

STATE OF TEXAS  
DEPARTMENT OF TRANSPORTATION

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6			1
STATE	STATE DIST.	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	576	VARIES

INDEX OF SHEETS

SEE SHEETS 2-4 FOR INDEX OF SHEETS

PLANS OF PROPOSED  
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT NO. :  
CSJ: 0915-12-576

BEXAR COUNTY  
IH 35, ETC

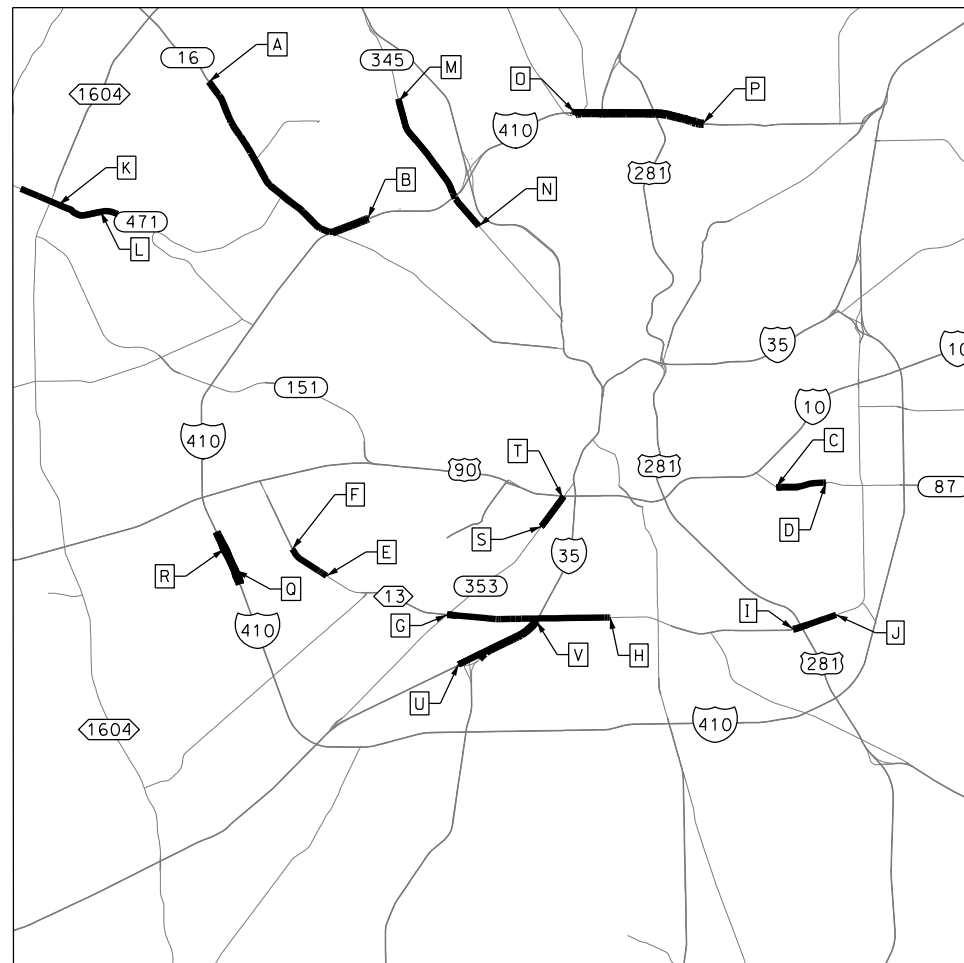
NET LENGTH OF ROADWAY = N/A  
NET LENGTH OF BRIDGE = N/A  
NET LENGTH OF PROJECT = 0.001 MI

LIMITS: VARIOUS LOCATIONS IN BEXAR COUNTY  
TO: ON STATE SYSTEM  
FOR THE CONSTRUCTION OF CURB RAMPS, SIDEWALKS,  
AND OTHER PEDESTRIAN RELATED INFRASTRUCTURE

DESIGN SPEED = VARIES  
AREA OF DISTURBED SOIL = 0.55 ACRES  
ADT: VARIES  
ACCESSIBILITY STANDARDS: PROWAG

"REGISTERED ACCESSIBILITY SPECIALIST (RAS)  
INSPECTION REQUIRED."  
TDLR NO. \_\_\_\_\_

- CSJ: 0915-12-576
- A: BEGIN SH 16 EB STA 1722+00  
  END SH 16 WB STA 1320+00
  - B: END SH 16 EB STA 2518+00  
  END SH 16 WB STA 2028+00
  - C: BEGIN US 87 EB STA 126+00  
  END US 87 WB STA 663+00
  - D: BEGIN US 87 WB STA 607+00  
  END US 87 EB STA 180+00
  - E: BEGIN SL 13 WB STA 399+00  
  BEGIN SL 13 EB STA 423+00
  - F: END SL 13 WB STA 403+00  
  END SL 13 EB STA 470+00
  - G: BEGIN SL 13 WB STA 742+00  
  BEGIN SL 13 EB STA 504+00
  - H: END SL 13 WB STA 956+00  
  END SL 13 EB STA 727+00
  - I: BEGIN SL 13 WB STA 1148+50  
  BEGIN SL 13 EB STA 889+50
  - J: END SL 13 WB STA 1284+00  
  END SL 13 EB STA 1125+00
  - K: BEGIN FM 471 WB STA 800+00  
  BEGIN FM 471 EB STA 639+00
  - L: END FM 471 WB STA 859+00  
  END FM 471 EB STA 671+00
  - M: BEGIN SL 345 NB STA 1111+00  
  BEGIN SL 345 SB STA 909+00
  - N: END SL 345 NB STA 1284+50  
  END SL 345 SB STA 1087+00
  - O: BEGIN IH 410 WB STA 1504+00  
  BEGIN IH 410 EB STA 1303+00
  - P: END IH 410 WB STA 1657+00  
  END IH 410 EB STA 1460+00
  - Q: BEGIN IH 410 NB STA 207+00  
  BEGIN IH 410 SB STA 280+00
  - R: END IH 410 NB STA 227+00  
  END IH 410 SB STA 331+00
  - S: BEGIN SL 353 STA 100+00  
  END SL 353 STA 144+75
  - U: BEGIN IH 35 NB STA 357+00  
  BEGIN IH 35 SB STA 452+00
  - V: END IH 35 NB STA 431+00  
  END IH 35 SB STA 557+00



LOCATION MAP NOT TO SCALE

EXCEPTIONS: NONE  
EQUATIONS: NONE  
RR X-ING'S: NONE

FINAL PLANS

LETTING DATE: \_\_\_\_\_  
DATE CONTRACTOR BEGAN WORK: \_\_\_\_\_  
DATE WORK WAS ACCEPTED: \_\_\_\_\_  
FINAL CONTRACT COST: \$ \_\_\_\_\_  
CONTRACTOR: \_\_\_\_\_

FINAL PLANS STATEMENT:

THE CONSTRUCTION WORK WAS PERFORMED  
IN ACCORDANCE WITH THE PLANS.

AREA ENGINEER \_\_\_\_\_ P. E. \_\_\_\_\_ DATE \_\_\_\_\_

TEXAS DEPARTMENT OF TRANSPORTATION

RECOMMENDED FOR LETTING

DESIGN SUPPORT DIRECTOR

RECOMMENDED FOR LETTING

DIRECTOR OF TRANSPORTATION, PLANNING & DEVELOPMENT

APPROVED FOR LETTING

DISTRICT ENGINEER

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF  
TRANSPORTATION, NOVEMBER 1, 2014 AND SPECIFICATION ITEMS  
LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS  
PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL-AID  
CONSTRUCTION CONTRACTS (FORM FHWA 1273, MAY, 2012).

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\design\Civil\General\1113507\*TitleSht.dgn

COUNTY \_\_\_\_\_ PROJ. NO. \_\_\_\_\_  
HWY. NO. \_\_\_\_\_ LETTING DATE \_\_\_\_\_  
DATE ACCEPTED \_\_\_\_\_

SHEET NO.

DESCRIPTION

SHEET NO.

DESCRIPTION

VOLUME I

GENERAL

VOLUME II

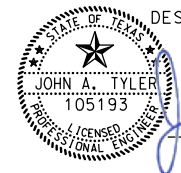
SL 13 SW MILITARY B

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23,23A-23	GENERAL NOTES
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82	*BC(4)-14
83	*BC(5)-14
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166	WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 613+00
167	WB SIDEWALK CONSTRUCTION PLAN STA 613+00 TO STA 615+00
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221	EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00
222	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00
223	EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00
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251	WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00 DETAILS
252	WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00
253	WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 778+00
254	WB SIDEWALK CONSTRUCTION PLAN STA 778+00 TO STA 780+00
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258	WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00 DETAILS
259	WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00
260	WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00 DETAILS
261	WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00

THE STANDARD SHEETS SPECIFICALLY SHOWN WITH PRECEDING (\*), HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

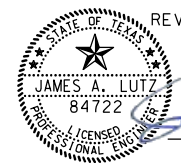
DESIGN



JOHN A. TYLER, P.E.

5/4/2019  
DATE

REVIEW AND APPROVAL




JAMES A. LUTZ, P.E.

5/4/2019  
DATE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPB FIRM REGISTRATION #470 | TBPBS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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INDEX OF SHEETS

SHEET 1 OF 4

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				2

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\General\1113507\*Index01.dgn

SHEET NO.

DESCRIPTION  
SL 13 SW MILITARY B CONT

Table with 2 columns: SHEET NO. and DESCRIPTION. Rows 262-285 listing construction plans for SL 13 SW MILITARY B CONT.

SL 13 MILITARY DRIVE

Table with 2 columns: SHEET NO. and DESCRIPTION. Rows 286-300 listing construction plans for SL 13 MILITARY DRIVE.

SH 16 BANDERA RD

Table with 2 columns: SHEET NO. and DESCRIPTION. Rows 301-335 listing construction plans for SH 16 BANDERA RD.

SHEET NO.

DESCRIPTION  
BANDERA RD CONT

Table with 2 columns: SHEET NO. and DESCRIPTION. Rows 336-411 listing construction plans for BANDERA RD CONT.

THE STANDARD SHEETS SPECIFICALLY SHOWN WITH PRECEDING (\*), HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

DESIGN  
Professional Engineer seal for John A. Tyler, P.E., License No. 105193, dated 5/4/2019.

REVIEW AND APPROVAL  
Professional Engineer seal for James A. Lutz, P.E., License No. 84722, dated 5/4/2019.

INDEX OF SHEETS SHEET 2 OF 4. Includes Pape-Dawson Engineers logo, contact information, and a table with project details: DIST. SAT, COUNTY BEXAR, CONT. NO. 0915, SECT. NO. 12, JOB NO. 576, SHEET NO. 3.

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\General\1113507\* Index01.dgn

SHEET NO.

DESCRIPTION

SHEET NO.

DESCRIPTION

BANDERA RD CONT

412 EB SIDEWALK CONSTRUCTION PLAN STA 1862+00 TO STA 1865+50 DETAILS
413 WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50
414 EB SIDEWALK CONSTRUCTION PLAN STA 1867+50 TO STA 1869+50
415 EB SIDEWALK CONSTRUCTION PLAN STA 1869+50 TO STA 1871+50
416 EB SIDEWALK CONSTRUCTION PLAN STA 1871+50 TO STA 1873+50
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426 WB SIDEWALK CONSTRUCTION PLAN STA 2026+00 TO STA 2028+00

VOLUME III

SL 353 NOGALITOS ST

427 SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 102+00
428 SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00
429 SIDEWALK CONSTRUCTION PLAN STA 104+00 TO STA 106+00
430 SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50
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433 SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00
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435 SIDEWALK CONSTRUCTION PLAN STA 114+50 TO STA 116+50
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437 SIDEWALK CONSTRUCTION PLAN STA 116+50 TO STA 118+00
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457 SIDEWALK CONSTRUCTION PLAN STA 138+75 TO STA 140+75
458 SIDEWALK CONSTRUCTION PLAN STA 138+75 TO STA 140+75 DETAILS
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462 SIDEWALK CONSTRUCTION PLAN STA 142+75 TO END PROJECT DETAILS

SW LOOP 410

463 NB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 209+00, STA 216+00 TO STA 218+00
464 NB SIDEWALK CONSTRUCTION PLAN STA 223+00 TO END PROJECT
465 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00
466 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00
467 SB SIDEWALK CONSTRUCTION PLAN STA 291+00 TO 295+00
468 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00
469 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT

IH 35 ACCESS RD

470 SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00
471 SIDEWALK CONSTRUCTION PLAN STA 361+00 TO STA 365+00
472 SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00
473 SIDEWALK CONSTRUCTION PLAN STA 369+00 TO STA 373+00
474 SIDEWALK CONSTRUCTION PLAN STA 373+00 TO STA 377+00
475 SIDEWALK CONSTRUCTION PLAN STA 377+00 TO STA 381+00
476 SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00
477 SIDEWALK CONSTRUCTION PLAN STA 385+00 TO STA 389+00
478 SIDEWALK CONSTRUCTION PLAN STA 389+00 TO STA 393+00
479 SIDEWALK CONSTRUCTION PLAN STA 393+00 TO STA 397+00
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481 SIDEWALK CONSTRUCTION PLAN STA 409+00 TO STA 413+00

IH 35 ACCESS RD (CONT)

482 SIDEWALK CONSTRUCTION PLAN STA 427+00 TO END PROJECT
483 SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00
484 SIDEWALK CONSTRUCTION PLAN STA 456+00 TO STA 460+00
485 SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00
486 SIDEWALK CONSTRUCTION PLAN STA 464+00 TO STA 467+50
487 SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00
488 SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00 DETAILS
489 SIDEWALK CONSTRUCTION PLAN STA 471+00 TO STA 475+00
490 SIDEWALK CONSTRUCTION PLAN STA 475+00 TO STA 479+00
491 SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00
492 SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00
493 SIDEWALK CONSTRUCTION PLAN STA 485+00 TO STA 487+00
494 SIDEWALK CONSTRUCTION PLAN STA 487+00 TO STA 489+00
495 SIDEWALK CONSTRUCTION PLAN STA 489+00 TO STA 491+00
496 SIDEWALK CONSTRUCTION PLAN STA 491+00 TO STA 493+00
497 SIDEWALK CONSTRUCTION PLAN STA 493+00 TO STA 495+00
498 SIDEWALK CONSTRUCTION PLAN NAVAJO ST
499 SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00
500 SIDEWALK CONSTRUCTION PLAN STA 511+00 TO STA 515+00
501 SIDEWALK CONSTRUCTION PLAN STA 515+00 TO STA 518+00
502 SIDEWALK CONSTRUCTION PLAN STA 518+00 TO STA 522+00
503 SIDEWALK CONSTRUCTION PLAN STA 532+00 TO STA 536+00
504 SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00
505 SIDEWALK CONSTRUCTION PLAN STA 540+00 TO STA 542+00
506 SIDEWALK CONSTRUCTION PLAN STA 542+00 TO STA 544+00
507 SIDEWALK CONSTRUCTION PLAN STA 544+00 TO STA 546+00
508 SIDEWALK CONSTRUCTION PLAN STA 546+00 TO STA 547+00
509 SIDEWALK CONSTRUCTION PLAN STA 547+00 TO STA 549+00
510 SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00
511 SIDEWALK CONSTRUCTION PLAN STA 551+00 TO STA 553+00
512 SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00
513 SIDEWALK CONSTRUCTION PLAN STA 555+00 TO STA END PROJECT

SL 345 FREDERICKSBURG RD

514 SIDEWALK CONSTRUCTION PLAN STA 977+00 TO STA 981+00
515 SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00
516 SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00
517 SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50
518 SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50
519 SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50
520 SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00
521 SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00 DETAILS
522 SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00
523 SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00 DETAILS
524 SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50
525 SIDEWALK CONSTRUCTION PLAN STA 1060+50 TO STA 1063+25
526 SIDEWALK CONSTRUCTION PLAN STA 1063+25 TO STA 1065+25, STA 1263+00 TO STA 1265+00
527 SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00
528 SIDEWALK CONSTRUCTION PLAN STA 1069+00 TO STA 1071+00
529 SIDEWALK CONSTRUCTION PLAN STA 1071+00 TO STA 1073+00, STA 1271+50 TO STA 1272+50
530 SIDEWALK CONSTRUCTION PLAN STA 1073+00 TO STA 1076+50
531 SIDEWALK CONSTRUCTION PLAN STA 1076+50 TO STA 1080+00
532 SIDEWALK CONSTRUCTION PLAN STA 1080+00 TO STA 1083+00
533 SIDEWALK CONSTRUCTION PLAN STA 1245+00 TO STA 1248+00
534 SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00
535 SIDEWALK CONSTRUCTION PLAN STA 1261+00 TO STA 1263+00
536 SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50
537 SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50
538 SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50
539 SIDEWALK CONSTRUCTION PLAN STA 1276+50 TO STA 1280+50
540 SIDEWALK CONSTRUCTION PLAN STA 1280+50 TO END PROJECT

FM 471 CULEBRA RD

541 SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 643+00
542 SIDEWALK CONSTRUCTION PLAN STA 643+00 TO STA 646+25
543 SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00
544 SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00 DETAILS
545 SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00
546 SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00
547 SIDEWALK CONSTRUCTION PLAN STA 667+00 TO END PROJECT
548 SIDEWALK CONSTRUCTION PLAN STA 800+00 TO STA 802+00, STA 804+00 TO STA 806+00
549 SIDEWALK CONSTRUCTION PLAN STA 812+00 TO STA 814+00, STA 818+00 TO STA 820+00
550 SIDEWALK CONSTRUCTION PLAN STA 840+00 TO STA 842+00, STA 857+00 TO END PROJECT

THE STANDARD SHEETS SPECIFICALLY SHOWN WITH PRECEDING (\*), HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THIS PROJECT.

DESIGN JOHN A. TYLER, P.E. 5/4/2019 DATE

REVIEW AND APPROVAL JAMES A. LUTZ, P.E. 5/4/2019 DATE

PAPE-DAWSON ENGINEERS SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000



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SHEET 3 OF 4

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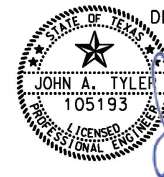
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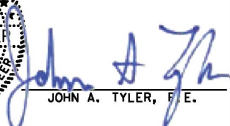
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551	SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1305+00, STA 1321+00 TO STA 1323+00
552	SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00
553	SIDEWALK CONSTRUCTION PLAN STA 1369+00 TO STA 1373+00
554	SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00
555	SIDEWALK CONSTRUCTION PLAN STA 1377+00 TO STA 1381+00
556	SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00
557	SIDEWALK CONSTRUCTION PLAN STA 1402+50 TO STA 1404+50, STA 1415+00 TO STA 1417+00
558	SIDEWALK CONSTRUCTION PLAN STA 1420+00 TO STA 1424+00
559	SIDEWALK CONSTRUCTION PLAN STA 1450+00 TO STA 1453+50
560	SIDEWALK CONSTRUCTION PLAN STA 1458+00 TO END PROJECT
561	SIDEWALK CONSTRUCTION PLAN STA BEGIN PROJECT TO STA 1518+00, STA 1522+00 TO STA 1524+
562	SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00
563	SIDEWALK CONSTRUCTION PLAN STA 1576+00 TO STA 1580+00
564	SIDEWALK CONSTRUCTION PLAN STA 1580+00 TO STA 1584+00
565	SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00
566	SIDEWALK CONSTRUCTION PLAN STA 1647+00 TO STA 1651+00
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DESIGN




  
 JOHN A. TYLER, P.E.  
 DATE 5/4/2019

REVIEW AND APPROVAL



  
 JAMES A. LUTZ, P.E.  
 DATE 5/4/2019

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

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DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
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Plotted on: 5/4/2019

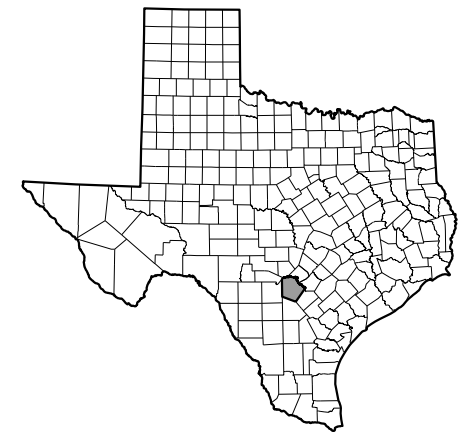
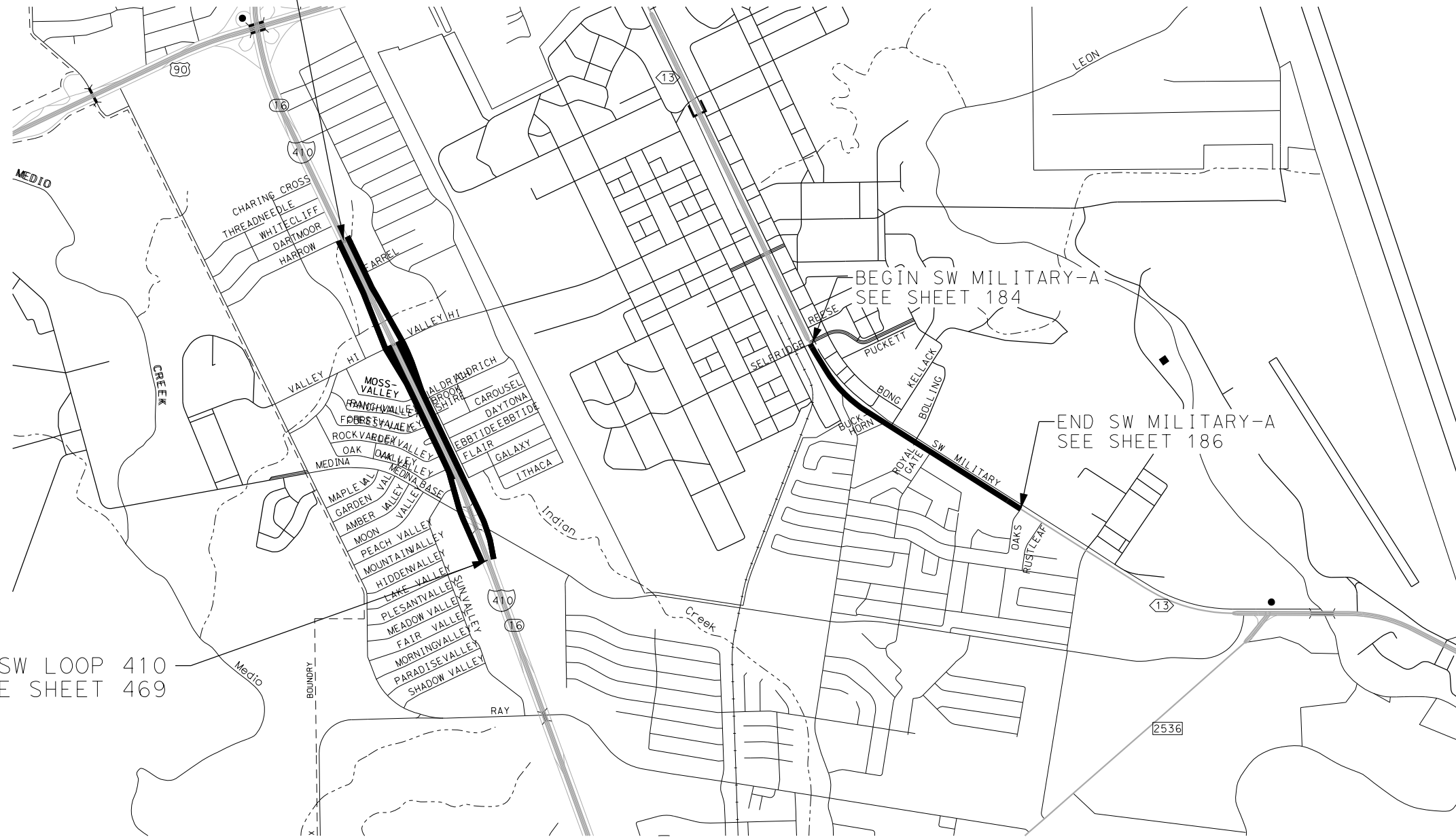
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BEGIN SW LOOP 410  
SEE SHEET 463

END SW LOOP 410  
SEE SHEET 469

BEGIN SW MILITARY-A  
SEE SHEET 184

END SW MILITARY-A  
SEE SHEET 186



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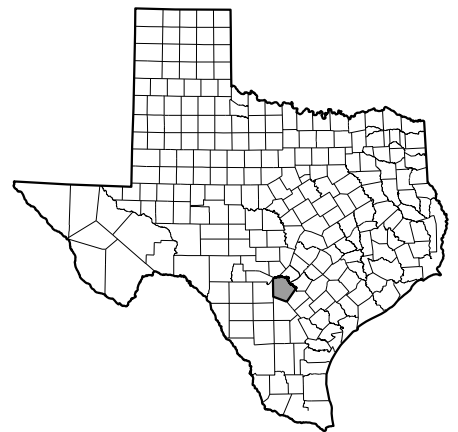
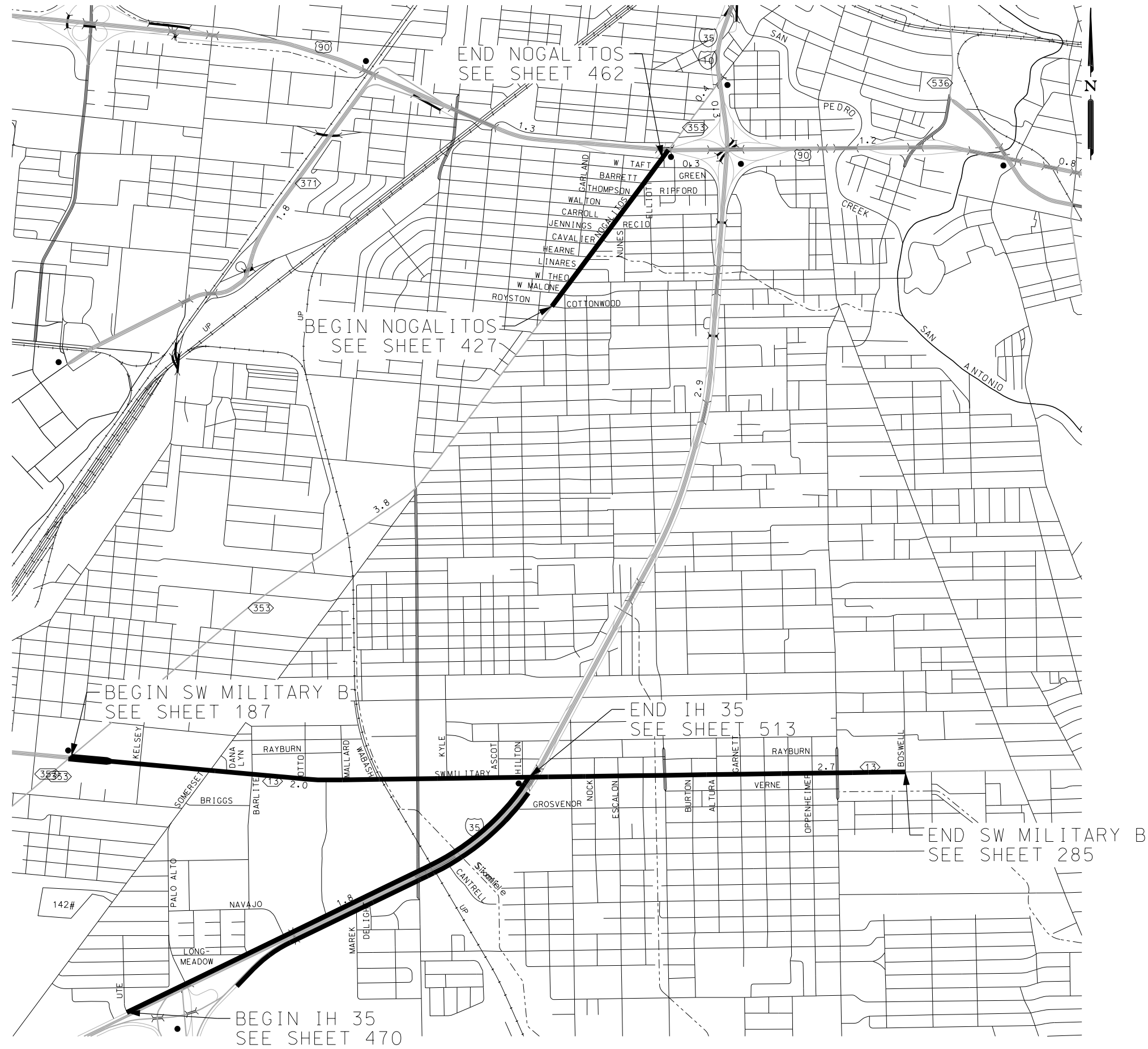
PROJECT  
LAYOUT  
MAPS

SHEET 1 OF 6

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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
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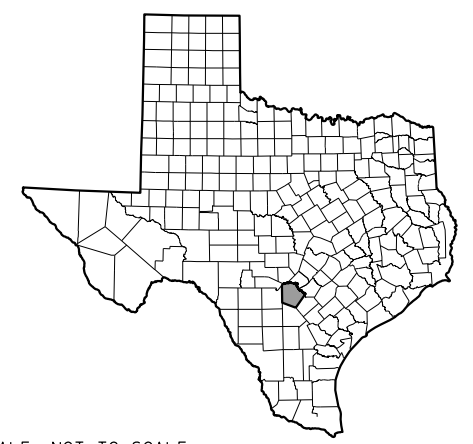
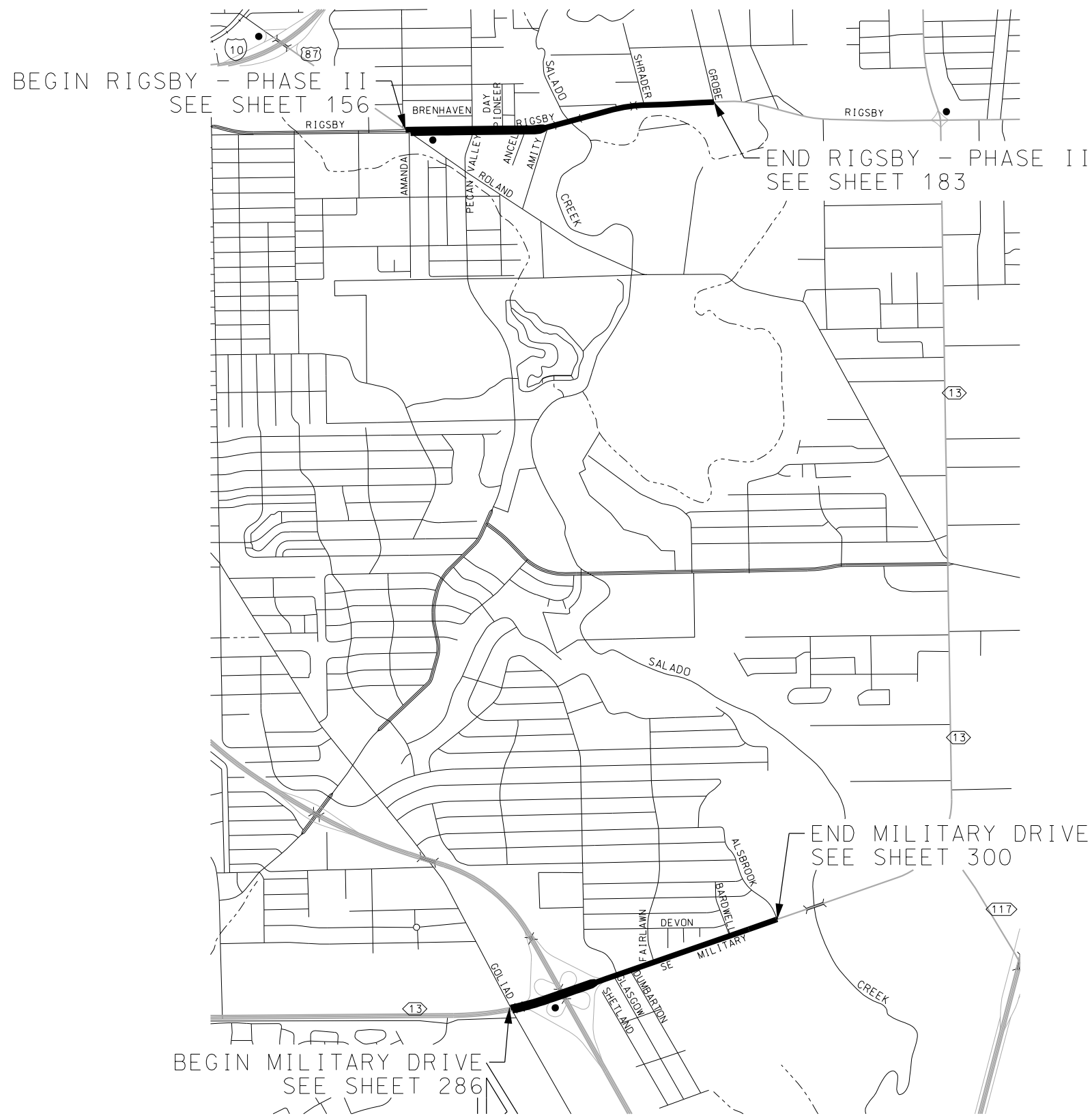
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PROJECT LAYOUT MAPS

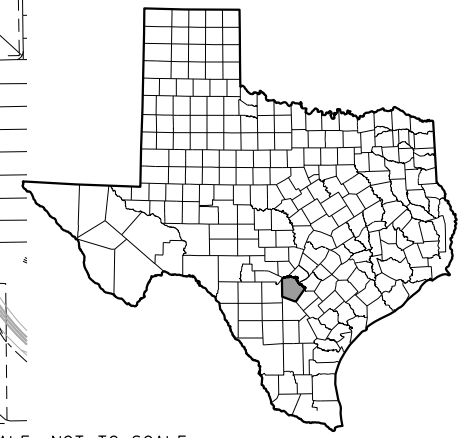
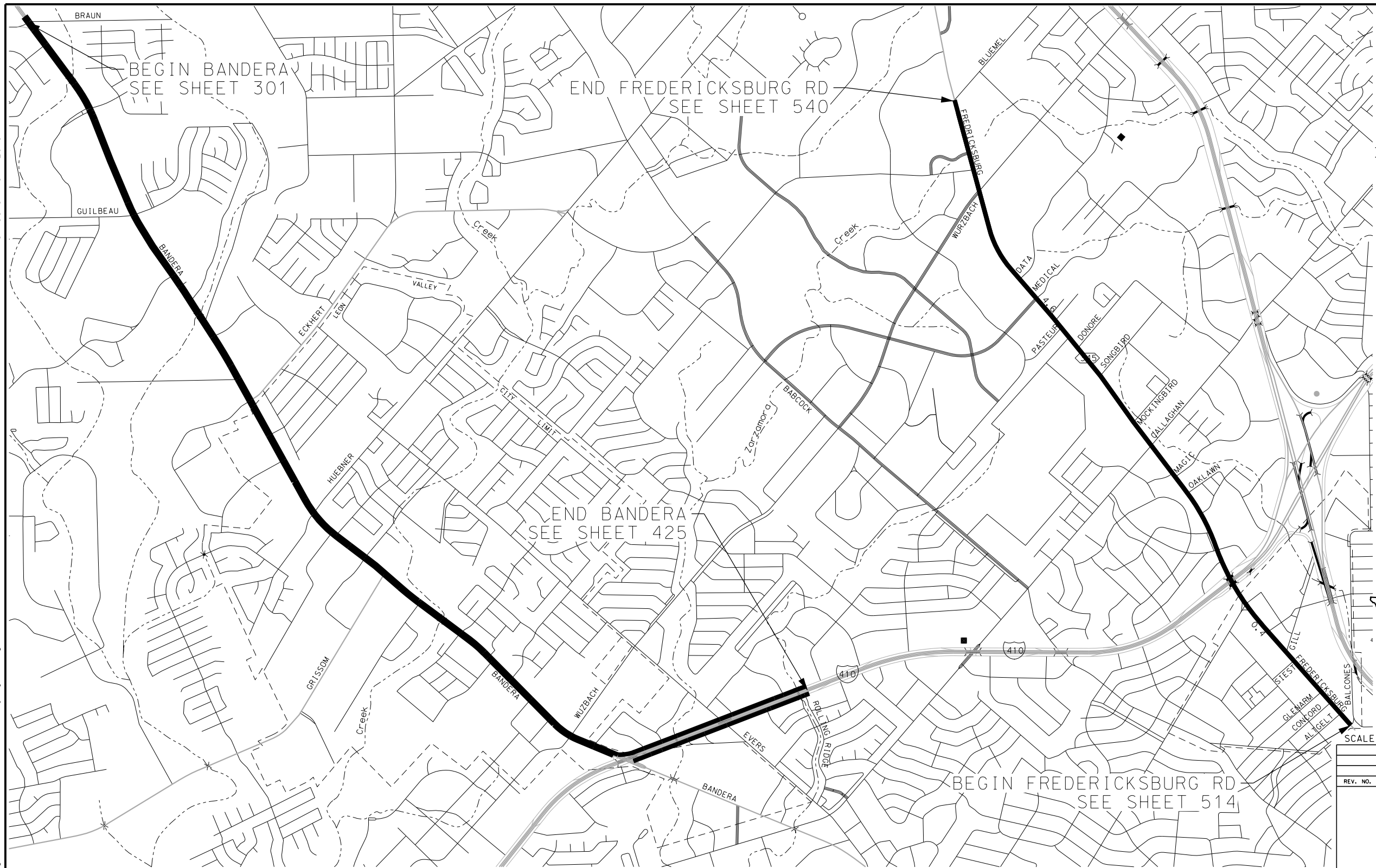
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CHK DWG:	SAT	BEXAR	0915	12	576	8



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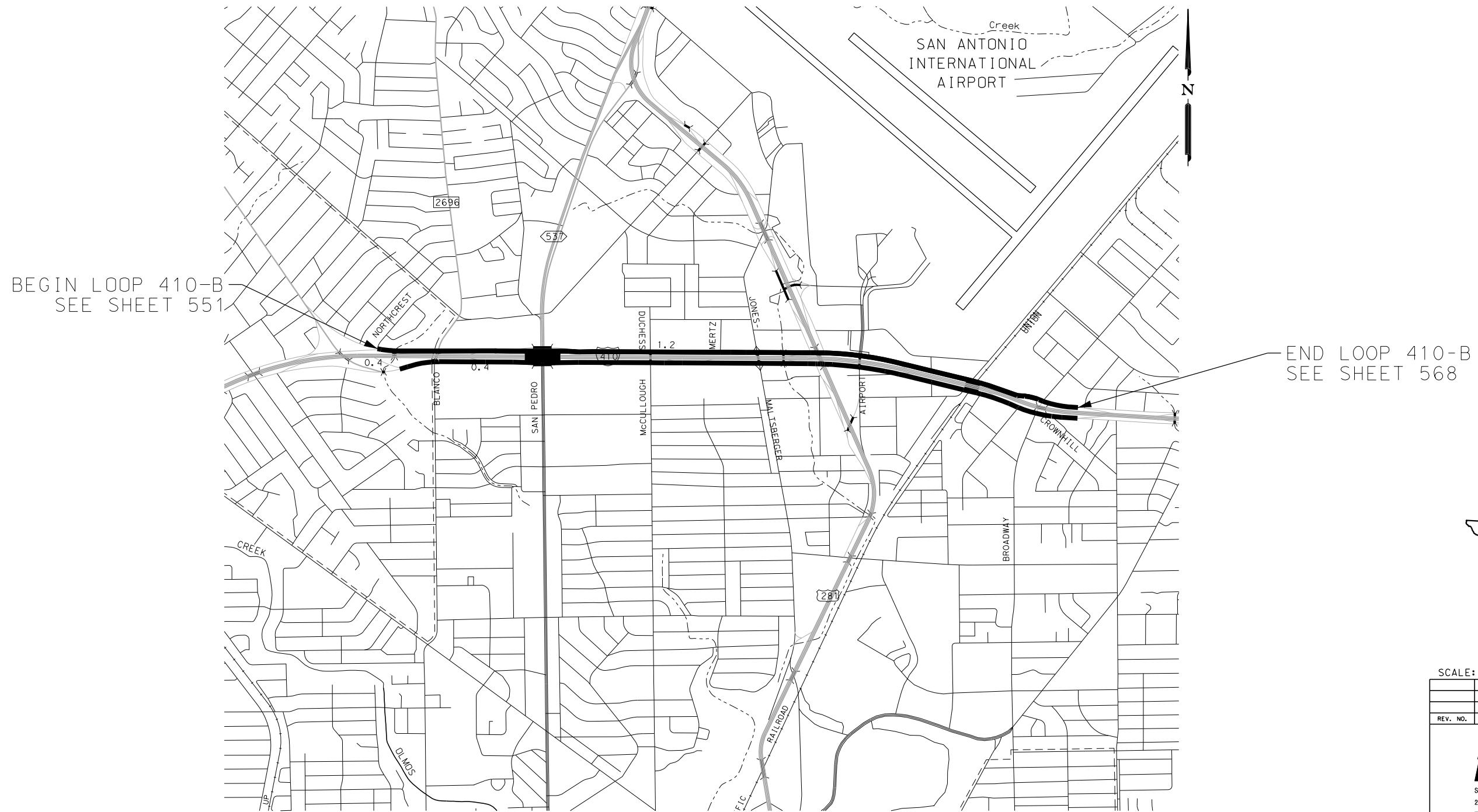
PROJECT  
LAYOUT  
MAPS

SHEET 4 OF 6

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CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	9

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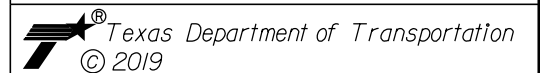


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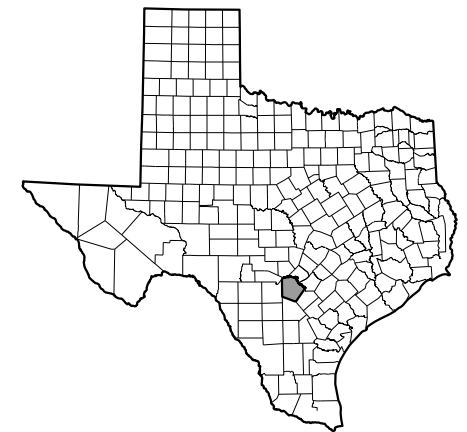
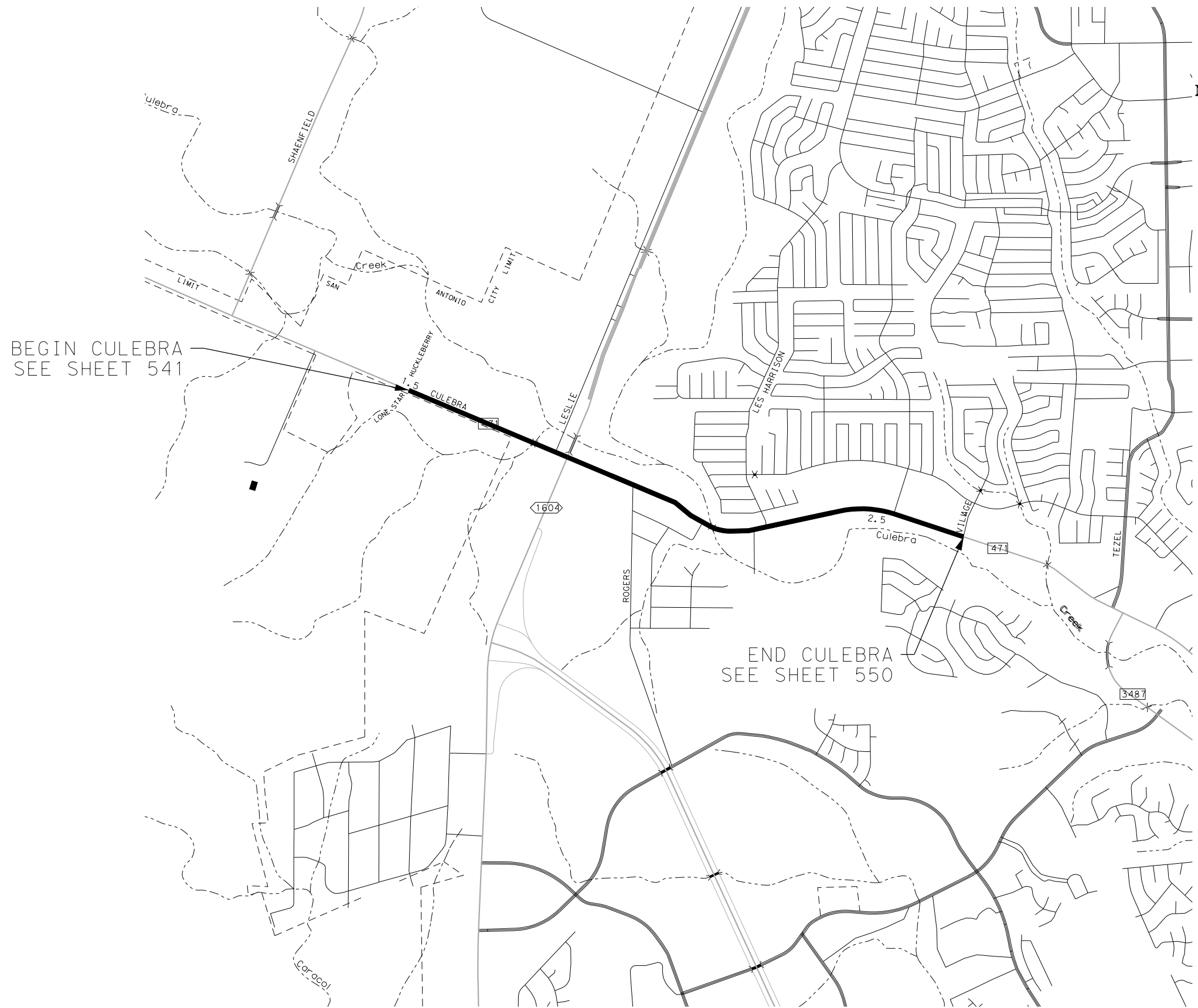
PROJECT  
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 MAPS

SHEET 5 OF 6

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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	10

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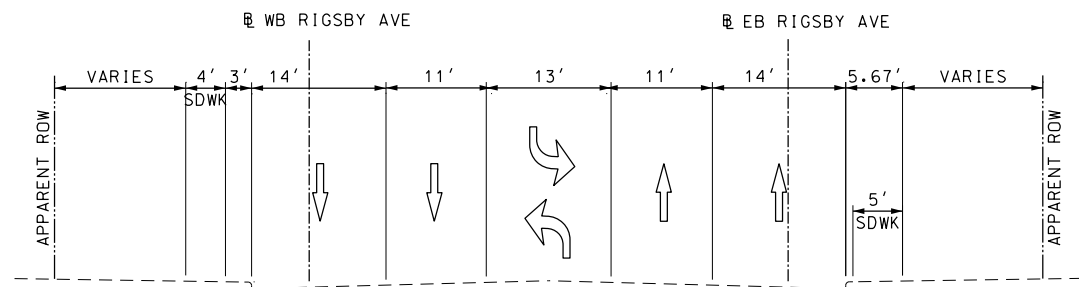
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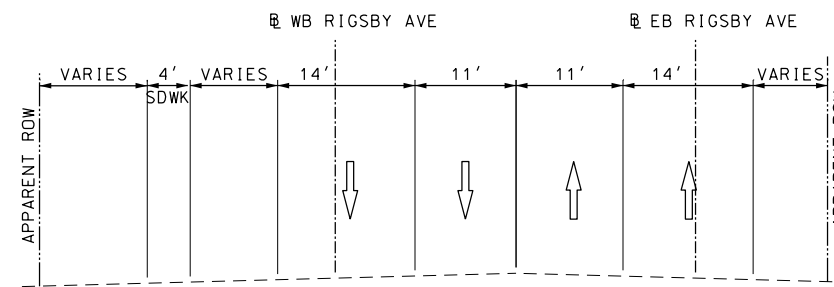
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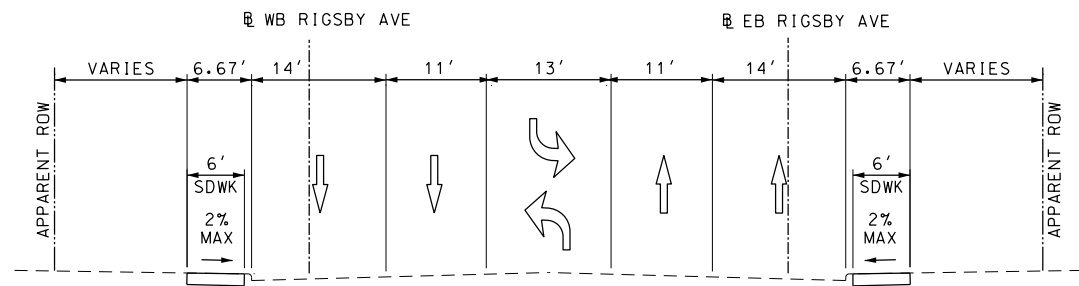
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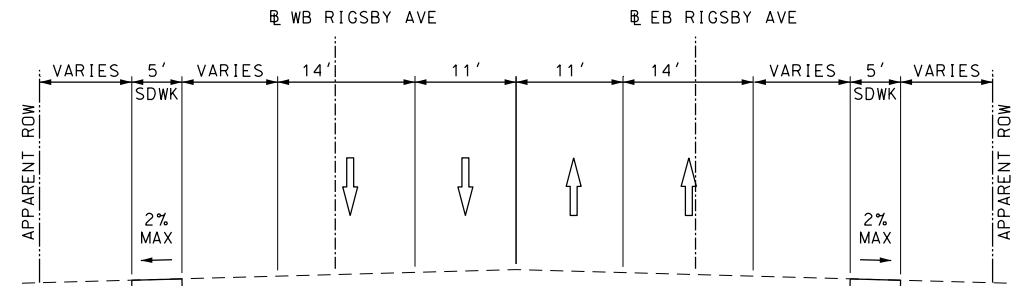
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 FROM WB RIGSBY AVE STA 636+00 TO STA 663+00



**EXISTING TYPICAL SECTION**  
**RIGSBY AVE (US 87)**  
 NOT TO SCALE  
 FROM EB RIGSBY AVE STA 149+00 TO STA 181+00  
 FROM WB RIGSBY AVE STA 605+00 TO STA 636+00



**PROPOSED TYPICAL SECTION**  
**RIGSBY AVE (US 87)**  
 NOT TO SCALE  
 FROM EB RIGSBY AVE STA 123+00 TO STA 149+00  
 FROM WB RIGSBY AVE STA 636+00 TO STA 663+00



**PROPOSED TYPICAL SECTION**  
**RIGSBY AVE (US 87)**  
 NOT TO SCALE  
 FROM EB RIGSBY AVE STA 149+00 TO STA 181+00  
 FROM WB RIGSBY AVE STA 605+00 TO STA 636+00

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

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**PAPE-DAWSON ENGINEERS**  
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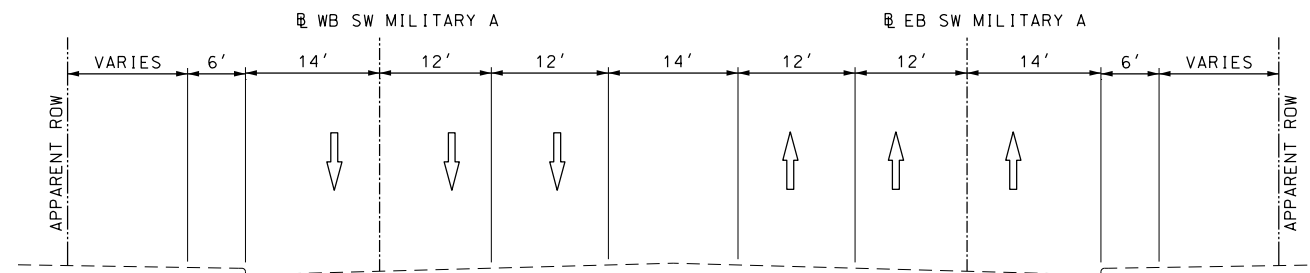
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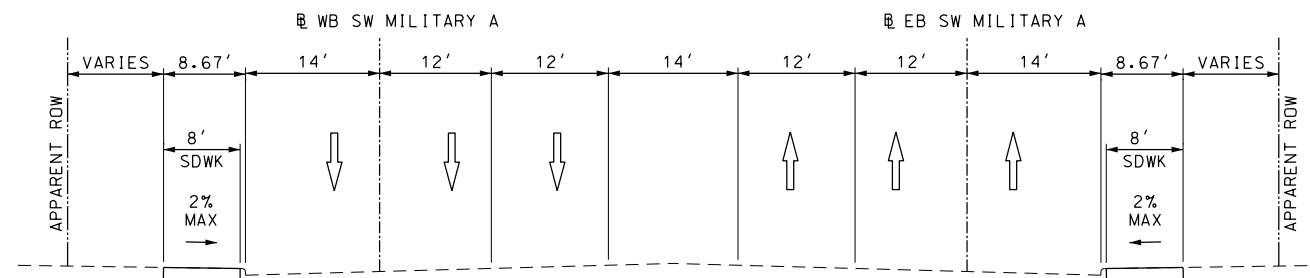
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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
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Plotted on: 5/4/2019

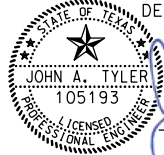
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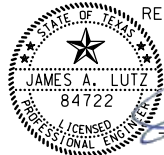


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SW MILITARY A (SL 13)  
NOT TO SCALE  
FROM BEGIN PROJECT TO END PROJECT



PROPOSED TYPICAL SECTION  
SW MILITARY A (SL 13)  
NOT TO SCALE  
FROM BEGIN PROJECT TO END PROJECT

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
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 5/4/2019  
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ENGINEERS

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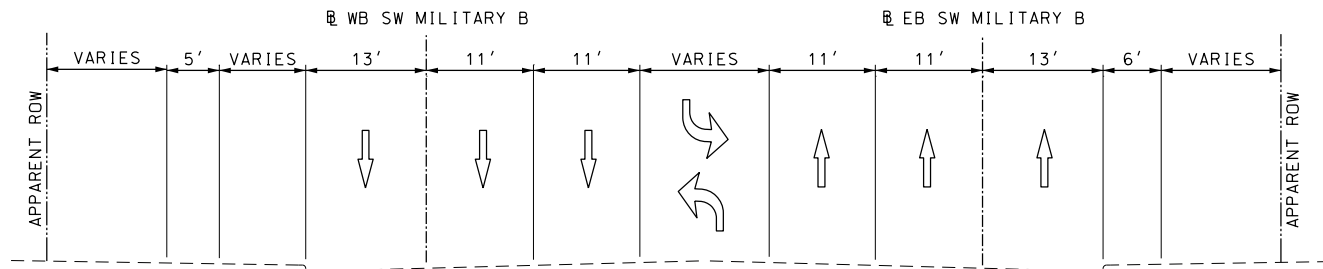
TYPICAL SECTIONS

SHEET 2 OF 11

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	13

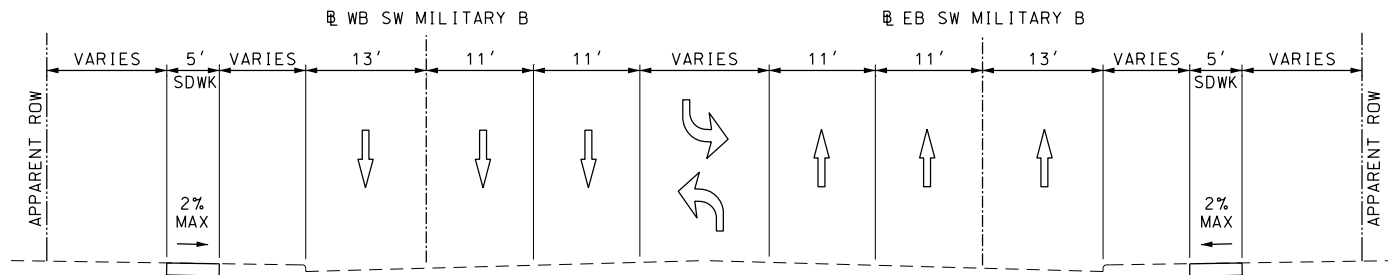
Plotted on: 5/4/2019

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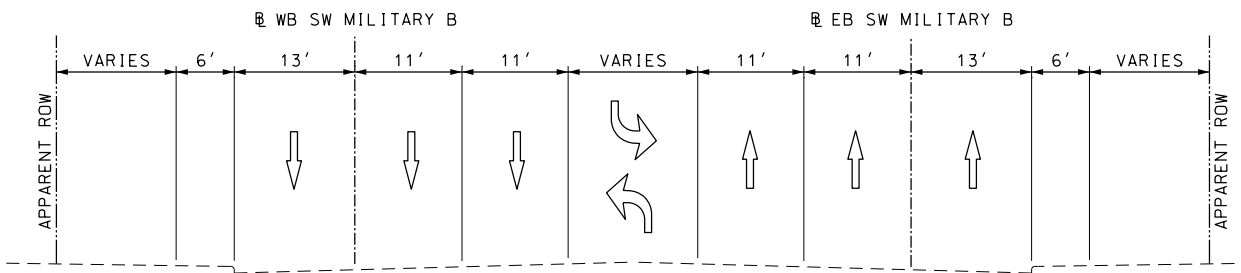
EXISTING TYPICAL SECTION

SW MILITARY B (SL 13)  
 NOT TO SCALE  
 FROM EB SW MILITARY B STA 505+00 TO STA 663+00  
 FROM WB SW MILITARY B STA 742+00 TO STA 802+00



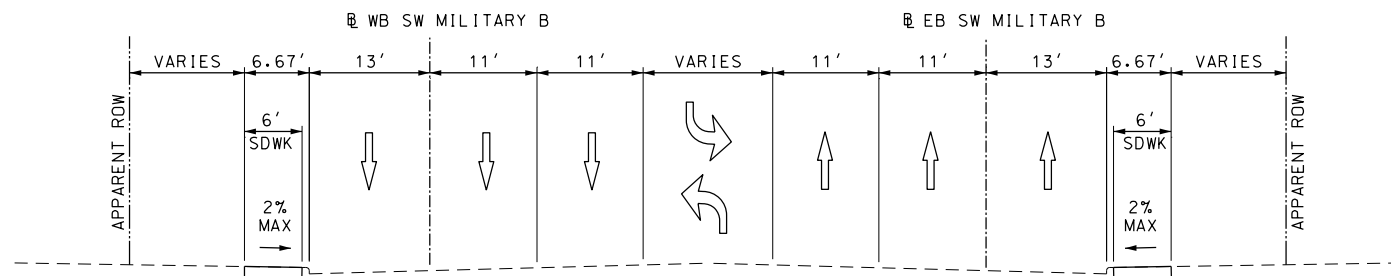
PROPOSED TYPICAL SECTION

SW MILITARY B (SL 13)  
 NOT TO SCALE  
 FROM EB SW MILITARY B STA 505+00 TO STA 663+00  
 FROM WB SW MILITARY B STA 742+00 TO STA 802+00



EXISTING TYPICAL SECTION

SW MILITARY B (SL 13)  
 NOT TO SCALE  
 FROM EB SW MILITARY B STA 663+00 TO STA 726+00  
 FROM WB SW MILITARY B STA 802+00 TO STA 956+00



PROPOSED TYPICAL SECTION

SW MILITARY B (SL 13)  
 NOT TO SCALE  
 FROM EB SW MILITARY B STA 663+00 TO STA 726+00  
 FROM WB SW MILITARY B STA 802+00 TO STA 956+00

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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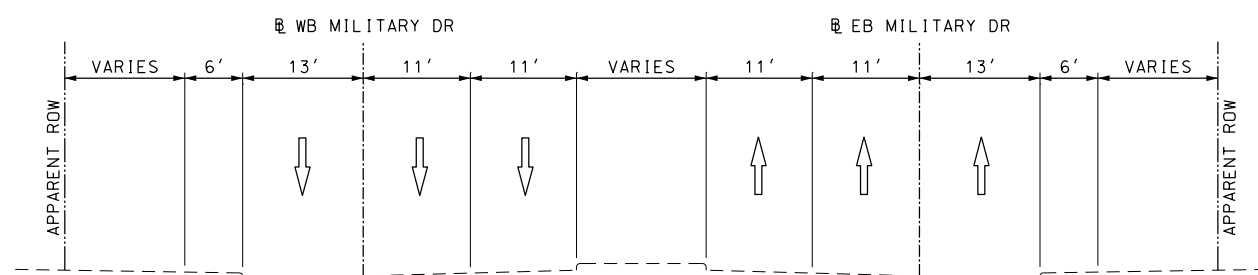
TYPICAL SECTIONS

SHEET 3 OF 11

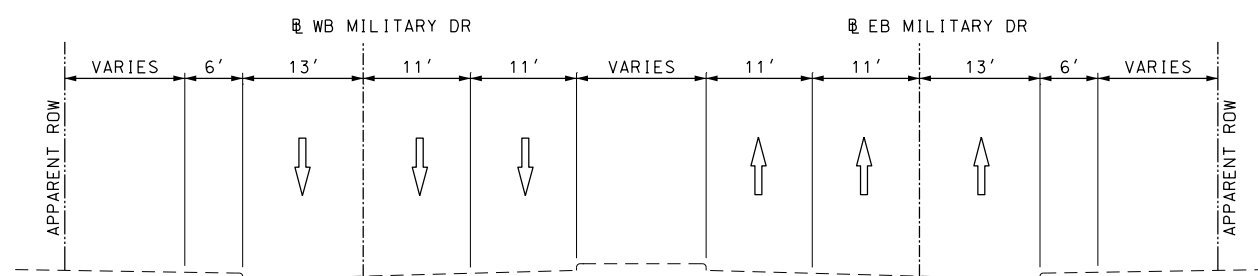
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	14

Plotted on: 5/4/2019

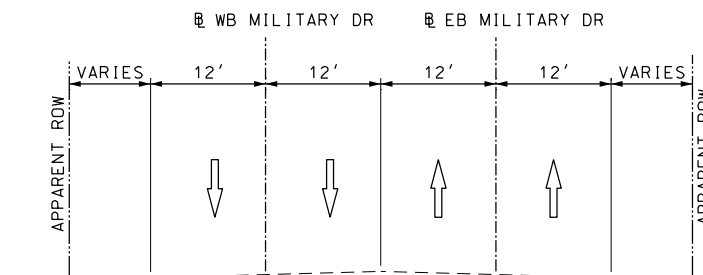
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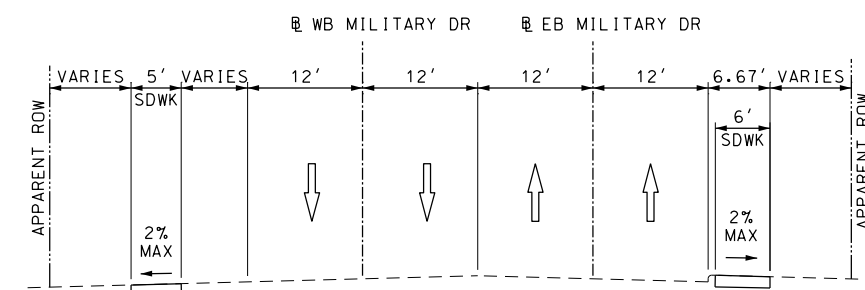
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FROM EB MILITARY DR STA 1040+00 TO STA 1092+00  
FROM WB MILITARY DR STA 1141+00 TO STA 1252+00



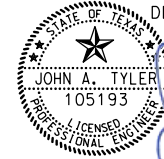
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MILITARY DR (SL 13)  
NOT TO SCALE  
FROM EB MILITARY DR STA 1040+00 TO STA 1092+00  
FROM WB MILITARY DR STA 1141+00 TO STA 1252+00



EXISTING TYPICAL SECTION  
MILITARY DR (SL 13)  
NOT TO SCALE  
FROM EB MILITARY DR STA 1092+00 TO STA 1128+00  
FROM WB MILITARY DR STA 1252+00 TO STA 1288+00



PROPOSED TYPICAL SECTION  
MILITARY DR (SL 13)  
NOT TO SCALE  
FROM EB MILITARY DR STA 1092+00 TO STA 1128+00  
FROM WB MILITARY DR STA 1252+00 TO STA 1288+00

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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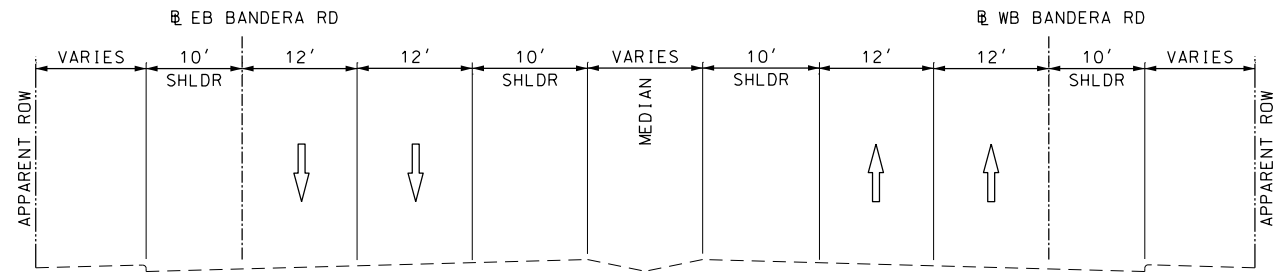
TYPICAL SECTIONS

SHEET 4 OF 11

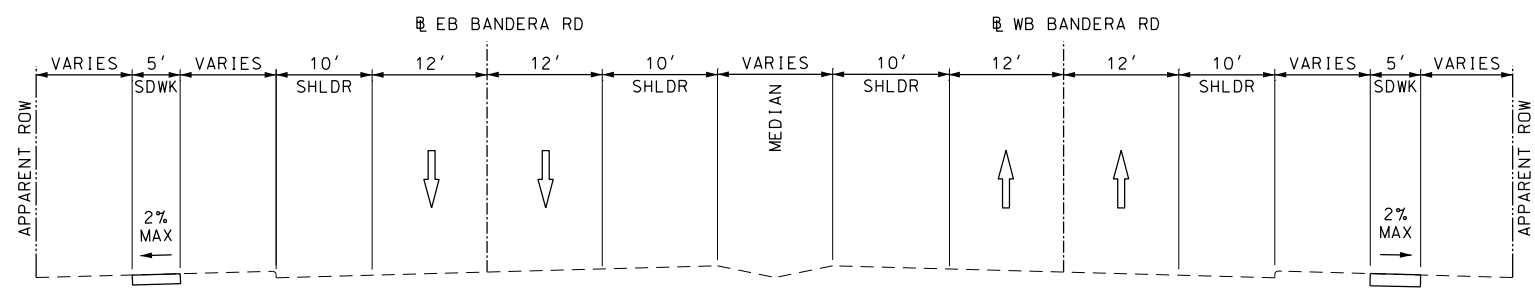
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CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	15

Plotted on: 5/4/2019

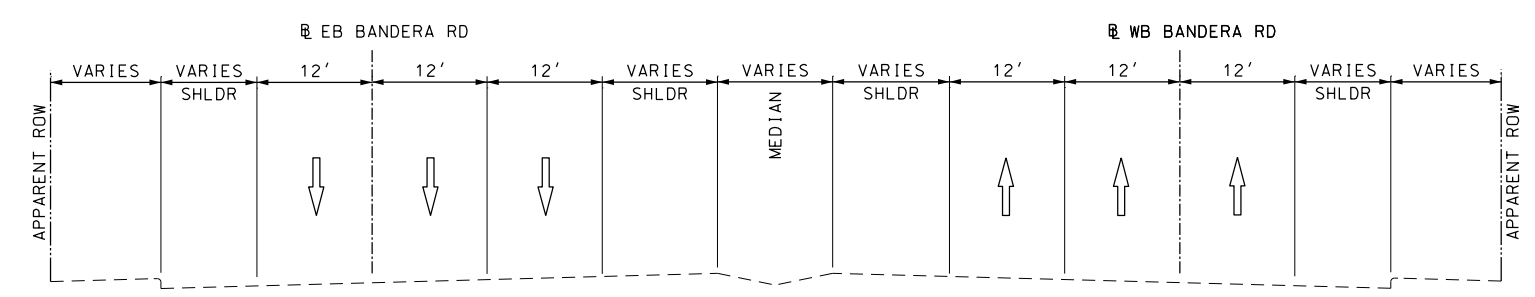
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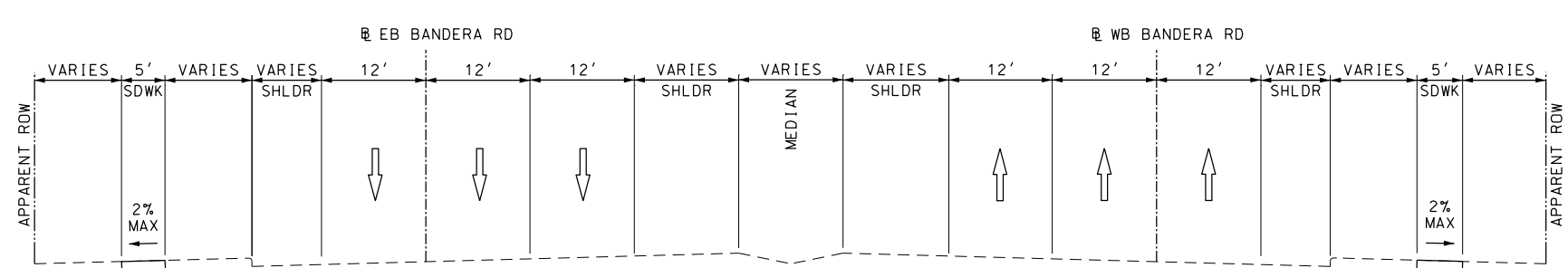
EXISTING TYPICAL SECTION  
BANDERA RD  
NOT TO SCALE  
FROM STA 1483+00 TO STA 1538+00  
FROM STA 1884+00 TO STA 1940+00



PROPOSED TYPICAL SECTION  
BANDERA RD  
NOT TO SCALE  
FROM STA 1483+00 TO STA 1538+00  
FROM STA 1884+00 TO STA 1940+00



EXISTING TYPICAL SECTION  
BANDERA RD  
NOT TO SCALE  
FROM STA 1320+00 TO STA 1483+00  
FROM STA 1722+00 TO STA 1884+00



PROPOSED TYPICAL SECTION  
BANDERA RD  
NOT TO SCALE  
FROM STA 1320+00 TO STA 1483+00  
FROM STA 1722+00 TO STA 1884+00

DESIGN

JOHN A. TYLER, P.E. 5/4/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/4/2019 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

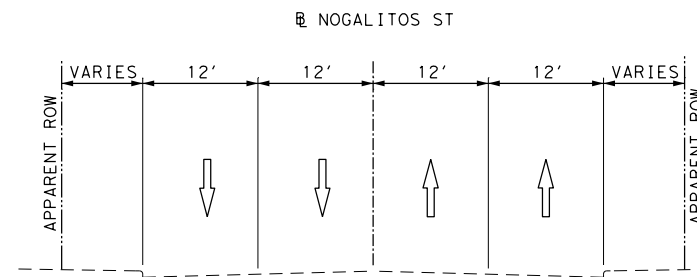
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TYPICAL SECTIONS

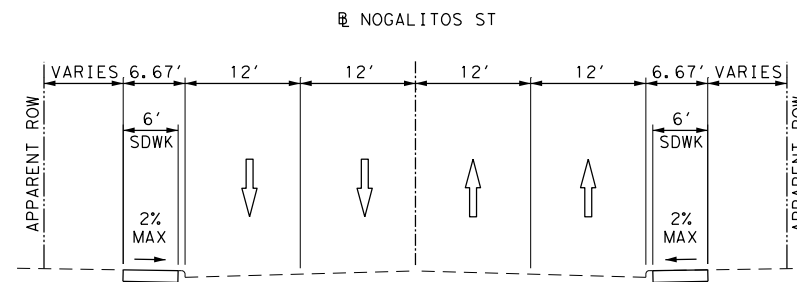
SHEET 5 OF 11

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DWG:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	16

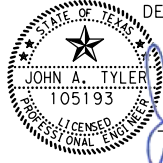


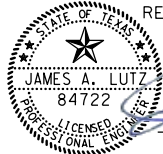


EXISTING TYPICAL SECTION  
 NOGALITOS ST (SL 353)  
 NOT TO SCALE  
 FROM BEGIN PROJECT TO END PROJECT



PROPOSED TYPICAL SECTION  
 NOGALITOS ST (SL 353)  
 NOT TO SCALE  
 FROM BEGIN PROJECT TO END PROJECT

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson**  
**ENGINEERS**

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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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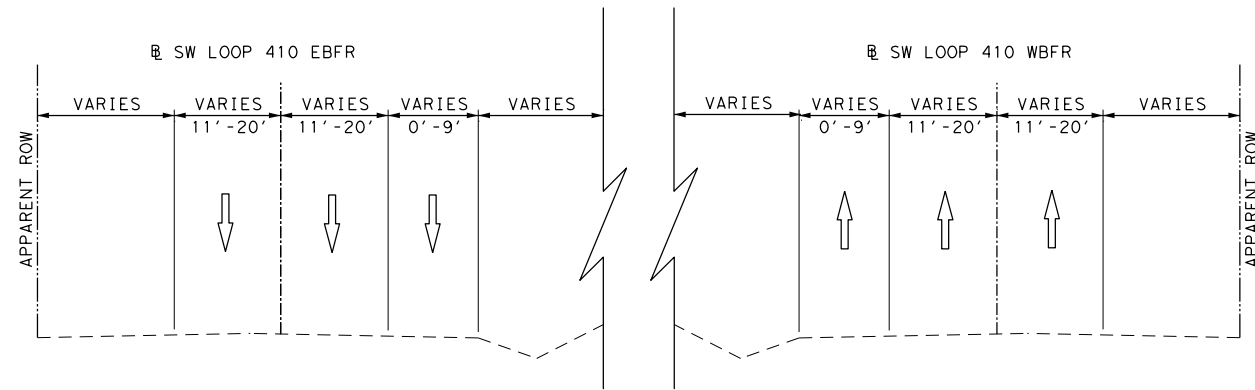
TYPICAL SECTIONS

SHEET 6 OF 11

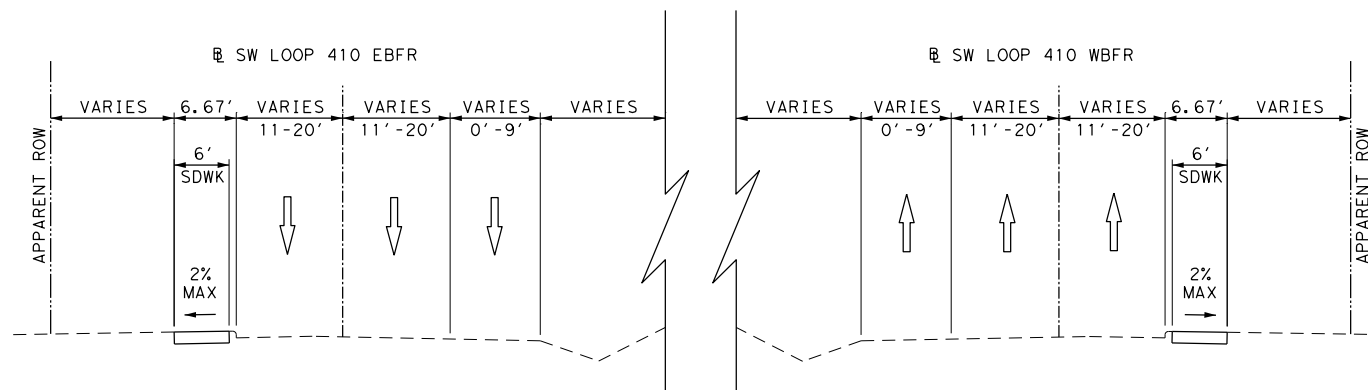
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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	17

Plotted on: 5/4/2019

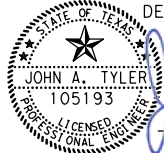
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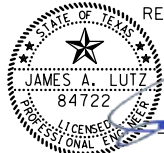


EXISTING TYPICAL SECTION  
SW LOOP 410  
NOT TO SCALE  
FROM BEGIN PROJECT TO END PROJECT



PROPOSED TYPICAL SECTION  
SW LOOP 410  
NOT TO SCALE  
FROM BEGIN PROJECT TO END PROJECT

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

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 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

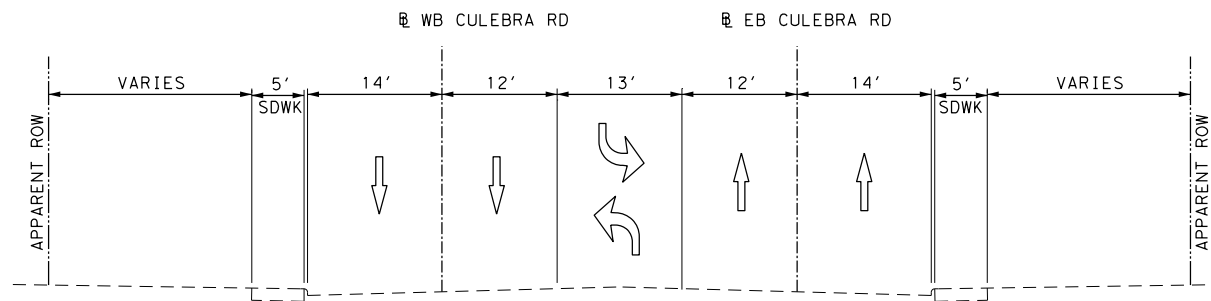
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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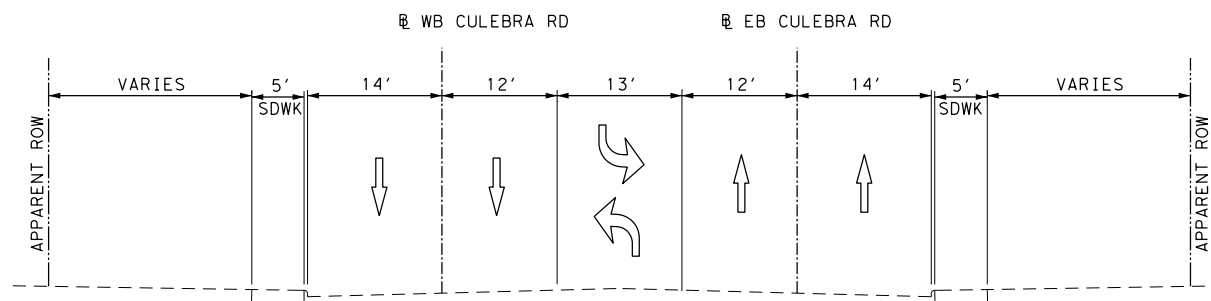
TYPICAL SECTIONS

SHEET 7 OF 11

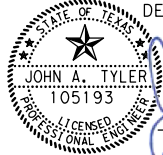
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CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	18

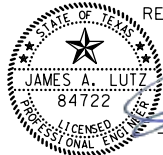


EXISTING TYPICAL SECTION  
CULEBRA RD  
NOT TO SCALE



PROPOSED TYPICAL SECTION  
CULEBRA RD  
NOT TO SCALE

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson**  
ENGINEERS

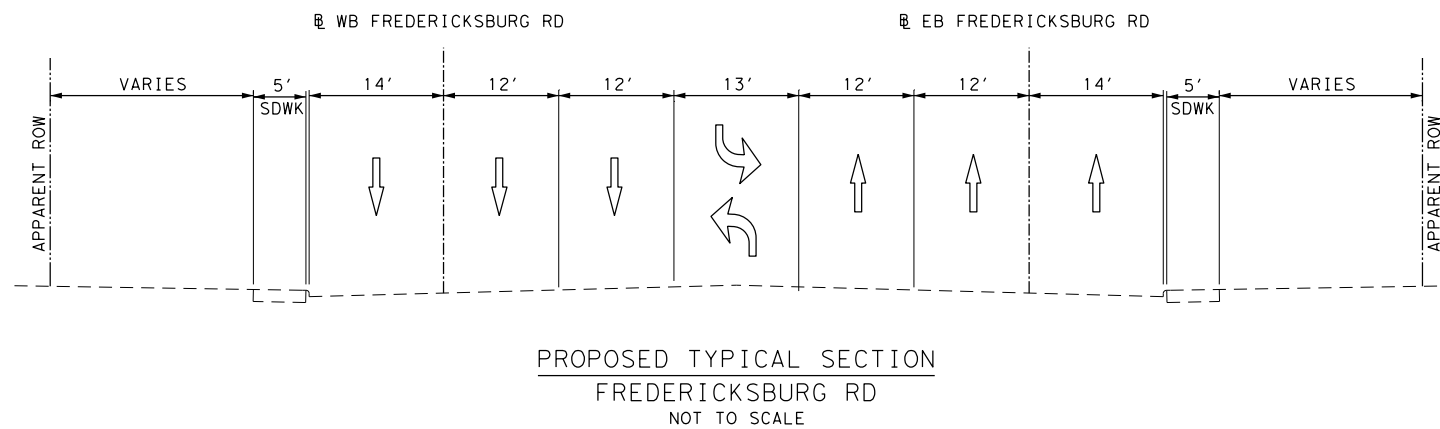
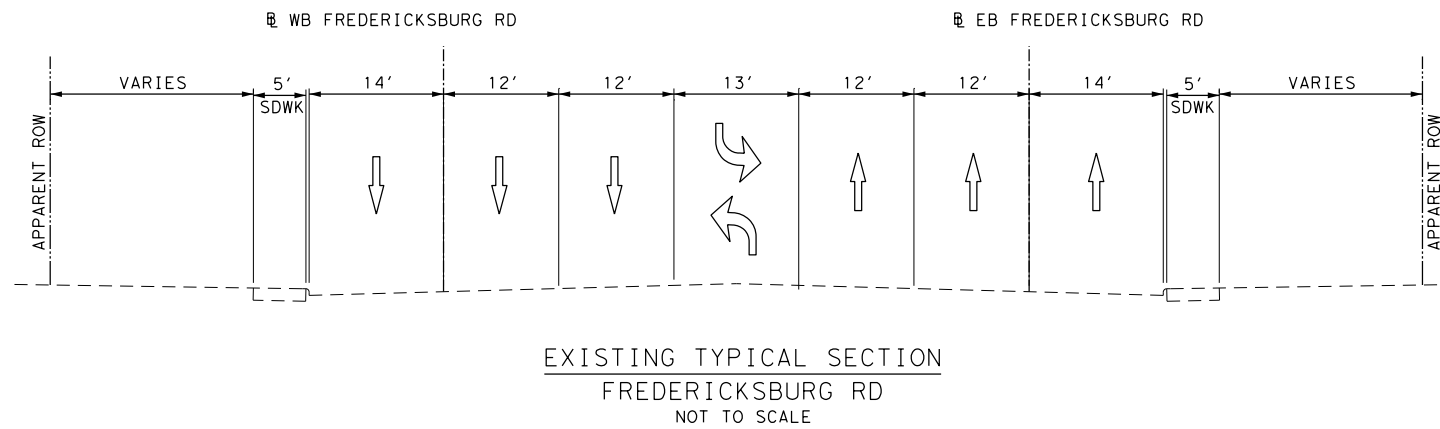
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

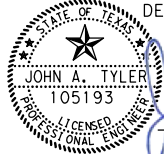
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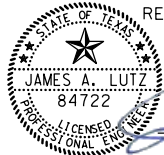
TYPICAL SECTIONS

SHEET 8 OF 11

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	19



DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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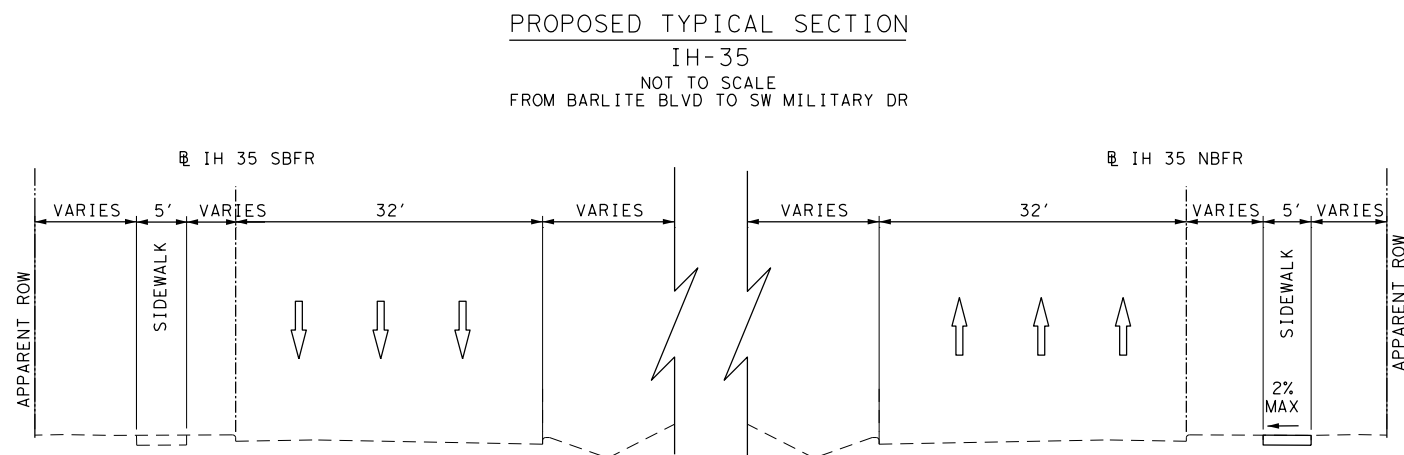
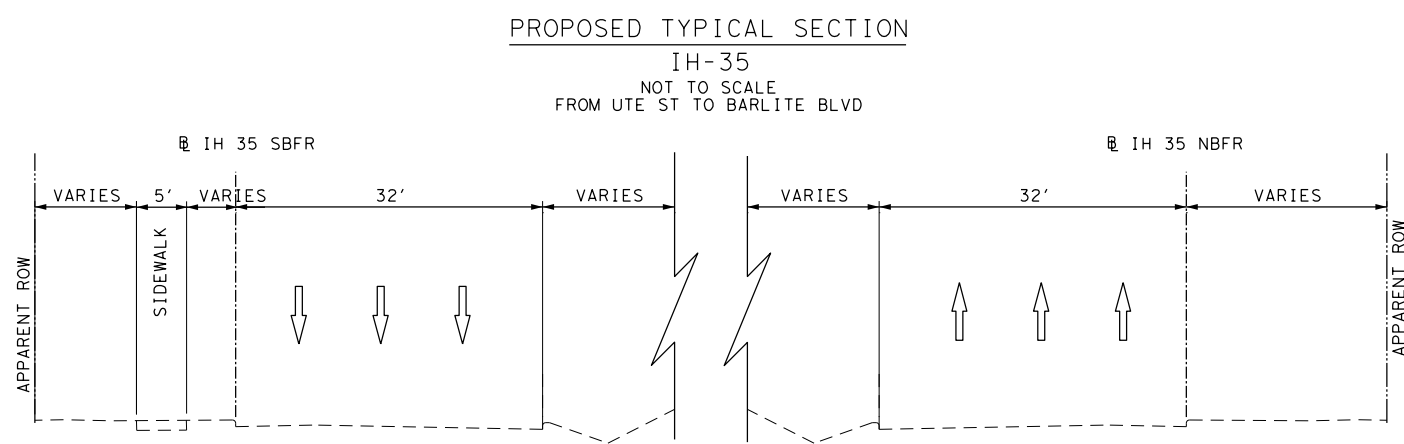
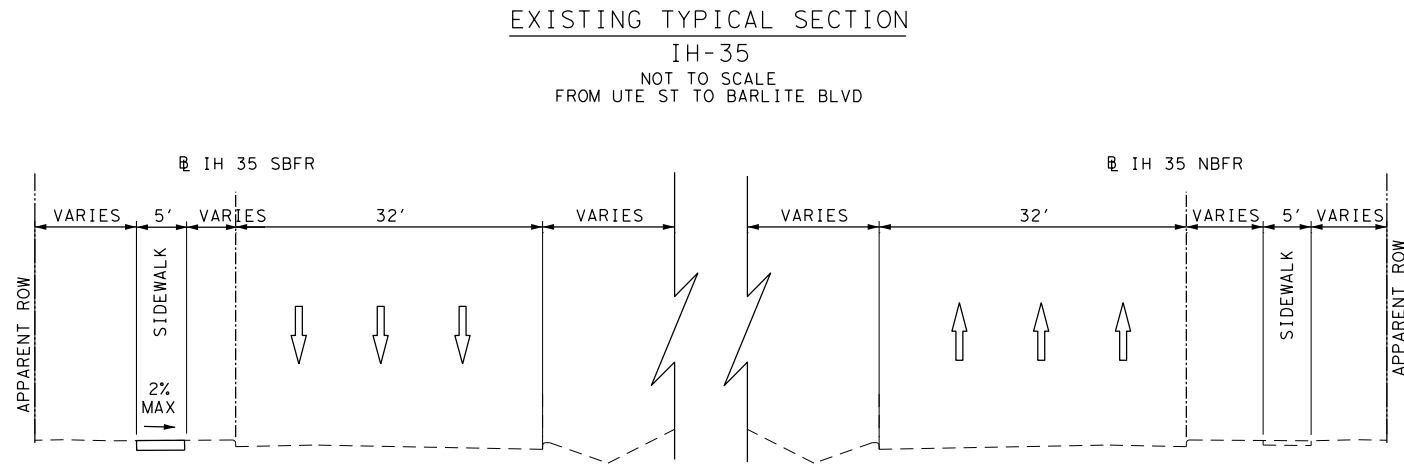
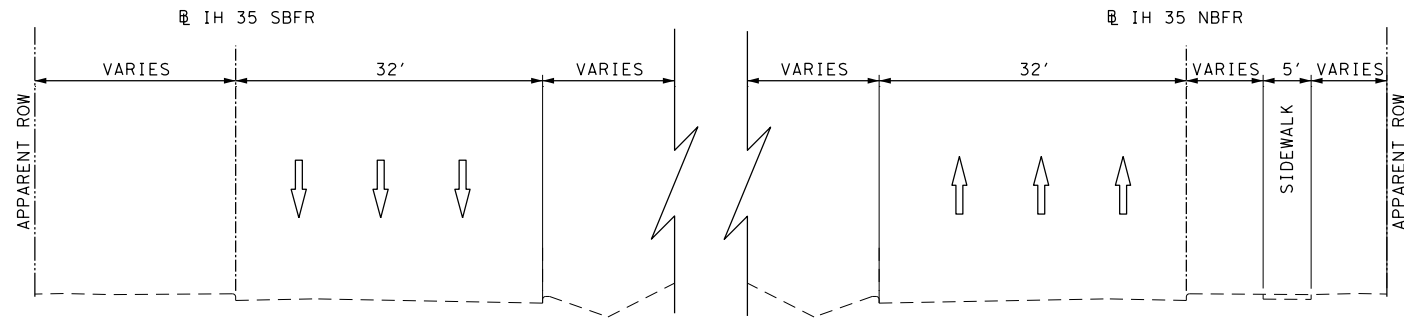
TYPICAL SECTIONS

SHEET 9 OF 11

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	20

Plotted on: 5/4/2019

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DESIGN

STATE OF TEXAS  
JOHN A. TYLER  
105193  
LICENSED PROFESSIONAL ENGINEER

5/4/2019  
DATE

JOHN A. TYLER, P.E.

REVIEW AND APPROVAL

STATE OF TEXAS  
JAMES A. LUTZ  
84722  
LICENSED PROFESSIONAL ENGINEER

5/4/2019  
DATE

JAMES A. LUTZ, P.E.

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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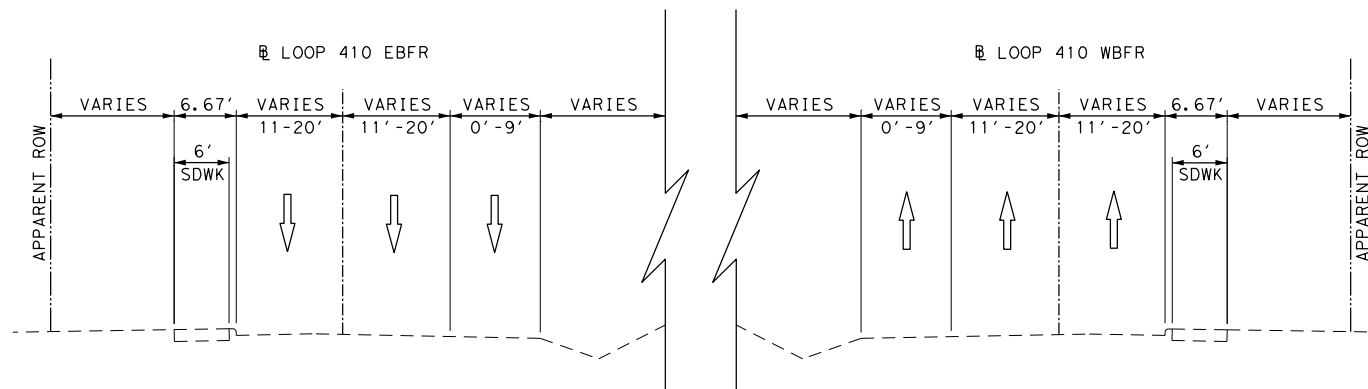
TYPICAL SECTIONS

SHEET 10 OF 11

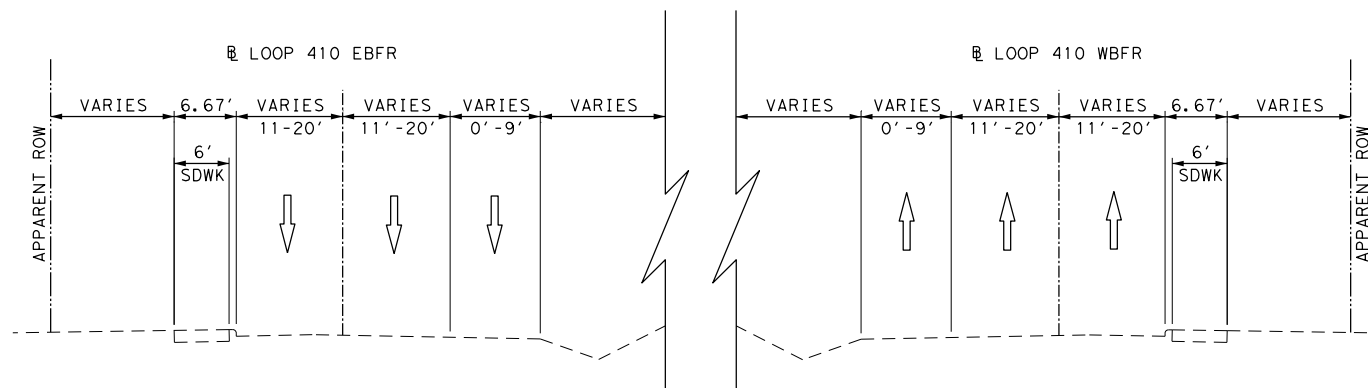
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	21

Plotted on: 5/4/2019

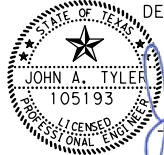
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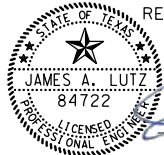


EXISTING TYPICAL SECTION  
 LOOP 410  
 NOT TO SCALE  
 FROM BEGIN PROJECT TO END PROJECT



PROPOSED TYPICAL SECTION  
 LOOP 410  
 NOT TO SCALE  
 FROM BEGIN PROJECT TO END PROJECT

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
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TYPICAL SECTIONS


SHEET 11 OF 11

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				22

Plotted on: 5/4/2019


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REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON  
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## GENERAL NOTES

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	23

Plotted on: 5/4/2019


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REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON  
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



*Texas Department of Transportation*  
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ESTIMATE  
AND  
QUANTITY

DGN:		FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:		6	TEXAS		VARIES		
DWG:		DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:		SAT	BEXAR	0915	12	576	24





Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0105-6037	0110-6001	0132-6003	0160-6003	0162-6002	0168-6001	0351-6028
		REMOVING CONC (RIPRAP) SY	REMOVING CONC (DRIVEWAYS) SY	REMOVING CONC (RETAINING WALLS) SY	REMOVING CONC (CURB OR CURB & GUTTER) LF	REMOVING CONC (SIDEWALK OR RAMP) SY	REMOVING STAB BASE AND ASPH PAV (0'-16") SY	EXCAVATION (ROADWAY) CY	EMBANKMENT (FINAL) (ORD COMP) (TY B) CY	FURNISHING AND PLACING TOP SOIL (4") SY	BLOCK SODDING SY	VEGETATIVE WATERING MG	FLEX PAVE STRUCTURE REPAIR (8"-10") SY
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00				92	1	20			56	56	0.87	
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00		56		95	4	114			35	35	0.55	
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00		53		214	18	109			61	61	0.95	
160	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00				136					42	42	0.66	
161	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00				24		132		31	254	254	3.96	
162	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00								14	325	325	5.07	
163	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00									86	86	1.34	10
164	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 609+00						101			70	70	1.09	
165	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 609+00 TO STA 611+00		13			6	50			198	198	3.09	
166	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 613+00		12				14			100	100	1.56	
167	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 613+00 TO STA 615+00		2				2			105	105	1.64	
168	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 617+00		11			16	9			90	90	1.40	
169	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 617+00 TO STA 619+00					12				80	80	1.25	
170	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 621+00									115	115	1.79	
171	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 621+00 TO STA 623+00					55	69			160	160	2.50	
172	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 625+00					12				115	115	1.79	
173	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 625+00 TO STA 627+00				30				21	170	170	2.65	
174	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00		52		191	7	155			100	100	1.56	
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00		19		238		161			150	150	2.34	
176	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00		92		208	9				95	95	1.48	
177	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00	1	239		138	8	179			26	26	0.41	
179	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00	11	93		195	9	61			70	70	1.09	
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00		199		95	21	438						
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00		108		248		282			28	28	0.44	
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT	13	43		71	12	117			70	70	1.09	
184	SL 13 SW MILITARY A EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT									7	7	0.11	
185	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00				26	22				41	41	0.64	
186	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT				10					5	5	0.08	
187	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 506+00		23				49			19	19	0.30	
188	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 506+00 TO STA 508+00		103			7	144			197	197	3.07	
189	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 510+00		74			8	69			257	257	4.01	
190	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 510+00 TO STA 512+00		132		3	8				181	181	2.82	
192	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 514+00		161			10	145			146	146	2.28	
193	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 514+00 TO STA 516+00		87							210	210	3.28	
194	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 518+00		14				28			165	165	2.57	
195	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00		46				6			115	115	1.79	
196	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 755+00		23		51	1	12			30	30	0.47	
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00				26	8				40	40	0.62	
198	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50		133		135		35			19	19	0.30	
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00		84		91		96						
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00		31		115		26			56	56	0.87	
201	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00		104		287		189			67	67	1.05	
203	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00		162		54					59	59	0.92	
204	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00		94		264	4	153			46	46	0.72	
206	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00		107		152	65	63						
208	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00		1		79					15	15	0.23	
209	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00		111		48		82			40	40	0.62	
210	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 591+50									20	20	0.31	
211	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 591+50 TO STA 593+50									8	8	0.12	
212	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 595+00		106		3		48						
213	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 595+00 TO STA 597+00		140		18								
214	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00												
215	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00				32	22				104	104	1.62	
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00		121		27		77			30	30	0.47	
217	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75		187		124	2	17			8	8	0.12	
219	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75	10			14								
220	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25	5	78		79		19						
221	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00		21				9			40	40	0.62	
222	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00		133		56	21	67			65	65	1.01	
223	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00		115		86	8	102			30	30	0.47	
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00		56		91		58						
225	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00		22		28		26						
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00		60		88		115						

REV. NO.	DATE	DESCRIPTION	BY


  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800


  
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SUMMARY OF ROADWAY QUANTITIES



SHEET 1 OF 30

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				25

Plotted on: 5/4/2019

Design File name: P:\111.35\07\design\Civil\Summaries\1113507\*Summaries\*RDWY.dgn



SHT NO	ITEM	CSJ 0915-12-576											
		SY	LF	CY	SF	CY	LF	EA	EA	LF	EA	EA	LF
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00												
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00			1.5									
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00			5.5									
160	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00			1.4				6					
161	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00			2.1			2	9					
162	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00			5.5			2						
163	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00			8.5				9					
164	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 609+00												
165	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 609+00 TO STA 611+00					5.5							
166	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 613+00												
167	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 613+00 TO STA 615+00												
168	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 617+00												
169	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 617+00 TO STA 619+00												
170	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 621+00												
171	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 621+00 TO STA 623+00												
172	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 625+00												
173	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 625+00 TO STA 627+00			5.5			37						
174	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00			2.1			2	9					
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00			5.9									
176	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00												
177	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00						1						
179	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00			5.9									
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00												
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00												
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT			5.5									
184	SL 13 SW MILITARY A EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT	132											
185	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00			0.9									
186	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT												
187	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 506+00												
188	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 506+00 TO STA 508+00												
189	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 510+00												
190	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 510+00 TO STA 512+00												
192	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 514+00												
193	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 514+00 TO STA 516+00												
194	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 518+00												
195	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00												
196	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 755+00												
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00												
198	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50												
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00			5.9									
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00						1						
201	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00			0.9									
203	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00												
204	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00												
206	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00						10						
208	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00						1						
209	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00												
210	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 591+50												
211	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 591+50 TO STA 593+50												
212	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 595+00												
213	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 595+00 TO STA 597+00			1				3					
214	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00												
215	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00			5.9									
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00												
217	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75												
219	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75												
220	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25						2						
221	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00						1						
222	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00												
223	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00												
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00												
225	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00												
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00												

REV. NO.	DATE	DESCRIPTION	BY
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS          2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000          TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>			
 <p>Texas Department of Transportation © 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 2 OF 30			
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 26

Plotted on: 5/4/2019

Design File name: P:\111.35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	CSJ 0915-12-576											
		0496-6030	0496-6041	0496-6043	0496-6099	0528-6006	0529-6001	0529-6002	0529-6012	0529-6020	0529-6023	0530-6004	0530-6005
		REMOVE STR (BOLLARD)	REMOVE STR (LARGE)	REMOVE STR (SMALL FENCE)	REMOVE STR (RAIL)	REMOVE AND RELAY PAVERS	CONC CURB (TY 1)	CONC CURB (TY 1)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	CONC CURB & GUTTER (VALLEY GUTTER) (36")	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)
	EA	EA	LF	LF	SY	LF	LF	LF	LF	LF	SY	SY	
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00						26	97			39	9	
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00						20	208			115	45	
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00						33	172			56	123	
160	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00							136					
161	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00							327	14		135		
162	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00							400					
163	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00							69					
164	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 609+00										87	15	
165	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 609+00 TO STA 611+00							52			15	48	
166	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 613+00										14	11	
167	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 613+00 TO STA 615+00										3	2	
168	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 617+00										14	7	
169	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 617+00 TO STA 619+00												
170	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 621+00												
171	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 621+00 TO STA 623+00										8	61	
172	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 625+00												
173	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 625+00 TO STA 627+00							189					
174	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00							247			99	104	
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00						22	175			252	61	
176	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00							203			103		
177	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00						44	99			182	245	
179	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00							215			96	64	
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00						74	33			215	445	
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00						39	209			109	282	
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT							75			47	108	
184	SL 13 SW MILITARY A EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT												
185	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00							26					
186	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT							10					
187	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 506+00										24		
188	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 506+00 TO STA 508+00										103		
189	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 510+00										74		
190	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 510+00 TO STA 512+00										136		
192	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 514+00										162	9	
193	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 514+00 TO STA 516+00										87		
194	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 518+00										42		
195	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00										46	6	
196	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 755+00						21	30			36		
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00							26					
198	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50						11	122			134	35	
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00						14	91			76	84	
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00						21	85			32	29	
201	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00							268			110	89	
203	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00							92			162		
204	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00							251			122	48	
206	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00							147			125	56	
208	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00							79					
209	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00							48			111	82	
210	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 591+50												
211	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 591+50 TO STA 593+50												
212	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 595+00							18			106	48	
213	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 595+00 TO STA 597+00												
214	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00												
215	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00							32					
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00							29			107	91	
217	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75							152			188	17	
219	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75							14					
220	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25							69			78	19	
221	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00										21	9	
222	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00							49			143	49	
223	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00							76			117	102	
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00							91			56	58	
225	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00							23			25	22	
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00						14	74			60	115	


REV. NO.	DATE	DESCRIPTION	BY
 <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS          2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000          TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>			
 <p>© 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 3 OF 30			
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO.:
	SAT	BEXAR	0915
			SECT. NO.:
			12
			JOB NO.:
			576
			SHEET NO.:
			27

Plotted on: 5/4/2019


Design File name: P:\111.35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0531-6001	0531-6018	0531-6019	0531-6020	0531-6022	0531-6023	0531-6024	0531-6027	0531-6029	0531-6030	0531-6031	0531-6033
		CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 5)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CURB RAMPS (TY 20)	CURB RAMPS (TY 21)	CURB RAMPS (TY 22)	CONC SIDEWALKS (SPECIAL) (TYPE B)
		SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00	64											6
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00	119											
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00	138											
160	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00	89							12				
161	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00	219											
162	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00	266											
163	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00	89											
164	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 609+00	38											
165	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 609+00 TO STA 611+00	142											
166	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 613+00	107											
167	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 613+00 TO STA 615+00	137											
168	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 617+00	124											
169	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 617+00 TO STA 619+00	98											
170	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 621+00	135											
171	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 621+00 TO STA 623+00	125											
172	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 625+00	135											
173	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 625+00 TO STA 627+00	128											
174	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00	139											
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00	129											
176	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00	131											
177	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00	83											7
179	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00	87											43
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00	62											
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00	169											
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT	74		33									
184	SL 13 SW MILITARY A EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT	11											
185	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00	29											
186	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT	3											5
187	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 506+00	26											
188	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 506+00 TO STA 508+00	89											
189	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 510+00	115											
190	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 510+00 TO STA 512+00	78											
192	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 514+00	67											
193	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 514+00 TO STA 516+00	98											
194	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 518+00	84											
195	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00	91											
196	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 755+00	35											
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00	25											
198	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50	93											
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00	73											
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00	90											
201	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00	166											17
203	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00	9											6
204	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00	156											
206	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00	93											
208	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00	69	29										
209	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00	15											
210	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 591+50	20											
211	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 591+50 TO STA 593+50	20											
212	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 595+00	79	11										4
213	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 595+00 TO STA 597+00	29											3
214	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00	40											
215	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00	118											
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00	6											12
217	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75	18											27
219	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75	14											
220	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25	40											
221	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00	46											
222	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00	57											
223	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00	80											
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00	36											
225	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00	16											
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00	76											

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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SUMMARY OF  
 ROADWAY QUANTITIES



SHEET 4 OF 30

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DWG:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	28

Plotted on: 5/4/2019

Design File name: P:\111.35\07\design\Civil\Summaries\1113507\*Summaries\*RDWY.dgn



SHT NO	ITEM	0560-6014	0624-6009	0624-6010	0624-6028	0685-6002
		MAILBOX INSTALL-S (TWG-POST) TY 4	GROUND_BOX TY D (162922)	GROUND_BOX TY D (1162922)W/APRON	REMOVE GROUND BOX	RELOCATE RDS FLASH BEACON ASSEMBLY
		EA	EA	EA	EA	EA
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00					
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00					
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00					
160	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00					
161	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00					
162	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00					
163	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00					
164	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 609+00					
165	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 609+00 TO STA 611+00					
166	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 613+00					
167	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 613+00 TO STA 615+00					
168	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 617+00					
169	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 617+00 TO STA 619+00					
170	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 621+00					
171	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 621+00 TO STA 623+00					
172	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 625+00					
173	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 625+00 TO STA 627+00					
174	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00					
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00					
176	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00					
177	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00	1				
179	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00					
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00					
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00					
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT					
184	SL 13 SW MILITARY A EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT					
185	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00					
186	SL 13 SW MILITARY A WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT					
187	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 506+00					
188	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 506+00 TO STA 508+00					
189	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 510+00					
190	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 510+00 TO STA 512+00					
192	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 514+00					
193	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 514+00 TO STA 516+00					
194	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 518+00					
195	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00					
196	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 755+00					
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00					
198	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50	1				
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00		1		1	
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00					
201	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00	2				
203	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00					
204	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00					
206	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00					
208	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00					
209	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00					
210	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 591+50					
211	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 591+50 TO STA 593+50					
212	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 595+00					
213	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 595+00 TO STA 597+00					
214	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00					
215	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00					
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00					
217	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75					
219	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75					
220	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25					
221	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00					
222	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00					
223	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00					
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00					
225	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00					
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00					

REV. NO.	DATE	DESCRIPTION	BY
 <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS 2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000 TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>			
 <p>© 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 5 OF 30			
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 29

Plotted on: 5/4/2019

Design File name: P:\111.35\07\des\gn\Civil\Summaries\1113507\*Summaries+RDWY.dgn



SHT NO	ITEM	0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0105-6037	0110-6001	0132-6003	0160-6003	0162-6002	0168-6001	0351-6028
		REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR CURB & GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING STAB BASE AND ASPH PAV (0'-16")	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (ORD COMP) (TY B)	FURNISHING AND PLACING TOP SOIL (4")	BLOCK SODDING	VEGETATIVE WATERING	FLEX PAVE STRUCTURE REPAIR (8'-10")
		SY	SY	SY	LF	SY	SY	CY	CY	SY	SY	MG	SY
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00	38	108		120	4	116			8	8	0.12	
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00		243		157	21	89						
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55		102		207		190			26	26	0.41	
231	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00		86		49		55						
232	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00	13			81					41	41	0.64	
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00		161		161		82			30	30	0.47	
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00		121		143		202						
237	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT		38		19		71						
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00		93		174		443			70	70	1.09	
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00		107		226					175	175	2.73	
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00		298		75		113			35	35	0.55	
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 758+00		293		76	51				170	170	2.65	
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 758+00 TO STA 760+00		61		79	118	34			190	190	2.96	
246	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 762+00		83		10	19	185			30	30	0.47	
247	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 762+00 TO STA 763+00						198						
248	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 763+00 TO STA 765+00		13				40						
249	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00		64		230		3			25	25	0.39	
250	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00		188		159		310						
252	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00		30		189		309						
253	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 778+00		101		26					25	25	0.39	
254	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 778+00 TO STA 780+00				10		3						
255	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 782+00		91				16						
256	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 782+00 TO STA 784+00		30		20		12						
257	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00	10	130		32		112			15	15	0.23	
259	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00	10	125		100					25	25	0.39	
261	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00	30	122		103		63			20	20	0.31	
263	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 790+00 TO STA 792+00	28	57		57	3	41			50	50	0.78	
264	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00		37		27								
265	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00		58			3				25	25	0.39	
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00		21		47	5	44						
267	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 854+00 TO STA 856+00		52		15		67						
268	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 858+00 TO STA 860+00	10	109		79	18	119						
269	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00		177	2	155	20	177			10	10	0.16	
271	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00		52		69	15	57						
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00		156		178	3	136						
273	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00		72		51		106						
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00		72		172	4	88			3	3	0.05	
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00		54		61	7	88						
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50		130		190	10	208						
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00		17		33		59						
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00		55		132		143						
280	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00		97		83		11			30	30	0.47	
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00		42		103		98						
282	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00		28		152					55	55	0.86	
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00		139		281	4	42			110	110	1.72	
284	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00		25		243		20			50	50	0.78	
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT		81		113	2				70	70	1.09	
286	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1042+00, STA 1054+50 TO STA 1056+50	9		35	69			14		83	83	1.29	
287	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00									162	162	2.53	
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00	10			67		21						
289	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1121+00 TO END PROJECT									76	76	1.19	
290	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1150+50, STA 1159+75 TO STA 1161+75					7				7	7	0.11	
291	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1191+50	24			56					43	43	0.67	
292	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50	2			23					11	11	0.17	
293	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00	42	41		107								
294	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00		4							62	62	0.97	
295	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1253+00	11	153		37					155	155	2.42	
296	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1253+00 TO STA 1255+00		32							145	145	2.26	
297	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1257+00		38		6		208			59	59	0.92	
298	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1257+00 TO STA 1259+00				36				2	108	108	1.68	
299	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00								6	356	356	5.55	
300	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT								6	328	328	5.12	
301	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00				81				14	85	85	1.33	

REV. NO.	DATE	DESCRIPTION	BY
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS            2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000            TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>  <p>Texas Department of Transportation © 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 6 OF 30			
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 30

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn



SHT NO	ITEM	CSJ 0915-12-576											
		SY	LF	CY	SF	CY	LF	EA	EA	LF	EA	EA	LF
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00												
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00												
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55												
231	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00												
232	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00			5.9									
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00												
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00												
237	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT												
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00												
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00												
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00												
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 758+00												
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 758+00 TO STA 760+00												
246	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 762+00												
247	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 762+00 TO STA 763+00												
248	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 763+00 TO STA 765+00												
249	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00			0.9		13							
250	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00												
252	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00												
253	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 778+00												
254	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 778+00 TO STA 780+00												
255	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 782+00												
256	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 782+00 TO STA 784+00												
257	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00												
259	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00												
261	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00												
263	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 790+00 TO STA 792+00												
264	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00												
265	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00												
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00												
267	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 854+00 TO STA 856+00												
268	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 858+00 TO STA 860+00												
269	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00												
271	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00												
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00												
273	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00												
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00												
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00												
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50												
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00												
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00												
280	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00												
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00												
282	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00												
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00												
284	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00												
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT												
286	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1042+00, STA 1054+50 TO STA 1056+50			8.2	225	1							
287	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00			4.2		20		18					
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00					2							
289	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1121+00 TO END PROJECT			5.5									
290	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1150+50, STA 1159+75 TO STA 1161+75												
291	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1191+50			12.8		1							
292	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50			5.5									
293	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00					8							
294	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00			2.1		3		9					
295	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1253+00			7.6		2		9					
296	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1253+00 TO STA 1255+00			6.3		6		27					
297	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1257+00												
298	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1257+00 TO STA 1259+00												
299	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00	401				8		36					
300	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT					12		36					
301	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00			7	105								

REV. NO.	DATE	DESCRIPTION	BY
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS            2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000            TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>  <p>Texas Department of Transportation © 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 7 OF 30			
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
	6	TEXAS	
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:
	SAT	BEXAR	0915
CHK DGN:	SECT. NO.:	JOB NO.:	SHEET NO.:
	12	576	31

Plotted on: 5/4/2019

Design File name: P:\111.35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	CSJ 0915-12-576												
		EA	EA	LF	LF	SY	LF	LF	LF	LF	LF	SY	SY	
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00									103			144	89
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00	2						37		125			295	79
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55									194			102	190
231	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00									49			84	57
232	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00									81				
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00									161			161	82
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00									127			119	204
237	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT							14					38	71
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00									153			282	290
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00									203			117	5
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00									100			312	105
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 758+00									137			304	
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 758+00 TO STA 760+00									14			61	
246	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 762+00									35			88	82
247	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 762+00 TO STA 763+00													93
248	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 763+00 TO STA 765+00												13	40
249	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00									206			65	3
250	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00							23		132			188	310
252	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00									189			30	156
253	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 778+00									26			101	
254	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 778+00 TO STA 780+00									10				
255	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 782+00												91	
256	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 782+00 TO STA 784+00									20			30	12
257	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00									32			130	104
259	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00									100			125	
261	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00							7		91			122	63
263	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 790+00 TO STA 792+00									54			57	41
264	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00									27			28	
265	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00												58	
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00									52			22	39
267	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 854+00 TO STA 856+00									15			52	67
268	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 858+00 TO STA 860+00									71			109	69
269	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00							34		121			179	177
271	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00									48			68	57
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00									152			159	136
273	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00							15		34			87	88
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00									164			93	69
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00									46			61	92
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50							43		147			122	247
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00									29			21	59
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00									124			105	93
280	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00									83			97	11
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00							17		86			42	98
282	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00									152			39	
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00									274			150	42
284	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00									238			25	20
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT							19		94			81	
286	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1042+00, STA 1054+50 TO STA 1056+50									69				
287	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00									214		14		
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00									79				21
289	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1121+00 TO END PROJECT													
290	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1150+50, STA 1159+75 TO STA 1161+75													
291	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1191+50									56				
292	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50									23				
293	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00									110			41	
294	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00									47			9	
295	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1253+00									63			157	
296	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1253+00 TO STA 1255+00									147		28	36	
297	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1257+00								16	129			46	162
298	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1257+00 TO STA 1259+00									99				
299	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00									344		56		
300	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT									320		56		
301	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00									81				



REV. NO.	DATE	DESCRIPTION	BY
 <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS 2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000 TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>  <p>© 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 8 OF 30			
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 32



Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0531-6001	0531-6018	0531-6019	0531-6020	0531-6022	0531-6023	0531-6024	0531-6027	0531-6029	0531-6030	0531-6031	0531-6033
		CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 5)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CURB RAMPS (TY 20)	CURB RAMPS (TY 21)	CURB RAMPS (TY 22)	CONC SIDEWALKS (SPECIAL) (TYPE B)
		SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00	108											
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00	156						18					
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55	93											38
231	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00	8											32
232	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00	61		20									
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00	29											48
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00												85
237	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT												9
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00	119											
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00	177											
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00	92											
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 758+00	24											34
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 758+00 TO STA 760+00	113											
246	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 762+00	88											
247	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 762+00 TO STA 763+00	47											
248	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 763+00 TO STA 765+00	34											
249	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00	117											12
250	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00	146											
252	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00	152											
253	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 778+00	10											4
254	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 778+00 TO STA 780+00	13											
255	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 782+00	54											
256	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 782+00 TO STA 784+00	15											
257	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00	48											
259	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00	53											
261	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00	57											
263	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 790+00 TO STA 792+00	46											
264	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00	21											
265	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00	12											
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00	42	14										
267	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 854+00 TO STA 856+00	37											
268	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 858+00 TO STA 860+00	67											4
269	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00	83											10
271	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00	29											
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00	90											18
273	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00	29											
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00	80											8
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00	22											20
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50	129											
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00	30											
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00	88											
280	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00	58											
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00	82											
282	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00	109											
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00	200					23						
284	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00	142											37
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT	96											
286	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1042+00, STA 1054+50 TO STA 1056+50	35		20									13
287	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00	13											145
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00	27											24
289	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1121+00 TO END PROJECT	136											
290	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1150+50, STA 1159+75 TO STA 1161+75												
291	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1191+50	31											
292	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50	16											
293	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00	4											48
294	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00	40											
295	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1253+00	55											
296	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1253+00 TO STA 1255+00	98											
297	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1257+00	93											
298	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1257+00 TO STA 1259+00	114		6									
299	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00	232											
300	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT	213											
301	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00	46											


REV. NO.	DATE	DESCRIPTION	BY
 <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS 2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000 TBPB FIRM REGISTRATION #470   TBPB FIRM REGISTRATION #10028800</p>  <p>© 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 9 OF 30			
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
DWG	6	TEXAS	
CHK	DIST.	COUNTY	CONT. NO.
DWG	SAT	BEXAR	0915
			SECT. NO.
			12
			JOB NO.
			576
			SHEET NO.
			33

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	0560-6014	0624-6009	0624-6010	0624-6028	0685-6002
		MAILBOX INSTALL-S (TWG-POST) TY 4	GROUND BOX TY D (162922)	GROUND BOX TY D (162922)W/APRON	REMOVE GROUND BOX	RELOCATE RSD FLASH BEACON ASSEMBLY
		EA	EA	EA	EA	EA
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00					
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00					
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55					
231	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00					
232	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00					
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00					
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00					
237	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT					
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00	2				
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00	3				
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00					
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 758+00					
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 758+00 TO STA 760+00					
246	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 762+00					
247	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 762+00 TO STA 763+00					
248	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 763+00 TO STA 765+00		1		1	
249	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00		1		1	
250	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00					
252	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00					
253	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 778+00					
254	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 778+00 TO STA 780+00					
255	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 782+00					
256	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 782+00 TO STA 784+00					
257	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00	1				
259	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00					
261	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00	1				
263	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 790+00 TO STA 792+00					
264	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00					
265	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00					
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00		1		1	
267	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 854+00 TO STA 856+00		1		1	
268	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 858+00 TO STA 860+00					
269	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00					
271	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00					
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00		1		1	
273	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00					
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00					
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00					
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50					
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00					
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00					
280	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00					
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00					
282	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00		1		1	
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00		1		1	
284	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00					
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT					
286	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1042+00, STA 1054+50 TO STA 1056+50		1		1	
287	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00			1	1	
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00					
289	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1121+00 TO END PROJECT					
290	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1150+50, STA 1159+75 TO STA 1161+75					
291	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1191+50					
292	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50					
293	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00					
294	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00					
295	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1253+00					
296	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1253+00 TO STA 1255+00					
297	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1257+00					
298	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1257+00 TO STA 1259+00					
299	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00					
300	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT					
301	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00					

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON  
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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## SUMMARY OF ROADWAY QUANTITIES

SHEET 10 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	34

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0105-6037	0110-6001	0132-6003	0160-6003	0162-6002	0168-6001	0351-6028
		REMOVING CONC (RIPRAP) SY	REMOVING CONC (DRIVEWAYS) SY	REMOVING CONC (RETAINING WALLS) SY	REMOVING CONC (CURB OR CURB & GUTTER) LF	REMOVING CONC (SIDEWALK OR RAMP) SY	REMOVING STAB BASE AND ASPH PAV (0'-16") SY	EXCAVATION (ROADWAY) CY	EMBANKMENT (FINAL) (ORD COMP) (TY B) CY	FURNISHING AND PLACING TOP SOIL (4") SY	BLOCK SODDING SY	VEGETATIVE WATERING MG	FLEX PAVE STRUCTURE REPAIR (8"-10") SY
302	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1337+00				41			8		44	44	0.69	
304	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00				40					14	14	0.22	
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00	19			73	27			13	109	109	1.70	
306	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50		211		95					100	100	1.56	
307	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00	13								3	3	0.05	
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50	17			40	6				135	135	2.11	
309	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00	35	5		10		10		3	54	54	0.84	
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00		23				33			25	25	0.39	
312	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1404+00 TO STA 1406+00						69	1	40	170	170	2.65	
314	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1408+00		162				42	2	3	225	225	3.51	
315	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1408+00 TO STA 1410+00		445		8					70	70	1.09	
317	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1412+00						63			85	85	1.33	
318	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1412+00 TO STA 1414+00			20			381			145	145	2.26	
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00				24		440			75	75	1.17	
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00						362			65	65	1.01	
321	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1418+00									70	70	1.09	
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00				102	1	128			125	125	1.95	
324	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1425+00				14	9	109	42		90	90	1.40	
325	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00							65		85	85	1.33	
326	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1429+00									70	70	1.09	
327	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1429+00 TO STA 1430+40		33		9	10	27			40	40	0.62	
329	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00				61	5				30	30	0.47	
330	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00		92				169	23	43	180	180	2.81	
333	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1436+00 TO STA 1440+00		129				157	22	44	155	155	2.42	
335	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1440+00 TO STA 1444+00		42				200	10	98	233	233	3.63	
337	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1444+00 TO STA 1448+00	44	86		87			38	65	225	225	3.51	
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00	45	82					20		240	240	3.74	179
341	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1452+00 TO STA 1456+00							19		390	390	6.08	
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50	16						3	5	100	100	1.56	
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00		69							320	320	4.99	
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00												
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00						92						
348	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1479+00 TO STA 1483+00	7	294						43	110	110	1.72	
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00	26			127					100	100	1.56	
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00		73				129		225	275	275	4.29	
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00						130	31	71	230	230	3.59	
355	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00								74	120	120	1.87	
356	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00						63		43	95	95	1.48	
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00		43							145	145	2.26	
358	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1504+00 TO STA 1508+00		45				42			95	95	1.48	
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50				3	18				115	115	1.79	
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00							36	97	610	610	9.52	
362	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1526+00 TO 1528+00, STA 1530+00 TO STA 1532+00						429	2	18	25	25	0.39	
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00									70	70	1.09	
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00	12			26	13				21	21	0.33	
367	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1722+00 TO 1724+00, STA 1730+00 TO STA 1732+00			96	49	12				15	15	0.23	8
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00	16			37				16	150	150	2.34	11
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00	131	149						72	143	143	2.23	20
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00	108	254							12	12	0.19	
373	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1755+00 TO STA 1758+50									18	18	0.28	
374	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1760+50 TO STA 1762+00		16				53			77	77	1.20	
375	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1762+00 TO STA 1764+00		51				77			55	55	0.86	
376	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1764+00 TO STA 1765+00		15			1	34			145	145	2.26	
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00				41					80	80	1.25	
378	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1769+00						392			86	86	1.34	
379	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1769+00 TO STA 1771+00						252			165	165	2.57	
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00								3	130	130	2.03	
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00						30	1		80	80	1.25	
382	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1775+00 TO STA 1776+00				21					100	100	1.56	
383	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1778+00 TO STA 1782+00				33	7	363			60	60	0.94	
384	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1784+50 TO STA 1788+50						36			13	13	0.20	
385	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50						2			87	87	1.36	
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00				5		139						

REV. NO.	DATE	DESCRIPTION	BY



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES

SHEET 11 OF 30


CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				35

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576											
		SY	LF	CY	SF	CY	LF	EA	EA	LF	EA	EA	LF
302	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1337+00			5.9	98	4	34						
304	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00			5.9	105		51						
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00	181		14.8	208	4	106	9					
306	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50			5.5									
307	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00					3							
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50	282		6.5		4		3					
309	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00			8.9	330	17	100	9					
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00						37						
312	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1404+00 TO STA 1406+00					2	136			11			
314	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1408+00												
315	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1408+00 TO STA 1410+00												
317	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1412+00			1		2		4					
318	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1412+00 TO STA 1414+00			1				3					
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00			8	104		35	9					
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00			8	104		35	9					
321	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1418+00												
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00	414											
324	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1425+00												
325	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00												
326	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1429+00												
327	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1429+00 TO STA 1430+40			7.5	90		32	9					
329	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00												
330	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00			2.1				9					206
333	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1436+00 TO STA 1440+00												
335	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1440+00 TO STA 1444+00			23		2		9					
337	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1444+00 TO STA 1448+00			12.2	90	104	170	27					
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00			2.1		31	50	9					100
341	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1452+00 TO STA 1456+00												
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50					3	40						
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00			7.9	156	13	166	9					
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00												
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00												
348	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1479+00 TO STA 1483+00					2	30						
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00					16							
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00			11.9	75		35	18					
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00			9	138		344	27					
355	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00			3			400	9					
356	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00			3			35	9					
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00			6				18					
358	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1504+00 TO STA 1508+00			9		3		27					
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50					4							
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00			5.9	100		35						
362	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1526+00 TO 1528+00, STA 1530+00 TO STA 1532+00			7.9	195	7	34	12					
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00					55	145						
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00			1		11	17	3					
367	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1722+00 TO 1724+00, STA 1730+00 TO STA 1732+00			6.8	105								
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00	18		5.5		4						1	
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00	18				23						1	
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00	54				16						3	
373	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1755+00 TO STA 1758+50												
374	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1760+50 TO STA 1762+00												
375	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1762+00 TO STA 1764+00												
376	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1764+00 TO STA 1765+00												
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00			5.9	120		34						
378	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1769+00												
379	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1769+00 TO STA 1771+00												
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00						14						
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00						34						
382	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1775+00 TO STA 1776+00												
383	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1778+00 TO STA 1782+00			8.9		2		9					
384	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1784+50 TO STA 1788+50												
385	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50												
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00												

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES



SHEET 12 OF 30

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				36

Plotted on: 5/4/2019

Design File name: P:\111.35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0496-6030	0496-6041	0496-6043	0496-6099	0528-6006	0529-6001	0529-6002	0529-6012	0529-6020	0529-6023	0530-6004	0530-6005
		REMOVE STR (BOLLARD)	REMOVE STR (LARGE)	REMOVE STR (SMALL FENCE)	REMOVE STR (RAIL)	REMOVE AND RELAY PAVERS	CONC CURB (TY 1)	CONC CURB (TY 1)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	CONC CURB & GUTTER (VALLEY GUTTER) (36")	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)
	CSJ 0915-12-576	EA	EA	LF	LF	SY	LF	LF	LF	LF	LF	SY	SY
302	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1337+00							41					
304	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00							40					
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00				20			143		14			
306	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50							119				214	
307	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00								9				
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50							108	9				
309	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00							139		14		5	6
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00											41	14
312	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1404+00 TO STA 1406+00											16	53
314	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1408+00											179	26
315	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1408+00 TO STA 1410+00											410	
317	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1412+00							8				27	36
318	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1412+00 TO STA 1414+00							216			52	222	71
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00							108		14		438	
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00							89		14		360	
321	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1418+00												
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00							86				20	108
324	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1425+00				21			14				23	86
325	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00												
326	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1429+00							24				19	42
327	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1429+00 TO STA 1430+40							45					
329	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00							63					
330	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00							173		14		180	95
333	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1436+00 TO STA 1440+00							153				205	83
335	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1440+00 TO STA 1444+00							202		14		117	131
337	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1444+00 TO STA 1448+00							326		42		92	
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00		1					271		14		87	
341	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1452+00 TO STA 1456+00												
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50							12					
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00							103		14		69	
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00												
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00							51				74	19
348	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1479+00 TO STA 1483+00							154				310	
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00							392					
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00							208		28		162	72
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00							214		42		121	33
355	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00							386		14			
356	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00							235		14		66	
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00							282		28		40	
358	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1504+00 TO STA 1508+00							208		42		85	
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50							59					
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00							255					
362	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1526+00 TO 1528+00, STA 1530+00 TO STA 1532+00							137					
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00							163				101	330
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00							48	42				
367	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1722+00 TO 1724+00, STA 1730+00 TO STA 1732+00							49					
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00							68					26
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00							297				150	
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00							232				243	
373	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1755+00 TO STA 1758+50					150							
374	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1760+50 TO STA 1762+00											21	49
375	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1762+00 TO STA 1764+00											39	90
376	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1764+00 TO STA 1765+00											12	38
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00												
378	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1769+00							118				49	342
379	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1769+00 TO STA 1771+00											26	226
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00												
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00											15	15
382	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1775+00 TO STA 1776+00												
383	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1778+00 TO STA 1782+00							21					
384	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1784+50 TO STA 1788+50							76	8			46	317
385	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50												36
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00						21	126				57	88


REV. NO.	DATE	DESCRIPTION	BY
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS          2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000          TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>			
 <p>Texas Department of Transportation © 2019</p>			
<p>SUMMARY OF ROADWAY QUANTITIES</p>			
SHEET 13 OF 30			
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 37

Plotted on: 5/4/2019

Design File name: P:\111.35\07\desi\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576												
		0531-6001	0531-6018	0531-6019	0531-6020	0531-6022	0531-6023	0531-6024	0531-6027	0531-6029	0531-6030	0531-6031	0531-6033	
		CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 5)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CURB RAMPS (TY 20)	CURB RAMPS (TY 21)	CURB RAMPS (TY 22)	CONC SIDEWALKS (SPECIAL) (TYPE B)	
		SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	
302	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1337+00	23												
304	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00	12											15	
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00	43											88	
306	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50	12											54	
307	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00	5												
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50	92		15										
309	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00	22		20									46	
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00												21	
312	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1404+00 TO STA 1406+00	94												
314	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1408+00	39											35	
315	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1408+00 TO STA 1410+00	54												
317	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1412+00	108												
318	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1412+00 TO STA 1414+00	88												
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00	89		27									8	
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00	95		21										
321	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1418+00	68												
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00	70	7											
324	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1425+00	28											75	
325	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00	135												
326	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1429+00	18											43	
327	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1429+00 TO STA 1430+40	16											19	
329	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00	5											38	
330	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00	17											82	
333	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1436+00 TO STA 1440+00												77	
335	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1440+00 TO STA 1444+00												134	
337	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1444+00 TO STA 1448+00	111											72	
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00	157		42									24	
341	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1452+00 TO STA 1456+00	234												
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50	16	13	20			13				10		22	
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00	84											63	
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00	71												
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00	81												
348	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1479+00 TO STA 1483+00	55											22	
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00	155				98				11	12			
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00	125											17	
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00	27											129	
355	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00												258	
356	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00	16											138	
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00	204			31								42	
358	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1504+00 TO STA 1508+00	123												
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50	13		29	31					8			18	
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00	12											160	
362	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1526+00 TO 1528+00, STA 1530+00 TO STA 1532+00	68											13	
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00	18											85	
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00	3		10		5		10					10	
367	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1722+00 TO 1724+00, STA 1730+00 TO STA 1732+00	28												
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00	50												
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00	204											48	
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00	176												
373	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1755+00 TO STA 1758+50	14												
374	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1760+50 TO STA 1762+00	23												
375	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1762+00 TO STA 1764+00	86												
376	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1764+00 TO STA 1765+00	53												
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00	127			23								45	
378	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1769+00	77												
379	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1769+00 TO STA 1771+00	54											30	
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00	117											9	
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00	79											23	
382	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1775+00 TO STA 1776+00	57												
383	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1778+00 TO STA 1782+00	55												
384	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1784+50 TO STA 1788+50	111												
385	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50	24												
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00	100								31				

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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## SUMMARY OF ROADWAY QUANTITIES

SHEET 14 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				38

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	0560-6014	0624-6009	0624-6010	0624-6028	0685-6002
		EA	EA	EA	EA	EA
302	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1337+00					
304	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00					
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00		1		1	
306	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50					
307	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00		1		1	
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50					
309	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00					
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00					
312	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1404+00 TO STA 1406+00					
314	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1408+00					
315	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1408+00 TO STA 1410+00					
317	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1412+00					
318	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1412+00 TO STA 1414+00					
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00		1		1	
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00		1		1	
321	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1418+00					
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00					
324	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1425+00					
325	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00					
326	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1429+00					
327	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1429+00 TO STA 1430+40					
329	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00					
330	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00					
333	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1436+00 TO STA 1440+00					
335	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1440+00 TO STA 1444+00					
337	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1444+00 TO STA 1448+00					
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00					
341	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1452+00 TO STA 1456+00					
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50		1		1	
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00					
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00					
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00					
348	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1479+00 TO STA 1483+00					
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00					
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00					
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00					
355	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00					
356	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00	1				
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00					
358	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1504+00 TO STA 1508+00					
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50					
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00					
362	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1526+00 TO 1528+00, STA 1530+00 TO STA 1532+00					
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00	1				
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00					
367	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1722+00 TO 1724+00, STA 1730+00 TO STA 1732+00					
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00					
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00					
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00					
373	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1755+00 TO STA 1758+50					
374	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1760+50 TO STA 1762+00					
375	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1762+00 TO STA 1764+00					
376	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1764+00 TO STA 1765+00					
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00					
378	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1769+00					
379	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1769+00 TO STA 1771+00					
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00					
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00					
382	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1775+00 TO STA 1776+00					
383	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1778+00 TO STA 1782+00					
384	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1784+50 TO STA 1788+50					
385	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50					
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00					

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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## SUMMARY OF ROADWAY QUANTITIES

SHEET 15 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				39

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\gn\Civil\Summaries\Summaryes+RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576												
		0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0105-6037	0110-6001	0132-6003	0160-6003	0162-6002	0168-6001	0351-6028	
		REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR CURB & GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING STAB BASE AND ASPH PAV (0'-16")	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (ORD COMP) (TY B)	FURNISHING AND PLACING TOP SOIL (4")	BLOCK SODDING	VEGETATIVE WATERING	FLEX PAVE STRUCTURE REPAIR (8"-10")	
		SY	SY	SY	LF	SY	SY	CY	CY	SY	SY	MG	SY	
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00						173			58	58	0.90		
388	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1799+00 TO STA 1801+00									30	30	0.47		
389	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1801+00 TO STA 1803+00						304			170	170	2.65		
390	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1803+00 TO STA 1805+00						161			150	150	2.34		
391	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1805+00 TO STA 1807+00						177			100	100	1.56		
392	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1807+00 TO STA 1808+00						92			75	75	1.17		
393	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1808+00 TO STA 1810+00						153			137	137	2.14		
394	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1810+00 TO STA 1811+00						3			50	50	0.78		
395	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1811+00 TO STA 1813+00						4	302		45	45	0.70		
396	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1816+00 TO STA 1820+00						109			19	19	0.30		
398	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1820+00 TO STA 1824+00									89	89	1.39		
399	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1828+00 TO STA 1830+00				61		252			150	150	2.34		
400	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1836+00 TO STA 1838+00													
401	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1838+00 TO STA 1840+00									36	36	0.56		
402	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1840+00 TO STA 1842+00						95			71	71	1.11		
403	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1848+00 TO STA 1850+00									77	77	1.20		
404	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1850+00 TO STA 1852+00									156	156	2.43		
405	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+00 TO STA 1855+00									229	229	3.57		
406	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+50 TO STA 1854+00									140	140	2.18		
407	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1858+00 TO STA 1860+00						39			30	30	0.47		
408	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1860+00 TO STA 1862+00						32			130	130	2.03		
409	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1862+00 TO STA 1864+00		97			3	36			150	150	2.34		
410	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1864+00 TO STA 1865+50		93							57	57	0.89		
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50				44	2				50	50	0.78		
413	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1867+50 TO STA 1869+50		227				60			135	135	2.11		
414	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1869+50 TO STA 1871+50		48				191			153	153	2.39		
415	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1871+50 TO STA 1873+50		345			88				247	247	3.85		
416	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1873+50 TO STA 1875+00		176			88				130	130	2.03		
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00	11			22		111			74	74	1.15	64	
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00									115	115	1.79		
419	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1885+00 TO STA 1889+00		26							33	33	0.51		
420	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1889+00 TO STA 1893+00		105							6	6	0.09		
422	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1893+00 TO STA 1897+00		12							96	96	1.50		
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00									24	24	0.37		
424	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1928+00 TO 1930+00, STA 1938+00 TO STA 1940+00									40	40	0.62		
425	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 2026+00 TO STA 2028+00				64	53				120	120	1.87		
427	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 102+00		13		48		17			11	11	0.17		
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00		100		125	7	182			112	112	1.75		
429	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 104+00 TO STA 106+00		89		134	3	108			6	6	0.09		
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50		74		252	3	42			39	39	0.61		
431	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 107+50 TO STA 109+50				121		23							
432	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 109+50 TO STA 111+00	11	154		73	3	22			10	10	0.16		
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00		51	2	162	2	138							
434	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 113+00 TO STA 114+50		304		128	13	69							
435	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 114+50 TO STA 116+50	7	104	10	145	2	52			51	51	0.80		
437	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 116+50 TO STA 118+00		218		101		35			64	64	1.00		
438	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 118+00 TO STA 119+50		92		80	4	92							
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50		253		99	7	166							
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00		128		68	5	95							
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00		144	1	114	12	173							
443	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 125+00 TO STA 127+00		139	3	149	17	167							
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50	1	98		87	14	137							
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50		150	10	56	5	209							
449	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 130+50 TO STA 132+00		67		122		54							
450	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 132+00 TO STA 134+00		135		107		66							
452	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 135+50		258		148	15	64							
454	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 135+50 TO STA 136+75		41		24	5								
455	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 136+75 TO STA 138+75		99	12	140	19	124			14	14	0.22		
457	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 138+75 TO STA 140+75		131		154	5	64							
459	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 140+75 TO STA 142+75		202	4	87	6	33			32	32	0.50		
461	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 142+75 TO END PROJECT		43											
463	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 209+00, STA 216+00 TO STA 218+00				4					99	99	1.54		
464	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN STA 223+00 TO END PROJECT		72		79	5	18			96	96	1.50		

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES

SHEET 16 OF 30

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DGN:	SAT:	BEXAR:	0915:	12:
DWG:			576:	40:





Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	CSJ 0915-12-576											
		SY	LF	CY	SF	CY	LF	EA	EA	LF	EA	EA	LF
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00												
388	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1799+00 TO STA 1801+00												
389	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1801+00 TO STA 1803+00												
390	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1803+00 TO STA 1805+00												
391	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1805+00 TO STA 1807+00												
392	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1807+00 TO STA 1808+00												
393	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1808+00 TO STA 1810+00												
394	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1810+00 TO STA 1811+00												
395	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1811+00 TO STA 1813+00												
396	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1816+00 TO STA 1820+00												
398	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1820+00 TO STA 1824+00												
399	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1828+00 TO STA 1830+00							6	24				
400	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1836+00 TO STA 1838+00												
401	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1838+00 TO STA 1840+00												
402	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1840+00 TO STA 1842+00												
403	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1848+00 TO STA 1850+00								10				
404	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1850+00 TO STA 1852+00								10				
405	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+00 TO STA 1855+00								190				
406	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+50 TO STA 1854+00												
407	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1858+00 TO STA 1860+00												
408	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1860+00 TO STA 1862+00												
409	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1862+00 TO STA 1864+00												
410	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1864+00 TO STA 1865+50												
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50							1					
413	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1867+50 TO STA 1869+50												
414	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1869+50 TO STA 1871+50												
415	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1871+50 TO STA 1873+50												
416	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1873+50 TO STA 1875+00			5.5									
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00			5			4		18				
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00												
419	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1885+00 TO STA 1889+00												
420	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1889+00 TO STA 1893+00			0.9	160	14	21						
422	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1893+00 TO STA 1897+00												
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00												
424	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1928+00 TO 1930+00, STA 1938+00 TO STA 1940+00			5.9	80		33						
425	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 2026+00 TO STA 2028+00			5.5									
427	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 102+00												
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00												
429	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 104+00 TO STA 106+00												
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50			0.9									
431	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 107+50 TO STA 109+50												
432	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 109+50 TO STA 111+00						2						
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00												
434	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 113+00 TO STA 114+50												
435	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 114+50 TO STA 116+50												
437	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 116+50 TO STA 118+00			1.5									
438	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 118+00 TO STA 119+50												
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50												
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00												
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00												
443	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 125+00 TO STA 127+00												
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50												
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50						1						
449	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 130+50 TO STA 132+00												
450	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 132+00 TO STA 134+00			0.9		1							
452	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 135+50						2						
454	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 135+50 TO STA 136+75						1						
455	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 136+75 TO STA 138+75												
457	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 138+75 TO STA 140+75							1					
459	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 140+75 TO STA 142+75												
461	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 142+75 TO END PROJECT			1.2	86								
463	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 209+00, STA 216+00 TO STA 218+00			6.9	105				3				
464	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN STA 223+00 TO END PROJECT			5.9									

REV. NO.	DATE	DESCRIPTION	BY


  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800


  
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SUMMARY OF  
 ROADWAY QUANTITIES

SHEET 17 OF 30

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DWG:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				41




Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	0531-6001	0531-6018	0531-6019	0531-6020	0531-6022	0531-6023	0531-6024	0531-6027	0531-6029	0531-6030	0531-6031	0531-6033
		CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 5)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CURB RAMPS (TY 20)	CURB RAMPS (TY 21)	CURB RAMPS (TY 22)	CONC SIDEWALKS (SPECIAL) (TYPE B)
		SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00	57											
388	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1799+00 TO STA 1801+00	23											
389	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1801+00 TO STA 1803+00	80											
390	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1803+00 TO STA 1805+00	95											
391	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1805+00 TO STA 1807+00	105											
392	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1807+00 TO STA 1808+00	56											
393	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1808+00 TO STA 1810+00	111											
394	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1810+00 TO STA 1811+00	40											
395	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1811+00 TO STA 1813+00	28											
396	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1816+00 TO STA 1820+00	21											
398	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1820+00 TO STA 1824+00	81											
399	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1828+00 TO STA 1830+00	61											13
400	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1836+00 TO STA 1838+00	10	7										
401	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1838+00 TO STA 1840+00	23											
402	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1840+00 TO STA 1842+00	34											
403	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1848+00 TO STA 1850+00	66											37
404	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1850+00 TO STA 1852+00	107											5
405	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+00 TO STA 1855+00	90											106
406	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+50 TO STA 1854+00	130											
407	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1858+00 TO STA 1860+00	24											
408	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1860+00 TO STA 1862+00	108											
409	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1862+00 TO STA 1864+00	57											
410	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1864+00 TO STA 1865+50	52											
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50	56						25					
413	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1867+50 TO STA 1869+50	33											48
414	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1869+50 TO STA 1871+50	83											
415	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1871+50 TO STA 1873+50	99											
416	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1873+50 TO STA 1875+00	96											
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00	77	6	12									
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00	112											
419	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1885+00 TO STA 1889+00	55											28
420	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1889+00 TO STA 1893+00	41											130
422	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1893+00 TO STA 1897+00	100											57
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00	23		9				7			7		
424	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1928+00 TO 1930+00, STA 1938+00 TO STA 1940+00	10				10							22
425	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 2026+00 TO STA 2028+00	60											
427	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 102+00	22											8
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00	162											14
429	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 104+00 TO STA 106+00	59											26
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50	143											10
431	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 107+50 TO STA 109+50	78											8
432	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 109+50 TO STA 111+00	57											3
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00	110											
434	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 113+00 TO STA 114+50	74											
435	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 114+50 TO STA 116+50	53											16
437	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 116+50 TO STA 118+00	46											
438	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 118+00 TO STA 119+50	49											
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50	79											
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00	41											
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00	87											
443	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 125+00 TO STA 127+00	60											17
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50	47											
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50	16											12
449	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 130+50 TO STA 132+00	44											26
450	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 132+00 TO STA 134+00	43											17
452	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 135+50	80											
454	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 135+50 TO STA 136+75	11											
455	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 136+75 TO STA 138+75	49											17
457	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 138+75 TO STA 140+75	23											49
459	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 140+75 TO STA 142+75	37											10
461	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 142+75 TO END PROJECT	4											
463	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 209+00, STA 216+00 TO STA 218+00	20					18						38
464	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN STA 223+00 TO END PROJECT	174											3

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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## SUMMARY OF ROADWAY QUANTITIES



SHEET 19 OF 30

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DWG:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				43

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0560-6014	0624-6009	0624-6010	0624-6028	0685-6002
	CSJ 0915-12-576	MAILBOX INSTALL-S (TWG-POST) TY 4	GROUND_BOX TY D (162922)	GROUND_BOX TY D (162922)W/APRON	REMOVE GROUND BOX	RELOCATE RDS FLASH BEACON ASSEMBLY
		EA	EA	EA	EA	EA
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00					
388	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1799+00 TO STA 1801+00					
389	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1801+00 TO STA 1803+00					
390	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1803+00 TO STA 1805+00					
391	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1805+00 TO STA 1807+00					
392	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1807+00 TO STA 1808+00					
393	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1808+00 TO STA 1810+00					
394	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1810+00 TO STA 1811+00					
395	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1811+00 TO STA 1813+00					
396	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1816+00 TO STA 1820+00					
398	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1820+00 TO STA 1824+00					
399	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1828+00 TO STA 1830+00					
400	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1836+00 TO STA 1838+00					
401	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1838+00 TO STA 1840+00					
402	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1840+00 TO STA 1842+00					
403	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1848+00 TO STA 1850+00					
404	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1850+00 TO STA 1852+00					
405	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+00 TO STA 1855+00					
406	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1852+50 TO STA 1854+00					
407	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1858+00 TO STA 1860+00					
408	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1860+00 TO STA 1862+00					
409	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1862+00 TO STA 1864+00					
410	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1864+00 TO STA 1865+50					
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50					
413	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1867+50 TO STA 1869+50					
414	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1869+50 TO STA 1871+50					
415	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1871+50 TO STA 1873+50					
416	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1873+50 TO STA 1875+00					
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00					
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00					
419	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1885+00 TO STA 1889+00					
420	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1889+00 TO STA 1893+00					
422	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1893+00 TO STA 1897+00					
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00					
424	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1928+00 TO 1930+00, STA 1938+00 TO STA 1940+00					
425	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 2026+00 TO STA 2028+00					
427	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 102+00					
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00					
429	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 104+00 TO STA 106+00					
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50					
431	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 107+50 TO STA 109+50					
432	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 109+50 TO STA 111+00					
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00					
434	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 113+00 TO STA 114+50					
435	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 114+50 TO STA 116+50					
437	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 116+50 TO STA 118+00					
438	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 118+00 TO STA 119+50					
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50					
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00					
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00					
443	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 125+00 TO STA 127+00					
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50					1
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50					
449	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 130+50 TO STA 132+00					
450	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 132+00 TO STA 134+00					
452	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 135+50					1
454	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 135+50 TO STA 136+75					
455	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 136+75 TO STA 138+75					
457	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 138+75 TO STA 140+75					
459	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 140+75 TO STA 142+75					
461	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 142+75 TO END PROJECT					
463	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 209+00, STA 216+00 TO STA 218+00					
464	SW LOOP 410 NB SIDEWALK CONSTRUCTION PLAN STA 223+00 TO END PROJECT					


REV. NO.	DATE	DESCRIPTION	BY			
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS            2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000            TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>						
 <p>Texas Department of Transportation © 2019</p>						
<p>SUMMARY OF ROADWAY QUANTITIES</p>						
SHEET 20 OF 30						
CHK DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	44

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576											
		0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0105-6037	0110-6001	0132-6003	0160-6003	0162-6002	0168-6001	0351-6028
		REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR CURB & GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING STAB BASE AND ASPH PAV (0'-16")	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (ORD COMP) (TY B)	FURNISHING AND PLACING TOP SOIL (4")	BLOCK SODDING	VEGETATIVE WATERING	FLEX PAVE STRUCTURE REPAIR (8"-10")
		SY	SY	SY	LF	SY	SY	CY	CY	SY	SY	MG	SY
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00									281	281	4.38	
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00	9			15					275	275	4.29	
467	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 291+00 TO 295+00	6		5	251					110	110	1.72	
468	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00	1	21							148	148	2.31	
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT									62	62	0.97	
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00									100	100	1.56	
471	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 361+00 TO STA 365+00									140	140	2.18	
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00				53					140	140	2.18	
473	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 369+00 TO STA 373+00									175	175	2.73	
474	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 373+00 TO STA 377+00									250	250	3.90	
475	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 377+00 TO STA 381+00									200	200	3.12	
476	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00		95		38	1				50	50	0.78	
479	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 393+00 TO STA 397+00				56	13				20	20	0.31	
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00				50	18				20	20	0.31	
481	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 409+00 TO STA 413+00				6	1							
482	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 427+00 TO END PROJECT				22	7				50	50	0.78	
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00									70	70	1.09	
484	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 456+00 TO STA 460+00									140	140	2.18	
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00									140	140	2.18	
486	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 464+00 TO STA 467+50				17			147		215	215	3.35	
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00	55			465	7				100	100	1.56	
489	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 471+00 TO STA 475+00		75		349	18				140	140	2.18	
490	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 475+00 TO STA 479+00				400					140	140	2.18	
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00	17	9		352	4				140	140	2.18	
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00				162	22				95	95	1.48	
493	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 485+00 TO STA 487+00				13	8				70	70	1.09	
494	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 487+00 TO STA 489+00		40		13	17				80	80	1.25	
495	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 489+00 TO STA 491+00		35		12	10				80	80	1.25	
496	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 491+00 TO STA 493+00				85	6				130	130	2.03	
497	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 493+00 TO STA 495+00				152	15				115	115	1.79	
498	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN NAVAJO ST				95					40	40	0.62	
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00				36	14				75	75	1.17	
500	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 511+00 TO STA 515+00		51		27	4	9			160	160	2.50	
501	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 515+00 TO STA 518+00		58		28	2				40	40	0.62	
502	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 518+00 TO STA 522+00				14					30	30	0.47	
503	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 532+00 TO STA 536+00				37	36				55	55	0.86	
504	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00		125		87	4				140	140	2.18	
505	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 540+00 TO STA 542+00				98					100	100	1.56	
506	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 542+00 TO STA 544+00				187					140	140	2.18	
507	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 544+00 TO STA 546+00				87					205	205	3.20	
508	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 546+00 TO STA 547+00									75	75	1.17	
509	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 547+00 TO STA 549+00				16					240	240	3.74	
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00		84		44					140	140	2.18	
511	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 551+00 TO STA 553+00									200	200	3.12	
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00		88		113		95			150	150	2.34	
513	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 555+00 TO STA END PROJECT				169	4	180			195	195	3.04	
514	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 977+00 TO STA 981+00				28	9				42	42	0.66	
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00	11			28								
516	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00	3	13		31		61						
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50	40	67		265	12	79						
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50	30			92		6						
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50	95	35		285	12	25						
520	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00	5	50		207	12	24			62	62	0.97	
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00		18		224	8	73			63	63	0.98	
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50		143		167	23	20						
525	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1060+50 TO STA 1063+25		272		221		118						
526	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1063+25 TO STA 1065+25, STA 1263+00 TO STA 1265+00	4			61		30						
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00	3	119		53		184						
528	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1069+00 TO STA 1071+00	2					213						
529	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1071+00 TO STA 1073+00, STA 1271+50 TO STA 1272+50	1	26		55		269						
530	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1073+00 TO STA 1076+50		77		61		253						
531	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1076+50 TO STA 1080+00	4	58		238	2	107			70	70	1.09	
532	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1080+00 TO STA 1083+00		12		32		12			9	9	0.14	

REV. NO.	DATE	DESCRIPTION	BY



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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SUMMARY OF  
ROADWAY QUANTITIES

SHEET 21 OF 30


DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DWG:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				45

Plotted on: 5/4/2019


Design File name: P:\11135\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	CSJ 0915-12-576											
		SY	LF	CY	SF	CY	LF	EA	EA	LF	EA	EA	LF
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00												
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00			5.9	105	1							
467	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 291+00 TO 295+00			5.9									
468	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00												
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT			6.9				3					
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00												
471	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 361+00 TO STA 365+00			5.5									
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00			5.5									
473	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 369+00 TO STA 373+00												
474	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 373+00 TO STA 377+00												
475	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 377+00 TO STA 381+00												
476	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00												
479	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 393+00 TO STA 397+00			5.5									
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00			5.5									
481	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 409+00 TO STA 413+00												
482	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 427+00 TO END PROJECT			5.5									
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00												
484	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 456+00 TO STA 460+00												
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00												
486	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 464+00 TO STA 467+50												
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00												
489	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 471+00 TO STA 475+00					10							
490	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 475+00 TO STA 479+00			5.5									
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00					3							
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00												
493	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 485+00 TO STA 487+00			5.5									
494	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 487+00 TO STA 489+00												
495	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 489+00 TO STA 491+00												
496	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 491+00 TO STA 493+00			5.5									
497	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 493+00 TO STA 495+00												
498	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN NAVAJO ST			5.9									
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00			5.5									
500	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 511+00 TO STA 515+00					4							
501	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 515+00 TO STA 518+00					4							
502	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 518+00 TO STA 522+00												
503	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 532+00 TO STA 536+00			5.5									
504	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00												
505	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 540+00 TO STA 542+00												
506	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 542+00 TO STA 544+00			3		2		9					
507	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 544+00 TO STA 546+00												
508	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 546+00 TO STA 547+00												
509	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 547+00 TO STA 549+00												
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00												
511	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 551+00 TO STA 553+00												
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00												
513	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 555+00 TO STA END PROJECT												
514	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 977+00 TO STA 981+00			5.9									
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00			5.9	210	2							
516	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00					1							
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50					9							
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50					7							
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50					18							
520	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00					1							
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00												
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50												
525	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1060+50 TO STA 1063+25												
526	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1063+25 TO STA 1065+25, STA 1263+00 TO STA 1265+00					120	1						
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00						1						
528	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1069+00 TO STA 1071+00						2						
529	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1071+00 TO STA 1073+00, STA 1271+50 TO STA 1272+50						1						
530	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1073+00 TO STA 1076+50												
531	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1076+50 TO STA 1080+00			3		1		9					
532	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1080+00 TO STA 1083+00												

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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## SUMMARY OF ROADWAY QUANTITIES

SHEET 22 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				46


Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0496-6030	0496-6041	0496-6043	0496-6099	0528-6006	0529-6001	0529-6002	0529-6012	0529-6020	0529-6023	0530-6004	0530-6005
		REMOVE STR (BOLLARD)	REMOVE STR (LARGE)	REMOVE STR (SMALL FENCE)	REMOVE STR (RAIL)	REMOVE AND RELAY PAVERS	CONC CURB (TY 1)	CONC CURB (TY 1)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	CONC CURB & GUTTER (VALLEY GUTTER) (36")	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)
	CSJ 0915-12-576	EA	EA	LF	LF	SY	LF	LF	LF	LF	LF	SY	SY
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00							29					
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00						19	56					
467	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 291+00 TO 295+00							275					
468	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00							25				24	
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT							109					
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00												
471	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 361+00 TO STA 365+00												
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00							88					
473	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 369+00 TO STA 373+00												
474	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 373+00 TO STA 377+00												
475	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 377+00 TO STA 381+00												
476	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00							38				96	
479	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 393+00 TO STA 397+00							56					
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00							50					
481	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 409+00 TO STA 413+00							6					
482	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 427+00 TO END PROJECT							22					
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00											40	
484	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 456+00 TO STA 460+00												
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00												
486	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 464+00 TO STA 467+50							17					
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00							458					
489	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 471+00 TO STA 475+00							378				79	
490	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 475+00 TO STA 479+00							400					
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00							346				27	
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00							162					
493	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 485+00 TO STA 487+00							13					
494	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 487+00 TO STA 489+00							42				55	
495	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 489+00 TO STA 491+00							42				45	
496	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 491+00 TO STA 493+00							85					
497	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 493+00 TO STA 495+00							161					
498	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN NAVAJO ST							95					
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00							41					
500	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 511+00 TO STA 515+00							22				64	
501	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 515+00 TO STA 518+00							21				62	
502	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 518+00 TO STA 522+00							14					
503	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 532+00 TO STA 536+00							37					
504	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00							267				136	
505	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 540+00 TO STA 542+00							200					
506	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 542+00 TO STA 544+00							187		14			
507	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 544+00 TO STA 546+00							87					
508	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 546+00 TO STA 547+00												
509	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 547+00 TO STA 549+00							10					
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00							57				84	
511	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 551+00 TO STA 553+00												
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00							136				90	
513	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 555+00 TO STA END PROJECT							169					
514	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 977+00 TO STA 981+00							28					
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00							28					
516	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00							24				25	55
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50							256				88	79
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50							92				6	
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50							278				41	32
520	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00							130				61	24
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00					4		200				25	73
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50							148				175	12
525	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1060+50 TO STA 1063+25							190				293	43
526	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1063+25 TO STA 1065+25, STA 1263+00 TO STA 1265+00			15				83					15
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00				25			52				201	103
528	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1069+00 TO STA 1071+00							77				124	89
529	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1071+00 TO STA 1073+00, STA 1271+50 TO STA 1272+50							42				149	129
530	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1073+00 TO STA 1076+50							73				233	110
531	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1076+50 TO STA 1080+00							237		14		83	80
532	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1080+00 TO STA 1083+00							30				8	16

REV. NO.	DATE	DESCRIPTION	BY


  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800


  
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SUMMARY OF  
 ROADWAY QUANTITIES

SHEET 23 OF 30


CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
	6	TEXAS		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
	SAT	BEXAR	0915	12
CHK DGN:	JOB NO.:	SHEET NO.:		
	576	47		

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\1113507\*Summaries+RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576												
		CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 5)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CURB RAMPS (TY 20)	CURB RAMPS (TY 21)	CURB RAMPS (TY 22)	CONC SIDEWALKS (SPECIAL) (TYPE B)	
		SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00	205												
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00	177												
467	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 291+00 TO 295+00	182												
468	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00	106		18										
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT	67		6										
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00	148												
471	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 361+00 TO STA 365+00	266												
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00	217			15			11						
473	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 369+00 TO STA 373+00	268												
474	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 373+00 TO STA 377+00	268												
475	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 377+00 TO STA 381+00	244												
476	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00	66											8	
479	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 393+00 TO STA 397+00	65												
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00	76												
481	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 409+00 TO STA 413+00	3						9						
482	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 427+00 TO END PROJECT	47												
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00	121												
484	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 456+00 TO STA 460+00	268												
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00	268												
486	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 464+00 TO STA 467+50	234											38	
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00	218			27							43	6	
489	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 471+00 TO STA 475+00	216											16	
490	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 475+00 TO STA 479+00	268												
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00	242	10		18		9							
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00	119	8	15										
493	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 485+00 TO STA 487+00	133												
494	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 487+00 TO STA 489+00	114												
495	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 489+00 TO STA 491+00	118												
496	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 491+00 TO STA 493+00	147												
497	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 493+00 TO STA 495+00	89			15									
498	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN NAVAJO ST	75												
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00	70												
500	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 511+00 TO STA 515+00	20												
501	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 515+00 TO STA 518+00	37												
502	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 518+00 TO STA 522+00	6	9											
503	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 532+00 TO STA 536+00	85												
504	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00	118											16	
505	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 540+00 TO STA 542+00	100												
506	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 542+00 TO STA 544+00	127												
507	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 544+00 TO STA 546+00	134												
508	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 546+00 TO STA 547+00	66												
509	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 547+00 TO STA 549+00	138												
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00	104												
511	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 551+00 TO STA 553+00	132												
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00	99												
513	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 555+00 TO STA END PROJECT	112												
514	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 977+00 TO STA 981+00	18												
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00	15												
516	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00	8											4	
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50	109												
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50	36			12									
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50	160			8									
520	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00	12											63	
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00	88			15								41	
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50	38											28	
525	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1060+50 TO STA 1063+25	76												
526	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1063+25 TO STA 1065+25, STA 1263+00 TO STA 1265+00	47												
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00	16	16											
528	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1069+00 TO STA 1071+00	13												
529	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1071+00 TO STA 1073+00, STA 1271+50 TO STA 1272+50	4		29										
530	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1073+00 TO STA 1076+50	19												
531	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1076+50 TO STA 1080+00	61											26	
532	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1080+00 TO STA 1083+00												6	

REV. NO.	DATE	DESCRIPTION	BY



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES

SHEET 24 OF 30

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DWG:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				48




Plotted on: 5/4/2019

Design File name: P:\11135\07\des\ign\Civil\Summaries\1113507\*Summaries+RDWY.dgn


SHT NO	ITEM	0560-6014	0624-6009	0624-6010	0624-6028	0685-6002
	CSJ 0915-12-576	MAILBOX INSTALL-S (TWG-POST) TY 4	GROUND_BOX TY D (162922)	GROUND_BOX TY D (162922)W/APRON	REMOVE GROUND BOX	RELOCATE RDS FLASH BEACON ASSEMBLY
		EA	EA	EA	EA	EA
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00					
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00					
467	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 291+00 TO 295+00					
468	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00					
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT					
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00					
471	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 361+00 TO STA 365+00					
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00					
473	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 369+00 TO STA 373+00					
474	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 373+00 TO STA 377+00					
475	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 377+00 TO STA 381+00					
476	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00					
479	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 393+00 TO STA 397+00					
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00					
481	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 409+00 TO STA 413+00					
482	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 427+00 TO END PROJECT					
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00					
484	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 456+00 TO STA 460+00					
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00					
486	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 464+00 TO STA 467+50		1		1	
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00		4	1	5	
489	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 471+00 TO STA 475+00					
490	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 475+00 TO STA 479+00					
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00					
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00					
493	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 485+00 TO STA 487+00					
494	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 487+00 TO STA 489+00					
495	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 489+00 TO STA 491+00					
496	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 491+00 TO STA 493+00					
497	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 493+00 TO STA 495+00					
498	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN NAVAJO ST					
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00					
500	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 511+00 TO STA 515+00					
501	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 515+00 TO STA 518+00					
502	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 518+00 TO STA 522+00					
503	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 532+00 TO STA 536+00					
504	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00					
505	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 540+00 TO STA 542+00					
506	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 542+00 TO STA 544+00					
507	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 544+00 TO STA 546+00					
508	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 546+00 TO STA 547+00					
509	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 547+00 TO STA 549+00					
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00					
511	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 551+00 TO STA 553+00					
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00					
513	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 555+00 TO STA END PROJECT					
514	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 977+00 TO STA 981+00					
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00					
516	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00					
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50					
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50					
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50					
520	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00					
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00					
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50					
525	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1060+50 TO STA 1063+25					
526	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1063+25 TO STA 1065+25, STA 1263+00 TO STA 1265+00					
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00					
528	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1069+00 TO STA 1071+00					
529	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1071+00 TO STA 1073+00, STA 1271+50 TO STA 1272+50					
530	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1073+00 TO STA 1076+50					
531	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1076+50 TO STA 1080+00					
532	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1080+00 TO STA 1083+00					

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON  
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES

SHEET 25 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				49

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576												
		0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0105-6037	0110-6001	0132-6003	0160-6003	0162-6002	0168-6001	0351-6028	
		REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR CURB & GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING STAB BASE AND ASPH PAV (0'-16")	EXCAVATION (ROADWAY)	EMBANKMENT (FINAL) (ORD COMP) (TY B)	FURNISHING AND PLACING TOP SOIL (4")	BLOCK SODDING	VEGETATIVE WATERING	FLEX PAVE STRUCTURE REPAIR (8"-10")	
		SY	SY	SY	LF	SY	SY	CY	CY	SY	SY	MG	SY	
533	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1245+00 TO STA 1248+00				84	13	72			24	24	0.37		
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00	5	41		167	17	85							
535	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1261+00 TO STA 1263+00		17		76	8								
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50		76		56	8	225							
537	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50				199	5	42							
538	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50		72		292	10	99			15	15	0.23		
539	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1276+50 TO STA 1280+50		107		60	4				66	66	1.03		
540	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1280+50 TO END PROJECT		25		170	4	11			74	74	1.15		
541	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 643+00		45		59			3		65	65	1.01		
542	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 643+00 TO STA 646+25	8	85		215			47	23	130	130	2.03		
543	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00	82	351		132				3	248	248	3.87		
545	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00	35	227		127					75	75	1.17		
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00		224		211		7			147	147	2.29		
547	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 667+00 TO END PROJECT		115							103	103	1.61		
548	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 800+00 TO STA 802+00, STA 804+00 TO STA 806+00				28	8				13	13	0.20		
549	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 812+00 TO STA 814+00, STA 818+00 TO STA 820+00				23					35	35	0.55		
550	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 840+00 TO STA 842+00, STA 857+00 TO END PROJECT				23					69	69	1.08		
551	LOOP 410-B SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1305+00, STA 1321+00 TO STA 1323+00		45		47					35	35	0.55		
552	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00		27		93									
553	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1369+00 TO STA 1373+00		52		27					6	6	0.09		
554	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00				35	4								
555	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1377+00 TO STA 1381+00				52									
556	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00		60		93	11	9			46	46	0.72		
557	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1402+50 TO STA 1404+50, STA 1415+00 TO STA 1417+00		269		68	10				104	104	1.62		
558	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1420+00 TO STA 1424+00	11			108					45	45	0.70		
559	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1450+00 TO STA 1453+50	12			34		14			49	49	0.76		
560	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1458+00 TO END PROJECT				36									
561	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA BEGIN PROJECT TO STA 1518+00, STA 1522+00 TO STA 1524+00		46		39	5				23	23	0.36		
562	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00		117		125	28				31	31	0.48		
563	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1576+00 TO STA 1580+00		72		95	6				40	40	0.62		
564	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1580+00 TO STA 1584+00		51		43					27	27	0.42		
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00	12			99									
566	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1647+00 TO STA 1651+00		74		46	4				24	24	0.37		
567	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1651+00 TO STA 1655+00		122		73	8				47	47	0.73		
568	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1655+00 TO STA 1657+00	68	69		74	28				58	58	0.90		
	TOTALS (CSJ 0915-12-576)	1315	18595	180	21816	1661	19240	387	1349	26175	26175	408.33	292	

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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### SUMMARY OF ROADWAY QUANTITIES

SHEET 26 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	50

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576											
		SY	LF	CY	SF	CY	LF	EA	EA	LF	EA	EA	LF
533	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1245+00 TO STA 1248+00												
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00						3						
535	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1261+00 TO STA 1263+00												
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50												
537	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50												
538	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50												
539	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1276+50 TO STA 1280+50												
540	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1280+50 TO END PROJECT												
541	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 643+00												
542	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 643+00 TO STA 646+25												
543	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00			3		5		9					
544	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00			5.5		38							
545	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00					7	33		1				
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00												
547	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 667+00 TO END PROJECT												
548	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 800+00 TO STA 802+00, STA 804+00 TO STA 806+00			5.9									
549	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 812+00 TO STA 814+00, STA 818+00 TO STA 820+00			5.5									
550	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 840+00 TO STA 842+00, STA 857+00 TO END PROJECT			7									
551	LOOP 410-B SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1305+00, STA 1321+00 TO STA 1323+00			6.7				9					
552	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00								1				
553	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1369+00 TO STA 1373+00												
554	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00												
555	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1377+00 TO STA 1381+00												
556	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00												
557	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1402+50 TO STA 1404+50, STA 1415+00 TO STA 1417+00								1				
558	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1420+00 TO STA 1424+00						2						
559	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1450+00 TO STA 1453+50			5.5		2							
560	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1458+00 TO END PROJECT												
561	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA BEGIN PROJECT TO STA 1518+00, STA 1522+00 TO STA 1524+00												
562	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00												
563	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1576+00 TO STA 1580+00												
564	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1580+00 TO STA 1584+00												
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00						2						
566	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1647+00 TO STA 1651+00												
567	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1651+00 TO STA 1655+00												
568	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1655+00 TO STA 1657+00			7.3		12							
TOTALS (CSJ 0915-12-576)		1410	90	547.5	3214	677	2470	481	3	11	1	5	306

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES

SHEET 27 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	51

Plotted on: 5/4/2019

Design File Name: P:\111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	0496-6030	0496-6041	0496-6043	0496-6099	0528-6006	0529-6001	0529-6002	0529-6012	0529-6020	0529-6023	0530-6004	0530-6005
		REMOVE STR (BOLLARD)	REMOVE STR (LARGE)	REMOVE STR (SMALL FENCE)	REMOVE STR (RAIL)	REMOVE AND RELAY PAVERS	CONC CURB (TY I)	CONC CURB (TY II)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	CONC CURB & GUTTER (VALLEY GUTTER) (36")	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)
	CSJ 0915-12-576	EA	EA	LF	LF	SY	LF	LF	LF	LF	LF	SY	SY
533	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1245+00 TO STA 1248+00							106				34	44
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00							161				50	72
535	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1261+00 TO STA 1263+00							75				25	
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50							103				82	236
537	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50							198					
538	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50						39	277				84	50
539	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1276+50 TO STA 1280+50							79				76	
540	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1280+50 TO END PROJECT							183				22	12
541	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 643+00							49				62	
542	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 643+00 TO STA 646+25							247		14		90	
543	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00							200				376	
545	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00							129				209	
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00							230				240	7
547	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 667+00 TO END PROJECT							44				62	
548	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 800+00 TO STA 802+00, STA 804+00 TO STA 806+00							28					
549	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 812+00 TO STA 814+00, STA 818+00 TO STA 820+00							23					
550	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 840+00 TO STA 842+00, STA 857+00 TO END PROJECT												
551	LOOP 410-B SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1305+00, STA 1321+00 TO STA 1323+00							70				48	
552	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00							95				34	
553	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1369+00 TO STA 1373+00							25				51	
554	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00							61					
555	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1377+00 TO STA 1381+00							54					
556	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00							159				66	9
557	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1402+50 TO STA 1404+50, STA 1415+00 TO STA 1417+00							67				273	
558	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1420+00 TO STA 1424+00							108					
559	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1450+00 TO STA 1453+50							34					26
560	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1458+00 TO END PROJECT							34					
561	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA BEGIN PROJECT TO STA 1518+00, STA 1522+00 TO STA 1524+00							39				51	
562	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00							89				159	
563	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1576+00 TO STA 1580+00							113				60	
564	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1580+00 TO STA 1584+00							43				54	
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00							88					
566	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1647+00 TO STA 1651+00							45				78	
567	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1651+00 TO STA 1655+00							104				126	
568	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1655+00 TO STA 1657+00							80				67	
	TOTALS (CSJ 0915-12-576)	3	2	15	66	154	1367	30137	68	546	52	22824	14191

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF ROADWAY QUANTITIES

SHEET 28 OF 30


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	52

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn


SHT NO	ITEM	CSJ 0915-12-576												
		0531-6001	0531-6018	0531-6019	0531-6020	0531-6022	0531-6023	0531-6024	0531-6027	0531-6029	0531-6030	0531-6031	0531-6033	
		CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)	CURB RAMPS (TY 5)	CURB RAMPS (TY 6)	CURB RAMPS (TY 7)	CURB RAMPS (TY 10)	CURB RAMPS (TY 20)	CURB RAMPS (TY 21)	CURB RAMPS (TY 22)	CONC SIDEWALKS (SPECIAL) (TYPE B)	
		SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	SY	
533	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1245+00 TO STA 1248+00	31												
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00	49			16									
535	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1261+00 TO STA 1263+00	37											22	
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50	15											15	
537	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50	119												
538	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50	155											6	
539	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1276+50 TO STA 1280+50	38												
540	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1280+50 TO END PROJECT	76											17	
541	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 643+00	74												
542	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 643+00 TO STA 646+25	34											143	
543	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00	98												
545	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00	39											26	
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00	137												
547	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 667+00 TO END PROJECT	126												
548	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 800+00 TO STA 802+00, STA 804+00 TO STA 806+00	17												
549	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 812+00 TO STA 814+00, STA 818+00 TO STA 820+00	13												
550	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 840+00 TO STA 842+00, STA 857+00 TO END PROJECT	74												
551	LOOP 410-B SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1305+00, STA 1321+00 TO STA 1323+00	21											14	
552	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00	17											23	
553	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1369+00 TO STA 1373+00	11												
554	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00	13											10	
555	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1377+00 TO STA 1381+00	6											17	
556	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00	74												
557	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1402+50 TO STA 1404+50, STA 1415+00 TO STA 1417+00	69												
558	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1420+00 TO STA 1424+00	67												
559	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1450+00 TO STA 1453+50	18												
560	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1458+00 TO END PROJECT	26												
561	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA BEGIN PROJECT TO STA 1518+00, STA 1522+00 TO STA 1524+00	20												
562	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00	35											9	
563	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1576+00 TO STA 1580+00	49												
564	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1580+00 TO STA 1584+00	25												
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00	116												
566	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1647+00 TO STA 1651+00	25												
567	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1651+00 TO STA 1655+00	28											14	
568	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1655+00 TO STA 1657+00	89												
	TOTALS (CSJ 0915-12-576)	26753	136	369	188	113	63	80	43	19	29	43	3970	

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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SUMMARY OF  
ROADWAY QUANTITIES



SHEET 29 OF 30

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	53

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\des\ign\Civil\Summaries\1113507\*Summaries\*RDWY.dgn

SHT NO	ITEM	0560-6014	0624-6009	0624-6010	0624-6028	0685-6002
		EA	EA	EA	EA	EA
533	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1245+00 TO STA 1248+00		1		1	
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00					
535	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1261+00 TO STA 1263+00					
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50					
537	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50					
538	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50					
539	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1276+50 TO STA 1280+50					
540	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1280+50 TO END PROJECT					
541	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 643+00					
542	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 643+00 TO STA 646+25					
543	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 646+25 TO STA 650+00					
545	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 650+00 TO STA 654+00					
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00					
547	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 667+00 TO END PROJECT					
548	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 800+00 TO STA 802+00, STA 804+00 TO STA 806+00					
549	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 812+00 TO STA 814+00, STA 818+00 TO STA 820+00					
550	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 840+00 TO STA 842+00, STA 857+00 TO END PROJECT					
551	LOOP 410-B SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1305+00, STA 1321+00 TO STA 1323+00					
552	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00					
553	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1369+00 TO STA 1373+00					
554	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00					
555	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1377+00 TO STA 1381+00					
556	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00					
557	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1402+50 TO STA 1404+50, STA 1415+00 TO STA 1417+00					
558	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1420+00 TO STA 1424+00					
559	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1450+00 TO STA 1453+50					
560	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1458+00 TO END PROJECT					
561	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA BEGIN PROJECT TO STA 1518+00, STA 1522+00 TO STA 1524+00					
562	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00					
563	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1576+00 TO STA 1580+00					
564	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1580+00 TO STA 1584+00					
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00					
566	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1647+00 TO STA 1651+00					
567	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1651+00 TO STA 1655+00					
568	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1655+00 TO STA 1657+00					
	TOTALS (CSJ 0915-12-576)	13	20	2	22	2


REV. NO.	DATE	DESCRIPTION	BY			
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS            2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000            TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>						
 <p>Texas Department of Transportation © 2019</p>						
<p>SUMMARY OF ROADWAY QUANTITIES</p>						
SHEET 30 OF 30						
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	54

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\Summaryes+SPM.dgn


SHT NO	ITEM	CSJ 0915-12-576												
		EA	EA	EA	EA	LF	LF	EA	EA	EA	LF	LF	LF	
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00	1												
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00													
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00	2							40					40
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00	1												
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00	1												
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00	1												
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT	1							164					164
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00		1											
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00	1												
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00	1												
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00											132		
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00	1												
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00											155		
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00											119		
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00	1												
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55											117		
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00	1								1				
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00											120		
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00													
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00													
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00													
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00		1											
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00											60		
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50											250		
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00	1										40		
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00	1										149		
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00											79		
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00													
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT									2				
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00	1												
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00	2						8	99			16	8	99
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50	1							203			24		203
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00	1												
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00													
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00													
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00	1										74		
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00	2												
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50													
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00											12		
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00	1												
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00	1												
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00	1	2									475		475
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00	1												
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00	1												
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00	2												
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50	1												
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00	1												
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00	2												
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00													
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00											62		
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00											400		
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00											400		
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00	1												70
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00	1												
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00	1												
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00	1												
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00	1												
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50													
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00	1												
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00	1												
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00	1												
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00												18	
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50	1												

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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SUMMARY OF  
 SIGNING AND PAVEMENT  
 MARKINGS QUANTITIES

SHEET 1 OF 6

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	55


SHT NO	ITEM	CSJ 0915-12-576											
		0666-6231	0666-6234	0666-6243	0666-6303	0666-6315	0677-6001	0677-6003	0677-6007	0677-6008	0678-6001	0678-6004	0678-6008
		PAVEMENT SEALER (ARROW)	PAVEMENT SEALER (DBL ARROW)	PAVEMENT SEALER (YLD TRI)	RE PM W/RET REO TY 1 (W) 4" (SLD) (100M IL)	RE PM W/RET REO TY 1 (Y) 4" (SLD) (100M IL)	ELIM EXT PAV. MRK & MRKS (4")	ELIM EXT PAV. MRK & MRKS (8")	ELIM EXT PAV. MRK & MRKS (24")	ELIM EXT PAV. MRK & MRKS (ARROW)	PAV. SUPP. PREP FOR MRK (4")	PAV. SUPP. PREP FOR MRK (8")	PAV. SUPP. PREP FOR MRK (24")
		EA	EA	EA	LF	LF	LF	LF	LF	EA	LF	LF	LF
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00												
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00												
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00												
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00								70				40
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00												
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00												
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT						132						164
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00												
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00												
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00												
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00					132					132		
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00												
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00				155		82				155		
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00				119		82				119		
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00												
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55												
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00	1					117	58			117		
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00						120				120		
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00												187
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00												
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00		2										
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00												
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00				60		35				60		
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50				150	100	190				250		
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00					40	30				40		
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00					149	81				149		
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00					79	62				79		
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00												
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT	2								2			
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00												
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00						16				16	8	99
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50				8	16			70		24		203
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00												
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00												
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00												
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00					74					74		
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00												
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50												
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00												
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00												
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00												
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00							32	16	237			475
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00												
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00												
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00												
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50												
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00												
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00												
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00												
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00					62	62				62		
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00					400	400				400		
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00					400	400				400		
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00									80			70
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00												
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00												
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00												
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00												
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50									150			150
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00												
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00												
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00												
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00				18						18		
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50												

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



Texas Department of Transportation  
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SUMMARY OF  
 SIGNING AND PAVEMENT  
 MARKINGS QUANTITIES

SHEET 2 OF 6



DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	56



Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\Civil\Summaries\Summaries\PM.dgn

SHT NO	ITEM	0678-6009	0678-6010	0678-6022	0688-6001	0688-6002	0690-6030
		PAV SURF PREP FOR MKK (ARROW)	PAV SURF PREP FOR MKK (DBL ARROW)	PAV SURF PREP FOR MKK (18") (YLD TRI)	PED DETECT PUSH BUTTON (APS)	PED DETECT PUSH BUTTON (STANDARD)	REMOVAL OF PEDESTRIAN PUSH BUTTONS
	CSJ 0915-12-576	EA	EA	EA	EA	EA	EA
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00						
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00						
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00						
175	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00						
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00						
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00						
183	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT						
197	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 754+00 TO STA 755+00						
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00						
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00						
216	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00						
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00						
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00						
227	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00						
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00						
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55						
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00	1					
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00						
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00						
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00					1	1
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00		2				
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00						
275	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00						
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50						
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00						
279	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00						
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00						
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00					2	2
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT	2					
288	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00						
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00					2	2
308	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50						
311	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1404+00						
319	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00					1	1
320	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00					1	1
322	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00						
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00						
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50					4	4
344	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00						
346	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1477+00						
347	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1477+00 TO STA 1479+00						
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00					1	1
352	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00						
353	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00						
357	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00						
359	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50					2	2
360	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00						
363	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00						
365	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00					2	2
368	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00						
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00						
371	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00						
377	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1767+00					2	2
380	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1771+00 TO STA 1773+00						
381	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1775+00						
386	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00						
387	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00						
412	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO STA 1467+50					1	1
417	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1875+00 TO STA 1877+00						
418	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1879+00 TO STA 1883+00						
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00						
428	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 102+00 TO STA 104+00						
430	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 106+00 TO STA 107+50						


REV. NO.	DATE	DESCRIPTION	BY
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS            2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000            TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>  <p>Texas Department of Transportation © 2019</p>			
<p>SUMMARY OF SIGNING AND PAVEMENT MARKINGS QUANTITIES</p>			
SHEET 3 OF 6			
CHK DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.
	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
	SAT	BEXAR	0915
			SECT. NO.
			12
			JOB NO.
			576
			SHEET NO.
			57


Plotted on: 5/4/2019

Design File Name: P:\1111\35\07\design\Civil\Summaries\1113507\*Summaries\*SPM.dgn

SHT NO	ITEM	CSJ 0915-12-576											
		0644-6070	0644-6076	0658-6050	0658-6060	0666-6036	0666-6048	0666-6054	0666-6057	0666-6099	0666-6224	0666-6226	0666-6230
		RELOCATE SM RD SN SUP&AM TY S80	REMOVE SM RD SN SUP&AM	INSTR OM ASSM (OM-ZZ) (FLX) SRF	REMOVE DELIN & OBJECT MARKER ASSMS	REFL PAV MRK TY (W) 8" (SLD) (100M IL)	REFL PAV MRK TY (W) 24" (SLD) (100 MIL)	REFL PAV MRK TY (W) (ARROW) (100M IL)	REFL PAV MRK TY (W) (DBL ARROW) (100MIL)	REF PAV MRK TY (W) 18" (YLD TRI) (100MIL)	PAVEMENT SEALER 4"	PAVEMENT SEALER 8"	PAVEMENT SEALER 24"
		EA	EA	EA	EA	LF	LF	EA	EA	EA	LF	LF	LF
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00										193		
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50	1											
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00										93		
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00										39		
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50										63		
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50										20		
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00	1											
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00	1											
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT	1											
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00	1											
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00	1											
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00	1											
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00	1											
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00	1											
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00	3					80		16				80
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00	2					58						58
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00	2											
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00	1											
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00	1											
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00	1											
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00	1											
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50	2											
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50	3											
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50	1											
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00										32		
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50	1											
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00	1											
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00										16		
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50	1											
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00		1										
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00	3											
	TOTALS (CSJ 0915-12-576)	74	5	1	1	8	1837	3	2	16	2683	8	1837

REV. NO.	DATE	DESCRIPTION	BY


  
**PAPE-DAWSON ENGINEERS**
  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800


  
 Texas Department of Transportation
   
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SUMMARY OF SIGNING AND PAVEMENT MARKINGS QUANTITIES

SHEET 4 OF 6


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	58

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\design\Civil\Summaries\1113507\*Summaries\*SPM.dgn


SHT NO	ITEM	CSJ 0915-12-576											
		0666-6231	0666-6234	0666-6243	0666-6303	0666-6315	0677-6001	0677-6003	0677-6007	0677-6008	0678-6001	0678-6004	0678-6008
		PAVEMENT SEALER (ARROW)	PAVEMENT SEALER (DBL ARROW)	PAVEMENT SEALER (YLD TRI)	RE PM W/RET REQ TY 1 (W) 4" (SLD) (100M IL)	RE PM W/RET REQ TY 1 (Y) 4" (SLD) (100M IL)	ELIM EXT PAV. MRK & MRKS (4")	ELIM EXT PAV. MRK & MRKS (8")	ELIM EXT PAV. MRK & MRKS (24")	ELIM EXT PAV. MRK & MRKS (ARROW)	PAV. SURF. PREP FOR MRK (4")	PAV. SURF. PREP FOR MRK (8")	PAV. SURF. PREP FOR MRK (24")
		EA	EA	EA	LF	LF	LF	LF	LF	EA	LF	LF	LF
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00					193	125				193		
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50												
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00					93	20				93		
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00					39					39		
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50					63	81				63		
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50					20	16				20		
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00												
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00												
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT												
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00												
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00												
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00												
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00												
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00												
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00			16					40				80
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00												58
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00												
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00												
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00												
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00												
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00												
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50												
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50												
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50												
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00					32	32				32		
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50												
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00												
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00				16		16				16		
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50												
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00												
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00												
	TOTALS (CSJ 0915-12-576)	3	2	16	526	2157	1936	16	958	3	2683	8	1837

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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SUMMARY OF  
SIGNING AND PAVEMENT  
MARKINGS QUANTITIES

SHEET 5 OF 6


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	59

Plotted on: 5/4/2019

Design File name: P:\111\35\07\design\Civil\Summaries\1113507\*Summaries\*SPM.dgn


SHT NO	ITEM	0678-6009	0678-6010	0678-6022	0688-6001	0688-6002	0690-6030
		PAV SURF PREP FOR MKK (ARROW)	PAV SURF PREP FOR MKK (DBL ARROW)	PAV SURF PREP FOR MKK (18") (YLD TRI)	PED DETECT PUSH BUTTON (APS)	PED DETECT PUSH BUTTON (STANDARD)	REMOVAL OF PEDESTRIAN PUSH BUTTONS
	CSJ 0915-12-576	EA	EA	EA	EA	EA	EA
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00						
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50						
440	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 121+50 TO STA 123+00						
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00						
445	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 127+00 TO STA 128+50						
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50						
465	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 284+00						
466	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00						
469	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 329+00 TO END PROJECT						
470	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 361+00						
472	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 365+00 TO STA 369+00						
480	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 397+00 TO STA 401+00						
483	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 456+00						
485	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 460+00 TO STA 464+00						
487	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 467+50 TO STA 471+00			16			
491	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 479+00 TO STA 483+00						
492	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 483+00 TO STA 485+00						
499	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 503+00 TO STA 507+00						
510	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 549+00 TO STA 551+00						
512	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 553+00 TO STA 555+00						
515	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 997+00 TO STA 999+00, STA 1008+00 TO STA 1010+00						
517	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1045+50 TO STA 1048+50						
518	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1048+50 TO STA 1050+50						
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50						
522	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1056+50 TO STA 1058+50, STA 1256+00 TO STA 1258+00						
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50						
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00						
534	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1258+00 TO STA 1261+00						
536	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1265+00 TO STA 1268+50						
546	FM 471 CULEBRA RD SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 667+00						
565	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1603+00 TO STA 1607+00						
	TOTALS (CSJ 0915-12-576)	3	2	16	3	16	19

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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SUMMARY OF  
SIGNING AND PAVEMENT  
MARKINGS QUANTITIES

SHEET 6 OF 6


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	60

Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\Summaries\11113507\*Summaries\*DRN.dgn


SHT NO	ITEM	CSJ 0915-12-576						
		CONC BOX CULV (6 FT X 3 FT)	RC PIPE (CL III) (12 IN)	RC PIPE (CL III) (24 IN)	INLET (COMPL) (PCO) (3FT) (NONE)	INLET (COMPL) (PCO) (3FT) (LEFT)	INLET (COMPL) (PCO) (3FT) (BOTH)	SET (TY I) (S= 4 FT) (HW= 2 FT) (6:1) (P)
		LF	LF	LF	EA	EA	EA	EA
339	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00	108						2
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50		10					
369	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00			18	1		1	
370	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00			18	1		1	
372	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00			54	3	2	1	
TOTALS (CSJ 0915-12-576)		108	10	90	5	2	3	2

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF DRAINAGE QUANTITIES

SHEET 1 OF 1

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	61

Plotted on: 5/4/2019

SUMMARY OF TCP QUANTITIES

ITEM		0512-6009	0512-6010	0512-6057	0512-6058	0662-6063
CSJ 0915-12-576		PORT CTB (FUR & INST) (LOW PROF) (TY 1)	PORT CTB (FUR & INST) (LOW PROF) (TY 2)	PORT CTB (REMOVE) (LOW PROF) (TY 1)	PORT CTB (REMOVE) (LOW PROF) (TY 2)	WK ZN PAY MRK REMOV (W)4" (SLD)
SHT NO		LF	LF	LF	LF	LF
78	TRAFFIC CONTROL PLAN BANDERA ROAD TRAFFIC CONTROL LAYOUT STA 1744+00 TO STA 1754+00	560	160	560	160	1655
TOTALS (CSJ 0915-12-576)		560	160	560	160	1655

SUMMARY OF SW3P QUANTITIES

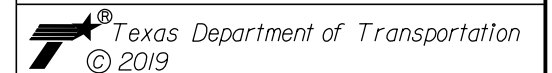
ITEM		0506-6001	0506-6011	0506-6020	0506-6024	0506-6041	0506-6043
INTERSECTION		ROCK FILTER DAMS (INSTALL) (TY 1)	ROCK FILTER DAMS (REMOVE)	CONSTRUCTION EXITS (INSTALL) (TY 1)	CONSTRUCTION EXITS (REMOVE)	BIODEC EROSN CONT LOGS (INSTL) (12")	BIODEC EROSN CONT LOGS (REMOVE)
SHT NO		LF	LF	SY	SY	LF	LF
648	ENVIRONMENTAL BANDERA RD SW3P LAYOUT	25	25	156	156	200	200
TOTALS (CSJ 0915-12-586)		25	25	156	156	200	200

Design File name: P:\1111\35\07\design\Civil\Summaries\11113507\*Summaries\*TCP.dgn

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SUMMARY OF TCP & SW3P QUANTITIES

SHEET 1 OF 1


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	62

Plotted on: 5/4/2019

Design File name: P:\11135\07\design\Civil\Summaries\1113507\*Summaries\*UTIL.dgn


SHT NO	ITEM	7027-6001	7194-6001	7194-6002	7196-6001	7196-6003	7196-6004
		ADJUST GAS FACILITY ACCESS COVER	SANITARY SEWER (ADJUST MANHOLE)	SANITARY SEWER (ADJUST CLEANOUT)	ADJUST EXISTING VALVE BOX	ADJUST EXISTING METER AND NEW METER BOX	RELOCATE FIRE HYDRANT
		EA	EA	EA	EA	EA	EA
156	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00					1	
157	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00		1			3	
159	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00					1	
160	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00				1		
162	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00				1		
174	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00	2					
180	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00					3	
181	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00					4	
188	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 506+00 TO STA 508+00	1					
199	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00				1		
200	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00		1		2		
201	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00		1			3	1
204	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00		1				
210	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 591+50	1					
217	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75		1		2		
220	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25				1		
221	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 659+00 TO STA 661+00					1	
222	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 663+00					3	
223	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 663+00 TO STA 665+00				1		
224	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00				1		
225	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00					3	
226	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00				1		
228	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00		1		2		
230	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55		1				
233	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00				1		
235	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00				1		
250	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00		1				
255	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 782+00		1				
257	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 786+00		1		1	3	
259	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 786+00 TO STA 788+00					2	
261	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 790+00		1			2	
263	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 790+00 TO STA 792+00					1	
266	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 854+00	1			1	1	
267	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 854+00 TO STA 856+00				1		
268	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 858+00 TO STA 860+00				1	2	
269	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00			2	1	1	
271	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00				1		
272	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00	1				3	
273	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00					1	
274	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00		1		1		
276	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50		1			1	
278	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00				1	1	
280	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00		1				
281	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00		1				
283	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00		1				
284	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00		2				
285	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT				2		
305	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00	2					
330	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00				3		
342	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50				1		
351	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00	2			1		
423	SH 16 BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00				1		
425	SH 16 BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 2026+00 TO STA 2028+00				1		
433	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 111+00 TO STA 113+00					1	
435	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 114+50 TO STA 116+50		1			1	
437	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 116+50 TO STA 118+00		2				
439	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 119+50 TO STA 121+50					1	
441	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 123+00 TO STA 125+00		1			1	
447	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 128+50 TO STA 130+50					1	
450	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 132+00 TO STA 134+00					1	
452	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 135+50					1	
455	SL 353 NOGALITOS ST SIDEWALK CONSTRUCTION PLAN STA 136+75 TO STA 138+75					1	
468	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 295+00 TO 299+00				4		

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF UTILITY QUANTITIES

SHEET 1 OF 2


DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				63

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\des\ign\Civil\Summaries\11113507\*Summaries\*UTIL.dgn


SHT NO	ITEM	CSJ 0915-12-576					
		ADJUST GAS FACILITY ACCESS COVER	SANITARY SEWER (ADJUST MANHOLE)	SANITARY SEWER (ADJUST CLEANOUT)	ADJUST EXISTING VALVE BOX	ADJUST EXISTING METER AND NEW METER BOX	RELOCATE FIRE HYDRANT
		EA	EA	EA	EA	EA	EA
476	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 381+00 TO STA 385+00					1	
504	IH 35 ACCESS RD SIDEWALK CONSTRUCTION PLAN STA 536+00 TO STA 540+00				2		
516	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1043+50 TO STA 1045+50, STA 1243+50 TO STA 1245+00	1					
519	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1050+50 TO STA 1054+50	1					
520	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1054+50 TO STA 1056+50, STA 1254+00 TO STA 1256+00				2		
524	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1058+50 TO STA 1060+50	1			2	4	
527	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1065+25 TO STA 1069+00	1			1		
537	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1268+50 TO STA 1271+50				1		
538	SL 345 FREDERICKSBURG RD SIDEWALK CONSTRUCTION PLAN STA 1272+50 TO STA 1276+50				6		
552	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1369+00				3		
554	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1377+00				1		
556	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1381+00 TO STA 1385+00				2	1	
562	LOOP 410-B SIDEWALK CONSTRUCTION PLAN STA 1544+00 TO STA 1546+00, STA 1552+00 TO STA 1554+00				2		
TOTALS (CSJ 0915-12-576)		14	22	2	60	54	1

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## SUMMARY OF UTILITY QUANTITIES

SHEET 2 OF 2

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	64

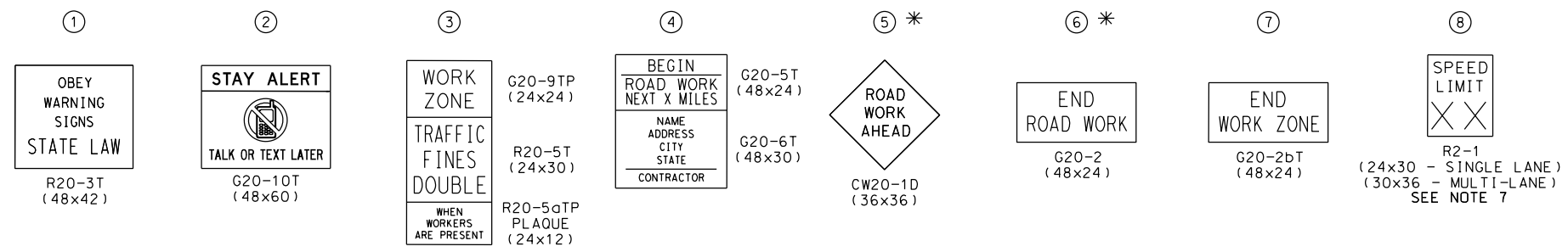


SHT NO	ITEM	0110-6002	0132-6003	0160-6003	0162-6002	0168-6001	0340-6066	0420-6003	0420-6074	0450-6048	0500-6001	0502-6001	0506-6035	0506-6041	0506-6043	0690-6005	6001-6002	6185-6002
	INDEFINITE QUANTITIES	EXCAVATION (CHANNEL)	EMBANKMENT (FINAL) (ORD COMP) (TY B)	FURNISHING AND PLACING TOPSOIL (4")	BLOCK SODDING	VEGETATIVE WATERING	D-GR HMA(SQ) TY-C PG76-22	CL A CONC (MISC)	CL C CONC (MISC)	RAIL (HANDRAIL) (TY B)	MOBILIZATION	BARRICADES, SIGNS AND TRAFFIC HANDLING	SANDBAGS FOR EROSION CONTROL	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)	INSTALL OF VEHICLE DETECTORS	PORTABLE CHANGEABLE MESSAGE SIGN	TMA (STATIONARY)
		CY	CY	SY	SY	MG	TON	SY	CY	LF	LS	MO	EA	LF	LF	LF	EA	DAY
x	FORCE ACCOUNT	500	500	500	500	7.80	47.0	20	10	50	1.0	26	2400	2400	2400	4000	2	272

REV. NO.	DATE	DESCRIPTION	BY			
 <p><b>PAPE-DAWSON ENGINEERS</b></p> <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS                  2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000                  TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>						
 <p>Texas Department of Transportation © 2019</p>						
<p>SUMMARY OF INDEFINITE QUANTITIES</p>						
SHEET 1 OF 1						
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	65

Plotted on: 5/4/2019

Design File name: P:\111\35\07\design\Civil\TCP\1113507\*TCP\*LINED IAGRAMS01.dgn



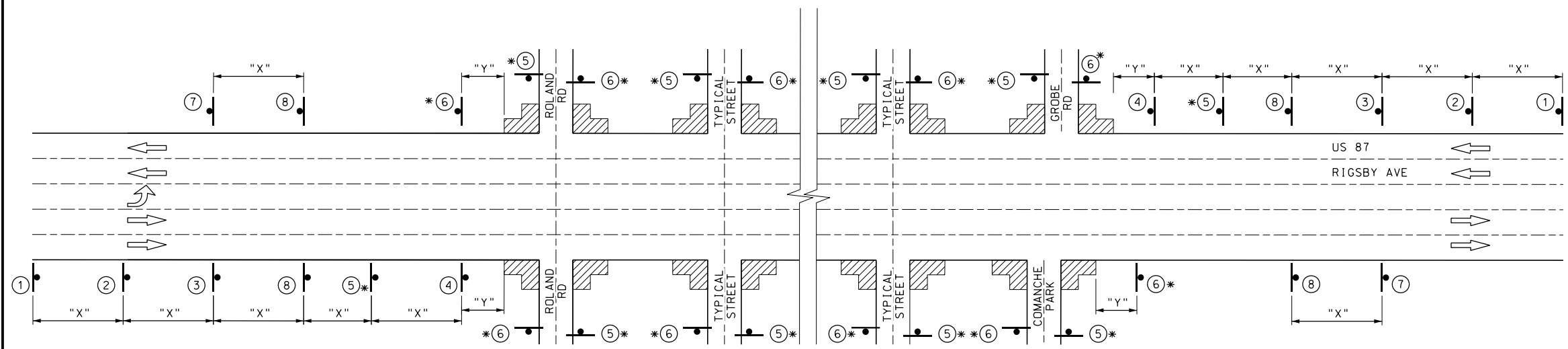
- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
  - CONFLICTING SIGNS SHALL BE COVERED BY CONTRACTOR OR AS DIRECTED BY THE ENGINEER
  - SIGNS SHOWN SHALL BE COORDINATED WITH SPECIFIC WORK TRAFFIC CONTROL DETAILS INCLUDED IN THE PLANS
  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

LEGEND

- CONSTRUCTION WARNING SIGN
- TRAFFIC FLOW
- WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



RIGSBY AVE FROM ROLAND RD TO GROBE RD  
SHEETS 156 - 183 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

DESIGN

STATE OF TEXAS  
JOHN A. TYLER  
105193  
LICENSED PROFESSIONAL ENGINEER  
DATE 5/4/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
JAMES A. LUTZ  
84722  
LICENSED PROFESSIONAL ENGINEER  
DATE 5/4/2019

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



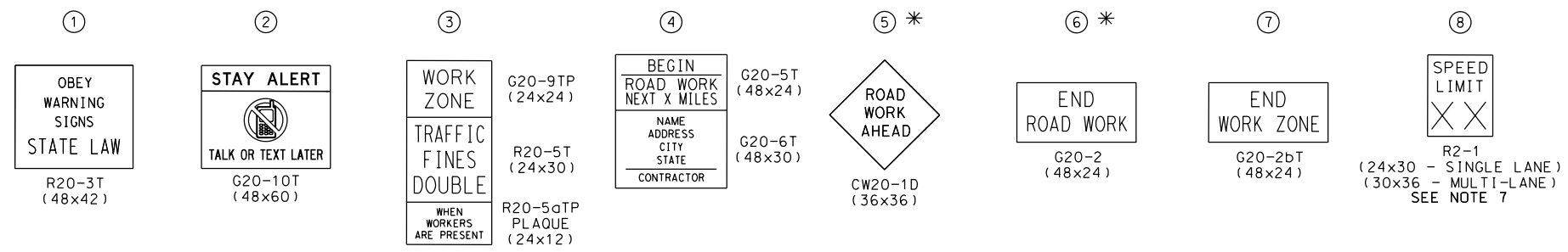
TRAFFIC CONTROL PLAN  
ADVANCE WARNING  
DEVICES

SHEET 1 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	66

Plotted on: 5/4/2019

Design File name: P:\111\35\07\design\Civil\TCP\1113507\*TCP\*LINED\IAGRAM502.dgn



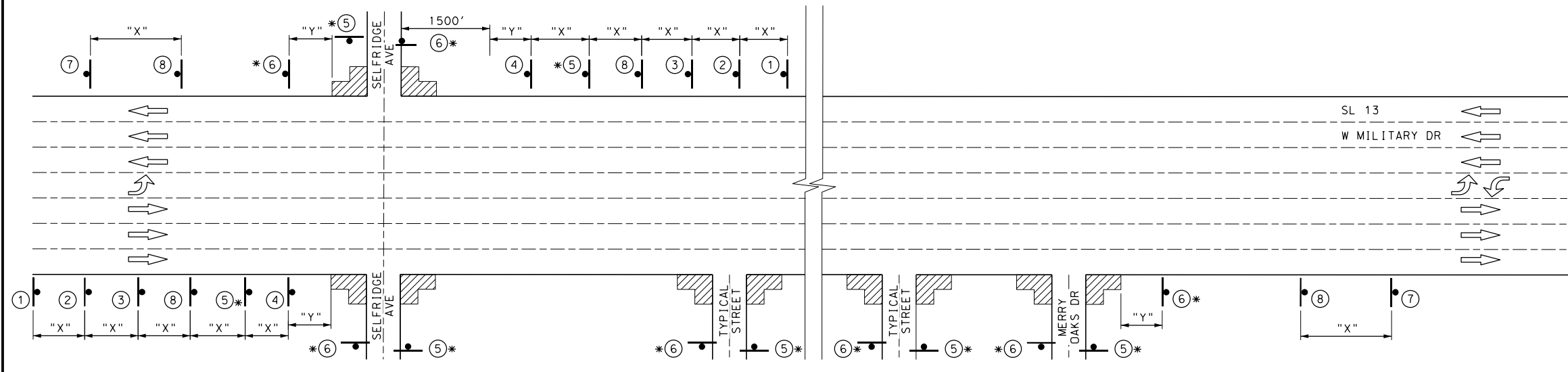
- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
  - CONFLICTING SIGNS SHALL BE COVERED BY CONTRACTOR OR AS DIRECTED BY THE ENGINEER
  - SIGNS SHOWN SHALL BE COORDINATED WITH SPECIFIC WORK TRAFFIC CONTROL DETAILS INCLUDED IN THE PLANS
  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

LEGEND

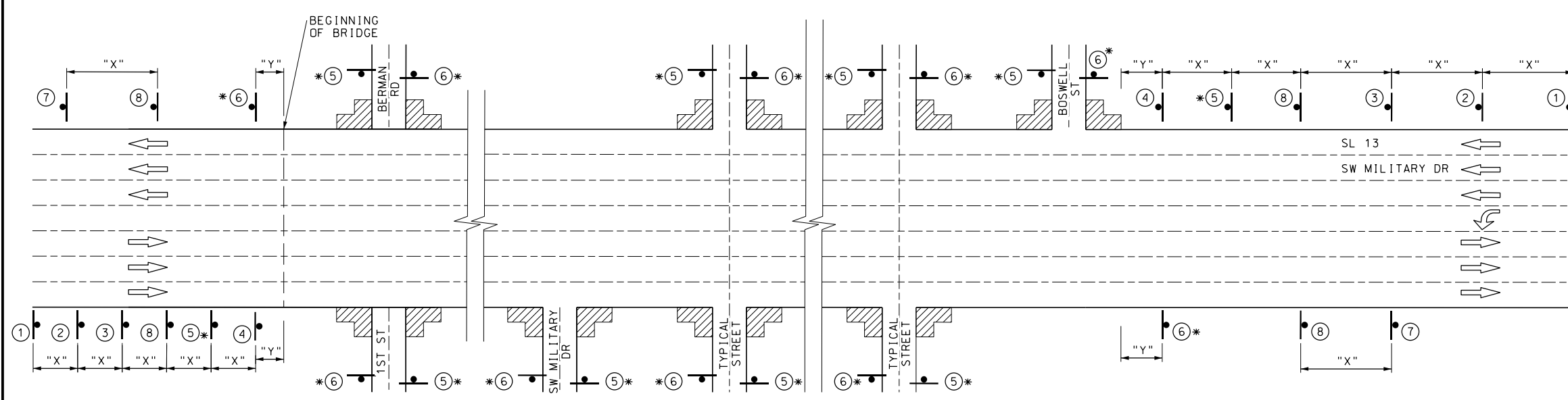
- CONSTRUCTION WARNING SIGN
- TRAFFIC FLOW
- WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



SW MILITARY DR FROM SELFRIDGE AVE TO MERRY OAKS DR  
SHEETS 184 - 186 - REFER TO TCP (1-1a) FOR ADDITIONAL INFORMATION



SW MILITARY DR FROM 1ST ST/ BERMAN RD TO BOSWELL ST  
SHEETS 187 - 285 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/4/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/4/2019

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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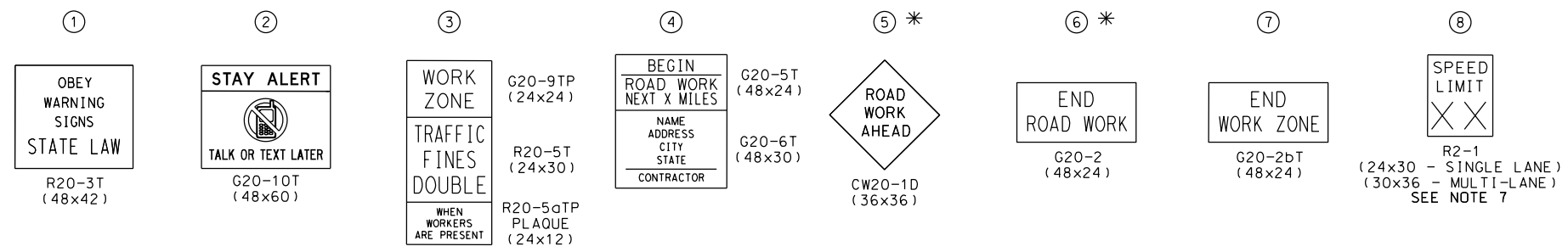
TRAFFIC CONTROL PLAN  
 ADVANCE WARNING  
 DEVICES

SHEET 2 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	67

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\ign\Civil\TCP\1113507\*TCP\*LINED\AGRAM503.dgn



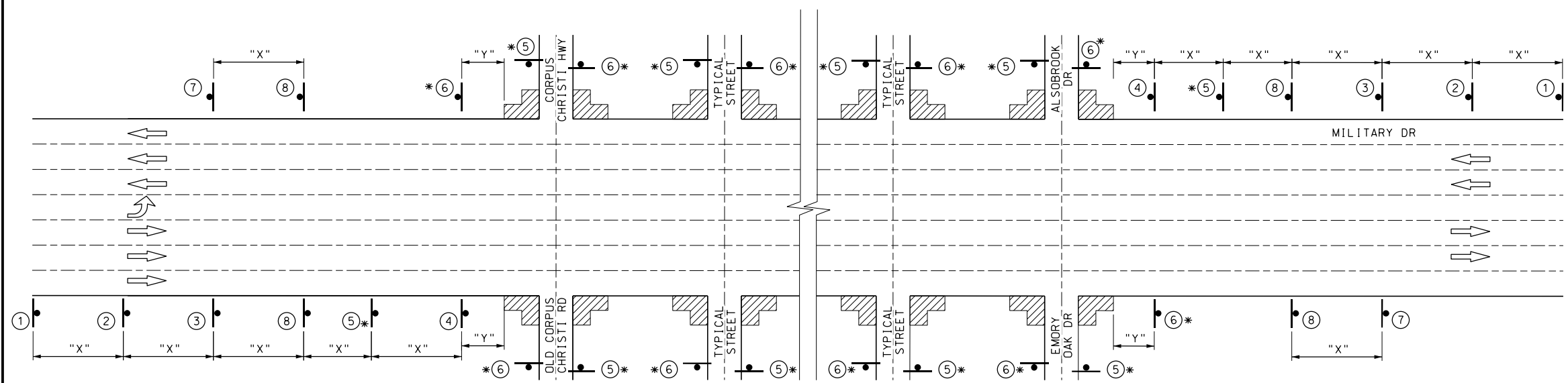
- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
  - CONFLICTING SIGNS SHALL BE COVERED BY CONTRACTOR OR AS DIRECTED BY THE ENGINEER
  - SIGNS SHOWN SHALL BE COORDINATED WITH SPECIFIC WORK TRAFFIC CONTROL DETAILS INCLUDED IN THE PLANS
  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

LEGEND

- CONSTRUCTION WARNING SIGN
- TRAFFIC FLOW
- WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



MILITARY DR FROM OLD CORPUS CHRISTI RD TO ALSOBROOK DR/ EMORY OAK DR  
SHEETS 286 - 300 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

DESIGN

STATE OF TEXAS  
JOHN A. TYLER  
105193  
LICENSED PROFESSIONAL ENGINEER  
DATE 5/4/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
JAMES A. LUTZ  
84722  
LICENSED PROFESSIONAL ENGINEER  
DATE 5/4/2019

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



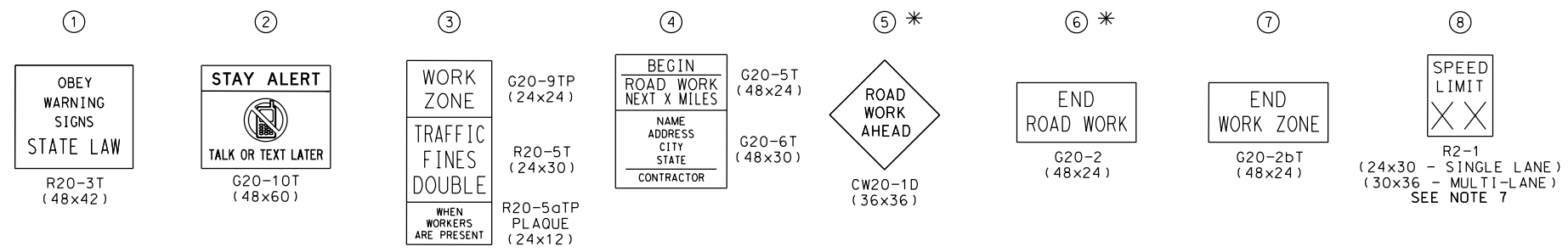
TRAFFIC CONTROL PLAN  
ADVANCE WARNING  
DEVICES

SHEET 3 OF 8

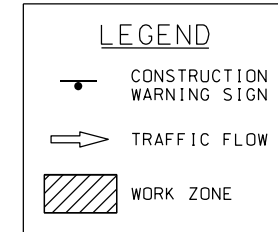
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	68

Plotted on: 5/4/2019

Design File name: P:\111\35\07\des\ign\Civil\TCP\1113507\*TCP\*LINED\IAGRAM504.dgn

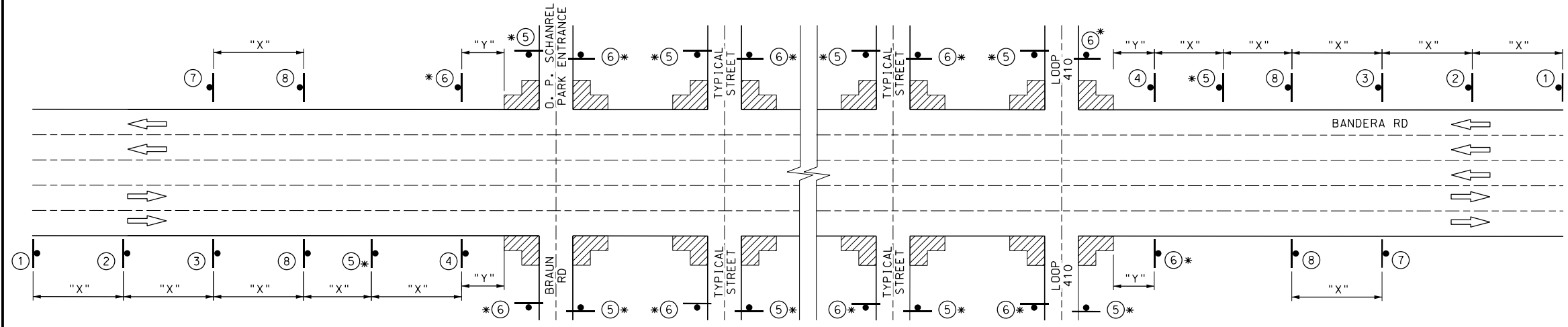


- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
  - CONFLICTING SIGNS SHALL BE COVERED BY CONTRACTOR OR AS DIRECTED BY THE ENGINEER
  - SIGNS SHOWN SHALL BE COORDINATED WITH SPECIFIC WORK TRAFFIC CONTROL DETAILS INCLUDED IN THE PLANS
  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"



POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



BANDERA RD FROM BRAUN RD TO LOOP 410  
SHEETS 301 - 426 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

DESIGN

John A. Tyler, P.E. DATE 5/4/2019

REVIEW AND APPROVAL

James A. Lutz, P.E. DATE 5/4/2019

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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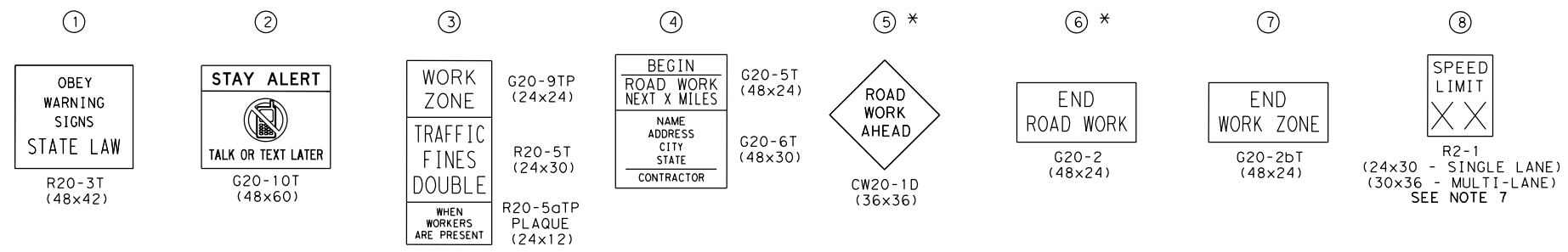
TRAFFIC CONTROL PLAN  
ADVANCE WARNING  
DEVICES

SHEET 4 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	69

Plotted on: 5/4/2019

Design File name: P:\111135\08\Design\Civil\TCP\1113508\_TCP\_LINED\IAGRAM501.dgn



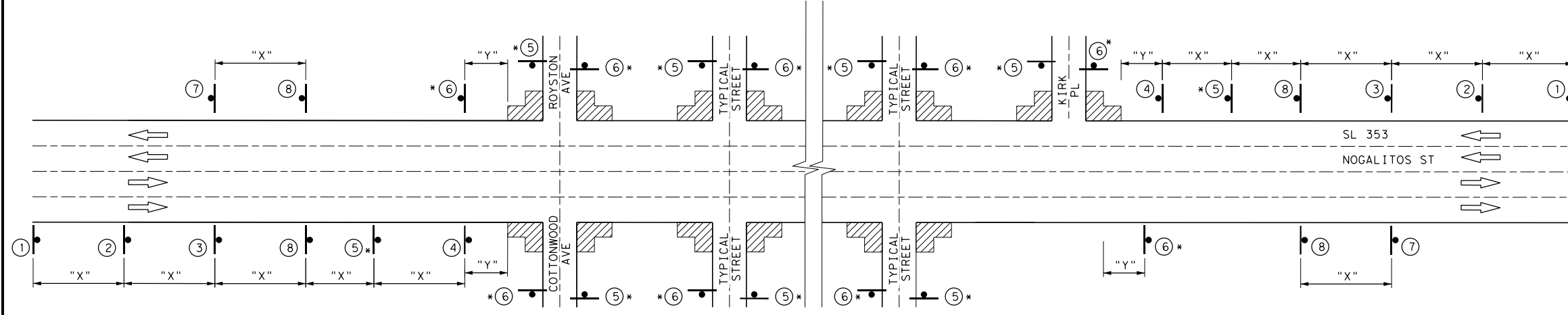
- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
  - CONFLICTING SIGNS SHALL BE COVERED BY CONTRACTOR OR AS DIRECTED BY THE ENGINEER
  - SIGNS SHOWN SHALL BE COORDINATED WITH SPECIFIC WORK TRAFFIC CONTROL DETAILS INCLUDED IN THE PLANS
  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

LEGEND

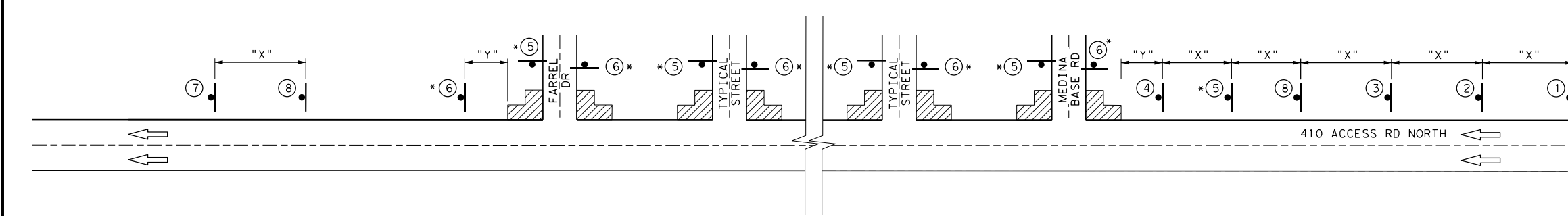
- CONSTRUCTION WARNING SIGN
- TRAFFIC FLOW
- WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

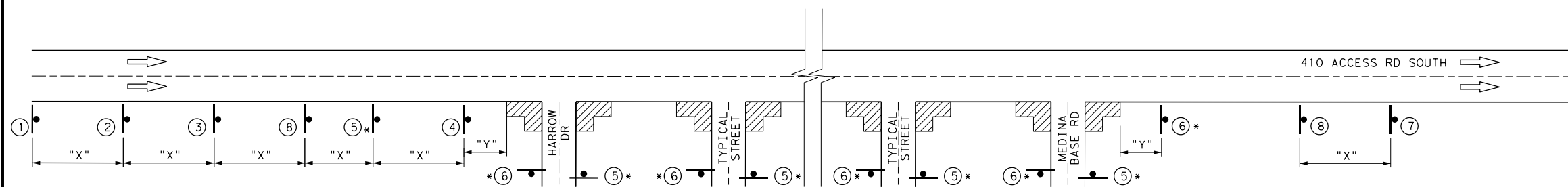
\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



NOGALITOS ST FROM COTTONWOOD AVE TO KIRK PL  
SHEETS 427 - 462 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION



410 ACCESS RD NORTHBOUND FROM MEDINA BASE RD TO FARREL DR  
SHEETS 463 - 464 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION



410 ACCESS RD SOUTHBOUD FROM HARROW DR TO MEDINA BASE RD  
SHEETS 465 - 469 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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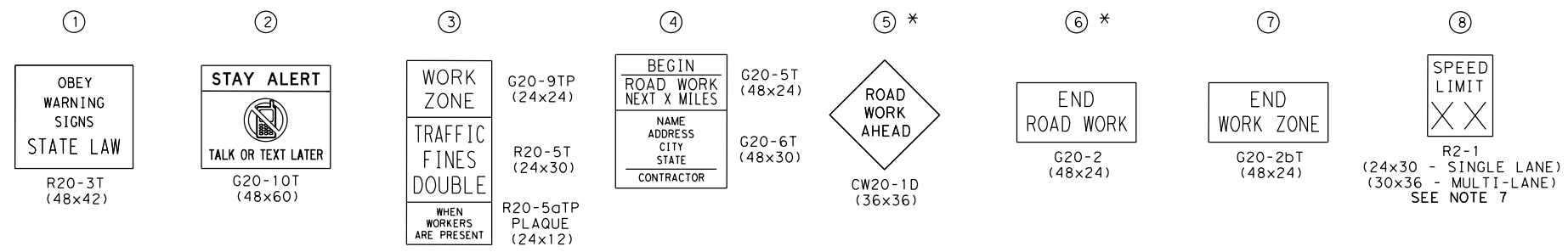
TRAFFIC CONTROL PLAN  
 ADVANCE WARNING  
 DEVICES

SHEET 5 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	70

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\TCP\1113508\_TCP\_LINED\IAGRAM502.dgn



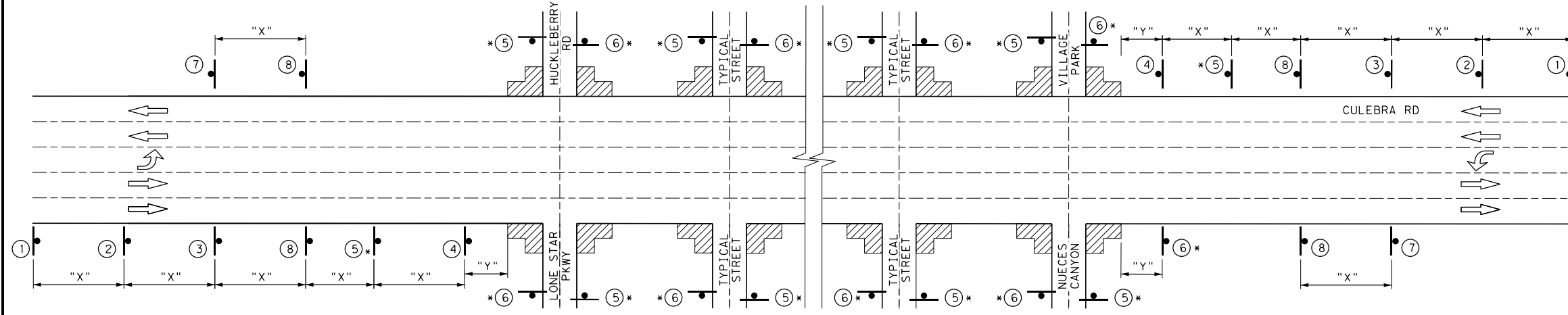
- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
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  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

**LEGEND**

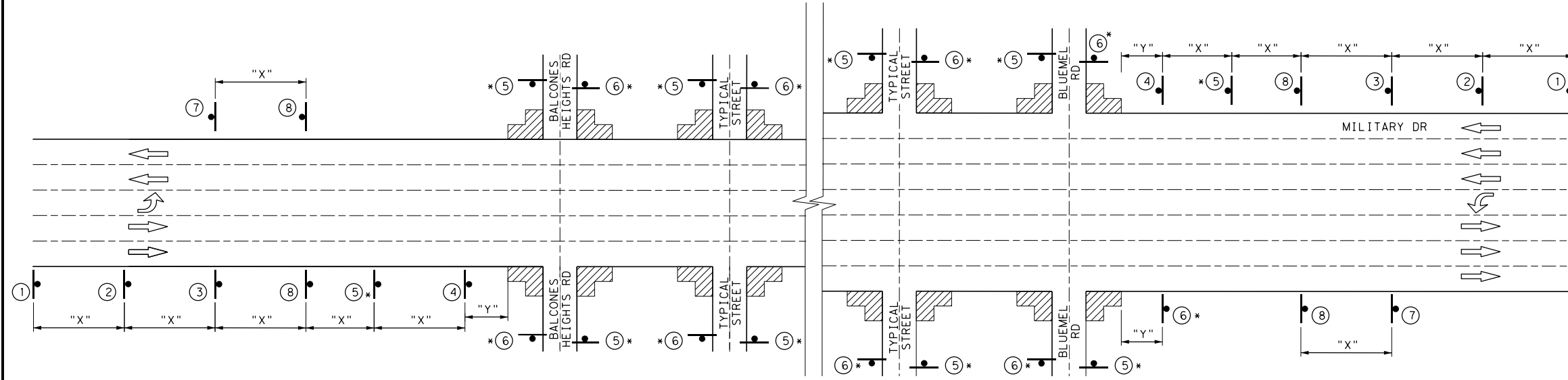
- CONSTRUCTION WARNING SIGN
- TRAFFIC FLOW
- WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



CULEBRA RD FROM HUCKLEBERRY/LONESTAR PKWY TO VILLAGE PARK/NUECES CANYON  
SHEETS 541 - 550 - REFER TO TCP (1-10) FOR ADDITIONAL INFORMATION



FREDERICKSBURG RD FROM BALCONES HEIGHTS RD TO BLUEMEL RD  
SHEETS 514 - 540 - REFER TO TCP (1-40) FOR ADDITIONAL INFORMATION

DESIGN

STATE OF TEXAS  
JOHN A. TYLER  
105193  
LICENSED PROFESSIONAL ENGINEER

5/4/2019  
DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
JAMES A. LUTZ  
84722  
LICENSED PROFESSIONAL ENGINEER

5/4/2019  
DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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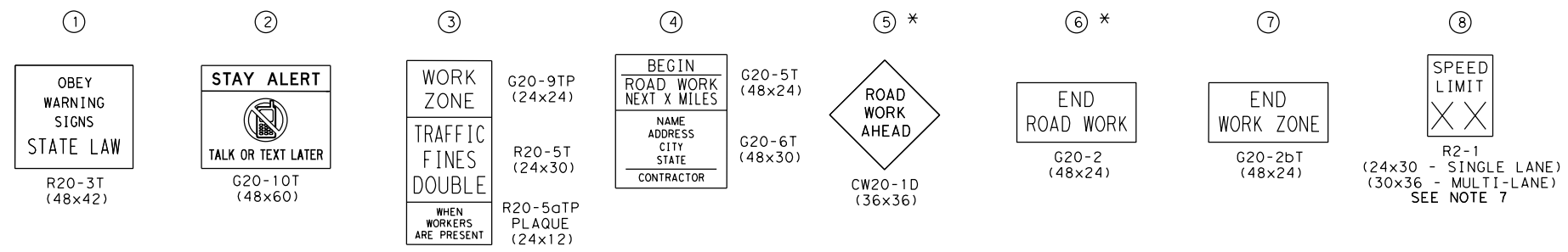
TRAFFIC CONTROL PLAN  
ADVANCE WARNING  
DEVICES

SHEET 6 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	71

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\TCP\1113508\_TCP\_LINED\AGRAM503.dgn



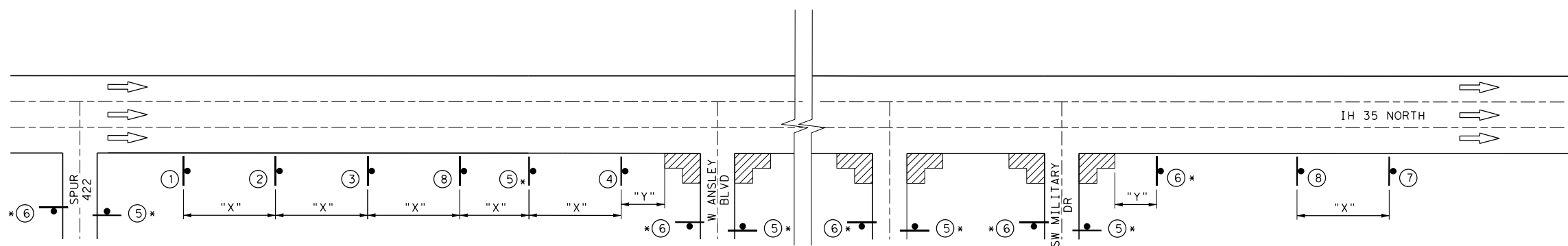
- NOTE:
- CONTRACTOR SHALL PLACE ADVANCE WARNING SIGNS ACCORDING TO DISTANCE "X" ON STANDARD BC(2)-14
  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
  - SIGN LOCATIONS MAY BE ADJUSTED DUE TO CONDITIONS AS APPROVED BY THE ENGINEER
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  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

**LEGEND**

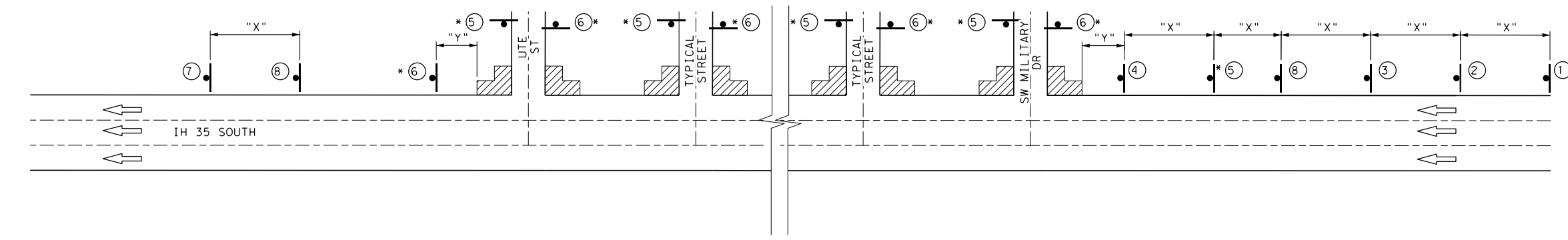
- CONSTRUCTION WARNING SIGN
- TRAFFIC FLOW
- WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



IH 35 NORTHBOUND FROM TO SW MILITARY DR  
SHEETS 470 - 482 - REFER TO TCP (1-1a) FOR ADDITIONAL INFORMATION



IH 35 SOUTHBOUND FROM SW MILITARY DR TO UTE ST  
SHEETS 483 - 513 - REFER TO TCP (1-1a) FOR ADDITIONAL INFORMATION

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



TRAFFIC CONTROL PLAN  
ADVANCE WARNING  
DEVICES

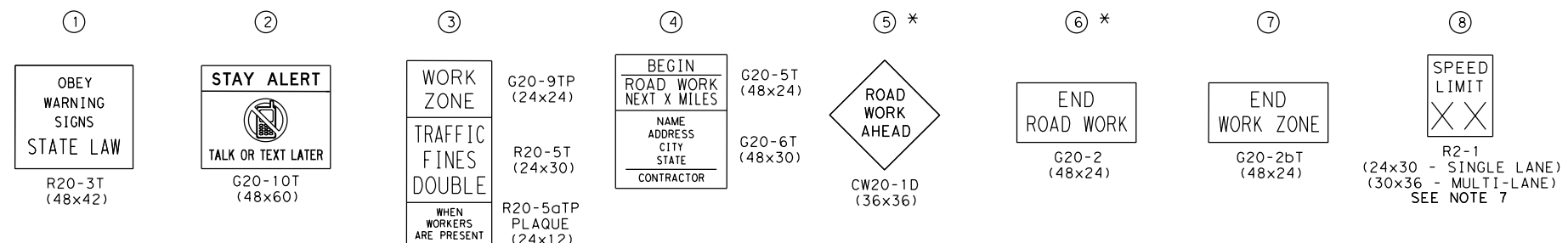
SHEET 7 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	72



Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\TCP\1113508\_TCP\_LINED\IAGRAM504.dgn



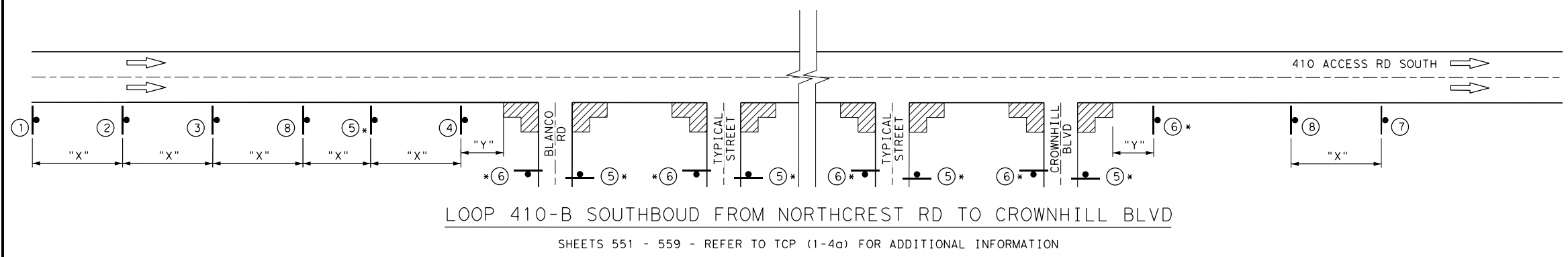
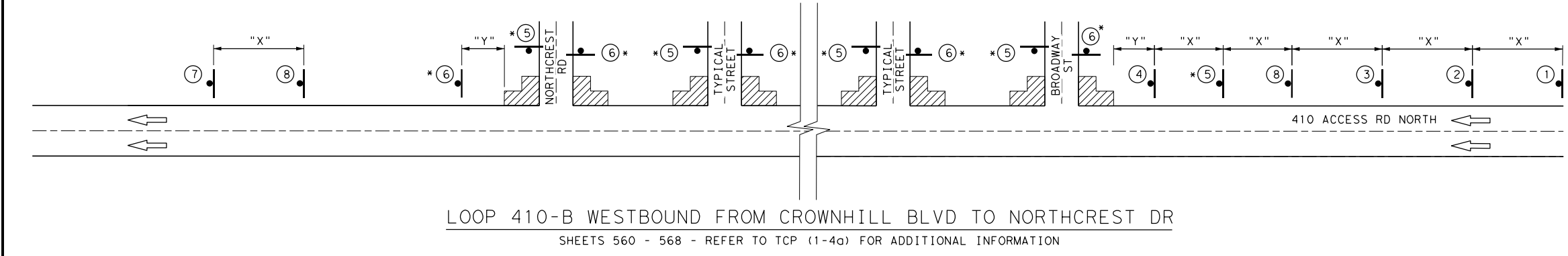
- NOTE:
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  - CONTRACTOR SHALL FIELD VERIFY POSTED SPEED FOR "X" SPACING
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  - CONFLICTING SIGNS SHALL BE COVERED BY CONTRACTOR OR AS DIRECTED BY THE ENGINEER
  - SIGNS SHOWN SHALL BE COORDINATED WITH SPECIFIC WORK TRAFFIC CONTROL DETAILS INCLUDED IN THE PLANS
  - SIGNS 5 & 6 TO BE MOVED AND PLACED ONLY IN ADVANCE OF WHERE WORK IS BEING PERFORMED
  - SIGN 8 SHALL DISPLAY APPROPRIATE SPEED LIMIT IN PLACE OF "XX"

**LEGEND**

- CONSTRUCTION WARNING SIGN
- ➔ TRAFFIC FLOW
- ▨ WORK ZONE

POSTED SPEED	LONGITUDINAL BUFFER SPACE "Y" DISTANCE
MPH	FT (APPROX)
30	90
35	120
40	155
45	195
50	240
55	295
60	350
65	410
70	475

\* SEE NOTE 6 FOR TYPICAL USE OF SIGNS 5 & 6



DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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TRAFFIC CONTROL PLAN  
 ADVANCE WARNING  
 DEVICES

SHEET 8 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	73

**DETOURS, BARRICADES, WARNING SIGNS, SEQUENCE OF WORK, ETC.**

THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE REQUIREMENTS OF ITEM 7, "LEGAL RELATIONS AND RESPONSIBILITIES TO THE PUBLIC", OF THE STANDARD SPECIFICATIONS. IN ADDITION TO THESE REQUIREMENTS, THE FOLLOWING PROVISIONS SHALL ALSO GOVERN ON THIS CONTRACT:

**1. GENERAL**

1. TRAFFIC MUST BE HANDLED THROUGHOUT THE PROJECT DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING A SAFE AND COMFORTABLE PASSAGE FOR VEHICULAR AND PEDESTRIAN TRAFFIC WITH MINIMAL INCONVENIENCE TO THE PUBLIC, AS SHOWN IN THE PLANS OR AS DIRECTED/APPROVED BY THE ENGINEER.
2. THE CONTRACTOR MAY PROPOSE/RECOMMEND MODIFICATIONS TO THE SEQUENCE OF WORK FOR CONSIDERATION BY THE ENGINEER. ANY MAJOR RECOMMENDED MODIFICATION BY THE CONTRACTOR SHALL INCLUDE ANY CHANGES TO THE VARIOUS BID ITEMS, IMPACT TO TRAFFIC, EFFECT OF OVERALL PROJECT IN TIME AND COST, ETC. IF THIS PROPOSAL IS IMPLEMENTED, THE CONTRACTOR WILL BE RESPONSIBLE FOR DEVELOPING DETAILED PLAN SHEETS TO BE SEALED BY A LICENSED PROFESSIONAL ENGINEER FOR INCLUSION WITH THE CHANGE ORDER. THE CONTRACTOR CANNOT PROCEED WITH ANY CONSTRUCTION OPERATIONS BASED ON A REVISED PHASE/SEQUENCE UNTIL WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. IF AT ANY TIME DURING CONSTRUCTION THE CONTRACTOR'S PROPOSED PLAN OF OPERATION FOR HANDLING TRAFFIC DOES NOT PROVIDE FOR SAFE AND COMFORTABLE MOVEMENT, THE CONTRACTOR WILL IMMEDIATELY CHANGE THEIR OPERATION TO CORRECT THE UNSATISFACTORY CONDITION.
3. DO NOT STORE ANY CONSTRUCTION MATERIAL OR EQUIPMENT AT ANY LOCATION THAT WILL CONSTITUTE A HAZARD AND WILL ENDANGER TRAFFIC.
4. THE CONTRACTOR WILL PROVIDE ADVANCE NOTIFICATION TO THE ENGINEER OF IMPENDING / UPCOMING LANE CLOSURES FOR ALL TEMPORARY AND / OR PERMANENT LANE, RAMP, CONNECTOR, FRONTAGE, SHOULDER, ETC. CLOSURES OR DETOURS. SEE GENERAL NOTES FOR NOTIFICATION REQUIREMENTS.
5. ACCESS TO ADJOINING PROPERTY MUST BE MAINTAINED AT ALL TIMES.
6. TEMPORARY DRAINAGE IS THE RESPONSIBILITY OF THE CONTRACTOR.
7. AT NO TIME SHALL TWO CONSECUTIVE INTERSECTING ROADWAYS BE CLOSED AT ONE TIME DURING CONSTRUCTION.
8. AT NO TIME SHALL TWO CONSECUTIVE RAMPS BE CLOSED AT ONE TIME DURING CONSTRUCTION OR OVERLAY OPERATIONS.
9. UNLESS OTHERWISE NOTED IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER, DAILY LANE CLOSURES SHALL BE LIMITED ACCORDING TO THE FOLLOWING RESTRICTIONS:
  - SINGLE LANE CLOSURES ARE ONLY PERMITTED DURING OFF PEAK HOURS AS DEFINED IN THE GENERAL NOTES.
  - NIGHTTIME : ASK AREA ENGINEER AND CONSTRUCTION ENGINEER. (WITH UNIFORMED OFF DUTY LAW ENFORCEMENT OFFICERS)
  - WEEKEND CLOSURES WHEN APPROVED BY THE ENGINEER: ASK AREA ENGINEER AND CONSTRUCTION ENGINEER.
  - NO LANE CLOSURES OR ROADWAY CLOSURES WILL BE PERMITTED FOR THE FOLLOWING KEY DATES AND/OR SPECIAL EVENTS:
    - BETWEEN DECEMBER 15 AND JANUARY 1.
    - FIESTA WEEK AND TAX FREE WEEKEND. (BEXAR COUNTY ONLY) WEDNESDAY BEFORE THANKSGIVING THRU THE SUNDAY AFTER THANKSGIVING
    - SATURDAY AND SUNDAY BEFORE MEMORIAL DAY AND LABOR DAY.
    - SATURDAY OR SUNDAY WHEN JULY 4 FALLS ON A FRIDAY OR MONDAY.
    - ELECTION DAYS (BEXAR COUNTY ONLY)
    - DURING MAJOR EVENTS AT THE AT&T CENTER (SPURS HOME GAMES, RODEO, CONCERTS, ETC.), ALAMODOME AND OR CONVENTION CENTER
10. REMOVAL AND DISPOSAL OF EXISTING ABANDONED UTILITIES (EITHER PREVIOUSLY ABANDONED OR ABANDONED DURING THIS PROJECT) REQUIRED TO SUPPORT THIS PROJECT'S CONSTRUCTION SHALL BE PERFORMED UNDER THE OVERALL PREPARE RIGHT-OF-WAY ITEM (ITEM 100).
11. COORDINATE WITH ADJACENT PROJECTS.
12. COVER PERMANENT SIGNS IF NOT USED. THIS IS SUBSIDIARY TO ITEM 502.
13. EXCAVATION WITHIN 5 FEET OF AN EXISTING CPS ENERGY POLE WILL REQUIRE POLE BRACING. CONTACT CPS ENERGY UTILITY COORDINATION TO REQUEST POLE BRACING (JOHN OFFER, JOFFER@CPSENERGY.COM). THE ESTIMATED DURATION FOR THE POLE BRACING PROCESS IS APPROXIMATELY 6 TO 8 WEEKS.
14. COORDINATE WITH THE CITY OF SAN ANTONIO OR TXDOT FOR SIGNAL TIMING REVISIONS, AS NECESSARY.
15. ADVANCE WARNING SIGNS AND LANE CLOSURES MUST BE MOVED UP PERIODICALLY IN ORDER TO KEEP UP WITH THE MOVING WORK ZONE. AS WORK PROGRESSES, THE LANE CLOSURE SIGNING AND APPROPRIATE BARRICADES MUST FOLLOW APPLICABLE STANDARDS.
16. CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA ASSETS.

17. CONTRACTOR SHALL CONTACT VIA THIRTY (30) DAYS PRIOR, FOR:
  - (A) THE REMOVAL OF BENCHES, STOP POLES AND ANY OTHER VIA AMENITIES WITHIN THE PROJECT LIMITS.
  - (B) THE REMOVAL OF SHELTERS.
  - (C) THE COORDINATION OF TEMPORARY BUS STOPS.
18. THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA.
19. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA.
20. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.
21. CONCERNING NEW VIA RELATED FLATWORK: THE CONTRACTOR SHALL SCHEDULE WITH VIA A PRE-POUR INSPECTION FOR ANY SHELTER SLAB, PAD, ADA CONNECTOR OR OTHER REPLACEMENT THAT DIRECTLY AFFECTS VIA AMENITIES NOT TO INCLUDE SIDEWALKS.

**2. SEQUENCE OF WORK**

1. THIS PROJECT WILL BE CONSTRUCTED IN 11 PHASES. BEFORE THE COMMENCEMENT OF EACH PHASE, INSTALL ADVANCE WARNING SIGNS, TEMPORARY SIGNS AND BARRICADES AS SHOWN ON THE PLANS AND/OR AS DIRECTED/APPROVED BY THE ENGINEER. DAILY LANE CLOSURES WILL BE USED IN ACCORDANCE WITH STATE TCP STANDARDS. DROP OFF CONDITIONS OF GREATER THAN 2" MUST HAVE A 3:1 SLOPE AT THE END OF EACH DAY, AS WELL AS THROUGHOUT THE PROJECT WHERE ACCESS TO ADJACENT PROPERTIES IS ALLOWED TO DRIVEWAYS AND SIDE STREETS.
2. PREPARING ROW / REMOVAL OF EXISTING ITEMS TO BE DONE ONLY IN AREAS WHERE WORK IS OCCURRING, AS PER THE PHASES NOTED BELOW.
3. PLANING, SURFACE TREATMENTS AND OVERLAYS SHALL BE PERFORMED IN THE DIRECTION OF TRAFFIC. BEGIN SURFACE CONSTRUCTION ON HIGH SIDE OF ROAD TO AVOID WATER PONDING ISSUES.
4. THE SEQUENCE OF CONSTRUCTION SHALL BE IN PHASE ORDER AS FOLLOWS:
  - CULEBRA; FREDERICKSBURG; LOOP 410-B; RIGSBY; MILITARY DR; SW MILITARY B; IH 35 ACCESS RD; NOGALITOS; SW MILITARY A; SW LOOP 410
  - BANDERA SHALL BE PHASED SUCH THAT WORK FROM STA 1744+00-1754+00 STARTS NO EARLIER THAN JUNE 1 AND IS COMPLETED NO LATER THAN AUGUST 1. CONTRACTOR SHALL COMPLETE CURB AND STORM DRAIN CONSTRUCTION AND OPEN LANE TO TRAFFIC WITHIN 14 DAYS OF LANE CLOSURE INSTALLATION.
  - A BRIEF DESCRIPTION OF THESE PHASES ARE AS FOLLOWS:
    1. NOTIFY AFFECTED BUSINESS OWNERS 2 WEEKS PRIOR TO CONSTRUCTION, MAINTAIN TEMPORARY ACCESS AT ALL TIMES.
    2. CLOSE SIDEWALK TO PEDESTRIAN TRAFFIC, DETOUR PEDESTRIANS PER TxDOT STANDARD WZ(BTS-2)-13. SEE ADVANCE WARNING SIGN LAYOUT SHEETS FOR THE INITIAL ADVANCE WARNING SIGN SETUP.
    3. INSTALL SW3P IN ACCORDANCE WITH STORM WATER POLLUTION PREVENTION PLAN.
    4. BANDERA RD AT SENECA DR WILL REQUIRE LPCB. CLOSE THE RIGHT EB LANE PER TCP (2-6a) AND INSTALL BARRIER AS SHOWN ON THE BANDERA RD TCP PLAN SHEET.
  - REMOVE EXISTING SIDEWALK, DRAINAGE STRUCTURES, AND EXISTING ROAD MATERIAL, SEE TYPICAL SECTIONS, PAVEMENT DETAILS AND PLAN LAYOUT SHEETS FOR ADDITIONAL INFORMATION. ENSURE POSITIVE DRAINAGE AROUND INTERSECTION RETURNS. CONTRACTOR SHALL INSTALL METAL PLATE OVER OPEN TRENCHES, UNCOVERED MANHOLES AND INLETS ADJACENT TO TRAFFIC OVER NIGHT OR WHEN NO WORK IS BEING PERFORMED. INSTALL TEMPORARY PAVEMENT MARKINGS AS NEEDED OR AS DIRECTED BY THE ENGINEER.
  - 5. CONSTRUCT RETAINING WALL FOOTINGS AND WALLS, INSTALL DRAINAGE ELEMENTS FROM DOWNSTREAM TO UPSTREAM. ENSURE POSITIVE DRAINAGE FROM EXISTING TO PROPOSED DRAINAGE STRUCTURES. WORK AT EACH LOCATION MUST BE COMPLETED PER THE GENERAL NOTES WITHIN OFF-PEAK HOURS.
  - 6. FORM SIDEWALKS, CURB RAMPS AND STEPS.
  - 7. CONSTRUCT SIDEWALKS, CURB RAMPS, STEPS, AND INSTALL PEDESTRIAN RAILS.
  - 8. OPEN COMPLETED SIDEWALK TO PEDESTRIANS AS SOON AS POSSIBLE, WITH THE APPROVAL OF THE ENGINEER, BUT NOT MORE THAN 7 DAYS AFTER COMMENCING WORK.
  - 9. ADJUST PEDESTRIAN PUSH BUTTONS.
  - 10. AFTER ALL SIDEWALK AND DRAINAGE IMPROVEMENTS ARE COMPLETE FOR ALL CORNERS, PLANE ASPHALT AS INDICATED AND INSTALL TEMPORARY PAVEMENT MARKINGS AS NEEDED OR AS DIRECTED BY THE ENGINEER.
  - 11. INSTALL PERMANENT PAVEMENT MARKINGS.

12. INSTALL/RELOCATE PERMANENT SIGNING.
13. REMOVE SW3P ITEMS.
14. ALL SPOILS MUST BE REMOVED PRIOR TO COMMENCING WORK ALONG A NEW CORRIDOR. THE AFFECTED CORRIDOR MUST HAVE ALL MISCELLANEOUS CLEAN UP COMPLETED, PROPER BACKFILL, HOLES FILLED, AND PUNCH LIST ADDRESSED PRIOR TO COMMENCING ADT'L WORK.

**3. SAFETY**

1. THE CONTRACTOR WILL PROVIDE, CONSTRUCT AND MAINTAIN BARRICADES AND SIGNS IN ACCORDANCE WITH STATE STANDARDS BC (1-12)-14. ANY SIGNS REQUIRED THAT ARE NOT DETAILED IN THE STANDARD SHEETS SHALL BE IN CONFORMANCE WITH THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND THE "STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS."
2. BARRICADES AND WARNING SIGNS SHALL BE PLACED AS INDICATED ON THE PLANS. THIS SHALL BE CONSIDERED THE MINIMUM REQUIRED TO PROVIDE FOR THE SAFETY OF TRAFFIC DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN OTHER SUCH BARRICADES AND SIGNS DEEMED NECESSARY BY THE ENGINEER OR AS DIRECTED BY FIELD CONDITIONS, TO PROVIDE FOR THE PASSAGE OF TRAFFIC IN SAFETY AT ALL TIMES.
3. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN FLAGGERS AS DIRECTED/APPROVED BY THE ENGINEER, AT SUCH POINTS, AND FOR SUCH PERIODS OF TIME AS MAY BE REQUIRED, TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC AND THE CONTRACTOR'S PERSONNEL.
4. THE CONTRACTOR SHALL KEEP THE ROADWAY CLEAN AND FREE OF DIRT OR OTHER MATERIALS DURING HAULING OPERATIONS. IF THE CONTRACTOR DOES NOT MAINTAIN A CLEAN ROADWAY, THEY SHALL CEASE ALL CONSTRUCTION OPERATIONS, WHEN DIRECTED BY THE ENGINEER, TO CLEAN THE ROADWAY TO THE SATISFACTION OF THE ENGINEER.

**4. HAULING EQUIPMENT**

1. THE USE OF RUBBER-TIRED EQUIPMENT WILL BE REQUIRED FOR MOVING DIRT OR OTHER MATERIALS ALONG OR ACROSS PAVEMENTED SURFACES. WHERE THE CONTRACTOR DESIRES TO MOVE ANY EQUIPMENT NOT LICENSED FOR OPERATION ON PUBLIC HIGHWAYS, ON OR ACROSS PAVEMENT, THEY SHALL PROTECT THE PAVEMENT FROM DAMAGE AS DIRECTED / APPROVED BY THE ENGINEER.
2. THROUGHOUT CONSTRUCTION OPERATIONS, THE CONTRACTOR WILL BE REQUIRED TO CONDUCT THEIR HAULING OPERATIONS IN A MANNER SUCH THAT VEHICLES WILL NOT HAUL OVER PREVIOUSLY RECOMPACTED SUBGRADE OR COMPACTED BASE MATERIAL, EXCEPT IN SHORT SECTIONS FOR DUMPING MANIPULATIONS.

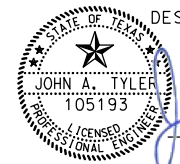
**5. FINAL CLEAN UP**

UPON COMPLETION OF THE WORK AND BEFORE FINAL ACCEPTANCE AND FINAL PAYMENT IS MADE, THE CONTRACTOR SHALL CLEAR AND REMOVE FROM THE SITE ALL SURPLUS AND DISCARDED MATERIALS AND DEBRIS OF EVERY KIND AND LEAVE THE ENTIRE PROJECT IN A SMOOTH, NEAT AND SIGHTLY CONDITION.

**6. PAYMENT**

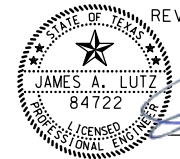
ALL BARRICADES, SIGNS, AND FLAGGERS SHALL BE SUBSIDIARY TO ITEM 502 BARRICADES, SIGNS AND TRAFFIC HANDLING. ALL EROSION AND SEDIMENT CONTROL DEVICES WILL BE PAID FOR UNDER ITEM 506 TEMPORARY EROSION, SEDIMENTATION, AND ENVIRONMENTAL CONTROLS. ALL WORK ZONE PAVEMENT MARKINGS WILL BE PAID FOR UNDER ITEM 662 WORK ZONE PAVEMENT MARKINGS. ALL OTHER WORK AND MATERIALS SHALL BE SUBSIDIARY TO THE VARIOUS BID ITEMS UNLESS OTHERWISE INDICATED IN THE PLANS.

DESIGN



JOHN A. TYLER, P.E.  
5/4/2019  
DATE

REVIEW AND APPROVAL



JAMES A. LUTZ, P.E.  
5/4/2019  
DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY



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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
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TRAFFIC CONTROL PLAN  
NARRATIVE

SHEET 1 OF 1

DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	74

Plotted on: 5/4/2019

Design File name: P:\11135\07\des\gn\C\1113507\TCP\*NARRATIVE.dgn

Plotted on: 5/4/2019

TRAFFIC CONTROL PLAN ITEMS

LOCATION	PROJECT LIMIT SIGNING											PEDESTRIAN SIGNING			
		END ROAD WORK	ROAD WORK NEXT X MILES	ROAD WORK NEXT MILES	END WORK ZONE	BEGIN ROAD WORK NEXT X MILES	NAME ADDRESS CITY STATE CONTRACTOR	BEGIN WORK ZONE	STAY ALERT TALK OR TEXT LATER	OBEY WARNING SIGNS STATE LAW	TRAFFIC FINES DOUBLE	WHEN WORKERS ARE PRESENT	SPEED LIMIT	SIDEWALK CLOSED	SIDEWALK CLOSED USE OTHER SIDE
	CW20-1D (36x36)	G20-2 (48x24)	G20-1aT (72x36)	G20-1T (72x24)	G20-2bT (48x24)	G20-5T (48x24)	G20-6T (48x30)	G20-9TP (24x24)	G20-10T (48x60)	R20-3T (48x42)	R20-5T (24x30)	R20-5aTP (24x12)	R2-1 24" x 12"	R9-9 24" x 12"	R9-10DBL 24" x 12"
1	X					X	X	X	X	X	X	X	X		
2		X			X										
3	X		X	X									X	X	X
4		X													

TRAFFIC CONTROL PLAN ITEMS (CONTINUED)

LOCATION	PED DEVICE	PHASE SIGNING													
				LEFT LANE ENDS	LANE ENDS MERGE LEFT	SHOULDER ENDS	ROAD WORK 1 MILE	ROAD WORK 1/2 MILE	ROAD WORK 1500 FT	ROAD WORK 1000 FT	ROAD WORK 500 FT	LEFT LANE CLOSED	1000 FT	1/2 MILE	TRUCKS ENTERING ROADWAY
	PEDESTRIAN BARRICADE	CW3-2 (36x36)	CW9-1 L OR R (30x30)	CW9-2 L OR R (30x30)	CW14-4T (36x36)	CW20-1A (36x36)	CW20-2D (36x36)	CW20-1A (36x36)	CW20-1B (36x36)	CW20-1C (36x36)	CW20-5 L OR R (36x36)	CW16-3aP 30" x 12"	CW16-3aP 30" x 12"	CW27-1T (48 x 48)	D70A (24x12)
1			X	X	X	X	X	X	X	X	X	X	X	X	
2															
3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4			X			X						X	X		

TRAFFIC CONTROL PLAN ITEMS (CONTINUED)

LOCATION	PHASE SIGNING (CONTINUED)						
	BUSINESS NAME	STOP	YIELD		DO NOT ENTER	ONE WAY	NO PARKING
	M4-3 (24x12)	R1-1 (36x36)	R1-2 (36x36x36)	R3-2 (36x36)	R5-1 (36x36)	R6-1 L OR R (54x18)	R8-3 (30x30)
1							
2							
3	X	X	X	X	X	X	X
4							

PHASE DEVICES

LOCATION	PHASE DEVICES						
	P.C.M.S.	ARROW BOARD	TY III BARRICADE	CW1-8(F)	VP(F)IR,L	PLASTIC DRUMS	CONE (>36")
1							
2							
3	X	X	X	X	X	X	X
4		X	X			X	

GENERAL NOTES - BARRICADES:  
 LOCATION NO. 1 TO BE USED AT BEGINNING OF THE PROJECT.  
 LOCATION NO. 2 TO BE USED AT THE END OF THE PROJECT.  
 LOCATION NO. 3 TO BE USED FOR TEMP DETOURS THROUGHOUT THE COURSE OF THE PROJECT AS DIRECTED BY THE ENGINEER.  
 LOCATION NO. 4 TO BE USED UPSTREAM OF BANDERA RD STORM SEWER CONSTRUCTION  
 SEE TCP LAYOUT - "TCP LINE DIAGRAM SHEETS" FOR DETAILS.

- NOTE:
- CERTAIN SIGNS MUST BE USED IN CONJUNCTION WITH OTHER SIGNS. EXAMPLE: "FLAGGER AHEAD" MUST HAVE A "BE PREPARED TO STOP".
  - BARRICADES AND WARNING SIGNS ON THIS SHEET ARE THE MINIMUM CONSTRUCTION ZONE, SIGNING, ADDITIONAL BARRICADES, WARNING SIGNS, ARROW PANELS, CONES, ETC. REQUIRED IN ACCORDANCE WITH CURRENT BC STANDARDS AND THE TEXAS MUTCD MAY BE REQUIRED IN AREAS OF ACTUAL CONSTRUCTION.
  - A DISTANCE PLAQUE IN FEET OR MILES MAY BE REQUIRED FOR USE IN CONJUNCTION WITH WARNING SIGNS.

DESIGN

JOHN A. TYLER, P.E.  
 5/4/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
 5/4/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

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SCHEDULE OF BARRICADES AND ADVANCE WARNING DEVICES

SHEET 1 OF 1

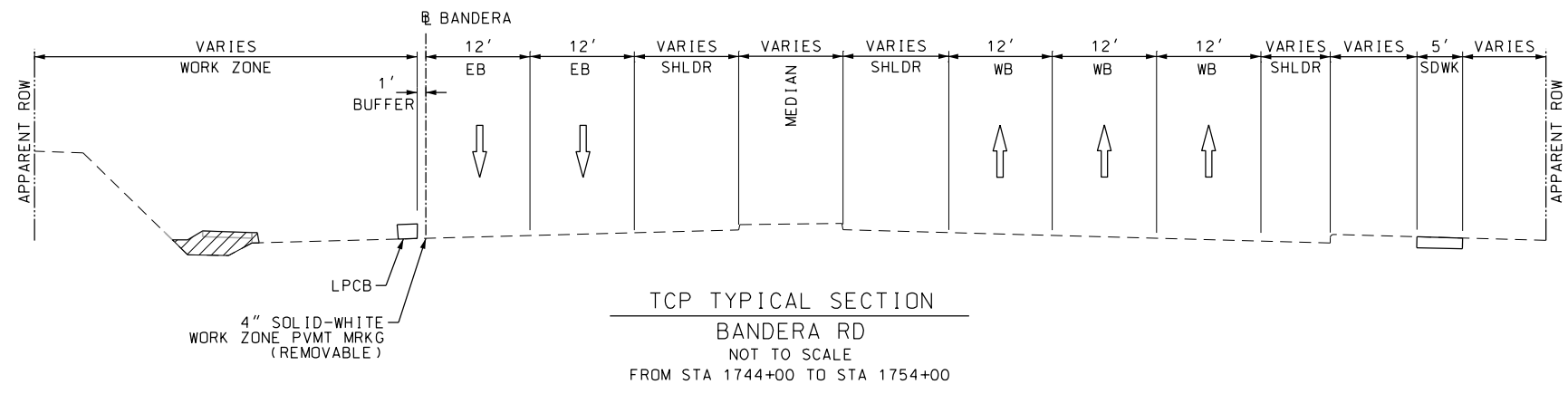
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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	75


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Plotted on: 5/4/2019

Design File name: P:\111\35\07\design\Civil\TCP\1113507\*TCP\*Bandera\*TYP.dgn



DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

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TCP TYPICAL SECTIONS  
 BANDERA RD

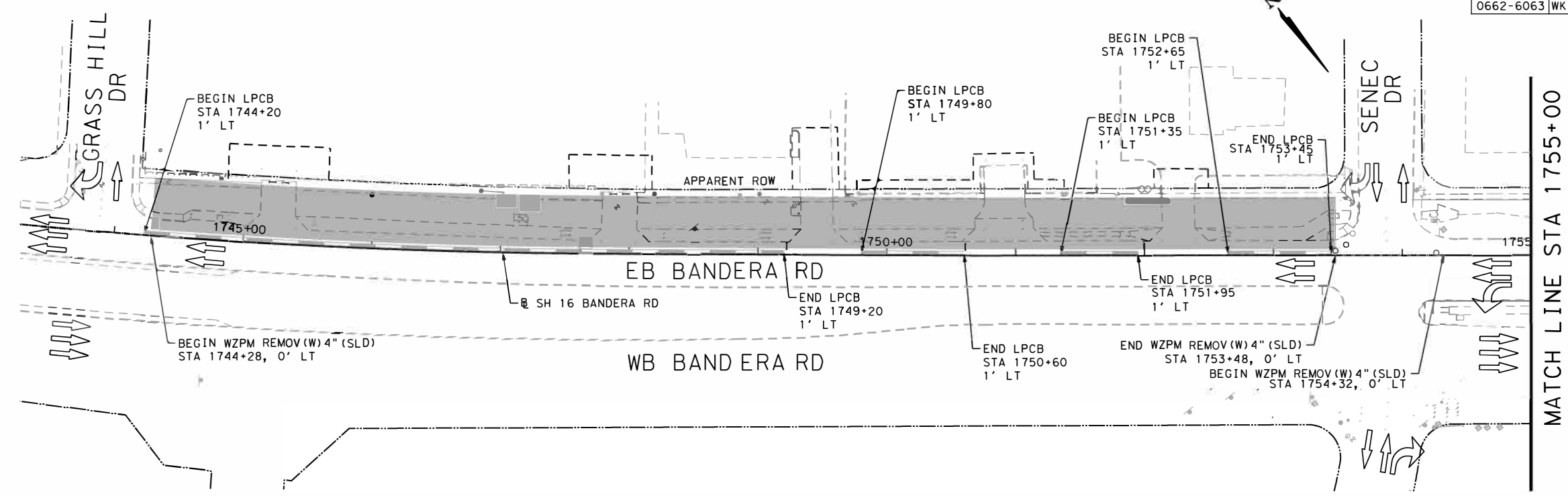
SHEET 1 OF 1

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CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	77

Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\TCP\1113507\*TCP\*Bandera Dr\*01.dgn

ITEM	DESCRIPTION	UNIT	QTY
0512-6009	PORT CTB (FUR & INST) (LOW PROF) (TY 1)	LF	560
0512-6010	PORT CTB (FUR & INST) (LOW PROF) (TY 2)	LF	160
0512-6057	PORT CTB (REMOVE) (LOW PROF) (TY 1)	LF	560
0512-6058	PORT CTB (REMOVE) (LOW PROF) (TY 2)	LF	160
0662-6063	WK ZN PAV MRK REMOV (W) 4" (SLD)	LF	1655



**LEGEND**

- ○ ○ ○ CHANNELIZING DEVICES
- LPCB
- ⇄ DIRECTION OF TRAFFIC
- I TYPE 3 BARRICADE
- WORKZONE

**NOTES:**

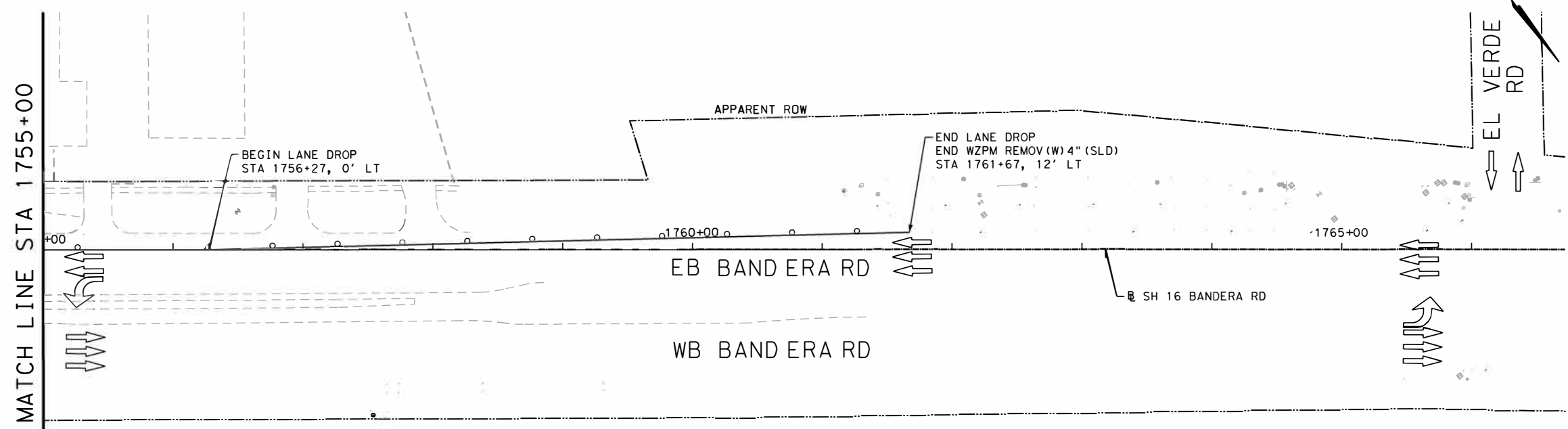
- \* FOR CONTRACTOR INFORMATION ONLY
- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2. PLACE LPCB TY 2 AT THE UPSTREAM AND DOWNSTREAM ENDS OF EACH BARRIER SETUP.
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED
- 4. SIGN AND PLACE TMA IN ACCORDANCE WITH STANDARD TCP (2-6g) - 18.

DESIGN

JOHN A. TYLER, P.E. 5/4/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/4/2019 DATE



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SH 16 BANDERA RD  
 BANDERA RD TRAFFIC CONTROL LAYOUT  
 STA 1744+00 TO STA 1754+00

SHEET 1 OF 1

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	78

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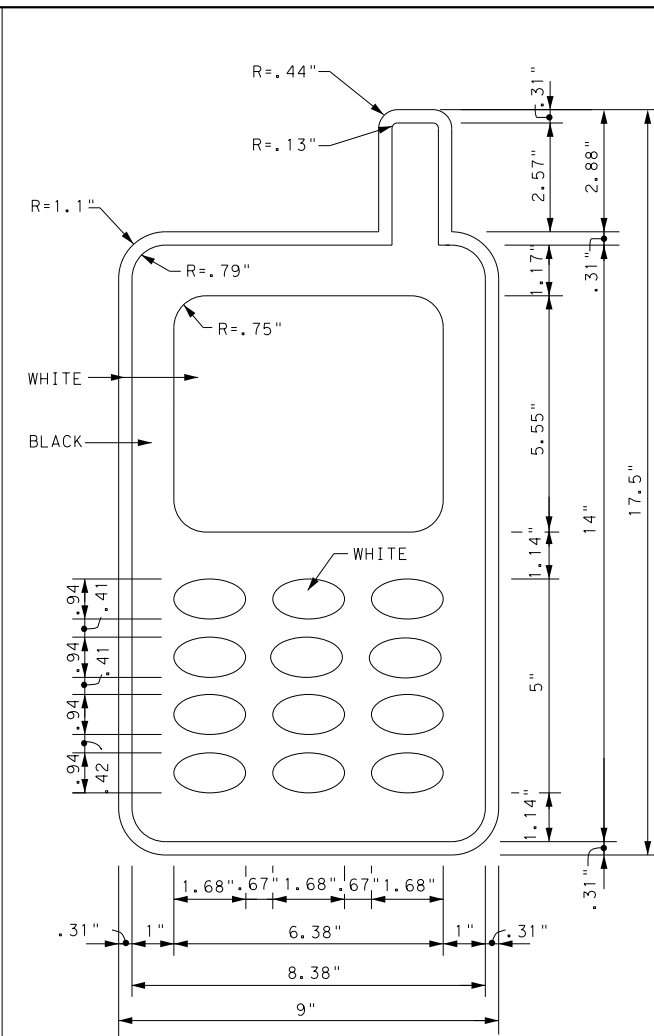
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**BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:**

- The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
- The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
- The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
- The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
- Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.
- When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
- The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
- All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
- The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
- As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER (see Sign Detail G20-10T) and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. However, the TRAFFIC FINES DOUBLE sign will not be required on projects consisting solely of mobile operation work, such as striping or milling edgeline rumble strips. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.
- Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.
- The Engineer has the final decision on the location of all traffic control devices.
- Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

**WORKER SAFETY APPAREL NOTES:**

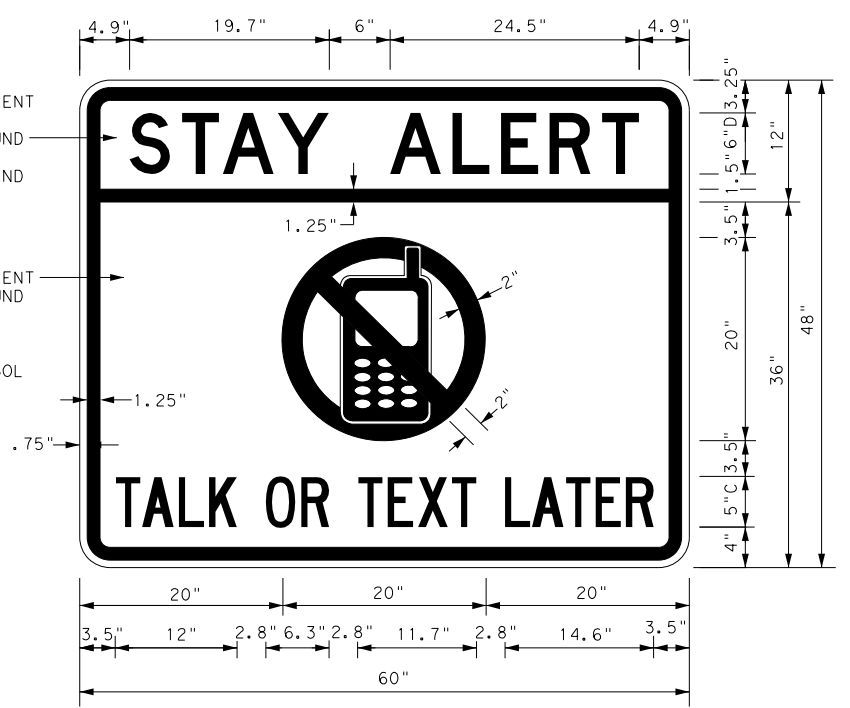
- Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.



SIGN DETAIL (G20-10T)

Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found on-line at the web address given below or by contacting:

Texas Department of Transportation  
 Traffic Operations Division - TE  
 Phone (512) 416-3118



3.0" Radius, 1.25" Border, 0.75" Indent, Black on Yellow; [STAY ALERT] Font: D  
 3.0" Radius, 1.25" Border, 0.75" Indent, Black on Orange; [TALK OR TEXT LATER] Font: C specified length;

THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT <a href="http://www.txdot.gov">http://www.txdot.gov</a>	
COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD)	
DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS)	
MATERIAL PRODUCER LIST (MPL)	
ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)"	
STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD)	
TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD)	
TRAFFIC ENGINEERING STANDARD SHEETS	

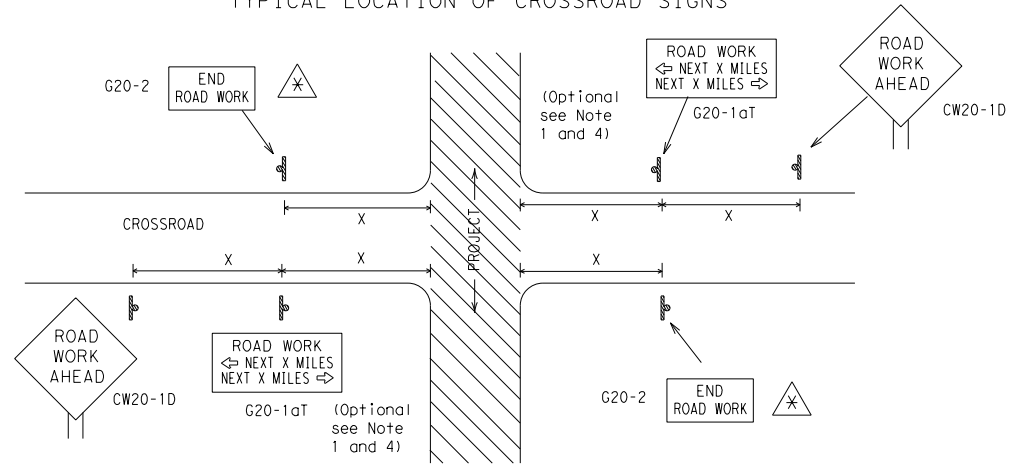
SHEET 1 OF 12

		<b>Traffic Operations Division Standard</b>	
<b>BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS</b>			
<b>BC (1) - 14</b>			
FILE:	bc-14.dgn	DN:	TxDOT
© TxDOT	November 2002	CK:	TxDOT
REVISIONS		DW:	TxDOT
4-03	5-10	8-14	
9-07	7-13		
CONT	SECT	JOB	HIGHWAY
0915	12	576	VARIES
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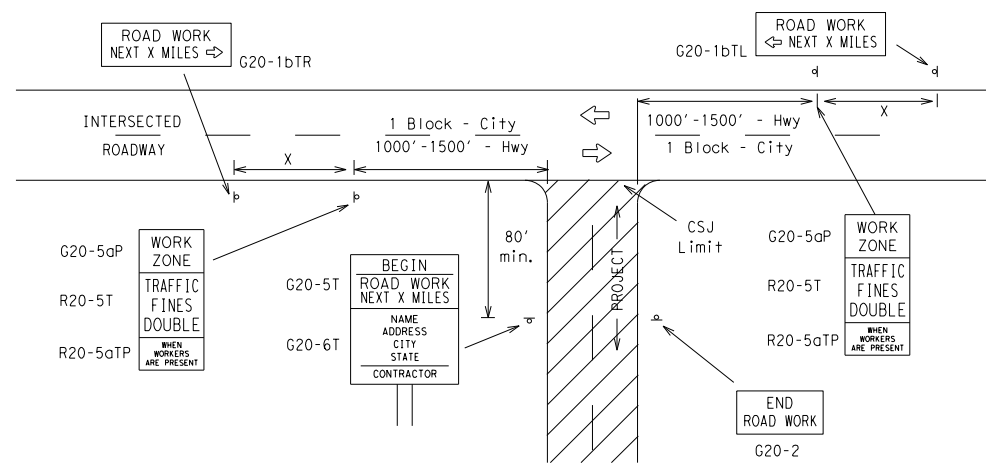
DATE: 5/4/2019 10:26:58 AM  
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TYPICAL LOCATION OF CROSSROAD SIGNS



- ⚠ May be mounted on back of "ROAD WORK AHEAD" (CW20-1D) sign with approval of Engineer. (See note 2 below)
- The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D) sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
  - The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK" (G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume. This information shall be shown in the plans.
  - Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
  - The "ROAD WORK NEXT X MILES" (G20-1aT) sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
  - Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
  - When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

- The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
- If construction closes the road at a T-intersection the Contractor shall place the "CONTRACTOR NAME" (G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow (G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR) signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING<sup>1,5,6</sup>

Sign Number or Series	SIZE		SPACING	
	Conventional Road	Expressway/Freeway	Posted Speed MPH	Sign Spacing "X" Feet (Apprx.)
CW20 <sup>4</sup>	48" x 48"	48" x 48"	30	120
CW21			35	160
CW22			40	240
CW23			45	320
CW25			50	400
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"	55	500 <sup>2</sup>
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"	60	600 <sup>2</sup>
			65	700 <sup>2</sup>
			70	800 <sup>2</sup>
			75	900 <sup>2</sup>
			80	1000 <sup>2</sup>
			*	* <sup>3</sup>

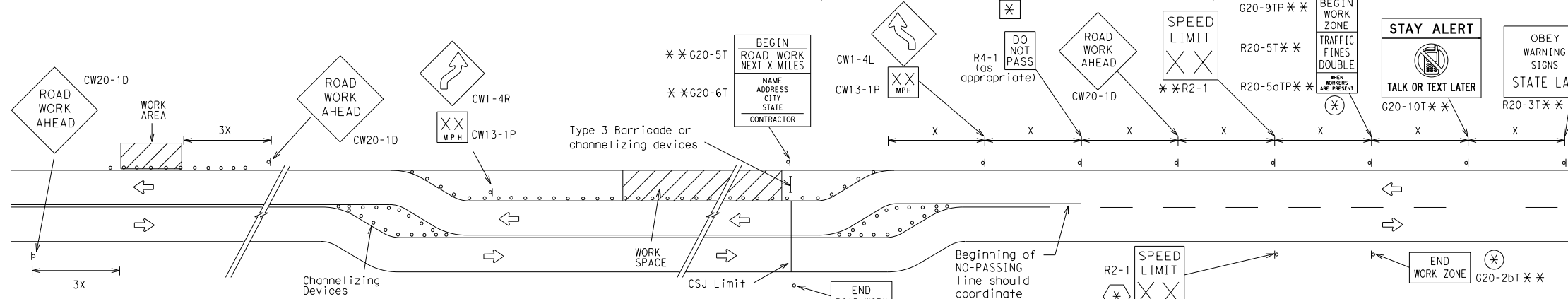
\* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

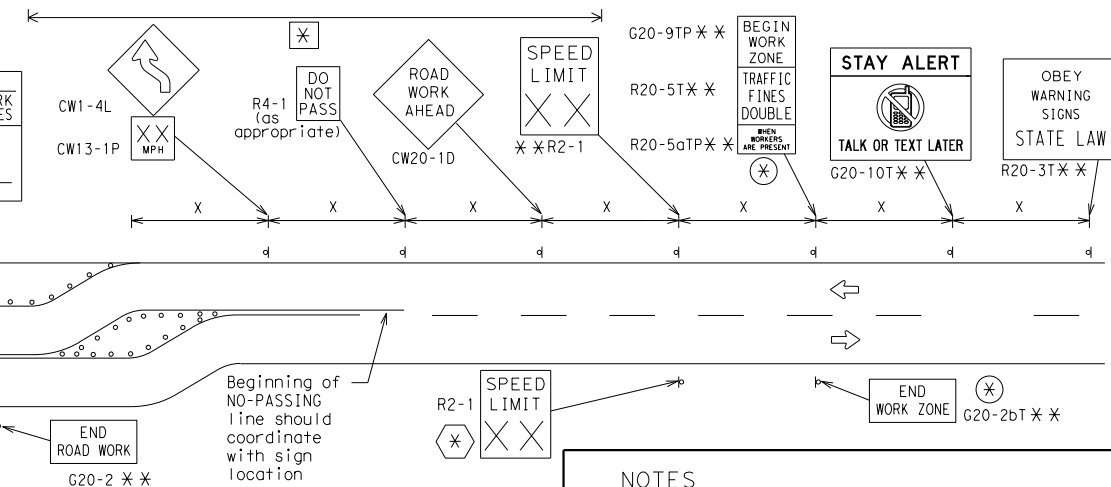
- Special or larger size signs may be used as necessary.
- Distance between signs should be increased as required to have 1500 feet advance warning.
- Distance between signs should be increased as required to have 1/2 mile or more advance warning.
- 36" x 36" "ROAD WORK AHEAD" (CW20-1D) signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
- Only diamond shaped warning sign sizes are indicated.
- See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD" (CW20-1D) signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

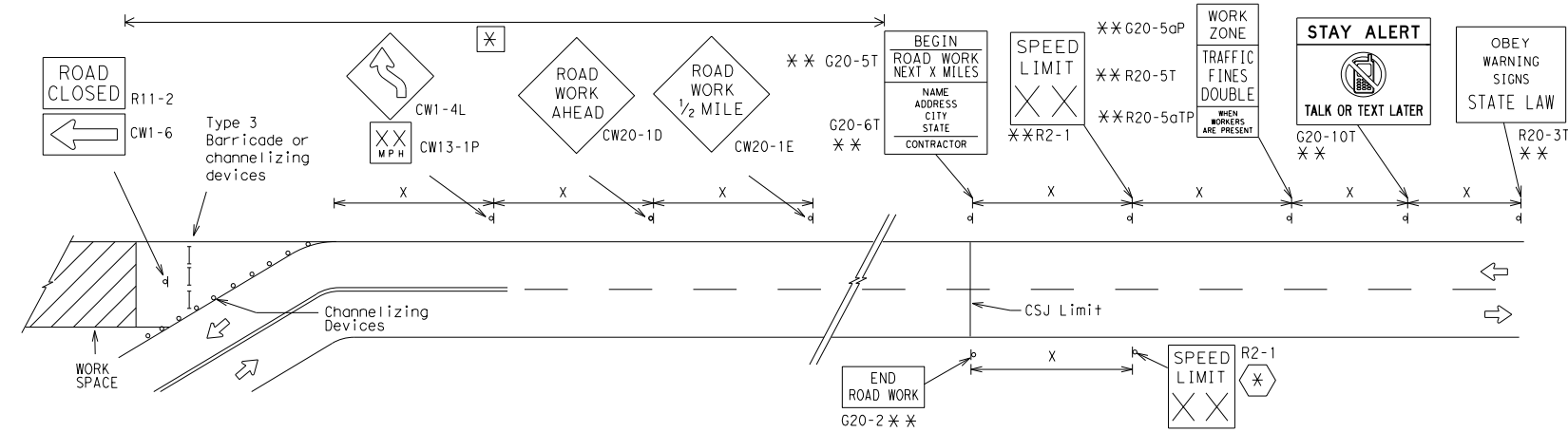
SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING AT THE CSJ LIMITS



NOTES

- The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES" (G20-5T) sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.
- ⊗ The "BEGIN WORK ZONE" (G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.
- \*\* Required CSJ Limit signing. See Note 10 on BC(1). TRAFFIC FINES DOUBLE signs will not be required on projects consisting solely of mobile operations work.
- ⊗ Area for placement of "ROAD WORK AHEAD" (CW20-1D) sign and other signs or devices as called for on the Traffic Control Plan.
- ⊗ Contractor will install a regulatory speed limit sign at the end of the work zone.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



LEGEND

—	Type 3 Barricade
○ ○ ○	Channelizing Devices
⊗	Sign
X	See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements.

SHEET 2 OF 12



BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2) - 14

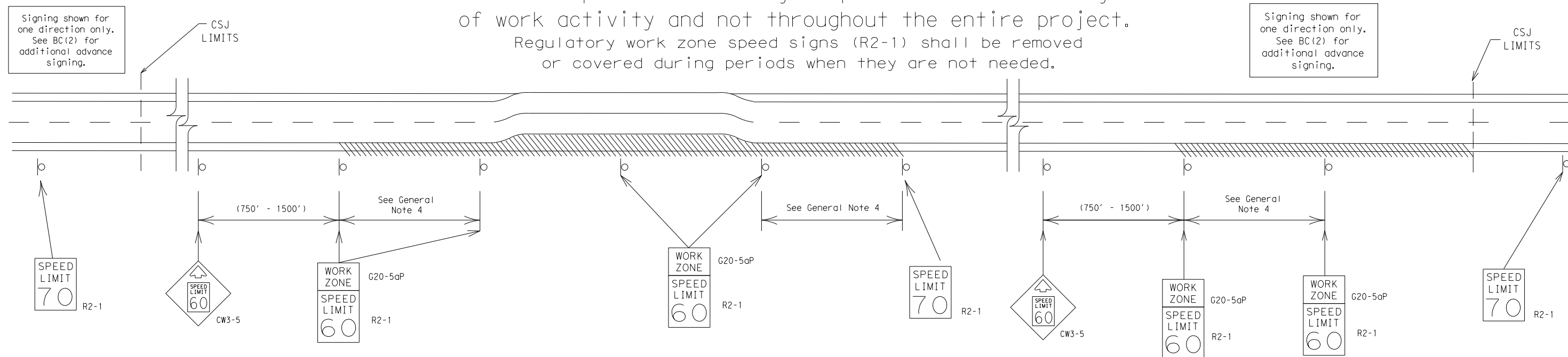
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© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
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# TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project. Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



## GUIDANCE FOR USE:

### LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

- rough road or damaged pavement surface
- substantial alteration of roadway geometrics (diversions)
- construction detours
- grade
- width
- other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

### SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the travelled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered. (See Removing or Covering on BC(4)).

## GENERAL NOTES

- Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
- Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
- Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
- Frequency of work zone speed limit signs should be:
 

40 mph and greater	0.2 to 2 miles
35 mph and less	0.2 to 1 mile
- Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
- Fabrication, erection and maintenance of the "ADVANCE SPEED LIMIT" (CW3-5) sign, "WORK ZONE" (G20-5aP) plaque and the "SPEED LIMIT" (R2-1) signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
- Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
- Techniques that may help reduce traffic speeds include but are not limited to:
  - Law enforcement.
  - Flagger stationed next to sign.
  - Portable changeable message sign (PCMS).
  - Low-power (drone) radar transmitter.
  - Speed monitor trailers or signs.
- Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
- For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

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SHEET 3 OF 12

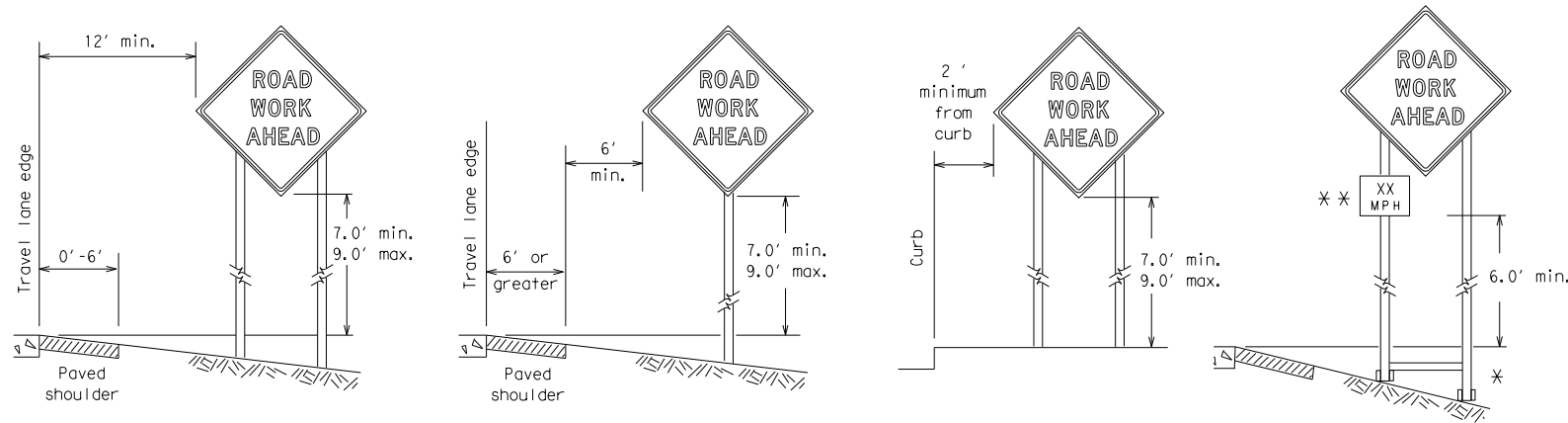


## BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC (3) - 14

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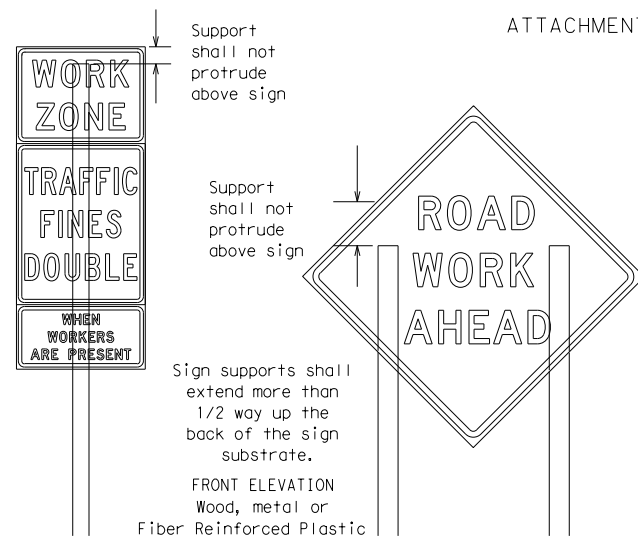
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



\* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

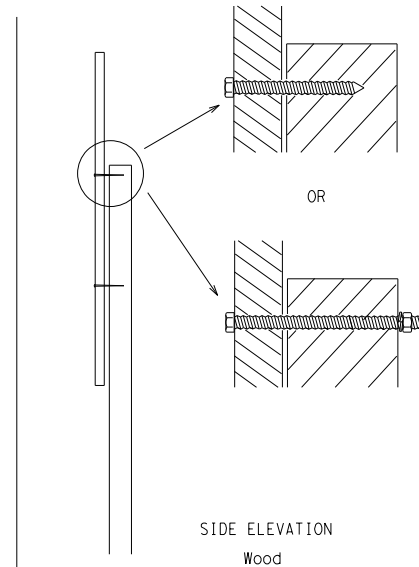
\*\* When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the splice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports



Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

GENERAL NOTES FOR WORK ZONE SIGNS

- Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
  - Wooden sign posts shall be painted white.
  - Barricades shall NOT be used as sign supports.
  - All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
  - The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
  - The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD). The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
  - The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
  - Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
  - The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.
- DURATION OF WORK** (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)
- The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
    - Long-term stationary - work that occupies a location more than 3 days.
    - Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
    - Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
    - Short, duration - work that occupies a location up to 1 hour.
    - Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

- The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
- The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
- Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
- Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
- Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

- The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

- The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
- "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
- All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

- All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
- White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
- Orange sheeting, meeting the requirements of DMS-8300 Type B<sub>FL</sub> or Type C<sub>FL</sub>, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

- All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

- When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
- Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
- Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
- When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
- Burlap shall NOT be used to cover signs.
- Duct tape or other adhesive material shall NOT be affixed to a sign face.
- Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

- Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
- The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
- Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
- Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
- Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
- Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
- Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
- Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

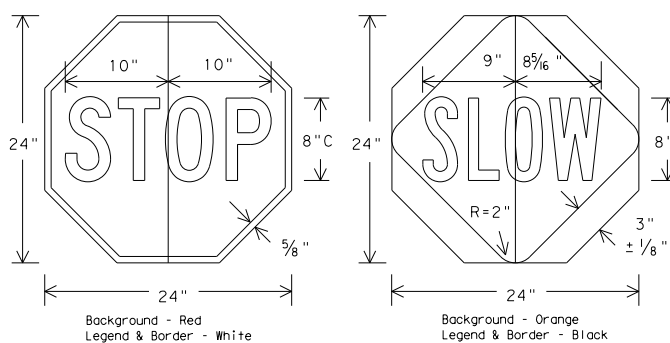
FLAGS ON SIGNS

- Flags may be used to draw attention to warning signs. When used the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

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STOP/SLOW PADDLES

- STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24" as detailed below.
- When used at night, the STOP/SLOW paddle shall be retroreflectORIZED.
- STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
- Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

- Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
- When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition.
- When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
- If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
- If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC sheets or the CWZTCD. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
- Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

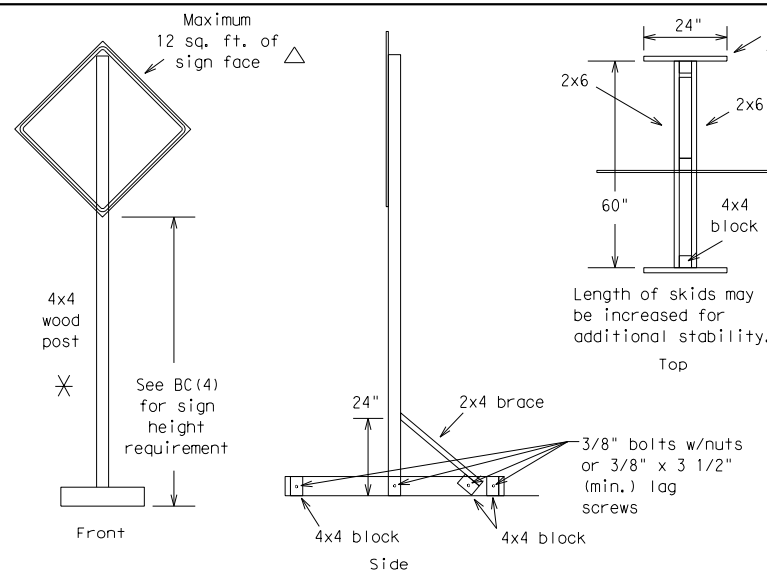
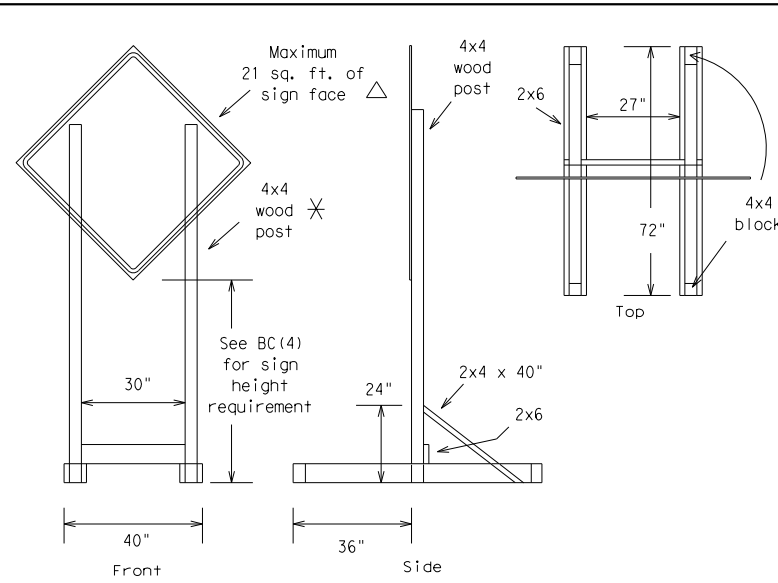


BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC (4) - 14

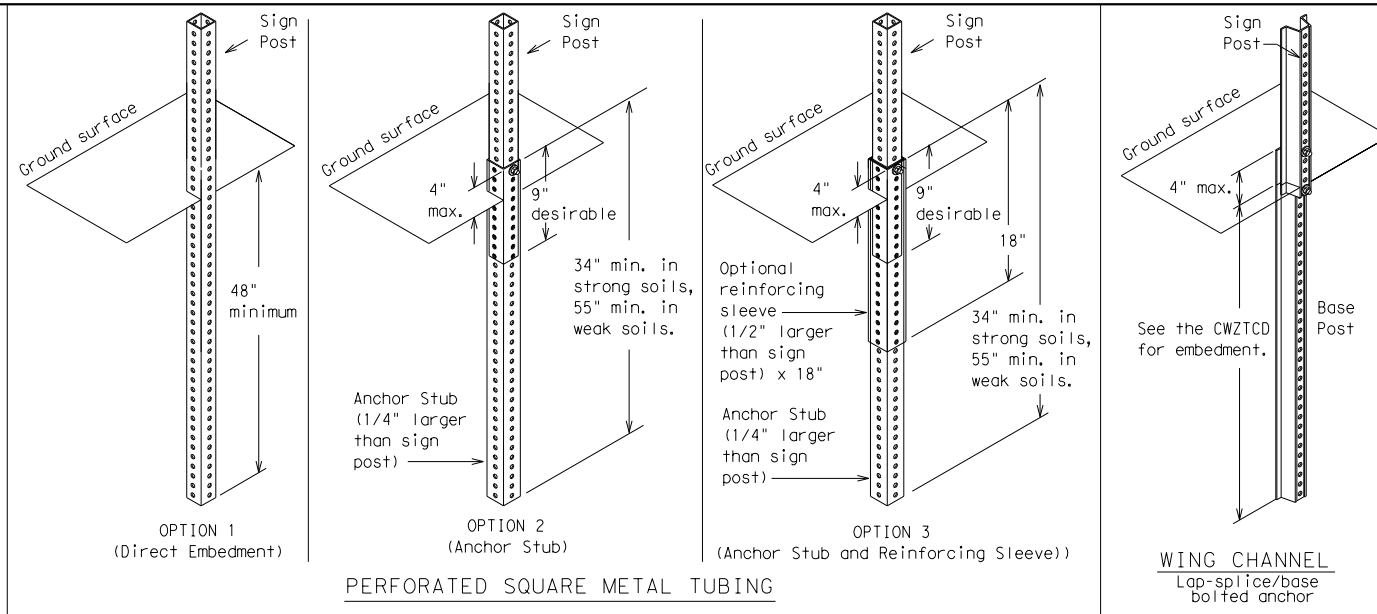
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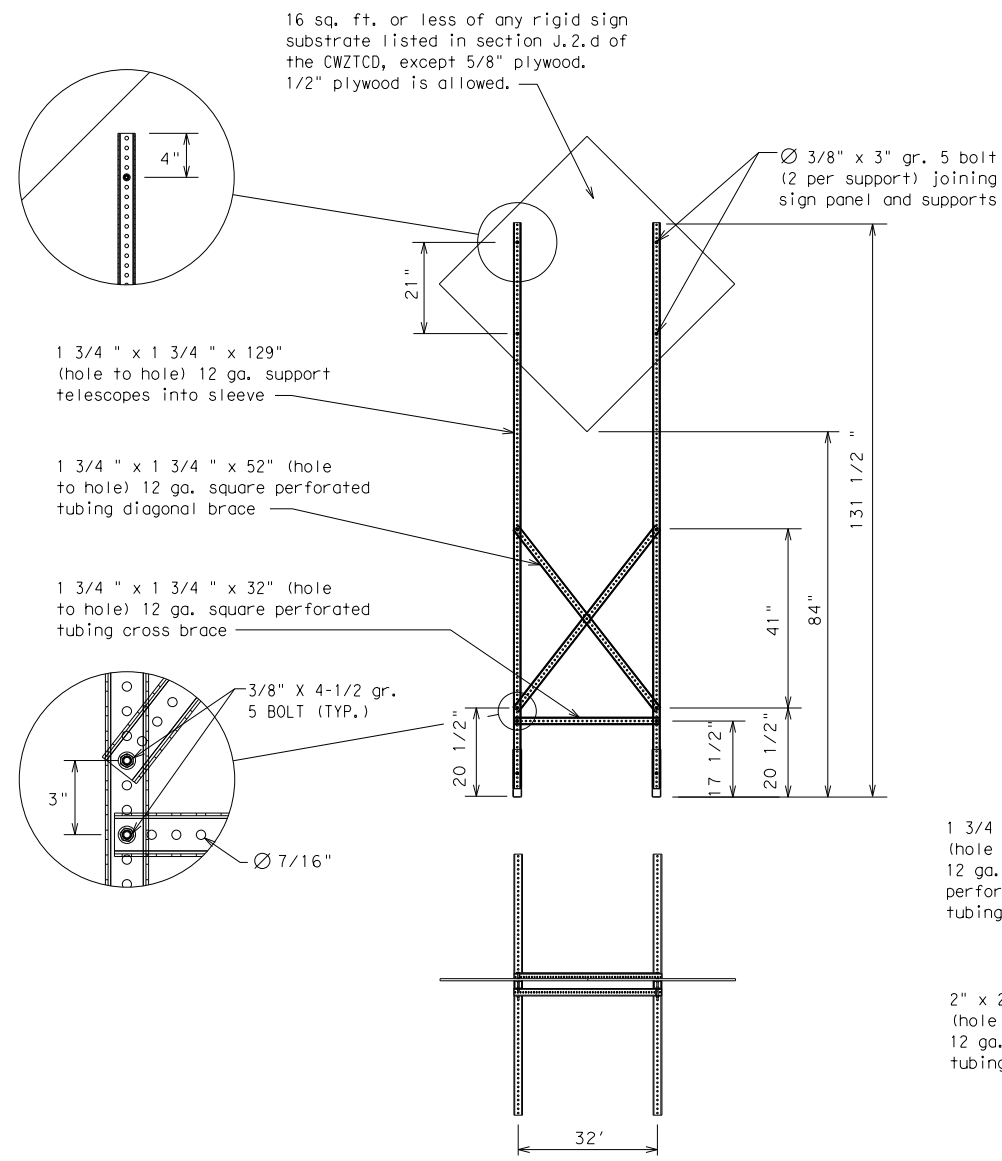
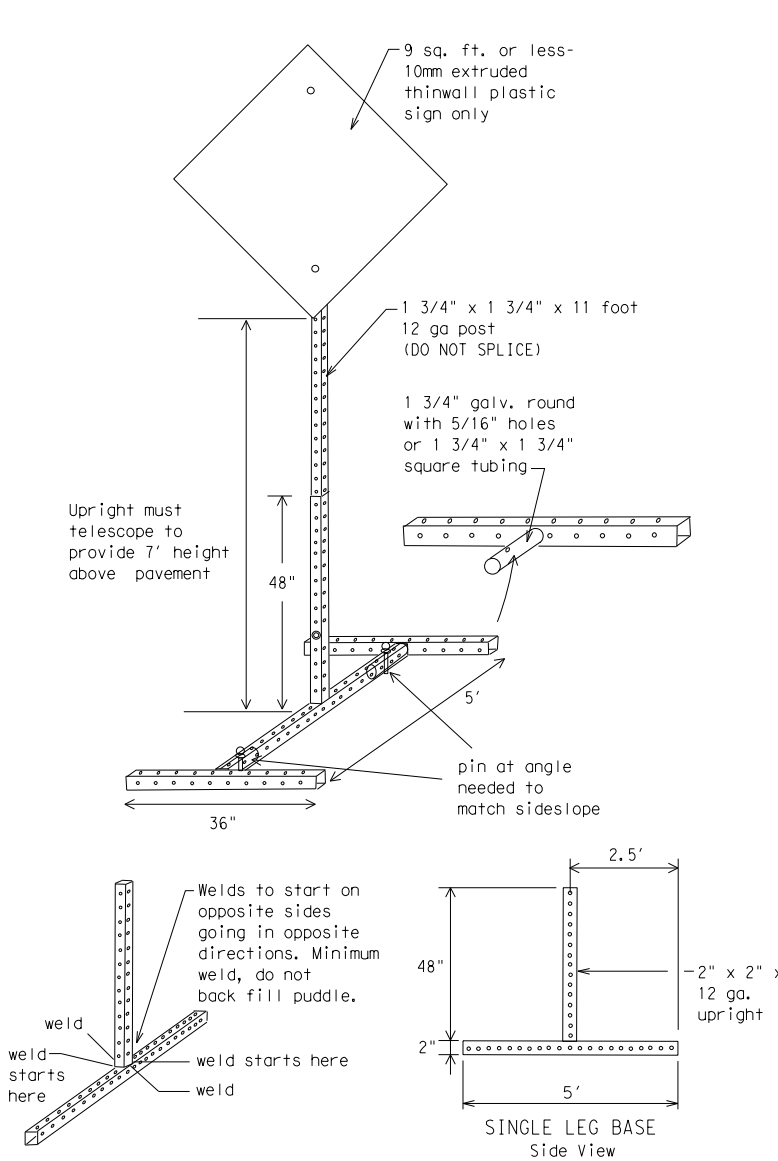
### SKID MOUNTED WOOD SIGN SUPPORTS

LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS  $\square$

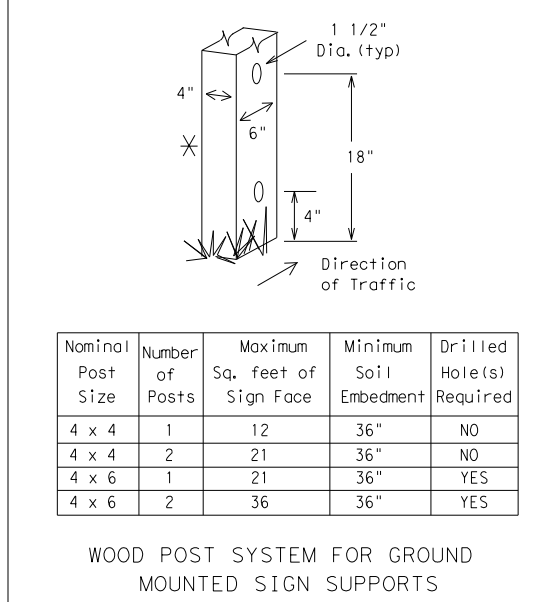


### GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support. The maximum sign square footage shall adhere to the manufacturer's recommendation. Two post installations can be used for larger signs.



### SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS



### WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

### OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

- ### GENERAL NOTES
- Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
  - No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
  - When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

- $\square$  See BC(4) for definition of "Work Duration."
- $\times$  Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.
- $\Delta$  See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

SHEET 5 OF 12



## BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5) - 14

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

- The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
- Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
- Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
- Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
- Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
- When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
- The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
- The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
- Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
- Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
- Do not use the word "Danger" in message.
- Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
- Do not display messages that scroll horizontally or vertically across the face of the sign.
- The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
- PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
- Each line of text should be centered on the message board rather than left or right justified.
- If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

WORD OR PHRASE	ABBREVIATION	WORD OR PHRASE	ABBREVIATION
Access Road	ACCS RD	Major	MAJ
Alternate	ALT	Miles	MI
Avenue	AVE	Miles Per Hour	MPH
Best Route	BEST RTE	Minor	MNR
Boulevard	BLVD	Monday	MON
Bridge	BRDG	Normal	NORM
Canal	CANT	North	N
Center	CTR	Northbound	(route) N
Construction Ahead	CONST AHD	Parking	PKING
CROSSING	XING	Road	RD
Detour Route	DETOUR RTE	Right Lane	RT LN
Do Not	DONT	Saturday	SAT
East	E	Service Road	SERV RD
Eastbound	(route) E	Shoulder	SHLDR
Emergency	EMER	Slippery	SLIP
Emergency Vehicle	EMER VEH	South	S
Entrance, Enter	ENT	Southbound	(route) S
Express Lane	EXP LN	Speed	SPD
Expressway	EXPWY	Street	ST
XXXX Feet	XXXX FT	Sunday	SUN
Fog Ahead	FOG AHD	Telephone	PHONE
Freeway	FRWY, FWY	Temporary	TEMP
Freeway Blocked	FWY BLKD	Thursday	THURS
Friday	FRI	To Downtown	TO DWNTN
Hazardous Driving	HAZ DRIVING	Traffic	TRAF
Hazardous Material	HAZMAT	Travelers	TRVLR
High-Occupancy Vehicle	HOV	Tuesday	TUES
Highway	HWY	Time Minutes	TIME MIN
Hour(s)	HR, HRS	Upper Level	UPR LEVEL
Information	INFO	Vehicles (s)	VEH, VEHS
It Is	ITS	Warning	WARN
Junction	JCT	Wednesday	WED
Left	LFT	Weight Limit	WT LIMIT
Left Lane	LFT LN	West	W
Lane Closed	LN CLOSED	Westbound	(route) W
Lower Level	LWR LEVEL	Wet Pavement	WET PVMT
Maintenance	MAINT	Will Not	WONT

Roadway designation # IH-number, US-number, SH-number, FM-number

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY CLOSED X MILE
ROAD CLOSED AT SH XXX
ROAD CLSD AT FM XXXX
RIGHT X LANES CLOSED
CENTER LANE CLOSED
NIGHT LANE CLOSURES
VARIOUS LANES CLOSED
EXIT CLOSED
MALL DRIVEWAY CLOSED
XXXXXXXX BLVD CLOSED

Other Condition List

FRONTAGE ROAD CLOSED
SHOULDER CLOSED XXX FT
RIGHT LN CLOSED XXX FT
RIGHT X LANES OPEN
DAYTIME LANE CLOSURES
I-XX SOUTH EXIT CLOSED
EXIT XXX CLOSED X MILE
RIGHT LN TO BE CLOSED
X LANES CLOSED TUE - FRI

ROADWORK XXX FT
FLAGGER XXXX FT
RIGHT LN NARROWS XXXX FT
MERGING TRAFFIC XXXX FT
LOOSE GRAVEL XXXX FT
DETOUR X MILE
ROADWORK PAST SH XXXX
BUMP XXXX FT
TRAFFIC SIGNAL XXXX FT

ROAD REPAIRS XXXX FT
LANE NARROWS XXXX FT
TWO-WAY TRAFFIC XX MILE
CONST TRAFFIC XXX FT
UNEVEN LANES XXXX FT
ROUGH ROAD XXXX FT
ROADWORK NEXT FRI-SUN
US XXX EXIT X MILES
LANES SHIFT *

\* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

MERGE RIGHT
DETOUR NEXT X EXITS
USE EXIT XXX
STAY ON US XXX SOUTH
TRUCKS USE US XXX N
WATCH FOR TRUCKS
EXPECT DELAYS
REDUCE SPEED XXX FT
USE OTHER ROUTES
STAY IN LANE *

FORM X LINES RIGHT
USE XXXXX RD EXIT
USE EXIT I-XX NORTH
USE I-XX E TO I-XX N
WATCH FOR TRUCKS
EXPECT DELAYS
PREPARE TO STOP
END SHOULDER USE
WATCH FOR WORKERS

Location List

AT FM XXXX
BEFORE RAILROAD CROSSING
NEXT X MILES
PAST US XXX EXIT
XXXXXXXXX TO XXXXXXXX
US XXX TO FM XXXX

Warning List

SPEED LIMIT XX MPH
MAXIMUM SPEED XX MPH
MINIMUM SPEED XX MPH
ADVISORY SPEED XX MPH
RIGHT LANE EXIT
USE CAUTION
DRIVE SAFELY
DRIVE WITH CARE

\*\* Advance Notice List

TUE-FRI XX AM - X PM
APR XX-XX X PM-X AM
BEGINS MONDAY
BEGINS MAY XX
MAY X-X XX PM - XX AM
NEXT FRI-SUN
XX AM TO XX PM
NEXT TUE AUG XX
TONIGHT XX PM-XX AM

\*\* See Application Guidelines Note 6.

APPLICATION GUIDELINES

- Only 1 or 2 phases are to be used on a PCMS.
- The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
- A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
- A Location Phase is necessary only if a distance or location is not included in the first phase selected.
- If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
- For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

WORDING ALTERNATIVES

- The words RIGHT, LEFT and ALL can be interchanged as appropriate.
- Roadway designations IH, US, SH, FM and LP can be interchanged as appropriate.
- EAST, WEST, NORTH and SOUTH (or abbreviations E, W, N and S) can be interchanged as appropriate.
- Highway names and numbers replaced as appropriate.
- ROAD, HIGHWAY and FREEWAY can be interchanged as needed.
- AHEAD may be used instead of distances if necessary.
- FT and MI, MILE and MILES interchanged as appropriate.
- AT, BEFORE and PAST interchanged as needed.
- Distances or AHEAD can be eliminated from the message if a location phase is used.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

- When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
- When symbol signs, such as the "Flagger Symbol" (CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
- When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
- A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

		<b>Traffic Operations Division Standard</b>	
<p><b>BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)</b></p> <p><b>BC (6) - 14</b></p>			
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©TxDOT November 2002	CONT	SECT	JOB
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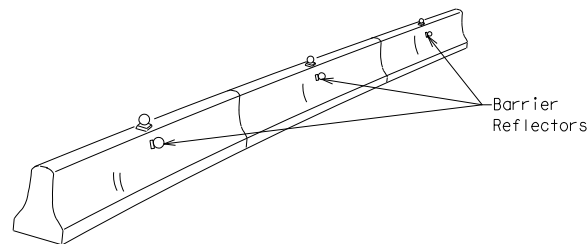
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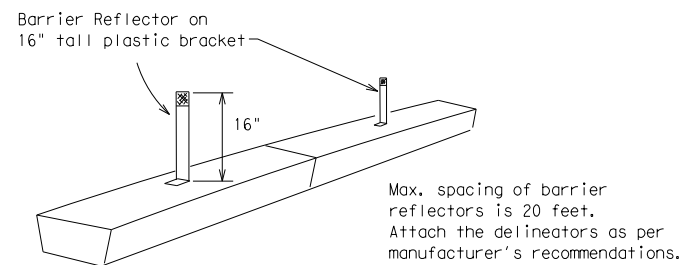
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- Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
- Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.

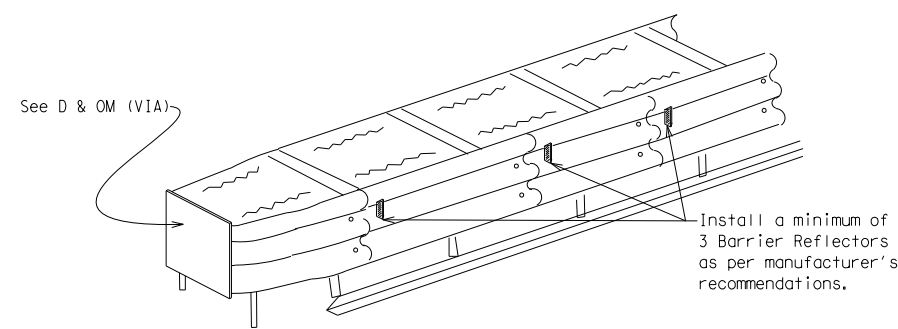


CONCRETE TRAFFIC BARRIER (CTB)



LOW PROFILE CONCRETE BARRIER (LPCB)

- Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
- Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional) while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
- When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
- Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
- Maximum spacing of Barrier Reflectors is forty (40) feet.
- Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
- Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
- Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
- Single slope barriers shall be delineated as shown on the above detail.



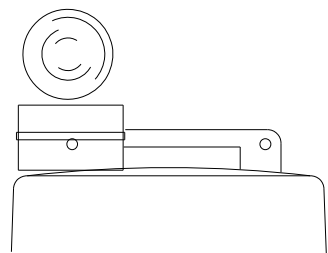
DELINEATION OF END TREATMENTS

**END TREATMENTS FOR CTB'S USED IN WORK ZONES**  
 End treatments used on CTB's in work zones shall meet crashworthy standards as defined in the National Cooperative Highway Research Report 350. Refer to the CWZTCD List for approved end treatments and manufacturers.

**BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS**

**WARNING LIGHTS**

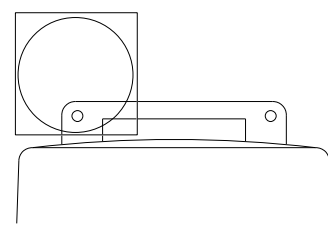
- Warning lights shall meet the requirements of the TMUTCD.
- Warning lights shall NOT be installed on barricades.
- Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B<sub>FL</sub> or C<sub>FL</sub> Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
- Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
- The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
- When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
- When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
- The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.



Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.

**WARNING LIGHTS MOUNTED ON PLASTIC DRUMS**

- Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
- Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
- A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
- Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
- Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
- Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
- The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.



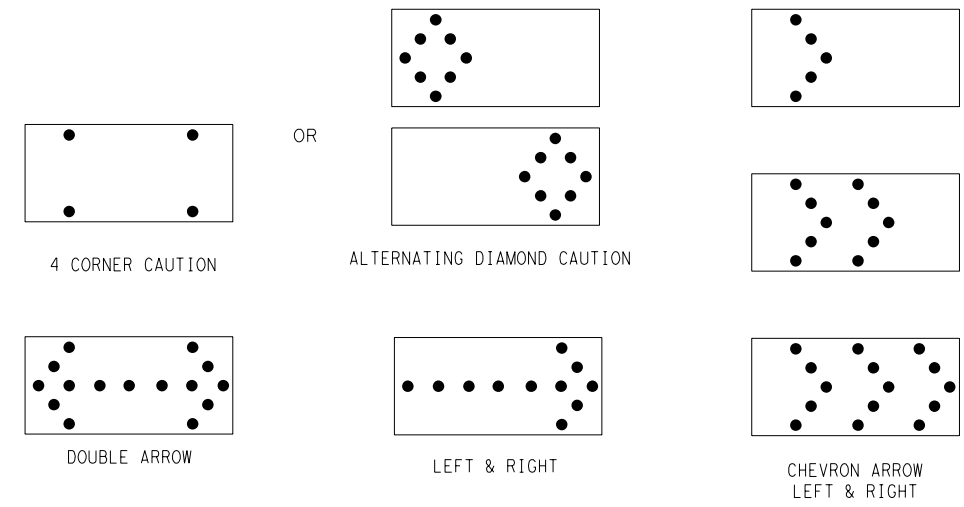
Warning reflector may be round or square. Must have a yellow reflective surface area of at least 30 square inches

**WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS**

- A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
- The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
- The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
- Round reflectors shall be fully reflectorized, including the area where attached to the drum.
- Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
- The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
- When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
- The warning reflector should be mounted on the side of the handle nearest approaching traffic.
- The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

- The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
- Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
- The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
- The Flashing Arrow Board should be able to display the following symbols:



- The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
- The straight line caution display is NOT ALLOWED.
- The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
- Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
- The sequential arrow display is NOT ALLOWED.
- The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.
- The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
- A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
- A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
- Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

REQUIREMENTS			
TYPE	MINIMUM SIZE	MINIMUM NUMBER OF PANEL LAMPS	MINIMUM VISIBILITY DISTANCE
B	30 x 60	13	3/4 mile
C	48 x 96	15	1 mile

**ATTENTION**  
 Flashing Arrow Boards shall be equipped with automatic dimming devices.

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

**FLASHING ARROW BOARDS**

SHEET 7 OF 12

**TRUCK-MOUNTED ATTENUATORS**

- Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the National Cooperative Highway Research Report No. 350 (NCHRP 350) or the Manual for Assessing Safety Hardware (MASH).
- Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
- Refer to the CWZTCD for a list of approved TMAs.
- TMAs are required on freeways unless otherwise noted in the plans.
- A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
- The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.



**BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR**

BC(7)-14

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**GENERAL NOTES**

- For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
- For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
- For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
- Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
- The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

**GENERAL DESIGN REQUIREMENTS**

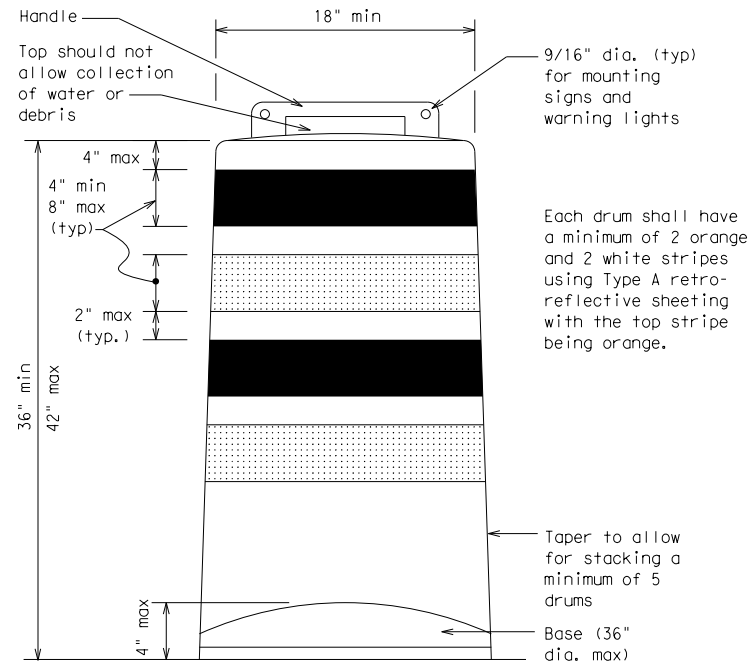
- Pre-qualified plastic drums shall meet the following requirements:
- Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
  - The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
  - Plastic drums shall be constructed of lightweight flexible, and deformable materials. The Contractor shall NOT use metal drums or single piece plastic drums as channelization devices or sign supports.
  - Drums shall present a profile that is a minimum of 18 inches in width at the 36 inch height when viewed from any direction. The height of drum unit (body installed on base) shall be a minimum of 36 inches and a maximum of 42 inches.
  - The top of the drum shall have a built-in handle for easy pickup and shall be designed to drain water and not collect debris. The handle shall have a minimum of two widely spaced 9/16 inch diameter holes to allow attachment of a warning light, warning reflector unit or approved compliant sign.
  - The exterior of the drum body shall have a minimum of four alternating orange and white retroreflective circumferential stripes not less than 4 inches nor greater than 8 inches in width. Any non-reflectORIZED space between any two adjacent stripes shall not exceed 2 inches in width.
  - Bases shall have a maximum width of 36 inches, a maximum height of 4 inches, and a minimum of two footholds of sufficient size to allow base to be held down while separating the drum body from the base.
  - Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
  - Drum body shall have a maximum unballasted weight of 11 lbs.
  - Drum and base shall be marked with manufacturer's name and model number.

**RETROREFLECTIVE SHEETING**

- The stripes used on drums shall be constructed of sheeting meeting the color and retroreflectivity requirements of Departmental Materials Specification DMS-8300, "Sign Face Materials." Type A reflective sheeting shall be supplied unless otherwise specified in the plans.
- The sheeting shall be suitable for use on and shall adhere to the drum surface such that, upon vehicular impact, the sheeting shall remain adhered in-place and exhibit no delaminating, cracking, or loss of retroreflectivity other than that loss due to abrasion of the sheeting surface.

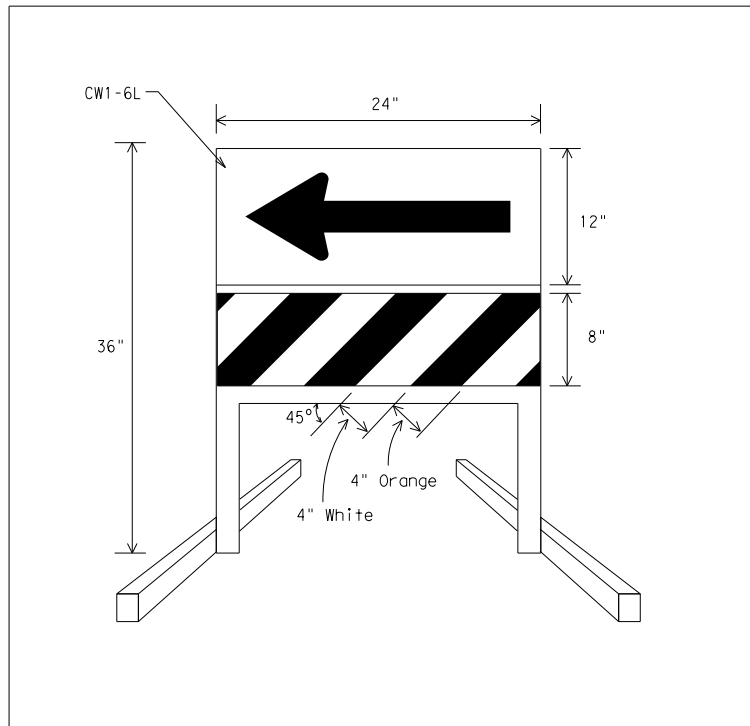
**BALLAST**

- Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other ballasting devices as approved by the Engineer. Stacking of sandbags will be allowed, however height of sandbags above pavement surface may not exceed 12 inches.
- Bases with built-in ballast shall weigh between 40 lbs. and 50 lbs. Built-in ballast can be constructed of an integral crumb rubber base or a solid rubber base.
- Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
- The ballast shall not be heavy objects, water, or any material that would become hazardous to motorists, pedestrians, or workers when the drum is struck by a vehicle.
- When used in regions susceptible to freezing, drums shall have drainage holes in the bottoms so that water will not collect and freeze becoming a hazard when struck by a vehicle.
- Ballast shall not be placed on top of drums.
- Adhesives may be used to secure base of drums to pavement.



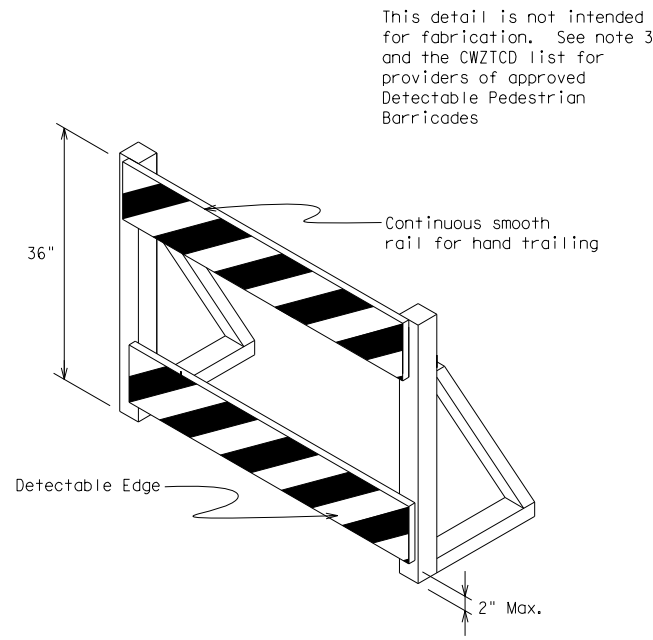
Each drum shall have a minimum of 2 orange and 2 white stripes using Type A retro-reflective sheeting with the top stripe being orange.

Taper to allow for stacking a minimum of 5 drums



**DIRECTION INDICATOR BARRICADE**

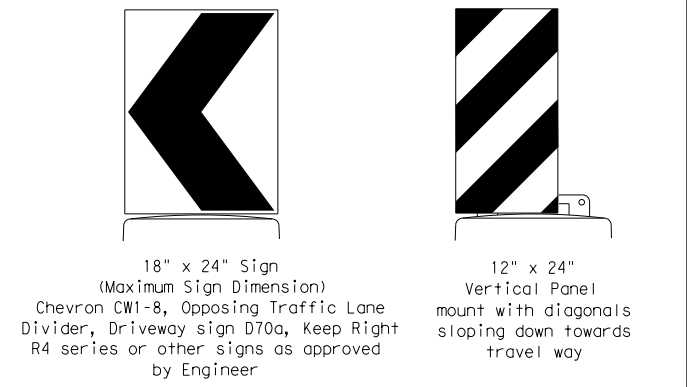
- The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
- If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
- The Direction Indicator Barricade shall consist of One-Direction Large Arrow (CW1-6) sign in the size shown with a black arrow on a background of Type B<sub>FL</sub> or Type C<sub>FL</sub> Orange retroreflective sheeting above a rail with Type A retroreflective sheeting in alternating 4" white and orange stripes sloping downward at an angle of 45 degrees in the direction road users are to pass. Sheeting types shall be as per DMS 8300.
- Double arrows on the Direction Indicator Barricade will not be allowed.
- Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.



**DETECTABLE PEDESTRIAN BARRICADES**

- When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, the temporary facilities shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.
- Where pedestrians with visual disabilities normally use the closed sidewalk, a device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.
- Detectable pedestrian barricades similar to the one pictured above, longitudinal channelizing devices, some concrete barriers, and wood or chain link fencing with a continuous detectable edging can satisfactorily delineate a pedestrian path.
- Tape, rope, or plastic chain strung between devices are not detectable, do not comply with the design standards in the "Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG)" and should not be used as a control for pedestrian movements.
- Warning lights shall not be attached to detectable pedestrian barricades.
- Detectable pedestrian barricades may use 8" nominal barricade rails as shown on BC(10) provided that the top rail provides a smooth continuous rail suitable for hand trailing with no splinters, burrs, or sharp edges.

This detail is not intended for fabrication. See note 3 and the CWZTCD list for providers of approved Detectable Pedestrian Barricades



Plywood, Aluminum or Metal sign substrates shall NOT be used on plastic drums

**SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS**

- Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
- Chevrons and other work zone signs with an orange background shall be manufactured with Type B<sub>FL</sub> or Type C<sub>FL</sub> Orange sheeting meeting the color and retroreflectivity requirements of DMS-8300, "Sign Face Material," unless otherwise specified in the plans.
- Vertical Panels shall be manufactured with orange and white sheeting meeting the requirements of DMS-8300 Type A Diagonal stripes on Vertical Panels shall slope down toward the intended traveled lane.
- Other sign messages (text or symbolic) may be used as approved by the Engineer. Sign dimensions shall not exceed 18 inches in width or 24 inches in height, except for the R9 series signs discussed in note 8 below.
- Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
- Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
- Chevrons may be placed on drums on the outside of curves, on merging tapers or on shifting tapers. When used in these locations they may be placed on every drum or spaced not more than on every third drum. A minimum of three (3) should be used at each location called for in the plans.
- R9-9, R9-10, R9-11 and R9-11a Sidewalk Closed signs which are 24 inches wide may be mounted on plastic drums, with approval of the Engineer.

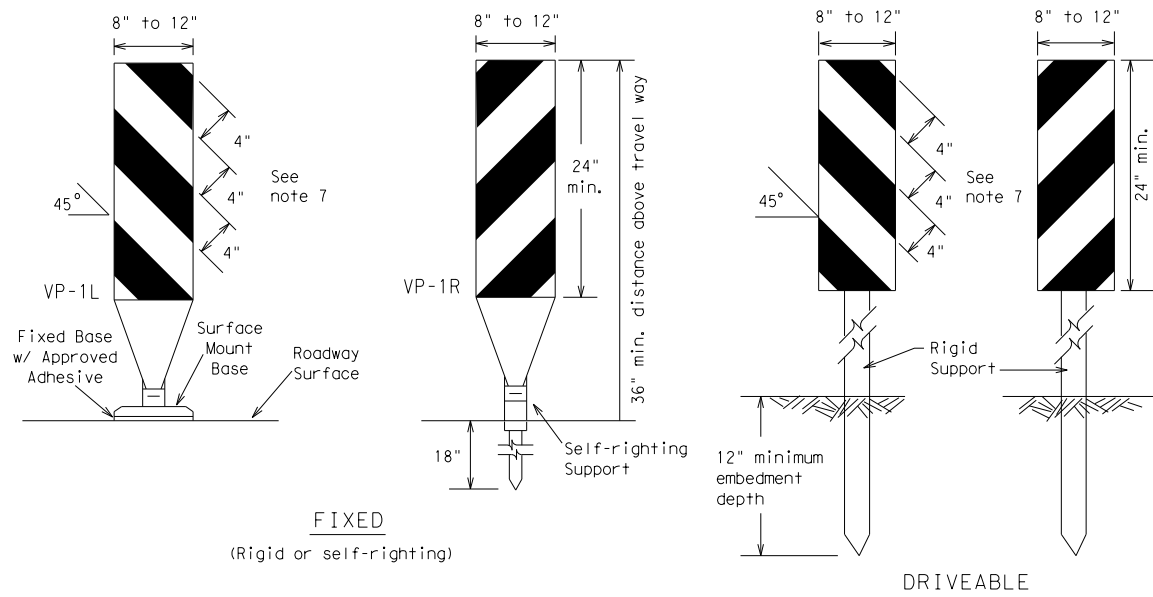


**BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES**

BC (8) - 14

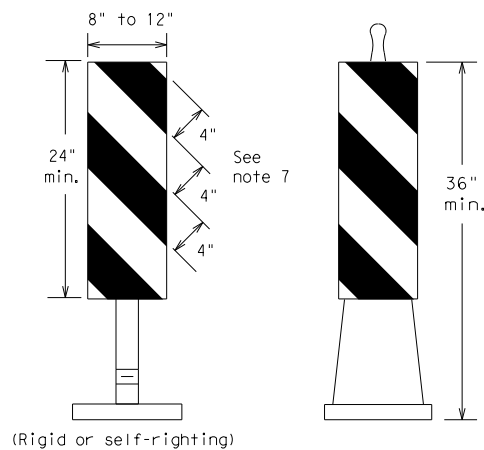
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**FIXED**  
(Rigid or self-righting)

**DRIVEABLE**

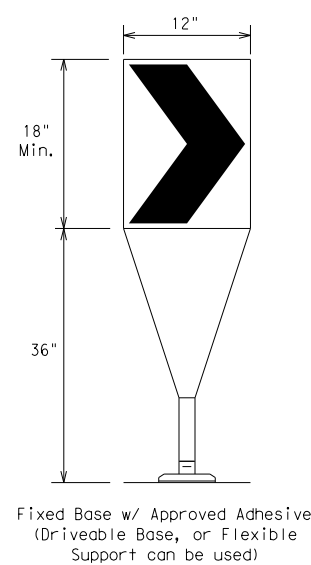


(Rigid or self-righting)

**PORTABLE**

**VERTICAL PANELS (VPs)**

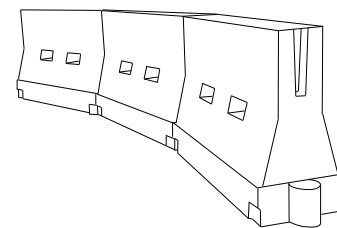
- Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
- VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual Appendix B "Treatment of Pavement Drop-offs in Work Zones" for additional guidelines on the use of VP's for drop-offs.
- VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
- VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
- Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- Sheeting for the VP's shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
- Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.



Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

- The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
- Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
- Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
- To be effective, the chevron should be visible for at least 500 feet.
- Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B<sub>FL</sub> or Type C<sub>FL</sub> conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
- For Long Term Stationary use on tapers or transitions on freeways and divided highways self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

**CHEVRONS**



**LONGITUDINAL CHANNELIZING DEVICES (LCD)**

- LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
- LCDs may be used instead of a line of cones or drums.
- LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
- LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
- LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
- LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10) placed near the top of the LCD along the full length of the device.

**WATER BALLASTED SYSTEMS USED AS BARRIERS**

- Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate NCHRP 350 crashworthiness requirements based on roadway speed and barrier application.
- Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
- Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
- Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
- When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

**HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS**

**GENERAL NOTES**

- Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
- Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
- Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
- Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
- Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
- The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices	
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent
30	L = WS <sup>2</sup> / 60	150'	165'	180'	30'	60'
35		205'	225'	245'	35'	70'
40		265'	295'	320'	40'	80'
45	L = WS	450'	495'	540'	45'	90'
50		500'	550'	600'	50'	100'
55		550'	605'	660'	55'	110'
60		600'	660'	720'	60'	120'
65		650'	715'	780'	65'	130'
70		700'	770'	840'	70'	140'
75		750'	825'	900'	75'	150'
80		800'	880'	960'	80'	160'

\*\*Taper lengths have been rounded off.  
L=Length of Taper (FT.) W=Width of Offset (FT.)  
S=Posted Speed (MPH)

**SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS**

SHEET 9 OF 12

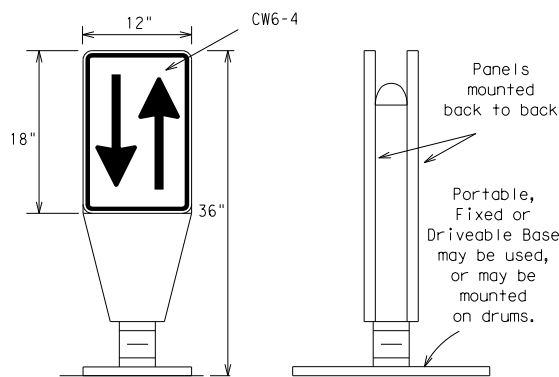


**BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES**

BC (9) - 14

FILE:	bc-14.dgn	DN:	TxDOT	CK:	TxDOT	DW:	TxDOT	CK:	TxDOT
©TxDOT	November 2002	CONT	SECT	JOB	HIGHWAY				
REVISIONS		0915	12	576	VARIES				
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7-13		SAT	BEXAR	87					

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**OPPOSING TRAFFIC LANE DIVIDERS (OTLD)**

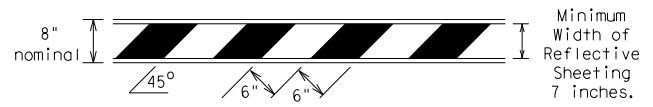
- Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
- The OTLD may be used in combination with 42" cones or VPs.
- Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
- The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B<sub>FL</sub> or Type C<sub>FL</sub> conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

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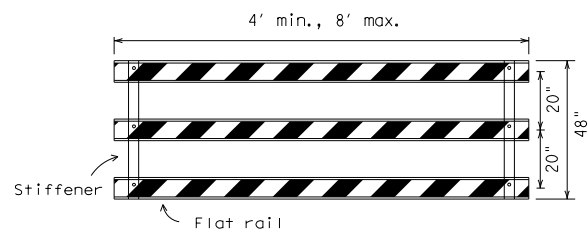
**TYPE 3 BARRICADES**

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.

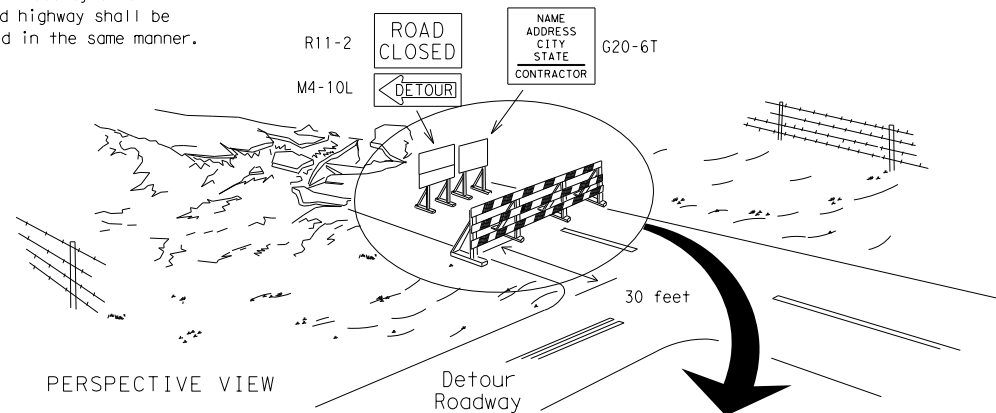


**TYPICAL STRIPING DETAIL FOR BARRICADE RAIL**



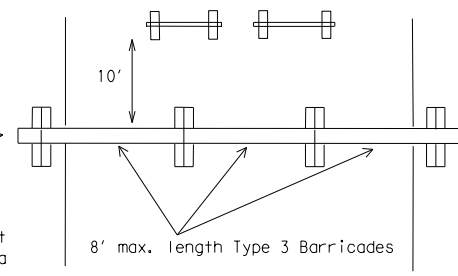
**TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES**

Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

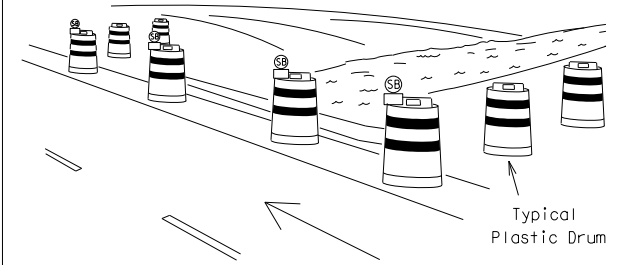
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic. Barricade striping should slant downward in the direction of detour.



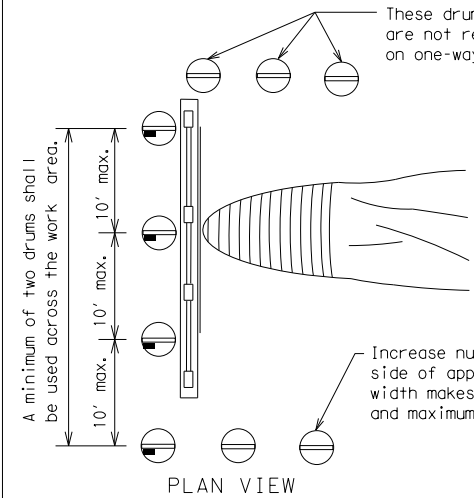
PLAN VIEW

1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

**TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION**



PERSPECTIVE VIEW

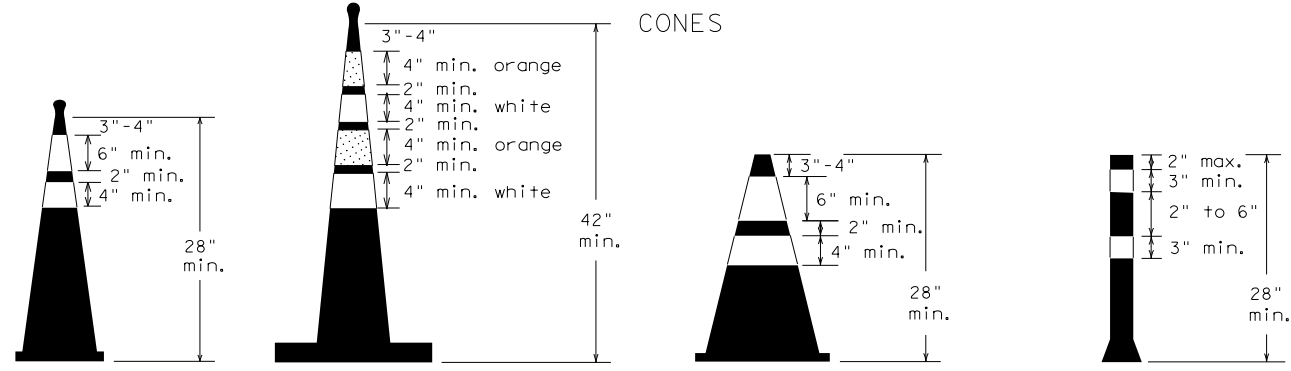


PLAN VIEW

1. Where positive redirection capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.

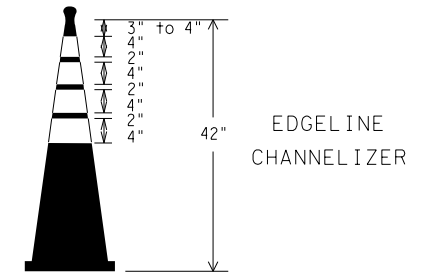
LEGEND	
	Plastic drum
	Plastic drum with steady burn light or yellow warning reflector
	Steady burn warning light or yellow warning reflector

**CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS**



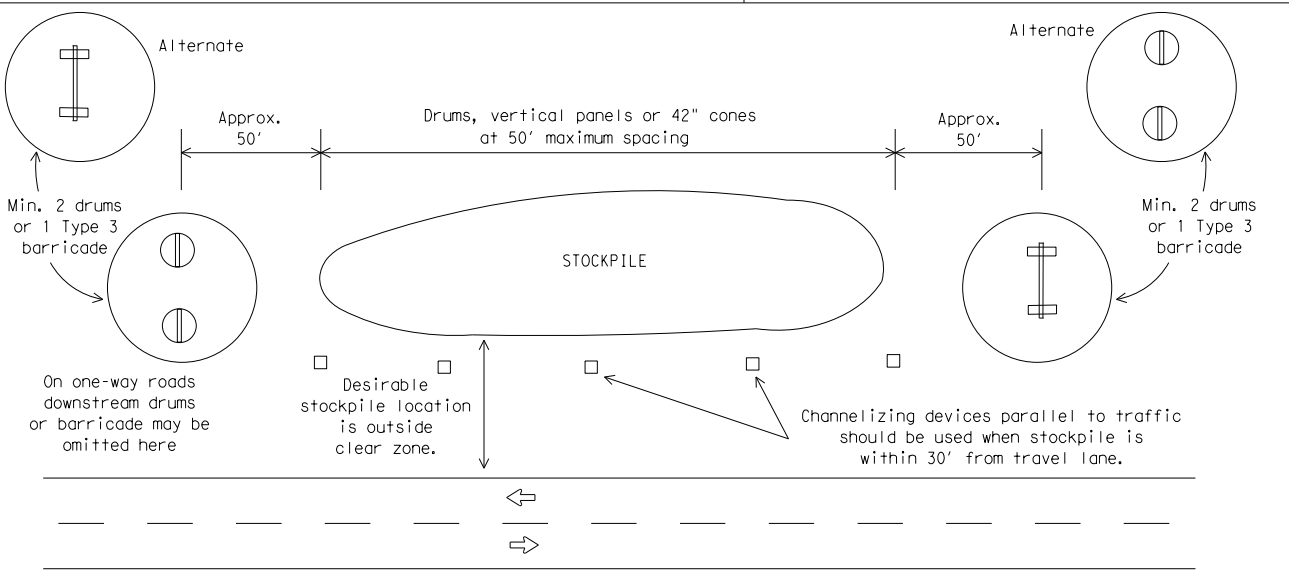
28" Cones shall have a minimum weight of 9 1/2 lbs.  
42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

THIS DEVICE SHALL NOT BE USED ON PROJECTS LET AFTER MARCH 2014.



EDGE LINE CHANNELIZER

1. This device is intended only for use in place of a vertical panel to channelize traffic by indicating the edge of the travel lane. It is not intended to be used in transitions or tapers.
2. This device shall not be used to separate lanes of traffic (opposing or otherwise) or warn of objects.
3. This device is based on a 42 inch, two-piece cone with an alternate striping pattern: four 4 inch retroreflective bands, with an approximate 2 inch gap between bands. The color of the band should correspond to the color of the edgeline (yellow for left edgeline, white for right edgeline) for which the device is substituted or for which it supplements. The reflectorized bands shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless otherwise noted.
4. The base must weigh a minimum of 30 lbs.



**TRAFFIC CONTROL FOR MATERIAL STOCKPILES**

1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers used at night shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.

**BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES**

**BC (10) - 14**

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7-13	SAT	BEXAR	88	

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

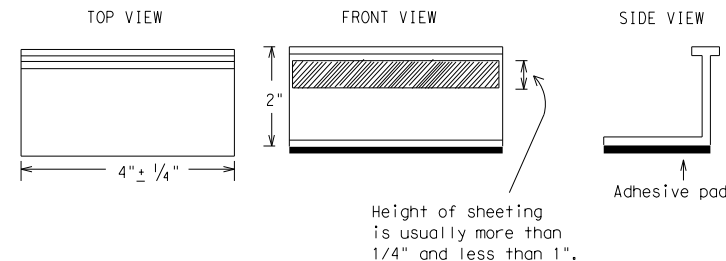
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
  - A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
  - B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:  
 YELLOW - (two amber reflective surfaces with yellow body).  
 WHITE - (one silver reflective surface with white body).

DEPARTMENTAL MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
TRAFFIC BUTTONS	DMS-4300
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240
TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS	DMS-8241
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS	DMS-8242

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

SHEET 11 OF 12



BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

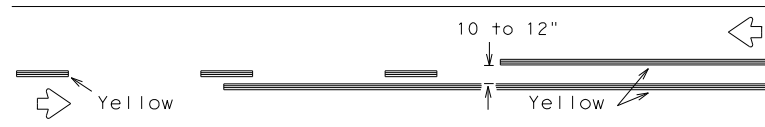
BC(11) - 14

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©TxDOT February 1998	CONT	SECT	JOB	HIGHWAY
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11-02 8-14	SAT	BEXAR		89

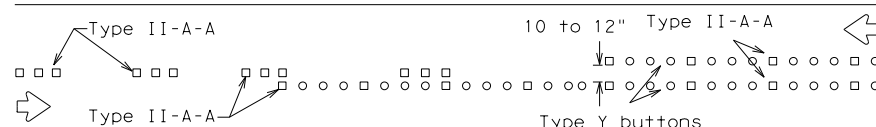
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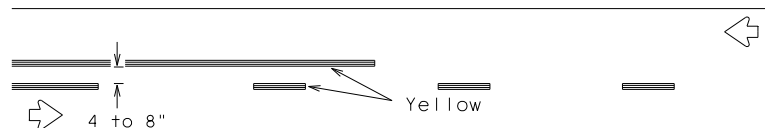
## PAVEMENT MARKING PATTERNS



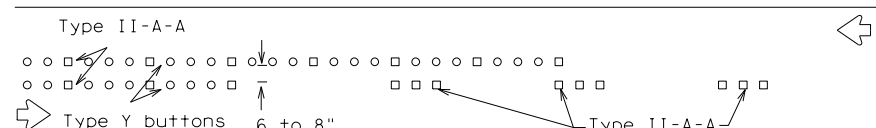
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



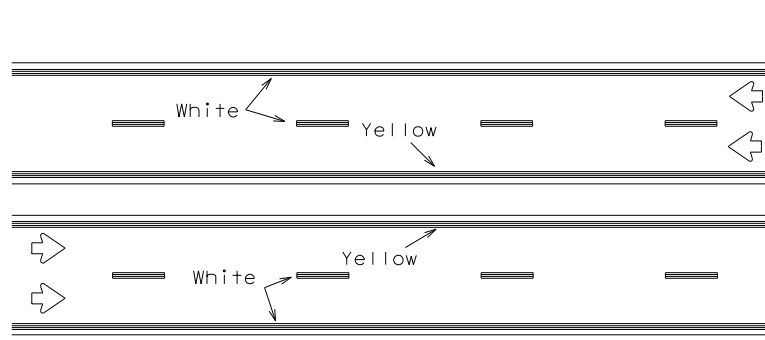
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



RAISED PAVEMENT MARKERS - PATTERN B

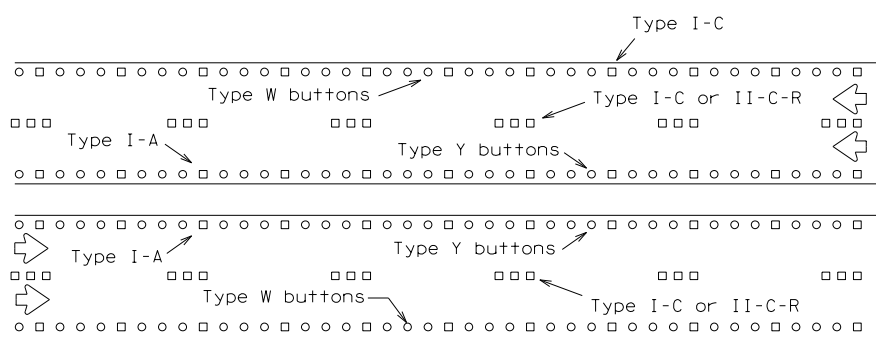
Pattern A is the TXDOT Standard, however Pattern B may be used if approved by the Engineer. Prefabricated markings may be substituted for reflectorized pavement markings.

### CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



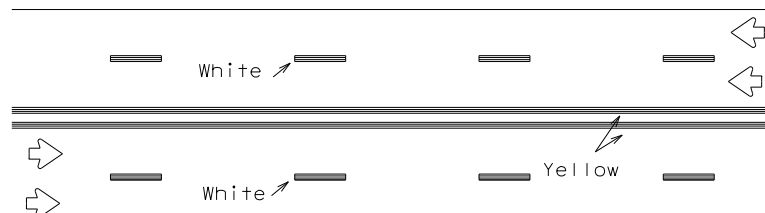
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectorized pavement markings.



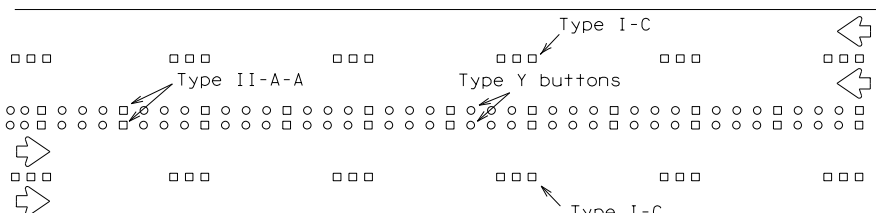
RAISED PAVEMENT MARKERS

### EDGE & LANE LINES FOR DIVIDED HIGHWAY



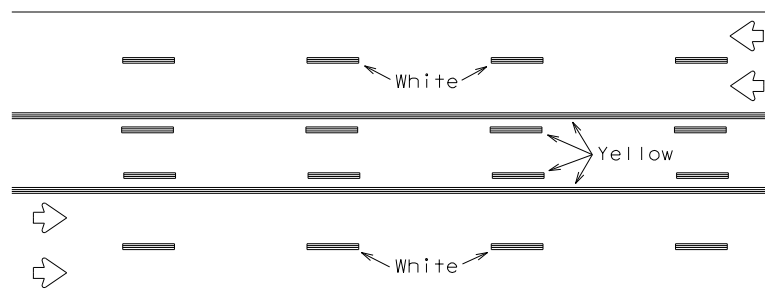
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectorized pavement markings.



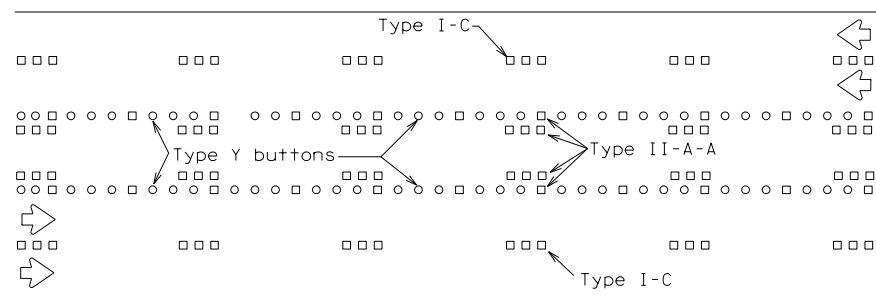
RAISED PAVEMENT MARKERS

### LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS

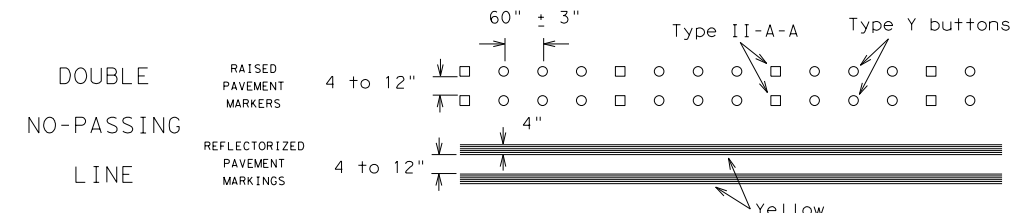
Prefabricated markings may be substituted for reflectorized pavement markings.



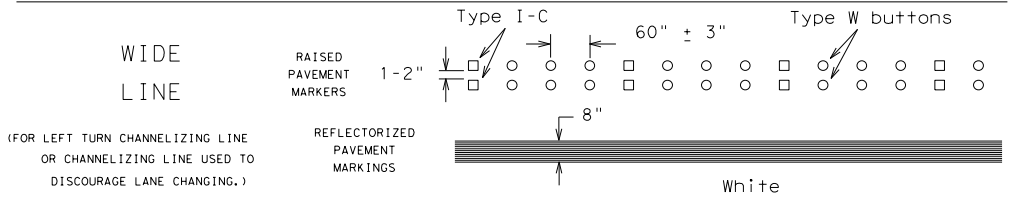
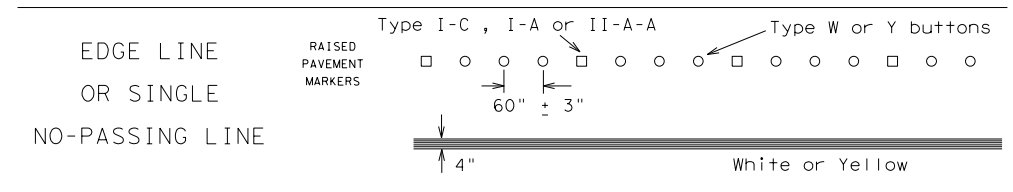
RAISED PAVEMENT MARKERS

### TWO-WAY LEFT TURN LANE

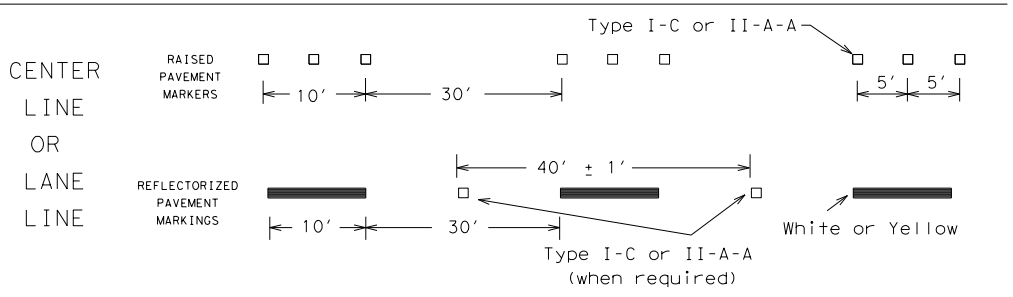
## STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS



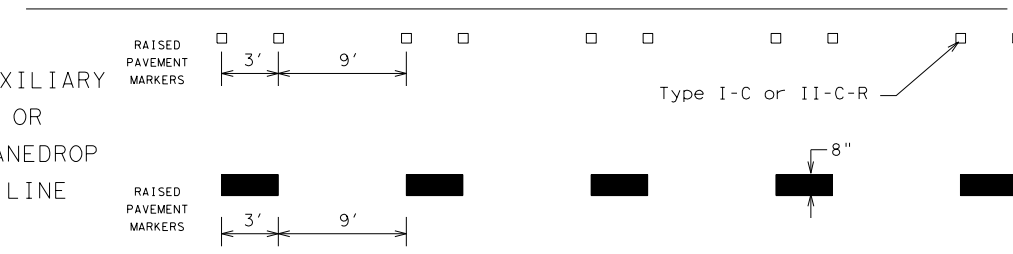
SOLID LINES



CENTER LINE OR LANE LINE

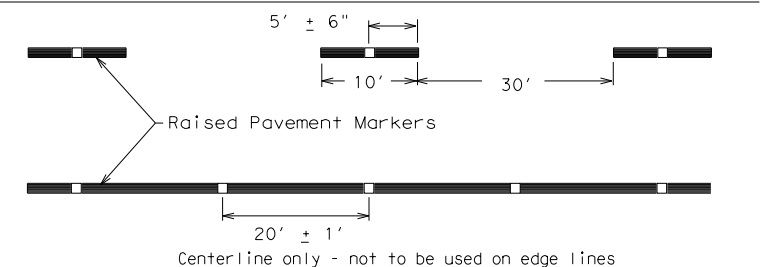


BROKEN LINES



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



SHEET 12 OF 12

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DATE: 5/4/2019 10:27:05 AM  
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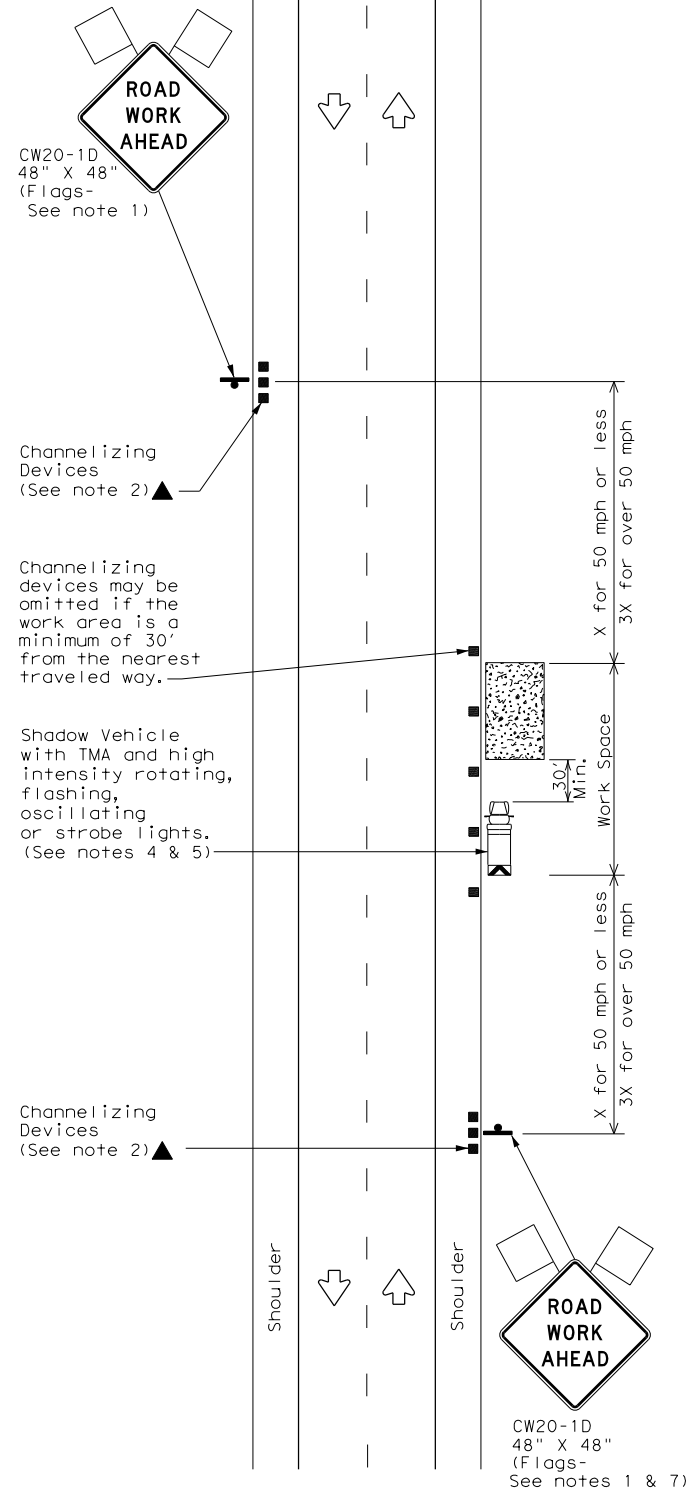


## BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC (12) - 14

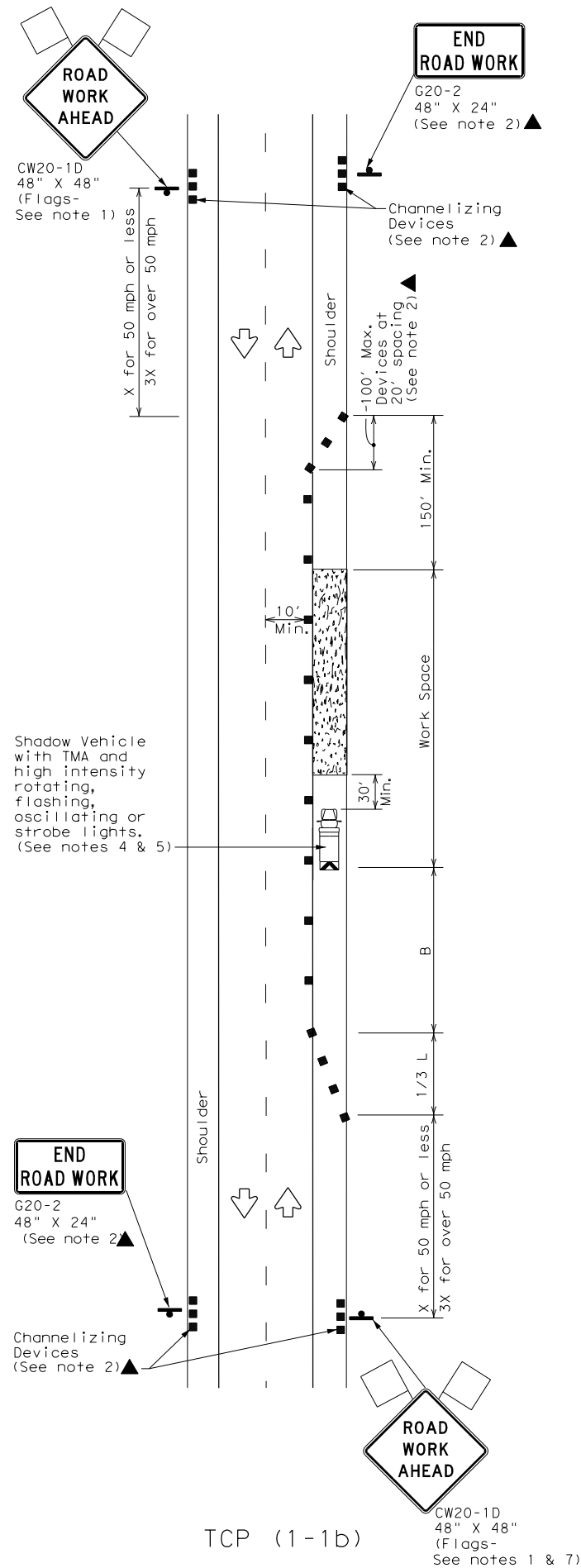
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© TXDOT February 1998	CONT	SECT	JOB	HIGHWAY
REVISIONS		0915	12	576
1-97	9-07	DIST	COUNTY	SHEET NO.
2-98	7-13	SAT	BEXAR	90
11-02	8-14			

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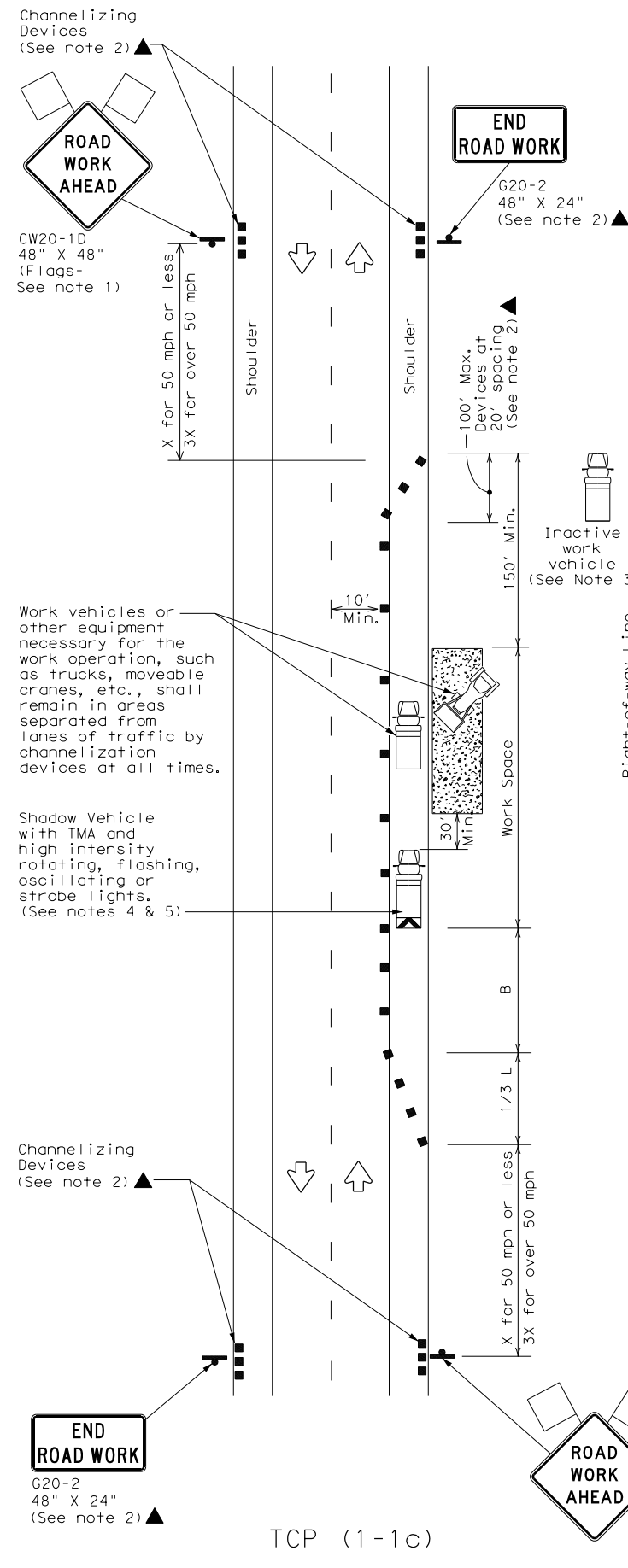
TCP (1-1a)

**WORK SPACE NEAR SHOULDER**  
Conventional Roads



TCP (1-1b)

**WORK SPACE ON SHOULDER**  
Conventional Roads



TCP (1-1c)

**WORK VEHICLES ON SHOULDER**  
Conventional Roads

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

\* Conventional Roads Only  
\*\* Taper lengths have been rounded off.  
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

**GENERAL NOTES**

- Flags attached to signs where shown are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- Inactive work vehicles or other equipment should be parked near the right-of-way line and not parked on the paved shoulder.
- A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
- See TCP(5-1) for shoulder work on divided highways, expressways and freeways.
- CW21-5 "SHOULDER WORK" signs may be used in place of CW20-1D "ROAD WORK AHEAD" signs for shoulder work on conventional roadways.



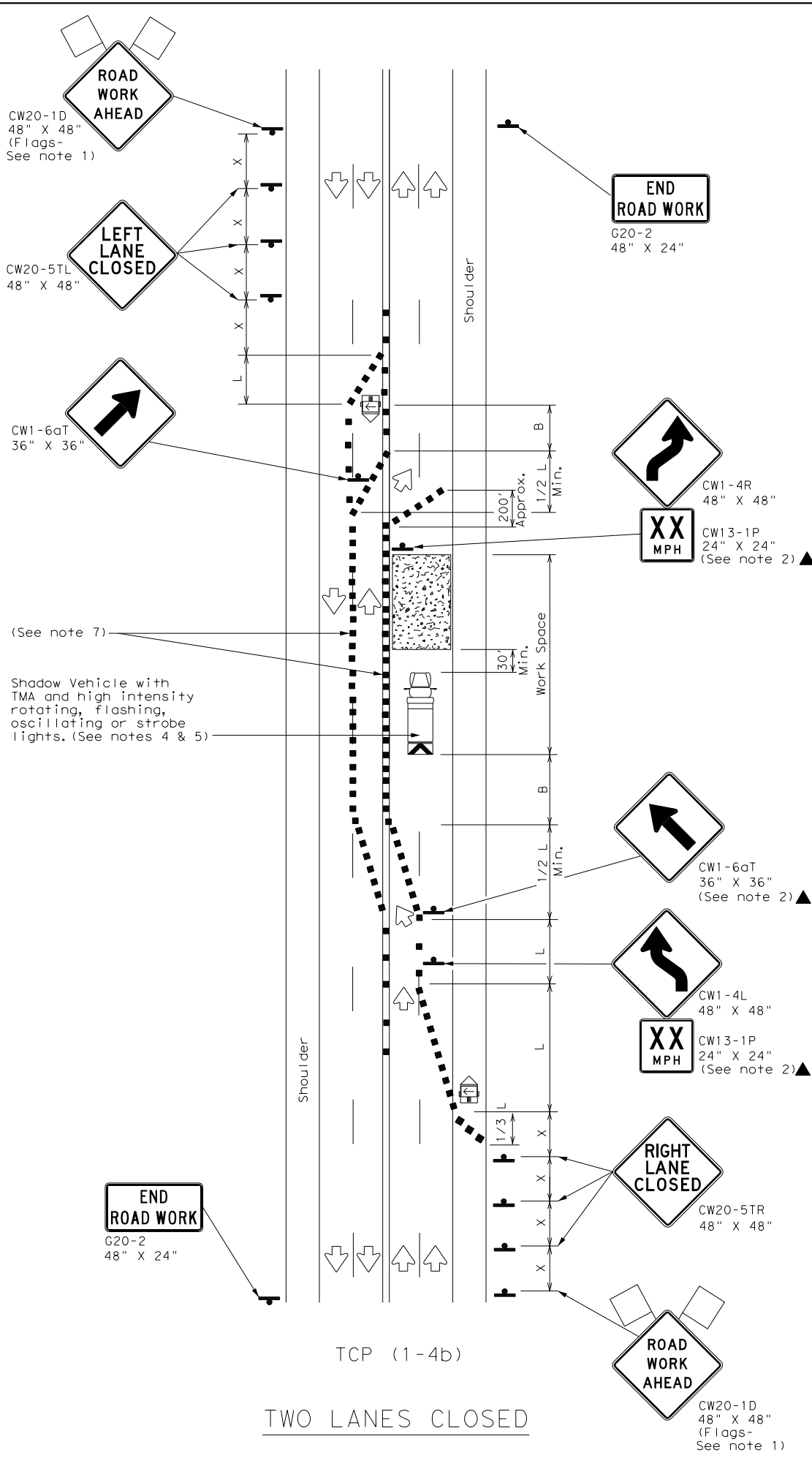
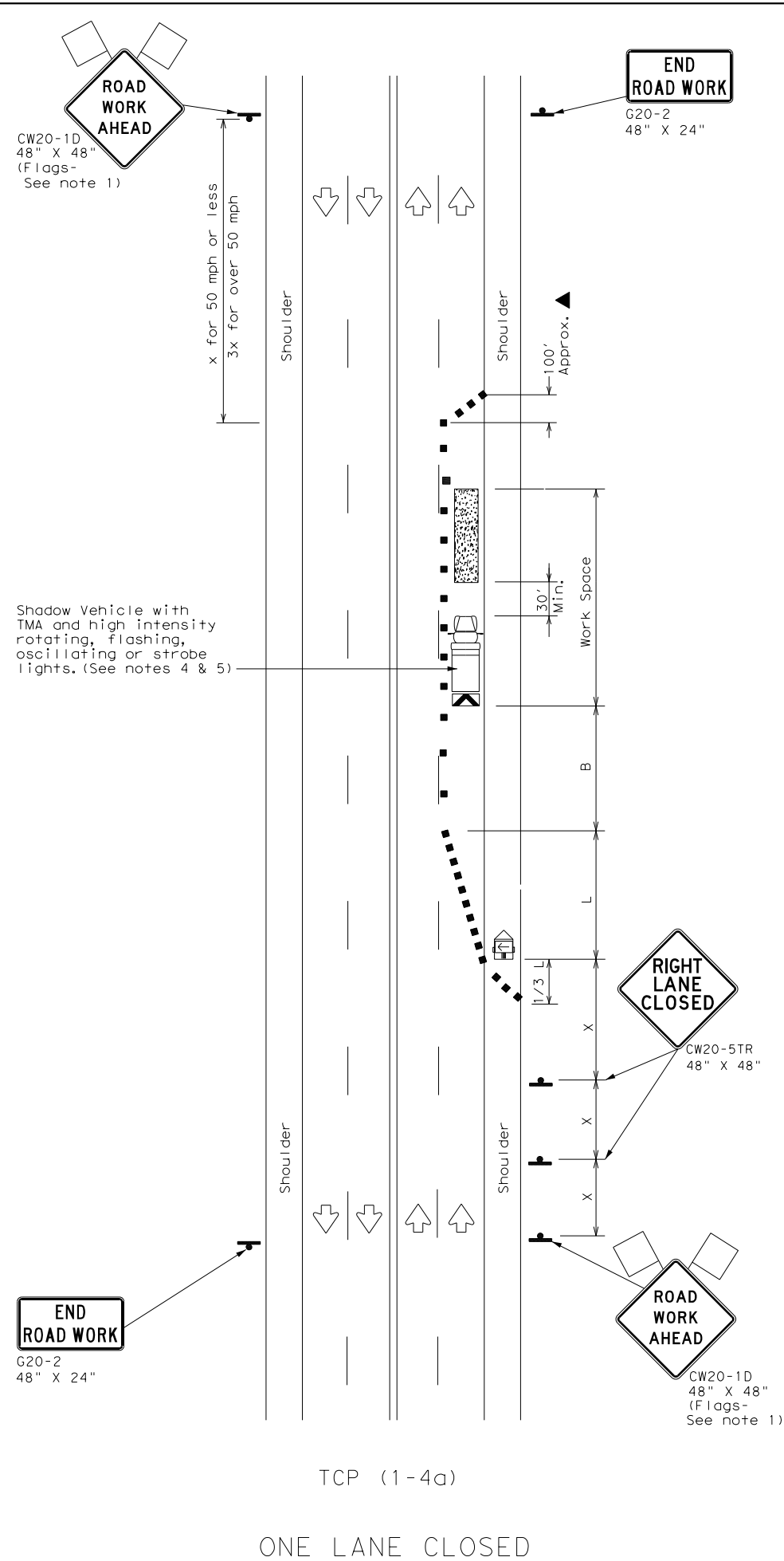
**TRAFFIC CONTROL PLAN**  
CONVENTIONAL ROAD  
SHOULDER WORK

TCP (1-1) - 18

FILE: tcp1-1-18.dgn	DN:	CK:	DW:	CK:
© TxDOT December 1985	CON:	SECT:	JOB:	HIGHWAY:
REVISIONS	0915	12	576	VARIES
2-94 4-98	DIST:	COUNTY:	SHEET NO.:	
8-95 2-12	SAT	BEXAR	91	
1-97 2-18				

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DATE: FILE:



**LEGEND**

	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "x" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	$L = WS$	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

\* Conventional Roads Only  
 \*\* Taper lengths have been rounded off.  
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

**TYPICAL USAGE**

MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
	✓	✓		

- GENERAL NOTES**
- Flags attached to signs where shown are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
  - The CW20-1D "ROAD WORK AHEAD" sign may be repeated if the visibility of the work zone is less than 1500 feet.
  - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
  - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

- TCP (1-4a)**
- If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline where needed to protect the work space from opposing traffic with the arrow panel placed in the closed lane near the end of the merging taper.
- TCP (1-4b)**
- Where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2S where S is the speed in mph. This tighter device spacing is intended for the areas of conflicting markings, not the entire work zone.

**Texas Department of Transportation**

**Traffic Operations Division Standard**

**TRAFFIC CONTROL PLAN**  
**LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS**

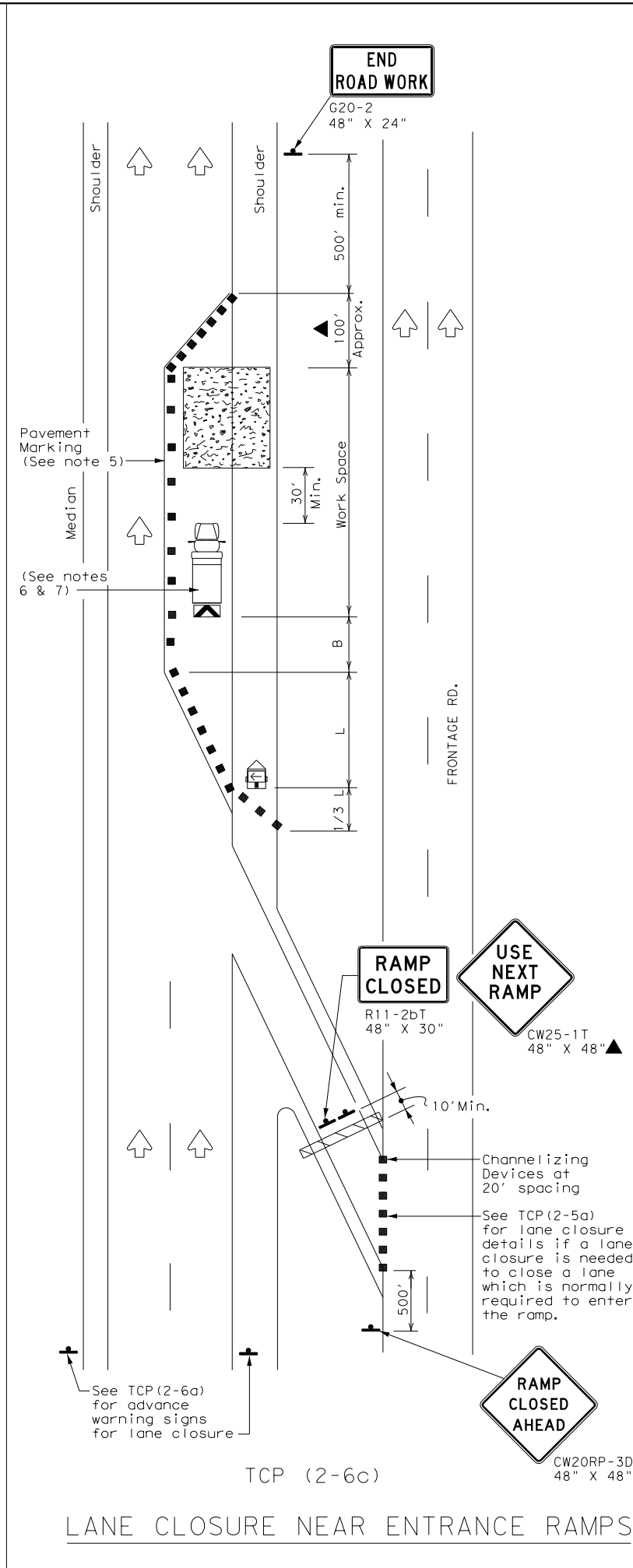
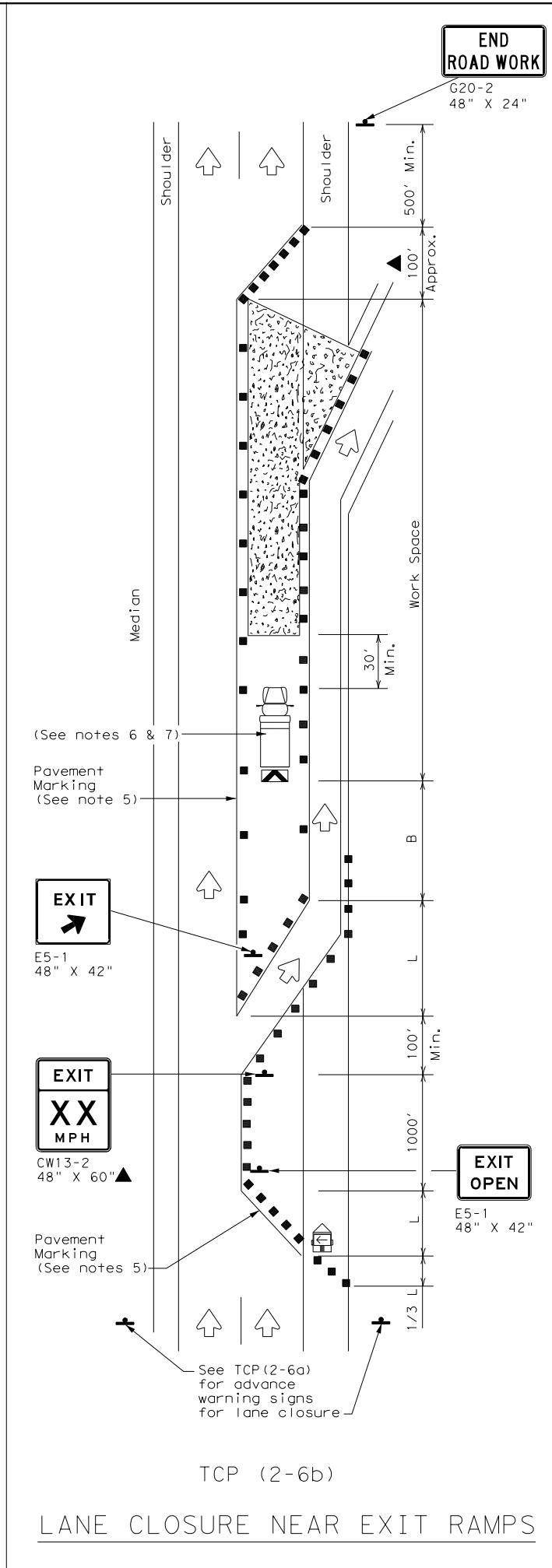
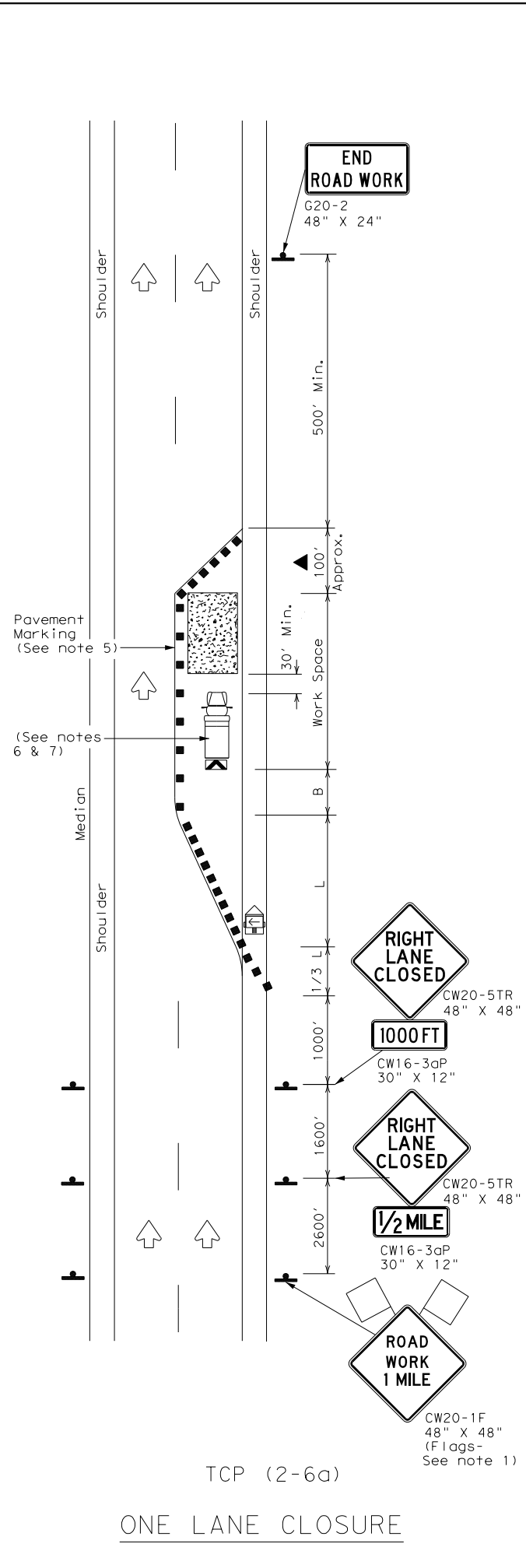
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8-95	2-12	SAT	BEXAR	92	
1-97	2-18				

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DATE:  
FILE:



LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

Posted Speed X	Formula	Minimum Desirable Taper Lengths X X			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

\* Conventional Roads Only  
 \*\* Taper lengths have been rounded off.  
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

TYPICAL USAGE				
MOBILE	SHORT DURATION	SHORT TERM STATIONARY	INTERMEDIATE TERM STATIONARY	LONG TERM STATIONARY
			✓	✓

- GENERAL NOTES
- Flags attached to signs where shown, are REQUIRED.
  - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
  - Channelizing devices used to close lanes may be supplemented with the Chevron Alignment Sign placed on every other channelizing device. Chevrons may be attached to plastic drums as per BC Standards.
  - Channelizing devices used along the work space or along tangent sections may be supplemented with vertical panels (VP) placed on every other channelizing device. If night time conditions make it difficult to see at least two VPs, the VPs may be placed on each channelizing device.
  - The placement of pavement markings may be omitted on intermediate-term stationary work zones with the approval of the Engineer.
  - Shadow Vehicle with TMA and high intensity rotating, flashing, oscillating or strobe lights. A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
  - Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

**Texas Department of Transportation**  
Traffic Operations Division Standard

**TRAFFIC CONTROL PLAN  
LANE CLOSURES ON  
DIVIDED HIGHWAYS**

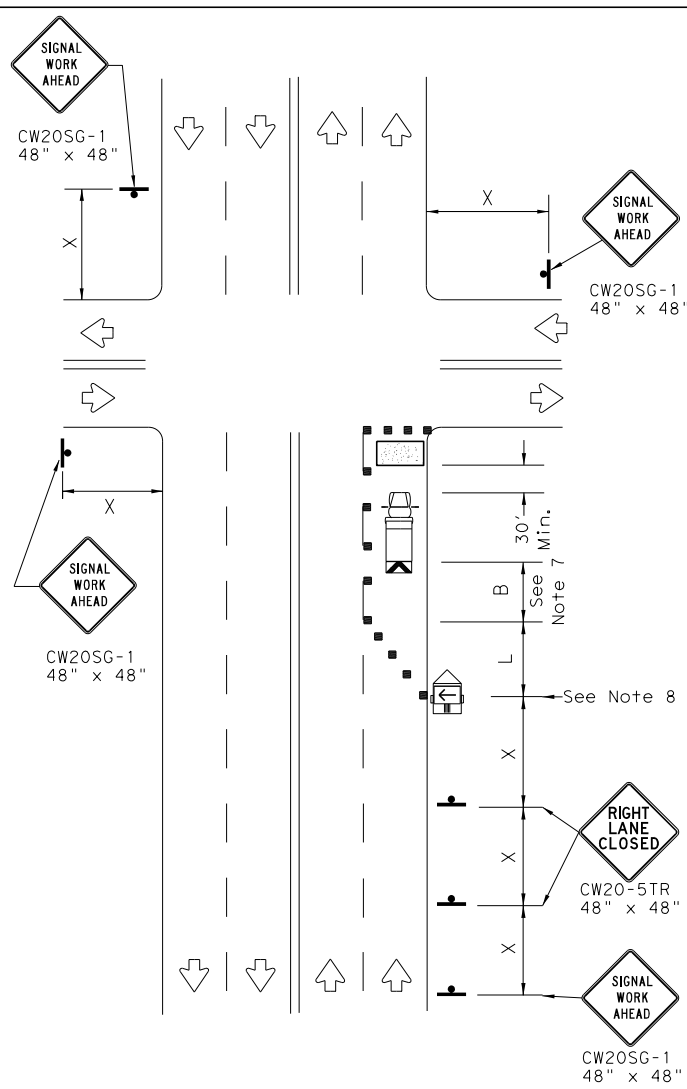
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8-95 2-12	SAT	BEXAR	93	
1-97 2-18				

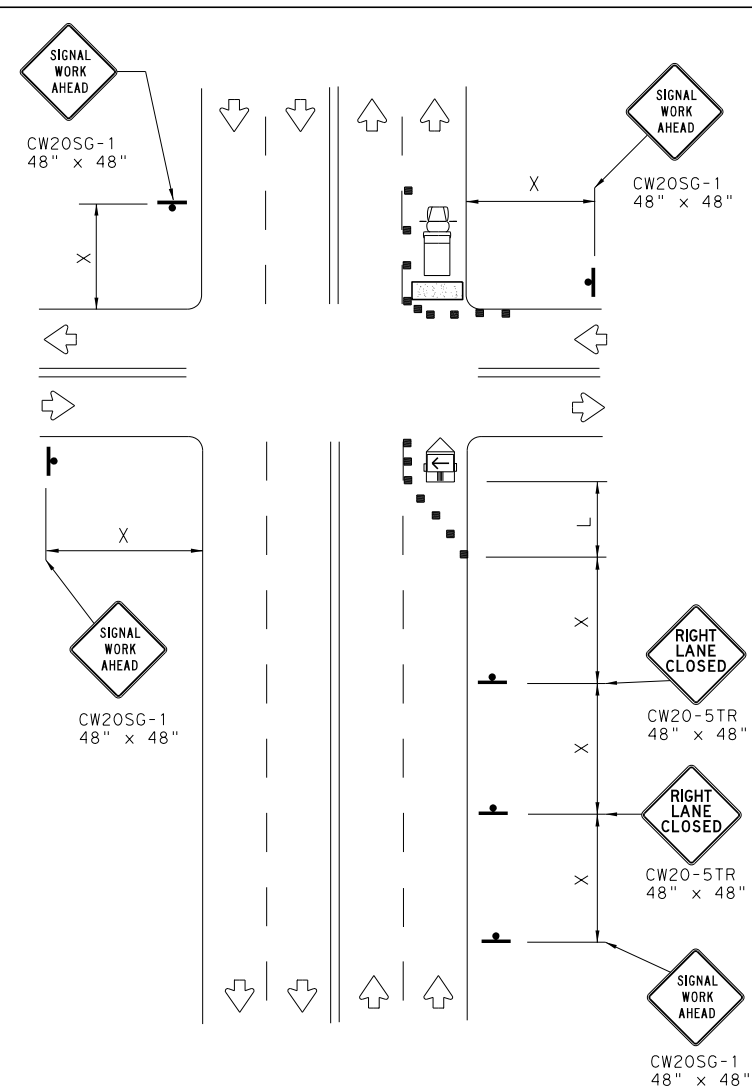
166

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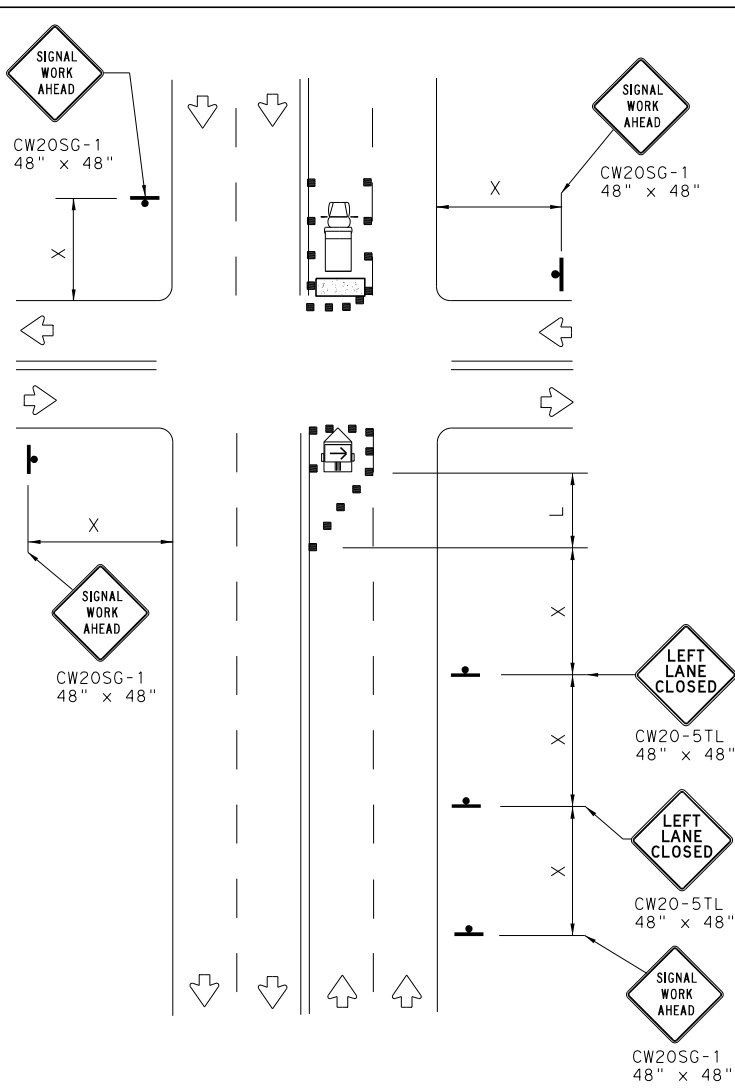
DATE: 5/4/2019 10:27:08 AM  
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NEAR SIDE LANE CLOSURE  
 SHORT DURATION OR SHORT TERM STATIONARY



FAR SIDE RIGHT LANE CLOSURE  
 SHORT DURATION OR SHORT TERM STATIONARY



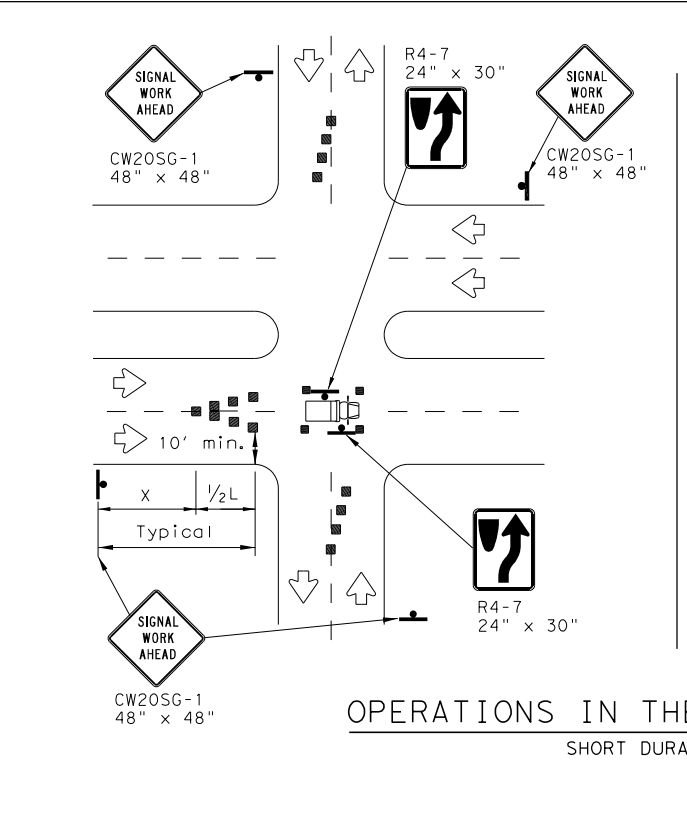
FAR SIDE LEFT LANE CLOSURE  
 SHORT DURATION OR SHORT TERM STATIONARY

LEGEND			
	Type 3 Barricade		Channelizing Devices
	Heavy Work Vehicle		Truck Mounted Attenuator (TMA)
	Trailer Mounted Flashing Arrow Board		Portable Changeable Message Sign (PCMS)
	Sign		Traffic Flow
	Flag		Flagger

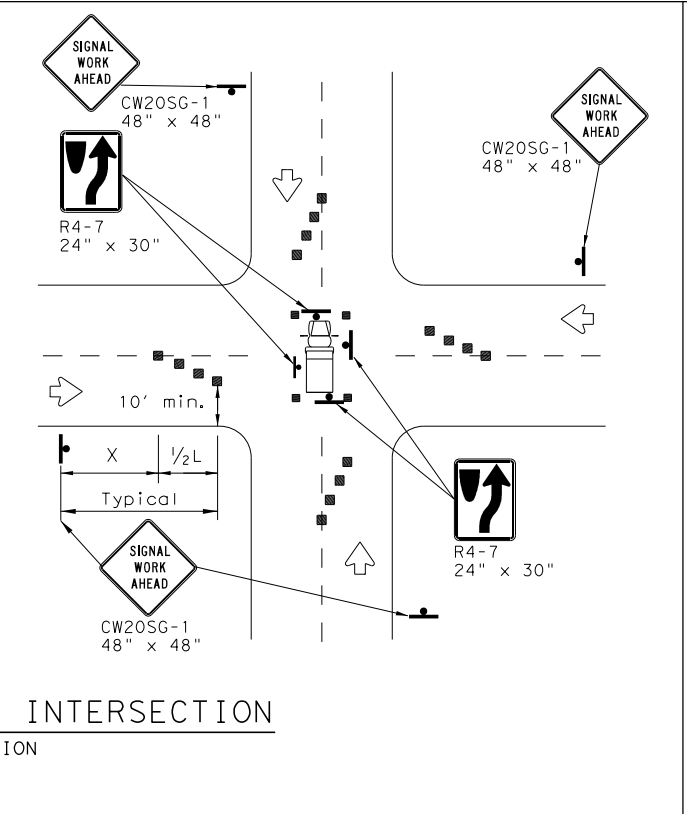
Posted Speed *	Formula	Minimum Desirable Taper Lengths **			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
35		205'	225'	245'	35'	70'	160'	120'
40		265'	295'	320'	40'	80'	240'	155'
45	L = WS	450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55		550'	605'	660'	55'	110'	500'	295'
60		600'	660'	720'	60'	120'	600'	350'
65		650'	715'	780'	65'	130'	700'	410'
70		700'	770'	840'	70'	140'	800'	475'
75		750'	825'	900'	75'	150'	900'	540'

\* Conventional Roads Only  
 \*\* Taper lengths have been rounded off.  
 L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

WORKERS IN BUCKET TRUCKS SHALL NOT WORK ABOVE OPEN LANES OF TRAFFIC.



OPERATIONS IN THE INTERSECTION  
 SHORT DURATION



GENERAL NOTES

- The minimum size channelizing device is the 28" cone. 42" Two-piece cones, drums, vertical panels or barricades will be required when the device must be left unattended at night.
- Obstructions or hazards at the work area shall be clearly marked and delineated at all times.
- Flaggers and Flagger Symbol (CW20-7) signs may be required according to field conditions.
- Vehicles parked in roadway shall be equipped with at least two high intensity rotating, flashing, oscillating or strobe type lights.
- High level warning devices (flag trees) may be used at corners of the vehicle.
- When work operations are performed on existing signals, the signals may be placed in flashing red mode when approved by the engineer. If existing signals do not have power, All-Way Stop (R1-1 and R1-3P) signs may be implemented when approved by the engineer.
- For Short-Term Stationary work the buffer space "B" from the above table should be used if field conditions permit. For Short Duration (less than 1 hour) any buffer space provided will enhance the safety of the setup.
- The arrow board at this location may be omitted for Short Duration work if the work vehicle has an arrow board in operation. As an option, the arrow board may be placed at the end of the taper in the closed lane if space is not available at the beginning of the taper.
- Signs and devices for the NEAR SIDE LANE CLOSURE may be altered for a left lane closure by using a LEFT LANE CLOSED (CW20-5TL) and adding channelizing devices on the centerline to protect the work space from opposing traffic.



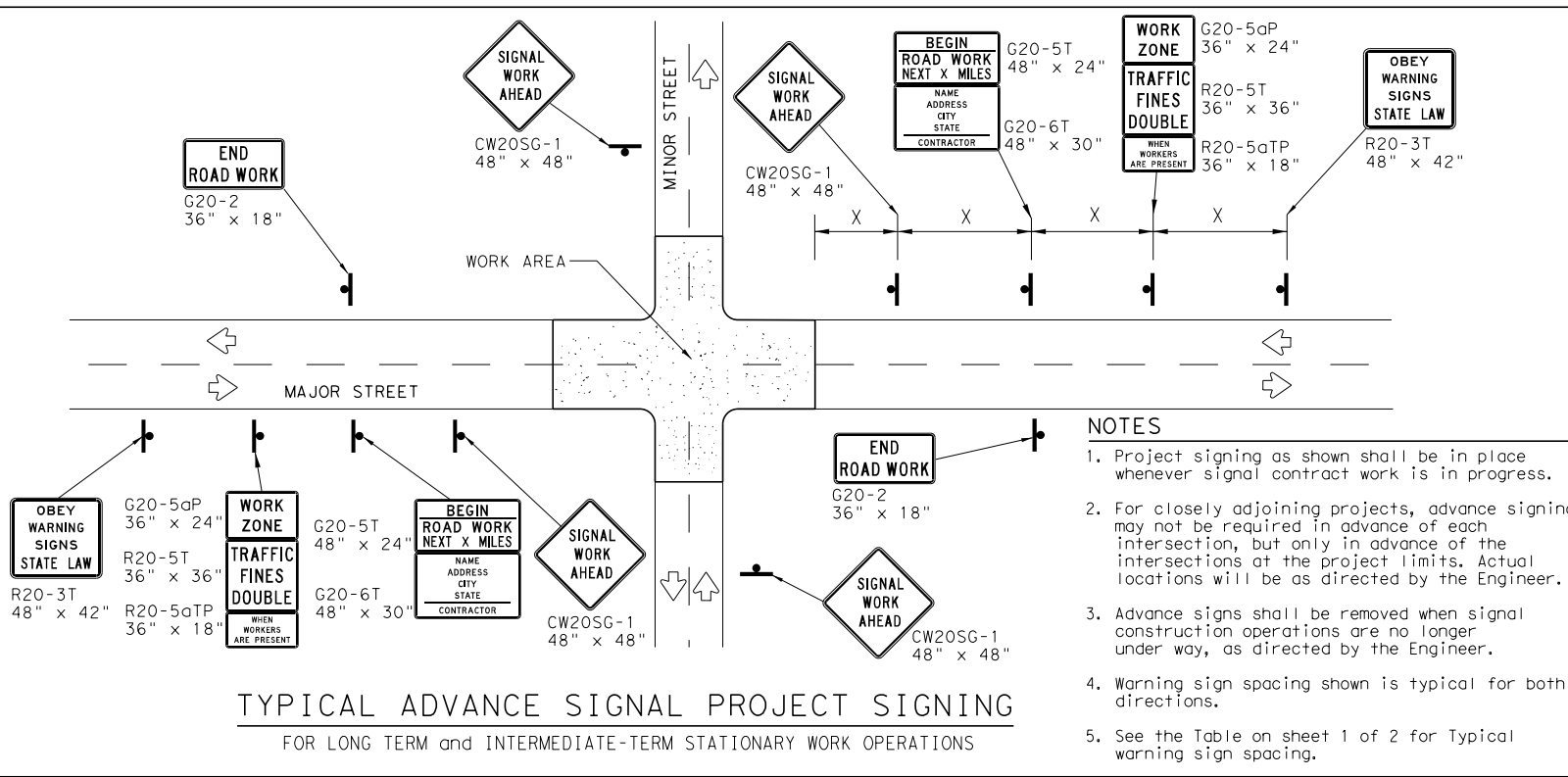
TRAFFIC SIGNAL WORK  
 TYPICAL DETAILS

WZ (BTS-1) - 13

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© TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
2-98 10-99 7-13	DIST	COUNTY	SHEET NO.	
4-98 3-03	SAT	BEXAR	94	

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DATE: 5/4/2019 10:27:08 AM  
 FILE: P:\1111\35\07\design\civil\Standards\TCP\wzbt-13 (1).dgn



- NOTES**
- Project signing as shown shall be in place whenever signal contract work is in progress.
  - For closely adjoining projects, advance signing may not be required in advance of each intersection, but only in advance of the intersections at the project limits. Actual locations will be as directed by the Engineer.
  - Advance signs shall be removed when signal construction operations are no longer under way, as directed by the Engineer.
  - Warning sign spacing shown is typical for both directions.
  - See the Table on sheet 1 of 2 for Typical warning sign spacing.

**GENERAL NOTES FOR WORK ZONE SIGNS**

- Signs shall be installed and maintained in a straight and plumb condition.
- Wooden sign posts shall be painted white.
- Barricades shall NOT be used as sign supports.
- Nails shall NOT be used to attach signs to any support.
- All signs shall be installed in accordance with the plans or as directed by the Engineer.
- The Contractor shall furnish the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD).
- The Contractor shall furnish sign supports and substrates listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD), installed as per the manufacturer's recommendations.
- Temporary signs that have damaged or cracked substrates and/or damaged or marred reflective sheeting shall be replaced as directed by the Engineer.
- Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1".
- Damaged wood posts shall be replaced. Splicing wood posts will not be allowed.

**DURATION OF WORK**

- Work zone durations are defined in Part 6, Section 60.02 of the Texas Manual on Uniform Traffic Control Devices (TMUTCD).

**SIGN MOUNTING HEIGHT**

- Sign height of Long-term/Intermediate-term warning signs shall be as shown on Figure 6F-1 of the TMUTCD.
- Sign height of Short-term/Short Duration warning signs shall be as shown on Figure 6F-2 of the TMUTCD.
- Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

**REMOVING OR COVERING**

- When sign messages may be confusing or do not apply, the signs shall be removed or completely covered, unless otherwise approved by the Engineer.
- When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night without damaging the sign sheeting. Burlap, or heavy materials such as plywood or aluminum shall not be used to cover signs.
- Duct tape or other adhesive material shall NOT be affixed to a sign face.
- Signs and anchor stubs shall be removed and holes back filled upon completion of the work.

**REFLECTIVE SHEETING**

- All signs shall be retroreflective and constructed of sheeting meeting the requirements of the DMS and color usage table shown on this sheet.

**SIGN SUPPORT WEIGHTS**

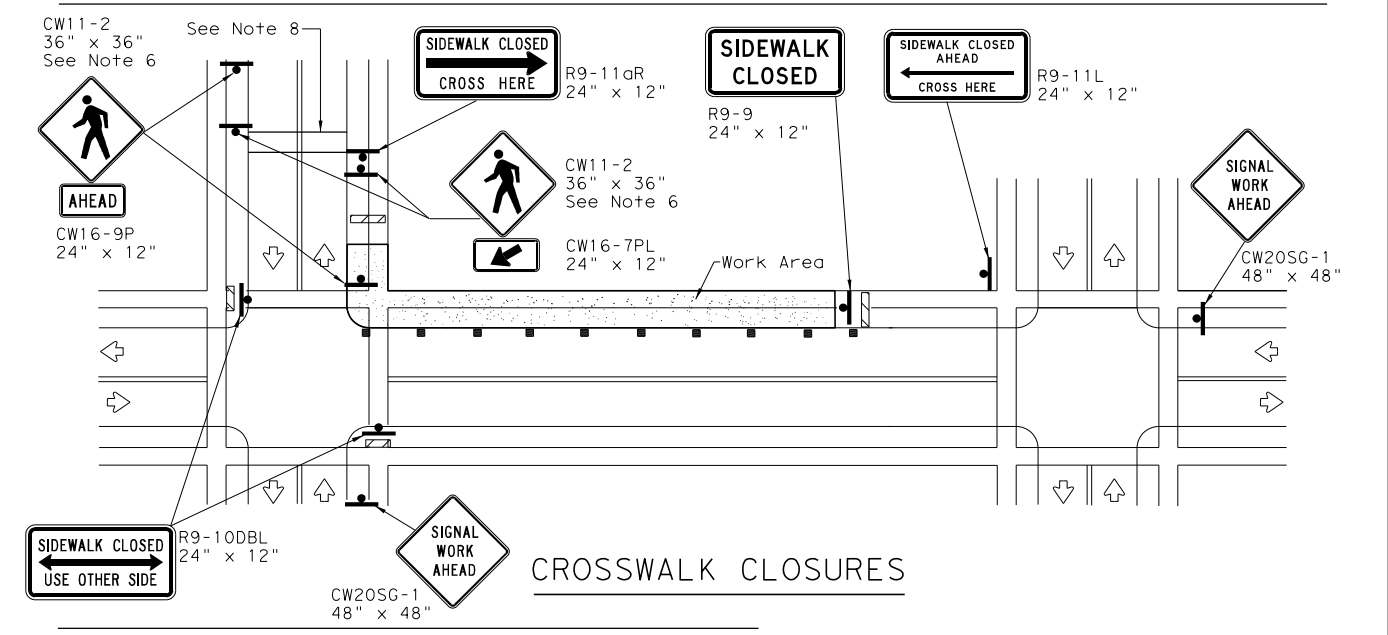
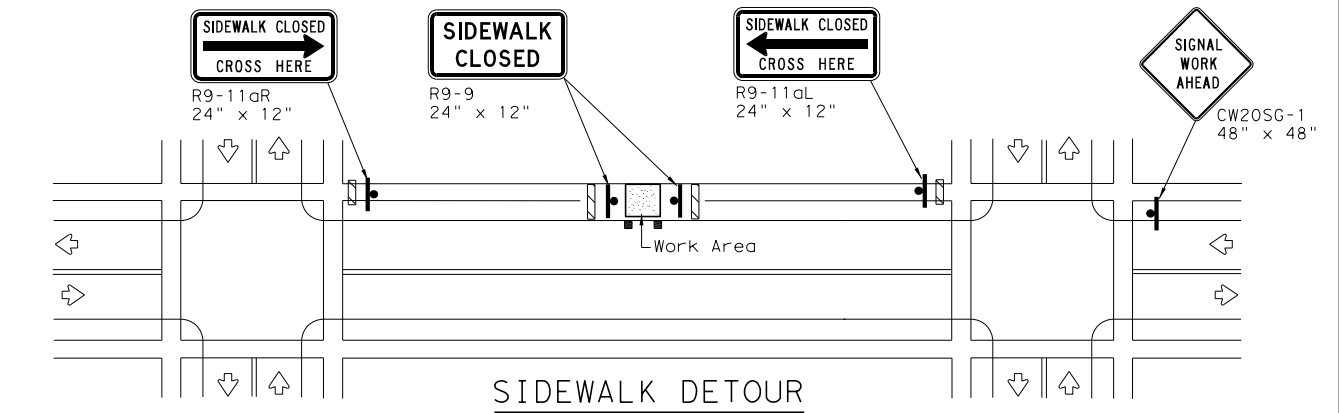
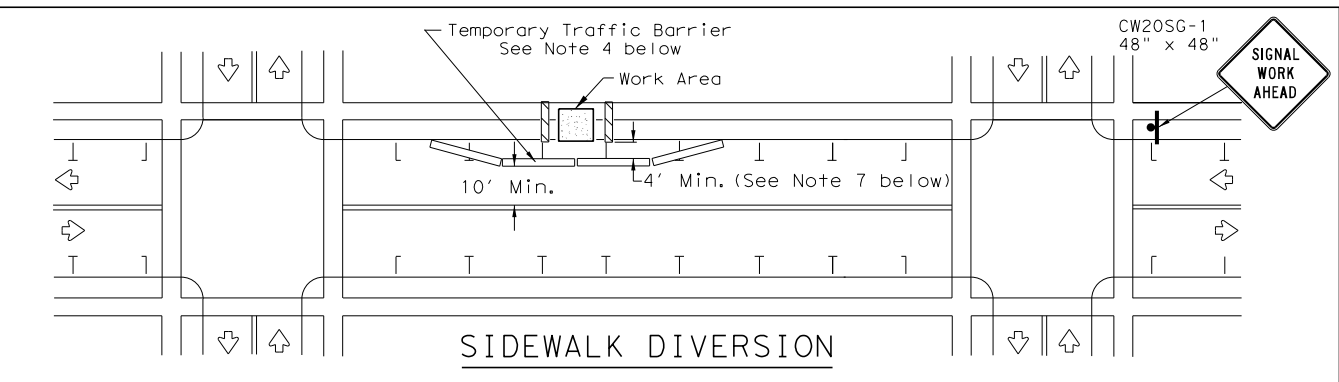
- Weights used to keep signs from turning over should be sandbags filled with dry, cohesionless material.
- The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
- Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support weights.
- Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
- Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber, such as tire inner tubes, shall not be used.
- Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
- Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
- Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

LEGEND	
	Sign
	Channelizing Devices
	Type 3 Barricade

DEPARTMENTAL MATERIAL SPECIFICATIONS	
SIGN FACE MATERIALS	DMS-8300
FLEXIBLE ROLL-UP REFLECTIVE SIGNS	DMS-8310

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B <sub>FL</sub> OR TYPE C <sub>FL</sub> SHEETING
WHITE	BACKGROUND	TYPE A SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

Only pre-qualified products shall be used. A copy of the "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources and may be found at the following web address:  
[http://www.txdot.gov/txdot\\_library/publications/construction.htm](http://www.txdot.gov/txdot_library/publications/construction.htm)



**PEDESTRIAN CONTROL**

- Holes, trenches or other hazards shall be adequately protected by covering, delineating or surrounding the hazard with orange plastic pedestrian fencing or longitudinal channelizing devices, or as directed by the Engineer.
- "CROSSWALK CLOSURES" as detailed above will require the Engineer's approval prior to installation.
- R9 series signs shown may be placed on supports detailed on the BC standards or CWZTCD list, or when fabricated from approved lightweight plastic substrates, they may be mounted on top of a plastic drum at or near the location shown.
- For speeds less than 45 mph longitudinal channelizing devices may be used instead of traffic barriers when approved by the Engineer. Attenuation of blunt ends and installation of water filled devices shall be as per BC(9) and manufacturer's recommendations.
- Location of devices are for general guidance. Actual device spacing and location must be field adjusted to meet actual conditions.
- Where pedestrians with visual disabilities normally use the closed sidewalk Detectable Pedestrian Barricades should be used instead of the Type 3 Barricades shown.
- The width of existing sidewalk should be maintained if practical.
- Pavement markings for mid-block crosswalks shall be paid for under the appropriate bid items.
- When crosswalks or other pedestrian facilities are closed or relocated, temporary facilities shall be detectable and shall include accessibility features consistent with the features present in the existing pedestrian facility.

SHEET 2 OF 2



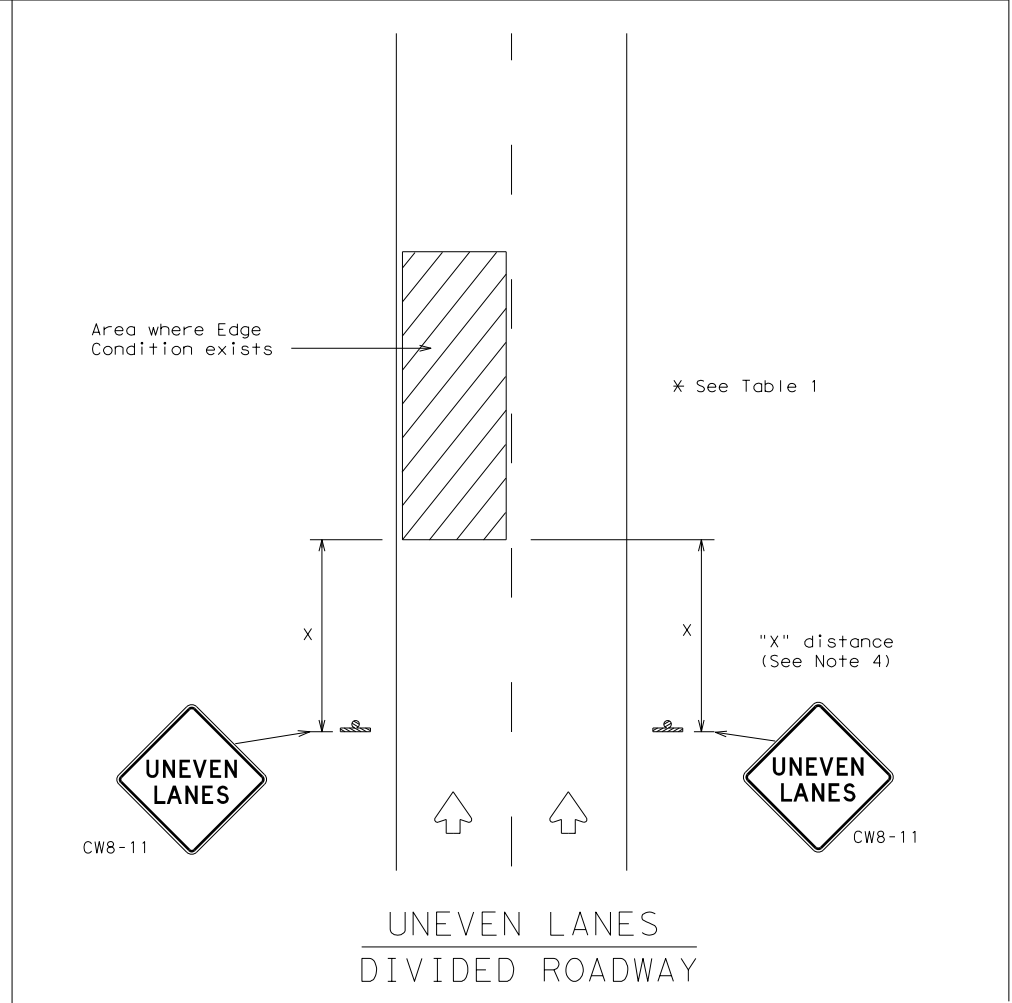
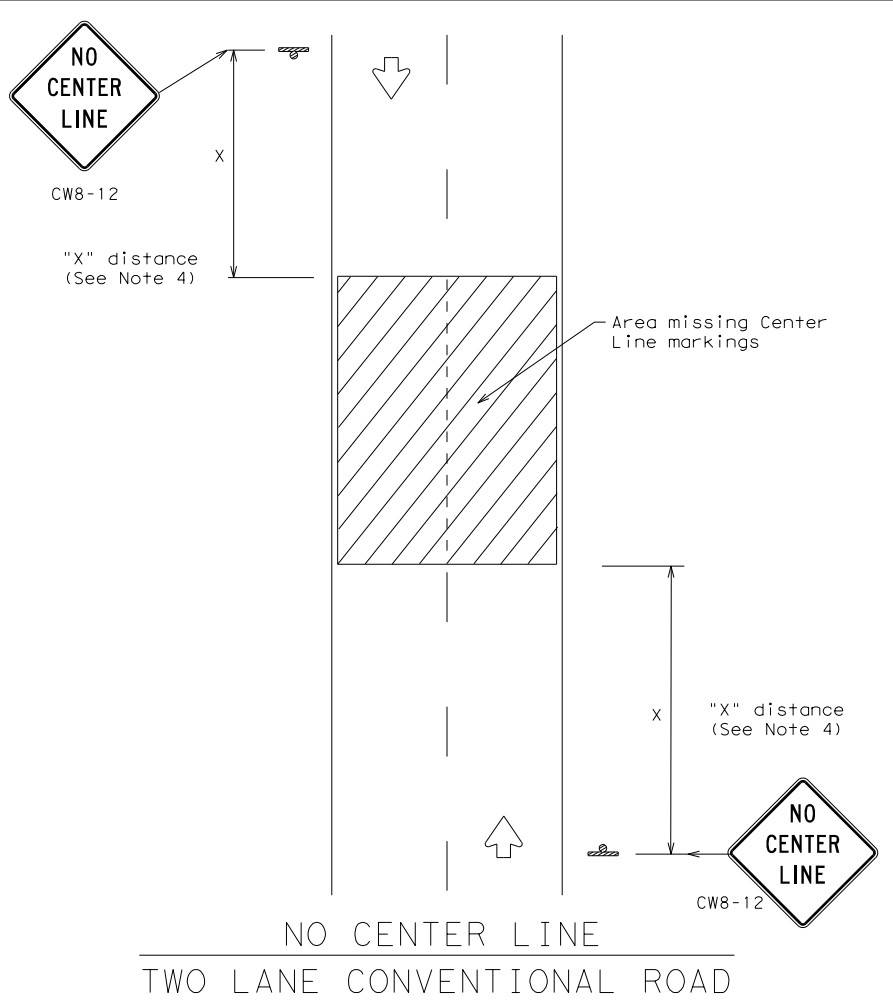
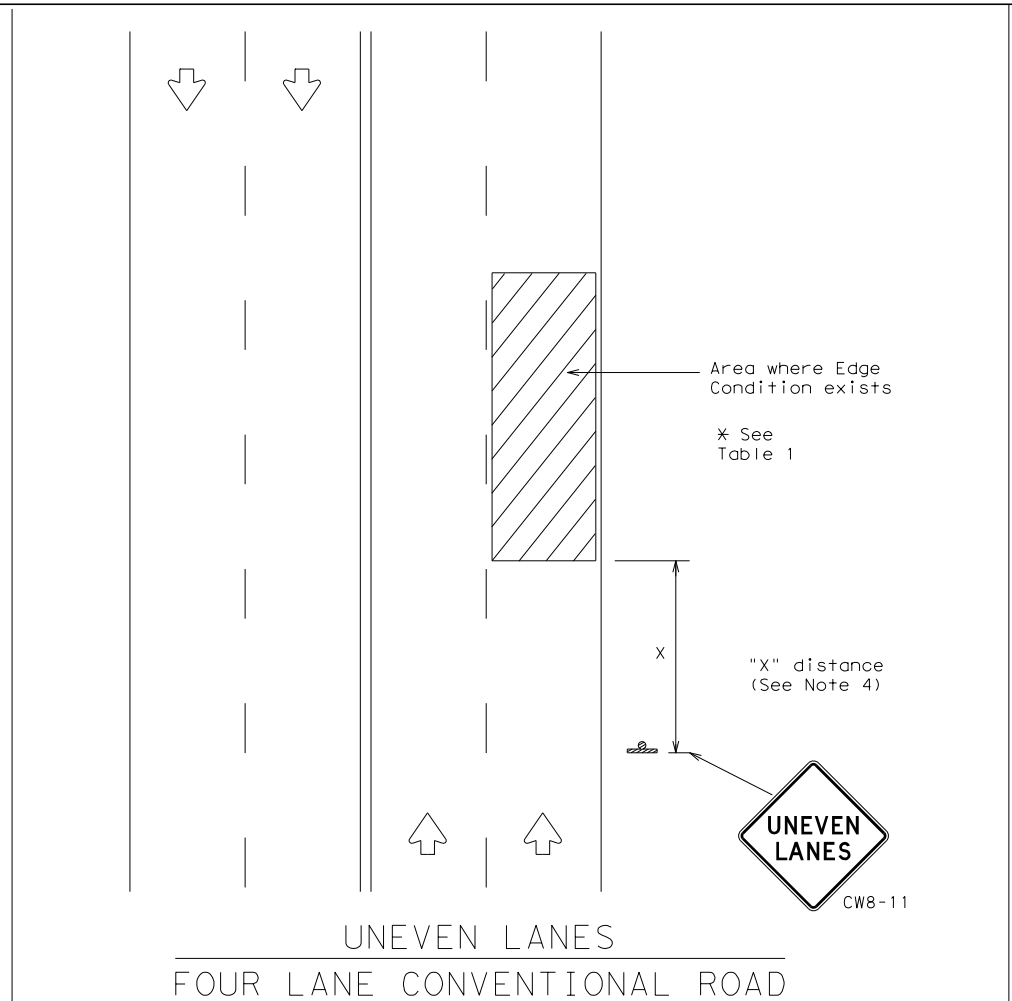
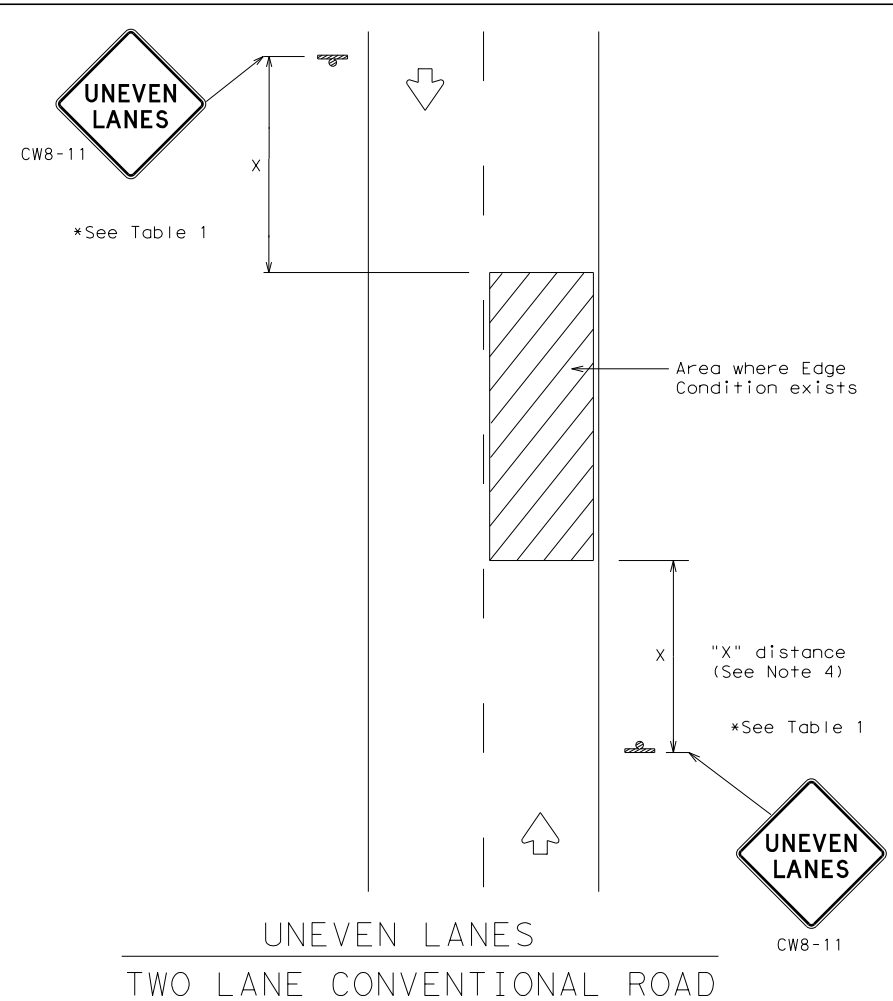
**TRAFFIC SIGNAL WORK BARRICADES AND SIGNS**

WZ(BTS-2)-13

FILE: wzbt-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
2-98 10-99 7-13	DIST	COUNTY	SHEET NO.	
4-98 3-03	SAT	BEXAR	95	

DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

DATE: 5/4/2019 10:27:09 AM  
 FILE: P:\111\35\07\design\civil\Standards\TCP\wzul-13 (1).dgn



DEPARTMENTAL MATERIAL SPECIFICATIONS		
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240	
TEMPORARY (REMOVABLE) PREFABRICATED PAVEMENT MARKINGS	DMS-8241	
SIGN FACE MATERIALS	DMS-8300	
COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B <sub>FL</sub> OR TYPE C <sub>FL</sub> SHEETING
BLACK	LEGEND & BORDERS	ACRYLIC NON-REFLECTIVE SHEETING

GENERAL NOTES

- If spalling or holes occur, ROUGH ROAD (CW8-8) signs should be placed in advance of the condition and be repeated every two miles where the condition persists.
- UNEVEN LANES (CW8-11) signs shall be installed in advance of the condition and repeated every mile. Signs installed along the uneven lane condition may be supplemented with the NEXT XX MILES (CW7-3aP) plaque or Advisory Speed (CW13-1P) plaque.
- NO CENTER LINE (CW8-12) signs and temporary pavement markings as per the WZ(STPM) standard shall be installed if yellow centerlines separating two way traffic are obscured or obliterated. Repeat NO CENTER LINE signs every two miles where the center line markings are not in place. The signs and markings shall remain in place until permanent pavement markings are installed.
- Signs shall be spaced at the distances recommended as per BC standards.
- Additional signs may be required as directed by the Engineer. Signs shall remain in place until final surface is applied. Signs shall be considered subsidiary to Item 502 "BARRICADES, SIGNS AND TRAFFIC HANDLING."
- Signs shall be fabricated and mounted on supports as shown on the BC standards and/or listed on the "Compliant Work Zone Traffic Control Devices" list.
- Short term markings shall not be used to simulate edge lines.
- All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition.

Edge Condition	Edge Height (D)	* Warning Devices
①	Less than or equal to: 1/4" (maximum-planing) 1/2" (typical-overlay)	Sign: CW8-11
②	Less than or equal to 3"	Sign: CW8-11
③	Distance "D" may be a maximum of 3" if uneven lanes with edge condition 2 or 3 are open to traffic after work operations cease. Uneven lanes should not be open to traffic when "D" is greater than 3".	

TRAFFIC CONTROL DURING PLANING, OVERLAY AND LEVELING OPERATIONS ARE SHOWN ELSEWHERE IN THE PLANS.

MINIMUM WARNING SIGN SIZE	
Conventional roads	36" x 36"
Freeways/expressways, divided roadways	48" x 48"



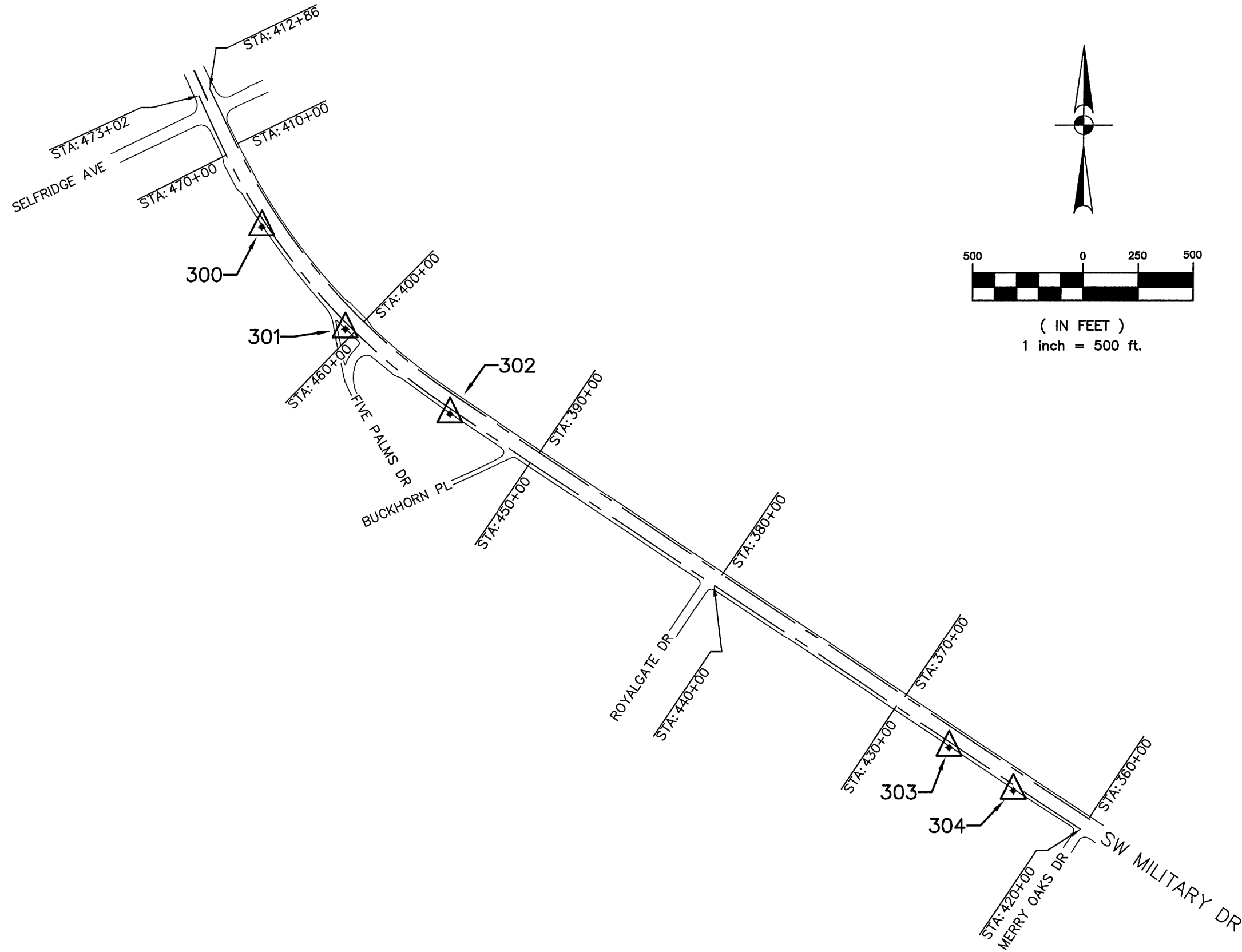
SIGNING FOR  
 UNEVEN LANES

WZ (UL) - 13

FILE: wzul-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
8-95 2-98 7-13	DIST	COUNTY	SHEET NO.	
1-97 3-03	SAT	BEXAR	96	



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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



*Angela Marie Carlin*  
 07/19/2018

**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



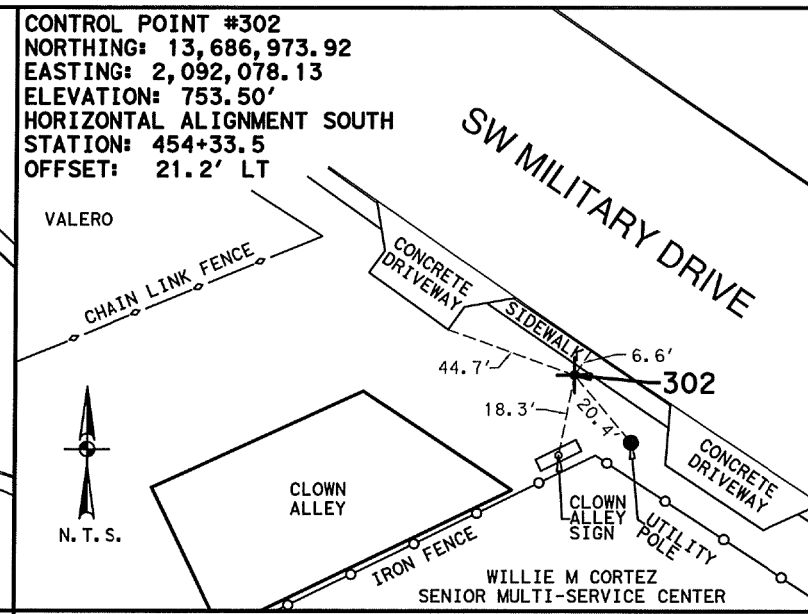
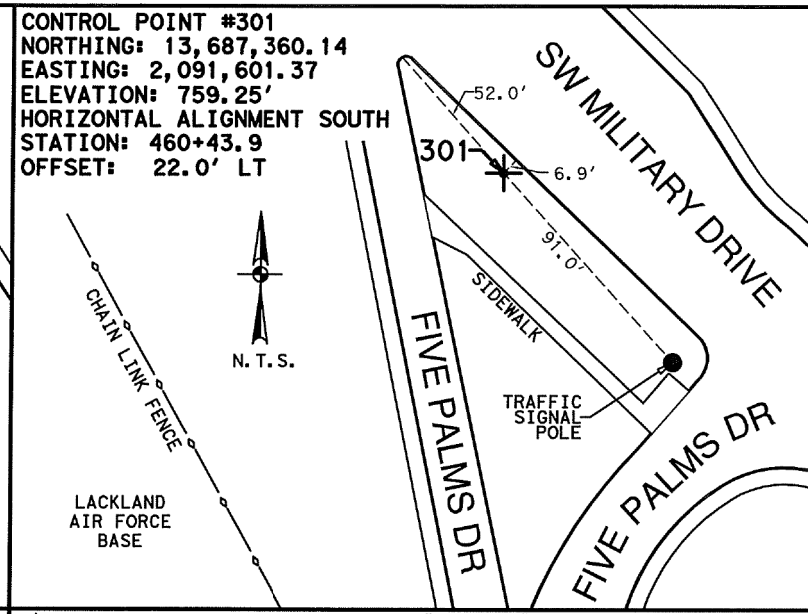
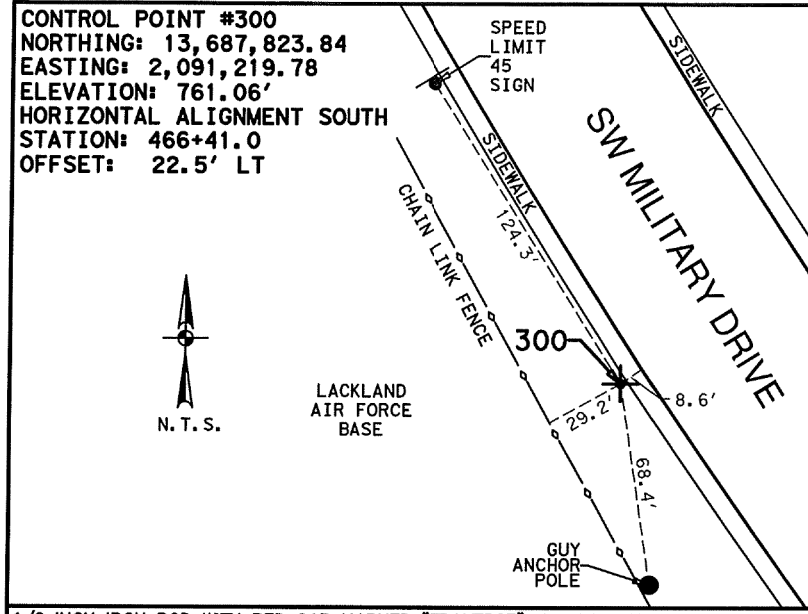
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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**SW MILITARY DRIVE  
 (LOOP 13)  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 2

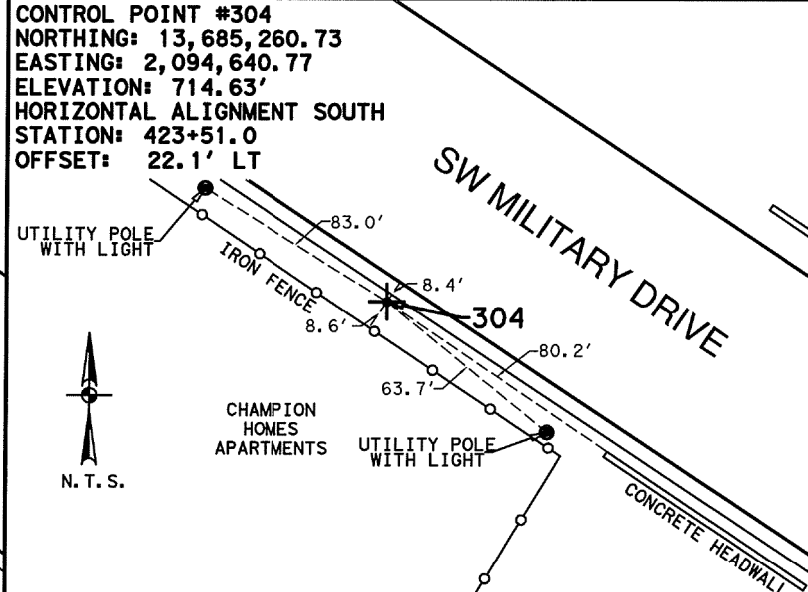
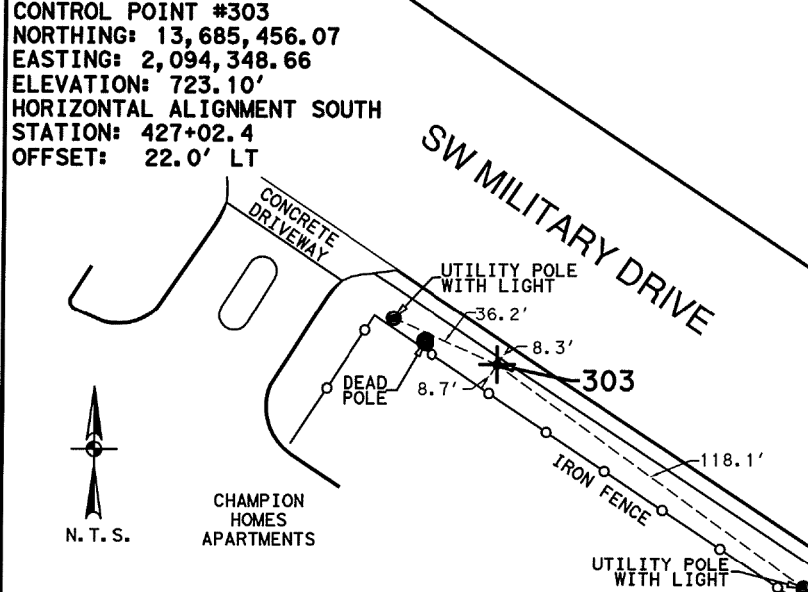
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CHK DGN	6	TEXAS		SL 13		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0017	10	280	97



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 580 FEET SOUTHEAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND SELF RIDGE AVENUE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SW MILITARY DRIVE AND FIVE PALMS DRIVE

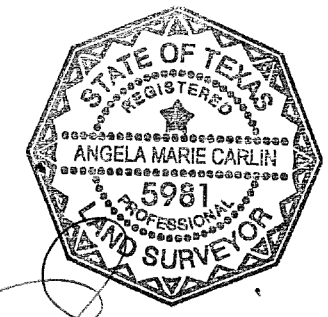
MAG NAIL WITH WASHER IN ASPHALT LOCATED APPROXIMATELY 330 FEET NORTHWEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND BUCKHORN PLACE, ON THE SOUTH SIDE OF SW MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 700 FEET NORTHWEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND MERRY OAKS DRIVE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 360 FEET NORTHWEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND MERRY OAKS DRIVE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
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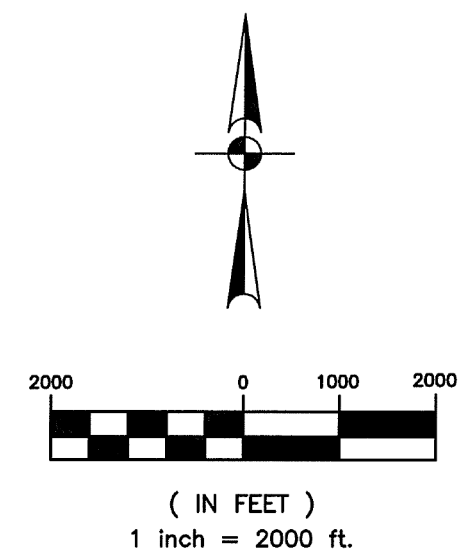
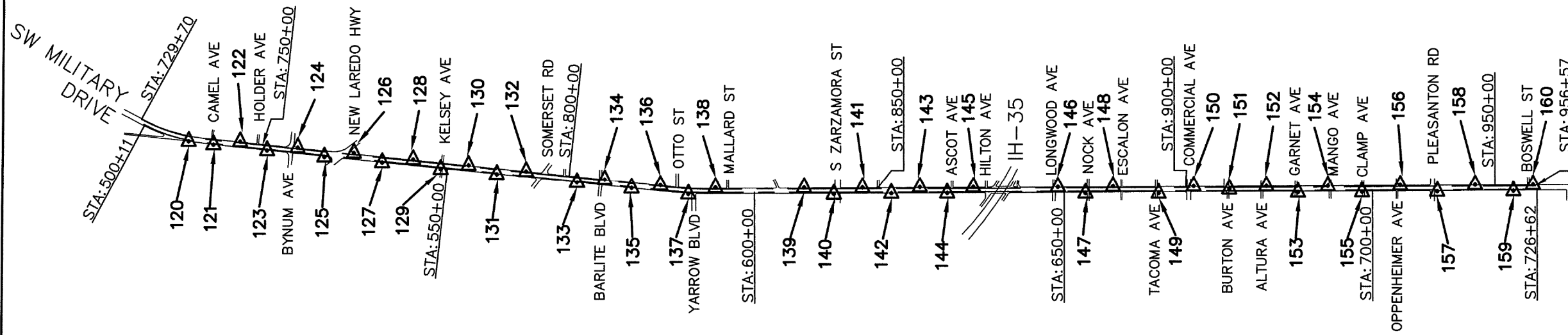
**SW MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 2 OF 2

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SL 13
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0017	10
DWG				280
				98

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
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*Handwritten signature*  
 7/16/2018

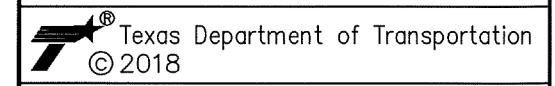
**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S.
- AVENUE
- BOULEVARD
- DRIVE
- HIGHWAY
- INTERSTATE HIGHWAY
- PLACE
- ROAD
- STATE HIGHWAY
- STREET
- U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



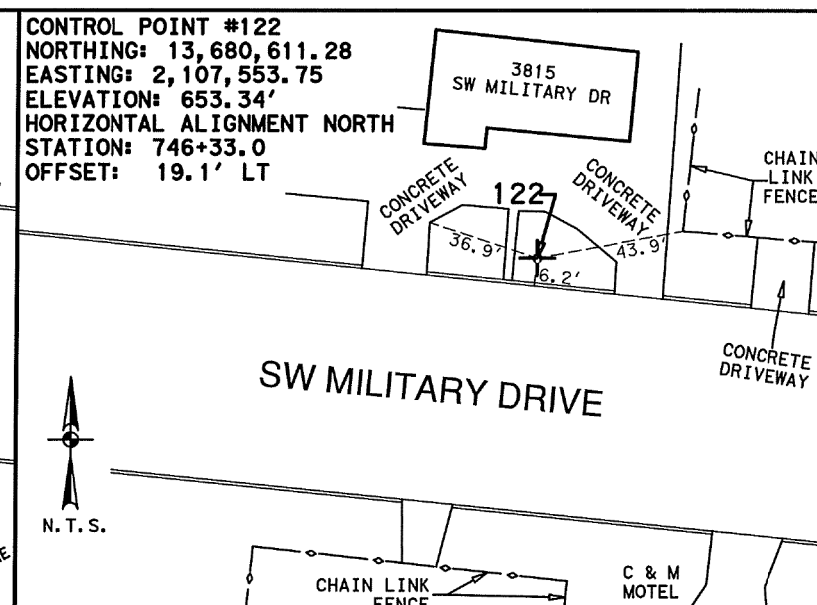
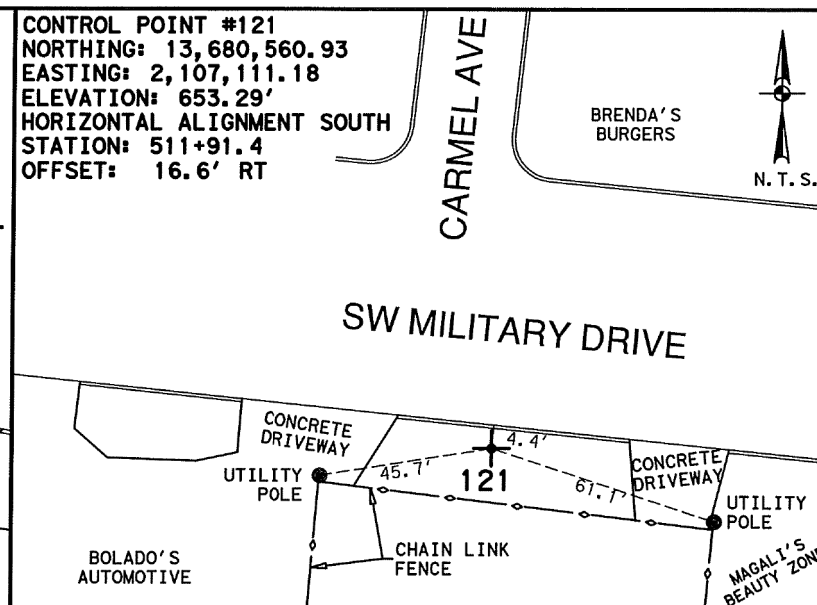
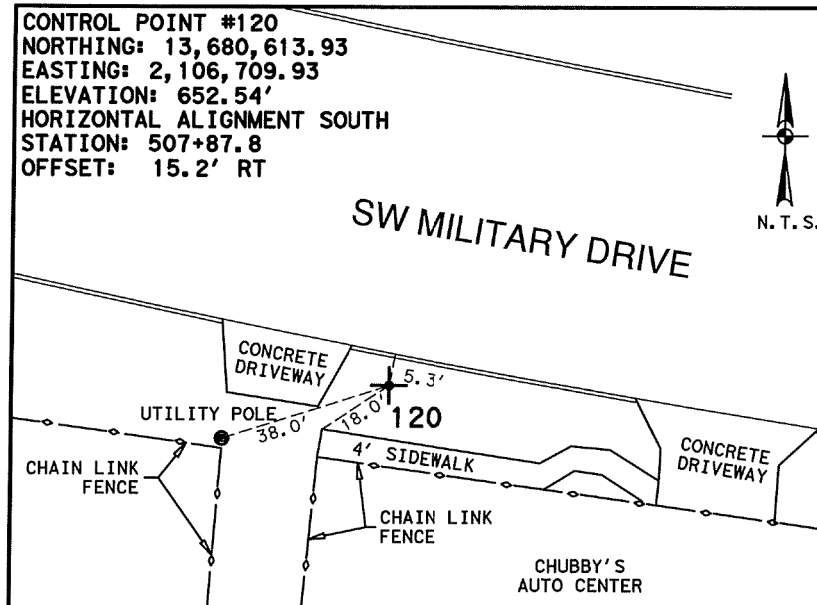
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



**SW MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 1 OF 6

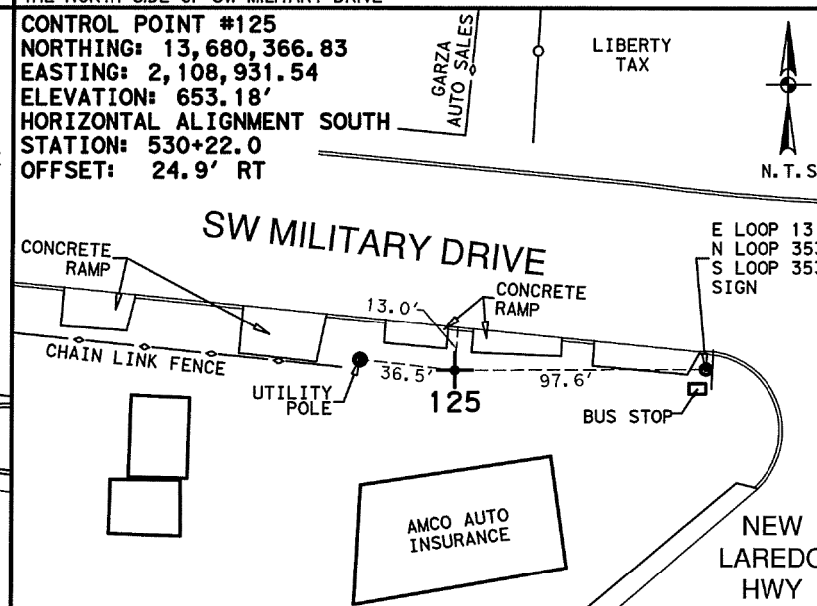
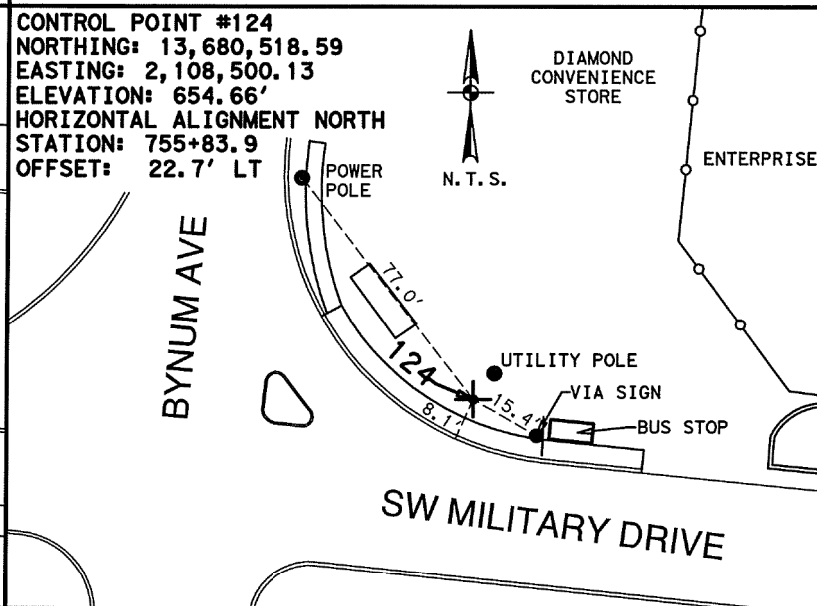
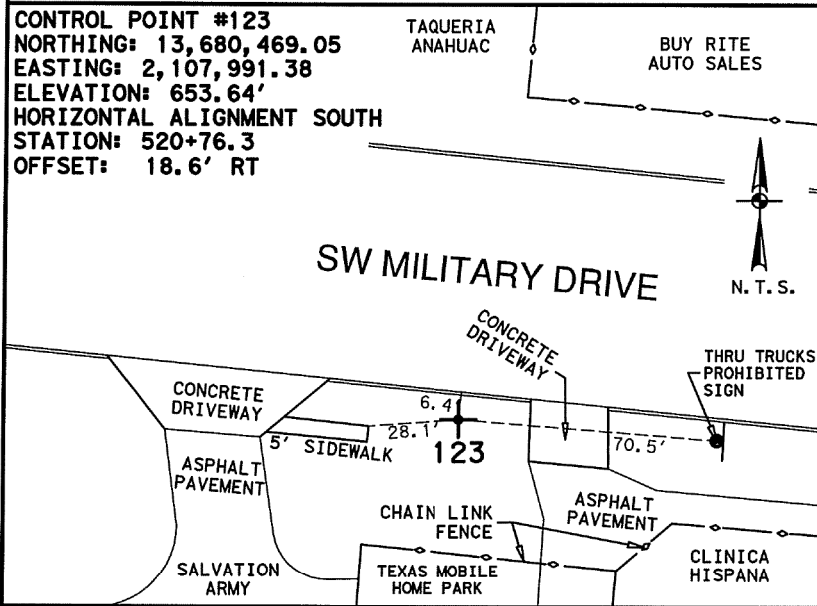
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	6	TEXAS		SL 13		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	15	BEXAR	0017	10	280	99



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 400 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND CARMEL AVENUE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SW MILITARY DRIVE AND CARMEL AVENUE

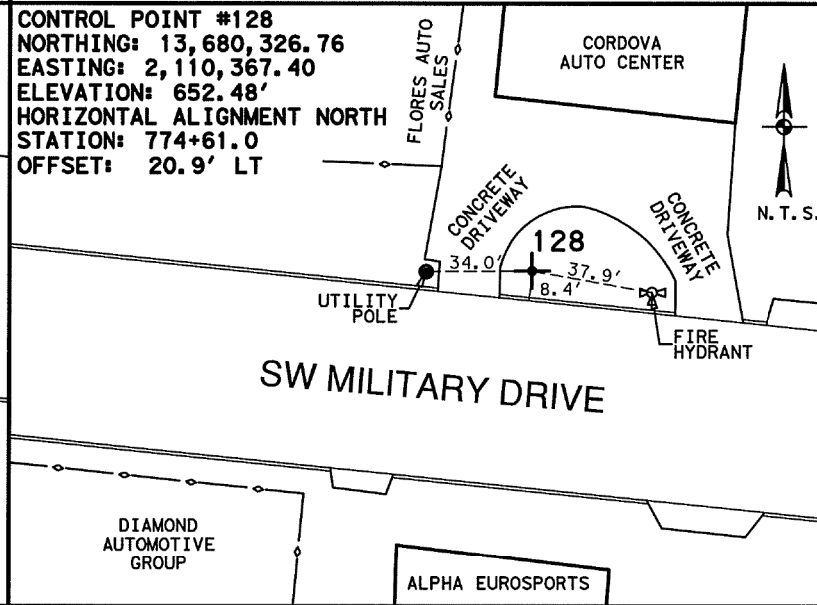
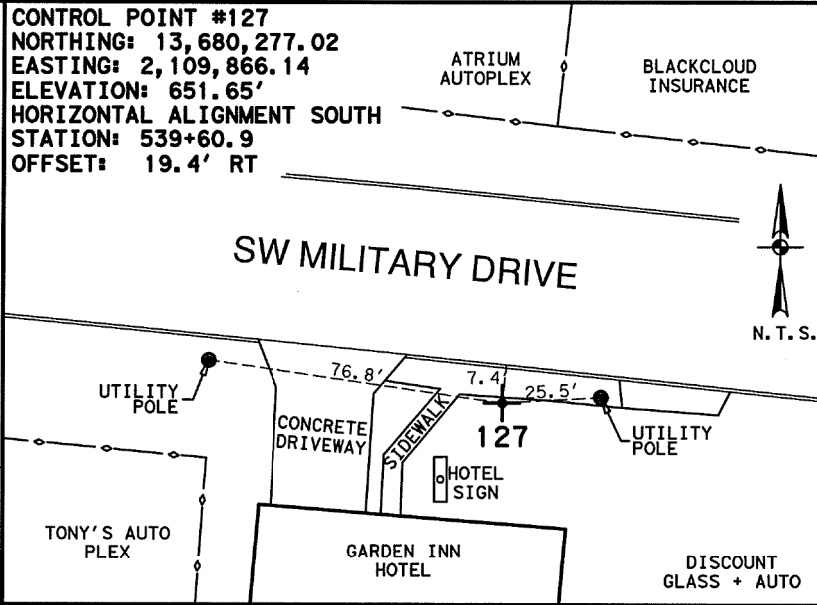
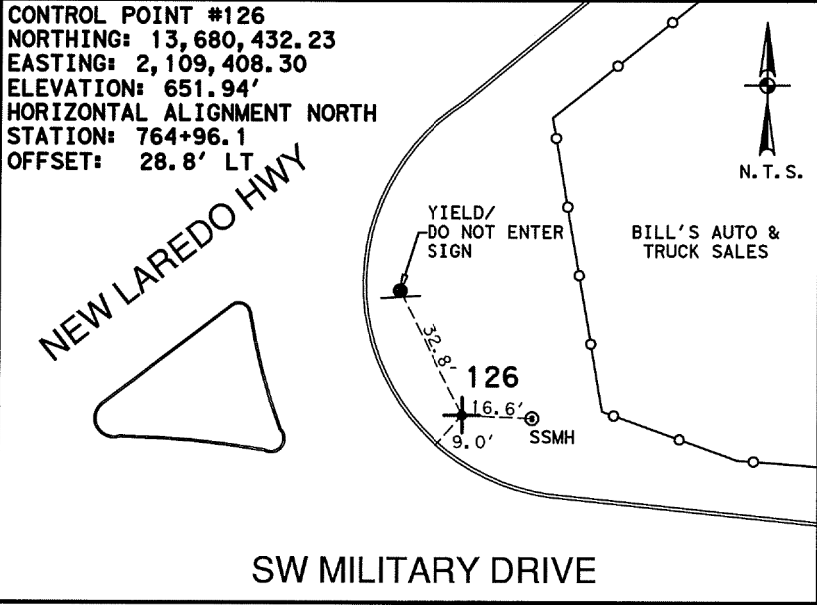
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 300 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND HOLDER AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 410 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND BYNUM AVENUE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SW MILITARY DRIVE AND BYNUM AVENUE

MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 200 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND NEW LAREDO HIGHWAY, ON THE SOUTH SIDE OF SW MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SW MILITARY DRIVE AND NEW LAREDO HIGHWAY

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 730 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND NEW LAREDO HIGHWAY, ON THE SOUTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 480 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE

NOTES:  
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 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



7/16/2018

**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

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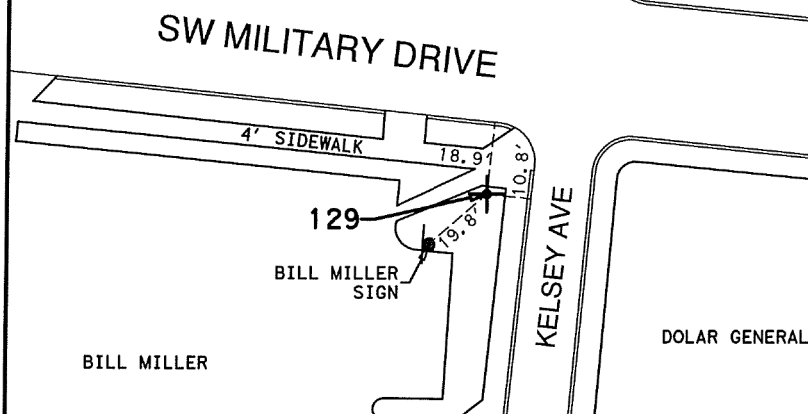
**SW MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 2 OF 6

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
01K	6	TEXAS		SL 13		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
01K	15	BEXAR	0017	10	280	100

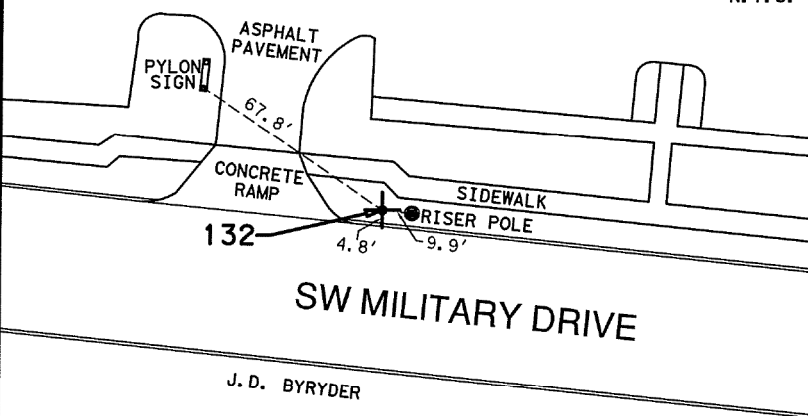
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**CONTROL POINT #129**  
 NORTHING: 13,680,169.65  
 EASTING: 2,110,810.96  
 ELEVATION: 654.10'  
 HORIZONTAL ALIGNMENT SOUTH  
 STATION: 549+11.7  
 OFFSET: 30.3' RT



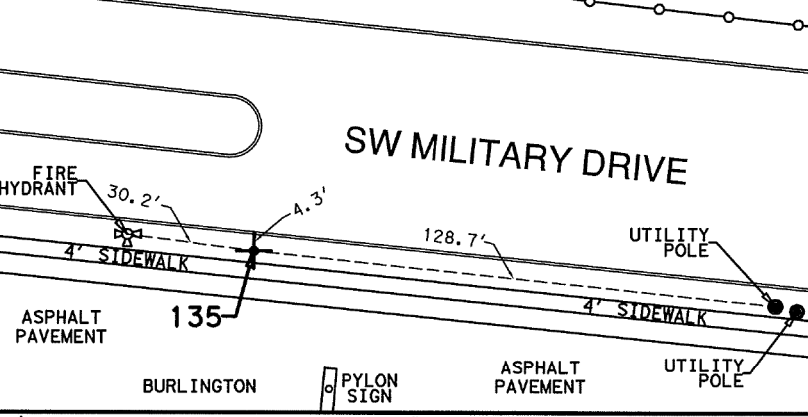
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED IN THE PLANTING STRIP AT THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY AVENUE

**CONTROL POINT #132**  
 NORTHING: 13,680,136.34  
 EASTING: 2,112,197.84  
 ELEVATION: 656.33'  
 HORIZONTAL ALIGNMENT NORTH  
 STATION: 793+01.3  
 OFFSET: 16.8' LT



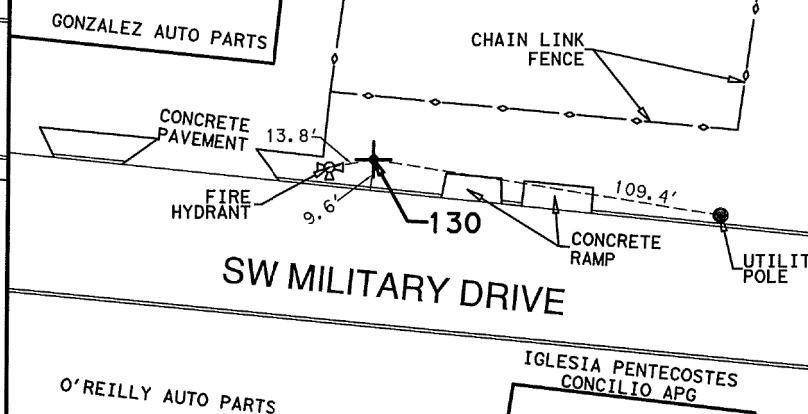
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 270 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND SOMERSET ROAD, ON THE NORTH SIDE OF SW MILITARY DRIVE

**CONTROL POINT #135**  
 NORTHING: 13,679,868.48  
 EASTING: 2,113,906.06  
 ELEVATION: 654.34'  
 HORIZONTAL ALIGNMENT SOUTH  
 STATION: 580+21.4  
 OFFSET: 15.7' RT



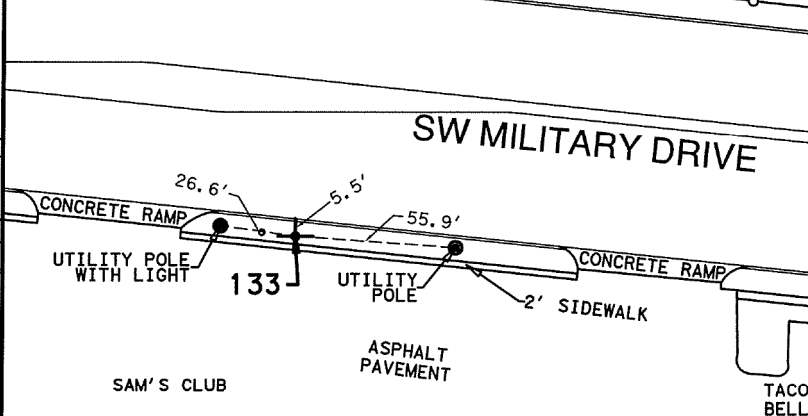
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED ON THE PLANTING STRIP APPROXIMATELY 500 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND BARLITE BOULEVARD, ON THE SOUTH SIDE OF SW MILITARY DRIVE

**CONTROL POINT #130**  
 NORTHING: 13,680,236.28  
 EASTING: 2,111,265.33  
 ELEVATION: 654.90'  
 HORIZONTAL ALIGNMENT NORTH  
 STATION: 783+63.4  
 OFFSET: 21.8' LT



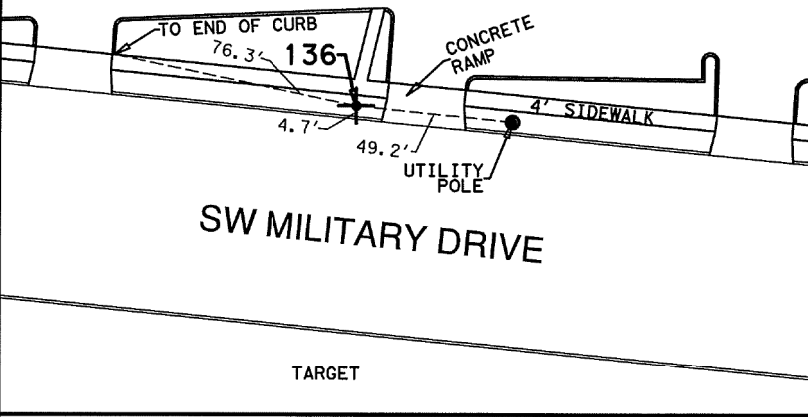
MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 430 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE

**CONTROL POINT #133**  
 NORTHING: 13,679,957.44  
 EASTING: 2,113,019.46  
 ELEVATION: 655.51'  
 HORIZONTAL ALIGNMENT SOUTH  
 STATION: 571+30.4  
 OFFSET: 17.2' RT



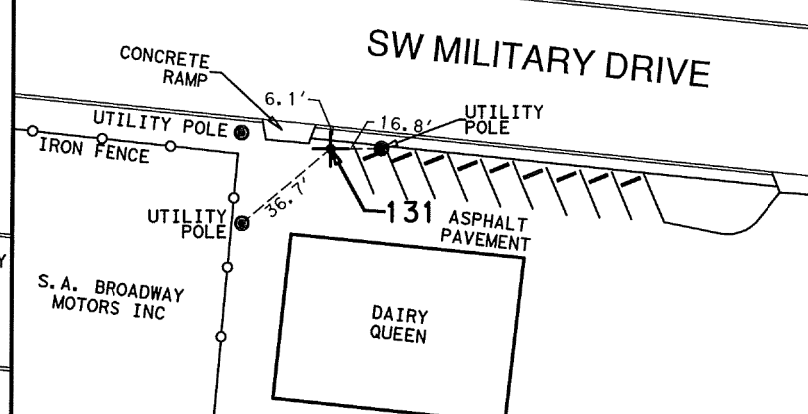
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 400 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND BARLITE BOULEVARD, ON THE SOUTH SIDE OF SW MILITARY DRIVE

**CONTROL POINT #136**  
 NORTHING: 13,679,914.81  
 EASTING: 2,114,370.26  
 ELEVATION: 652.86'  
 HORIZONTAL ALIGNMENT NORTH  
 STATION: 814+85.0  
 OFFSET: 16.3' LT



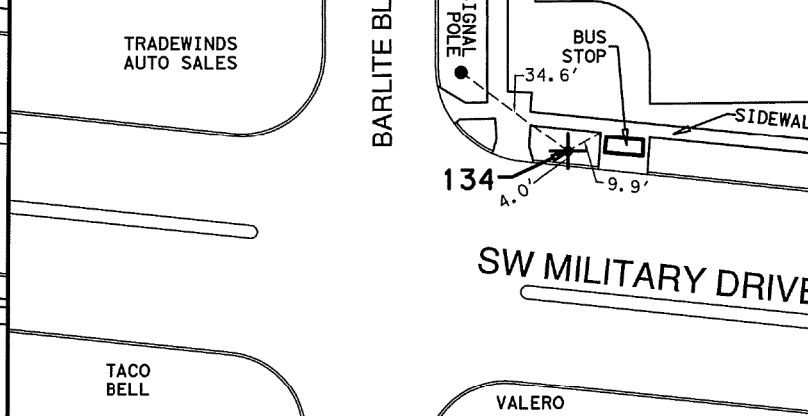
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED ON THE PLANTING STRIP APPROXIMATELY 280 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND OTTO STREET, ON THE NORTH SIDE OF SW MILITARY DRIVE

**CONTROL POINT #131**  
 NORTHING: 13,680,089.27  
 EASTING: 2,111,722.43  
 ELEVATION: 655.86'  
 HORIZONTAL ALIGNMENT SOUTH  
 STATION: 558+26.7  
 OFFSET: 17.7' RT



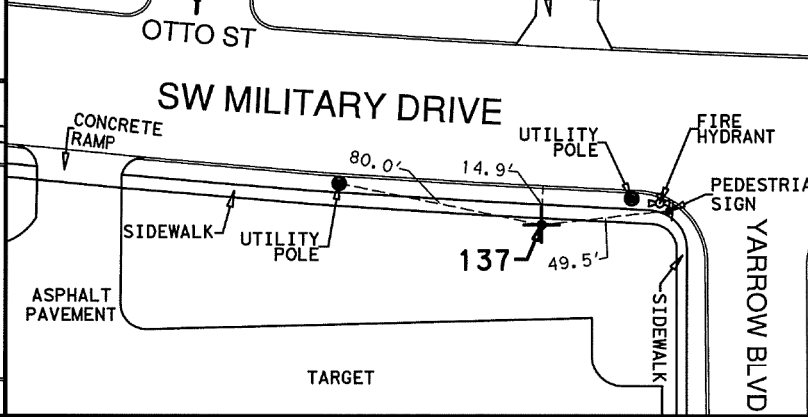
MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 700 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND SOMERSET ROAD, ON THE SOUTH SIDE OF SW MILITARY DRIVE

**CONTROL POINT #134**  
 NORTHING: 13,680,005.96  
 EASTING: 2,113,468.52  
 ELEVATION: 654.87'  
 HORIZONTAL ALIGNMENT NORTH  
 STATION: 805+78.6  
 OFFSET: 15.7' LT



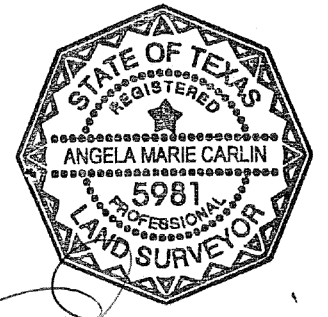
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED IN THE PLANTING STRIP AT THE INTERSECTION OF SW MILITARY DRIVE AND BARLITE BOULEVARD

**CONTROL POINT #137**  
 NORTHING: 13,679,771.24  
 EASTING: 2,114,822.44  
 ELEVATION: 651.88'  
 HORIZONTAL ALIGNMENT SOUTH  
 STATION: 589+41.6  
 OFFSET: 27.1' RT



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 100 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND YARROW BOULEVARD, ON THE SOUTH SIDE OF SW MILITARY DRIVE

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



07/16/2018

**LEGEND**

- + CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

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 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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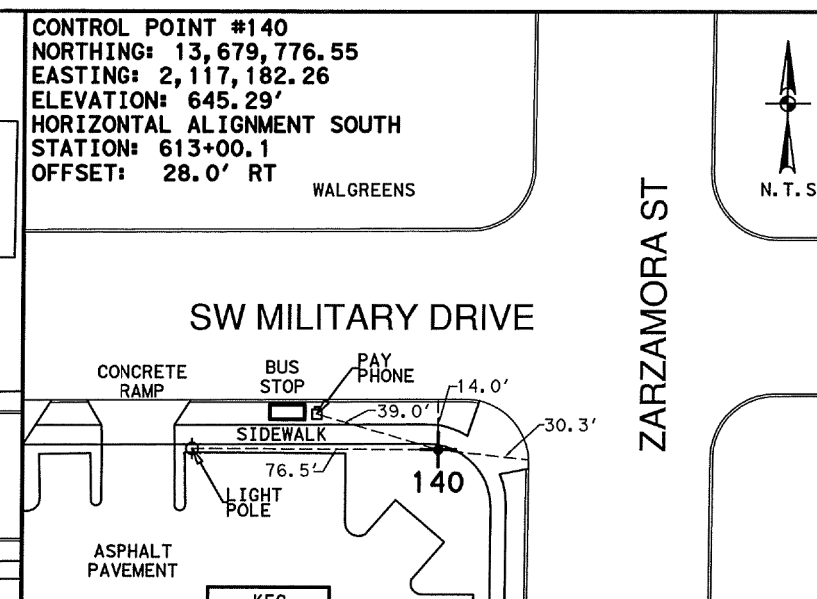
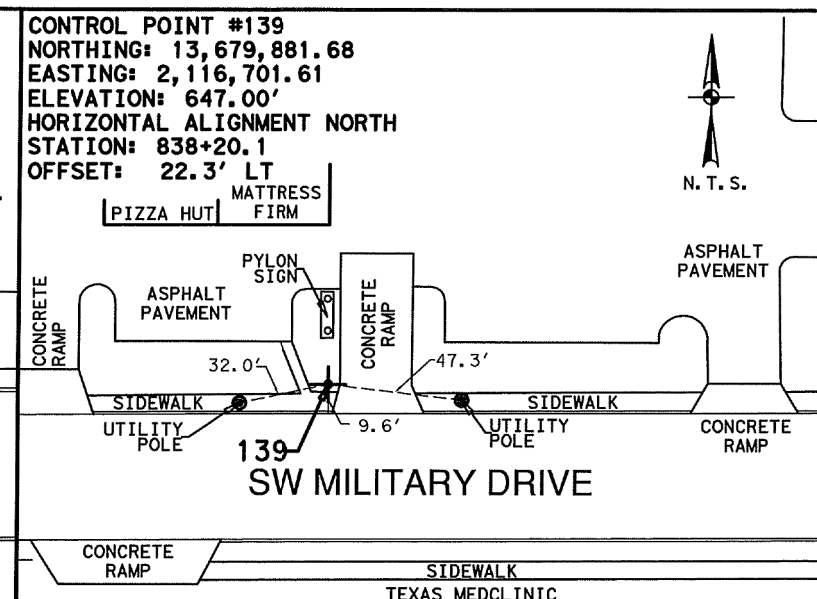
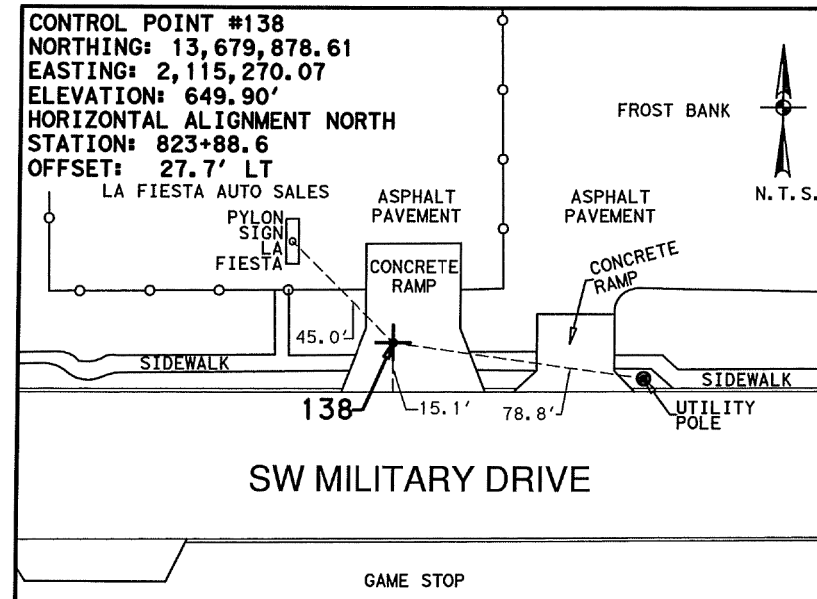
**SW MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 3 OF 6

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK:	6	TEXAS		SL 13
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK:	15	BEXAR	0017	10
DWG:				
			JOB NO.:	SHEET NO.:
			280	101

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.

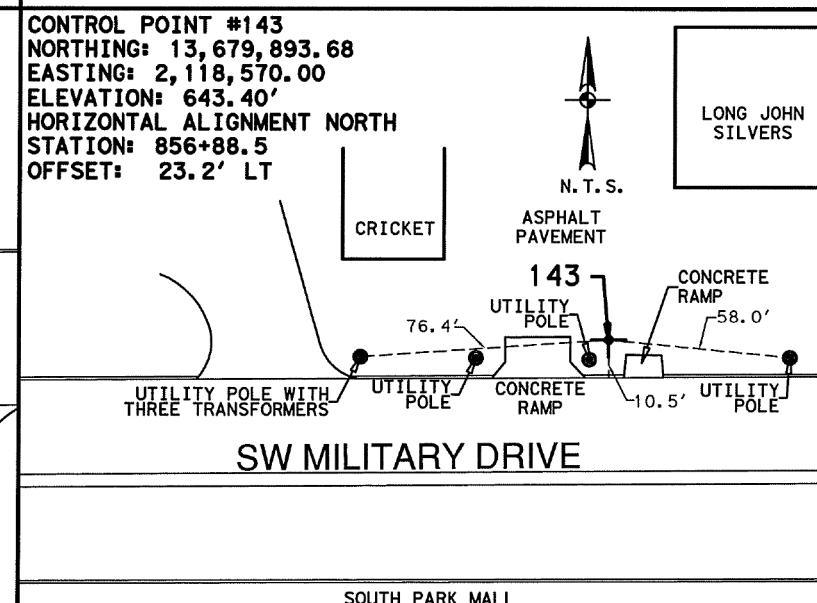
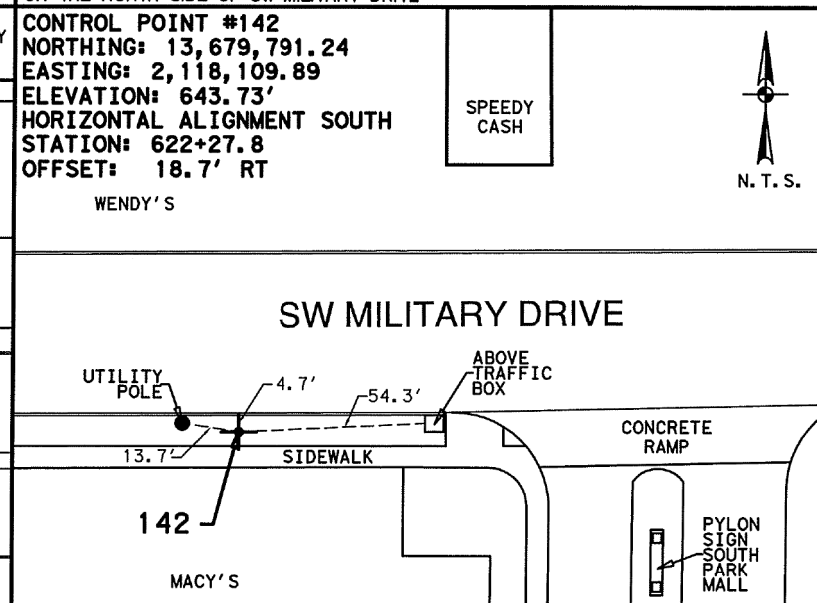
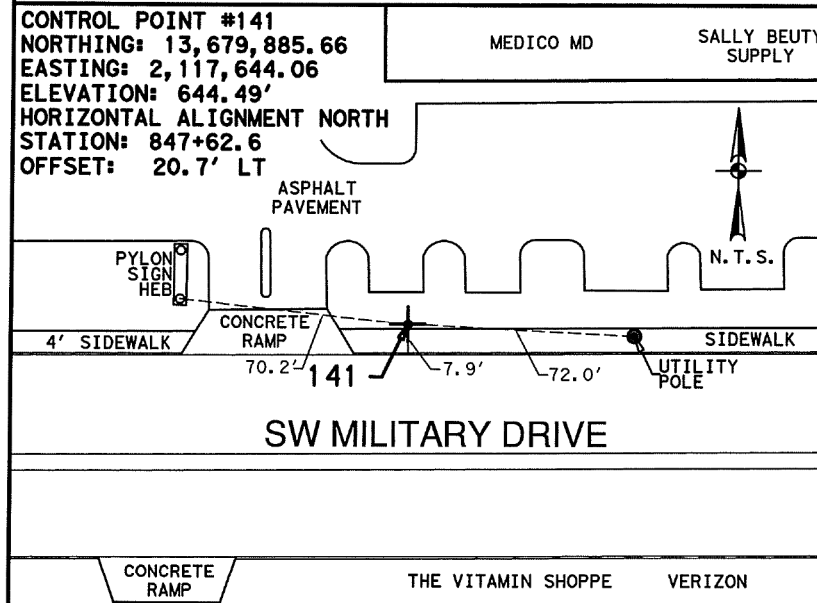


7/16/2018

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 200 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND MALLARD STREET, ON THE NORTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 550 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND ZARZAMORA STREET, ON THE NORTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED IN THE SOUTHWEST CORNER OF THE INTERSECTION OF SW MILITARY DRIVE AND ZARZAMORA STREET



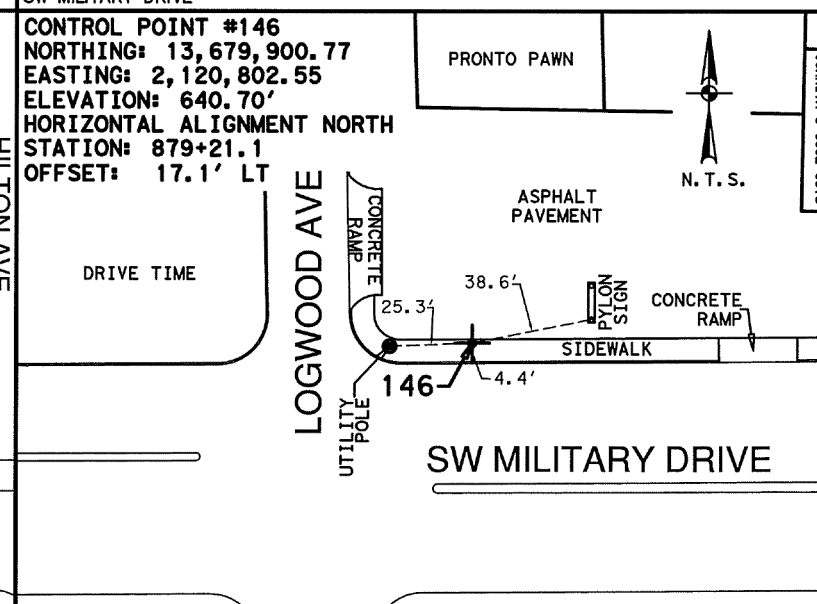
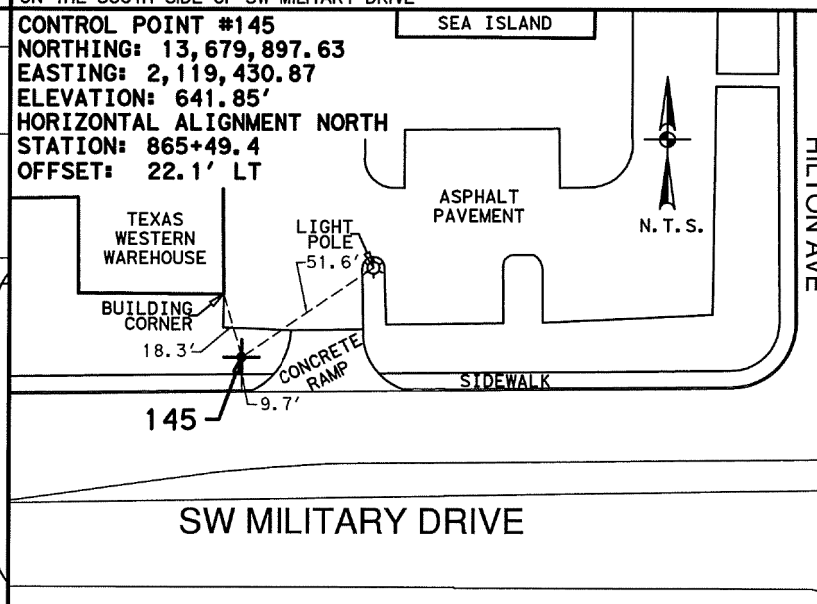
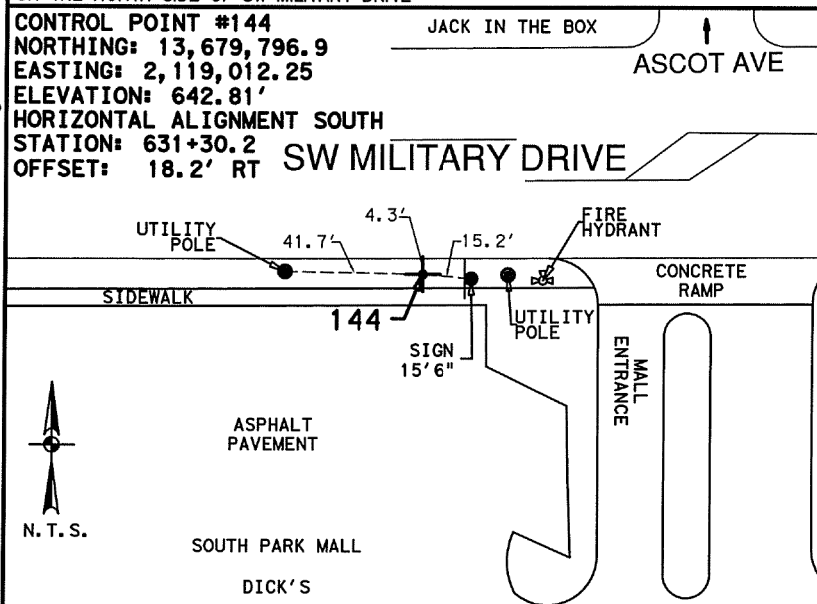
**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 380 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND ZARZAMORA STREET, ON THE NORTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 850 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND ZARZAMORA STREET, ON THE SOUTH SIDE OF SW MILITARY DRIVE

MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 530 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND ASCOT AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 90 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND ASCOT AVENUE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 220 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND HILTON AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 50 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND LONGWOOD AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE

REV. NO. DATE DESCRIPTION BY

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 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

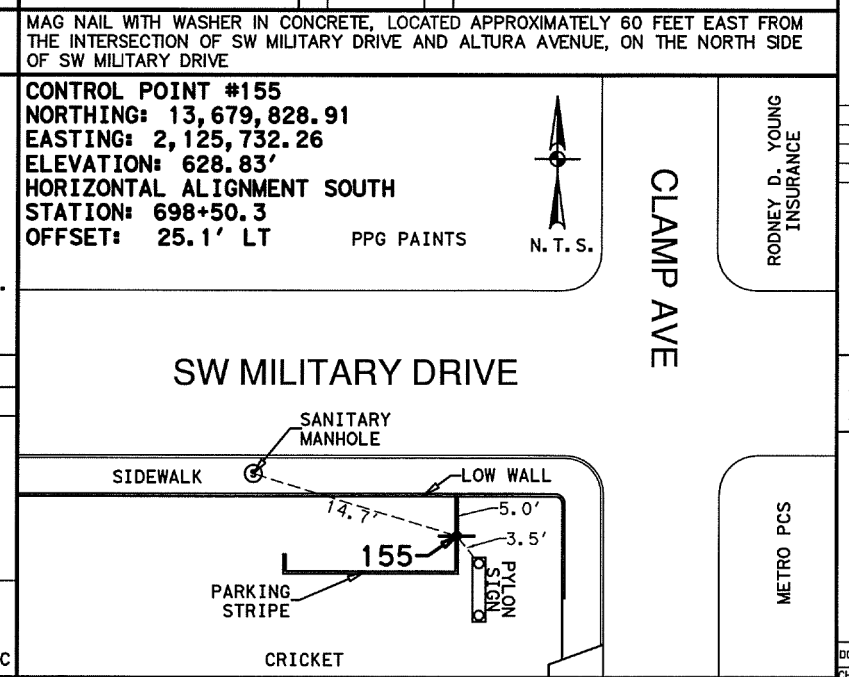
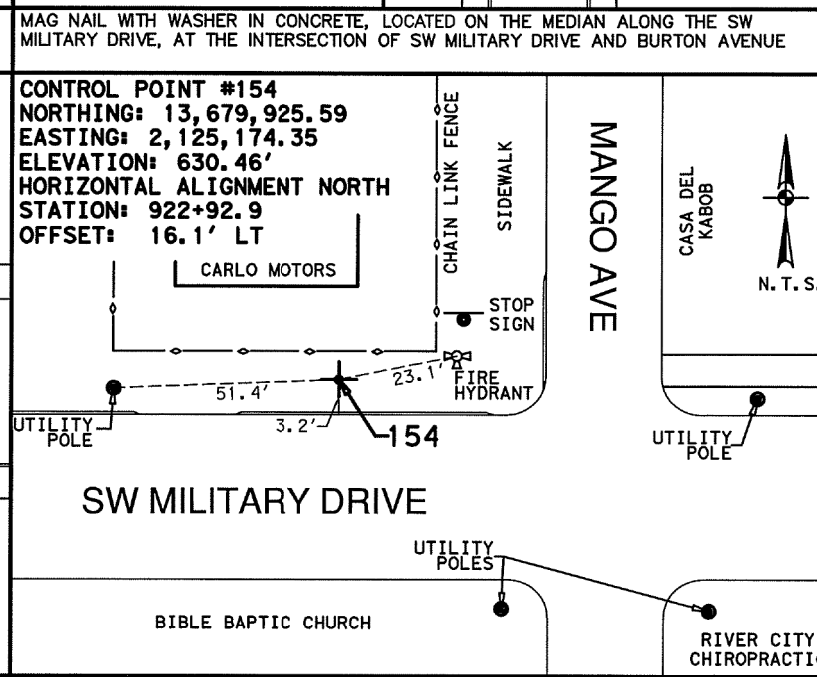
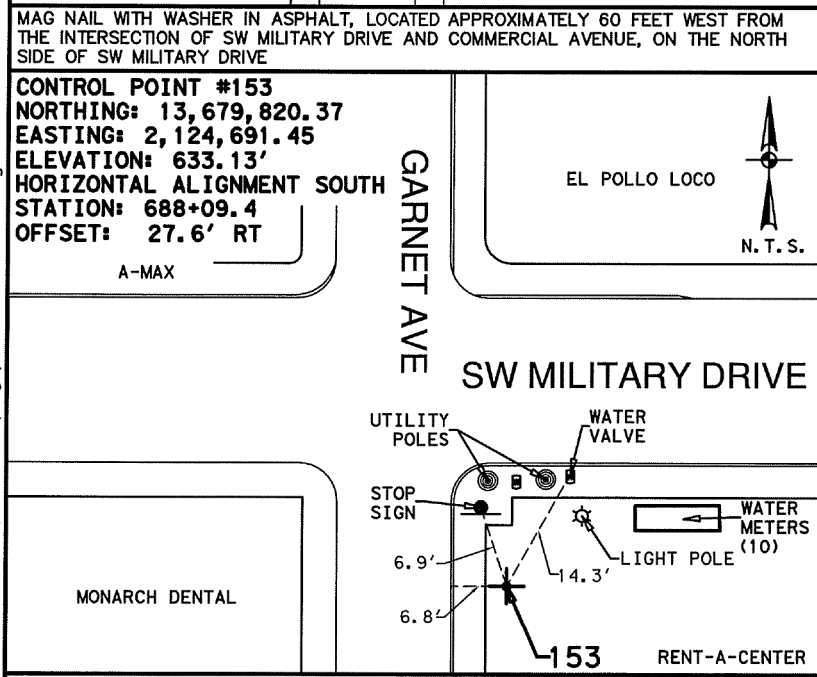
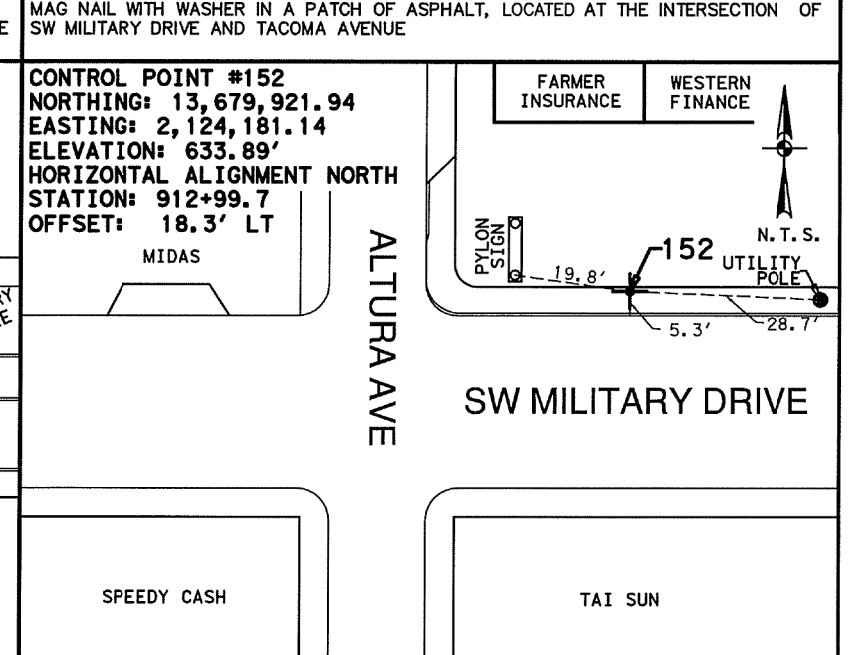
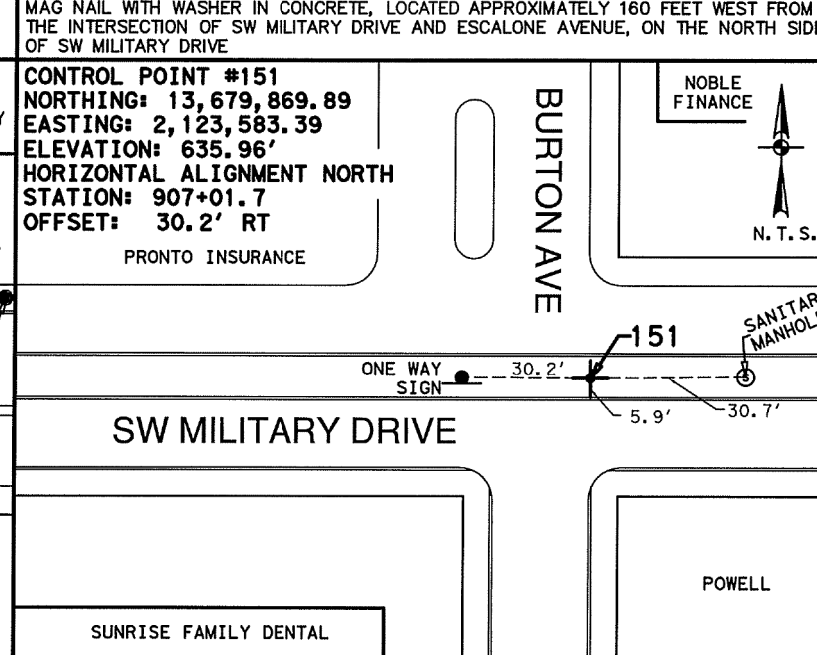
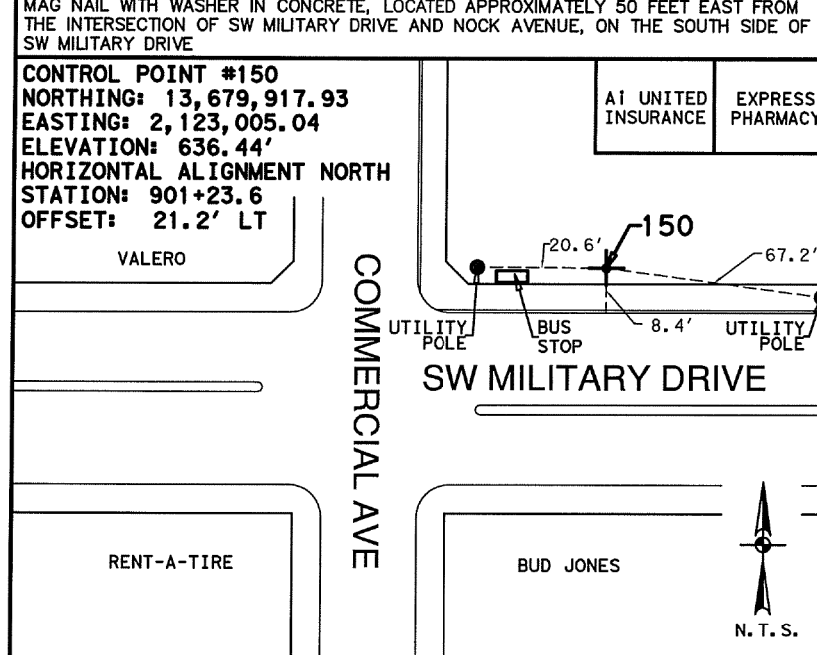
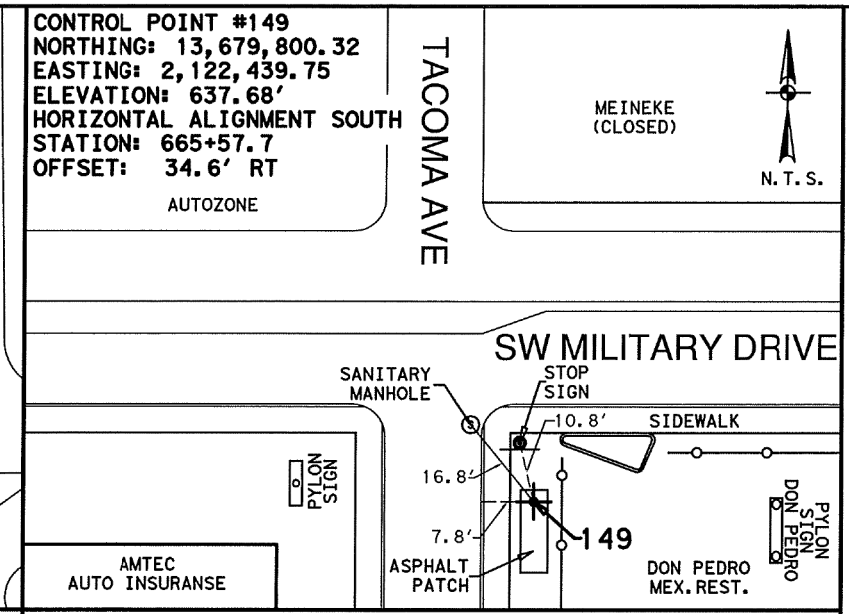
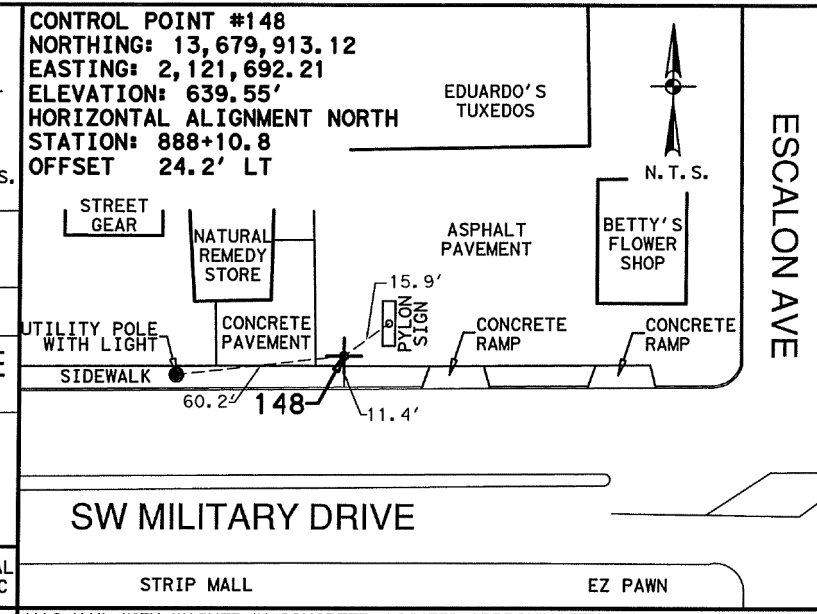
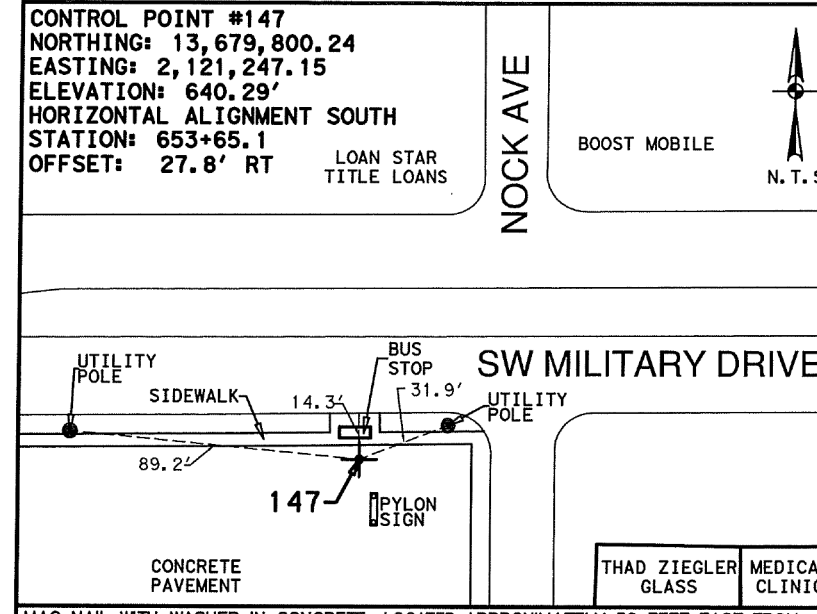
Texas Department of Transportation  
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**SW MILITARY DRIVE (LOOP 13)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 4 OF 6

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
15	6	TEXAS		SL 13
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
102	15	BEXAR	0017	10
			JOB NO.	SHEET NO.
			280	102

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MAG NAIL WITH WASHER IN ASPHALT, LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF SW MILITARY DRIVE AND GARNET AVENUE

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 50 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND MANGO AVENUE, ON THE NORTH SIDE OF SW MILITARY DRIVE

MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 35 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND CLAMP AVENUE, ON THE SOUTH SIDE OF SW MILITARY DRIVE

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



7/16/2018

LEGEND

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

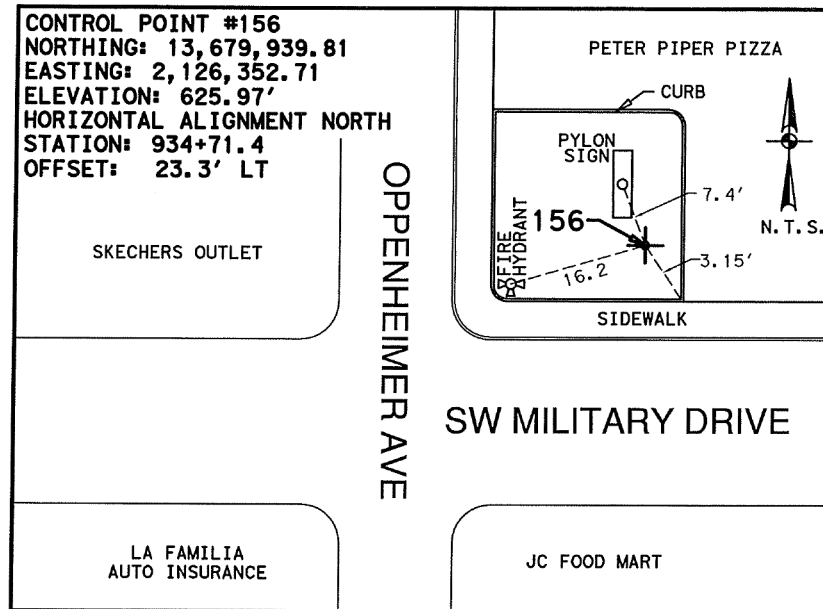
Texas Department of Transportation  
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SW MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS

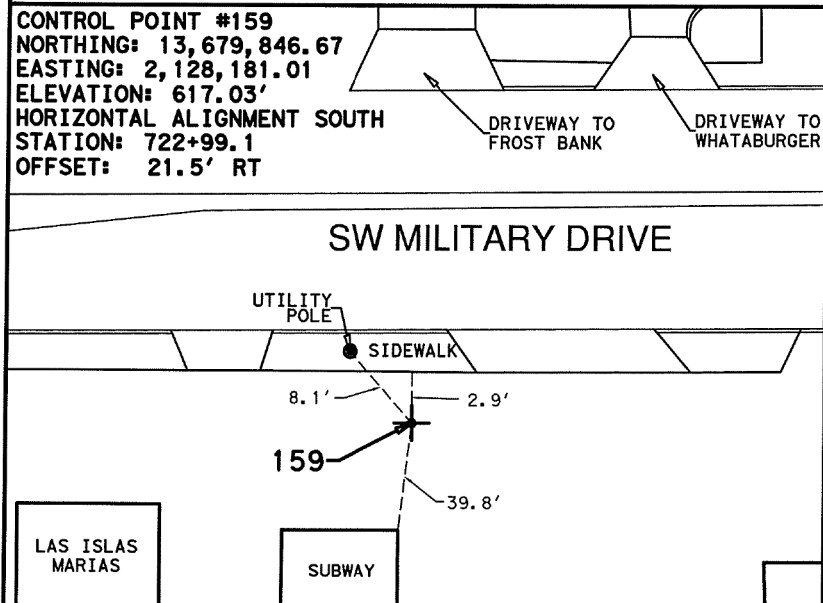
SHEET 5 OF 6

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SL 13
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0017	10
DWG				280
				103

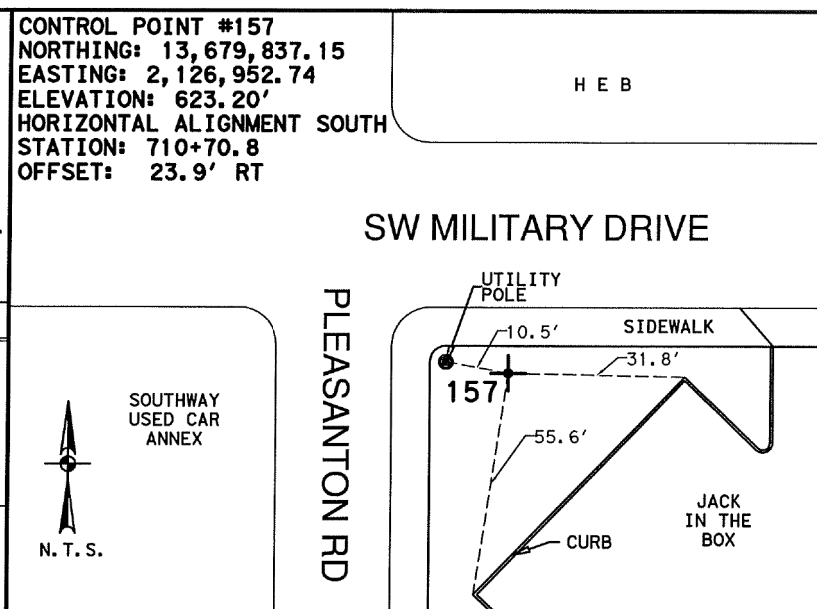
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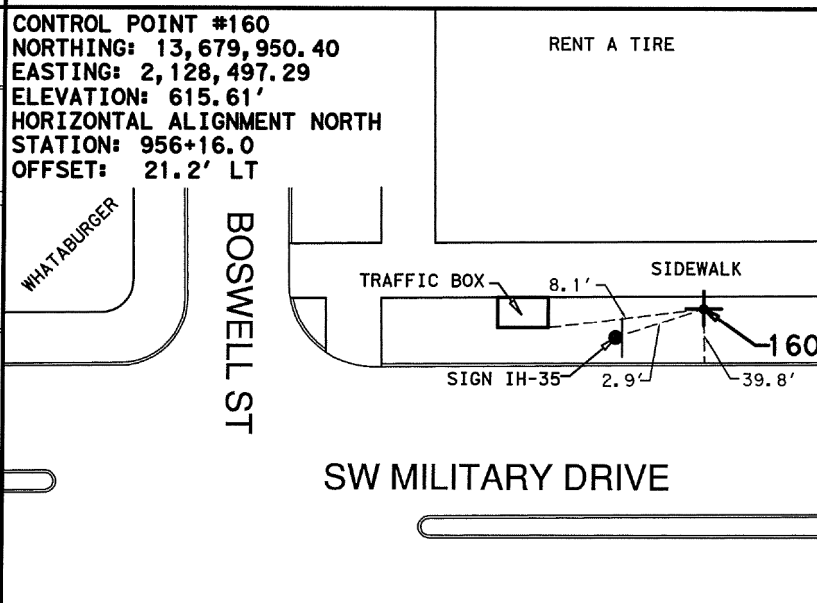
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SW MILITARY DRIVE AND OPPENHEIMER AVENUE



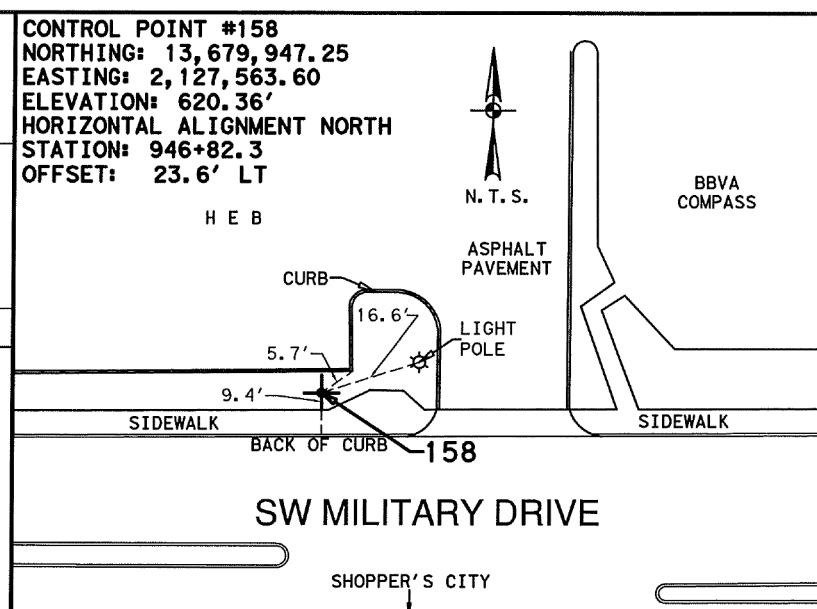
MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 250 FEET WEST FROM THE INTERSECTION OF SW MILITARY DRIVE AND BOSWELL STREET, ON THE SOUTH SIDE OF SW MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SW MILITARY DRIVE AND PLEASANTON ROAD

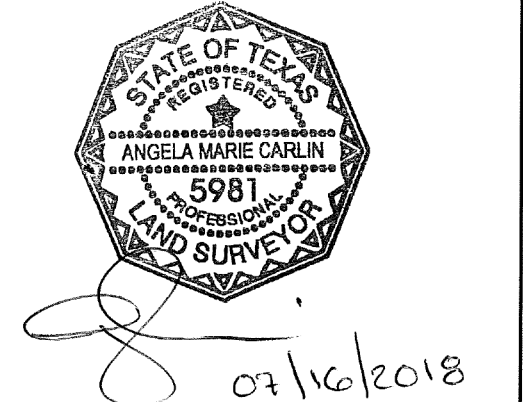


1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 60 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND BOSWELL STREET, ON THE NORTH SIDE OF SW MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 670 FEET EAST FROM THE INTERSECTION OF SW MILITARY DRIVE AND PLEASANTON ROAD, ON THE NORTH SIDE OF SW MILITARY DRIVE

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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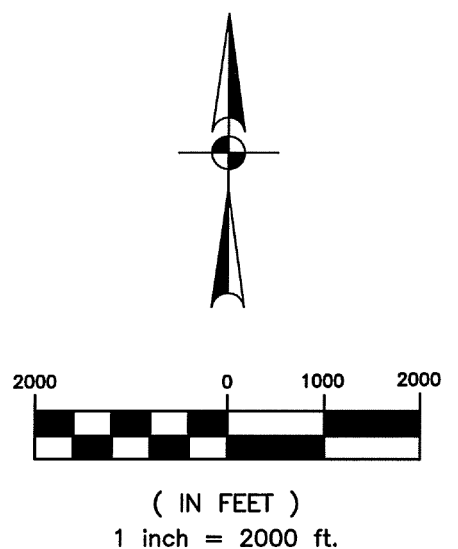
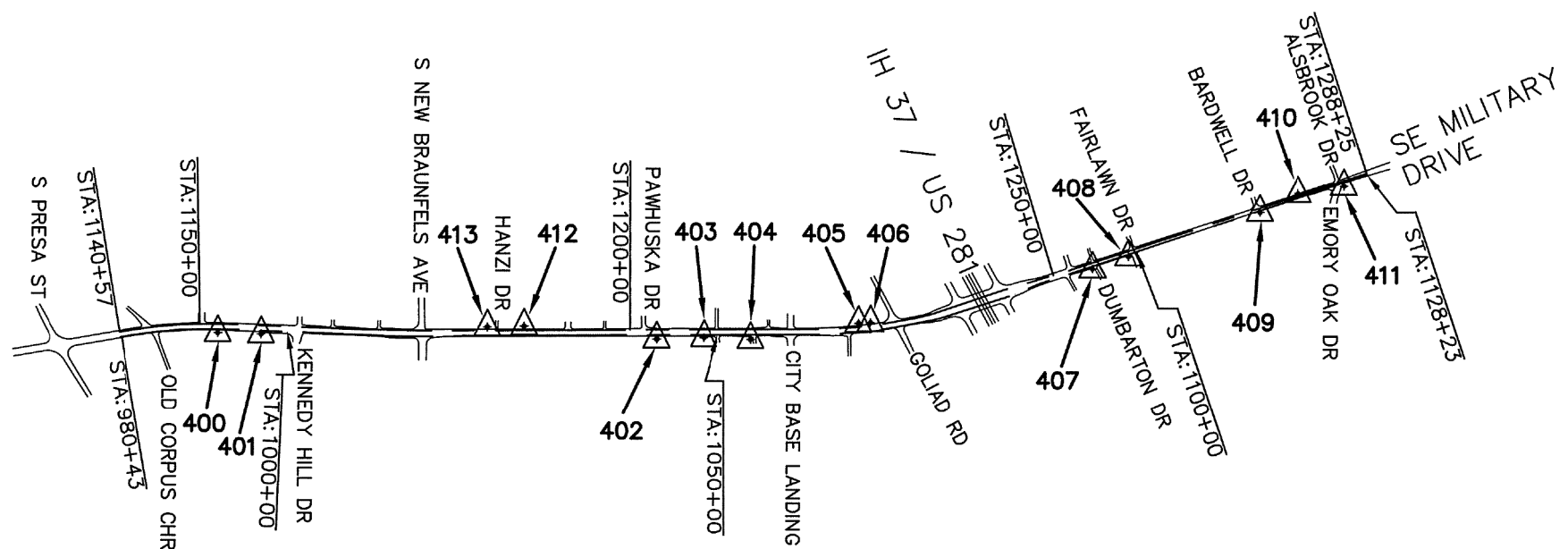
**SW MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 6 OF 6

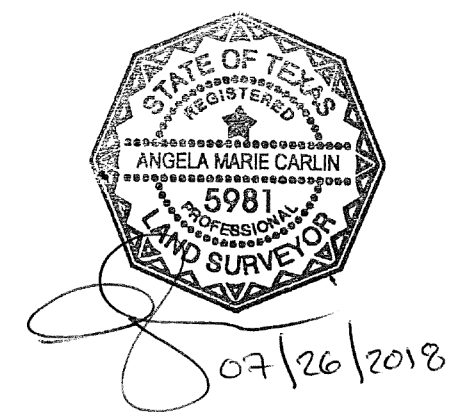
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CHK	6	TEXAS		SL 13		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	15	BEXAR	0017	10	280	104



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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



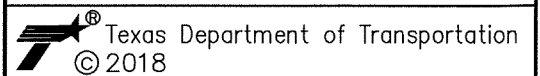
**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



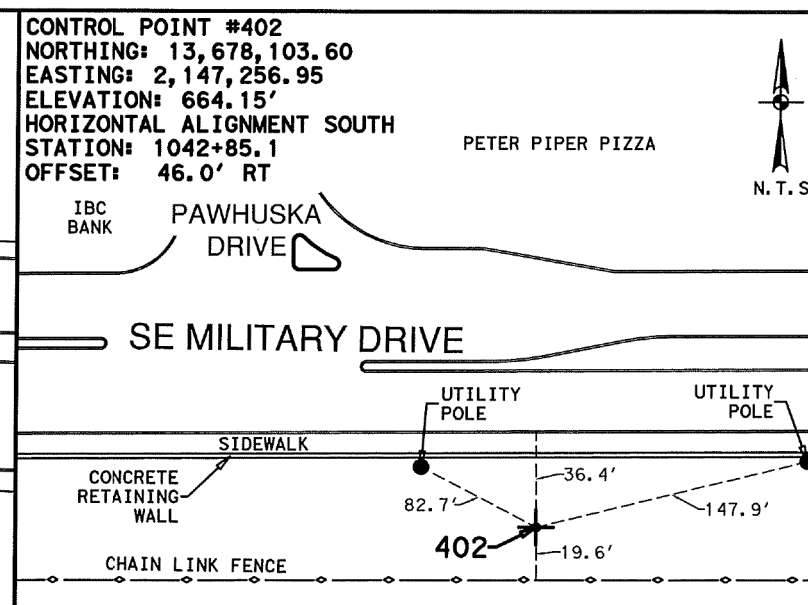
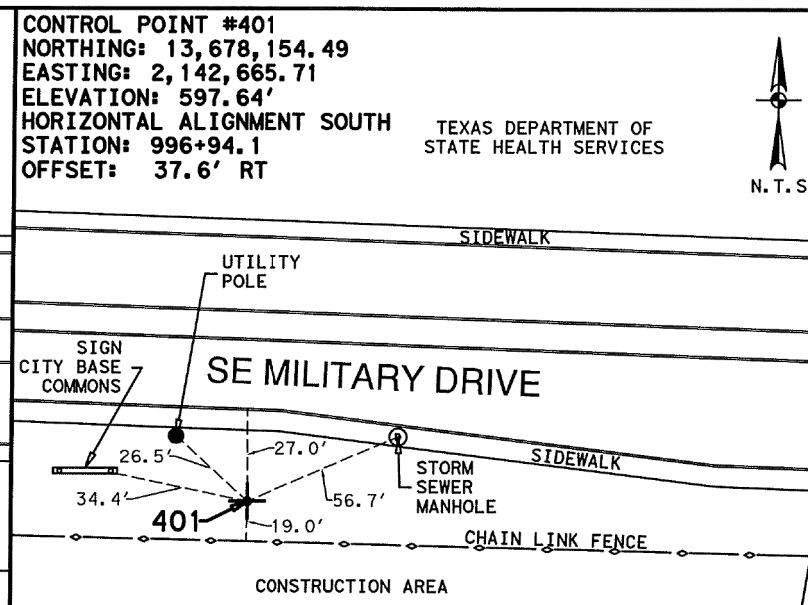
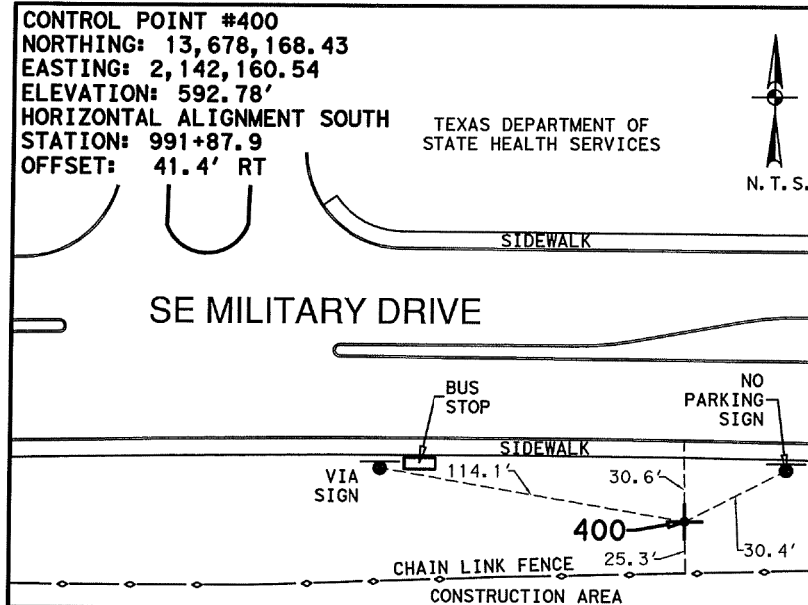
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



**SE MILITARY DRIVE  
 (LOOP 13)  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 3

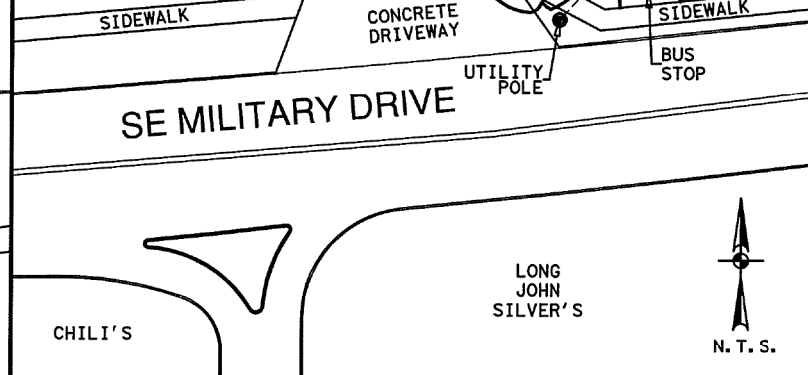
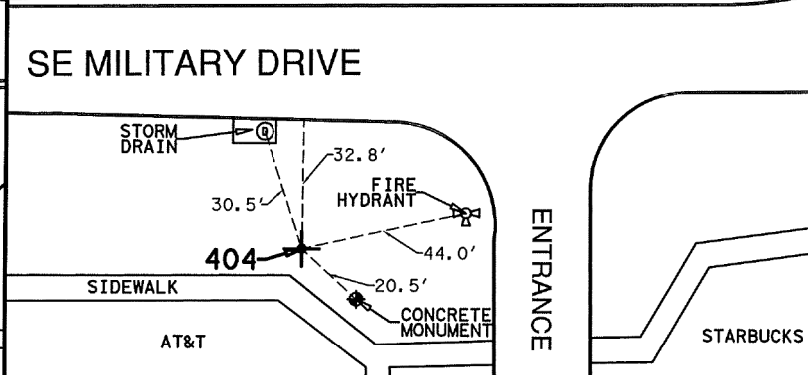
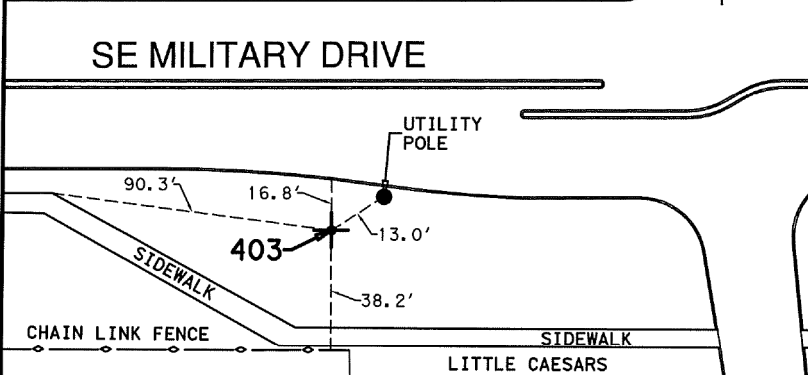
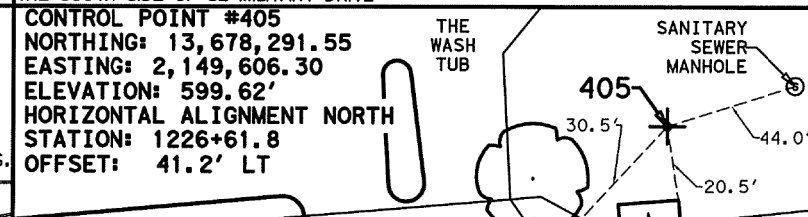
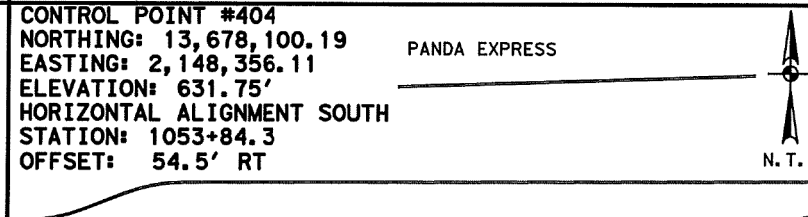
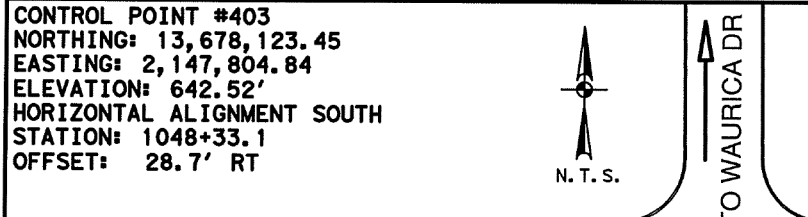
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CHK DGN	6	TEXAS		SL 13
DWG	DIST.	COUNTY	CONT. NO. SECT. NO.	JOB NO. SHEET NO.
CHK DWG	15	BEXAR	0017 10	280 105



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 750 FEET EAST FROM THE INTERSECTION OF SE MILITARY DRIVE AND OLD CORPUS CHRISTI ROAD, ON THE SOUTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 1,200 FEET EAST FROM THE INTERSECTION OF SE MILITARY DRIVE AND OLD CORPUS CHRISTI ROAD, ON THE SOUTH SIDE OF SE MILITARY DRIVE

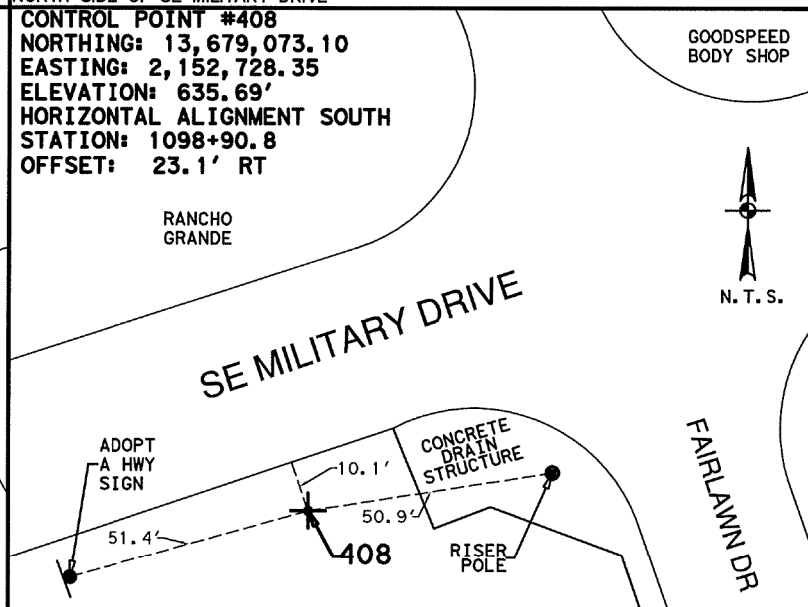
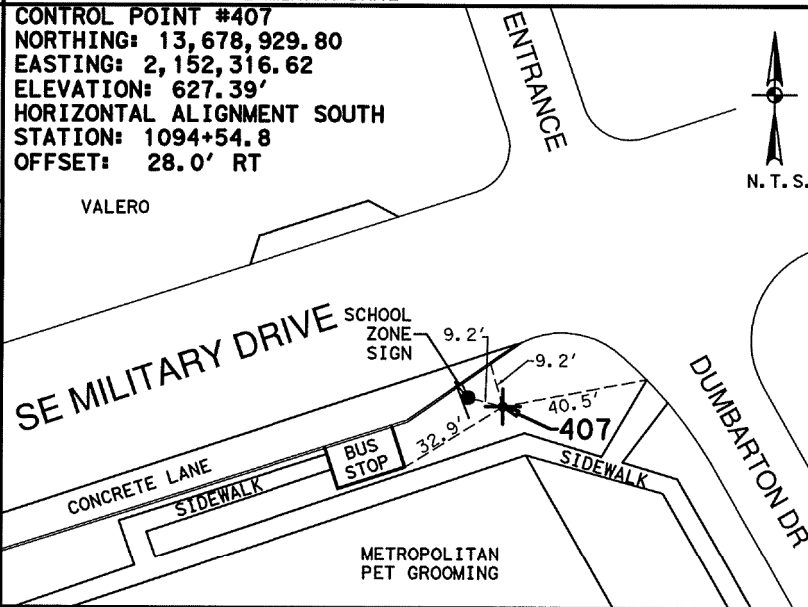
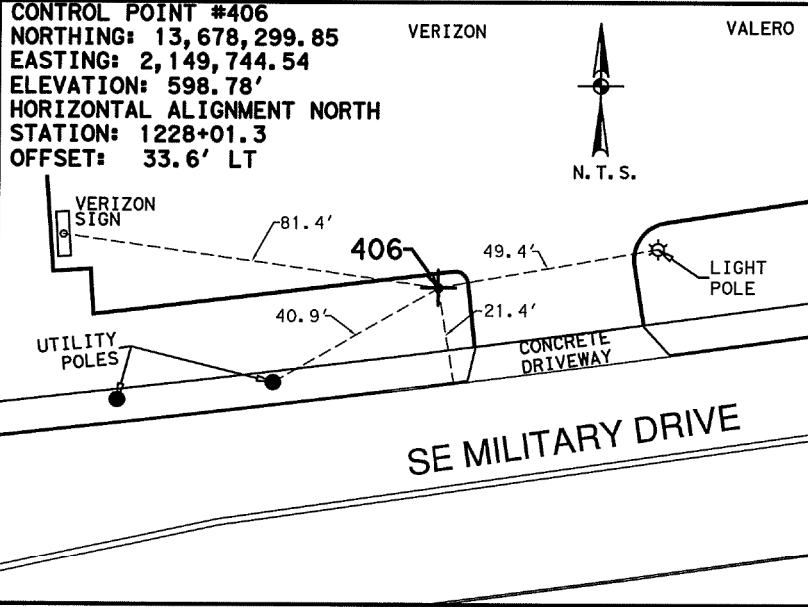
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 130 FEET EAST FROM THE INTERSECTION OF SE MILITARY DRIVE AND PAWHUSKA DRIVE, ON THE SOUTH SIDE OF SE MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 680 FEET EAST FROM THE INTERSECTION OF SE MILITARY DRIVE AND PAWHUSKA DRIVE, ON THE SOUTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 420 FEET WEST FROM THE INTERSECTION OF SE MILITARY DRIVE AND CITY BASE LANDING, ON THE SOUTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 460 FEET WEST FROM THE INTERSECTION OF SE MILITARY DRIVE AND GOLIAD ROAD, ON THE NORTH SIDE OF SE MILITARY DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 320 FEET WEST FROM THE INTERSECTION OF SE MILITARY DRIVE AND GOLIAD ROAD, ON THE NORTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 50 FEET WEST FROM THE INTERSECTION OF SE MILITARY DRIVE AND DUMBARTON DRIVE, ON THE SOUTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 90 FEET WEST FROM THE INTERSECTION OF SE MILITARY DRIVE AND FAIRLAWN DRIVE, ON THE SOUTH SIDE OF SE MILITARY DRIVE

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



07/26/2018

**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
PL	INTERSTATE HIGHWAY
RD	PLACE
SH	ROAD
ST	STATE HIGHWAY
US	STREET
	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPBE FIRM REGISTRATION #470 | TPLS FIRM REGISTRATION #1002800

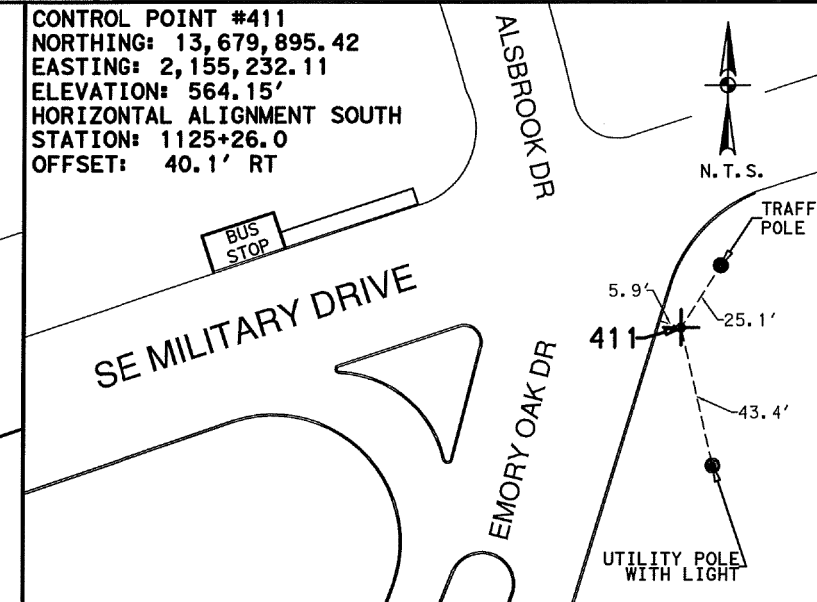
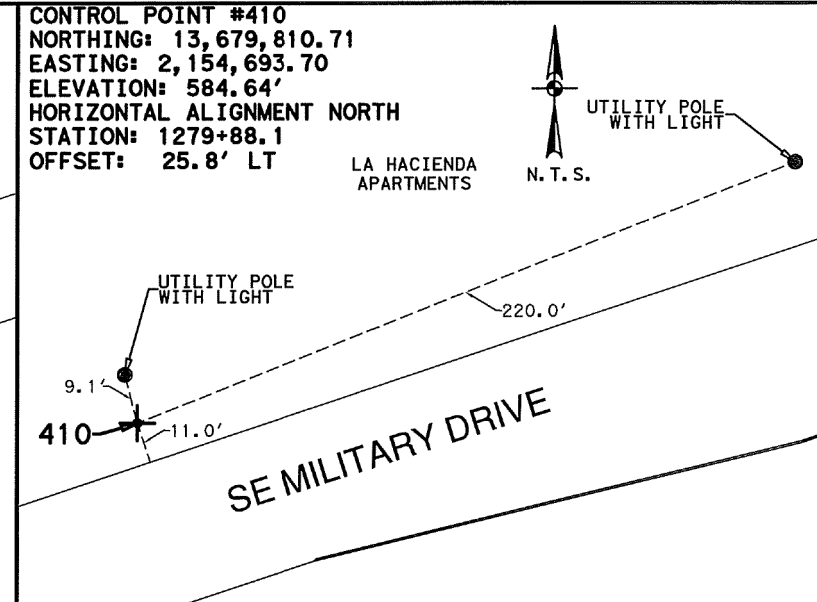
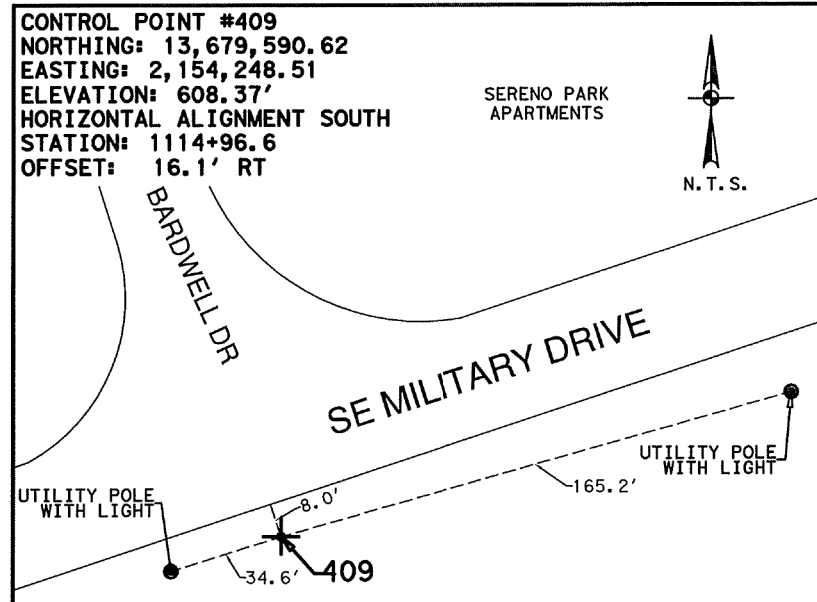
Texas Department of Transportation  
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**SE MILITARY DRIVE (LOOP 13)  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

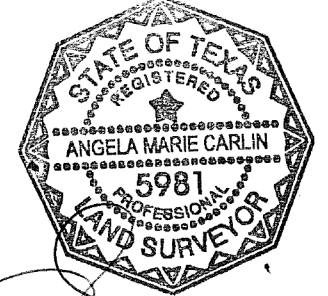
SHEET 2 OF 3

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN	6	TEXAS		SL 13
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG	15	BEXAR	0017	10
			JOB NO.	SHEET NO.
			280	106

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.

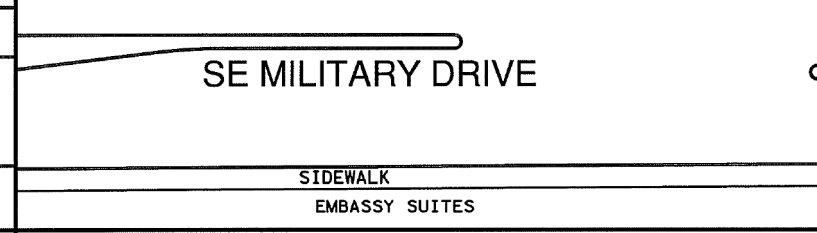
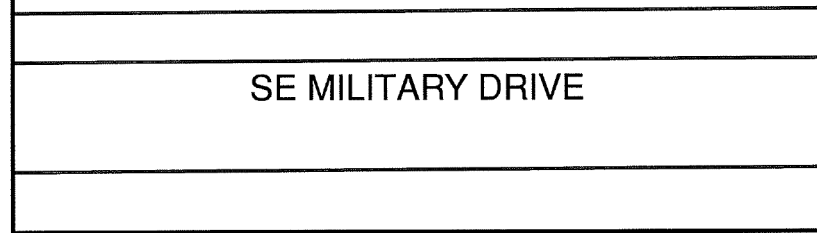
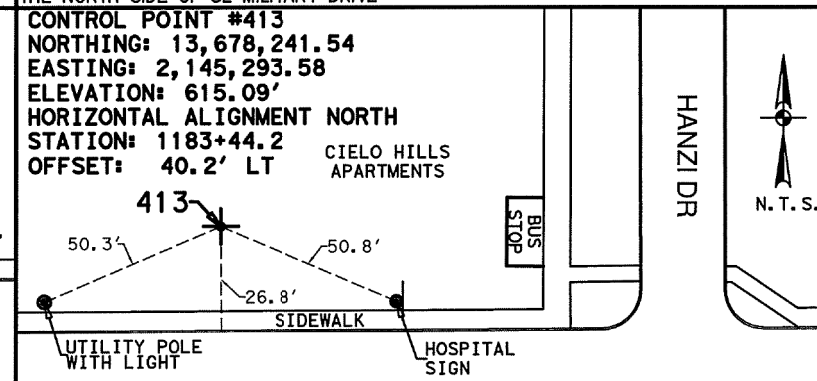
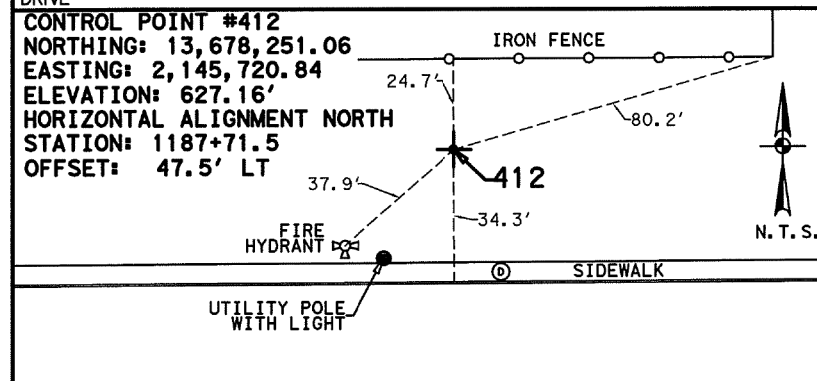


07/26/2018

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SE MILITARY DRIVE AND BARDWELL DRIVE, ON THE SOUTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 490 FEET EAST FROM THE INTERSECTION OF SE MILITARY DRIVE AND BARDWELL DRIVE, ON THE NORTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SE MILITARY DRIVE, ALSBROOK DRIVE AND EMORY OAK DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 300 FEET EAST FROM THE INTERSECTION OF SE MILITARY DRIVE AND HANZI DRIVE, ON THE NORTH SIDE OF SE MILITARY DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 130 FEET WEST FROM THE INTERSECTION OF SE MILITARY DRIVE AND HANZI DRIVE, ON THE NORTH SIDE OF SE MILITARY DRIVE

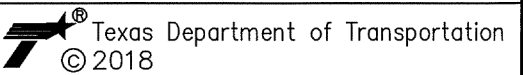
LEGEND

- + CONTROL POINT
- ALIGNMENT
- N. T. S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028600



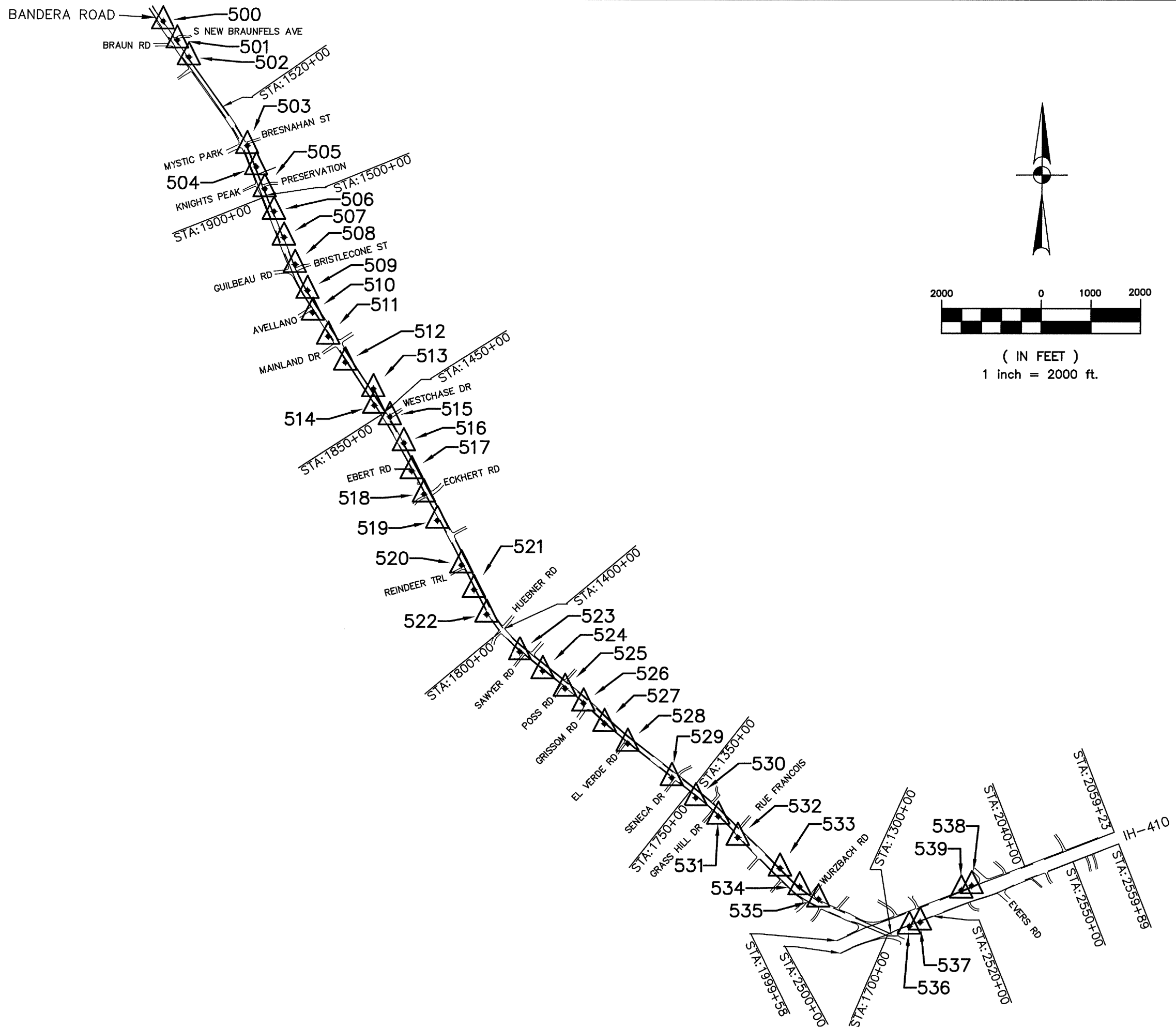
SE MILITARY DRIVE  
 (LOOP 13)  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS

SHEET 3 OF 3

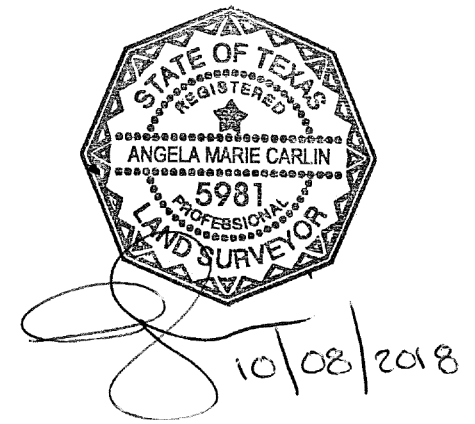
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CHK DDN	6	TEXAS		SL 13		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0017	10	280	107

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



**LEGEND**

	CONTROL POINT
	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

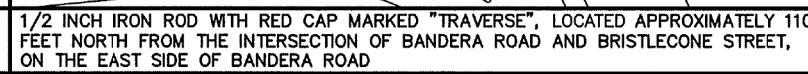
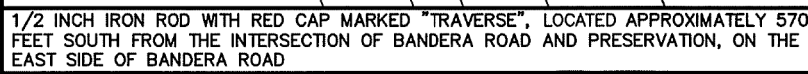
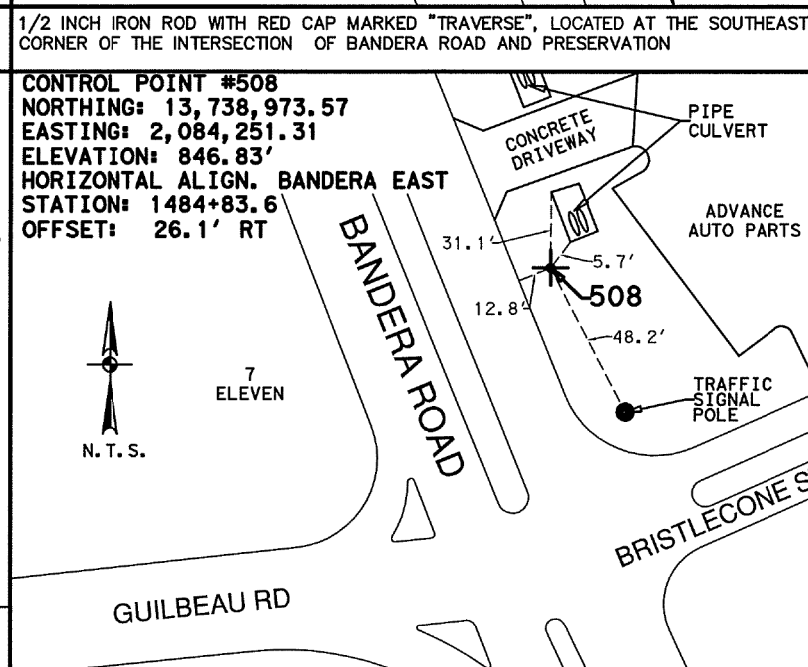
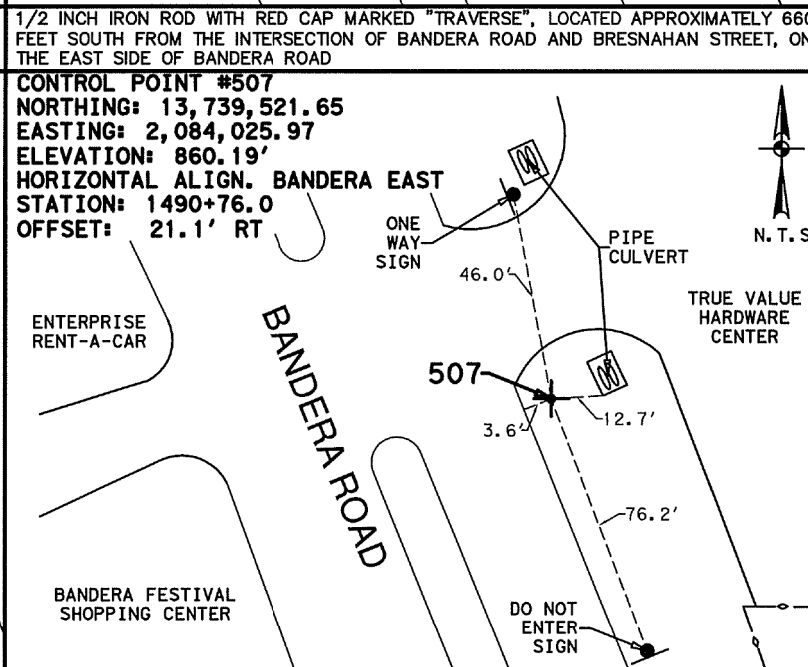
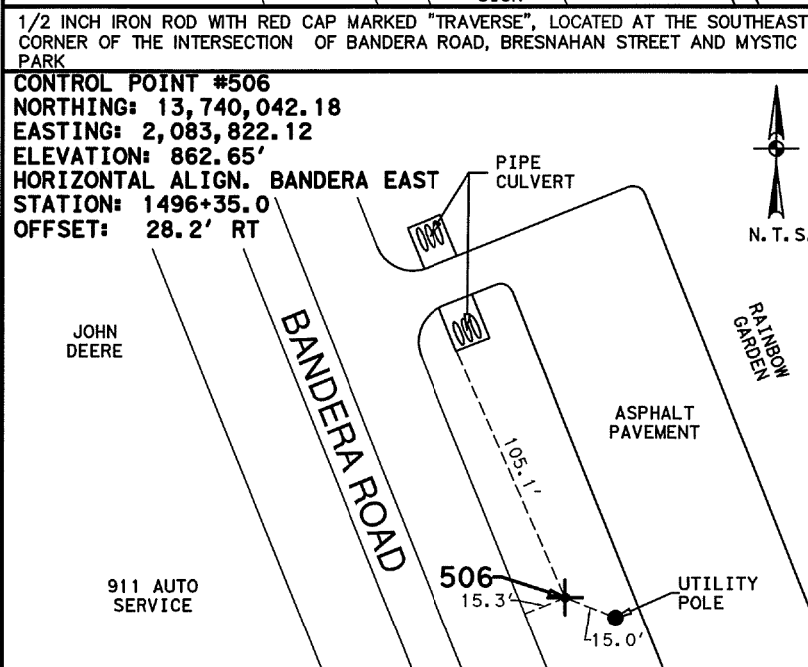
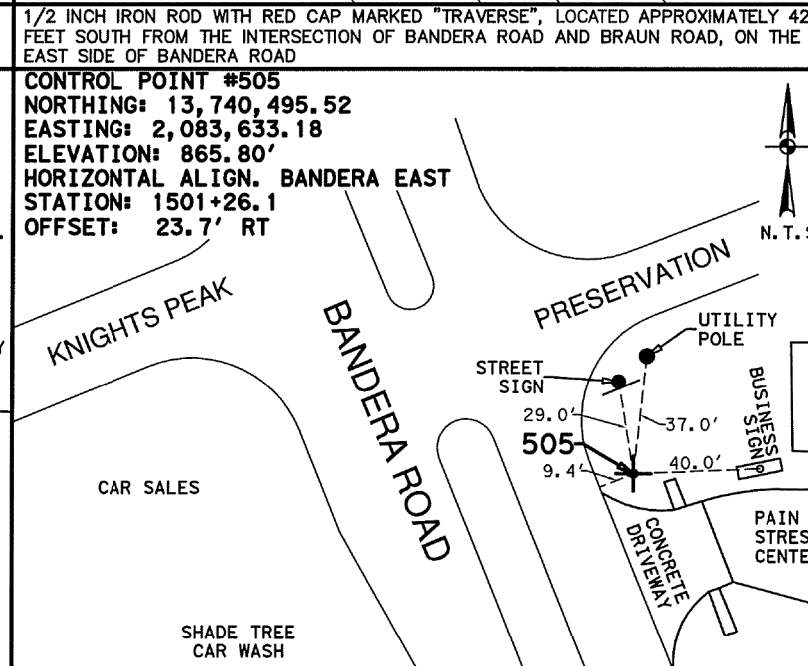
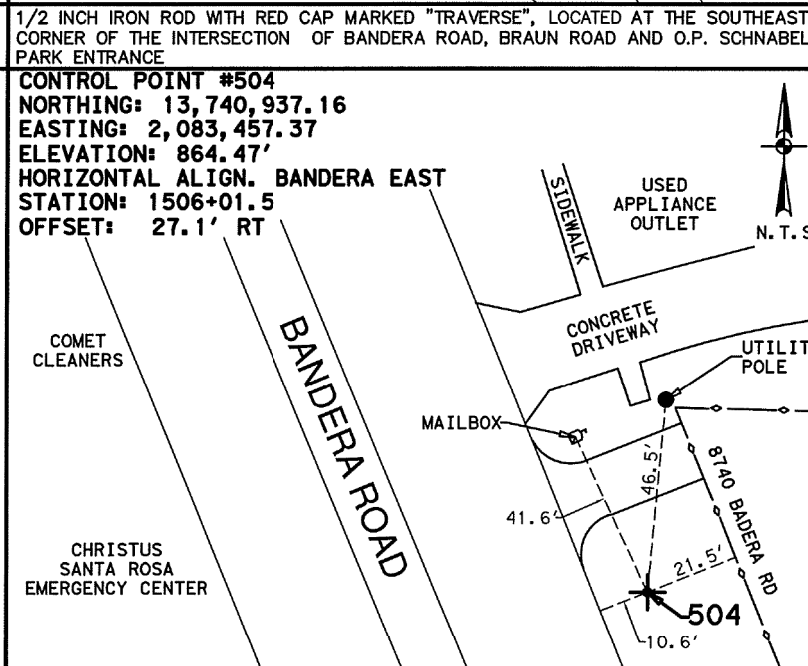
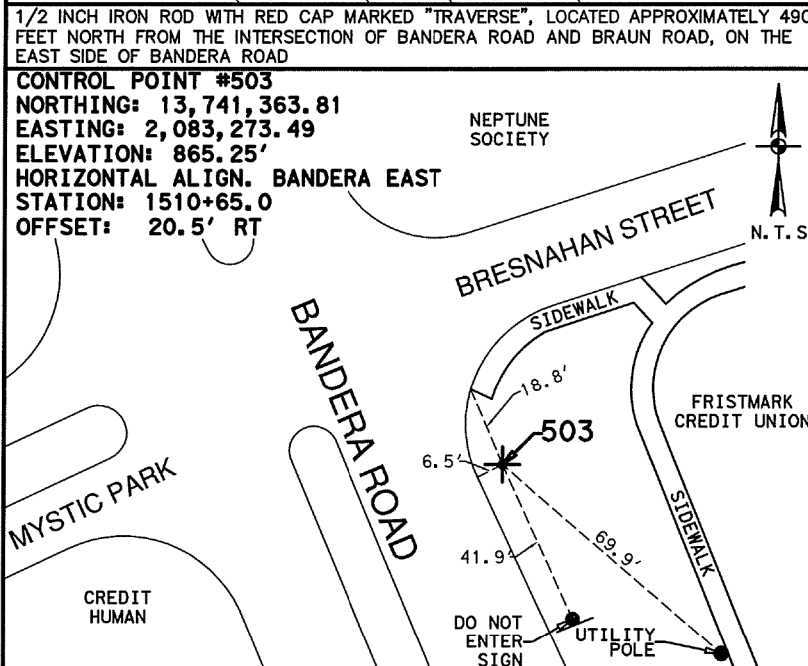
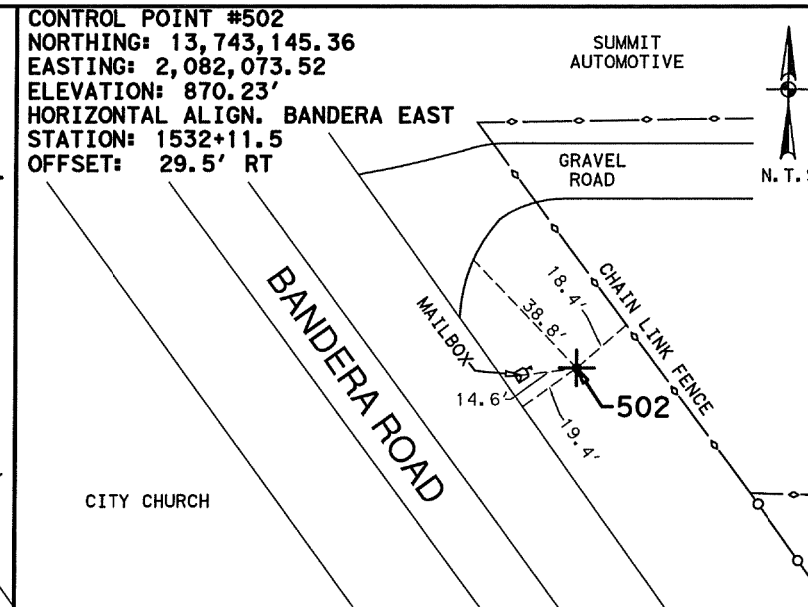
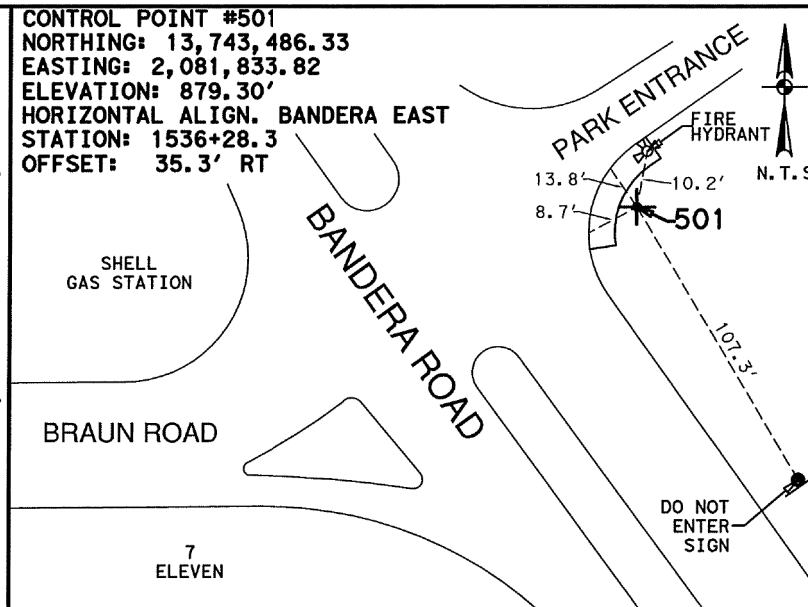
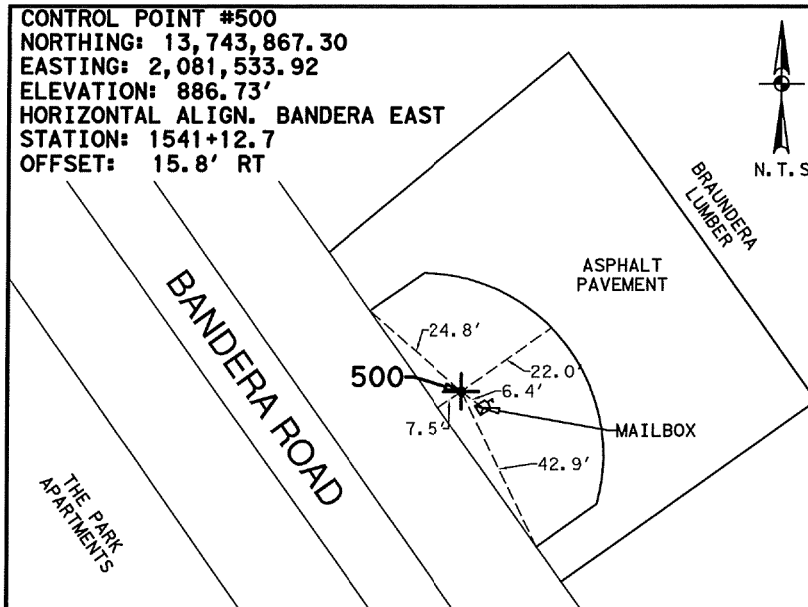
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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**BANDERA ROAD (SH 16)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 1 OF 6

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SH 16
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0017	10
DWG			280	108



NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



10/08/2018

**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPBE FIRM REGISTRATION #470 | TBPBE FIRM REGISTRATION #10028800

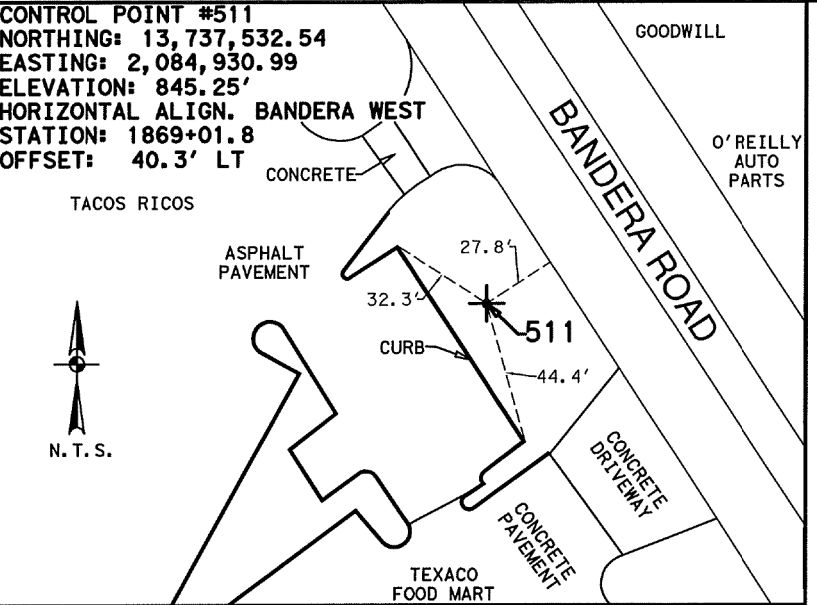
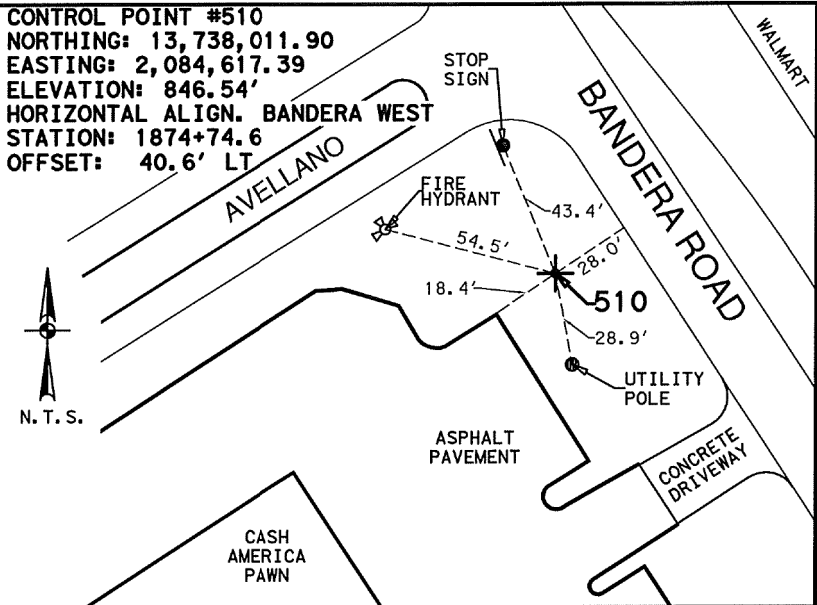
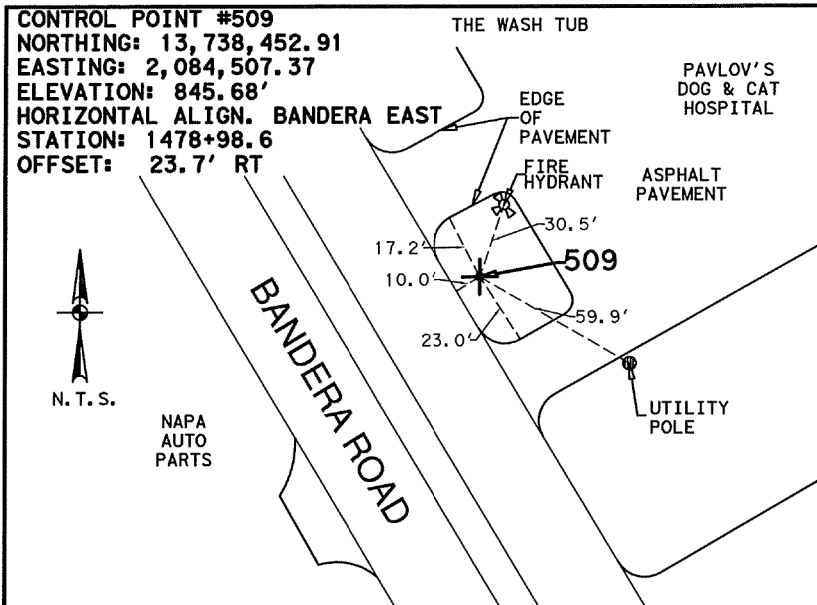
Texas Department of Transportation  
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**BANDERA ROAD (SH-16)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

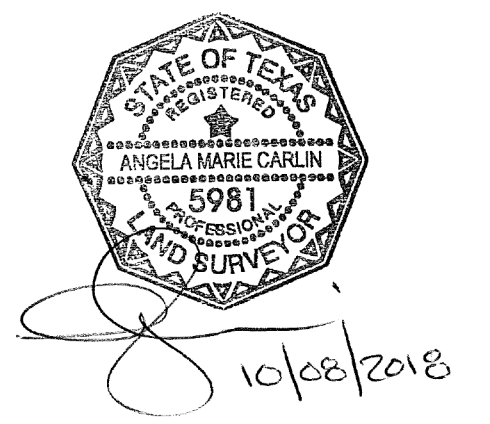
SHEET 2 OF 6

DSN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SH 16
DWG	DIST.	COUNTY	CONT. NO. SECT. NO.	JOB NO. SHEET NO.
CHK	15	BEXAR	0017 10	280 109

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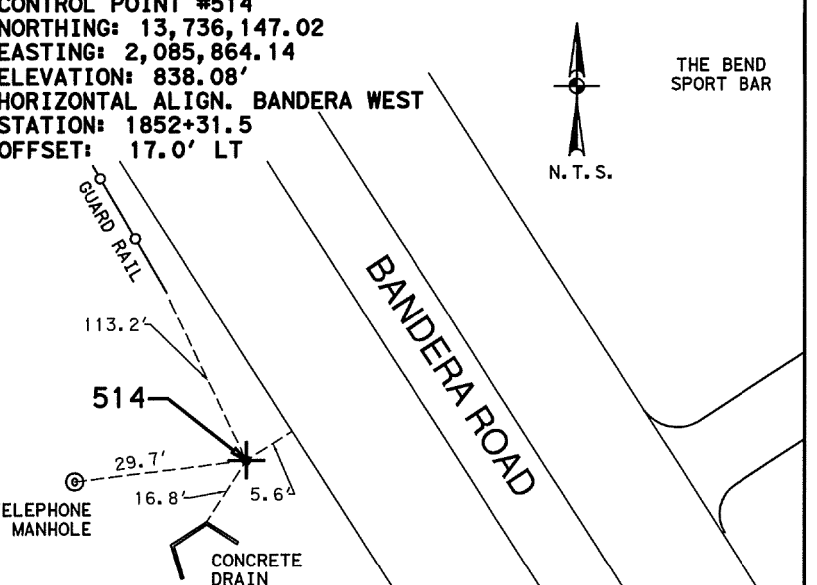
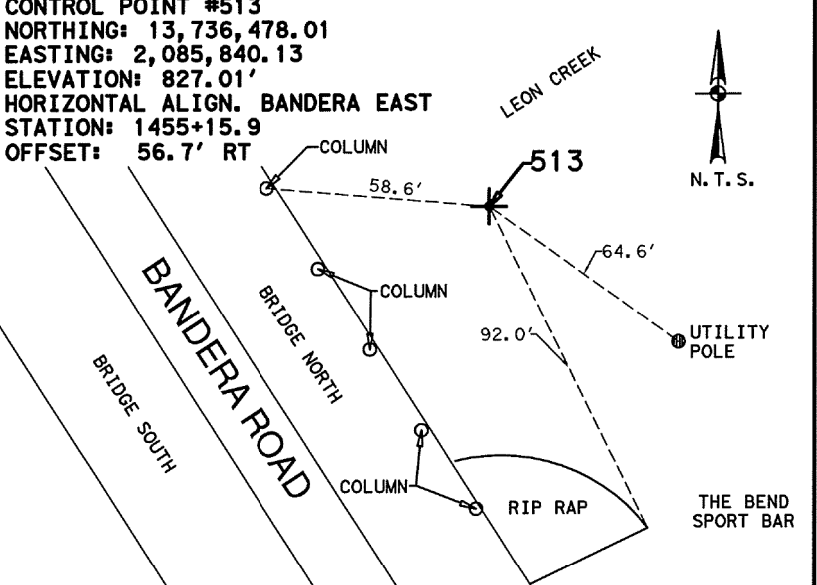
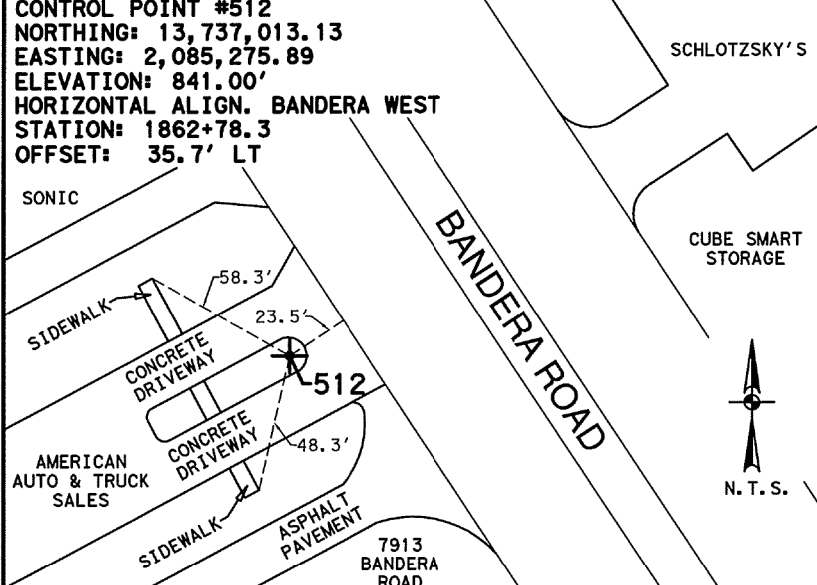
NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 500 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND BRISTLECONE STREET, ON THE EAST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 80 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND AVELLANO, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 220 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND MAINLAND DRIVE, ON THE WEST SIDE OF BANDERA ROAD



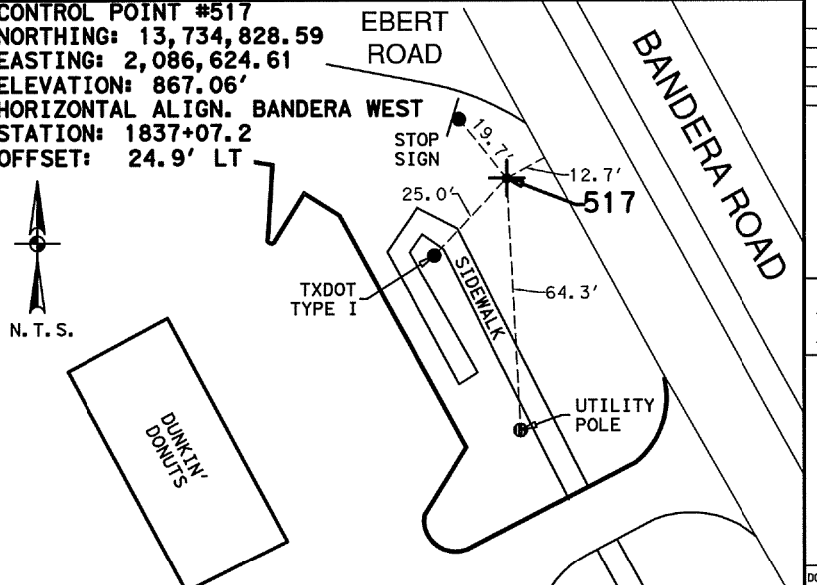
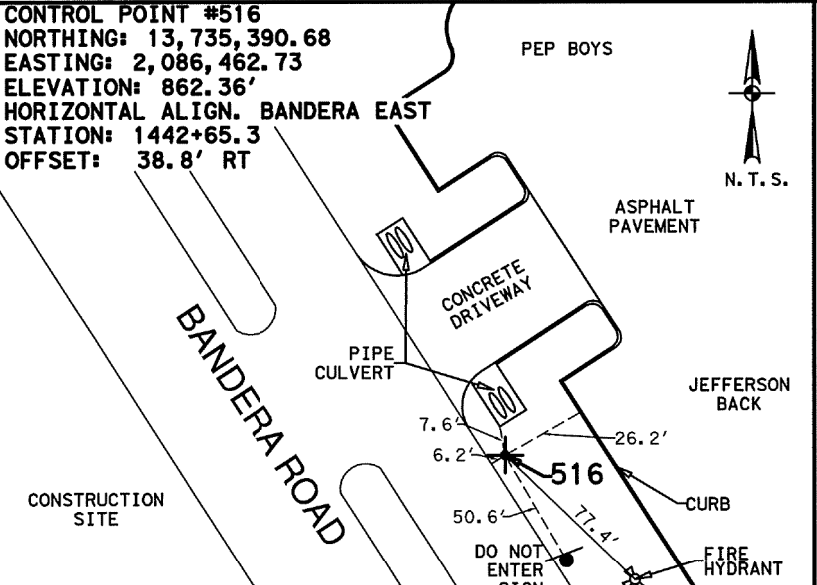
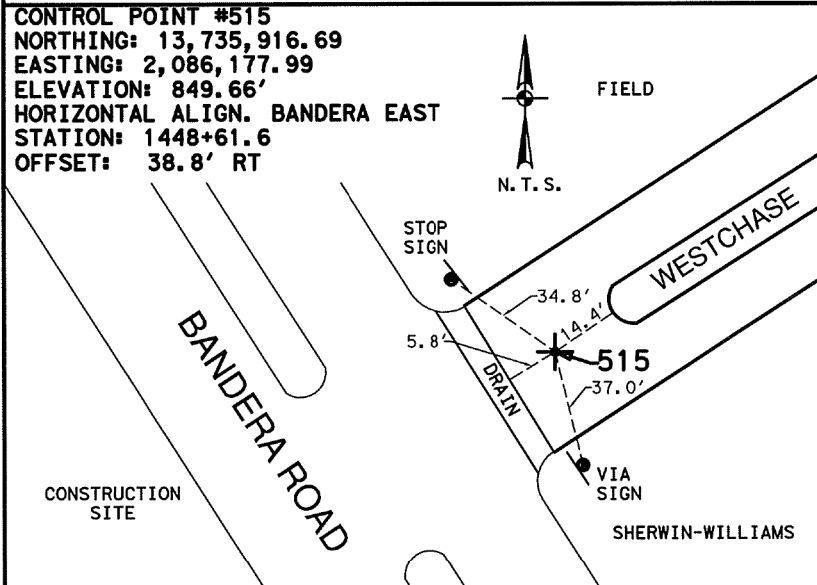
LEGEND

- + CONTROL POINT
- ALIGNMENT
- N. T. S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 410 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND MAINLAND DRIVE, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 660 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND WESTCHASE DRIVE, ON THE EAST SIDE OF THE BRIDGE ON BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 360 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND WESTCHASE DRIVE, ON THE WEST SIDE OF BANDERA ROAD



MAG NAIL WITH WASHER IN ASPHALT, LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF BANDERA ROAD AND WESTCHASE DRIVE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 580 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND WESTCHASE DRIVE, ON THE EAST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF BANDERA ROAD AND EBERT ROAD, ON THE WEST SIDE OF BANDERA ROAD

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPPE FIRM REGISTRATION #470 | TSPS FIRM REGISTRATION #1028800

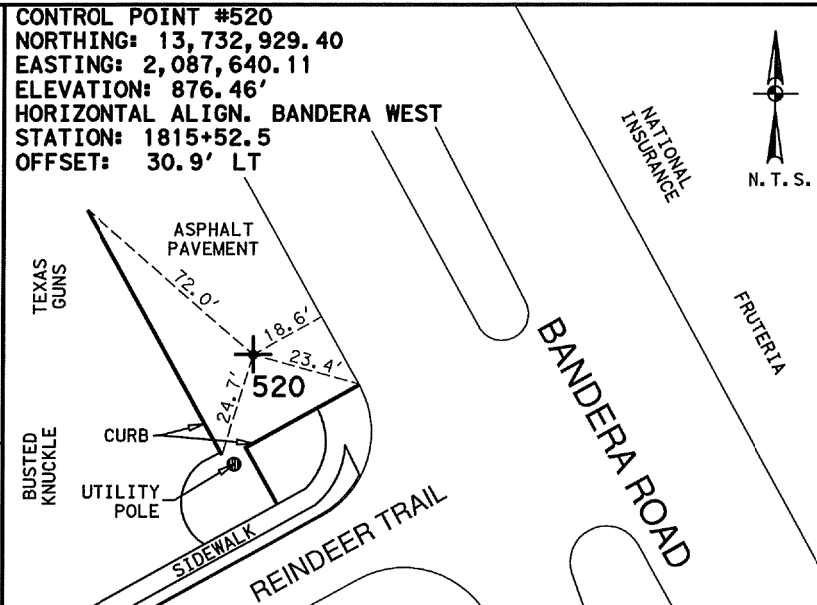
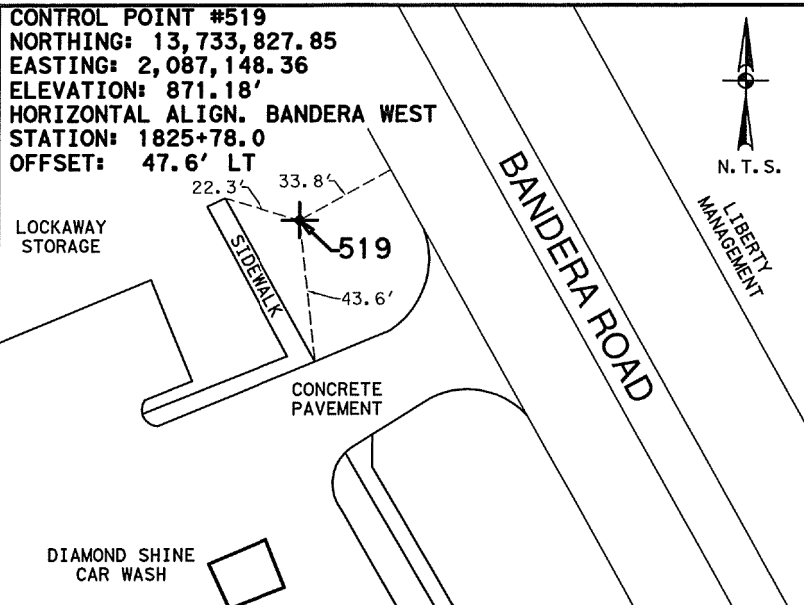
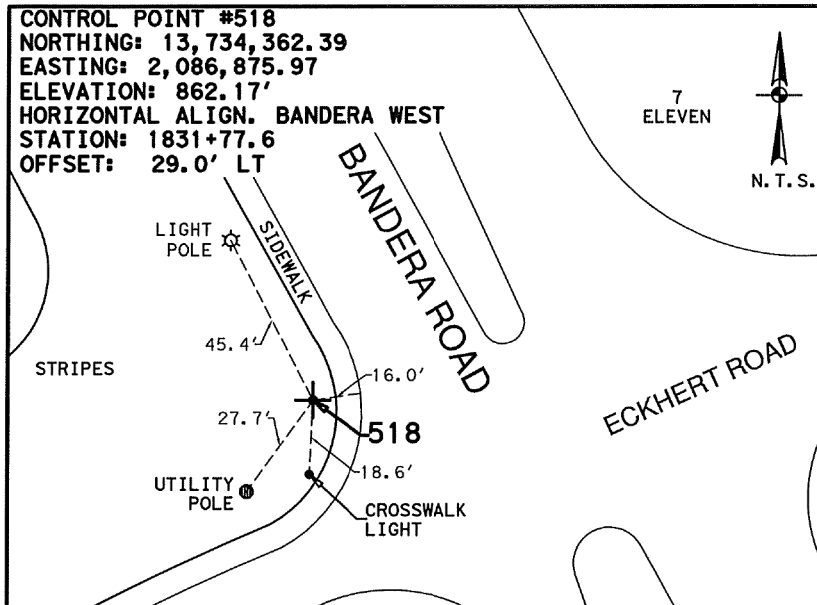
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**BANDERA ROAD (SH-16)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 3 OF 6

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SH 16
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0017	10
DWG				280
				110

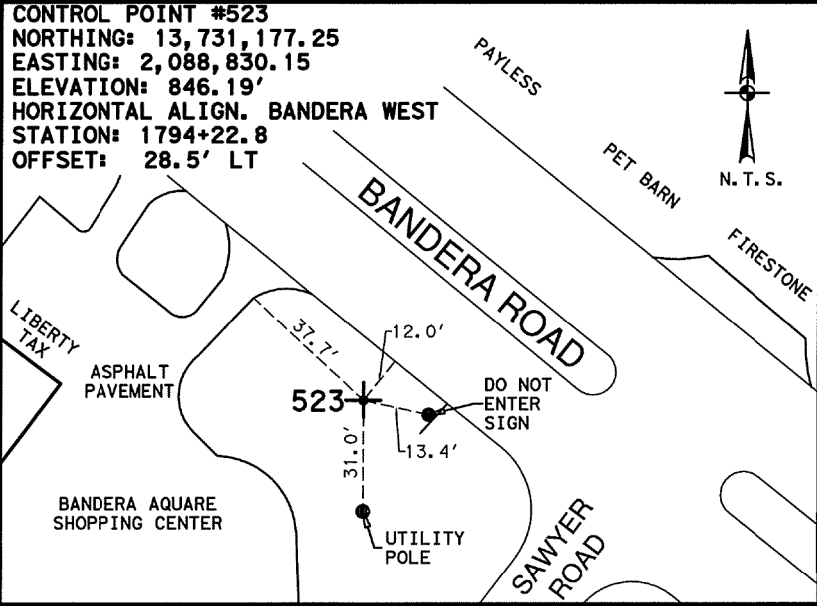
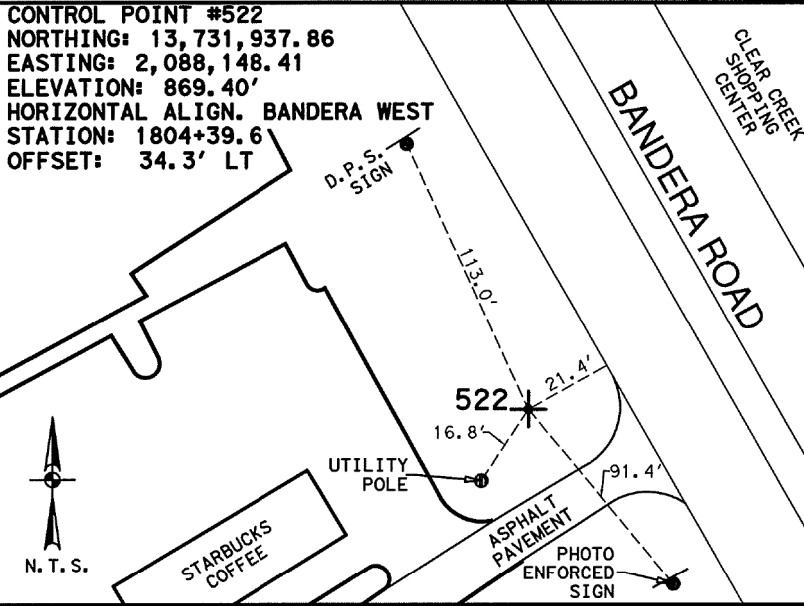
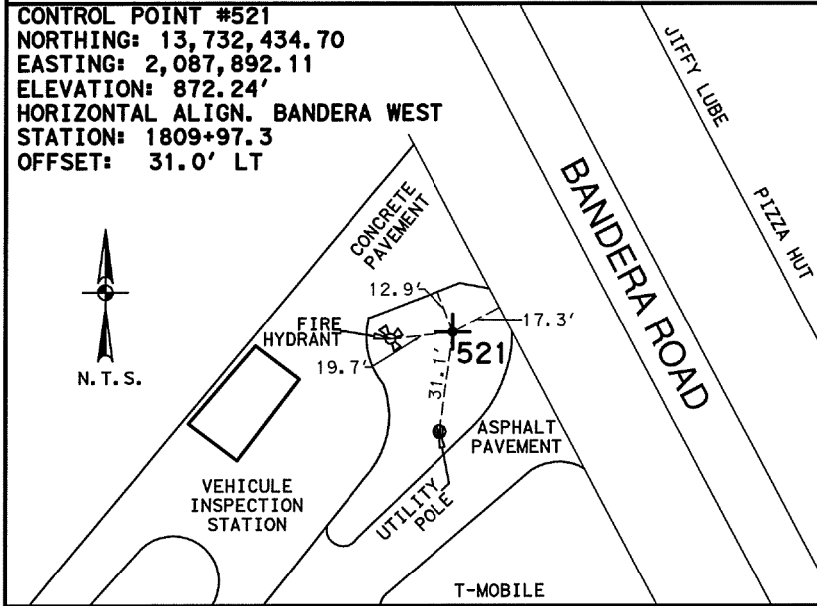
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1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF BANDERA ROAD AND ECKHERT ROAD, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 550 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND ECKHERT ROAD, ON THE WEST SIDE OF BANDERA ROAD

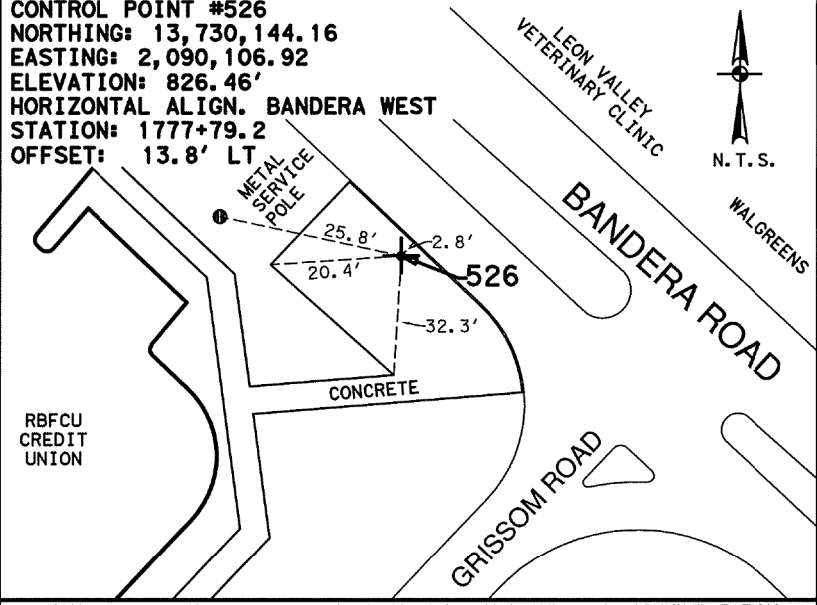
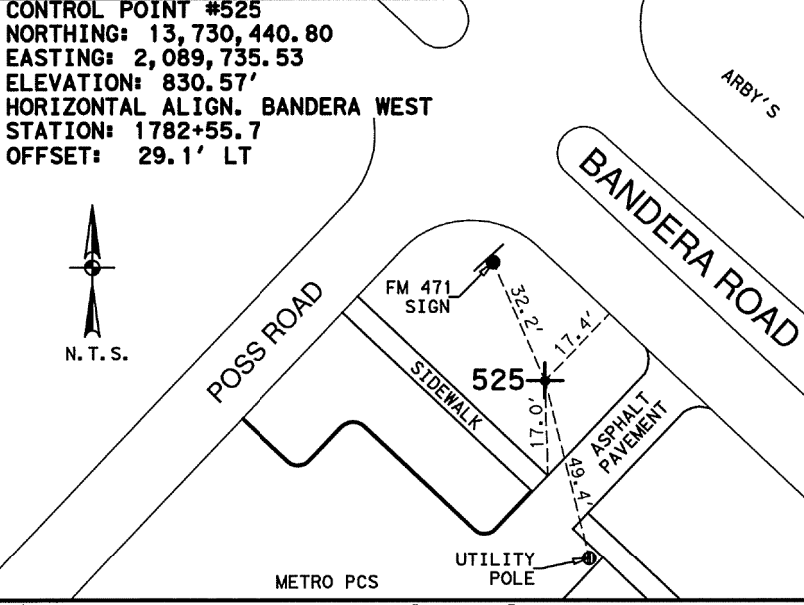
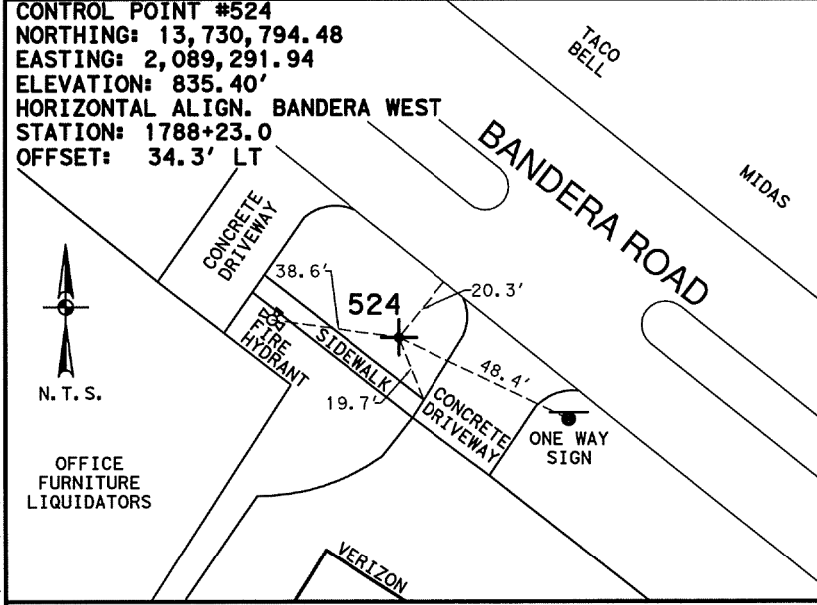
MAG NAIL WITH WASHER IN ASPHALT LOCATED APPROXIMATELY 60 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND REINDEER TRAIL, ON THE WEST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 480 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND REINDEER TRAIL, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 410 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND HUEBNER ROAD, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 100 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND SAWYER ROAD, ON THE WEST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 500 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND SAWYER ROAD, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 90 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND POSS ROAD, ON THE WEST SIDE OF BANDERA ROAD

MAG NAIL WITH WASHER LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF BANDERA ROAD AND GRISSOM ROAD, ON THE WEST SIDE OF BANDERA ROAD

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



10/08/2018

**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

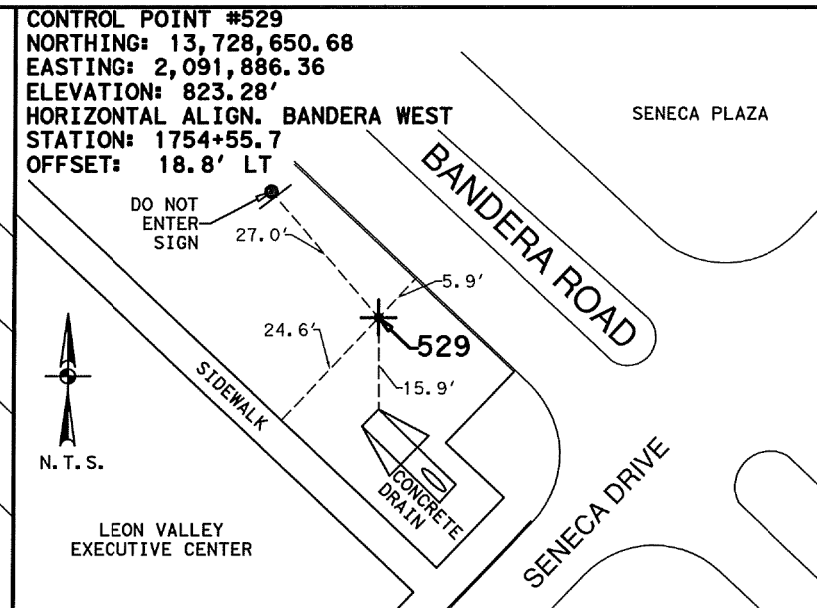
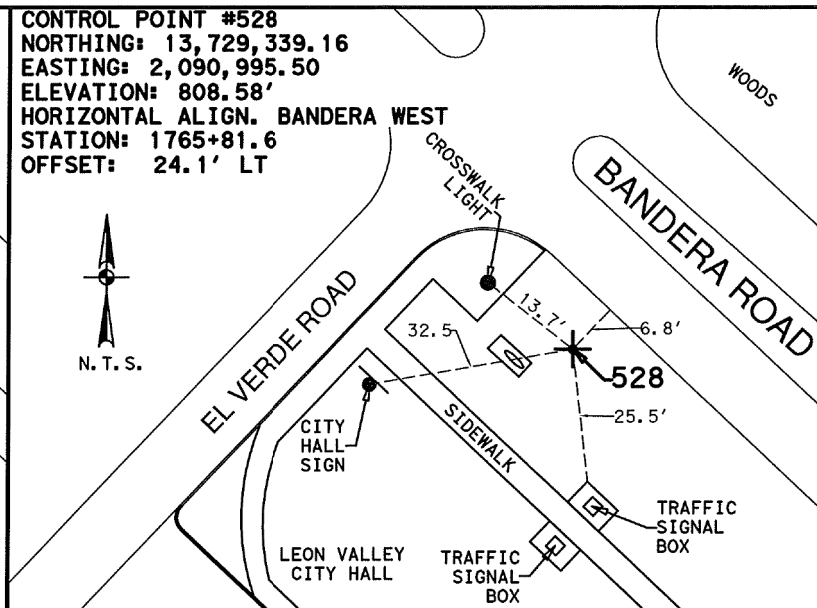
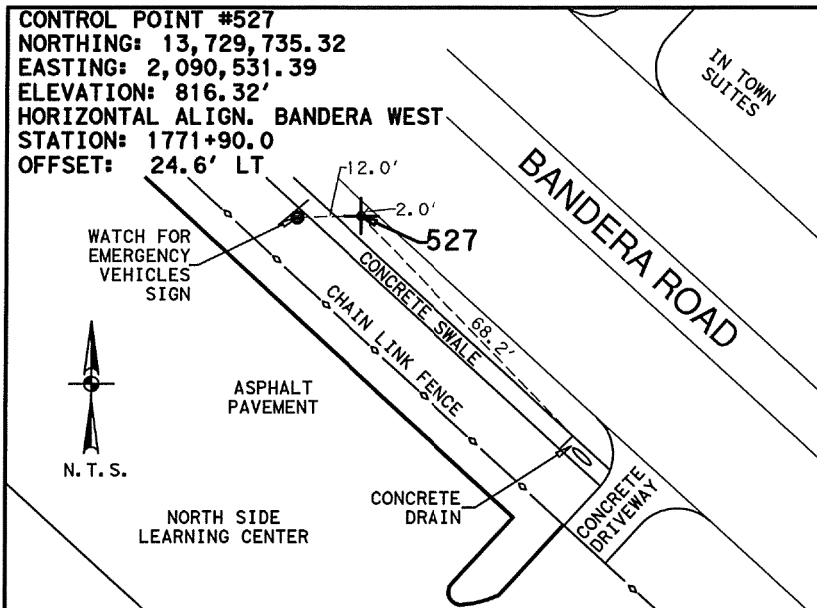
Texas Department of Transportation  
 © 2018

**BANDERA ROAD (SH-16)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 4 OF 6

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SH 16
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0017	10
DWG			280	111

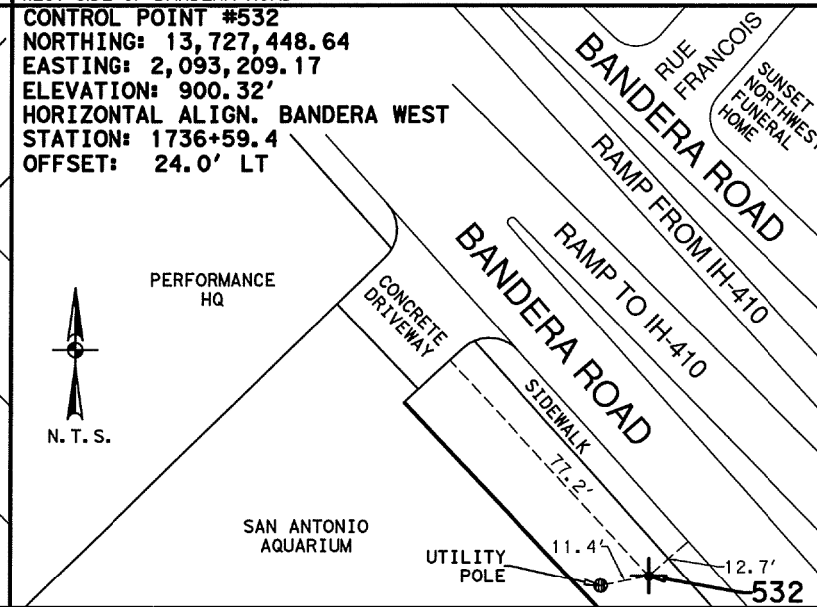
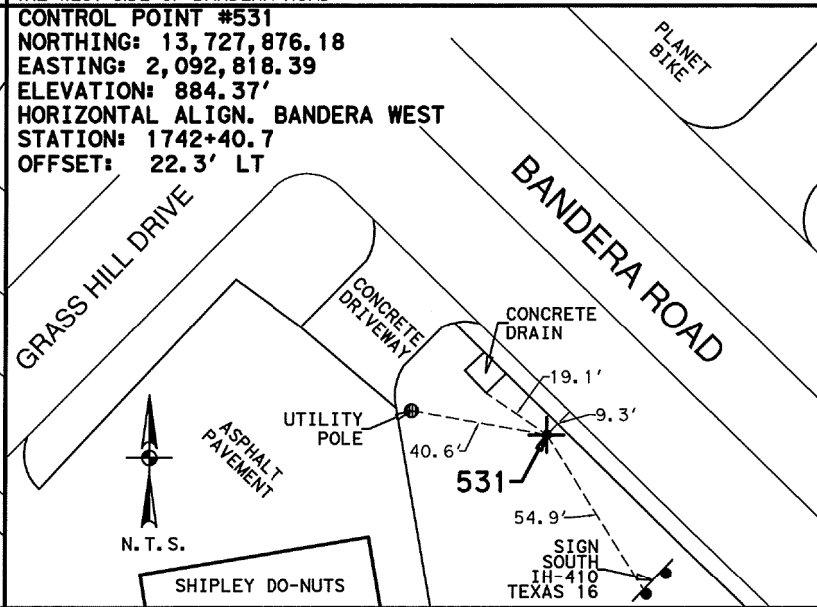
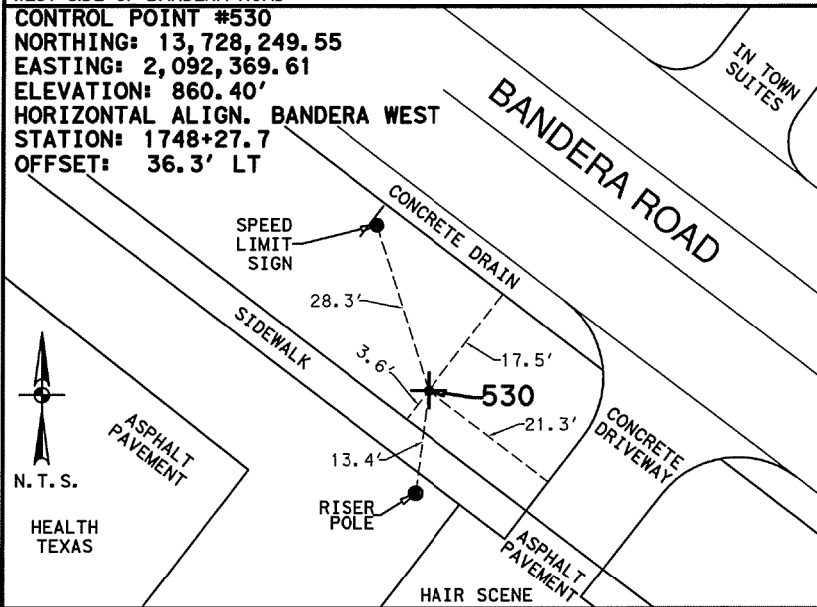
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1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 500 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND GRISSOM ROAD, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 40 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND EL VERDE ROAD, ON THE WEST SIDE OF BANDERA ROAD

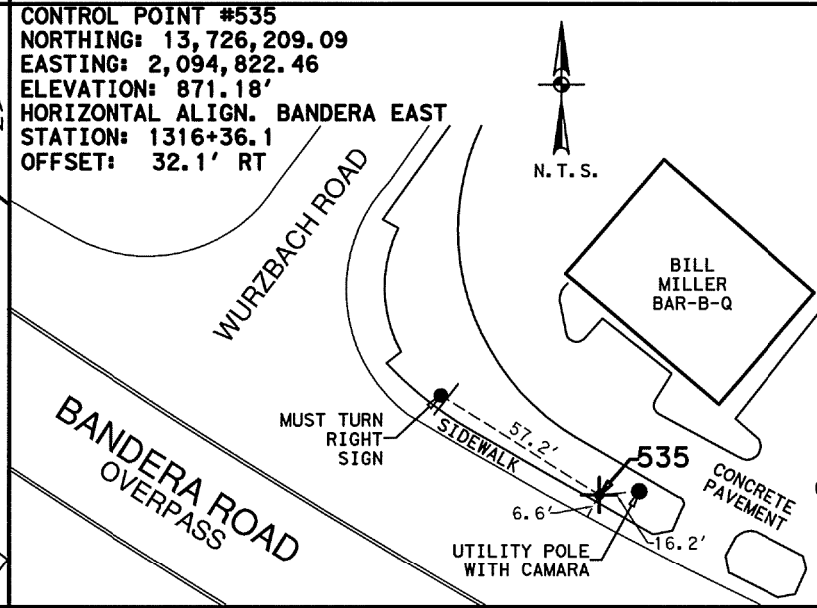
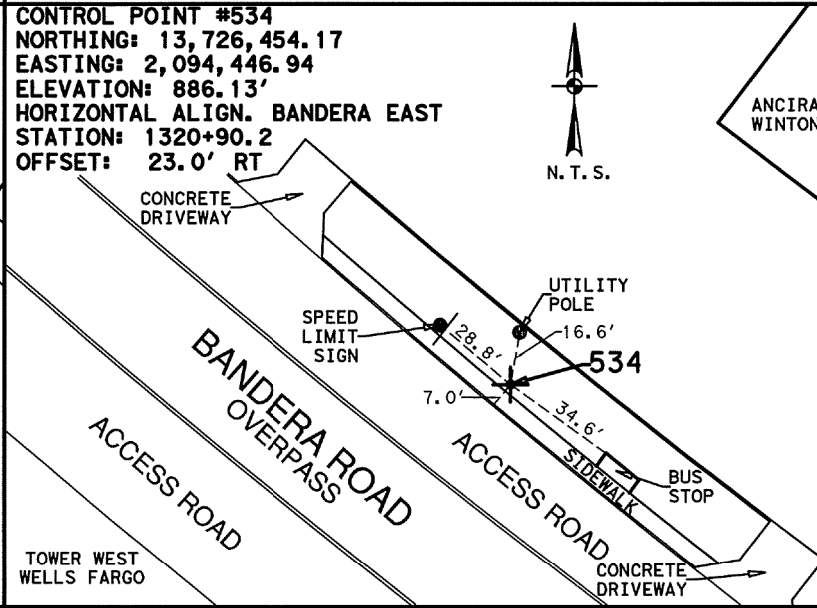
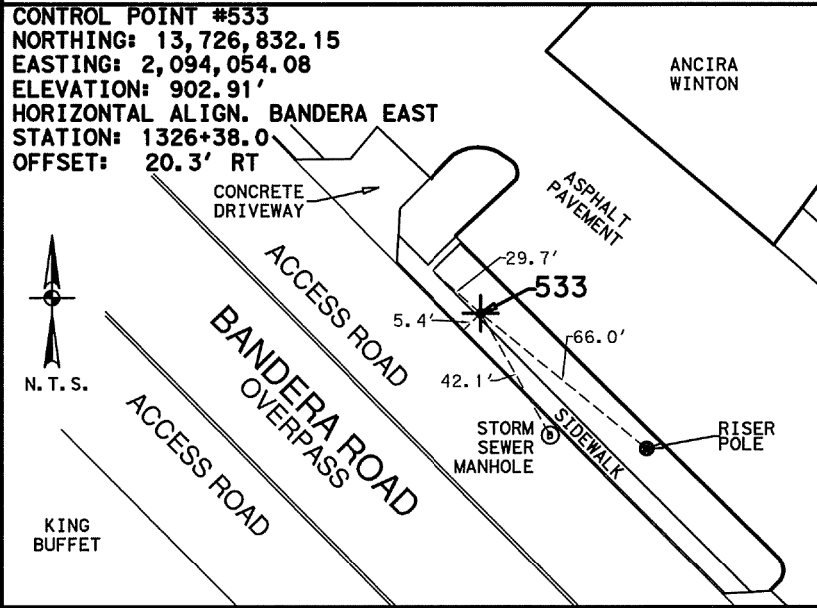
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 60 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND SENECA DRIVE, ON THE WEST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 560 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND SENECA DRIVE, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 140 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND GRASS HILL DRIVE, ON THE WEST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 150 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND RUE FRANCOIS, ON THE WEST SIDE OF BANDERA ROAD



MAG NAIL WITH WASHER IN CONCRETE LOCATED APPROXIMATELY 850 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND WURZBACH ROAD, ON THE EAST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 310 FEET NORTH FROM THE INTERSECTION OF BANDERA ROAD AND WURZBACH ROAD, ON THE EAST SIDE OF BANDERA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 130 FEET SOUTH FROM THE INTERSECTION OF BANDERA ROAD AND WURZBACH ROAD, ON THE EAST SIDE OF BANDERA ROAD

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



16/08/2018

**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2018

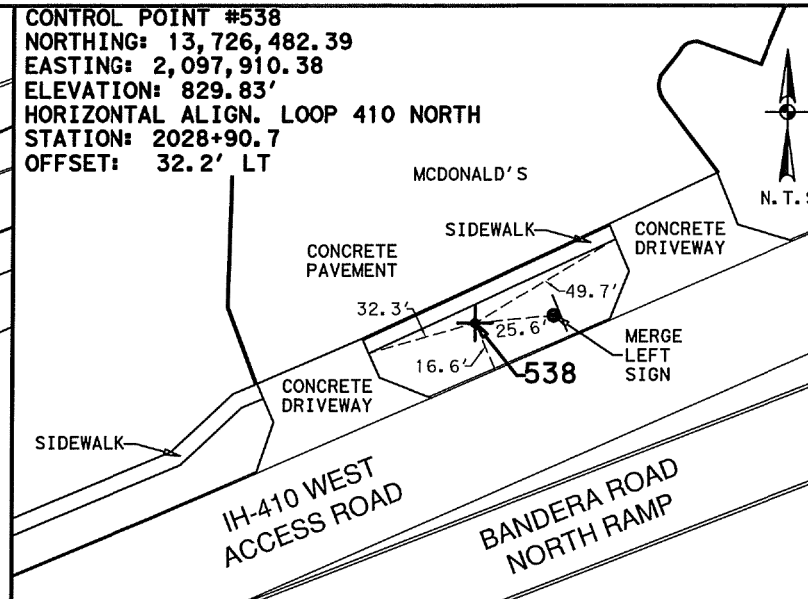
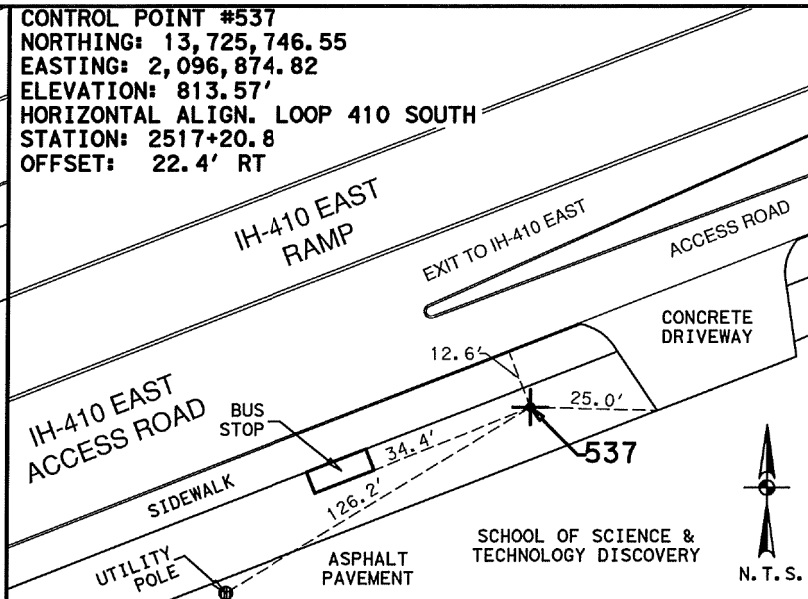
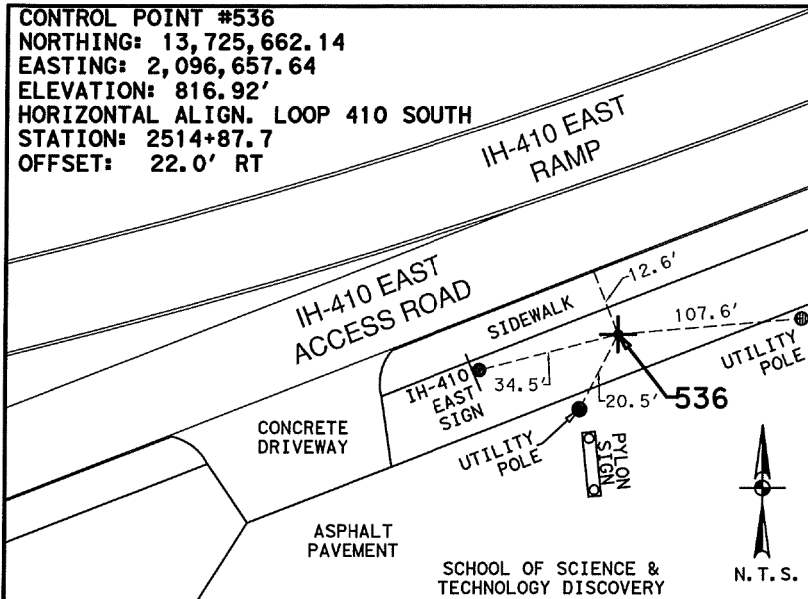
**BANDERA ROAD (SH-16)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 5 OF 6

CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
DGN	6	TEXAS				SH 16
DWG	15	BEXAR	0017	10	280	112

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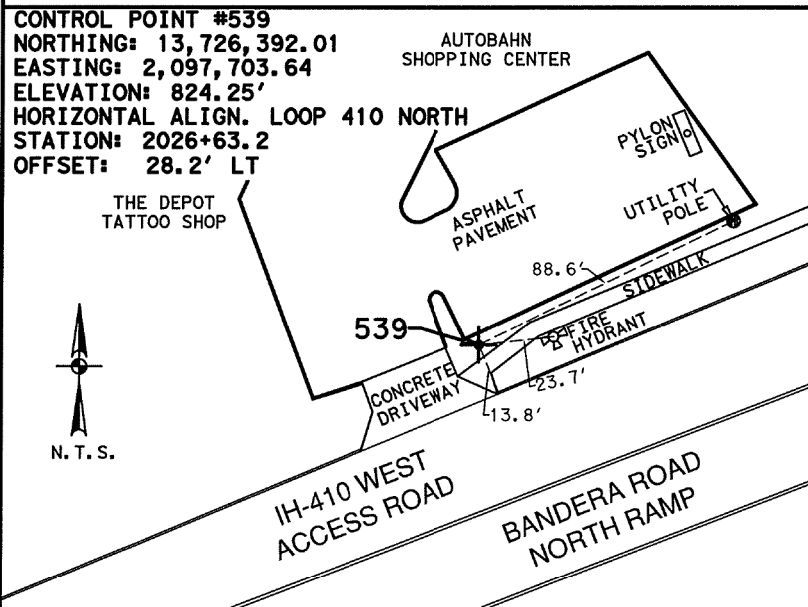




MAG NAIL WITH WASHER LOCATED APPROXIMATELY 430 FEET EAST FROM THE INTERSECTION OF BANDERA ROAD AND IH-410, ON THE SOUTH SIDE OF IH-410

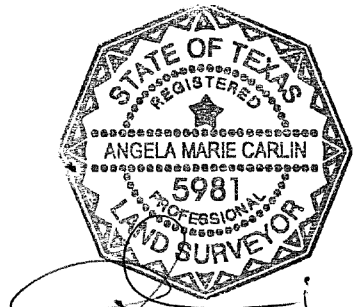
MAG NAIL WITH WASHER LOCATED APPROXIMATELY 660 FEET EAST FROM THE INTERSECTION OF BANDERA ROAD AND IH-410, ON THE SOUTH SIDE OF IH-410

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 300 FEET WEST FROM THE INTERSECTION OF IH-410 AND EVERS ROAD, ON THE NORTH SIDE OF IH-410



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 530 FEET WEST FROM THE INTERSECTION OF IH-410 AND EVERS ROAD, ON THE NORTH SIDE OF IH-410

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



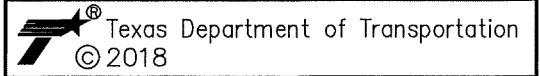
**LEGEND**

- + CONTROL POINT
- ALIGNMENT
- N. T. S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028000



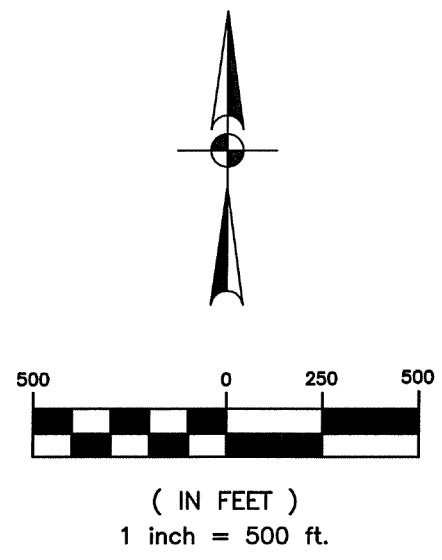
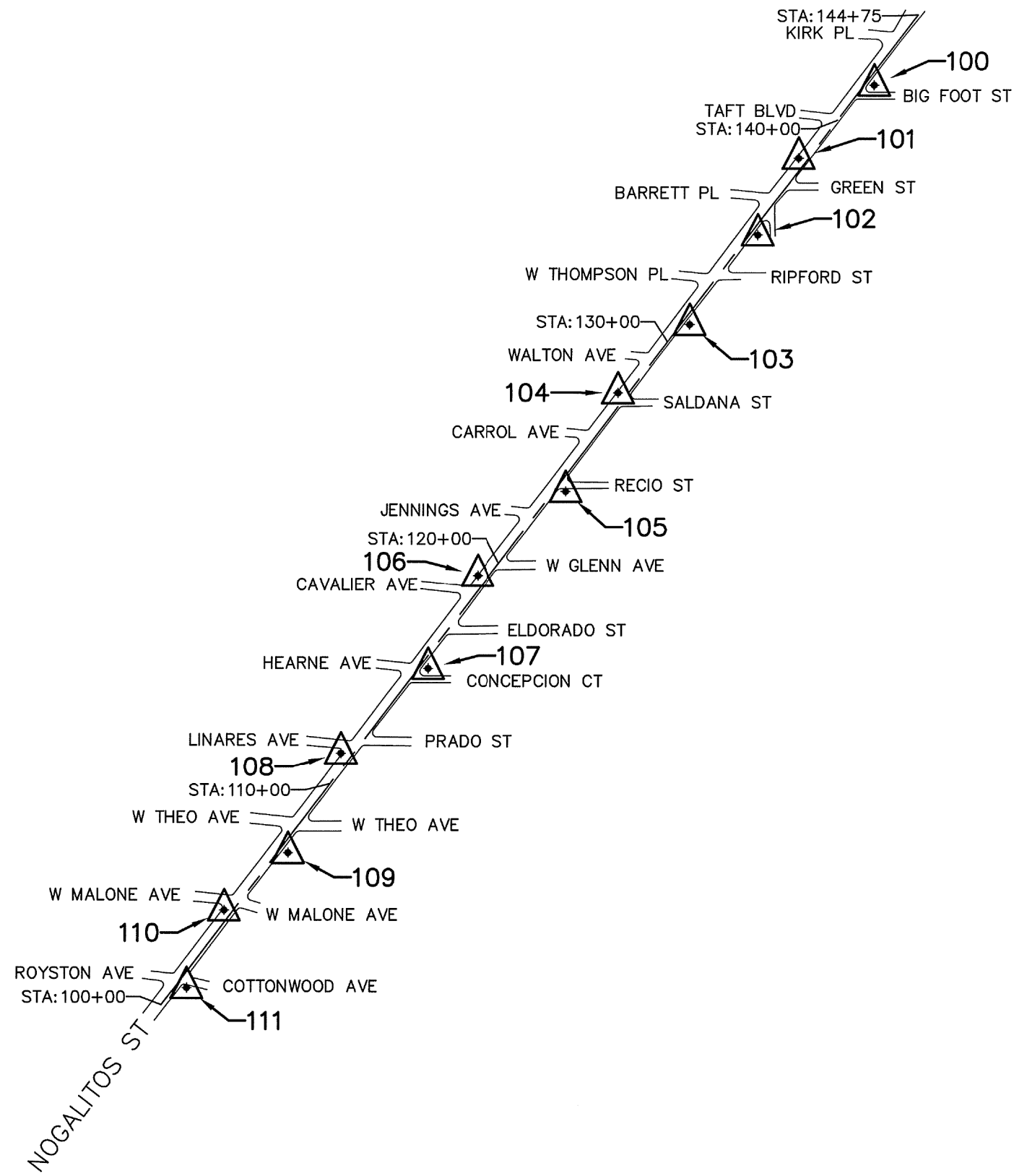
**BANDERA ROAD (SH-16)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 6 OF 6

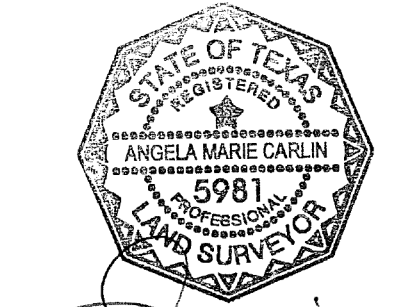
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	6	TEXAS		SH 16		
CHK DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	15	BEXAR	0017	10	280	113

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



*Angela Marie Carlin*  
 6/11/2018

**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



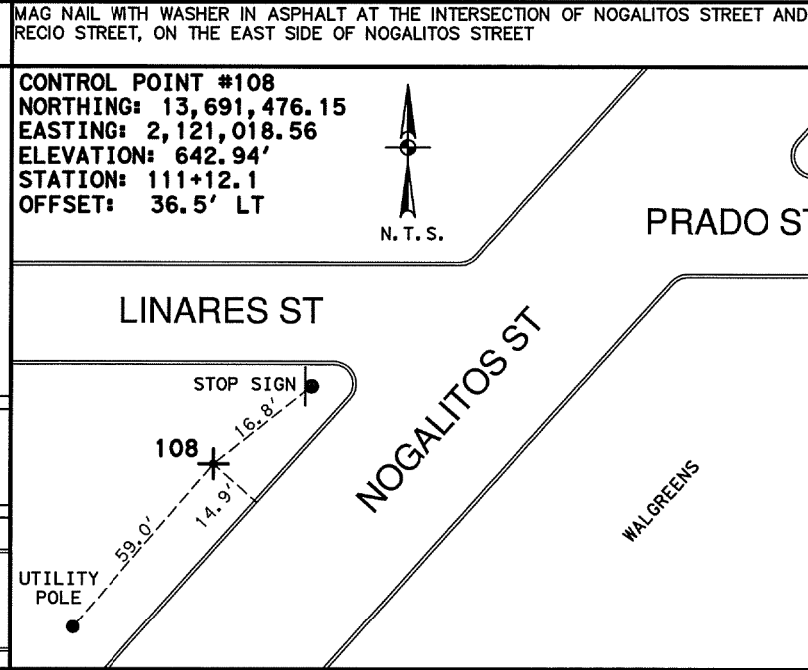
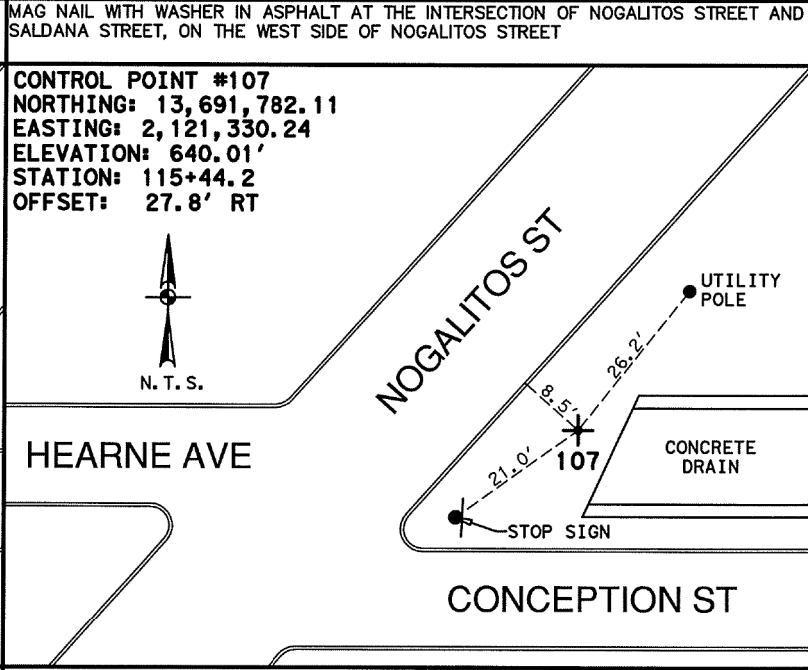
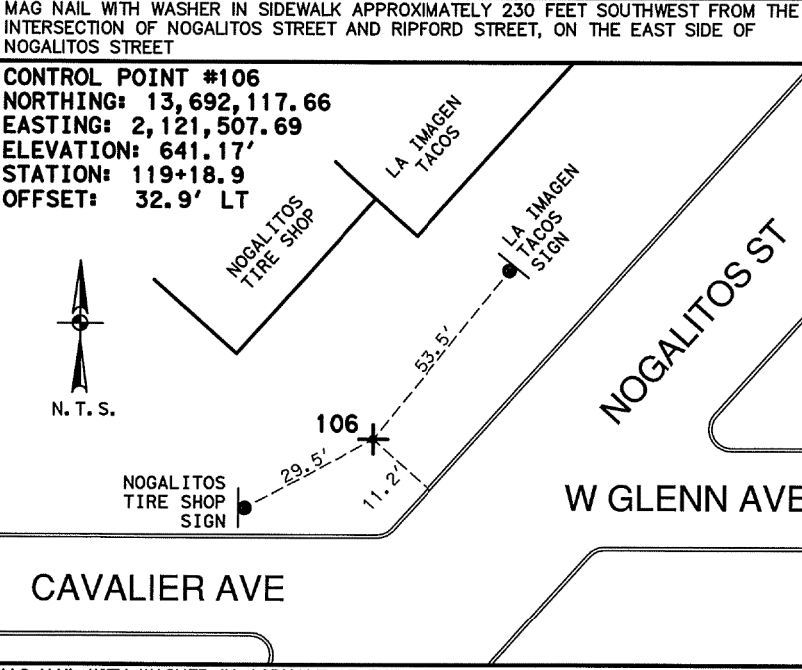
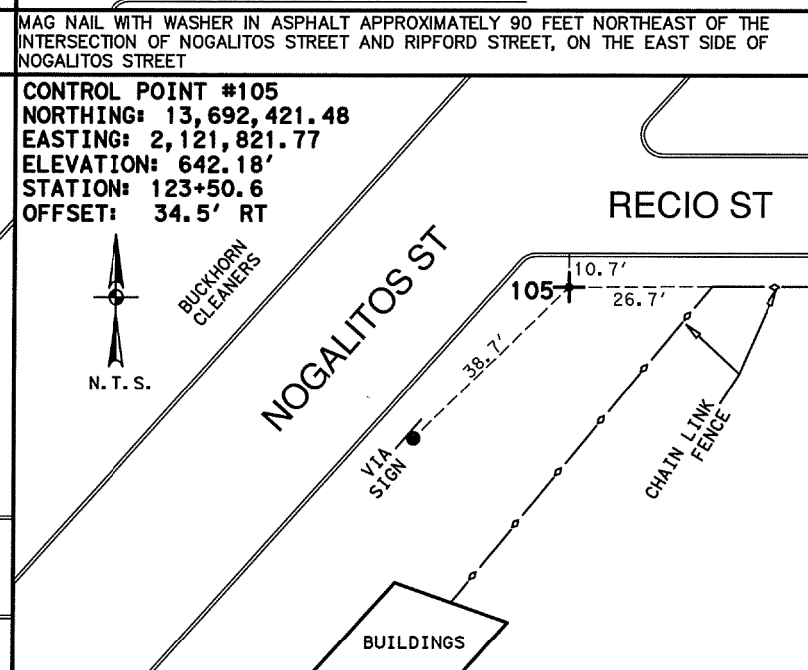
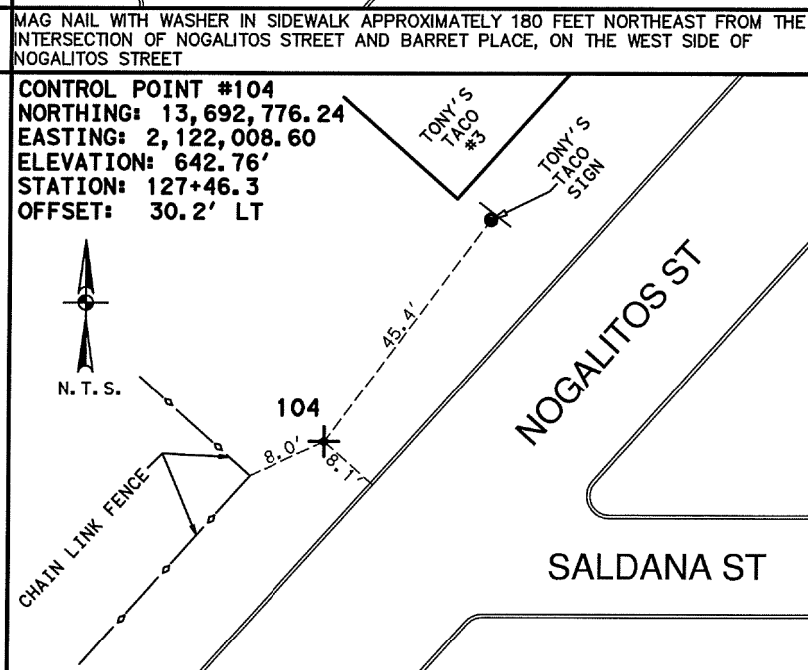
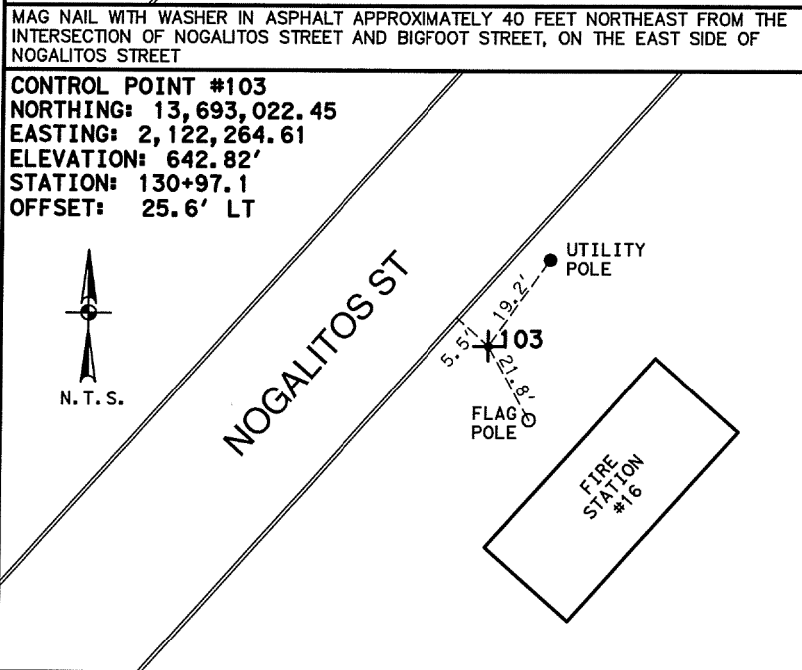
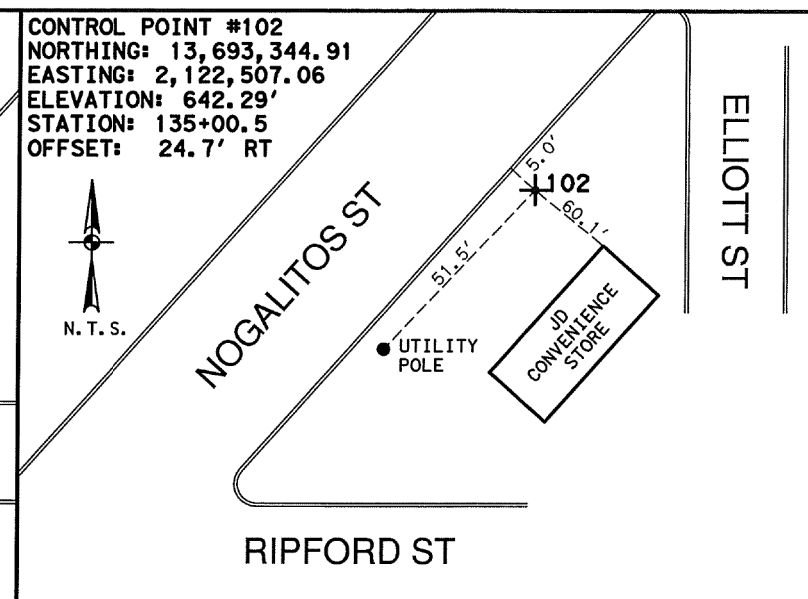
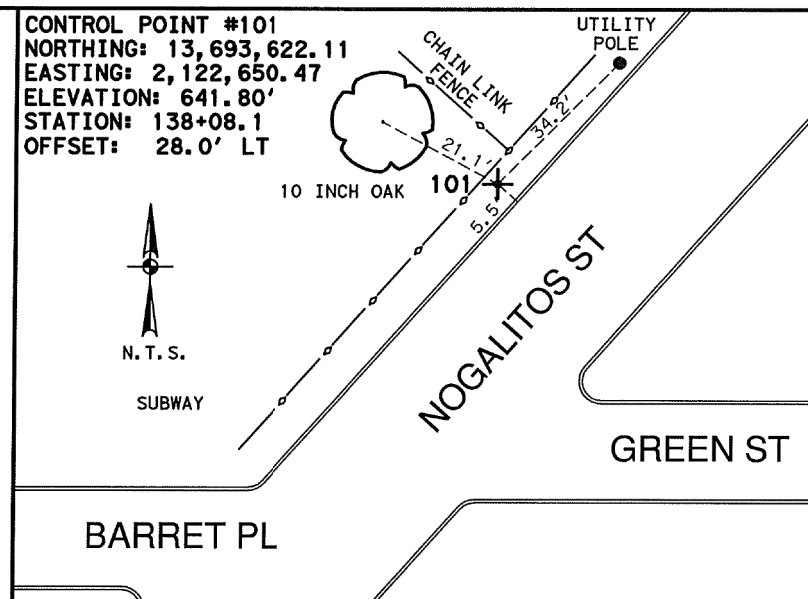
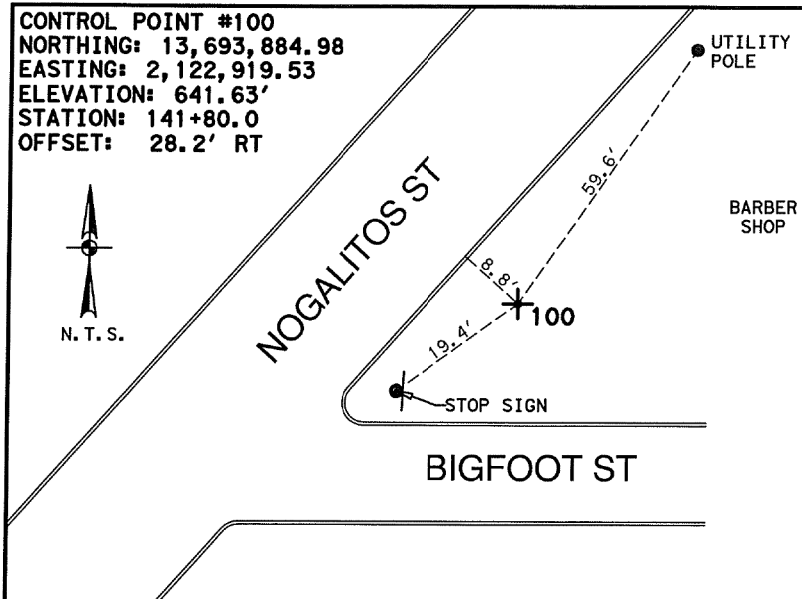
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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**NOGALITOS ST  
 (LOOP 353)  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 3

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN	6	TEXAS		SL 353		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0017	10	280	114



MAG NAIL WITH WASHER IN ASPHALT AT THE INTERSECTION OF NOGALITOS STREET AND CAVALIER AVENUE, ON THE WEST SIDE OF NOGALITOS STREET

MAG NAIL WITH WASHER IN CONCRETE APPROXIMATELY 50 FEET NORTHEAST FROM THE INTERSECTION OF NOGALITOS ST AND CONCEPTION ST, ON THE EAST SIDE OF NOGALITOS ST

MAG NAIL WITH WASHER IN CONCRETE APPROXIMATELY 50 FEET SOUTHWEST FROM THE INTERSECTION OF NOGALITOS ST AND LINARES ST

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



6/11/2018

**LEGEND**

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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**NOGALITOS ST (LOOP 353)**  
**HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 2 OF 3

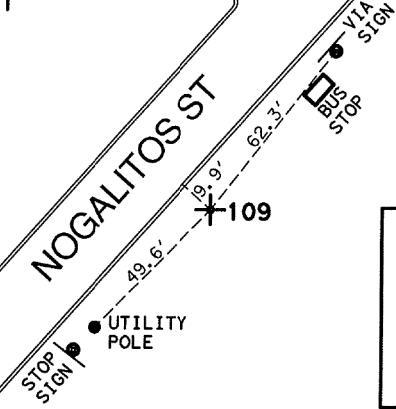
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	6	TEXAS		SL 353		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	15	BEXAR	0017	10	280	115

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CONTROL POINT #109  
 NORTHING: 13,691,115.33  
 EASTING: 2,120,830.41  
 ELEVATION: 647.64'  
 STATION: 107+10.8  
 OFFSET: 30.9' RT



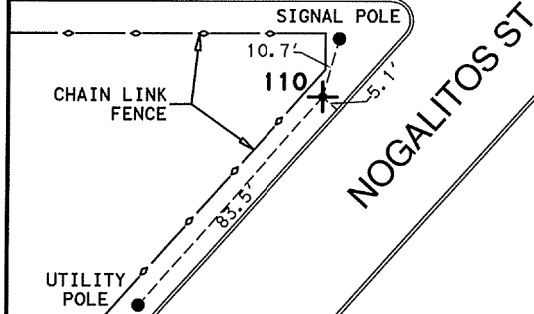
W THEO AVE  
 NOGALITOS ST



CONTROL POINT #110  
 NORTHING: 13,690,908.62  
 EASTING: 2,120,601.59  
 ELEVATION: 649.21'  
 STATION: 104+08.0  
 OFFSET: 27.1' LT



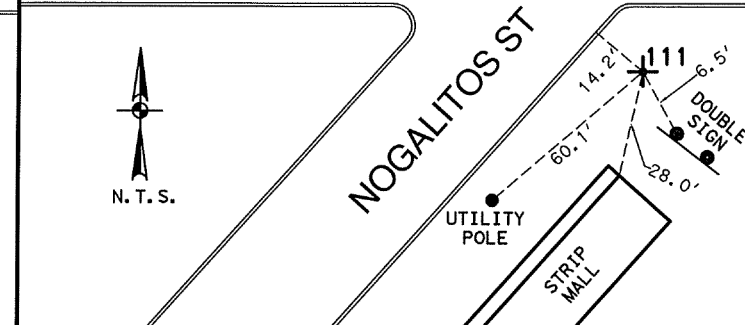
W MALONE AVE



CONTROL POINT #111  
 NORTHING: 13,690,629.00  
 EASTING: 2,120,467.90  
 ELEVATION: 650.43'  
 STATION: 101+04.3  
 OFFSET: 34.8' RT



ROYSTON AVE

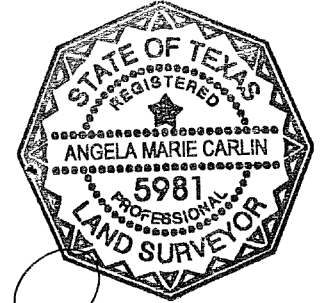


MAG NAIL WITH WASHER IN ASPHALT APPROXIMATELY 120 FEET SOUTHWEST FROM THE INTERSECTION OF NOGALITOS STREET AND THE W THEO AVENUE

MAG NAIL WITH WASHER AT THE INTERSECTION OF NOGALITOS STREET AND W MALONE AVENUE

MAG NAIL WITH WASHER IN ASPHALT AT THE INTERSECTION OF NOGALITOS STREET AND ROYSTON AVENUE

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



*Angela Marie Carlin*  
 6/11/2018

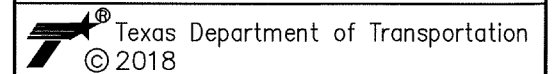
LEGEND

- + CONTROL POINT
- ALIGNMENT
- N. T. S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78218 | 210.375.9000  
 TPPE FIRM REGISTRATION #470 | TDPPLS FIRM REGISTRATION #10028800

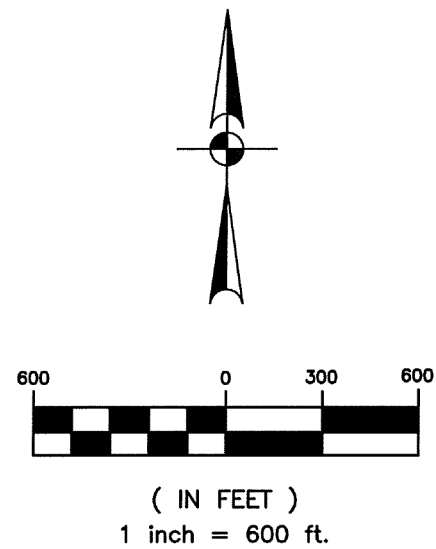
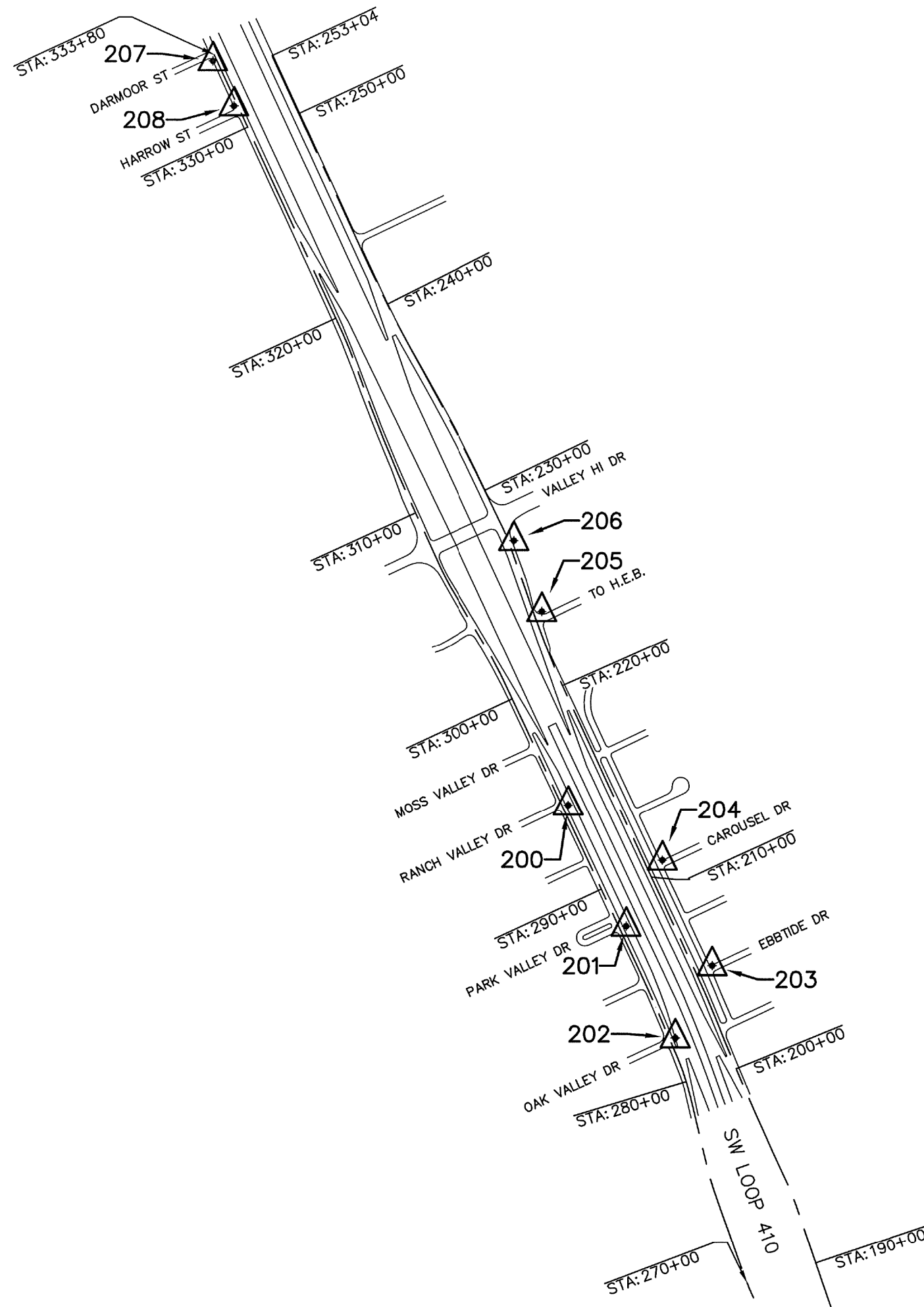


NOGALITOS ST  
 (LOOP 353)  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS

SHEET 3 OF 3

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK	6	TEXAS				SL 353
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	15	BEXAR	0017	10	280	116

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



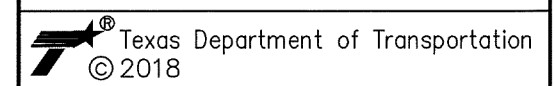
**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



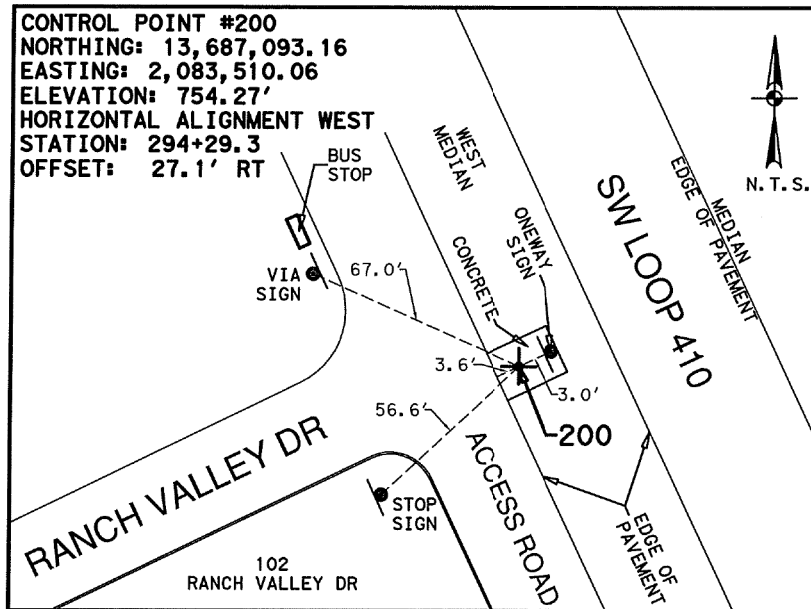
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



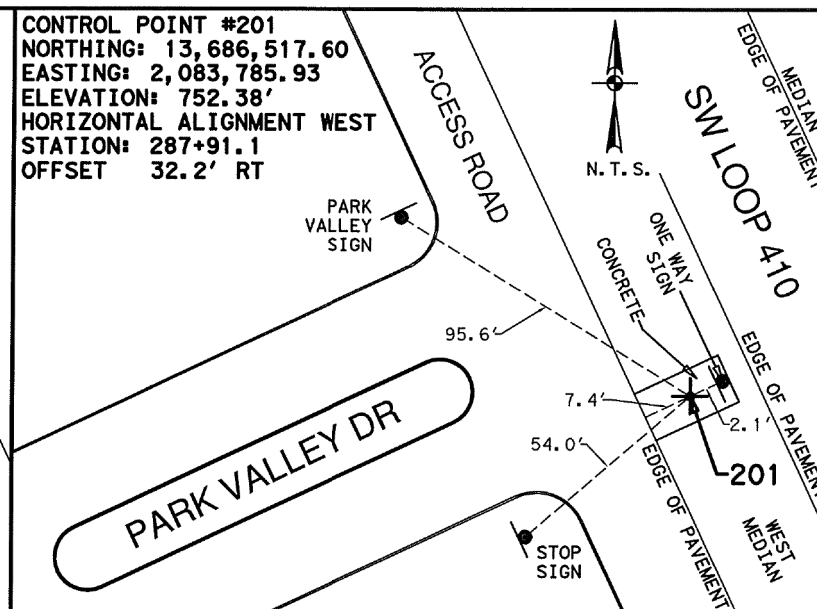
**SW LOOP 410  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 2

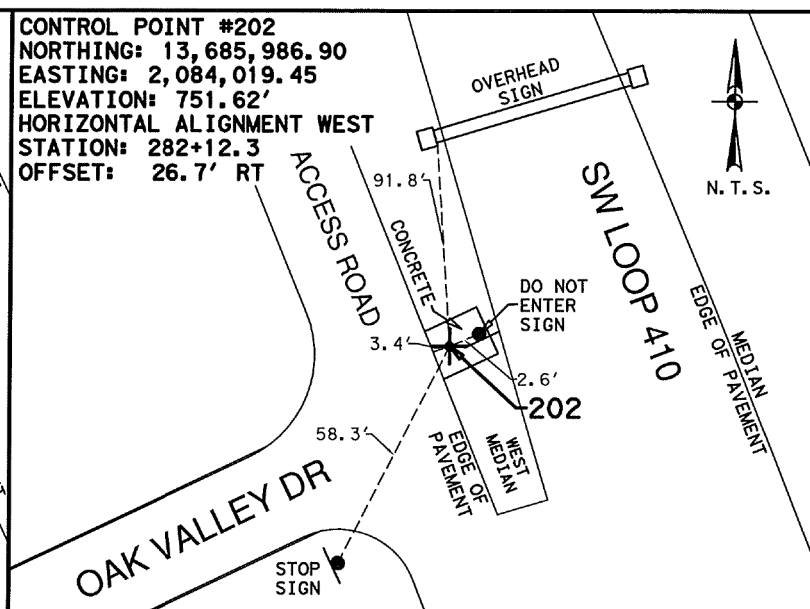
DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN	6	TEXAS		IH 410		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0017	10	280	117



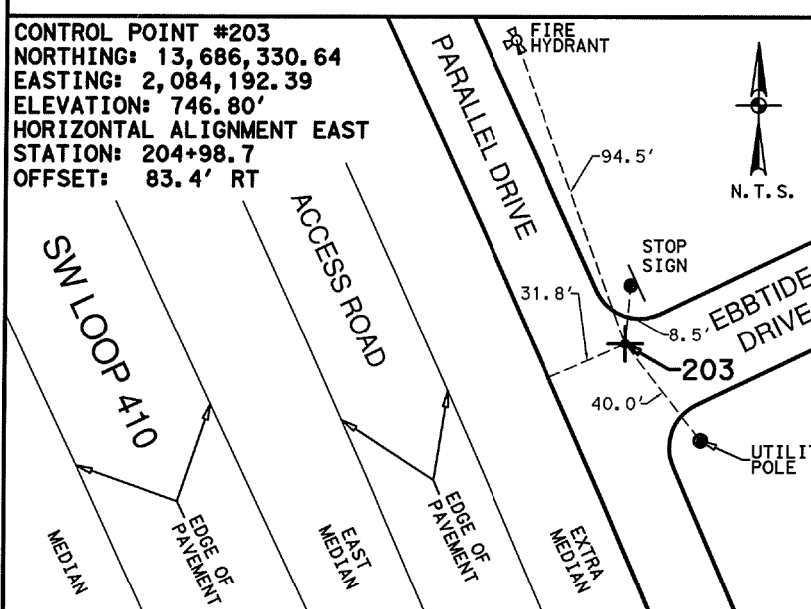
MAG NAIL WITH WASHER IN CONCRETE AT THE INTERSECTION OF SW LOOP 410 AND RANCH VALLEY DRIVE



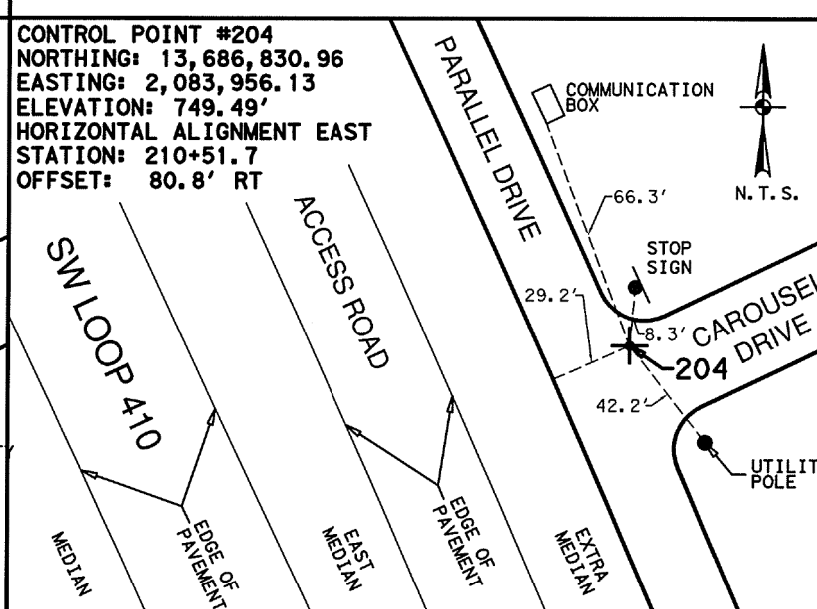
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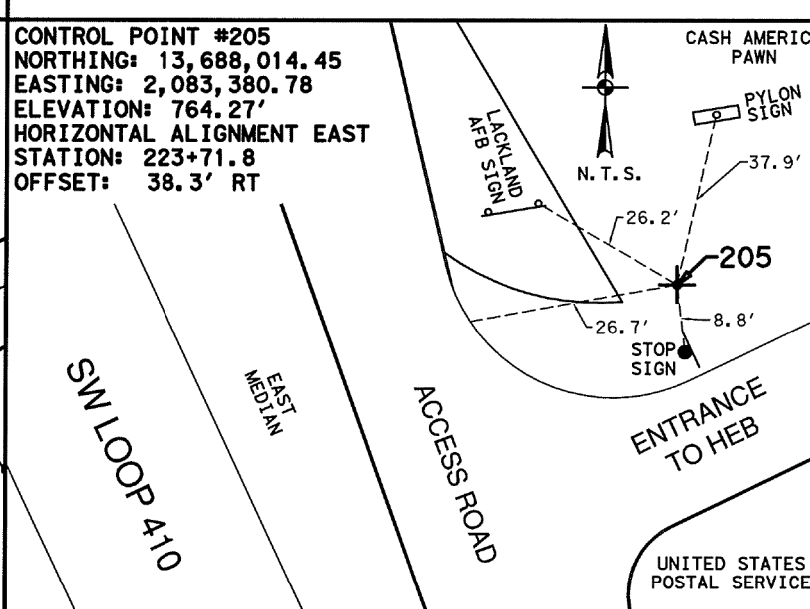
MAG NAIL WITH WASHER IN CONCRETE AT THE INTERSECTION OF SW LOOP 410 AND OAK VALLEY DRIVE



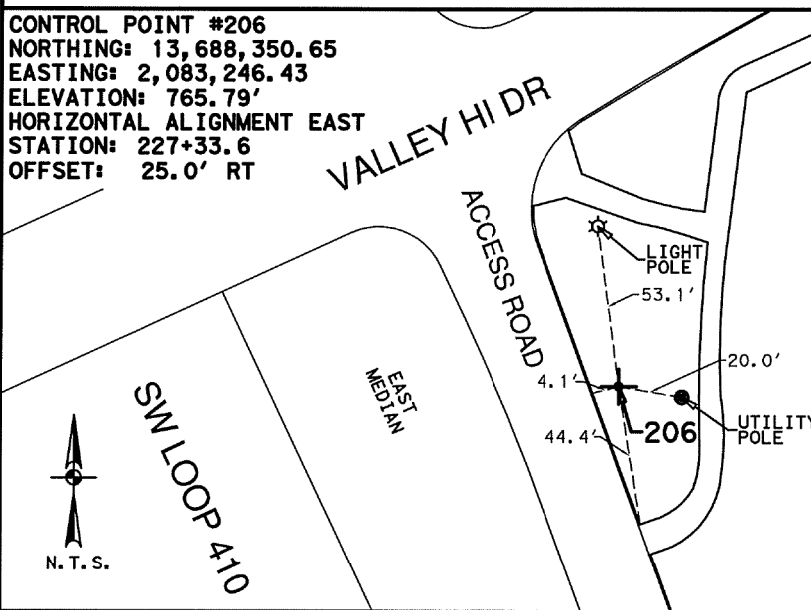
MAG NAIL WITH WASHER IN ASPHALT AT THE INTERSECTION OF PARALLEL DRIVE AND EBBTIDE DRIVE



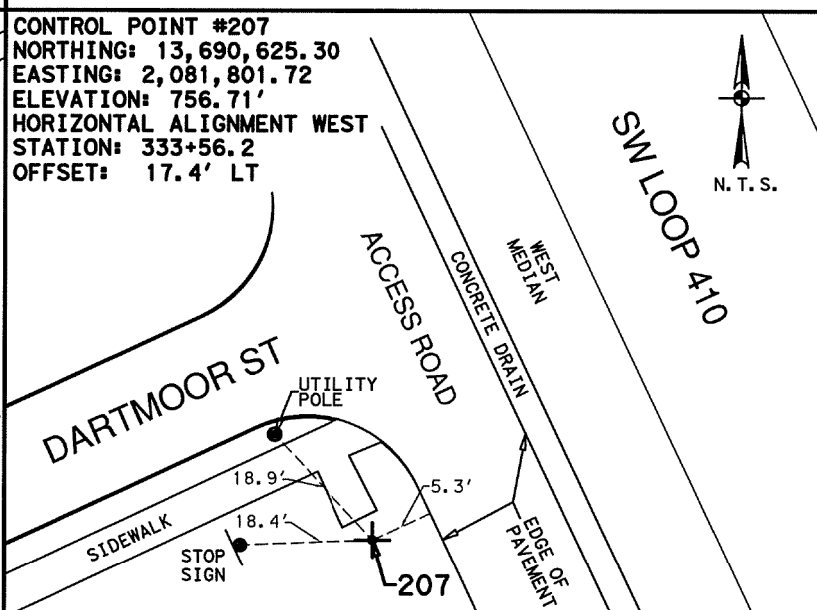
MAG NAIL WITH WASHER IN ASPHALT AT THE INTERSECTION OF PARALLEL DRIVE AND CAROUSEL DRIVE



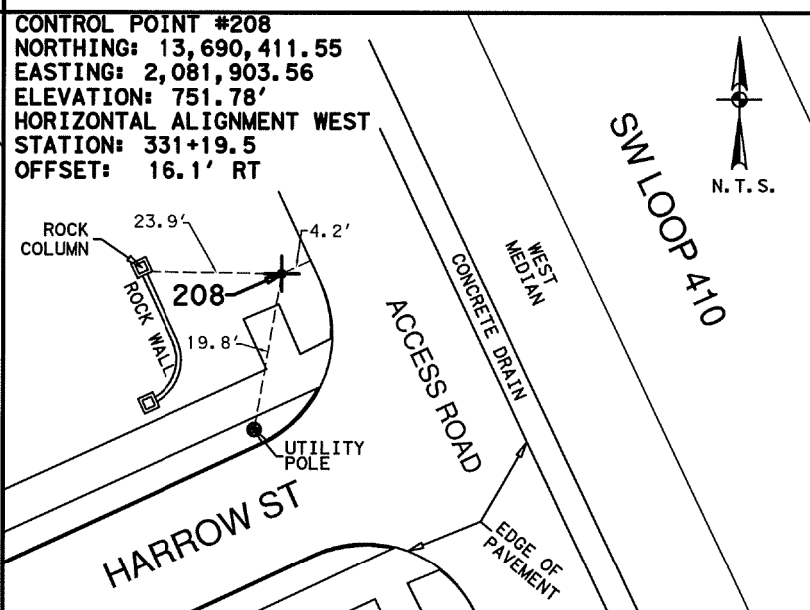
MAG NAIL WITH WASHER IN ASPHALT APPROXIMATELY 470 FEET SOUTHEAST FROM THE INTERSECTION OF SW LOOP 410 AND VALLEY HI DRIVE



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", APPROXIMATELY 120 FEET SOUTHEAST FROM THE INTERSECTION OF SW LOOP 410 AND VALLEY HI DRIVE

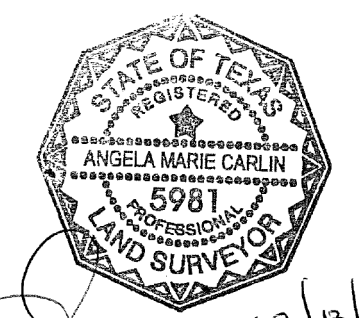


1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SW LOOP 410 AND DARTMOOR STREET



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", AT THE INTERSECTION OF SW LOOP 410 AND HARROW STREET

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND FINALIZED BY BALANCING A CLOSED, DOUBLE RUN LEVEL LOOP.



07/13/2018

**LEGEND**

- + CONTROL POINT
- - - ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPB FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028900

Texas Department of Transportation  
 © 2018

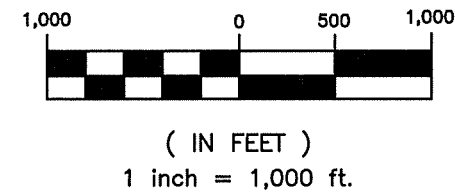
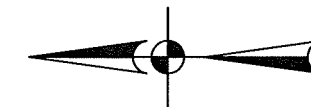
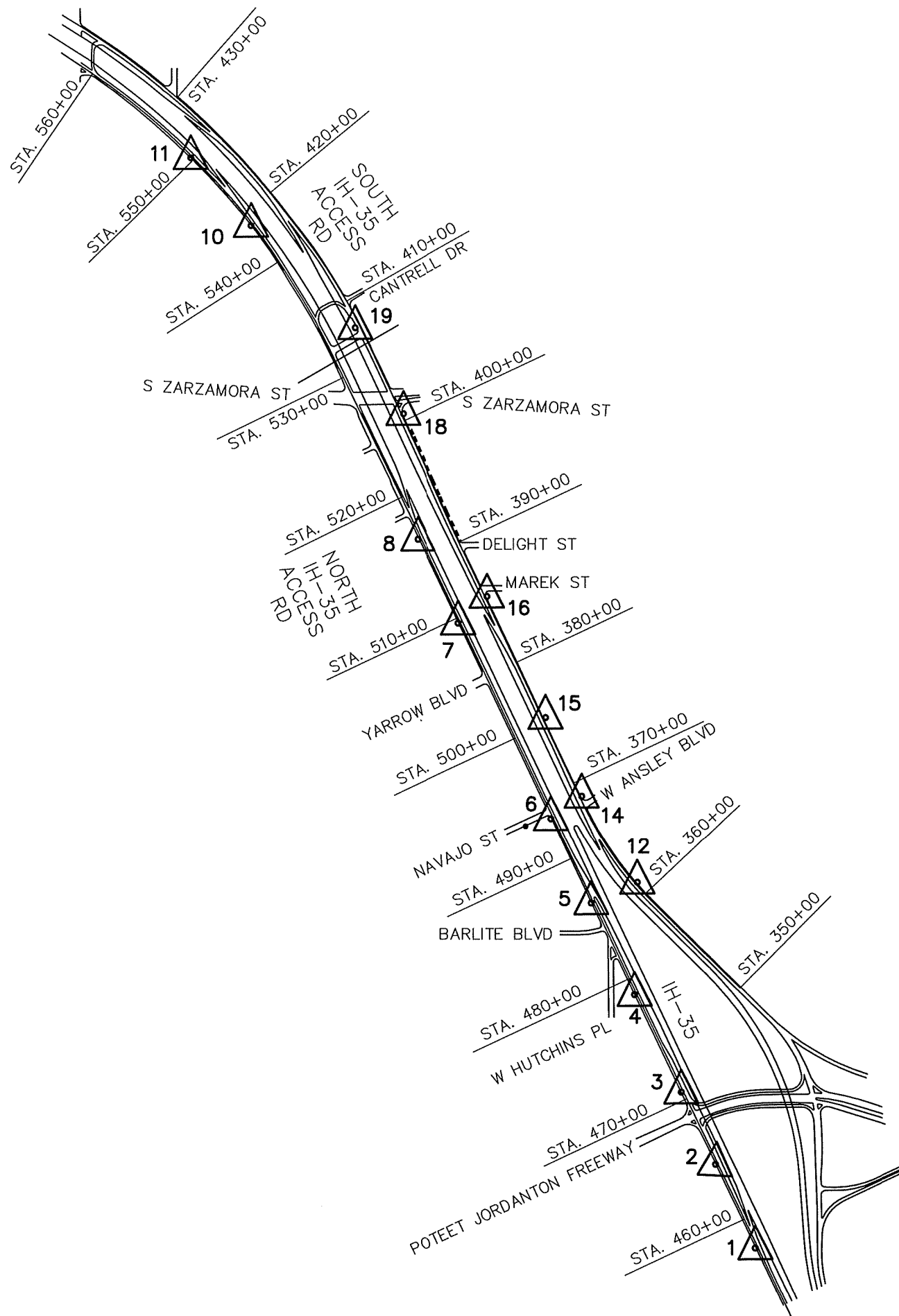
**SW LOOP 410  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 2 OF 2

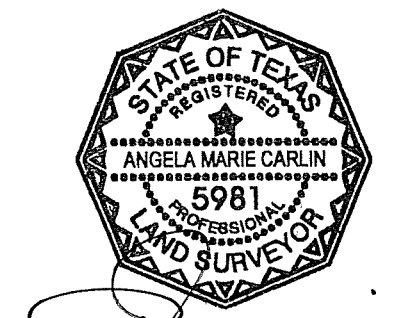
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CHK	6	TEXAS		IH 410		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	15	BEXAR	0017	10	280	118

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File: N:\Transpo\Civil\11135-08\dwg\IH-35 Access Road\CP - 11135-08\_Control Sheets.dwg



NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



*2/15/2019*

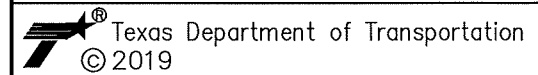
**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE
- AVE AVENUE
- BLVD BOULEVARD
- DR DRIVE
- HWY HIGHWAY
- IH INTERSTATE HIGHWAY
- PL PLACE
- RD ROAD
- SH STATE HIGHWAY
- ST STREET
- US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



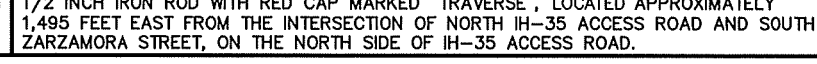
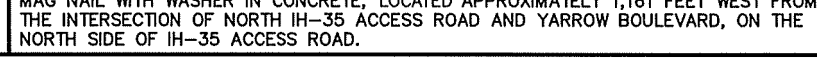
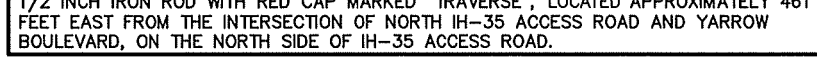
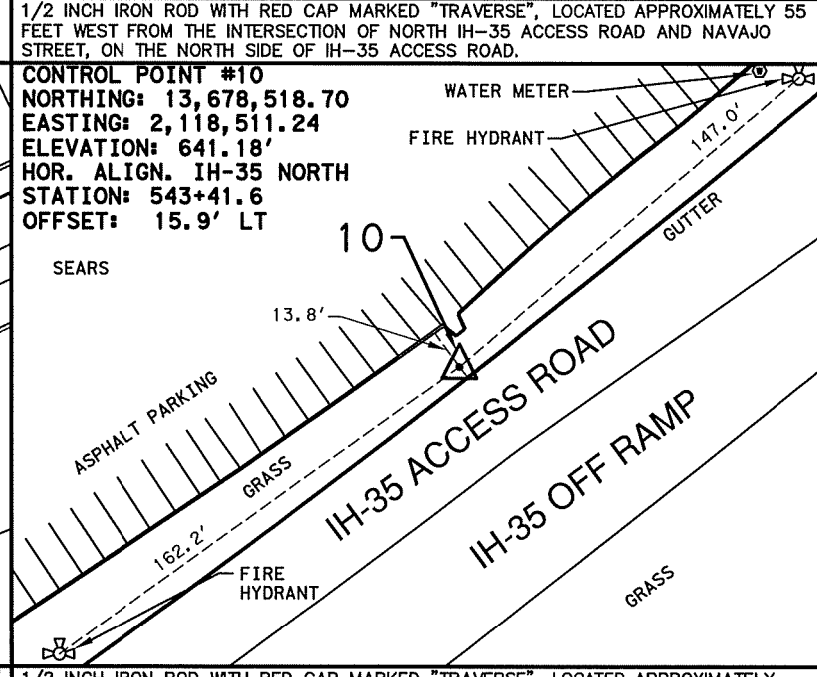
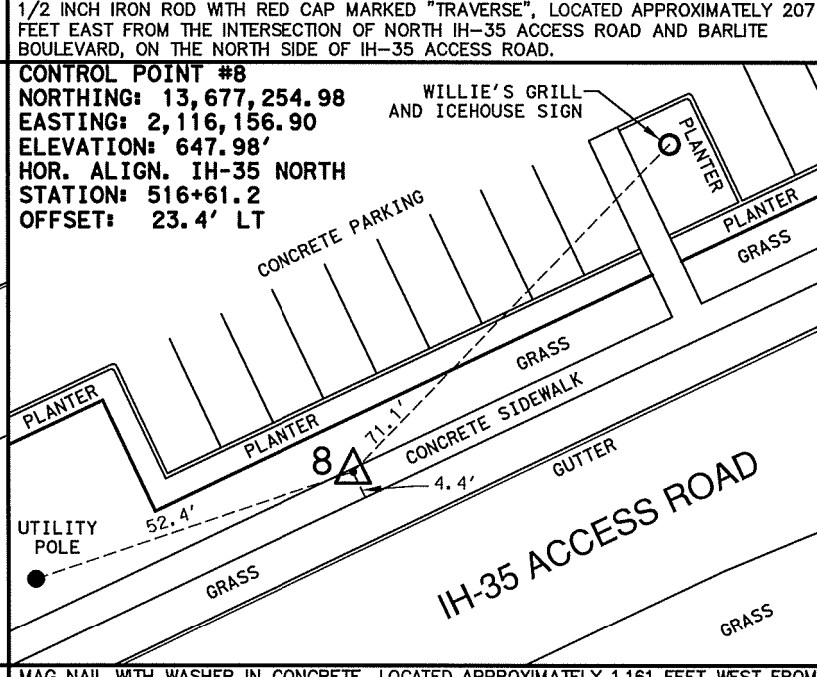
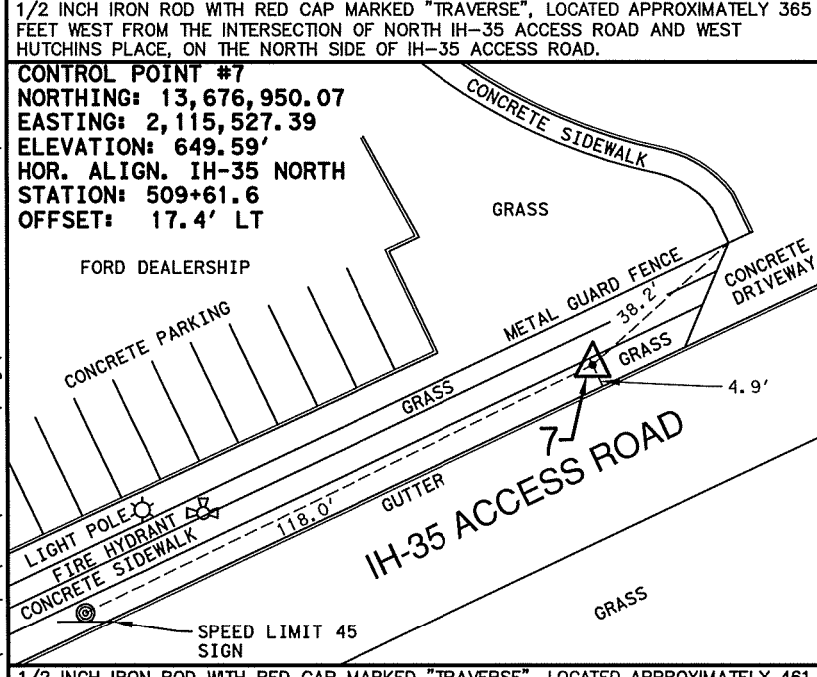
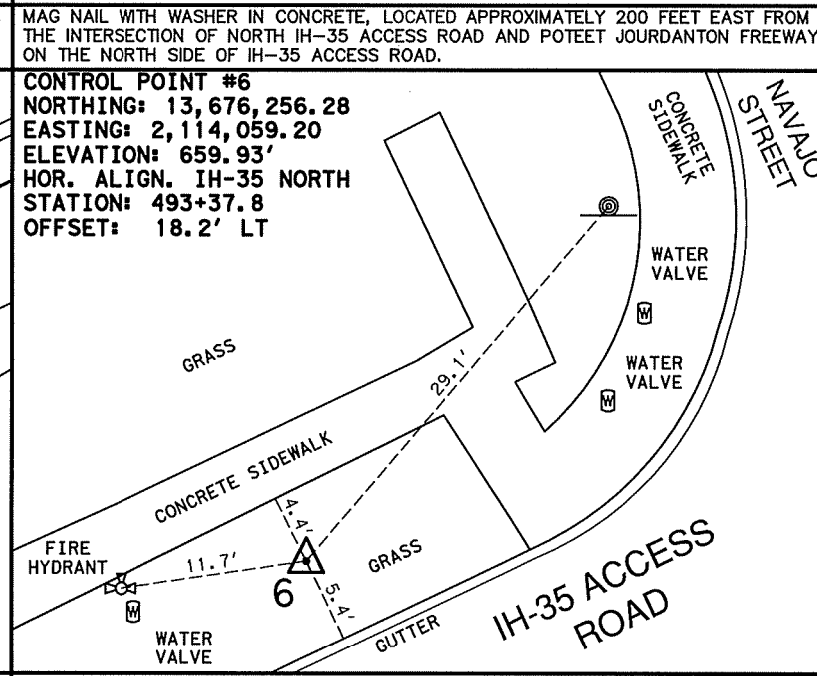
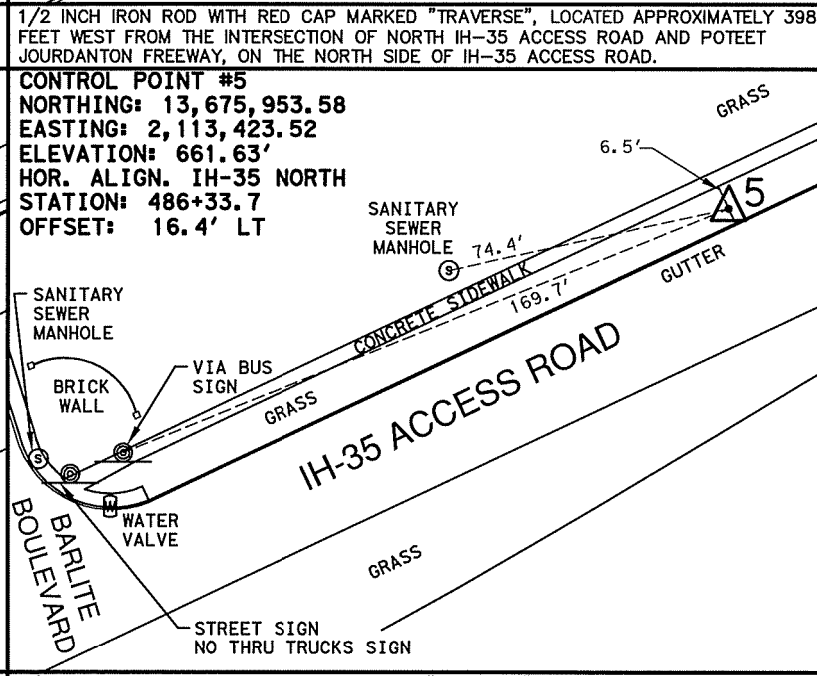
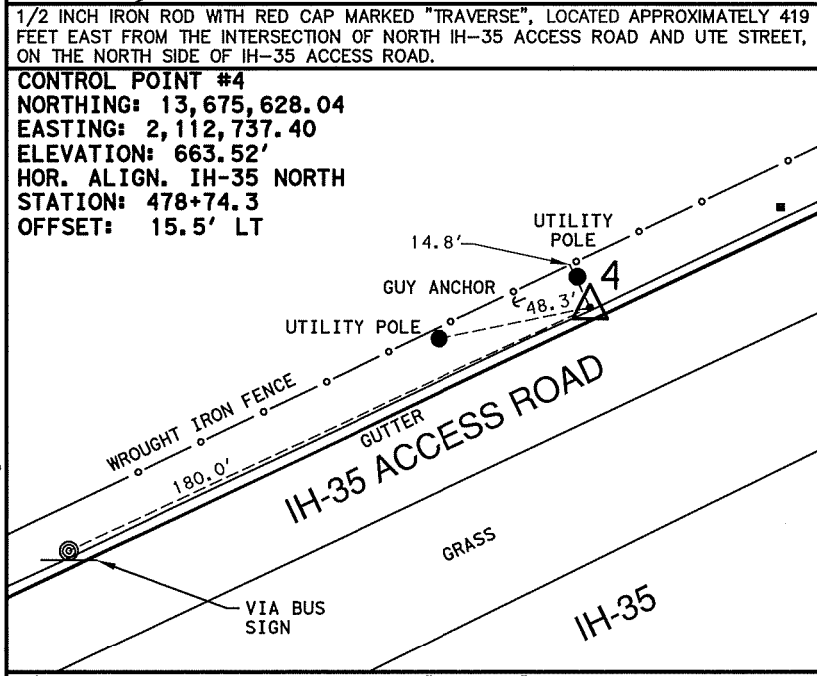
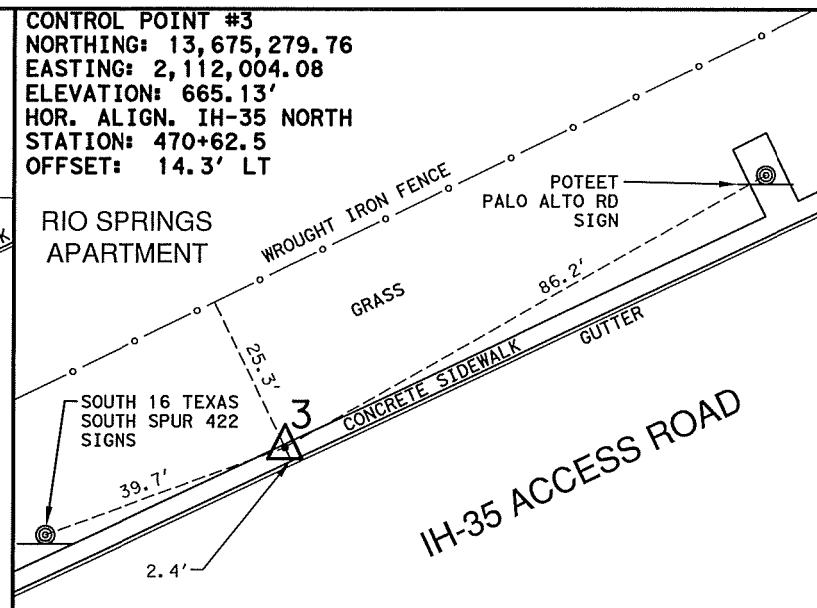
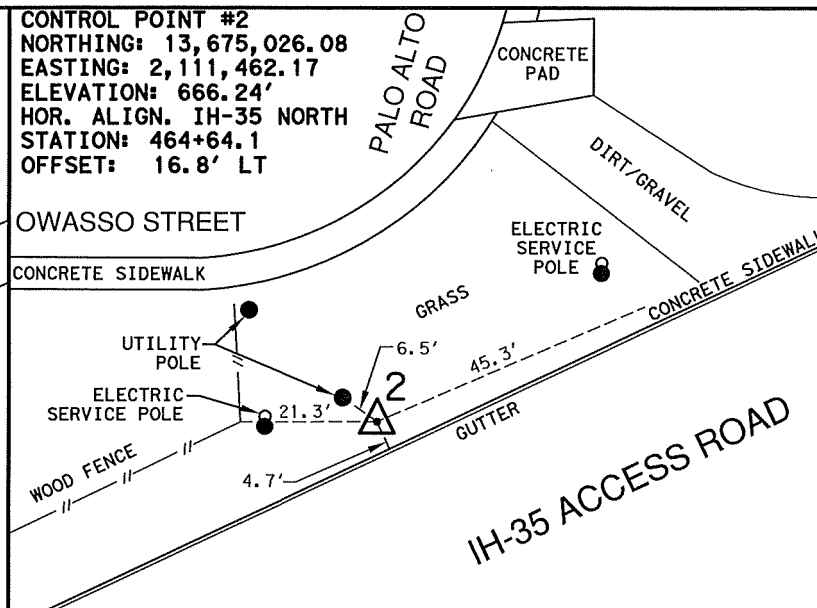
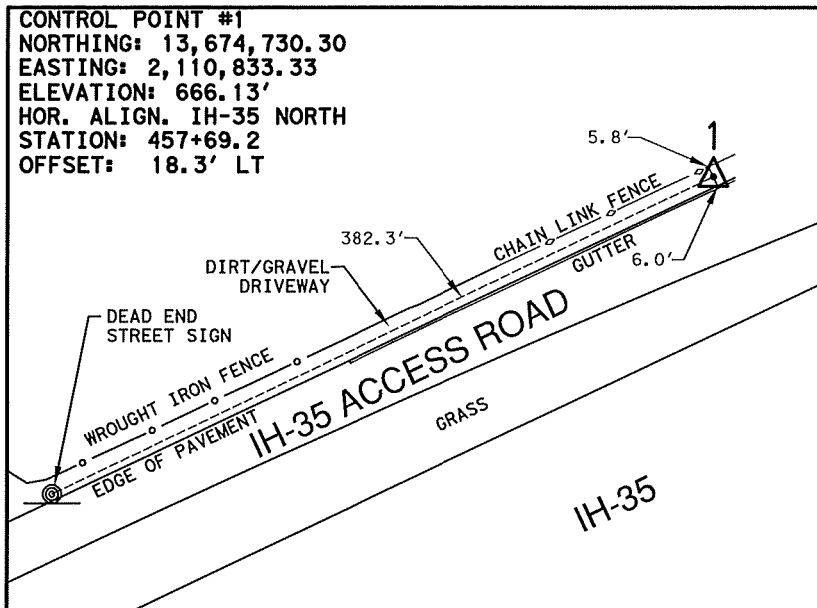
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



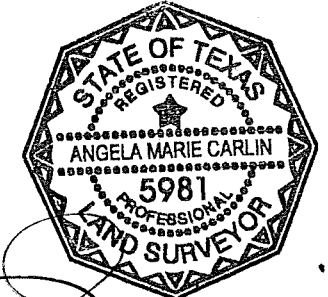
**IH-35 ACCESS ROAD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 3

DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK 0001	6	TEXAS				IH-35
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK 0001	15	BEXAR	0915	12	576	119



NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



2/15/2019

**LEGEND**

	CONTROL POINT
	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPBE FIRM REGISTRATION #470 | TPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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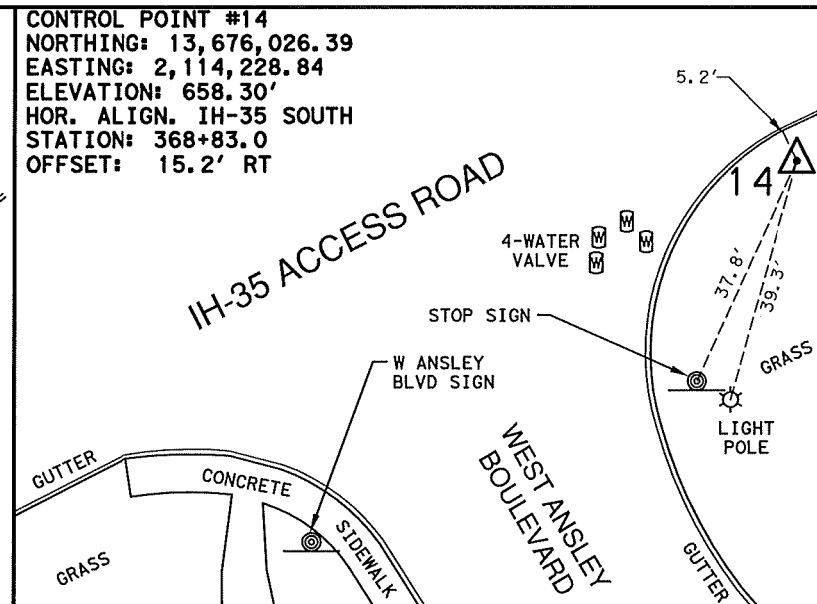
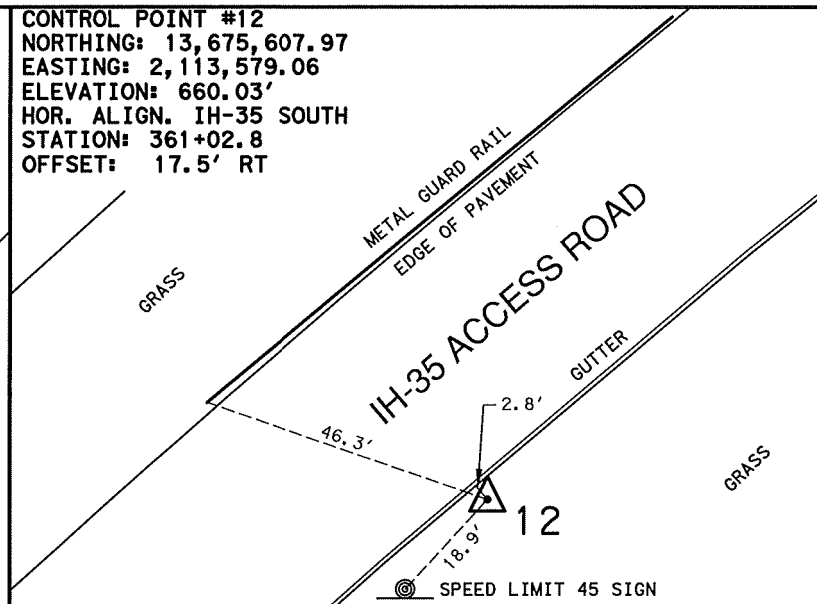
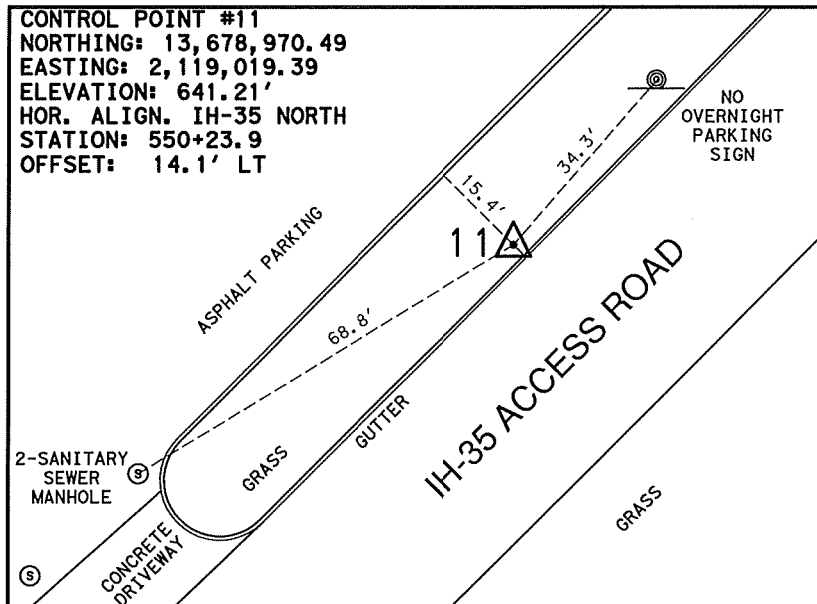
**IH-35 ACCESS ROAD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 2 OF 3

CDM	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
DMG	6	TEXAS				IH-35
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
DMG	15	BEXAR	0915	12	576	120

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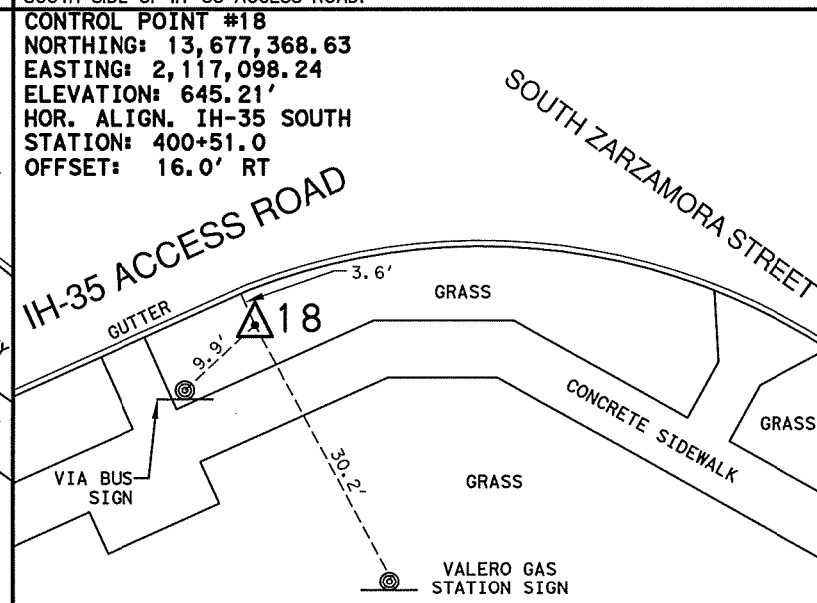
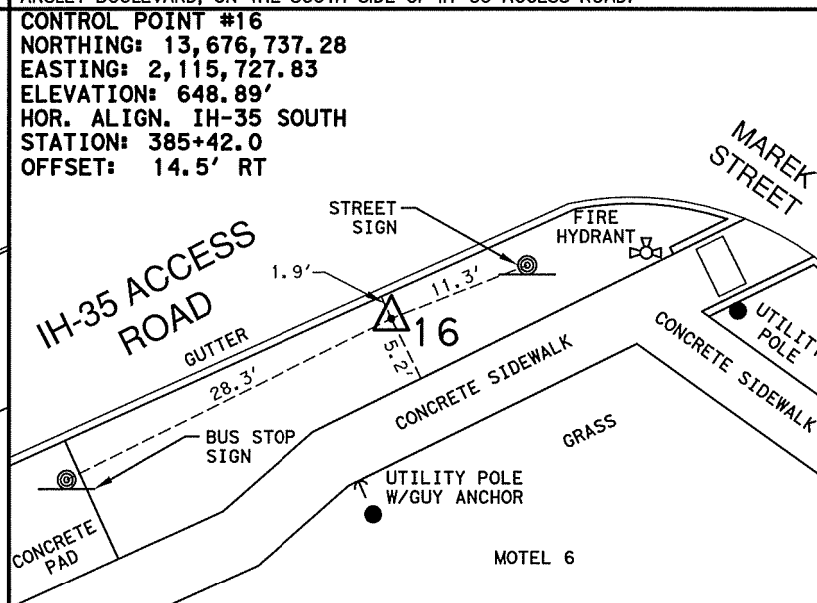
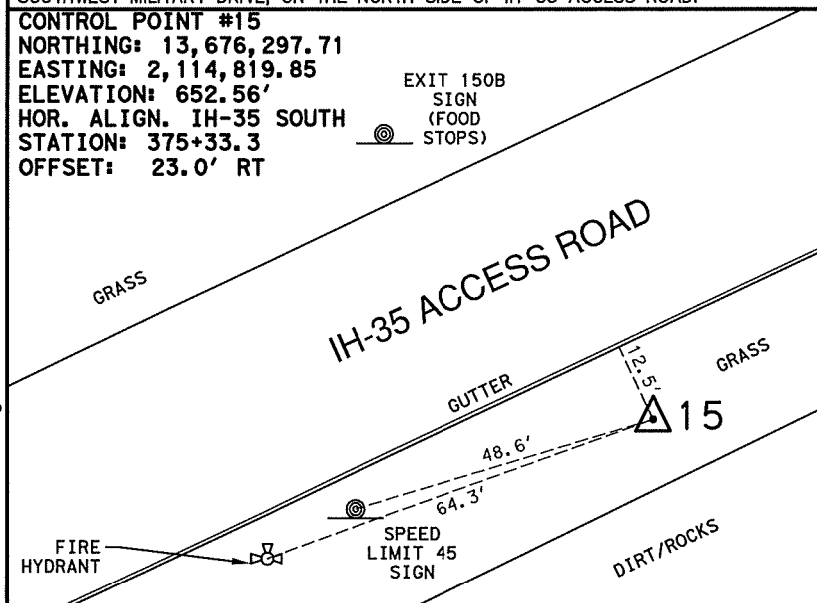




1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 1,120 FEET WEST FROM THE INTERSECTION OF NORTH IH-35 ACCESS ROAD AND SOUTHWEST MILITARY DRIVE, ON THE NORTH SIDE OF IH-35 ACCESS ROAD.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 711 FEET WEST FROM THE INTERSECTION OF SOUTH IH-35 ACCESS ROAD AND WEST ANSLEY BOULEVARD, ON THE SOUTH SIDE OF IH-35 ACCESS ROAD.

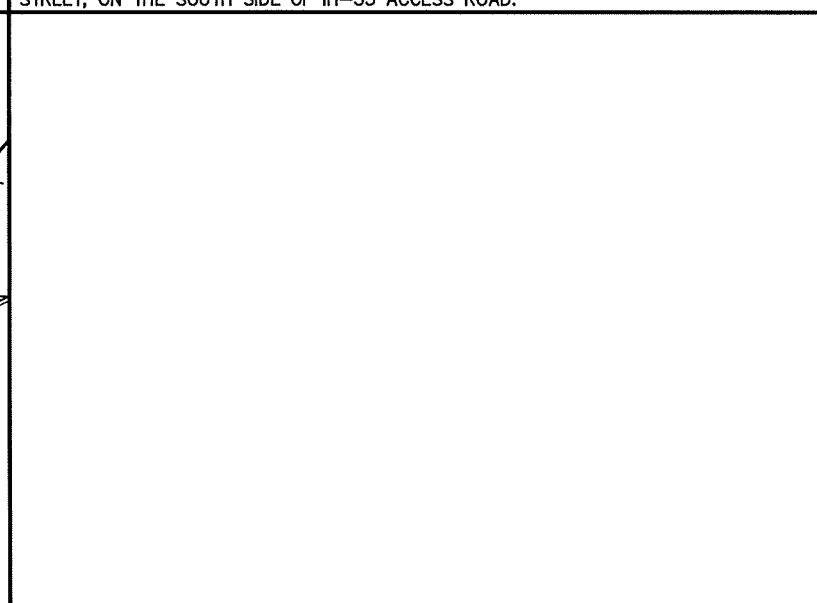
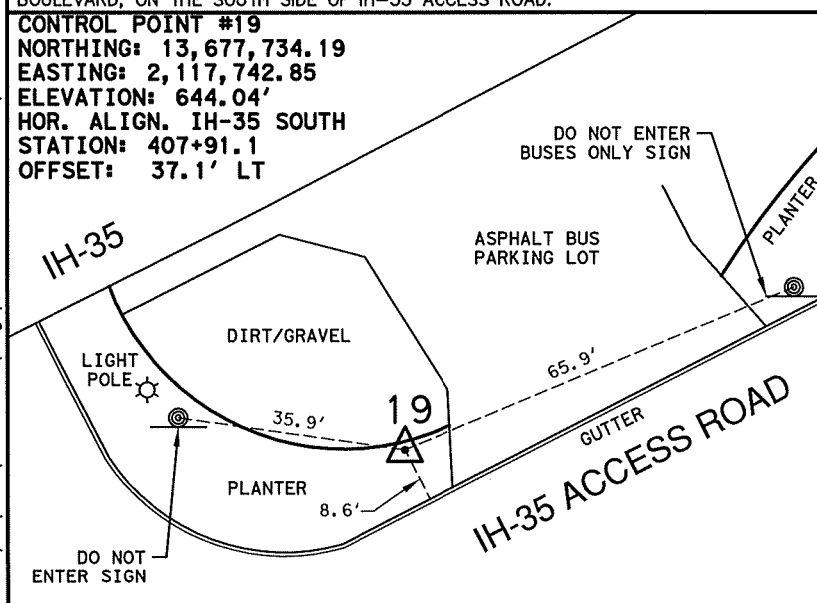
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF SOUTH IH-35 ACCESS ROAD AND WEST ANSLEY BOULEVARD, ON THE SOUTH SIDE OF IH-35 ACCESS ROAD.



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 707 FEET EAST FROM THE INTERSECTION OF SOUTH IH-35 ACCESS ROAD AND WEST ANSLEY BOULEVARD, ON THE SOUTH SIDE OF IH-35 ACCESS ROAD.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 58 FEET WEST FROM THE INTERSECTION OF SOUTH IH-35 ACCESS ROAD AND MAREK STREET, ON THE SOUTH SIDE OF IH-35 ACCESS ROAD.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 124 FEET WEST FROM THE INTERSECTION OF SOUTH IH-35 ACCESS ROAD AND SOUTH ZARZAMORA STREET, ON THE SOUTH SIDE OF IH-35 ACCESS ROAD.



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 574 FEET EAST FROM THE INTERSECTION OF SOUTH IH-35 ACCESS ROAD AND SOUTH ZARZAMORA STREET, ON THE NORTH SIDE OF IH-35 ACCESS ROAD.

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



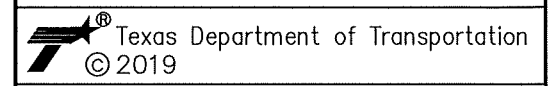
**LEGEND**

	CONTROL POINT
---	ALIGNMENT
N.T.S.	NOT TO SCALE
Ave	AVENUE
BLVD	BOULEVARD
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TDPF FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800



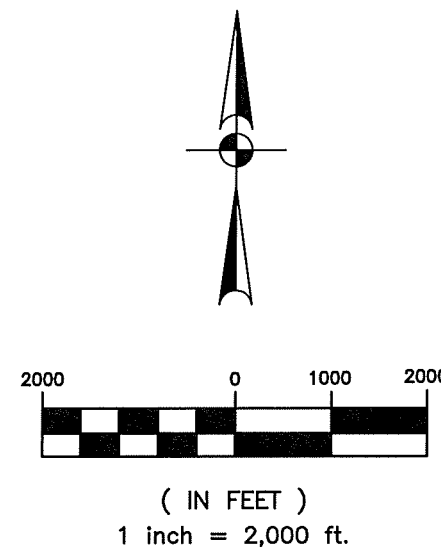
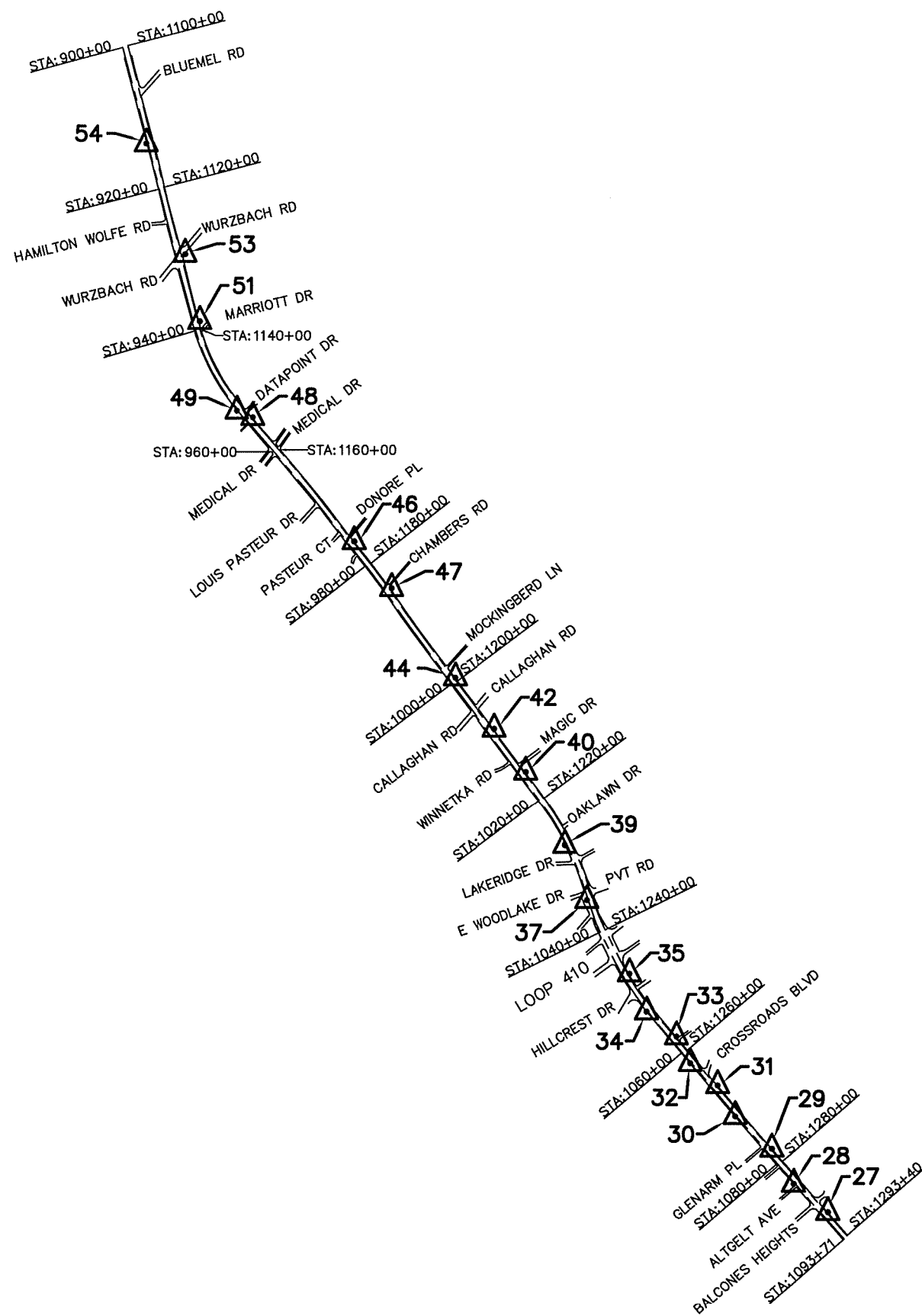
**IH-35 ACCESS ROAD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 3 OF 3

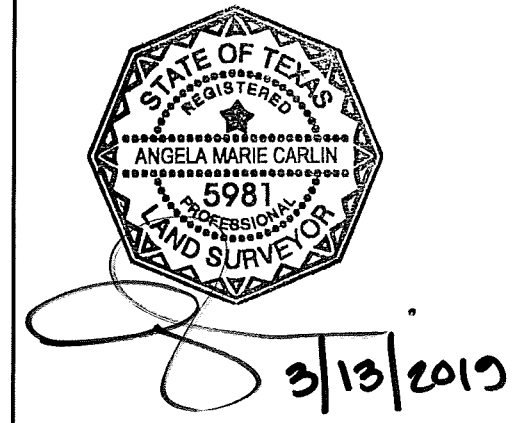
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN#	6	TEXAS		IH-35		
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	15	BEXAR	0915	12	576	121

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File: N:\Transpo\Civil\11135-08\dwg\Fredericksburg Road\CP - 11135-08 - Fredericksburg Road.dwg



NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



**LEGEND**

	CONTROL POINT
---	ALIGNMENT
N.T.S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
CT	COURT
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
LN	LANE
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY

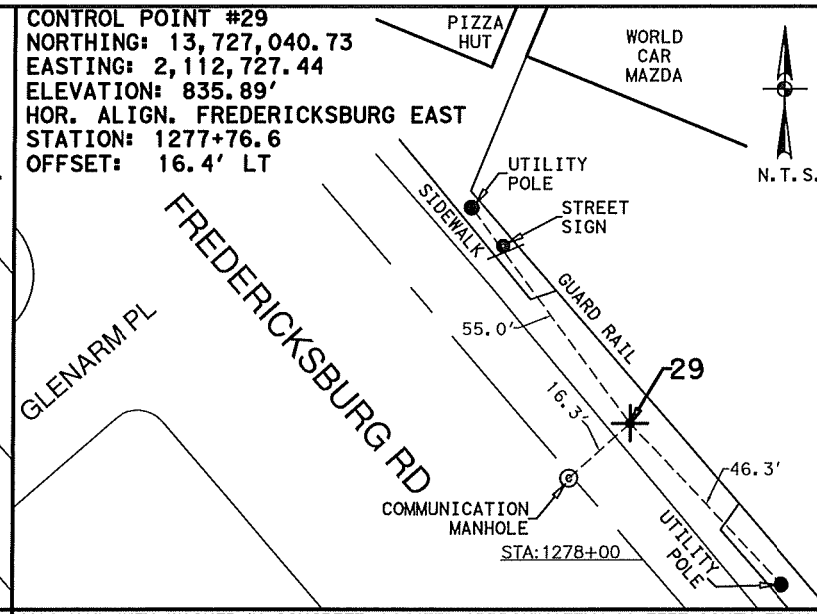
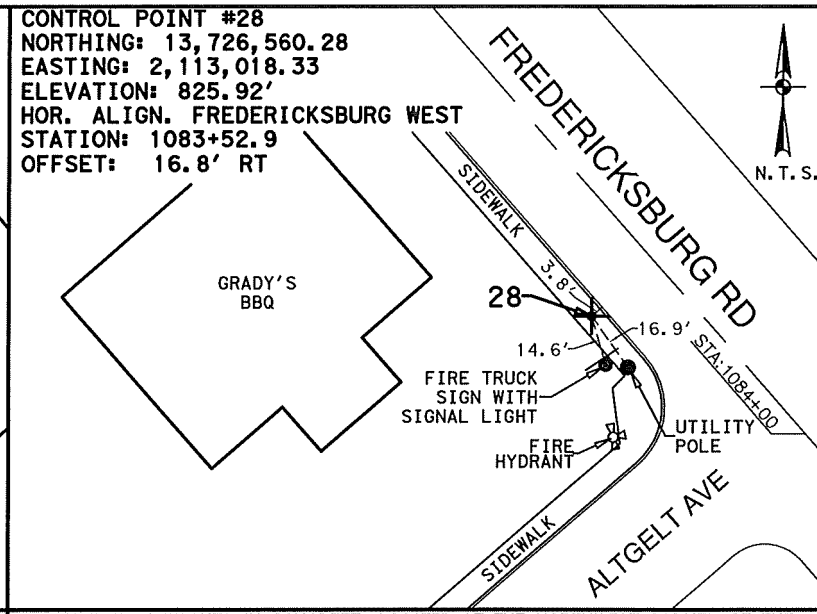
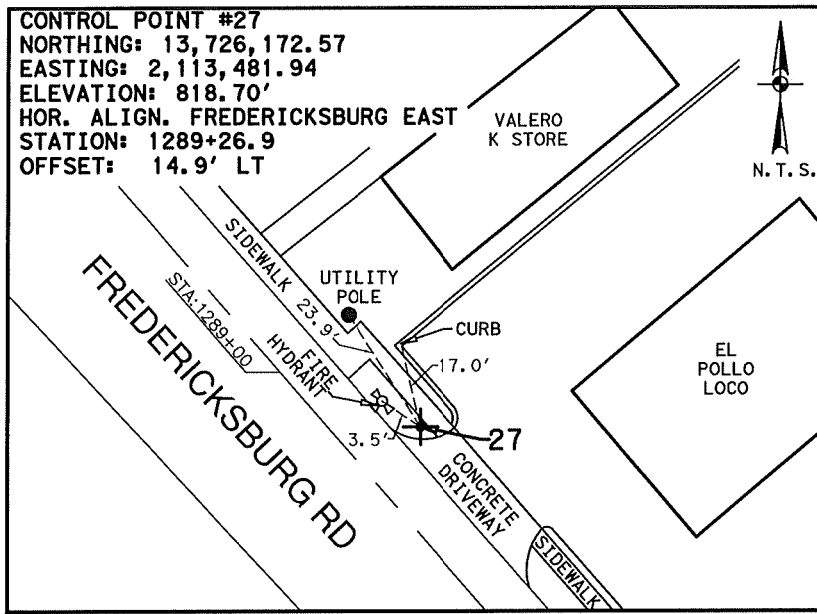
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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**SL 345  
 FREDERICKSBURG RD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 4

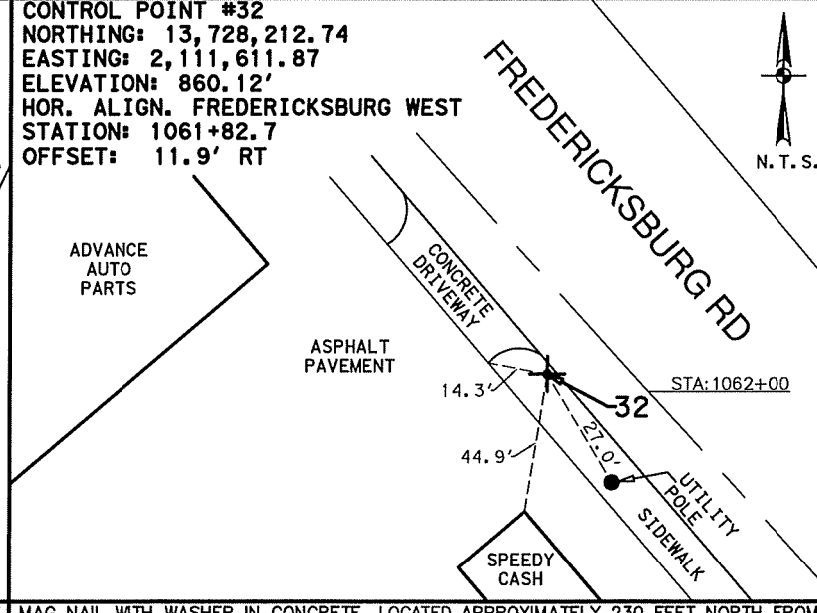
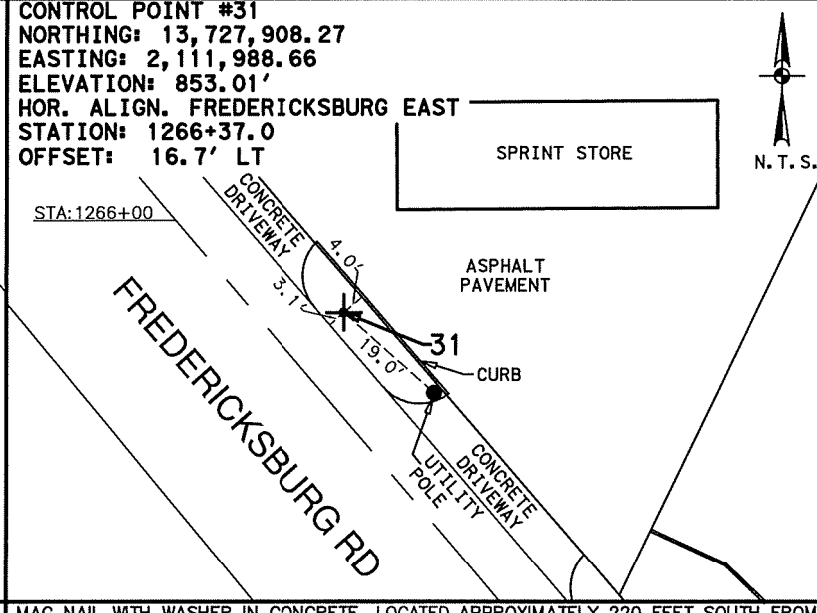
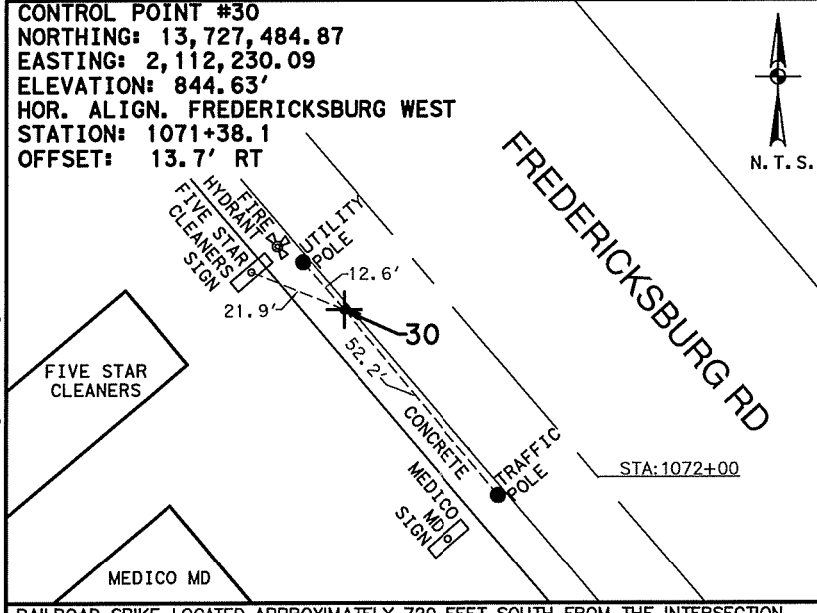
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15	6	TEXAS		SL 345		
DIST.	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
15	15	BEXAR	0915	12	576	122



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 180 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND BALCONES HEIGHTS, ON THE WEST SIDE OF FREDERICKSBURG ROAD

MAG NAIL WITH WASHER IN CONCRETE, LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF FREDERICKSBURG ROAD AND ALTGELT AVENUE

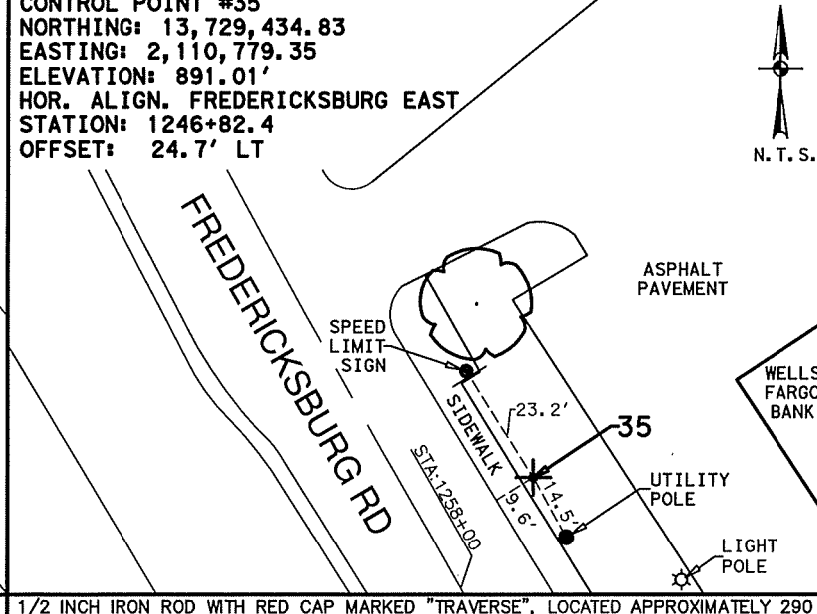
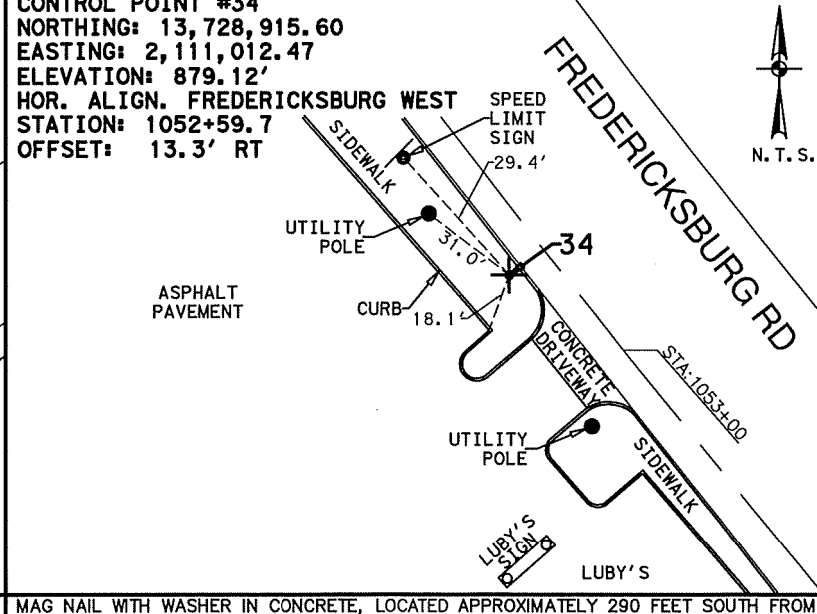
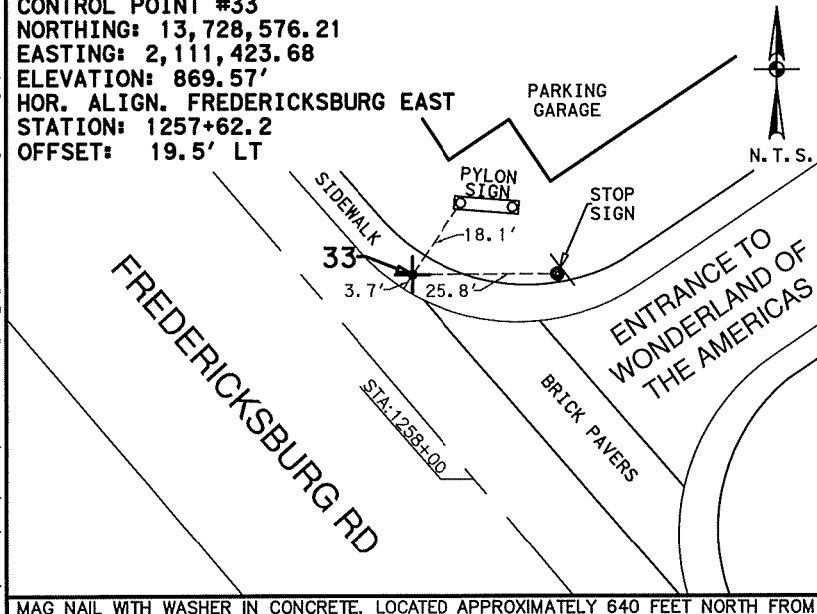
MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 90 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND GLENARM PLACE, ON THE EAST SIDE OF FREDERICKSBURG ROAD



RAILROAD SPIKE LOCATED APPROXIMATELY 720 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND CROSSROADS BOULEVARD, ON THE WEST SIDE OF FREDERICKSBURG ROAD

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 220 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND CROSSROADS BOULEVARD, ON THE EAST SIDE OF FREDERICKSBURG ROAD

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 230 FEET NORTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND CROSSROADS BOULEVARD, ON THE WEST SIDE OF FREDERICKSBURG ROAD



MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 640 FEET NORTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND CROSSROADS BOULEVARD, ON THE EAST SIDE OF FREDERICKSBURG ROAD

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 290 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND HILLCREST DRIVE, ON THE WEST SIDE OF FREDERICKSBURG ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 290 FEET NORTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND HILLCREST DRIVE, ON THE EAST SIDE OF FREDERICKSBURG ROAD

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



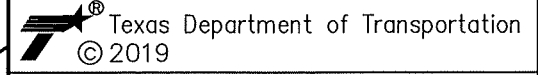
3/13/2019

- LEGEND**
- ⊕ CONTROL POINT
  - ALIGNMENT
  - N. T. S. NOT TO SCALE
  - AVE AVENUE
  - BLVD BOULEVARD
  - CT COURT
  - DR DRIVE
  - HWY HIGHWAY
  - IH INTERSTATE HIGHWAY
  - LN LANE
  - PL PLACE
  - RD ROAD
  - SH STATE HIGHWAY
  - ST STREET
  - US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPBE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

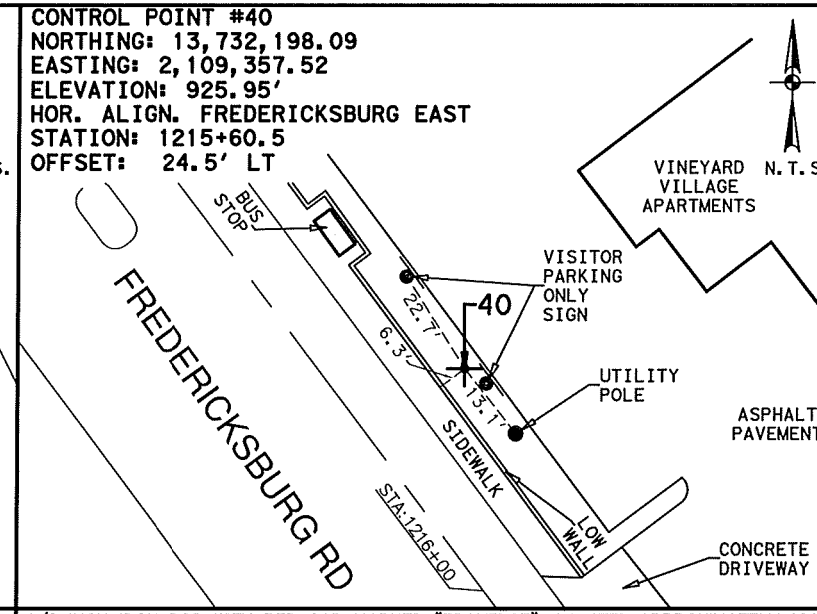
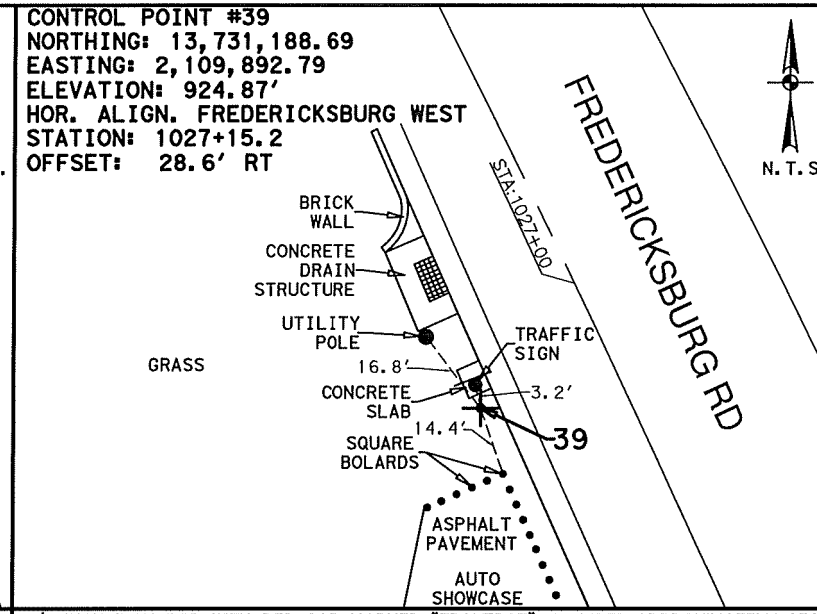
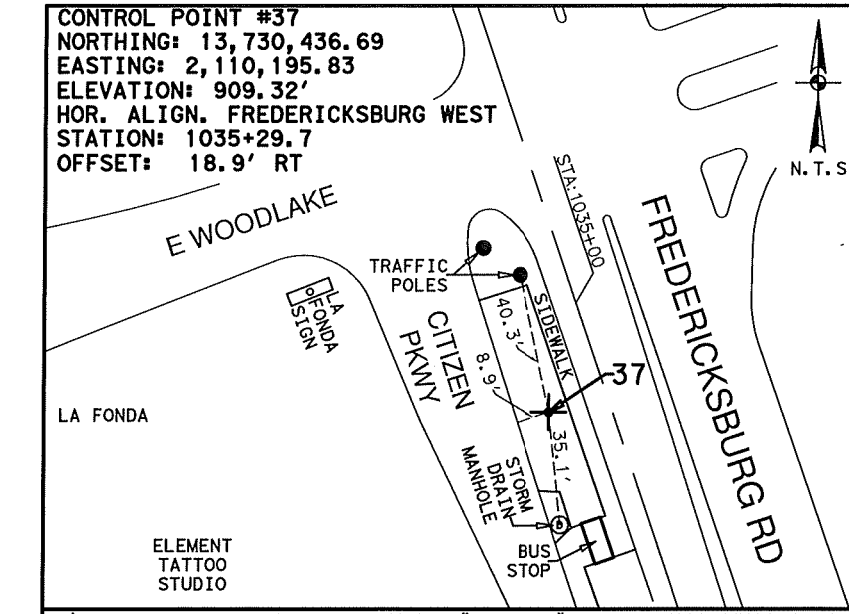


SL 345  
 FREDERICKSBURG RD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS

SHEET 2 OF 4

DCN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		SL 345
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0915	12
DWG			576	123

File: N:\Transpo\Civil\11135-08\dwg\Fredricksburg Road.dwg



NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.

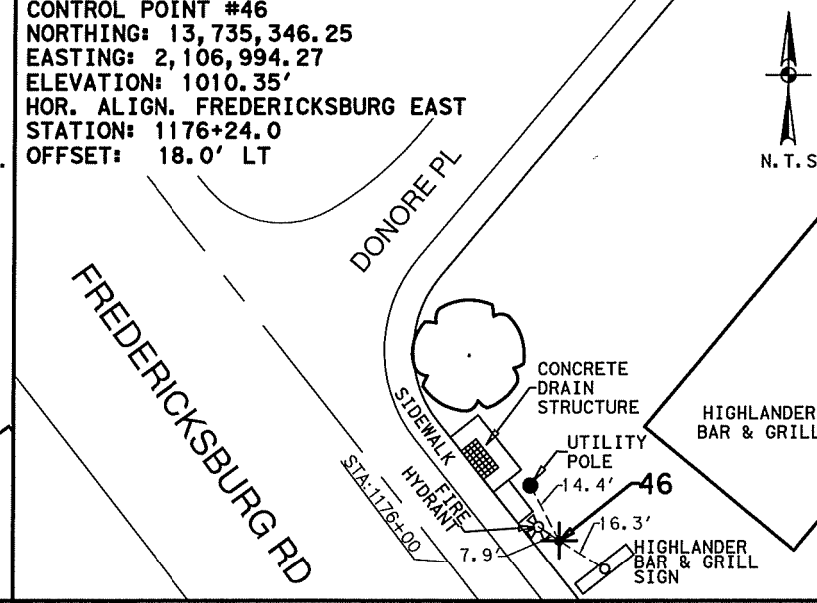
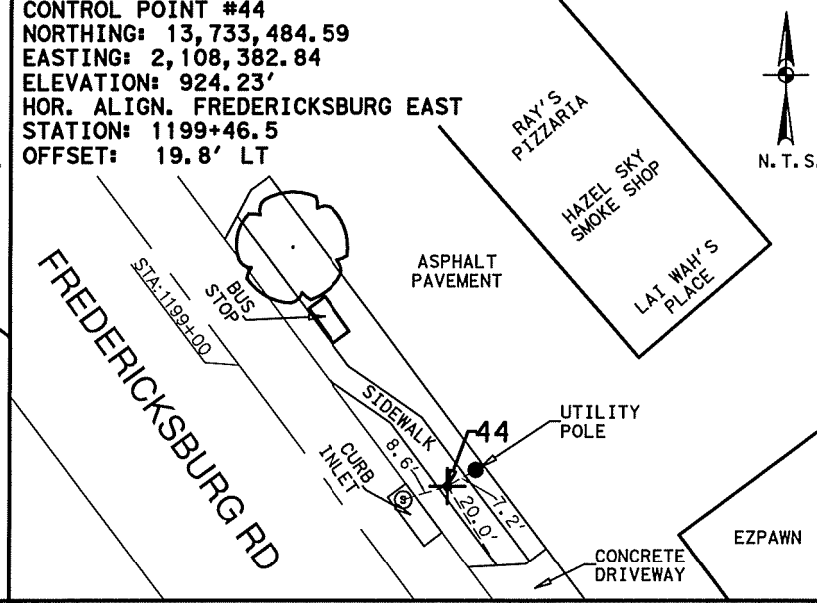
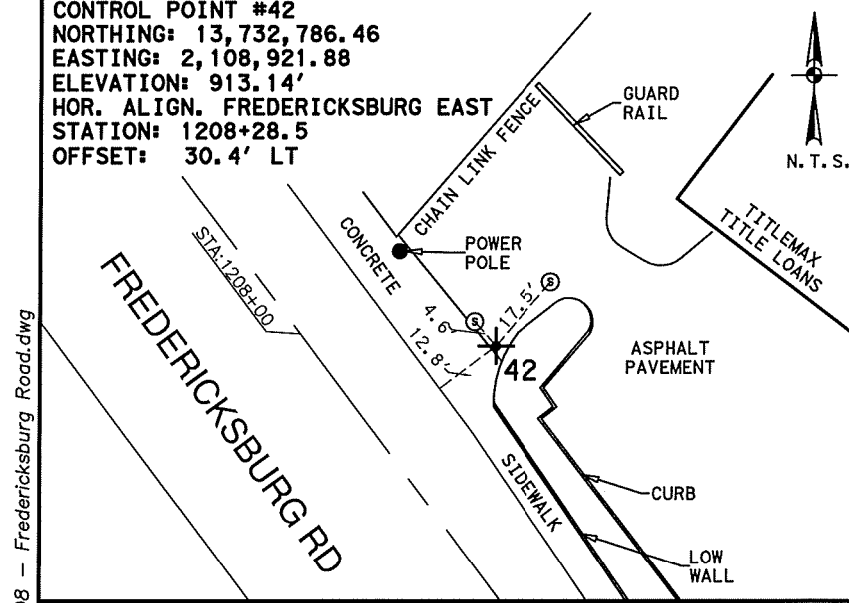


3/13/2019

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 80 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND E WOODLAKE DRIVE, ON THE WEST SIDE OF FREDERICKSBURG ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 250 FEET NORTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND LAKERIDGE DRIVE, ON THE WEST SIDE OF FREDERICKSBURG ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 120 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND MAGIC DRIVE, ON THE EAST SIDE OF FREDERICKSBURG ROAD



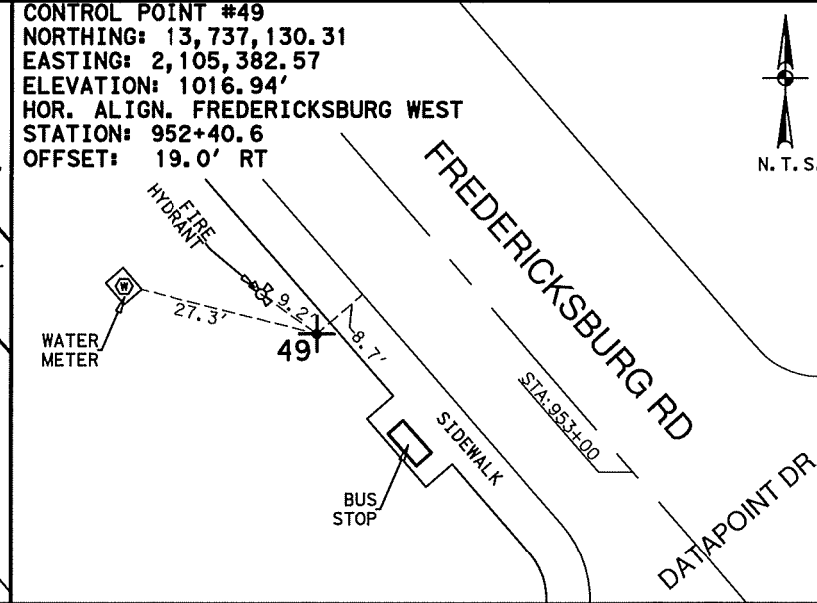
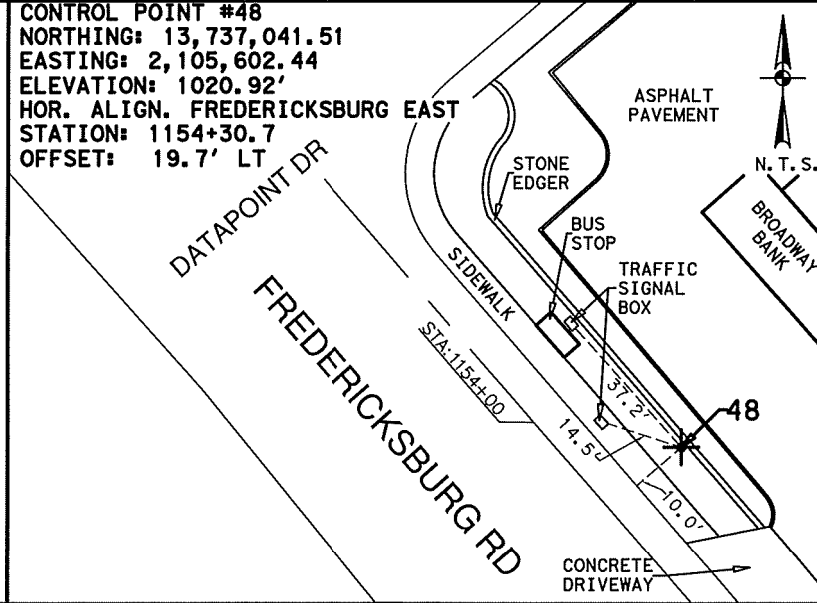
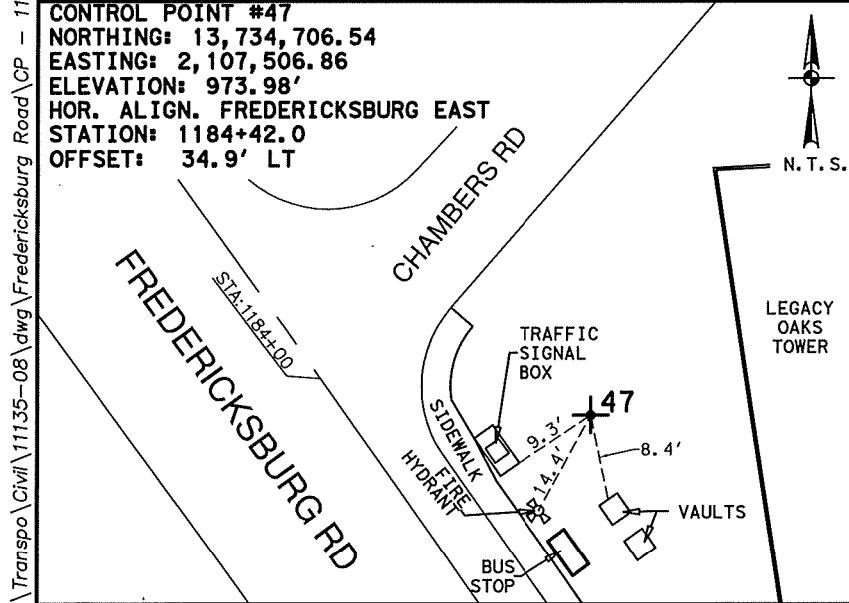
LEGEND

+	CONTROL POINT
---	ALIGNMENT
N. T. S.	NOT TO SCALE
AVE	AVENUE
BLVD	BOULEVARD
CT	COURT
DR	DRIVE
HWY	HIGHWAY
IH	INTERSTATE HIGHWAY
LN	LANE
PL	PLACE
RD	ROAD
SH	STATE HIGHWAY
ST	STREET
US	U.S. HIGHWAY

MAG NAIL WITH WASHER IN ASPHALT, LOCATED APPROXIMATELY 360 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND CALLAHAN ROAD, ON THE EAST SIDE OF FREDERICKSBURG ROAD

MAG NAIL WITH WASHER IN CONCRETE, LOCATED APPROXIMATELY 180 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND MOCKINGBIRD LANE, ON THE EAST SIDE OF FREDERICKSBURG ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 90 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND DONORE PLACE, ON THE EAST SIDE OF FREDERICKSBURG ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF FREDERICKSBURG ROAD AND CHAMBERS ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 120 FEET SOUTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND DATAPOINT DRIVE, ON THE EAST SIDE OF FREDERICKSBURG ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 60 FEET NORTH FROM THE INTERSECTION OF FREDERICKSBURG ROAD AND DATAPOINT DRIVE, ON THE WEST SIDE OF FREDERICKSBURG ROAD

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TPPE FIRM REGISTRATION #470 | TBPL FIRM REGISTRATION #1022800

Texas Department of Transportation  
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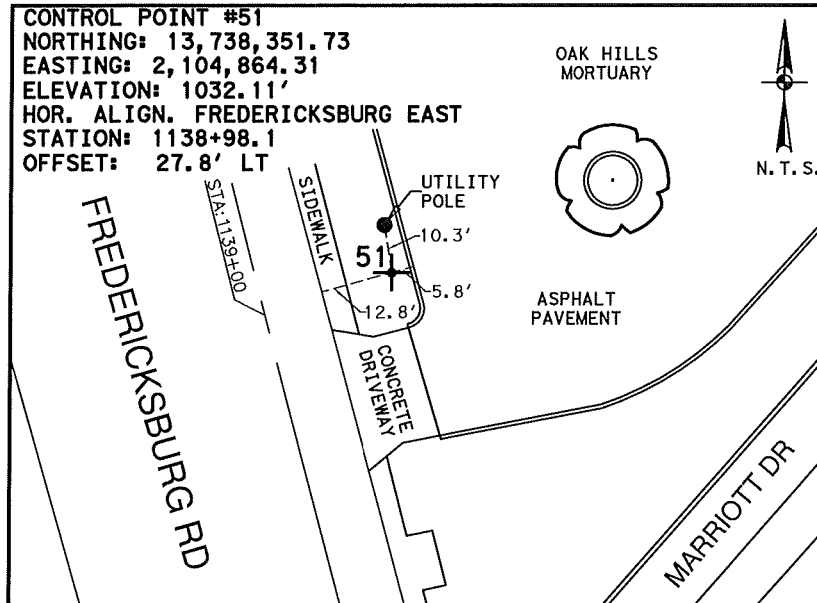
**SL 345  
 FREDERICKSBURG RD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 3 OF 4

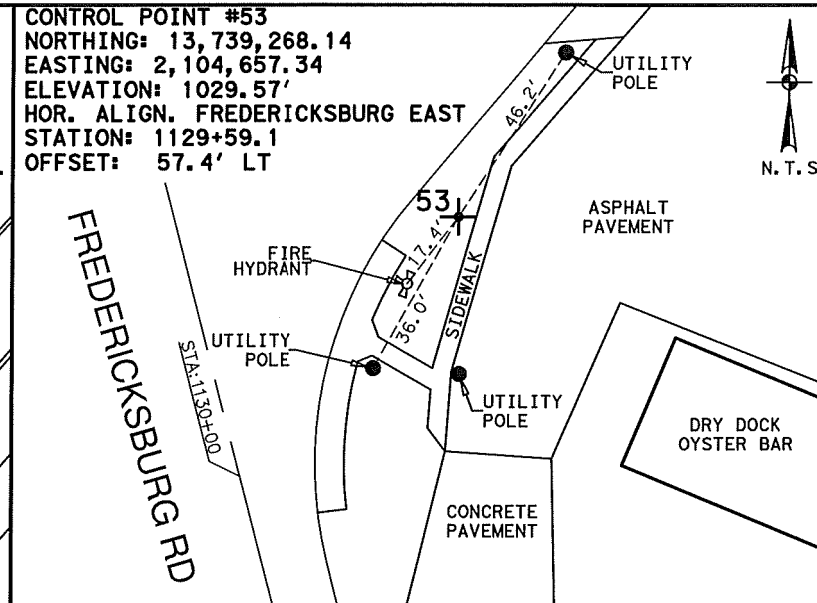
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CRK	6	TEXAS		SL 345		
DGN	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CRK	15	BEXAR	0915	12	576	124

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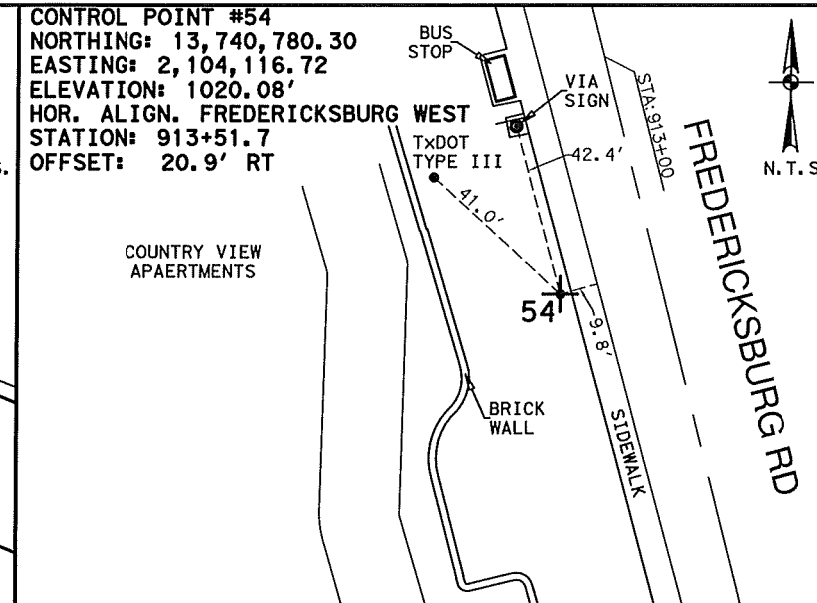
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CONTROL POINT #51  
 NORTHING: 13,738,351.73  
 EASTING: 2,104,864.31  
 ELEVATION: 1032.11'  
 HOR. ALIGN. FREDERICKSBURG EAST  
 STATION: 1138+98.1  
 OFFSET: 27.8' LT



CONTROL POINT #53  
 NORTHING: 13,739,268.14  
 EASTING: 2,104,657.34  
 ELEVATION: 1029.57'  
 HOR. ALIGN. FREDERICKSBURG EAST  
 STATION: 1129+59.1  
 OFFSET: 57.4' LT



CONTROL POINT #54  
 NORTHING: 13,740,780.30  
 EASTING: 2,104,116.72  
 ELEVATION: 1020.08'  
 HOR. ALIGN. FREDERICKSBURG WEST  
 STATION: 913+51.7  
 OFFSET: 20.9' RT

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.

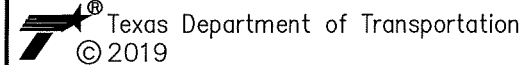


- LEGEND**
- ⊕ CONTROL POINT
  - ALIGNMENT
  - N. T. S. NOT TO SCALE
  - AVE AVENUE
  - BLVD BOULEVARD
  - CT COURT
  - DR DRIVE
  - HWY HIGHWAY
  - IH INTERSTATE HIGHWAY
  - LN LANE
  - PL PLACE
  - RD ROAD
  - SH STATE HIGHWAY
  - ST STREET
  - US U.S. HIGHWAY

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

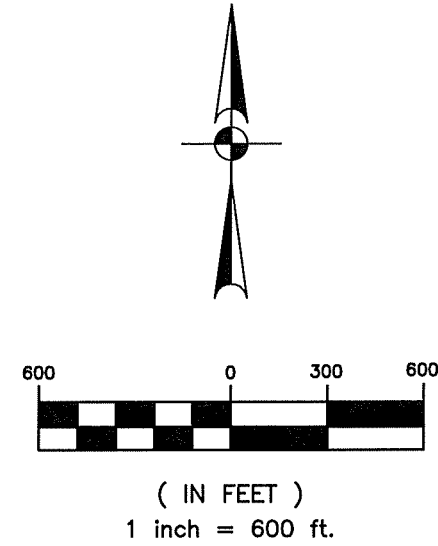
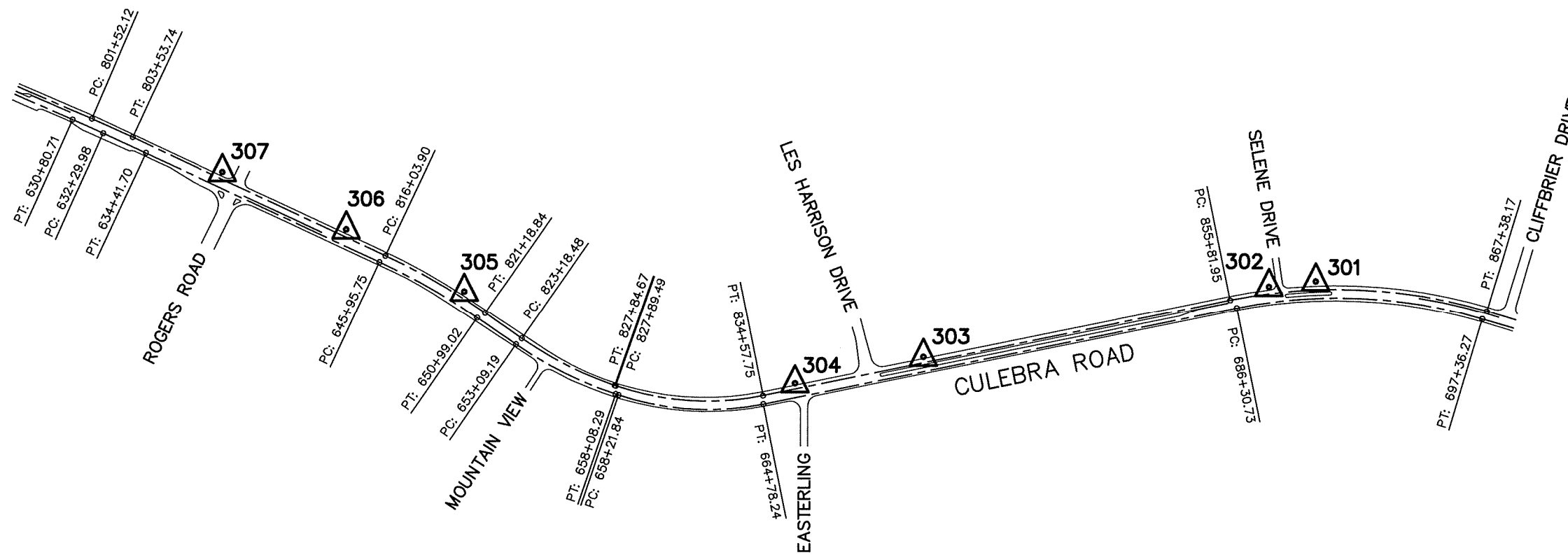


**SL 345  
 FREDERICKSBURG RD  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

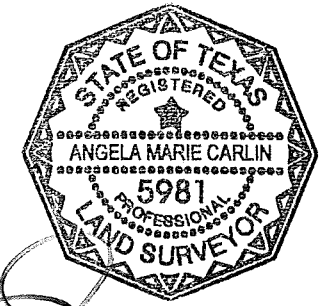
SHEET 4 OF 4

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK PDR	6	TEXAS				SL 345
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK PDR	15	BEXAR	0915	12	576	125

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NOTES:  
1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



*Angela Marie Carlin*  
3/07/2019

LEGEND

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY



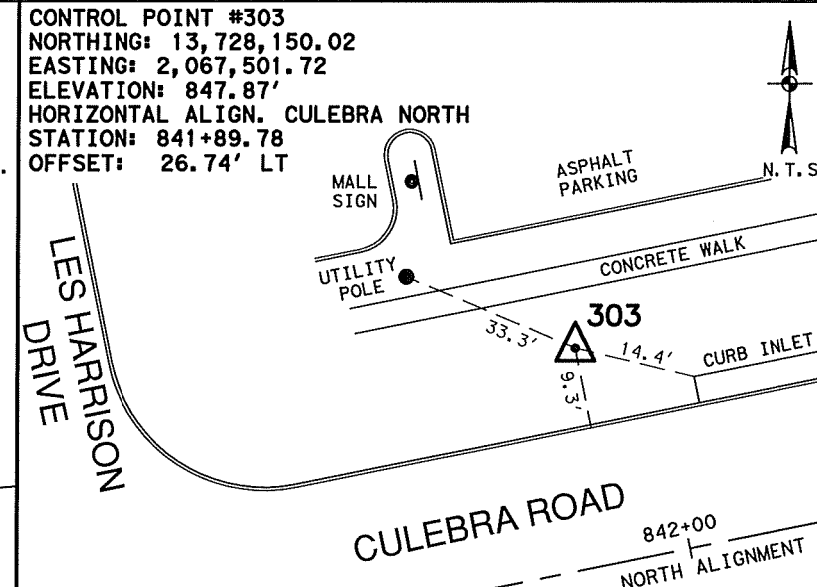
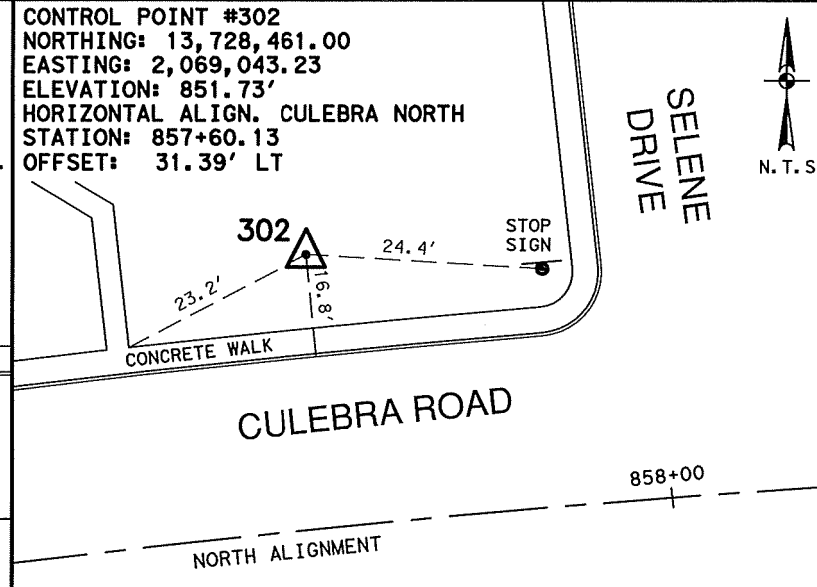
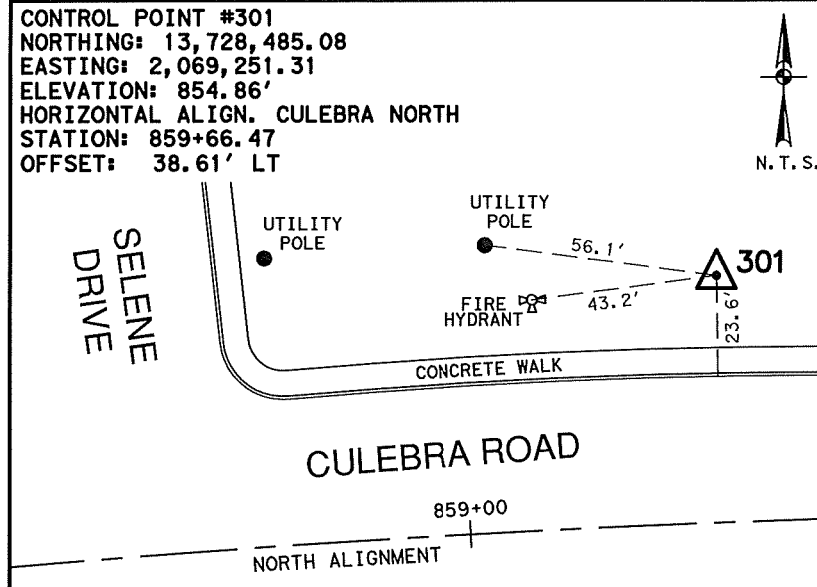
**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPPE FIRM REGISTRATION #470 | TBPPLS FIRM REGISTRATION #10028800

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FM 471  
CULEBRA ROAD  
HORIZONTAL AND  
VERTICAL  
CONTROL SHEETS

SHEET 1 OF 2

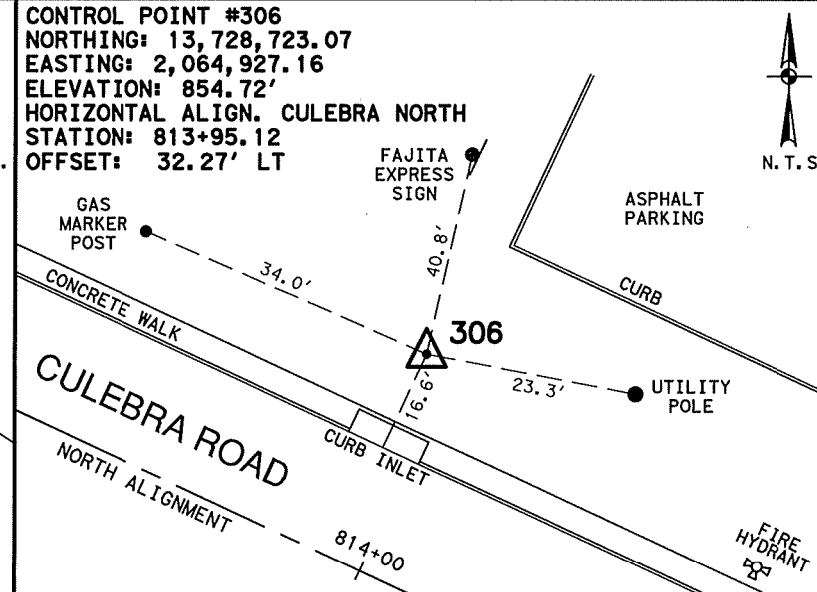
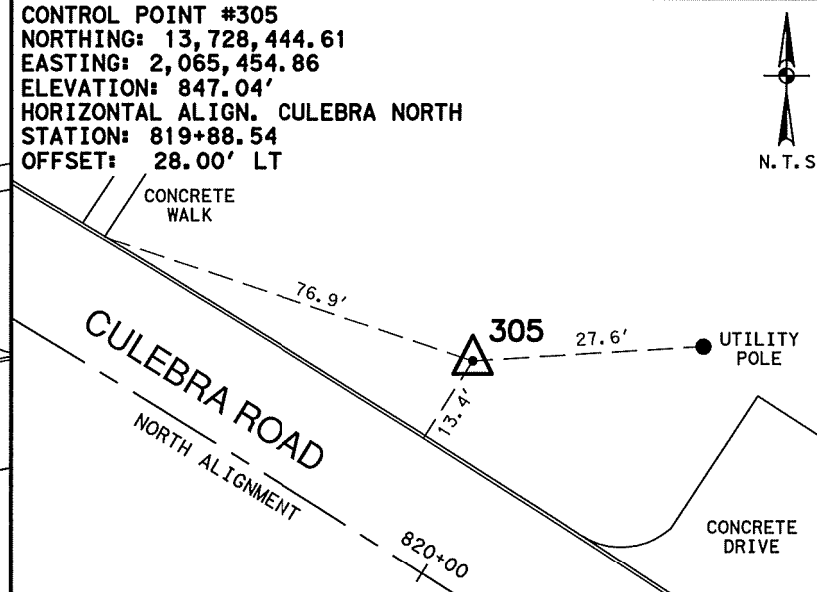
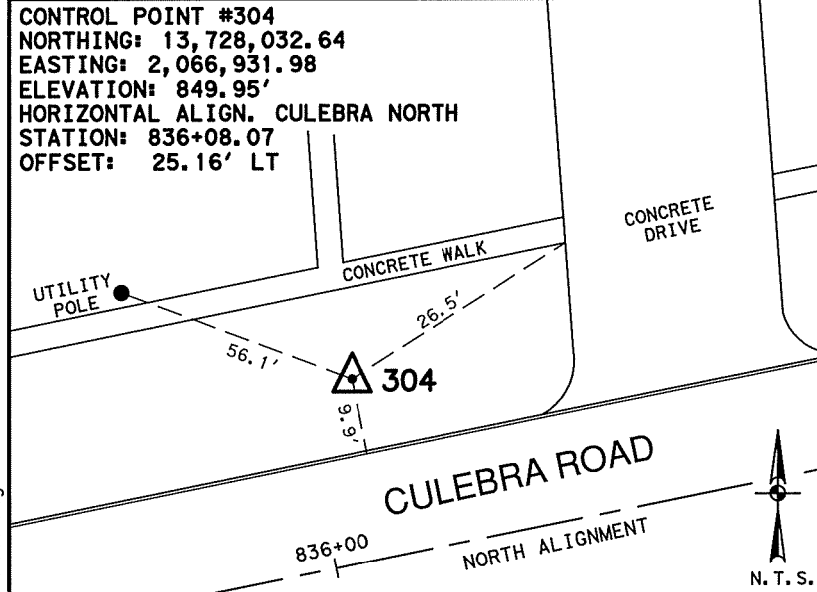
DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
	6	TEXAS		FM 471
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
	15	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				126



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 160 FEET EAST FROM THE INTERSECTION OF CULEBRA ROAD AND SELENE DRIVE, ON THE NORTH SIDE OF CULEBRA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 45 FEET WEST FROM THE INTERSECTION OF CULEBRA ROAD AND SELENE DRIVE, ON THE NORTH SIDE OF CULEBRA ROAD

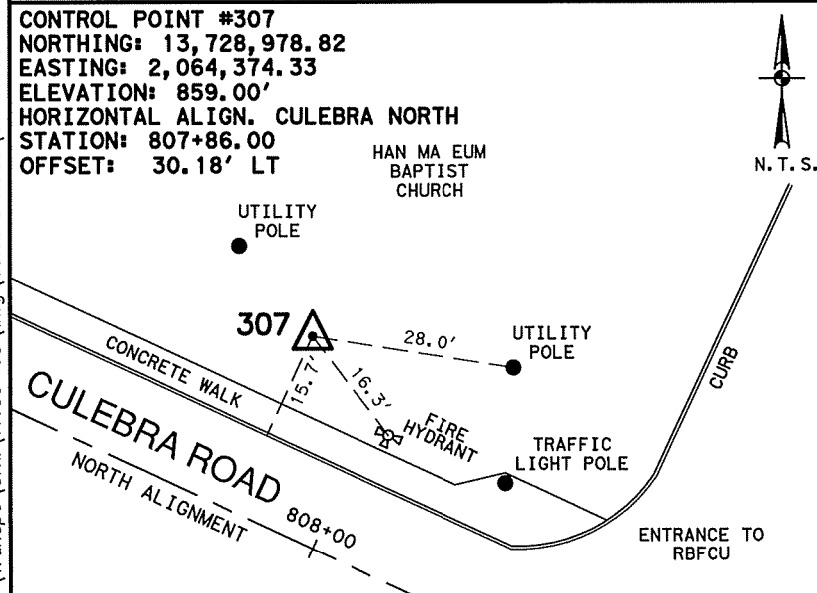
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 257 FEET EAST FROM THE INTERSECTION OF CULEBRA ROAD AND LES HARRISON DRIVE, ON THE NORTH SIDE OF CULEBRA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF CULEBRA ROAD AND EASTERLING, ON THE NORTH SIDE OF CULEBRA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 470 FEET EAST FROM THE INTERSECTION OF CULEBRA ROAD AND MOUNTAIN VIEW, ON THE NORTH SIDE OF CULEBRA ROAD

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 525 FEET EAST FROM THE INTERSECTION OF CULEBRA ROAD AND ROGERS ROAD, ON THE NORTH SIDE OF CULEBRA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 80 FEET WEST FROM THE INTERSECTION OF CULEBRA ROAD AND ROGERS ROAD, ON THE NORTH SIDE OF CULEBRA ROAD

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



3/07/2019

**LEGEND**  
 △ CONTROL POINT  
 --- ALIGNMENT  
 N.T.S. NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

FM 471  
 CULEBRA ROAD  
 HORIZONTAL AND VERTICAL CONTROL SHEETS

SHEET 2 OF 2

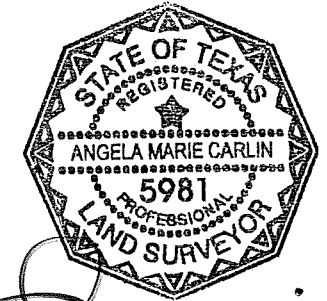
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK 2304	6	TEXAS		FM 471		
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK 2304	15	BEXAR	0915	12	576	127

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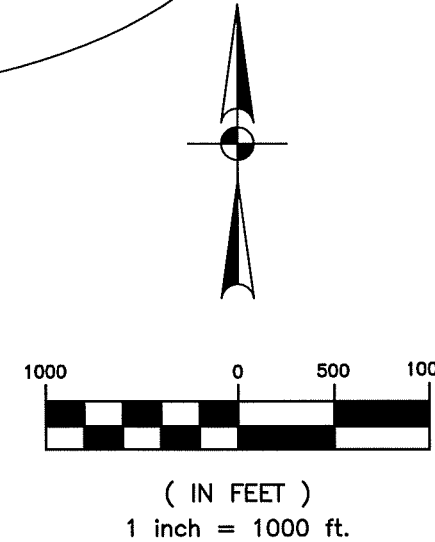
NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



*Angela Marie Carlin*  
 3/21/2019

**LEGEND**

- CONTROL POINT
- ALIGNMENT
- N.T.S. NOT TO SCALE



REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

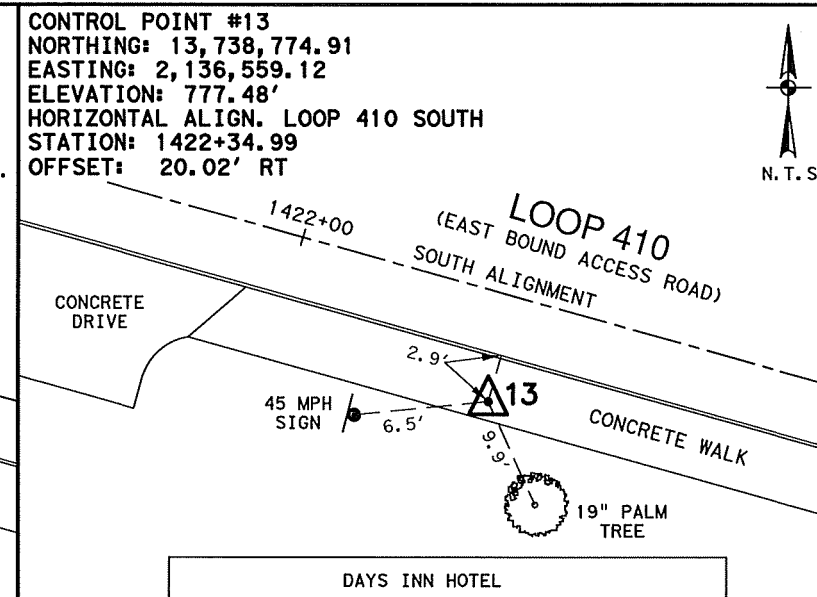
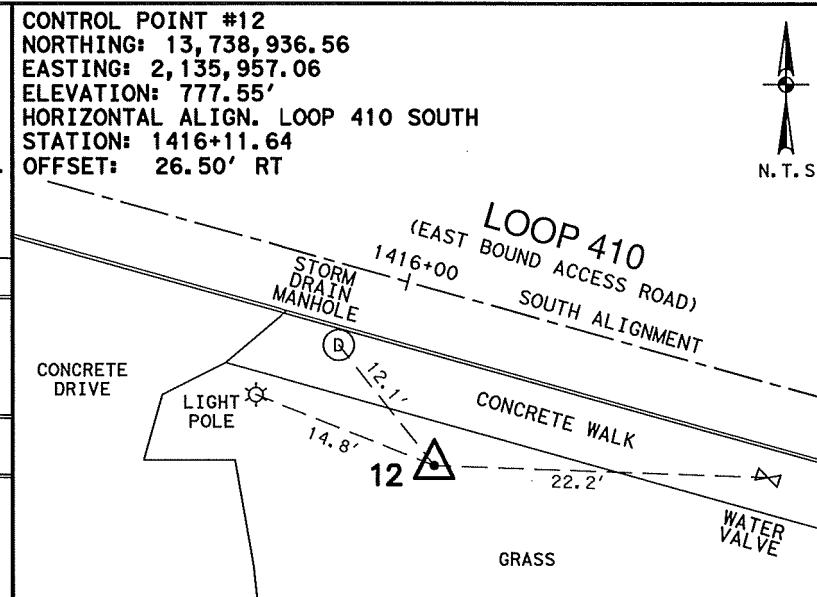
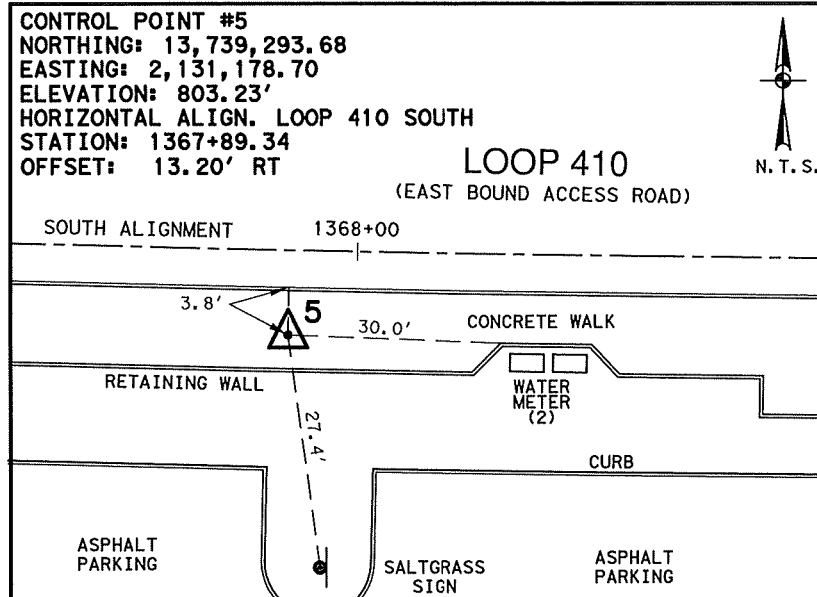
Texas Department of Transportation  
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**LOOP 410 B  
 HORIZONTAL AND  
 VERTICAL  
 CONTROL SHEETS**

SHEET 1 OF 4

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN	6	TEXAS		LOOP 410		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0915	12	576	128

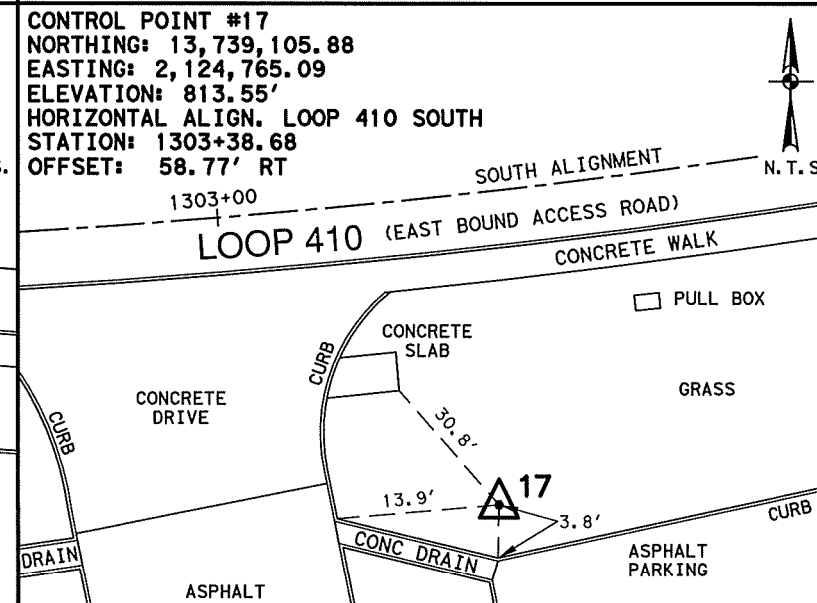
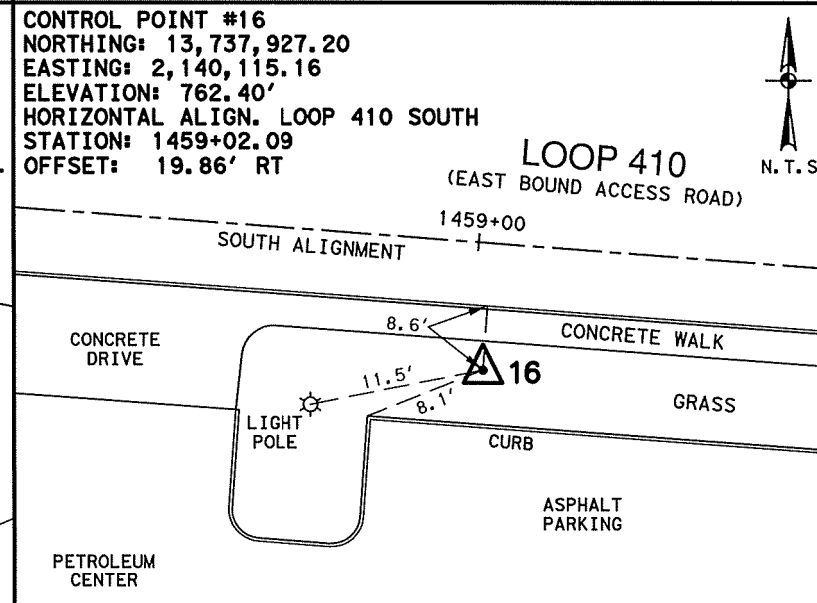
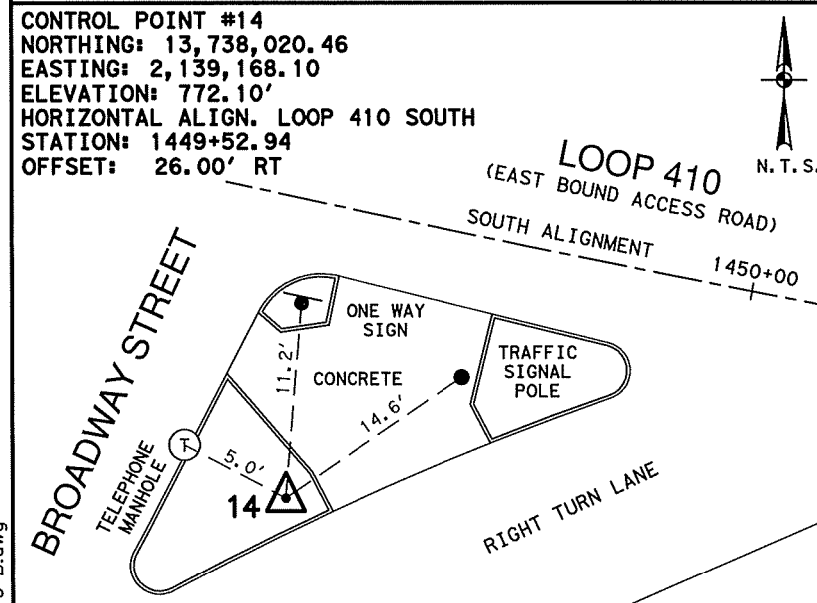




MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 675 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND MCCULLOUGH AVENUE, ON THE SOUTH SIDE OF LOOP 410.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 790 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND AIRPORT BOULEVARD, ON THE SOUTH SIDE OF LOOP 410

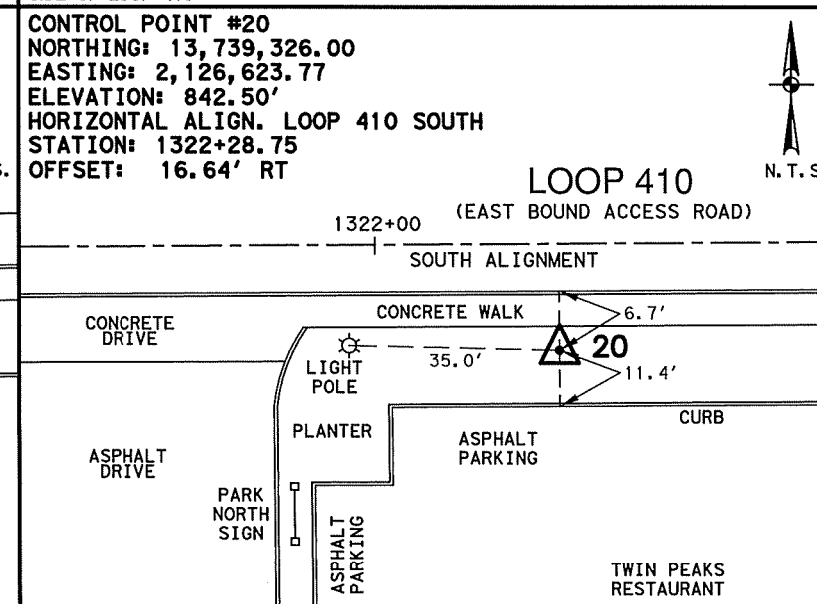
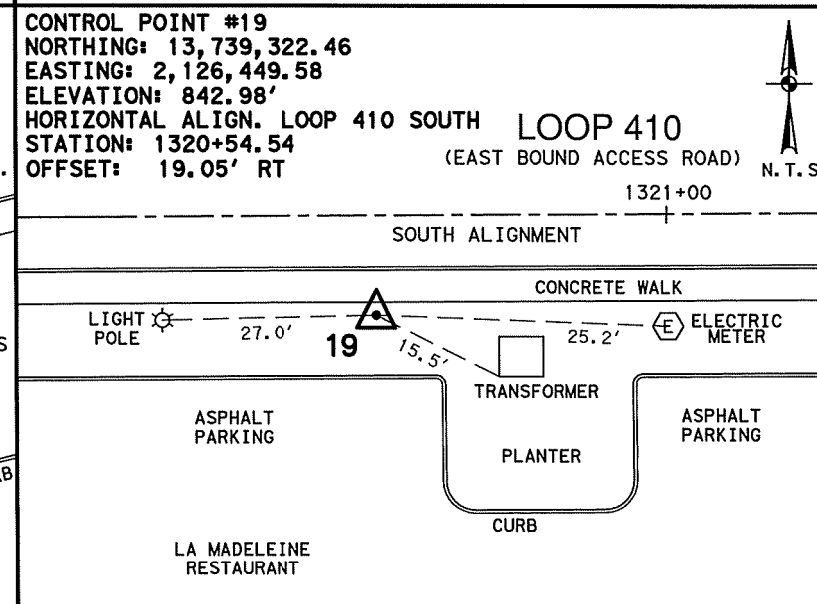
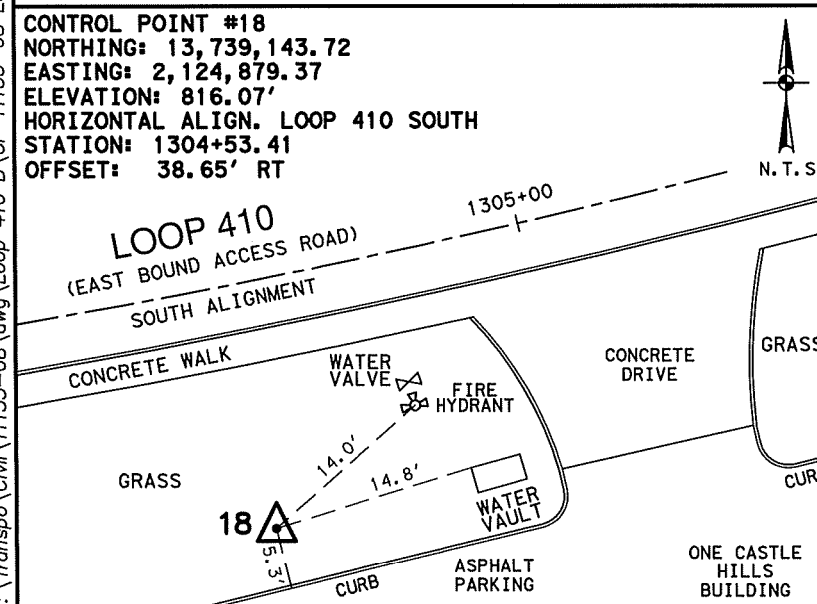
MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 1410 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND AIRPORT BOULEVARD, ON THE SOUTH SIDE OF LOOP 410.



MAG NAIL WITH SHINER, LOCATED AT THE INTERSECTION OF LOOP 410 AND BROADWAY, ON THE SOUTH SIDE OF LOOP 410.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 555 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND CROWNHILL BOULEVARD, ON THE SOUTH SIDE OF LOOP 410

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 980 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE SOUTH SIDE OF LOOP 410



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 865 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE SOUTH SIDE OF LOOP 410

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 735 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE SOUTH SIDE OF LOOP 410

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 910 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE SOUTH SIDE OF LOOP 410

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



**LEGEND**  
 △ CONTROL POINT  
 --- ALIGNMENT  
 N.T.S. NOT TO SCALE

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

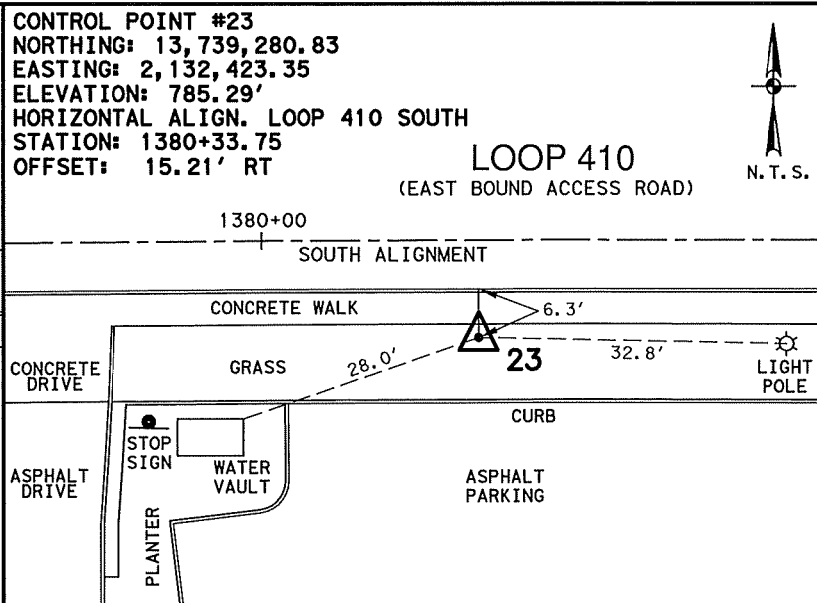
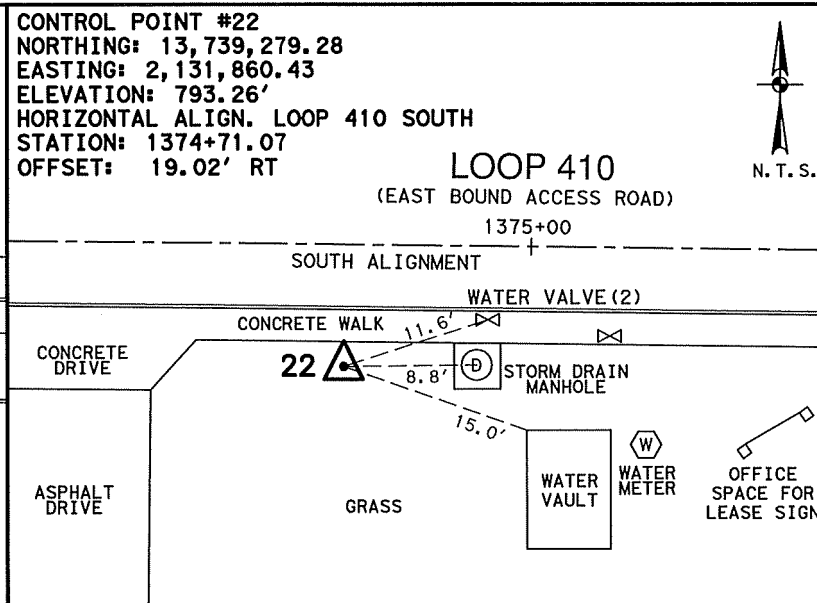
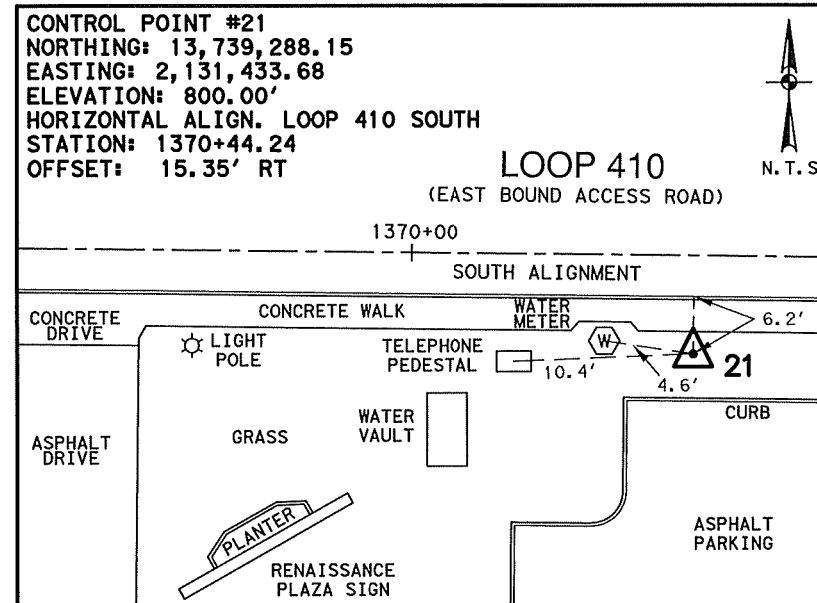
Texas Department of Transportation  
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**LOOP 410 B  
 HORIZONTAL AND VERTICAL CONTROL SHEETS**

SHEET 2 OF 4

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
DWG	6	TEXAS		LOOP 410
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.
DWG	15	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				129

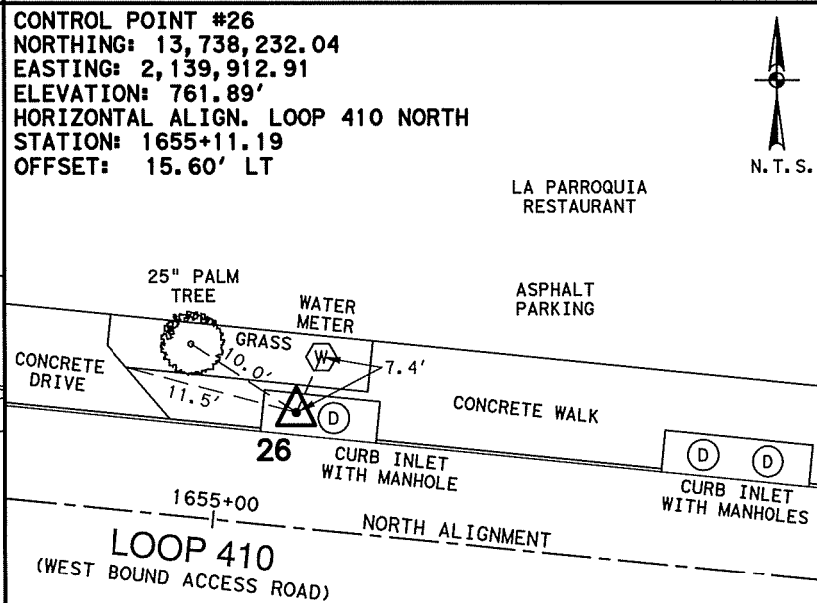
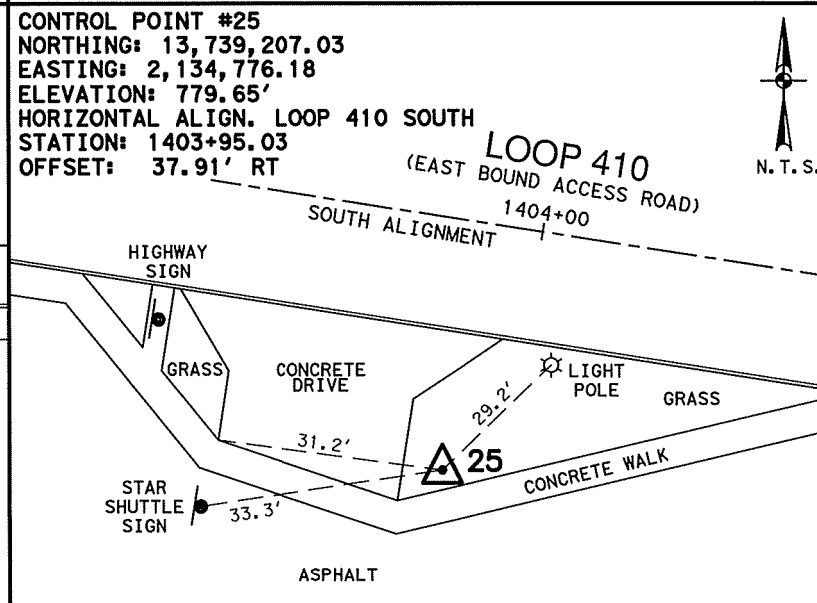
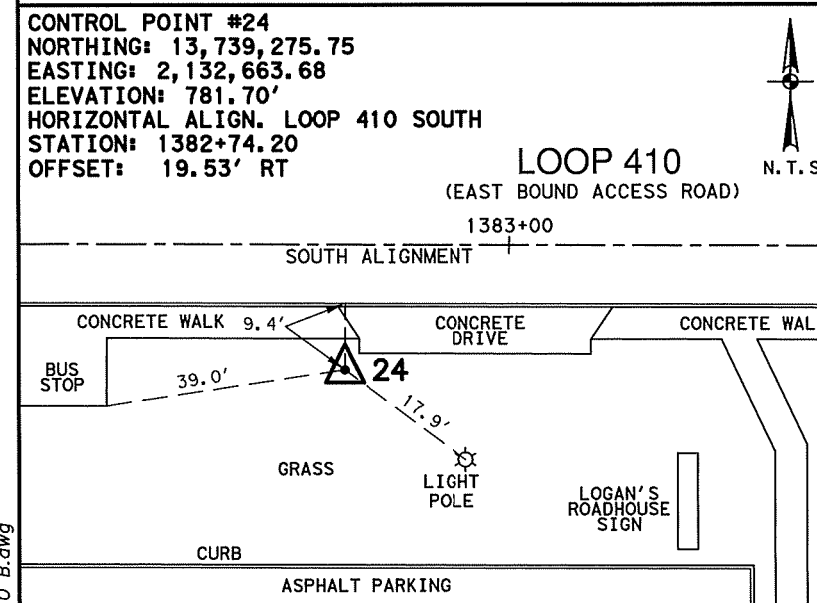
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1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 930 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND MCCULLOUGH AVENUE, ON THE SOUTH SIDE OF LOOP 410.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 1,355 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND MCCULLOUGH AVENUE, ON THE SOUTH SIDE OF LOOP 410.

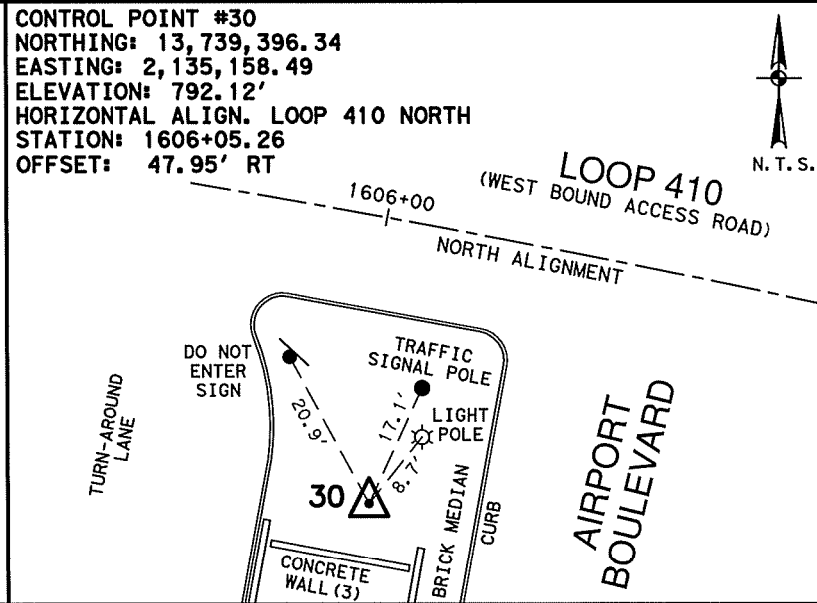
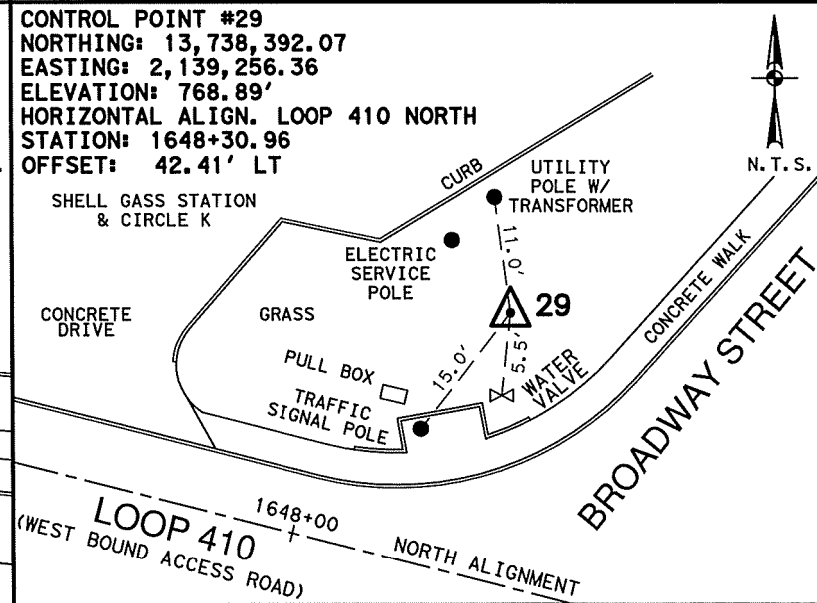
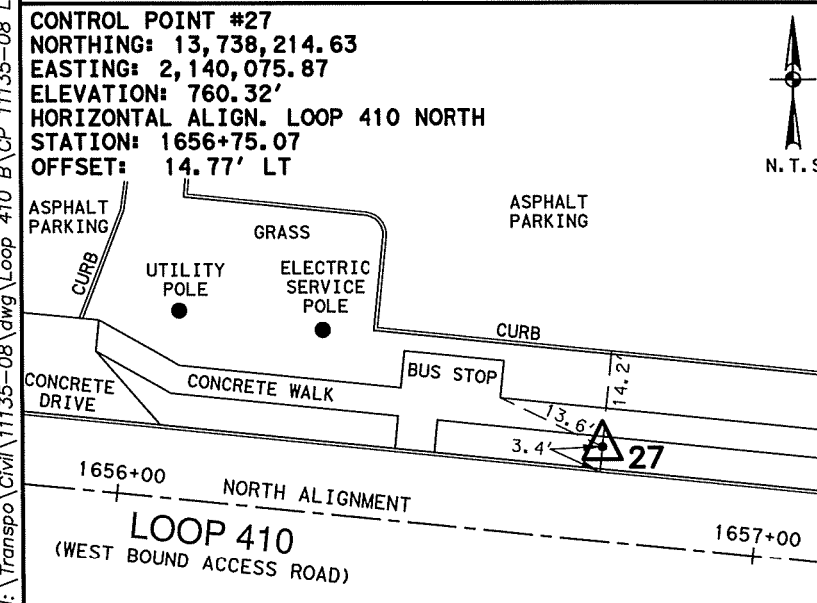
1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 530 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND JONES MALTSBERGER ROAD, ON THE SOUTH SIDE OF LOOP 410.



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 290 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND JONES MALTSBERGER ROAD, ON THE SOUTH SIDE OF LOOP 410.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 425 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND AIRPORT BOULEVARD, ON THE SOUTH SIDE OF LOOP 410.

MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 620 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND BROADWAY STREET, ON THE NORTH SIDE OF LOOP 410.



1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 785 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND BROADWAY STREET, ON THE NORTH SIDE OF LOOP 410.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF LOOP 410 AND BROADWAY STREET, ON THE NORTH SIDE OF LOOP 410.

MAG NAIL WITH SHINER, LOCATED AT THE INTERSECTION OF LOOP 410 AND AIRPORT BOULEVARD, ON THE NORTH SIDE OF LOOP 410.

NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.



3/21/2019

**LEGEND**  
 △ CONTROL POINT  
 --- ALIGNMENT  
 N.T.S. NOT TO SCALE

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

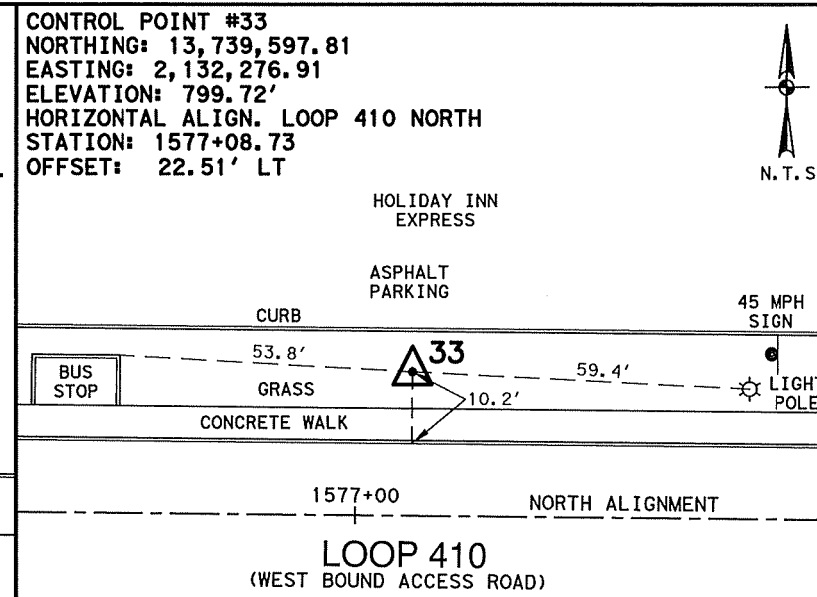
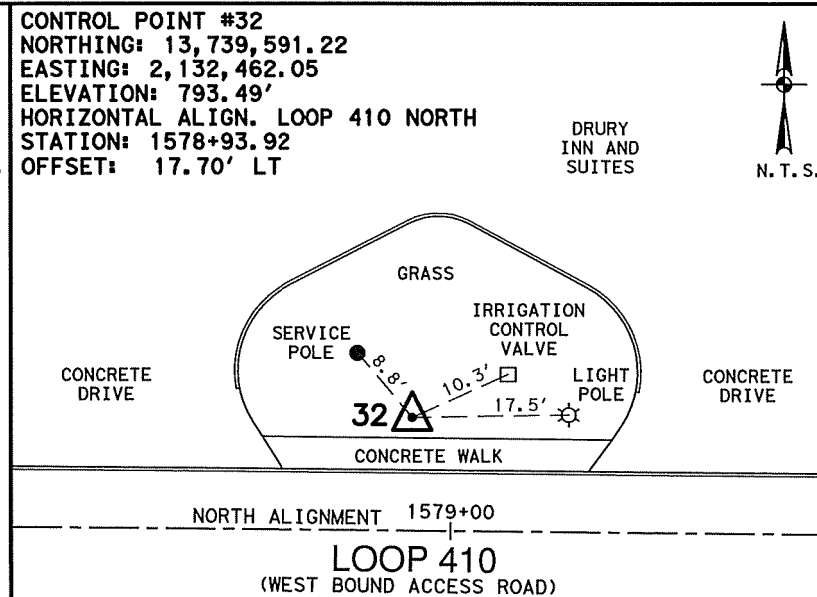
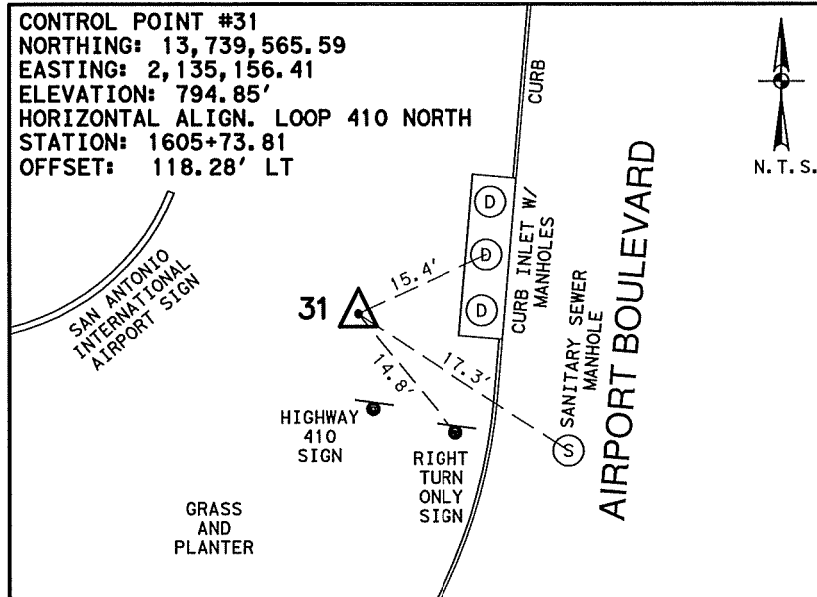
Texas Department of Transportation  
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LOOP 410 B  
 HORIZONTAL AND VERTICAL CONTROL SHEETS

SHEET 3 OF 4

CDN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		LOOP 410
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0915	12
DWG				576
				130

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NOTES:  
 1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR OF 1.00017 APPLIED, DERIVED BY AVERAGING MULTIPLE RTK OBSERVATIONS, AND VERIFIED BY OBSERVING TxDOT MONUMENTS S0150014, Z0150603 AND Z0152109.  
 2. ELEVATIONS SHOWN ARE BASED ON NAVD88 (GEOID 12A), OBTAINED BY RTK METHODS AND LEVELING.

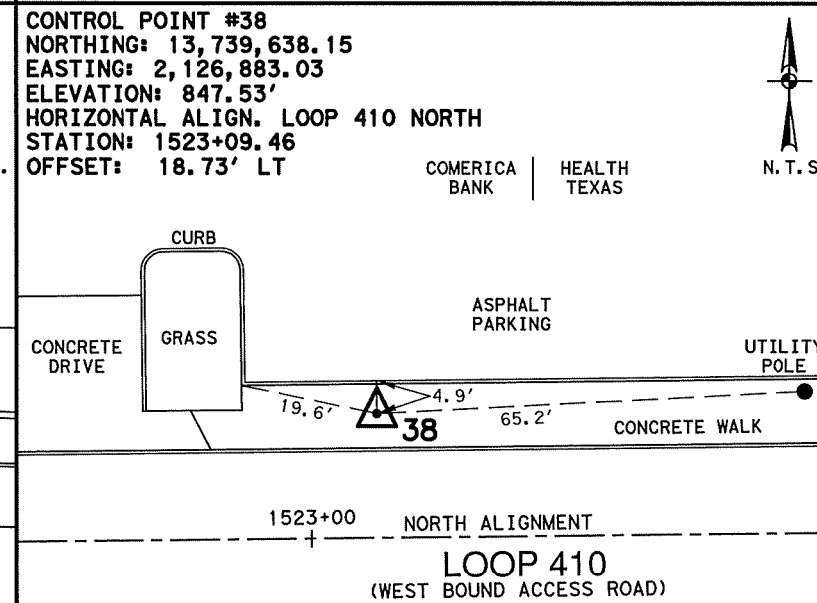
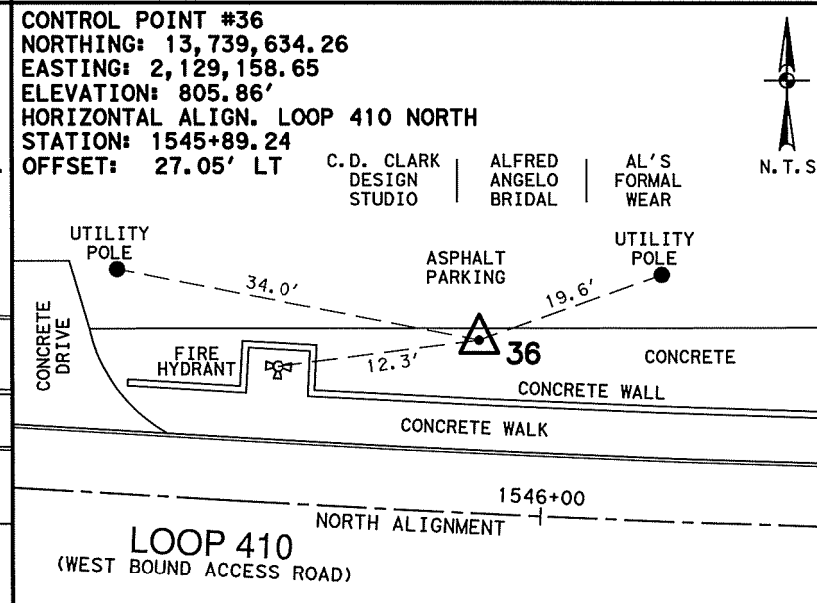
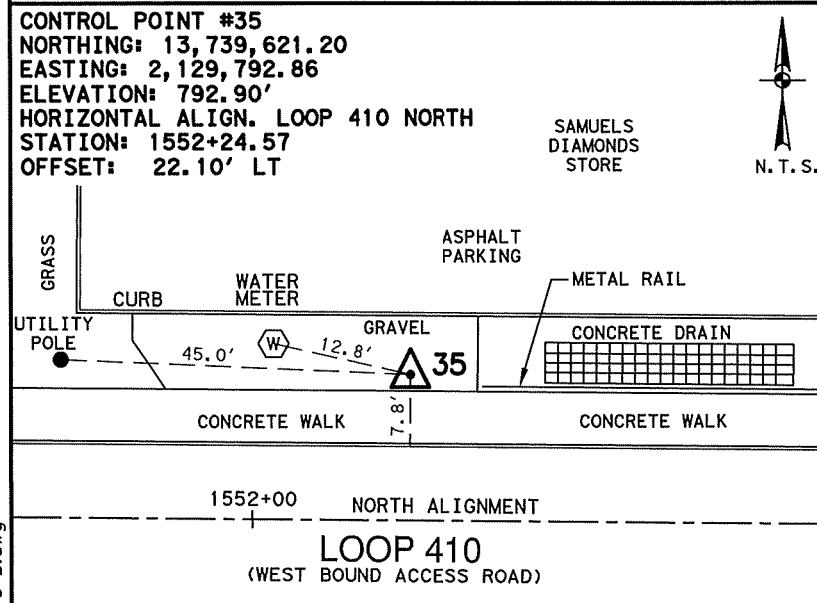


3/21/2019

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED AT THE INTERSECTION OF LOOP 410 AND AIRPORT BOULEVARD, ON THE NORTH SIDE OF LOOP 410.

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 435 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND JONES MALTSBERGER ROAD, ON THE NORTH SIDE OF LOOP 410

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 175 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND MERTZ DRIVE, ON THE NORTH SIDE OF LOOP 410

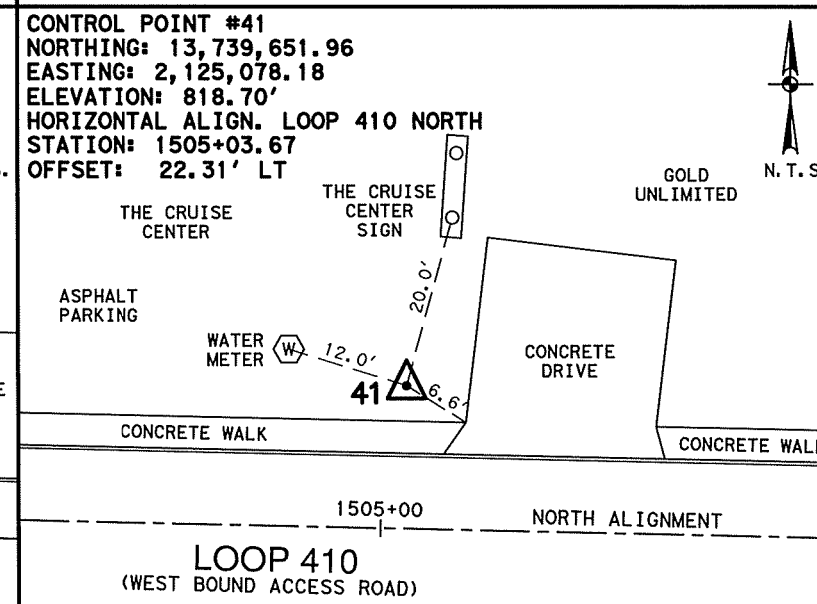
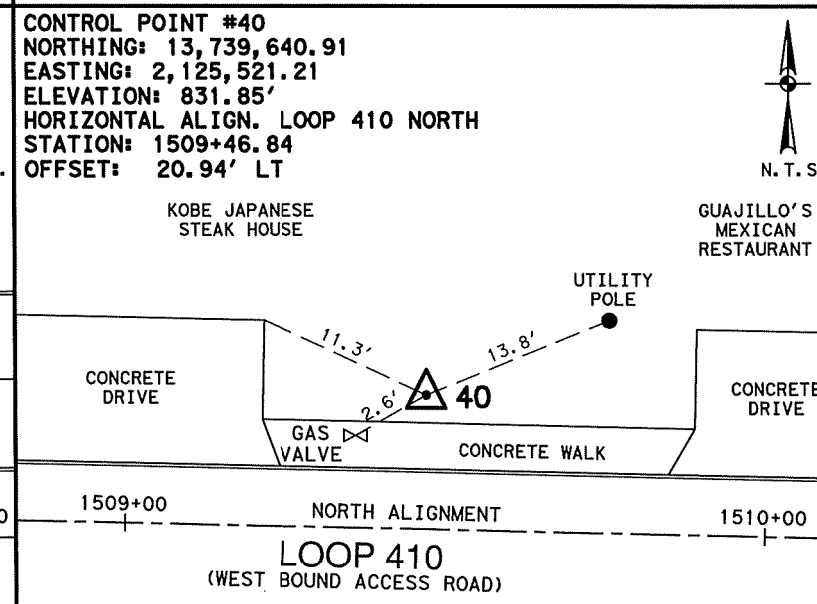
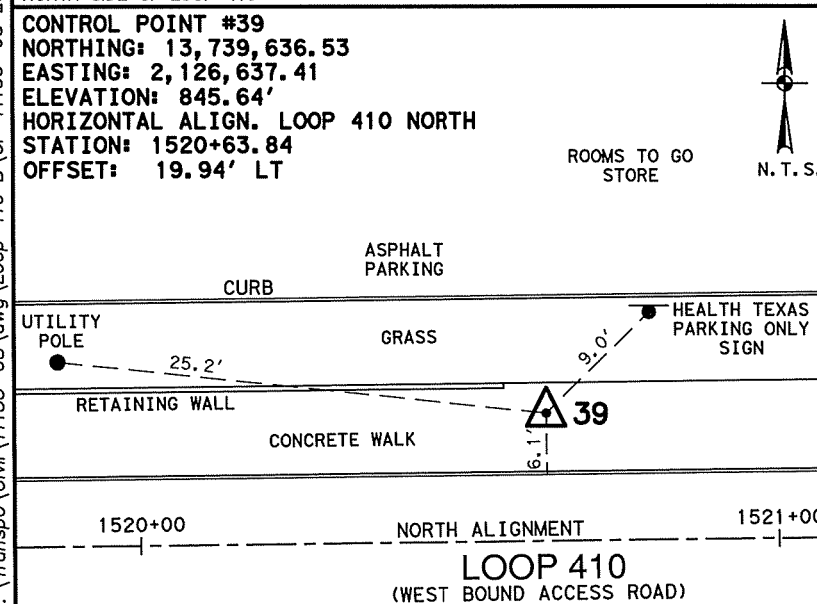


LEGEND  
 △ CONTROL POINT  
 --- ALIGNMENT  
 N.T.S. NOT TO SCALE

1/2 INCH IRON ROD WITH RED CAP MARKED "TRAVERSE", LOCATED APPROXIMATELY 710 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND MCCULLOUGH AVENUE, ON THE NORTH SIDE OF LOOP 410

MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 1,050 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND SAN PEDRO AVENUE, ON THE NORTH SIDE OF LOOP 410.

MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 1,225 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND SAN PEDRO AVENUE, ON THE NORTH SIDE OF LOOP 410.



MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 840 FEET EAST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE NORTH SIDE OF LOOP 410.

MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 275 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE NORTH SIDE OF LOOP 410.

MAG NAIL WITH SHINER, LOCATED APPROXIMATELY 720 FEET WEST FROM THE INTERSECTION OF LOOP 410 AND BLANCO ROAD, ON THE NORTH SIDE OF LOOP 410.

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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LOOP 410 B  
 HORIZONTAL AND VERTICAL CONTROL SHEETS

SHEET 4 OF 4

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN	6	TEXAS		LOOP 410
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG	15	BEJAR	0915	12
				JOB NO.
				576
				SHEET NO.
				131

File: N:\Transpo\Civil\11135-08\dwg\Loop 410 B\CP 11135-08 Loop 410 B.dwg

RIGSBY EB HORIZONTAL ALIGNMENT

Beginning chain RIG EB description

Point RIG01 N 13,695,500.07 E 2,152,682.43 Sta 166+24.52

Course from PT RIG01 to PC RIG C3 N 88° 23' 16" E Dist 1,677.87

Curve Data

Curve RIG C3  
 P.I. Station 186+74.82 N 13,695,557.75 E 2,154,731.93  
 Delta = 16° 56' 47" (RT)  
 Degree = 2° 17' 31"  
 Tangent = 372.43  
 Length = 739.42  
 Radius = 2,500.00  
 External = 27.59  
 Long Chord = 736.73  
 Mid. Ord. = 27.29  
 P.C. Station 183+02.39 N 13,695,547.27 E 2,154,359.64  
 P.T. Station 190+41.82 N 13,695,459.26 E 2,155,091.10  
 C.C. N 13,693,048.26 E 2,154,429.98  
 Back = N 88° 23' 16" E  
 Ahead = S 74° 39' 57" E  
 Chord Bear = S 83° 08' 20" E

Course from PT RIG C3 to PC RIG C4 S 74° 39' 57" E Dist 721.70

Curve Data

Curve RIG C4  
 P.I. Station 201+06.64 N 13,695,177.67 E 2,156,118.01  
 Delta = 12° 57' 51" (LT)  
 Degree = 1° 53' 50"  
 Tangent = 343.13  
 Length = 683.33  
 Radius = 3,020.00  
 External = 19.43  
 Long Chord = 681.87  
 Mid. Ord. = 19.31  
 P.C. Station 197+63.51 N 13,695,268.41 E 2,155,787.10  
 P.T. Station 204+46.84 N 13,695,163.48 E 2,156,460.85  
 C.C. N 13,698,180.90 E 2,156,585.74  
 Back = S 74° 39' 57" E  
 Ahead = S 87° 37' 48" E  
 Chord Bear = S 81° 08' 52" E

Course from PT RIG C4 to RIG06 S 87° 37' 48" E Dist 363.40

Point RIG06 N 13,695,148.45 E 2,156,823.94 Sta 208+10.24

Course from RIG06 to RIG07 S 89° 38' 50" E Dist 1,626.03

Point RIG07 N 13,695,138.44 E 2,158,449.94 Sta 224+36.27

Course from RIG07 to RIG08 N 89° 45' 25" E Dist 672.92

Point RIG08 N 13,695,141.29 E 2,159,122.86 Sta 231+09.19

Course from RIG08 to RIG09 N 89° 49' 44" E Dist 5,361.43

Point RIG09 N 13,695,157.31 E 2,164,484.26 Sta 284+70.62

Ending chain RIG EB description

RIGSBY WB HORIZONTAL ALIGNMENT

Beginning chain RIG WB description

Point RIG10 N 13,695,206.23 E 2,164,484.11 Sta 500+00.00

Course from RIG10 to RIG11 S 89° 49' 44" W Dist 5,361.44

Point RIG11 N 13,695,190.22 E 2,159,122.70 Sta 553+61.44

Course from RIG11 to RIG12 S 88° 38' 38" W Dist 672.64

Point RIG12 N 13,695,174.30 E 2,158,450.25 Sta 560+34.08

Course from RIG12 to RIG13 N 89° 38' 50" W Dist 1,626.59

Point RIG13 N 13,695,184.32 E 2,156,823.69 Sta 576+60.67

Course from RIG13 to PC RIG C5 N 88° 17' 57" W Dist 327.42

Curve Data

Curve RIG C5  
 P.I. Station 583+45.51 N 13,695,204.64 E 2,156,139.15  
 Delta = 13° 38' 00" (RT)  
 Degree = 1° 54' 58"  
 Tangent = 357.42  
 Length = 711.46  
 Radius = 2,990.00  
 External = 21.29  
 Long Chord = 709.78  
 Mid. Ord. = 21.14  
 P.C. Station 579+88.09 N 13,695,194.03 E 2,156,496.41  
 P.T. Station 586+99.55 N 13,695,299.16 E 2,155,794.46  
 C.C. N 13,698,182.72 E 2,156,585.16  
 Back = N 88° 17' 57" W  
 Ahead = N 74° 39' 57" W  
 Chord Bear = N 81° 28' 57" W

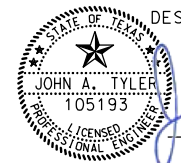
Course from PT RIG C5 to PC RIG C6 N 74° 39' 57" W Dist 740.79

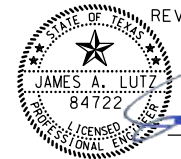
Curve Data

Curve RIG C6  
 P.I. Station 598+14.85 N 13,695,594.10 E 2,154,718.86  
 Delta = 16° 56' 47" (LT)  
 Degree = 2° 16' 45"  
 Tangent = 374.52  
 Length = 743.56  
 Radius = 2,514.00  
 External = 27.74  
 Long Chord = 740.86  
 Mid. Ord. = 27.44  
 P.C. Station 594+40.34 N 13,695,495.06 E 2,155,080.04  
 P.T. Station 601+83.90 N 13,695,583.56 E 2,154,344.49  
 C.C. N 13,693,070.56 E 2,154,415.22  
 Back = N 74° 39' 57" W  
 Ahead = S 88° 23' 16" W  
 Chord Bear = N 83° 08' 20" W

Course from PT RIG C6 to PC RIG C7 S 88° 23' 16" W Dist 1,672.13

Ending chain RIG WB description

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



HORIZONTAL ALIGNMENT DATA SHEET

SHEET 1 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				132

Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\General\1113507\*HALN\*Data01.dgn

SW MILITARY A EB HORIZONTAL ALIGNMENT

Beginning chain SWMILITARYA\_1 description

Point RDCL1321 N 13,685,129.7135 E 2,094,984.8461 Sta 360+00.00

Course from RDCL1321 to PC RDCL132\_3 N 56° 14' 32.57" W Dist 3,475.0093

Curve Data  
\*-----\*

Curve RDCL132\_3  
 P.I. Station = 402+57.26 N 13,687,495.3920 E 2,091,445.3771  
 Delta = 30° 11' 29.79" (RT)  
 Degree = 1° 58' 32.58"  
 Tangent = 782.2522  
 Length = 1,528.1346  
 Radius = 2,900.0000  
 External = 103.6509  
 Long Chord = 1,510.5160  
 Mid. Ord. = 100.0740  
 P.C. Station = 394+75.01 N 13,687,060.7095 E 2,092,095.7382  
 P.T. Station = 410+03.14 N 13,688,198.1714 E 2,091,101.8374  
 C.C. = N 13,689,471.7571 E 2,093,707.2125  
 Back = N 56° 14' 32.57" W  
 Ahead = N 26° 03' 02.78" W  
 Chord Bear = N 41° 08' 47.68" W

Course from PT RDCL132\_3 to RDCL1325 N 26° 03' 02.78" W Dist 282.7376

Point RDCL1325 N 13,688,452.1844 E 2,090,977.6682 Sta 412+85.88

Ending chain SWMILITARYA\_1 description

SW MILITARY A WB HORIZONTAL ALIGNMENT

Beginning chain SWMILITARYA\_2 description

Point RDCL1331 N 13,685,084.1796 E 2,094,944.8920 Sta 420+00.00

Course from RDCL1331 to PC RDCL133\_3 N 56° 15' 11.10" W Dist 3,460.2931

Curve Data  
\*-----\*

Curve RDCL133\_3  
 P.I. Station = 462+98.55 N 13,687,472.1351 E 2,091,370.6476  
 Delta = 31° 13' 22.21" (RT)  
 Degree = 1° 54' 35.49"  
 Tangent = 838.2595  
 Length = 1,634.8238  
 Radius = 3,000.0000  
 External = 114.9124  
 Long Chord = 1,614.6705  
 Mid. Ord. = 110.6731  
 P.C. Station = 454+60.29 N 13,687,006.4606 E 2,092,067.6600  
 P.T. Station = 470+95.12 N 13,688,231.6691 E 2,091,015.9828  
 C.C. = N 13,689,500.9591 E 2,093,734.2364  
 Back = N 56° 15' 11.10" W  
 Ahead = N 25° 01' 48.89" W  
 Chord Bear = N 40° 38' 30.00" W

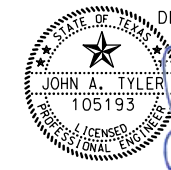
Course from PT RDCL133\_3 to RDCL1335 N 25° 01' 48.89" W Dist 207.2546

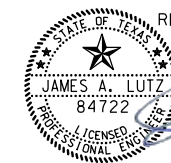
Point RDCL1335 N 13,688,419.4594 E 2,090,928.2940 Sta 473+02.37

Ending chain SWMILITARYA\_2 description

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\design\Civil\General\11113507\HALN>Data01.dgn

DESIGN  
  
 JOHN A. TYLER, P.E. 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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HORIZONTAL ALIGNMENT  
 DATA SHEET

SHEET 2 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	133

SW MILITARY B EB HORIZONTAL ALIGNMENT

SW MILITARY B WB HORIZONTAL ALIGNMENT

Beginning chain SWMILITARYB\_2 description

Beginning chain SWMILITARYB\_1 description

Curve Data  
\*-----\*

Curve RDCL134\_1  
P.I. Station = 505+24.09 N 13,680,646.4378 E 2,106,436.5662  
Delta = 21° 54' 57.78" (LT)  
Degree = 2° 09' 43.58"  
Tangent = 513.0933  
Length = 1,013.6441  
Radius = 2,650.0000  
External = 49.2156  
Long Chord = 1,007.4759  
Mid. Ord. = 48.3182  
P.C. Station = 500+11.00 N 13,680,885.2809 E 2,105,982.4530  
P.T. Station = 510+24.64 N 13,680,594.3522 E 2,106,947.0090  
C.C. = N 13,683,230.6628 E 2,107,216.0185  
Back = S 62° 15' 27.53" E  
Ahead = S 84° 10' 25.31" E  
Chord Bear = S 73° 12' 56.42" E

Curve Data  
\*-----\*

Curve RDCL10\_1  
P.I. Station = 735+24.90 N 13,680,705.8502 E 2,106,435.2943  
Delta = 22° 26' 00.03" (LT)  
Degree = 2° 02' 46.60"  
Tangent = 555.2616  
Length = 1,096.2998  
Radius = 2,800.0000  
External = 54.5254  
Long Chord = 1,089.3106  
Mid. Ord. = 53.4839  
P.C. Station = 729+69.64 N 13,680,968.6110 E 2,105,946.1397  
P.T. Station = 740+65.94 N 13,680,649.6394 E 2,106,987.7033  
C.C. = N 13,683,435.2552 E 2,107,271.1555  
Back = S 61° 45' 23.35" E  
Ahead = S 84° 11' 23.38" E  
Chord Bear = S 72° 58' 23.37" E

Course from PT RDCL134\_1 to PC RDCL134\_4 S 84° 10' 25.31" E Dist 7,634.9877

Course from PT RDCL10\_1 to PC RDCL10\_4 S 84° 11' 23.38" E Dist 7,618.1629

Curve Data  
\*-----\*

Curve RDCL134\_4  
P.I. Station = 589+39.32 N 13,679,790.9094 E 2,114,820.7999  
Delta = 6° 09' 27.09" (LT)  
Degree = 1° 06' 06.63"  
Tangent = 279.6888  
Length = 558.8391  
Radius = 5,200.0000  
External = 7.5163  
Long Chord = 558.5702  
Mid. Ord. = 7.5054  
P.C. Station = 586+59.63 N 13,679,819.3015 E 2,114,542.5559  
P.T. Station = 592+18.47 N 13,679,792.5262 E 2,115,100.4840  
C.C. = N 13,684,992.4393 E 2,115,070.4236  
Back = S 84° 10' 25.31" E  
Ahead = N 89° 40' 07.61" E  
Chord Bear = S 87° 15' 08.85" E

Curve Data  
\*-----\*

Curve RDCL10\_4  
P.I. Station = 819+79.52 N 13,679,848.5242 E 2,114,860.6327  
Delta = 6° 08' 56.86" (LT)  
Degree = 1° 02' 30.27"  
Tangent = 295.4205  
Length = 590.2738  
Radius = 5,500.0000  
External = 7.9282  
Long Chord = 589.9906  
Mid. Ord. = 7.9168  
P.C. Station = 816+84.10 N 13,679,878.4305 E 2,114,566.7298  
P.T. Station = 822+74.38 N 13,679,850.2719 E 2,115,156.0480  
C.C. = N 13,685,350.1757 E 2,115,123.5109  
Back = S 84° 11' 23.38" E  
Ahead = N 89° 39' 39.76" E  
Chord Bear = S 87° 15' 51.81" E

Course from PT RDCL134\_4 to RDCL1346 N 89° 40' 07.61" E Dist 13,443.1671

Course from PT RDCL10\_4 to RDCL106 N 89° 39' 39.76" E Dist 13,382.8280

Point RDCL1346 N 13,679,870.2390 E 2,128,543.4265 Sta 726+61.64

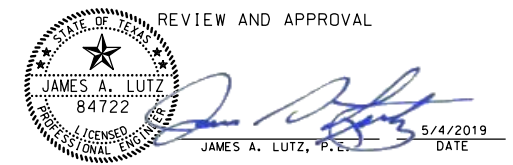
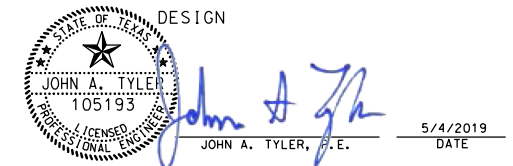
Point RDCL106 N 13,679,929.4426 E 2,128,538.6419 Sta 956+57.20

Ending chain SWMILITARYB\_2 description

Ending chain SWMILITARYB\_1 description

Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\General\1113507\*HALN\*Data01.dgn



REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



HORIZONTAL ALIGNMENT DATA SHEET

SHEET 3 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	134

# MILITARY DR EB HORIZONTAL ALIGNMENT

Beginning chain MILITARYDR\_1 description

Point RDCL1351 N 13,678,112.3569 E 2,141,022.2358 Sta 980+42.80

Course from RDCL1351 to PC RDCL135\_3 N 80° 02' 56.85" E Dist 80.9468

Curve Data

Curve RDCL135\_3  
 P.I. Station = 987+17.26 N 13,678,228.9067 E 2,141,686.5531  
 Delta = 12° 05' 59.41" (RT)  
 Degree = 1° 01' 23.30"  
 Tangent = 593.5169  
 Length = 1,182.6190  
 Radius = 5,600.0000  
 External = 31.3642  
 Long Chord = 1,180.4226  
 Mid. Ord. = 31.1895  
 P.C. Station = 981+23.74 N 13,678,126.3448 E 2,141,101.9649  
 P.T. Station = 993+06.36 N 13,678,206.6513 E 2,142,279.6527  
 C.C. = N 13,672,610.5897 E 2,142,069.6659  
 Back = N 80° 02' 56.85" E  
 Ahead = S 87° 51' 03.74" E  
 Chord Bear = N 86° 05' 56.55" E

Course from PT RDCL135\_3 to PC RDCL135\_6 S 87° 51' 03.74" E Dist 1,242.5952

Curve Data

Curve RDCL135\_6  
 P.I. Station = 1008+14.55 N 13,678,150.0979 E 2,143,786.7780  
 Delta = 0° 28' 31.93" (RT)  
 Degree = 0° 05' 22.29"  
 Tangent = 265.5908  
 Length = 531.1785  
 Radius = 64,000.0000  
 External = 0.5511  
 Long Chord = 531.1770  
 Mid. Ord. = 0.5511  
 P.C. Station = 1005+48.96 N 13,678,160.0569 E 2,143,521.3740  
 P.T. Station = 1010+80.14 N 13,678,137.9364 E 2,144,052.0902  
 C.C. = N 13,614,205.0670 E 2,141,121.5256  
 Back = S 87° 51' 03.74" E  
 Ahead = S 87° 22' 31.82" E  
 Chord Bear = S 87° 36' 47.78" E

Course from PT RDCL135\_6 to PC RDCL135\_9 S 87° 22' 31.82" E Dist 60.6668

Curve Data

Curve RDCL135\_9  
 P.I. Station = 1012+94.89 N 13,678,128.1029 E 2,144,266.6179  
 Delta = 2° 50' 50.33" (LT)  
 Degree = 0° 55' 26.85"  
 Tangent = 154.0862  
 Length = 308.1089  
 Radius = 6,200.0000  
 External = 1.9144  
 Long Chord = 308.0772  
 Mid. Ord. = 1.9138  
 P.C. Station = 1011+40.80 N 13,678,135.1585 E 2,144,112.6934  
 P.T. Station = 1014+48.91 N 13,678,128.7021 E 2,144,420.7029  
 C.C. = N 13,684,328.6552 E 2,144,396.5918  
 Back = S 87° 22' 31.82" E  
 Ahead = N 89° 46' 37.86" E  
 Chord Bear = S 88° 47' 56.98" E

Course from PT RDCL135\_9 to RDCL13512 N 89° 46' 37.86" E Dist 256.0788

Point RDCL13512 N 13,678,129.6980 E 2,144,676.7798 Sta 1017+04.99

Course from RDCL13512 to RDCL13514 N 88° 24' 48.27" E Dist 352.9090

Point RDCL13514 N 13,678,139.4692 E 2,145,029.5535 Sta 1020+57.90

Course from RDCL13514 to RDCL13516 N 89° 44' 18.99" E Dist 3,867.1725

Point RDCL13516 N 13,678,157.1118 E 2,148,896.6857 Sta 1059+25.07

Course from RDCL13516 to PC RDCL135\_18 N 89° 43' 10.29" E Dist 161.8788

Curve Data

Curve RDCL135\_18  
 P.I. Station = 1064+77.26 N 13,678,159.8149 E 2,149,448.8682  
 Delta = 8° 07' 06.37" (LT)  
 Degree = 1° 02' 30.27"  
 Tangent = 390.3103  
 Length = 779.3141  
 Radius = 5,500.0000  
 External = 13.8319  
 Long Chord = 778.6623  
 Mid. Ord. = 13.7972  
 P.C. Station = 1060+86.95 N 13,678,157.9042 E 2,149,058.5626  
 P.T. Station = 1068+66.27 N 13,678,216.8253 E 2,149,834.9924  
 C.C. = N 13,683,657.8383 E 2,149,031.6389  
 Back = N 89° 43' 10.29" E  
 Ahead = N 81° 36' 03.91" E  
 Chord Bear = N 85° 39' 37.10" E

Course from PT RDCL135\_18 to RDCL13521 N 81° 36' 03.91" E Dist 190.1680

Point RDCL13521 N 13,678,244.6020 E 2,150,023.1208 Sta 1070+56.43

Course from RDCL13521 to PC RDCL135\_23 N 78° 31' 26.87" E Dist 225.0534

Curve Data

Curve RDCL135\_23  
 P.I. Station = 1073+70.26 N 13,678,307.0402 E 2,150,330.6770  
 Delta = 1° 27' 11.58" (RT)  
 Degree = 0° 49' 06.64"  
 Tangent = 88.7766  
 Length = 177.5438  
 Radius = 7,000.0000  
 External = 0.5629  
 Long Chord = 177.5390  
 Mid. Ord. = 0.5629  
 P.C. Station = 1072+81.49 N 13,678,289.3776 E 2,150,243.6751  
 P.T. Station = 1074+59.03 N 13,678,322.4906 E 2,150,418.0988  
 C.C. = N 13,671,429.3175 E 2,151,636.3617  
 Back = N 78° 31' 26.87" E  
 Ahead = N 79° 58' 38.44" E  
 Chord Bear = N 79° 15' 02.66" E

Course from PT RDCL135\_23 to PC RDCL135\_26 N 79° 58' 38.44" E Dist 55.2527

Curve Data

Curve RDCL135\_26  
 P.I. Station = 1075+65.99 N 13,678,341.1061 E 2,150,523.4290  
 Delta = 7° 53' 17.48" (LT)  
 Degree = 7° 38' 21.97"  
 Tangent = 51.7098  
 Length = 103.2561  
 Radius = 750.0000  
 External = 1.7805  
 Long Chord = 103.1746  
 Mid. Ord. = 1.7763  
 P.C. Station = 1075+14.28 N 13,678,332.1067 E 2,150,472.5084  
 P.T. Station = 1076+17.54 N 13,678,357.0088 E 2,150,572.6327  
 C.C. = N 13,679,070.6609 E 2,150,341.9802  
 Back = N 79° 58' 38.44" E  
 Ahead = N 72° 05' 20.97" E  
 Chord Bear = N 76° 01' 59.71" E

Course from PT RDCL135\_26 to PC RDCL135\_29 N 72° 05' 20.97" E Dist 892.1433

Curve Data

Curve RDCL135\_29  
 P.I. Station = 1085+78.88 N 13,678,652.6564 E 2,151,487.3834  
 Delta = 10° 32' 33.92" (LT)  
 Degree = 7° 38' 21.97"  
 Tangent = 69.1975  
 Length = 138.0043  
 Radius = 750.0000  
 External = 3.1854  
 Long Chord = 137.8097  
 Mid. Ord. = 3.1720  
 P.C. Station = 1085+09.68 N 13,678,631.3756 E 2,151,421.5394  
 P.T. Station = 1086+47.69 N 13,678,685.6253 E 2,151,548.2220  
 C.C. = N 13,679,345.0277 E 2,151,190.8869  
 Back = N 72° 05' 20.97" E  
 Ahead = N 61° 32' 47.05" E  
 Chord Bear = N 66° 49' 04.01" E

Course from PT RDCL135\_29 to PC RDCL135\_30 N 61° 32' 47.05" E Dist 22.5663

Curve Data

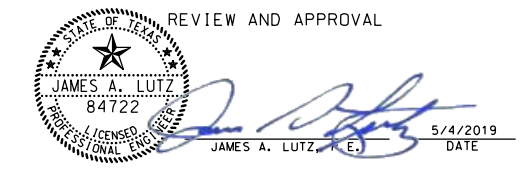
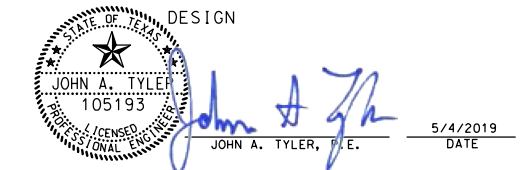
Curve RDCL135\_30  
 P.I. Station = 1087+35.24 N 13,678,727.3373 E 2,151,625.1946  
 Delta = 9° 54' 13.46" (RT)  
 Degree = 7° 38' 21.97"  
 Tangent = 64.9817  
 Length = 129.6397  
 Radius = 750.0000  
 External = 2.8098  
 Long Chord = 129.4783  
 Mid. Ord. = 2.7993  
 P.C. Station = 1086+70.25 N 13,678,696.3770 E 2,151,568.0624  
 P.T. Station = 1087+99.89 N 13,678,748.0099 E 2,151,686.8003  
 C.C. = N 13,678,036.9745 E 2,151,925.3976  
 Back = N 61° 32' 47.05" E  
 Ahead = N 71° 27' 00.52" E  
 Chord Bear = N 66° 29' 53.78" E

Point RDCL13533 N 13,678,748.0099 E 2,151,686.8003 Sta 1087+99.89

Course from RDCL13533 to RDCL13534 N 71° 27' 00.52" E Dist 4,023.5077

Point RDCL13534 N 13,680,028.0073 E 2,155,501.2755 Sta 1128+23.40

Ending chain MILITARYDR\_1 description



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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 4 OF 10

CHK	DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
		6	TEXAS		VARIABLES
CHK	DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
		SAT	BEXAR	0915	12
CHK	DWG	JOB NO.	SHEET NO.		
		576	135		

Plotted on: 5/4/2019

Design File name: P:\11135\07\design\Civil\General\1113507\*HALN\*Data01.dgn

# MILITARY DR WB HORIZONTAL ALIGNMENT

Beginning chain MILITARYDR\_2 description

Point RDCL1391 N 13,678,172.3947 E 2,141,014.1314 Sta 1140+57.30

Course from RDCL1391 to PC RDCL139\_3 N 80° 28' 23.45" E Dist 106.7771

Curve Data

Curve RDCL139\_3  
 P.I. Station = 1147+56.47 N 13,678,288.1141 E 2,141,703.6608  
 Delta = 11° 39' 48.97" (RT)  
 Degree = 0° 59' 16.29"  
 Tangent = 592.3951  
 Length = 1,180.6959  
 Radius = 5,800.0000  
 External = 30.1743  
 Long Chord = 1,178.6583  
 Mid. Ord. = 30.0181  
 P.C. Station = 1141+64.08 N 13,678,190.0673 E 2,141,119.4359  
 P.T. Station = 1153+44.77 N 13,678,266.0265 E 2,142,295.6440  
 C.C. = N 13,672,470.0595 E 2,142,079.3895  
 Back = N 80° 28' 23.45" E  
 Ahead = S 87° 51' 47.58" E  
 Chord Bear = N 86° 18' 17.94" E

Course from PT RDCL139\_3 to PC RDCL139\_6 S 87° 51' 47.58" E Dist 1,554.0576

Curve Data

Curve RDCL139\_6  
 P.I. Station = 1172+40.31 N 13,678,195.3509 E 2,144,189.8637  
 Delta = 2° 26' 43.08" (LT)  
 Degree = 0° 21' 29.16"  
 Tangent = 341.4802  
 Length = 682.8567  
 Radius = 16,000.0000  
 External = 3.6436  
 Long Chord = 682.8049  
 Mid. Ord. = 3.6428  
 P.C. Station = 1168+98.83 N 13,678,208.0831 E 2,143,848.6210  
 P.T. Station = 1175+81.69 N 13,678,197.1897 E 2,144,531.3390  
 C.C. = N 13,694,196.9577 E 2,144,445.1851  
 Back = S 87° 51' 47.58" E  
 Ahead = N 89° 41' 29.34" E  
 Chord Bear = S 89° 05' 09.12" E

Course from PT RDCL139\_6 to PC RDCL139\_9 N 89° 41' 29.34" E Dist 4,600.1044

Curve Data

Curve RDCL139\_9  
 P.I. Station = 1223+44.93 N 13,678,222.8379 E 2,149,294.5081  
 Delta = 4° 40' 15.06" (LT)  
 Degree = 1° 25' 56.62"  
 Tangent = 163.1338  
 Length = 326.0868  
 Radius = 4,000.0000  
 External = 3.3252  
 Long Chord = 325.9965  
 Mid. Ord. = 3.3224  
 P.C. Station = 1221+81.79 N 13,678,221.9595 E 2,149,131.3767  
 P.T. Station = 1225+07.88 N 13,678,236.9974 E 2,149,457.0262  
 C.C. = N 13,682,221.9015 E 2,149,109.8382  
 Back = N 89° 41' 29.34" E  
 Ahead = N 85° 01' 14.28" E  
 Chord Bear = N 87° 21' 21.81" E

Course from PT RDCL139\_9 to PC RDCL139\_12 N 85° 01' 14.28" E Dist 112.4392

Curve Data

Curve RDCL139\_12  
 P.I. Station = 1227+97.10 N 13,678,262.1014 E 2,149,745.1607  
 Delta = 5° 03' 40.59" (LT)  
 Degree = 1° 25' 56.62"  
 Tangent = 176.7868  
 Length = 353.3437  
 Radius = 4,000.0000  
 External = 3.9048  
 Long Chord = 353.2289  
 Mid. Ord. = 3.9010  
 P.C. Station = 1226+20.32 N 13,678,246.7568 E 2,149,569.0411  
 P.T. Station = 1229+73.66 N 13,678,292.9236 E 2,149,919.2399  
 C.C. = N 13,682,231.6609 E 2,149,221.8531  
 Back = N 85° 01' 14.28" E  
 Ahead = N 79° 57' 33.68" E  
 Chord Bear = N 82° 29' 23.98" E

Course from PT RDCL139\_12 to PC RDCL139\_15 N 79° 57' 33.68" E Dist 364.1914

Curve Data

Curve RDCL139\_15  
 P.I. Station = 1234+26.43 N 13,678,371.8623 E 2,150,365.0741  
 Delta = 8° 26' 35.51" (LT)  
 Degree = 4° 46' 28.73"  
 Tangent = 88.5773  
 Length = 176.8339  
 Radius = 1,200.0000  
 External = 3.2647  
 Long Chord = 176.6740  
 Mid. Ord. = 3.2558  
 P.C. Station = 1233+37.85 N 13,678,356.4191 E 2,150,277.8535  
 P.T. Station = 1235+14.69 N 13,678,399.9446 E 2,150,449.0820  
 C.C. = N 13,679,538.0403 E 2,150,068.6374  
 Back = N 79° 57' 33.68" E  
 Ahead = N 71° 30' 58.17" E  
 Chord Bear = N 75° 44' 15.93" E

Course from PT RDCL139\_15 to RDCL13918 N 71° 30' 58.17" E Dist 1,064.2291

Point RDCL13918 N 13,678,737.3448 E 2,151,458.4109 Sta 1245+78.92

Course from RDCL13918 to RDCL13920 N 75° 24' 08.25" E Dist 161.5891

Point RDCL13920 N 13,678,778.0702 E 2,151,614.7837 Sta 1247+40.50

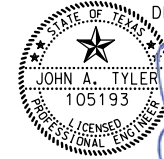
Course from RDCL13920 to RDCL13922 N 72° 59' 28.68" E Dist 531.8133

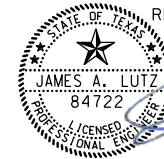
Point RDCL13922 N 13,678,933.6346 E 2,152,123.3357 Sta 1252+72.32

Course from RDCL13922 to RDCL13923 N 71° 42' 10.69" E Dist 3,552.2292

Point RDCL13923 N 13,680,048.8330 E 2,155,495.9704 Sta 1288+24.55

Ending chain MILITARYDR\_2 description

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 5 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	136

Plotted on: 5/4/2019

Design File name: P:\1111\35\07\design\Civil\General\1113507\HALN>Data01.dgn



# BANDERA WB HORIZONTAL ALIGNMENT

Beginning chain RDCL\_BANDERA description  
Feature: Road\_Centerline

Point 258 N 13,725,506.2700 E 2,096,297.0238 Sta 1300+00.00

Course from 258 to 259 N 65° 35' 12.90" W Dist 1,105.4692

Point 259 N 13,725,963.1741 E 2,095,290.3954 Sta 1311+05.47

Course from 259 to PC RDCL\_BANDERA\_5 N 67° 26' 24.83" W Dist 251.5404

### Curve Data

Curve RDCL\_BANDERA\_5

P.I. Station = 1318+62.71 N 13,726,253.6855 E 2,094,591.1030

Delta = 23° 05' 44.28" (RT)

Degree = 2° 18' 53.93"

Tangent = 505.6958

Length = 997.6597

Radius = 2,475.0000

External = 51.1341

Long Chord = 990.9190

Mid. Ord. = 50.0990

P.C. Station = 1313+57.01 N 13,726,059.6768 E 2,095,058.1029

P.T. Station = 1323+54.67 N 13,726,615.3333 E 2,094,237.6357

C.C. = N 13,728,345.2894 E 2,096,007.6292

Back = N 67° 26' 24.83" W

Ahead = N 44° 20' 40.55" W

Chord Bear = N 55° 53' 32.69" W

Course from PT RDCL\_BANDERA\_5 to 260 N 44° 20' 40.55" W Dist 926.5840

Point 260 N 13,727,277.9788 E 2,093,589.9793 Sta 1332+81.25

Course from 260 to 261 N 46° 12' 39.27" W Dist 542.3376

Point 261 N 13,727,653.2795 E 2,093,198.4701 Sta 1338+23.59

Course from 261 to PC RDCL\_BANDERA\_12 N 44° 45' 06.39" W Dist 374.7307

### Curve Data

Curve RDCL\_BANDERA\_12

P.I. Station = 1345+13.00 N 13,728,142.8711 E 2,092,713.1024

Delta = 7° 30' 05.77" (LT)

Degree = 1° 11' 37.18"

Tangent = 314.6761

Length = 628.4529

Radius = 4,800.0000

External = 10.3036

Long Chord = 628.0041

Mid. Ord. = 10.2816

P.C. Station = 1341+98.32 N 13,727,919.3996 E 2,092,934.6460

P.T. Station = 1348+26.77 N 13,728,335.5066 E 2,092,464.2800

C.C. = N 13,724,540.0234 E 2,089,525.8608

Back = N 44° 45' 06.39" W

Ahead = N 52° 15' 12.16" W

Chord Bear = N 48° 30' 09.28" W

Course from PT RDCL\_BANDERA\_12 to 262 N 52° 15' 12.16" W Dist 1,843.4396

Point 262 N 13,729,464.0062 E 2,091,006.6249 Sta 1366+70.21

Course from 262 to 263 N 49° 16' 01.61" W Dist 432.8245

Point 263 N 13,729,746.4387 E 2,090,678.6479 Sta 1371+03.04

Course from 263 to 264 N 47° 07' 51.52" W Dist 798.6939

Point 264 N 13,730,289.8099 E 2,090,093.2765 Sta 1379+01.73

Course from 264 to 265 N 50° 43' 50.35" W Dist 748.0455

Point 265 N 13,730,763.2979 E 2,089,514.1554 Sta 1386+49.78

Course from 265 to PC RDCL\_BANDERA\_23 N 51° 07' 32.93" W Dist 871.3067

### Curve Data

Curve RDCLBANDERA2\_11

P.I. Station = 1719+62.14 N 13,726,254.8973 E 2,094,423.8363

Delta = 17° 55' 20.71" (RT)

Degree = 3° 23' 25.02"

Tangent = 266.4969

Length = 528.6408

Radius = 1,690.0000

External = 20.8830

Long Chord = 526.4882

Mid. Ord. = 20.6281

P.C. Station = 1716+95.64 N 13,726,134.9525 E 2,094,661.8150

P.T. Station = 1722+24.28 N 13,726,442.2546 E 2,094,234.3162

C.C. = N 13,727,644.1031 E 2,095,422.4493

Back = N 63° 15' 04.39" W

Ahead = N 45° 19' 43.69" W

Chord Bear = N 54° 17' 24.04" W

Course from PT RDCLBANDERA2\_11 to RDCLBANDERA214 N 45° 19' 43.69" W Dist 848.1984

Point RDCLBANDERA214 N 13,727,038.5696 E 2,093,631.1174 Sta 1730+72.48

Course from RDCLBANDERA214 to RDCLBANDERA216 N 43° 52' 26.02" W Dist 510.1989

Point RDCLBANDERA216 N 13,727,406.3552 E 2,093,277.5121 Sta 1735+82.68

Course from RDCLBANDERA216 to PC RDCLBANDERA2\_18 N 40° 54' 49.88" W Dist 241.5316

### Curve Data

Curve RDCLBANDERA2\_18

P.I. Station = 1743+04.82 N 13,727,952.0694 E 2,092,804.5686

Delta = 10° 46' 00.69" (LT)

Degree = 1° 07' 24.41"

Tangent = 480.6038

Length = 958.3773

Radius = 5,100.0000

External = 22.5950

Long Chord = 956.9678

Mid. Ord. = 22.4954

P.C. Station = 1738+24.21 N 13,727,588.8795 E 2,093,119.3273

P.T. Station = 1747+82.59 N 13,728,250.0644 E 2,092,427.5024

C.C. = N 13,724,248.7691 E 2,089,265.2823

Back = N 40° 54' 49.88" W

Ahead = N 51° 40' 50.57" W

Chord Bear = N 46° 17' 50.23" W

Course from PT RDCLBANDERA2\_18 to RDCLBANDERA221 N 51° 40' 50.57" W Dist 285.3810

Point RDCLBANDERA221 N 13,728,427.0130 E 2,092,203.6017 Sta 1750+67.97

Course from RDCLBANDERA221 to PC RDCLBANDERA2\_23 N 52° 01' 57.74" W Dist 1,585.9166

### Curve Data

Curve RDCLBANDERA2\_23

P.I. Station = 1768+72.43 N 13,729,537.1399 E 2,090,781.0310

Delta = 4° 54' 27.07" (RT)

Degree = 1° 07' 24.41"

Tangent = 218.5471

Length = 436.8270

Radius = 5,100.0000

External = 4.6805

Long Chord = 436.6935

Mid. Ord. = 4.6762

P.C. Station = 1766+53.89 N 13,729,402.6872 E 2,090,953.3252

P.T. Station = 1770+90.71 N 13,729,685.8392 E 2,090,620.8704

C.C. = N 13,733,423.3337 E 2,094,090.9043

Back = N 52° 01' 57.74" W

Ahead = N 47° 07' 30.67" W

Chord Bear = N 49° 34' 44.20" W

Course from PT RDCLBANDERA2\_23 to PC RDCLBANDERA2\_26 N 47° 07' 30.67" W Dist 763.9709

### Curve Data

Curve RDCLBANDERA2\_26

P.I. Station = 1779+50.29 N 13,730,270.6967 E 2,089,990.9337

Delta = 3° 46' 35.69" (LT)

Degree = 1° 58' 32.58"

Tangent = 95.6096

Length = 191.1500

Radius = 2,900.0000

External = 1.5756

Long Chord = 191.1154

Mid. Ord. = 1.5748

P.C. Station = 1778+54.68 N 13,730,205.6440 E 2,090,061.0004

P.T. Station = 1780+45.83 N 13,730,330.9931 E 2,089,916.7343

C.C. = N 13,728,080.4021 E 2,088,087.8439

Back = N 47° 07' 30.67" W

Ahead = N 50° 54' 06.37" W

Chord Bear = N 49° 00' 48.52" W

Course from PT RDCLBANDERA2\_26 to PC RDCLBANDERA2\_29 N 50° 54' 06.37" W Dist 1,515.1331

### Curve Data

Curve RDCLBANDERA2\_29

P.I. Station = 1800+42.58 N 13,731,590.2433 E 2,088,367.1295

Delta = 23° 21' 25.67" (RT)

Degree = 2° 27' 32.57"

Tangent = 481.6108

Length = 949.8451

Radius = 2,330.0000

External = 49.2539

Long Chord = 943.2816

Mid. Ord. = 48.2342

P.C. Station = 1795+60.97 N 13,731,286.5146 E 2,088,740.8912

P.T. Station = 1805+10.81 N 13,732,017.2640 E 2,088,144.4136

C.C. = N 13,733,094.7481 E 2,090,210.3101

Back = N 50° 54' 06.37" W

Ahead = N 27° 32' 40.70" W


Chord Bear = N 39° 13' 23.53" W

Course from PT RDCLBANDERA2\_29 to RDCLBANDERA232 N 27° 32' 40.70" W Dist 454.0851


Point RDCLBANDERA232 N 13,732,419.8789 E 2,087,934.4267 Sta 1809+64.90

Course from RDCLBANDERA232 to PC RDCLBANDERA2\_34 N 26° 59' 55.19" W Dist 1,071.3331

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

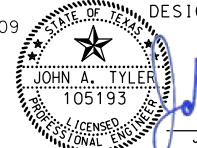



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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 6 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				137

DESIGN  
  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

Plotted on: 5/4/2019

Design File name: P:\111135\07\des\gn\Civil\General\1113507\HALN>Data01.dgn

BANDERA WB HORIZONTAL ALIGNMENT (CONT.)

Plotted on: 5/4/2019

Design File name: P:\111\35\07\design\Civil\General\1113507\*HALN\*Data01.dgn

Curve Data  
\*-----\*

Curve RDCLBANDERA2\_34  
P.I. Station = 1821+39.20 N 13,733,466.2051 E 2,087,401.3276  
Delta = 1° 46' 46.60" (LT)  
Degree = 0° 51' 51.08"  
Tangent = 102.9724  
Length = 205.9281  
Radius = 6,630.0000  
External = 0.7996  
Long Chord = 205.9199  
Mid. Ord. = 0.7995  
P.C. Station = 1820+36.23 N 13,733,374.4550 E 2,087,448.0740  
P.T. Station = 1822+42.16 N 13,733,556.4593 E 2,087,351.7546  
C.C. = N 13,730,364.6358 E 2,081,540.6305  
Back = N 26° 59' 55.19" W  
Ahead = N 28° 46' 41.78" W  
Chord Bear = N 27° 53' 18.49" W

Course from PT RDCLBANDERA2\_34 to PC RDCLBANDERA2\_37 N 28° 46' 41.78" W Dist 2,205.6002

Curve Data  
\*-----\*

Curve RDCLBANDERA2\_37  
P.I. Station = 1847+10.98 N 13,735,720.3564 E 2,086,163.2104  
Delta = 4° 22' 55.34" (LT)  
Degree = 0° 49' 58.03"  
Tangent = 263.2230  
Length = 526.1893  
Radius = 6,880.0000  
External = 5.0335  
Long Chord = 526.0610  
Mid. Ord. = 5.0298  
P.C. Station = 1844+47.76 N 13,735,489.6443 E 2,086,289.9315  
P.T. Station = 1849+73.95 N 13,735,940.7118 E 2,086,019.2318  
C.C. = N 13,732,177.4655 E 2,080,259.6851  
Back = N 28° 46' 41.78" W  
Ahead = N 33° 09' 37.12" W  
Chord Bear = N 30° 58' 09.45" W

Course from PT RDCLBANDERA2\_37 to PC RDCLBANDERA2\_40 N 33° 09' 37.12" W Dist 2,842.5901

Curve Data  
\*-----\*

Curve RDCLBANDERA2\_40  
P.I. Station = 1881+45.12 N 13,738,595.4363 E 2,084,284.6539  
Delta = 11° 24' 24.19" (RT)  
Degree = 1° 44' 29.45"  
Tangent = 328.5805  
Length = 654.9890  
Radius = 3,290.0000  
External = 16.3674  
Long Chord = 653.9078  
Mid. Ord. = 16.2863  
P.C. Station = 1878+16.54 N 13,738,320.3674 E 2,084,464.3820  
P.T. Station = 1884+71.53 N 13,738,900.6174 E 2,084,162.8768  
C.C. = N 13,740,119.9430 E 2,087,218.5838  
Back = N 33° 09' 37.12" W  
Ahead = N 21° 45' 12.93" W  
Chord Bear = N 27° 27' 25.03" W

Course from PT RDCLBANDERA2\_40 to PC RDCLBANDERA2\_43 N 21° 45' 12.93" W Dist 2,395.7425

Curve Data  
\*-----\*

Curve RDCLBANDERA2\_43  
P.I. Station = 1912+98.13 N 13,741,525.9299 E 2,083,115.2925  
Delta = 14° 02' 09.69" (LT)  
Degree = 1° 38' 13.28"  
Tangent = 430.8629  
Length = 857.4120  
Radius = 3,500.0000  
External = 26.4207  
Long Chord = 855.2696  
Mid. Ord. = 26.2227  
P.C. Station = 1908+67.27 N 13,741,125.7503 E 2,083,274.9771  
P.T. Station = 1917+24.68 N 13,741,875.4329 E 2,082,863.3193  
C.C. = N 13,739,828.5954 E 2,080,024.2250  
Back = N 21° 45' 12.93" W  
Ahead = N 35° 47' 22.63" W  
Chord Bear = N 28° 46' 17.78" W

Course from PT RDCLBANDERA2\_43 to RDCLBANDERA246 N 35° 47' 22.63" W Dist 825.8339

Point RDCLBANDERA246 N 13,742,545.3244 E 2,082,380.3627 Sta 1925+50.52

Course from RDCLBANDERA246 to PC RDCLBANDERA2\_48 N 36° 14' 38.12" W Dist 1,367.3704

Curve Data  
\*-----\*

Curve RDCLBANDERA2\_48  
P.I. Station = 1943+15.31 N 13,743,968.6406 E 2,081,336.9762  
Delta = 6° 44' 56.41" (RT)  
Degree = 0° 51' 00.31"  
Tangent = 397.4198  
Length = 793.9203  
Radius = 6,740.0000  
External = 11.7066  
Long Chord = 793.4614  
Mid. Ord. = 11.6863  
P.C. Station = 1939+17.89 N 13,743,648.1187 E 2,081,571.9404  
P.T. Station = 1947+11.81 N 13,744,314.5545 E 2,081,141.3081  
C.C. = N 13,747,632.9691 E 2,087,007.7998  
Back = N 36° 14' 38.12" W  
Ahead = N 29° 29' 41.71" W  
Chord Bear = N 32° 52' 09.91" W

Course from PT RDCLBANDERA2\_48 to PC RDCLBANDERA2\_51 N 29° 29' 41.71" W Dist 904.4544

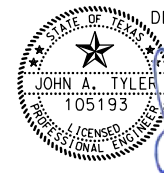
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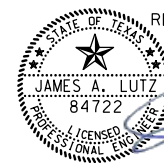
Curve RDCLBANDERA2\_51  
P.I. Station = 1962+21.88 N 13,745,628.9178 E 2,080,397.8310  
Delta = 27° 29' 57.83" (LT)  
Degree = 2° 18' 53.93"  
Tangent = 605.6148  
Length = 1,187.8886  
Radius = 2,475.0000  
External = 73.0177  
Long Chord = 1,176.5198  
Mid. Ord. = 70.9253  
P.C. Station = 1956+16.26 N 13,745,101.7911 E 2,080,696.0032  
P.T. Station = 1968+04.15 N 13,745,958.8097 E 2,079,889.9523  
C.C. = N 13,743,883.2338 E 2,078,541.7648  
Back = N 29° 29' 41.71" W  
Ahead = N 56° 59' 39.54" W  
Chord Bear = N 43° 14' 40.62" W

Course from PT RDCLBANDERA2\_51 to RDCLBANDERA253 N 56° 59' 39.54" W Dist 260.3818


Point RDCLBANDERA253 N 13,746,100.6454 E 2,079,671.5919 Sta 1970+64.53

=====  
Ending chain RDCLBANDERA2 description  
=====

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

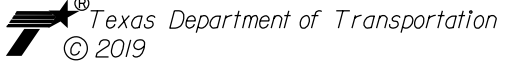
REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 7 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	138

# BANDERA EB HORIZONTAL ALIGNMENT

Beginning chain RDCL\_BANDERA description  
Feature: Road\_Centerline

Point 258 N 13,725,506.2700 E 2,096,297.0238 Sta 1300+00.00  
Course from 258 to 259 N 65° 35' 12.90" W Dist 1,105.4692  
Point 259 N 13,725,963.1741 E 2,095,290.3954 Sta 1311+05.47  
Course from 259 to PC RDCL\_BANDERA\_5 N 67° 26' 24.83" W Dist 251.5404

### Curve Data

Curve RDCL\_BANDERA\_5  
P.I. Station 1318+62.71 N 13,726,253.6855 E 2,094,591.1030  
Delta = 23° 05' 44.28" (RT)  
Degree = 2° 18' 53.93"  
Tangent = 505.6958  
Length = 997.6597  
Radius = 2,475.0000  
External = 51.1341  
Long Chord = 990.9190  
Mid. Ord. = 50.0990  
P.C. Station 1313+57.01 N 13,726,059.6768 E 2,095,058.1029  
P.T. Station 1323+54.67 N 13,726,615.3333 E 2,094,237.6357  
C.C. = N 13,728,345.2894 E 2,096,007.6292  
Back = N 67° 26' 24.83" W  
Ahead = N 44° 20' 40.55" W  
Chord Bear = N 55° 53' 32.69" W

Course from PT RDCL\_BANDERA\_5 to 260 N 44° 20' 40.55" W Dist 926.5840  
Point 260 N 13,727,277.9788 E 2,093,589.9793 Sta 1332+81.25  
Course from 260 to 261 N 46° 12' 39.27" W Dist 542.3376  
Point 261 N 13,727,653.2795 E 2,093,198.4701 Sta 1338+23.59  
Course from 261 to PC RDCL\_BANDERA\_12 N 44° 45' 06.39" W Dist 374.7307

### Curve Data

Curve RDCL\_BANDERA\_12  
P.I. Station 1345+13.00 N 13,728,142.8711 E 2,092,713.1024  
Delta = 7° 30' 05.77" (LT)  
Degree = 1° 11' 37.18"  
Tangent = 314.6761  
Length = 628.4529  
Radius = 4,800.0000  
External = 10.3036  
Long Chord = 628.0041  
Mid. Ord. = 10.2816  
P.C. Station 1341+98.32 N 13,727,919.3996 E 2,092,934.6460  
P.T. Station 1348+26.77 N 13,728,335.5066 E 2,092,464.2800  
C.C. = N 13,724,540.0234 E 2,089,525.8608  
Back = N 44° 45' 06.39" W  
Ahead = N 52° 15' 12.16" W  
Chord Bear = N 48° 30' 09.28" W

Course from PT RDCL\_BANDERA\_12 to 262 N 52° 15' 12.16" W Dist 1,843.4396  
Point 262 N 13,729,464.0062 E 2,091,006.6249 Sta 1366+70.21  
Course from 262 to 263 N 49° 16' 01.61" W Dist 432.8245  
Point 263 N 13,729,746.4387 E 2,090,678.6479 Sta 1371+03.04  
Course from 263 to 264 N 47° 07' 51.52" W Dist 798.6939  
Point 264 N 13,730,289.8099 E 2,090,093.2765 Sta 1379+01.73  
Course from 264 to 265 N 50° 43' 50.35" W Dist 748.0455  
Point 265 N 13,730,763.2979 E 2,089,514.1554 Sta 1386+49.78  
Course from 265 to PC RDCL\_BANDERA\_23 N 51° 07' 32.93" W Dist 871.3067

### Curve Data

Curve RDCL\_BANDERA\_23  
P.I. Station 1400+54.67 N 13,731,645.0241 E 2,088,420.4121  
Delta = 24° 11' 24.12" (RT)  
Degree = 2° 18' 03.73"  
Tangent = 533.5832  
Length = 1,051.2673  
Radius = 2,490.0000  
External = 56.5292  
Long Chord = 1,043.4769  
Mid. Ord. = 55.2743  
P.C. Station 1395+21.08 N 13,731,310.1407 E 2,088,835.8205  
P.T. Station 1405+72.35 N 13,732,120.7214 E 2,088,178.7034  
C.C. = N 13,733,248.6704 E 2,090,398.5753  
Back = N 51° 07' 32.93" W  
Ahead = N 26° 56' 08.82" W  
Chord Bear = N 39° 01' 50.87" W

Course from PT RDCL\_BANDERA\_23 to 266 N 26° 56' 08.82" W Dist 1,435.7586  
Point 266 N 13,733,400.7215 E 2,087,528.3169 Sta 1420+08.11  
Course from 266 to 267 N 28° 31' 01.78" W Dist 1,035.9702  
Point 267 N 13,734,311.0017 E 2,087,033.7220 Sta 1430+44.08  
Course from 267 to 268 N 28° 53' 11.18" W Dist 741.2075  
Point 268 N 13,734,959.9873 E 2,086,675.6631 Sta 1437+85.29  
Course from 268 to PC RDCL\_BANDERA\_32 N 28° 45' 07.17" W Dist 519.1924

### Curve Data

Curve RDCL\_BANDERA\_32  
P.I. Station 1446+67.60 N 13,735,733.5170 E 2,086,251.2551  
Delta = 3° 58' 48.84" (LT)  
Degree = 0° 32' 53.83"  
Tangent = 363.1172  
Length = 725.9423  
Radius = 10,450.0000  
External = 6.3069  
Long Chord = 725.7963  
Mid. Ord. = 6.3031  
P.C. Station 1443+04.48 N 13,735,415.1685 E 2,086,425.9215  
P.T. Station 1450+30.42 N 13,736,038.9737 E 2,086,054.9128  
C.C. = N 13,730,388.5174 E 2,077,264.3016  
Back = N 28° 45' 07.17" W  
Ahead = N 32° 43' 56.01" W  
Chord Bear = N 30° 44' 31.59" W

Course from PT RDCL\_BANDERA\_32 to 269 N 32° 43' 56.01" W Dist 487.0570  
Point 269 N 13,736,448.6893 E 2,085,791.5545 Sta 1455+17.48  
Course from 269 to 270 N 33° 38' 02.03" W Dist 601.7195  
Point 270 N 13,736,949.6771 E 2,085,458.2716 Sta 1461+19.20  
Course from 270 to PC RDCL\_BANDERA\_39 N 33° 08' 15.46" W Dist 1,666.3666

### Curve Data

Curve RDCL\_BANDERA\_39  
P.I. Station 1481+30.60 N 13,738,633.9455 E 2,084,358.7341  
Delta = 11° 23' 22.54" (RT)  
Degree = 1° 39' 21.41"  
Tangent = 345.0366  
Length = 687.7993  
Radius = 3,460.0000  
External = 17.1612  
Long Chord = 686.6674  
Mid. Ord. = 17.0765  
P.C. Station 1477+85.57 N 13,738,345.0257 E 2,084,547.3490  
P.T. Station 1484+73.37 N 13,738,954.4232 E 2,084,230.8892  
C.C. = N 13,740,236.4415 E 2,087,444.6143  
Back = N 33° 08' 15.46" W  
Ahead = N 21° 44' 52.91" W  
Chord Bear = N 27° 26' 34.19" W

Course from PT RDCL\_BANDERA\_39 to 271 N 21° 44' 52.91" W Dist 399.6714  
Point 271 N 13,739,325.6469 E 2,084,082.8007 Sta 1488+73.04  
Course from 271 to PC RDCL\_BANDERA\_44 N 22° 06' 28.57" W Dist 2,052.1779

### Curve Data

Curve RDCL\_BANDERA\_44  
P.I. Station 1512+67.31 N 13,741,543.8808 E 2,083,181.7114  
Delta = 13° 00' 38.59" (LT)  
Degree = 1° 54' 35.49"  
Tangent = 342.0911  
Length = 681.2397  
Radius = 3,000.0000

External = 19.4414  
Long Chord = 679.7769  
Mid. Ord. = 19.3162  
P.C. Station 1509+25.21 N 13,741,226.9415 E 2,083,310.4583  
P.T. Station 1516+06.45 N 13,741,823.6985 E 2,082,984.9161  
C.C. = N 13,740,097.8837 E 2,080,531.0287  
Back = N 22° 06' 28.57" W  
Ahead = N 35° 07' 07.16" W  
Chord Bear = N 28° 36' 47.86" W

Course from PT RDCL\_BANDERA\_44 to 272 N 35° 07' 07.16" W Dist 538.8423

Point 272 N 13,742,264.4513 E 2,082,674.9354 Sta 1521+45.30  
Course from 272 to PC RDCL\_BANDERA\_49 N 35° 54' 19.34" W Dist 2,016.1757

### Curve Data

Curve RDCL\_BANDERA\_49  
P.I. Station 1543+77.05 N 13,744,072.1447 E 2,081,366.1253  
Delta = 6° 35' 21.12" (RT)  
Degree = 1° 31' 47.74"  
Tangent = 215.5812  
Length = 430.6871  
Radius = 3,745.0000  
External = 6.1998  
Long Chord = 430.4498  
Mid. Ord. = 6.1896  
P.C. Station 1541+61.47 N 13,743,897.5268 E 2,081,492.5525  
P.T. Station 1545+92.16 N 13,744,260.1166 E 2,081,260.5706  
C.C. = N 13,746,093.7757 E 2,084,525.9526  
Back = N 35° 54' 19.34" W  
Ahead = N 29° 18' 58.22" W  
Chord Bear = N 32° 36' 38.78" W

Course from PT RDCL\_BANDERA\_49 to PC RDCL\_BANDERA\_52 N 29° 18' 58.22" W Dist 1,059.7556

### Curve Data

Curve RDCL\_BANDERA\_52  
P.I. Station 1561+95.47 N 13,745,658.0903 E 2,080,475.5454  
Delta = 26° 42' 18.48" (LT)  
Degree = 2° 30' 07.20"  
Tangent = 543.5519  
Length = 1,067.3518  
Radius = 2,290.0000  
External = 63.6246  
Long Chord = 1,057.7166  
Mid. Ord. = 61.9046  
P.C. Station 1556+51.92 N 13,745,184.1505 E 2,080,741.6839  
P.T. Station 1567+19.27 N 13,745,961.8731 E 2,080,024.8074  
C.C. = N 13,744,062.9011 E 2,078,744.9617  
Back = N 29° 18' 58.22" W  
Ahead = N 56° 01' 16.70" W  
Chord Bear = N 42° 40' 07.46" W

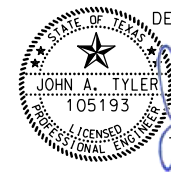
Course from PT RDCL\_BANDERA\_52 to 273 N 56° 01' 16.70" W Dist 348.8877

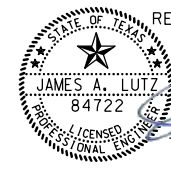
Point 273 N 13,746,156.8611 E 2,079,735.4939 Sta 1570+68.15

Ending chain RDCL\_BANDERA description


Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\General\11113507\HALN\Data01.dgn


DESIGN  
  
JOHN A. TYLER, P.E.  
5/4/2019 DATE

REVIEW AND APPROVAL  
  
JAMES A. LUTZ, P.E.  
5/4/2019 DATE

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 8 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				139

# BANDERA EB HORIZONTAL ALIGNMENT (CONT.)

Beginning chain EB410 description  
Feature: Road\_Centerline

Point EB4101 N 13,725,119.2117 E 2,095,274.8890 Sta 2500+00.00

Course from EB4101 to PC EB410\_3 N 61° 15' 51.98" E Dist 34.3435

Curve Data  
\*-----\*

Curve EB410\_3  
P.I. Station 2502+93.66 N 13,725,260.3939 E 2,095,532.3840  
Delta = 11° 23' 28.86" (RT)  
Degree = 2° 12' 13.26"  
Tangent = 259.3163  
Length = 516.9230  
Radius = 2,600.0000  
External = 12.8997  
Long Chord = 516.0721  
Mid. Ord. = 12.8360  
P.C. Station 2500+34.34 N 13,725,135.7230 E 2,095,305.0030  
P.T. Station 2505+51.27 N 13,725,337.6991 E 2,095,779.9094  
C.C. N 13,722,855.9184 E 2,096,554.9993  
Back = N 61° 15' 51.98" E  
Ahead = N 72° 39' 20.84" E  
Chord Bear = N 66° 57' 36.41" E

Course from PT EB410\_3 to PC EB410\_6 N 72° 39' 20.84" E Dist 47.9432

Curve Data  
\*-----\*

Curve EB410\_6  
P.I. Station 2507+44.92 N 13,725,395.4306 E 2,095,964.7613  
Delta = 3° 59' 40.56" (LT)  
Degree = 1° 22' 16.51"  
Tangent = 145.7141  
Length = 291.3102  
Radius = 4,178.3521  
External = 2.5400  
Long Chord = 291.2512  
Mid. Ord. = 2.5385  
P.C. Station 2505+99.21 N 13,725,351.9915 E 2,095,825.6727  
P.T. Station 2508+90.52 N 13,725,448.4534 E 2,096,100.4860  
C.C. N 13,729,340.3583 E 2,094,580.0578  
Back = N 72° 39' 20.84" E  
Ahead = N 68° 39' 40.28" E  
Chord Bear = N 70° 39' 30.56" E

Course from PT EB410\_6 to PC EB410\_9 N 68° 39' 40.28" E Dist 33.0318

Curve Data  
\*-----\*

Curve EB410\_9  
P.I. Station 2509+63.13 N 13,725,474.8763 E 2,096,168.1219  
Delta = 3° 36' 36.25" (LT)  
Degree = 4° 33' 42.22"  
Tangent = 39.5822  
Length = 79.1382  
Radius = 1,256.0102  
External = 0.6235  
Long Chord = 79.1251  
Mid. Ord. = 0.6232  
P.C. Station 2509+23.55 N 13,725,460.4730 E 2,096,131.2533  
P.T. Station 2510+02.69 N 13,725,491.5724 E 2,096,204.0105  
C.C. N 13,726,630.3774 E 2,095,674.2135  
Back = N 68° 39' 40.28" E  
Ahead = N 65° 03' 04.03" E  
Chord Bear = N 66° 51' 22.15" E

Course from PT EB410\_9 to PC EB410\_12 N 65° 03' 04.03" E Dist 184.9129

Curve Data  
\*-----\*

Curve EB410\_12  
P.I. Station 2512+53.40 N 13,725,597.3223 E 2,096,431.3212  
Delta = 3° 36' 36.25" (RT)  
Degree = 2° 44' 39.97"  
Tangent = 65.7924  
Length = 131.5413  
Radius = 2,087.7061  
External = 1.0364  
Long Chord = 131.5196  
Mid. Ord. = 1.0359  
P.C. Station 2511+87.60 N 13,725,569.5705 E 2,096,371.6682  
P.T. Station 2513+19.14 N 13,725,621.2630 E 2,096,492.6032  
C.C. N 13,723,676.6798 E 2,097,252.2824  
Back = N 65° 03' 04.03" E  
Ahead = N 68° 39' 40.28" E  
Chord Bear = N 66° 51' 22.15" E

Course from PT EB410\_12 to PC EB410\_15 N 68° 39' 40.28" E Dist 1,380.7903

Curve Data  
\*-----\*

Curve EB410\_15  
P.I. Station 2528+26.80 N 13,726,169.8737 E 2,097,896.9053  
Delta = 4° 28' 15.66" (RT)  
Degree = 1° 45' 46.61"  
Tangent = 126.8696  
Length = 253.6103  
Radius = 3,250.0000  
External = 2.4753  
Long Chord = 253.5460  
Mid. Ord. = 2.4735  
P.C. Station 2526+99.93 N 13,726,123.7081 E 2,097,778.7333  
P.T. Station 2529+53.54 N 13,726,206.6867 E 2,098,018.3165  
C.C. N 13,723,096.5120 E 2,098,961.3507  
Back = N 68° 39' 40.28" E  
Ahead = N 73° 07' 55.94" E  
Chord Bear = N 70° 53' 48.11" E

Course from PT EB410\_15 to PC EB410\_18 N 73° 07' 55.94" E Dist 226.6753

Curve Data  
\*-----\*

Curve EB410\_18  
P.I. Station 2532+51.84 N 13,726,293.2406 E 2,098,303.7758  
Delta = 5° 17' 27.31" (LT)  
Degree = 3° 41' 47.41"  
Tangent = 71.6175  
Length = 143.1331  
Radius = 1,550.0000  
External = 1.6537  
Long Chord = 143.0823  
Mid. Ord. = 1.6519  
P.C. Station 2531+80.22 N 13,726,272.4598 E 2,098,235.2395  
P.T. Station 2533+23.35 N 13,726,320.2529 E 2,098,370.1038  
C.C. N 13,727,755.7739 E 2,097,785.4848  
Back = N 73° 07' 55.94" E  
Ahead = N 67° 50' 28.63" E  
Chord Bear = N 70° 29' 12.28" E

Course from PT EB410\_18 to PC EB410\_21 N 67° 50' 28.63" E Dist 130.2817

Curve Data  
\*-----\*

Curve EB410\_21  
P.I. Station 2535+27.65 N 13,726,397.3077 E 2,098,559.3104  
Delta = 5° 28' 03.65" (LT)  
Degree = 3° 41' 47.41"  
Tangent = 74.0137  
Length = 147.9150  
Radius = 1,550.0000  
External = 1.7661  
Long Chord = 147.8589  
Mid. Ord. = 1.7641  
P.C. Station 2534+53.63 N 13,726,369.3917 E 2,098,490.7632  
P.T. Station 2536+01.55 N 13,726,431.6281 E 2,098,624.8858  
C.C. N 13,727,804.9127 E 2,097,906.1442  
Back = N 67° 50' 28.63" E  
Ahead = N 62° 22' 24.98" E  
Chord Bear = N 65° 06' 26.80" E

Course from PT EB410\_21 to PC EB410\_24 N 62° 22' 24.98" E Dist 53.4495

Curve Data  
\*-----\*

Curve EB410\_24  
P.I. Station 2538+34.32 N 13,726,539.5640 E 2,098,831.1167  
Delta = 6° 18' 58.35" (RT)  
Degree = 1° 45' 46.61"  
Tangent = 179.3194  
Length = 358.2756  
Radius = 3,250.0000  
External = 4.9432  
Long Chord = 358.0942  
Mid. Ord. = 4.9357  
P.C. Station 2536+55.00 N 13,726,456.4128 E 2,098,672.2414  
P.T. Station 2540+13.27 N 13,726,604.7317 E 2,098,998.1755  
C.C. N 13,723,576.9452 E 2,100,179.2802  
Back = N 62° 22' 24.98" E  
Ahead = N 68° 41' 23.33" E  
Chord Bear = N 65° 31' 54.16" E

Course from PT EB410\_24 to EB41026 N 68° 41' 23.33" E Dist 1,975.6567

Point EB41026 N 13,727,322.7187 E 2,100,838.7498 Sta 2559+88.93

Ending chain EB410 description

DESIGN  
STATE OF TEXAS  
JOHN A. TYLER  
105193  
LICENSED PROFESSIONAL ENGINEER  
John A. Tyler  
JOHN A. TYLER, P.E.  
5/4/2019  
DATE

REVIEW AND APPROVAL  
STATE OF TEXAS  
JAMES A. LUTZ  
84722  
LICENSED PROFESSIONAL ENGINEER  
James A. Lutz  
JAMES A. LUTZ, P.E.  
5/4/2019  
DATE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 9 OF 10

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
DWG	6	TEXAS				VARIES
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
DWG	SAT	BEXAR	0915	12	576	140

Plotted on: 5/4/2019

Design File name: P:\11135\07\design\Civil\General\1113507\HALN>Data01.dgn

# BANDERA EB HORIZONTAL ALIGNMENT (CONT.)

Beginning chain WB412 description  
Feature: Road\_Centerline

Point WB4121 N 13,725,373.1350 E 2,095,199.0514 Sta 1999+58.38  
Course from WB4121 to PC WB412\_3 N 64° 12' 58.72" E Dist 30.5268

Curve Data

Curve WB412\_3  
P.I. Station = 2002+57.41 N 13,725,503.2083 E 2,095,468.3164  
Delta = 3° 08' 20.04" (RT)  
Degree = 0° 35' 04.74"  
Tangent = 268.5095  
Length = 536.8846  
Radius = 9,800.0000  
External = 3.6777  
Long Chord = 536.8175  
Mid. Ord. = 3.6764  
P.C. Station = 1999+88.90 N 13,725,386.4134 E 2,095,226.5391  
P.T. Station = 2005+25.79 N 13,725,606.5890 E 2,095,716.1264  
C.C. = N 13,716,562.0756 E 2,099,489.2920  
Back = N 64° 12' 58.72" E  
Ahead = N 67° 21' 18.76" E  
Chord Bear = N 65° 47' 08.74" E

Course from PT WB412\_3 to PC WB412\_6 N 67° 21' 18.76" E Dist 55.2691

Curve Data

Curve WB412\_6  
P.I. Station = 2006+13.69 N 13,725,640.4312 E 2,095,797.2485  
Delta = 3° 44' 15.70" (RT)  
Degree = 5° 43' 46.48"  
Tangent = 32.6291  
Length = 65.2351  
Radius = 1,000.0000  
External = 0.5322  
Long Chord = 65.2235  
Mid. Ord. = 0.5319  
P.C. Station = 2005+81.06 N 13,725,627.8685 E 2,095,767.1348  
P.T. Station = 2006+46.29 N 13,725,651.0042 E 2,095,828.1171  
C.C. = N 13,724,704.9590 E 2,096,152.1517  
Back = N 67° 21' 18.76" E  
Ahead = N 71° 05' 34.46" E  
Chord Bear = N 69° 13' 26.61" E

Course from PT WB412\_6 to PC WB412\_9 N 71° 05' 34.46" E Dist 228.0206

Curve Data

Curve WB412\_9  
P.I. Station = 2011+29.00 N 13,725,807.4182 E 2,096,284.7804  
Delta = 2° 25' 54.18" (LT)  
Degree = 0° 28' 38.87"  
Tangent = 254.6870  
Length = 509.2975  
Radius = 12,000.0000  
External = 2.7024  
Long Chord = 509.2593  
Mid. Ord. = 2.7018  
P.C. Station = 2008+74.31 N 13,725,724.8908 E 2,096,043.8349  
P.T. Station = 2013+83.61 N 13,725,900.0942 E 2,096,522.0073  
C.C. = N 13,737,077.4337 E 2,092,155.4201  
Back = N 71° 05' 34.46" E  
Ahead = N 68° 39' 40.28" E  
Chord Bear = N 69° 52' 37.37" E

Course from PT WB412\_9 to PC WB412\_12 N 68° 39' 40.28" E Dist 1,333.1502

Curve Data

Curve WB412\_12  
P.I. Station = 2028+10.75 N 13,726,419.4039 E 2,097,851.3094  
Delta = 3° 36' 07.72" (LT)  
Degree = 1° 55' 00.80"  
Tangent = 93.9891  
Length = 187.9163  
Radius = 2,989.0000  
External = 1.4774  
Long Chord = 187.8854  
Mid. Ord. = 1.4766  
P.C. Station = 2027+16.76 N 13,726,385.2040 E 2,097,763.7633  
P.T. Station = 2029+04.68 N 13,726,459.0366 E 2,097,936.5339  
C.C. = N 13,729,169.3060 E 2,096,676.1527  
Back = N 68° 39' 42.76" E  
Ahead = N 65° 03' 35.03" E  
Chord Bear = N 66° 51' 38.89" E

Course from PT WB412\_12 to PC WB412\_15 N 65° 03' 35.03" E Dist 116.8864

Curve Data

Curve WB412\_15  
P.I. Station = 2030+97.95 N 13,726,540.5353 E 2,098,111.7851  
Delta = 5° 08' 44.21" (RT)  
Degree = 3° 22' 13.22"  
Tangent = 76.3881  
Length = 152.6735  
Radius = 1,700.0000  
External = 1.7154  
Long Chord = 152.6222  
Mid. Ord. = 1.7136  
P.C. Station = 2030+21.56 N 13,726,508.3245 E 2,098,042.5204  
P.T. Station = 2031+74.24 N 13,726,566.4041 E 2,098,183.6596  
C.C. = N 13,724,966.8531 E 2,098,759.3649  
Back = N 65° 03' 35.03" E  
Ahead = N 70° 12' 19.24" E  
Chord Bear = N 67° 37' 57.14" E

Course from PT WB412\_15 to PC WB412\_18 N 70° 12' 19.24" E Dist 248.8259

Curve Data

Curve WB412\_18  
P.I. Station = 2035+64.75 N 13,726,698.6515 E 2,098,551.0984  
Delta = 1° 28' 33.36" (LT)  
Degree = 0° 31' 15.13"  
Tangent = 141.6874  
Length = 283.3591  
Radius = 11,000.0000  
External = 0.9125  
Long Chord = 283.3512  
Mid. Ord. = 0.9124  
P.C. Station = 2034+23.06 N 13,726,650.6690 E 2,098,417.7830  
P.T. Station = 2037+06.42 N 13,726,750.0518 E 2,098,683.1337  
C.C. = N 13,737,000.7051 E 2,094,692.6314  
Back = N 70° 12' 19.24" E  
Ahead = N 68° 43' 45.88" E  
Chord Bear = N 69° 28' 02.56" E

Course from PT WB412\_18 to WB41221 N 68° 43' 45.88" E Dist 225.8682

Point WB41221 N 13,726,831.9907 E 2,098,893.6152 Sta 2039+32.29

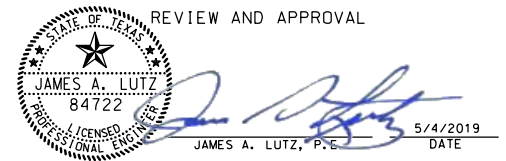
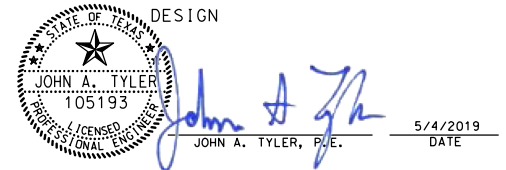
Course from WB41221 to WB41223 N 68° 41' 23.33" E Dist 14.8214

Point WB41223 N 13,726,837.3770 E 2,098,907.4232 Sta 2039+47.11

Course from WB41223 to WB41224 N 68° 43' 48.01" E Dist 1,975.6572

Point WB41224 N 13,727,554.0730 E 2,100,748.5012 Sta 2059+22.77

Ending chain WB412 description



REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 10 OF 10

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	141

Plotted on: 5/4/2019

Design File name: P:\111\35\07\design\Civil\General\1113507\HALN\Data01.dgn

# NOGALITOS HORIZONTAL ALIGNMENT

Beginning chain NOGALITOS description

Point RDCL762 N 13,690,566.7610 E 2,120,377.2875 Sta 100+00.00  
 Course from RDCL762 to RDCL761 N 37° 04' 12.83" E Dist 4,475.0000  
 Point RDCL761 N 13,694,137.3512 E 2,123,074.7884 Sta 144+75.00

Ending chain NOGALITOS description

# SW LOOP 410 HORIZONTAL ALIGNMENT

Beginning chain SWL00P410\_1 description

Point RDCL1291 N 13,683,952.7590 E 2,084,970.2818 Sta 180+00.00  
 Course from RDCL1291 to PC RDCL129\_3 N 19° 11' 38.51" W Dist 238.6859

### Curve Data

Curve RDCL129\_3  
 P.I. Station = 183+04.51 N 13,684,240.3460 E 2,084,870.1670  
 Delta = 6° 16' 47.66" (RT)  
 Degree = 4° 46' 28.73"  
 Tangent = 65.8289  
 Length = 131.5260  
 Radius = 1,200.0000  
 External = 1.8042  
 Long Chord = 131.4602  
 Mid. Ord. = 1.8015  
 P.C. Station = 182+38.69 N 13,684,178.1765 E 2,084,891.8095  
 P.T. Station = 183+70.21 N 13,684,304.5099 E 2,084,855.4549  
 C.C. = 183+04.51 N 13,684,240.3460 E 2,084,870.1670  
 Back = N 19° 11' 38.51" W  
 Ahead = N 12° 54' 50.85" W  
 Chord Bear = N 16° 03' 14.68" W

Course from PT RDCL129\_3 to PC RDCL129\_6 N 12° 54' 50.85" W Dist 282.5471

### Curve Data

Curve RDCL129\_6  
 P.I. Station = 187+03.76 N 13,684,629.6257 E 2,084,780.9091  
 Delta = 5° 50' 23.10" (LT)  
 Degree = 5° 43' 46.48"  
 Tangent = 51.0056  
 Length = 101.9229  
 Radius = 1,000.0000  
 External = 1.2999  
 Long Chord = 101.8788  
 Mid. Ord. = 1.2983  
 P.C. Station = 186+52.76 N 13,684,579.9102 E 2,084,792.3083  
 P.T. Station = 187+54.68 N 13,684,677.9233 E 2,084,764.5106  
 C.C. = 187+03.76 N 13,684,629.6257 E 2,084,780.9091  
 Back = N 12° 54' 50.85" W  
 Ahead = N 18° 45' 13.95" W  
 Chord Bear = N 15° 50' 02.40" W

Course from PT RDCL129\_6 to PC RDCL129\_9 N 18° 45' 13.95" W Dist 544.3822

### Curve Data

Curve RDCL129\_9  
 P.I. Station = 193+51.94 N 13,685,243.4690 E 2,084,572.4910  
 Delta = 6° 03' 11.28" (LT)  
 Degree = 5° 43' 46.48"  
 Tangent = 52.8727  
 Length = 105.6471  
 Radius = 1,000.0000  
 External = 1.3968  
 Long Chord = 105.5980  
 Mid. Ord. = 1.3948  
 P.C. Station = 192+99.06 N 13,685,193.4034 E 2,084,589.4898  
 P.T. Station = 194+04.71 N 13,685,291.4630 E 2,084,550.3076  
 C.C. = 193+51.94 N 13,685,243.4690 E 2,084,572.4910  
 Back = N 18° 45' 13.95" W  
 Ahead = N 24° 48' 25.23" W  
 Chord Bear = N 21° 46' 49.59" W

Course from PT RDCL129\_9 to PC RDCL129\_12 N 24° 48' 25.23" W Dist 174.9434

Curve Data

Curve RDCL129\_12  
 P.I. Station = 198+60.07 N 13,685,704.8003 E 2,084,359.2575  
 Delta = 3° 12' 44.77" (RT)  
 Degree = 0° 34' 22.65"  
 Tangent = 280.4113  
 Length = 560.6757  
 Radius = 10,000.0000  
 External = 3.9308  
 Long Chord = 560.6022  
 Mid. Ord. = 3.9292  
 P.C. Station = 195+79.65 N 13,685,450.2636 E 2,084,476.9078  
 P.T. Station = 201+40.33 N 13,685,965.5299 E 2,084,256.0559  
 C.C. = 198+60.07 N 13,685,704.8003 E 2,084,359.2575  
 Back = N 24° 48' 25.23" W  
 Ahead = N 21° 35' 40.47" W  
 Chord Bear = N 23° 12' 02.85" W

Course from PT RDCL129\_12 to PC RDCL129\_15 N 21° 35' 40.47" W Dist 73.5651

Curve Data

Curve RDCL129\_15  
 P.I. Station = 203+63.08 N 13,686,172.6464 E 2,084,174.0754  
 Delta = 3° 25' 05.07" (LT)  
 Degree = 1° 08' 45.30"  
 Tangent = 149.1859  
 Length = 298.2834  
 Radius = 5,000.0000  
 External = 2.2251  
 Long Chord = 298.2391  
 Mid. Ord. = 2.2242  
 P.C. Station = 202+13.90 N 13,686,033.9316 E 2,084,228.9813  
 P.T. Station = 205+12.18 N 13,686,307.8408 E 2,084,110.9969  
 C.C. = 203+63.08 N 13,686,172.6464 E 2,084,174.0754  
 Back = N 21° 35' 40.47" W  
 Ahead = N 25° 00' 45.54" W  
 Chord Bear = N 23° 18' 13.00" W

Course from PT RDCL129\_15 to PC RDCL129\_18 N 25° 00' 45.54" W Dist 1,416.2756

Curve Data

Curve RDCL129\_18  
 P.I. Station = 221+37.83 N 13,687,781.0256 E 2,083,423.6435  
 Delta = 5° 19' 39.92" (RT)  
 Degree = 1° 16' 23.66"  
 Tangent = 209.3714  
 Length = 418.4410  
 Radius = 4,500.0000  
 External = 4.8681  
 Long Chord = 418.2902  
 Mid. Ord. = 4.8628  
 P.C. Station = 219+28.45 N 13,687,591.2902 E 2,083,512.1696  
 P.T. Station = 223+46.90 N 13,687,978.1612 E 2,083,353.1174  
 C.C. = 221+37.83 N 13,687,781.0256 E 2,083,423.6435  
 Back = N 25° 00' 45.54" W  
 Ahead = N 19° 41' 05.62" W  
 Chord Bear = N 22° 20' 55.58" W

Course from PT RDCL129\_18 to PC RDCL129\_21 N 19° 41' 05.62" W Dist 398.7789

Curve Data

Curve RDCL129\_21  
 P.I. Station = 227+73.56 N 13,688,379.8952 E 2,083,209.3953  
 Delta = 6° 23' 06.95" (LT)  
 Degree = 11° 27' 32.96"  
 Tangent = 27.8898  
 Length = 55.7219  
 Radius = 500.0000  
 External = 0.7772  
 Long Chord = 55.6931  
 Mid. Ord. = 0.7760  
 P.C. Station = 227+45.67 N 13,688,353.6352 E 2,083,218.7899  
 P.T. Station = 228+01.40 N 13,688,404.9474 E 2,083,197.1385  
 C.C. = 227+73.56 N 13,688,379.8952 E 2,083,209.3953  
 Back = N 19° 41' 05.62" W  
 Ahead = N 26° 04' 12.57" W  
 Chord Bear = N 22° 52' 39.09" W

Course from PT RDCL129\_21 to PC RDCL129\_24 N 26° 04' 12.57" W Dist 323.7827

Curve Data

Curve RDCL129\_24  
 P.I. Station = 232+82.92 N 13,688,837.4828 E 2,082,985.5208  
 Delta = 3° 00' 43.25" (LT)  
 Degree = 0° 57' 17.75"  
 Tangent = 157.7450  
 Length = 315.4173  
 Radius = 6,000.0000  
 External = 2.0733  
 Long Chord = 315.3809  
 Mid. Ord. = 2.0725  
 P.C. Station = 231+25.18 N 13,688,695.7874 E 2,083,054.8452  
 P.T. Station = 234+40.60 N 13,688,975.3398 E 2,082,908.8468  
 C.C. = 232+82.92 N 13,688,837.4828 E 2,082,985.5208  
 Back = N 26° 04' 12.57" W  
 Ahead = N 29° 04' 55.82" W  
 Chord Bear = N 27° 34' 34.19" W

Course from PT RDCL129\_24 to PC RDCL129\_27 N 29° 04' 55.82" W Dist 334.1524

Curve Data

Curve RDCL129\_27  
 P.I. Station = 239+82.29 N 13,689,448.7365 E 2,082,645.5505  
 Delta = 3° 57' 43.63" (RT)  
 Degree = 0° 57' 17.75"  
 Tangent = 207.5388  
 Length = 414.9122  
 Radius = 6,000.0000  
 External = 3.5883  
 Long Chord = 414.8295  
 Mid. Ord. = 3.5861  
 P.C. Station = 237+74.75 N 13,689,267.3635 E 2,082,746.4275  
 P.T. Station = 241+89.66 N 13,689,636.6464 E 2,082,557.4469  
 C.C. = 239+82.29 N 13,689,448.7365 E 2,082,645.5505  
 Back = N 29° 04' 55.82" W  
 Ahead = N 25° 07' 12.19" W  
 Chord Bear = N 27° 06' 04.00" W

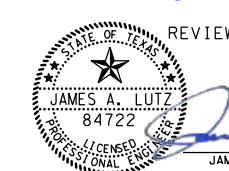
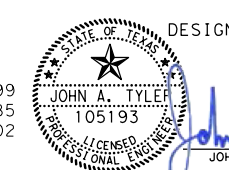
Course from PT RDCL129\_27 to RDCL12929 N 25° 07' 12.19" W Dist 1,114.3744

Point RDCL12929 N 13,690,645.6236 E 2,082,084.3767 Sta 253+04.04

Ending chain SWL00P410\_1 description

Plotted on: 5/4/2019

Design File name: P:\11135\08\Design\Civil\General\1113508\_HALN\_Data01.dgn



DESIGN  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 1 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				142

# SW LOOP 410 HORIZONTAL ALIGNMENT

Plotted on: 5/4/2019

Design File name: P:\11135\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Beginning chain SWL00P410\_2 description  
 =====

Point RDCL1311        N 13,683,845.7786 E    2,084,764.0054 Sta    259+40.94

Course from RDCL1311 to PC RDCL131\_3 N 19° 19' 18.20" W Dist 479.2203

Curve Data  
 \*-----\*

Curve RDCL131\_3  
 P.I. Station        265+31.18    N    13,684,402.7724    E    2,084,568.7119  
 Delta            =    8° 27' 56.67" (LT)  
 Degree           =    3° 49' 10.99"  
 Tangent          =    111.0184  
 Length           =    221.6326  
 Radius           =    1,500.0000  
 External         =    4.1027  
 Long Chord       =    221.4311  
 Mid. Ord.        =    4.0916  
 P.C. Station      264+20.16    N    13,684,298.0071    E    2,084,605.4448  
 P.T. Station      266+41.79    N    13,684,500.9885    E    2,084,516.9559  
 C.C.             =    N 13° 19' 18.20" W  
 Back             =    N 27° 47' 14.87" W  
 Ahead            =    N 27° 47' 14.87" W  
 Chord Bear       =    N 23° 33' 16.53" W

Course from PT RDCL131\_3 to PC RDCL131\_6 N 27° 47' 14.87" W Dist 205.0972

Curve Data  
 \*-----\*

Curve RDCL131\_6  
 P.I. Station        269+41.79    N    13,684,766.3939    E    2,084,377.0977  
 Delta            =    8° 28' 50.45" (RT)  
 Degree           =    4° 28' 34.44"  
 Tangent          =    94.9035  
 Length           =    189.4602  
 Radius           =    1,280.0000  
 External         =    3.5134  
 Long Chord       =    189.2873  
 Mid. Ord.        =    3.5038  
 P.C. Station      268+46.89    N    13,684,682.4344    E    2,084,421.3410  
 P.T. Station      270+36.35    N    13,684,855.9602    E    2,084,345.7201  
 C.C.             =    N 27° 47' 14.87" W  
 Back             =    N 19° 18' 24.41" W  
 Ahead            =    N 19° 18' 24.41" W  
 Chord Bear       =    N 23° 32' 49.64" W

Course from PT RDCL131\_6 to PC RDCL131\_9 N 19° 18' 24.41" W Dist 426.0522

Curve Data  
 \*-----\*

Curve RDCL131\_9  
 P.I. Station        275+24.17    N    13,685,316.3503    E    2,084,184.4326  
 Delta            =    5° 53' 37.03" (RT)  
 Degree           =    4° 46' 28.73"  
 Tangent          =    61.7723  
 Length           =    123.4357  
 Radius           =    1,200.0000  
 External         =    1.5889  
 Long Chord       =    123.3812  
 Mid. Ord.        =    1.5868  
 P.C. Station      274+62.40    N    13,685,258.0519    E    2,084,204.8561  
 P.T. Station      275+85.84    N    13,685,376.4376    E    2,084,170.1032  
 C.C.             =    N 19° 18' 24.41" W  
 Back             =    N 13° 24' 47.39" W  
 Ahead            =    N 13° 24' 47.39" W  
 Chord Bear       =    N 16° 21' 35.90" W

Course from PT RDCL131\_9 to PC RDCL131\_12 N 13° 24' 47.39" W Dist 339.8418

Curve Data  
 \*-----\*

Curve RDCL131\_12  
 P.I. Station        280+27.46    N    13,685,806.0168    E    2,084,067.6587  
 Delta            =    9° 41' 47.14" (LT)  
 Degree           =    4° 46' 28.73"  
 Tangent          =    101.7838  
 Length           =    203.0815  
 Radius           =    1,200.0000  
 External         =    4.3089  
 Long Chord       =    202.8392  
 Mid. Ord.        =    4.2935  
 P.C. Station      279+25.68    N    13,685,707.0094    E    2,084,091.2696  
 P.T. Station      281+28.76    N    13,685,899.6330    E    2,084,027.7095  
 C.C.             =    N 13° 24' 47.39" W  
 Back             =    N 23° 06' 34.53" W  
 Ahead            =    N 23° 06' 34.53" W  
 Chord Bear       =    N 18° 15' 40.96" W

Course from PT RDCL131\_12 to PC RDCL131\_15 N 23° 06' 34.53" W Dist 253.5924

Curve Data  
 \*-----\*

Curve RDCL131\_15  
 P.I. Station        284+53.66    N    13,686,198.4637    E    2,083,900.1883  
 Delta            =    2° 02' 33.57" (LT)  
 Degree           =    1° 25' 56.62"  
 Tangent          =    71.3098  
 Length           =    142.6045  
 Radius           =    4,000.0000  
 External         =    0.6356  
 Long Chord       =    142.5970  
 Mid. Ord.        =    0.6355  
 P.C. Station      283+82.35    N    13,686,132.8761    E    2,083,928.1767  
 P.T. Station      285+24.96    N    13,686,263.0120    E    2,083,869.8798  
 C.C.             =    N 23° 06' 34.53" W  
 Back             =    N 25° 09' 08.10" W  
 Ahead            =    N 25° 09' 08.10" W  
 Chord Bear       =    N 24° 07' 51.31" W

Course from PT RDCL131\_15 to PC RDCL131\_18 N 25° 09' 08.10" W Dist 1,610.9264

Curve Data  
 \*-----\*

Curve RDCL131\_18  
 P.I. Station        301+72.29    N    13,687,754.1485    E    2,083,169.7215  
 Delta            =    5° 33' 29.95" (LT)  
 Degree           =    7° 38' 21.97"  
 Tangent          =    36.4077  
 Length           =    72.7582  
 Radius           =    750.0000  
 External         =    0.8832  
 Long Chord       =    72.7297  
 Mid. Ord.        =    0.8821  
 P.C. Station      301+35.88    N    13,687,721.1929    E    2,083,185.1957  
 P.T. Station      302+08.64    N    13,687,785.4503    E    2,083,151.1281  
 C.C.             =    N 25° 09' 08.10" W  
 Back             =    N 30° 42' 38.05" W  
 Ahead            =    N 30° 42' 38.05" W  
 Chord Bear       =    N 27° 55' 53.07" W

Course from PT RDCL131\_18 to PC RDCL131\_21 N 30° 42' 38.05" W Dist 410.0612

Curve Data  
 \*-----\*

Curve RDCL131\_21  
 P.I. Station        306+57.35    N    13,688,171.2292    E    2,082,921.9731  
 Delta            =    5° 53' 57.58" (RT)  
 Degree           =    7° 38' 21.97"  
 Tangent          =    38.6451  
 Length           =    77.2220  
 Radius           =    750.0000  
 External         =    0.9950  
 Long Chord       =    77.1879  
 Mid. Ord.        =    0.9937  
 P.C. Station      306+18.70    N    13,688,138.0037    E    2,082,941.7092  
 P.T. Station      306+95.93    N    13,688,206.3072    E    2,082,905.7564  
 C.C.             =    N 30° 42' 38.05" W  
 Back             =    N 24° 48' 40.47" W  
 Ahead            =    N 24° 48' 40.47" W  
 Chord Bear       =    N 27° 45' 39.26" W

Course from PT RDCL131\_21 to PC RDCL131\_24 N 24° 48' 40.47" W Dist 355.7596

Curve Data  
 \*-----\*

Curve RDCL131\_24  
 P.I. Station        313+88.67    N    13,688,835.1034    E    2,082,615.0620  
 Delta            =    5° 00' 42.27" (RT)  
 Degree           =    0° 44' 38.76"  
 Tangent          =    336.9798  
 Length           =    673.5298  
 Radius           =    7,700.0000  
 External         =    7.3702  
 Long Chord       =    673.3151  
 Mid. Ord.        =    7.3632  
 P.C. Station      310+51.69    N    13,688,529.2285    E    2,082,756.4689  
 P.T. Station      317+25.22    N    13,689,152.1622    E    2,082,500.9170  
 C.C.             =    N 24° 48' 40.47" W  
 Back             =    N 19° 47' 58.20" W  
 Ahead            =    N 19° 47' 58.20" W  
 Chord Bear       =    N 22° 18' 19.34" W

Course from PT RDCL131\_24 to PC RDCL131\_27 N 19° 47' 58.20" W Dist 34.9367

Curve Data  
 \*-----\*

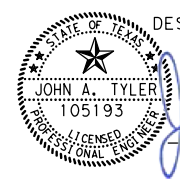
Curve RDCL131\_27  
 P.I. Station        318+39.67    N    13,689,259.8486    E    2,082,462.1485  
 Delta            =    5° 21' 21.58" (LT)  
 Degree           =    3° 22' 13.22"  
 Tangent          =    79.5157  
 Length           =    158.9156  
 Radius           =    1,700.0000  
 External         =    1.8586  
 Long Chord       =    158.8577  
 Mid. Ord.        =    1.8566  
 P.C. Station      317+60.15    N    13,689,185.0336    E    2,082,489.0829  
 P.T. Station      319+19.07    N    13,689,331.8228    E    2,082,428.3483  
 C.C.             =    N 19° 47' 58.20" W  
 Back             =    N 25° 09' 19.78" W  
 Ahead            =    N 25° 09' 19.78" W  
 Chord Bear       =    N 22° 28' 38.99" W

Course from PT RDCL131\_27 to RDCL13129 N 25° 09' 19.78" W Dist 1,380.9283

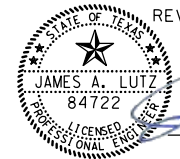
Point RDCL13129        N 13,690,581.7805 E    2,081,841.3484 Sta    333+00.00

=====



Ending chain SWL00P410\_2 description



DESIGN  
 JOHN A. TYLER, P.E.  
 DATE 5/4/2019



REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 DATE 5/4/2019

REV. NO.	DATE	DESCRIPTION	BY
 <p>SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS                  2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000                  TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800</p>			
 <p>© 2018</p>			
HORIZONTAL ALIGNMENT DATA SHEET			
SHEET 2 OF 13			
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 143

# IH 35 NBFR HORIZONTAL ALIGNMENT

Beginning chain IH35\_RDCL\_NB description  
Feature: Road.Centerline

Point 27 N 13,674,842.45 E 2,112,786.82 Sta 350+00.00

Course from 27 to PC IH35\_RDCL\_EB\_3 N 44° 43' 22" E Dist 915.52

Curve Data  
\*-----\*

Curve IH35\_RDCL\_EB\_3  
P.I. Station = 363+72.28 N 13,675,817.48 E 2,113,752.46  
Delta = 19° 55' 40" (RT)  
Degree = 2° 12' 13"  
Tangent = 456.76  
Length = 904.29  
Radius = 2,600.00  
External = 39.82  
Long Chord = 899.74  
Mid. Ord. = 39.22  
P.C. Station = 359+15.52 N 13,675,492.94 E 2,113,431.05  
P.T. Station = 368+19.81 N 13,676,013.03 E 2,114,165.24  
C.C. = N 13,673,663.38 E 2,115,278.40  
Back = N 44° 43' 22" E  
Ahead = N 64° 39' 02" E  
Chord Bear = N 54° 41' 12" E

Course from PT IH35\_RDCL\_EB\_3 to PC IH35\_RDCL\_EB\_6 N 64° 39' 02" E Dist 2,316.48

Curve Data  
\*-----\*

Curve IH35\_RDCL\_EB\_6  
P.I. Station = 392+89.88 N 13,677,070.57 E 2,116,397.48  
Delta = 1° 53' 33" (RT)  
Degree = 0° 36' 58"  
Tangent = 153.59  
Length = 307.16  
Radius = 9,300.00  
External = 1.27  
Long Chord = 307.15  
Mid. Ord. = 1.27  
P.C. Station = 391+36.29 N 13,677,004.81 E 2,116,258.67  
P.T. Station = 394+43.45 N 13,677,131.71 E 2,116,538.38  
C.C. = N 13,668,600.27 E 2,120,240.36  
Back = N 64° 39' 02" E  
Ahead = N 66° 32' 34" E  
Chord Bear = N 65° 35' 48" E

Course from PT IH35\_RDCL\_EB\_6 to PC IH35\_RDCL\_EB\_9 N 66° 32' 34" E Dist 197.59

Curve Data  
\*-----\*

Curve IH35\_RDCL\_EB\_9  
P.I. Station = 397+20.68 N 13,677,242.06 E 2,116,792.70  
Delta = 1° 49' 30" (LT)  
Degree = 1° 08' 45"  
Tangent = 79.63  
Length = 159.25  
Radius = 5,000.00  
External = 0.63  
Long Chord = 159.25  
Mid. Ord. = 0.63  
P.C. Station = 396+41.04 N 13,677,210.36 E 2,116,719.64  
P.T. Station = 398+00.30 N 13,677,276.07 E 2,116,864.70  
C.C. = N 13,681,797.15 E 2,114,729.33  
Back = N 66° 32' 34" E  
Ahead = N 64° 43' 05" E  
Chord Bear = N 65° 37' 50" E

Course from PT IH35\_RDCL\_EB\_9 to PC IH35\_RDCL\_EB\_12 N 64° 43' 05" E Dist 851.57

Curve Data  
\*-----\*

Curve IH35\_RDCL\_EB\_12  
P.I. Station = 411+34.55 N 13,677,845.90 E 2,118,071.16  
Delta = 12° 14' 41" (LT)  
Degree = 1° 16' 24"  
Tangent = 482.68  
Length = 961.69  
Radius = 4,500.00  
External = 25.81  
Long Chord = 959.86  
Mid. Ord. = 25.67  
P.C. Station = 406+51.87 N 13,677,639.75 E 2,117,634.71  
P.T. Station = 416+13.56 N 13,678,139.91 E 2,118,453.96  
C.C. = N 13,681,708.73 E 2,115,712.87  
Back = N 64° 43' 05" E  
Ahead = N 52° 28' 24" E  
Chord Bear = N 58° 35' 44" E

Course from PT IH35\_RDCL\_EB\_12 to PC IH35\_RDCL\_EB\_15 N 52° 28' 24" E Dist 176.46

Curve Data  
\*-----\*

Curve IH35\_RDCL\_EB\_15  
P.I. Station = 425+25.40 N 13,678,695.34 E 2,119,177.11  
Delta = 13° 58' 30" (LT)  
Degree = 0° 57' 18"  
Tangent = 735.38  
Length = 1,463.46  
Radius = 6,000.00  
External = 44.90  
Long Chord = 1,459.84  
Mid. Ord. = 44.56  
P.C. Station = 417+90.02 N 13,678,247.40 E 2,118,593.90  
P.T. Station = 432+53.48 N 13,679,270.87 E 2,119,634.88  
C.C. = N 13,683,005.82 E 2,114,939.12  
Back = N 52° 28' 24" E  
Ahead = N 38° 29' 54" E  
Chord Bear = N 45° 29' 09" E

Course from PT IH35\_RDCL\_EB\_15 to PC IH35\_RDCL\_EB\_18 N 38° 29' 54" E Dist 13.12

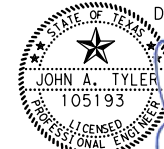
Curve Data  
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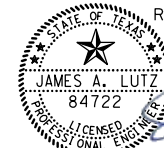
Curve IH35\_RDCL\_EB\_18  
P.I. Station = 435+70.88 N 13,679,519.28 E 2,119,832.46  
Delta = 6° 57' 55" (LT)  
Degree = 1° 08' 45"  
Tangent = 304.29  
Length = 607.83  
Radius = 5,000.00  
External = 9.25  
Long Chord = 607.45  
Mid. Ord. = 9.23  
P.C. Station = 432+66.60 N 13,679,281.14 E 2,119,643.04  
P.T. Station = 438+74.42 N 13,679,778.64 E 2,119,991.60  
C.C. = N 13,682,393.59 E 2,115,729.91  
Back = N 38° 29' 54" E  
Ahead = N 31° 31' 59" E  
Chord Bear = N 35° 00' 57" E

Course from PT IH35\_RDCL\_EB\_18 to 28 N 31° 31' 59" E Dist 187.47

Point 28 N 13,679,938.43 E 2,120,089.65 Sta 440+61.89

Ending chain IH35\_RDCL\_NB description

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 3 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				144

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn



# IH 35 SBFR HORIZONTAL ALIGNMENT

Beginning chain IH35\_RDCL\_SB description  
Feature: Road.Centerline

Point 29 N 13,674,384.79 E 2,110,145.88 Sta 450+00.00

Course from 29 to PC IH35\_RDCL\_WB\_3 N 64° 40' 52" E Dist 6,527.02

### Curve Data

Curve IH35\_RDCL\_WB\_3  
P.I. Station = 516+57.24 N 13,677,231.80 E 2,116,163.63  
Delta = 0° 44' 46" (LT)  
Degree = 0° 17' 11"  
Tangent = 130.22  
Length = 260.43  
Radius = 20,000.00  
External = 0.42  
Long Chord = 260.43  
Mid. Ord. = 0.42  
P.C. Station = 515+27.02 N 13,677,176.11 E 2,116,045.92  
P.T. Station = 517+87.45 N 13,677,289.01 E 2,116,280.60  
C.C. = N 13,695,254.94 E 2,107,492.81  
Back = N 64° 40' 52" E  
Ahead = N 63° 56' 06" E  
Chord Bear = N 64° 18' 29" E

Course from PT IH35\_RDCL\_WB\_3 to PC IH35\_RDCL\_WB\_6 N 63° 56' 06" E Dist 1,473.34

### Curve Data

Curve IH35\_RDCL\_WB\_6  
P.I. Station = 534+61.34 N 13,678,024.51 E 2,117,784.25  
Delta = 5° 44' 26" (LT)  
Degree = 1° 25' 57"  
Tangent = 200.55  
Length = 400.77  
Radius = 4,000.00  
External = 5.02  
Long Chord = 400.61  
Mid. Ord. = 5.02  
P.C. Station = 532+60.78 N 13,677,936.38 E 2,117,604.09  
P.T. Station = 536+61.56 N 13,678,130.21 E 2,117,954.69  
C.C. = N 13,681,529.57 E 2,115,846.54  
Back = N 63° 56' 06" E  
Ahead = N 58° 11' 40" E  
Chord Bear = N 61° 03' 53" E

Course from PT IH35\_RDCL\_WB\_6 to PC IH35\_RDCL\_WB\_9 N 58° 11' 40" E Dist 264.83

### Curve Data

Curve IH35\_RDCL\_WB\_9  
P.I. Station = 543+46.44 N 13,678,491.17 E 2,118,536.73  
Delta = 11° 41' 57" (LT)  
Degree = 1° 23' 51"  
Tangent = 420.05  
Length = 837.18  
Radius = 4,100.00  
External = 21.46  
Long Chord = 835.73  
Mid. Ord. = 21.35  
P.C. Station = 539+26.39 N 13,678,269.78 E 2,118,179.76  
P.T. Station = 547+63.57 N 13,678,780.34 E 2,118,841.40  
C.C. = N 13,681,754.13 E 2,116,018.90  
Back = N 58° 11' 40" E  
Ahead = N 46° 29' 43" E  
Chord Bear = N 52° 20' 41" E

Course from PT IH35\_RDCL\_WB\_9 to PC IH35\_RDCL\_WB\_12 N 46° 29' 43" E Dist 145.72

### Curve Data

Curve IH35\_RDCL\_WB\_12  
P.I. Station = 554+60.41 N 13,679,260.05 E 2,119,346.83  
Delta = 12° 34' 48" (LT)  
Degree = 1° 08' 45"  
Tangent = 551.12  
Length = 1,097.81  
Radius = 5,000.00  
External = 30.28  
Long Chord = 1,095.60  
Mid. Ord. = 30.10  
P.C. Station = 549+09.29 N 13,678,880.65 E 2,118,947.09  
P.T. Station = 560+07.09 N 13,679,717.40 E 2,119,654.33  
C.C. = N 13,682,507.23 E 2,115,505.01  
Back = N 46° 29' 43" E  
Ahead = N 33° 54' 55" E  
Chord Bear = N 40° 12' 19" E

Course from PT IH35\_RDCL\_WB\_12 to 30 N 33° 54' 55" E Dist 274.31

Point 30 N 13,679,945.04 E 2,119,807.39 Sta 562+81.40

Ending chain IH35\_RDCL\_SB description

# FREDERICKSBURG NB HORIZONTAL ALIGNMENT

Beginning chain FREDBURG\_NB description  
Feature: Road.Centerline

Point 43 N 13,742,117.23 E 2,103,855.85 Sta 1100+00.00

Course from 43 to PC FREDBURG\_WB\_3 S 14° 27' 03" E Dist 953.96

### Curve Data

Curve FREDBURG\_WB\_3  
P.I. Station = 1110+10.06 N 13,741,139.13 E 2,104,107.91  
Delta = 0° 38' 34" (LT)  
Degree = 0° 34' 23"  
Tangent = 56.10  
Length = 112.20  
Radius = 10,000.00  
External = 0.16  
Long Chord = 112.20  
Mid. Ord. = 0.16  
P.C. Station = 1109+53.96 N 13,741,193.46 E 2,104,093.91  
P.T. Station = 1110+66.16 N 13,741,084.97 E 2,104,122.51  
C.C. = N 13,743,688.96 E 2,113,777.52  
Back = S 14° 27' 03" E  
Ahead = S 15° 05' 37" E  
Chord Bear = S 14° 46' 20" E

Course from PT FREDBURG\_WB\_3 to PC FREDBURG\_WB\_6 S 15° 05' 37" E Dist 350.42

### Curve Data

Curve FREDBURG\_WB\_6  
P.I. Station = 1115+14.63 N 13,740,651.97 E 2,104,239.29  
Delta = 0° 33' 42" (RT)  
Degree = 0° 17' 11"  
Tangent = 98.05  
Length = 196.10  
Radius = 20,000.00  
External = 0.24  
Long Chord = 196.10  
Mid. Ord. = 0.24  
P.C. Station = 1114+16.58 N 13,740,746.64 E 2,104,213.76  
P.T. Station = 1116+12.67 N 13,740,557.06 E 2,104,263.90  
C.C. = N 13,735,538.65 E 2,084,903.74  
Back = S 15° 05' 37" E  
Ahead = S 14° 31' 55" E  
Chord Bear = S 14° 48' 46" E

Course from PT FREDBURG\_WB\_6 to PC FREDBURG\_WB\_9 S 14° 31' 55" E Dist 2,316.36

### Curve Data

Curve FREDBURG\_WB\_9  
P.I. Station = 1145+61.34 N 13,737,702.73 E 2,105,003.78  
Delta = 26° 21' 39" (LT)  
Degree = 2° 07' 19"  
Tangent = 632.31  
Length = 1,242.23  
Radius = 2,700.00  
External = 73.05  
Long Chord = 1,231.30  
Mid. Ord. = 71.13  
P.C. Station = 1139+29.03 N 13,738,314.80 E 2,104,845.12  
P.T. Station = 1151+71.26 N 13,737,224.75 E 2,105,417.71  
C.C. = N 13,738,992.29 E 2,107,458.74  
Back = S 14° 31' 55" E  
Ahead = S 40° 53' 34" E  
Chord Bear = S 27° 42' 45" E

Course from PT FREDBURG\_WB\_9 to PC FREDBURG\_WB\_12 S 40° 53' 34" E Dist 1,149.88

### Curve Data

Curve FREDBURG\_WB\_12  
P.I. Station = 1167+40.20 N 13,736,038.72 E 2,106,444.82  
Delta = 4° 21' 49" (RT)  
Degree = 0° 31' 15"  
Tangent = 419.07  
Length = 837.74  
Radius = 11,000.00  
External = 7.98  
Long Chord = 837.53  
Mid. Ord. = 7.97  
P.C. Station = 1163+21.13 N 13,736,355.51 E 2,106,170.47  
P.T. Station = 1171+58.87 N 13,735,701.98 E 2,106,694.26  
C.C. = N 13,729,154.41 E 2,097,855.18  
Back = S 40° 53' 34" E  
Ahead = S 36° 31' 45" E  
Chord Bear = S 38° 42' 40" E

Course from PT FREDBURG\_WB\_12 to PC FREDBURG\_WB\_15 S 36° 31' 45" E Dist 19.76

### Curve Data

Curve FREDBURG\_WB\_15  
P.I. Station = 1172+33.68 N 13,735,641.87 E 2,106,738.79  
Delta = 1° 39' 35" (LT)  
Degree = 1° 30' 28"  
Tangent = 55.04  
Length = 110.08  
Radius = 3,800.00  
External = 0.40  
Long Chord = 110.07  
Mid. Ord. = 0.40  
P.C. Station = 1171+78.63 N 13,735,686.10 E 2,106,706.03  
P.T. Station = 1172+88.71 N 13,735,598.60 E 2,106,772.82  
C.C. = N 13,737,947.98 E 2,109,759.53  
Back = S 36° 31' 45" E  
Ahead = S 38° 11' 20" E  
Chord Bear = S 37° 21' 33" E

Course from PT FREDBURG\_WB\_15 to PC FREDBURG\_WB\_18 S 38° 11' 20" E Dist 818.87



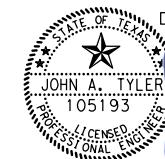
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



## HORIZONTAL ALIGNMENT DATA SHEET

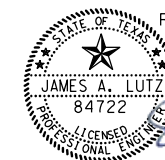
SHEET 4 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	145



DESIGN

5/4/2019 DATE



REVIEW AND APPROVAL

5/4/2019 DATE

Plotted on: 5/4/2019

Design File name: P:\11135\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

FREDERICKSBURG NB HORIZONTAL ALIGNMENT CONT.

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Curve Data  
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Curve FREDBURG\_WB\_18  
P.I. Station 1182+67.04 N 13,734,829.66 E 2,107,377.68  
Delta = 3° 05' 46" (RT)  
Degree = 0° 58' 16"  
Tangent = 159.45  
Length = 318.83  
Radius = 5,900.00  
External = 2.15  
Long Chord = 318.79  
Mid. Ord. = 2.15  
P.C. Station 1181+07.58 N 13,734,954.99 E 2,107,279.10  
P.T. Station 1184+26.41 N 13,734,699.20 E 2,107,469.35  
C.C. N 13,731,307.27 E 2,102,641.84  
Back = S 38° 11' 20" E  
Ahead = S 35° 05' 34" E  
Chord Bear = S 36° 38' 27" E

Course from PT FREDBURG\_WB\_18 to PC FREDBURG\_WB\_21 S 35° 05' 34" E Dist 414.95

Curve Data  
\*-----\*

Curve FREDBURG\_WB\_21  
P.I. Station 1190+55.75 N 13,734,184.26 E 2,107,831.16  
Delta = 1° 53' 23" (LT)  
Degree = 0° 26' 27"  
Tangent = 214.39  
Length = 428.74  
Radius = 13,000.00  
External = 1.77  
Long Chord = 428.72  
Mid. Ord. = 1.77  
P.C. Station 1188+41.36 N 13,734,359.68 E 2,107,707.90  
P.T. Station 1192+70.10 N 13,734,013.00 E 2,107,960.12  
C.C. N 13,741,833.41 E 2,118,344.79  
Back = S 35° 05' 34" E  
Ahead = S 36° 58' 57" E  
Chord Bear = S 36° 02' 15" E

Course from PT FREDBURG\_WB\_21 to PC FREDBURG\_WB\_24 S 36° 58' 57" E Dist 2,706.50

Curve Data  
\*-----\*

Curve FREDBURG\_WB\_24  
P.I. Station 1224+86.73 N 13,731,443.49 E 2,109,895.16  
Delta = 14° 11' 06" (RT)  
Degree = 1° 23' 51"  
Tangent = 510.13  
Length = 1,015.05  
Radius = 4,100.00  
External = 31.61  
Long Chord = 1,012.46  
Mid. Ord. = 31.37  
P.C. Station 1219+76.60 N 13,731,850.99 E 2,109,588.27  
P.T. Station 1229+91.65 N 13,730,973.21 E 2,110,092.82  
C.C. N 13,729,384.56 E 2,106,313.11  
Back = S 36° 58' 57" E  
Ahead = S 22° 47' 51" E  
Chord Bear = S 29° 53' 24" E

Course from PT FREDBURG\_WB\_24 to PC FREDBURG\_WB\_27 S 22° 47' 51" E Dist 16.33

Curve Data  
\*-----\*

Curve FREDBURG\_WB\_27  
P.I. Station 1231+19.52 N 13,730,855.33 E 2,110,142.36  
Delta = 4° 15' 30" (RT)  
Degree = 1° 54' 35"  
Tangent = 111.53  
Length = 222.96  
Radius = 3,000.00  
External = 2.07  
Long Chord = 222.91  
Mid. Ord. = 2.07  
P.C. Station 1230+07.99 N 13,730,958.15 E 2,110,099.15  
P.T. Station 1232+30.94 N 13,730,749.59 E 2,110,177.83  
C.C. N 13,729,795.72 E 2,107,333.51  
Back = S 22° 47' 51" E  
Ahead = S 18° 32' 21" E  
Chord Bear = S 20° 40' 06" E

Course from PT FREDBURG\_WB\_27 to PC FREDBURG\_WB\_30 S 18° 32' 21" E Dist 406.50

Curve Data  
\*-----\*

Curve FREDBURG\_WB\_30  
P.I. Station 1237+87.26 N 13,730,222.14 E 2,110,354.71  
Delta = 7° 47' 30" (LT)  
Degree = 2° 36' 16"  
Tangent = 149.82  
Length = 299.17  
Radius = 2,200.00  
External = 5.10  
Long Chord = 298.94  
Mid. Ord. = 5.08  
P.C. Station 1236+37.44 N 13,730,364.18 E 2,110,307.07  
P.T. Station 1239+36.62 N 13,730,087.87 E 2,110,421.16  
C.C. N 13,731,063.68 E 2,112,392.91  
Back = S 18° 32' 21" E  
Ahead = S 26° 19' 51" E  
Chord Bear = S 22° 26' 06" E

Course from PT FREDBURG\_WB\_30 to PC FREDBURG\_WB\_33 S 26° 19' 51" E Dist 525.79

Curve Data  
\*-----\*

Curve FREDBURG\_WB\_33  
P.I. Station 1249+06.87 N 13,729,218.28 E 2,110,851.52  
Delta = 14° 04' 36" (LT)  
Degree = 1° 35' 30"  
Tangent = 444.47  
Length = 884.45  
Radius = 3,600.00  
External = 27.33  
Long Chord = 882.23  
Mid. Ord. = 27.13  
P.C. Station 1244+62.41 N 13,729,616.63 E 2,110,654.38  
P.T. Station 1253+46.86 N 13,728,879.84 E 2,111,139.63  
C.C. N 13,731,213.42 E 2,113,880.87  
Back = S 26° 19' 51" E  
Ahead = S 40° 24' 26" E  
Chord Bear = S 33° 22' 09" E

Course from PT FREDBURG\_WB\_33 to PC FREDBURG\_WB\_36 S 40° 24' 26" E Dist 2,267.99

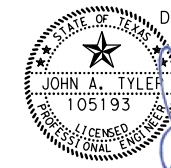
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\*-----\*

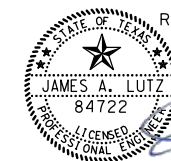
Curve FREDBURG\_WB\_36  
P.I. Station 1277+62.72 N 13,727,040.27 E 2,112,705.63  
Delta = 0° 40' 40" (LT)  
Degree = 0° 13' 45"  
Tangent = 147.87  
Length = 295.74  
Radius = 25,000.00  
External = 0.44  
Long Chord = 295.74  
Mid. Ord. = 0.44  
P.C. Station 1276+14.85 N 13,727,152.87 E 2,112,609.78  
P.T. Station 1279+10.58 N 13,726,928.81 E 2,112,802.81  
C.C. N 13,743,358.30 E 2,131,646.16  
Back = S 40° 24' 26" E  
Ahead = S 41° 05' 06" E  
Chord Bear = S 40° 44' 46" E

Course from PT FREDBURG\_WB\_36 to 44 S 41° 05' 06" E Dist 1,429.13

Point 44 N 13,725,851.63 E 2,113,742.00 Sta 1293+39.71

=====  
Ending chain FREDBURG\_NB description

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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HORIZONTAL ALIGNMENT DATA SHEET

SHEET 5 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	146

# FREDERICKSBURG SB HORIZONTAL ALIGNMENT

Beginning chain FREDBURG\_SB description  
Feature: Road.Centerline

Point 45 N 13,742,090.54 E 2,103,785.00 Sta 900+00.00

Course from 45 to PC FREDBURG\_EB\_3 S 15° 09' 58" E Dist 1,113.00

Curve Data

Curve FREDBURG\_EB\_3  
P.I. Station = 912+17.90 N 13,740,915.06 E 2,104,103.62  
Delta = 0° 45' 05" (RT)  
Degree = 0° 21' 29"  
Tangent = 104.90  
Length = 209.80  
Radius = 16,000.00  
External = 0.34  
Long Chord = 209.80  
Mid. Ord. = 0.34  
P.C. Station = 911+13.00 N 13,741,016.31 E 2,104,076.18  
P.T. Station = 913+22.80 N 13,740,813.46 E 2,104,129.74  
C.C. = 13,736,830.42 E 2,088,633.43  
Back = S 15° 09' 58" E  
Ahead = S 14° 24' 53" E  
Chord Bear = S 14° 47' 26" E

Course from PT FREDBURG\_EB\_3 to PC FREDBURG\_EB\_6 S 14° 24' 53" E Dist 1,584.10

Curve Data

Curve FREDBURG\_EB\_6  
P.I. Station = 929+59.47 N 13,739,228.31 E 2,104,537.17  
Delta = 2° 00' 28" (RT)  
Degree = 1° 54' 35"  
Tangent = 52.57  
Length = 105.13  
Radius = 3,000.00  
External = 0.46  
Long Chord = 105.13  
Mid. Ord. = 0.46  
P.C. Station = 929+06.90 N 13,739,279.23 E 2,104,524.08  
P.T. Station = 930+12.03 N 13,739,176.97 E 2,104,548.47  
C.C. = 13,738,532.41 E 2,101,618.53  
Back = S 14° 24' 53" E  
Ahead = S 12° 24' 25" E  
Chord Bear = S 13° 24' 39" E

Course from PT FREDBURG\_EB\_6 to PC FREDBURG\_EB\_9 S 12° 24' 25" E Dist 42.52

Curve Data

Curve FREDBURG\_EB\_9  
P.I. Station = 930+80.58 N 13,739,110.01 E 2,104,563.19  
Delta = 2° 58' 59" (LT)  
Degree = 5° 43' 46"  
Tangent = 26.04  
Length = 52.07  
Radius = 1,000.00  
External = 0.34  
Long Chord = 52.06  
Mid. Ord. = 0.34  
P.C. Station = 930+54.54 N 13,739,135.44 E 2,104,557.60  
P.T. Station = 931+06.61 N 13,739,084.91 E 2,104,570.10  
C.C. = 13,739,350.30 E 2,105,534.25  
Back = S 12° 24' 25" E  
Ahead = S 15° 23' 24" E  
Chord Bear = S 13° 53' 55" E

Course from PT FREDBURG\_EB\_9 to PC FREDBURG\_EB\_12 S 15° 23' 24" E Dist 844.96

Curve Data

Curve FREDBURG\_EB\_12  
P.I. Station = 946+05.65 N 13,737,639.62 E 2,104,967.93  
Delta = 25° 25' 14" (LT)  
Degree = 1° 58' 33"  
Tangent = 654.09  
Length = 1,286.65  
Radius = 2,900.00  
External = 72.85  
Long Chord = 1,276.12  
Mid. Ord. = 71.06  
P.C. Station = 939+51.56 N 13,738,270.25 E 2,104,794.35  
P.T. Station = 952+38.21 N 13,737,144.56 E 2,105,395.42  
C.C. = 13,739,039.88 E 2,107,590.36  
Back = S 15° 23' 24" E  
Ahead = S 40° 48' 38" E  
Chord Bear = S 28° 06' 01" E

Course from PT FREDBURG\_EB\_12 to PC FREDBURG\_EB\_15 S 40° 48' 38" E Dist 1,325.99

Curve Data

Curve FREDBURG\_EB\_15  
P.I. Station = 968+39.49 N 13,735,932.59 E 2,106,441.95  
Delta = 3° 50' 44" (RT)  
Degree = 0° 41' 55"  
Tangent = 275.28  
Length = 550.36  
Radius = 8,200.00  
External = 4.62  
Long Chord = 550.26  
Mid. Ord. = 4.62  
P.C. Station = 965+64.20 N 13,736,140.95 E 2,106,262.04  
P.T. Station = 971+14.57 N 13,735,712.64 E 2,106,607.49  
C.C. = 13,730,781.75 E 2,100,055.67  
Back = S 40° 48' 38" E  
Ahead = S 36° 57' 54" E  
Chord Bear = S 38° 53' 16" E

Course from PT FREDBURG\_EB\_15 to PC FREDBURG\_EB\_18 S 36° 57' 54" E Dist 149.84

Curve Data

Curve FREDBURG\_EB\_18  
P.I. Station = 973+82.22 N 13,735,498.79 E 2,106,768.43  
Delta = 1° 21' 00" (LT)  
Degree = 0° 34' 23"  
Tangent = 117.81  
Length = 235.61  
Radius = 10,000.00  
External = 0.69  
Long Chord = 235.60  
Mid. Ord. = 0.69  
P.C. Station = 972+64.41 N 13,735,592.92 E 2,106,697.59  
P.T. Station = 975+00.02 N 13,735,406.35 E 2,106,841.47  
C.C. = 13,741,606.20 E 2,114,687.61  
Back = S 36° 57' 54" E  
Ahead = S 38° 18' 54" E  
Chord Bear = S 37° 38' 24" E

Course from PT FREDBURG\_EB\_18 to PC FREDBURG\_EB\_21 S 38° 18' 54" E Dist 650.56

Curve Data

Curve FREDBURG\_EB\_21  
P.I. Station = 982+61.16 N 13,734,809.15 E 2,107,313.37  
Delta = 3° 10' 02" (RT)  
Degree = 1° 25' 57"  
Tangent = 110.59  
Length = 221.12  
Radius = 4,000.00  
External = 1.53  
Long Chord = 221.09  
Mid. Ord. = 1.53  
P.C. Station = 981+50.57 N 13,734,895.91 E 2,107,244.81  
P.T. Station = 983+71.69 N 13,734,718.72 E 2,107,377.04  
C.C. = 13,732,415.97 E 2,104,106.36  
Back = S 38° 18' 54" E  
Ahead = S 35° 08' 52" E  
Chord Bear = S 36° 43' 53" E

Course from PT FREDBURG\_EB\_21 to PC FREDBURG\_EB\_24 S 35° 08' 52" E Dist 491.64

Curve Data

Curve FREDBURG\_EB\_24  
P.I. Station = 990+01.86 N 13,734,203.45 E 2,107,739.81  
Delta = 1° 45' 49" (LT)  
Degree = 0° 38' 12"  
Tangent = 138.53  
Length = 277.03  
Radius = 9,000.00  
External = 1.07  
Long Chord = 277.02  
Mid. Ord. = 1.07  
P.C. Station = 988+63.33 N 13,734,316.72 E 2,107,660.07  
P.T. Station = 991+40.36 N 13,734,092.69 E 2,107,823.01  
C.C. = 13,739,497.91 E 2,115,019.10  
Back = S 35° 08' 52" E  
Ahead = S 36° 54' 41" E  
Chord Bear = S 36° 01' 47" E

Course from PT FREDBURG\_EB\_24 to PC FREDBURG\_EB\_27 S 36° 54' 41" E Dist 2,967.92

Curve Data

Curve FREDBURG\_EB\_27  
P.I. Station = 1024+23.24 N 13,731,467.82 E 2,109,794.64  
Delta = 11° 59' 11" (RT)  
Degree = 1° 54' 35"  
Tangent = 314.95  
Length = 627.61  
Radius = 3,000.00  
External = 16.49  
Long Chord = 626.46  
Mid. Ord. = 16.40  
P.C. Station = 1021+08.29 N 13,731,719.64 E 2,109,605.49  
P.T. Station = 1027+35.89 N 13,731,182.20 E 2,109,927.37  
C.C. = 13,729,917.91 E 2,107,206.79  
Back = S 36° 54' 41" E  
Ahead = S 24° 55' 30" E  
Chord Bear = S 30° 55' 06" E

Course from PT FREDBURG\_EB\_27 to PC FREDBURG\_EB\_30 S 24° 55' 30" E Dist 201.24

Curve Data

Curve FREDBURG\_EB\_30  
P.I. Station = 1030+44.34 N 13,730,902.48 E 2,110,057.36  
Delta = 6° 08' 12" (RT)  
Degree = 2° 51' 53"  
Tangent = 107.21  
Length = 214.21  
Radius = 2,000.00  
External = 2.87  
Long Chord = 214.11  
Mid. Ord. = 2.87  
P.C. Station = 1029+37.13 N 13,730,999.71 E 2,110,012.18  
P.T. Station = 1031+51.34 N 13,730,800.99 E 2,110,091.89  
C.C. = 13,730,156.84 E 2,108,198.46  
Back = S 24° 55' 30" E  
Ahead = S 18° 47' 18" E  
Chord Bear = S 21° 51' 24" E

Course from PT FREDBURG\_EB\_30 to PC FREDBURG\_EB\_33 S 18° 47' 18" E Dist 662.05

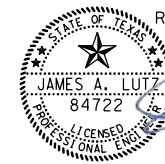
Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn




DESIGN

JOHN A. TYLER, P.E. 5/4/2019 DATE




REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/4/2019 DATE



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPCE FIRM REGISTRATION #470 | TBPES FIRM REGISTRATION #10028800

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## HORIZONTAL ALIGNMENT DATA SHEET

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SHEET 6 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				147

FREDERICKSBURG SB HORIZONTAL ALIGNMENT CONT.

Plotted on: 5/4/2019

Design File name: P:\111.35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Curve Data  
\*-----\*

Curve FREDBURG\_EB\_33  
P.I. Station = 1038+79.61 N 13,730,111.53 E 2,110,326.45  
Delta = 7° 34' 37" (LT)  
Degree = 5° 43' 46"  
Tangent = 66.22  
Length = 132.24  
Radius = 1,000.00  
External = 2.19  
Long Chord = 132.15  
Mid. Ord. = 2.19  
P.C. Station = 1038+13.39 N 13,730,174.22 E 2,110,305.12  
P.T. Station = 1039+45.63 N 13,730,052.20 E 2,110,355.85  
C.C. = N 13,730,496.29 E 2,111,251.83  
Back = S 18° 47' 18" E  
Ahead = S 26° 21' 56" E  
Chord Bear = S 22° 34' 37" E

Course from PT FREDBURG\_EB\_33 to PC FREDBURG\_EB\_36 S 26° 21' 56" E Dist 450.53

Curve Data  
\*-----\*

Curve FREDBURG\_EB\_36  
P.I. Station = 1045+71.21 N 13,729,491.69 E 2,110,633.67  
Delta = 6° 04' 22" (LT)  
Degree = 1° 44' 10"  
Tangent = 175.05  
Length = 349.77  
Radius = 3,300.00  
External = 4.64  
Long Chord = 349.60  
Mid. Ord. = 4.63  
P.C. Station = 1043+96.17 N 13,729,648.53 E 2,110,555.93  
P.T. Station = 1047+45.93 N 13,729,343.96 E 2,110,727.56  
C.C. = N 13,731,114.04 E 2,113,512.67  
Back = S 26° 21' 56" E  
Ahead = S 32° 26' 18" E  
Chord Bear = S 29° 24' 07" E

Course from PT FREDBURG\_EB\_36 to PC FREDBURG\_EB\_39 S 32° 26' 18" E Dist 39.94

Curve Data  
\*-----\*

Curve FREDBURG\_EB\_39  
P.I. Station = 1051+12.95 N 13,729,034.20 E 2,110,924.43  
Delta = 7° 57' 43" (LT)  
Degree = 1° 13' 09"  
Tangent = 327.09  
Length = 653.12  
Radius = 4,700.00  
External = 11.37  
Long Chord = 652.59  
Mid. Ord. = 11.34  
P.C. Station = 1047+85.87 N 13,729,310.25 E 2,110,748.99  
P.T. Station = 1054+38.99 N 13,728,785.11 E 2,111,136.42  
C.C. = N 13,731,831.28 E 2,114,715.65  
Back = S 32° 26' 18" E  
Ahead = S 40° 24' 00" E  
Chord Bear = S 36° 25' 09" E

Course from PT FREDBURG\_EB\_39 to PC FREDBURG\_EB\_42 S 40° 24' 00" E Dist 564.10

Curve Data  
\*-----\*

Curve FREDBURG\_EB\_42  
P.I. Station = 1061+00.38 N 13,728,281.44 E 2,111,565.09  
Delta = 2° 03' 52" (LT)  
Degree = 1° 03' 40"  
Tangent = 97.29  
Length = 194.56  
Radius = 5,400.00  
External = 0.88  
Long Chord = 194.55  
Mid. Ord. = 0.88  
P.C. Station = 1060+03.09 N 13,728,355.53 E 2,111,502.03  
P.T. Station = 1061+97.65 N 13,728,209.67 E 2,111,630.77  
C.C. = N 13,731,855.38 E 2,115,614.33  
Back = S 40° 24' 00" E  
Ahead = S 42° 27' 52" E  
Chord Bear = S 41° 25' 56" E

Course from PT FREDBURG\_EB\_42 to PC FREDBURG\_EB\_45 S 42° 27' 52" E Dist 87.24

Curve Data  
\*-----\*

Curve FREDBURG\_EB\_45  
P.I. Station = 1063+11.53 N 13,728,125.66 E 2,111,707.66  
Delta = 2° 20' 52" (RT)  
Degree = 4° 24' 27"  
Tangent = 26.64  
Length = 53.27  
Radius = 1,300.00  
External = 0.27  
Long Chord = 53.27  
Mid. Ord. = 0.27  
P.C. Station = 1062+84.89 N 13,728,145.31 E 2,111,689.67  
P.T. Station = 1063+38.16 N 13,728,105.28 E 2,111,724.82  
C.C. = N 13,727,267.64 E 2,110,730.67  
Back = S 42° 27' 52" E  
Ahead = S 40° 07' 00" E  
Chord Bear = S 41° 17' 26" E

Course from PT FREDBURG\_EB\_45 to PC FREDBURG\_EB\_48 S 40° 07' 00" E Dist 692.06

Curve Data  
\*-----\*

Curve FREDBURG\_EB\_48  
P.I. Station = 1071+01.42 N 13,727,521.60 E 2,112,216.62  
Delta = 0° 24' 28" (LT)  
Degree = 0° 17' 11"  
Tangent = 71.19  
Length = 142.39  
Radius = 20,000.00  
External = 0.13  
Long Chord = 142.39  
Mid. Ord. = 0.13  
P.C. Station = 1070+30.22 N 13,727,576.04 E 2,112,170.74  
P.T. Station = 1071+72.61 N 13,727,467.48 E 2,112,262.88  
C.C. = N 13,740,462.95 E 2,127,465.44  
Back = S 40° 07' 00" E  
Ahead = S 40° 31' 28" E  
Chord Bear = S 40° 19' 14" E

Course from PT FREDBURG\_EB\_48 to PC FREDBURG\_EB\_51 S 40° 31' 28" E Dist 958.61

Curve Data  
\*-----\*

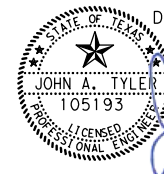
Curve FREDBURG\_EB\_51  
P.I. Station = 1082+27.48 N 13,726,665.65 E 2,112,948.30  
Delta = 0° 44' 07" (LT)  
Degree = 0° 22' 55"  
Tangent = 96.26  
Length = 192.52  
Radius = 15,000.00  
External = 0.31  
Long Chord = 192.52  
Mid. Ord. = 0.31  
P.C. Station = 1081+31.22 N 13,726,738.82 E 2,112,885.76  
P.T. Station = 1083+23.74 N 13,726,593.29 E 2,113,011.78  
C.C. = N 13,736,485.42 E 2,124,287.68  
Back = S 40° 31' 28" E  
Ahead = S 41° 15' 36" E  
Chord Bear = S 40° 53' 32" E

Course from PT FREDBURG\_EB\_51 to 46 S 41° 15' 36" E Dist 1,047.72

Point 46 N 13,725,805.69 E 2,113,702.73 Sta 1093+71.45

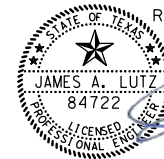
Ending chain FREDBURG\_SB description

DESIGN




JOHN A. TYLER, P.E.  
5/4/2019  
DATE

REVIEW AND APPROVAL




JAMES A. LUTZ, P.E.  
5/4/2019  
DATE

REV. NO.	DATE	DESCRIPTION	BY



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 7 OF 13					
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:	
CHK DGN:	6	TEXAS		VARIES	
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:
CHK DWG:	SAT	BEXAR	0915	12	576
					SHEET NO. 148

# CULEBRA EB HORIZONTAL ALIGNMENT

Beginning chain CULEBRA\_EB description  
Feature: Road\_CenterLine

Point 31 N 13,731,276.14 E 2,059,062.79 Sta 580+00.00  
Course from 31 to PC CULEBRA\_EB.3 S 67° 09' 16" E Dist 712.88

### Curve Data

Curve CULEBRA\_EB.3  
P.I. Station = 590+18.65 N 13,730,880.65 E 2,060,001.54  
Delta = 1° 45' 07" (RT)  
Degree = 0° 17' 11"  
Tangent = 305.78  
Length = 611.51  
Radius = 20,000.00  
External = 2.34  
Long Chord = 611.48  
Mid. Ord. = 2.34  
P.C. Station = 587+12.88 N 13,730,999.37 E 2,059,719.75  
P.T. Station = 593+24.38 N 13,730,753.37 E 2,060,279.57  
C.C. = N 13,712,568.26 E 2,051,954.81  
Back = S 67° 09' 16" E  
Ahead = S 65° 24' 10" E  
Chord Bear = S 66° 16' 43" E

Course from PT CULEBRA\_EB.3 to PC CULEBRA\_EB.6 S 65° 24' 10" E Dist 2,128.91

### Curve Data

Curve CULEBRA\_EB.6  
P.I. Station = 615+17.32 N 13,729,840.59 E 2,062,273.51  
Delta = 6° 06' 28" (RT)  
Degree = 4° 46' 29"  
Tangent = 64.02  
Length = 127.92  
Radius = 1,200.00  
External = 1.71  
Long Chord = 127.86  
Mid. Ord. = 1.70  
P.C. Station = 614+53.30 N 13,729,867.24 E 2,062,215.30  
P.T. Station = 615+81.22 N 13,729,807.90 E 2,062,328.56  
C.C. = N 13,728,776.13 E 2,061,715.81  
Back = S 65° 24' 10" E  
Ahead = S 59° 17' 42" E  
Chord Bear = S 62° 20' 56" E

Course from PT CULEBRA\_EB.6 to PC CULEBRA\_EB.9 S 59° 17' 42" E Dist 212.17

### Curve Data

Curve CULEBRA\_EB.9  
P.I. Station = 618+55.42 N 13,729,667.89 E 2,062,564.31  
Delta = 7° 05' 54" (LT)  
Degree = 5° 43' 46"  
Tangent = 62.02  
Length = 123.89  
Radius = 1,000.00  
External = 1.92  
Long Chord = 123.81  
Mid. Ord. = 1.92  
P.C. Station = 617+93.39 N 13,729,699.56 E 2,062,510.98  
P.T. Station = 619+17.28 N 13,729,643.05 E 2,062,621.14  
C.C. = N 13,730,559.37 E 2,063,021.60  
Back = S 59° 17' 42" E  
Ahead = S 66° 23' 35" E  
Chord Bear = S 62° 50' 39" E

Course from PT CULEBRA\_EB.9 to PC CULEBRA\_EB.12 S 66° 23' 35" E Dist 278.36

### Curve Data

Curve CULEBRA\_EB.12  
P.I. Station = 623+13.36 N 13,729,484.44 E 2,062,984.08  
Delta = 6° 07' 34" (LT)  
Degree = 2° 36' 16"  
Tangent = 117.72  
Length = 235.22  
Radius = 2,200.00  
External = 3.15  
Long Chord = 235.11  
Mid. Ord. = 3.14  
P.C. Station = 621+95.64 N 13,729,531.58 E 2,062,876.21  
P.T. Station = 624+30.86 N 13,729,449.08 E 2,063,096.37  
C.C. = N 13,731,547.48 E 2,063,757.22  
Back = S 66° 23' 35" E  
Ahead = S 72° 31' 09" E  
Chord Bear = S 69° 27' 22" E

Course from PT CULEBRA\_EB.12 to PC CULEBRA\_EB.15 S 72° 31' 09" E Dist 124.62

### Curve Data

Curve CULEBRA\_EB.15  
P.I. Station = 626+40.88 N 13,729,385.99 E 2,063,296.60  
Delta = 5° 25' 58" (RT)  
Degree = 3° 10' 59"  
Tangent = 85.40  
Length = 170.68  
Radius = 1,800.00  
External = 2.02  
Long Chord = 170.61  
Mid. Ord. = 2.02  
P.C. Station = 625+55.48 N 13,729,411.64 E 2,063,215.23  
P.T. Station = 627+26.16 N 13,729,352.74 E 2,063,375.35  
C.C. = N 13,727,694.77 E 2,062,674.54  
Back = S 72° 31' 09" E  
Ahead = S 67° 05' 11" E  
Chord Bear = S 69° 48' 10" E

Course from PT CULEBRA\_EB.15 to PC CULEBRA\_EB.18 S 67° 05' 11" E Dist 13.93

### Curve Data

Curve CULEBRA\_EB.18  
P.I. Station = 629+10.41 N 13,729,281.00 E 2,063,545.06  
Delta = 1° 01' 38" (RT)  
Degree = 0° 18' 06"  
Tangent = 170.31  
Length = 340.62  
Radius = 19,000.00  
External = 0.76  
Long Chord = 340.61  
Mid. Ord. = 0.76  
P.C. Station = 627+40.09 N 13,729,347.31 E 2,063,388.19  
P.T. Station = 630+80.71 N 13,729,211.89 E 2,063,700.72  
C.C. = N 13,711,846.55 E 2,055,990.68  
Back = S 67° 05' 11" E  
Ahead = S 66° 03' 33" E  
Chord Bear = S 66° 34' 22" E

Course from PT CULEBRA\_EB.18 to PC CULEBRA\_EB.21 S 66° 03' 33" E Dist 149.27

### Curve Data

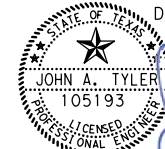
Curve CULEBRA\_EB.21  
P.I. Station = 633+35.84 N 13,729,108.36 E 2,063,933.91  
Delta = 1° 00' 39" (RT)  
Degree = 0° 28' 39"  
Tangent = 105.86  
Length = 211.72  
Radius = 12,000.00  
External = 0.47  
Long Chord = 211.72  
Mid. Ord. = 0.47  
P.C. Station = 632+29.98 N 13,729,151.32 E 2,063,837.15  
P.T. Station = 634+41.70 N 13,729,063.70 E 2,064,029.89  
C.C. = N 13,718,183.73 E 2,058,967.65  
Back = S 66° 03' 33" E  
Ahead = S 65° 02' 54" E  
Chord Bear = S 65° 33' 14" E

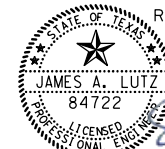
Course from PT CULEBRA\_EB.21 to PC CULEBRA\_EB.24 S 65° 02' 54" E Dist 1,154.05

### Curve Data

Curve CULEBRA\_EB.24  
P.I. Station = 648+47.98 N 13,728,470.46 E 2,065,304.91  
Delta = 9° 36' 42" (RT)  
Degree = 1° 54' 35"  
Tangent = 252.23  
Length = 503.27  
Radius = 3,000.00  
External = 10.58  
Long Chord = 502.68  
Mid. Ord. = 10.55  
P.C. Station = 645+95.75 N 13,728,576.86 E 2,065,076.23  
P.T. Station = 650+99.02 N 13,728,327.36 E 2,065,512.62  
C.C. = N 13,725,856.87 E 2,063,810.67  
Back = S 65° 02' 54" E  
Ahead = S 55° 26' 12" E  
Chord Bear = S 60° 14' 33" E

Course from PT CULEBRA\_EB.24 to PC CULEBRA\_EB.27 S 55° 26' 12" E Dist 210.16

DESIGN  
  
JOHN A. TYLER, P.E.  
5/4/2019  
DATE

REVIEW AND APPROVAL  
  
JAMES A. LUTZ, P.E.  
5/4/2019  
DATE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 8 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	149

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

CULEBRA EB HORIZONTAL ALIGNMENT CONT.

CULEBRA WB HORIZONTAL ALIGNMENT

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Curve Data  
\*-----\*

Curve CULEBRA_EB_27				
P.I. Station	655+60.35	N	13,728,065.64	E 2,065,892.52
Delta	= 15° 53' 14"	(LT)		
Degree	= 3° 10' 59"			
Tangent	= 251.17			
Length	= 499.11			
Radius	= 1,800.00			
External	= 17.44			
Long Chord	= 497.51			
Mid. Ord.	= 17.27			
P.C. Station	653+09.19	N	13,728,208.14	E 2,065,685.69
P.T. Station	658+08.29	N	13,727,985.22	E 2,066,130.46
C.C.	= N		13,729,690.43	E 2,066,706.86
Back	= S 55° 26' 12"	E		
Ahead	= S 71° 19' 25"	E		
Chord Bear	= S 63° 22' 48"	E		

Course from PT CULEBRA\_EB\_27 to PC CULEBRA\_EB\_30 S 71° 19' 25" E Dist 13.54

Curve Data  
\*-----\*

Curve CULEBRA_EB_30				
P.I. Station	661+57.80	N	13,727,873.30	E 2,066,461.56
Delta	= 30° 05' 14"	(LT)		
Degree	= 4° 35' 01"			
Tangent	= 335.96			
Length	= 656.40			
Radius	= 1,250.00			
External	= 44.36			
Long Chord	= 648.89			
Mid. Ord.	= 42.84			
P.C. Station	658+21.84	N	13,727,980.88	E 2,066,143.29
P.T. Station	664+78.24	N	13,727,939.77	E 2,066,790.88
C.C.	= N		13,729,165.06	E 2,066,543.57
Back	= S 71° 19' 25"	E		
Ahead	= N 78° 35' 20"	E		
Chord Bear	= S 86° 22' 02"	E		

Course from PT CULEBRA\_EB\_30 to PC CULEBRA\_EB\_33 N 78° 35' 20" E Dist 2,152.49

Curve Data  
\*-----\*

Curve CULEBRA_EB_33				
P.I. Station	691+94.90	N	13,728,477.25	E 2,069,453.83
Delta	= 28° 09' 09"	(RT)		
Degree	= 2° 32' 47"			
Tangent	= 564.17			
Length	= 1,105.54			
Radius	= 2,250.00			
External	= 69.65			
Long Chord	= 1,094.45			
Mid. Ord.	= 67.56			
P.C. Station	686+30.73	N	13,728,365.63	E 2,068,900.82
P.T. Station	697+36.27	N	13,728,314.74	E 2,069,994.09
C.C.	= N		13,726,160.10	E 2,069,345.97
Back	= N 78° 35' 20"	E		
Ahead	= S 73° 15' 31"	E		
Chord Bear	= S 87° 20' 05"	E		

Course from PT CULEBRA\_EB\_33 to PC CULEBRA\_EB\_36 S 73° 15' 31" E Dist 981.75

Curve Data  
\*-----\*

Curve CULEBRA_EB_36				
P.I. Station	708+29.23	N	13,727,999.91	E 2,071,040.72
Delta	= 2° 49' 52"	(RT)		
Degree	= 1° 16' 24"			
Tangent	= 111.20			
Length	= 222.36			
Radius	= 4,500.00			
External	= 1.37			
Long Chord	= 222.33			
Mid. Ord.	= 1.37			
P.C. Station	707+18.03	N	13,728,031.94	E 2,070,934.23
P.T. Station	709+40.38	N	13,727,962.66	E 2,071,145.49
C.C.	= N		13,723,722.67	E 2,069,638.00
Back	= S 73° 15' 31"	E		
Ahead	= S 70° 25' 39"	E		
Chord Bear	= S 71° 50' 35"	E		

Course from PT CULEBRA\_EB\_36 to 32 S 70° 25' 39" E Dist 816.87

Point 32 N 13,727,689.01 E 2,071,915.16 Sta 717+57.25

Ending chain CULEBRA\_EB description

Beginning chain CULEBRA\_WB description  
Feature: Road\_Centerline

Point 41 N 13,731,310.43 E 2,059,079.77 Sta 750+00.00  
Course from 41 to PC CULEBRA\_WB\_3 S 67° 05' 24" E Dist 981.66

Curve Data  
\*-----\*

Curve CULEBRA_WB_3				
P.I. Station	760+71.93	N	13,730,893.14	E 2,060,067.14
Delta	= 1° 36' 58"	(RT)		
Degree	= 0° 53' 43"			
Tangent	= 90.26			
Length	= 180.51			
Radius	= 6,400.00			
External	= 0.64			
Long Chord	= 180.51			
Mid. Ord.	= 0.64			
P.C. Station	759+81.66	N	13,730,928.28	E 2,059,984.00
P.T. Station	761+62.18	N	13,730,855.67	E 2,060,149.26
C.C.	= N		13,725,033.13	E 2,057,492.57
Back	= S 67° 05' 24"	E		
Ahead	= S 65° 28' 26"	E		
Chord Bear	= S 66° 16' 55"	E		

Course from PT CULEBRA\_WB\_3 to PC CULEBRA\_WB\_6 S 65° 28' 26" E Dist 2,297.29

Curve Data  
\*-----\*

Curve CULEBRA_WB_6				
P.I. Station	785+65.18	N	13,729,858.16	E 2,062,335.45
Delta	= 4° 10' 31"	(RT)		
Degree	= 1° 58' 33"			
Tangent	= 105.71			
Length	= 211.33			
Radius	= 2,900.00			
External	= 1.93			
Long Chord	= 211.28			
Mid. Ord.	= 1.92			
P.C. Station	784+59.47	N	13,729,902.05	E 2,062,239.27
P.T. Station	786+70.80	N	13,729,807.40	E 2,062,428.17
C.C.	= N		13,727,263.71	E 2,061,035.46
Back	= S 65° 28' 26"	E		
Ahead	= S 61° 17' 55"	E		
Chord Bear	= S 63° 23' 10"	E		

Course from PT CULEBRA\_WB\_6 to PC CULEBRA\_WB\_9 S 61° 17' 55" E Dist 104.41

Curve Data  
\*-----\*

Curve CULEBRA_WB_9				
P.I. Station	788+10.61	N	13,729,740.26	E 2,062,550.80
Delta	= 5° 04' 01"	(LT)		
Degree	= 7° 09' 43"			
Tangent	= 35.40			
Length	= 70.75			
Radius	= 800.00			
External	= 0.78			
Long Chord	= 70.73			
Mid. Ord.	= 0.78			
P.C. Station	787+75.21	N	13,729,757.25	E 2,062,519.75
P.T. Station	788+45.96	N	13,729,726.06	E 2,062,583.23
C.C.	= N		13,730,458.96	E 2,062,903.95
Back	= S 61° 17' 55"	E		
Ahead	= S 66° 21' 57"	E		
Chord Bear	= S 63° 49' 56"	E		

Course from PT CULEBRA\_WB\_9 to PC CULEBRA\_WB\_12 S 66° 21' 57" E Dist 424.17

Curve Data  
\*-----\*

Curve CULEBRA_WB_12				
P.I. Station	793+00.68	N	13,729,543.77	E 2,062,999.81
Delta	= 1° 45' 02"	(LT)		
Degree	= 2° 51' 53"			
Tangent	= 30.55			
Length	= 61.11			
Radius	= 2,000.00			
External	= 0.23			
Long Chord	= 61.10			
Mid. Ord.	= 0.23			
P.C. Station	792+70.13	N	13,729,556.01	E 2,062,971.82
P.T. Station	793+31.23	N	13,729,532.38	E 2,063,028.17
C.C.	= N		13,731,388.26	E 2,063,773.62
Back	= S 66° 21' 57"	E		
Ahead	= S 68° 06' 58"	E		
Chord Bear	= S 67° 14' 27"	E		

Course from PT CULEBRA\_WB\_12 to PC CULEBRA\_WB\_15 S 68° 06' 58" E Dist 317.59

Curve Data  
\*-----\*

Curve CULEBRA_WB_15				
P.I. Station	797+11.82	N	13,729,390.52	E 2,063,381.33
Delta	= 1° 21' 43"	(RT)		
Degree	= 1° 04' 52"			
Tangent	= 62.99			
Length	= 125.97			
Radius	= 5,300.00			
External	= 0.37			
Long Chord	= 125.97			
Mid. Ord.	= 0.37			
P.C. Station	796+48.83	N	13,729,414.00	E 2,063,322.88
P.T. Station	797+74.80	N	13,729,365.66	E 2,063,439.20
C.C.	= N		13,724,495.91	E 2,061,347.44
Back	= S 68° 06' 58"	E		
Ahead	= S 66° 45' 16"	E		
Chord Bear	= S 67° 26' 07"	E		

Course from PT CULEBRA\_WB\_15 to PC CULEBRA\_WB\_18 S 66° 45' 16" E Dist 377.32

Curve Data  
\*-----\*

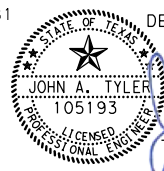
Curve CULEBRA_WB_18				
P.I. Station	802+52.94	N	13,729,176.96	E 2,063,878.53
Delta	= 1° 46' 38"	(RT)		
Degree	= 0° 52' 53"			
Tangent	= 100.81			
Length	= 201.61			
Radius	= 6,500.00			
External	= 0.78			
Long Chord	= 201.60			
Mid. Ord.	= 0.78			
P.C. Station	801+52.12	N	13,729,216.74	E 2,063,785.90
P.T. Station	803+53.74	N	13,729,134.31	E 2,063,969.88
C.C.	= N		13,723,244.41	E 2,061,220.52
Back	= S 66° 45' 16"	E		
Ahead	= S 64° 58' 38"	E		
Chord Bear	= S 65° 51' 57"	E		

Course from PT CULEBRA\_WB\_18 to PC CULEBRA\_WB\_21 S 64° 58' 38" E Dist 1,250.17

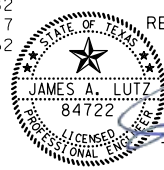
Curve Data  
\*-----\*

Curve CULEBRA_WB_21				
P.I. Station	818+62.01	N	13,728,496.35	E 2,065,336.58
Delta	= 9° 50' 05"	(RT)		
Degree	= 1° 54' 35"			
Tangent	= 258.10			
Length	= 514.94			
Radius	= 3,000.00			
External	= 11.08			
Long Chord	= 514.31			
Mid. Ord.	= 11.04			
P.C. Station	816+03.90	N	13,728,605.52	E 2,065,102.70
P.T. Station	821+18.84	N	13,728,348.83	E 2,065,548.38
C.C.	= N		13,725,887.10	E 2,063,833.77
Back	= S 64° 58' 38"	E		
Ahead	= S 55° 08' 33"	E		
Chord Bear	= S 60° 03' 36"	E		

Course from PT CULEBRA\_WB\_21 to PC CULEBRA\_WB\_24 S 55° 08' 33" E Dist 199.64



DESIGN  
John A. Tyler  
5/4/2019 DATE



REVIEW AND APPROVAL  
James A. Lutz, P.E.  
5/4/2019 DATE

**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPB FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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**HORIZONTAL ALIGNMENT DATA SHEET**

SHEET 9 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK:	SAT	BEXAR	0915	12
DWG:				576
CHK:				150

CULEBRA WB HORIZONTAL ALIGNMENT CONT.

LP 410-B EB HORIZONTAL ALIGNMENT

Plotted on: 5/4/2019

Design File name: P:\11135\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Curve Data  
\*-----\*

Curve CULEBRA_WB_24				
P.I. Station	825+53.05	N	13,728,100.67	E 2,065,904.67
Delta	= 15° 42' 44"	(LT)		
Degree	= 3° 22' 13"			
Tangent	= 234.57			
Length	= 466.19			
Radius	= 1,700.00			
External	= 16.11			
Long Chord	= 464.73			
Mid. Ord.	= 15.96			
P.C. Station	823+18.48	N	13,728,234.73	E 2,065,712.19
P.T. Station	827+84.67	N	13,728,023.74	E 2,066,126.27
C.C.		N	13,729,629.71	E 2,066,683.80
Back	= S 55° 08' 33" E			
Ahead	= S 70° 51' 17" E			
Chord Bear	= S 62° 59' 55" E			

Course from PT CULEBRA\_WB\_24 to PC CULEBRA\_WB\_27 S 70° 51' 17" E Dist 4.82

Curve Data  
\*-----\*

Curve CULEBRA_WB_27				
P.I. Station	831+31.82	N	13,727,909.89	E 2,066,454.21
Delta	= 30° 37' 51"	(LT)		
Degree	= 4° 35' 01"			
Tangent	= 342.32			
Length	= 668.26			
Radius	= 1,250.00			
External	= 46.03			
Long Chord	= 660.33			
Mid. Ord.	= 44.39			
P.C. Station	827+89.49	N	13,728,022.16	E 2,066,130.82
P.T. Station	834+57.75	N	13,727,978.05	E 2,066,789.68
C.C.		N	13,729,203.02	E 2,066,540.78
Back	= S 70° 51' 17" E			
Ahead	= N 78° 30' 52" E			
Chord Bear	= S 86° 10' 13" E			

Course from PT CULEBRA\_WB\_27 to PC CULEBRA\_WB\_30 N 78° 30' 52" E Dist 2,124.20

Curve Data  
\*-----\*

Curve CULEBRA_WB_30				
P.I. Station	861+72.01	N	13,728,518.52	E 2,069,449.59
Delta	= 28° 11' 24"	(RT)		
Degree	= 2° 26' 17"			
Tangent	= 590.06			
Length	= 1,156.22			
Radius	= 2,350.00			
External	= 72.95			
Long Chord	= 1,144.59			
Mid. Ord.	= 70.75			
P.C. Station	855+81.95	N	13,728,401.03	E 2,068,871.34
P.T. Station	867+38.17	N	13,728,348.92	E 2,070,014.75
C.C.		N	13,726,098.09	E 2,069,339.28
Back	= N 78° 30' 52" E			
Ahead	= S 73° 17' 44" E			
Chord Bear	= S 87° 23' 26" E			

Course from PT CULEBRA\_WB\_30 to PC CULEBRA\_WB\_33 S 73° 17' 44" E Dist 947.26

Curve Data  
\*-----\*

Curve CULEBRA_WB_33				
P.I. Station	878+11.27	N	13,728,040.47	E 2,071,042.56
Delta	= 2° 52' 59"	(RT)		
Degree	= 1° 08' 45"			
Tangent	= 125.83			
Length	= 251.60			
Radius	= 5,000.00			
External	= 1.58			
Long Chord	= 251.58			
Mid. Ord.	= 1.58			
P.C. Station	876+85.44	N	13,728,076.64	E 2,070,922.04
P.T. Station	879+37.04	N	13,727,998.29	E 2,071,161.10
C.C.		N	13,723,287.64	E 2,069,484.87
Back	= S 73° 17' 44" E			
Ahead	= S 70° 24' 45" E			
Chord Bear	= S 71° 51' 15" E			

Course from PT CULEBRA\_WB\_33 to 42 S 70° 24' 45" E Dist 810.04

Point 42 N 13,727,726.73 E 2,071,924.26 Sta 887+47.08

Ending chain CULEBRA\_WB description

Beginning chain LOOP410B\_EB\_CL description  
Feature: Road\_Centerline

Point 55 N 13,739,152.32 E 2,124,420.25 Sta 1300+00.00  
Course from 55 to PC LOOP410B\_EB\_C\_3 N 89° 00' 44" E Dist 207.50

Curve Data  
\*-----\*

Curve LOOP410B_EB_C_3				
P.I. Station	1304+24.13	N	13,739,159.63	E 2,124,844.32
Delta	= 17° 35' 29"	(LT)		
Degree	= 4° 05' 33"			
Tangent	= 216.62			
Length	= 429.84			
Radius	= 1,400.00			
External	= 16.66			
Long Chord	= 428.15			
Mid. Ord.	= 16.46			
P.C. Station	1302+07.50	N	13,739,155.90	E 2,124,627.73
P.T. Station	1306+37.34	N	13,739,228.65	E 2,125,049.65
C.C.		N	13,740,555.69	E 2,124,603.59
Back	= N 89° 00' 44" E			
Ahead	= N 71° 25' 15" E			
Chord Bear	= N 80° 12' 59" E			

Course from PT LOOP410B\_EB\_C\_3 to PC LOOP410B\_EB\_C\_6 N 71° 25' 15" E Dist 223.60

Curve Data  
\*-----\*

Curve LOOP410B_EB_C_6				
P.I. Station	1310+33.24	N	13,739,354.79	E 2,125,424.92
Delta	= 19° 33' 09"	(RT)		
Degree	= 5° 43' 46"			
Tangent	= 172.30			
Length	= 341.25			
Radius	= 1,000.00			
External	= 14.74			
Long Chord	= 339.60			
Mid. Ord.	= 14.52			
P.C. Station	1308+60.94	N	13,739,299.89	E 2,125,261.60
P.T. Station	1312+02.19	N	13,739,351.86	E 2,125,597.19
C.C.		N	13,738,352.01	E 2,125,580.21
Back	= N 71° 25' 15" E			
Ahead	= S 89° 01' 37" E			
Chord Bear	= N 81° 11' 49" E			

Course from PT LOOP410B\_EB\_C\_6 to PC LOOP410B\_EB\_C\_9 S 89° 01' 37" E Dist 547.72

Curve Data  
\*-----\*

Curve LOOP410B_EB_C_9				
P.I. Station	1318+79.20	N	13,739,340.36	E 2,126,274.10
Delta	= 1° 20' 48"	(LT)		
Degree	= 0° 31' 15"			
Tangent	= 129.29			
Length	= 258.56			
Radius	= 11,000.00			
External	= 0.76			
Long Chord	= 258.56			
Mid. Ord.	= 0.76			
P.C. Station	1317+49.91	N	13,739,342.56	E 2,126,144.84
P.T. Station	1320+08.47	N	13,739,341.21	E 2,126,403.39
C.C.		N	13,750,340.97	E 2,126,331.67
Back	= S 89° 01' 37" E			
Ahead	= N 89° 37' 35" E			
Chord Bear	= S 89° 42' 01" E			

Course from PT LOOP410B\_EB\_C\_9 to PC LOOP410B\_EB\_12 N 89° 37' 35" E Dist 680.86

Curve Data  
\*-----\*

Curve LOOP410B_EB_12				
P.I. Station	1328+54.85	N	13,739,346.72	E 2,127,249.75
Delta	= 5° 24' 54"	(RT)		
Degree	= 1° 38' 13"			
Tangent	= 165.51			
Length	= 330.78			
Radius	= 3,500.00			
External	= 3.91			
Long Chord	= 330.65			
Mid. Ord.	= 3.91			
P.C. Station	1326+89.34	N	13,739,345.65	E 2,127,084.24
P.T. Station	1330+20.11	N	13,739,332.18	E 2,127,414.62
C.C.		N	13,735,845.72	E 2,127,107.06
Back	= N 89° 37' 35" E			
Ahead	= S 84° 57' 31" E			
Chord Bear	= S 87° 39' 58" E			

Course from PT LOOP410B\_EB\_12 to PC LOOP410B\_EB\_15 S 84° 57' 31" E Dist 343.20

Curve Data  
\*-----\*

Curve LOOP410B_EB_15				
P.I. Station	1334+51.23	N	13,739,294.30	E 2,127,844.06
Delta	= 4° 22' 41"	(LT)		
Degree	= 2° 29' 28"			
Tangent	= 87.91			
Length	= 175.74			
Radius	= 2,300.00			
External	= 1.68			
Long Chord	= 175.70			
Mid. Ord.	= 1.68			
P.C. Station	1333+63.31	N	13,739,302.02	E 2,127,756.49
P.T. Station	1335+39.06	N	13,739,293.28	E 2,127,931.97
C.C.		N	13,741,593.13	E 2,127,958.60
Back	= S 84° 57' 31" E			
Ahead	= S 89° 20' 12" E			
Chord Bear	= S 87° 08' 52" E			

Course from PT LOOP410B\_EB\_15 to PC LOOP410B\_EB\_18 S 89° 20' 12" E Dist 373.86

Curve Data  
\*-----\*

Curve LOOP410B_EB_18				
P.I. Station	1340+15.93	N	13,739,287.76	E 2,128,408.82
Delta	= 8° 25' 01"	(LT)		
Degree	= 4° 05' 33"			
Tangent	= 103.02			
Length	= 205.66			
Radius	= 1,400.00			
External	= 3.79			
Long Chord	= 205.48			
Mid. Ord.	= 3.77			
P.C. Station	1339+12.92	N	13,739,288.95	E 2,128,305.81
P.T. Station	1341+18.58	N	13,739,301.66	E 2,128,510.89
C.C.		N	13,740,688.86	E 2,128,322.01
Back	= S 89° 20' 12" E			
Ahead	= N 82° 14' 47" E			
Chord Bear	= N 86° 27' 18" E			

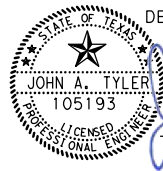
Course from PT LOOP410B\_EB\_18 to PC LOOP410B\_EB\_21 N 82° 14' 47" E Dist 150.06

Curve Data  
\*-----\*


Curve LOOP410B_EB_21				
P.I. Station	1344+09.80	N	13,739,340.95	E 2,128,799.45
Delta	= 8° 04' 28"	(RT)		
Degree	= 2° 51' 53"			
Tangent	= 141.16			
Length	= 281.85			
Radius	= 2,000.00			
External	= 4.98			
Long Chord	= 281.62			
Mid. Ord.	= 4.96			
P.C. Station	1342+68.64	N	13,739,321.90	E 2,128,659.58
P.T. Station	1345+50.49	N	13,739,340.16	E 2,128,940.60
C.C.		N	13,737,340.19	E 2,128,929.40
Back	= N 82° 14' 47" E			
Ahead	= S 89° 40' 45" E			
Chord Bear	= N 86° 17' 01" E			

Course from PT LOOP410B\_EB\_21 to PC LOOP410B\_EB\_24 S 89° 40' 45" E Dist 1,407.33

DESIGN


 JOHN A. TYLER, P.E. 5/4/2019 DATE

REVIEW AND APPROVAL

 JAMES A. LUTZ, P.E. 5/4/2019 DATE

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPPE FIRM REGISTRATION #470 | TBPFLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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HORIZONTAL ALIGNMENT DATA SHEET

SHEET 10 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				151

LP 410-B EB HORIZONTAL ALIGNMENT CONT.

Plotted on: 5/4/2019

Design File name: P:\11135\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Curve Data  
\*-----\*

Curve LOOP410B_EB__24				
P.I. Station	1361+99.85	N	13,739,330.92	E 2,130,589.94
Delta	= 2° 08' 00"	(RT)		
Degree	= 0° 26' 27"			
Tangent	= 242.03			
Length	= 484.01			
Radius	= 13,000.00			
External	= 2.25			
Long Chord	= 483.98			
Mid. Ord.	= 2.25			
P.C. Station	1359+57.82	N	13,739,332.27	E 2,130,347.91
P.T. Station	1364+41.83	N	13,739,320.55	E 2,130,831.75
C.C.		N	13,726,332.48	E 2,130,275.10
Back	= S 89° 40' 45" E			
Ahead	= S 87° 32' 45" E			
Chord Bear	= S 88° 36' 45" E			

Course from PT LOOP410B\_EB\_\_24 to PC LOOP410B\_EB\_\_27 S 87° 32' 45" E Dist 231.49

Curve Data  
\*-----\*

Curve LOOP410B_EB__27				
P.I. Station	1367+59.17	N	13,739,306.97	E 2,131,148.80
Delta	= 1° 45' 24"	(LT)		
Degree	= 1° 01' 23"			
Tangent	= 85.85			
Length	= 171.69			
Radius	= 5,600.00			
External	= 0.66			
Long Chord	= 171.69			
Mid. Ord.	= 0.66			
P.C. Station	1366+73.32	N	13,739,310.64	E 2,131,063.03
P.T. Station	1368+45.01	N	13,739,305.92	E 2,131,234.65
C.C.		N	13,744,905.51	E 2,131,302.81
Back	= S 87° 32' 45" E			
Ahead	= S 89° 18' 09" E			
Chord Bear	= S 88° 25' 27" E			

Course from PT LOOP410B\_EB\_\_27 to PC LOOP410B\_EB\_\_30 S 89° 18' 09" E Dist 916.87

Curve Data  
\*-----\*

Curve LOOP410B_EB__30				
P.I. Station	1378+36.05	N	13,739,293.86	E 2,132,225.62
Delta	= 1° 31' 03"	(LT)		
Degree	= 1° 01' 23"			
Tangent	= 74.17			
Length	= 148.33			
Radius	= 5,600.00			
External	= 0.49			
Long Chord	= 148.33			
Mid. Ord.	= 0.49			
P.C. Station	1377+61.88	N	13,739,294.76	E 2,132,151.45
P.T. Station	1379+10.21	N	13,739,294.92	E 2,132,299.78
C.C.		N	13,744,894.35	E 2,132,219.62
Back	= S 89° 18' 09" E			
Ahead	= N 89° 10' 47" E			
Chord Bear	= N 89° 56' 19" E			

Course from PT LOOP410B\_EB\_\_30 to PC LOOP410B\_EB\_\_33 N 89° 10' 47" E Dist 15.23

Curve Data  
\*-----\*

Curve LOOP410B_EB__33				
P.I. Station	1380+07.15	N	13,739,296.31	E 2,132,396.71
Delta	= 1° 02' 25"	(RT)		
Degree	= 0° 38' 12"			
Tangent	= 81.71			
Length	= 163.41			
Radius	= 9,000.00			
External	= 0.37			
Long Chord	= 163.40			
Mid. Ord.	= 0.37			
P.C. Station	1379+25.44	N	13,739,295.14	E 2,132,315.01
P.T. Station	1380+88.85	N	13,739,295.99	E 2,132,478.41
C.C.		N	13,730,296.06	E 2,132,443.84
Back	= N 89° 10' 47" E			
Ahead	= S 89° 46' 48" E			
Chord Bear	= N 89° 42' 00" E			

Course from PT LOOP410B\_EB\_\_33 to PC LOOP410B\_EB\_\_36 S 89° 46' 48" E Dist 1,796.72

Curve Data  
\*-----\*

Curve LOOP410B_EB__36				
P.I. Station	1401+13.32	N	13,739,288.22	E 2,134,502.86
Delta	= 8° 40' 58"	(RT)		
Degree	= 1° 54' 35"			
Tangent	= 227.75			
Length	= 454.63			
Radius	= 3,000.00			
External	= 8.63			
Long Chord	= 454.20			
Mid. Ord.	= 8.61			
P.C. Station	1398+85.56	N	13,739,289.09	E 2,134,275.11
P.T. Station	1403+40.20	N	13,739,252.97	E 2,134,727.87
C.C.		N	13,736,289.12	E 2,134,263.59
Back	= S 89° 46' 48" E			
Ahead	= S 81° 05' 49" E			
Chord Bear	= S 85° 26' 19" E			

Course from PT LOOP410B\_EB\_\_36 to PC LOOP410B\_EB\_\_39 S 81° 05' 49" E Dist 190.06

Curve Data  
\*-----\*

Curve LOOP410B_EB__39				
P.I. Station	1406+58.48	N	13,739,203.71	E 2,135,042.32
Delta	= 3° 40' 20"	(RT)		
Degree	= 1° 25' 57"			
Tangent	= 128.23			
Length	= 256.36			
Radius	= 4,000.00			
External	= 2.05			
Long Chord	= 256.32			
Mid. Ord.	= 2.05			
P.C. Station	1405+30.26	N	13,739,223.56	E 2,134,915.64
P.T. Station	1407+86.62	N	13,739,175.80	E 2,135,167.47
C.C.		N	13,735,271.75	E 2,134,296.60
Back	= S 81° 05' 49" E			
Ahead	= S 77° 25' 30" E			
Chord Bear	= S 79° 15' 40" E			

Course from PT LOOP410B\_EB\_\_39 to PC LOOP410B\_EB\_\_42 S 77° 25' 30" E Dist 50.29

Curve Data  
\*-----\*

Curve LOOP410B_EB__42				
P.I. Station	1409+51.37	N	13,739,139.93	E 2,135,328.27
Delta	= 3° 02' 59"	(RT)		
Degree	= 1° 19' 57"			
Tangent	= 114.46			
Length	= 228.87			
Radius	= 4,300.00			
External	= 1.52			
Long Chord	= 228.84			
Mid. Ord.	= 1.52			
P.C. Station	1408+36.91	N	13,739,164.85	E 2,135,216.56
P.T. Station	1410+65.78	N	13,739,109.10	E 2,135,438.50
C.C.		N	13,734,968.00	E 2,134,280.37
Back	= S 77° 25' 30" E			
Ahead	= S 74° 22' 31" E			
Chord Bear	= S 75° 54' 01" E			

Course from PT LOOP410B\_EB\_\_42 to PC LOOP410B\_EB\_\_45 S 74° 22' 31" E Dist 1,702.99

Curve Data  
\*-----\*

Curve LOOP410B_EB__45				
P.I. Station	1430+12.03	N	13,738,584.91	E 2,137,312.83
Delta	= 3° 05' 47"	(LT)		
Degree	= 0° 38' 12"			
Tangent	= 243.26			
Length	= 486.40			
Radius	= 9,000.00			
External	= 3.29			
Long Chord	= 486.34			
Mid. Ord.	= 3.29			
P.C. Station	1427+68.77	N	13,738,650.43	E 2,137,078.56
P.T. Station	1432+55.17	N	13,738,532.14	E 2,137,550.30
C.C.		N	13,747,317.85	E 2,139,502.57
Back	= S 74° 22' 31" E			
Ahead	= S 77° 28' 19" E			
Chord Bear	= S 75° 55' 25" E			

Course from PT LOOP410B\_EB\_\_45 to PC LOOP410B\_EB\_\_48 S 77° 28' 19" E Dist 396.72

Curve Data  
\*-----\*

Curve LOOP410B_EB__48				
P.I. Station	1439+81.39	N	13,738,374.61	E 2,138,259.23
Delta	= 9° 25' 06"	(RT)		
Degree	= 1° 25' 57"			
Tangent	= 329.50			
Length	= 657.52			
Radius	= 4,000.00			
External	= 13.55			
Long Chord	= 656.78			
Mid. Ord.	= 13.50			
P.C. Station	1436+51.89	N	13,738,446.08	E 2,137,937.57
P.T. Station	1443+09.41	N	13,738,251.46	E 2,138,564.86
C.C.		N	13,734,541.33	E 2,137,069.90
Back	= S 77° 28' 19" E			
Ahead	= S 68° 03' 13" E			
Chord Bear	= S 72° 45' 46" E			

Course from PT LOOP410B\_EB\_\_48 to PC LOOP410B\_EB\_\_51 S 68° 03' 13" E Dist 213.97

Curve Data  
\*-----\*

Curve LOOP410B_EB__51				
P.I. Station	1448+06.15	N	13,738,065.81	E 2,139,025.60
Delta	= 12° 54' 22"	(LT)		
Degree	= 2° 17' 31"			
Tangent	= 282.76			
Length	= 563.13			
Radius	= 2,500.00			
External	= 15.94			
Long Chord	= 561.94			
Mid. Ord.	= 15.84			
P.C. Station	1445+23.39	N	13,738,171.49	E 2,138,763.33
P.T. Station	1450+86.52	N	13,738,021.38	E 2,139,304.85
C.C.		N	13,740,490.32	E 2,139,697.68
Back	= S 68° 03' 13" E			
Ahead	= S 80° 57' 34" E			
Chord Bear	= S 74° 30' 24" E			

Course from PT LOOP410B\_EB\_\_51 to PC LOOP410B\_EB\_\_54 S 80° 57' 34" E Dist 99.65

Curve Data  
\*-----\*

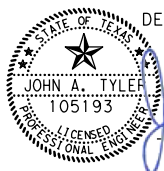
Curve LOOP410B_EB__54				
P.I. Station	1452+48.35	N	13,737,995.95	E 2,139,464.67
Delta	= 4° 44' 51"	(LT)		
Degree	= 3° 49' 11"			
Tangent	= 62.18			
Length	= 124.29			
Radius	= 1,500.00			
External	= 1.29			
Long Chord	= 124.25			
Mid. Ord.	= 1.29			
P.C. Station	1451+86.17	N	13,738,005.72	E 2,139,403.26
P.T. Station	1453+10.46	N	13,737,991.29	E 2,139,526.67
C.C.		N	13,739,487.09	E 2,139,638.96
Back	= S 80° 57' 34" E			
Ahead	= S 85° 42' 25" E			
Chord Bear	= S 83° 20' 00" E			

Course from PT LOOP410B\_EB\_\_54 to 56 S 85° 42' 25" E Dist 880.11

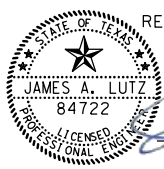
Point 56 N 13,737,925.41 E 2,140,404.31 Sta 1461+90.57

Ending chain LOOP410B\_EB\_CL description

DESIGN


STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/4/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019 DATE

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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**HORIZONTAL ALIGNMENT DATA SHEET**

SHEET 11 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				152



# LP 410-B WB HORIZONTAL ALIGNMENT

Beginning chain LOOP410B\_CL\_WB description  
Feature: Road\_CenterLine

Point 53 N 13,739,649.45 E 2,124,574.45 Sta 1500+00.00

Course from 53 to PC LOOP410B\_CL\_W3 S 86° 59' 18" E Dist 169.54

Curve Data

Curve LOOP410B\_CL\_W3  
P.I. Station 1502+86.29 N 13,739,634.41 E 2,124,860.34  
Delta = 1° 45' 37" (LT)  
Degree = 0° 45' 14"  
Tangent = 116.75  
Length = 233.48  
Radius = 7,600.00  
External = 0.90  
Long Chord = 233.47  
Mid. Ord. = 0.90  
P.C. Station 1501+69.54 N 13,739,640.54 E 2,124,743.75  
P.T. Station 1504+03.02 N 13,739,631.86 E 2,124,977.06  
C.C. Station 13,747,230.04 E 2,125,143.06  
Back = S 86° 59' 18" E  
Ahead = S 88° 44' 55" E  
Chord Bear = S 87° 52' 06" E

Course from PT LOOP410B\_CL\_W3 to PC LOOP410B\_CL\_W6 S 88° 44' 55" E Dist 780.50

Curve Data

Curve LOOP410B\_CL\_W6  
P.I. Station 1514+33.58 N 13,739,609.35 E 2,126,007.38  
Delta = 1° 54' 37" (LT)  
Degree = 0° 22' 55"  
Tangent = 250.07  
Length = 500.09  
Radius = 15,000.00  
External = 2.08  
Long Chord = 500.07  
Mid. Ord. = 2.08  
P.C. Station 1511+83.52 N 13,739,614.81 E 2,125,757.38  
P.T. Station 1516+83.61 N 13,739,612.22 E 2,126,257.43  
C.C. Station 13,754,611.23 E 2,126,085.00  
Back = S 88° 44' 55" E  
Ahead = N 89° 20' 29" E  
Chord Bear = S 89° 42' 13" E

Course from PT LOOP410B\_CL\_W6 to PC LOOP410B\_CL\_W9 N 89° 20' 29" E Dist 910.89

Curve Data

Curve LOOP410B\_CL\_W9  
P.I. Station 1527+72.21 N 13,739,624.74 E 2,127,345.96  
Delta = 6° 46' 48" (LT)  
Degree = 1° 54' 35"  
Tangent = 177.71  
Length = 355.00  
Radius = 3,000.00  
External = 5.26  
Long Chord = 354.79  
Mid. Ord. = 5.25  
P.C. Station 1525+94.50 N 13,739,622.69 E 2,127,168.27  
P.T. Station 1529+49.50 N 13,739,647.74 E 2,127,522.18  
C.C. Station 13,742,622.50 E 2,127,133.78  
Back = N 89° 20' 29" E  
Ahead = N 82° 33' 41" E  
Chord Bear = N 85° 57' 05" E

Course from PT LOOP410B\_CL\_W9 to PC LOOP410B\_CL\_12 N 82° 33' 41" E Dist 120.52

Curve Data

Curve LOOP410B\_CL\_12  
P.I. Station 1531+96.24 N 13,739,679.69 E 2,127,766.84  
Delta = 8° 01' 20" (RT)  
Degree = 3° 10' 59"  
Tangent = 126.22  
Length = 252.03  
Radius = 1,800.00  
External = 4.42  
Long Chord = 251.82  
Mid. Ord. = 4.41  
P.C. Station 1530+70.02 N 13,739,663.35 E 2,127,641.68  
P.T. Station 1533+22.05 N 13,739,678.40 E 2,127,893.05  
C.C. Station 13,737,878.50 E 2,127,874.72  
Back = N 82° 33' 41" E  
Ahead = S 89° 24' 59" E  
Chord Bear = N 86° 34' 21" E

Course from PT LOOP410B\_CL\_12 to PC LOOP410B\_CL\_15 S 89° 24' 59" E Dist 372.78

Curve Data

Curve LOOP410B\_CL\_15  
P.I. Station 1538+31.96 N 13,739,673.21 E 2,128,402.94  
Delta = 5° 36' 28" (RT)  
Degree = 2° 02' 47"  
Tangent = 137.13  
Length = 274.05  
Radius = 2,800.00  
External = 3.36  
Long Chord = 273.94  
Mid. Ord. = 3.35  
P.C. Station 1536+94.83 N 13,739,674.60 E 2,128,265.82  
P.T. Station 1539+68.88 N 13,739,658.42 E 2,128,539.27  
C.C. Station 13,736,874.75 E 2,128,237.30  
Back = S 89° 24' 59" E  
Ahead = S 83° 48' 31" E  
Chord Bear = S 86° 36' 45" E

Course from PT LOOP410B\_CL\_15 to PC LOOP410B\_CL\_18 S 83° 48' 31" E Dist 144.08

Curve Data

Curve LOOP410B\_CL\_18  
P.I. Station 1542+72.87 N 13,739,625.63 E 2,128,841.50  
Delta = 2° 49' 07" (LT)  
Degree = 0° 52' 53"  
Tangent = 159.91  
Length = 319.76  
Radius = 6,500.00  
External = 1.97  
Long Chord = 319.73  
Mid. Ord. = 1.97  
P.C. Station 1541+12.96 N 13,739,642.88 E 2,128,682.52  
P.T. Station 1544+32.72 N 13,739,616.22 E 2,129,001.13  
C.C. Station 13,746,104.97 E 2,129,383.54  
Back = S 83° 48' 31" E  
Ahead = S 86° 37' 38" E  
Chord Bear = S 85° 13' 05" E

Course from PT LOOP410B\_CL\_18 to PC LOOP410B\_CL\_21 S 86° 37' 38" E Dist 119.73

Curve Data

Curve LOOP410B\_CL\_21  
P.I. Station 1546+26.40 N 13,739,604.83 E 2,129,194.47  
Delta = 2° 49' 26" (LT)  
Degree = 1° 54' 35"  
Tangent = 73.94  
Length = 147.85  
Radius = 3,000.00  
External = 0.91  
Long Chord = 147.84  
Mid. Ord. = 0.91  
P.C. Station 1545+52.46 N 13,739,609.18 E 2,129,120.66  
P.T. Station 1547+00.31 N 13,739,604.12 E 2,129,268.41  
C.C. Station 13,742,603.98 E 2,129,297.15  
Back = S 86° 37' 38" E  
Ahead = S 89° 27' 04" E  
Chord Bear = S 88° 02' 21" E

Course from PT LOOP410B\_CL\_21 to PC LOOP410B\_CL\_24 S 89° 27' 04" E Dist 3,489.52

Curve Data

Curve LOOP410B\_CL\_24  
P.I. Station 1582+24.73 N 13,739,570.36 E 2,132,792.67  
Delta = 1° 59' 58" (RT)  
Degree = 2° 51' 53"  
Tangent = 34.90  
Length = 69.79  
Radius = 2,000.00  
External = 0.30  
Long Chord = 69.79  
Mid. Ord. = 0.30  
P.C. Station 1581+89.83 N 13,739,570.69 E 2,132,757.78  
P.T. Station 1582+59.63 N 13,739,568.80 E 2,132,827.54  
C.C. Station 13,737,570.78 E 2,132,738.62  
Back = S 89° 27' 04" E  
Ahead = S 87° 27' 06" E  
Chord Bear = S 88° 27' 05" E

Course from PT LOOP410B\_CL\_24 to PC LOOP410B\_CL\_27 S 87° 27' 06" E Dist 74.73

Curve Data

Curve LOOP410B\_CL\_27  
P.I. Station 1583+62.22 N 13,739,564.24 E 2,132,930.03  
Delta = 1° 35' 47" (LT)  
Degree = 2° 51' 53"  
Tangent = 27.87  
Length = 55.73  
Radius = 2,000.00  
External = 0.19  
Long Chord = 55.73  
Mid. Ord. = 0.19  
P.C. Station 1583+34.35 N 13,739,565.48 E 2,132,902.19  
P.T. Station 1583+90.08 N 13,739,563.78 E 2,132,957.89  
C.C. Station 13,741,563.50 E 2,132,991.12  
Back = S 87° 27' 06" E  
Ahead = S 89° 02' 53" E  
Chord Bear = S 88° 15' 00" E

Course from PT LOOP410B\_CL\_27 to PC LOOP410B\_CL\_30 S 89° 02' 53" E Dist 851.98

Curve Data

Curve LOOP410B\_CL\_30  
P.I. Station 1592+91.60 N 13,739,548.80 E 2,133,859.29  
Delta = 0° 48' 39" (RT)  
Degree = 0° 49' 07"  
Tangent = 49.53  
Length = 99.07  
Radius = 7,000.00  
External = 0.18  
Long Chord = 99.06  
Mid. Ord. = 0.18  
P.C. Station 1592+42.06 N 13,739,549.63 E 2,133,809.76  
P.T. Station 1593+41.13 N 13,739,547.28 E 2,133,908.80  
C.C. Station 13,732,550.59 E 2,133,693.47  
Back = S 89° 02' 53" E  
Ahead = S 88° 14' 14" E  
Chord Bear = S 88° 38' 34" E

Course from PT LOOP410B\_CL\_30 to PC LOOP410B\_CL\_33 S 88° 14' 14" E Dist 486.11

Curve Data

Curve LOOP410B\_CL\_33  
P.I. Station 1599+14.14 N 13,739,529.65 E 2,134,481.53  
Delta = 4° 58' 33" (RT)  
Degree = 2° 51' 53"  
Tangent = 86.90  
Length = 173.68  
Radius = 2,000.00  
External = 1.89  
Long Chord = 173.63  
Mid. Ord. = 1.89  
P.C. Station 1598+27.24 N 13,739,532.33 E 2,134,394.68  
P.T. Station 1600+00.93 N 13,739,519.46 E 2,134,567.83  
C.C. Station 13,737,533.27 E 2,134,333.16  
Back = S 88° 14' 14" E  
Ahead = S 83° 15' 42" E  
Chord Bear = S 85° 44' 58" E

Course from PT LOOP410B\_CL\_33 to PC LOOP410B\_CL\_36 S 83° 15' 42" E Dist 450.88

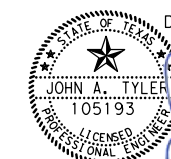


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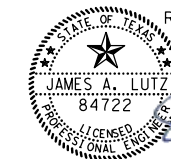
## HORIZONTAL ALIGNMENT DATA SHEET

SHEET 12 OF 13



DESIGN

JOHN A. TYLER, P.E. 5/4/2019 DATE



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/4/2019 DATE

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				153

Plotted on: 5/4/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

LP 410-B WB HORIZONTAL ALIGNMENT CONT.

Plotted on: 5/4/2019

Design File name: P:\11135\08\Design\Civil\General\1113508\_HALN\_Data01.dgn

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_36  
P.I. Station 1605+89.24 N 13,739,450.43 E 2,135,152.08  
Delta = 6° 50' 20" (RT)  
Degree = 2° 29' 28"  
Tangent = 137.43  
Length = 274.53  
Radius = 2,300.00  
External = 4.10  
Long Chord = 274.37  
Mid. Ord. = 4.09  
P.C. Station 1604+51.81 N 13,739,466.55 E 2,135,015.60  
P.T. Station 1607+26.34 N 13,739,418.16 E 2,135,285.67  
C.C. = N 13,737,182.44 E 2,134,745.72  
Back = S 83° 15' 42" E  
Ahead = S 76° 25' 21" E  
Chord Bear = S 79° 50' 32" E

Course from PT LOOP410B\_CL\_\_36 to PC LOOP410B\_CL\_\_39 S 76° 25' 21" E Dist 228.63

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_39  
P.I. Station 1610+30.73 N 13,739,346.71 E 2,135,581.55  
Delta = 3° 36' 56" (RT)  
Degree = 2° 23' 14"  
Tangent = 75.75  
Length = 151.45  
Radius = 2,400.00  
External = 1.20  
Long Chord = 151.43  
Mid. Ord. = 1.19  
P.C. Station 1609+54.98 N 13,739,364.49 E 2,135,507.91  
P.T. Station 1611+06.43 N 13,739,324.32 E 2,135,653.91  
C.C. = N 13,737,031.56 E 2,134,944.49  
Back = S 76° 25' 21" E  
Ahead = S 72° 48' 25" E  
Chord Bear = S 74° 36' 53" E

Course from PT LOOP410B\_CL\_\_39 to PC LOOP410B\_CL\_\_42 S 72° 48' 25" E Dist 135.10

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_42  
P.I. Station 1613+69.87 N 13,739,246.44 E 2,135,905.59  
Delta = 2° 43' 23" (LT)  
Degree = 1° 03' 40"  
Tangent = 128.34  
Length = 256.63  
Radius = 5,400.00  
External = 1.52  
Long Chord = 256.61  
Mid. Ord. = 1.52  
P.C. Station 1612+41.53 N 13,739,284.38 E 2,135,782.98  
P.T. Station 1614+98.17 N 13,739,214.37 E 2,136,029.86  
C.C. = N 13,744,443.08 E 2,137,379.18  
Back = S 72° 48' 25" E  
Ahead = S 75° 31' 48" E  
Chord Bear = S 74° 10' 06" E

Course from PT LOOP410B\_CL\_\_42 to PC LOOP410B\_CL\_\_45 S 75° 31' 48" E Dist 546.16

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_45  
P.I. Station 1620+89.79 N 13,739,066.54 E 2,136,602.71  
Delta = 2° 10' 13" (LT)  
Degree = 2° 23' 14"  
Tangent = 45.46  
Length = 90.90  
Radius = 2,400.00  
External = 0.43  
Long Chord = 90.90  
Mid. Ord. = 0.43  
P.C. Station 1620+44.33 N 13,739,077.90 E 2,136,558.69  
P.T. Station 1621+35.23 N 13,739,056.86 E 2,136,647.12  
C.C. = N 13,741,401.77 E 2,137,158.39  
Back = S 75° 31' 48" E  
Ahead = S 77° 42' 00" E  
Chord Bear = S 76° 36' 54" E

Course from PT LOOP410B\_CL\_\_45 to PC LOOP410B\_CL\_\_48 S 77° 42' 00" E Dist 827.48

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_48  
P.I. Station 1631+84.75 N 13,738,833.28 E 2,137,672.54  
Delta = 4° 47' 52" (RT)  
Degree = 1° 04' 52"  
Tangent = 222.03  
Length = 443.80  
Radius = 5,300.00  
External = 4.65  
Long Chord = 443.67  
Mid. Ord. = 4.64  
P.C. Station 1629+62.72 N 13,738,880.58 E 2,137,455.61  
P.T. Station 1634+06.52 N 13,738,768.00 E 2,137,884.76  
C.C. = N 13,733,702.24 E 2,136,326.55  
Back = S 77° 42' 00" E  
Ahead = S 72° 54' 08" E  
Chord Bear = S 75° 18' 04" E

Course from PT LOOP410B\_CL\_\_48 to PC LOOP410B\_CL\_\_51 S 72° 54' 08" E Dist 676.01

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_51  
P.I. Station 1641+76.31 N 13,738,541.69 E 2,138,620.53  
Delta = 4° 17' 47" (RT)  
Degree = 2° 17' 31"  
Tangent = 93.78  
Length = 187.47  
Radius = 2,500.00  
External = 1.76  
Long Chord = 187.43  
Mid. Ord. = 1.76  
P.C. Station 1640+82.53 N 13,738,569.26 E 2,138,530.90  
P.T. Station 1642+70.00 N 13,738,507.48 E 2,138,707.85  
C.C. = N 13,736,179.74 E 2,137,795.89  
Back = S 72° 54' 08" E  
Ahead = S 68° 36' 21" E  
Chord Bear = S 70° 45' 15" E

Course from PT LOOP410B\_CL\_\_51 to PC LOOP410B\_CL\_\_54 S 68° 36' 21" E Dist 87.11

Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_54  
P.I. Station 1644+18.59 N 13,738,453.27 E 2,138,846.20  
Delta = 7° 02' 13" (LT)  
Degree = 5° 43' 46"  
Tangent = 61.49  
Length = 122.82  
Radius = 1,000.00  
External = 1.89  
Long Chord = 122.74  
Mid. Ord. = 1.88  
P.C. Station 1643+57.11 N 13,738,475.70 E 2,138,788.95  
P.T. Station 1644+79.93 N 13,738,438.03 E 2,138,905.77  
C.C. = N 13,739,406.79 E 2,139,153.74  
Back = S 68° 36' 21" E  
Ahead = S 75° 38' 34" E  
Chord Bear = S 72° 07' 28" E

Course from PT LOOP410B\_CL\_\_54 to PC LOOP410B\_CL\_\_57 S 75° 38' 34" E Dist 685.76

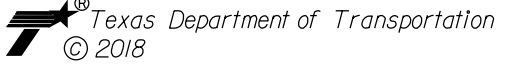
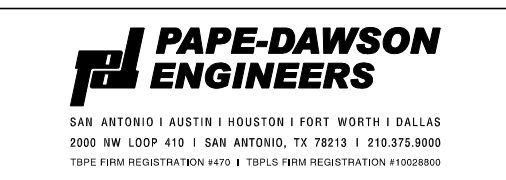
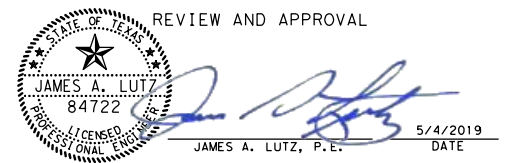
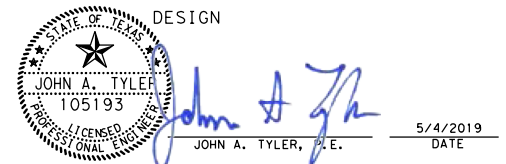
Curve Data  
\*-----\*

Curve LOOP410B\_CL\_\_57  
P.I. Station 1652+77.82 N 13,738,240.18 E 2,139,678.74  
Delta = 8° 33' 00" (LT)  
Degree = 3° 49' 11"  
Tangent = 112.13  
Length = 223.84  
Radius = 1,500.00  
External = 4.19  
Long Chord = 223.63  
Mid. Ord. = 4.17  
P.C. Station 1651+65.69 N 13,738,267.98 E 2,139,570.12  
P.T. Station 1653+89.53 N 13,738,228.83 E 2,139,790.30  
C.C. = N 13,739,721.13 E 2,139,942.07  
Back = S 75° 38' 34" E  
Ahead = S 84° 11' 35" E  
Chord Bear = S 79° 55' 05" E

Course from PT LOOP410B\_CL\_\_57 to 54 S 84° 11' 35" E Dist 509.49

Point 54 N 13,738,177.28 E 2,140,297.18 Sta 1658+99.02

Ending chain LOOP410B\_CL\_\_WB description



HORIZONTAL ALIGNMENT DATA SHEET

SHEET 13 OF 13

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	154

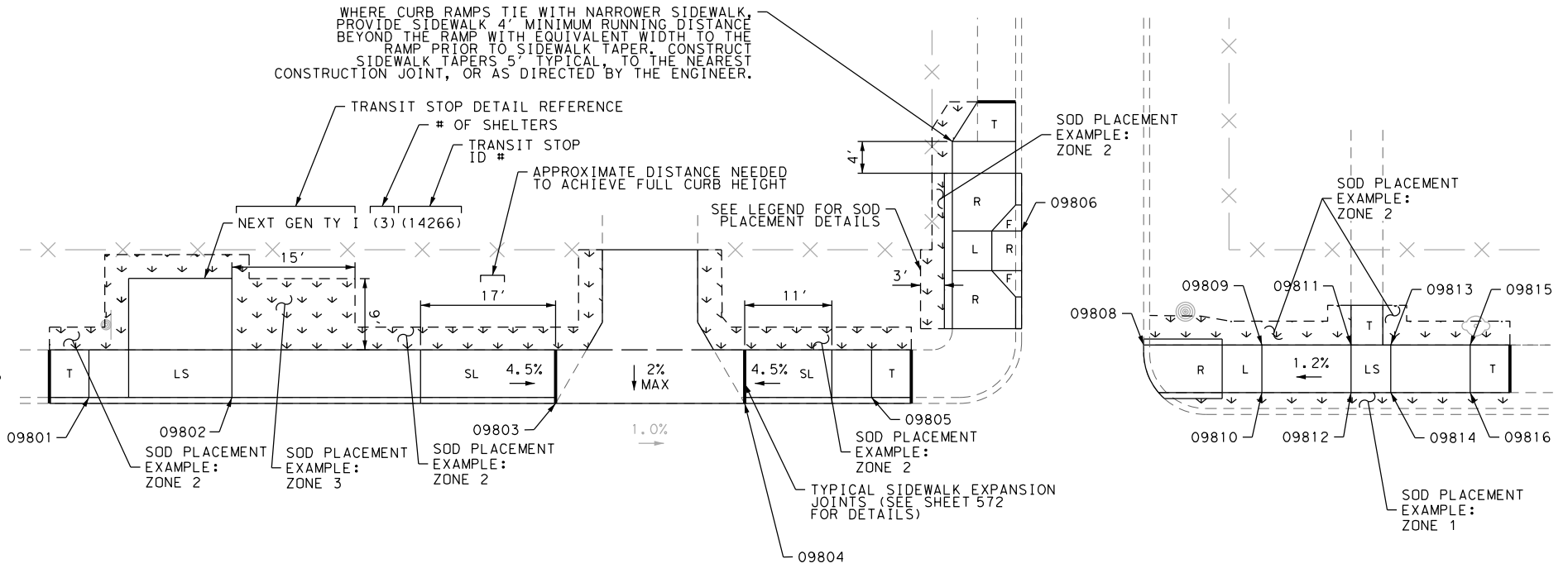
# SAMPLE POINT TABLE

POINT	NORTHING	EASTING	ELEV	DESC
09801	13709412.82	2137561.60	--	ME
09802	13709407.82	2137561.65	--	ME
09803	13709413.09	2137591.40	--	ME
09804	13709408.09	2137591.44	--	ME
09805	13709413.50	2137635.58	--	ME
09806	13709408.50	2137635.53	--	ME
09807	13709413.54	2137640.48	--	ME
09808	13709408.54	2137640.53	--	ME
09809	13709413.66	2137653.71	702.34	PROP
09810	13709408.66	2137653.75	702.26	PROP
09811	13709413.74	2137662.57	702.51	PROP
09812	13709408.74	2137662.62	702.44	PROP
09813	13709413.78	2137666.57	--	PROF
09814	13709408.78	2137666.62	--	PROF
09815	13709413.87	2137676.16	--	PROF
09816	13709408.87	2137676.21	--	PROF

PROP = PROPOSED ELEVATION  
 ME = CONTRACTOR SHALL MATCH PROPOSED IMPROVEMENTS FLUSH WITH SURROUNDINGS  
 PROF = PROPOSED ELEVATION CONTROLLED BY PROFILE

POINTS ARE PROVIDED FOR HORIZONTAL CONTROL ONLY  
 MATCH ELEVATION FLUSH WITH ADJACENT SURFACE OR AS DIRECTED  
 POINTS ARE PROVIDED FOR HORIZONTAL AND VERTICAL CONTROL  
 ELEVATIONS ESTABLISH DESIGN INTENT, HOWEVER, PLANAR SLOPE DESIGNATIONS (LS/SL/R/ETC.) SHALL CONTROL IN THE EVENT OF DISCREPANCIES BETWEEN PROVIDED ELEVATIONS AND FIELD CONDITIONS  
 SEE SURVEY CONTROL SHEETS FOR ADDITIONAL INFORMATION  
 POINTS ARE PROVIDED FOR HORIZONTAL CONTROL ONLY  
 SEE PROFILE FOR ELEVATIONS

# SAMPLE PLAN LAYOUT



# LEGEND OF SYMBOLS

- |  |                            |  |   |
|--|----------------------------|--|---|
|  | CAMERA POSITION            |  | PI POINT  |
|  | DRAINAGE FLOW DIRECTION    |  | POWER/UTILITY POLE                                |
|  | FIRE HYDRANT               |  | SEWER CLEANOUT                                    |
|  | GAS METER                  |  | SIGN  |
|  | GAS VALVE                  |  | TRAFFIC SIGNAL BOX                                |
|  | GROUND BOX                 |  | TRAFFIC SIGNAL CONTROLLER                         |
|  | GUY ANCHOR                 |  | TRAFFIC SIGNAL POLE                               |
|  | IRRIGATION                 |  | TRANSFORMER                                       |
|  | JUNCTION BOX               |  | TREE/BUSHES                                       |
|  | LIGHT POLE                 |  | UTILITY PEDESTAL/MARKER                           |
|  | LUMINAIRE STANDARD         |  | UTILITY VAULT                                     |
|  | MAIL BOX                   |  | WATER METER                                       |
|  | MANHOLE                    |  | WATER VALVE                                       |
|  | NSPI NO SEPARATE PAY ITEM  |  | X.X% EXISTING ROADWAY OR DRIVEWAY SLOPE           |
|  | PEDESTAL SIGNAL POLE       |  | X.X% PROPOSED ROADWAY, SIDEWALK OR DRIVEWAY SLOPE |
|  | EX UNDERGROUND GAS         |  |   |
|  | EX UNDERGROUND WATER       |  |   |
|  | EX UNDERGROUND STORM SEWER |  |   |
|  | EX UNDERGROUND ELECTRIC    |  |   |
|  | EX OVERHEAD ELECTRIC       |  |   |

- PLANAR SLOPE DESIGNATIONS
- F = FLARE (10:1 OR LESS) MEASURED AT FACE OF CURB
  - R = RAMP (CROSS SLOPE NOT TO EXCEED 2 PERCENT; LONGITUDINAL NOT TO EXCEED 8.3 PERCENT)
  - L = LANDING (SHALL NOT EXCEED 2 PERCENT SLOPE IN ANY DIRECTION)
  - L1 = SHARED LANDING (SHALL NOT EXCEED 2 PERCENT SLOPE IN ANY DIRECTION)
  - LS = LEVEL SIDEWALK (SHALL NOT EXCEED 2 PERCENT SLOPE IN ANY DIRECTION)
  - SL = SLOPED SIDEWALK. IF INDICATED, CONSTRUCT SLOPED SIDEWALK AT LONGITUDINAL SLOPE SHOWN ON THE PLANS. OTHERWISE LONGITUDINAL SLOPES MAY NOT EXCEED 5 PERCENT, CROSS SLOPES MAY NOT EXCEED 2 PERCENT
  - T = TAPER SIDEWALK WIDTH TO NEAREST EXISTING PANEL JOINT (5' TYP)
  - TOC = TOP OF CURB
  - FOC = FACE OF CURB
  - ↓ = BLOCK SOD

TYPICAL LIMITS OF SOD PLACEMENT ARE AS FOLLOWS:  
 ZONE 1: PLACE SOD BETWEEN THE BACK OF CURB AND PROPOSED IMPROVEMENTS (SIDEWALK, DRIVEWAY, RIPRAP, ETC.)  
 ZONE 2: PLACE SOD 3' BEYOND PROPOSED IMPROVEMENTS  
 IF THE SPACE BETWEEN THE IMPROVEMENTS AND THE ROW IS LESS THAN 3', PLACE SOD BETWEEN PROPOSED IMPROVEMENTS AND THE ROW  
 ZONE 3: PLACE SOD WITHIN THE LIMITS OF SOIL DISTURBANCE DUE TO EXCAVATION OR EMBANKMENT AS DIMENSIONED ON THE PLANS  
 PLACE SOD AS DIRECTED BY THE ENGINEER  
 - X - = EXISTING FENCE

NOTES  
 1. FLARE (F), RAMP (R), AND LANDING (L), DIRECTLY IN CONTACT WITH THE CURB RAMP ARE PAID FOR UNDER ITEM 531 "CURB RAMPS"  
 2. LEVEL SIDEWALK (LS) AND RAMPS (R) NOT DIRECTLY IN CONTACT WITH THE CURB RAMP ARE PAID FOR UNDER ITEM 531 "SIDEWALK"

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800

Texas Department of Transportation  
 © \$YEAR\$

SAMPLE PLAN LAYOUT AND LEGEND OF SYMBOLS

SHEET 1 OF 1

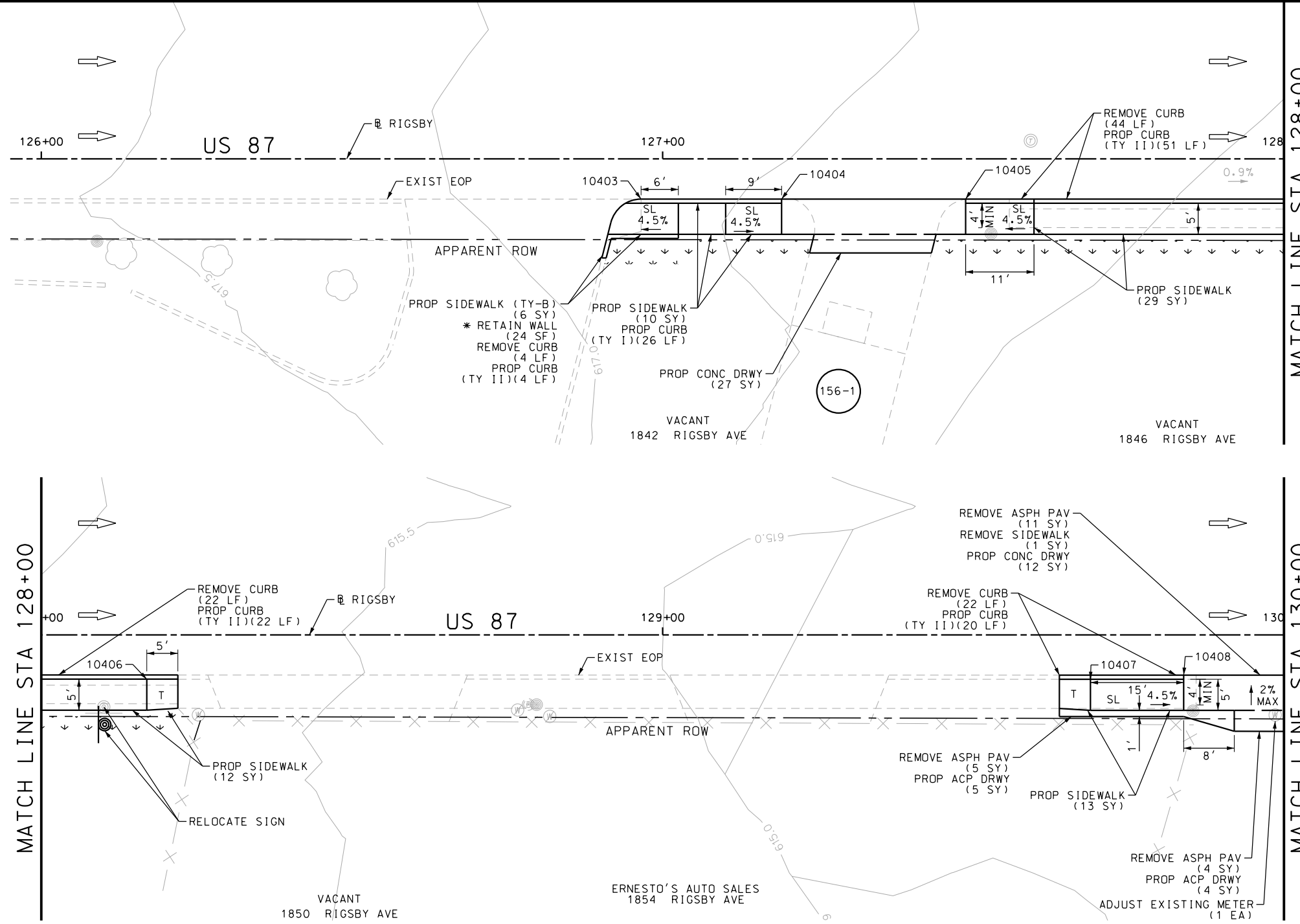
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CHK DGN:	6	TEXAS		SHWY\$
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	\$DST\$	\$CTY\$	\$C\$	\$S\$
				JOB NO.:
				\$J\$
				SHEET NO.:
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Plotted on: 5/4/2019

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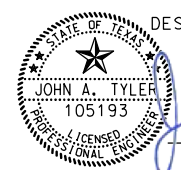
Plotted on: 5/3/2019


Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	92
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	1
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	20
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	56
0162-6002	BLOCK SODDING	SY	56
0168-6001	VEGETATIVE WATERING	MG	0.87
0529-6001	CONC CURB (TY I)	LF	26
0529-6002	CONC CURB (TY II)	LF	97
0530-6004	DRIVEWAYS (CONC)	SY	39
0530-6005	DRIVEWAYS (ACP)	SY	9
0531-6001	CONC SIDEWALKS (4")	SY	64
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	6
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

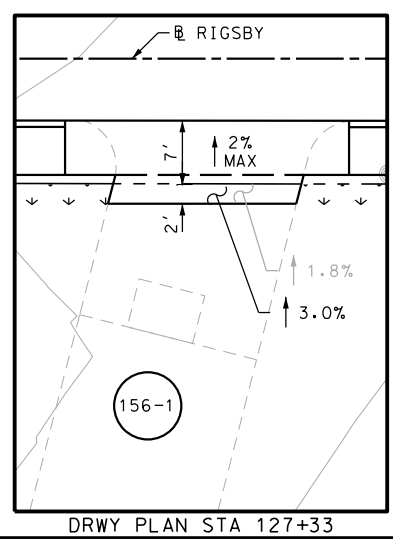
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
10403	13695003.61	2148811.08	--	ME
10404	13695003.62	2148833.71	--	ME
10405	13695003.63	2148863.31	--	ME
10406	13695002.98	2148931.53	--	ME
10407	13695003.03	2149083.42	--	ME
10408	13695003.70	2149098.42	--	ME



**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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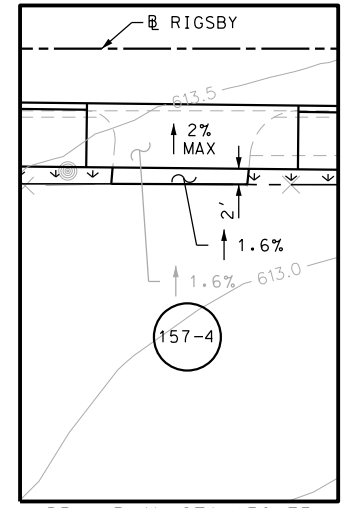
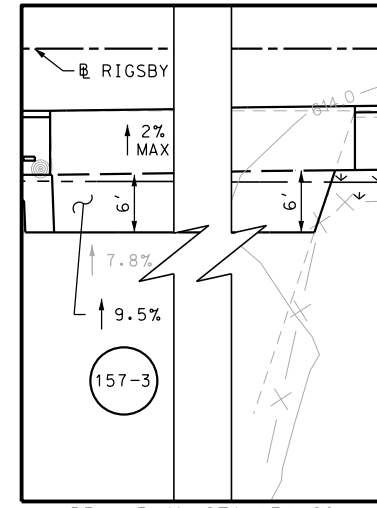
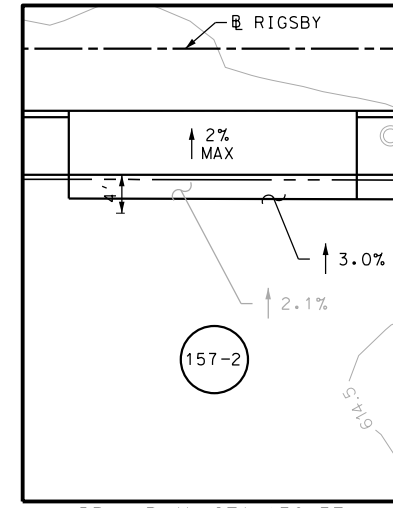
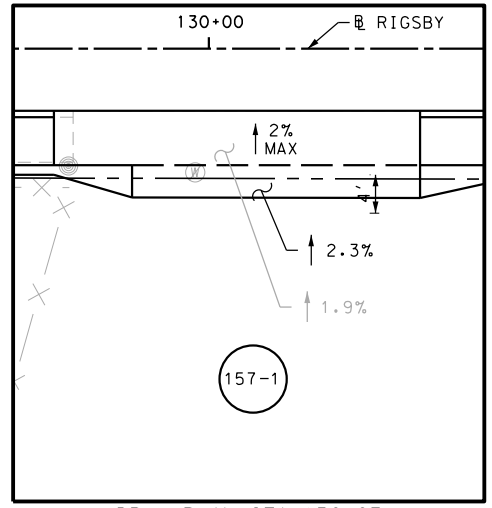
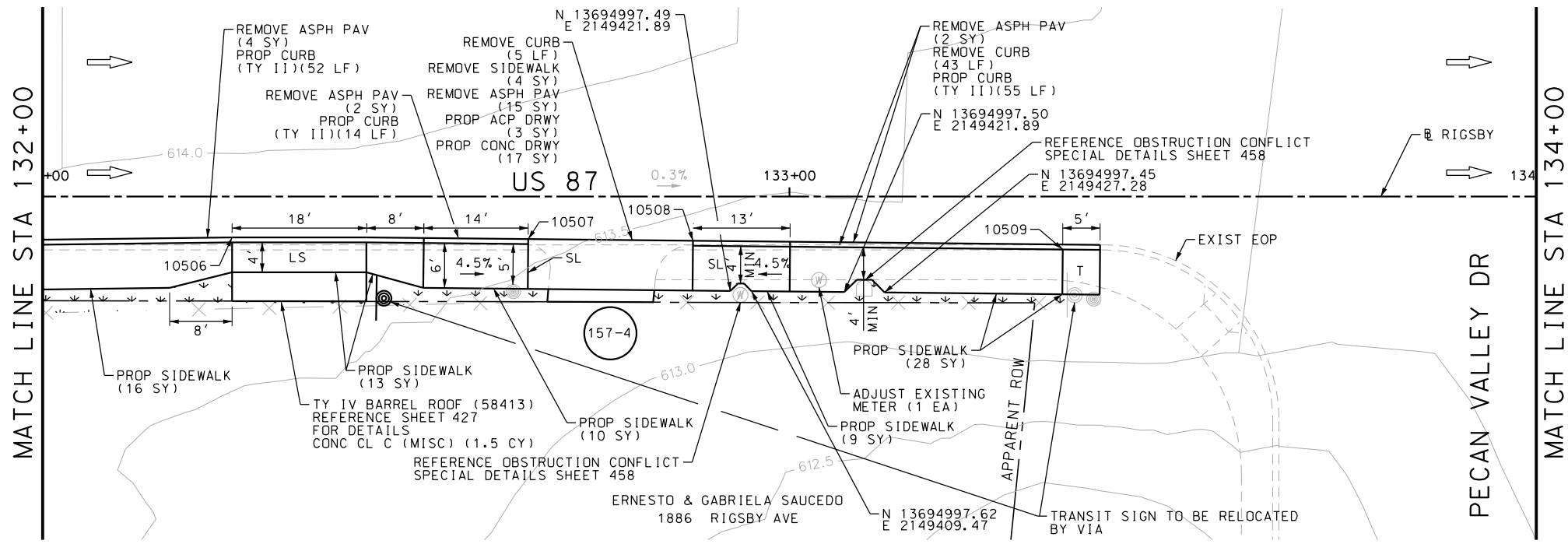
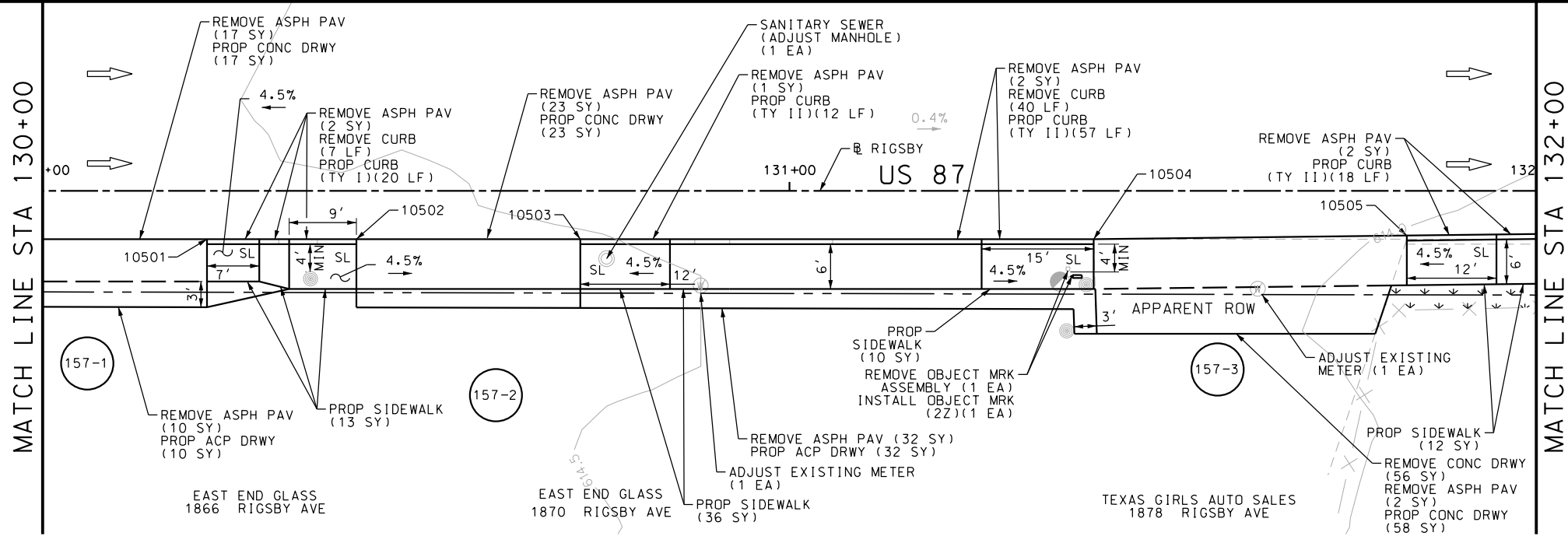
US 87  
 RIGSBY AVE EB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 130+00

SHEET 1 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				156

Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Rigsby\1113507\Rigsby\*08.dgn



SEE SHEET 158 FOR POINT TABLE

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	56
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	95
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	114
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	35
0162-6002	BLOCK SODDING	SY	35
0168-6001	VEGETATIVE WATERING	MG	0.55
0420-6074	CL C CONC (MISC)	CY	1.5
0529-6001	CONC CURB (TY I)	LF	20
0529-6002	CONC CURB (TY II)	LF	208
0530-6004	DRIVEWAYS (CONC)	SY	115
0530-6005	DRIVEWAYS (ACP)	SY	45
0531-6001	CONC SIDEWALKS (4")	SY	119
0658-6050	INSTL OM ASSM (OM-2Z) (FLX)SRF	EA	1
0658-6060	REMOVE DELIN & OBJECT MARKER ASSMS	EA	1
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	3

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

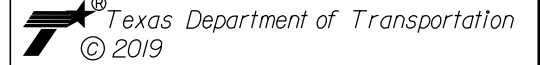
STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



US 87  
 RIGSBY AVE EB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 130+00 TO STA 134+00

SHEET 2 OF 28

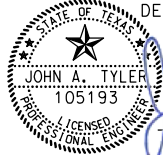
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CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				157


SEE SHEET 157

POINT	NORTHING	EASTING	ELEV	DESC
10501	13695003.72	2149136.55	--	ME
10502	13695003.72	2149156.55	--	ME
10503	13695003.73	2149186.55	--	ME
10504	13695003.76	2149255.29	--	ME
10505	13695004.27	2149297.22	--	ME
10506	13695004.79	2149339.92	--	ME
10507	13695004.58	2149379.58	--	ME
10508	13695004.36	2149401.64	--	ME
10509	13695003.21	2149451.15	--	ME

Plotted on: 5/3/2019

Design Filename: P:\111\35\07\des\ign\Civil\Roadway\RI\gsby\113507\*RIgsby\*08a.dgn


DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson**  
**ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE EB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 130+00 TO STA 134+00  
 POINT TABLES

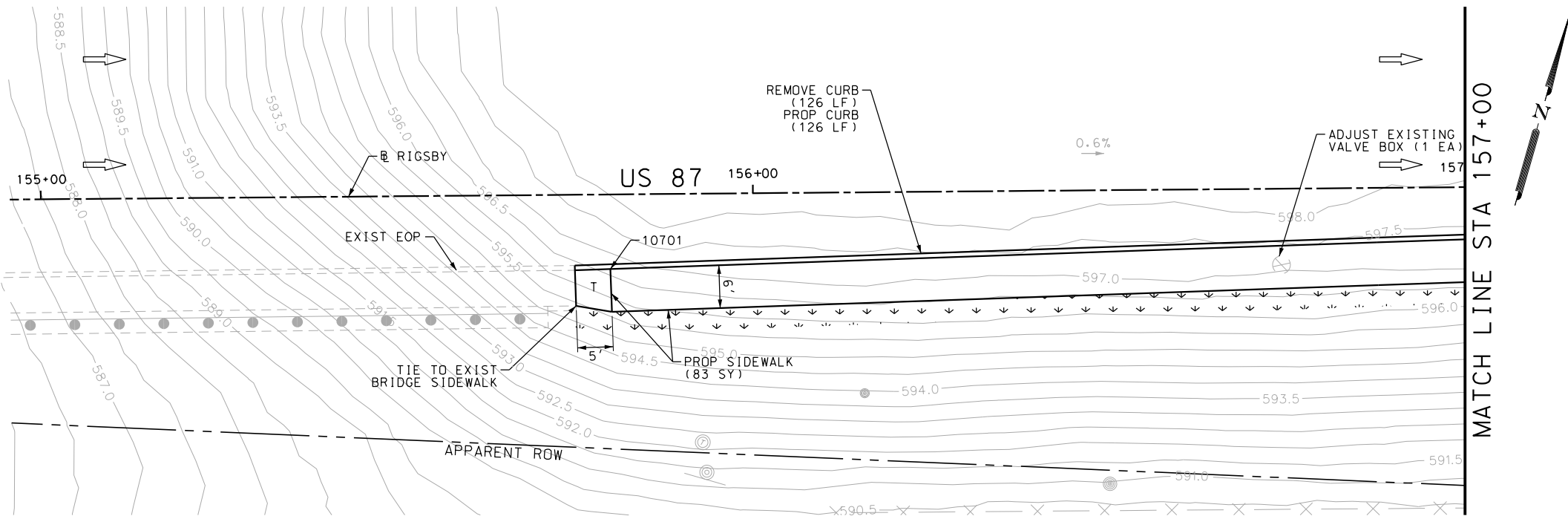
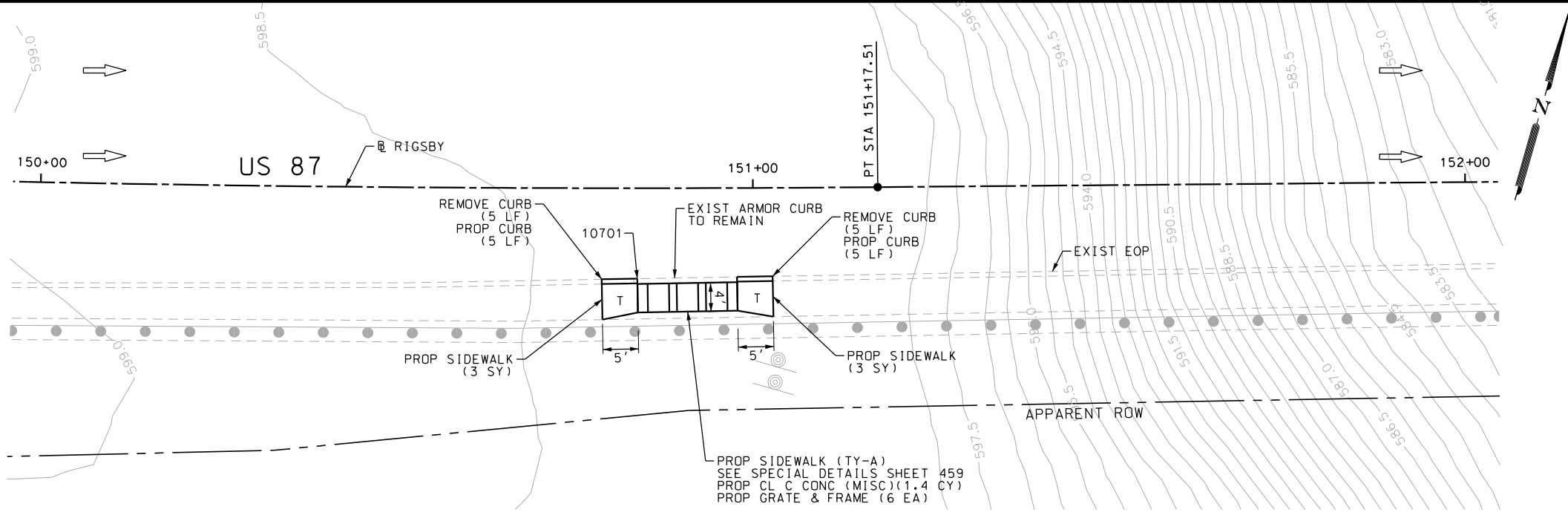
SHEET 3 OF 28

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	158



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*10.dgn



POINT	NORTHING	EASTING	ELEV	DESC
10701	13695298.91	2151662.27	--	ME
10702	13695155.80	2151187.10	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	136
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	42
0162-6002	BLOCK SODDING	SY	42
0168-6001	VEGETATIVE WATERING	MG	0.66
0420-6074	CL C CONC (MISC)	CY	1.4
0471-6003	GRATE & FRAME	EA	6
0529-6002	CONC CURB (TY II)	LF	136
0531-6001	CONC SIDEWALKS (4")	SY	89
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
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DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
RIGSBY AVE EB  
SIDEWALK  
CONSTRUCTION PLAN  
STA 150+00 TO STA 157+00

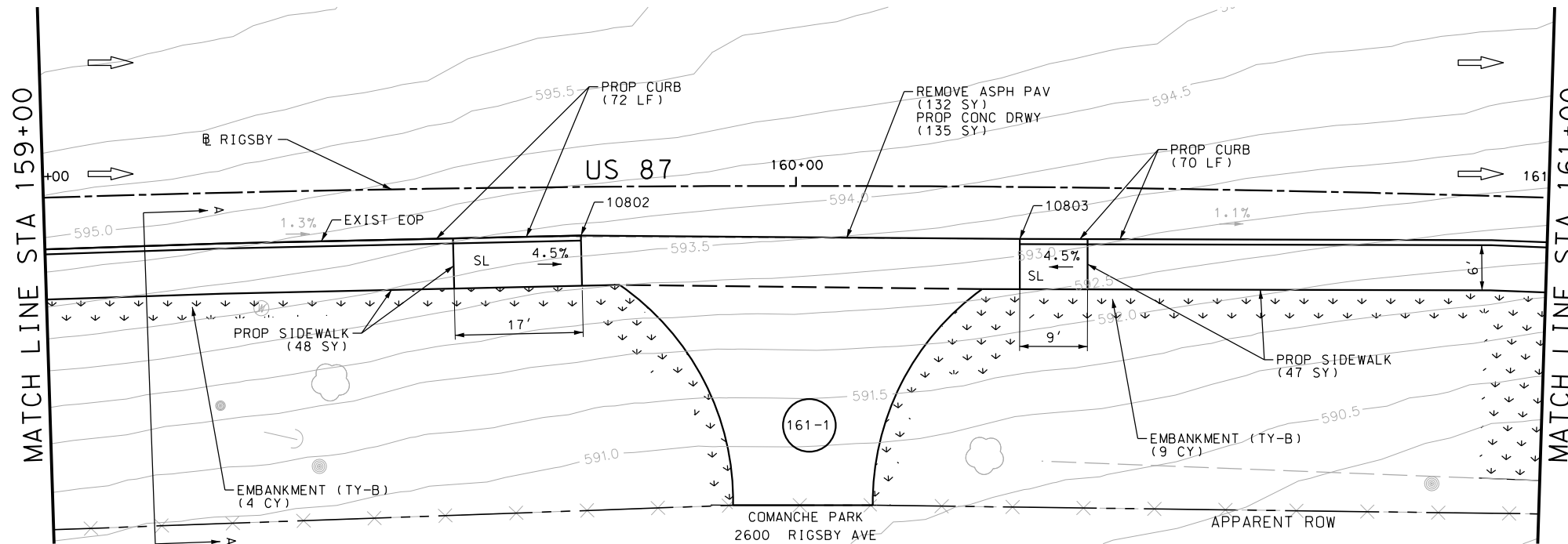
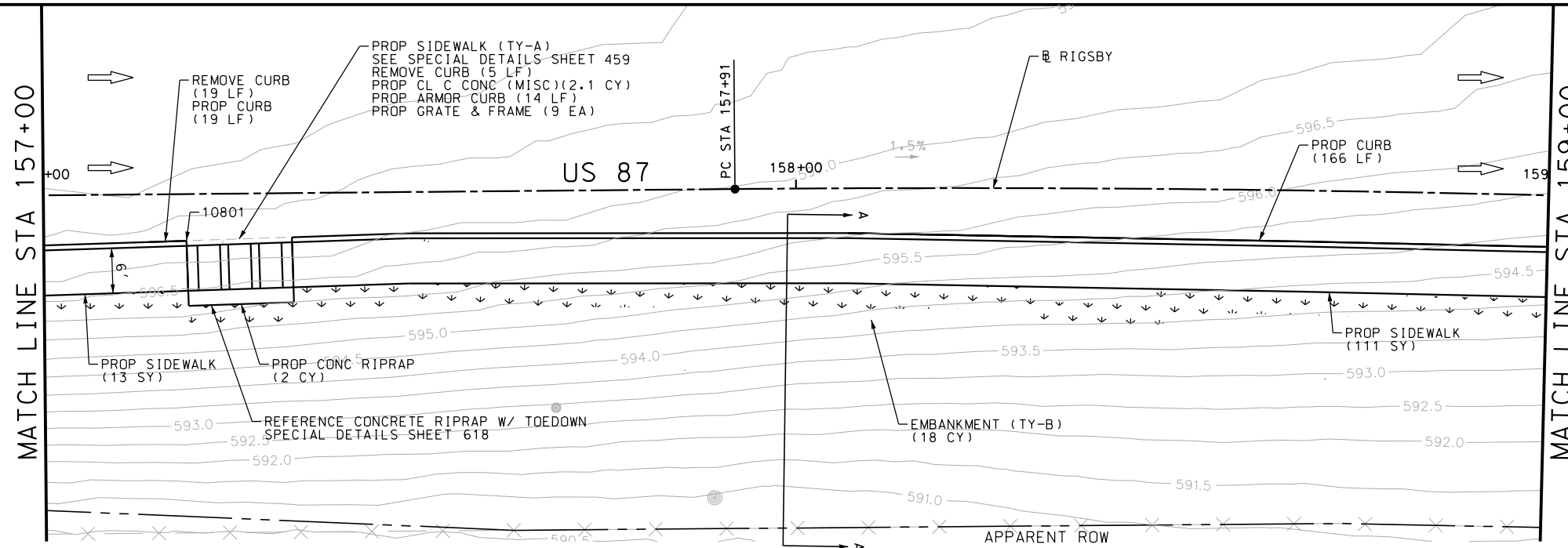
SHEET 5 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	160

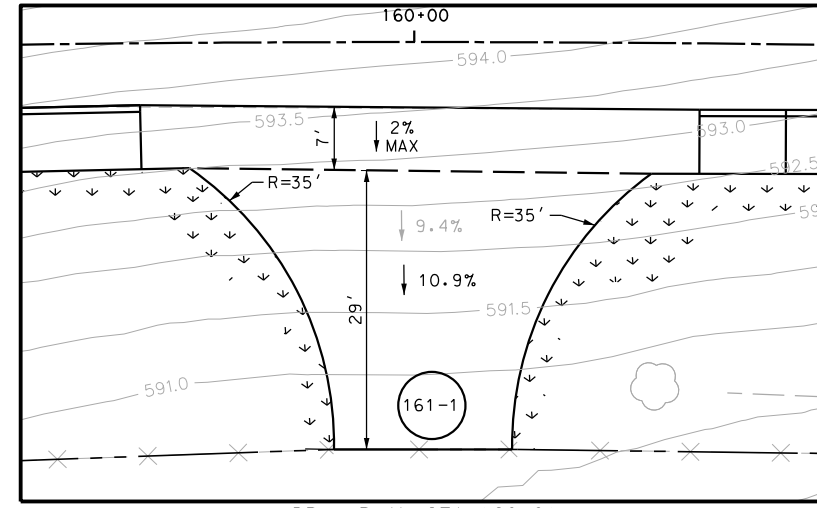
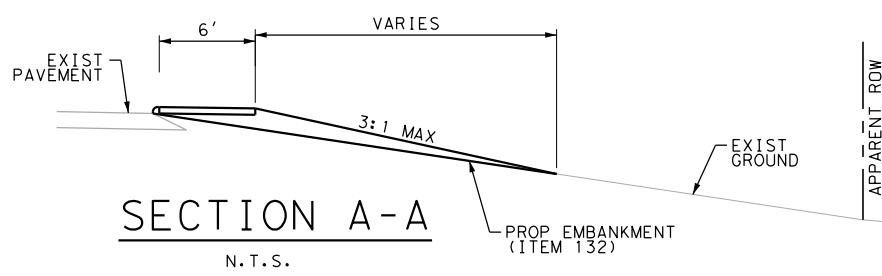


Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\113507\Rigsby\*11.dgn



POINT	NORTHING	EASTING	ELEV	DESC
10801	13695342.55	2151794.38	--	ME
10802	13695409.13	2152037.44	--	ME
10803	13695421.59	2152094.39	--	ME



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	24
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	132
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	31
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	254
0162-6002	BLOCK SODDING	SY	254
0168-6001	VEGETATIVE WATERING	MG	3.96
0420-6074	CL C CONC (MISC)	CY	2.1
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	327
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	135
0531-6001	CONC SIDEWALKS (4")	SY	219

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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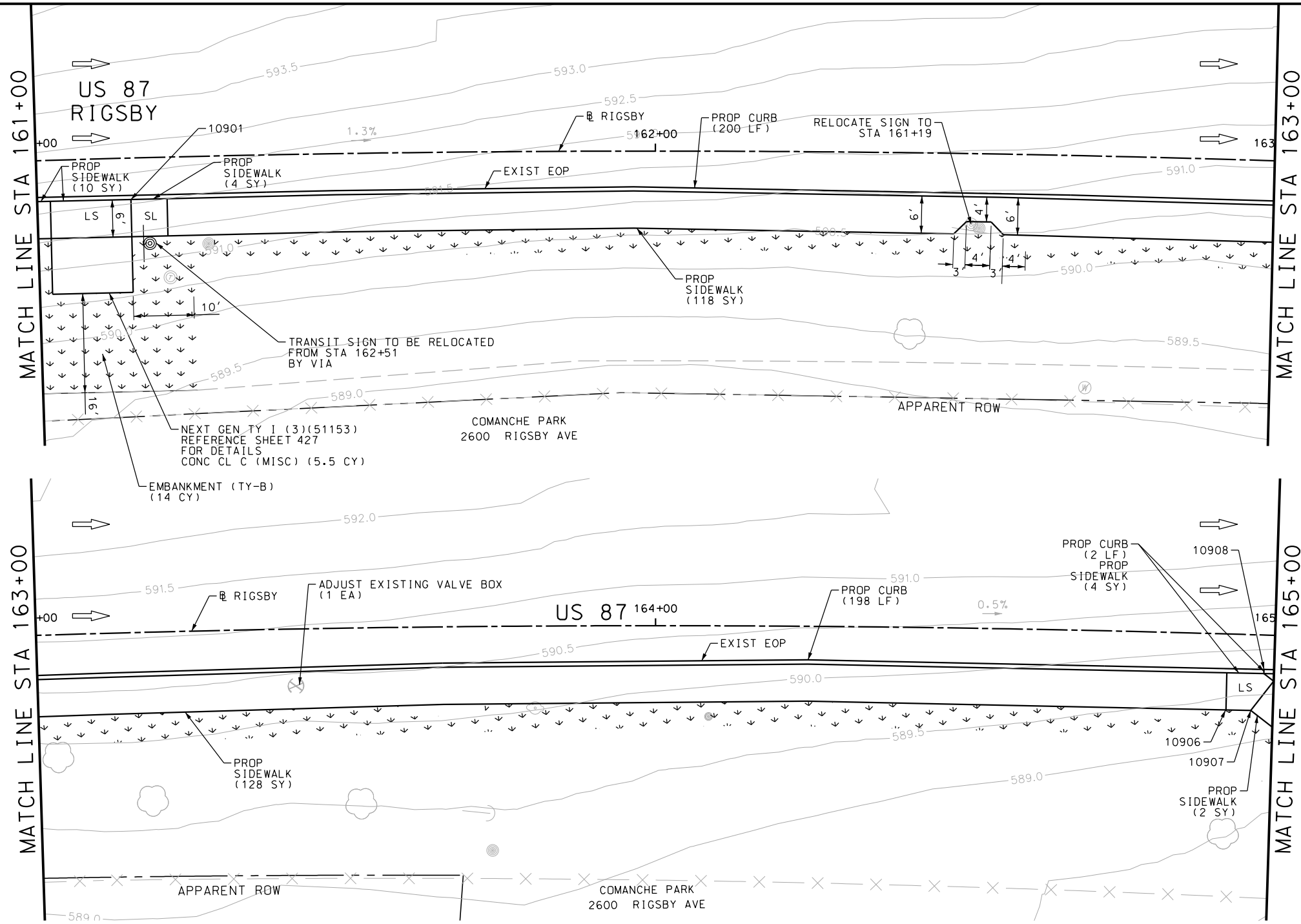
US 87  
 RIGSBY AVE EB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 157+00 TO STA 161+00

SHEET 6 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	161

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*12.dgn



ITEM	DESCRIPTION	UNIT	QTY
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	325
0162-6002	BLOCK SODDING	SY	325
0168-6001	VEGETATIVE WATERING	MG	5.07
0420-6074	CL C CONC (MISC)	CY	5.5
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	400
0531-6001	CONC SIDEWALKS (4")	SY	266
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN

JOHN A. TYLER, P.E.  
DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
10901	13695438.79	2152177.82	--	ME
10906	13695481.39	2152551.36	591.01	PROP
10907	13695481.70	2152555.35	591.01	PROP
10908	13695487.84	2152556.87	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
RIGSBY AVE EB  
SIDEWALK  
CONSTRUCTION PLAN  
STA 161+00 TO STA 165+00

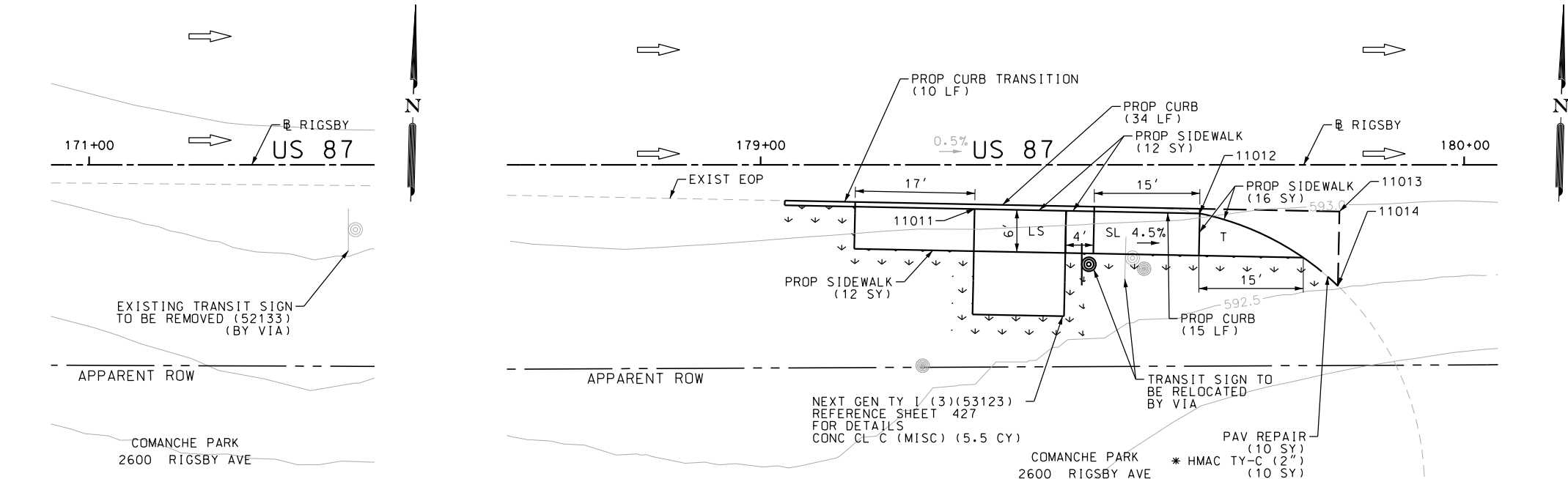
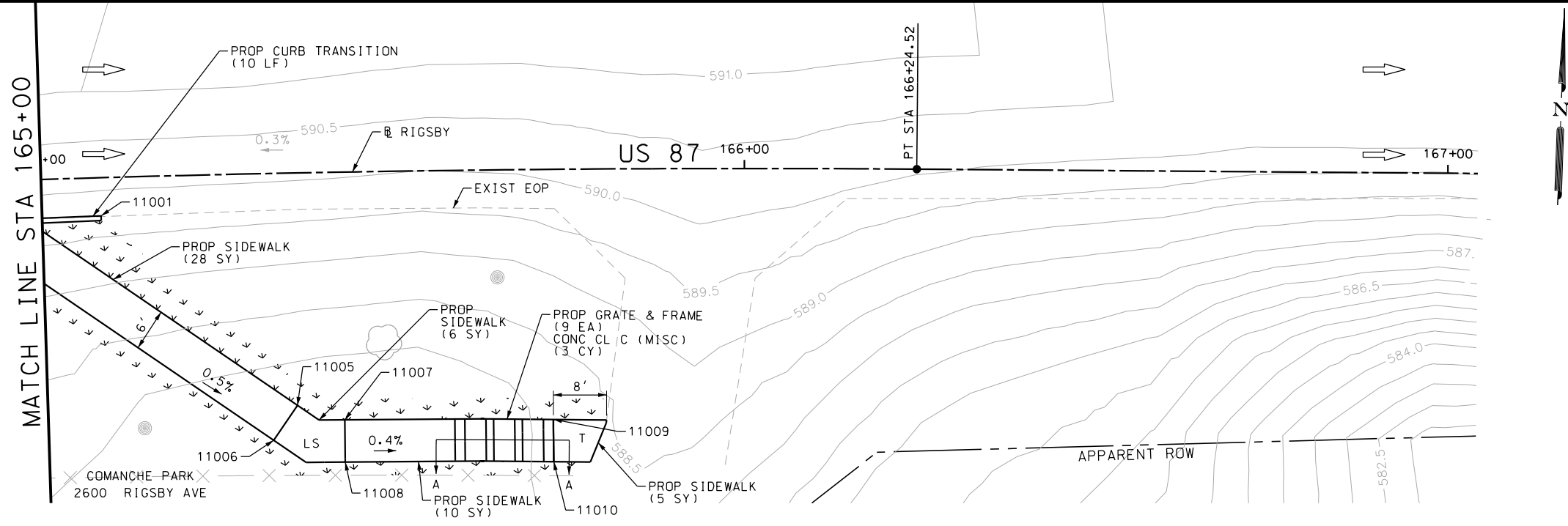
SHEET 7 OF 28

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	162

Plotted on: 5/3/2019

Design File name: P:\11135\07\des\ign\Civil\Roadway\Rigsby\1113507\Rigsby#13.dgn

ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA (SQ) TY-C PG76-22	SY	10
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	86
0162-6002	BLOCK SODDING	SY	86
0168-6001	VEGETATIVE WATERING	MG	1.34
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	10
0420-6074	CL C CONC (MISC)	CY	8.5
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	69
0531-6001	CONC SIDEWALKS (4")	SY	89



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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

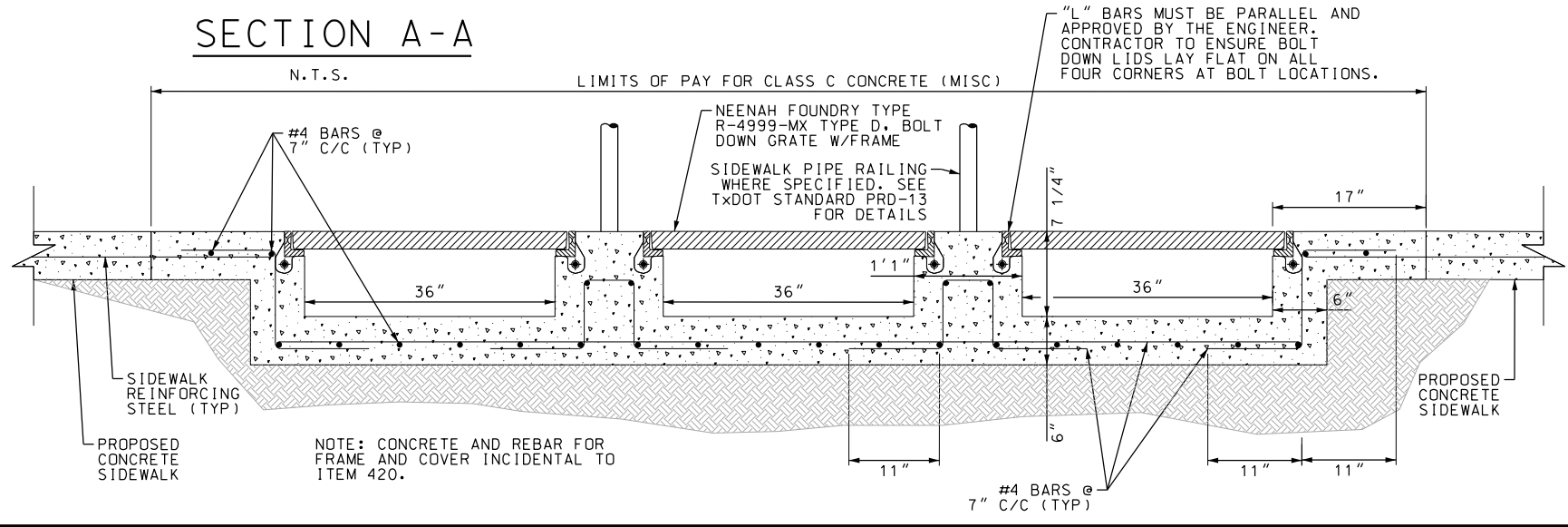
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US 87  
 RIGSBY AVE EB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 165+00 TO STA 180+00

SHEET 8 OF 28

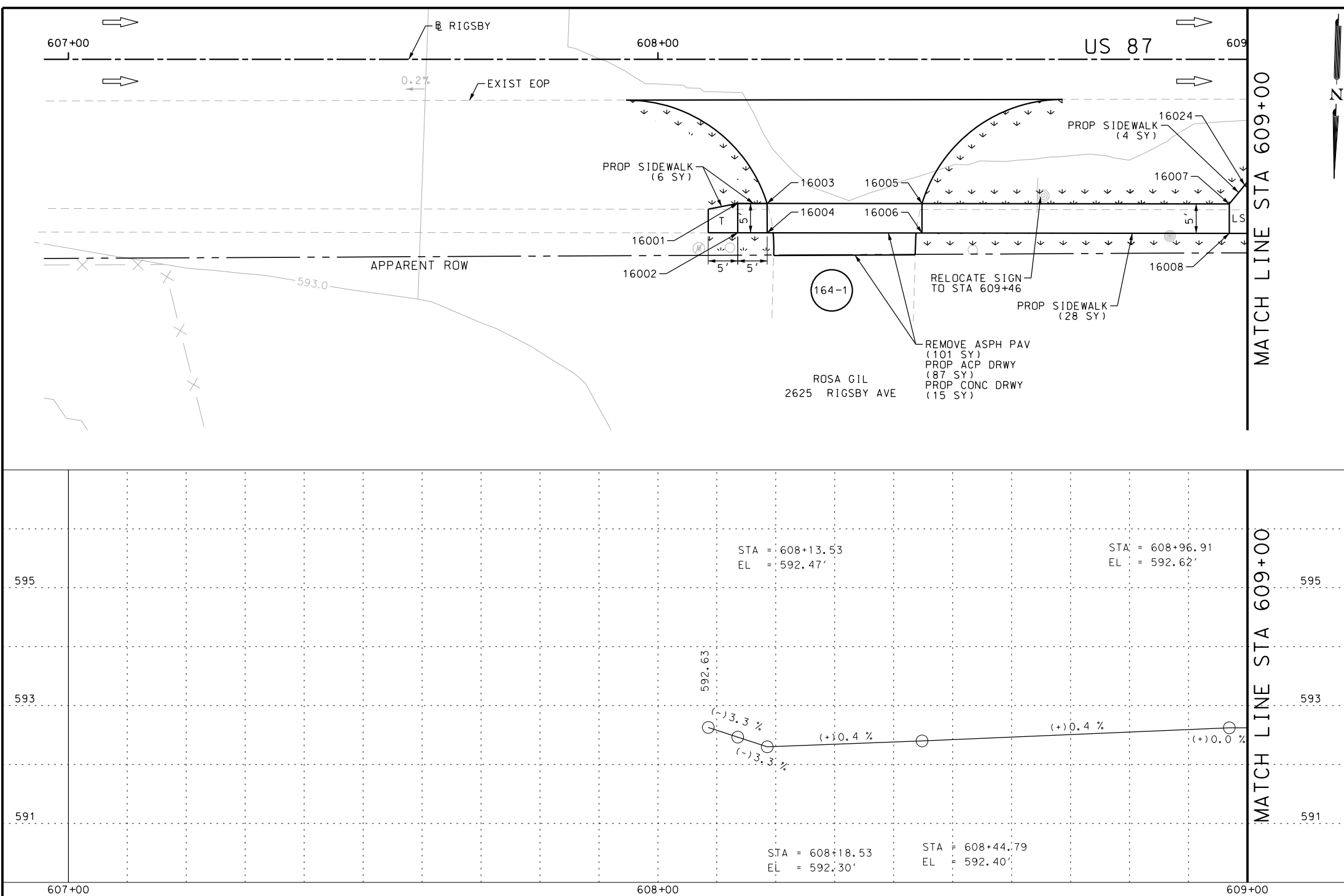
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				163

POINT	NORTHING	EASTING	ELEV	DESC
11001	13695489.28	2152566.79	--	ME
11005	13695463.33	2152595.67	588.86	PROP
11006	13695458.26	2152592.46	588.86	PROP
11007	13695461.52	2152602.47	588.86	PROP
11008	13695455.53	2152602.73	588.86	PROP
11009	13695462.63	2152632.08	588.86	PROP
11010	13695456.64	2152632.34	588.86	PROP
11011	13695530.52	2153987.99	--	ME
11012	13695530.79	2154019.99	--	ME
11013	13695531.63	2154039.82	--	ME
11014	13695521.04	2154039.91	--	ME



Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Rigsby\1113507\Rigsby\*63PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	101
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0530-6004	DRIVEWAYS (CONC)	SY	87
0530-6005	DRIVEWAYS (ACP)	SY	15
0531-6001	CONC SIDEWALKS (4")	SY	38

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

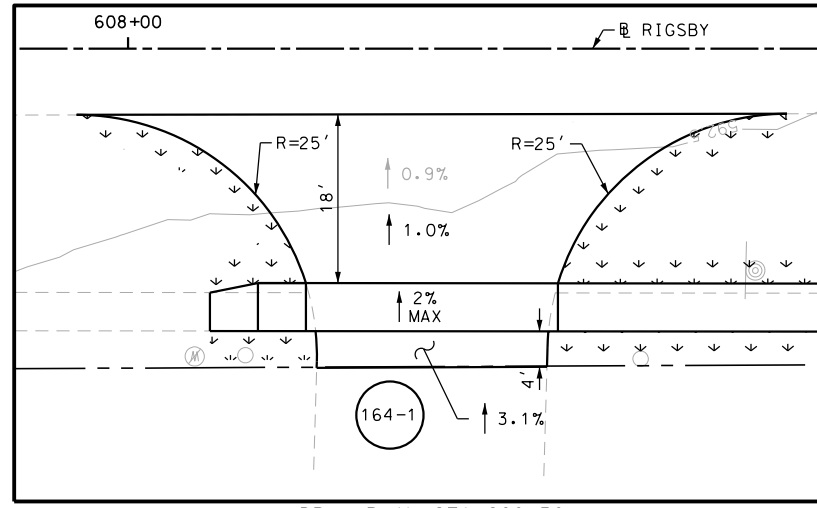
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 607+00 TO STA 609+00

SHEET 9 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	164

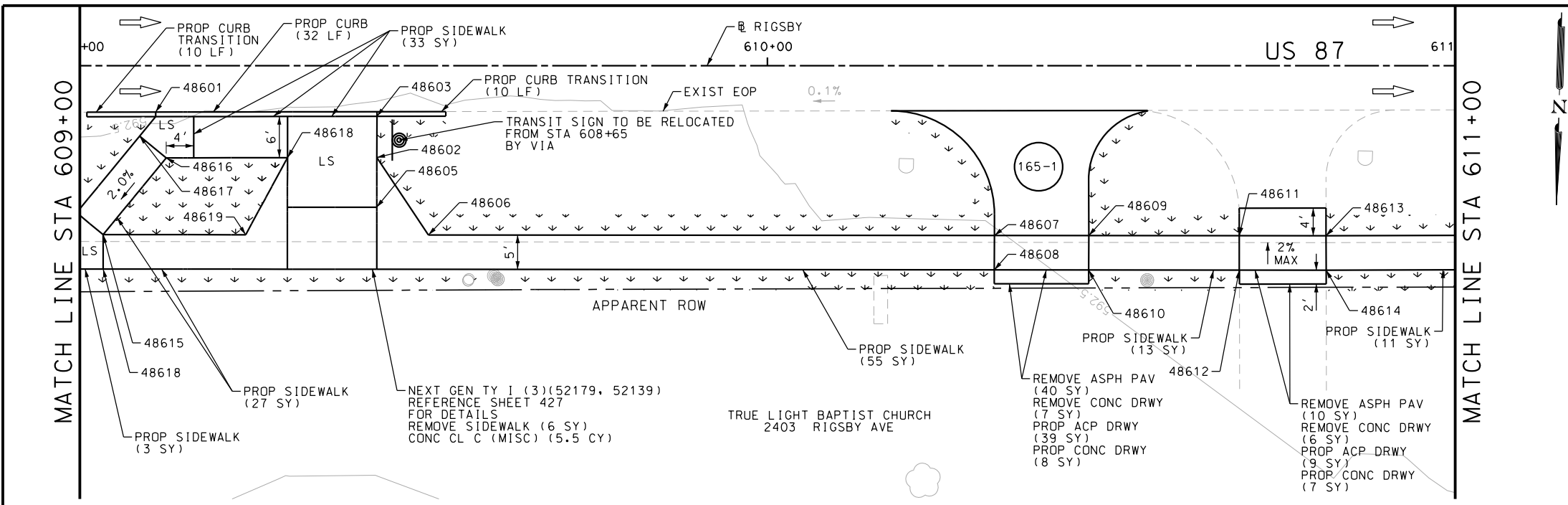


DRWY PLAN STA 608+32

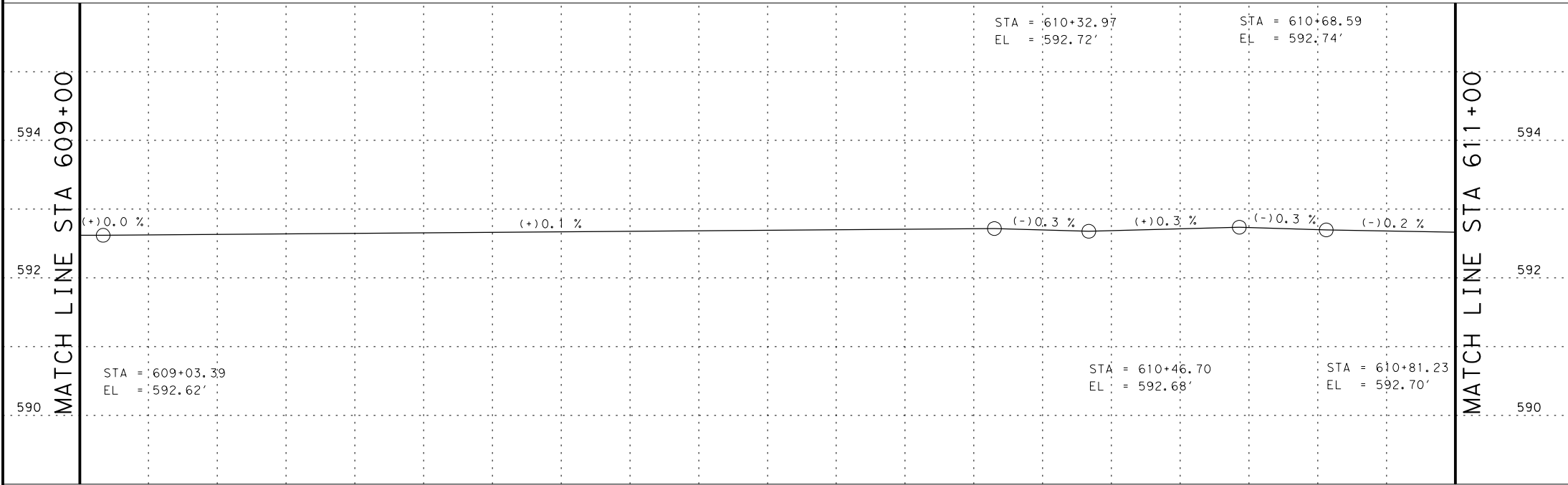
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16002	13695595.27	2153714.28	--	PROF
16003	13695590.14	2153709.43	--	PROF
16004	13695595.14	2153709.28	592.30	PROP
16005	13695589.43	2153683.17	592.35	PROP
16006	13695594.42	2153683.03	--	PROF
16007	13695588.01	2153631.07	--	PROF
16008	13695593.01	2153630.92	--	PROF
16024	13695584.77	2153628.54	592.60	PROP

Plotted on: 5/3/2019

Design File name: P:\11135\07\des\ign\Civil\Roadway\RI\gsby\1113507\RI\gsby\63PP\A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	13
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	6
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	50
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	198
0162-6002	BLOCK SODDING	SY	198
0168-6001	VEGETATIVE WATERING	MG	3.09
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	52
0530-6004	DRIVEWAYS (CONC)	SY	15
0530-6005	DRIVEWAYS (ACP)	SY	48
0531-6001	CONC SIDEWALKS (4")	SY	142



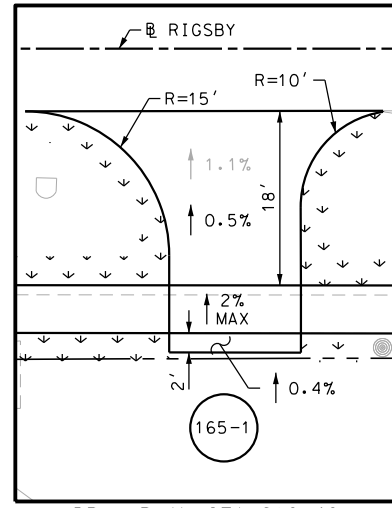
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
48601	13695570.49	2153617.43	--	ME
48602	13695575.53	2153585.11	592.92	PROP
48603	13695569.54	2153585.27	--	ME
48605	13695582.76	2153584.92	--	PROP
48606	13695586.56	2153577.29	--	PROP
48607	13695584.32	2153495.05	--	PROP
48608	13695589.32	2153494.92	--	PROP
48609	13695583.95	2153481.33	--	PROP
48610	13695588.95	2153481.19	592.68	PROP
48611	13695583.36	2153459.45	--	PROP
48612	13695588.36	2153459.31	--	PROP
48613	13695583.02	2153446.84	--	PROP
48614	13695588.02	2153446.67	--	PROP
48615	13695587.84	2153624.59	--	PROP
48616	13695576.44	2153615.73	592.90	PROP
48617	13695573.37	2153619.67	592.94	PROP
48618	13695575.92	2153598.11	592.91	PROP
48619	13695587.27	2153603.87	--	PROP



REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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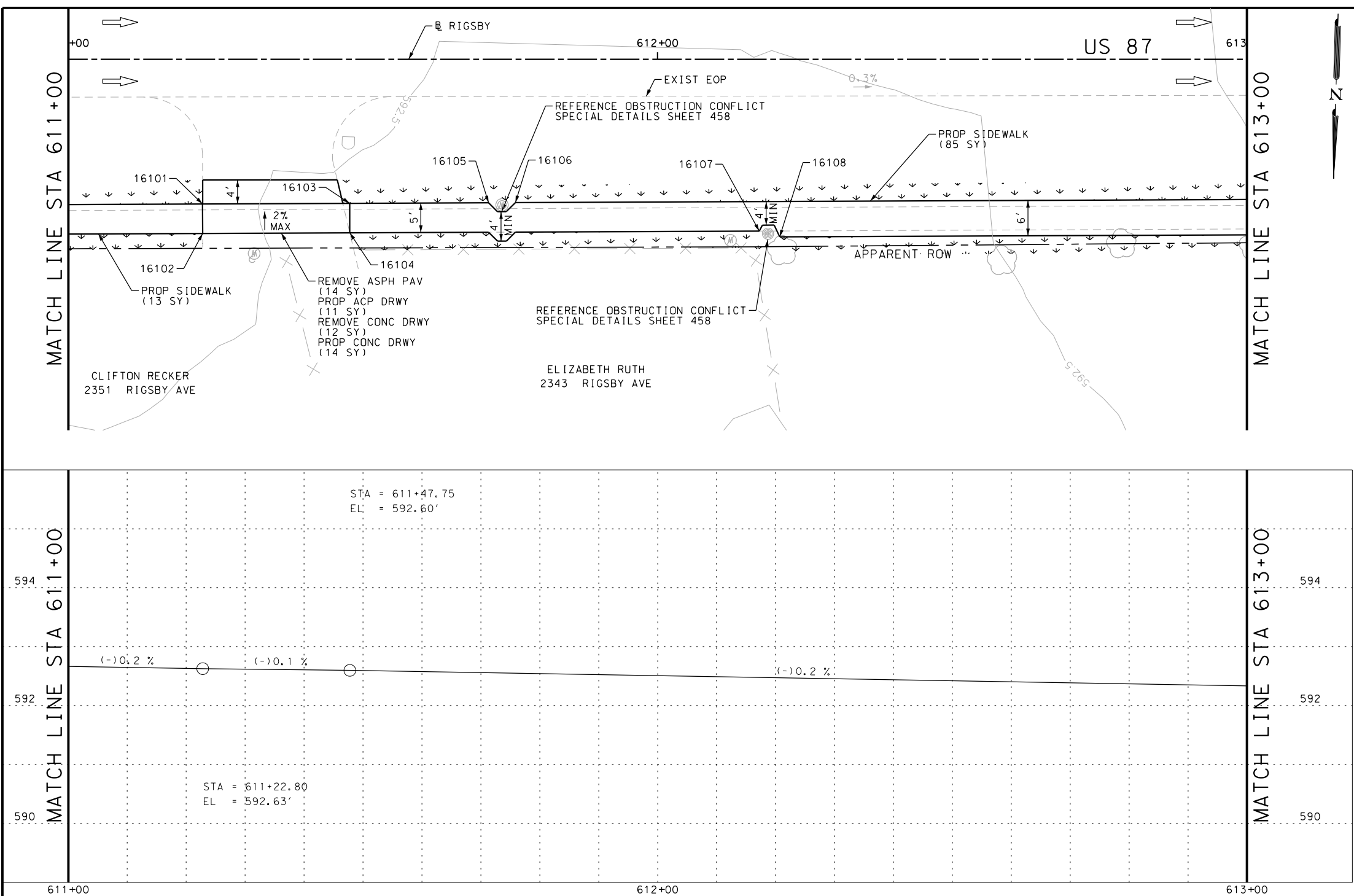
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 609+00 TO STA 611+00

SHEET 10 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				165

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\RIgsby\1113507\RIgsby\*64PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0530-6004	DRIVEWAYS (CONC)	SY	14
0530-6005	DRIVEWAYS (ACP)	SY	11
0531-6001	CONC SIDEWALKS (4")	SY	107

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DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
16101	13695581.67	2153405.29	--	PROF
16102	13695586.67	2153405.13	--	PROF
16103	13695580.87	2153380.35	--	PROF
16104	13695585.86	2153380.19	--	PROF
16105	13695580.11	2153356.80	--	PROF
16106	13695579.96	2153352.25	--	PROF
16107	13695583.62	2153310.74	--	PROF
16108	13695584.50	2153307.24	--	PROF

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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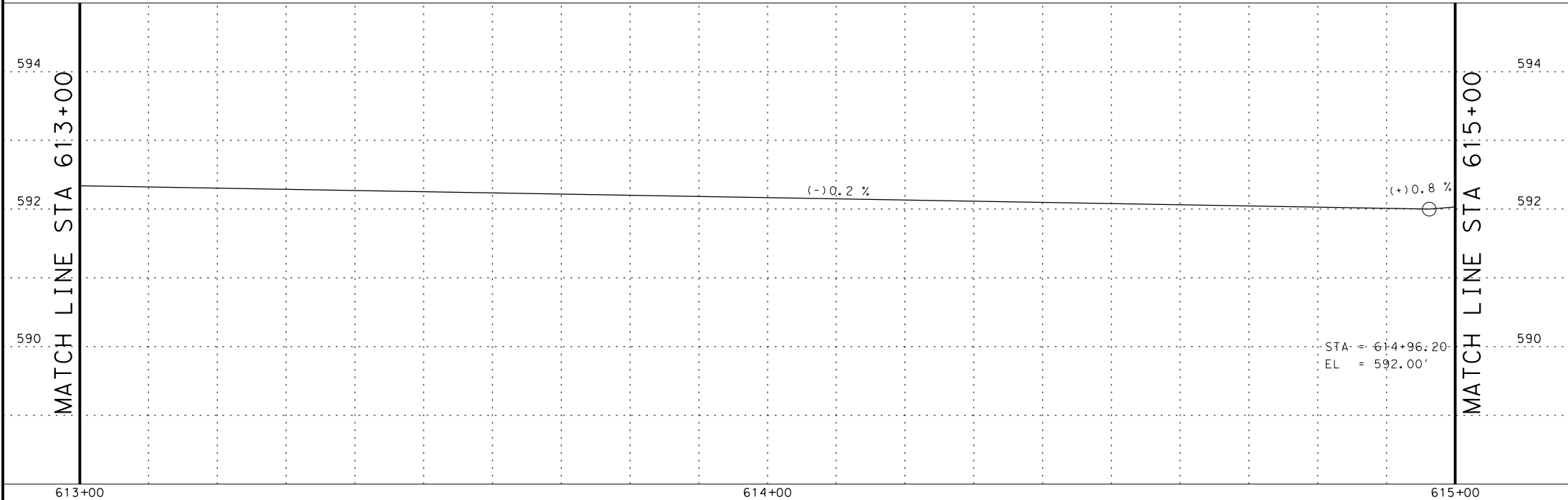
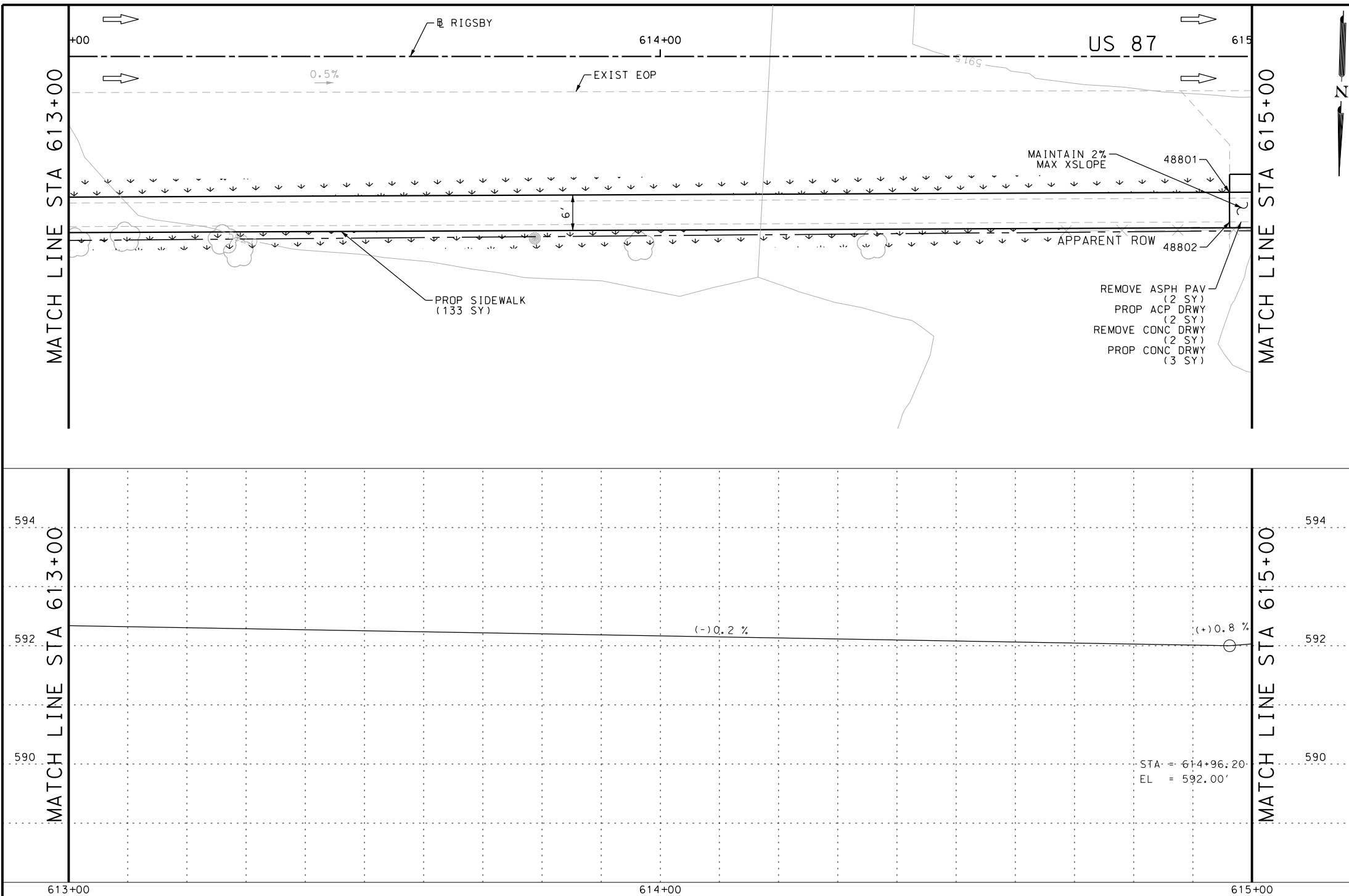
US 87  
RIGSBY AVE WB  
SIDEWALK  
CONSTRUCTION PLAN  
STA 611+00 TO STA 613+00

SHEET 11 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	166

Plotted on: 5/3/2019

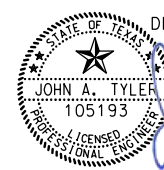
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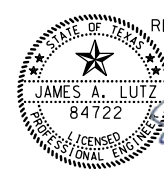


POINT	NORTHING	EASTING	ELEV	DESC
48801	13695569.60	2153032.08	--	PROF
48802	13695575.60	2153031.89	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	2
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	2
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	105
0162-6002	BLOCK SODDING	SY	105
0168-6001	VEGETATIVE WATERING	MG	1.64
0530-6004	DRIVEWAYS (CONC)	SY	3
0530-6005	DRIVEWAYS (ACP)	SY	2
0531-6001	CONC SIDEWALKS (4")	SY	137

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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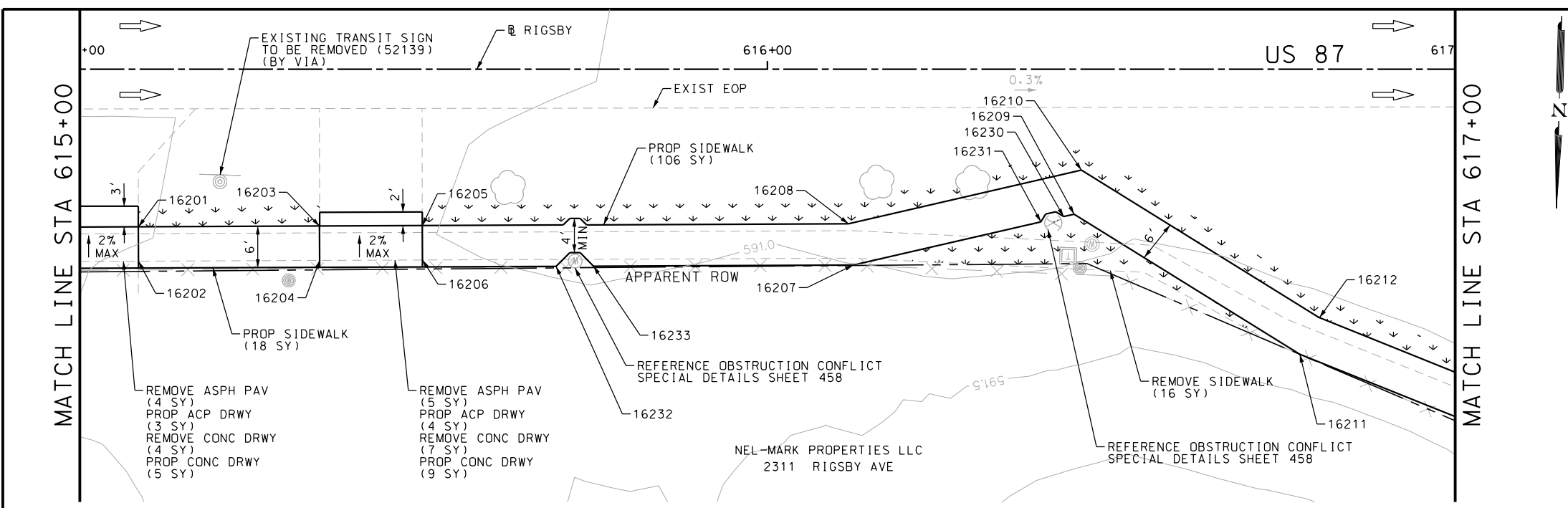
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 613+00 TO STA 615+00

SHEET 12 OF 28

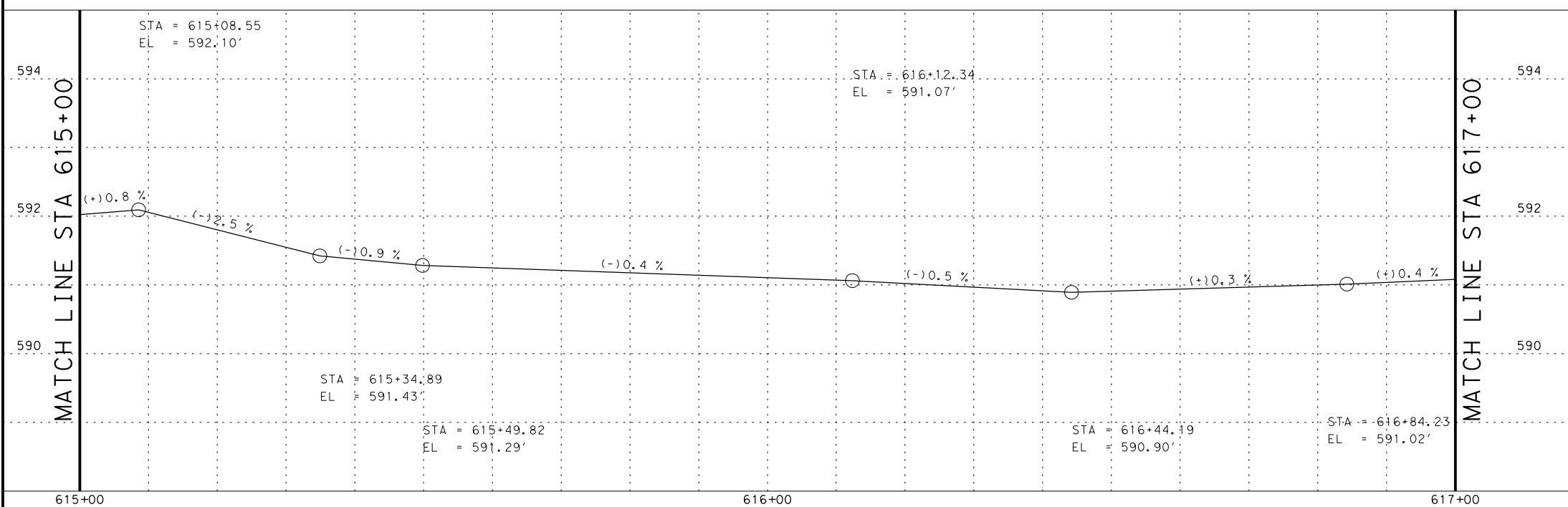
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	167

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\RI\gsby\1113507\RI\gsby\65PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	11
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	16
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	9
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	90
0162-6002	BLOCK SODDING	SY	90
0168-6001	VEGETATIVE WATERING	MG	1.40
0530-6004	DRIVEWAYS (CONC)	SY	14
0530-6005	DRIVEWAYS (ACP)	SY	7
0531-6001	CONC SIDEWALKS (4")	SY	124



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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
16201	13695569.20	2153019.74	--	PROF
16202	13695575.20	2153019.55	--	PROF
16203	13695568.35	2152993.42	--	PROF
16204	13695574.34	2152993.22	--	PROF
16205	13695567.86	2152978.49	--	PROF
16206	13695573.86	2152978.29	--	PROF
16207	13695571.84	2152915.70	--	PROF
16208	13695565.86	2152916.57	--	PROF
16209	13695563.54	2152883.79	--	PROF
16210	13695557.11	2152882.91	--	PROF
16211	13695582.97	2152850.42	--	PROF
16212	13695577.57	2152847.78	--	PROF
16230	13695563.93	2152885.31	--	PROF
16231	13695564.79	2152888.61	--	PROF
16232	13695573.23	2152958.87	--	PROF
16233	13695573.06	2152953.44	--	PROF



US 87  
RIGSBY AVE WB  
SIDEWALK  
CONSTRUCTION PLAN  
STA 615+00 TO STA 617+00

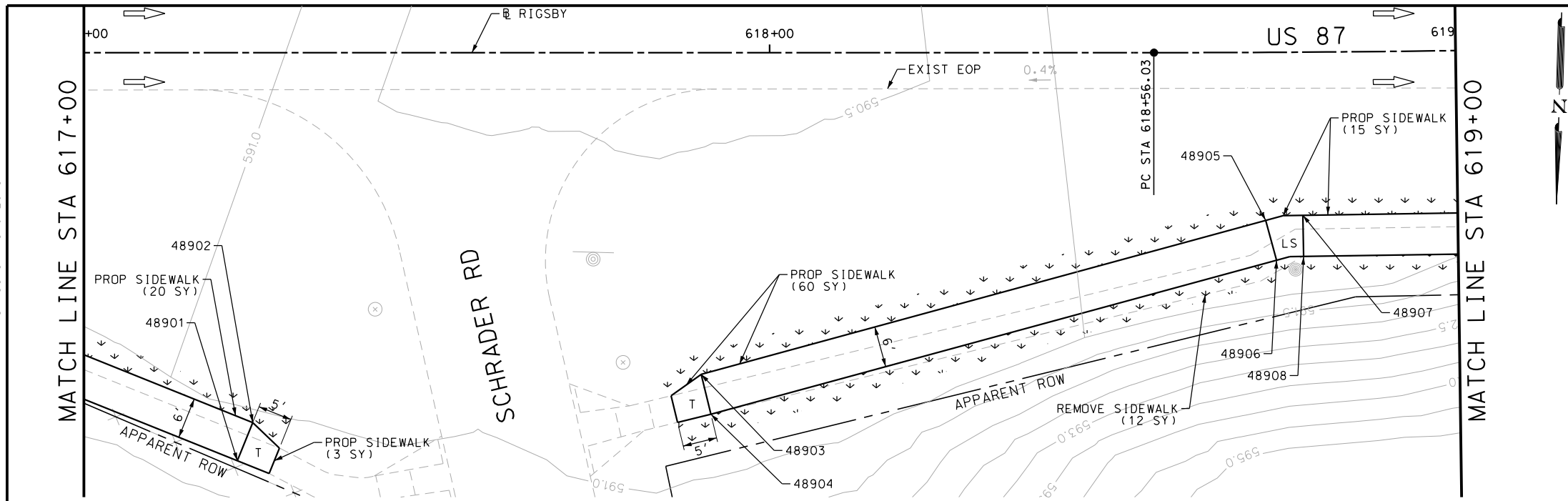
SHEET 13 OF 28

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	168



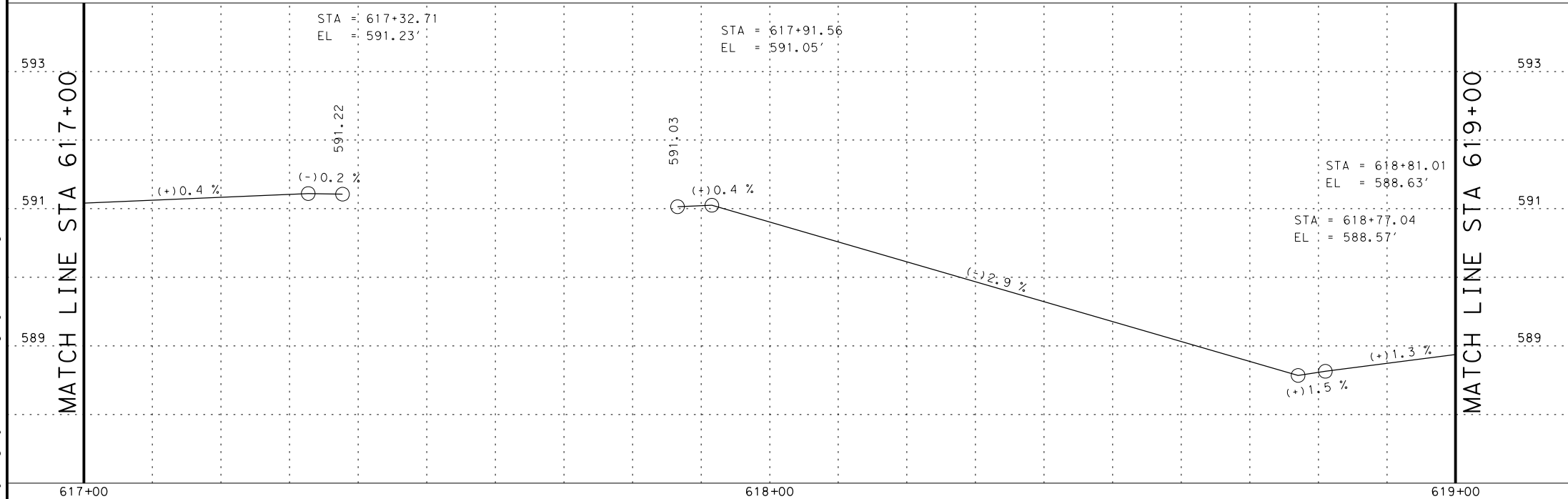
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*65PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	80
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0531-6001	CONC SIDEWALKS (4")	SY	98

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POINT	NORTHING	EASTING	ELEV	DESC
48901	13695599.76	2152804.94	--	PROF
48902	13695594.13	2152802.86	--	PROF
48903	13695585.26	2152737.70	--	PROF
48904	13695591.05	2152736.12	--	PROF
48905	13695560.50	2152656.06	--	PROF
48906	13695566.27	2152654.31	--	PROF
48907	13695559.61	2152650.65	--	PROF
48908	13695565.60	2152650.40	--	PROF

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

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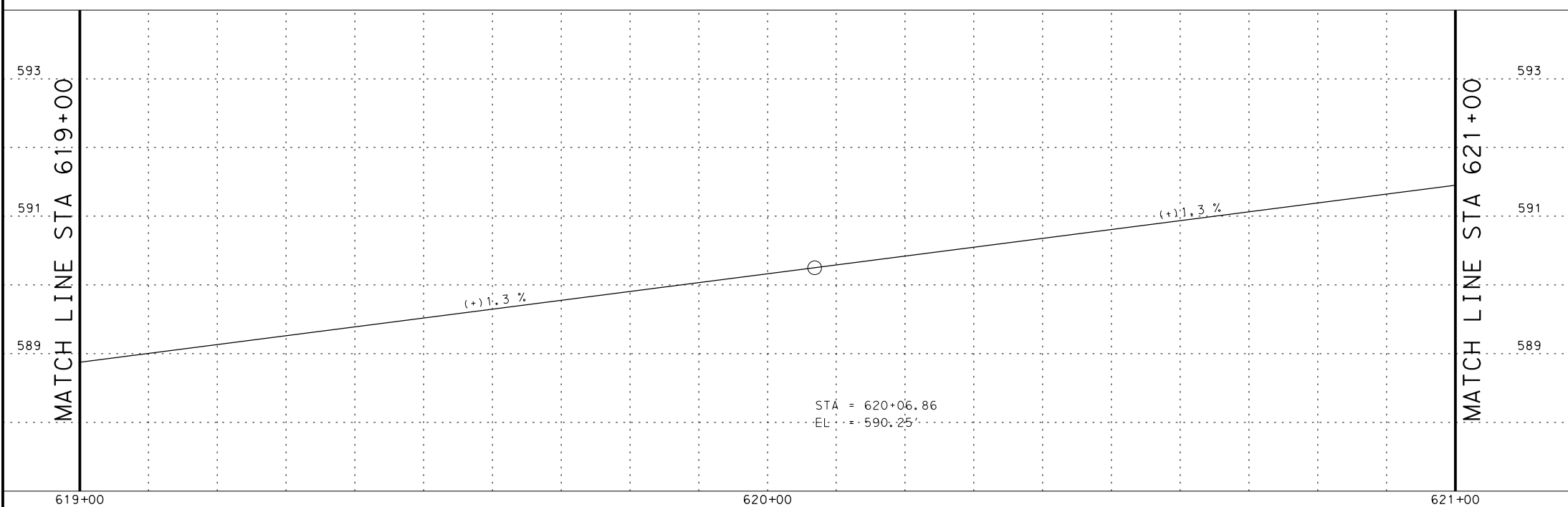
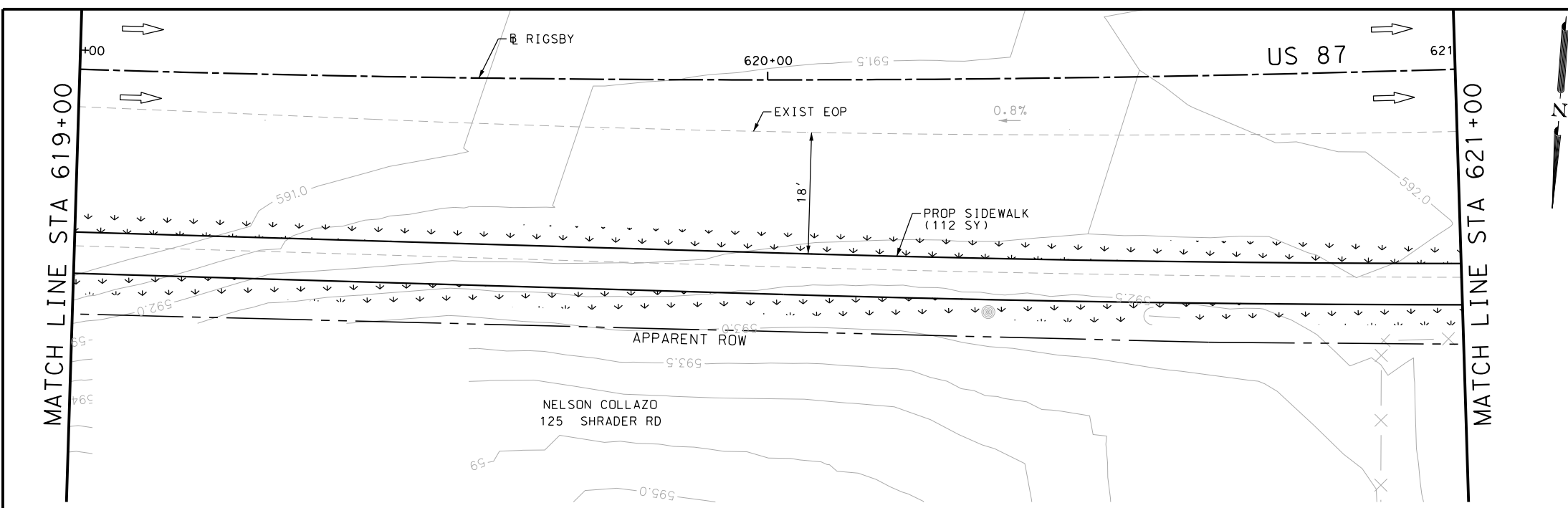
US 87  
RIGSBY AVE WB  
SIDEWALK  
CONSTRUCTION PLAN  
STA 617+00 TO STA 619+00

SHEET 14 OF 28

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	169

Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\RI\gsby\1113507\RI\gsby\*66PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	115
0162-6002	BLOCK SODDING	SY	115
0168-6001	VEGETATIVE WATERING	MG	1.79
0531-6001	CONC SIDEWALKS (4")	SY	135

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 619+00 TO STA 621+00

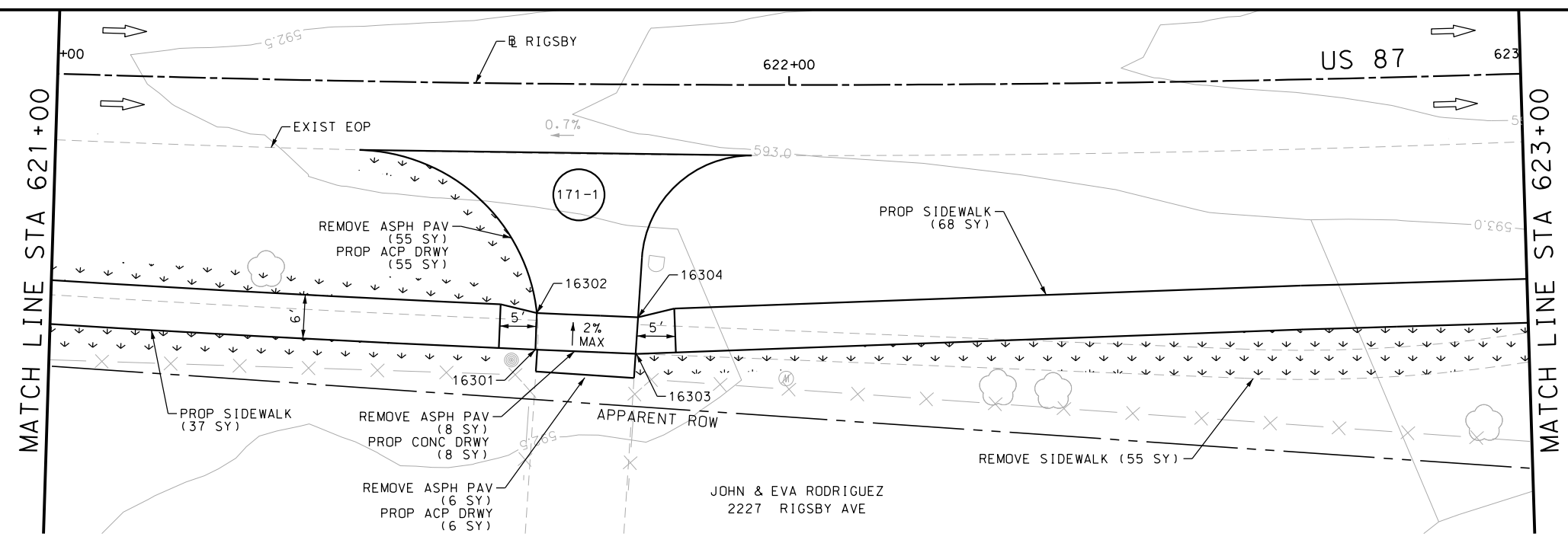
SHEET 15 OF 28

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	170

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*66PP\*A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	55
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	69
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	160
0162-6002	BLOCK SODDING	SY	160
0168-6001	VEGETATIVE WATERING	MG	2.50
0530-6004	DRIVEWAYS (CONC)	SY	8
0530-6005	DRIVEWAYS (ACP)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	125



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 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

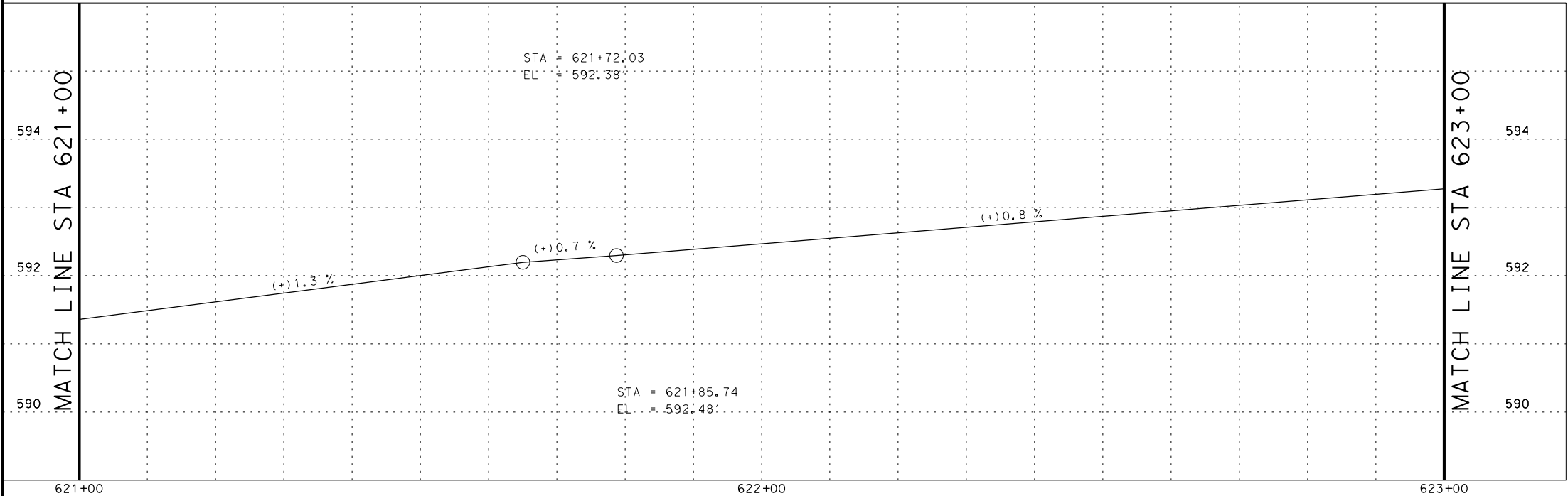
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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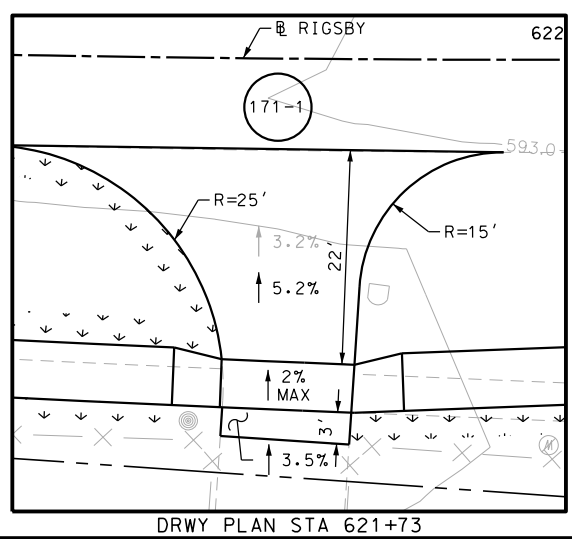
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 621+00 TO STA 623+00

SHEET 16 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	171

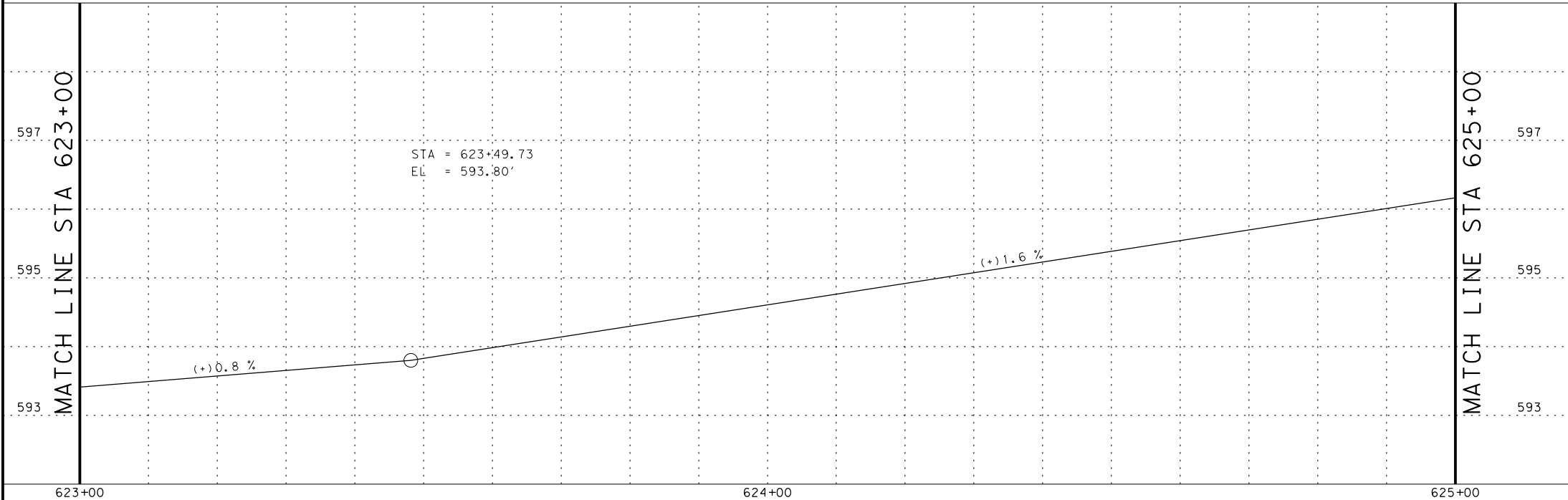
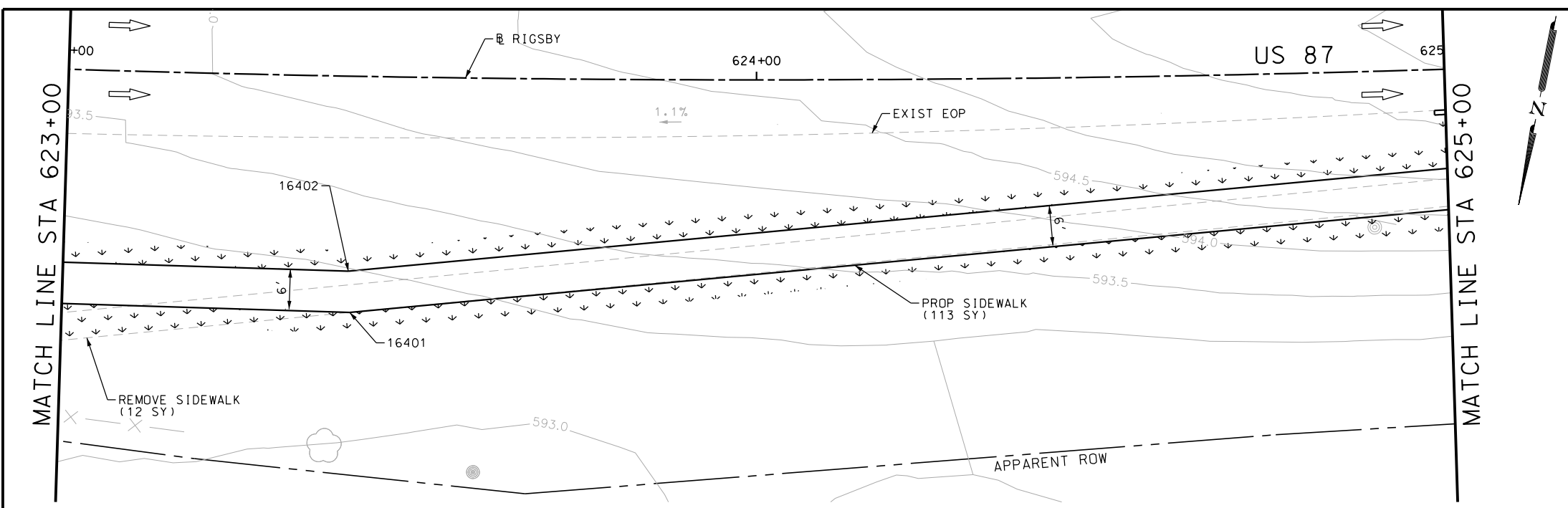


POINT	NORTHING	EASTING	ELEV	DESC
16301	13695549.15	2152359.88	--	PROF
16302	13695544.17	2152360.34	--	PROF
16303	13695547.87	2152346.22	--	PROF
16304	13695542.88	2152346.57	--	PROF



Plotted on: 5/3/2019

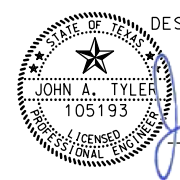
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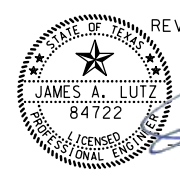


POINT	NORTHING	EASTING	ELEV	DESC
16401	13695520.44	2152184.55	--	PROF
16402	13695514.59	2152185.90	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	115
0162-6002	BLOCK SODDING	SY	115
0168-6001	VEGETATIVE WATERING	MG	1.79
0531-6001	CONC SIDEWALKS (4")	SY	135

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DESIGN  

 JOHN A. TYLER, P.E.  
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 DATE

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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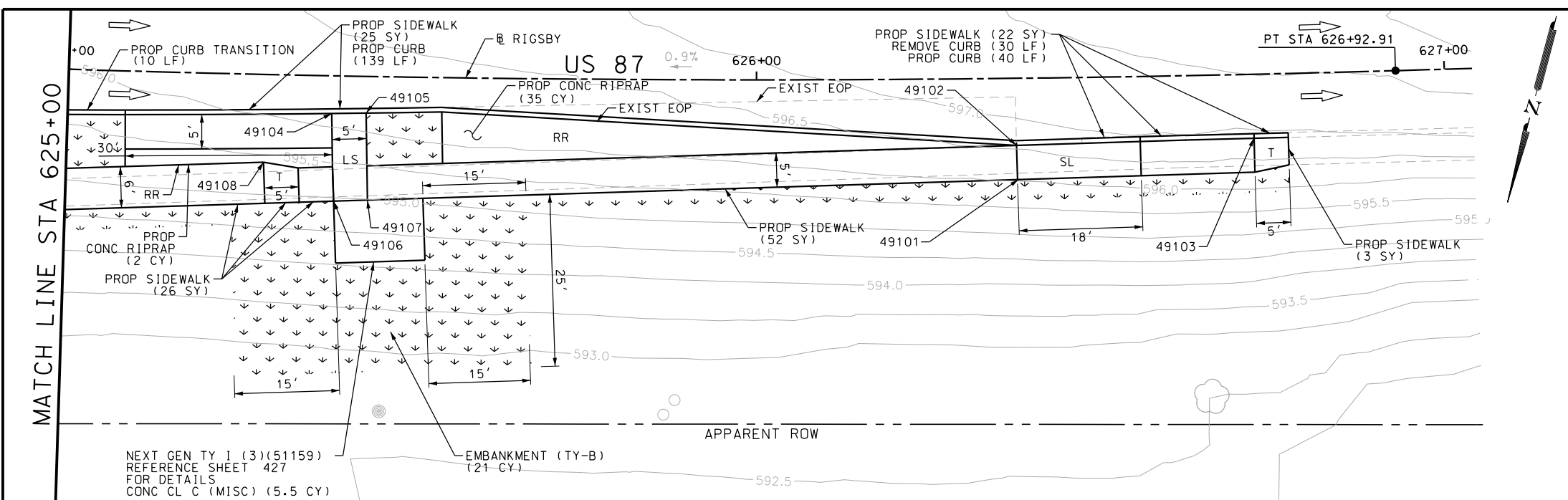
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 623+00 TO STA 625+00

SHEET 17 OF 28

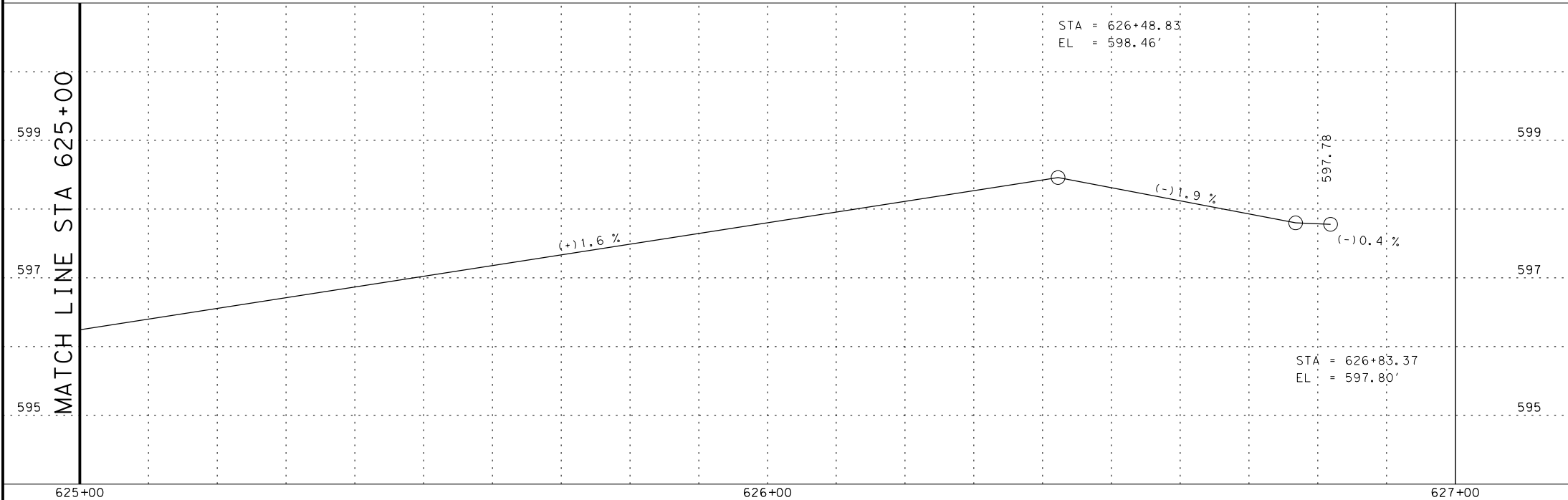
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	172

Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\RI\gsby\1113507\RI\gsby\67PP\A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	30
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	21
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	170
0162-6002	BLOCK SODDING	SY	170
0168-6001	VEGETATIVE WATERING	MG	2.65
0420-6074	CL C CONC (MISC)	CY	5.5
0432-6003	RIPRAP (CONC) (6 IN)	CY	37
0529-6002	CONC CURB (TY II)	LF	189
0531-6001	CONC SIDEWALKS (4")	SY	128



POINT	NORTHING	EASTING	ELEV	DESC
49101	13695435.14	2151897.87	--	PROF
49102	13695430.35	2151899.30	--	ME
49103	13695420.54	2151866.15	--	ME
49104	13695451.26	2151996.76	--	ME
49105	13695449.93	2151991.94	--	ME
49106	13695463.52	2151993.23	--	PROF
49107	13695462.11	2151988.52	--	PROF
49108	13695460.62	2152004.53	--	PROF

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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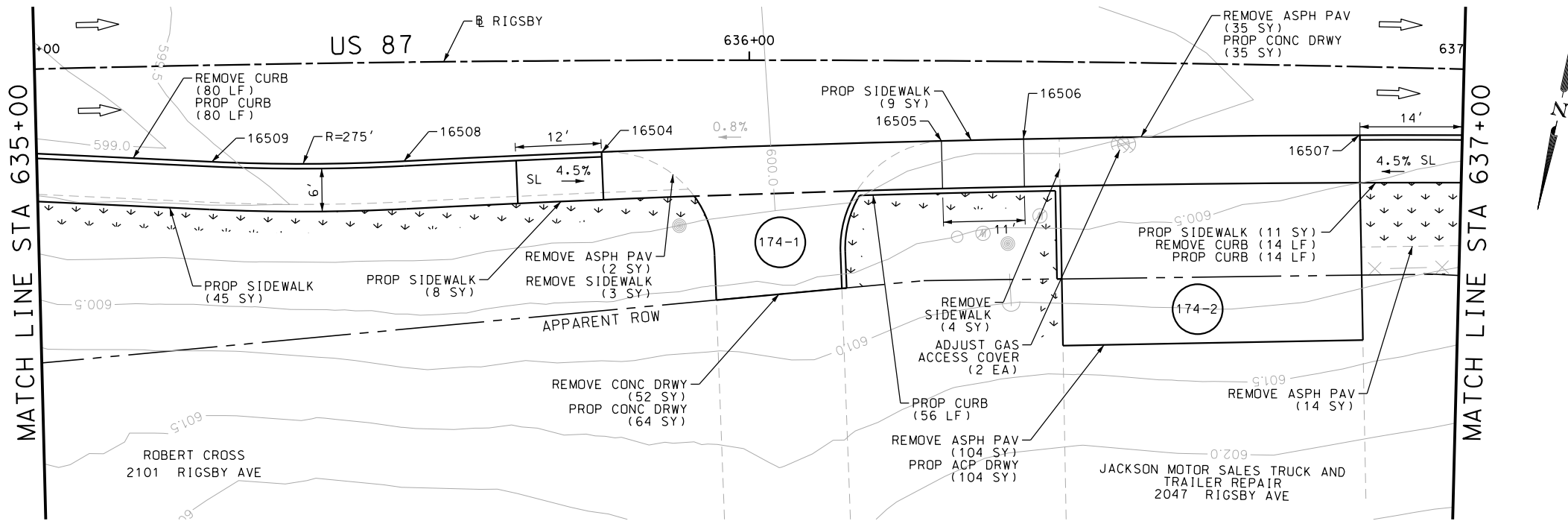
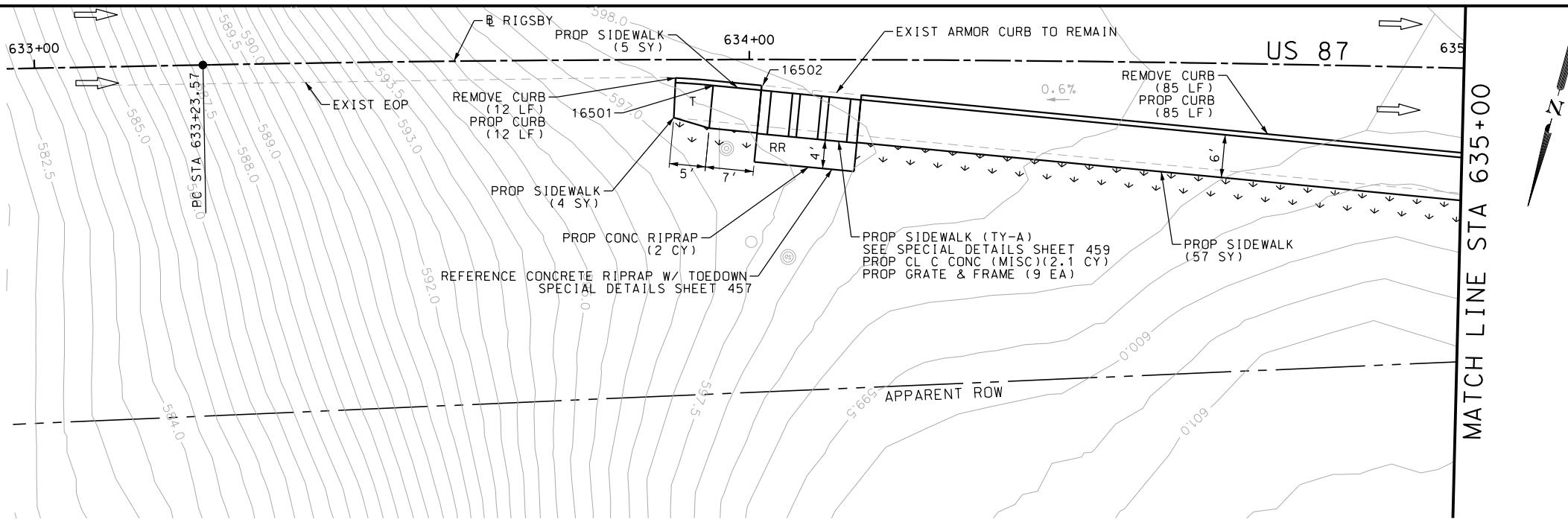
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 625+00 TO STA 627+00

SHEET 18 OF 28

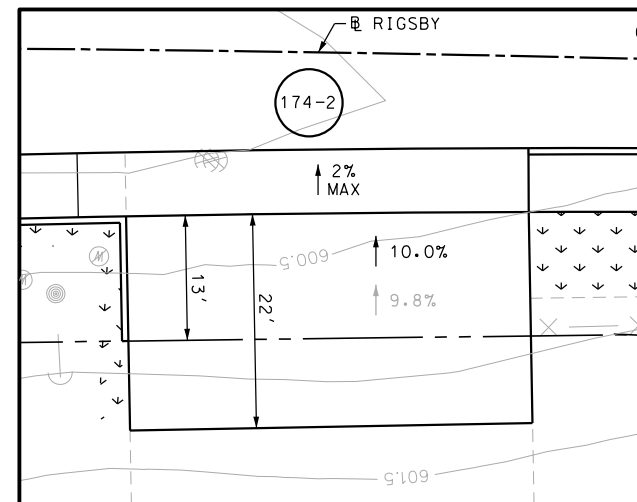
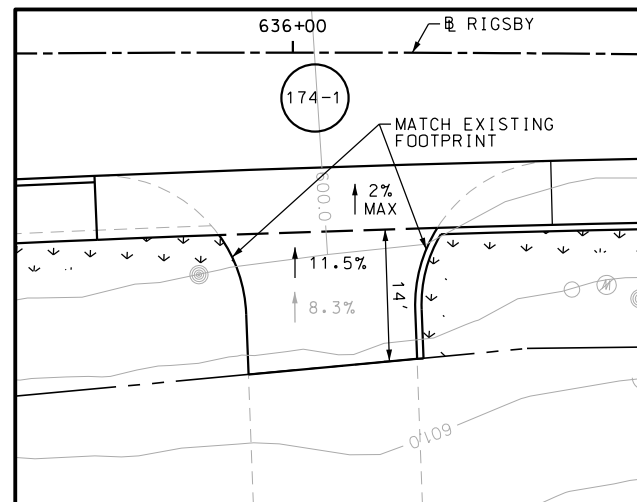
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	173

Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\RI\gsby\1113507\*Rigsby\*68.dgn



POINT	NORTHING	EASTING	ELEV	DESC
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16502	13695209.76	2151167.65	--	ME
16504	13695175.76	2150993.55	--	ME
16505	13695164.00	2150947.47	--	ME
16506	13695161.26	2150936.30	--	ME
16507	13695150.59	2150890.47	--	ME
16508	13695182.97	2151020.27	--	ME
16509	13695188.84	2151046.51	--	ME



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	52
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	191
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	155
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0420-6074	CL C CONC (MISC)	CY	2.1
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	247
0530-6004	DRIVEWAYS (CONC)	SY	99
0530-6005	DRIVEWAYS (ACP)	SY	104
0531-6001	CONC SIDEWALKS (4")	SY	139
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	2

- NOTES:
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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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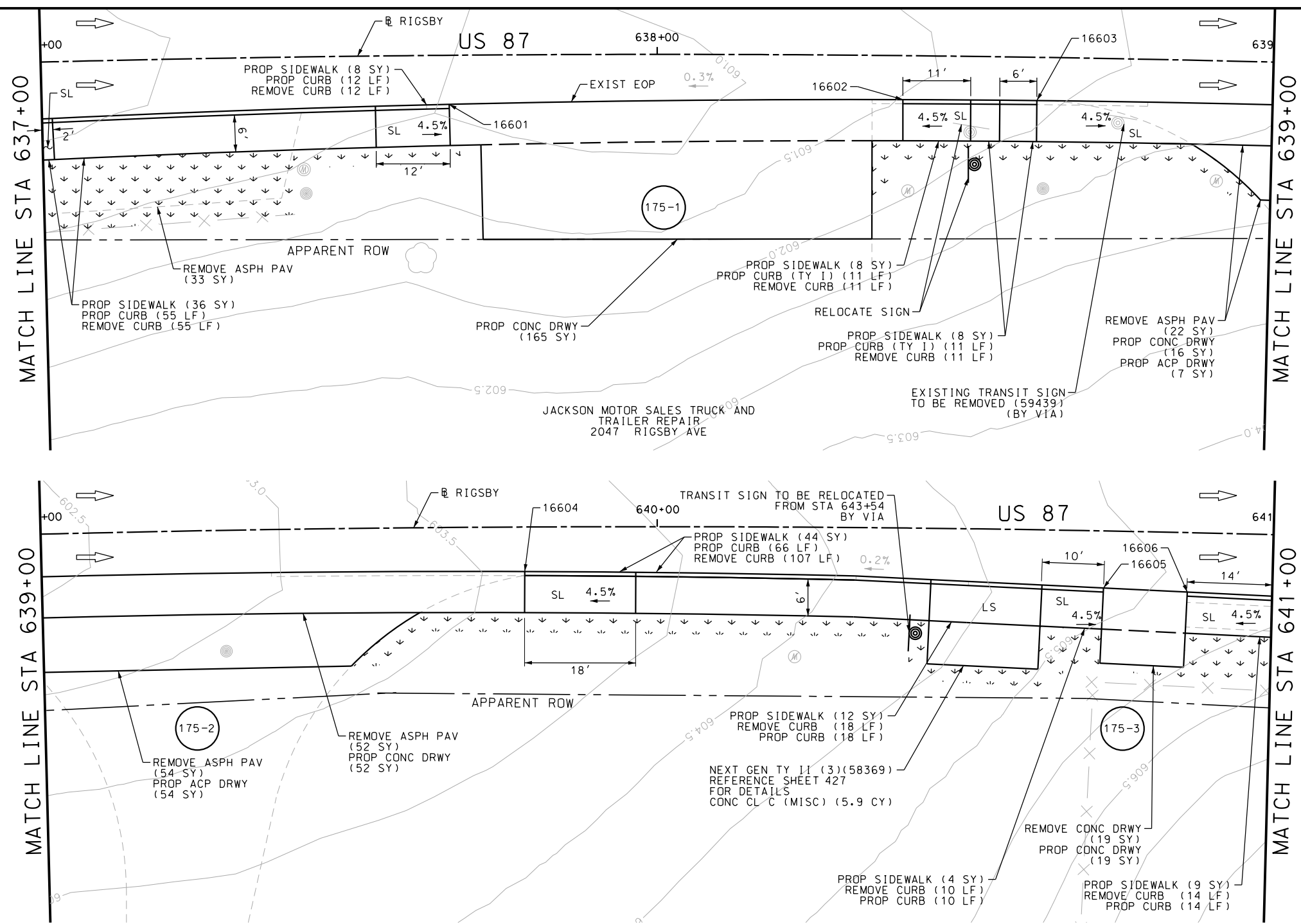
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 633+00 TO STA 637+00

SHEET 19 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				174

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*69.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	19
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	238
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	161
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	150
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6001	CONC CURB (TY I)	LF	22
0529-6002	CONC CURB (TY II)	LF	175
0530-6004	DRIVEWAYS (CONC)	SY	252
0530-6005	DRIVEWAYS (ACP)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	129
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

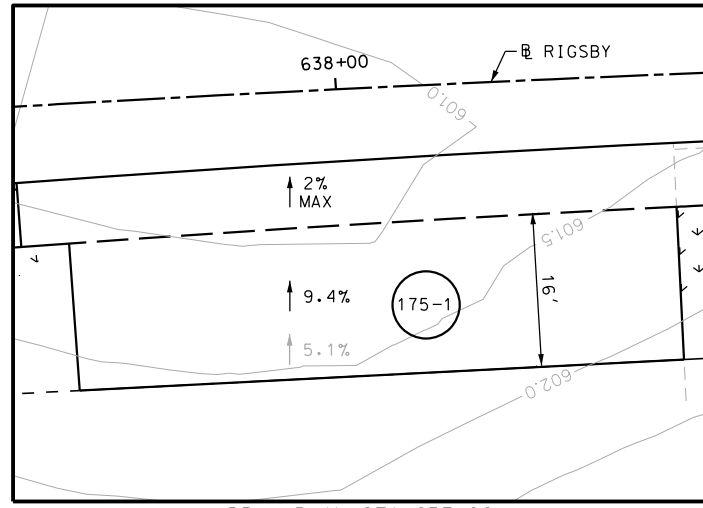
Texas Department of Transportation  
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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 637+00 TO STA 641+00

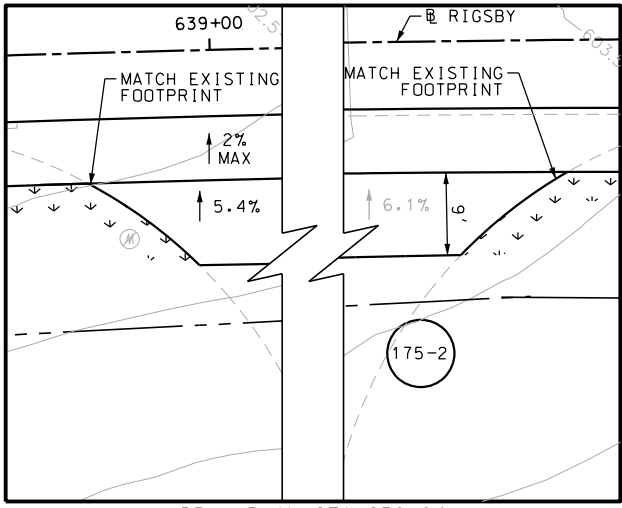
SHEET 20 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
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				JOB NO.:
				576
				SHEET NO.:
				175

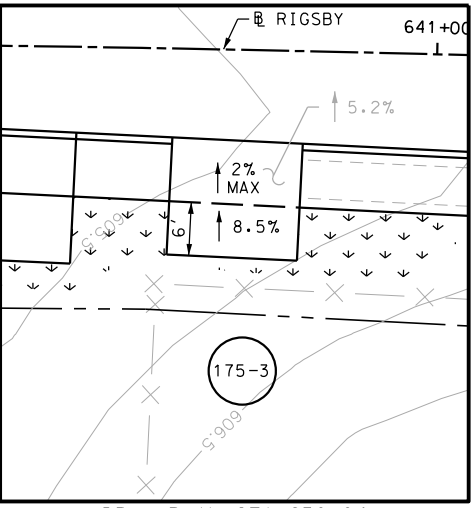
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16603	13695117.72	2150717.87	--	ME
16604	13695102.02	2150602.35	--	ME
16605	13695093.69	2150508.82	--	ME
16606	13695092.76	2150495.25	--	ME



DRWY PLAN STA 637+96



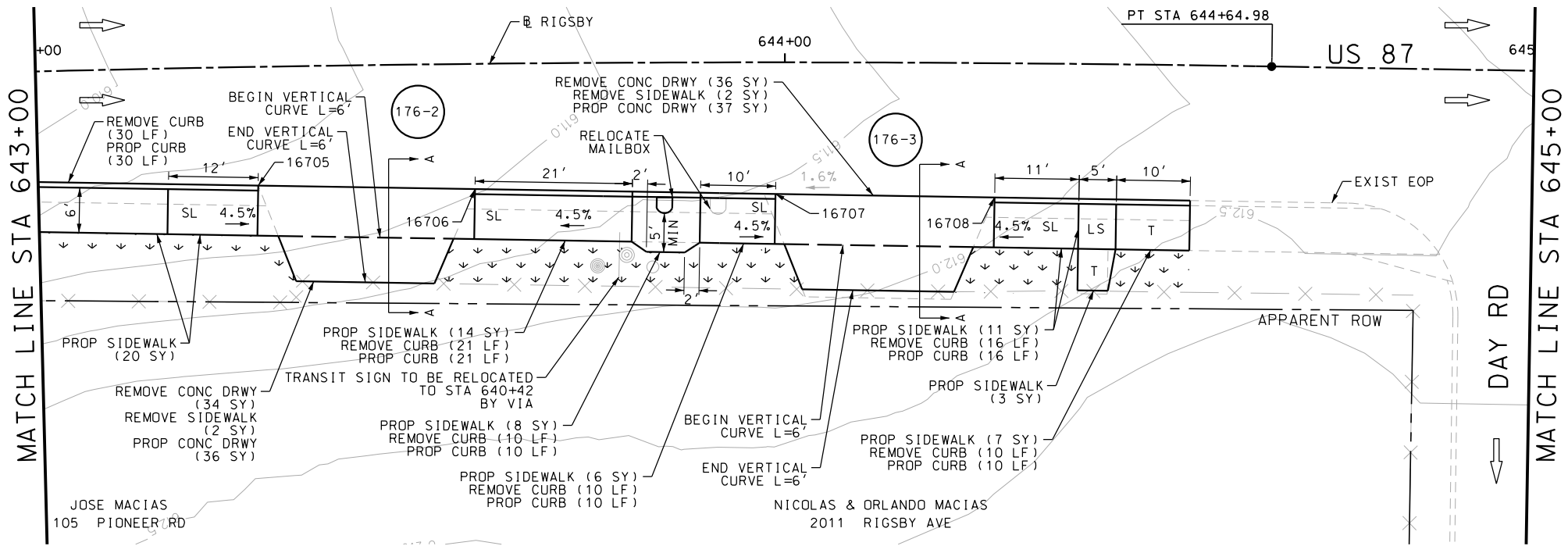
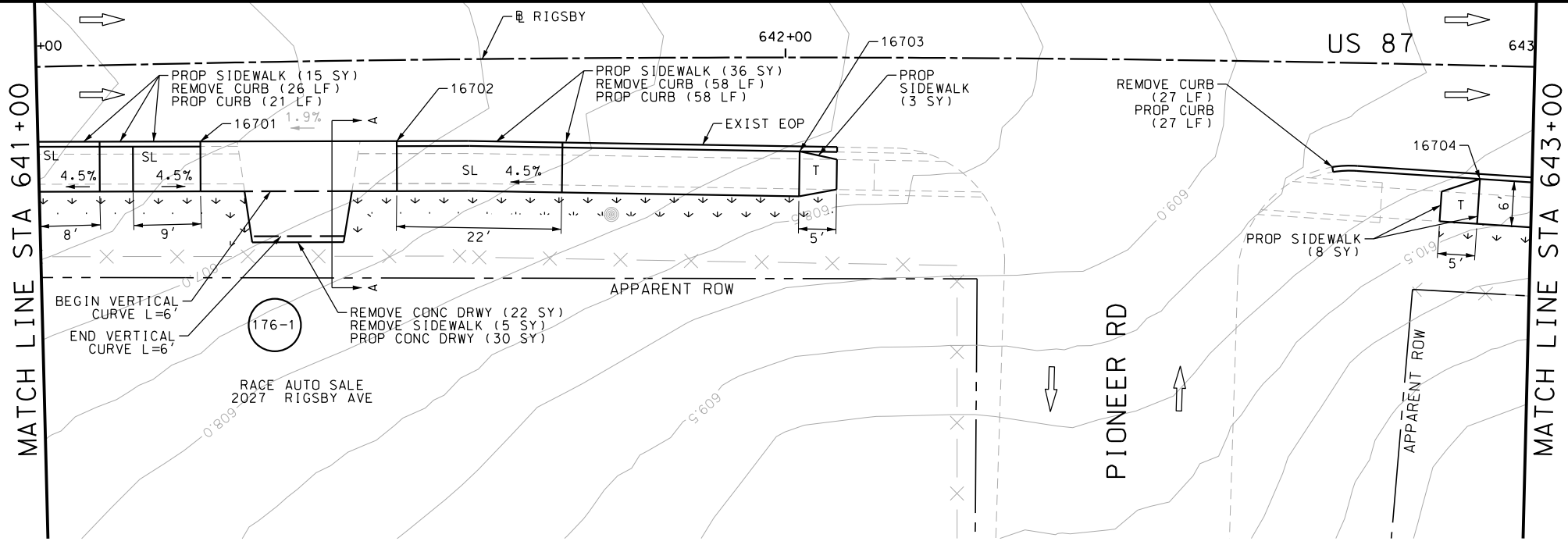
DRWY PLAN STA 639+24



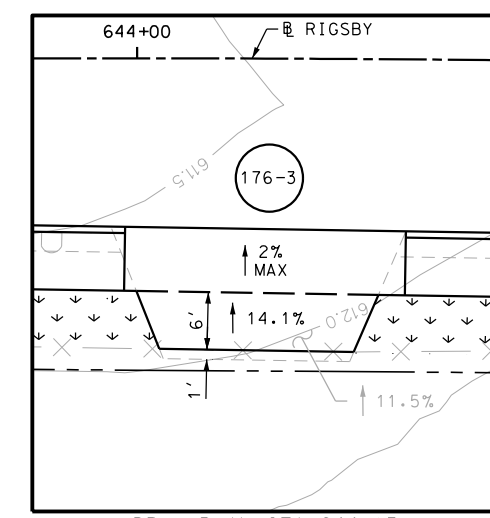
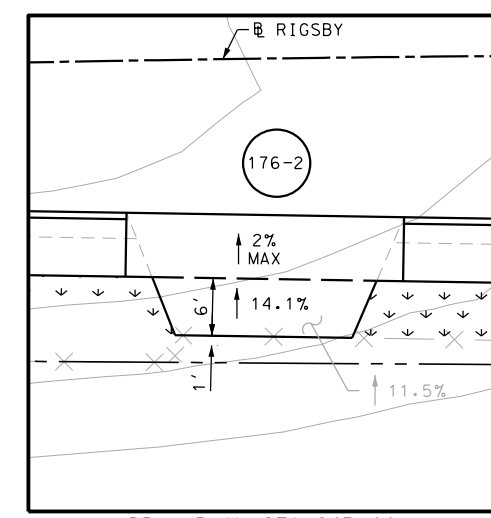
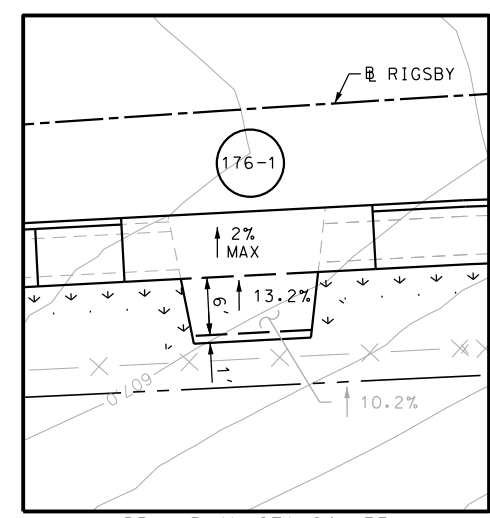
DRWY PLAN STA 639+24

Plotted on: 5/3/2019

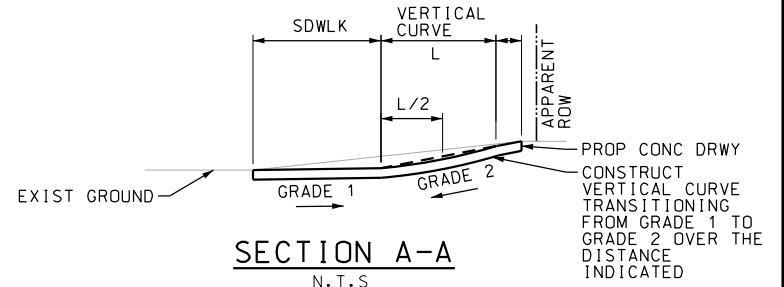
Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*70.dgn



POINT	NORTHING	EASTING	ELEV	DESC
16701	13695090.34	2150459.88	--	ME
16702	13695088.54	2150433.74	--	ME
16703	13695086.33	2150380.00	--	ME
16704	13695083.94	2150289.19	--	ME
16705	13695083.24	2150252.92	--	ME
16706	13695083.21	2150223.98	--	ME
16707	13695083.18	2150183.88	--	ME
16708	13695083.15	2150154.63	--	ME



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	92
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	208
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	9
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	95
0162-6002	BLOCK SODDING	SY	95
0168-6001	VEGETATIVE WATERING	MG	1.48
0529-6002	CONC CURB (TY II)	LF	203
0530-6004	DRIVEWAYS (CONC)	SY	103
0531-6001	CONC SIDEWALKS (4")	SY	131
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	1



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 641+00 TO STA 645+00

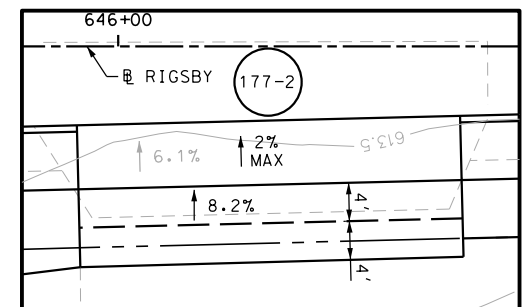
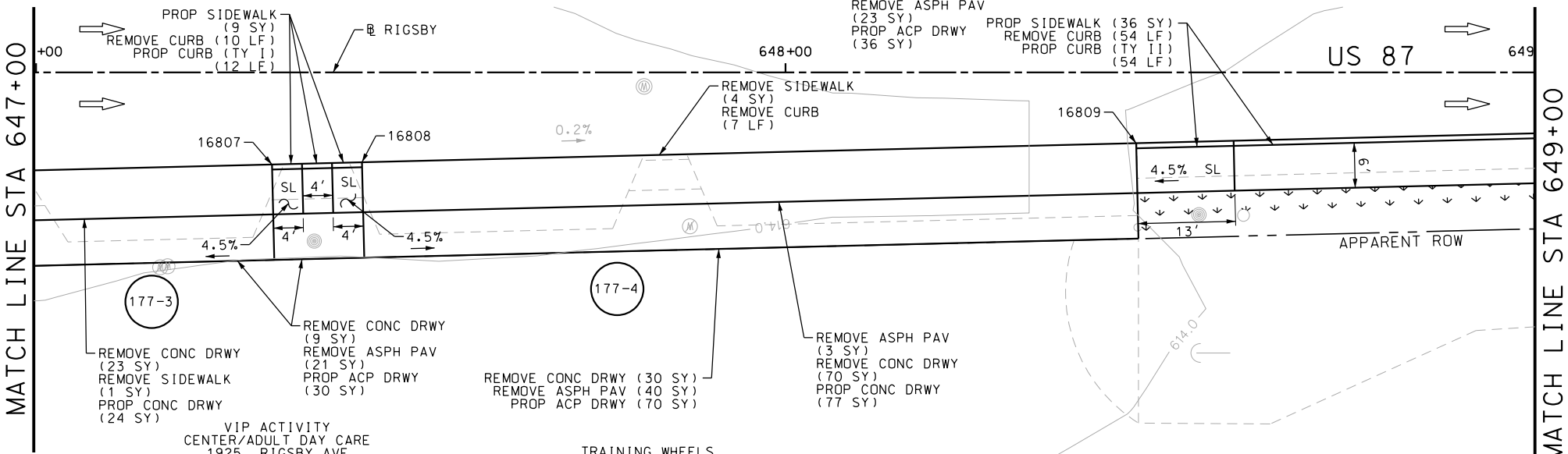
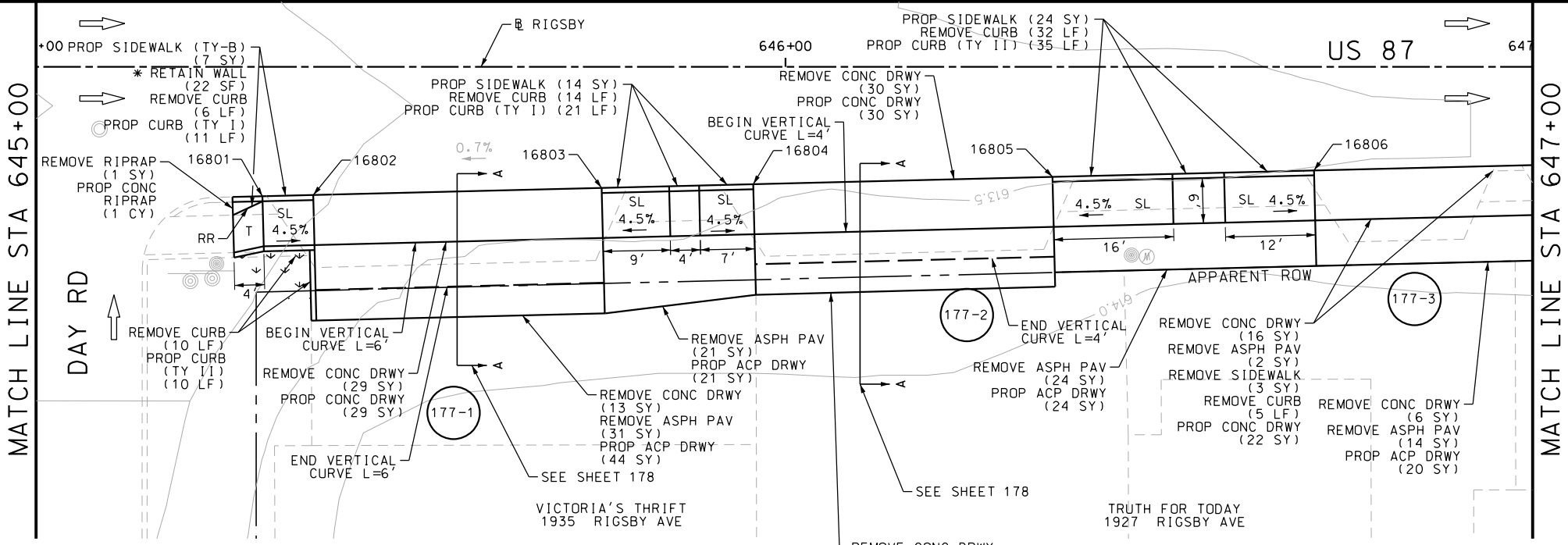
SHEET 21 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				176

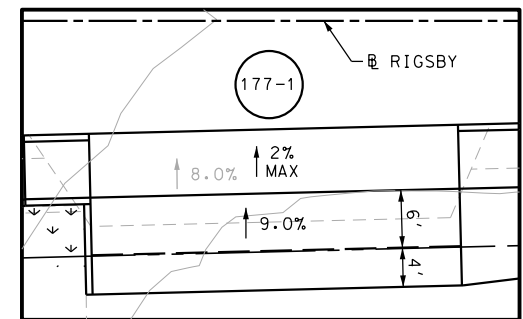


Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*71.dgn

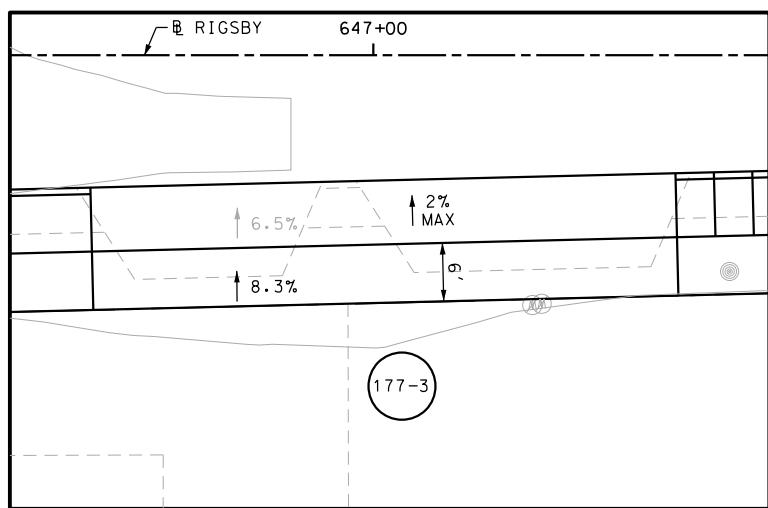


DRWY PLAN STA 646+16

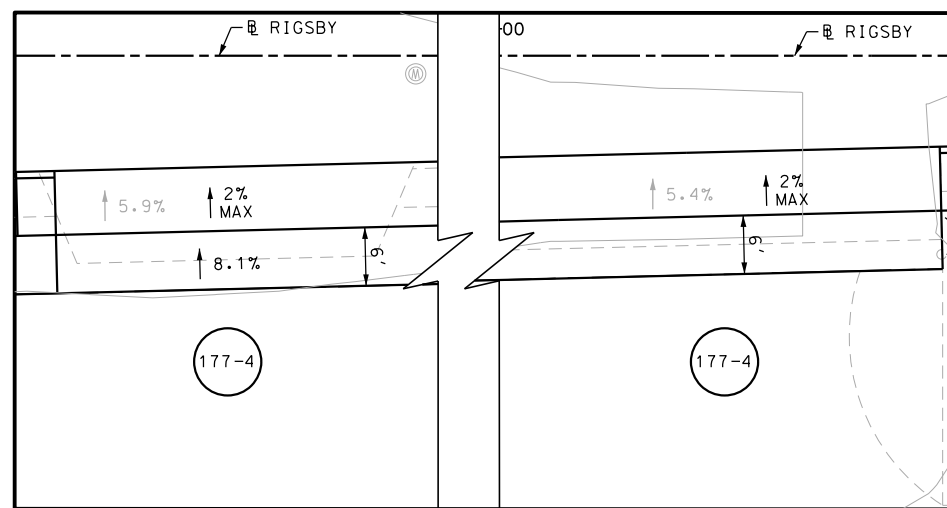


DRWY PLAN STA 645+56

SEE SHEET 178 FOR POINT TABLE



DRWY PLAN STA 647+00



DRWY PLAN STA 648+00

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	1
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	239
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	138
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	179
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	26
0162-6002	BLOCK SODDING	SY	26
0168-6001	VEGETATIVE WATERING	MG	0.41
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6001	CONC CURB (TY I)	LF	44
0529-6002	CONC CURB (TY II)	LF	99
0530-6004	DRIVEWAYS (CONC)	SY	182
0530-6005	DRIVEWAYS (ACP)	SY	245
0531-6001	CONC SIDEWALKS (4")	SY	83
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	7

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  2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 645+00 TO STA 649+00

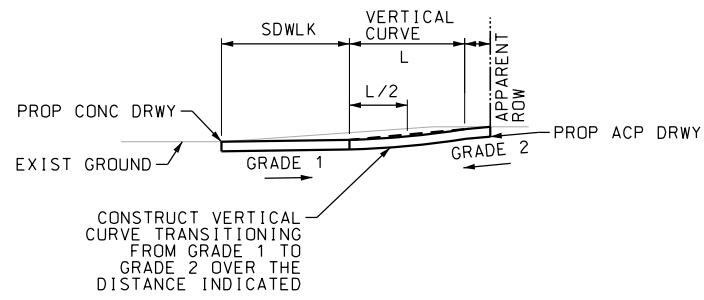
SHEET 22 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				177

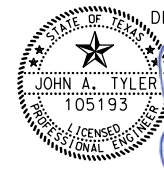
SEE SHEET 177

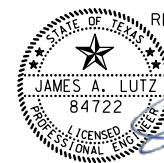
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16802	13695082.13	2150045.94	--	ME
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16804	13695080.66	2149987.25	--	ME
16805	13695079.66	2149947.31	--	ME
16806	13695078.79	2149912.42	--	ME
16807	13695077.27	2149851.46	--	ME
16808	13695076.97	2149839.46	--	ME
16809	13695074.39	2149736.15	--	ME

SEE SHEET 177



**SECTION A-A**  
N.T.S

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 645+00 TO STA 649+00  
 POINT TABLES

SHEET 23 OF 28

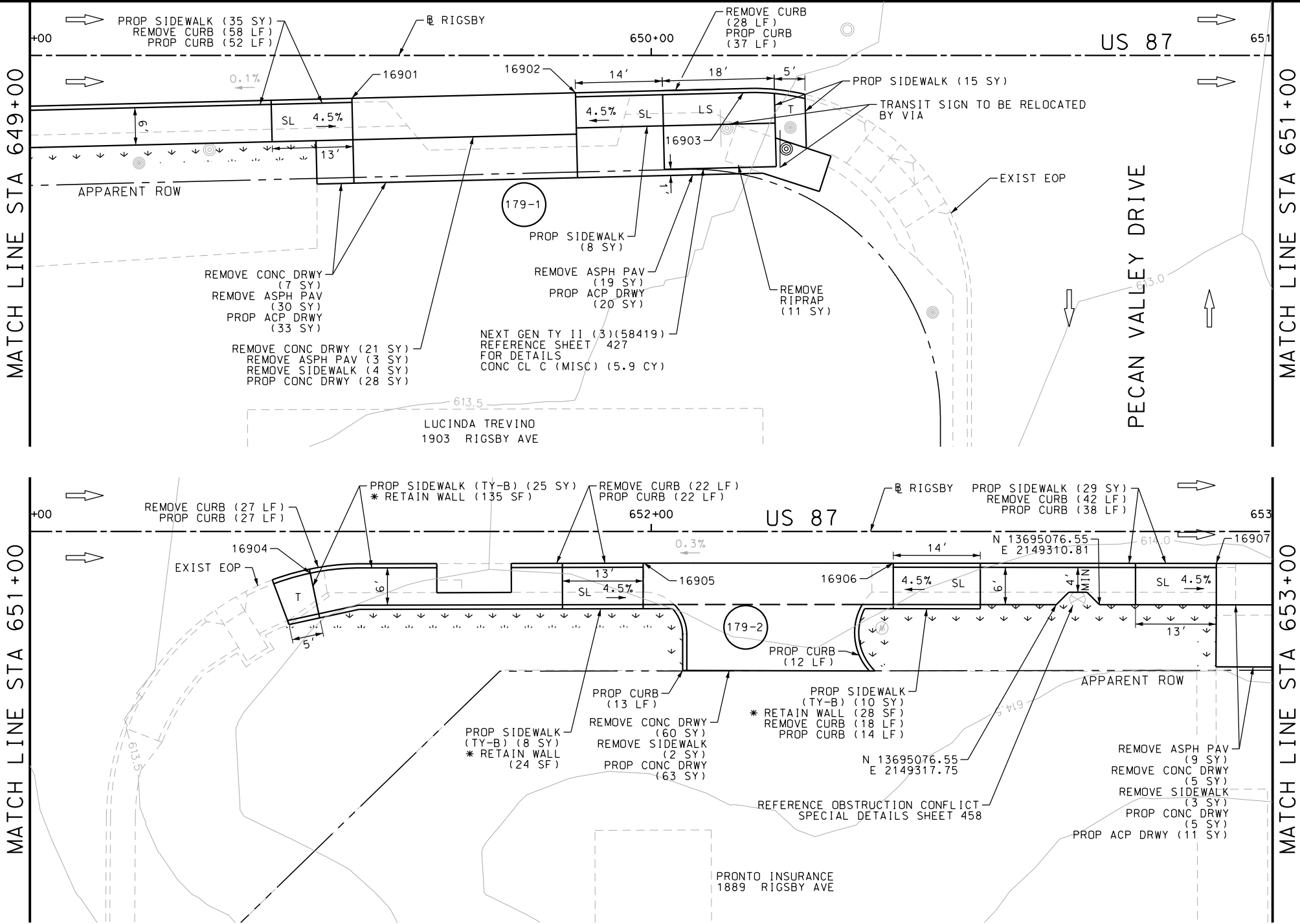
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	178

Plotted on: 5/3/2019

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Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\113507\Rigsby\*72.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	93
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	195
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	9
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	61
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6002	CONC CURB (TY II)	LF	215
0530-6004	DRIVEWAYS (CONC)	SY	96
0530-6005	DRIVEWAYS (ACP)	SY	64
0531-6001	CONC SIDEWALKS (4")	SY	87
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	43

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

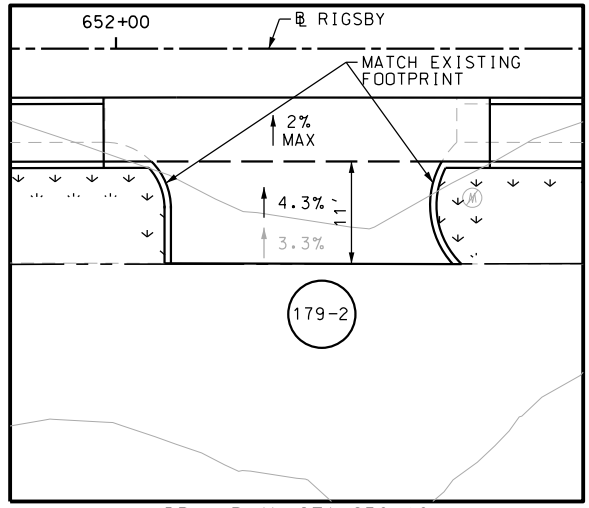
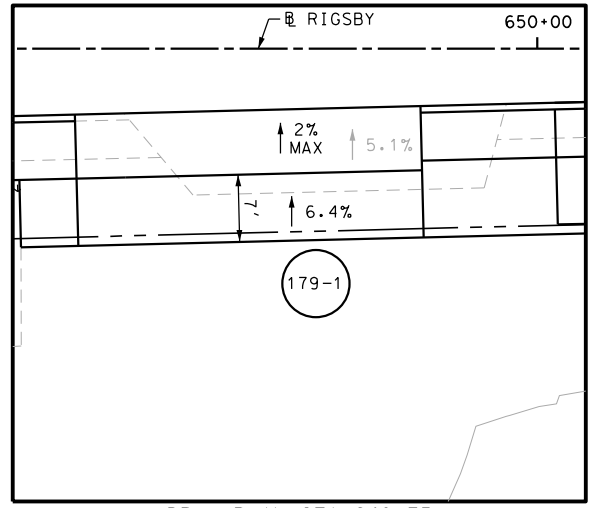
STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
16901	13695071.76	2149631.11	--	ME
16902	13695070.86	2149595.12	--	ME
16904	13695071.53	2149437.81	--	ME
16905	13695069.89	2149384.24	--	ME
16906	13695069.88	2149343.98	--	ME
16907	13695069.89	2149292.00	--	ME



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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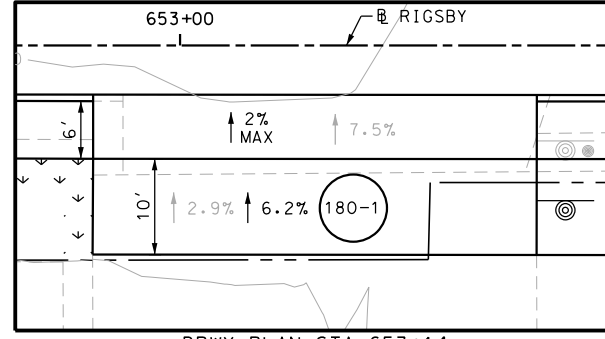
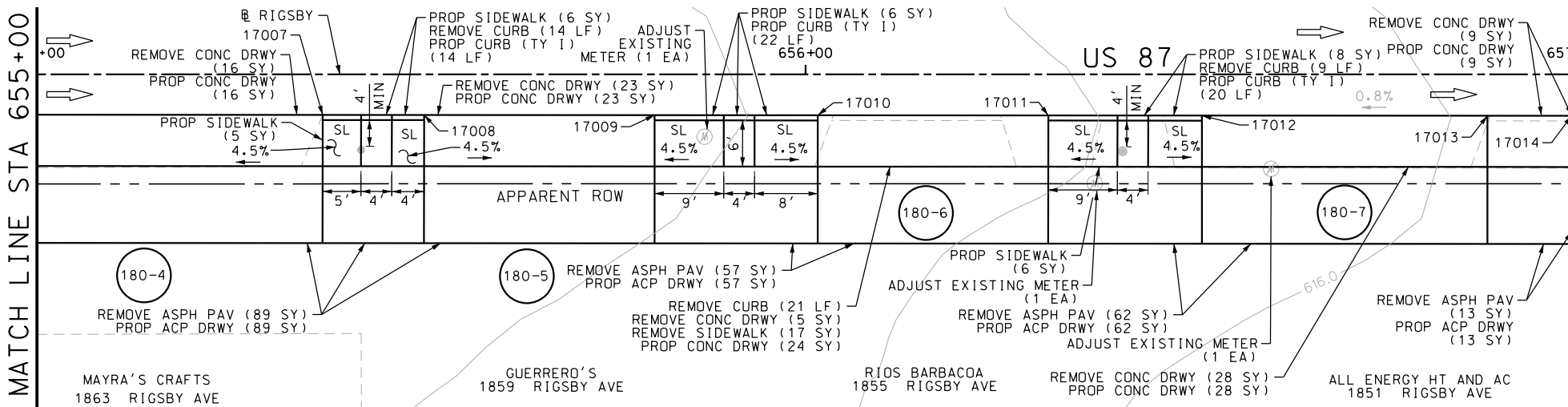
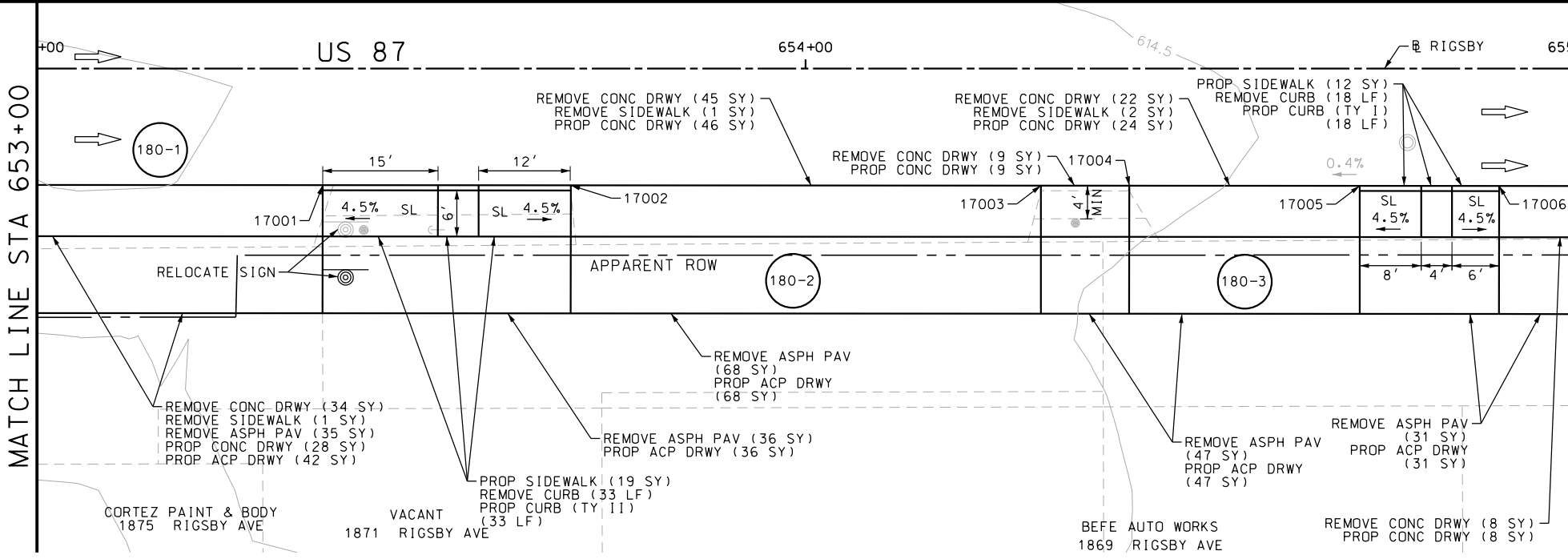
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 649+00 TO STA 653+00

SHEET 24 OF 28

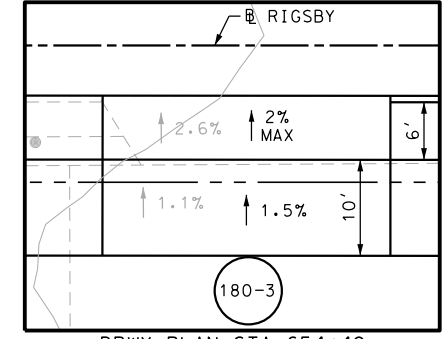
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CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				179

Plotted on: 5/3/2019

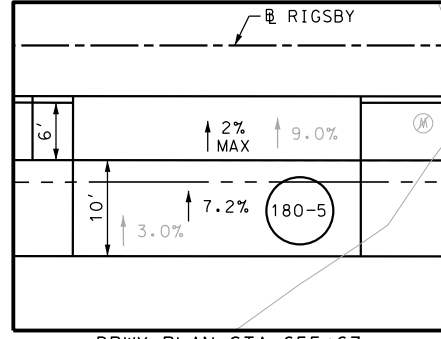
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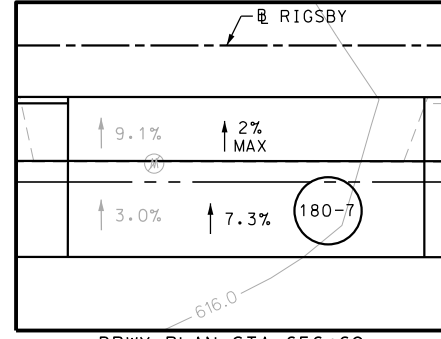
DRWY PLAN STA 653+14



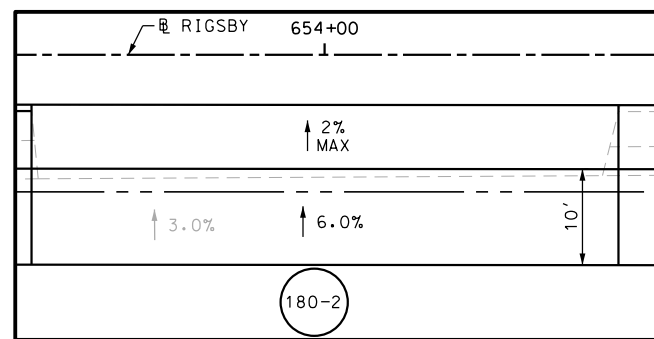
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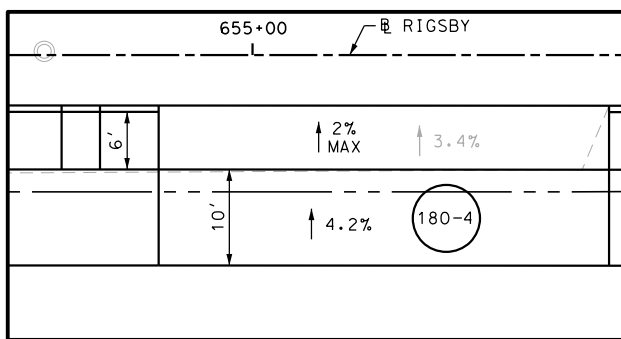
DRWY PLAN STA 655+67



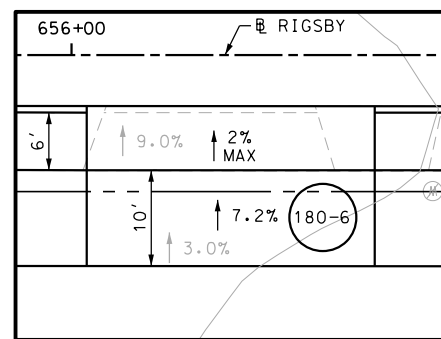
DRWY PLAN STA 656+69



DRWY PLAN STA 653+79



DRWY PLAN STA 655+07



DRWY PLAN STA 656+17

SEE SHEET 182 FOR POINT TABLE

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	199
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	95
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	21
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	438
0529-6001	CONC CURB (TY I)	LF	74
0529-6002	CONC CURB (TY II)	LF	33
0530-6004	DRIVEWAYS (CONC)	SY	215
0530-6005	DRIVEWAYS (ACP)	SY	445
0531-6001	CONC SIDEWALKS (4")	SY	62
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	3

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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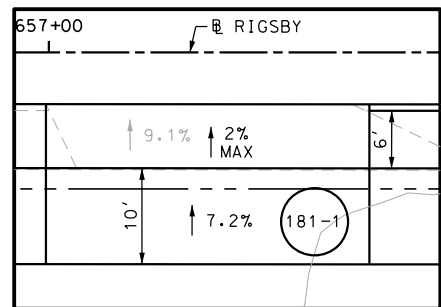
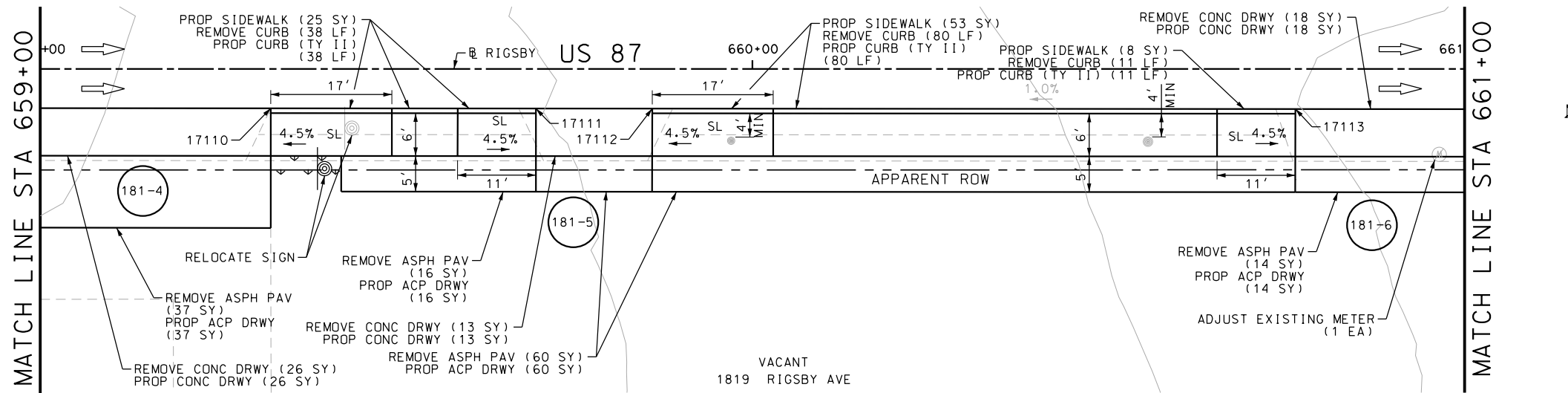
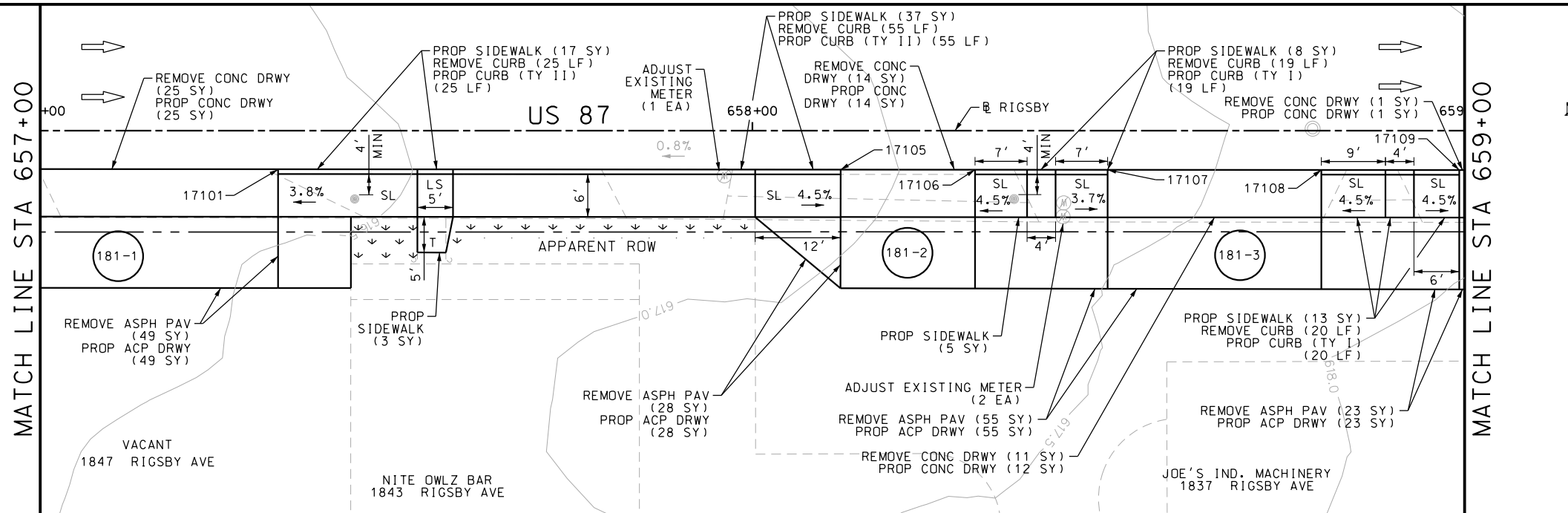
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 653+00 TO STA 657+00

SHEET 25 OF 28

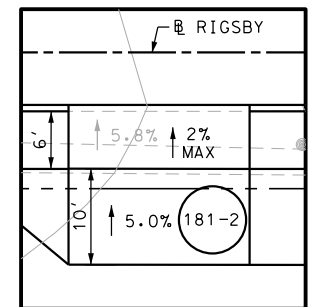
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CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	180

Plotted on: 5/3/2019

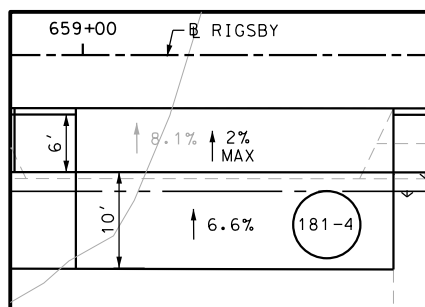
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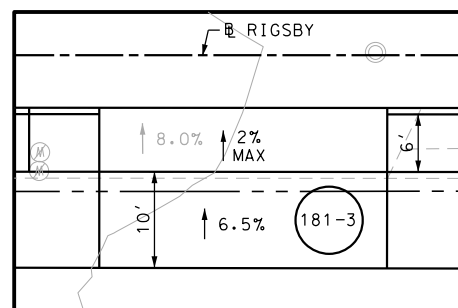
DRWY PLAN STA 657+19



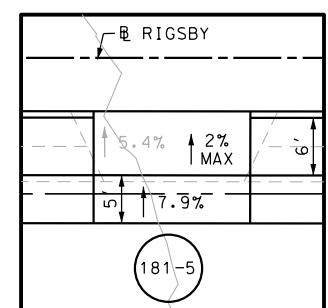
DRWY PLAN STA 658+22



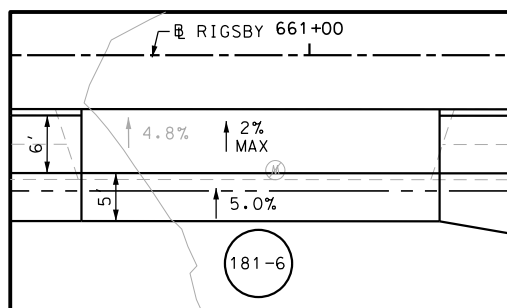
DRWY PLAN STA 659+14



DRWY PLAN STA 658+64



DRWY PLAN STA 659+78

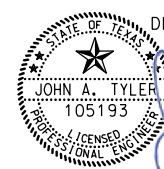


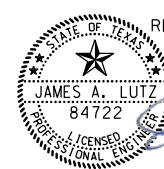
DRWY PLAN STA 660+91

SEE SHEET 182 FOR POINT TABLE

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	108
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	248
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	282
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	28
0162-6002	BLOCK SODDING	SY	28
0168-6001	VEGETATIVE WATERING	MG	0.44
0529-6001	CONC CURB (TY I)	LF	39
0529-6002	CONC CURB (TY II)	LF	209
0530-6004	DRIVEWAYS (CONC)	SY	109
0530-6005	DRIVEWAYS (ACP)	SY	282
0531-6001	CONC SIDEWALKS (4")	SY	169
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	4

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 657+00 TO STA 661+00

SHEET 26 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				181

SEE SHEET 180

POINT	NORTHING	EASTING	ELEV	DESC
17001	13695069.90	2149245.77	--	ME
17002	13695069.91	2149213.48	--	ME
17003	13695069.93	2149152.31	--	ME
17004	13695069.93	2149140.82	--	ME
17005	13695069.94	2149110.82	--	ME
17006	13695069.94	2149092.69	--	ME
17007	13695069.96	2149045.77	--	ME
17008	13695069.96	2149032.57	--	ME
17009	13695069.97	2149002.57	--	ME
17010	13695069.97	2148981.35	--	ME
17011	13695069.98	2148951.35	--	ME
17012	13695069.99	2148931.35	--	ME
17013	13695070.00	2148894.21	--	ME
17014	13695070.00	2148883.24	--	ME

SEE SHEET 181

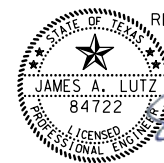
POINT	NORTHING	EASTING	ELEV	DESC
17101	13695070.01	2148849.54	--	ME
17105	13695070.03	2148770.56	--	ME
17106	13695070.03	2148751.68	--	ME
17107	13695070.04	2148733.05	--	ME
17108	13695070.05	2148703.05	--	ME
17109	13695070.05	2148683.67	--	ME
17110	13695070.06	2148650.56	--	ME
17111	13695070.07	2148613.32	--	ME
17112	13695070.07	2148597.01	--	ME
17113	13695070.10	2148506.70	--	ME

DESIGN



*John A. Tyler*  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL



*James A. Lutz*  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson**  
**ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 653+00 TO STA 661+00  
 POINT TABLES

SHEET 27 OF 28

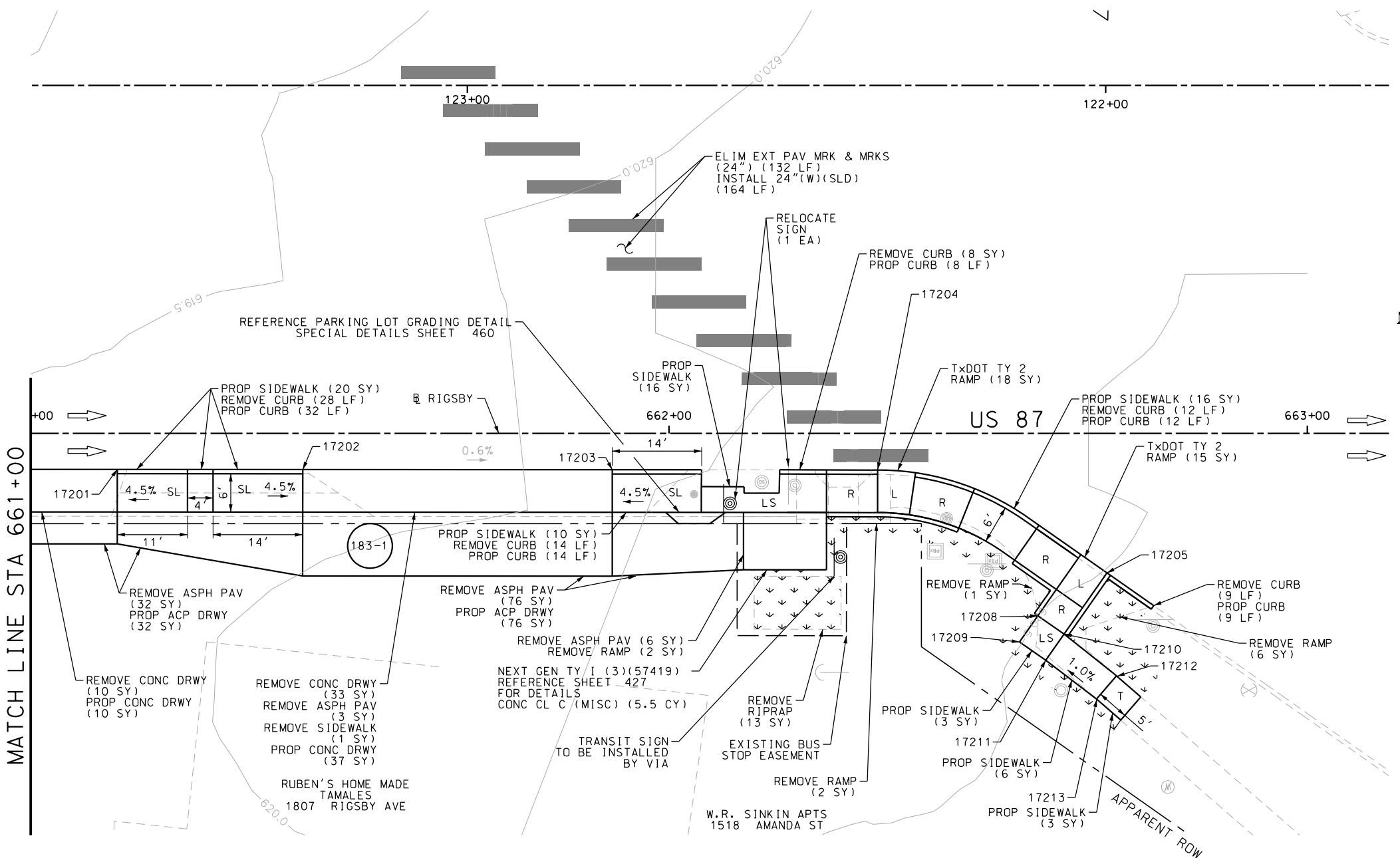
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	182

Plotted on: 5/3/2019

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Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507\Rigsby\*75.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	13
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	43
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	71
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	117
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	75
0530-6004	DRIVEWAYS (CONC)	SY	47
0530-6005	DRIVEWAYS (ACP)	SY	108
0531-6001	CONC SIDEWALKS (4")	SY	74
0531-6019	CURB RAMPS (TY 2)	SY	33
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
0666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	164
0666-6230	PAVEMENT SEALER 24"	LF	164
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	132
0678-6008	PAV SURF PREP FOR MRK (24")	LF	164

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

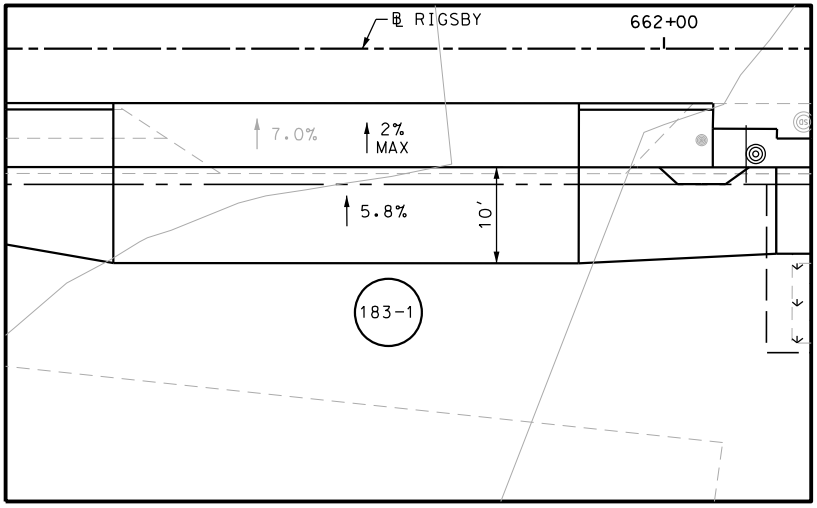
STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
17201	13695070.11	2148469.37	--	ME
17202	13695070.11	2148440.32	--	ME
17203	13695070.13	2148391.82	--	ME
17204	13695070.16	2148350.25	--	ME
17205	13695086.26	2148314.32	--	ME
17208	13695093.00	2148325.15	620.64	PROP
17209	13695097.09	2148328.02	620.71	PROP
17210	13695095.84	2148321.04	620.71	PROP
17211	13695099.94	2148323.91	620.78	PROP
17212	13695102.38	2148312.82	620.81	PROP
17213	13695106.02	2148315.96	620.74	PROP



REV. NO. DATE DESCRIPTION BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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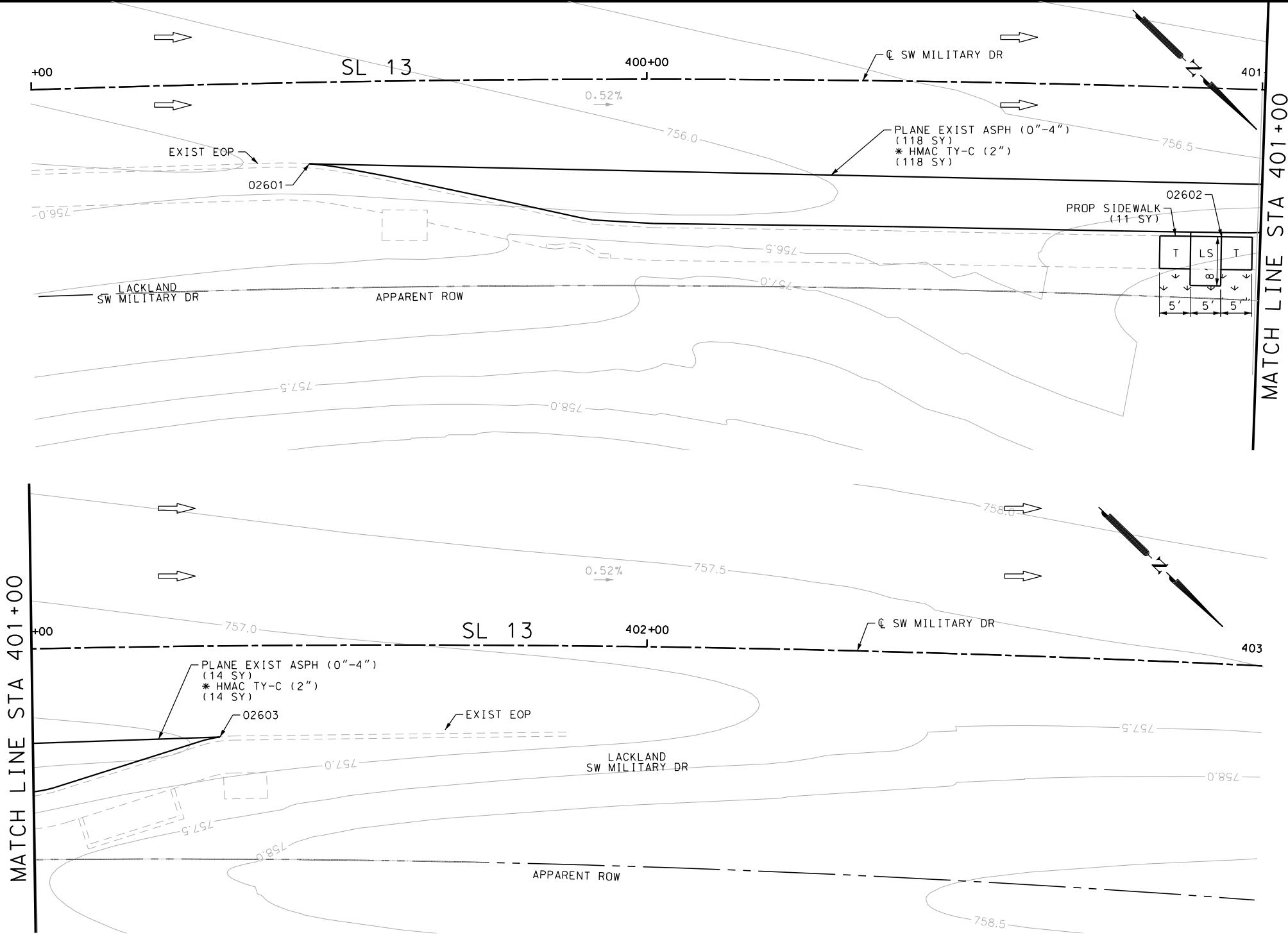
US 87  
 RIGSBY AVE WB  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 661+00 TO END PROJECT

SHEET 28 OF 28

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				183

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507A\*01.dgn



POINT	NORTHING	EASTING	ELEV	DESC
02601	13687361.93	2091736.91	--	ME
02602	13687473.60	2091638.79	--	ME
02603	13687493.30	2091607.18	--	ME

ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA (SQ) TY-C PG76-22	*SY	132
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	7
0162-6002	BLOCK SODDING	SY	7
0168-6001	VEGETATIVE WATERING	MG	0.11
0354-6023	PLANE ASPH CONC PAV (0" TO 4")	SY	132
0531-6001	CONC SIDEWALKS (4")	SY	11

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation © 2019

SL 13  
 SW MILITARY A  
**SIDEWALK CONSTRUCTION PLAN**  
 BEGIN PROJECT TO END PROJECT

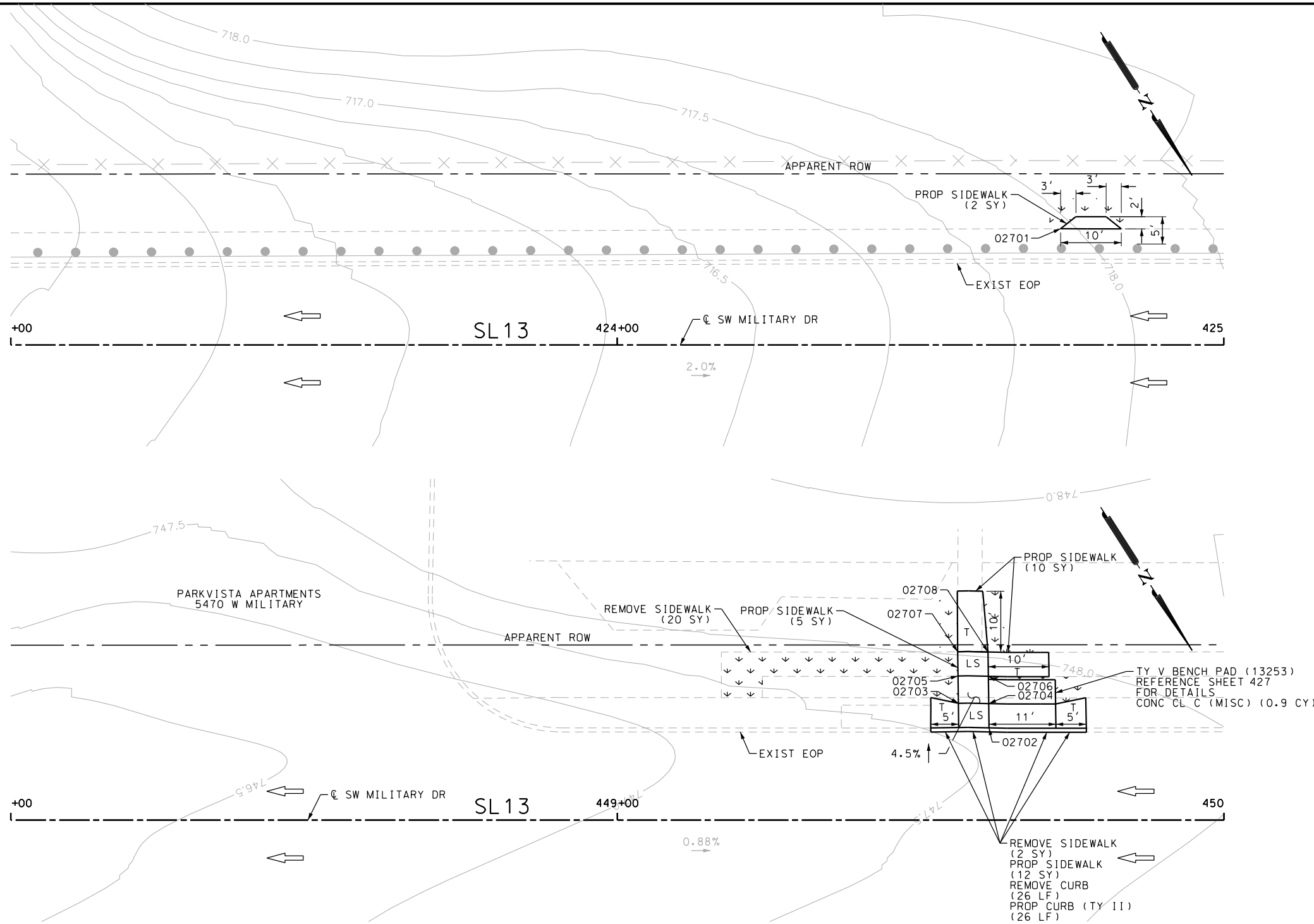
SHEET 1 OF 3

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	184



Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB01.dgn



POINT	NORTHING	EASTING	ELEV	DESC
02701	13685331.08	2094540.87	--	ME
02702	13686716.60	2092474.15	--	ME
02703	13686710.44	2092476.09	--	ME
02704	13686713.26	2092471.96	--	ME
02705	13686706.66	2092473.64	747.49	PROP
02706	13686709.48	2092469.51	747.56	PROP
02707	13686703.30	2092471.47	747.55	PROP
02708	13686706.11	2092467.34	747.50	PROP

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	26
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	22
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	41
0162-6002	BLOCK SODDING	SY	41
0168-6001	VEGETATIVE WATERING	MG	0.64
0420-6074	CL C CONC (MISC)	CY	0.9
0529-6002	CONC CURB (TY II)	LF	26
0531-6001	CONC SIDEWALKS (4")	SY	29

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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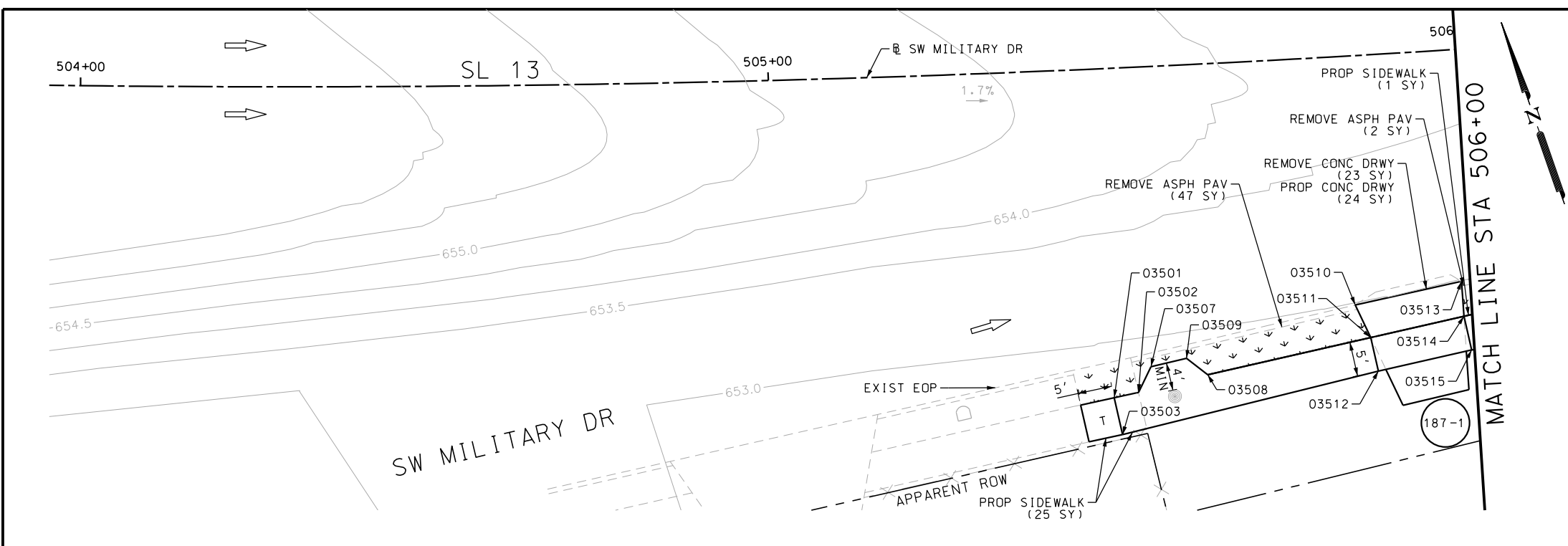
SL 13  
 SW MILITARY A  
**SIDEWALK CONSTRUCTION PLAN**  
 BEGIN PROJECT TO 425+00  
 STA 448+00 TO 450+00  
 SHEET 2 OF 3

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	185

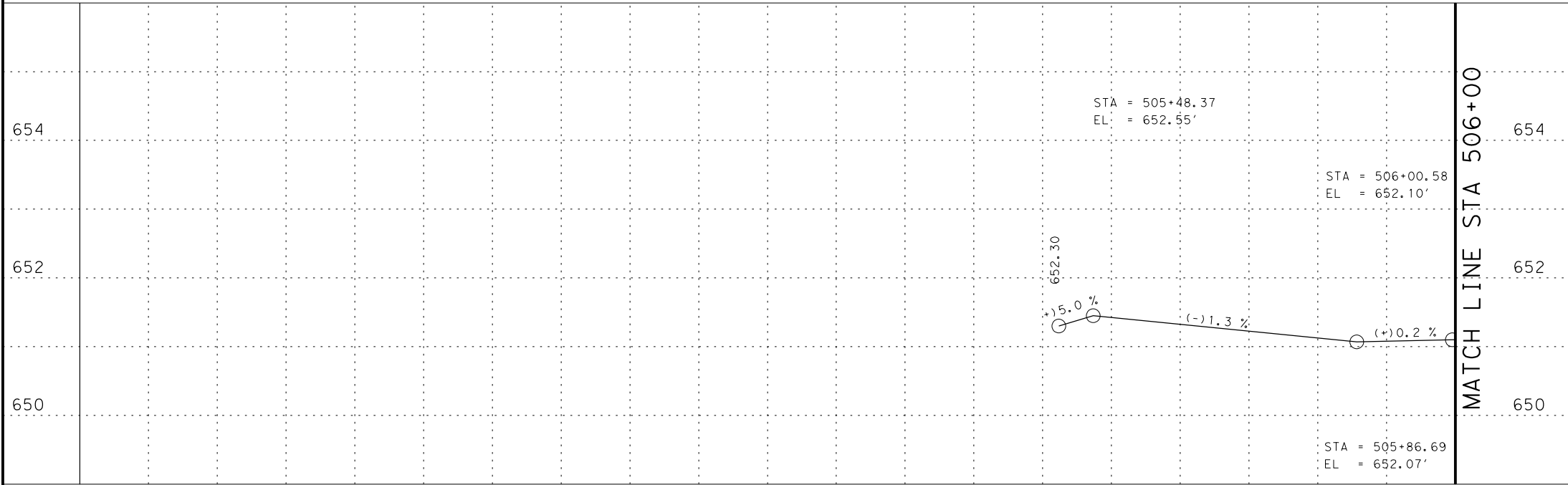


Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*01PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	23
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	49
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	19
0162-6002	BLOCK SODDING	SY	19
0168-6001	VEGETATIVE WATERING	MG	0.30
0530-6004	DRIVEWAYS (CONC)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	26



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  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

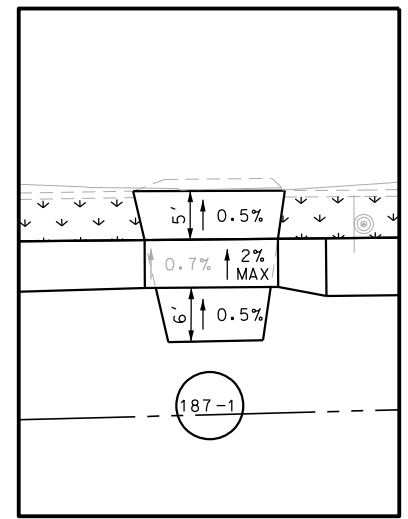


SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 BEGIN PROJECT TO STA 506+00

SHEET 1 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	187

POINT	NORTHING	EASTING	ELEV	DESC
03501	13680638.95	2106466.61	--	PROF
03502	13680638.55	2106470.20	--	PROF
03503	13680633.48	2106466.05	--	PROF
03507	13680641.53	2106473.11	--	PROF
03508	13680637.77	2106480.56	--	PROF
03509	13680641.02	2106478.41	--	PROF
03510	13680640.51	2106504.13	--	ME
03511	13680635.30	2106504.75	--	PROF
03512	13680630.33	2106504.24	--	PROF
03513	13680638.81	2106519.86	--	ME
03514	13680633.89	2106518.57	--	PROF
03515	13680628.92	2106518.06	--	PROF

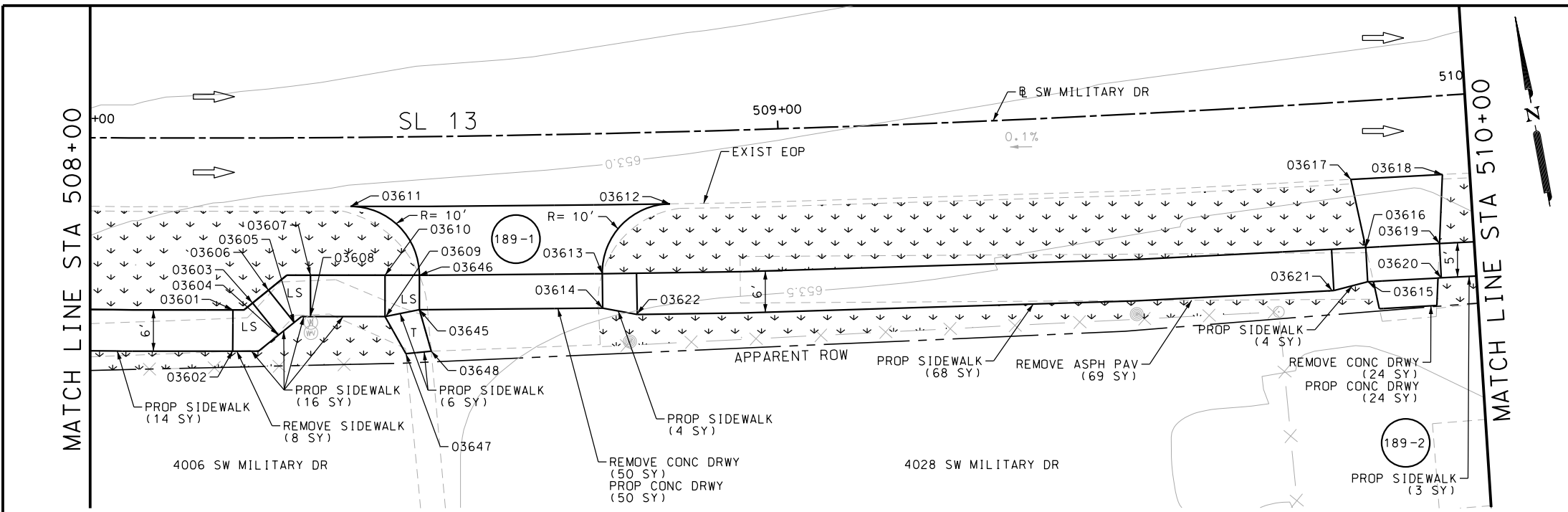


DRWY PLAN STA 505+91

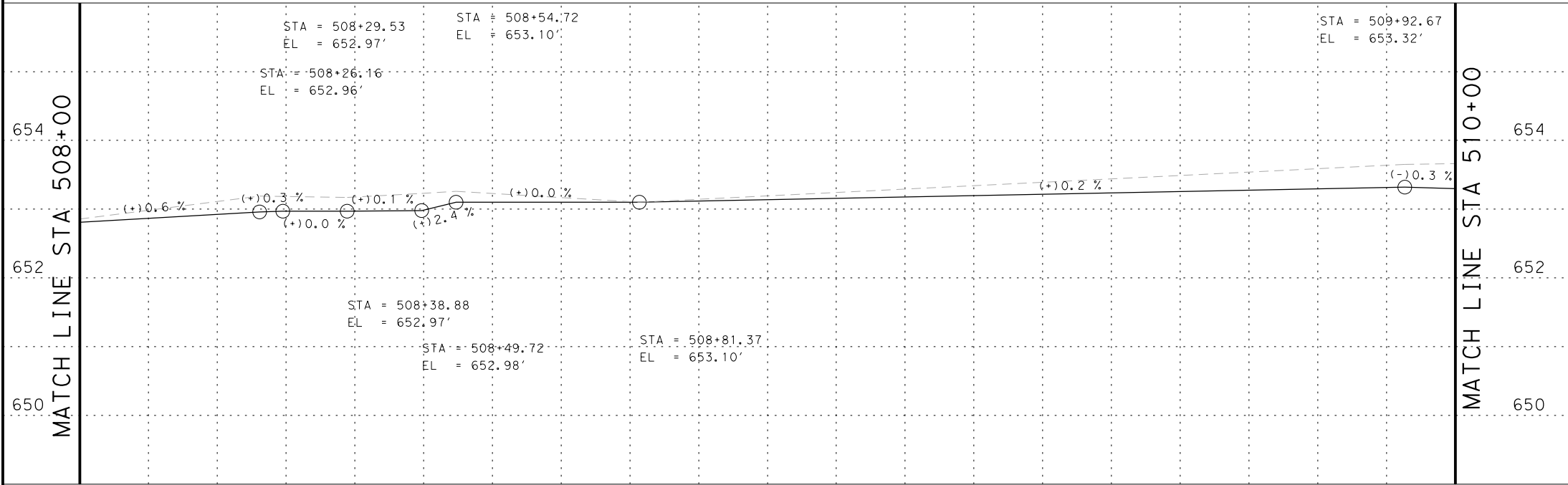


Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM1113507\SWM1113507\B\*02PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	74
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	69
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	257
0162-6002	BLOCK SODDING	SY	257
0168-6001	VEGETATIVE WATERING	MG	4.01
0530-6004	DRIVEWAYS (CONC)	SY	74
0531-6001	CONC SIDEWALKS (4")	SY	115



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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

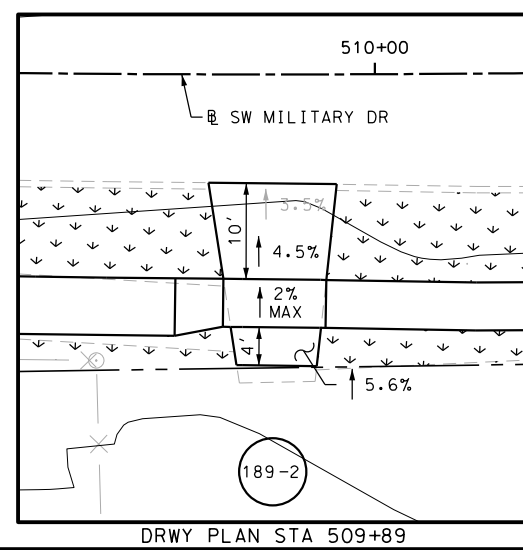
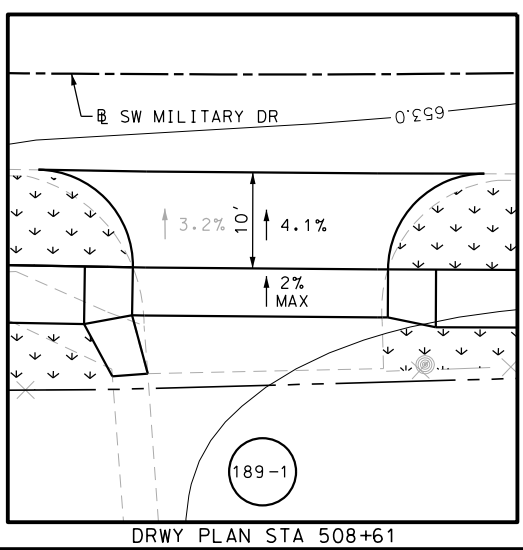
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 508+00 TO STA 510+00

SHEET 3 OF 99

DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG	6	TEXAS		VARIABLES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	189

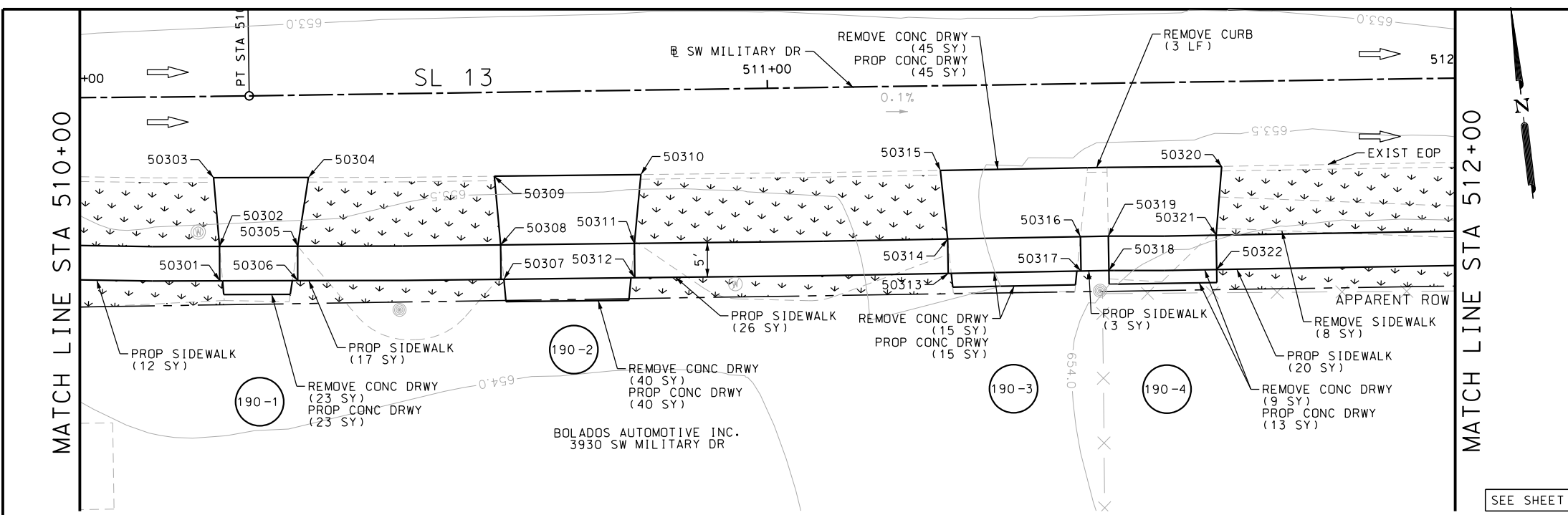


POINT	NORTHING	EASTING	ELEV	DESC
03601	13680598.27	2106740.68	--	PROF
03602	13680592.37	2106739.58	--	PROF
03603	13680598.74	2106743.67	--	PROF
03604	13680593.46	2106746.53	--	PROF
03605	13680594.87	2106749.12	--	PROF
03606	13680600.14	2106746.26	--	PROF
03607	13680601.18	2106752.67	--	PROF
03608	13680595.27	2106751.60	--	PROF
03609	13680593.34	2106762.26	--	PROF
03610	13680599.24	2106763.33	--	PROF
03611	13680609.97	2106760.19	--	ME
03612	13680602.00	2106805.97	--	ME
03613	13680593.80	2106794.45	--	PROF
03614	13680588.87	2106793.62	--	ME
03615	13680572.65	2106903.73	--	PROF
03616	13680577.61	2106904.36	--	PROF
03617	13680587.73	2106903.98	--	ME
03618	13680586.05	2106917.22	--	ME
03619	13680576.25	2106914.99	653.22	PROP
03620	13680571.30	2106914.34	--	PROF

POINT	NORTHING	EASTING	ELEV	DESC
03645	13680593.43	2106767.36	--	ME
03646	13680598.35	2106768.25	--	PROF
03647	13680587.49	2106764.29	--	ME
03648	13680587.17	2106767.98	--	ME

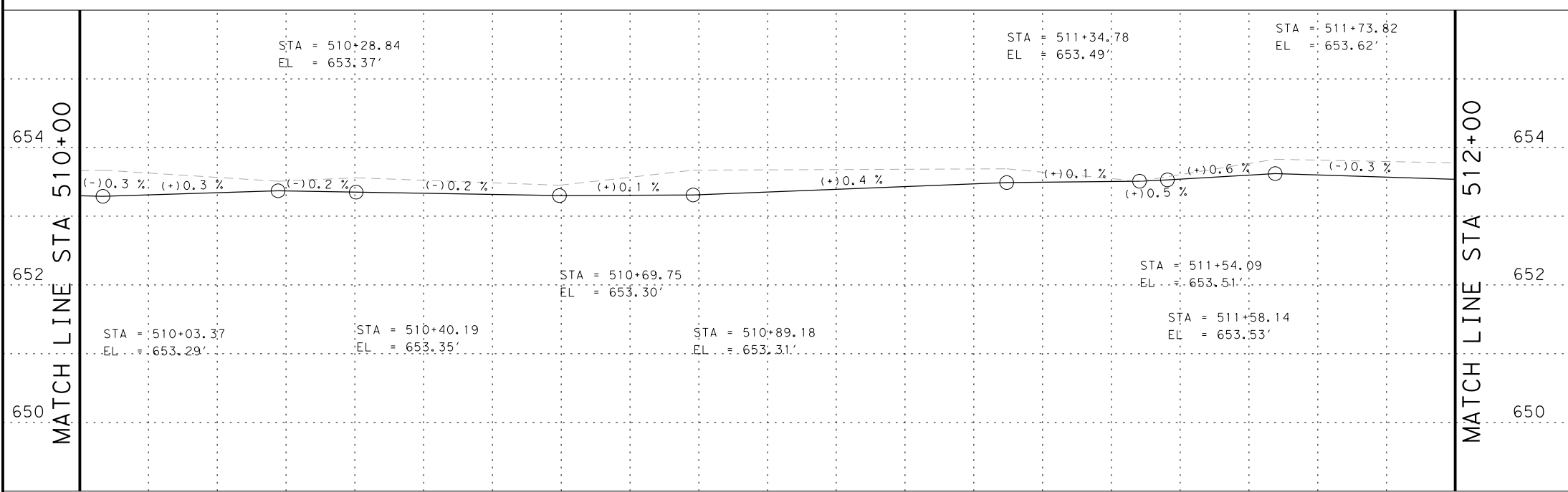
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM11113507+SWM11113507+02PP+A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	132
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	3
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	181
0162-6002	BLOCK SODDING	SY	181
0168-6001	VEGETATIVE WATERING	MG	2.82
0530-6004	DRIVEWAYS (CONC)	SY	136
0531-6001	CONC SIDEWALKS (4")	SY	78

SEE SHEET 178 FOR POINT TABLE



- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

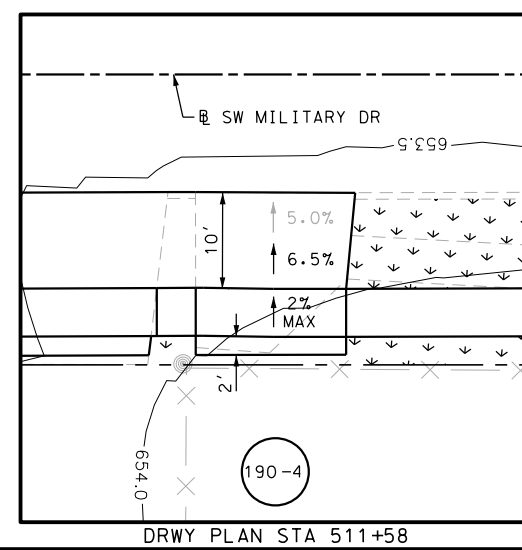
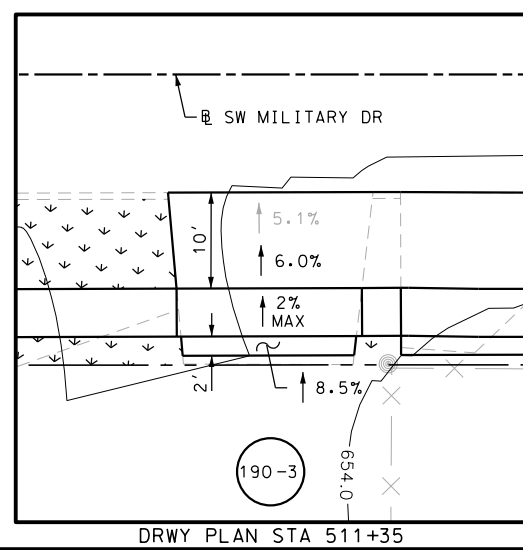
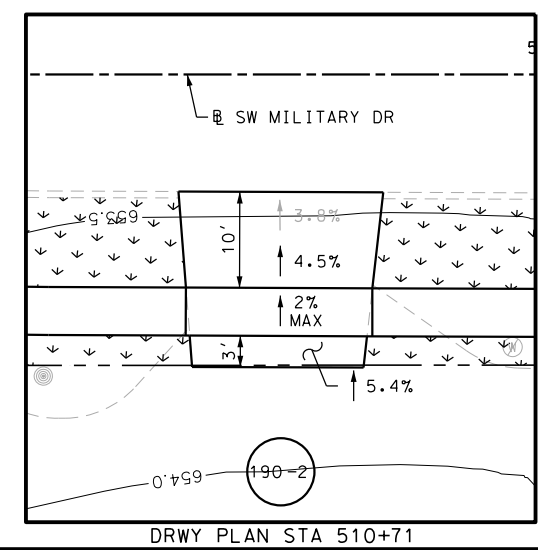
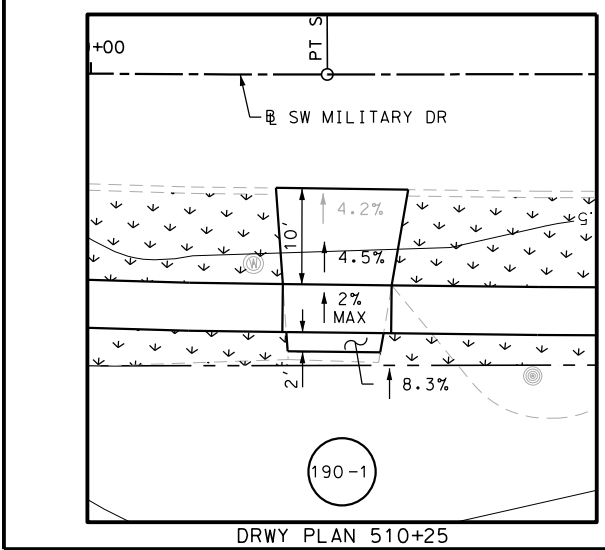
**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 510+00 TO STA 512+00

SHEET 4 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				190



Plotted on: 5/3/2019

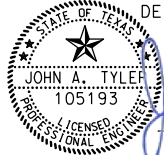
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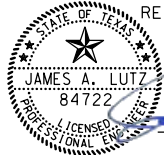
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50303	13680583.14	2106940.48	--	ME
50304	13680581.57	2106954.17	--	ME
50305	13680571.81	2106951.46	--	PROF
50306	13680566.85	2106950.89	--	PROF
50307	13680563.61	2106980.28	--	PROF
50308	13680568.58	2106980.81	--	PROF
50309	13680578.61	2106981.04	--	ME
50310	13680576.37	2107002.25	--	ME
50311	13680566.54	2107000.13	--	PROF
50312	13680561.56	2106999.60	--	PROF
50313	13680556.89	2107044.96	--	PROF
50314	13680561.87	2107045.45	--	PROF
50315	13680571.91	2107045.57	--	ME
50316	13680559.97	2107064.67	--	PROF
50317	13680555.00	2107064.17	--	PROF
50318	13680554.60	2107068.21	--	PROF
50319	13680559.57	2107068.70	--	PROF
50320	13680567.75	2107086.26	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
50321	13680557.89	2107084.29	--	PROF
50322	13680552.92	2107083.79	--	PROF

NOTES:

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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK  
 CONSTRUCTION PLAN**  
 STA 510+00 TO STA 512+00

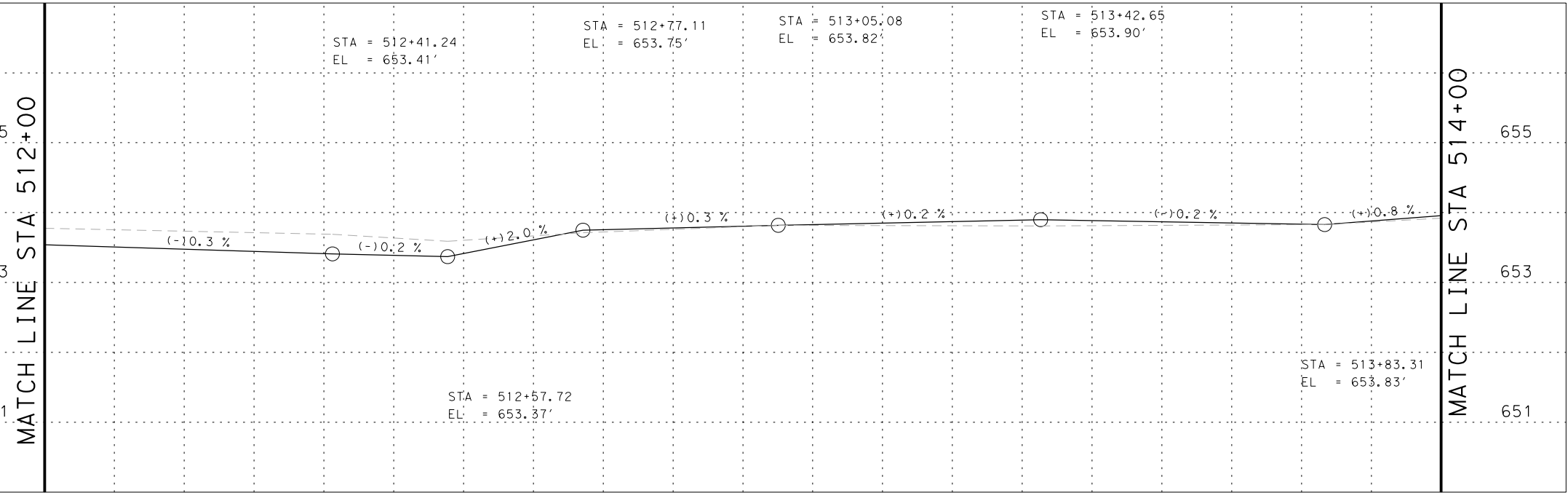
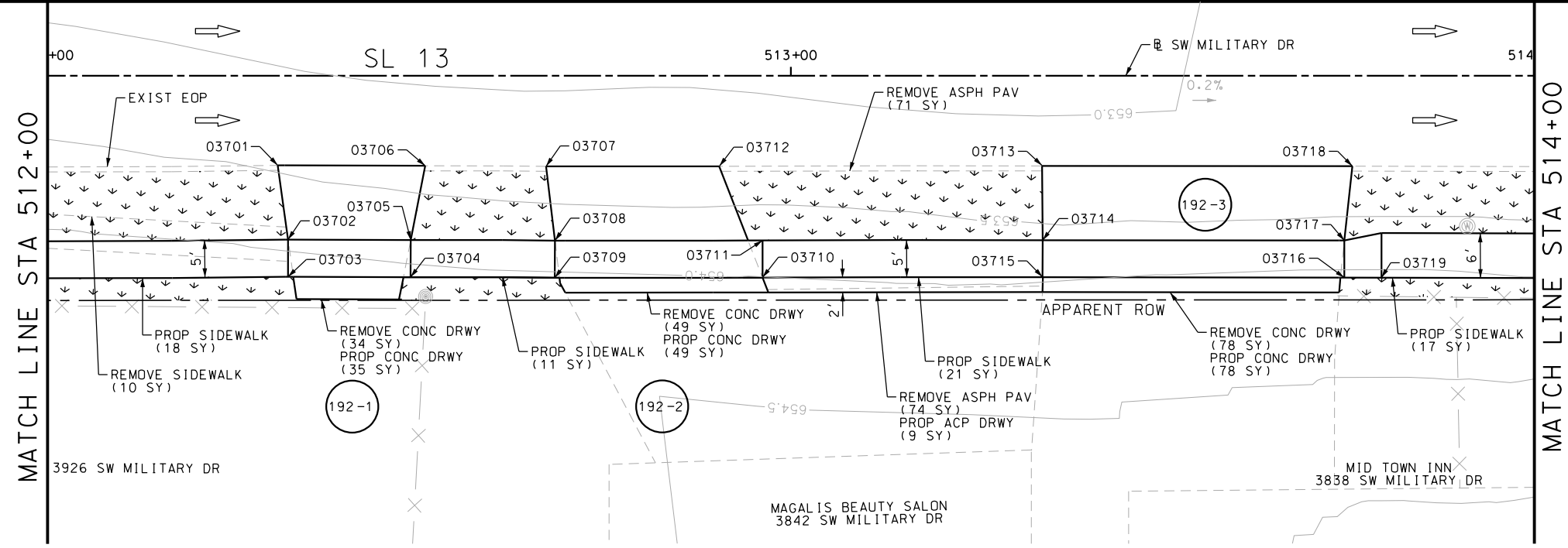
SHEET 5 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	191

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM1113507\SWM1113507\B\*03PP.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	161
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	10
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	145
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	146
0162-6002	BLOCK SODDING	SY	146
0168-6001	VEGETATIVE WATERING	MG	2.28
0530-6004	DRIVEWAYS (CONC)	SY	162
0530-6005	DRIVEWAYS (ACP)	SY	9
0531-6001	CONC SIDEWALKS (4")	SY	67



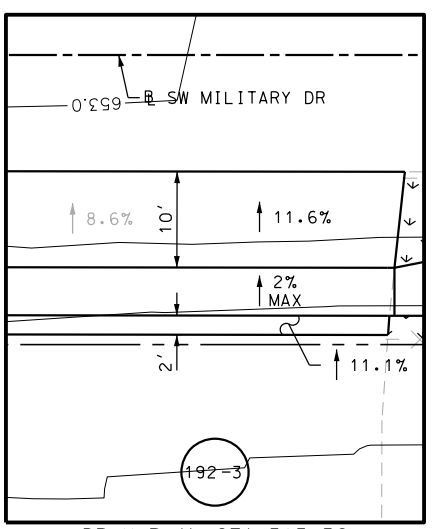
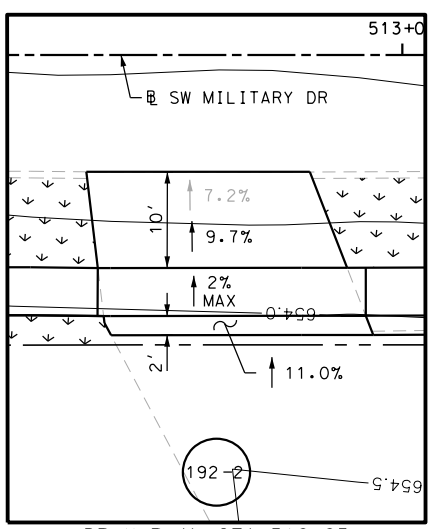
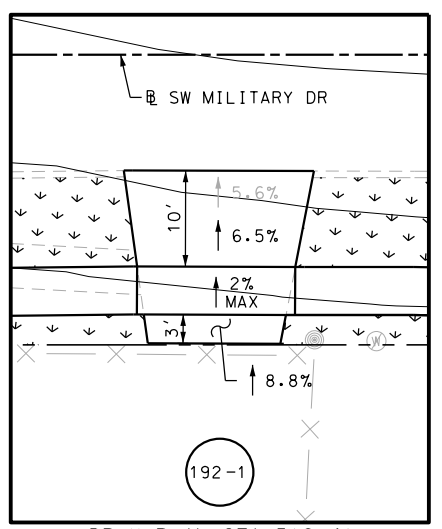
NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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DESIGN  
 JOHN A. TYLER, P.E.  
 105193  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 84722  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

512+00 513+00 514+00



POINT	NORTHING	EASTING	ELEV	DESC
03701	13680561.41	2107151.04	--	ME
03702	13680551.33	2107151.42	--	PROF
03703	13680546.36	2107150.89	--	PROF
03704	13680544.62	2107167.29	--	PROF
03705	13680549.59	2107167.82	--	PROF
03706	13680559.34	2107170.77	--	ME
03707	13680557.63	2107186.93	--	ME
03708	13680547.54	2107187.12	--	PROF
03709	13680542.57	2107186.56	--	PROF
03710	13680539.76	2107214.39	--	PROF
03711	13680544.74	2107214.88	--	PROF
03712	13680555.26	2107210.10	--	ME
03713	13680550.91	2107253.31	--	ME
03714	13680540.95	2107252.37	--	PROF
03715	13680535.98	2107251.86	--	PROF
03716	13680531.82	2107292.22	--	PROF
03717	13680536.79	2107292.74	--	PROF
03718	13680546.63	2107294.82	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
 SIDEWALK CONSTRUCTION PLAN  
 STA 512+00 TO STA 514+00

SHEET 6 OF 99

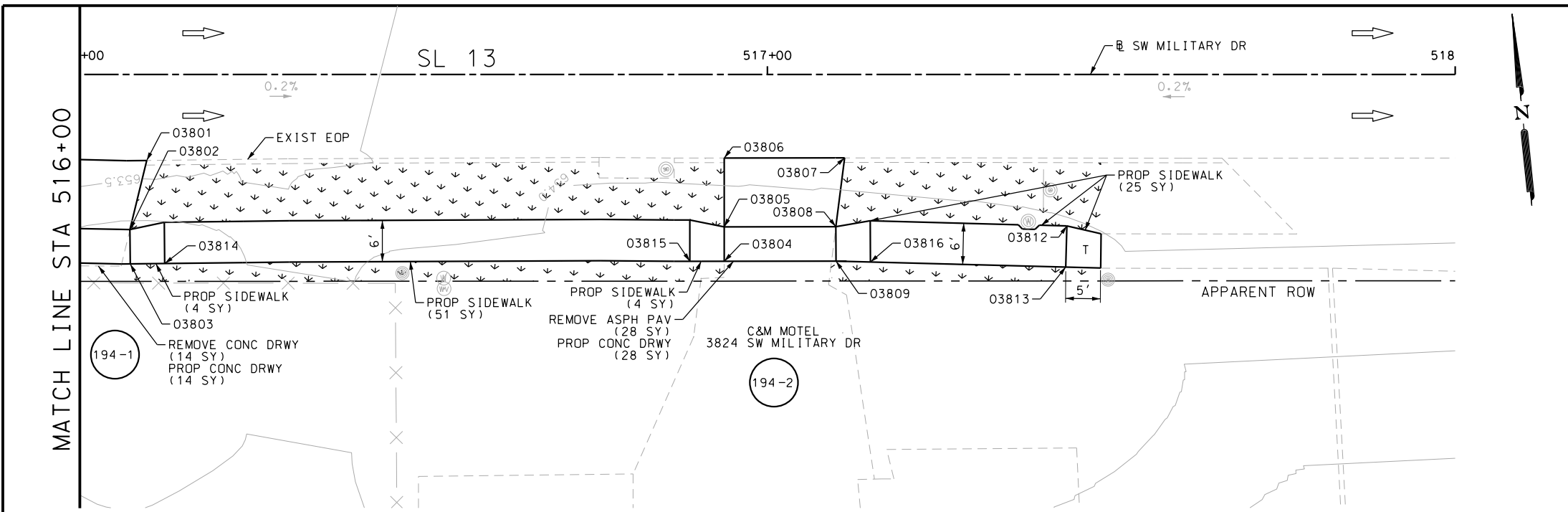
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				192



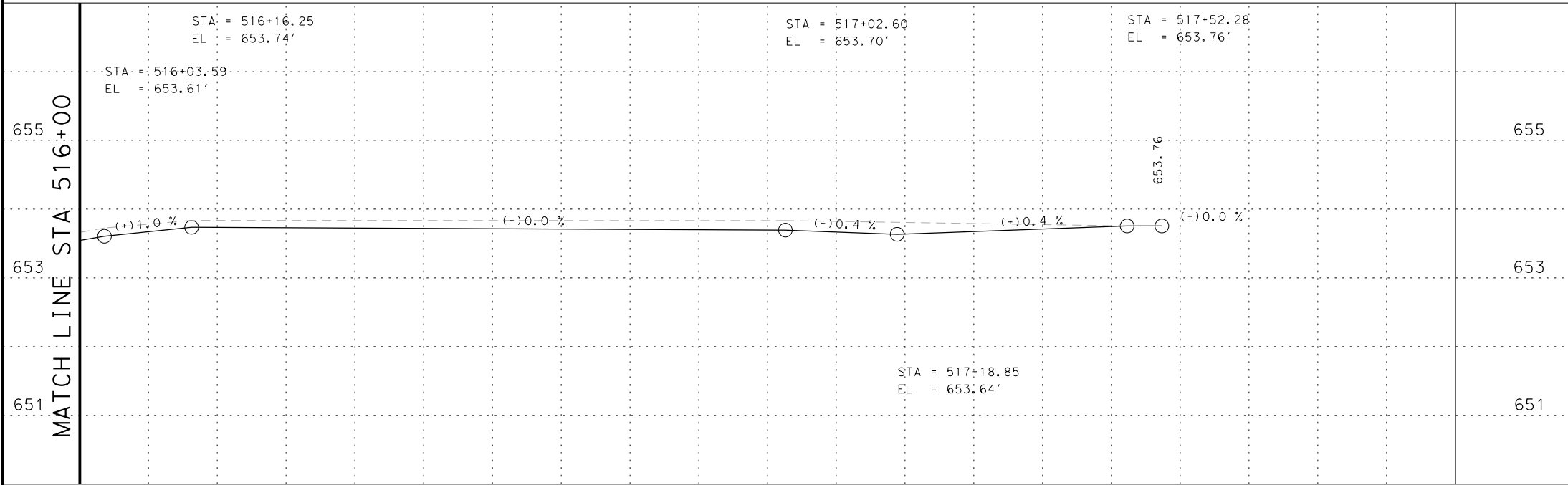


Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*APP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	14
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	28
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	165
0162-6002	BLOCK SODDING	SY	165
0168-6001	VEGETATIVE WATERING	MG	2.57
0530-6004	DRIVEWAYS (CONC)	SY	42
0531-6001	CONC SIDEWALKS (4")	SY	84



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

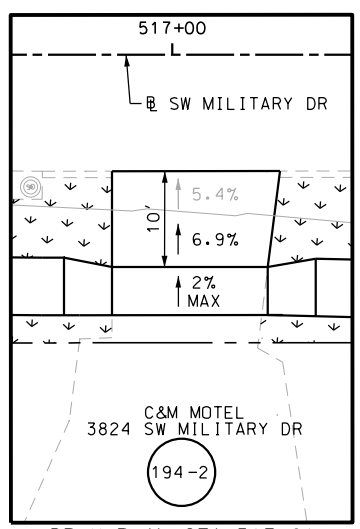
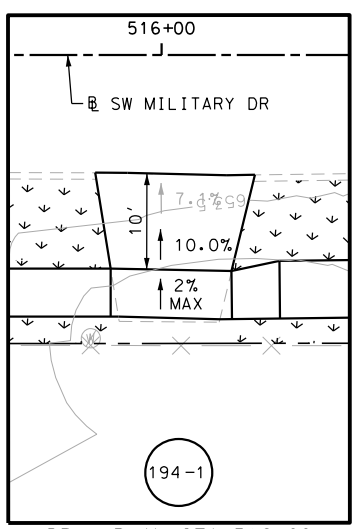
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 516+00 TO STA 518+00

SHEET 8 OF 99

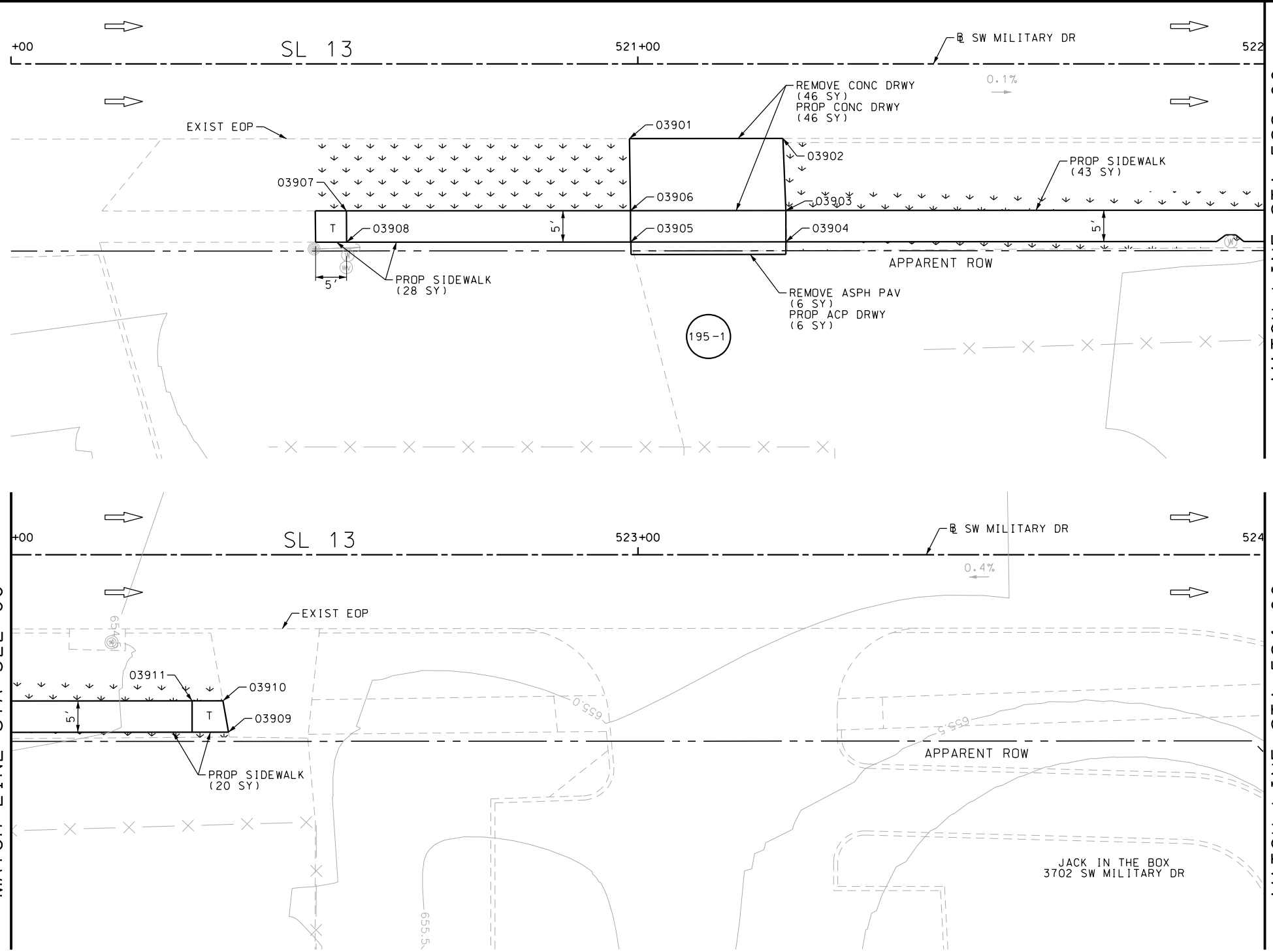
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	194



POINT	NORTHING	EASTING	ELEV	DESC
03801	13680522.53	2107527.80	--	ME
03802	13680512.80	2107524.37	--	PROF
03803	13680507.82	2107523.92	--	ME
03804	13680499.45	2107609.86	--	ME
03805	13680504.42	2107610.36	--	PROF
03806	13680514.37	2107611.38	--	ME
03807	13680512.60	2107628.81	--	ME
03808	13680502.78	2107626.53	--	PROF
03809	13680497.81	2107626.02	--	ME
03812	13680499.48	2107659.95	--	PROF
03813	13680493.55	2107659.18	--	PROF
03814	13680507.37	2107528.90	--	PROF
03815	13680499.96	2107604.88	--	PROF
03816	13680497.17	2107630.98	--	PROF

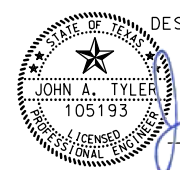
Plotted on: 5/3/2019

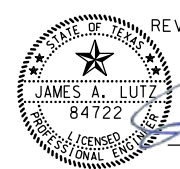
Design File name: P:\111135\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	46
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	6
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	115
0162-6002	BLOCK SODDING	SY	115
0168-6001	VEGETATIVE WATERING	MG	1.79
0530-6004	DRIVEWAYS (CONC)	SY	46
0530-6005	DRIVEWAYS (ACP)	SY	6
0531-6001	CONC SIDEWALKS (4")	SY	91

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

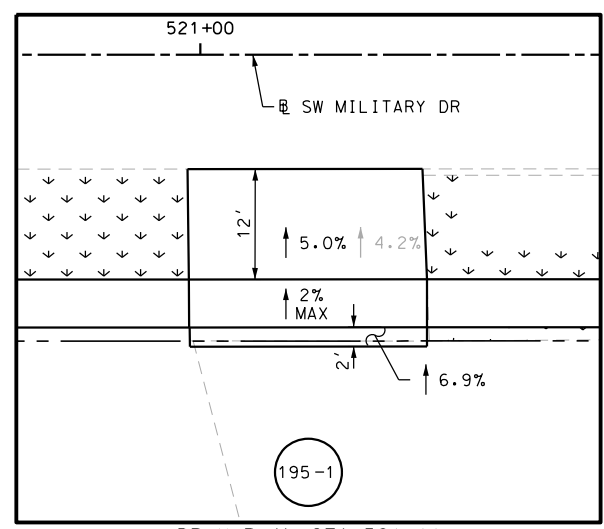
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 520+00 TO STA 524+00

SHEET 9 OF 99

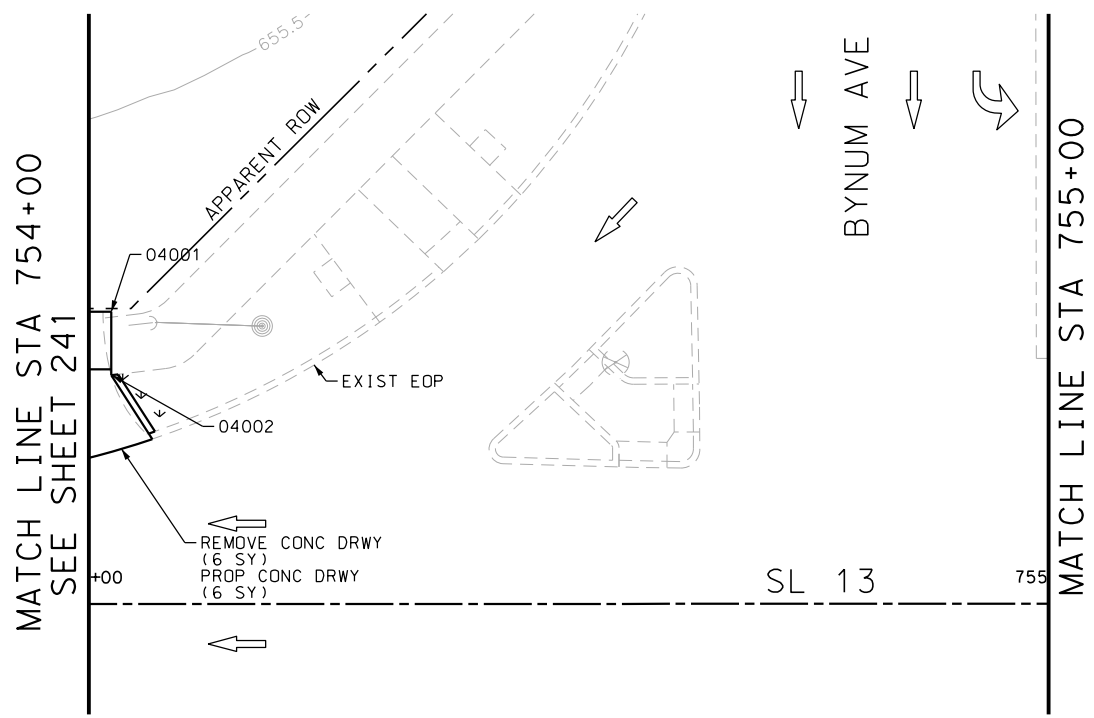
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	195



POINT	NORTHING	EASTING	ELEV	DESC
03901	13680473.48	2108014.27	--	ME
03902	13680471.01	2108038.61	--	ME
03903	13680459.52	2108037.92	653.91	PROP
03904	13680454.55	2108037.42	653.98	PROP
03905	13680457.05	2108012.75	653.98	PROP
03906	13680462.02	2108013.25	653.91	PROP
03907	13680466.58	2107968.19	654.24	PROP
03908	13680461.61	2107967.69	654.31	PROP

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI\1113507\*SWMI\1113507\*06.dgn



POINT	NORTHING	EASTING	ELEV	DESC
04001	13680544.64	2108320.31	--	ME
04002	13680538.07	2108319.64	--	ME
04003	13680518.82	2108495.30	--	PROF
04004	13680525.92	2108472.92	--	ME
04005	13680512.82	2108495.53	--	PROF
04007	13680428.59	2108452.62	--	ME
04008	13680426.39	2108473.50	--	ME
04009	13680424.74	2108487.96	--	ME
04010	13680422.89	2108508.07	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	23
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	51
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	1
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	12
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6001	CONC CURB (TY I)	LF	21
0529-6002	CONC CURB (TY II)	LF	30
0530-6004	DRIVEWAYS (CONC)	SY	36
0531-6001	CONC SIDEWALKS (4")	SY	35

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DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20'

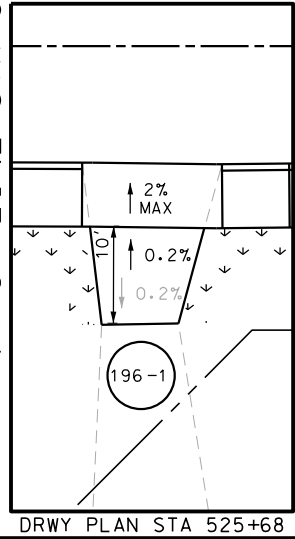
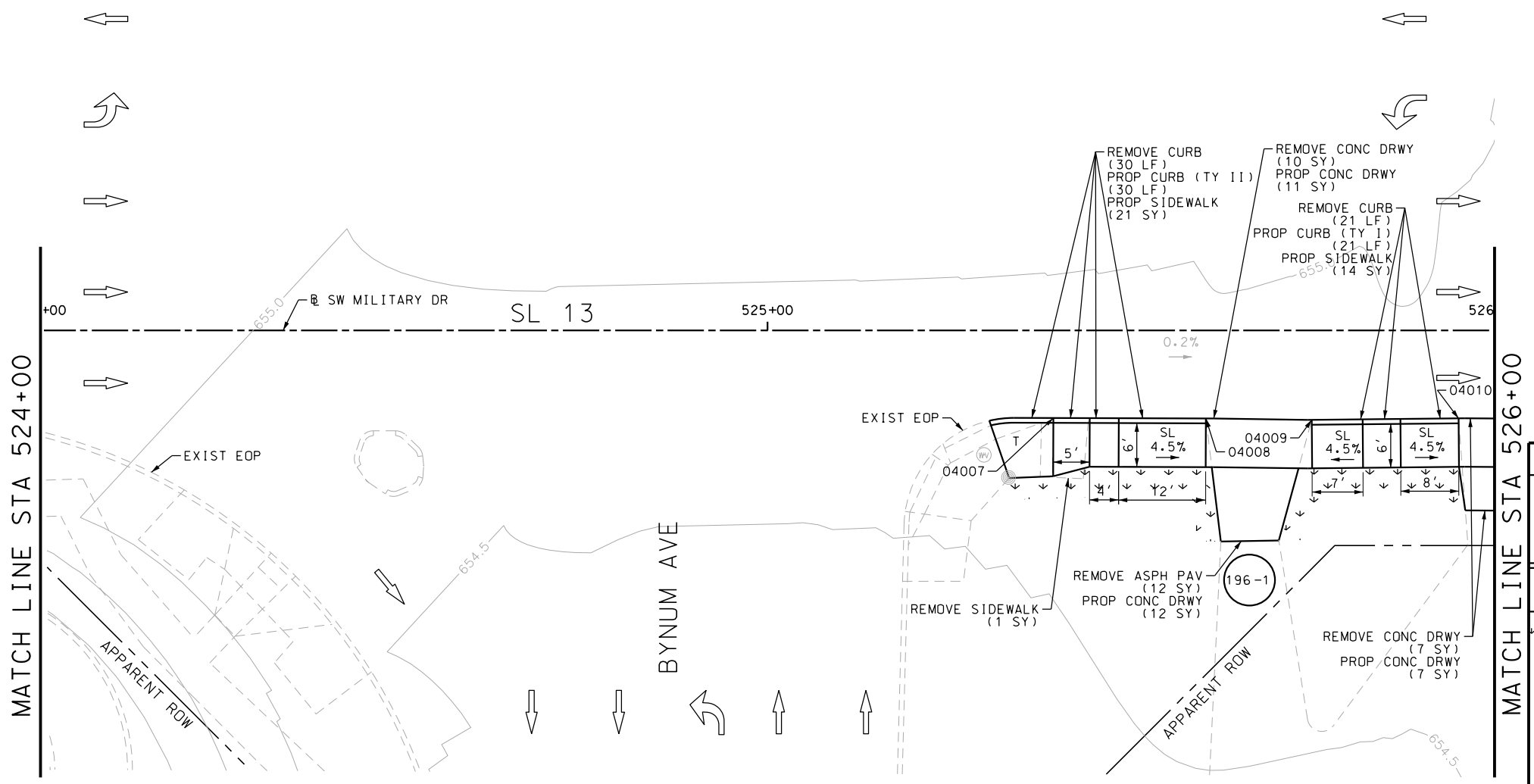
REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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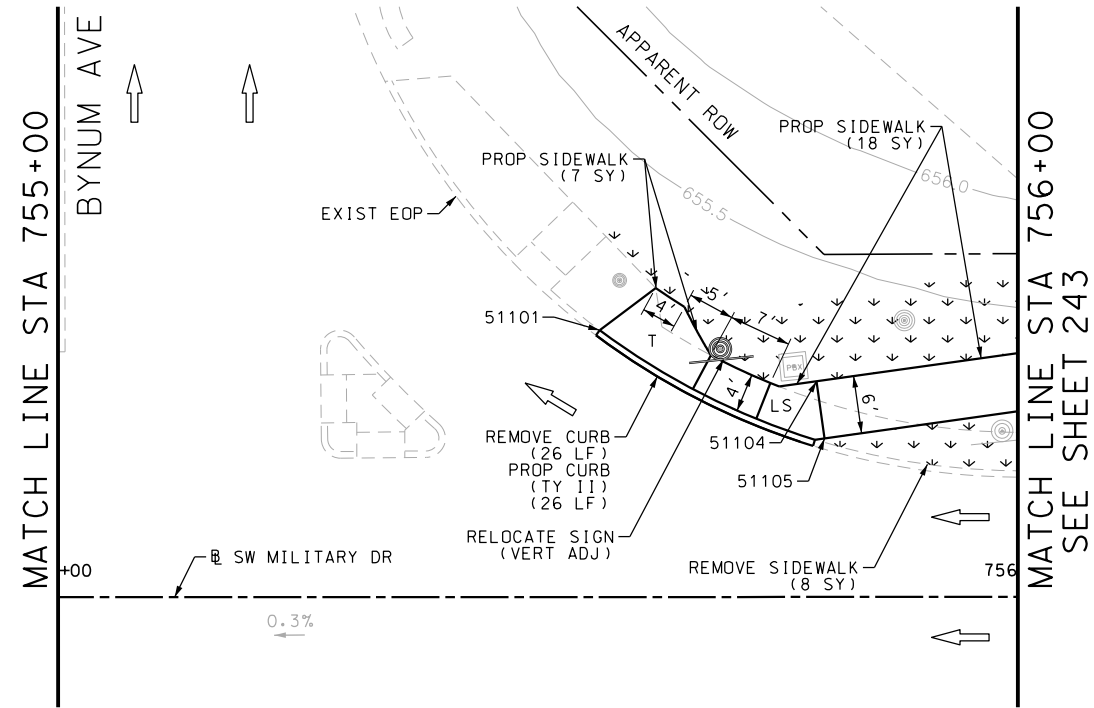
SL 13  
 SW MILITARY B  
 SIDEWALK CONSTRUCTION PLAN  
 STA 524+00 TO STA 526+00  
 STA 754+00 TO STA 755+00  
 SHEET 10 OF 99

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	196



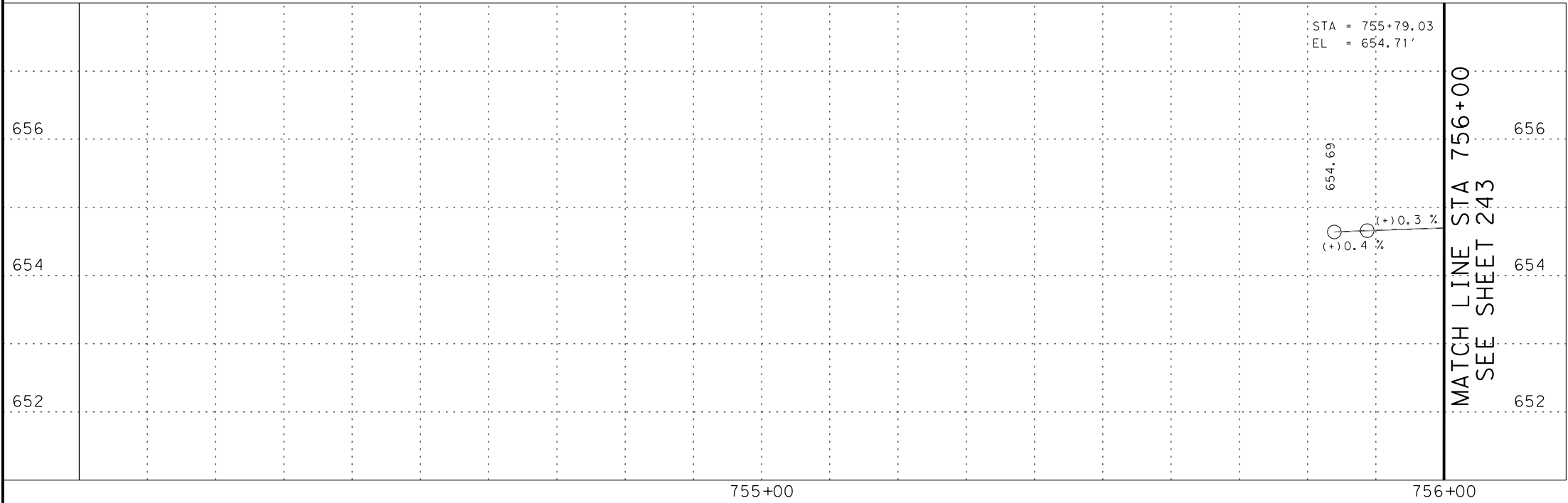
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*06PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	26
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0529-6002	CONC CURB (TY II)	LF	26
0531-6001	CONC SIDEWALKS (4")	SY	25
0644-6076	REMOVE SM RD SN SUP&AM	EA	1

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POINT	NORTHING	EASTING	ELEV	DESC
51101	13680526.41	2108473.37	--	ME
51104	13680518.82	2108495.30	--	PROF
51105	13680512.82	2108495.53	--	PROF

DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPPE FIRM REGISTRATION #470 | TBPPLS FIRM REGISTRATION #10028800

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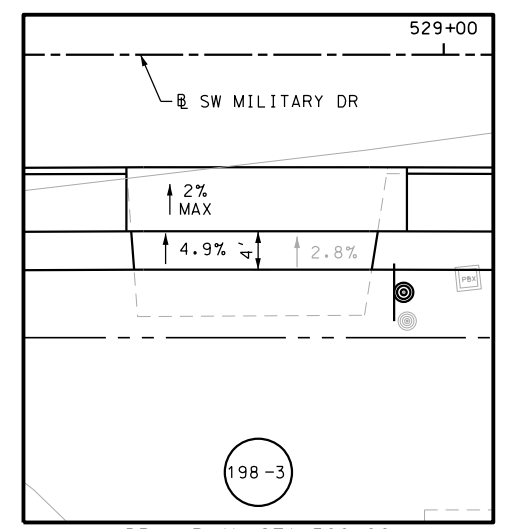
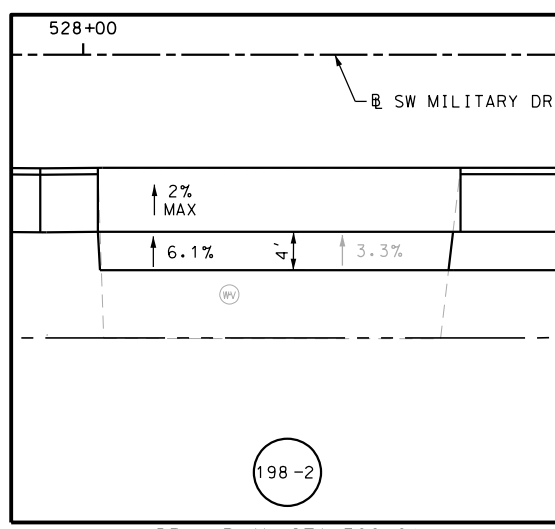
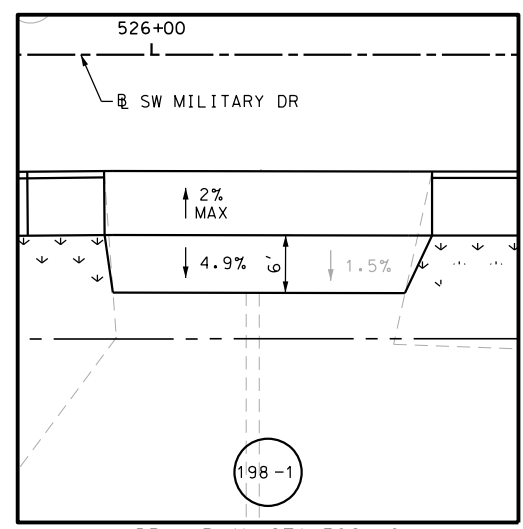
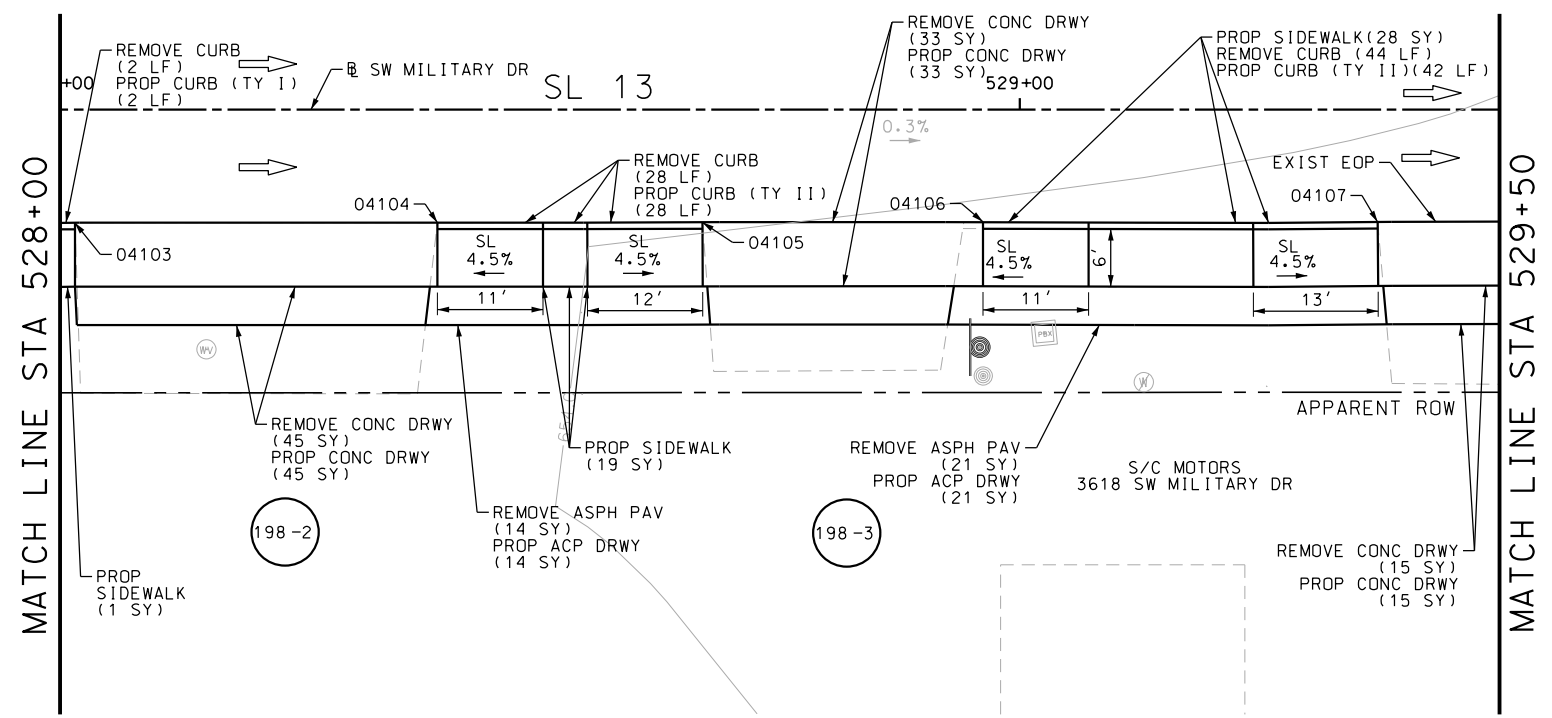
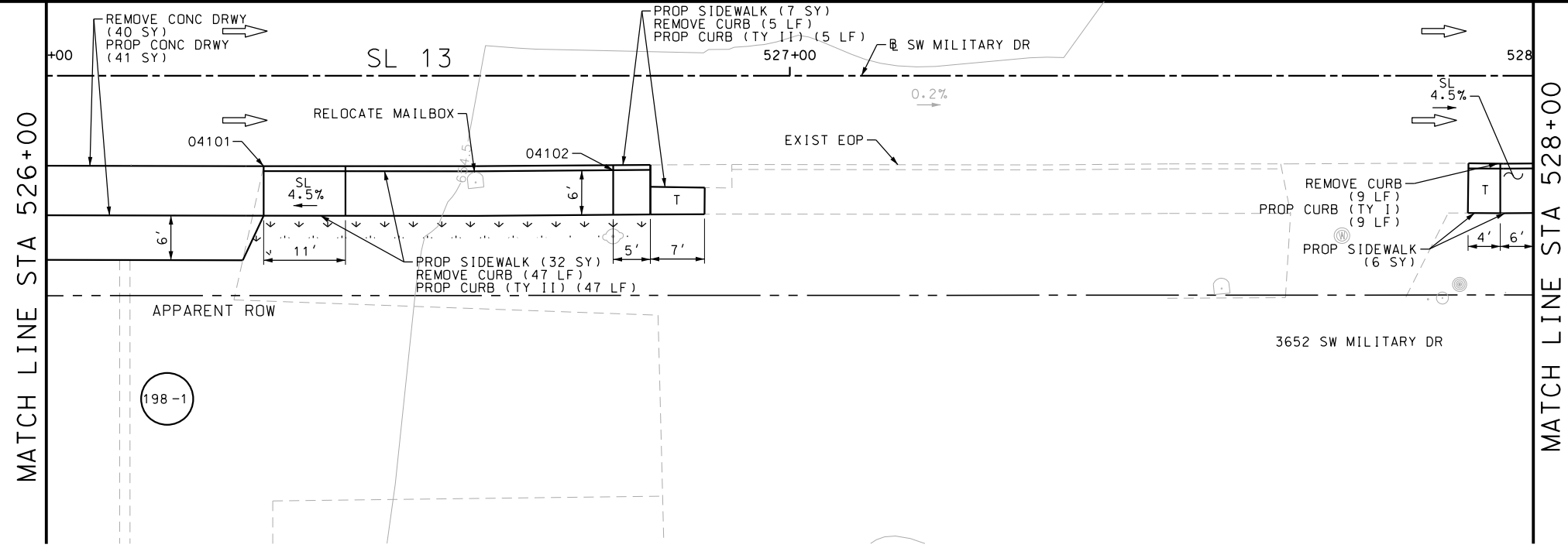
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 755+00 TO STA 756+00

SHEET 11 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	197

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM\1113507+SWM\1113507.dgn



POINT	NORTHING	EASTING	ELEV	DESC
04101	13680419.36	2108542.07	--	ME
04102	13680414.05	2108588.77	--	ME
04103	13680402.25	2108713.53	--	ME
04104	13680398.43	2108751.12	--	ME
04105	13680395.67	2108778.59	--	ME
04106	13680392.70	2108807.68	--	ME
04107	13680388.55	2108848.60	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	133
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	135
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	35
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	19
0162-6002	BLOCK SODDING	SY	19
0168-6001	VEGETATIVE WATERING	MG	0.30
0529-6001	CONC CURB (TY I)	LF	11
0529-6002	CONC CURB (TY II)	LF	122
0530-6004	DRIVEWAYS (CONC)	SY	134
0530-6005	DRIVEWAYS (ACP)	SY	35
0531-6001	CONC SIDEWALKS (4")	SY	93
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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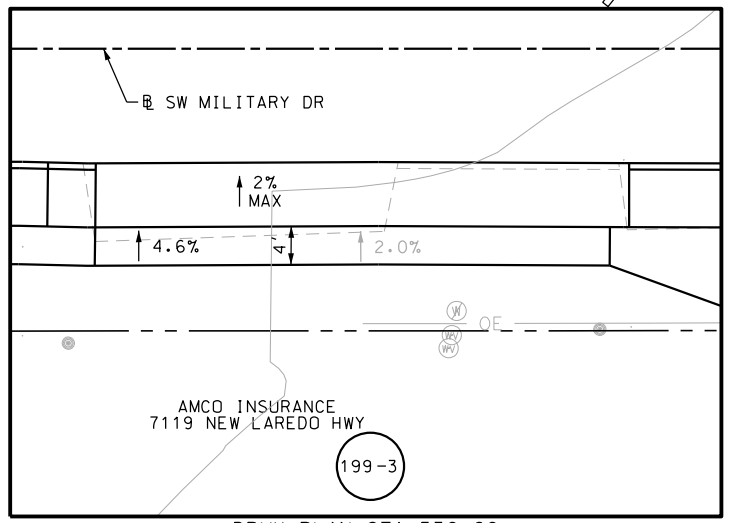
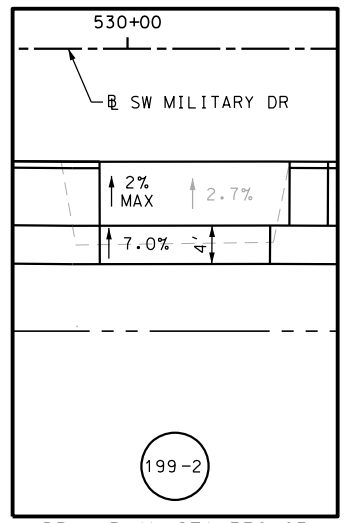
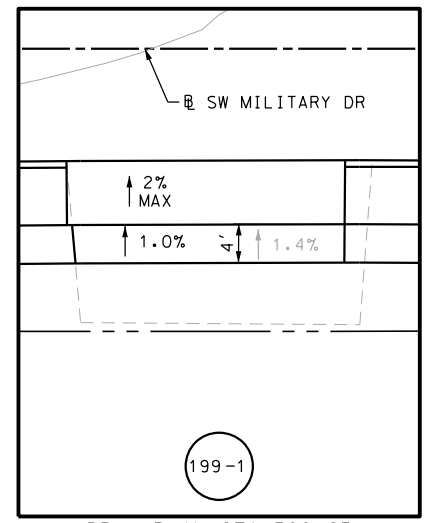
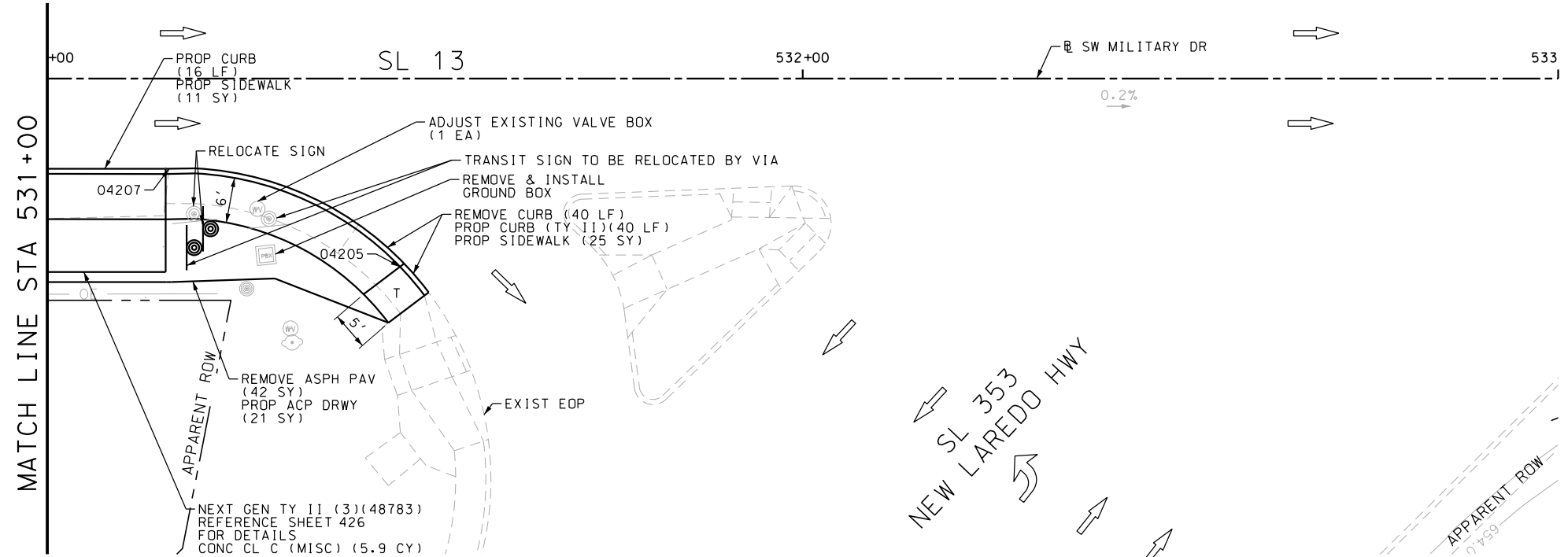
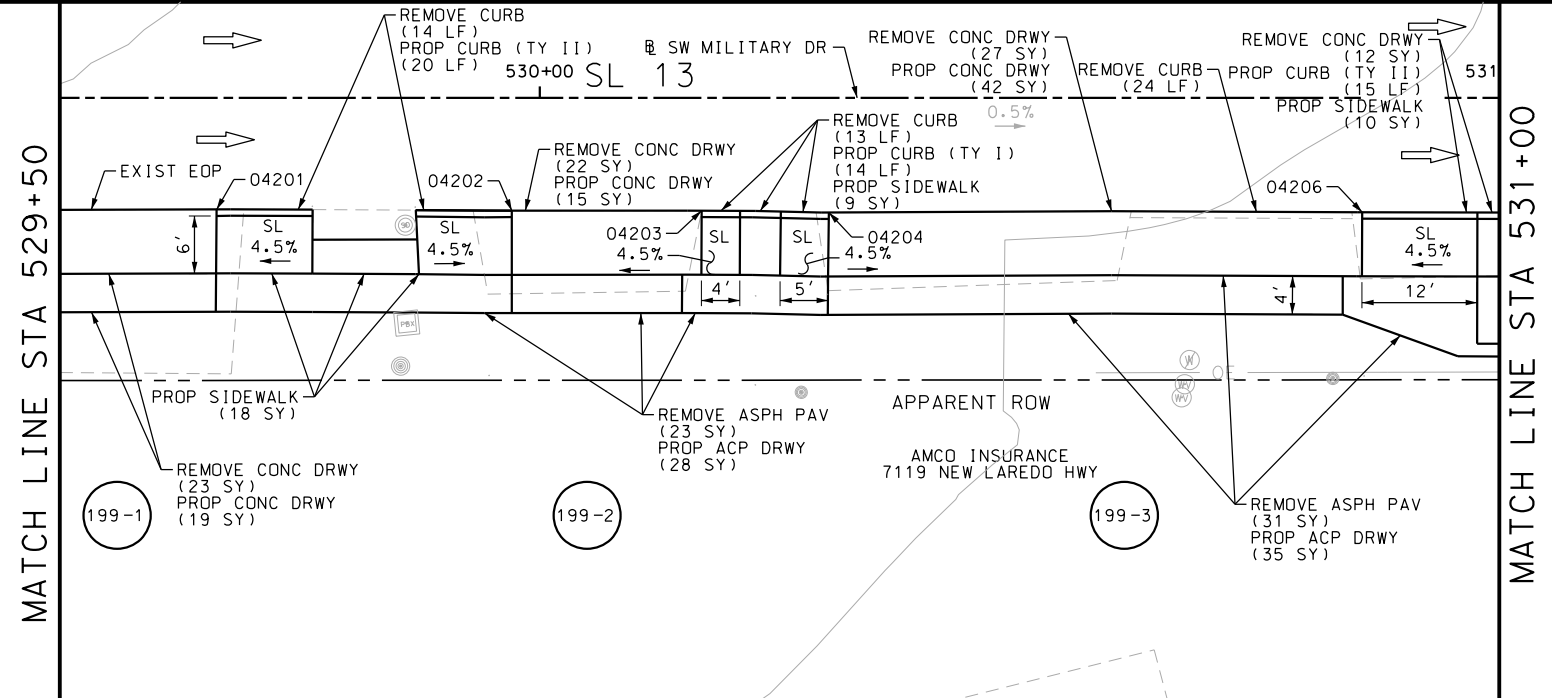
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 526+00 TO STA 529+50

SHEET 12 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	198

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*08.dgn



POINT	NORTHING	EASTING	ELEV	DESC
04201	13680385.68	2108877.48	--	ME
04202	13680382.43	2108908.06	--	ME
04203	13680380.43	2108927.76	--	ME
04204	13680378.90	2108940.93	--	ME
04205	13680354.15	2109055.57	--	ME
04206	13680373.28	2108996.20	--	ME
04207	13680370.19	2109026.04	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	84
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	91
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	96
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6001	CONC CURB (TY I)	LF	14
0529-6002	CONC CURB (TY II)	LF	91
0530-6004	DRIVEWAYS (CONC)	SY	76
0530-6005	DRIVEWAYS (ACP)	SY	84
0531-6001	CONC SIDEWALKS (4")	SY	73
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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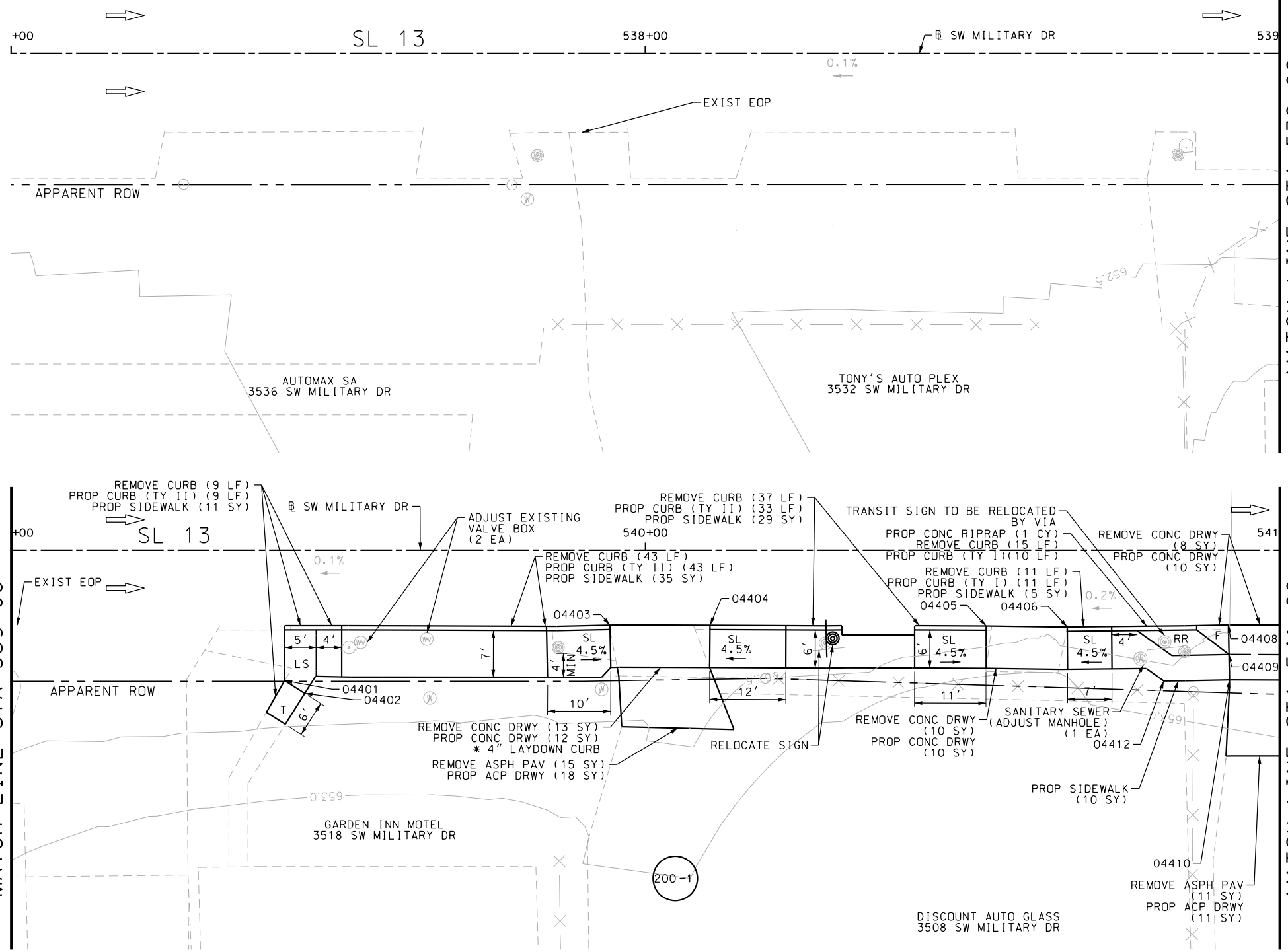
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 529+50 TO STA 533+00

SHEET 13 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	199

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507\*SWMilitaryB\*10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	31
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	115
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	26
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	56
0162-6002	BLOCK SODDING	SY	56
0168-6001	VEGETATIVE WATERING	MG	0.87
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6001	CONC CURB (TY I)	LF	21
0529-6002	CONC CURB (TY II)	LF	85
0530-6004	DRIVEWAYS (CONC)	SY	32
0530-6005	DRIVEWAYS (ACP)	SY	29
0531-6001	CONC SIDEWALKS (4")	SY	90
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

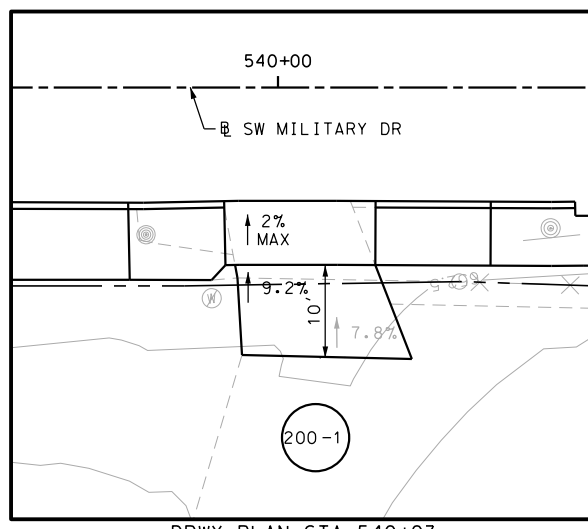
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 537+00 TO STA 541+00

SHEET 14 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				200



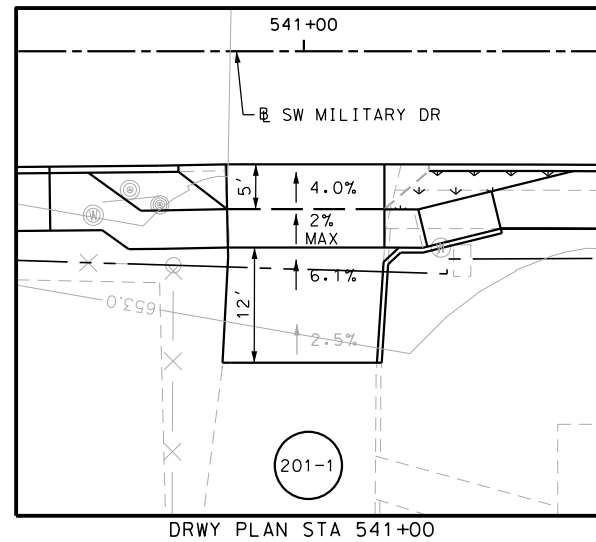
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04402	13680275.31	2109851.27	--	ME
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04404	13680279.52	2109915.91	--	ME
04405	13680274.99	2109959.23	--	ME
04406	13680273.53	2109971.93	--	ME
04408	13680271.26	2109997.24	--	ME
04409	13680266.60	2109996.86	651.65	PROP
04410	13680262.62	2109996.53	651.72	PROP
04412	13680263.50	2109986.22	651.89	PROP



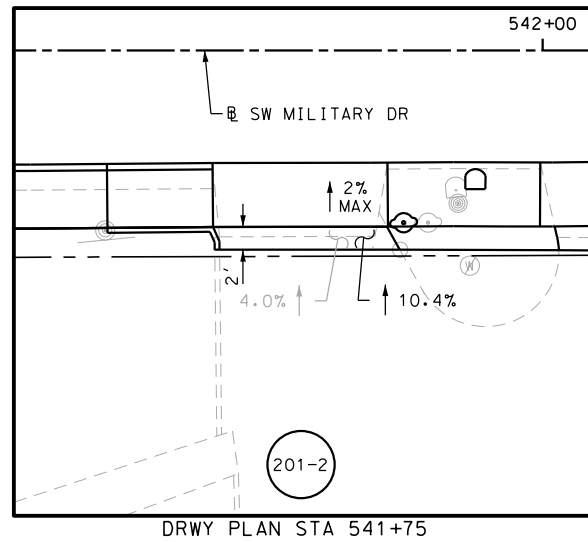


Plotted on: 5/3/2019

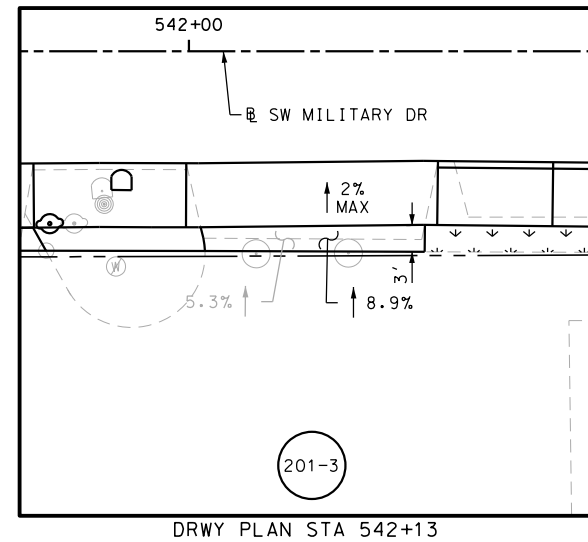
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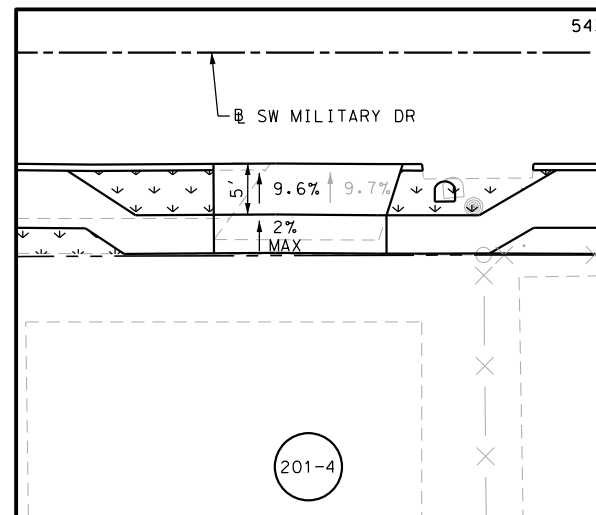
DRWY PLAN STA 541+00



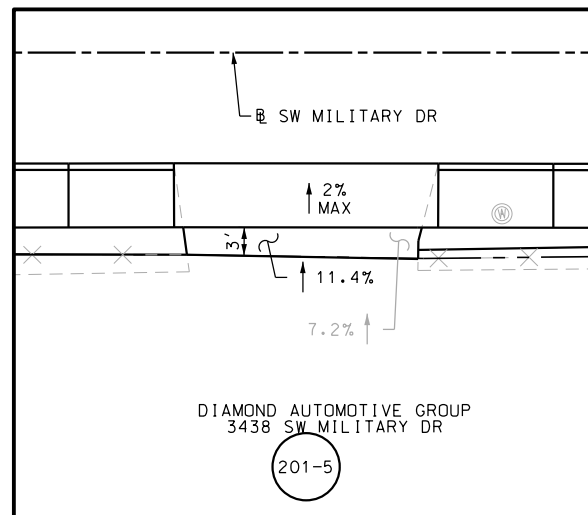
DRWY PLAN STA 541+75



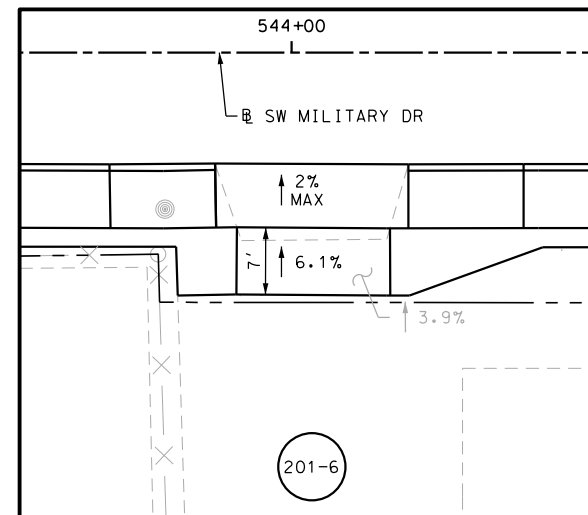
DRWY PLAN STA 542+13



DRWY PLAN STA 542+69



DRWY PLAN STA 543+37



DRWY PLAN STA 544+02

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 541+00 TO STA 545+00

SHEET 16 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	202





Plotted on: 5/3/2019

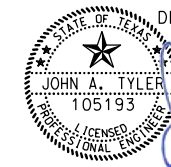
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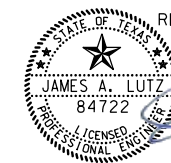
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04902	13680111.57	2111564.94	--	ME
04904	13680102.21	2111610.50	--	ME
04905	13680096.85	2111614.84	--	ME
04906	13680104.53	2111633.85	--	ME
04907	13680100.44	2111634.09	655.47	PROP
04908	13680094.82	2111633.78	655.54	PROP
04909	13680100.97	2111667.30	--	ME
04910	13680097.16	2111666.30	655.58	PROP
04911	13680091.43	2111665.46	655.65	PROP
04912	13680097.79	2111700.10	--	ME
04913	13680092.09	2111700.20	--	ME
04914	13680088.11	2111699.82	--	ME
04915	13680096.23	2111716.20	--	ME
04916	13680086.76	2111713.68	--	ME
04917	13680085.44	2111741.83	--	ME
04918	13680088.30	2111747.60	--	ME
04919	13680089.71	2111773.40	--	ME
04920	13680082.07	2111855.76	--	ME
04921	13680078.15	2111895.04	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
04922	13680090.75	2111714.07	--	ME

NOTES:


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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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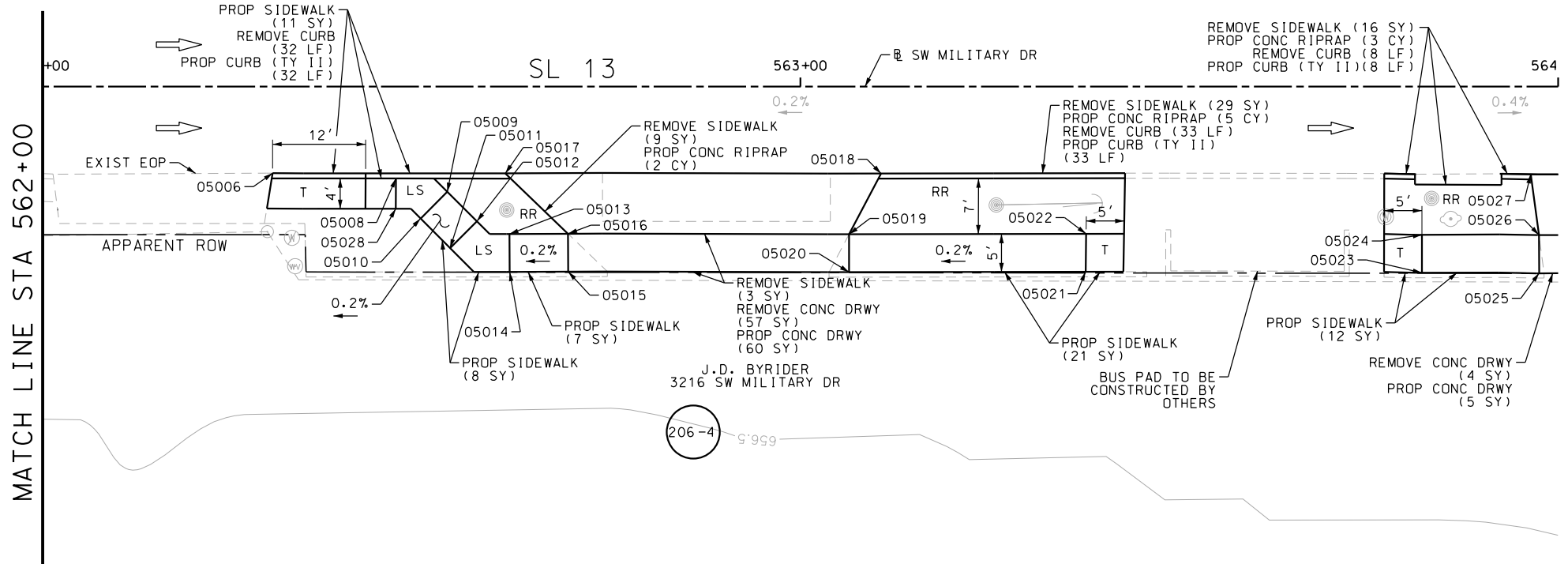
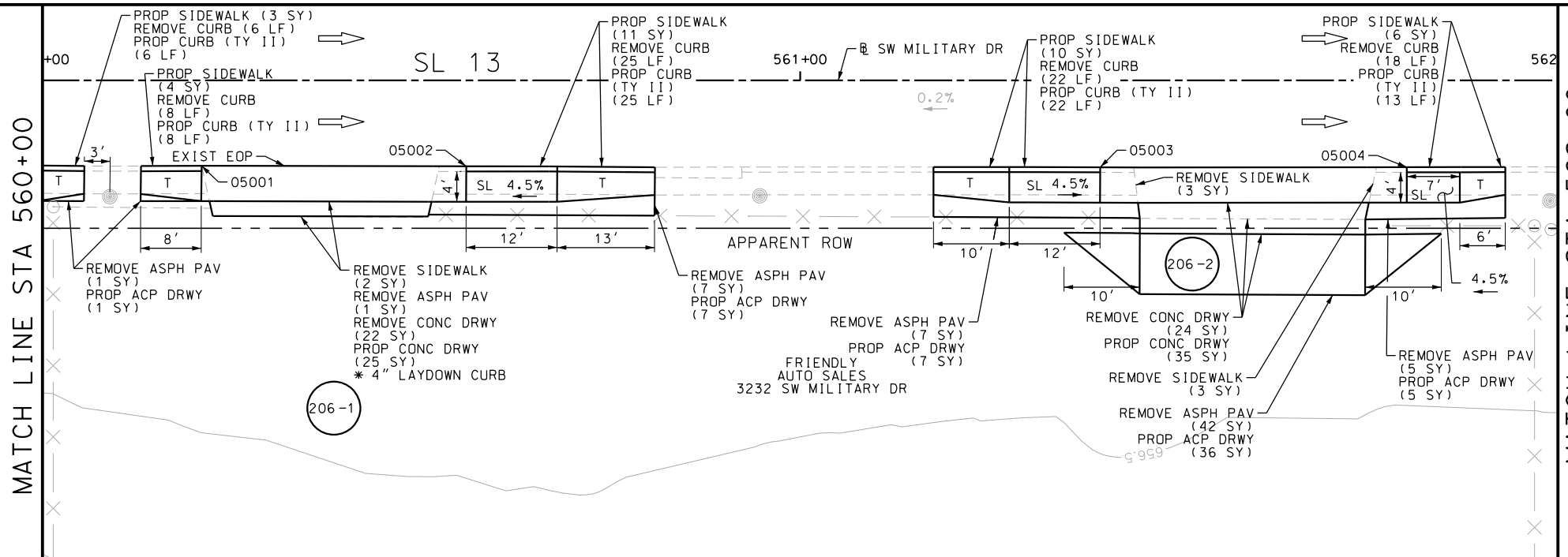
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 556+00 TO STA 560+00

SHEET 19 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	205

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*16.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	107
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	152
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	65
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	63
0432-6003	RIPRAP (CONC) (6 IN)	CY	10
0529-6002	CONC CURB (TY II)	LF	147
0530-6004	DRIVEWAYS (CONC)	SY	125
0530-6005	DRIVEWAYS (ACP)	SY	56
0531-6001	CONC SIDEWALKS (4")	SY	93

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 560+00 TO STA 564+00

SHEET 20 OF 99

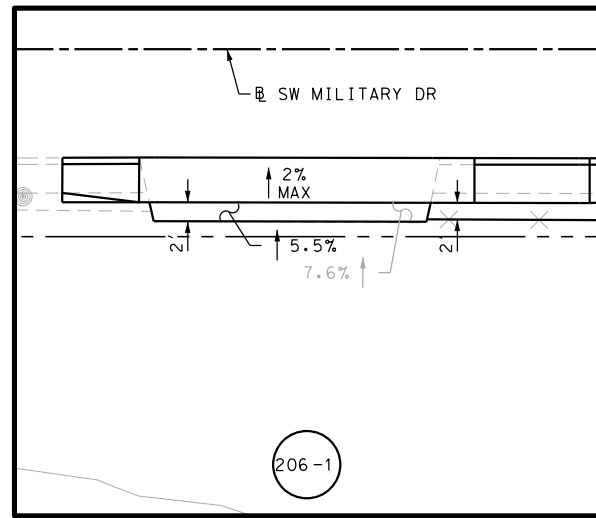
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05002	13680072.33	2111951.14	--	ME
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05004	13680059.61	2112074.62	--	ME
05006	13680054.56	2112124.66	--	ME
05008	13680052.20	2112140.78	--	ME
05009	13680049.77	2112147.35	656.56	PROP
05010	13680046.61	2112143.47	656.63	PROP
05011	13680042.34	2112146.96	656.65	PROP
05012	13680045.50	2112150.83	656.58	PROP
05013	13680043.39	2112154.94	656.65	PROP
05014	13680038.41	2112154.45	656.72	PROP
05015	13680037.66	2112162.15	--	ME
05016	13680042.64	2112162.64	656.67	PROP
05017	13680051.40	2112155.21	--	ME
05018	13680046.35	2112204.55	--	ME
05019	13680038.81	2112199.52	656.69	PROP
05020	13680033.84	2112199.02	--	ME
05021	13680030.72	2112230.08	656.83	PROP
05022	13680035.69	2112230.66	656.76	PROP

POINT	NORTHING	EASTING	ELEV	DESC
05023	13680026.09	2112274.21	656.70	PROP
05024	13680031.07	2112274.74	656.63	PROP
05025	13680024.44	2112289.61	--	ME
05026	13680029.46	2112290.10	--	ME
05027	13680037.54	2112289.84	--	ME
05028	13680048.24	2112140.34	--	ME

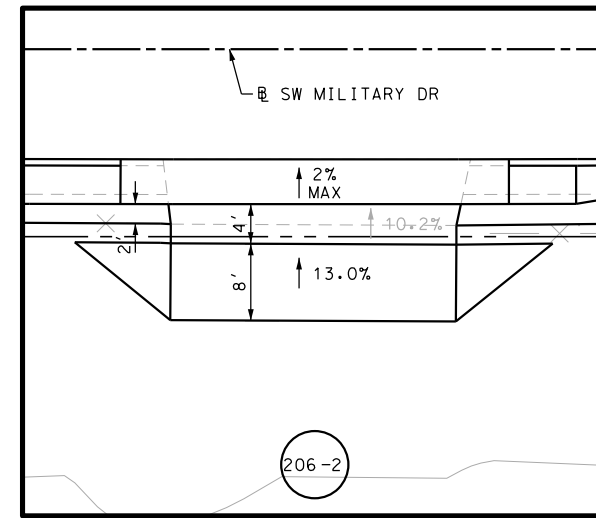
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	206

Plotted on: 5/3/2019

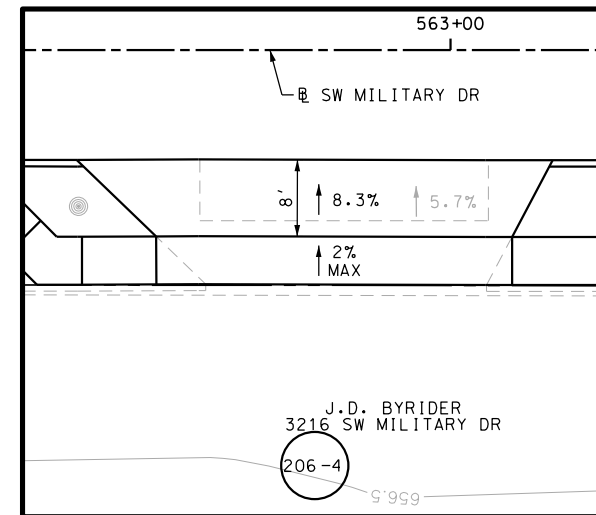
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DRWY PLAN STA 560+39



DRWY PLAN STA 561+60



DRWY PLAN STA 562+86

- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 560+00 TO STA 564+00

SHEET 21 OF 99

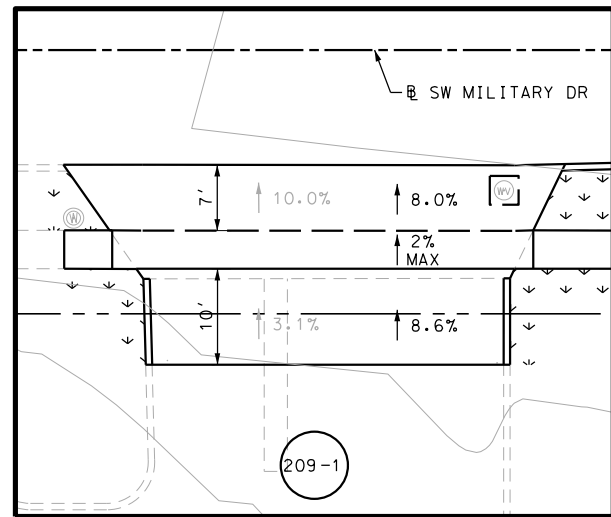
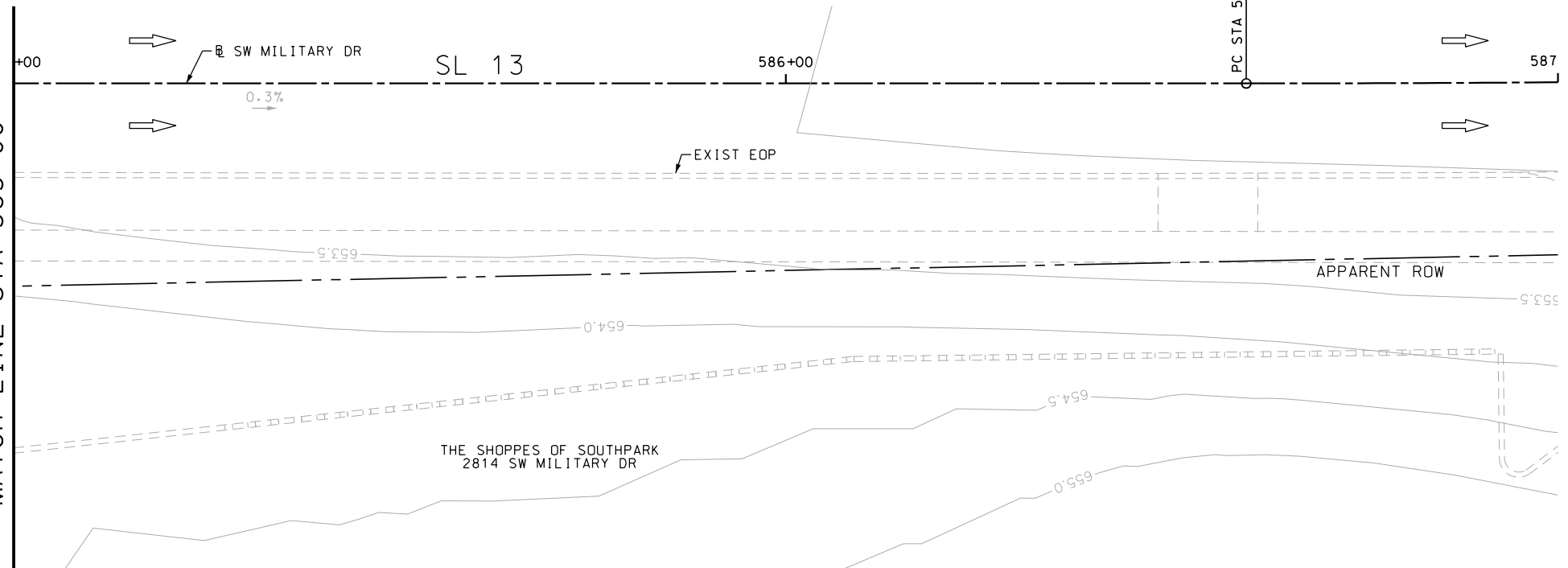
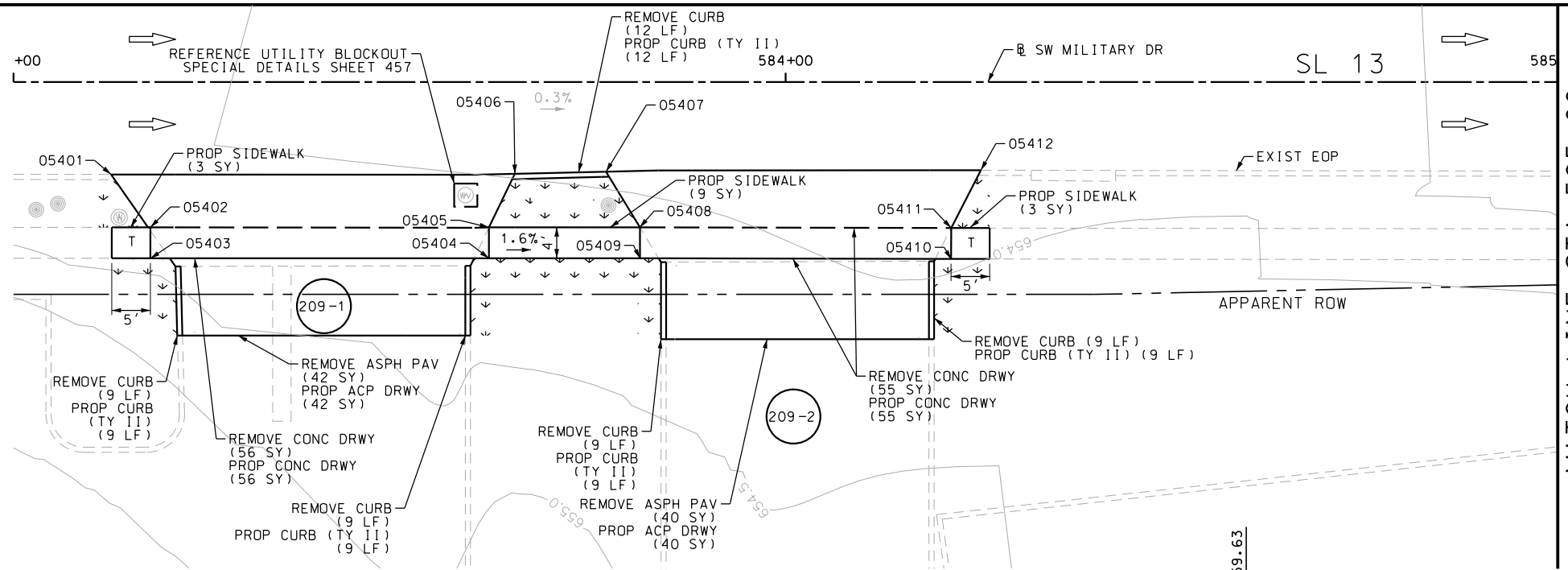
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	207



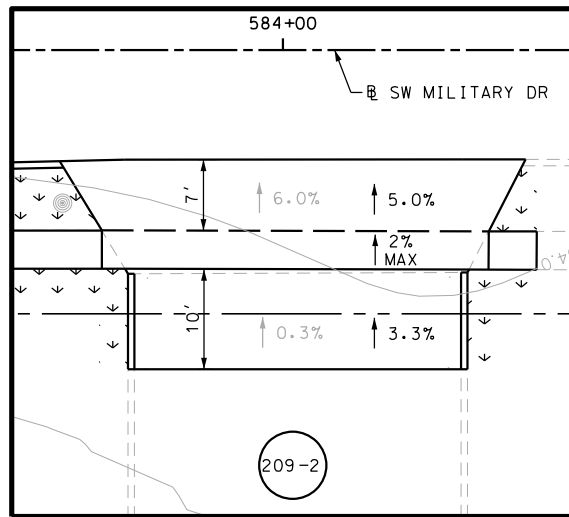


Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507\*SWMilitaryB\*20.dgn



DRWY PLAN STA 583+39



DRWY PLAN STA 584+01

POINT	NORTHING	EASTING	ELEV	DESC
05401	13679842.63	2114196.13	--	ME
05402	13679835.30	2114200.50	653.35	PROP
05403	13679831.32	2114200.09	653.42	PROP
05404	13679826.87	2114243.73	653.46	PROP
05405	13679830.85	2114244.13	653.39	PROP
05406	13679837.40	2114248.16	--	ME
05407	13679836.49	2114259.94	--	ME
05408	13679828.86	2114263.57	653.07	PROP
05409	13679824.88	2114263.17	653.14	PROP
05410	13679820.70	2114303.26	652.98	PROP
05411	13679824.69	2114303.67	652.91	PROP
05412	13679831.75	2114308.25	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	111
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	48
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	82
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0529-6002	CONC CURB (TY II)	LF	48
0530-6004	DRIVEWAYS (CONC)	SY	111
0530-6005	DRIVEWAYS (ACP)	SY	82
0531-6001	CONC SIDEWALKS (4")	SY	15

- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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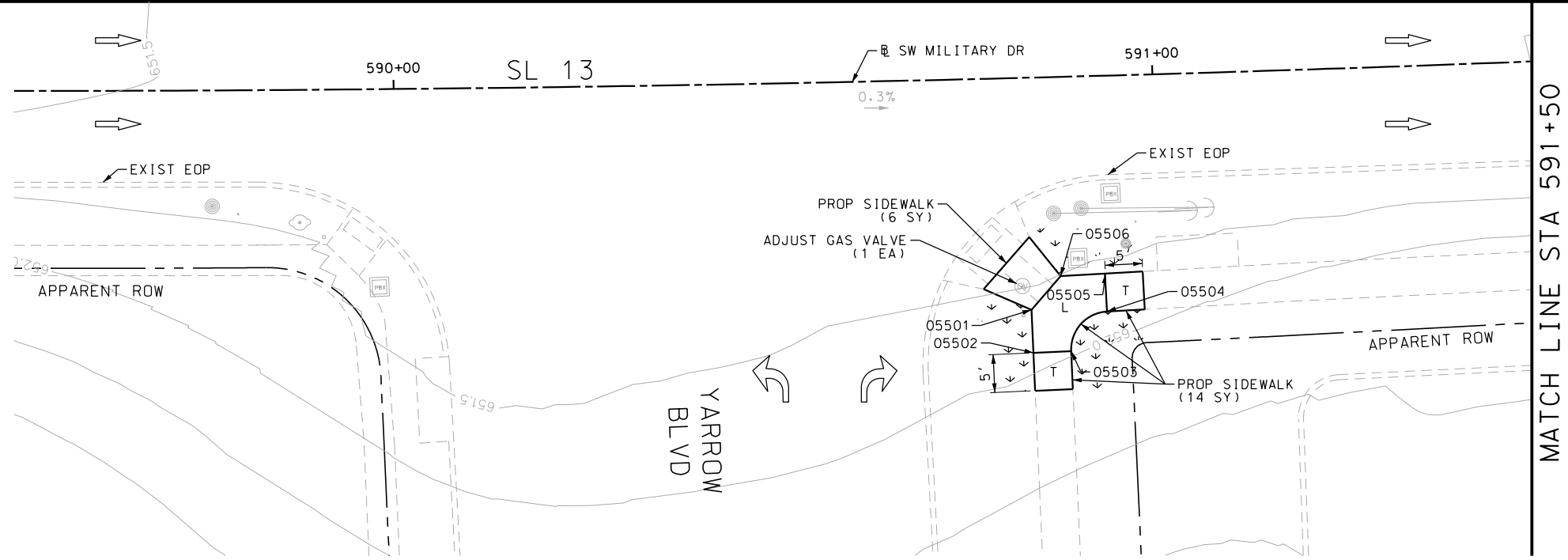
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 583+00 TO STA 587+00

SHEET 23 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				209

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*21.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	20
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0531-6001	CONC SIDEWALKS (4")	SY	20
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1

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DESIGN

John A. Tyler, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

James A. Lutz, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
05501	13679762.94	2114964.70	651.41	PROP
05502	13679757.26	2114964.69	651.50	PROP
05503	13679757.25	2114969.66	651.57	PROP
05504	13679762.25	2114974.61	651.43	PROP
05505	13679767.25	2114974.56	651.36	PROP
05506	13679767.19	2114968.72	651.27	PROP

REV. NO.	DATE	DESCRIPTION	BY

Texas Department of Transportation © 2019

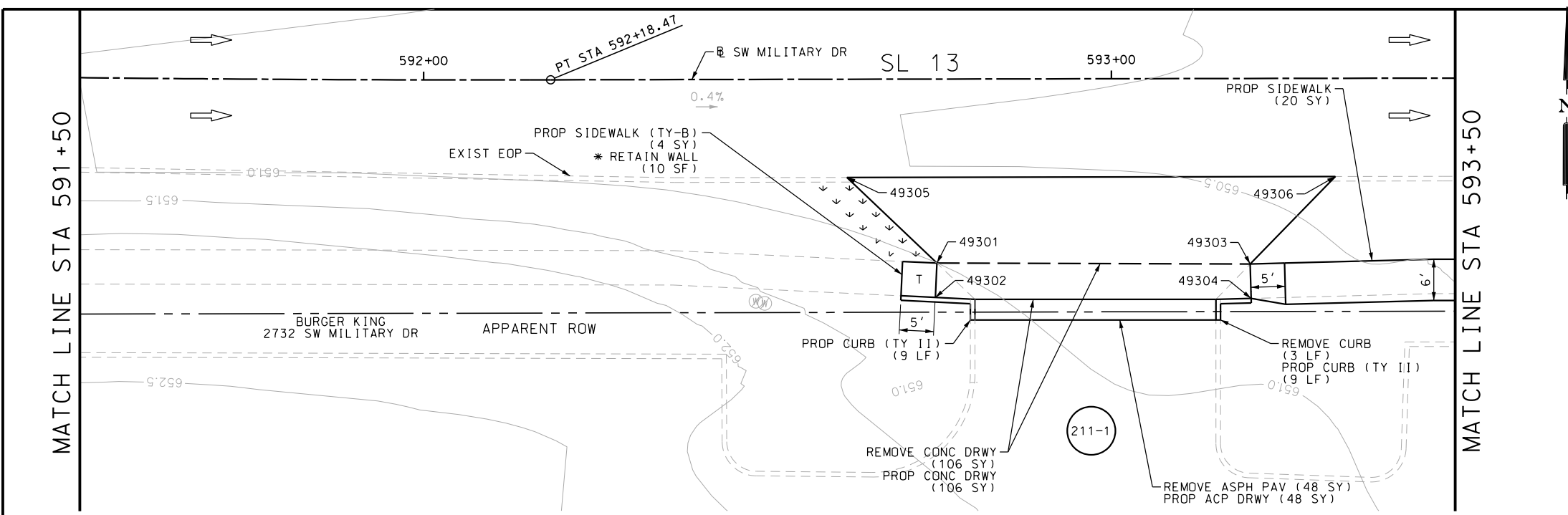
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 589+50 TO STA 591+50

SHEET 24 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	210

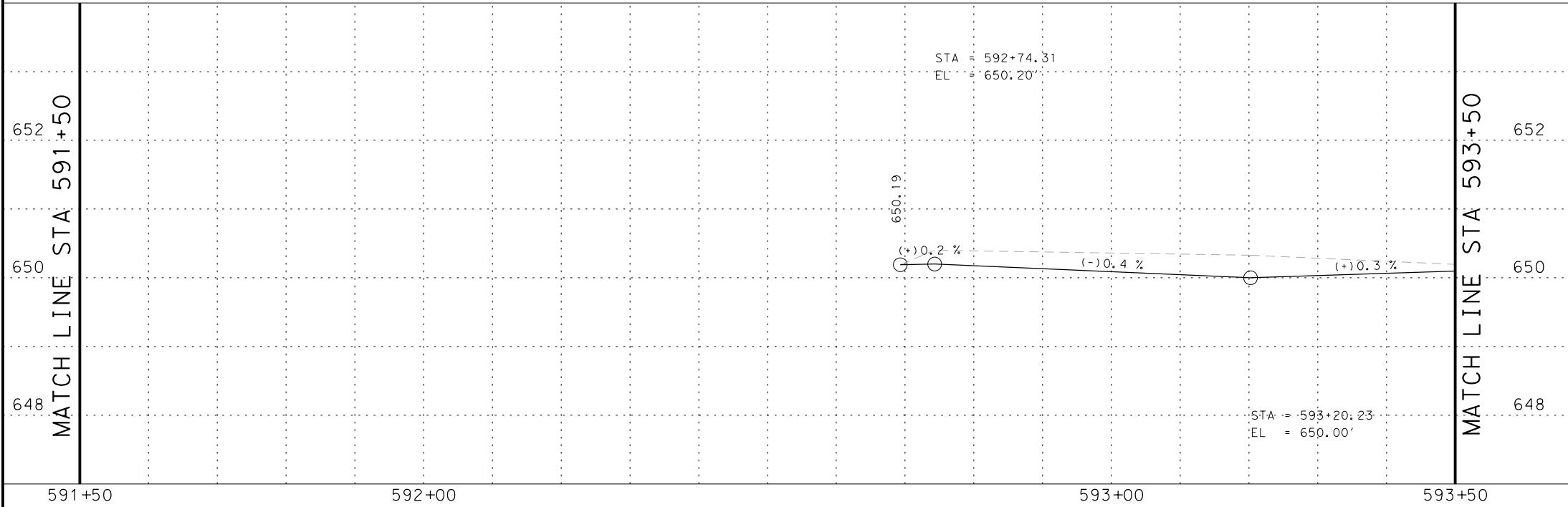
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI\1113507\*SWMI\1113507\*211-1.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	106
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	3
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	48
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	8
0162-6002	BLOCK SODDING	SY	8
0168-6001	VEGETATIVE WATERING	MG	0.12
0529-6002	CONC CURB (TY II)	LF	18
0530-6004	DRIVEWAYS (CONC)	SY	106
0530-6005	DRIVEWAYS (ACP)	SY	48
0531-6001	CONC SIDEWALKS (4")	SY	20
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

STATE OF TEXAS  
 JOHN A. TYLER, P.E.  
 LICENSED PROFESSIONAL ENGINEER  
 105193  
 DATE: 5/3/2019

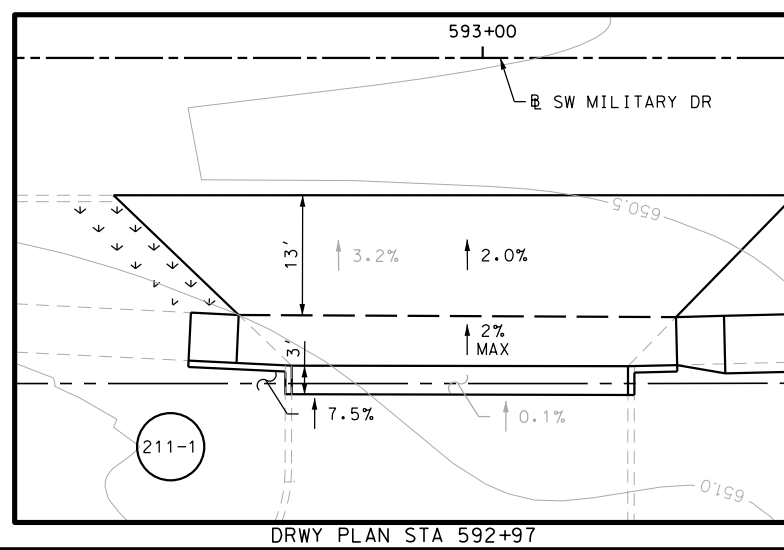
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ, P.E.  
 LICENSED PROFESSIONAL ENGINEER  
 84722  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
49301	13679766.08	2115156.75	--	PROF
49302	13679761.09	2115156.53	--	PROF
49303	13679766.12	2115202.31	--	PROF
49304	13679761.13	2115202.46	--	PROF
49305	13679778.48	2115143.63	--	ME
49306	13679778.90	2115214.64	--	ME



**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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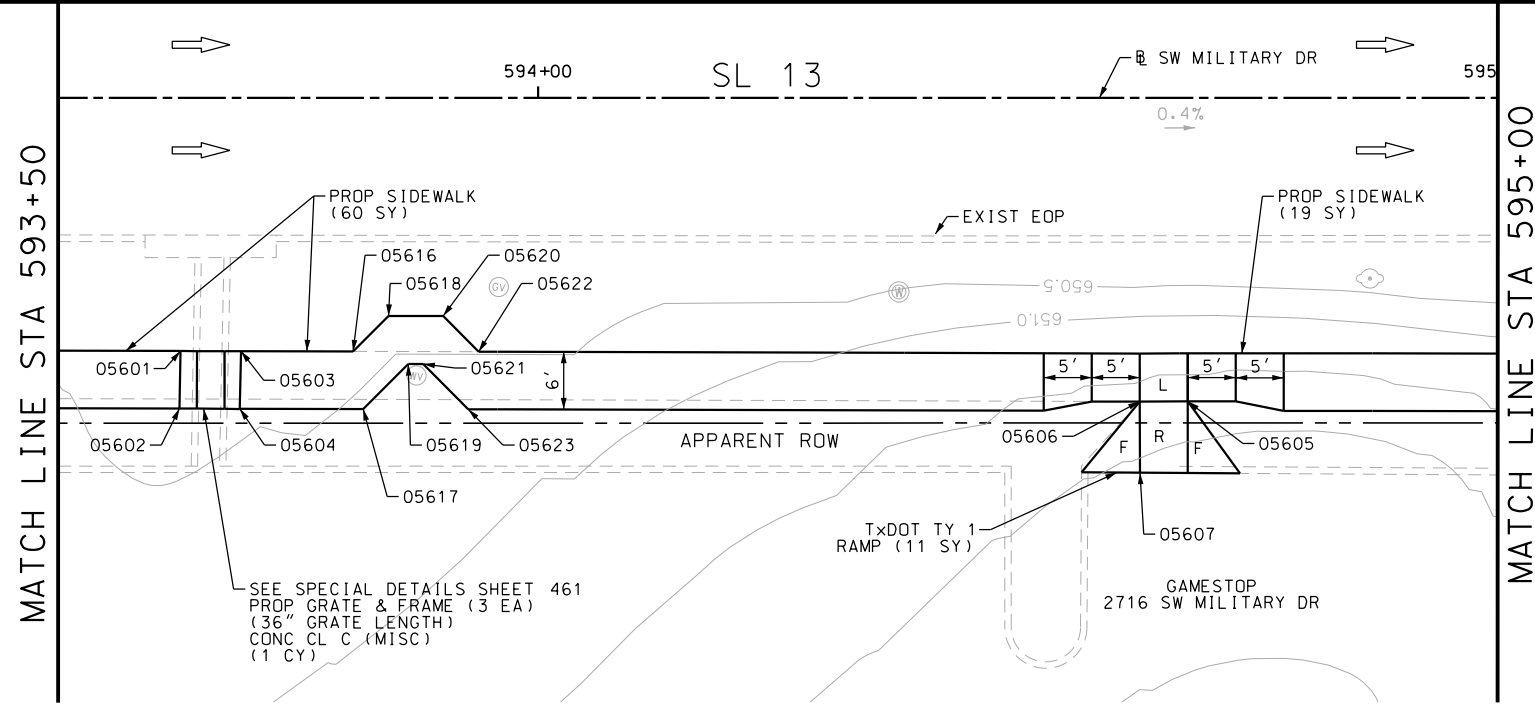
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 591+50 TO STA 593+50

SHEET 25 OF 99

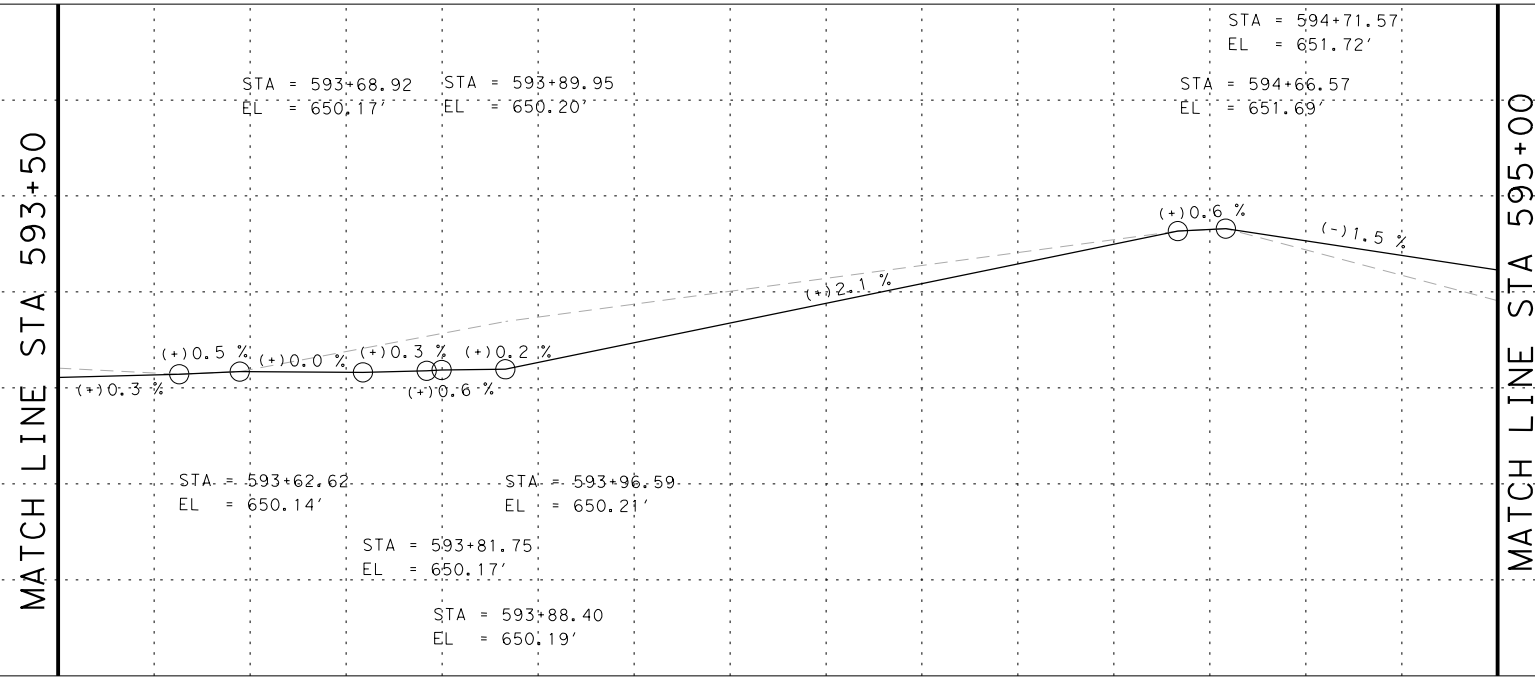
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	211

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*22PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	1.0
0471-6003	GRATE & FRAME	EA	3
0531-6001	CONC SIDEWALKS (4")	SY	79
0531-6018	CURB RAMPS (TY 1)	SY	11



- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
05601	13679766.99	2115244.91	650.07	PROP
05602	13679761.99	2115244.85	650.14	PROP
05603	13679767.01	2115251.22	650.10	PROP
05604	13679762.01	2115251.14	650.17	PROP
05605	13679762.35	2115349.04	651.72	PROP
05606	13679762.31	2115344.89	651.69	PROP
05607	13679754.89	2115344.94	--	ME
05616	13679767.05	2115262.89	650.11	PROP
05617	13679762.06	2115264.97	650.17	PROP
05618	13679770.76	2115266.57	650.12	PROP
05619	13679765.77	2115268.66	650.19	PROP
05620	13679770.78	2115272.27	650.13	PROP
05621	13679765.78	2115270.21	650.20	PROP
05622	13679767.10	2115275.98	650.14	PROP
05623	13679762.10	2115273.92	650.21	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 593+50 TO STA 595+00

SHEET 26 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	212

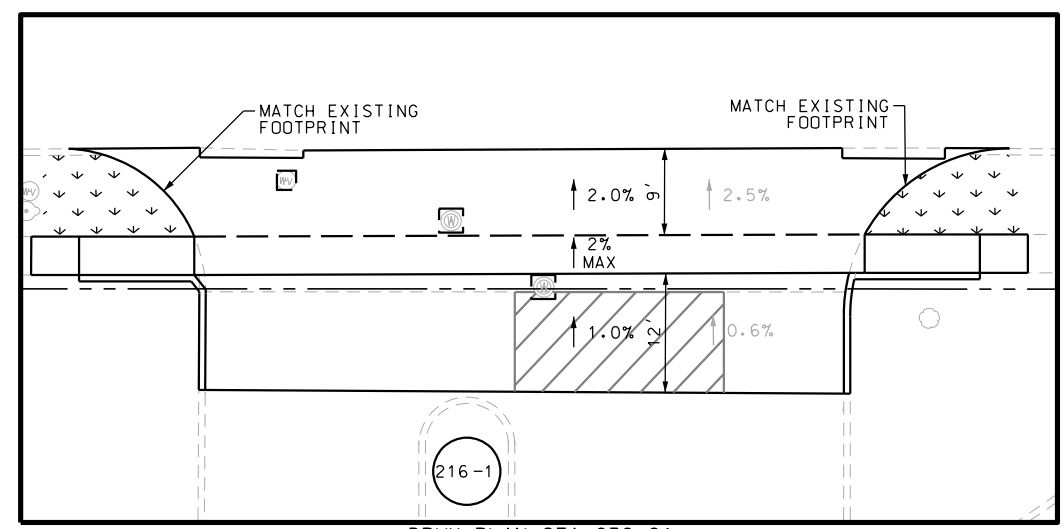
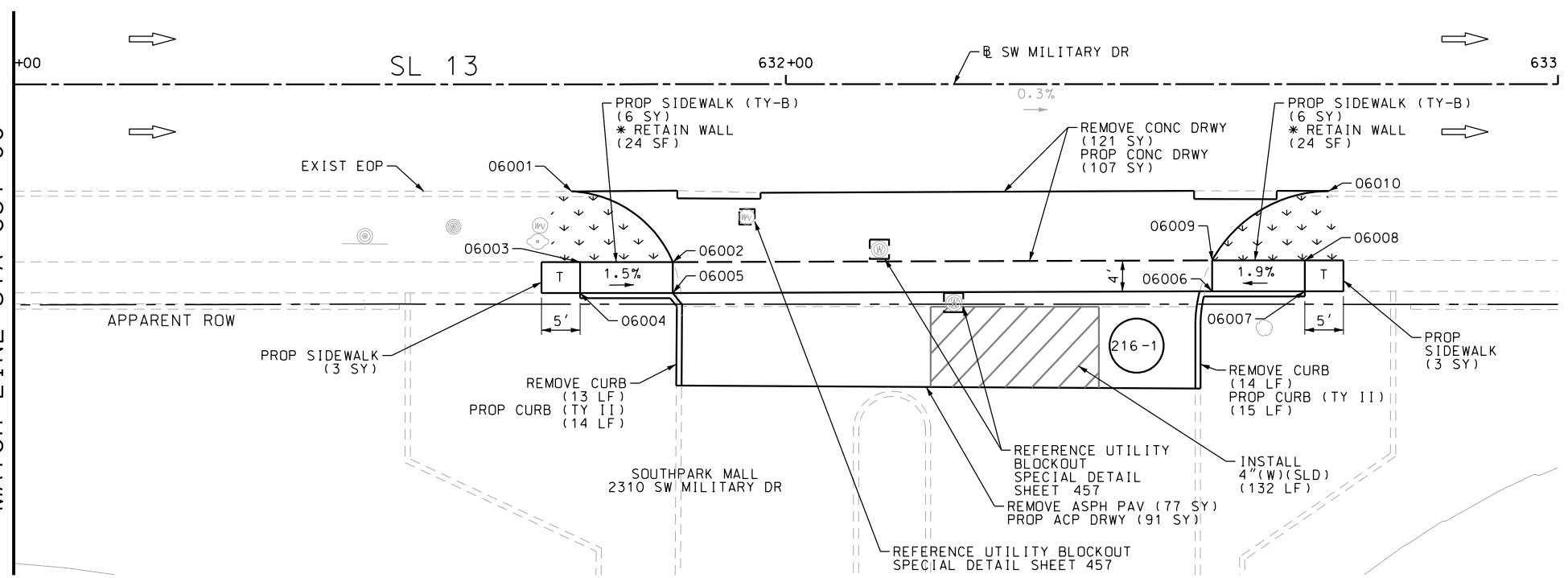
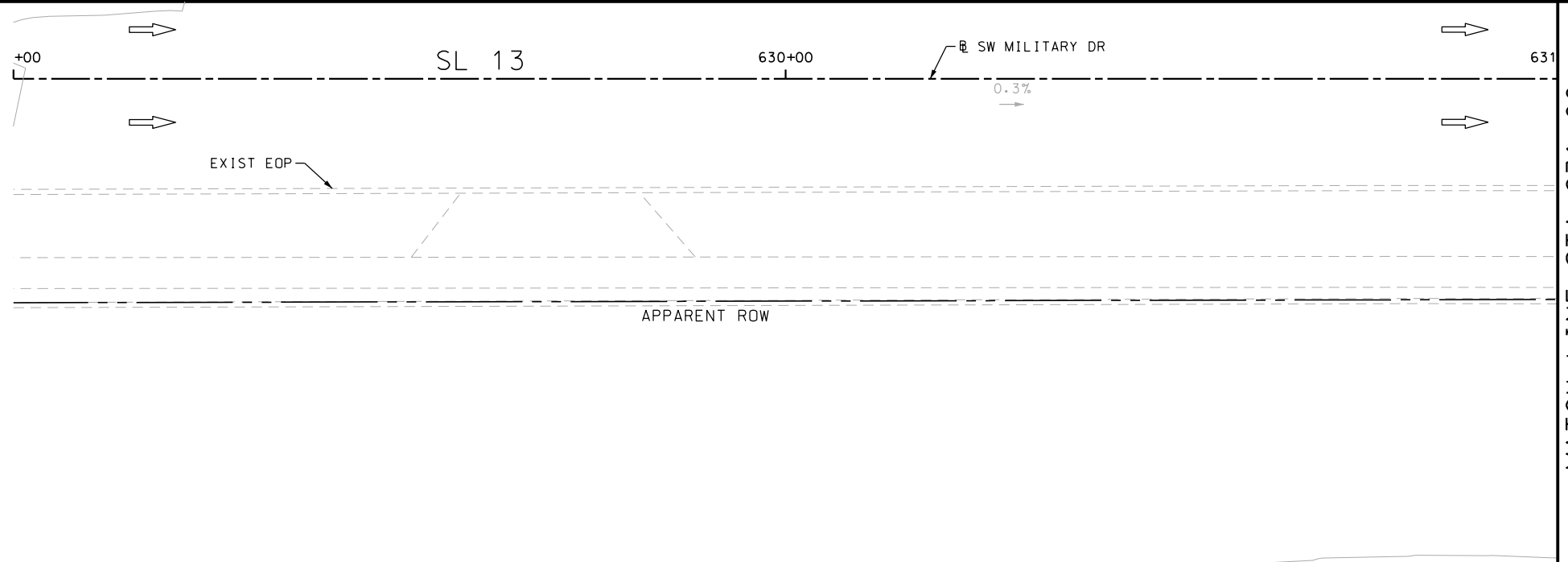






Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\1113507\*SWMI\1113507\*26.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	121
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	27
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	77
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	29
0530-6004	DRIVEWAYS (CONC)	SY	107
0530-6005	DRIVEWAYS (ACP)	SY	91
0531-6001	CONC SIDEWALKS (4")	SY	6
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	12
0666-6224	PAVEMENT SEALER 4"	LF	132
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	132
0678-6001	PAV SURF PREP FOR MRK (4")	LF	132

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  2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
06001	13679801.52	2119054.32	--	PROP
06002	13679792.44	2119067.45	642.19	PROP
06003	13679792.37	2119055.45	642.37	PROP
06004	13679788.37	2119055.47	642.44	PROP
06005	13679788.44	2119067.47	642.26	PROP
06006	13679789.06	2119137.32	642.15	PROP
06007	13679789.12	2119149.32	642.32	PROP
06008	13679793.12	2119149.29	642.25	PROP
06009	13679793.06	2119137.29	642.08	PROP
06010	13679802.11	2119152.33	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 629+00 TO STA 633+00

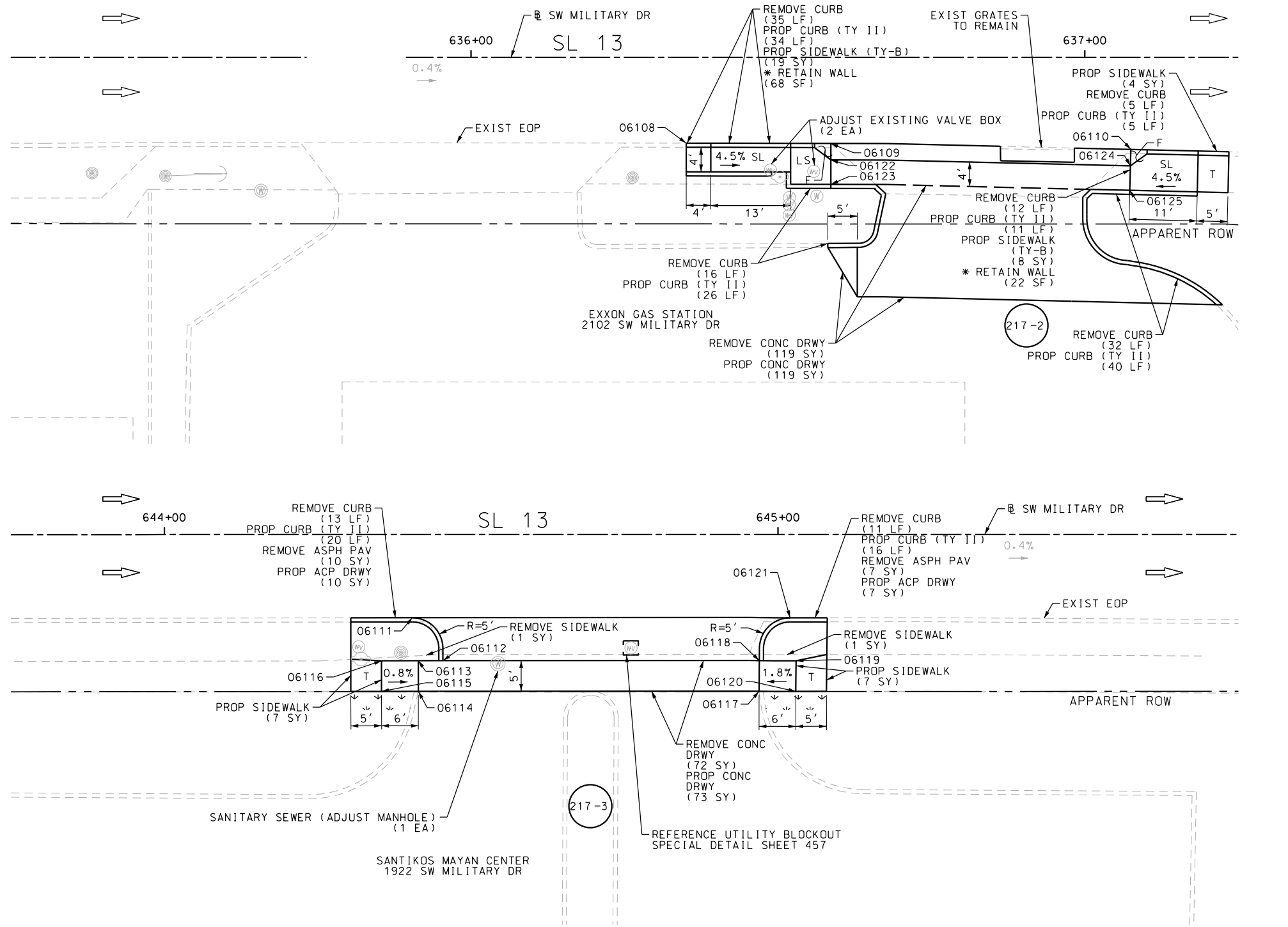
SHEET 30 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	216



Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\SWMI\113507\*SWMI\113507\*27.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	187
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	124
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	17
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	8
0162-6002	BLOCK SODDING	SY	8
0168-6001	VEGETATIVE WATERING	MG	0.12
0529-6002	CONC CURB (TY II)	LF	152
0530-6004	DRIVEWAYS (CONC)	SY	188
0530-6005	DRIVEWAYS (ACP)	SY	17
0531-6001	CONC SIDEWALKS (4")	SY	18
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	27
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
06108	13679804.09	2119517.08	--	ME
06109	13679804.18	2119540.64	--	ME
06110	13679803.50	2119589.51	--	ME
06111	13679809.15	2120322.38	--	ME
06112	13679802.18	2120327.43	--	ME
06113	13679802.15	2120323.43	641.95	PROP
06114	13679797.15	2120323.47	642.02	PROP
06115	13679797.11	2120317.47	642.07	PROP
06116	13679802.11	2120317.43	642.00	PROP
06117	13679797.49	2120378.96	641.36	PROP
06118	13679802.49	2120378.98	641.29	PROP
06119	13679802.50	2120384.98	641.40	PROP
06120	13679797.50	2120384.96	641.47	PROP
06121	13679809.49	2120383.96	--	ME
06122	13679801.51	2119540.65	--	ME
06123	13679797.51	2119540.67	641.13	PROP
06124	13679800.83	2119589.46	640.94	PROP
06125	13679796.83	2119589.39	641.03	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

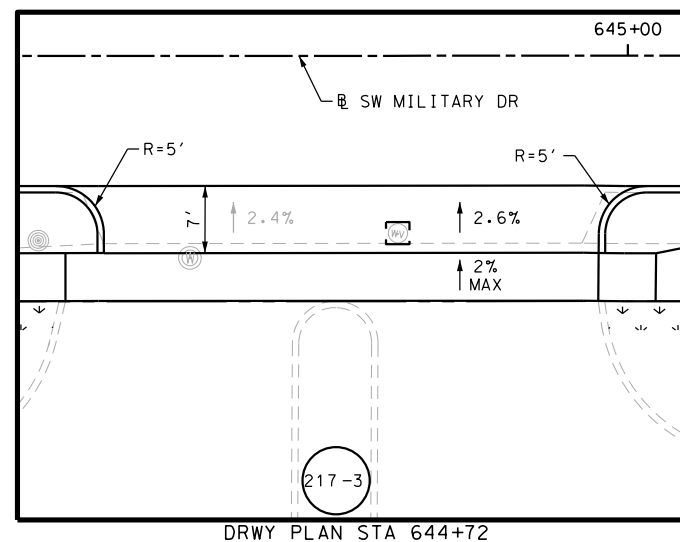
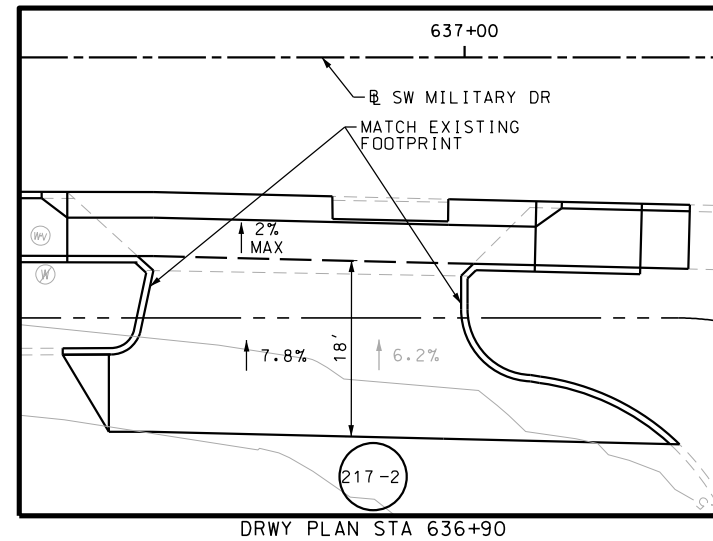
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 635+25 TO STA 637+25  
 STA 643+75 TO STA 645+75  
 SHEET 31 OF 99

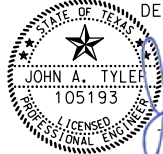
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CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	217

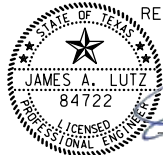
Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507\*SWMilitaryB\*27A.dgn



- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

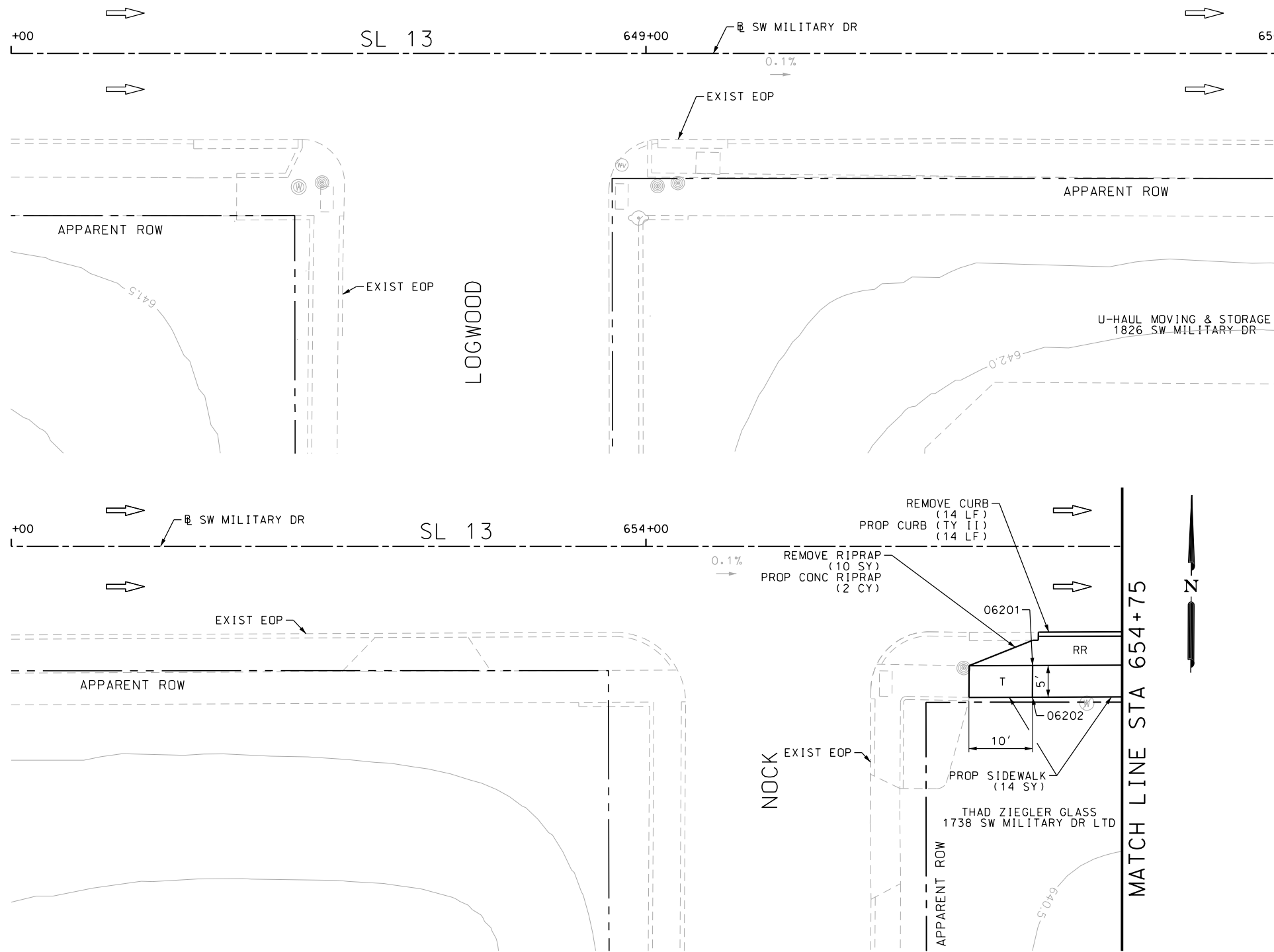
Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 635+25 TO STA 637+25  
 STA 643+75 TO STA 645+75  
 SHEET 32 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	218

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*28.dgn



POINT	NORTHING	EASTING	ELEV	DESC
06201	13679809.85	2121342.92	639.62	PROP
06202	13679804.85	2121342.92	639.69	PROP

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	10
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	14
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	14

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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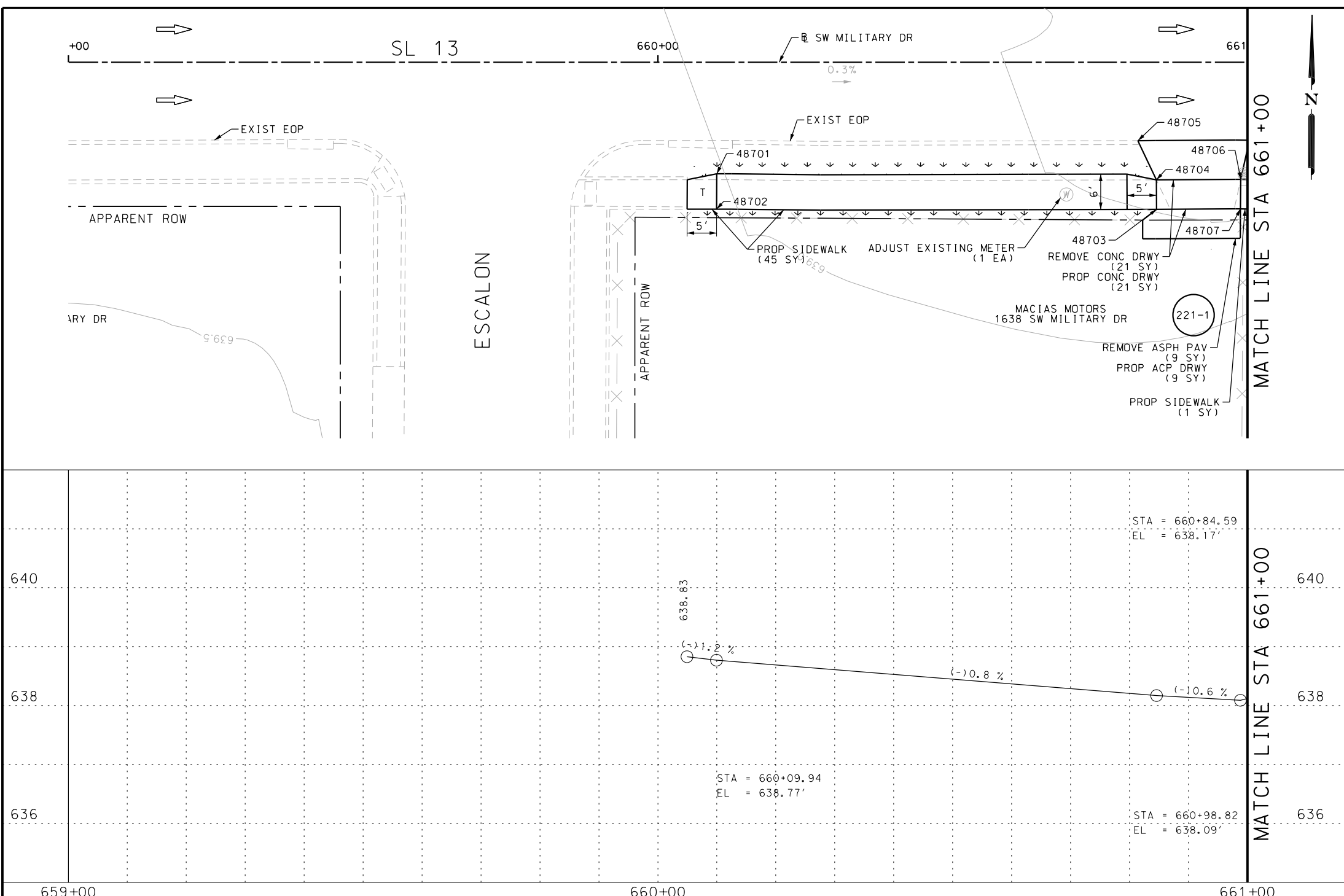
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 648+00 TO STA 650+00  
 STA 653+00 TO STA 654+75  
 SHEET 33 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	219



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM11113507\SWM11113507\29pp.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	21
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	9
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0530-6004	DRIVEWAYS (CONC)	SY	21
0530-6005	DRIVEWAYS (ACP)	SY	9
0531-6001	CONC SIDEWALKS (4")	SY	46
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

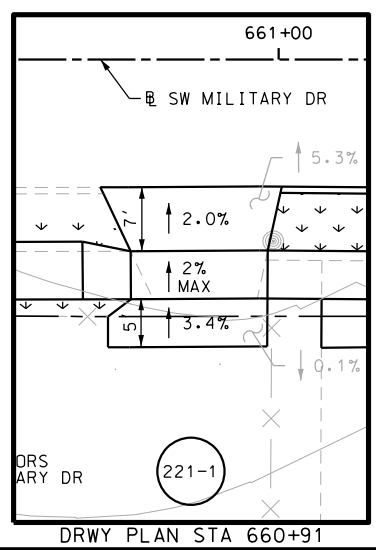
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 659+00 TO STA 661+00

SHEET 35 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	221

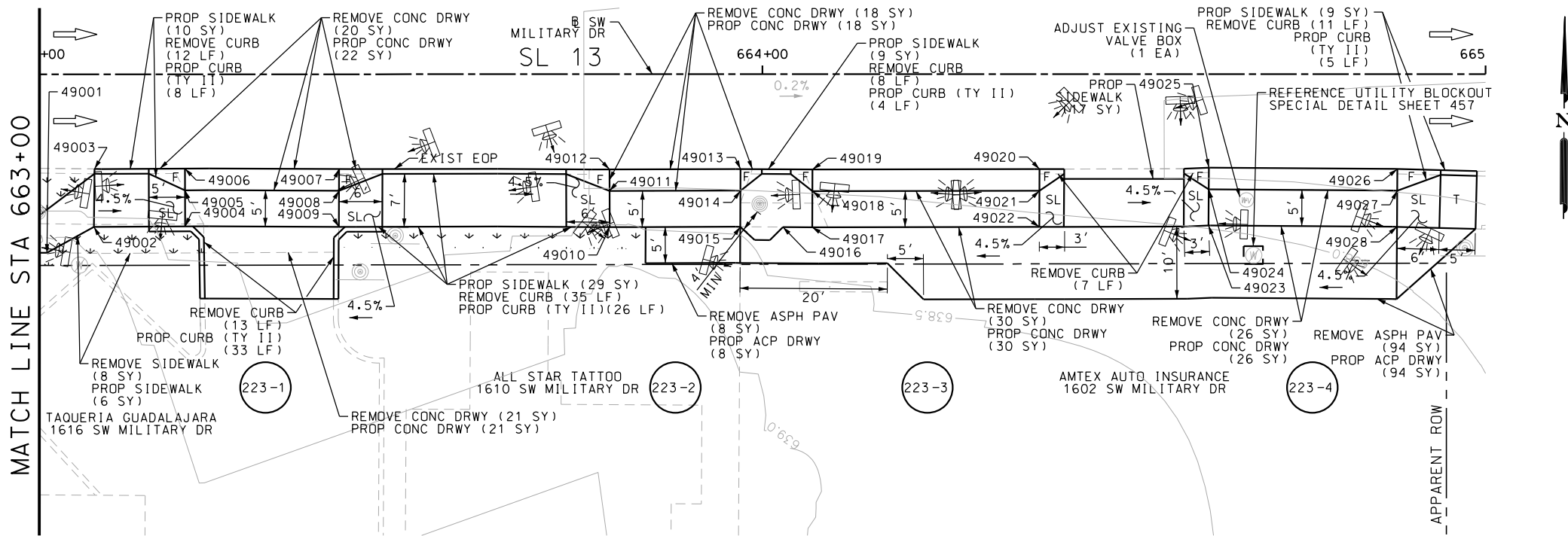


POINT	NORTHING	EASTING	ELEV	DESC
48701	13679812.87	2121891.99	--	PROF
48702	13679806.87	2121891.99	--	PROF
48703	13679807.25	2121966.64	--	PROF
48704	13679812.25	2121966.58	--	PROF
48705	13679818.90	2121963.39	--	ME
48706	13679812.42	2121980.88	--	PROF
48707	13679807.42	2121980.87	--	PROF



Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*30PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	115
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	86
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	102
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	76
0530-6004	DRIVEWAYS (CONC)	SY	117
0530-6005	DRIVEWAYS (ACP)	SY	102
0531-6001	CONC SIDEWALKS (4")	SY	80
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

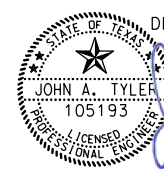
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

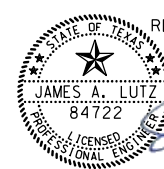
POINT	NORTHING	EASTING	ELEV	DESC
06401	13679813.12	2122086.63	--	PROF
06402	13679816.67	2122092.09	--	PROF
06403	13679813.26	2122100.99	--	PROF
06404	13679820.25	2122164.84	--	ME
06405	13679812.50	2122001.43	--	PROF
06406	13679807.50	2122001.49	--	PROF
06407	13679819.11	2121996.63	--	ME
06409	13679812.69	2122026.54	--	PROF
06415	13679807.68	2122036.50	--	PROF
06416	13679812.68	2122036.51	--	PROF
06418	13679819.71	2122077.21	--	ME
06419	13679812.96	2122068.77	--	PROF
06420	13679807.96	2122068.81	--	PROF
06421	13679808.12	2122086.67	--	PROF
06422	13679808.26	2122101.04	--	PROF
06423	13679816.71	2122097.47	--	PROF
06425	13679808.17	2122113.58	--	PROF
06426	13679813.18	2122113.63	--	PROF
06427	13679819.90	2122108.71	--	ME
06429	13679813.29	2122127.92	--	PROF

POINT	NORTHING	EASTING	ELEV	DESC
06430	13679808.29	2122128.01	--	PROF
06431	13679808.47	2122137.79	--	PROF
06432	13679813.47	2122137.70	--	PROF
06433	13679808.51	2122158.36	--	PROF
06434	13679813.51	2122158.35	--	PROF
06435	13679813.60	2122165.94	--	PROF
06436	13679808.59	2122165.95	--	PROF
06437	13679808.64	2122171.02	--	PROF
06438	13679813.69	2122170.94	--	PROF
06439	13679813.79	2122181.79	--	PROF
06455	13679807.69	2122026.53	--	PROF
06468	13679819.09	2121982.29	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
49001	13679808.78	2122183.08	--	PROF
49002	13679812.39	2122189.56	--	PROF
49003	13679820.41	2122189.60	--	ME
49004	13679812.52	2122202.17	--	PROF
49005	13679817.52	2122202.12	--	PROF
49006	13679820.52	2122202.09	--	ME
49007	13679820.59	2122223.42	--	ME
49008	13679817.59	2122223.42	--	PROF
49009	13679812.59	2122223.42	--	PROF
49010	13679812.75	2122260.87	--	PROF
49011	13679817.75	2122260.83	--	PROF
49012	13679820.75	2122260.80	--	ME
49013	13679820.90	2122278.94	--	ME
49014	13679817.90	2122278.94	--	PROF
49015	13679812.90	2122278.94	--	PROF
49016	13679812.90	2122284.83	--	ME
49017	13679812.90	2122288.88	--	PROF
49018	13679817.90	2122288.88	--	PROF
49019	13679820.90	2122288.88	--	ME
49020	13679821.12	2122320.28	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
49021	13679818.12	2122320.28	--	PROF
49022	13679813.12	2122320.28	--	PROF
49023	13679813.44	2122343.69	--	PROF
49024	13679818.44	2122343.69	--	PROF
49025	13679821.45	2122343.69	--	ME
49026	13679821.41	2122369.75	--	ME
49027	13679818.41	2122369.75	--	PROF
49028	13679813.41	2122369.75	--	PROF

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

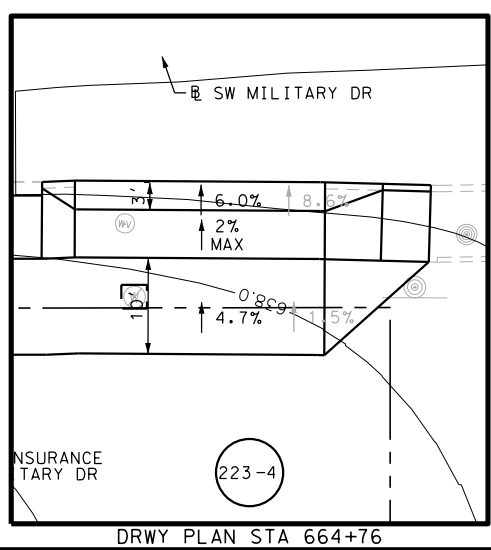
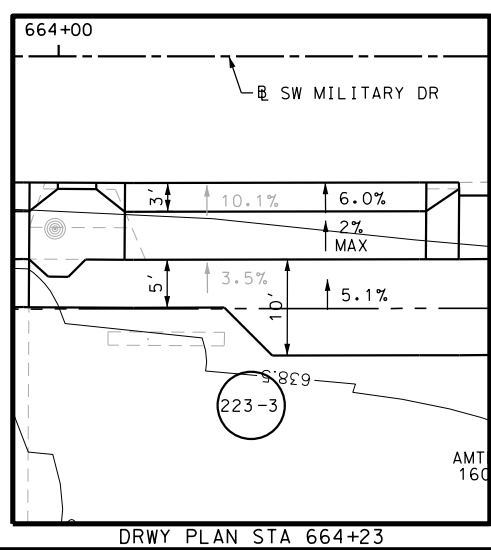
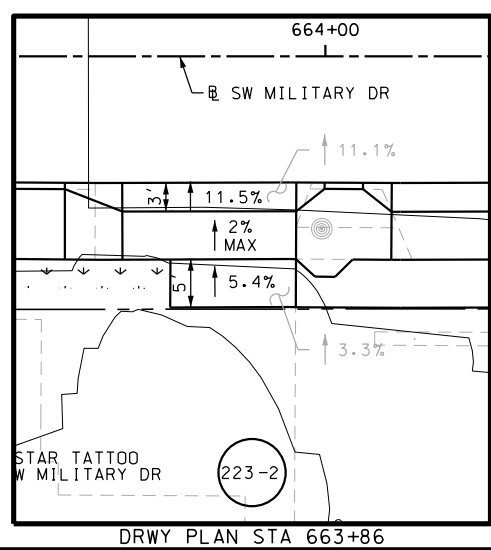
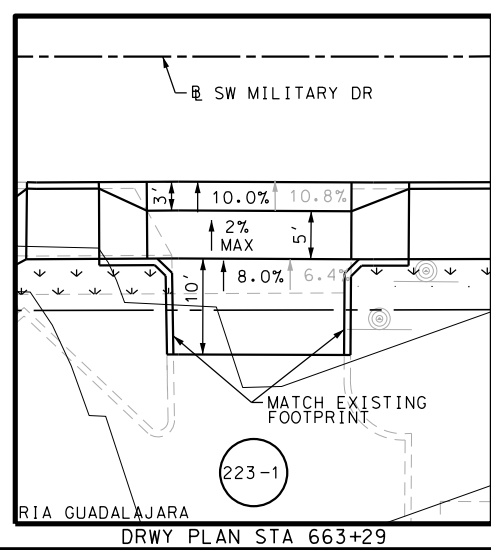
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 663+00 TO STA 665+00

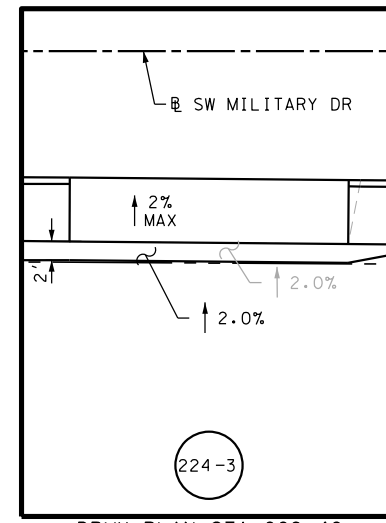
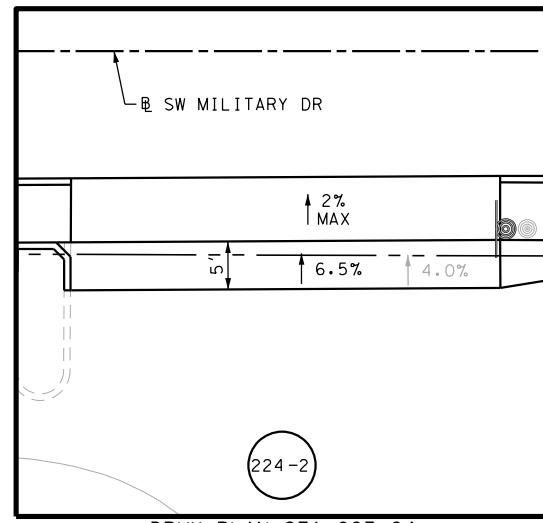
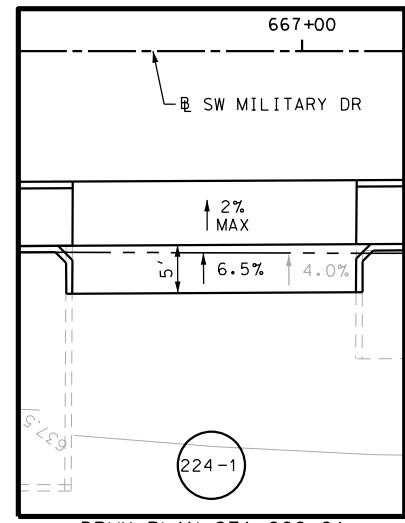
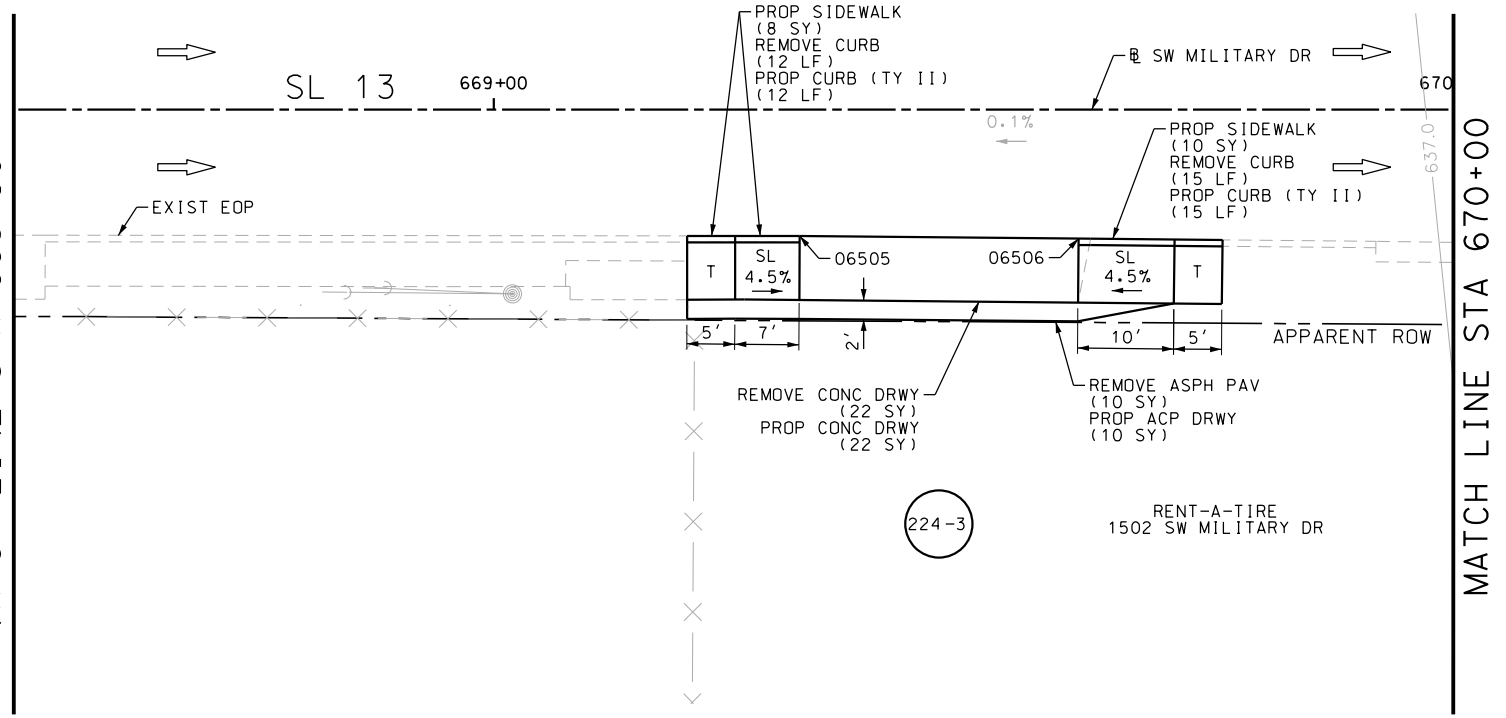
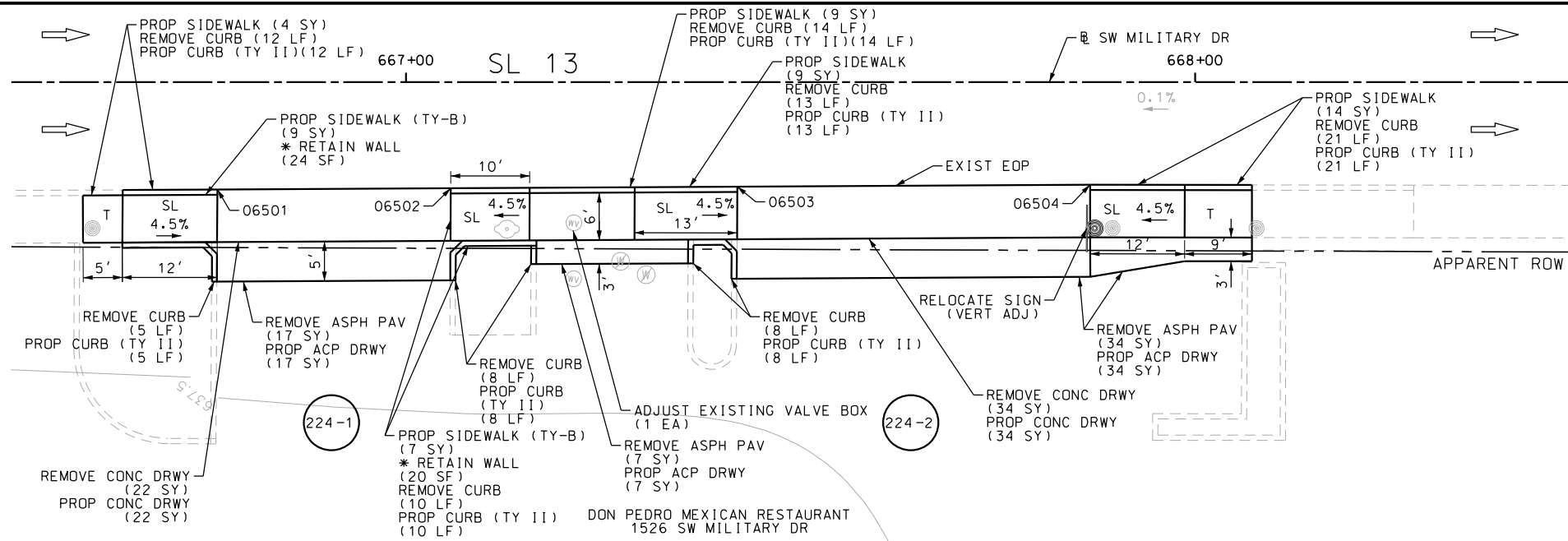
SHEET 37 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	223



Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*31.dgn



POINT	NORTHING	EASTING	ELEV	DESC
06501	13679822.04	2122558.07	--	ME
06502	13679822.36	2122587.65	--	ME
06503	13679822.77	2122623.95	--	ME
06504	13679823.27	2122668.66	--	ME
06505	13679823.96	2122813.84	--	ME
06506	13679823.86	2122842.90	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	56
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	91
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	58
0529-6002	CONC CURB (TY II)	LF	91
0530-6004	DRIVEWAYS (CONC)	SY	56
0530-6005	DRIVEWAYS (ACP)	SY	58
0531-6001	CONC SIDEWALKS (4")	SY	36
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 666+50 TO STA 670+00

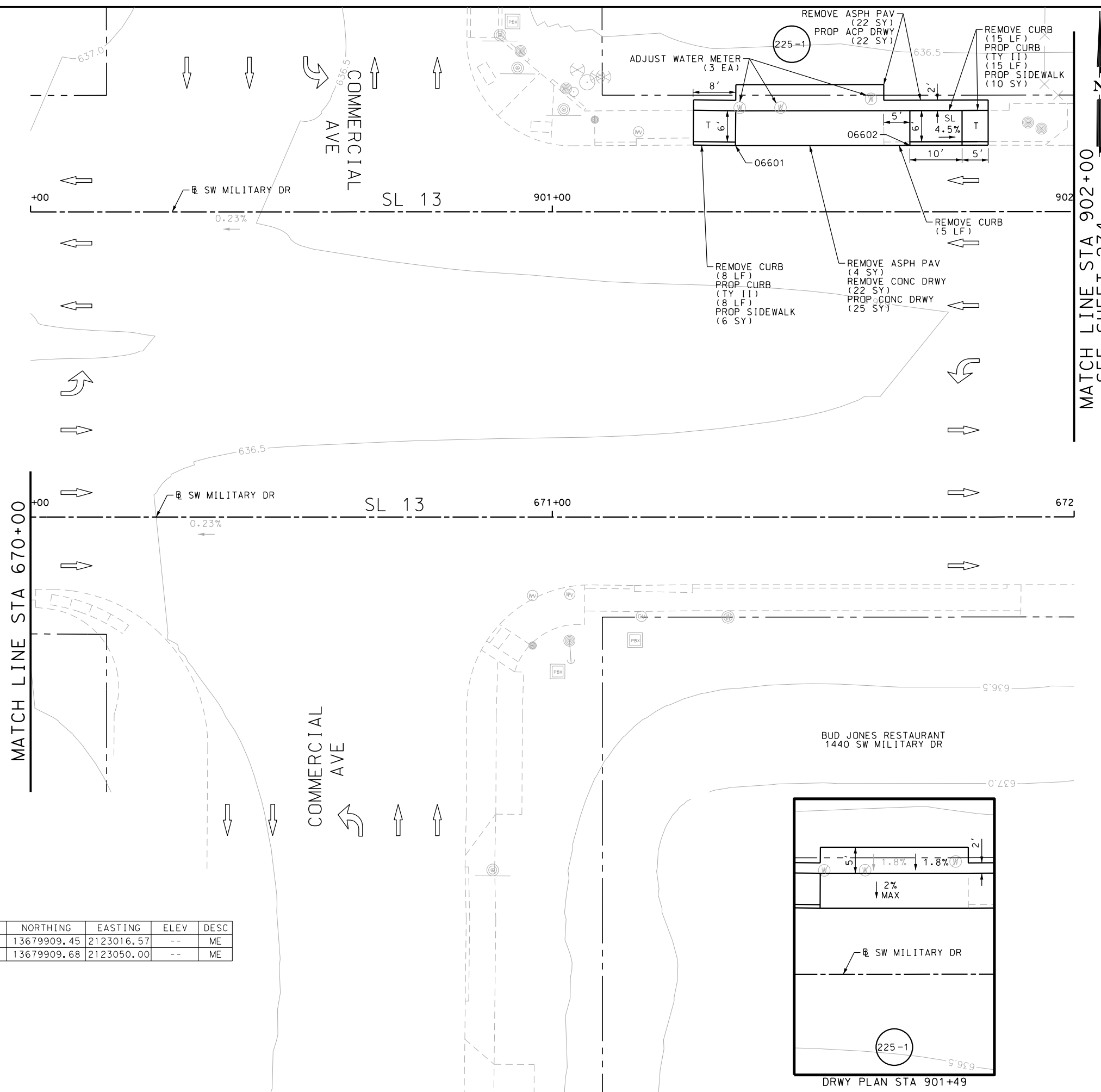
SHEET 38 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				224



Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*32.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	22
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	28
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	26
0529-6002	CONC CURB (TY II)	LF	23
0530-6004	DRIVEWAYS (CONC)	SY	25
0530-6005	DRIVEWAYS (ACP)	SY	22
0531-6001	CONC SIDEWALKS (4")	SY	16
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	3

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

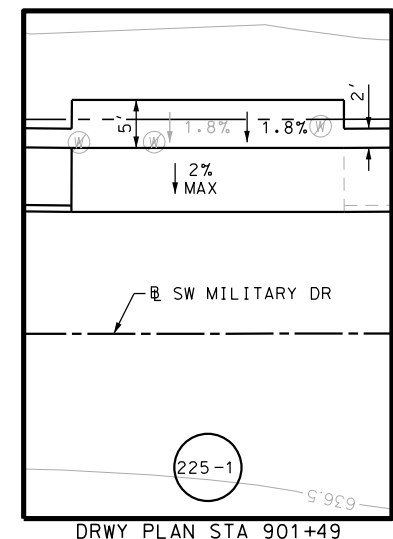
**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 670+00 TO STA 672+00  
 STA 900+00 TO STA 902+00  
 SHEET 39 OF 99

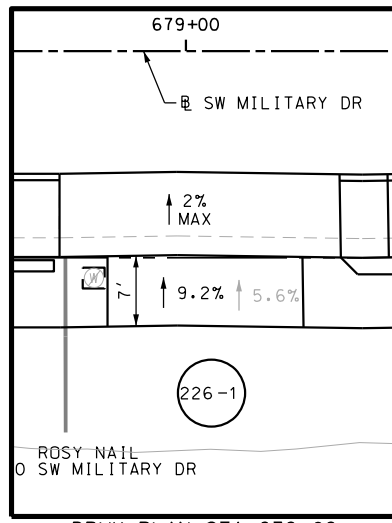
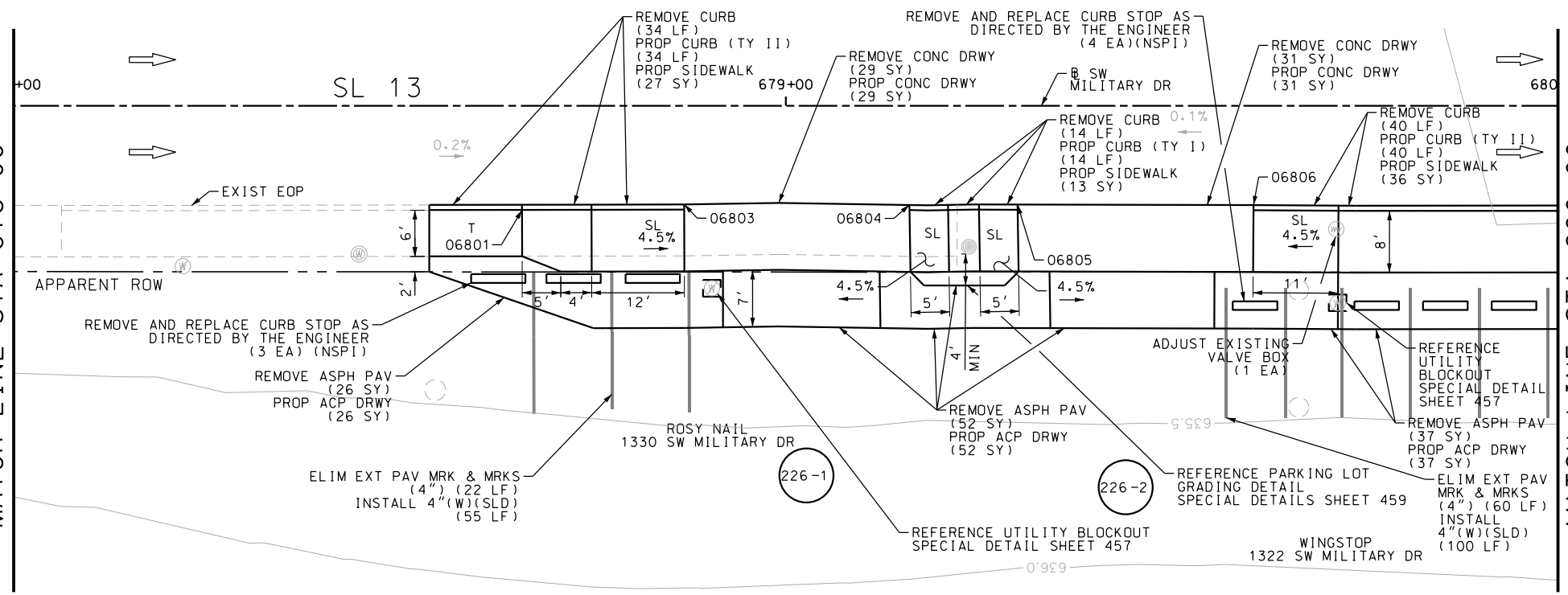
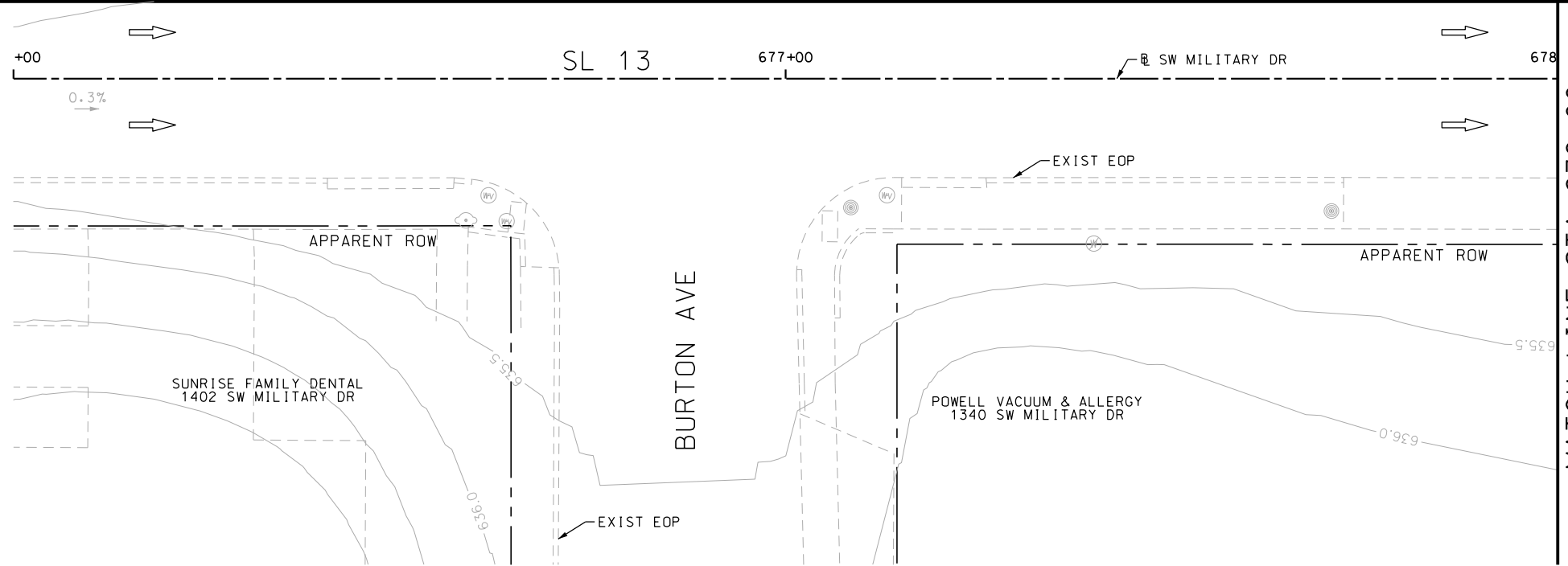
POINT	NORTHING	EASTING	ELEV	DESC
06601	13679909.45	2123016.57	--	ME
06602	13679909.68	2123050.00	--	ME



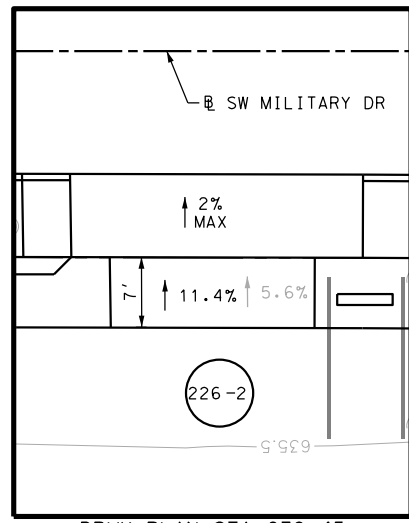
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	225

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*34.dgn



DRWY PLAN STA 679+02



DRWY PLAN STA 679+45

POINT	NORTHING	EASTING	ELEV	DESC
06801	13679829.04	2123747.79	--	ME
06803	13679829.86	2123768.78	--	ME
06804	13679829.97	2123797.95	--	ME
06805	13679830.10	2123811.95	--	ME
06806	13679830.21	2123842.51	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	60
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	88
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	115
0529-6001	CONC CURB (TY I)	LF	14
0529-6002	CONC CURB (TY II)	LF	74
0530-6004	DRIVEWAYS (CONC)	SY	60
0530-6005	DRIVEWAYS (ACP)	SY	115
0531-6001	CONC SIDEWALKS (4")	SY	76
0666-6224	PAVEMENT SEALER 4"	LF	155
0666-6303	RE PM W/RET REQ TY I (W)4" (SLD) (100MIL)	LF	155
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	82
0678-6001	PAV SURF PREP FOR MRK (4")	LF	155
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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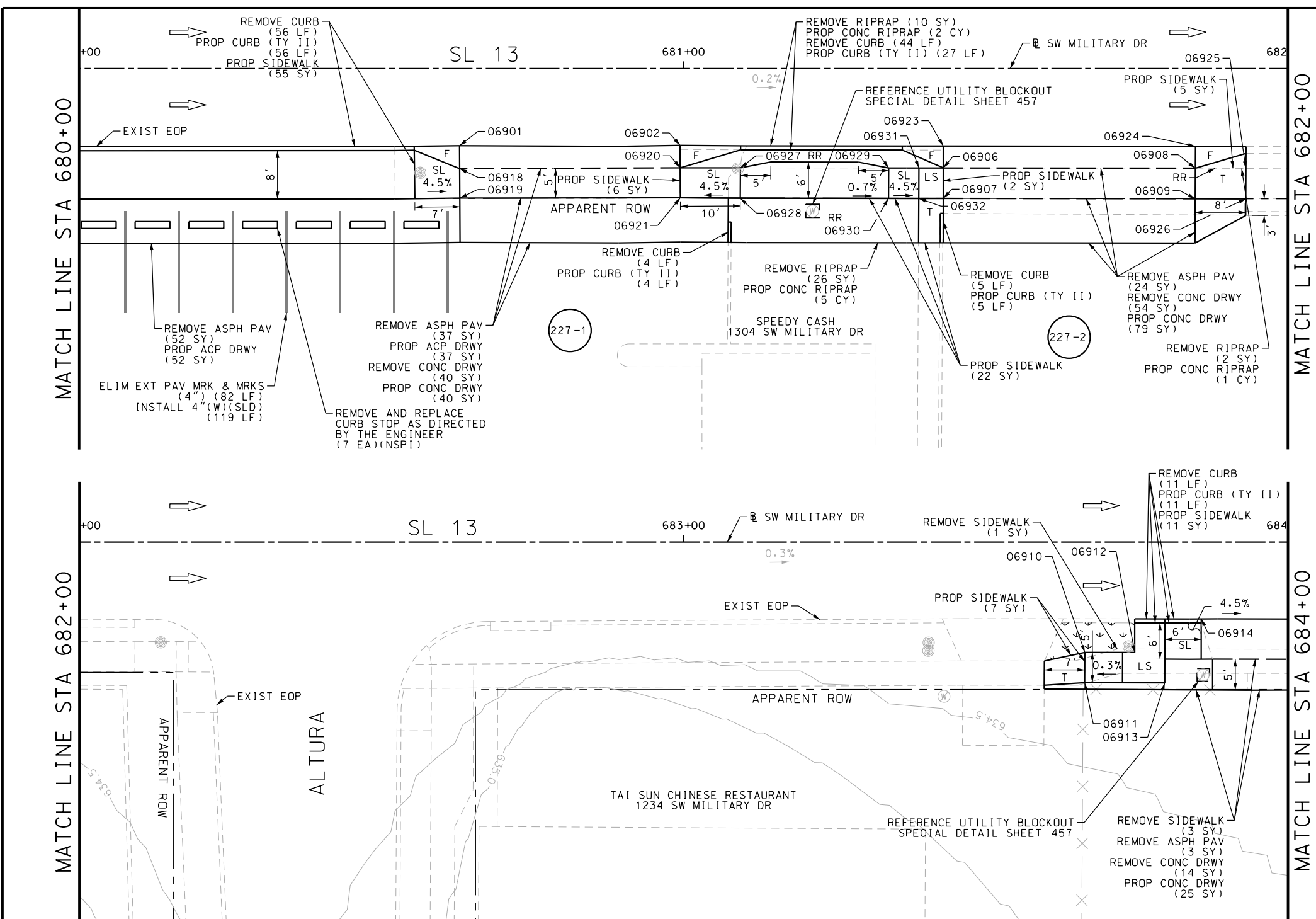
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 676+00 TO STA 680+00

SHEET 40 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				226

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*35.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	38
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	108
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	120
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	116
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	8
0162-6002	BLOCK SODDING	SY	8
0168-6001	VEGETATIVE WATERING	MG	0.12
0432-6003	RIPRAP (CONC) (6 IN)	CY	8
0529-6002	CONC CURB (TY II)	LF	103
0530-6004	DRIVEWAYS (CONC)	SY	144
0530-6005	DRIVEWAYS (ACP)	SY	89
0531-6001	CONC SIDEWALKS (4")	SY	108
0666-6224	PAVEMENT SEALER 4"	LF	119
0666-6303	RE PM W/RET REQ TY I (W)4" (SLD) (100MIL)	LF	119
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	82
0678-6001	PAV SURF PREP FOR MRK (4")	LF	119

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

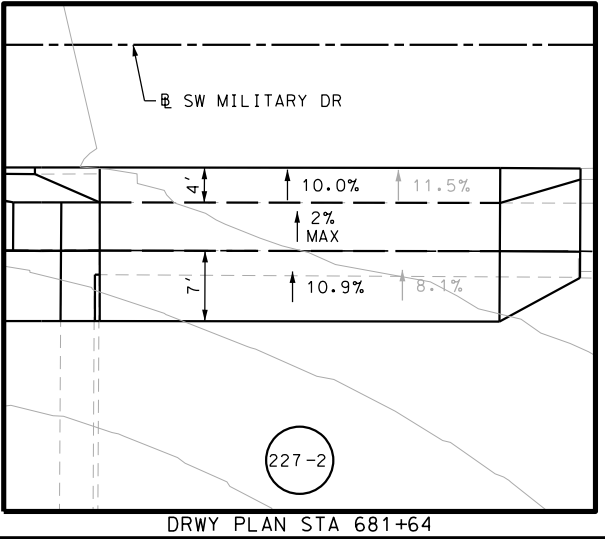
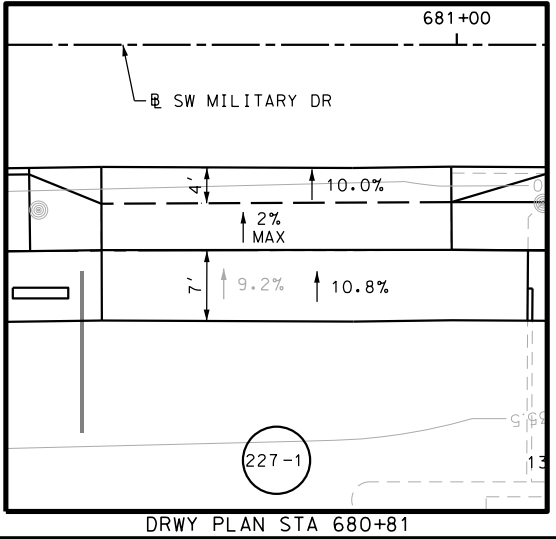
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 680+00 TO STA 684+00

SHEET 41 OF 99

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DWG:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				227

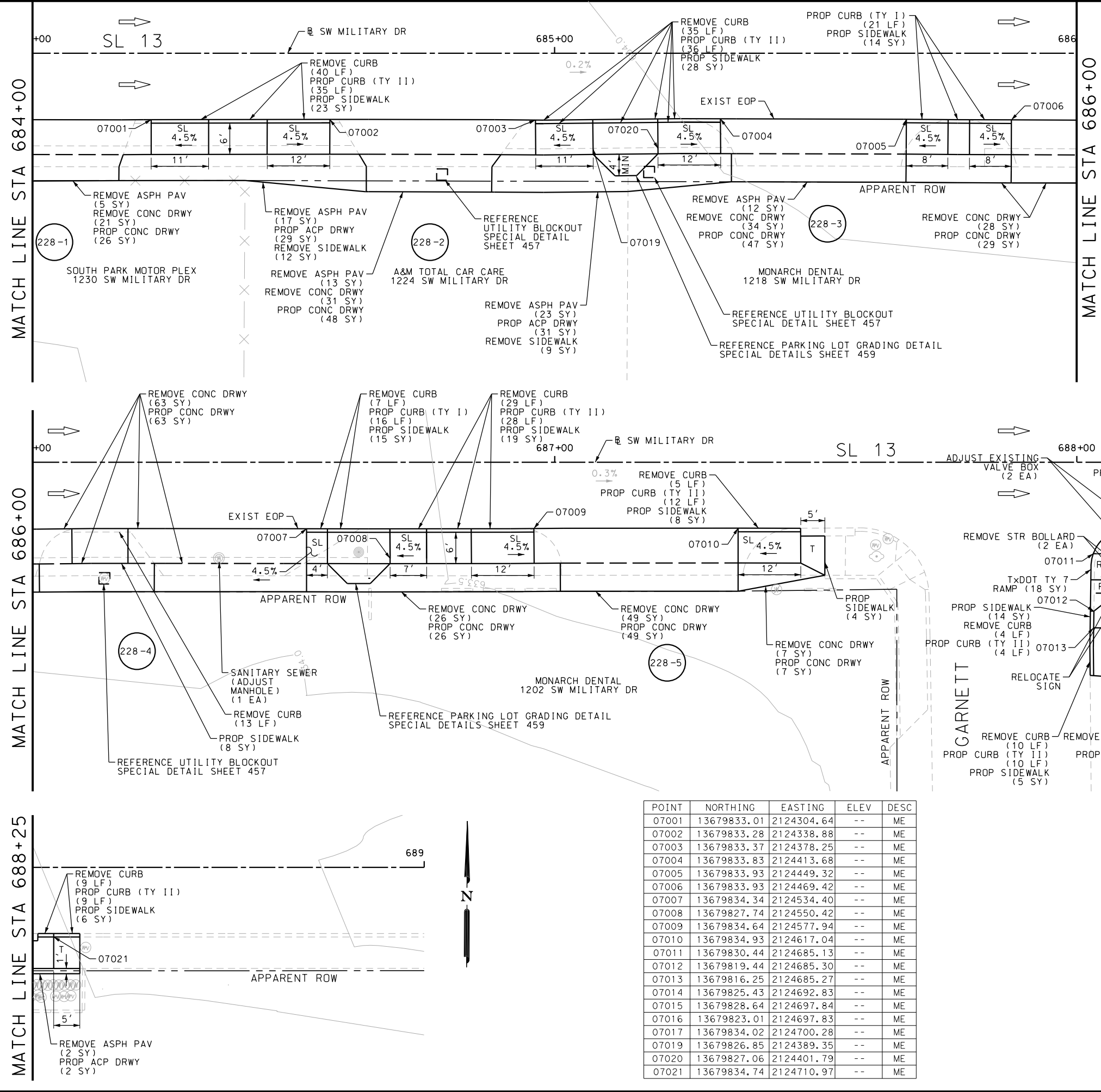


POINT	NORTHING	EASTING	ELEV	DESC
06901	13679830.91	2123944.88	--	ME
06902	13679831.17	2123981.36	--	ME
06906	13679827.68	2124024.94	634.21	PROP
06907	13679822.65	2124024.97	634.28	PROP
06908	13679827.88	2124066.64	634.11	PROP
06909	13679822.84	2124066.65	634.18	PROP
06910	13679827.17	2124248.34	--	ME
06911	13679822.17	2124248.36	--	ME
06912	13679827.20	2124256.59	--	ME
06913	13679822.22	2124261.61	--	ME
06914	13679832.82	2124267.56	--	ME
06918	13679827.09	2123944.92	634.37	PROP
06919	13679822.24	2123944.97	634.44	PROP
06920	13679827.46	2123981.40	634.22	PROP
06921	13679822.50	2123981.44	634.29	PROP
06923	13679831.32	2124024.92	--	ME
06924	13679831.51	2124066.64	--	ME
06925	13679827.89	2124075.01	--	ME
06926	13679822.85	2124075.02	--	ME
06927	13679827.51	2123991.38	634.67	PROP

POINT	NORTHING	EASTING	ELEV	DESC
06928	13679822.49	2123991.38	634.74	PROP
06929	13679827.63	2124015.92	634.50	PROP
06930	13679822.60	2124015.92	634.57	PROP
06931	13679827.65	2124020.92	634.27	PROP
06932	13679822.62	2124020.92	634.34	PROP

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*36.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	243
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	157
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	21
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	89
0496-6030	REMOVE STR (BOLLARD)	EA	2
0529-6001	CONC CURB (TY I)	LF	37
0529-6002	CONC CURB (TY II)	LF	125
0530-6004	DRIVEWAYS (CONC)	SY	295
0530-6005	DRIVEWAYS (ACP)	SY	79
0531-6001	CONC SIDEWALKS (4")	SY	156
0531-6024	CURB RAMPS (TY 7)	SY	18
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

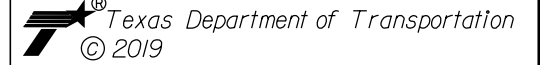
STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 684+00 TO STA 689+00

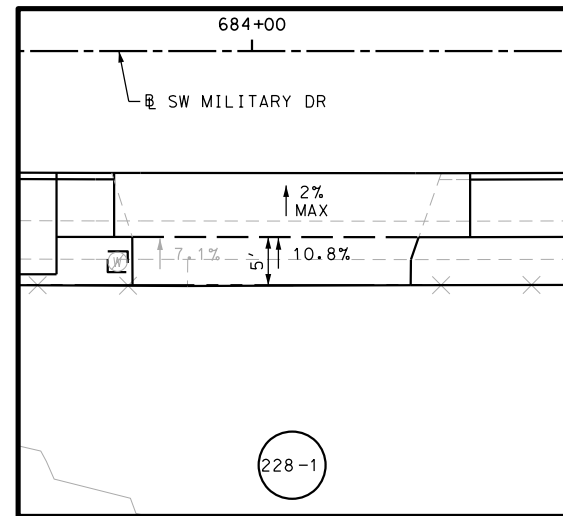
SHEET 42 OF 99

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIABLES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	228

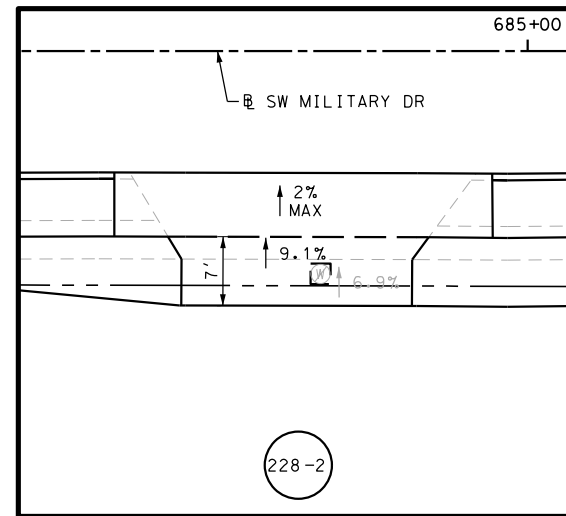
POINT	NORTHING	EASTING	ELEV	DESC
07001	13679833.01	2124304.64	--	ME
07002	13679833.28	2124338.88	--	ME
07003	13679833.37	2124378.25	--	ME
07004	13679833.83	2124413.68	--	ME
07005	13679833.93	2124449.32	--	ME
07006	13679833.93	2124469.42	--	ME
07007	13679834.34	2124534.40	--	ME
07008	13679827.74	2124550.42	--	ME
07009	13679834.64	2124577.94	--	ME
07010	13679834.93	2124617.04	--	ME
07011	13679830.44	2124685.13	--	ME
07012	13679819.44	2124685.30	--	ME
07013	13679816.25	2124685.27	--	ME
07014	13679825.43	2124692.83	--	ME
07015	13679828.64	2124697.84	--	ME
07016	13679823.01	2124697.83	--	ME
07017	13679834.02	2124700.28	--	ME
07019	13679826.85	2124389.35	--	ME
07020	13679827.06	2124401.79	--	ME
07021	13679834.74	2124710.97	--	ME

Plotted on: 5/3/2019

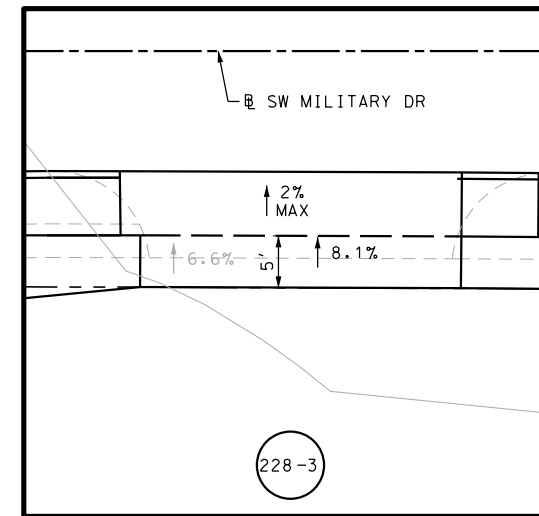
Design File name: P:\111\35\07\design\Civil\Roadway\SWM\1113507\*SWM\111aryB\*36A.dgn



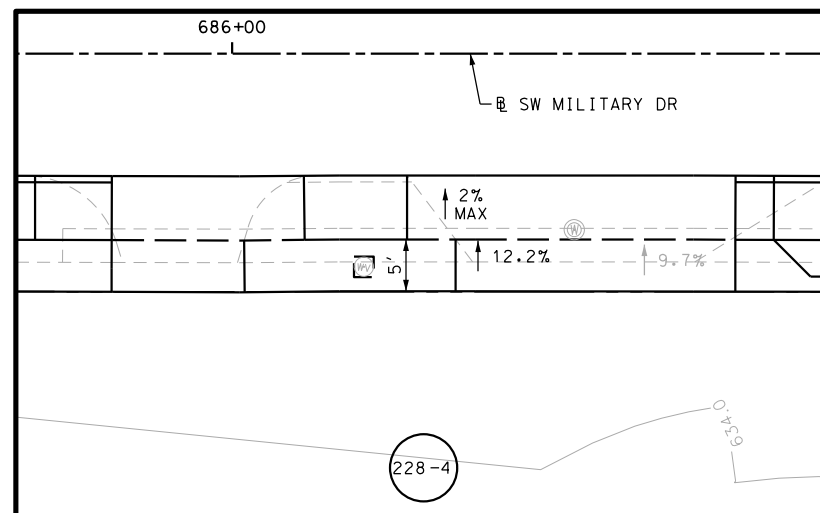
DRWY PLAN STA 684+04



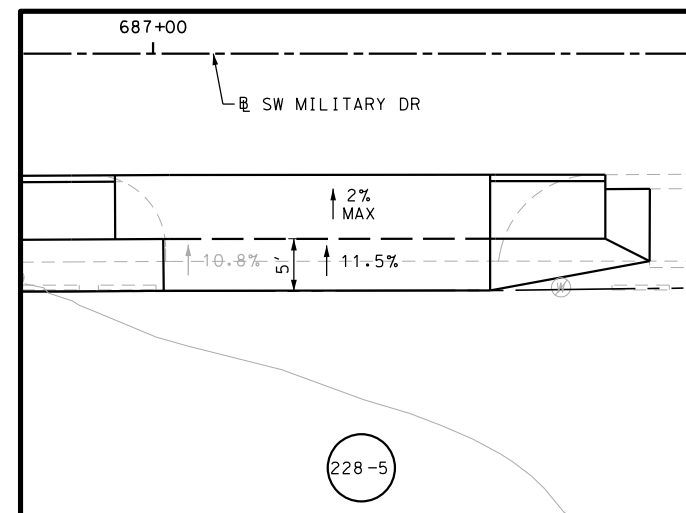
DRWY PLAN STA 684+76



DRWY PLAN STA 685+50



DRWY PLAN STA 686+20



DRWY PLAN STA 687+22

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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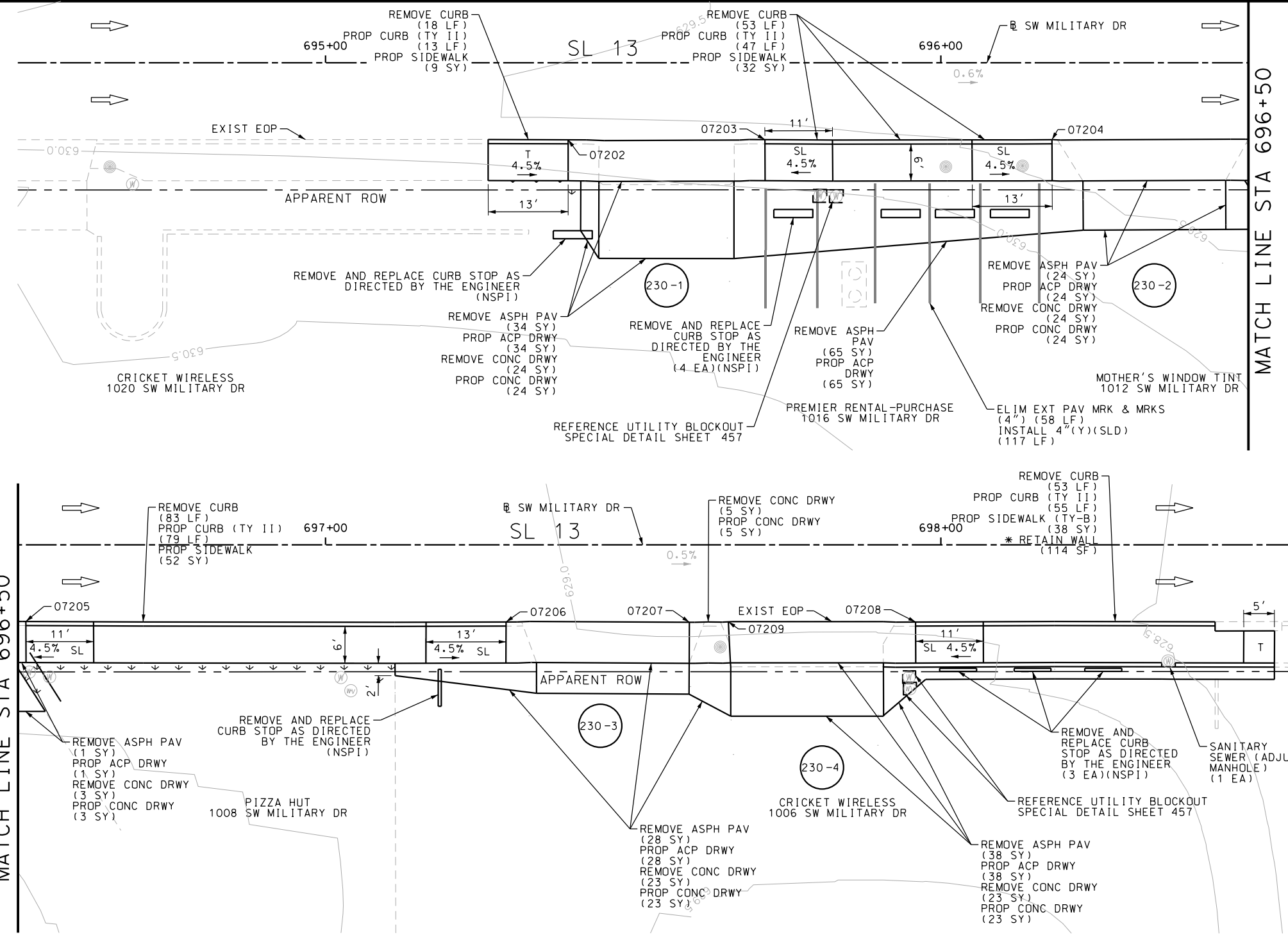
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 684+00 TO STA 689+00

SHEET 43 OF 99

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DWG:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	229

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*38.dgn



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

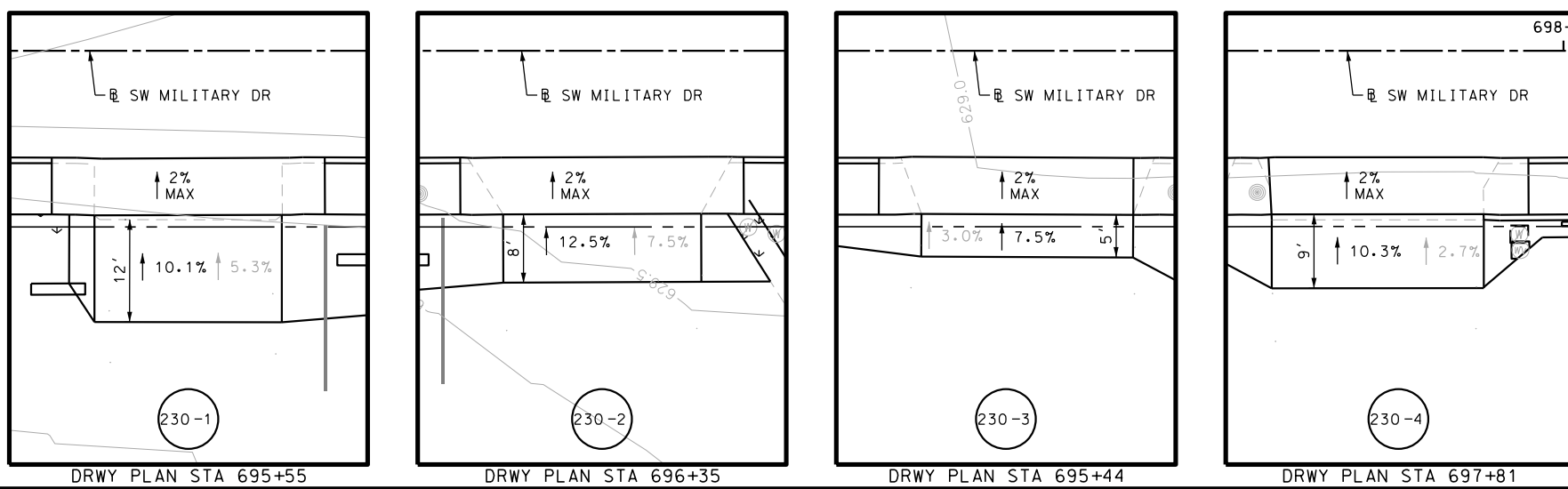
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

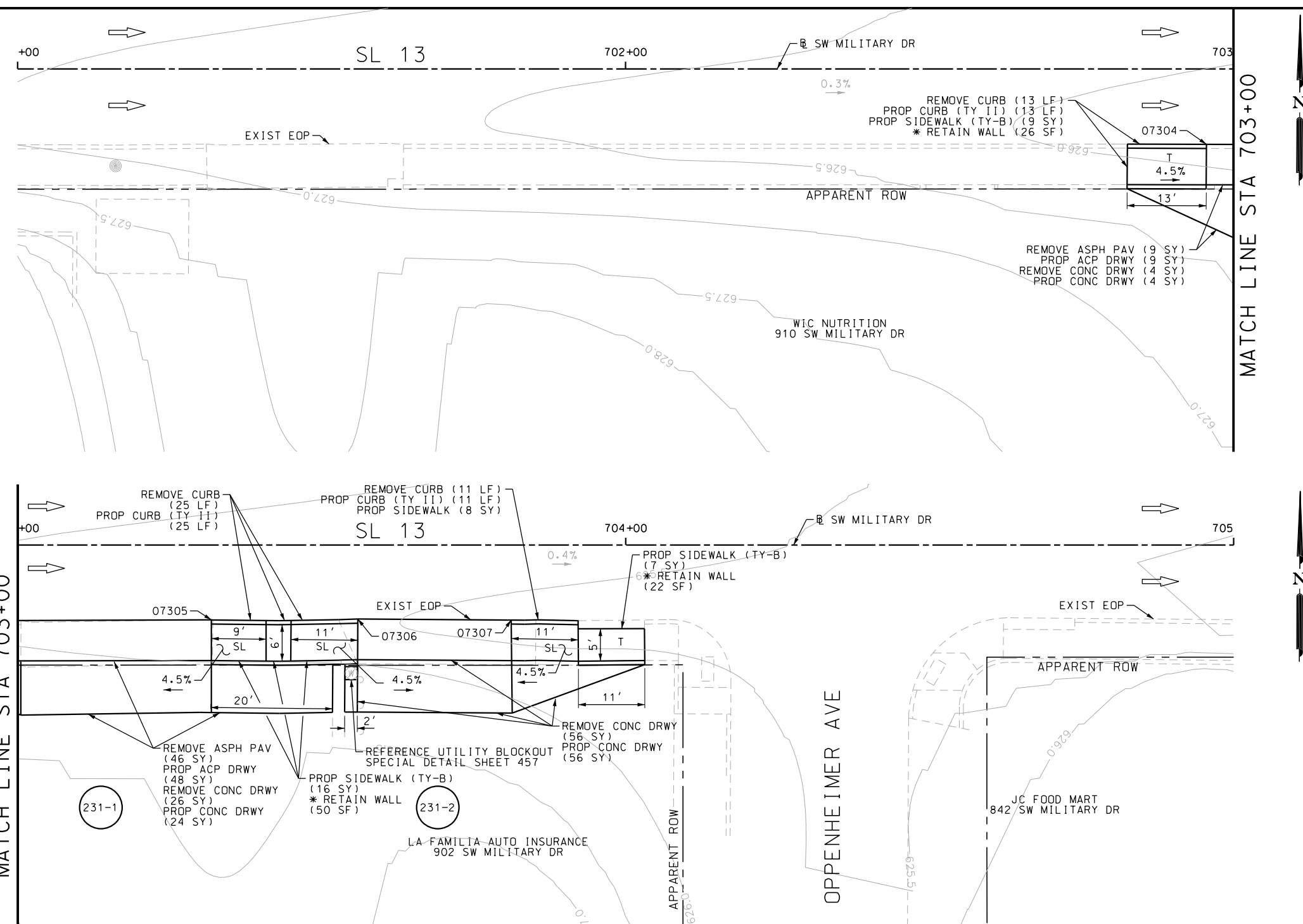
REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
07202	13679839.68	2125421.36	--	ME
07203	13679839.88	2125453.32	--	ME
07204	13679840.15	2125499.99	--	ME
07205	13679840.39	2125533.19	--	ME
07206	13679840.76	2125611.23	--	ME
07207	13679840.90	2125641.04	--	ME
07208	13679841.14	2125677.79	--	ME
07209	13679840.01	2125731.13	--	ME



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507+SWMI1113507+39.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	86
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	49
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	55
0529-6002	CONC CURB (TY II)	LF	49
0530-6004	DRIVEWAYS (CONC)	SY	84
0530-6005	DRIVEWAYS (ACP)	SY	57
0531-6001	CONC SIDEWALKS (4")	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	32

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

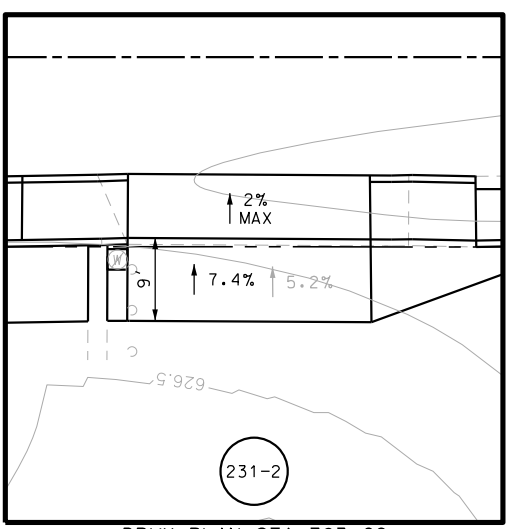
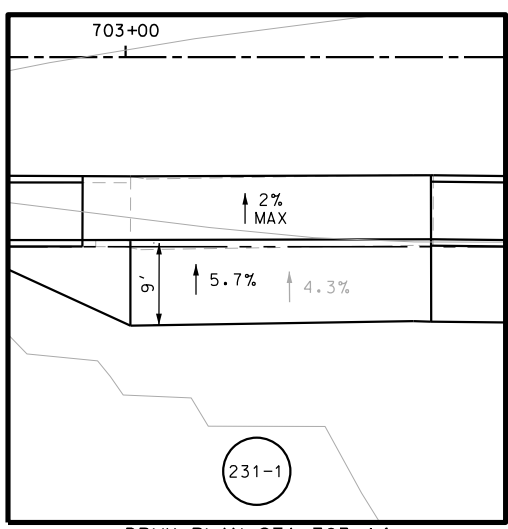
DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
07304	13679844.16	2126177.44	--	ME
07305	13679844.46	2126213.73	--	ME
07306	13679844.74	2126237.84	--	ME
07307	13679844.73	2126263.05	--	ME



**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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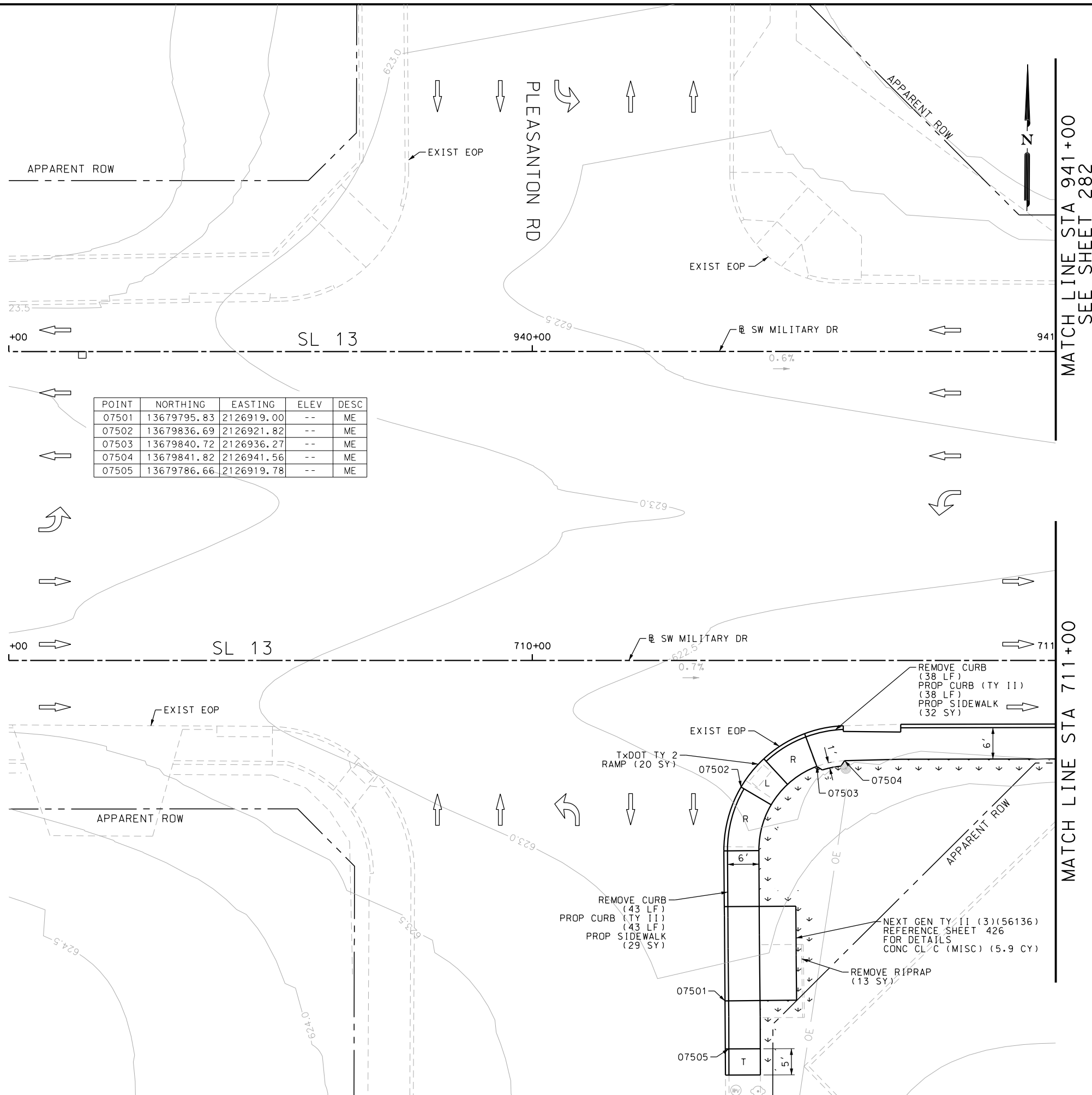
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 701+00 TO STA 705+00

SHEET 45 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	231

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWM1113507\*SWM111\aryB\*41.dgn



POINT	NORTHING	EASTING	ELEV	DESC
07501	13679795.83	2126919.00	--	ME
07502	13679836.69	2126921.82	--	ME
07503	13679840.72	2126936.27	--	ME
07504	13679841.82	2126941.56	--	ME
07505	13679786.66	2126919.78	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	13
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	81
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	41
0162-6002	BLOCK SODDING	SY	41
0168-6001	VEGETATIVE WATERING	MG	0.64
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6002	CONC CURB (TY II)	LF	81
0531-6001	CONC SIDEWALKS (4")	SY	61
0531-6019	CURB RAMPS (TY 2)	SY	20

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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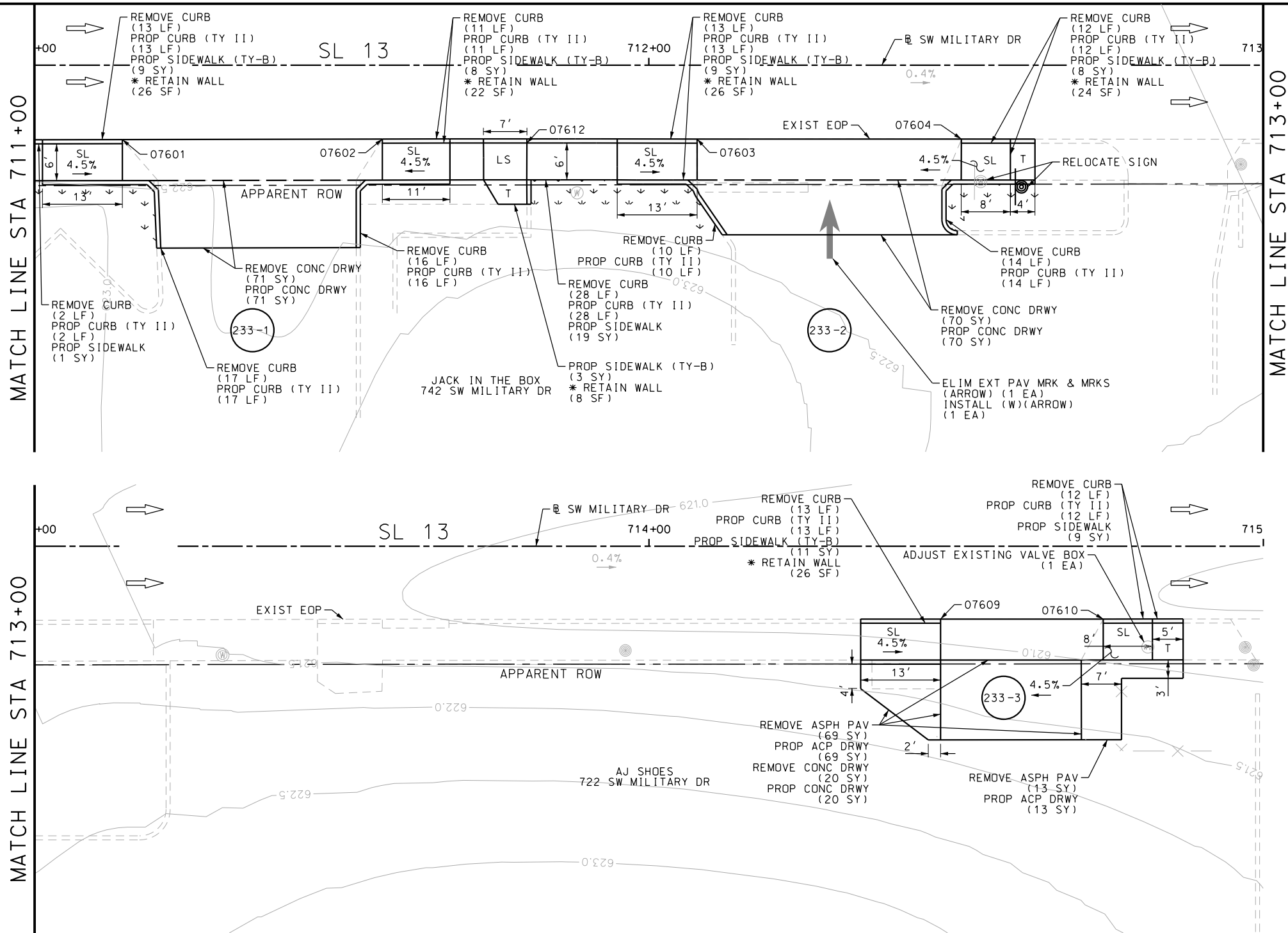
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 709+00 TO STA 711+00  
 STA 939+00 TO STA 941+00  
 SHEET 46 OF 99

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	232



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*42.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	161
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	161
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	82
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	161
0530-6004	DRIVEWAYS (CONC)	SY	161
0530-6005	DRIVEWAYS (ACP)	SY	82
0531-6001	CONC SIDEWALKS (4")	SY	29
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	48
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
0666-6054	REFL PAV MRK TY I (W) (ARROW) (100MIL)	EA	1
0666-6231	PAVEMENT SEALER (ARROW)	EA	1
0677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA	1
0678-6009	PAV SURF PREP FOR MRK (ARROW)	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

NOTES:

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- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
07601	13679849.18	2126996.18	--	ME
07602	13679849.51	2127038.50	--	ME
07603	13679849.82	2127089.74	--	ME
07604	13679850.06	2127132.74	--	ME
07609	13679851.37	2127329.34	--	ME
07610	13679851.54	2127355.81	--	ME
07612	13679849.01	2127062.03	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 711+00 TO STA 715+00

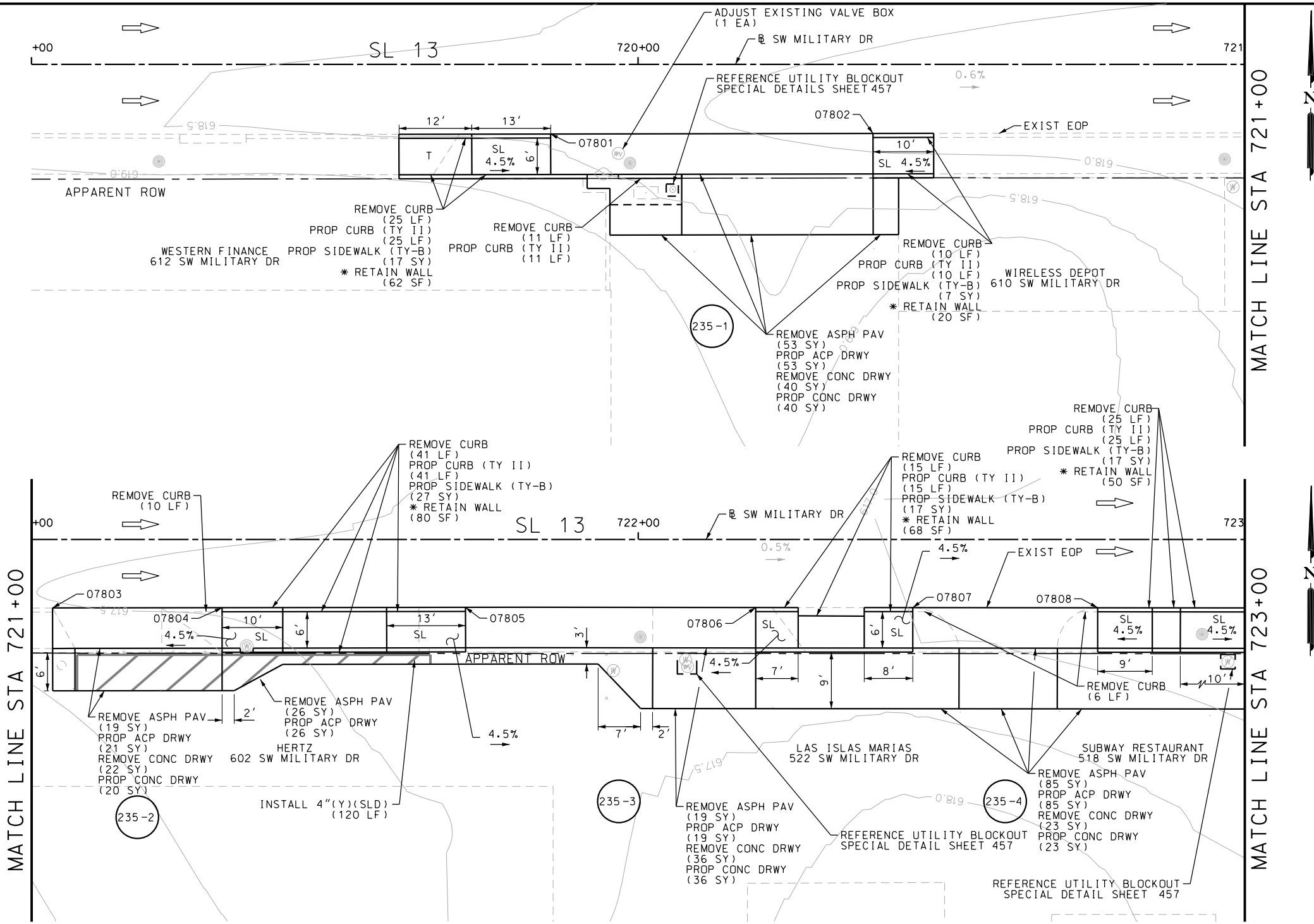
SHEET 47 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	233



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM1113507\SWM1113507\B4.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	121
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	143
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	202
0529-6002	CONC CURB (TY II)	LF	127
0530-6004	DRIVEWAYS (CONC)	SY	119
0530-6005	DRIVEWAYS (ACP)	SY	204
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	85
0666-6224	PAVEMENT SEALER 4"	LF	120
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	120
0678-6001	PAV SURF PREP FOR MRK (4")	LF	120
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
07801	13679854.86	2127867.45	--	ME
07802	13679855.26	2127920.59	--	ME
07803	13679855.73	2127985.31	--	ME
07804	13679855.93	2128013.25	--	ME
07805	13679856.22	2128053.39	--	ME
07806	13679856.48	2128101.23	--	ME
07807	13679856.62	2128127.13	--	ME
07808	13679856.76	2128157.61	--	ME

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 719+00 TO STA 723+00

SHEET 49 OF 99

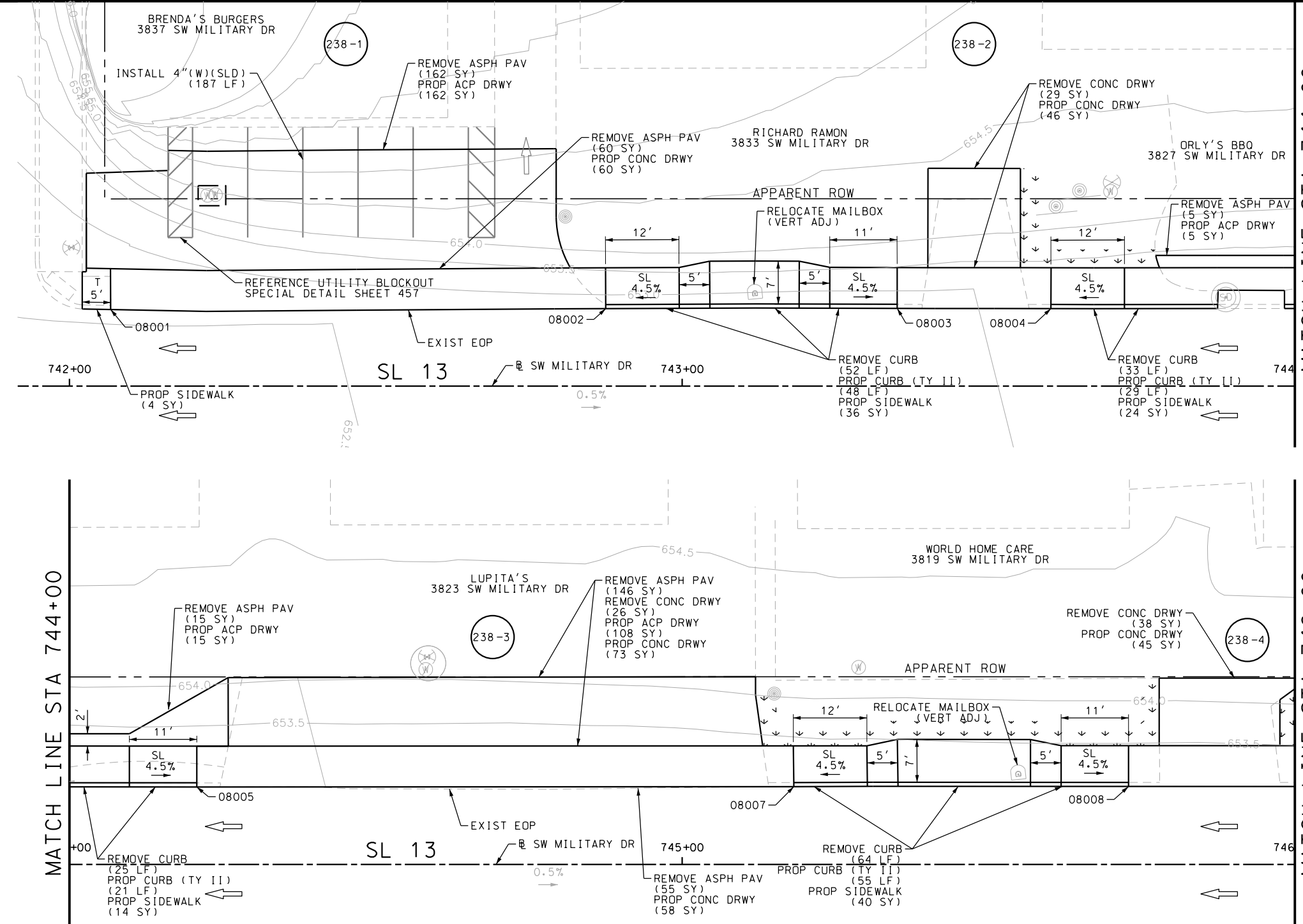
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	235





Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	93
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	174
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	443
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0529-6002	CONC CURB (TY II)	LF	153
0530-6004	DRIVEWAYS (CONC)	SY	282
0530-6005	DRIVEWAYS (ACP)	SY	290
0531-6001	CONC SIDEWALKS (4")	SY	119
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	2
0666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	187
0666-6230	PAVEMENT SEALER 24"	LF	187
0678-6008	PAV SURF PREP FOR MRK (24")	LF	187

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
08001	13680647.83	2107129.02	--	ME
08002	13680639.79	2107209.42	--	ME
08003	13680635.02	2107256.74	--	ME
08004	13680632.45	2107281.72	--	ME
08005	13680626.31	2107341.99	--	ME
08007	13680616.49	2107438.95	--	ME
08008	13680610.99	2107493.29	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 746+00

SHEET 52 OF 99

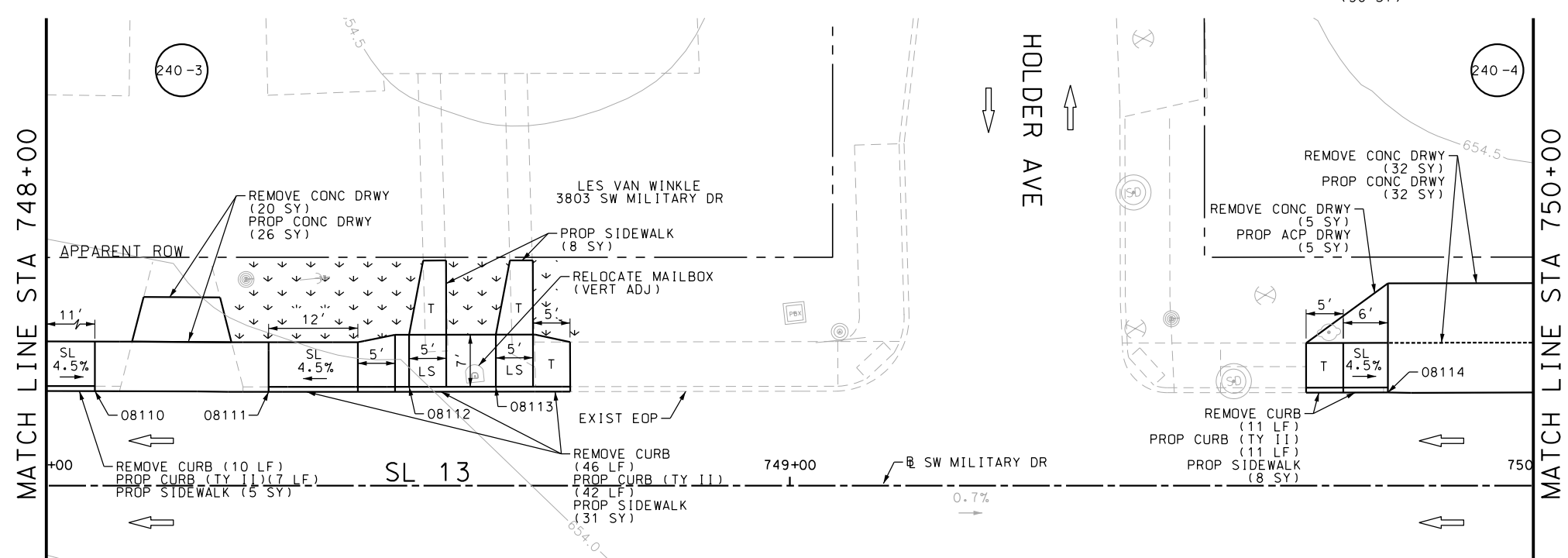
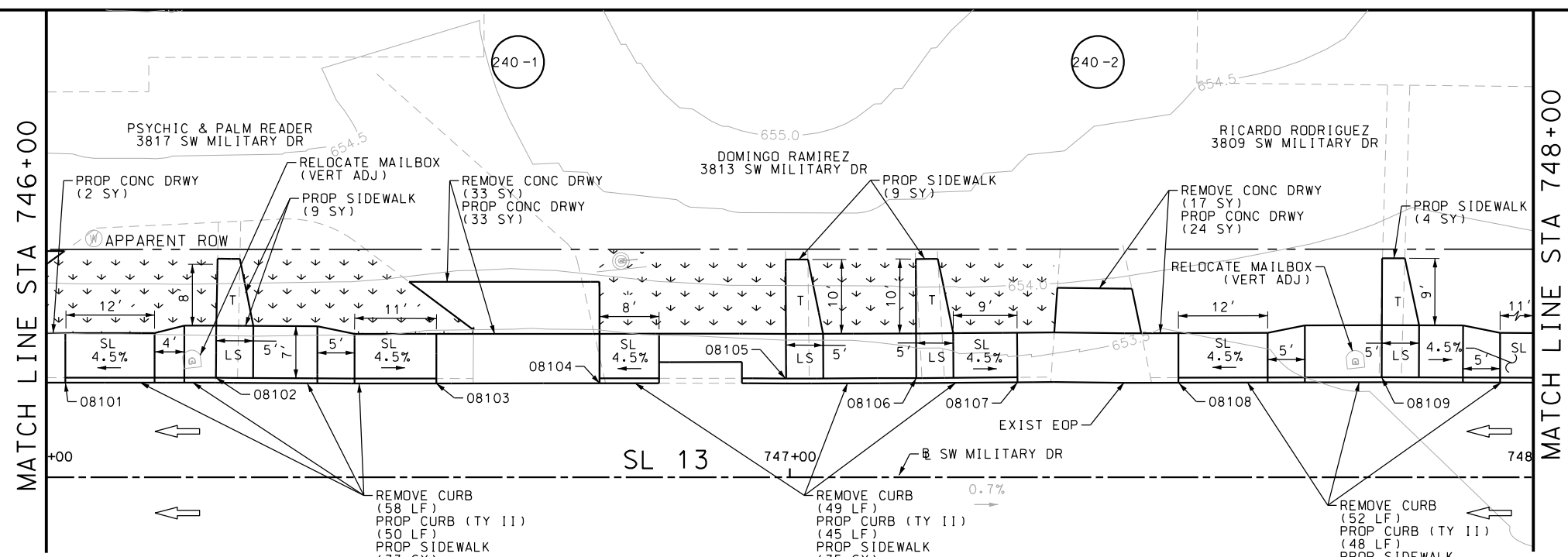
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	238



Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB02.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	107
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	226
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	175
0162-6002	BLOCK SODDING	SY	175
0168-6001	VEGETATIVE WATERING	MG	2.73
0529-6002	CONC CURB (TY II)	LF	203
0530-6004	DRIVEWAYS (CONC)	SY	117
0530-6005	DRIVEWAYS (ACP)	SY	5
0531-6001	CONC SIDEWALKS (4")	SY	177
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	3



- NOTES:
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  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

5/3/2019  
 DATE

JOHN A. TYLER, P.E.

REVIEW AND APPROVAL

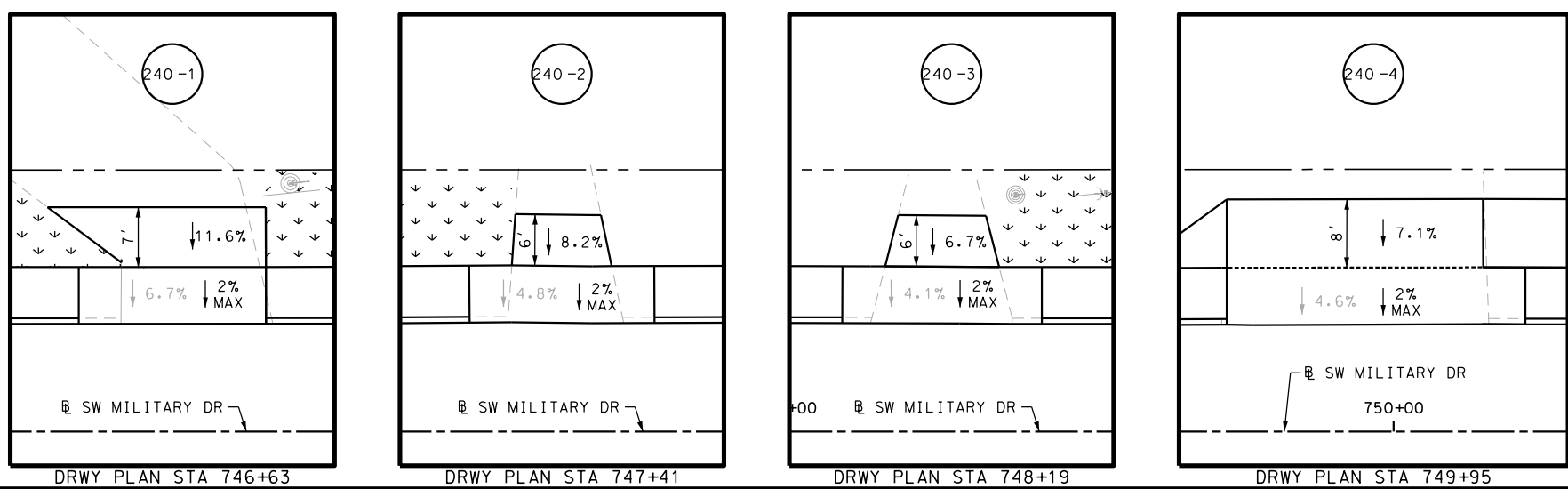
STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

5/3/2019  
 DATE

JAMES A. LUTZ, P.E.

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



POINT	NORTHING	EASTING	ELEV	DESC
08101	13680607.98	2107522.84	--	ME
08102	13680606.60	2107543.06	--	ME
08103	13680602.83	2107572.49	--	ME
08104	13680600.63	2107594.33	--	ME
08105	13680598.72	2107619.35	--	ME
08106	13680597.01	2107636.78	--	ME
08107	13680595.06	2107650.25	--	ME
08108	13680592.82	2107671.80	--	ME
08109	13680590.79	2107699.06	--	ME
08110	13680587.32	2107725.76	--	ME
08111	13680584.85	2107749.02	--	ME
08112	13680583.62	2107767.87	--	ME
08113	13680581.94	2107784.45	--	ME
08114	13680569.52	2107898.77	--	ME

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 746+00 TO STA 750+00

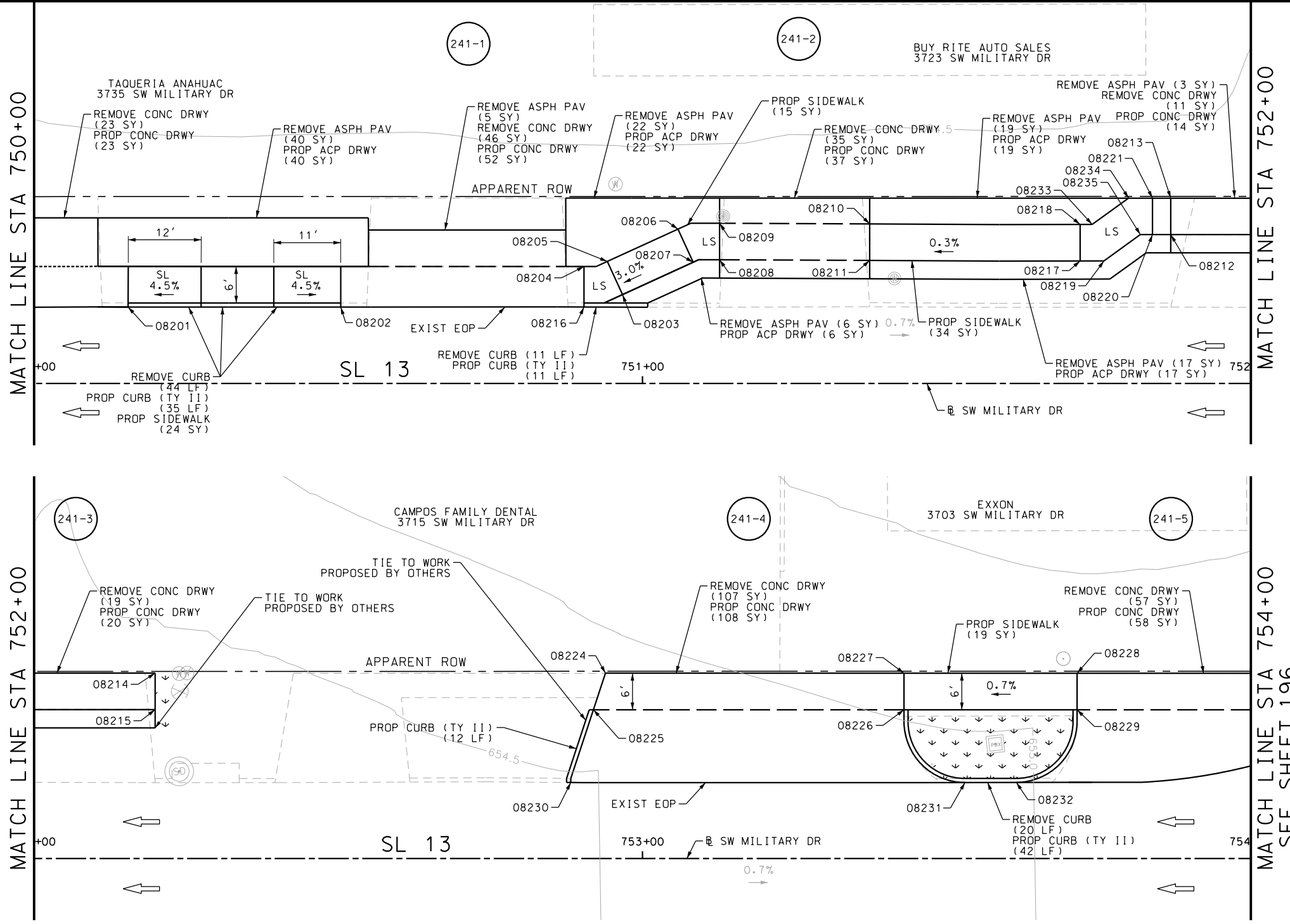
SHEET 54 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	240



Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*WB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	298
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	75
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	113
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	35
0162-6002	BLOCK SODDING	SY	35
0168-6001	VEGETATIVE WATERING	MG	0.55
0529-6002	CONC CURB (TY II)	LF	100
0530-6004	DRIVEWAYS (CONC)	SY	312
0530-6005	DRIVEWAYS (ACP)	SY	105
0531-6001	CONC SIDEWALKS (4")	SY	92

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
08201	13680566.03	2107933.61	--	ME
08202	13680562.48	2107968.38	--	ME
08203	13680559.83	2108014.66	653.40	PROP
08204	13680565.08	2108008.84	--	ME
08205	13680565.51	2108012.73	653.47	PROP
08206	13680569.63	2108024.81	653.83	PROP
08207	13680563.95	2108026.75	653.76	PROP
08208	13680563.92	2108031.12	653.83	PROP
08209	13680569.89	2108031.73	653.90	PROP
08210	13680567.27	2108056.25	653.86	PROP
08211	13680561.30	2108055.65	653.79	PROP
08212	13680560.52	2108105.32	--	ME
08213	13680566.49	2108105.93	--	ME
08214	13680563.14	2108138.80	--	ME
08215	13680557.18	2108138.19	654.07	PROP
08216	13680558.44	2108008.15	--	ME
08217	13680557.73	2108090.05	653.89	PROP
08218	13680563.70	2108090.65	653.96	PROP
08219	13680557.34	2108093.97	653.90	PROP
08220	13680560.82	2108102.34	853.97	PROP

POINT	NORTHING	EASTING	ELEV	DESC
08221	13680566.79	2108102.94	854.04	PROP
08224	13680555.65	2108212.46	--	ME
08225	13680549.86	2108209.88	654.64	PROP
08226	13680544.69	2108260.67	654.76	PROP
08227	13680550.67	2108261.28	--	ME
08228	13680547.78	2108289.57	--	ME
08229	13680541.80	2108288.96	654.97	PROP
08230	13680538.34	2108204.96	--	ME
08231	13680531.77	2108269.42	--	ME
08232	13680530.94	2108277.82	--	ME
08233	13680563.50	2108092.64	653.96	PROP
08234	13680567.19	2108099.03	654.03	PROP
08235	13680561.03	2108100.35	653.97	PROP

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 750+00 TO STA 754+00

SHEET 55 OF 99

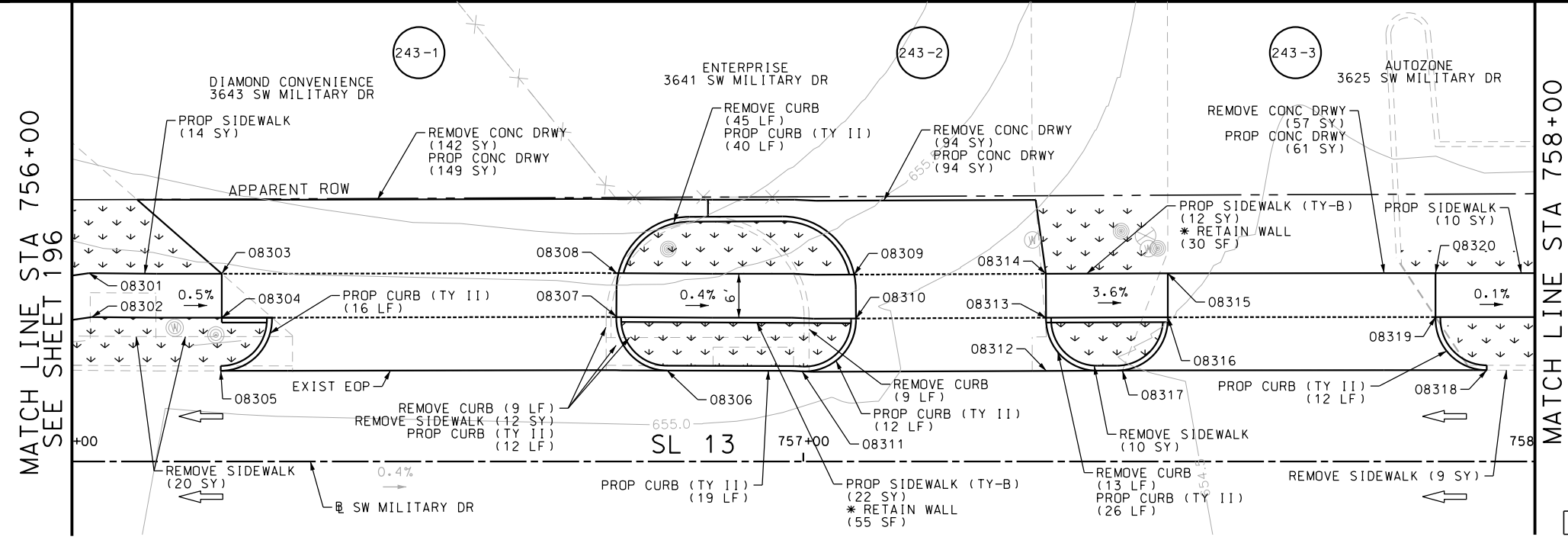
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		VARIABLES

CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	241



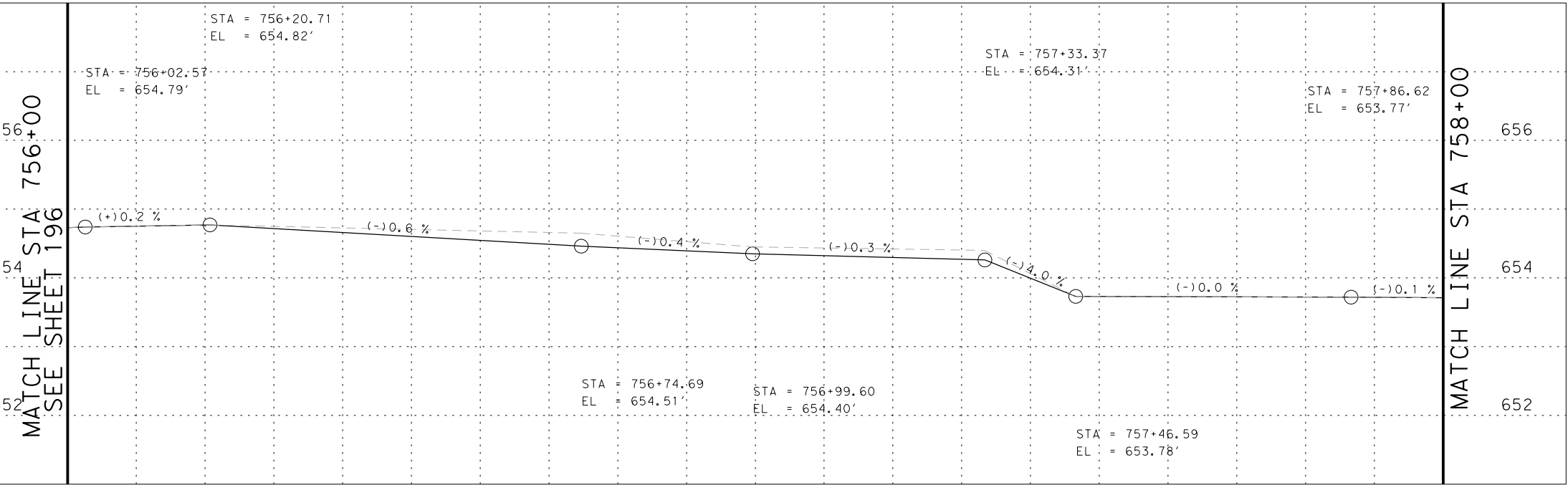
Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*SWMI1113507\*WB04PP.dgn



SEE SHEET 244 FOR POINT TABLE

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	293
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	76
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	51
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	170
0162-6002	BLOCK SODDING	SY	170
0168-6001	VEGETATIVE WATERING	MG	2.65
0529-6002	CONC CURB (TY II)	LF	137
0530-6004	DRIVEWAYS (CONC)	SY	304
0531-6001	CONC SIDEWALKS (4")	SY	24
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	34



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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

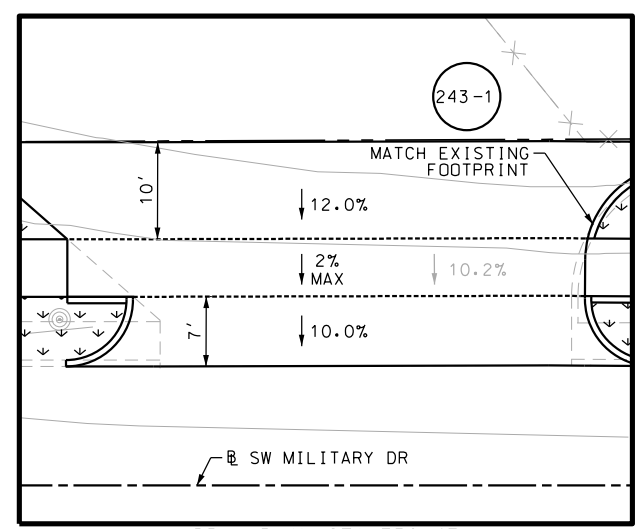
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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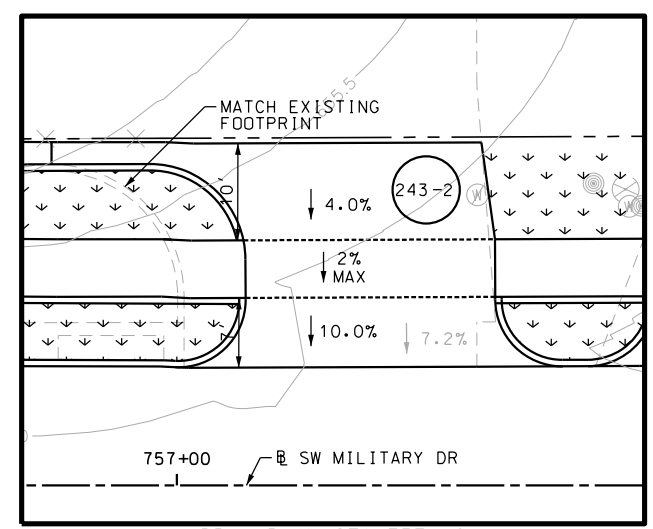
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 756+00 TO STA 758+00

SHEET 57 OF 99

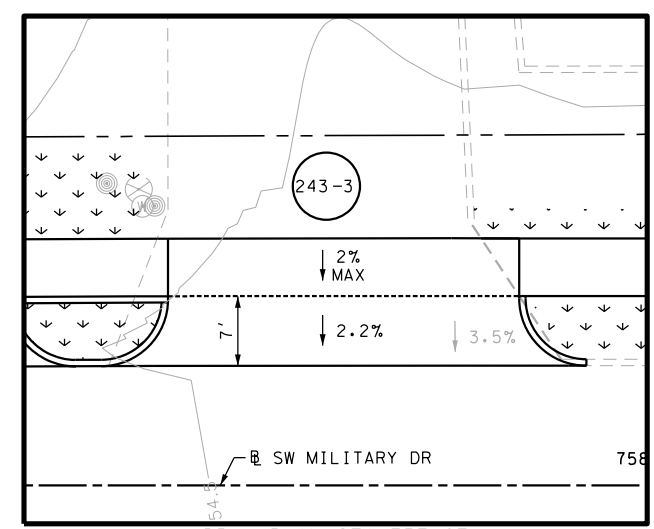
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	243



DRWY PLAN STA 756+47



DRWY PLAN STA 757+16



DRWY PLAN STA 757+67

Plotted on: 5/3/2019

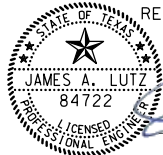
Design File name: P:\111\35\07\des\ign\Civil\Roadway\SWM\1113507\*SWM\111\aryB\*WB04PPB.dgn

POINT	NORTHING	EASTING	ELEV	DESC
08301	13680519.71	2108518.82	--	PROF
08302	13680513.70	2108518.60	--	PROF
08303	13680517.79	2108536.86	--	PROF
08304	13680511.83	2108536.25	--	PROF
08305	13680504.61	2108535.38	--	ME
08306	13680498.47	2108596.10	--	ME
08307	13680506.45	2108589.93	--	PROF
08308	13680512.39	2108590.82	--	PROF
08309	13680508.93	2108622.87	--	PROF
08310	13680502.93	2108622.49	--	PROF
08311	13680496.49	2108614.45	--	ME
08312	13680492.50	2108654.63	--	ME
08313	13680500.41	2108648.36	--	PROF
08314	13680506.38	2108648.94	--	PROF
08315	13680504.76	2108665.53	--	ME
08316	13680498.79	2108664.93	--	PROF
08317	13680492.17	2108658.02	--	ME
08318	13680487.18	2108707.55	--	ME
08319	13680495.12	2108701.32	--	PROF
08320	13680501.09	2108701.93	--	ME

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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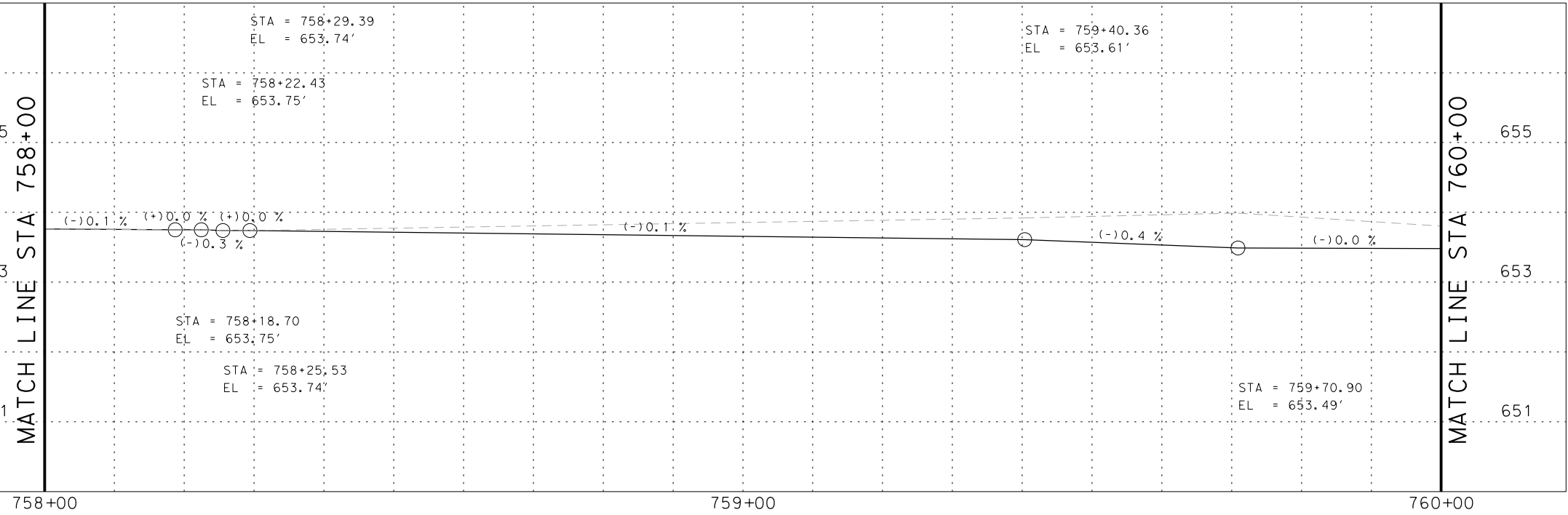
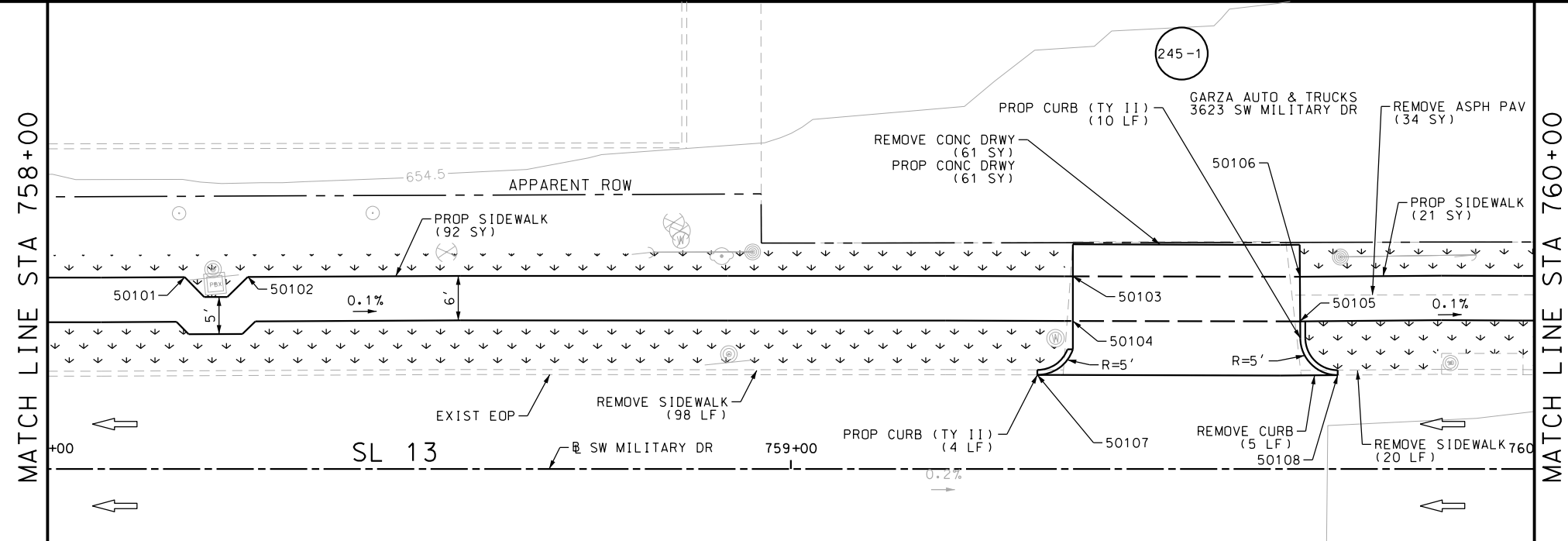
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 756+00 TO STA 758+00  
 SHEET 58 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	244

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\SWMI1113507\WB04PP\A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	61
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	79
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	118
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	34
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	190
0162-6002	BLOCK SODDING	SY	190
0168-6001	VEGETATIVE WATERING	MG	2.96
0529-6002	CONC CURB (TY II)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	113



- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

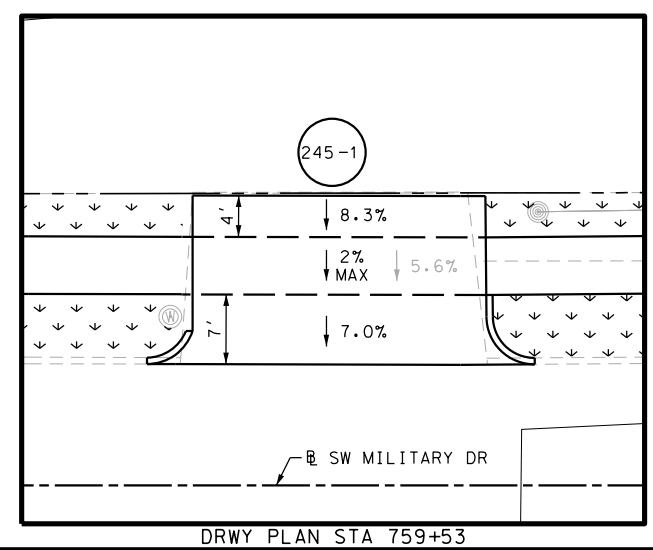
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 758+00 TO STA 760+00

SHEET 59 OF 99

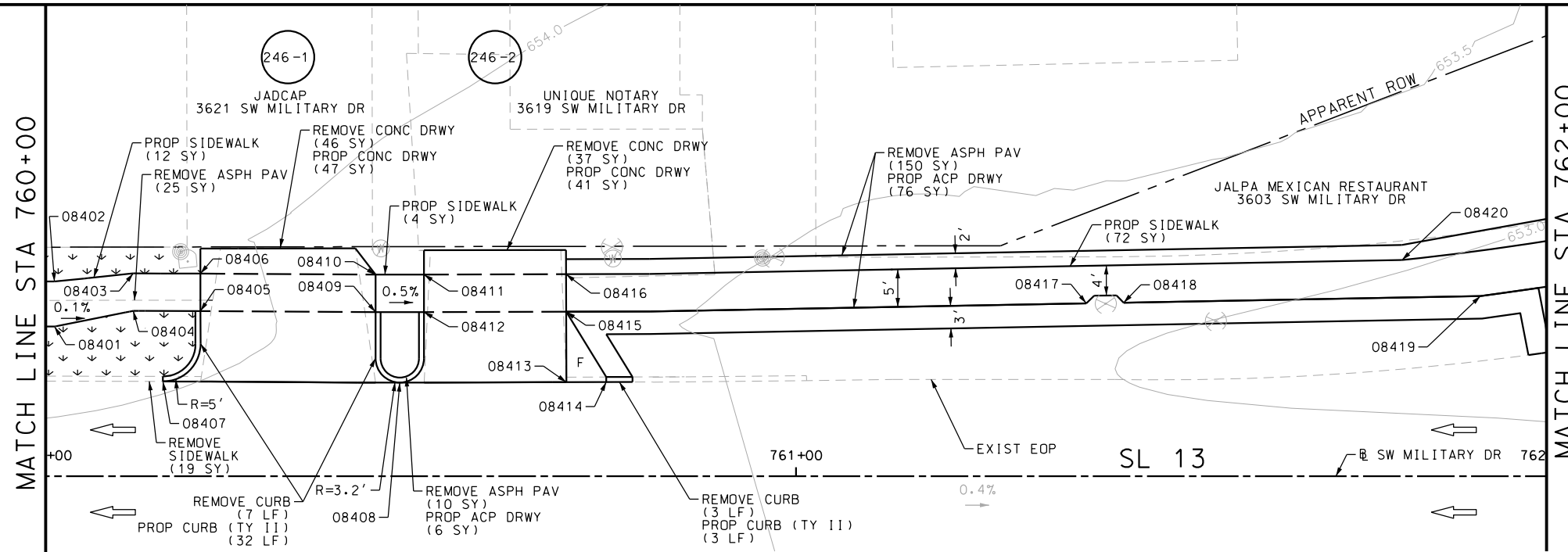
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	245



POINT	NORTHING	EASTING	ELEV	DESC
50101	13680497.89	2108733.85	--	PROF
50102	13680497.07	2108742.27	--	PROF
50103	13680485.91	2108852.68	--	PROF
50104	13680479.95	2108852.07	--	PROF
50105	13680476.79	2108882.49	--	PROF
50106	13680482.77	2108883.06	--	PROF
50107	13680473.21	2108846.60	--	ME
50108	13680469.10	2108886.79	--	ME

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM\1113507\SWM\1113507\WB05PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	83
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	10
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	19
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	185
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	35
0530-6004	DRIVEWAYS (CONC)	SY	88
0530-6005	DRIVEWAYS (ACP)	SY	82
0531-6001	CONC SIDEWALKS (4")	SY	88

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

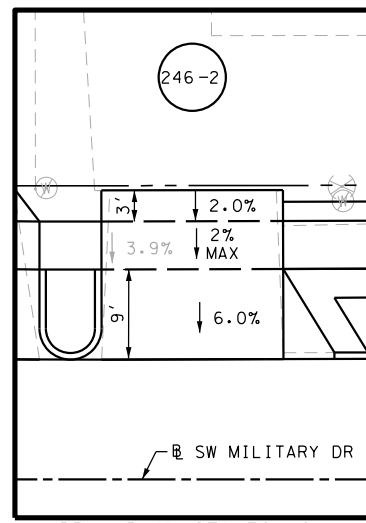
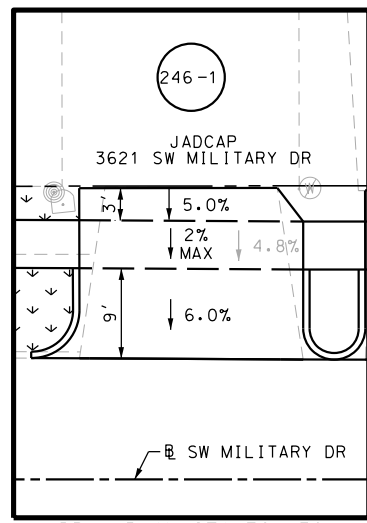
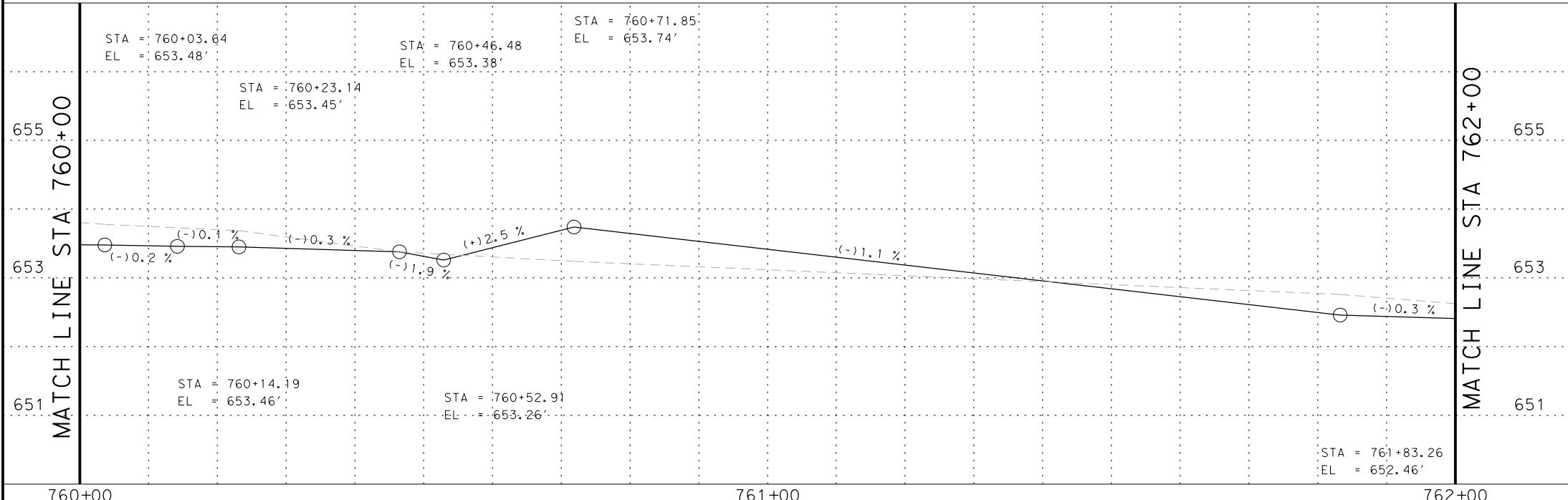
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 760+00 TO STA 762+00

SHEET 60 OF 99

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	246

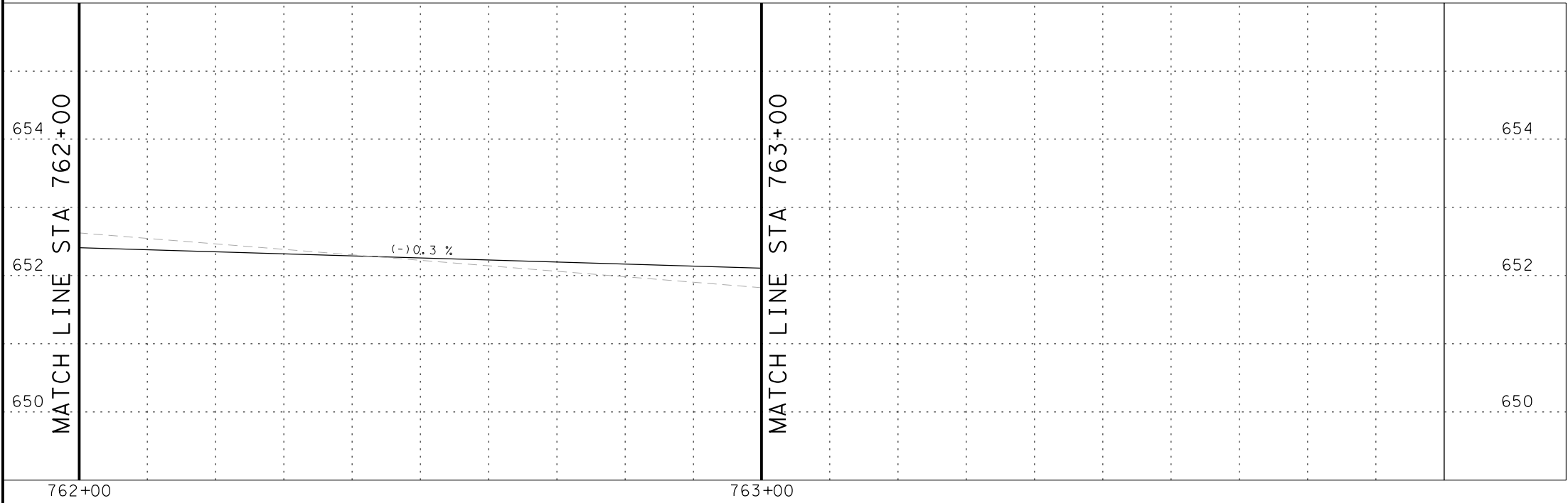
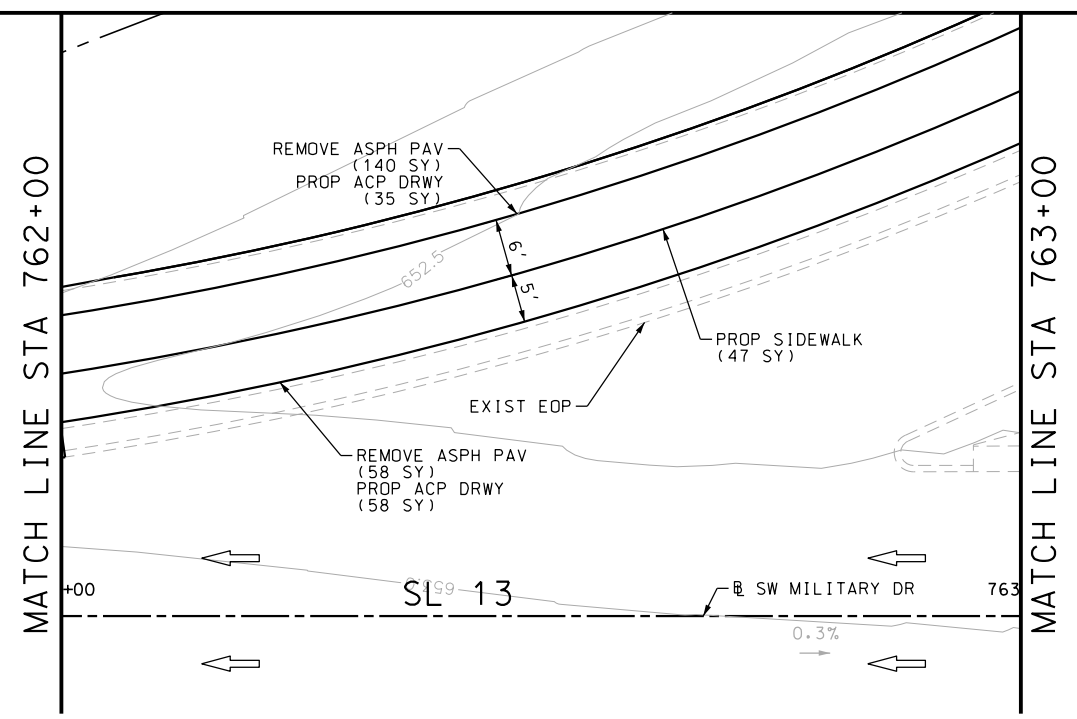


POINT	NORTHING	EASTING	ELEV	DESC
08401	13680473.58	2108915.01	--	PROF
08402	13680479.55	2108915.64	--	PROF
08403	13680479.56	2108926.19	--	PROF
08404	13680474.59	2108925.67	--	PROF
08405	13680473.66	2108934.59	--	PROF
08406	13680478.63	2108935.09	--	PROF
08407	13680464.84	2108928.66	--	ME
08408	13680461.50	2108960.05	--	ME
08409	13680471.16	2108957.79	--	PROF
08410	13680476.14	2108958.30	--	PROF
08411	13680475.48	2108964.70	--	PROF
08412	13680470.51	2108964.20	--	PROF
08413	13680459.30	2108982.13	--	ME
08414	13680458.78	2108987.41	--	ME
08415	13680468.64	2108983.05	--	PROF
08416	13680473.61	2108983.54	--	PROF
08417	13680462.73	2109052.11	--	PROF
08418	13680462.32	2109057.07	--	PROF
08419	13680458.39	2109104.46	--	PROF
08420	13680464.22	2109094.56	--	PROF

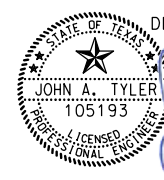
Plotted on: 5/3/2019

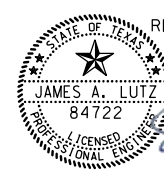
Design File name: P:\1111\35\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*SWM\1113507\*WB05PP\*A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	198
0530-6005	DRIVEWAYS (ACP)	SY	93
0531-6001	CONC SIDEWALKS (4")	SY	47



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 762+00 TO STA 763+00

SHEET 61 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	247

Plotted on: 5/3/2019

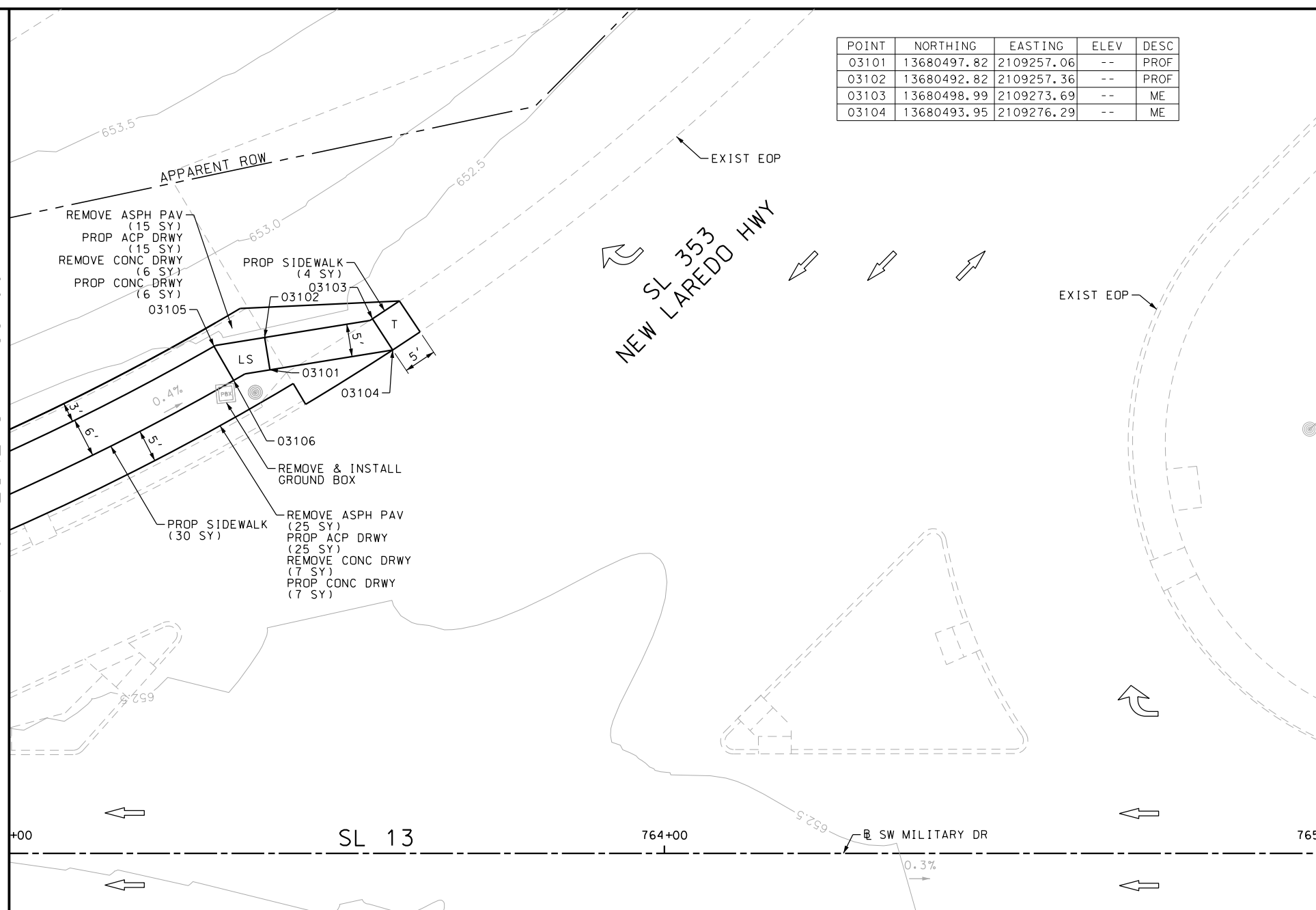
Design File name: P:\111135\07\design\Civil\Roadway\SWM\1113507\SWM\1113507\APP.dgn

POINT	NORTHING	EASTING	ELEV	DESC
03101	13680497.82	2109257.06	--	PROF
03102	13680492.82	2109257.36	--	PROF
03103	13680498.99	2109273.69	--	ME
03104	13680493.95	2109276.29	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	13
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	40
0530-6004	DRIVEWAYS (CONC)	SY	13
0530-6005	DRIVEWAYS (ACP)	SY	40
0531-6001	CONC SIDEWALKS (4")	SY	34
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

MATCH LINE STA 763+00

MATCH LINE STA 765+00



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

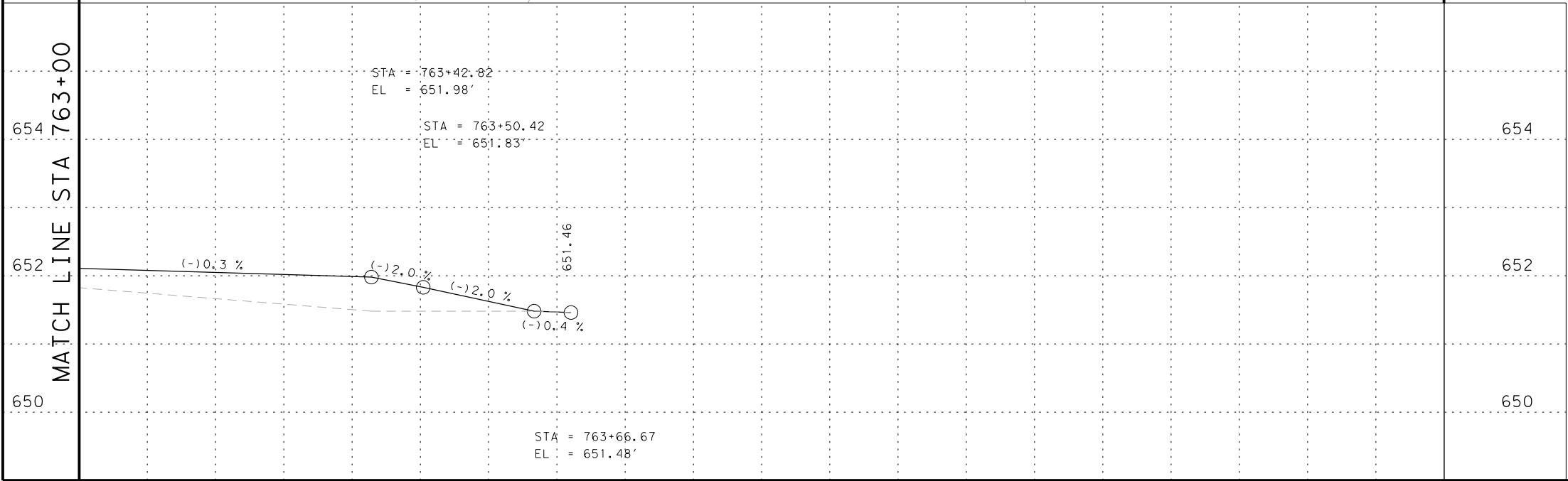
**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 763+00 TO STA 765+00

SHEET 62 OF 99

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	248



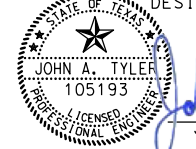


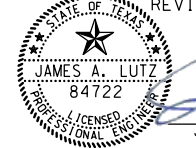
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM\1113507+SWM\1113507+SW\1113507+WB06.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	64
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	230
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	25
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0420-6074	CL C CONC (MISC)	CY	0.9
0432-6003	RIPRAP (CONC) (6 IN)	CY	13
0529-6002	CONC CURB (TY II)	LF	206
0530-6004	DRIVEWAYS (CONC)	SY	65
0530-6005	DRIVEWAYS (ACP)	SY	3
0531-6001	CONC SIDEWALKS (4")	SY	117
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	12
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

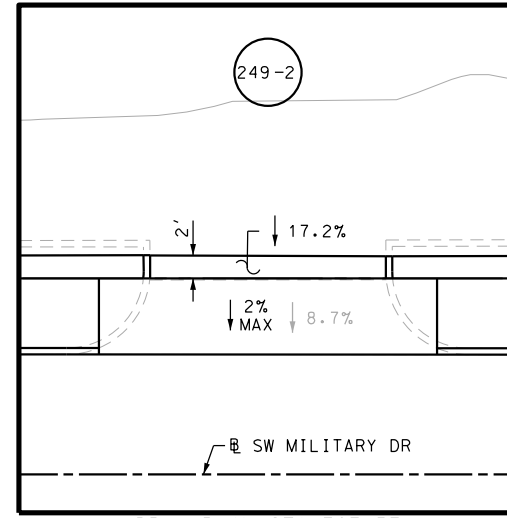
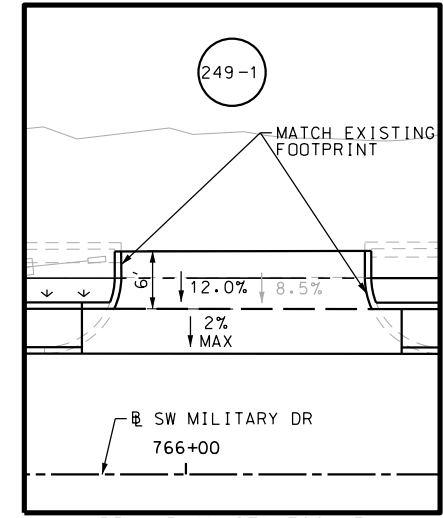
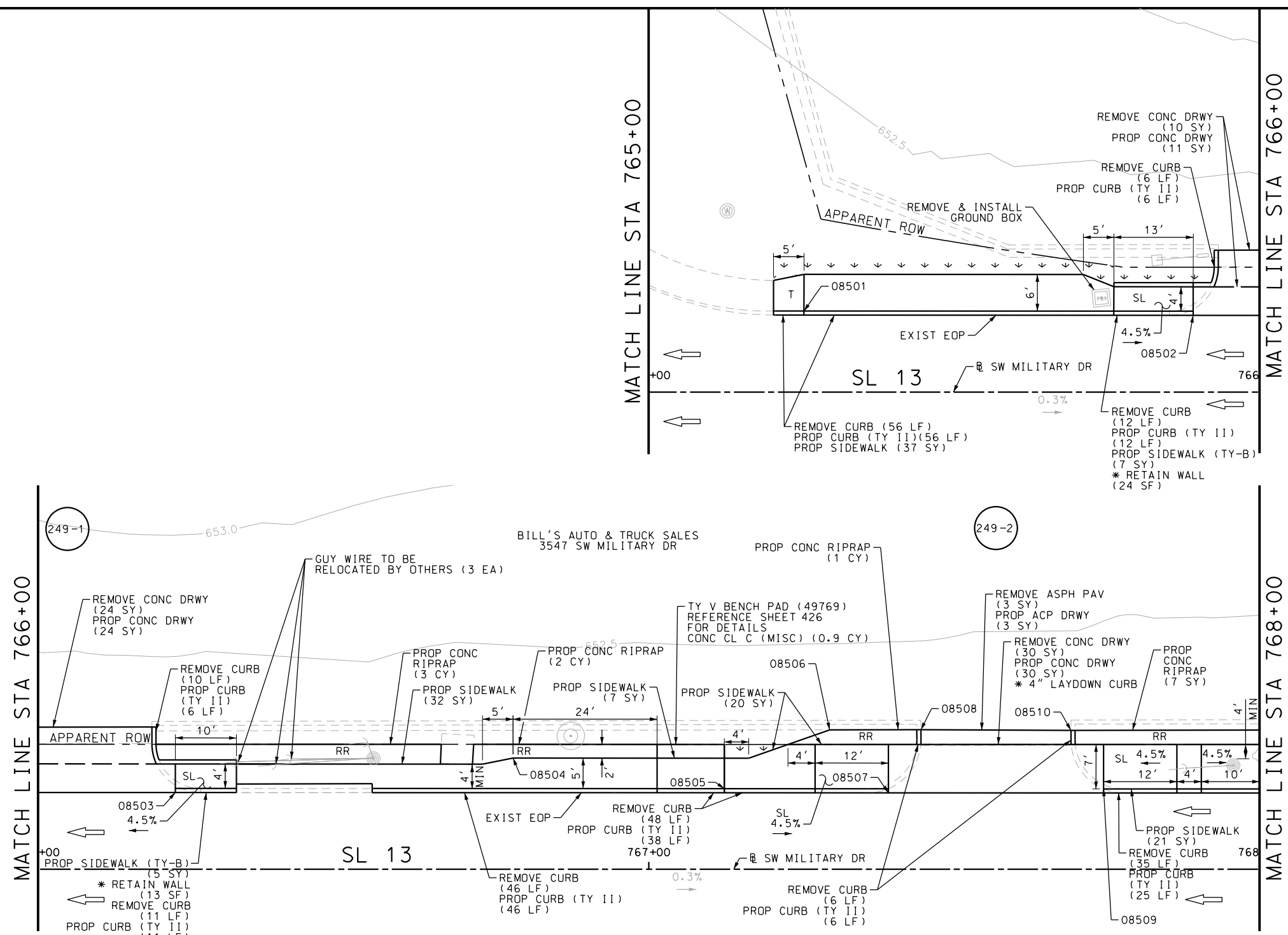
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 765+00 TO STA 768+00

SHEET 63 OF 99

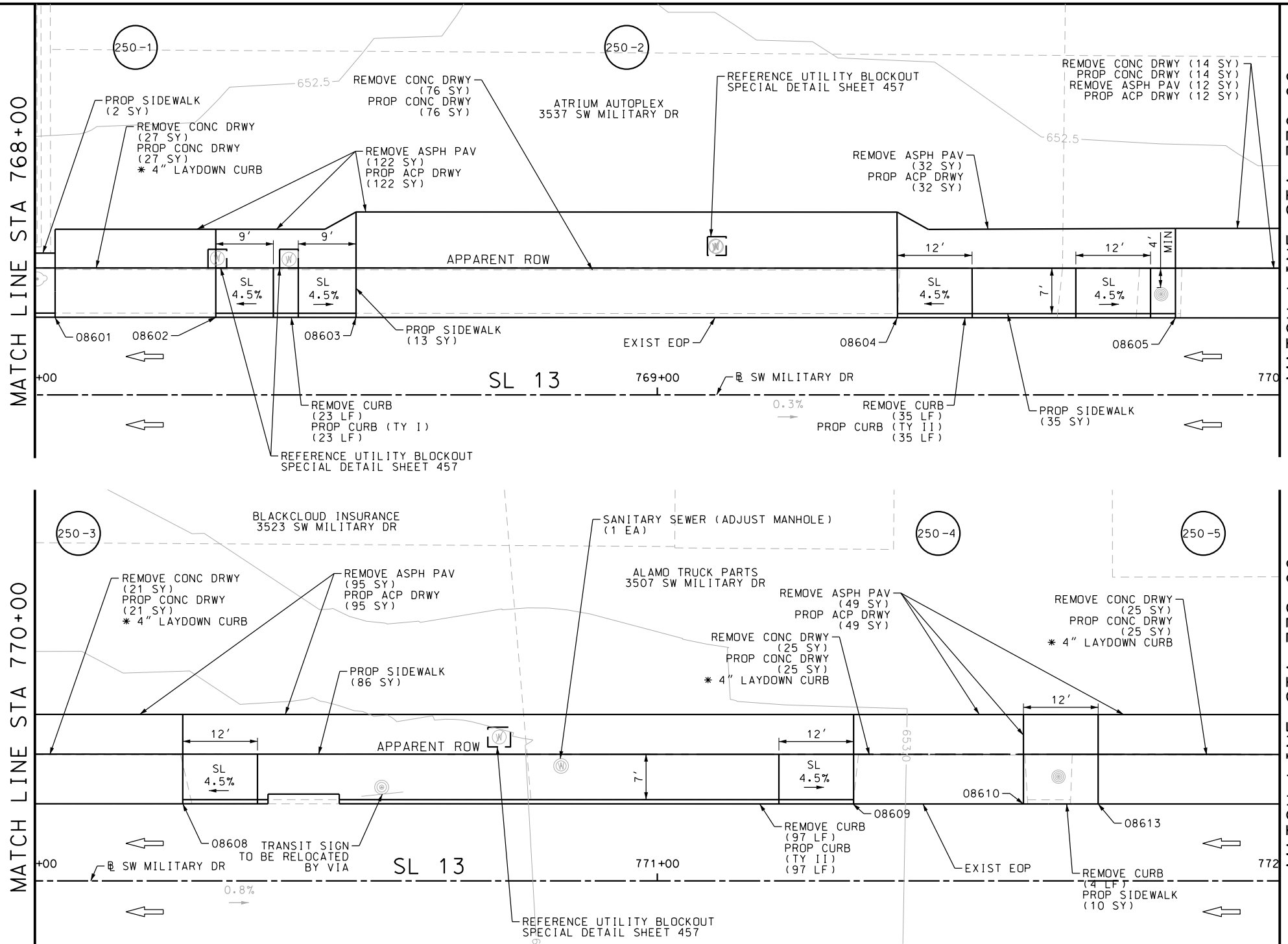
DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG	6	TEXAS		VARIES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	249



POINT	NORTHING	EASTING	ELEV	DESC
08501	13680413.88	2109435.88	--	ME
08502	13680406.72	2109499.22	--	ME
08503	13680403.33	2109532.38	--	ME
08504	13680403.35	2109587.95	--	ME
08505	13680394.85	2109621.86	--	ME
08506	13680402.68	2109639.99	--	ME
08507	13680391.45	2109648.53	--	ME
08508	13680401.19	2109654.87	--	ME
08509	13680387.87	2109683.57	--	ME
08510	13680398.61	2109679.30	--	ME

Plotted on: 5/3/2019

Design File name: P:\111\35\07\des\ign\Civil\Roadway\SWM\1113507\*SWM\1113507\*WB07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	188
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	159
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	310
0529-6001	CONC CURB (TY I)	LF	23
0529-6002	CONC CURB (TY II)	LF	132
0530-6004	DRIVEWAYS (CONC)	SY	188
0530-6005	DRIVEWAYS (ACP)	SY	310
0531-6001	CONC SIDEWALKS (4")	SY	146
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
08601	13680384.94	2109712.19	--	ME
08602	13680382.31	2109737.89	--	ME
08603	13680380.02	2109760.29	--	ME
08604	13680371.17	2109846.85	--	ME
08605	13680366.63	2109891.28	--	ME
08608	13680362.53	2109931.57	--	ME
08609	13680351.62	2110038.79	--	ME
08610	13680348.85	2110065.95	--	ME
08613	13680347.63	2110077.89	--	ME

REV. NO.	DATE	DESCRIPTION	BY



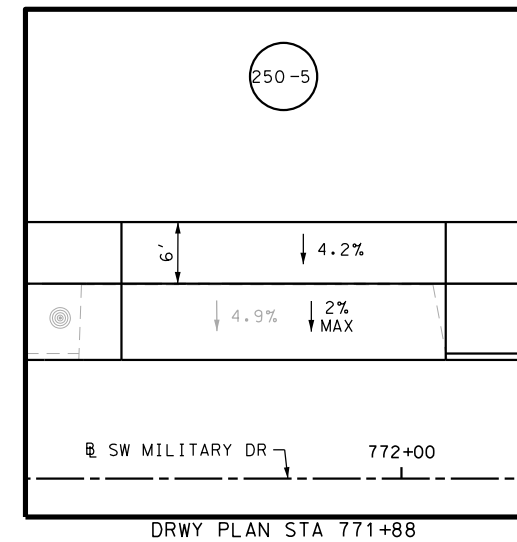
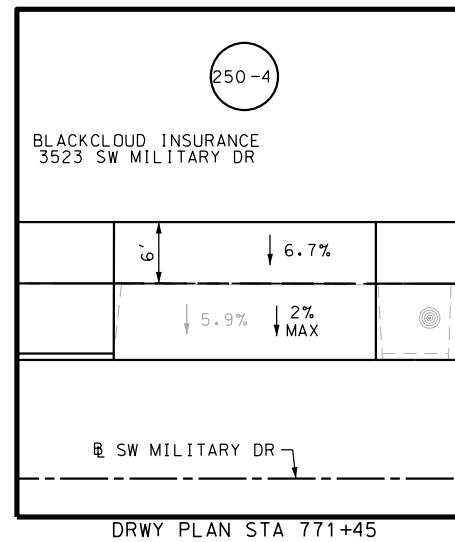
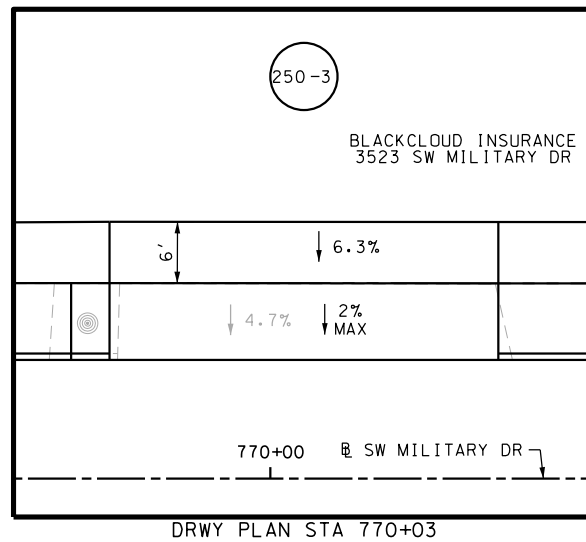
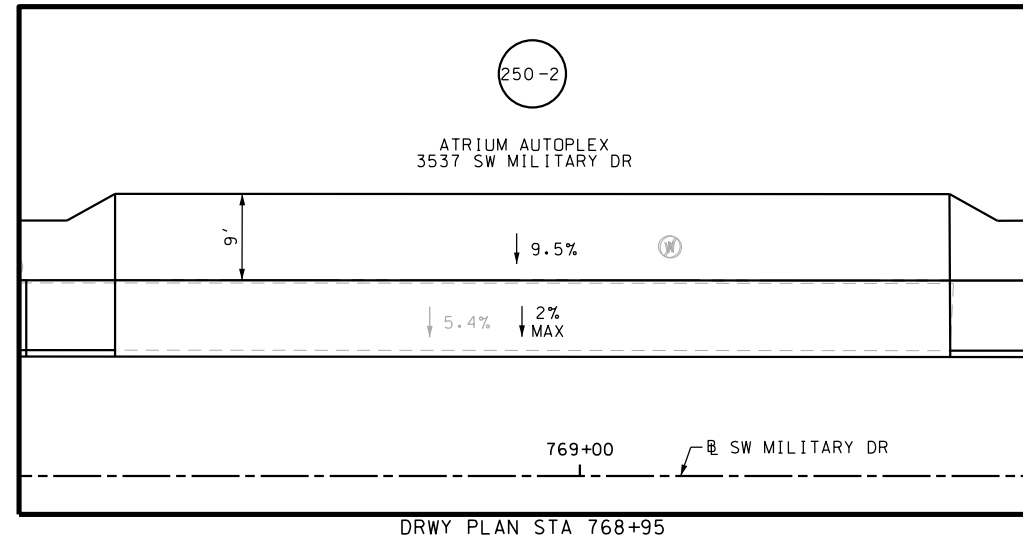
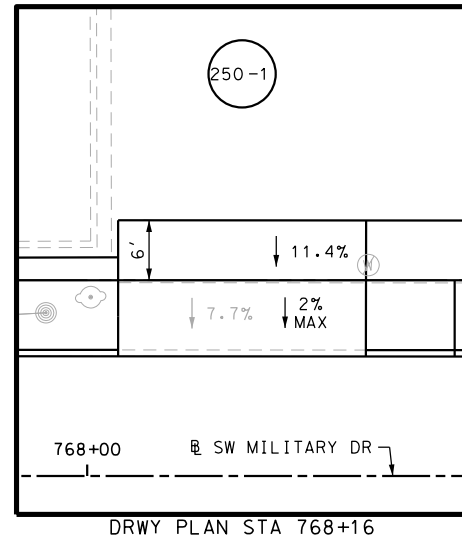
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 768+00 TO STA 772+00

SHEET 64 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	250

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWM\1113507\*SWM\111aryB\*WB07A.dgn



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 768+00 TO STA 772+00

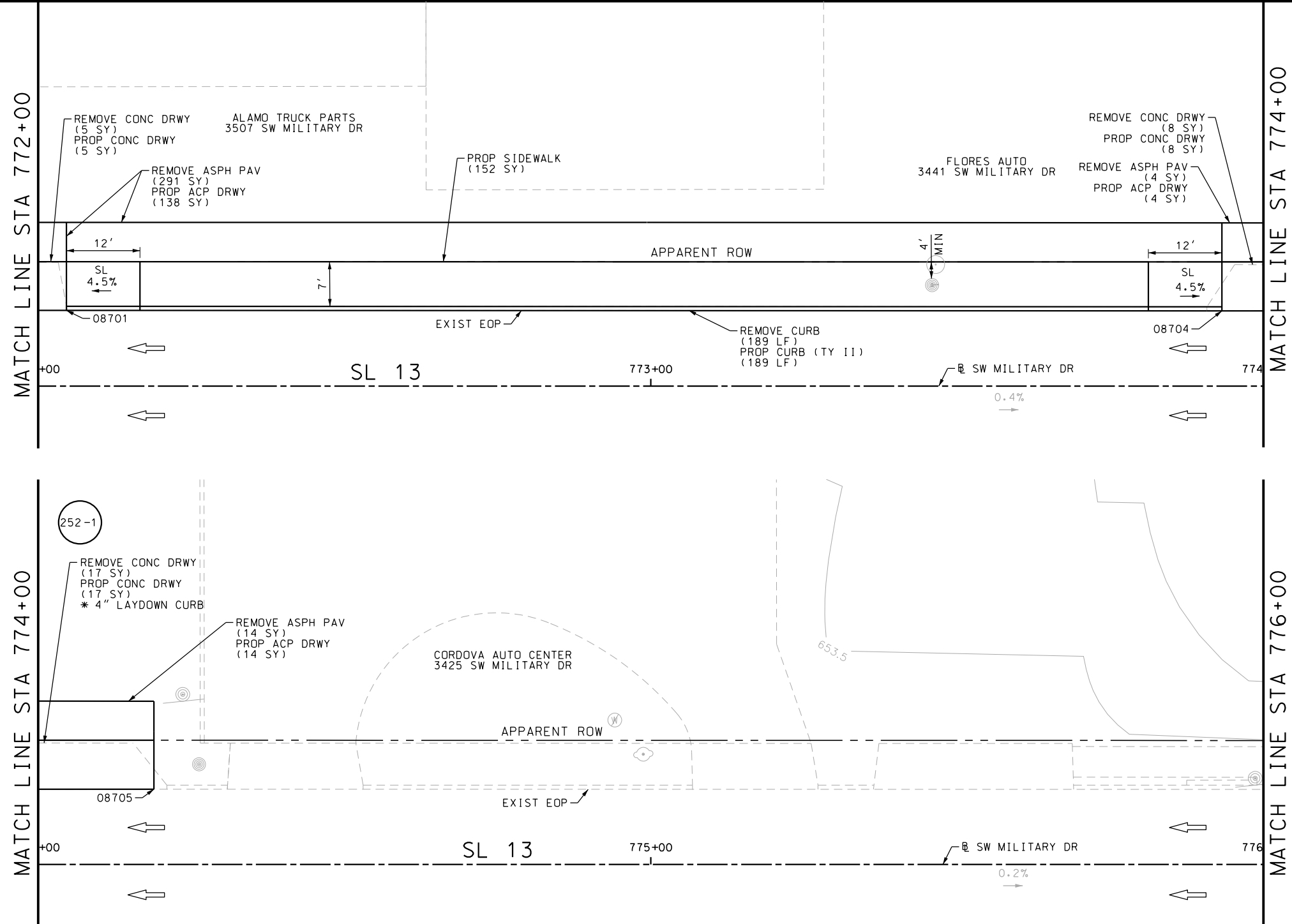
SHEET 65 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	251

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*WB08.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	30
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	189
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	309
0529-6002	CONC CURB (TY II)	LF	189
0530-6004	DRIVEWAYS (CONC)	SY	30
0530-6005	DRIVEWAYS (ACP)	SY	156
0531-6001	CONC SIDEWALKS (4")	SY	152



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

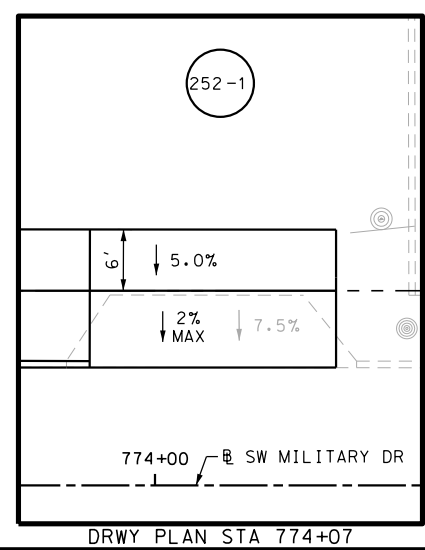
STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
08701	13680344.21	2110111.51	--	ME
08704	13680325.04	2110299.12	--	ME
08705	13680322.43	2110324.66	--	ME



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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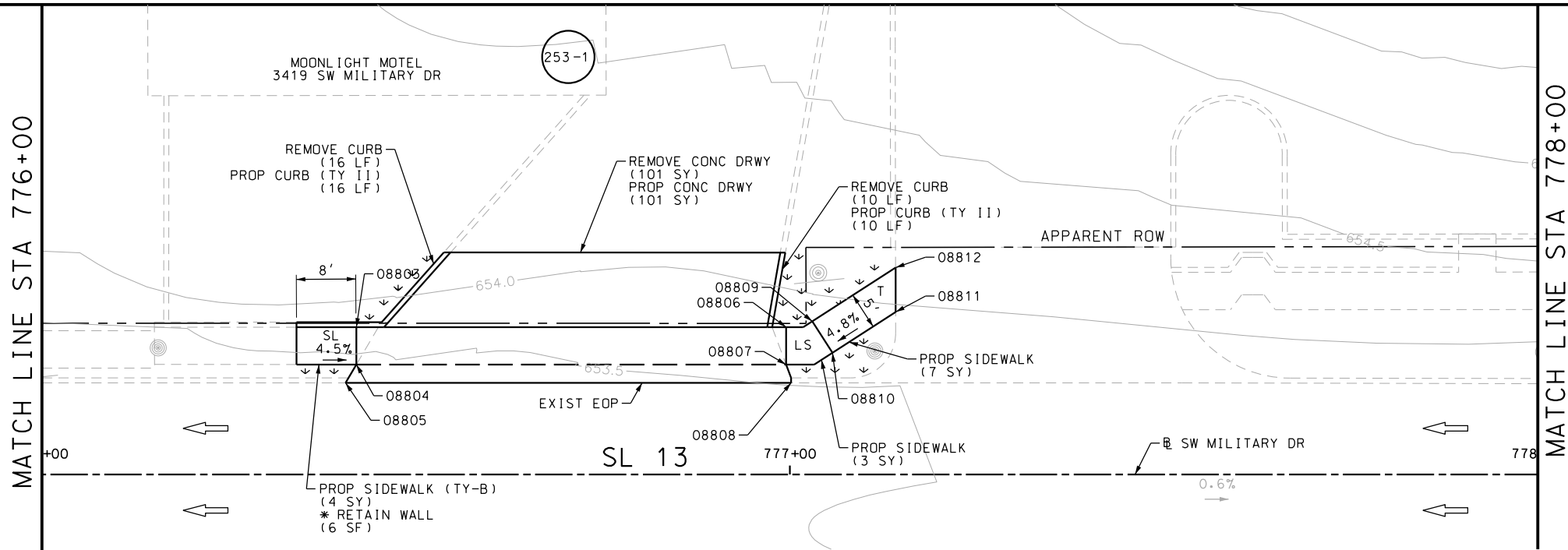
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 772+00 TO STA 776+00

SHEET 66 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	252

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI113507\*SWMI1113507\*WB09.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	101
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	26
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	25
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0529-6002	CONC CURB (TY II)	LF	26
0530-6004	DRIVEWAYS (CONC)	SY	101
0531-6001	CONC SIDEWALKS (4")	SY	10
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

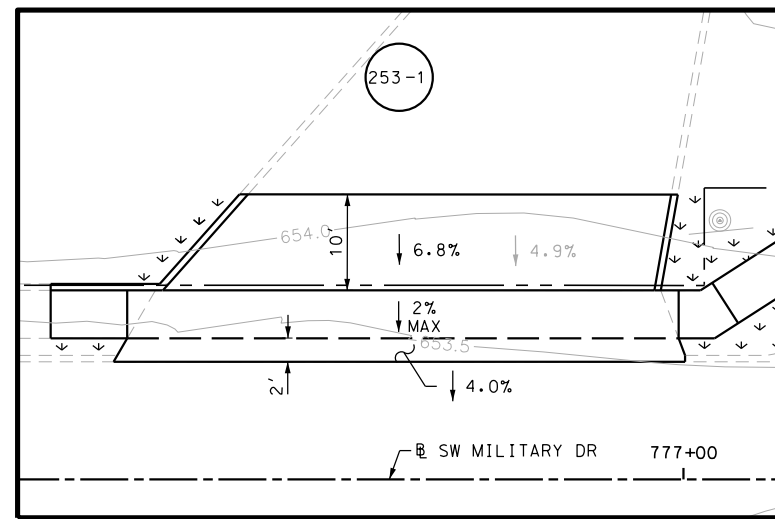
DESIGN

John A. Tyler, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

James A. Lutz, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20'



POINT	NORTHING	EASTING	ELEV	DESC
08803	13680307.23	2110547.43	652.52	PROP
08804	13680302.25	2110546.92	652.45	PROP
08805	13680299.97	2110545.24	--	ME
08806	13680301.42	2110604.58	652.59	PROP
08807	13680296.45	2110604.07	652.52	PROP
08808	13680293.94	2110604.49	--	ME
08809	13680301.84	2110608.14	652.66	PROP
08810	13680297.38	2110610.41	652.59	PROP
08811	13680301.94	2110619.37	--	ME
08812	13680307.85	2110619.96	--	ME

REV. NO.	DATE	DESCRIPTION	BY

Texas Department of Transportation © 2019

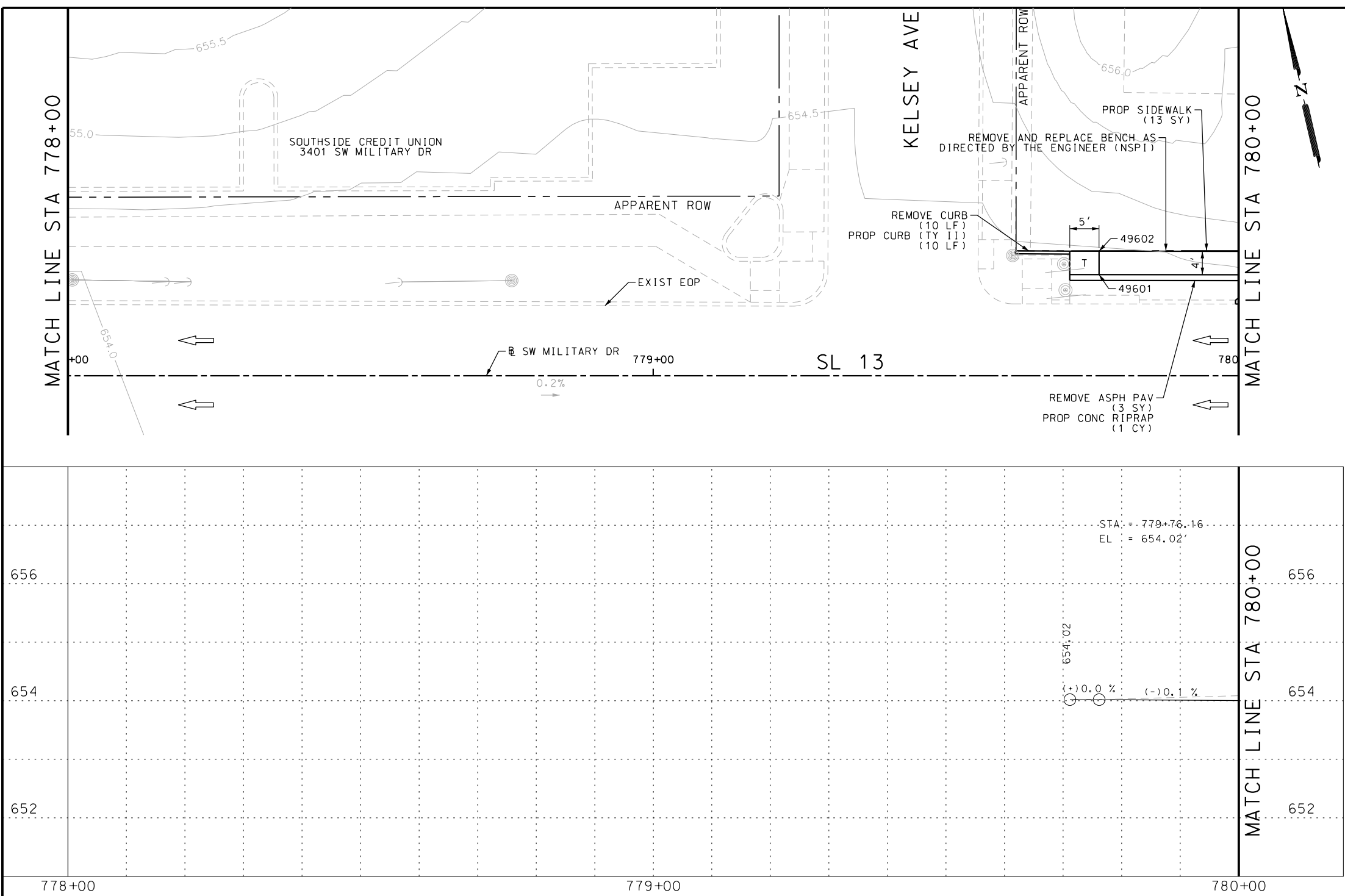
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 776+00 TO STA 778+00

SHEET 67 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	253

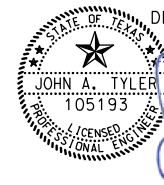
Plotted on: 5/3/2019

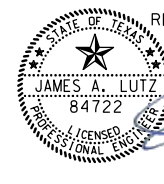
Design File name: P:\111\35\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*WB09PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	10
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	3
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	10
0531-6001	CONC SIDEWALKS (4")	SY	13

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
49601	13680270.99	2110879.58	--	PROF
49602	13680274.97	2110879.99	--	PROF

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

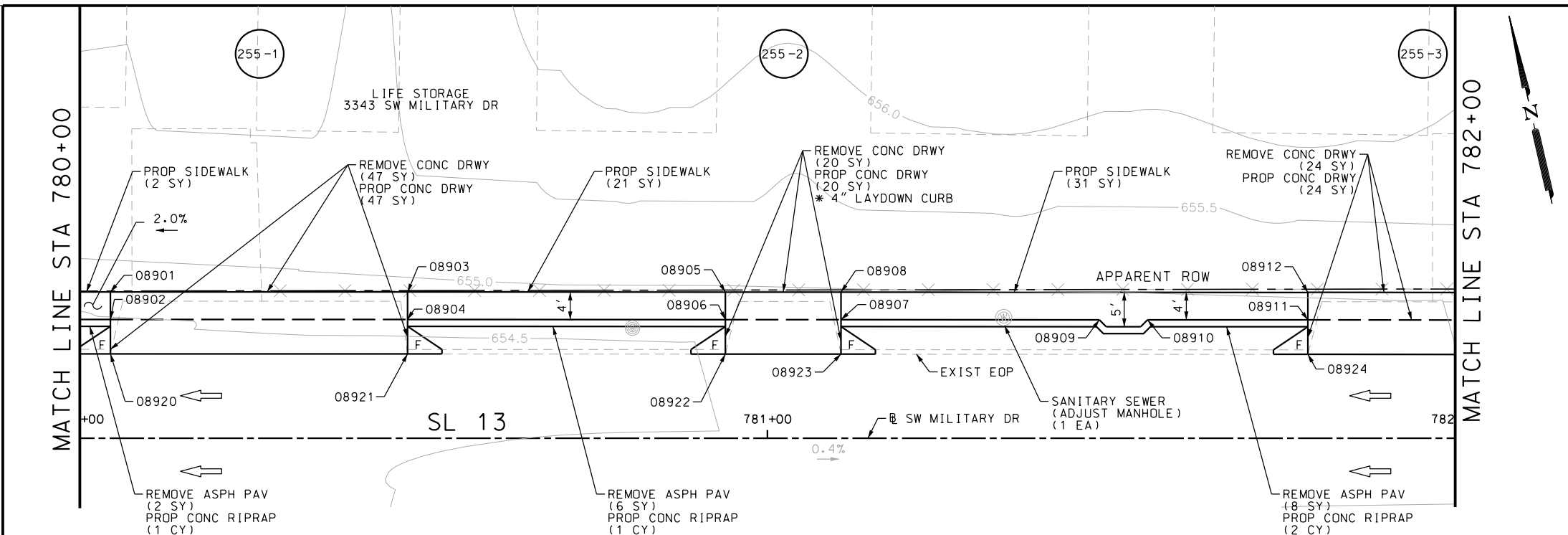
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 778+00 TO STA 780+00

SHEET 68 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	254

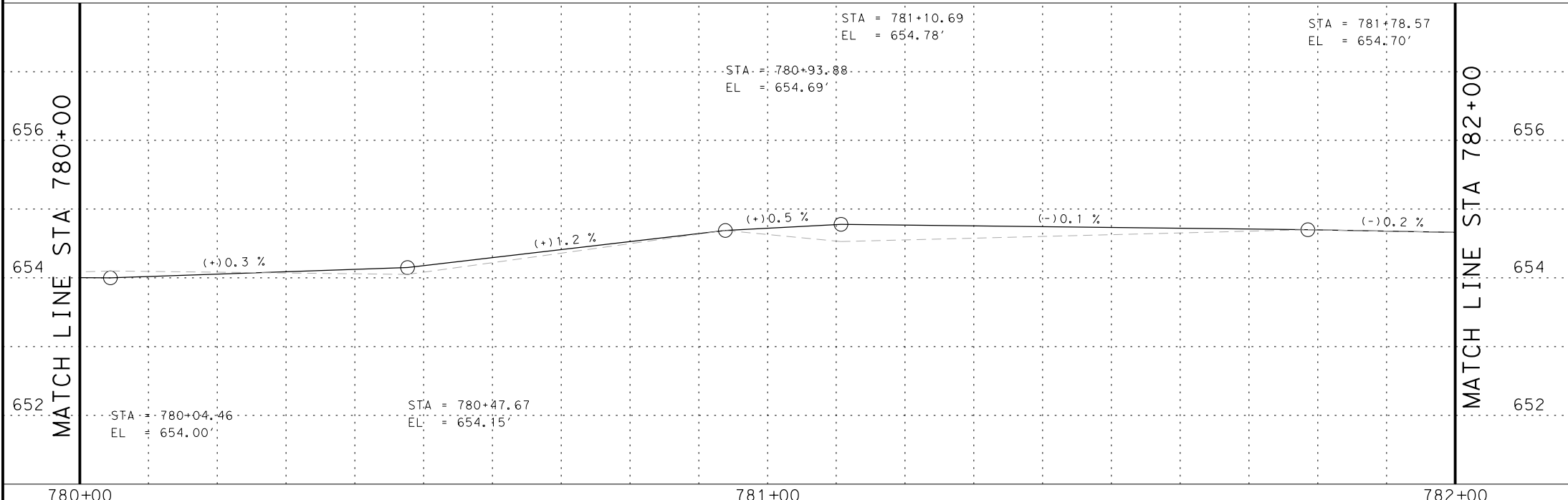
Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB10PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	91
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	16
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0530-6004	DRIVEWAYS (CONC)	SY	91
0531-6001	CONC SIDEWALKS (4")	SY	54
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

**JOHN A. TYLER, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 105193  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

**JAMES A. LUTZ, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 84722  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
08901	13680272.09	2110908.15	--	ME
08902	13680268.11	2110907.74	--	PROF
08903	13680267.70	2110951.13	--	ME
08904	13680263.72	2110950.72	654.09	PROP
08905	13680263.00	2110997.10	--	ME
08906	13680259.02	2110996.69	--	PROF
08907	13680257.32	2111013.42	--	PROF
08908	13680261.29	2111013.83	--	ME
08909	13680253.50	2111050.79	--	PROF
08910	13680252.79	2111057.76	--	PROF
08911	13680250.42	2111080.95	--	PROF
08912	13680254.39	2111081.35	--	ME
08920	13680263.14	2110907.23	--	ME
08921	13680258.75	2110950.21	--	ME
08922	13680254.05	2110996.19	--	ME
08923	13680252.34	2111012.91	--	ME
08924	13680245.44	2111080.44	--	ME

**PAPE-DAWSON ENGINEERS**

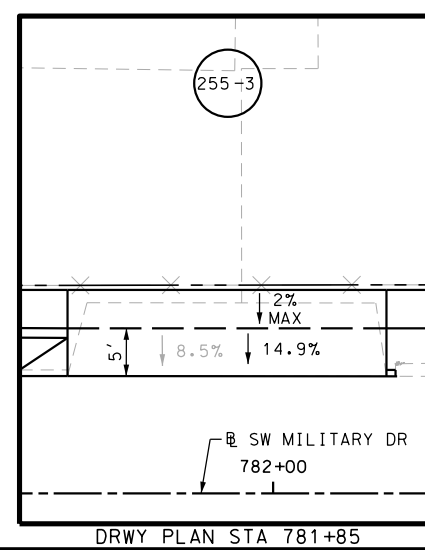
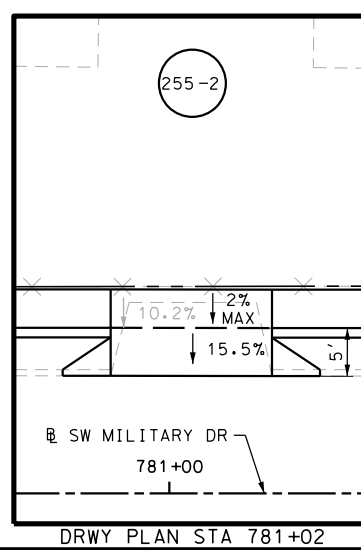
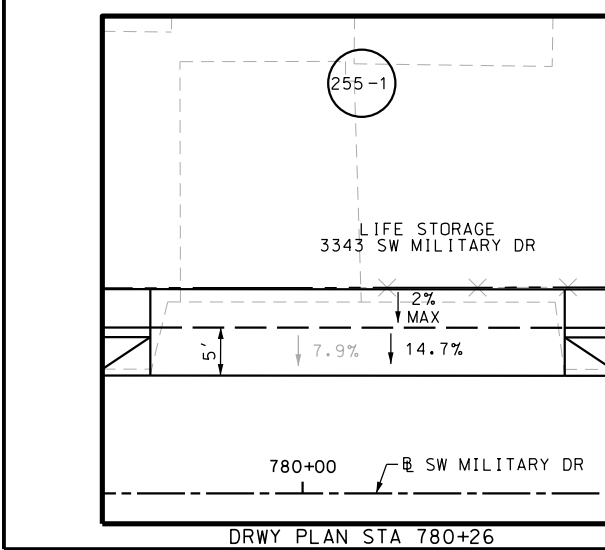
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 780+00 TO STA 782+00

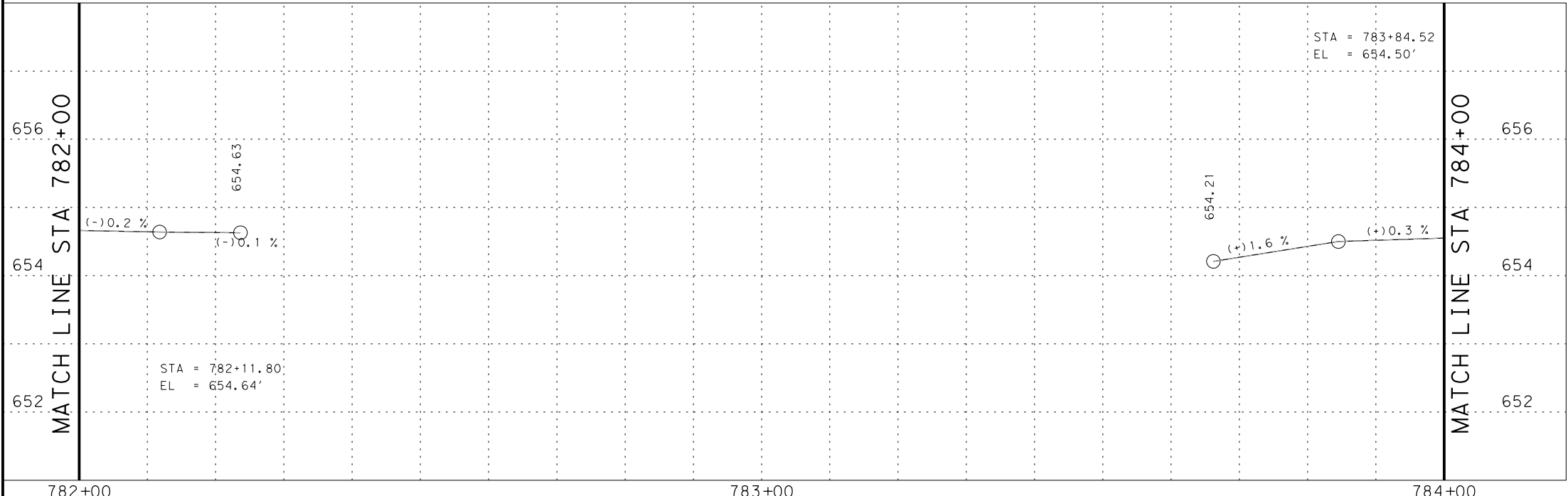
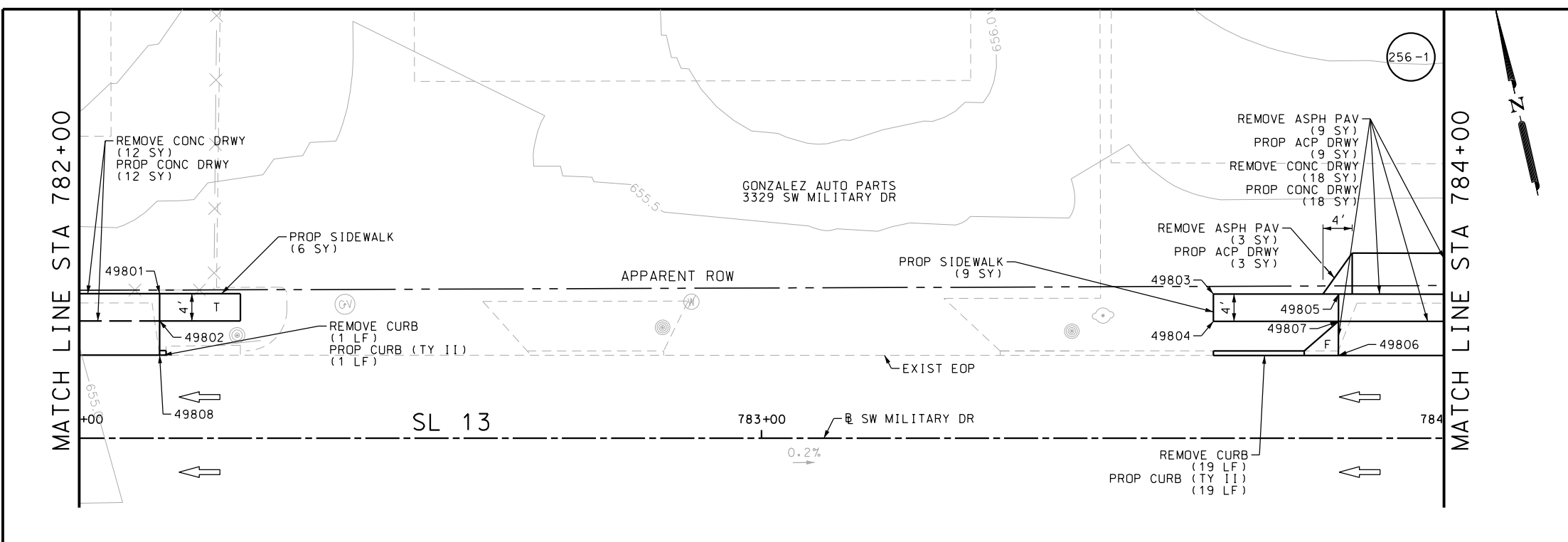
SHEET 69 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	255



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM11113507\*SWM11113507\*WB10PP\*W.A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	30
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	20
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	12
0529-6002	CONC CURB (TY II)	LF	20
0530-6004	DRIVEWAYS (CONC)	SY	30
0530-6005	DRIVEWAYS (ACP)	SY	12
0531-6001	CONC SIDEWALKS (4")	SY	15

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

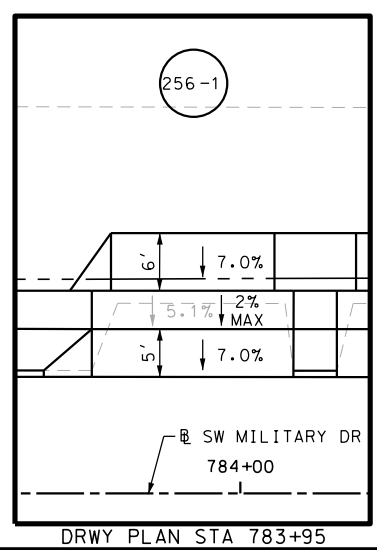


SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 782+00 TO STA 784+00

SHEET 70 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	256

POINT	NORTHING	EASTING	ELEV	DESC
49801	13680251.01	2111114.41	--	PROF
49802	13680247.04	2111114.00	--	PROF
49803	13680235.32	2111268.02	--	ME
49804	13680231.35	2111267.61	--	ME
49805	13680233.47	2111286.24	--	PROF
49806	13680224.51	2111285.33	--	ME
49807	13680229.49	2111285.84	--	PROF
49808	13680242.07	2111113.49	--	ME







Plotted on: 5/3/2019

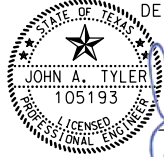
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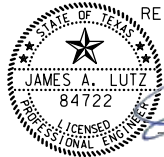
POINT	NORTHING	EASTING	ELEV	DESC
09001	13680227.35	2111306.75	--	PROF
09002	13680231.32	2111307.16	--	PROF
09003	13680230.86	2111311.65	654.59	PROF
09004	13680226.89	2111311.25	654.52	PROF
09005	13680224.48	2111334.81	--	PROF
09006	13680228.45	2111335.22	--	PROF
09007	13680223.12	2111348.19	--	PROF
09008	13680222.40	2111355.15	--	PROF
09009	13680217.40	2111404.12	--	PROF
09010	13680221.38	2111404.53	--	PROF
09011	13680212.43	2111403.61	--	ME
09012	13680209.06	2111436.58	--	ME
09013	13680214.03	2111437.08	--	PROF
09014	13680218.00	2111437.49	--	PROF
09015	13680217.17	2111445.78	--	PROF
09016	13680213.19	2111445.37	654.89	PROP
09017	13680208.21	2111444.86	--	ME
09018	13680204.41	2111482.29	--	ME
09019	13680209.38	2111482.77	--	PROF
09020	13680213.36	2111483.16	--	PROF

POINT	NORTHING	EASTING	ELEV	DESC
09021	13680208.73	2111489.53	--	PROF
09022	13680208.05	2111496.50	--	PROF

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
 © 2019

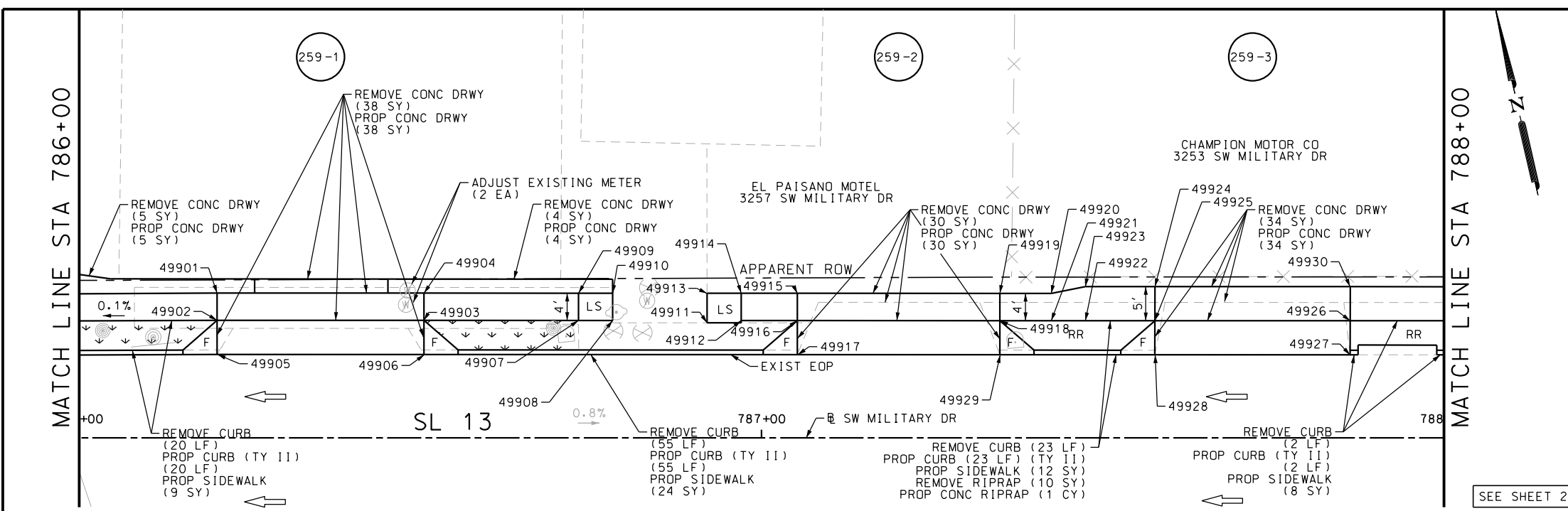
SL 13  
 SW MILITARY B  
**SIDEWALK  
 CONSTRUCTION PLAN**  
 STA 784+00 TO STA 786+00

SHEET 72 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	258

Plotted on: 5/3/2019

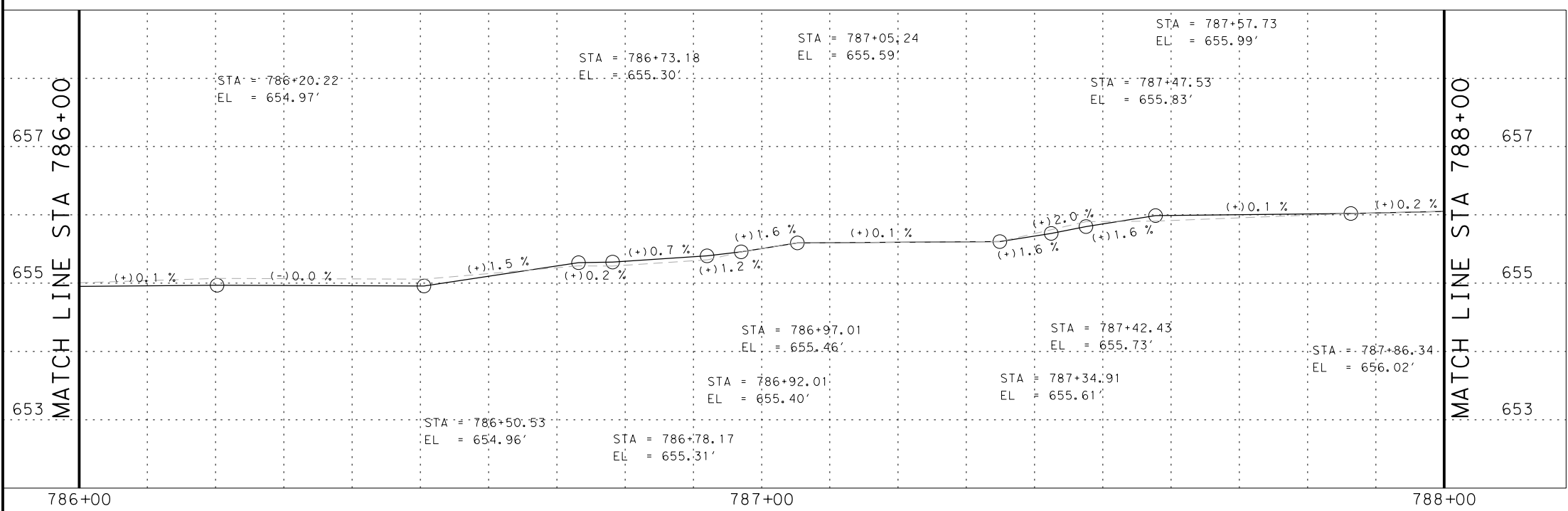
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ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	10
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	125
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	100
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	25
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	100
0530-6004	DRIVEWAYS (CONC)	SY	125
0531-6001	CONC SIDEWALKS (4")	SY	53
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	2

SEE SHEET 260 FOR POINT TABLE

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

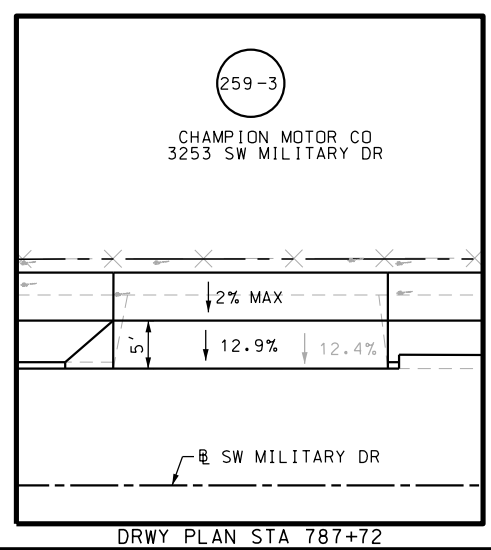
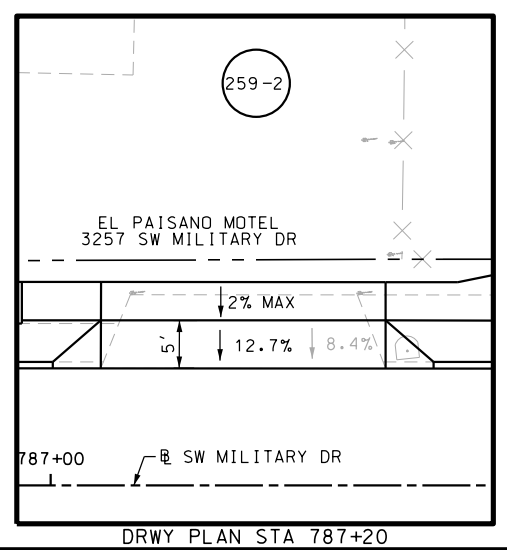
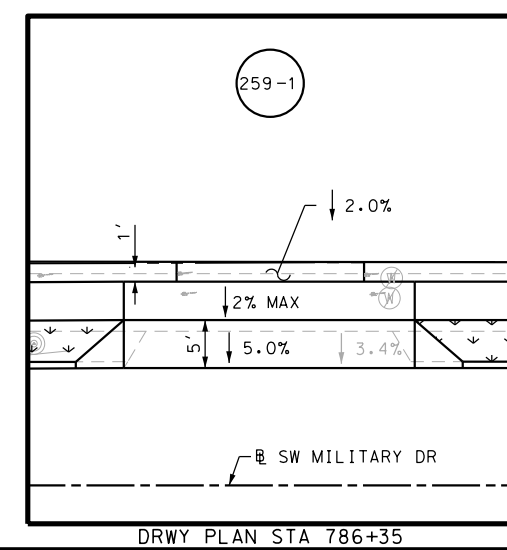
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 786+00 TO STA 788+00

SHEET 73 OF 99

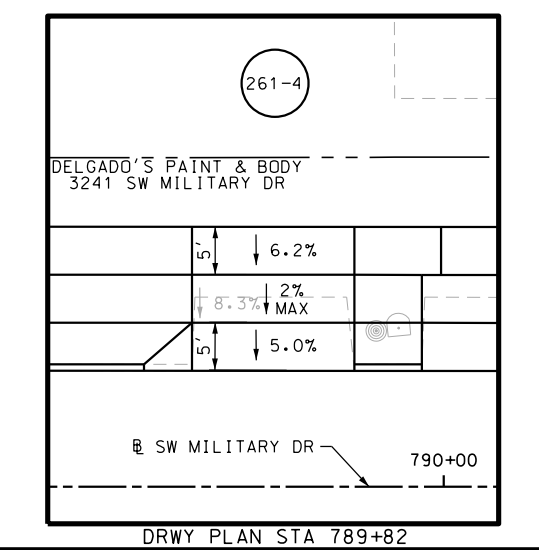
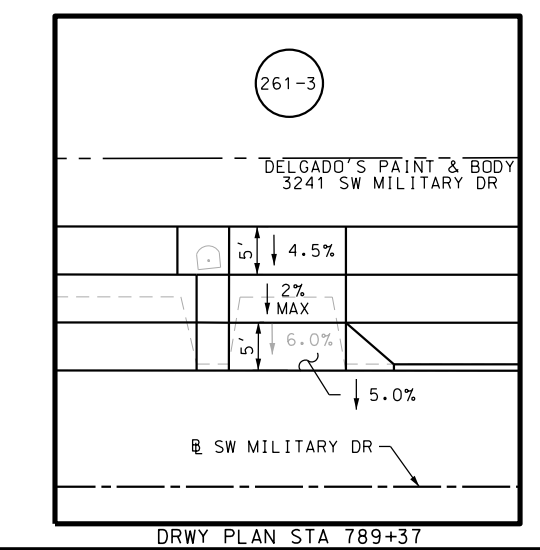
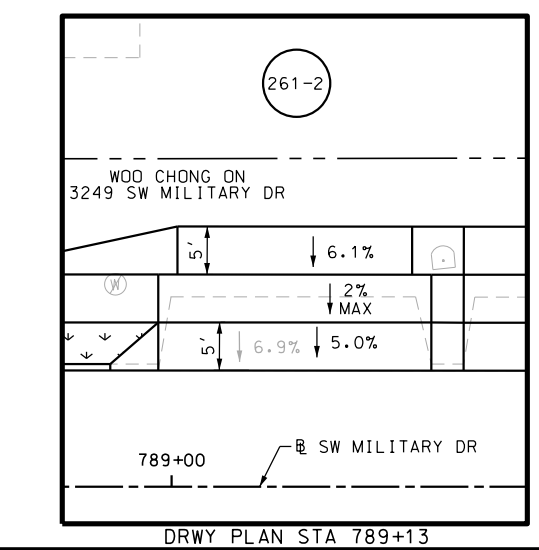
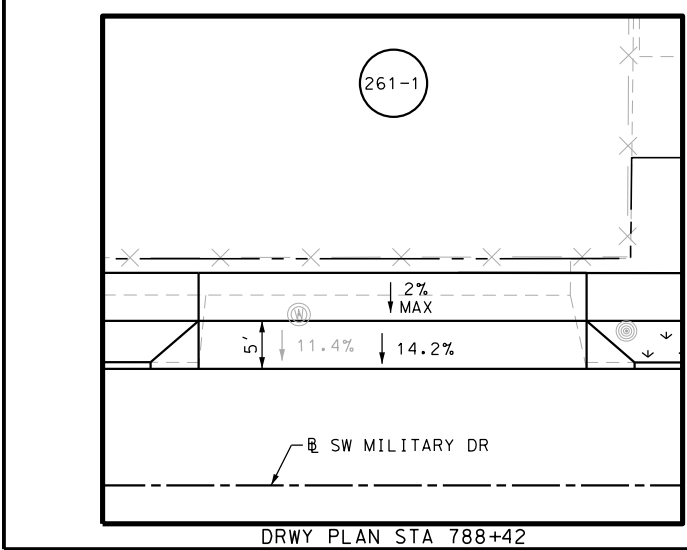
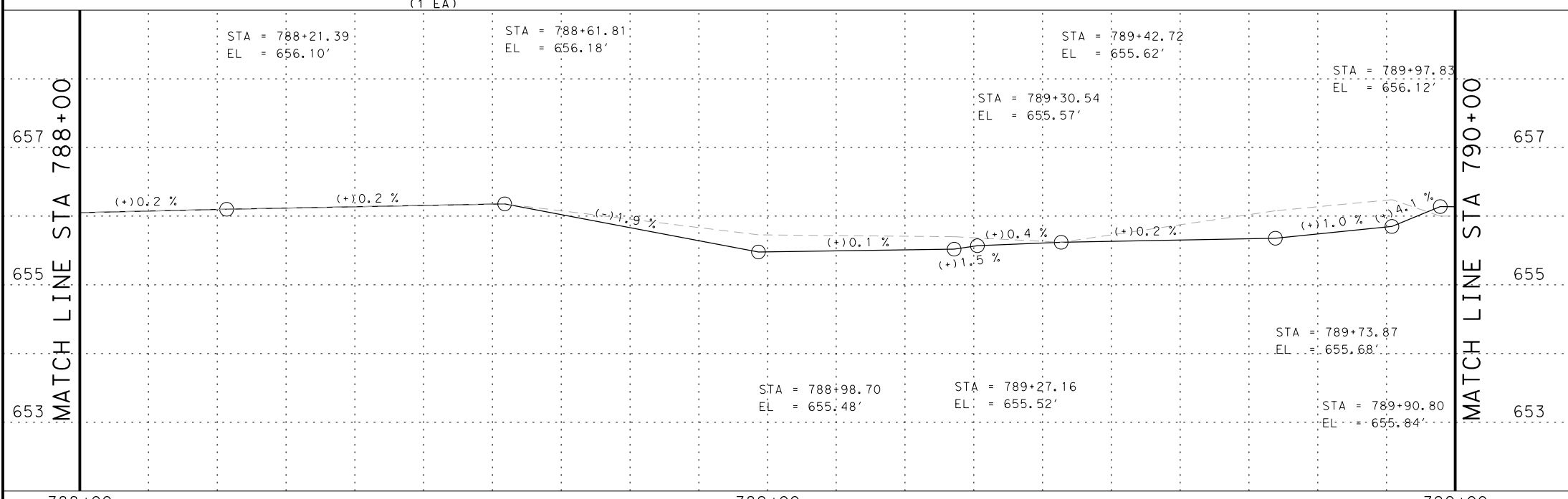
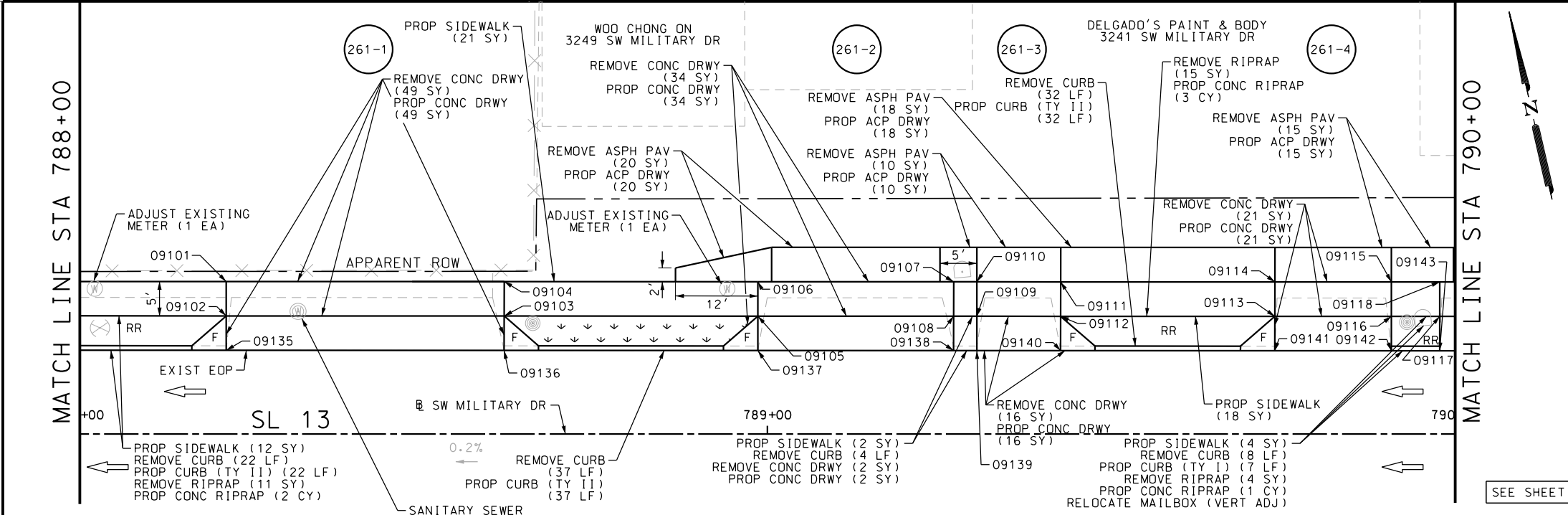
DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG	6	TEXAS		VARIES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	259





Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\SWMI1113507\WB12PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	30
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	122
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	103
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	63
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	20
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0432-6003	RIPRAP (CONC) (6 IN)	CY	6
0529-6001	CONC CURB (TY I)	LF	7
0529-6002	CONC CURB (TY II)	LF	91
0530-6004	DRIVEWAYS (CONC)	SY	122
0530-6005	DRIVEWAYS (ACP)	SY	63
0531-6001	CONC SIDEWALKS (4")	SY	57
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	1
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	2

SEE SHEET 262 FOR POINT TABLE

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 788+00 TO STA 790+00

SHEET 75 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	261

Plotted on: 5/3/2019

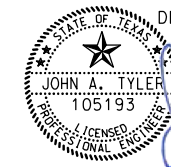
Design File name: P:\111\35\07\des\ign\Civil\Roadway\SMM\1113507\*SMM\1113507\*WB12PPB.dgn

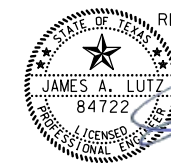
POINT	NORTHING	EASTING	ELEV	DESC
09101	13680190.29	2111720.87	--	ME
09102	13680185.31	2111720.36	--	PROF
09103	13680181.20	2111760.58	--	PROF
09104	13680186.18	2111761.08	--	ME
09105	13680177.45	2111797.28	--	PROF
09106	13680182.43	2111797.79	--	PROF
09107	13680179.54	2111826.10	--	PROF
09108	13680174.56	2111825.59	--	PROF
09109	13680174.22	2111828.95	--	PROF
09110	13680179.19	2111829.46	--	PROF
09111	13680177.95	2111841.57	--	PROF
09112	13680172.98	2111841.07	--	PROF
09113	13680169.81	2111872.05	--	PROF
09114	13680174.79	2111872.56	--	PROF
09115	13680173.07	2111889.41	--	PROF
09116	13680168.09	2111888.90	--	PROF
09117	13680167.38	2111895.89	--	PROF
09118	13680172.35	2111896.40	--	PROF
09135	13680180.34	2111719.85	--	ME
09136	13680176.23	2111760.07	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
09137	13680172.48	2111796.77	--	ME
09138	13680169.59	2111825.08	--	ME
09139	13680169.24	2111828.44	--	ME
09140	13680168.01	2111840.56	--	ME
09141	13680164.84	2111871.55	--	ME
09142	13680163.12	2111888.39	--	ME
09143	13680162.41	2111895.39	--	ME

NOTES:

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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
 © 2019

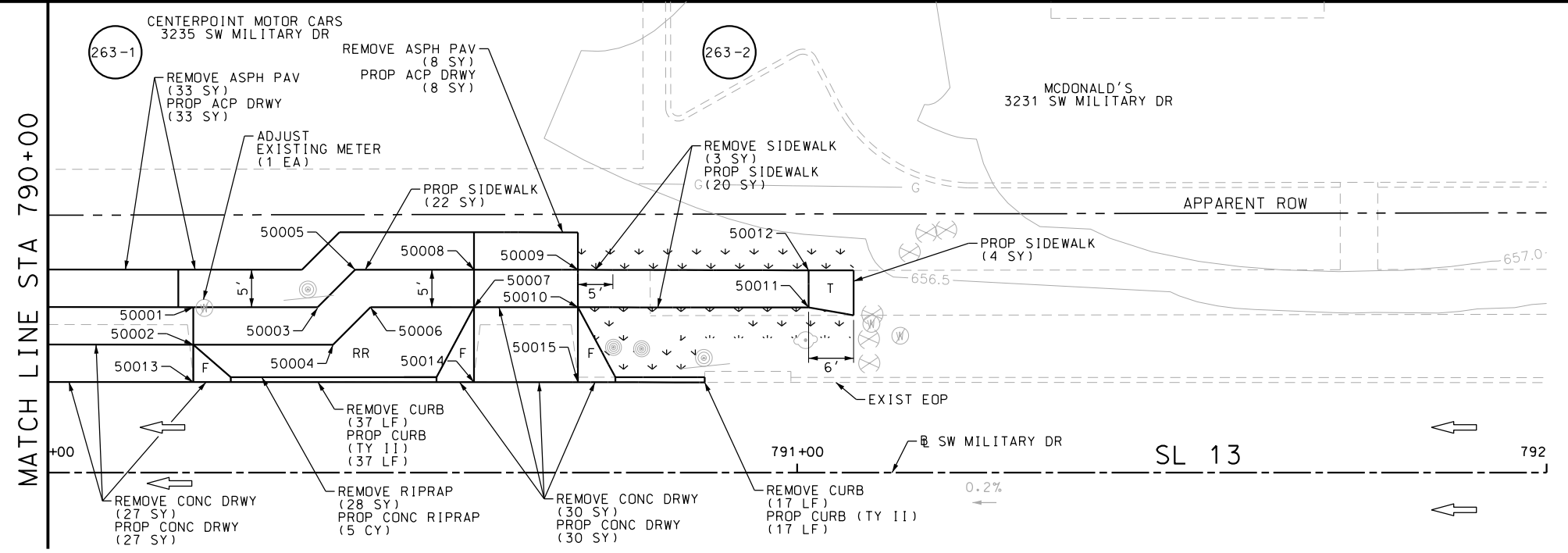
SL 13  
 SW MILITARY B  
**SIDEWALK  
 CONSTRUCTION PLAN**  
 STA 788+00 TO STA 790+00

SHEET 76 OF 99

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DWG:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	262

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\SWMI1113507\WB12PP\A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	28
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	57
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	57
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	3
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	41
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	50
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0432-6003	RIPRAP (CONC) (6 IN)	CY	5
0529-6002	CONC CURB (TY II)	LF	54
0530-6004	DRIVEWAYS (CONC)	SY	57
0530-6005	DRIVEWAYS (ACP)	SY	41
0531-6001	CONC SIDEWALKS (4")	SY	46
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

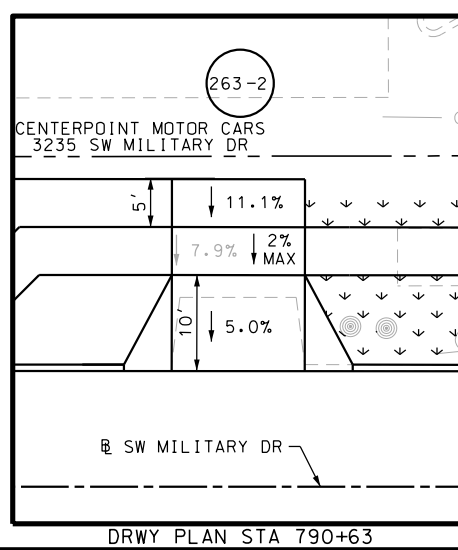
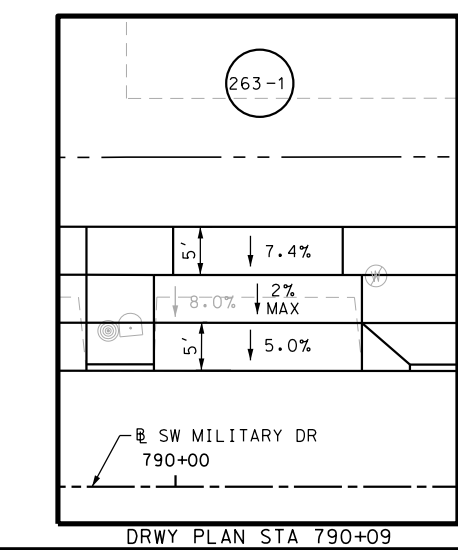
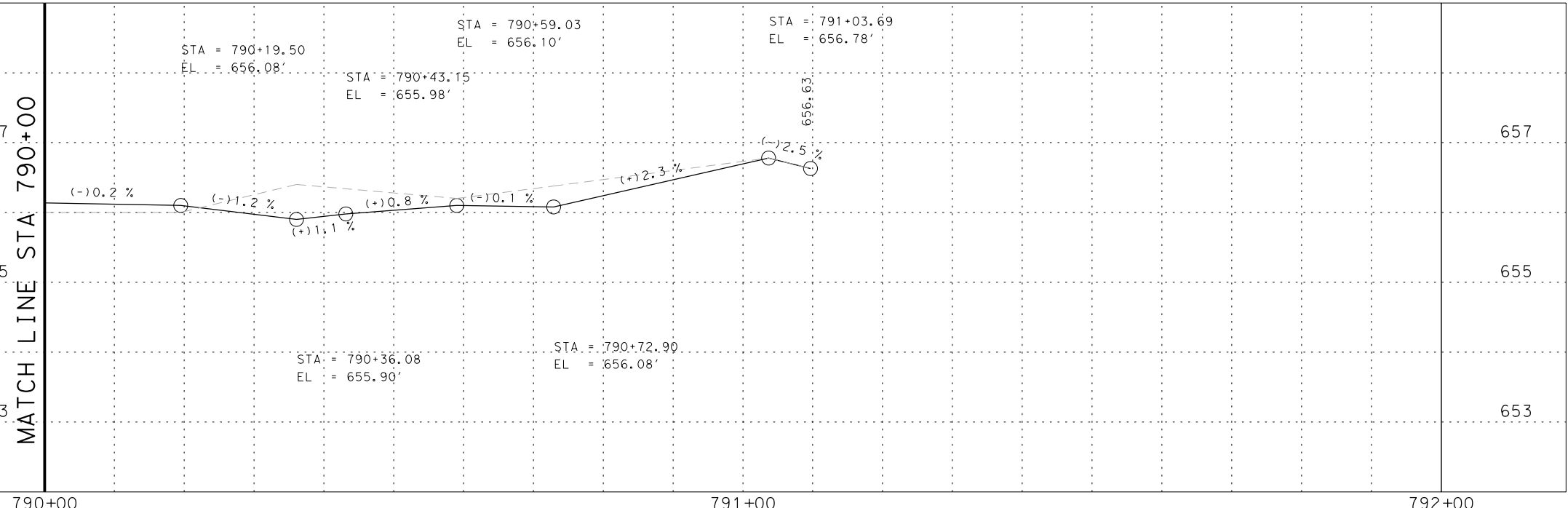
Texas Department of Transportation  
 © 2019

SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 790+00 TO STA 792+00

SHEET 77 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				263

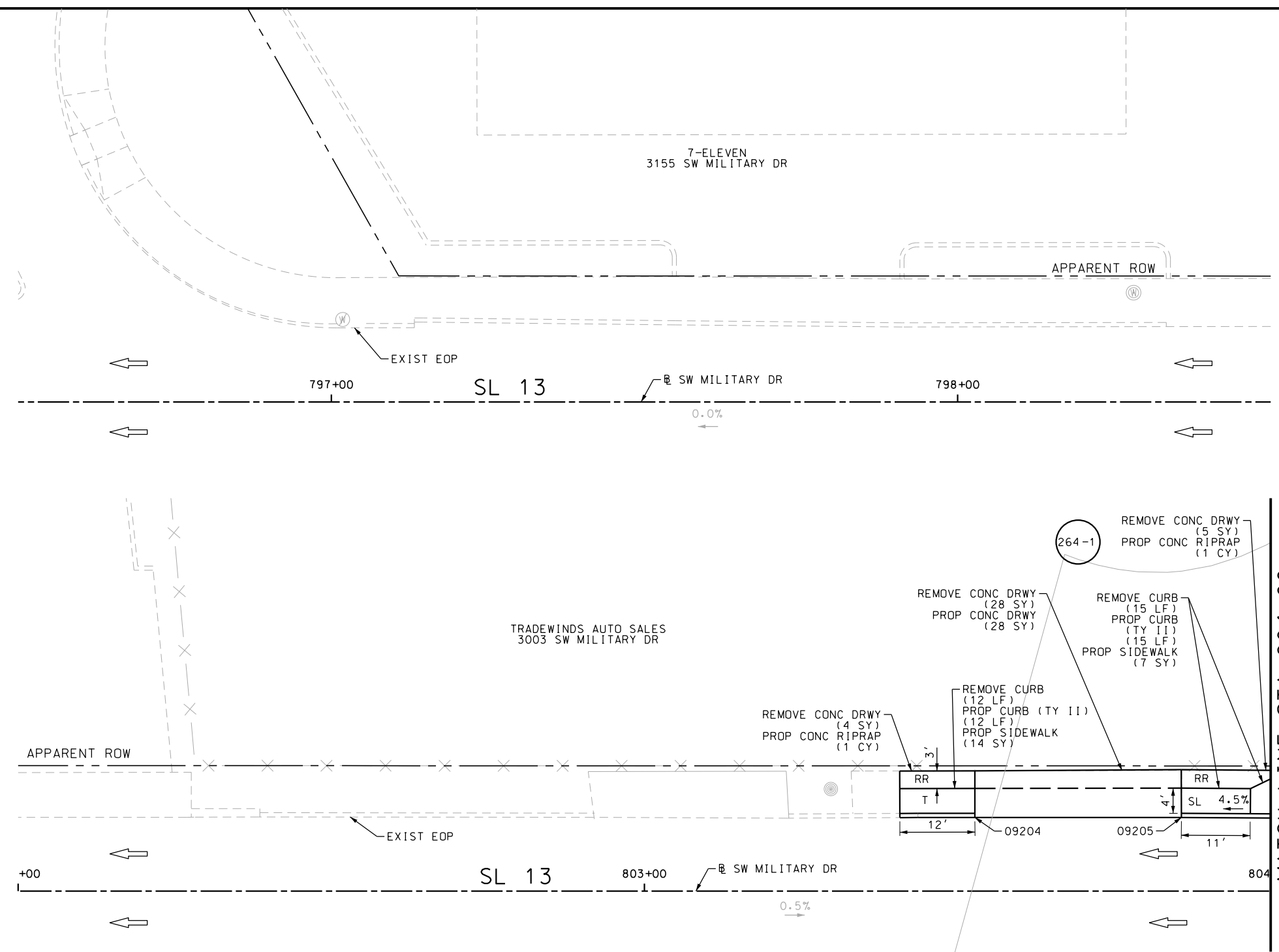
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50001	13680170.15	2111917.96	--	PROF
50002	13680165.18	2111917.46	--	PROF
50003	13680168.47	2111934.45	--	PROF
50004	13680163.28	2111936.00	--	PROF
50005	13680172.93	2111939.93	--	PROF
50006	13680167.75	2111941.49	--	PROF
50007	13680166.34	2111955.23	--	PROF
50008	13680171.32	2111955.74	--	PROF
50009	13680169.91	2111969.53	--	PROF
50010	13680164.93	2111969.02	--	PROF
50011	13680161.81	2111999.65	--	PROF
50012	13680166.73	2112000.16	--	PROF
50013	13680160.20	2111916.95	--	ME
50014	13680156.40	2111954.21	--	ME
50015	13680154.99	2111968.00	--	ME



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB13A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	37
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	27
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	27
0530-6004	DRIVEWAYS (CONC)	SY	28
0531-6001	CONC SIDEWALKS (4")	SY	21



- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

*John A. Tyler*  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

*James A. Lutz*  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

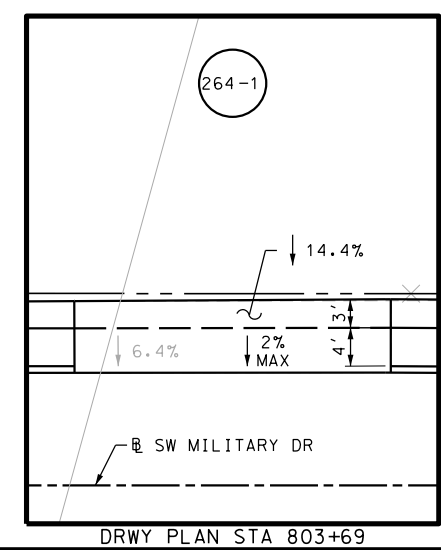
**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 796+50 TO STA 798+50  
 STA 802+00 TO STA 804+00  
 SHEET 78 OF 99

POINT	NORTHING	EASTING	ELEV	DESC
09204	13680024.89	2113243.43	--	ME
09205	13680021.57	2113276.23	--	ME

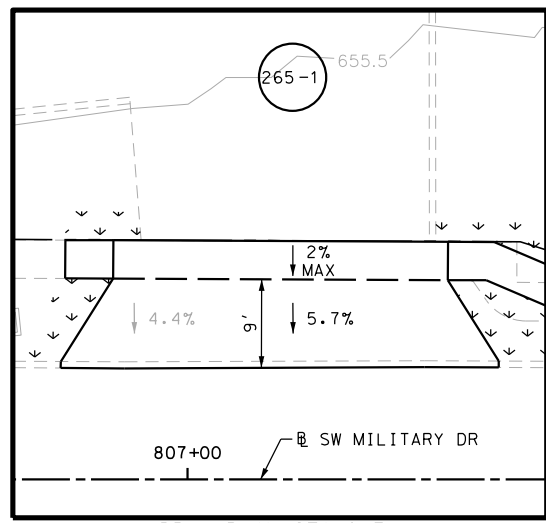
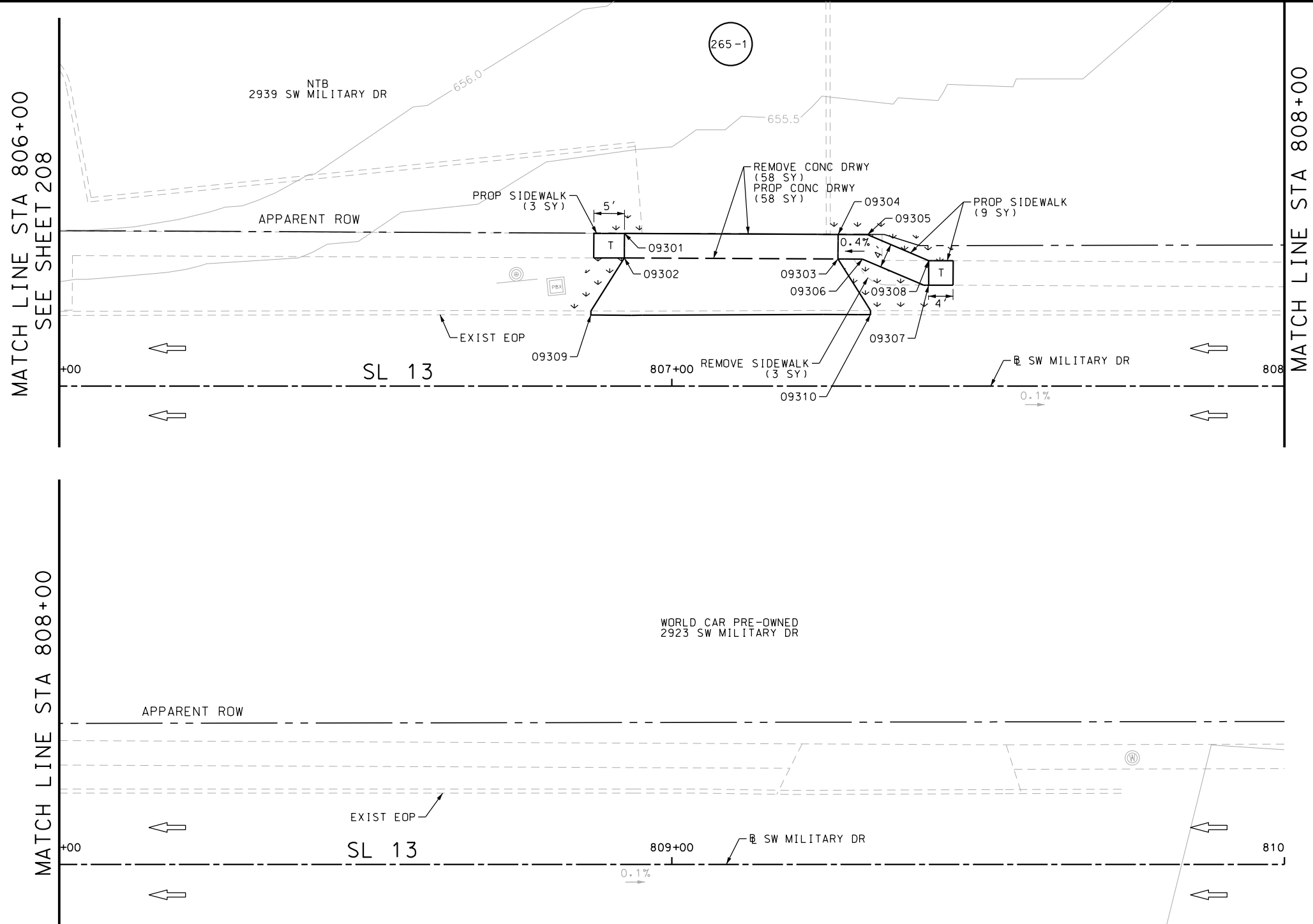


DRWY PLAN STA 803+69



Plotted on: 5/3/2019

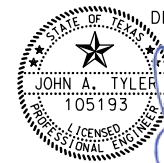
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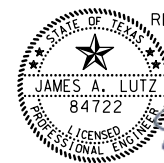


DRWY PLAN STA 807+10

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	58
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	25
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0530-6004	DRIVEWAYS (CONC)	SY	58
0531-6001	CONC SIDEWALKS (4")	SY	12

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
09301	13680003.63	2113582.51	--	ME
09302	13679999.65	2113582.09	654.41	PROP
09303	13679995.97	2113616.77	654.44	PROP
09304	13679999.95	2113617.19	--	ME
09305	13679999.44	2113621.97	654.53	PROP
09306	13679995.55	2113620.75	654.46	PROP
09307	13679990.22	2113631.05	654.50	PROP
09308	13679994.20	2113631.47	654.57	PROP
09309	13679990.95	2113575.71	--	ME
09310	13679986.38	2113621.12	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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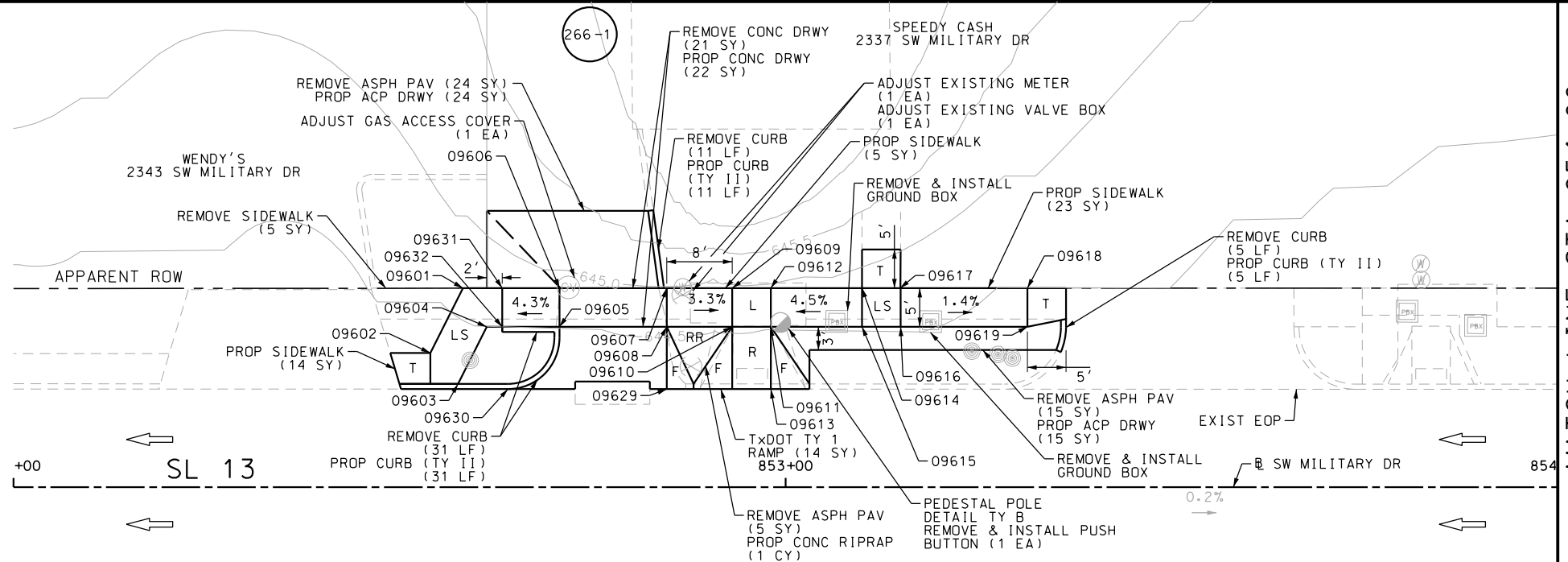
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 806+00 TO STA 810+00

SHEET 79 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	265

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB17.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	21
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	47
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	44
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	52
0530-6004	DRIVEWAYS (CONC)	SY	22
0530-6005	DRIVEWAYS (ACP)	SY	39
0531-6001	CONC SIDEWALKS (4")	SY	42
0531-6018	CURB RAMPS (TY 1)	SY	14
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	1
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	1
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

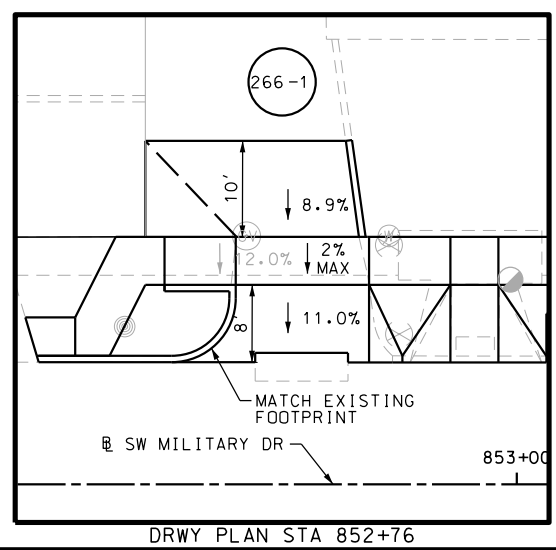
REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 852+00 TO STA 854+00  
 SHEET 80 OF 99

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	266

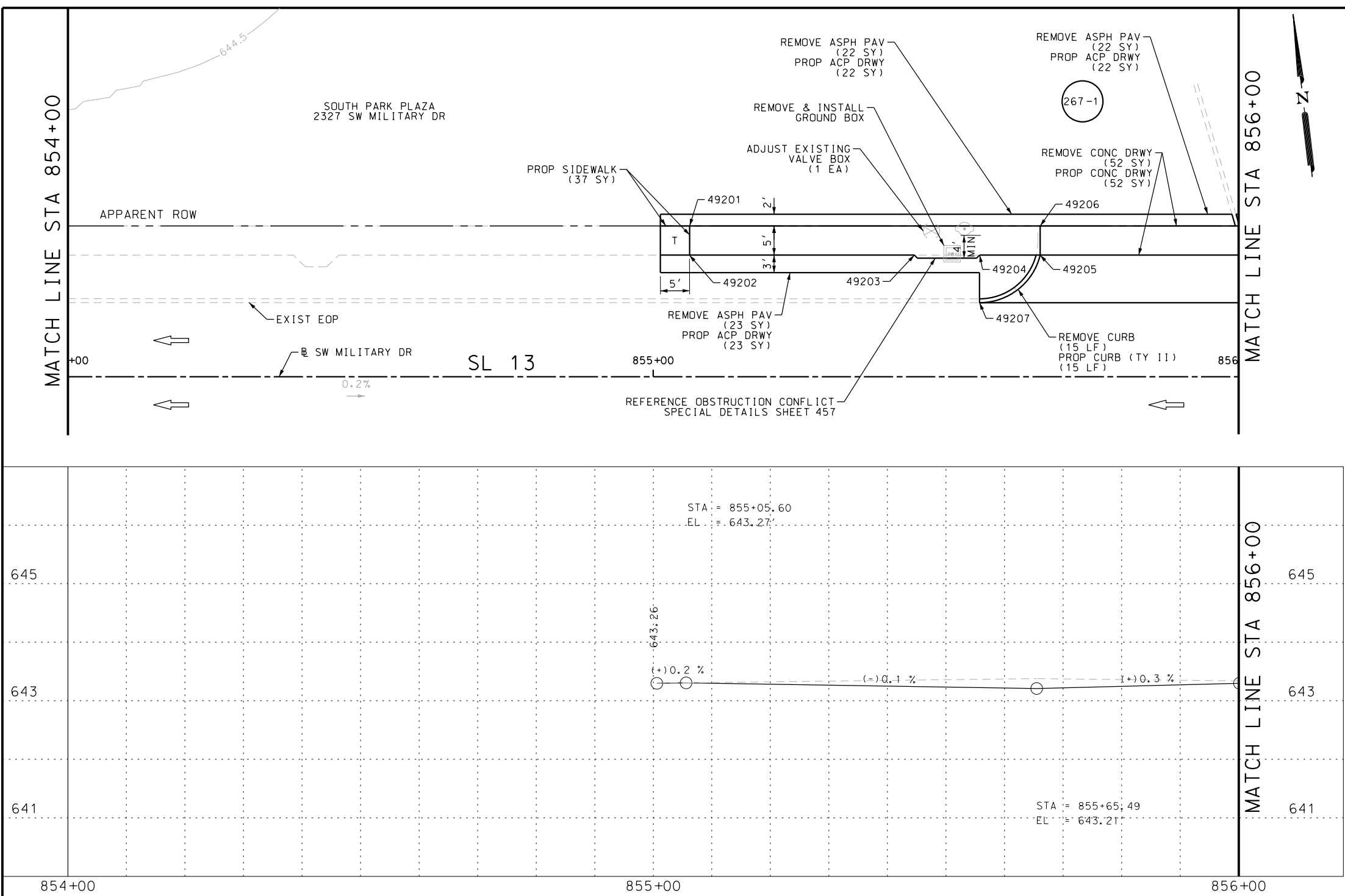


POINT	NORTHING	EASTING	ELEV	DESC
09601	13679893.69	2118139.67	643.98	PROP
09602	13679885.27	2118135.50	--	ME
09603	13679881.29	2118139.11	--	ME
09604	13679888.70	2118142.78	643.91	PROP
09605	13679888.76	2118152.21	644.21	PROP
09606	13679893.76	2118152.18	644.28	PROP
09607	13679893.84	2118166.07	--	ME
09608	13679888.84	2118166.10	644.24	PROP
09609	13679893.89	2118174.54	--	ME
09610	13679888.89	2118174.57	643.98	PROP
09611	13679888.92	2118179.57	644.06	PROP
09612	13679893.92	2118179.54	--	ME
09613	13679880.85	2118179.62	--	ME
09614	13679893.99	2118191.35	644.67	PROP
09615	13679888.99	2118191.38	644.60	PROP
09616	13679889.02	2118196.38	644.52	PROP
09617	13679894.02	2118196.35	644.60	PROP
09618	13679894.12	2118212.77	--	ME
09619	13679889.12	2118212.80	644.29	PROP
09629	13679880.78	2118166.15	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
09630	13679880.66	2118145.58	--	ME
09631	13679893.72	2118144.75	644.00	PROP
09632	13679888.72	2118144.78	639.93	PROP

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\SWMI1113507\WB17PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	52
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	15
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	67
0529-6002	CONC CURB (TY II)	LF	15
0530-6004	DRIVEWAYS (CONC)	SY	52
0530-6005	DRIVEWAYS (ACP)	SY	67
0531-6001	CONC SIDEWALKS (4")	SY	37
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

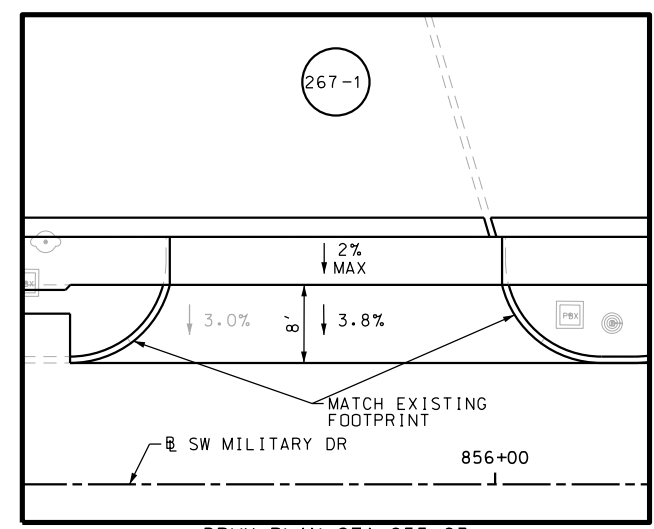
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 854+00 TO STA 856+00

SHEET 81 OF 99

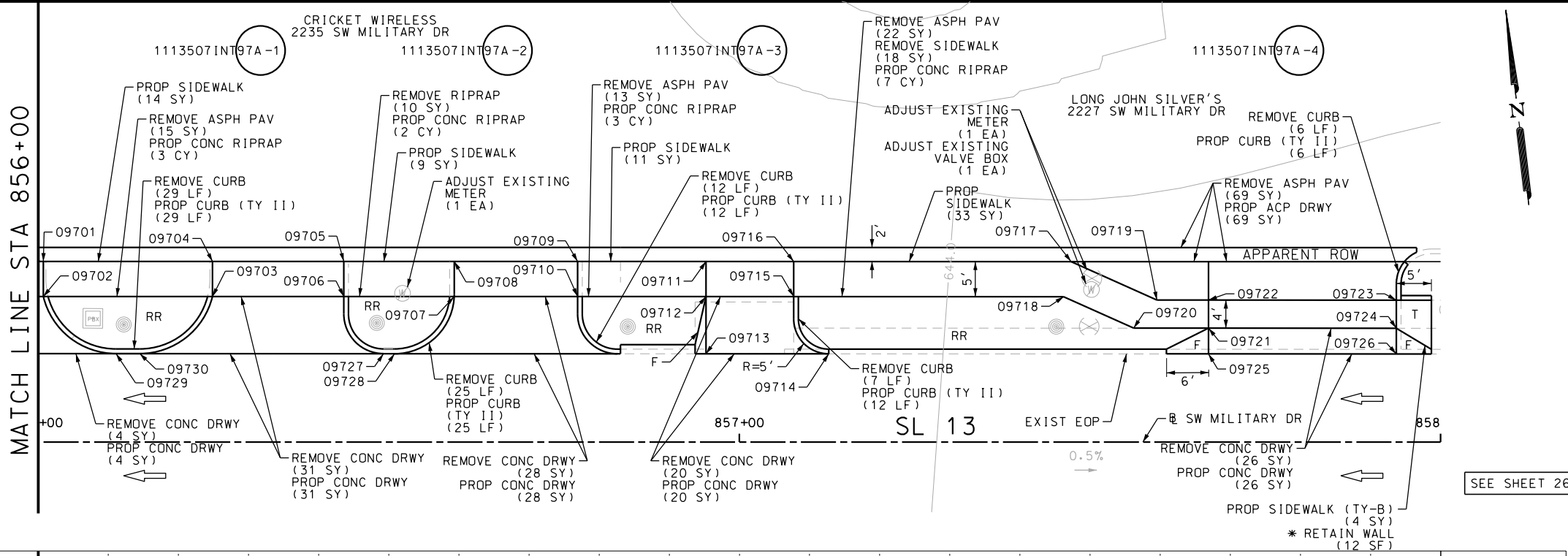
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	267



POINT	NORTHING	EASTING	ELEV	DESC
49201	13679895.15	2118387.67	--	PROF
49202	13679890.15	2118387.70	--	PROF
49203	13679890.38	2118426.10	--	PROF
49204	13679890.45	2118437.24	--	PROF
49205	13679890.51	2118447.59	--	PROF
49206	13679895.51	2118447.56	--	ME
49207	13679882.32	2118437.27	--	ME

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\SWMI1113507.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	10
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	109
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	79
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	18
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	119
0432-6003	RIPRAP (CONC) (6 IN)	CY	15
0529-6002	CONC CURB (TY II)	LF	71
0530-6004	DRIVEWAYS (CONC)	SY	109
0530-6005	DRIVEWAYS (ACP)	SY	69
0531-6001	CONC SIDEWALKS (4")	SY	67
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4
7196-6001	ADJUST EXISTING VALVE BOX	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	2

SEE SHEET 269 FOR POINT TABLE

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

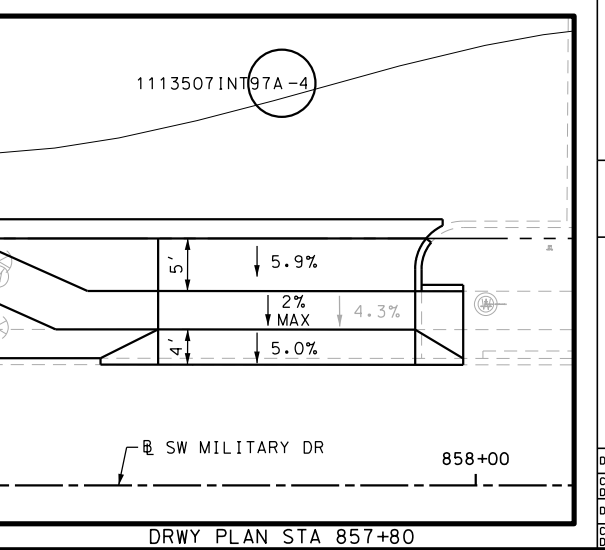
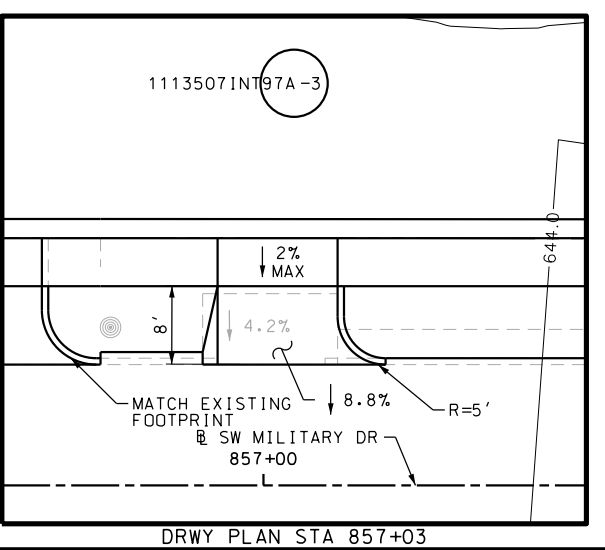
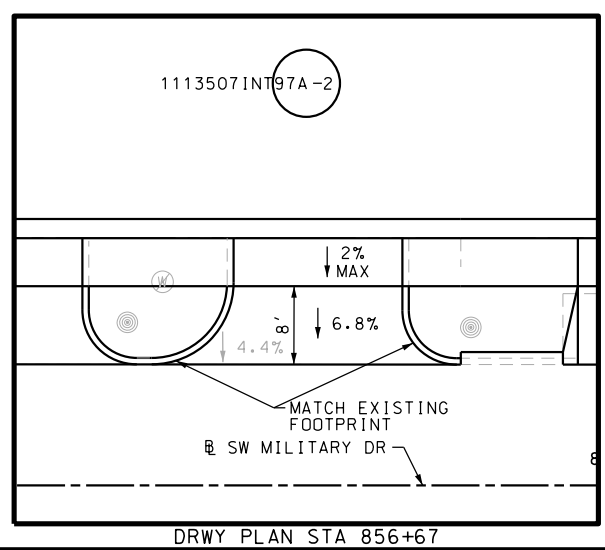
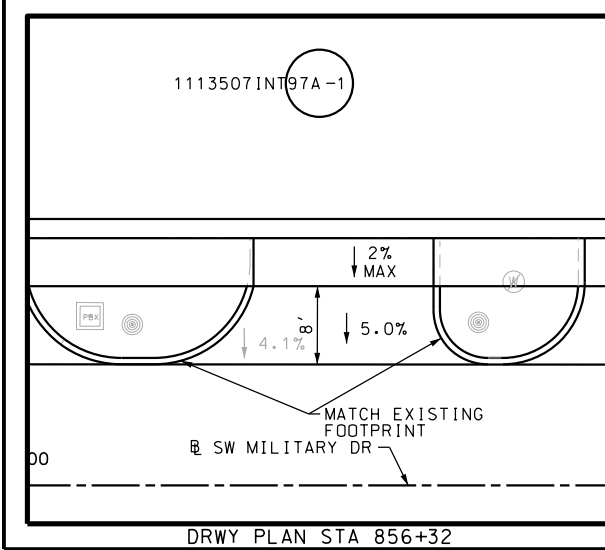
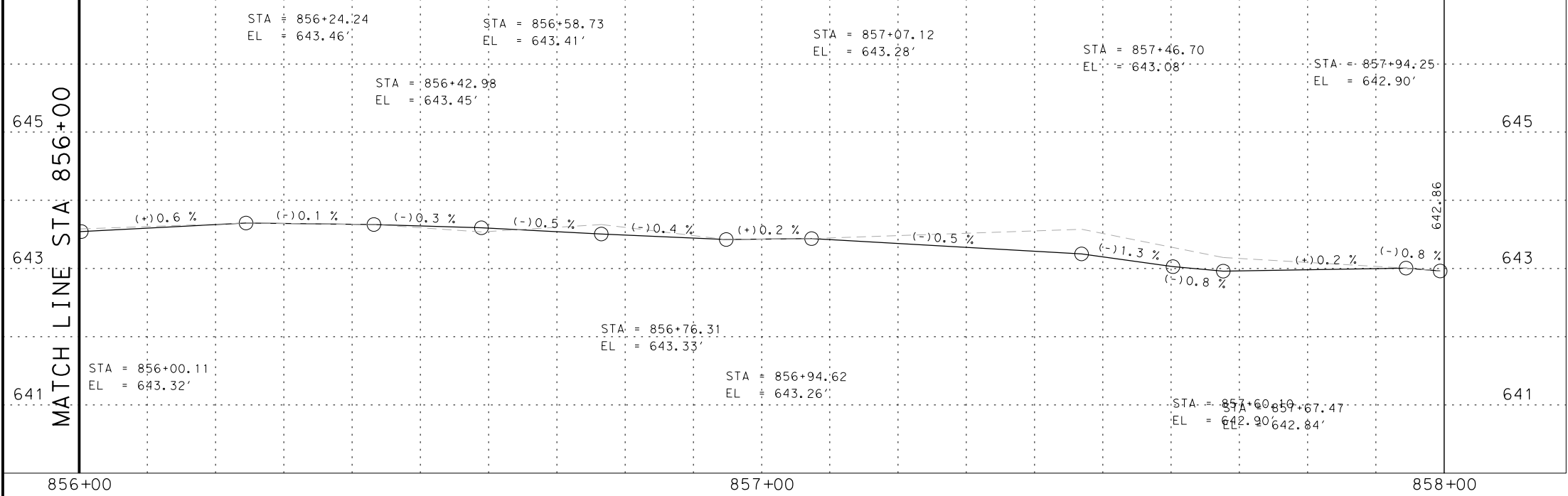
**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 856+00 TO STA 858+00

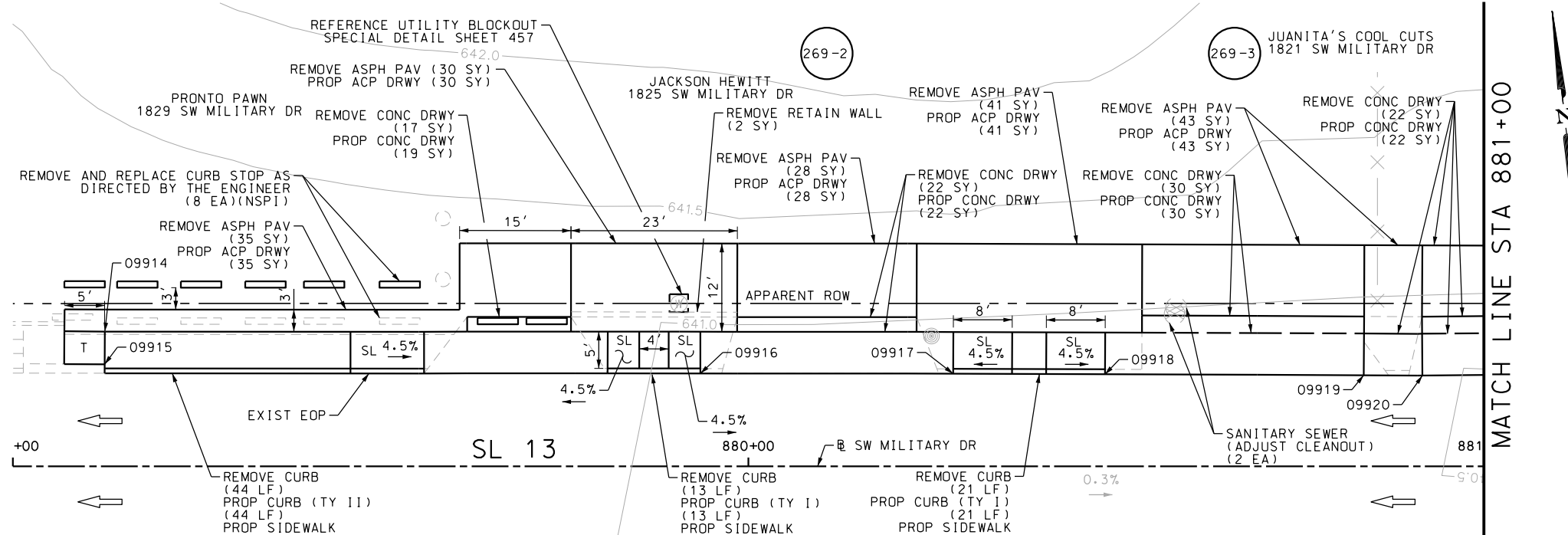
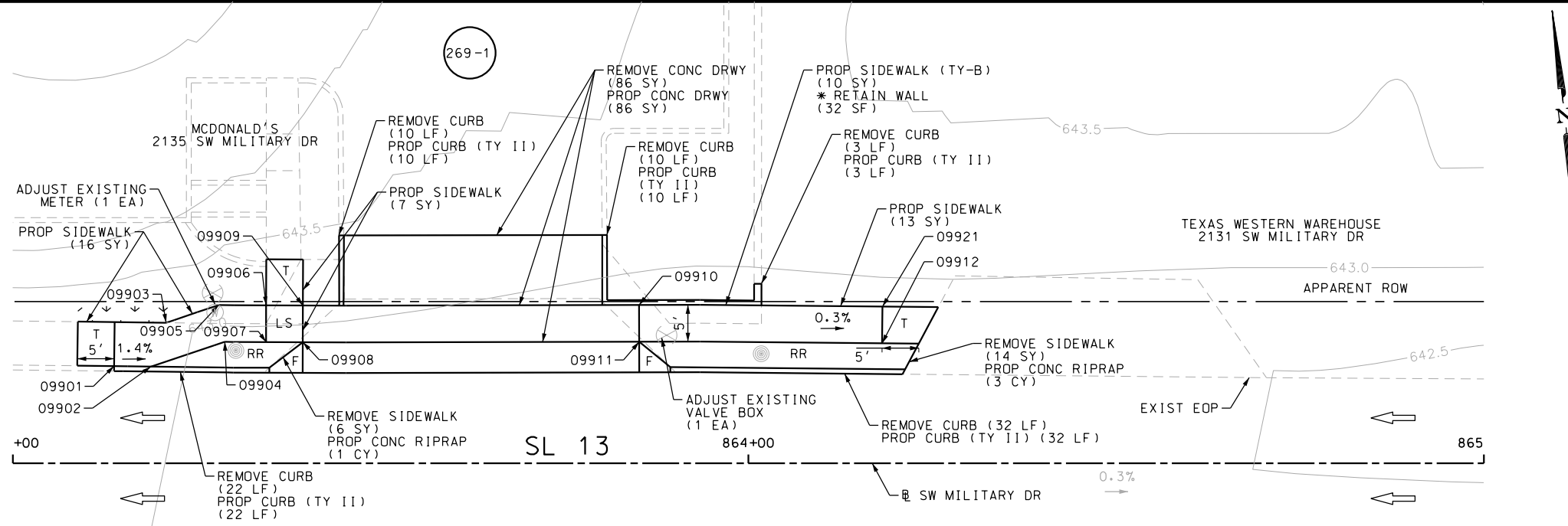
SHEET 82 OF 99

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	268



Plotted on: 5/3/2019

Design File Name: P:\11135\07\des\ign\Civil\Roadway\SWMI1113507\SWMI1113507\BWB20.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	177
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	2
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	155
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	20
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	177
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	10
0162-6002	BLOCK SODDING	SY	10
0168-6001	VEGETATIVE WATERING	MG	0.16
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0529-6001	CONC CURB (TY I)	LF	34
0529-6002	CONC CURB (TY II)	LF	121
0530-6004	DRIVEWAYS (CONC)	SY	179
0530-6005	DRIVEWAYS (ACP)	SY	177
0531-6001	CONC SIDEWALKS (4")	SY	83
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10
7194-6002	SANITARY SEWER (ADJUST CLEANOUT)	EA	2
7196-6001	ADJUST EXISTING VALVE BOX	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TPLS FIRM REGISTRATION #10028800



SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 863+00 TO STA 865+00  
 STA 879+00 TO STA 881+00  
 SHEET 83 OF 99

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	269

POINT	NORTHING	EASTING	ELEV	DESC
09701	13679895.71	2118482.18	--	PROF
09702	13679890.71	2118482.21	--	PROF
09703	13679890.86	2118506.34	--	PROF
09704	13679895.86	2118506.31	--	PROF
09705	13679895.97	2118525.05	--	PROF
09706	13679890.97	2118525.08	--	PROF
09707	13679891.06	2118540.82	--	PROF
09708	13679896.06	2118540.80	--	PROF
09709	13679896.16	2118558.38	--	PROF
09710	13679891.16	2118558.41	--	PROF
09711	13679896.27	2118576.69	--	PROF
09712	13679891.27	2118576.72	--	PROF
09713	13679883.11	2118576.76	--	ME
09714	13679883.21	2118594.27	--	ME
09715	13679891.34	2118589.22	--	PROF
09716	13679896.34	2118589.19	--	PROF
09717	13679896.56	2118628.76	--	PROF
09718	13679891.56	2118627.72	--	PROF
09719	13679891.14	2118641.02	--	PROF
09720	13679887.12	2118637.75	--	PROF

POINT	NORTHING	EASTING	ELEV	DESC
09721	13679887.18	2118648.42	--	PROF
09722	13679891.18	2118648.40	--	PROF
09723	13679891.34	2118675.17	--	PROF
09724	13679887.34	2118675.20	--	PROF
09725	13679883.51	2118648.44	--	ME
09726	13679883.67	2118675.22	--	ME
09727	13679882.85	2118530.79	--	ME
09728	13679882.86	2118532.35	--	ME
09729	13679882.63	2118492.63	--	ME
09730	13679882.65	2118496.02	--	ME

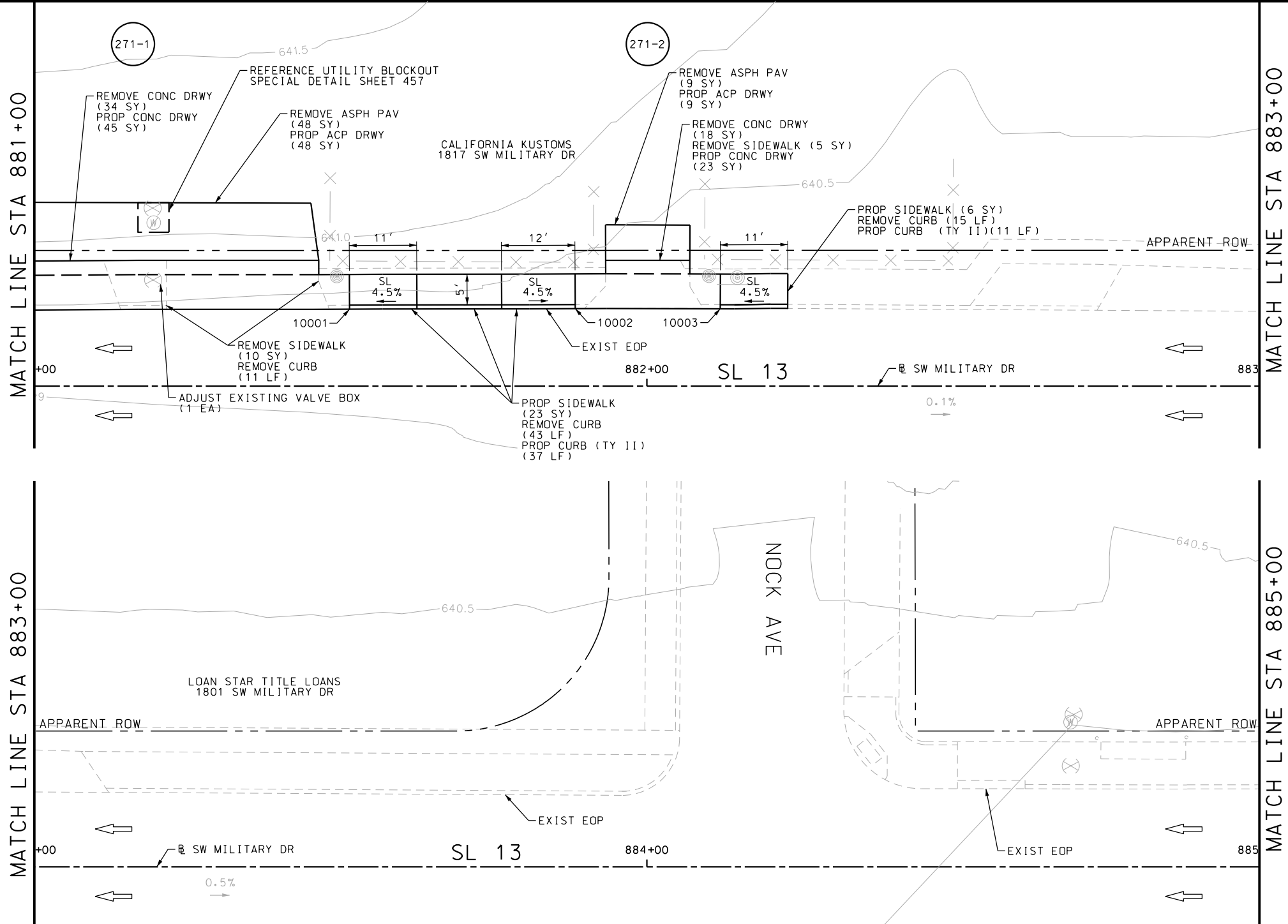
POINT	NORTHING	EASTING	ELEV	DESC
09901	13679887.39	2119195.28	--	ME
09902	13679887.36	2119200.28	--	ME
09903	13679893.35	2119202.32	--	ME
09904	13679890.80	2119210.30	642.38	PROP
09905	13679895.80	2119209.48	642.45	PROP
09906	13679895.80	2119215.91	--	ME
09907	13679890.80	2119215.92	642.28	PROP
09908	13679890.81	2119220.92	642.31	PROP
09909	13679895.81	2119220.91	--	ME
09910	13679896.13	2119266.62	--	ME
09911	13679891.13	2119266.65	642.12	PROP
09912	13679891.11	2119299.67	642.20	PROP
09914	13679901.96	2120793.96	--	ME
09915	13679897.51	2120793.96	--	ME
09916	13679896.75	2120874.97	--	ME
09917	13679896.91	2120909.34	--	ME
09918	13679896.96	2120929.97	--	ME
09919	13679897.03	2120965.17	--	ME
09920	13679897.05	2120973.15	--	ME
09921	13679896.11	2119299.69	642.27	PROP

POINT	NORTHING	EASTING	ELEV	DESC
09922	13679896.52	2120837.41	--	ME
09923	13679896.69	2120862.36	--	ME



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWM11113507\*SWM11113507\*WB21.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	52
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	69
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	15
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	57
0529-6002	CONC CURB (TY II)	LF	48
0530-6004	DRIVEWAYS (CONC)	SY	68
0530-6005	DRIVEWAYS (ACP)	SY	57
0531-6001	CONC SIDEWALKS (4")	SY	29
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
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DESIGN

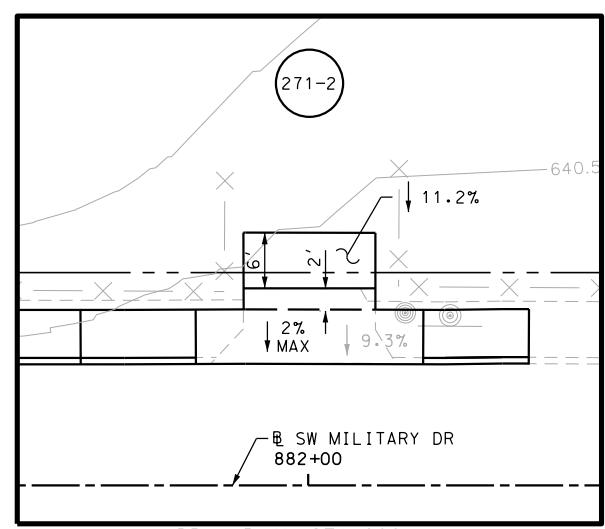
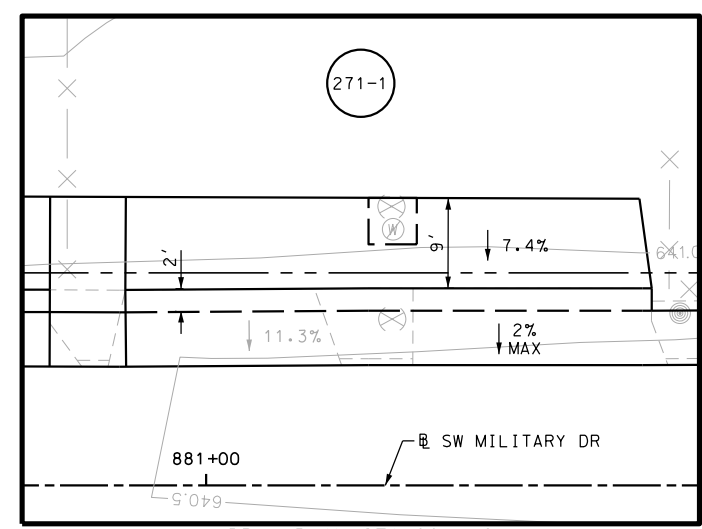
JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
10001	13679897.60	2121032.96	--	ME
10002	13679897.91	2121069.78	--	ME
10003	13679898.02	2121093.47	--	ME



SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
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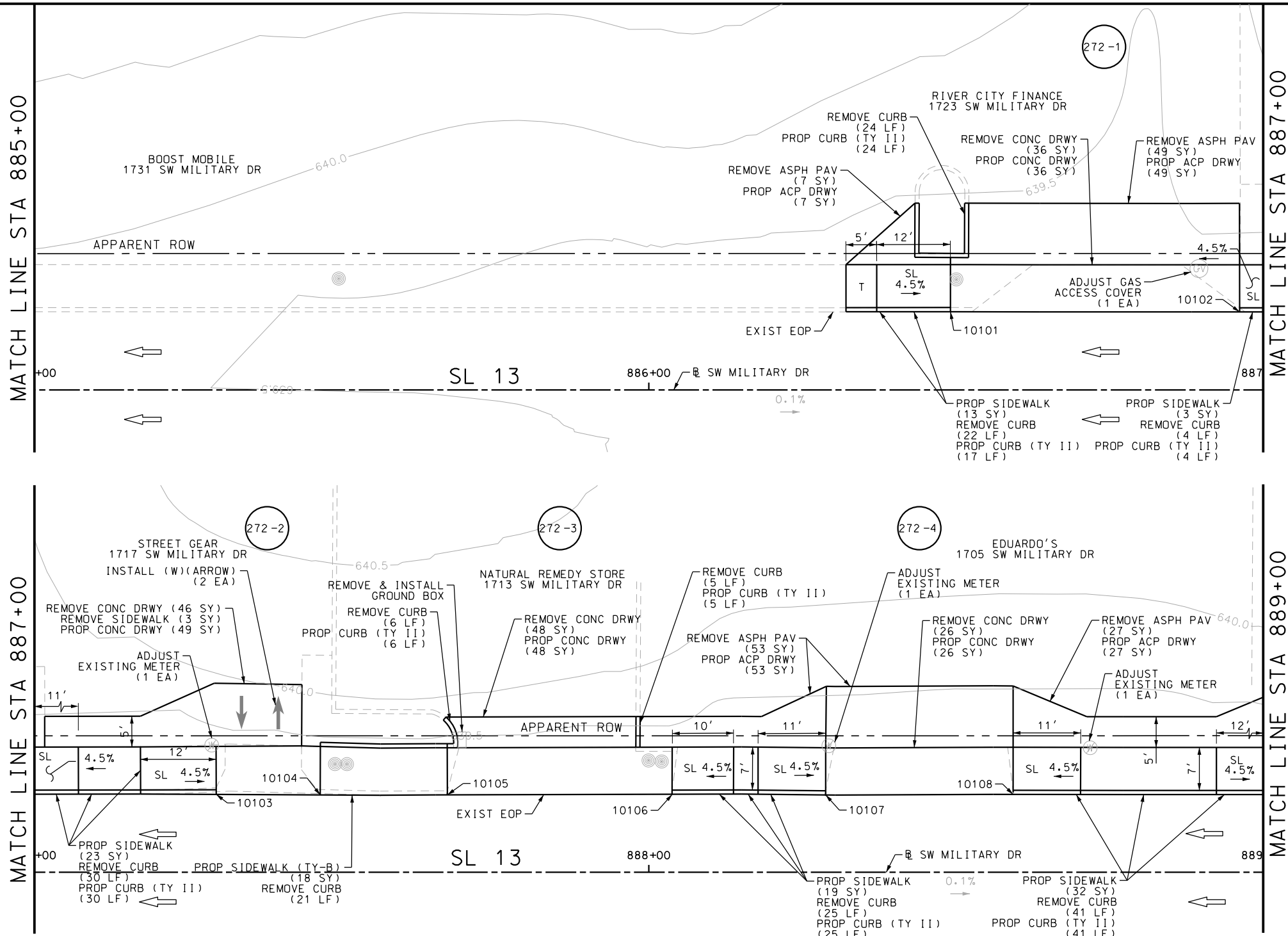
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 881+00 TO STA 885+00

SHEET 85 OF 99

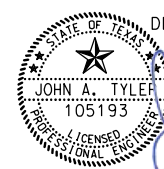
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	271

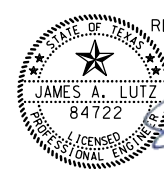
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB22.dgn



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- \* FOR CONTRACTOR INFORMATION ONLY
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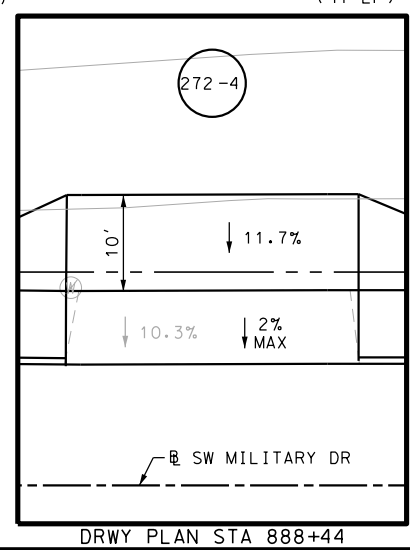
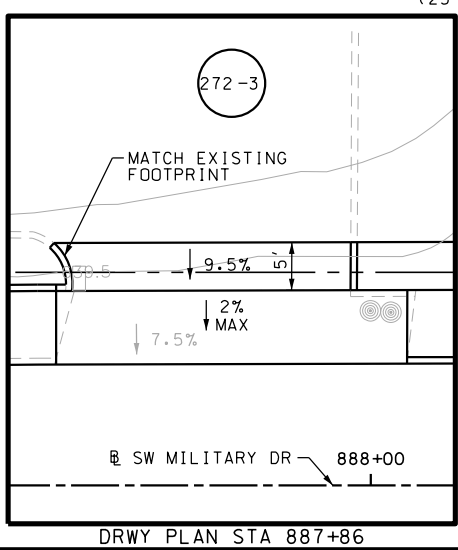
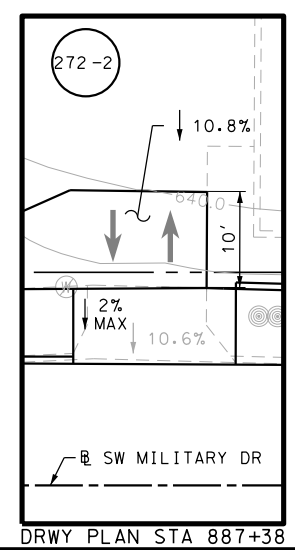
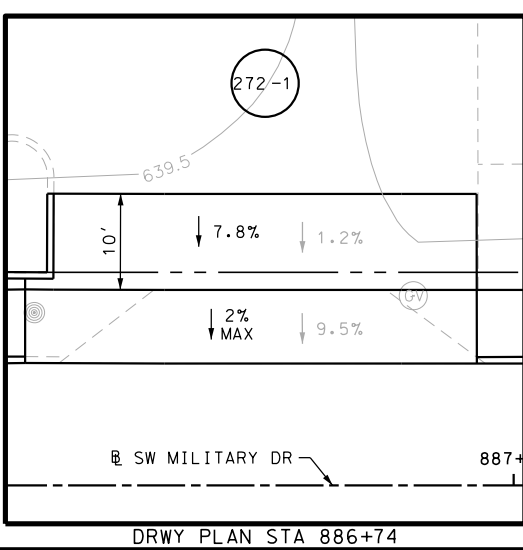
**Pape-Dawson Engineers**  
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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 885+00 TO STA 889+00

SHEET 86 OF 99

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	272



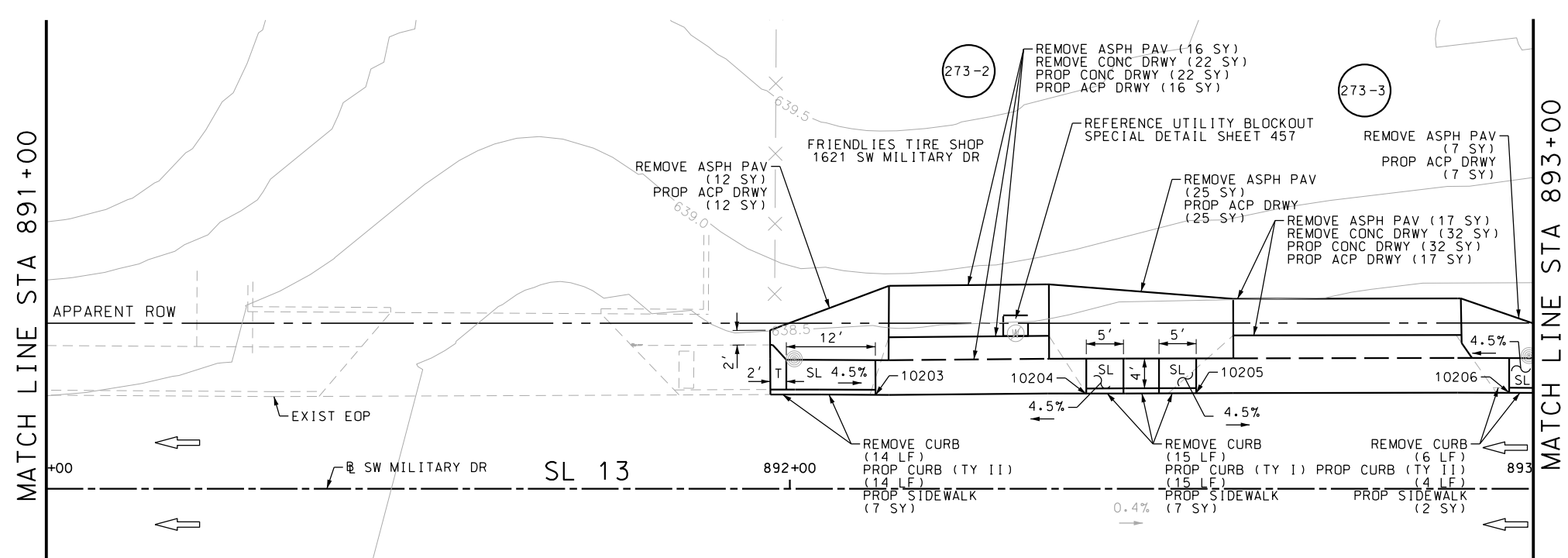
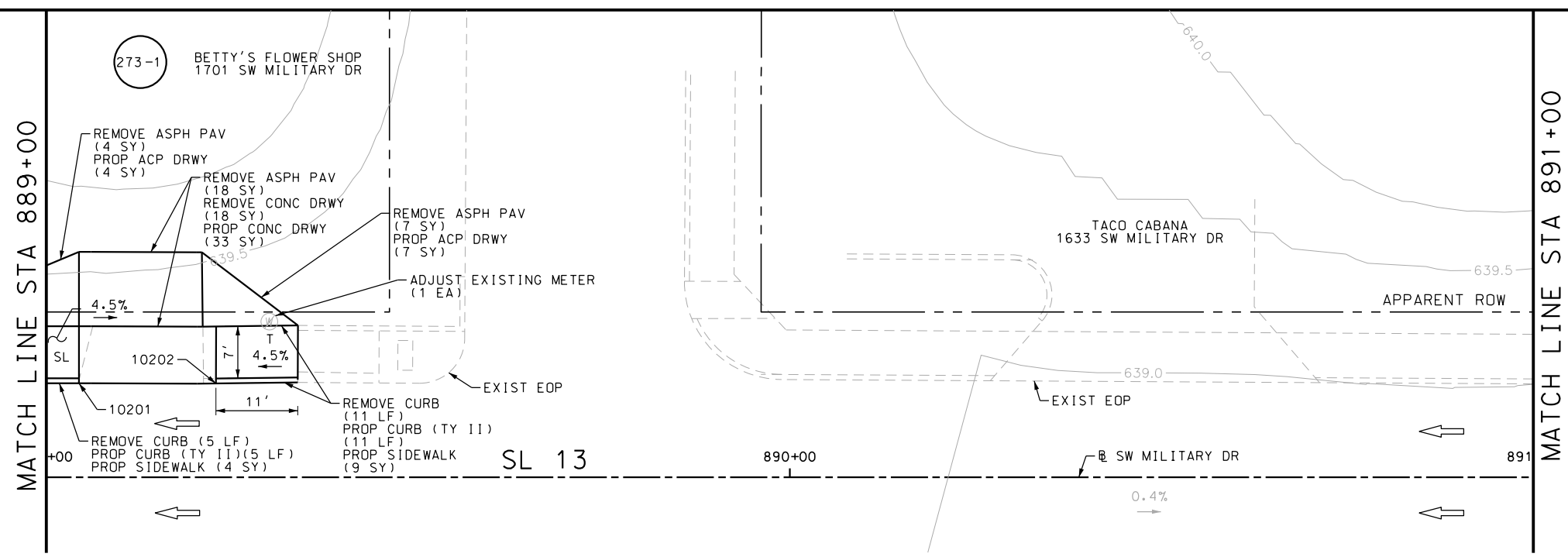
POINT	NORTHING	EASTING	ELEV	DESC
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10103	13679901.14	2121611.07	--	ME
10104	13679901.15	2121627.99	--	ME
10105	13679901.28	2121648.70	--	ME
10106	13679901.59	2121685.26	--	ME
10107	13679901.65	2121710.26	--	ME
10108	13679901.90	2121740.76	--	ME



Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB23.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	72
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	51
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	106
0529-6001	CONC CURB (TY I)	LF	15
0529-6002	CONC CURB (TY II)	LF	34
0530-6004	DRIVEWAYS (CONC)	SY	87
0530-6005	DRIVEWAYS (ACP)	SY	88
0531-6001	CONC SIDEWALKS (4")	SY	29
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1



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 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

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SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

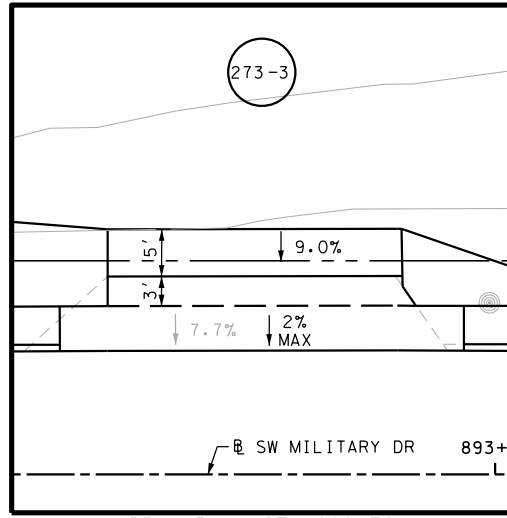
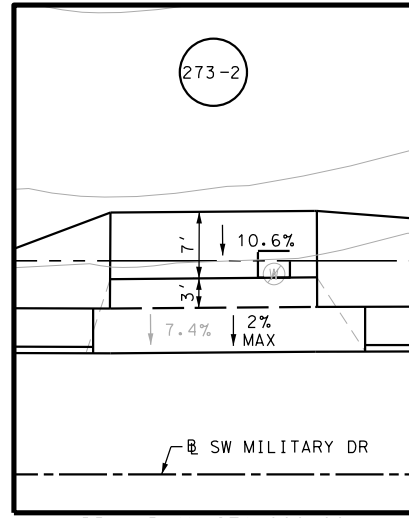
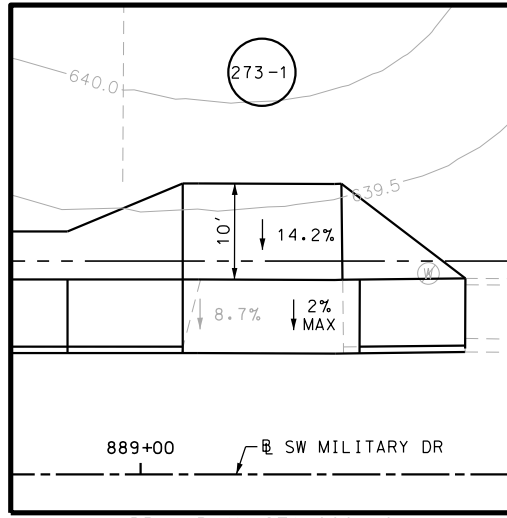
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
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 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 889+00 TO STA 893+00

SHEET 87 OF 99

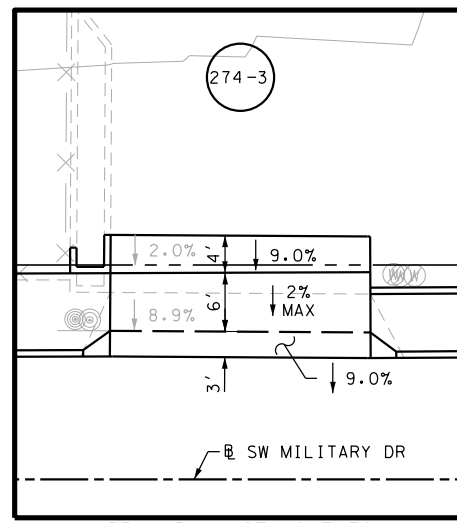
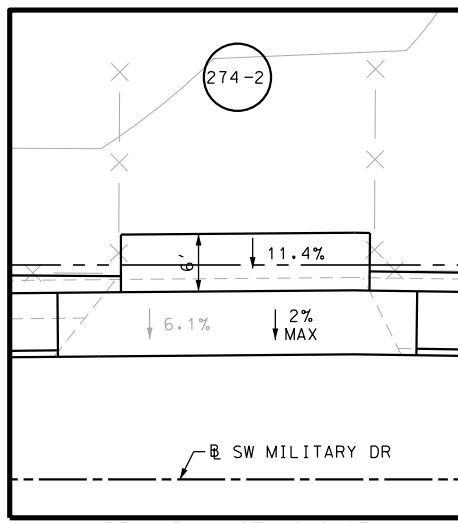
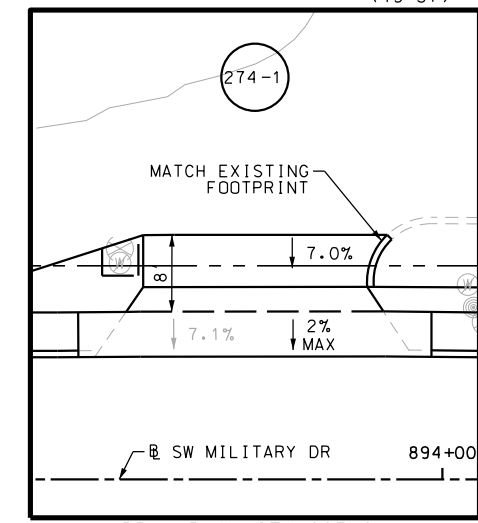
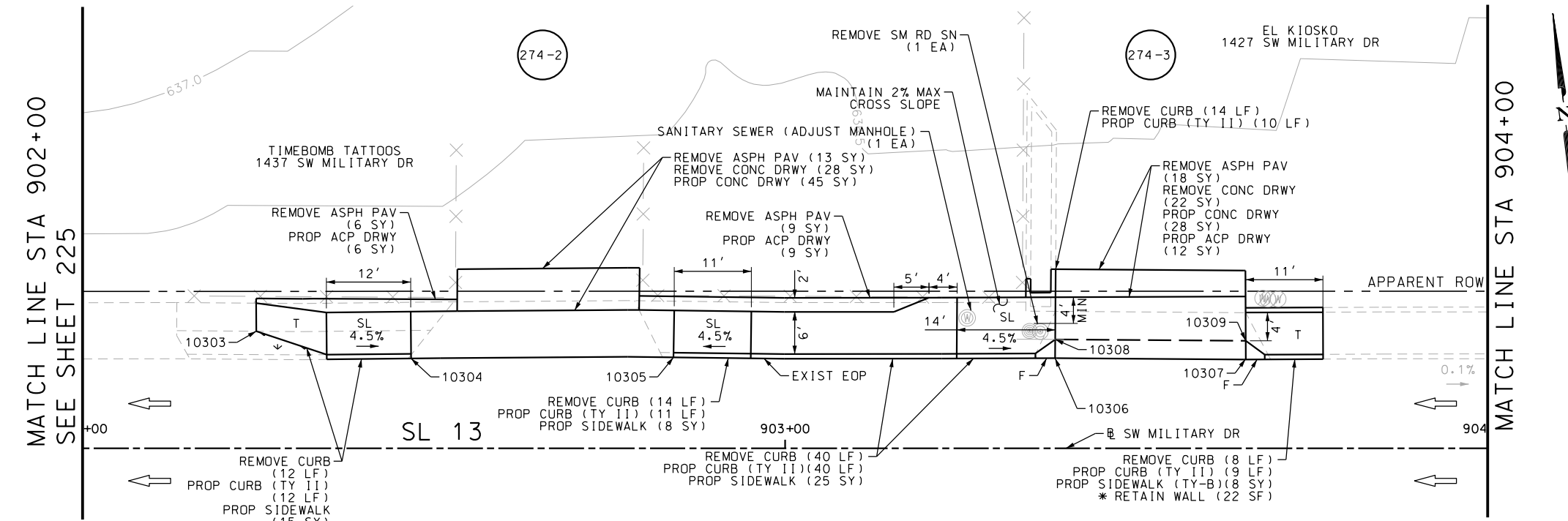
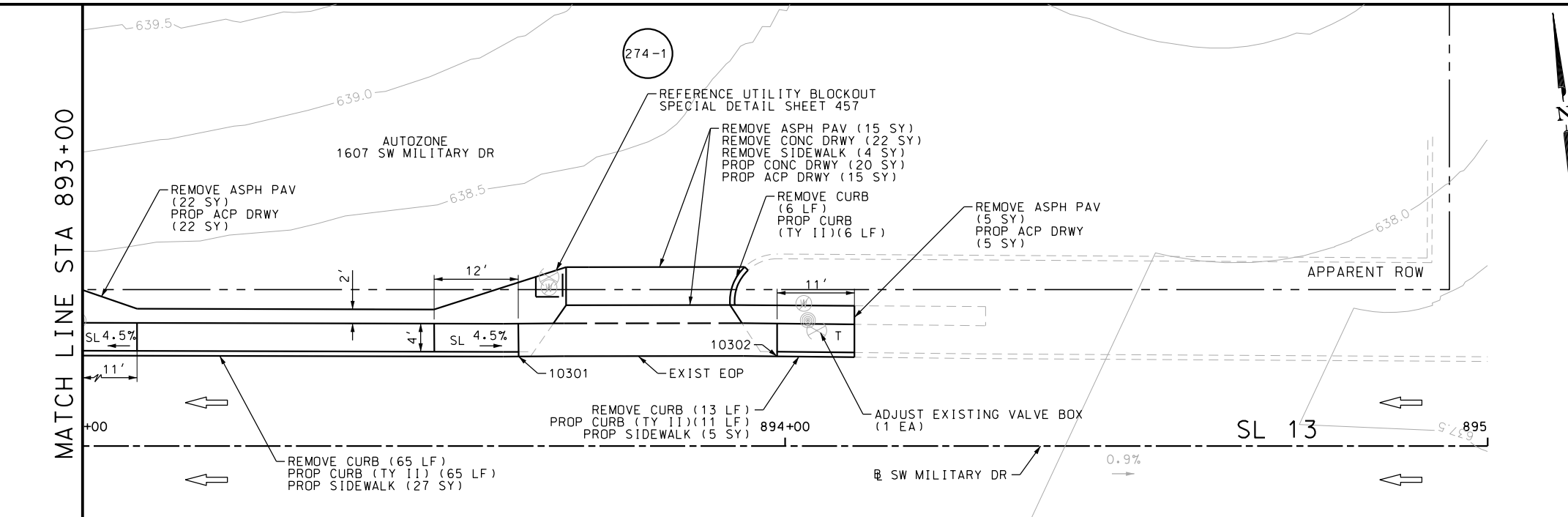
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	6	TEXAS		VARIES		
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	273



POINT	NORTHING	EASTING	ELEV	DESC
10201	13679902.15	2121785.87	--	ME
10202	13679902.24	2121804.30	--	ME
10203	13679903.93	2122092.99	--	ME
10204	13679904.28	2122121.34	--	ME
10205	13679904.41	2122136.12	--	ME
10206	13679904.71	2122178.22	--	ME

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI1113507+SWMI1113507+WB24.dgn



POINT	NORTHING	EASTING	ELEV	DESC
10301	13679904.95	2122243.53	--	ME
10302	13679905.20	2122280.33	--	ME
10303	13679913.96	2123106.16	--	ME
10304	13679910.21	2123128.22	--	ME
10305	13679910.60	2123165.57	--	ME
10306	13679910.80	2123219.88	--	ME
10307	13679910.78	2123247.04	--	ME
10308	13679913.47	2123219.88	635.60	PROP
10309	13679913.45	2123247.01	635.53	PROP

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	72
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	172
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	88
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	3
0162-6002	BLOCK SODDING	SY	3
0168-6001	VEGETATIVE WATERING	MG	0.05
0529-6002	CONC CURB (TY II)	LF	164
0530-6004	DRIVEWAYS (CONC)	SY	93
0530-6005	DRIVEWAYS (ACP)	SY	69
0531-6001	CONC SIDEWALKS (4")	SY	80
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8
0644-6076	REMOVE SM RD SN SUP&M	EA	1
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

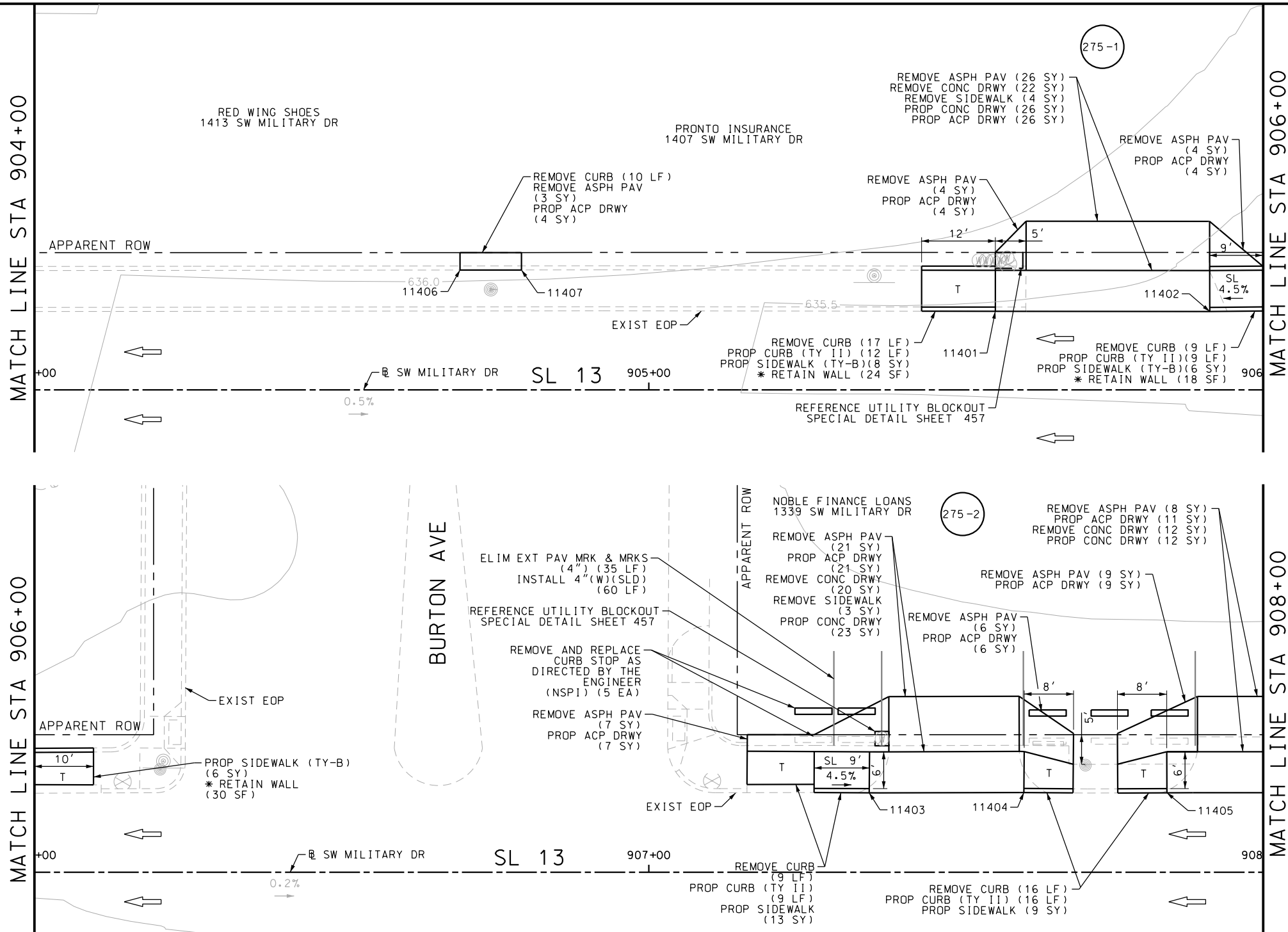
Texas Department of Transportation  
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SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 893+00 TO STA 895+00  
 STA 902+00 TO STA 904+00  
 SHEET 88 OF 99

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	274

Plotted on: 5/3/2019

Design File name: P:\11135\07\des\ign\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB25.dgn



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

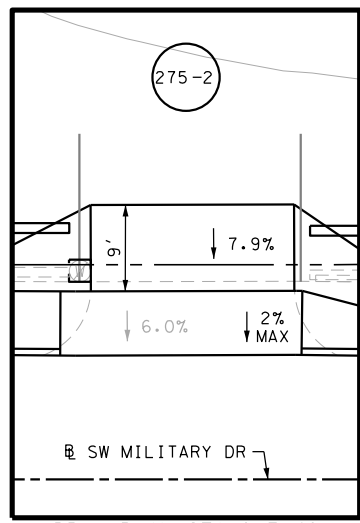
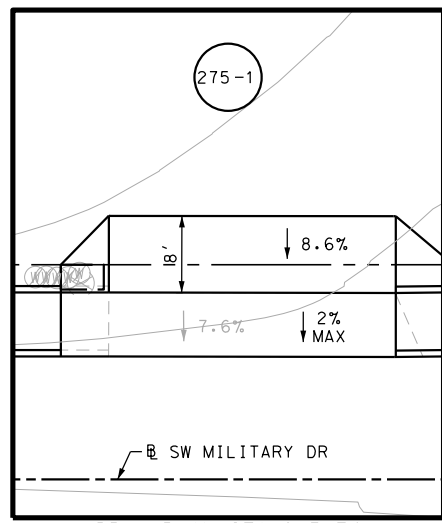
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 904+00 TO STA 908+00

SHEET 89 OF 99

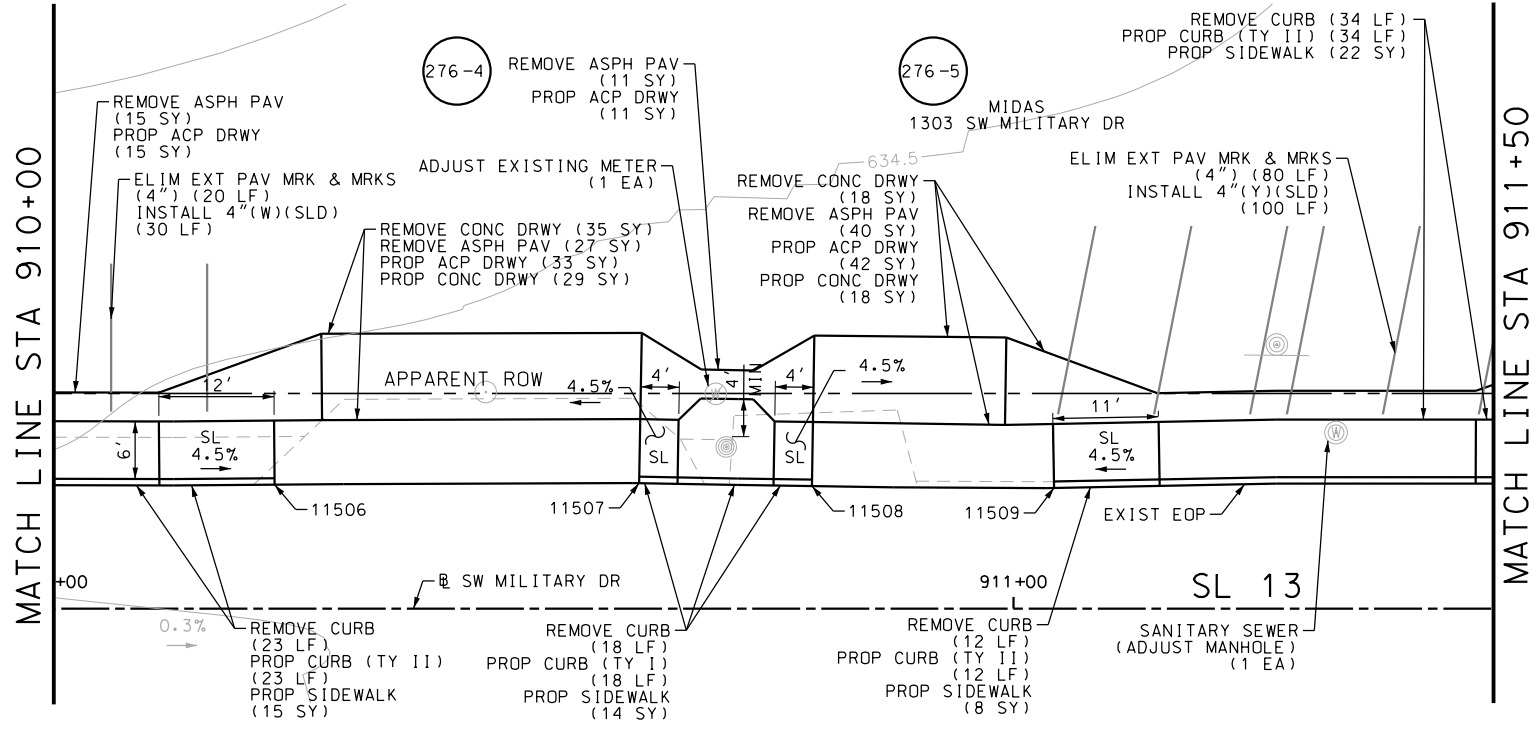
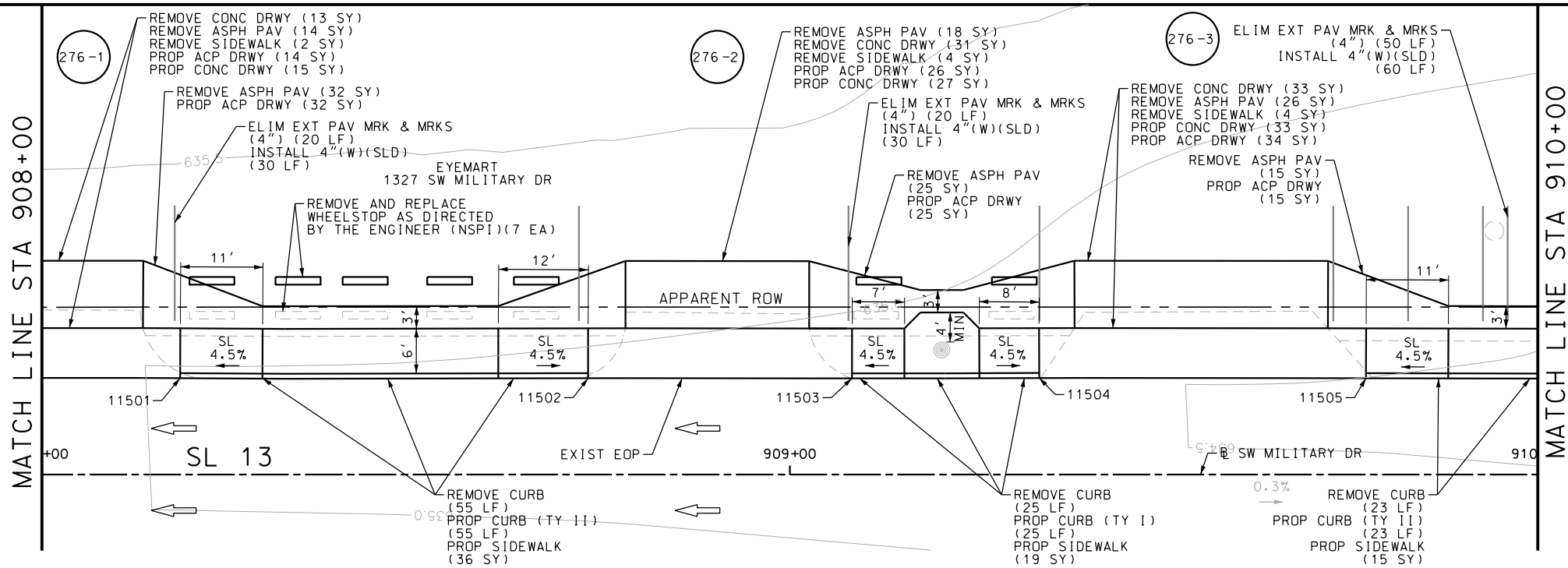
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				275



POINT	NORTHING	EASTING	ELEV	DESC
11401	13679912.07	2123437.84	--	ME
11402	13679912.24	2123472.74	--	ME
11403	13679913.25	2123617.33	--	ME
11404	13679913.45	2123642.48	--	ME
11405	13679913.54	2123665.76	--	ME
11406	13679918.26	2123350.69	--	ME
11407	13679918.34	2123360.69	--	ME

Plotted on: 5/3/2019

Design File name: P:\11135\07\des\ign\Civil\Roadway\SWMI1113507\SWMI1113507.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	130
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	190
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	10
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	208
0529-6001	CONC CURB (TY I)	LF	43
0529-6002	CONC CURB (TY II)	LF	147
0530-6004	DRIVEWAYS (CONC)	SY	122
0530-6005	DRIVEWAYS (ACP)	SY	247
0531-6001	CONC SIDEWALKS (4")	SY	129
0666-6224	PAVEMENT SEALER 4"	LF	250
0666-6303	RE PM W/RET REQ TY I (W) 4"(SLD) (100MIL)	LF	150
0666-6315	RE PM W/RET REQ TY I (Y) 4"(SLD) (100MIL)	LF	100
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	190
0678-6001	PAV SURF PREP FOR MRK (4")	LF	250
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11501	13679913.72	2123699.91	--	ME
11502	13679914.03	2123754.46	--	ME
11503	13679914.23	2123789.76	--	ME
11504	13679914.42	2123814.79	--	ME
11505	13679914.65	2123858.47	--	ME
11506	13679914.93	2123904.45	--	ME
11507	13679915.31	2123942.44	--	ME
11508	13679915.12	2123960.44	--	ME
11509	13679915.07	2123985.67	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPPE FIRM REGISTRATION #470 | TBPPLS FIRM REGISTRATION #10028800

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SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 908+00 TO STA 911+50

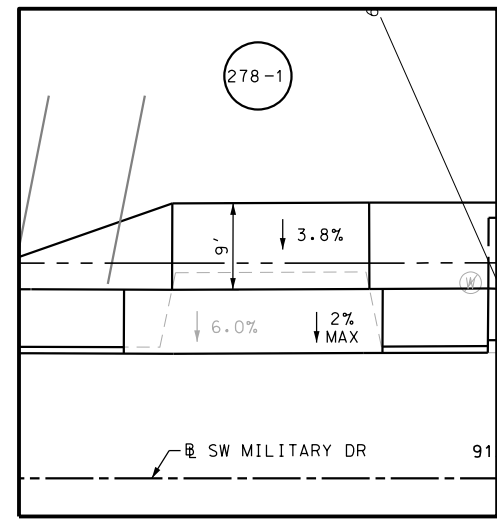
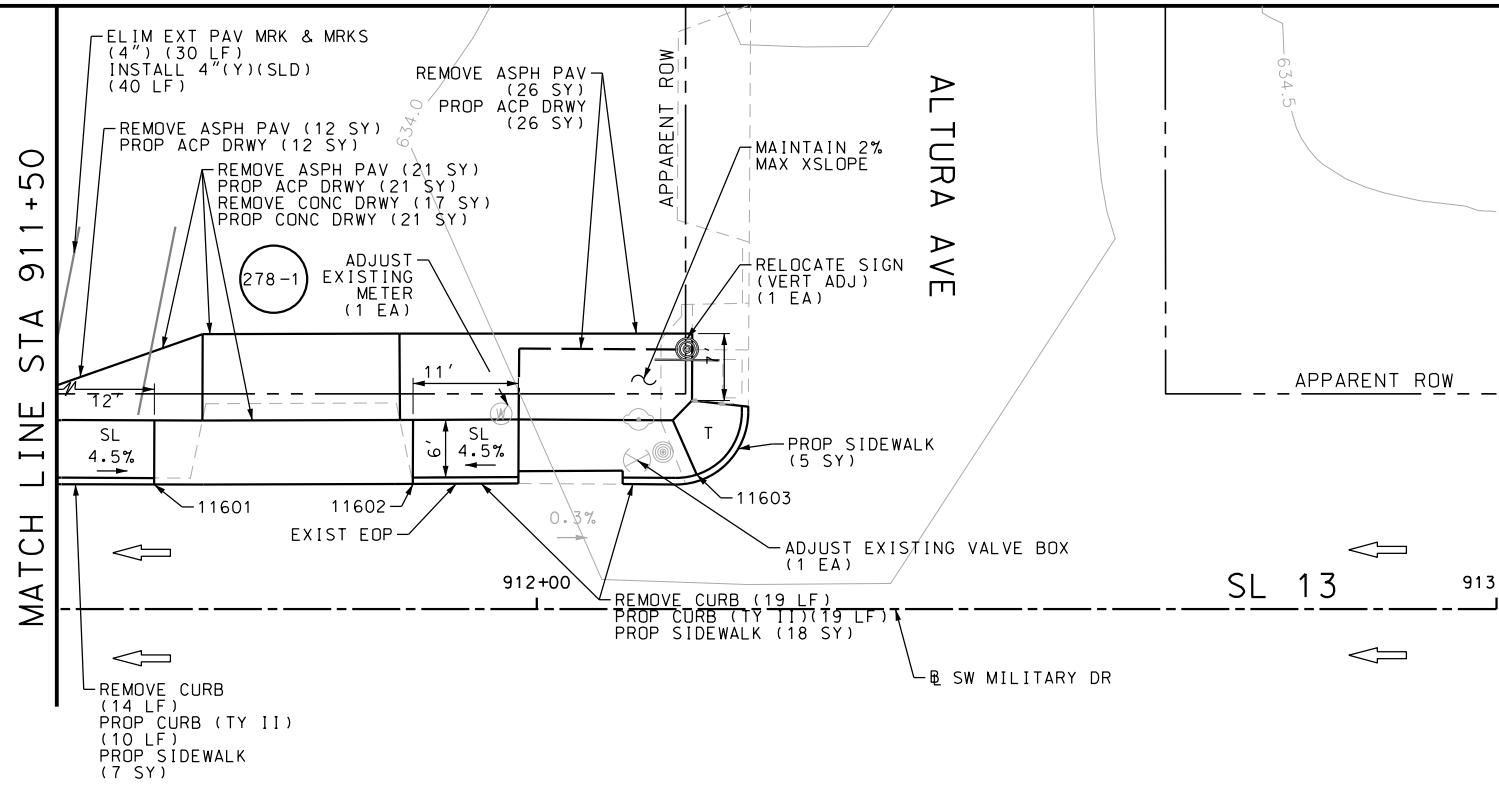
SHEET 90 OF 99

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	276



Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\SWMI113507+SMM11113507+WB27.dgn

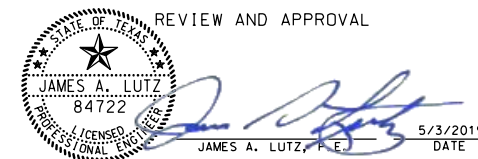
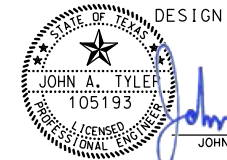


DRWY PLAN STA 911+74

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	17
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	33
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	59
0529-6002	CONC CURB (TY II)	LF	29
0530-6004	DRIVEWAYS (CONC)	SY	21
0530-6005	DRIVEWAYS (ACP)	SY	59
0531-6001	CONC SIDEWALKS (4")	SY	30
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
0666-6224	PAVEMENT SEALER 4"	LF	40
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	40
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	30
0678-6001	PAV SURF PREP FOR MRK (4")	LF	40
7196-6001	ADJUST EXISTING VALVE BOX	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, I.E. FADED



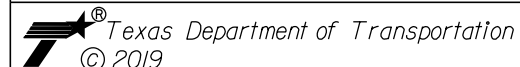
SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11601	13679915.83	2124041.59	--	ME
11602	13679916.04	2124068.53	--	ME
11603	13679917.18	2124098.11	--	ME

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



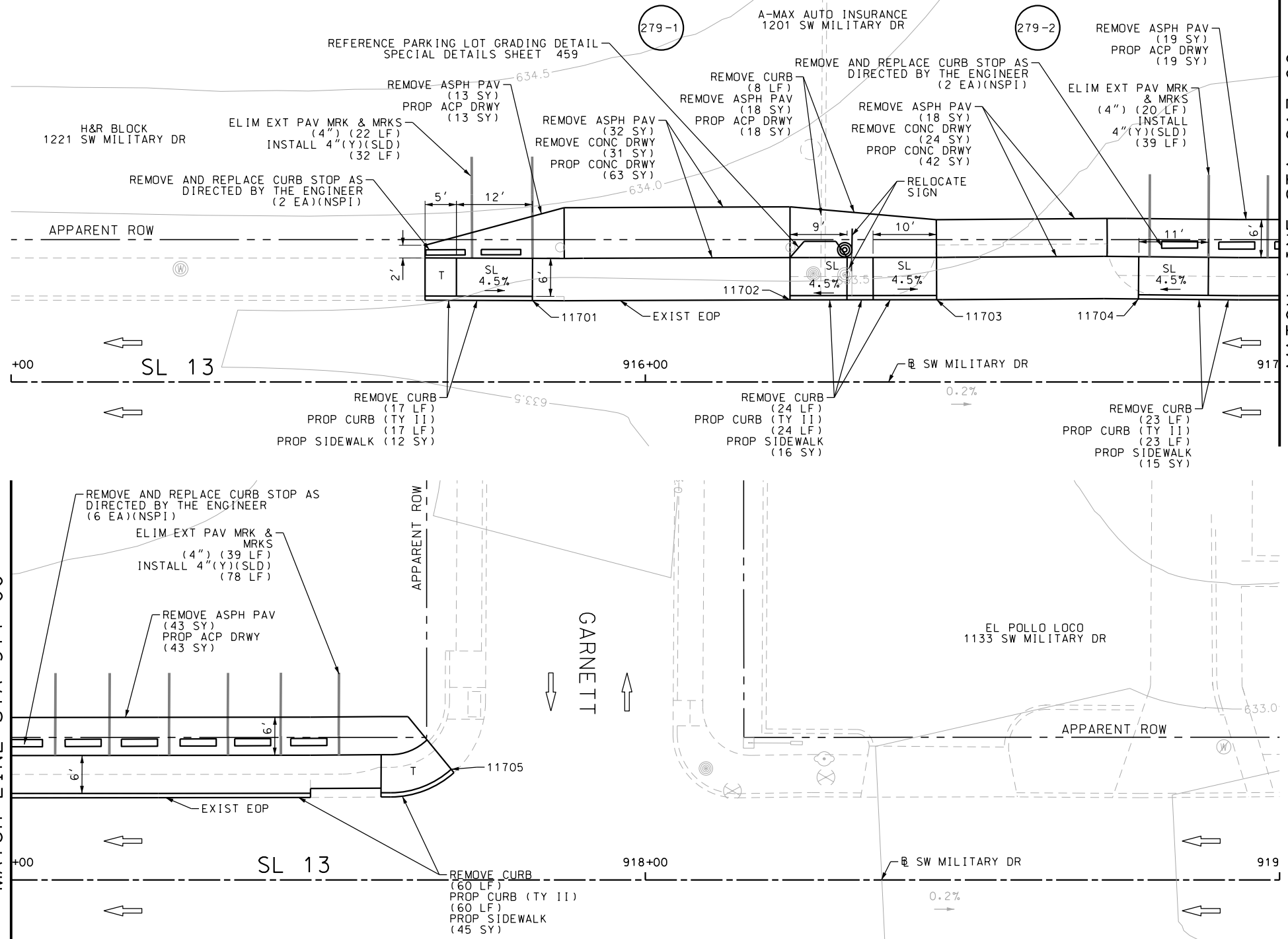
SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 911+50 TO STA 913+00

SHEET 92 OF 99

DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	278

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM\1113507+SWM\1113507+WB28.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	55
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	132
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	143
0529-6002	CONC CURB (TY II)	LF	124
0530-6004	DRIVEWAYS (CONC)	SY	105
0530-6005	DRIVEWAYS (ACP)	SY	93
0531-6001	CONC SIDEWALKS (4")	SY	88
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
0666-6224	PAVEMENT SEALER 4"	LF	149
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	149
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	81
0678-6001	PAV SURF PREP FOR MRK (4")	LF	149

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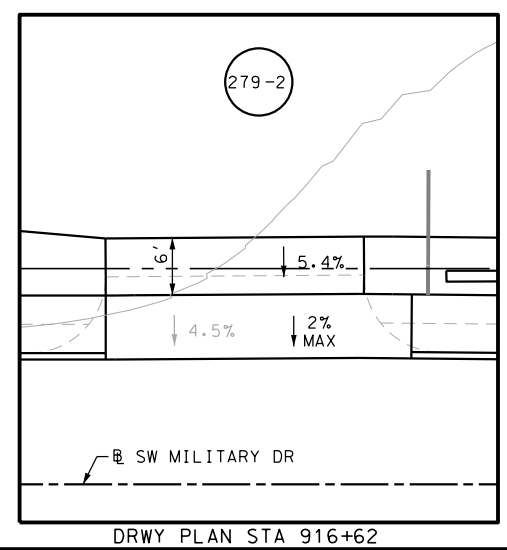
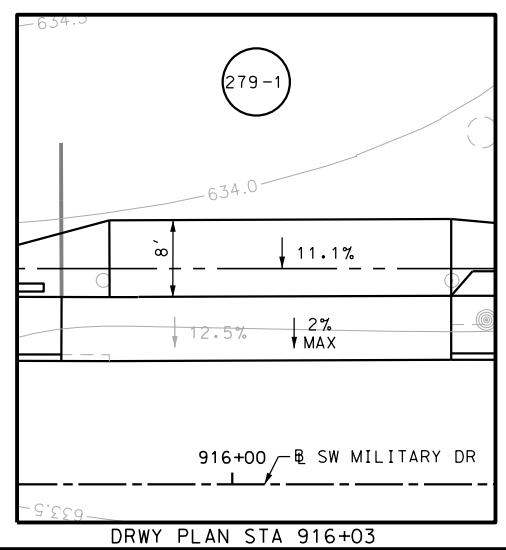
DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
11701	13679918.18	2124463.63	--	ME
11702	13679918.54	2124504.25	--	ME
11703	13679918.70	2124527.35	--	ME
11704	13679919.01	2124559.17	--	ME
11705	13679923.88	2124650.79	--	ME



**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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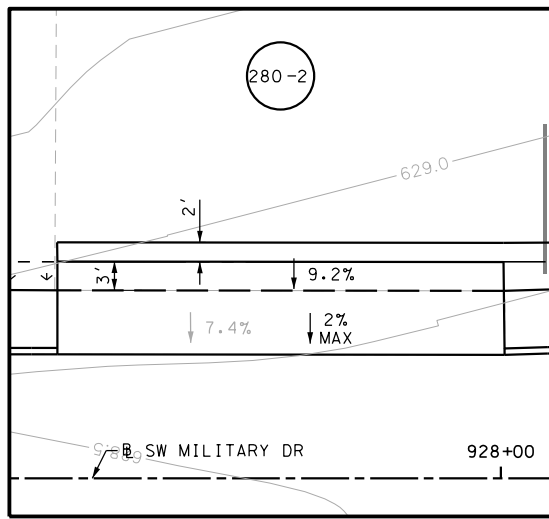
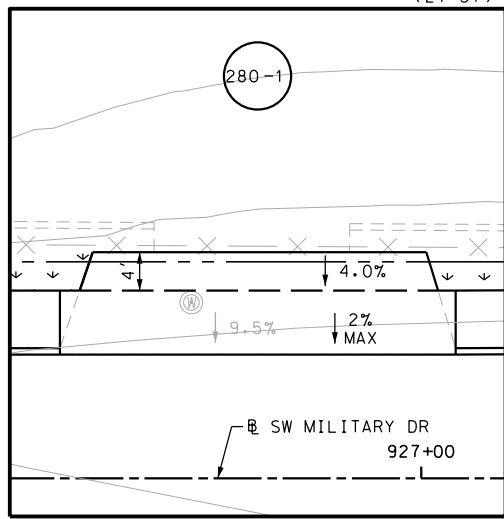
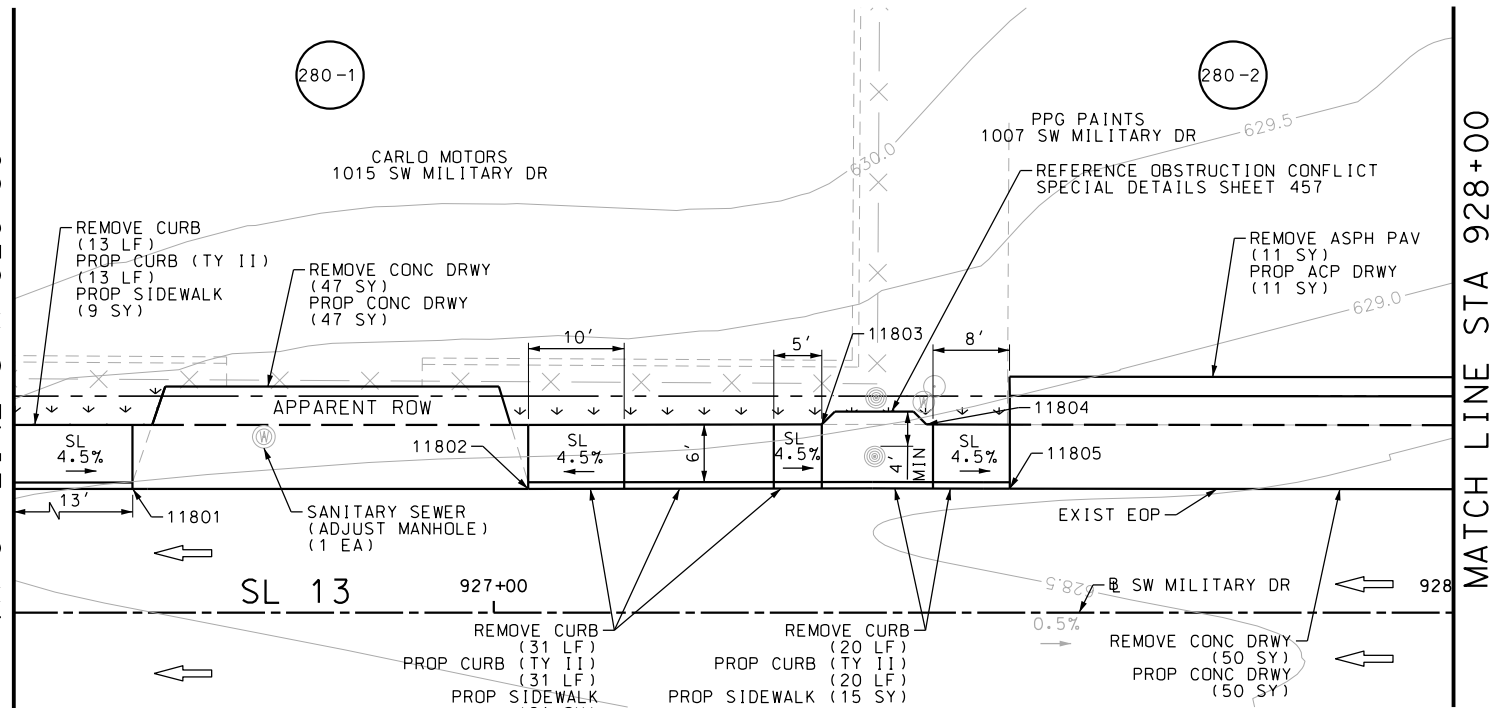
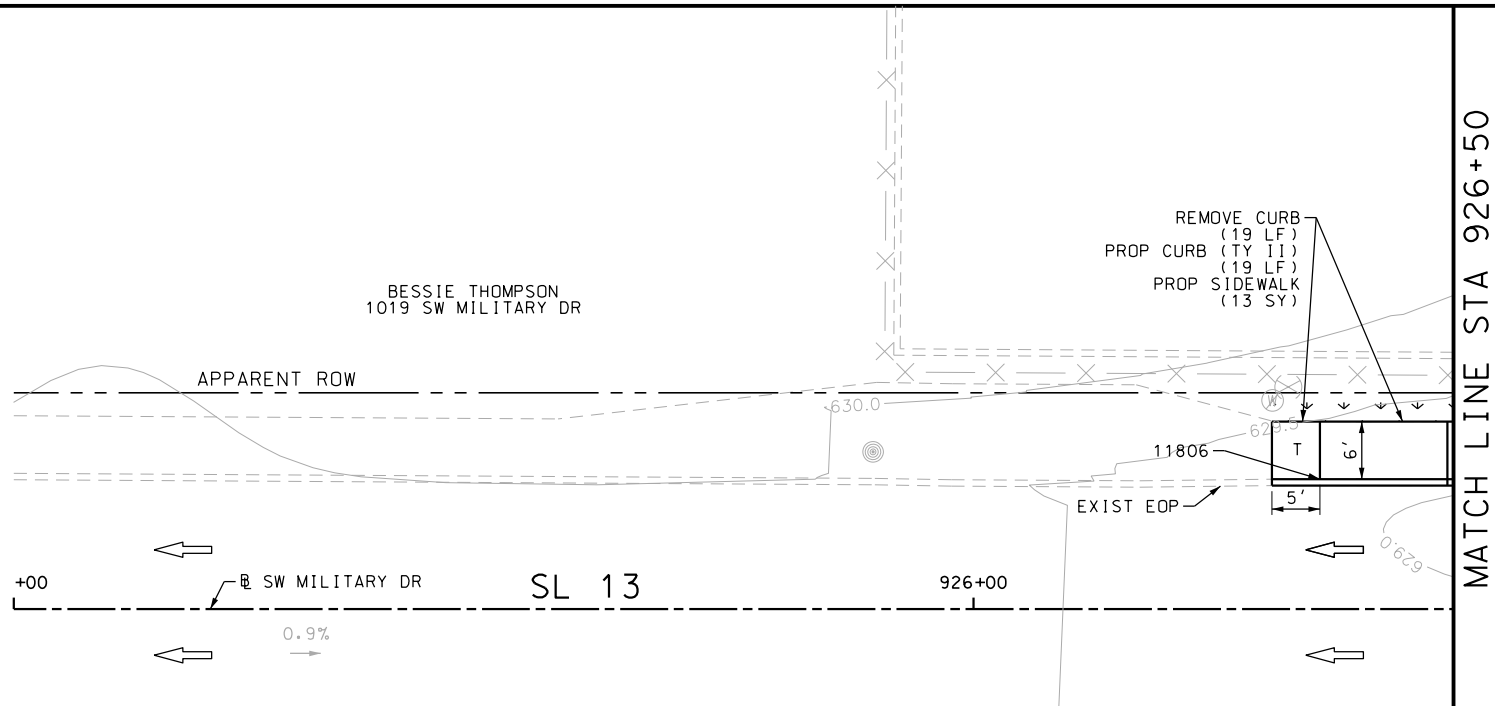
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 915+00 TO STA 919+00

SHEET 93 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	279

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB29.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	97
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	83
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	11
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	83
0530-6004	DRIVEWAYS (CONC)	SY	97
0530-6005	DRIVEWAYS (ACP)	SY	11
0531-6001	CONC SIDEWALKS (4")	SY	58
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11801	13679924.60	2125543.78	--	ME
11802	13679924.86	2125585.00	--	ME
11803	13679931.74	2125615.55	--	ME
11804	13679931.82	2125626.44	--	ME
11805	13679925.18	2125635.19	--	ME
11806	13679925.12	2125517.50	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 925+00 TO STA 928+00

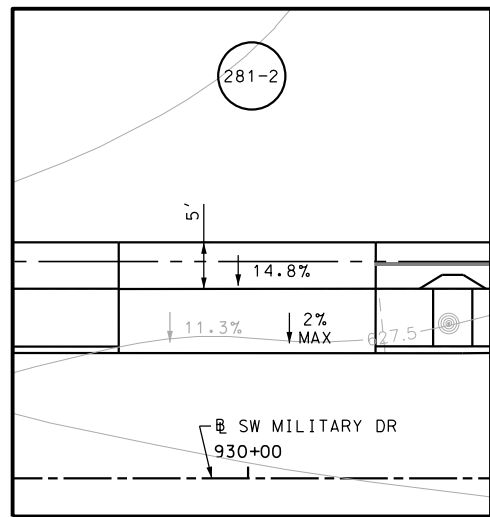
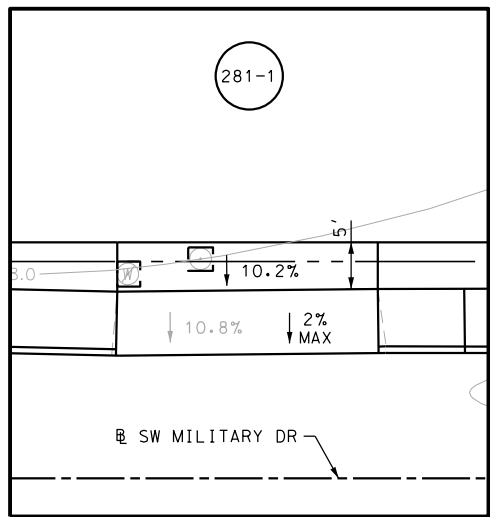
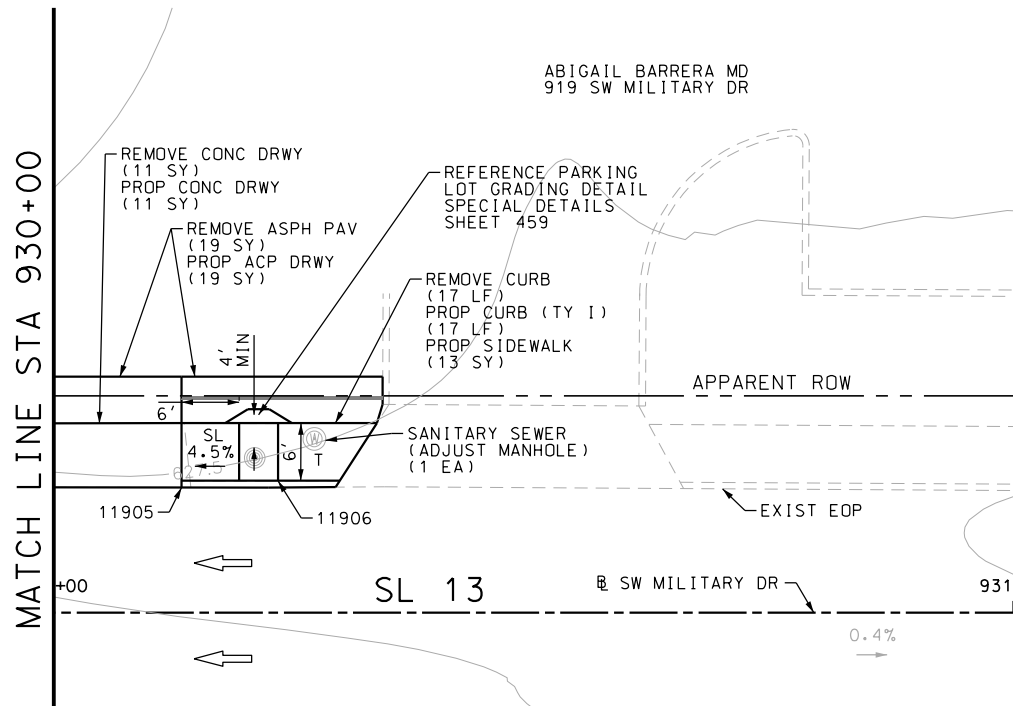
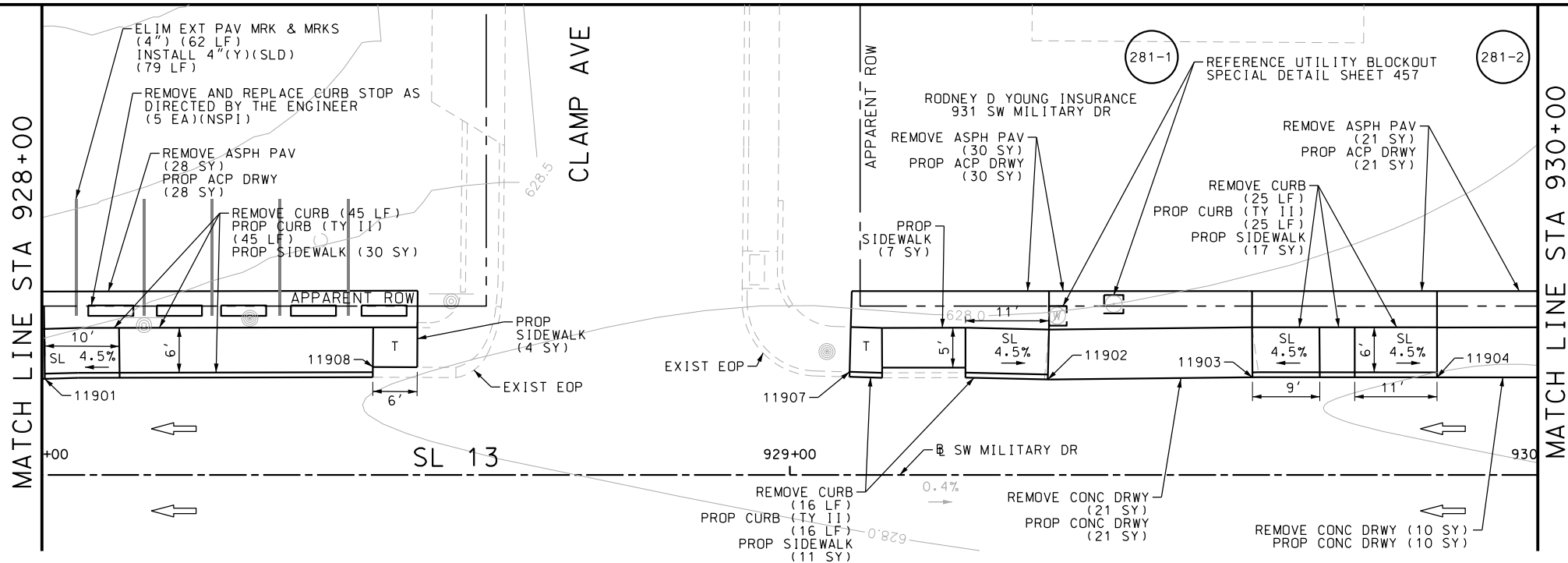
SHEET 94 OF 99

CHK	DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
		6	TEXAS		VARIES		
CHK	DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
		SAT	BEXAR	0915	12	576	280



Plotted on: 5/3/2019

Design File name: P:\111.35\07\design\Civil\Roadway\SWM\1113507\*SWM\1113507\*WB30.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	42
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	103
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	98
0529-6001	CONC CURB (TY I)	LF	17
0529-6002	CONC CURB (TY II)	LF	86
0530-6004	DRIVEWAYS (CONC)	SY	42
0530-6005	DRIVEWAYS (ACP)	SY	98
0531-6001	CONC SIDEWALKS (4")	SY	82
0666-6224	PAVEMENT SEALER 4"	LF	79
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	79
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	62
0678-6001	PAV SURF PREP FOR MRK (4")	LF	79
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11901	13679925.40	2125681.80	--	ME
11902	13679926.11	2125815.89	--	ME
11903	13679926.55	2125843.26	--	ME
11904	13679926.69	2125867.93	--	ME
11905	13679926.83	2125894.70	--	ME
11906	13679927.60	2125904.77	--	ME
11907	13679926.96	2125789.38	--	ME
11908	13679927.23	2125725.65	--	ME

REV. NO. DATE DESCRIPTION BY

TEXAS DEPARTMENT OF TRANSPORTATION © 2019

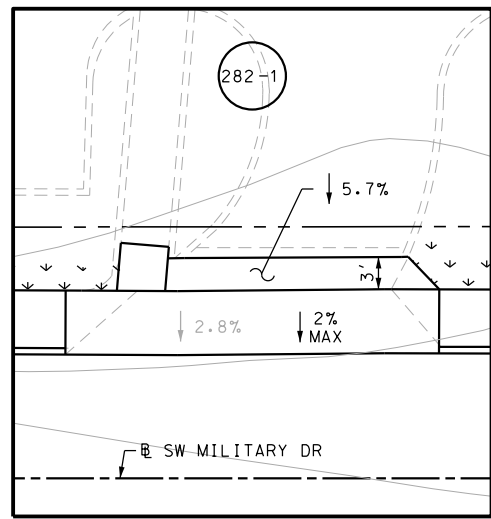
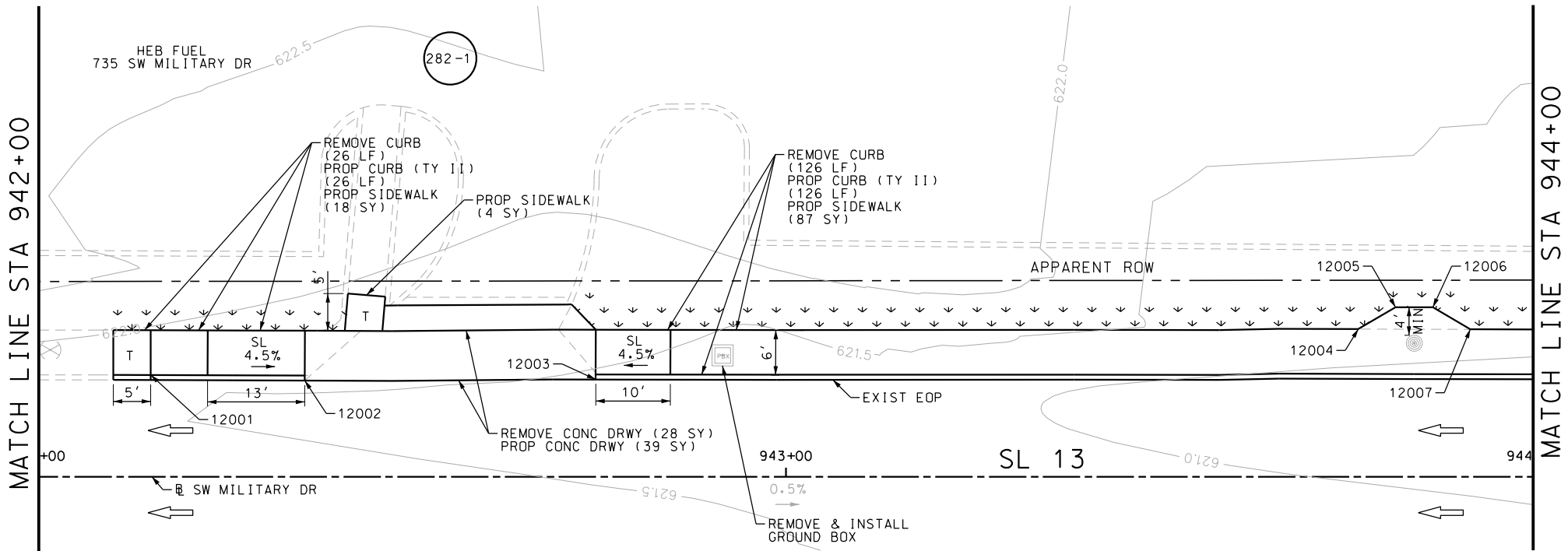
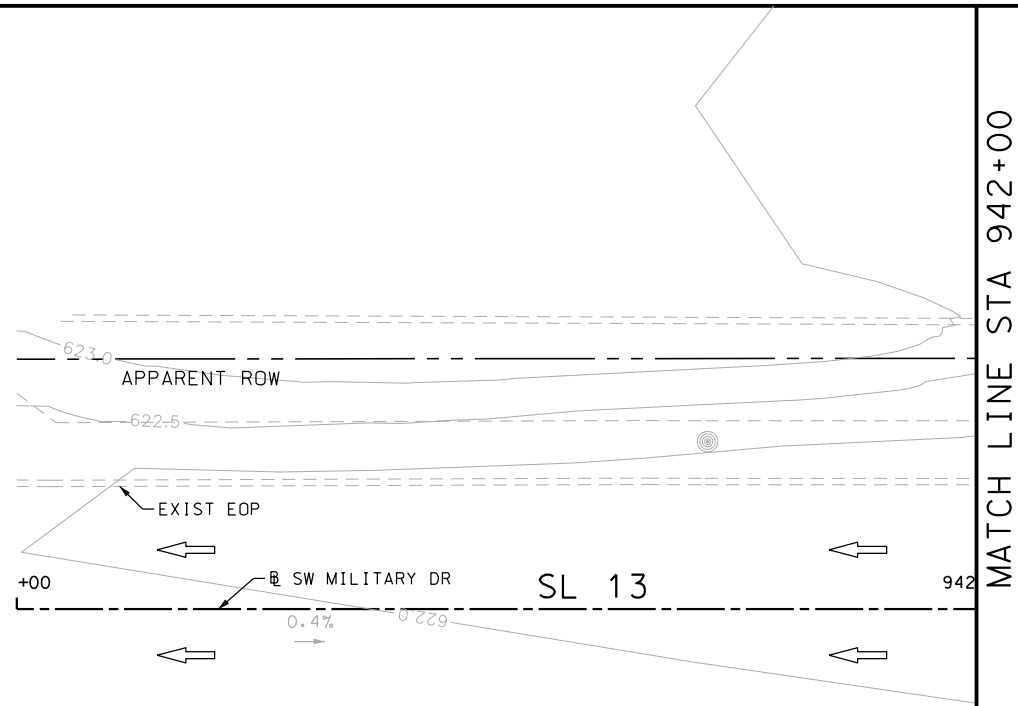
SL 13  
SW MILITARY B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 928+00 TO STA 931+00

SHEET 95 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	281

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWM1113507\*SWM1113507\*WB31.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	28
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	152
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	55
0162-6002	BLOCK SODDING	SY	55
0168-6001	VEGETATIVE WATERING	MG	0.86
0529-6002	CONC CURB (TY II)	LF	152
0530-6004	DRIVEWAYS (CONC)	SY	39
0531-6001	CONC SIDEWALKS (4")	SY	109
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
12001	13679934.53	2127096.35	--	ME
12002	13679933.91	2127116.98	--	ME
12003	13679934.27	2127155.91	--	ME
12004	13679941.63	2127257.93	--	ME
12005	13679944.59	2127262.91	--	ME
12006	13679944.62	2127267.91	--	ME
12007	13679941.69	2127272.92	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SL 13  
 SW MILITARY B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 941+00 TO STA 944+00

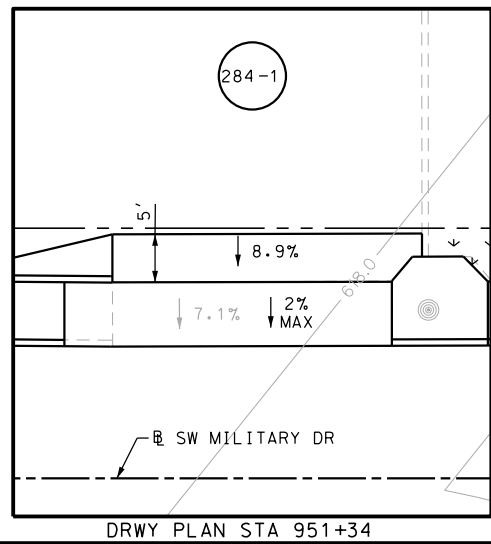
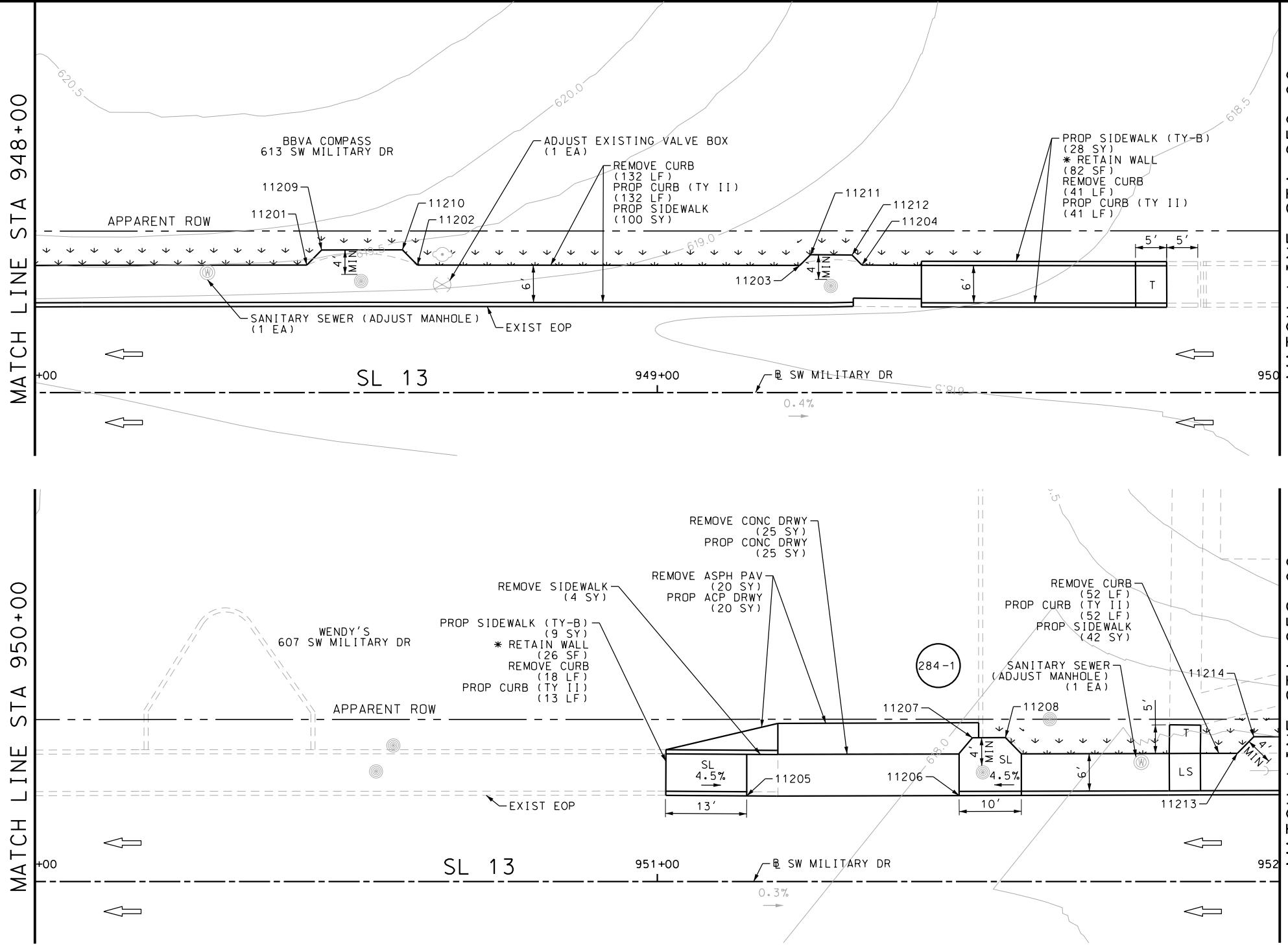
SHEET 96 OF 99

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	282



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB33.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	25
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	243
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	20
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	50
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0529-6002	CONC CURB (TY II)	LF	238
0530-6004	DRIVEWAYS (CONC)	SY	25
0530-6005	DRIVEWAYS (ACP)	SY	20
0531-6001	CONC SIDEWALKS (4")	SY	142
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	37
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	2
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11201	13679945.13	2127725.00	--	ME
11202	13679945.24	2127742.80	--	ME
11203	13679945.55	2127804.23	--	ME
11204	13679945.66	2127814.20	--	ME
11205	13679939.98	2127995.73	--	ME
11206	13679940.23	2128029.86	--	ME
11207	13679949.53	2128031.94	--	ME
11208	13679949.57	2128037.24	--	ME
11209	13679947.55	2127727.39	--	ME
11210	13679947.65	2127740.36	--	ME
11211	13679947.27	2127805.93	--	ME
11212	13679947.25	2127812.61	--	ME
11213	13679947.28	2128074.51	--	ME
11214	13679949.96	2128077.14	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

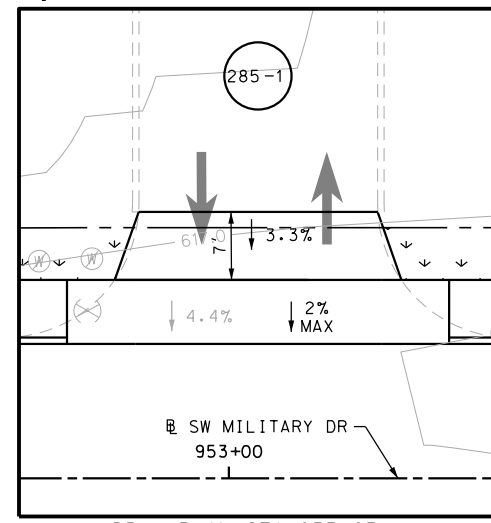
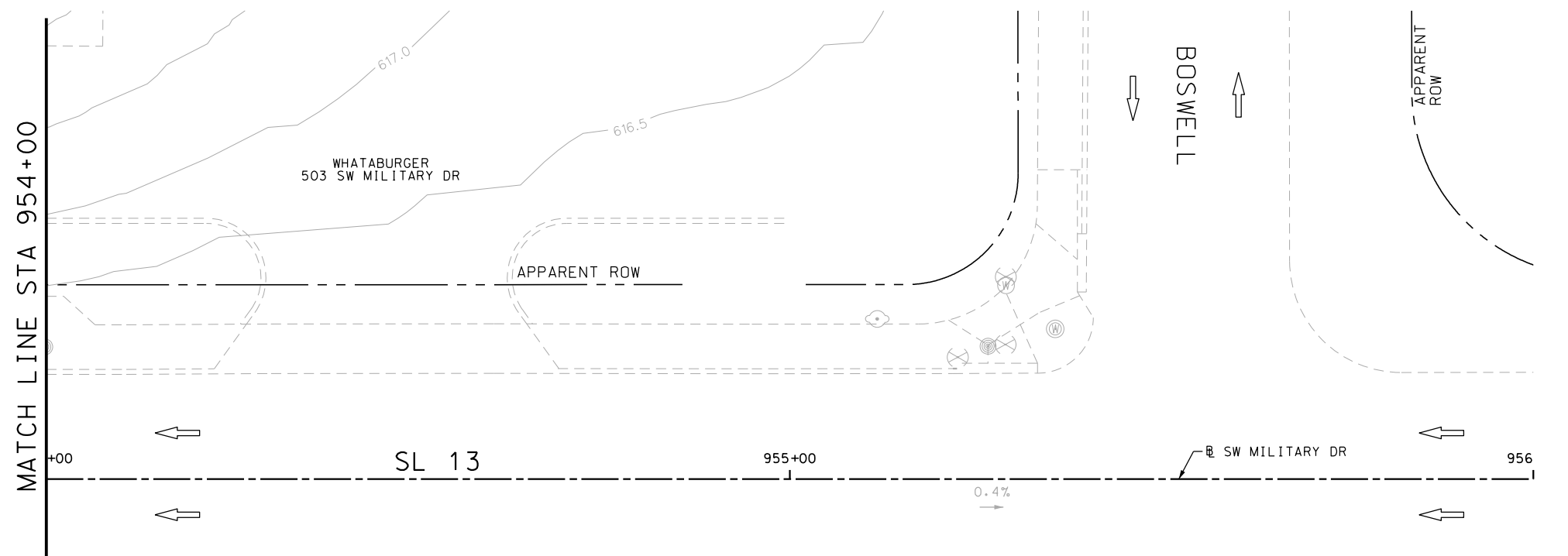
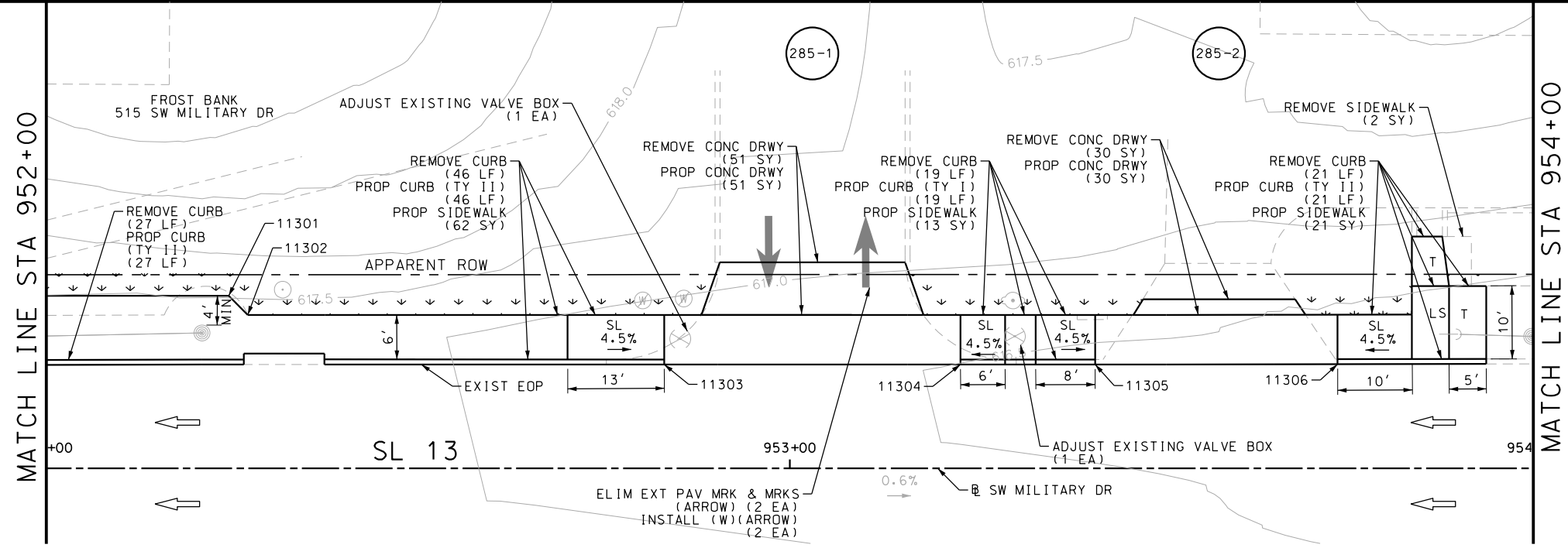
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 948+00 TO STA 952+00

SHEET 98 OF 99

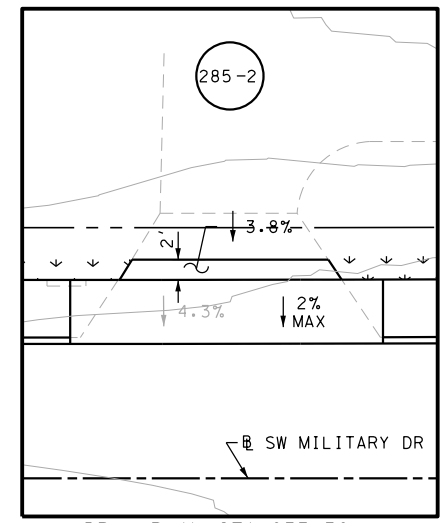
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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				284

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\SWMI1113507\*SWMI1113507\*WB34.dgn



DRWY PLAN STA 953+03



DRWY PLAN STA 953+58

POINT	NORTHING	EASTING	ELEV	DESC
11301	13679950.12	2128105.83	--	ME
11302	13679947.56	2128108.42	--	ME
11303	13679941.23	2128164.47	--	ME
11304	13679941.45	2128204.31	--	ME
11305	13679941.55	2128222.42	--	ME
11306	13679941.79	2128255.03	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	81
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	113
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0529-6001	CONC CURB (TY I)	LF	19
0529-6002	CONC CURB (TY II)	LF	94
0530-6004	DRIVEWAYS (CONC)	SY	81
0531-6001	CONC SIDEWALKS (4")	SY	96
0666-6054	REFL PAV MRK TY I (W) (ARROW) (100MIL)	EA	2
0666-6231	PAVEMENT SEALER (ARROW)	EA	2
0677-6008	ELIM EXT PAV MRK & MRKS (ARROW)	EA	2
0678-6009	PAV SURF PREP FOR MRK (ARROW)	EA	2
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



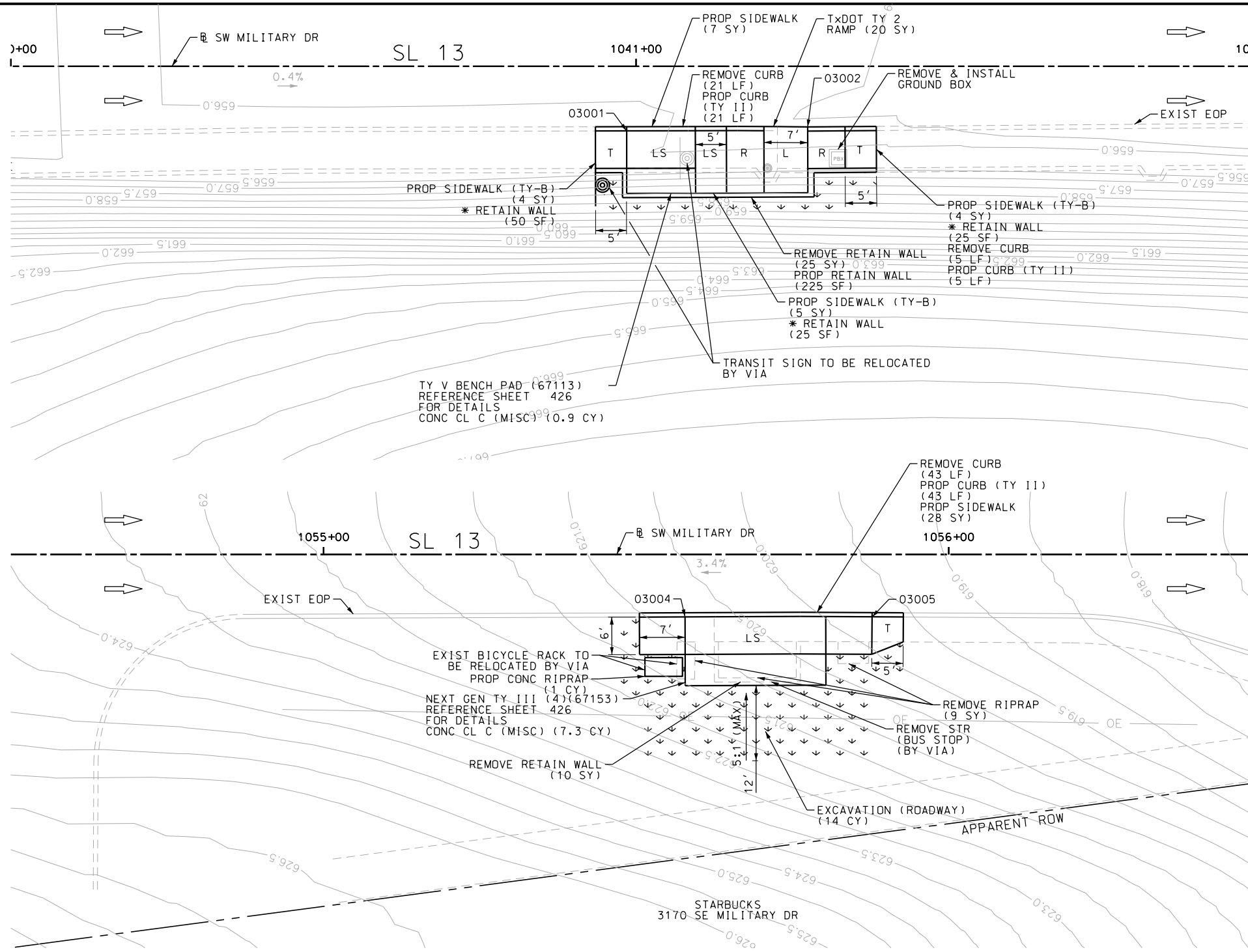
SL 13  
 SW MILITARY B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 952+00 TO END PROJECT

SHEET 99 OF 99

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	285

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Drive\1113507\*MilitaryDr\*02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	9
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	35
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	69
0110-6001	EXCAVATION (ROADWAY)	CY	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	83
0162-6002	BLOCK SODDING	SY	83
0168-6001	VEGETATIVE WATERING	MG	1.29
0420-6074	CL C CONC (MISC)	CY	8.2
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	225
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	69
0531-6001	CONC SIDEWALKS (4")	SY	35
0531-6019	CURB RAMPS (TY 2)	SY	20
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	13
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
03001	13678138.45	2147070.17	--	ME
03002	13678139.22	2147099.11	--	ME
03004	13678145.44	2148529.49	--	ME
03005	13678145.58	2148559.41	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

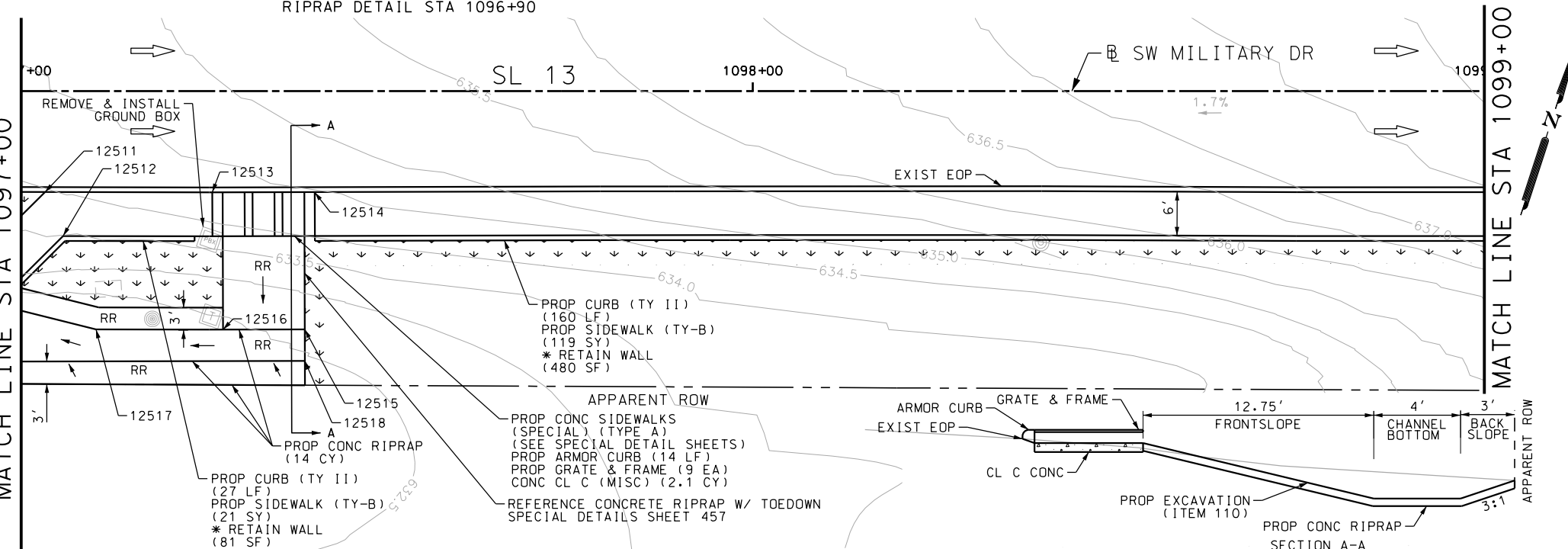
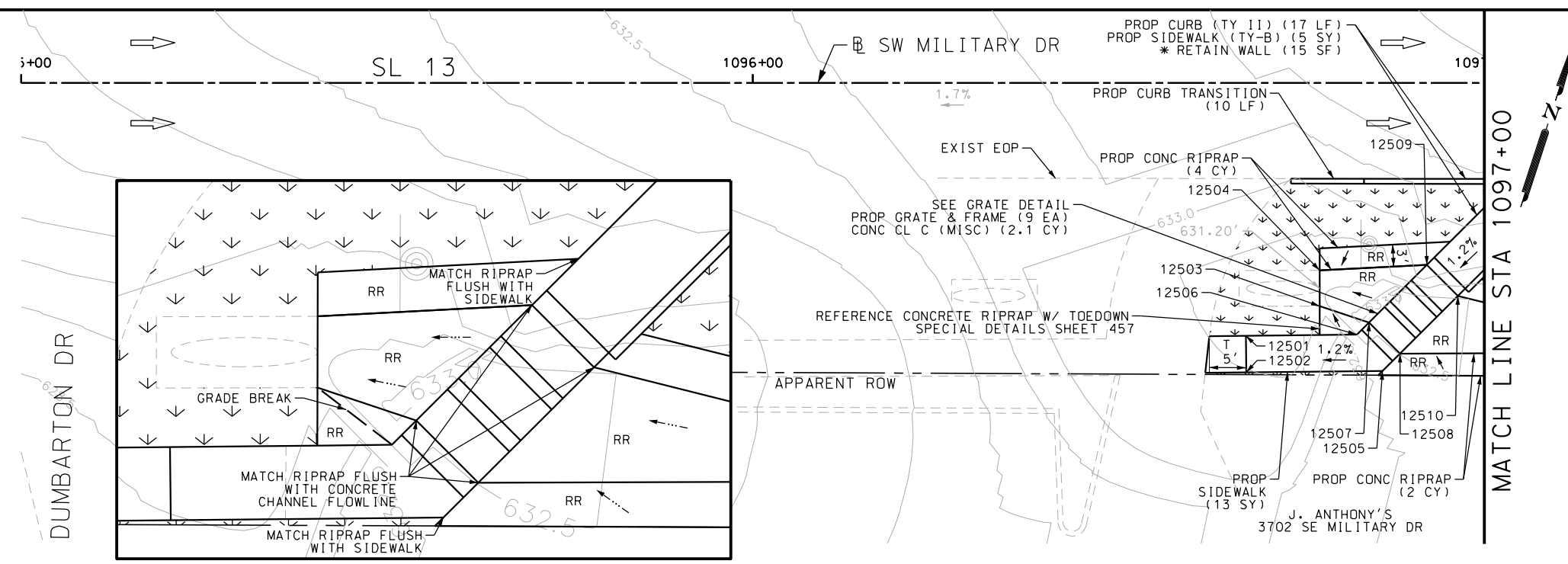
Texas Department of Transportation  
 © 2019

SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 1042+00  
 STA 1054+50 TO STA 1056+50  
 SHEET 1 OF 17

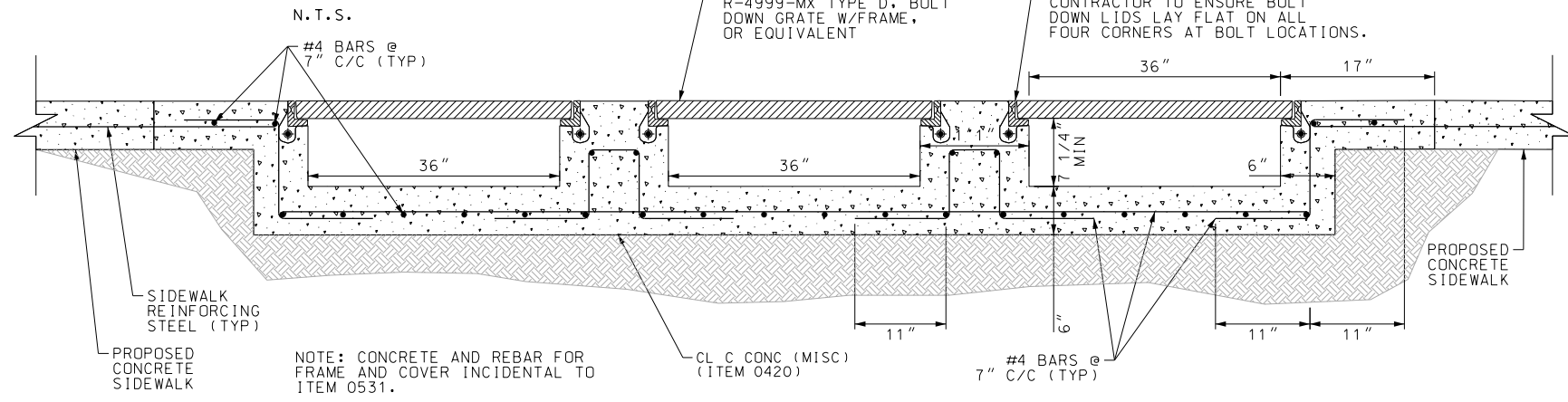
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	286

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\Military Dr\1113507\*Mi\1113507\*Dr\*05.dgn



**GRATE DETAIL**



NOTE: CONCRETE AND REBAR FOR FRAME AND COVER INCIDENTAL TO ITEM 0531.

POINT	NORTHING	EASTING	ELEV	DESC
12501	13678991.23	2152520.24	634.14	PROP
12502	13678986.51	2152521.87	634.20	PROP
12503	13678998.29	2152528.50	--	ME
12504	13679002.91	2152526.95	--	ME
12505	13678992.61	2152539.48	633.42	PROP
12506	13678996.20	2152534.56	633.36	PROP
12507	13678998.30	2152535.62	631.47	PROP
12508	13678995.62	2152540.98	631.52	PROP
12509	13679008.29	2152540.61	631.58	PROP
12510	13679005.61	2152545.97	631.63	PROP
12511	13679022.31	2152547.61	634.75	PROP
12512	13679017.41	2152551.87	634.84	PROP
12513	13679029.56	2152569.30	--	ME
12514	13679034.05	2152582.56	--	ME
12515	13679015.82	2152587.24	632.00	PROP
12516	13679012.24	2152576.66	631.89	PROP
12517	13679006.74	2152560.20	631.76	PROP
12518	13679011.75	2152588.62	632.00	PROP

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	162
0162-6002	BLOCK SODDING	SY	162
0168-6001	VEGETATIVE WATERING	MG	2.53
0420-6074	CL C CONC (MISC)	CY	4.2
0432-6003	RIPRAP (CONC) (6 IN)	CY	20
0471-6003	GRATE & FRAME	EA	18
0529-6002	CONC CURB (TY II)	LF	214
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	13
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	145
0624-6010	GROUND BOX TY D (162922)W/APRON	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

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SL 13  
MILITARY DRIVE  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1095+00 TO STA 1099+00

SHEET 2 OF 17

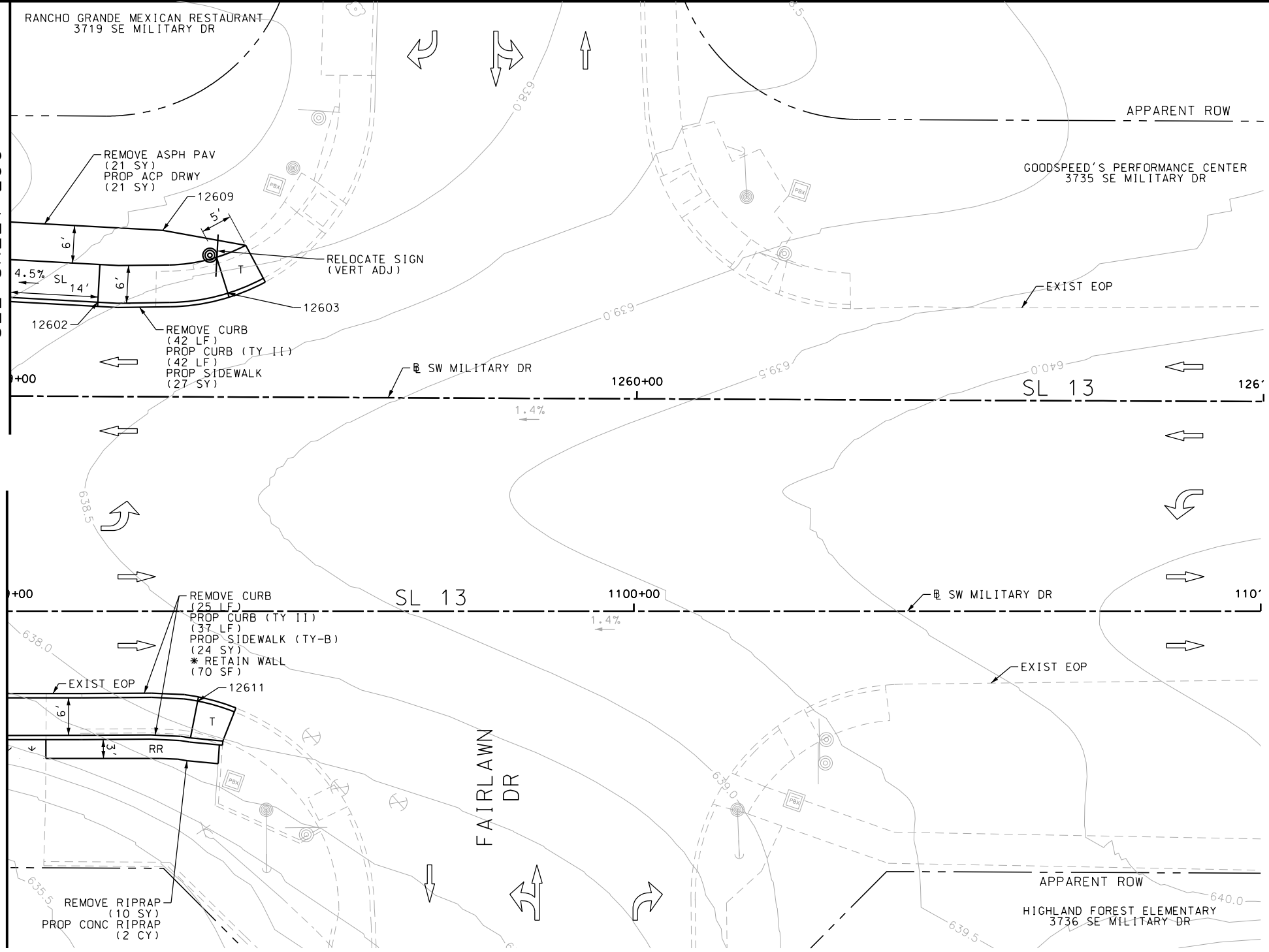
DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG	6	TEXAS		VARIABLES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	287

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr\*06.dgn

MATCH LINE STA 1259+00  
SEE SHEET 296

MATCH LINE STA 1099+00



POINT	NORTHING	EASTING	ELEV	DESC
12602	13679163.50	2152733.96	--	ME
12603	13679169.32	2152757.86	--	ME
12609	13679084.58	2152769.67	--	ME
12611	13679091.54	2152782.66	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	10
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	67
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	21
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	79
0530-6005	DRIVEWAYS (ACP)	SY	21
0531-6001	CONC SIDEWALKS (4")	SY	27
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	24
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

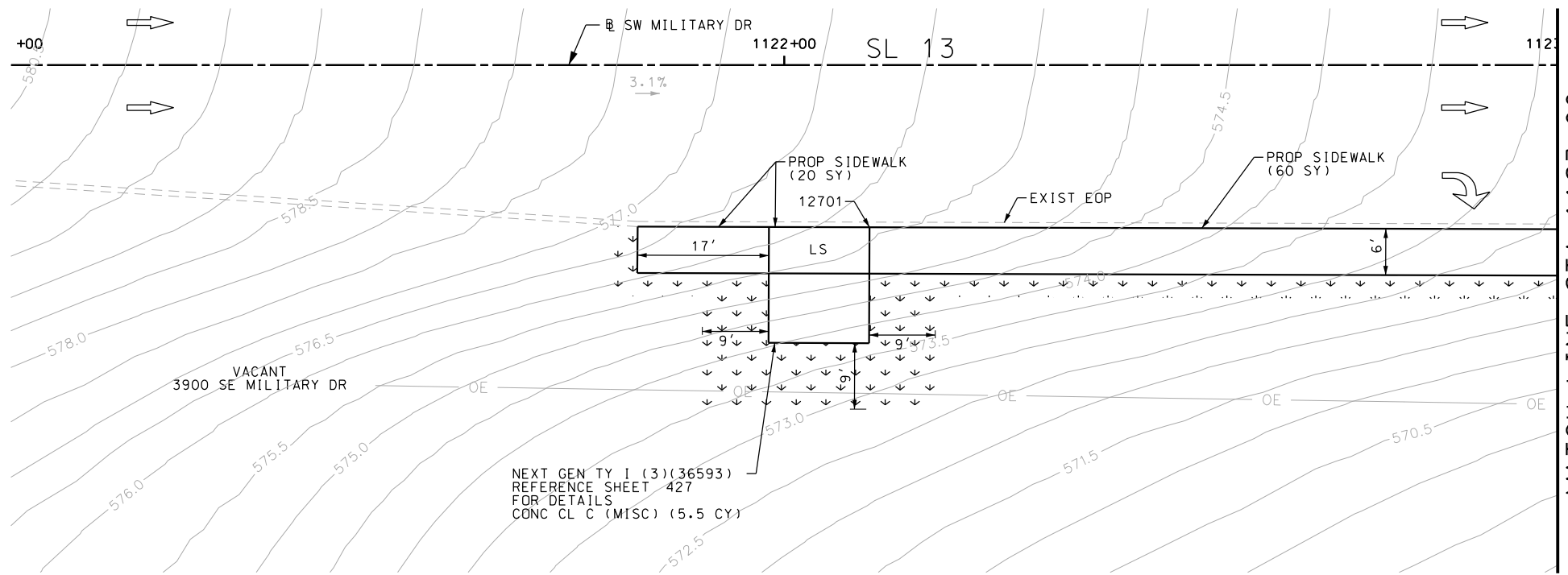
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1099+00 TO STA 1101+00  
 STA 1259+00 TO STA 1261+00  
 SHEET 3 OF 17

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	288



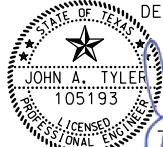
Plotted on: 5/3/2019

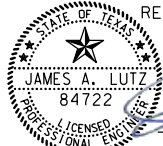
Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr+07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	76
0162-6002	BLOCK SODDING	SY	76
0168-6001	VEGETATIVE WATERING	MG	1.19
0420-6074	CL C CONC (MISC)	CY	5.5
0531-6001	CONC SIDEWALKS (4")	SY	136

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1122+50 TO END PROJECT

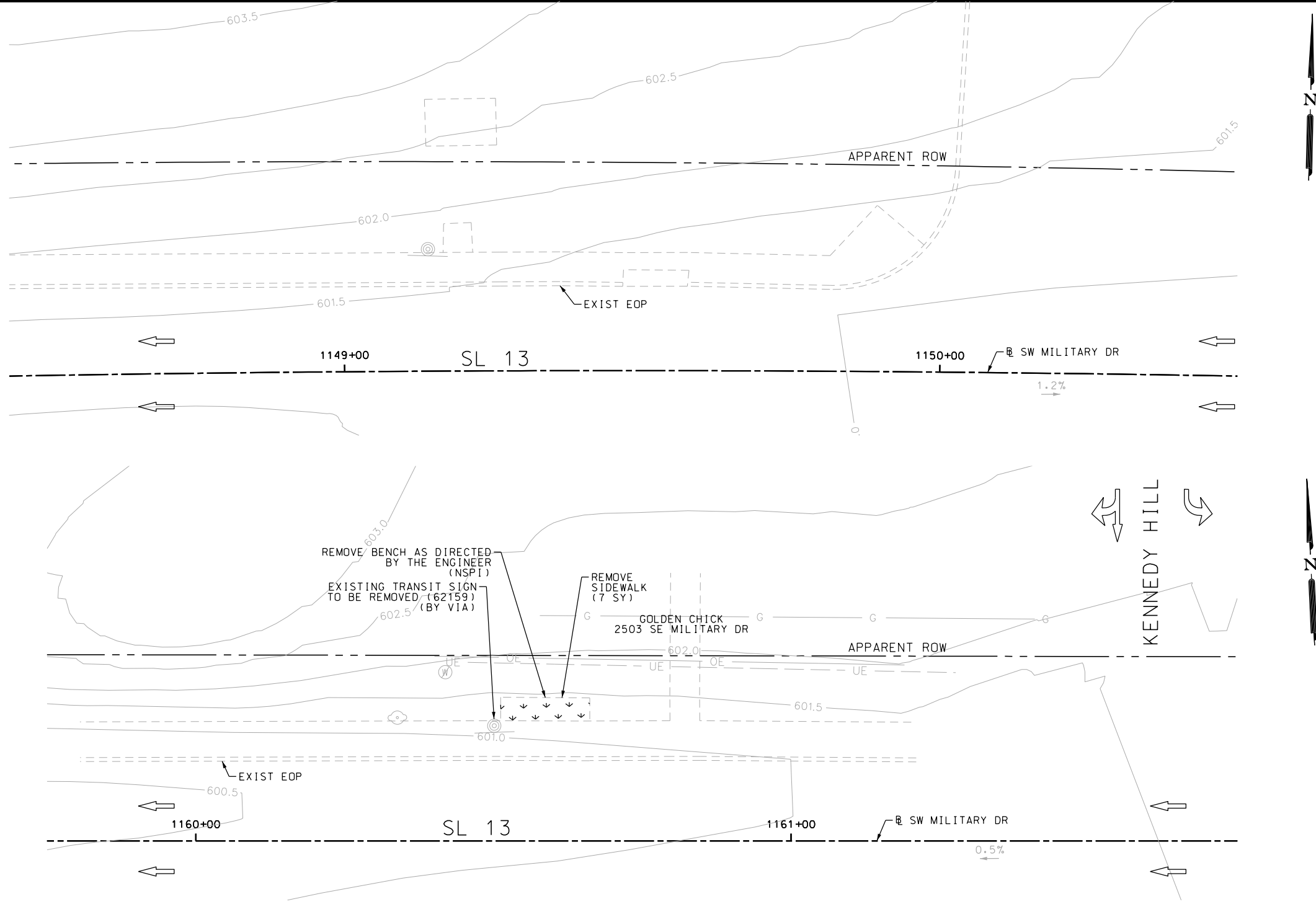
SHEET 5 OF 17

POINT	NORTHING	EASTING	ELEV	DESC
12701	13679813.31	2154927.38	--	ME
12702	13679856.81	2155087.79	--	ME

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	289

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	7
0162-6002	BLOCK SODDING	SY	7
0168-6001	VEGETATIVE WATERING	MG	0.11

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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

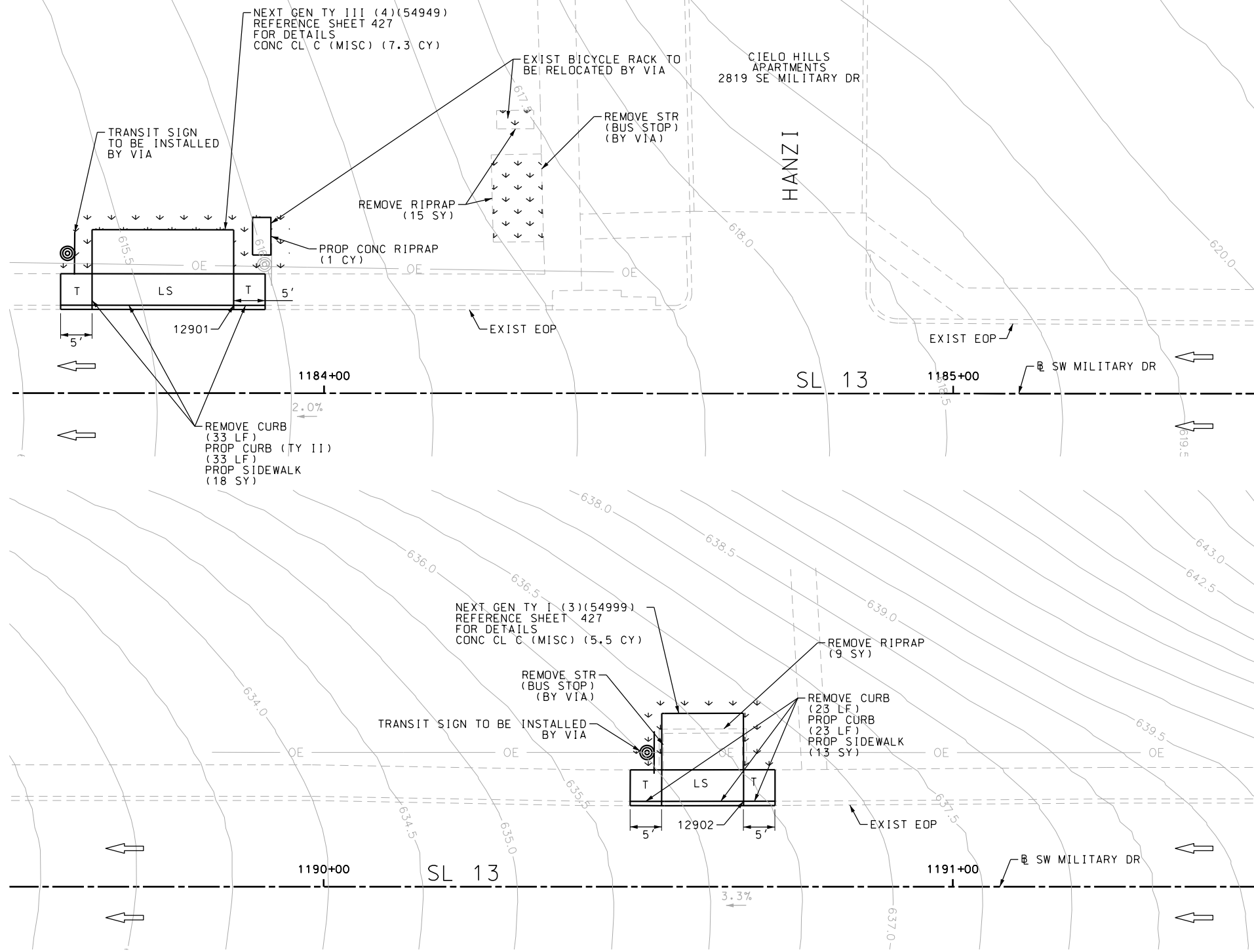
Texas Department of Transportation  
© 2019

SL 13  
MILITARY DRIVE  
SIDEWALK  
CONSTRUCTION PLAN  
BEGIN PROJECT TO STA 1150+50  
STA 1159+75 TO STA 1161+75  
SHEET 6 OF 17

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	290

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB02.dgn



POINT	NORTHING	EASTING	ELEV	DESC
12901	13678215.48	2145335.18	--	ME
12902	13678218.75	2146016.31	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	24
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	56
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	43
0162-6002	BLOCK SODDING	SY	43
0168-6001	VEGETATIVE WATERING	MG	0.67
0420-6074	CL C CONC (MISC)	CY	12.8
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	56
0531-6001	CONC SIDEWALKS (4")	SY	31

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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

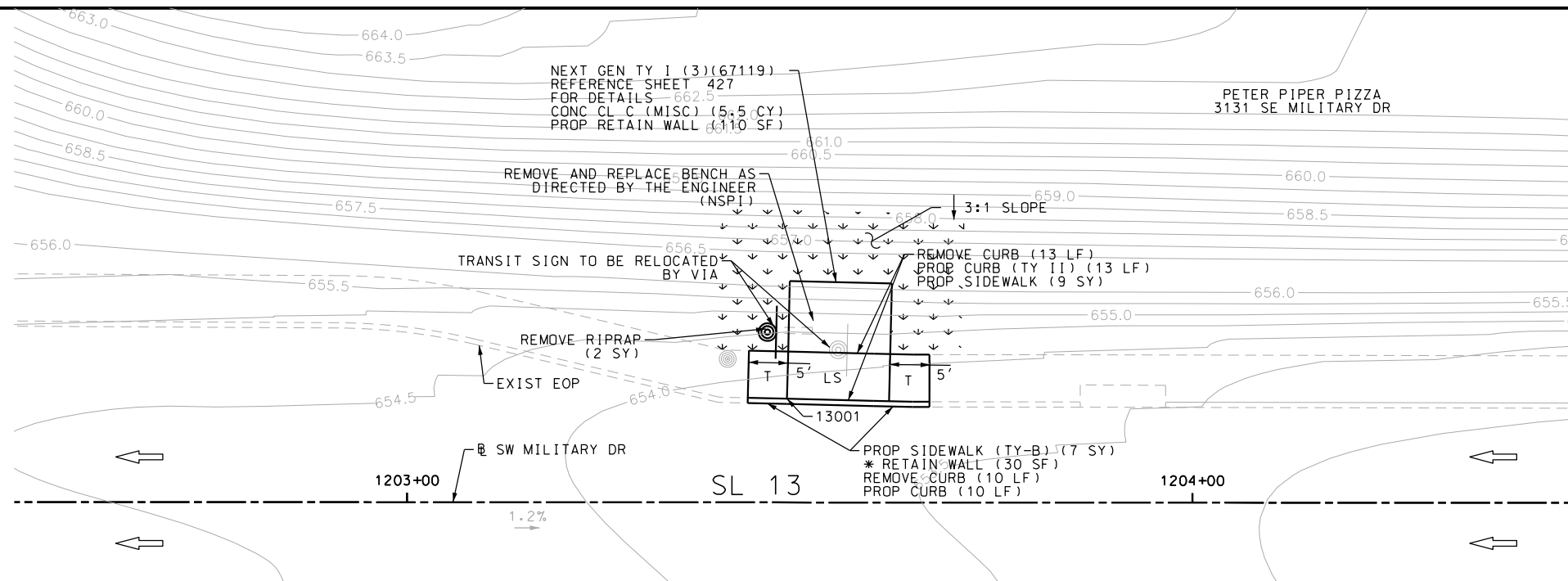


SL 13  
MILITARY DRIVE  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1183+50 TO STA 1185+50  
STA 1189+50 TO STA 1191+50  
SHEET 7 OF 17

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	291

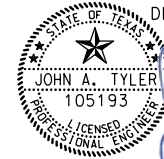
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\Military Dr\1113507.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	2
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	23
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	11
0162-6002	BLOCK SODDING	SY	11
0168-6001	VEGETATIVE WATERING	MG	0.17
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	23
0531-6001	CONC SIDEWALKS (4")	SY	16

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
13001	13678225.29	2147297.91	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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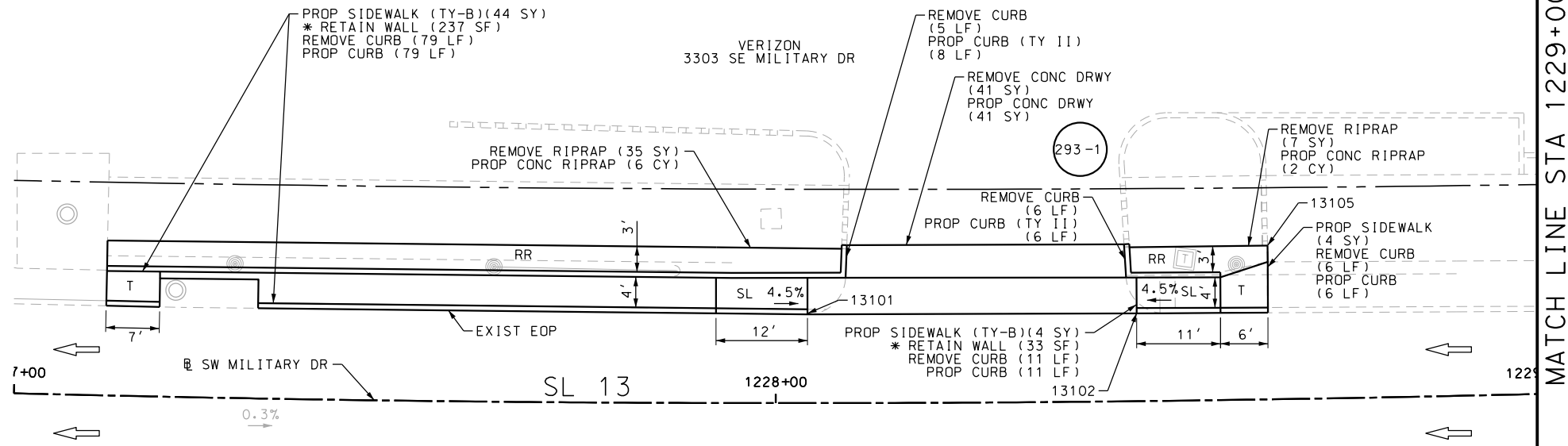
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1202+50 TO STA 1204+50

SHEET 8 OF 17

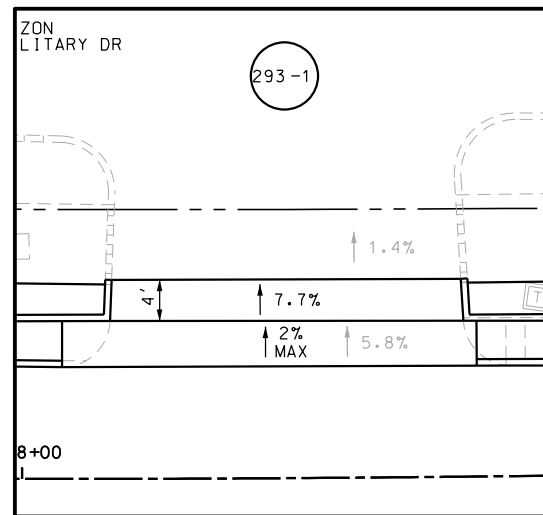
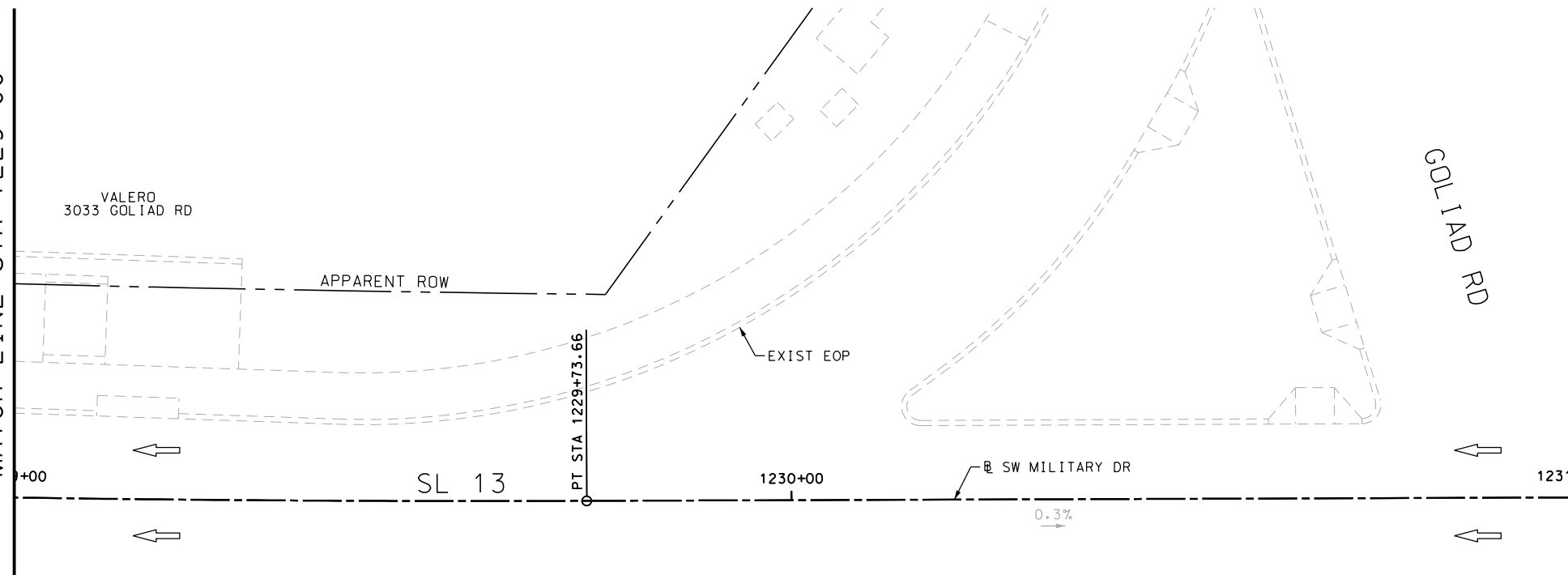
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	292

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB04.dgn



MATCH LINE STA 1229+00



DRWY PLAN STA 1228+27

POINT	NORTHING	EASTING	ELEV	DESC
13101	13678278.59	2149750.21	--	ME
13102	13678284.34	2149793.02	--	ME
13105	13678295.40	2149808.88	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	42
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	41
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	107
0432-6003	RIPRAP (CONC) (6 IN)	CY	8
0529-6002	CONC CURB (TY II)	LF	110
0530-6004	DRIVEWAYS (CONC)	SY	41
0531-6001	CONC SIDEWALKS (4")	SY	4
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	48

NOTES:

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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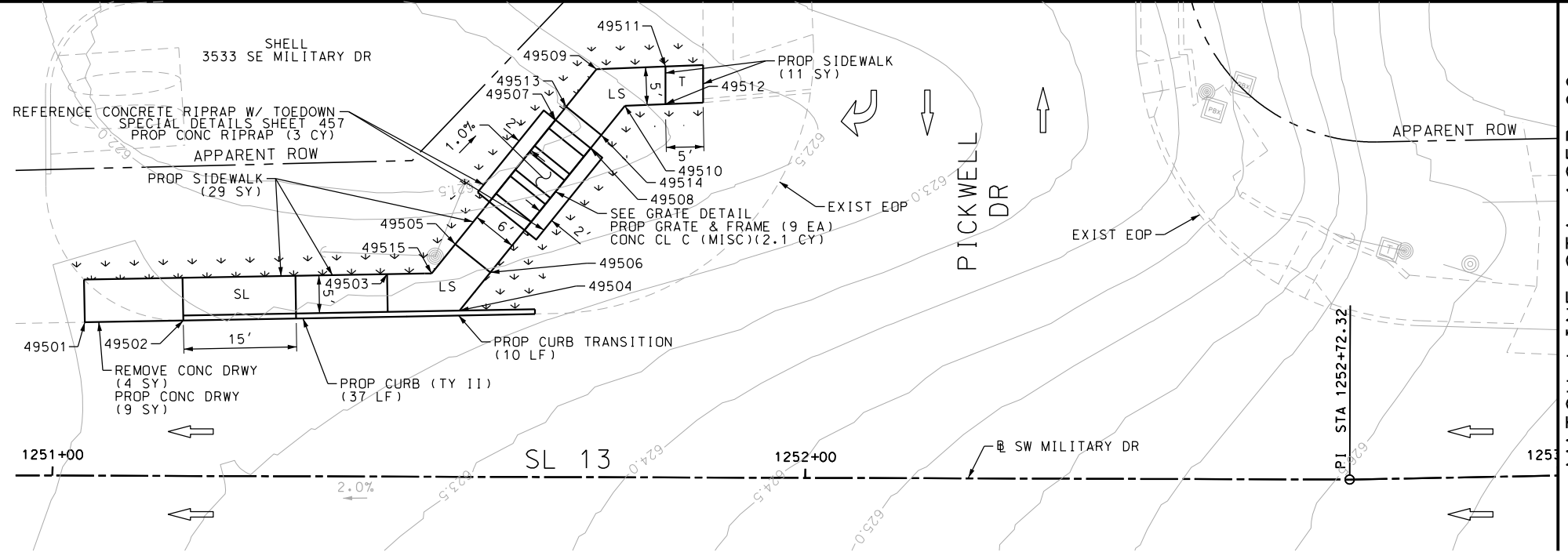
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1227+00 TO STA 1231+00

SHEET 9 OF 17

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	293

Plotted on: 5/3/2019

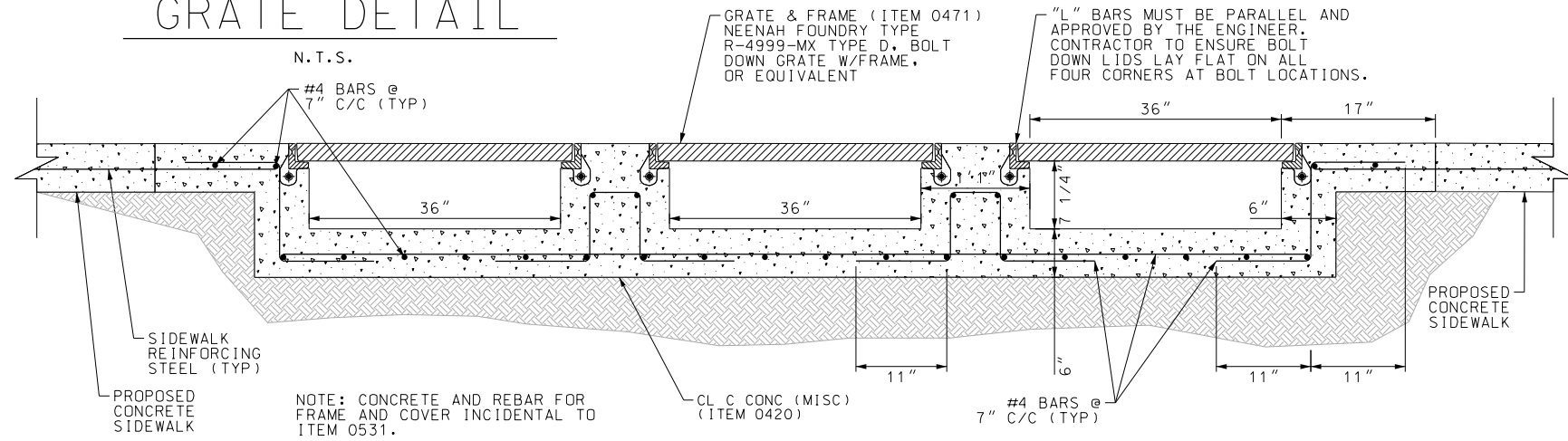
Design File name: P:\111135\07\design\Civil\Roadway\Military Drive\113507\*MiilitaryDr\*WB05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	62
0162-6002	BLOCK SODDING	SY	62
0168-6001	VEGETATIVE WATERING	MG	0.97
0420-6074	CL C CONC (MISC)	CY	2.1
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	47
0530-6004	DRIVEWAYS (CONC)	SY	9
0531-6001	CONC SIDEWALKS (4")	SY	40

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

### GRATE DETAIL



DESIGN

JOHN A. TYLER, P.E.  
105193  
5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
84722  
5/3/2019  
DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
49501	13678903.96	2151956.63	--	ME
49502	13678908.05	2151969.06	--	ME
49503	13678921.92	2151993.11	623.18	PROP
49504	13678920.16	2152003.74	623.19	PROP
49505	13678928.41	2152000.57	622.96	PROP
49508	13678945.91	2152014.00	622.84	PROP
49509	13678956.16	2152011.62	622.71	PROP
49510	13678952.65	2152016.68	622.72	PROP
49511	13678959.23	2152020.28	622.53	PROP
49512	13678954.45	2152021.76	622.61	PROP
49513	13678950.22	2152009.26	622.81	PROP
49514	13678950.22	2152009.26	622.82	PROP
49515	13678923.77	2151998.72	623.06	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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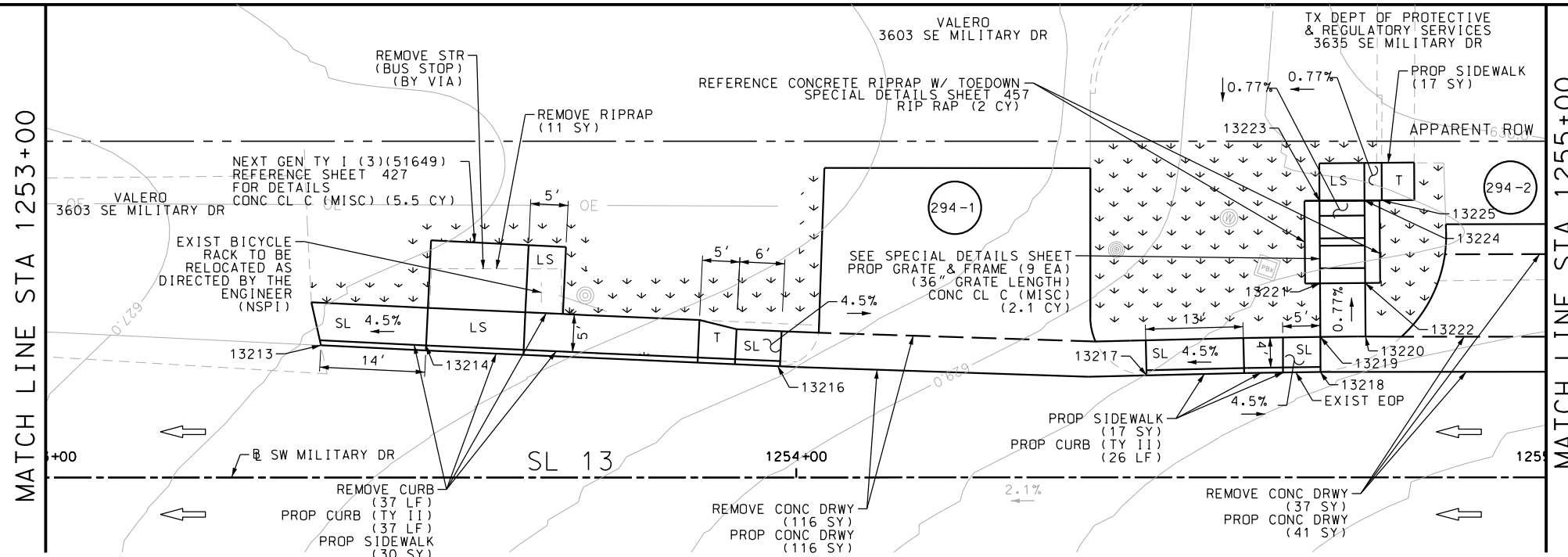
SL 13  
MILITARY DRIVE  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1251+00 TO STA 1253+00

SHEET 10 OF 17

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	294

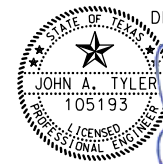
Plotted on: 5/3/2019

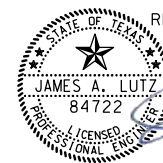
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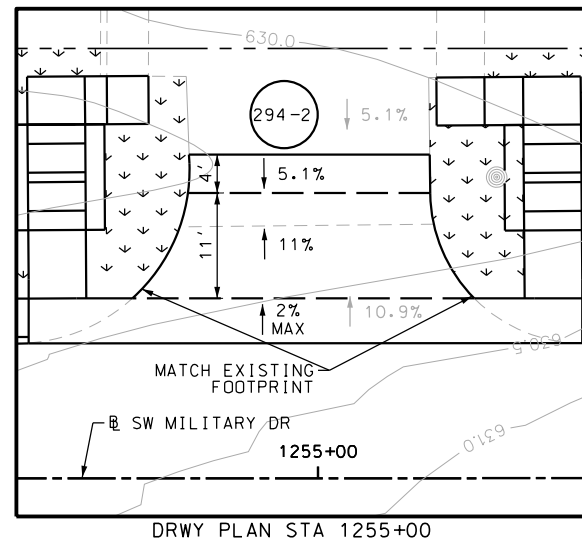
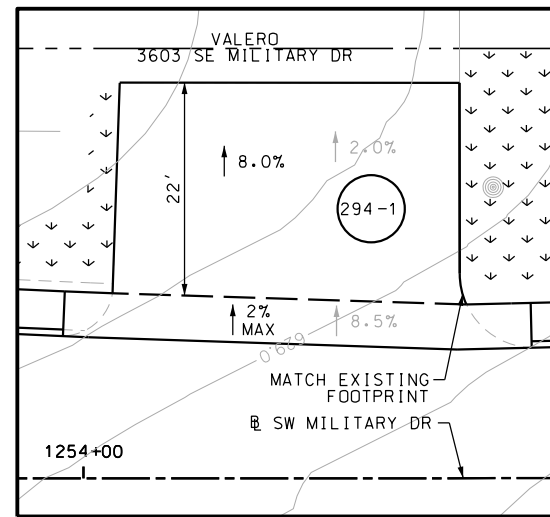
ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	153
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	37
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	155
0162-6002	BLOCK SODDING	SY	155
0168-6001	VEGETATIVE WATERING	MG	2.42
0420-6074	CL C CONC (MISC)	CY	7.6
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	63
0530-6004	DRIVEWAYS (CONC)	SY	157
0531-6001	CONC SIDEWALKS (4")	SY	55

- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'



POINT	NORTHING	EASTING	ELEV	DESC
13213	13678970.55	2152178.91	--	ME
13214	13678974.94	2152192.22	--	ME
13216	13678987.11	2152237.87	--	ME
13217	13679001.28	2152284.62	--	ME
13218	13679008.99	2152306.47	--	ME
13219	13679013.42	2152305.00	629.89	PROP
13220	13679015.34	2152310.70	629.90	PROP
13221	13679020.17	2152302.73	629.84	PROP
13222	13679022.09	2152308.42	629.85	PROP
13223	13679030.59	2152299.21	629.75	PROP
13224	13679032.51	2152304.89	629.76	PROP
13225	13679033.25	2152307.07	629.76	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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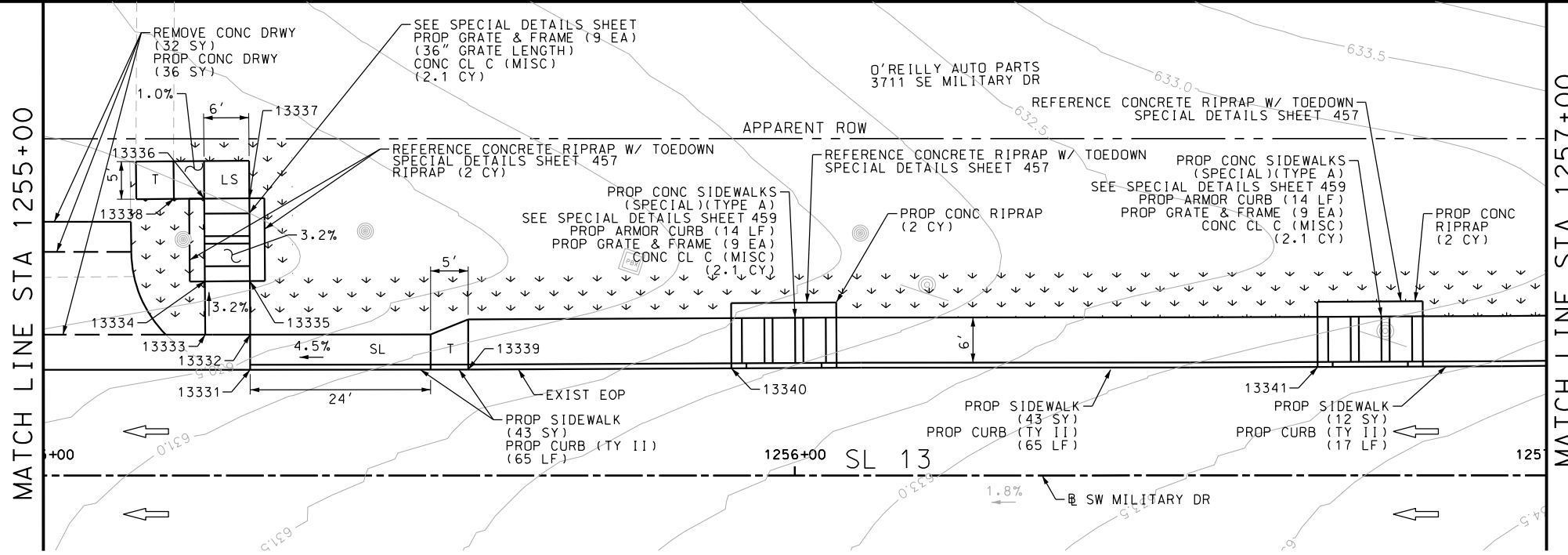
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1253+00 TO STA 1255+00

SHEET 11 OF 17

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	295

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\*Mi\11orYDr\*WB06PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	32
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	145
0162-6002	BLOCK SODDING	SY	145
0168-6001	VEGETATIVE WATERING	MG	2.26
0420-6074	CL C CONC (MISC)	CY	6.3
0432-6003	RIPRAP (CONC) (6 IN)	CY	6
0471-6003	GRATE & FRAME	EA	27
0529-6002	CONC CURB (TY II)	LF	147
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	28
0530-6004	DRIVEWAYS (CONC)	SY	36
0531-6001	CONC SIDEWALKS (4")	SY	98

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
13331	13679027.11	2152361.23	--	ME
13332	13679031.54	2152359.76	630.78	PROP
13333	13679029.66	2152354.08	630.66	PROP
13334	13679036.36	2152351.81	630.38	PROP
13335	13679038.29	2152357.49	630.49	PROP
13336	13679046.78	2152348.28	630.15	PROP
13337	13679048.71	2152353.97	630.27	PROP
13338	13679045.49	2152344.46	630.00	PROP
13339	13679036.23	2152388.76	--	ME
13340	13679047.38	2152421.95	--	ME
13341	13679072.02	2152495.95	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1255+00 TO STA 1257+00

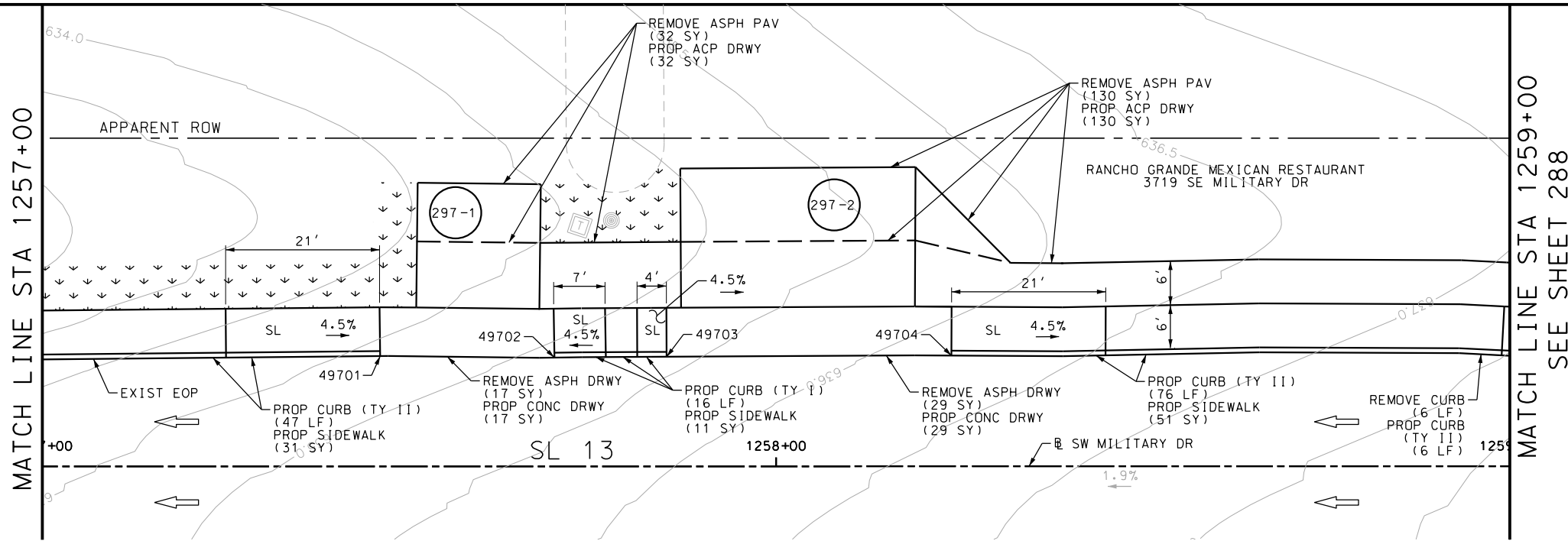
SHEET 12 OF 17

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	296



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\*MiilitaryDr\*WB06PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	38
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	6
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	208
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	59
0162-6002	BLOCK SODDING	SY	59
0168-6001	VEGETATIVE WATERING	MG	0.92
0529-6001	CONC CURB (TY I)	LF	16
0529-6002	CONC CURB (TY II)	LF	129
0530-6004	DRIVEWAYS (CONC)	SY	46
0530-6005	DRIVEWAYS (ACP)	SY	162
0531-6001	CONC SIDEWALKS (4")	SY	93

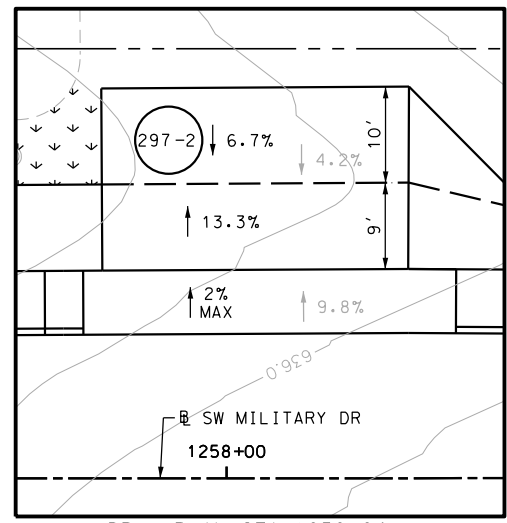
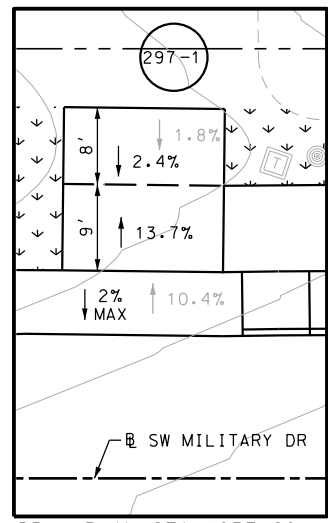
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
49701	13679096.63	2152568.39	--	ME
49702	13679103.90	2152591.01	--	ME
49703	13679108.80	2152605.49	--	ME
49704	13679121.14	2152642.30	--	ME



**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1257+00 TO STA 1259+00

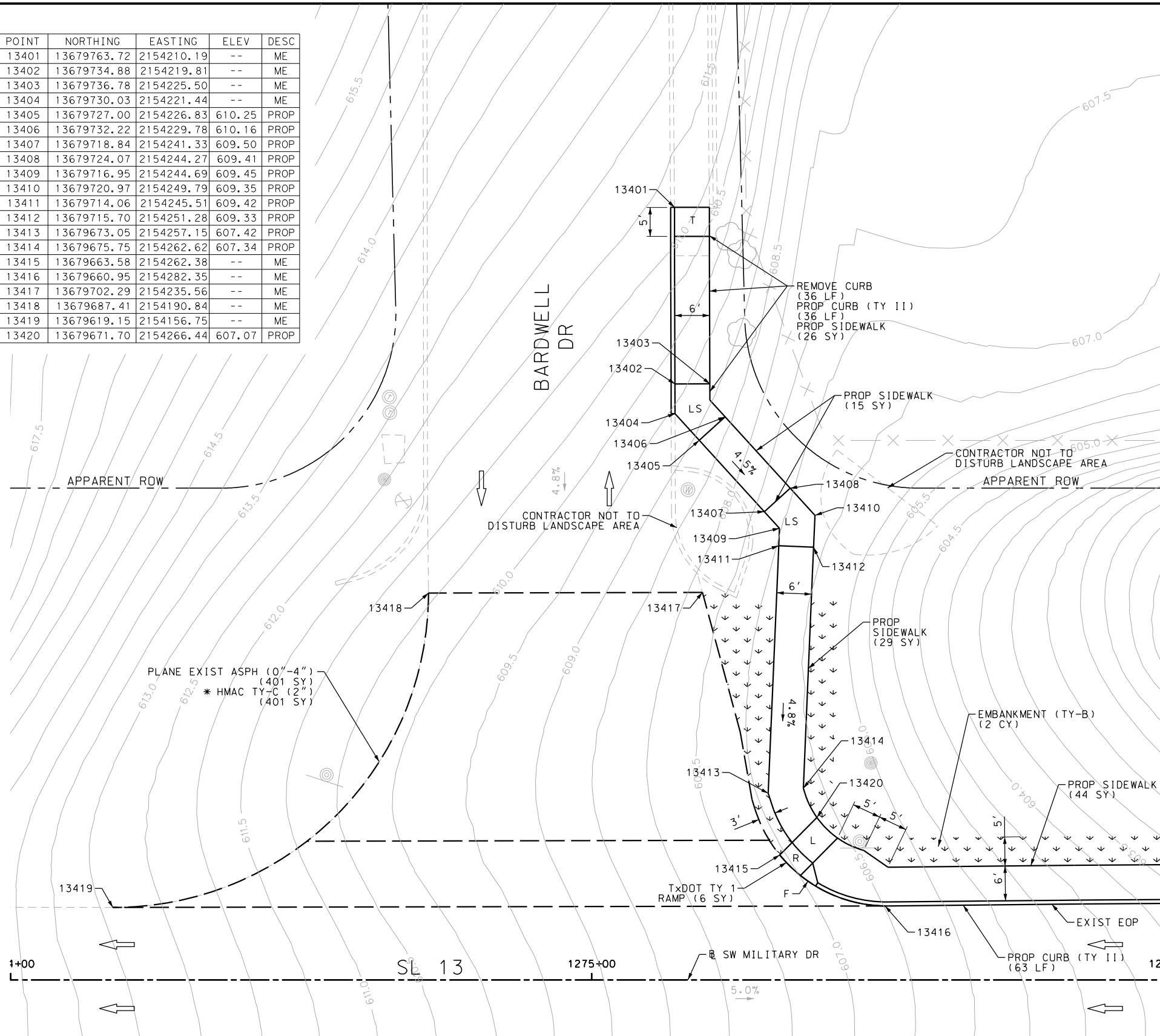
SHEET 13 OF 17

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				297

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB07.dgn

POINT	NORTHING	EASTING	ELEV	DESC
13401	13679763.72	2154210.19	--	ME
13402	13679734.88	2154219.81	--	ME
13403	13679736.78	2154225.50	--	ME
13404	13679730.03	2154221.44	--	ME
13405	13679727.00	2154226.83	610.25	PROP
13406	13679732.22	2154229.78	610.16	PROP
13407	13679718.84	2154241.33	609.50	PROP
13408	13679724.07	2154244.27	609.41	PROP
13409	13679716.95	2154244.69	609.45	PROP
13410	13679720.97	2154249.79	609.35	PROP
13411	13679714.06	2154245.51	609.42	PROP
13412	13679715.70	2154251.28	609.33	PROP
13413	13679673.05	2154257.15	607.42	PROP
13414	13679675.75	2154262.62	607.34	PROP
13415	13679663.58	2154262.38	--	ME
13416	13679660.95	2154282.35	--	ME
13417	13679702.29	2154235.56	--	ME
13418	13679687.41	2154190.84	--	ME
13419	13679619.15	2154156.75	--	ME
13420	13679671.70	2154266.44	607.07	PROP



ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA (SQ) TY-C PG76-22	SY	401
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	36
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	2
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	108
0162-6002	BLOCK SODDING	SY	108
0168-6001	VEGETATIVE WATERING	MG	1.68
0354-6023	PLANE ASPH CONC PAV (0" TO 4")	SY	401
0529-6002	CONC CURB (TY II)	LF	99
0531-6001	CONC SIDEWALKS (4")	SY	114
0531-6018	CURB RAMPS (TY 1)	SY	6

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  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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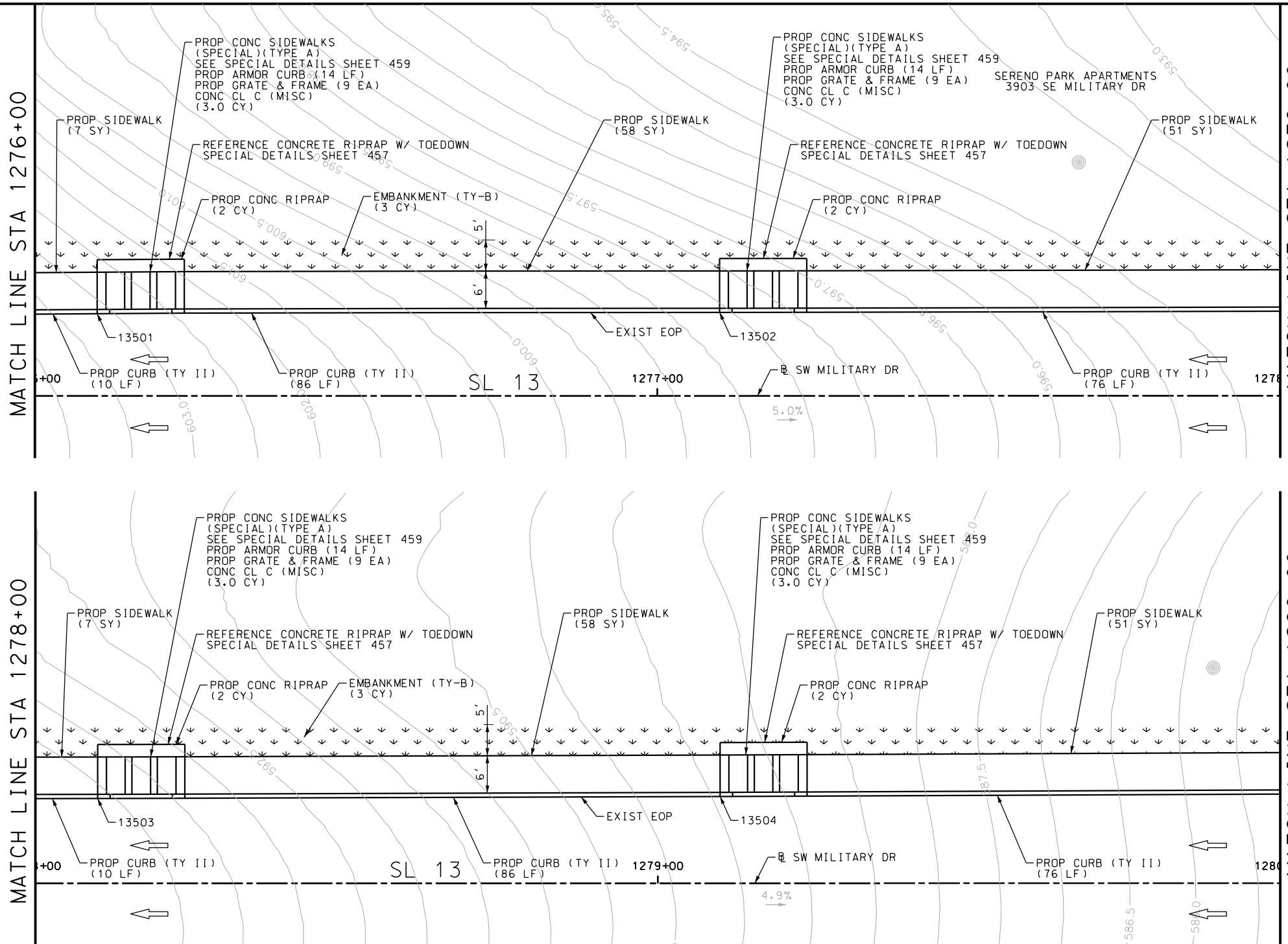
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1274+00 TO STA 1276+00

SHEET 15 OF 17

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				298

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\Military Dr\1113507.dgn



ITEM	DESCRIPTION	UNIT	QTY
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	6
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	356
0162-6002	BLOCK SODDING	SY	356
0168-6001	VEGETATIVE WATERING	MG	5.55
0420-6074	CL C CONC (MISC)	CY	12.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	8
0471-6003	GRATE & FRAME	EA	36
0529-6002	CONC CURB (TY II)	LF	344
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	56
0531-6001	CONC SIDEWALKS (4")	SY	232

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
13501	13679680.08	2154338.68	--	ME
13502	13679711.65	2154433.57	--	ME
13503	13679743.26	2154528.44	--	ME
13504	13679774.95	2154623.28	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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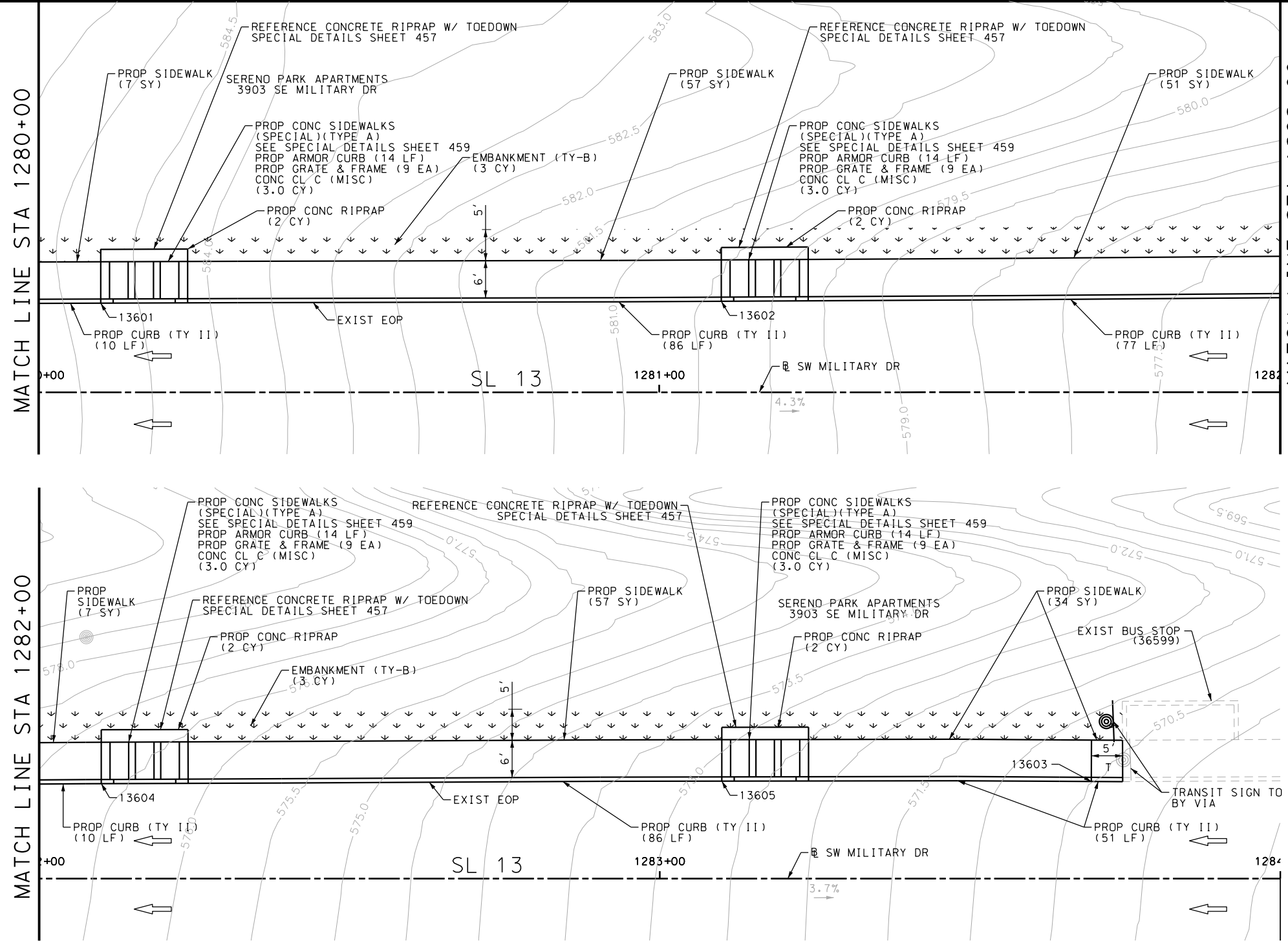
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1276+00 TO STA 1280+00

SHEET 16 OF 17

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	299

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\Military Dr\1113507.dgn



ITEM	DESCRIPTION	UNIT	QTY
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	6
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	328
0162-6002	BLOCK SODDING	SY	328
0168-6001	VEGETATIVE WATERING	MG	5.12
0420-6074	CL C CONC (MISC)	CY	12.0
0471-6003	GRATE & FRAME	EA	36
0529-6002	CONC CURB (TY II)	LF	320
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	56
0531-6001	CONC SIDEWALKS (4")	SY	213

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
13601	13679806.75	2154718.10	--	ME
13602	13679838.43	2154812.94	--	ME
13603	13679920.84	2155059.07	--	ME
13604	13679870.43	2154907.69	--	ME
13605	13679902.20	2155002.51	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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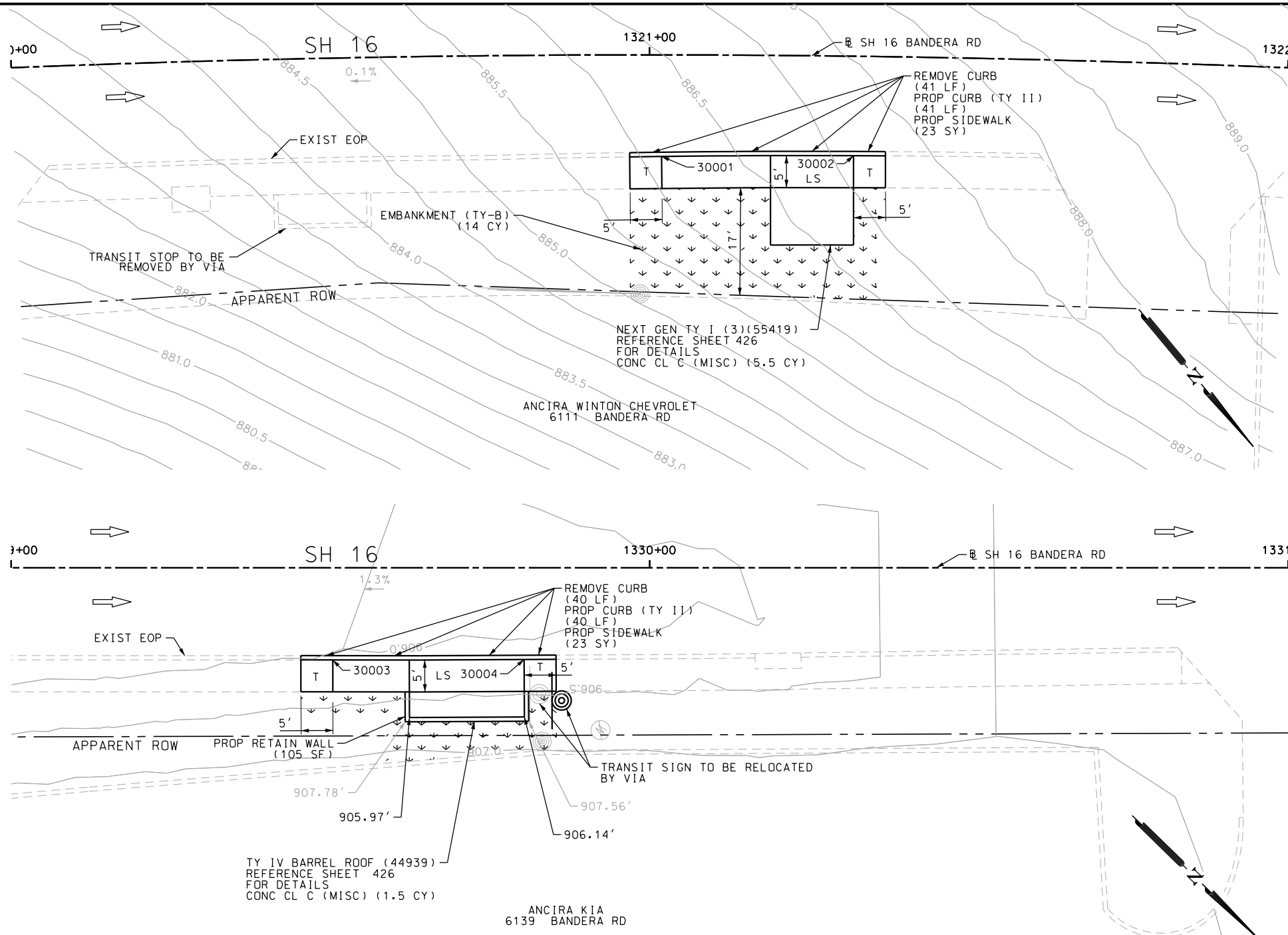
SL 13  
 MILITARY DRIVE  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1280+00 TO END PROJECT

SHEET 17 OF 17

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	300

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\Bandera Dr\WB\*01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	81
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	85
0162-6002	BLOCK SODDING	SY	85
0168-6001	VEGETATIVE WATERING	MG	1.33
0420-6074	CL C CONC (MISC)	CY	7.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	105
0529-6002	CONC CURB (TY II)	LF	81
0531-6001	CONC SIDEWALKS (4")	SY	46

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
30001	13726456.12	2094433.42	--	ME
30002	13726475.25	2094410.23	--	ME
30003	13727051.43	2093831.58	--	ME
30004	13727072.81	2093810.58	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800

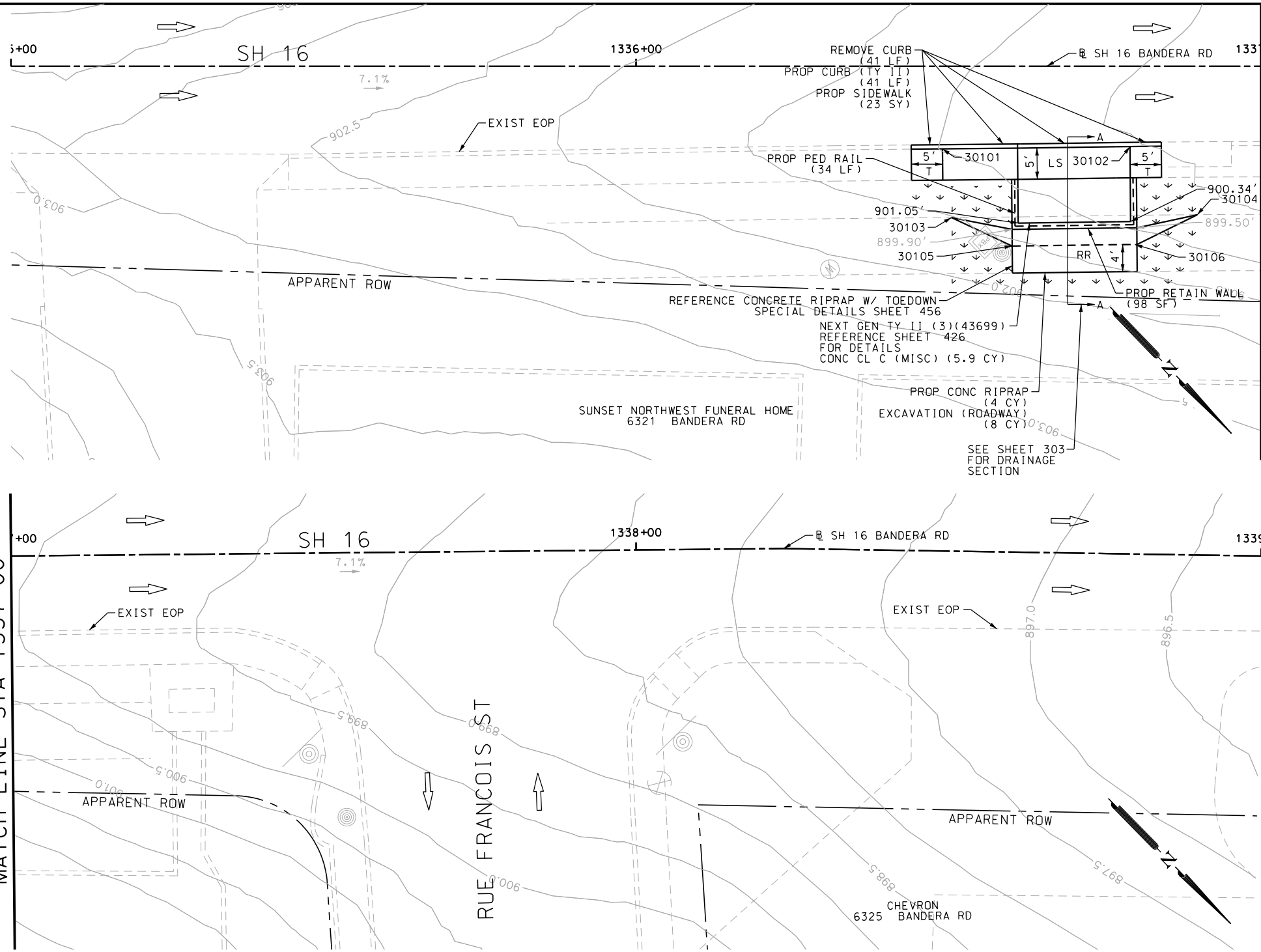
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1320+00 TO STA 1322+00  
 STA 1329+00 TO STA 1331+00  
 SHEET 1 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	301

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	41
0110-6001	EXCAVATION (ROADWAY)	CY	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	44
0162-6002	BLOCK SODDING	SY	44
0168-6001	VEGETATIVE WATERING	MG	0.69
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	98
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0450-6048	RAIL (HANDRAIL) (TY B)	LF	34
0529-6002	CONC CURB (TY II)	LF	41
0531-6001	CONC SIDEWALKS (4")	SY	23

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
30101	13727541.99	2093333.63	--	ME
30102	13727562.50	2093311.73	--	ME
30103	13727550.92	2093340.20	--	ME
30104	13727577.80	2093311.51	--	ME
30105	13727560.95	2093336.35	--	ME
30106	13727574.57	2093321.76	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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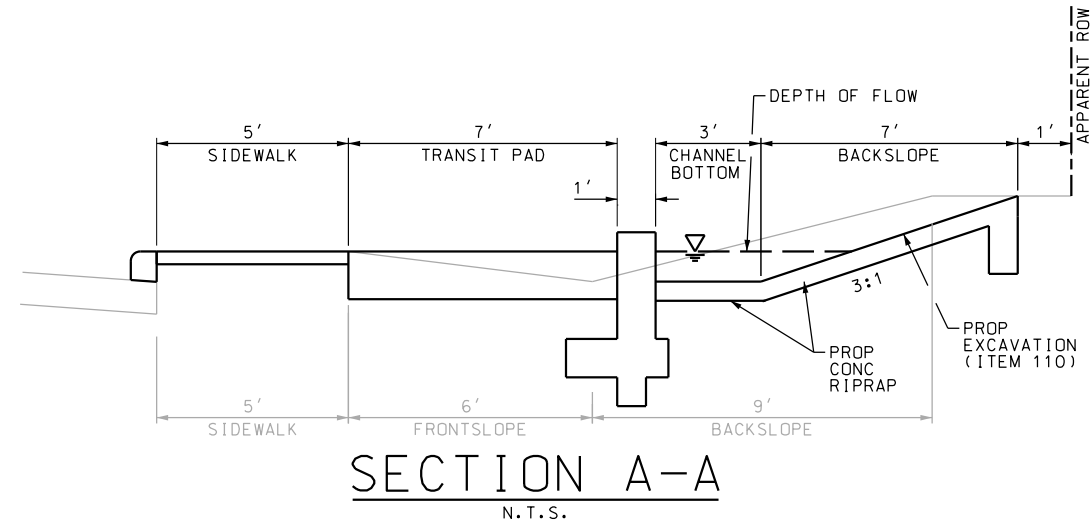
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1335+00 TO STA 1339+00

SHEET 2 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				302

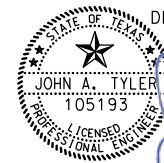
Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*WB\*02\*A.dgn

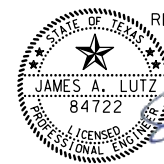


- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN


 JOHN A. TYLER, P.E.
   
 5/3/2019
   
 DATE

REVIEW AND APPROVAL


 JAMES A. LUTZ, P.E.
   
 5/3/2019
   
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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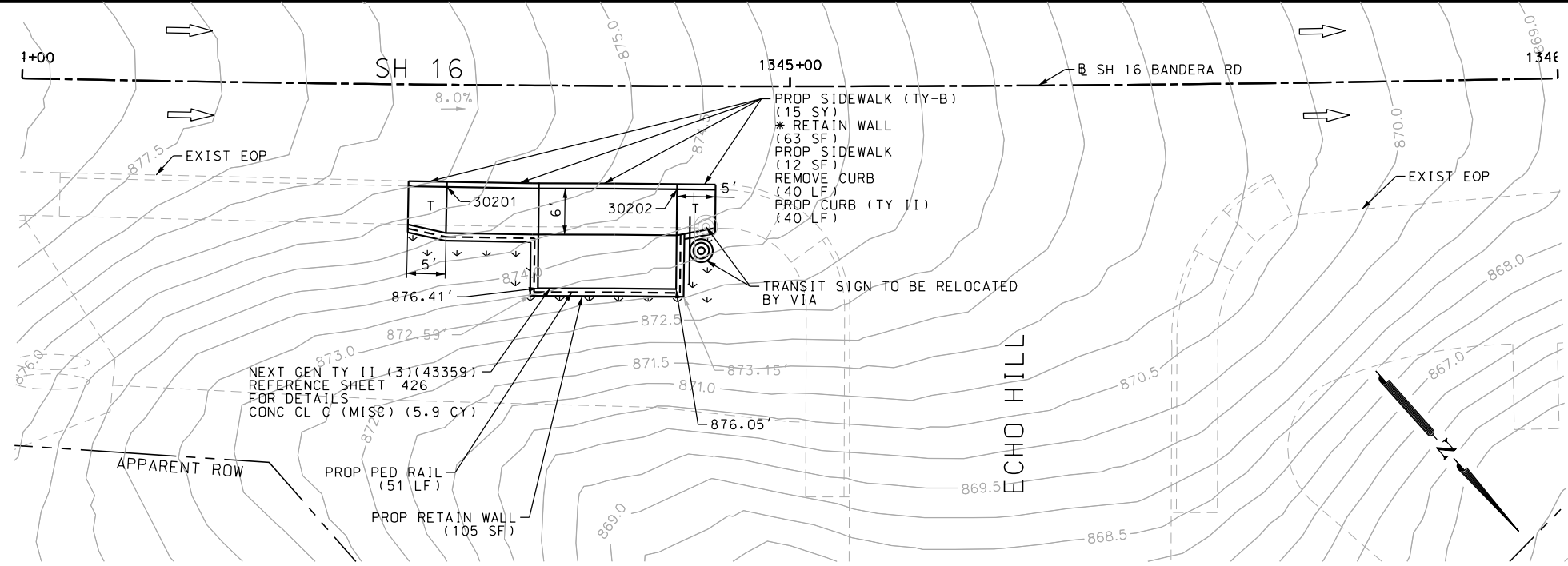
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1335+00 TO STA 1339+00

SHEET 3 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	303

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*WB\*03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	40
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	14
0162-6002	BLOCK SODDING	SY	14
0168-6001	VEGETATIVE WATERING	MG	0.22
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	105
0450-6048	RAIL (HANDRAIL) (TY B)	LF	51
0529-6002	CONC CURB (TY II)	LF	40
0531-6001	CONC SIDEWALKS (4")	SY	12
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	15

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
30201	13728106.93	2092757.79	--	ME
30202	13728127.09	2092735.57	--	ME

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1344+00 TO STA 1346+00  
 SHEET 4 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	304

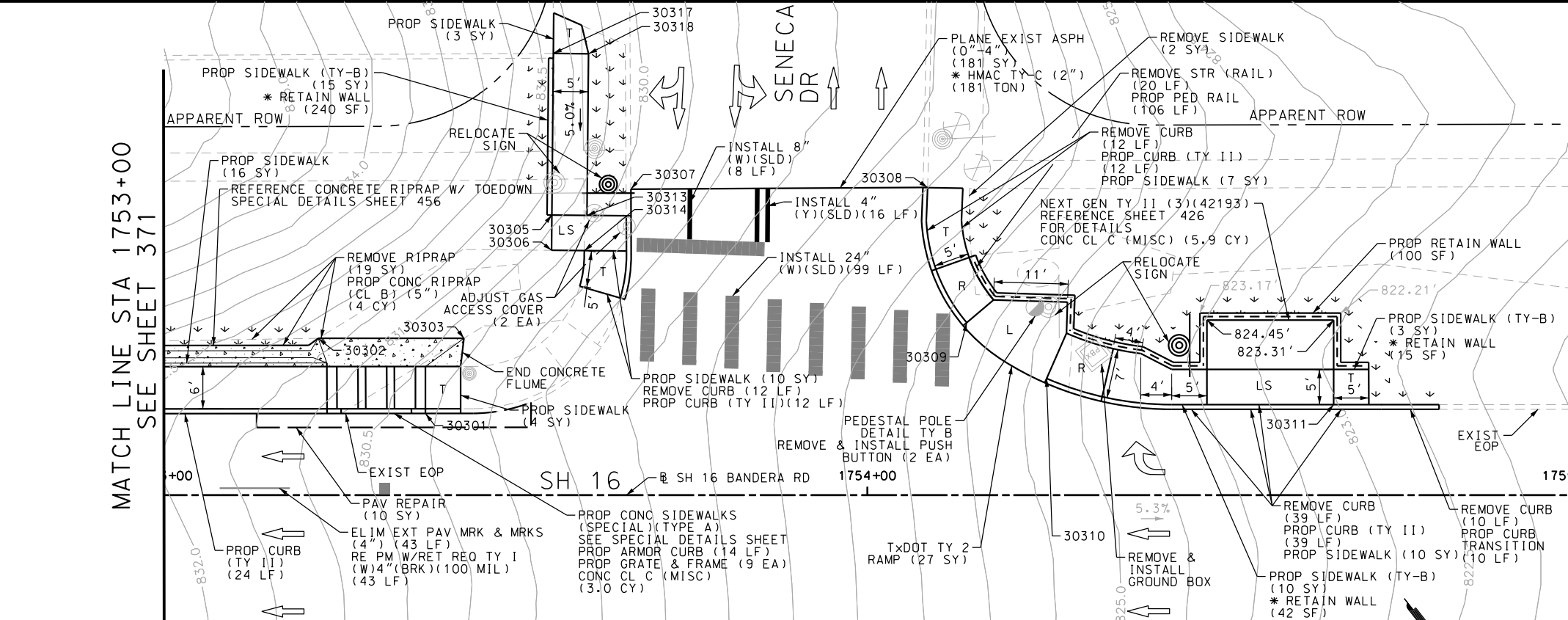


Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr-WB\*04.dgn

MATCH LINE STA 1753+00  
SEE SHEET 371

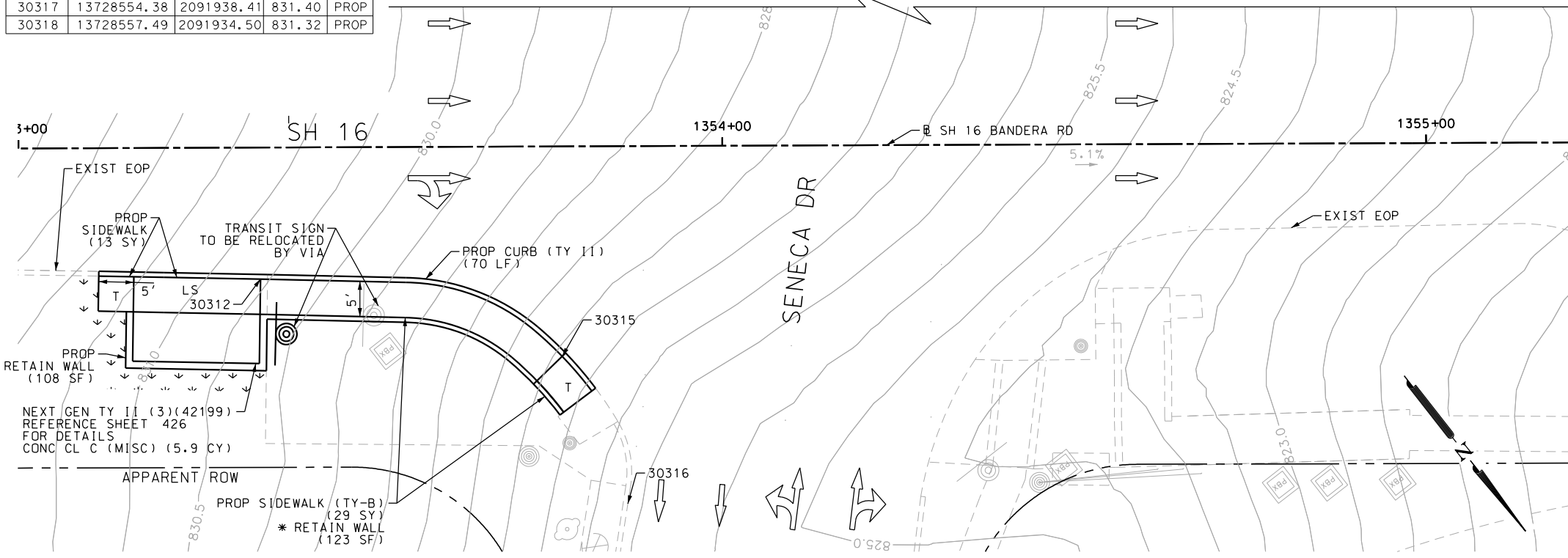
MATCH LINE  
STA 1755+00  
SEE SHEET 373



POINT	NORTHING	EASTING	ELEV	DESC
30301	13728583.50	2091984.18	--	ME
30302	13728565.71	2091989.62	--	ME
30303	13728578.45	2091973.31	--	ME
30305	13728572.33	2091952.70	829.25	PROP
30306	13728576.25	2091955.82	829.20	PROP
30307	13728576.35	2091941.59	--	ME
30308	13728602.11	2091908.22	--	ME
30309	13728620.65	2091915.63	--	ME
30310	13728633.87	2091911.55	--	ME
30311	13728661.89	2091881.70	--	ME
30312	13728661.00	2092074.39	--	ME
30313	13728575.45	2091948.79	829.20	PROP
30314	13728579.15	2091952.17	829.14	PROP
30315	13728696.03	2092047.35	--	ME
30317	13728554.38	2091938.41	831.40	PROP
30318	13728557.49	2091934.50	831.32	PROP

NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA(SQ) TY-C PG76-22	SY	181
0104-6009	REMOVING CONC (RIPRAP)	SY	19
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	73
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	27
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	13
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	109
0162-6002	BLOCK SODDING	SY	109
0168-6001	VEGETATIVE WATERING	MG	1.70
0354-6023	PLANE ASPH CONC PAV(0" TO 4")	SY	181
0420-6074	CL C CONC (MISC)	CY	14.8
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	208
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0450-6048	RAIL (HANDRAIL) (TY B)	LF	106
0471-6003	GRATE & FRAME	EA	9
0496-6099	REMOVE STR (RAIL)	LF	20
0529-6002	CONC CURB (TY II)	LF	143
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	43
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	88
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2
0666-6036	REFL PAV MRK TY I (W)8"(SLD)(100MIL)	LF	8
0666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	99
0666-6224	PAVEMENT SEALER 4"	LF	16
0666-6226	PAVEMENT SEALER 8"	LF	8
0666-6230	PAVEMENT SEALER 24"	LF	99
0666-6315	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	LF	16
0678-6001	PAV SURF PREP FOR MRK (4")	LF	16
0678-6004	PAV SURF PREP FOR MRK (8")	LF	8
0678-6008	PAV SURF PREP FOR MRK (24")	LF	99
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	2
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	2
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	2



DESIGN  
 JOHN A. TYLER, P.E.  
 LICENSED PROFESSIONAL ENGINEER  
 105193  
 5/3/2019 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 LICENSED PROFESSIONAL ENGINEER  
 84722  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

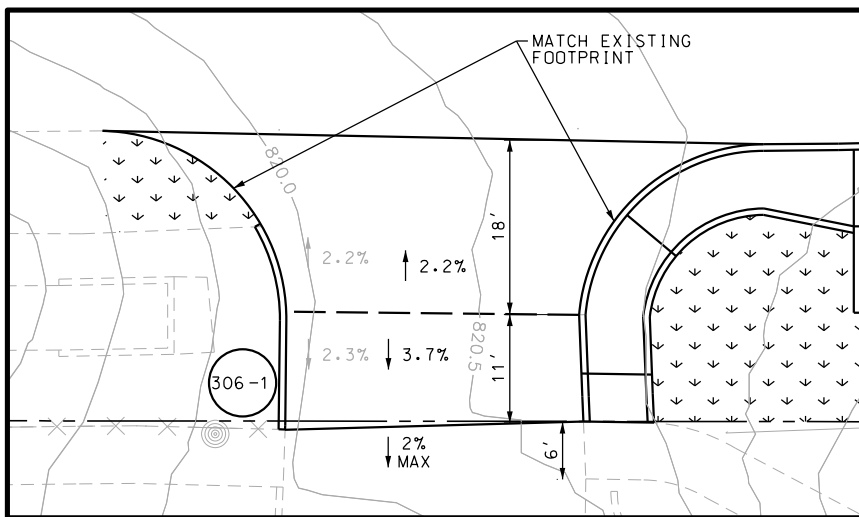
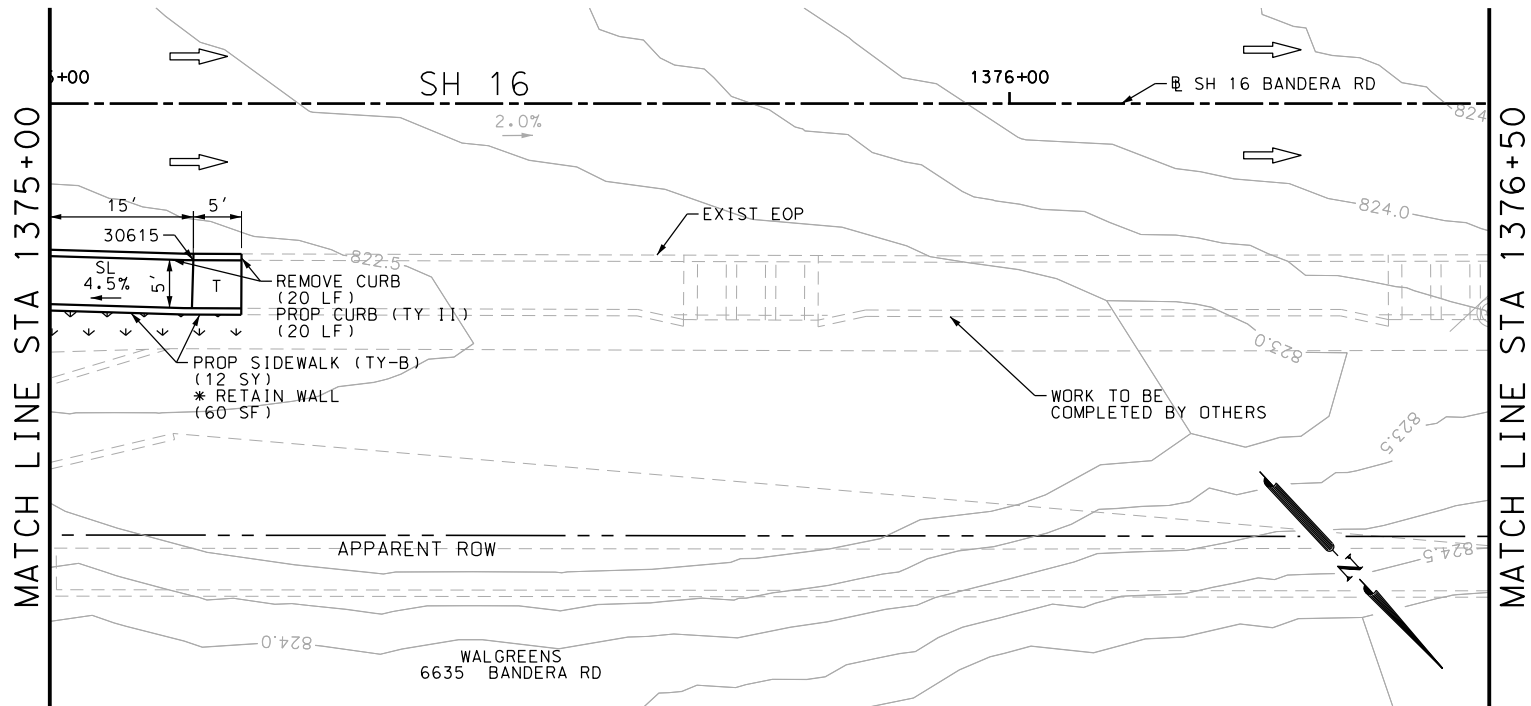
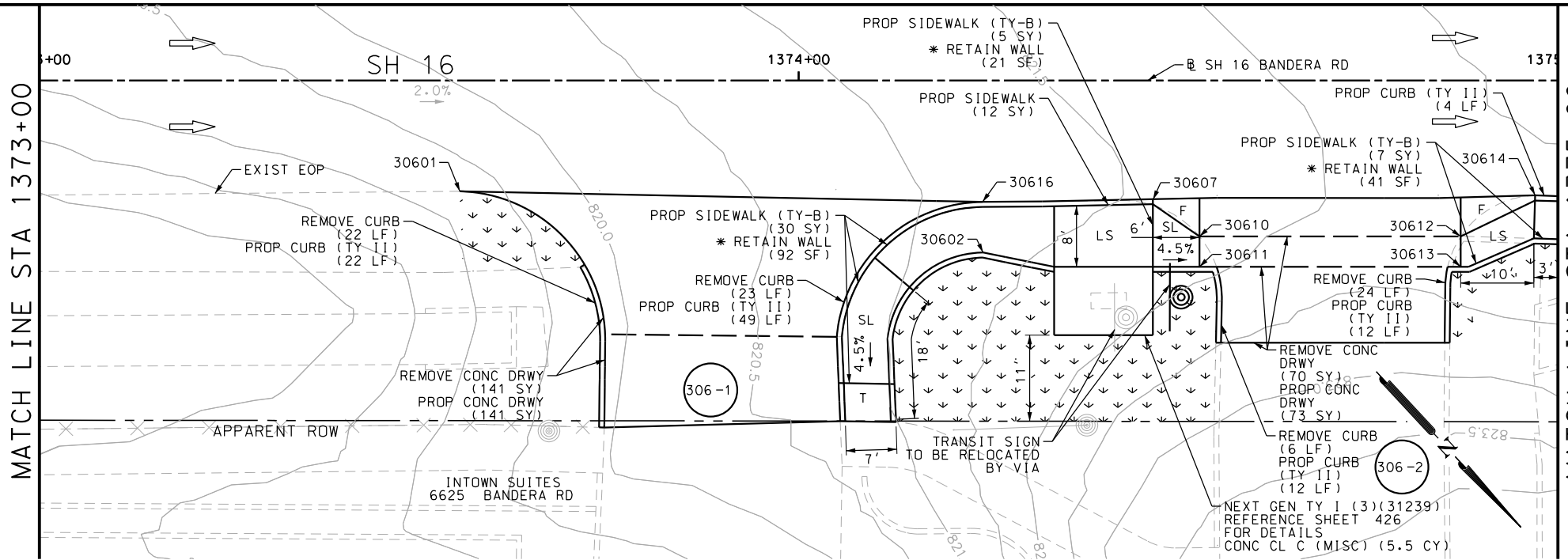
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1353+00 TO STA 1355+00  
 STA 1753+00 TO STA 1755+00  
 SHEET 5 OF 126

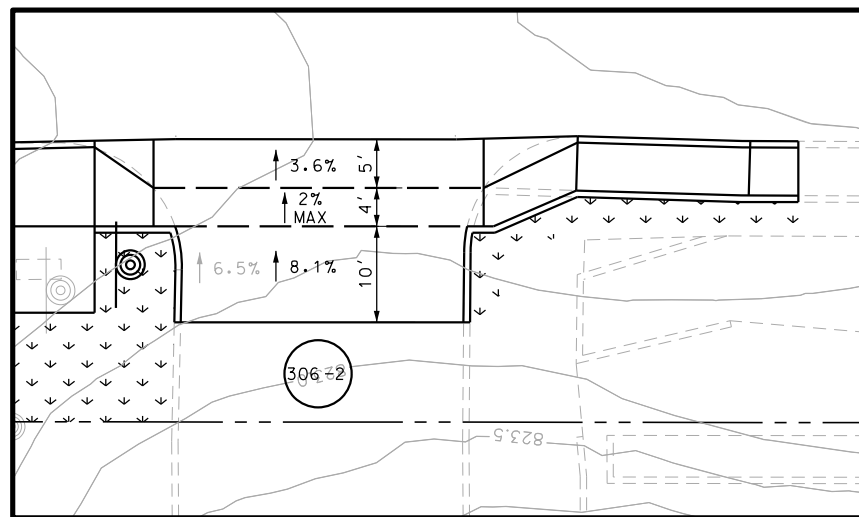
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	305

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*07.dgn



DRWY PLAN STA 1373+90



DRWY PLAN STA 1374+70

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	211
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	95
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	119
0530-6004	DRIVEWAYS (CONC)	SY	214
0531-6001	CONC SIDEWALKS (4")	SY	12
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	54

NOTES:

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
30601	13729928.78	2090503.64	--	ME
30602	13729981.59	2090458.61	821.68	PROP
30607	13729991.64	2090437.44	--	ME
30610	13729999.42	2090436.28	821.75	PROP
30611	13730002.35	2090439.00	821.81	PROP
30612	13730022.82	2090411.06	822.25	PROP
30613	13730025.76	2090413.79	822.31	PROP
30614	13730025.53	2090400.21	--	ME
30615	13730038.63	2090387.84	--	ME
30616	13729976.66	2090454.12	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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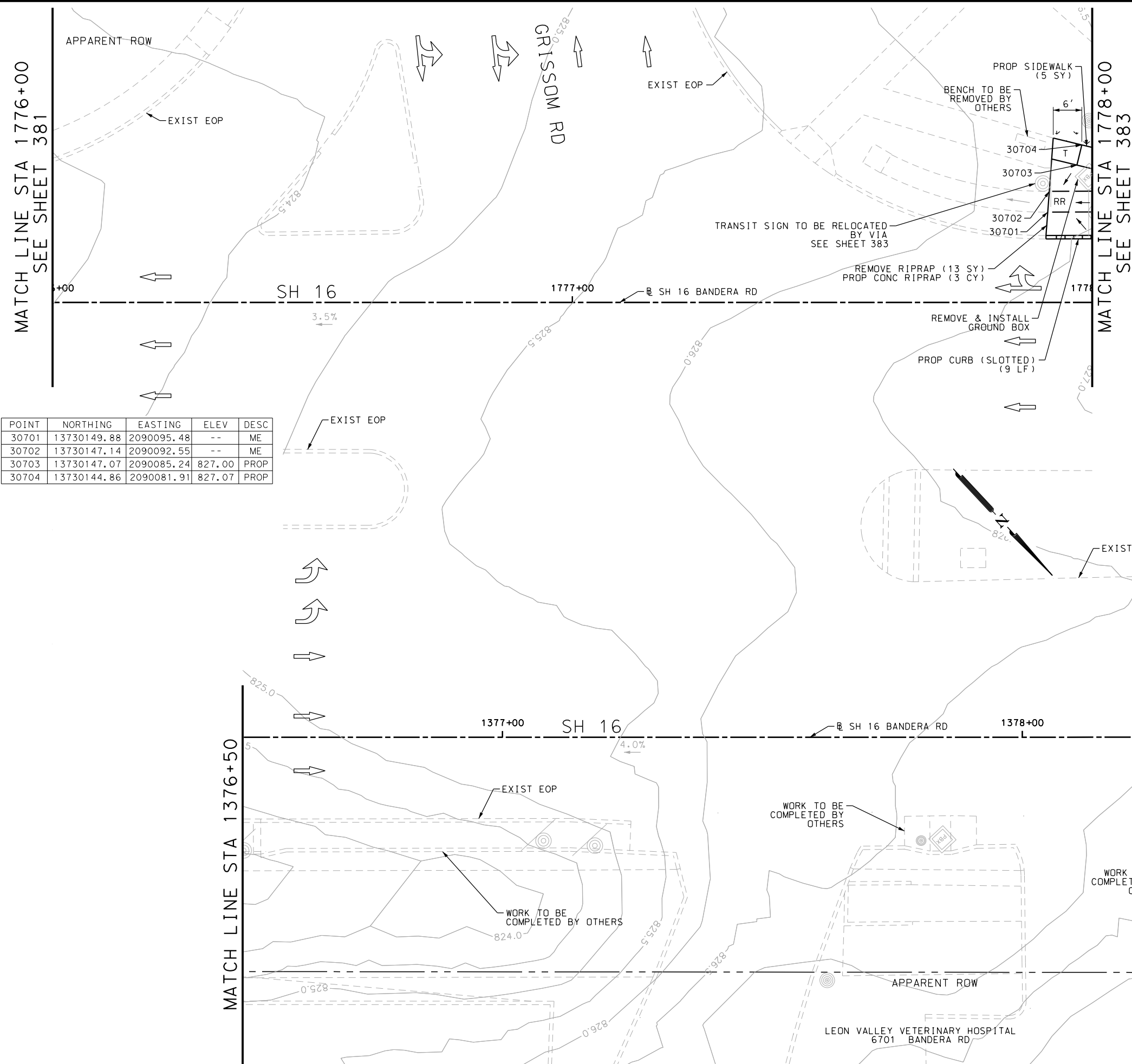
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1373+00 TO STA 1376+50

SHEET 6 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				306

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*08.dgn



POINT	NORTHING	EASTING	ELEV	DESC
30701	13730149.88	2090095.48	--	ME
30702	13730147.14	2090092.55	--	ME
30703	13730147.07	2090085.24	827.00	PROP
30704	13730144.86	2090081.91	827.07	PROP

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	13
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	3
0162-6002	BLOCK SODDING	SY	3
0168-6001	VEGETATIVE WATERING	MG	0.05
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0529-6012	CONC CURB (SLOTTED)	LF	9
0531-6001	CONC SIDEWALKS (4")	SY	5
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

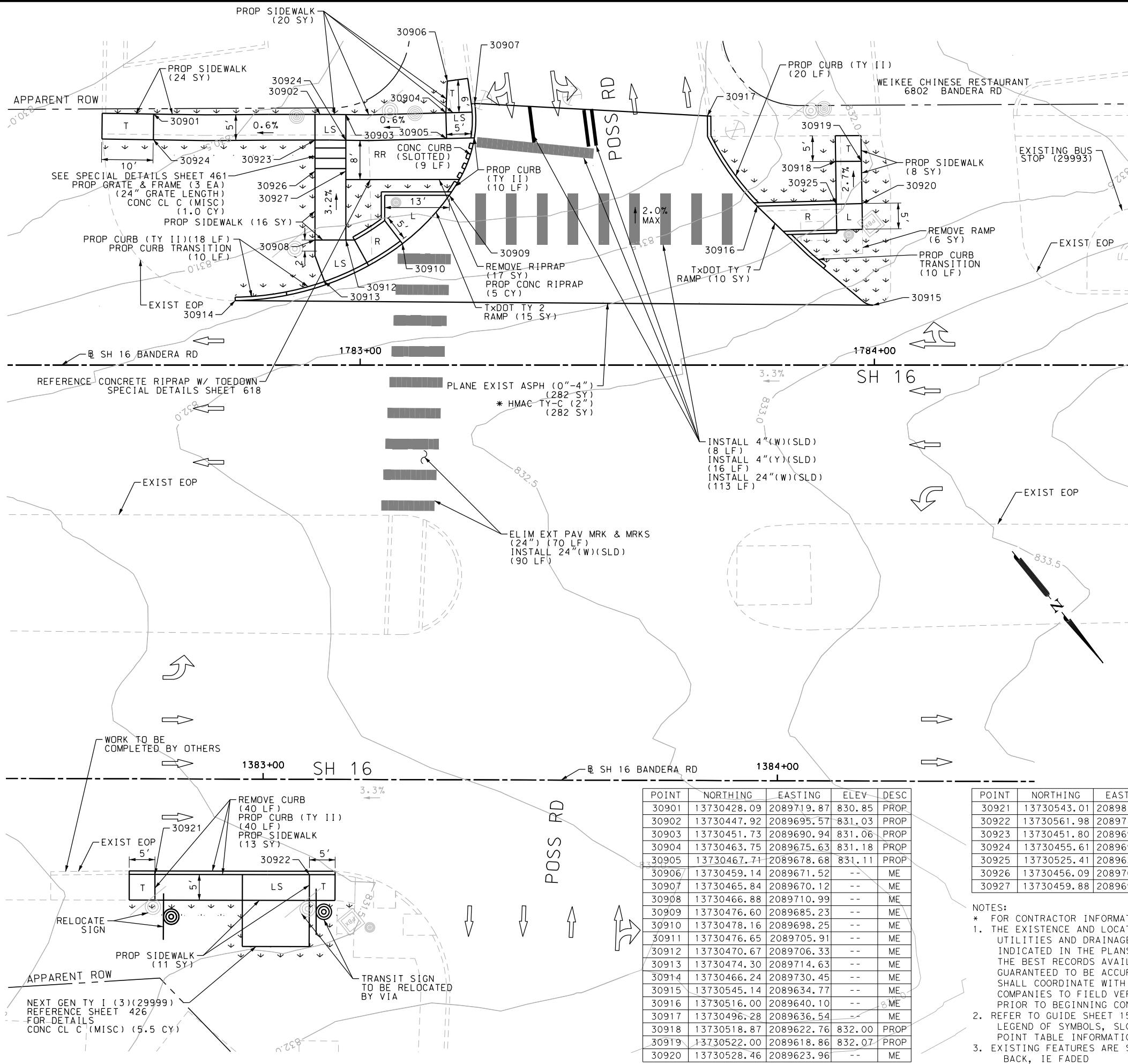


SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1376+50 TO STA 1378+50  
 STA 1776+00 TO STA 1778+00  
 SHEET 7 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	307

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*10.dgn



MATCH LINE STA 1784+50 SEE SHEET 384

ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA (SQ) TY-C PG76-22	SY	282
0104-6009	REMOVING CONC (RIPRAP)	SY	17
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	40
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	6
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	135
0162-6002	BLOCK SODDING	SY	135
0168-6001	VEGETATIVE WATERING	MG	2.11
0354-6023	PLANE ASPH CONC PAV(0" TO 4")	SY	282
0420-6074	CL C CONC (MISC)	CY	6.5
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0471-6003	GRATE & FRAME	EA	3
0529-6002	CONC CURB (TY II)	LF	108
0529-6012	CONC CURB (SLOTTED)	LF	9
0531-6001	CONC SIDEWALKS (4")	SY	92
0531-6019	CURB RAMPS (TY 2)	SY	15
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
0666-6048	REFL PAV MRK TY I (W)24"(SLD) (100MIL)	LF	203
0666-6224	PAVEMENT SEALER 4"	LF	24
0666-6230	PAVEMENT SEALER 24"	LF	203
0666-6303	RE PM W/RET REQ TY I (W)4"(SLD) (100MIL)	LF	8
0666-6315	RE PM W/RET REQ TY I (Y)4"(SLD) (100MIL)	LF	16
0677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	70
0678-6001	PAV SURF PREP FOR MRK (4")	LF	24
0678-6008	PAV SURF PREP FOR MRK (24")	LF	203

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1382+50 TO STA 1384+50  
 STA 1782+50 TO STA 1784+50  
 SHEET 8 OF 126

POINT	NORTHING	EASTING	ELEV	DESC
30901	13730428.09	2089719.87	830.85	PROP
30902	13730447.92	2089695.57	831.03	PROP
30903	13730451.73	2089690.94	831.06	PROP
30904	13730463.75	2089675.63	831.18	PROP
30905	13730467.71	2089678.68	831.11	PROP
30906	13730459.14	2089671.52	--	ME
30907	13730465.84	2089670.12	--	ME
30908	13730466.88	2089710.99	--	ME
30909	13730476.60	2089685.23	--	ME
30910	13730478.16	2089698.25	--	ME
30911	13730476.65	2089705.91	--	ME
30912	13730470.67	2089706.33	--	ME
30913	13730474.30	2089714.63	--	ME
30914	13730466.24	2089730.45	--	ME
30915	13730545.14	2089634.77	--	ME
30916	13730516.00	2089640.10	--	ME
30917	13730496.28	2089636.54	--	ME
30918	13730518.87	2089622.76	832.00	PROP
30919	13730522.00	2089618.86	832.07	PROP
30920	13730528.46	2089623.96	--	ME

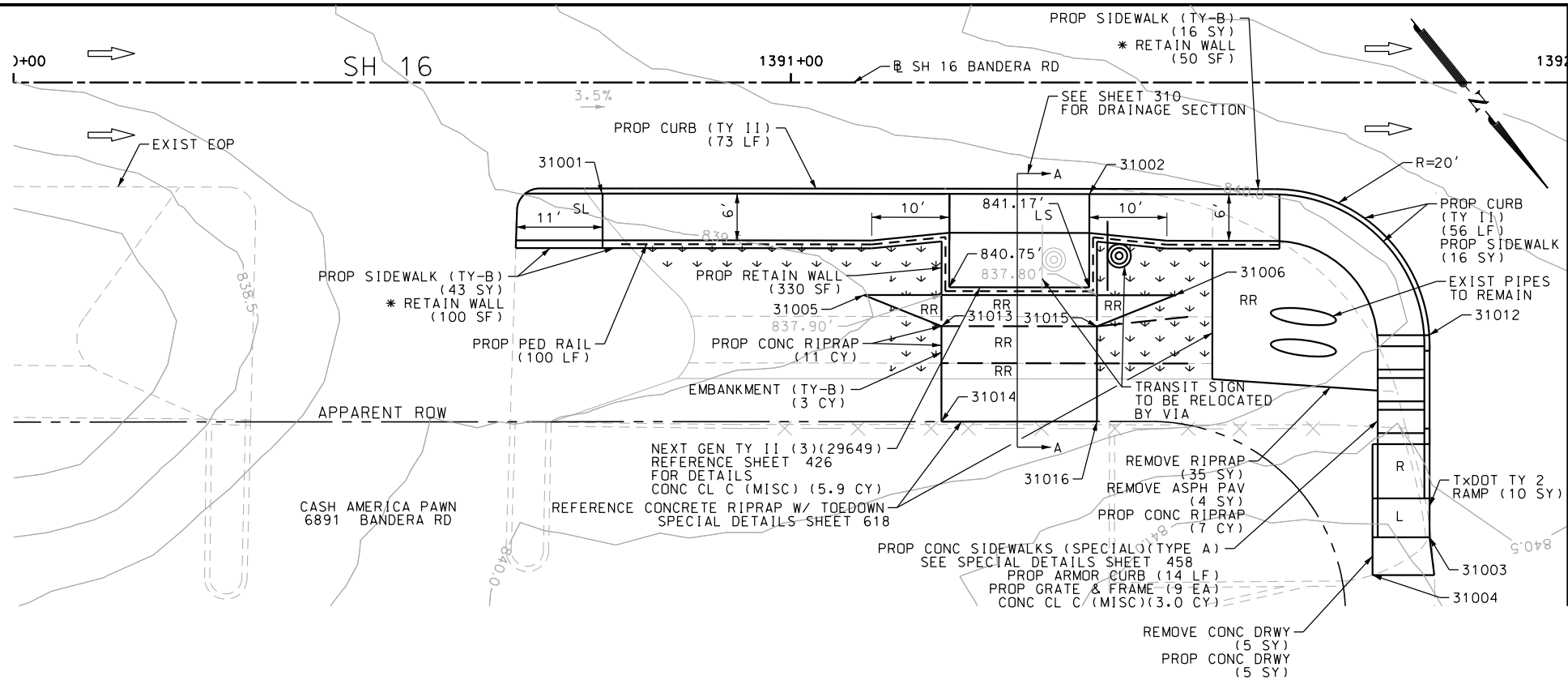
POINT	NORTHING	EASTING	ELEV	DESC
30921	13730543.01	2089812.94	--	ME
30922	13730561.98	2089789.67	830.78	PROP
30923	13730451.80	2089698.73	830.96	PROP
30924	13730455.61	2089694.09	830.99	PROP
30925	13730525.41	2089627.92	--	ME
30926	13730456.09	2089702.22	831.05	PROP
30927	13730459.88	2089697.56	831.08	PROP

- NOTES:
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  - REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

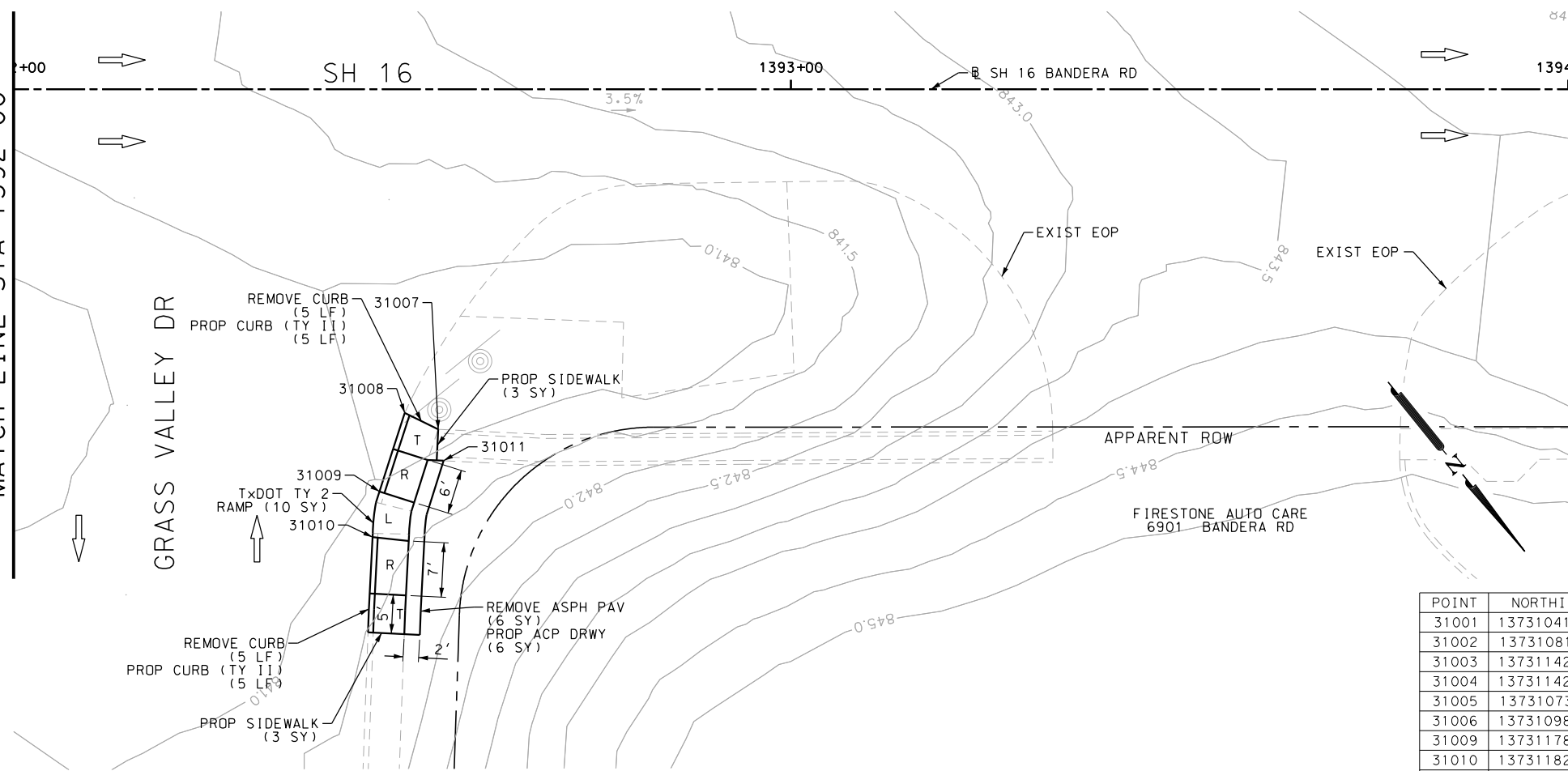
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CHK	6	TEXAS		VARIABLES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	SAT	BEXAR	0915	12
DWG				576
				308

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*11.dgn

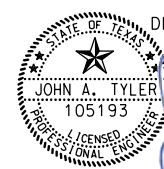


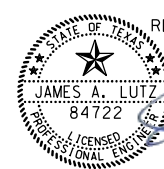
MATCH LINE STA 1392+00



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	35
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	5
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	10
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	10
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	54
0162-6002	BLOCK SODDING	SY	54
0168-6001	VEGETATIVE WATERING	MG	0.84
0420-6074	CL C CONC (MISC)	CY	8.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	330
0432-6003	RIPRAP (CONC) (6 IN)	SY	17
0450-6048	RAIL (HANDRAIL) (TY B)	LF	100
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	139
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	5
0530-6005	DRIVEWAYS (ACP)	SY	6
0531-6001	CONC SIDEWALKS (4")	SY	22
0531-6019	CURB RAMPS (TY 2)	SY	20
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	46

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1390+00 TO STA 1394+00

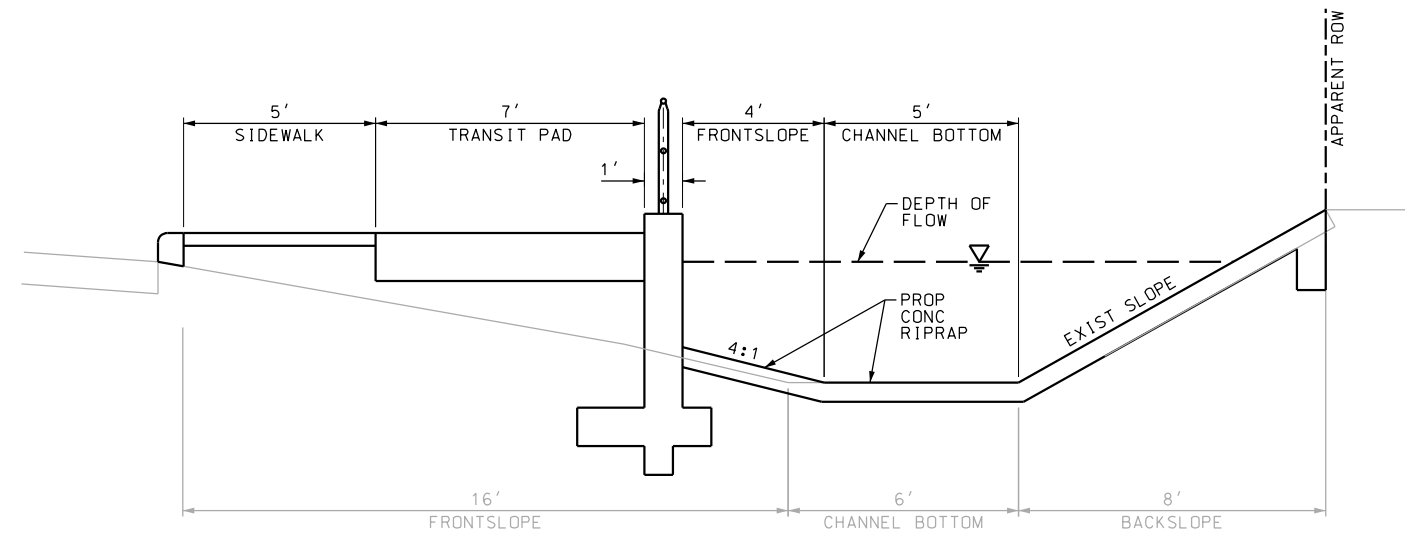
SHEET 9 OF 126

POINT	NORTHING	EASTING	ELEV	DESC
31001	13731041.78	2089191.47	--	ME
31002	13731081.11	2089142.76	--	ME
31003	13731142.94	2089136.38	--	ME
31004	13731142.10	2089145.14	--	ME
31005	13731073.01	2089173.49	--	ME
31006	13731098.13	2089142.36	--	ME
31009	13731178.47	2089081.64	--	ME
31010	13731182.48	2089086.02	--	ME
31011	13731180.56	2089072.72	--	ME
31012	13731122.67	2089120.09	--	ME
31013	13731082.40	2089168.22	--	ME
31014	13731091.95	2089175.92	--	ME
31015	13731094.96	2089152.66	--	ME
31016	13731104.49	2089160.34	--	ME

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	309

Plotted on: 5/3/2019

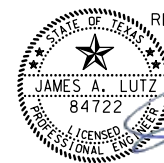
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**SECTION A-A**  
N.T.S.

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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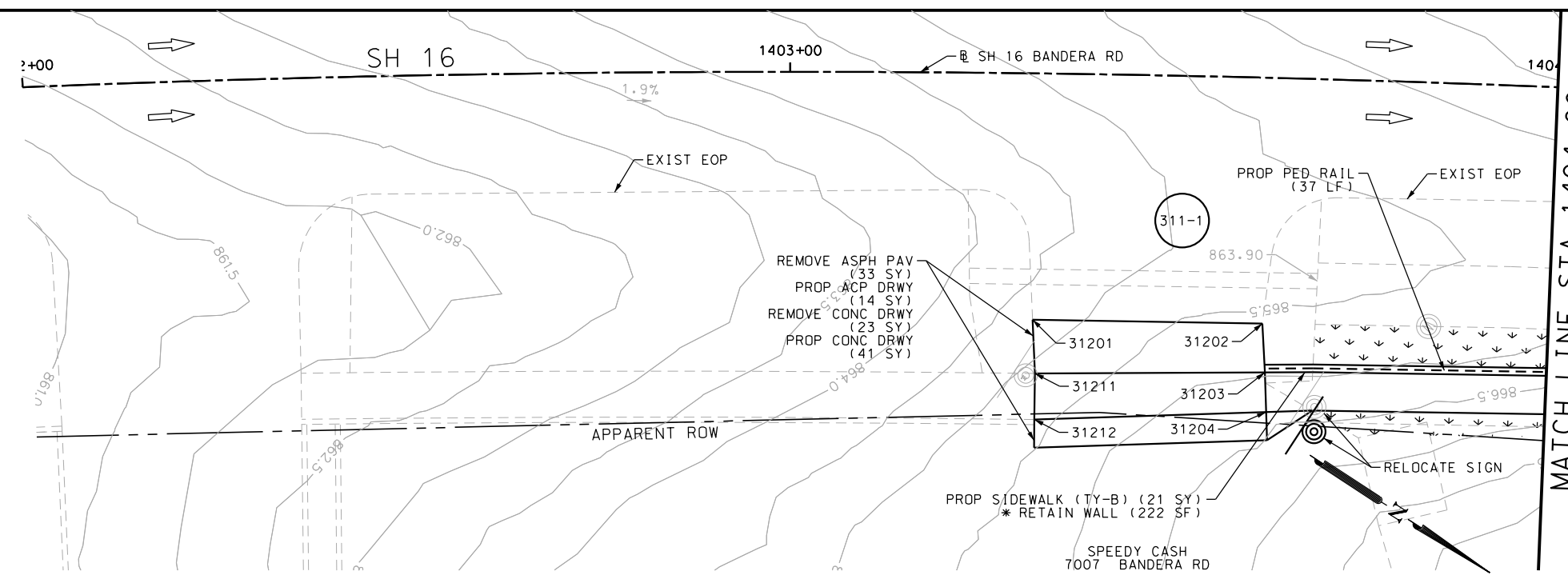
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1390+00 TO STA 1394+00

SHEET 10 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				310

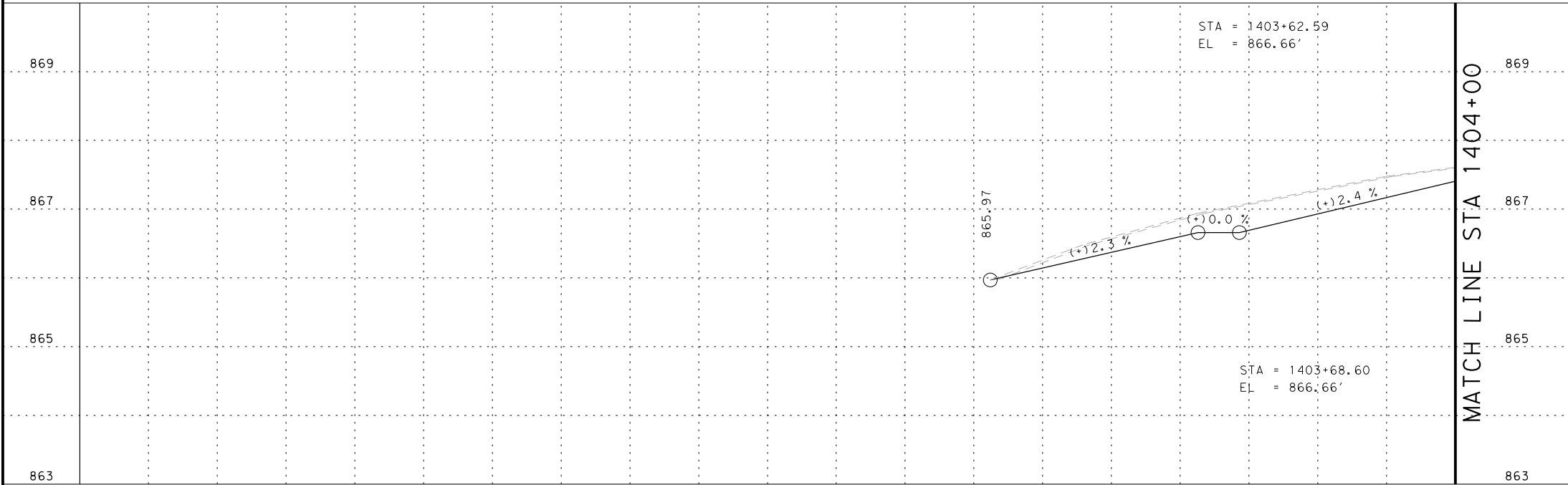
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*13PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	23
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	33
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	25
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0450-6048	RAIL (HANDRAIL) (TY B)	LF	37
0530-6004	DRIVEWAYS (CONC)	SY	41
0530-6005	DRIVEWAYS (ACP)	SY	14
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	21
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

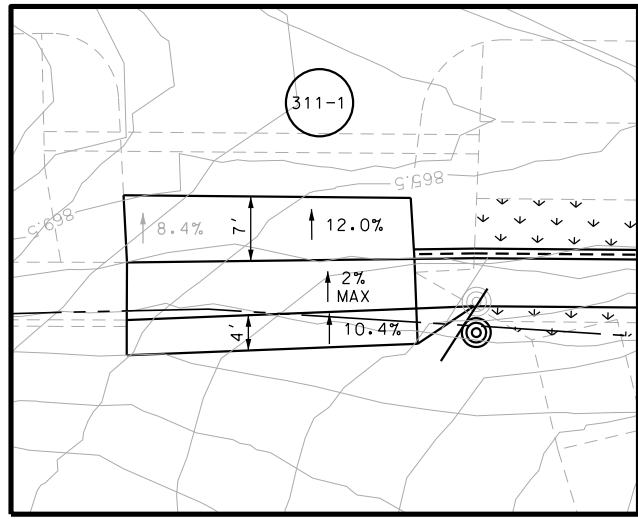
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
31201	13731929.23	2088324.83	--	ME
31202	13731954.55	2088308.87	--	ME
31203	13731958.32	2088314.02	--	PROF
31204	13731961.28	2088318.26	--	PROF
31211	13731933.32	2088330.53	--	ME
31212	13731936.55	2088335.59	--	ME



**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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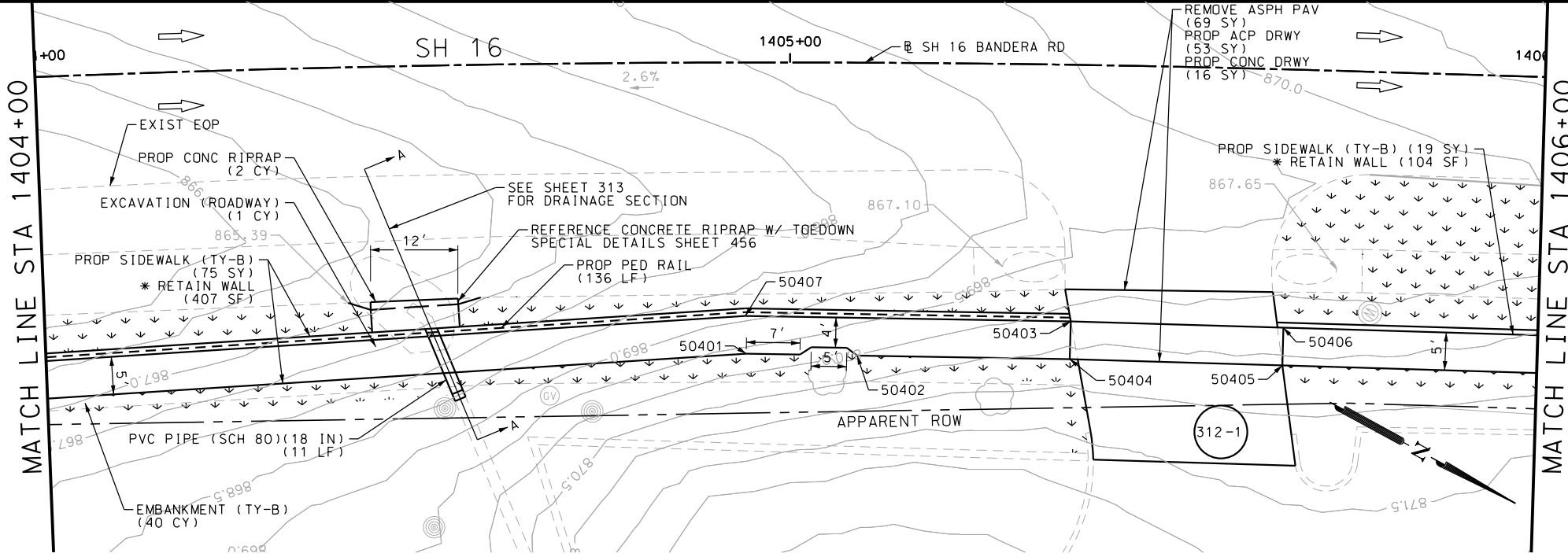
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1402+00 TO STA 1404+00

SHEET 11 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	311

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\WB\*13PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	69
0110-6001	EXCAVATION (ROADWAY)	CY	1
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	40
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	170
0162-6002	BLOCK SODDING	SY	170
0168-6001	VEGETATIVE WATERING	MG	2.65
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0450-6048	RAIL (HANDRAIL) (TY B)	LF	136
0481-6029	PIPE (PVC) (SCH 80) (18 IN)	LF	11
0530-6004	DRIVEWAYS (CONC)	SY	16
0530-6005	DRIVEWAYS (ACP)	SY	53
0531-6001	CONC SIDEWALKS (4")	SY	94

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

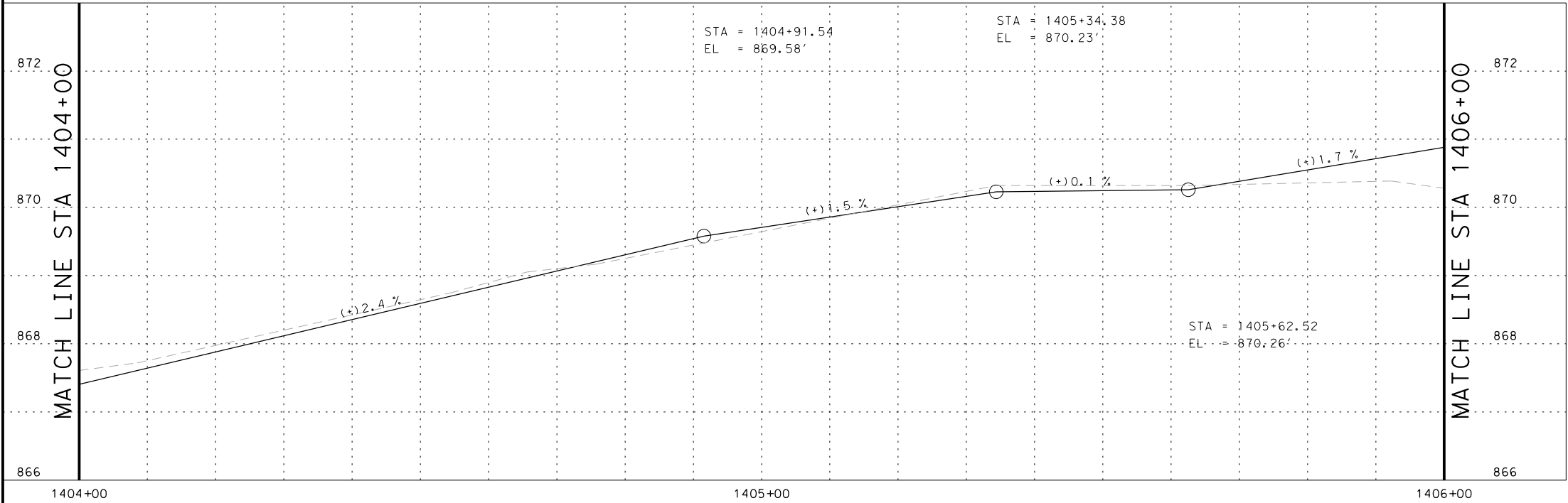
REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

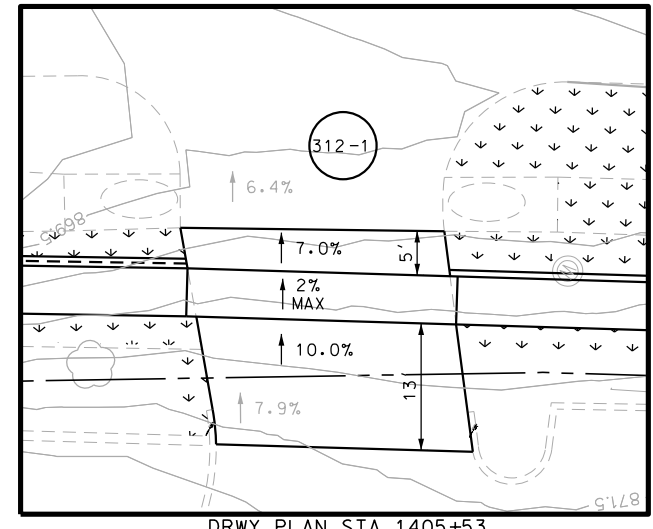
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1404+00 TO STA 1406+00  
 SHEET 12 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				312



POINT	NORTHING	EASTING	ELEV	DESC
50401	13732070.09	2088249.06	--	PROF
50402	13732083.09	2088242.24	--	PROF
50403	13732105.75	2088224.70	--	PROF
50404	13732108.02	2088229.15	--	PROF
50405	13732133.11	2088216.40	--	PROF
50406	13732130.84	2088211.95	--	PROF
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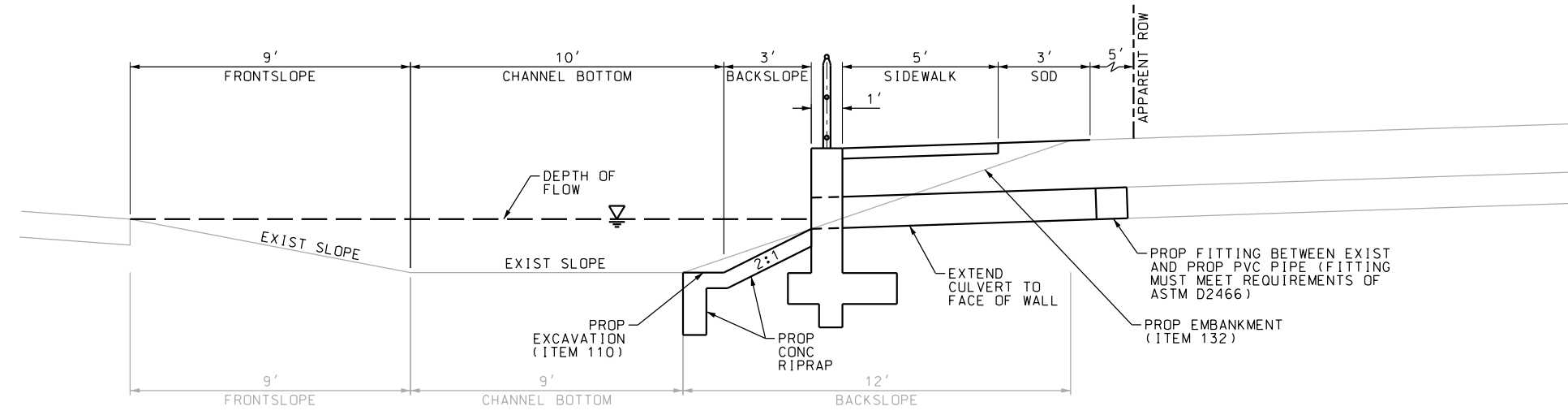


DRYW PLAN STA 1405+53



Plotted on: 5/3/2019

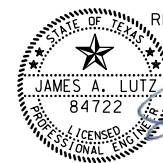
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**SECTION A-A**  
N.T.S.

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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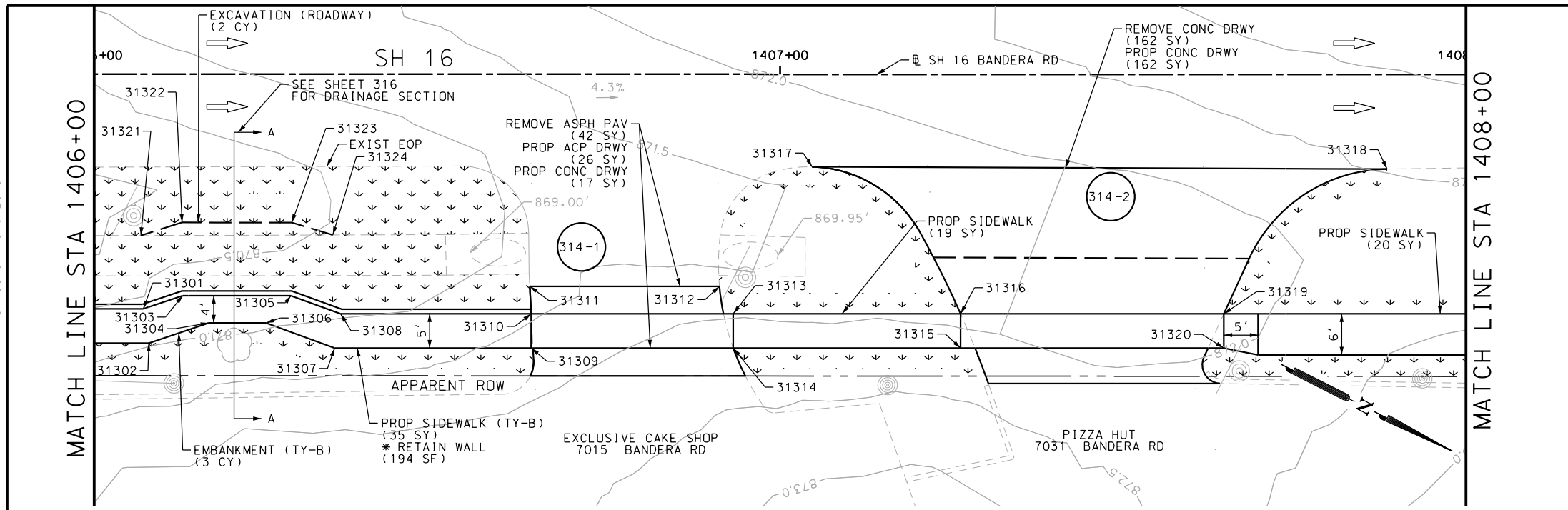
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1404+00 TO STA 1406+00

SHEET 13 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	313

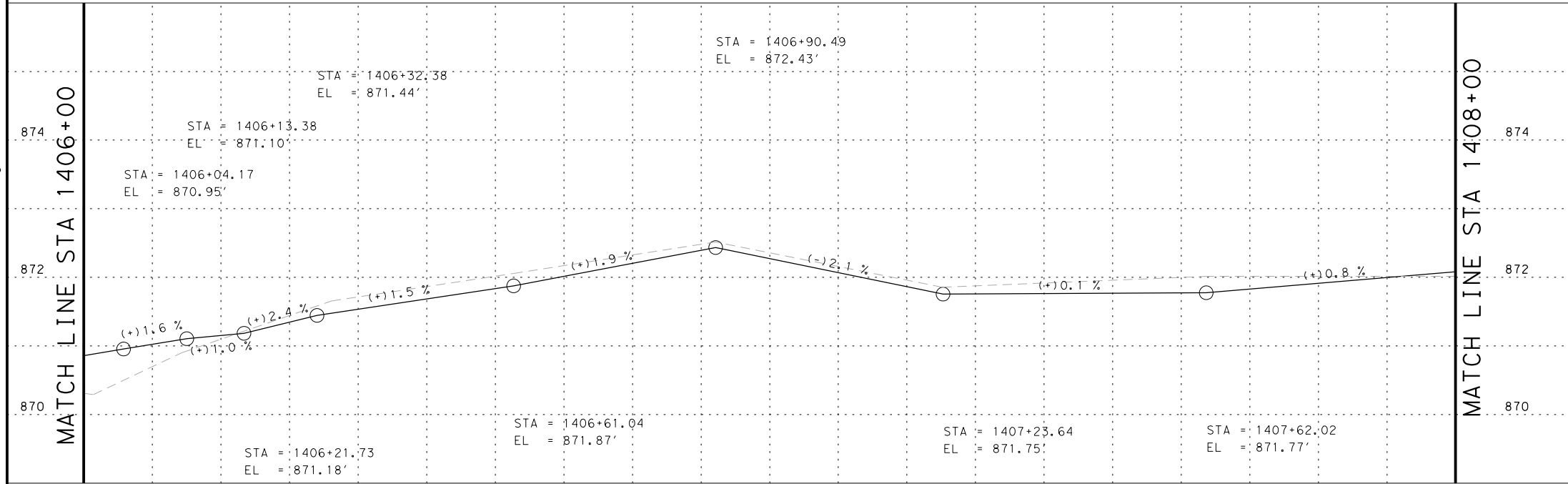
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB14PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	162
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	42
0110-6001	EXCAVATION (ROADWAY)	CY	2
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	225
0162-6002	BLOCK SODDING	SY	225
0168-6001	VEGETATIVE WATERING	MG	3.51
0530-6004	DRIVEWAYS (CONC)	SY	179
0530-6005	DRIVEWAYS (ACP)	SY	26
0531-6001	CONC SIDEWALKS (4")	SY	39
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	35

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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

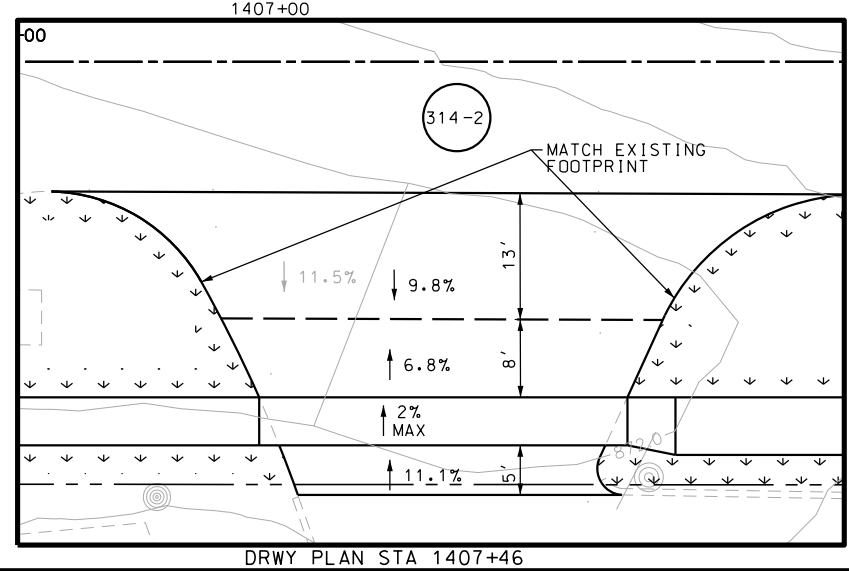
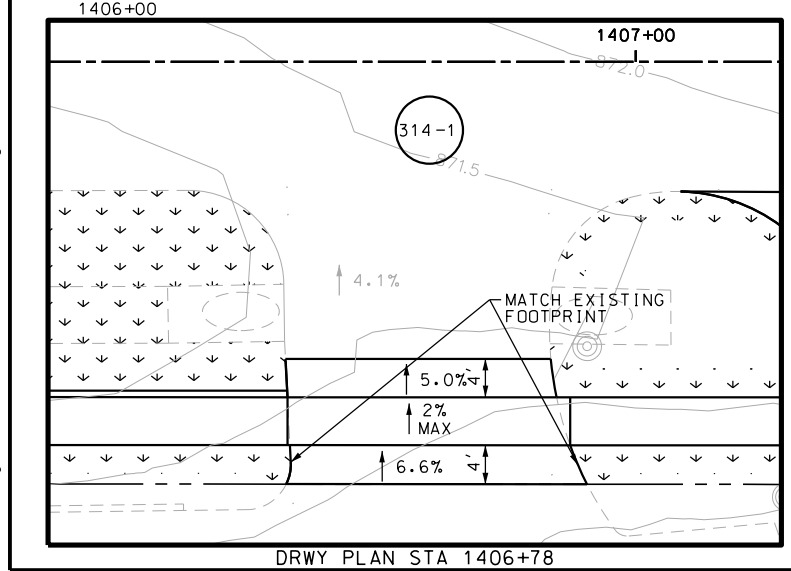
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1406+00 TO STA 1408+00

SHEET 14 OF 126

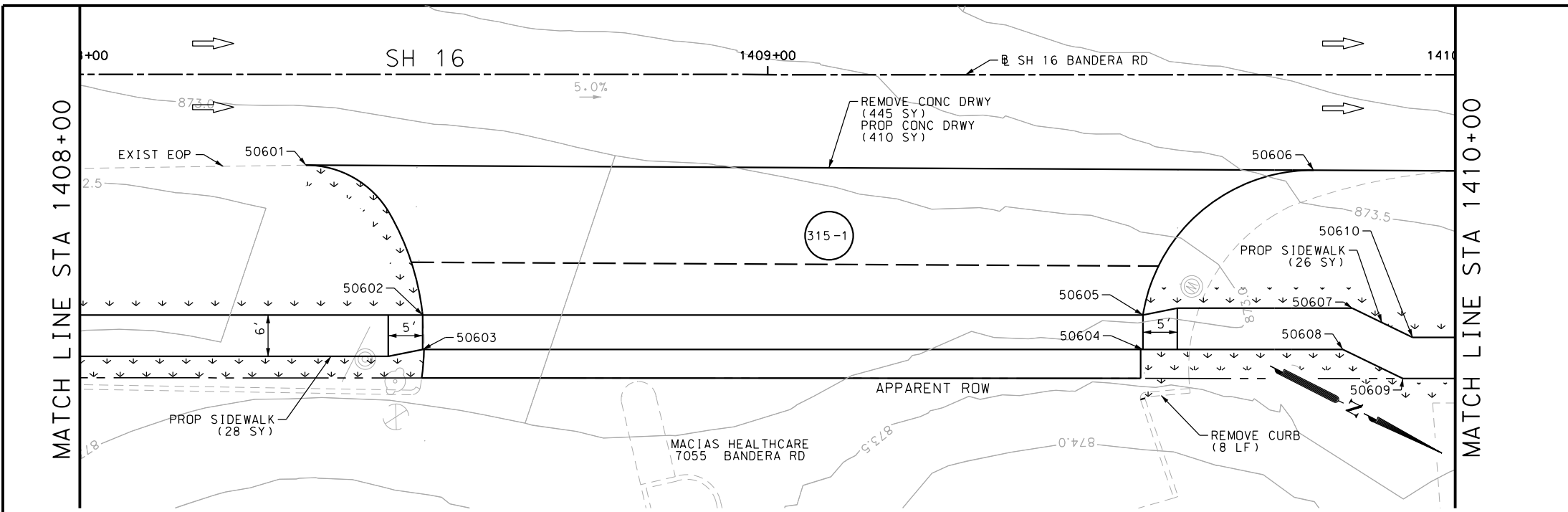
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	6	TEXAS		VARIABLES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	314



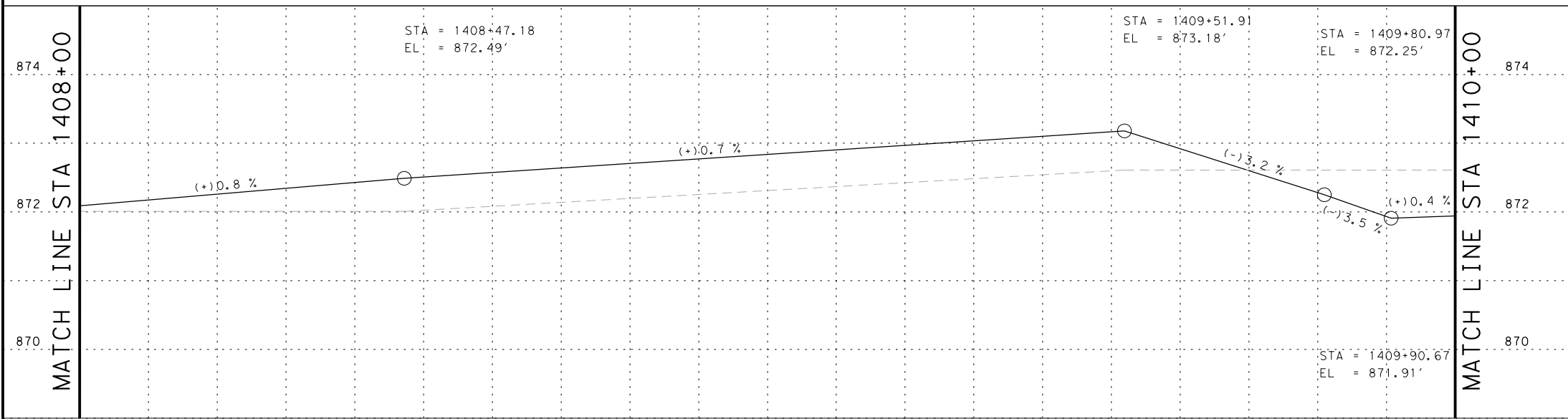
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31302	13732170.24	2088197.54	--	PROF
31303	13732171.50	2088189.13	--	PROF
31304	13732176.70	2088190.97	--	PROF
31305	13732185.56	2088181.98	--	PROF
31306	13732184.14	2088187.19	--	PROF
31307	13732194.71	2088185.91	--	PROF
31308	13732193.23	2088181.05	--	PROF
31309	13732220.26	2088172.92	--	PROF
31310	13732218.00	2088168.47	--	PROF
31311	13732216.00	2088164.99	--	ME
31312	13732240.65	2088152.47	--	ME
31313	13732244.25	2088155.12	--	PROF
31314	13732246.52	2088159.58	--	PROF
31315	13732276.08	2088144.56	--	PROF
31316	13732273.81	2088140.11	--	PROF
31317	13732244.80	2088130.80	--	ME
31318	13732319.67	2088093.11	--	ME
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31320	13732310.29	2088127.18	--	PROF

Plotted on: 5/3/2019

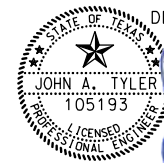
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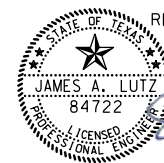


ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	445
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0530-6004	DRIVEWAYS (CONC)	SY	410
0531-6001	CONC SIDEWALKS (4")	SY	54



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

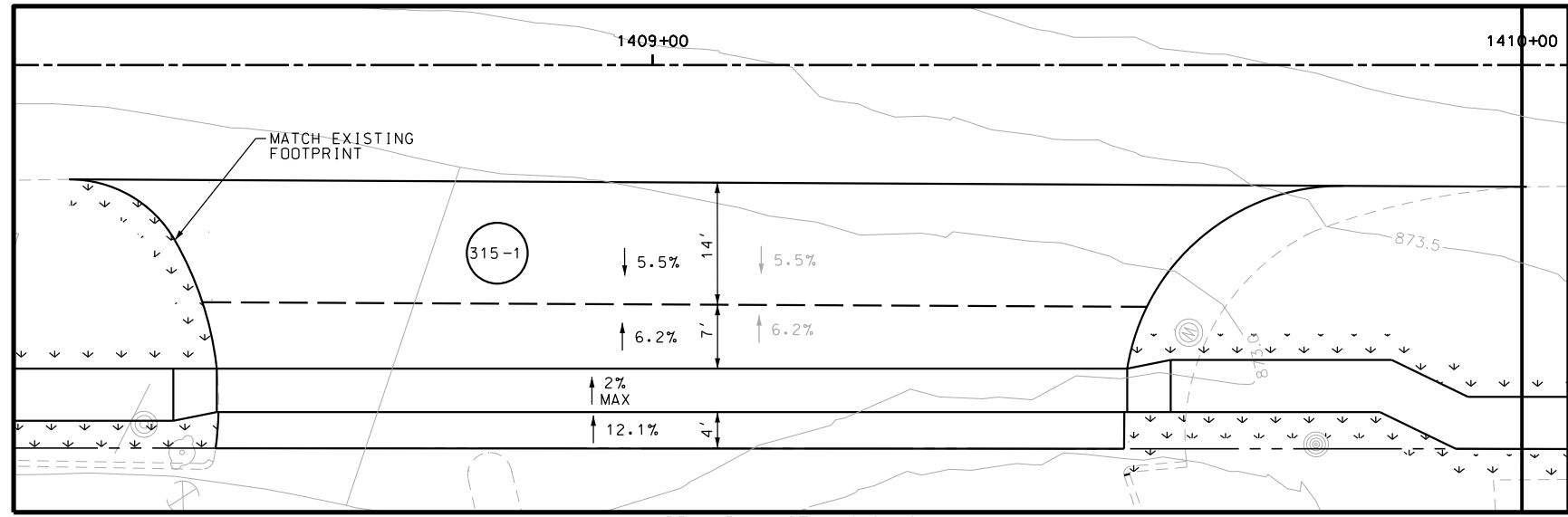
REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1408+00 TO STA 1410+00  
 SHEET 15 OF 126

POINT	NORTHING	EASTING	ELEV	DESC
50601	13732358.95	2088072.42	--	ME
50602	13732383.95	2088084.14	--	PROF
50603	13732386.21	2088088.60	--	PROF
50604	13732479.58	2088041.16	--	PROF
50605	13732477.31	2088036.70	--	PROF
50606	13732489.90	2088006.70	--	ME
50607	13732503.99	2088022.02	--	PROF
50608	13732505.49	2088028.00	--	PROF
50609	13732515.19	2088027.81	--	PROF
50610	13732513.73	2088021.83	--	PROF

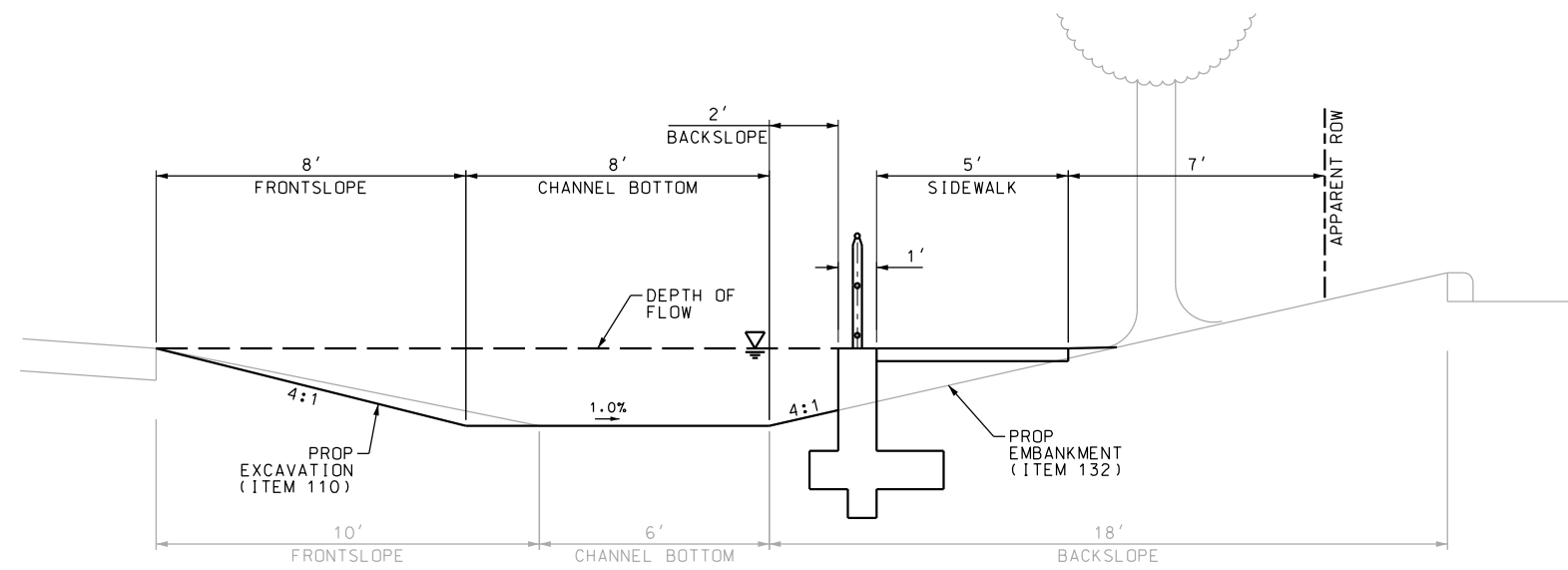


DRWY PLAN STA 1409+06

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	315

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\1113507\Bandera Dr\WB\14\*B.dgn



**SECTION A-A**  
N.T.S.

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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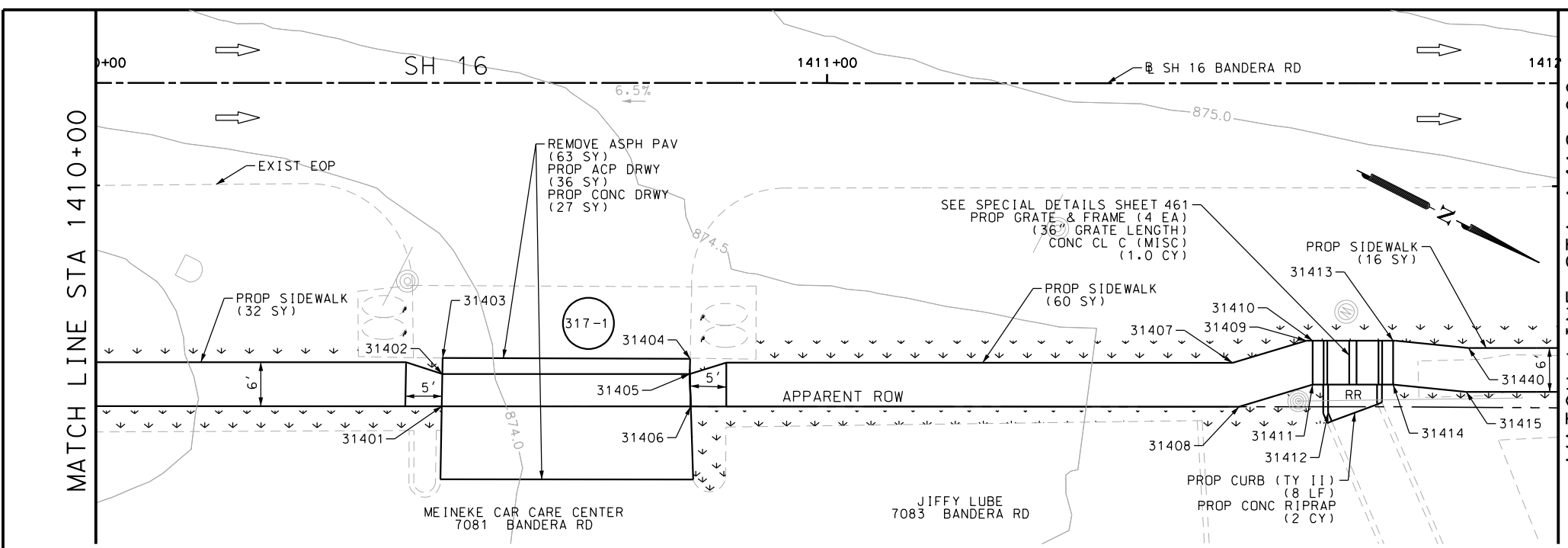
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1406+00 TO STA 1410+00

SHEET 16 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	316

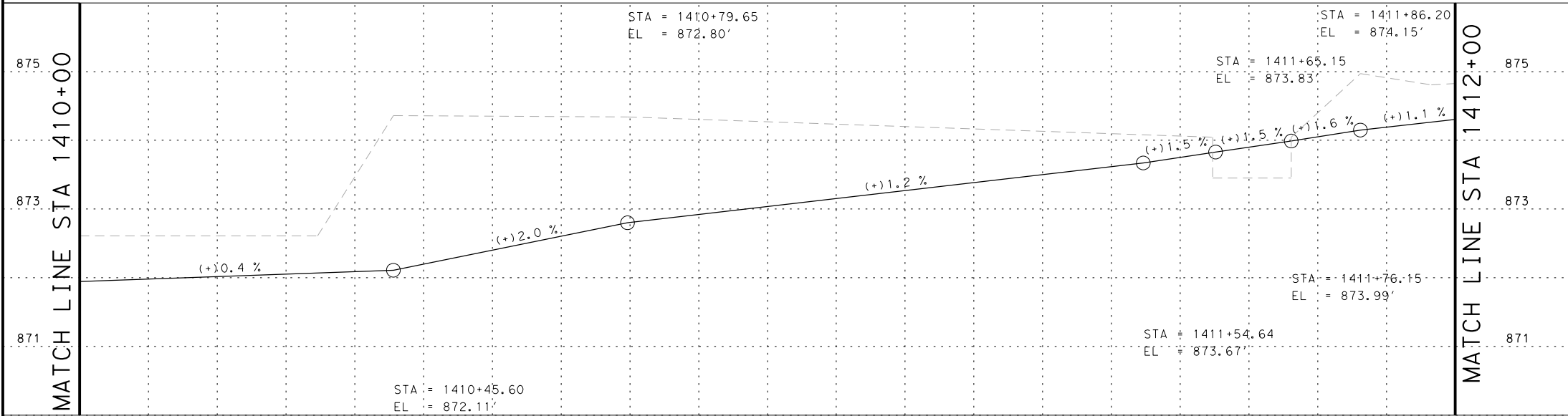
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*15PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	63
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	85
0162-6002	BLOCK SODDING	SY	85
0168-6001	VEGETATIVE WATERING	MG	1.33
0420-6074	CL C CONC (MISC)	CY	1.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	4
0529-6002	CONC CURB (TY II)	LF	8
0530-6004	DRIVEWAYS (CONC)	SY	27
0530-6005	DRIVEWAYS (ACP)	SY	36
0531-6001	CONC SIDEWALKS (4")	SY	108

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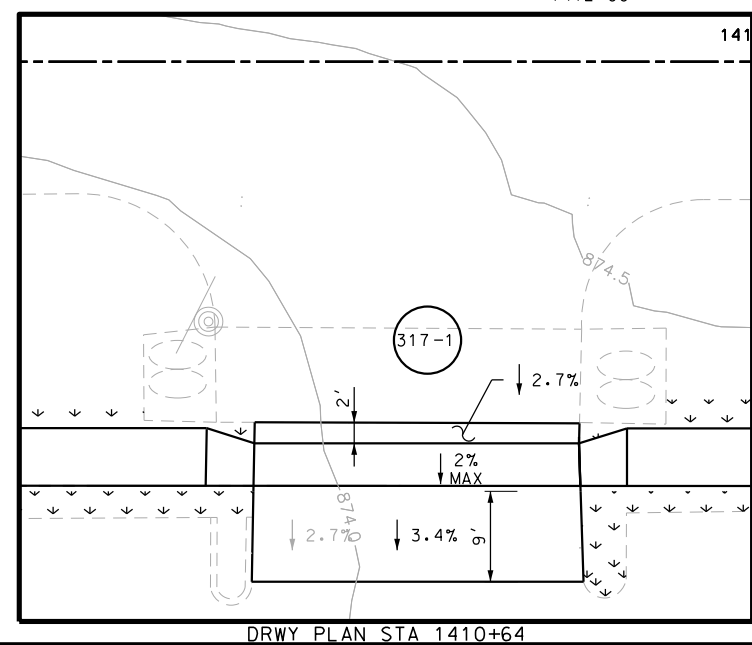
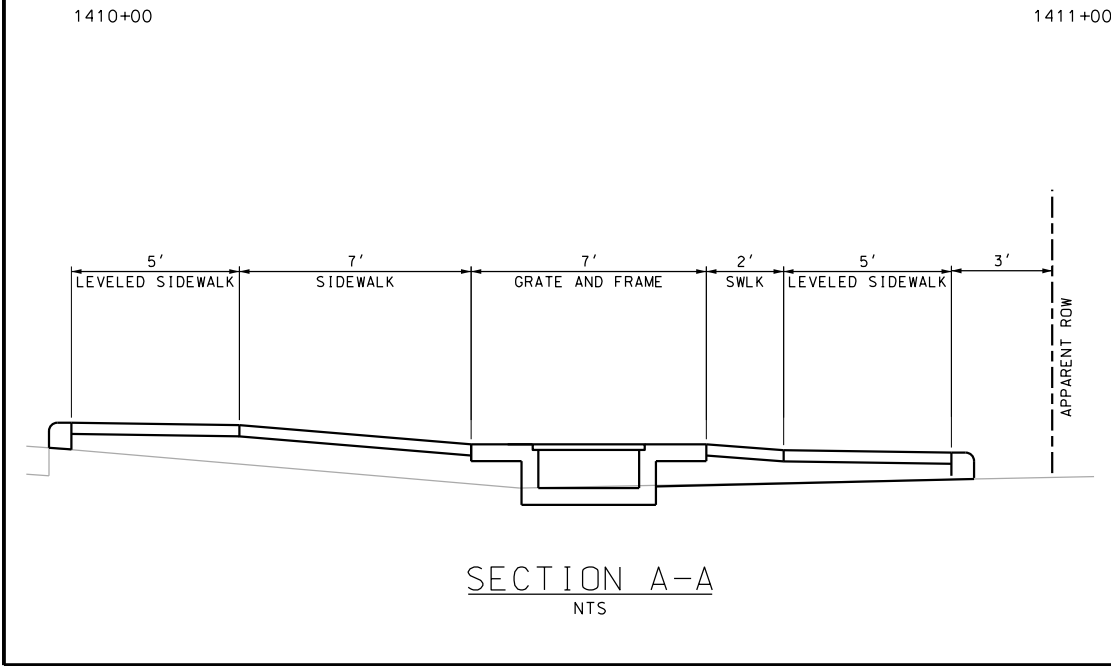
DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'



POINT	NORTHING	EASTING	ELEV	DESC
31401	13732564.17	2088002.95	--	PROF
31402	13732562.25	2087998.97	--	PROF
31403	13732561.29	2087997.00	--	ME
31404	13732591.49	2087981.77	--	ME
31405	13732592.39	2087983.65	--	PROF
31406	13732594.53	2087987.54	--	PROF
31407	13732657.90	2087948.66	--	PROF
31408	13732661.40	2087953.61	--	PROF
31409	13732665.51	2087941.40	--	PROF
31410	13732666.29	2087941.00	--	PROF
31411	13732669.01	2087946.35	--	PROF
31412	13732672.63	2087948.81	--	ME
31413	13732676.10	2087936.02	--	PROF
31414	13732678.82	2087941.36	--	PROF
31415	13732688.19	2087937.73	--	PROF
31440	13732685.73	2087932.24	--	PROF

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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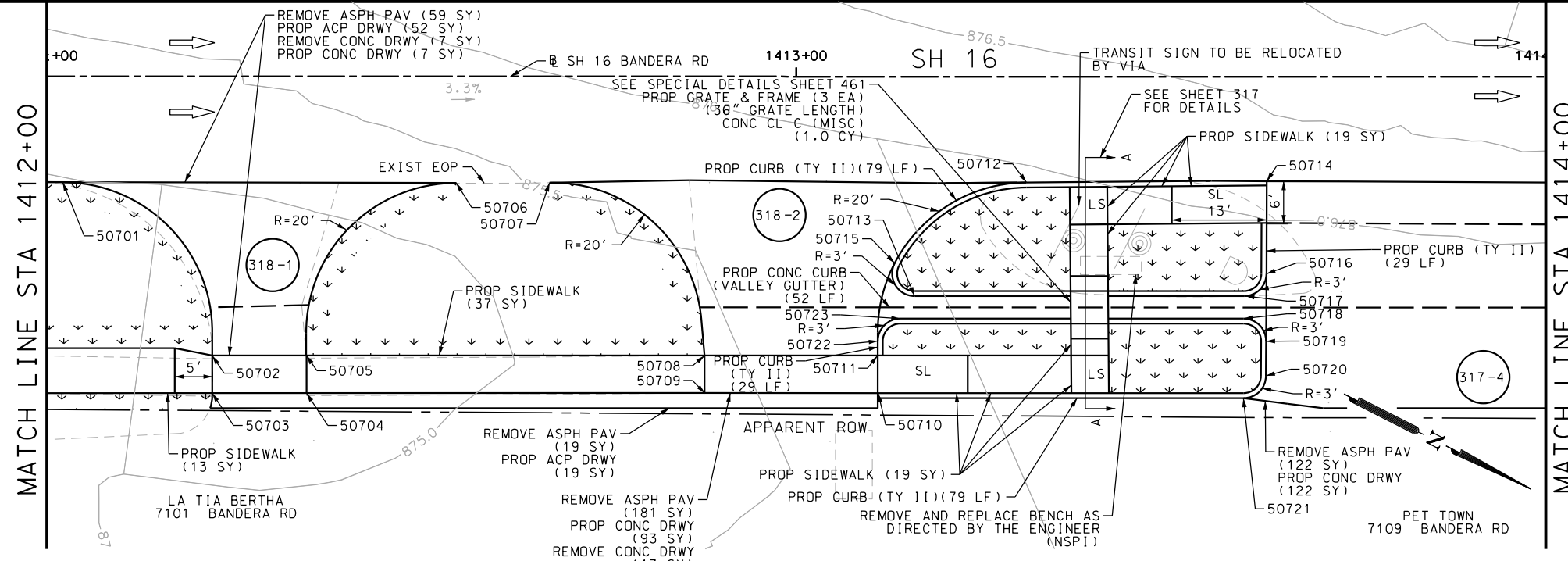
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1410+00 TO STA 1412+00

SHEET 17 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	317

Plotted on: 5/3/2019

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\WB\*15PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	20
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	381
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	145
0162-6002	BLOCK SODDING	SY	145
0168-6001	VEGETATIVE WATERING	MG	2.26
0420-6074	CL C CONC (MISC)	CY	1.0
0471-6003	GRATE & FRAME	EA	3
0529-6002	CONC CURB (TY II)	LF	216
0529-6023	CONC CURB & GUTTER (VALLEY GUTTER) (36")	LF	52
0530-6004	DRIVEWAYS (CONC)	SY	222
0530-6005	DRIVEWAYS (ACP)	SY	71
0531-6001	CONC SIDEWALKS (4")	SY	88

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

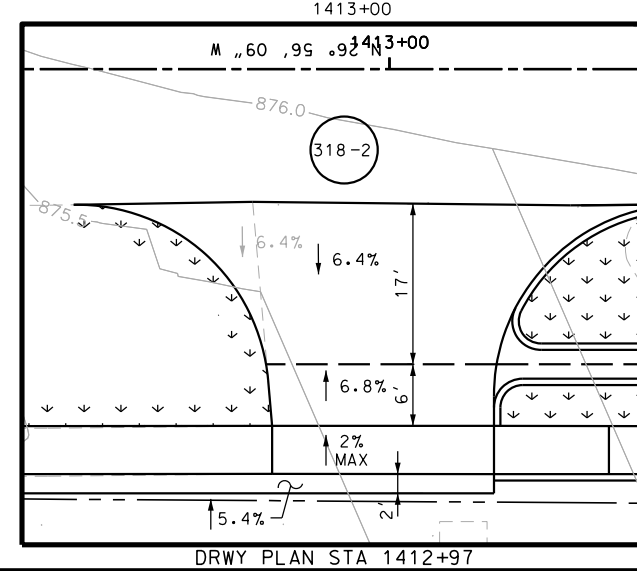
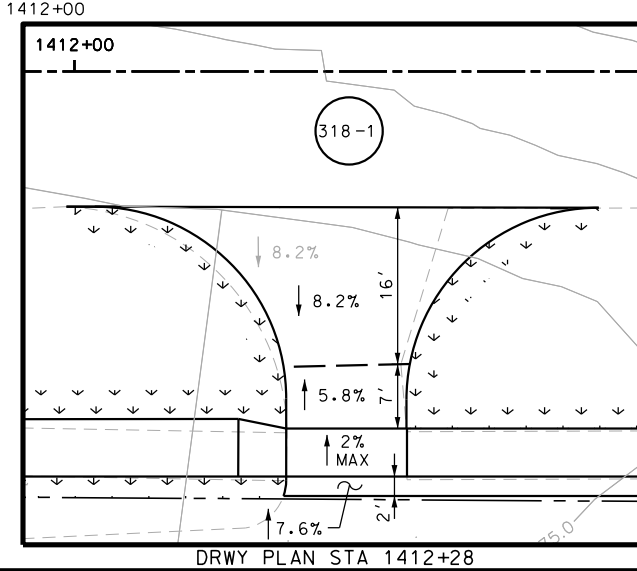
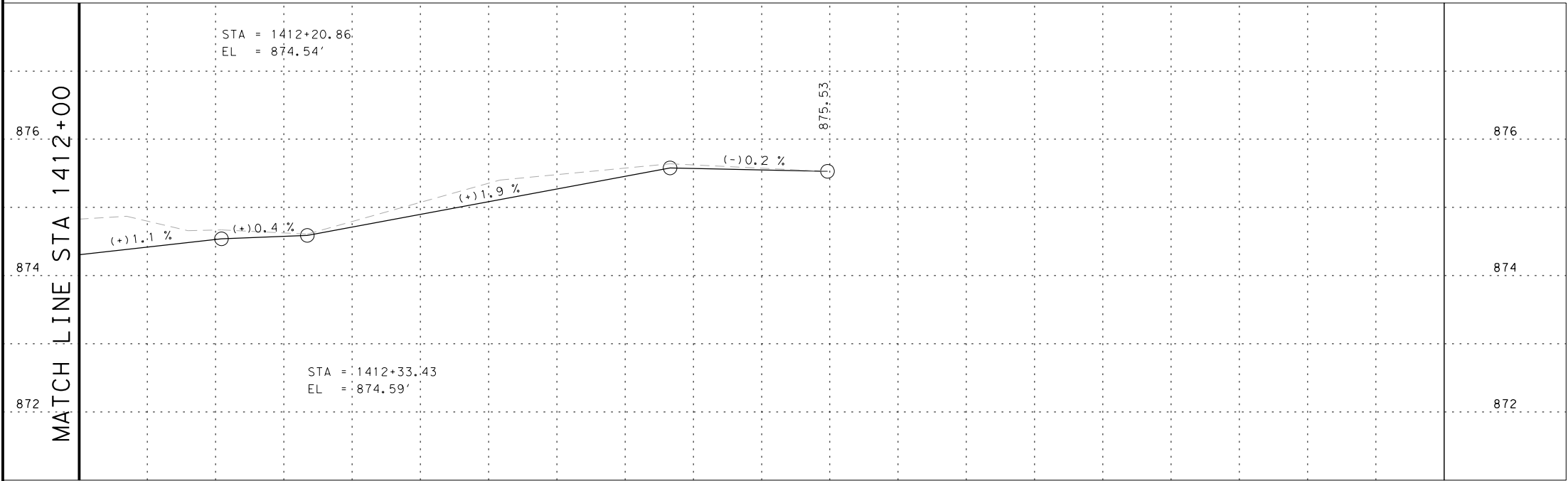
REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1412+00 TO STA 1414+00  
 SHEET 18 OF 126

DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG	6	TEXAS		VARIABLES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	318



POINT	NORTHING	EASTING	ELEV	DESC
50701	13732688.55	2087905.99	--	ME
50702	13732716.81	2087917.56	--	PROF
50703	13732719.08	2087922.02	--	PROF
50704	13732730.29	2087916.33	--	PROF
50705	13732728.02	2087911.86	--	PROF
50706	13732735.42	2087882.29	--	ME
50707	13732746.49	2087876.61	--	ME
50708	13732775.36	2087887.79	--	PROF
50709	13732777.63	2087892.25	--	PROF
50710	13732798.25	2087881.80	--	PROF
50711	13732795.97	2087877.32	--	PROF
50712	13732803.20	2087847.76	--	ME
50713	13732796.77	2087868.03	875.46	PROP
50714	13732831.72	2087833.08	--	ME
50715	13732792.41	2087865.33	875.44	PROP
50716	13732837.27	2087844.10	875.80	PROP
50717	13732835.95	2087848.12	875.78	PROP
50718	13732837.27	2087850.82	875.37	PROP
50719	13732841.31	2087852.14	875.39	PROP
50720	13732843.39	2087856.27	--	ME

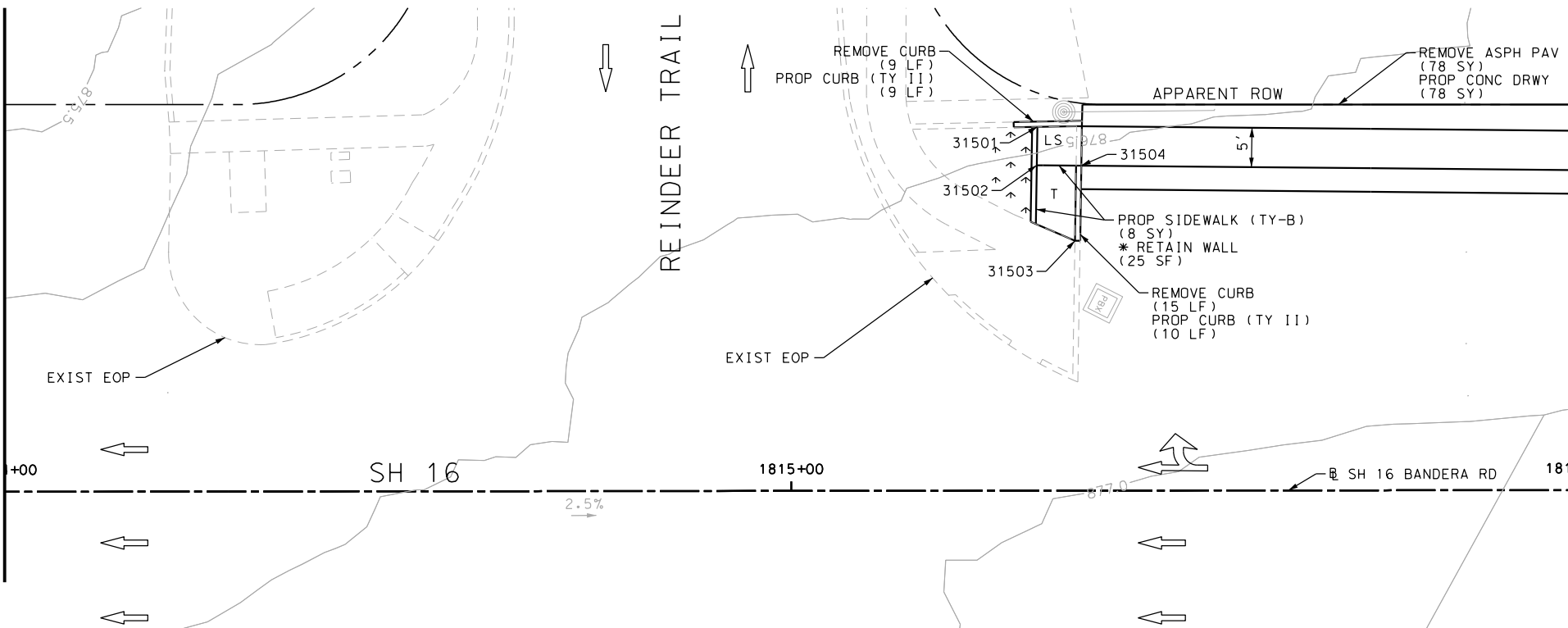
POINT	NORTHING	EASTING	ELEV	DESC
50721	13732842.06	2087860.29	--	ME
50722	13732795.10	2087875.61	875.28	PROP
50723	13732796.42	2087871.57	875.30	PROP

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\Bandera Dr-WB\*16.dgn

POINT	NORTHING	EASTING	ELEV	DESC
31501	13732903.59	2087636.08	--	ME
31502	13732905.73	2087640.46	--	ME
31503	13732914.40	2087646.83	--	ME
31504	13732910.81	2087637.94	867.60	PROP
31505	13732980.83	2087792.93	876.07	PROP
31506	13732979.20	2087789.73	876.00	PROP
31507	13732976.01	2087760.50	--	ME
31508	13733032.31	2087732.11	--	ME
31509	13732989.90	2087784.30	--	ME
31510	13732991.53	2087787.49	--	ME
31511	13732978.56	2087788.47	875.82	PROP
31512	13732986.36	2087779.79	--	ME
31513	13732973.61	2087778.65	875.77	PROP
31514	13732983.08	2087773.77	--	ME

MATCH LINE STA 1814+00  
SEE SHEET 395



MATCH LINE STA 1816+00 SEE SHEET 396

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	24
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	440
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0420-6074	CL C CONC (MISC)	CY	8.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	104
0450-6048	RAIL (HANDRAIL) (TY B)	LF	35
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	108
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	438
0531-6001	CONC SIDEWALKS (4")	SY	89
0531-6019	CURB RAMPS (TY 2)	SY	27
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1
0688-6001	PED DETECT PUSH BUTTON (APS)	EA	1
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	1

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

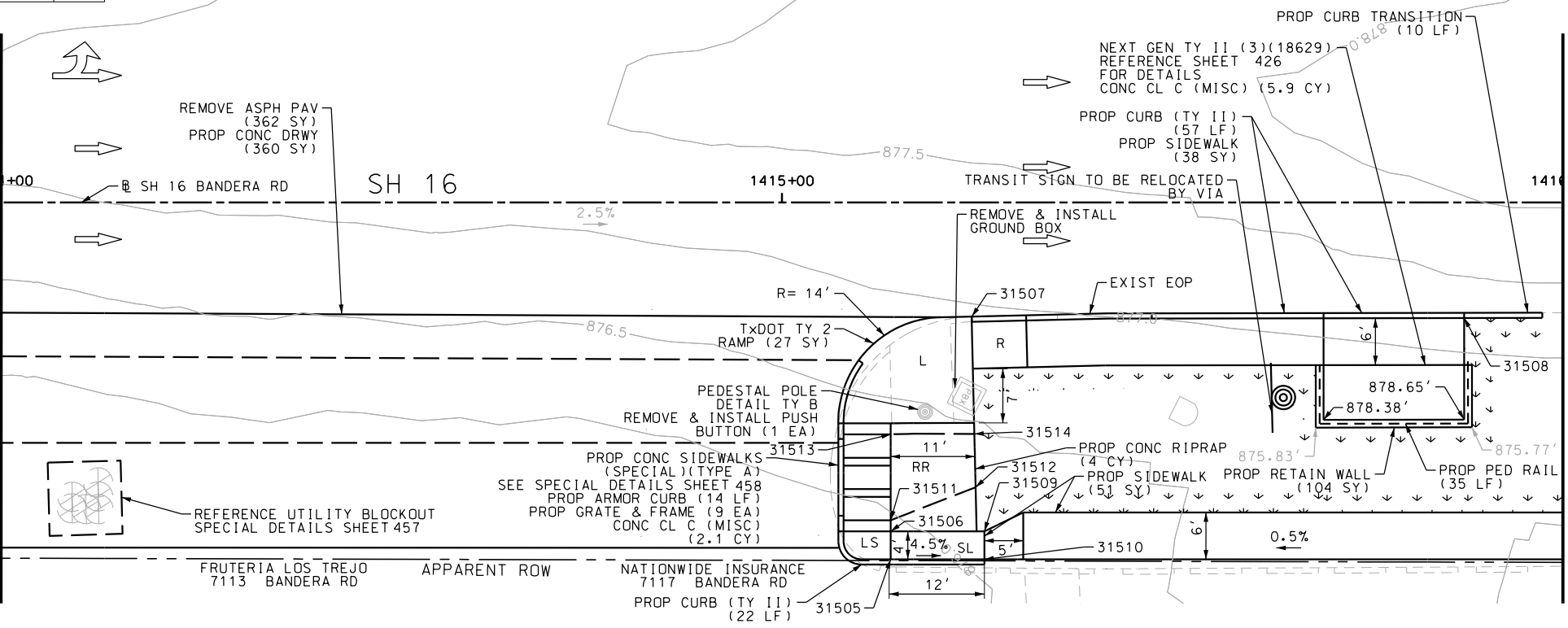
**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1414+00 TO STA 1416+00  
 STA 1814+00 TO STA 1816+00  
 SHEET 19 OF 126

MATCH LINE STA 1414+00

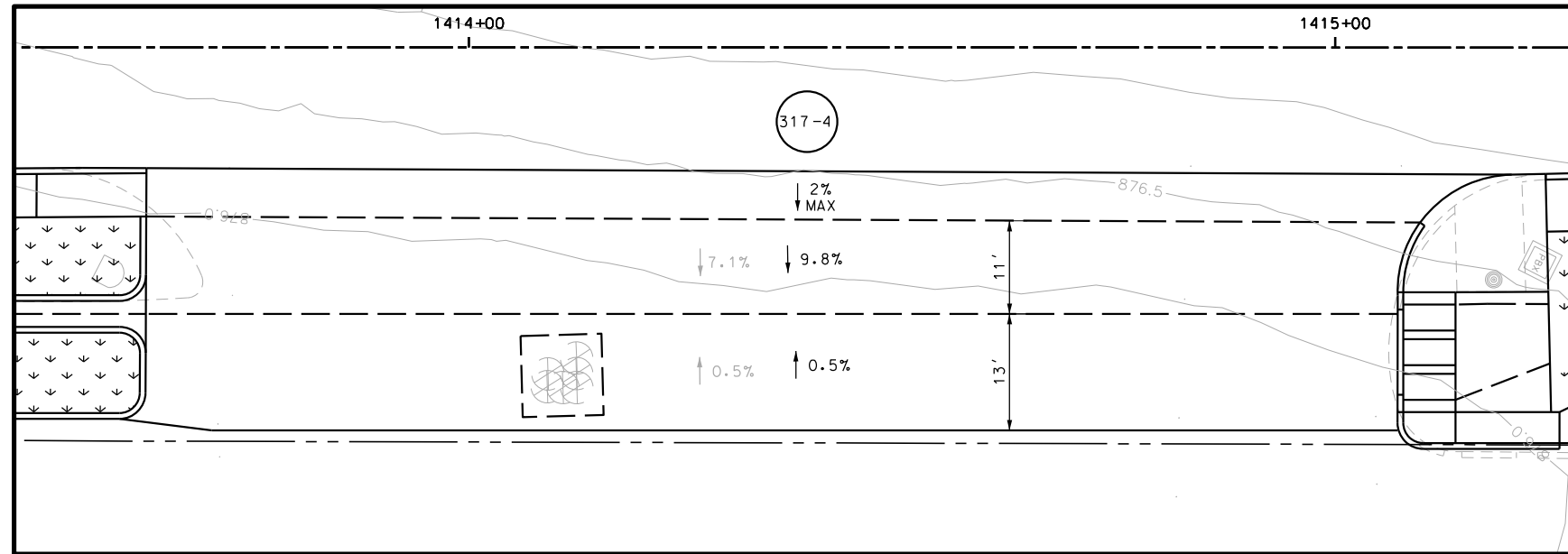


MATCH LINE STA 1416+00

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIABLES		
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	319

Plotted on: 5/3/2019

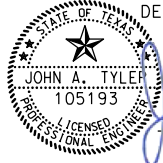
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DRWY PLAN STA 1414+40

- NOTES:
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DESIGN


  
 JOHN A. TYLER, P.E.
   
 5/3/2019
   
 DATE

REVIEW AND APPROVAL


  
 JAMES A. LUTZ, P.E.
   
 5/3/2019
   
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1414+00 TO STA 1416+00

SHEET 20 OF 126

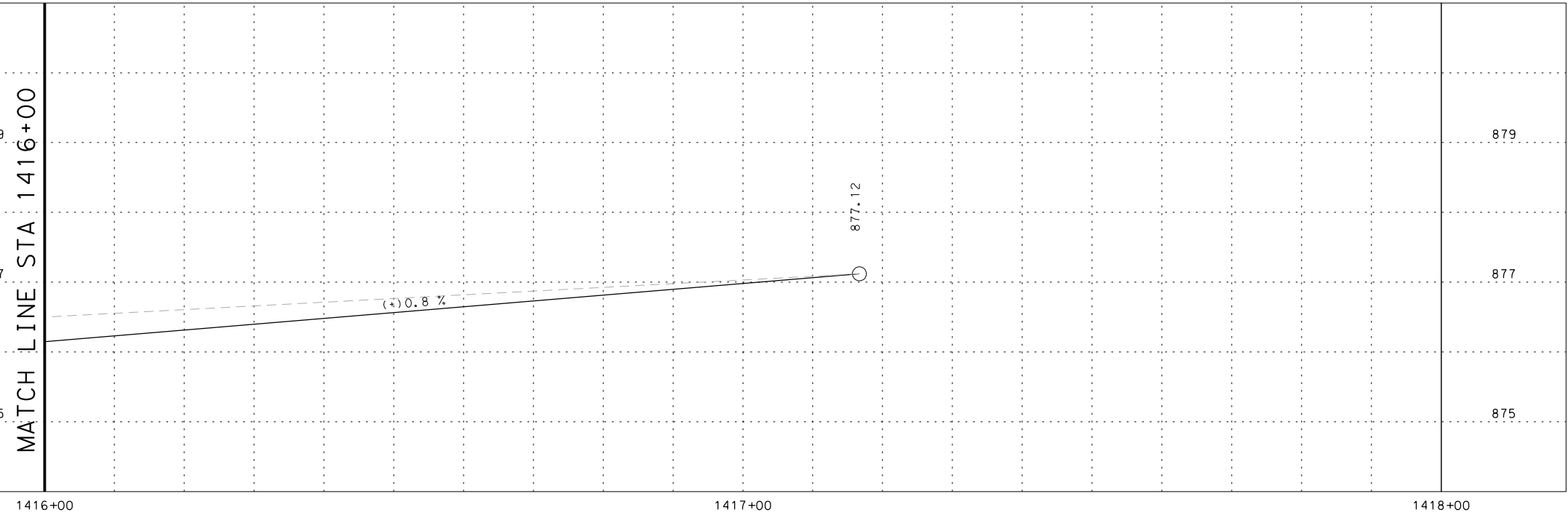
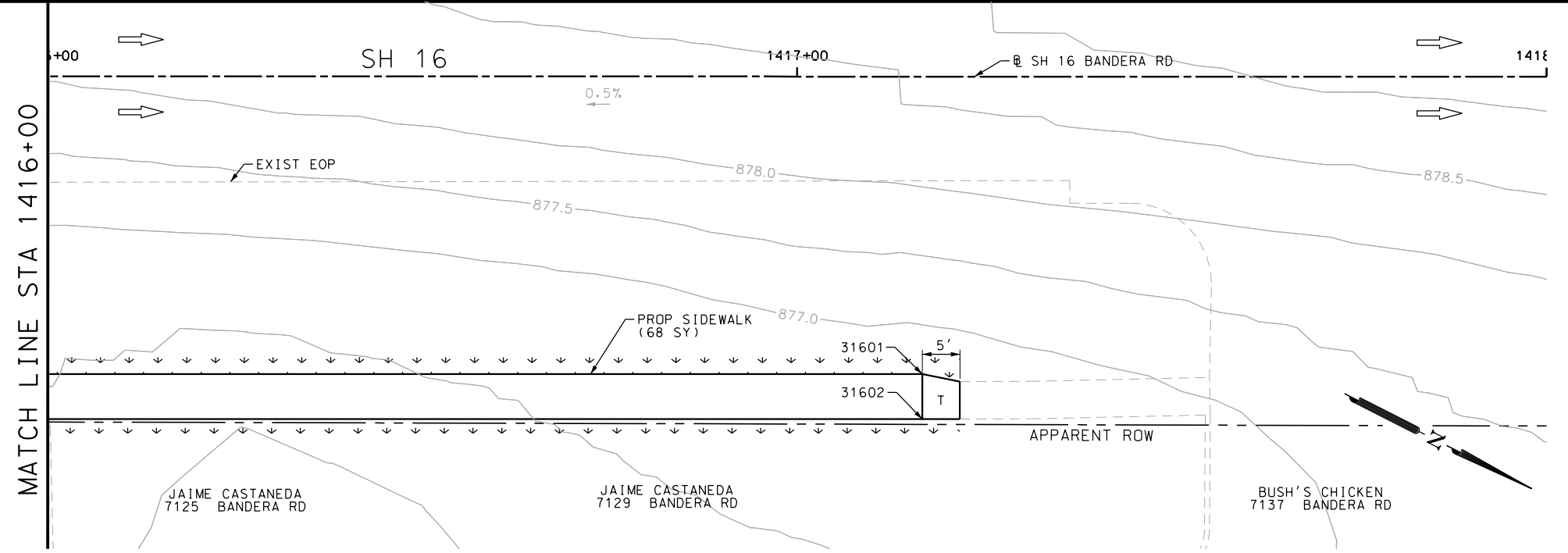
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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.	SHEET NO.
			576	320



Plotted on: 5/3/2019

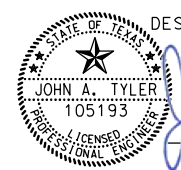
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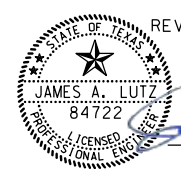
ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0531-6001	CONC SIDEWALKS (4")	SY	68



POINT	NORTHING	EASTING	ELEV	DESC
31601	13733158.89	2087695.72	877.05	PROP
31602	13733161.63	2087701.08	877.12	PROP

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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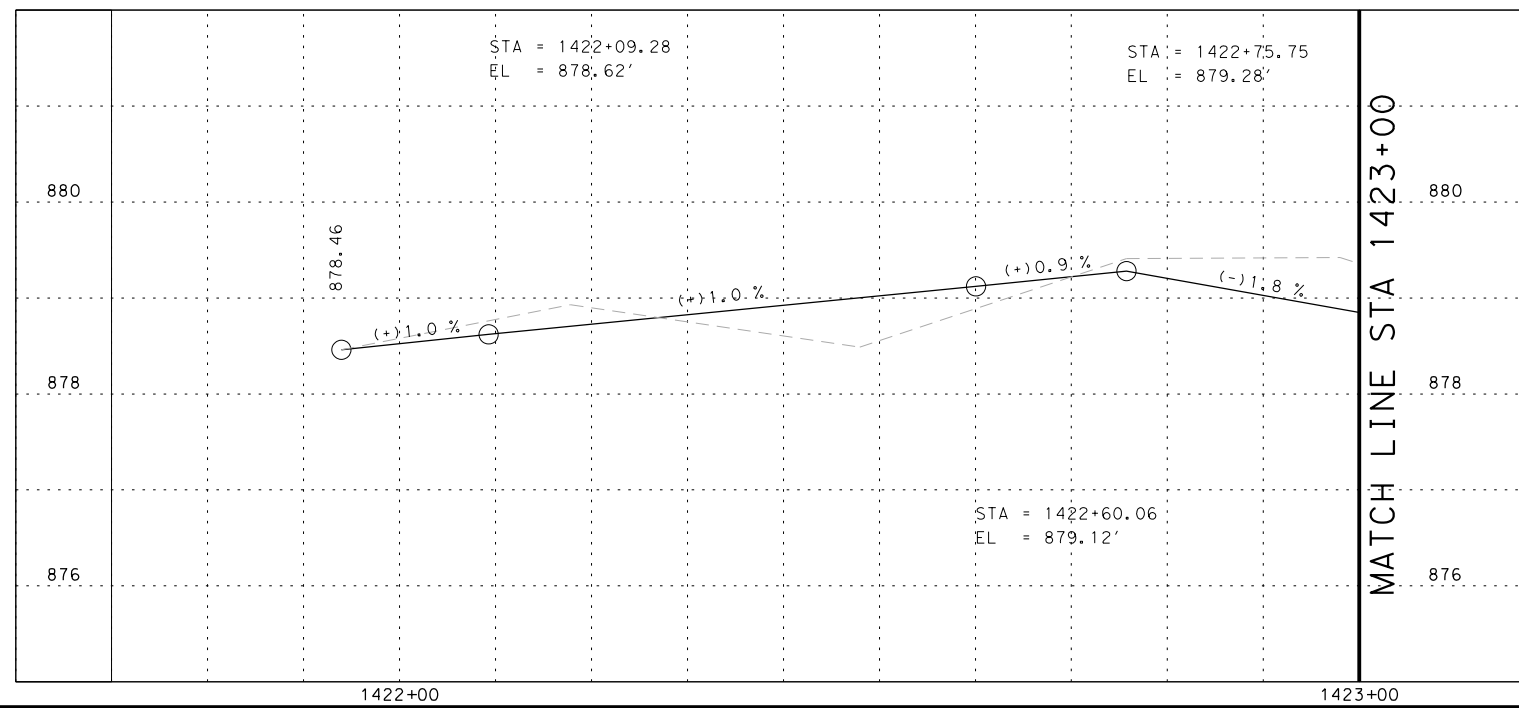
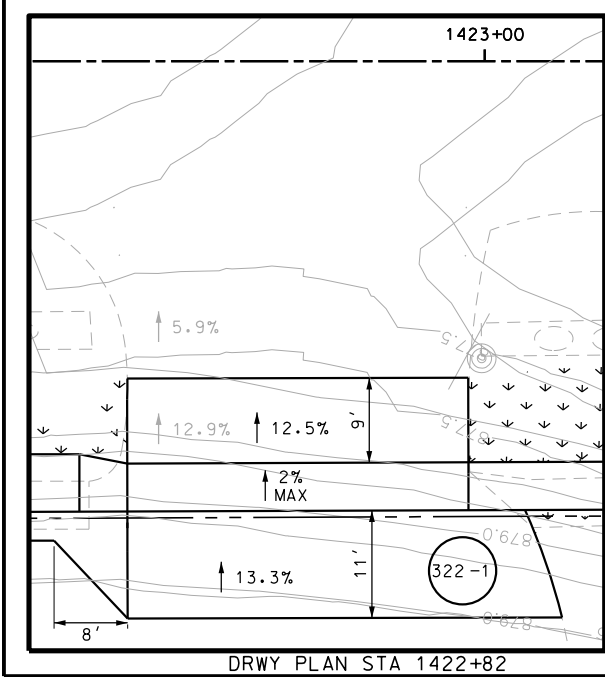
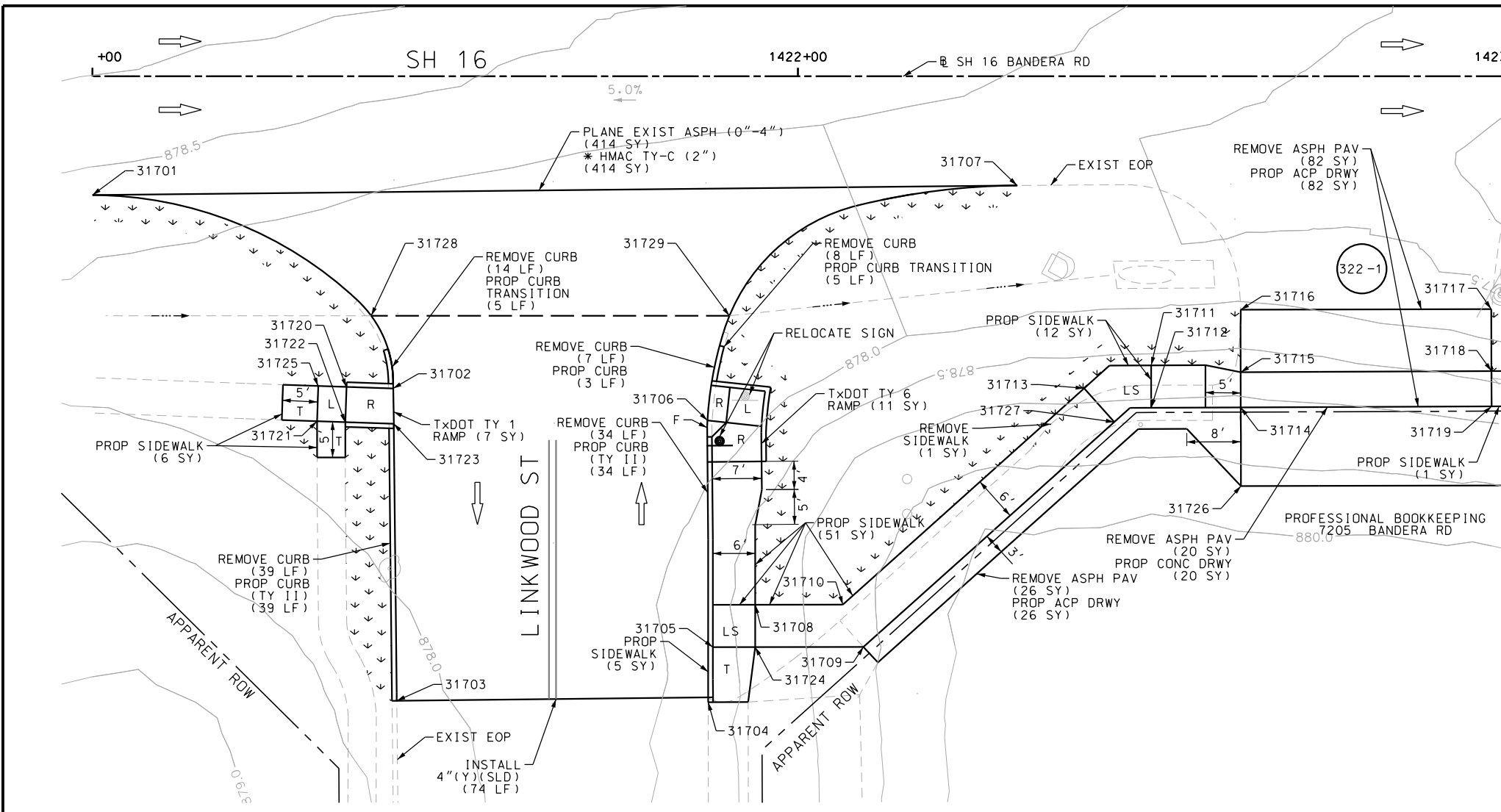
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1416+00 TO STA 1418+00

SHEET 21 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	321

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*18PF.dgn



ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA(SQ) TY-C PG76-22	SY	414
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	102
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	1
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	128
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	125
0162-6002	BLOCK SODDING	SY	125
0168-6001	VEGETATIVE WATERING	MG	1.95
0354-6023	PLANE ASPH CONC PAV(0" TO 4")	SY	414
0529-6002	CONC CURB (TY II)	LF	86
0530-6004	DRIVEWAYS (CONC)	SY	20
0530-6005	DRIVEWAYS (ACP)	SY	108
0531-6001	CONC SIDEWALKS (4")	SY	70
0531-6018	CURB RAMPS (TY 1)	SY	7
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
0666-6224	PAVEMENT SEALER 4"	LF	74
0666-6315	RE PM W/RET REQ TY I (Y)4"(SLD)(100MIL)	LF	74
0678-6001	PAV SURF PREP FOR MRK (4")	LF	74

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1421+00 TO STA 1423+00  
 SHEET 22 OF 126

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	322

Plotted on: 5/3/2019

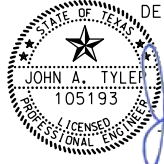
Design File name: P:\1111\35\07\des\ign\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*WB\*18PP\*A.dgn

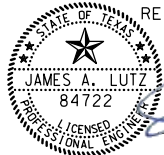
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31701	13733489.49	2087499.23	--	ME
31702	13733540.05	2087502.99	--	ME
31703	13733561.63	2087541.66	--	ME
31704	13733600.52	2087520.74	--	ME
31705	13733597.37	2087513.57	--	ME
31706	13733581.35	2087485.71	--	ME
31707	13733604.01	2087435.47	--	ME
31708	13733599.77	2087505.43	--	PROF
31709	13733616.12	2087503.36	--	PROF
31710	13733610.69	2087499.49	--	PROF
31711	13733632.90	2087448.81	--	PROF
31712	13733635.77	2087454.08	--	PROF
31713	13733626.09	2087456.20	--	PROF
31714	13733646.89	2087447.98	--	PROF
31715	13733644.50	2087443.61	--	PROF
31716	13733640.25	2087435.83	--	ME
31717	13733671.43	2087418.79	--	ME
31718	13733675.65	2087426.50	--	PROF
31719	13733678.06	2087430.88	--	PROF
31720	13733534.12	2087505.95	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
31721	13733532.78	2087512.21	877.82	PROP
31722	13733536.36	2087510.42	--	ME
31723	13733542.51	2087507.35	--	ME
31724	13733602.64	2087510.70	--	PROF
31725	13733530.54	2087507.74	877.75	PROP
31726	13733652.24	2087457.76	--	ME
31727	13733632.13	2087458.35	--	PROF

NOTES:

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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



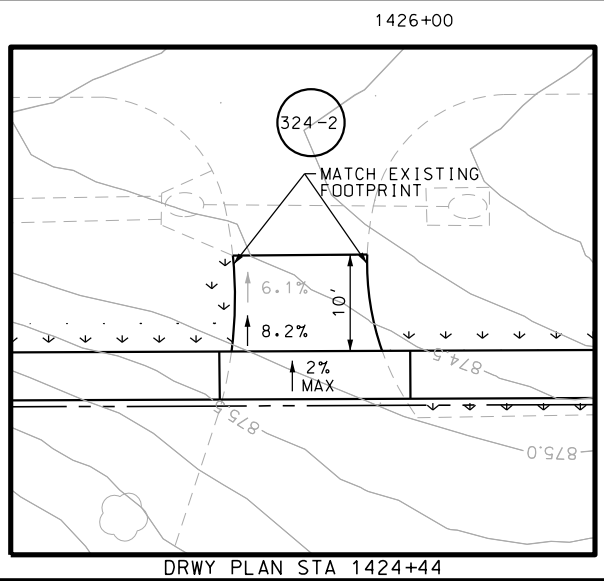
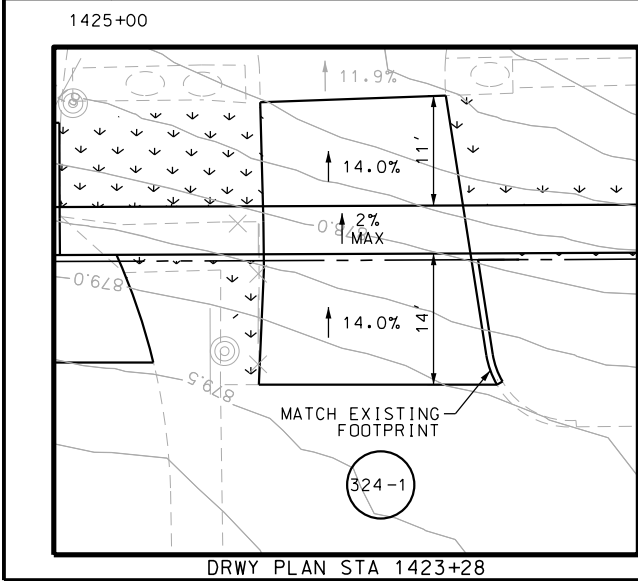
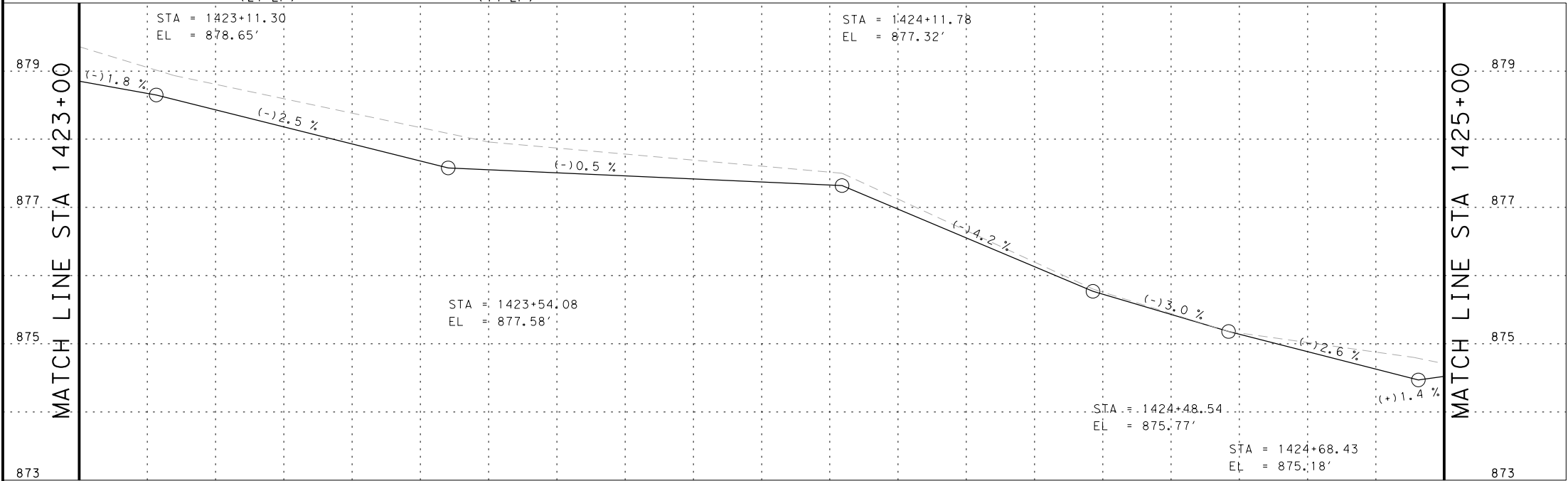
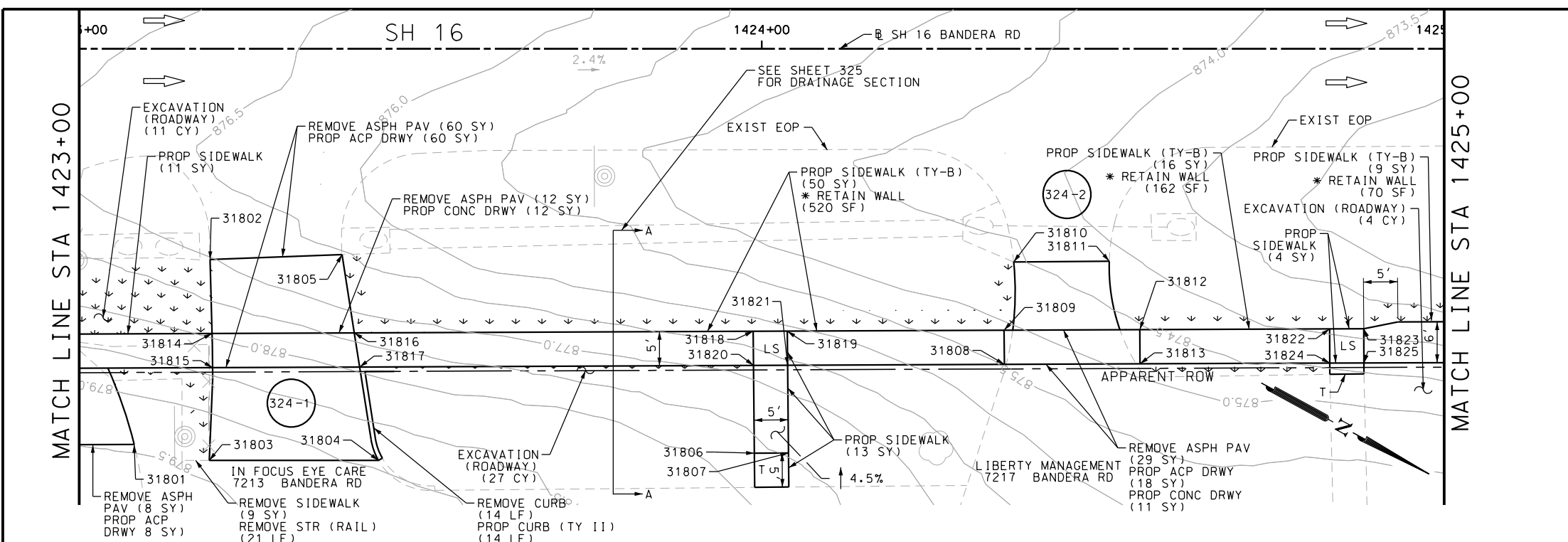
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1421+00 TO STA 1423+00

SHEET 23 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	323

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\Bandera Dr-WB\*19PP.dgn



POINT	NORTHING	EASTING	ELEV	DESC
31801	13733691.95	2087436.06	--	ME
31802	13733688.80	2087406.93	--	ME
31803	13733702.73	2087432.86	--	ME
31804	13733724.52	2087421.02	--	ME
31805	13733705.45	2087397.08	--	ME
31806	13733772.41	2087393.80	--	ME
31807	13733776.78	2087391.37	--	ME
31808	13733798.39	2087364.87	--	ME
31809	13733795.97	2087360.50	--	PROF
31810	13733792.42	2087351.04	--	ME
31811	13733804.67	2087344.25	--	ME
31812	13733813.41	2087350.93	--	PROF
31813	13733815.82	2087355.31	--	ME
31814	13733694.22	2087416.31	--	PROF
31815	13733696.67	2087420.67	--	PROF
31816	13733712.49	2087406.29	--	PROF
31817	13733715.57	2087410.31	--	PROF
31818	13733763.73	2087378.18	--	PROF
31819	13733768.12	2087375.78	--	PROF
31820	13733766.16	2087382.55	--	PROF

POINT	NORTHING	EASTING	ELEV	DESC
31822	13733837.80	2087337.55	--	PROF
31823	13733842.18	2087335.15	--	PROF
31824	13733840.20	2087341.94	--	PROF
31825	13733844.59	2087339.53	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	14
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	9
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	109
0110-6001	EXCAVATION (ROADWAY)	CY	42
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	90
0162-6002	BLOCK SODDING	SY	90
0168-6001	VEGETATIVE WATERING	MG	1.40
0496-6099	REMOVE STR (RAIL)	LF	21
0529-6002	CONC CURB (TY II)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	23
0530-6005	DRIVEWAYS (ACP)	SY	86
0531-6001	CONC SIDEWALKS (4")	SY	28
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	75

NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
 JOHN A. TYLER, P.E.  
 105193  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 84722  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

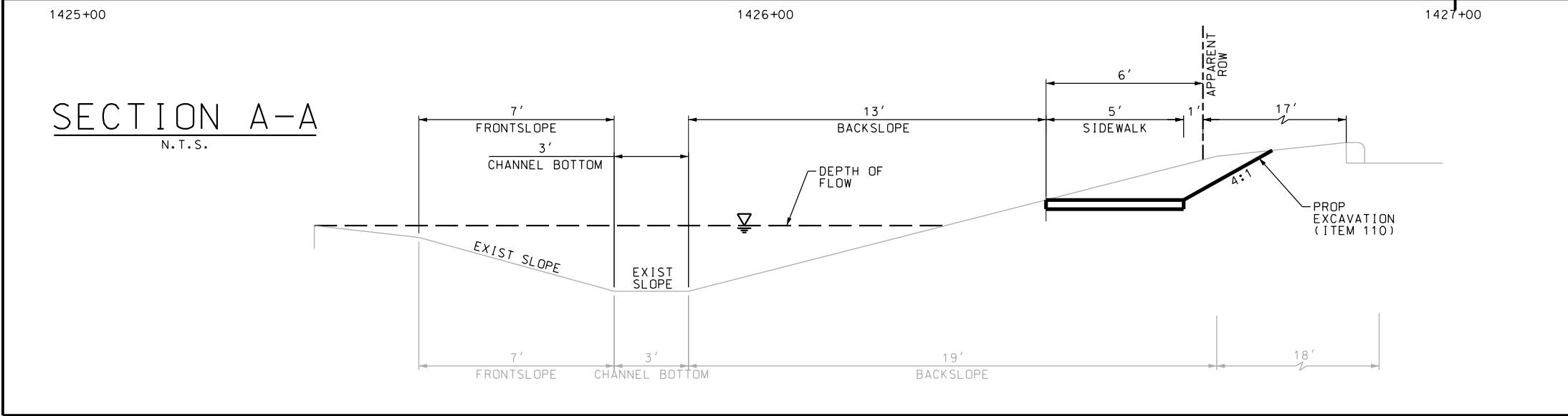
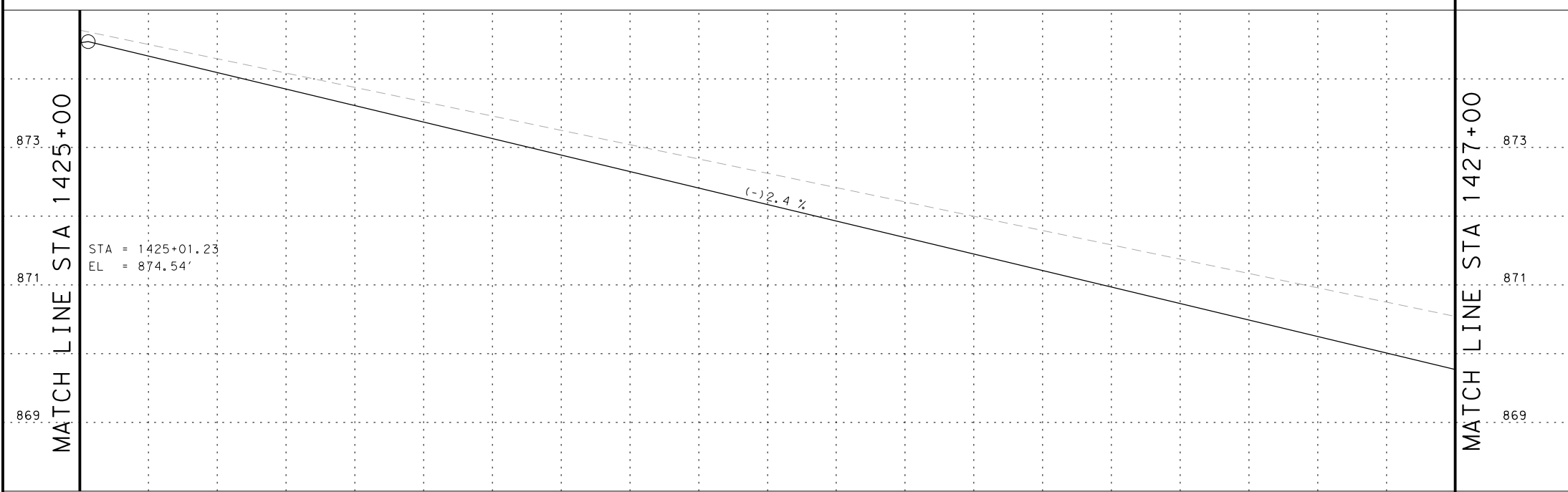
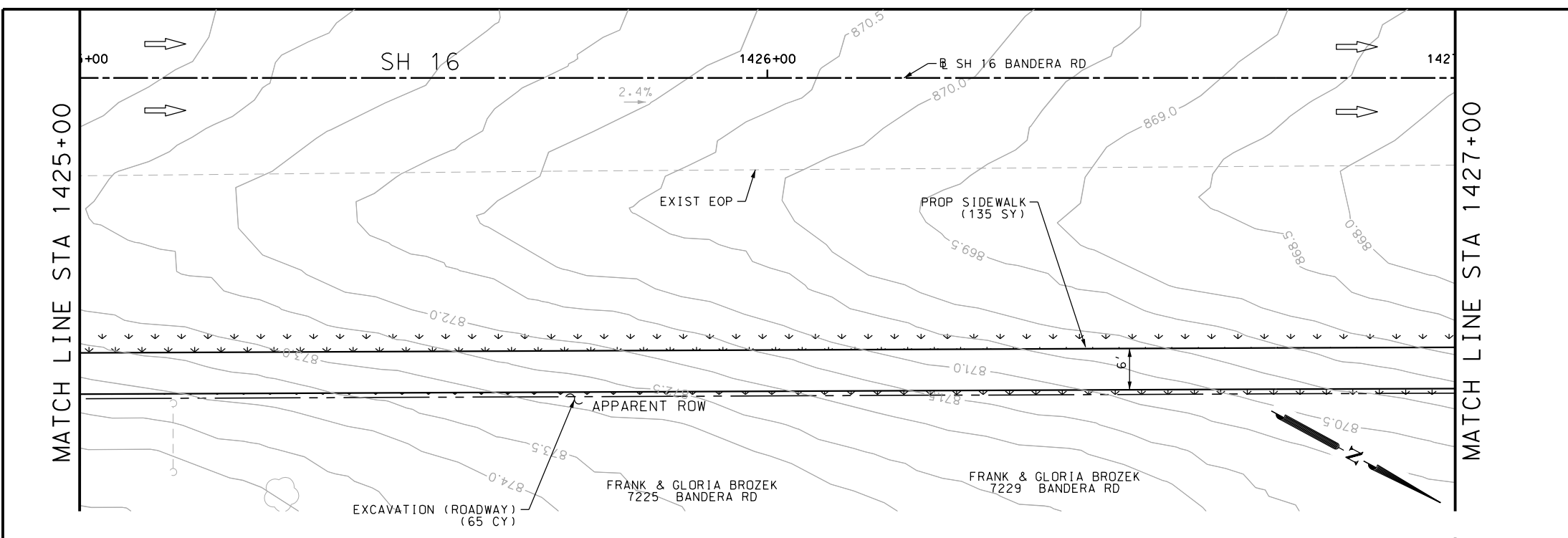
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1423+00 TO STA 1425+00  
 SHEET 24 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				324

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*19PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0110-6001	EXCAVATION (ROADWAY)	CY	65
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	85
0162-6002	BLOCK SODDING	SY	85
0168-6001	VEGETATIVE WATERING	MG	1.33
0531-6001	CONC SIDEWALKS (4")	SY	135

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



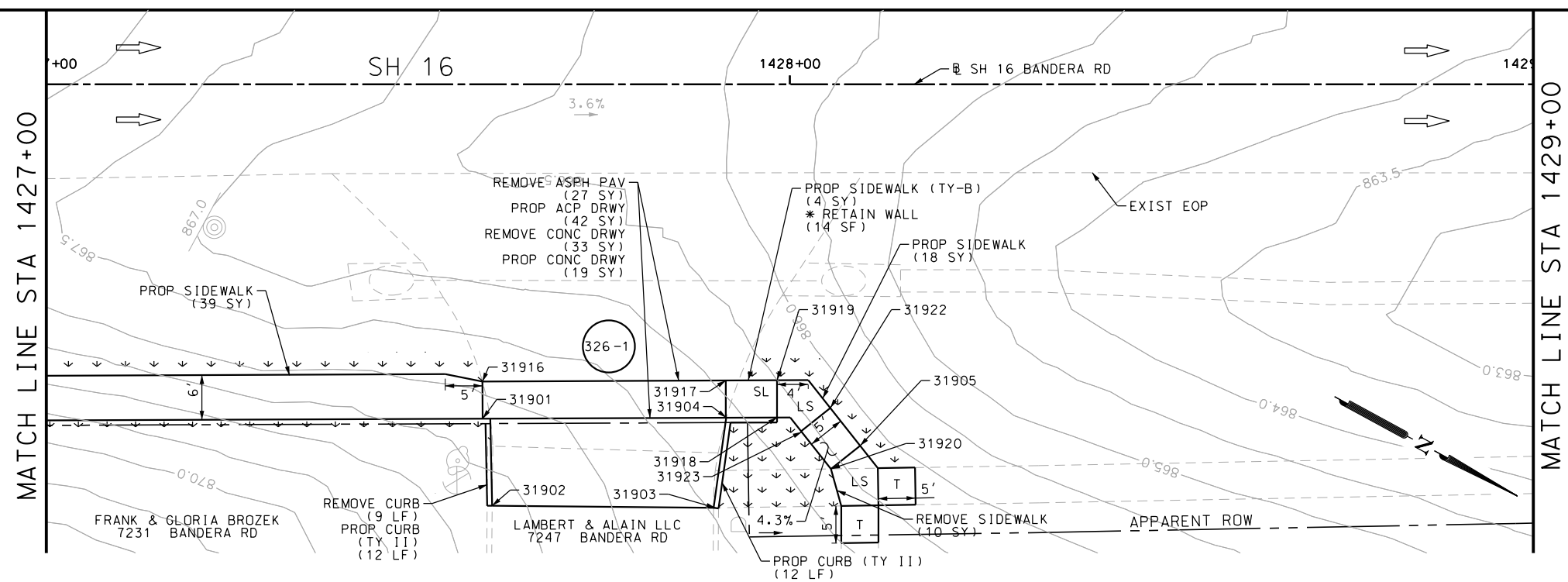
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1423+00 TO STA 1427+00

SHEET 25 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			576	325

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*20PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	33
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	9
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	10
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	27
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0529-6002	CONC CURB (TY II)	LF	24
0530-6004	DRIVEWAYS (CONC)	SY	19
0530-6005	DRIVEWAYS (ACP)	SY	42
0531-6001	CONC SIDEWALKS (4")	SY	18
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	43

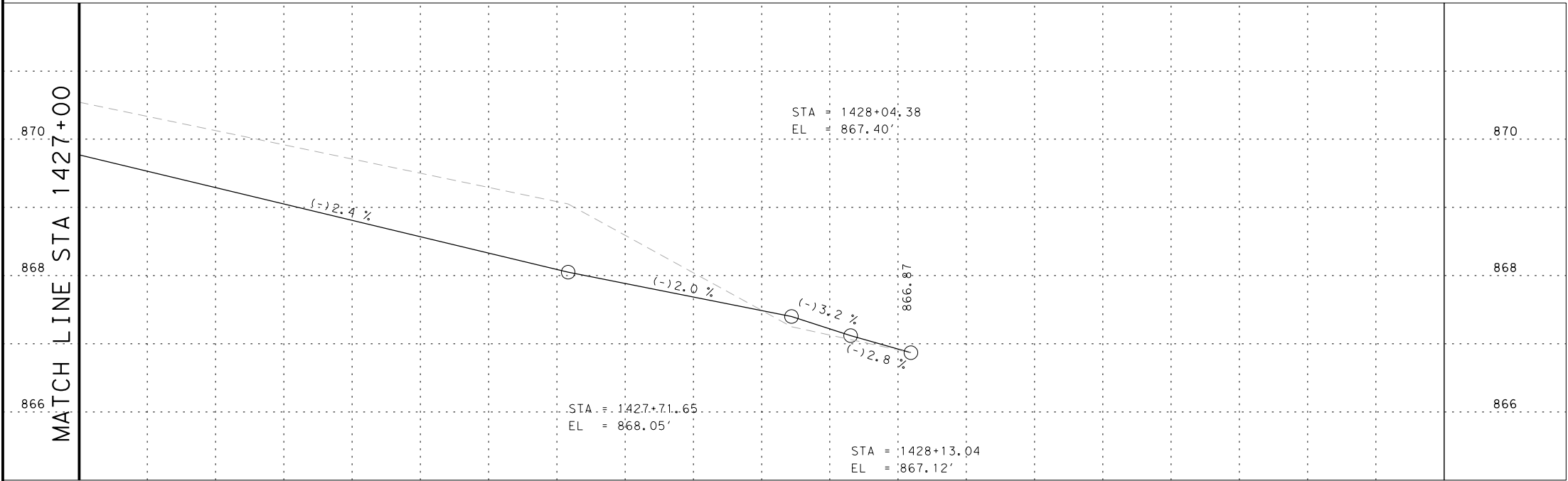
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE



SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY



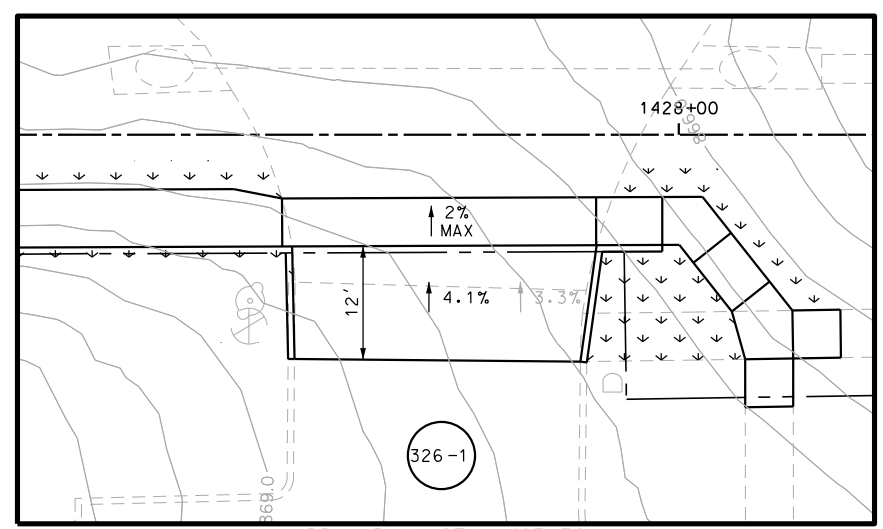
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1427+00 TO STA 1429+00

SHEET 26 OF 126

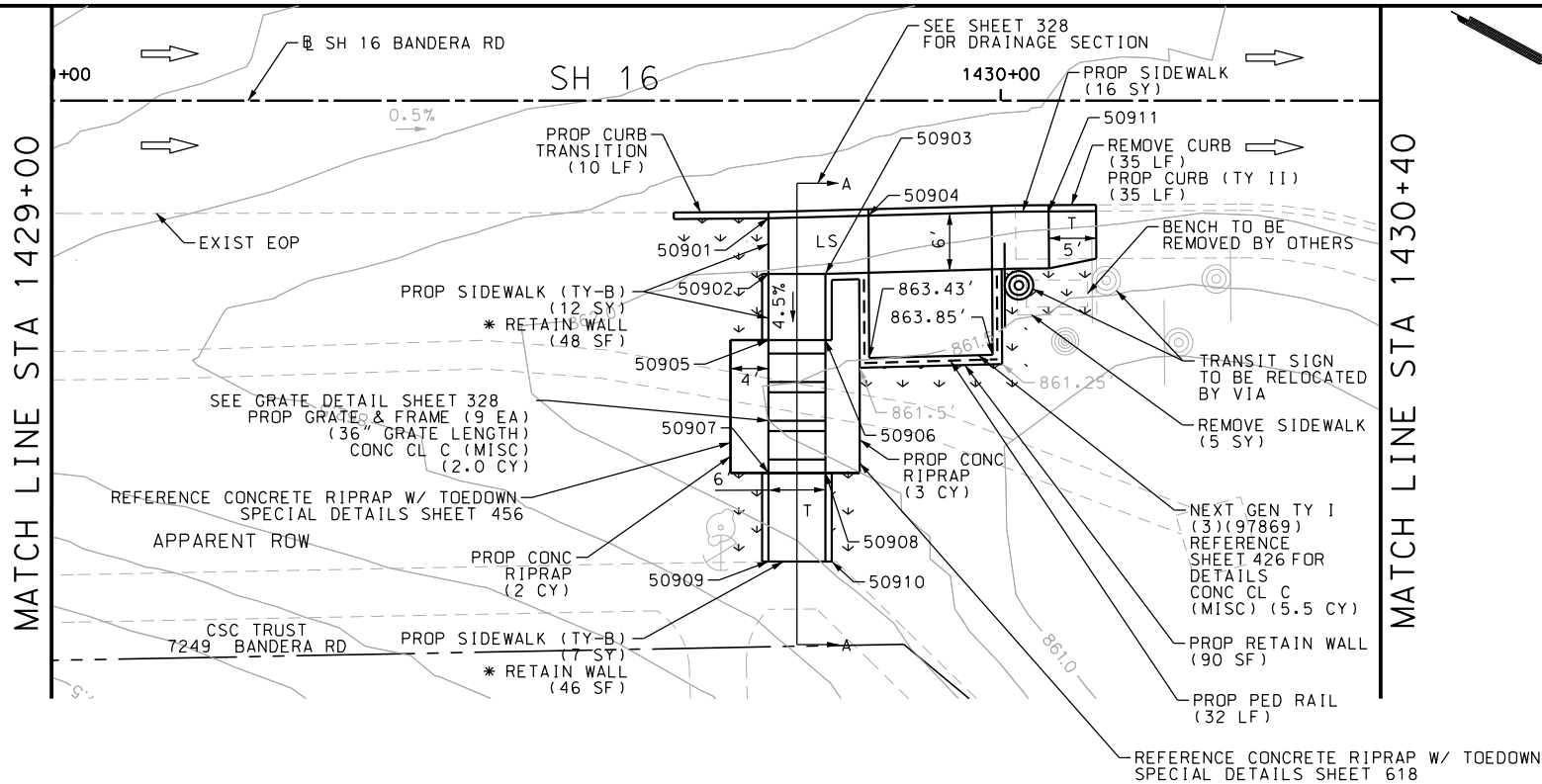
POINT	NORTHING	EASTING	ELEV	DESC
31901	13734081.68	2087209.47	--	PROF
31902	13734088.40	2087219.15	--	ME
31903	13734114.70	2087205.16	--	ME
31904	13734110.36	2087193.73	--	PROF
31905	13734128.04	2087188.44	--	PROF
31916	13734079.26	2087205.09	--	ME
31917	13734107.97	2087189.34	--	ME
31918	13734116.40	2087190.42	--	PROF
31919	13734114.00	2087186.03	--	PROF
31920	13734126.08	2087193.03	--	PROF
31922	13734122.09	2087185.89	--	PROF
31923	13734120.13	2087190.49	--	PROF



DRWY PLAN STA 1427+76

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*20PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	35
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0420-6074	CL C CONC (MISC)	CY	7.5
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	90
0450-6048	RAIL (HANDRAIL) (TY B)	LF	32
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	45
0531-6001	CONC SIDEWALKS (4")	SY	16
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	19

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

James A. Lutz, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
50901	13734256.68	2087077.36	--	ME
50902	13734259.47	2087082.49	--	ME
50903	13734264.74	2087079.62	--	ME
50904	13734265.78	2087072.09	--	ME
50905	13734262.80	2087088.62	862.71	PROP
50906	13734268.07	2087085.76	862.71	PROP
50907	13734269.49	2087100.92	862.71	PROP
50908	13734274.76	2087098.06	862.71	PROP
50909	13734273.95	2087109.14	862.50	PROP
50910	13734280.18	2087105.75	--	ME
50911	13734282.27	2087062.64	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

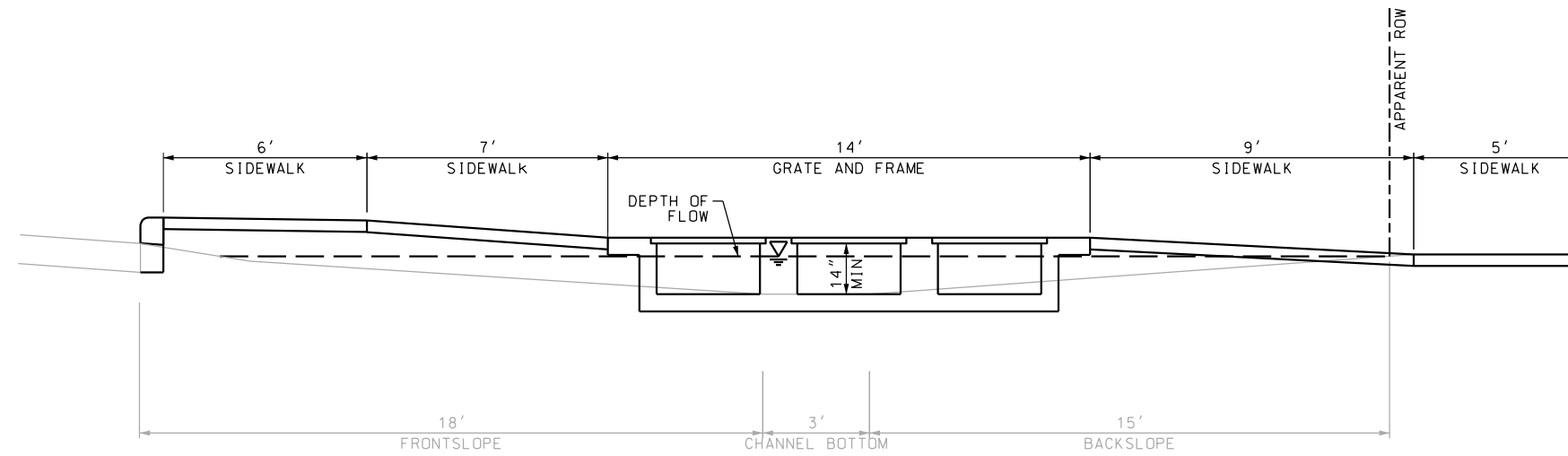
Texas Department of Transportation  
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SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1429+00 TO STA 1430+40  
SHEET 27 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	327

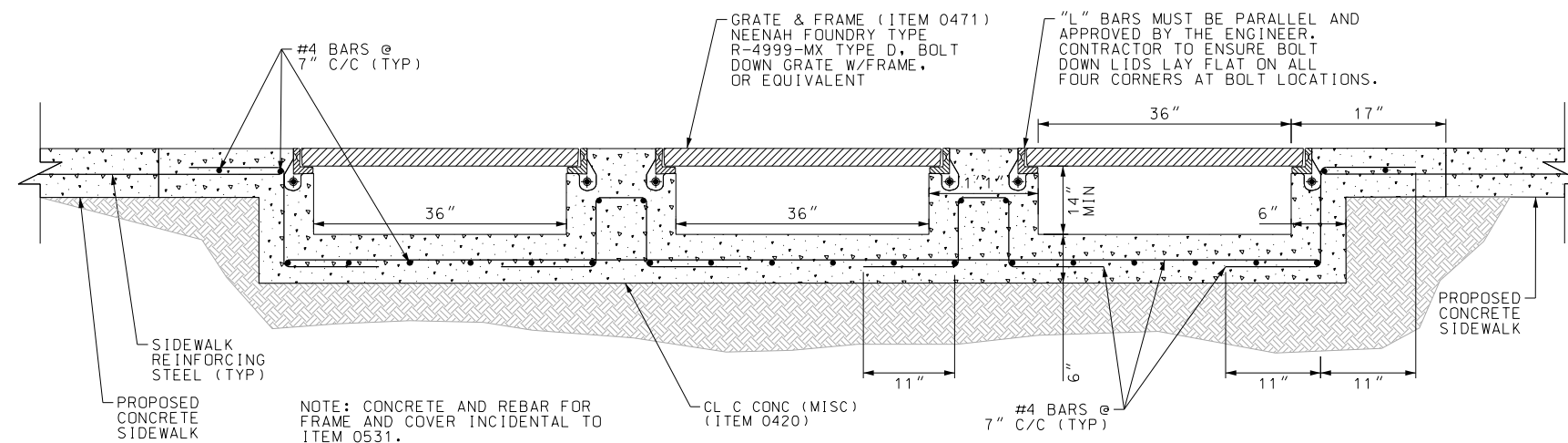
Plotted on: 5/3/2019

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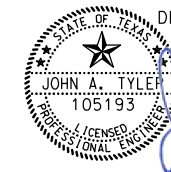


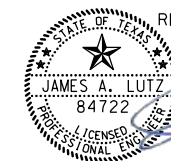
**SECTION A-A**  
N.T.S.

**GRATE DETAIL**  
N.T.S.



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1427+00 TO STA 1430+00

SHEET 28 OF 126

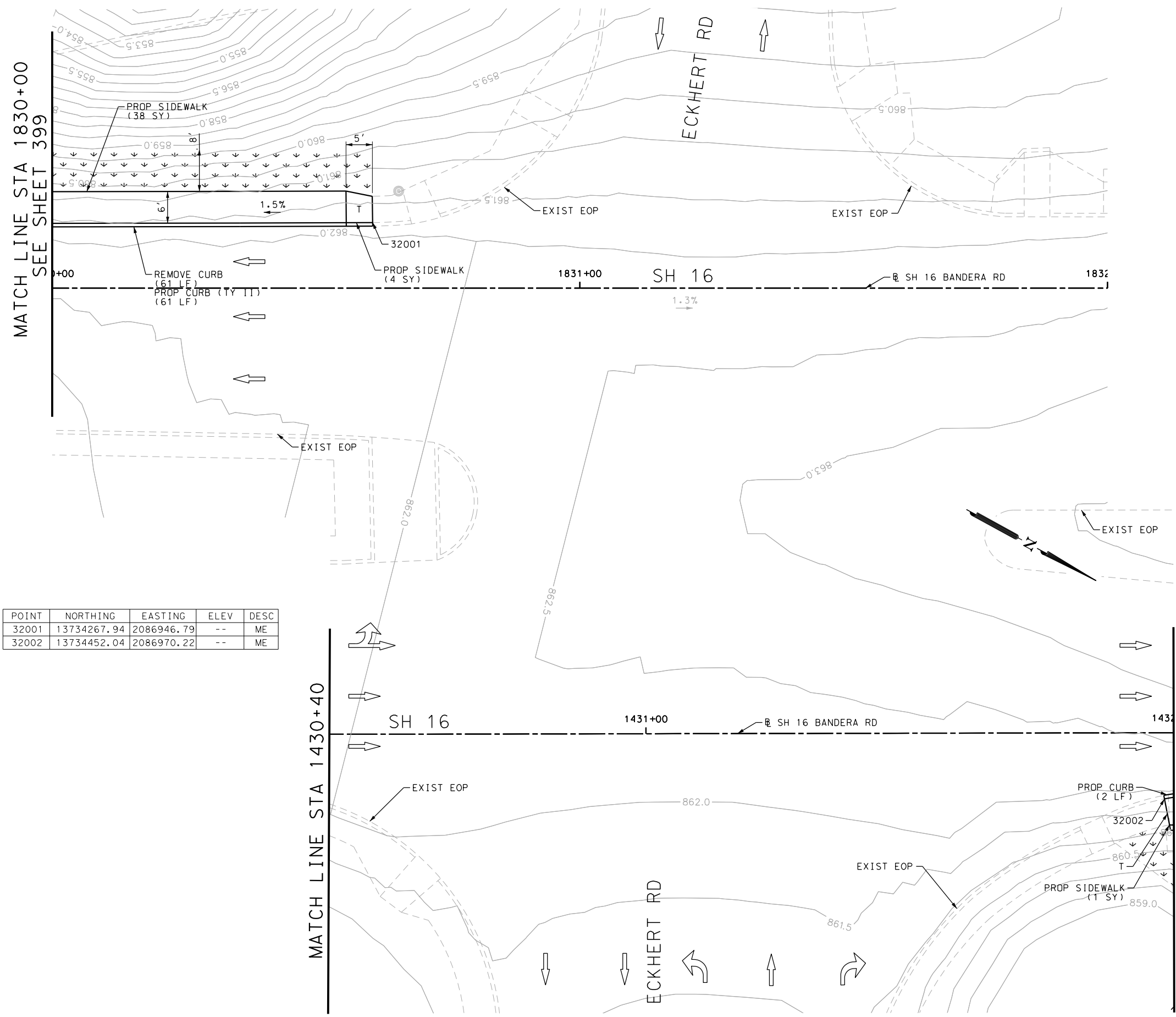
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				328



Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*WB\*21.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	61
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	63
0531-6001	CONC SIDEWALKS (4")	SY	5
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	38



POINT	NORTHING	EASTING	ELEV	DESC
32001	13734267.94	2086946.79	--	ME
32002	13734452.04	2086970.22	--	ME

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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

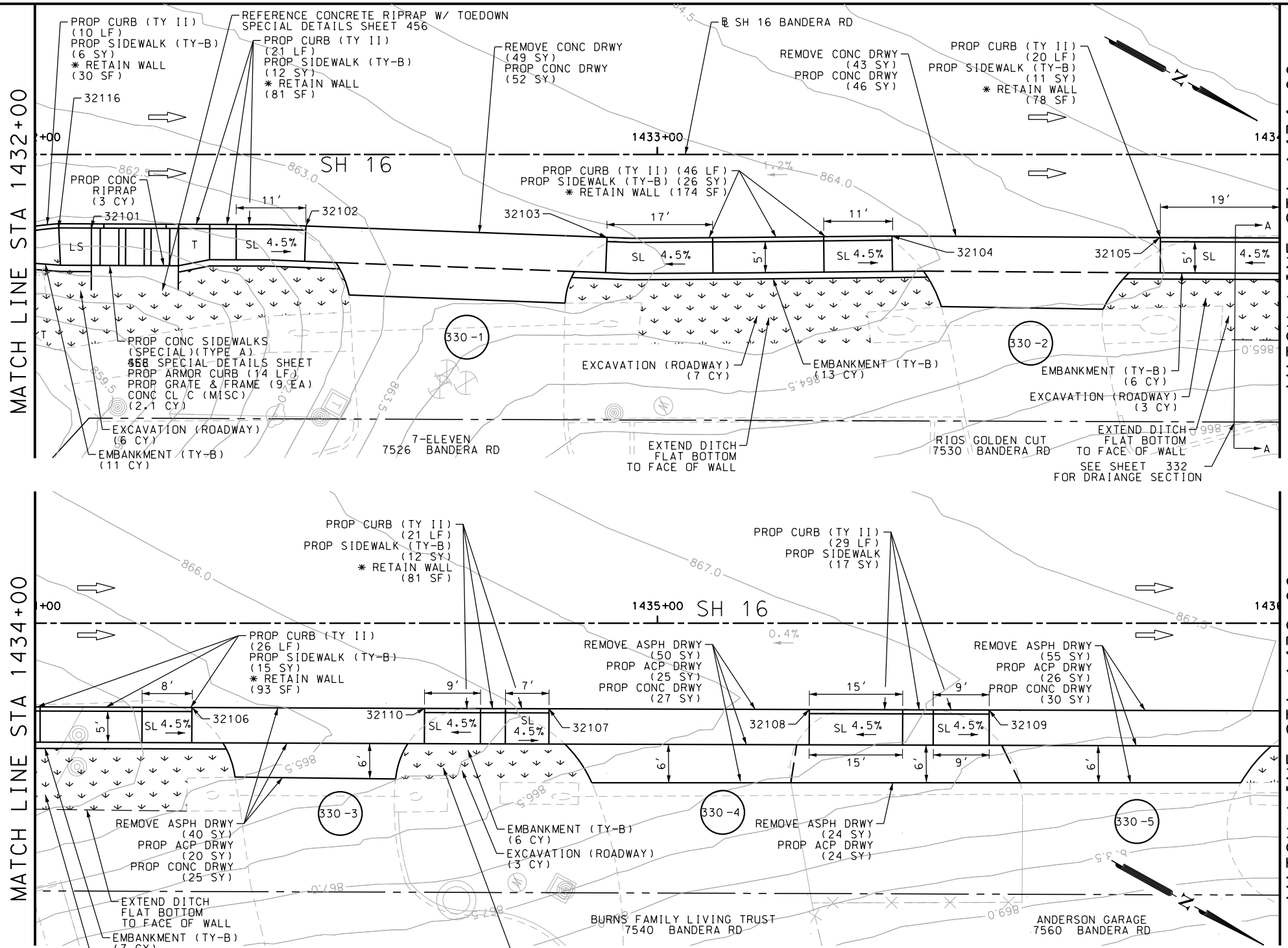
Texas Department of Transportation  
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SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1430+00 TO STA 1432+00  
STA 1830+00 TO STA 1832+00  
SHEET 29 OF 126

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	329

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507\Bandera Dr-WB\*22.dgn



NOTE: FOR SET RIPRAP AND TOE DOWN DIMENSIONS, SEE STANDARDS PSET-SP, PSET-RR, AND SPECIAL DETAILS SHEET

POINT	NORTHING	EASTING	ELEV	DESC
32101	13734461.19	2086964.38	--	ME
32102	13734491.21	2086947.46	--	ME
32103	13734534.44	2086925.68	--	ME
32104	13734574.44	2086903.37	--	ME
32105	13734612.30	2086882.76	--	ME
32106	13734651.24	2086861.47	--	ME
32107	13734701.58	2086833.93	--	ME
32108	13734738.25	2086813.84	--	ME
32109	13734763.61	2086799.95	--	ME
32110	13734684.03	2086843.52	--	ME
32116	13734456.58	2086966.90	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	92
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	169
0110-6001	EXCAVATION (ROADWAY)	CY	23
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	43
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	180
0162-6002	BLOCK SODDING	SY	180
0168-6001	VEGETATIVE WATERING	MG	2.81
0420-6074	CL C CONC (MISC)	CY	2.1
0471-6003	GRATE & FRAME	EA	9
0496-6007	REMOV STR (PIPE)	LF	206
0529-6002	CONC CURB (TY II)	LF	173
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	180
0530-6005	DRIVEWAYS (ACP)	SY	95
0531-6001	CONC SIDEWALKS (4")	SY	17
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	82
7196-6001	ADJUST EXISTING VALVE BOX	EA	3

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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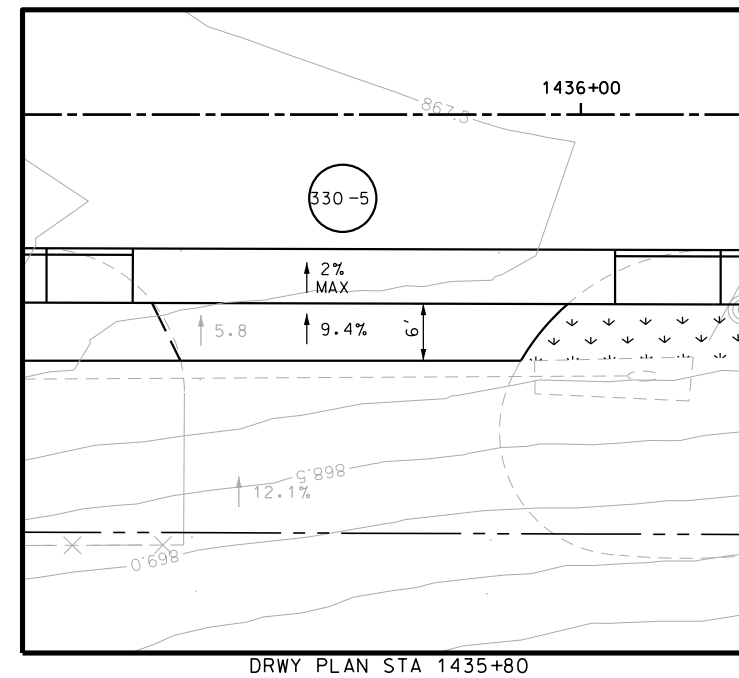
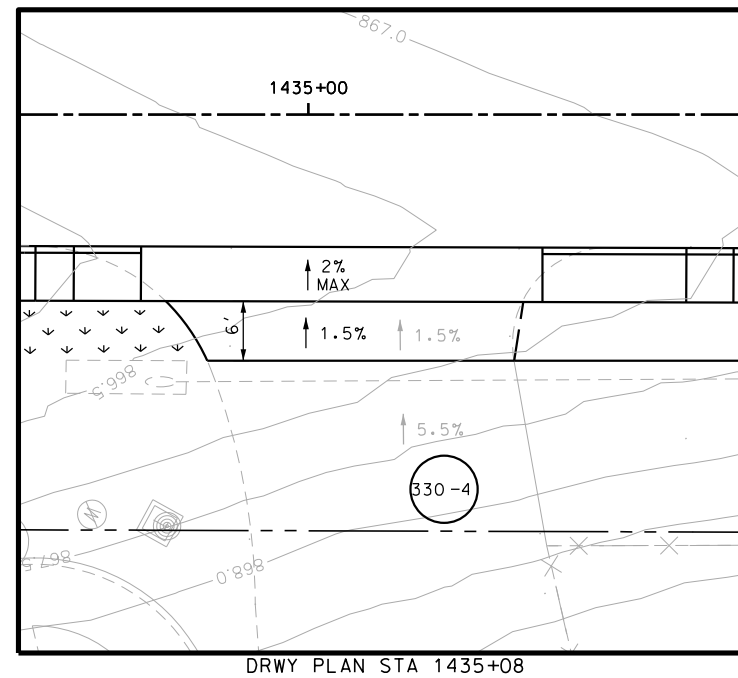
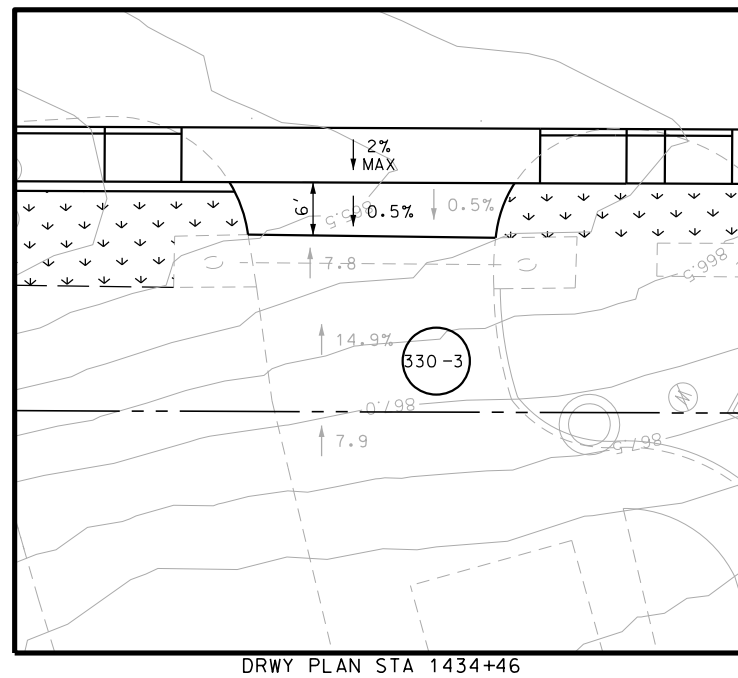
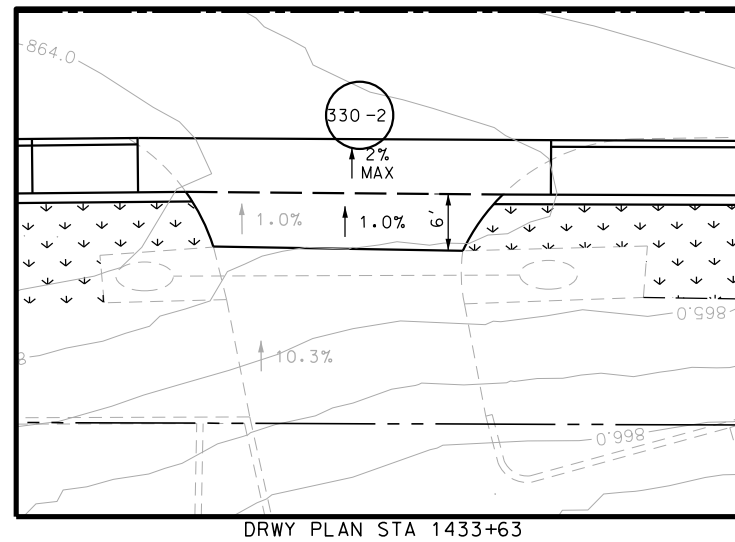
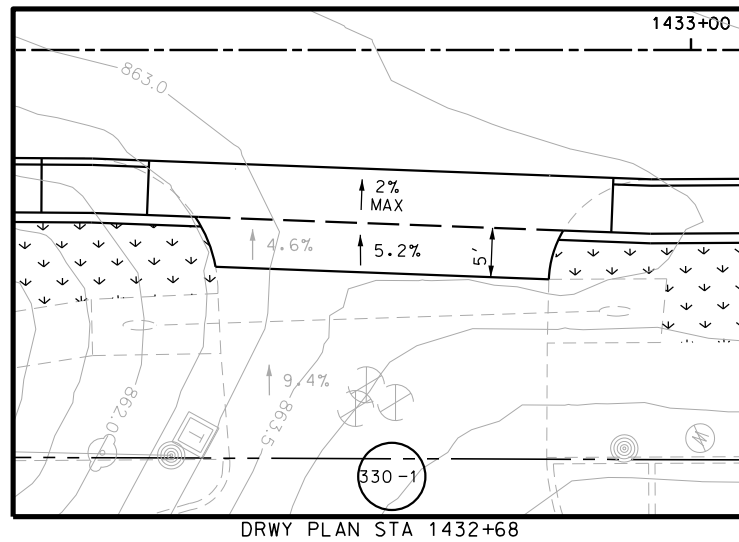
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1432+00 TO STA 1436+00

SHEET 30 OF 126

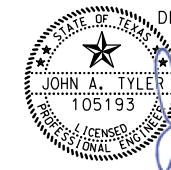
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	330

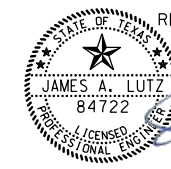
Plotted on: 5/3/2019

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DESIGN  

 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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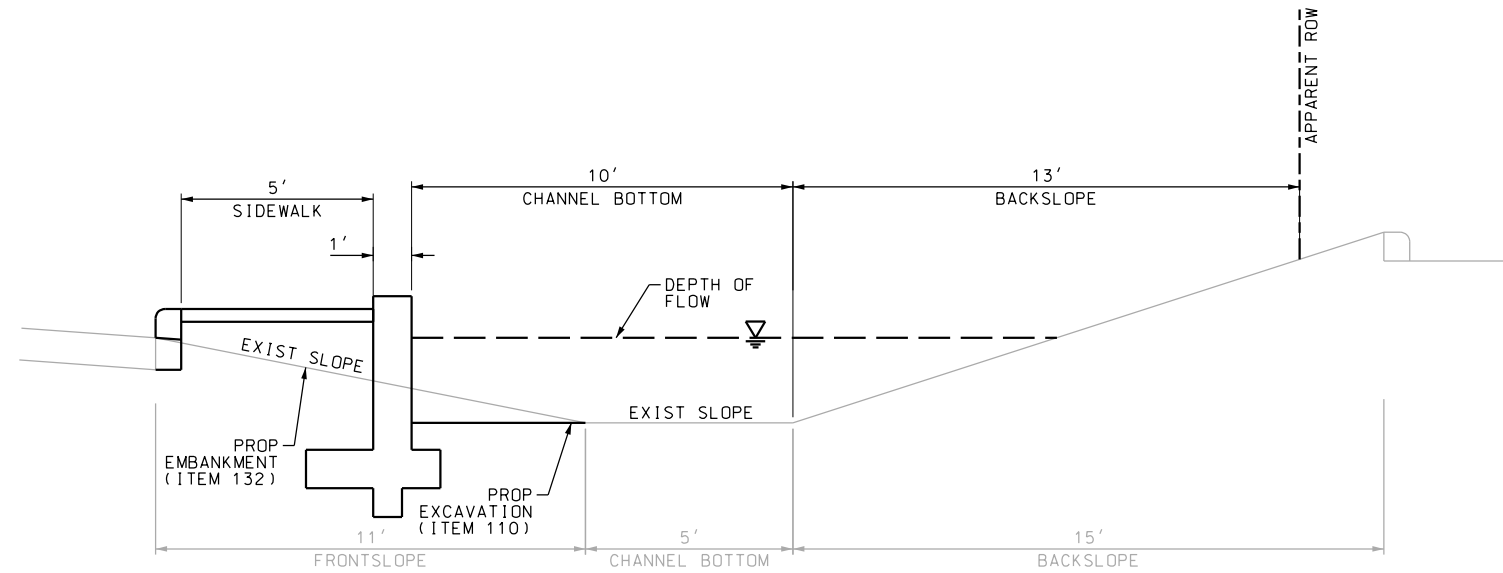
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1432+00 TO STA 1436+00

SHEET 31 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
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				576
				SHEET NO.
				331

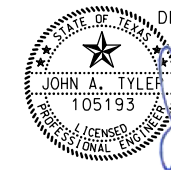
Plotted on: 5/3/2019

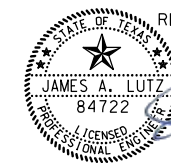
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**SECTION A-A**  
N.T.S.

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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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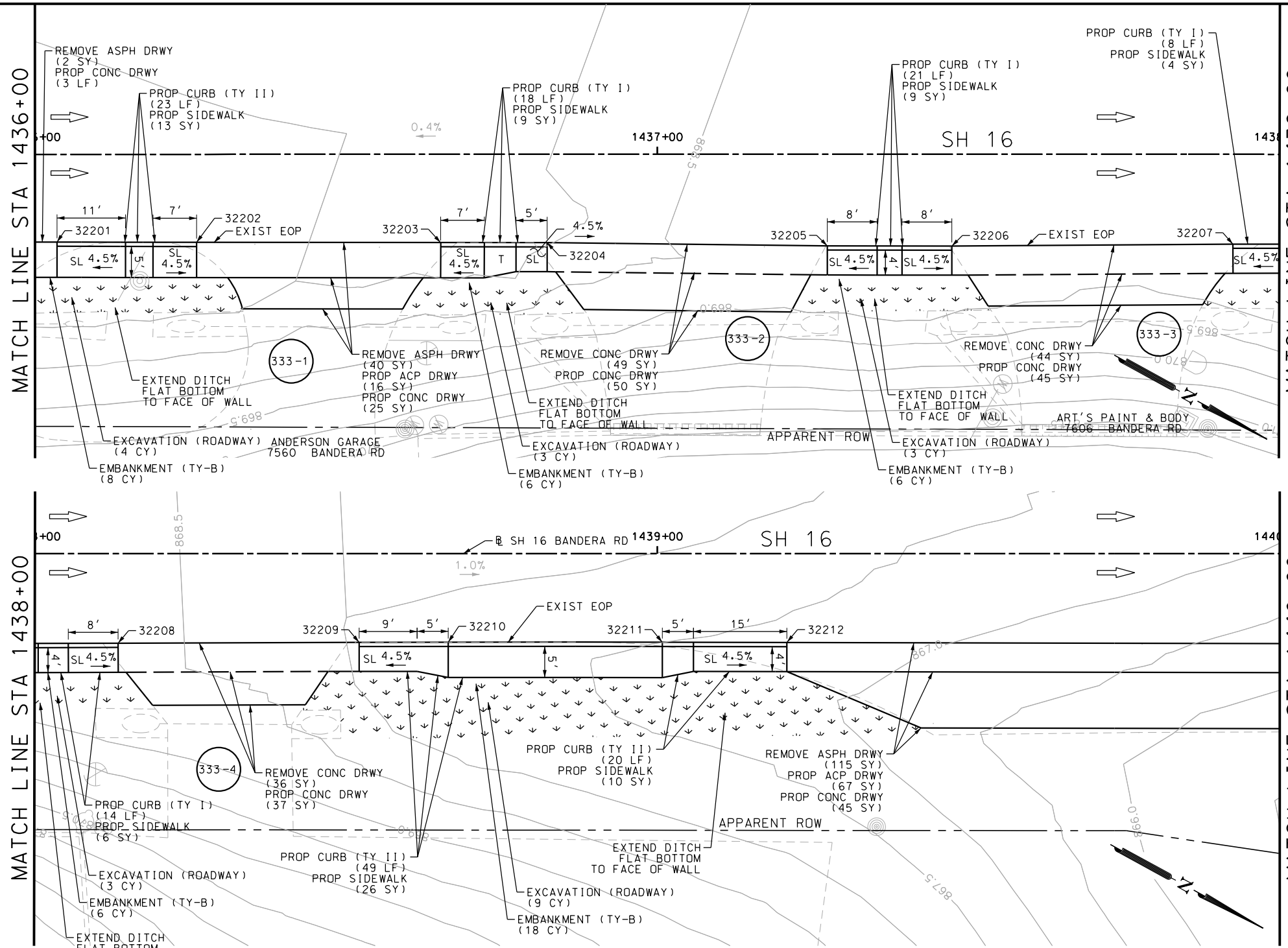
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1432+00 TO STA 1436+00

SHEET 32 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	332

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*23.dgn

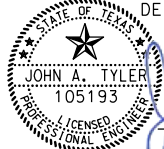


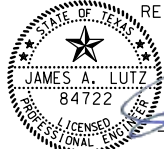
NOTE: FOR SET RIPRAP AND TOE DOWN DIMENSIONS, SEE STANDARDS PSET-SP AND PSET-RR

POINT	NORTHING	EASTING	ELEV	DESC
32201	13734807.67	2086775.80	--	ME
32202	13734827.33	2086765.00	--	ME
32203	13734861.69	2086746.10	--	ME
32204	13734876.67	2086737.86	--	ME
32205	13734916.33	2086716.57	--	ME
32206	13734933.86	2086706.94	--	ME
32207	13734973.27	2086684.86	--	ME
32208	13734991.52	2086674.77	--	ME
32209	13735025.40	2086656.02	--	ME
32210	13735037.94	2086649.13	--	ME
32211	13735068.11	2086632.58	--	ME
32212	13735085.66	2086622.99	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	129
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	157
0110-6001	EXCAVATION (ROADWAY)	CY	22
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	44
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	155
0162-6002	BLOCK SODDING	SY	155
0168-6001	VEGETATIVE WATERING	MG	2.42
0529-6002	CONC CURB (TY II)	LF	153
0530-6004	DRIVEWAYS (CONC)	SY	205
0530-6005	DRIVEWAYS (ACP)	SY	83
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	77

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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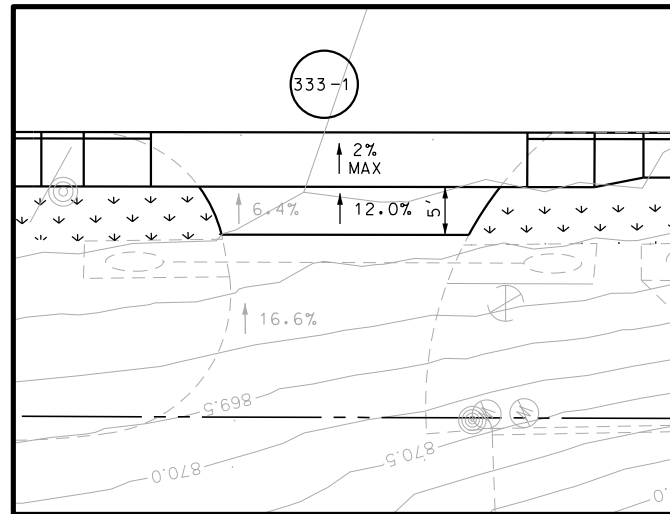
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1436+00 TO STA 1440+00

SHEET 33 OF 126

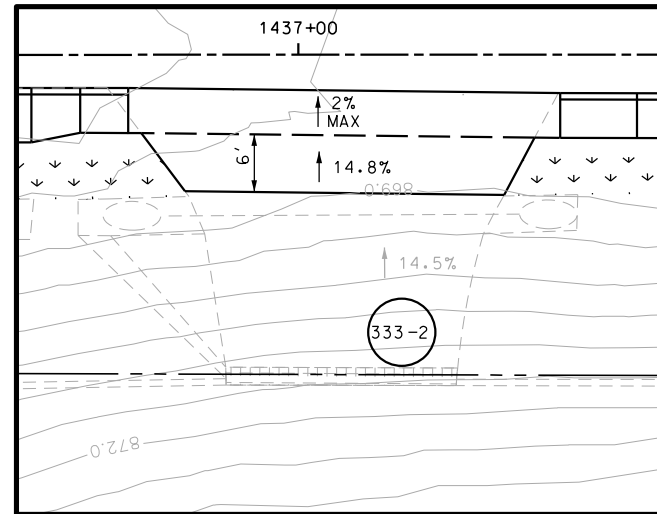
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	333

Plotted on: 5/3/2019

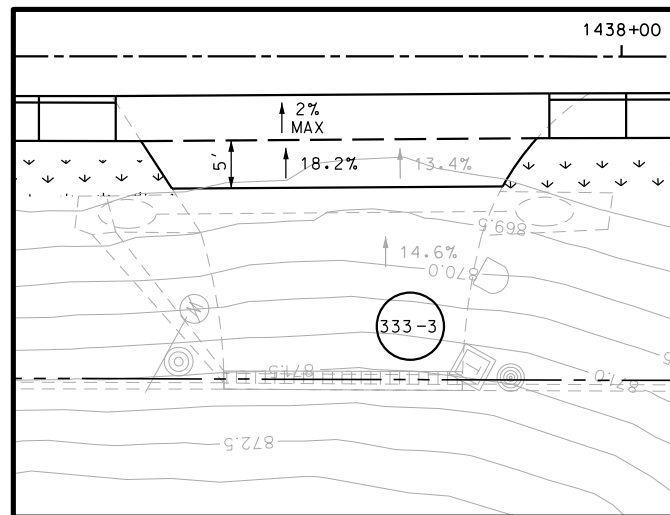
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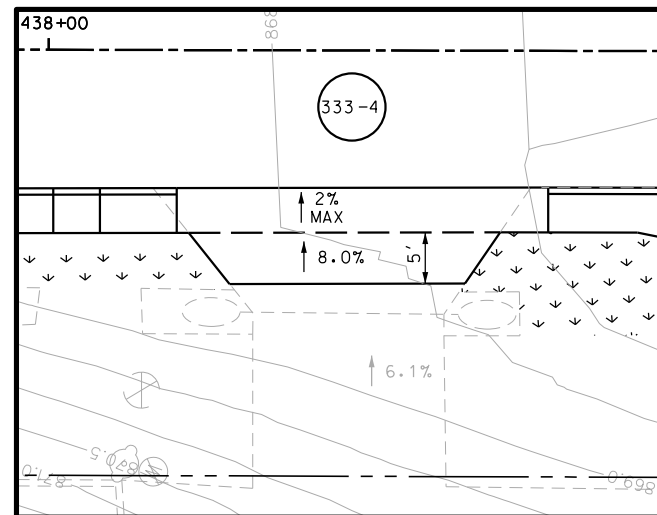
DRWY PLAN STA 1436+46



DRWY PLAN STA 1437+05



DRWY PLAN STA 1437+71



DRWY PLAN STA 1438+31

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DESIGN

John A. Tyler, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

James A. Lutz, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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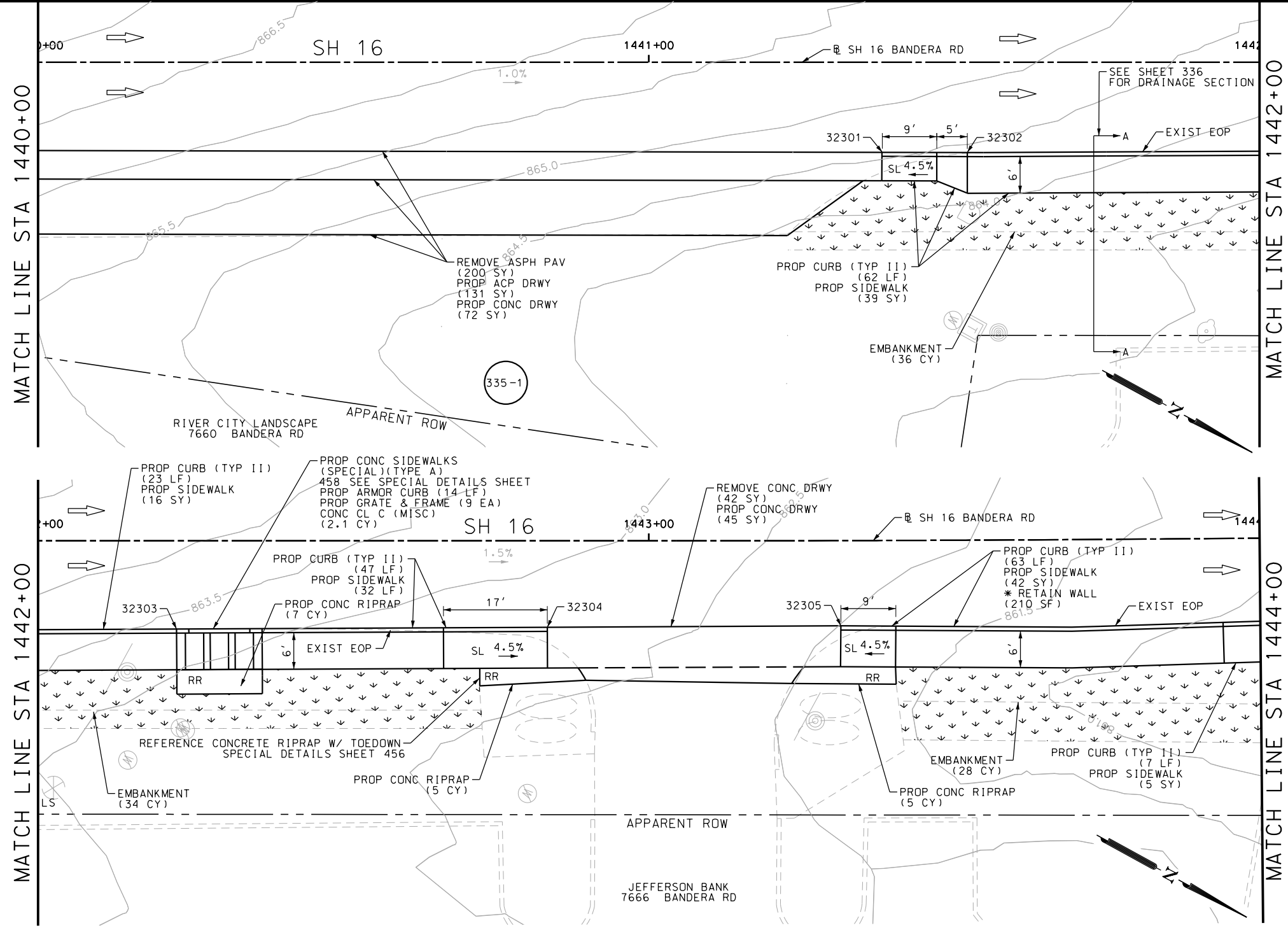
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1436+00 TO STA 1440+00

SHEET 34 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	334

Plotted on: 5/3/2019

Design File Name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*24.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	42
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	200
0110-6001	EXCAVATION (ROADWAY)	CY	10
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	98
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	233
0162-6002	BLOCK SODDING	SY	233
0168-6001	VEGETATIVE WATERING	MG	3.63
0420-6074	CL C CONC (MISC)	CY	23.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	202
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	117
0530-6005	DRIVEWAYS (ACP)	SY	131
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	134

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

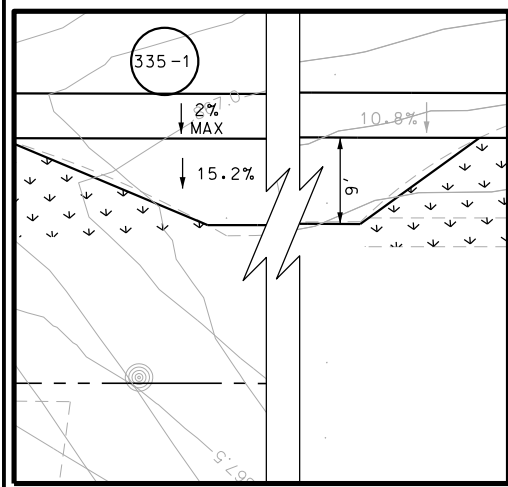
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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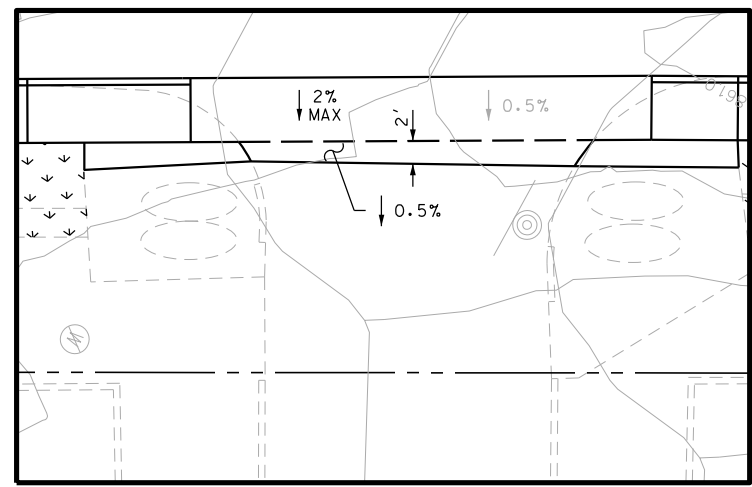
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1440+00 TO STA 1444+00

SHEET 35 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				335



DRYW PLAN STA 1440+21

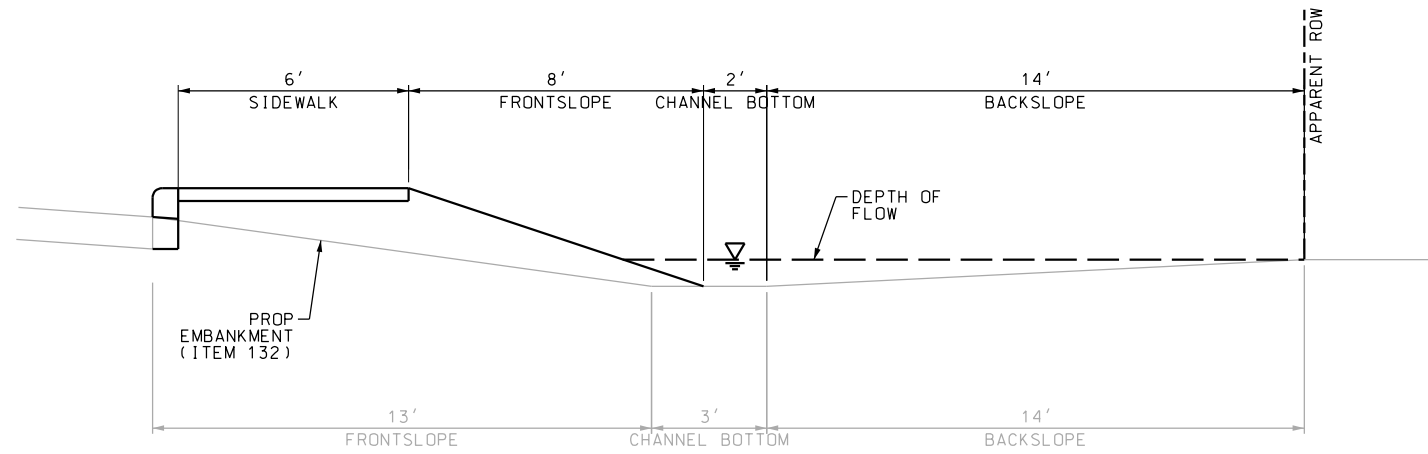


DRYW PLAN STA 1443+07

POINT	NORTHING	EASTING	ELEV	DESC
32301	13735276.44	2086518.84	--	ME
32302	13735288.73	2086512.13	--	ME
32303	13735350.40	2086477.93	--	ME
32304	13735403.48	2086448.49	--	ME
32305	13735445.50	2086425.16	--	ME

Plotted on: 5/3/2019

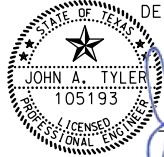
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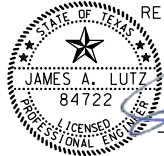


**SECTION A-A**  
N. T. S.

**NOTES:**

- \* FOR CONTRACTOR INFORMATION ONLY
- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1440+00 TO STA 1444+00

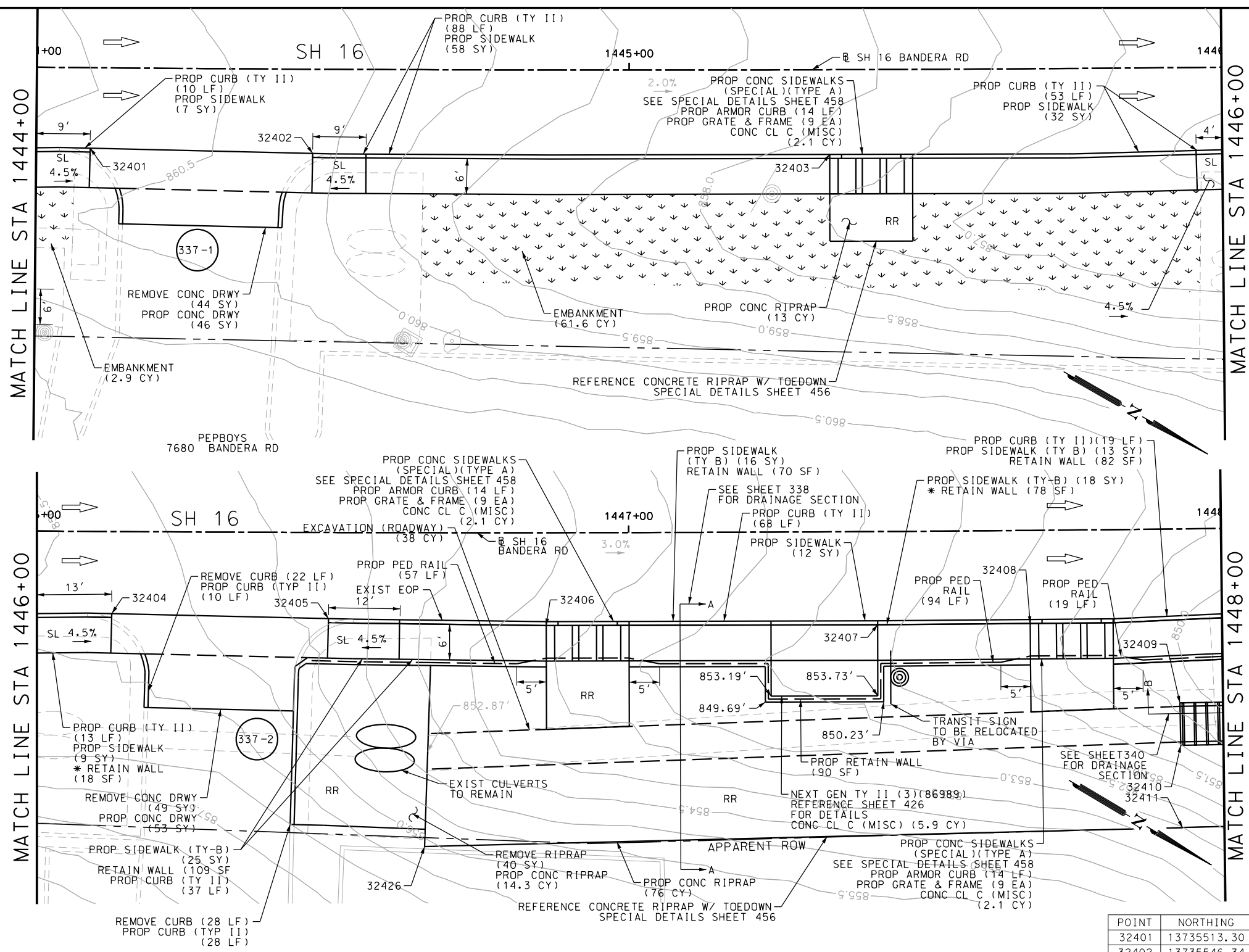
SHEET 36 OF 126

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	336



Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Bandera Dr\WB\*25.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	44
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	86
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	87
0110-6001	EXCAVATION (ROADWAY)	CY	38
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	65
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	225
0162-6002	BLOCK SODDING	SY	225
0168-6001	VEGETATIVE WATERING	MG	3.51
0420-6074	CL C CONC (MISC)	CY	12.2
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	90
0432-6003	RIPRAP (CONC) (6 IN)	CY	104
0450-6048	RAIL (HANDRAIL) (TY B)	LF	170
0471-6003	GRATE & FRAME	EA	27
0529-6002	CONC CURB (TY II)	LF	326
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	42
0530-6004	DRIVEWAYS (CONC)	SY	92
0531-6001	CONC SIDEWALKS (4")	SY	111
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	72

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

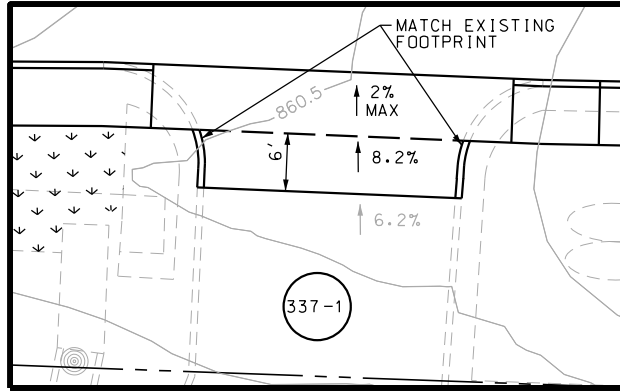
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

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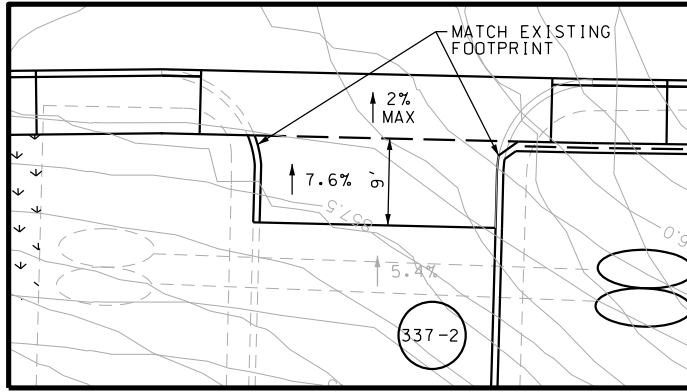
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1444+00 TO STA 1448+00

SHEET 37 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				337



DRWY PLAN STA 1444+28

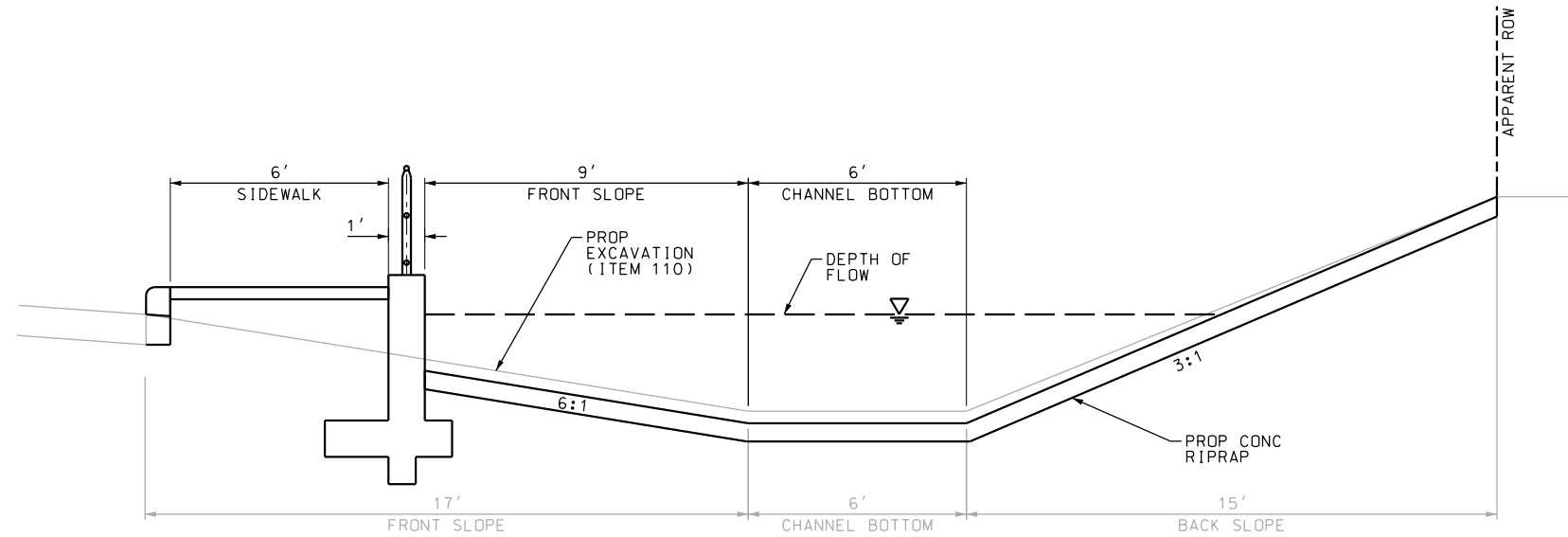


DRWY PLAN STA 1446+31

POINT	NORTHING	EASTING	ELEV	DESC
32401	13735513.30	2086386.98	--	ME
32402	13735546.34	2086369.06	--	ME
32403	13735622.15	2086325.80	--	ME
32404	13735690.26	2086285.60	--	ME
32405	13735722.13	2086267.59	--	ME
32406	13735753.97	2086249.21	--	ME
32407	13735802.31	2086221.00	--	ME
32408	13735823.98	2086207.05	--	ME
32409	13735852.92	2086206.22	846.03	PROP
32410	13735856.72	2086212.30	846.03	PROP
32411	13735864.07	2086224.06	--	ME
32426	13735755.76	2086292.34	--	ME

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\Bandera Dr\WB\*25\*A.dgn

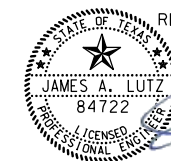


**SECTION A-A**  
N.T.S.

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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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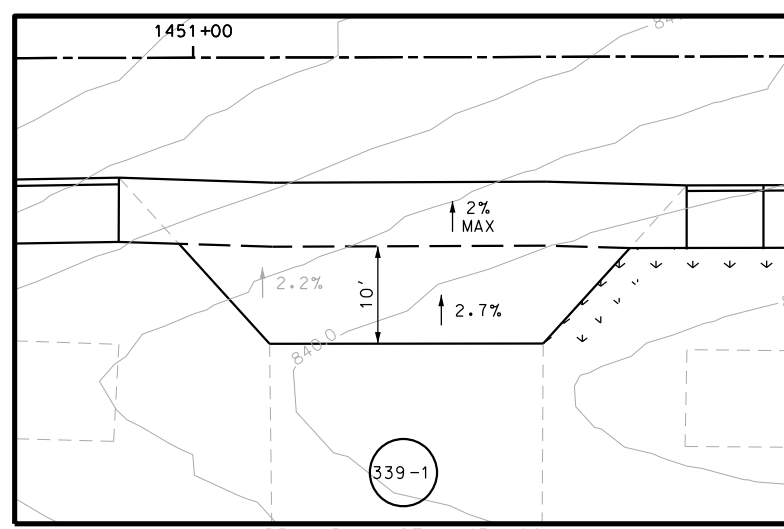
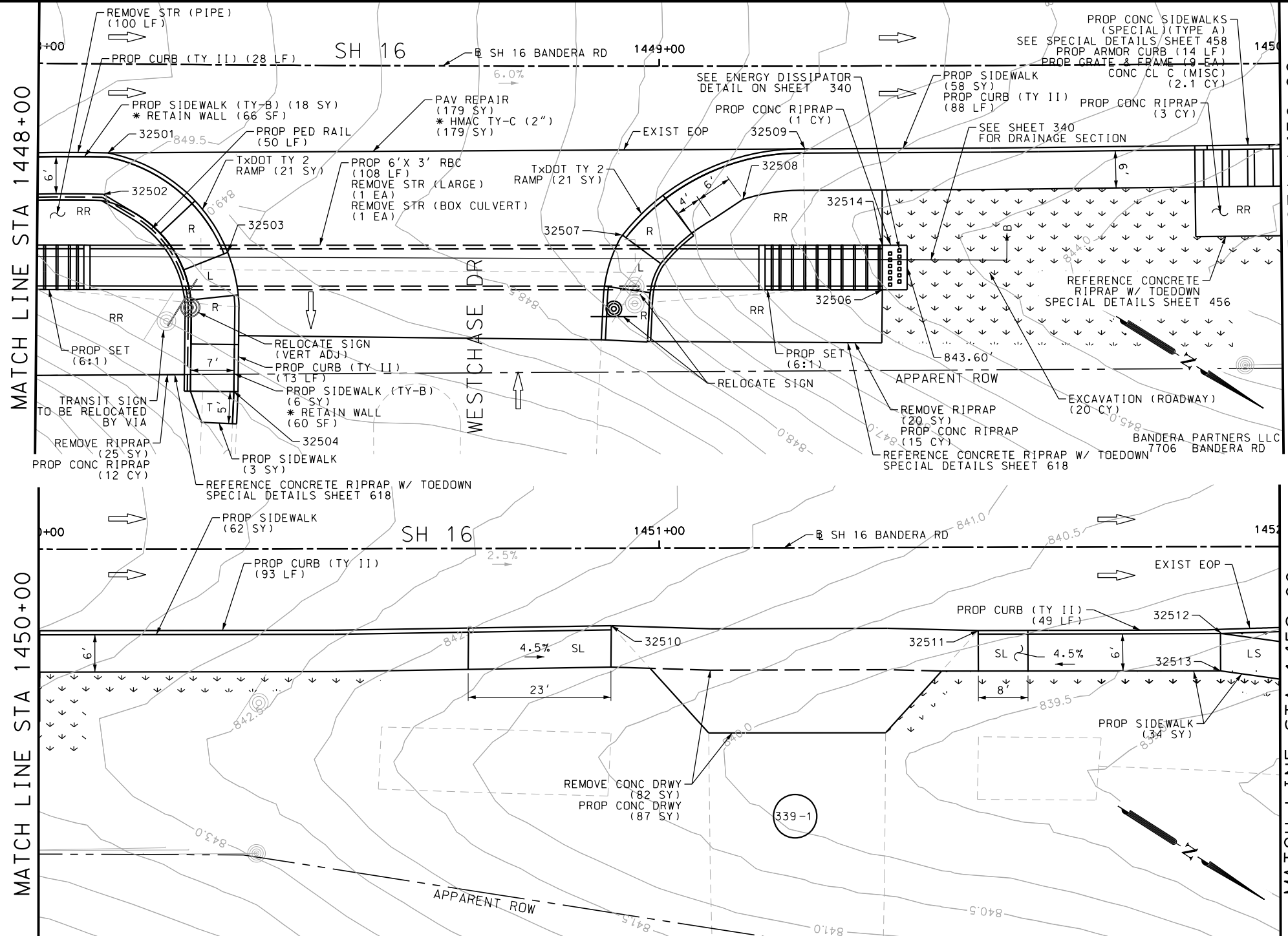
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1444+00 TO STA 1448+00

SHEET 38 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	338

Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*26.dgn



POINT	NORTHING	EASTING	ELEV	DESC
32501	13735860.90	2086183.70	--	ME
32502	13735863.78	2086189.75	--	ME
32503	13735885.78	2086187.05	--	ME
32504	13735898.51	2086205.56	--	ME
32506	13735978.41	2086136.24	843.66	PROP
32507	13735938.24	2086150.96	--	ME
32508	13735951.63	2086135.80	--	ME
32509	13735955.79	2086123.60	--	ME
32510	13736097.74	2086031.99	--	ME
32511	13736147.99	2086000.81	--	ME
32512	13736181.26	2085980.08	--	ME
32513	13736184.39	2085985.24	840.45	PROP
32514	13735974.61	2086130.17	843.66	PROP

ITEM	DESCRIPTION	UNIT	QTY
*0340-6066	D-GR HMA (SQ) TY-C PG76-22	SY	179
0104-6009	REMOVING CONC (RIPRAP)	SY	45
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	82
0110-6001	EXCAVATION (ROADWAY)	CY	20
0160-6003	FURNISHING AND PLACING TOPSOIL (4'')	SY	240
0162-6002	BLOCK SODDING	SY	240
0168-6001	VEGETATIVE WATERING	MG	3.74
0351-6028	FLEX PAVE STRUCTURE REPAIR (8''-10'')	SY	179
0420-6074	CL C CONC (MISC)	CY	2.1
0432-6003	RIPRAP (CONC) (6 IN)	CY	31
0450-6048	RAIL (HANDRAIL) (TY B)	LF	50
0462-6010	CONC BOX CULV (6 FT X 3 FT)	LF	108
0467-6134	SET (TY I) (S= 4 FT) (HW= 2 FT) (6:1) (P)	EA	2
0471-6003	GRATE & FRAME	EA	9
0496-6001	REMOV STR (BOX CULVERT)	EA	1
0496-6007	REMOV STR (PIPE)	LF	100
0496-6041	REMOV STR (LARGE)	EA	1
0529-6002	CONC CURB (TY II)	LF	271
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	87
0531-6001	CONC SIDEWALKS (4'')	SY	157
0531-6019	CURB RAMPS (TY 2)	SY	42
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	24
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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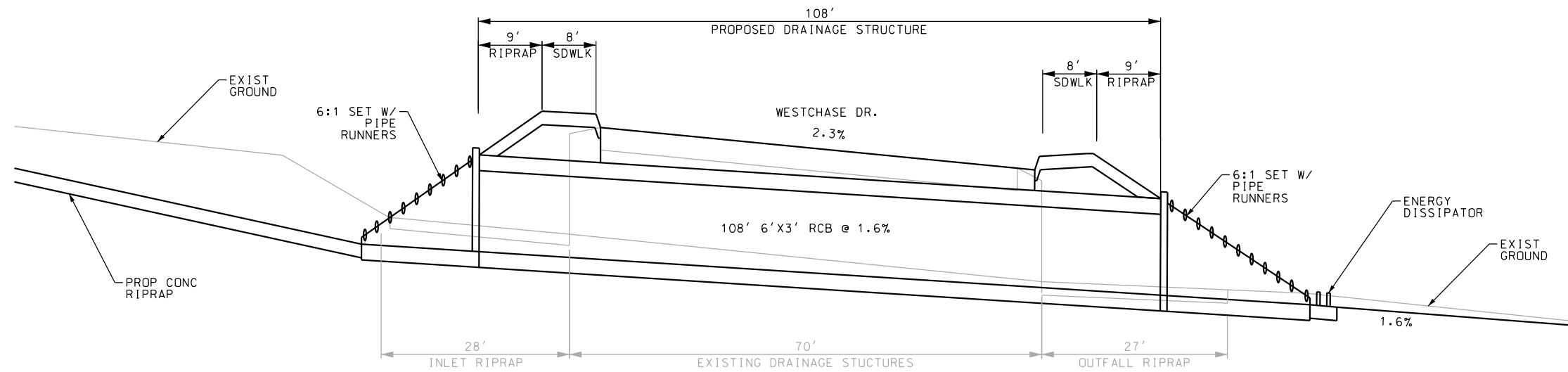
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1448+00 TO STA 1452+00

SHEET 39 OF 126

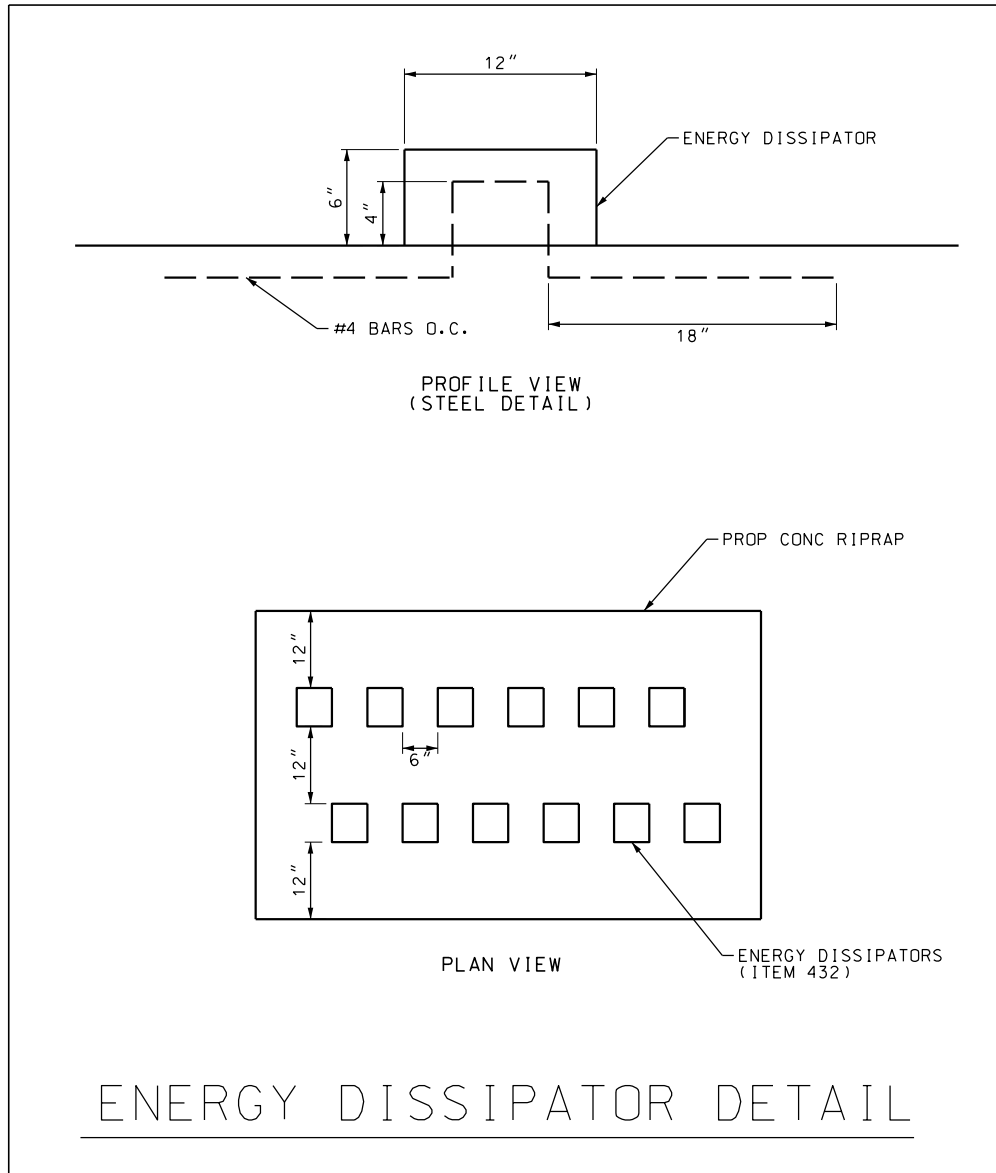
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				339

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*26\*A.dgn



SECTION B-B



- NOTES:
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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

5/3/2019  
 JOHN A. TYLER, P.E. DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

5/3/2019  
 JAMES A. LUTZ, P.E. DATE

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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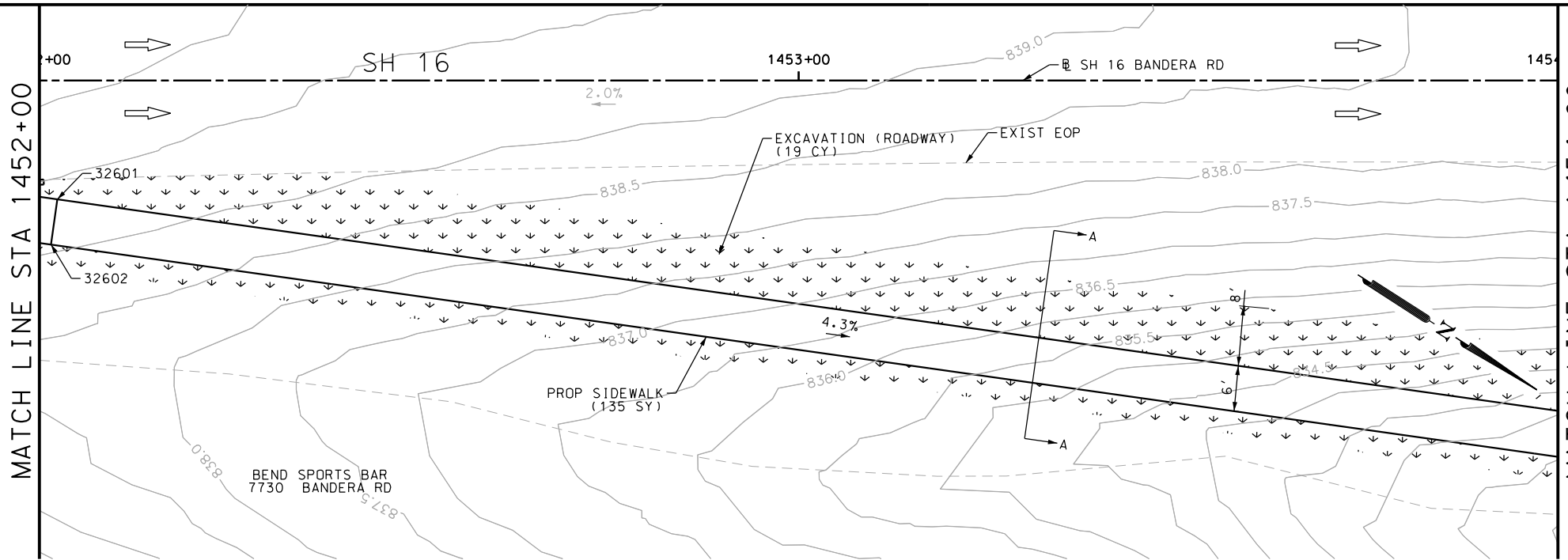
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1448+00 TO STA 1452+00

SHEET 40 OF 126

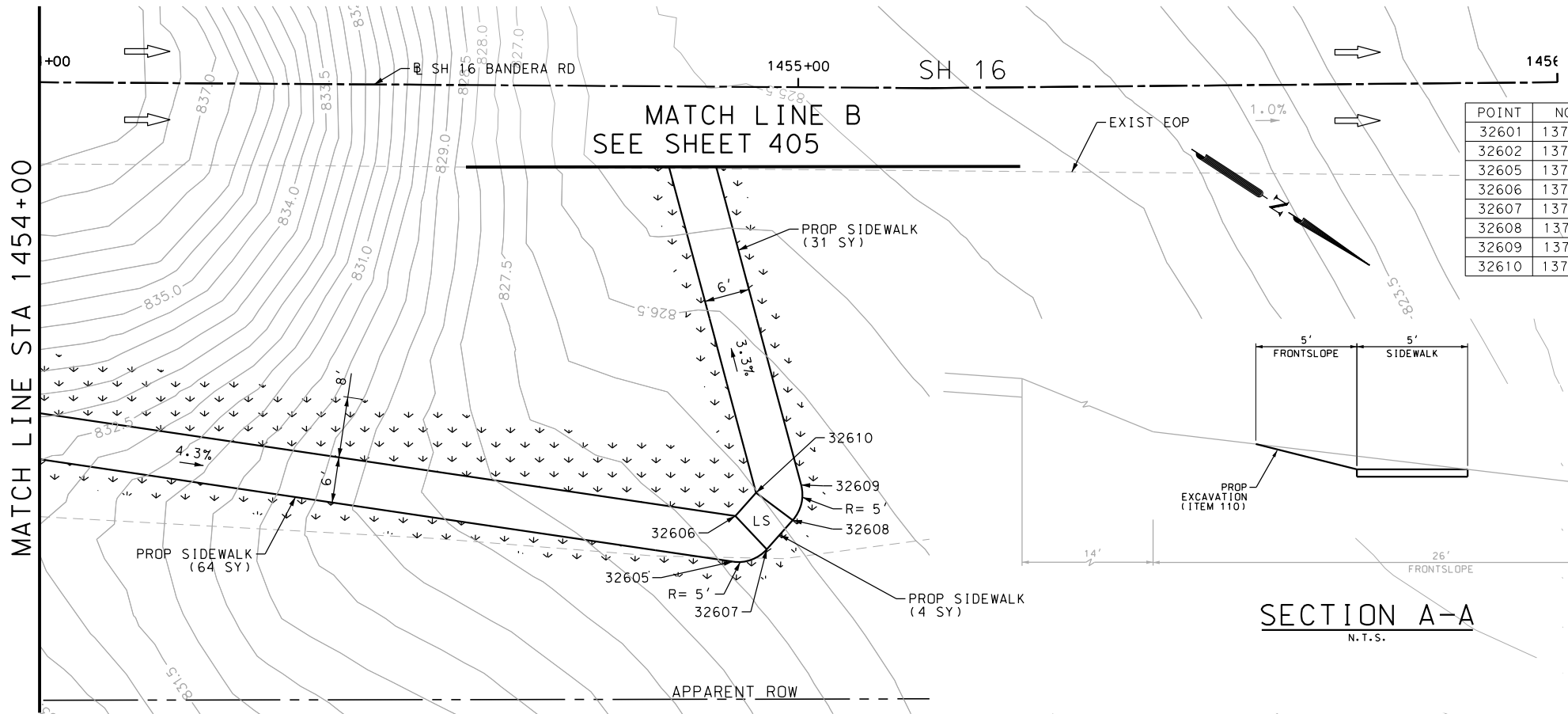
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	340

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*27.dgn

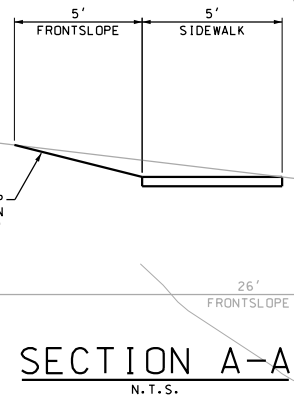


DETAIL A

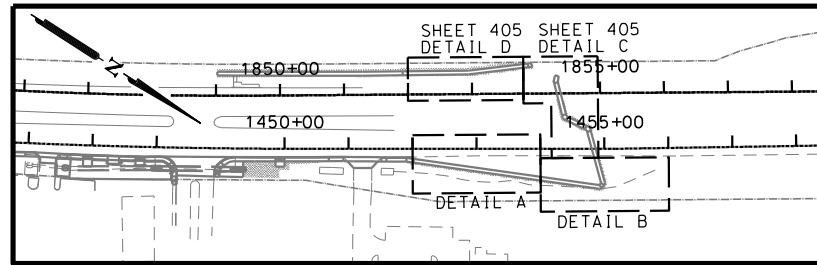


DETAIL B

POINT	NORTHING	EASTING	ELEV	DESC
32601	13736192.06	2085975.11	840.35	PROP
32602	13736194.56	2085980.56	840.44	PROP
32605	13736460.89	2085858.03	827.83	PROP
32606	13736457.89	2085852.80	827.86	PROP
32607	13736463.74	2085854.23	827.77	PROP
32608	13736464.51	2085849.14	827.66	PROP
32609	13736462.91	2085844.67	827.66	PROP
32610	13736458.50	2085848.77	827.75	PROP



SECTION A-A  
N.T.S.



ITEM	DESCRIPTION	UNIT	QTY
0110-6001	EXCAVATION (ROADWAY)	CY	19
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	390
0162-6002	BLOCK SODDING	SY	390
0168-6001	VEGETATIVE WATERING	MG	6.08
0531-6001	CONC SIDEWALKS (4")	SY	234

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1452+00 TO STA 1456+00  
 SHEET 41 OF 126

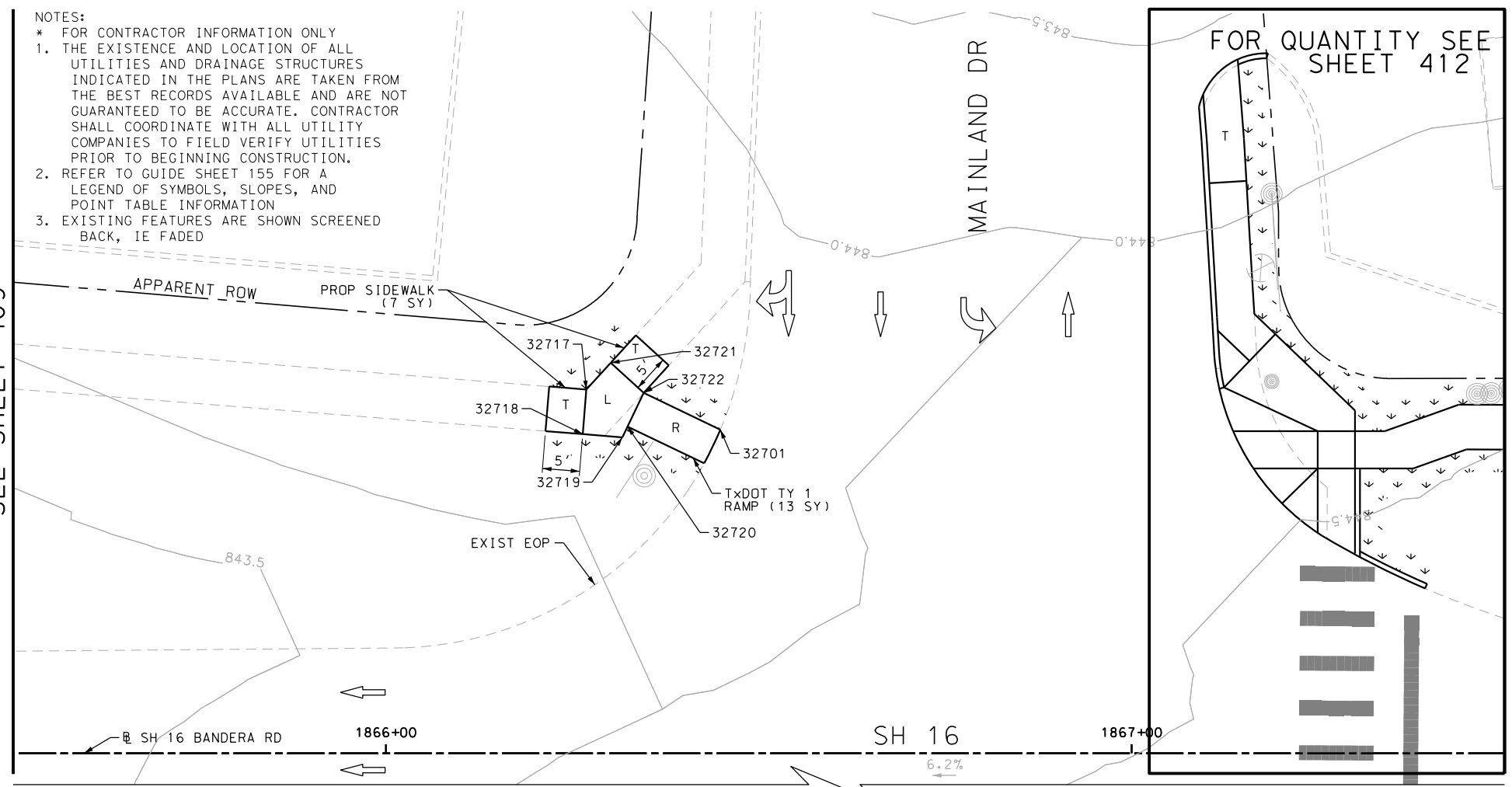
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				341

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*28.dgn

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

MATCH LINE STA 1865+50  
SEE SHEET 409



SEE MEDIAN DETAIL

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	16
0110-6001	EXCAVATION (ROADWAY)	CY	3
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	5
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0450-6048	RAIL (HANDRAIL) (TY B)	LF	40
0464-6001	RC PIPE (CL III) (12 IN)	LF	10
0529-6002	CONC CURB (TY II)	LF	12
0531-6001	CONC SIDEWALKS (4")	SY	16
0531-6018	CURB RAMPS (TY 1)	SY	13
0531-6019	CURB RAMPS (TY 2)	SY	20
0531-6023	CURB RAMPS (TY 6)	SY	13
0531-6030	CURB RAMPS (TY 21)	SY	10
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	22
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	4
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	4
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

DESIGN

JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

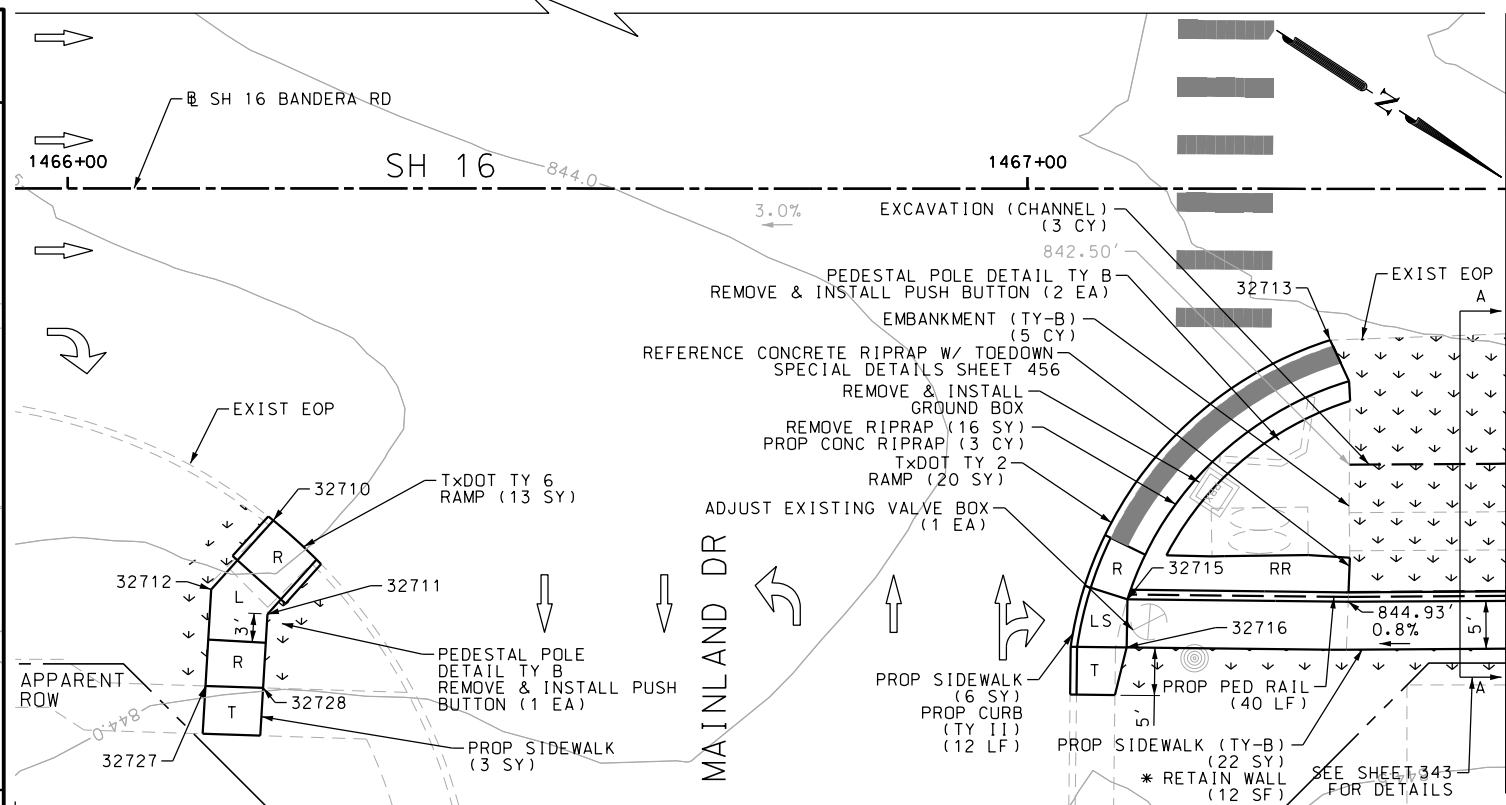
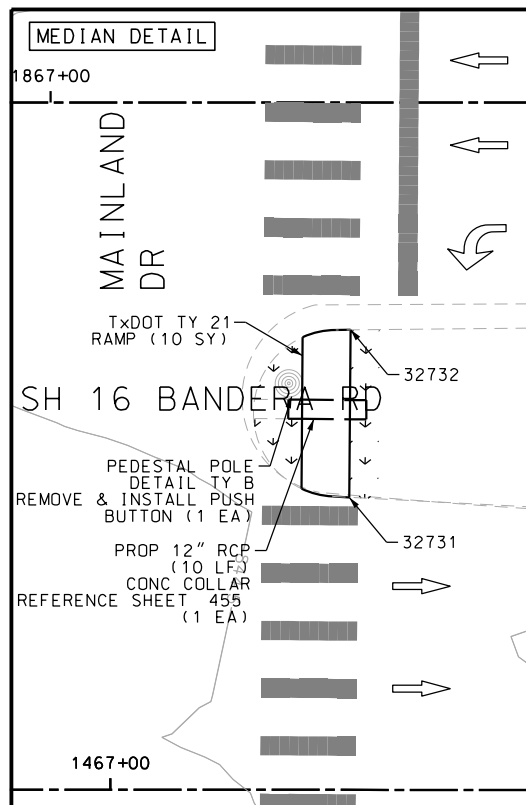
**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1465+50 TO STA 1467+50  
 STA 1865+50 TO STA 1867+50  
 SHEET 42 OF 126

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	342

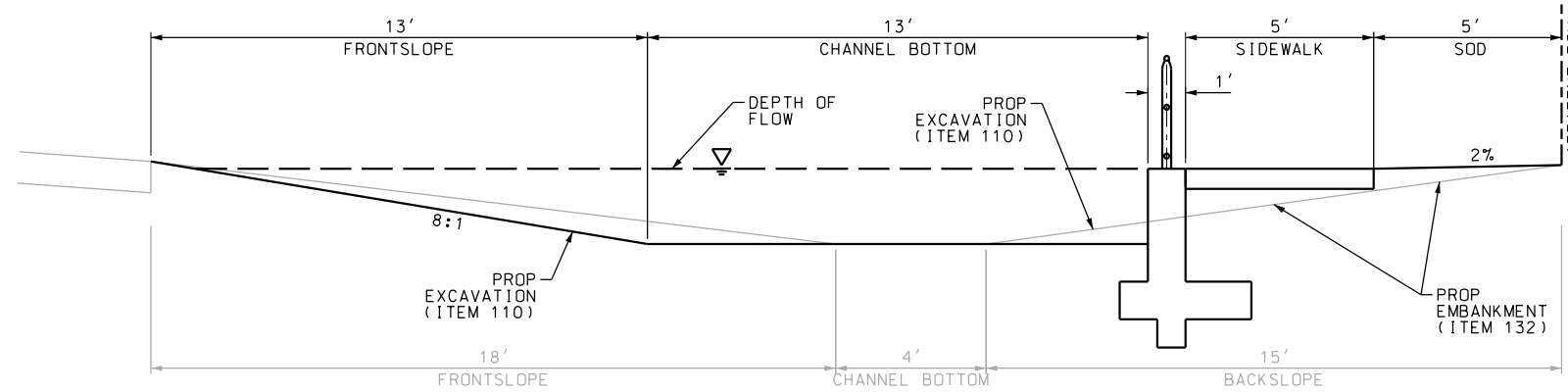


Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\WB\*28\*A.dgn

POINT	NORTHING	EASTING	ELEV	DESC
32701	13737315.75	2085068.96	--	ME
32702	13737373.43	2085031.51	--	ME
32703	13737389.84	2085026.76	844.69	PROP
32704	13737396.39	2085022.49	844.68	PROP
32705	13737400.96	2085016.43	844.70	PROP
32706	13737390.46	2085020.39	844.77	PROP
32707	13737396.81	2085011.96	844.78	PROP
32708	13737385.57	2085020.23	844.76	PROP
32709	13737352.54	2085005.41	--	ME
32710	13737389.14	2085212.69	--	ME
32711	13737393.98	2085221.20	844.00	PROP
32712	13737387.67	2085222.25	843.93	PROP
32713	13737471.06	2085136.72	--	ME
32715	13737468.14	2085170.90	--	ME
32716	13737470.83	2085175.11	--	ME
32717	13737297.76	2085074.28	845.20	PROP
32718	13737300.62	2085079.55	845.15	PROP
32719	13737305.31	2085077.00	845.13	PROP
32720	13737305.10	2085075.40	845.13	PROP
32721	13737298.53	2085069.49	845.13	PROP

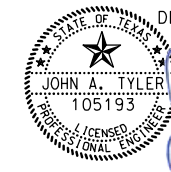
POINT	NORTHING	EASTING	ELEV	DESC
32722	13737304.45	2085070.45	845.06	PROP
32723	13737364.34	2085021.33	--	ME
32724	13737367.19	2085016.78	--	ME
32725	13737382.92	2085025.31	844.75	PROP
32726	13737387.11	2085022.58	844.76	PROP
32727	13737392.67	2085230.98	844.23	PROP
32728	13737397.80	2085227.87	844.30	PROP
32729	13737481.41	2085156.72	--	ME
32730	13737485.18	2085154.60	--	ME
32731	13737440.20	2085101.65	--	ME
32732	13737430.75	2085086.96	--	ME
32733	13737371.05	2085017.50	844.90	PROP
32736	13737370.13	2085022.42	844.83	PROP

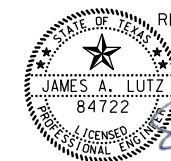


SECTION A-A  
N.T.S.

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

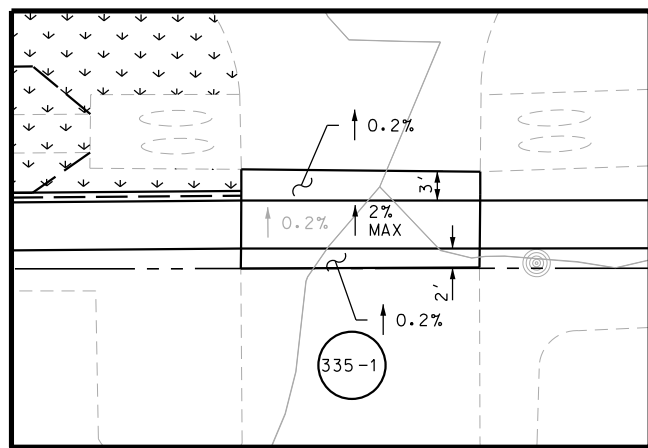
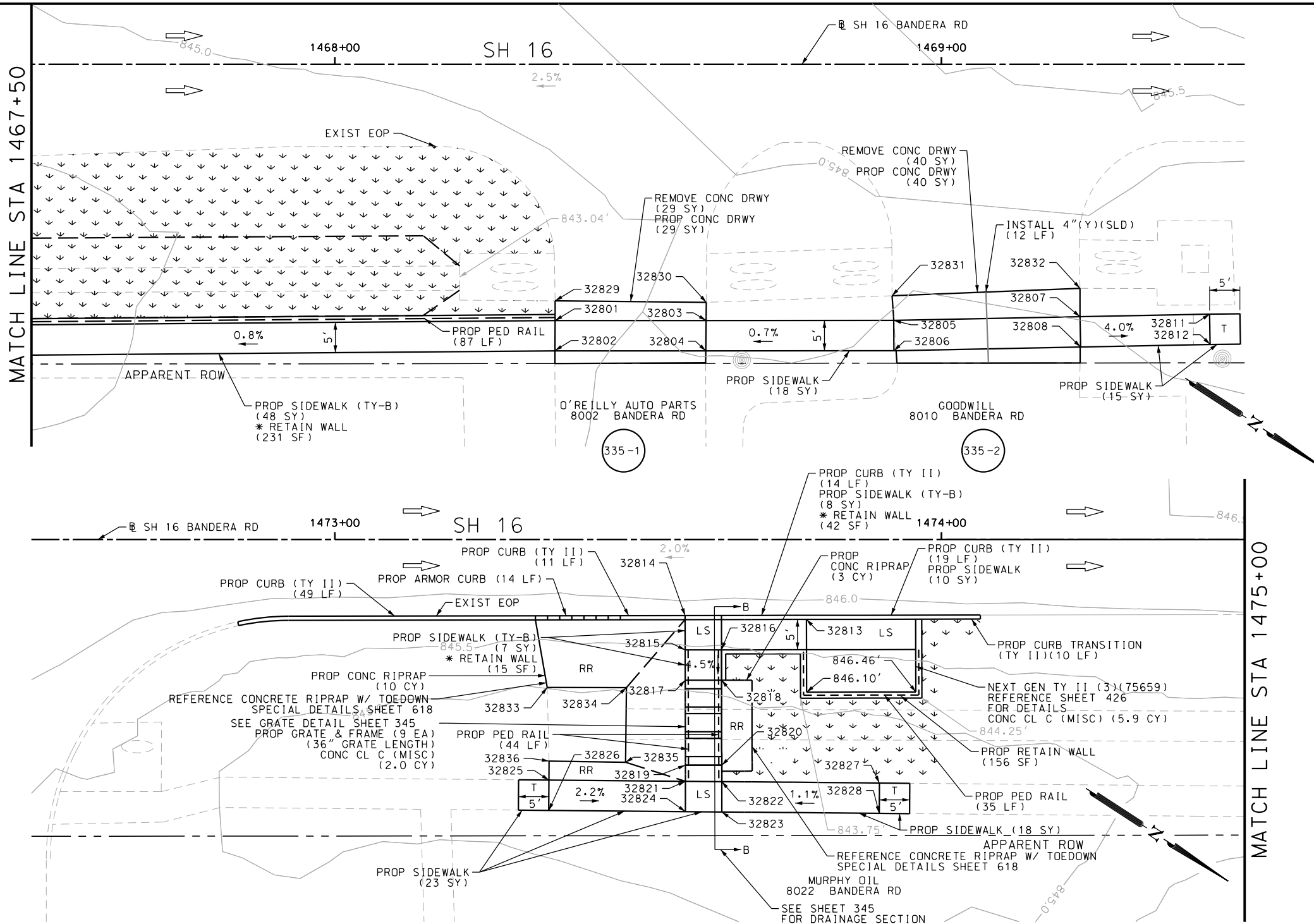


SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1465+50 TO STA 1467+50  
 STA 1865+50 TO STA 1867+50  
 SHEET 43 OF 126

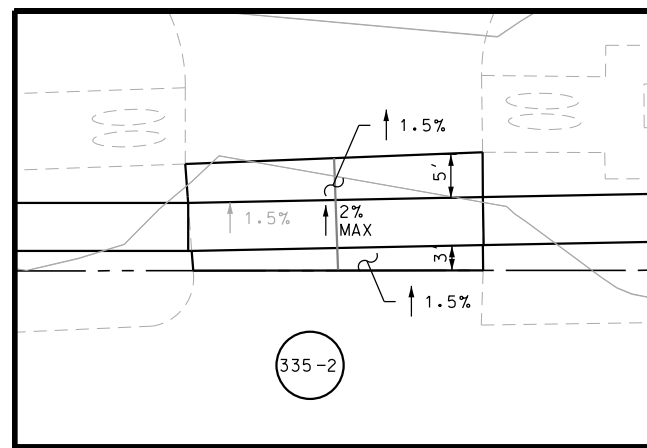
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	343

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*29.dgn



DRWY PLAN STA 1443+06



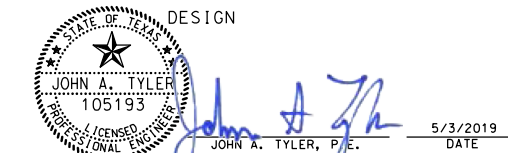
DRWY PLAN STA 1443+06

POINT	NORTHING	EASTING	ELEV	DESC
32801	13737573.25	2085101.62	845.67	PROP
32802	13737575.96	2085105.82	845.68	PROP
32803	13737594.08	2085088.00	845.82	PROP
32804	13737596.78	2085092.21	845.83	PROP
32805	13737619.99	2085071.07	846.03	PROP
32806	13737622.73	2085075.25	846.06	PROP
32807	13737645.36	2085053.78	845.99	PROP
32808	13737648.18	2085057.92	846.02	PROP
32811	13737663.03	2085041.75	845.12	PROP
32812	13737665.82	2085045.90	845.19	PROP
32814	13737993.63	2084791.69	--	ME
32815	13737996.74	2084796.43	845.15	PROP
32816	13738001.75	2084793.14	845.15	PROP
32817	13737999.48	2084800.61	844.93	PROP
32818	13738004.49	2084797.32	844.93	PROP
32819	13738007.15	2084812.32	844.86	PROP
32820	13738012.17	2084809.03	844.93	PROP
32821	13738008.61	2084814.54	844.93	PROP
32822	13738013.66	2084811.31	844.93	PROP
32823	13738016.40	2084815.49	845.00	PROP

POINT	NORTHING	EASTING	ELEV	DESC
32824	13738011.35	2084818.73	845.00	PROP
32825	13737989.66	2084826.67	845.43	PROP
32826	13737992.36	2084830.88	845.50	PROP
32827	13738035.55	2084797.29	845.23	PROP
32828	13738038.25	2084801.50	845.30	PROP
32829	13737571.48	2085098.88	--	ME
32830	13737592.47	2085085.48	--	ME
32831	13737617.52	2085067.83	--	ME
32832	13737642.80	2085049.88	--	ME
32833	13737981.08	2084814.04	--	ME
32834	13737992.01	2084806.94	--	ME
32835	13737998.63	2084817.30	--	ME
32836	13737987.97	2084824.03	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	69
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	320
0162-6002	BLOCK SODDING	SY	320
0168-6001	VEGETATIVE WATERING	MG	4.99
0420-6074	CL C CONC (MISC)	CY	7.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	156
0432-6003	RIPRAP (CONC) (6 IN)	CY	13
0450-6048	RAIL (HANDRAIL) (TY B)	LF	166
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	103
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	69
0531-6001	CONC SIDEWALKS (4")	SY	84
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	63
0666-6224	PAVEMENT SEALER 4"	LF	12
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	12
0678-6001	PAV SURF PREP FOR MRK (4")	LF	12

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1467+50 TO STA 1469+50  
 STA 1473+00 TO STA 1475+00  
 SHEET 44 OF 126

DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	344

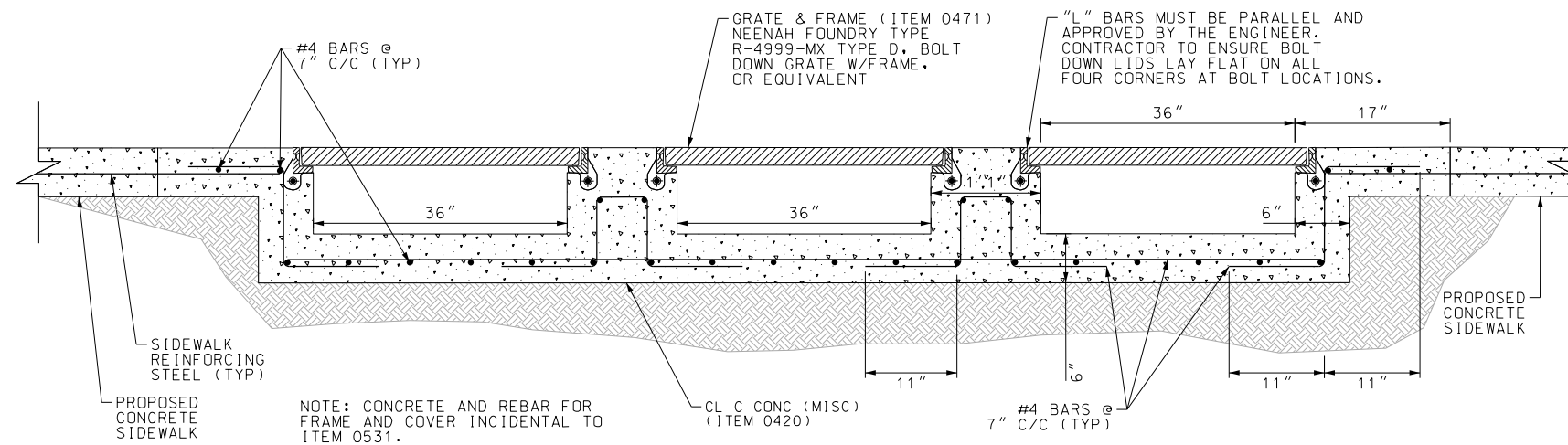


Plotted on: 5/3/2019

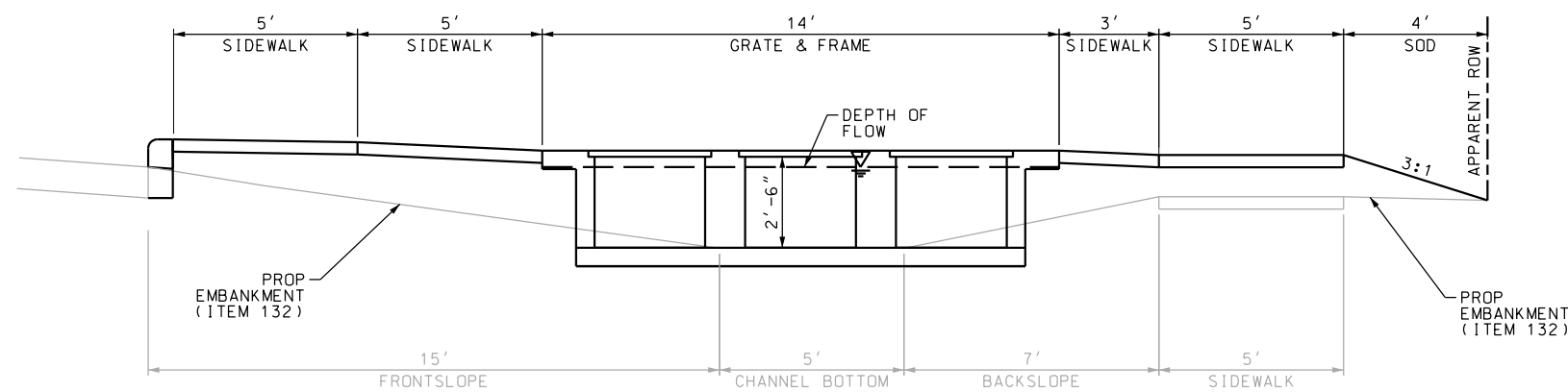
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# GRATE DETAIL

N.T.S.



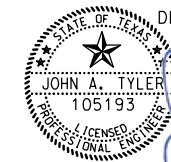
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# SECTION A-A

N.T.S.

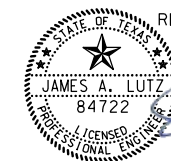
DESIGN



JOHN A. TYLER, P.E.

5/3/2019

DATE



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019

DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD

SIDEWALK  
CONSTRUCTION PLAN  
STA 1467+50 TO STA 1469+50  
STA 1473+00 TO STA 1475+00

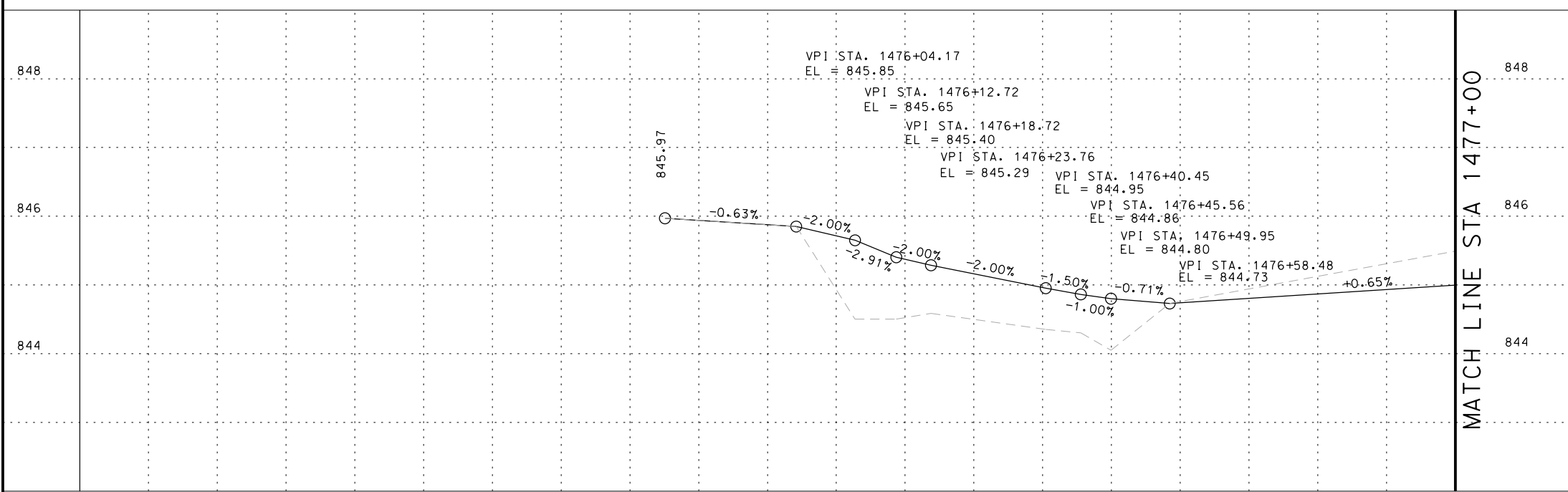
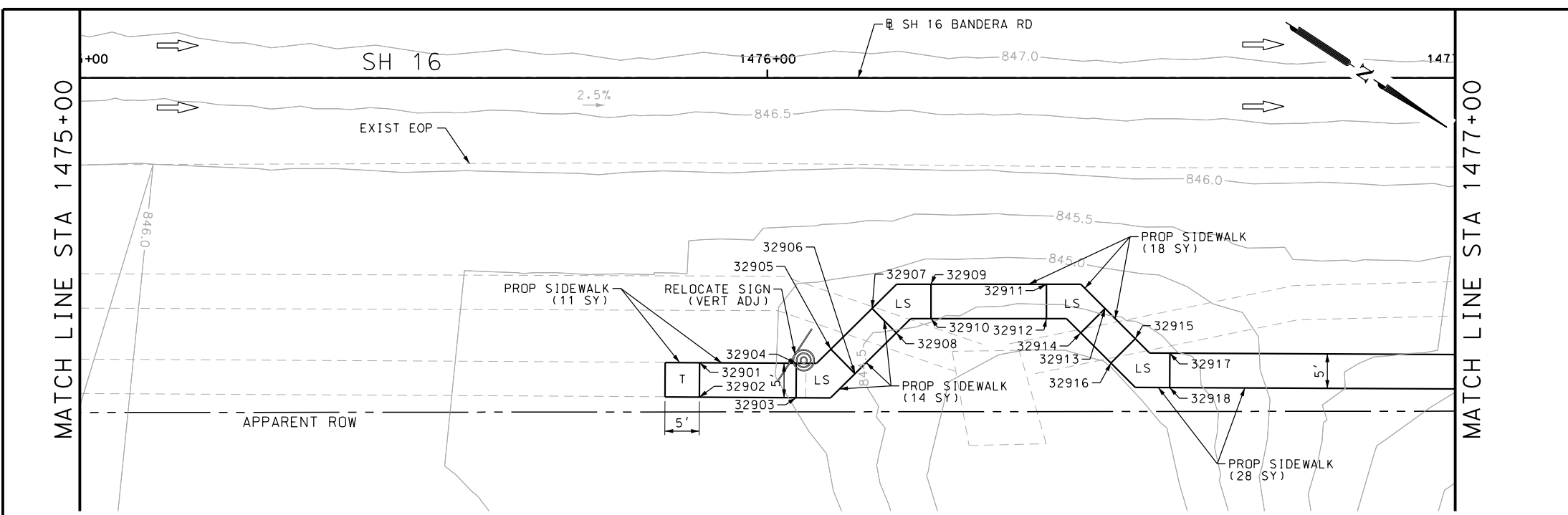
SHEET 45 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	345

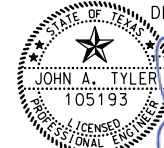
Plotted on: 5/3/2019

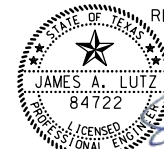
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ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	71
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
32901	13738204.01	2084688.88	--	PROF
32902	13738206.72	2084693.08	--	PROF
32903	13738218.55	2084685.45	--	PROF
32904	13738215.84	2084681.25	--	PROF
32905	13738218.92	2084676.80	--	PROF
32906	13738223.80	2084677.85	--	PROF
32907	13738220.70	2084668.54	--	PROF
32908	13738225.58	2084669.60	--	PROF
32909	13738225.94	2084660.92	--	PROF
32910	13738228.67	2084665.11	--	PROF
32911	13738240.00	2084651.74	--	PROF
32912	13738242.73	2084655.93	--	PROF
32913	13738249.08	2084650.03	--	PROF
32914	13738248.05	2084654.93	--	PROF
32915	13738255.15	2084651.31	--	PROF
32916	13738254.13	2084656.20	--	PROF
32917	13738260.51	2084650.32	--	PROF
32918	13738263.22	2084654.52	--	PROF

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



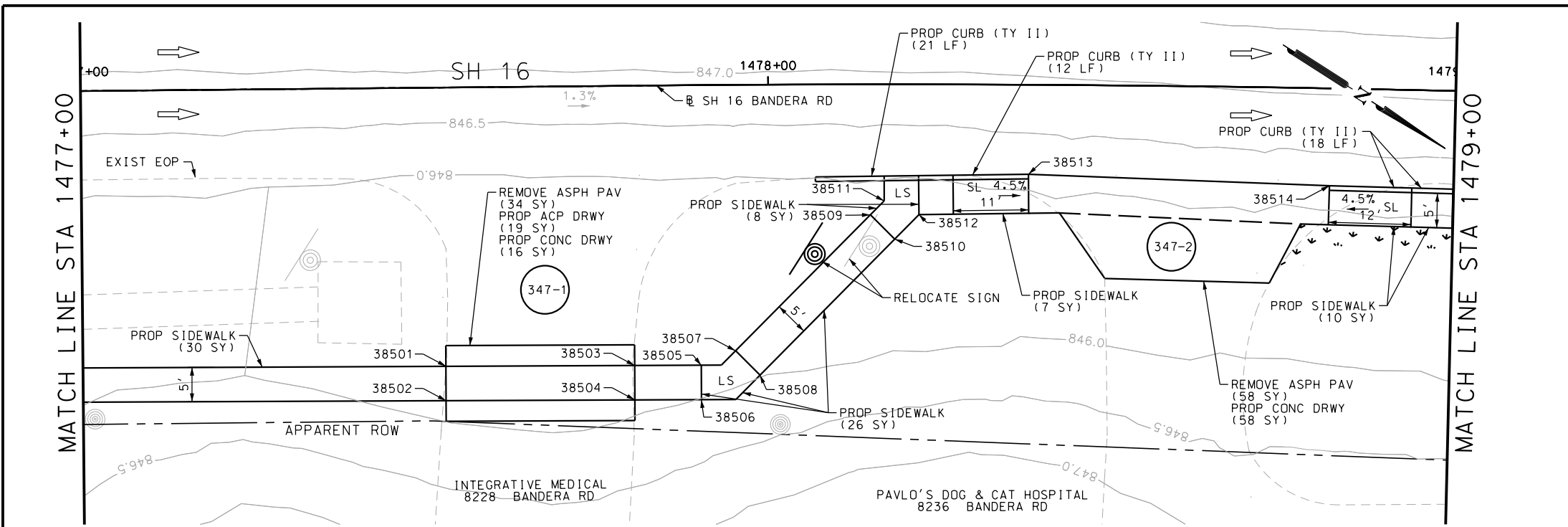
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1475+00 TO STA 1477+00

SHEET 46 OF 126

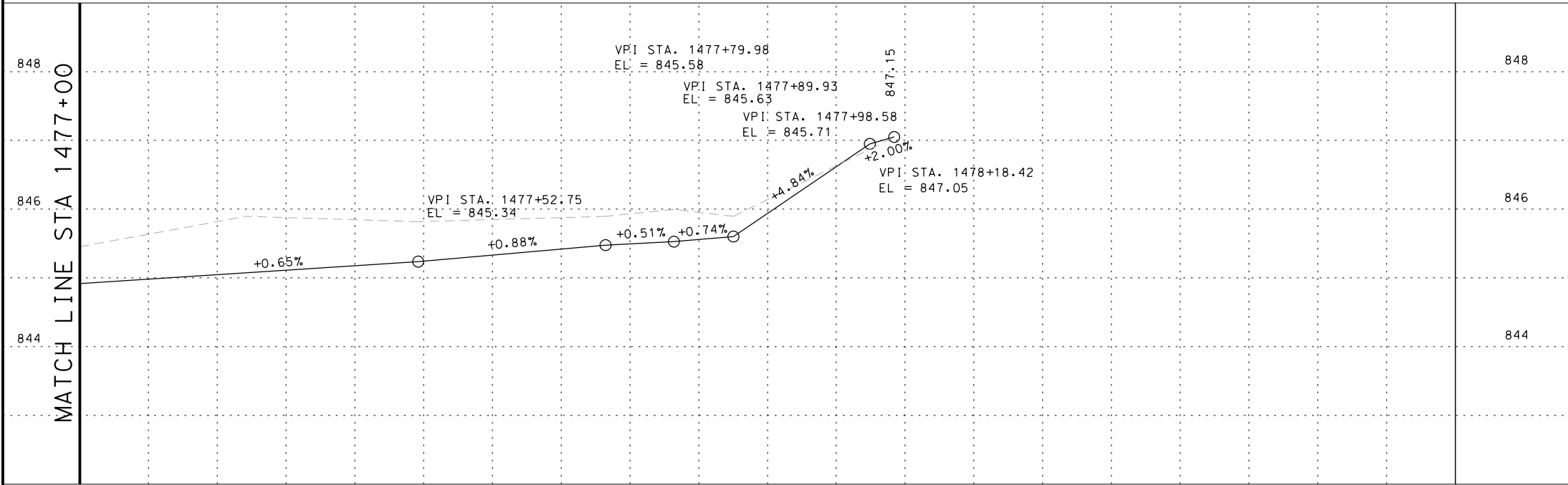
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CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	346

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*30PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	92
0529-6002	CONC CURB (TY II)	LF	51
0530-6004	DRIVEWAYS (CONC)	SY	74
0530-6005	DRIVEWAYS (ACP)	SY	19
0531-6001	CONC SIDEWALKS (4")	SY	81
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

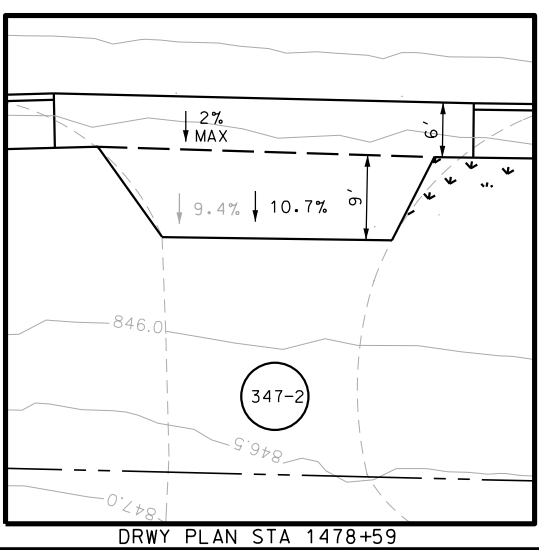
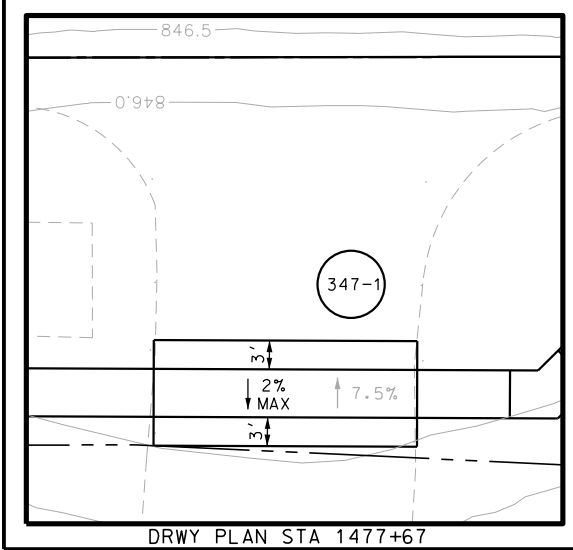


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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'



POINT	NORTHING	EASTING	ELEV	DESC
38501	13738339.71	2084599.19	--	PROF
38502	13738342.42	2084603.40	--	PROF
38503	13738362.77	2084584.31	--	PROF
38504	13738365.48	2084588.51	--	PROF
38505	13738370.90	2084579.06	--	PROF
38506	13738373.61	2084583.26	--	PROF
38507	13738373.98	2084574.61	--	PROF
38508	13738378.86	2084575.66	--	PROF
38509	13738379.84	2084547.40	--	PROF
38510	13738384.73	2084548.46	--	PROF
38511	13738380.44	2084544.62	--	PROF
38512	13738385.78	2084543.57	--	PROF
38513	13738396.03	2084530.04	--	PROF
38514	13738433.79	2084507.89	--	PROF

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBLS FIRM REGISTRATION #10028800

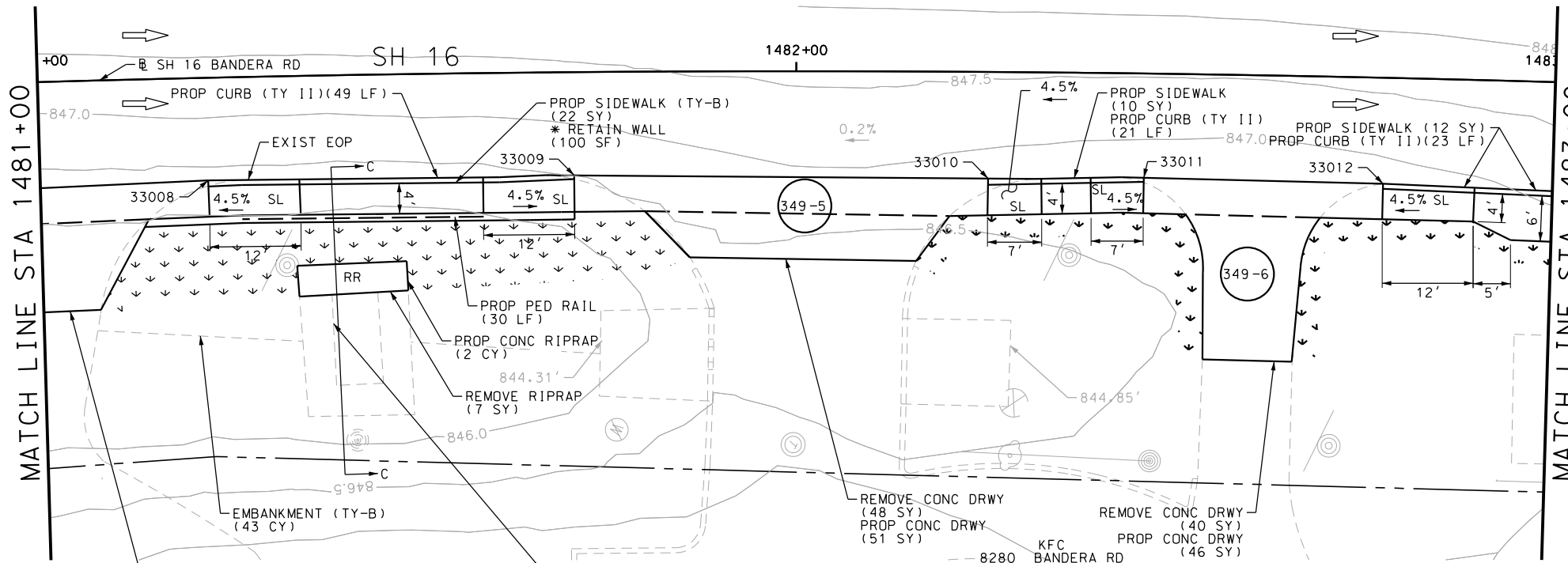
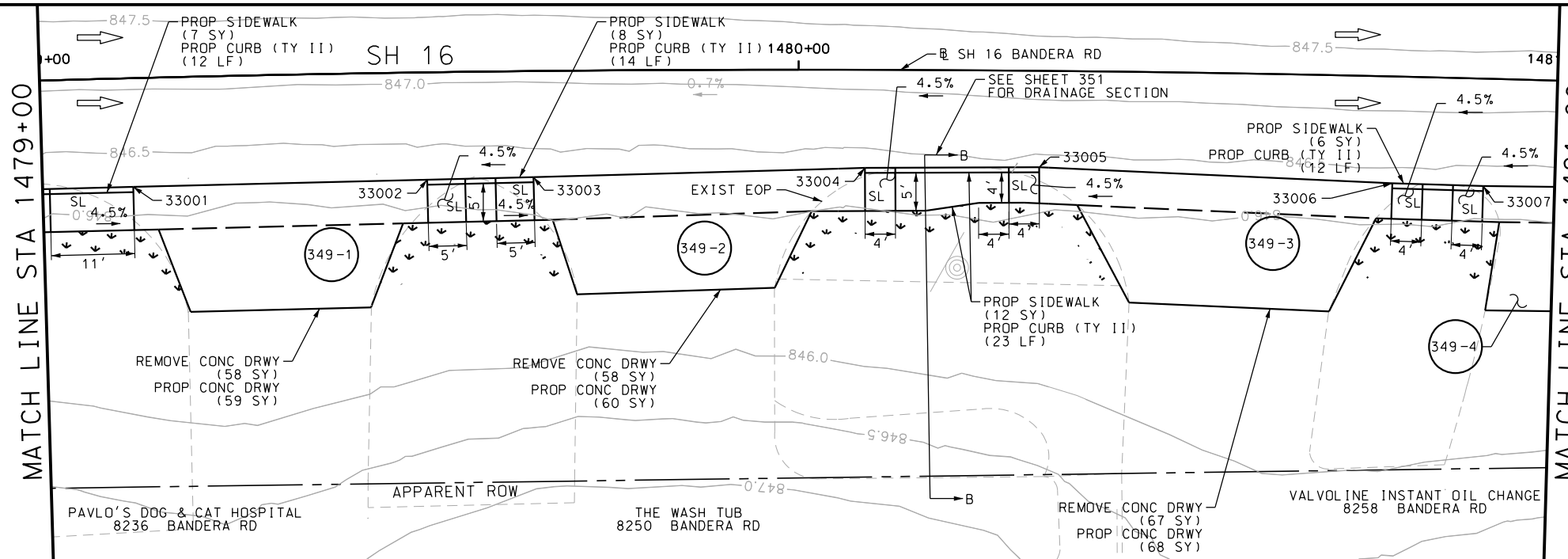
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1477+00 TO STA 1479+00  
 SHEET 47 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	347

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*31.dgn



POINT	NORTHING	EASTING	ELEV	DESC
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33002	13738492.71	2084472.50	846.75	ME
33003	13738504.71	2084465.29	846.75	ME
33004	13738542.07	2084442.69	846.75	ME
33005	13738561.99	2084431.27	846.75	ME
33006	13738603.47	2084410.15	846.75	ME
33007	13738614.09	2084404.55	846.75	ME
33008	13738641.68	2084389.28	846.75	ME
33009	13738684.60	2084367.37	846.75	ME
33010	13738733.68	2084343.61	846.75	ME
33011	13738752.03	2084334.44	846.75	ME
33012	13738780.63	2084321.20	846.75	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	7
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	294
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	43
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	110
0162-6002	BLOCK SODDING	SY	110
0168-6001	VEGETATIVE WATERING	MG	1.72
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0450-6048	RAIL (HANDRAIL) (TY B)	LF	30
0529-6002	CONC CURB (TY II)	LF	154
0530-6004	DRIVEWAYS (CONC)	SY	310
0531-6001	CONC SIDEWALKS (4")	SY	55
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	22

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

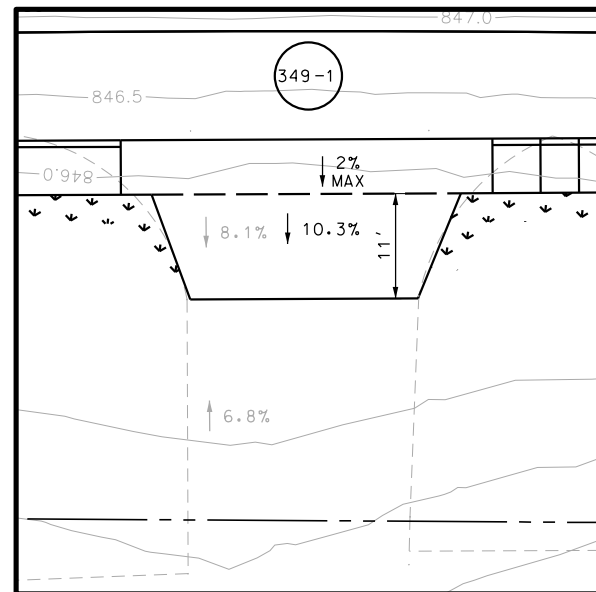
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1479+00 TO STA 1483+00  
 SHEET 49 OF 126

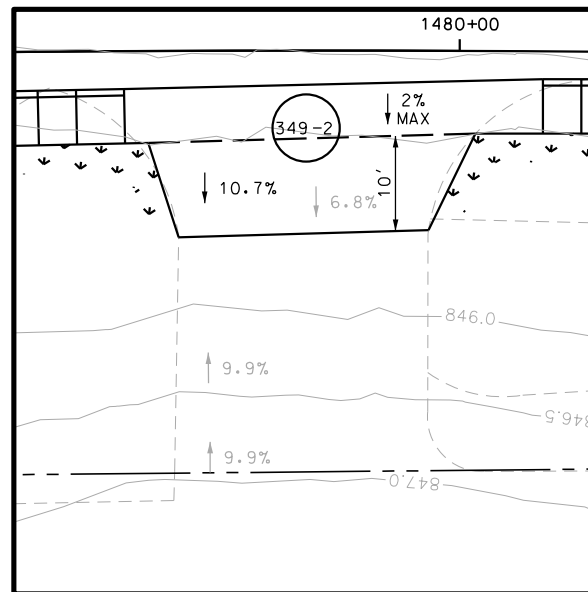
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CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
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				JOB NO.
				576
				SHEET NO.
				349

Plotted on: 5/3/2019

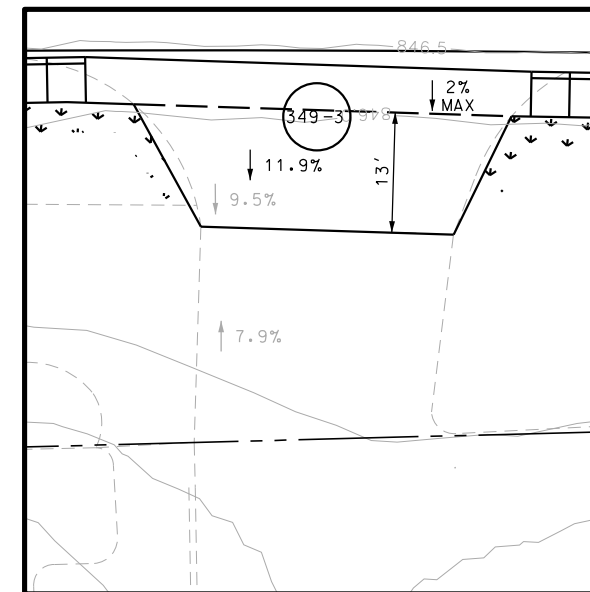
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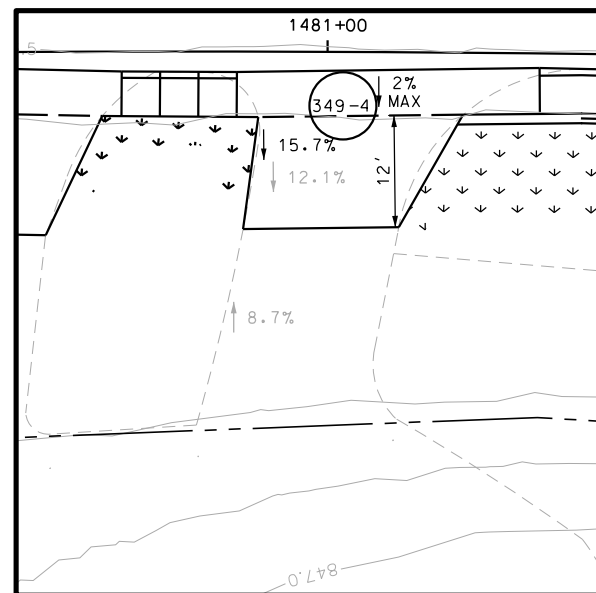
DRWY PLAN STA 1479+32



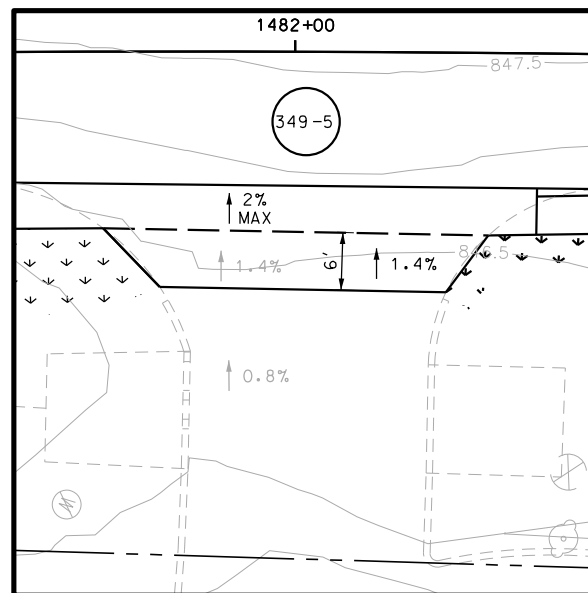
DRWY PLAN STA 1479+84



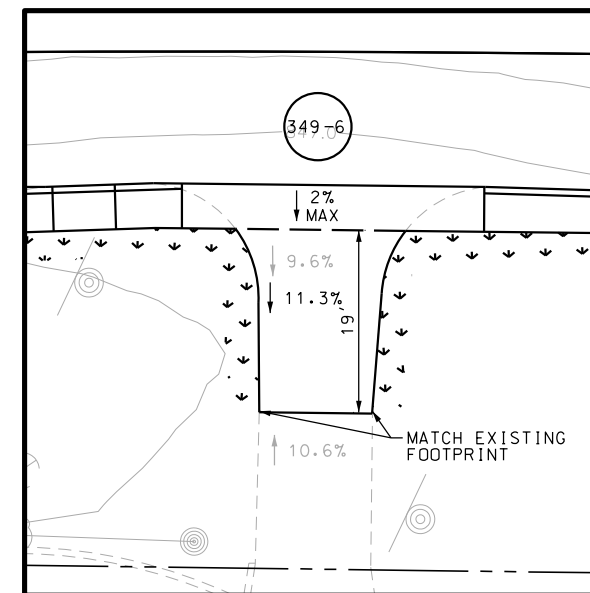
DRWY PLAN STA 1480+56



DRWY PLAN STA 1480+98



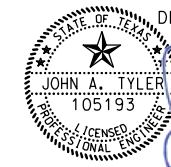
DRWY PLAN STA 1482+01

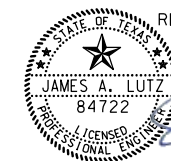


DRWY PLAN STA 1482+60

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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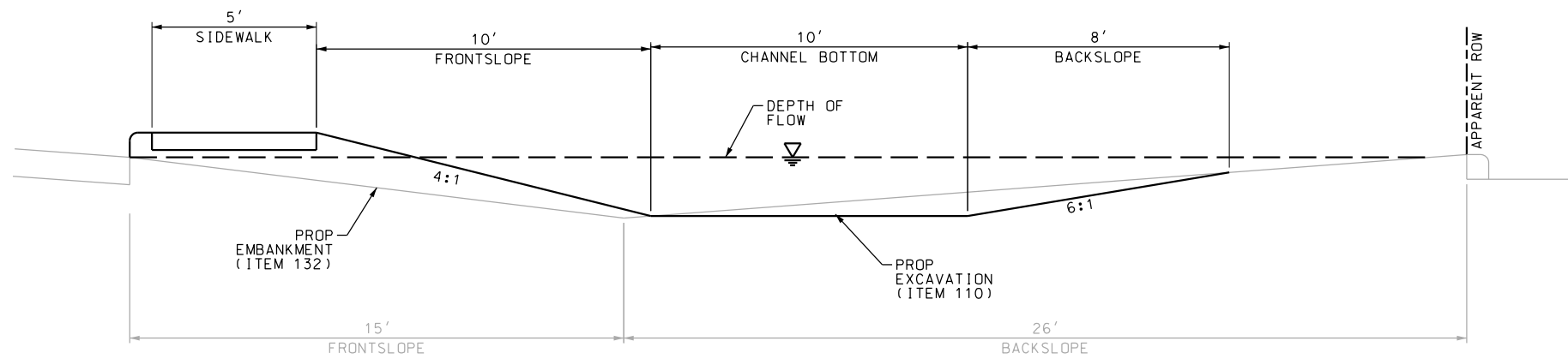
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1479+00 TO STA 1483+00

SHEET 50 OF 126

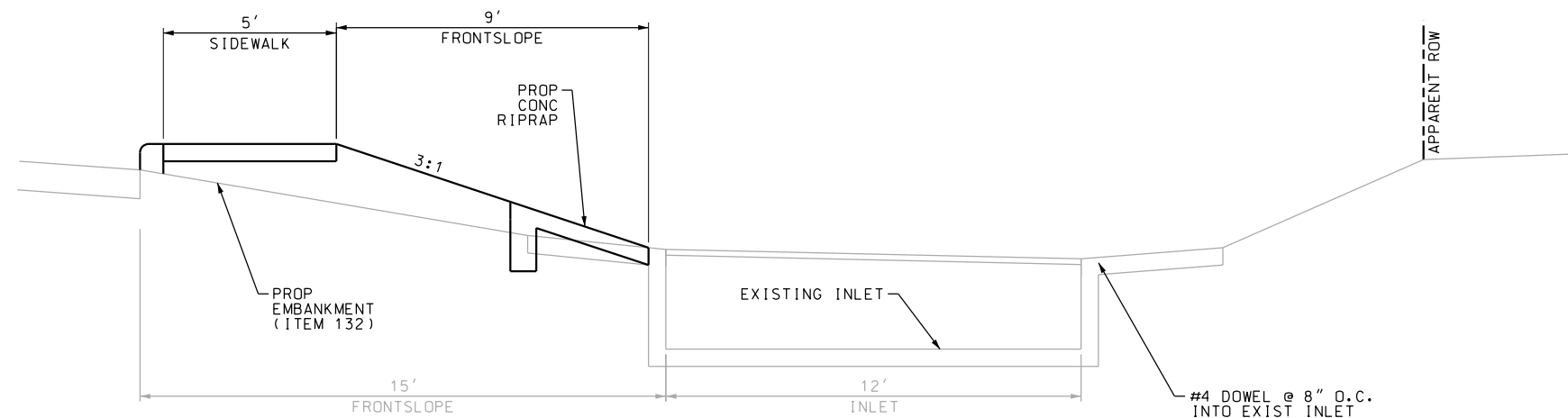
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	350

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\Bandera Dr-WB\*31\*B.dgn



**SECTION B-B**  
N.T.S.



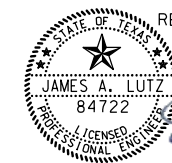
**SECTION C-C**  
N.T.S.

PROPOSED IMPROVEMENTS WILL NOT AFFECT EXISTING HYDRAULIC CAPACITY

**NOTES:**

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 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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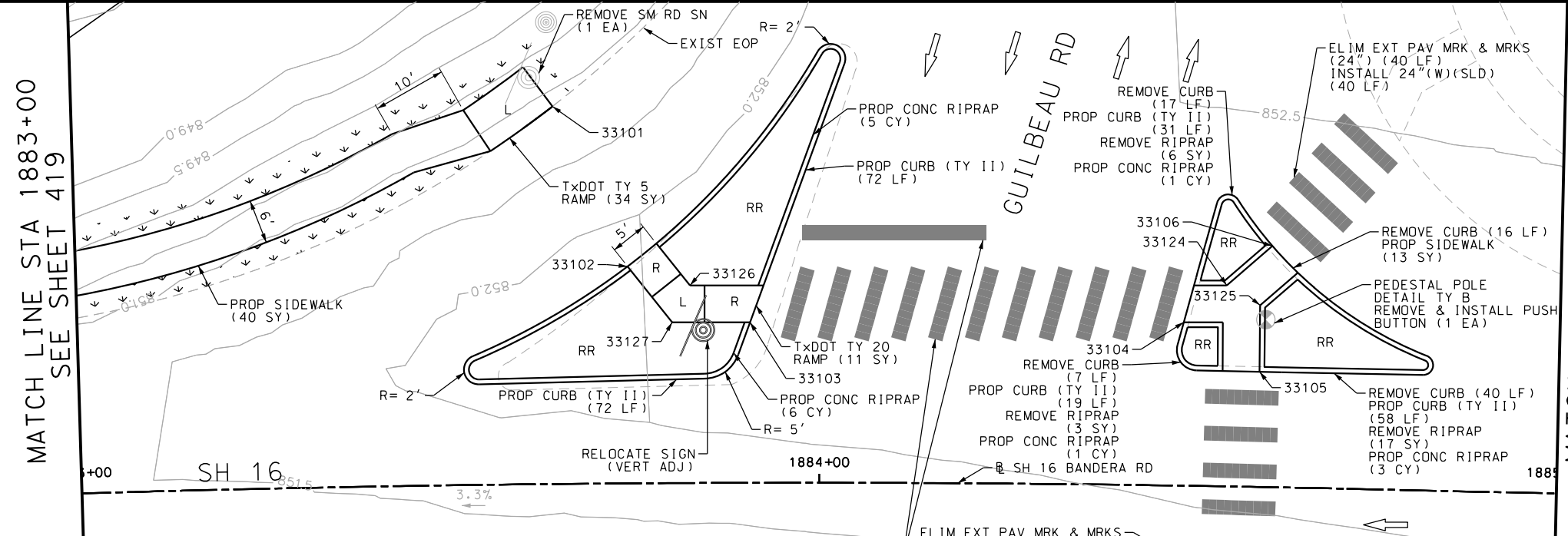
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1479+00 TO STA 1483+00

SHEET 51 OF 126

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	351

Plotted on: 5/3/2019

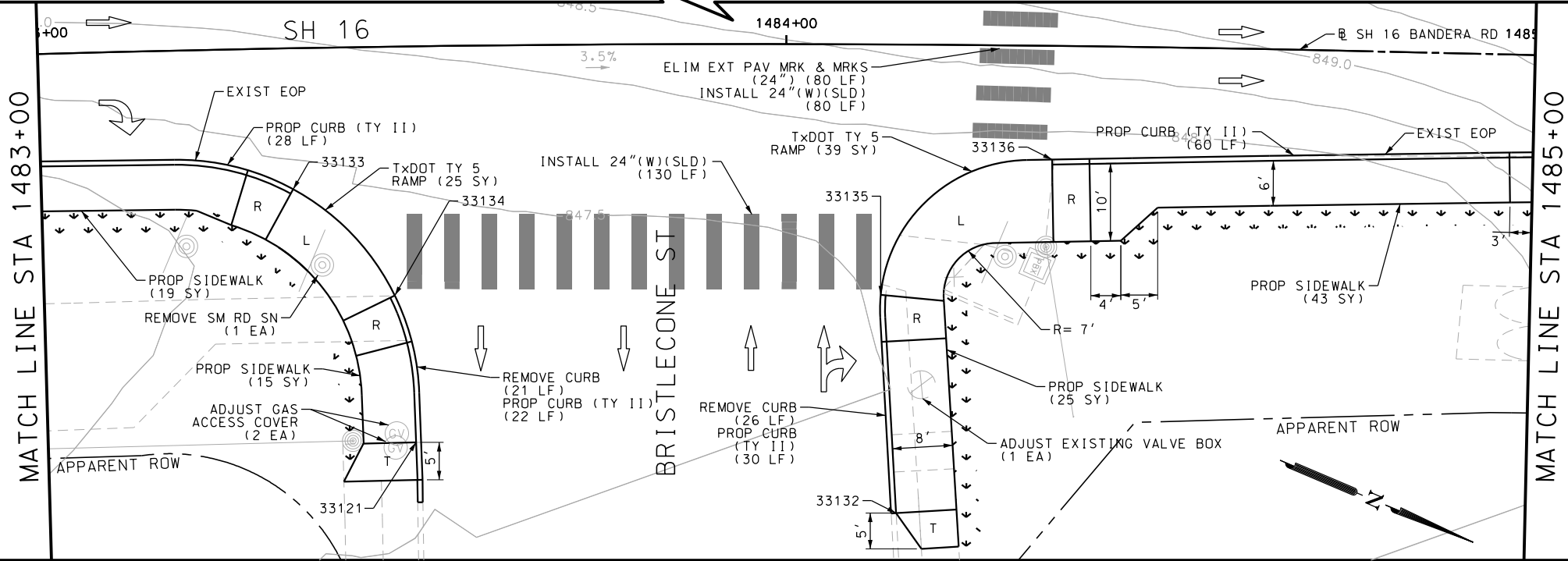
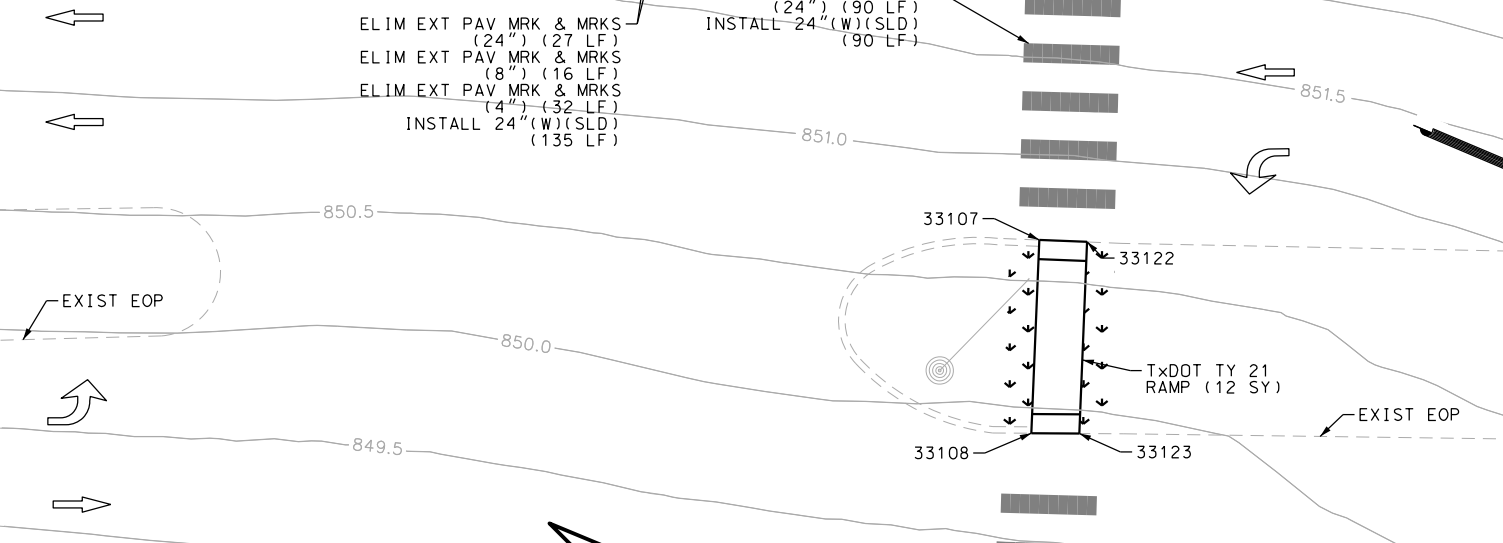
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MATCH LINE STA 1885+00  
SEE SHEET 420

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	26
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	127
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0432-6003	RIPRAP (CONC) (6 IN)	CY	16
0529-6002	CONC CURB (TY II)	LF	392
0531-6001	CONC SIDEWALKS (4")	SY	155
0531-6022	CURB RAMPS (TY 5)	SY	98
0531-6029	CURB RAMPS (TY 20)	SY	11
0531-6030	CURB RAMPS (TY 21)	SY	12
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
0644-6076	REMOVE SM RD SN SUP&M	EA	2
0666-6048	REFL PAV MRK TY I (W)24"(SLD) (100MIL)	LF	475
0666-6230	PAVEMENT SEALER 24"	LF	475
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	32
0677-6003	ELIM EXT PAV MRK & MRKS (8")	LF	16
0677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	237
0678-6008	PAV SURF PREP FOR MRK (24")	LF	475
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	1
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	1
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	2
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

POINT	NORTHING	EASTING	ELEV	DESC
33101	13738781.20	2084157.27	--	ME
33102	13738799.06	2084173.27	--	ME
33103	13738817.32	2084173.74	--	ME
33104	13738871.46	2084150.73	--	ME
33105	13738883.55	2084152.88	--	ME
33106	13738878.48	2084136.49	--	ME
33107	13738896.28	2084199.41	--	ME
33108	13738903.41	2084218.28	--	ME
33121	13738861.89	2084327.09	--	ME
33122	13738900.96	2084197.65	--	ME
33123	13738908.02	2084216.35	--	ME
33124	13738874.88	2084143.84	853.33	PROP
33125	13738880.09	2084144.57	853.33	PROP
33126	13738807.86	2084172.33	853.08	PROP
33127	13738807.60	2084177.87	846.75	ME
33132	13738924.57	2084310.70	--	ME
33133	13738833.56	2084302.39	853.08	ME
33134	13738851.61	2084310.14	853.08	ME
33135	13738911.27	2084284.69	853.08	ME
33136	13738925.25	2084259.10	853.08	ME



MATCH LINE STA 1483+00

MATCH LINE STA 1485+00

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

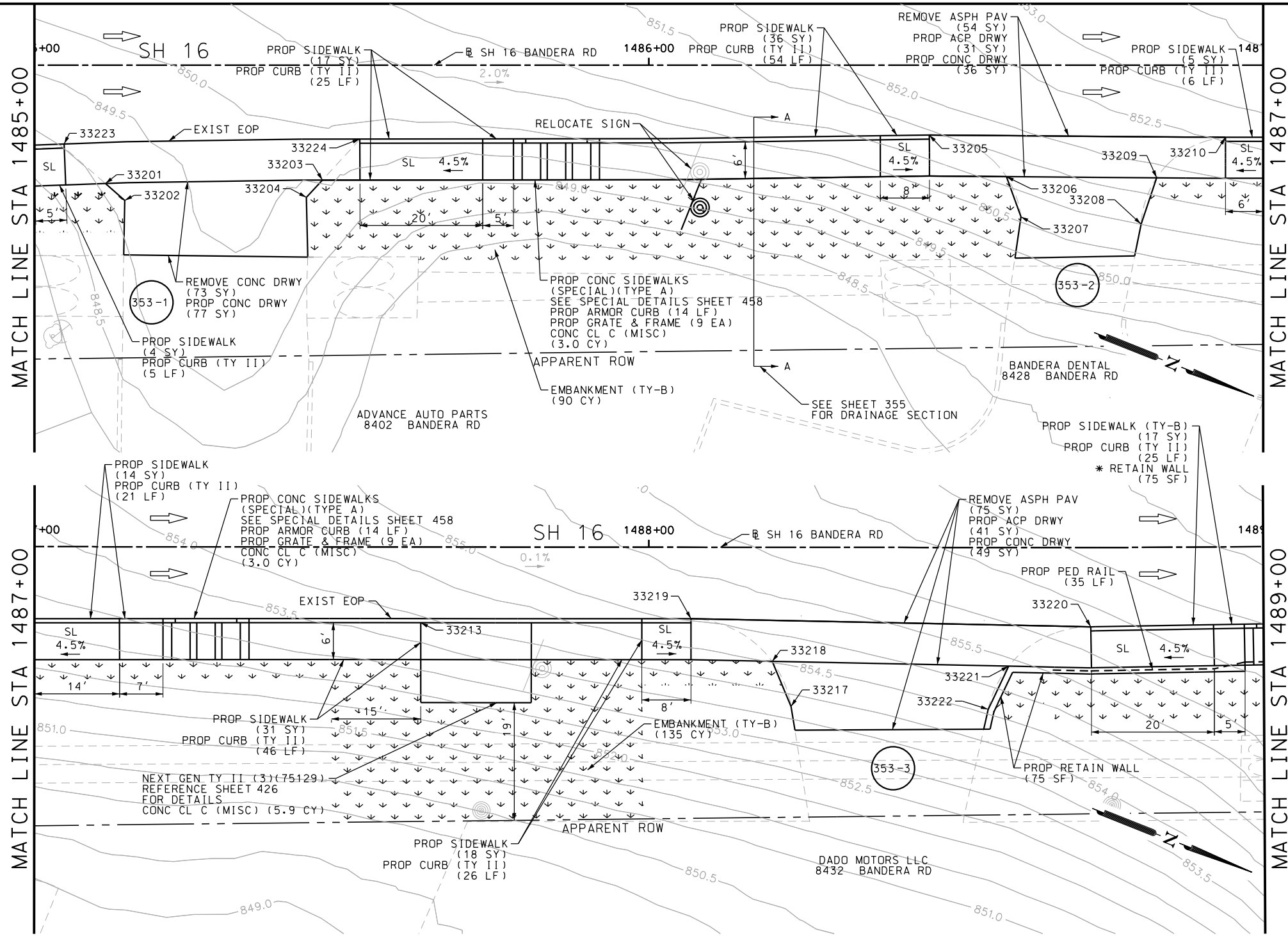
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1483+00 TO STA 1485+00  
 STA 1883+00 TO STA 1885+00  
 SHEET 52 OF 126

DWG	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DWG	6	TEXAS		VARIABLES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG	SAT	BEXAR	0915	12
				576
				352

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*33.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	73
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	129
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	225
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	275
0162-6002	BLOCK SODDING	SY	275
0168-6001	VEGETATIVE WATERING	MG	4.29
0420-6074	CL C CONC (MISC)	CY	11.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	75
0450-6048	RAIL (HANDRAIL) (TY B)	LF	35
0471-6003	GRATE & FRAME	EA	18
0529-6002	CONC CURB (TY II)	LF	208
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	28
0530-6004	DRIVEWAYS (CONC)	SY	162
0530-6005	DRIVEWAYS (ACP)	SY	72
0531-6001	CONC SIDEWALKS (4")	SY	125
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

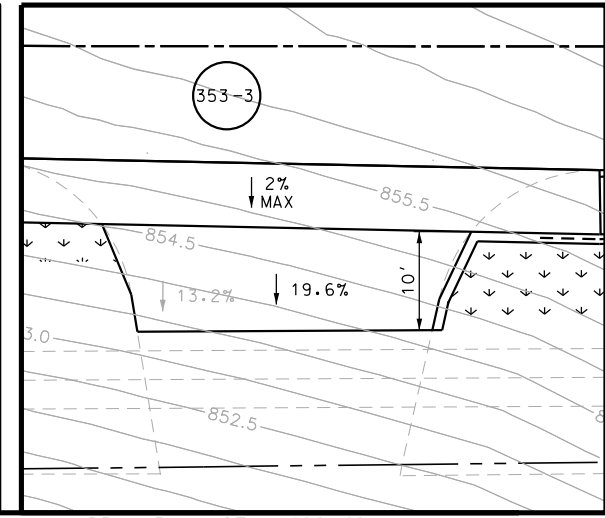
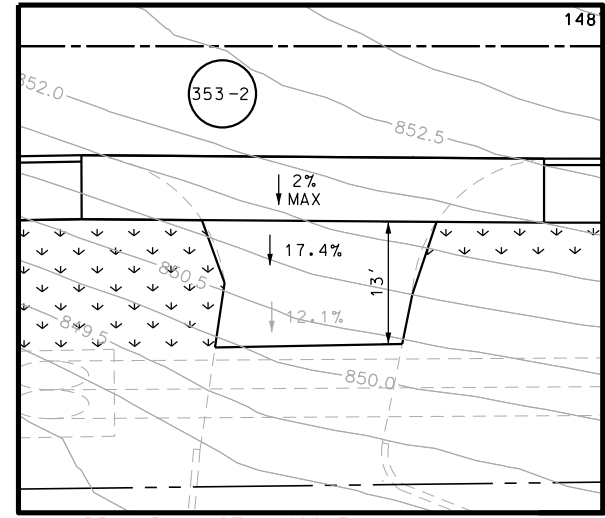
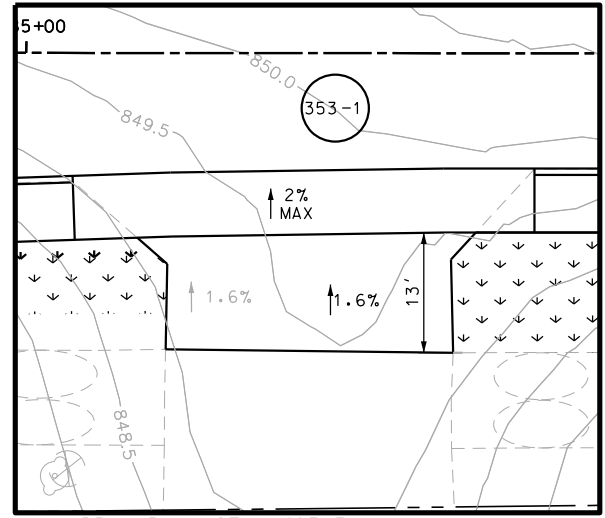
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1485+00 TO STA 1489+00

SHEET 53 OF 126

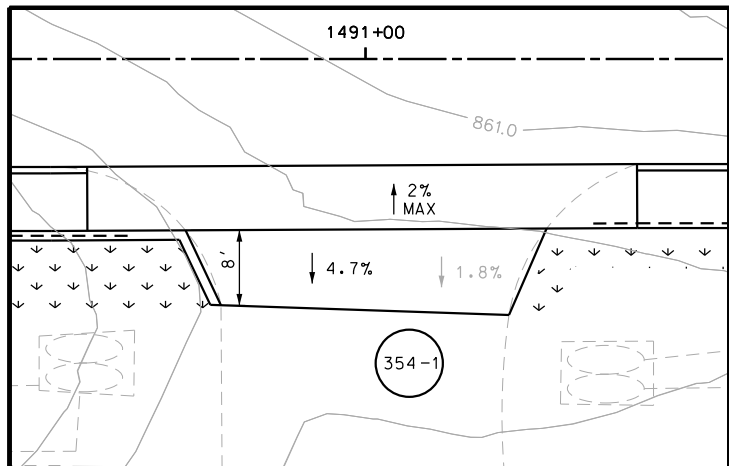
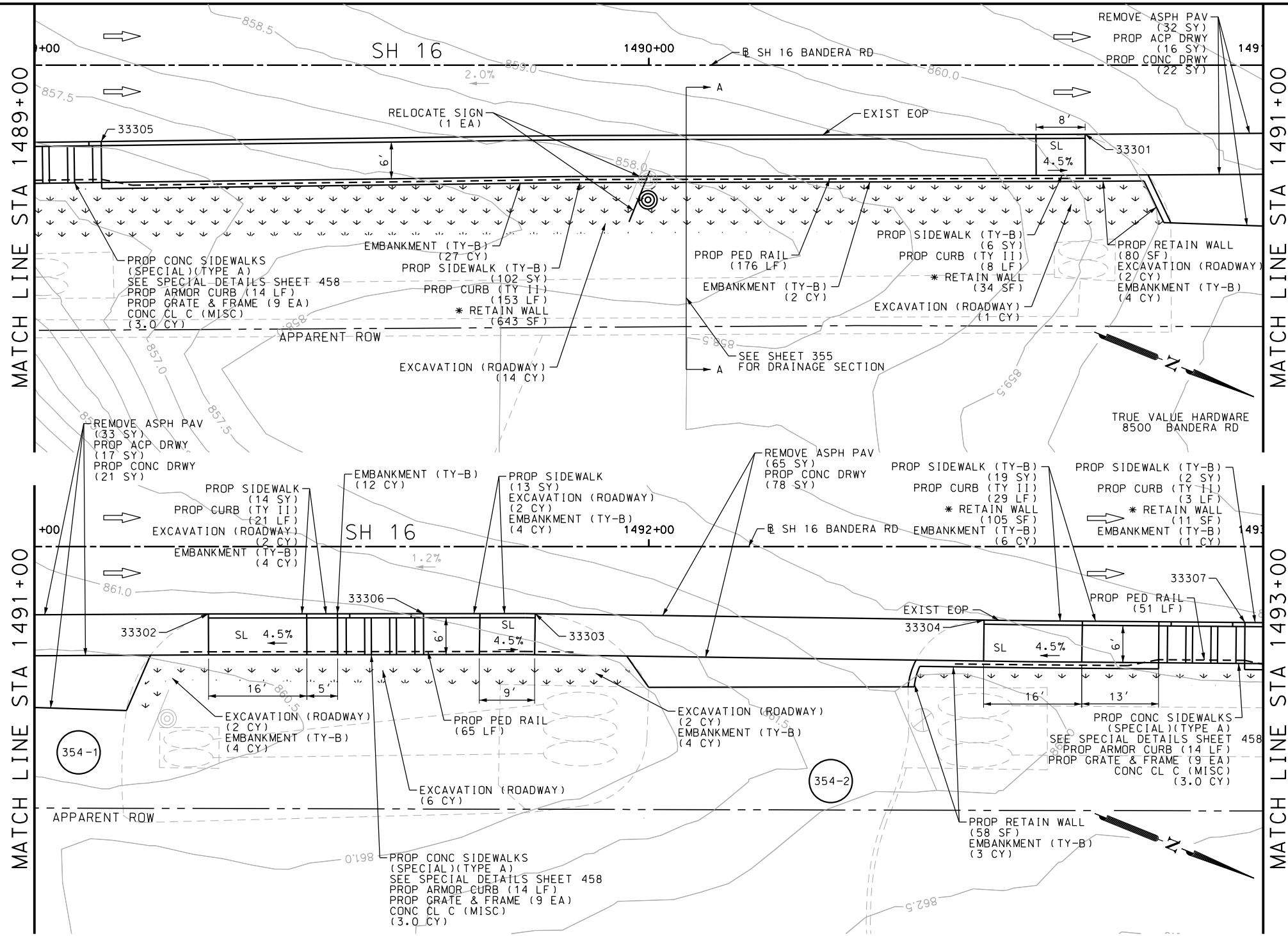
POINT	NORTHING	EASTING	ELEV	DESC
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33202	13739000.96	2084236.00	849.75	PROP
33203	13739029.60	2084221.01	--	ME
33204	13739028.24	2084224.58	850.35	PROP
33205	13739118.66	2084177.60	--	ME
33206	13739132.82	2084179.24	--	ME
33207	13739137.44	2084184.43	851.64	PROP
33208	13739156.04	2084178.29	851.88	PROP
33209	13739155.59	2084170.35	--	ME
33210	13739163.56	2084160.08	--	ME
33213	13739227.89	2084135.06	--	ME
33217	13739288.92	2084125.34	853.88	PROP
33218	13739283.34	2084119.66	--	ME
33219	13739268.51	2084118.12	--	ME
33220	13739329.40	2084095.19	--	ME
33221	13739319.38	2084106.09	--	ME
33222	13739318.90	2084113.86	855.28	PROP
33223	13738988.40	2084231.13	--	ME
33224	13739032.80	2084212.55	--	ME



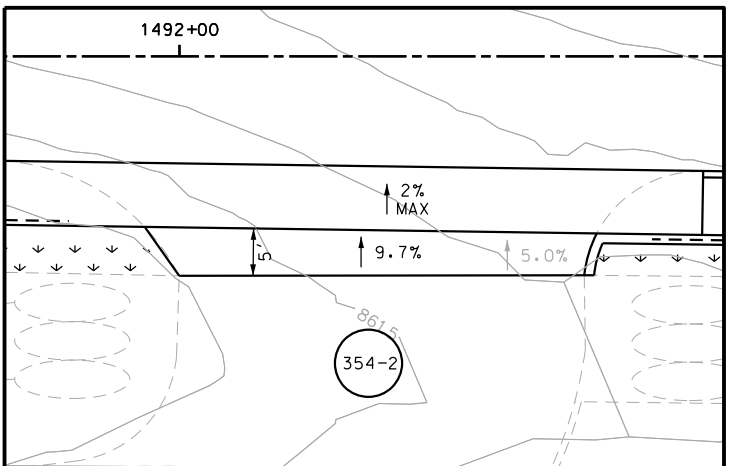


Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*34.dgn



DW PLAN STA 1491+00



DW PLAN STA 1492+00

POINT	NORTHING	EASTING	ELEV	DESC
33301	13739513.28	2084018.69	--	ME
33302	13739566.27	2083996.87	--	ME
33303	13739615.54	2083976.80	--	ME
33304	13739683.62	2083950.28	--	ME
33305	13739365.35	2084080.06	--	ME
33306	13739598.67	2083983.65	--	ME
33307	13739723.10	2083934.66	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	130
0110-6001	EXCAVATION (ROADWAY)	CY	31
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	71
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	230
0162-6002	BLOCK SODDING	SY	230
0168-6001	VEGETATIVE WATERING	MG	3.59
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	138
0450-6048	RAIL (HANDRAIL) (TY B)	LF	344
0471-6003	GRATE & FRAME	EA	27
0529-6002	CONC CURB (TY II)	LF	214
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	42
0530-6004	DRIVEWAYS (CONC)	SY	121
0530-6005	DRIVEWAYS (ACP)	SY	33
0531-6001	CONC SIDEWALKS (4")	SY	27
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	129
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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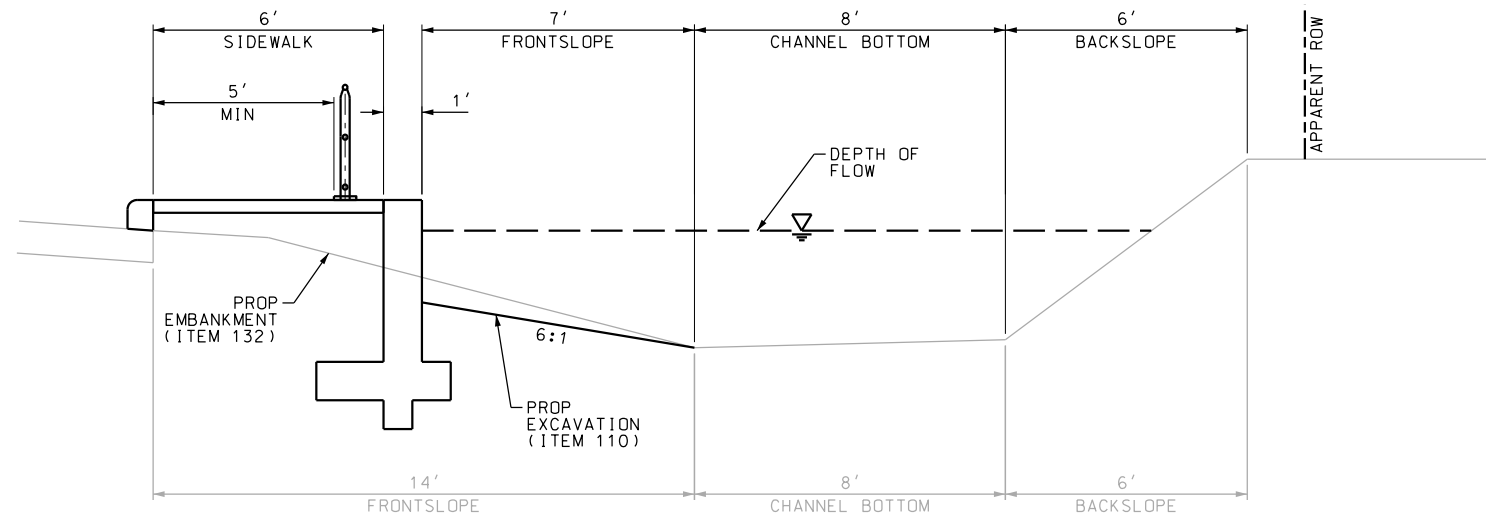
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1489+00 TO STA 1493+00

SHEET 54 OF 126

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	354

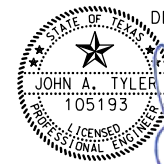
Plotted on: 5/3/2019

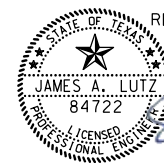
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**SECTION A-A**  
N.T.S.

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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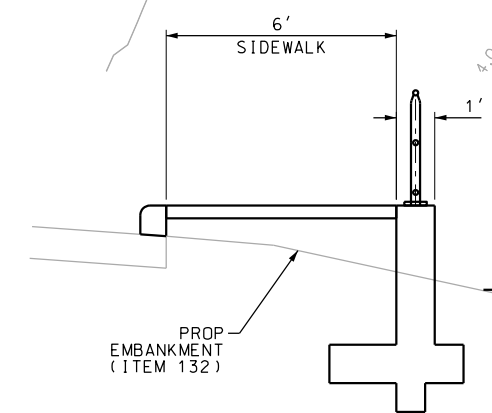
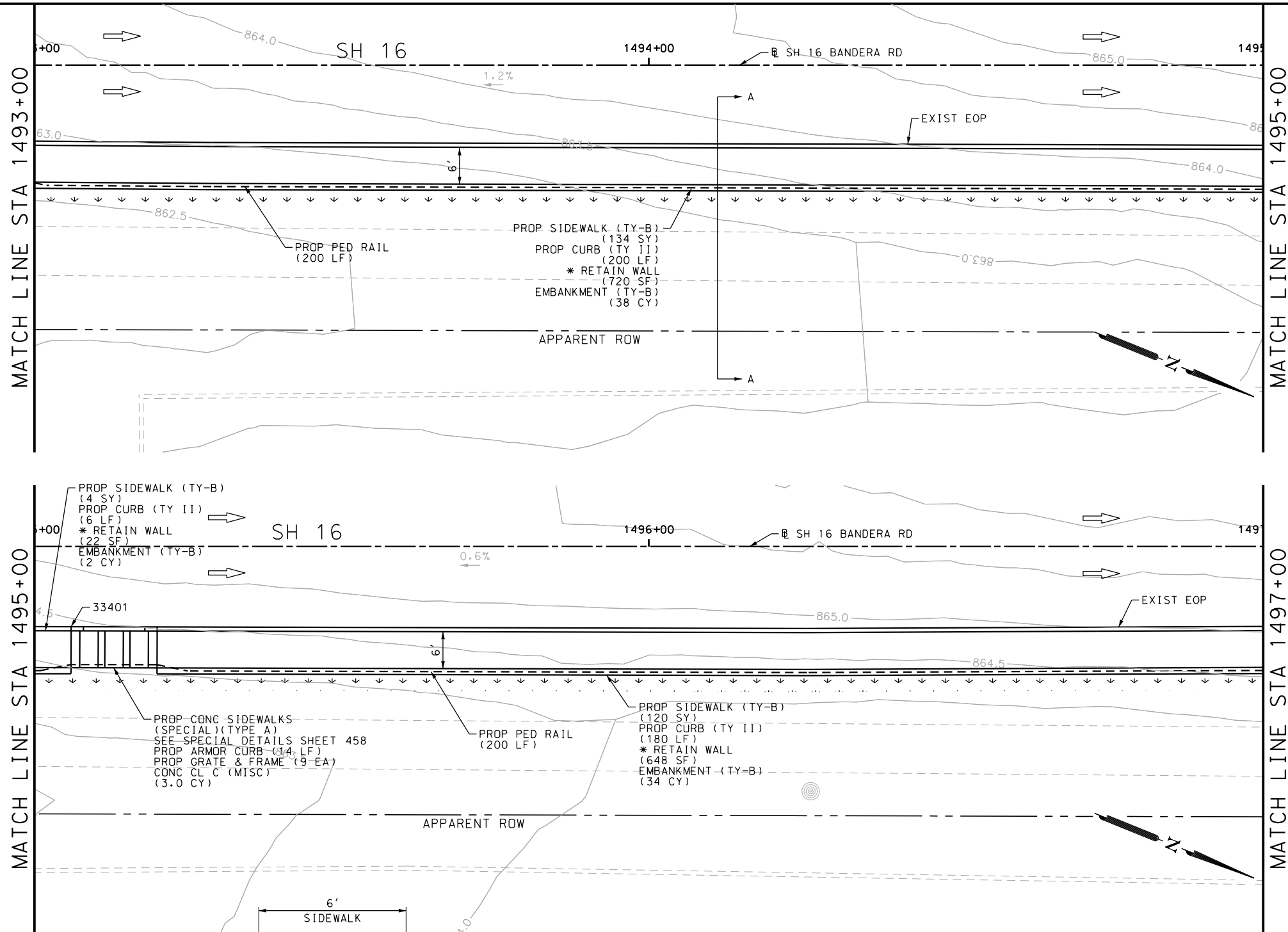
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1489+00 TO STA 1493+00

SHEET 55 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	355

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507\Bandera Dr\WB\*35.dgn



PROPOSED IMPROVEMENTS WILL NOT AFFECT EXISTING HYDRAULIC CAPACITY

**SECTION A-A**  
N.T.S.

POINT	NORTHING	EASTING	ELEV	DESC
33401	13739917.00	2083856.64	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	74
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	120
0162-6002	BLOCK SODDING	SY	120
0168-6001	VEGETATIVE WATERING	MG	1.87
0420-6074	CL C CONC (MISC)	CY	3.0
0450-6048	RAIL (HANDRAIL) (TY B)	LF	400
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	386
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	258

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



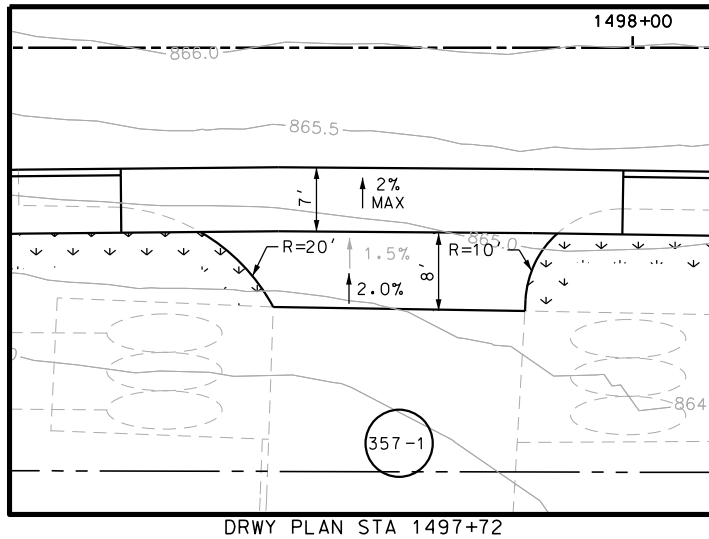
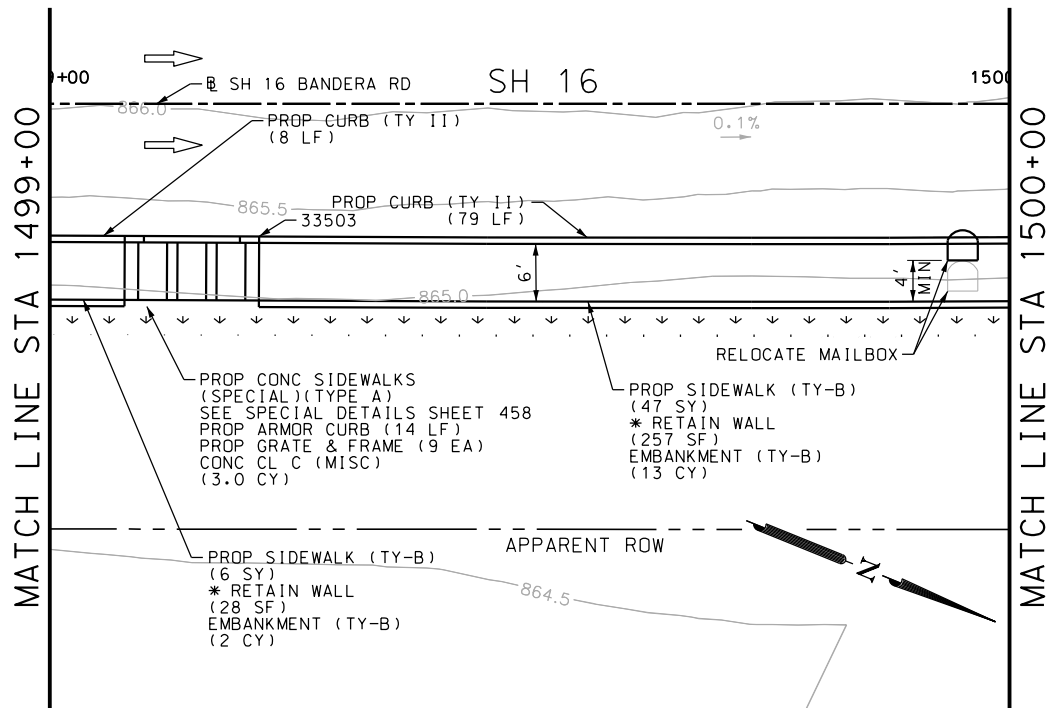
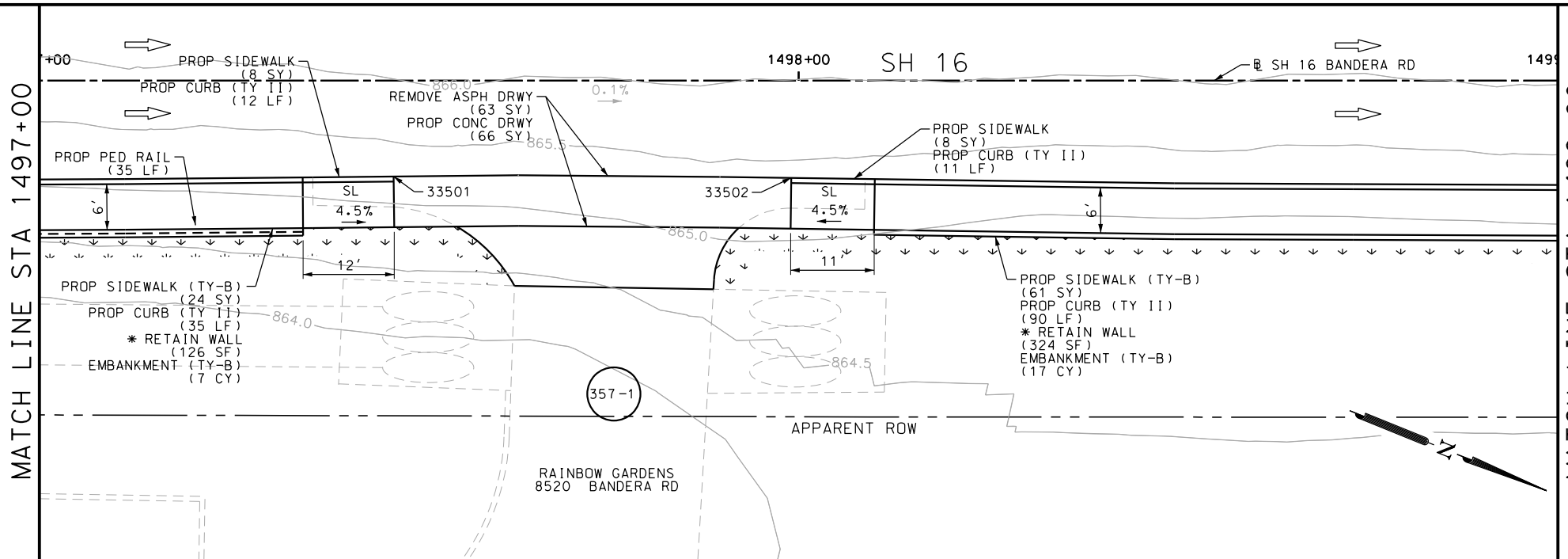
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1493+00 TO STA 1497+00

SHEET 56 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	356

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*36.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33501	13740139.78	2083765.69	--	ME
33502	13740188.37	2083746.15	--	ME
33503	13740302.50	2083700.90	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	63
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	43
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	95
0162-6002	BLOCK SODDING	SY	95
0168-6001	VEGETATIVE WATERING	MG	1.48
0420-6074	CL C CONC (MISC)	CY	3.0
0450-6048	RAIL (HANDRAIL) (TY B)	LF	35
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	235
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	66
0531-6001	CONC SIDEWALKS (4")	SY	16
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	138
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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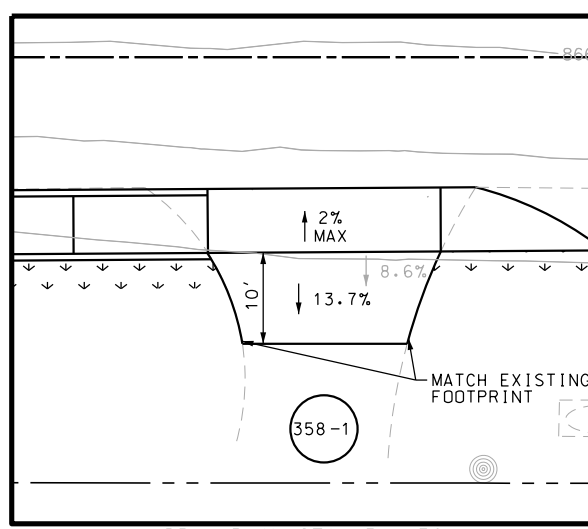
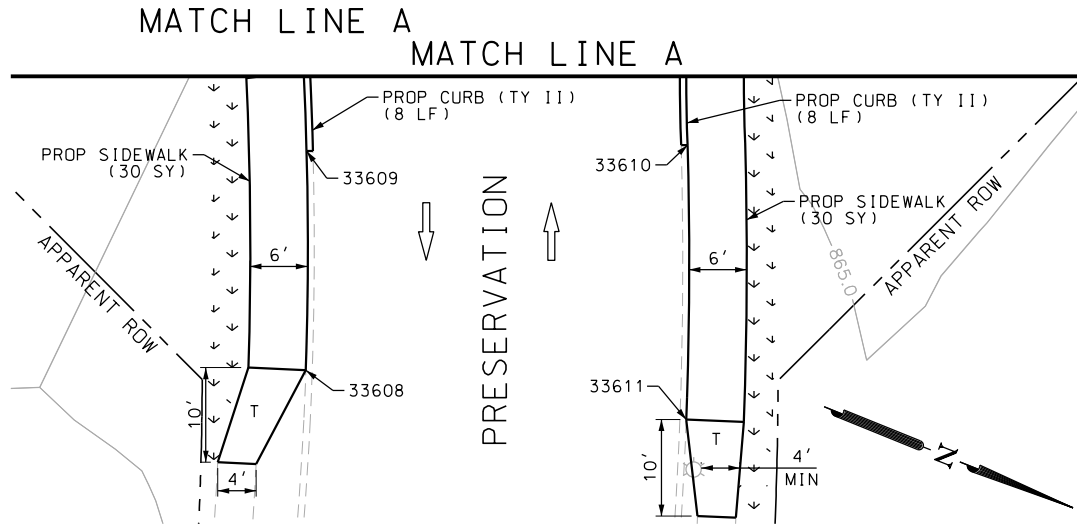
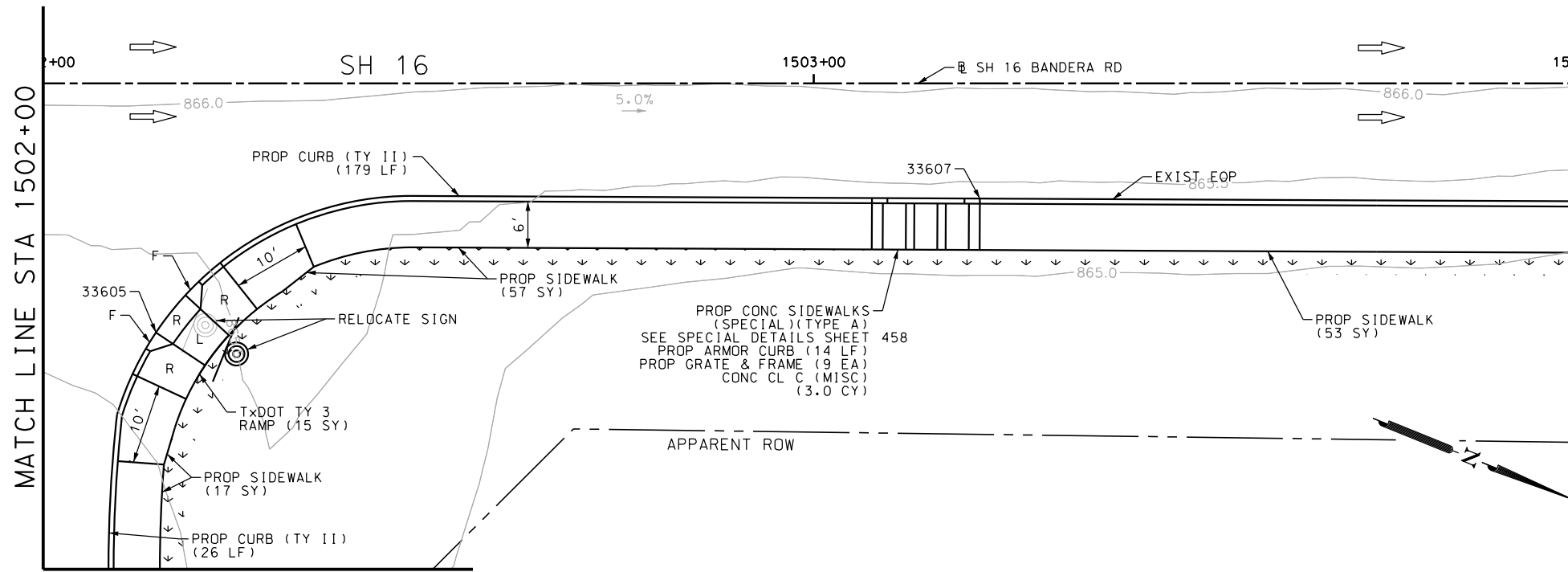
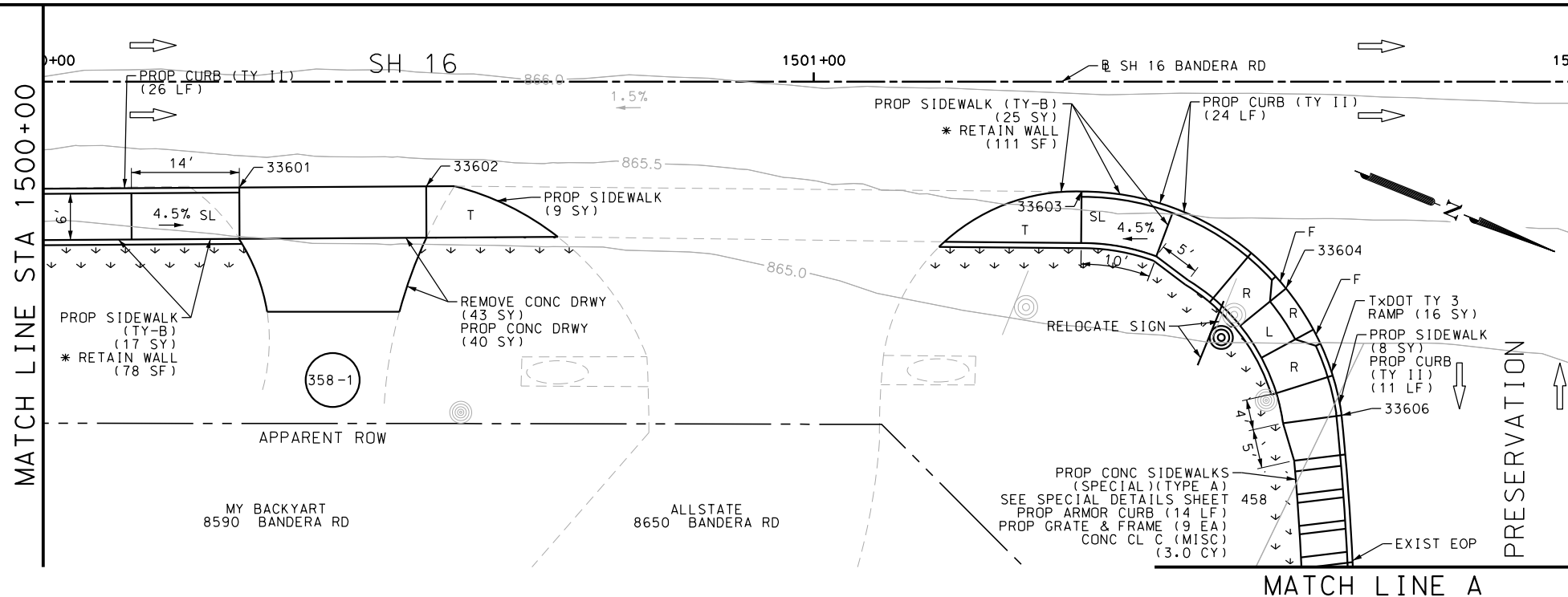
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1497+00 TO STA 1500+00

SHEET 57 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	357

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*37.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33601	13740398.48	2083661.81	--	ME
33602	13740420.90	2083652.54	--	ME
33603	13740499.97	2083621.16	--	ME
33604	13740529.29	2083622.83	--	ME
33605	13740580.75	2083607.82	--	ME
33606	13740542.29	2083635.61	--	ME
33607	13740673.28	2083551.47	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	43
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	145
0162-6002	BLOCK SODDING	SY	145
0168-6001	VEGETATIVE WATERING	MG	2.26
0420-6074	CL C CONC (MISC)	CY	6.0
0471-6003	GRATE & FRAME	EA	18
0529-6002	CONC CURB (TY II)	LF	282
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	28
0530-6004	DRIVEWAYS (CONC)	SY	40
0531-6001	CONC SIDEWALKS (4")	SY	204
0531-6020	CURB RAMPS (TY 3)	SY	31
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	42
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

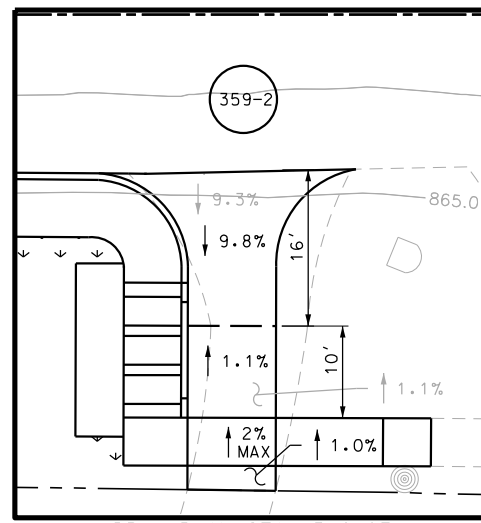
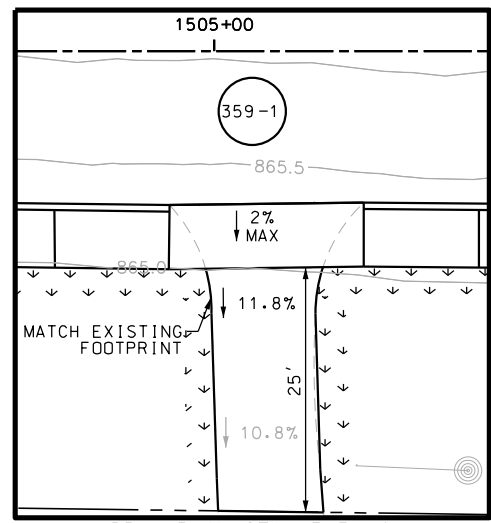
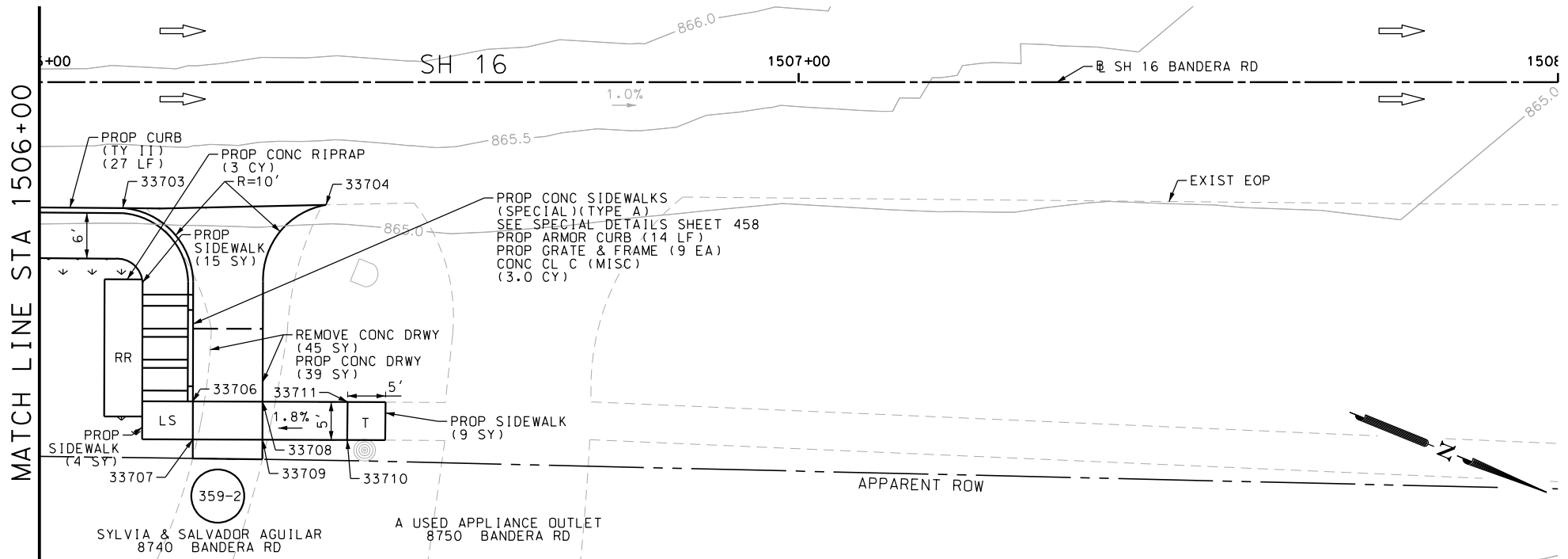
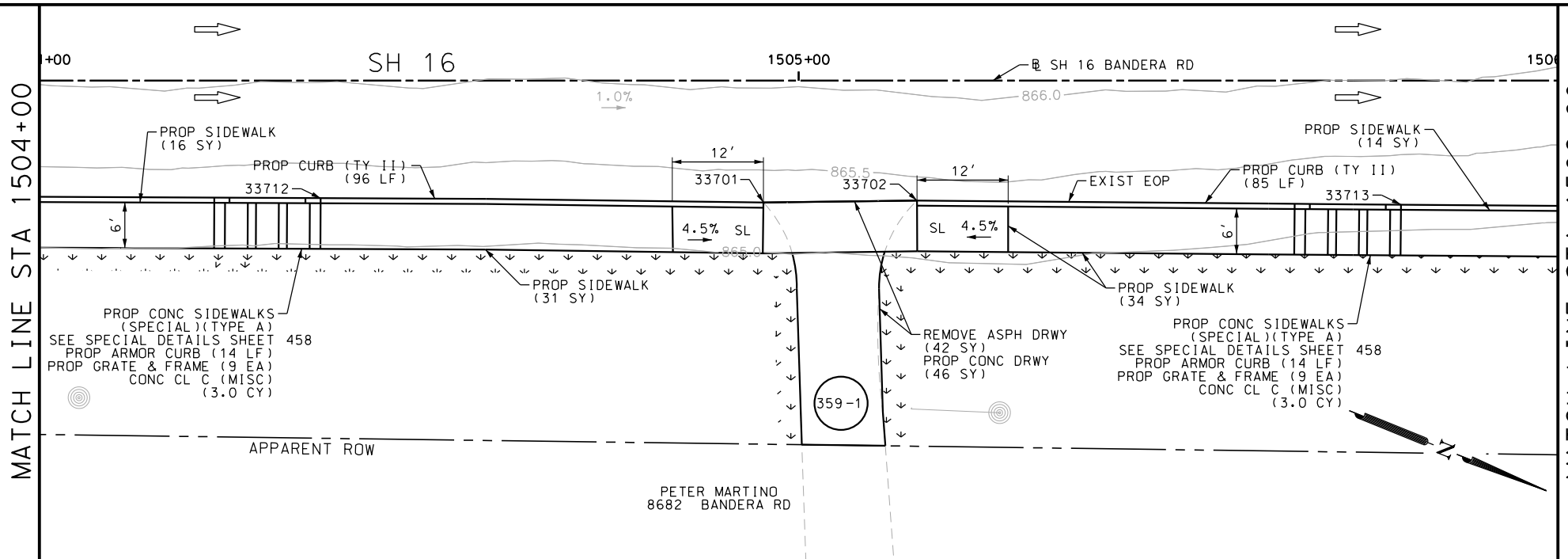
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1500+00 TO STA 1504+00  
 SHEET 58 OF 126

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	358

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*38.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33701	13740834.72	2083487.10	--	ME
33702	13740853.37	2083479.24	--	ME
33703	13740942.03	2083444.07	--	ME
33704	13740966.67	2083433.60	--	ME
33706	13740960.17	2083464.17	864.38	PROP
33707	13740962.03	2083468.81	864.45	PROP
33708	13740968.69	2083460.74	864.45	PROP
33709	13740970.56	2083465.38	864.52	PROP
33710	13740980.91	2083461.21	864.72	PROP
33711	13740979.07	2083456.56	864.65	PROP
33712	13740780.46	2083508.51	--	ME
33713	13740912.62	2083455.75	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	45
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	42
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	95
0162-6002	BLOCK SODDING	SY	95
0168-6001	VEGETATIVE WATERING	MG	1.48
0420-6074	CL C CONC (MISC)	CY	9.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0471-6003	GRATE & FRAME	EA	27
0529-6002	CONC CURB (TY II)	LF	208
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	42
0530-6004	DRIVEWAYS (CONC)	SY	85
0531-6001	CONC SIDEWALKS (4")	SY	123

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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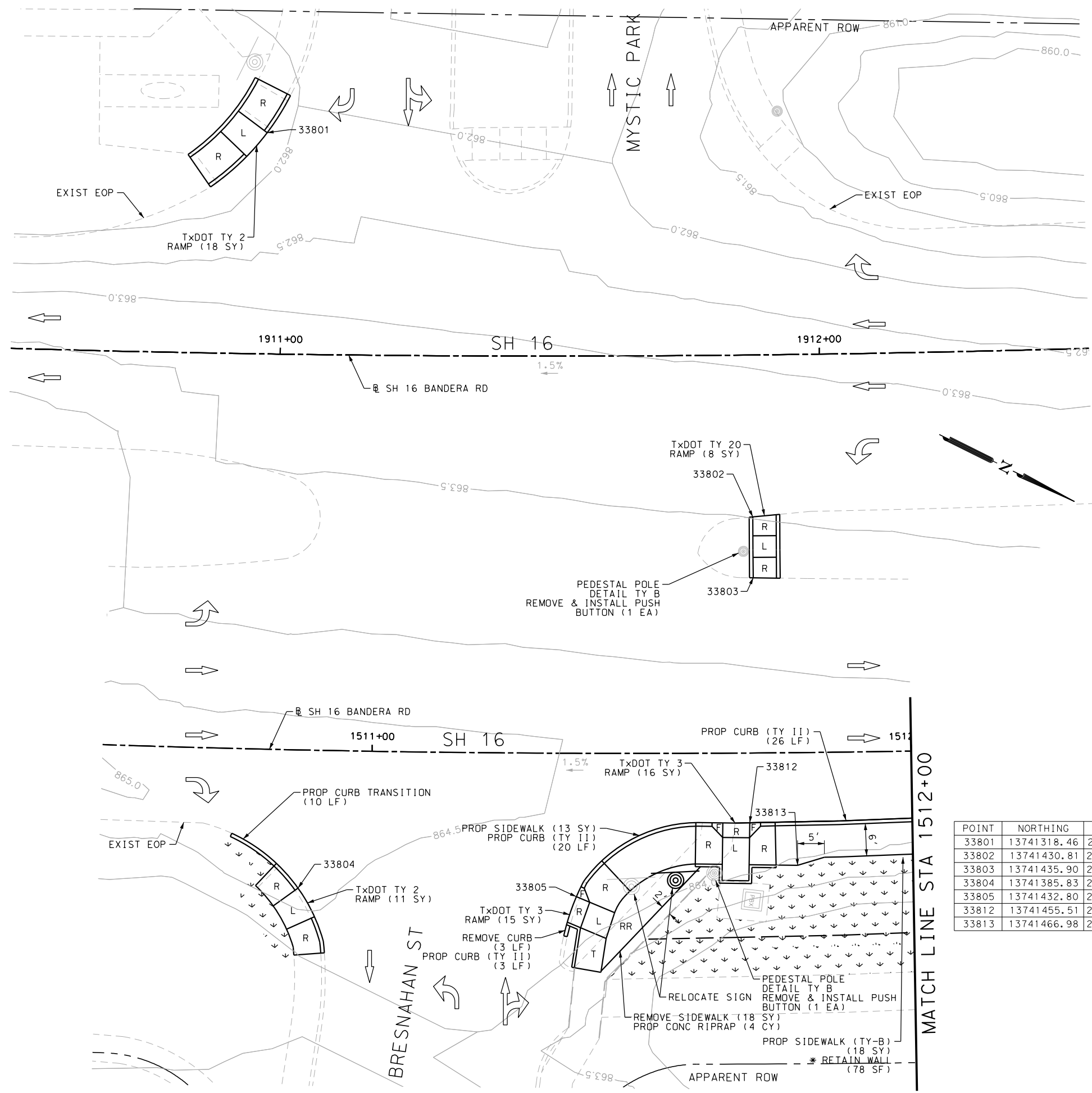
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1504+00 TO STA 1508+00

SHEET 59 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				359

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*39.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	3
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	18
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	115
0162-6002	BLOCK SODDING	SY	115
0168-6001	VEGETATIVE WATERING	MG	1.79
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0529-6002	CONC CURB (TY II)	LF	59
0531-6001	CONC SIDEWALKS (4")	SY	13
0531-6019	CURB RAMPS (TY 2)	SY	29
0531-6020	CURB RAMPS (TY 3)	SY	31
0531-6029	CURB RAMPS (TY 20)	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	18
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	2
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	2

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
33801	13741318.46	2083145.91	--	ME
33802	13741430.81	2083169.69	--	ME
33803	13741435.90	2083179.78	--	ME
33804	13741385.83	2083268.84	--	ME
33805	13741432.80	2083247.32	--	ME
33812	13741455.51	2083220.75	--	ME
33813	13741466.98	2083223.88	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

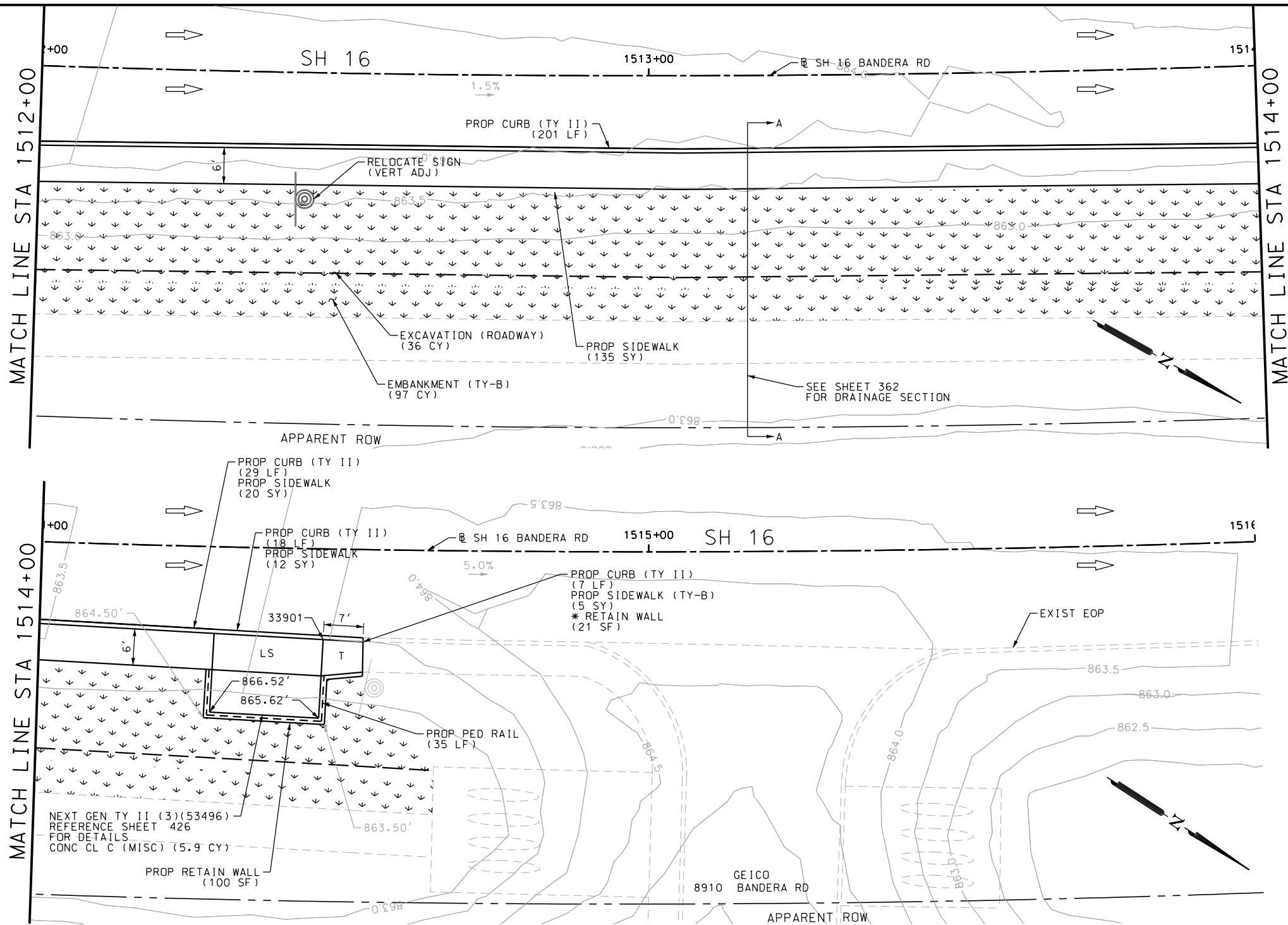
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1510+50 TO STA 1512+00  
 STA 1910+50 TO STA 1912+50  
 SHEET 60 OF 126

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	360

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*40.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33901	13741698.47	2083086.02	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0110-6001	EXCAVATION (ROADWAY)	CY	36
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	97
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	610
0162-6002	BLOCK SODDING	SY	610
0168-6001	VEGETATIVE WATERING	MG	9.52
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	100
0450-6048	RAIL (HANDRAIL) (TY B)	LF	35
0529-6002	CONC CURB (TY II)	LF	255
0531-6001	CONC SIDEWALKS (4")	SY	12
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	160
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

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 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
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 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1512+00 TO STA 1516+00

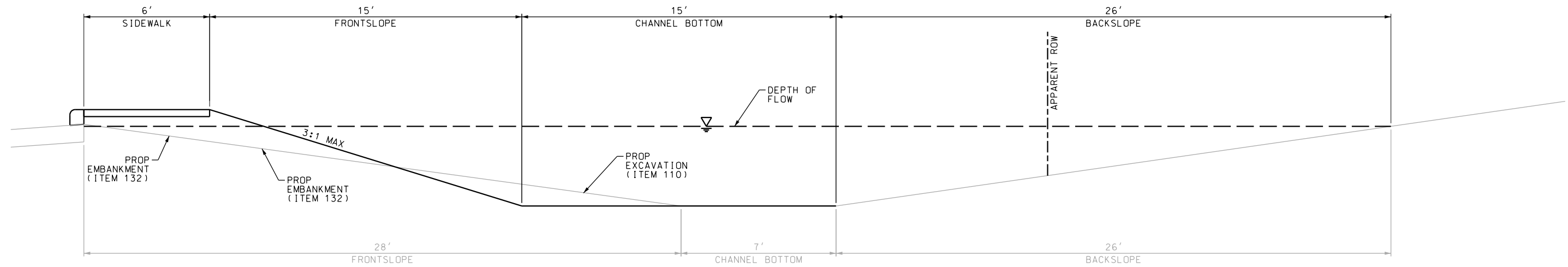
SHEET 61 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	SAT	BEXAR	0915	12	576	361



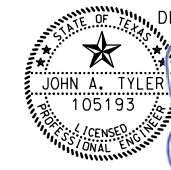
Plotted on: 5/3/2019

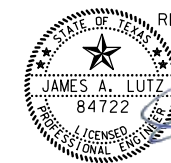
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**SECTION A-A**  
N.T.S.

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  

 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

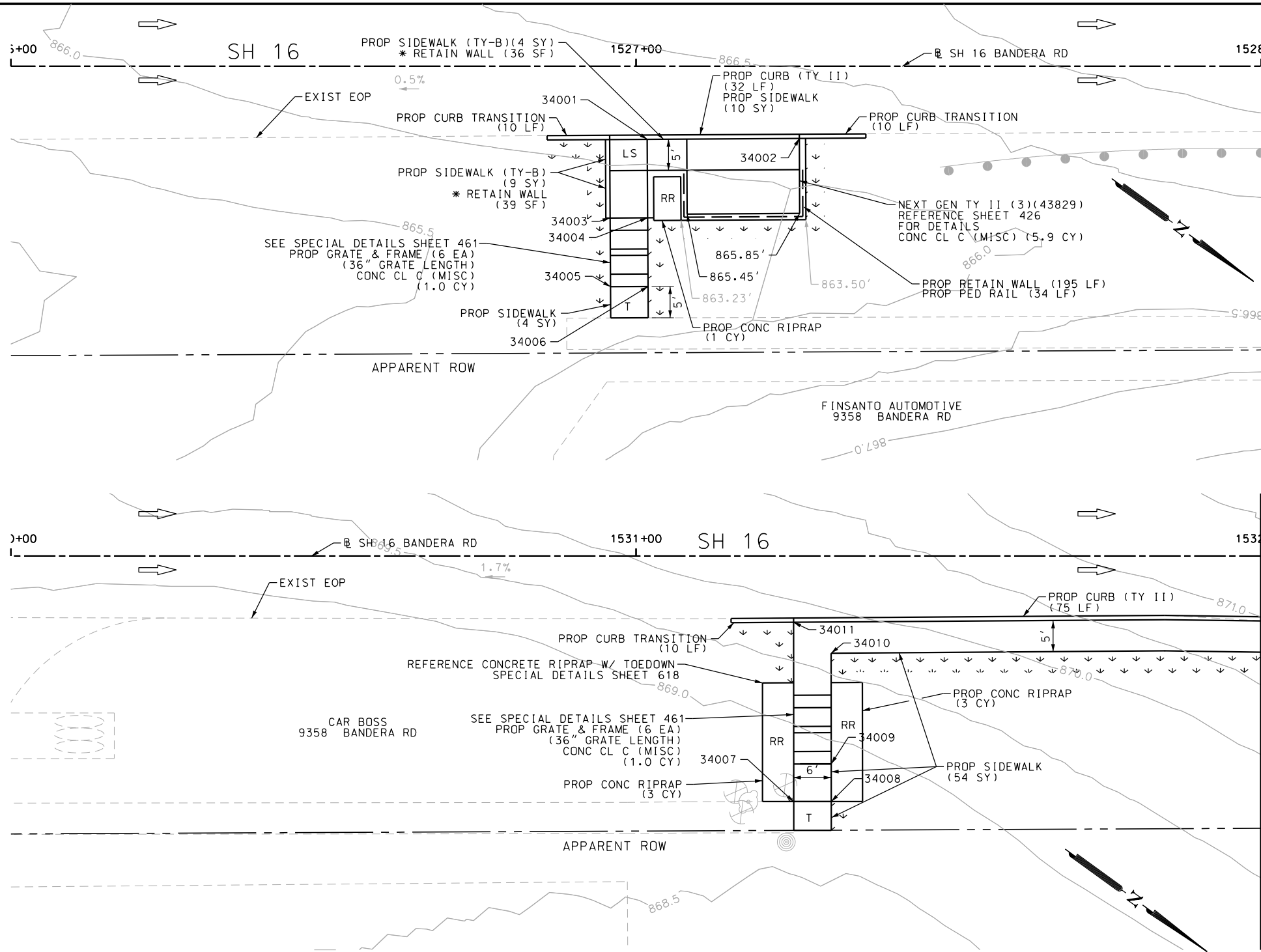
 Texas Department of Transportation  
© 2019

SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1512+00 TO STA 1516+00  
 SHEET 62 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.	SHEET NO.
			576	362

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB\*41.dgn



MATCH LINE STA 1532+00

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0420-6074	CL C CONC (MISC)	CY	7.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	195
0432-6003	RIPRAP (CONC) (6 IN)	CY	7
0450-6048	RAIL (HANDRAIL) (TY B)	LF	34
0471-6003	GRATE & FRAME	EA	12
0529-6002	CONC CURB (TY II)	LF	137
0531-6001	CONC SIDEWALKS (4")	SY	68
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	13

**NOTES:**

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DESIGN

JOHN A. TYLER, P.E.  
DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
34001	13742722.02	2082358.05	--	ME
34002	13742741.66	2082343.66	--	ME
34003	13742724.61	2082371.72	866.39	PROP
34004	13742729.45	2082368.18	866.46	PROP
34005	13742731.11	2082380.60	866.23	PROP
34006	13742735.95	2082377.05	866.30	PROP
34007	13743081.21	2082132.08	--	ME
34008	13743086.07	2082128.56	869.55	PROP
34009	13743082.53	2082123.67	869.55	PROP
34010	13743072.15	2082109.35	--	ME
34011	13743064.38	2082108.85	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1526+00 TO STA 1528+00  
STA 1530+00 TO STA 1532+00  
SHEET 63 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	363

Plotted on: 5/3/2019

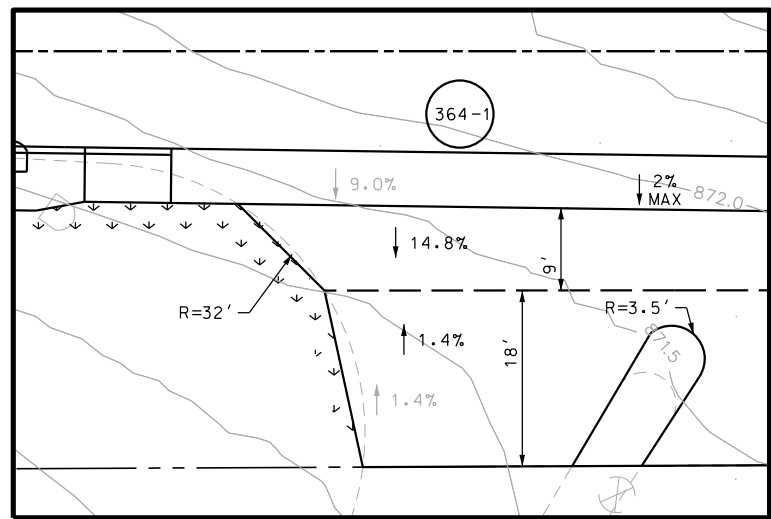
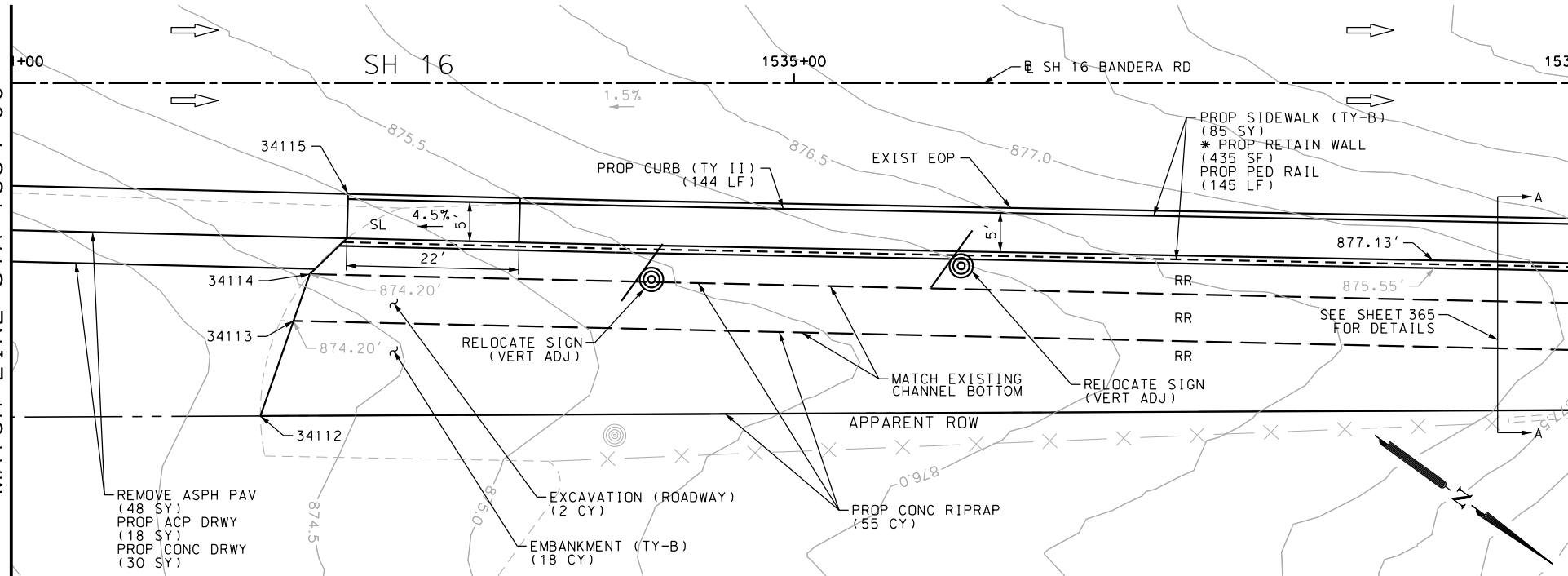
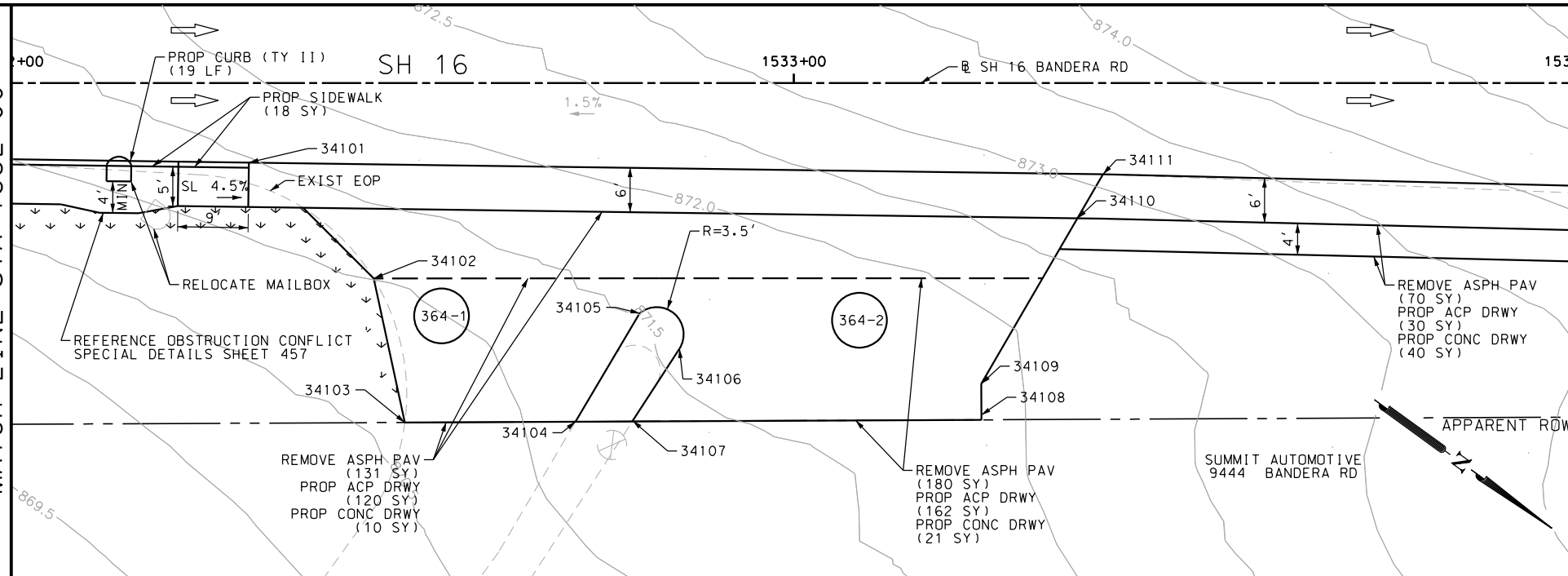
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MATCH LINE STA 1532+00

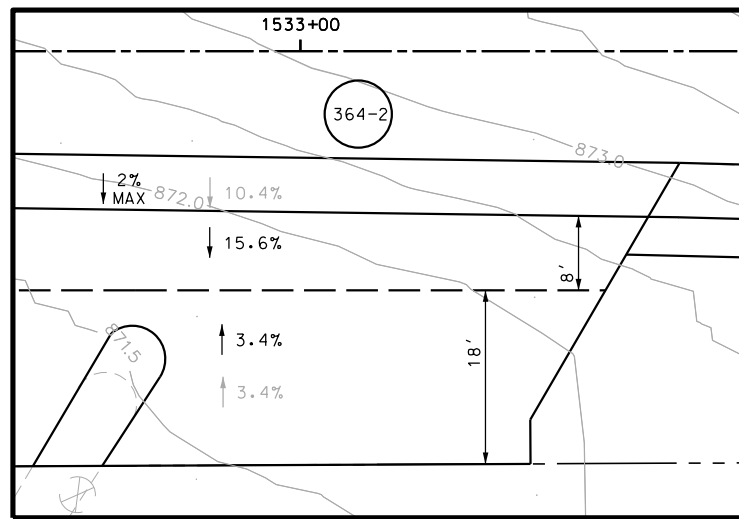
MATCH LINE STA 1534+00

MATCH LINE STA 1534+00

MATCH LINE STA 1536+00



DRWY PLAN STA 1532+53



DRWY PLAN STA 1533+11

POINT	NORTHING	EASTING	ELEV	DESC
34101	13743149.29	2082046.81	--	ME
34102	13743170.88	2082049.45	--	ME
34103	13743184.90	2082062.01	--	ME
34104	13743202.51	2082049.14	--	ME
34105	13743201.02	2082033.12	--	ME
34106	13743207.78	2082033.81	--	ME
34107	13743208.36	2082044.86	--	ME
34108	13743244.02	2082018.06	872.45	PROP
34109	13743241.66	2082014.83	872.38	PROP
34110	13743239.22	2081990.50	--	ME
34111	13743238.57	2081984.02	--	ME
34112	13743331.47	2081954.87	874.72	PROP
34113	13743327.76	2081942.55	874.20	PROP
34114	13743325.94	2081936.51	874.20	PROP

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	429
0110-6001	EXCAVATION (ROADWAY)	CY	2
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	18
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	25
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0432-6003	RIPRAP (CONC) (6 IN)	CY	55
0450-6048	RAIL (HANDRAIL) (TY B)	LF	145
0529-6002	CONC CURB (TY II)	LF	163
0530-6004	DRIVEWAYS (CONC)	SY	101
0530-6005	DRIVEWAYS (ACP)	SY	330
0531-6001	CONC SIDEWALKS (4")	SY	18
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	85
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	1
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  

 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPES FIRM REGISTRATION #10028800



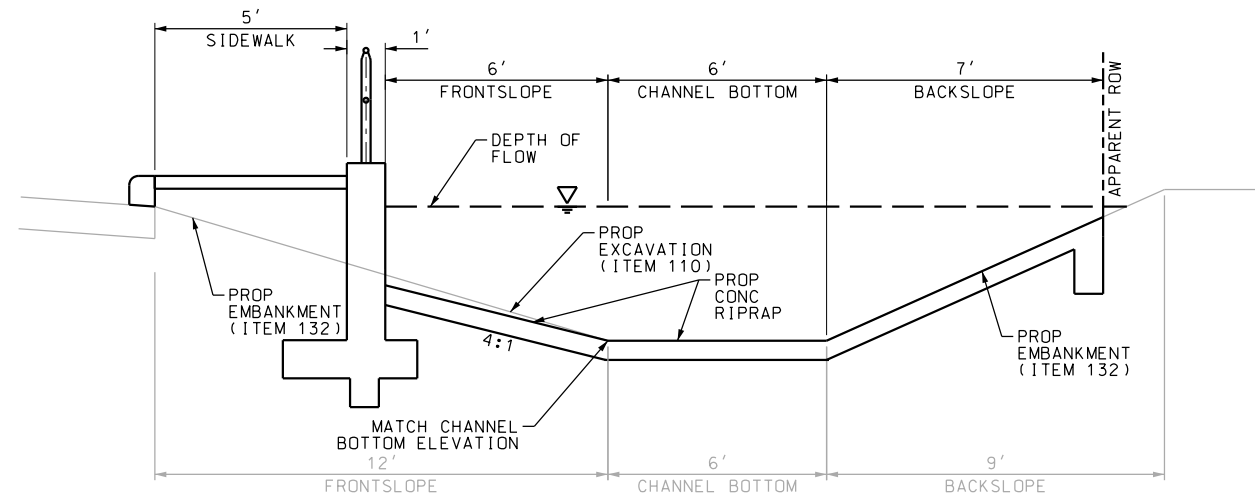
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1532+00 TO STA 1536+00

SHEET 64 OF 126

DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				576
				364

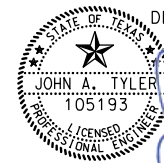
Plotted on: 5/3/2019

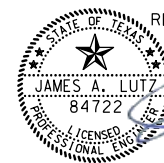
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**SECTION A-A**  
N.T.S.

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

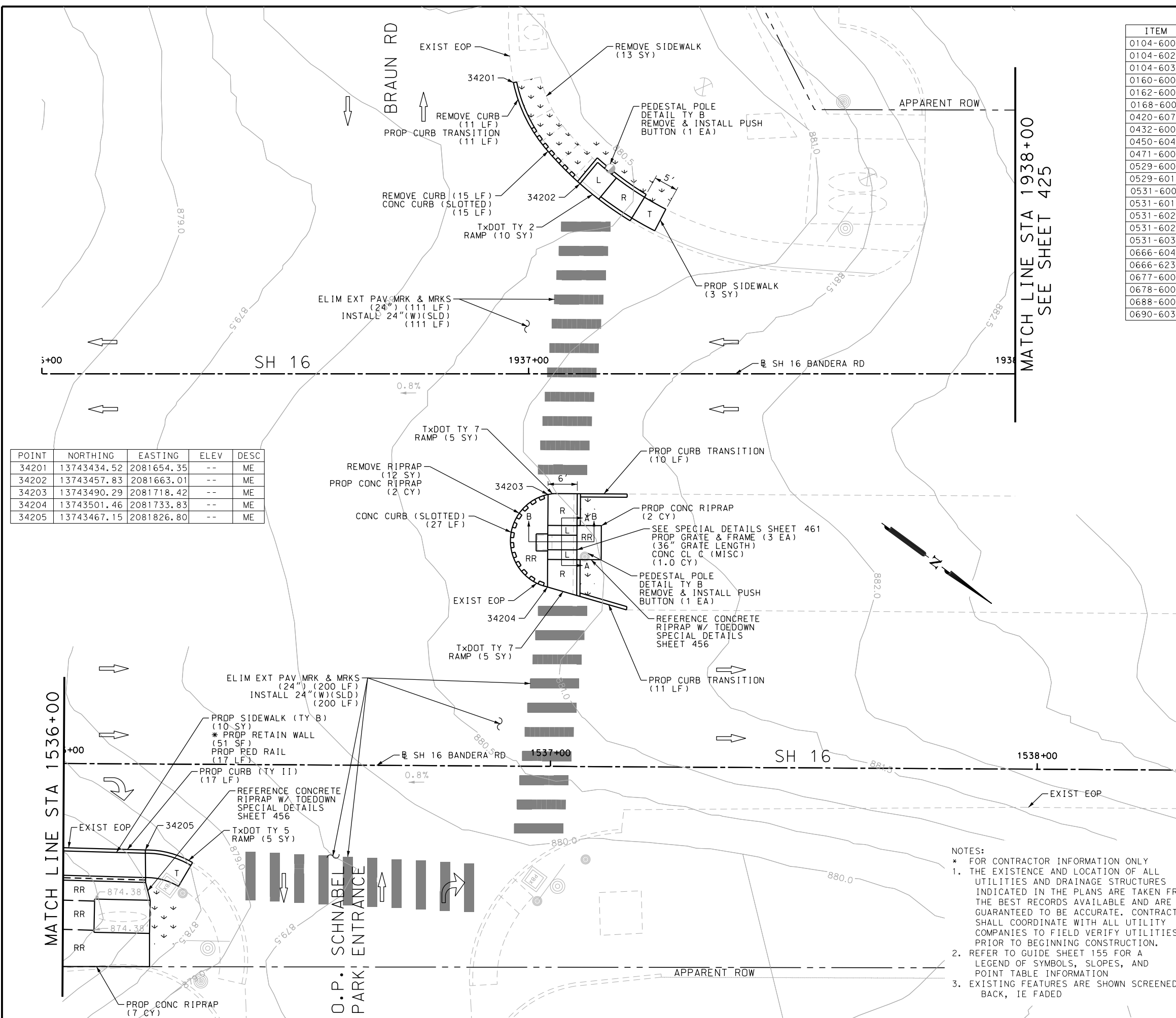
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1532+00 TO STA 1536+00  
 SHEET 65 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIABLES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	365

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*WB\*43.dgn



POINT	NORTHING	EASTING	ELEV	DESC
34201	13743434.52	2081654.35	--	ME
34202	13743457.83	2081663.01	--	ME
34203	13743490.29	2081718.42	--	ME
34204	13743501.46	2081733.83	--	ME
34205	13743467.15	2081826.80	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	12
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	26
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	13
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0420-6074	CL C CONC (MISC)	CY	1.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	11
0450-6048	RAIL (HANDRAIL) (TY B)	LF	17
0471-6003	GRATE & FRAME	EA	3
0529-6002	CONC CURB (TY II)	LF	48
0529-6012	CONC CURB (SLOTTED)	LF	42
0531-6001	CONC SIDEWALKS (4")	SY	3
0531-6019	CURB RAMPS (TY 2)	SY	10
0531-6022	CURB RAMPS (TY 5)	SY	5
0531-6024	CURB RAMPS (TY 7)	SY	10
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10
0666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	311
0666-6230	PAVEMENT SEALER 24"	LF	311
0677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	311
0678-6008	PAV SURF PREP FOR MRK (24")	LF	311
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	2
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	2

MATCH LINE STA 1938+00  
SEE SHEET 425

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPES FIRM REGISTRATION #10028800



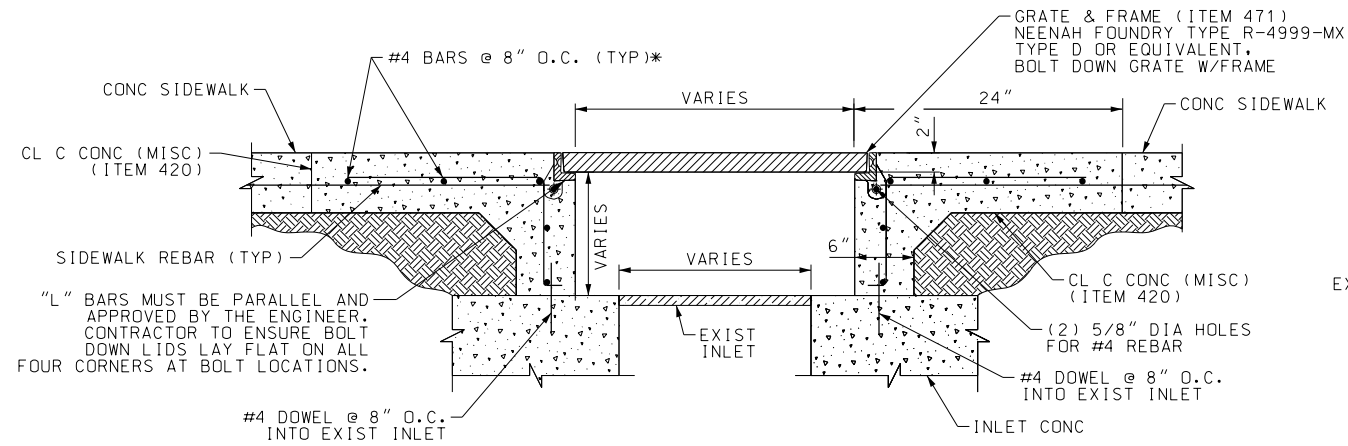
SH 16 BANDERA RD  
SIDEWALK CONSTRUCTION PLAN  
STA 1536+00 TO STA 1538+00  
STA 1936+00 TO STA 1938+00  
SHEET 66 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				366

- NOTES:
- FOR CONTRACTOR INFORMATION ONLY
  - THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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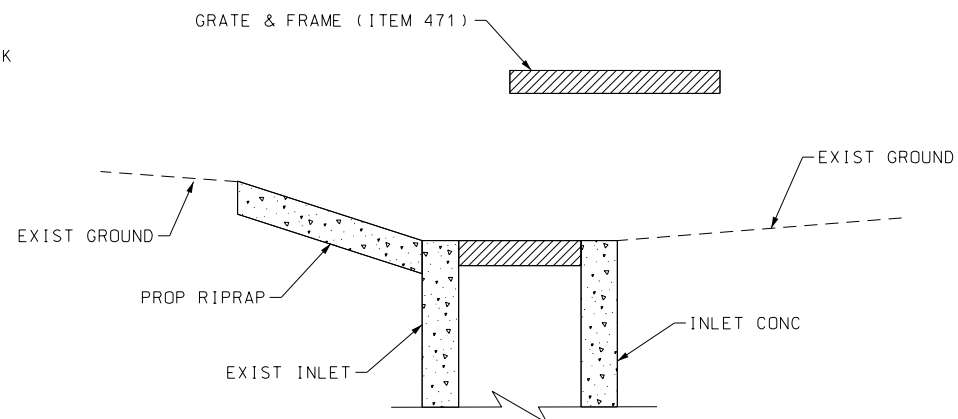
Plotted on: 5/3/2019

Design File Name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\WB\43\A.dgn



SECTION "A-A"  
SCALE : NTS

\* REINFORCEMENT IS SUBSIDIARY TO ITEM 420. CONTRACTOR TO FIELD VERIFY GRATE DIMENSIONS PRIOR TO ORDERING GRATE & FRAME



SECTION "B-B"  
SCALE : NTS

DESIGN

5/3/2019  
DATE

REVIEW AND APPROVAL

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

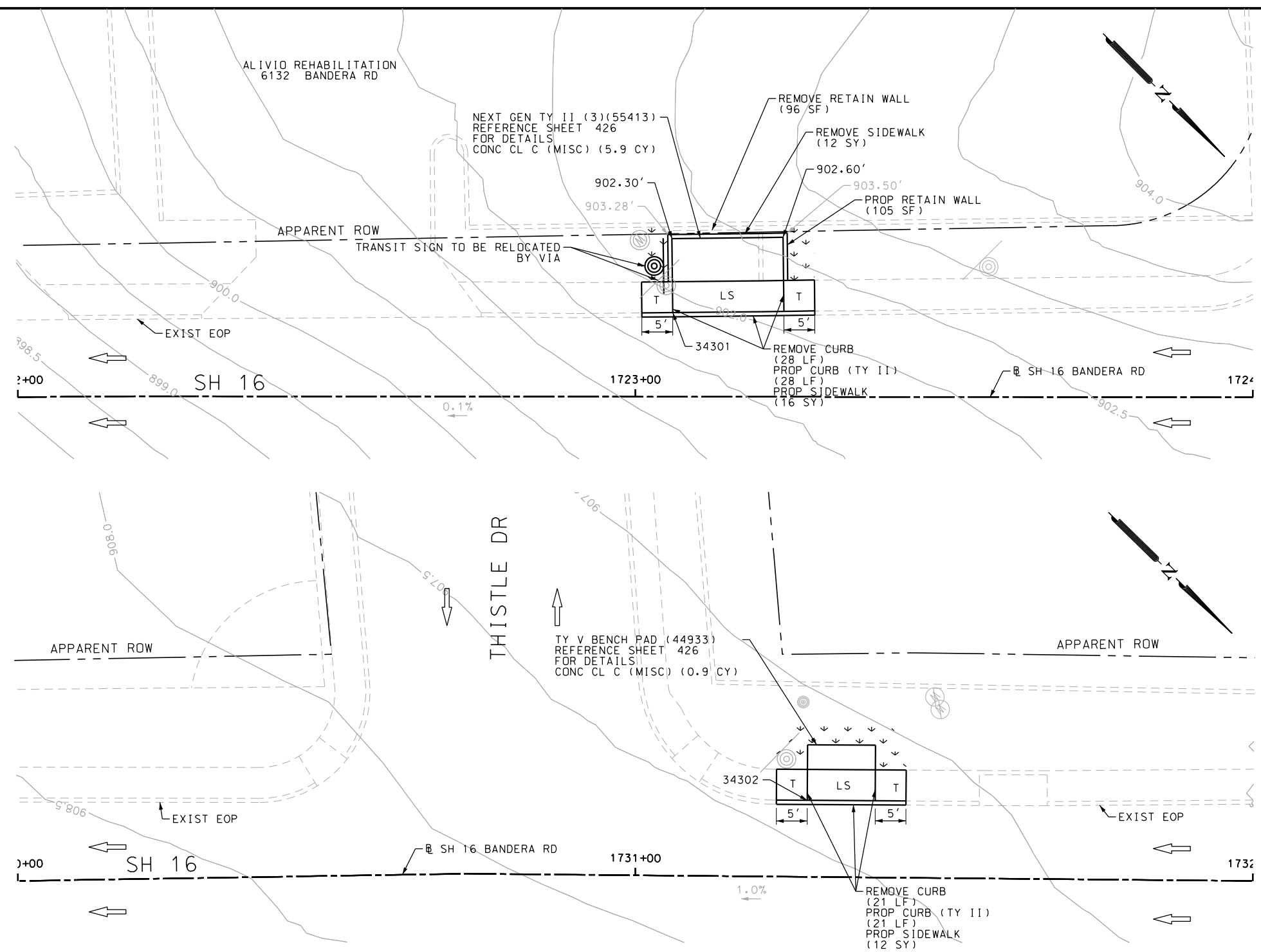


SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1536+00 TO STA 1538+00  
STA 1936+00 TO STA 1938+00  
SHEET 67 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	367

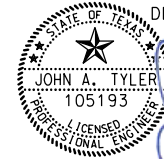
Plotted on: 5/3/2019

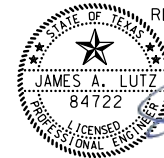
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ITEM	DESCRIPTION	UNIT	QTY
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	96
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	49
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	21
0162-6002	BLOCK SODDING	SY	21
0168-6001	VEGETATIVE WATERING	MG	0.33
0420-6074	CL C CONC (MISC)	CY	6.8
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	105
0529-6002	CONC CURB (TY II)	LF	49
0531-6001	CONC SIDEWALKS (4")	SY	28

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
34301	13726490.05	2094166.59	--	ME
34302	13727069.80	2093583.89	--	ME

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

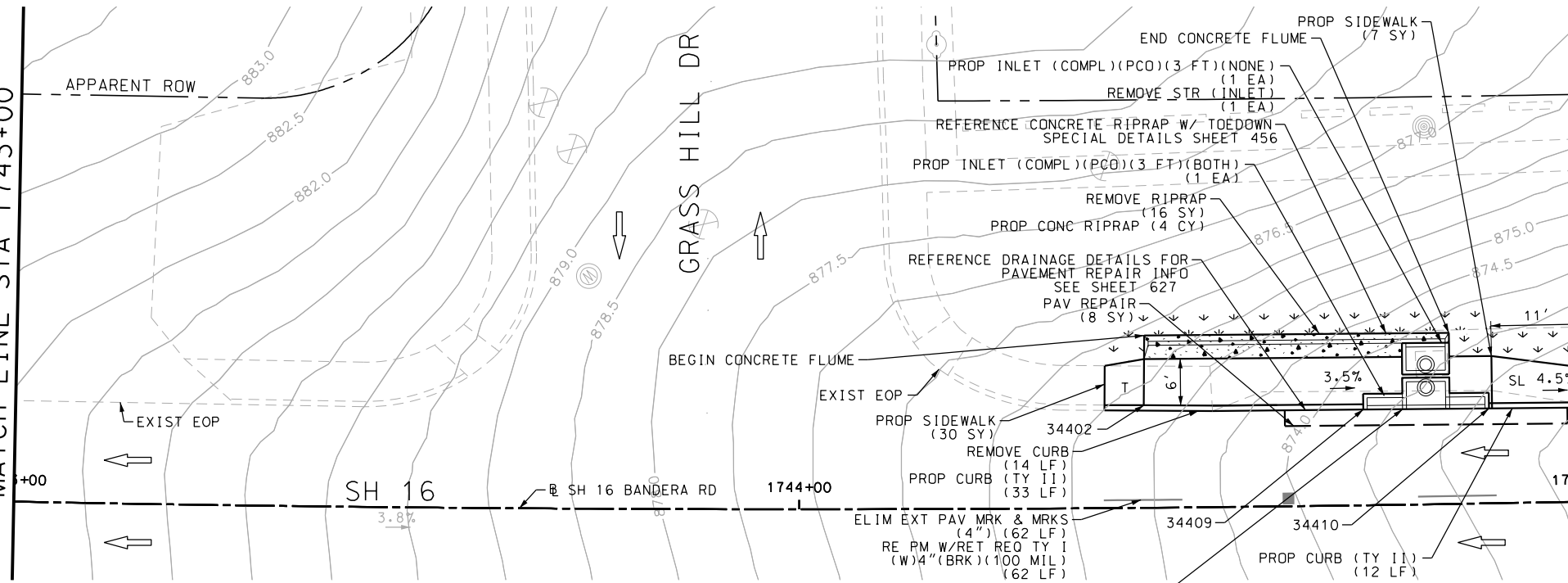
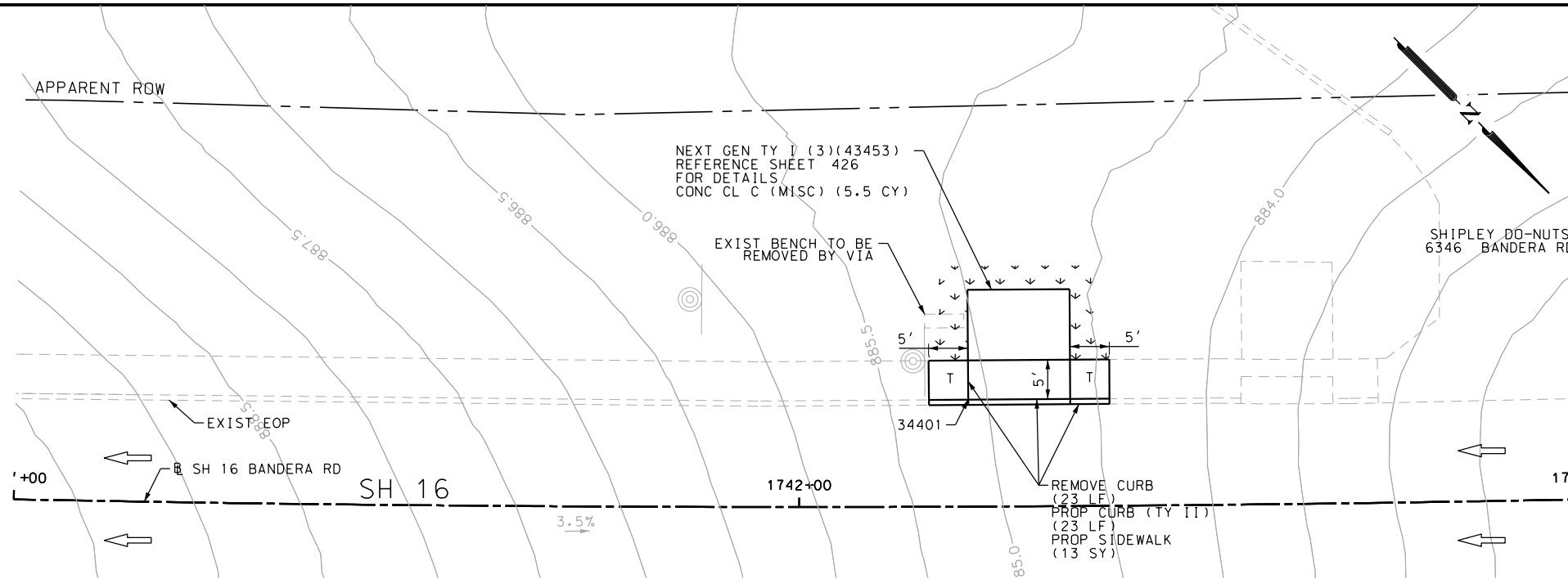
Texas Department of Transportation  
 © 2019

SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1722+00 TO STA 1724+00  
 STA 1730+00 TO STA 1732+00  
 SHEET 68 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO. SHEET NO.
				576 368

Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\45.dgn



POINT	NORTHING	EASTING	ELEV	DESC
34401	13727869.02	2092838.07	--	ME
34402	13728021.78	2092677.25	--	ME
34409	13728041.11	2092657.05	--	ME
34410	13728051.83	2092645.18	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	16
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	37
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	16
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	15
0162-6002	BLOCK SODDING	SY	15
0168-6001	VEGETATIVE WATERING	MG	0.23
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	8
0402-6001	TRENCH EXCAVATION PROTECTION	LF	18
0420-6074	CL C CONC (MISC)	CY	5.5
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0464-6005	RC PIPE (CL III) (24 IN)	LF	18
0465-6013	INLET (COMPL) (PCO) (3FT) (NONE)	EA	1
0465-6016	INLET (COMPL) (PCO) (3FT) (BOTH)	EA	1
0496-6002	REMOV STR (INLET)	EA	1
0529-6002	CONC CURB (TY II)	LF	68
0530-6005	DRIVEWAYS (ACP)	SY	26
0531-6001	CONC SIDEWALKS (4")	SY	50
0666-6224	PAVEMENT SEALER 4"	LF	62
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	62
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	62
0678-6001	PAV SURF PREP FOR MRK (4")	LF	62

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/4/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/4/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1741+00 TO STA 1745+00

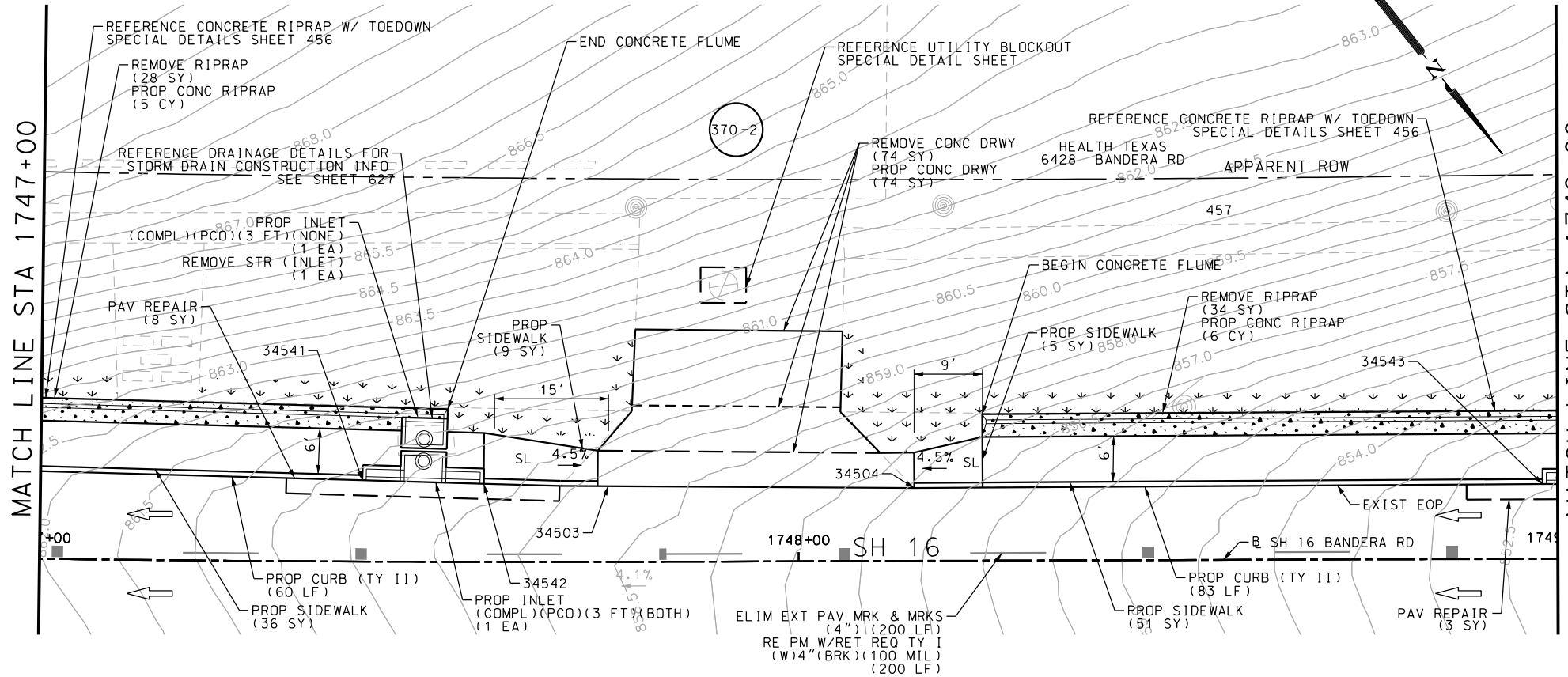
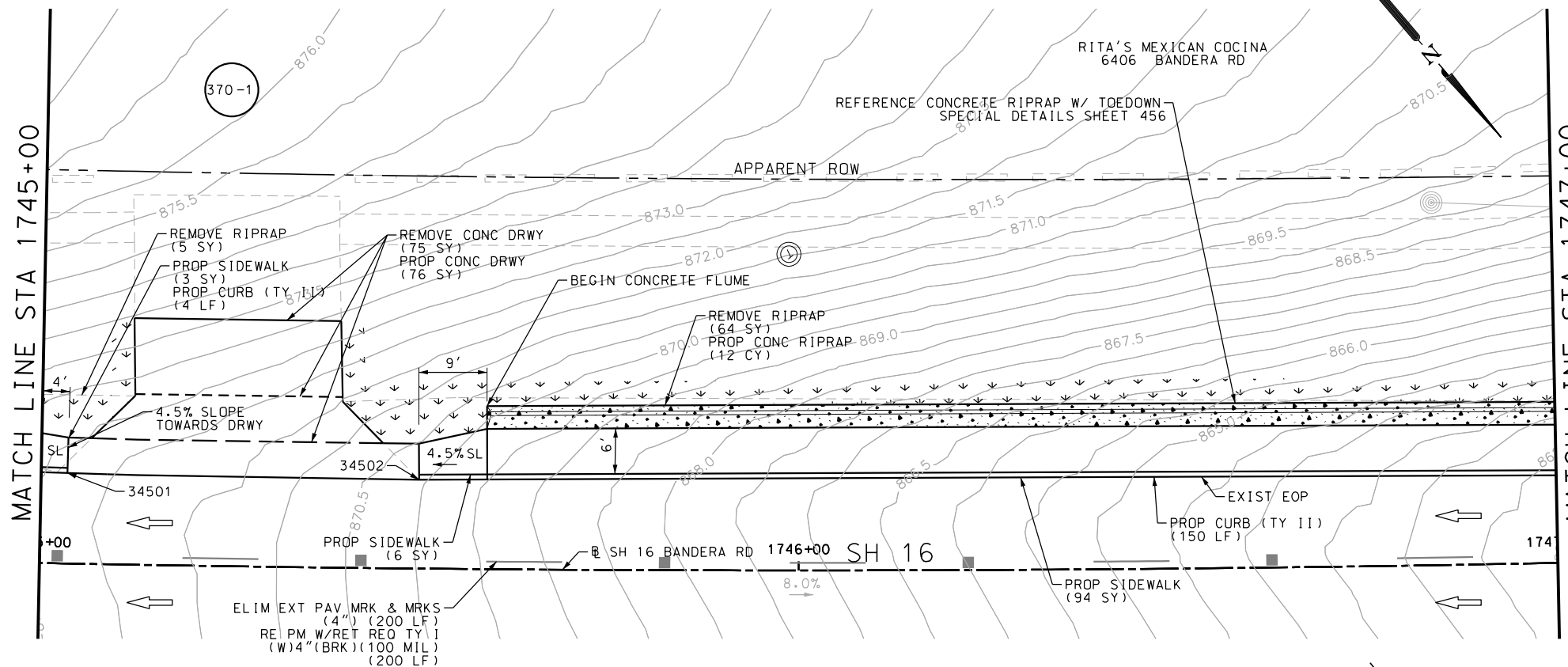
SHEET 69 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	369



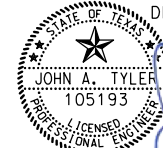
Plotted on: 5/4/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*EB\*46.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	131
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	149
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	106
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	150
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	11
0402-6001	TRENCH EXCAVATION PROTECTION	LF	18
0432-6003	RIPRAP (CONC) (6 IN)	CY	23
0464-6005	RC PIPE (CL III) (24 IN)	LF	18
0465-6013	INLET (COMPL) (PCO) (3FT) (NONE)	EA	1
0465-6016	INLET (COMPL) (PCO) (3FT) (BOTH)	EA	1
0496-6002	REMOV STR (INLET)	EA	1
0529-6002	CONC CURB (TY II)	LF	297
0530-6004	DRIVEWAYS (CONC)	SY	150
0531-6001	CONC SIDEWALKS (4")	SY	204
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	48
0666-6224	PAVEMENT SEALER 4"	LF	400
0666-6315	RE PM W/RET REQ TY I (Y)4" (SLD) (100MIL)	LF	400
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	400
0678-6001	PAV SURF PREP FOR MRK (4")	LF	400

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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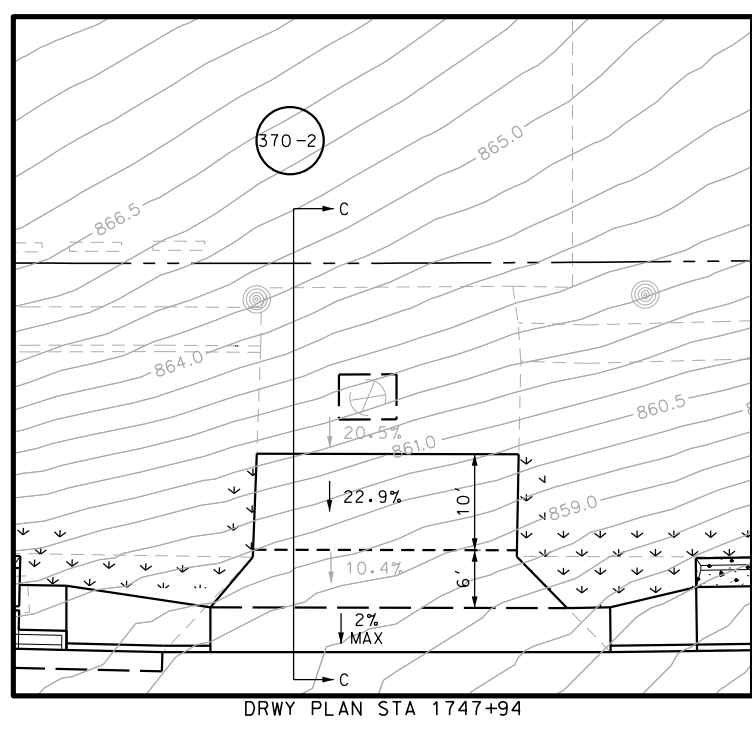
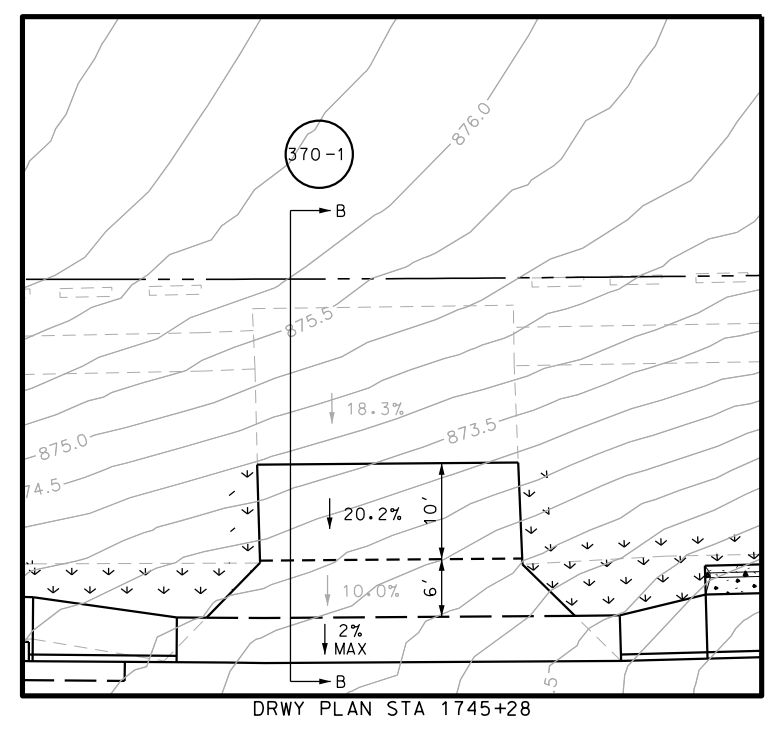
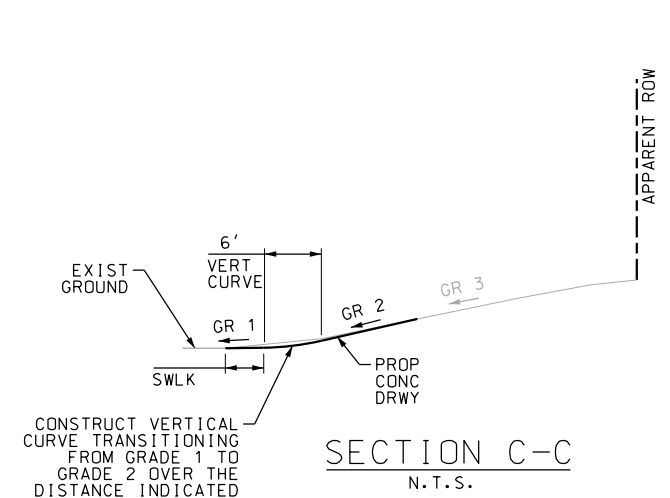
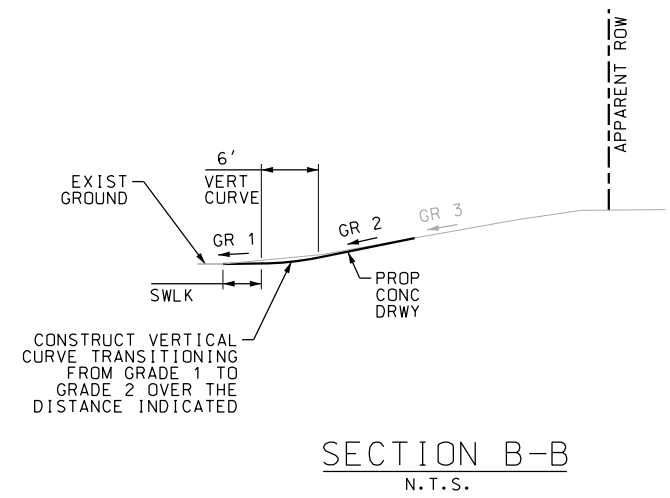
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1745+00 TO STA 1749+00

SHEET 70 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				370

SEE SHEET 371 FOR POINT TABLE

POINT	NORTHING	EASTING	ELEV	DESC
34501	13728062.15	2092633.76	--	ME
34502	13728092.83	2092599.06	--	ME
34503	13728237.50	2092427.31	--	ME
34504	13728262.79	2092395.92	--	ME
34541	13728216.72	2092452.17	--	ME
34542	13728227.03	2092439.94	--	ME
34543	13728313.89	2092330.85	--	ME



- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

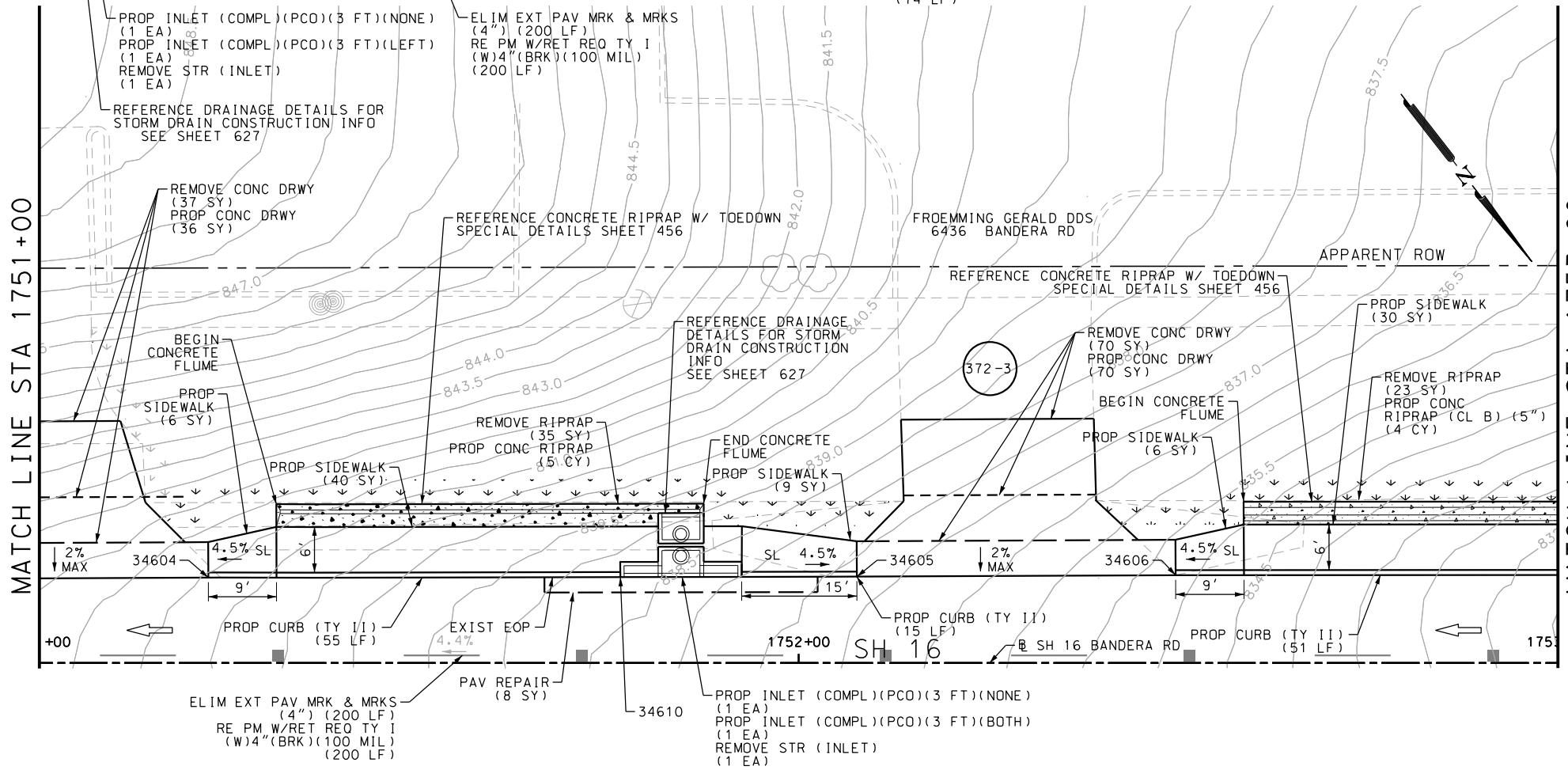
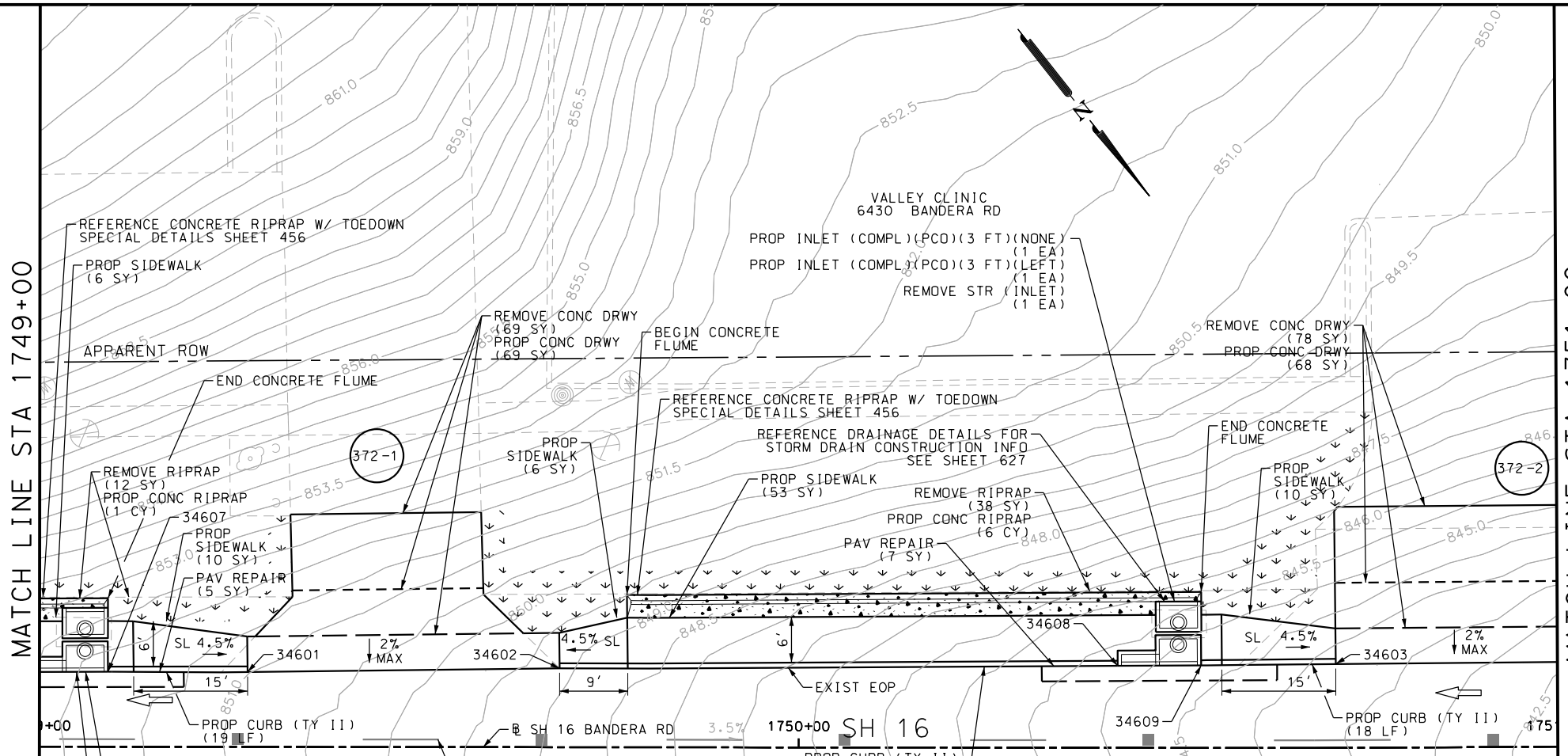
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1745+00 TO STA 1749+00  
 SHEET 71 OF 126

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
DGN:	6	TEXAS		VARIES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
DWG:	SAT	BEXAR	0915	12	576	371

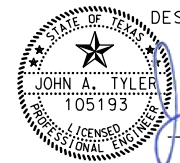
Plotted on: 5/4/2019

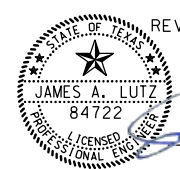
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ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	108
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	254
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	72
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	143
0162-6002	BLOCK SODDING	SY	143
0168-6001	VEGETATIVE WATERING	MG	2.23
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	20
0402-6001	TRENCH EXCAVATION PROTECTION	LF	54
0432-6003	RIPRAP (CONC) (6 IN)	CY	16
0464-6005	RC PIPE (CL III) (24 IN)	LF	54
0465-6013	INLET (COMPL) (PCO) (3FT) (NONE)	EA	3
0465-6014	INLET (COMPL) (PCO) (3FT) (LEFT)	EA	2
0465-6016	INLET (COMPL) (PCO) (3FT) (BOTH)	EA	1
0496-6002	REMOV STR (INLET)	EA	3
0528-6006	REMOVE AND RELAY PAVERS	SY	150
0529-6002	CONC CURB (TY II)	LF	232
0530-6004	DRIVEWAYS (CONC)	SY	243
0531-6001	CONC SIDEWALKS (4")	SY	176
0666-6224	PAVEMENT SEALER 4"	LF	400
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	400
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	400
0678-6001	PAV SURF PREP FOR MRK (4")	LF	400

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION.
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED.

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1749+00 TO STA 1753+00

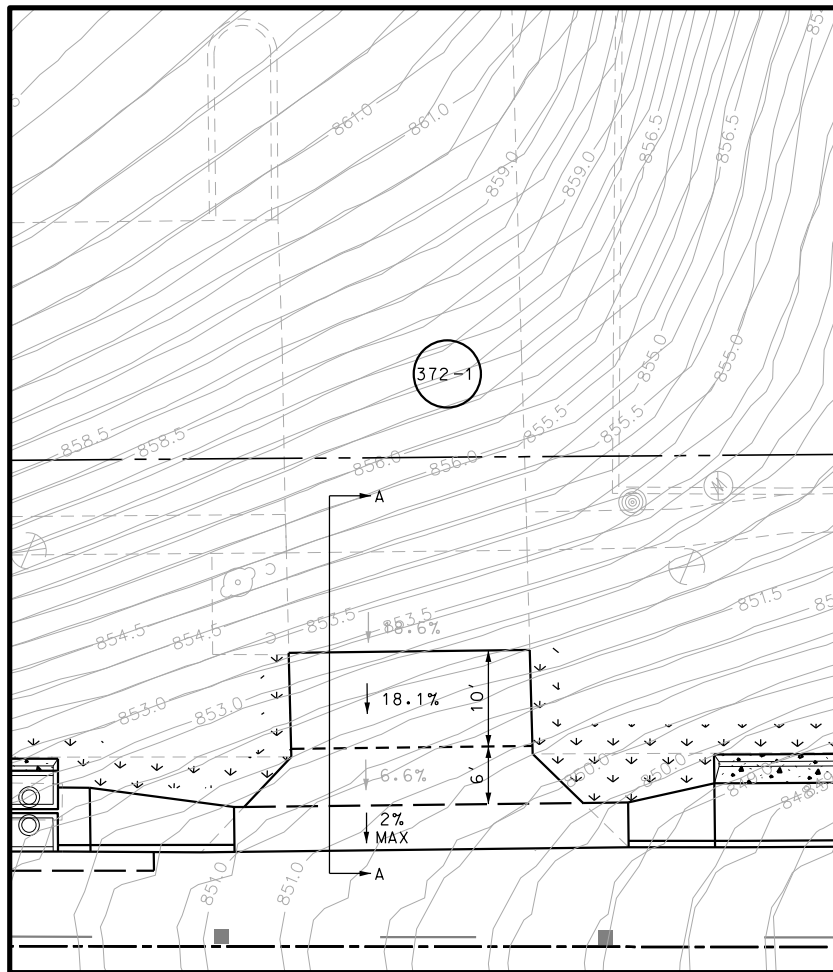
SHEET 72 OF 126

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DWG:	6	TEXAS		VARIABLES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				372

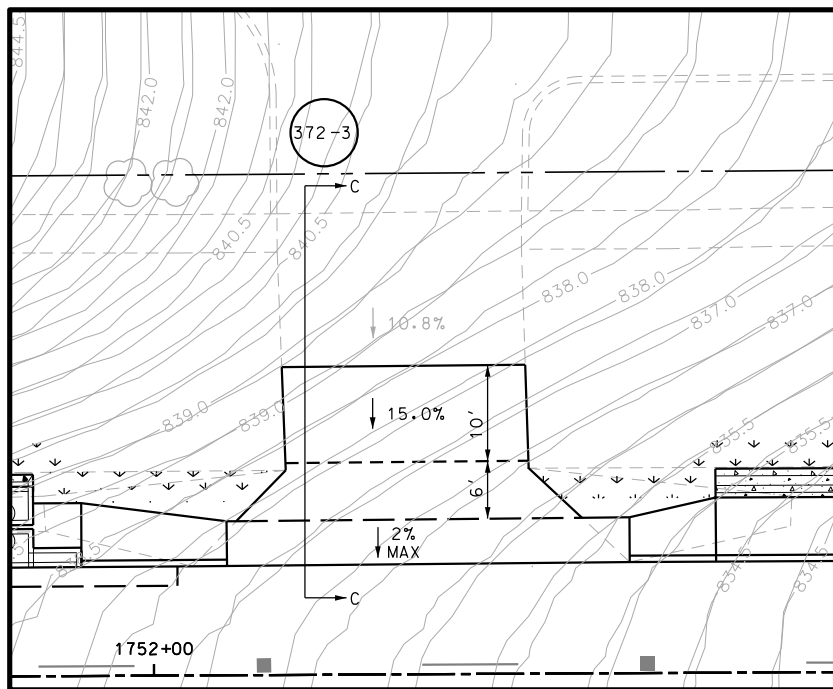
SEE SHEET 373 FOR POINT TABLE

Plotted on: 5/3/2019

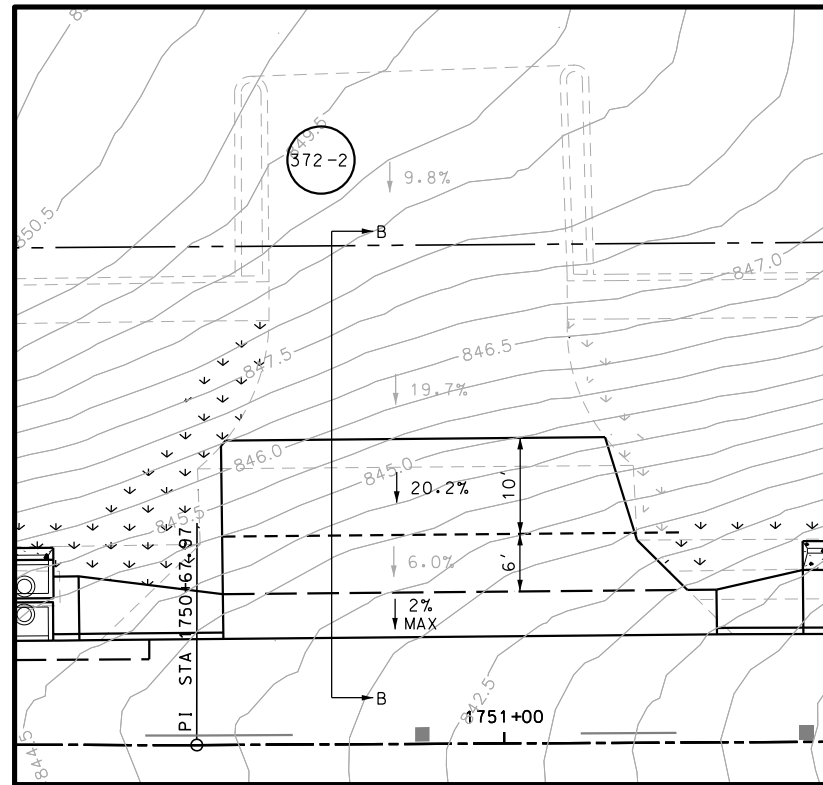
Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*47\*A.dgn



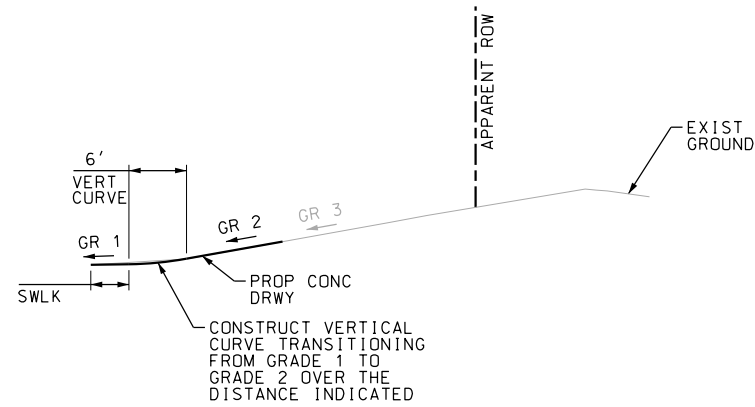
DRWY PLAN STA 1749+47



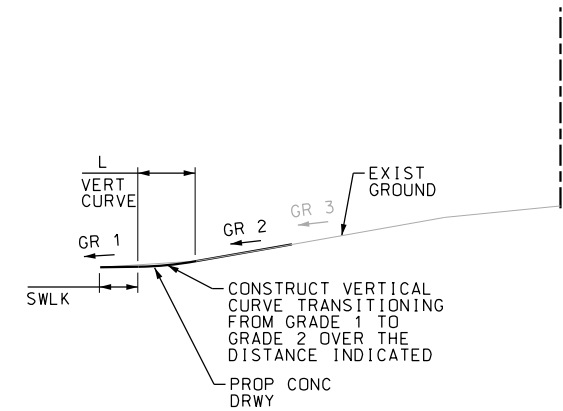
DRWY PLAN STA 1752+28



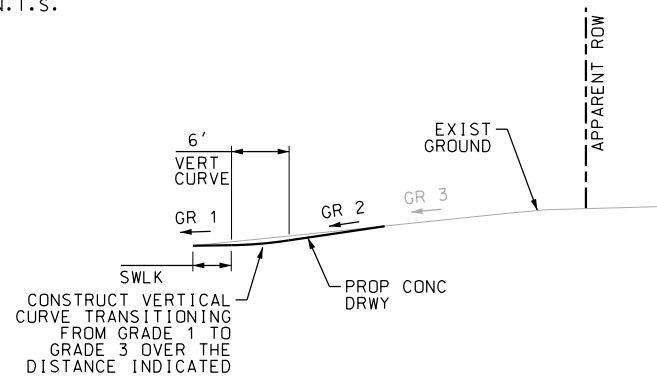
DRWY PLAN STA 1750+92



SECTION A-A  
N.T.S.



SECTION B-B  
N.T.S.

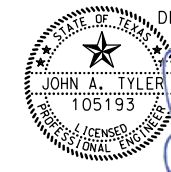


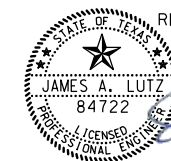
SECTION C-C  
N.T.S.

POINT	NORTHING	EASTING	ELEV	DESC
34601	13728332.11	2092307.78	--	ME
34602	13728357.18	2092275.21	--	ME
34603	13728420.05	2092194.58	--	ME
34604	13728451.53	2092153.90	--	ME
34605	13728503.99	2092086.47	--	ME
34606	13728529.66	2092053.26	--	ME
34607	13728320.70	2092322.20	--	ME
34608	13728402.45	2092217.29	--	ME
34609	13728409.21	2092208.61	--	ME
34610	13728484.87	2092111.08	--	ME

NOTES:

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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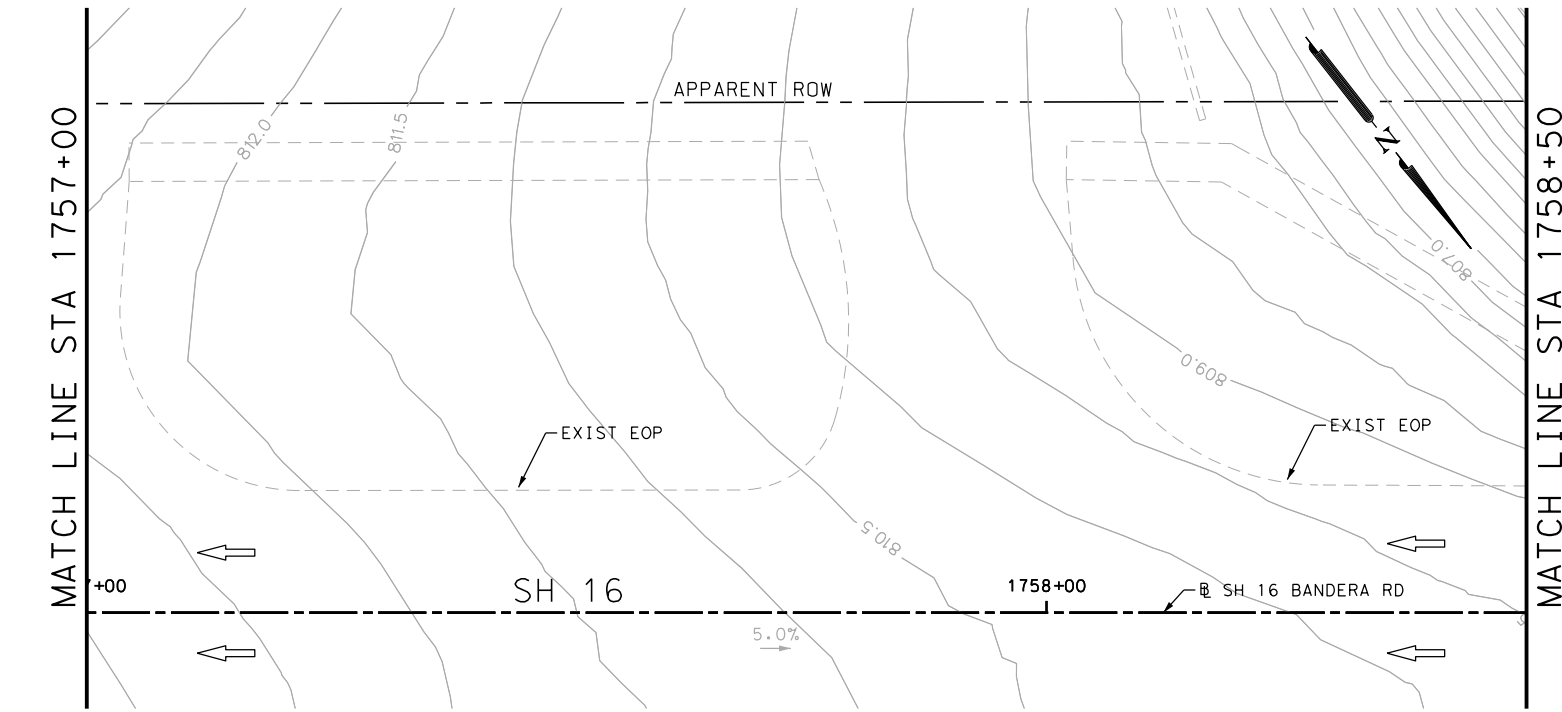
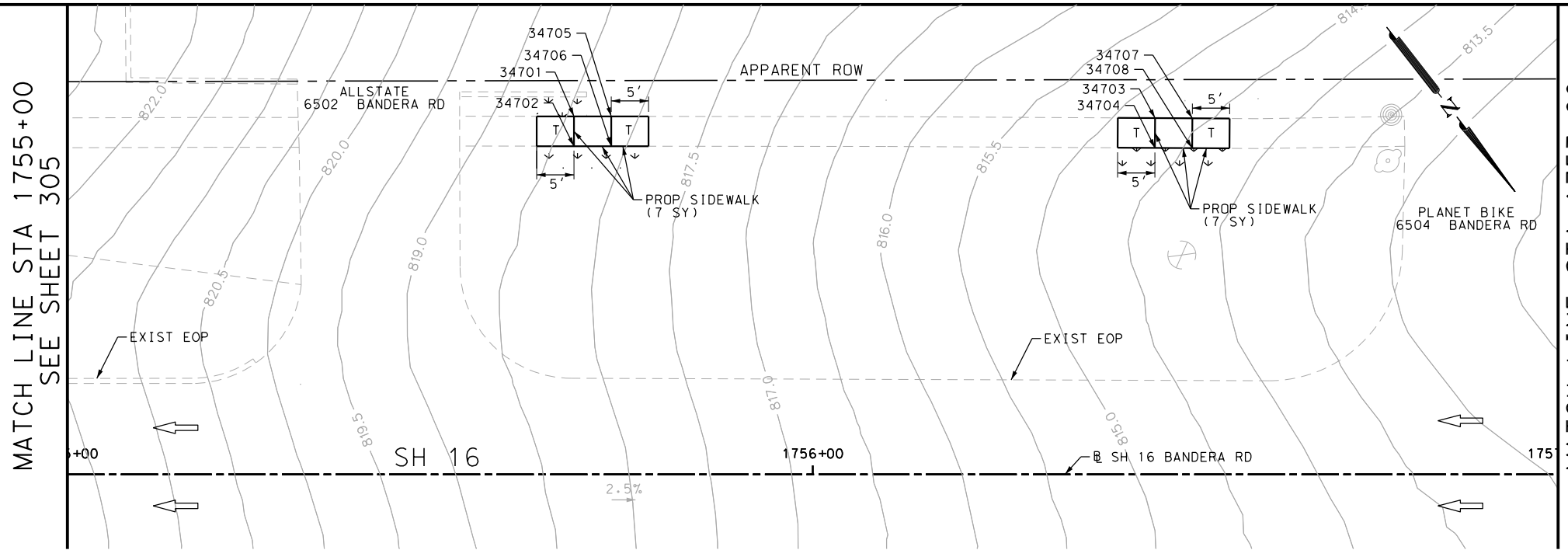
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1749+00 TO STA 1753+00

SHEET 73 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				373

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*48.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	12
0162-6002	BLOCK SODDING	SY	12
0168-6001	VEGETATIVE WATERING	MG	0.19
0531-6001	CONC SIDEWALKS (4")	SY	14

- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
34701	13728696.76	2091779.90	--	ME
34702	13728699.91	2091782.36	--	ME
34703	13728744.91	2091718.57	--	ME
34704	13728748.05	2091721.05	--	ME
34705	13728699.84	2091775.96	--	ME
34706	13728702.99	2091778.42	--	ME
34707	13728748.01	2091714.65	--	ME
34708	13728751.15	2091717.12	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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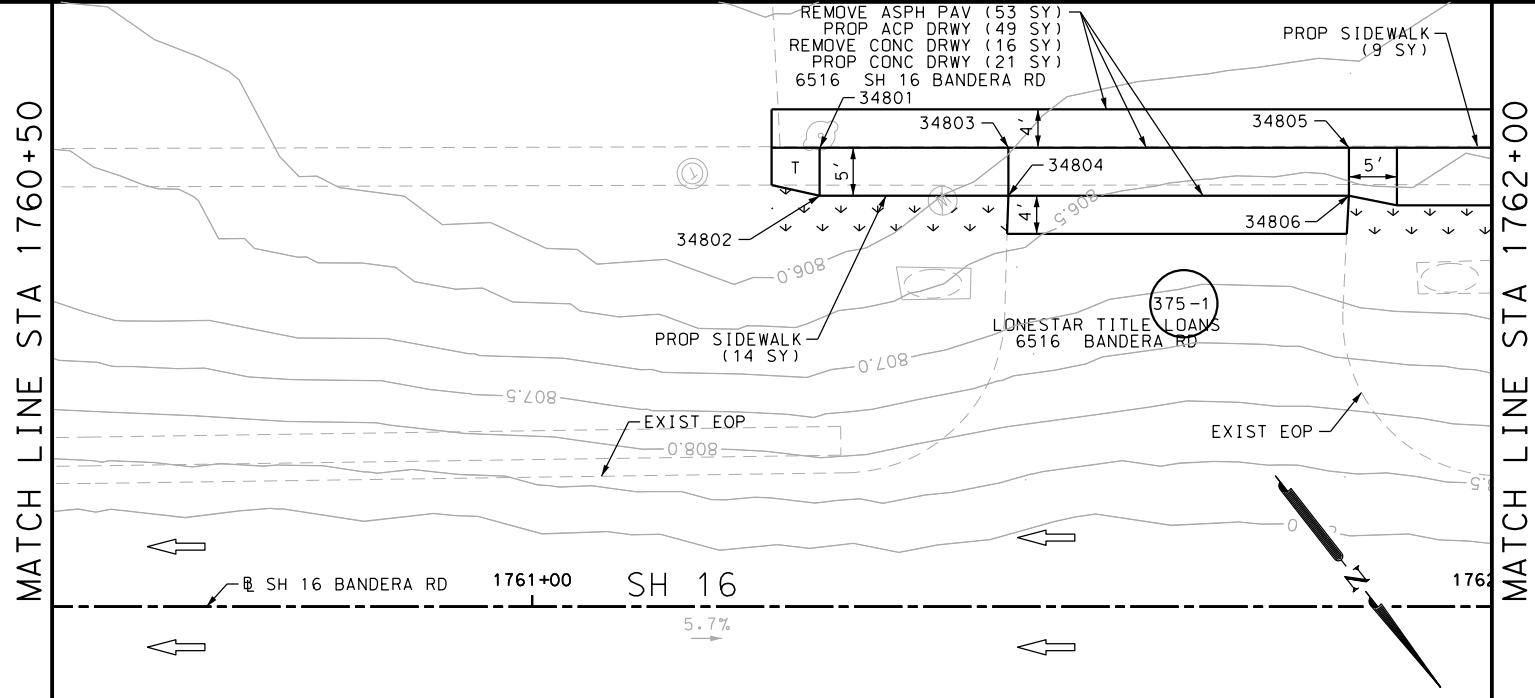
SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1755+00 TO STA 1758+50

SHEET 74 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	374

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*49PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	16
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	53
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	18
0162-6002	BLOCK SODDING	SY	18
0168-6001	VEGETATIVE WATERING	MG	0.28
0530-6004	DRIVEWAYS (CONC)	SY	21
0530-6005	DRIVEWAYS (ACP)	SY	49
0531-6001	CONC SIDEWALKS (4")	SY	23

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

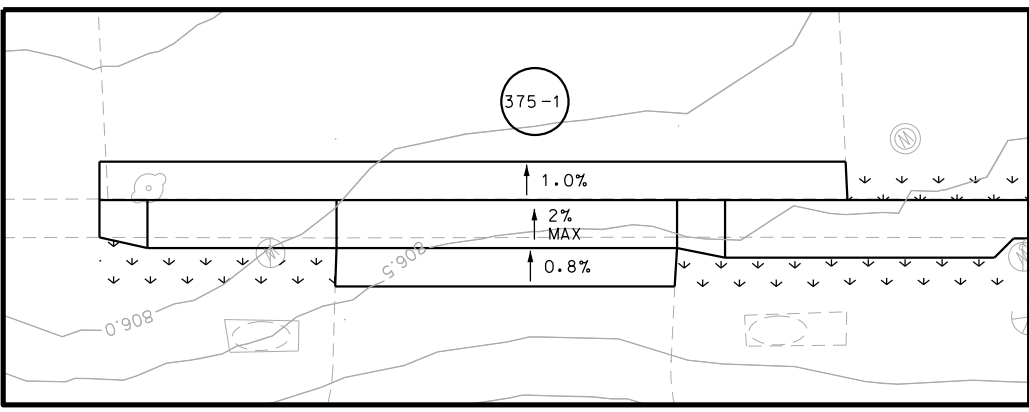
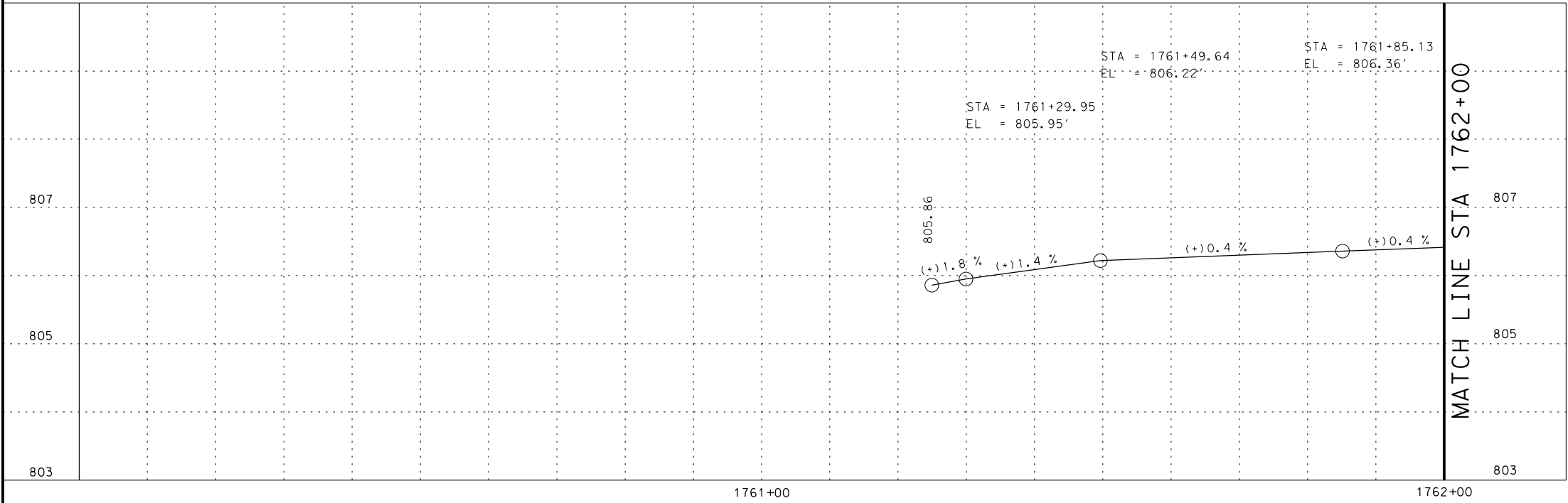
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1760+50 TO STA 1762+00

SHEET 75 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	375

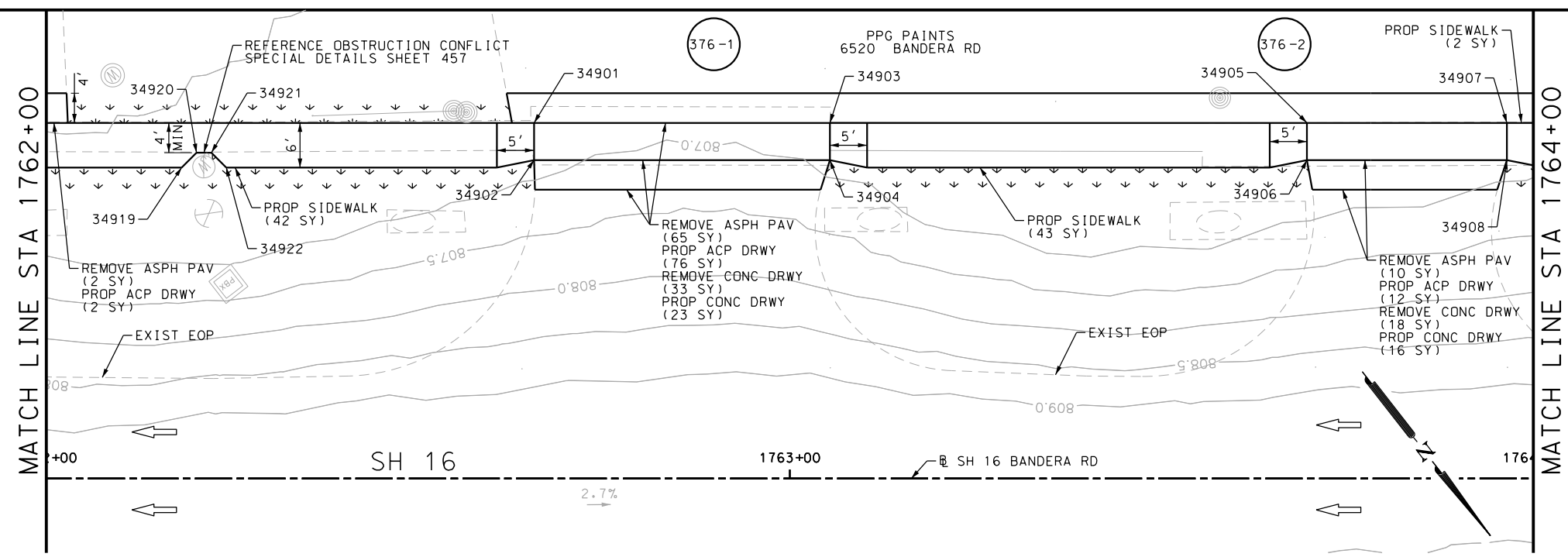


DRWY PLAN STA 1761+71

POINT	NORTHING	EASTING	ELEV	DESC
34801	13729042.66	2091336.95	--	PROF
34802	13729046.60	2091340.03	--	PROF
34803	13729054.77	2091321.43	--	PROF
34804	13729058.71	2091324.51	--	PROF
34805	13729076.60	2091293.46	--	PROF
34806	13729080.54	2091296.53	--	PROF

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB\*50PP.dgn



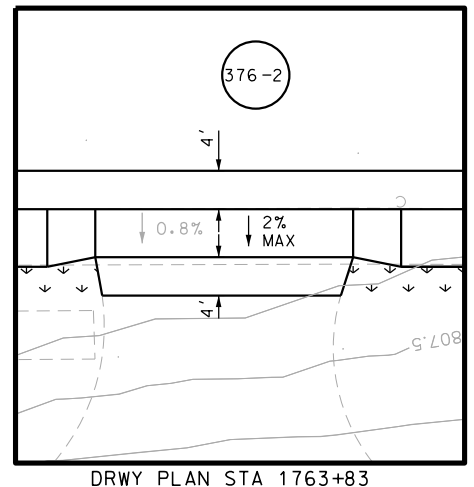
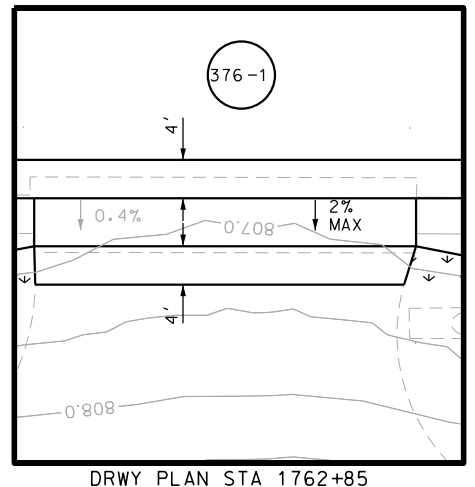
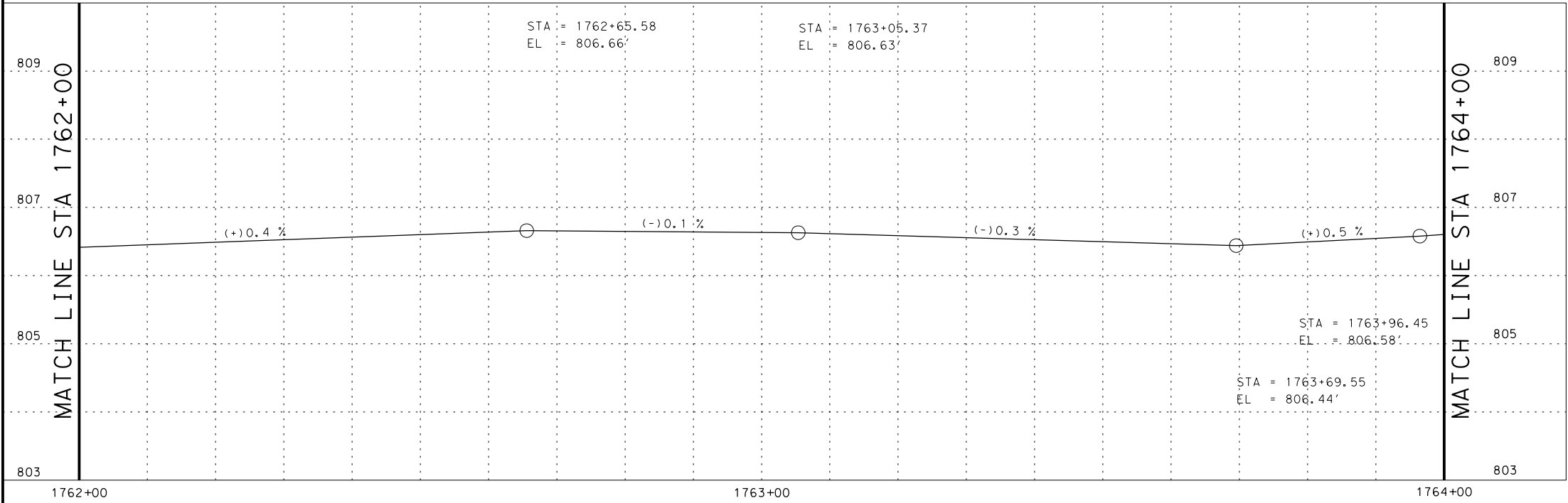
ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	51
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	77
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	77
0162-6002	BLOCK SODDING	SY	77
0168-6001	VEGETATIVE WATERING	MG	1.20
0530-6004	DRIVEWAYS (CONC)	SY	39
0530-6005	DRIVEWAYS (ACP)	SY	90
0531-6001	CONC SIDEWALKS (4")	SY	86

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'



POINT	NORTHING	EASTING	ELEV	DESC
34901	13729126.10	2091230.03	--	PROF
34902	13729130.04	2091233.10	--	PROF
34903	13729150.58	2091198.66	--	PROF
34904	13729154.52	2091201.73	--	PROF
34905	13729190.06	2091148.06	--	PROF
34906	13729194.00	2091151.14	--	PROF
34907	13729206.59	2091126.87	--	PROF
34908	13729210.54	2091129.95	--	PROF
34919	13729101.67	2091271.08	--	PROF
34920	13729101.32	2091268.28	--	PROF
34921	13729102.55	2091266.70	--	PROF
34922	13729105.36	2091266.35	--	PROF

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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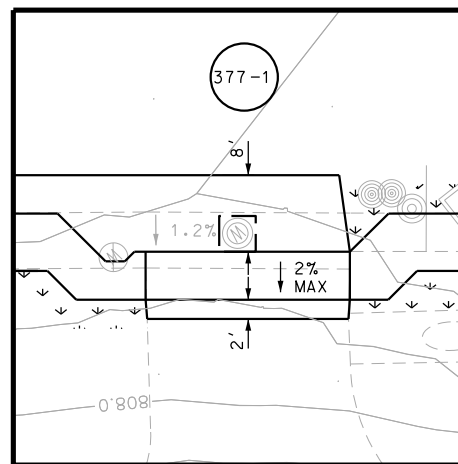
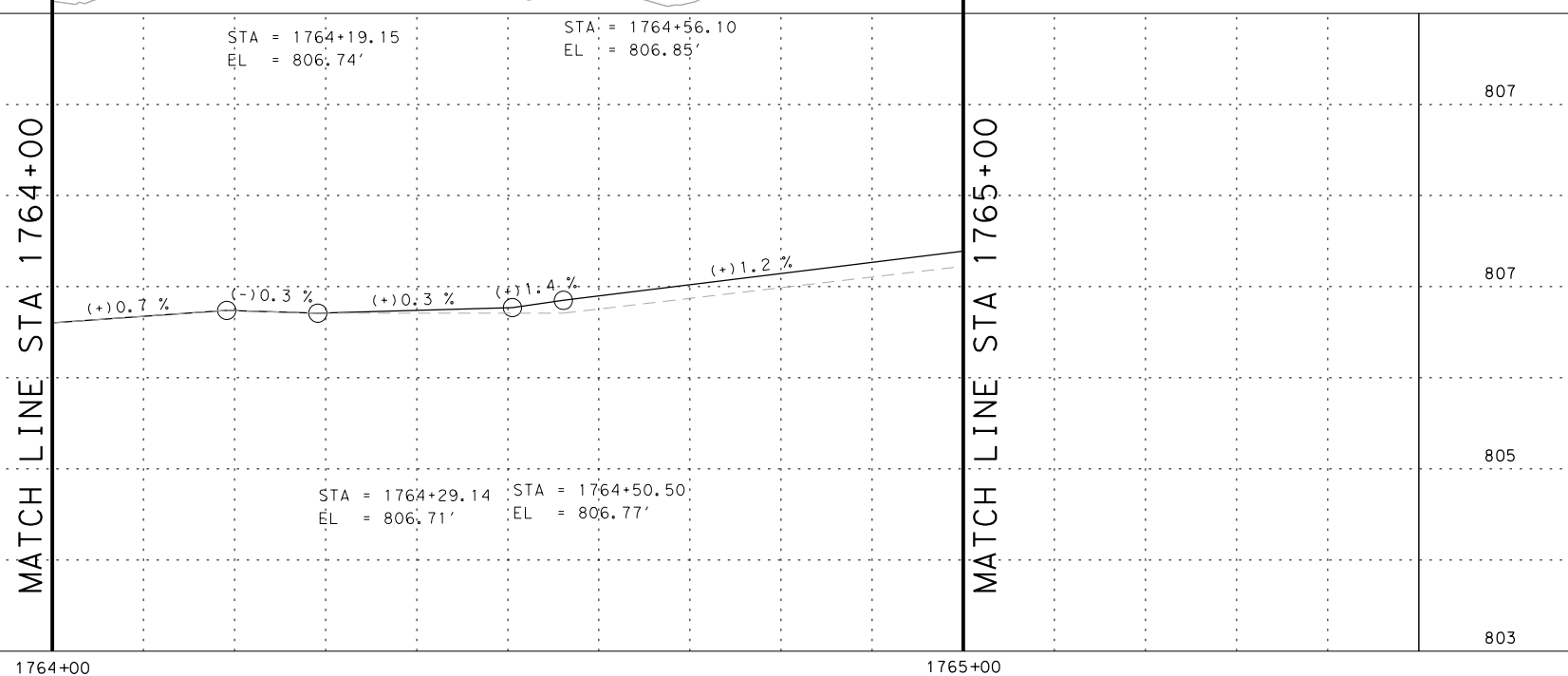
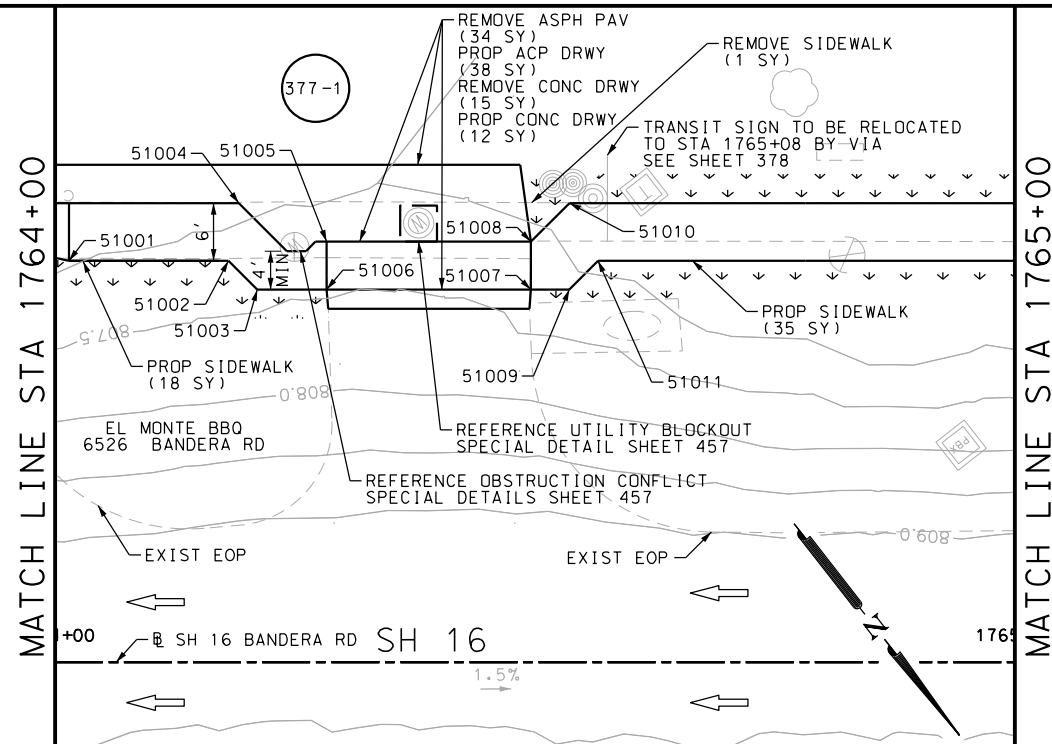
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1762+00 TO STA 1764+00

SHEET 76 OF 126

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	376

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*50PP\*A.dgn



DRWY PLAN STA 1764+39

POINT	NORTHING	EASTING	ELEV	DESC
51001	13729214.40	2091126.62	--	PROF
51002	13729224.63	2091113.52	--	PROF
51003	13729228.84	2091113.00	--	PROF
51004	13729220.56	2091108.98	--	PROF
51005	13729229.35	2091104.22	--	PROF
51006	13729233.29	2091107.29	--	PROF
51007	13729246.39	2091090.51	--	PROF
51008	13729242.45	2091087.43	--	PROF
51009	13729248.85	2091087.36	--	PROF
51010	13729241.77	2091081.80	--	PROF
51011	13729248.33	2091083.15	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	15
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	1
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	34
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	55
0162-6002	BLOCK SODDING	SY	55
0168-6001	VEGETATIVE WATERING	MG	0.86
0530-6004	DRIVEWAYS (CONC)	SY	12
0530-6005	DRIVEWAYS (ACP)	SY	38
0531-6001	CONC SIDEWALKS (4")	SY	53

- NOTES:
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1764+00 TO STA 1765+00

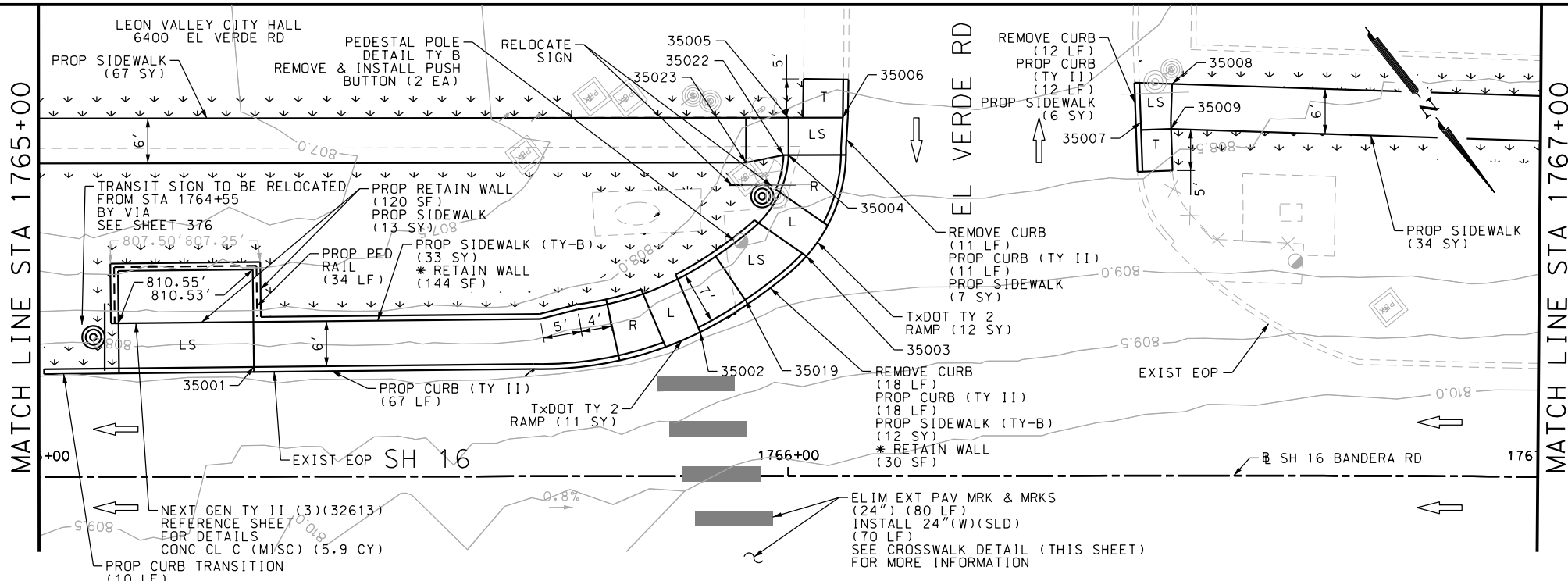
SHEET 77 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	377



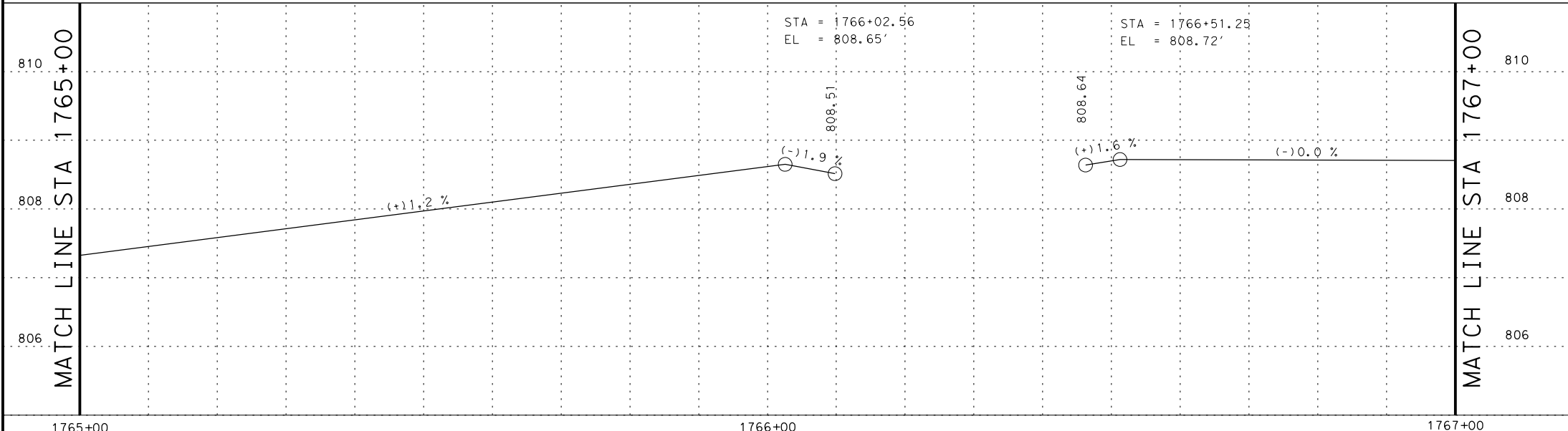
Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Bandera Dr\EB#51PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	41
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	145
0162-6002	BLOCK SODDING	SY	145
0168-6001	VEGETATIVE WATERING	MG	2.26
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	120
0450-6048	RAIL (HANDRAIL) (TY B)	LF	34
0529-6002	CONC CURB (TY II)	LF	118
0531-6001	CONC SIDEWALKS (4")	SY	127
0531-6019	CURB RAMPS (TY 2)	SY	23
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	45
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
0666-6048	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	LF	70
0666-6230	PAVEMENT SEALER 24"	LF	70
0677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	80
0678-6008	PAV SURF PREP FOR MRK (24")	LF	70
0688-6002	PED DETECT PUSH BUTTON (STANDARD)	EA	2
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	2

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

**JOHN A. TYLER, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 105193  
 DATE: 5/3/2019

REVIEW AND APPROVAL

**JAMES A. LUTZ, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 84722  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

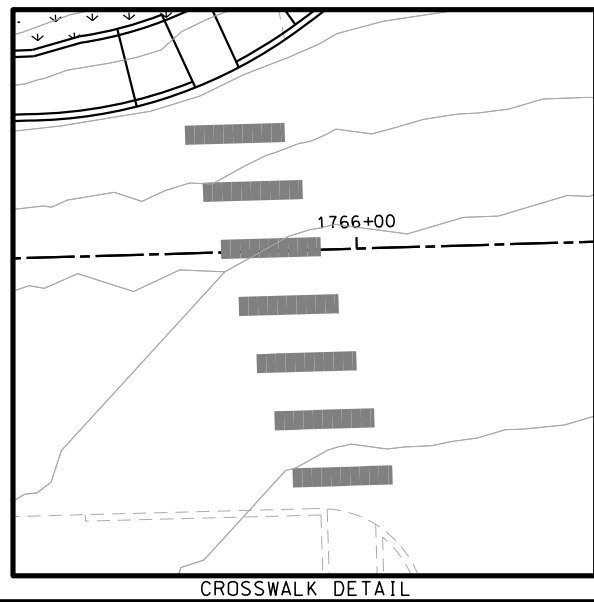
**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1765+00 TO STA 1767+00  
 SHEET 78 OF 126

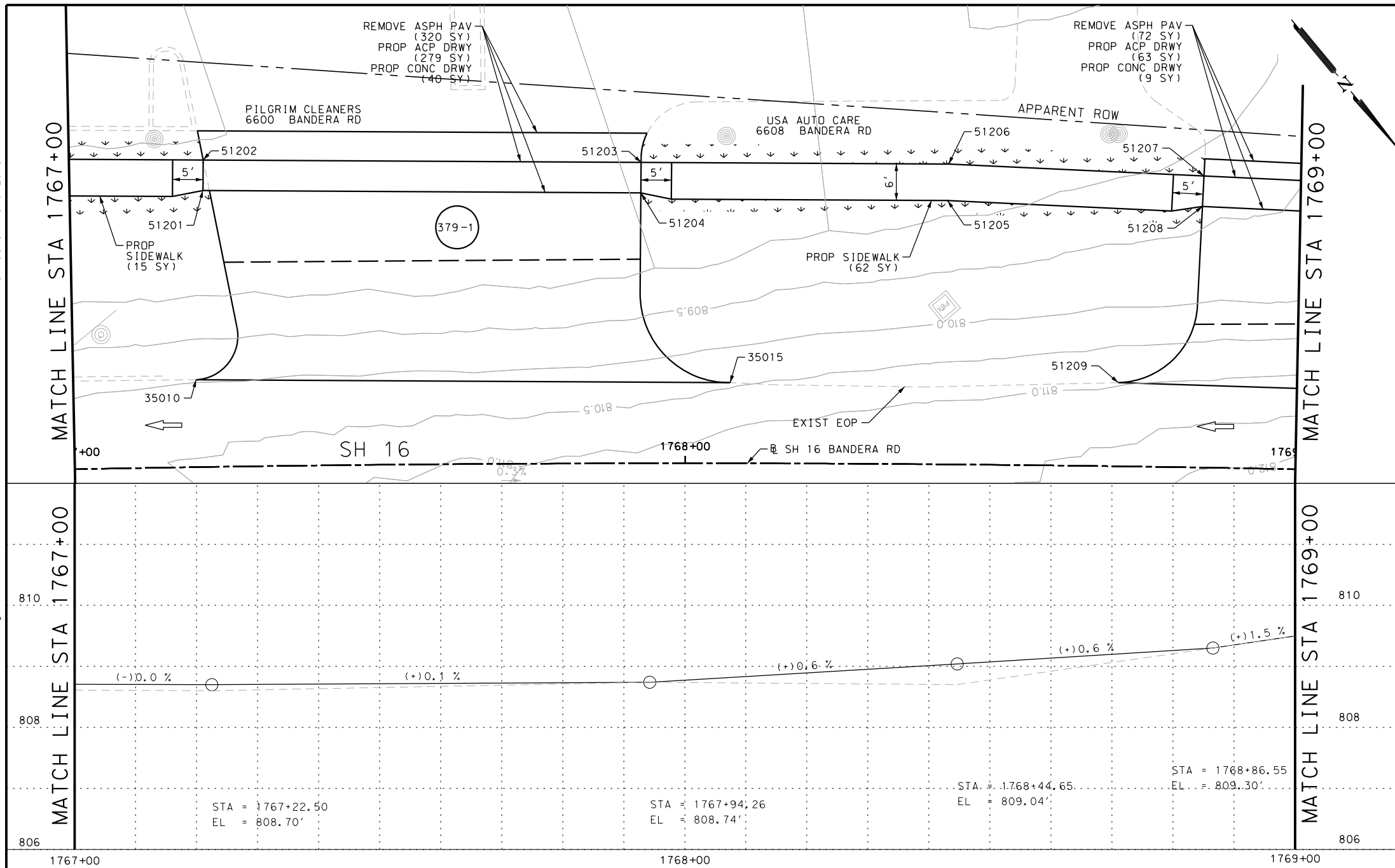
POINT	NORTHING	EASTING	ELEV	DESC
35001	13729314.14	2091043.03	--	ME
35002	13729347.16	2090993.24	--	ME
35003	13729347.91	2090975.85	--	ME
35004	13729335.81	2090969.41	--	PROF
35005	13729331.87	2090966.34	--	PROF
35006	13729336.33	2090960.63	--	ME
35007	13729362.14	2090930.28	--	ME
35008	13729359.86	2090923.25	--	PROF
35009	13729364.50	2090927.05	--	PROF
35010	13729432.61	2090892.43	--	ME
35015	13729488.74	2090825.33	--	ME
35019	13729347.47	2090985.85	--	ME
35022	13729335.40	2090969.94	--	PROF
35023	13729333.11	2090974.50	--	PROF



DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIABLES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	378

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*51PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	392
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	80
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0530-6004	DRIVEWAYS (CONC)	SY	49
0530-6005	DRIVEWAYS (ACP)	SY	342
0531-6001	CONC SIDEWALKS (4")	SY	77

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DESIGN

**JOHN A. TYLER, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 105193  
 5/3/2019 DATE

REVIEW AND APPROVAL

**JAMES A. LUTZ, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 84722  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

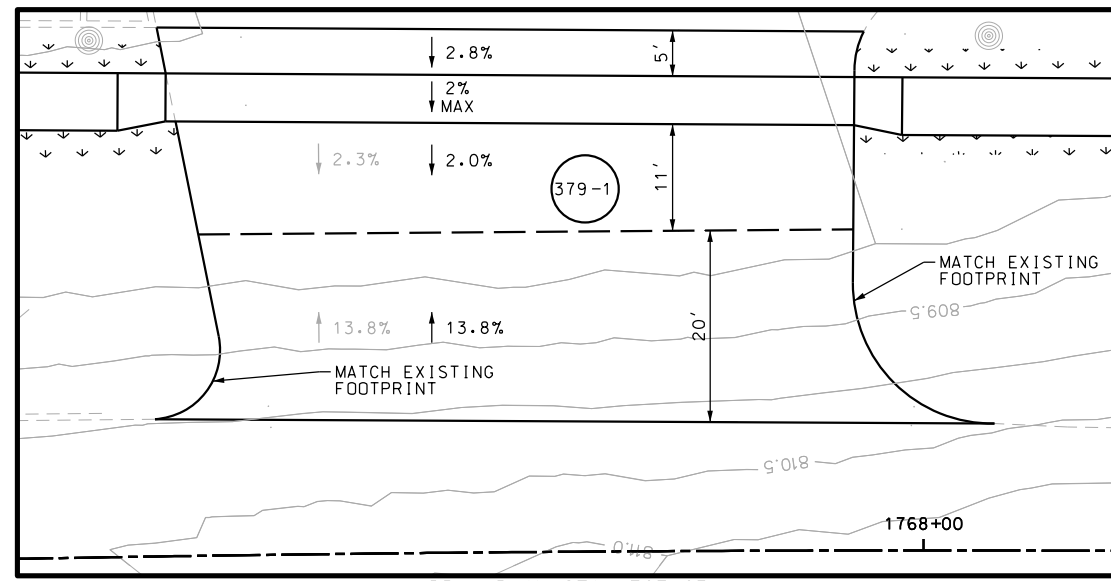
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1767+00 TO STA 1769+00

SHEET 79 OF 126

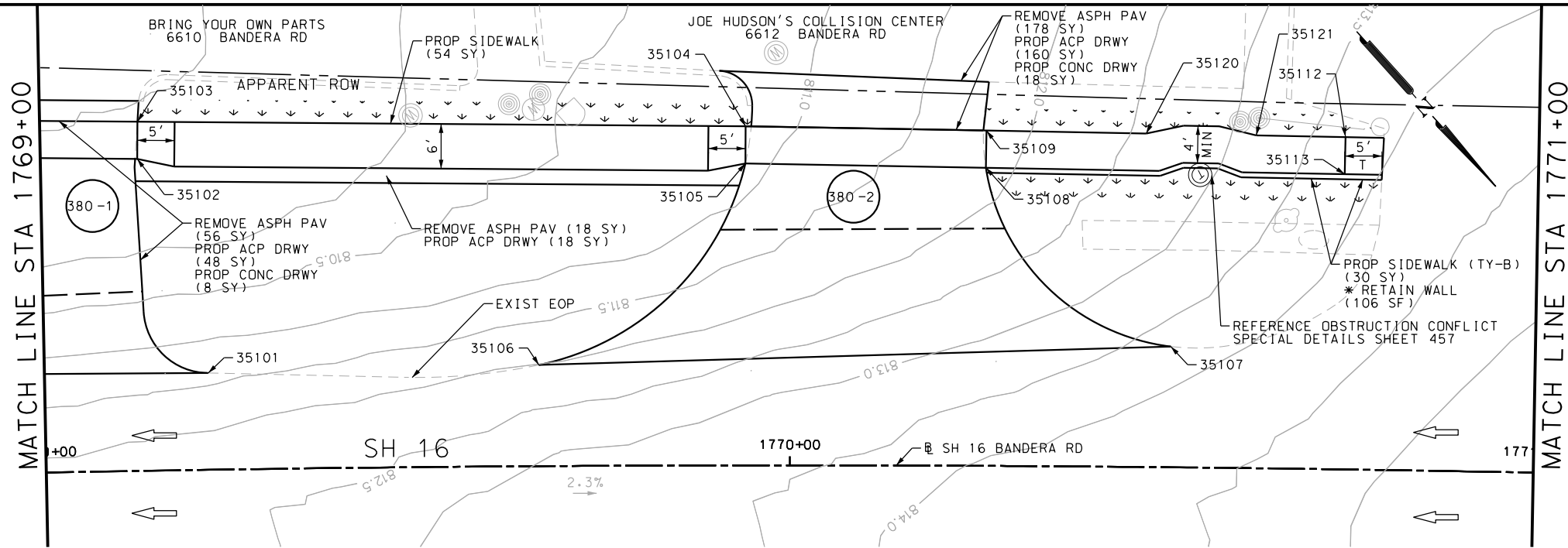
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	379



POINT	NORTHING	EASTING	ELEV	DESC
51201	13729409.41	2090871.80	--	PROF
51202	13729405.58	2090868.60	--	PROF
51203	13729451.62	2090813.56	--	PROF
51204	13729455.45	2090816.77	--	PROF
51205	13729488.55	2090778.76	--	PROF
51206	13729483.95	2090774.91	--	PROF
51207	13729512.15	2090743.91	--	PROF
51208	13729515.83	2090747.29	--	PROF
51209	13729529.28	2090776.32	--	ME

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*52PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	252
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	86
0162-6002	BLOCK SODDING	SY	86
0168-6001	VEGETATIVE WATERING	MG	1.34
0530-6004	DRIVEWAYS (CONC)	SY	26
0530-6005	DRIVEWAYS (ACP)	SY	226
0531-6001	CONC SIDEWALKS (4")	SY	54
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	30

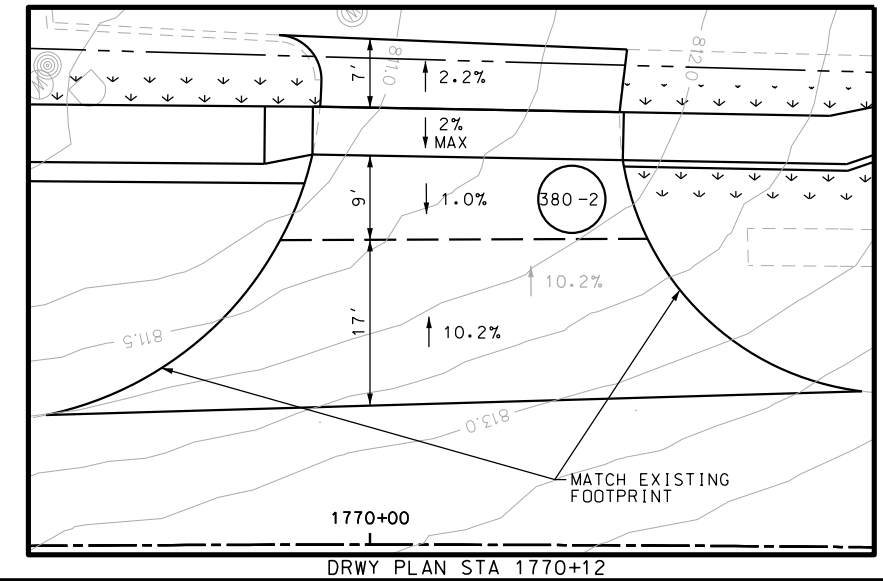
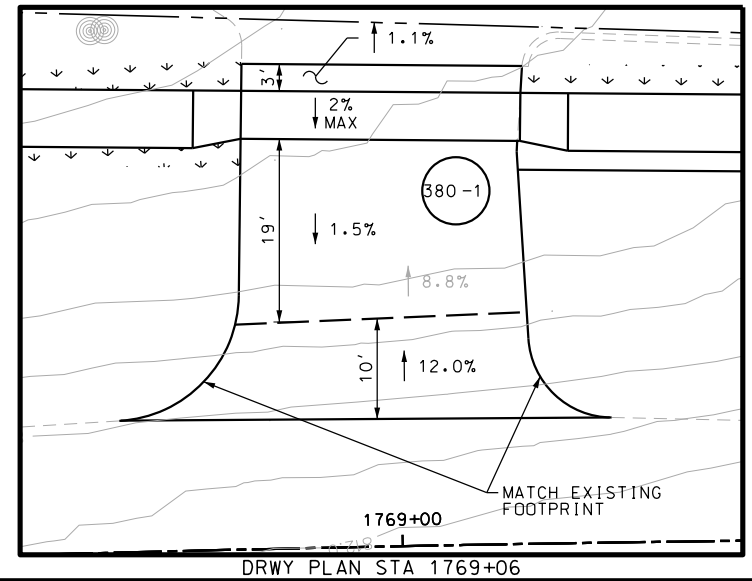
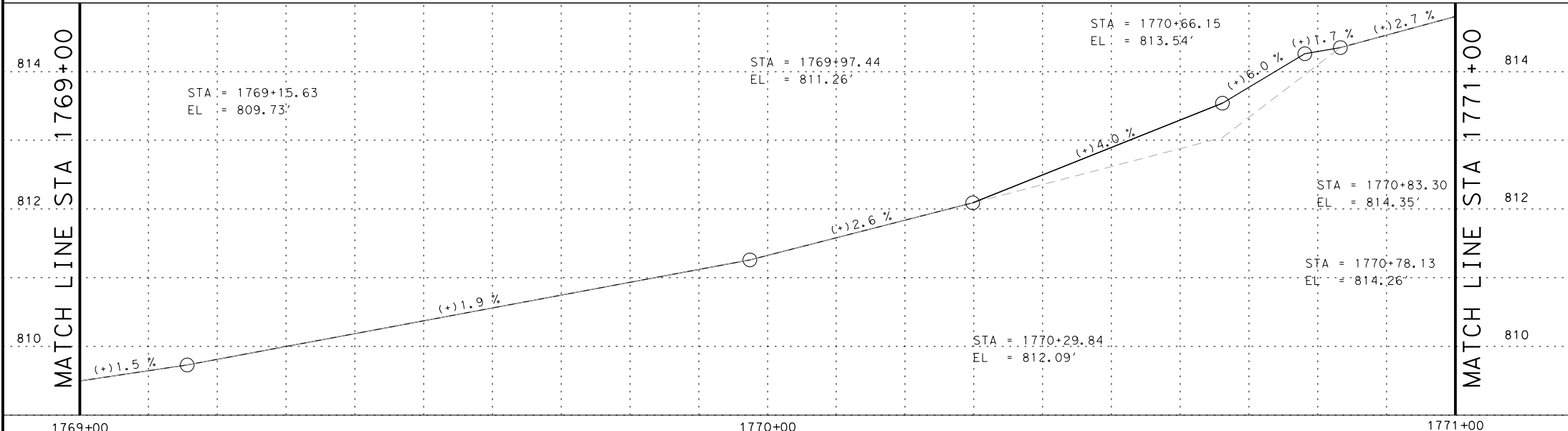
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE



POINT	NORTHING	EASTING	ELEV	DESC
35101	13729563.26	2090737.87	--	ME
35102	13729535.41	2090725.76	--	PROF
35103	13729531.71	2090722.39	--	PROF
35104	13729586.75	2090661.87	--	PROF
35105	13729590.45	2090665.23	--	PROF
35106	13729592.13	2090704.02	--	ME
35107	13729647.00	2090639.05	--	ME
35108	13729612.46	2090641.53	--	PROF
35109	13729608.80	2090638.12	--	PROF
35112	13729641.66	2090602.75	--	PROF
35113	13729645.33	2090606.15	--	PROF
35120	13729623.42	2090622.39	--	PROF
35121	13729633.51	2090611.52	--	PROF

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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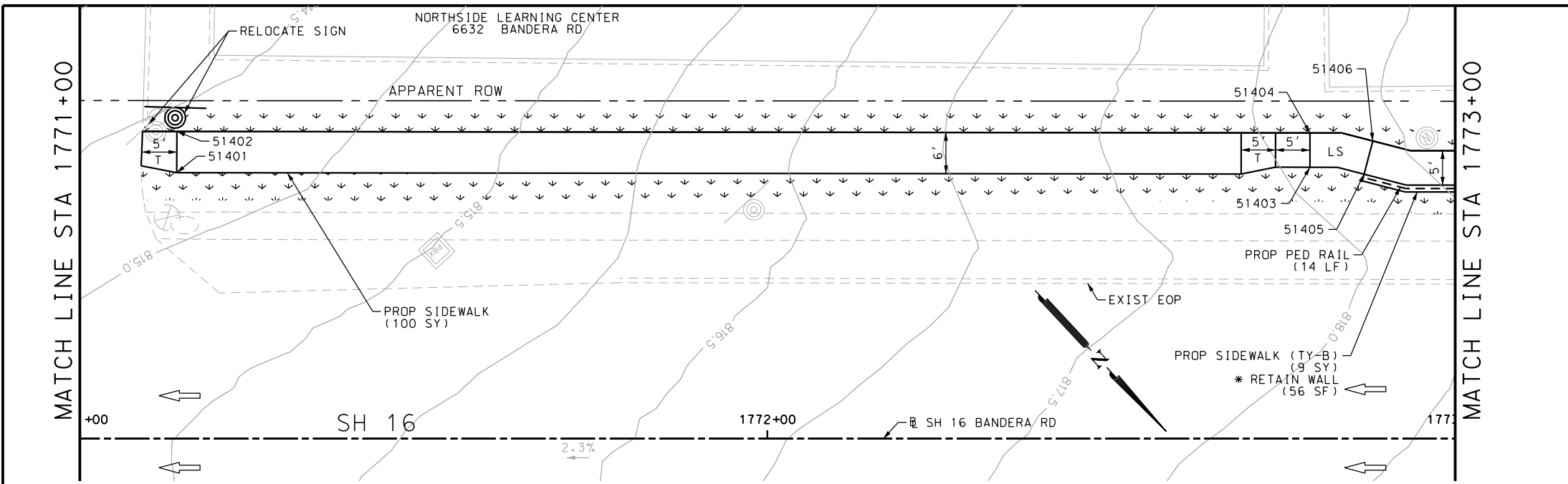
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1769+00 TO STA 1771+00

SHEET 80 OF 126

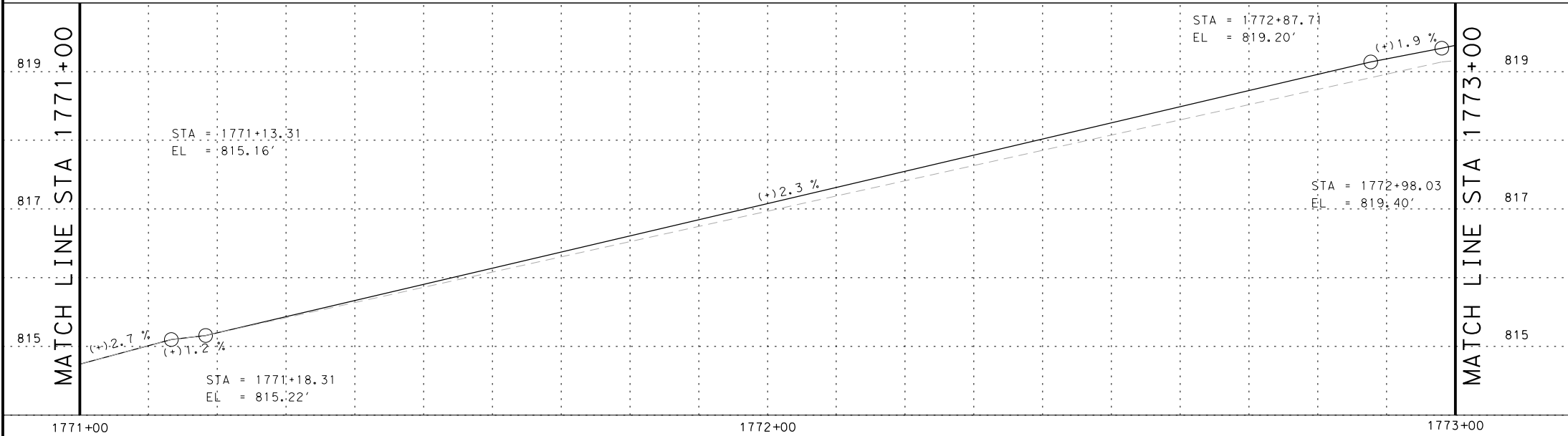
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	380

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\*52PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	252
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	86
0162-6002	BLOCK SODDING	SY	86
0168-6001	VEGETATIVE WATERING	MG	1.34
0530-6004	DRIVEWAYS (CONC)	SY	26
0530-6005	DRIVEWAYS (ACP)	SY	226
0531-6001	CONC SIDEWALKS (4")	SY	54
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	30



NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
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DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
51401	13729673.40	2090577.40	--	PROF
51402	13729669.01	2090573.31	--	PROF
51403	13729784.93	2090456.11	--	PROF
51404	13729781.27	2090452.70	--	PROF
51405	13729791.02	2090451.02	--	PROF
51406	13729788.32	2090446.81	--	PROF

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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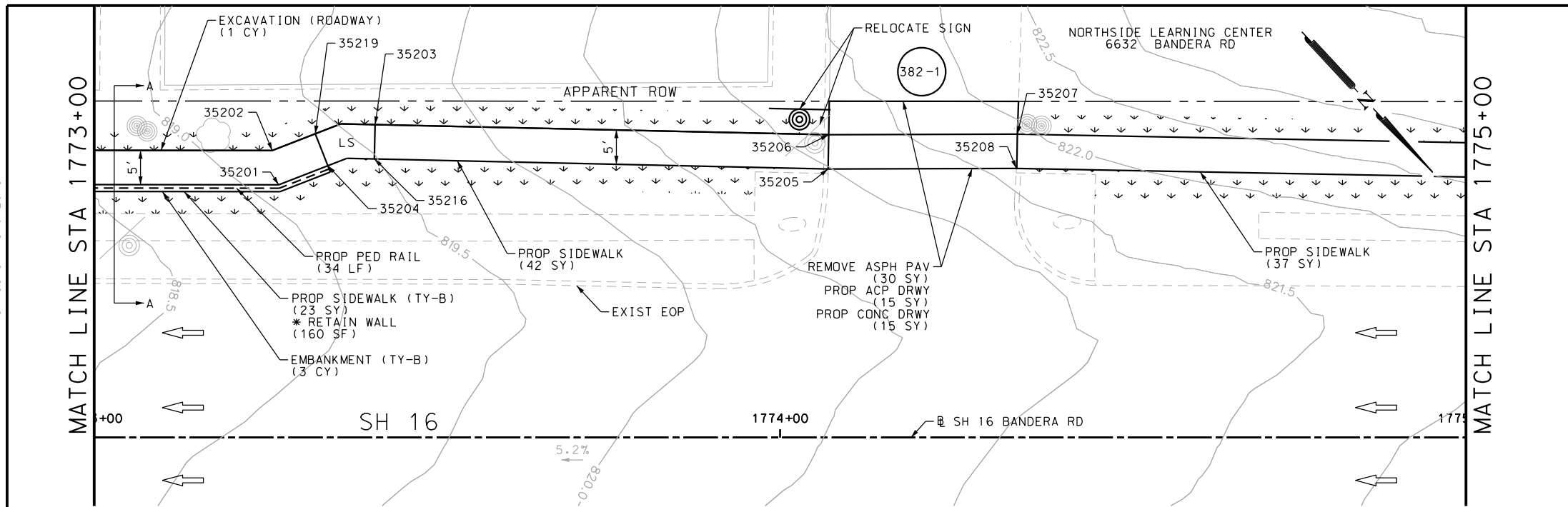
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1771+00 TO STA 1773+00

SHEET 81 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	381

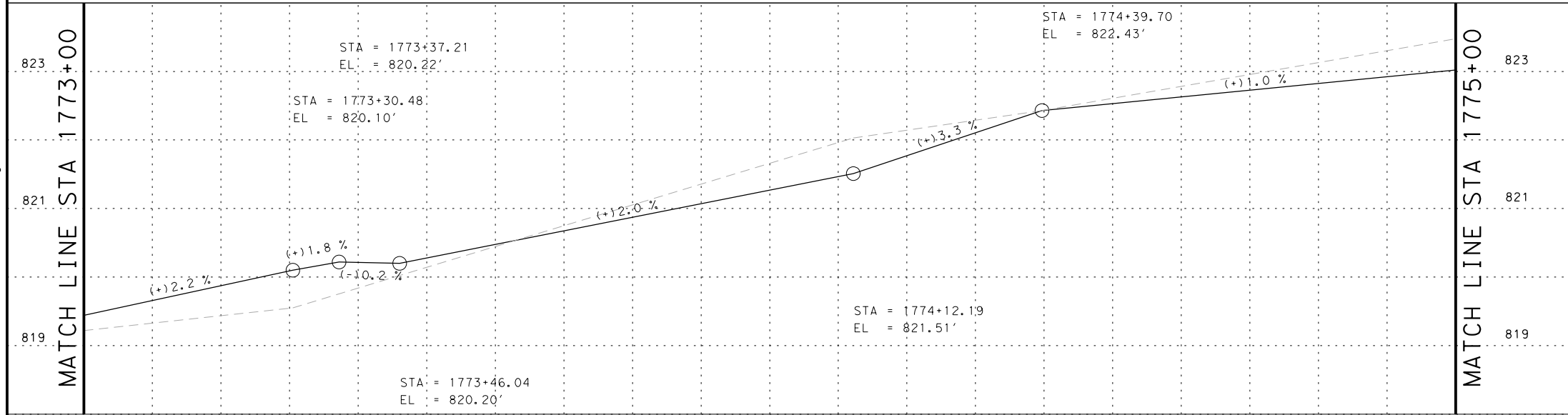
Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB#53PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	30
0110-6001	EXCAVATION (ROADWAY)	CY	1
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	130
0162-6002	BLOCK SODDING	SY	130
0168-6001	VEGETATIVE WATERING	MG	2.03
0450-6048	RAIL (HANDRAIL) (TY B)	LF	34
0530-6004	DRIVEWAYS (CONC)	SY	15
0530-6005	DRIVEWAYS (ACP)	SY	15
0531-6001	CONC SIDEWALKS (4")	SY	79
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	23
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



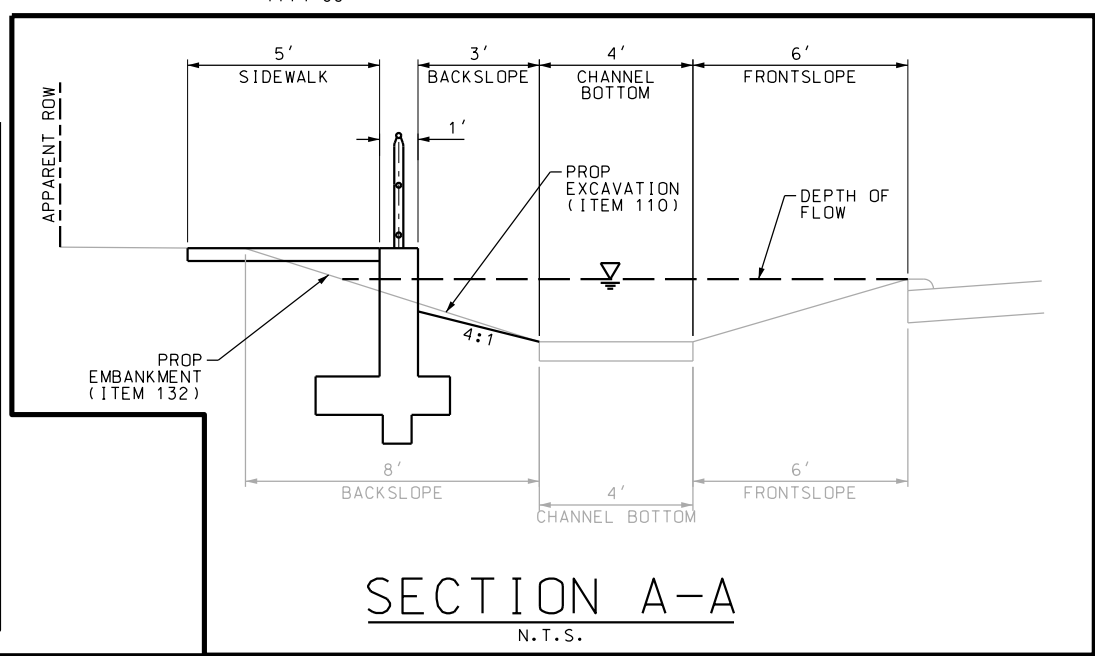
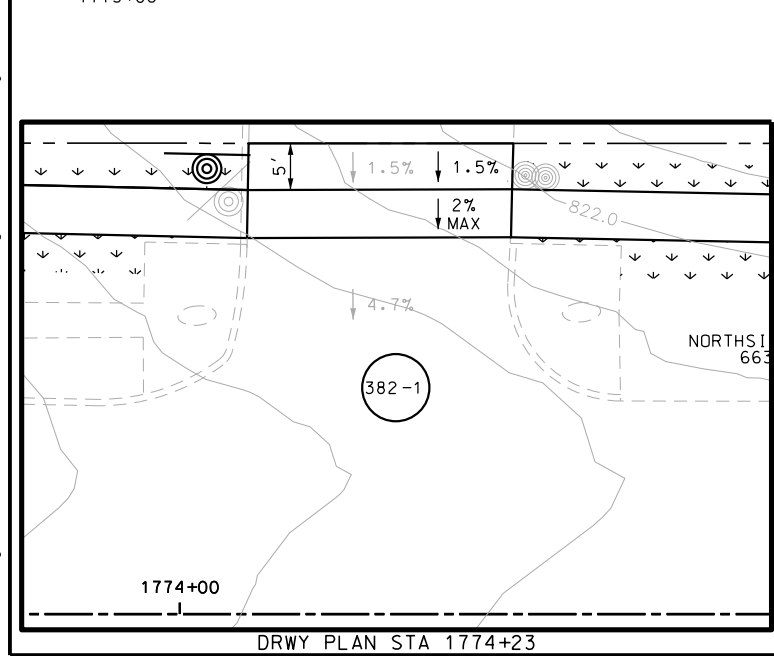
DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'



POINT	NORTHING	EASTING	ELEV	DESC
35201	13729819.52	2090422.71	--	PROF
35202	13729815.22	2090420.00	--	PROF
35203	13729822.65	2090406.42	--	PROF
35204	13729822.35	2090415.57	--	PROF
35205	13729872.33	2090362.42	--	PROF
35206	13729868.72	2090358.96	--	PROF
35207	13729887.39	2090338.75	--	PROF
35208	13729890.94	2090342.27	--	PROF
35216	13729826.24	2090409.91	--	PROF
35219	13729817.70	2090413.73	--	PROF

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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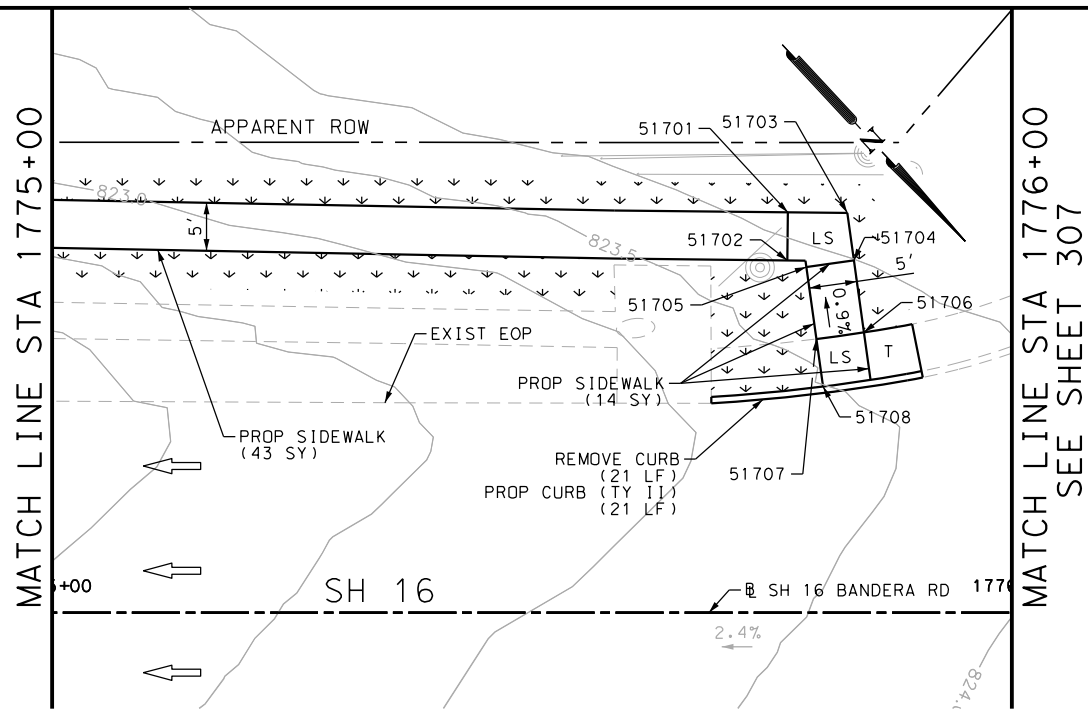
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1773+00 TO STA 1775+00

SHEET 82 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				382

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*53PP\*A.dgn

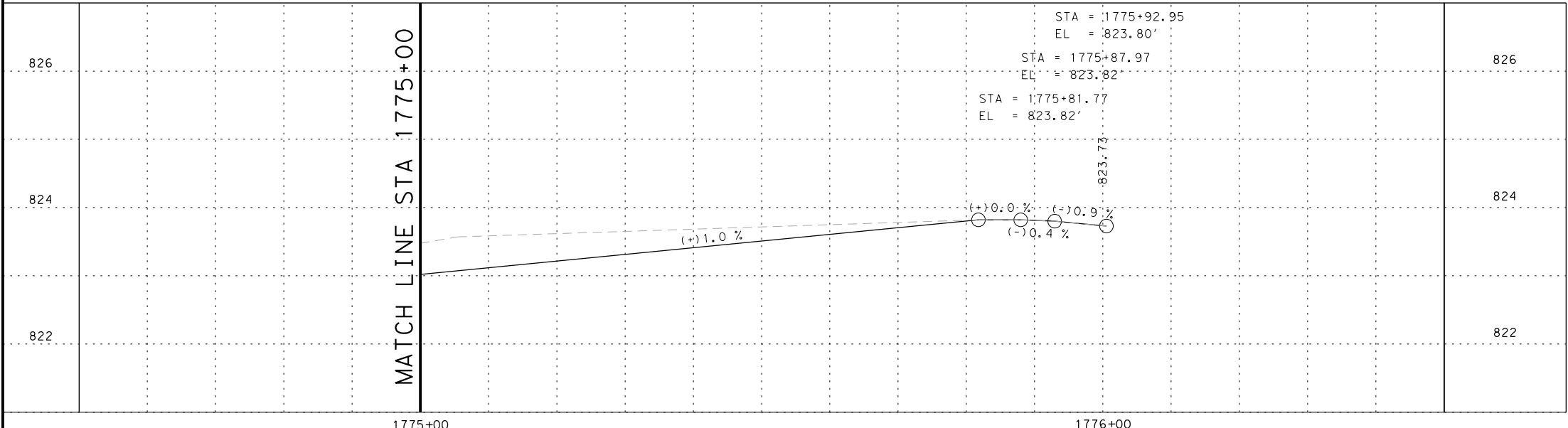


ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	21
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	80
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0529-6002	CONC CURB (TY II)	LF	21
0531-6001	CONC SIDEWALKS (4")	SY	57

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

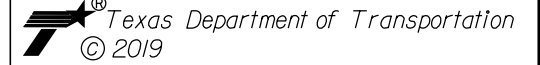


SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
51701	13729985.91	2090236.38	--	PROF
51702	13729989.53	2090239.83	--	PROF
51703	13729990.18	2090231.89	--	PROF
51704	13729994.26	2090234.74	--	PROF
51705	13729991.40	2090238.84	--	PROF
51706	13730000.48	2090239.08	--	PROF
51707	13729997.61	2090243.18	--	PROF
51708	13730001.71	2090246.04	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



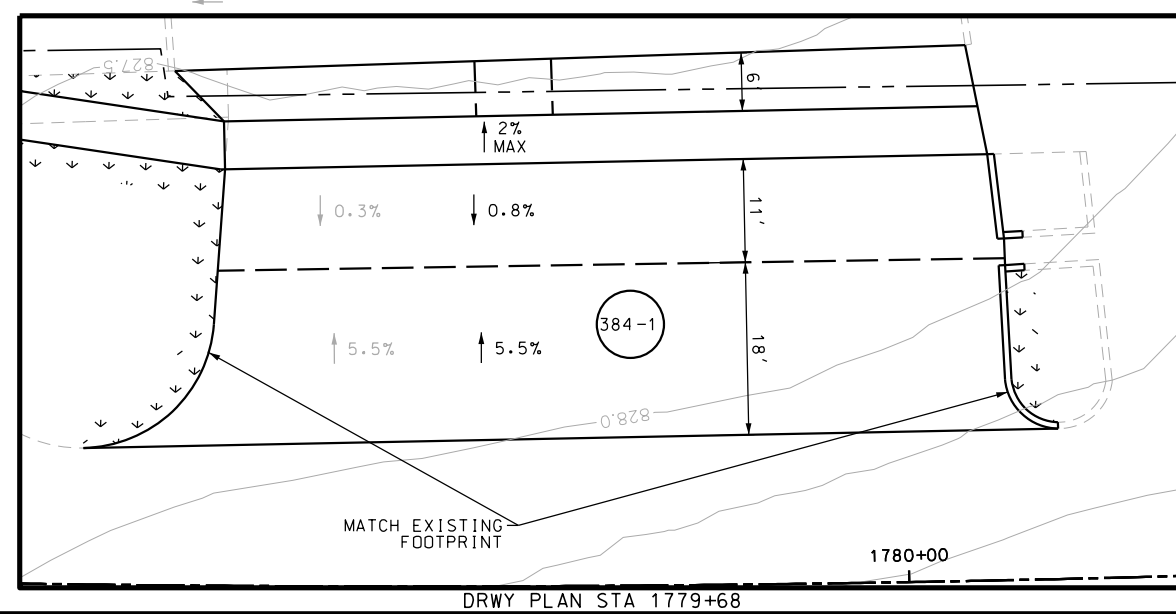
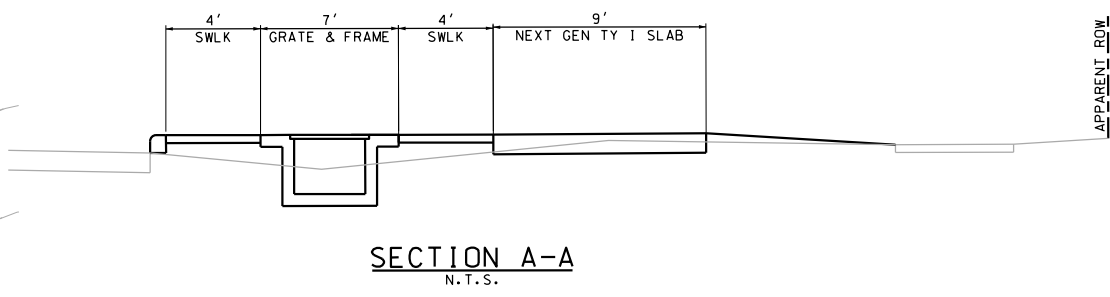
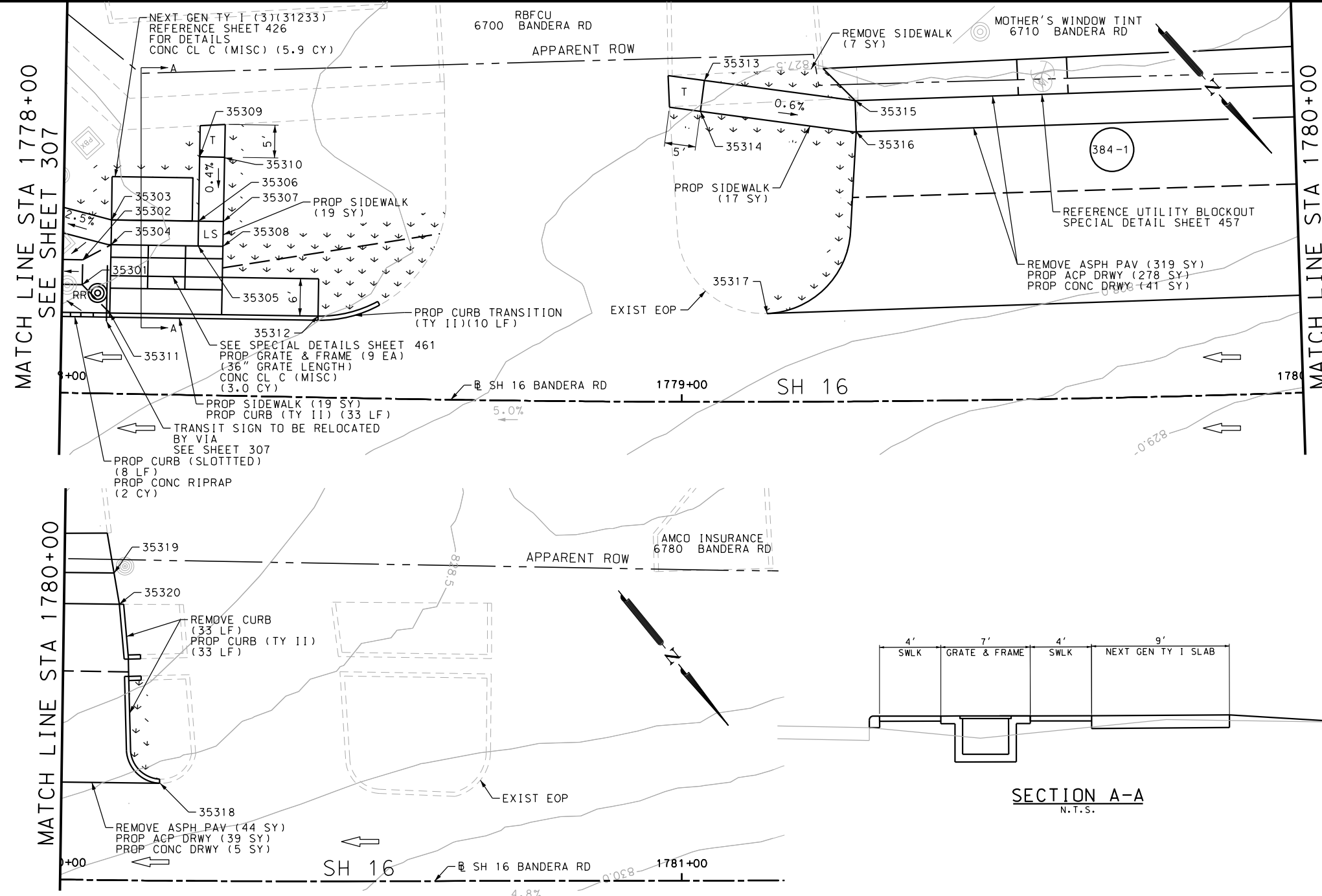
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1775+00 TO STA 1776+00

SHEET 83 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	383

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*EB\*54.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	33
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	363
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0420-6074	CL C CONC (MISC)	CY	8.9
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	76
0529-6012	CONC CURB (SLOTTED)	LF	8
0530-6004	DRIVEWAYS (CONC)	SY	46
0530-6005	DRIVEWAYS (ACP)	SY	317
0531-6001	CONC SIDEWALKS (4")	SY	55

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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1778+00 TO STA 1782+00  
 SHEET 84 OF 126

POINT	NORTHING	EASTING	ELEV	DESC
35301	13730157.85	2090086.83	826.40	PROP
35302	13730154.92	2090084.11	826.40	PROP
35303	13730153.22	2090076.37	827.68	PROP
35304	13730156.15	2090079.09	827.75	PROP
35305	13730165.64	2090068.80	827.95	PROP
35306	13730162.71	2090066.07	827.87	PROP
35307	13730165.41	2090063.14	827.95	PROP
35308	13730168.35	2090065.85	828.00	PROP
35309	13730155.12	2090059.03	827.03	PROP
35310	13730157.90	2090056.15	827.10	PROP
35311	13730164.21	2090086.58	--	ME
35312	13730186.92	2090061.94	--	ME
35313	13730200.13	2089990.34	828.02	PROP
35314	13730203.38	2089994.14	827.95	PROP
35315	13730218.71	2089974.44	827.88	PROP
35316	13730222.55	2089977.65	827.81	PROP
35317	13730234.78	2090007.83	--	ME
35318	13730299.92	2089929.87	--	ME
35319	13730269.07	2089914.17	--	ME
35320	13730273.49	2089916.68	--	ME

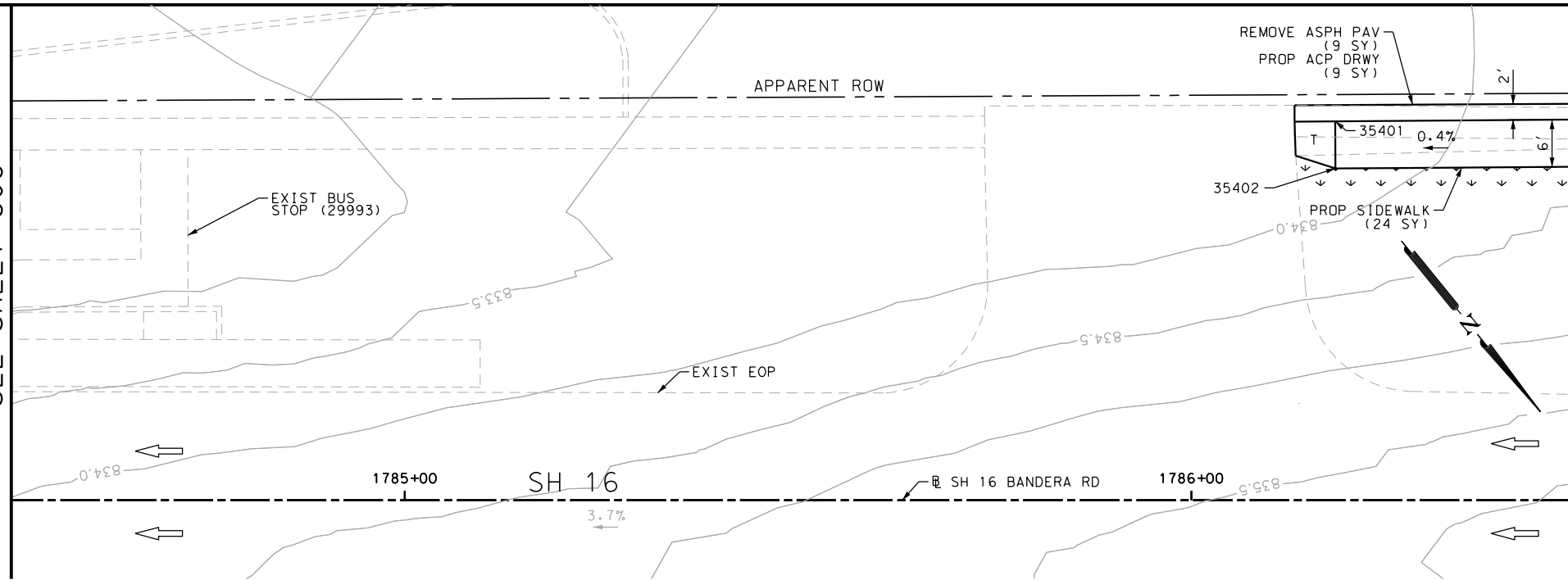
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIABLES		
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	384

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\55.dgn

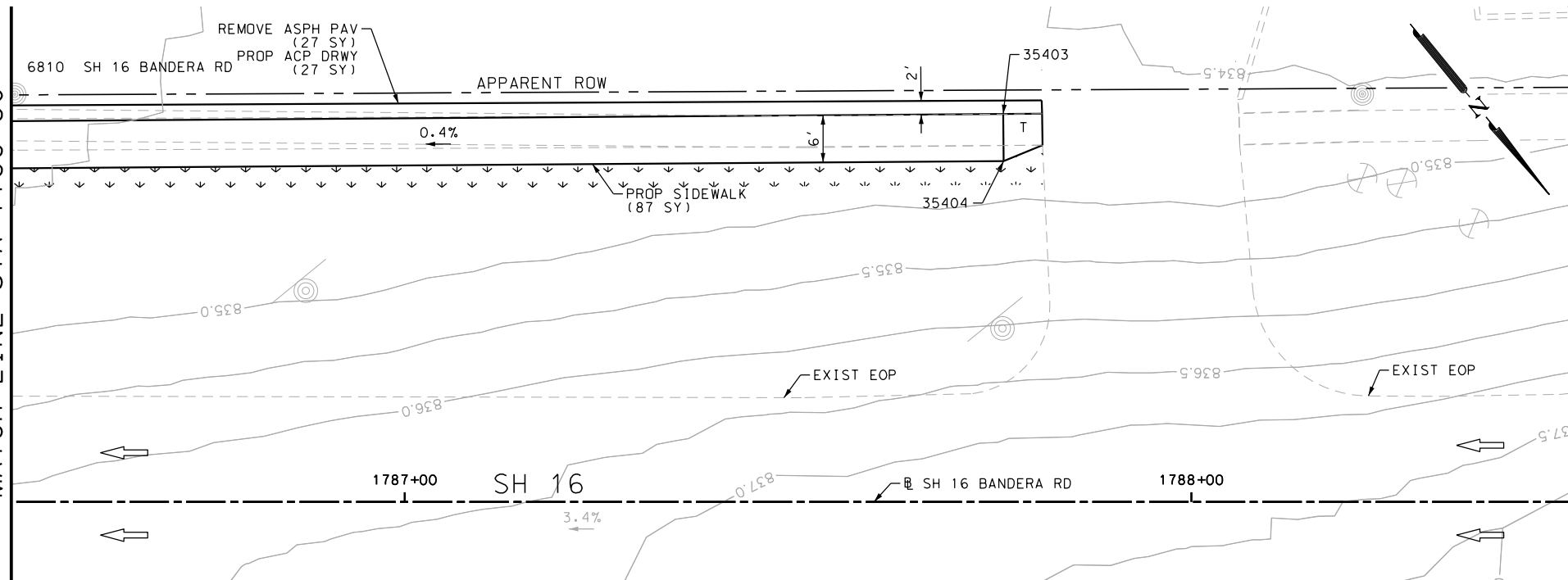
MATCH LINE STA 1784+50  
SEE SHEET 308

MATCH LINE STA 1786+50



MATCH LINE STA 1786+50

MATCH LINE STA 1788+50



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	36
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	60
0162-6002	BLOCK SODDING	SY	60
0168-6001	VEGETATIVE WATERING	MG	0.94
0530-6005	DRIVEWAYS (ACP)	SY	36
0531-6001	CONC SIDEWALKS (4")	SY	111

NOTES:

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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

James A. Lutz, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
35401	13730654.61	2089442.08	833.60	PROP
35402	13730659.29	2089445.83	833.51	PROP
35403	13730753.25	2089318.89	834.30	PROP
35404	13730757.93	2089322.64	834.21	PROP

REV. NO.	DATE	DESCRIPTION	BY

Texas Department of Transportation  
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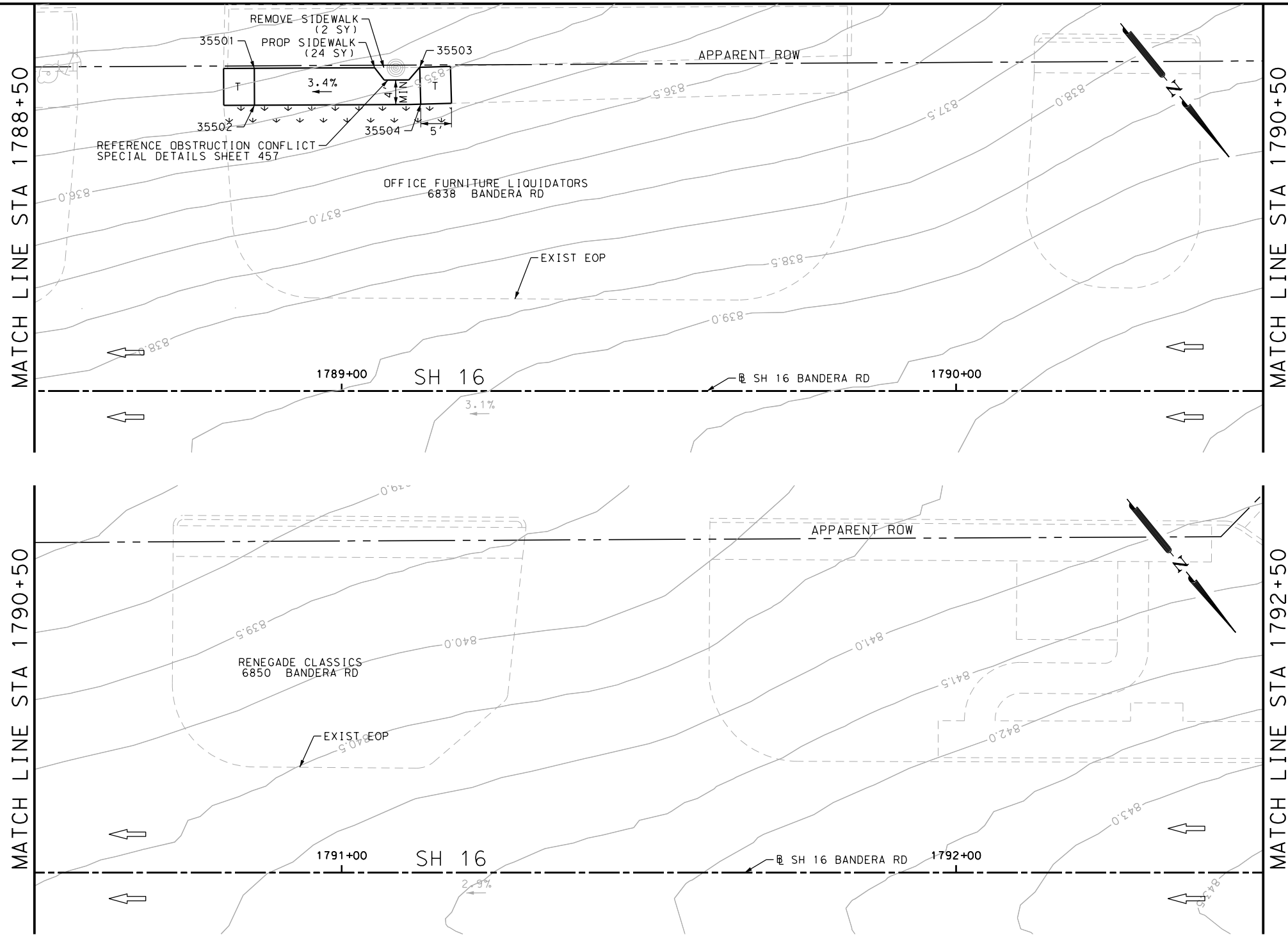
SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1784+50 TO STA 1788+50  
SHEET 85 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	385



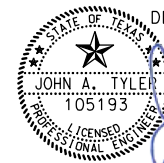
Plotted on: 5/3/2019

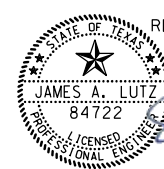
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ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	13
0162-6002	BLOCK SODDING	SY	13
0168-6001	VEGETATIVE WATERING	MG	0.20
0531-6001	CONC SIDEWALKS (4")	SY	24

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
35501	13730819.96	2089231.77	835.20	PROP
35502	13730824.63	2089235.53	835.13	PROP
35503	13730836.82	2089210.77	836.13	PROP
35504	13730841.58	2089214.42	836.06	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

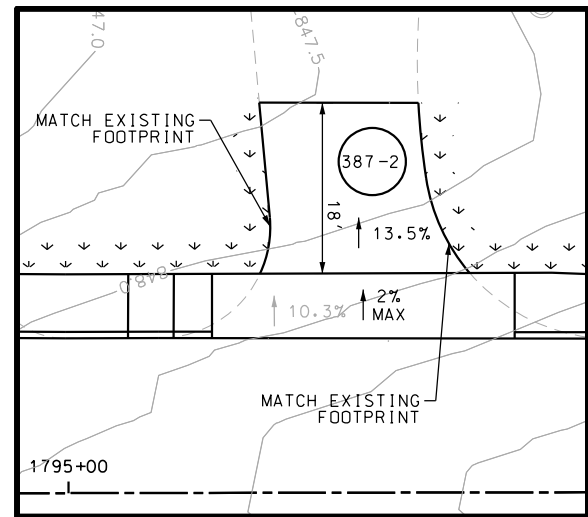
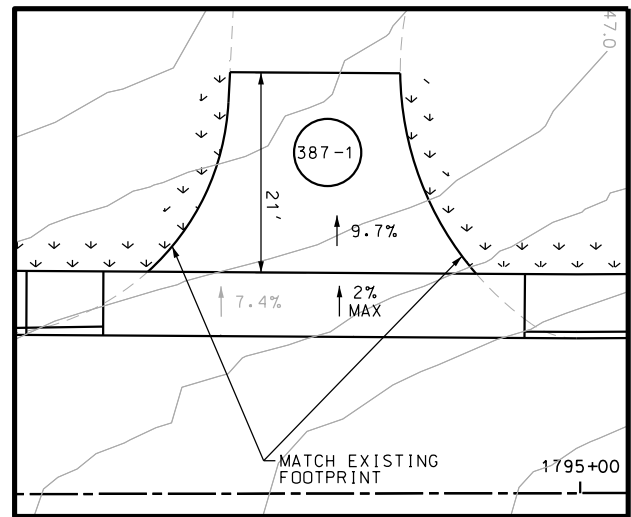
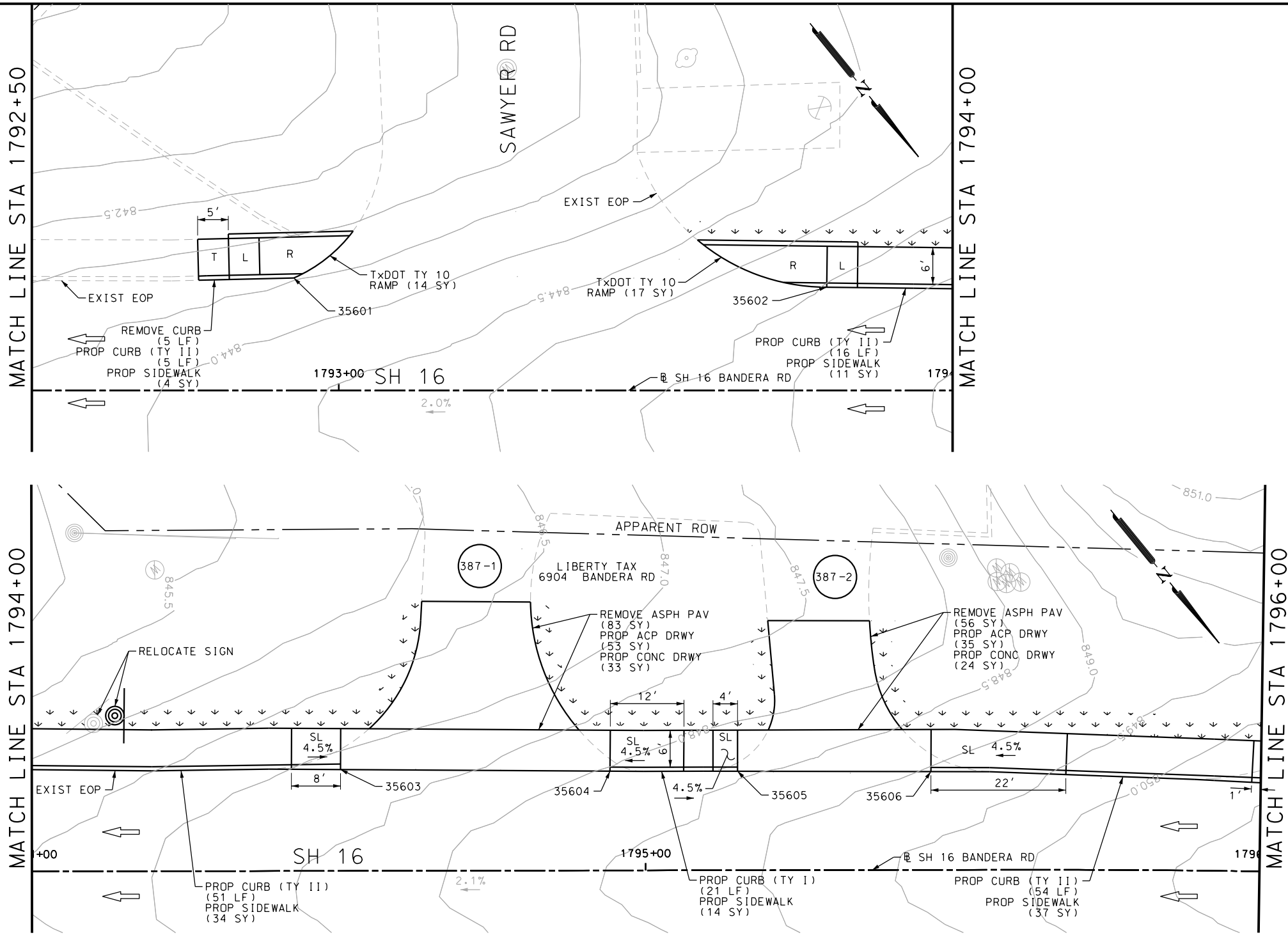
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1788+50 TO STA 1792+50  
 SHEET 86 OF 126

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		VARIABLES		
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	386

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*57.dgn



POINT	NORTHING	EASTING	ELEV	DESC
35601	13731103.08	2088937.55	--	ME
35602	13731159.00	2088871.10	--	ME
35603	13731203.91	2088816.36	--	ME
35604	13731231.87	2088782.49	--	ME
35605	13731245.00	2088766.40	--	ME
35606	13731264.96	2088742.00	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	5
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	139
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	87
0162-6002	BLOCK SODDING	SY	87
0168-6001	VEGETATIVE WATERING	MG	1.36
0529-6001	CONC CURB (TY I)	LF	21
0529-6002	CONC CURB (TY II)	LF	126
0530-6004	DRIVEWAYS (CONC)	SY	57
0530-6005	DRIVEWAYS (ACP)	SY	88
0531-6001	CONC SIDEWALKS (4")	SY	100
0531-6027	CURB RAMPS (TY 10)	SY	31
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

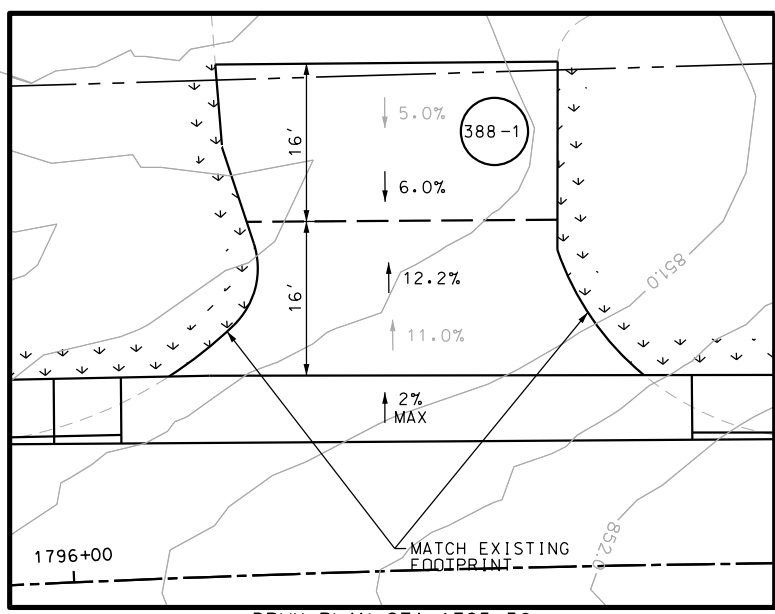
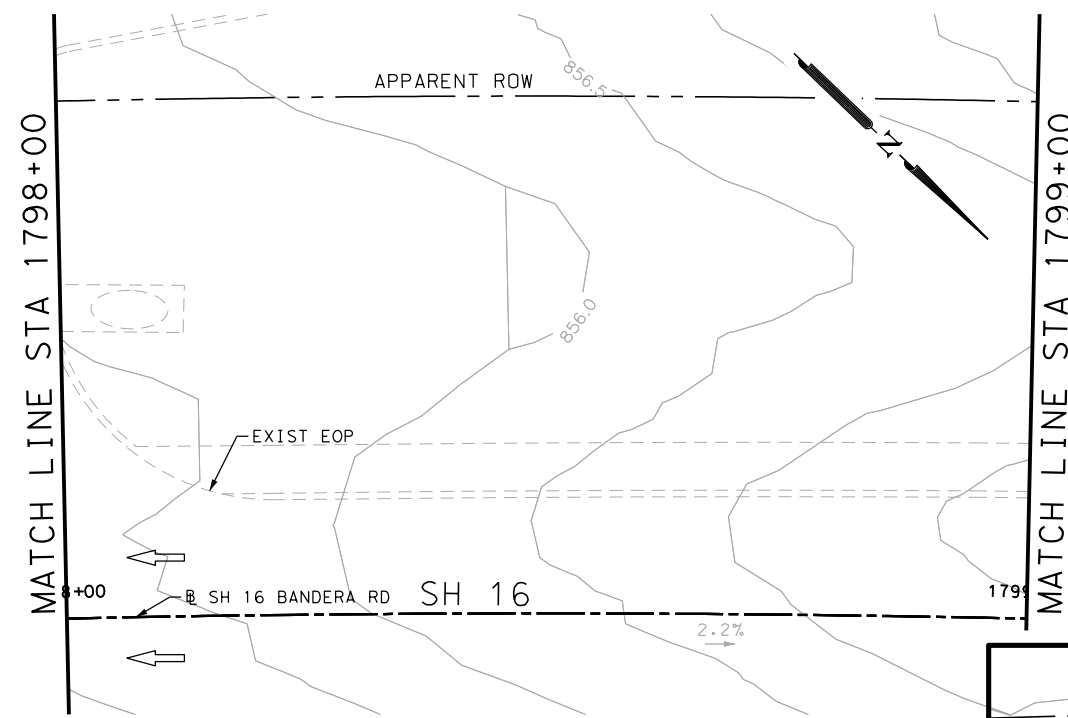
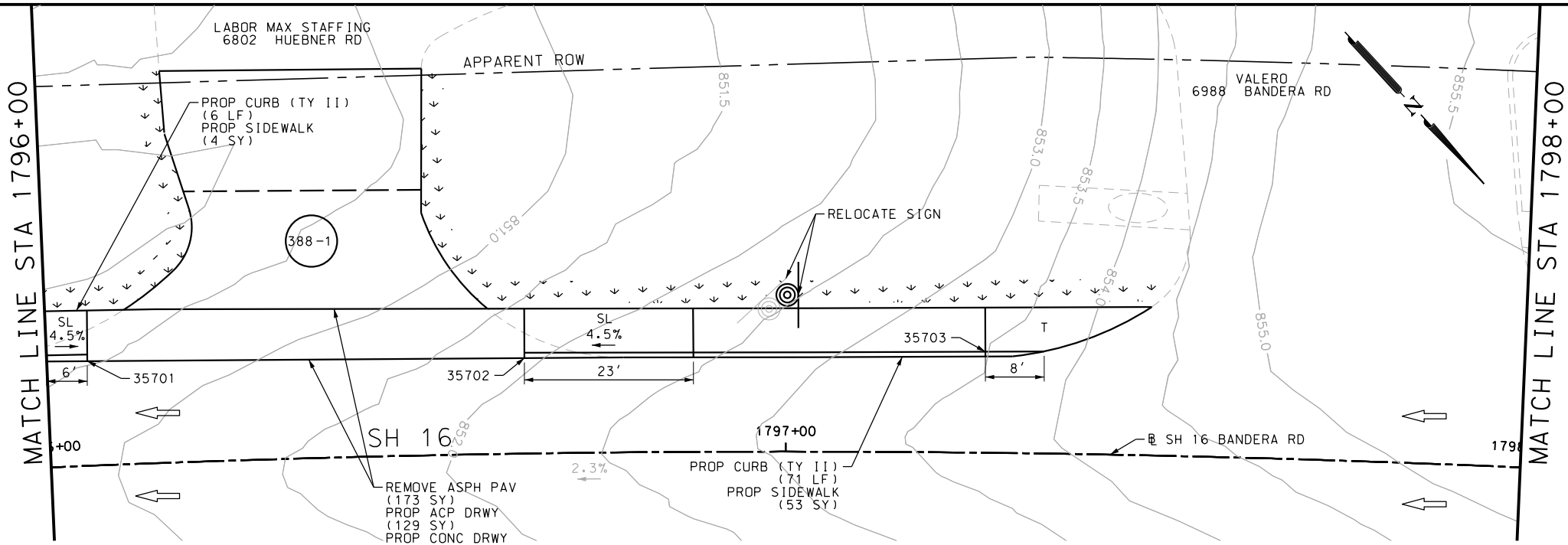
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1792+50 TO STA 1796+00  
 SHEET 87 OF 126

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	387

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*58.dgn



POINT	NORTHING	EASTING	ELEV	DESC
35701	13731304.04	2088697.41	--	ME
35702	13731343.95	2088653.28	--	ME
35703	13731385.68	2088606.45	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	173
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	58
0162-6002	BLOCK SODDING	SY	58
0168-6001	VEGETATIVE WATERING	MG	0.90
0529-6002	CONC CURB (TY II)	LF	77
0530-6004	DRIVEWAYS (CONC)	SY	45
0530-6005	DRIVEWAYS (ACP)	SY	129
0531-6001	CONC SIDEWALKS (4")	SY	57
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

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- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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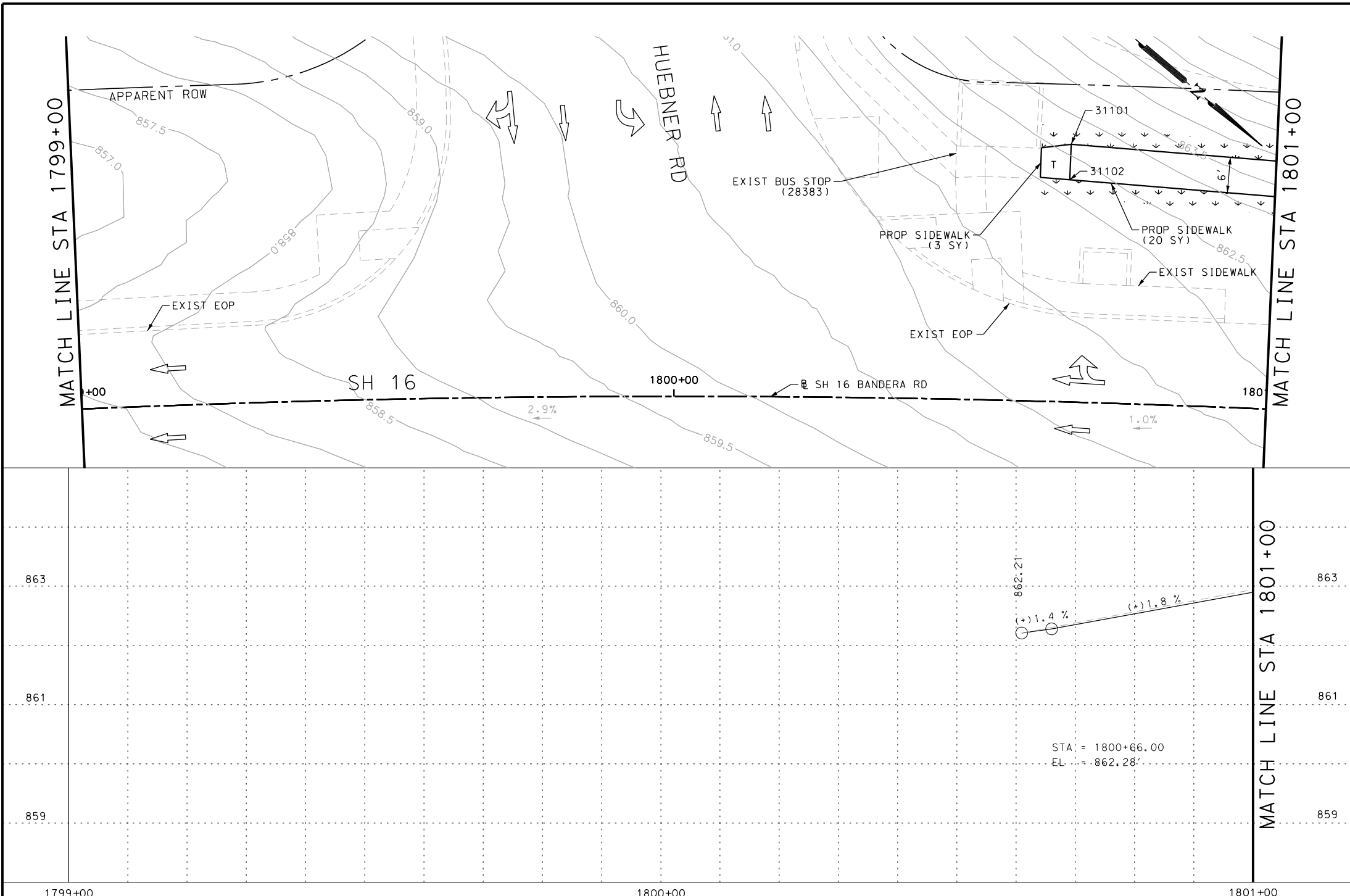
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1796+00 TO STA 1799+00

SHEET 88 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	388

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\WB\*12PP\*EB58PP.dgn



1799+00 1800+00 1801+00

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0531-6001	CONC SIDEWALKS (4")	SY	23

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
31101	13731617.65	2088352.42	--	PROF
31102	13731621.33	2088357.16	--	PROF

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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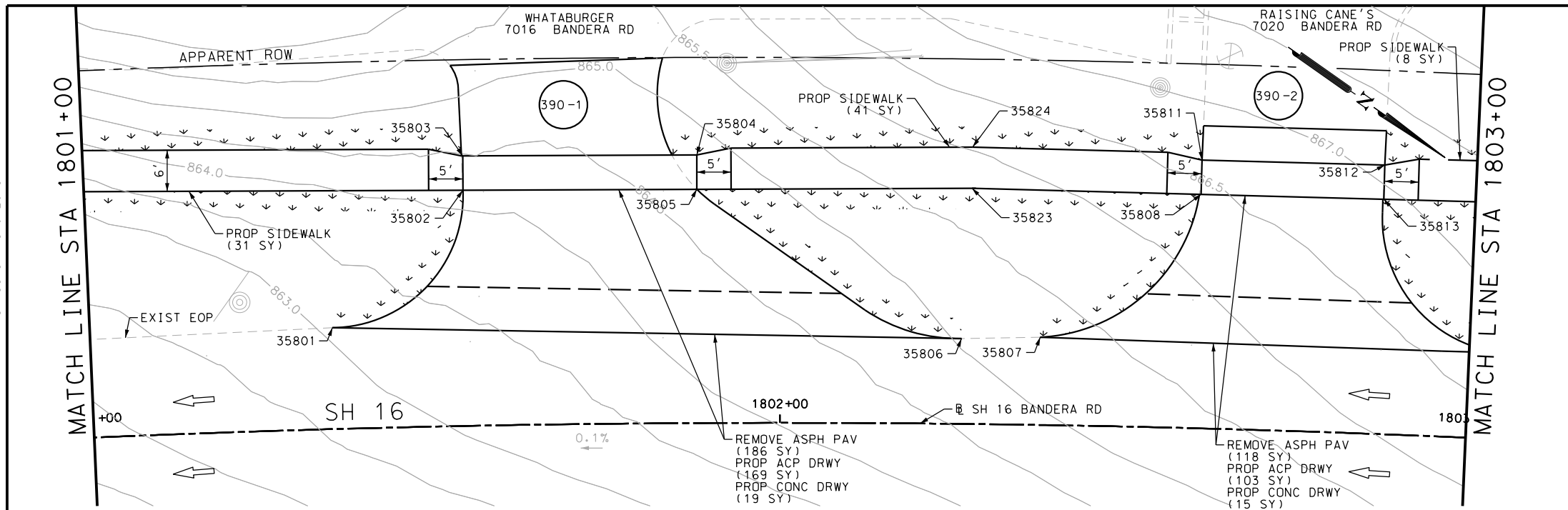
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1799+00 TO STA 1801+00

SHEET 89 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	389

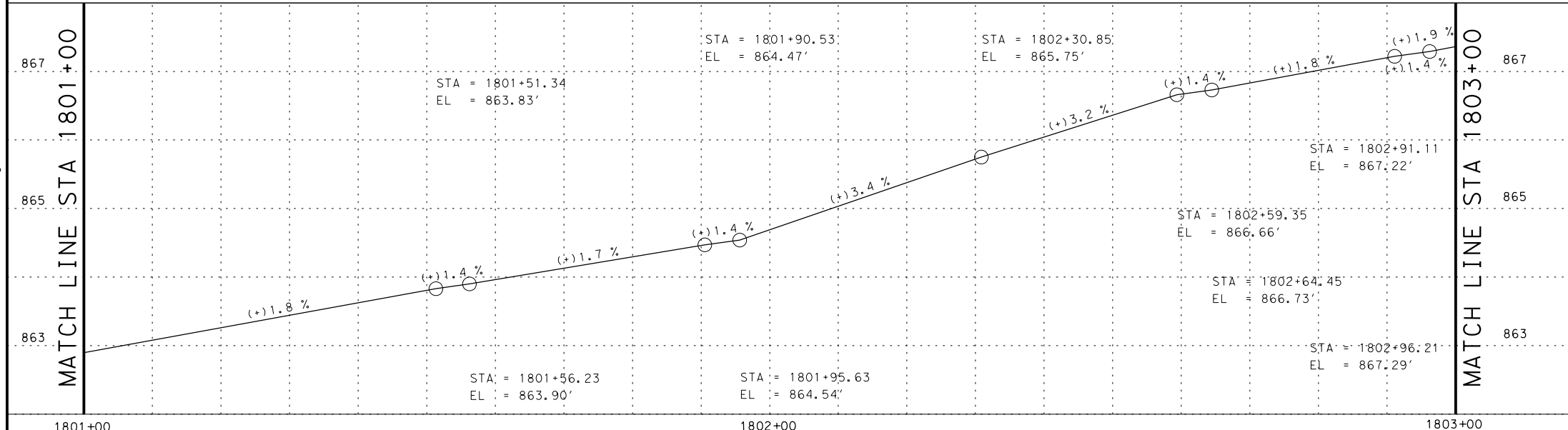
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB#59PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	304
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	170
0162-6002	BLOCK SODDING	SY	170
0168-6001	VEGETATIVE WATERING	MG	2.65
0530-6004	DRIVEWAYS (CONC)	SY	34
0530-6005	DRIVEWAYS (ACP)	SY	272
0531-6001	CONC SIDEWALKS (4")	SY	80

- NOTES:
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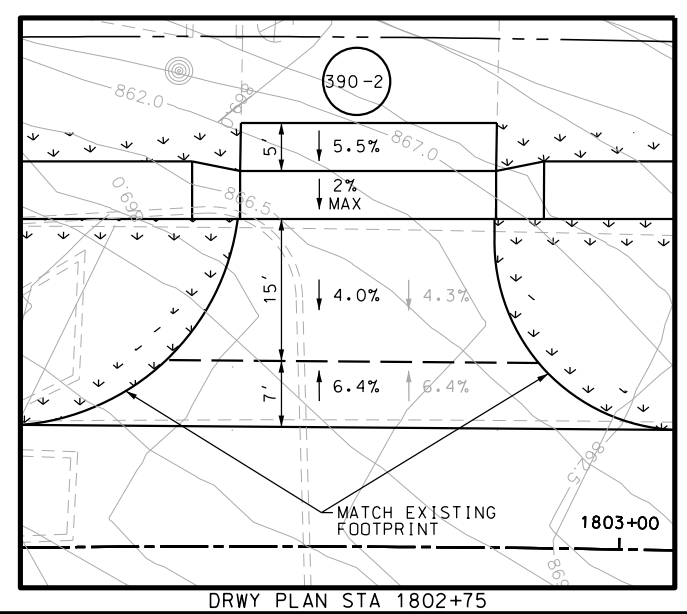
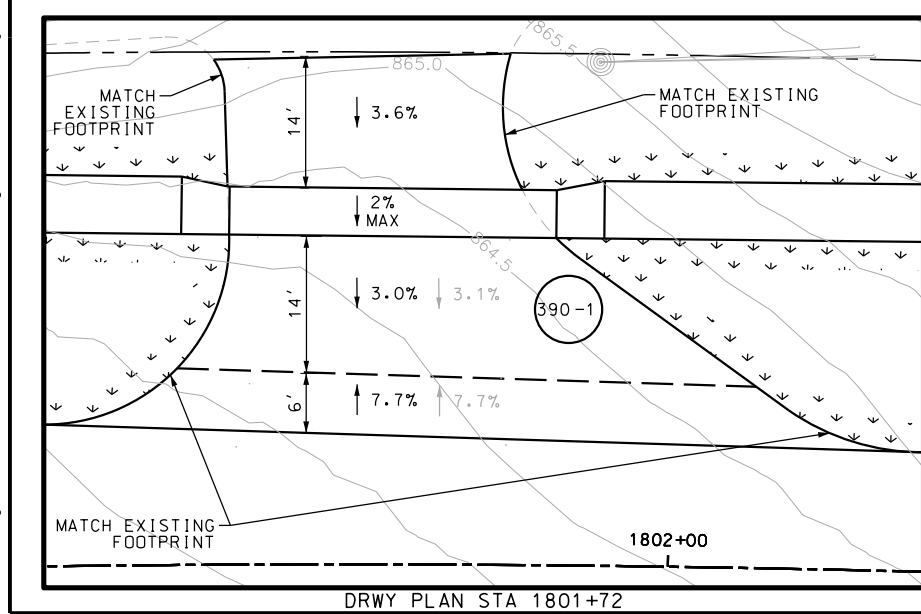
DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'



POINT	NORTHING	EASTING	ELEV	DESC
35801	13731690.76	2088332.33	--	ME
35802	13731694.75	2088304.96	--	PROF
35803	13731691.85	2088300.89	--	PROF
35804	13731719.64	2088281.13	--	PROF
35805	13731722.54	2088285.21	--	PROF
35806	13731766.62	2088280.77	--	ME
35807	13731775.90	2088274.01	--	ME
35808	13731783.06	2088243.45	--	PROF
35811	13731780.29	2088239.29	--	PROF
35812	13731802.48	2088224.52	--	PROF
35813	13731805.25	2088228.68	--	PROF
35823	13731755.24	2088261.96	--	PROF
35824	13731751.84	2088257.01	--	PROF

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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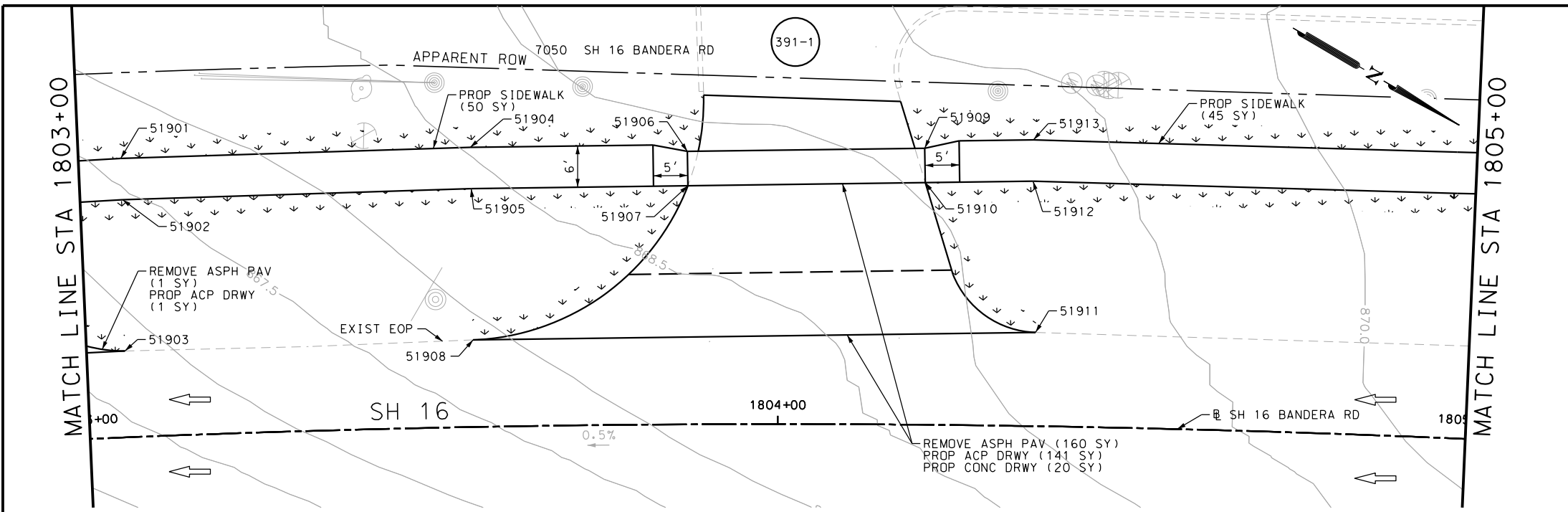
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1801+00 TO STA 1803+00

SHEET 90 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				390

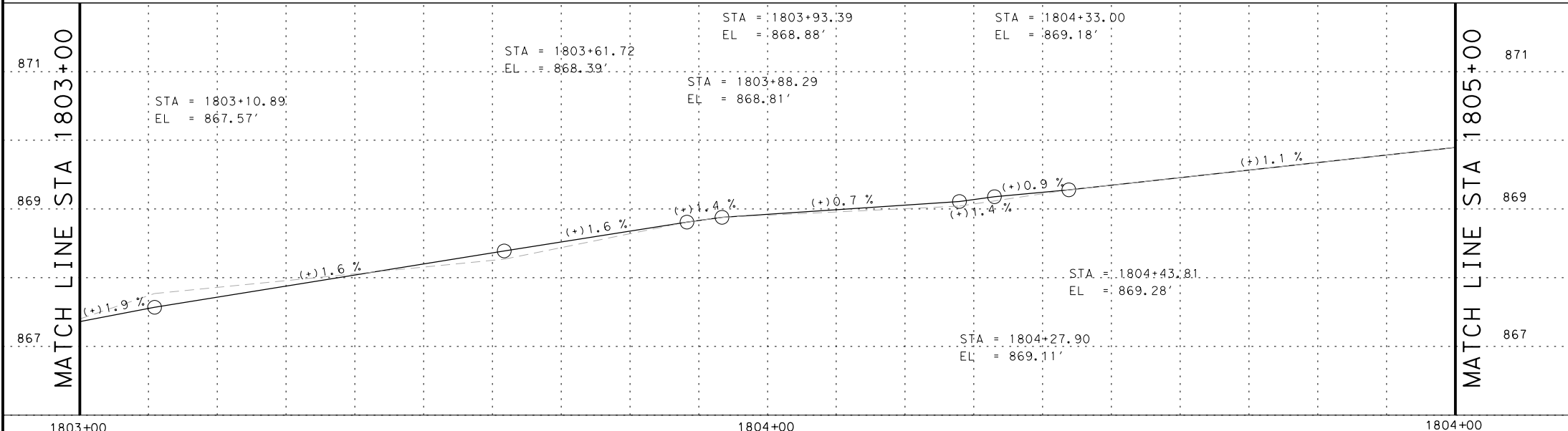
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*59PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	161
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	150
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0530-6004	DRIVEWAYS (CONC)	SY	20
0530-6005	DRIVEWAYS (ACP)	SY	142
0531-6001	CONC SIDEWALKS (4")	SY	95

- NOTES:
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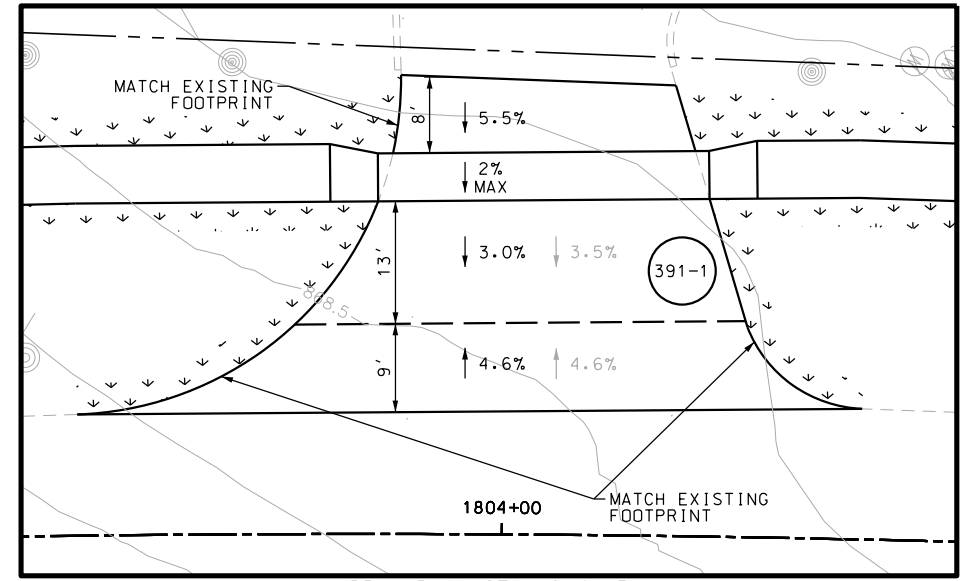
DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

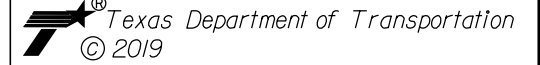


POINT	NORTHING	EASTING	ELEV	DESC
51901	13731818.31	2088212.78	--	PROF
51902	13731821.57	2088217.82	--	PROF
51903	13731832.94	2088236.64	--	ME
51904	13731861.38	2088185.79	--	PROF
51905	13731864.52	2088190.90	--	PROF
51906	13731888.94	2088170.37	--	PROF
51907	13731891.52	2088174.66	--	PROF
51908	13731875.86	2088209.74	--	ME
51909	13731918.52	2088152.57	--	PROF
51910	13731921.10	2088156.86	--	PROF
51911	13731945.93	2088167.57	--	ME
51912	13731934.54	2088148.77	--	PROF
51913	13731931.55	2088143.57	--	PROF

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



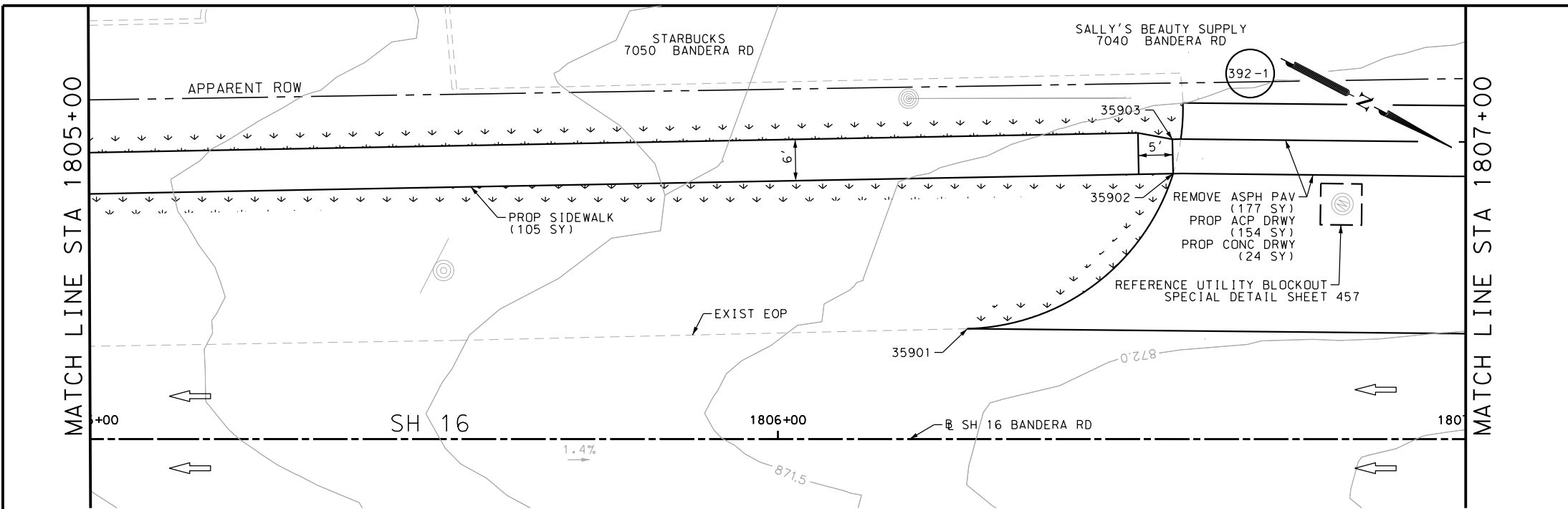
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1803+00 TO STA 1805+00

SHEET 91 OF 126

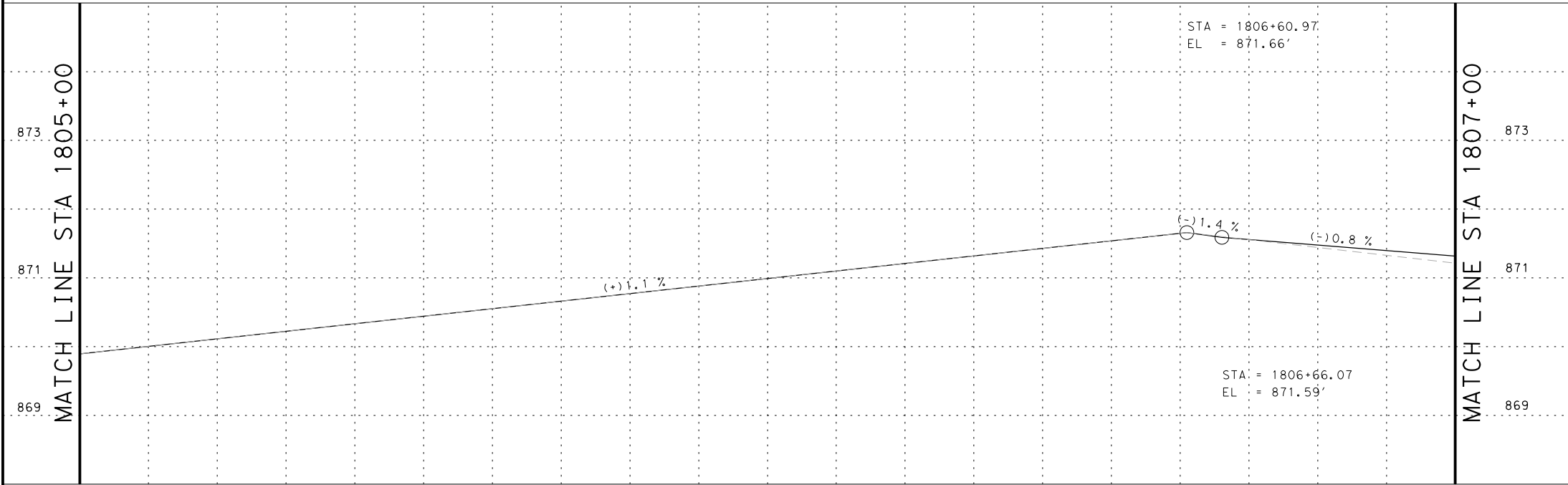
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				391

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*60PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	177
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0530-6004	DRIVEWAYS (CONC)	SY	24
0530-6005	DRIVEWAYS (ACP)	SY	154
0531-6001	CONC SIDEWALKS (4")	SY	105



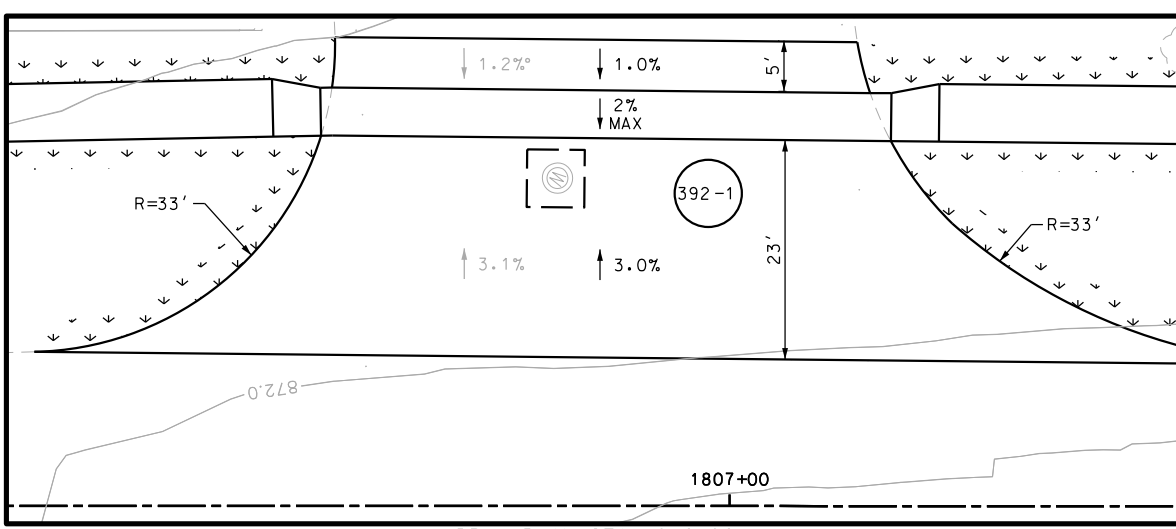
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY



POINT	NORTHING	EASTING	ELEV	DESC
35901	13732113.35	2088076.20	--	ME
35902	13732129.43	2088042.40	--	PROF
35903	13732127.03	2088038.01	--	PROF

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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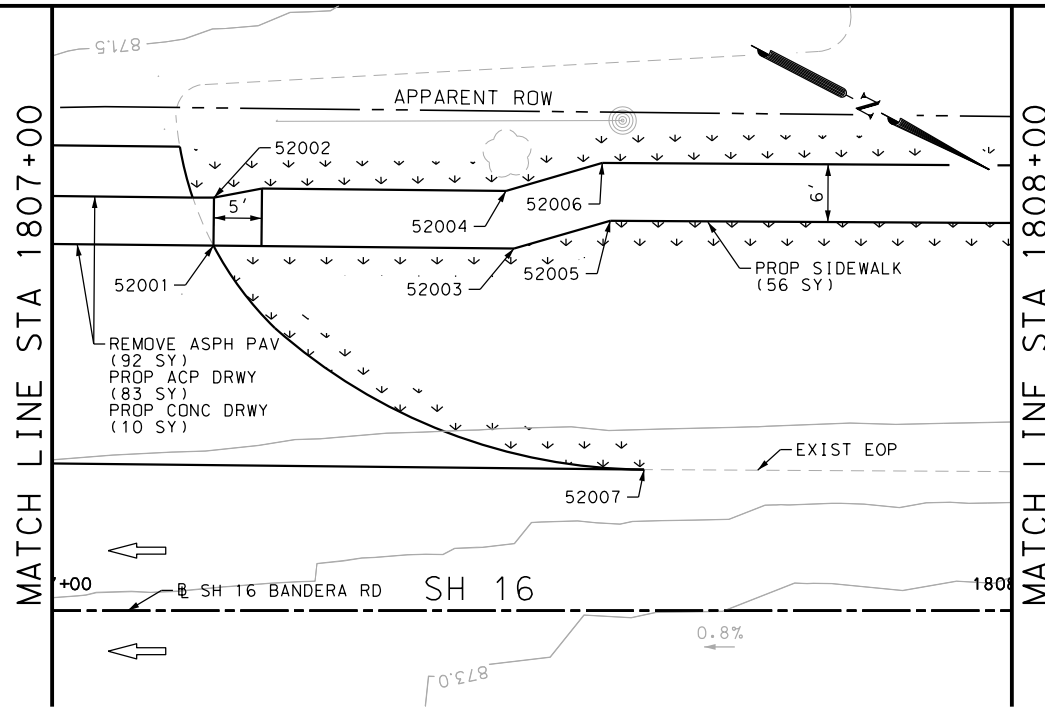
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1805+00 TO STA 1807+00

SHEET 92 OF 126

CHK	DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
		6	TEXAS		VARIES		
CHK	DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
		SAT	BEXAR	0915	12	576	392

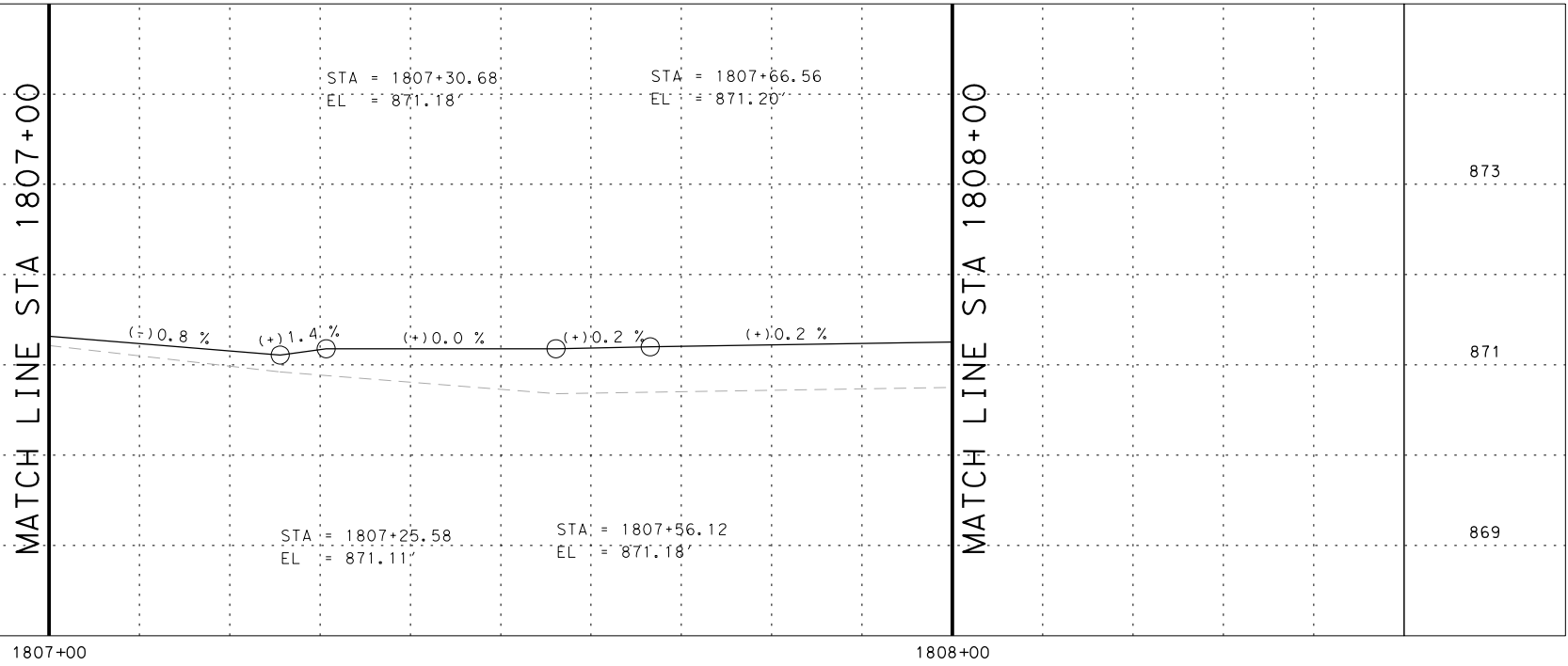
Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\*60PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	92
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0530-6004	DRIVEWAYS (CONC)	SY	10
0530-6005	DRIVEWAYS (ACP)	SY	83
0531-6001	CONC SIDEWALKS (4")	SY	56

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
52001	13732182.33	2088015.45	--	PROF
52002	13732180.06	2088010.99	--	PROF
52003	13732210.23	2088001.23	--	PROF
52004	13732206.72	2087996.28	--	PROF
52005	13732217.79	2087994.01	--	PROF
52006	13732214.27	2087989.07	--	PROF
52007	13732232.87	2088015.38	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1807+00 TO STA 1808+00

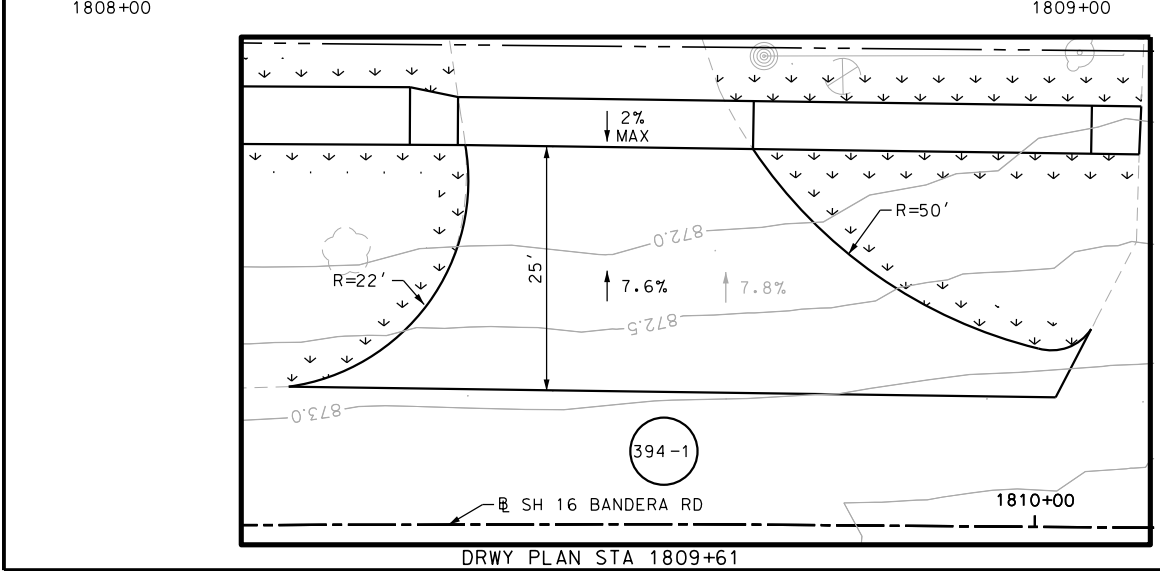
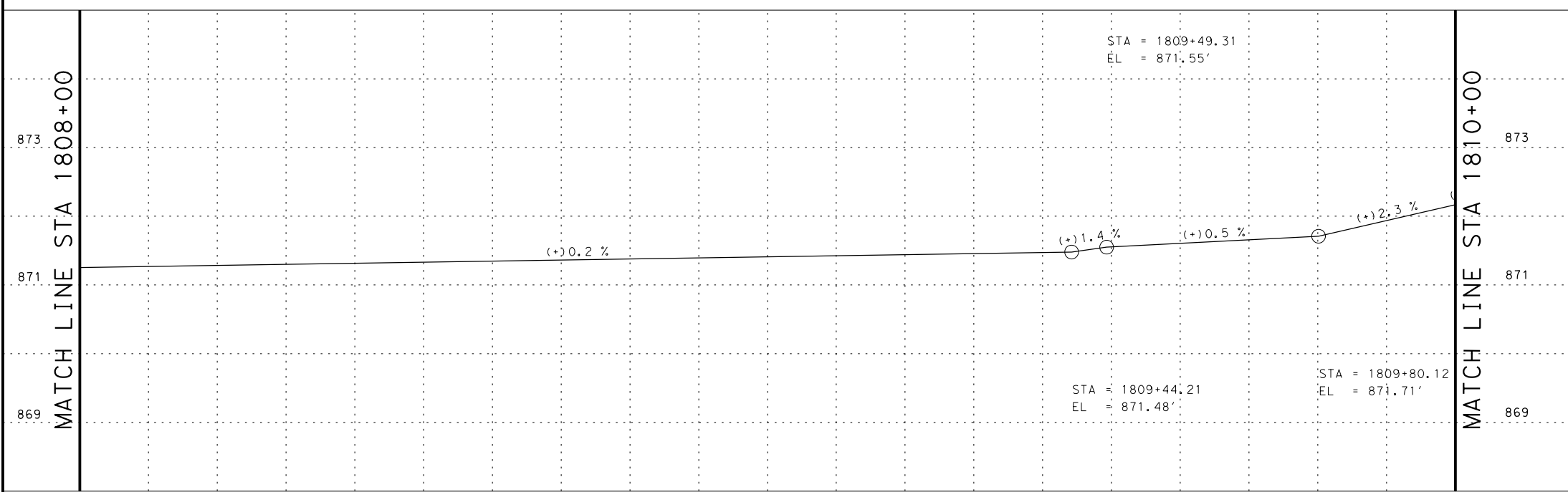
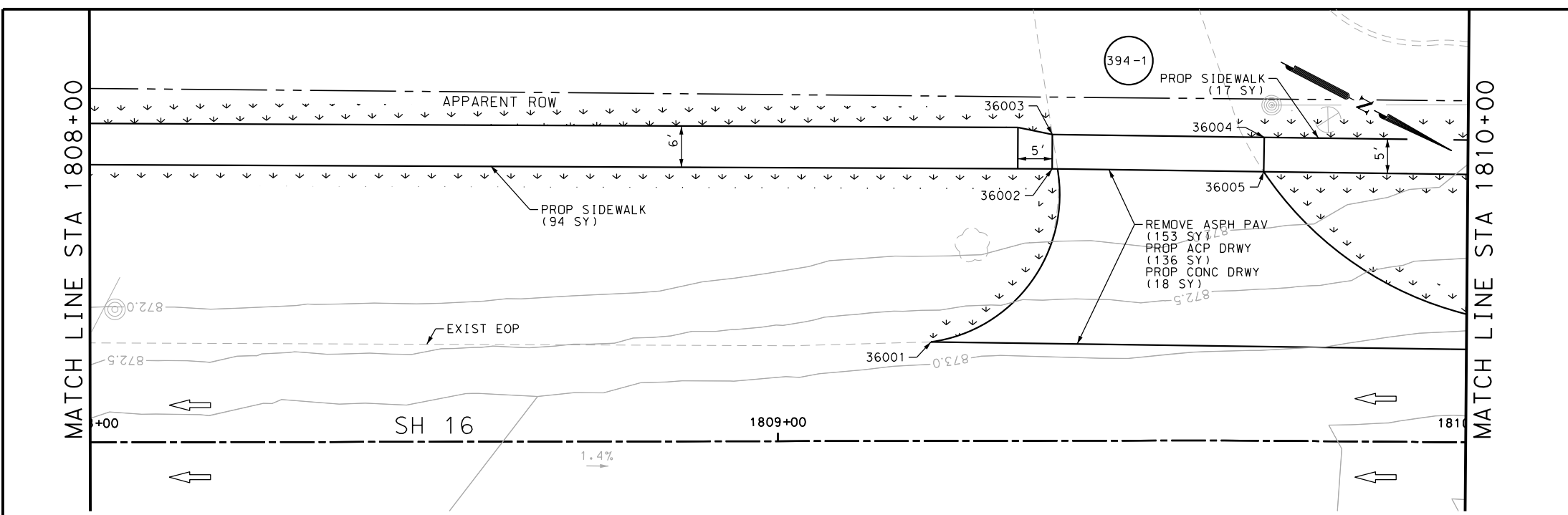
SHEET 93 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	393



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB#61PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	153
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	137
0162-6002	BLOCK SODDING	SY	137
0168-6001	VEGETATIVE WATERING	MG	2.14
0530-6004	DRIVEWAYS (CONC)	SY	18
0530-6005	DRIVEWAYS (ACP)	SY	136
0531-6001	CONC SIDEWALKS (4")	SY	111

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 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
36001	13732375.43	2087941.37	--	ME
36002	13732379.46	2087910.90	--	PROF
36003	13732377.18	2087906.45	--	ME
36004	13732404.71	2087892.62	--	ME
36005	13732406.95	2087897.09	--	PROF

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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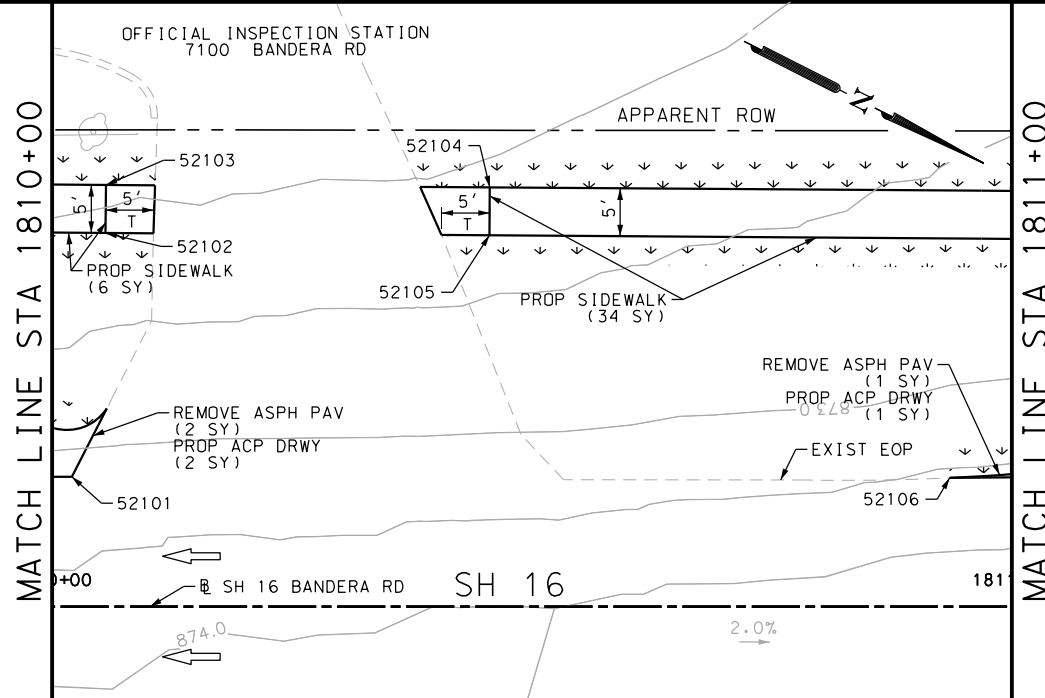
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1808+00 TO STA 1810+00

SHEET 94 OF 126

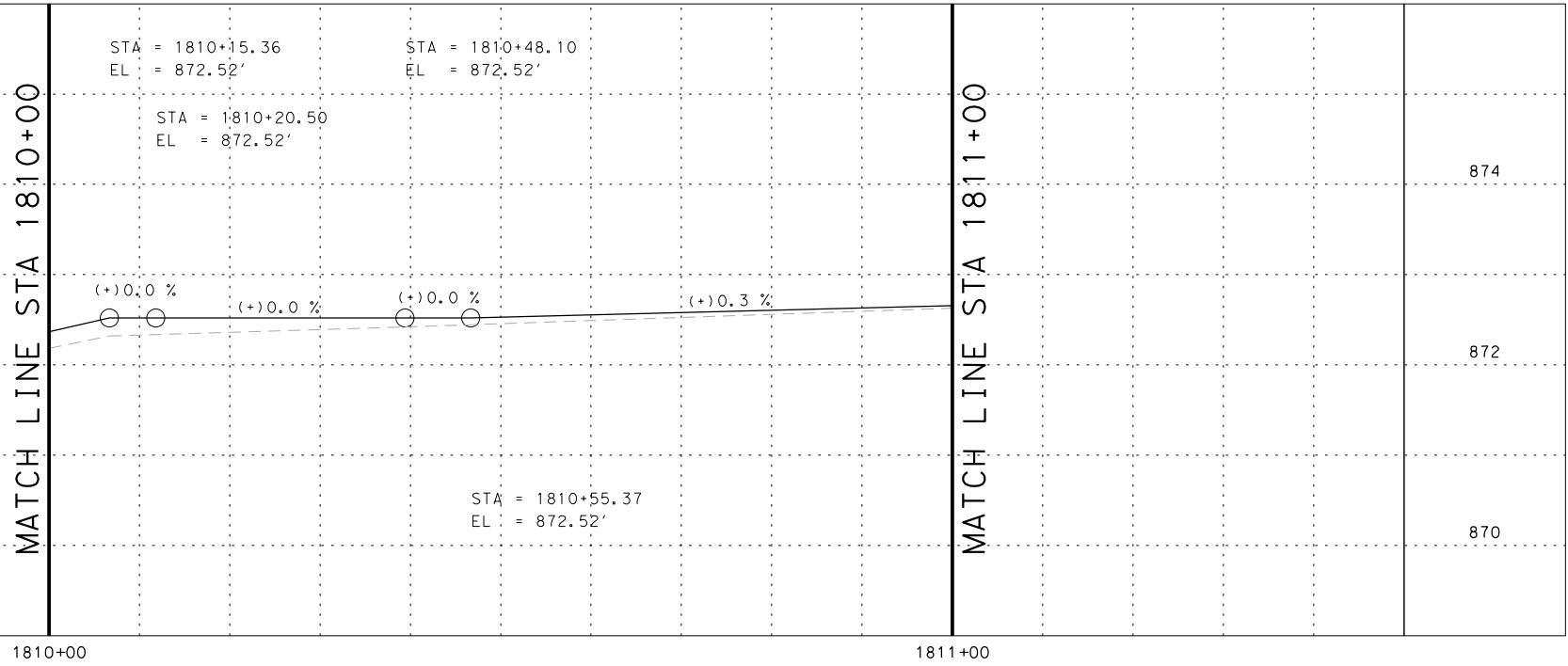
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	394

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\61PP\A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	50
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0530-6005	DRIVEWAYS (ACP)	SY	3
0531-6001	CONC SIDEWALKS (4")	SY	40



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
52101	13732446.86	2087905.51	--	ME
52102	13732438.44	2087881.27	--	PROF
52103	13732436.20	2087876.81	--	PROF
52104	13732471.96	2087858.86	--	PROF
52105	13732474.20	2087863.33	--	PROF
52106	13732528.41	2087864.09	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

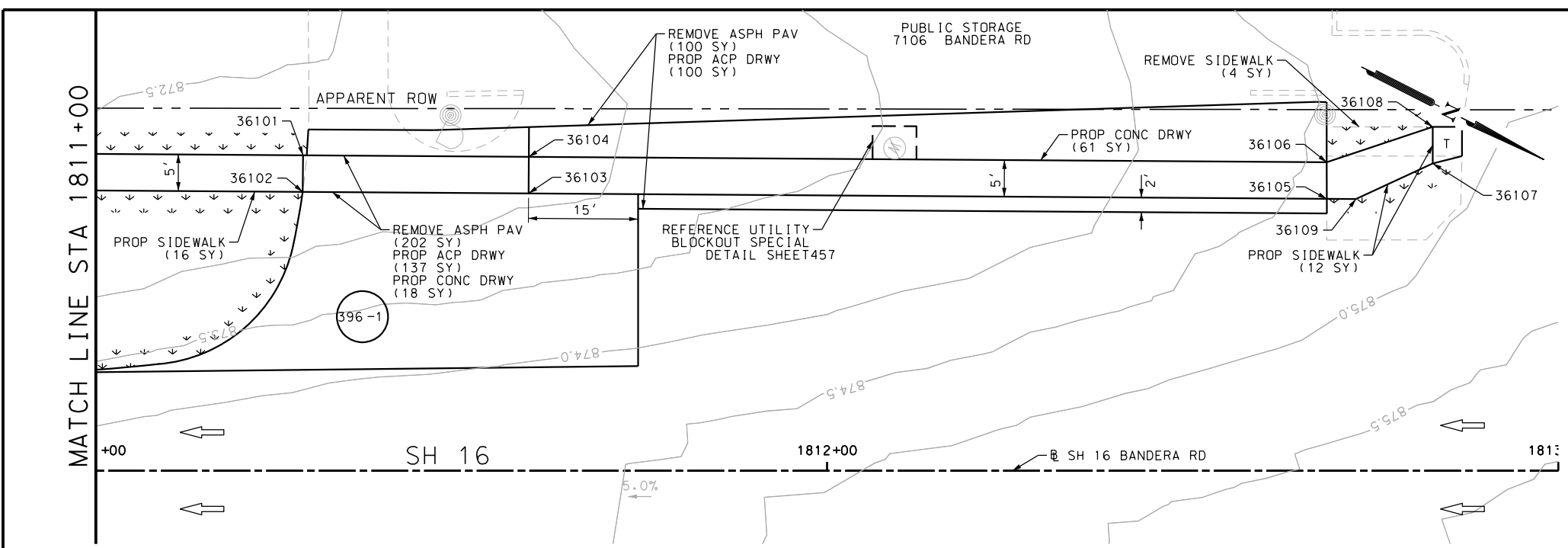
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1810+00 TO STA 1811+00  
 SHEET 95 OF 126

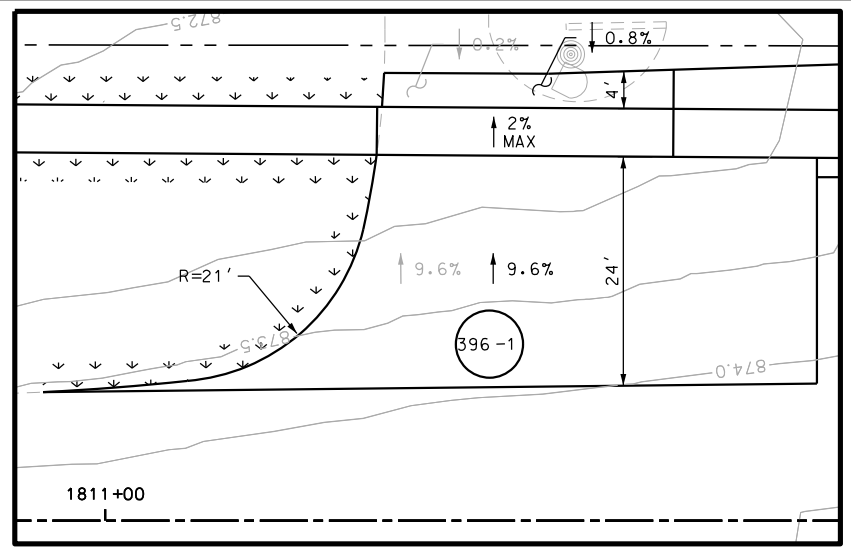
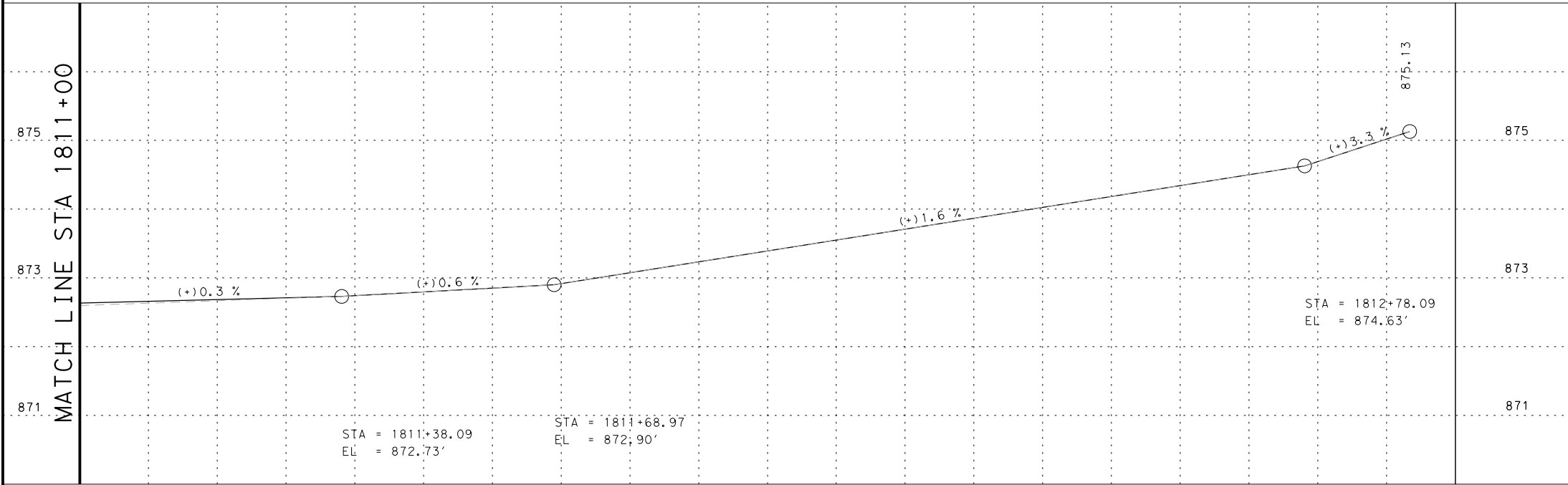
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	395

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\*62PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	302
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	45
0162-6002	BLOCK SODDING	SY	45
0168-6001	VEGETATIVE WATERING	MG	0.70
0530-6004	DRIVEWAYS (CONC)	SY	79
0530-6005	DRIVEWAYS (ACP)	SY	237
0531-6001	CONC SIDEWALKS (4")	SY	28



DRWY PLAN STA 1811+45

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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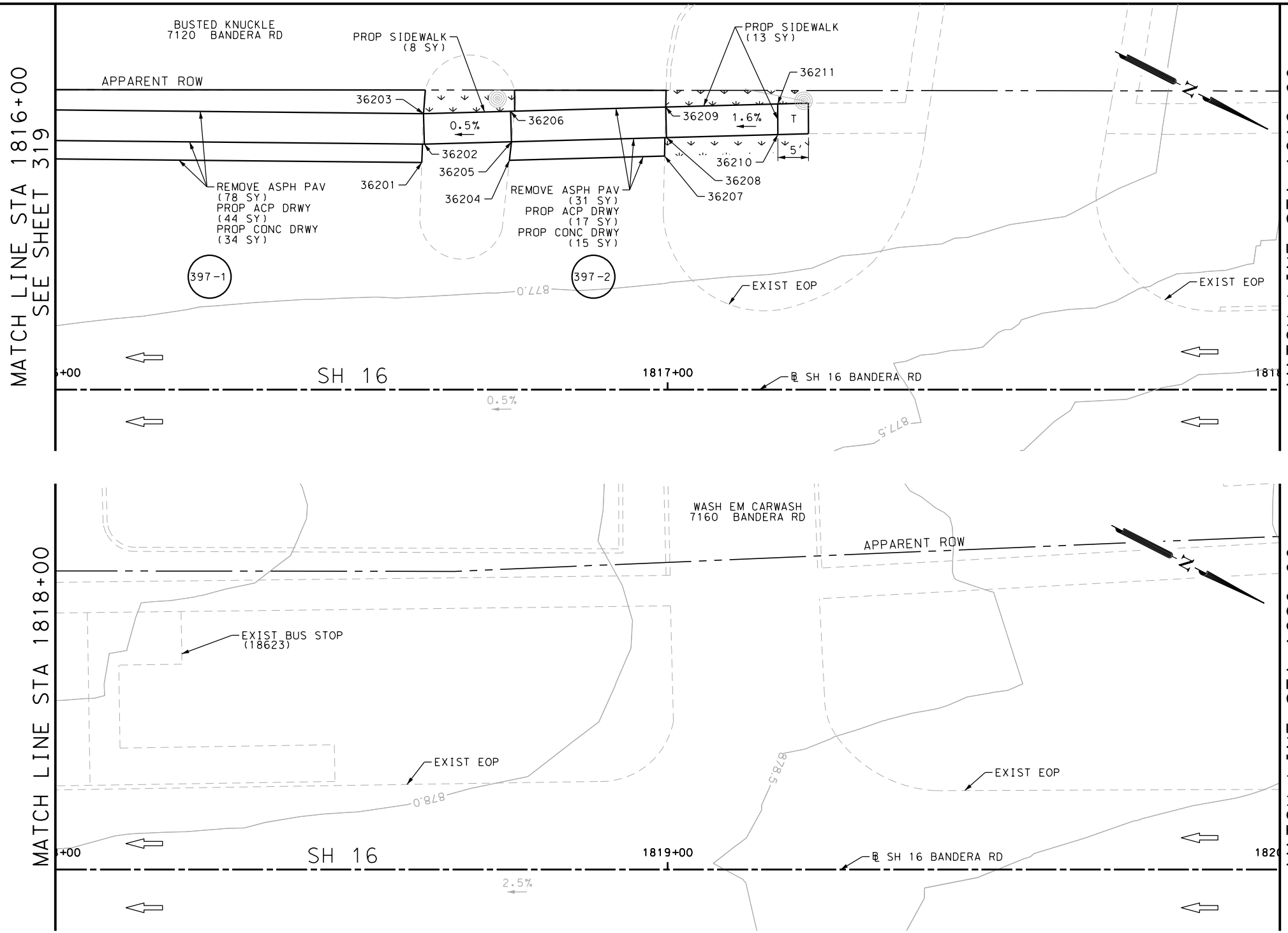
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1811+00 TO STA 1813+00

SHEET 96 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	396

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*63.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	109
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	19
0162-6002	BLOCK SODDING	SY	19
0168-6001	VEGETATIVE WATERING	MG	0.30
0530-6004	DRIVEWAYS (CONC)	SY	49
0530-6005	DRIVEWAYS (ACP)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	21

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36201	13733022.25	2087585.91	--	ME
36202	13733021.27	2087583.05	876.41	PROP
36203	13733018.88	2087578.65	876.48	PROP
36204	13733034.84	2087579.07	--	ME
36205	13733033.76	2087576.25	876.48	PROP
36206	13733031.37	2087571.85	876.55	PROP
36207	13733057.10	2087566.96	--	ME
36208	13733056.02	2087564.14	876.66	PROP
36209	13733053.63	2087559.74	876.73	PROP
36210	13733072.00	2087555.45	877.03	PROP
36211	13733069.70	2087551.00	877.10	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

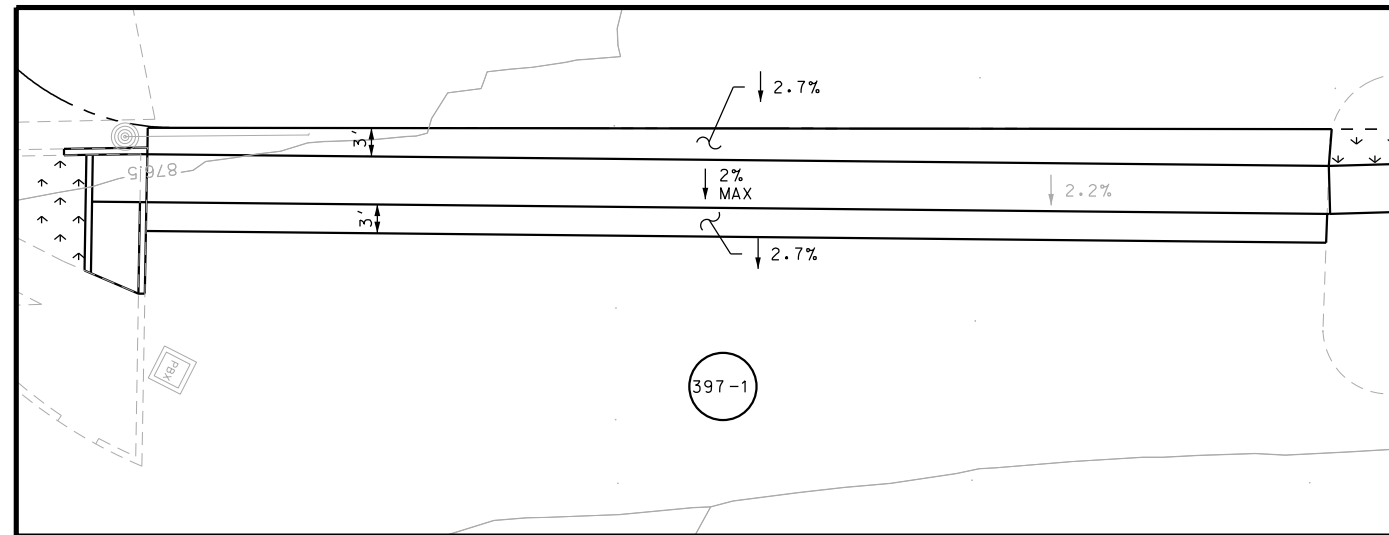
Texas Department of Transportation  
 © 2019

SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1816+00 TO STA 1820+00  
 SHEET 97 OF 126

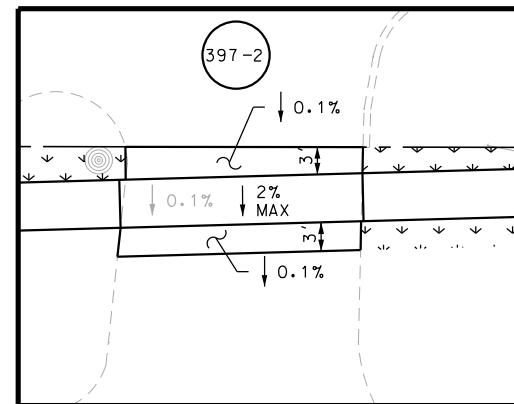
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	397

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*EB\*63\*A.dgn



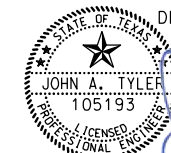
DRWY PLAN STA 1816+00

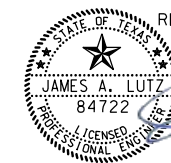


DRWY PLAN STA 1816+86

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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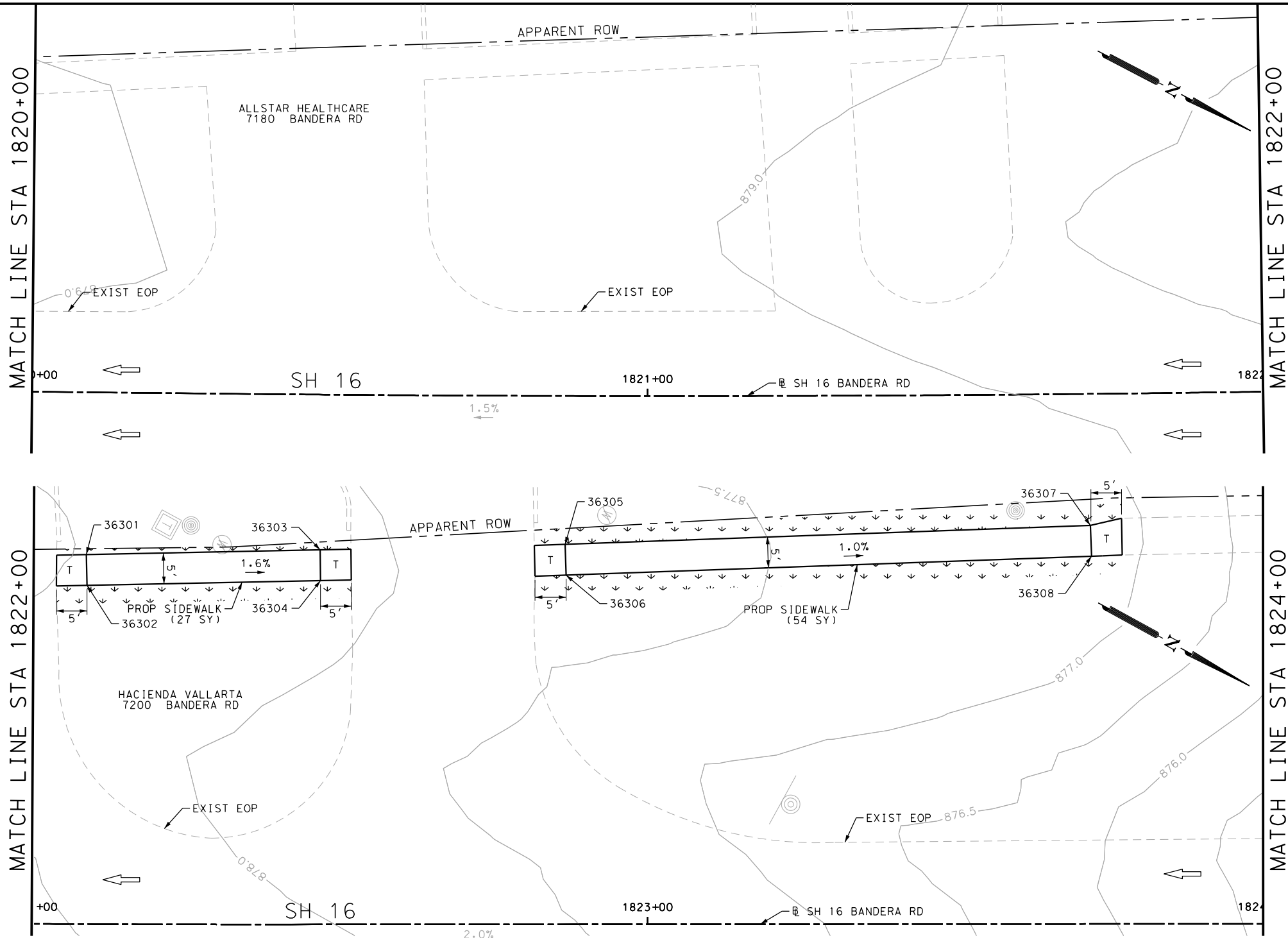
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1816+00 TO STA 1820+00

SHEET 98 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	398

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*EB\*64.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	89
0162-6002	BLOCK SODDING	SY	89
0168-6001	VEGETATIVE WATERING	MG	1.39
0531-6001	CONC SIDEWALKS (4")	SY	81

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36301	13733498.36	2087315.10	878.75	PROP
36302	13733500.85	2087319.43	878.68	PROP
36303	13733531.28	2087296.16	878.15	PROP
36304	13733533.74	2087300.52	878.08	PROP
36305	13733565.74	2087276.26	878.00	PROP
36306	13733568.30	2087280.55	877.93	PROP
36307	13733639.08	2087232.53	877.15	PROP
36308	13733641.64	2087236.82	877.08	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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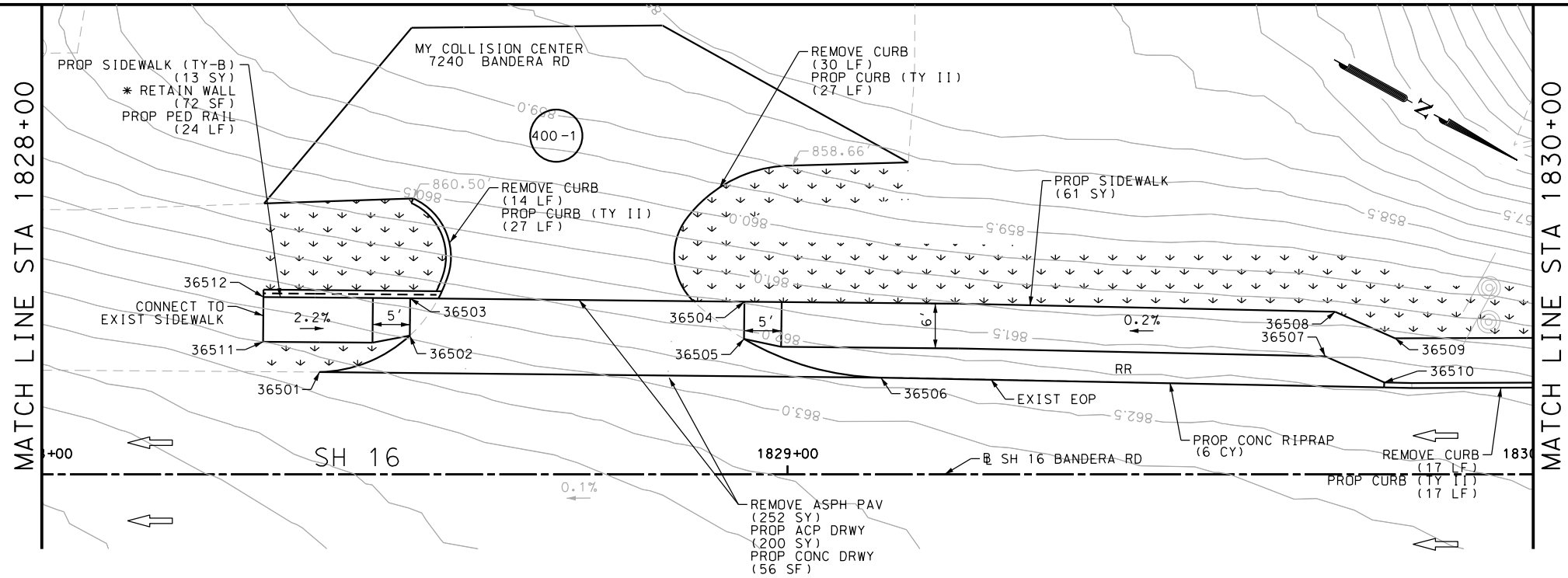
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1820+00 TO STA 1824+00

SHEET 99 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	399

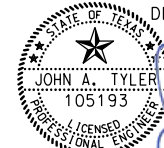
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*EB\*66.dgn

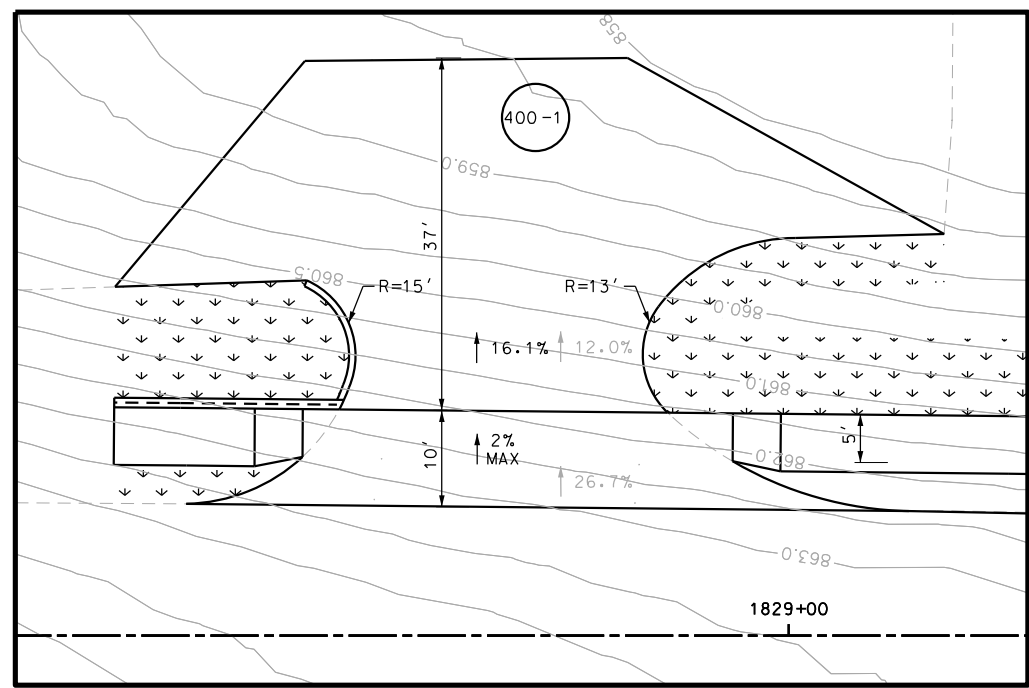


ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	61
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	252
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	150
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0432-6003	RIPRAP (CONC) (6 IN)	CY	6
0450-6048	RAIL (HANDRAIL) (TY B)	LF	24
0529-6002	CONC CURB (TY II)	LF	71
0530-6004	DRIVEWAYS (CONC)	SY	56
0530-6005	DRIVEWAYS (ACP)	SY	200
0531-6001	CONC SIDEWALKS (4")	SY	61
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	13

NOTES:  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019 DATE



DRWY PLAN STA 1828+72

POINT	NORTHING	EASTING	ELEV	DESC
36501	13734071.42	2087053.24	--	ME
36502	13734079.70	2087043.13	863.50	PROP
36503	13734077.32	2087038.73	864.43	PROP
36504	13734116.82	2087017.54	862.61	PROP
36505	13734119.18	2087021.95	862.68	PROP
36506	13734137.77	2087017.65	--	ME
36507	13734188.62	2086986.47	862.50	PROP
36508	13734186.90	2086980.59	862.43	PROP
36509	13734195.66	2086979.84	862.41	PROP
36510	13734197.24	2086985.73	--	ME
36511	13734062.85	2087053.33	864.33	PROP
36512	13734060.00	2087048.05	864.42	PROP

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

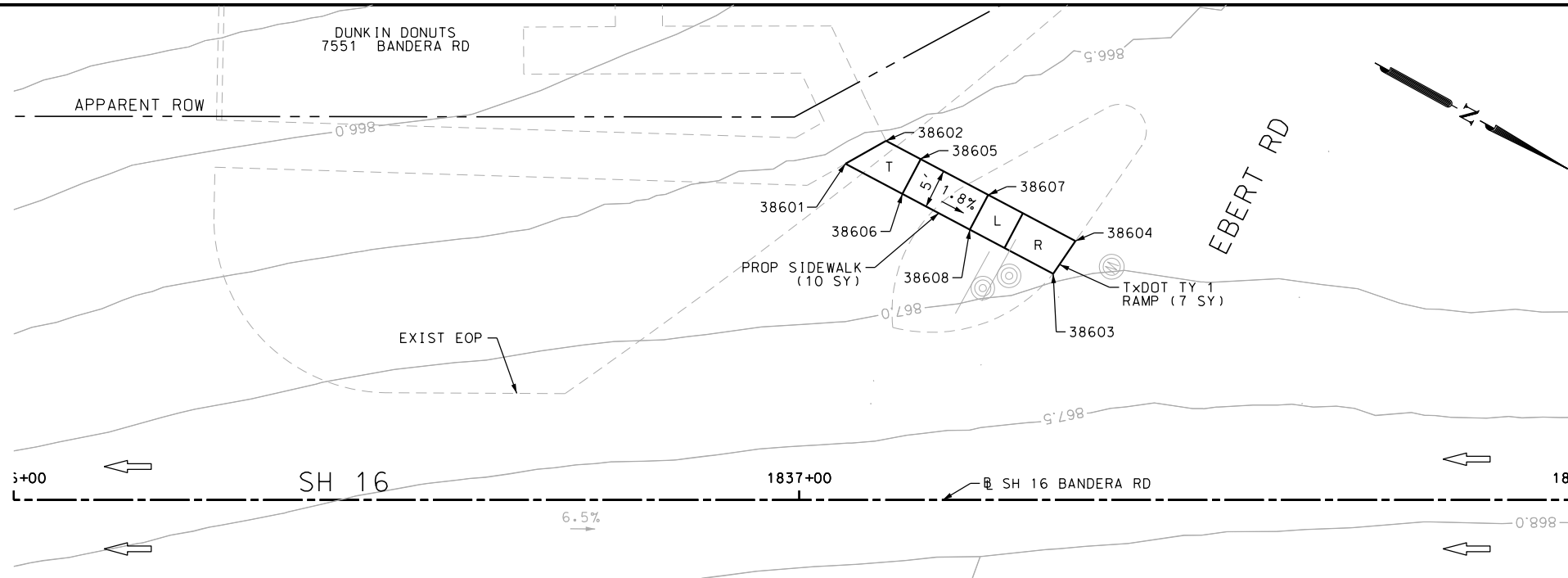


SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1828+00 TO STA 1830+00  
 SHEET 100 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				400

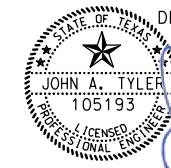
Plotted on: 5/3/2019

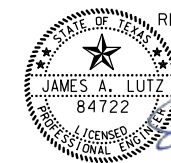
Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*EB\*68.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	10
0531-6018	CURB RAMPS (TY 1)	SY	7

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
38601	13734818.81	2086609.58	--	ME
38602	13734821.93	2086604.53	--	ME
38603	13734848.72	2086609.13	--	ME
38604	13734849.21	2086604.12	--	ME
38605	13734826.93	2086604.46	866.61	PROP
38606	13734827.00	2086609.45	866.68	PROP
38607	13734836.65	2086604.31	866.44	PROP
38608	13734836.72	2086609.31	866.37	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1836+00 TO STA 1838+00

SHEET 101 OF 126

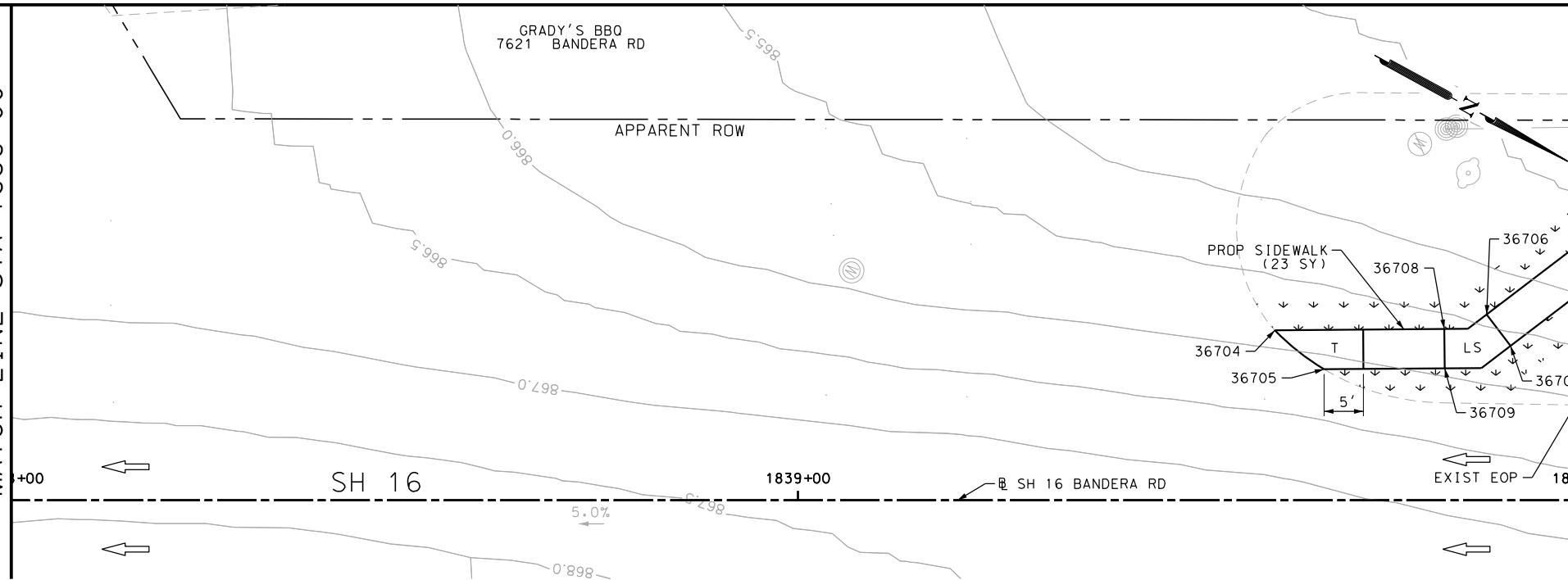
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	401



Plotted on: 5/3/2019

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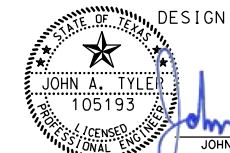
MATCH LINE STA 1838+00



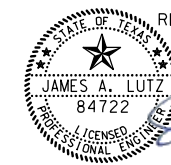
ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	36
0162-6002	BLOCK SODDING	SY	36
0168-6001	VEGETATIVE WATERING	MG	0.56
0531-6001	CONC SIDEWALKS (4")	SY	23

NOTES:

- \* FOR CONTRACTOR INFORMATION ONLY
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE



REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

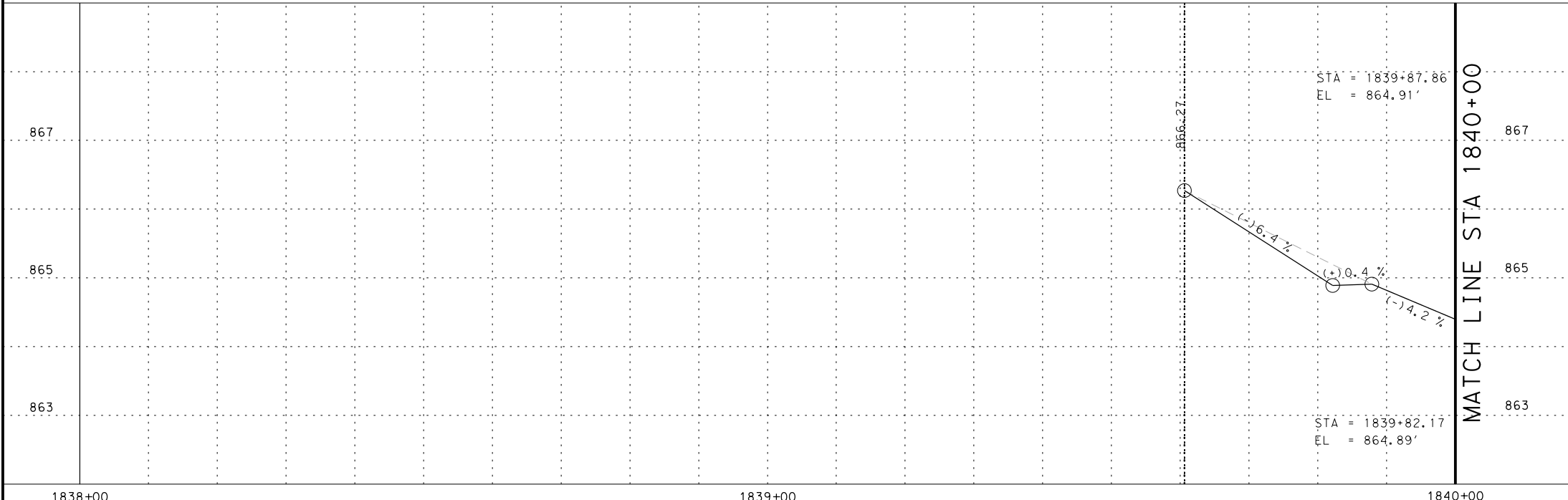


SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1838+00 TO STA 1840+00

SHEET 102 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	402

MATCH LINE STA 1840+00

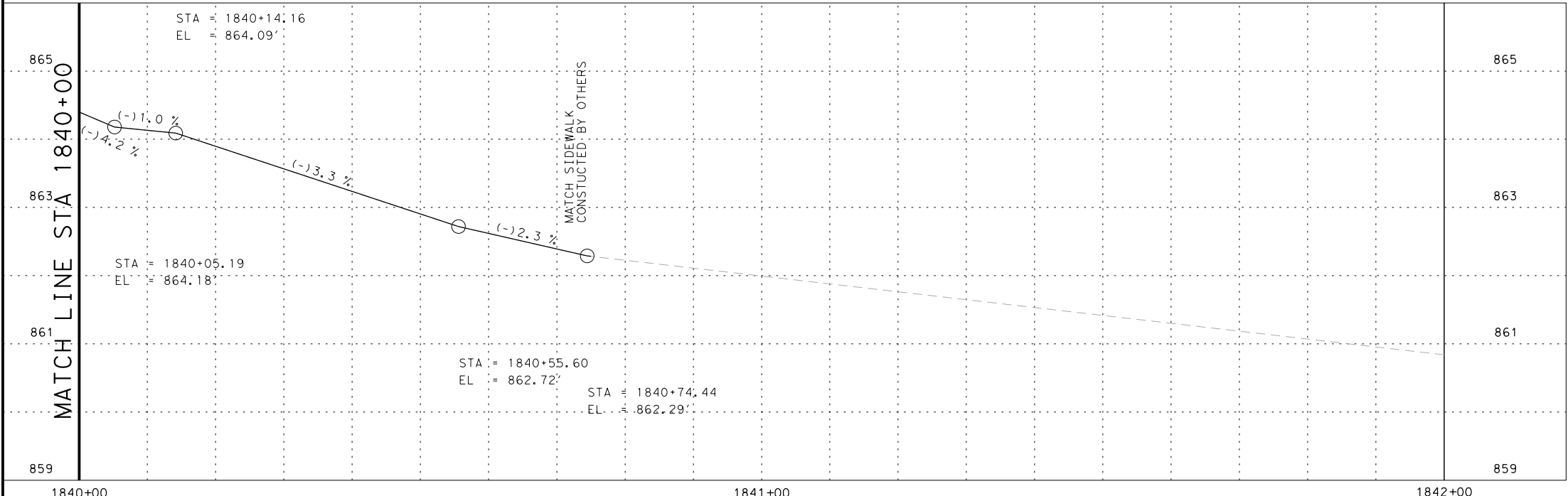
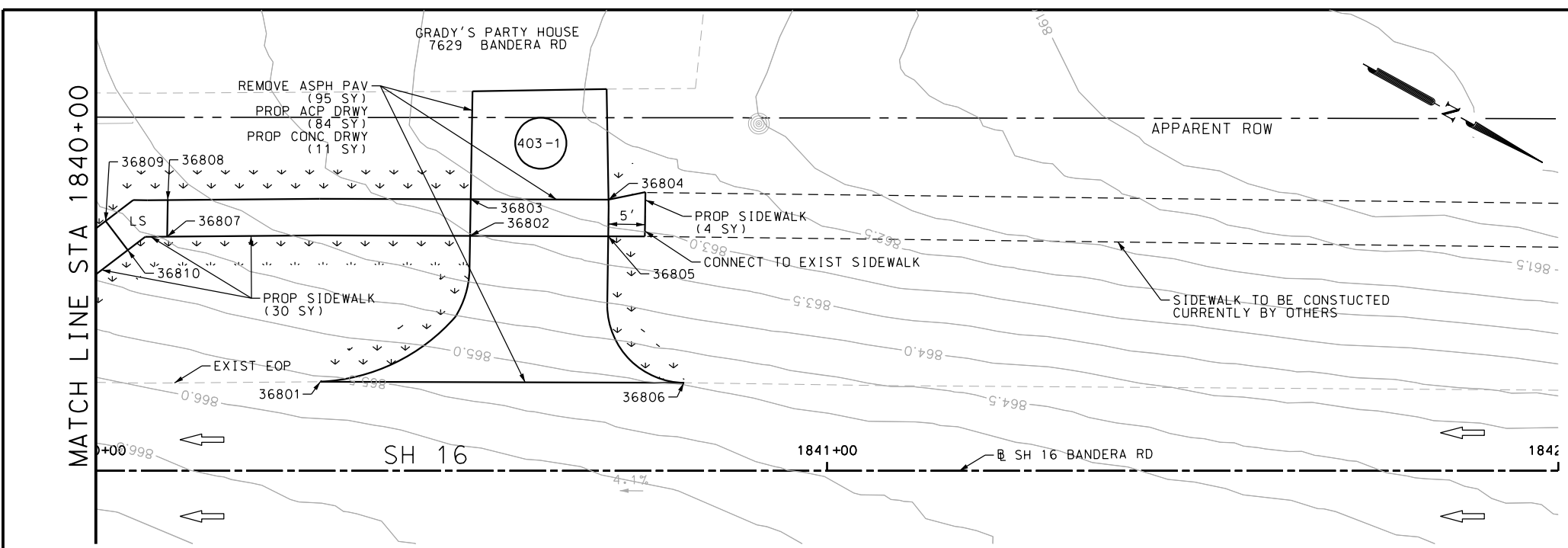


POINT	NORTHING	EASTING	ELEV	DESC
36704	13735052.27	2086505.52	--	ME
36705	13735060.14	2086506.84	--	ME
36706	13735074.91	2086490.78	--	PROF
36707	13735079.48	2086492.81	--	PROF
36708	13735071.07	2086494.99	--	PROF
36709	13735073.52	2086499.35	--	PROF

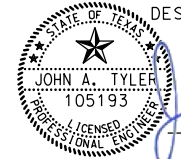
Plotted on: 5/3/2019

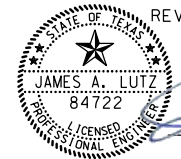
Design File Name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*69PP.dgn

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	95
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	71
0162-6002	BLOCK SODDING	SY	71
0168-6001	VEGETATIVE WATERING	MG	1.11
0530-6004	DRIVEWAYS (CONC)	SY	11
0530-6005	DRIVEWAYS (ACP)	SY	84
0531-6001	CONC SIDEWALKS (4")	SY	34



NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

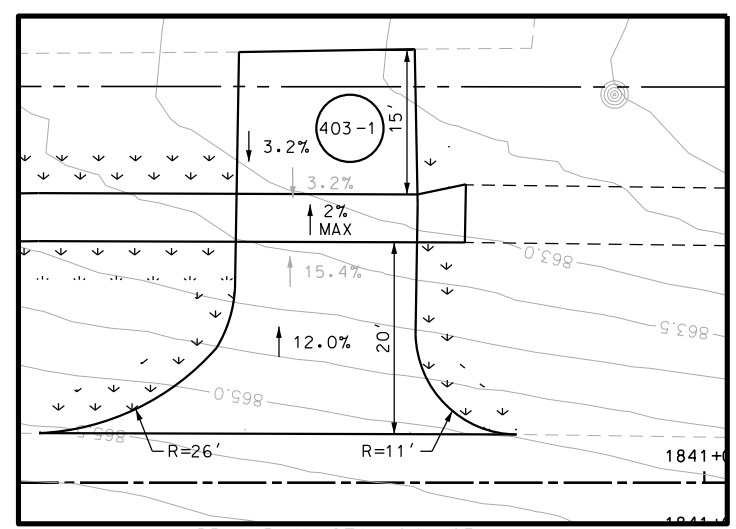
DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
36801	13735118.23	2086480.06	--	ME
36802	13735126.59	2086452.71	--	PROF
36803	13735124.26	2086448.29	--	PROF
36804	13735140.81	2086439.26	--	PROF
36805	13735143.18	2086443.67	--	PROF
36806	13735161.88	2086456.25	--	ME
36807	13735090.33	2086472.75	864.16	PROP
36808	13735087.99	2086468.33	864.09	PROP
36809	13735081.92	2086474.94	864.18	PROP
36810	13735086.50	2086476.96	864.25	PROP



DRWY PLAN STA 1840+65

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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



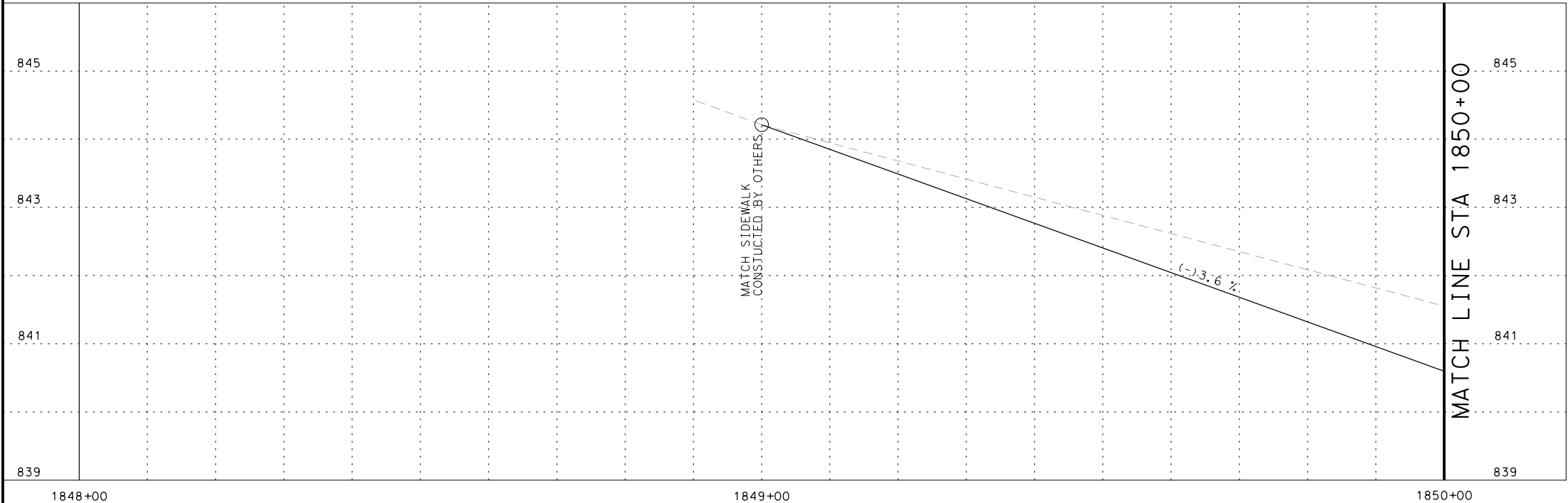
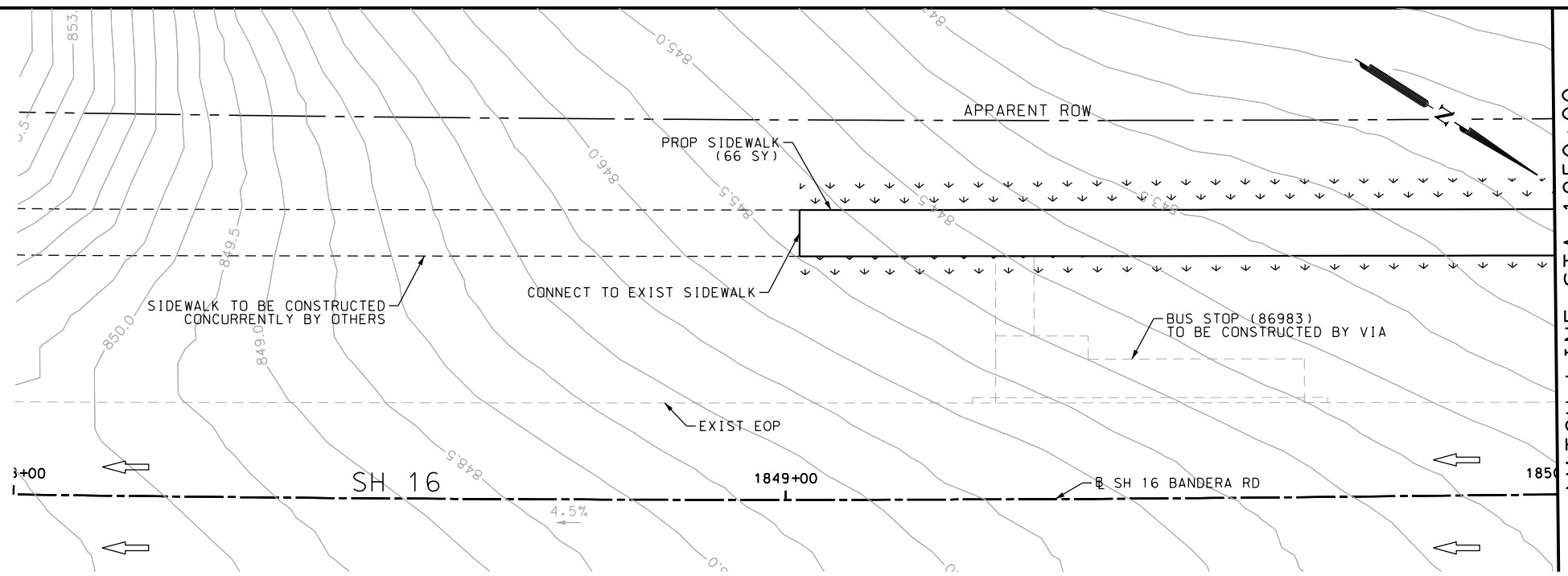
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1840+00 TO STA 1842+00

SHEET 103 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	403

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\71PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	77
0162-6002	BLOCK SODDING	SY	77
0168-6001	VEGETATIVE WATERING	MG	1.20
0450-6048	RAIL (HANDRAIL) (TY B)	LF	10
0531-6001	CONC SIDEWALKS (4")	SY	66
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	37

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



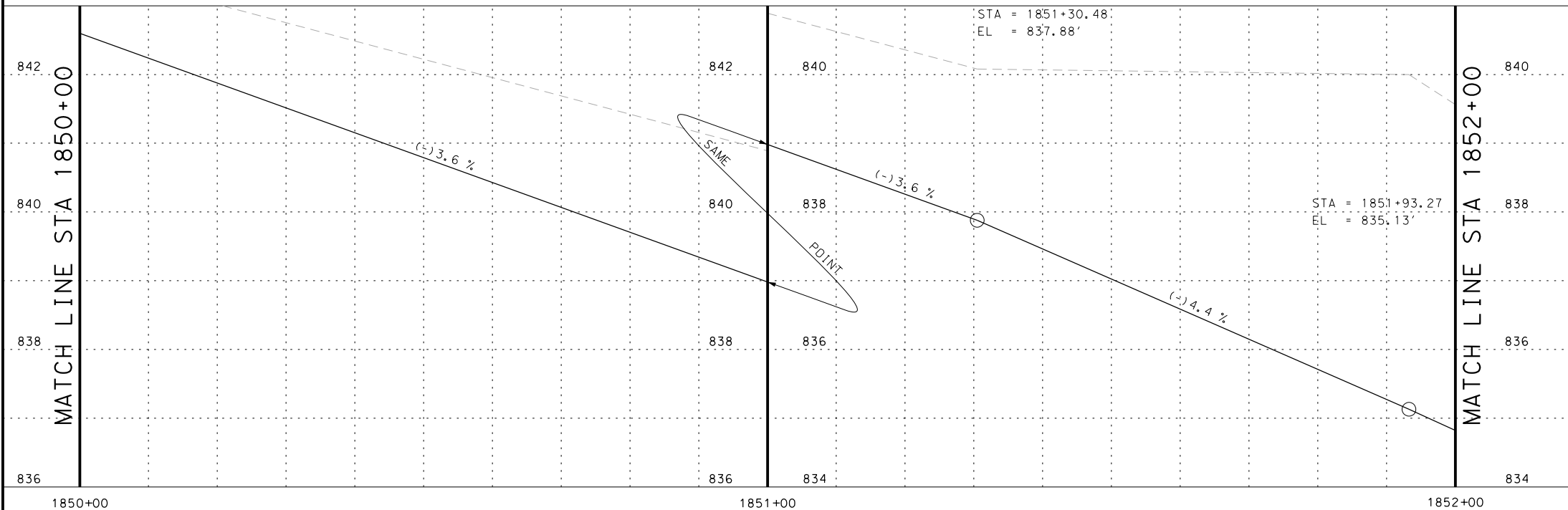
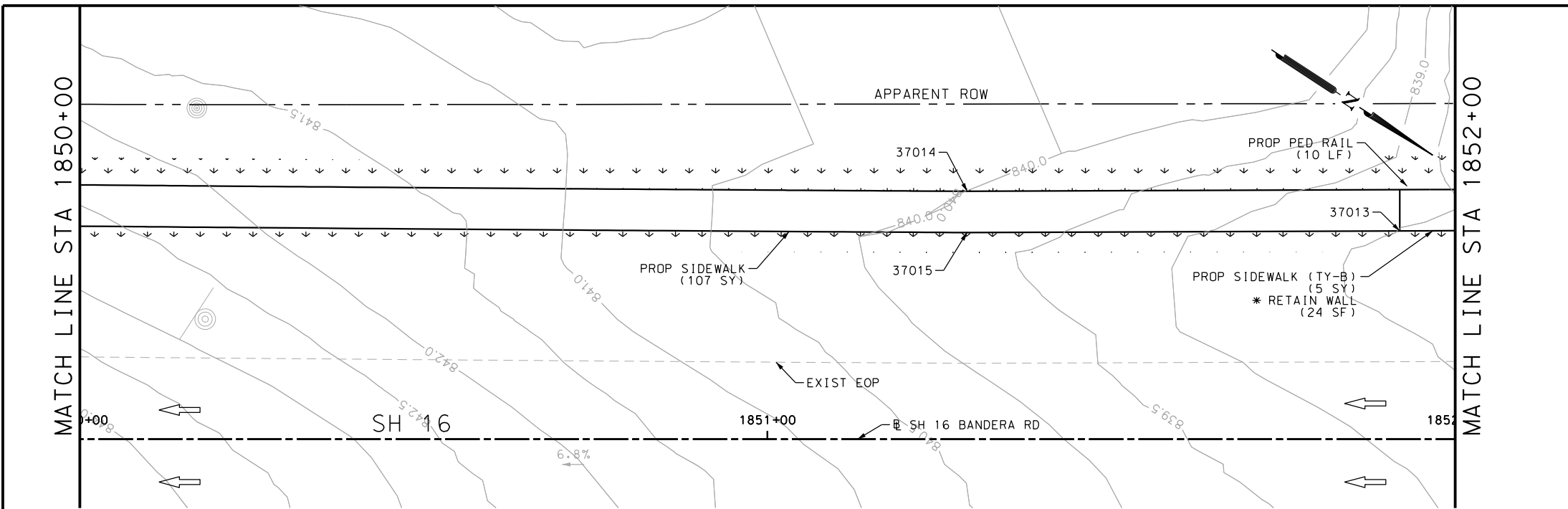
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1848+00 TO STA 1850+00

SHEET 104 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	404

Plotted on: 5/3/2019

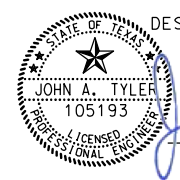
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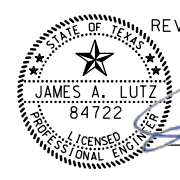


POINT	NORTHING	EASTING	ELEV	DESC
37013	13736106.65	2085874.66	--	PROF
37014	13736050.82	2085904.26	--	PROF
37015	13736054.17	2085909.23	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	156
0162-6002	BLOCK SODDING	SY	156
0168-6001	VEGETATIVE WATERING	MG	2.43
0450-6048	RAIL (HANDRAIL) (TY B)	LF	10
0531-6001	CONC SIDEWALKS (4")	SY	107
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	5

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  

 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

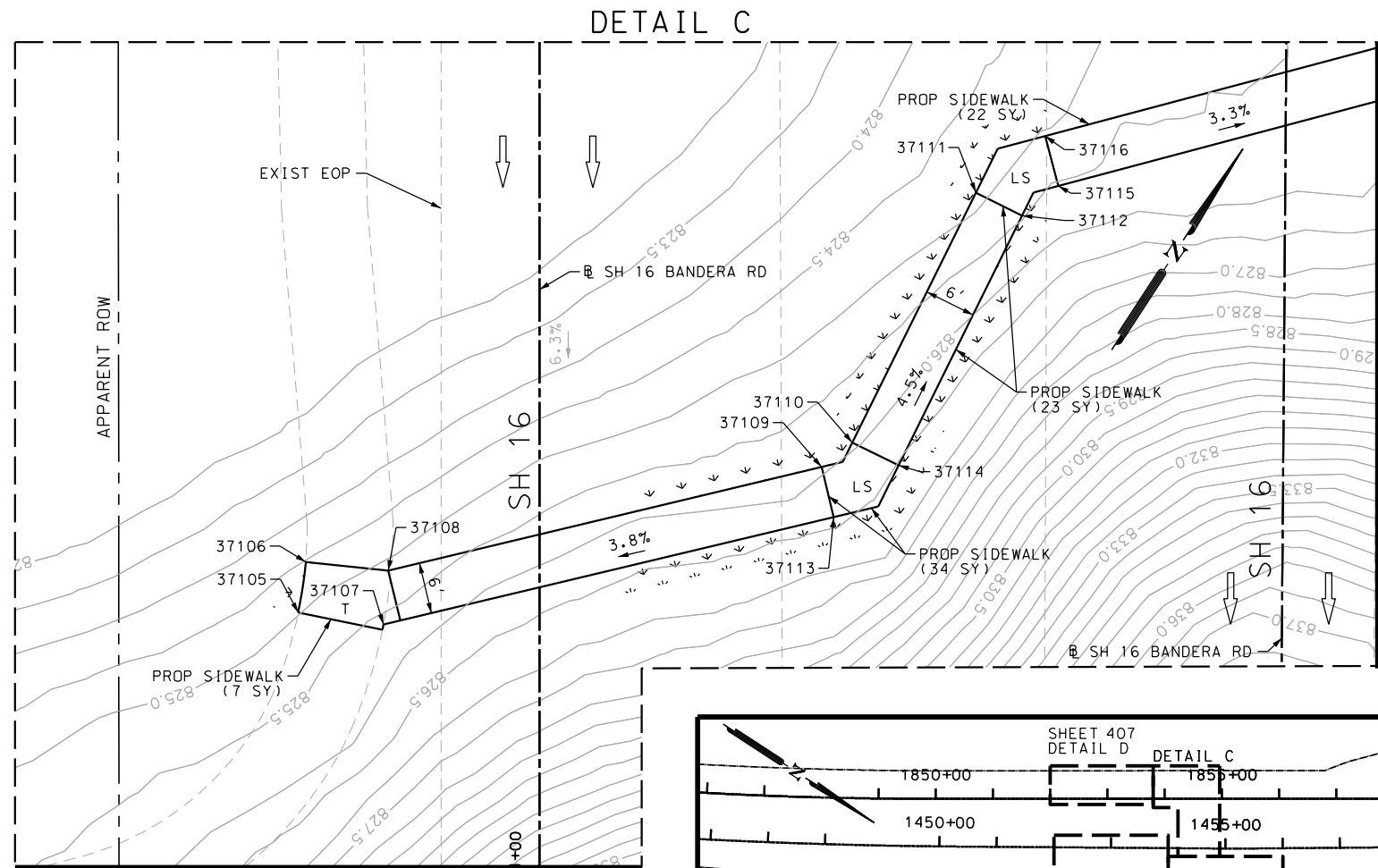
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1850+00 TO STA 1852+00  
 SHEET 105 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	405

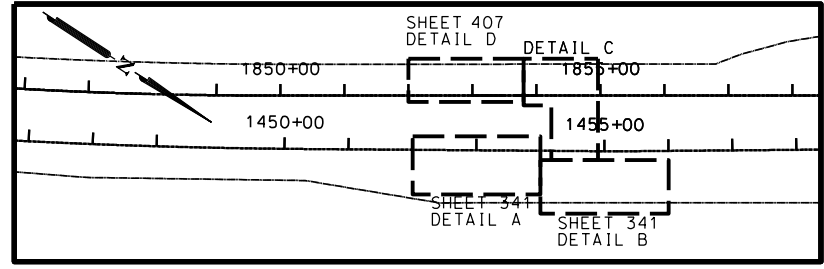
Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB\*72.dgn



MATCH LINE STA 1854+00

MATCH LINE B  
SEE SHEET 341



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	229
0162-6002	BLOCK SODDING	SY	229
0168-6001	VEGETATIVE WATERING	MG	3.57
0450-6048	RAIL (HANDRAIL) (TY B)	LF	190
0531-6001	CONC SIDEWALKS (4")	SY	90
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	106

- NOTES:
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  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37105	13736306.83	2085746.48	--	ME
37106	13736312.23	2085743.98	--	ME
37107	13736311.08	2085755.55	--	ME
37108	13736316.66	2085752.57	824.10	PROP
37109	13736354.37	2085788.24	826.06	PROP
37110	13736358.72	2085789.68	826.06	PROP
37111	13736390.97	2085785.81	824.60	PROP
37112	13736391.69	2085791.77	824.67	PROP
37113	13736350.25	2085792.60	826.13	PROP
37114	13736359.44	2085795.64	826.13	PROP
37115	13736396.90	2085793.42	824.67	PROP
37116	13736400.91	2085788.95	824.60	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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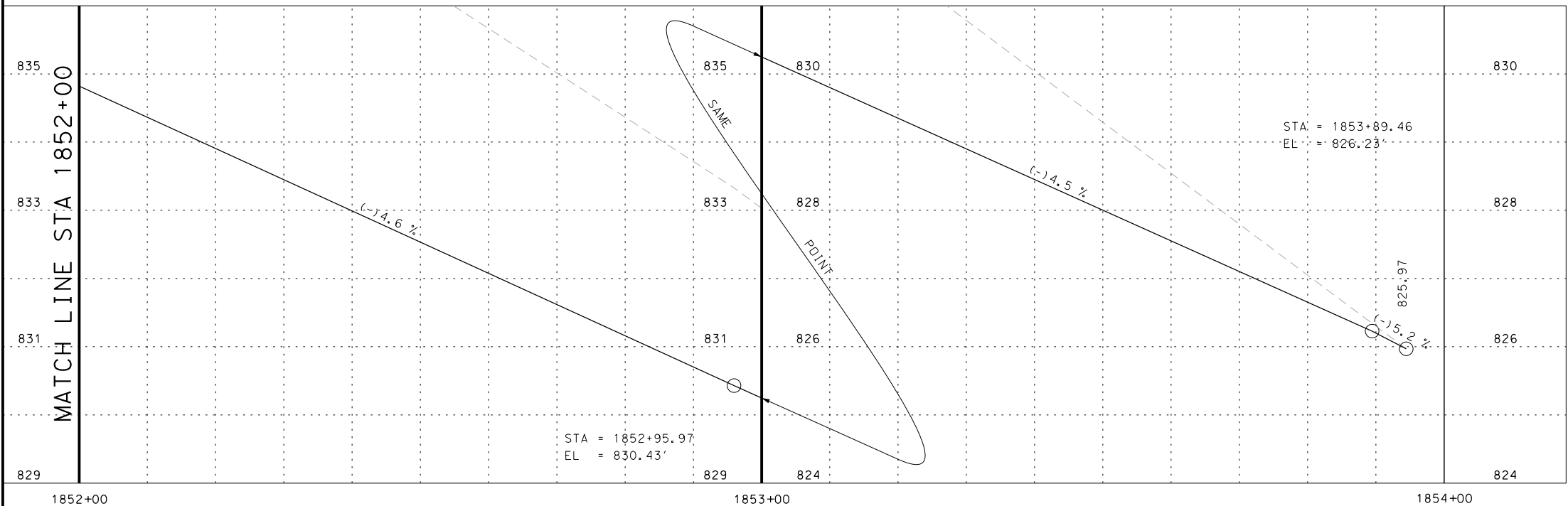
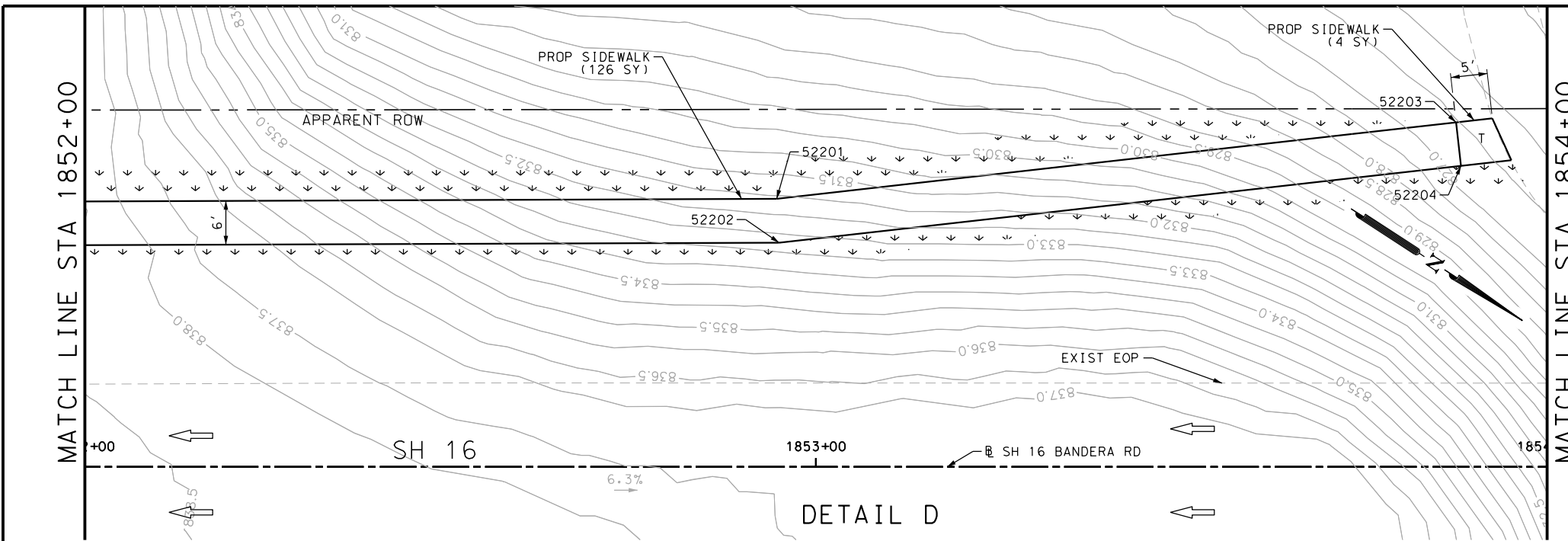
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1852+00 TO STA 1855+00

SHEET 106 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	406

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*72PP.dgn



POINT	NORTHING	EASTING	ELEV	DESC
52201	13736189.11	2085813.15	--	PROF
52202	13736192.69	2085817.98	--	PROF
52203	13736261.18	2085753.58	--	PROF
52204	13736265.00	2085758.21	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0531-6001	CONC SIDEWALKS (4")	SY	130

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

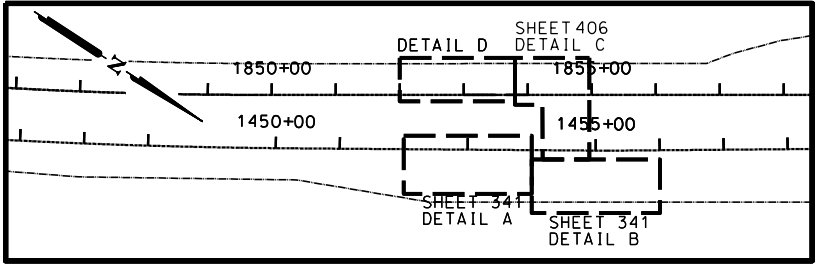
REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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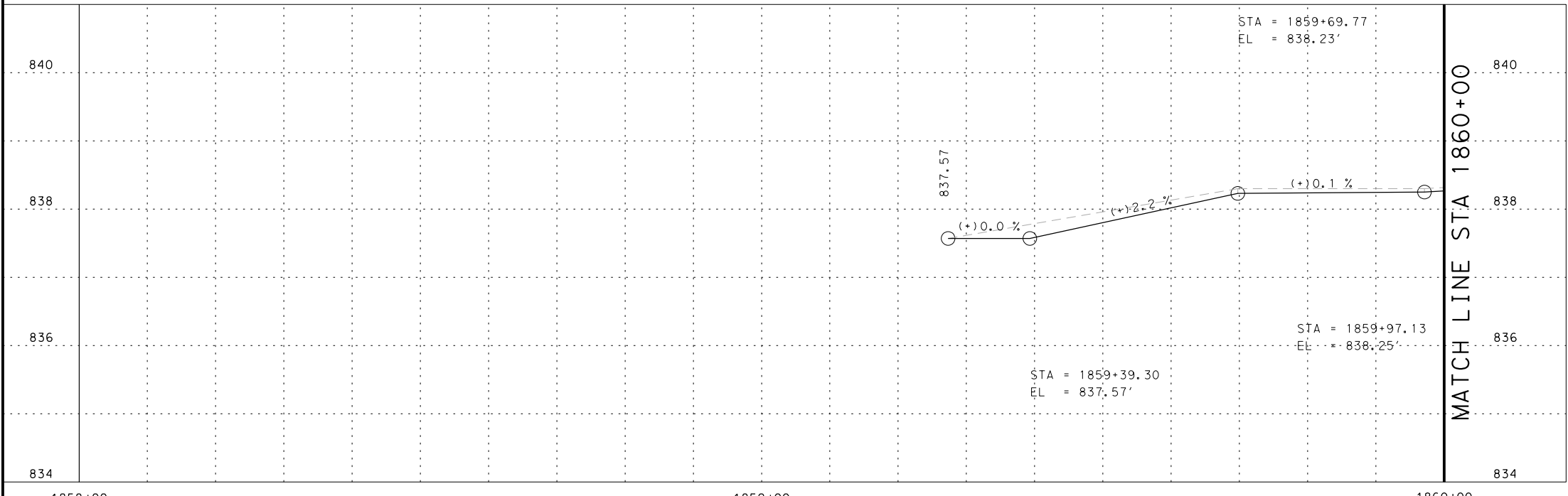
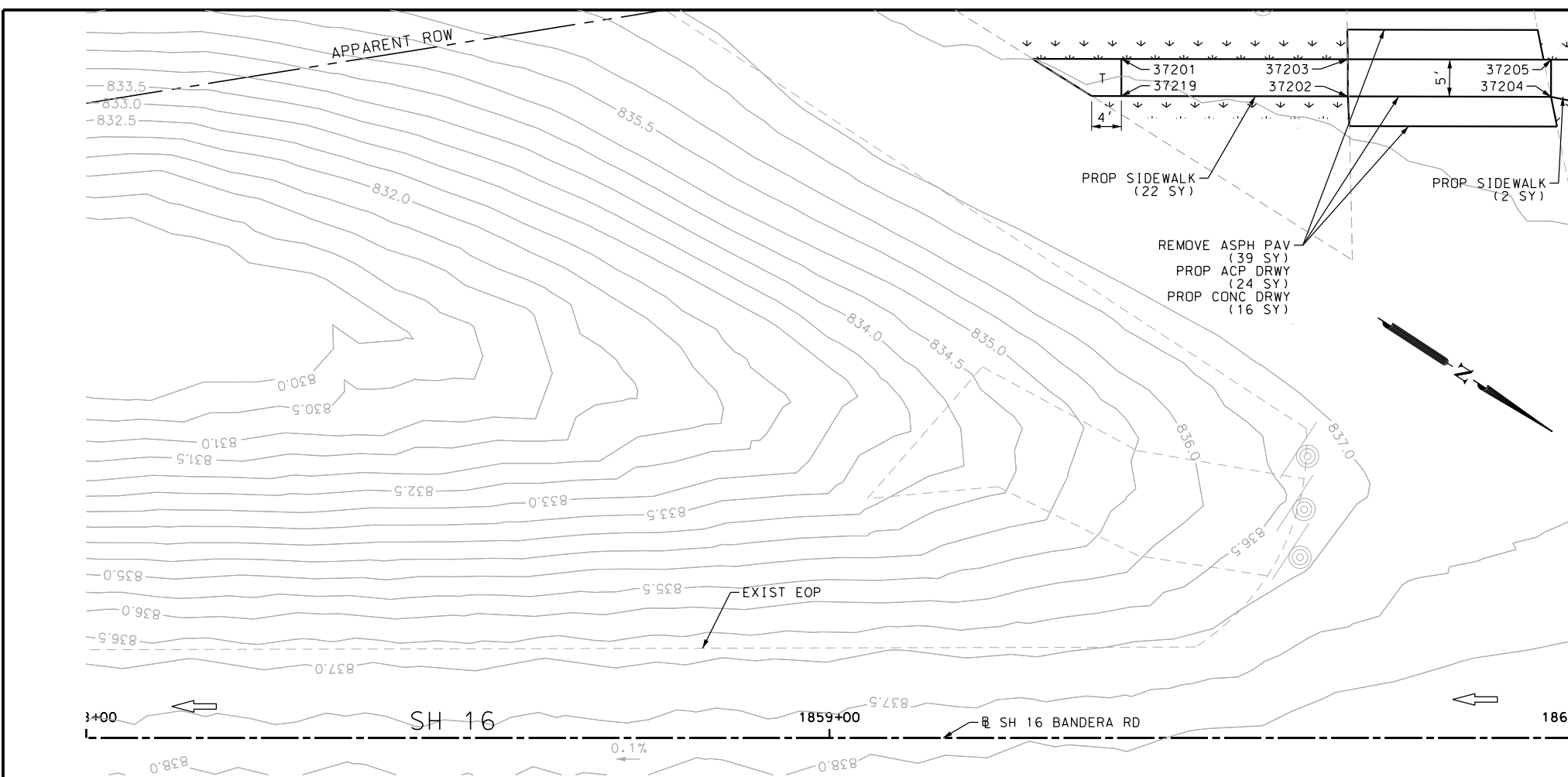
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1852+00 TO STA 1854+00  
 SHEET 107 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				407



Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\73PP.dgn



POINT	NORTHING	EASTING	ELEV	DESC
37201	13736699.02	2085414.59	--	PROF
37202	13736727.12	2085402.23	838.16	PROP
37203	13736724.39	2085398.04	828.23	PROP
37204	13736750.04	2085387.31	838.18	PROP
37205	13736747.32	2085383.12	838.25	PROP
37219	13736701.73	2085418.76	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	39
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0530-6004	DRIVEWAYS (CONC)	SY	16
0530-6005	DRIVEWAYS (ACP)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	24

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

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 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



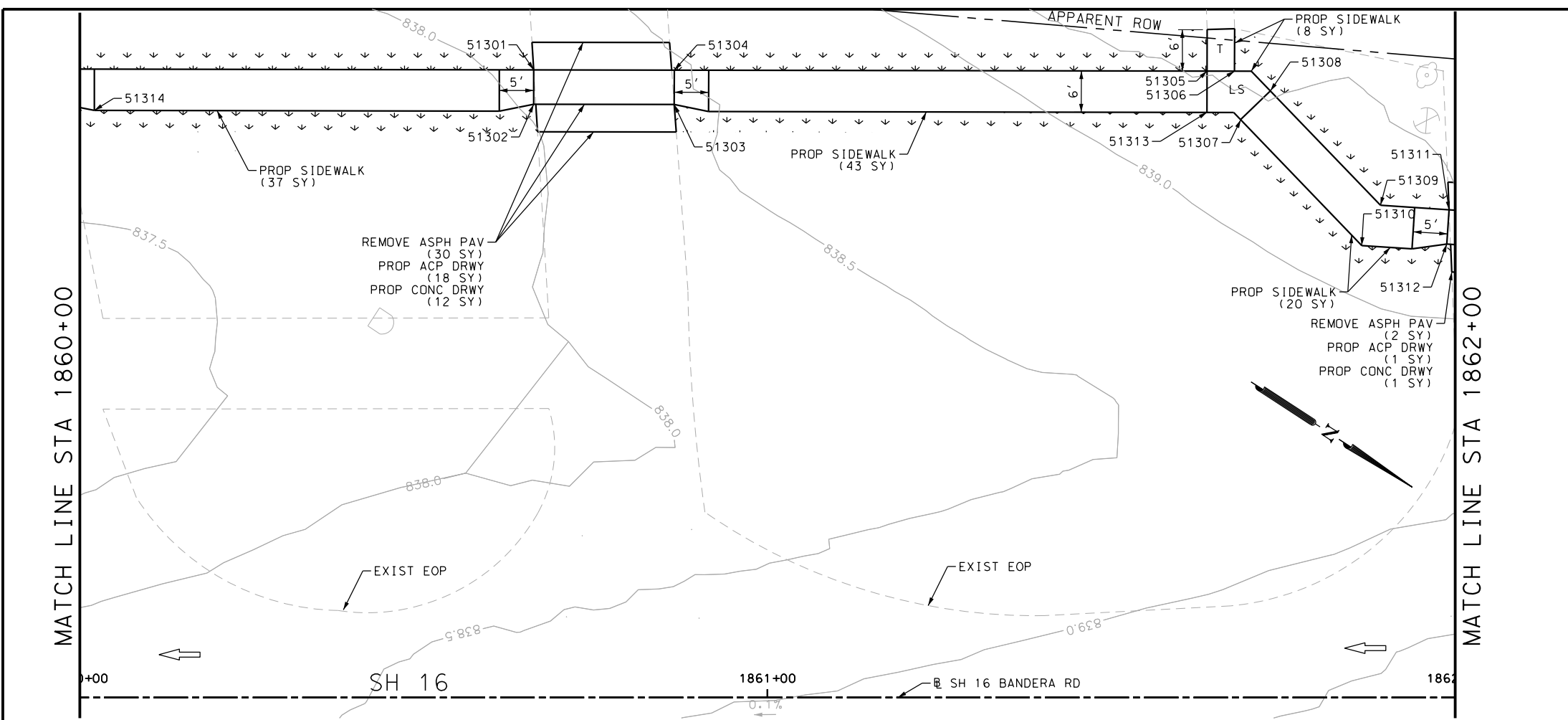
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1858+00 TO STA 1860+00

SHEET 108 OF 126

CHK	DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
		6	TEXAS		VARIES		
CHK	DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
		SAT	BEXAR	0915	12	576	408

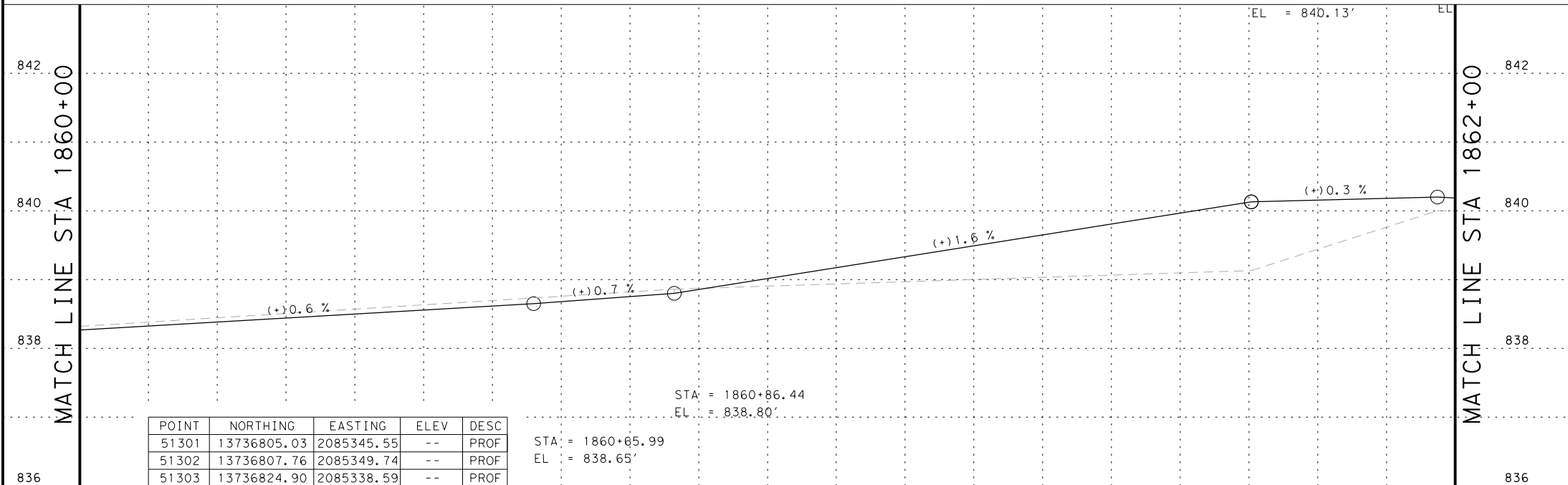
Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Bandera Dr\EB\*73PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	39
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0530-6004	DRIVEWAYS (CONC)	SY	16
0530-6005	DRIVEWAYS (ACP)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	24

- NOTES:
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  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



POINT	NORTHING	EASTING	ELEV	DESC
51301	13736805.03	2085345.55	--	PROF
51302	13736807.76	2085349.74	--	PROF
51303	13736824.90	2085338.59	--	PROF
51304	13736822.17	2085334.40	--	PROF
51305	13736887.09	2085292.14	--	PROF
51306	13736890.44	2085289.96	--	PROF
51307	13736895.26	2085294.40	--	PROF
51308	13736896.38	2085289.53	--	PROF
51309	13736918.87	2085294.68	--	PROF
51310	13736919.64	2085299.99	--	PROF
51311	13736927.57	2085289.76	--	PROF
51312	13736930.03	2085294.12	--	PROF
51313	13736889.81	2085296.33	--	PROF
51314	13736754.78	2085385.42	--	PROF

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1860+00 TO STA 1862+00

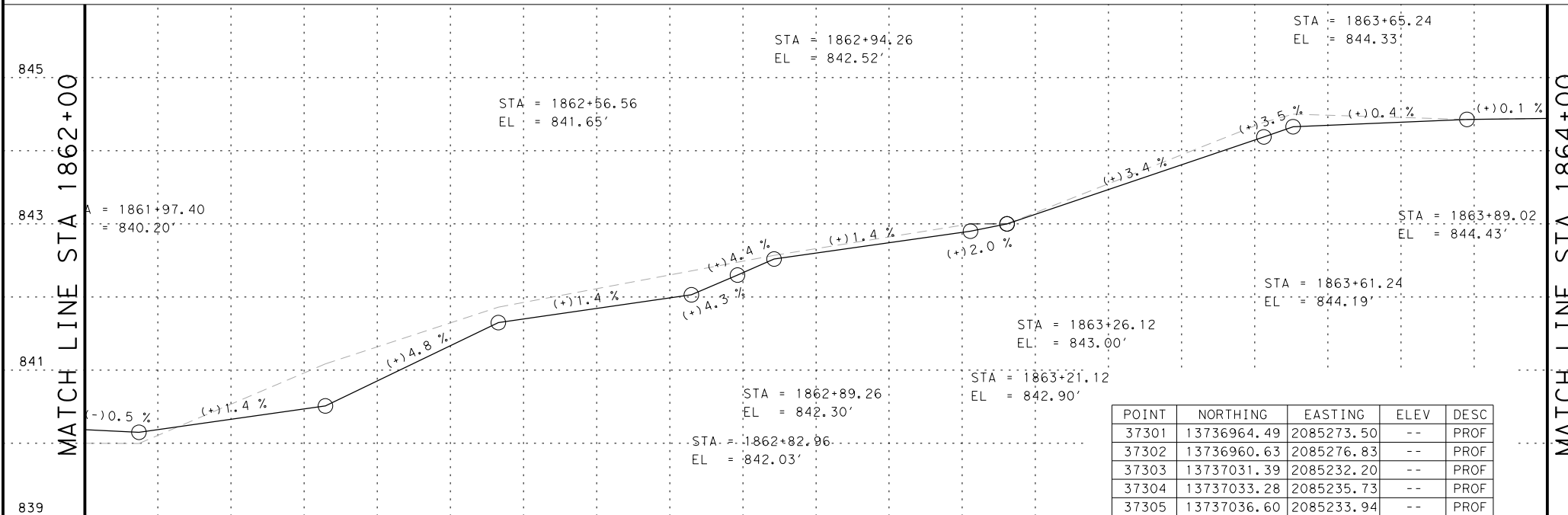
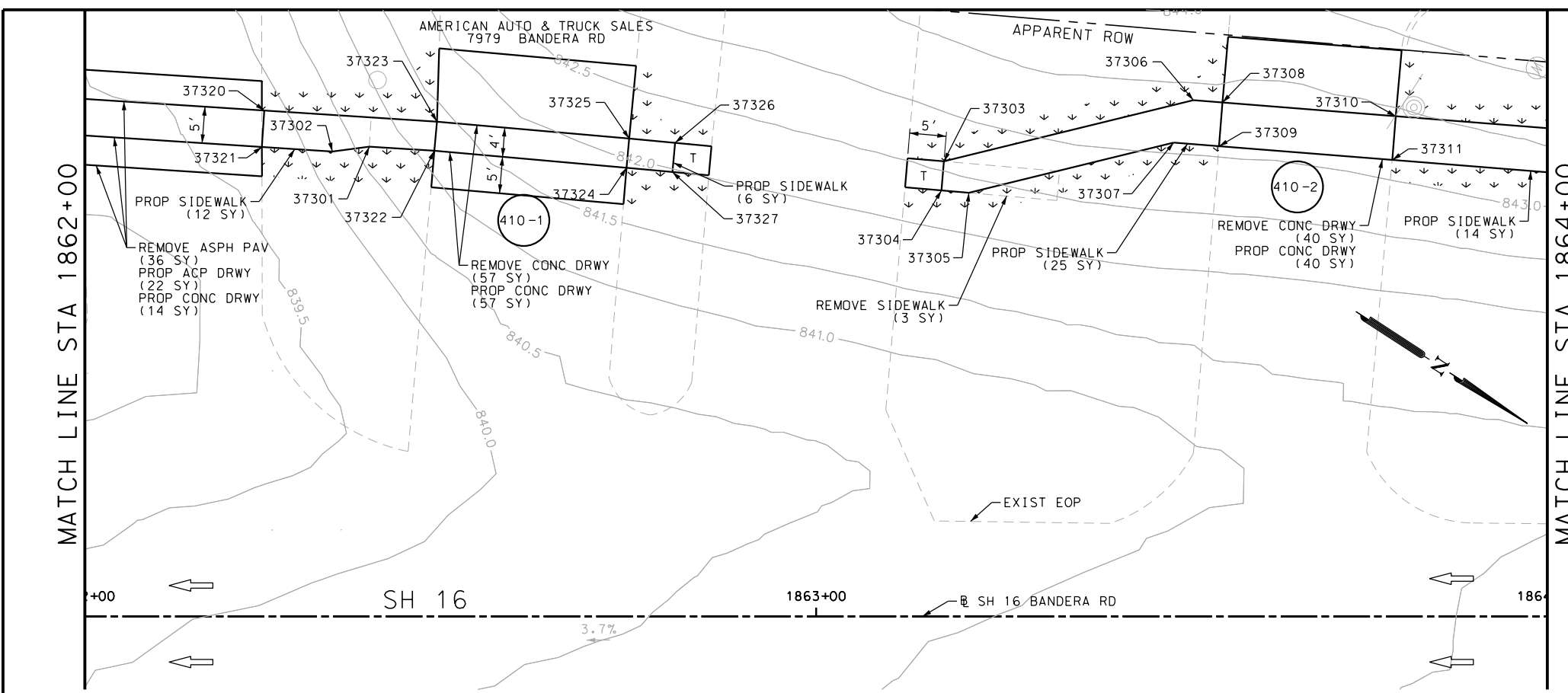
SHEET 109 OF 126

DWG:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	409



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507\Bandera Dr\*EB\*14PP.dgn



POINT	NORTHING	EASTING	ELEV	DESC
37301	13736964.49	2085273.50	--	PROF
37302	13736960.63	2085276.83	--	PROF
37303	13737031.39	2085232.20	--	PROF
37304	13737033.28	2085235.73	--	PROF
37305	13737036.60	2085233.94	--	PROF
37306	13737055.37	2085206.54	--	PROF
37307	13737056.30	2085212.87	--	PROF
37308	13737058.88	2085204.63	--	PROF
37309	13737061.76	2085209.89	--	ME
37310	13737079.75	2085193.23	--	PROF
37311	13737082.63	2085198.50	--	ME
37320	13736949.77	2085277.22	--	PROF
37321	13736952.23	2085281.58	--	PROF
37322	13736972.26	2085269.11	--	PROF
37323	13736970.37	2085265.59	--	PROF
37324	13736995.52	2085256.68	--	PROF
37325	13736993.65	2085253.15	--	PROF
37326	13736999.23	2085250.20	--	PROF
37327	13737001.10	2085253.73	--	PROF

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	97
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	3
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	36
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	150
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0530-6004	DRIVEWAYS (CONC)	SY	111
0530-6005	DRIVEWAYS (ACP)	SY	22
0531-6001	CONC SIDEWALKS (4")	SY	57

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

James A. Lutz, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPCE FIRM REGISTRATION #470 | TBPES FIRM REGISTRATION #10028800

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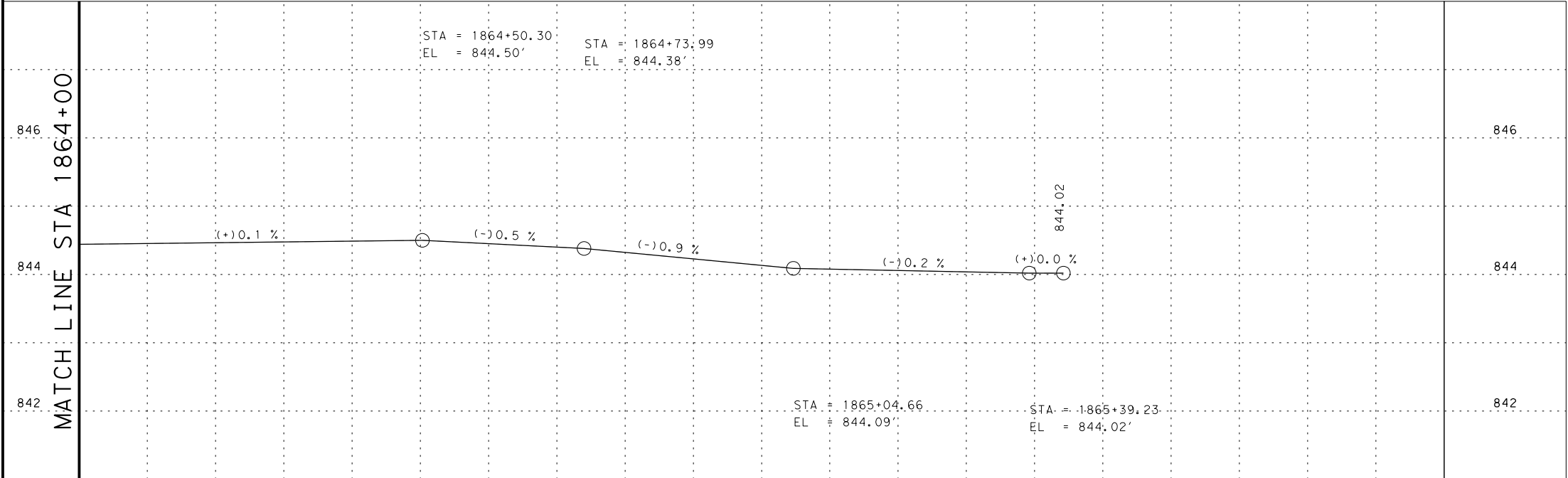
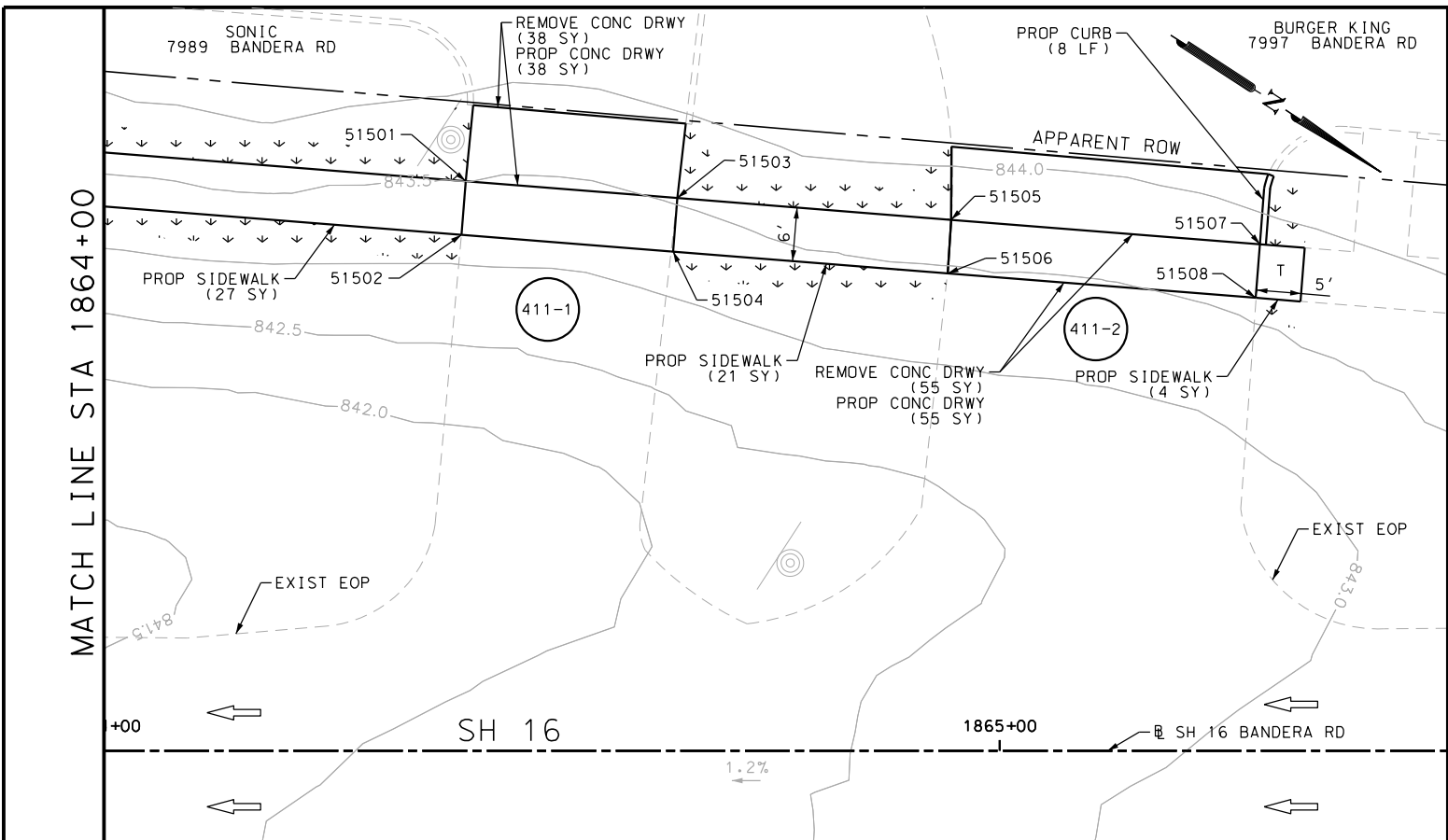
SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1862+00 TO STA 1864+00

SHEET 110 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	410

Plotted on: 5/3/2019

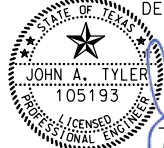
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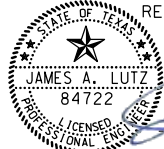


POINT	NORTHING	EASTING	ELEV	DESC
51501	13737133.55	2085163.88	--	PROF
51502	13737136.42	2085169.15	--	ME
51503	13737154.34	2085152.53	--	PROF
51504	13737157.21	2085157.80	--	ME
51505	13737181.26	2085137.84	--	PROF
51506	13737184.20	2085143.07	--	ME
51507	13737211.60	2085121.28	--	PROF
51508	13737214.48	2085126.55	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	93
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	57
0162-6002	BLOCK SODDING	SY	57
0168-6001	VEGETATIVE WATERING	MG	0.89
0529-6002	CONC CURB (TY II)	LF	8
0530-6004	DRIVEWAYS (CONC)	SY	93
0531-6001	CONC SIDEWALKS (4")	SY	52

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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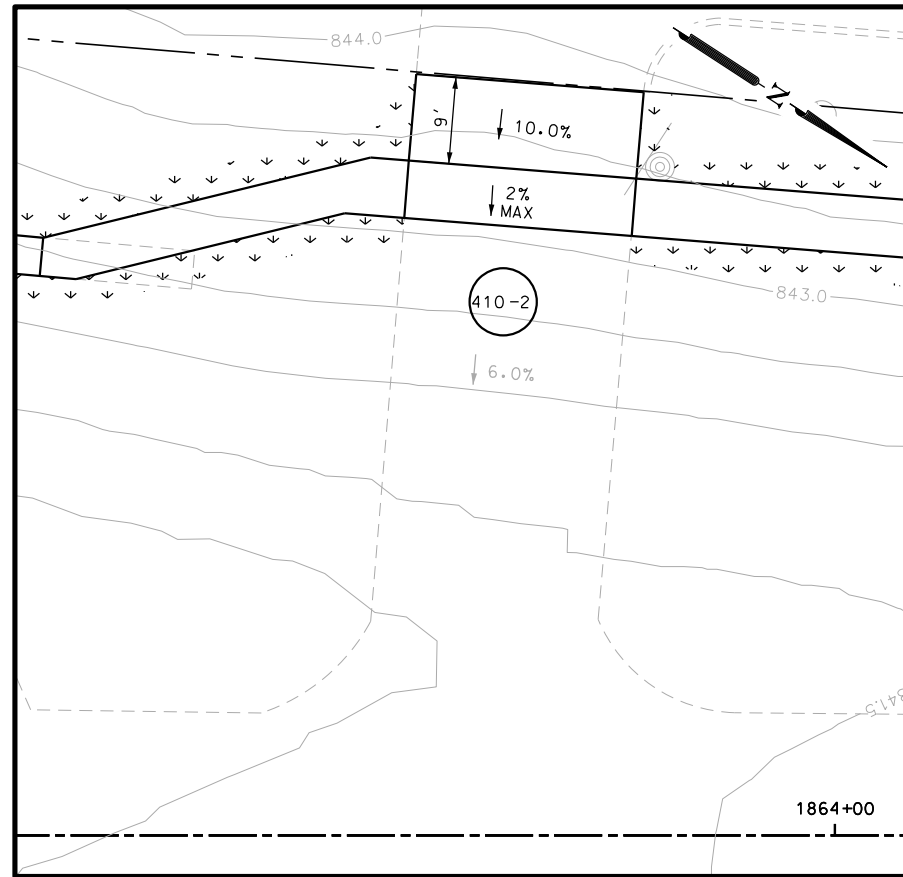
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1864+00 TO STA 1865+50

SHEET 111 OF 126

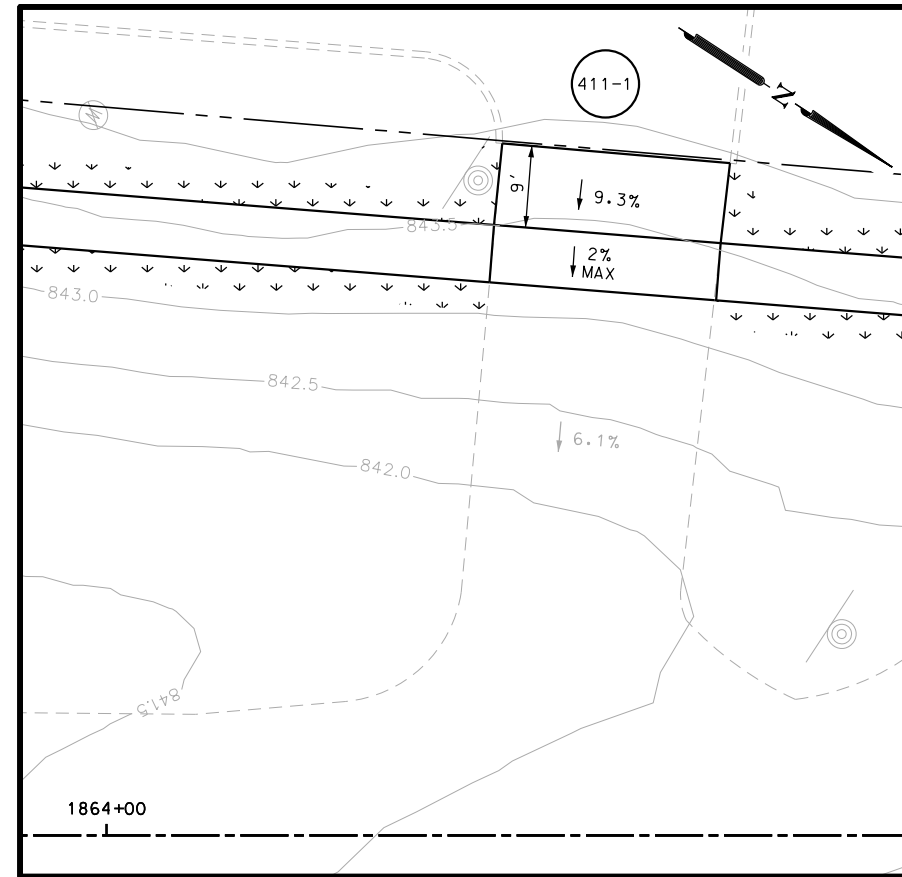
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	411

Plotted on: 5/3/2019

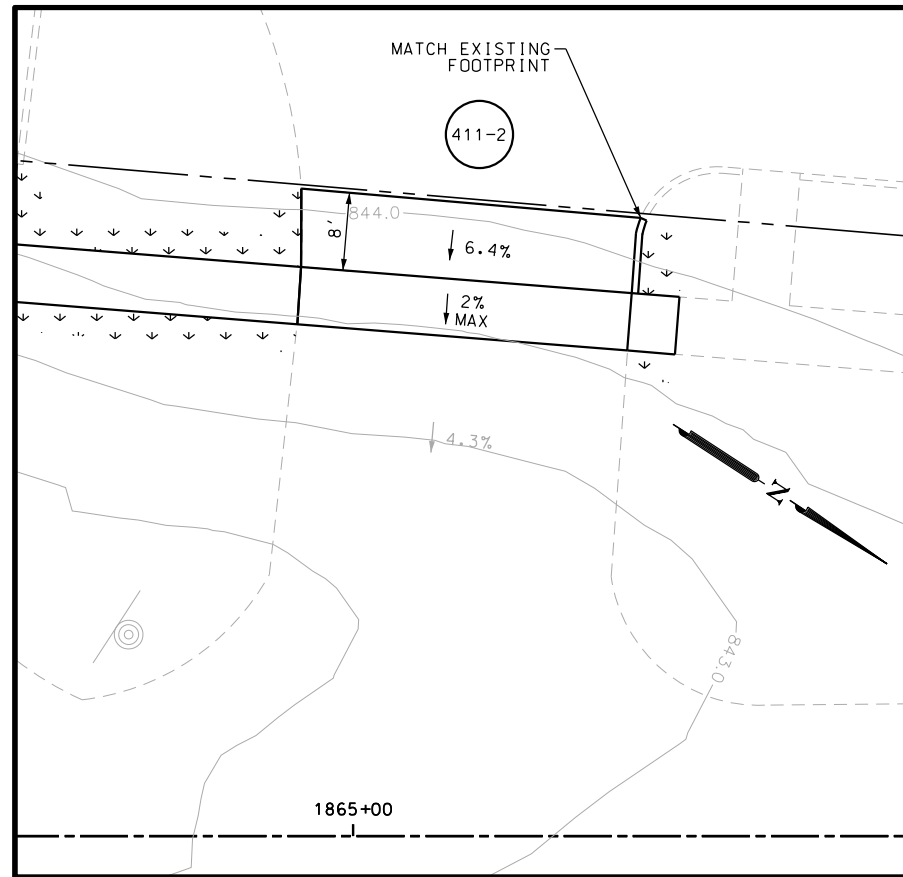
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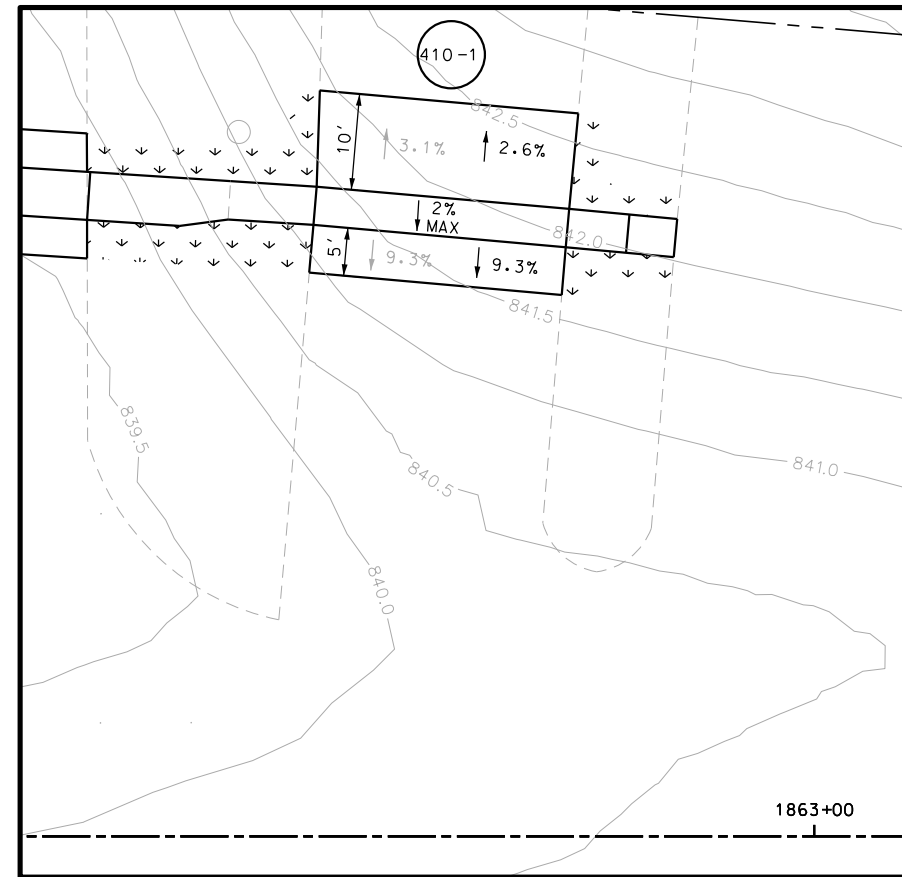
DRWY PLAN STA 1863+60



DRWY PLAN STA 1864+50

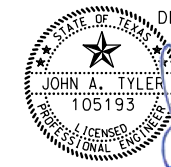


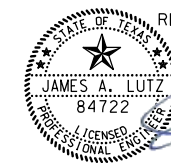
DRWY PLAN STA 1865+10



DRWY PLAN STA 1862+62

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1862+00 TO STA 1865+50

SHEET 112 OF 126

DWG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DWG:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	412

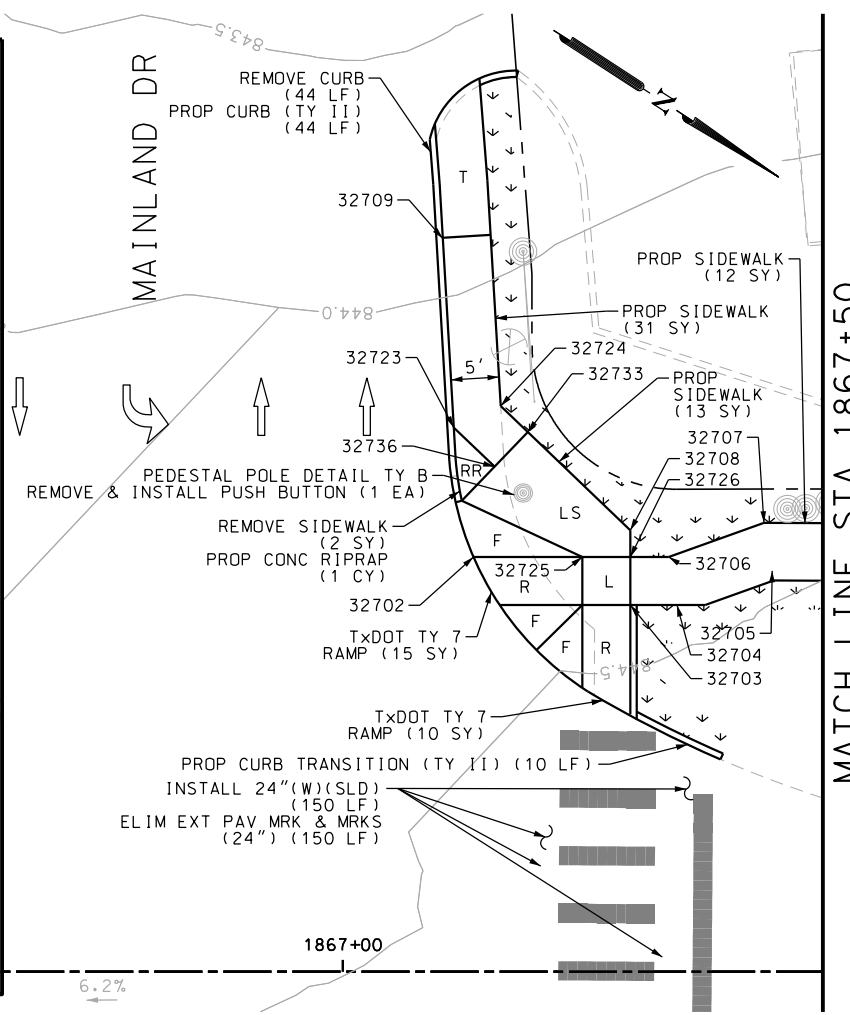
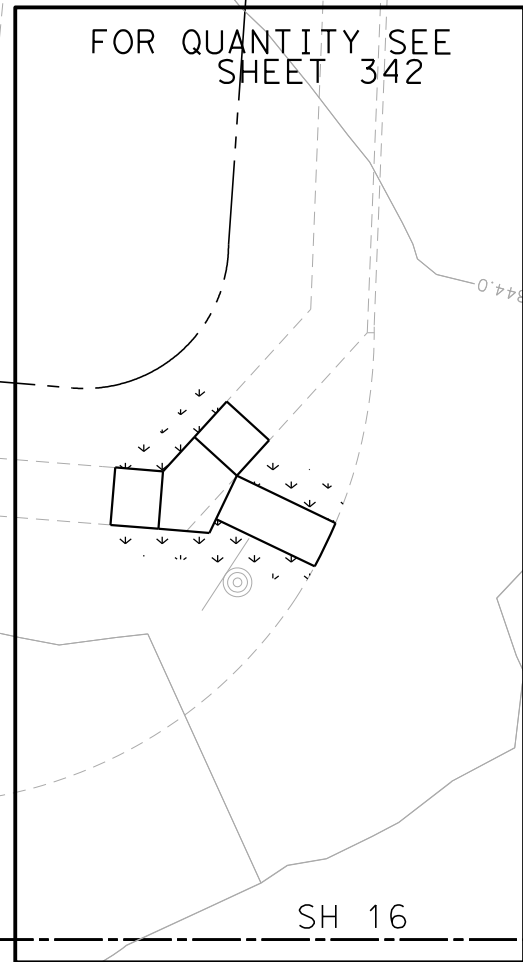
Plotted on: 5/3/2019

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MATCH LINE STA 1865+50  
SEE SHEET 410

MATCH LINE STA 1867+50  
SEE SHEET 414

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	44
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	50
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY 11)	LF	54
0531-6001	CONC SIDEWALKS (4")	SY	56
0531-6024	CURB RAMPS (TY 7)	SY	25
0666-6048	REFL PAV MRK TY I (W)24" (SLD) (100MIL)	LF	150
0666-6230	PAVEMENT SEALER 24"	LF	150
0677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	150
0678-6008	PAV SURF PREP FOR MRK (24")	LF	150
0688-6001	PED DETECT PUSH BUTTON (APS)	EA	1
0690-6030	REMOVAL OF PEDESTRIAN PUSH BUTTONS	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

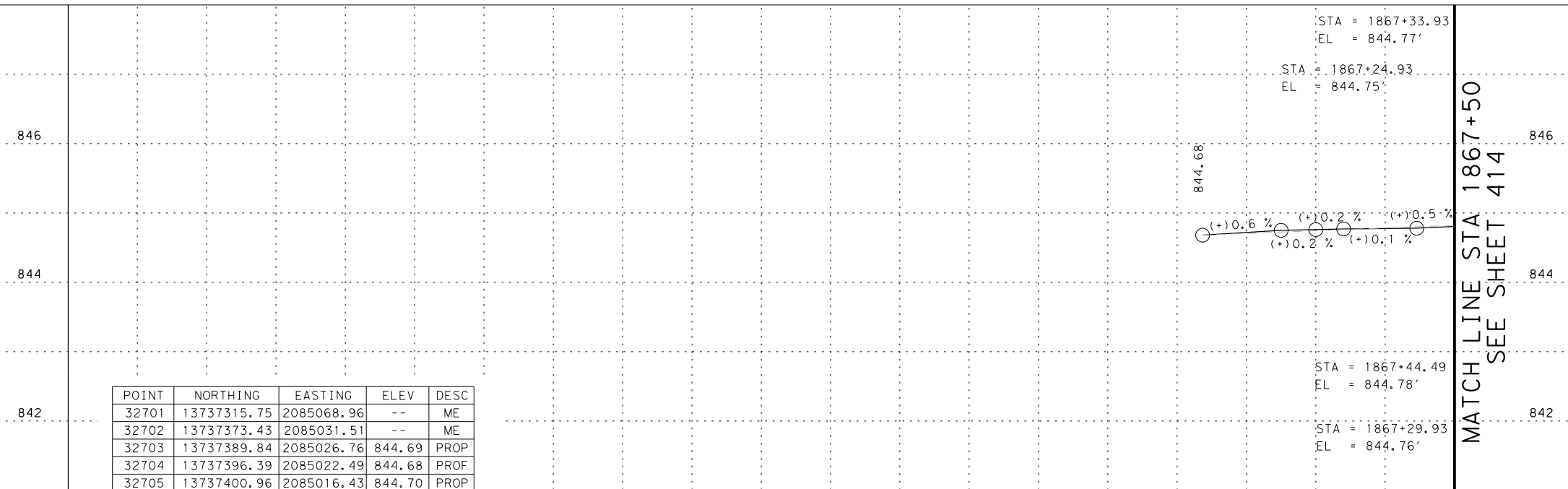
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1865+50 TO STA 1867+50

SHEET 113 OF 126

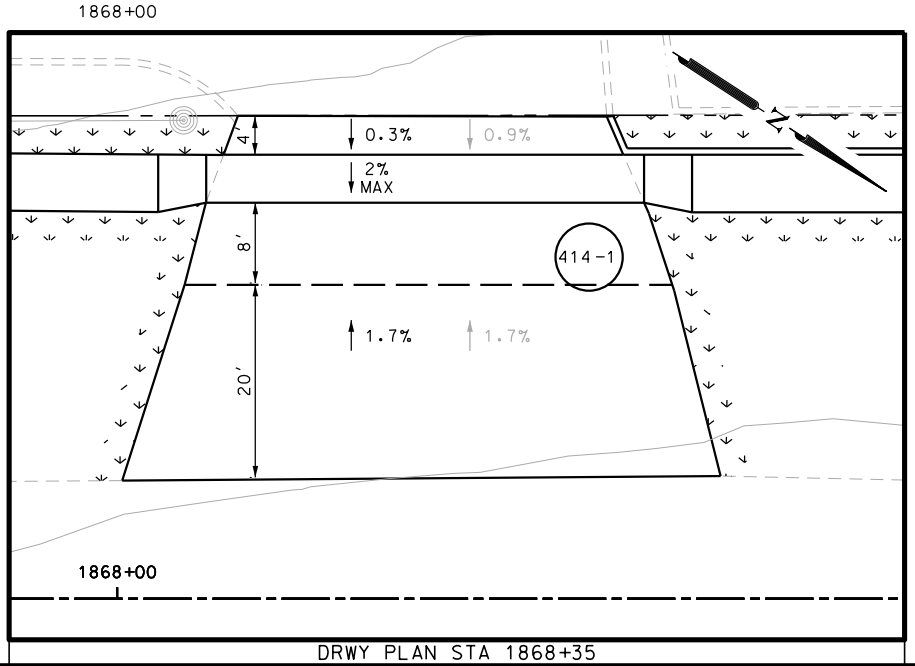
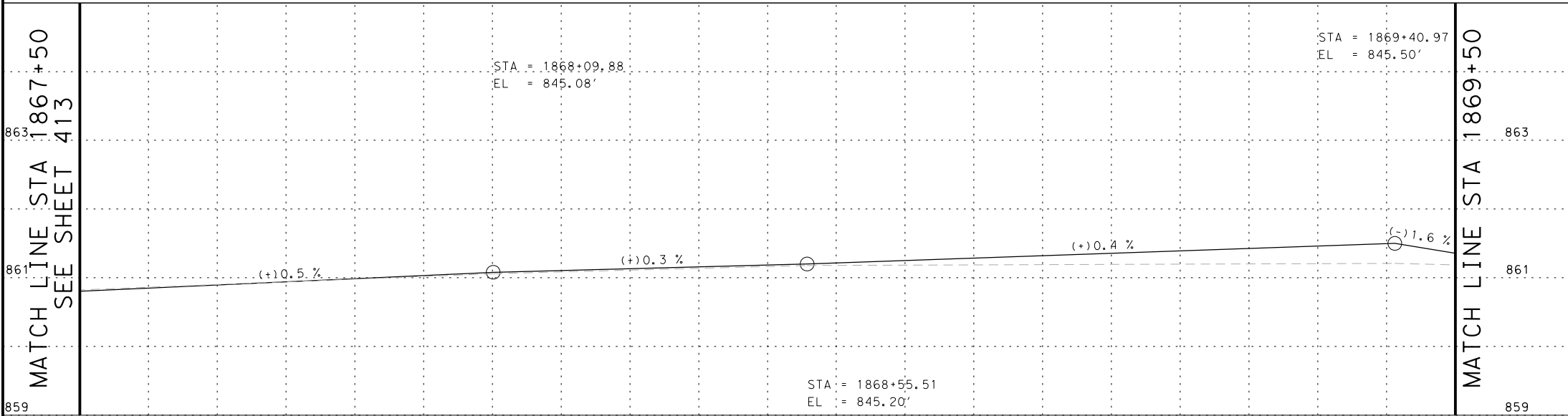
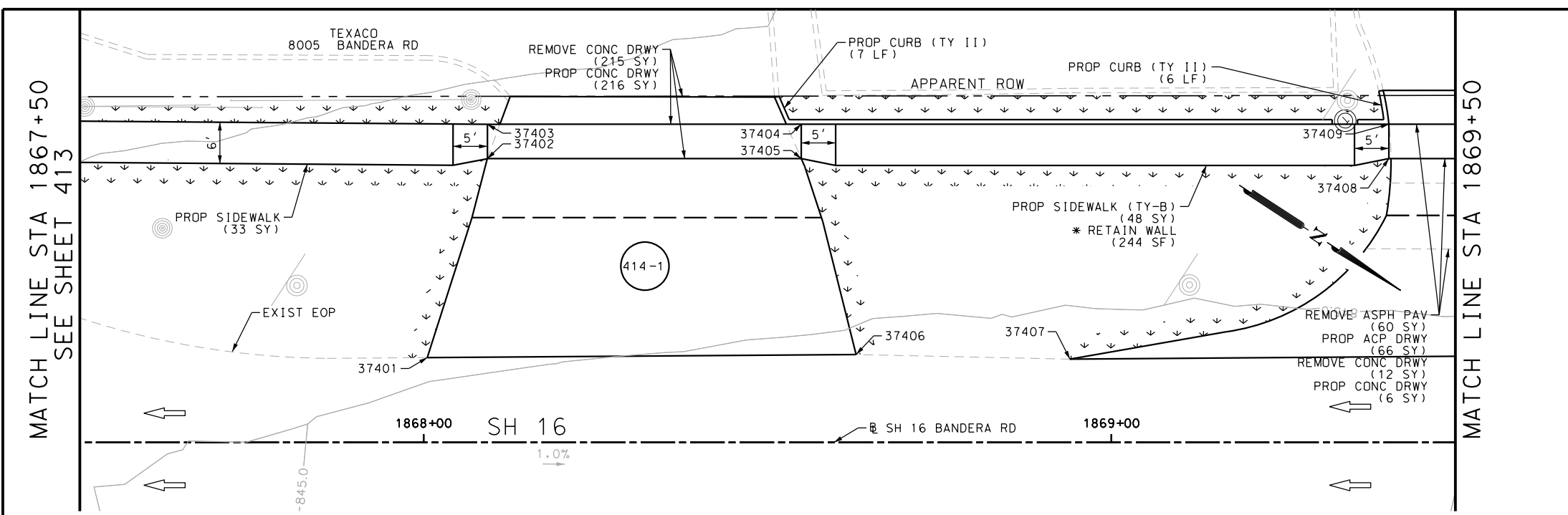
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				413



POINT	NORTHING	EASTING	ELEV	DESC
32701	13737315.75	2085068.96	--	ME
32702	13737373.43	2085031.51	--	ME
32703	13737389.84	2085026.76	844.69	PROP
32704	13737396.39	2085022.49	844.68	PROP
32705	13737400.96	2085016.43	844.70	PROP
32706	13737390.46	2085020.39	844.77	PROP
32707	13737396.81	2085011.96	844.78	PROP
32708	13737385.57	2085020.23	844.76	PROP
32709	13737352.54	2085005.41	--	ME
32710	13737389.14	2085212.69	--	ME
32711	13737393.98	2085221.20	844.00	PROP
32712	13737387.67	2085222.25	843.93	PROP
32713	13737471.06	2085136.72	--	ME
32715	13737468.14	2085170.90	--	ME
32716	13737470.83	2085175.11	--	ME
32717	13737297.76	2085074.28	845.20	PROP
32718	13737300.62	2085079.55	845.15	PROP

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\*75PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	227
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	60
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	135
0162-6002	BLOCK SODDING	SY	135
0168-6001	VEGETATIVE WATERING	MG	2.11
0529-6002	CONC CURB (TY II)	LF	13
0530-6004	DRIVEWAYS (CONC)	SY	222
0530-6005	DRIVEWAYS (ACP)	SY	66
0531-6001	CONC SIDEWALKS (4")	SY	33
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	48

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1867+50 TO STA 1869+50

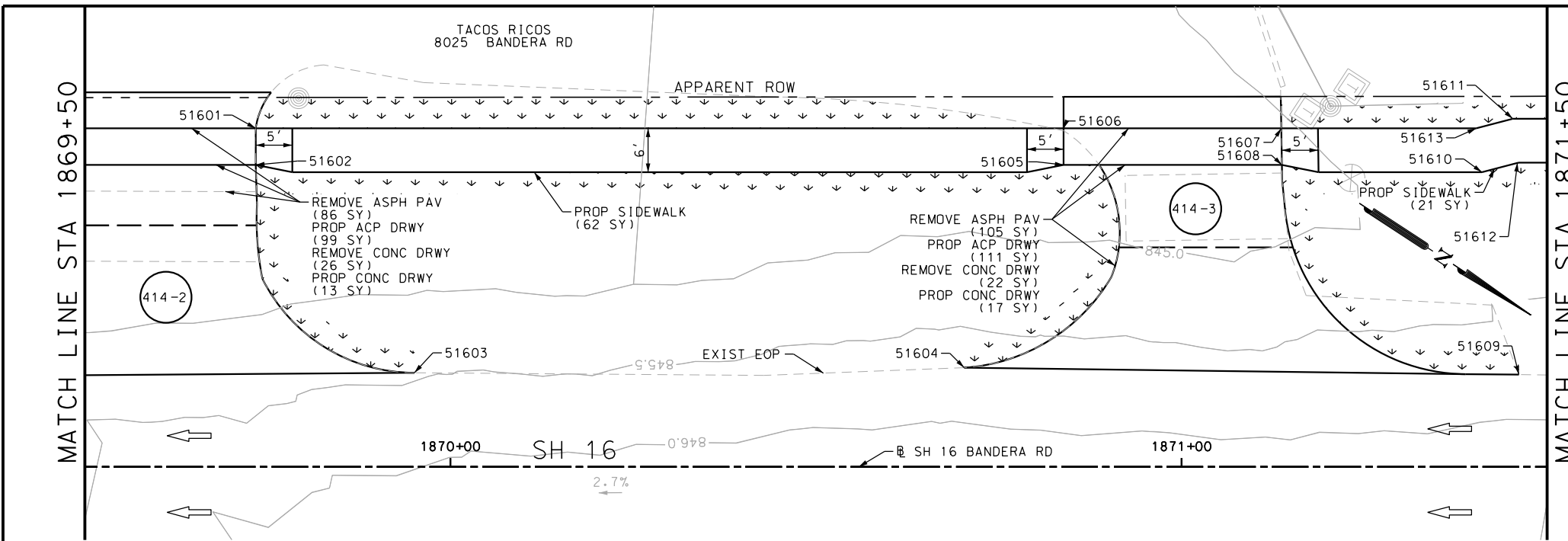
SHEET 114 OF 126

POINT	NORTHING	EASTING	ELEV	DESC
37401	13737463.08	2085009.80	--	ME
37402	13737454.56	2084980.79	--	PROF
37403	13737451.83	2084976.62	--	PROF
37404	13737490.02	2084951.64	--	PROF
37405	13737492.76	2084955.83	--	PROF
37406	13737515.03	2084975.32	--	ME
37407	13737541.41	2084958.88	--	ME
37408	13737564.30	2084909.09	--	PROF
37409	13737561.56	2084904.90	--	PROF

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	414

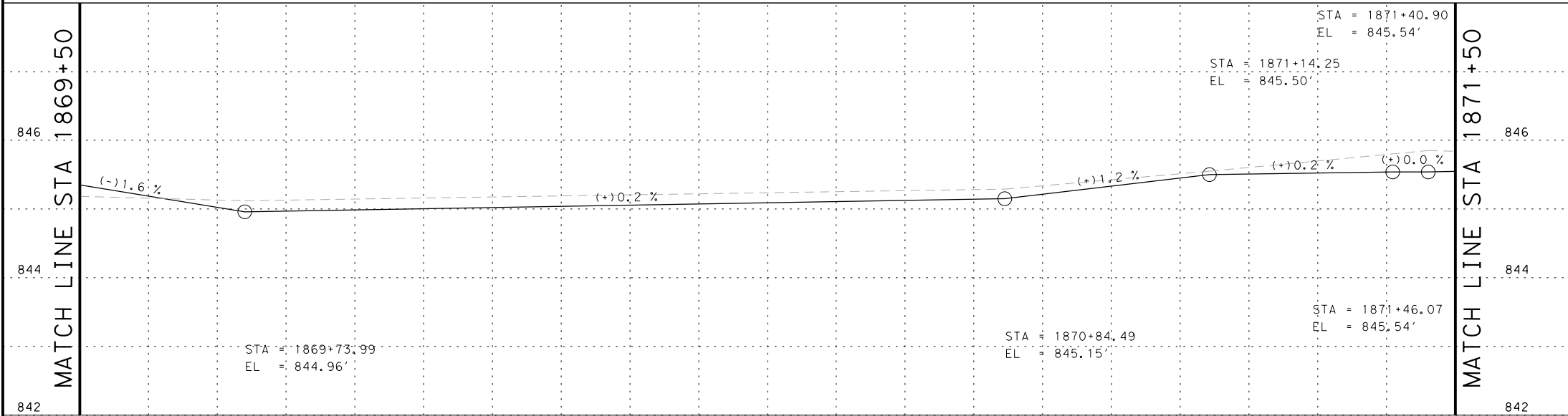
Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB\*75PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	48
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	191
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	153
0162-6002	BLOCK SODDING	SY	153
0168-6001	VEGETATIVE WATERING	MG	2.39
0530-6004	DRIVEWAYS (CONC)	SY	30
0530-6005	DRIVEWAYS (ACP)	SY	210
0531-6001	CONC SIDEWALKS (4")	SY	83

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

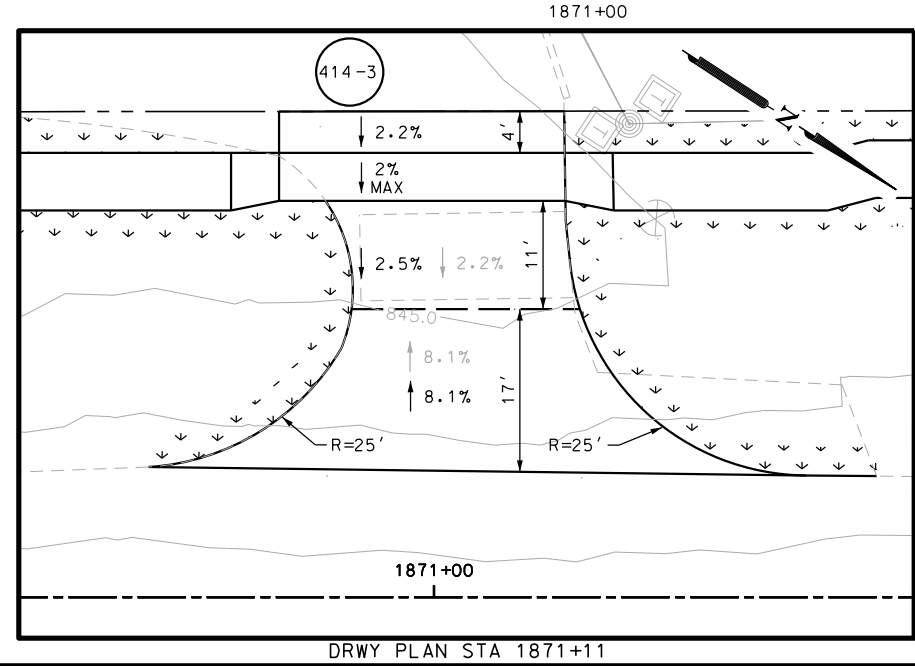
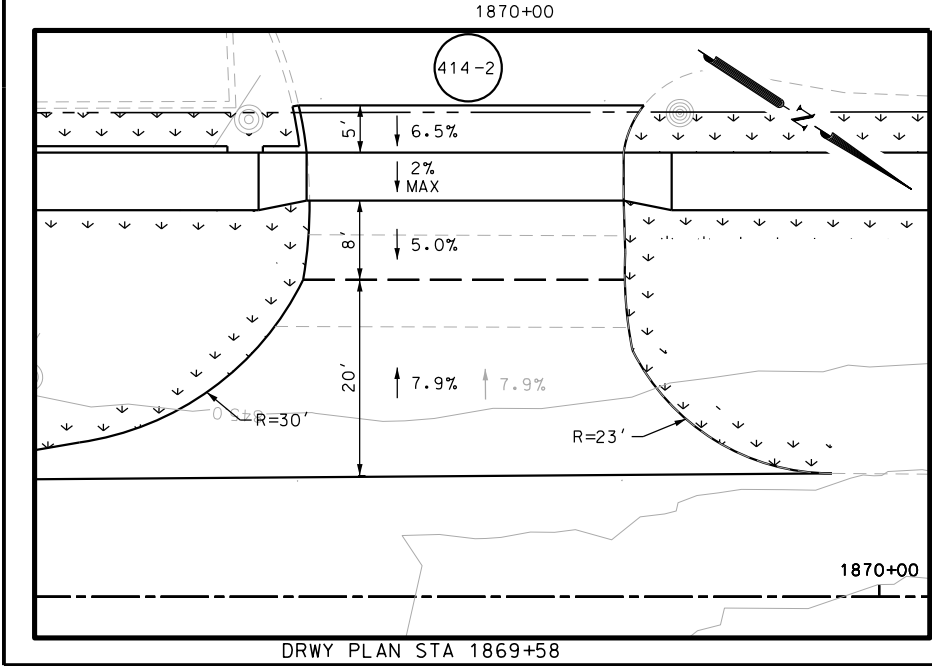
STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

DATE: 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

DATE: 5/3/2019



POINT	NORTHING	EASTING	ELEV	DESC
37401	13737463.08	2085009.80	--	ME
37402	13737454.56	2084980.79	--	PROF
37403	13737451.83	2084976.62	--	PROF
37404	13737490.02	2084951.64	--	PROF
37405	13737492.76	2084955.83	--	PROF
37406	13737515.03	2084975.32	--	ME
37407	13737541.41	2084958.88	--	ME
37408	13737564.30	2084909.09	--	PROF
37409	13737561.56	2084904.90	--	PROF

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



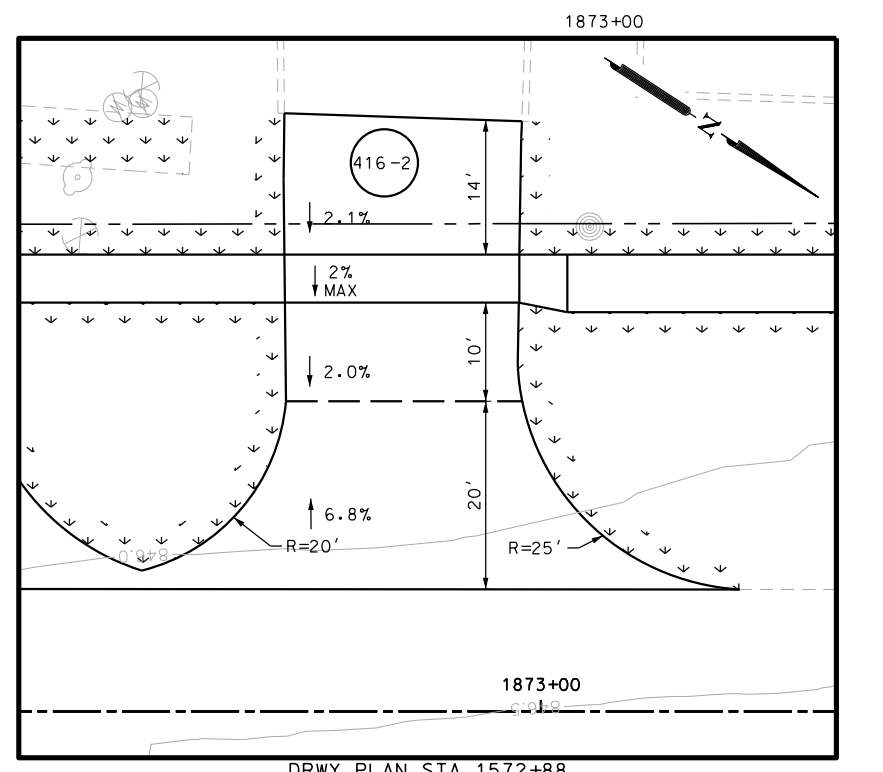
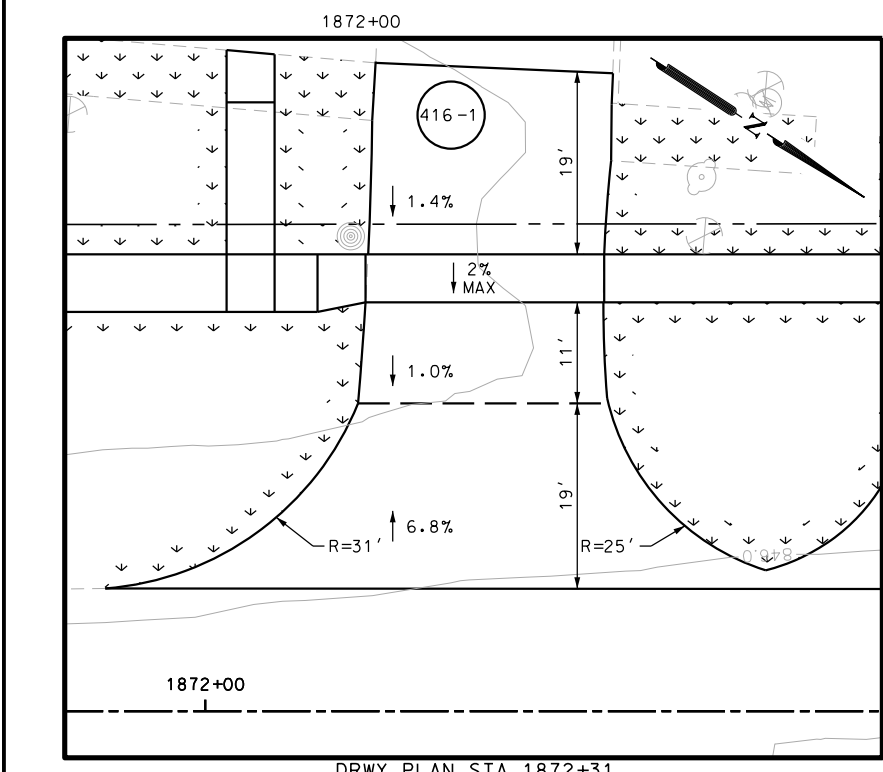
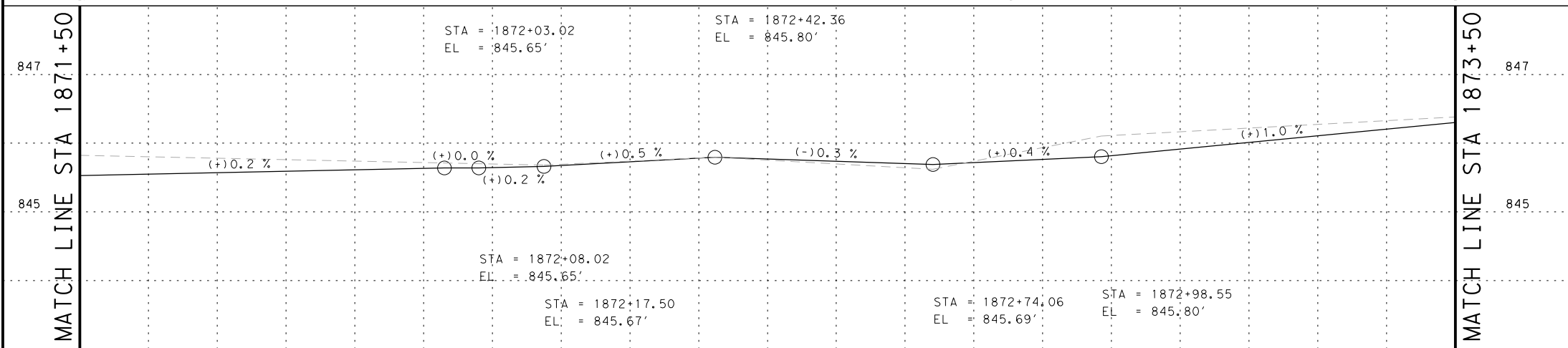
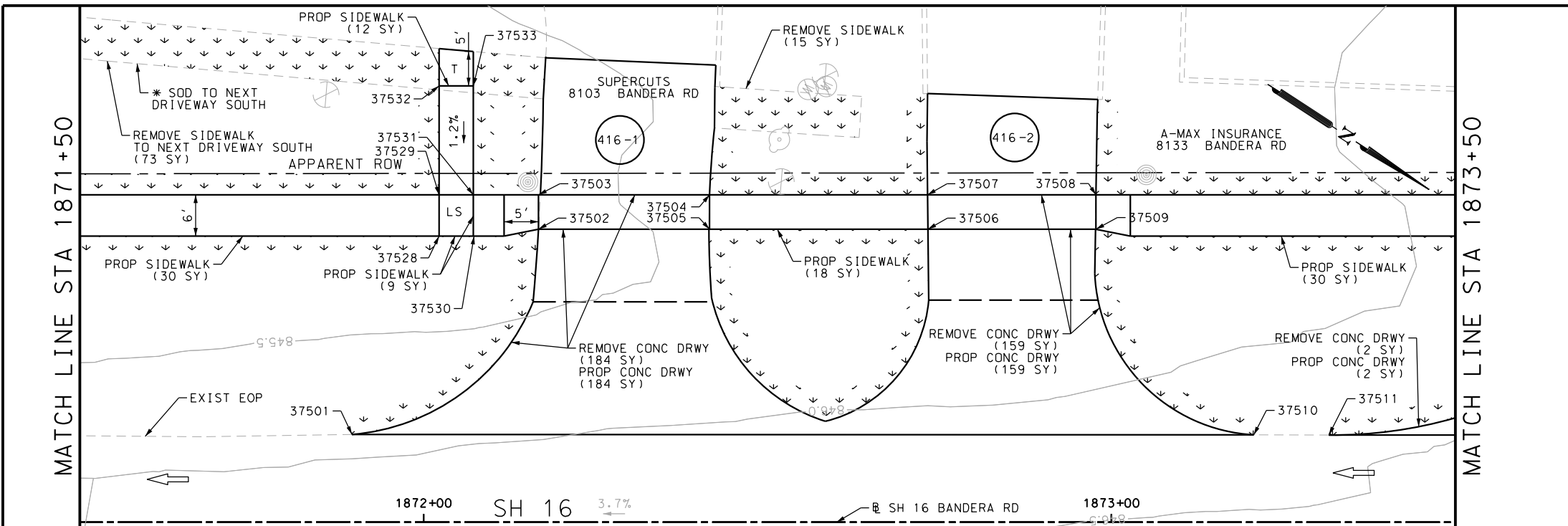
SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1869+50 TO STA 1871+50

SHEET 115 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	415

Plotted on: 5/3/2019

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507\*Bandera Dr\*EB\*76PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	345
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	88
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	247
0162-6002	BLOCK SODDING	SY	247
0168-6001	VEGETATIVE WATERING	MG	3.85
0530-6004	DRIVEWAYS (CONC)	SY	345
0531-6001	CONC SIDEWALKS (4")	SY	99

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
37501	13737788.52	2084796.63	--	ME
37502	13737794.92	2084756.82	--	PROF
37503	13737792.18	2084752.63	--	PROF
37504	13737813.00	2084739.03	--	PROF
37505	13737815.73	2084743.22	--	PROF
37506	13737842.31	2084725.85	--	PROF
37507	13737839.54	2084721.69	--	PROF
37508	13737860.04	2084708.30	--	PROF
37509	13737862.77	2084712.48	--	PROF
37510	13737898.33	2084724.97	--	ME
37511	13737907.49	2084719.00	--	ME
37528	13737783.35	2084765.57	--	PROF
37529	13737780.07	2084760.55	--	PROF
37530	13737787.53	2084762.84	--	PROF
37531	13737784.25	2084757.81	--	PROF
37532	13737771.40	2084747.29	845.84	PROP
37533	13737775.59	2084744.55	845.84	PROP

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
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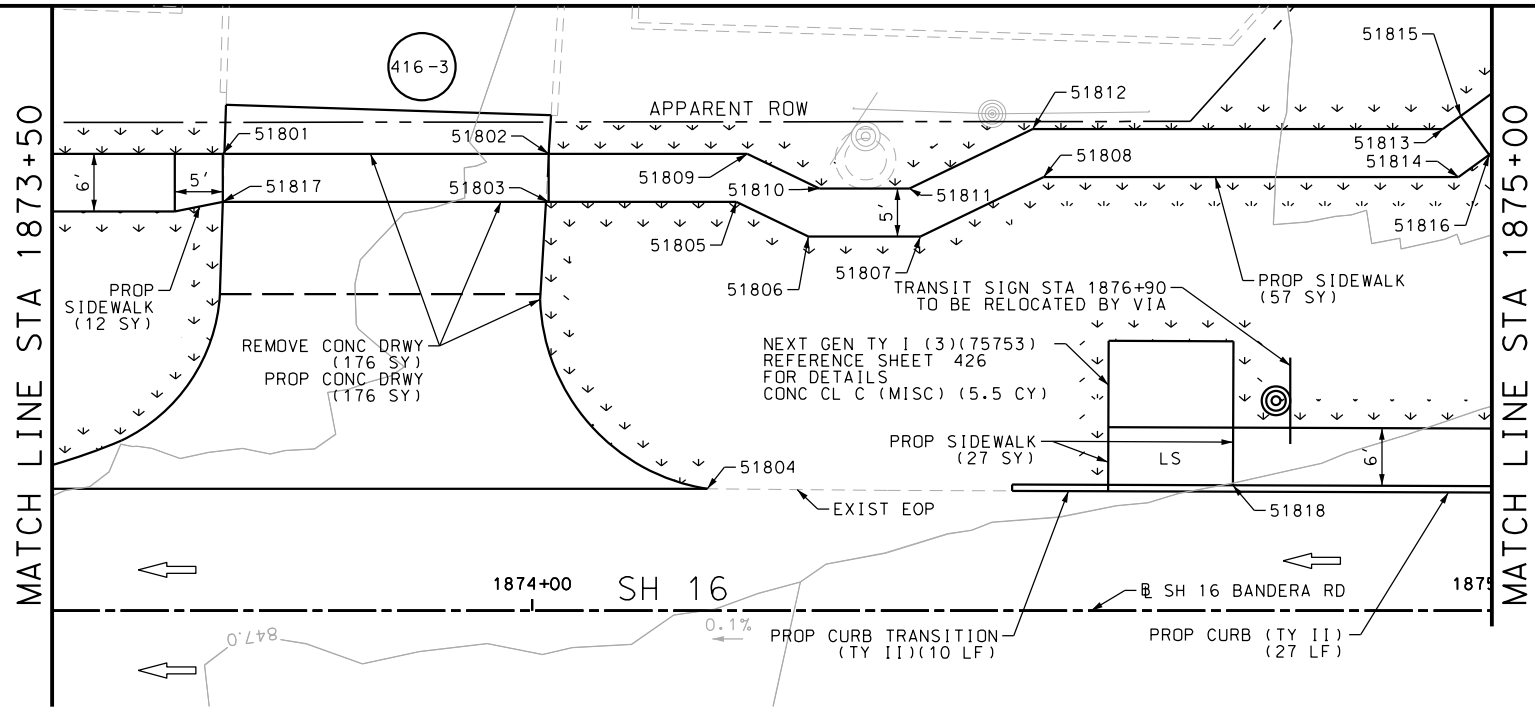
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1871+50 TO STA 1873+50

SHEET 116 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIABLES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			576	416

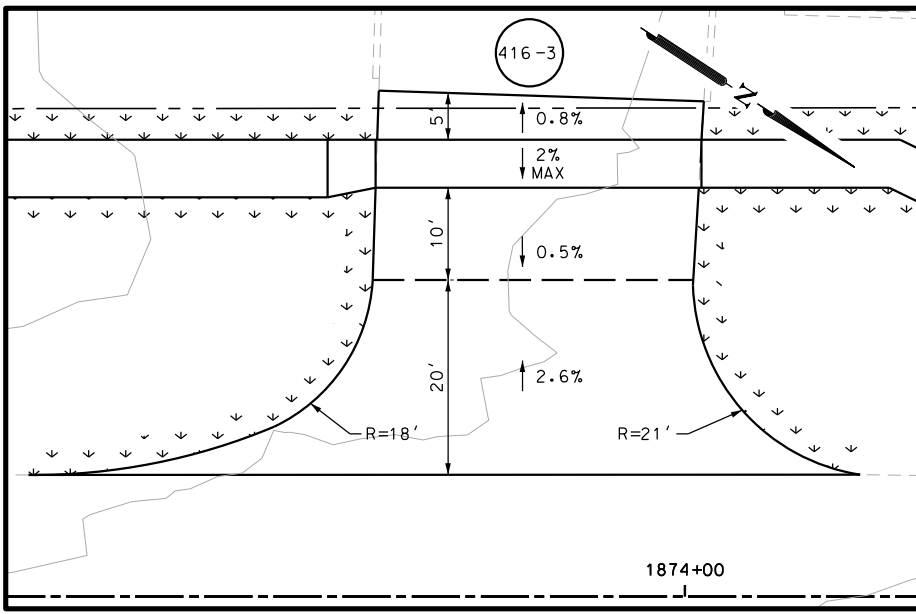
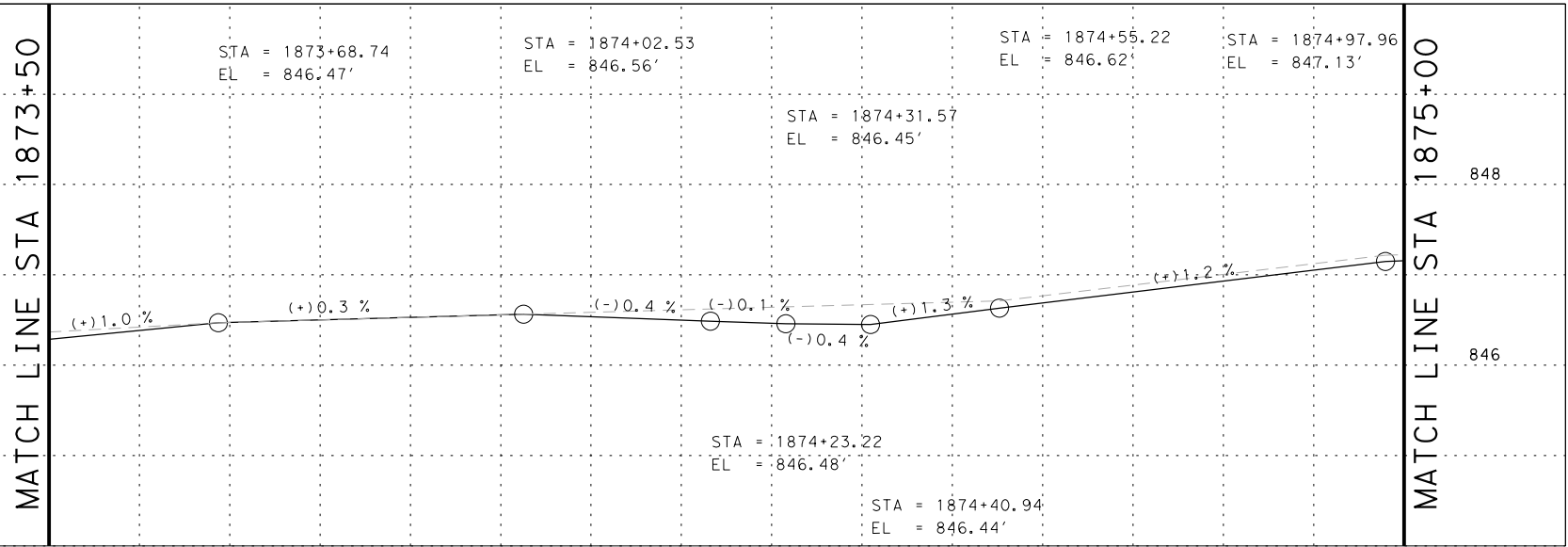
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*76PP\*A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	345
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	88
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	247
0162-6002	BLOCK SODDING	SY	247
0168-6001	VEGETATIVE WATERING	MG	3.85
0530-6004	DRIVEWAYS (CONC)	SY	345
0531-6001	CONC SIDEWALKS (4")	SY	99

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POINT	NORTHING	EASTING	ELEV	DESC
51801	13737918.66	2084669.99	--	PROF
51802	13737947.08	2084651.42	--	PROF
51803	13737949.82	2084655.61	--	PROF
51804	13737980.02	2084671.60	--	ME
51805	13737966.18	2084644.92	--	PROF
51806	13737974.46	2084643.85	--	PROF
51807	13737984.23	2084637.47	--	PROF
51808	13737991.58	2084625.24	--	PROF
51809	13737964.41	2084640.10	--	PROF
51810	13737972.68	2084639.04	--	PROF
51811	13737980.53	2084633.91	--	PROF
51812	13737987.89	2084621.68	--	PROF
51813	13738023.67	2084598.30	--	PROF
51814	13738027.77	2084601.59	--	PROF
51815	13738024.48	2084596.14	--	PROF
51816	13738029.16	2084597.91	--	PROF
51817	13738031.28	2084592.29	847.09	PROP
51818	13738025.65	2084641.35	--	ME

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1873+50 TO STA 1875+00

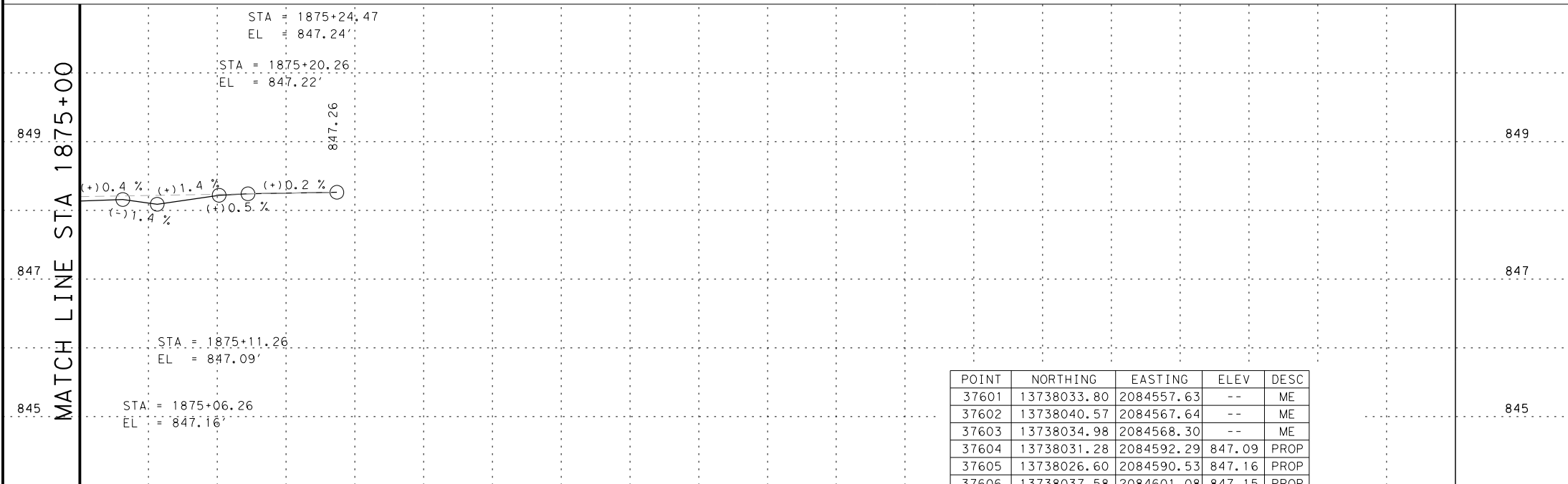
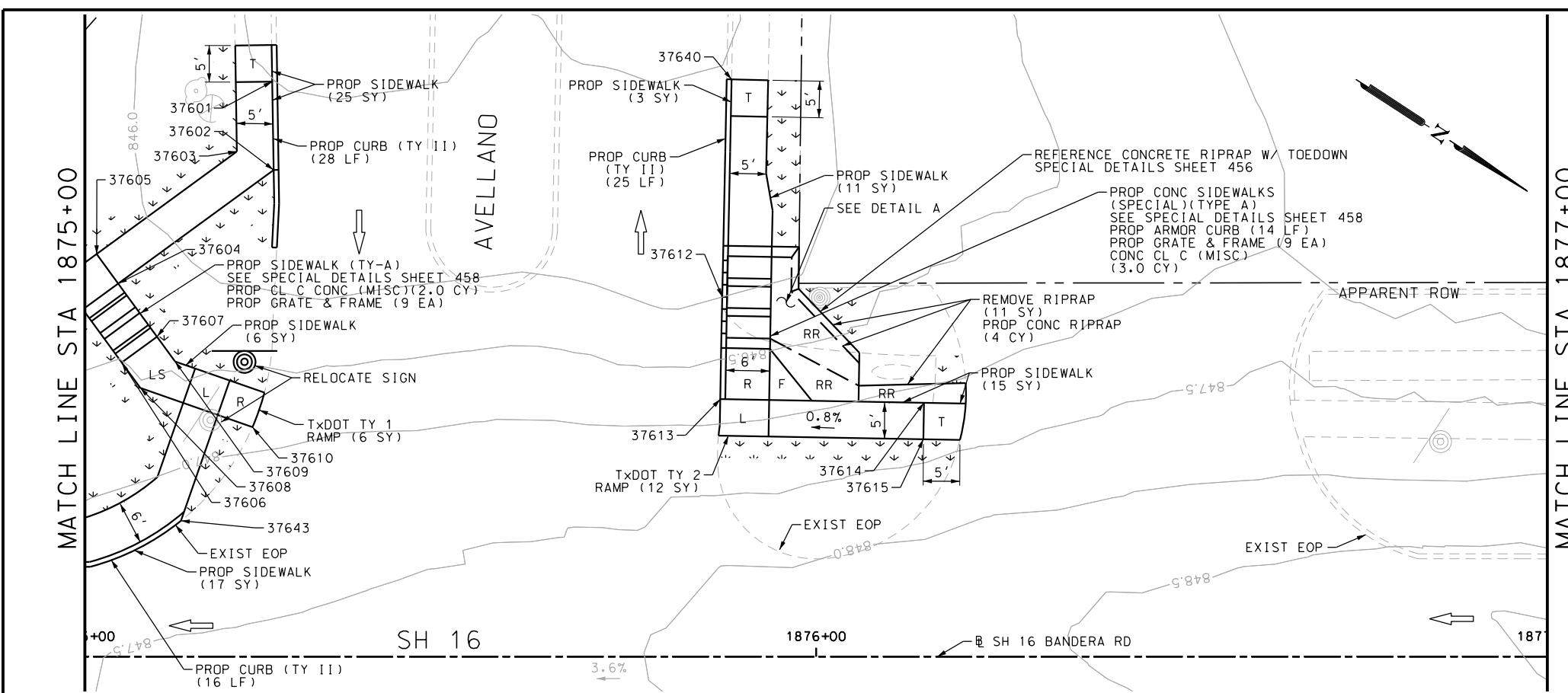
SHEET 117 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				417



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*77P.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	22
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	111
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	74
0162-6002	BLOCK SODDING	SY	74
0168-6001	VEGETATIVE WATERING	MG	1.15
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	64
0420-6074	CL C CONC (MISC)	CY	5.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0471-6003	GRATE & FRAME	EA	18
0529-6002	CONC CURB (TY II)	LF	91
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	77
0531-6018	CURB RAMPS (TY 1)	SY	6
0531-6019	CURB RAMPS (TY 2)	SY	12
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

NOTES:  
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DESIGN  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

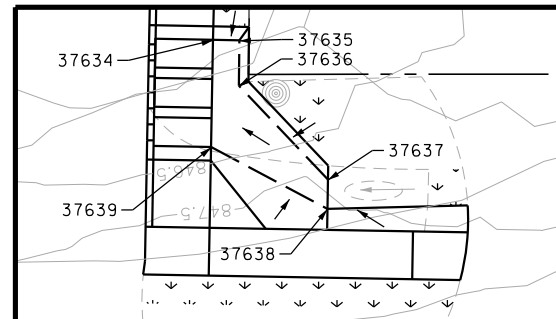
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1875+00 TO STA 1877+00

SHEET 118 OF 126

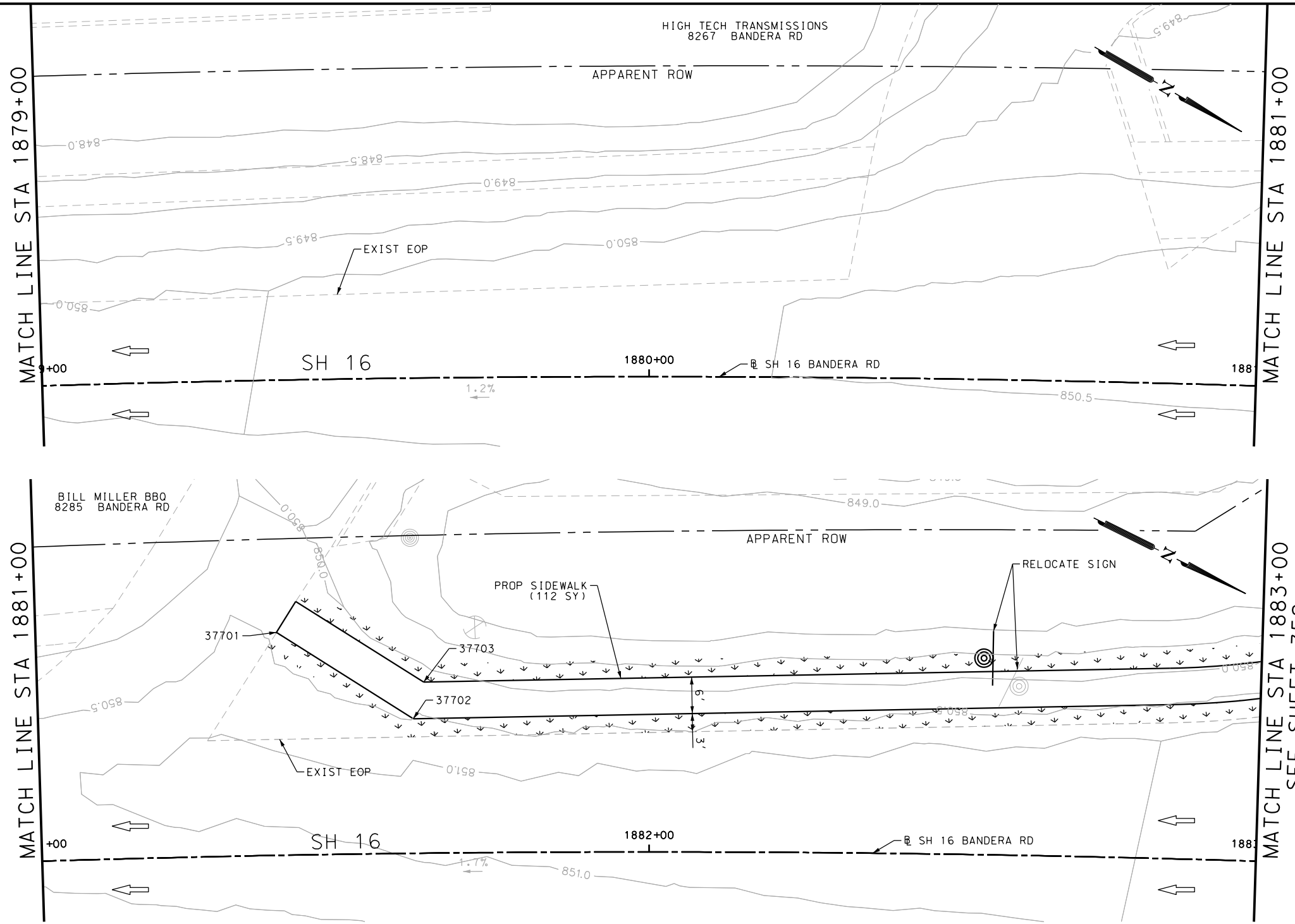
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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				418



POINT	NORTHING	EASTING	ELEV	DESC
37601	13738033.80	2084557.63	--	ME
37602	13738040.57	2084567.64	--	ME
37603	13738034.98	2084568.30	--	ME
37604	13738031.28	2084592.29	847.09	PROP
37605	13738026.60	2084590.53	847.16	PROP
37606	13738037.58	2084601.08	847.15	PROP
37607	13738039.70	2084595.47	847.22	PROP
37608	13738041.62	2084602.60	847.17	PROP
37609	13738043.63	2084596.95	847.24	PROP
37610	13738057.39	2084598.68	--	ME
37612	13738101.43	2084548.65	845.50	PROP
37613	13738108.87	2084560.48	--	ME
37614	13738132.45	2084545.66	847.60	PROP
37615	13738135.12	2084549.89	847.67	PROP
37634	13738104.09	2084540.35	846.00	PROP
37635	13738106.41	2084538.90	845.56	PROP
37636	13738108.94	2084542.87	845.57	PROP
37637	13738122.08	2084545.98	845.70	PROP
37638	13738123.71	2084548.58	--	ME
37639	13738110.03	2084549.81	846.51	PROP

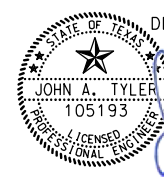
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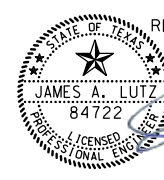
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ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	115
0162-6002	BLOCK SODDING	SY	115
0168-6001	VEGETATIVE WATERING	MG	1.79
0531-6001	CONC SIDEWALKS (4")	SY	112
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN  

 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37701	13738581.70	2084268.77	--	ME
37702	13738608.31	2084271.46	--	ME
37703	13738607.13	2084265.31	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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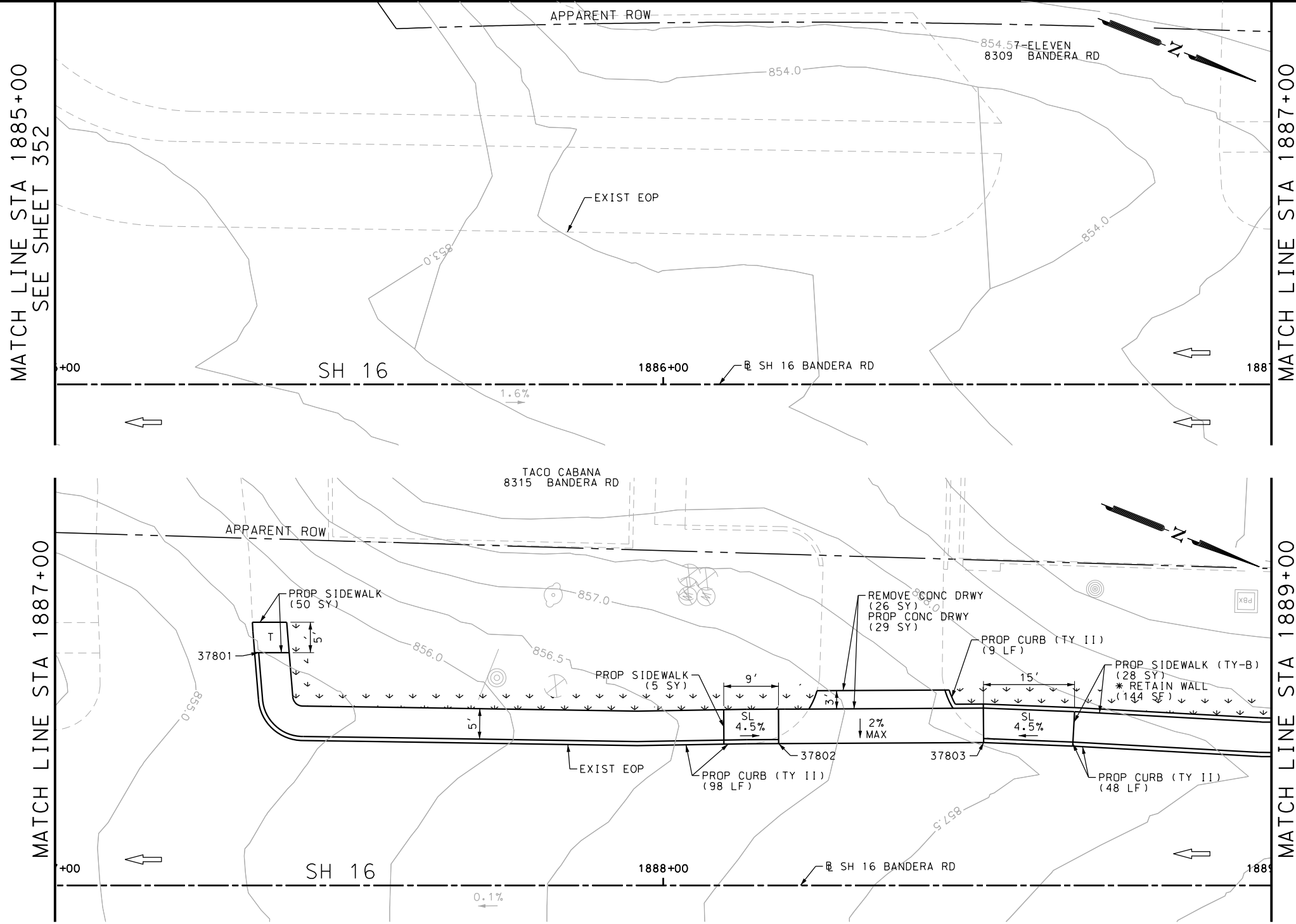
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1879+00 TO STA 1883+00

SHEET 119 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	419

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB\*79.dgn



POINT	NORTHING	EASTING	ELEV	DESC
37801	13739129.12	2084030.51	--	ME
37802	13739214.69	2084012.47	--	ME
37803	13739245.92	2083999.83	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	26
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	33
0162-6002	BLOCK SODDING	SY	33
0168-6001	VEGETATIVE WATERING	MG	0.51
0529-6002	CONC CURB (TY II)	LF	155
0530-6004	DRIVEWAYS (CONC)	SY	29
0531-6001	CONC SIDEWALKS (4")	SY	55
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	28

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



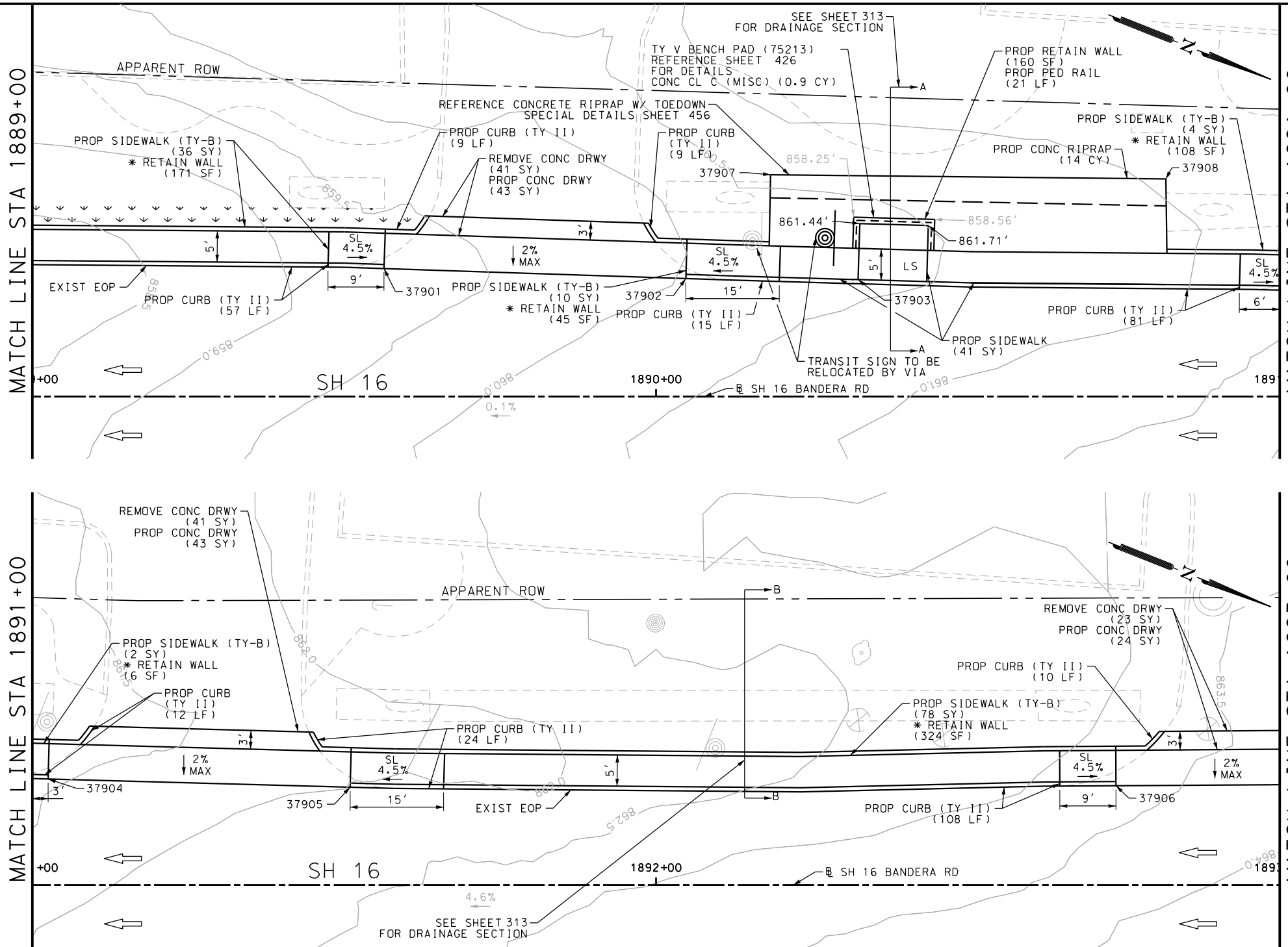
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1885+00 TO STA 1889+00

SHEET 120 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	420

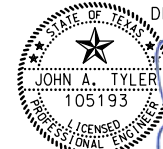
Plotted on: 5/3/2019

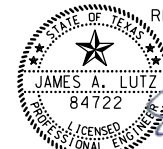
Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB#80.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	105
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	6
0162-6002	BLOCK SODDING	SY	6
0168-6001	VEGETATIVE WATERING	MG	0.09
0420-6074	CL C CONC (MISC)	CY	0.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	160
0432-6003	RIPRAP (CONC) (6 IN)	CY	14
0450-6048	RAIL (HANDRAIL) (TY B)	LF	21
0529-6002	CONC CURB (TY II)	LF	325
0530-6004	DRIVEWAYS (CONC)	SY	110
0531-6001	CONC SIDEWALKS (4")	SY	41
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	130

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DESIGN  
  
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 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37901	13739343.33	2083964.11	--	ME
37902	13739388.86	2083947.67	--	ME
37903	13739414.59	2083937.58	--	ME
37904	13739480.38	2083913.23	--	ME
37905	13739525.83	2083896.50	--	ME
37906	13739639.80	2083850.77	--	ME
37907	13739395.32	2083927.16	--	ME
37908	13739454.43	2083904.30	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

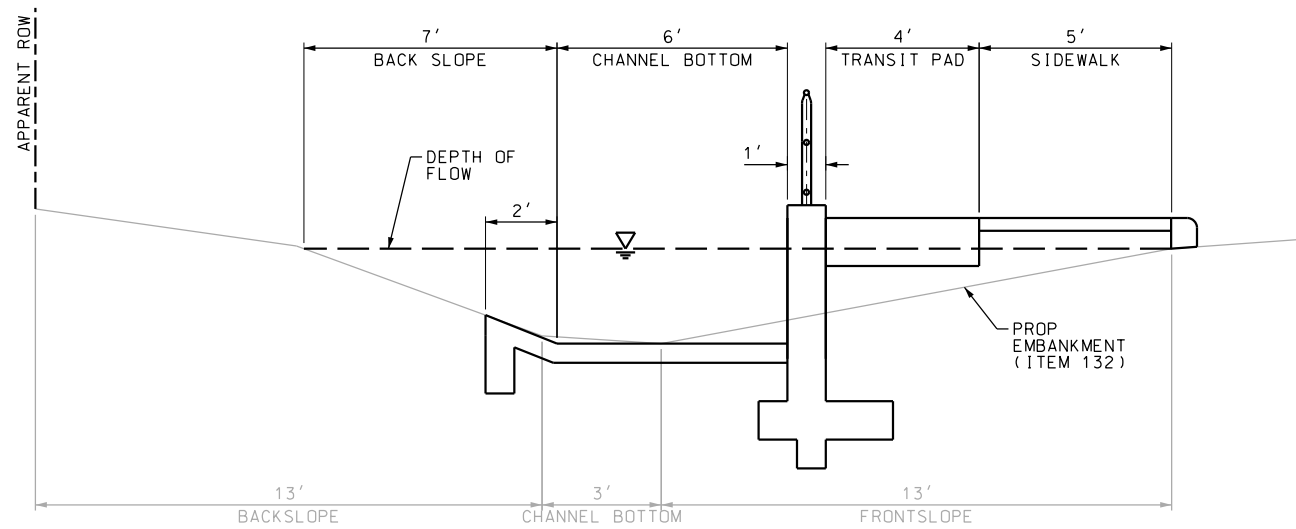
Texas Department of Transportation  
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SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1889+00 TO STA 1893+00  
 SHEET 121 OF 126

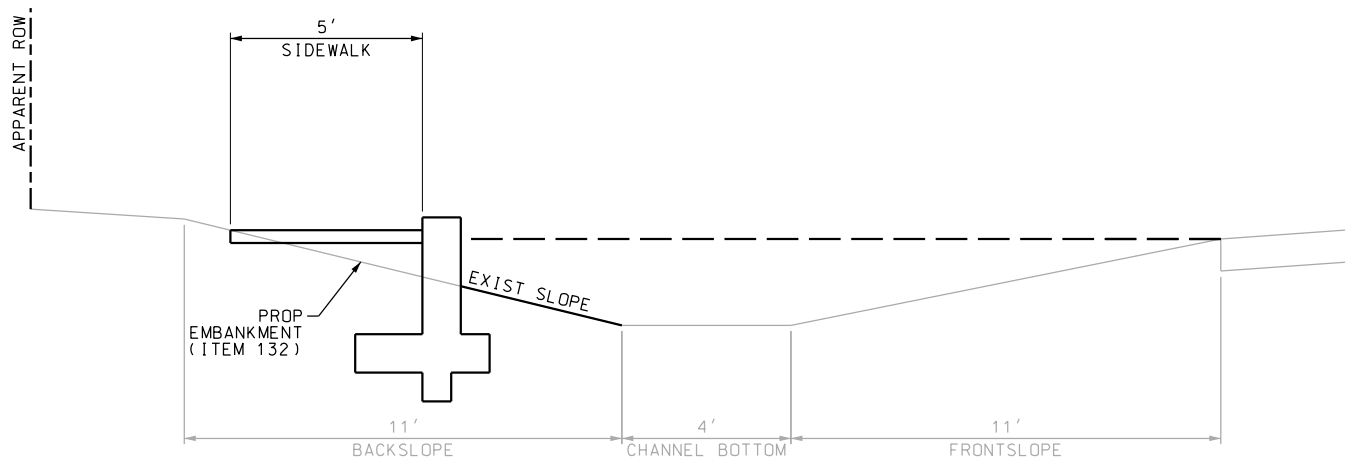
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	421

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\80\A.dgn



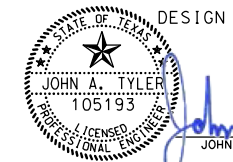
**SECTION A-A**  
N.T.S.



**SECTION B-B**  
N.T.S.

**NOTES:**

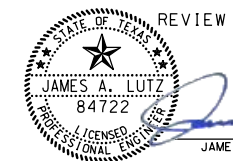
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



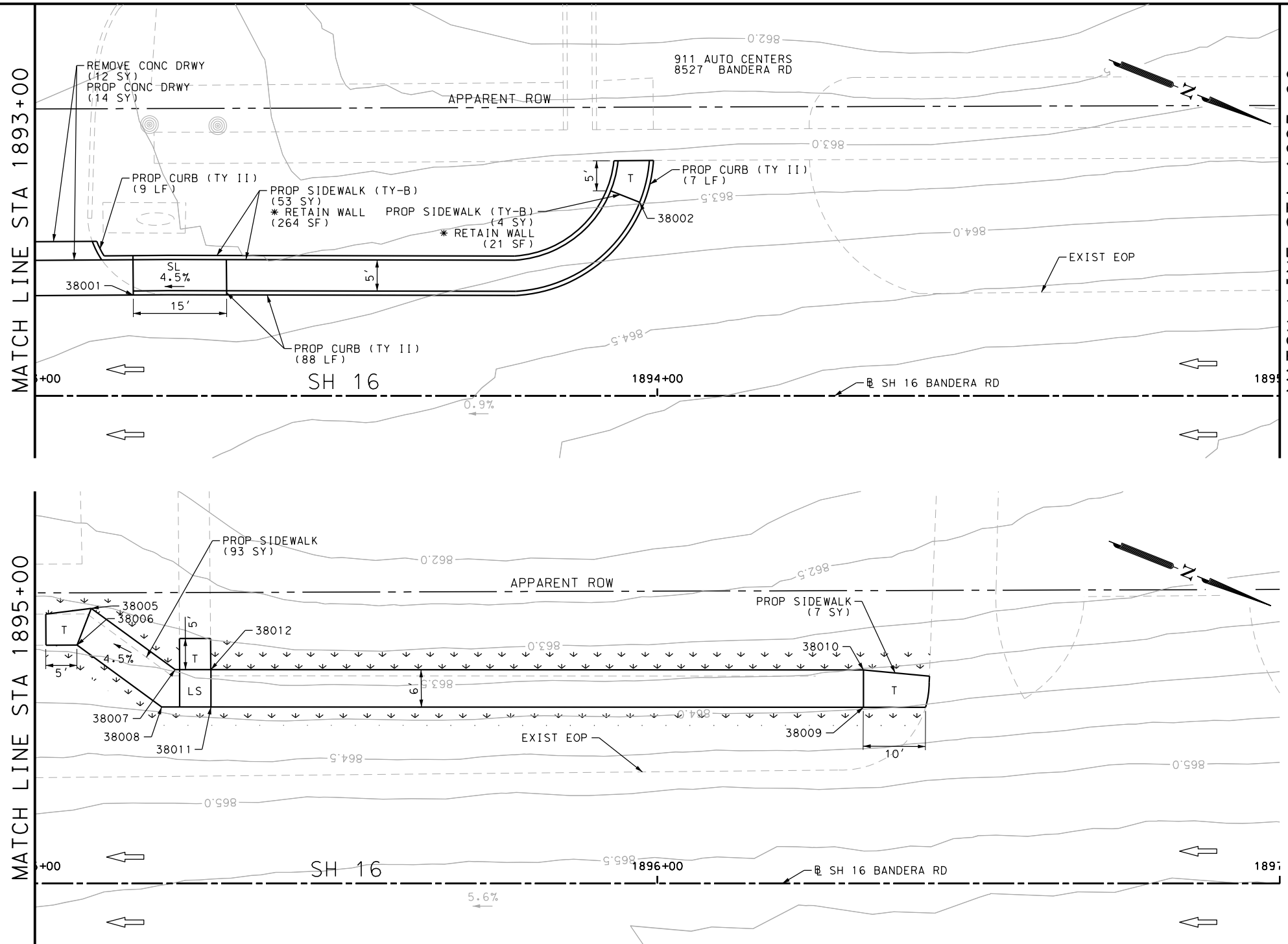
SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1889+00 TO STA 1893+00

SHEET 122 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	422

Plotted on: 5/3/2019

Design File name: P:\111135\07\des\ign\Civil\Roadway\Bandera Dr\EB#81.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	12
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	96
0162-6002	BLOCK SODDING	SY	96
0168-6001	VEGETATIVE WATERING	MG	1.50
0529-6002	CONC CURB (TY II)	LF	104
0530-6004	DRIVEWAYS (CONC)	SY	14
0531-6001	CONC SIDEWALKS (4")	SY	100
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	57

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
38001	13739678.76	2083834.93	--	ME
38002	13739748.80	2083790.94	--	ME
38005	13739847.86	2083737.30	862.42	PROP
38006	13739847.93	2083743.63	862.51	PROP
38007	13739864.02	2083741.45	863.56	PROP
38008	13739864.25	2083747.82	863.65	PROP
38009	13739968.98	2083706.08	864.00	PROP
38010	13739966.76	2083700.51	863.91	PROP
38011	13739871.60	2083744.89	863.57	PROP
38012	13739869.37	2083739.32	863.48	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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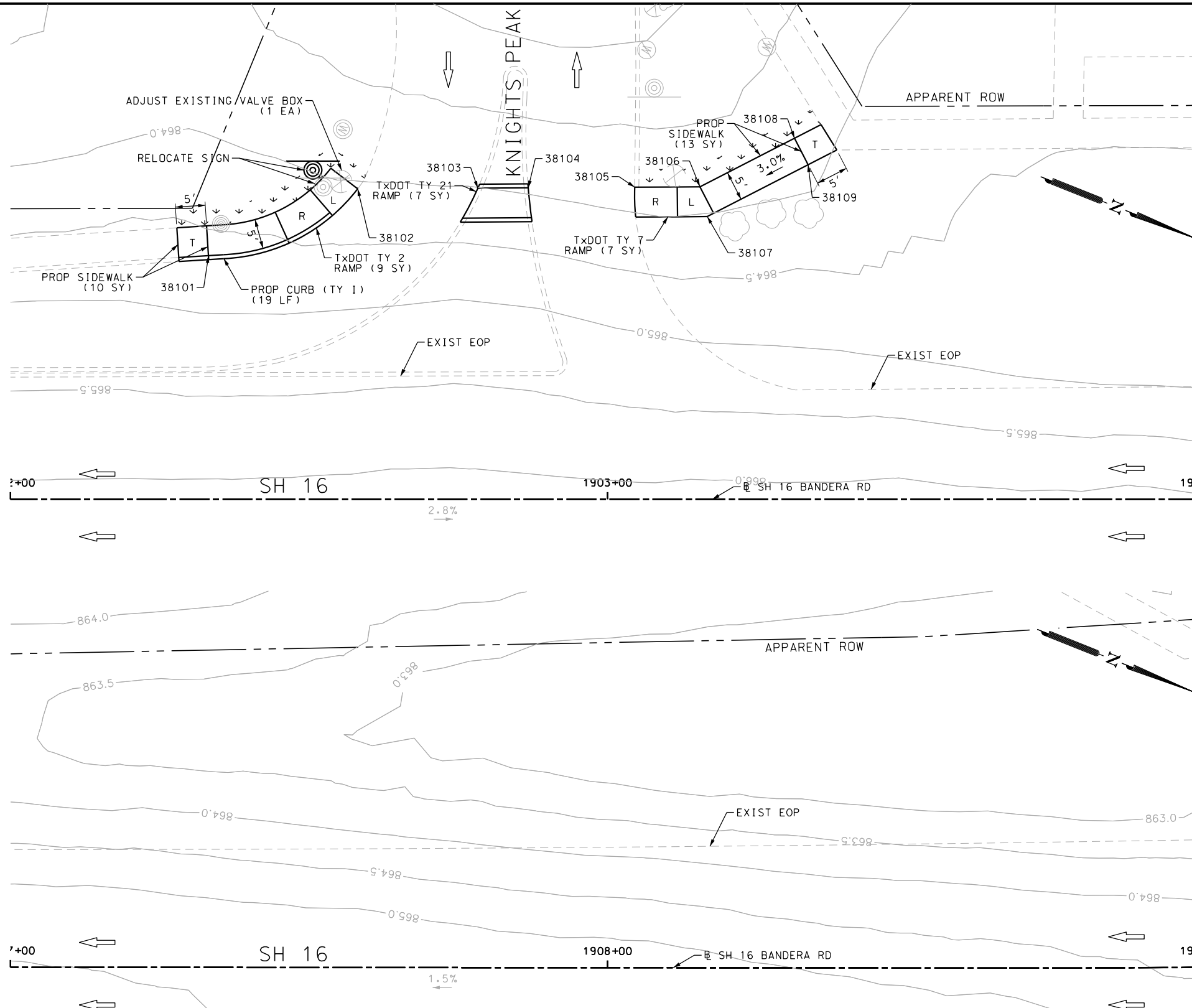
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1893+00 TO STA 1897+00

SHEET 123 OF 126

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	423

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\113507\*Bandera Dr\*EB\*82.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	24
0162-6002	BLOCK SODDING	SY	24
0168-6001	VEGETATIVE WATERING	MG	0.37
0529-6001	CONC CURB (TY 1)	LF	19
0531-6001	CONC SIDEWALKS (4")	SY	23
0531-6019	CURB RAMPS (TY 2)	SY	9
0531-6024	CURB RAMPS (TY 7)	SY	7
0531-6030	CURB RAMPS (TY 21)	SY	7
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
38101	13740521.67	2083472.08	--	ME
38102	13740540.74	2083452.44	--	ME
38103	13740559.39	2083444.87	--	ME
38104	13740567.20	2083441.69	--	ME
38105	13740583.74	2083434.97	--	ME
38106	13740593.86	2083430.86	863.21	PROP
38107	13740596.85	2083435.05	863.28	PROP
38108	13740605.55	2083417.45	863.72	PROP
38109	13740609.32	2083420.73	863.79	PROP

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

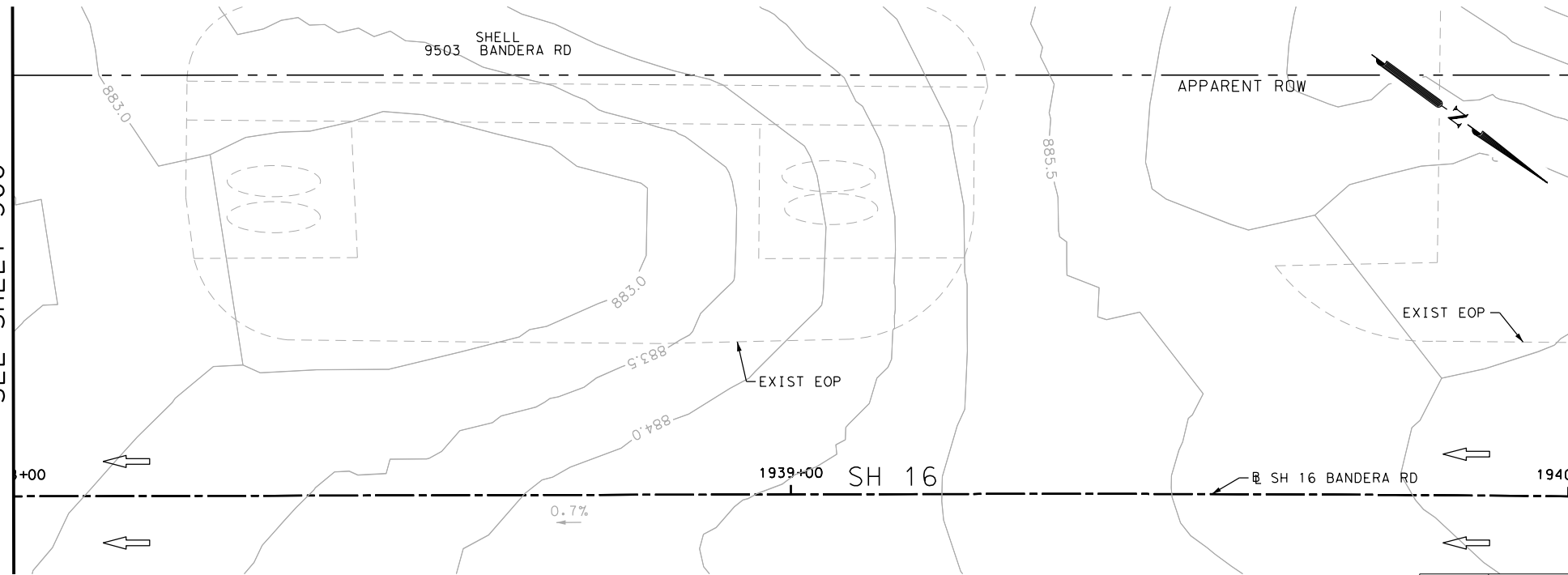
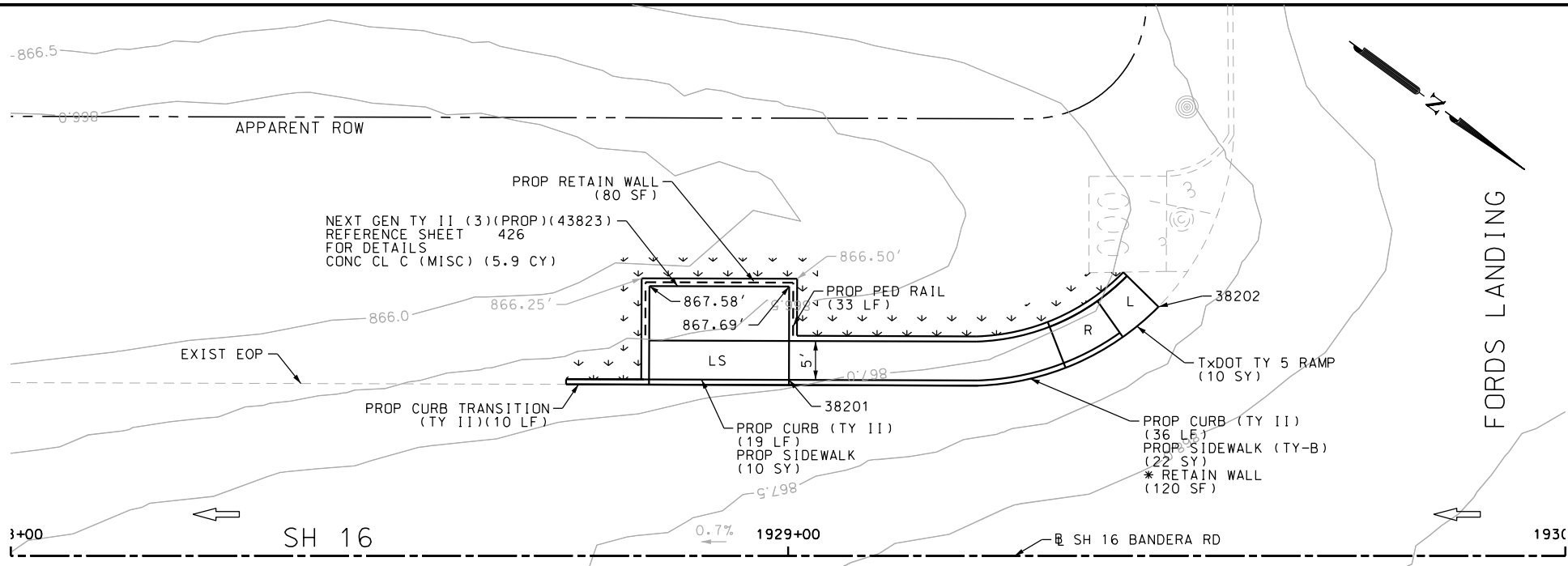
Texas Department of Transportation  
 © 2019

SH 16 BANDERA RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1902+00 TO STA 1904+00  
 STA 1907+00 TO STA 1909+00  
 SHEET 124 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO. SHEET NO.
				576 424

Plotted on: 5/3/2019

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\EB\*83.dgn

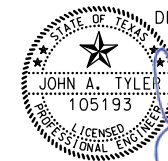


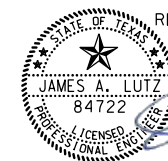
MATCH LINE STA 1938+00  
SEE SHEET 366

POINT	NORTHING	EASTING	ELEV	DESC
38201	13742813.89	2082155.40	--	ME
38202	13742846.67	2082119.72	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	80
0450-6048	RAIL (HANDRAIL) (TY B)	LF	33
0529-6002	CONC CURB (TY II)	LF	65
0531-6001	CONC SIDEWALKS (4")	SY	10
0531-6022	CURB RAMPS (TY 5)	SY	10
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	22

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

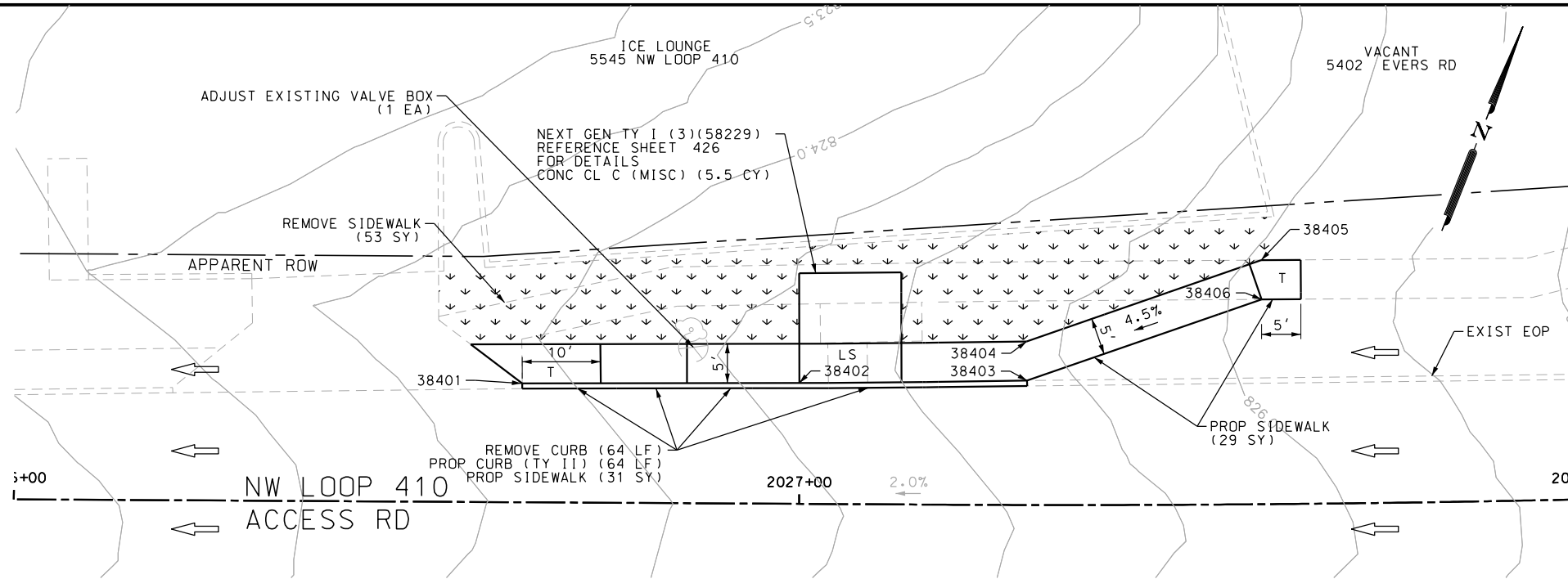
SH 16 BANDERA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1928+00 TO STA 1930+00  
 STA 1938+00 TO STA 1940+00  
 SHEET 125 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	425



Plotted on: 5/3/2019

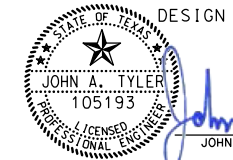
Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\410 WB\*02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	64
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	53
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	120
0162-6002	BLOCK SODDING	SY	120
0168-6001	VEGETATIVE WATERING	MG	1.87
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	64
0531-6001	CONC SIDEWALKS (4")	SY	60
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

NOTES:

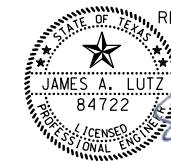
- \* FOR CONTRACTOR INFORMATION ONLY
- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

JOHN A. TYLER, P.E.  
DATE

5/3/2019



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE

5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
38401	13726380.34	2097709.70	--	ME
38402	13726393.44	2097742.48	--	ME
38403	13726404.41	2097769.31	--	ME
38404	13726409.03	2097767.41	--	ME
38405	13726429.68	2097791.33	826.91	PROP
38406	13726425.06	2097793.24	826.98	PROP

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



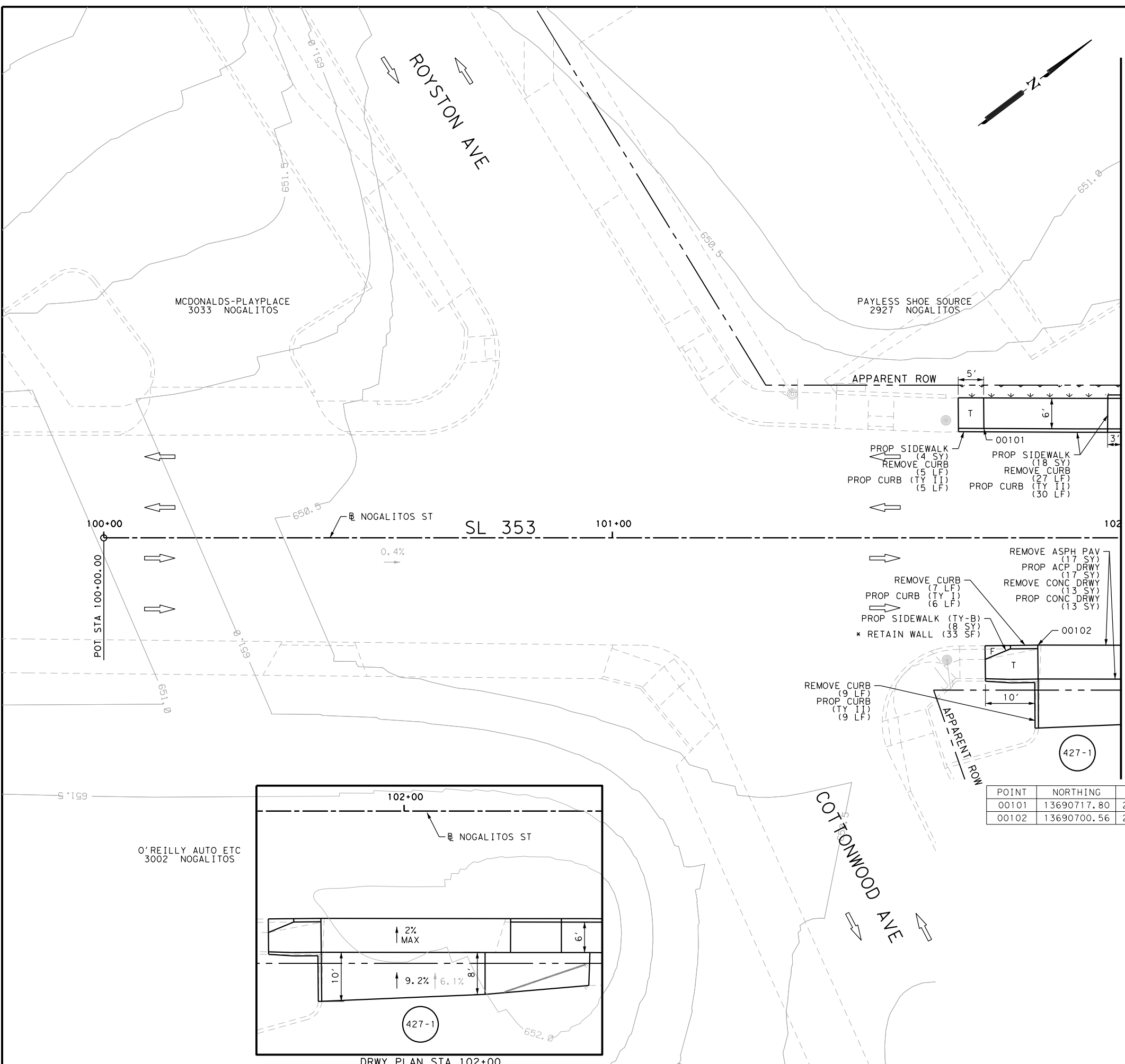
SH 16 BANDERA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 2026+00 TO STA 2028+00

SHEET 126 OF 126

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	426

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	13
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	48
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	17
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	11
0162-6002	BLOCK SODDING	SY	11
0168-6001	VEGETATIVE WATERING	MG	0.17
0529-6001	CONC CURB (TY I)	LF	6
0529-6002	CONC CURB (TY II)	LF	44
0530-6004	DRIVEWAYS (CONC)	SY	13
0530-6005	DRIVEWAYS (ACP)	SY	17
0531-6001	CONC SIDEWALKS (4")	SY	22
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

John A. Tyler, P.E.  
 5/3/2019  
 DATE

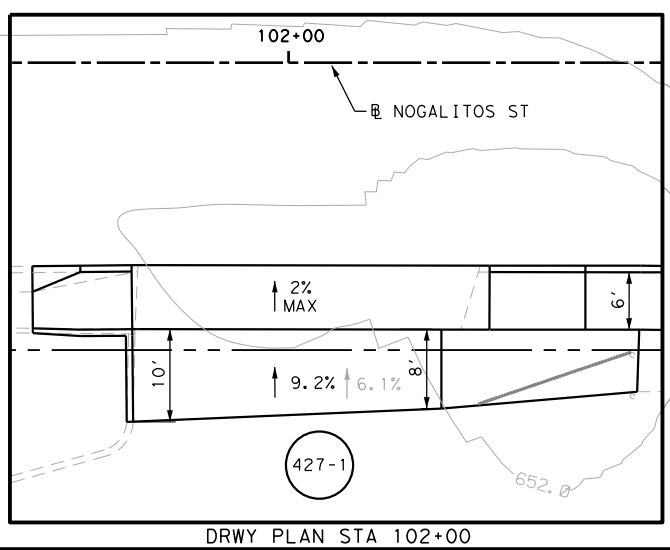
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

James A. Lutz, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
00101	13690717.80	2120464.44	--	ME
00102	13690700.56	2120504.82	--	ME



**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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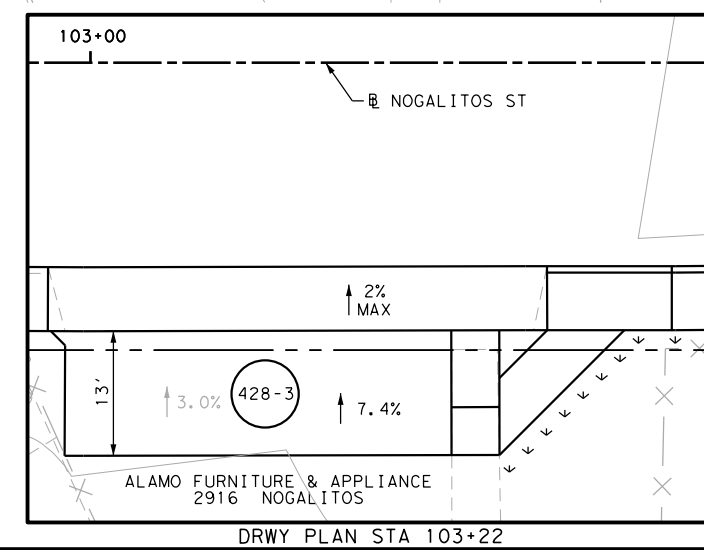
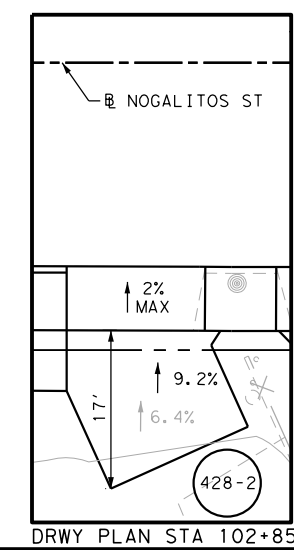
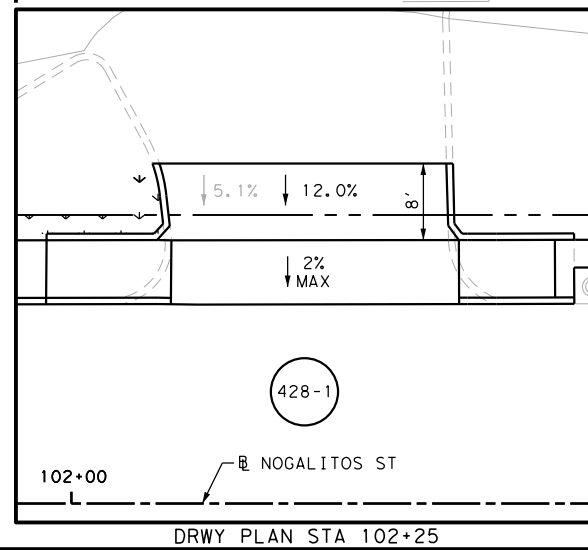
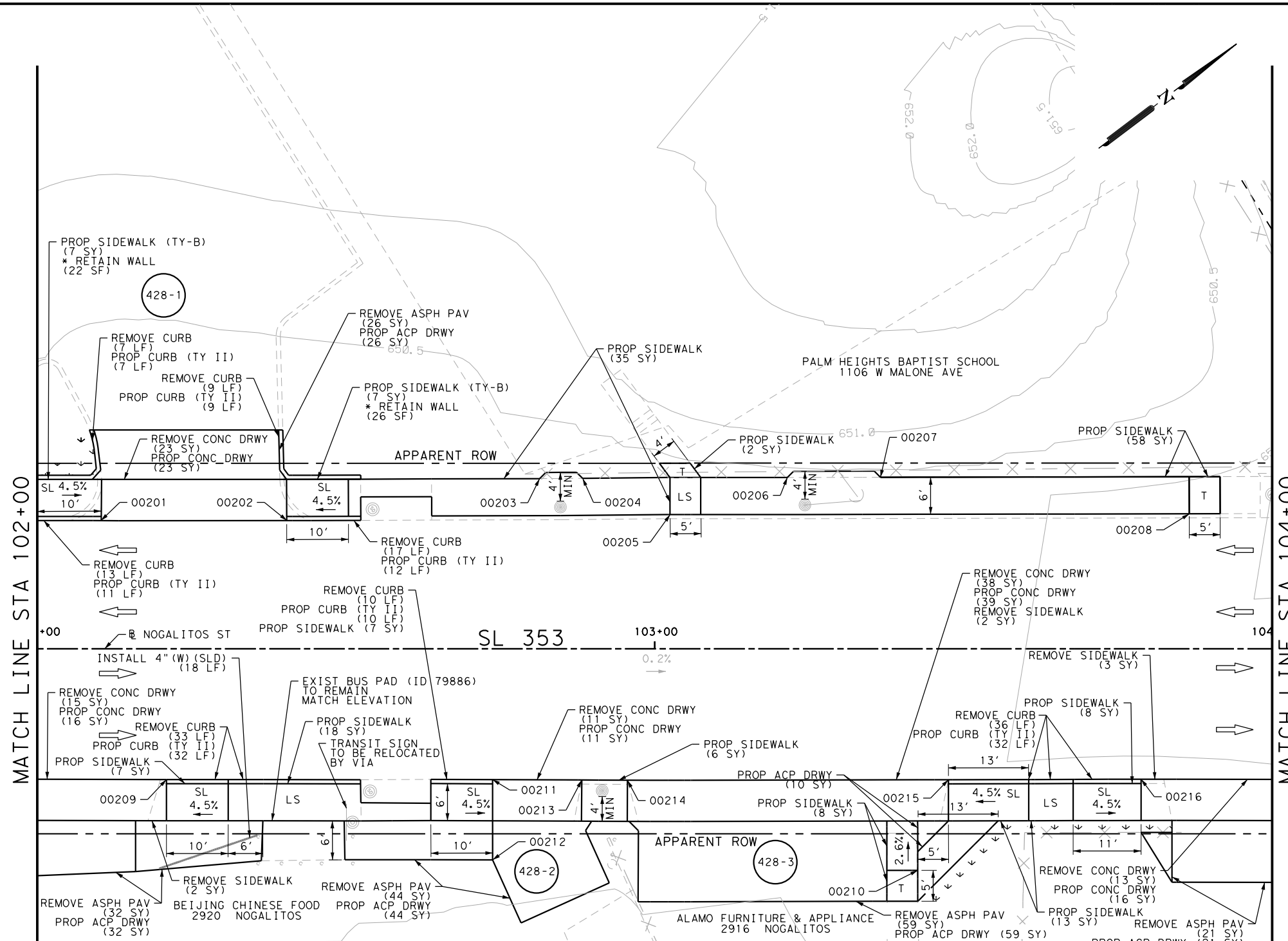
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 102+00

SHEET 1 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				427

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_02.dgn



POINT	NORTHING	EASTING	ELEV	DESC
00201	13690747.12	2120487.54	--	ME
00202	13690771.09	2120505.64	--	ME
00203	13690807.85	2120524.91	--	ME
00204	13690813.44	2120529.08	--	ME
00205	13690821.23	2120542.31	--	ME
00206	13690839.99	2120548.94	--	ME
00207	13690852.05	2120558.03	--	ME
00208	13690888.38	2120592.88	--	ME
00209	13690730.28	2120527.35	--	ME
00210	13690818.50	2120612.43	--	ME
00211	13690772.41	2120559.20	--	ME
00212	13690764.58	2120569.58	--	ME
00213	13690783.91	2120567.95	--	ME
00214	13690789.78	2120572.44	--	ME
00215	13690831.32	2120603.72	--	ME
00216	13690856.26	2120622.48	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	100
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	125
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	182
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	112
0162-6002	BLOCK SODDING	SY	112
0168-6001	VEGETATIVE WATERING	MG	1.75
0529-6002	CONC CURB (TY II)	LF	113
0530-6004	DRIVEWAYS (CONC)	SY	105
0530-6005	DRIVEWAYS (ACP)	SY	192
0531-6001	CONC SIDEWALKS (4")	SY	162
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	14
0666-6224	PAVEMENT SEALER 4"	LF	18
0666-6303	RE PM W/RET REQ TY I (W)4" (SLD) (100MIL)	LF	18
0678-6001	PAV SURF PREP FOR MRK (4")	LF	18

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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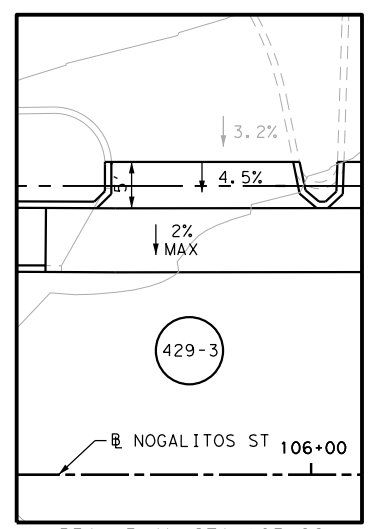
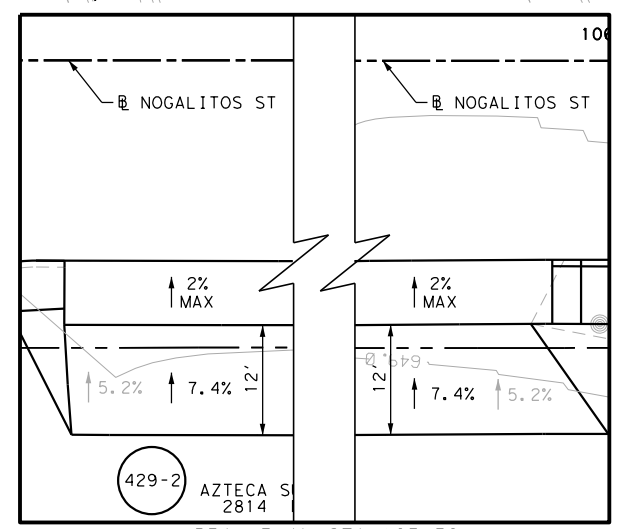
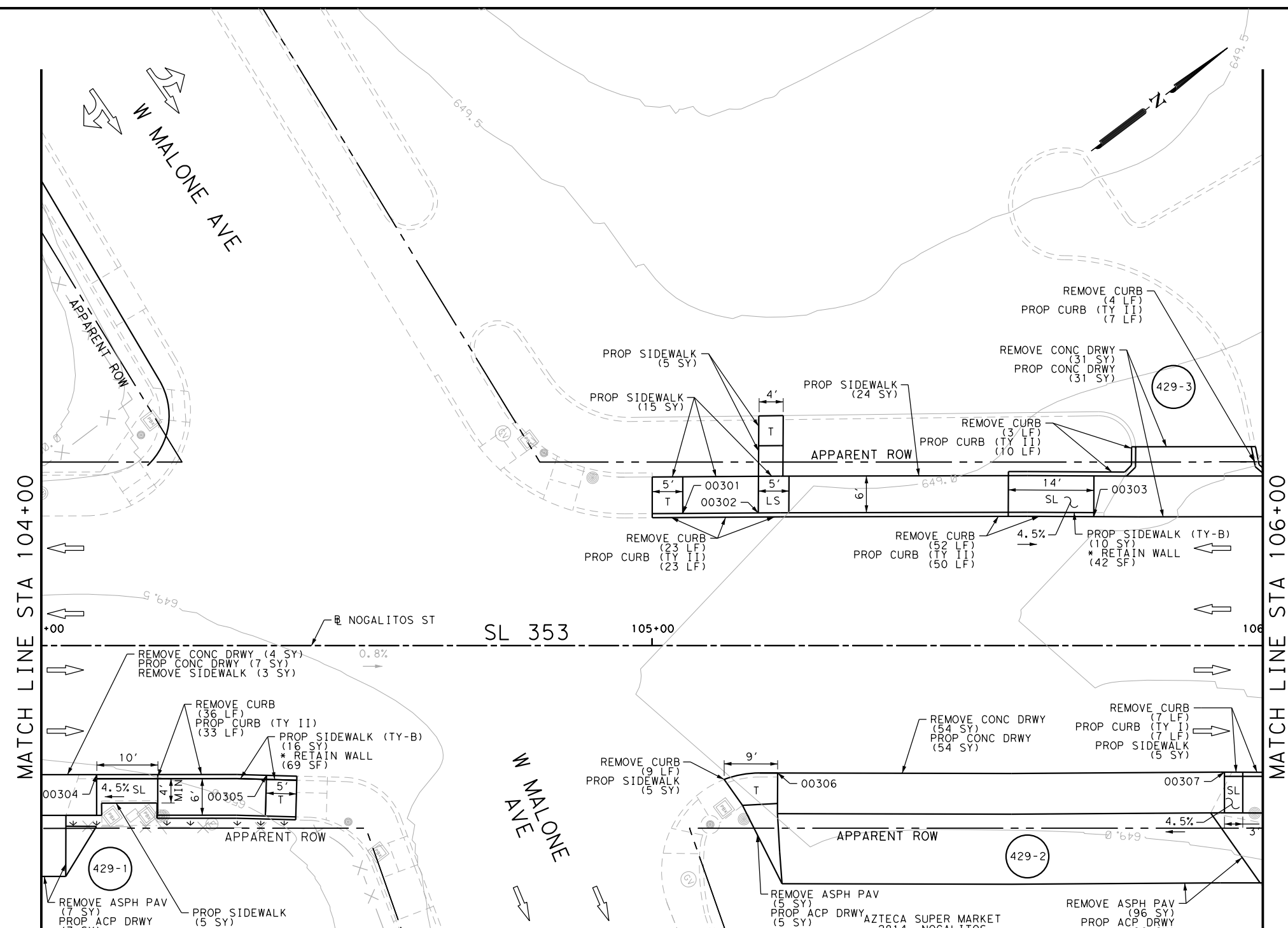
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 102+00 TO STA 104+00

SHEET 2 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	428

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_03.dgn



POINT	NORTHING	EASTING	ELEV	DESC
00301	13690982.78	2120664.44	--	ME
00302	13690992.69	2120671.83	--	ME
00303	13691036.15	2120705.43	--	ME
00304	13690880.44	2120640.75	--	ME
00305	13690902.53	2120657.58	--	ME
00306	13690969.53	2120707.73	--	ME
00307	13691027.99	2120751.73	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	89
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	134
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	3
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	108
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	6
0162-6002	BLOCK SODDING	SY	6
0168-6001	VEGETATIVE WATERING	MG	0.09
0529-6001	CONC CURB (TY I)	LF	7
0529-6002	CONC CURB (TY II)	LF	123
0530-6004	DRIVEWAYS (CONC)	SY	92
0530-6005	DRIVEWAYS (ACP)	SY	108
0531-6001	CONC SIDEWALKS (4")	SY	59
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	26

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

John A. Tyler, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

James A. Lutz, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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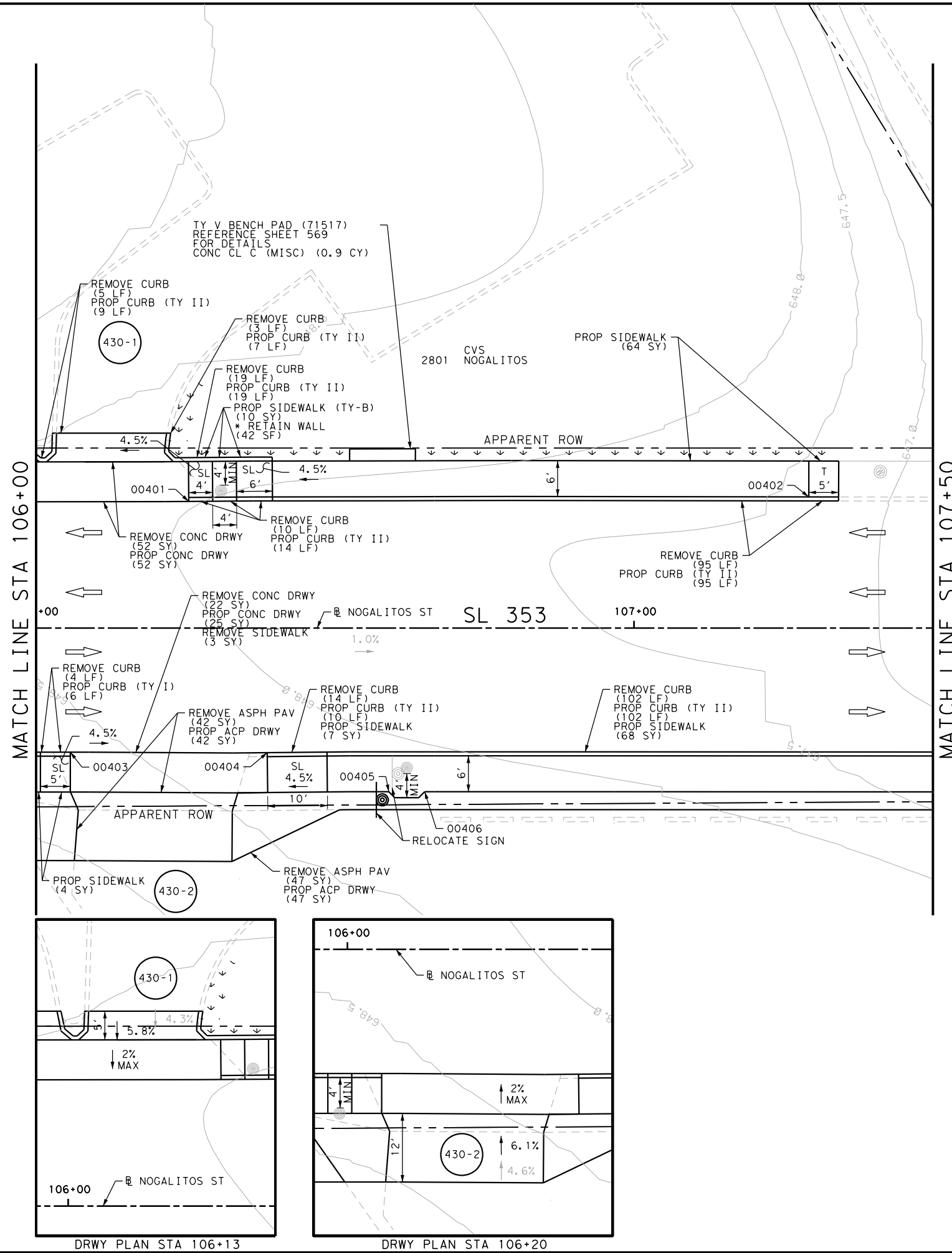
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 104+00 TO STA 106+00

SHEET 3 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	429

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_04.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	74
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	252
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	3
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	42
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	39
0162-6002	BLOCK SODDING	SY	39
0168-6001	VEGETATIVE WATERING	MG	0.61
0420-6074	CL C CONC (MISC)	CY	0.9
0529-6001	CONC CURB (TY I)	LF	6
0529-6002	CONC CURB (TY II)	LF	256
0530-6004	DRIVEWAYS (CONC)	SY	77
0530-6005	DRIVEWAYS (ACP)	SY	42
0531-6001	CONC SIDEWALKS (4")	SY	143
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
00401	13691078.63	2120737.48	--	ME
00402	13691161.83	2120799.36	--	ME
00403	13691037.56	2120758.97	--	ME
00404	13691063.78	2120778.90	--	ME
00405	13691076.07	2120796.37	--	ME
00406	13691080.86	2120799.99	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 106+00 TO STA 107+50

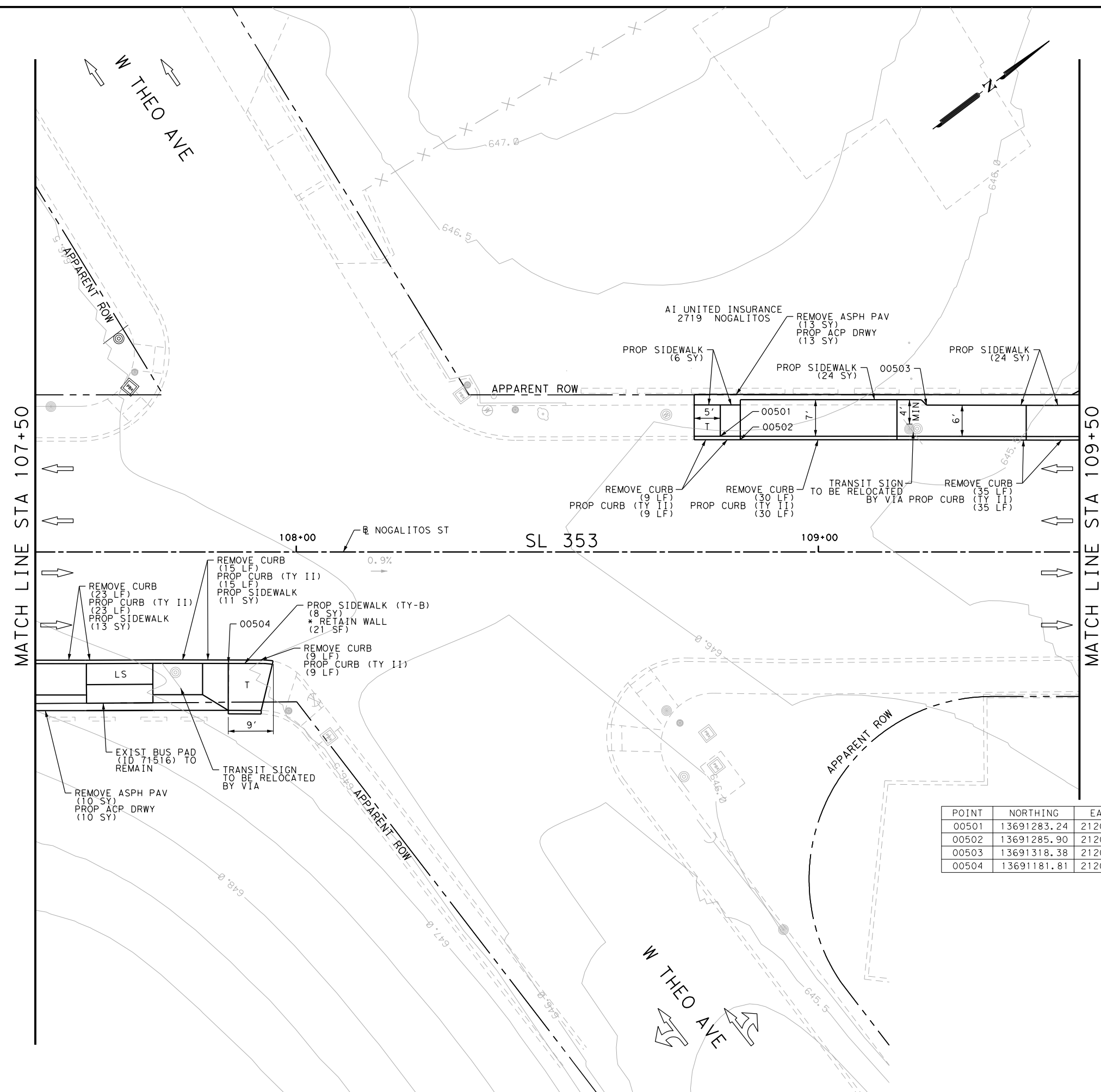
SHEET 4 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	430

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_05.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	121
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	23
0529-6002	CONC CURB (TY II)	LF	121
0530-6005	DRIVEWAYS (ACP)	SY	23
0531-6001	CONC SIDEWALKS (4")	SY	78
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8



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DESIGN

**JOHN A. TYLER, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 105193  
 DATE: 5/3/2019

REVIEW AND APPROVAL

**JAMES A. LUTZ, P.E.**  
 LICENSED PROFESSIONAL ENGINEER  
 84722  
 DATE: 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
00501	13691283.24	2120890.79	--	ME
00502	13691285.90	2120893.64	--	ME
00503	13691318.38	2120909.83	--	ME
00504	13691181.81	2120868.70	--	ME

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 353  
NOGALITOS ST

SIDEWALK  
CONSTRUCTION PLAN

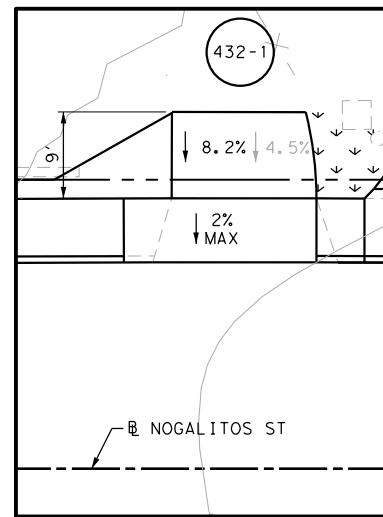
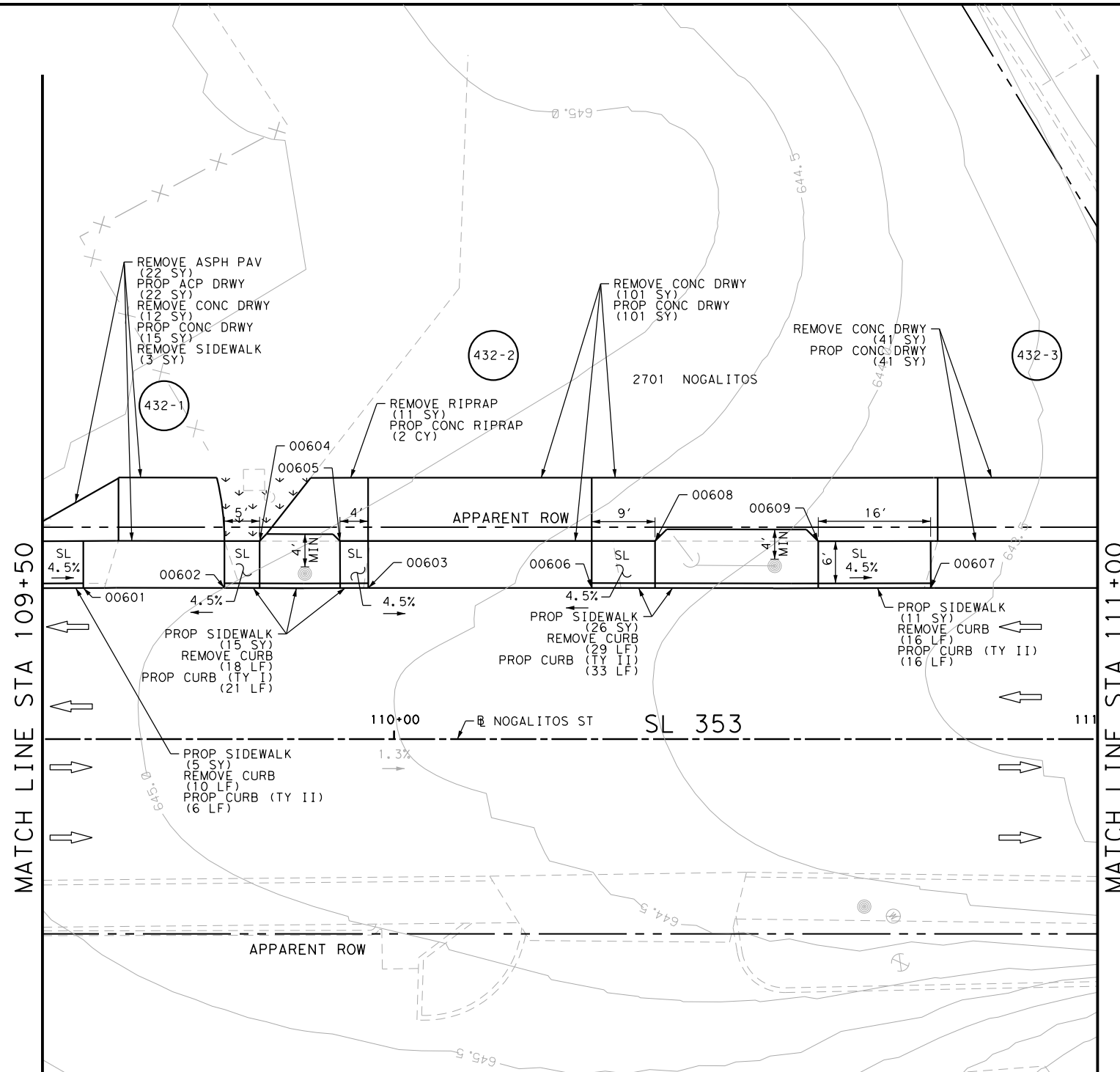
STA 107+50 TO STA 109+50

SHEET 5 OF 36

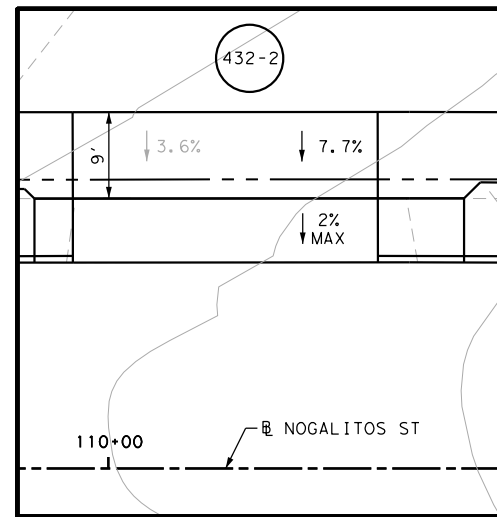
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	431

Plotted on: 5/3/2019

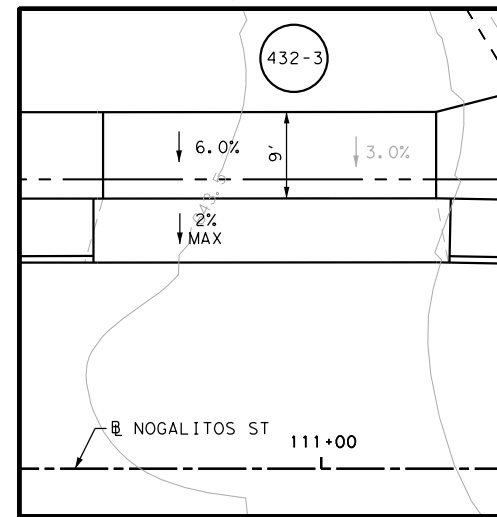
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DRWY PLAN STA 109+67



DRWY PLAN STA 110+15



DRWY PLAN STA 111+00

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	154
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	73
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	3
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	22
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	10
0162-6002	BLOCK SODDING	SY	10
0168-6001	VEGETATIVE WATERING	MG	0.16
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6001	CONC CURB (TY I)	LF	21
0529-6002	CONC CURB (TY II)	LF	55
0530-6004	DRIVEWAYS (CONC)	SY	157
0530-6005	DRIVEWAYS (ACP)	SY	22
0531-6001	CONC SIDEWALKS (4")	SY	57

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DESIGN

JOHN A. TYLER, P.E.

5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
00601	13691342.35	2120936.31	--	ME
00602	13691358.35	2120948.40	--	ME
00603	13691374.66	2120960.73	--	ME
00604	13691366.36	2120946.10	--	ME
00605	13691375.47	2120952.99	--	ME
00606	13691400.02	2120979.87	--	ME
00607	13691438.47	2121008.93	--	ME
00608	13691411.21	2120979.98	--	ME
00609	13691429.70	2120993.98	--	ME

TEXAS DEPARTMENT OF TRANSPORTATION © 2018

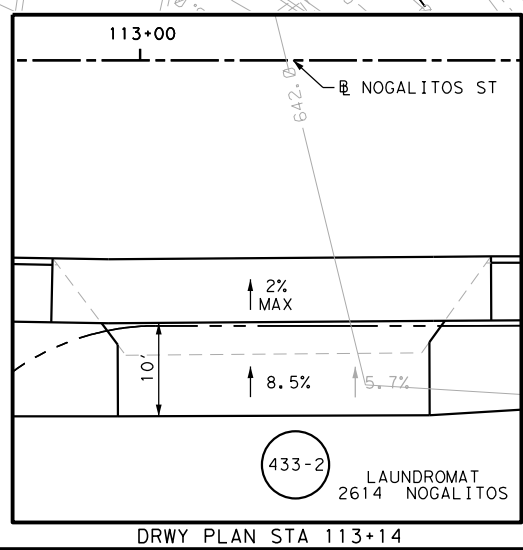
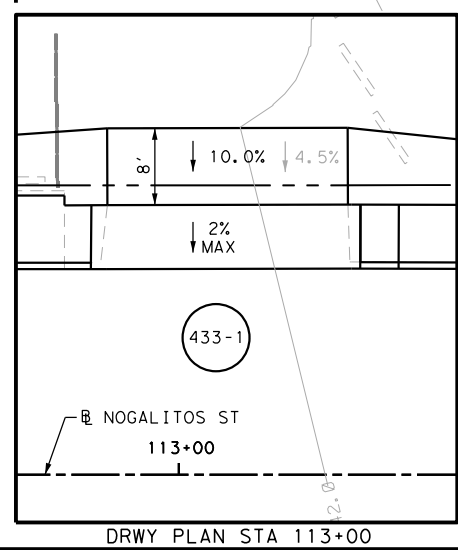
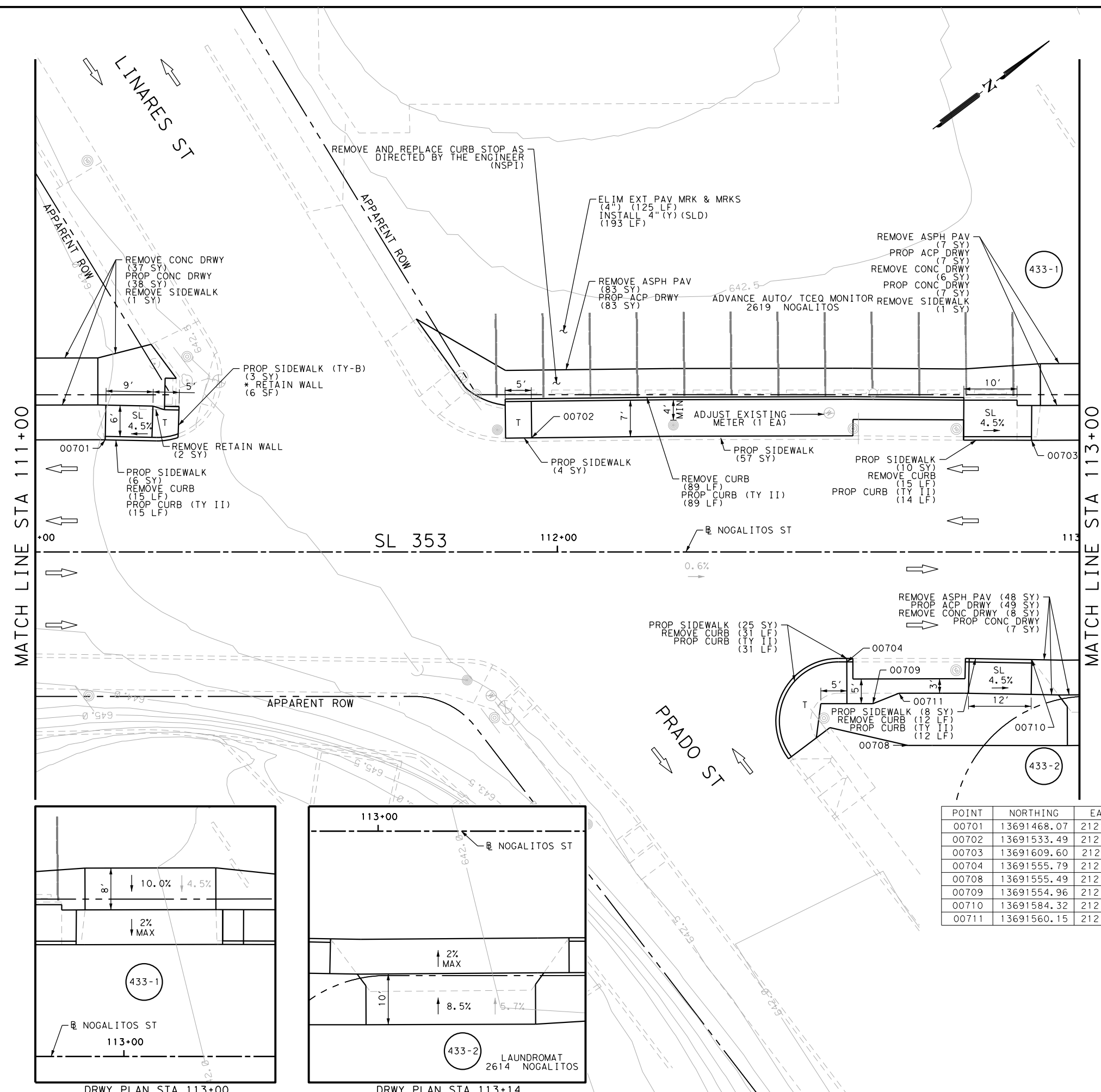
SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 109+50 TO STA 111+00

SHEET 6 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				432

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_07.dgn



POINT	NORTHING	EASTING	ELEV	DESC
00701	13691468.07	2121031.30	--	ME
00702	13691533.49	2121080.22	--	ME
00703	13691609.60	2121138.31	--	ME
00704	13691555.79	2121150.87	--	ME
00708	13691555.49	2121170.69	--	ME
00709	13691554.96	2121160.27	--	ME
00710	13691584.32	2121171.87	--	ME
00711	13691560.15	2121161.68	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	51
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	2
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	162
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	138
0529-6002	CONC CURB (TY II)	LF	161
0530-6004	DRIVEWAYS (CONC)	SY	52
0530-6005	DRIVEWAYS (ACP)	SY	139
0531-6001	CONC SIDEWALKS (4")	SY	110
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	3
0666-6224	PAVEMENT SEALER 4"	LF	193
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	193
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	125
0678-6001	PAV SURF PREP FOR MRK (4")	LF	193
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 111+00 TO STA 113+00

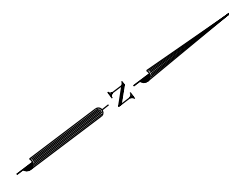
SHEET 7 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	433



Plotted on: 5/3/2019

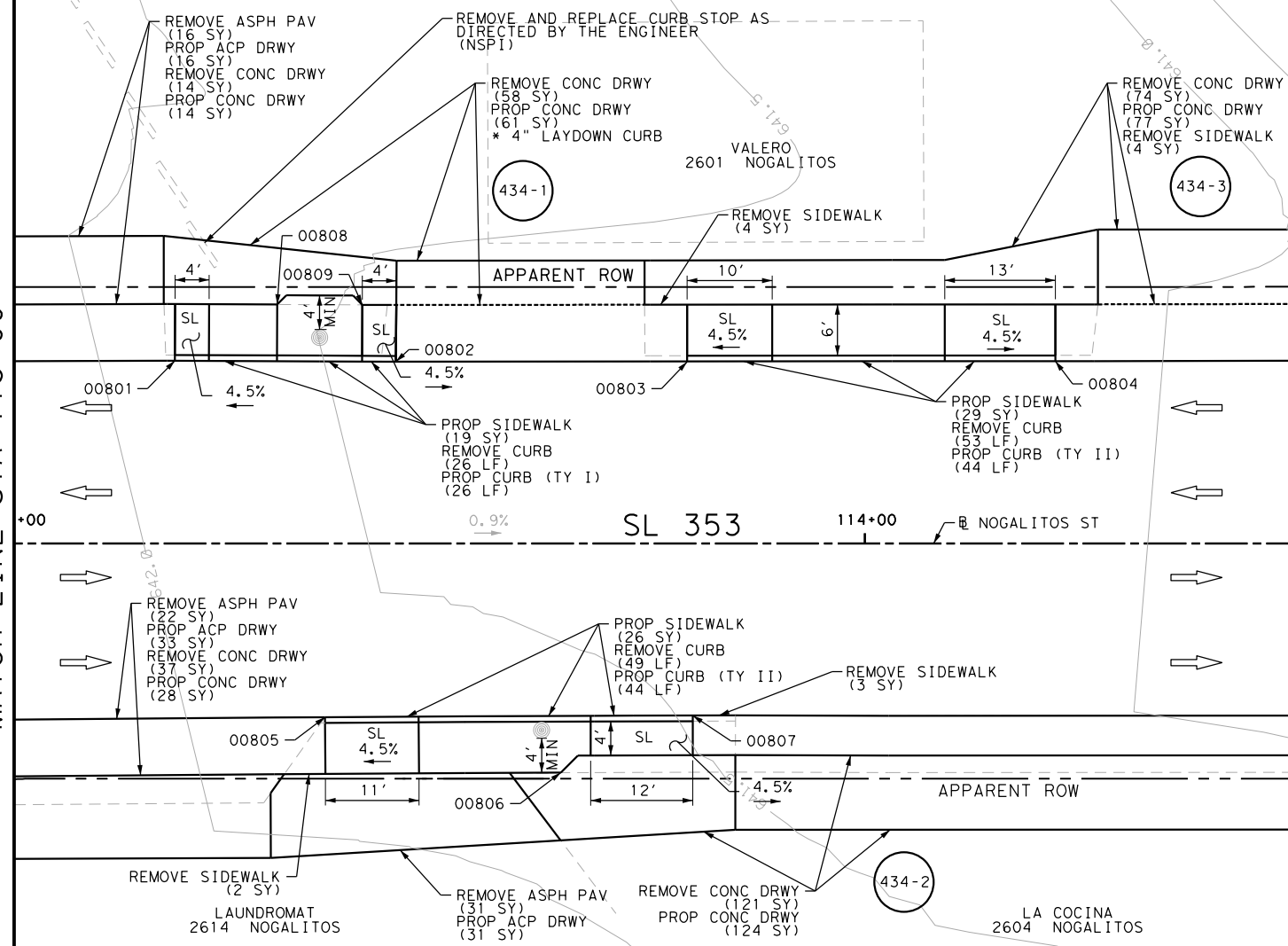
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ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	304
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	128
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	13
0105-6037	REMOVING STAB BASE AND ASPH PAV (0" - 16")	SY	69
0529-6001	CONC CURB (TY I)	LF	26
0529-6002	CONC CURB (TY II)	LF	88
0530-6004	DRIVEWAYS (CONC)	SY	304
0530-6005	DRIVEWAYS (ACP)	SY	69
0531-6001	CONC SIDEWALKS (4")	SY	74

MATCH LINE STA 113+00

MATCH LINE STA 114+50



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**DESIGN**

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

**REVIEW AND APPROVAL**

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

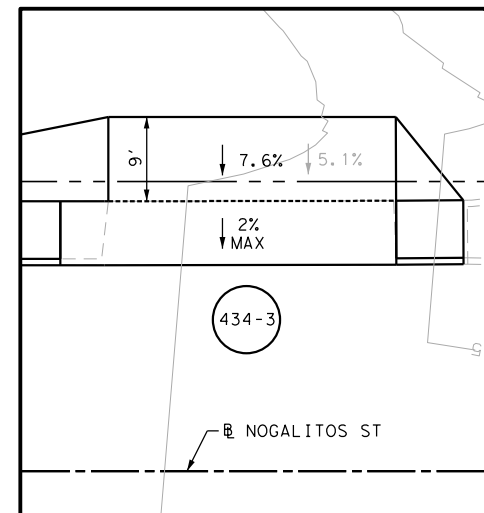
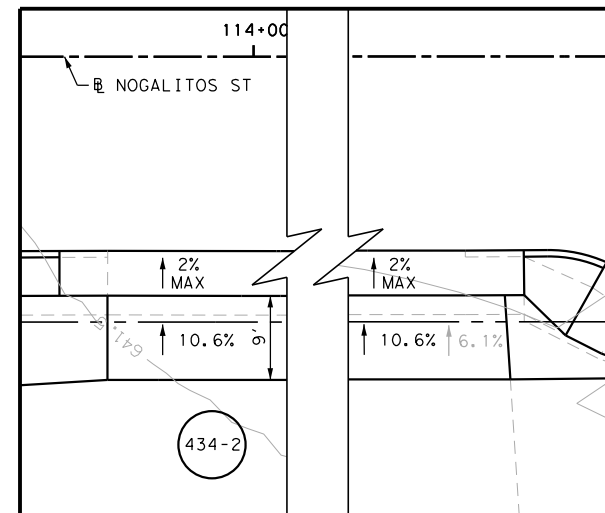
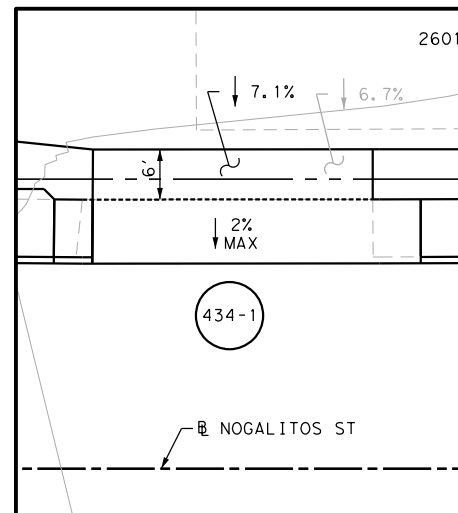
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPCE FIRM REGISTRATION #470 | TBPES FIRM REGISTRATION #10028800

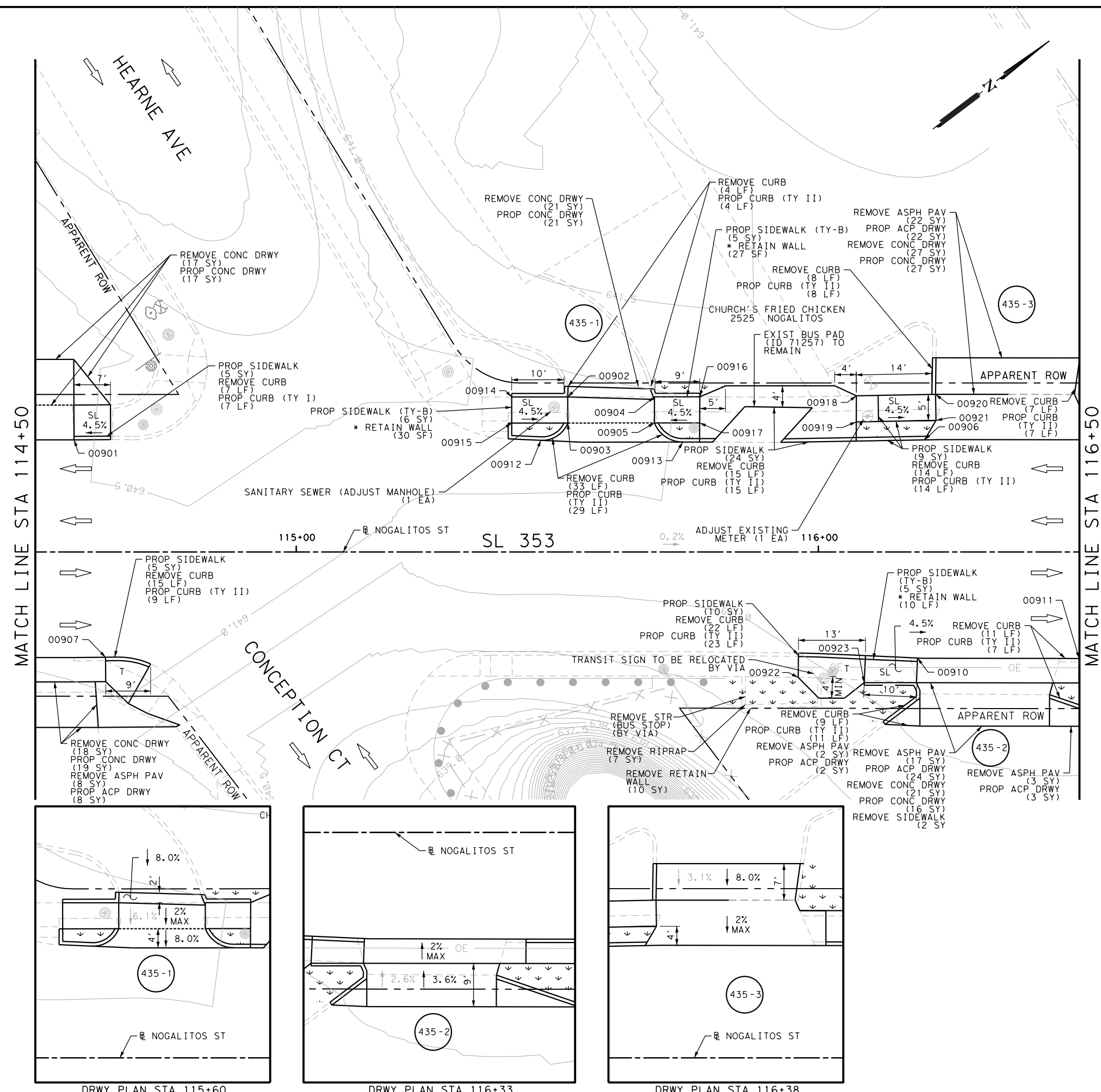


SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 113+00 TO STA 114+50

SHEET 8 OF 36

POINT	NORTHING	EASTING	ELEV	DESC
00801	13691632.06	2121155.18	--	ME
00802	13691652.72	2121170.94	--	ME
00803	13691680.06	2121191.54	--	ME
00804	13691714.61	2121217.60	--	ME
00805	13691620.88	2121199.25	--	ME
00806	13691639.07	2121221.16	--	ME
00807	13691655.49	2121225.14	--	ME
00808	13691645.64	2121157.15	--	ME
00809	13691653.59	2121163.21	--	ME





ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	7
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	104
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	10
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	145
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	52
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	51
0162-6002	BLOCK SODDING	SY	51
0168-6001	VEGETATIVE WATERING	MG	0.80
0529-6001	CONC CURB (TY I)	LF	7
0529-6002	CONC CURB (TY II)	LF	127
0530-6004	DRIVEWAYS (CONC)	SY	100
0530-6005	DRIVEWAYS (ACP)	SY	59
0531-6001	CONC SIDEWALKS (4")	SY	53
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	16
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

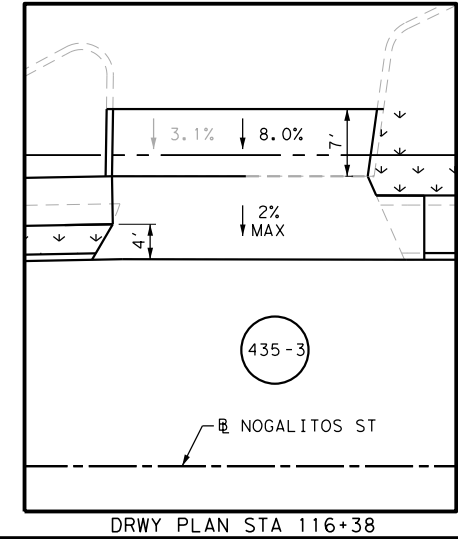
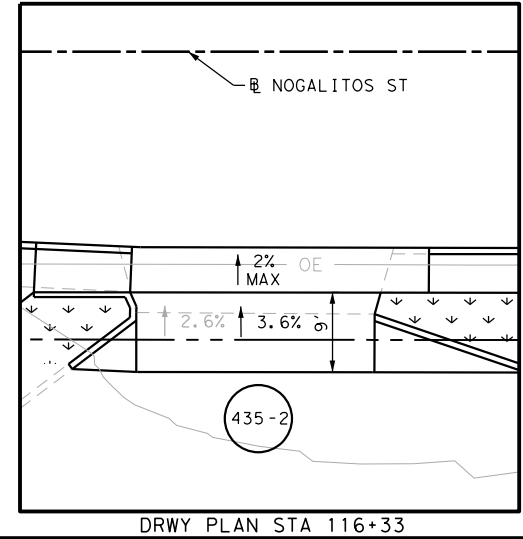
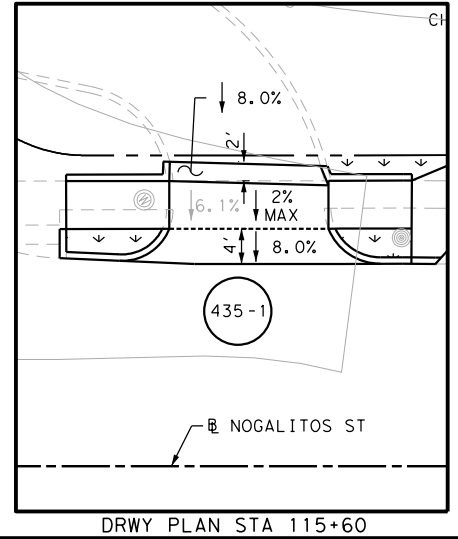
**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 114+50 TO STA 116+50

SHEET 9 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	435



Plotted on: 5/3/2019

Design Filename: P:\111\35\08\Design\Civil\Roadway\Nogalitos\_09\_A.dgn

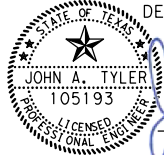
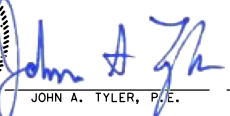
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00902	13691823.00	2121289.12	--	ME
00903	13691819.99	2121293.11	--	ME
00904	13691836.25	2121299.10	--	ME
00905	13691833.24	2121303.09	--	ME
00906	13691872.58	2121336.88	--	ME
00907	13691722.29	2121275.55	--	ME
00910	13691846.31	2121369.42	--	ME
00911	13691870.95	2121388.13	--	ME
00912	13691813.86	2121292.65	--	ME
00913	13691835.35	2121309.28	--	ME
00914	13691814.42	2121282.66	--	ME
00915	13691811.41	2121286.65	--	ME
00916	13691843.20	2121304.34	--	ME
00917	13691840.16	2121308.31	--	ME
00918	13691870.60	2121324.71	--	ME
00919	13691867.66	2121328.76	--	ME
00920	13691879.49	2121331.19	--	ME
00921	13691876.55	2121335.23	--	ME
00922	13691825.81	2121358.60	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
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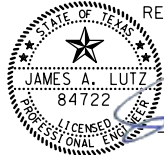
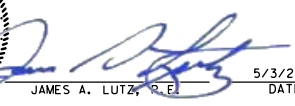
**NOTES:**

- \* FOR CONTRACTOR INFORMATION ONLY
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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

 JOHN A. TYLER 105193 LICENSED PROFESSIONAL ENGINEER	 JOHN A. TYLER, P.E.	5/3/2019 DATE
---	--	------------------

REVIEW AND APPROVAL

 JAMES A. LUTZ 84722 LICENSED PROFESSIONAL ENGINEER	 JAMES A. LUTZ, P.E.	5/3/2019 DATE
---	--	------------------

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

  
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

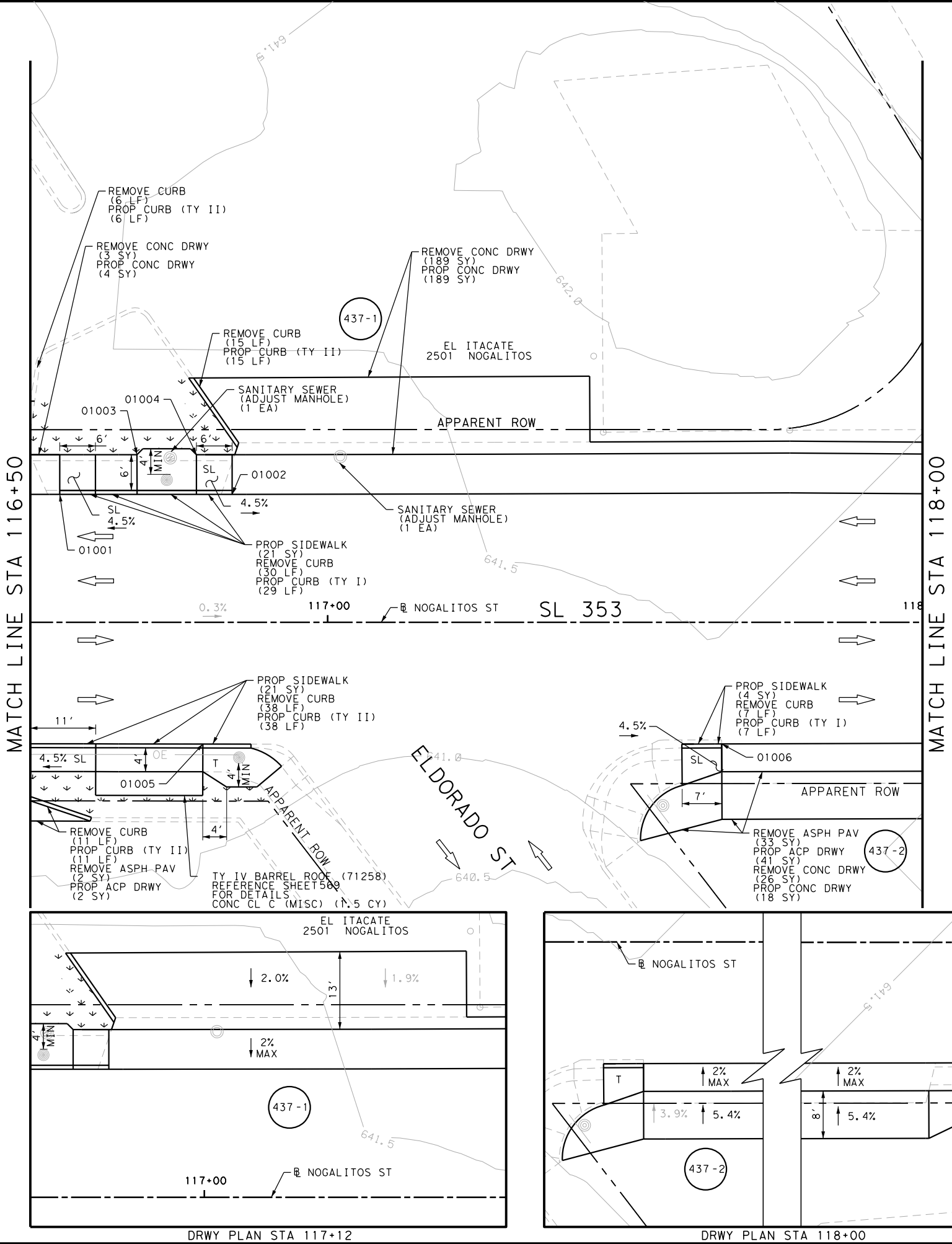

 Texas Department of Transportation  
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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 114+50 TO STA 116+50

SHEET 10 OF 36					
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.	
CHK DGN:	6	TEXAS		VARIES	
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576
					SHEET NO. 436

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	218
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	101
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	35
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	64
0162-6002	BLOCK SODDING	SY	64
0168-6001	VEGETATIVE WATERING	MG	1.00
0420-6074	CL C CONC (MISC)	CY	1.5
0529-6001	CONC CURB (TY I)	LF	36
0529-6002	CONC CURB (TY II)	LF	70
0530-6004	DRIVEWAYS (CONC)	SY	211
0530-6005	DRIVEWAYS (ACP)	SY	43
0531-6001	CONC SIDEWALKS (4")	SY	46
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	2

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01001	13691900.22	2121357.73	--	ME
01002	13691923.34	2121375.19	--	ME
01003	13691914.59	2121360.22	--	ME
01004	13691922.57	2121366.25	--	ME
01005	13691894.10	2121405.71	--	ME
01006	13691963.72	2121458.28	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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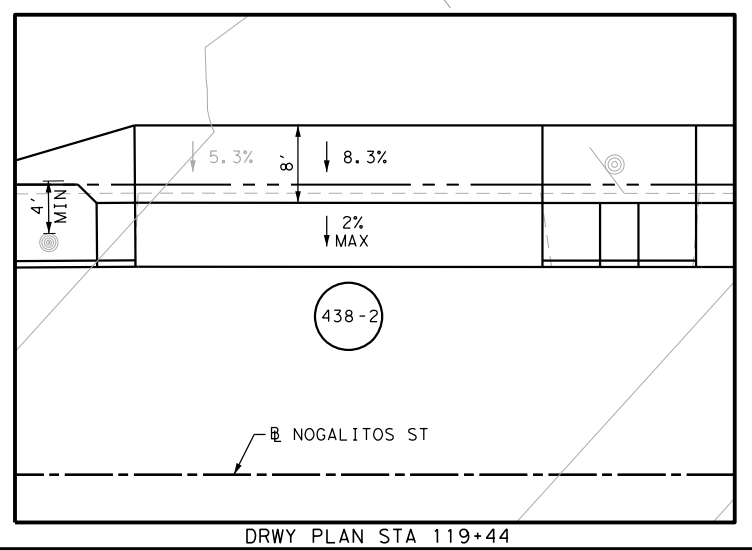
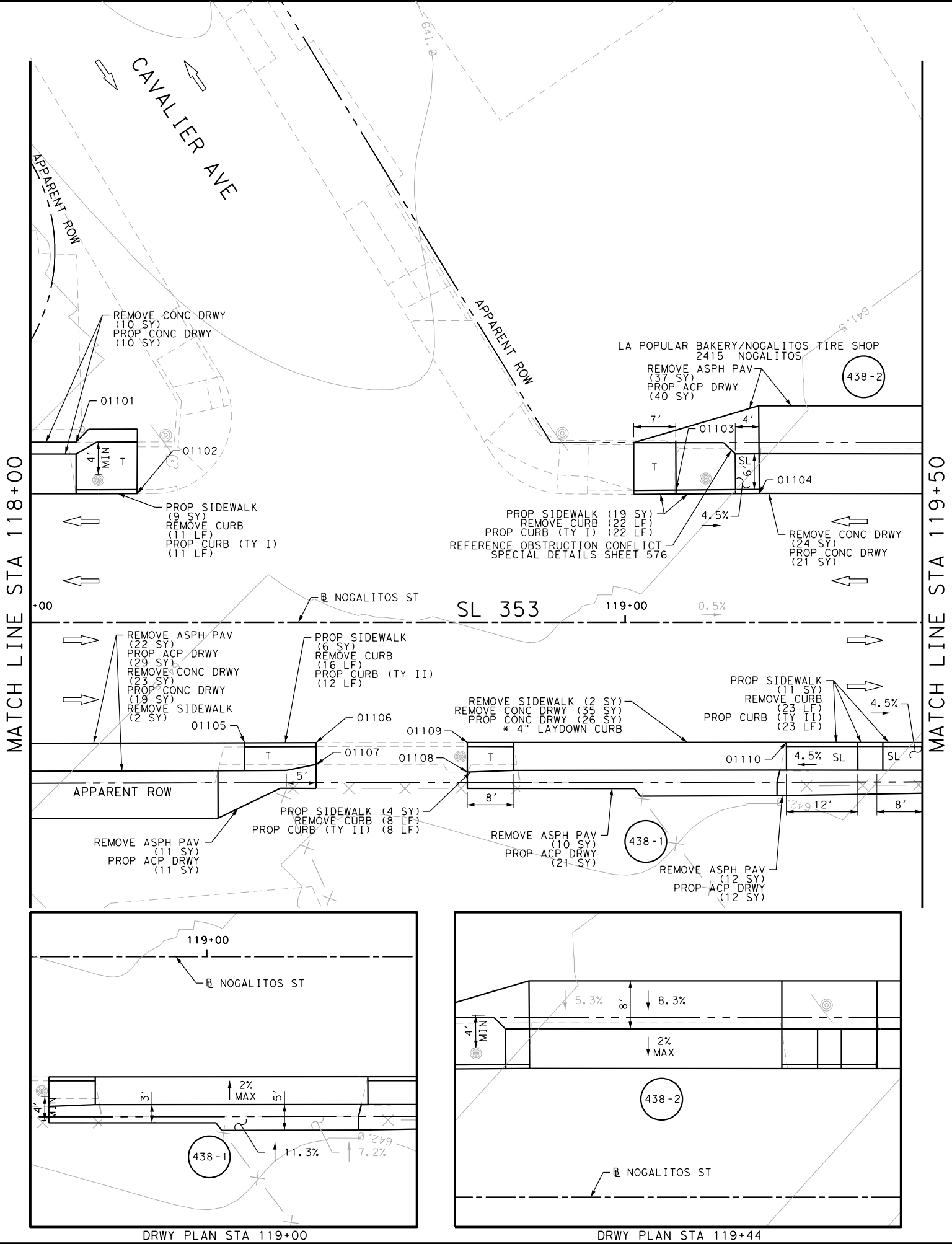
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 116+50 TO STA 118+00

SHEET 11 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	437

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos.11.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	92
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	80
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	92
0529-6001	CONC CURB (TY I)	LF	33
0529-6002	CONC CURB (TY II)	LF	43
0530-6004	DRIVEWAYS (CONC)	SY	76
0530-6005	DRIVEWAYS (ACP)	SY	113
0531-6001	CONC SIDEWALKS (4")	SY	49

- NOTES:
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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

5/3/2019  
DATE

JOHN A. TYLER, P.E.

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

5/3/2019  
DATE

JAMES A. LUTZ, P.E.

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01101	13692029.38	2121442.71	--	ME
01102	13692030.35	2121455.87	--	ME
01103	13692103.00	2121510.02	--	ME
01104	13692113.82	2121518.91	--	ME
01105	13692019.52	2121500.20	--	ME
01106	13692042.93	2121517.82	--	ME
01107	13692041.94	2121522.93	--	ME
01108	13692049.37	2121528.55	--	ME
01109	13692052.50	2121525.06	--	ME
01110	13692092.23	2121555.04	--	ME

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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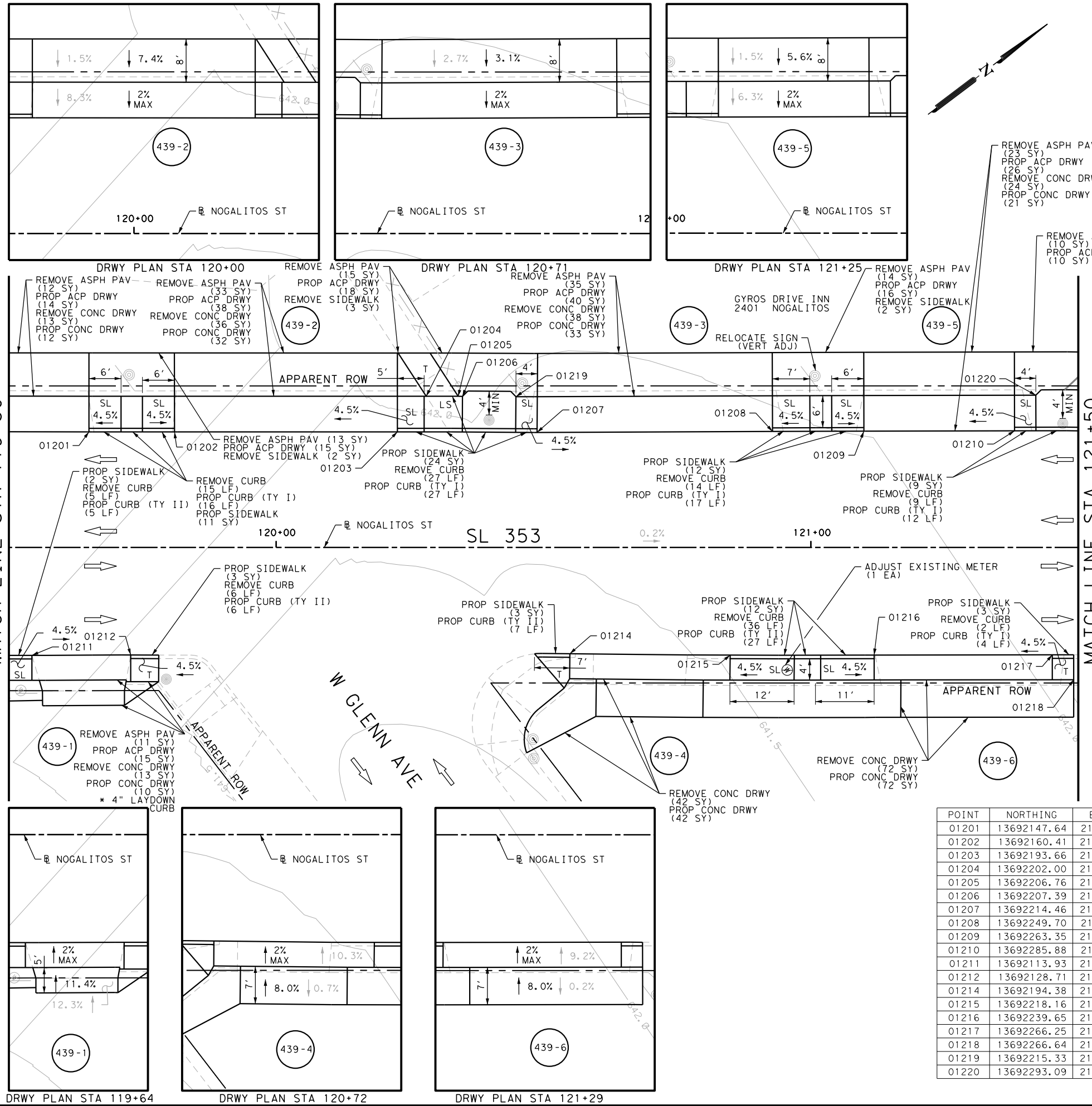
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 118+00 TO STA 119+50

SHEET 12 OF 36

DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	438

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_12.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	253
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	99
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	166
0529-6001	CONC CURB (TY I)	LF	76
0529-6002	CONC CURB (TY II)	LF	45
0530-6004	DRIVEWAYS (CONC)	SY	222
0530-6005	DRIVEWAYS (ACP)	SY	192
0531-6001	CONC SIDEWALKS (4")	SY	79
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01201	13692147.64	2121544.51	--	ME
01202	13692160.41	2121554.15	--	ME
01203	13692193.66	2121579.28	--	ME
01204	13692202.00	2121577.23	--	ME
01205	13692206.76	2121580.83	--	ME
01206	13692207.39	2121581.32	--	ME
01207	13692214.46	2121595.12	--	ME
01208	13692249.70	2121621.51	--	ME
01209	13692263.35	2121631.77	--	ME
01210	13692285.88	2121648.71	--	ME
01211	13692113.93	2121571.45	--	ME
01212	13692128.71	2121582.53	--	ME
01214	13692194.38	2121631.84	--	ME
01215	13692218.16	2121650.14	--	ME
01216	13692239.65	2121666.35	--	ME
01217	13692266.25	2121686.40	--	ME
01218	13692266.64	2121692.53	--	ME
01219	13692215.33	2121587.39	--	ME
01220	13692293.09	2121645.78	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



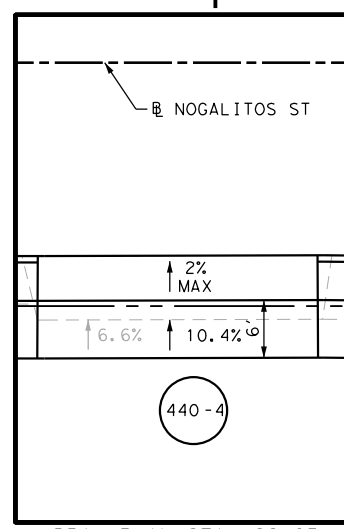
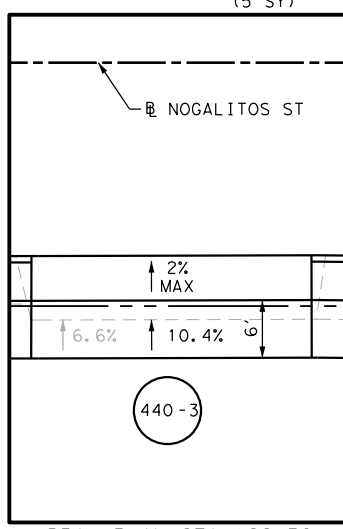
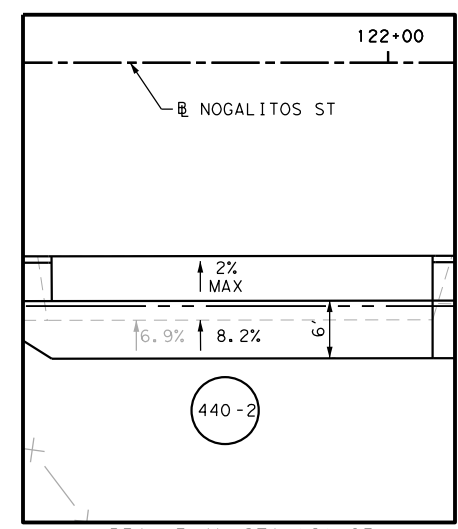
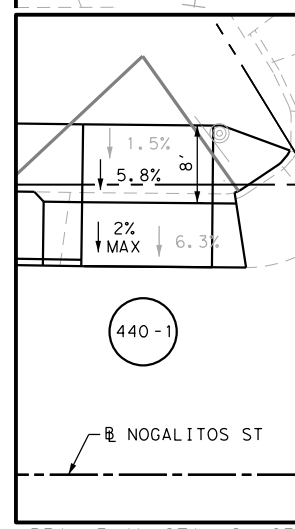
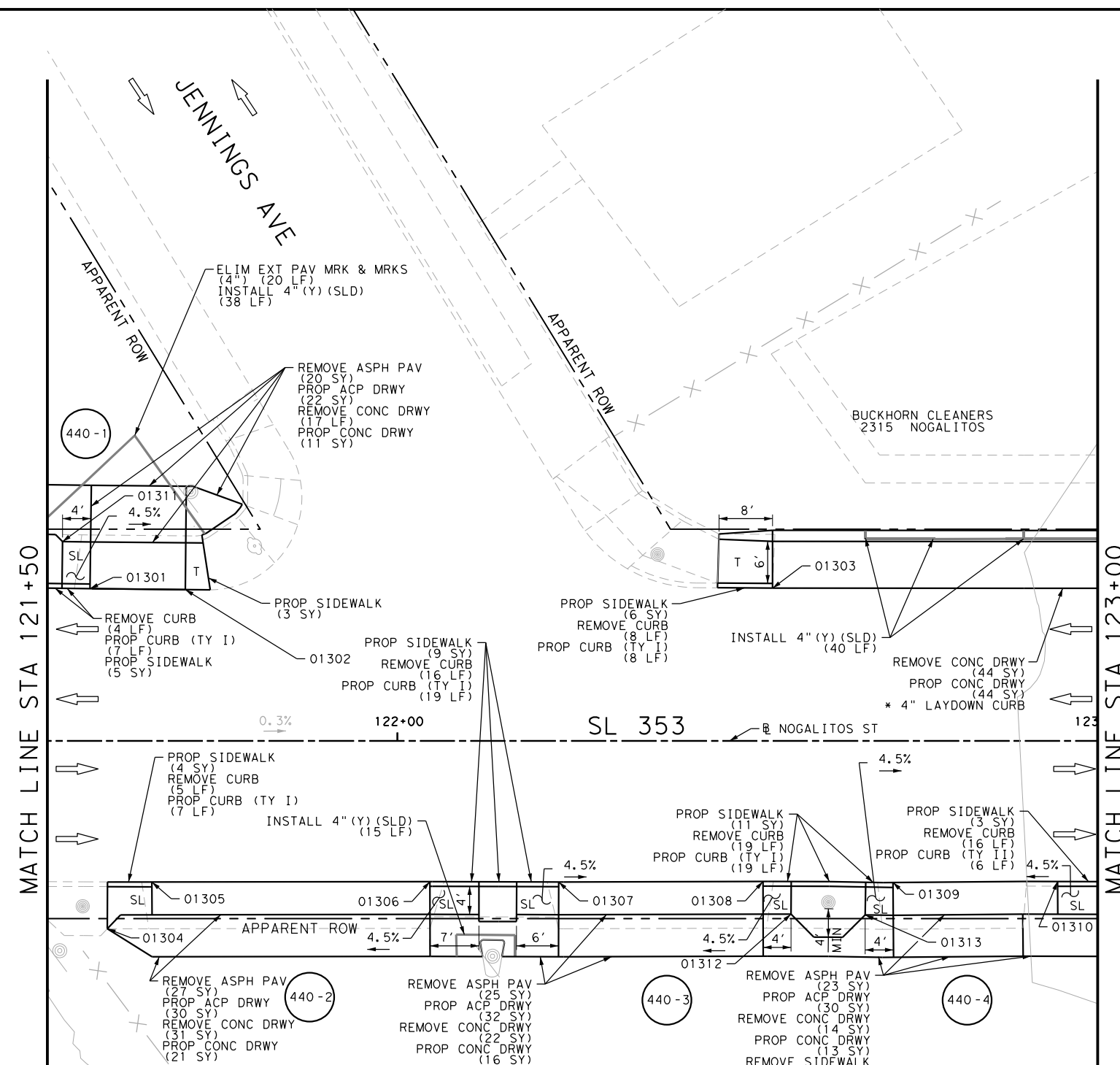
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 119+50 TO STA 121+50

SHEET 13 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				439

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_13.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	128
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	68
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	95
0529-6001	CONC CURB (TY I)	LF	60
0529-6002	CONC CURB (TY II)	LF	6
0530-6004	DRIVEWAYS (CONC)	SY	105
0530-6005	DRIVEWAYS (ACP)	SY	114
0531-6001	CONC SIDEWALKS (4")	SY	41
0666-6224	PAVEMENT SEALER 4"	LF	93
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	93
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	20
0678-6001	PAV SURF PREP FOR MRK (4")	LF	93

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01301	13692300.19	2121659.62	--	ME
01302	13692313.80	2121670.11	--	ME
01303	13692378.02	2121718.33	--	ME
01304	13692276.01	2121699.69	--	ME
01305	13692282.01	2121698.38	--	ME
01306	13692313.72	2121722.25	--	ME
01307	13692328.37	2121733.38	--	ME
01308	13692351.69	2121750.90	--	ME
01309	13692366.41	2121762.21	--	ME
01310	13692385.25	2121776.27	--	ME
01311	13692301.12	2121651.90	--	ME
01312	13692352.07	2121757.06	--	ME
01313	13692360.45	2121763.52	--	ME

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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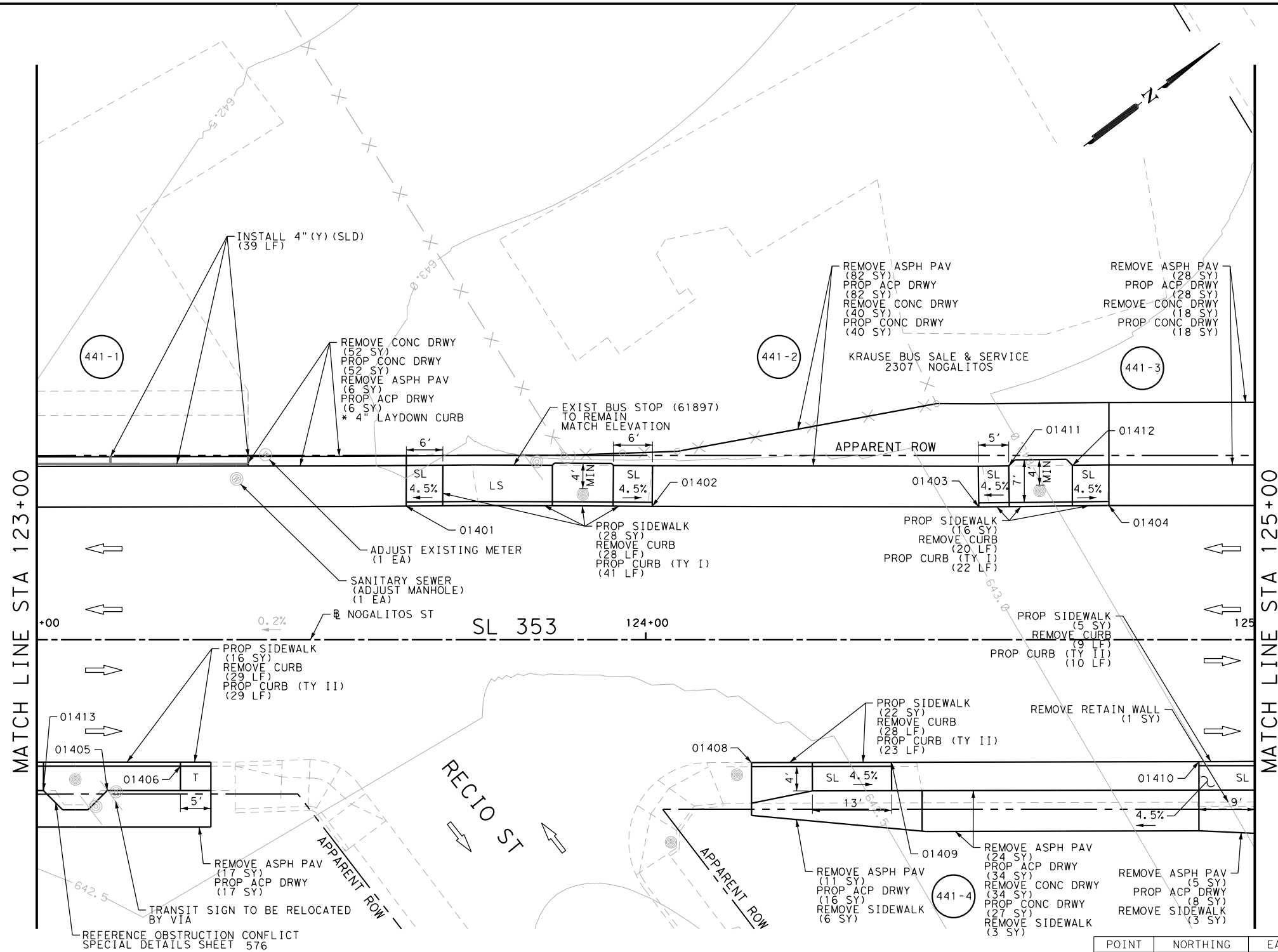
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 121+50 TO STA 123+00

SHEET 14 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				440

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_14.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	144
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	1
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	114
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	173
0529-6001	CONC CURB (TY I)	LF	63
0529-6002	CONC CURB (TY II)	LF	62
0530-6004	DRIVEWAYS (CONC)	SY	137
0530-6005	DRIVEWAYS (ACP)	SY	191
0531-6001	CONC SIDEWALKS (4")	SY	87
0666-6224	PAVEMENT SEALER 4"	LF	39
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	39
0678-6001	PAV SURF PREP FOR MRK (4")	LF	39
7194-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 123+00 TO STA 125+00

SHEET 15 OF 36

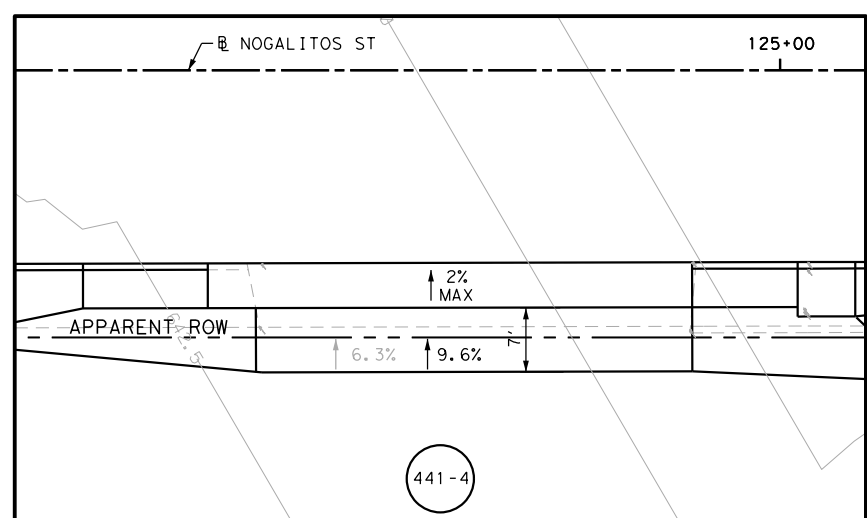
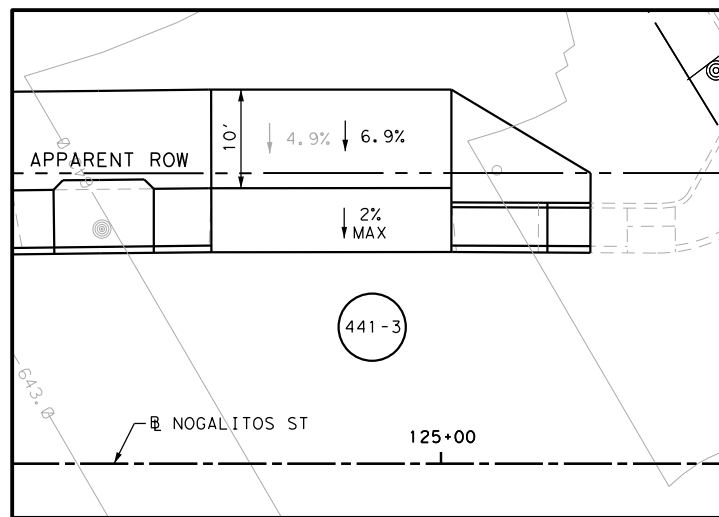
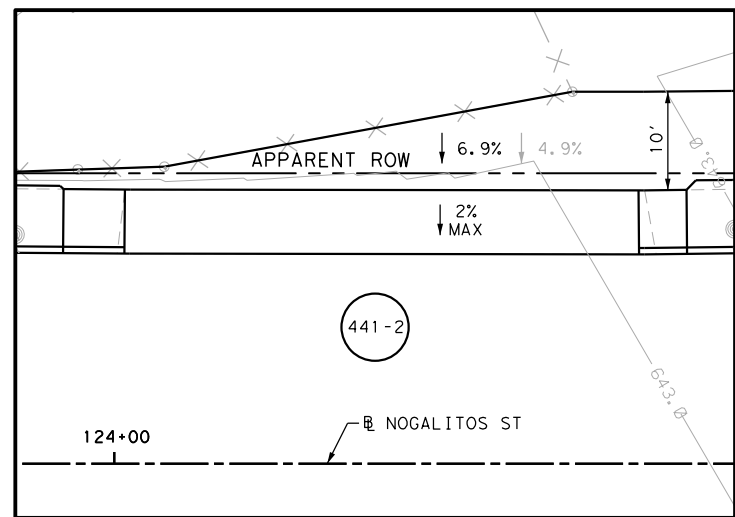
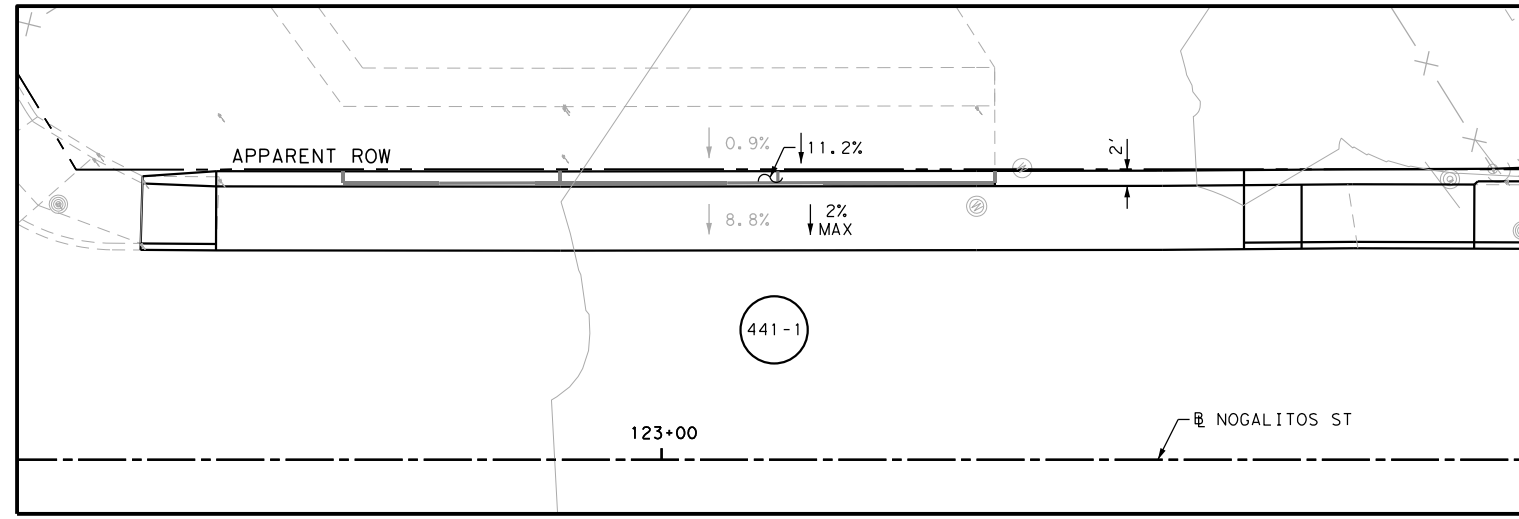
POINT	NORTHING	EASTING	ELEV	DESC
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01402	13692495.76	2121807.17	--	ME
01403	13692538.50	2121839.56	--	ME
01404	13692555.68	2121852.26	--	ME
01405	13692396.24	2121790.45	--	ME
01406	13692408.24	2121794.51	--	ME
01408	13692483.41	2121850.55	--	ME
01409	13692501.79	2121864.38	--	ME
01410	13692542.12	2121894.71	--	ME
01411	13692546.47	2121837.17	--	ME
01412	13692554.87	2121843.37	--	ME
01413	13692387.88	2121784.13	--	ME

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	441



Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_14\_A.dgn



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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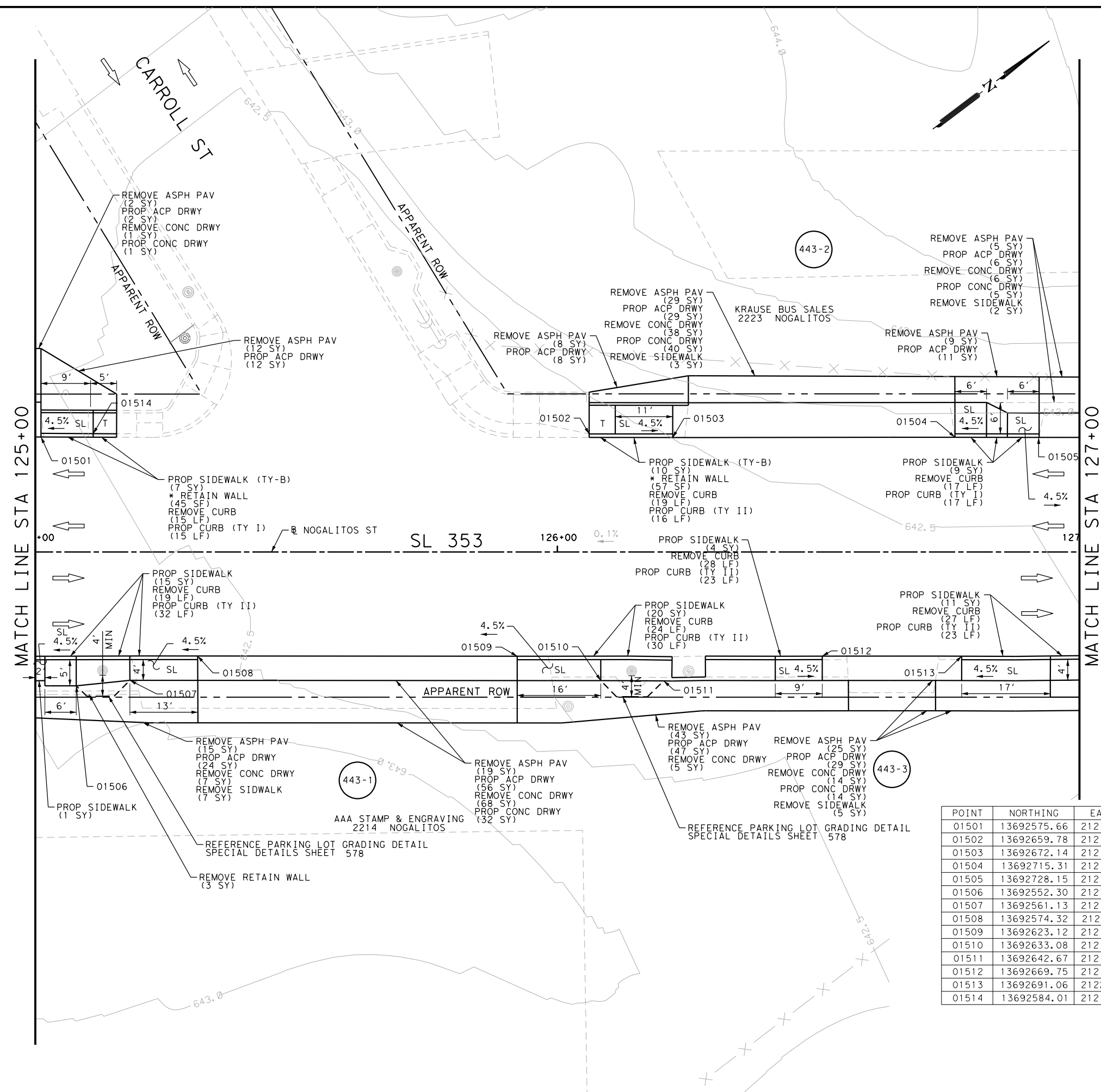
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 123+00 TO STA 125+00

SHEET 16 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				442

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_15.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	139
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	3
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	149
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	17
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	167
0529-6001	CONC CURB (TY I)	LF	32
0529-6002	CONC CURB (TY II)	LF	124
0530-6004	DRIVEWAYS (CONC)	SY	92
0530-6005	DRIVEWAYS (ACP)	SY	224
0531-6001	CONC SIDEWALKS (4")	SY	60
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.  
DATE 5/3/2019

REVIEW AND APPROVAL

James A. Lutz, P.E.  
DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01501	13692575.66	2121867.33	--	ME
01502	13692659.78	2121930.18	--	ME
01503	13692672.14	2121940.37	--	ME
01504	13692715.31	2121972.92	--	ME
01505	13692728.15	2121982.65	--	ME
01506	13692552.30	2121909.46	--	ME
01507	13692561.13	2121914.83	--	ME
01508	13692574.32	2121918.91	--	ME
01509	13692623.12	2121955.86	--	ME
01510	13692633.08	2121969.22	--	ME
01511	13692642.67	2121976.55	--	ME
01512	13692669.75	2121991.05	--	ME
01513	13692691.06	2122007.17	--	ME
01514	13692584.01	2121872.86	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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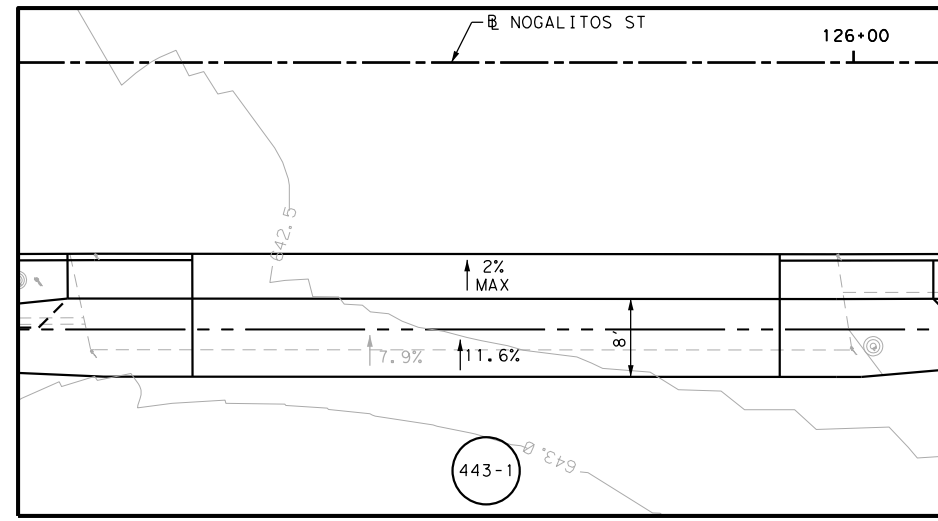
SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 125+00 TO STA 127+00

SHEET 17 OF 36

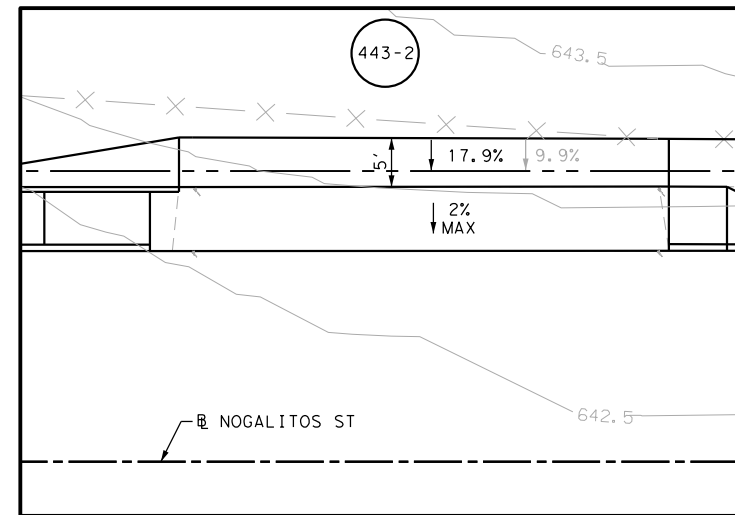
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	SAT	BEXAR	0915	12	576	443

Plotted on: 5/3/2019

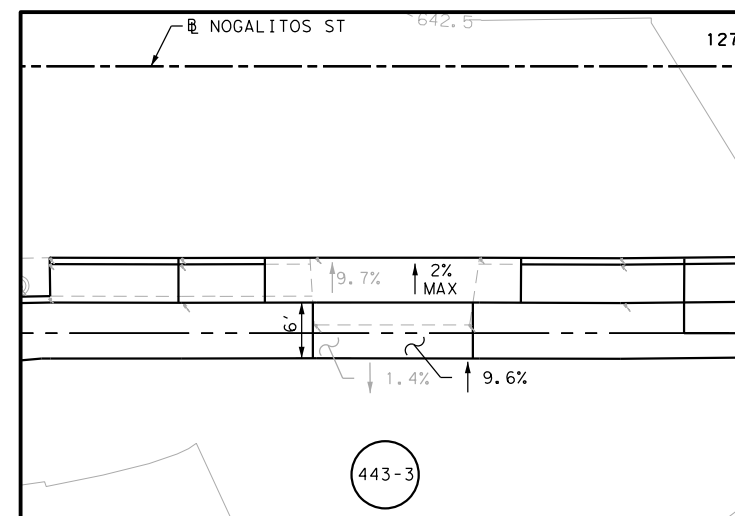
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DRWY PLAN STA 125+62

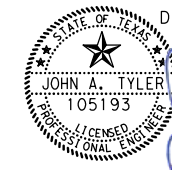


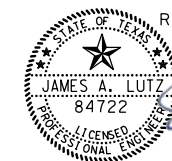
DRWY PLAN STA 126+49



DRWY PLAN STA 126+65

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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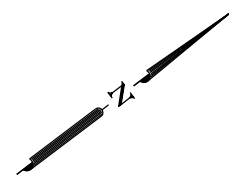
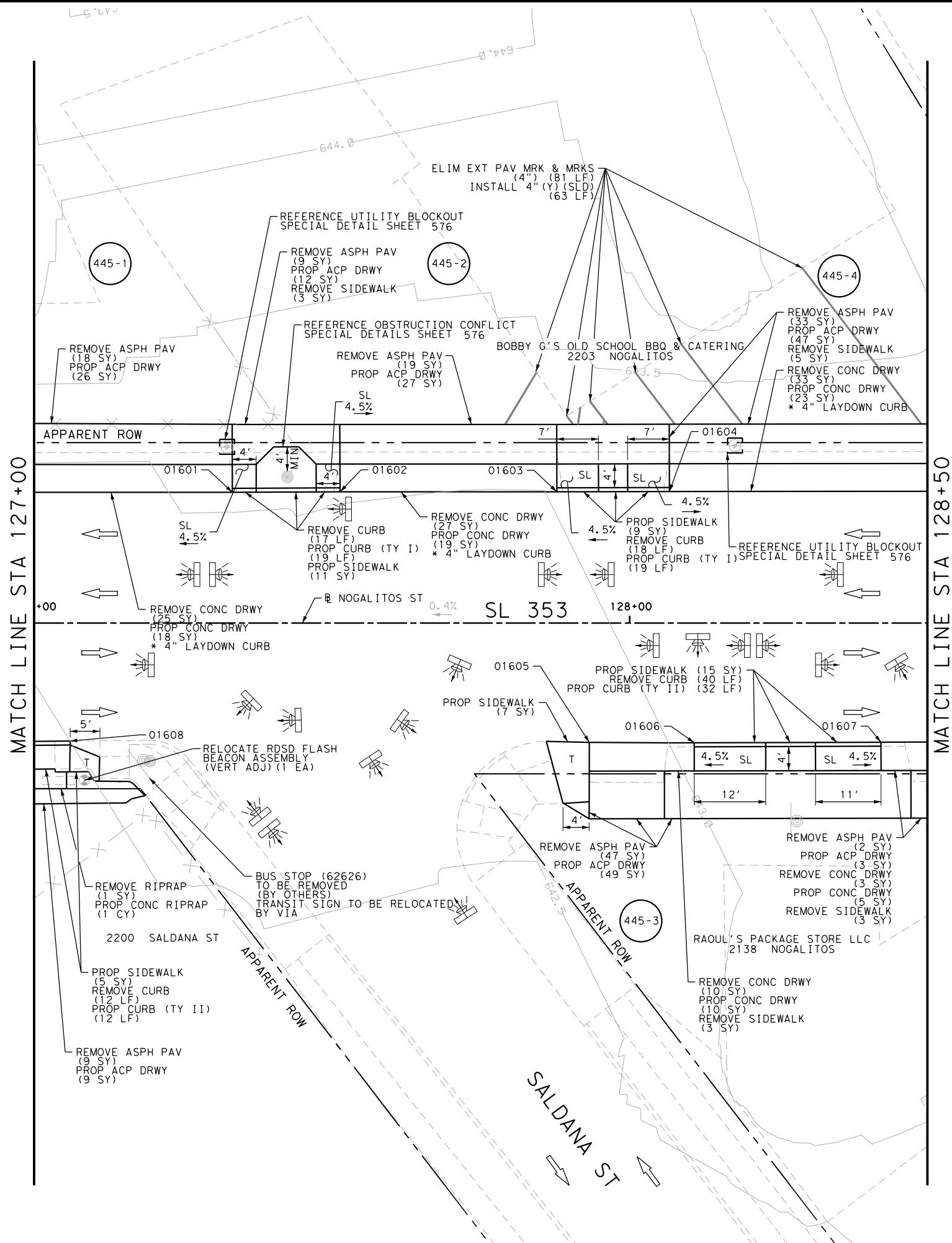
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 125+00 TO STA 127+00

SHEET 18 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	444

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_16.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	1
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	98
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	87
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	14
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	137
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0496-6041	REMOV STR (LARGE)	EA	1
0529-6001	CONC CURB (TY I)	LF	38
0529-6002	CONC CURB (TY II)	LF	44
0530-6004	DRIVEWAYS (CONC)	SY	75
0530-6005	DRIVEWAYS (ACP)	SY	173
0531-6001	CONC SIDEWALKS (4")	SY	47
0666-6224	PAVEMENT SEALER 4"	LF	63
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	63
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	81
0678-6001	PAV SURF PREP FOR MRK (4")	LF	63
0685-6002	RELOCATE RSD FLASH BEACON ASSEMBLY	EA	1

NOTES:  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01601	13692760.88	2122007.39	--	ME
01602	13692775.37	2122018.22	--	ME
01603	13692804.40	2122040.16	--	ME
01604	13692819.51	2122051.51	--	ME
01605	13692783.39	2122077.01	--	ME
01606	13692797.40	2122087.68	--	ME
01607	13692822.48	2122106.51	--	ME
01608	13692713.56	2122024.82	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



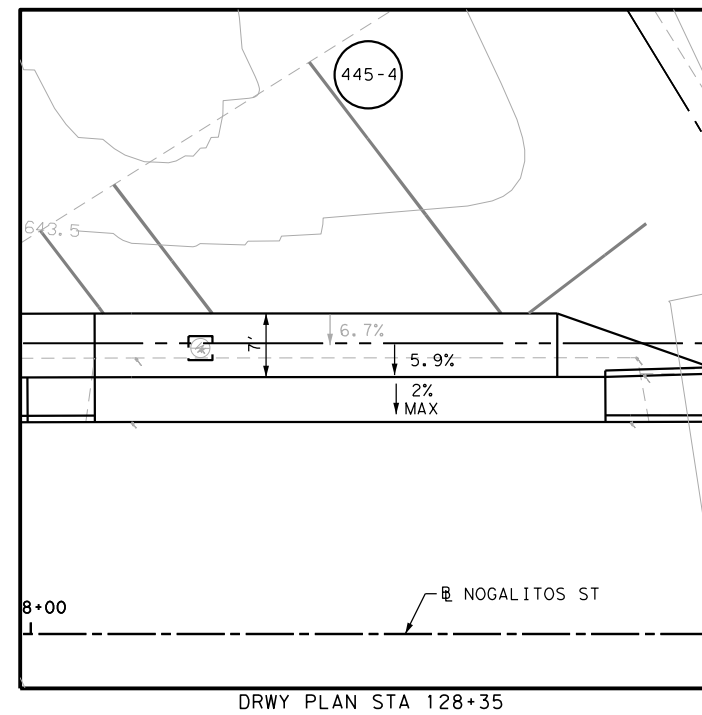
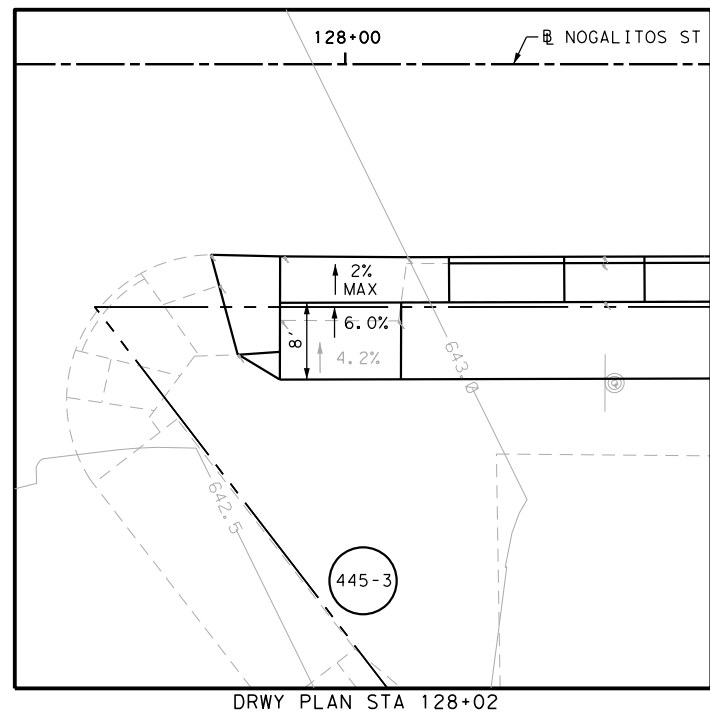
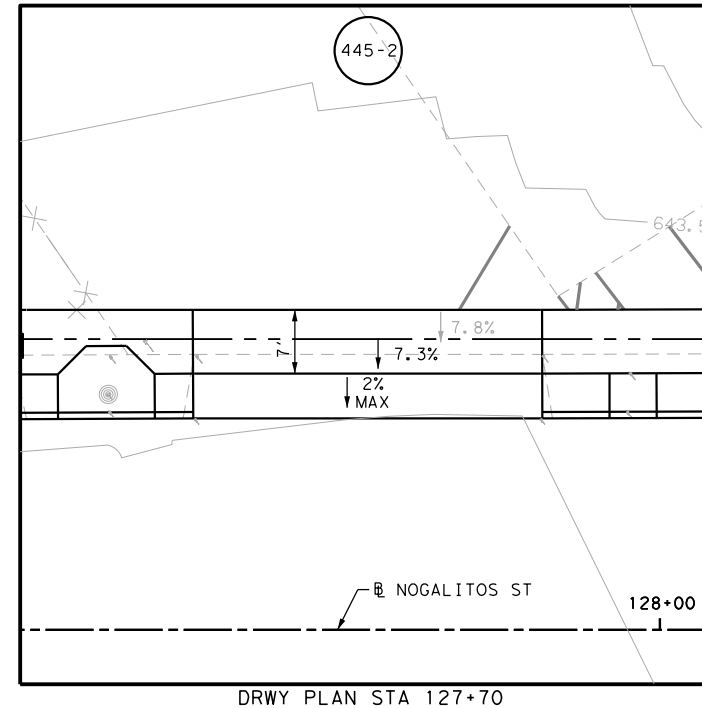
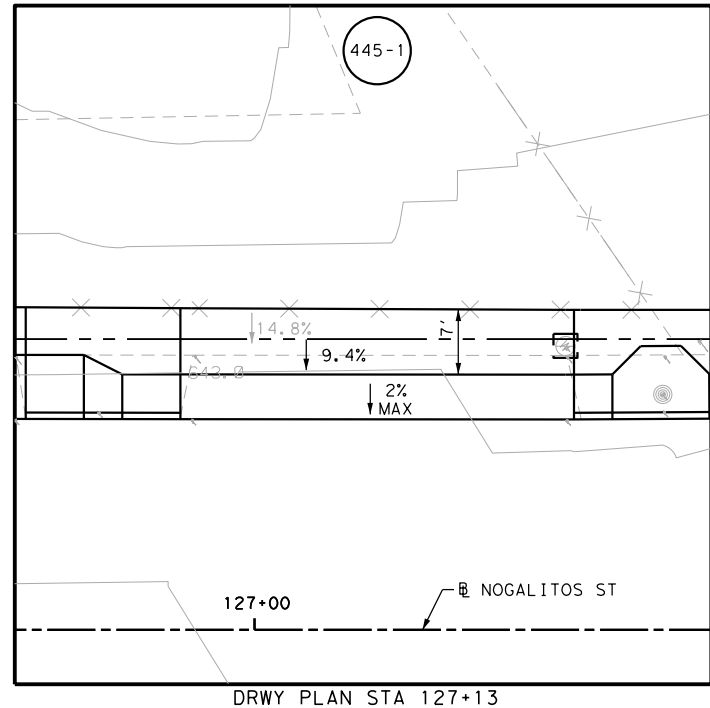
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 127+00 TO STA 128+50

SHEET 19 OF 36

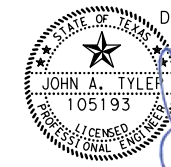
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	445

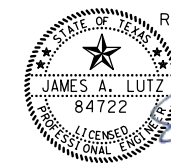
Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_16\_A.dgn



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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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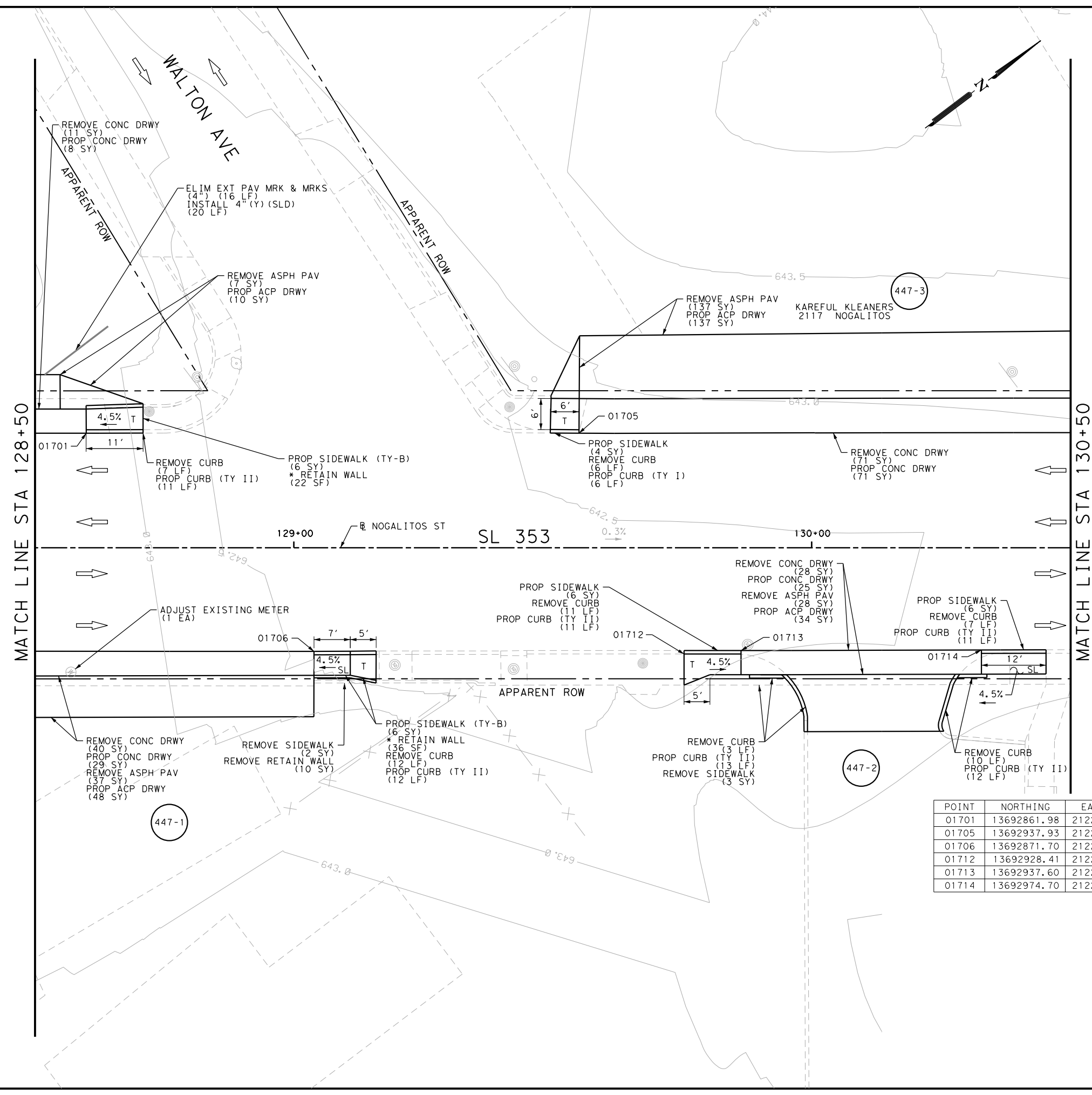
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 127+00 TO STA 128+50

SHEET 20 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				446

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_17.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	150
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	10
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	56
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	209
0529-6001	CONC CURB (TY I)	LF	18
0529-6002	CONC CURB (TY II)	LF	58
0530-6004	DRIVEWAYS (CONC)	SY	133
0530-6005	DRIVEWAYS (ACP)	SY	229
0531-6001	CONC SIDEWALKS (4")	SY	16
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	12
0666-6224	PAVEMENT SEALER 4"	LF	20
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	20
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	16
0678-6001	PAV SURF PREP FOR MRK (4")	LF	20
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

NOTES:  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
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DESIGN

JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01701	13692861.98	2122083.57	--	ME
01705	13692937.93	2122140.92	--	ME
01706	13692871.70	2122143.68	--	ME
01712	13692928.41	2122187.17	--	ME
01713	13692937.60	2122193.27	--	ME
01714	13692974.70	2122221.17	--	ME

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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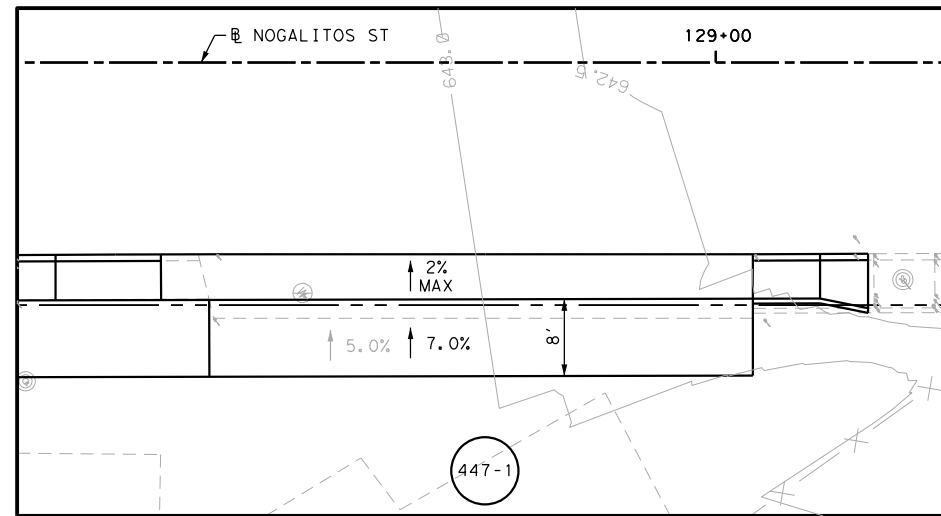
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 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 128+50 TO STA 130+50

SHEET 21 OF 36

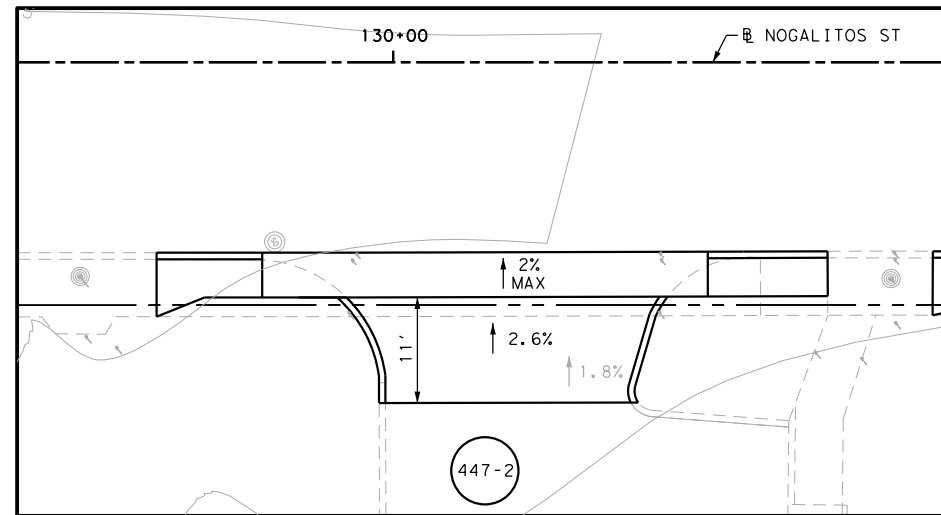
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	447

Plotted on: 5/3/2019

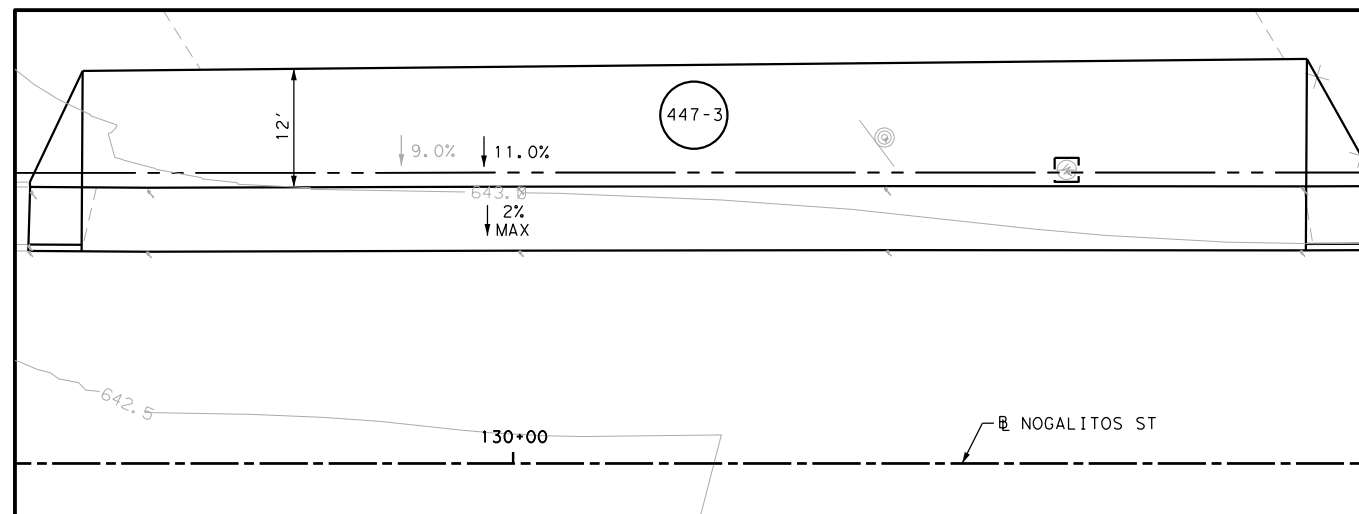
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DRWY PLAN STA 128+76



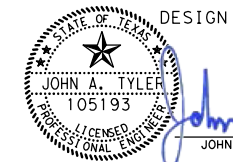
DRWY PLAN STA 130+10



DRWY PLAN STA 130+19

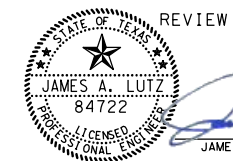
NOTES:

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- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN

JOHN A. TYLER, P.E.  
DATE 5/3/2019



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 128+50 TO STA 130+50

SHEET 22 OF 36

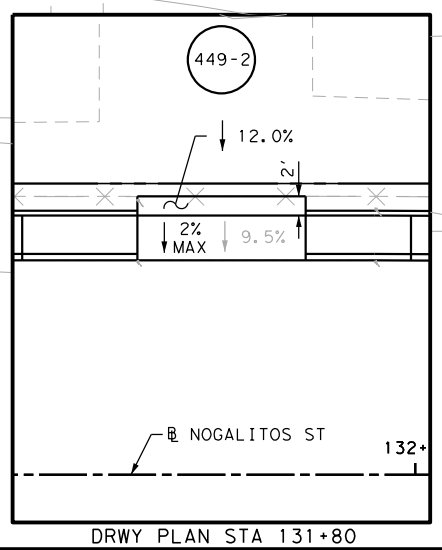
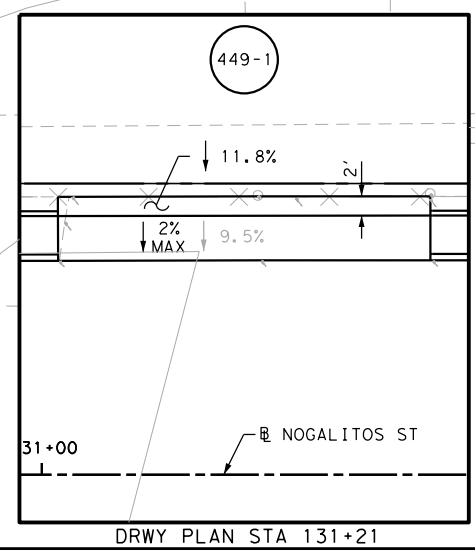
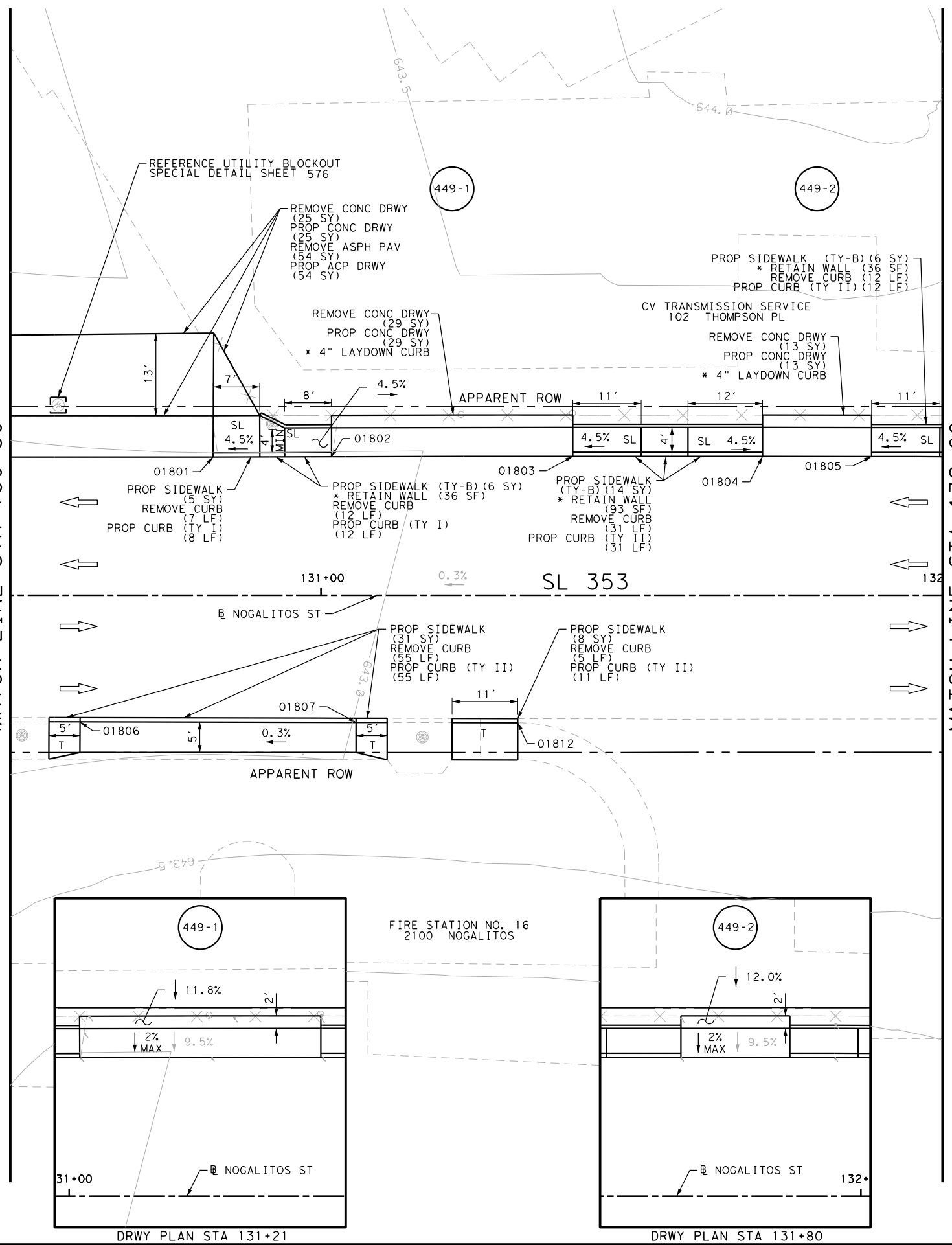
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	448

Plotted on: 5/3/2019

Design File name: P:\111.35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_18.dgn

MATCH LINE STA 130+50

MATCH LINE STA 132+00



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	67
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	122
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	54
0529-6001	CONC CURB (TY I)	LF	20
0529-6002	CONC CURB (TY II)	LF	109
0530-6004	DRIVEWAYS (CONC)	SY	67
0530-6005	DRIVEWAYS (ACP)	SY	54
0531-6001	CONC SIDEWALKS (4")	SY	44
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	26

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01801	13693039.76	2122217.74	--	ME
01802	13693055.02	2122229.19	--	ME
01803	13693086.01	2122252.54	--	ME
01804	13693110.38	2122270.95	--	ME
01805	13693124.36	2122281.52	--	ME
01806	13692997.03	2122238.81	--	ME
01807	13693032.41	2122265.66	--	ME
01812	13693053.13	2122281.38	--	ME

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 130+50 TO STA 132+00

SHEET 23 OF 36

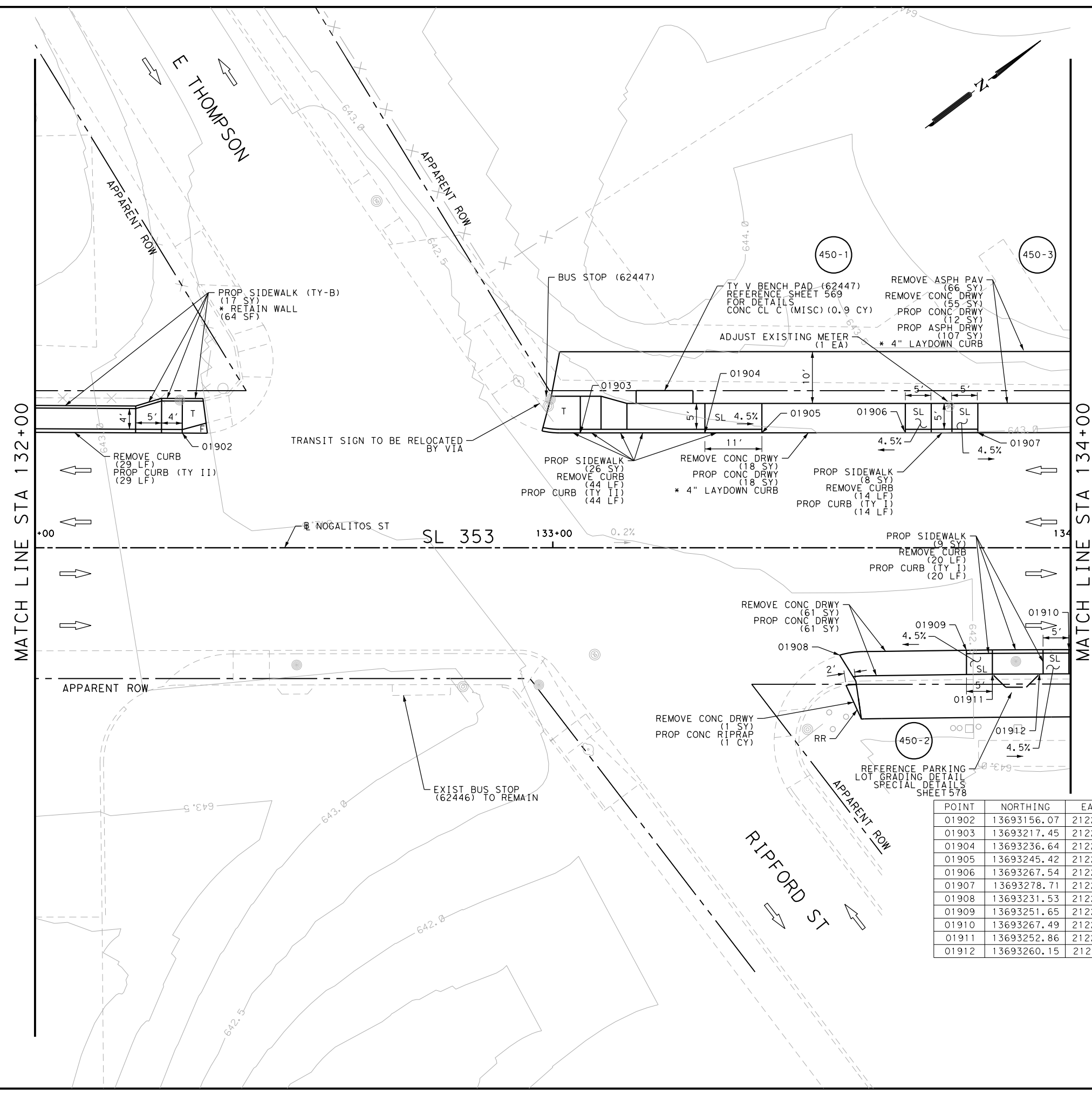
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	449



Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_19.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	135
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	107
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	66
0420-6074	CL C CONC (MISC)	CY	0.9
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6001	CONC CURB (TY I)	LF	34
0529-6002	CONC CURB (TY II)	LF	73
0530-6004	DRIVEWAYS (CONC)	SY	91
0530-6005	DRIVEWAYS (ACP)	SY	107
0531-6001	CONC SIDEWALKS (4")	SY	43
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1



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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
01902	13693156.07	2122305.68	--	ME
01903	13693217.45	2122352.02	--	ME
01904	13693236.64	2122366.50	--	ME
01905	13693245.42	2122373.13	--	ME
01906	13693267.54	2122389.83	--	ME
01907	13693278.71	2122398.27	--	ME
01908	13693231.53	2122416.45	--	ME
01909	13693251.65	2122430.42	--	ME
01910	13693267.49	2122442.27	--	ME
01911	13693252.86	2122437.15	--	ME
01912	13693260.15	2122442.61	--	ME

REV. NO. DATE DESCRIPTION BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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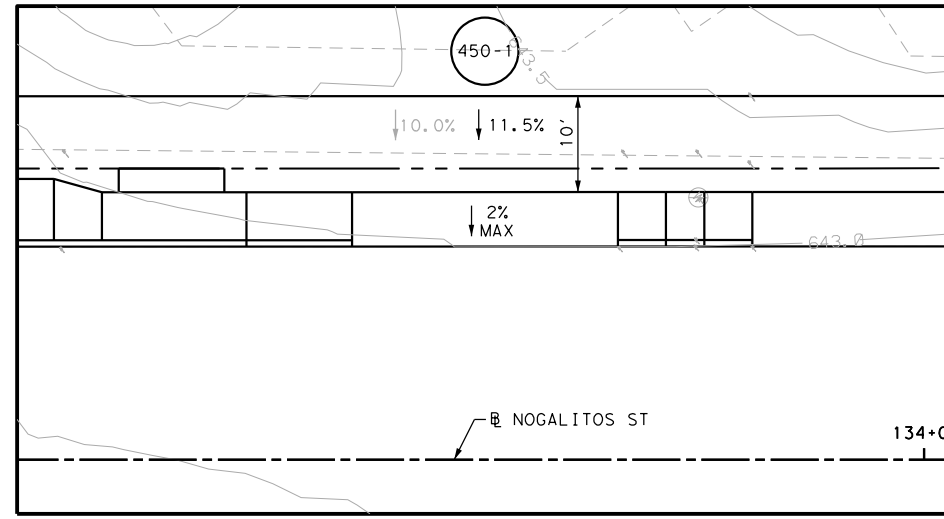
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 132+00 TO STA 134+00

SHEET 24 OF 36

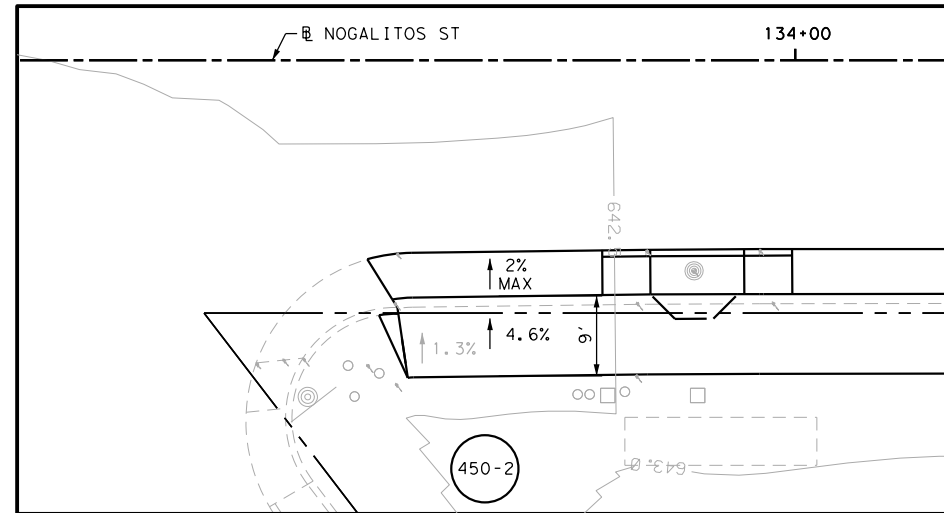
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				450

Plotted on: 5/3/2019

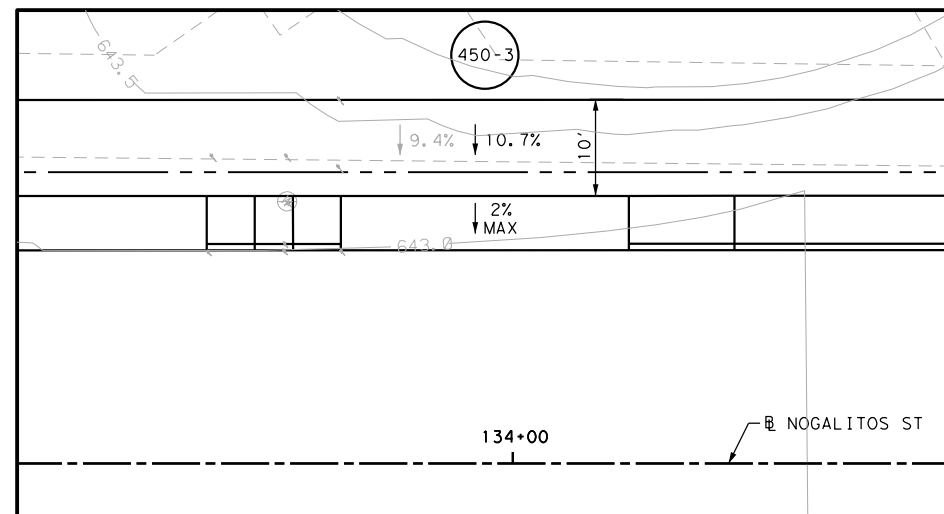
Design Filename: P:\111\35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_19\_A.dgn



DRWY PLAN STA 133+54



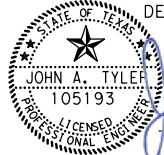
DRWY PLAN STA 133+68

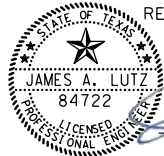


DRWY PLAN STA 133+97

NOTES:

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- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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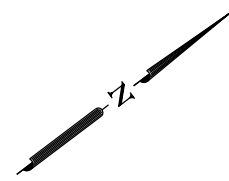
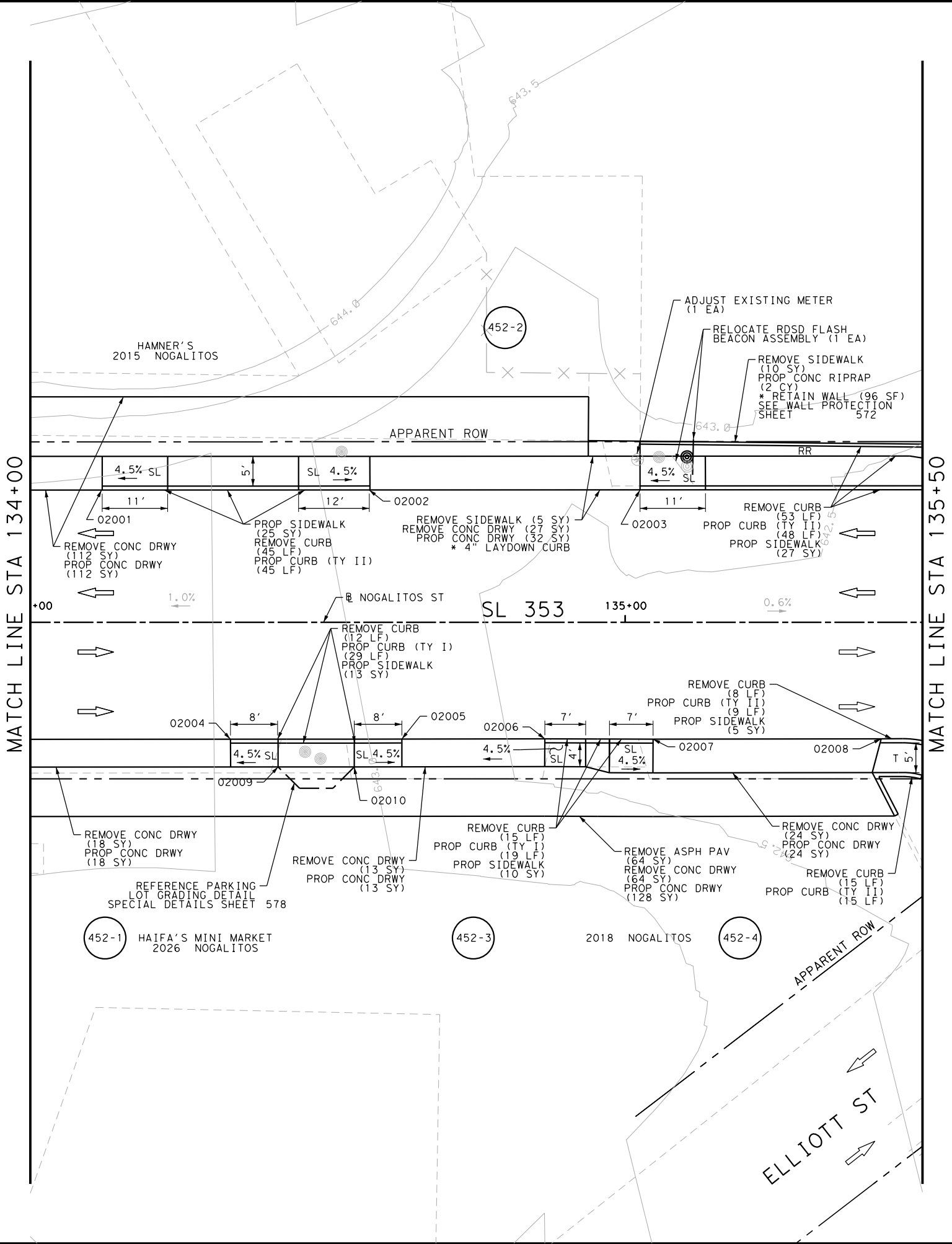
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 132+00 TO STA 134+00

SHEET 25 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				451

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_20.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	258
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	148
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	15
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	64
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6001	CONC CURB (TY I)	LF	48
0529-6002	CONC CURB (TY II)	LF	117
0530-6004	DRIVEWAYS (CONC)	SY	327
0531-6001	CONC SIDEWALKS (4")	SY	80
0685-6002	RELOCATE RDS FLASH BEACON ASSEMBLY	EA	1
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

- NOTES:
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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
02001	13693302.57	2122416.28	--	ME
02002	13693338.49	2122443.39	--	ME
02003	13693374.81	2122470.81	--	ME
02004	13693294.63	2122462.75	--	ME
02005	13693317.62	2122480.10	--	ME
02006	13693336.81	2122494.55	--	ME
02007	13693351.30	2122505.57	--	ME
02008	13693381.93	2122528.63	--	ME
02009	13693298.21	2122471.30	--	ME
02010	13693308.42	2122479.01	--	ME

**Pape-Dawson Engineers**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

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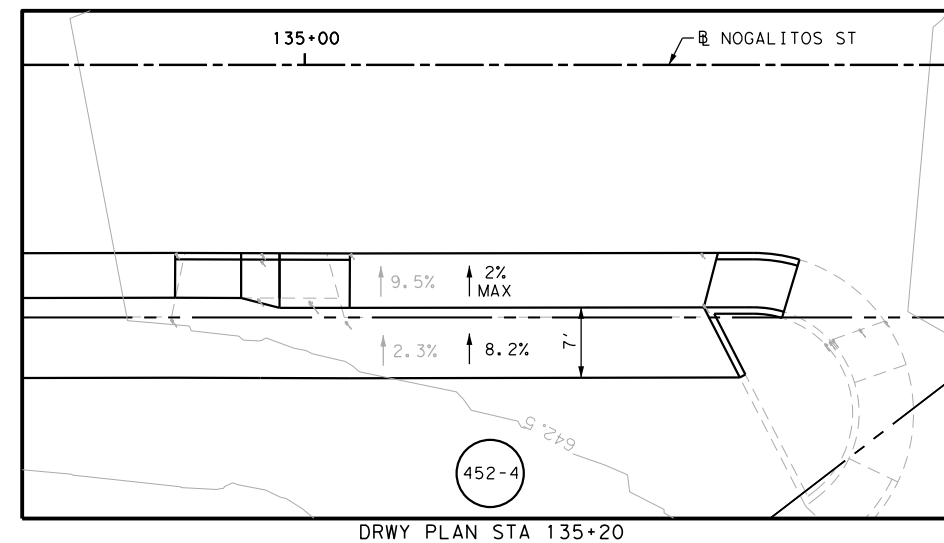
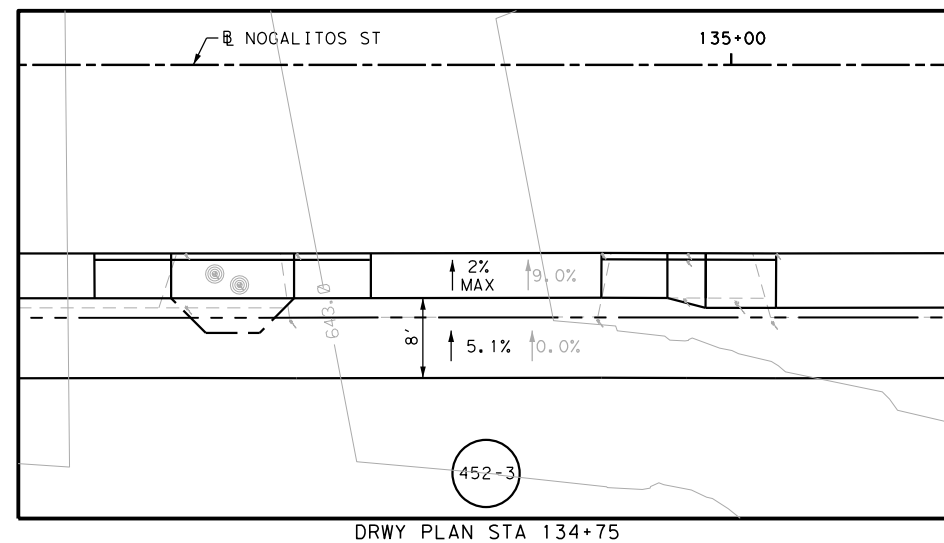
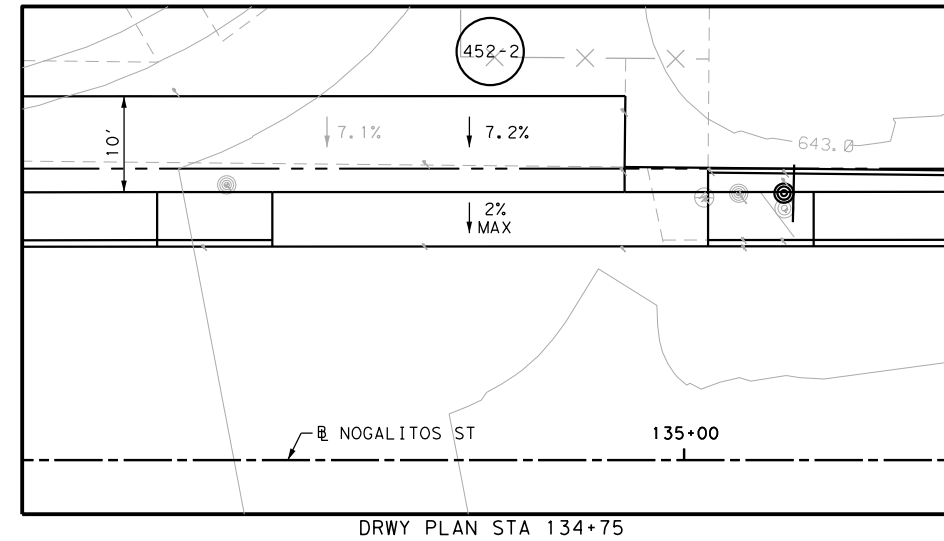
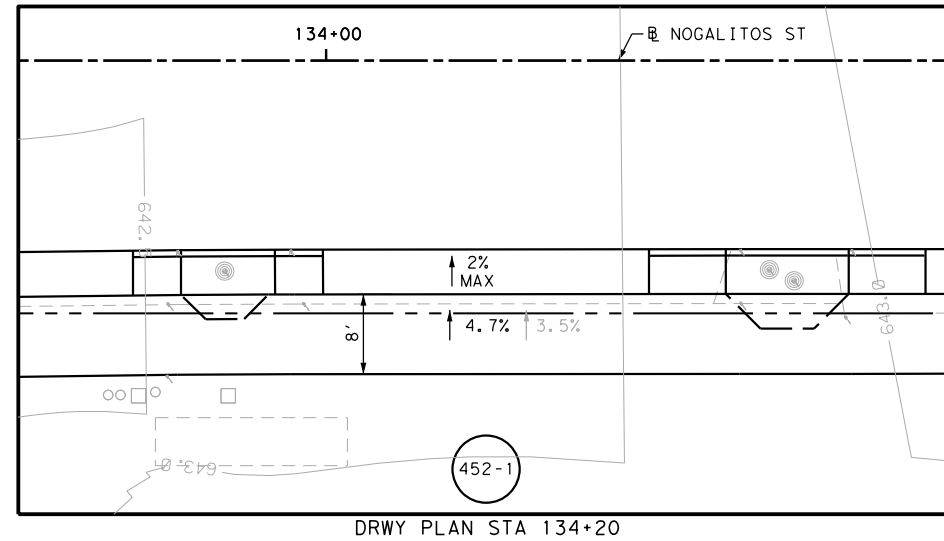
SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 134+00 TO STA 135+50

SHEET 26 OF 36

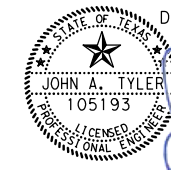
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	452

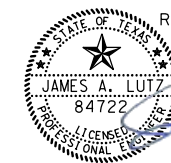
Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_20\_A.dgn



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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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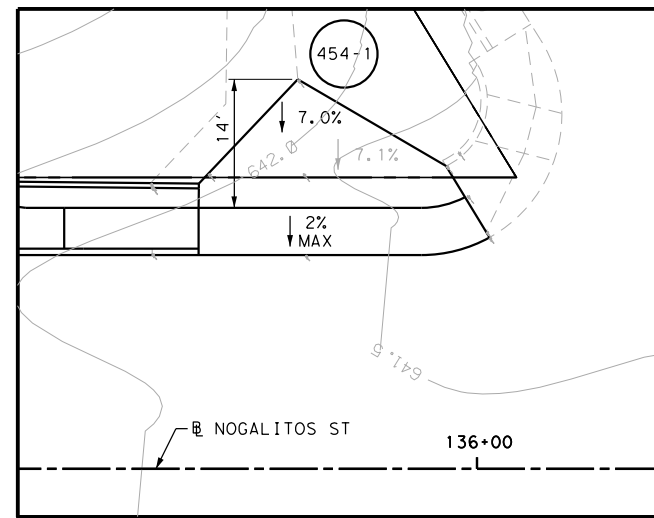
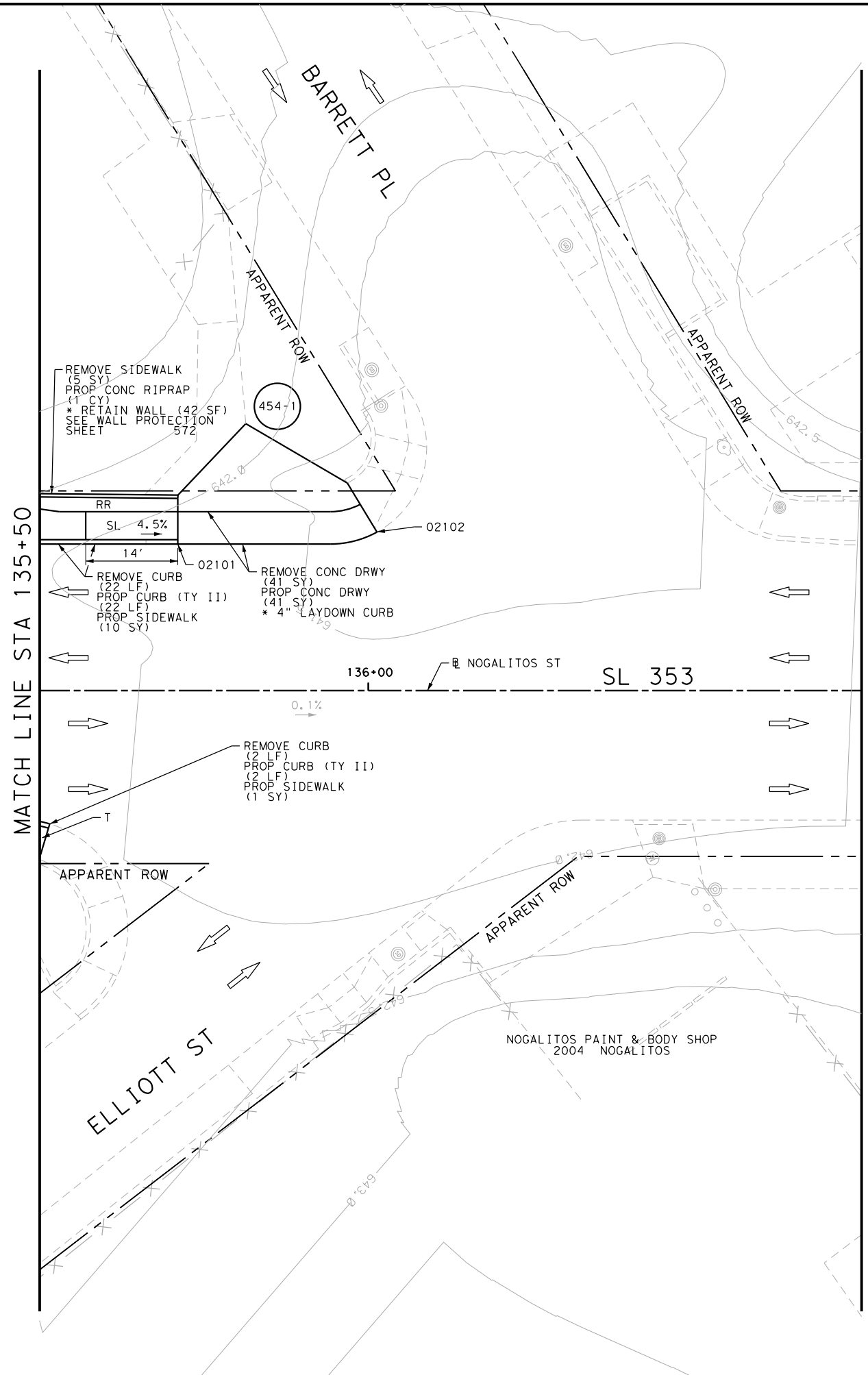
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 134+00 TO STA 135+50

SHEET 27 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	453

Plotted on: 5/3/2019

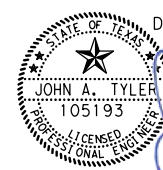
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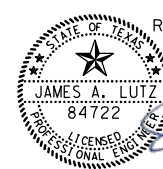


POINT	NORTHING	EASTING	ELEV	DESC
02101	13693429.49	2122512.09	--	ME
02102	13693454.77	2122528.89	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	41
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	24
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	24
0530-6004	DRIVEWAYS (CONC)	SY	41
0531-6001	CONC SIDEWALKS (4")	SY	11

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DESIGN  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 135+50 TO STA 136+75

SHEET 28 OF 36

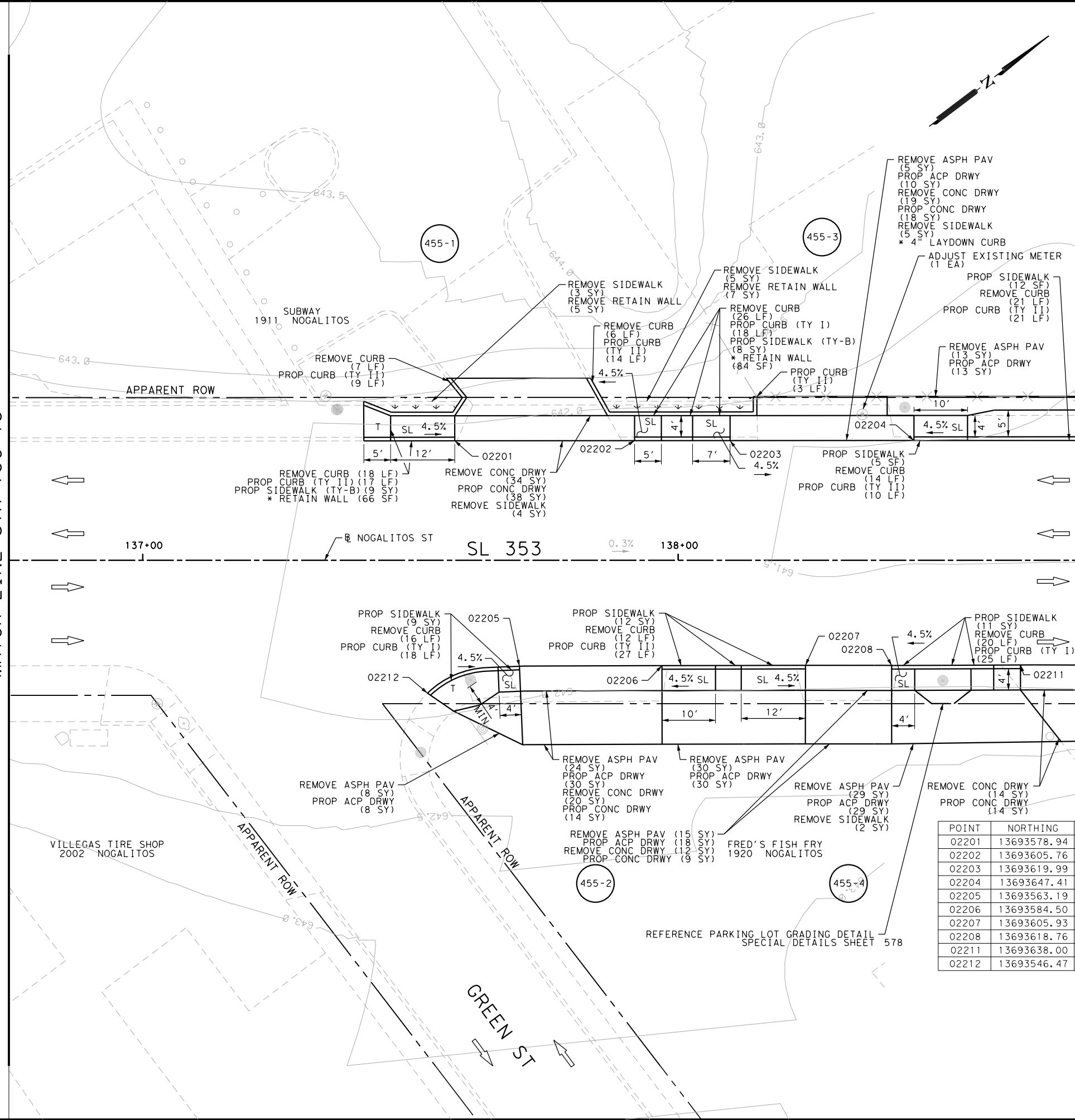
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	454

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_22.dgn

MATCH LINE STA 136+75

MATCH LINE STA 138+75



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	99
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	12
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	140
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	19
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	124
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	14
0162-6002	BLOCK SODDING	SY	14
0168-6001	VEGETATIVE WATERING	MG	0.22
0529-6001	CONC CURB (TY I)	LF	61
0529-6002	CONC CURB (TY II)	LF	101
0530-6004	DRIVEWAYS (CONC)	SY	93
0530-6005	DRIVEWAYS (ACP)	SY	138
0531-6001	CONC SIDEWALKS (4")	SY	49
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
02201	13693578.94	2122624.96	--	ME
02202	13693605.76	2122645.19	--	ME
02203	13693619.99	2122655.93	--	ME
02204	13693647.41	2122676.62	--	ME
02205	13693563.19	2122665.82	--	ME
02206	13693584.50	2122681.78	--	ME
02207	13693605.93	2122697.90	--	ME
02208	13693618.76	2122707.61	--	ME
02211	13693638.00	2122722.05	--	ME
02212	13693546.47	2122659.49	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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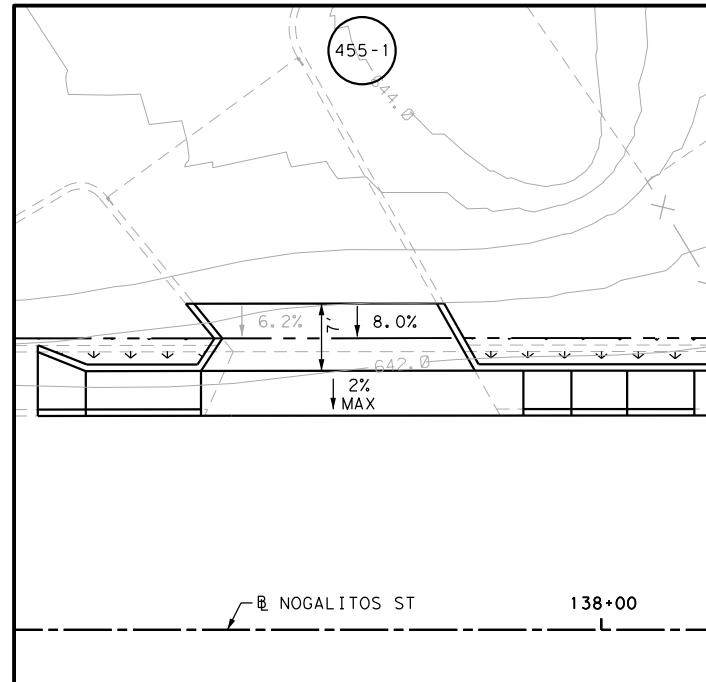
SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 136+75 TO STA 138+75

SHEET 29 OF 36

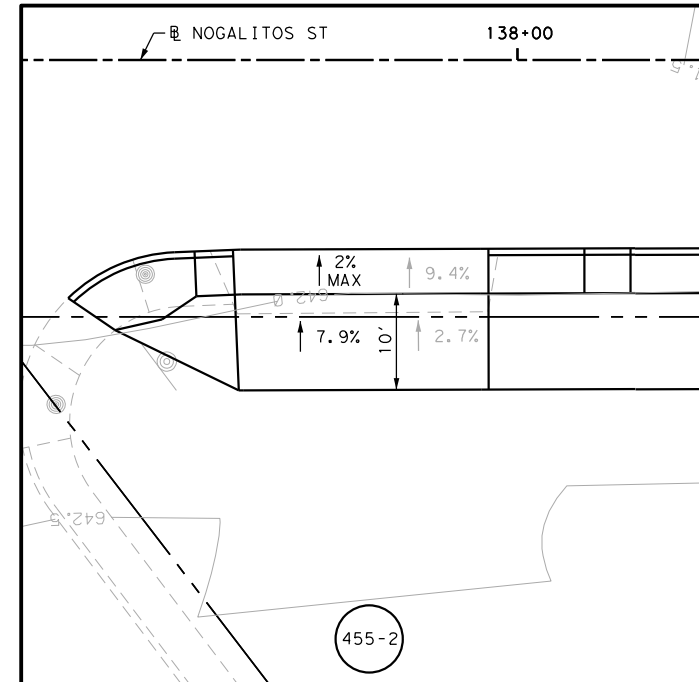
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	455

Plotted on: 5/3/2019

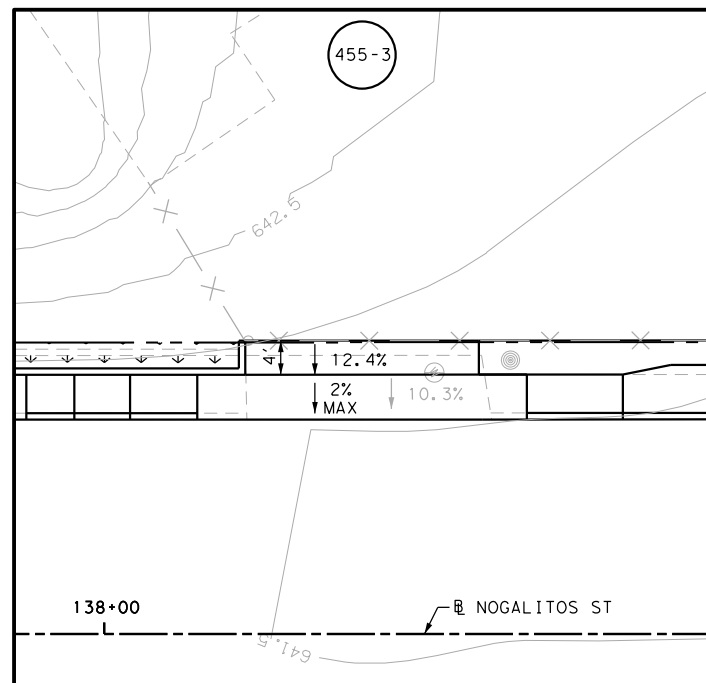
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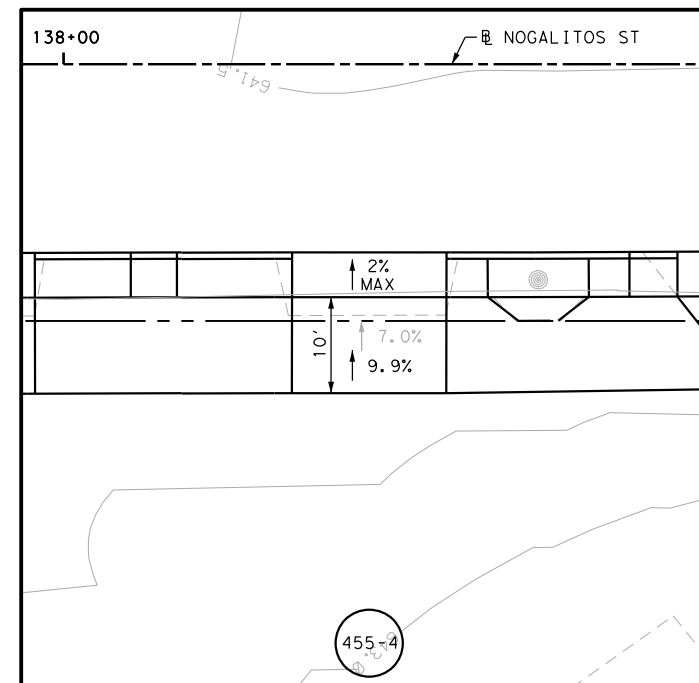
DRWY PLAN STA 137+75



DRWY PLAN STA 137+93

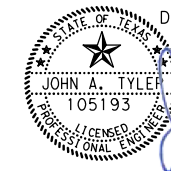


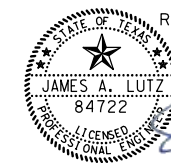
DRWY PLAN STA 138+27



DRWY PLAN STA 138+32

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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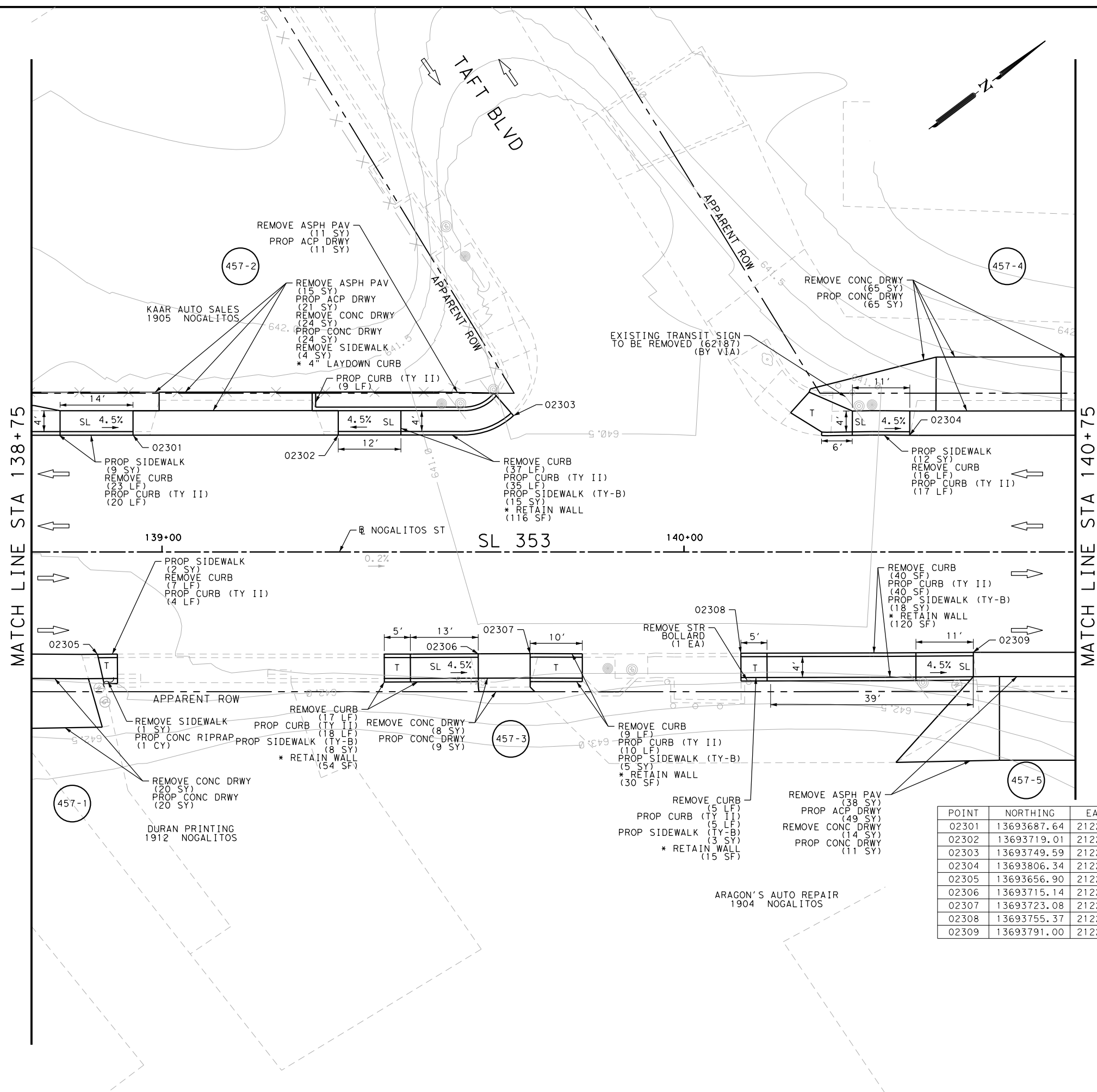
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 136+75 TO STA 138+75

SHEET 30 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	456

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_23.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	131
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	154
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	64
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0496-6030	REMOVE STR (BOLLARD)	EA	1
0529-6002	CONC CURB (TY II)	LF	158
0530-6004	DRIVEWAYS (CONC)	SY	129
0530-6005	DRIVEWAYS (ACP)	SY	81
0531-6001	CONC SIDEWALKS (4")	SY	23
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	49

NOTES:  
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
02301	13693687.64	2122706.98	--	ME
02302	13693719.01	2122730.66	--	ME
02303	13693749.59	2122747.70	--	ME
02304	13693806.34	2122796.69	--	ME
02305	13693656.90	2122736.37	--	ME
02306	13693715.14	2122780.26	--	ME
02307	13693723.08	2122786.25	--	ME
02308	13693755.37	2122810.52	--	ME
02309	13693791.00	2122837.22	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 138+75 TO STA 140+75

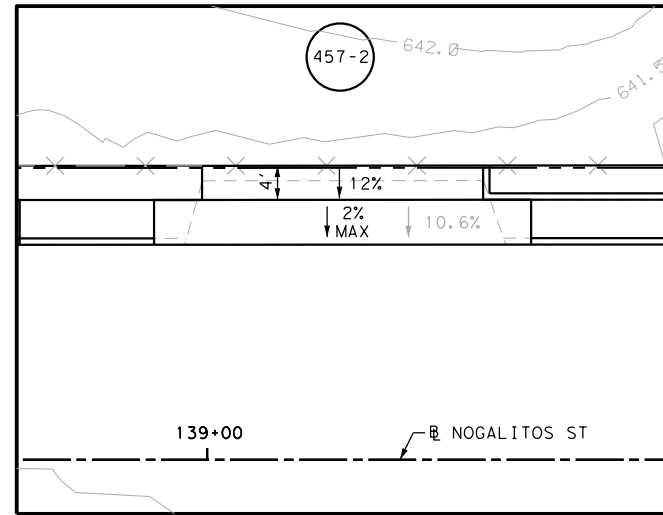
SHEET 31 OF 36

DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	457

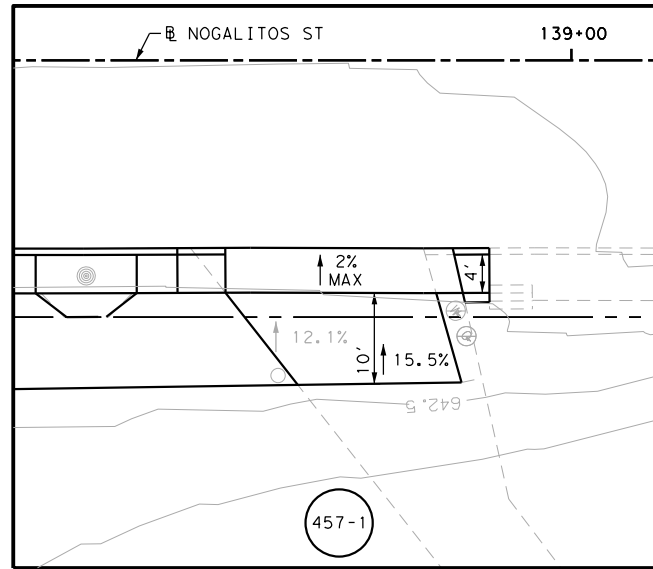


Plotted on: 5/3/2019

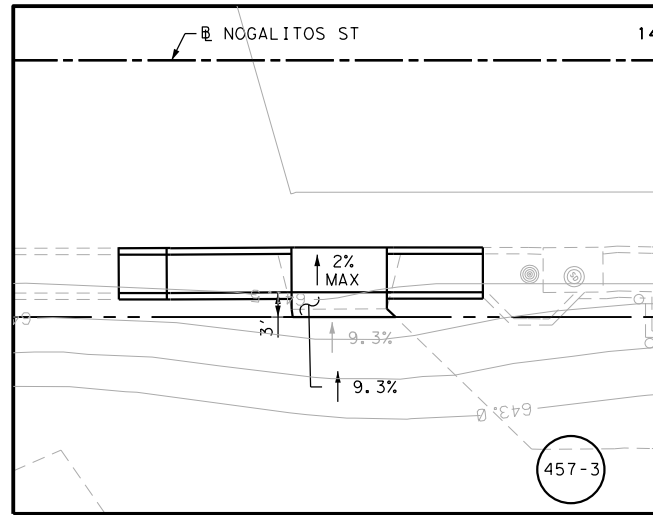
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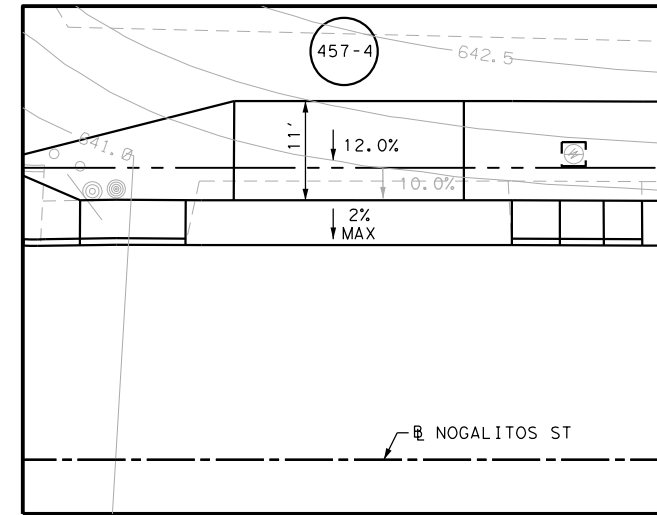
DRWY PLAN STA 139+14



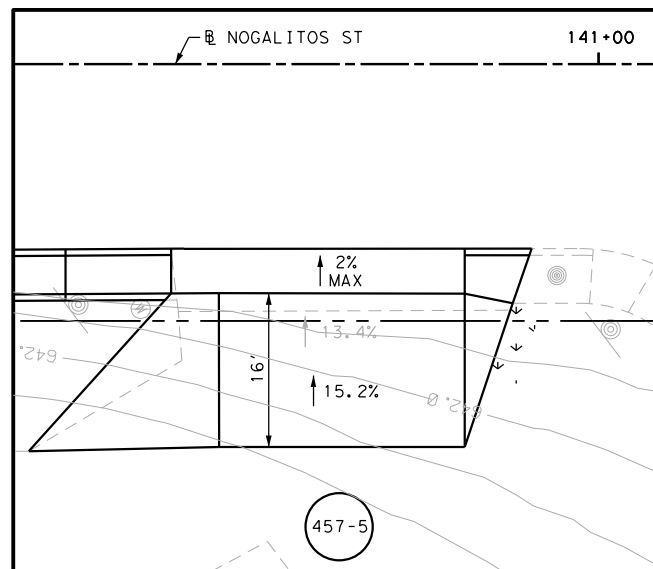
DRWY PLAN STA 138+77



DRWY PLAN STA 139+66



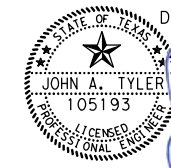
DRWY PLAN STA 140+60

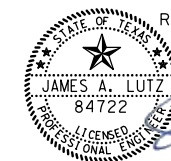


DRWY PLAN STA 140+73

NOTES:

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- 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2018

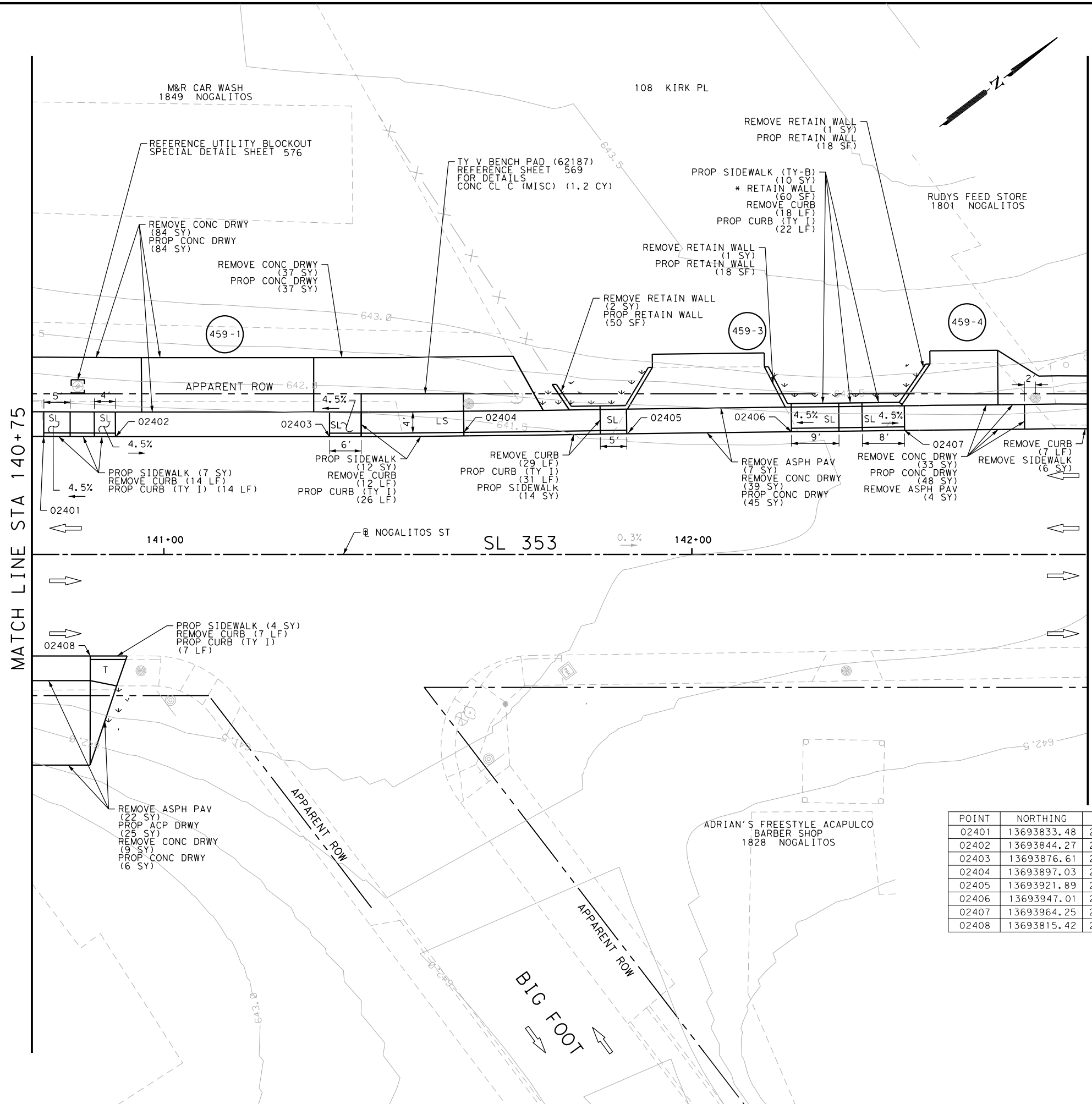
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 138+75 TO STA 140+75

SHEET 32 OF 36

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				458

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_24.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	202
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	4
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	87
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	6
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	33
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	32
0162-6002	BLOCK SODDING	SY	32
0168-6001	VEGETATIVE WATERING	MG	0.50
0420-6074	CL C CONC (MISC)	CY	1.2
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	86
0529-6001	CONC CURB (TY I)	LF	100
0530-6004	DRIVEWAYS (CONC)	SY	220
0530-6005	DRIVEWAYS (ACP)	SY	33
0531-6001	CONC SIDEWALKS (4")	SY	37
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
02401	13693833.48	2122817.19	--	ME
02402	13693844.27	2122825.42	--	ME
02403	13693876.61	2122849.86	--	ME
02404	13693897.03	2122865.07	--	ME
02405	13693921.89	2122883.34	--	ME
02406	13693947.01	2122901.87	--	ME
02407	13693964.25	2122914.56	--	ME
02408	13693815.42	2122855.68	--	ME

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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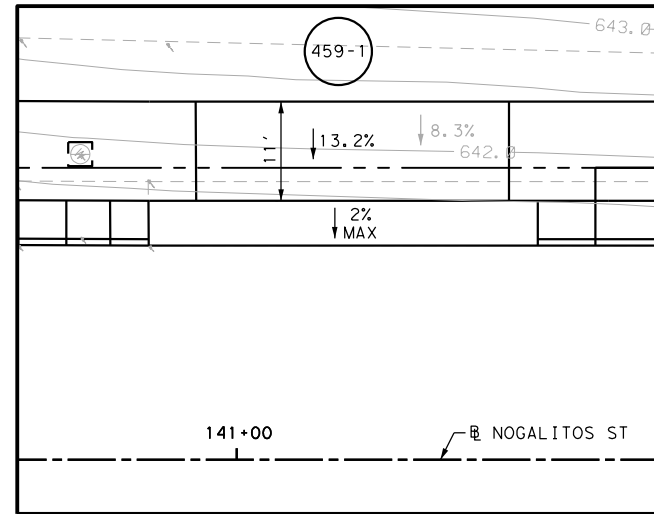
SL 353  
 NOGALITOS ST  
**SIDEWALK  
 CONSTRUCTION PLAN**  
 STA 140+75 TO STA 142+75

SHEET 33 OF 36

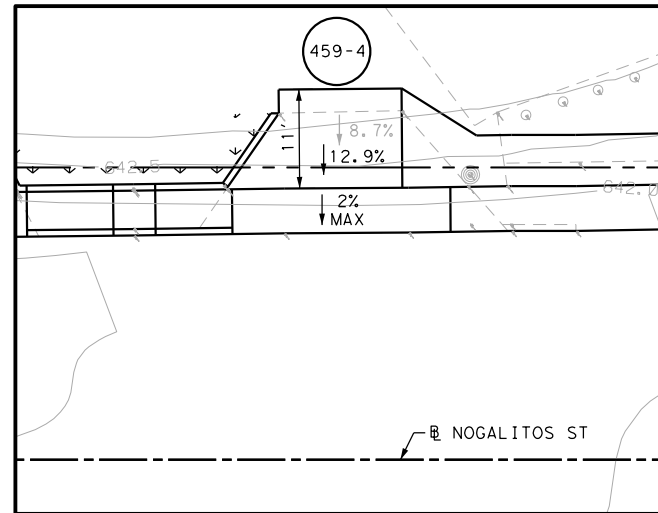
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				459

Plotted on: 5/3/2019

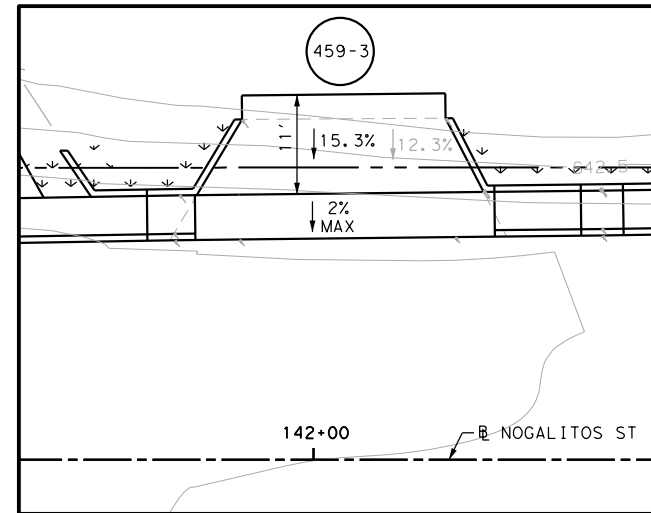
Design File name: P:\1111\35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_24\_A.dgn



DRWY PLAN STA 141+11



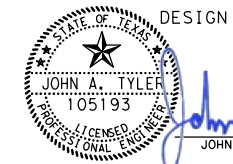
DRWY PLAN STA 142+52



DRWY PLAN STA 142+03

NOTES:

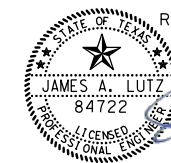
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN

JOHN A. TYLER, P.E.  
DATE

5/3/2019



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE

5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 140+75 TO STA 142+75

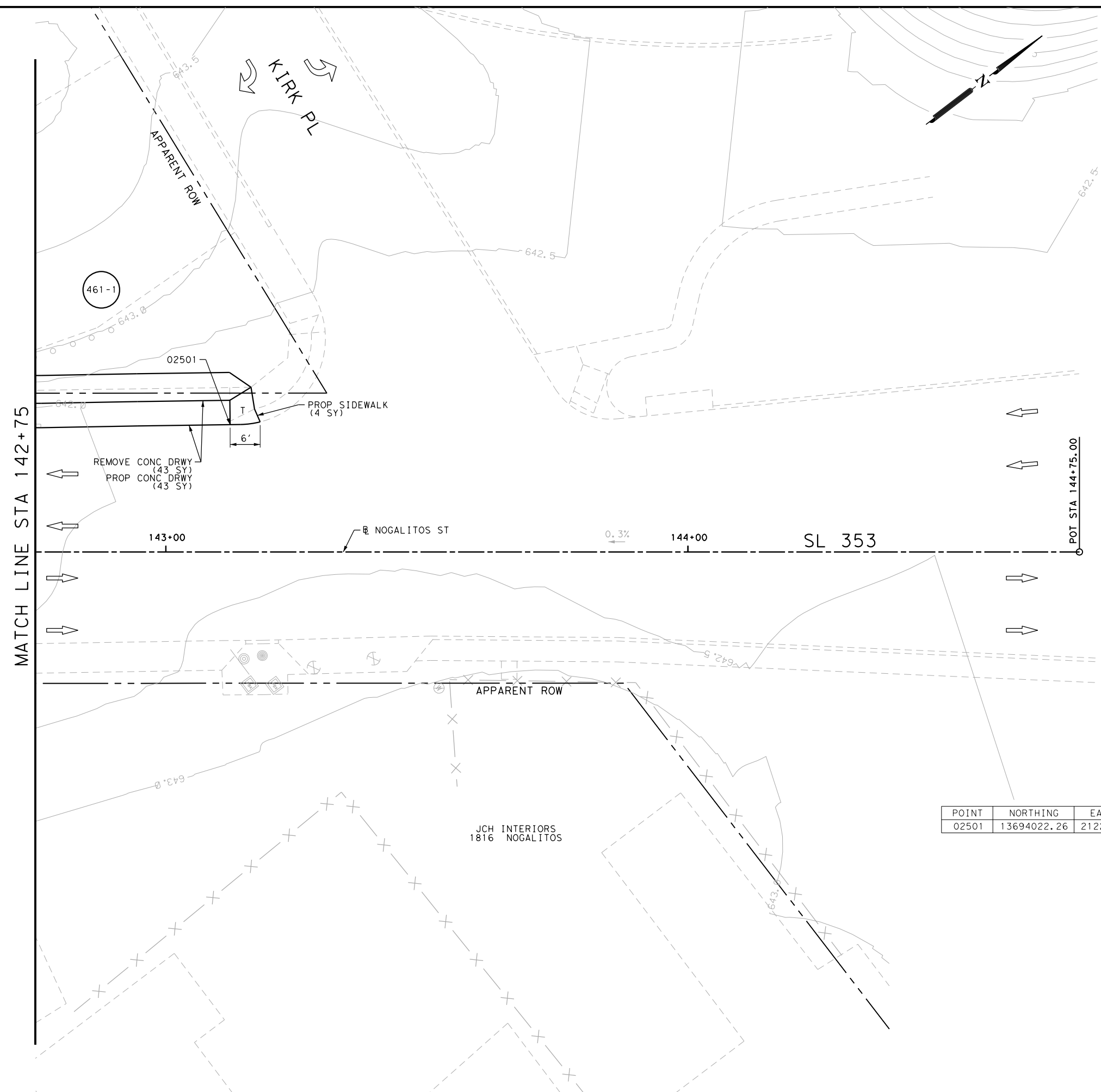
SHEET 34 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				460

Plotted on: 5/3/2019

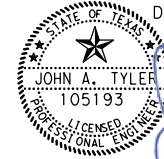
Design File name: P:\1111\35\08\Design\Civil\Roadway\Nogalitos\1113508\_Nogalitos\_25.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	43
0530-6004	DRIVEWAYS (CONC)	SY	43
0531-6001	CONC SIDEWALKS (4")	SY	4

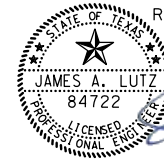


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DESIGN

 *John A. Tyler*  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL

 *James A. Lutz*  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
02501	13694022.26	2122957.26	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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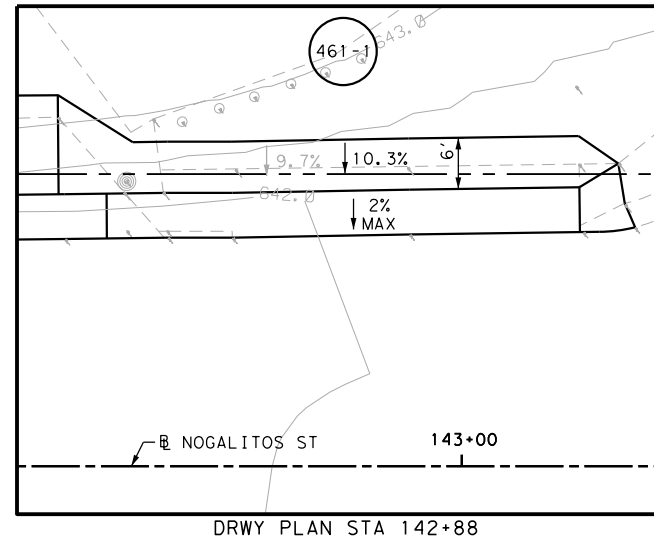
SL 353  
 NOGALITOS ST  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 142+75 TO END PROJECT

SHEET 35 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	461

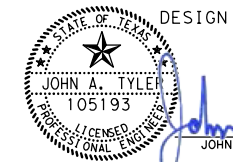
Plotted on: 5/3/2019

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NOTES:

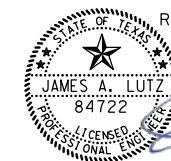
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



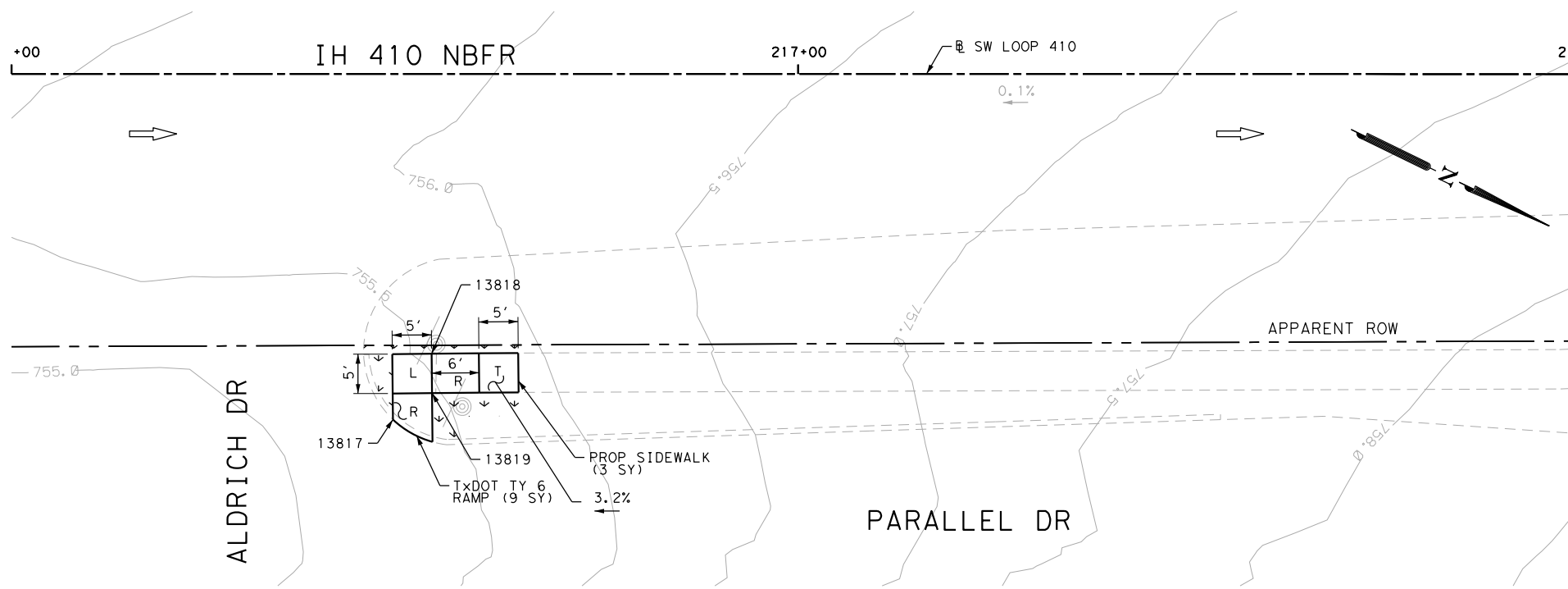
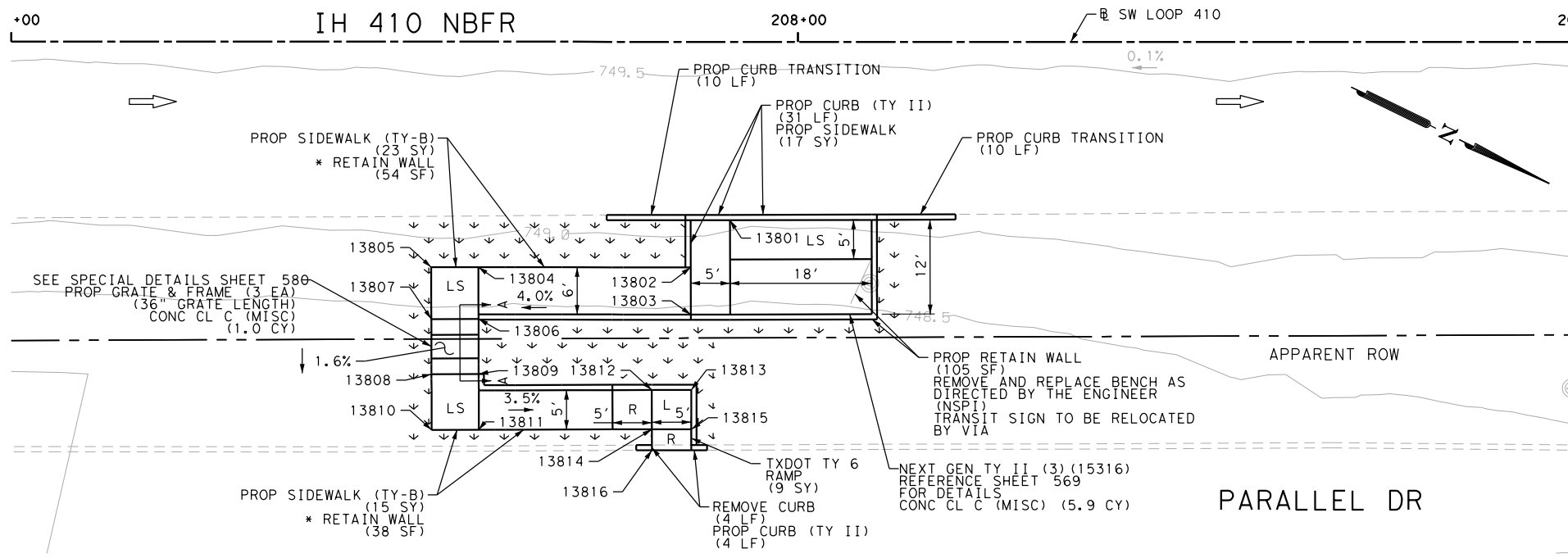
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 353  
NOGALITOS ST  
SIDEWALK  
CONSTRUCTION PLAN  
STA 142+75 TO END PROJECT

SHEET 36 OF 36

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	462



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	99
0162-6002	BLOCK SODDING	SY	99
0168-6001	VEGETATIVE WATERING	MG	1.54
0420-6074	CL C CONC (MISC)	CY	6.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	105
0471-6003	GRATE & FRAME	EA	3
0529-6002	CONC CURB (TY II)	LF	55
0531-6001	CONC SIDEWALKS (4")	SY	20
0531-6023	CURB RAMPS (TY 6)	SY	18
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	38

NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
 JOHN A. TYLER, P.E. DATE: 5/3/2019  
 REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E. DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
13801	13686570.14	2084012.91	--	ME
13802	13686568.44	2084021.06	750.17	PROP
13803	13686570.99	2084026.49	750.08	PROP
13804	13686543.97	2084032.46	749.09	PROP
13805	13686538.53	2084035.00	749.00	PROP
13806	13686546.77	2084038.42	749.01	PROP
13807	13686541.35	2084040.98	748.93	PROP
13808	13686544.33	2084047.31	748.82	PROP
13809	13686549.75	2084044.76	748.90	PROP
13810	13686547.34	2084053.72	748.74	PROP
13811	13686552.77	2084051.17	748.80	PROP
13812	13686570.55	2084037.28	747.90	PROP
13813	13686575.09	2084035.16	747.87	PROP
13814	13686572.68	2084041.81	747.83	PROP
13815	13686577.21	2084039.68	747.80	PROP
13816	13686573.82	2084044.22	--	ME
13817	13687356.15	2083670.32	--	ME
13818	13687357.08	2083660.67	755.81	PROP
13819	13687359.23	2083665.18	755.74	PROP

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IH 410 SW LOOP  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 209+00  
 STA 216+00 TO STA 218+00  
 SHEET 1 OF 2

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	463

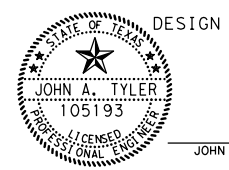
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Plotted on: 5/3/2019

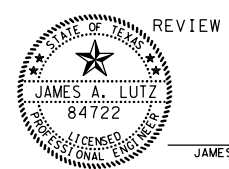
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ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	72
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	79
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	18
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	96
0162-6002	BLOCK SODDING	SY	96
0168-6001	VEGETATIVE WATERING	MG	1.50
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6001	CONC CURB (TY I)	LF	13
0529-6002	CONC CURB (TY II)	LF	104
0530-6004	DRIVEWAYS (CONC)	SY	71
0530-6005	DRIVEWAYS (ACP)	SY	11
0531-6001	CONC SIDEWALKS (4")	SY	174
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	3

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE



REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

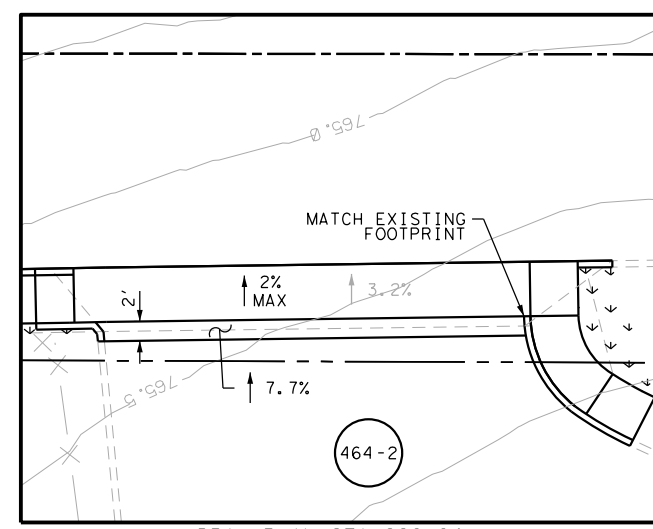
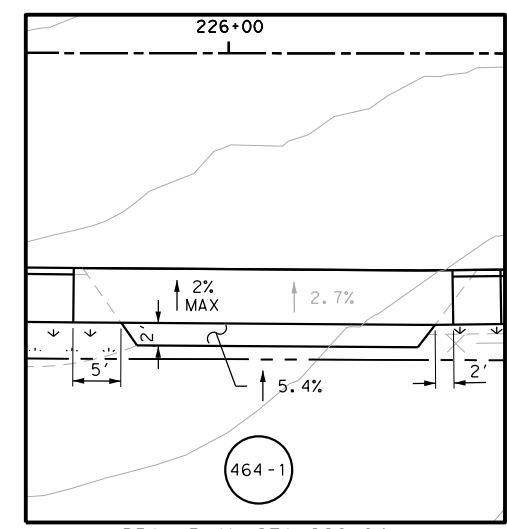
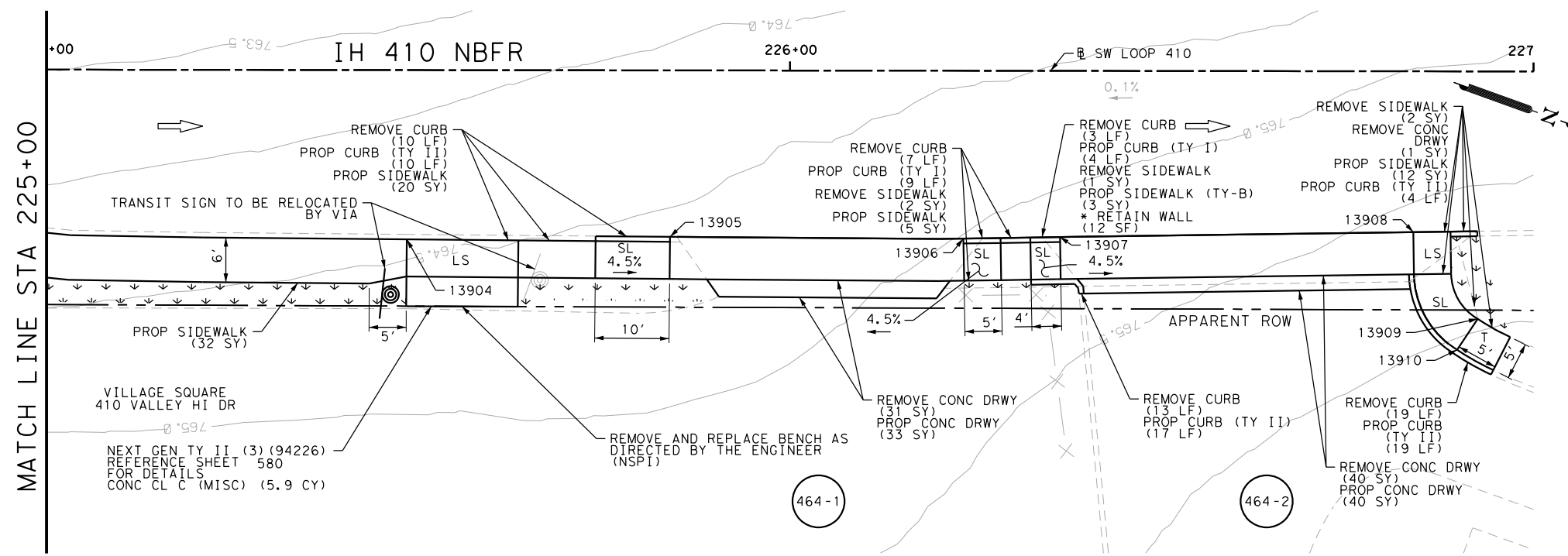
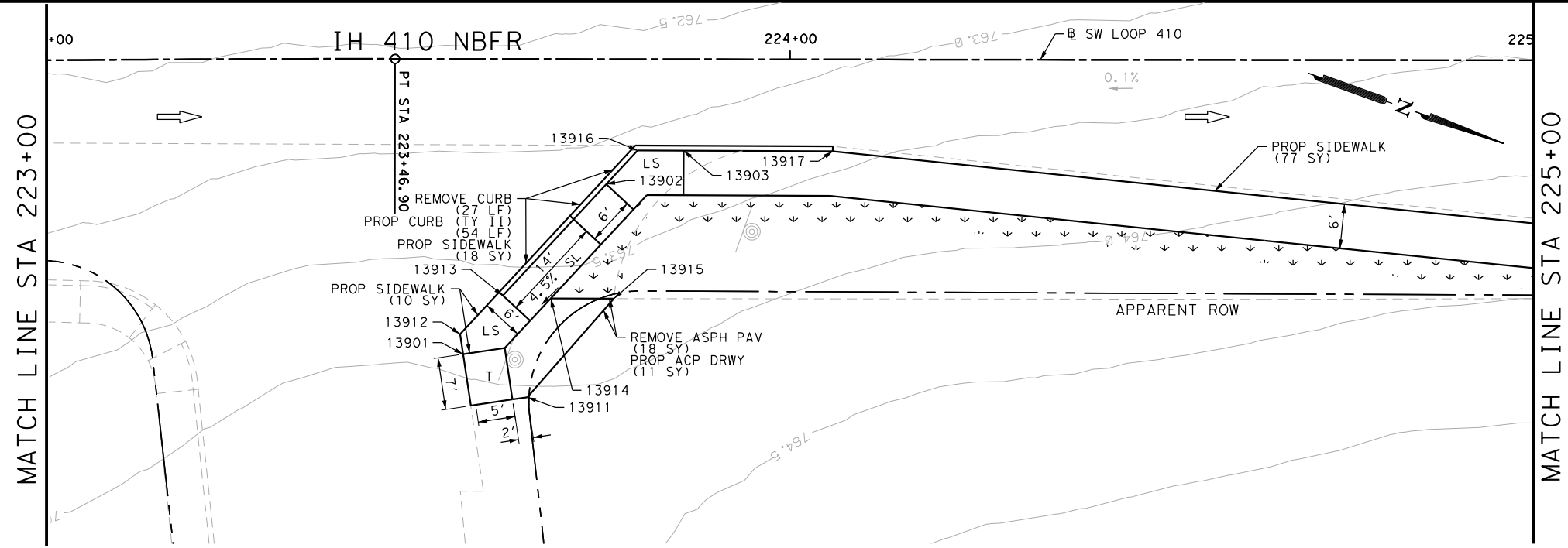
**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 410 SW LOOP  
 SIDEWALK CONSTRUCTION PLAN  
 STA 223+00 TO END PROJECT

SHEET 2 OF 2

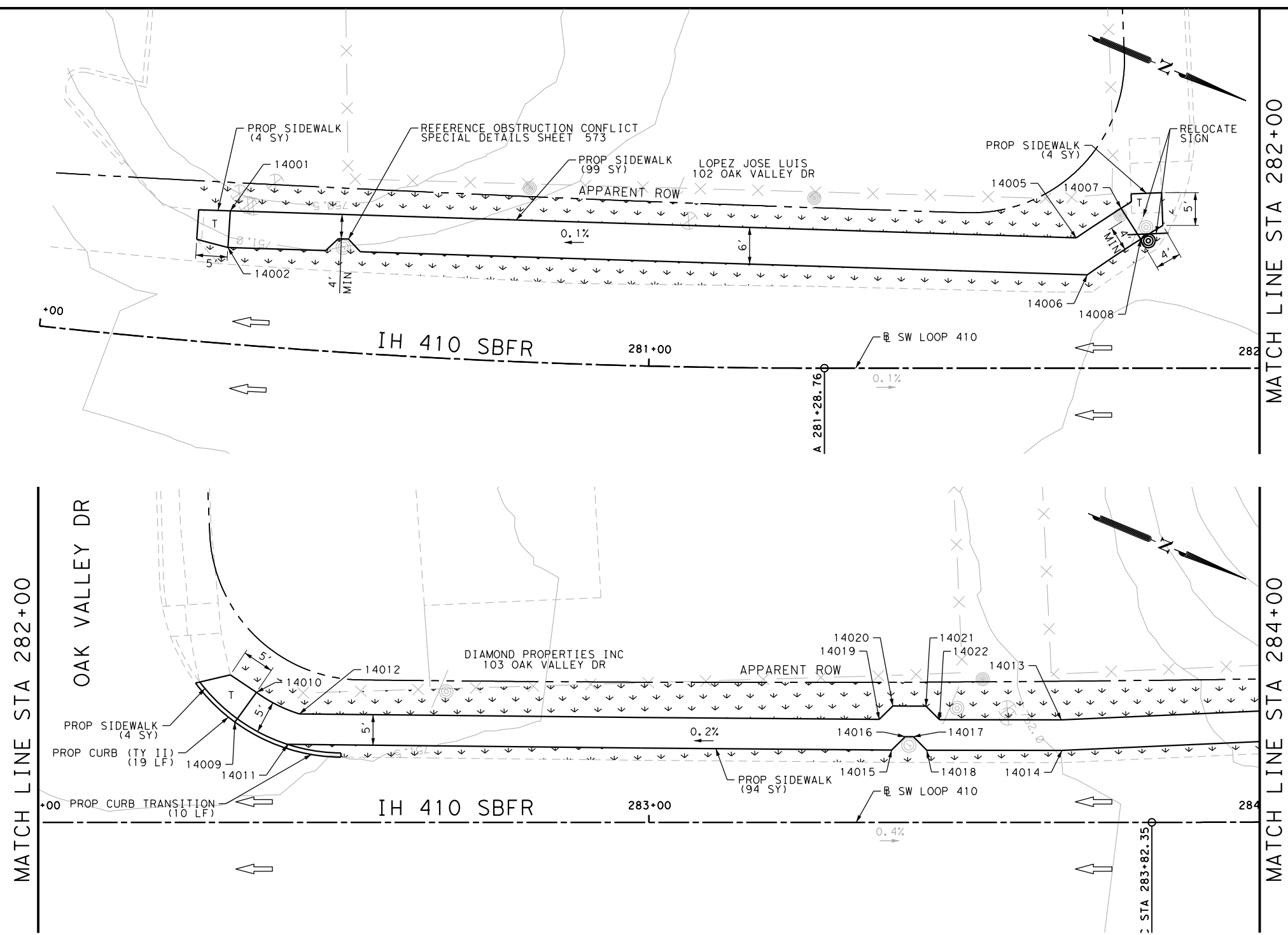
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	464



POINT	NORTHING	EASTING	ELEV	DESC
13901	13688000.21	2083387.44	--	ME
13902	13688010.58	2083359.39	--	ME
13903	13688018.85	2083351.62	--	ME
13904	13688175.63	2083306.65	--	ME
13905	13688208.84	2083294.38	--	ME
13906	13688246.05	2083281.26	--	ME
13907	13688258.21	2083276.67	--	ME
13908	13688302.72	2083259.98	--	ME
13909	13688310.78	2083256.97	--	ME
13910	13688313.61	2083272.91	--	ME
13911	13688010.28	2083389.98	--	ME
13912	13687998.92	2083385.04	--	ME
13913	13688001.95	2083377.94	--	ME
13914	13688008.77	2083376.39	--	ME
13915	13688016.75	2083373.54	--	ME
13916	13688013.01	2083353.69	--	ME
13917	13688037.73	2083344.93	--	ME

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Desi.gn\Civil\Roadway\SWLoop410\1113508\_SWLoop410\_03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	281
0162-6002	BLOCK SODDING	SY	281
0168-6001	VEGETATIVE WATERING	MG	4.38
0529-6002	CONC CURB (TY II)	LF	29
0531-6001	CONC SIDEWALKS (4")	SY	205
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
14001	13685800.05	2084042.22	751.63	PROP
14002	13685802.04	2084047.88	751.70	PROP
14005	13685929.07	2083992.09	751.76	PROP
14006	13685933.22	2083996.78	751.85	PROP
14007	13685934.02	2083984.58	751.78	PROP
14008	13685938.97	2083987.97	751.85	PROP
14009	13685988.34	2083972.01	--	ME
14010	13685989.68	2083966.16	--	ME
14011	13685997.71	2083971.98	--	ME
14012	13685997.52	2083966.64	--	ME
14013	13686112.64	2083918.57	751.23	PROP
14014	13686114.71	2083923.13	751.30	PROP
14015	13686089.02	2083934.02	751.23	PROP
14016	13686090.21	2083931.13	751.24	PROP
14017	13686091.44	2083930.62	751.25	PROP
14018	13686094.34	2083931.79	751.26	PROP
14019	13686085.19	2083930.21	751.16	PROP
14020	13686086.38	2083927.31	751.17	PROP
14021	13686091.39	2083925.20	751.18	PROP
14022	13686094.29	2083926.37	751.19	PROP

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 410 SW LOOP  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 284+00

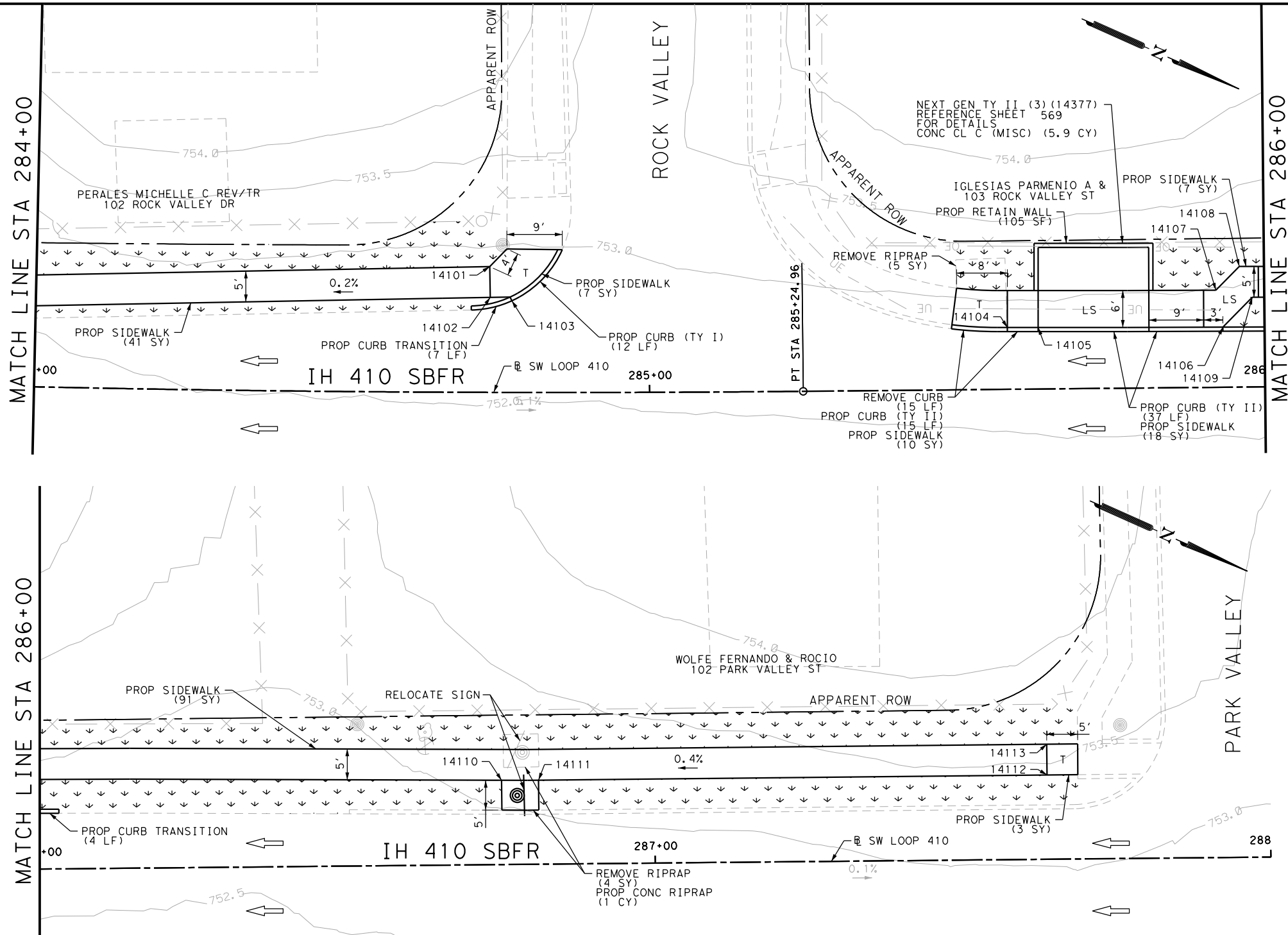
SHEET 1 OF 5

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	465



Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\SWLoop410\1113508\_SWLoop410\_04.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	9
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	15
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	275
0162-6002	BLOCK SODDING	SY	275
0168-6001	VEGETATIVE WATERING	MG	4.29
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	105
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6001	CONC CURB (TY I)	LF	19
0529-6002	CONC CURB (TY II)	LF	56
0531-6001	CONC SIDEWALKS (4")	SY	177
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
14101	13686208.26	2083872.65	752.80	PROP
14102	13686210.43	2083877.16	752.87	PROP
14103	13686213.85	2083876.19	--	ME
14104	13686288.85	2083846.65	--	ME
14105	13686293.40	2083844.57	--	ME
14106	13686320.65	2083832.03	--	ME
14107	13686317.13	2083827.04	752.38	PROP
14108	13686318.97	2083821.95	751.68	PROP
14109	13686322.96	2083825.61	752.38	PROP
14110	13686393.16	2083793.63	753.11	PROP
14111	13686398.61	2083791.13	753.09	PROP
14112	13686473.36	2083755.98	753.42	PROP
14113	13686471.23	2083751.45	753.35	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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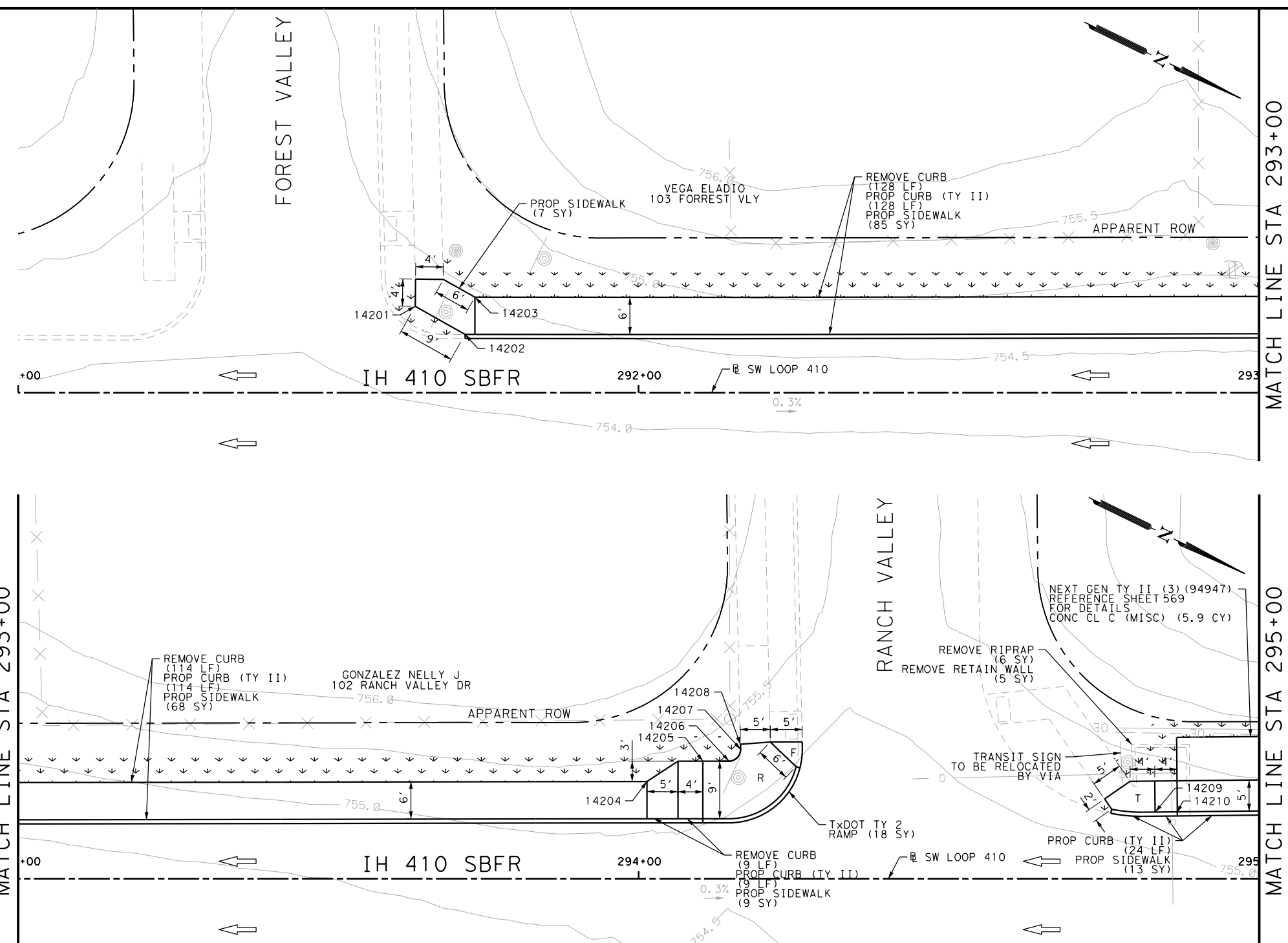
IH 410 SW LOOP  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 284+00 TO STA 288+00

SHEET 2 OF 5

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				466

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\SWLoop410\1113508\_SWLoop410\_05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	6
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	5
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	251
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	110
0162-6002	BLOCK SODDING	SY	110
0168-6001	VEGETATIVE WATERING	MG	1.72
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6002	CONC CURB (TY II)	LF	275
0531-6001	CONC SIDEWALKS (4")	SY	182
0531-6019	CURB RAMPS (TY 2)	SY	18

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
14201	13686835.54	2083585.65	--	ME
14202	13686844.74	2083586.34	--	ME
14203	13686843.62	2083580.24	--	ME
14204	13687049.63	2083483.21	--	ME
14205	13687056.38	2083476.41	--	ME
14206	13687060.20	2083474.61	--	ME
14207	13687061.07	2083472.10	--	ME
14208	13687060.71	2083471.37	--	ME
14209	13687125.84	2083452.86	--	ME
14210	13687129.07	2083451.31	--	ME

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 410 SW LOOP  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 291+00 TO STA 295+00

SHEET 3 OF 5

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	467

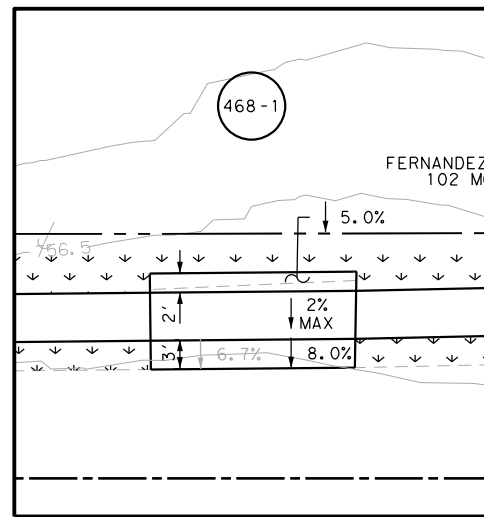
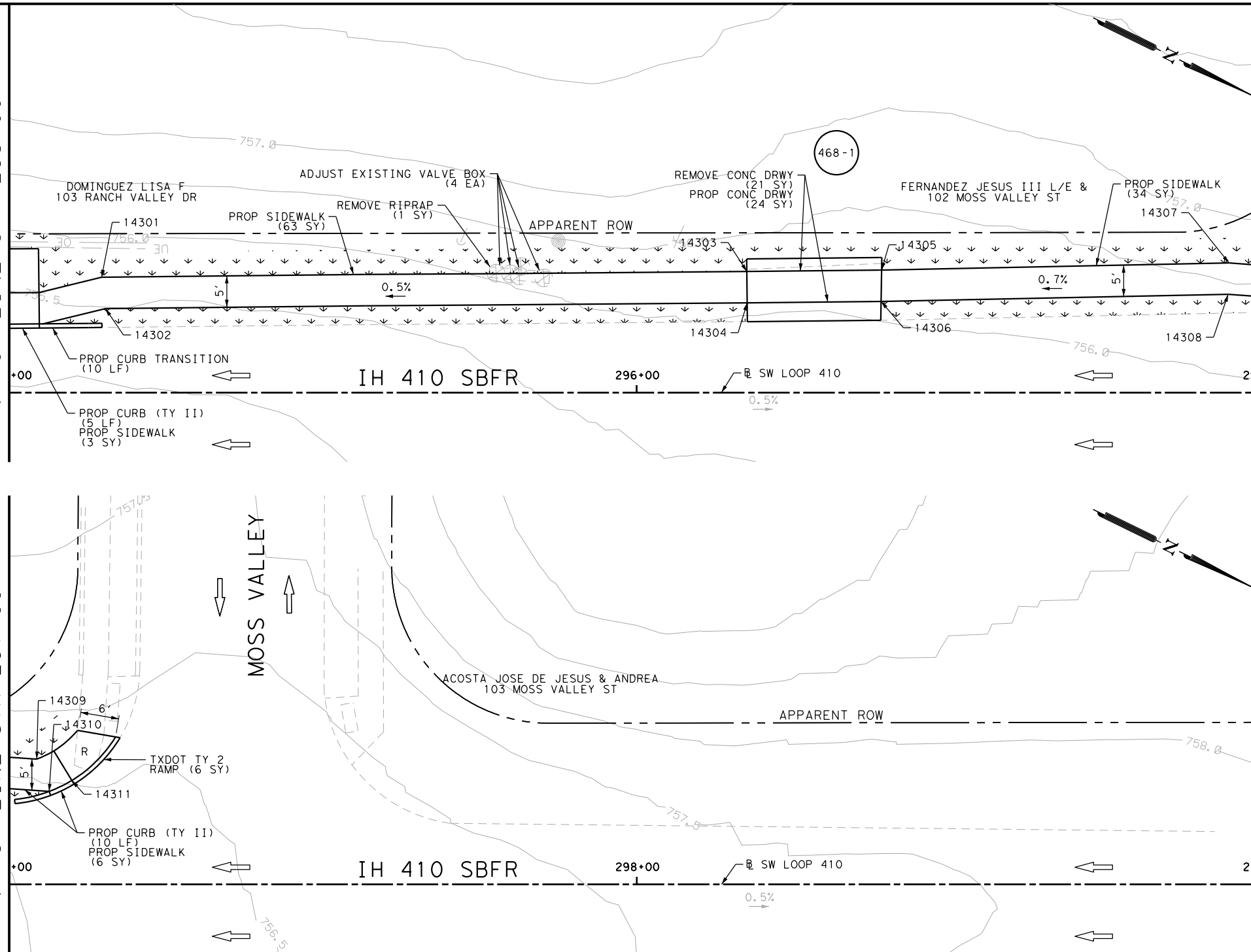
Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\SWLoop410\1113508\_SWLoop410\_06.dgn

MATCH LINE STA 295+00

MATCH LINE STA 297+00

MATCH LINE STA 297+00



DRWY PLAN STA 296+28

POINT	NORTHING	EASTING	ELEV	DESC
14301	13687151.11	2083432.55	755.43	PROP
14302	13687153.80	2083436.81	755.36	PROP
14303	13687243.80	2083388.02	756.32	PROP
14304	13687245.97	2083392.52	756.25	PROP
14305	13687263.13	2083378.70	756.32	PROP
14306	13687265.19	2083383.25	756.25	PROP
14307	13687312.76	2083354.13	756.70	PROP
14308	13687314.77	2083358.71	756.63	PROP
14309	13687322.13	2083350.52	--	ME
14310	13687326.59	2083354.82	--	ME
14311	13687329.18	2083351.59	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	1
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	21
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	148
0162-6002	BLOCK SODDING	SY	148
0168-6001	VEGETATIVE WATERING	MG	2.31
0529-6002	CONC CURB (TY II)	LF	25
0530-6004	DRIVEWAYS (CONC)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	106
0531-6019	CURB RAMPS (TY 2)	SY	6
7196-6001	ADJUST EXISTING VALVE BOX	EA	4

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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E. DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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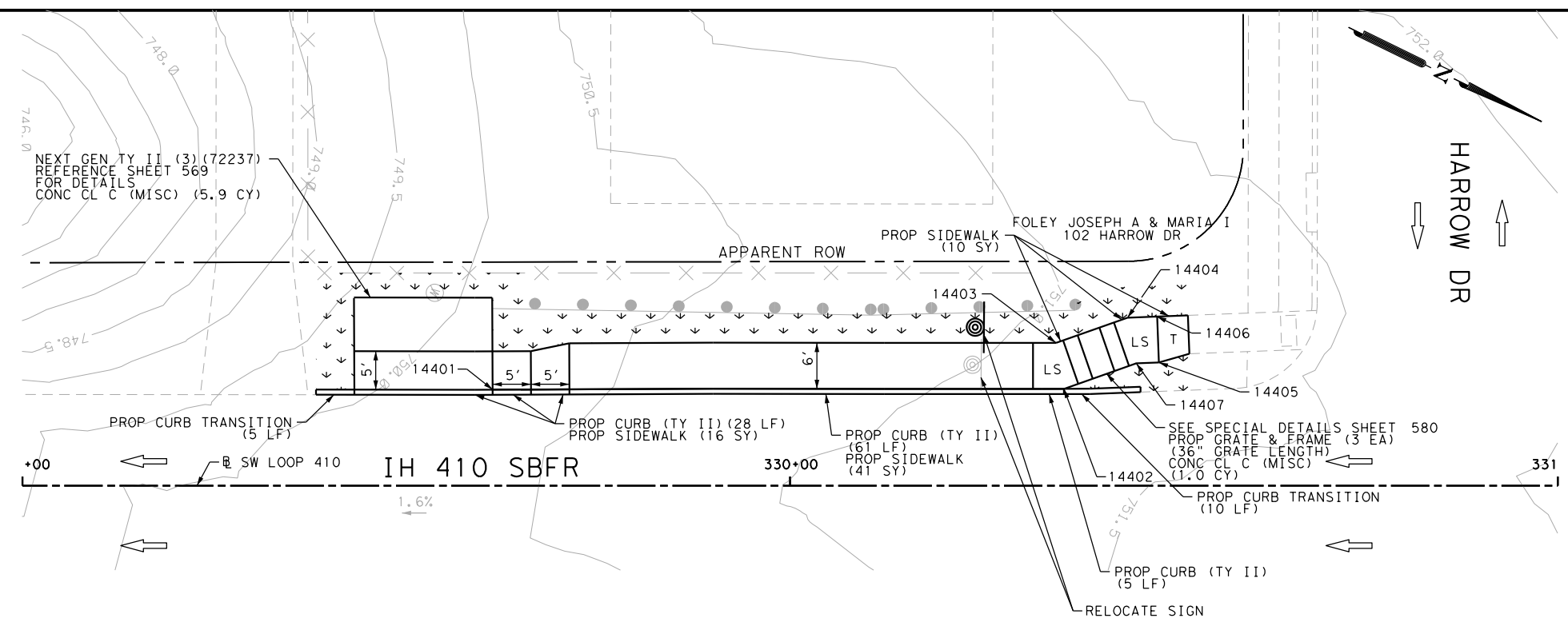
IH 410 SW LOOP  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 295+00 TO STA 299+00

SHEET 4 OF 5

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	468

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\SWLoop410\1113508\_SWL\_oop410\_07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	62
0162-6002	BLOCK SODDING	SY	62
0168-6001	VEGETATIVE WATERING	MG	0.97
0420-6074	CL C CONC (MISC)	CY	6.9
0471-6003	GRATE & FRAME	EA	3
0529-6002	CONC CURB (TY II)	LF	109
0531-6001	CONC SIDEWALKS (4")	SY	67
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
14401	13690269.84	2081974.00	--	ME
14402	13690337.14	2081942.28	--	ME
14403	13690333.66	2081937.29	--	ME
14404	13690340.71	2081930.36	751.96	PROP
14405	13690346.89	2081933.92	751.86	PROP
14406	13690344.14	2081928.59	751.93	PROP
14407	13690344.23	2081935.30	751.89	PROP

REV. NO.	DATE	DESCRIPTION	BY

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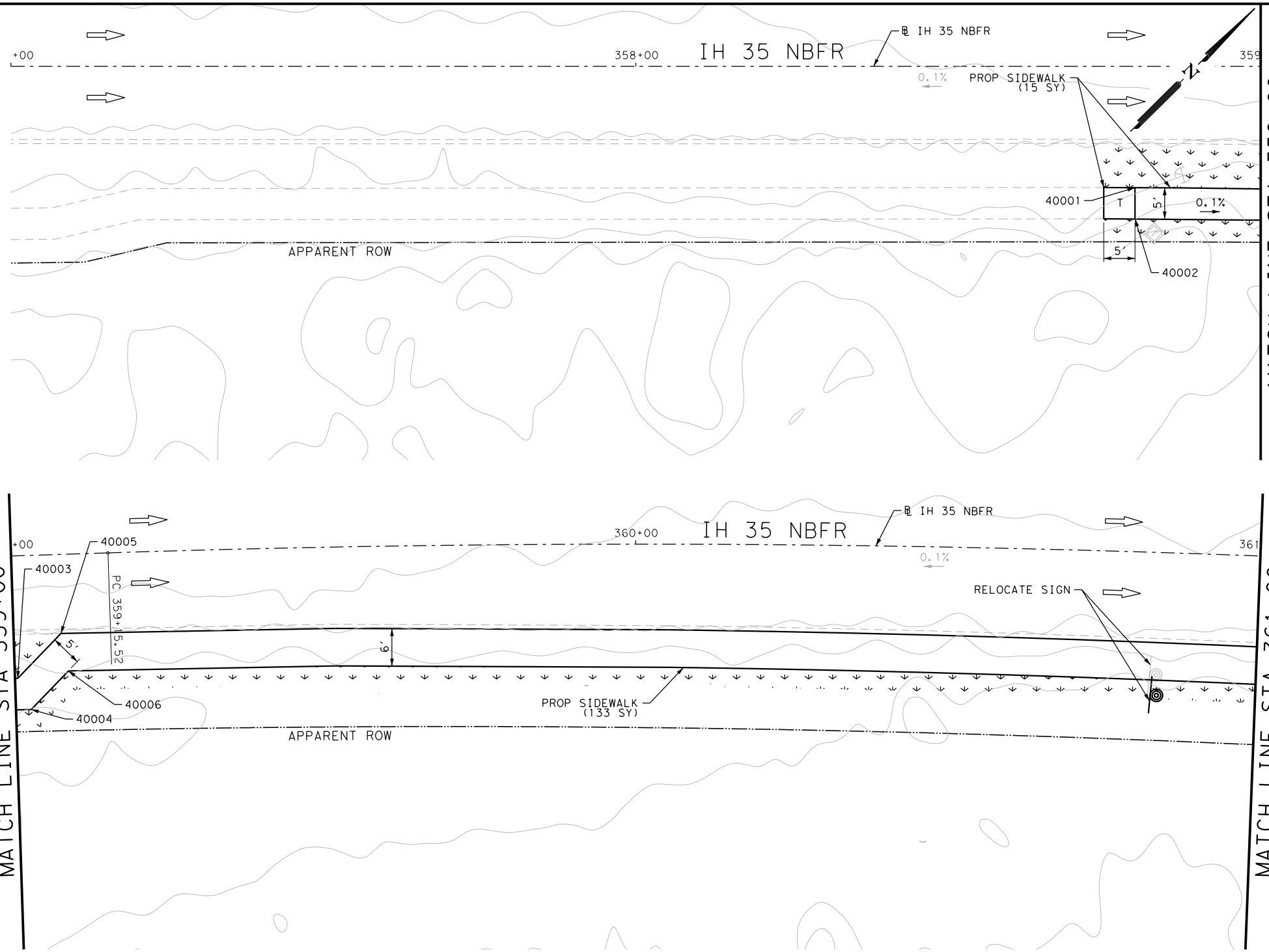
IH 410 SW LOOP  
SIDEWALK  
CONSTRUCTION PLAN  
STA 329+00 TO END PROJECT

SHEET 5 OF 5

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	469

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0531-6001	CONC SIDEWALKS (4")	SY	148
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40001	13675453.96	2113419.75	659.76	PROP
40002	13675450.44	2113423.31	659.83	PROP
40003	13675468.42	2113434.37	659.78	PROP
40004	13675466.30	2113439.35	659.82	PROP
40005	13675478.40	2113434.46	--	ME
40006	13675474.87	2113439.43	659.81	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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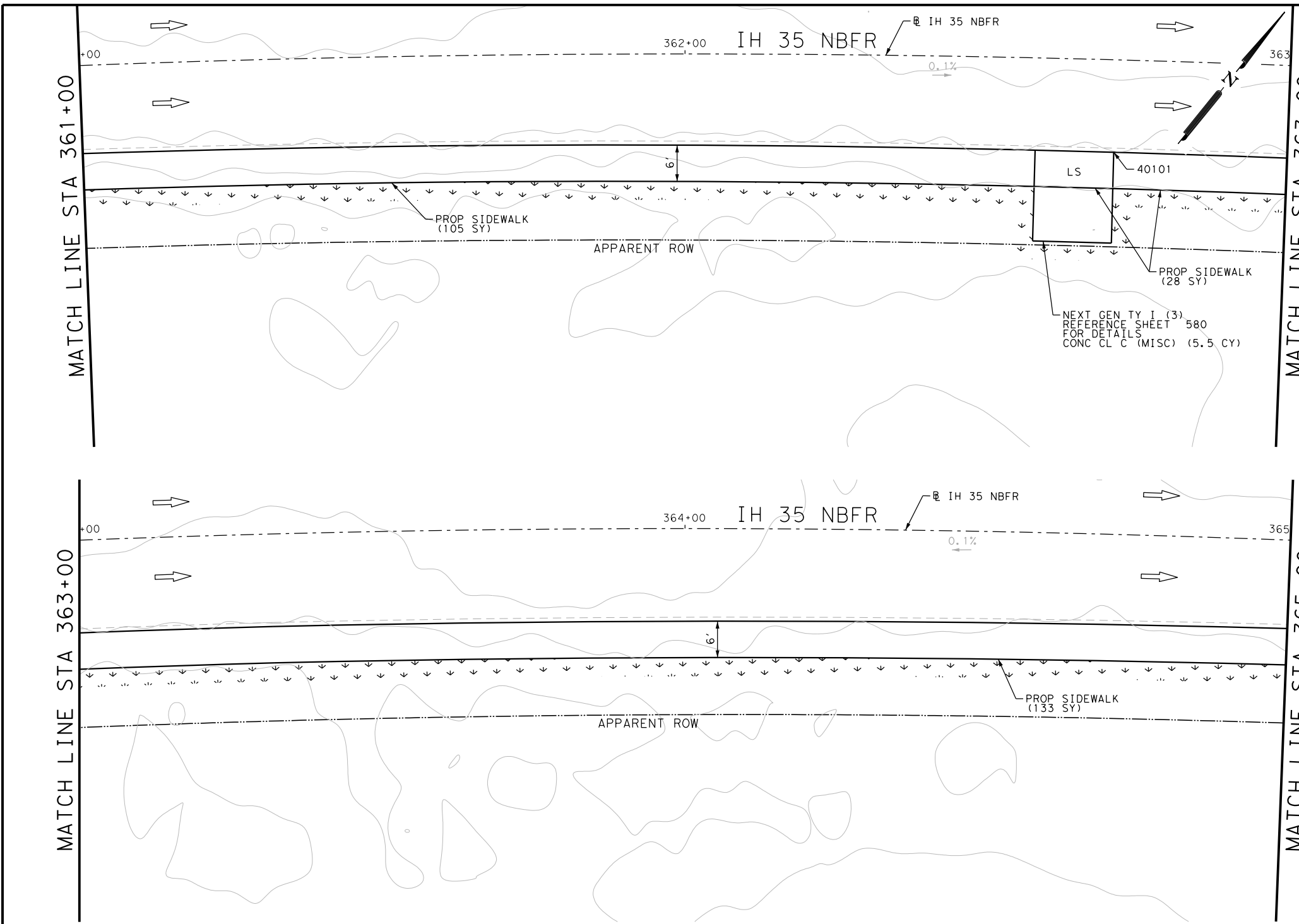
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 357+00 TO STA 361+00

SHEET 1 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				470

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0420-6074	CL C CONC (MISC)	CY	5.5
0531-6001	CONC SIDEWALKS (4")	SY	266

- NOTES:
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DESIGN

John A. Tyler, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

James A. Lutz, P.E.  
DATE: 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
40101	13675715.66	2113707.09	--	ME

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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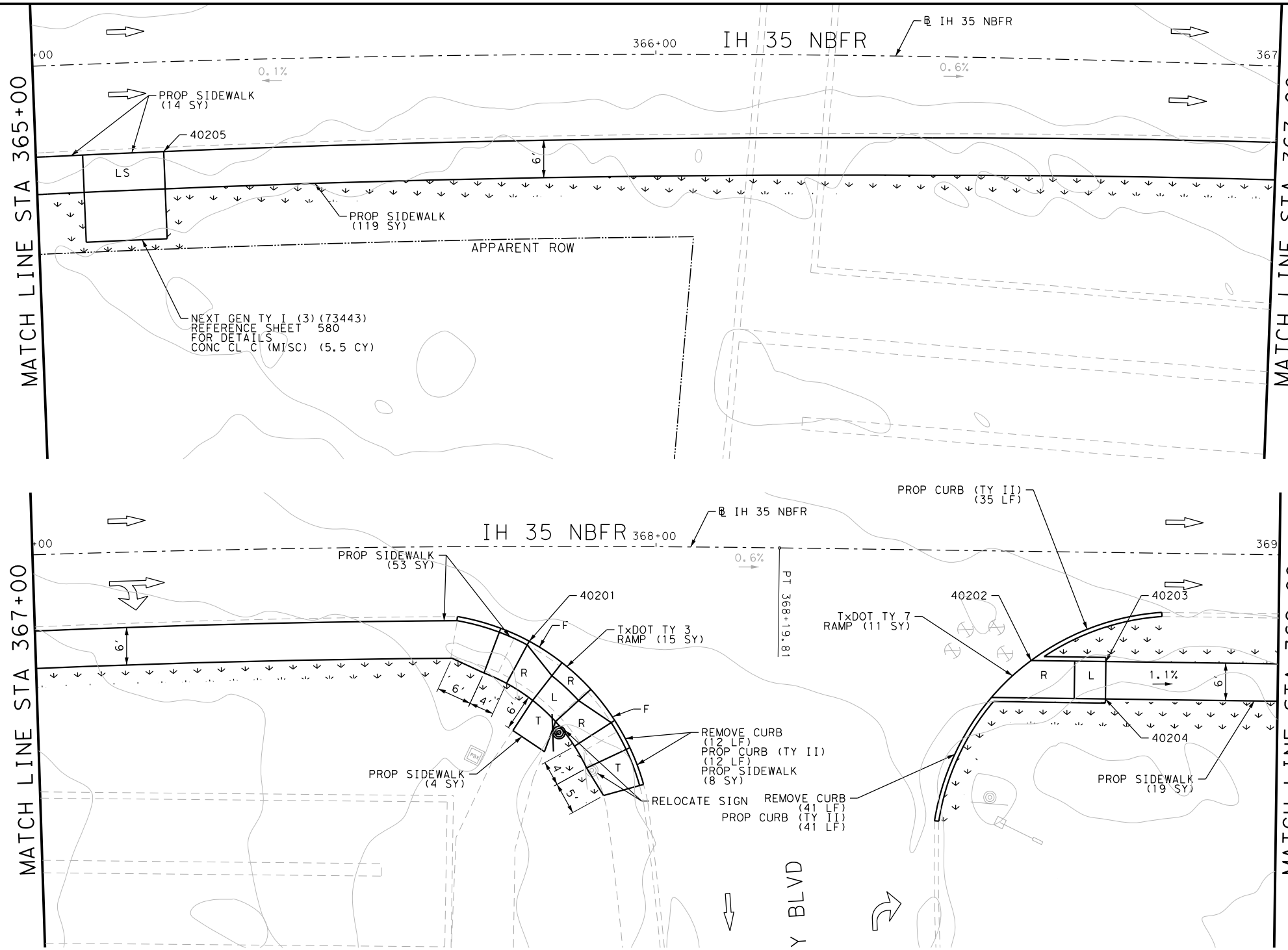
IH 35  
ACCESS RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 361+00 TO STA 365+00

SHEET 2 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	471

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	53
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	88
0531-6001	CONC SIDEWALKS (4")	SY	217
0531-6020	CURB RAMPS (TY 3)	SY	15
0531-6024	CURB RAMPS (TY 7)	SY	11
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40201	13675981.92	2114135.81	--	ME
40202	13676014.60	2114209.41	--	ME
40203	13676019.74	2114220.25	658.30	PROP
40204	13676014.32	2114222.82	658.37	PROP
40205	13675857.44	2113910.45	--	ME

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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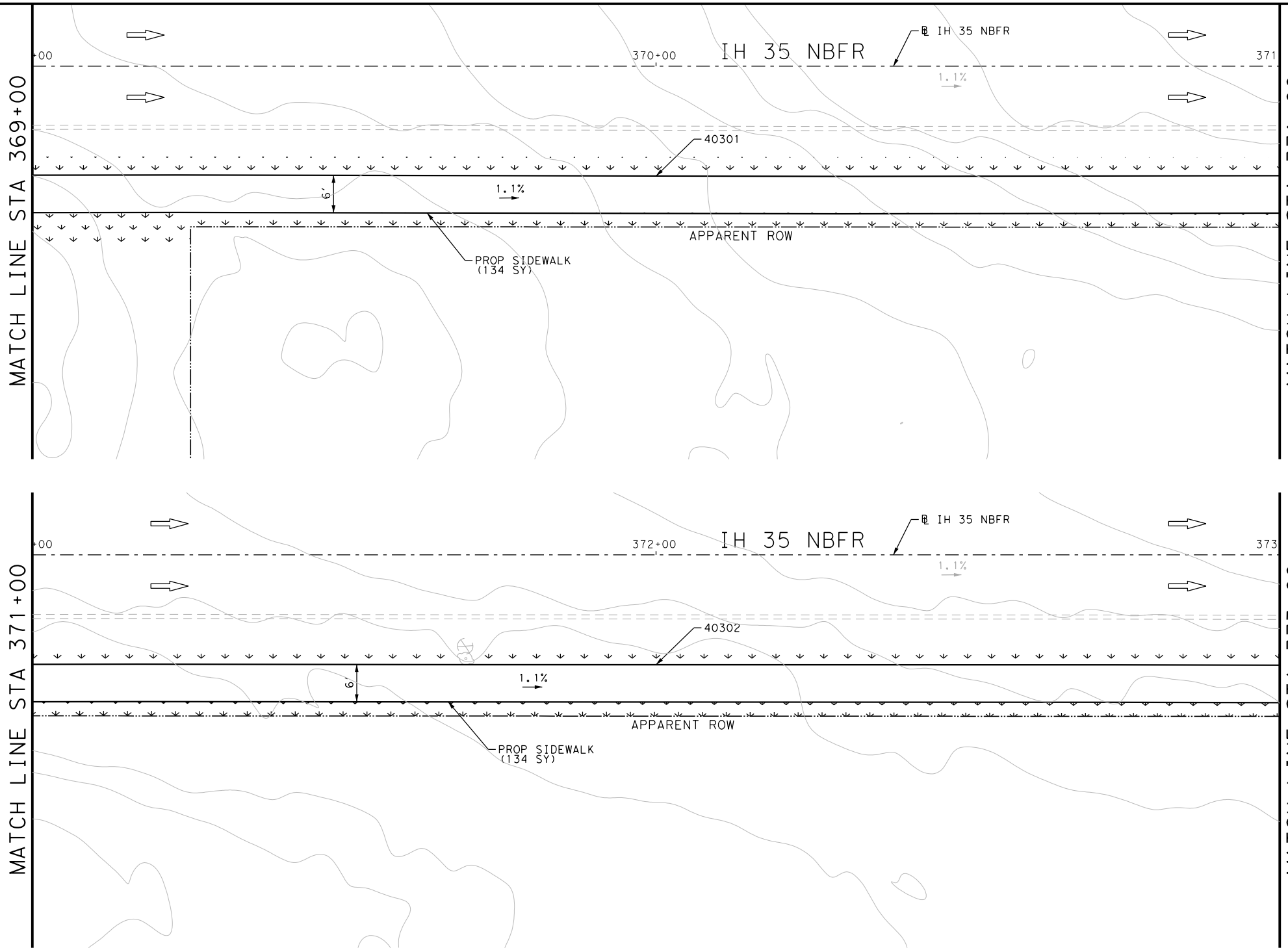
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 365+00 TO STA 369+00

SHEET 3 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	472

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB04.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	175
0162-6002	BLOCK SODDING	SY	175
0168-6001	VEGETATIVE WATERING	MG	2.73
0531-6001	CONC SIDEWALKS (4")	SY	268

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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40301	13676074.26	2114335.59	656.72	PROP
40302	13676159.89	2114516.36	654.62	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 369+00 TO STA 373+00

SHEET 4 OF 44

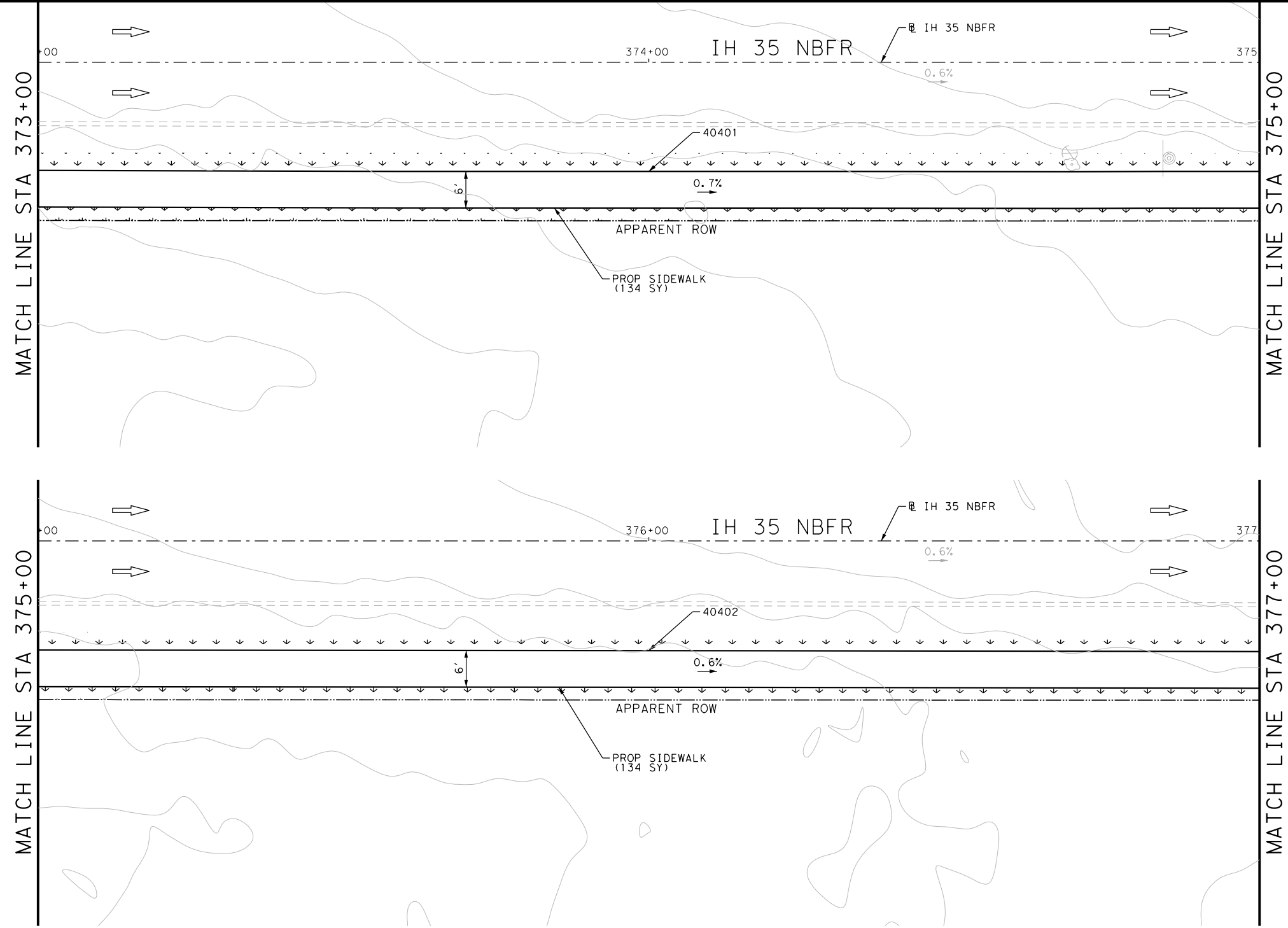
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	473



Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB05.dgn

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	250
0162-6002	BLOCK SODDING	SY	250
0168-6001	VEGETATIVE WATERING	MG	3.90
0531-6001	CONC SIDEWALKS (4")	SY	268



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DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

POINT	NORTHING	EASTING	ELEV	DESC
40401	13676245.30	2114697.21	653.51	PROP
40402	13676330.84	2114877.98	652.28	PROP

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 35  
ACCESS RD

SIDEWALK  
CONSTRUCTION PLAN

STA 373+00 TO STA 377+00

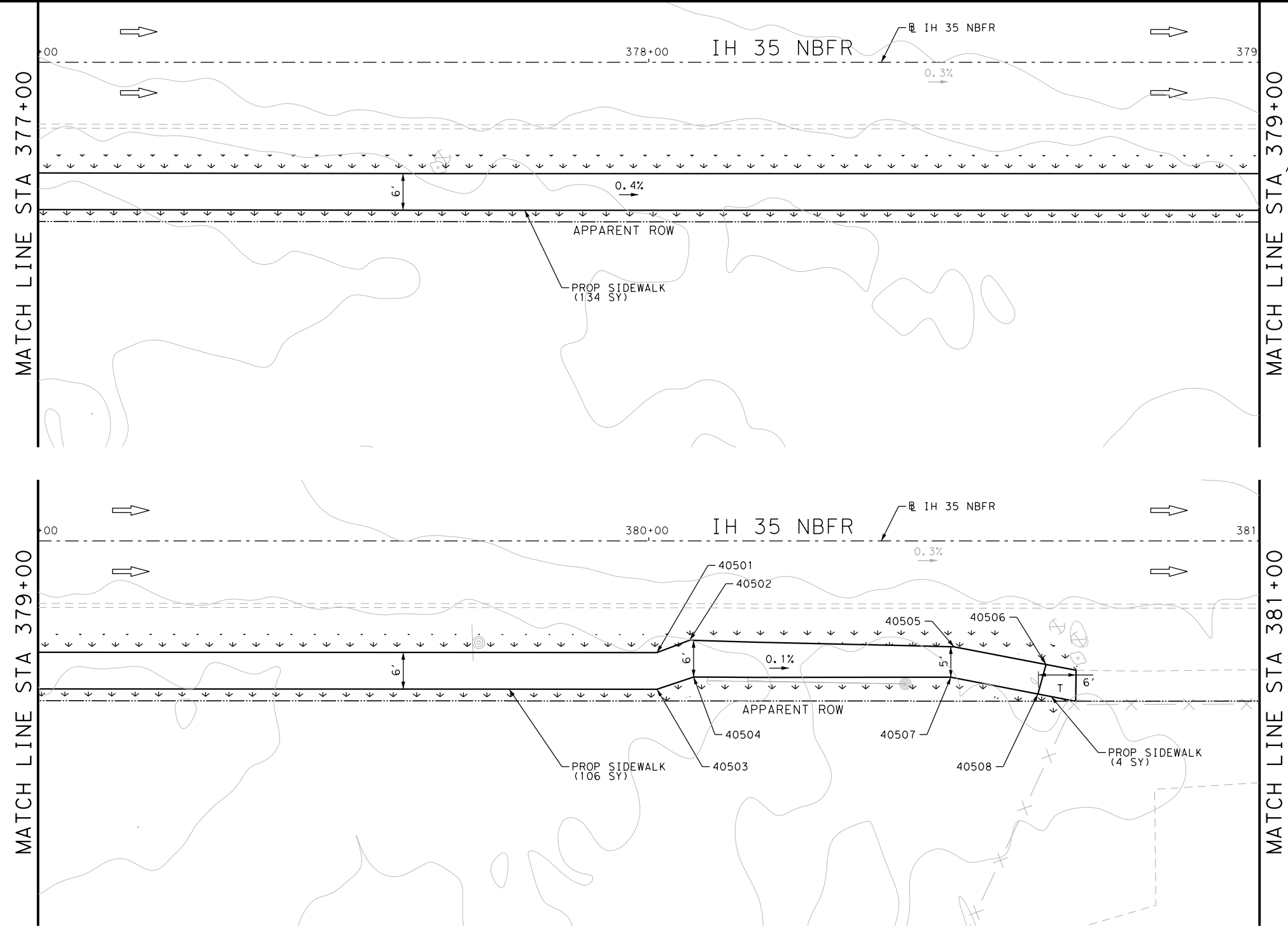
SHEET 5 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	474

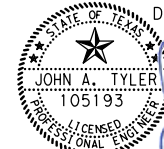
Plotted on: 5/3/2019

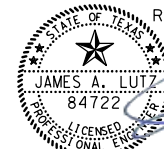
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ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	200
0162-6002	BLOCK SODDING	SY	200
0168-6001	VEGETATIVE WATERING	MG	3.12
0531-6001	CONC SIDEWALKS (4")	SY	244



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40501	13676502.38	2115240.83	650.70	PROP
40502	13676506.49	2115244.81	650.68	PROP
40503	13676496.95	2115243.39	650.74	PROP
40504	13676501.32	2115247.96	650.72	PROP
40505	13676524.06	2115284.38	650.67	PROP
40506	13676527.89	2115299.23	650.53	PROP
40507	13676519.33	2115286.05	650.72	PROP
40508	13676522.95	2115300.10	650.60	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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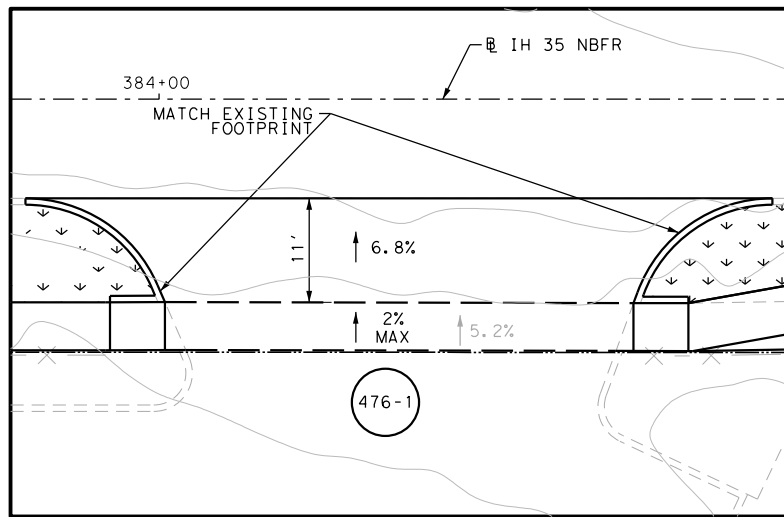
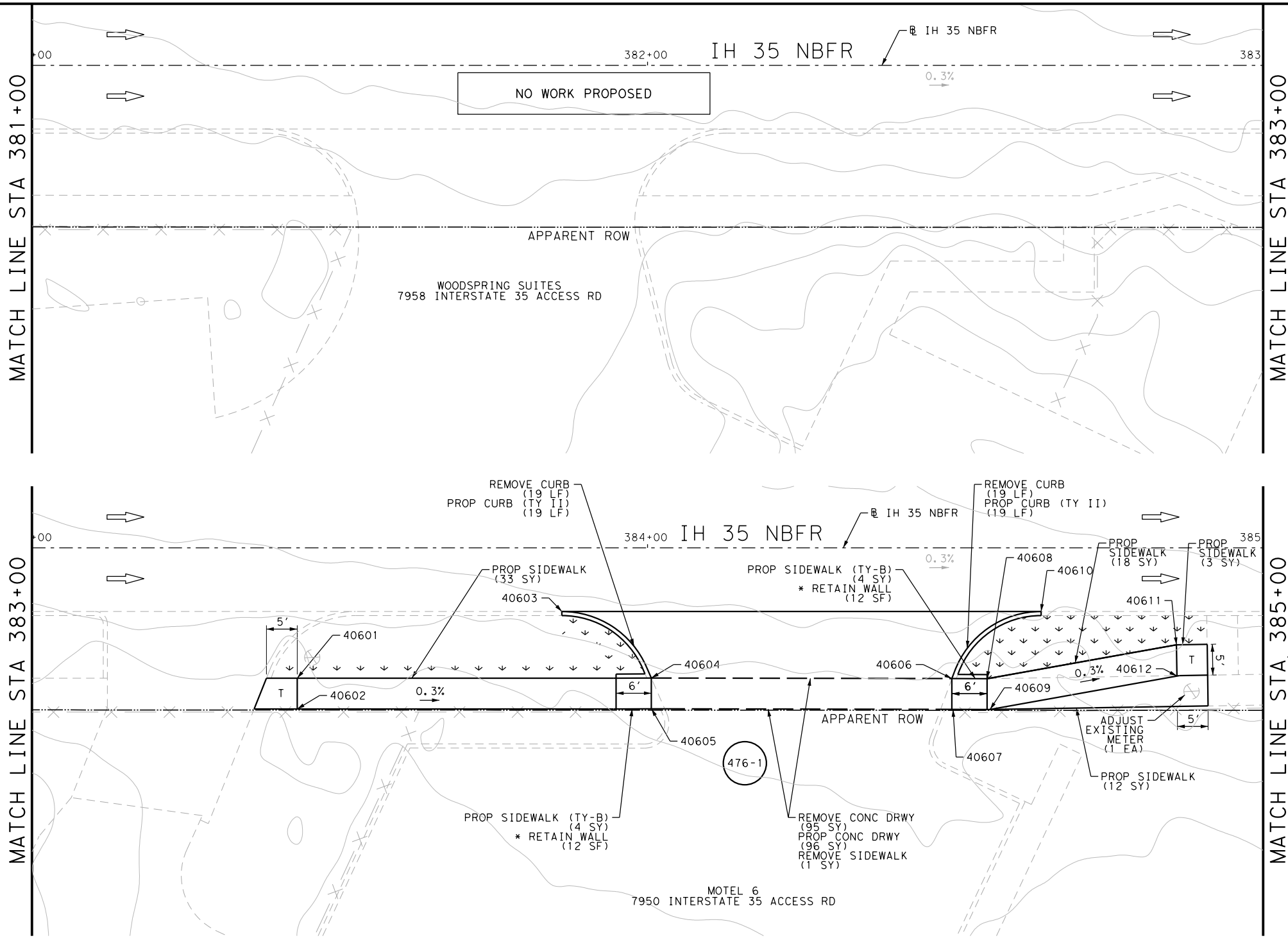
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 377+00 TO STA 381+00

SHEET 6 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	475

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	95
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	38
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	1
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	50
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0529-6002	CONC CURB (TY II)	LF	38
0530-6004	DRIVEWAYS (CONC)	SY	96
0531-6001	CONC SIDEWALKS (4")	SY	66
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40601	13676646.08	2115550.90	650.00	PROP
40602	13676641.56	2115553.04	650.07	PROP
40603	13676674.28	2115585.11	--	ME
40604	13676670.73	2115602.88	649.83	PROP
40605	13676666.21	2115605.01	649.90	PROP
40606	13676691.55	2115647.05	649.65	PROP
40607	13676687.03	2115649.18	649.72	PROP
40608	13676693.99	2115652.22	649.64	PROP
40609	13676689.66	2115654.76	649.71	PROP
40610	13676707.61	2115655.46	--	ME
40611	13676712.12	2115677.65	649.55	PROP
40612	13676707.81	2115680.23	649.60	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



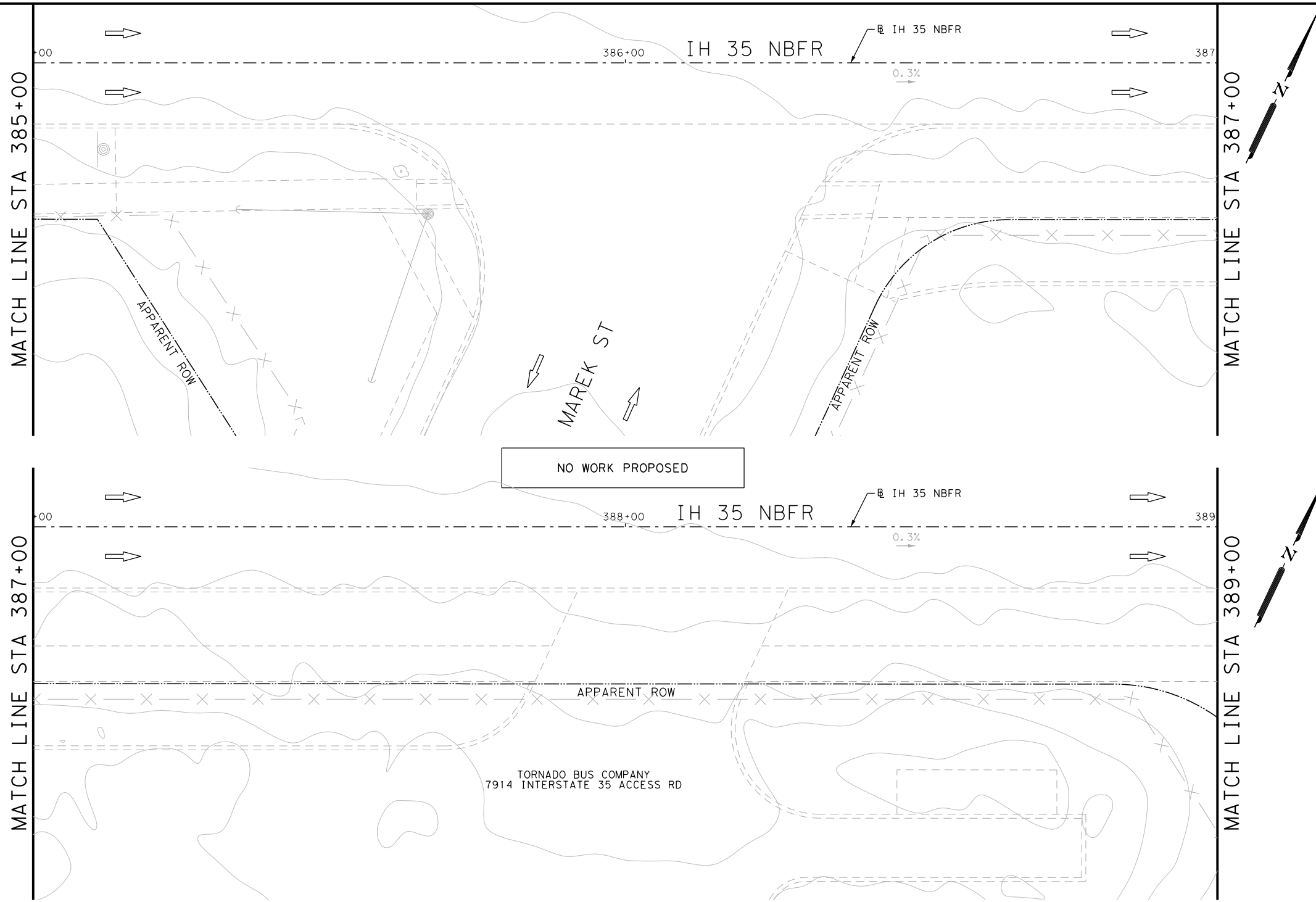
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 381+00 TO STA 385+00

SHEET 7 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	476

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB08.dgn



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40701	13676770.46	2115812.52	--	ME
40702	13676774.87	2115820.29	649.10	PROP
40703	13676769.42	2115822.86	649.10	PROP
40704	13676777.53	2115825.92	649.04	PROP
40705	13676772.11	2115828.48	649.05	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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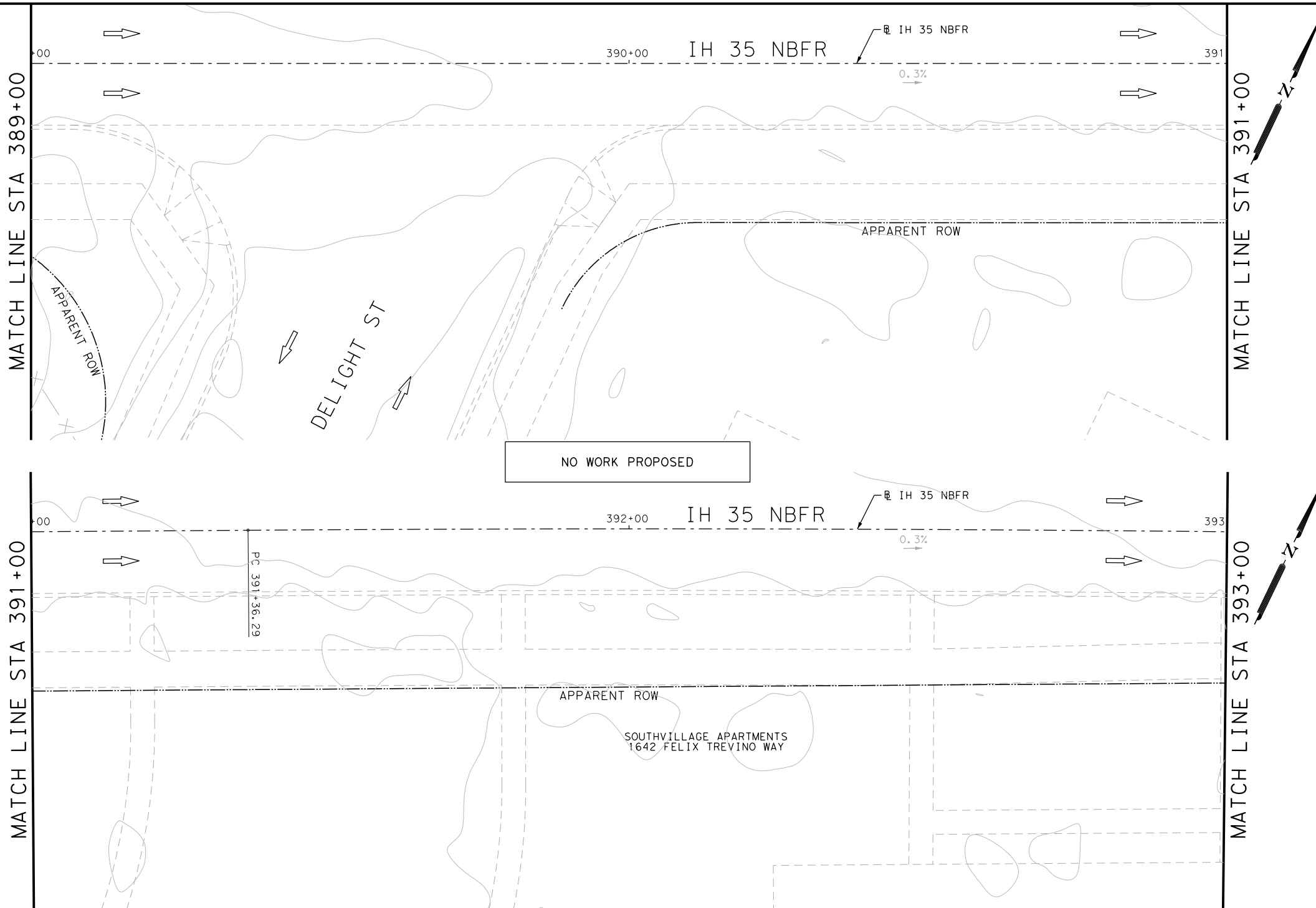
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 385+00 TO STA 389+00

SHEET 8 OF 44

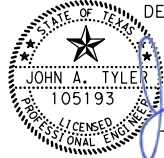
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	477

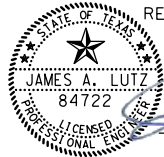
Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB09.dgn



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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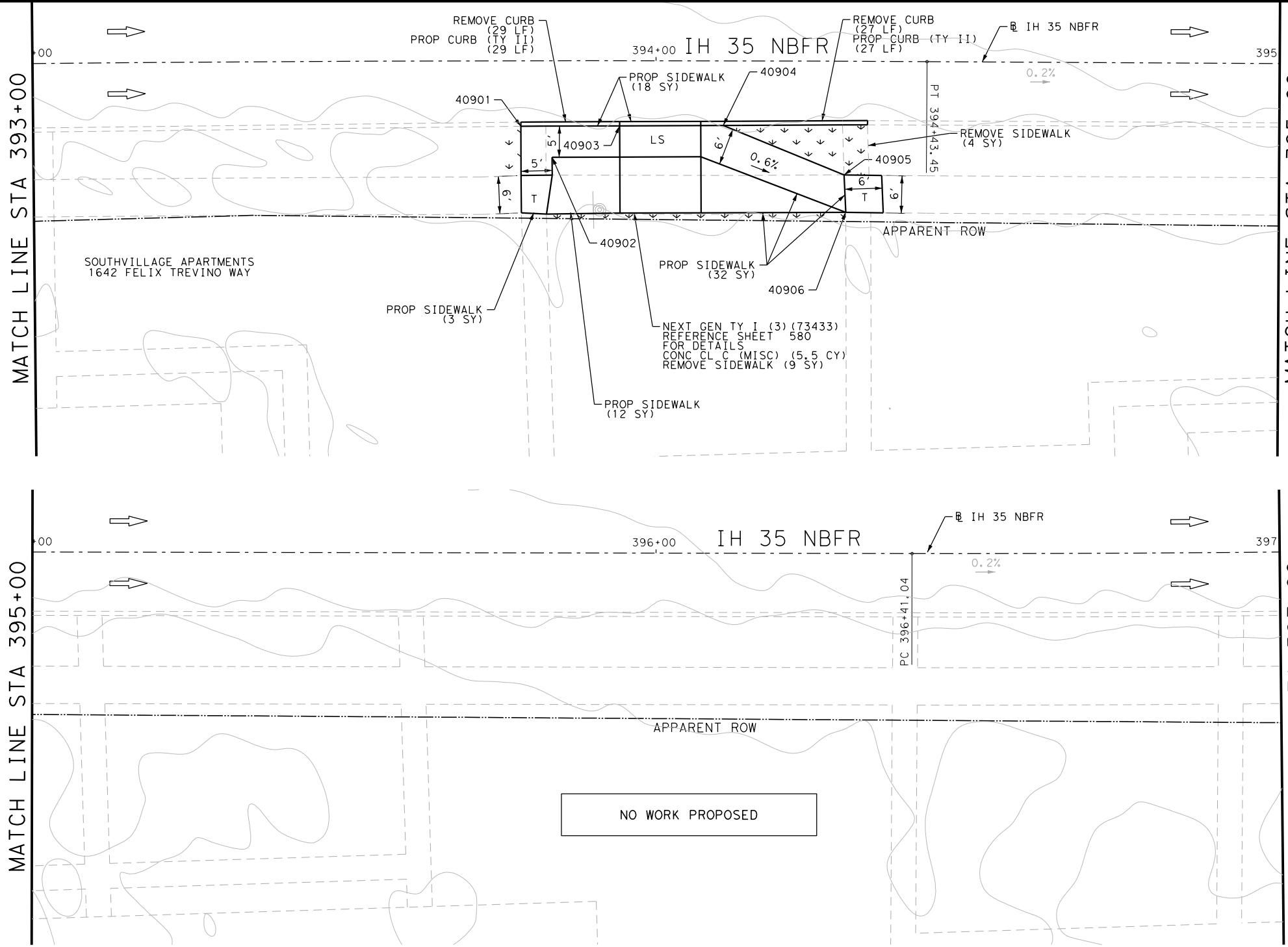
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 389+00 TO STA 393+00

SHEET 9 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	478

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	56
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	13
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	20
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	56
0531-6001	CONC SIDEWALKS (4")	SY	65

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
40901	13677095.96	2116482.96	--	ME
40902	13677093.44	2116489.55	--	ME
40903	13677102.41	2116497.42	--	ME
40904	13677109.16	2116512.59	--	ME
40905	13677109.71	2116533.54	846.34	PROP
40906	13677104.34	2116536.19	846.41	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 393+00 TO STA 397+00

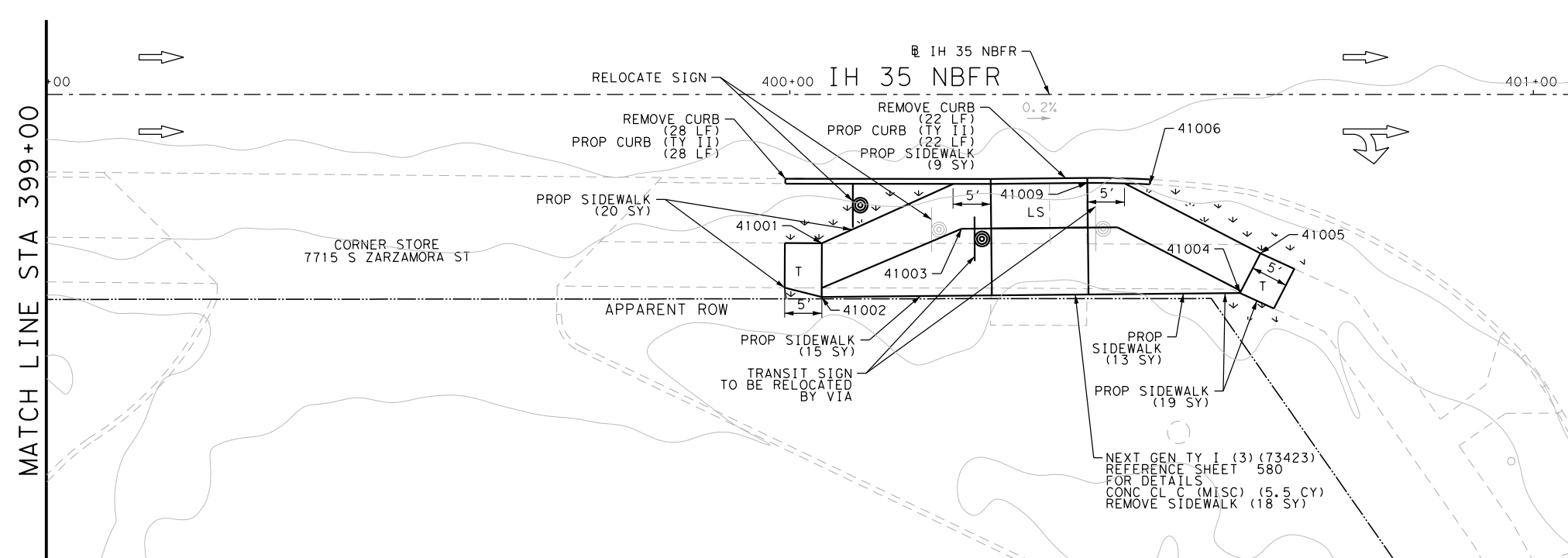
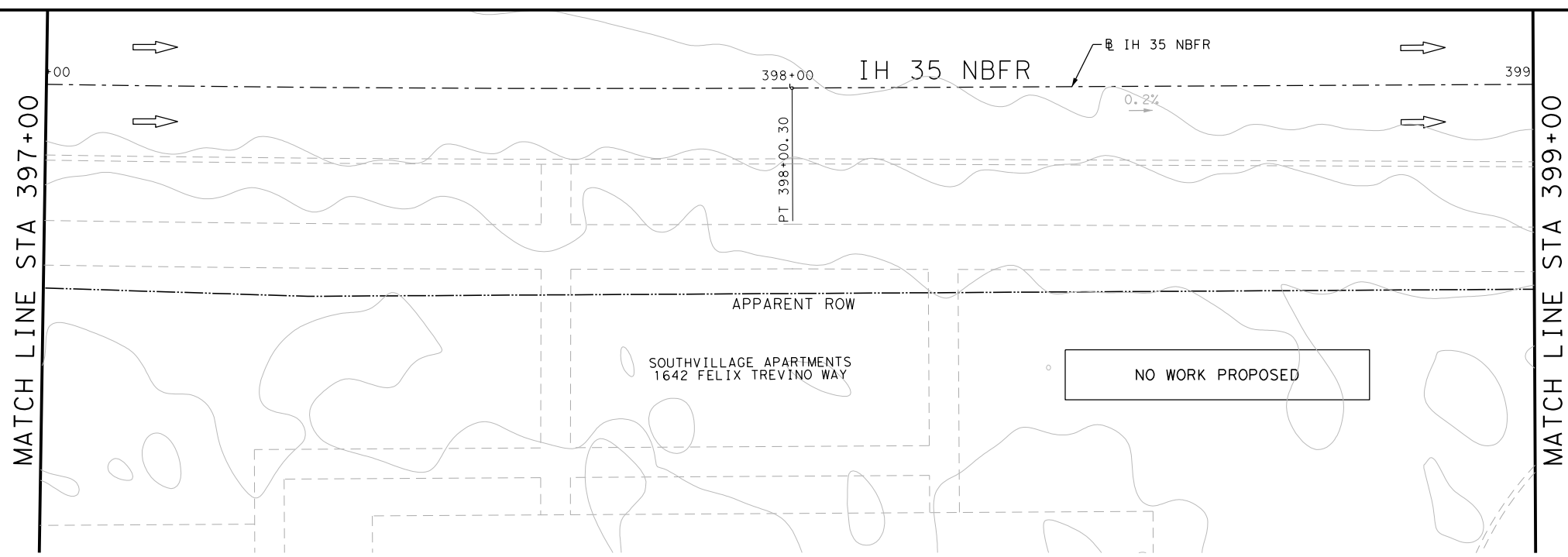
SHEET 10 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				479

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\11113508\_IH35AccessRd\_NB11.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	50
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	18
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	20
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	50
0531-6001	CONC SIDEWALKS (4")	SY	76
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1



POINT	NORTHING	EASTING	ELEV	DESC
41001	13677345.59	2117057.50	645.49	PROP
41002	13677339.69	2117060.27	645.56	PROP
41003	13677354.89	2117073.86	--	ME
41004	13677363.33	2117112.66	645.58	PROP
41005	13677369.34	2117112.58	645.51	PROP
41006	13677371.73	2117093.98	--	ME
41009	13677367.70	2117086.54	--	ME

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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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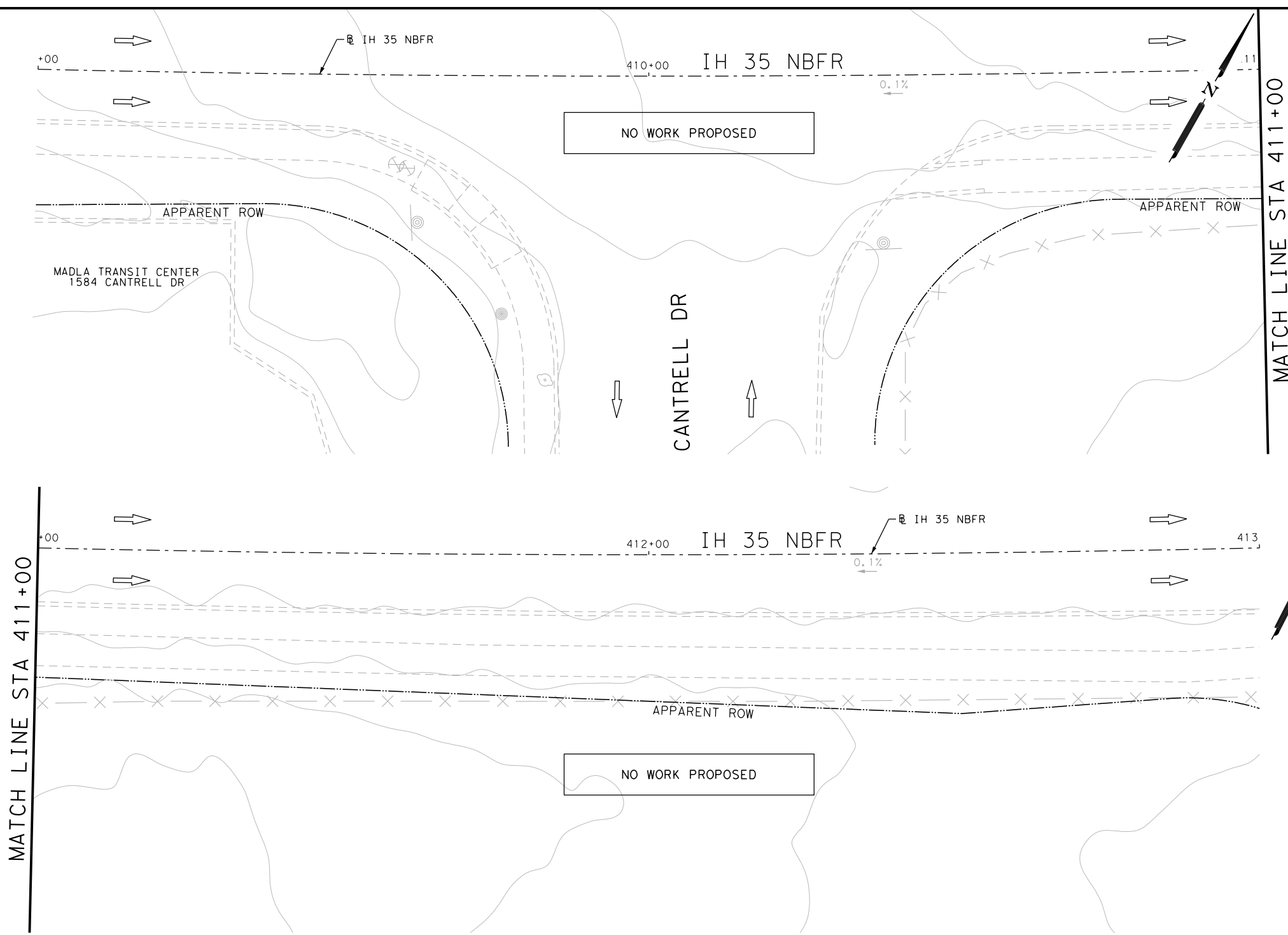
IH 35  
ACCESS RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 397+00 TO STA 401+05

SHEET 11 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	480

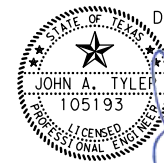
Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB12.dgn

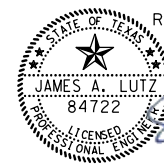


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REVIEW AND APPROVAL


 JAMES A. LUTZ, P.E.
   
 5/3/2019
   
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 409+00 TO STA 413+00

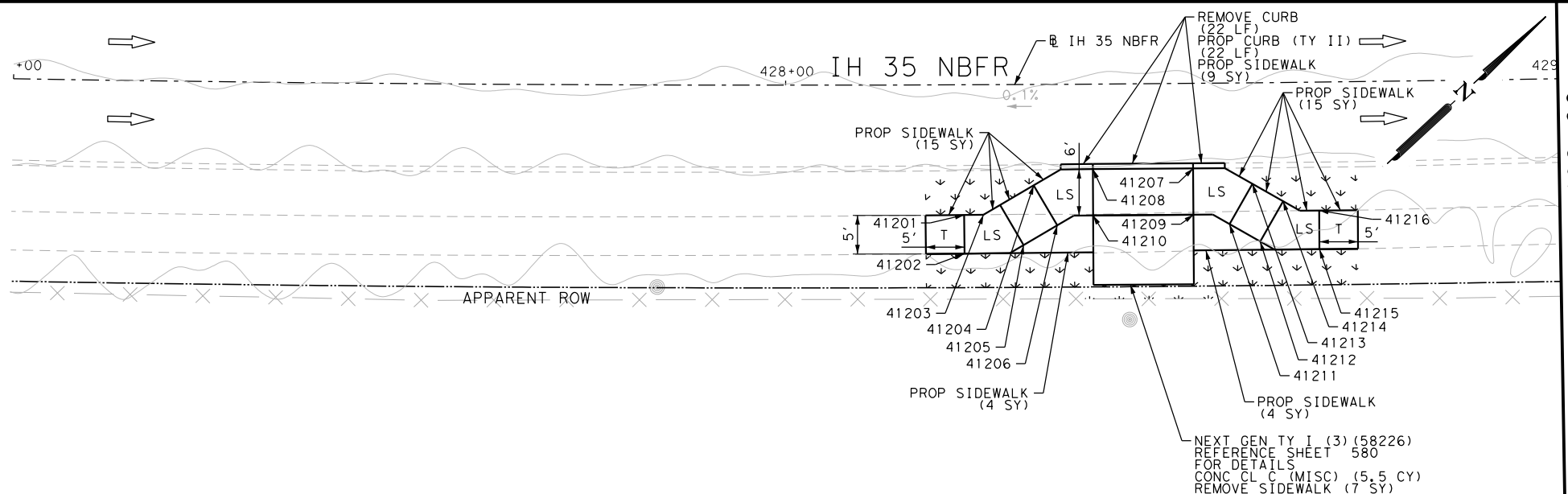
SHEET 12 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				481

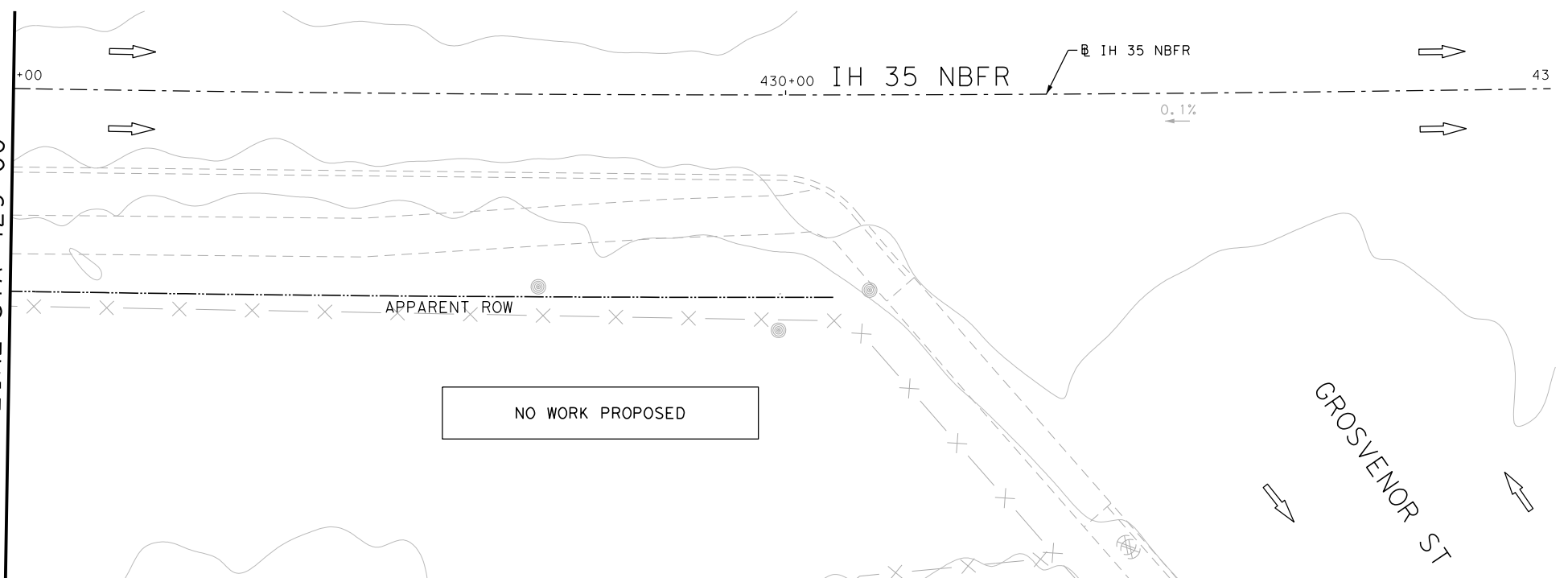


Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_NB13.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	22
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	50
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	22
0531-6001	CONC SIDEWALKS (4")	SY	47



POINT	NORTHING	EASTING	ELEV	DESC
41201	13678932.49	2119367.51	641.32	PROP
41202	13678929.14	2119371.21	641.38	PROP
41203	13678936.79	2119369.72	641.25	PROP
41204	13678941.71	2119370.81	641.03	PROP
41205	13678935.49	2119375.58	641.30	PROP
41206	13678940.42	2119376.67	641.10	PROP
41207	13678958.35	2119383.24	--	ME
41208	13678948.76	2119374.46	--	ME
41209	13678954.30	2119387.66	--	ME
41210	13678944.71	2119378.89	--	ME
41211	13678956.90	2119391.73	641.10	PROP
41212	13678958.28	2119396.08	641.30	PROP
41213	13678962.62	2119389.92	641.03	PROP
41214	13678964.00	2119394.27	641.25	PROP
41215	13678963.24	2119402.03	641.38	PROP
41216	13678966.60	2119398.33	641.32	PROP

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 427+00 TO STA 431+00

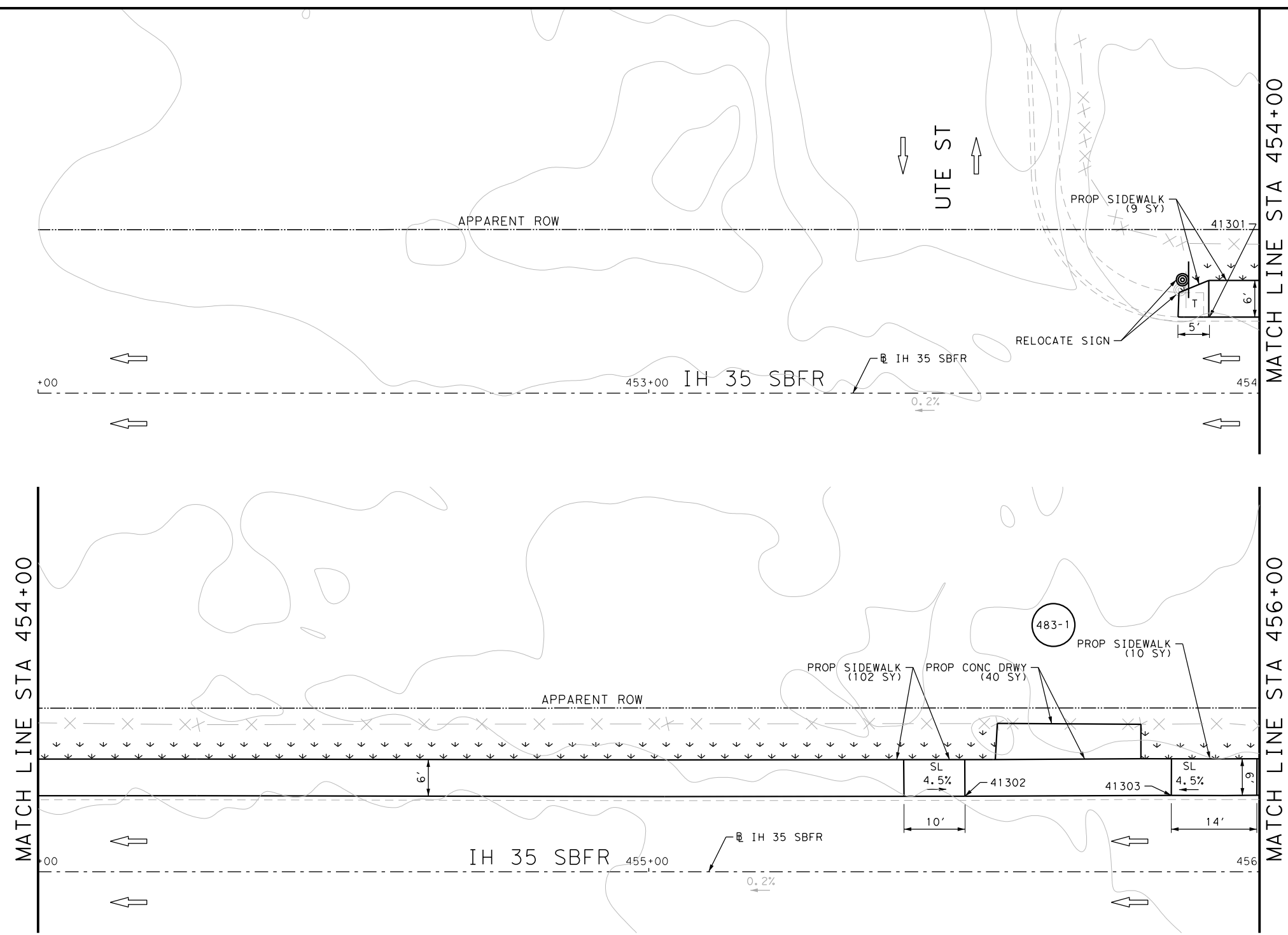
SHEET 13 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	482

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB01.dgn

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0530-6004	DRIVEWAYS (CONC)	SY	40
0531-6001	CONC SIDEWALKS (4")	SY	121
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1



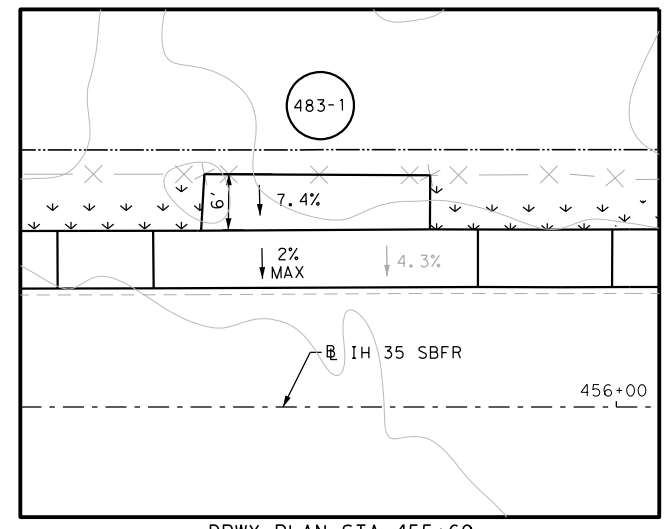
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
41301	13674563.54	2110494.62	--	ME
41302	13674631.94	2110639.36	--	ME
41303	13674646.50	2110669.84	--	ME



**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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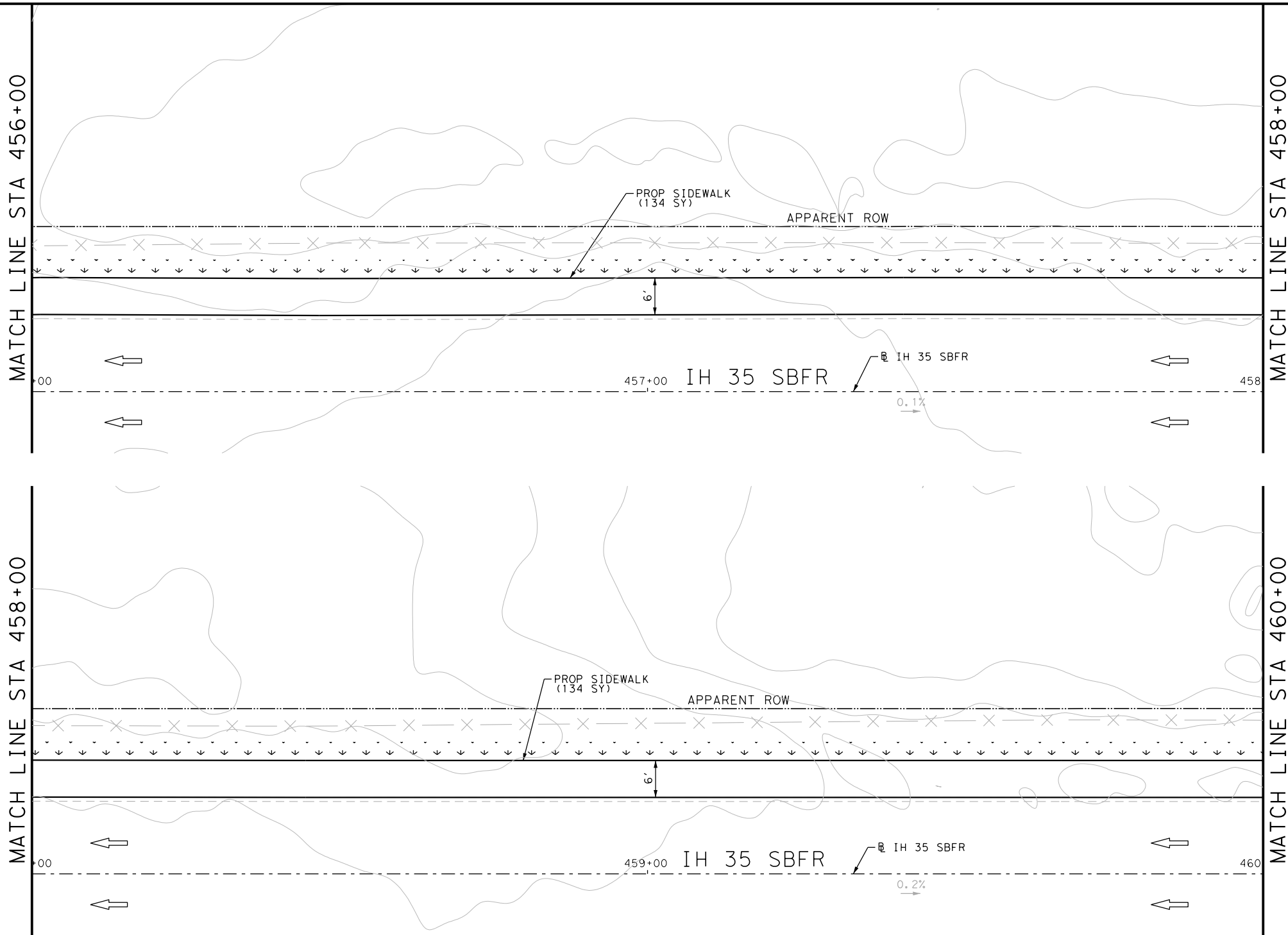
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 452+00 TO STA 456+00

SHEET 14 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				483

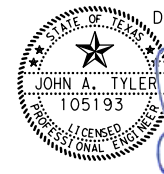
Plotted on: 5/3/2019

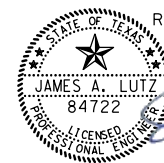
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ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0531-6001	CONC SIDEWALKS (4")	SY	268

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DESIGN  

 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  

 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



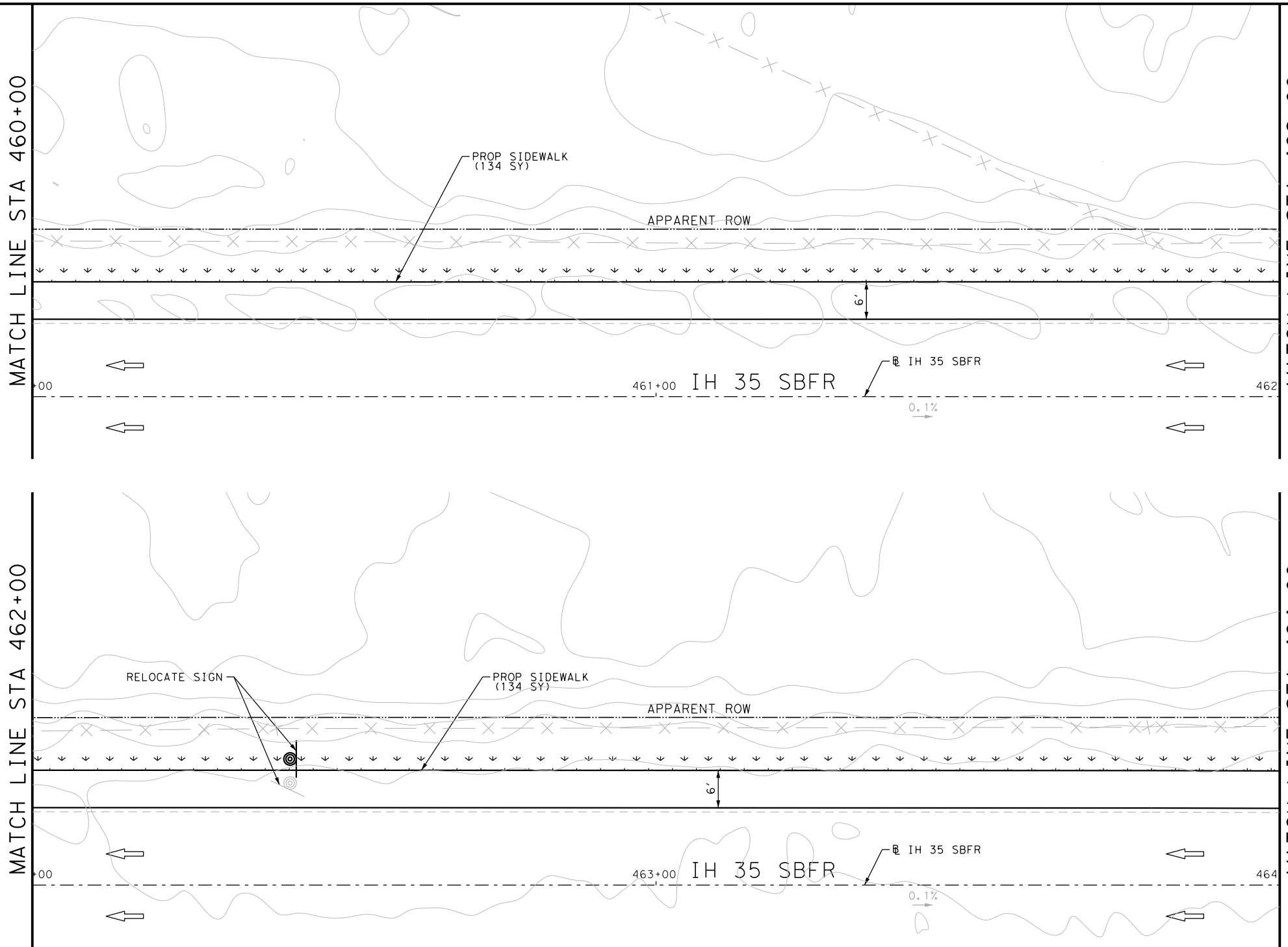
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 456+00 TO STA 460+00

SHEET 15 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				484

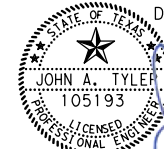
Plotted on: 5/3/2019


Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0531-6001	CONC SIDEWALKS (4")	SY	268
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 460+00 TO STA 464+00

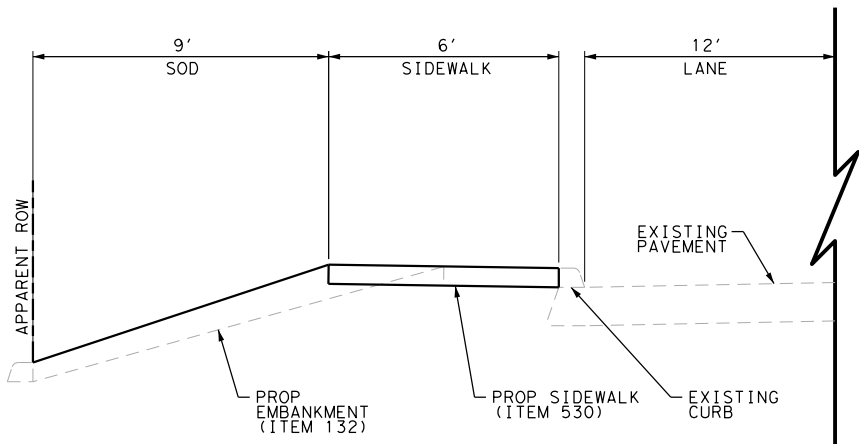
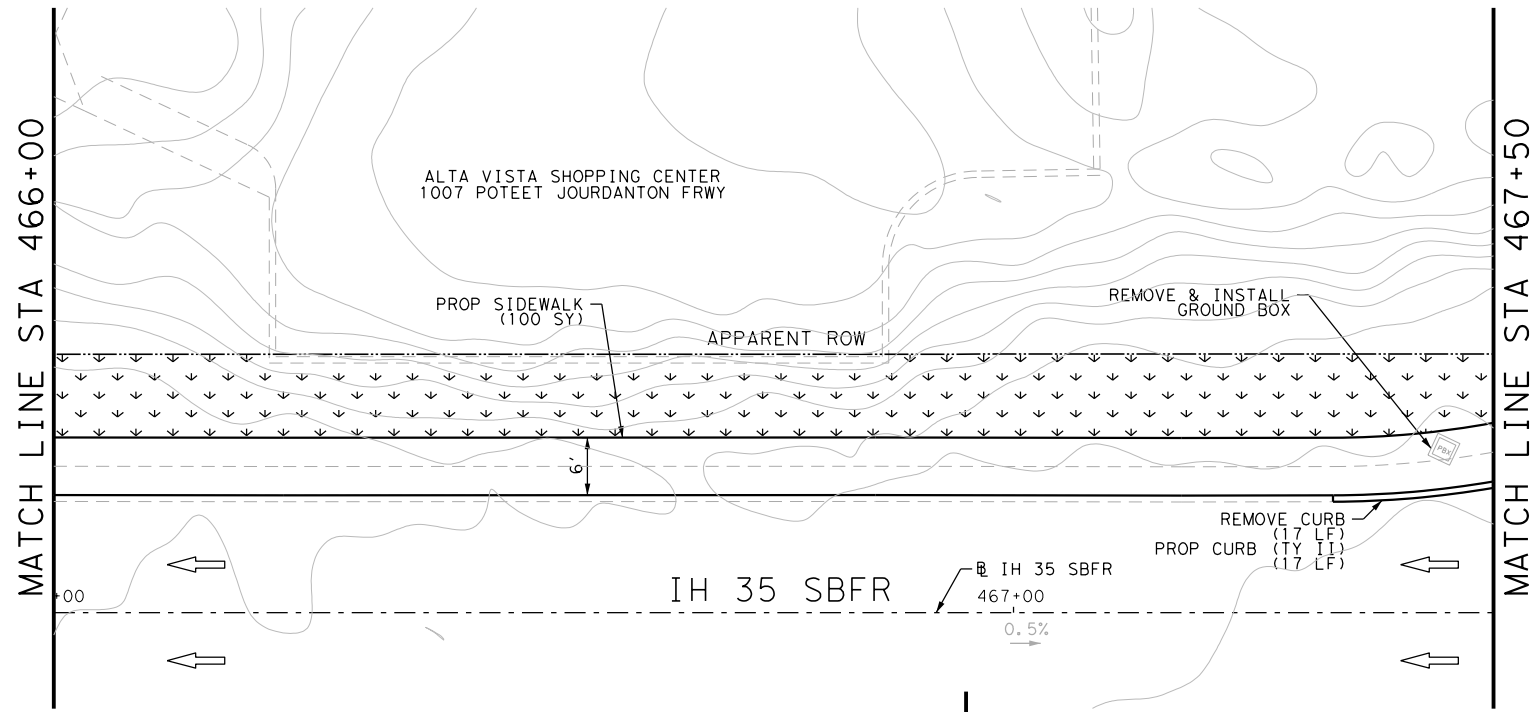
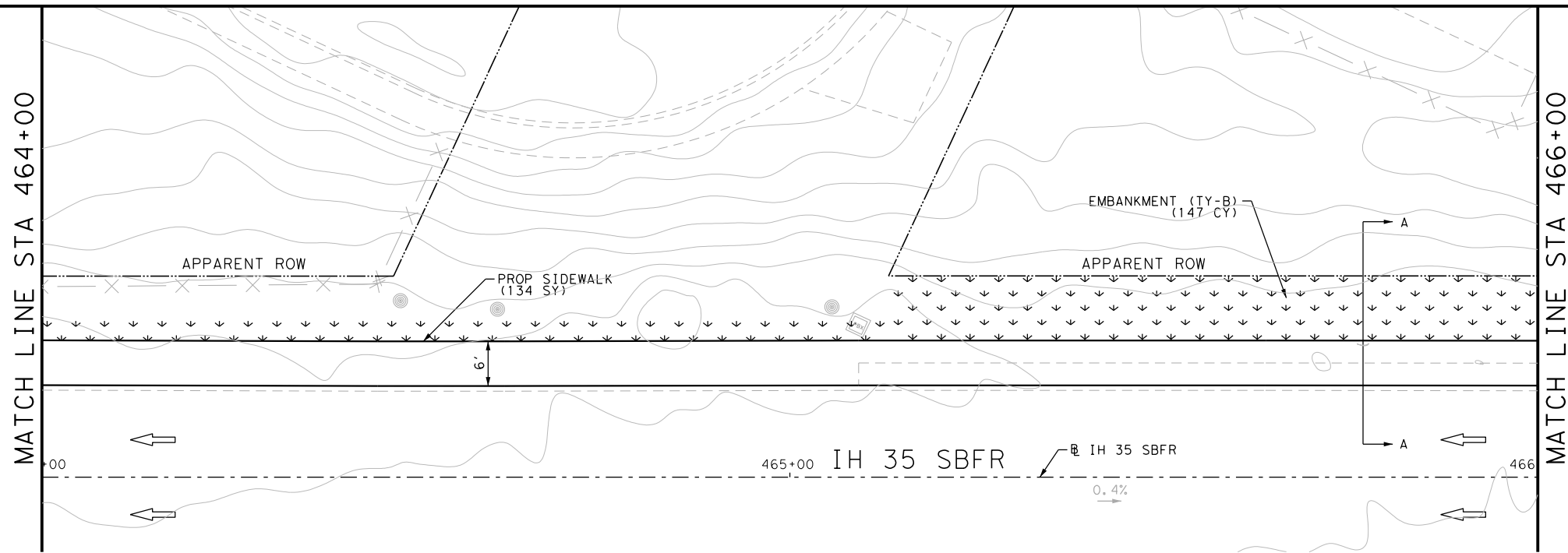
SHEET 16 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	485

Plotted on: 5/3/2019

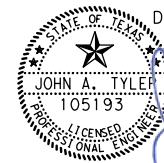
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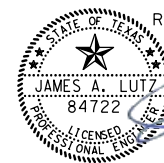
ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	17
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	147
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	215
0162-6002	BLOCK SODDING	SY	215
0168-6001	VEGETATIVE WATERING	MG	3.35
0529-6002	CONC CURB (TY II)	LF	17
0531-6001	CONC SIDEWALKS (4")	SY	234
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	38
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1



**SECTION A-A**  
N. T. S.

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 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
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 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 464+00 TO STA 467+50

SHEET 17 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				486

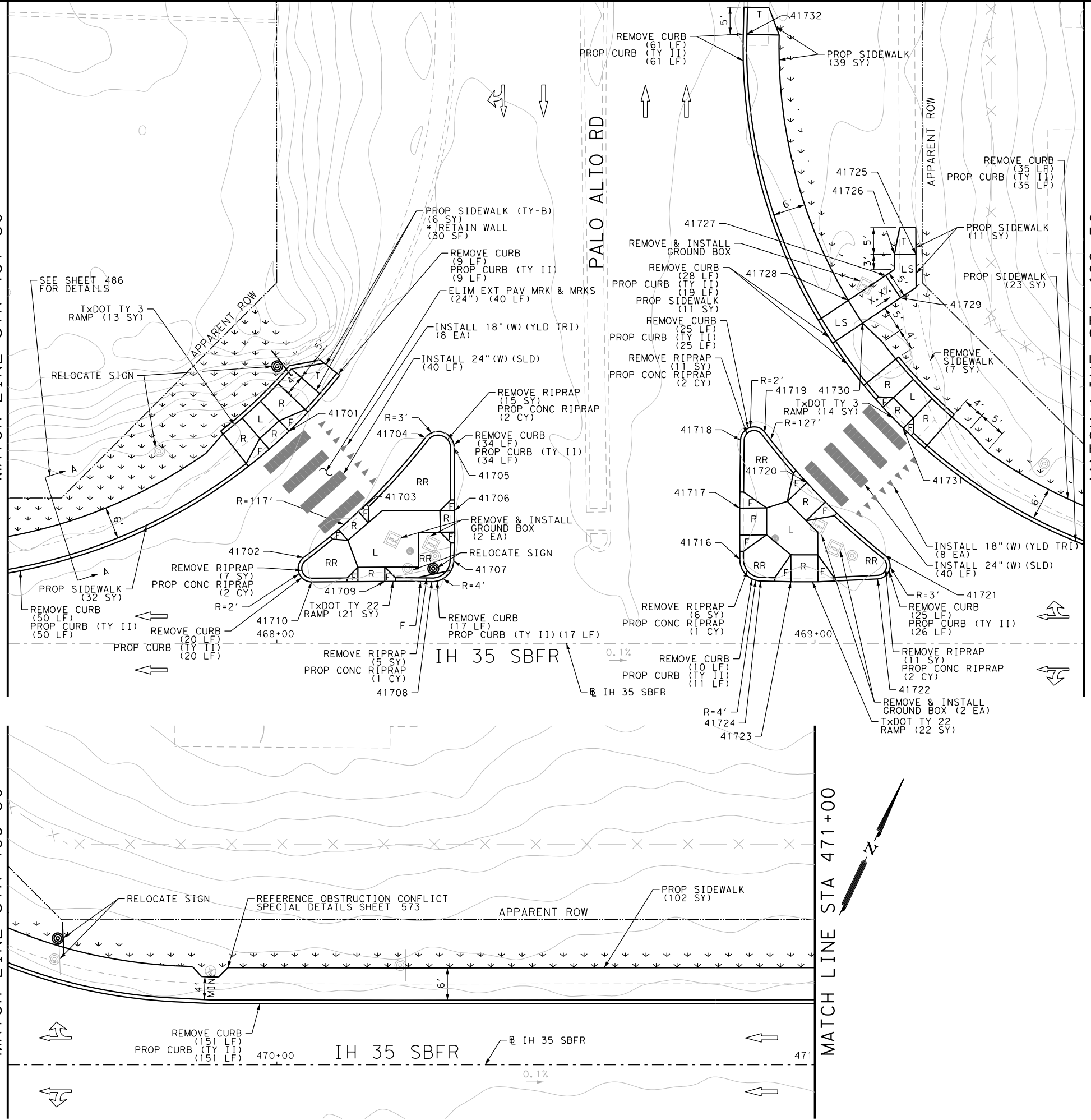
Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\11113508\_IH35AccessRd\_SB05.dgn

MATCH LINE STA 467+50

MATCH LINE STA 469+50

MATCH LINE STA 471+00



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	55
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	465
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0432-6003	RIPRAP (CONC) (6 IN)	CY	10
0529-6002	CONC CURB (TY II)	LF	458
0531-6001	CONC SIDEWALKS (4")	SY	218
0531-6020	CURB RAMPS (TY 3)	SY	27
0531-6031	CURB RAMPS (TY 22)	SY	43
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	6
0624-6009	GROUND BOX TY D (162922)	EA	4
0624-6010	GROUND BOX TY D (162922)W/APRON	EA	1
0624-6028	REMOVE GROUND BOX	EA	5
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	3
0666-6048	REFL PAV MRK TY I (W)24" (SLD) (100MIL)	LF	80
0666-6099	REF PAV MRK TY I (W)18" (YLD TRI) (100MIL)	EA	16
0666-6230	PAVEMENT SEALER 24"	LF	80
0666-6243	PAVEMENT SEALER (YLD TRI)	EA	16
0677-6007	ELIM EXT PAV MRK & MRKS (24")	LF	40
0678-6008	PAV SURF PREP FOR MRK (24")	LF	80
0678-6022	PAV SURF PREP FOR MRK (18") (YLD TRI)	EA	16

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 467+50 TO STA 471+00

SHEET 18 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	487

SEE SHEET 488 FOR POINT TABLE

Plotted on: 5/3/2019

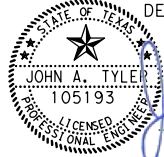
Design File name: P:\111135\08\Design\Civil\Roadway\IH\_35 Access Rd\1113508\_IH35AccessRd\_SB05A.dgn

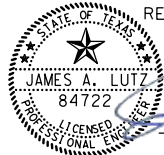
POINT	NORTHING	EASTING	ELEV	DESC
41701	13675191.14	2111758.19	--	ME
41702	13675171.05	2111770.67	--	ME
41703	13675183.17	2111776.24	--	ME
41704	13675200.85	2111781.60	--	ME
41705	13675201.50	2111787.24	--	ME
41706	13675190.91	2111792.29	--	ME
41707	13675182.42	2111796.17	--	ME
41708	13675177.21	2111794.15	--	ME
41709	13675173.50	2111786.22	--	ME
41710	13675167.62	2111773.96	--	ME
41711	13675195.56	2111822.26	--	ME
41712	13675193.62	2111818.28	--	ME
41713	13675206.00	2111812.23	--	ME
41714	13675207.95	2111816.21	--	ME
41715	13675198.96	2111820.60	--	ME
41716	13675205.41	2111844.11	--	ME
41717	13675214.02	2111840.04	--	ME
41718	13675225.51	2111834.77	--	ME
41719	13675228.77	2111838.20	--	ME
41720	13675223.62	2111849.25	--	ME

POINT	NORTHING	EASTING	ELEV	DESC
41721	13675217.65	2111868.21	--	ME
41722	13675213.09	2111868.80	--	ME
41723	13675205.73	2111854.47	--	ME
41724	13675203.47	2111849.36	--	ME
41725	13675270.67	2111849.46	665.00	PROP
41726	13675268.94	2111845.85	664.93	PROP
41727	13675264.70	2111846.04	664.86	PROP
41728	13675257.54	2111841.74	--	ME
41729	13675262.12	2111850.32	664.90	PROP
41730	13675254.85	2111845.96	--	ME
41731	13675240.44	2111861.15	--	ME
41732	13675294.19	2111803.56	--	ME

NOTES:

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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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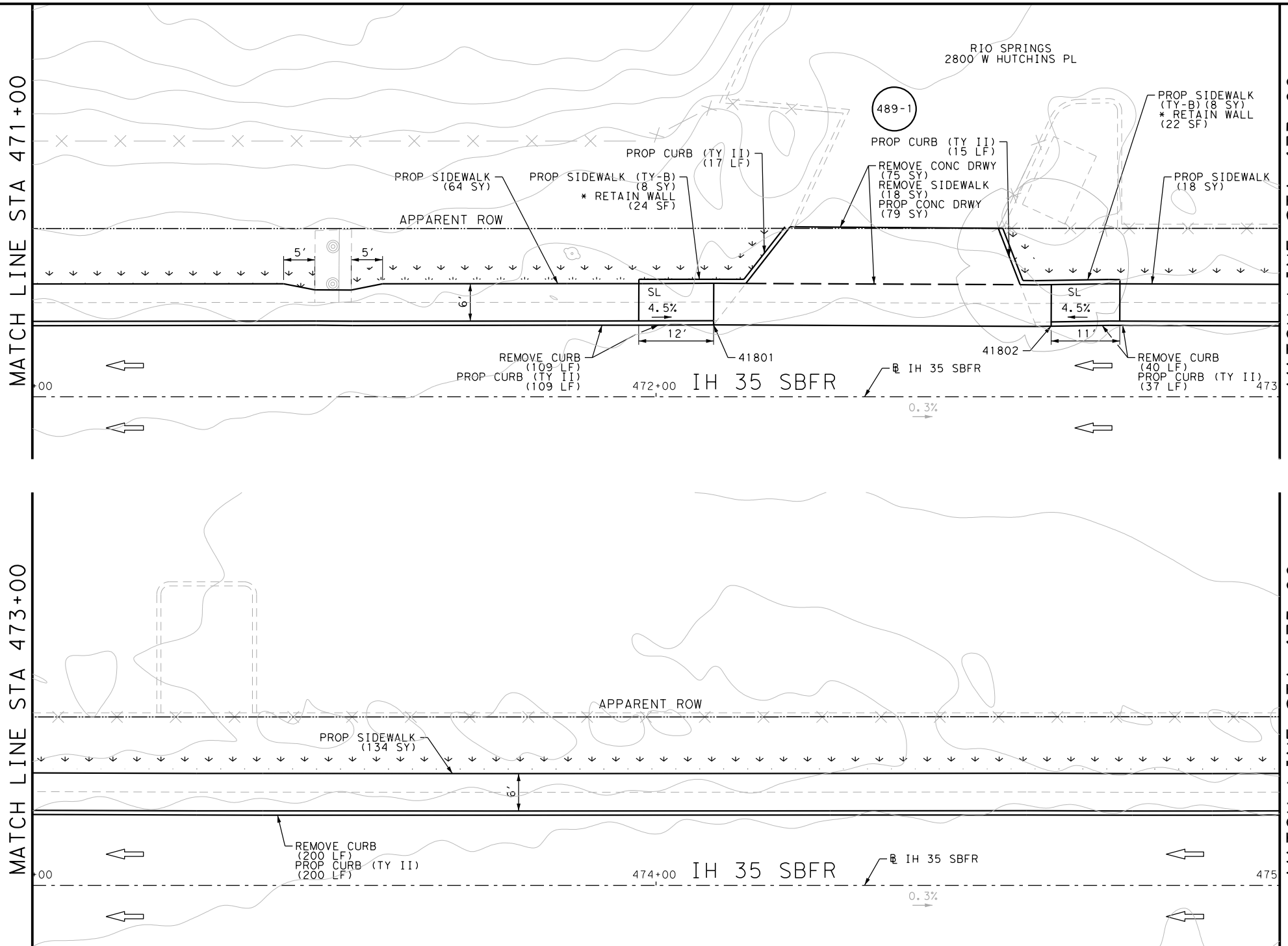
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 467+50 TO STA 471+00

SHEET 19 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	488

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB06.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	75
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	349
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	18
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0529-6002	CONC CURB (TY II)	LF	378
0530-6004	DRIVEWAYS (CONC)	SY	79
0531-6001	CONC SIDEWALKS (4")	SY	216
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	16

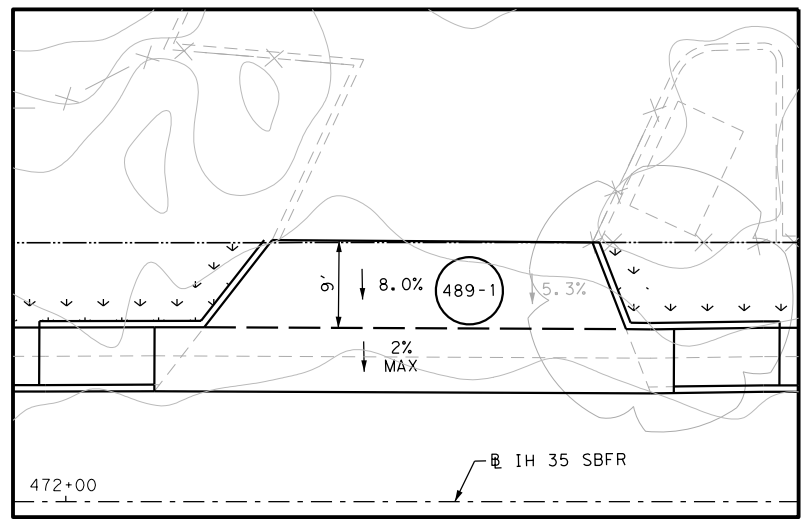
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
41801	13675339.98	2112137.95	--	ME
41802	13675362.91	2112186.98	--	ME



REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 471+00 TO STA 475+00

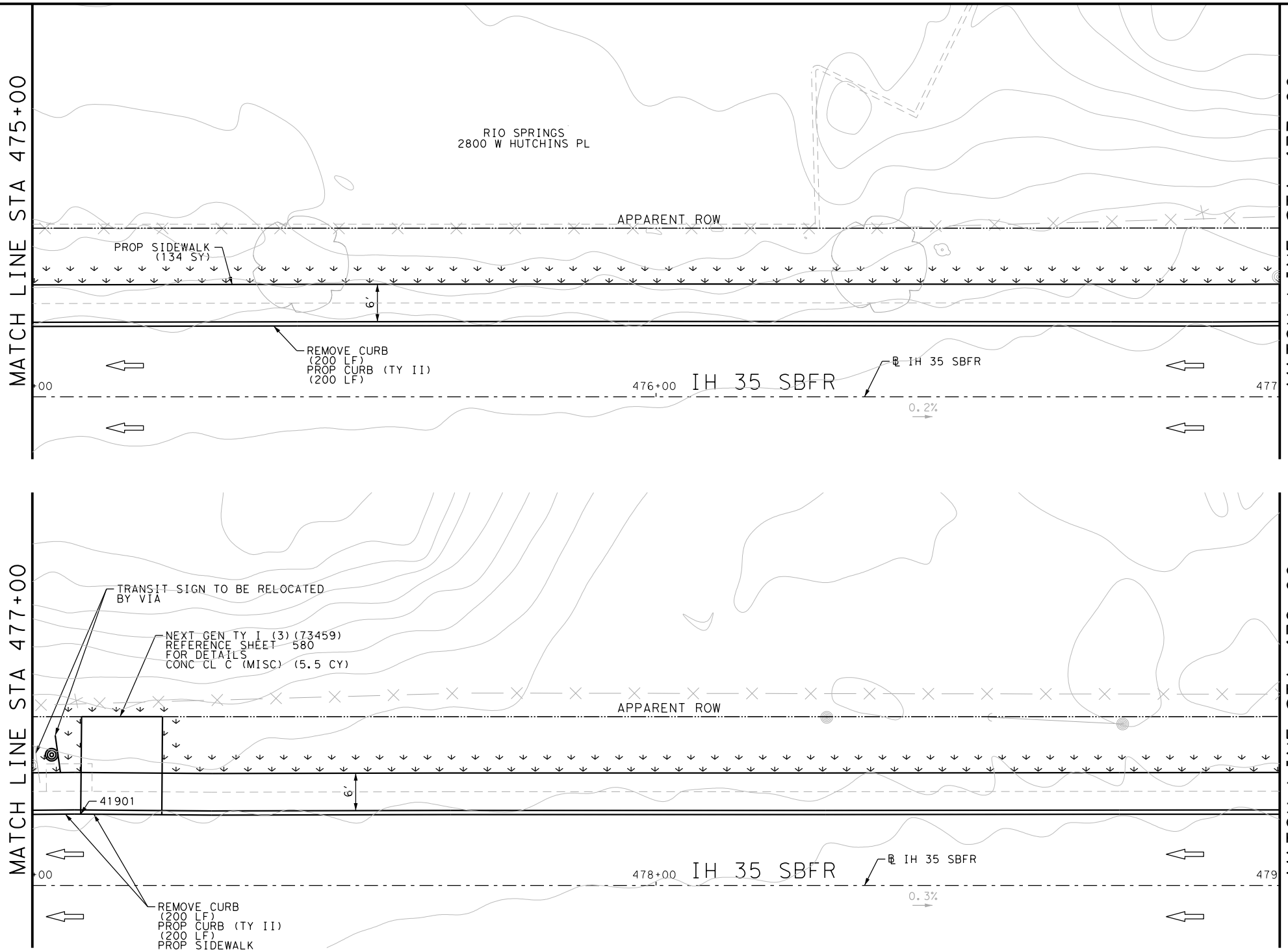
SHEET 20 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				489



Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	400
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	400
0531-6001	CONC SIDEWALKS (4")	SY	268

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
41901	13675553.11	2112588.64	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 475+00 TO STA 479+00

SHEET 21 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	490

Plotted on: 5/3/2019

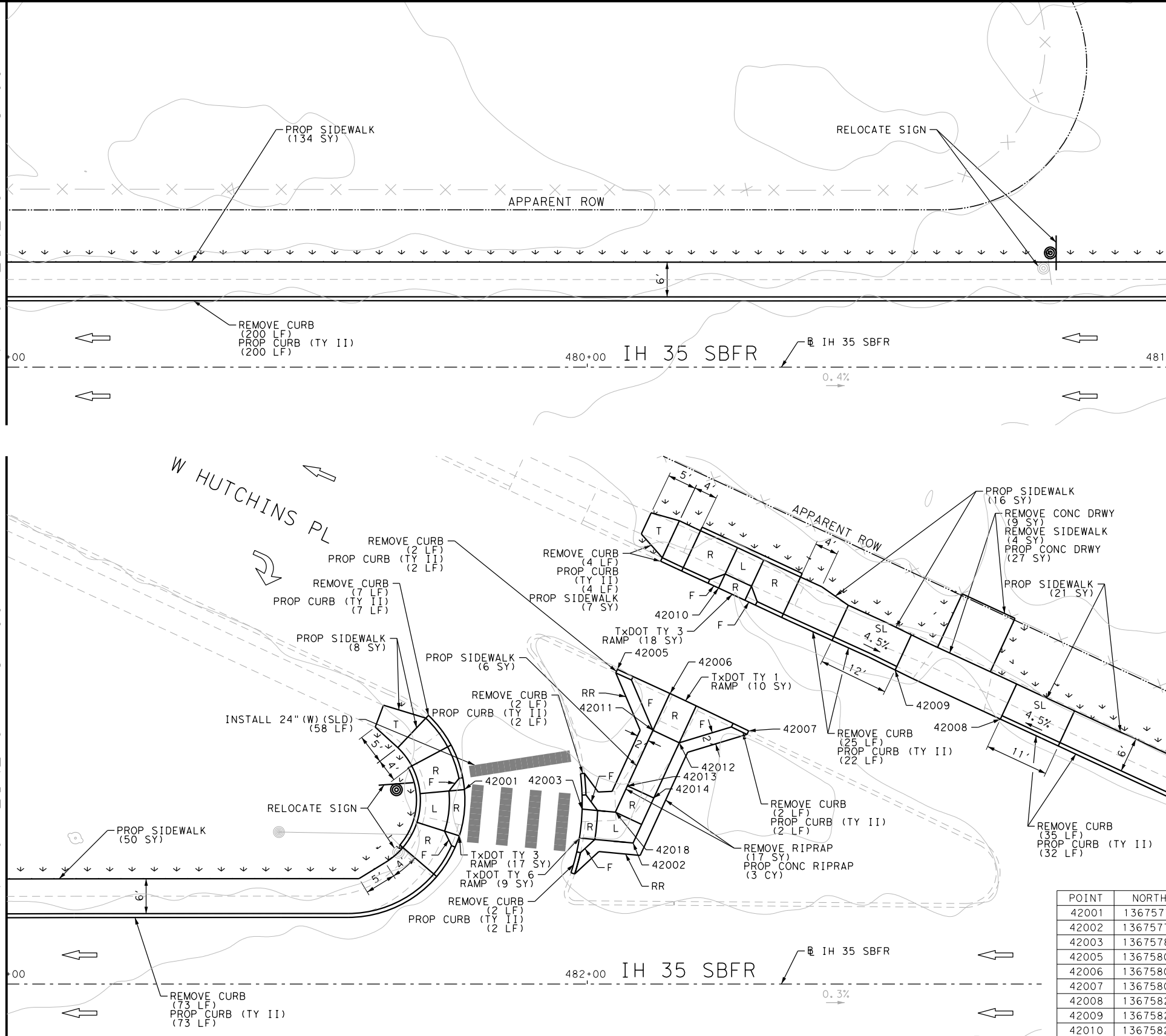
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MATCH LINE STA 479+00

MATCH LINE STA 481+00

MATCH LINE STA 481+00

MATCH LINE STA 483+00



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	17
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	9
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	352
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0529-6002	CONC CURB (TY II)	LF	346
0530-6004	DRIVEWAYS (CONC)	SY	27
0531-6001	CONC SIDEWALKS (4")	SY	242
0531-6018	CURB RAMPS (TY 1)	SY	10
0531-6020	CURB RAMPS (TY 3)	SY	18
0531-6023	CURB RAMPS (TY 6)	SY	9
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	2
0666-6048	REFL PAV MRK TY I (W)24" (SLD) (100MIL)	LF	58
0666-6230	PAVEMENT SEALER 24"	LF	58
0678-6008	PAV SURF PREP FOR MRK (24")	LF	58

- NOTES:
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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
42001	13675774.51	2113005.05	--	ME
42002	13675778.60	2113035.23	662.10	PROP
42003	13675780.13	2113024.80	--	ME
42005	13675804.50	2113020.01	--	ME
42006	13675804.60	2113029.96	--	ME
42007	13675804.59	2113044.97	--	ME
42008	13675824.94	2113083.29	--	ME
42009	13675824.84	2113063.29	--	ME
42010	13675824.60	2113029.77	--	ME
42011	13675797.61	2113030.03	662.82	PROP
42012	13675797.61	2113035.03	662.80	PROP
42013	13675787.09	2113030.14	662.50	PROP
42014	13675787.14	2113035.14	662.48	PROP
42018	13675782.09	2113030.19	662.12	PROP

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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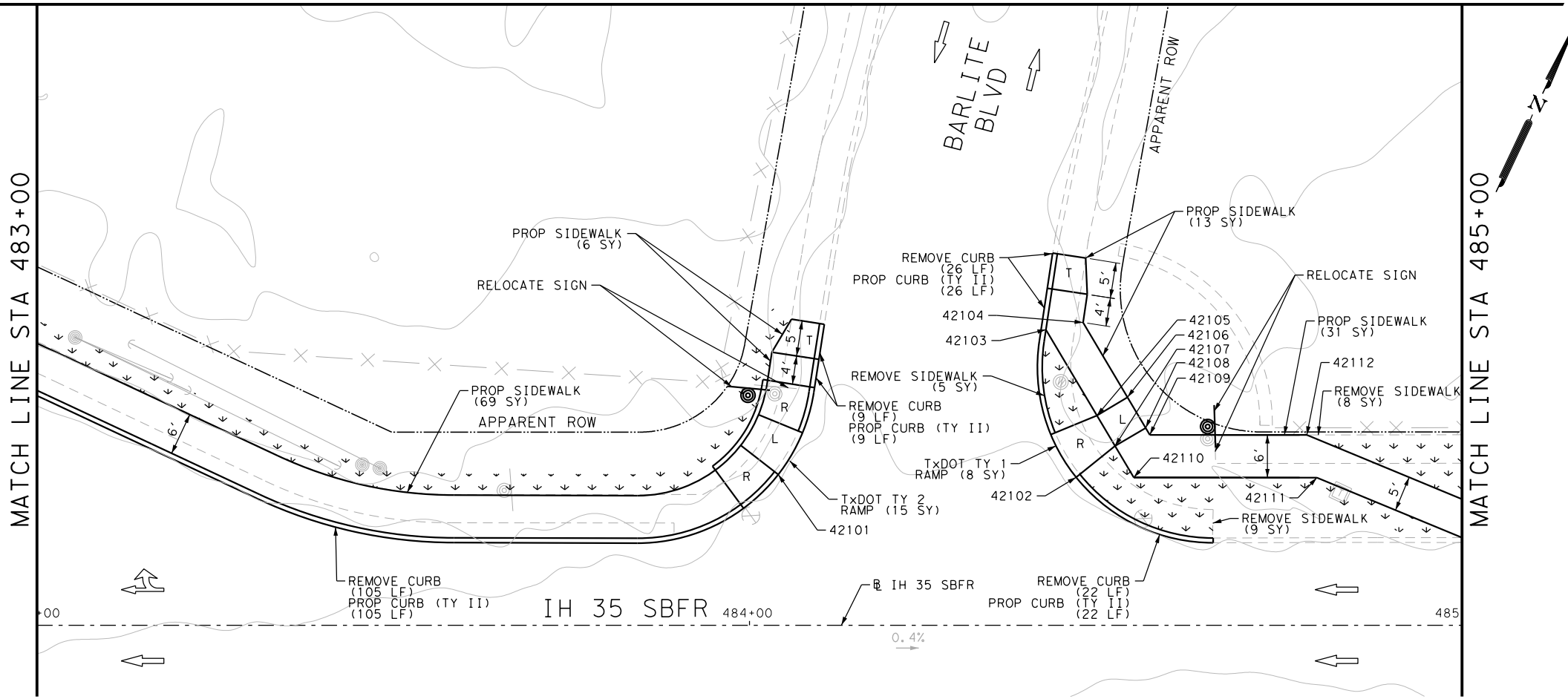
IH 35  
ACCESS RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 479+00 TO STA 483+00

SHEET 22 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	491

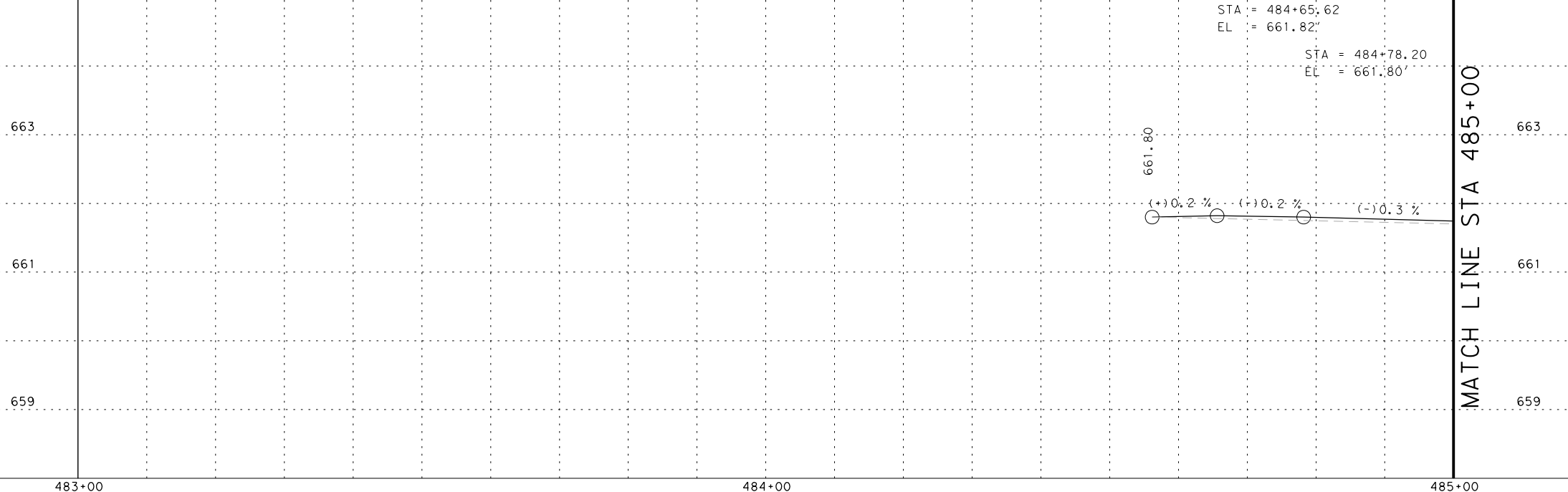
Plotted on: 5/3/2019

Design File Name: P:\111135\08\Design\Civil\Roadway\IH\_35 Access Rd\1113508\_IH35AccessRd\_SB09PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	162
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	22
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	95
0162-6002	BLOCK SODDING	SY	95
0168-6001	VEGETATIVE WATERING	MG	1.48
0529-6002	CONC CURB (TY II)	LF	162
0531-6001	CONC SIDEWALKS (4")	SY	119
0531-6018	CURB RAMPS (TY 1)	SY	8
0531-6019	CURB RAMPS (TY 2)	SY	15
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2

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DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 483+00 TO STA 485+00

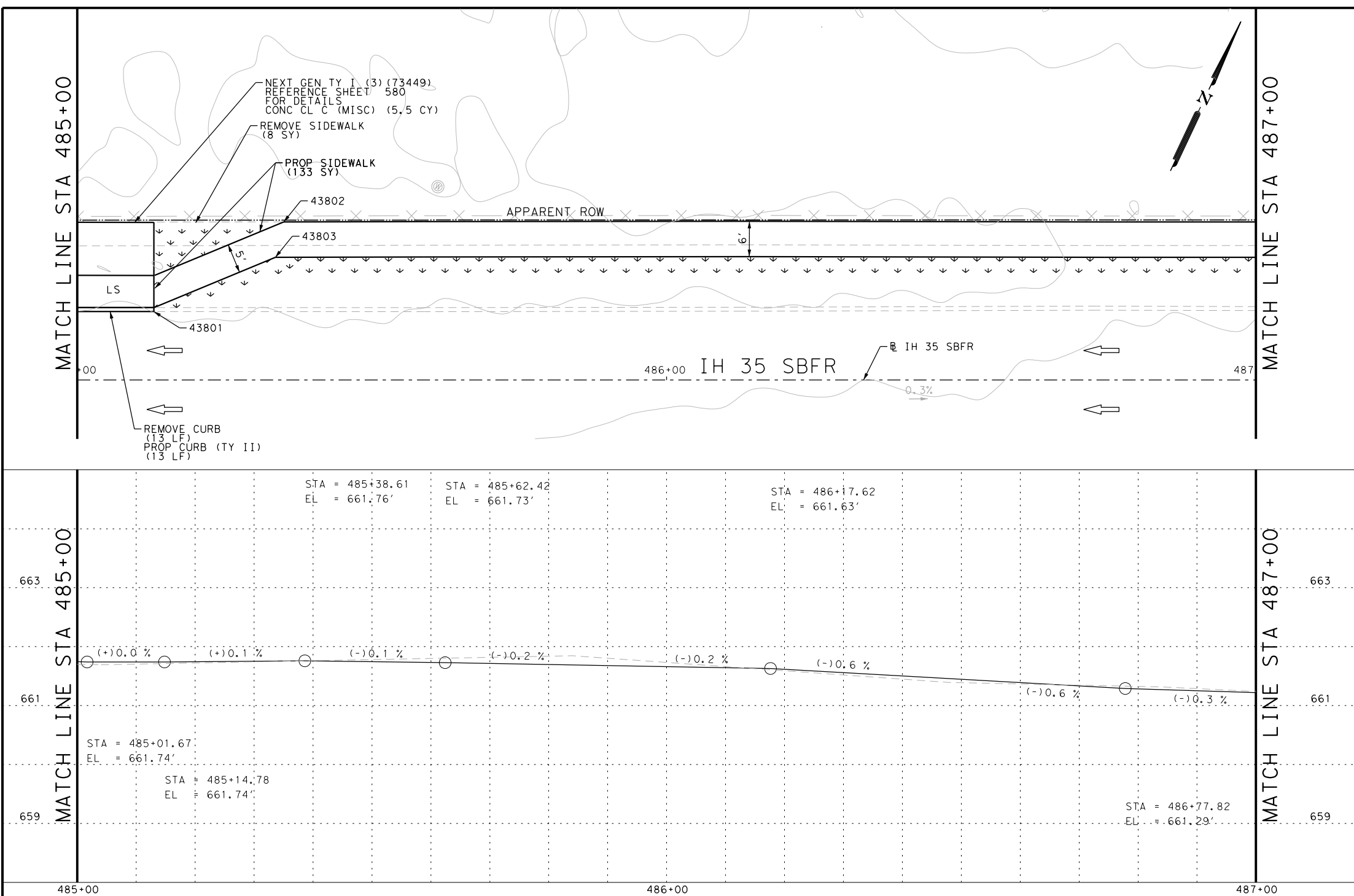
SHEET 23 OF 44

POINT	NORTHING	EASTING	ELEV	DESC
42101	13675859.67	2113213.87	--	ME
42102	13675877.20	2113251.84	--	ME
42103	13675894.13	2113239.13	--	ME
42104	13675897.28	2113243.41	--	ME
42105	13675886.30	2113250.74	--	PROF
42106	13675890.45	2113253.54	--	PROF
42107	13675883.50	2113254.89	--	PROF
42108	13675887.65	2113257.68	--	PROF
42109	13675887.02	2113258.62	--	PROF
42110	13675880.63	2113259.15	--	PROF
42111	13675891.62	2113282.39	--	PROF
42112	13675896.43	2113278.53	--	PROF

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	492

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB09PP\_A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	13
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	70
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	13
0531-6001	CONC SIDEWALKS (4")	SY	133

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 485+00 TO STA 487+00

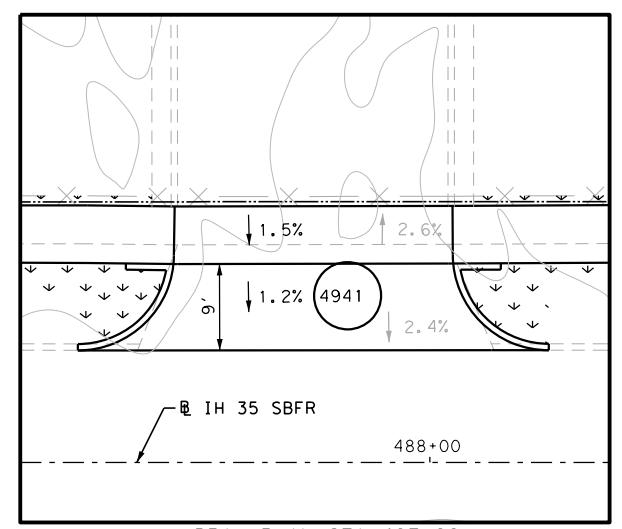
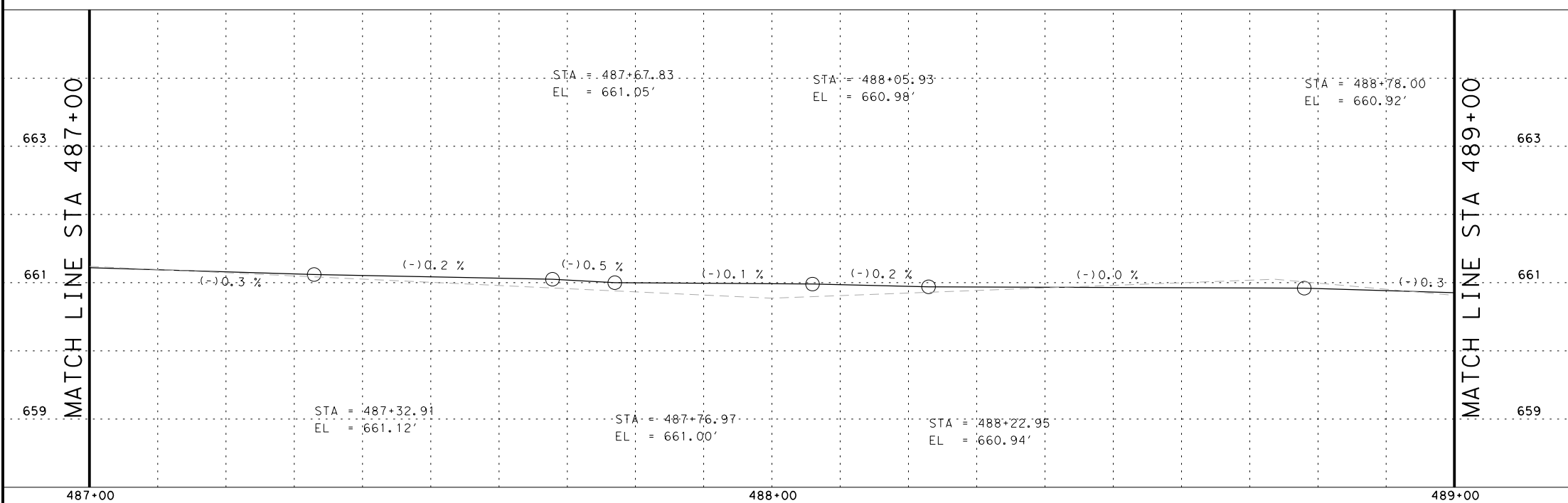
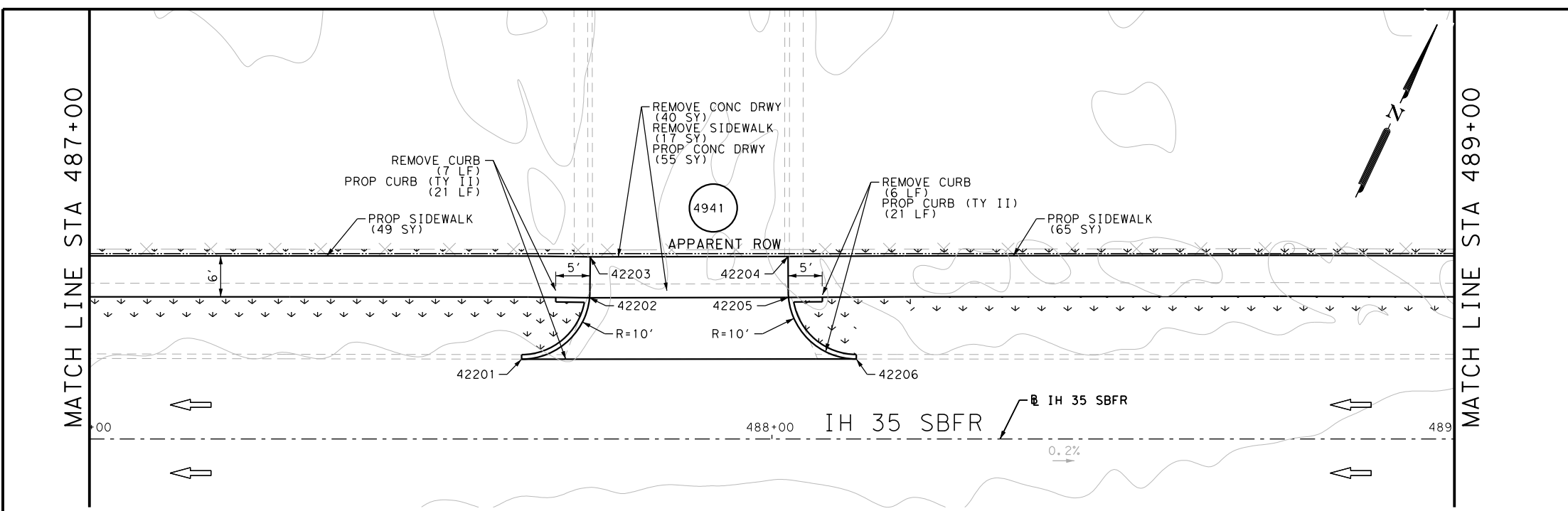
SHEET 24 OF 44

POINT	NORTHING	EASTING	ELEV	DESC
43801	13675897.65	2113316.45	--	ME
43802	13675920.82	2113329.86	--	PROF
43803	13675914.78	2113331.14	--	PROF

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	493

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB10PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	40
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	13
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	17
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	80
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0529-6002	CONC CURB (TY II)	LF	42
0530-6004	DRIVEWAYS (CONC)	SY	55
0531-6001	CONC SIDEWALKS (4")	SY	114

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 487+00 TO STA 489+00

SHEET 25 OF 44

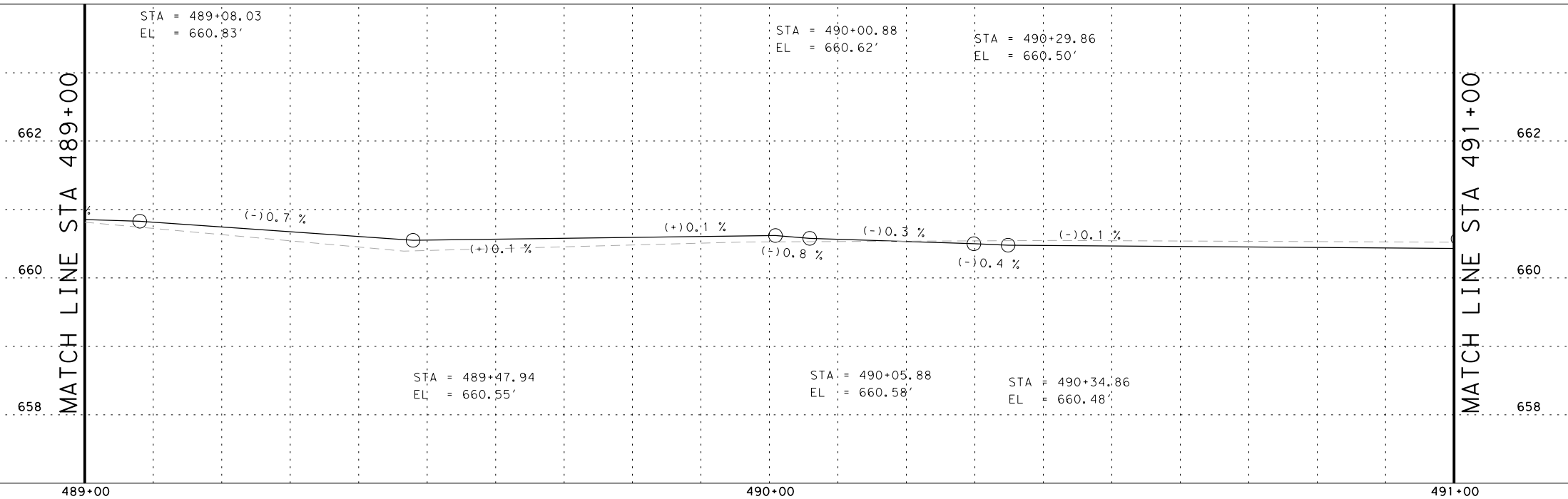
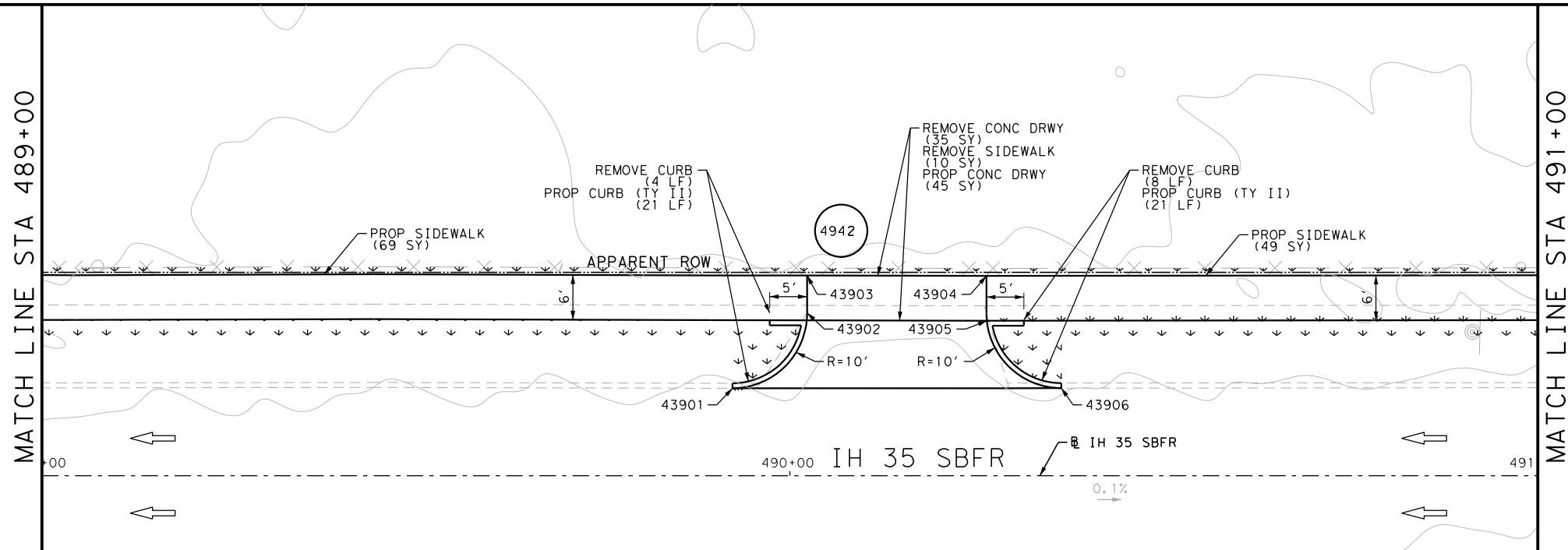
POINT	NORTHING	EASTING	ELEV	DESC
42201	13676004.76	2113542.69	--	ME
42202	13676017.16	2113547.85	--	PROF
42203	13676022.63	2113545.38	--	PROF
42204	13676035.07	2113571.54	--	PROF
42205	13676029.68	2113574.16	--	PROF
42206	13676025.76	2113587.03	--	ME

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	494

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB10PP\_A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	35
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	12
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	10
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	80
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0529-6002	CONC CURB (TY II)	LF	42
0530-6004	DRIVEWAYS (CONC)	SY	45
0531-6001	CONC SIDEWALKS (4")	SY	118



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

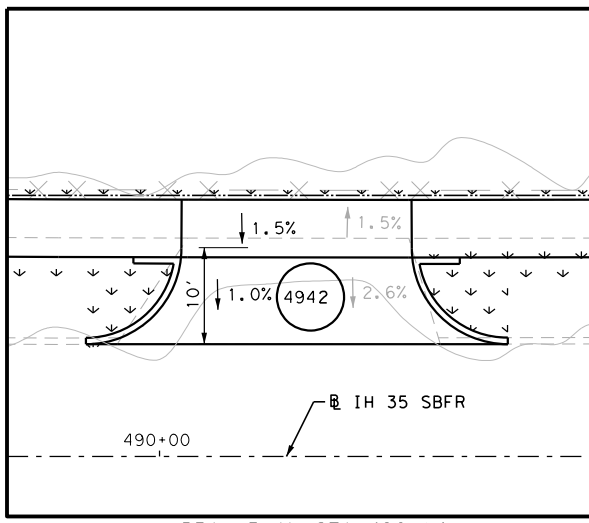
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 489+00 TO STA 491+00

SHEET 26 OF 44

POINT	NORTHING	EASTING	ELEV	DESC
43901	13676102.70	2113749.71	--	ME
43902	13676115.15	2113754.79	--	PROF
43903	13676120.60	2113752.28	--	PROF
43904	13676130.81	2113773.96	--	PROF
43905	13676125.41	2113776.58	--	PROF
43906	13676121.52	2113789.44	--	ME

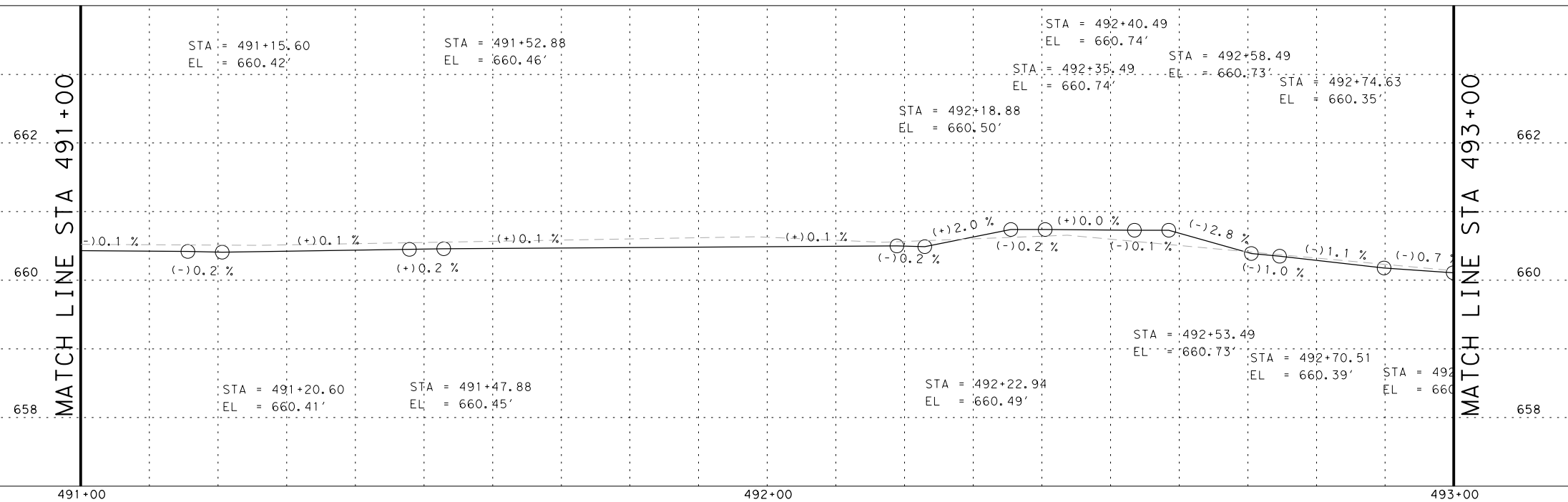
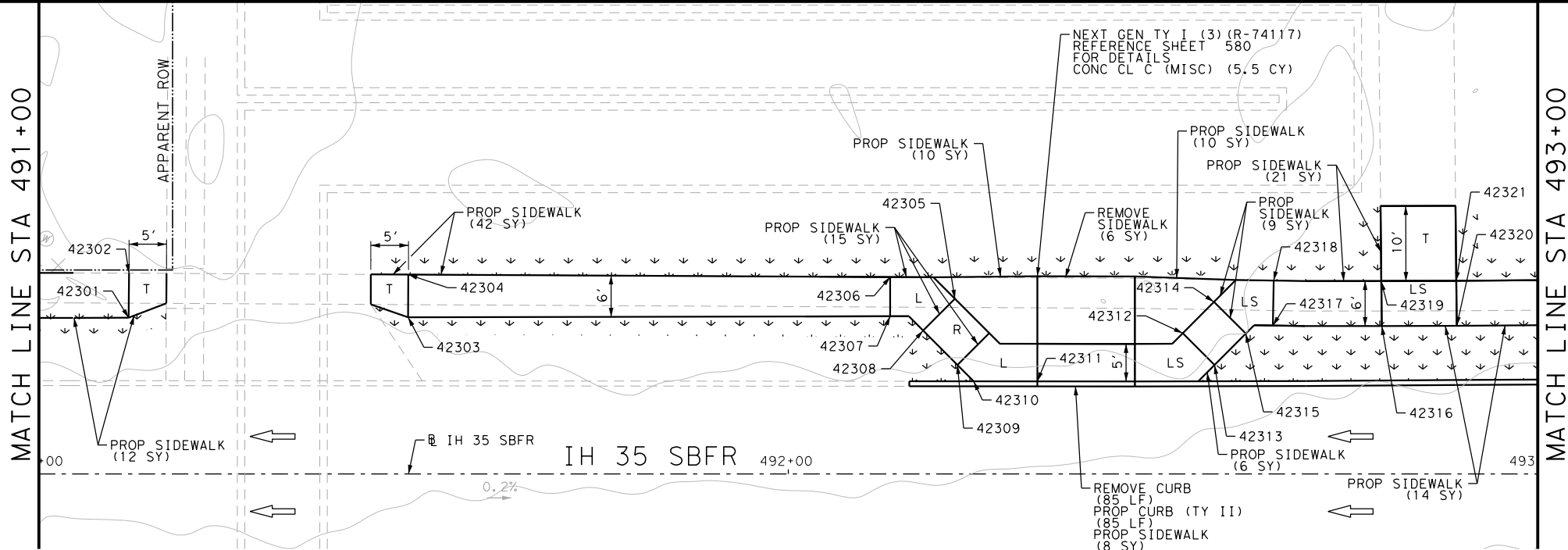


DRWY PLAN STA 490+14

Plotted on: 5/3/2019

Design File Name: P:\11135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SBI1PP.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	85
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	6
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	130
0162-6002	BLOCK SODDING	SY	130
0168-6001	VEGETATIVE WATERING	MG	2.03
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	85
0531-6001	CONC SIDEWALKS (4")	SY	147



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 491+00 TO STA 493+00

SHEET 27 OF 44

POINT	NORTHING	EASTING	ELEV	DESC
42301	13676162.13	2113853.96	--	PROF
42302	13676167.52	2113851.45	--	PROF
42303	13676178.14	2113887.63	--	PROF
42304	13676183.29	2113885.23	--	PROF
42305	13676211.57	2113952.53	--	PROF
42306	13676211.22	2113945.04	--	PROF
42307	13676206.49	2113947.24	--	PROF
42308	13676205.92	2113950.51	--	PROF
42309	13676203.73	2113956.61	--	PROF
42310	13676209.38	2113958.64	--	PROF
42311	13676206.32	2113967.18	--	ME
42312	13676220.42	2113981.98	--	PROF
42313	13676218.41	2113987.64	--	PROF
42314	13676225.97	2113983.96	--	PROF
42315	13676223.96	2113989.61	--	PROF
42316	13676232.64	2114005.56	--	PROF
42317	13676226.10	2113991.57	--	PROF
42318	13676231.56	2113989.10	--	PROF
42319	13676238.04	2114002.95	--	PROF
42320	13676236.93	2114014.60	--	PROF

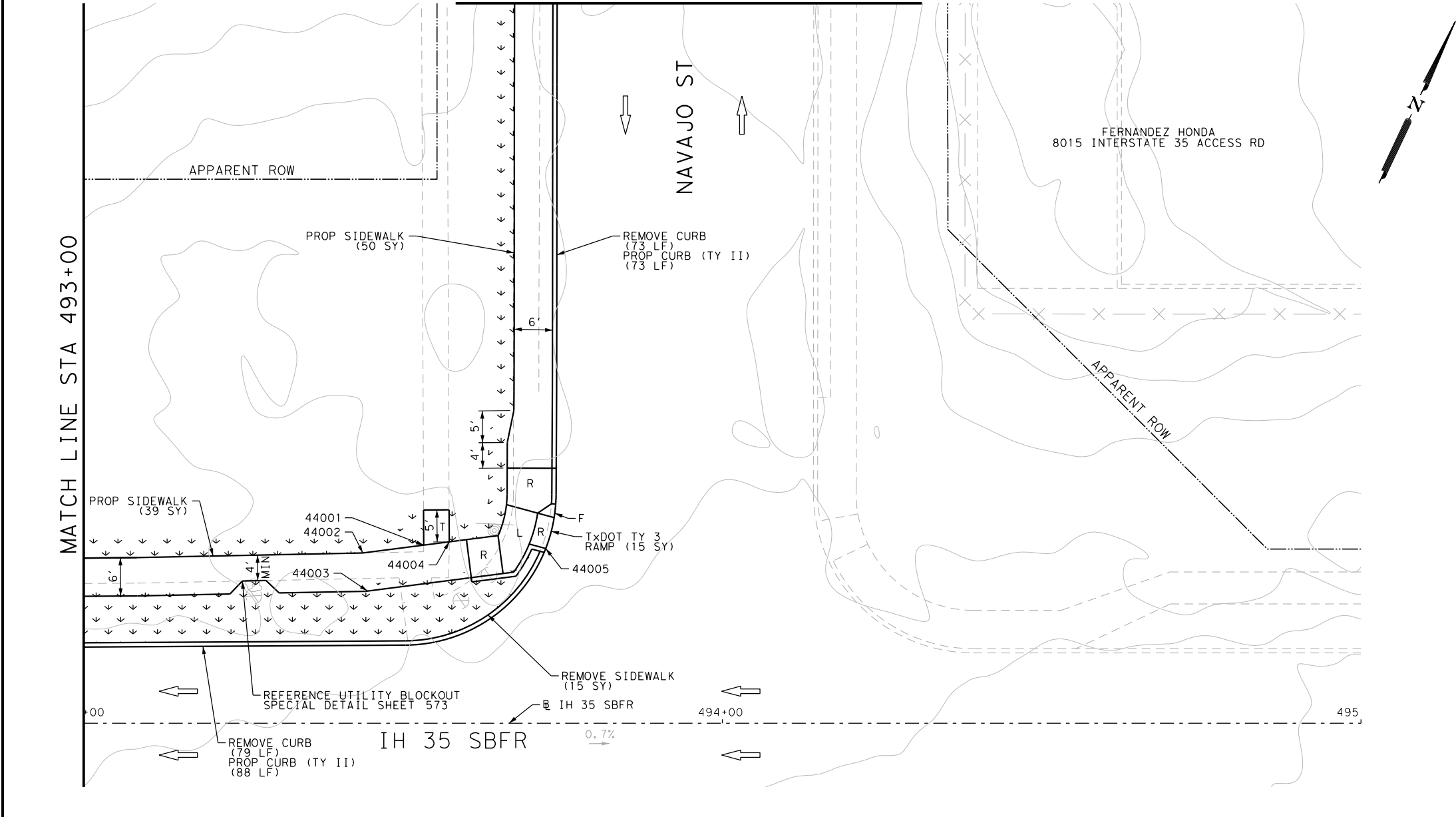
POINT	NORTHING	EASTING	ELEV	DESC
42321	13676242.33	2114011.98	--	PROF

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	496

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\11113508\_IH35AccessRd\_SB11PP\_A.dgn

MATCH LINE "A"  
SEE SHEET 498



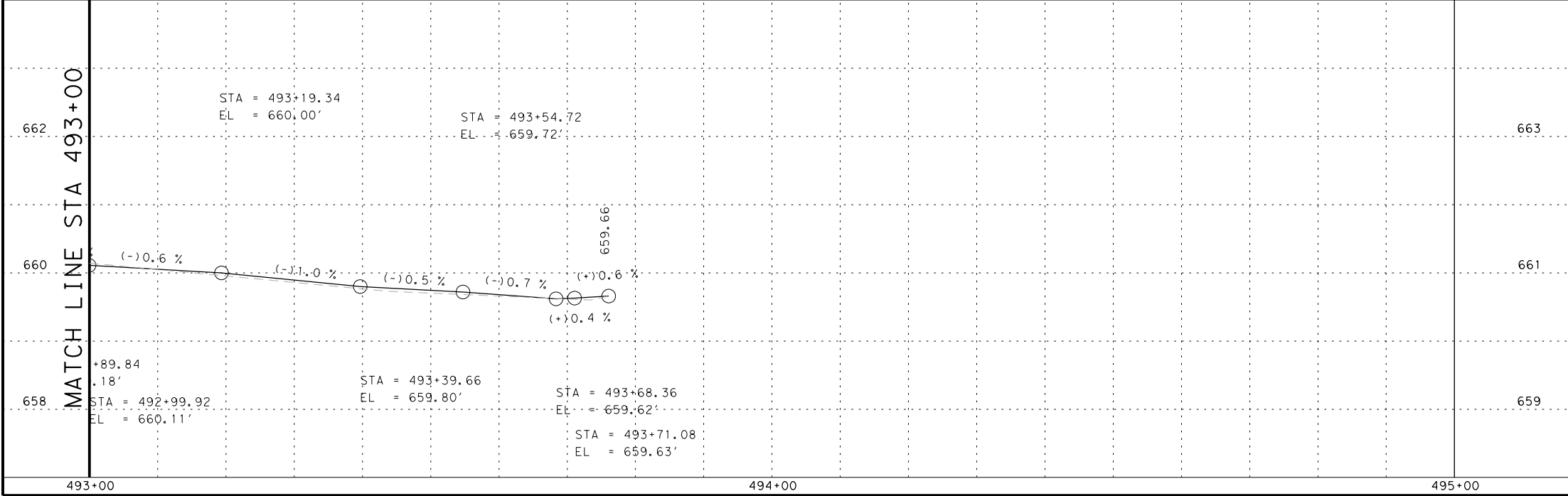
ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	152
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	15
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	115
0162-6002	BLOCK SODDING	SY	115
0168-6001	VEGETATIVE WATERING	MG	1.79
0529-6002	CONC CURB (TY II)	LF	161
0531-6001	CONC SIDEWALKS (4")	SY	89
0531-6020	CURB RAMPS (TY 3)	SY	15

POINT	NORTHING	EASTING	ELEV	DESC
44001	13676271.66	2114069.02	--	PROF
44002	13676266.48	2114060.93	--	PROF
44003	13676261.25	2114063.89	--	PROF
44004	13676273.83	2114072.42	--	PROF
44005	13676279.36	2114086.53	--	ME

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE



SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 493+00 TO STA 495+00

SHEET 28 OF 44

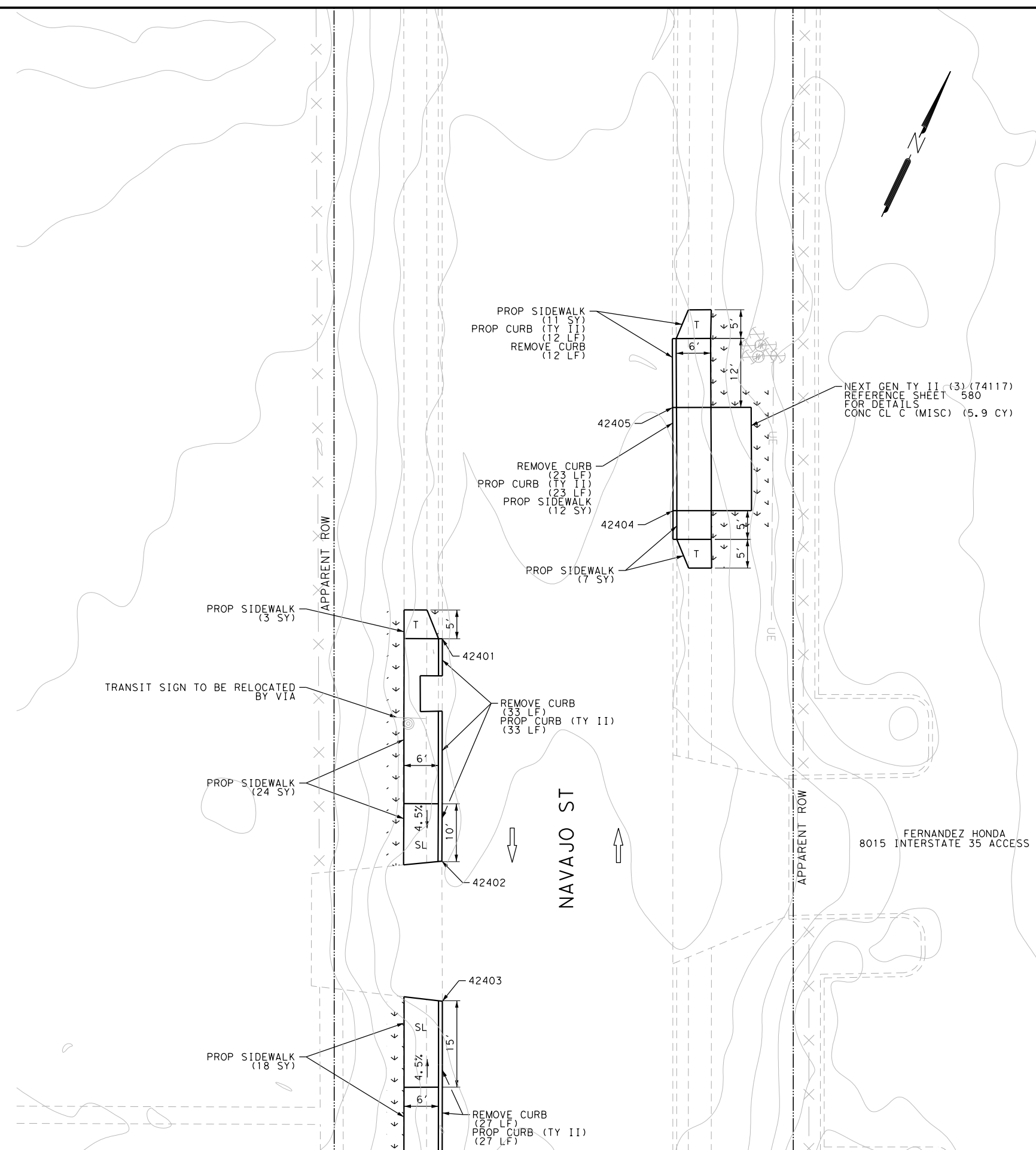
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	497



Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB11A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	95
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6002	CONC CURB (TY II)	LF	95
0531-6001	CONC SIDEWALKS (4")	SY	75



NEXT GEN TY II (3) (74117)  
REFERENCE SHEET 580  
FOR DETAILS  
CONC CL C (MISC) (5.9 CY)

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

James A. Lutz, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
42401	13676438.08	2114013.44	--	ME
42402	13676403.01	2114029.93	--	ME
42403	13676381.01	2114040.43	--	ME
42404	13676477.37	2114039.28	--	ME
42405	13676498.13	2114029.37	--	ME

MATCH LINE "A"  
SEE SHEET 497

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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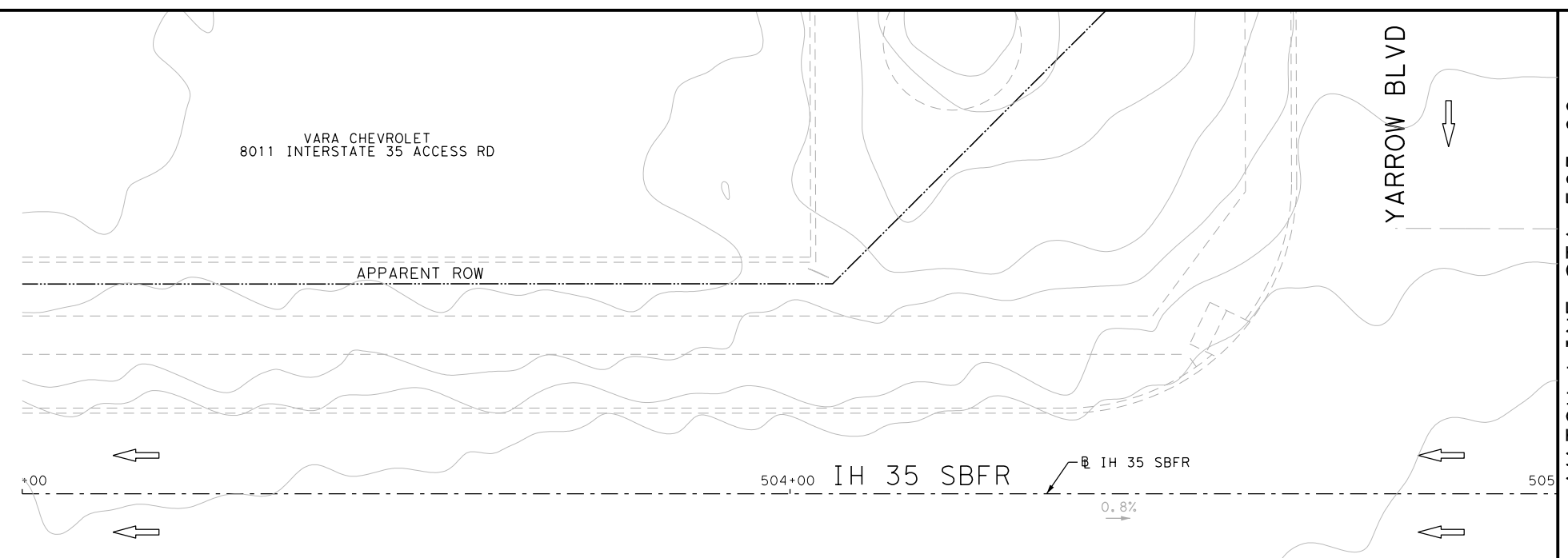
IH 35  
ACCESS RD  
SIDEWALK  
CONSTRUCTION PLAN  
NAVAJO ST

SHEET 29 OF 44

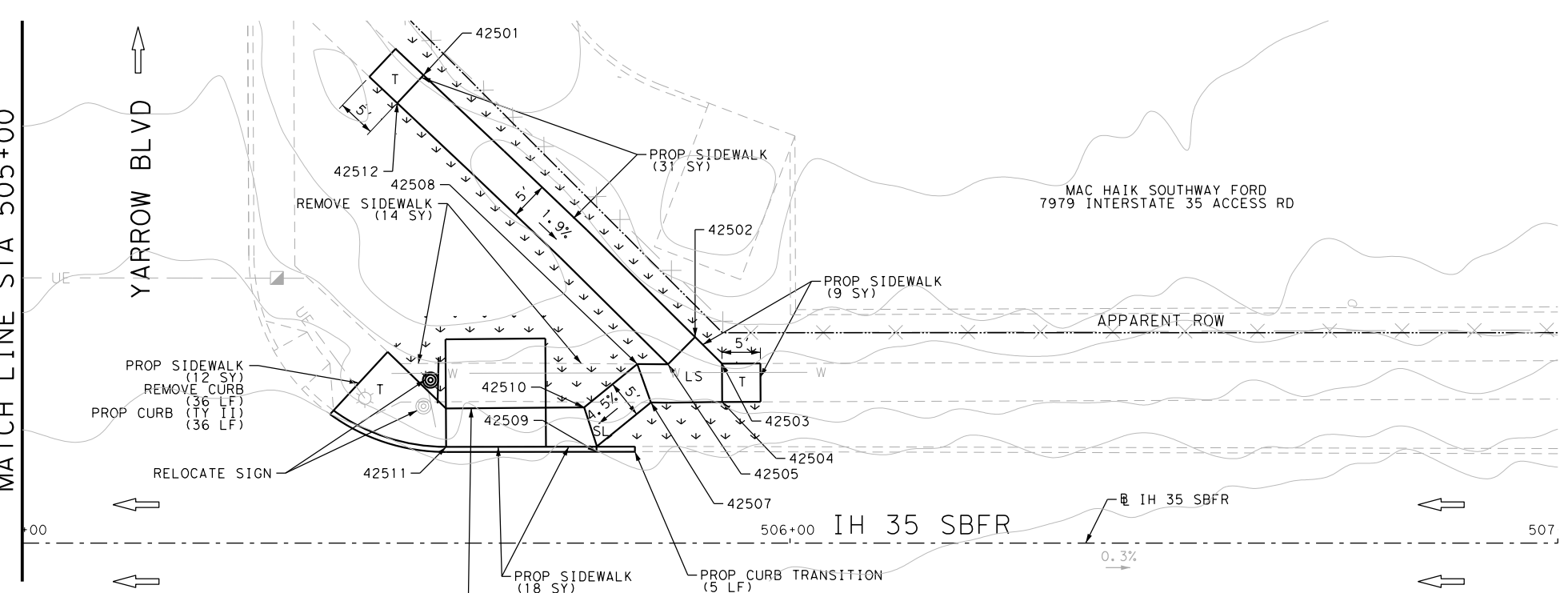
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				498

Plotted on: 5/3/2019

Design File name: P:\111.35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB12.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	36
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	41
0531-6001	CONC SIDEWALKS (4")	SY	70
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
42501	13676814.32	2115138.74	651.80	PROP
42502	13676798.63	2115185.29	650.88	PROP
42503	13676796.99	2115189.94	650.85	PROP
42504	13676792.48	2115192.10	650.79	PROP
42505	13676793.91	2115183.63	650.81	PROP
42507	13676788.45	2115183.74	650.75	PROP
42508	13676792.23	2115180.00	650.80	PROP
42509	13676779.63	2115180.09	--	ME
42510	13676784.17	2115176.15	--	ME
42511	13676771.83	2115162.11	--	ME
42512	13676809.56	2115137.20	651.74	PROP

NEXT GEN TY I (3) (73439)  
 REFERENCE SHEET 580  
 FOR DETAILS  
 CONC CL C (MISC) (5.5 CY)

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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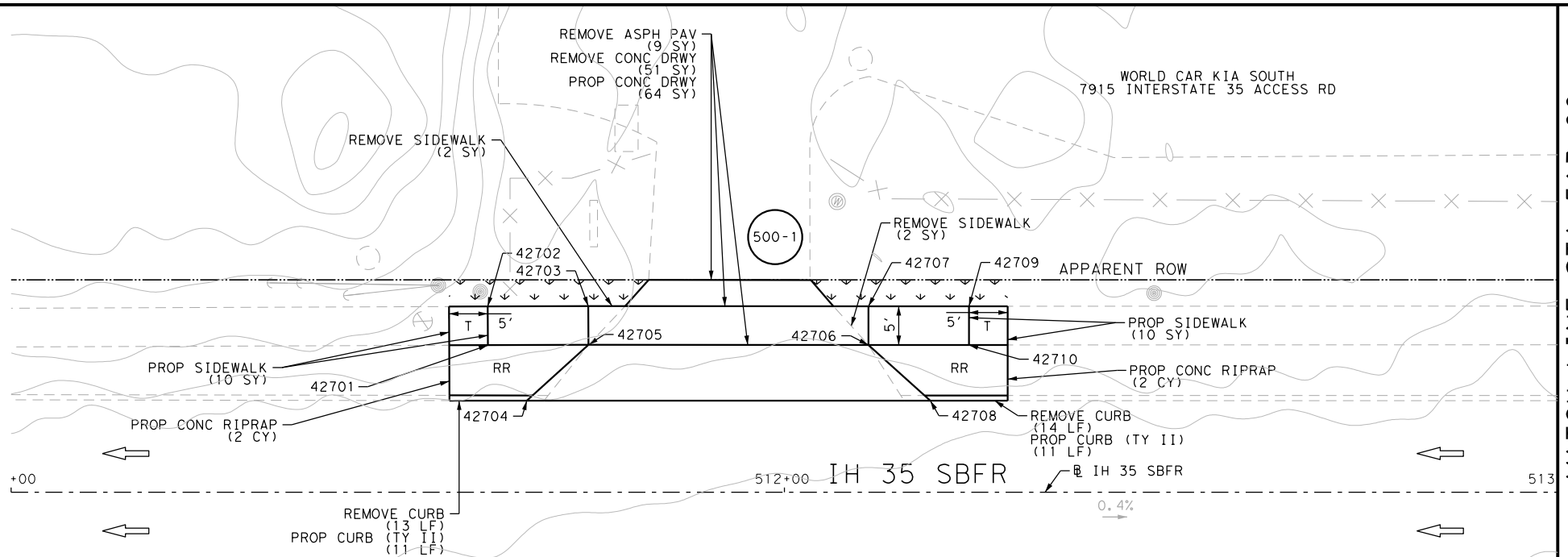
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 503+00 TO STA 507+00

SHEET 30 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	499

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SBI 4.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	51
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	27
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	9
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	160
0162-6002	BLOCK SODDING	SY	160
0168-6001	VEGETATIVE WATERING	MG	2.50
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0529-6002	CONC CURB (TY II)	LF	22
0530-6004	DRIVEWAYS (CONC)	SY	64
0531-6001	CONC SIDEWALKS (4")	SY	20

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

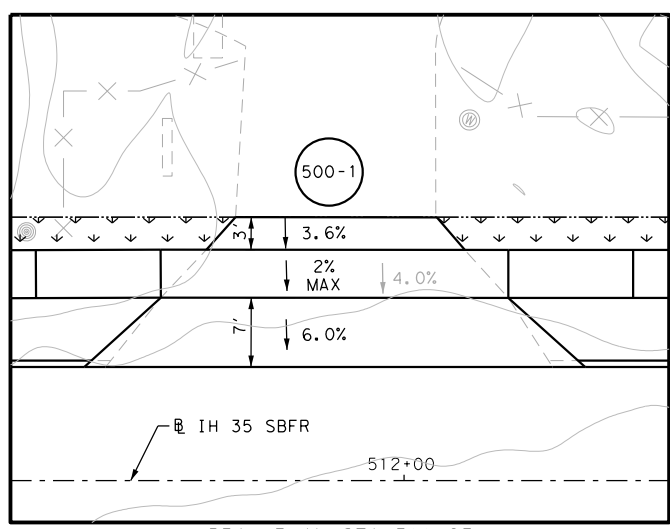
**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 511+00 TO STA 515+00

SHEET 31 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	500

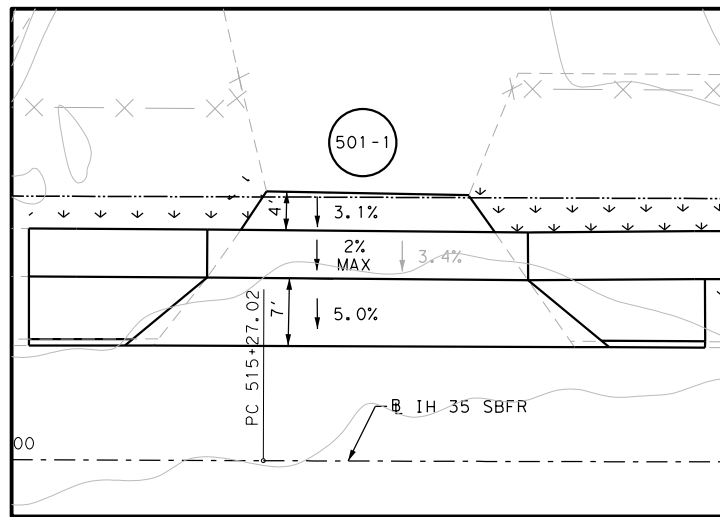
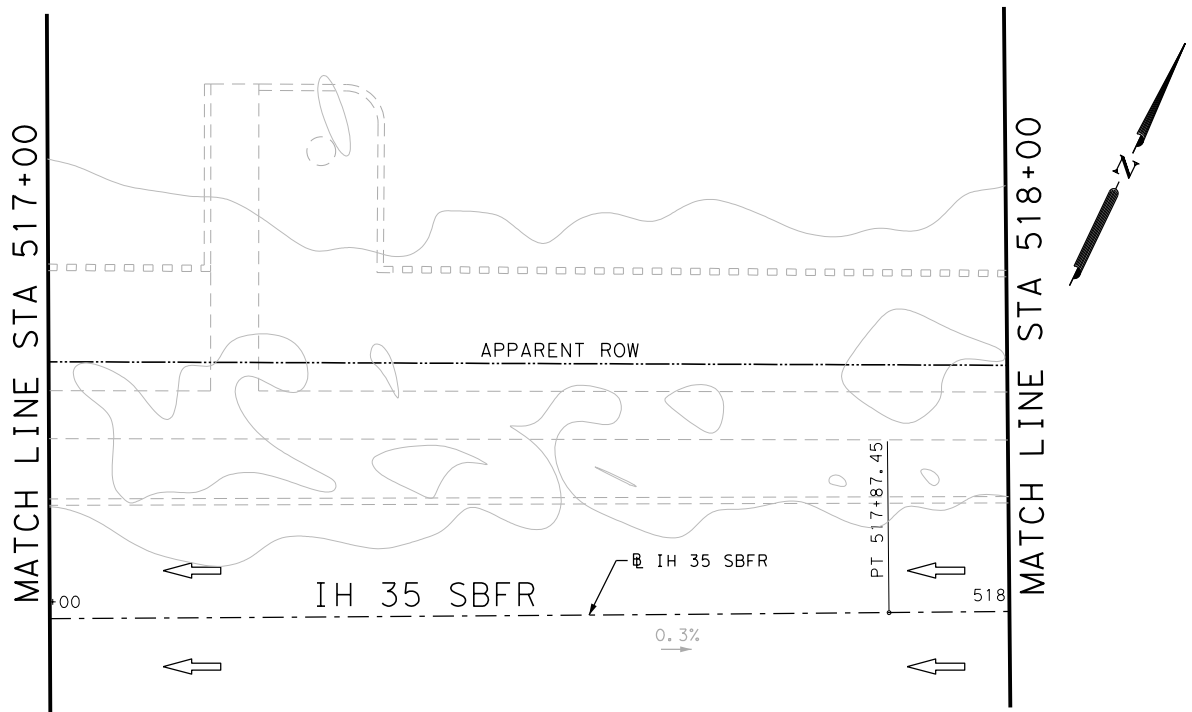
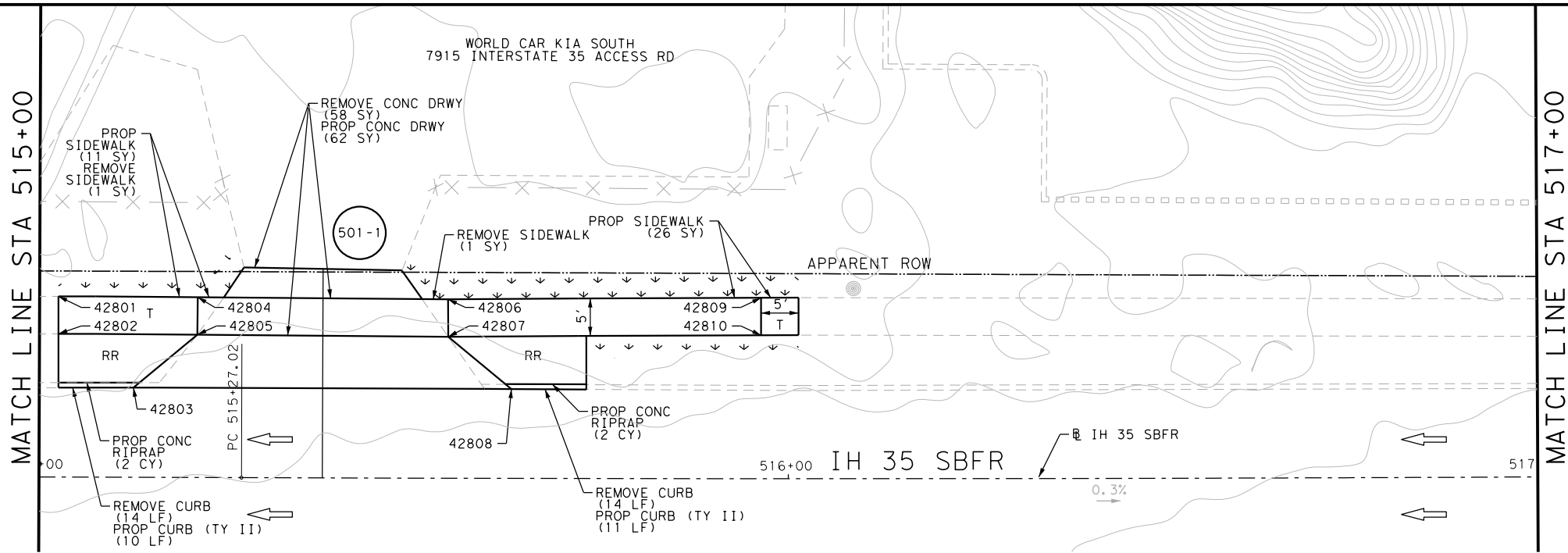


DRWY PLAN STA 511+93

POINT	NORTHING	EASTING	ELEV	DESC
42701	13677037.05	2115707.52	649.32	PROP
42702	13677041.56	2115705.36	649.39	PROP
42703	13677047.16	2115717.09	649.15	PROP
42704	13677032.70	2115715.14	--	ME
42705	13677042.65	2115719.25	649.08	PROP
42706	13677058.11	2115751.99	648.90	PROP
42707	13677062.63	2115749.85	648.97	PROP
42708	13677055.01	2115762.31	--	ME
42709	13677068.19	2115761.60	648.73	PROP
42710	13677063.67	2115763.74	648.66	PROP

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB15.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	58
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	28
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0432-6003	RIPRAP (CONC) (6 IN)	CY	4
0529-6002	CONC CURB (TY II)	LF	21
0530-6004	DRIVEWAYS (CONC)	SY	62
0531-6001	CONC SIDEWALKS (4")	SY	37

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
JOHN A. TYLER  
105193  
LICENSED PROFESSIONAL ENGINEER

John A. Tyler

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
JAMES A. LUTZ  
84722  
LICENSED PROFESSIONAL ENGINEER

James A. Lutz

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
42801	13677187.41	2116013.46	--	ME
42802	13677182.90	2116015.62	--	ME
42803	13677180.74	2116027.74	--	ME
42804	13677195.33	2116030.27	647.97	PROP
42805	13677190.80	2116032.40	647.90	PROP
42806	13677209.47	2116060.54	647.69	PROP
42807	13677204.97	2116062.73	647.62	PROP
42808	13677202.31	2116073.33	--	ME
42809	13677227.66	2116098.14	647.70	PROP
42810	13677223.15	2116100.30	647.69	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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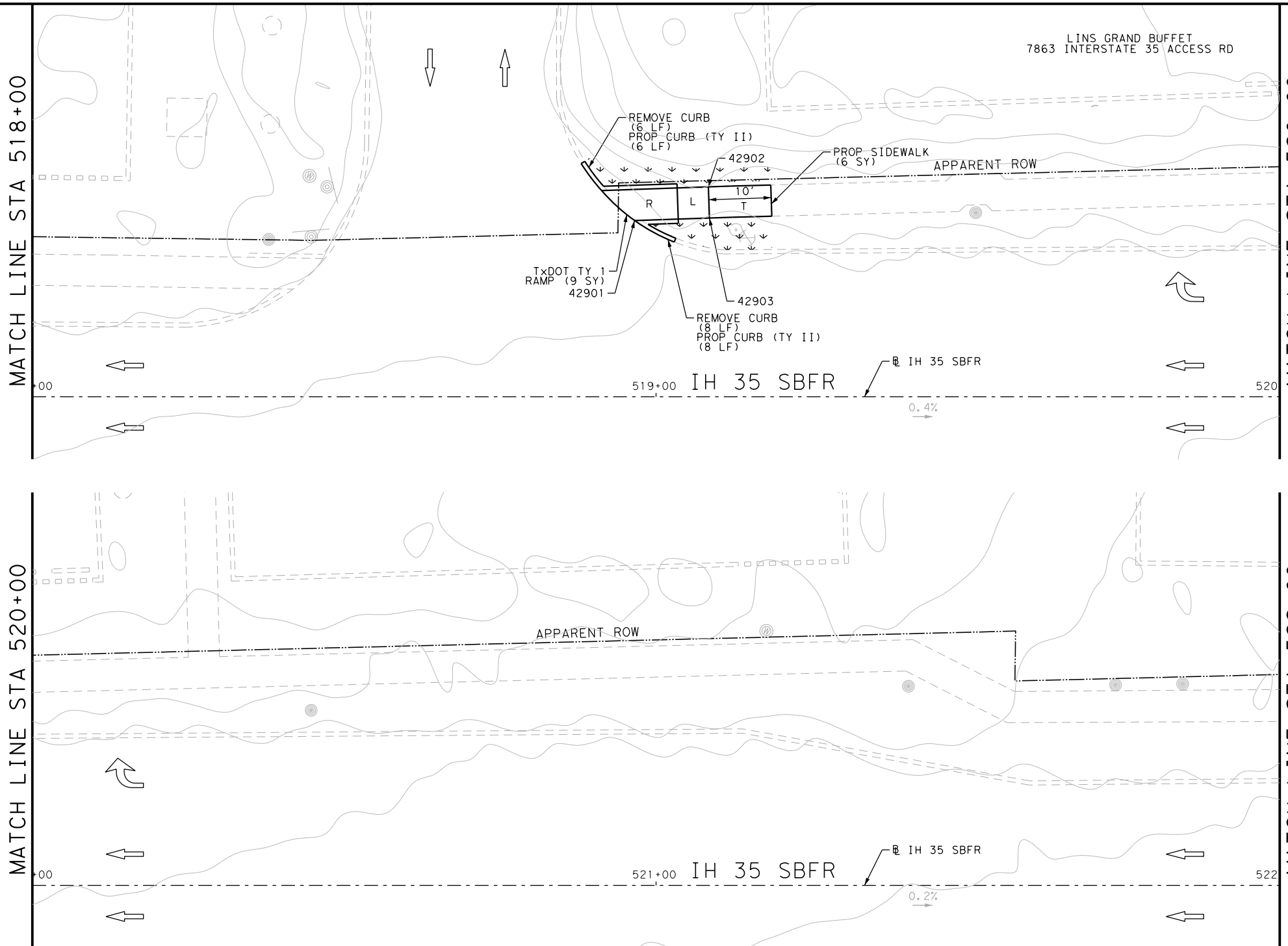
IH 35  
ACCESS RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 515+00 TO STA 518+00

SHEET 32 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				501

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB16.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	30
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0529-6002	CONC CURB (TY II)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	6
0531-6018	CURB RAMPS (TY 1)	SY	9

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
42901	13677362.34	2116366.21	--	ME
42902	13677372.38	2116374.45	646.83	PROP
42903	13677367.97	2116376.80	645.78	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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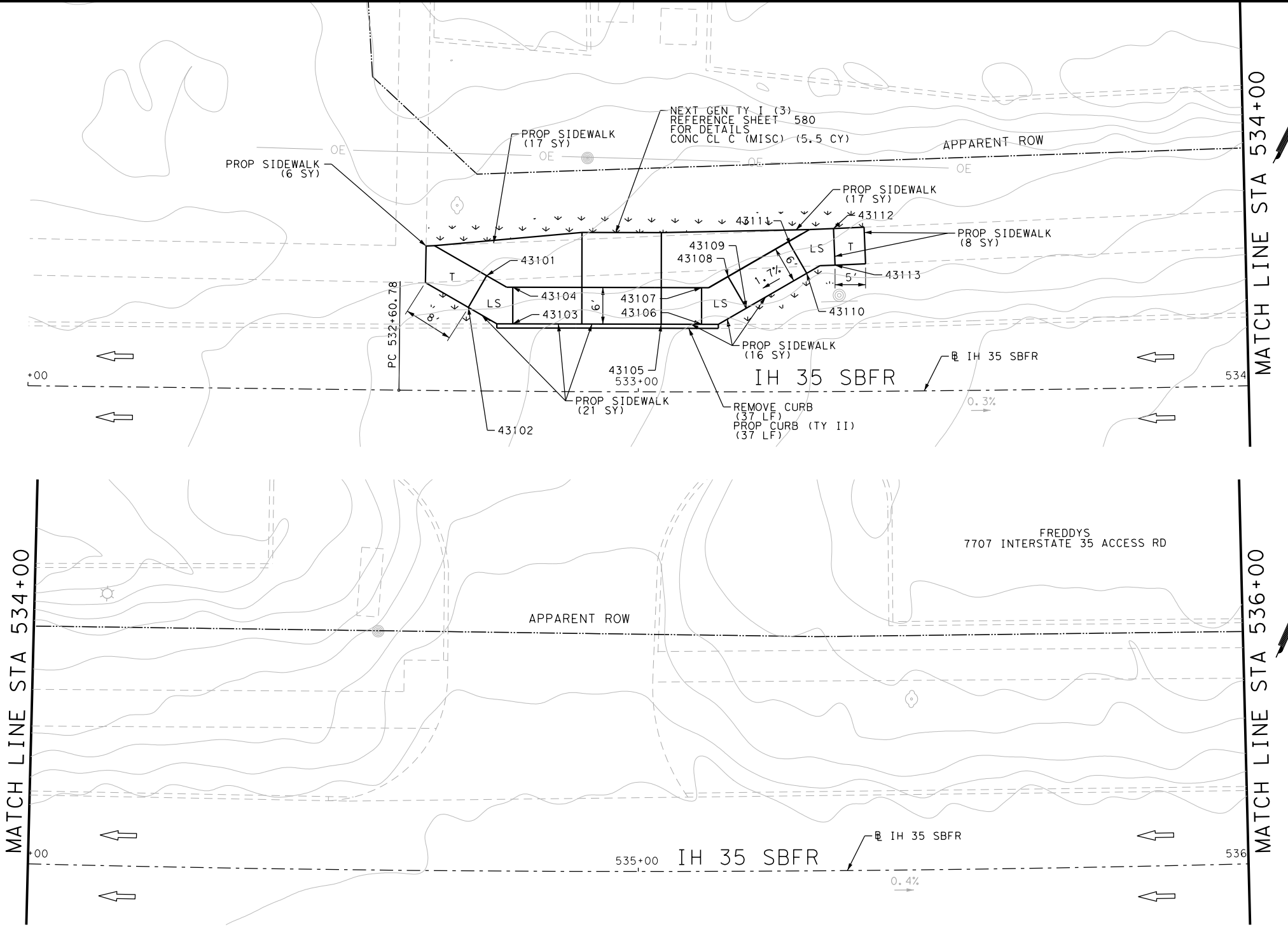
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 518+00 TO STA 522+00

SHEET 33 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	502

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB18.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	37
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	36
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	55
0162-6002	BLOCK SODDING	SY	55
0168-6001	VEGETATIVE WATERING	MG	0.86
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	37
0531-6001	CONC SIDEWALKS (4")	SY	85

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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  - EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
43101	13677959.60	2117608.48	645.70	PROP
43102	13677953.61	2117608.14	645.66	PROP
43103	13677954.48	2117615.86	--	ME
43104	13677959.84	2117613.17	--	ME
43105	13677965.38	2117637.58	--	ME
43106	13677968.35	2117643.50	--	ME
43107	13677973.71	2117640.81	--	ME
43108	13677977.29	2117643.84	645.20	PROP
43109	13677974.00	2117648.86	645.15	PROP
43110	13677983.55	2117655.12	645.34	PROP
43111	13677986.84	2117650.10	645.42	PROP
43112	13677992.09	2117655.74	645.41	PROP
43113	13677986.86	2117658.67	645.40	PROP

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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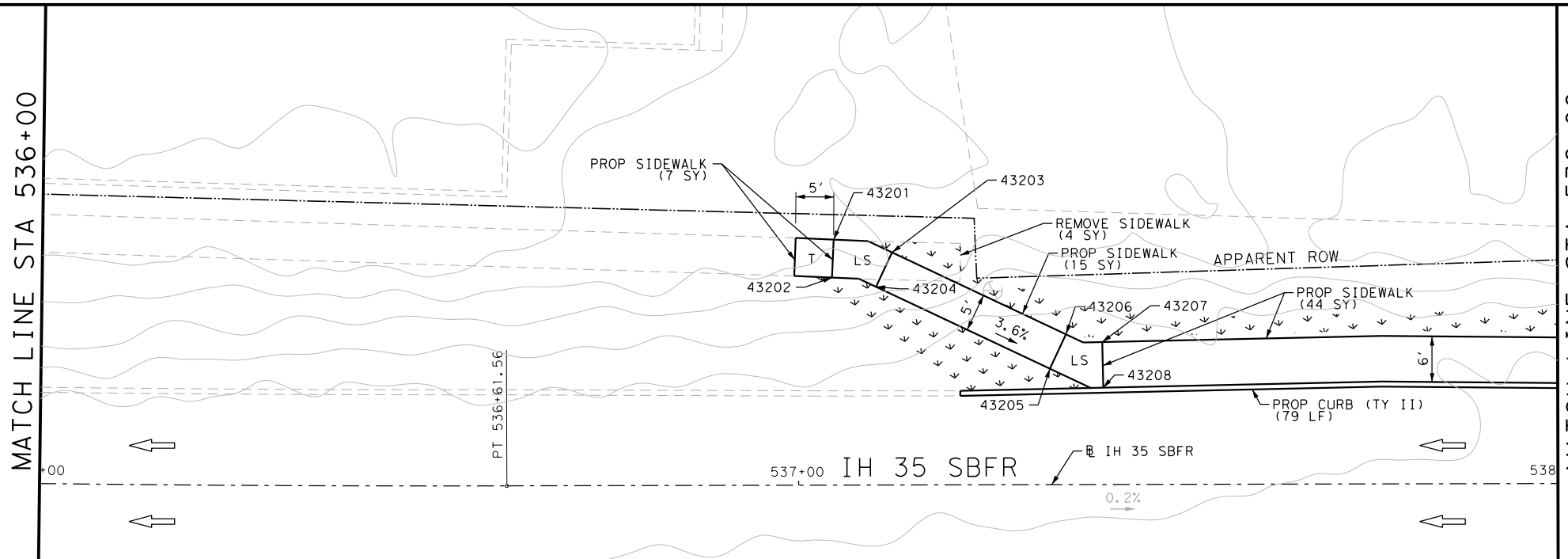
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 532+00 TO STA 536+00

SHEET 34 OF 44

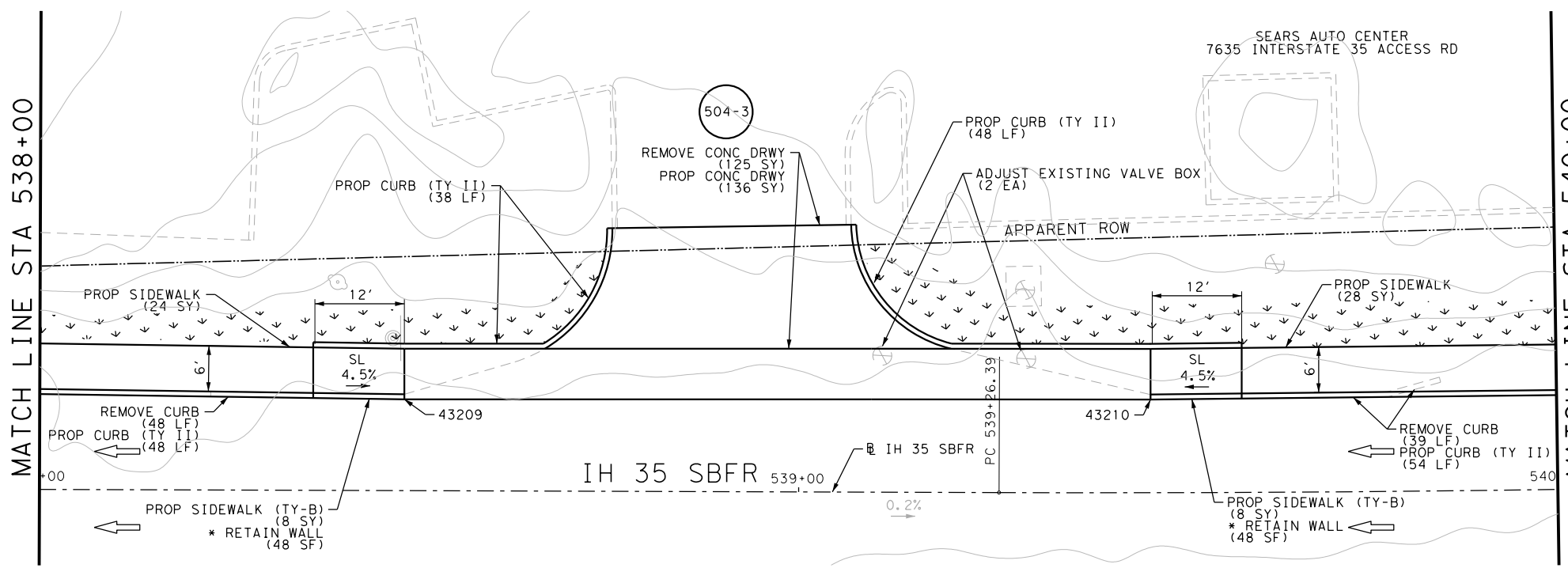
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	503

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB19.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	125
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	87
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0529-6002	CONC CURB (TY II)	LF	267
0530-6004	DRIVEWAYS (CONC)	SY	136
0531-6001	CONC SIDEWALKS (4")	SY	118
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	16
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

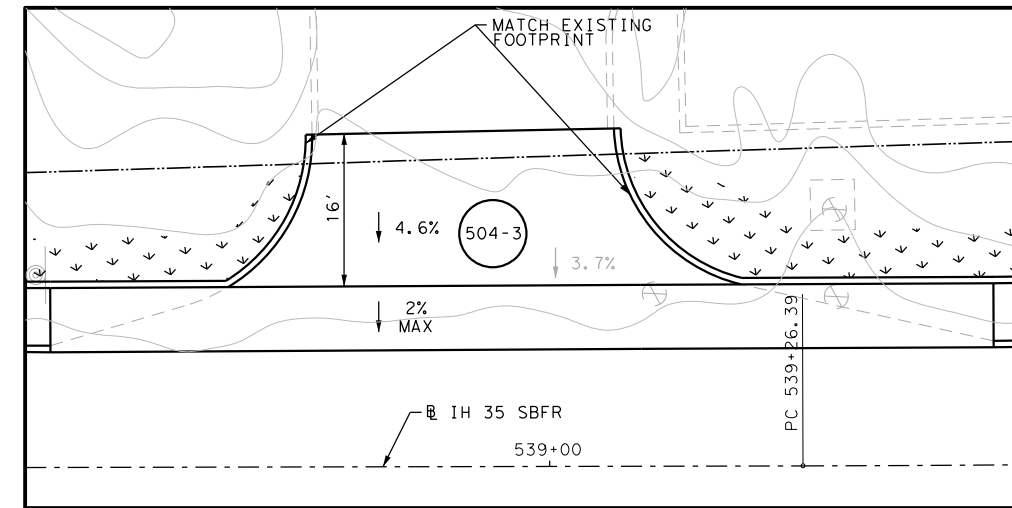


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- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'



DRYW PLAN STA 538+91

POINT	NORTHING	EASTING	ELEV	DESC
43201	13678180.40	2117974.31	643.73	PROP
43202	13678176.03	2117976.75	643.66	PROP
43203	13678183.01	2117981.76	643.66	PROP
43204	13678178.04	2117982.32	643.59	PROP
43205	13678180.89	2118007.46	642.68	PROP
43206	13678185.86	2118006.90	642.74	PROP
43207	13678187.50	2118011.48	642.71	PROP
43208	13678182.46	2118014.75	--	ME
43209	13678238.69	2118106.81	--	ME
43210	13678290.73	2118190.19	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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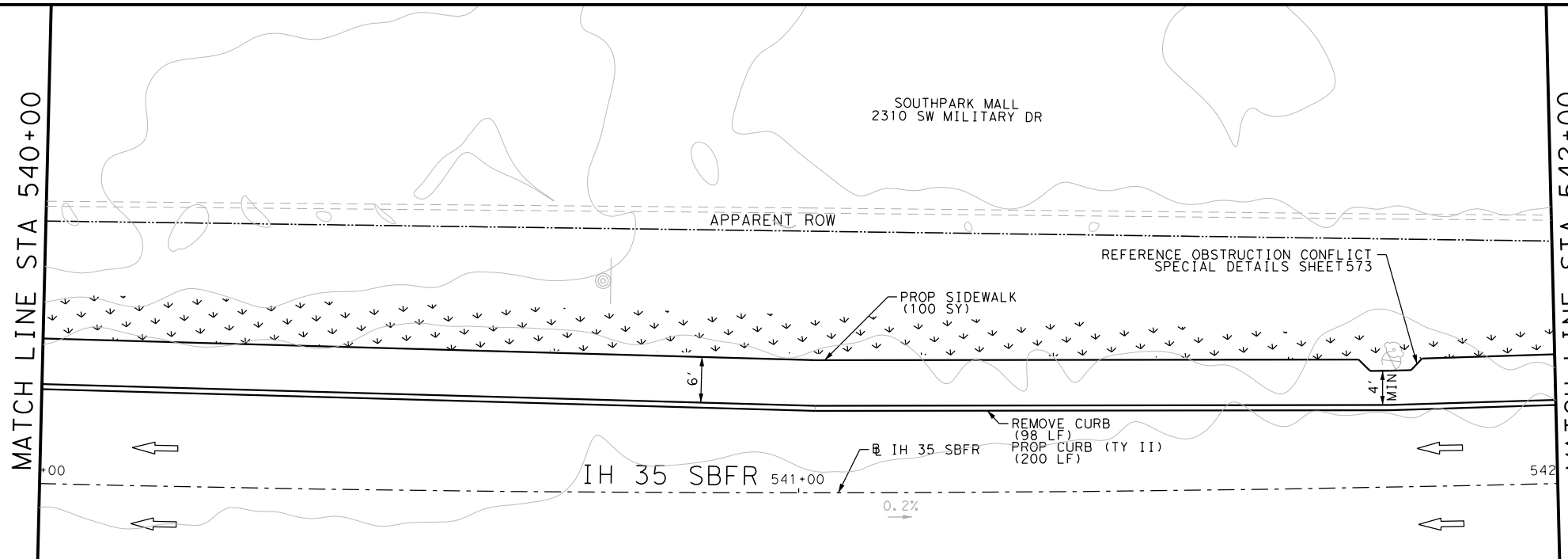
IH 35 ACCESS RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 536+00 TO STA 540+00

SHEET 35 OF 44

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	504

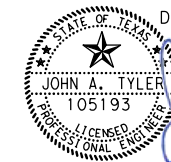
Plotted on: 5/3/2019

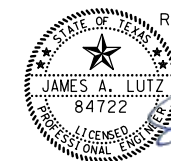
Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\11113508\_IH35AccessRd\_SB20.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	98
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	100
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0529-6002	CONC CURB (TY II)	LF	200
0531-6001	CONC SIDEWALKS (4")	SY	100

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 540+00 TO STA 542+00

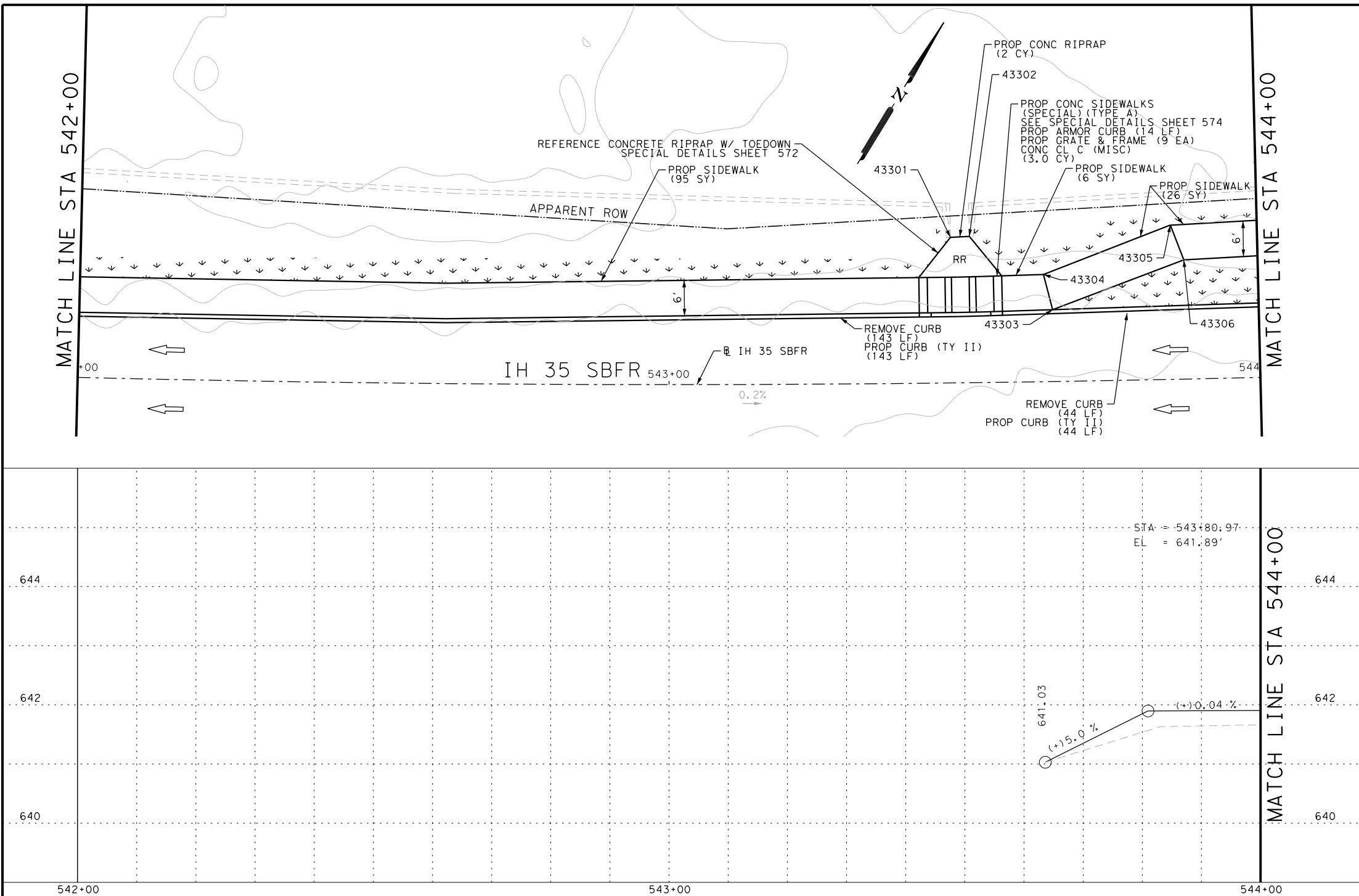
SHEET 36 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	505



Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB20PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	187
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0420-6074	CL C CONC (MISC)	CY	3.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	187
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	127

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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E. DATE: 5/3/2019

REVIEW AND APPROVAL

James A. Lutz, P.E. DATE: 5/3/2019

SCALE: 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
43301	13678529.39	2118510.84	--	ME
43302	13678531.44	2118513.30	--	ME
43303	13678530.05	2118532.02	--	ME
43304	13678533.86	2118527.20	--	PROF
43305	13678549.54	2118534.70	--	PROF
43306	13678545.79	2118539.55	--	PROF

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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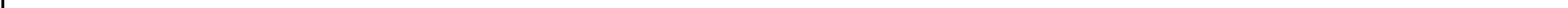
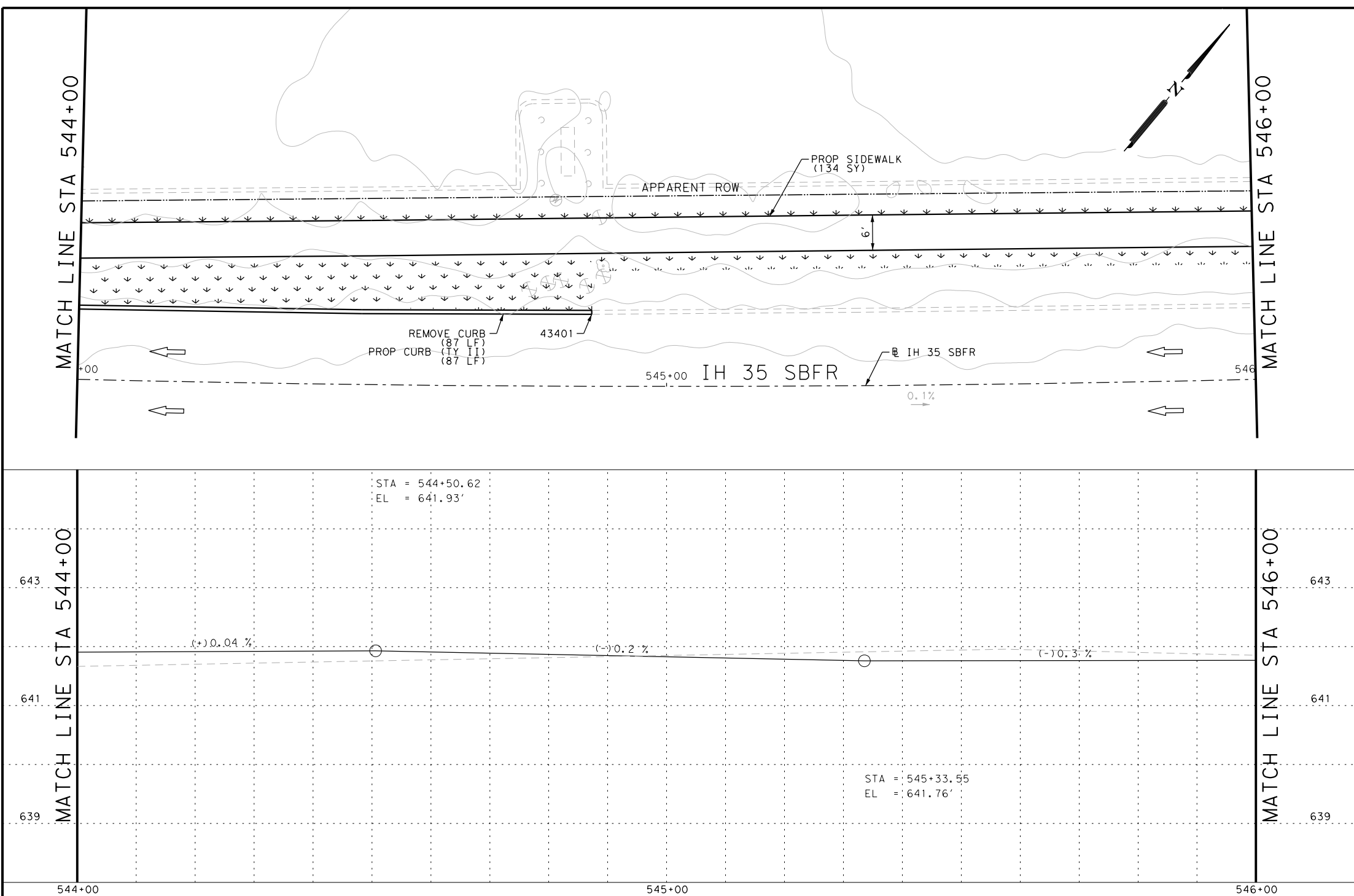
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 542+00 TO STA 544+00

SHEET 37 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	506

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB21PP.dgn



POINT	NORTHING	EASTING	ELEV	DESC
43401	13678606.43	2118626.94	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	87
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	205
0162-6002	BLOCK SODDING	SY	205
0168-6001	VEGETATIVE WATERING	MG	3.20
0529-6002	CONC CURB (TY II)	LF	87
0531-6001	CONC SIDEWALKS (4")	SY	134

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 544+00 TO STA 546+00

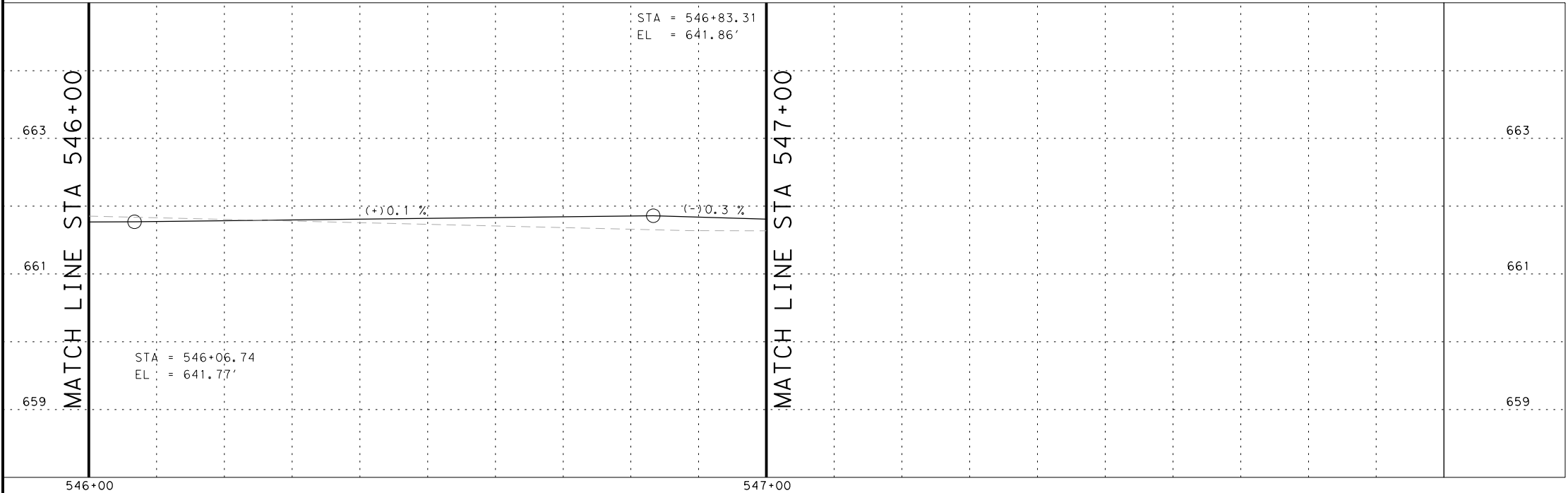
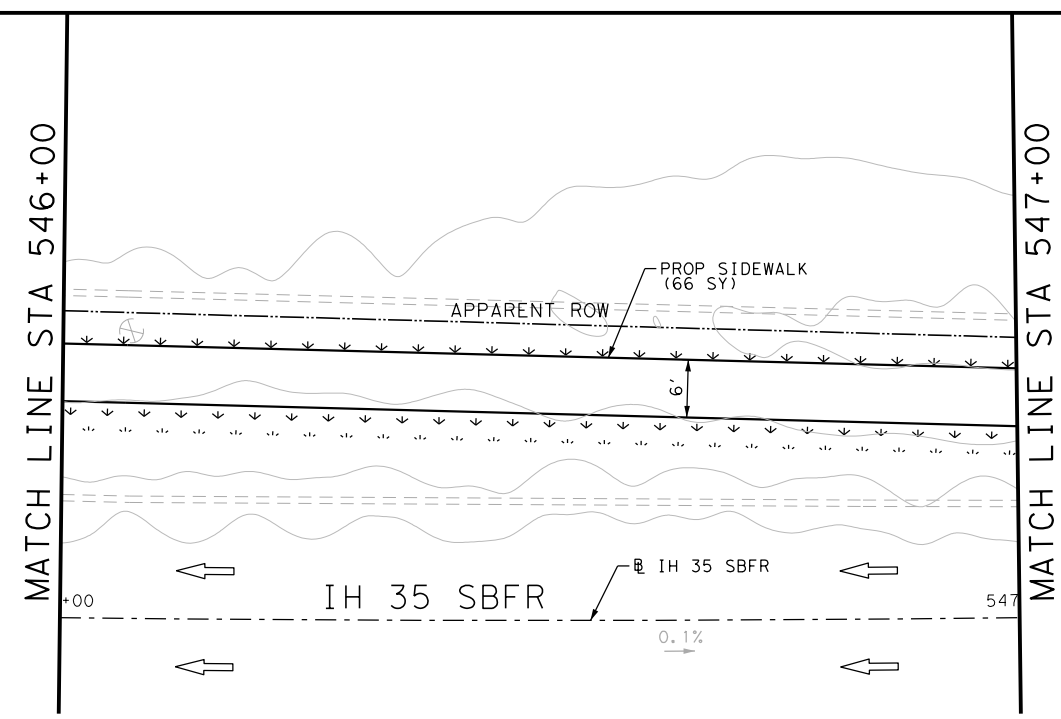
SHEET 38 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	507

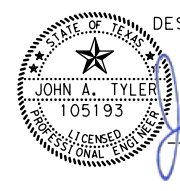
Plotted on: 5/3/2019

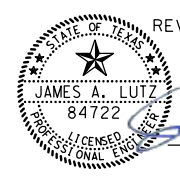
Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB21PP\_A.dgn

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0531-6001	CONC SIDEWALKS (4")	SY	66



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 30' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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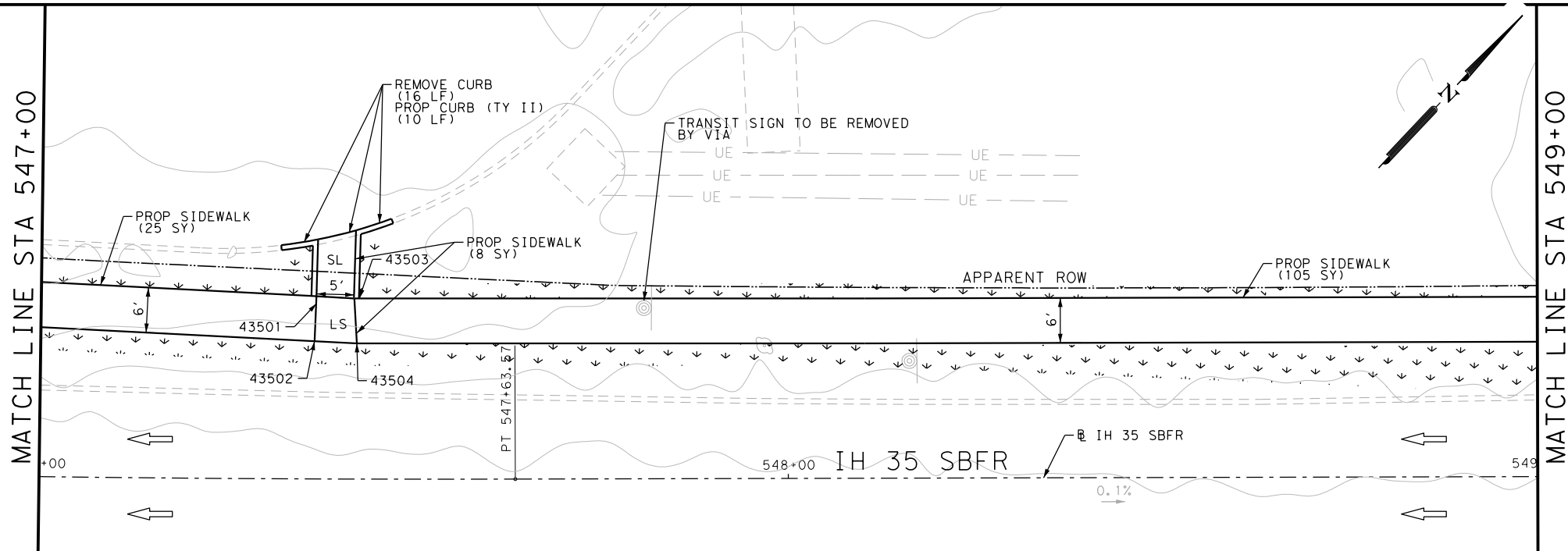
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 546+00 TO STA 547+00

SHEET 39 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	508

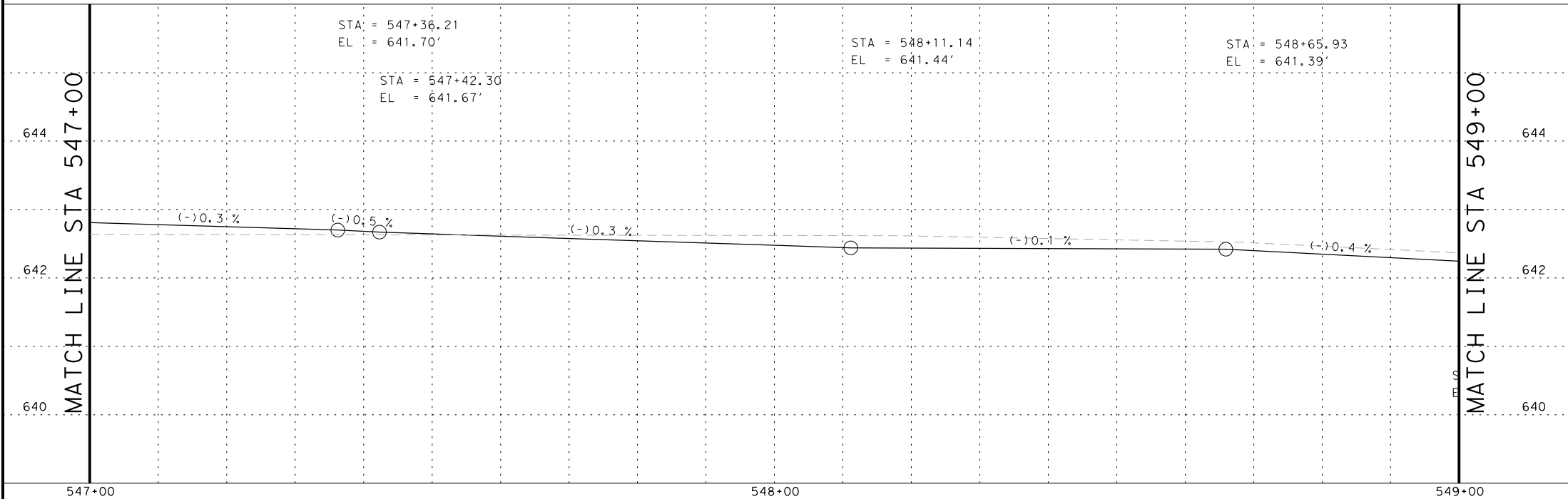
Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB22PP.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	16
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	240
0162-6002	BLOCK SODDING	SY	240
0168-6001	VEGETATIVE WATERING	MG	3.74
0529-6002	CONC CURB (TY II)	LF	10
0531-6001	CONC SIDEWALKS (4")	SY	138

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POINT	NORTHING	EASTING	ELEV	DESC
43501	13678779.88	2118805.38	--	PROF
43502	13678775.33	2118809.29	--	PROF
43503	13678783.10	2118809.21	--	PROF
43504	13678778.99	2118813.59	--	PROF

DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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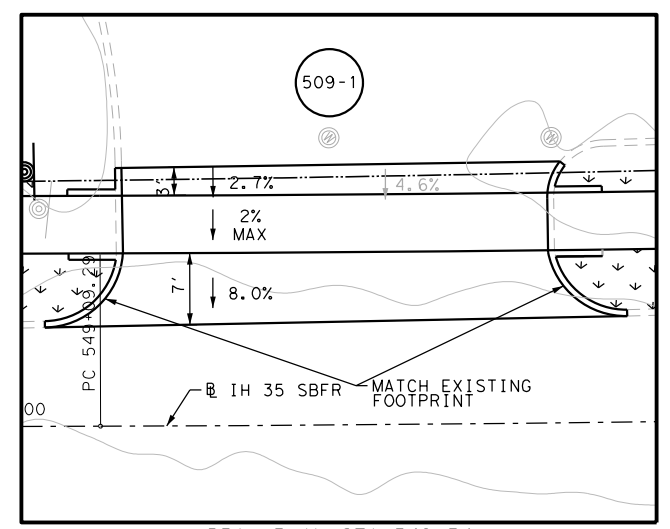
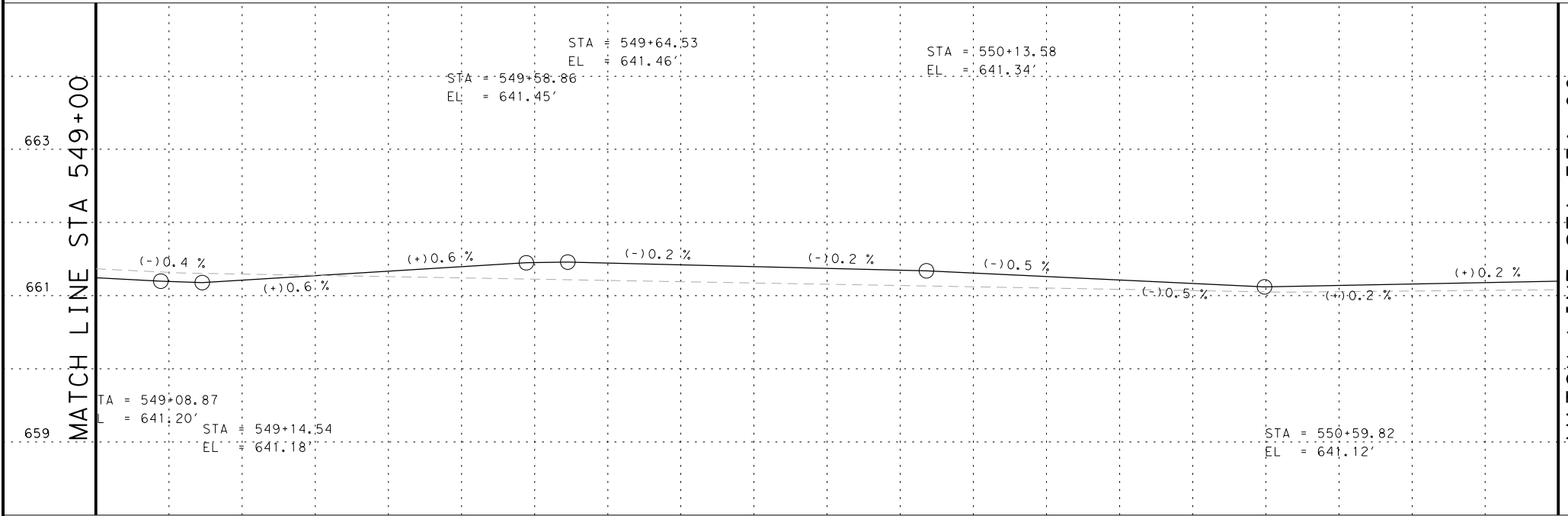
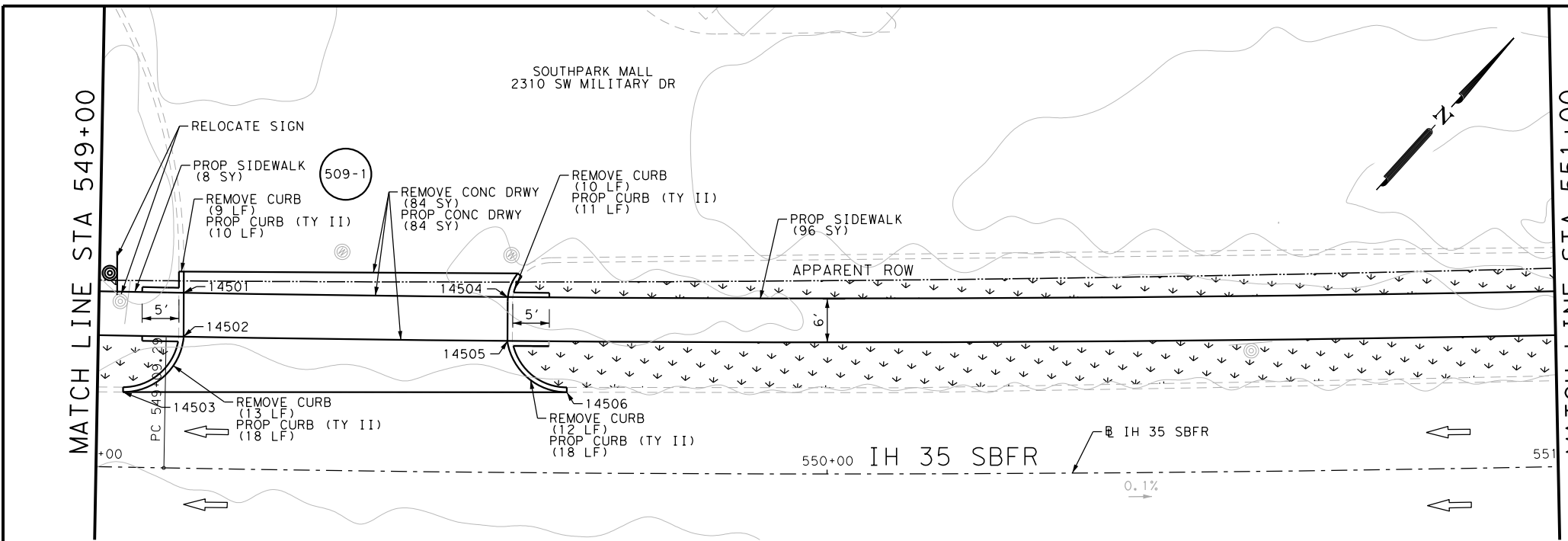
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 547+00 TO STA 549+00

SHEET 40 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	509

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB22PP\_A.dgn



DRWY PLAN STA 549+34

POINT	NORTHING	EASTING	ELEV	DESC
14501	13678898.92	2118932.93	--	PROF
14502	13678895.34	2118936.42	--	PROF
14503	13678884.14	2118935.84	--	ME
14504	13678929.59	2118964.93	--	PROF
14505	13678926.00	2118968.41	--	PROF
14506	13678926.68	2118979.11	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	84
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	44
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	140
0162-6002	BLOCK SODDING	SY	140
0168-6001	VEGETATIVE WATERING	MG	2.18
0529-6002	CONC CURB (TY II)	LF	57
0530-6004	DRIVEWAYS (CONC)	SY	84
0531-6001	CONC SIDEWALKS (4")	SY	104
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 549+00 TO STA 551+00

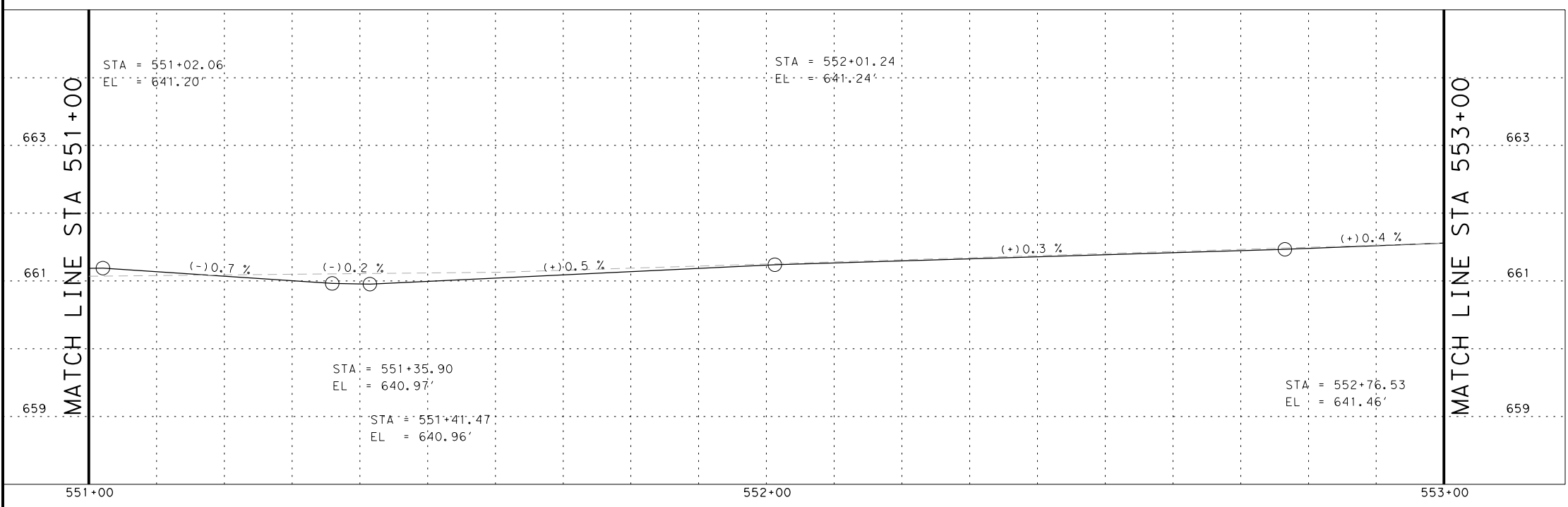
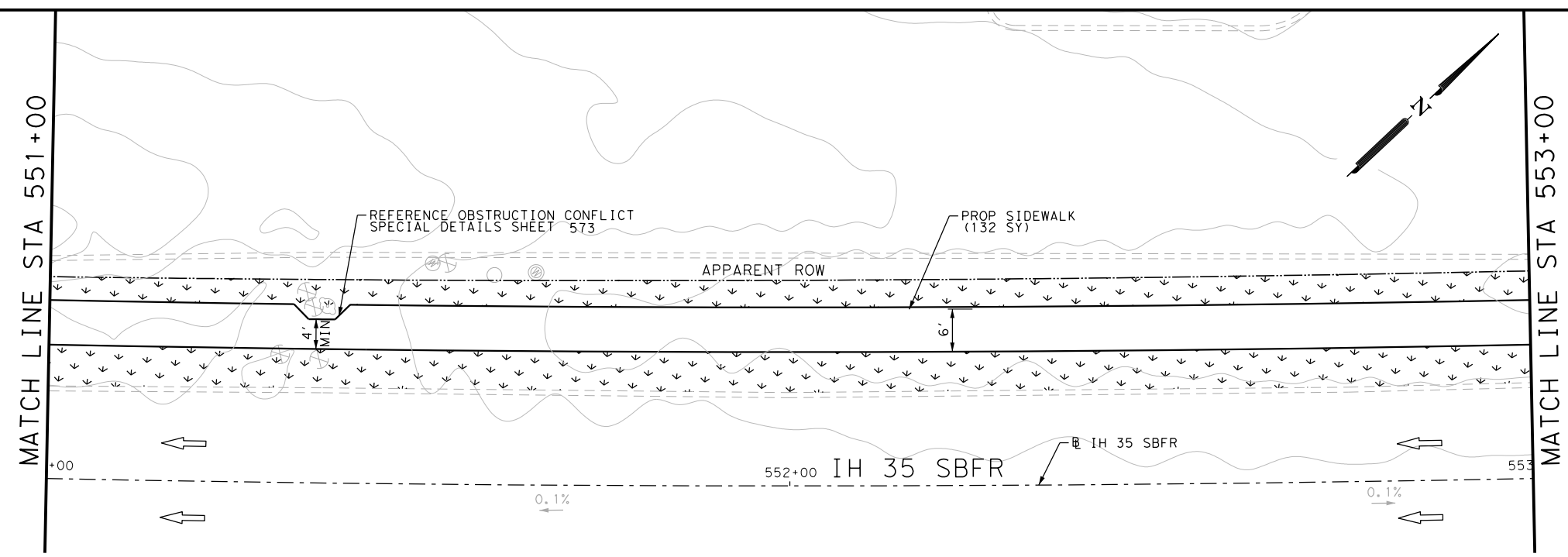
SHEET 41 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
CHK DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	510

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB23PP.dgn

ITEM	DESCRIPTION	UNIT	QTY
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	200
0162-6002	BLOCK SODDING	SY	200
0168-6001	VEGETATIVE WATERING	MG	3.12
0531-6001	CONC SIDEWALKS (4")	SY	132



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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



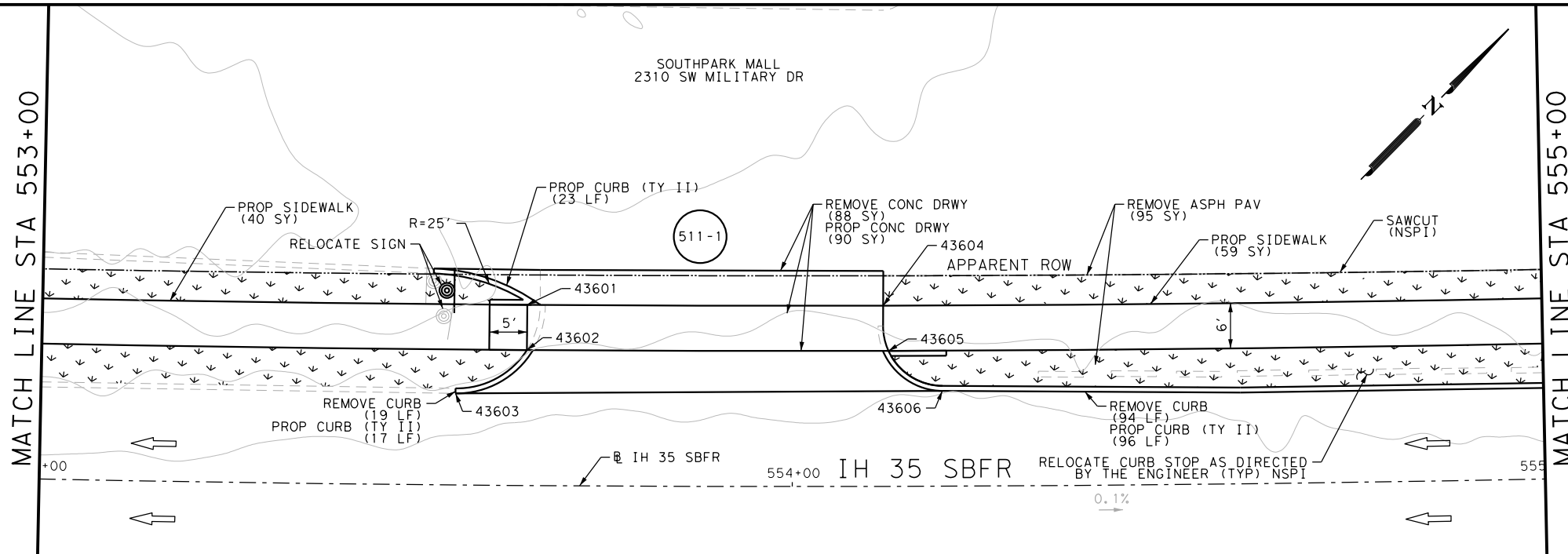
IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 551+00 TO STA 553+00

SHEET 42 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	511

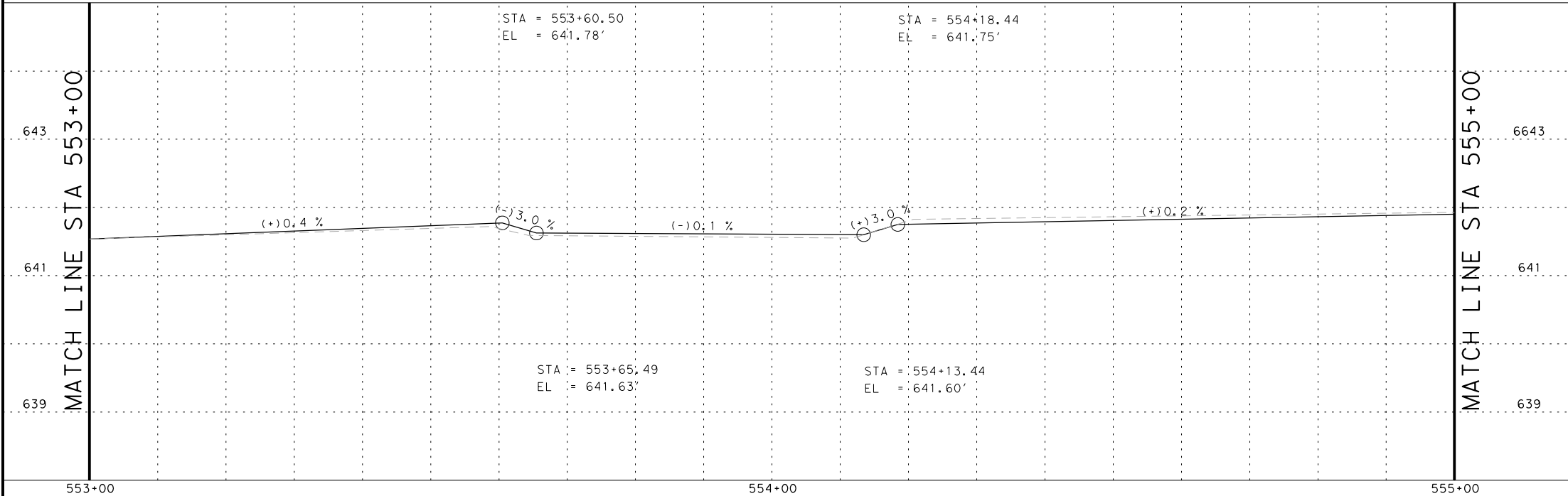
Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB23PP\_A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	88
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	113
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	95
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	150
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0529-6002	CONC CURB (TY II)	LF	136
0530-6004	DRIVEWAYS (CONC)	SY	90
0531-6001	CONC SIDEWALKS (4")	SY	99
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

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DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

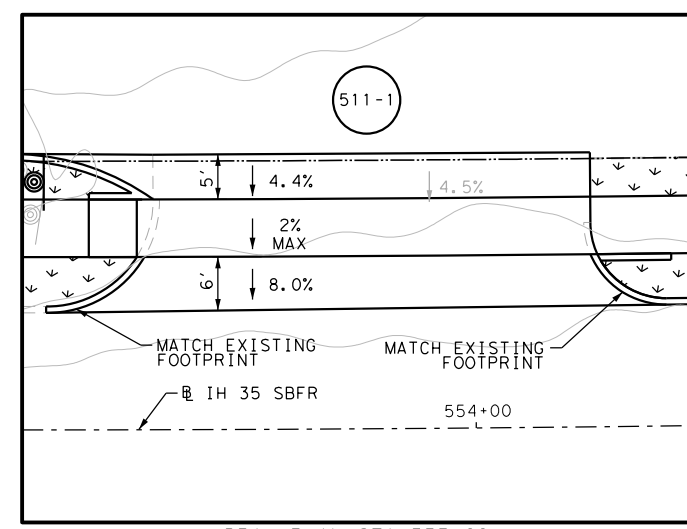
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
43601	13679224.56	2119244.62	--	PROF
43602	13679260.21	2119275.62	--	PROF
43603	13679209.66	2119247.26	--	ME
43604	13679260.21	2119275.62	--	PROF
43605	13679256.82	2119280.61	--	PROF
43606	13679258.76	2119289.32	--	ME



DRWY PLAN STA 553+89

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 553+00 TO STA 555+00

SHEET 43 OF 44

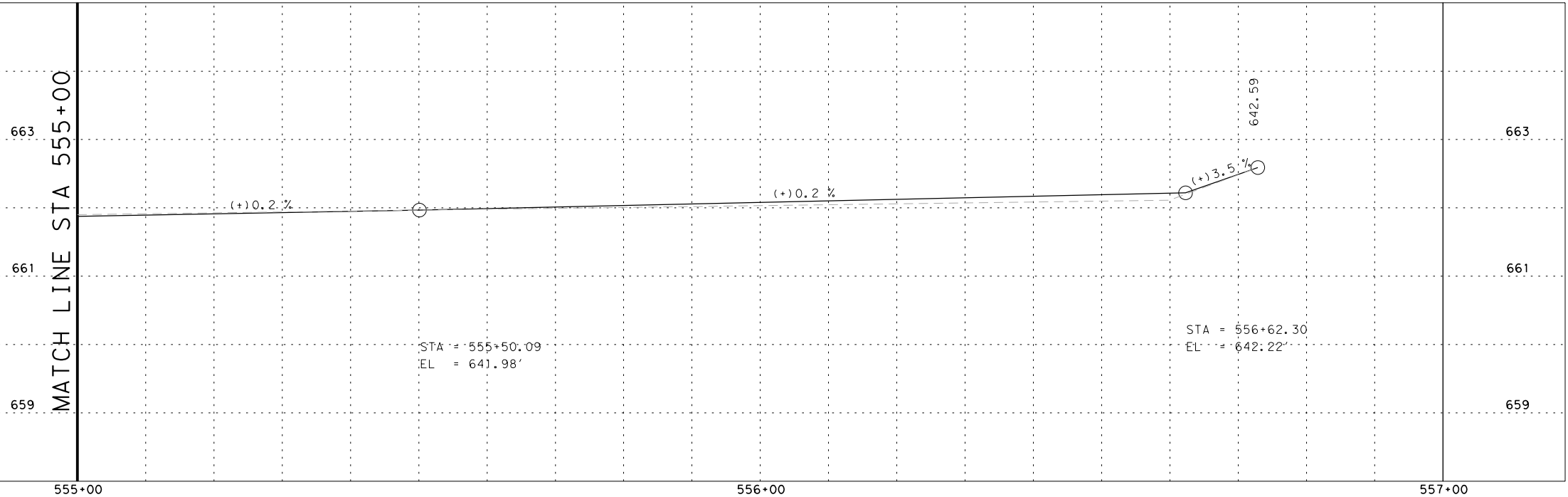
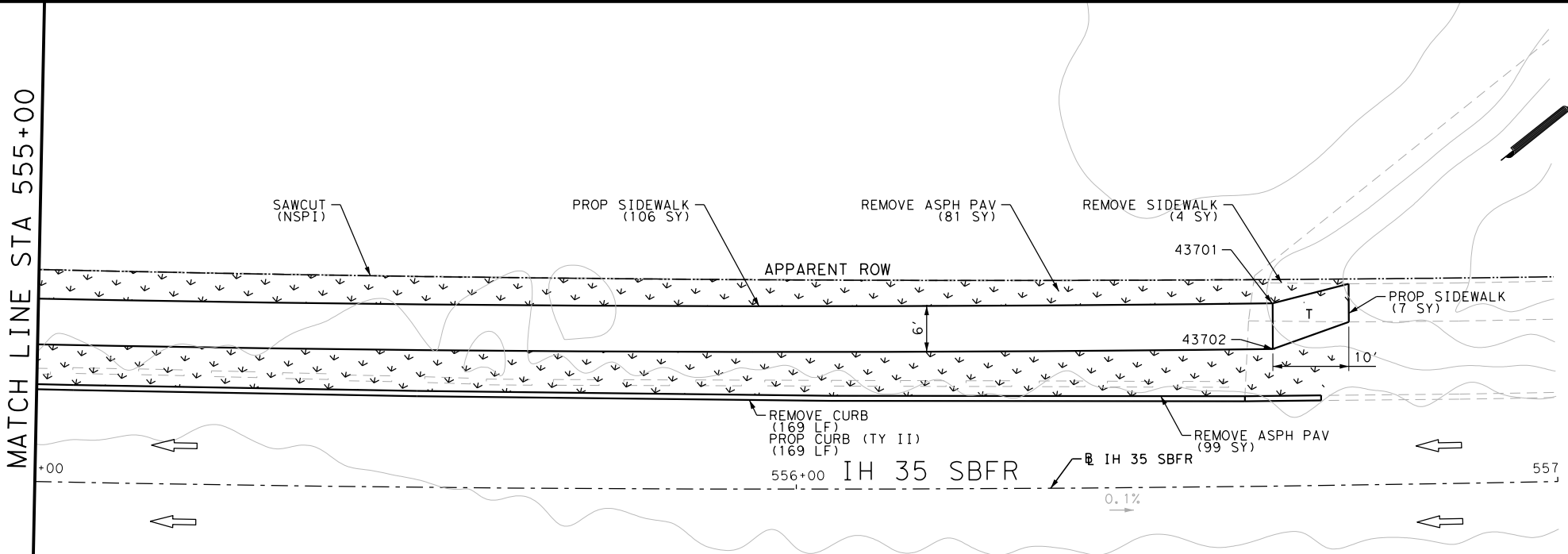
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
	6	TEXAS		VARIES

DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	SAT	BEXAR	0915	12	576	512

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\IH 35 Access Rd\1113508\_IH35AccessRd\_SB24PP.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	169
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	180
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	195
0162-6002	BLOCK SODDING	SY	195
0168-6001	VEGETATIVE WATERING	MG	3.04
0529-6002	CONC CURB (TY II)	LF	169
0531-6001	CONC SIDEWALKS (4")	SY	112



POINT	NORTHING	EASTING	ELEV	DESC
43701	13679453.28	2119433.63	--	PROF
43702	13679449.58	2119438.35	--	PROF

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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IH 35  
 ACCESS RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 555+00 TO STA 557+00

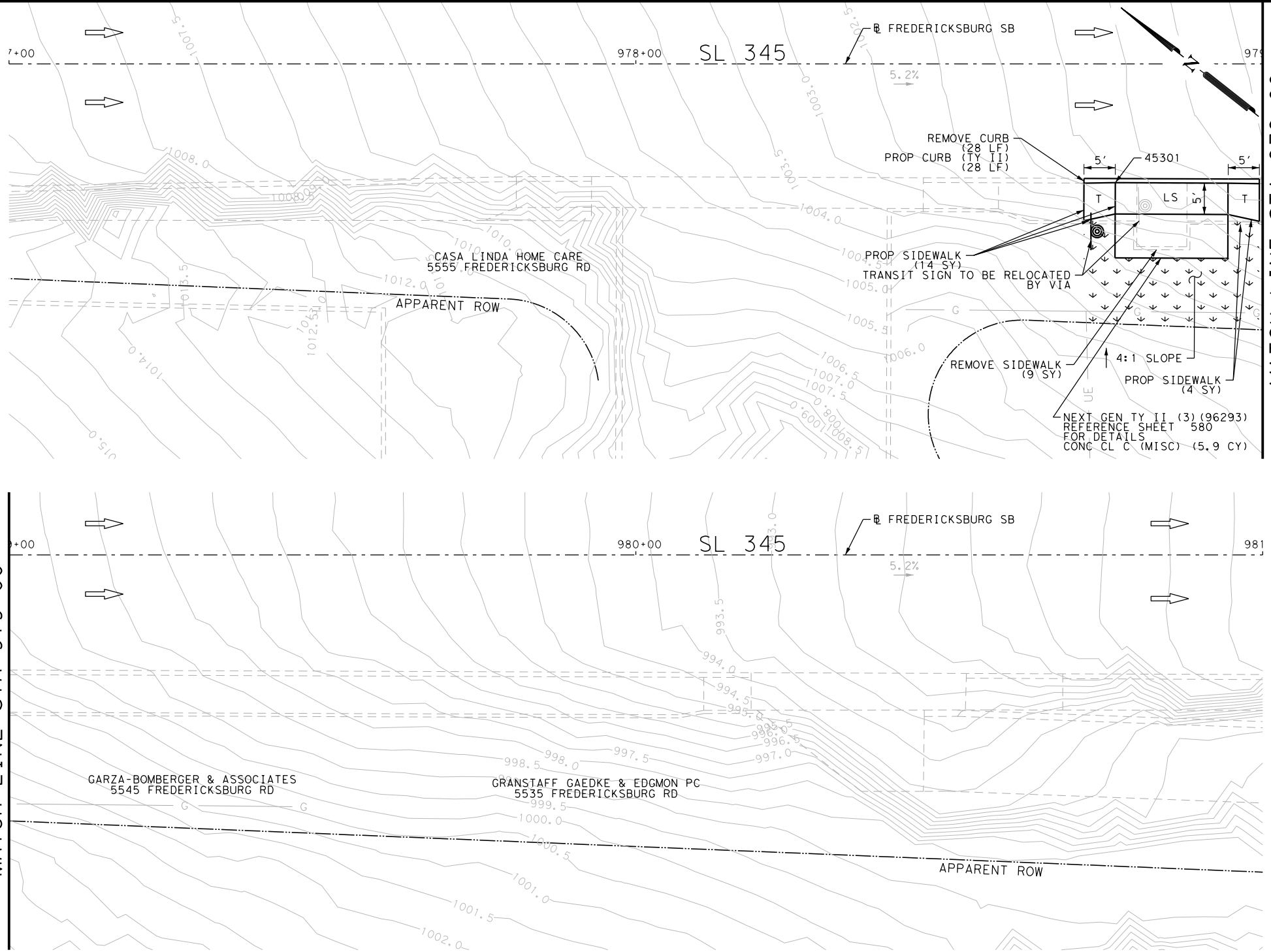
SHEET 44 OF 44

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	513



Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\113508\_FredericksburgRd\_SB04.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	28
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	9
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	42
0162-6002	BLOCK SODDING	SY	42
0168-6001	VEGETATIVE WATERING	MG	0.66
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6002	CONC CURB (TY II)	LF	28
0531-6001	CONC SIDEWALKS (4")	SY	18

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
45301	13735099.22	2107060.00	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



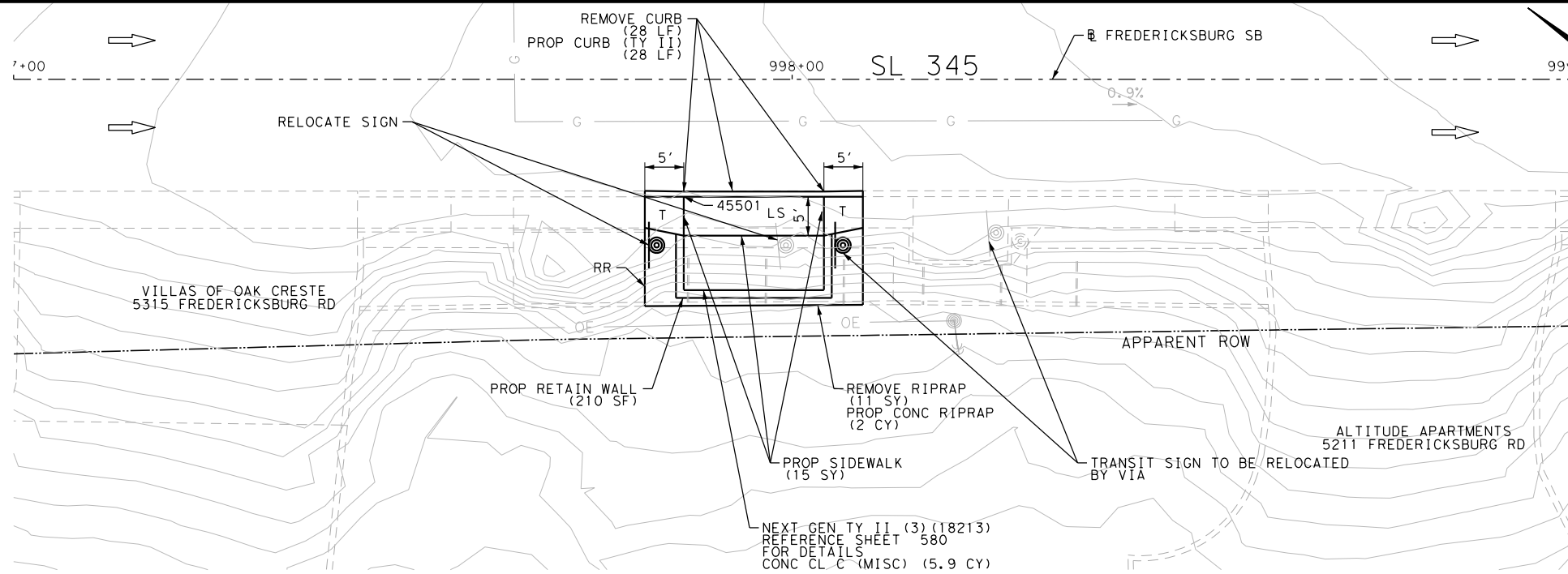
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 977+00 TO STA 981+00

SHEET 1 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	514

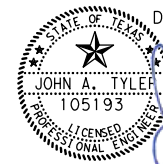
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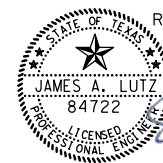
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ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	28
0420-6074	CL C CONC (MISC)	CY	5.9
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	210
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	28
0531-6001	CONC SIDEWALKS (4")	SY	15
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

- NOTES:
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  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
45501	13733567.34	2108198.75	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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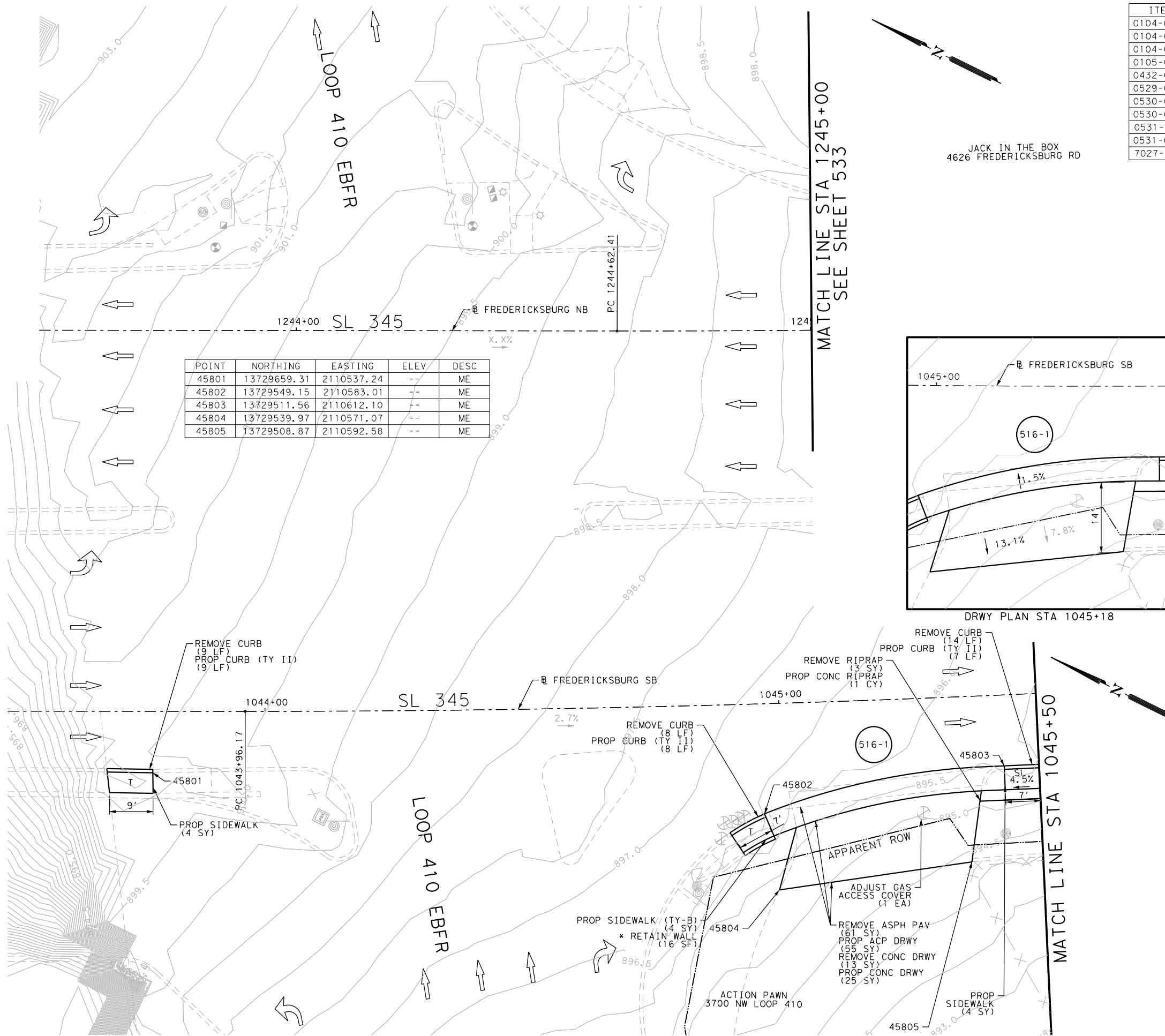
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 997+00 TO STA 999+00

SHEET 2 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	515

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB09.dgn

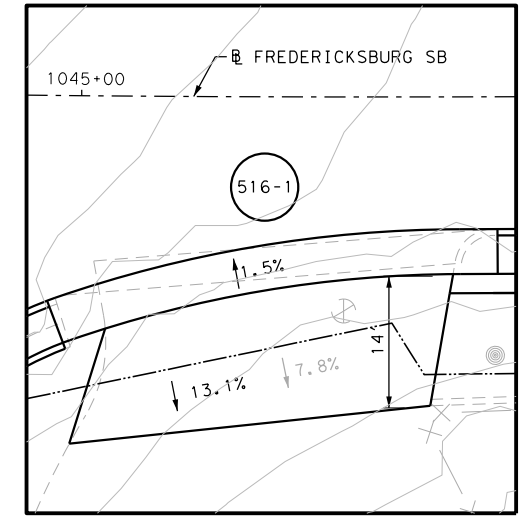


POINT	NORTHING	EASTING	ELEV	DESC
45801	13729659.31	2110537.24	--	ME
45802	13729549.15	2110583.01	--	ME
45803	13729511.56	2110612.10	--	ME
45804	13729539.97	2110571.07	--	ME
45805	13729508.87	2110592.58	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	3
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	13
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	31
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	61
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	24
0530-6004	DRIVEWAYS (CONC)	SY	25
0530-6005	DRIVEWAYS (ACP)	SY	55
0531-6001	CONC SIDEWALKS (4")	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1

JACK IN THE BOX  
4626 FREDERICKSBURG RD

MATCH LINE STA 1245+00  
SEE SHEET 533



- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

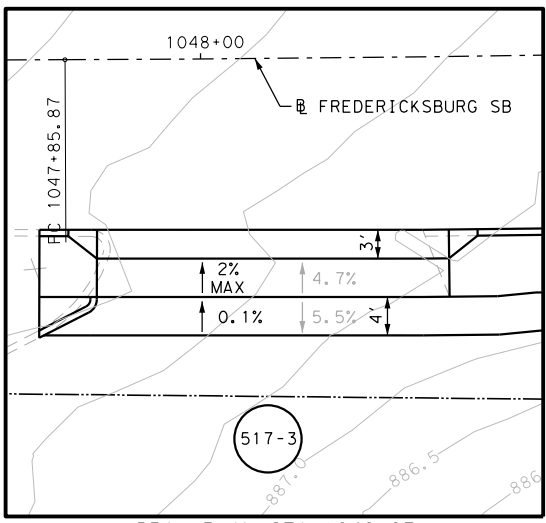
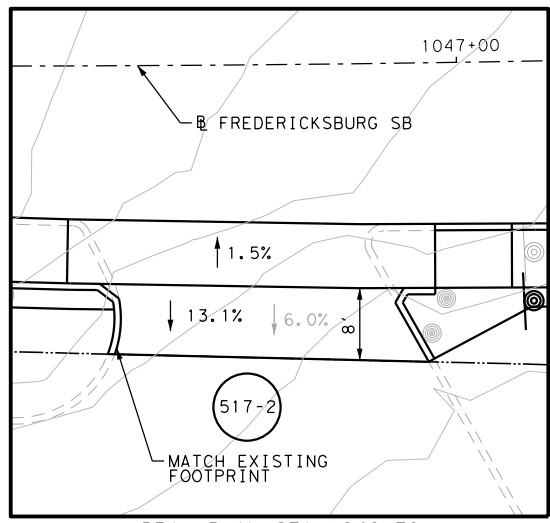
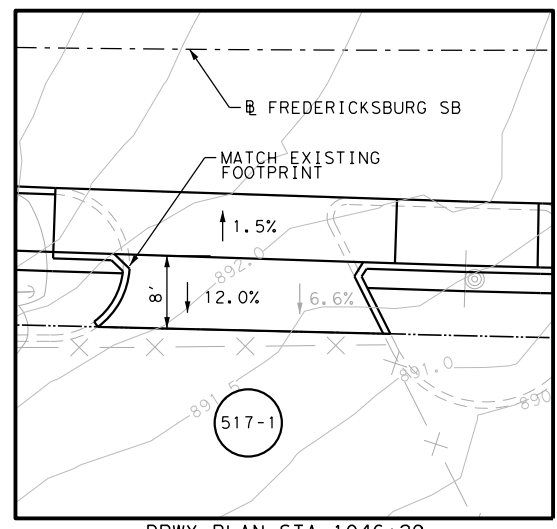
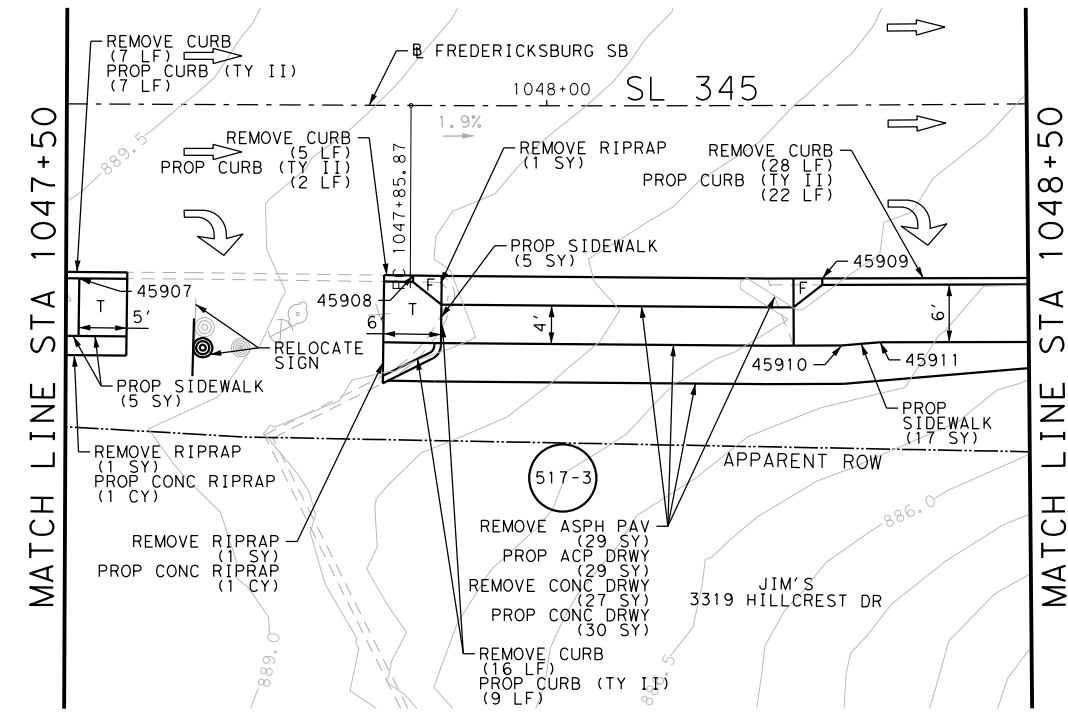
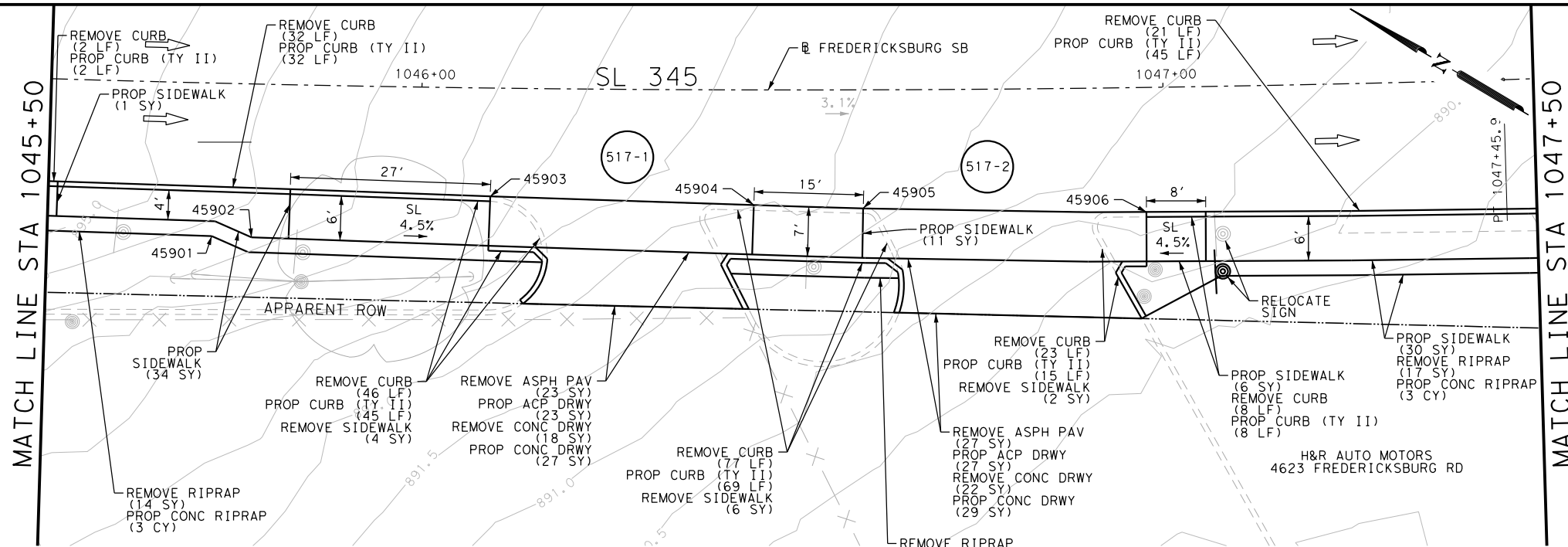
Texas Department of Transportation  
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SL 345  
FREDERICKSBURG RD  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 1043+50 TO STA 1045+50  
 STA 1243+50 TO STA 1245+00  
 SHEET 3 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	516

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\113508\_FredericksburgRd\_SB10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	40
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	67
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	265
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	79
0432-6003	RIPRAP (CONC) (6 IN)	CY	9
0529-6002	CONC CURB (TY II)	LF	256
0530-6004	DRIVEWAYS (CONC)	SY	88
0530-6005	DRIVEWAYS (ACP)	SY	79
0531-6001	CONC SIDEWALKS (4")	SY	109
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 345  
FREDERICKSBURG RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1045+50 TO STA 1048+50

SHEET 4 OF 19

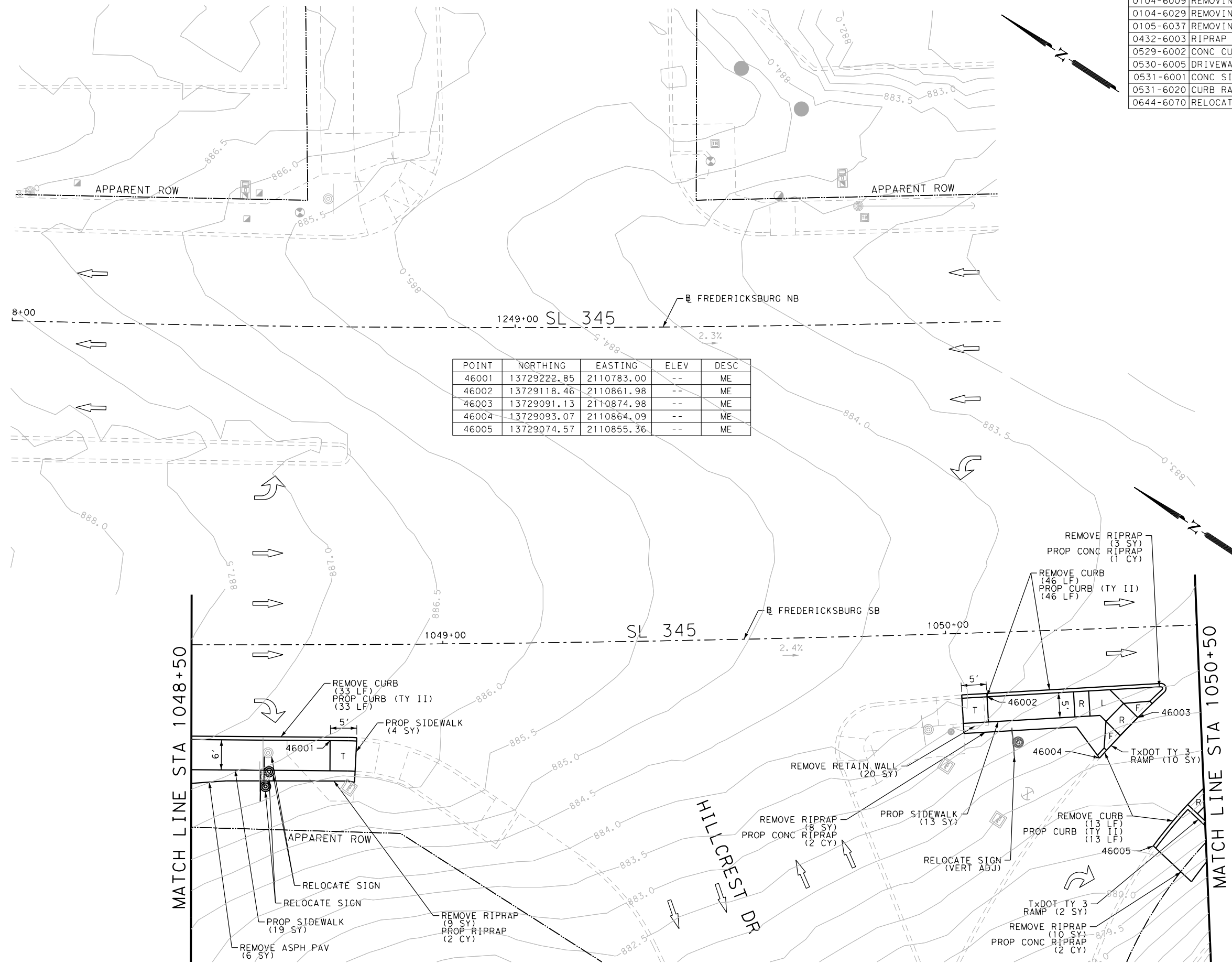
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	517

POINT	NORTHING	EASTING	ELEV	DESC
45901	13729482.93	2110620.26	--	ME
45902	13729478.22	2110622.86	--	ME
45903	13729453.37	2110644.10	--	ME
45904	13729422.19	2110661.29	--	ME
45905	13729409.28	2110668.46	--	ME
45906	13729376.19	2110687.60	--	ME
45907	13729329.61	2110715.15	--	ME
45908	13729300.51	2110734.18	--	ME
45909	13729264.46	2110756.95	--	ME
45910	13729258.99	2110752.15	--	ME
45911	13729255.80	2110754.60	--	ME

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB11.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	30
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	92
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	6
0432-6003	RIPRAP (CONC) (6 IN)	CY	7
0529-6002	CONC CURB (TY II)	LF	92
0530-6005	DRIVEWAYS (ACP)	SY	6
0531-6001	CONC SIDEWALKS (4")	SY	36
0531-6020	CURB RAMPS (TY 3)	SY	12
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	3



POINT	NORTHING	EASTING	ELEV	DESC
46001	13729222.85	2110783.00	--	ME
46002	13729118.46	2110861.98	--	ME
46003	13729091.13	2110874.98	--	ME
46004	13729093.07	2110864.09	--	ME
46005	13729074.57	2110855.36	--	ME

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DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

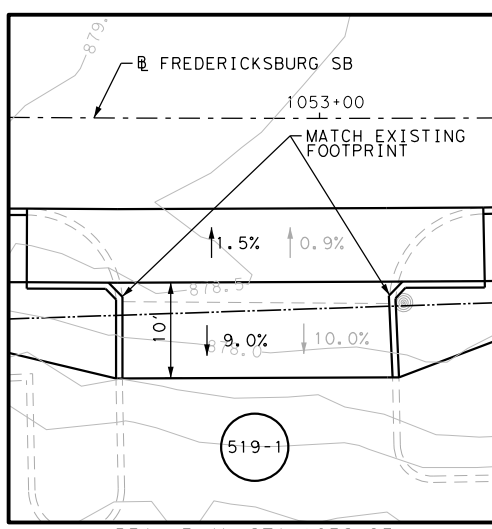
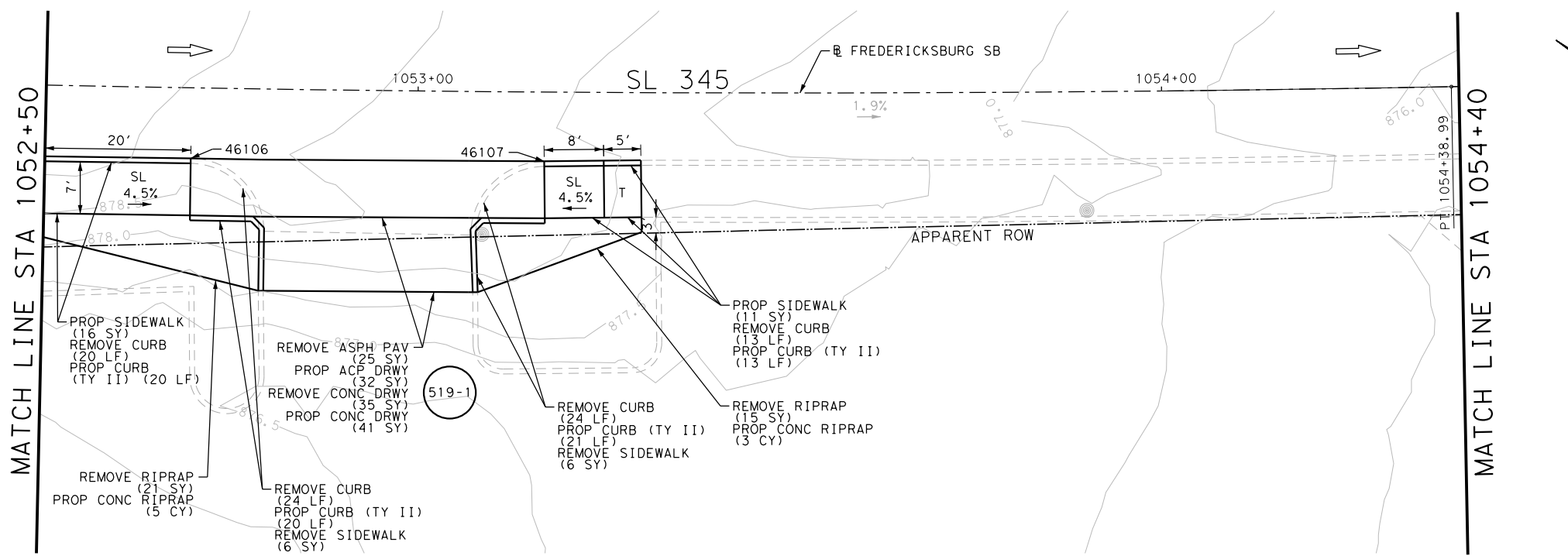
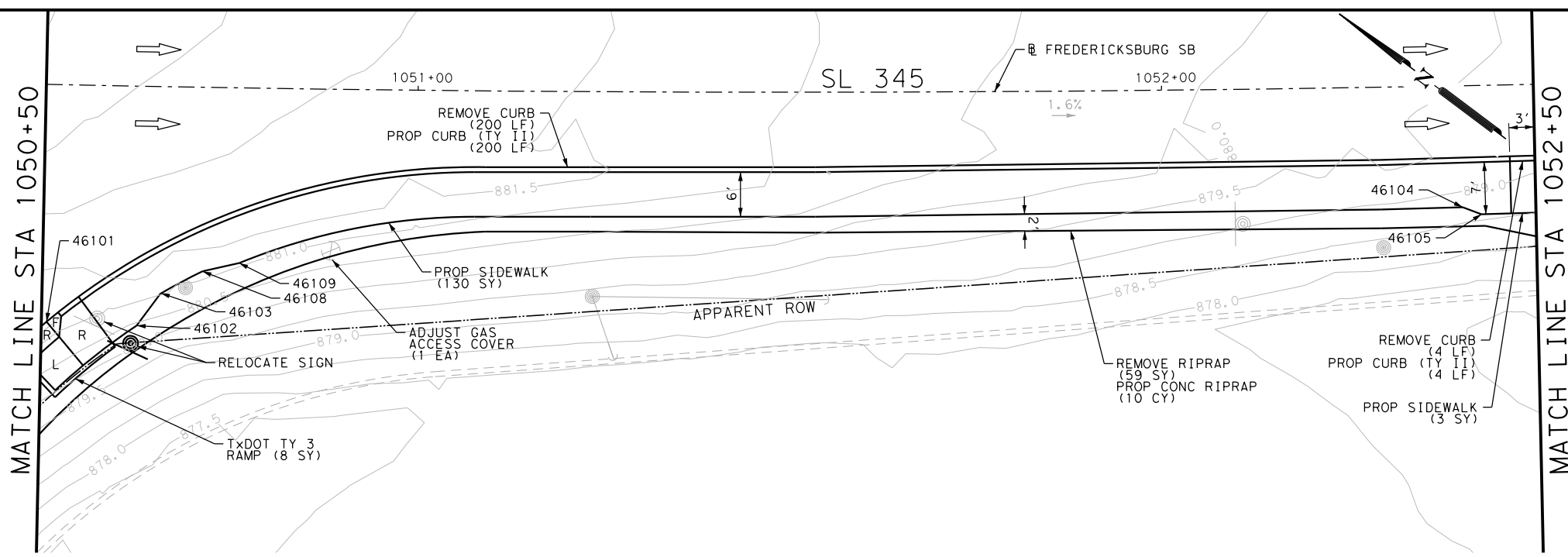
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SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1048+50 TO STA 1050+50  
 STA 1248+00 TO STA 1250+00  
 SHEET 5 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	518

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB12.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	95
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	35
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	285
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	25
0432-6003	RIPRAP (CONC) (6 IN)	CY	18
0529-6002	CONC CURB (TY II)	LF	278
0530-6004	DRIVEWAYS (CONC)	SY	41
0530-6005	DRIVEWAYS (ACP)	SY	32
0531-6001	CONC SIDEWALKS (4")	SY	160
0531-6020	CURB RAMPS (TY 3)	SY	8
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
46101	13729072.26	2110871.33	--	ME
46102	13729062.24	2110878.18	--	ME
46103	13729062.26	2110883.62	--	ME
46104	13728929.12	2110997.95	--	ME
46105	13728926.54	2110998.72	--	ME
46106	13728910.18	2111021.54	--	ME
46107	13728873.15	2111051.35	--	ME
46108	13729059.54	2110889.34	--	ME
46109	13729056.25	2110893.19	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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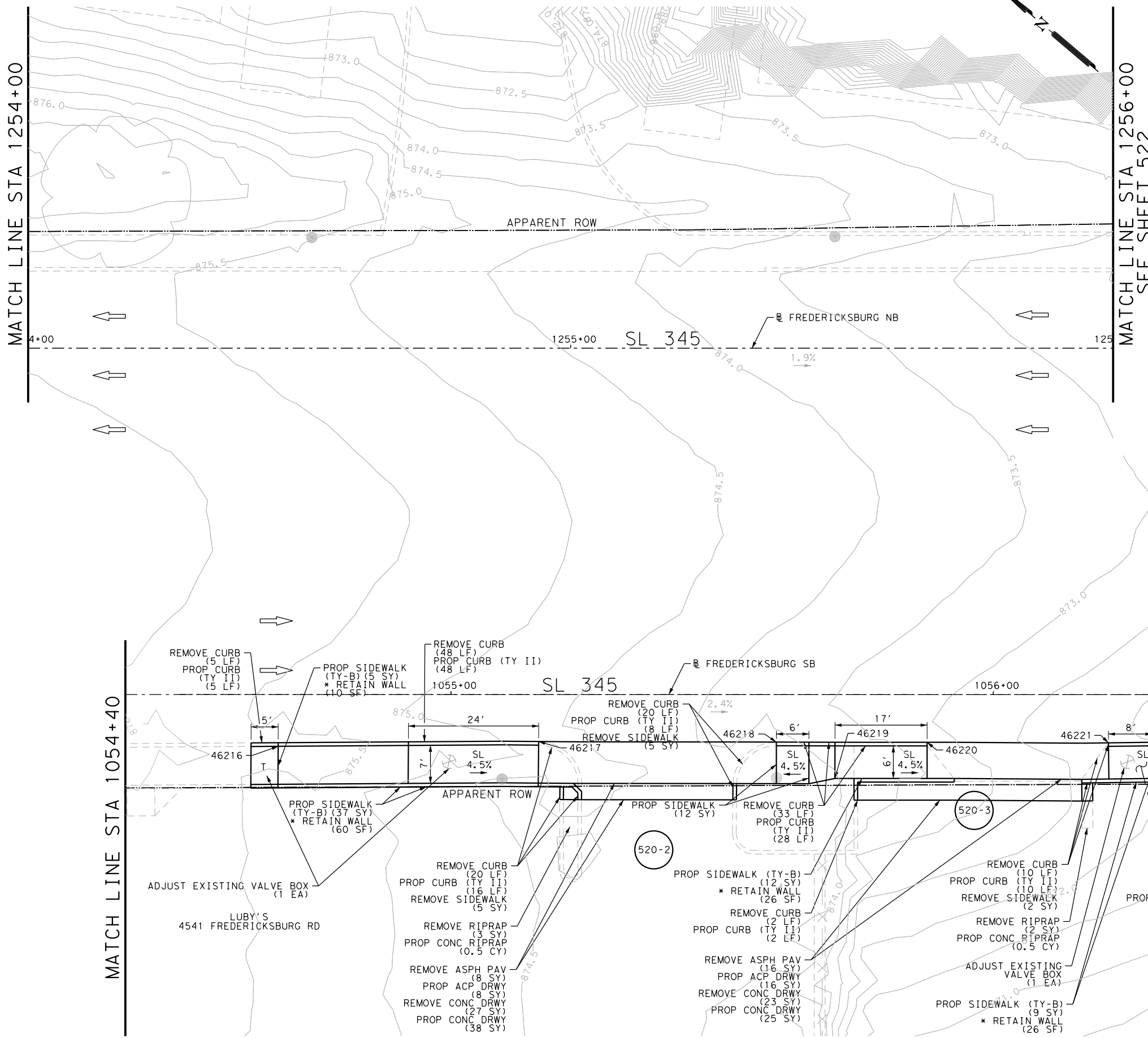
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1050+50 TO STA 1054+40

SHEET 6 OF 19

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				519

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB13.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	5
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	50
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	207
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	24
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	62
0162-6002	BLOCK SODDING	SY	62
0168-6001	VEGETATIVE WATERING	MG	0.97
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	130
0530-6004	DRIVEWAYS (CONC)	SY	61
0530-6005	DRIVEWAYS (ACP)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	12
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	63
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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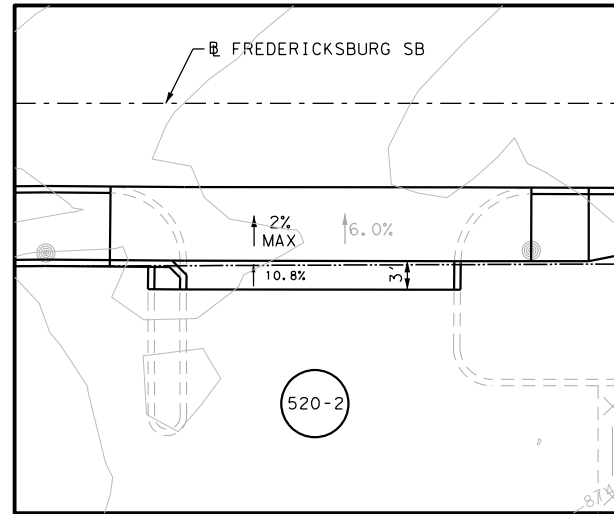
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1054+40 TO STA 1056+50  
 STA 1254+00 TO STA 1256+00  
 SHEET 7 OF 19

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	520

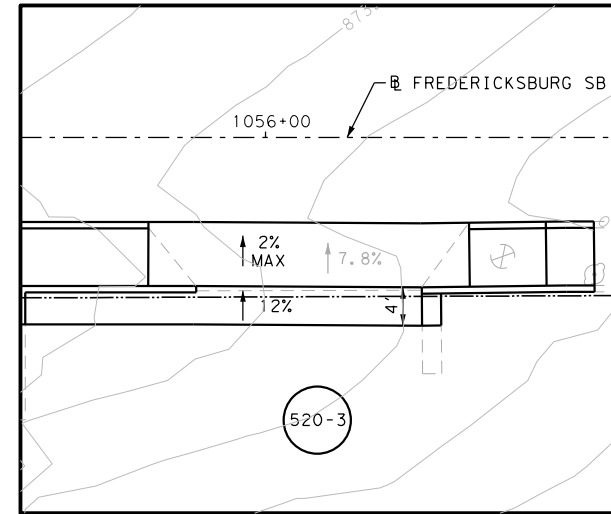
SEE SHEET 521 FOR POINT TABLE

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB13A.dgn



DRWY PLAN STA 1055+38

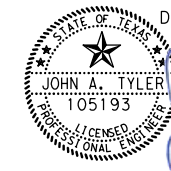


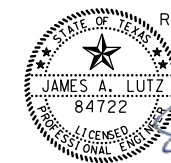
DRWY PLAN STA 1056+07

POINT	NORTHING	EASTING	ELEV	DESC
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46217	13728720.71	2111179.85	--	ME
46218	13728687.26	2111208.18	--	ME
46219	13728674.72	2111210.07	--	ME
46220	13728666.08	2111226.17	--	ME
46221	13728640.58	2111247.76	--	ME

NOTES:

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- 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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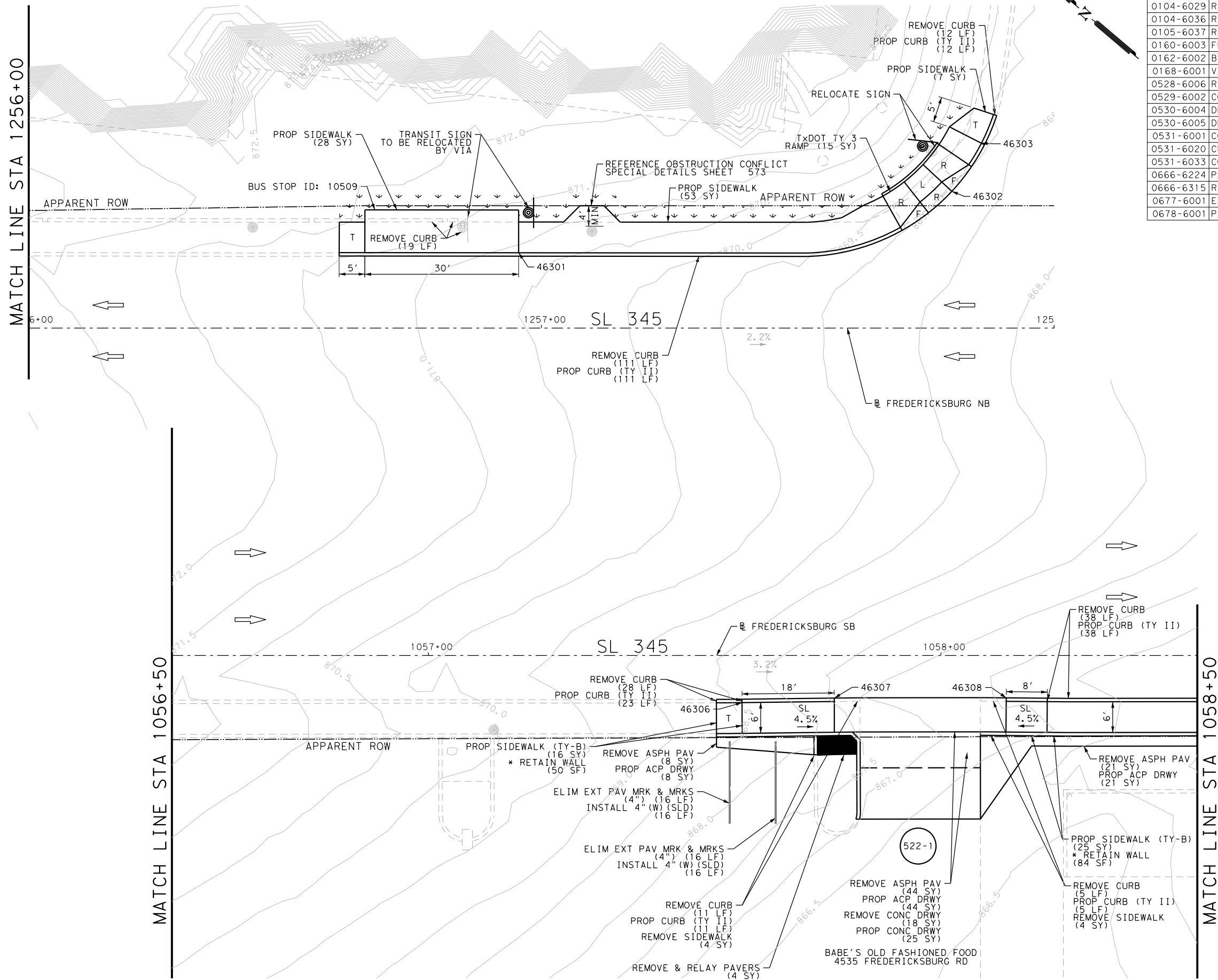
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1054+40 TO STA 1056+50  
 STA 1254+00 TO STA 1256+00  
 SHEET 8 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	521



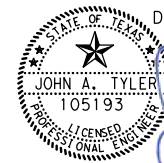
Plotted on: 5/3/2019

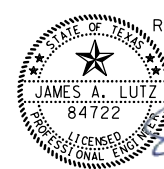
Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB14.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	18
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	224
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	73
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	63
0162-6002	BLOCK SODDING	SY	63
0168-6001	VEGETATIVE WATERING	MG	0.98
0528-6006	REMOVE AND RELAY PAVERS	SY	4
0529-6002	CONC CURB (TY II)	LF	200
0530-6004	DRIVEWAYS (CONC)	SY	25
0530-6005	DRIVEWAYS (ACP)	SY	73
0531-6001	CONC SIDEWALKS (4")	SY	88
0531-6020	CURB RAMPS (TY 3)	SY	15
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	41
0666-6224	PAVEMENT SEALER 4"	LF	32
0666-6315	RE PM W/RET REQ TY I (Y) 4" (SLD) (100MIL)	LF	32
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	32
0678-6001	PAV SURF PREP FOR MRK (4")	LF	32

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2018

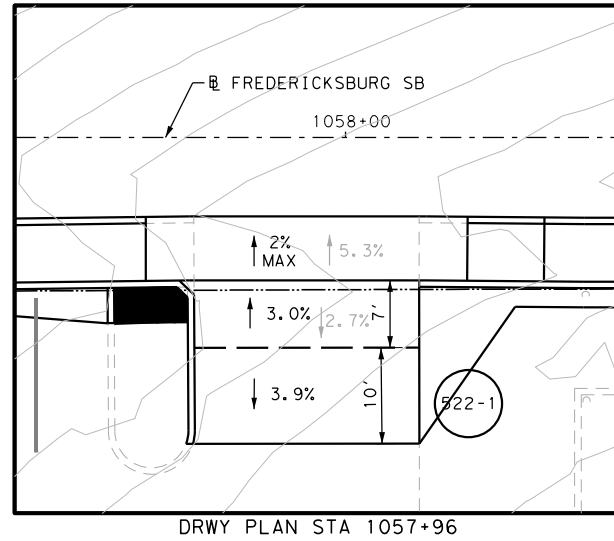
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1056+50 TO STA 1058+50  
 STA 1256+00 TO STA 1258+00  
 SHEET 9 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	522

SEE SHEET 523 FOR POINT TABLE

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB14A.dgn



POINT	NORTHING	EASTING	ELEV	DESC
46301	13728623.85	2111376.85	--	ME
46302	13728567.28	2111440.73	--	ME
46303	13728568.97	2111451.63	--	ME
46306	13728533.77	2111338.26	--	ME
46307	13728520.65	2111350.61	--	ME
46308	13728495.13	2111372.37	--	ME

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DESIGN

John A. Tyler, P.E. 5/3/2019  
DATE

REVIEW AND APPROVAL

James A. Lutz, P.E. 5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

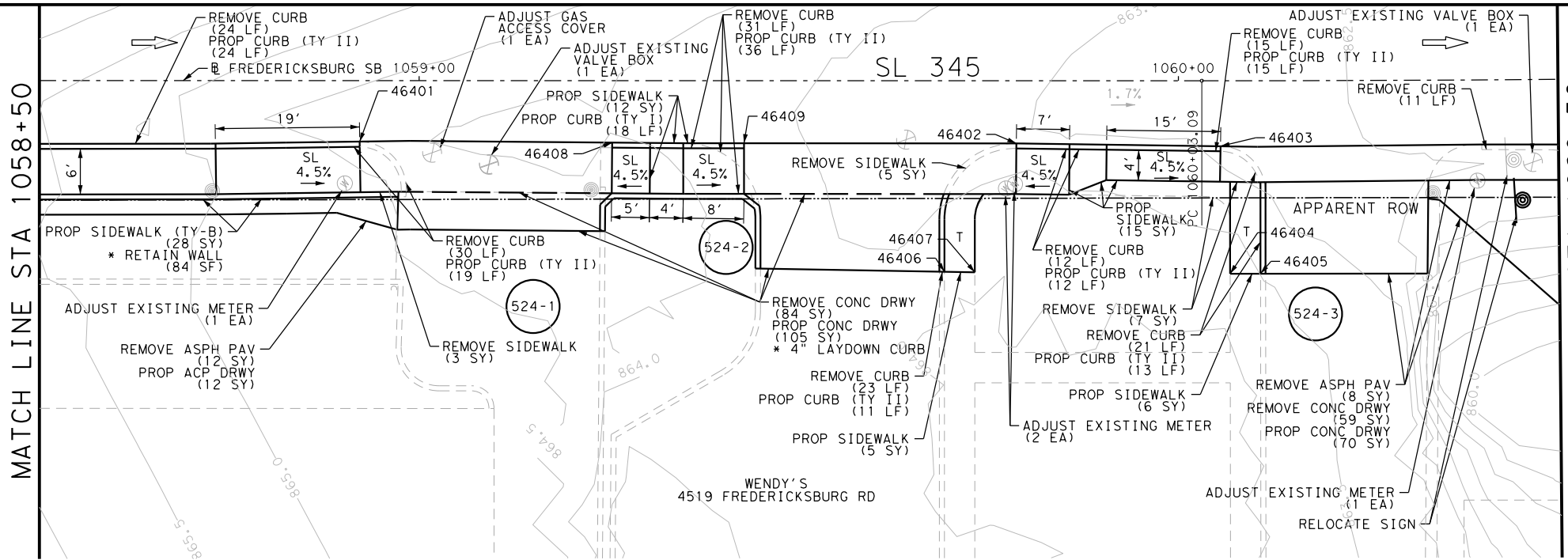


SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1056+50 TO STA 1058+50  
 STA 1256+00 TO STA 1258+00  
 SHEET 10 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	523

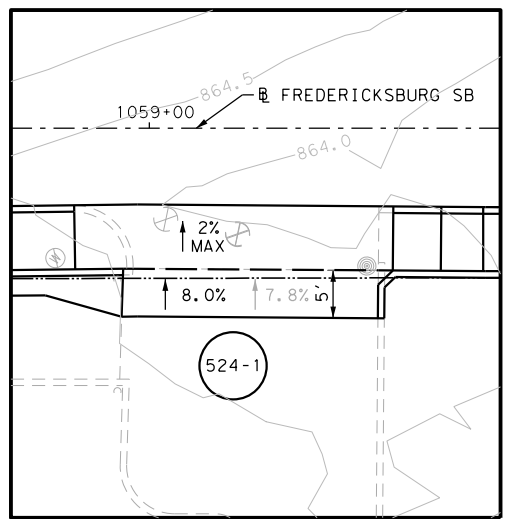
Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB15.dgn

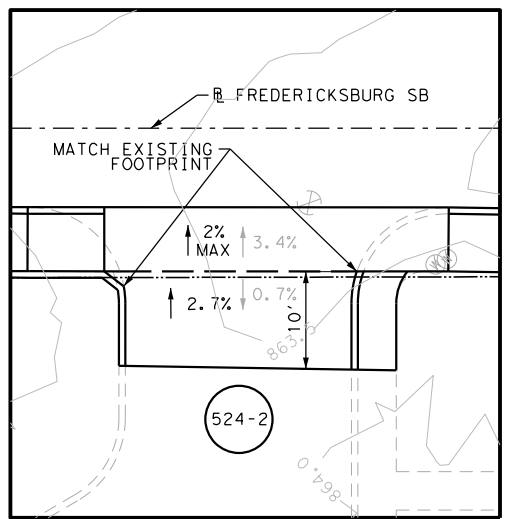


ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	143
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	167
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	23
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	20
0529-6002	CONC CURB (TY II)	LF	148
0530-6004	DRIVEWAYS (CONC)	SY	175
0530-6005	DRIVEWAYS (ACP)	SY	12
0531-6001	CONC SIDEWALKS (4")	SY	38
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	28
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	2
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	4

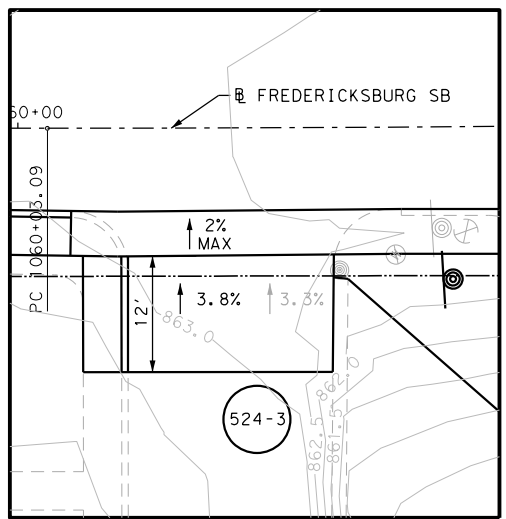
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DRWY PLAN STA 1059+11



DRWY PLAN STA 1059+57



DRWY PLAN STA 1060+22

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
46401	13728434.78	2111424.03	--	ME
46402	13728368.78	2111479.92	--	ME
46403	13728348.06	2111497.07	--	ME
46404	13728336.21	2111485.10	--	ME
46405	13728333.17	2111487.69	--	ME
46406	13728365.02	2111460.91	--	ME
46407	13728361.93	2111463.45	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



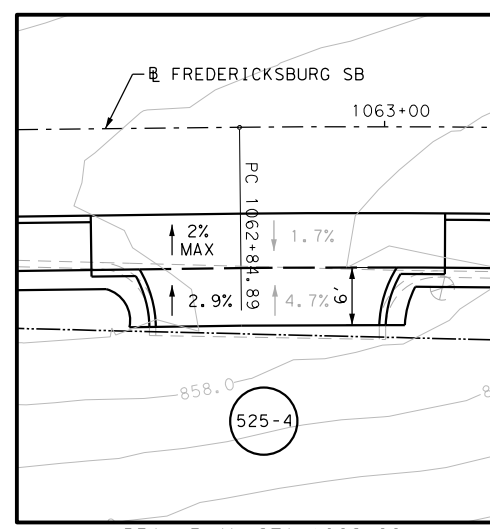
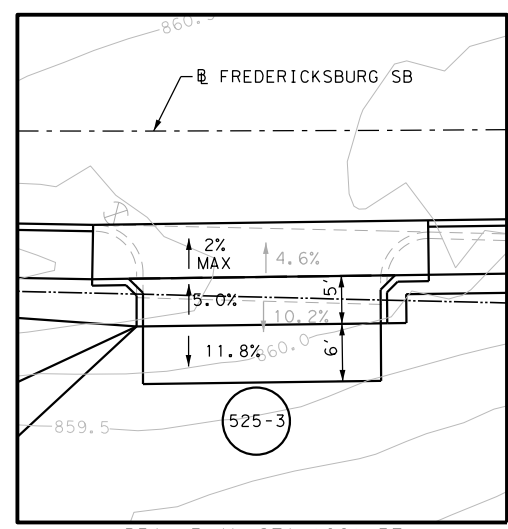
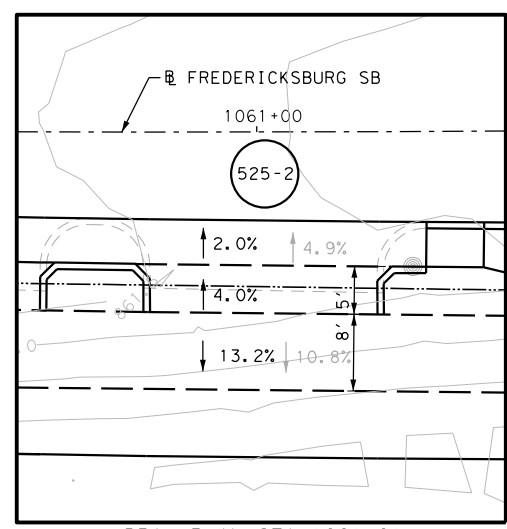
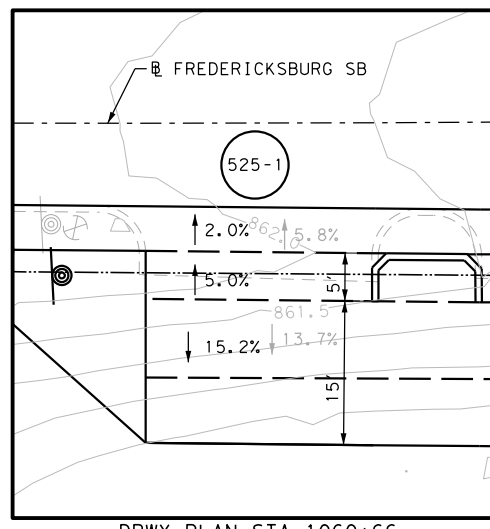
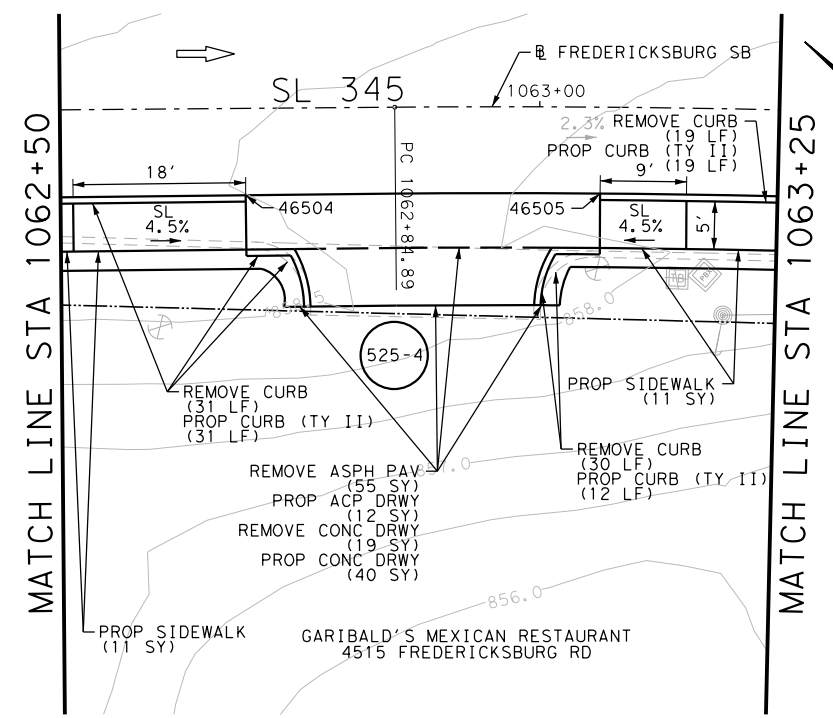
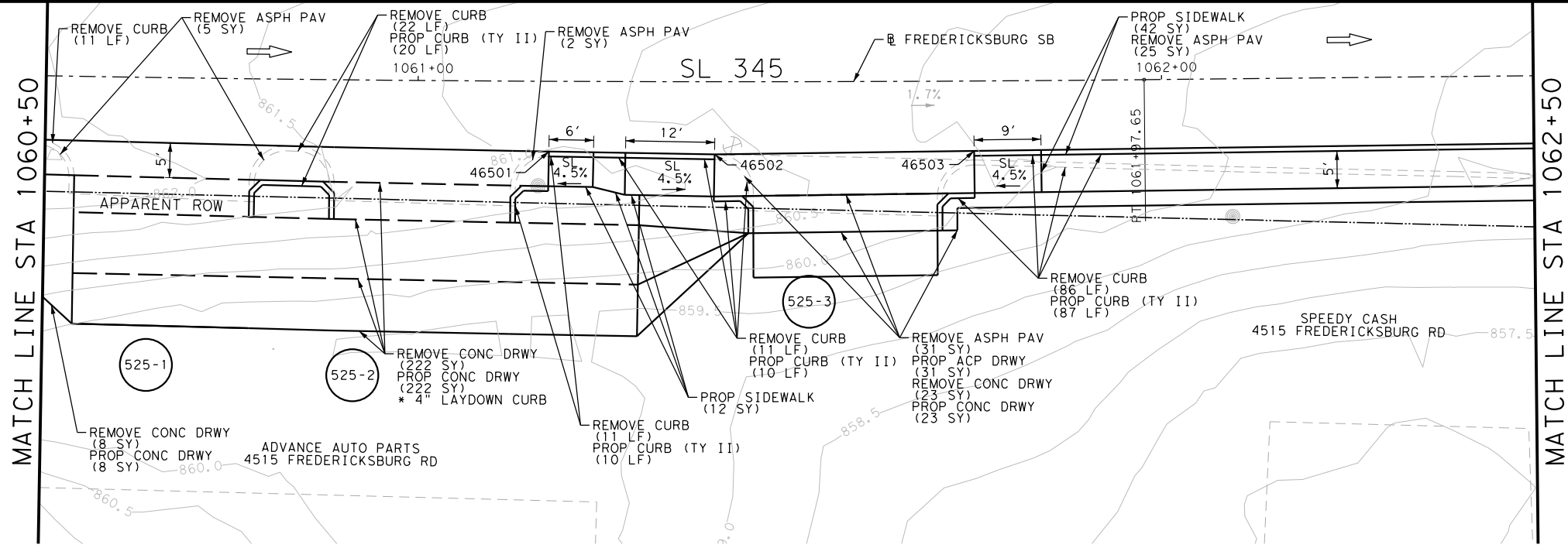
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1058+50 TO STA 1060+50

SHEET 11 OF 19

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	524

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB16.dgn



POINT	NORTHING	EASTING	ELEV	DESC
46501	13728262.81	2111570.12	--	ME
46502	13728245.97	2111584.73	--	ME
46503	13728220.29	2111608.38	--	ME
46504	13728150.71	2111672.46	--	ME
46505	13728123.39	2111697.30	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	272
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	221
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	118
0529-6002	CONC CURB (TY II)	LF	190
0530-6004	DRIVEWAYS (CONC)	SY	293
0530-6005	DRIVEWAYS (ACP)	SY	43
0531-6001	CONC SIDEWALKS (4")	SY	76

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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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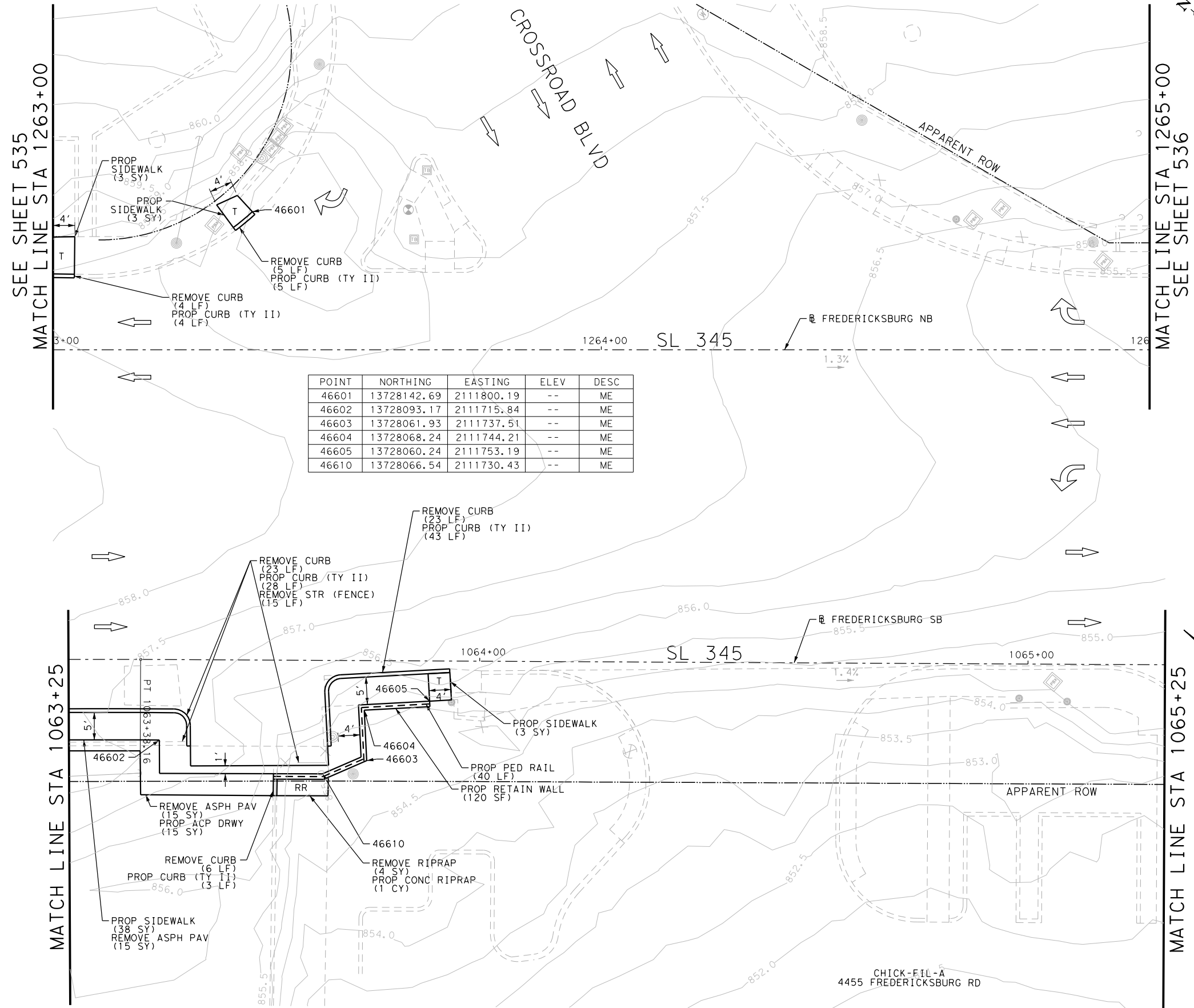
SL 345  
FREDERICKSBURG RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1060+50 TO STA 1063+25

SHEET 12 OF 19

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	525

Plotted on: 5/3/2019

Design File Name: P:\111.35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB17.dgn



POINT	NORTHING	EASTING	ELEV	DESC
46601	13728142.69	2111800.19	--	ME
46602	13728093.17	2111715.84	--	ME
46603	13728061.93	2111737.51	--	ME
46604	13728068.24	2111744.21	--	ME
46605	13728060.24	2111753.19	--	ME
46610	13728066.54	2111730.43	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	4
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	61
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	30
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	120
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0432-6010	RIPRAP (CONC) (CL B) (5 IN)	CY	40
0496-6043	REMOV STR (SMALL FENCE)	LF	15
0529-6002	CONC CURB (TY II)	LF	83
0530-6005	DRIVEWAYS (ACP)	SY	15
0531-6001	CONC SIDEWALKS (4")	SY	47

- NOTES:
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

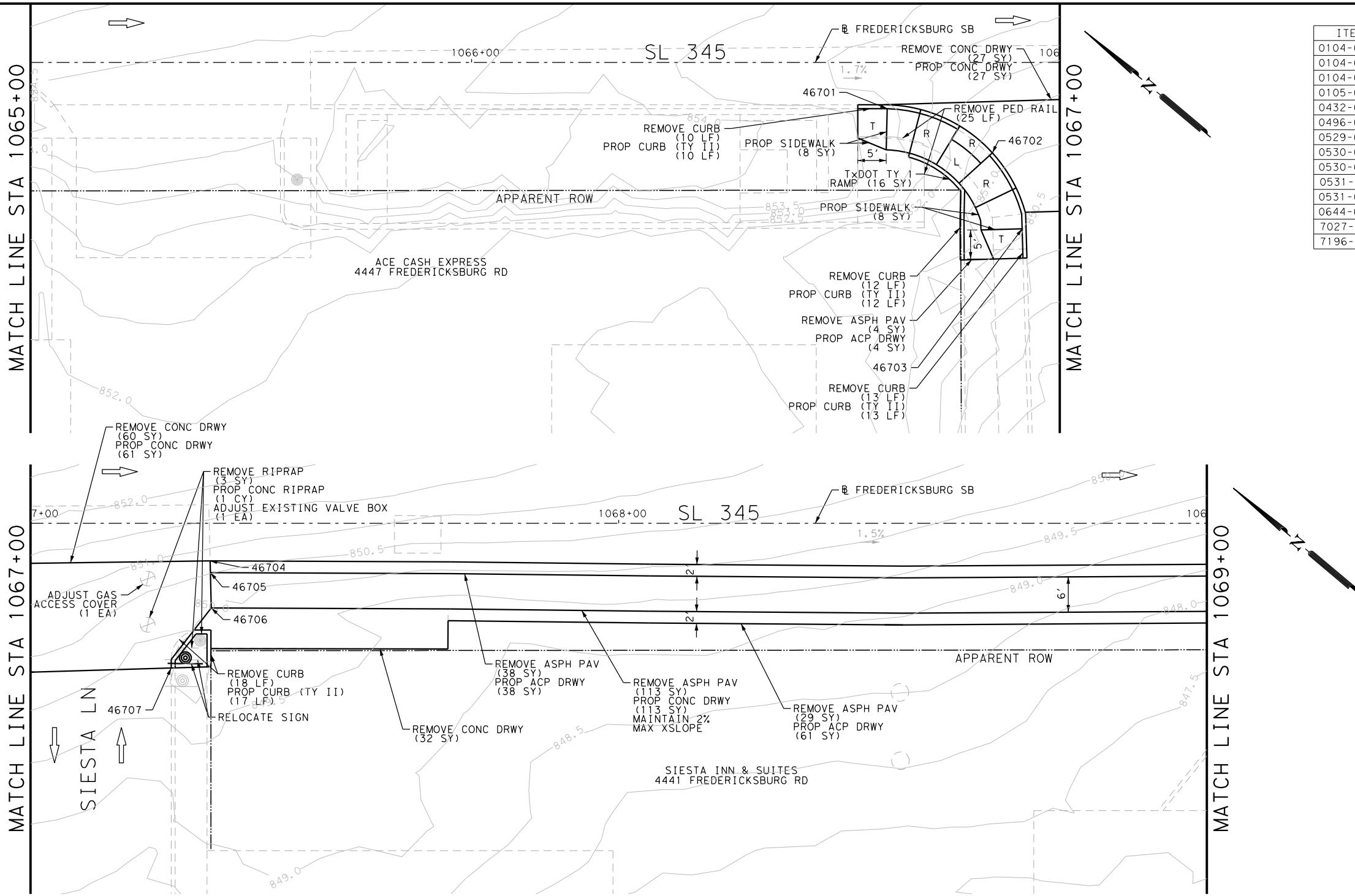
Texas Department of Transportation  
 © 2018

SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1063+25 TO STA 1065+25  
 STA 1263+00 TO STA 1265+00  
 SHEET 13 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	526

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB18.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	3
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	119
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	53
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	184
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0496-6099	REMOVE STR (RAIL)	LF	25
0529-6002	CONC CURB (TY II)	LF	52
0530-6004	DRIVEWAYS (CONC)	SY	201
0530-6005	DRIVEWAYS (ACP)	SY	103
0531-6001	CONC SIDEWALKS (4")	SY	16
0531-6018	CURB RAMPS (TY 1)	SY	16
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
46701	13727845.95	2111933.04	--	ME
46702	13727827.44	2111938.83	--	ME
46703	13727815.26	2111932.21	--	ME
46704	13727801.11	2111972.76	--	ME
46705	13727799.78	2111971.26	--	ME
46706	13727795.81	2111966.76	--	ME
46707	13727794.45	2111954.56	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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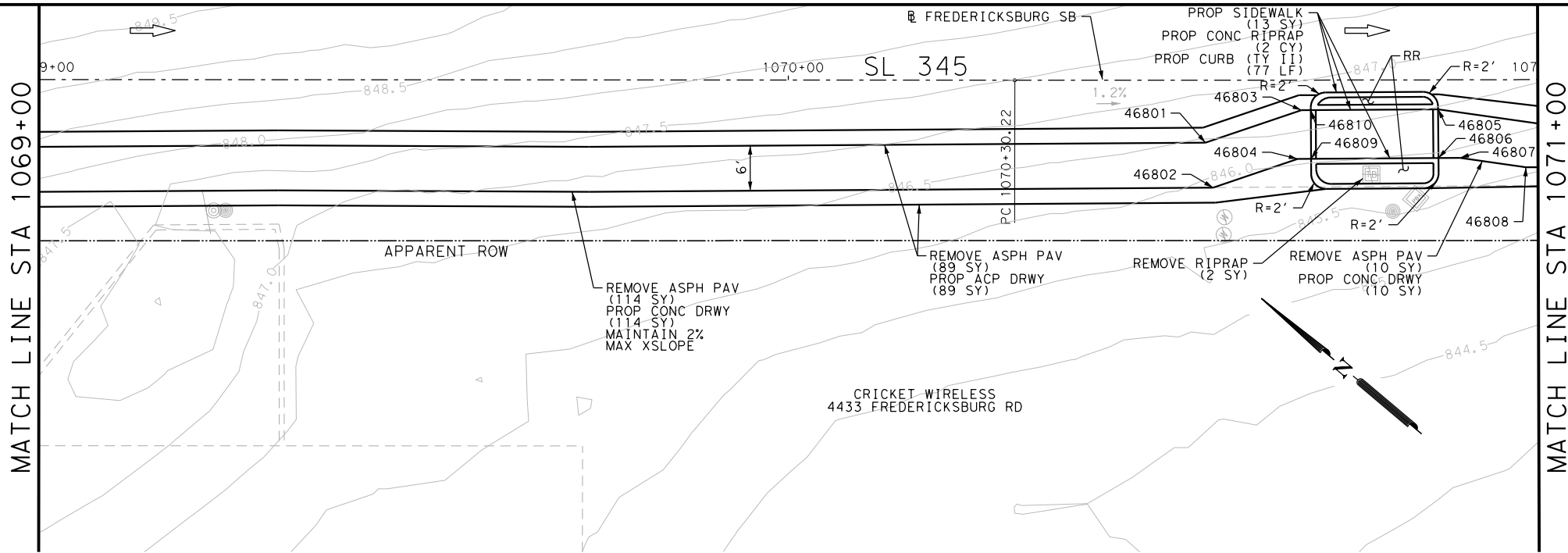
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1065+25 TO STA 1069+00

SHEET 14 OF 19

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	527

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB19.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	2
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	213
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	77
0530-6004	DRIVEWAYS (CONC)	SY	124
0530-6005	DRIVEWAYS (ACP)	SY	89
0531-6001	CONC SIDEWALKS (4")	SY	13

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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
46801	13727551.23	2112180.78	--	ME
46802	13727546.59	2112176.85	--	ME
46803	13727544.23	2112192.35	--	ME
46804	13727538.37	2112190.45	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1069+00 TO STA 1071+00

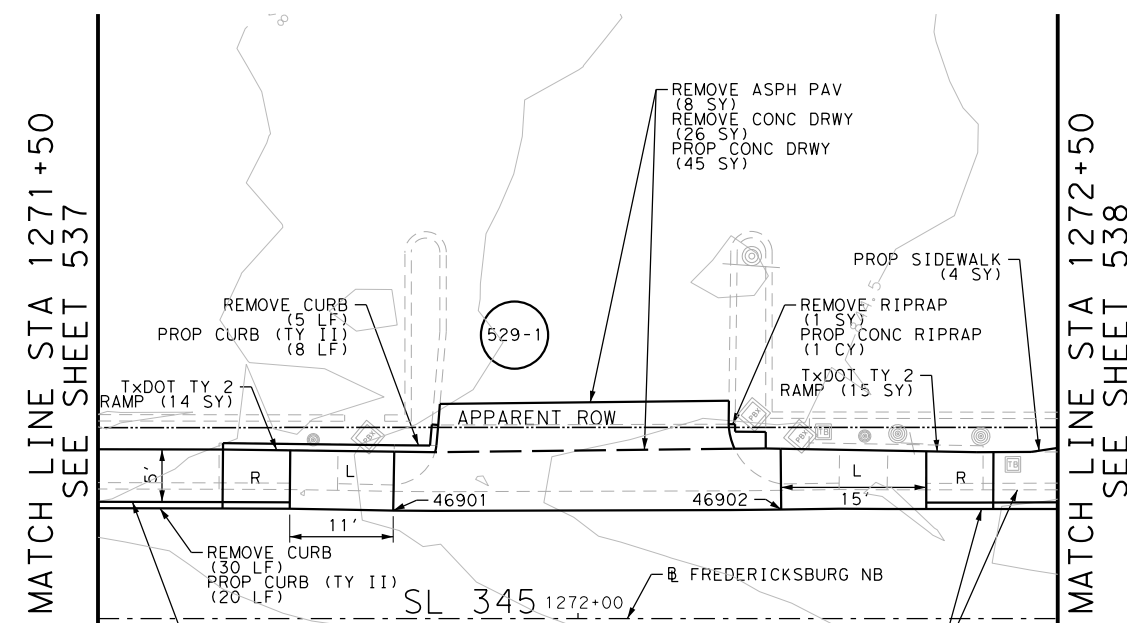
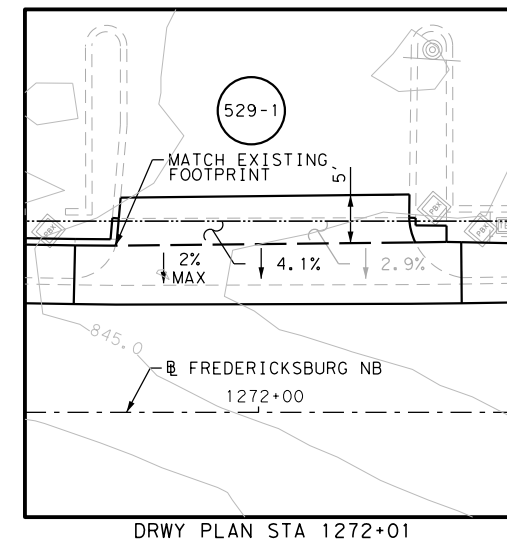
SHEET 15 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	528

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB20.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	1
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	26
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	55
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	269
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	42
0530-6004	DRIVEWAYS (CONC)	SY	149
0530-6005	DRIVEWAYS (ACP)	SY	129
0531-6001	CONC SIDEWALKS (4")	SY	4
0531-6019	CURB RAMPS (TY 2)	SY	29



POINT	NORTHING	EASTING	ELEV	DESC
46901	13727490.73	2112336.97	--	ME
46902	13727460.00	2112363.24	--	ME
46903	13727450.84	2112267.63	--	ME
46904	13727447.62	2112263.81	--	ME
46905	13727444.07	2112259.60	--	ME
46906	13727441.66	2112275.37	--	ME
46907	13727438.44	2112271.54	--	ME
46908	13727434.90	2112267.34	--	ME
46909	13727405.94	2112305.46	--	ME
46910	13727402.72	2112301.64	--	ME
46911	13727399.18	2112297.43	--	ME
46912	13727396.77	2112313.19	--	ME
46913	13727394.64	2112310.67	--	ME
46914	13727390.83	2112306.15	--	ME

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  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.  
105193  
5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
84722  
5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

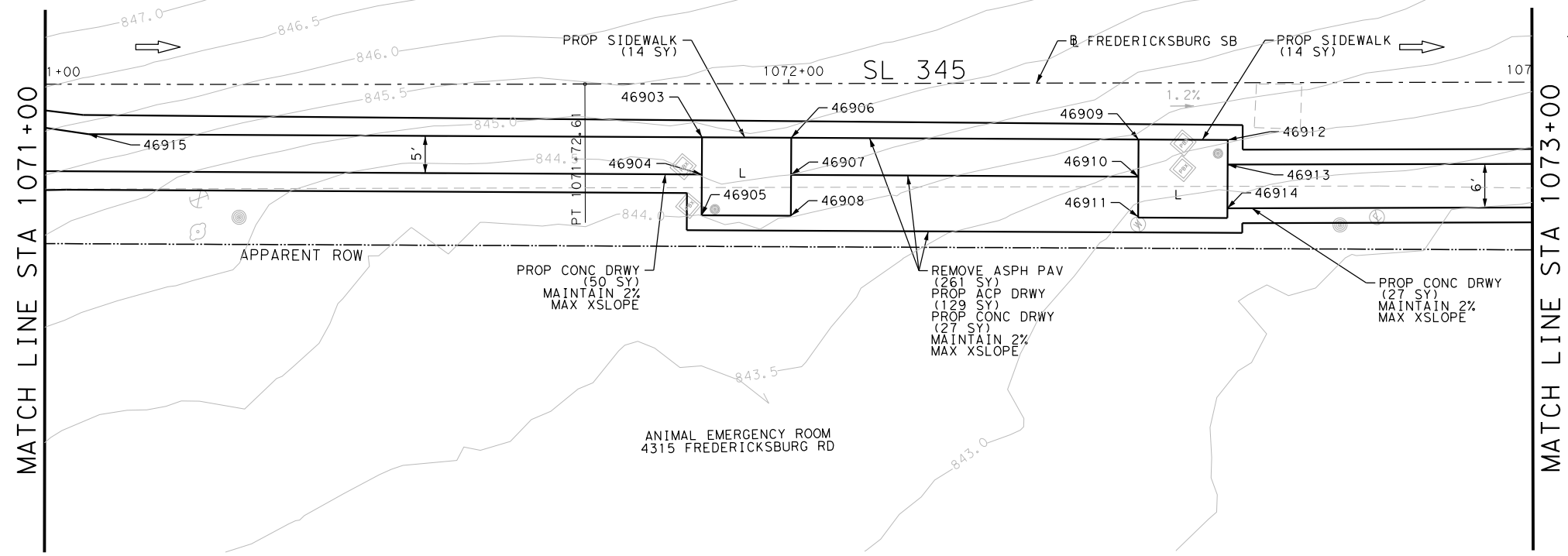
**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 345  
FREDERICKSBURG RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1071+00 TO STA 1073+00  
STA 1271+50 TO STA 1272+50  
SHEET 16 OF 19

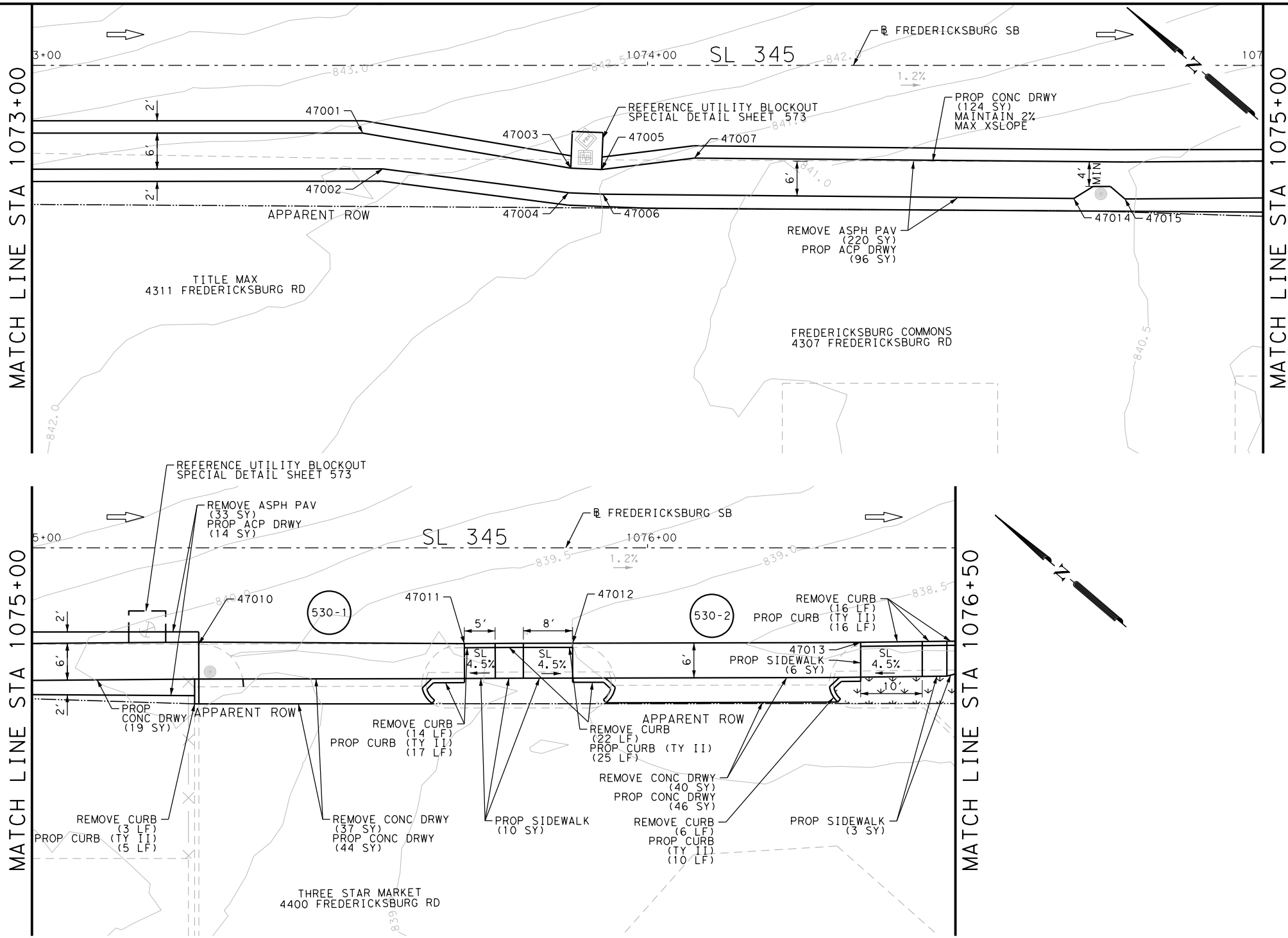
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	529



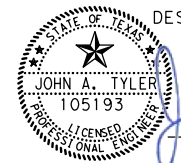


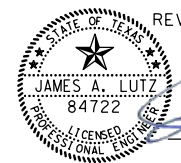
Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB21.dgn



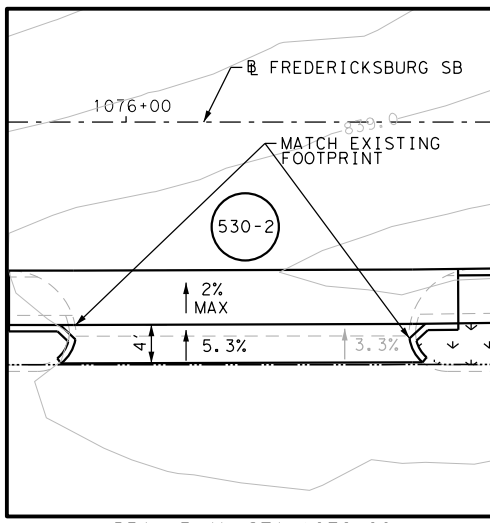
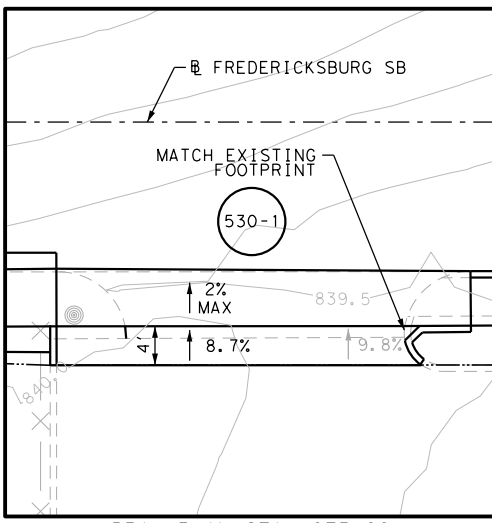
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
47001	13727322.65	2112372.21	--	ME
47002	13727316.42	2112369.90	--	ME
47003	13727293.26	2112389.83	--	ME
47004	13727290.98	2112386.53	--	ME
47005	13727289.33	2112392.93	--	ME
47006	13727286.56	2112390.02	--	ME
47007	13727279.07	2112404.14	--	ME
47010	13727187.88	2112481.33	--	ME
47011	13727155.13	2112509.42	--	ME
47012	13727141.81	2112520.89	--	ME
47013	13727106.35	2112551.43	--	ME



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 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
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 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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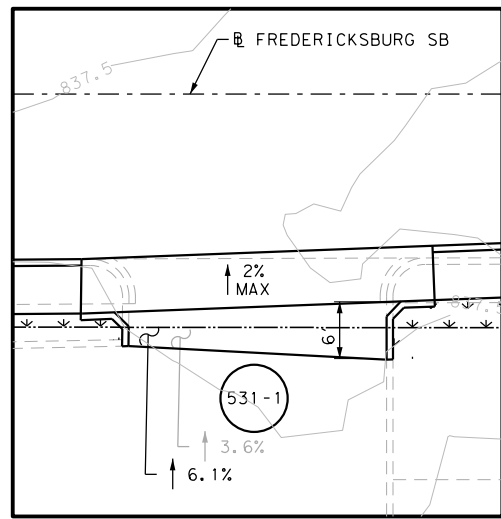
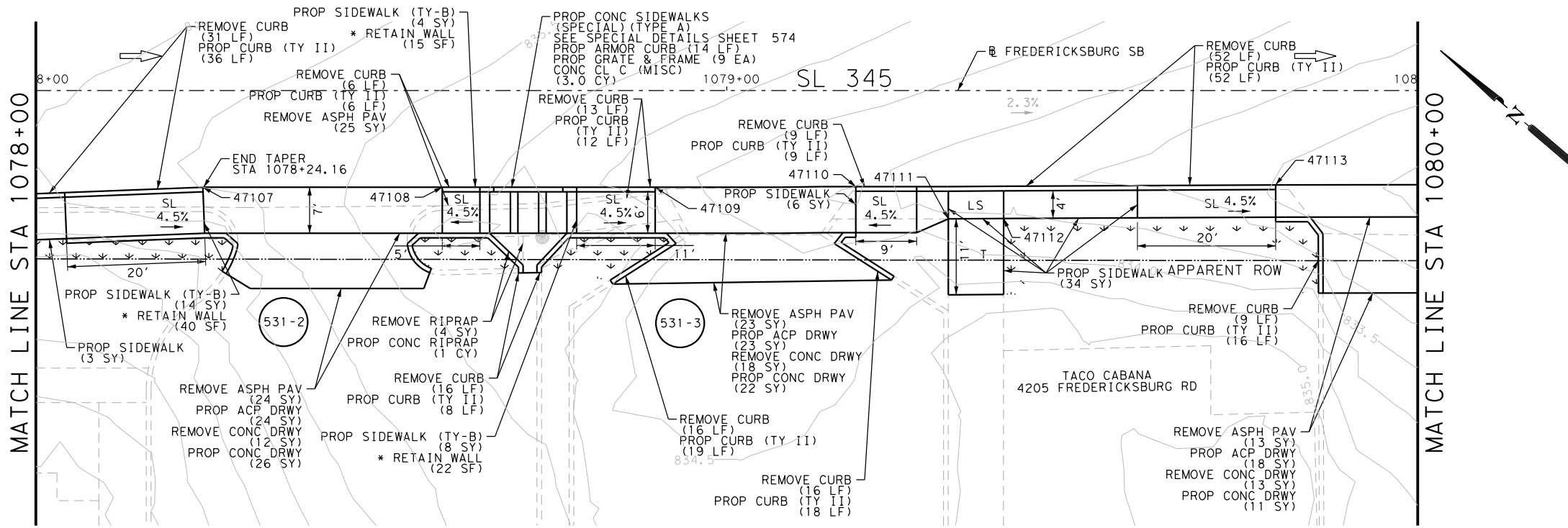
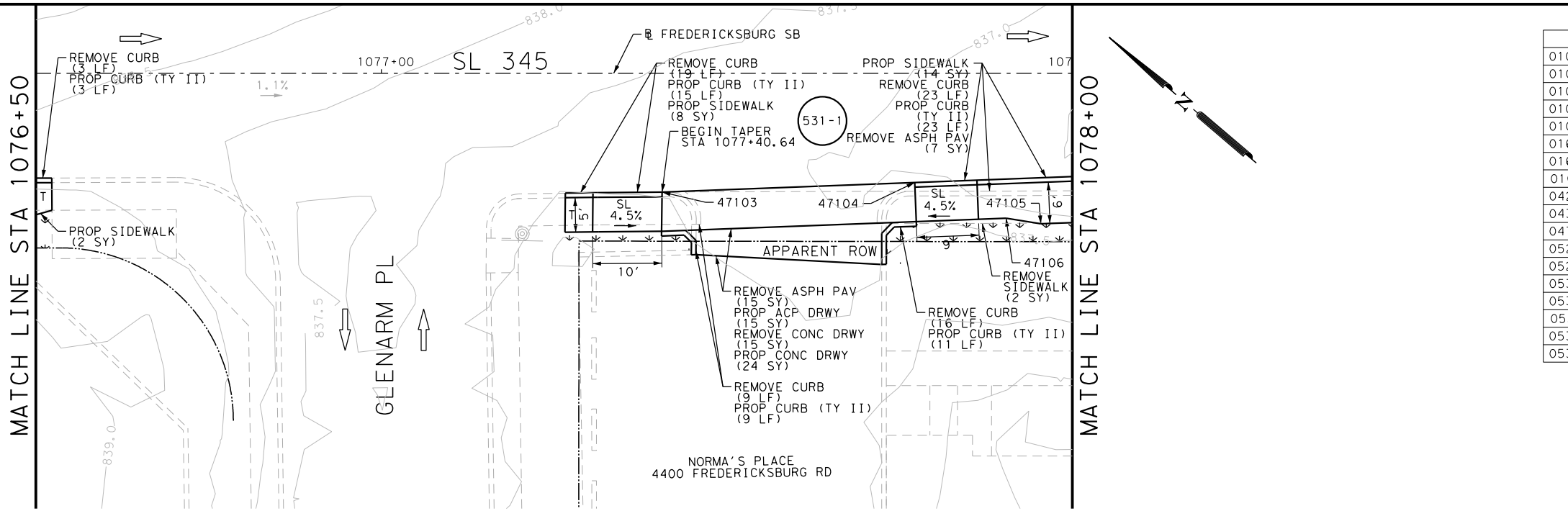
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1073+00 TO STA 1076+50

SHEET 17 OF 19

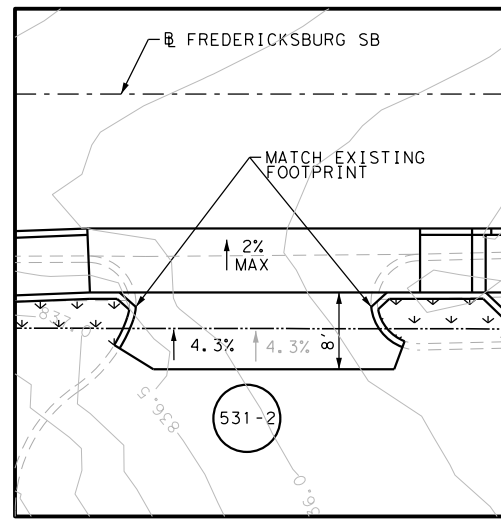
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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				530

Plotted on: 5/3/2019

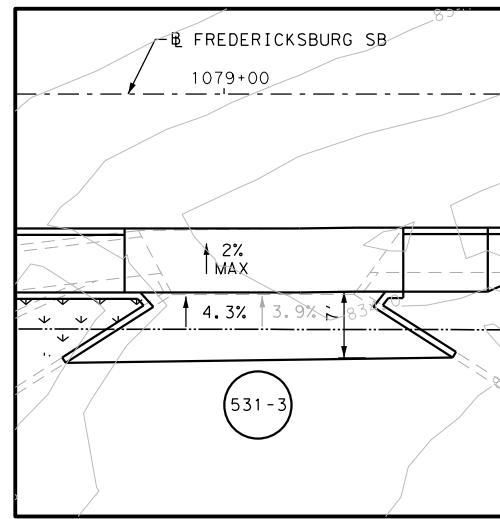
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DRWY PLAN STA 1077+59



DRWY PLAN STA 1078+44



DRWY PLAN STA 1079+04

POINT	NORTHING	EASTING	ELEV	DESC
47103	13727024.53	2112618.89	--	ME
47104	13726997.65	2112643.71	--	ME
47105	13726979.90	2112651.02	--	ME
47106	13726984.25	2112648.37	--	ME
47107	13726963.12	2112675.59	--	ME
47108	13726936.77	2112698.12	--	ME
47109	13726913.36	2112718.14	--	ME
47110	13726891.33	2112737.07	--	ME
47111	13726878.13	2112742.22	--	ME
47112	13726872.09	2112747.47	--	ME
47113	13726845.31	2112776.73	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	4
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	58
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	248
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	2
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	107
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0420-6074	CL C CONC (MISC)	CY	3.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	247
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	83
0530-6005	DRIVEWAYS (ACP)	SY	80
0531-6001	CONC SIDEWALKS (4")	SY	68
0531-6020	CURB RAMPS (TY 3)	SY	16
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	26

NOTES:  
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TPLS FIRM REGISTRATION #10028800

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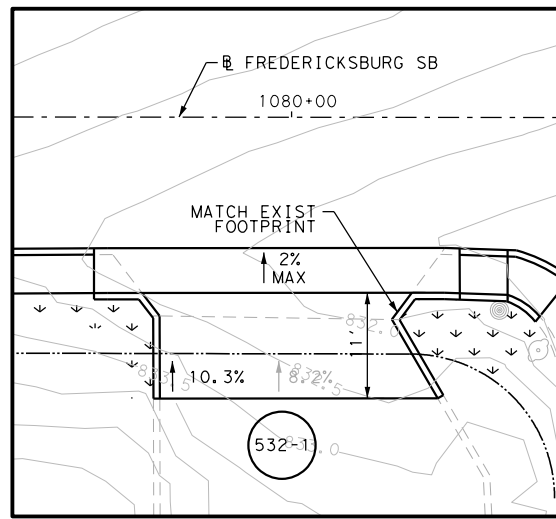
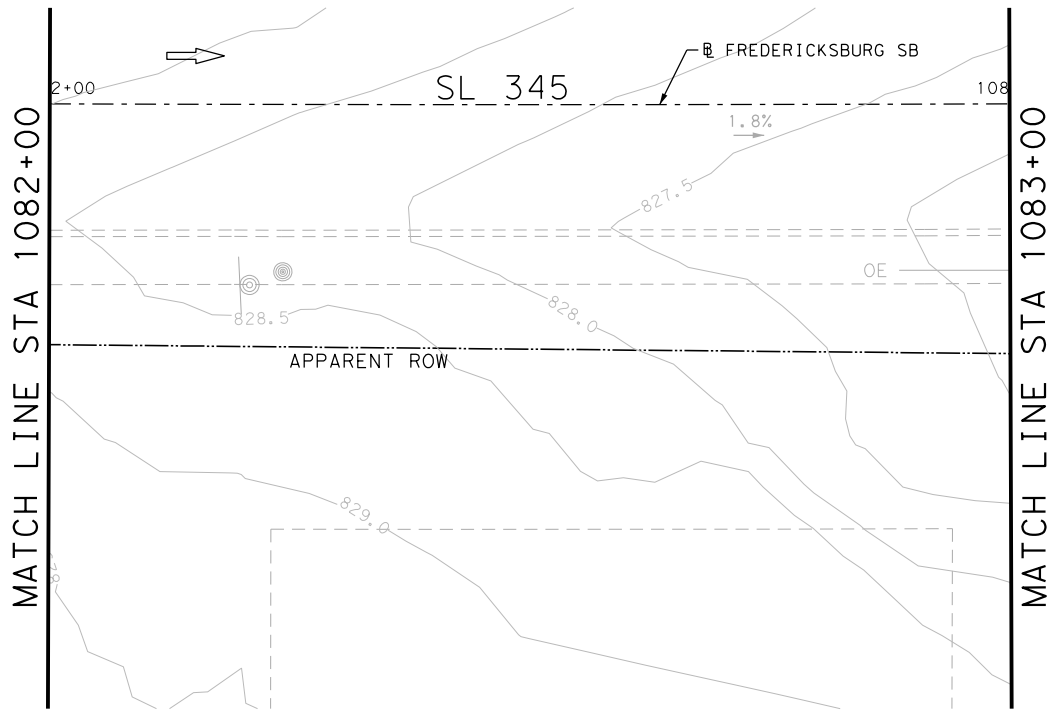
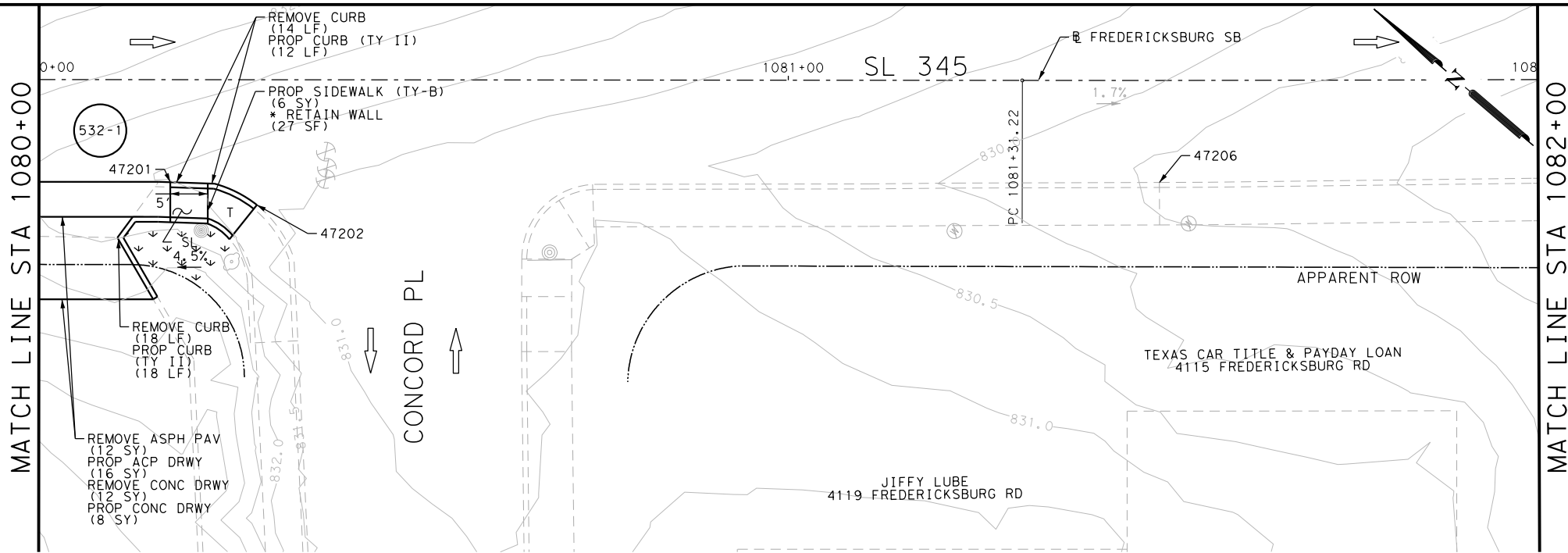
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1076+50 TO STA 1080+00

SHEET 18 OF 19

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	531

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_SB23.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	57
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	117
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	12
0529-6002	CONC CURB (TY II)	LF	64
0530-6004	DRIVEWAYS (CONC)	SY	57
0530-6005	DRIVEWAYS (ACP)	SY	16
0531-6001	CONC SIDEWALKS (4")	SY	20
0531-6020	CURB RAMPS (TY 3)	SY	14
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	6

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
47201	13726816.36	2112801.50	--	ME
47202	13726805.59	2112806.69	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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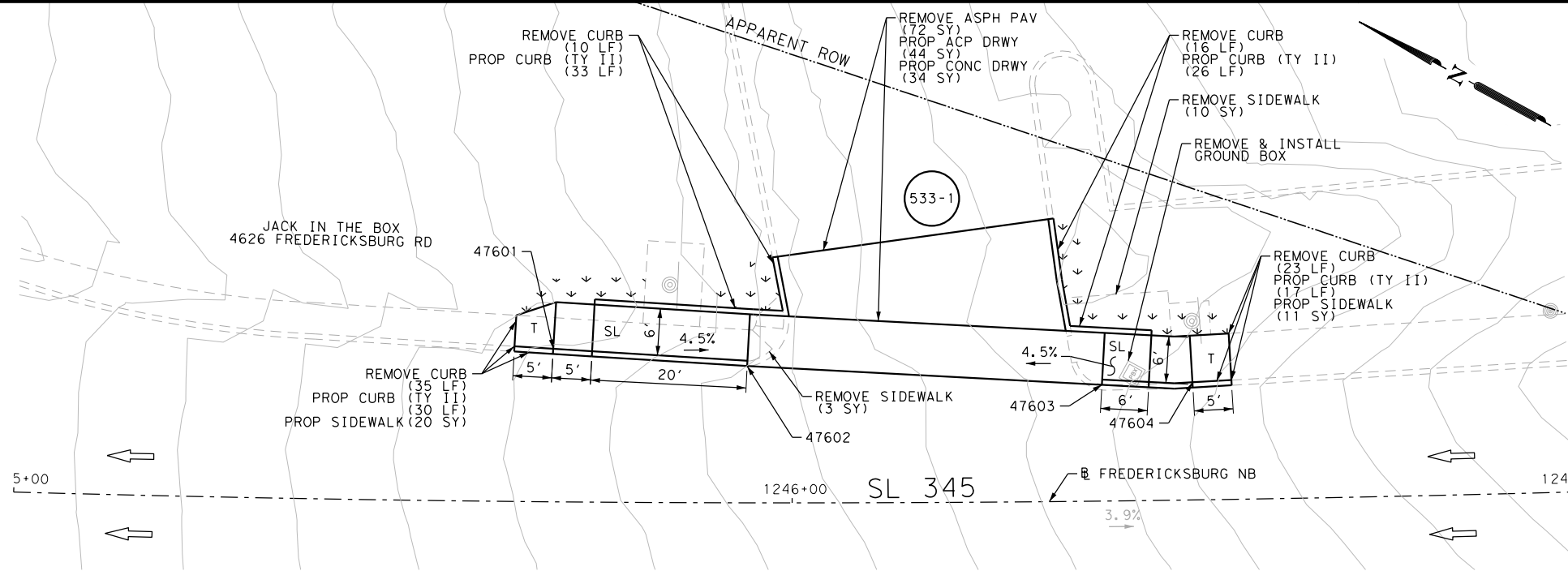
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1080+00 TO STA 1083+00

SHEET 19 OF 19

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				532

Plotted on: 5/3/2019

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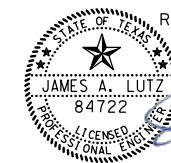


ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	84
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	13
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	72
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	24
0162-6002	BLOCK SODDING	SY	24
0168-6001	VEGETATIVE WATERING	MG	0.37
0529-6002	CONC CURB (TY II)	LF	106
0530-6004	DRIVEWAYS (CONC)	SY	34
0530-6005	DRIVEWAYS (ACP)	SY	44
0531-6001	CONC SIDEWALKS (4")	SY	31
0624-6009	GROUND BOX TY D (162922)	EA	1
0624-6028	REMOVE GROUND BOX	EA	1

NOTES:

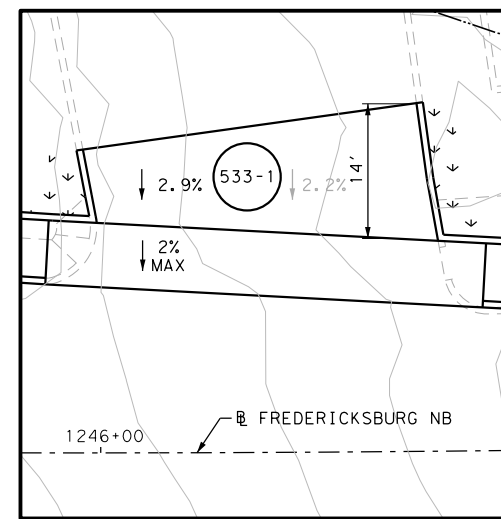
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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
47601	13729530.90	2110720.49	--	ME
47602	13729507.95	2110730.43	--	ME
47603	13729466.77	2110750.08	--	ME
47604	13729456.70	2110755.91	--	ME



REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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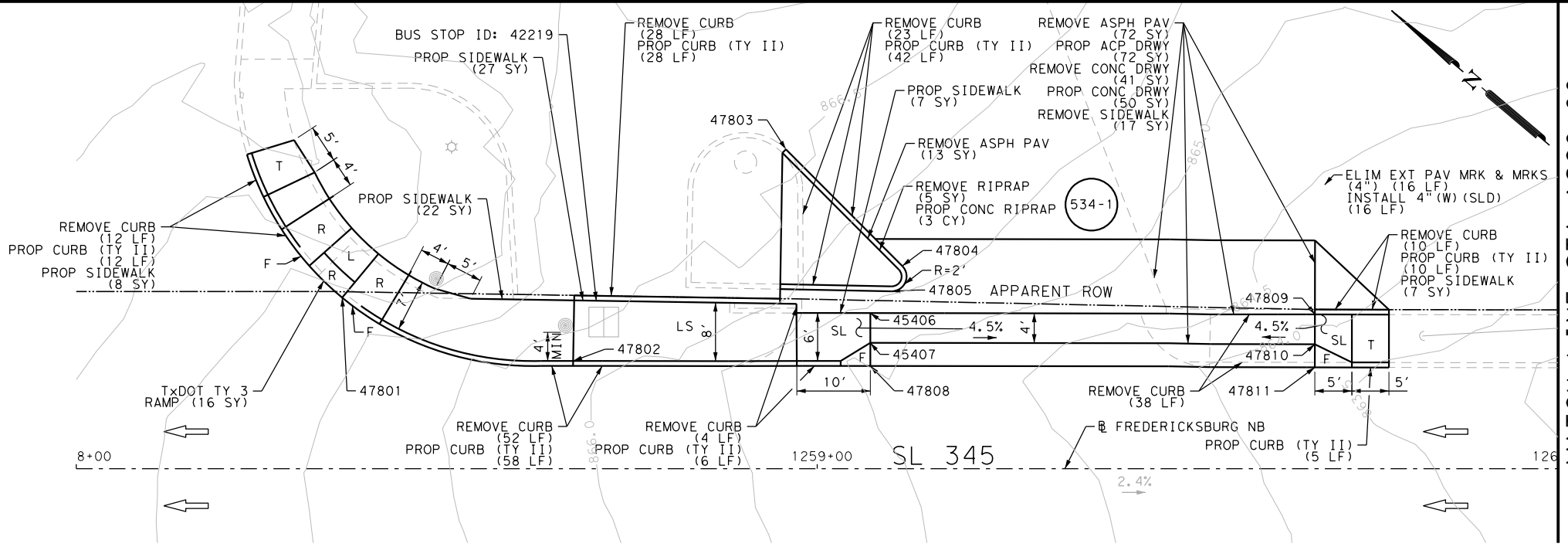
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1245+00 TO STA 1248+00

SHEET 1 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	533

Plotted on: 5/3/2019

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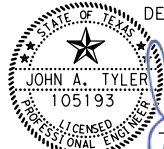
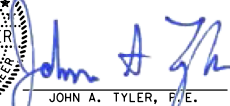


MATCH LINE STA 1260+00

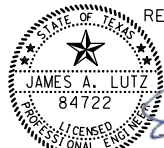
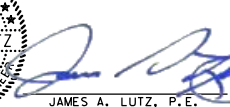
ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	5
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	41
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	167
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	17
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	85
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0529-6002	CONC CURB (TY II)	LF	161
0530-6004	DRIVEWAYS (CONC)	SY	50
0530-6005	DRIVEWAYS (ACP)	SY	72
0531-6001	CONC SIDEWALKS (4")	SY	49
0531-6020	CURB RAMPS (TY 3)	SY	16
0666-6224	PAVEMENT SEALER 4"	LF	16
0666-6303	RE PM W/RET REQ TY I (W)4" (SLD) (100MIL)	LF	16
0677-6001	ELIM EXT PAV MRK & MRKS (4")	LF	16
0678-6001	PAV SURF PREP FOR MRK (4")	LF	16

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DESIGN



  
 JOHN A. TYLER, P.E.      5/3/2019 DATE


REVIEW AND APPROVAL




  
 JAMES A. LUTZ, P.E.      5/3/2019 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

POINT	NORTHING	EASTING	ELEV	DESC
47801	13728522.42	2111474.19	--	ME
47802	13728493.15	2111487.90	--	ME
47803	13728489.77	2111528.22	--	ME
47804	13728467.63	2111526.44	--	ME
47805	13728466.52	2111522.90	--	ME
47806	13728466.79	2111518.81	865.57	PROP
47807	13728464.20	2111515.76	865.50	PROP
47808	13728462.18	2111513.37	--	ME
47809	13728420.98	2111557.55	864.37	PROP
47810	13728418.39	2111554.50	864.30	PROP
47811	13728416.36	2111552.12	--	ME

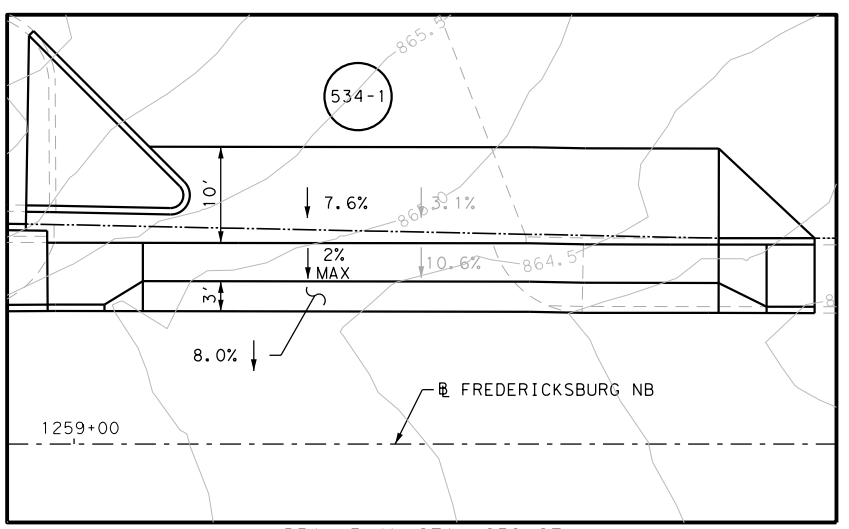
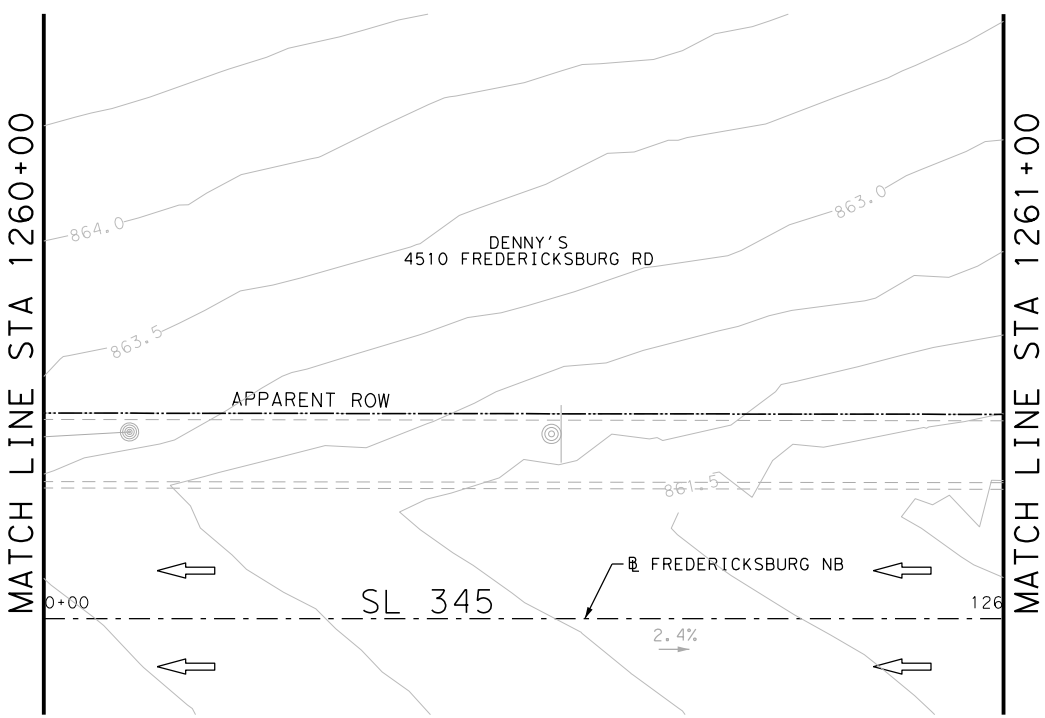

  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800


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SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1258+00 TO STA 1261+00

SHEET 2 OF 8

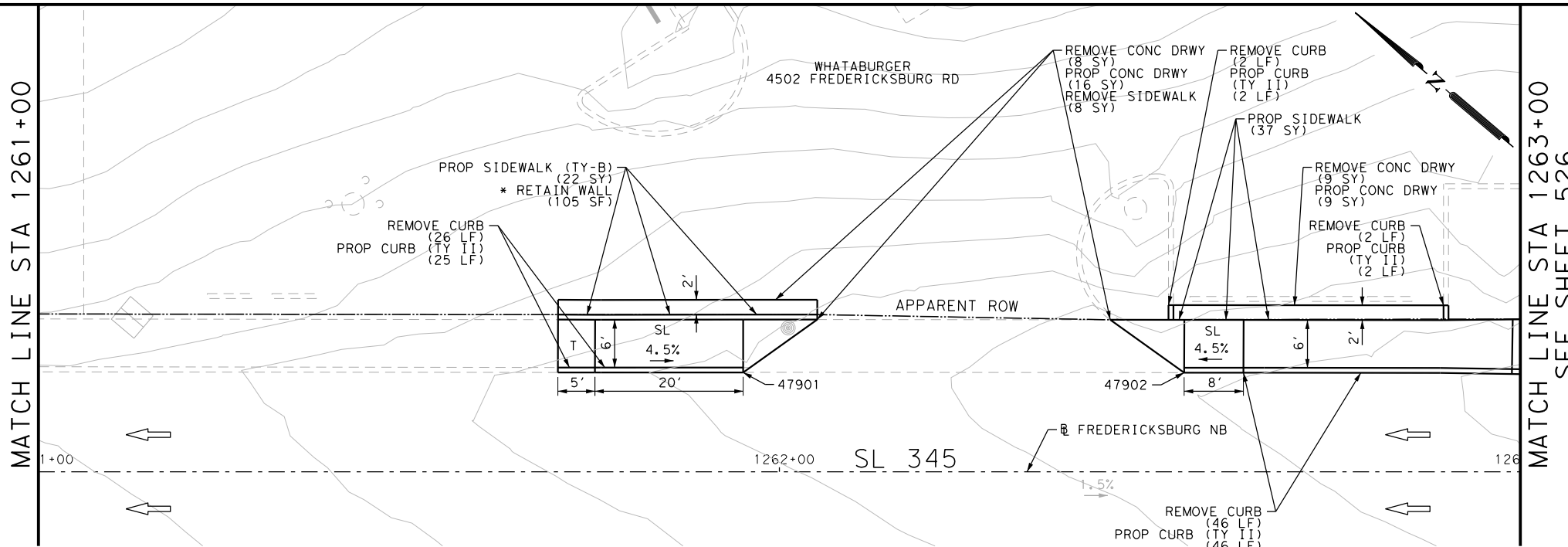
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	534



DRWY PLAN STA 1259+27

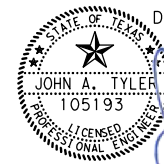
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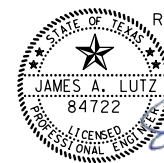
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ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	17
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	76
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0529-6002	CONC CURB (TY II)	LF	75
0530-6004	DRIVEWAYS (CONC)	SY	25
0531-6001	CONC SIDEWALKS (4")	SY	37
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	22

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
47901	13728242.62	2111699.68	--	ME
47902	13728197.27	2111738.23	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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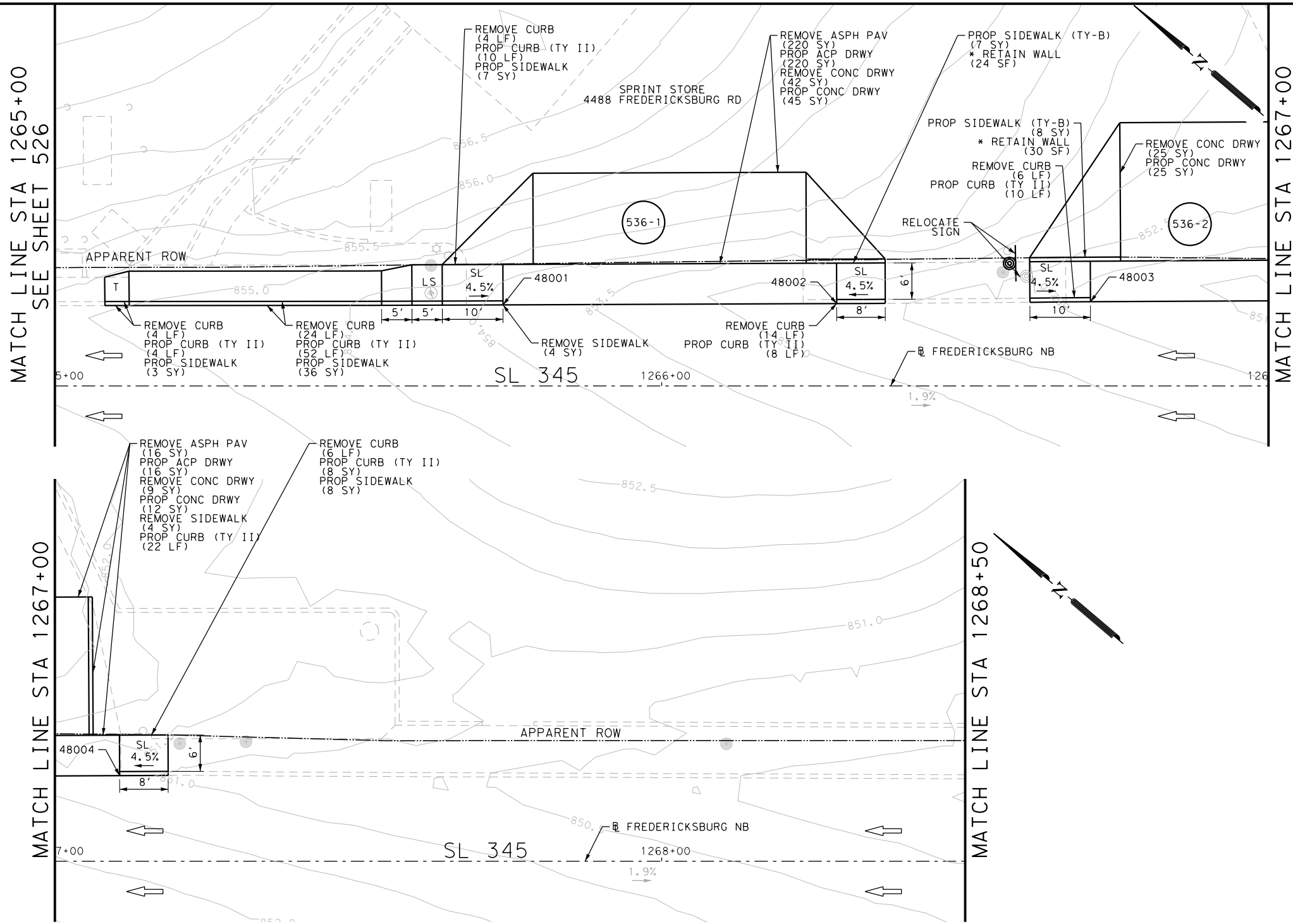
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1261+00 TO STA 1263+00

SHEET 3 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	535

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_NB07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	76
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	58
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	236
0529-6002	CONC CURB (TY II)	LF	114
0530-6004	DRIVEWAYS (CONC)	SY	82
0530-6005	DRIVEWAYS (ACP)	SY	236
0531-6001	CONC SIDEWALKS (4")	SY	15
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	15
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

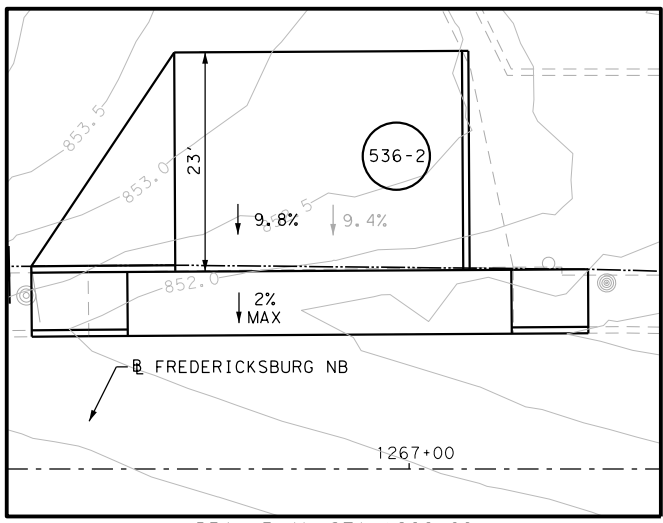
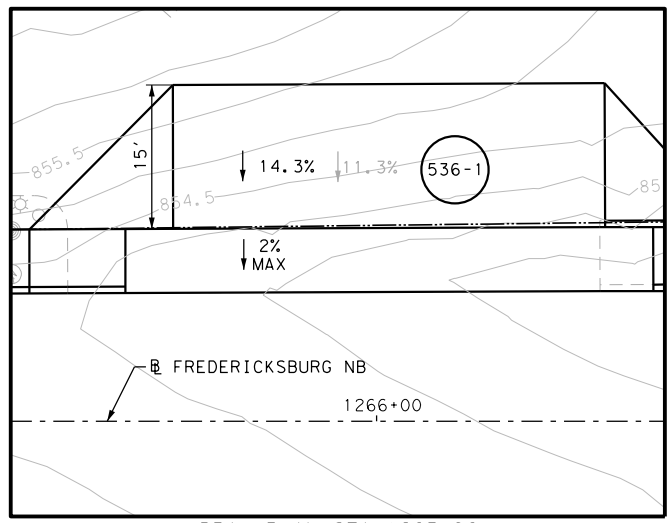
John A. Tyler, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

James A. Lutz, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
48001	13727954.20	2111945.14	--	ME
48002	13727912.47	2111980.96	--	ME
48003	13727880.81	2112008.31	--	ME
48004	13727850.50	2112034.42	--	ME



**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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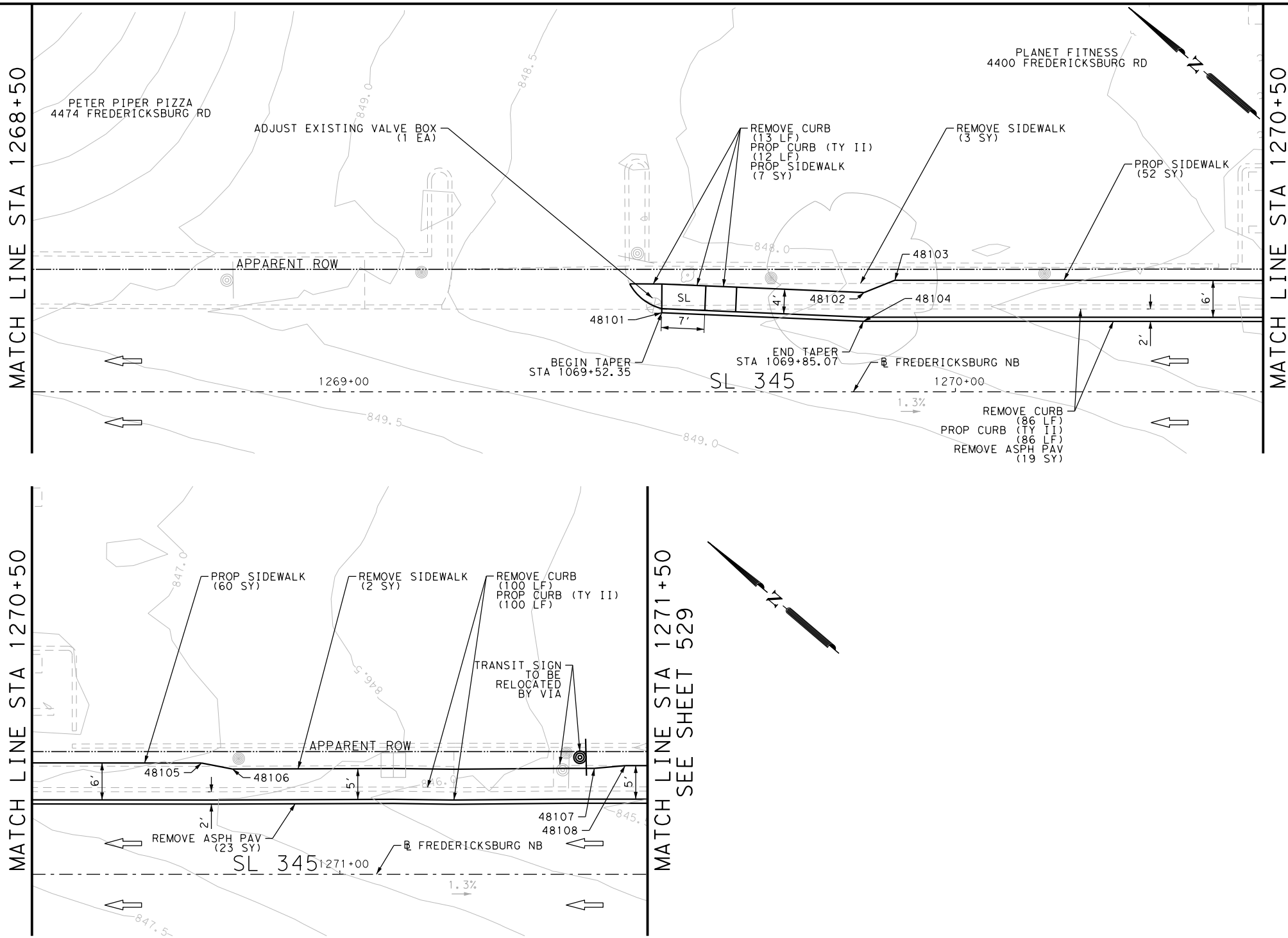
SL 345  
FREDERICKSBURG RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1265+00 TO STA 1268+50

SHEET 4 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				536

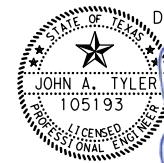
Plotted on: 5/3/2019

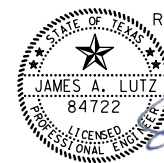
Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_NB08.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	199
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	42
0529-6002	CONC CURB (TY II)	LF	198
0531-6001	CONC SIDEWALKS (4")	SY	119
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
48101	13727665.67	2112190.07	--	ME
48102	13727642.78	2112213.88	--	ME
48103	13727640.27	2112218.65	--	ME
48104	13727639.83	2112210.26	--	ME
48105	13727573.70	2112275.24	--	ME
48106	13727569.25	2112277.73	--	ME
48107	13727524.55	2112315.94	--	ME
48108	13727521.04	2112319.53	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1268+50 TO STA 1271+50

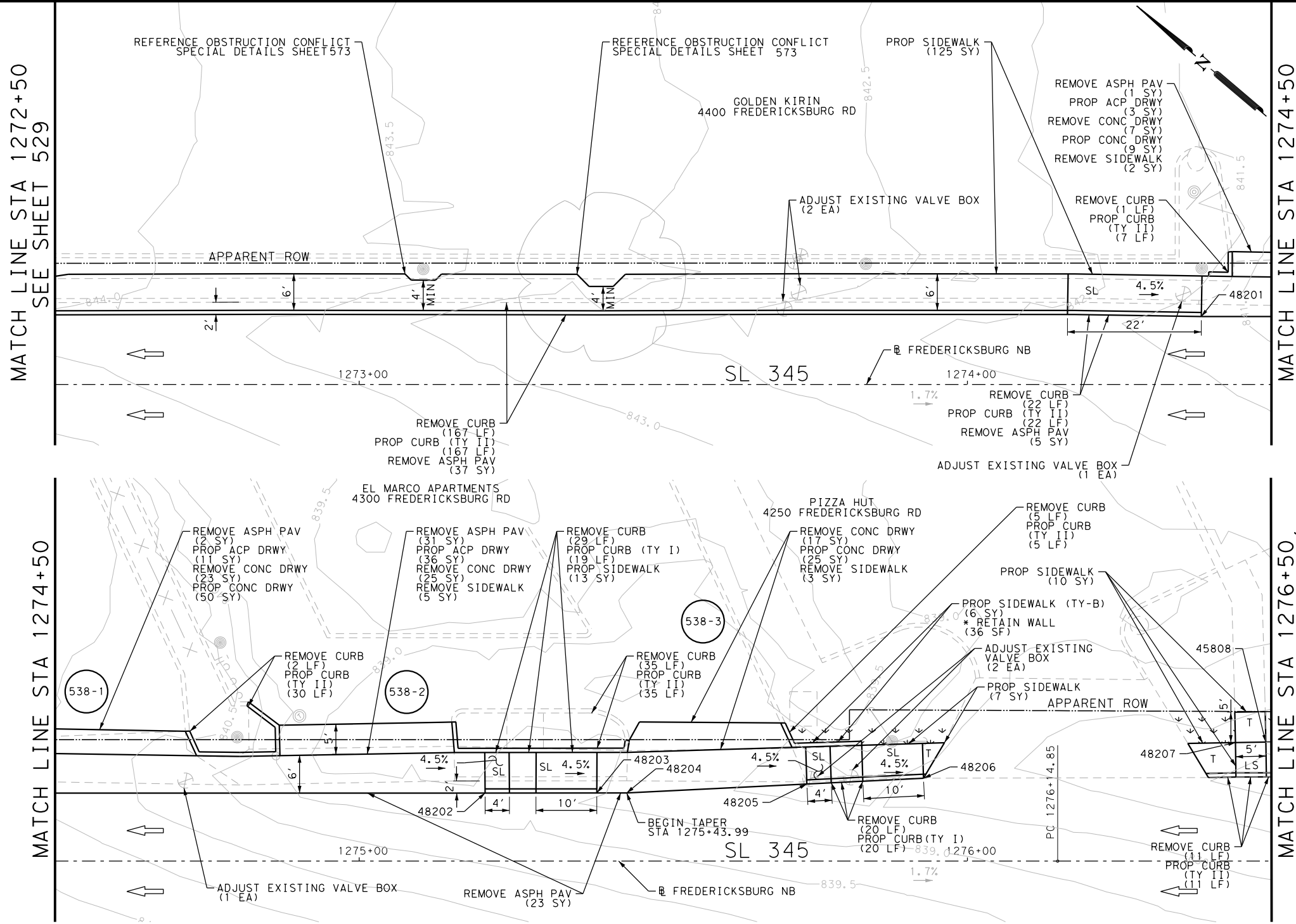
SHEET 5 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	537



Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_NB09.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	72
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	292
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	10
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	99
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	15
0162-6002	BLOCK SODDING	SY	15
0168-6001	VEGETATIVE WATERING	MG	0.23
0529-6001	CONC CURB (TY I)	LF	39
0529-6002	CONC CURB (TY II)	LF	277
0530-6004	DRIVEWAYS (CONC)	SY	84
0530-6005	DRIVEWAYS (ACP)	SY	50
0531-6001	CONC SIDEWALKS (4")	SY	155
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	6
7196-6001	ADJUST EXISTING VALVE BOX	EA	6

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DESIGN

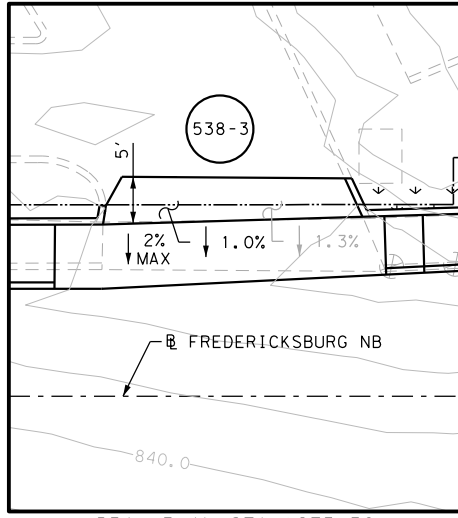
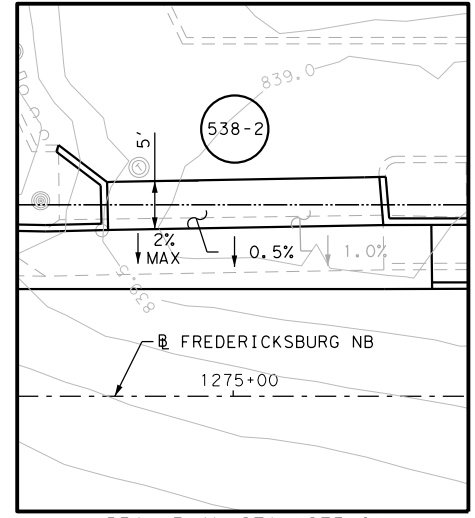
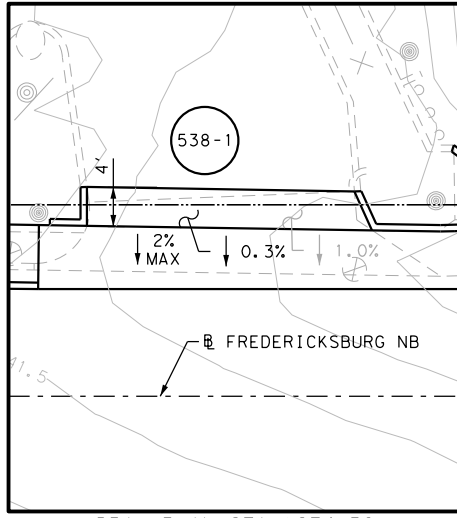
JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
48201	13727294.41	2112503.94	--	ME
48202	13727231.79	2112557.28	--	ME
48203	13727217.83	2112569.19	--	ME
48204	13727214.09	2112572.38	--	ME
48205	13727192.48	2112592.70	--	ME
48206	13727178.49	2112605.86	--	ME
48207	13727143.25	2112643.58	--	ME
48208	13727139.49	2112646.88	--	ME



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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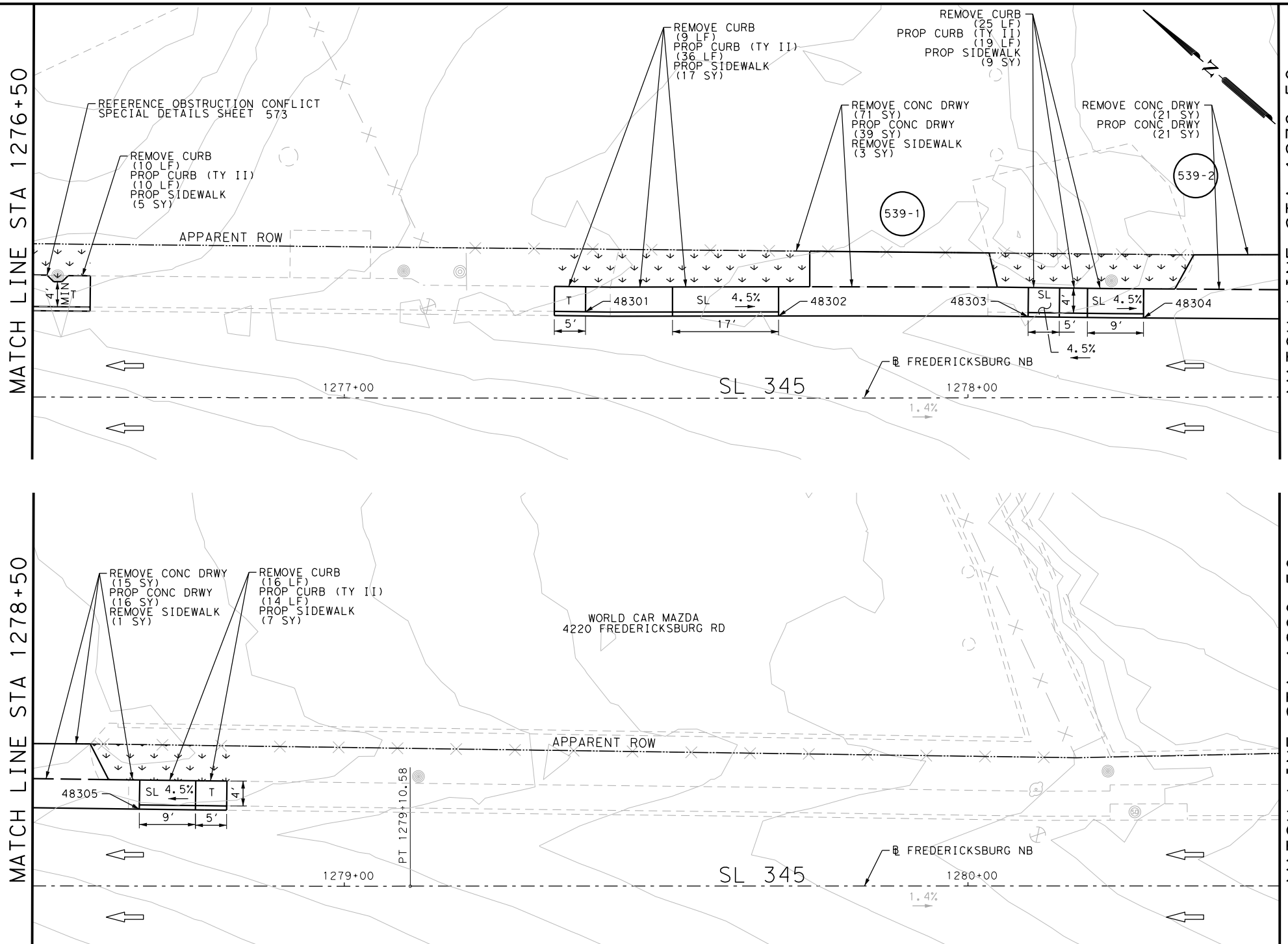
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1272+50 TO STA 1276+50

SHEET 6 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	538

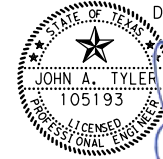
Plotted on: 5/3/2019

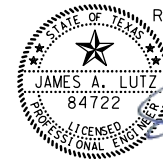
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ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	107
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	60
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	66
0162-6002	BLOCK SODDING	SY	66
0168-6001	VEGETATIVE WATERING	MG	1.03
0529-6002	CONC CURB (TY II)	LF	79
0530-6004	DRIVEWAYS (CONC)	SY	76
0531-6001	CONC SIDEWALKS (4")	SY	38

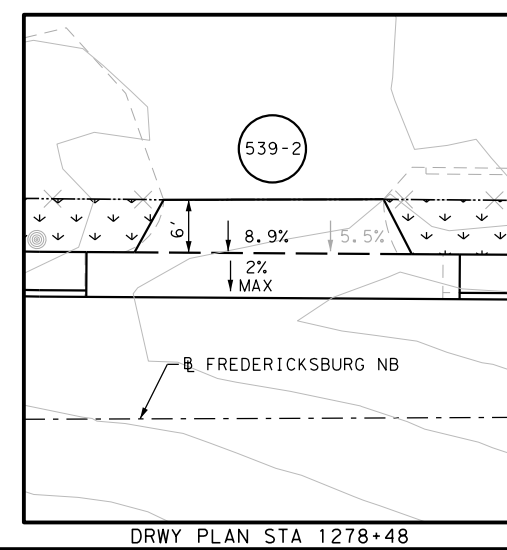
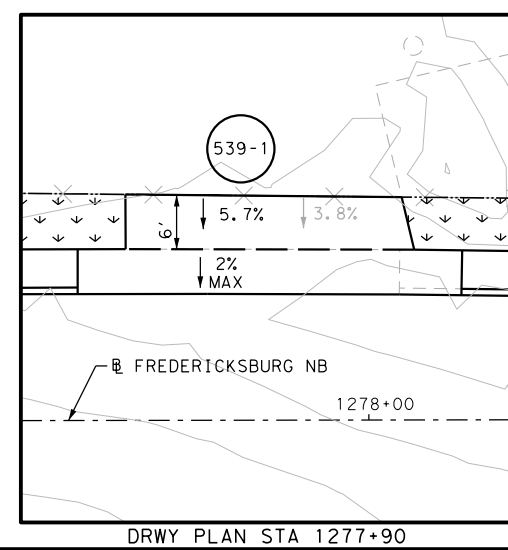
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
48301	13727067.81	2112700.78	--	ME
48302	13727043.89	2112720.47	--	ME
48303	13727013.50	2112746.48	--	ME
48304	13726999.34	2112758.39	--	ME
48305	13726969.68	2112783.59	--	ME



**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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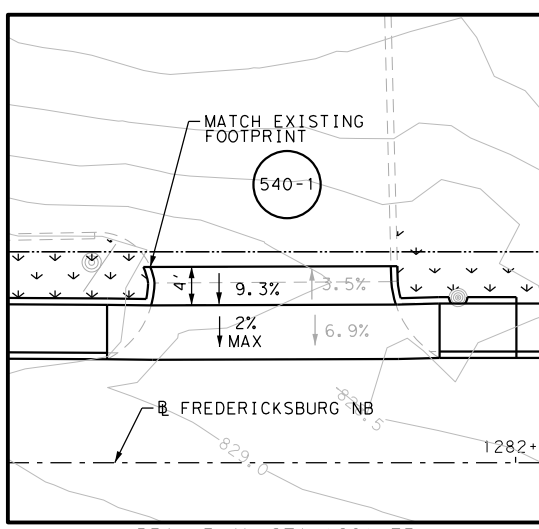
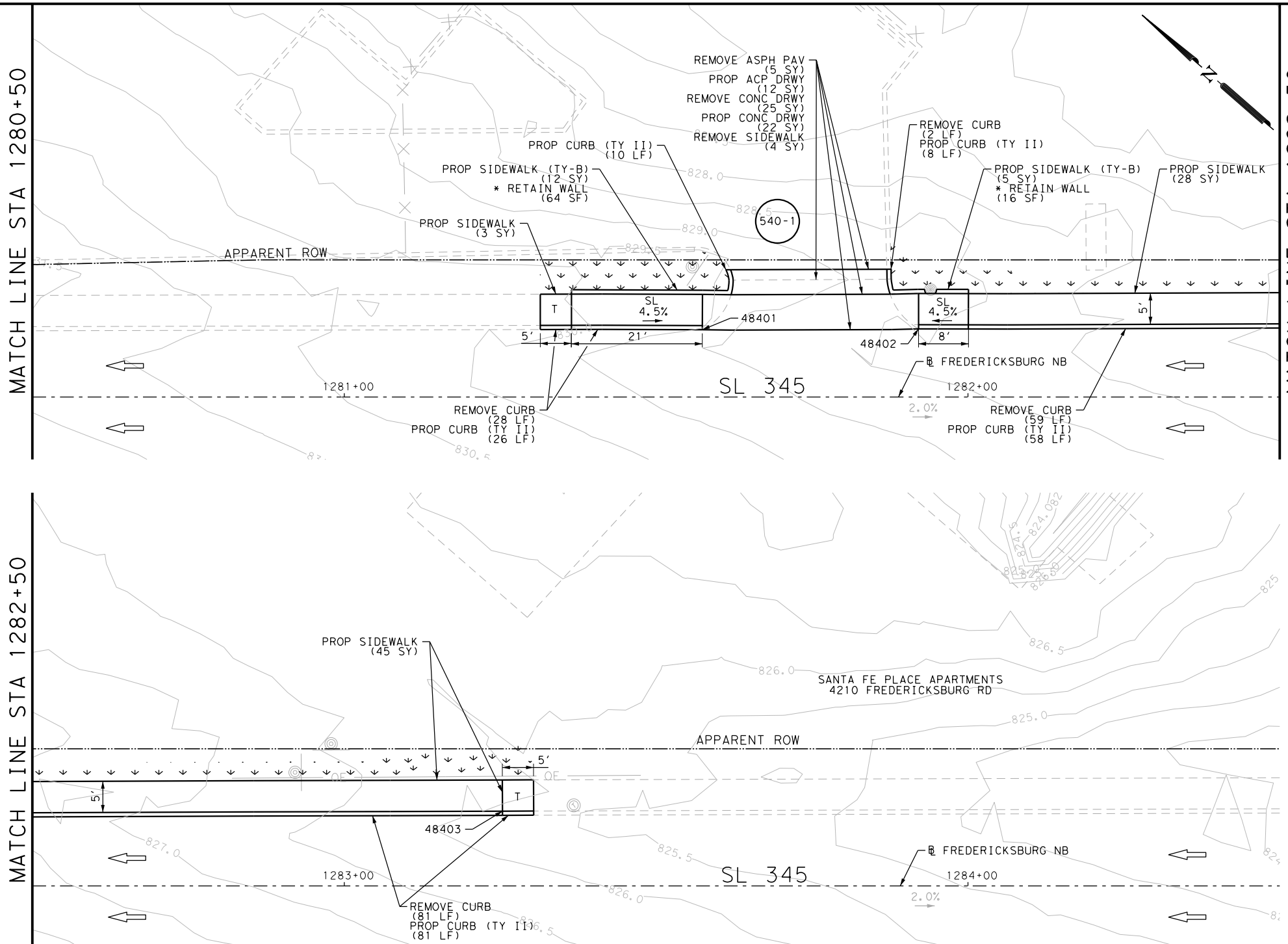
SL 345  
 FREDERICKSBURG RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1276+50 TO STA 1280+50

SHEET 7 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				539

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Fredericksburg\1113508\_FredericksburgRd\_NB11.dgn



POINT	NORTHING	EASTING	ELEV	DESC
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48402	13726723.82	2112996.03	--	ME
48403	13726624.04	2113084.42	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	25
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	175
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	16
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	74
0162-6002	BLOCK SODDING	SY	74
0168-6001	VEGETATIVE WATERING	MG	1.15
0529-6002	CONC CURB (TY II)	LF	194
0530-6004	DRIVEWAYS (CONC)	SY	22
0530-6005	DRIVEWAYS (ACP)	SY	22
0531-6001	CONC SIDEWALKS (4")	SY	76
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17

- NOTES:
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DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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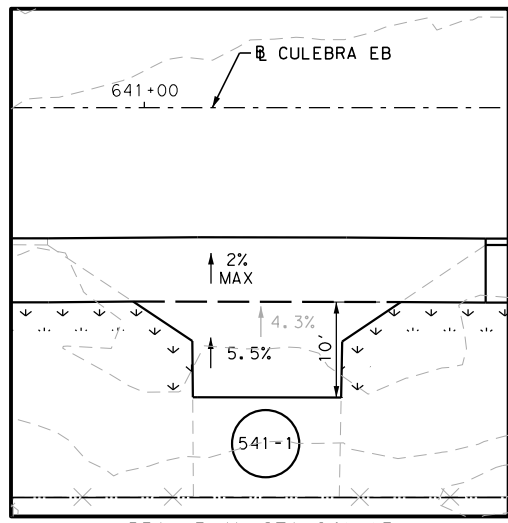
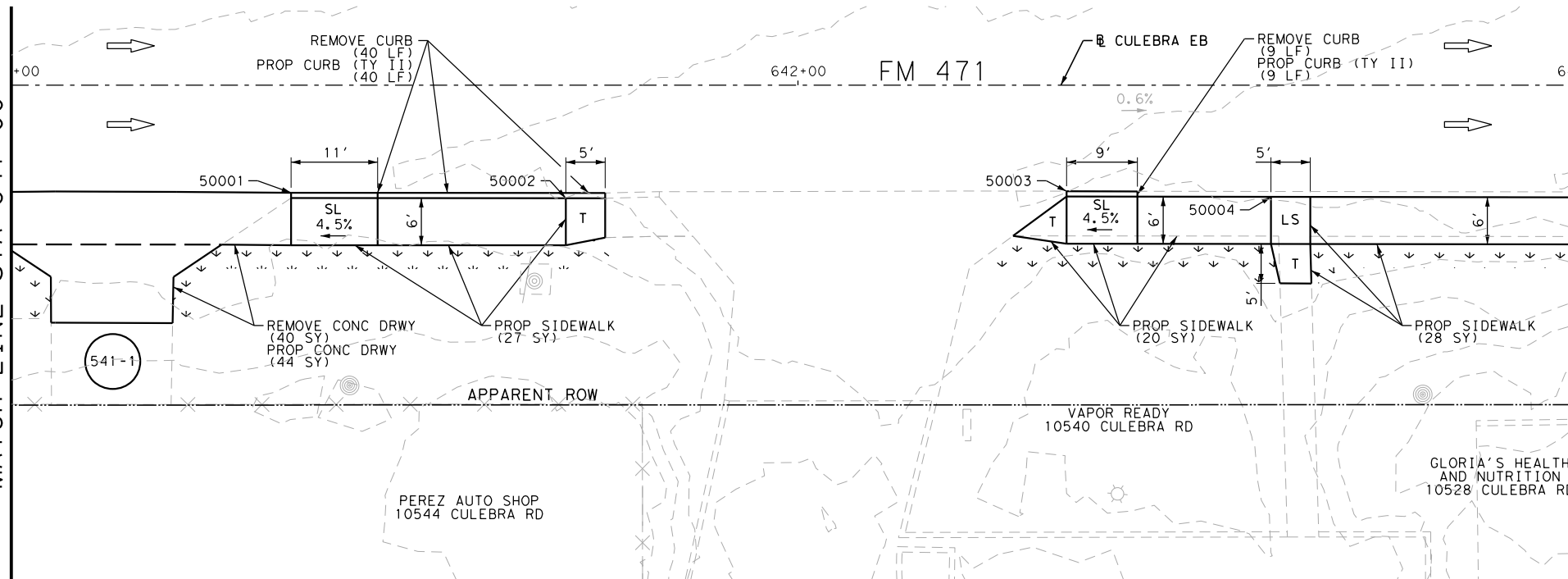
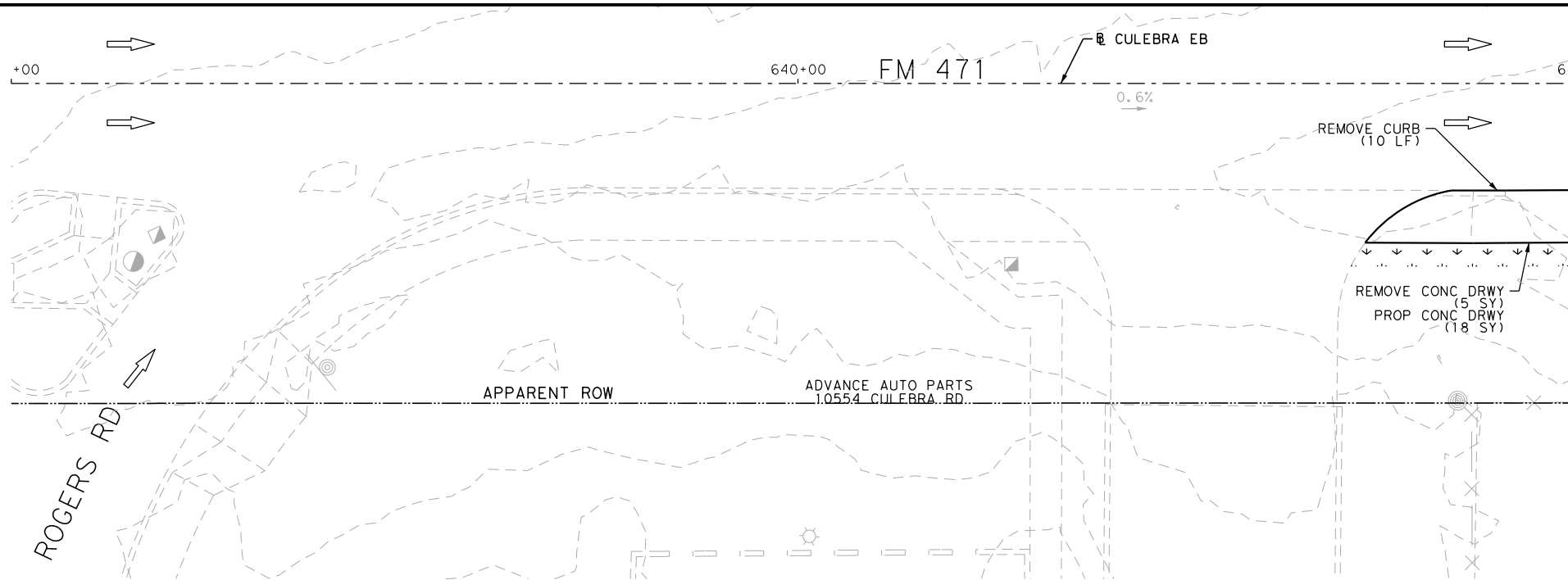
SL 345  
FREDERICKSBURG RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1280+50 TO STA 1284+50

SHEET 8 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	540

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_EB01.dgn



DRWY PLAN STA 641+13

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	45
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	59
0110-6001	EXCAVATION (ROADWAY)	CY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	65
0162-6002	BLOCK SODDING	SY	65
0168-6001	VEGETATIVE WATERING	MG	1.01
0529-6002	CONC CURB (TY II)	LF	49
0530-6004	DRIVEWAYS (CONC)	SY	62
0531-6001	CONC SIDEWALKS (4")	SY	74

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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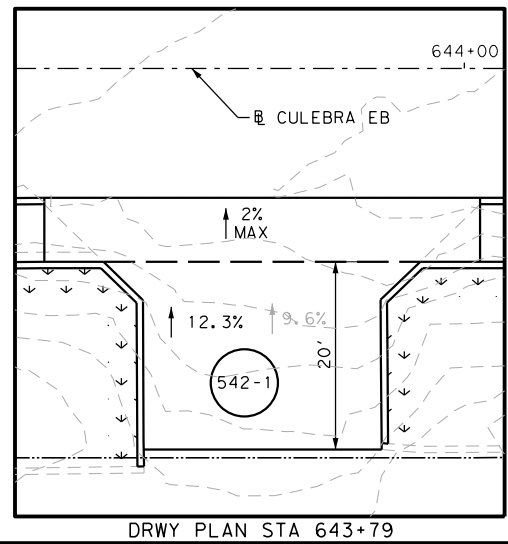
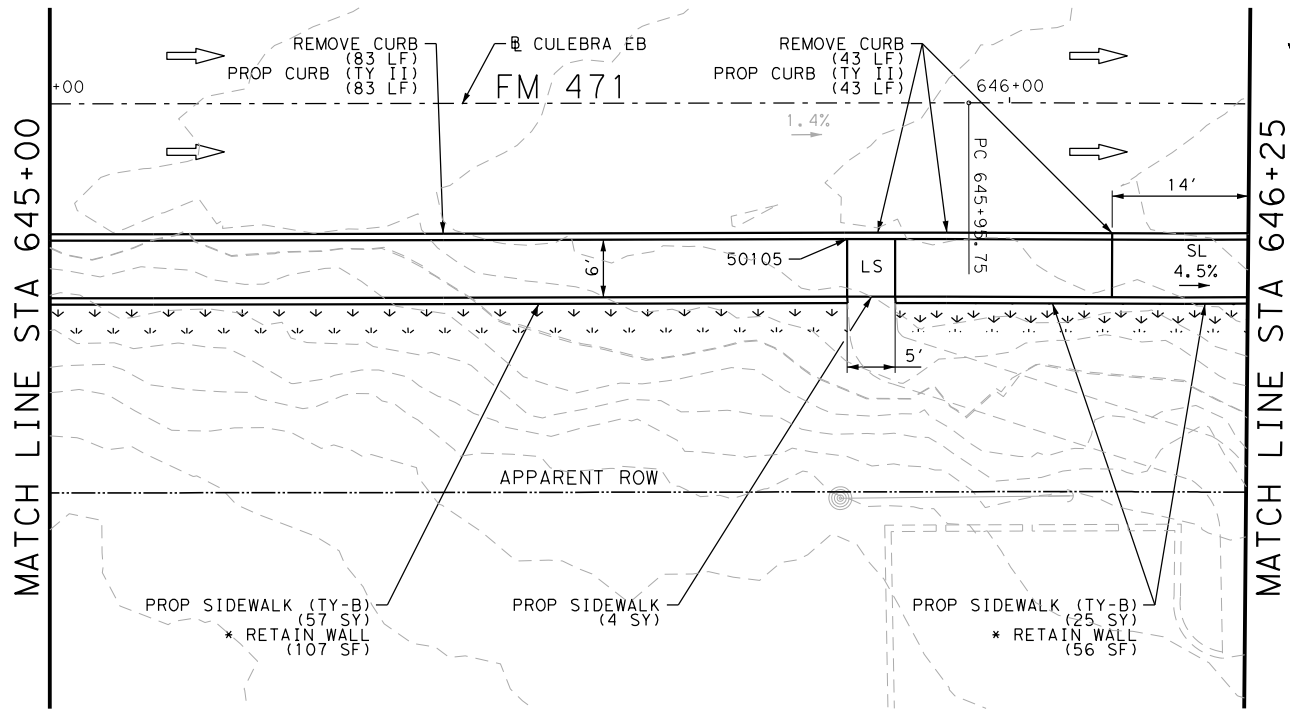
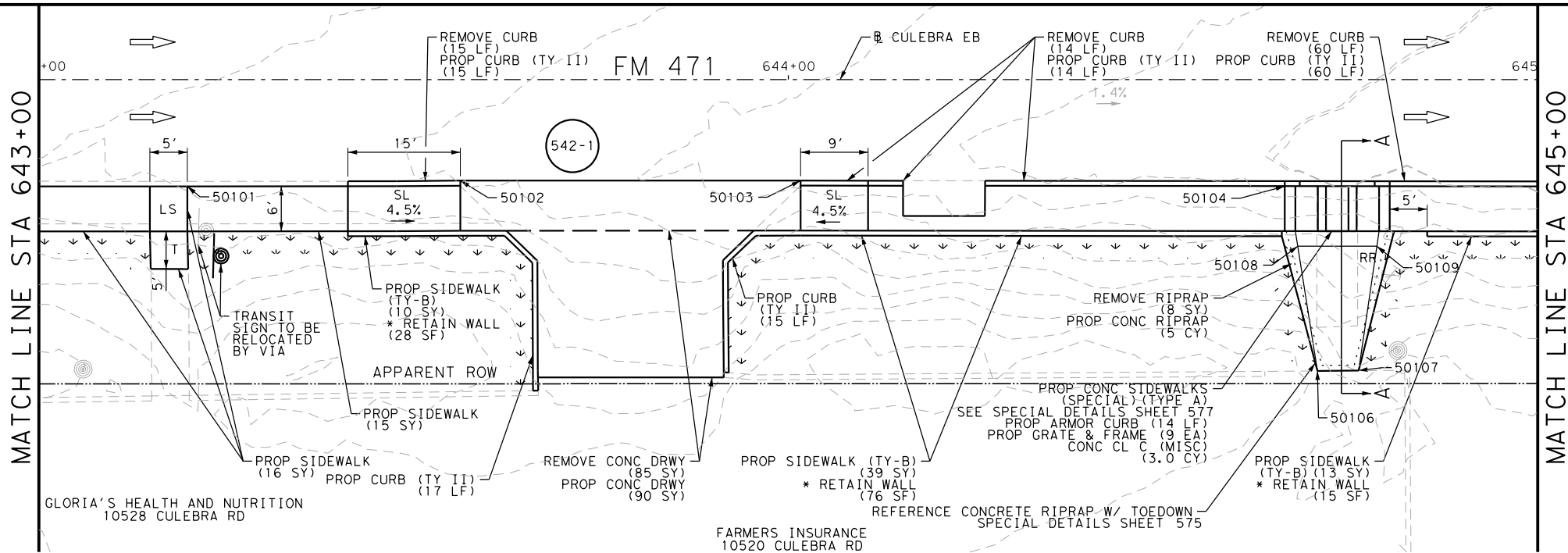
FM 471  
 CULEBRA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 639+00 TO STA 643+00

SHEET 1 OF 7

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	541

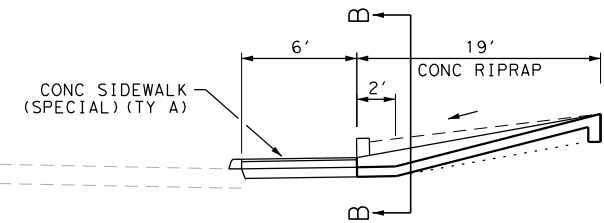
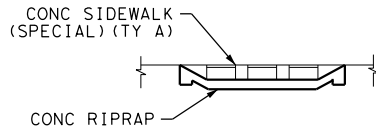
Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_EB02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	8
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	85
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	215
0110-6001	EXCAVATION (ROADWAY)	CY	47
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	23
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	130
0162-6002	BLOCK SODDING	SY	130
0168-6001	VEGETATIVE WATERING	MG	2.03
0420-6074	CL C CONC (MISC)	CY	3.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	5
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	247
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	90
0531-6001	CONC SIDEWALKS (4")	SY	34
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	143

- NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN  
 JOHN A. TYLER, P.E.  
 105193  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 84722  
 5/3/2019  
 DATE

POINT	NORTHING	EASTING	ELEV	DESC
50101	13728680.36	2064820.02	--	ME
50102	13728665.68	2064853.38	--	ME
50103	13728646.53	2064894.55	--	ME
50104	13728618.60	2064952.81	--	ME
50105	13728569.37	2065058.72	--	ME
50106	13728594.43	2064946.36	--	ME
50107	13728592.14	2064951.36	--	ME
50108	13728610.62	2064951.00	853.74	PROP
50109	13728606.16	2064960.57	853.64	PROP

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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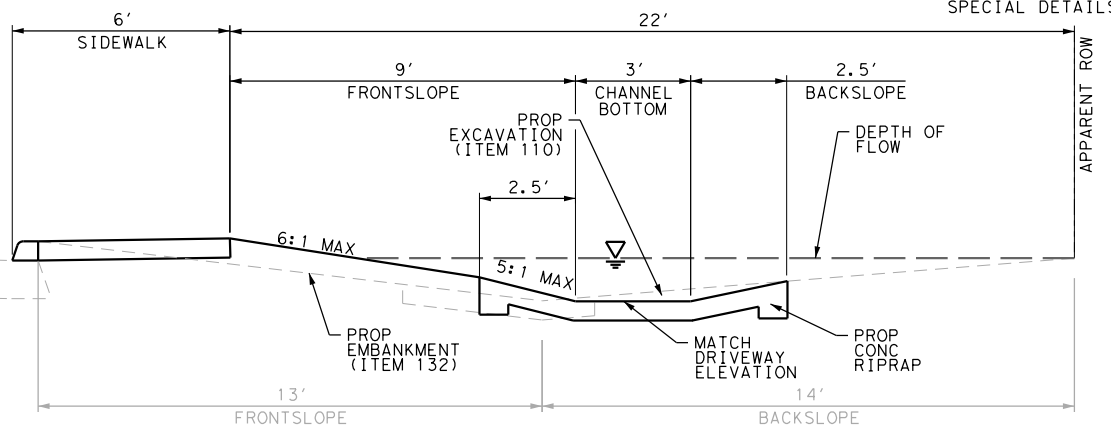
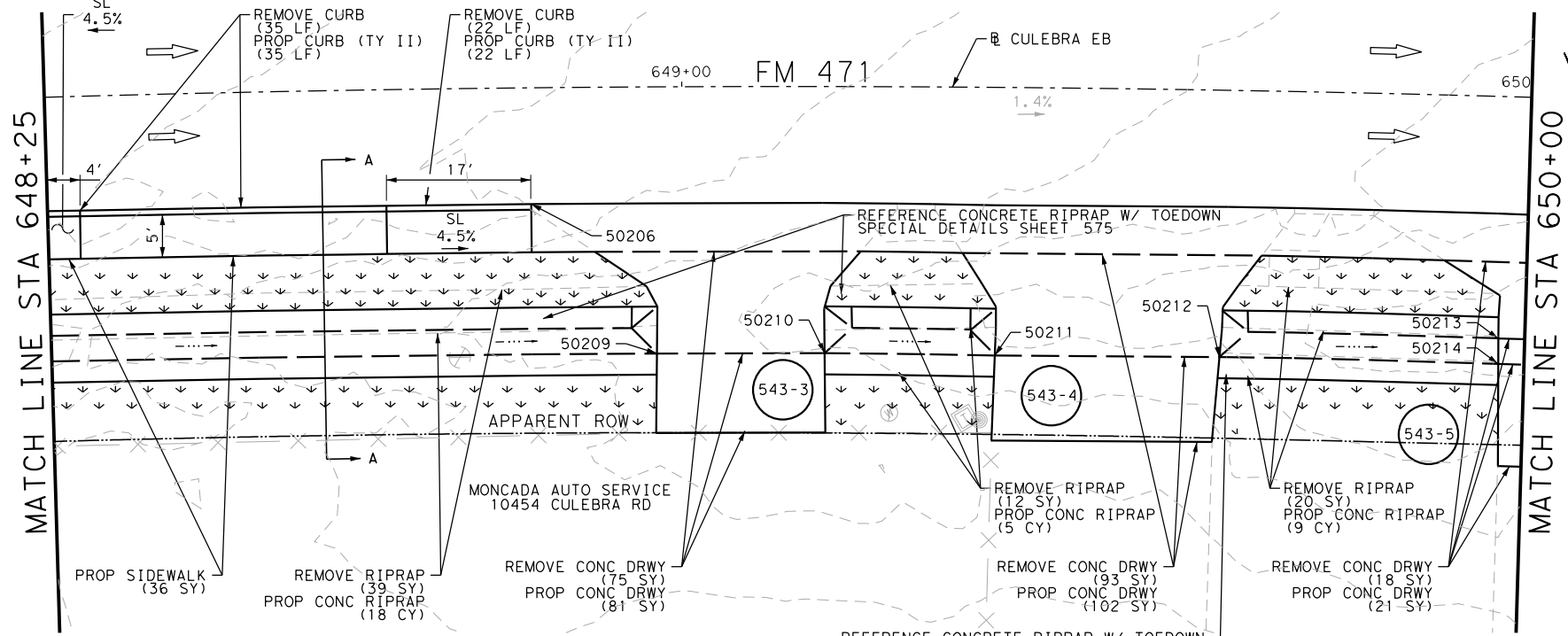
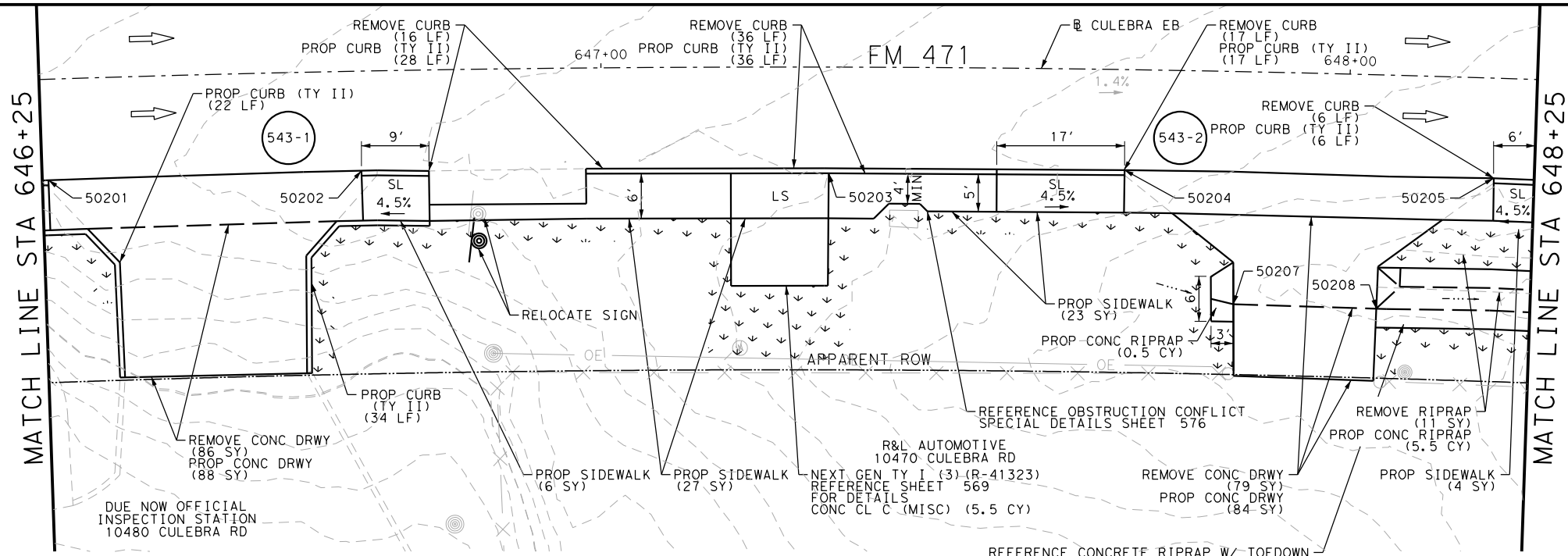
FM 471  
 CULEBRA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 643+00 TO STA 646+25

SHEET 2 OF 7

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	542

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\113508\_Culebra\_EB03.dgn



SECTION A-A  
N. T. S.

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	82
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	351
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	132
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	3
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	248
0162-6002	BLOCK SODDING	SY	248
0168-6001	VEGETATIVE WATERING	MG	3.87
0420-6074	CL C CONC (MISC)	CY	5.5
0432-6003	RIPRAP (CONC) (6 IN)	CY	38
0529-6002	CONC CURB (TY II)	LF	200
0530-6004	DRIVEWAYS (CONC)	SY	376
0531-6001	CONC SIDEWALKS (4")	SY	98

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

POINT	NORTHING	EASTING	ELEV	DESC
50201	13728551.88	2065097.64	--	ME
50202	13728533.79	2065135.29	--	ME
50203	13728504.76	2065190.46	--	ME
50204	13728486.96	2065225.71	--	ME
50205	13728463.32	2065268.95	--	ME
50206	13728432.04	2065322.83	--	ME
50207	13728464.39	2065230.36	847.48	PROP
50208	13728455.08	2065247.01	847.30	PROP
50209	13728409.36	2065326.44	846.08	PROP
50210	13728399.25	2065343.36	845.86	PROP
50211	13728388.69	2065360.38	845.58	PROP
50212	13728374.92	2065382.93	845.42	PROP
50213	13728359.91	2065412.18	844.86	PROP
50214	13728357.34	2065410.63	844.86	PROP

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #1002800



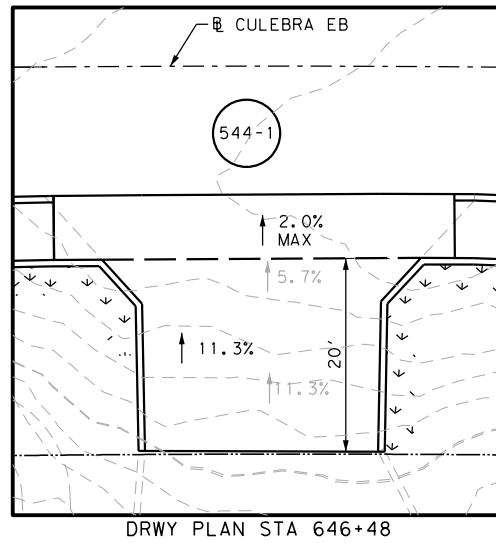
FM 471  
CULEBRA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 646+25 TO STA 650+00

SHEET 3 OF 7

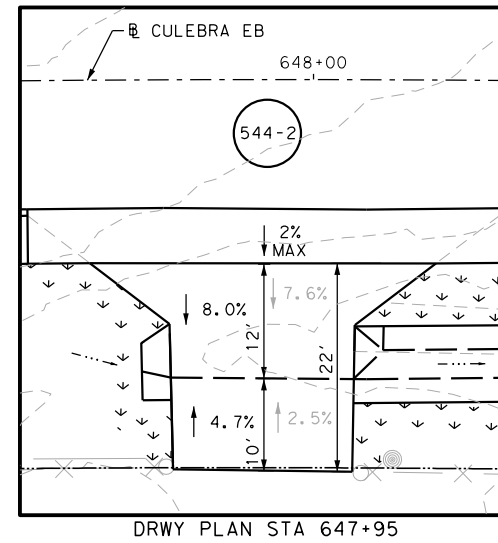
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	543

Plotted on: 5/3/2019

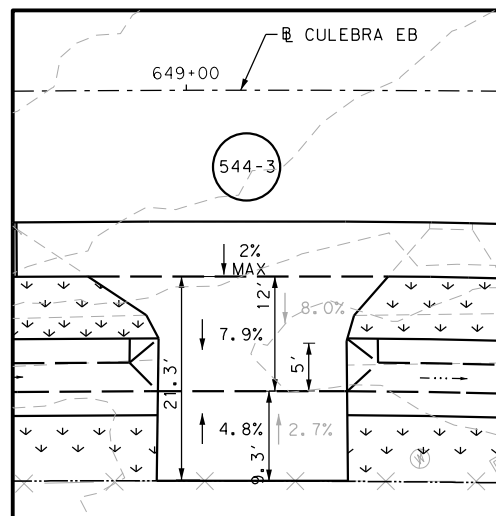
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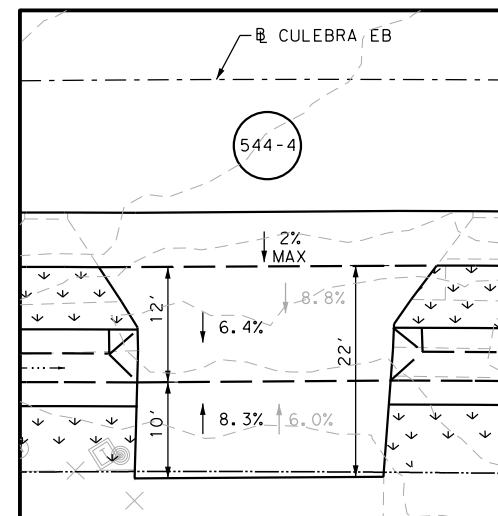
DRWY PLAN STA 646+48



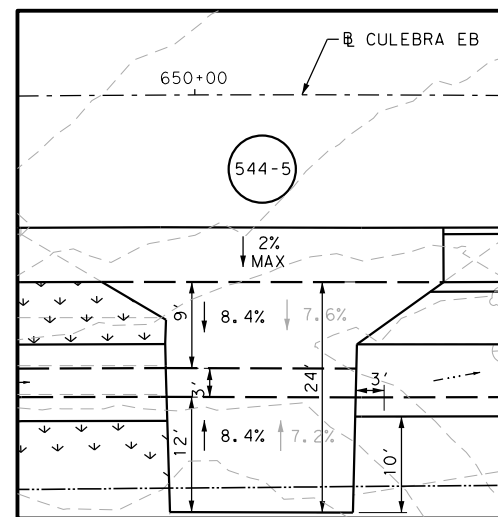
DRWY PLAN STA 647+95



DRWY PLAN STA 649+06

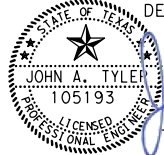


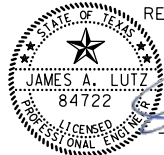
DRWY PLAN STA 649+51



DRWY PLAN STA 650+07

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E. 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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FM 471  
 CULEBRA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 646+25 TO STA 650+00

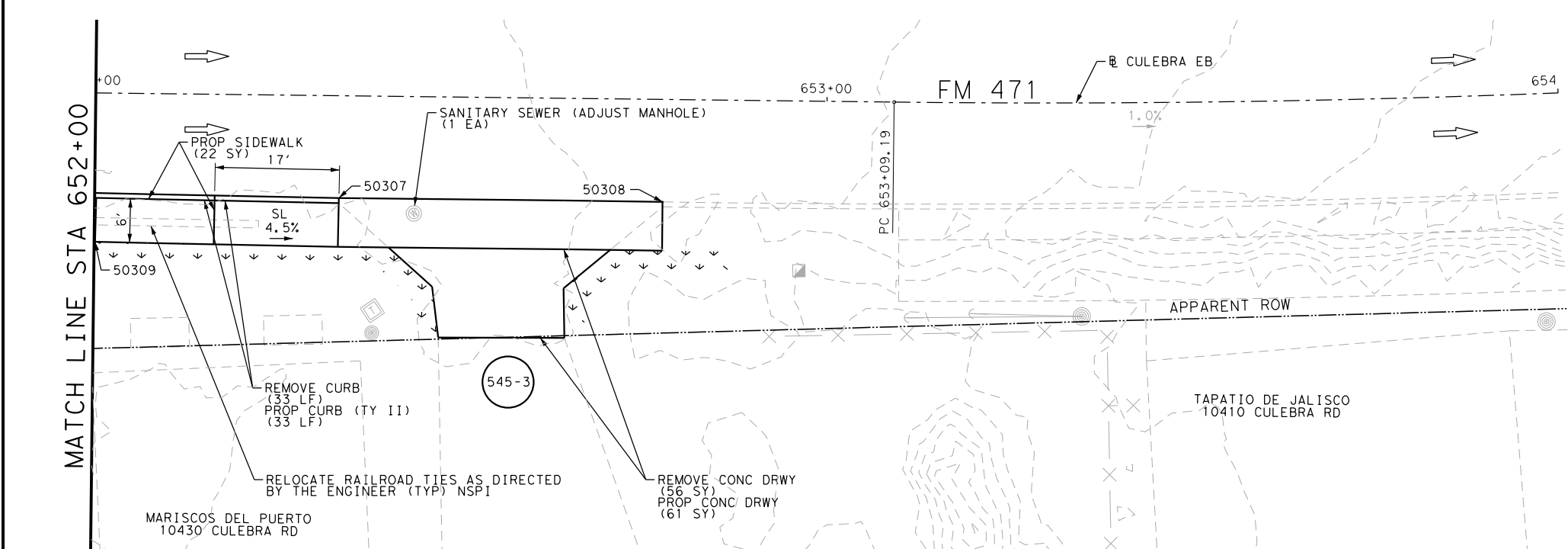
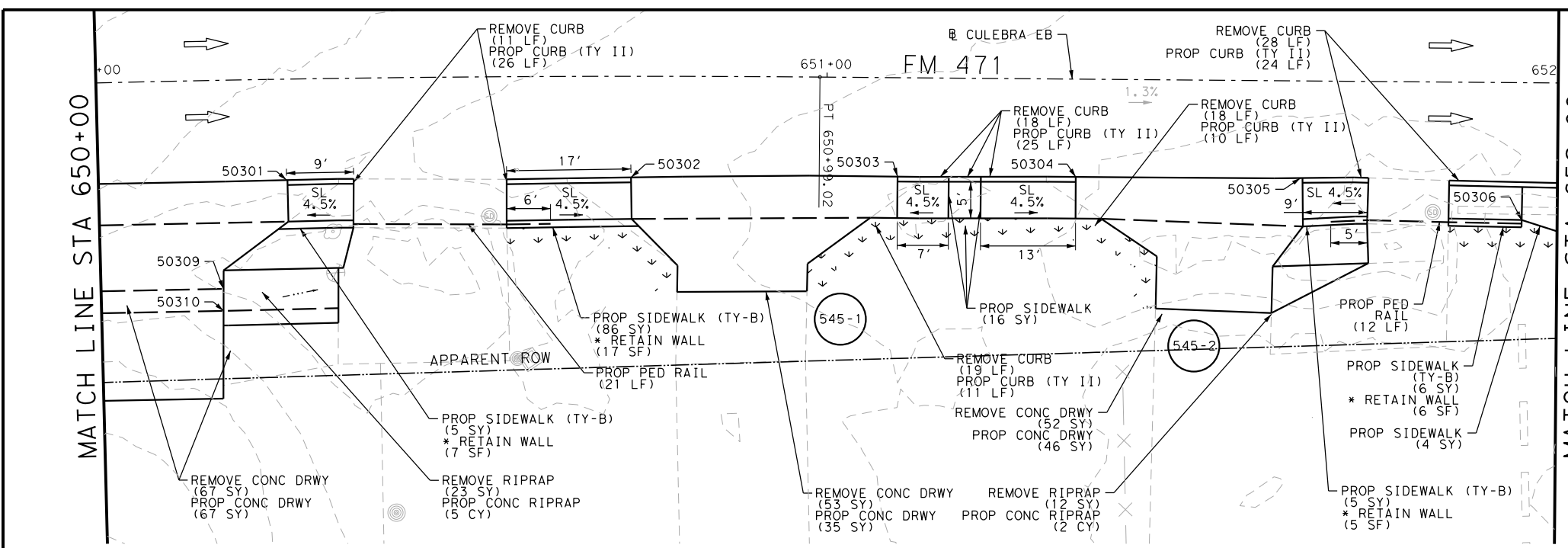
SHEET 4 OF 7

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	544

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_EB04.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	35
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	227
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	136
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	75
0162-6002	BLOCK SODDING	SY	75
0168-6001	VEGETATIVE WATERING	MG	1.17
0432-6003	RIPRAP (CONC) (6 IN)	CY	7
0450-6048	RAIL (HANDRAIL) (TY B)	LF	33
0479-6001	ADJUSTING MANHOLES	EA	1
0529-6002	CONC CURB (TY II)	LF	138
0530-6004	DRIVEWAYS (CONC)	SY	209
0531-6001	CONC SIDEWALKS (4")	SY	48
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	26



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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE

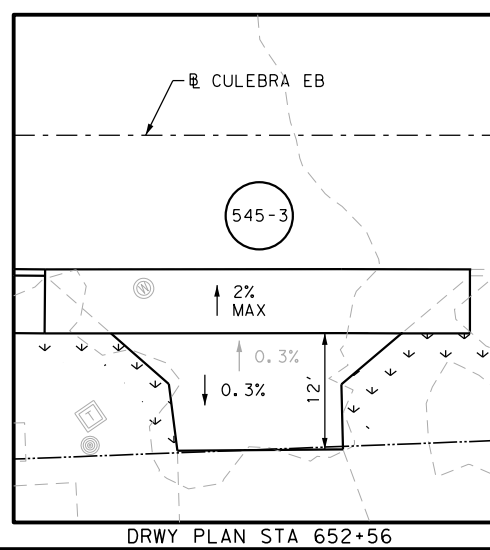
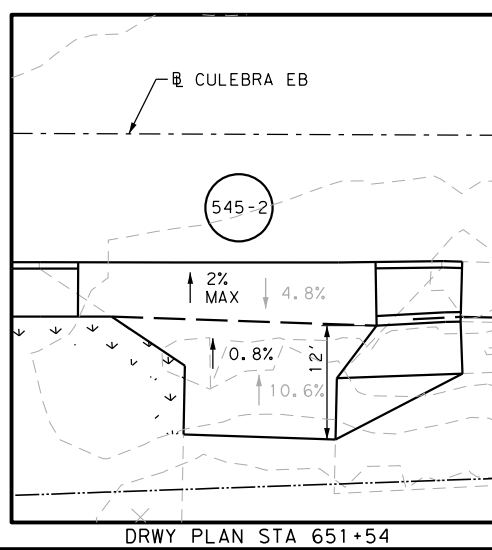
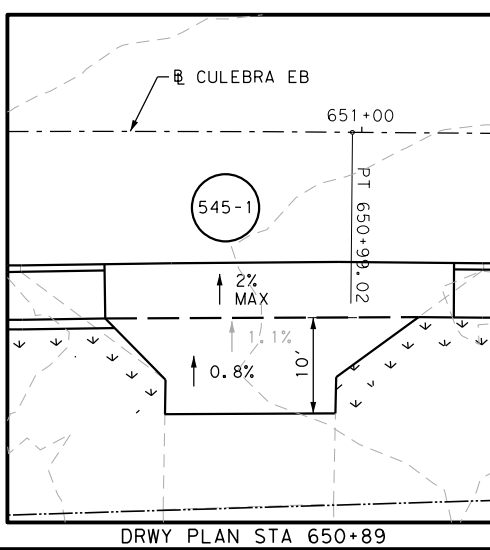
REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

POINT	NORTHING	EASTING	ELEV	DESC
50301	13728356.58	2065444.32	--	ME
50302	13728330.48	2065483.54	--	ME
50303	13728310.14	2065513.78	--	ME
50304	13728296.42	2065533.94	--	ME
50305	13728279.07	2065559.33	--	ME
50306	13728257.38	2065581.13	--	ME
50307	13728239.61	2065615.34	--	ME
50308	13728214.50	2065651.79	--	ME
50309	13728349.09	2065428.84	844.51	PROP
50310	13728346.61	2065427.15	844.51	PROP



SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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FM 471  
CULEBRA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 650+00 TO STA 654+00

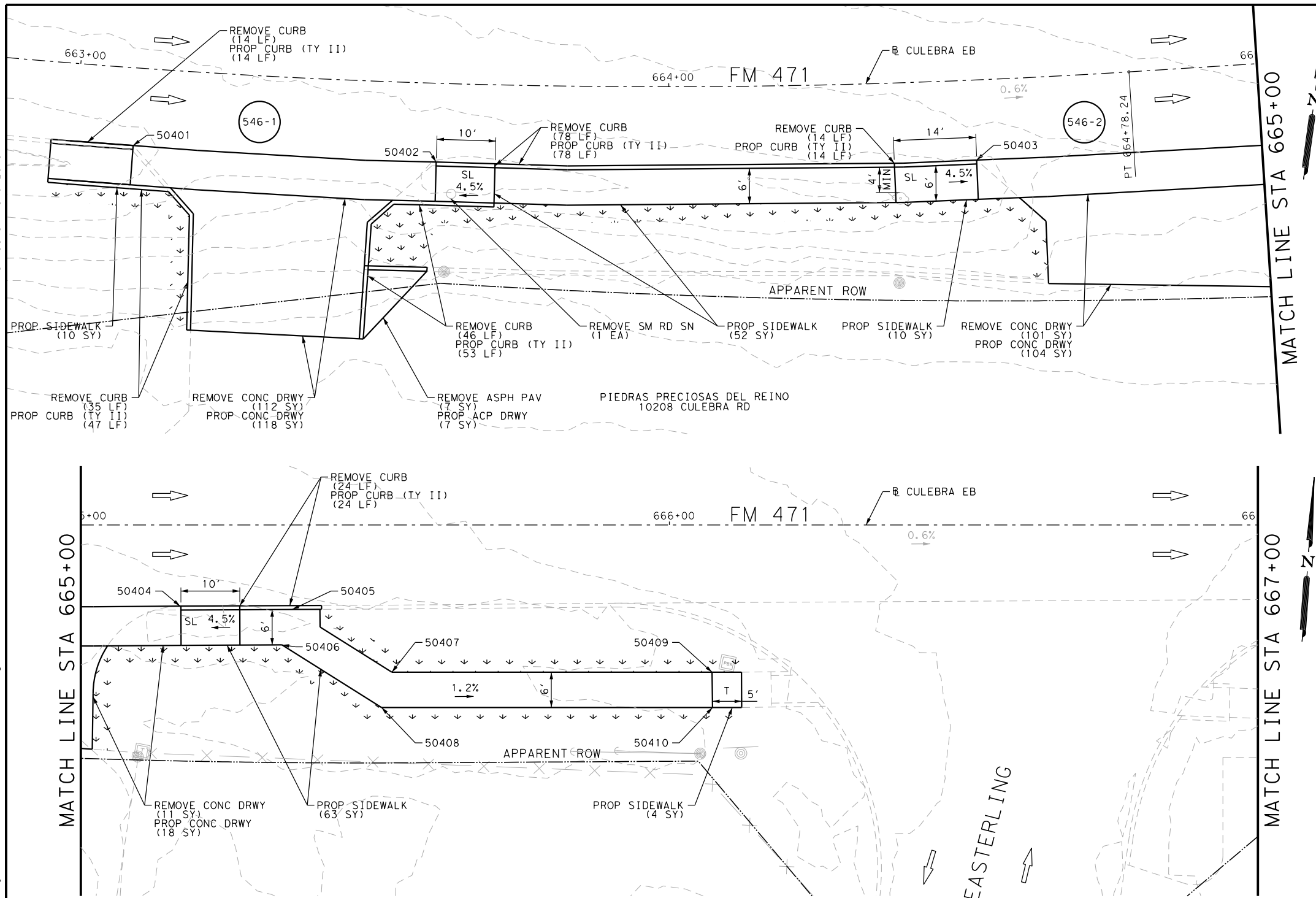
SHEET 5 OF 7

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	545



Plotted on: 5/3/2019

Design File name: P:\111.35\08\Design\Civil\Roadway\Culebra\113508\_Culebra\_EB05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	224
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	211
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	7
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	147
0162-6002	BLOCK SODDING	SY	147
0168-6001	VEGETATIVE WATERING	MG	2.29
0529-6002	CONC CURB (TY II)	LF	230
0530-6004	DRIVEWAYS (CONC)	SY	240
0530-6005	DRIVEWAYS (ACP)	SY	7
0531-6001	CONC SIDEWALKS (4")	SY	137
0644-6076	REMOVE SM RD SN SUP&M	EA	1

NOTES:  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
 JOHN A. TYLER, P.E.  
 105193  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 84722  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

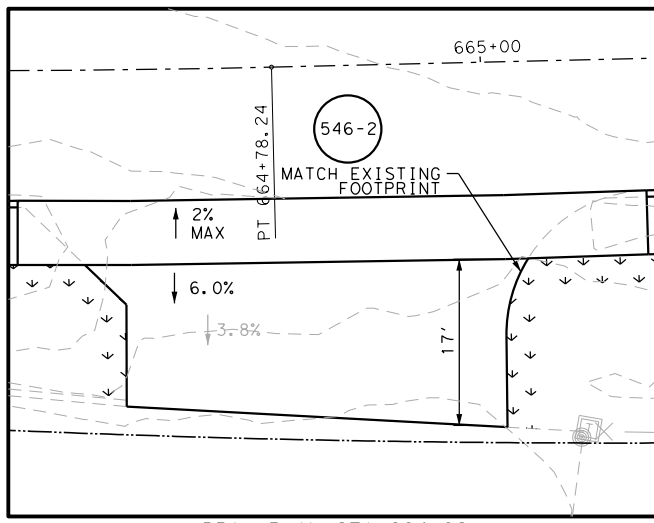
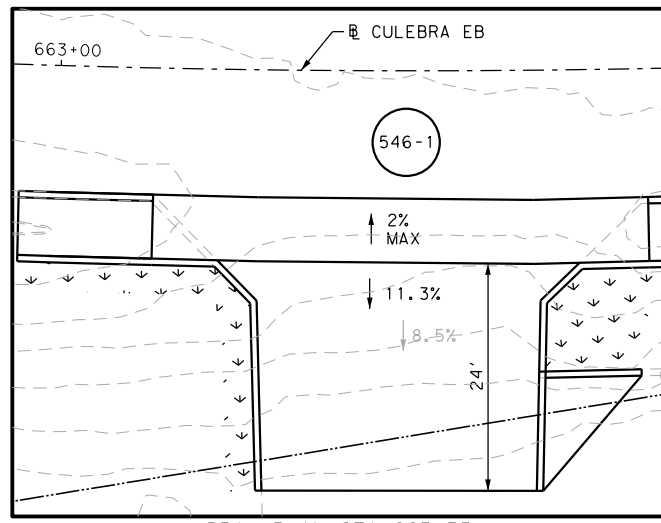
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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FM 471  
 CULEBRA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 663+00 TO STA 667+00

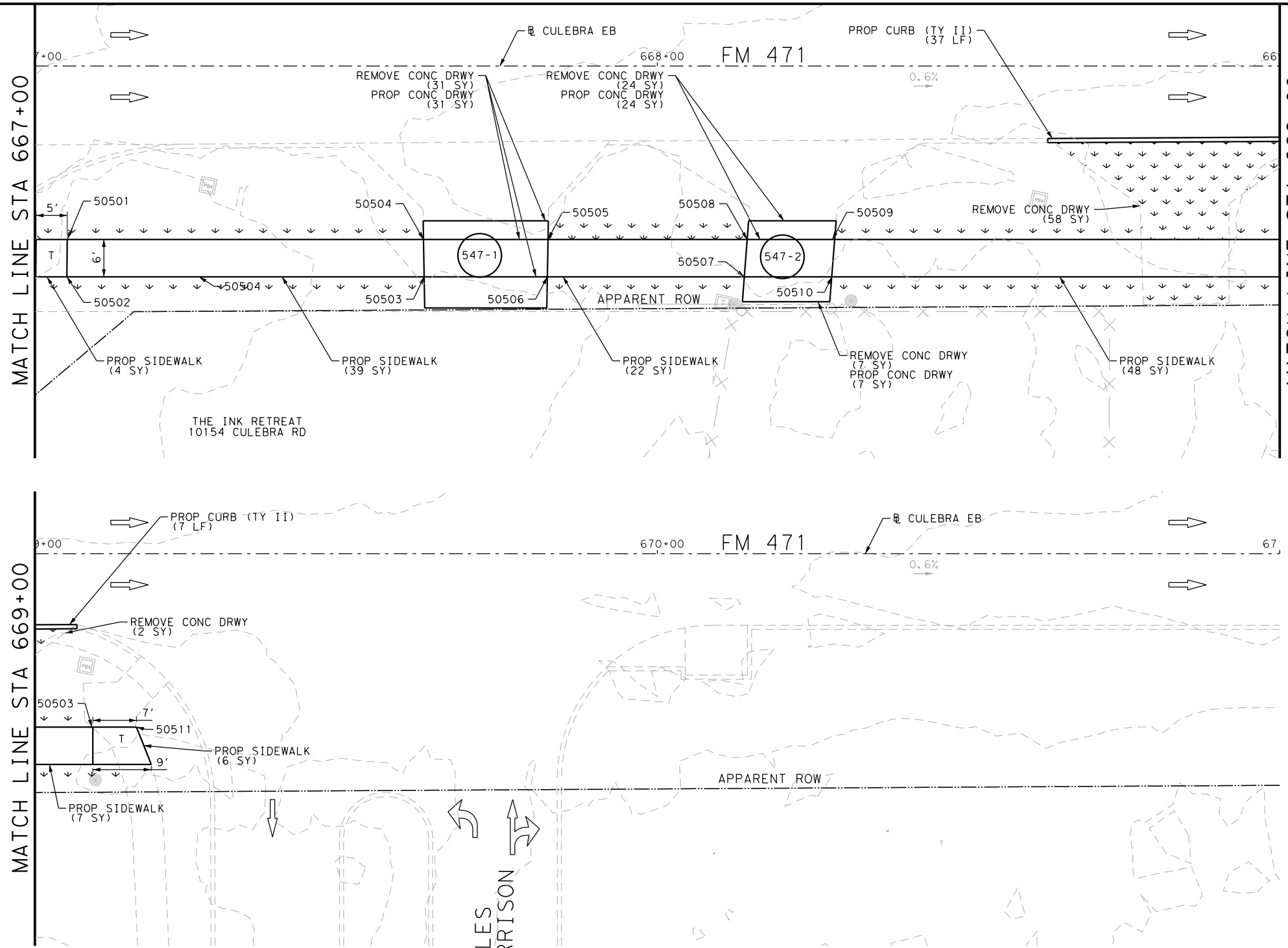
SHEET 6 OF 7

POINT	NORTHING	EASTING	ELEV	DESC
50401	13727904.49	2066624.93	--	ME
50402	13727908.69	2066676.32	--	ME
50403	13727921.43	2066767.27	--	ME
50404	13727933.94	2066831.58	--	ME
50405	13727938.77	2066854.99	--	ME
50406	13727930.87	2066849.74	851.40	PROP
50407	13727930.02	2066868.94	851.35	PROP
50408	13727923.79	2066868.43	851.30	PROP
50409	13727940.78	2066922.28	850.65	PROP
50410	13727934.92	2066923.55	850.60	PROP



Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_EB06.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	132
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	100
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	103
0162-6002	BLOCK SODDING	SY	103
0168-6001	VEGETATIVE WATERING	MG	1.61
0529-6002	CONC CURB (TY II)	LF	93
0530-6004	DRIVEWAYS (CONC)	SY	88
0531-6001	CONC SIDEWALKS (4")	SY	85

- NOTES:
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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

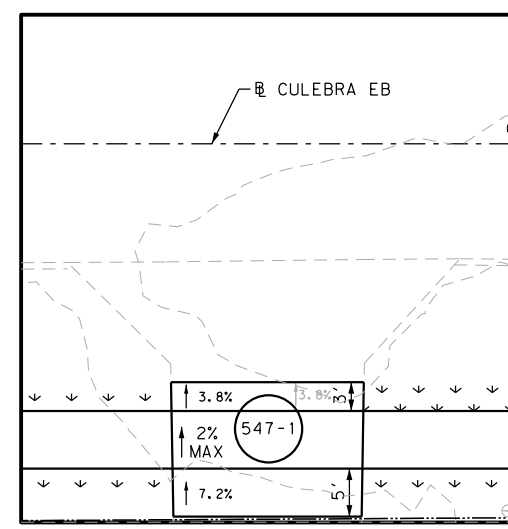
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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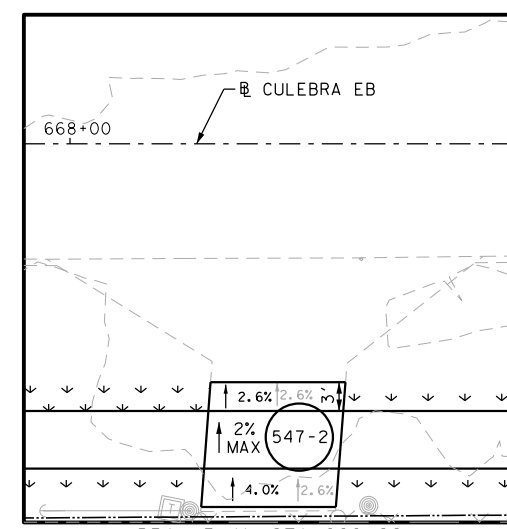
FM 471  
 CULEBRA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 667+00 TO STA 671+00

SHEET 7 OF 7

POINT	NORTHING	EASTING	ELEV	DESC
50501	13727957.36	2067018.84	849.76	PROP
50502	13727951.47	2067019.97	849.82	PROP
50503	13727962.83	2067076.25	849.51	PROP
50504	13727968.69	2067074.96	849.43	PROP
50505	13727972.64	2067094.56	848.95	PROP
50506	13727966.74	2067095.65	849.10	PROP
50507	13727973.00	2067126.67	848.91	PROP
50508	13727978.98	2067125.93	848.82	PROP
50509	13727981.76	2067139.71	848.88	PROP
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DRWY PLAN STA 667+72

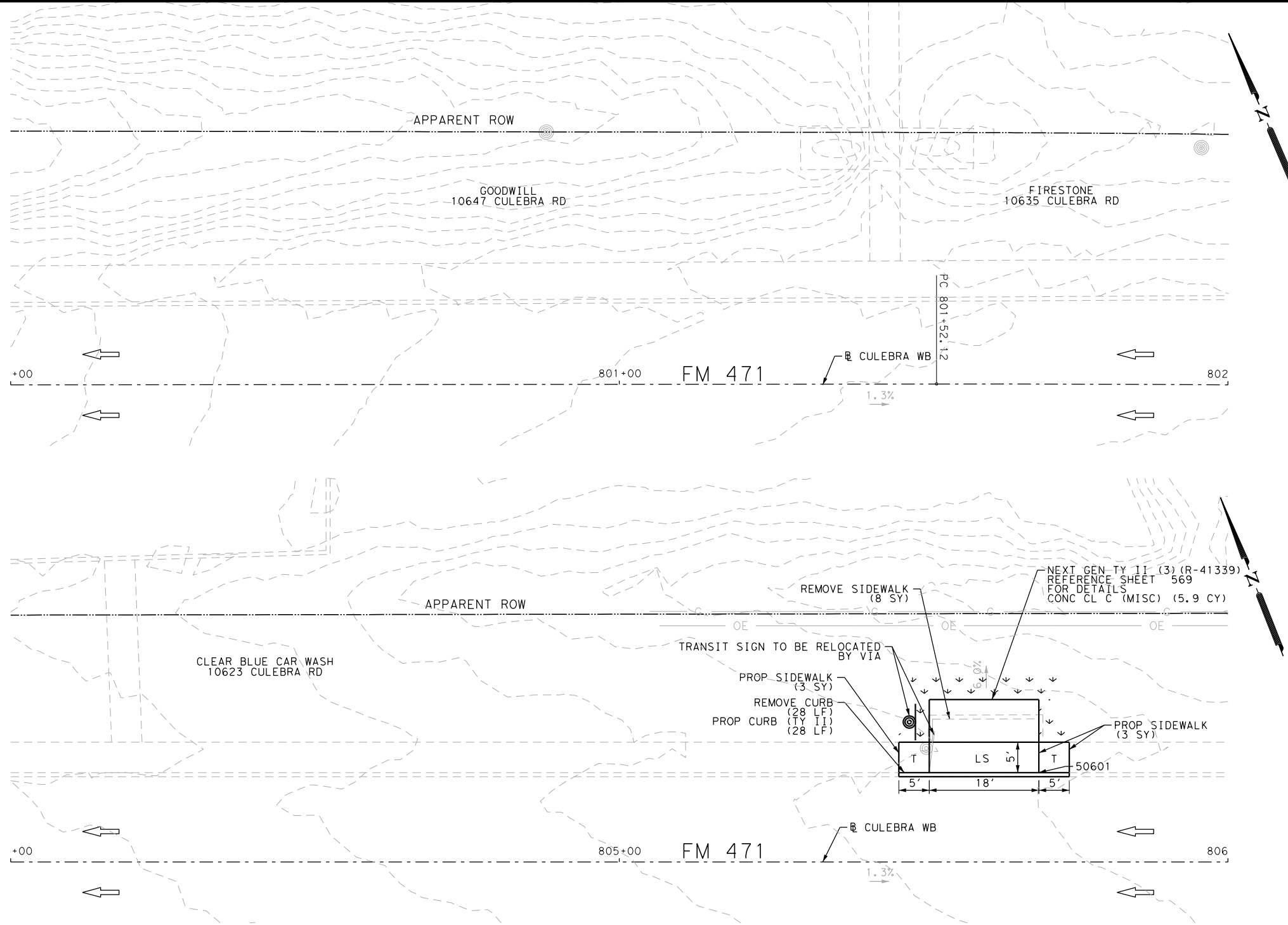


DRWY PLAN STA 668+22

LES HARRISON

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_WB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	28
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	13
0162-6002	BLOCK SODDING	SY	13
0168-6001	VEGETATIVE WATERING	MG	0.20
0420-6074	CL C CONC (MISC)	CY	5.9
0529-6002	CONC CURB (TY II)	LF	28
0531-6001	CONC SIDEWALKS (4")	SY	17

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
50601	13729056.59	2064171.08	--	ME

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

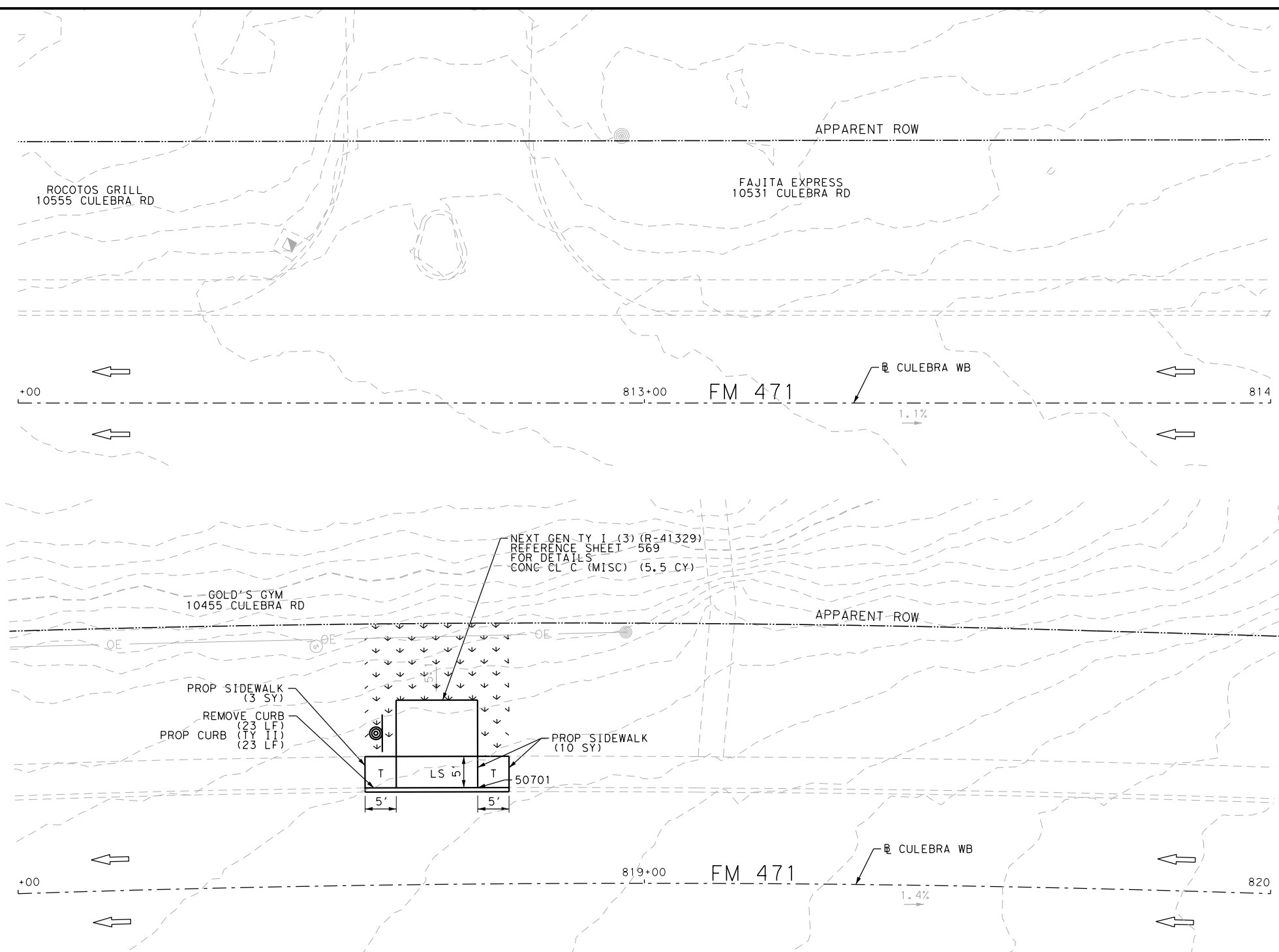


FM 471  
CULEBRA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 800+00 TO STA 802+00  
STA 804+00 TO STA 806+00  
SHEET 1 OF 3

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	548

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_WB02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	23
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	35
0162-6002	BLOCK SODDING	SY	35
0168-6001	VEGETATIVE WATERING	MG	0.55
0420-6074	CL C CONC (MISC)	CY	5.5
0529-6002	CONC CURB (TY II)	LF	23
0531-6001	CONC SIDEWALKS (4")	SY	13

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
50701	13728493.95	2065349.31	--	ME

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

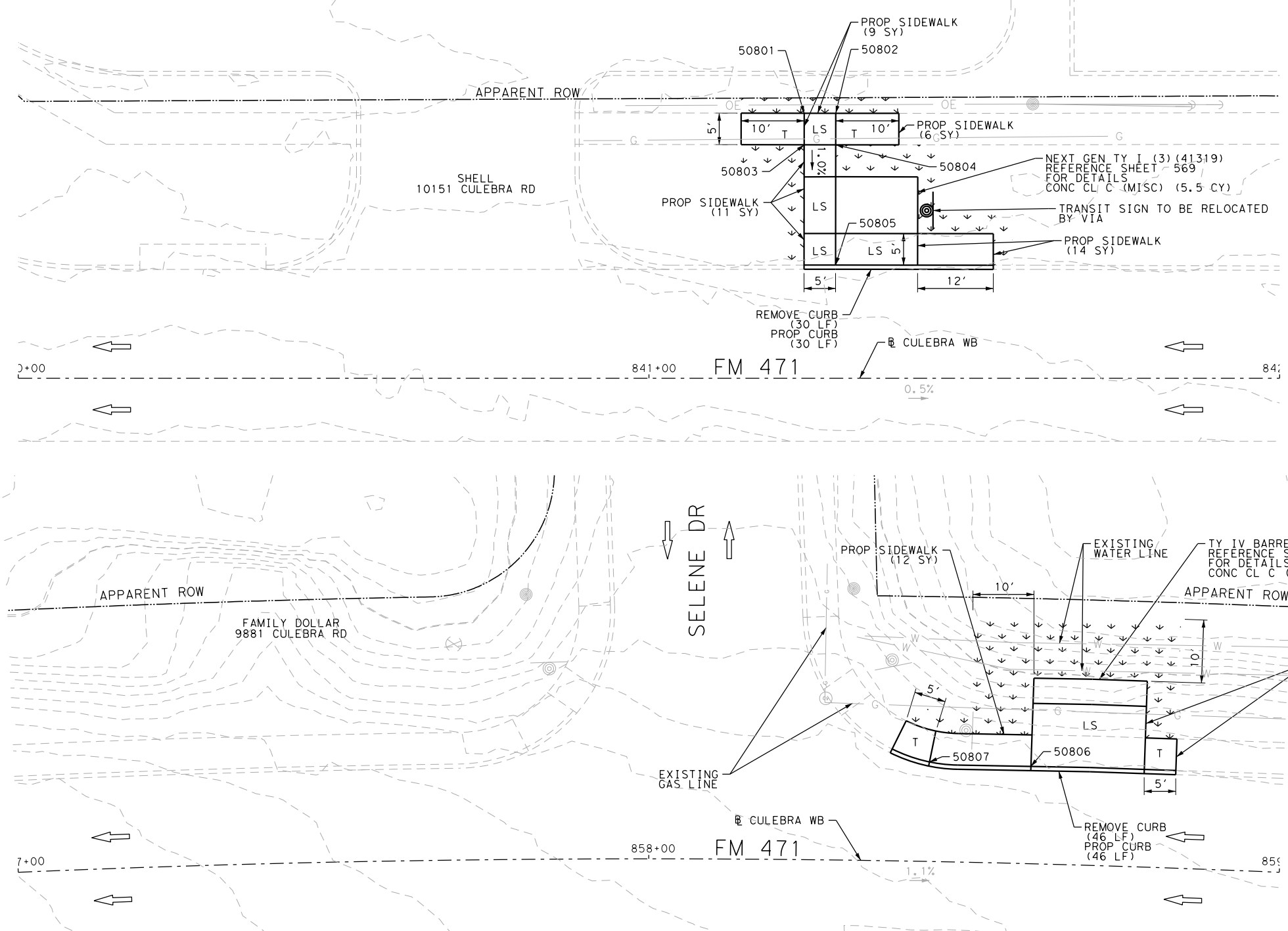
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FM 471  
 CULEBRA RD  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 812+00 TO STA 814+00  
 STA 818+00 TO STA 820+00  
 SHEET 2 OF 3

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	549

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Culebra\1113508\_Culebra\_WB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	23
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	69
0162-6002	BLOCK SODDING	SY	69
0168-6001	VEGETATIVE WATERING	MG	1.08
0420-6074	CL C CONC (MISC)	CY	7.0
0531-6001	CONC SIDEWALKS (4")	SY	74

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

James A. Lutz, P.E.  
DATE: 5/3/2019

POINT	NORTHING	EASTING	ELEV	DESC
50801	13728152.00	2067434.83	848.34	PROP
50802	13728152.99	2067439.73	848.34	PROP
50803	13728147.10	2067435.82	848.27	PROP
50804	13728148.09	2067440.72	848.27	PROP
50805	13728129.41	2067444.50	--	ME
50806	13728455.56	2069145.38	--	ME
50807	13728454.54	2069129.33	--	ME

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

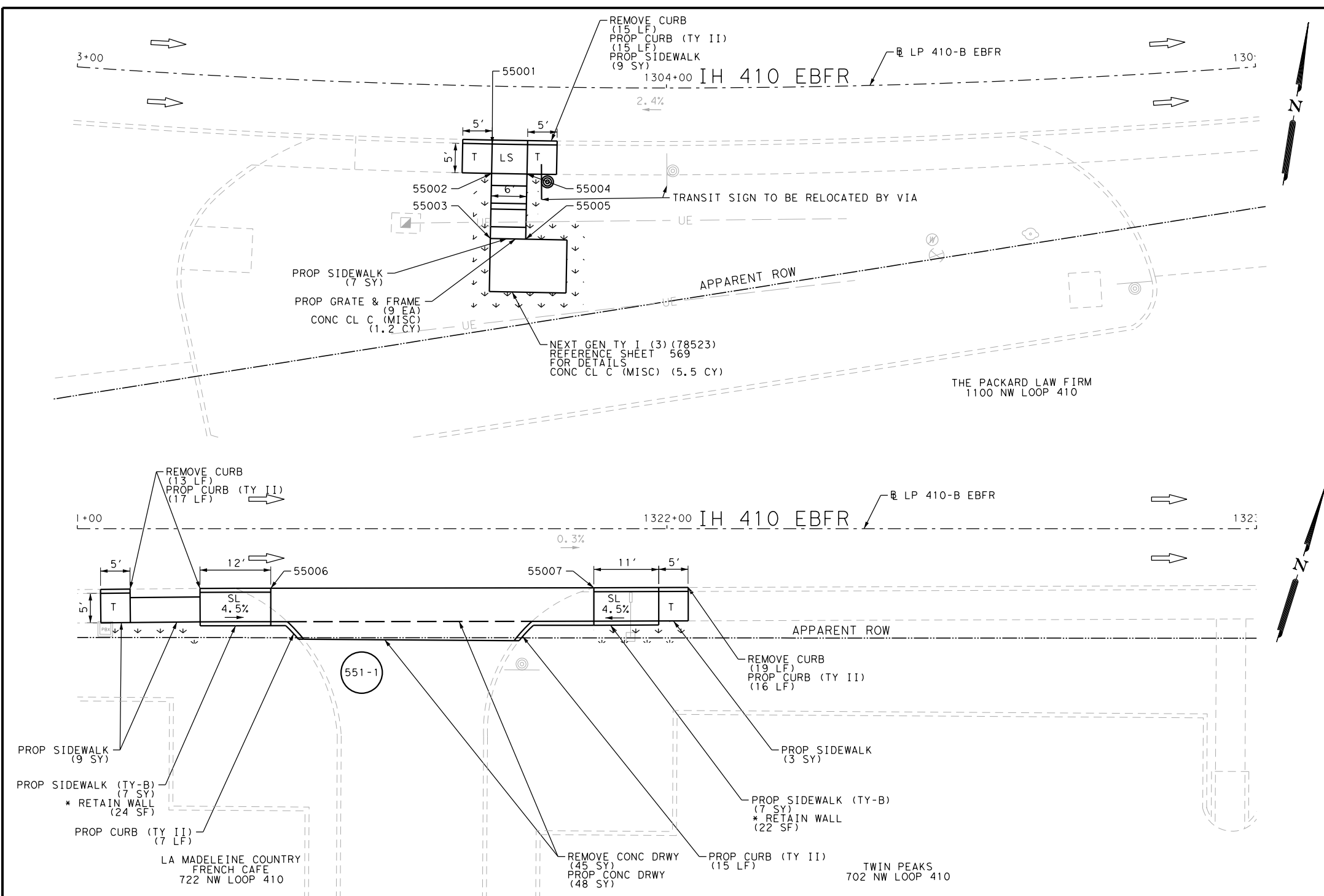
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FM 471  
CULEBRA RD  
SIDEWALK  
CONSTRUCTION PLAN  
STA 840+00 TO STA 842+00  
STA 857+00 TO STA 859+00  
SHEET 3 OF 3

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	550

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	45
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	47
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	35
0162-6002	BLOCK SODDING	SY	35
0168-6001	VEGETATIVE WATERING	MG	0.55
0420-6074	CL C CONC (MISC)	CY	6.7
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	70
0530-6004	DRIVEWAYS (CONC)	SY	48
0531-6001	CONC SIDEWALKS (4")	SY	21
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	14

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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

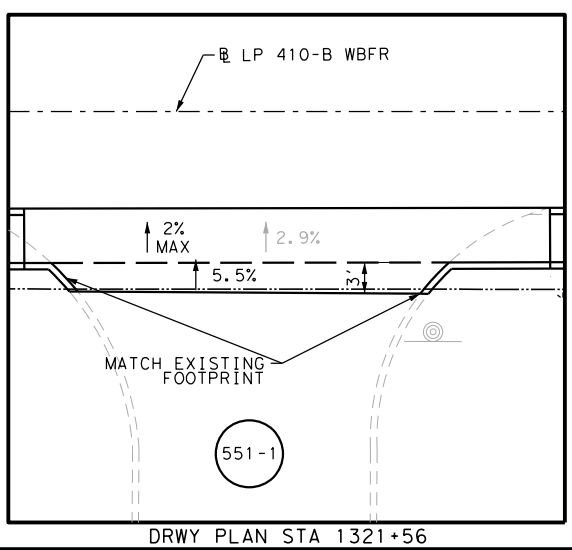
REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1303+00 TO STA 1305+00  
STA 1321+00 TO STA 1323+00  
SHEET 1 OF 10

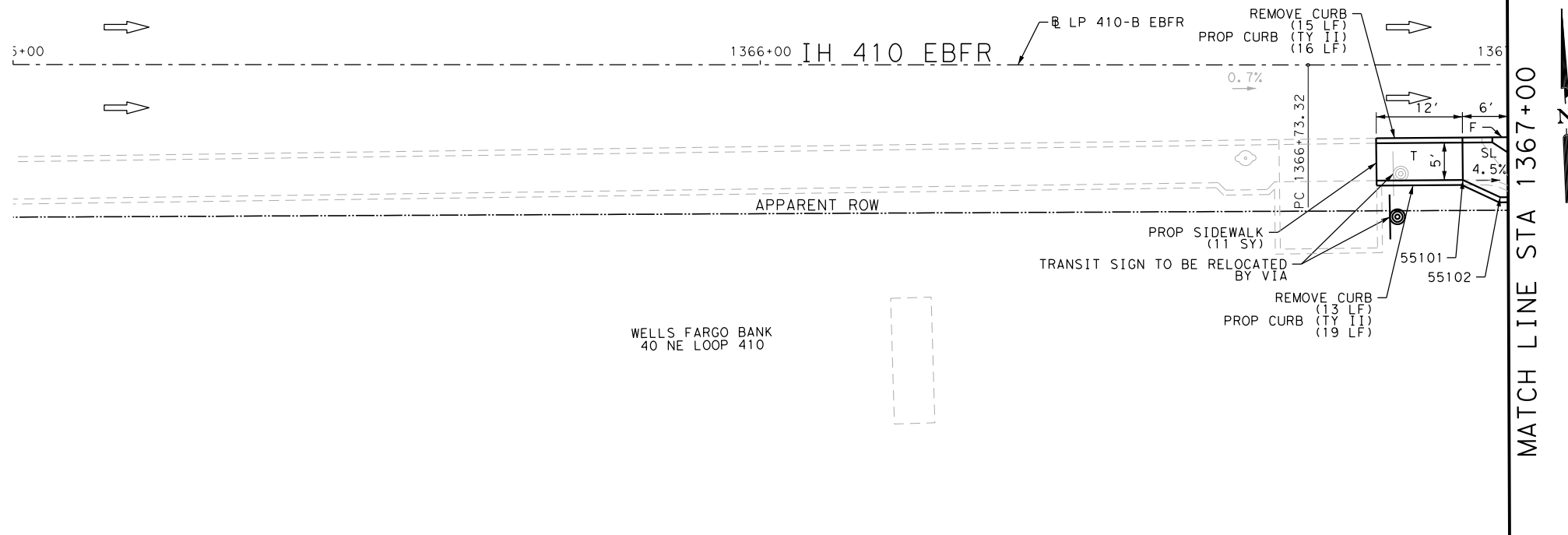
POINT	NORTHING	EASTING	ELEV	DESC
55001	13739158.47	2124791.63	--	ME
55002	13739153.51	2124792.30	813.88	PROP
55003	13739142.58	2124793.79	813.90	PROP
55004	13739154.33	2124798.25	813.92	PROP
55005	13739143.38	2124799.74	813.94	PROP
55006	13739331.91	2126527.78	--	ME
55007	13739332.34	2126582.57	--	ME



DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	551

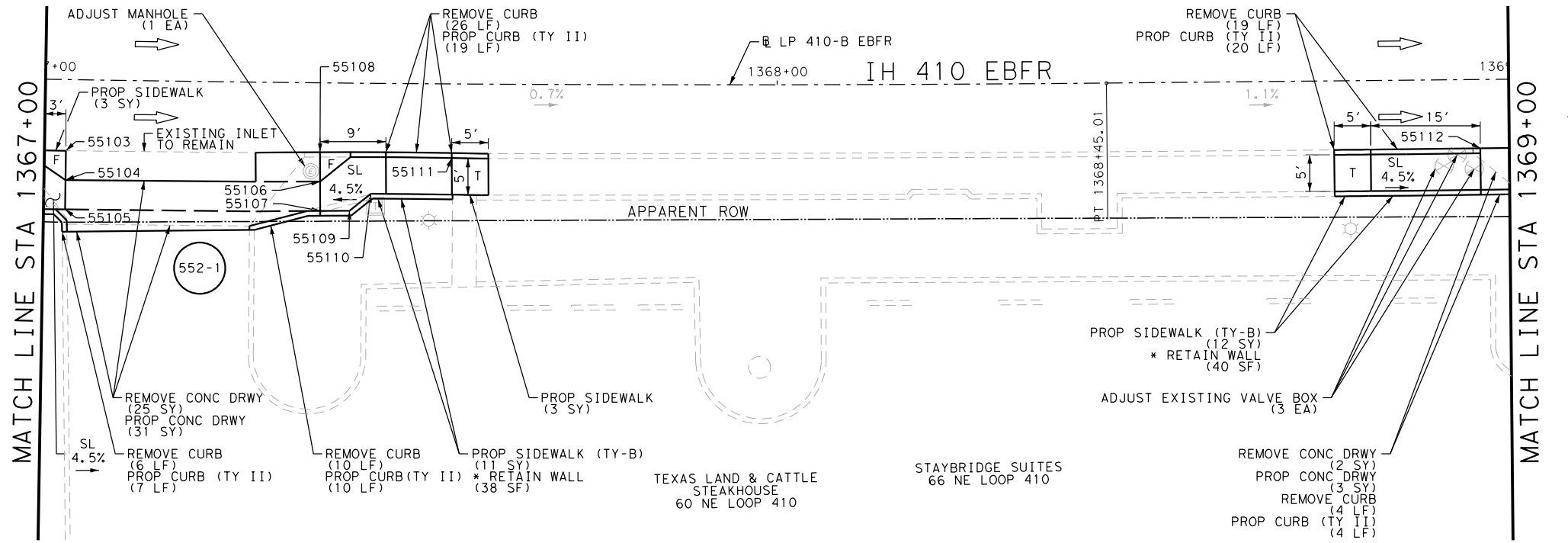
Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Loop410B\Loop410B\_EB02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	27
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	93
0479-6001	ADJUSTING MANHOLES	EA	1
0529-6002	CONC CURB (TY II)	LF	95
0530-6004	DRIVEWAYS (CONC)	SY	34
0531-6001	CONC SIDEWALKS (4")	SY	17
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	23
7196-6001	ADJUST EXISTING VALVE BOX	EA	3

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DESIGN

JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

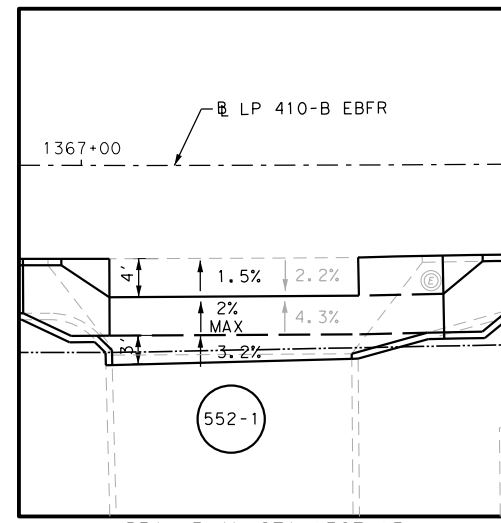
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1365+00 TO STA 1369+00

SHEET 2 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DRW:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	552

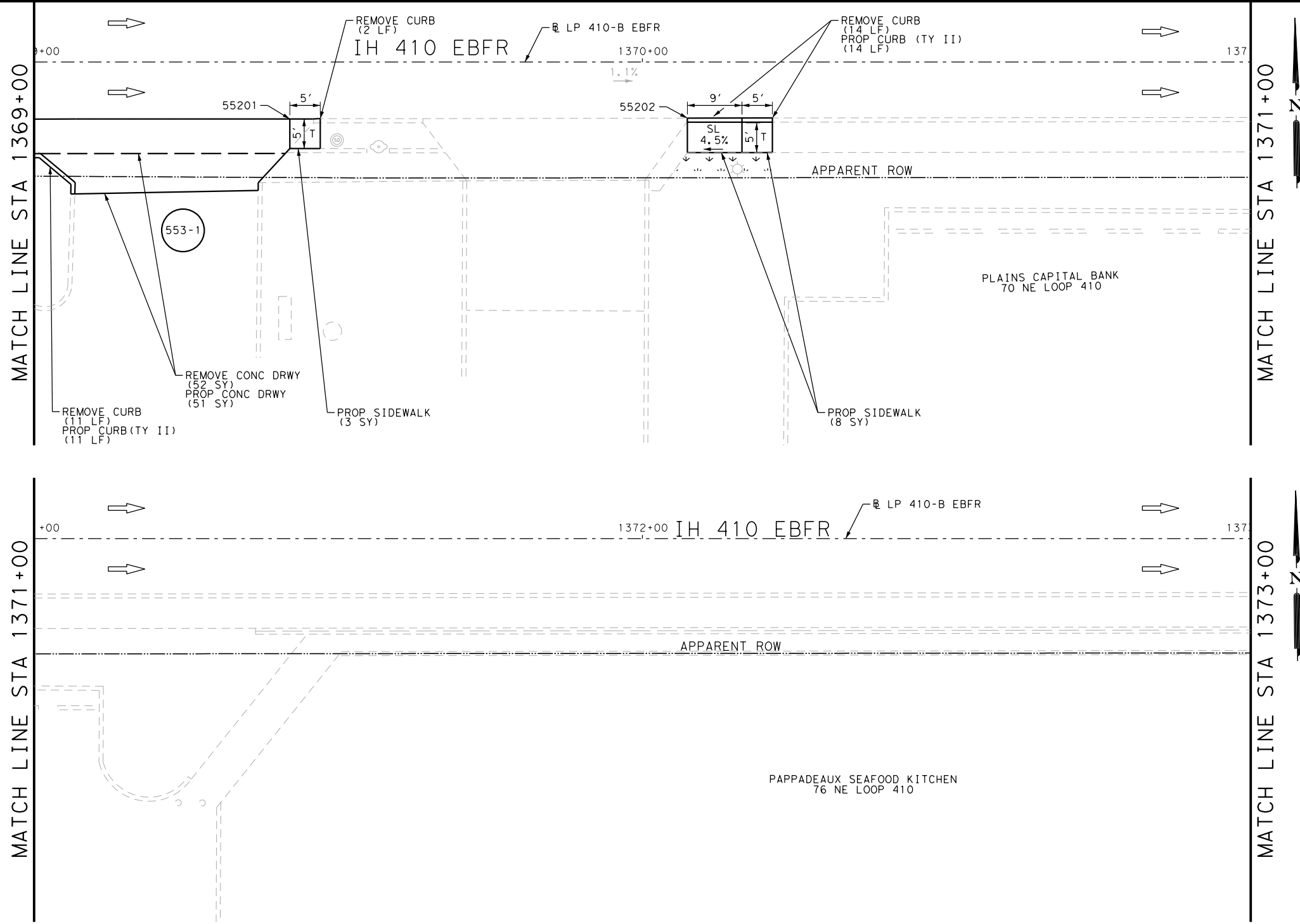


DRWY PLAN STA 1367+15

POINT	NORTHING	EASTING	ELEV	DESC
55101	13739294.39	2131083.06	--	ME
55102	13739291.86	2131087.97	--	ME
55103	13739299.74	2131092.25	--	ME
55104	13739295.73	2131092.11	--	ME
55105	13739291.73	2131091.97	803.19	PROP
55106	13739294.80	2131126.90	802.84	PROP
55107	13739290.77	2131126.83	802.90	PROP
55108	13739298.79	2131126.97	--	ME
55109	13739290.70	2131130.83	--	ME
55110	13739292.97	2131133.79	--	ME
55111	13739297.61	2131144.95	--	ME
55112	13739295.91	2131285.56	--	ME

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	52
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	27
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	6
0162-6002	BLOCK SODDING	SY	6
0168-6001	VEGETATIVE WATERING	MG	0.09
0529-6002	CONC CURB (TY II)	LF	25
0530-6004	DRIVEWAYS (CONC)	SY	51
0531-6001	CONC SIDEWALKS (4")	SY	11

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN

JOHN A. TYLER, P.E.

5/3/2019  
DATE

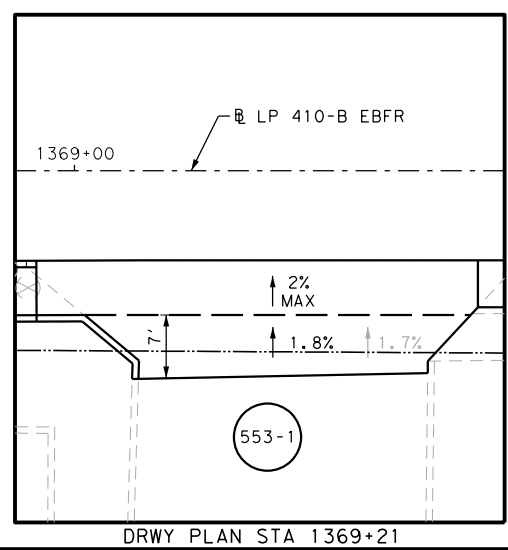
REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019  
DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
55201	13739295.40	2131331.56	--	ME
55202	13739294.74	2131396.89	--	ME



REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1369+00 TO STA 1373+00

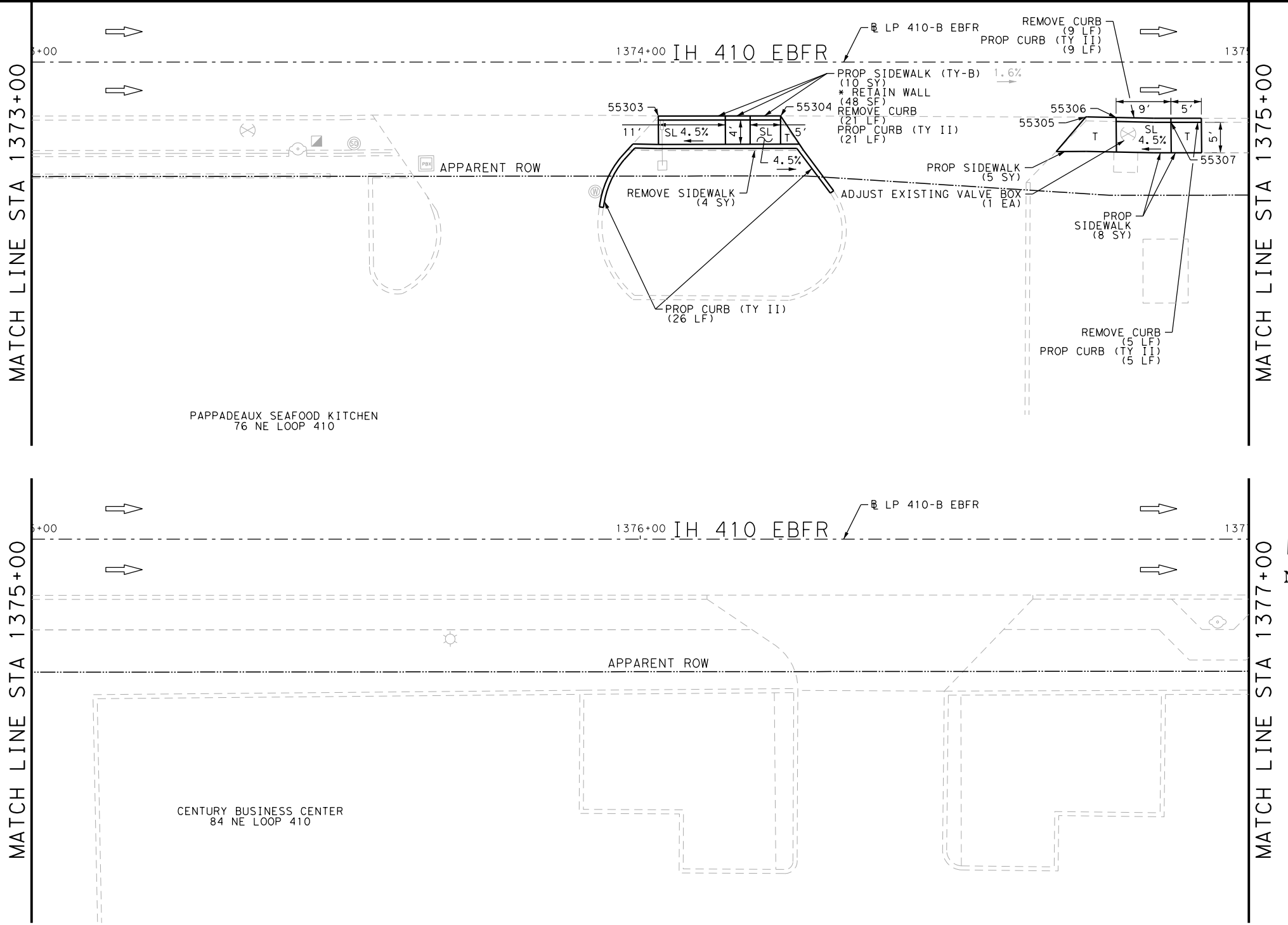
SHEET 3 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	553



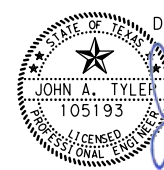
Plotted on: 5/3/2019

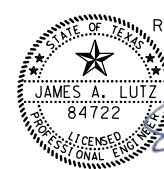
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ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	35
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0529-6002	CONC CURB (TY II)	LF	61
0531-6001	CONC SIDEWALKS (4")	SY	13
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10
7196-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

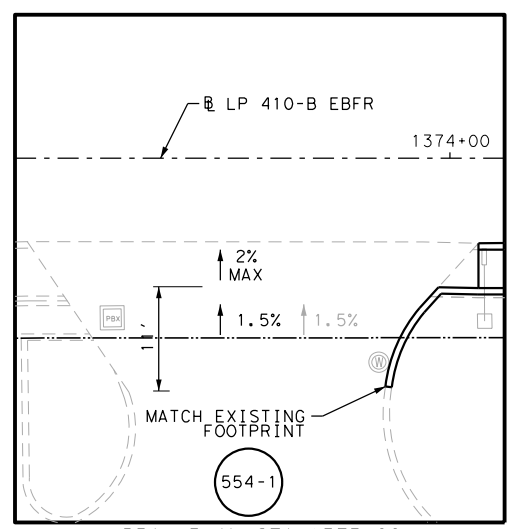
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1373+00 TO STA 1377+00

SHEET 4 OF 10

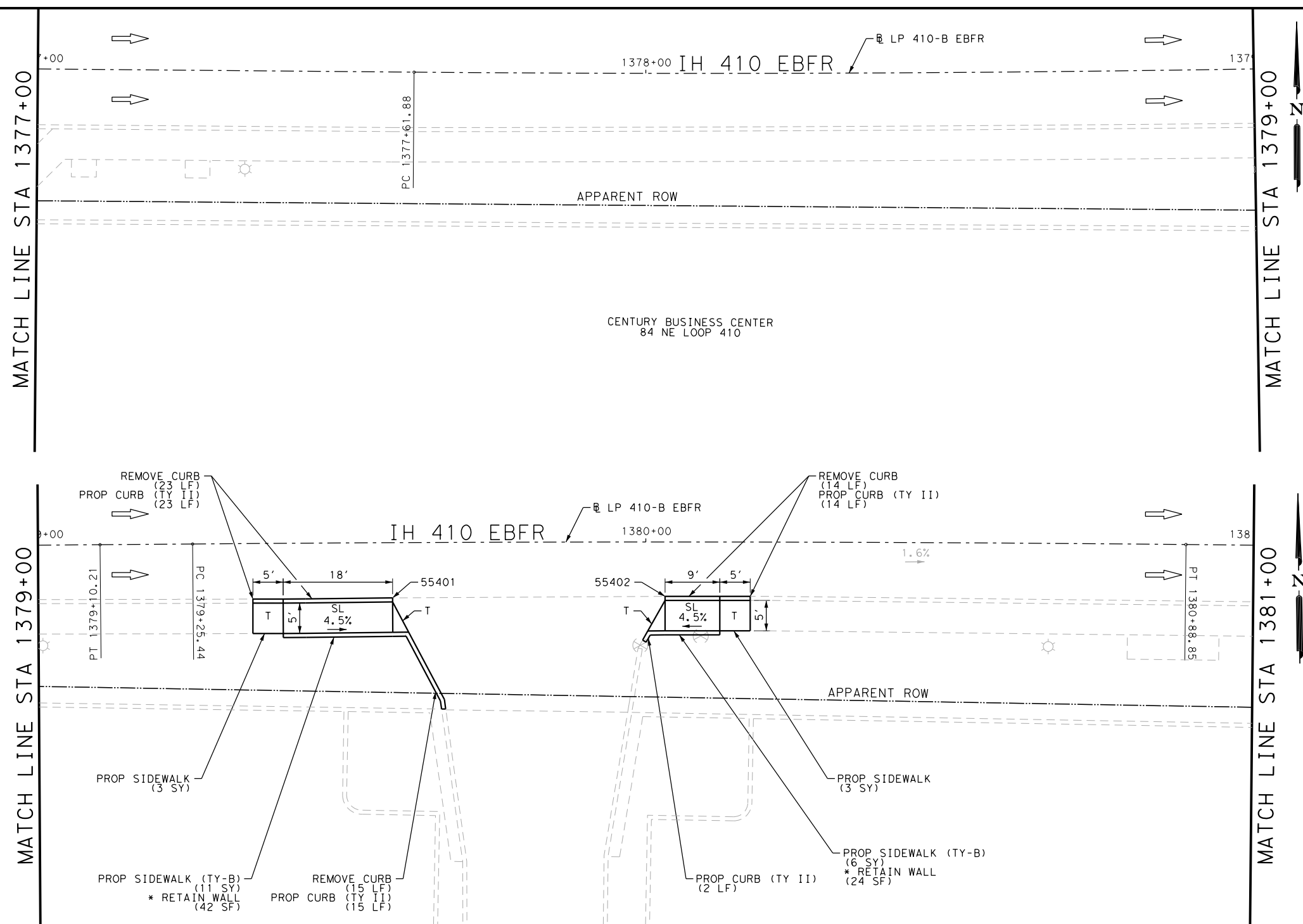
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	554



POINT	NORTHING	EASTING	ELEV	DESC
55303	13739290.27	2131792.47	--	ME
55304	13739290.07	2131812.55	--	ME
55305	13739289.29	2131862.68	--	ME
55306	13739289.13	2131867.68	--	ME
55307	13739288.23	2131876.67	--	ME

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	52
0529-6002	CONC CURB (TY II)	LF	54
0531-6001	CONC SIDEWALKS (4")	SY	6
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
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  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
55401	13739286.46	2132347.96	--	ME
55402	13739286.97	2132392.78	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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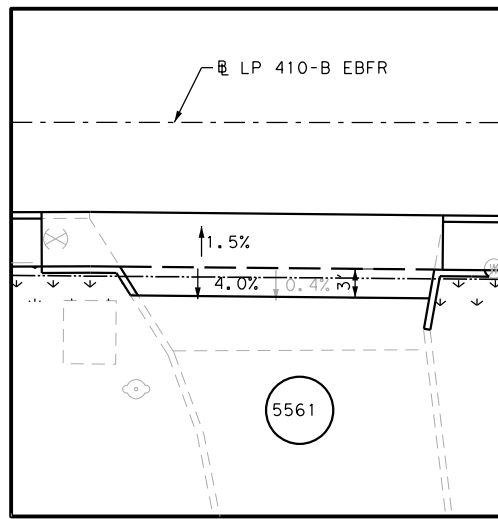
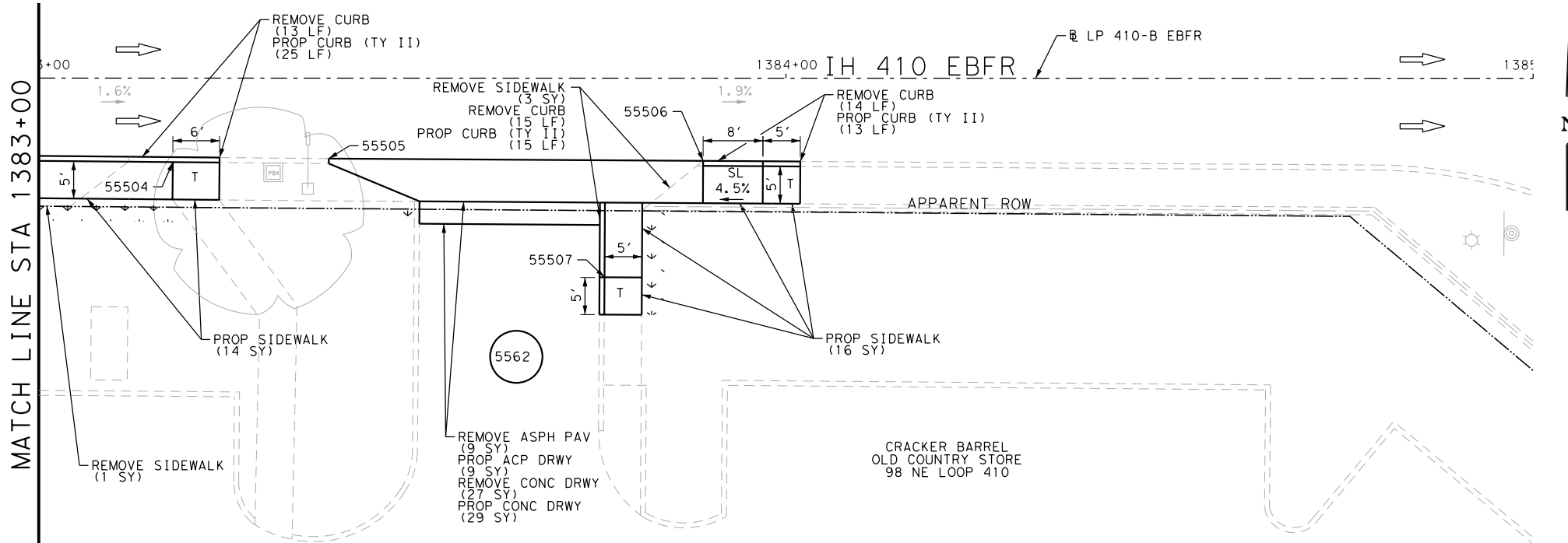
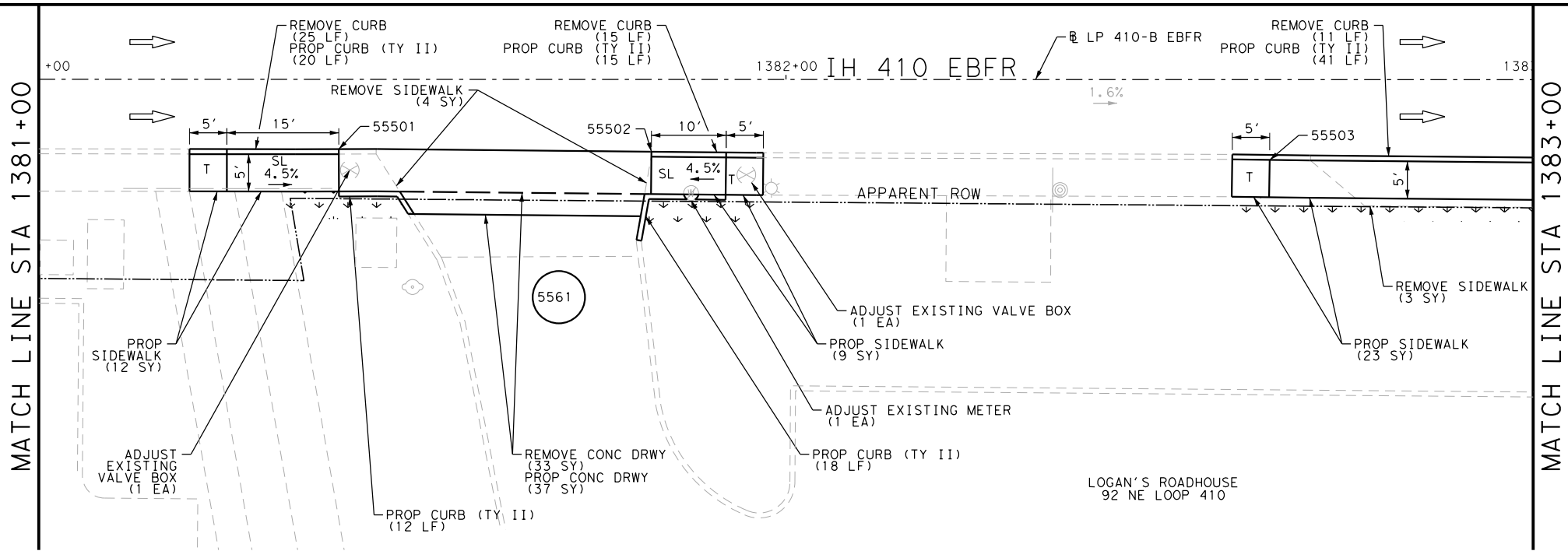
Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1377+00 TO STA 1381+00

SHEET 5 OF 10

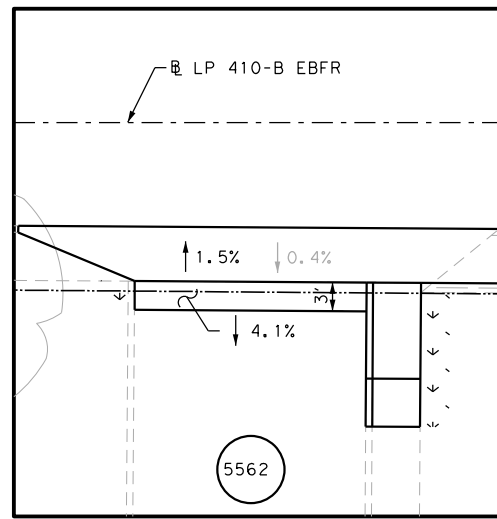
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	555

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB06.dgn



DRWY PLAN STA 1381+67



DRWY PLAN STA 1383+63

POINT	NORTHING	EASTING	ELEV	DESC
55501	13739286.46	2132529.67	--	ME
55502	13739285.97	2132571.50	--	ME
55503	13739284.55	2132654.25	--	ME
55504	13739283.86	2132707.46	--	ME
55505	13739284.26	2132728.33	--	ME
55506	13739283.76	2132778.43	--	ME
55507	13739268.22	2132765.17	--	ME

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	60
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	93
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	11
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	9
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	46
0162-6002	BLOCK SODDING	SY	46
0168-6001	VEGETATIVE WATERING	MG	0.72
0529-6002	CONC CURB (TY II)	LF	159
0530-6004	DRIVEWAYS (CONC)	SY	66
0530-6005	DRIVEWAYS (ACP)	SY	9
0531-6001	CONC SIDEWALKS (4")	SY	74
7196-6001	ADJUST EXISTING VALVE BOX	EA	2
7196-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
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 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1381+00 TO STA 1385+00

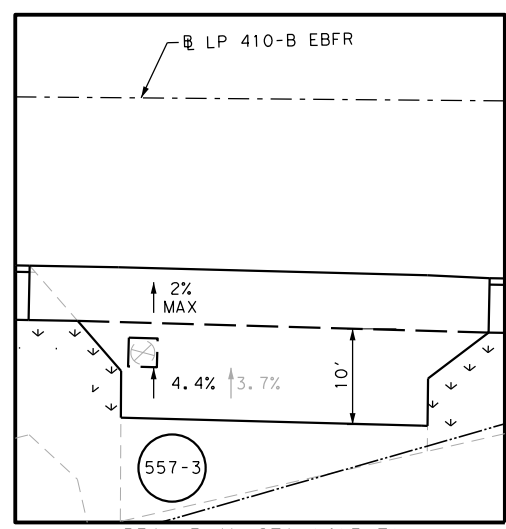
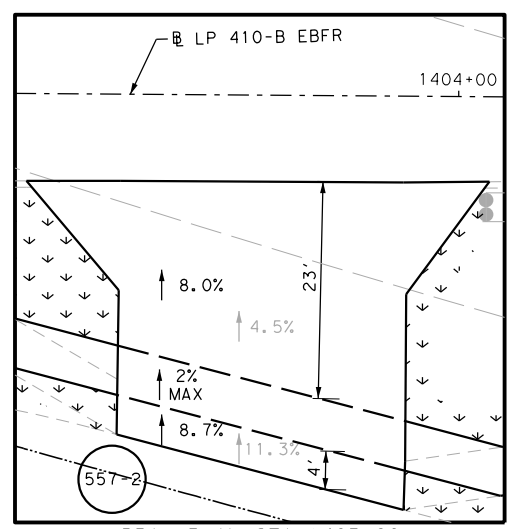
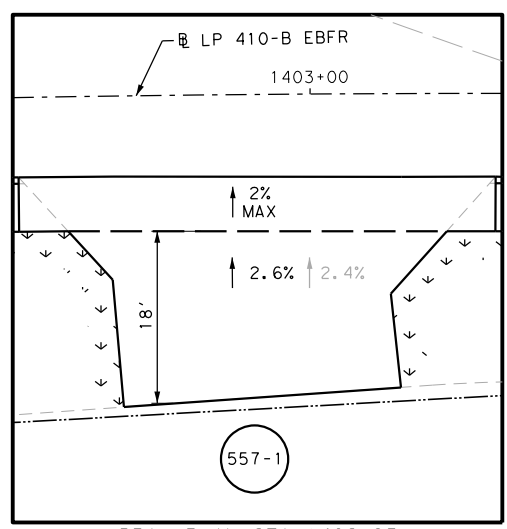
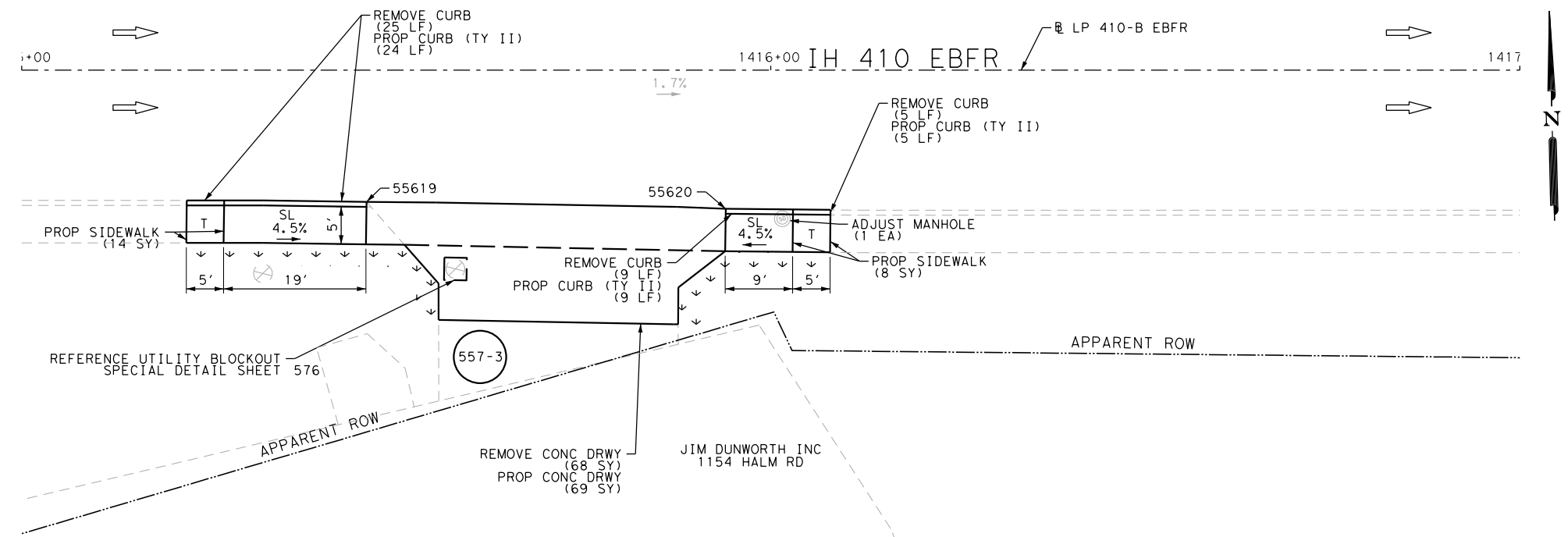
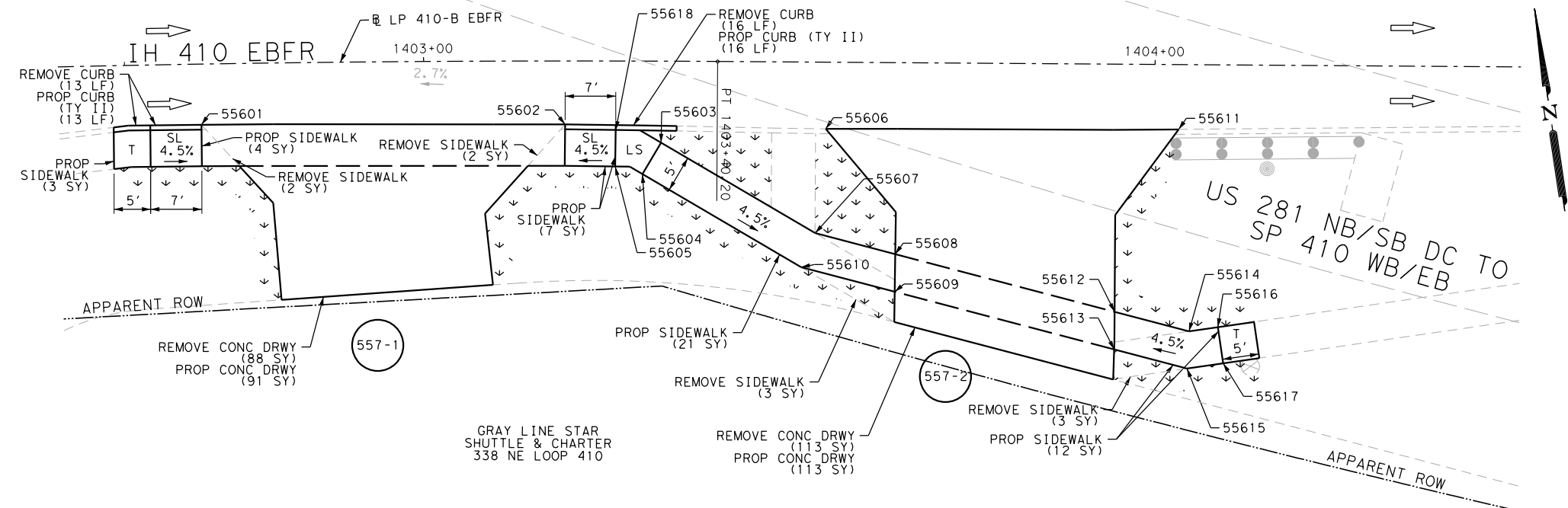
SHEET 6 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
	6	TEXAS		VARIES		
CHK DGN:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	SAT	BEXAR	0915	12	576	556

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB07.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	269
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	68
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	10
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	104
0162-6002	BLOCK SODDING	SY	104
0168-6001	VEGETATIVE WATERING	MG	1.62
0479-6001	ADJUSTING MANHOLES	EA	1
0529-6002	CONC CURB (TY II)	LF	67
0530-6004	DRIVEWAYS (CONC)	SY	273
0531-6001	CONC SIDEWALKS (4")	SY	69



POINT	NORTHING	EASTING	ELEV	DESC
55601	13739254.85	2134656.81	--	ME
55602	13739247.55	2134705.97	--	ME
55603	13739243.15	2134718.57	776.60	PROP
55604	13739239.26	2134715.43	776.66	PROP
55605	13739240.84	2134711.90	--	ME
55606	13739241.68	2134741.12	--	ME
55607	13739227.77	2134737.59	777.69	PROP
55608	13739223.31	2134747.99	778.32	PROP
55609	13739218.23	2134747.15	778.38	PROP
55610	13739223.45	2134734.98	777.75	PROP
55611	13739234.46	2134788.81	--	ME
55612	13739211.07	2134776.47	779.30	PROP
55613	13739205.98	2134775.65	779.35	PROP
55614	13739206.92	2134786.12	779.77	PROP
55615	13739201.93	2134785.09	779.83	PROP
55616	13739206.90	2134790.12	779.95	PROP
55617	13739201.90	2134790.10	779.97	PROP
55618	13739245.77	2134712.71	--	ME
55619	13738962.82	2135896.28	--	ME
55620	13738949.02	2135942.20	--	ME

NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION  
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

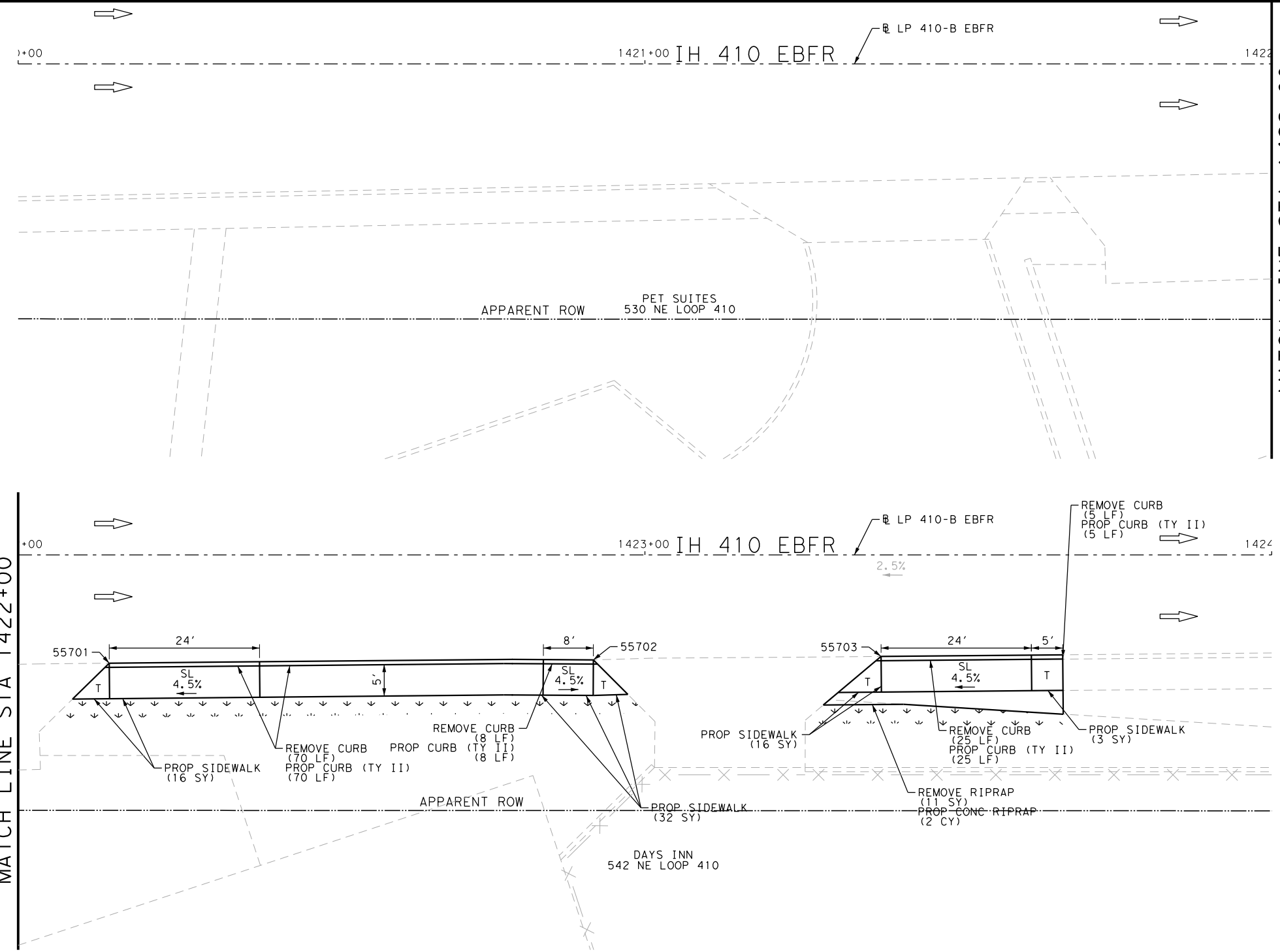


Loop 410-B  
 SIDEWALK CONSTRUCTION PLAN  
 STA 1402+50 TO STA 1404+50  
 STA 1415+00 TO STA 1417+00  
 SHEET 7 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	557

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB08.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	108
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	45
0162-6002	BLOCK SODDING	SY	45
0168-6001	VEGETATIVE WATERING	MG	0.70
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	108
0531-6001	CONC SIDEWALKS (4")	SY	67

- NOTES:
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DESIGN

JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E. 5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
55701	13738783.07	2136540.13	--	ME
55702	13738762.76	2136614.69	--	ME
55703	13738750.93	2136659.02	--	ME

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1420+00 TO STA 1424+00

SHEET 8 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	558

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_EB10.dgn

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	12
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	34
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	14
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	49
0162-6002	BLOCK SODDING	SY	49
0168-6001	VEGETATIVE WATERING	MG	0.76
0420-6074	CL C CONC (MISC)	CY	5.5
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	34
0530-6005	DRIVEWAYS (ACP)	SY	26
0531-6001	CONC SIDEWALKS (4")	SY	18

- NOTES:
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DESIGN

JOHN A. TYLER, P.E.  
DATE: 5/3/2019

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE: 5/3/2019

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

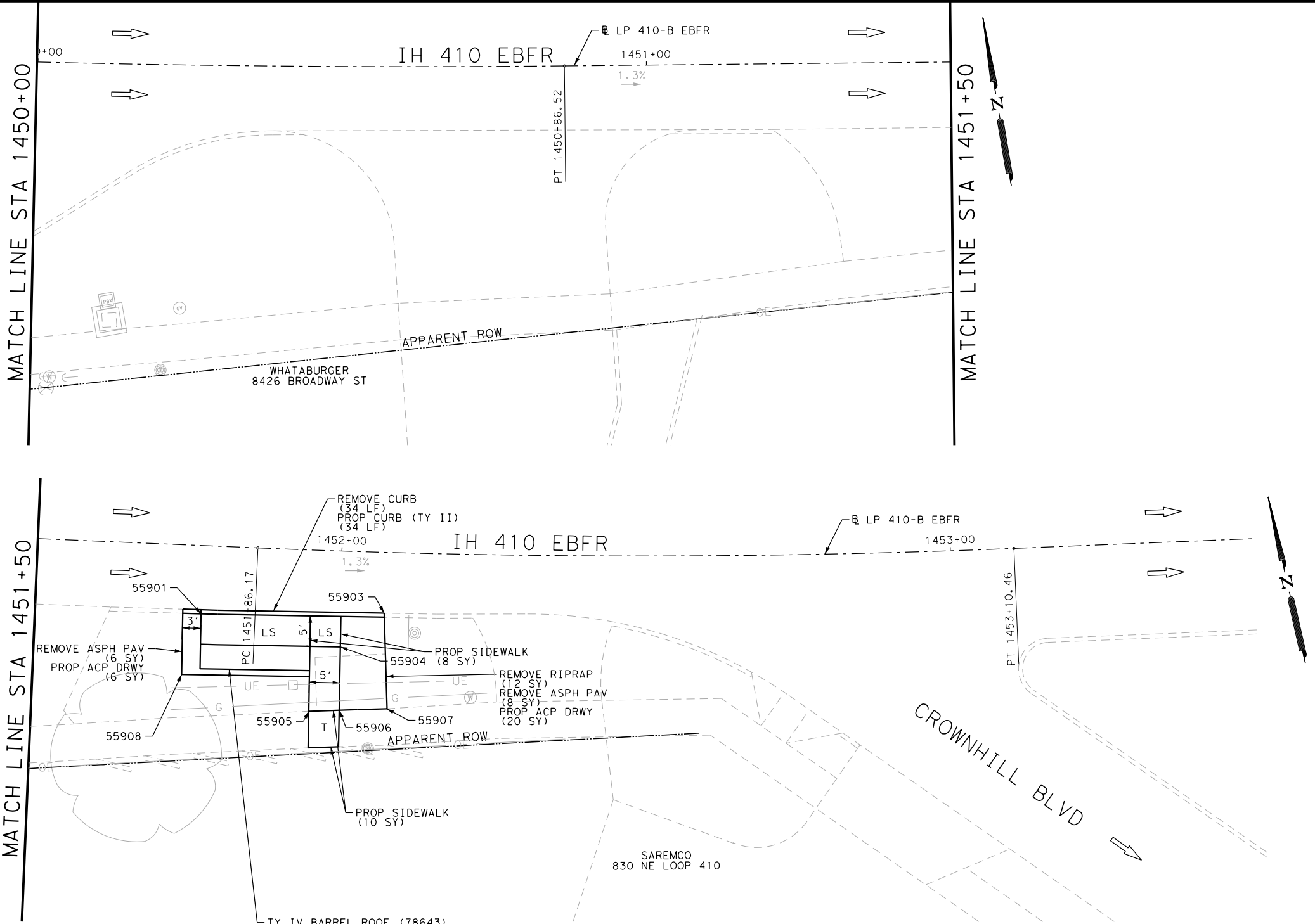
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1450+00 TO STA 1453+50

SHEET 9 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	559

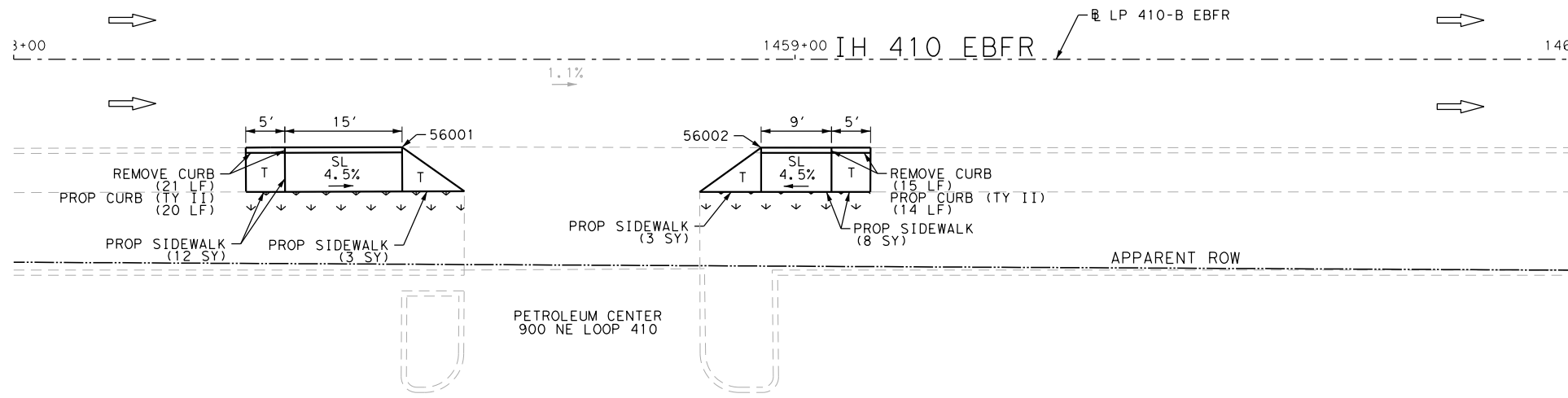


POINT	NORTHING	EASTING	ELEV	DESC
55901	13737996.04	2139392.73	--	ME
55903	13737992.67	2139422.64	--	ME
55904	13737987.99	2139414.86	--	ME
55905	13737978.07	2139408.48	--	ME
55906	13737977.67	2139413.47	--	ME
55907	13737977.01	2139421.31	--	ME
55908	13737986.50	2139388.42	--	ME

TY IV BARREL ROOF (78643)  
REFERENCE SHEET 569  
FOR DETAILS  
CONC CL C (MISC) (1.5 CY)

Plotted on: 5/3/2019

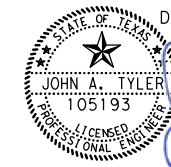
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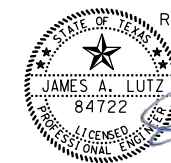


ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	36
0529-6002	CONC CURB (TY II)	LF	34
0531-6001	CONC SIDEWALKS (4")	SY	26

NOTES:

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DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
56001	13737939.73	2140063.56	--	ME
56002	13737936.22	2140109.38	--	ME

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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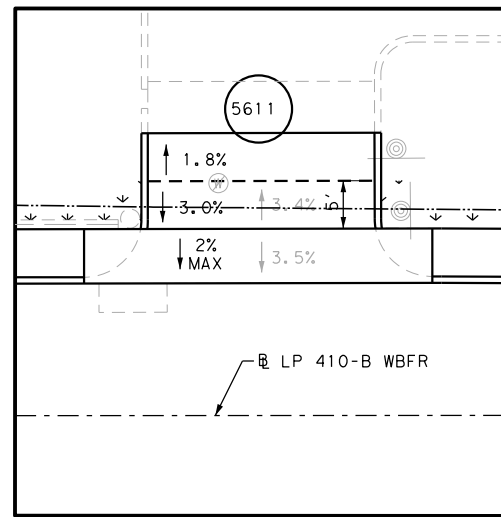
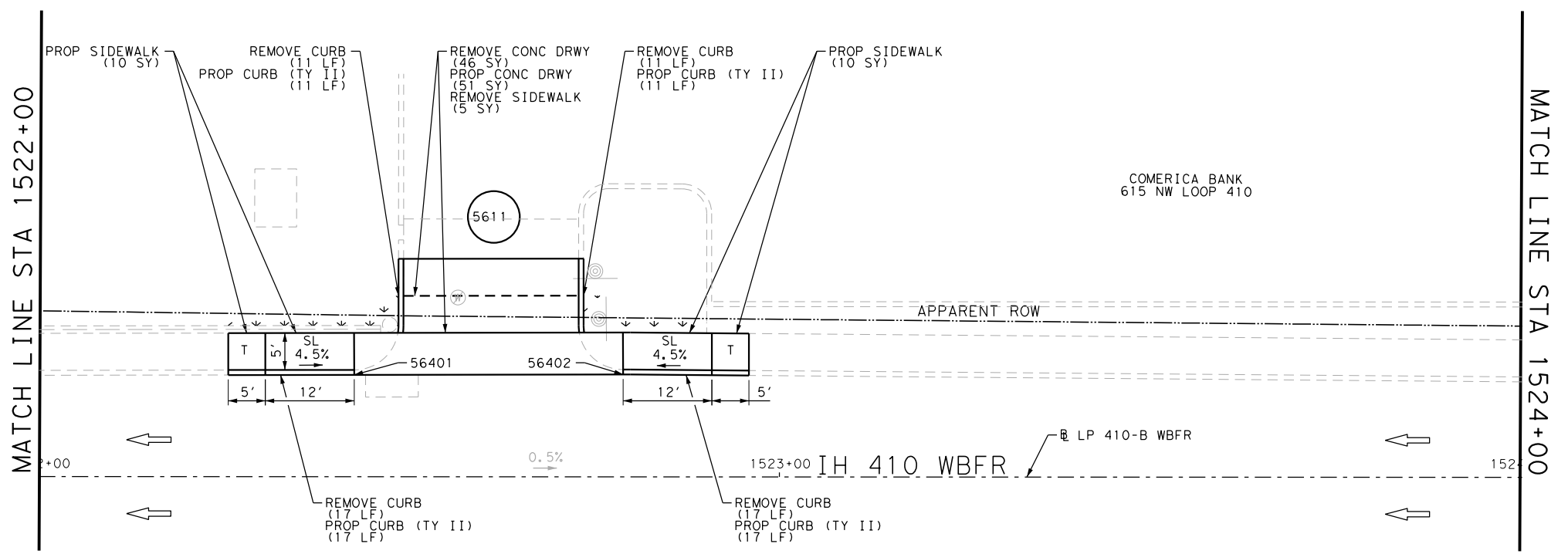
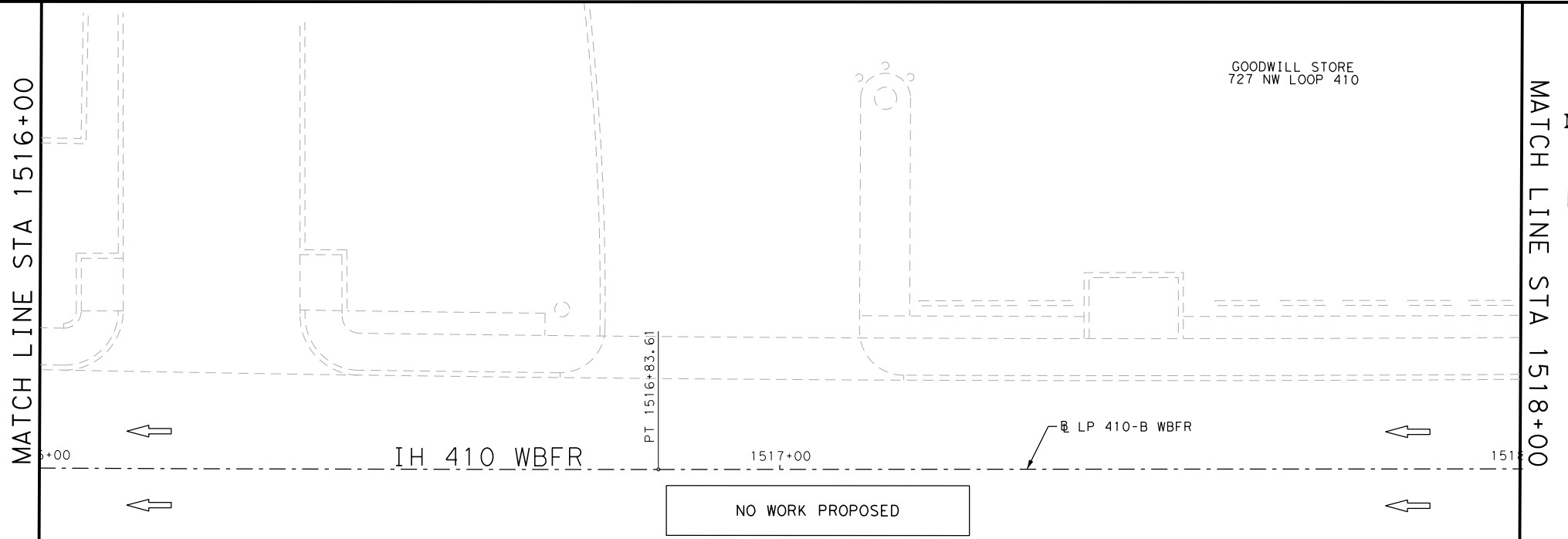
Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1458+00 TO STA 1460+00

SHEET 10 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				560

Plotted on: 5/3/2019

Design Filename: P:\111\35\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_WB04.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	46
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	39
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	5
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	23
0162-6002	BLOCK SODDING	SY	23
0168-6001	VEGETATIVE WATERING	MG	0.36
0529-6002	CONC CURB (TY II)	LF	39
0530-6004	DRIVEWAYS (CONC)	SY	51
0531-6001	CONC SIDEWALKS (4")	SY	20

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DESIGN

JOHN A. TYLER, P.E.

5/3/2019 DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.

5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
56401	13739632.41	2126816.19	--	ME
56402	13739632.89	2126852.50	--	ME

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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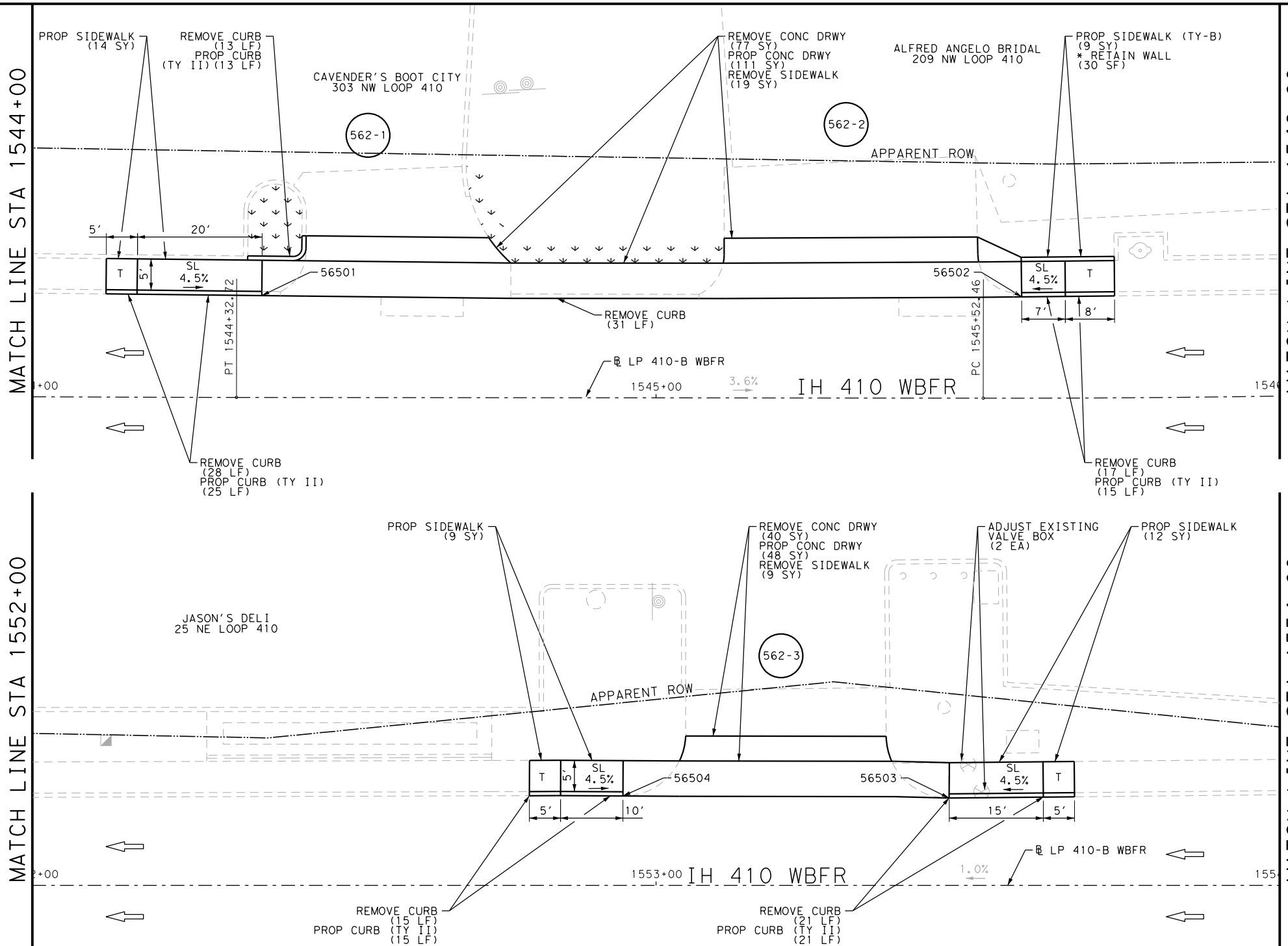
Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 BEGIN PROJECT TO STA 1518+00  
 STA 1522+00 TO STA 1524+00  
 SHEET 1 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	561



Plotted on: 5/3/2019

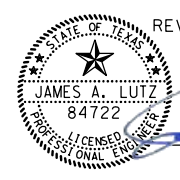
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ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	117
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	125
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	28
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	31
0162-6002	BLOCK SODDING	SY	31
0168-6001	VEGETATIVE WATERING	MG	0.48
0529-6002	CONC CURB (TY II)	LF	89
0530-6004	DRIVEWAYS (CONC)	SY	159
0531-6001	CONC SIDEWALKS (4")	SY	35
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	9
7196-6001	ADJUST EXISTING VALVE BOX	EA	2

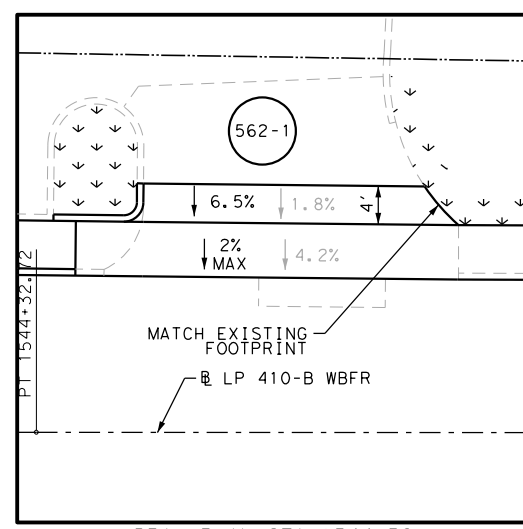
NOTES:  
 \* FOR CONTRACTOR INFORMATION ONLY  
 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.  
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 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

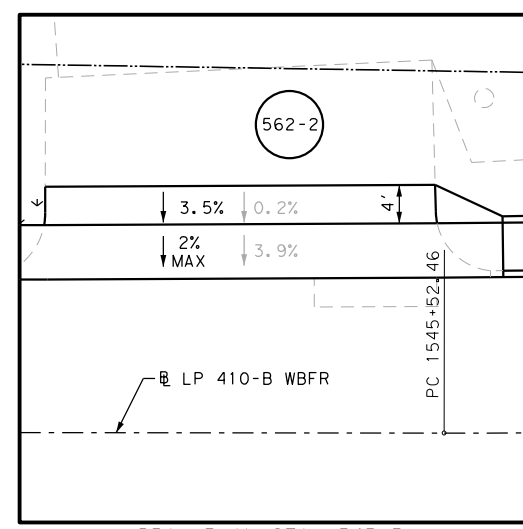
REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

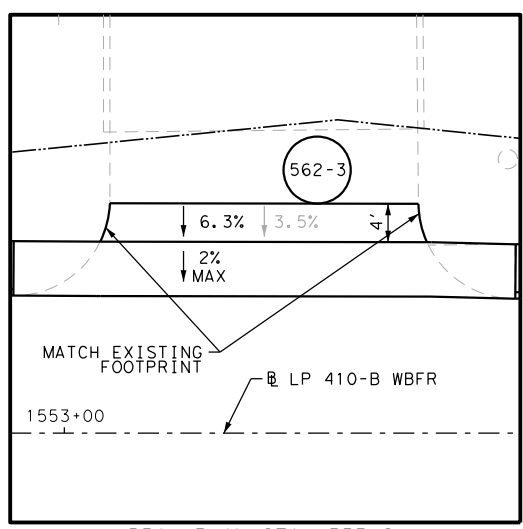
POINT	NORTHING	EASTING	ELEV	DESC
56501	13739632.29	2129006.14	--	ME
56502	13739625.05	2129127.75	--	ME
56503	13739611.93	2129915.20	--	ME
56504	13739612.74	2129862.91	--	ME



DRWY PLAN STA 1544+56



DRWY PLAN STA 1545+31



DRWY PLAN STA 1553+21

**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

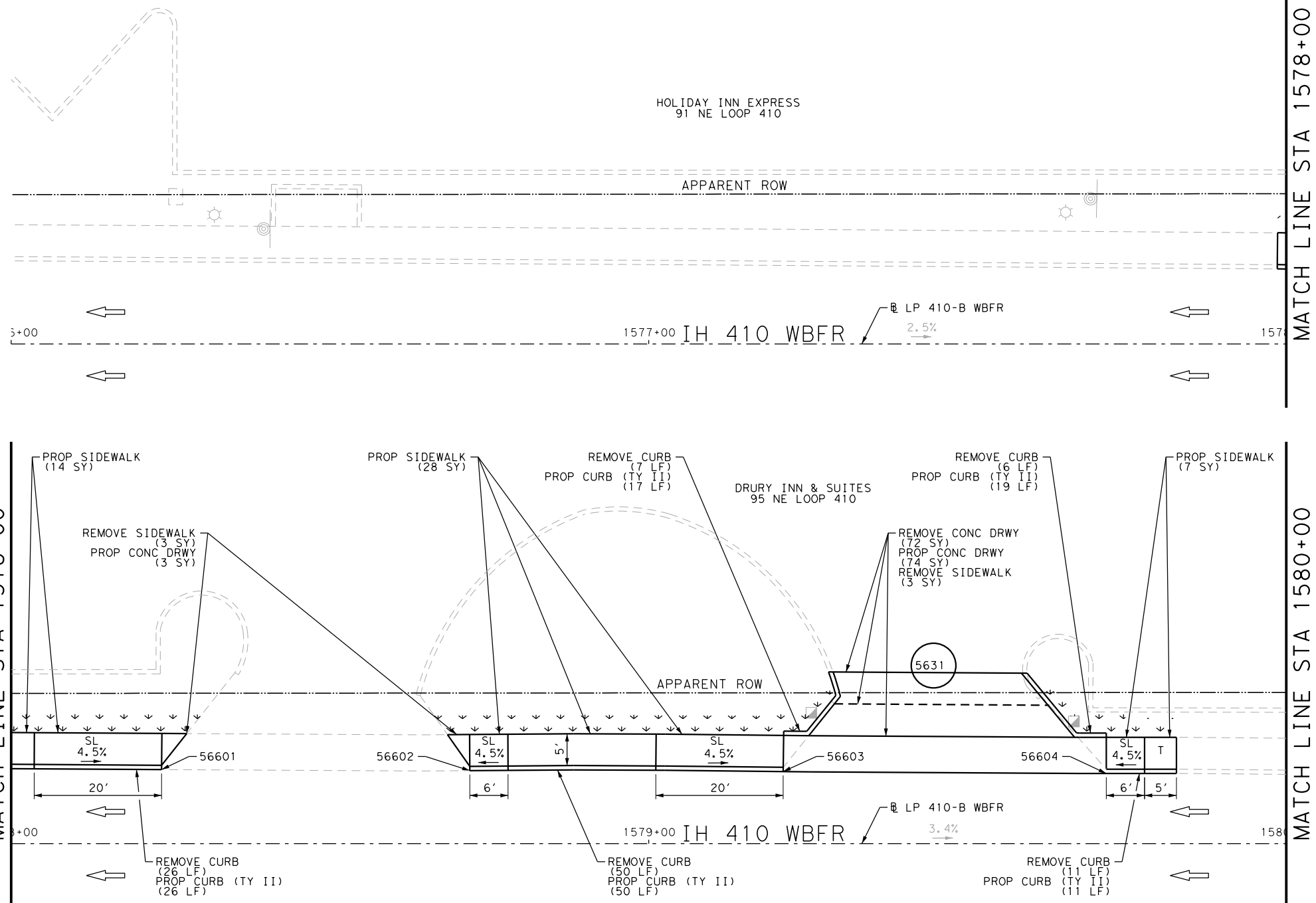
Texas Department of Transportation  
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Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1544+00 TO STA 1546+00  
 STA 1552+00 TO STA 1554+00  
 SHEET 2 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				562

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_WB06.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	72
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	95
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	6
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	40
0162-6002	BLOCK SODDING	SY	40
0168-6001	VEGETATIVE WATERING	MG	0.62
0529-6002	CONC CURB (TY II)	LF	113
0530-6004	DRIVEWAYS (CONC)	SY	60
0531-6001	CONC SIDEWALKS (4")	SY	49

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

*John A. Tyler*  
 JOHN A. TYLER, P.E.  
 DATE 5/3/2019

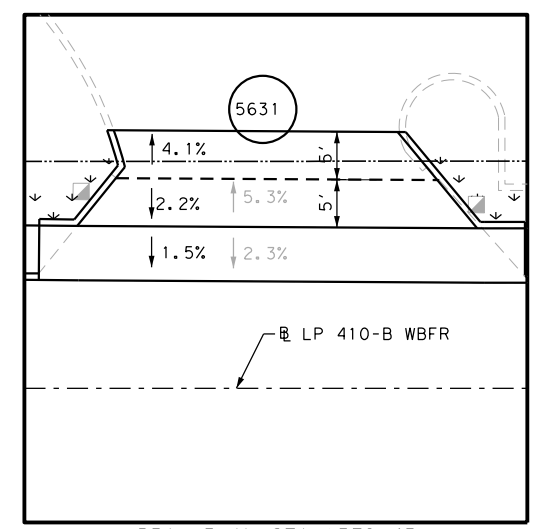
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

*James A. Lutz*  
 JAMES A. LUTZ, P.E.  
 DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
56601	13739585.80	2132391.66	--	ME
56602	13739585.17	2132440.00	--	ME
56603	13739584.56	2132489.15	--	ME
56604	13739583.78	2132539.82	--	ME



REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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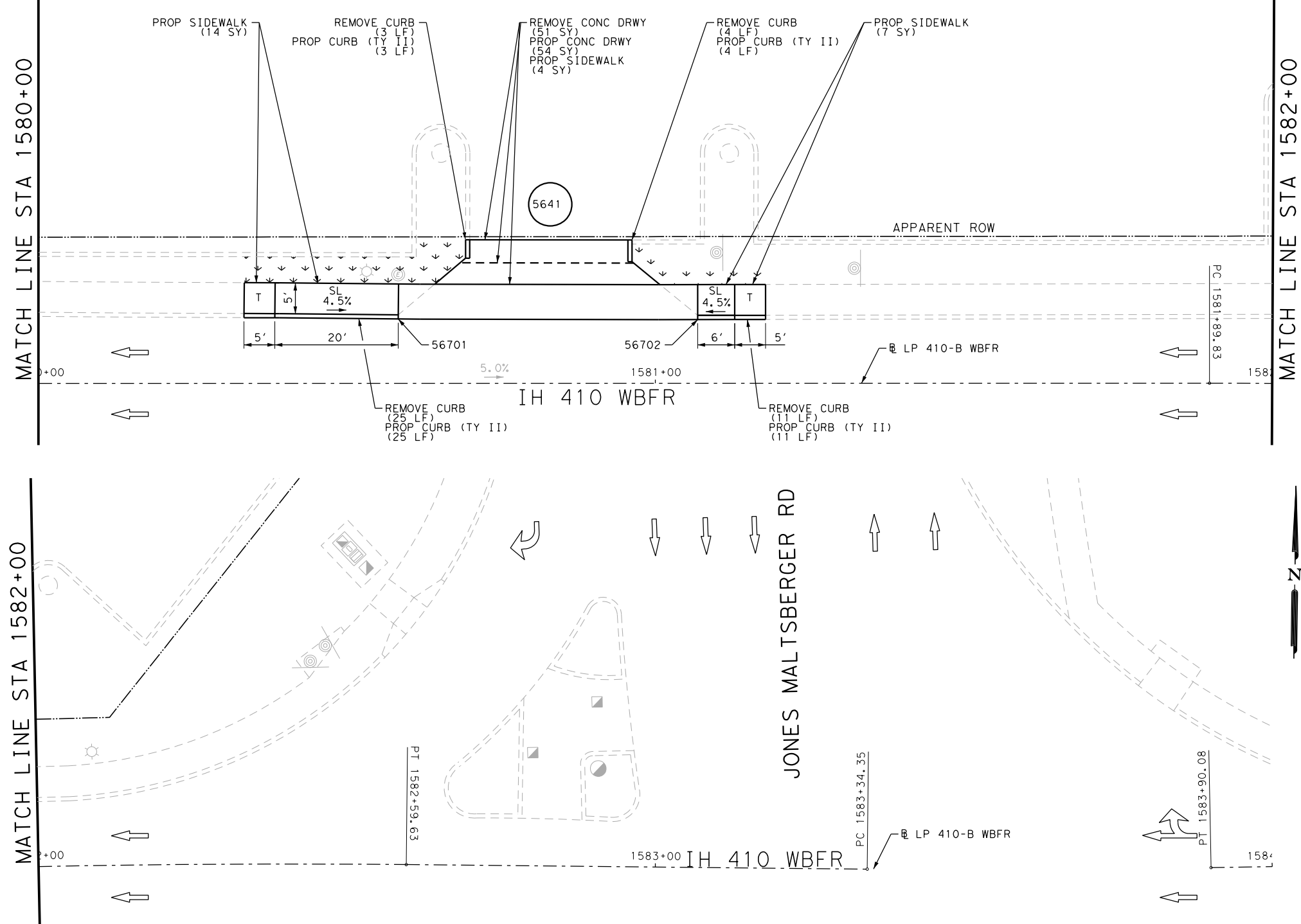
Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1576+00 TO STA 1580+00

SHEET 3 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	563

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\Loop410B\Loop410B\_WB07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	51
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	43
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	27
0162-6002	BLOCK SODDING	SY	27
0168-6001	VEGETATIVE WATERING	MG	0.42
0529-6002	CONC CURB (TY II)	LF	43
0530-6004	DRIVEWAYS (CONC)	SY	54
0531-6001	CONC SIDEWALKS (4")	SY	25

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER

*John A. Tyler*  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

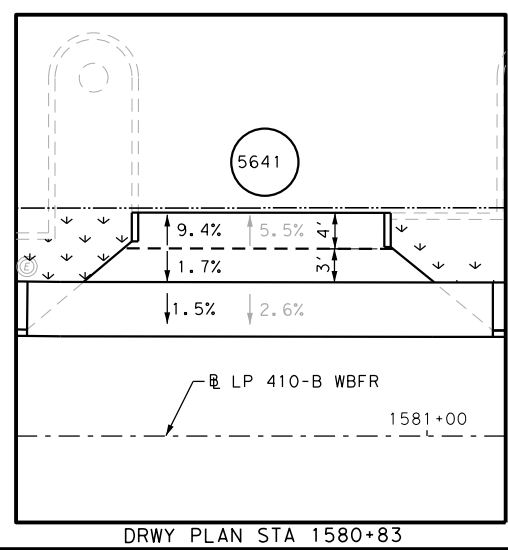
REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER

*James A. Lutz*  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
56701	13739582.38	2132626.37	--	ME
56702	13739581.81	2132674.91	--	ME



REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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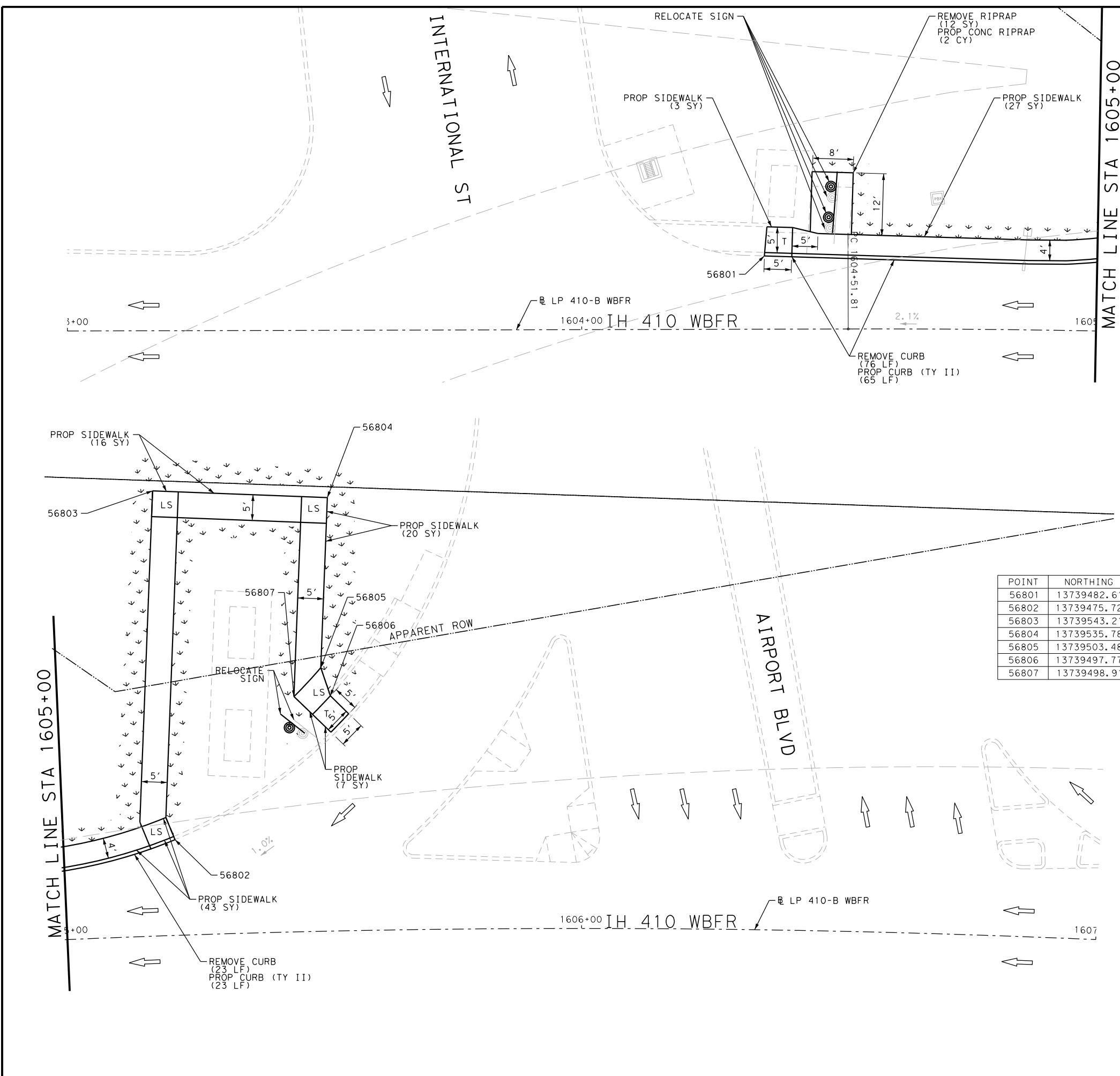
Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1580+00 TO STA 1584+00

SHEET 4 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				564

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_WB08.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	12
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	99
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	88
0531-6001	CONC SIDEWALKS (4")	SY	116
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	3

- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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POINT	NORTHING	EASTING	ELEV	DESC
56801	13739482.61	2135001.12	--	ME
56802	13739475.72	2135087.47	--	ME
56803	13739543.21	2135095.47	--	ME
56804	13739535.78	2135128.65	--	ME
56805	13739503.48	2135121.42	--	ME
56806	13739497.77	2135122.24	--	ME
56807	13739498.91	2135115.27	--	ME

DESIGN

JOHN A. TYLER, P.E.  
5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
5/3/2019  
DATE

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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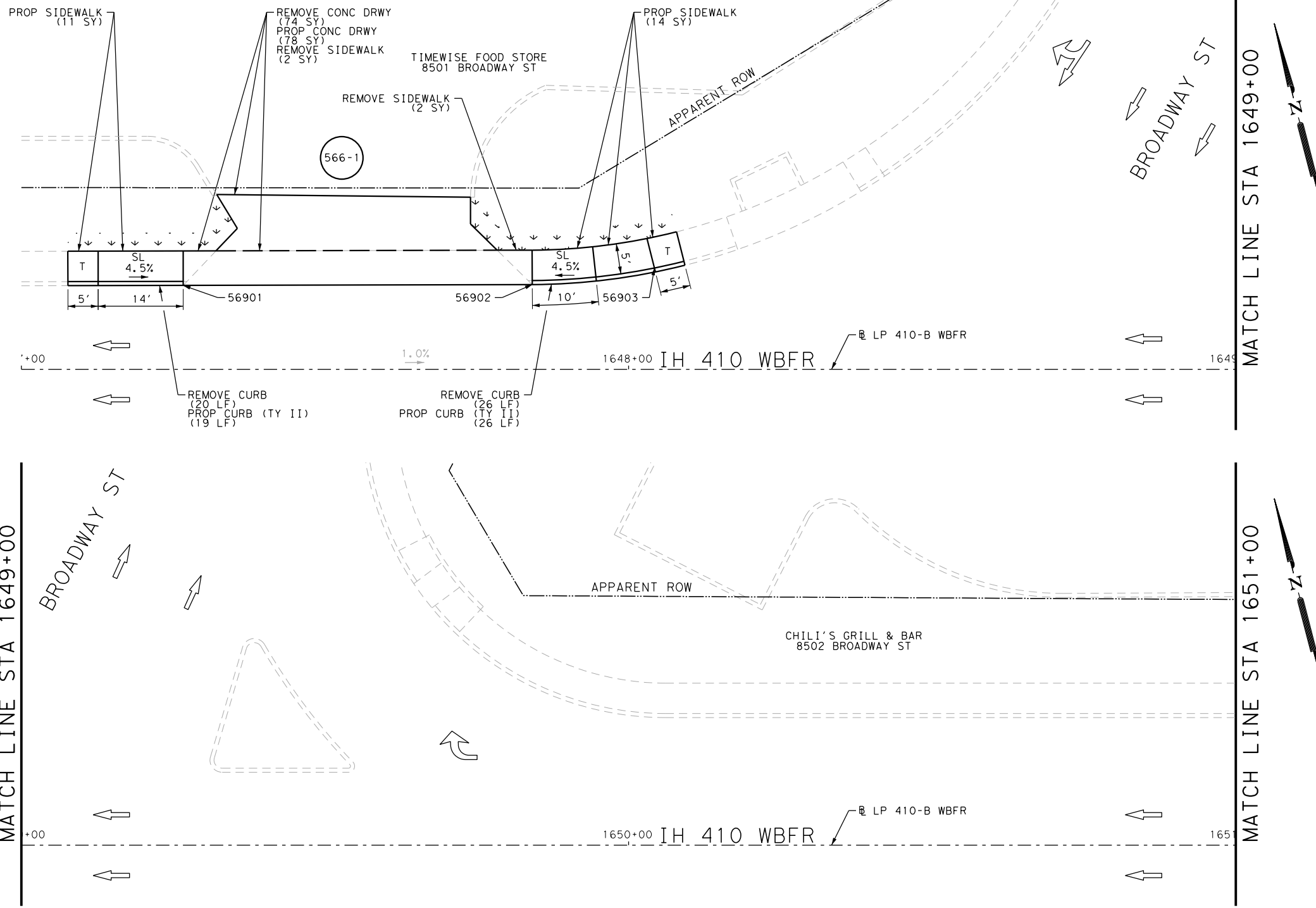
Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1603+00 TO STA 1607+00

SHEET 5 OF 8

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	565

Plotted on: 5/3/2019

Design File name: P:\1111\35\08\Design\Civil\Roadway\Loop410B\Loop410B\_WB09.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	74
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	46
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	4
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	24
0162-6002	BLOCK SODDING	SY	24
0168-6001	VEGETATIVE WATERING	MG	0.37
0529-6002	CONC CURB (TY II)	LF	45
0530-6004	DRIVEWAYS (CONC)	SY	78
0531-6001	CONC SIDEWALKS (4")	SY	25

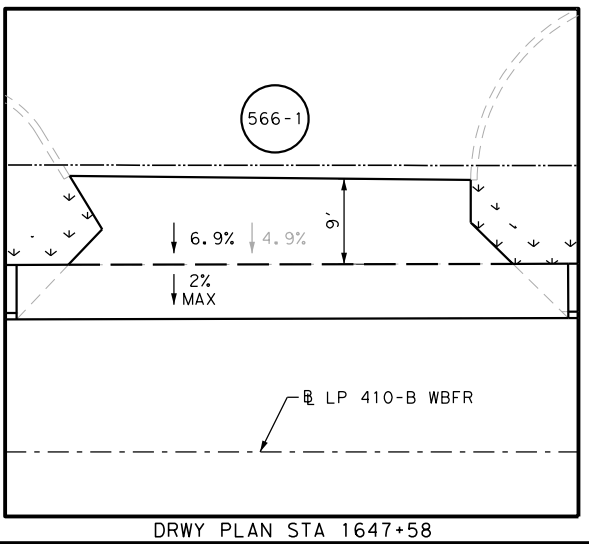
- NOTES:
- \* FOR CONTRACTOR INFORMATION ONLY
  - 1. THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
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DESIGN  
  
 JOHN A. TYLER, P.E. DATE 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E. DATE 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
56901	13738390.23	2139148.21	--	ME
56902	13738376.10	2139203.94	--	ME
56903	13738373.76	2139224.09	--	ME



REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**  
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

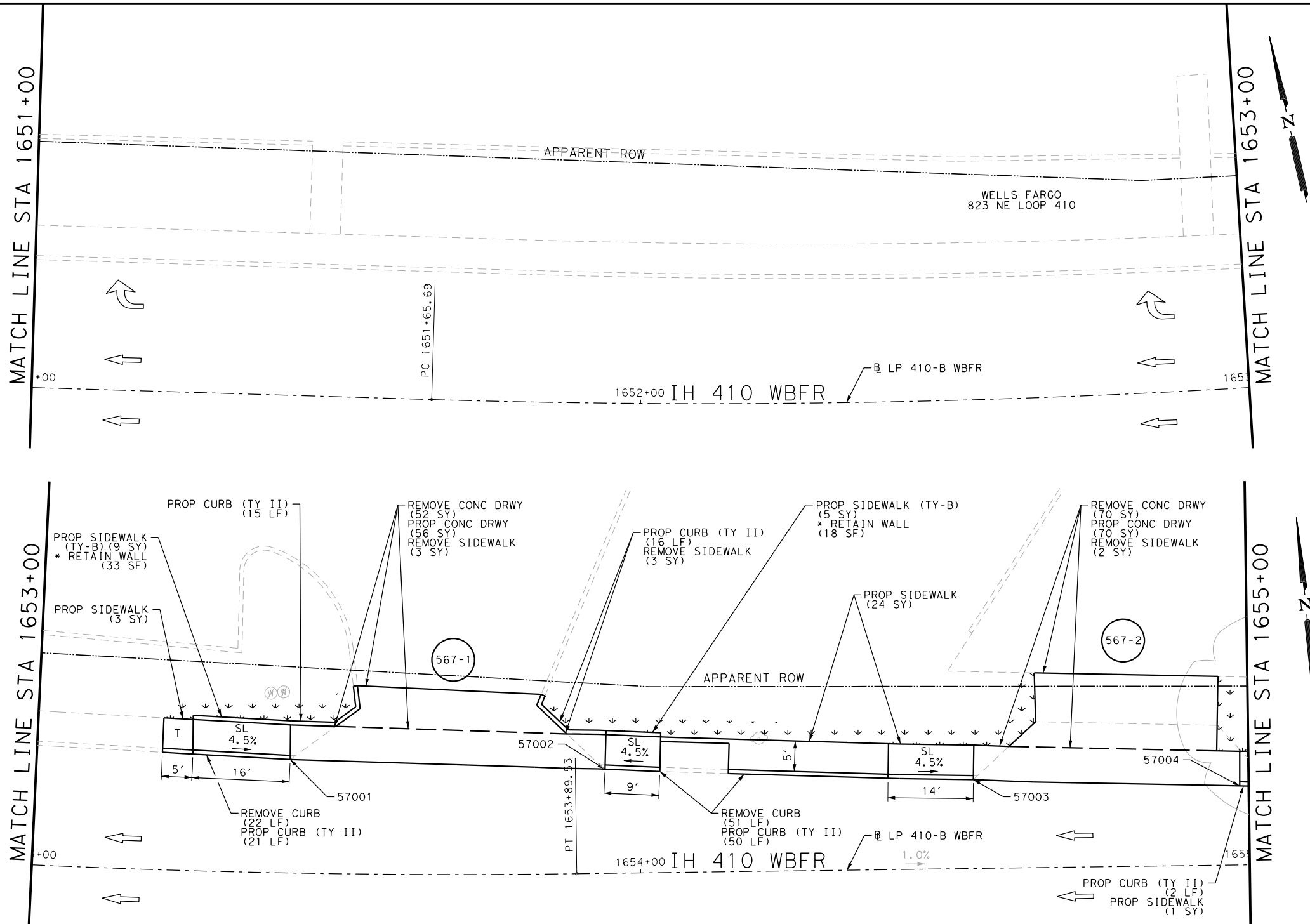
Texas Department of Transportation  
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Loop 410-B  
**SIDEWALK CONSTRUCTION PLAN**  
 STA 1647+00 TO STA 1651+00  
 SHEET 6 OF 8

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
	6	TEXAS		VARIES		
CHK DGN:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
	SAT	BEXAR	0915	12	576	566

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\Roadway\Loop410B\Loop410B-WB10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	122
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	73
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	8
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	47
0162-6002	BLOCK SODDING	SY	47
0168-6001	VEGETATIVE WATERING	MG	0.73
0529-6002	CONC CURB (TY II)	LF	104
0530-6004	DRIVEWAYS (CONC)	SY	126
0531-6001	CONC SIDEWALKS (4")	SY	28
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	14

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  - 2. REFER TO GUIDE SHEET 155 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
  - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

John A. Tyler, P.E.

5/3/2019 DATE

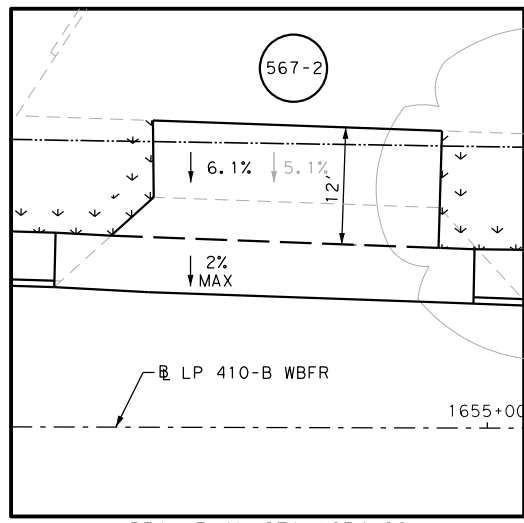
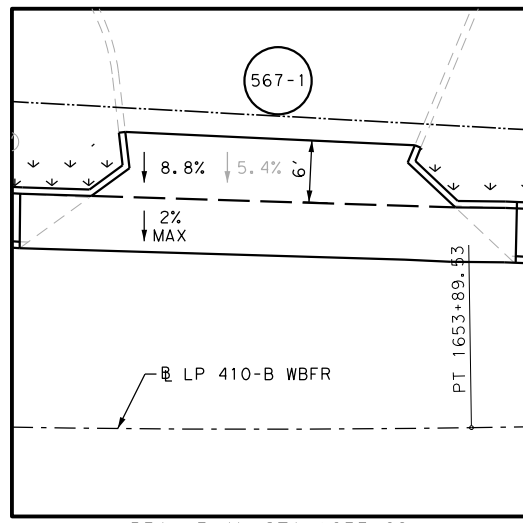
REVIEW AND APPROVAL

James A. Lutz, P.E.

5/3/2019 DATE

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
57001	13738252.85	2139745.70	--	ME
57002	13738245.36	2139796.86	--	ME
57003	13738236.73	2139856.73	--	ME
57004	13738230.71	2139900.05	--	ME



**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9900  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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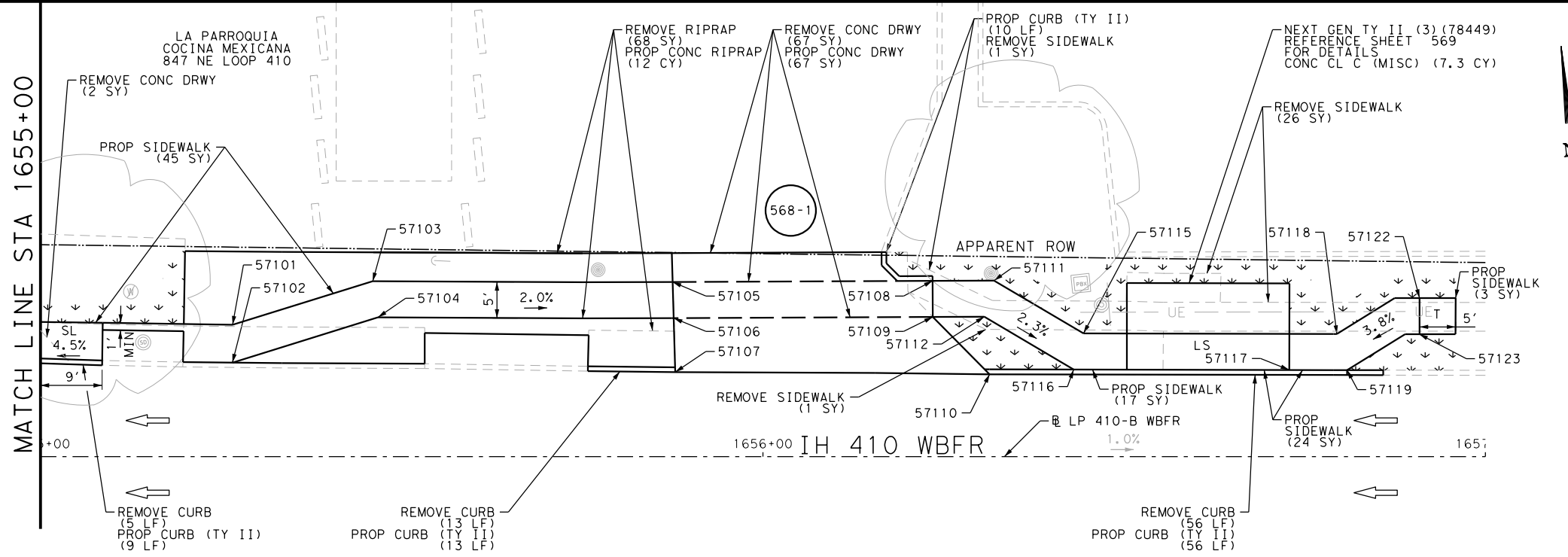
Loop 410-B  
SIDEWALK  
CONSTRUCTION PLAN  
STA 1651+00 TO STA 1655+00

SHEET 7 OF 8

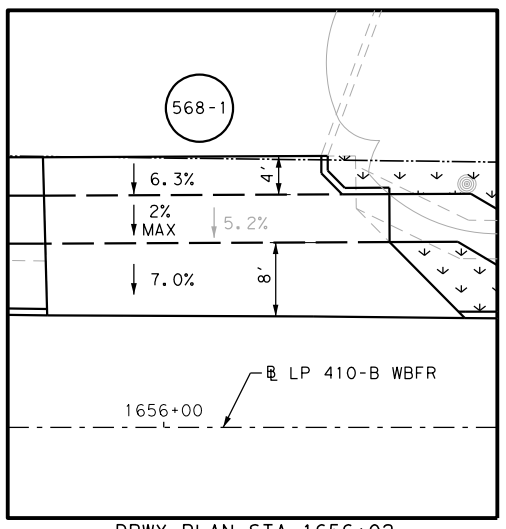
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				567

Plotted on: 5/3/2019

Design File name: P:\11135\08\Design\Civil\Roadway\Loop410B\1113508\_Loop410B\_WB11.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	68
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	69
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	74
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	28
0160-6003	FURNISHING AND PLACING TOPSOIL (4")	SY	58
0162-6002	BLOCK SODDING	SY	58
0168-6001	VEGETATIVE WATERING	MG	0.90
0420-6074	CL C CONC (MISC)	CY	7.3
0432-6003	RIPRAP (CONC) (6 IN)	CY	12
0529-6002	CONC CURB (TY II)	LF	80
0530-6004	DRIVEWAYS (CONC)	SY	67
0531-6001	CONC SIDEWALKS (4")	SY	89



NOTES:  
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DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

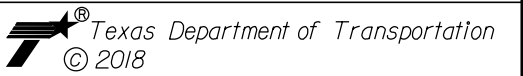
REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
57101	13738233.12	2139928.50	761.86	PROP
57102	13738227.91	2139927.94	--	ME
57103	13738237.15	2139948.39	761.91	PROP
57104	13738232.09	2139948.62	761.84	PROP
57105	13738232.83	2139989.70	761.08	PROP
57106	13738227.84	2139989.33	761.01	PROP
57107	13738220.39	2139988.79	--	ME
57108	13738229.36	2140025.52	761.00	PROP
57109	13738224.38	2140025.03	760.94	PROP
57110	13738215.70	2140032.05	--	ME
57111	13738228.54	2140033.98	760.90	PROP
57112	13738223.69	2140032.12	760.84	PROP
57115	13738220.00	2140045.55	--	ME
57116	13738215.17	2140043.68	--	ME
57117	13738212.08	2140073.39	--	ME
57118	13738216.38	2140080.43	--	ME
57119	13738211.26	2140081.34	--	ME
57122	13738220.17	2140092.32	760.70	PROP
57123	13738215.20	2140091.81	760.65	PROP

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



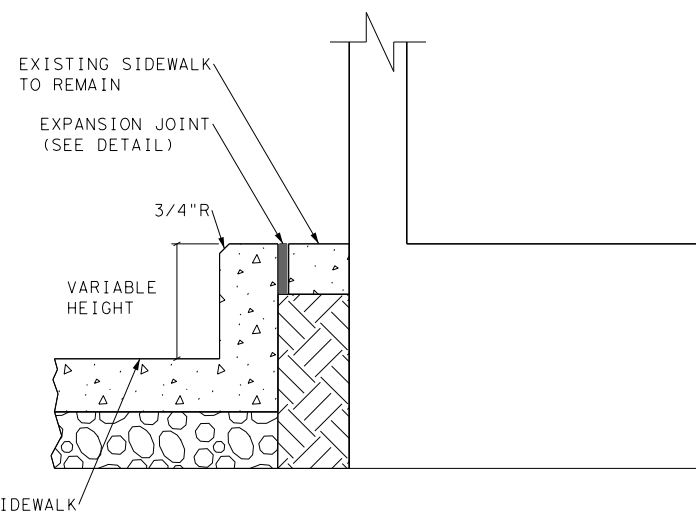
Loop 410-B  
 SIDEWALK  
 CONSTRUCTION PLAN  
 STA 1655+00 TO STA 1657+00

SHEET 8 OF 8

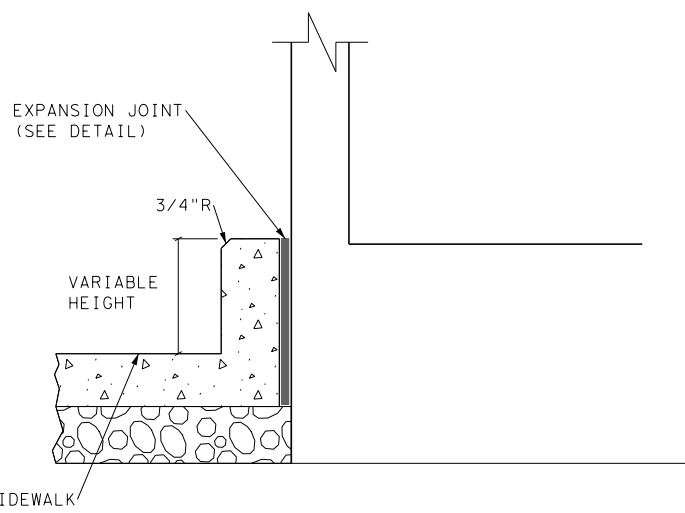
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIABLES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	568

Plotted on: 5/3/2019

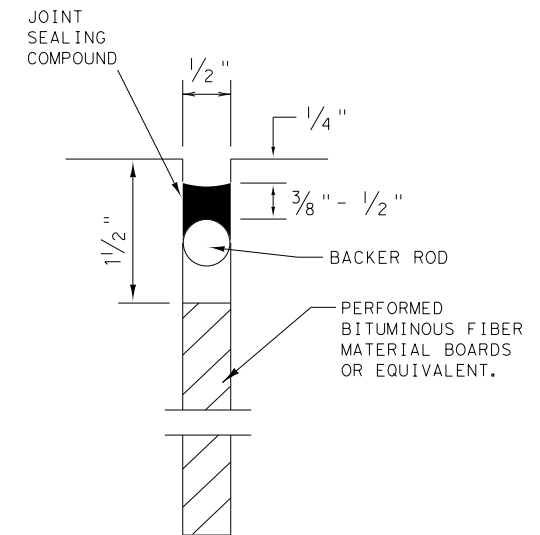
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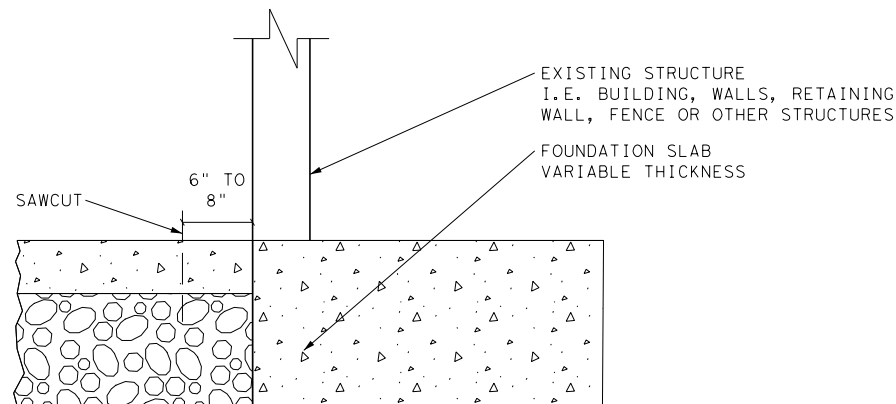
ADJACENT SIDEWALK TO REMAIN DETAIL



ADJACENT SIDEWALK REMOVED DETAIL



EXPANSION JOINT DETAIL



SAWCUT DETAIL

### PAVING OPTION @ BUILDING FACE

NOT TO SCALE

### GENERAL PROTECTION NOTES FOR BUILDINGS AND HISTORIC STRUCTURES:

1. SAW CUT EXISTING SIDEWALK 6 TO 8 INCHES AWAY FROM PROTECTED BUILDING/STRUCTURE TO MINIMIZE POTENTIAL DAMAGE PRIOR TO DEMOLITION OF WALK.
2. CONTRACTOR IS RESPONSIBLE FOR PREVENTING DAMAGE TO ALL BUILDINGS AND STRUCTURES DURING THE ENTIRE CONSTRUCTION PROJECT. IF DIRECTED BY ENGINEER TO HAND REMOVE EXISTING PAVING ADJACENT TO HISTORIC STRUCTURES, PROTECT FOUNDATION, MATERIALS, ELEVATION AND ENTRYWAYS. DO NOT REMOVE EXISTING MATERIALS IF FACADE (BRICK/STONE, ETC.) UTILIZES THE MATERIALS TO BE REMOVED AS A FOOTING, FOUNDATION OR SUPPORT. IF THIS CONDITION IS OBSERVED, IMMEDIATELY CONTACT ENGINEER AND DO NOT EXCAVATE FURTHER. SEPARATE PAYMENT WILL NOT BE MADE FOR HAND REMOVAL.
3. REPAIR OR REPLACE IN KIND, AT CONTRACTORS EXPENSE, ANY DAMAGE TO HISTORIC OR NON-HISTORIC MATERIAL THAT RESULTS FROM AN ACT OF OMISSION ON THE PART OF OR ON BEHALF OF THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR LOCATING A REPLACEMENT SOURCE FOR HISTORIC AND NON-HISTORIC MATERIALS DAMAGED IN THE PROCESS OF CONSTRUCTION. INFORM TXDOT ENVIRONMENTAL AFFAIRS DIVISION (ENV) OF PROPOSED REPAIRS AND/OR DAMAGED AREAS IN ORDER TO FACILITATE CONSULTATION WITH TEXAS HISTORICAL COMMISSION. MATERIAL AND SOURCE SHALL BE APPROVED BY TXDOT ENV PRIOR TO REPLACEMENT.
4. PROTECT BUILDINGS AND STRUCTURE FROM CONCRETE SPLASH UTILIZING A MATERIAL APPROVED BY THE ENGINEER. ANY CONCRETE SPLASH AS A RESULT OF CONSTRUCTION ACTIVITIES MUST BE REMOVED FROM THE BUILDING OR STRUCTURE AT CONTRACTORS EXPENSE. NO PAYMENT WILL BE MADE FOR BUILDING PROTECTION.
5. REFER TO HISTORIC BUILDING PROTECTION NOTES, EPIC (ENVIRONMENTAL PERMITS, ISSUES AND COMMITMENTS) SHEET FOR FURTHER DIRECTION INFORMATION.

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

SCALE: NOT TO SCALE 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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### BUILDING WALL DETAIL

SHEET 1 OF 1

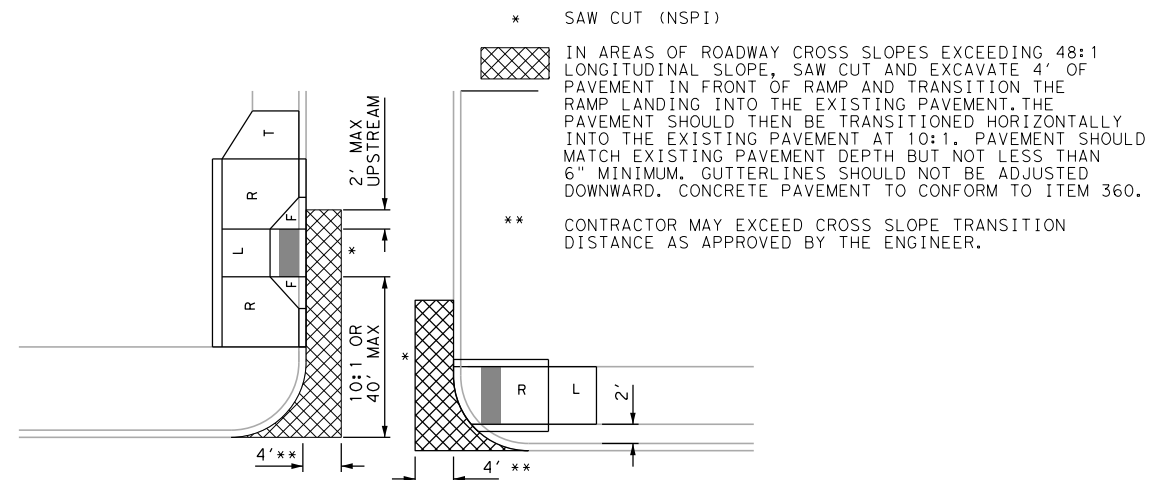
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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				569



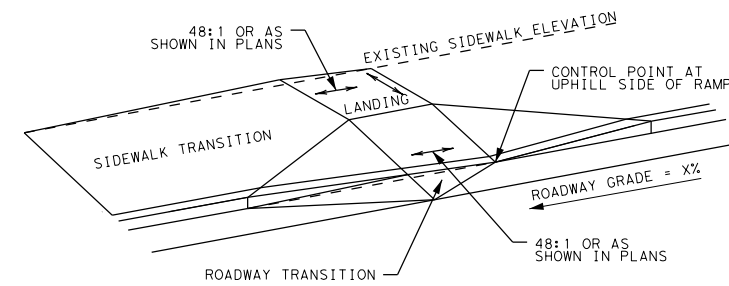
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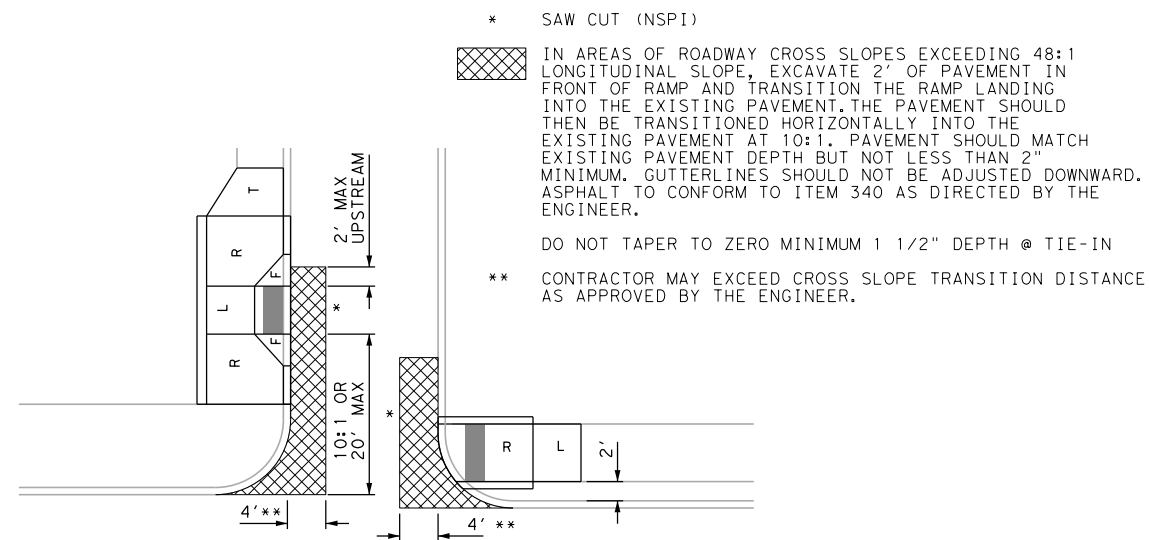
CONCRETE ROADWAY  
OR  
CURB AND GUTTER SECTION



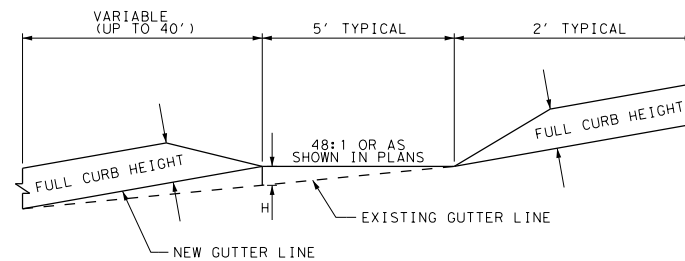
ROADWAY TRANSITION



ASPHALT/SEALCOAT ROADWAY



CURB ELEVATION



DIFFERENTIAL BETWEEN RAMP AND ROADWAY LONGITUDINAL SLOPE	H	
1%	0.04'	0.50"
2%	0.08'	1.00"
3%	0.12'	1.50"
4%	0.16'	2.00"
5%	0.20'	2.40"
6%	0.24'	2.90"

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
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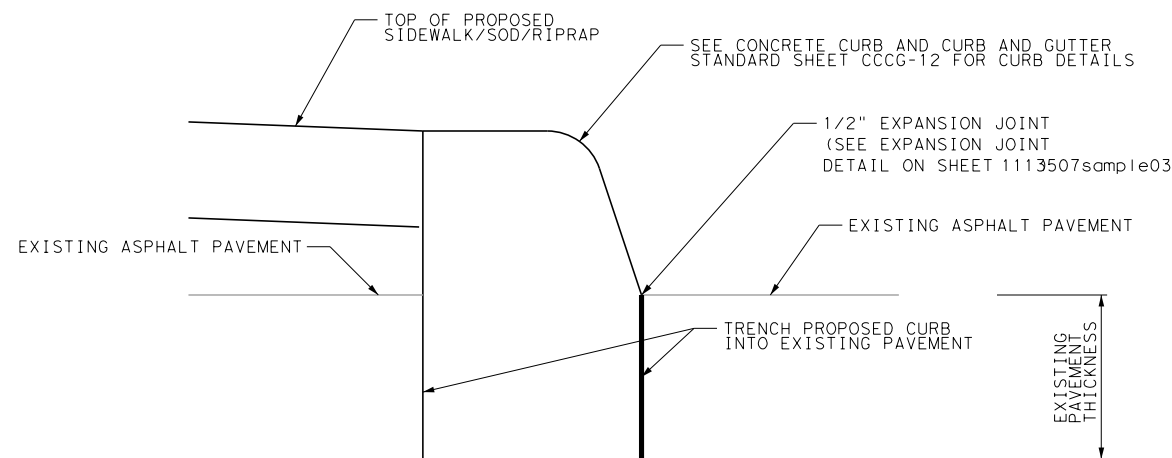
SPECIAL DETAILS

SHEET 1 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	570

# CURB TRENCH DETAIL

USE WHEN INSTALLING A CURB INTO EXISTING ASPHALT PAVEMENT

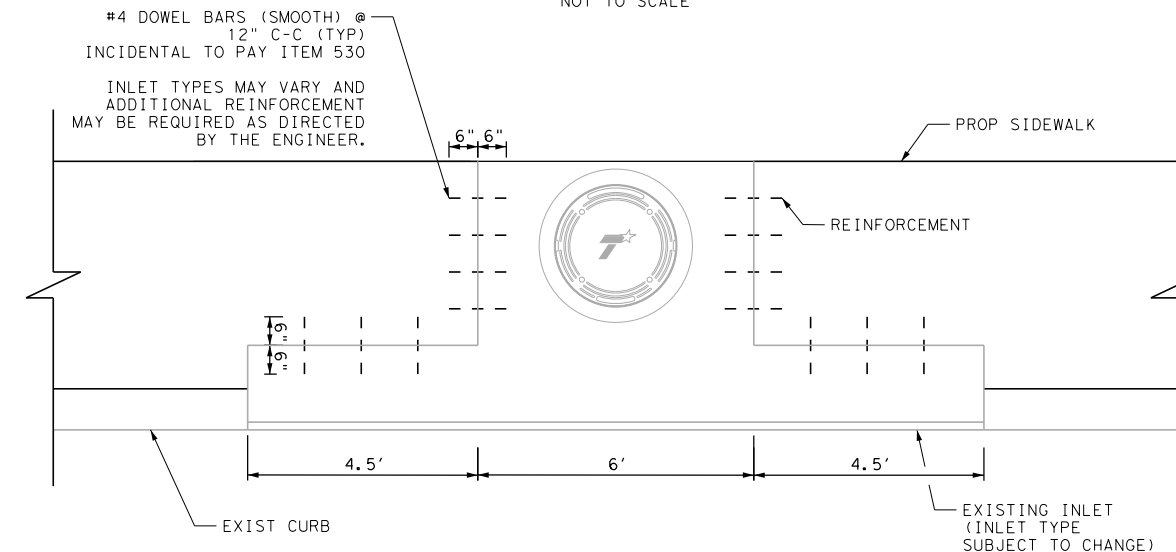


**NOTES:**

1. VERTICAL DOWELING PROPOSED CURB INTO EXISTING PAVEMENT IS NOT PERMITTED
2. NO ADDITIONAL PAYMENT SHALL BE MADE FOR ADDITIONAL CONCRETE REQUIRED TO MATCH EXISTING PAVEMENT THICKNESS

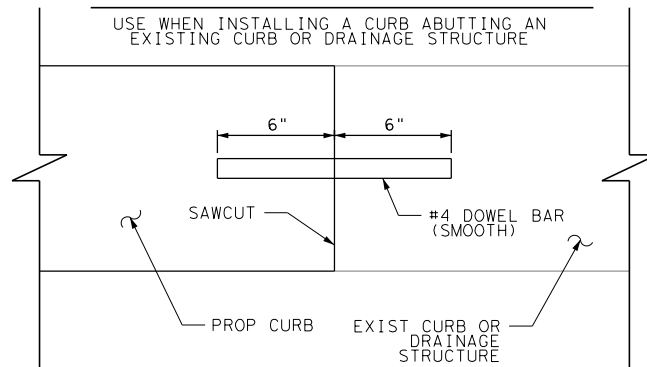
# INLET DOWELING DETAIL

NOT TO SCALE

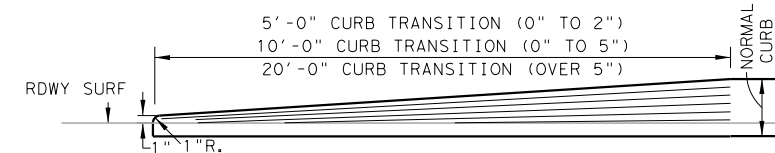


# CURB TIE-IN DETAIL

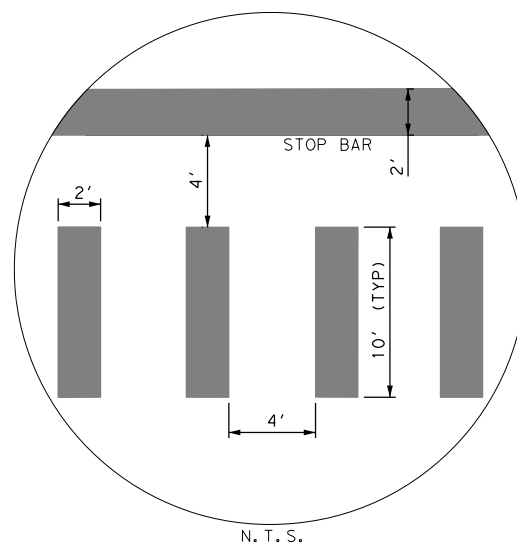
USE WHEN INSTALLING A CURB ABUTTING AN EXISTING CURB OR DRAINAGE STRUCTURE



# TYPICAL TRANSITION FOR CONCRETE CURB ENDS



# TYPICAL CONTINENTAL CROSSWALK DETAIL



DESIGN  
 JOHN A. TYLER, P.E.  
 105193  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 84722  
 5/3/2019  
 DATE

SCALE: NOT TO SCALE

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**Pape-Dawson Engineers**

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 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
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SPECIAL DETAILS

SHEET 2 OF 10

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CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	571

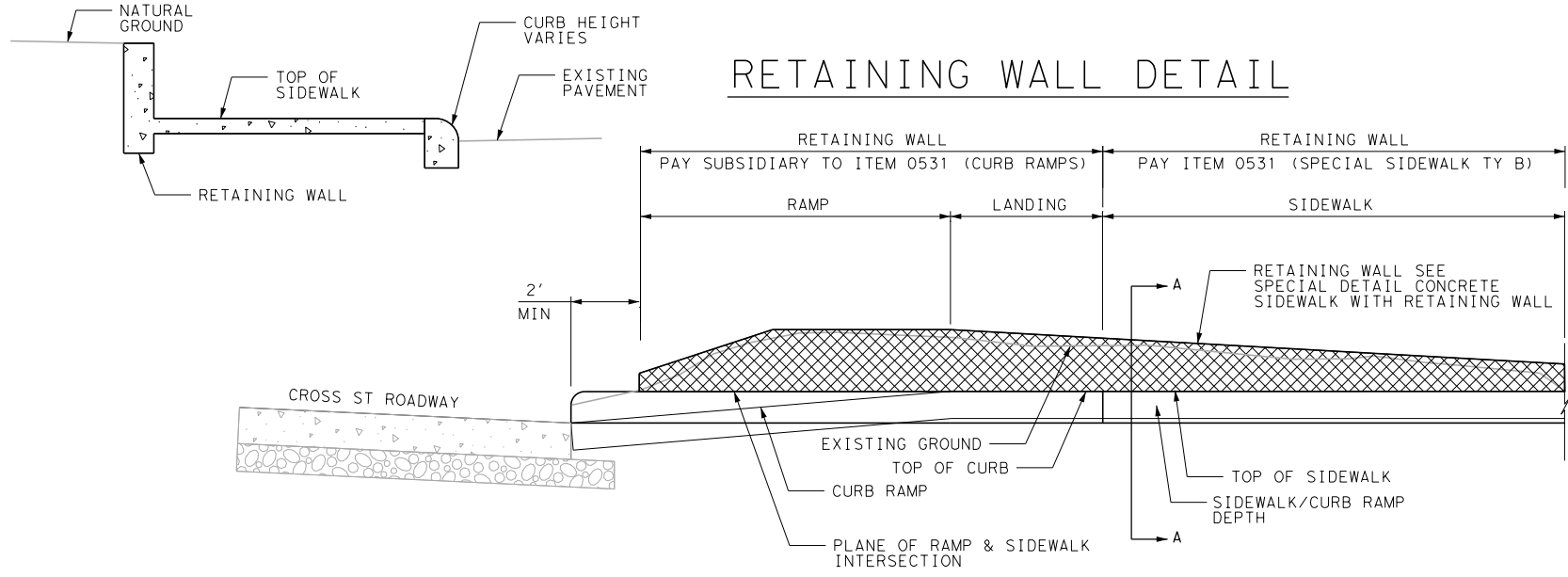
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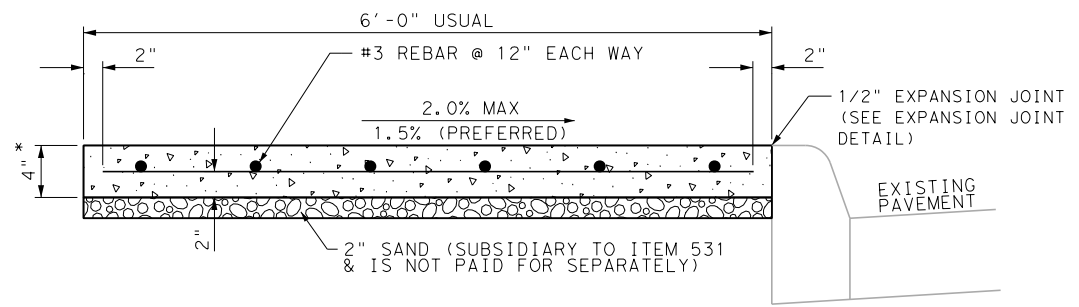
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### SECTION A-A



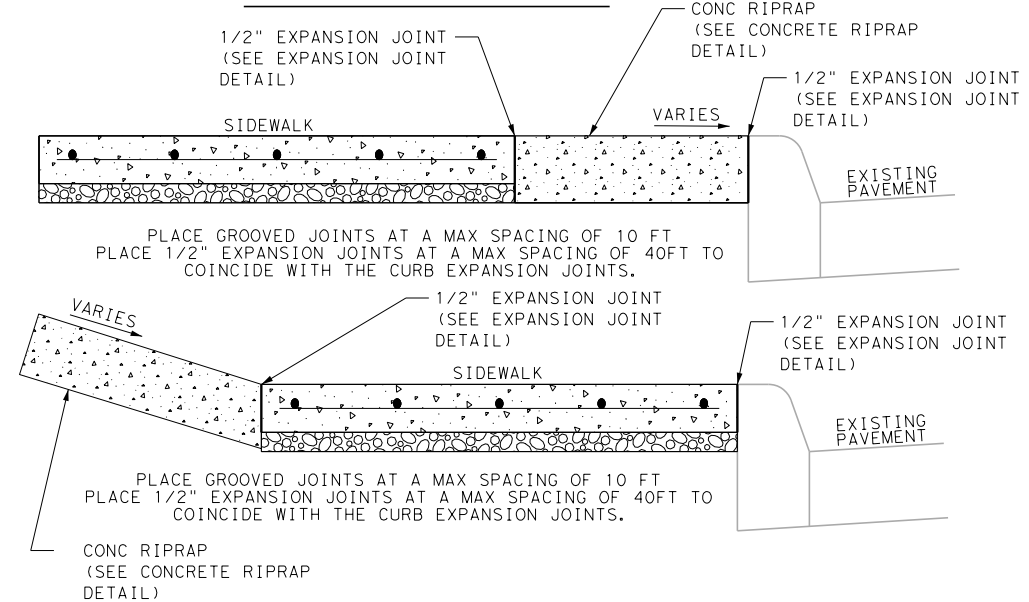
### SIDEWALK DETAILS



PLACE GROOVED JOINTS IN THE SIDEWALK AT A MAX SPACING OF 10 FT  
 PLACE 1/2" EXPANSION JOINTS AT A MAX SPACING OF 40FT TO COINCIDE WITH THE CURB EXPANSION JOINTS.

\* UNLESS OTHERWISE SHOWN

### RIPRAP DETAIL

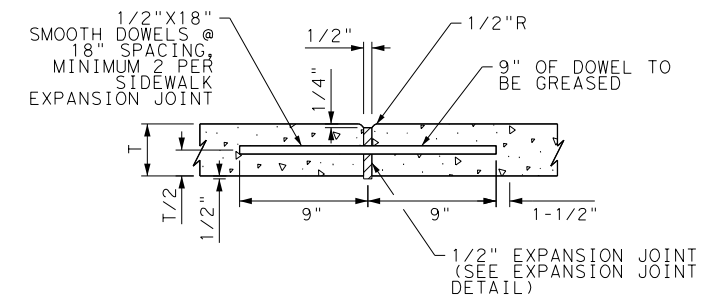


PLACE GROOVED JOINTS AT A MAX SPACING OF 10 FT  
 PLACE 1/2" EXPANSION JOINTS AT A MAX SPACING OF 40FT TO COINCIDE WITH THE CURB EXPANSION JOINTS.

PLACE GROOVED JOINTS AT A MAX SPACING OF 10 FT  
 PLACE 1/2" EXPANSION JOINTS AT A MAX SPACING OF 40FT TO COINCIDE WITH THE CURB EXPANSION JOINTS.

CONC RIPRAP (SEE CONCRETE RIPRAP DETAIL)

### SIDEWALK EXPANSION JOINT DETAIL



NOTES:

1. SIDEWALK EXPANSION JOINT DOWELS ARE CONSIDERED SUBSIDIARY TO ITEM 531.
2. SIDEWALK EXPANSION JOINTS SHALL BE INSTALLED AT MAXIMUM 40 FT INTERVALS, COINCIDE WITH CURB EXPANSION JOINT, CONNECTIONS TO EXISTING CONCRETE, CONNECTIONS TO PROPOSED CONCRETE DRIVEWAYS, WHERE DAILY WORK TERMINATES, AND AS DIRECTED BY THE ENGINEER.

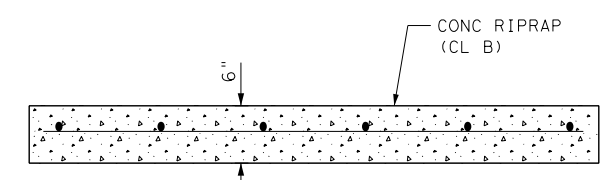
DESIGN

JOHN A. TYLER, P.E.  
 5/3/2019 DATE

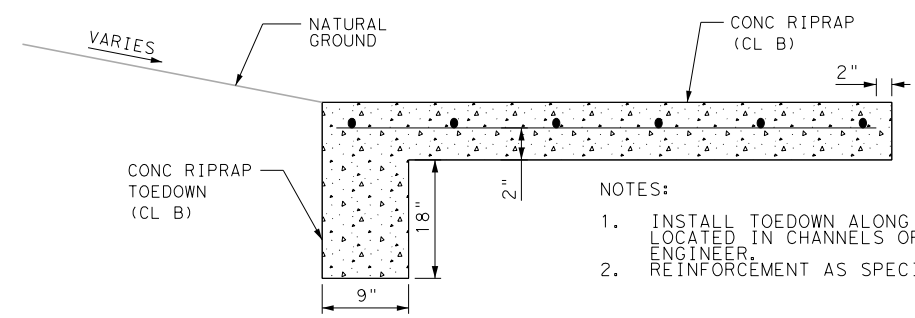
REVIEW AND APPROVAL

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 5/3/2019 DATE

### CONCRETE RIPRAP DETAIL



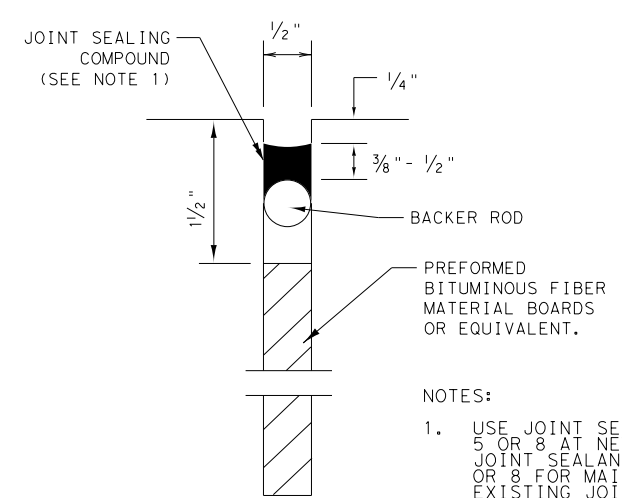
### CONCRETE RIPRAP W/ TOEDOWN DETAIL



NOTES:

1. INSTALL TOEDOWN ALONG PERIMETER OF RIPRAP LOCATED IN CHANNELS OR AS DIRECTED BY THE ENGINEER.
2. REINFORCEMENT AS SPECIFIED IN ITEM 432.

### EXPANSION JOINT DETAIL



NOTES:

1. USE JOINT SEALANT CLASS 5 OR 8 AT NEW JOINTS. USE JOINT SEALANT CLASS 4, 5, 7, OR 8 FOR MAINTAINING EXISTING JOINTS.

SCALE: NOT TO SCALE

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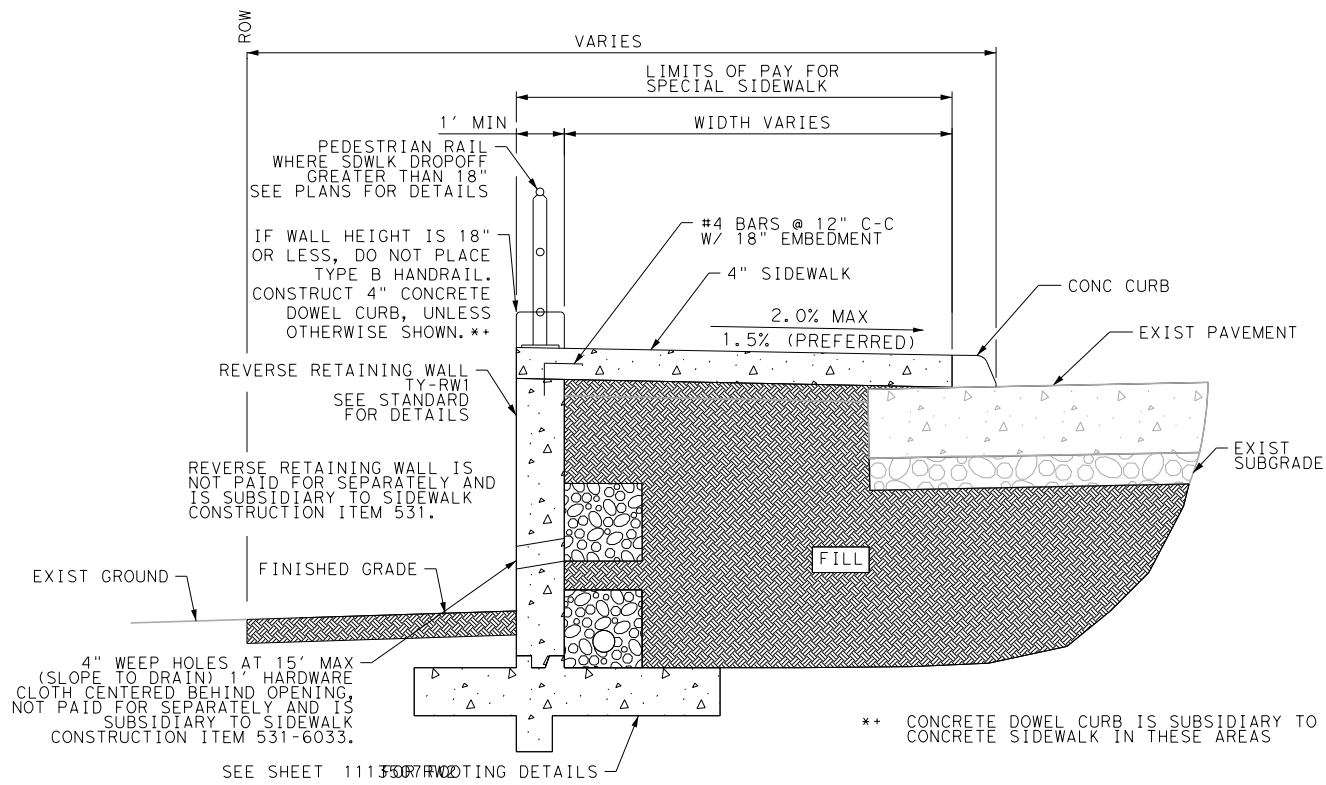
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SPECIAL DETAILS

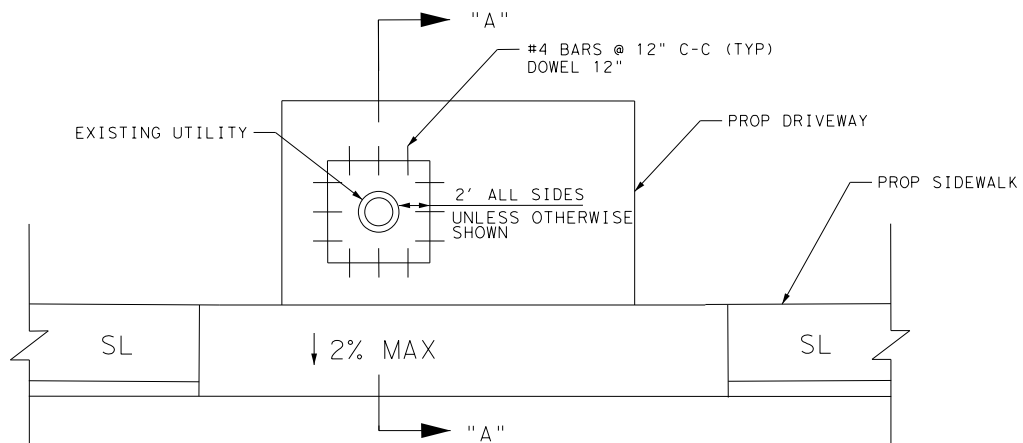
SHEET 3 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	572

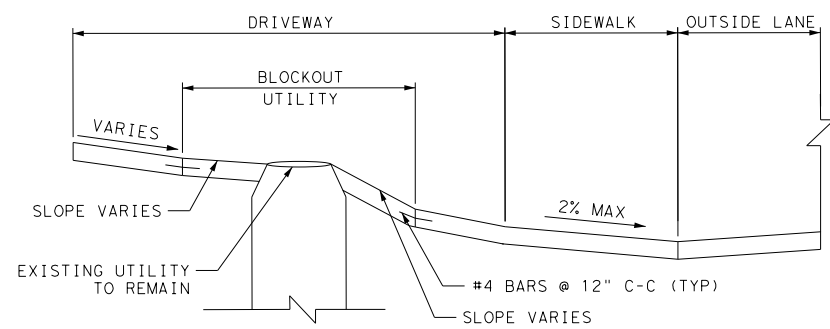
# REVERSE RETAINING WALL DETAIL (CONCRETE SIDEWALK (SPECIAL) (TY B))



## UTILITY BLOCKOUT

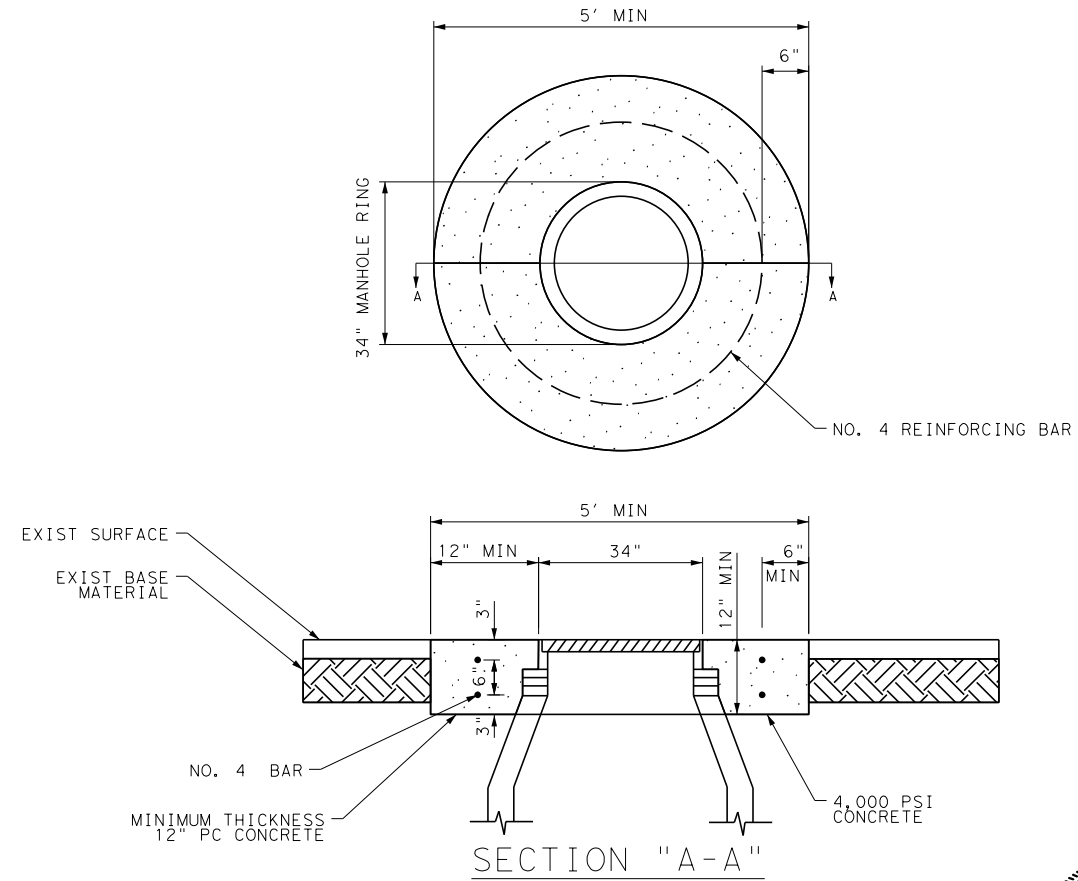


- SEQUENCE OF WORK:
1. REMOVE EXISTING CONCRETE OR ASPHALT WITHIN LIMITS OF PROPOSED WORK. CONSTRUCT FORMWORK FOR PROPOSED IMPROVEMENTS, INCLUDING UTILITY BLOCKOUT AS SHOWN. EXISTING UTILITY RIM TO REMAIN UNDISTURBED.
  2. CONSTRUCT PROPOSED IMPROVEMENTS EXCEPT WITHIN UTILITY BLOCKOUT AREA. ALLOW TIME TO CURE, REMOVE FORMWORK.
  3. DOWEL REINFORCEMENT AS SHOWN. CONSTRUCT IMPROVEMENTS WITHIN UTILITY BLOCKOUT AREA FLUSH WITH RIM OF UTILITY AND SURROUNDING (COMPLETED) IMPROVEMENTS.



## SECTION "A-A"

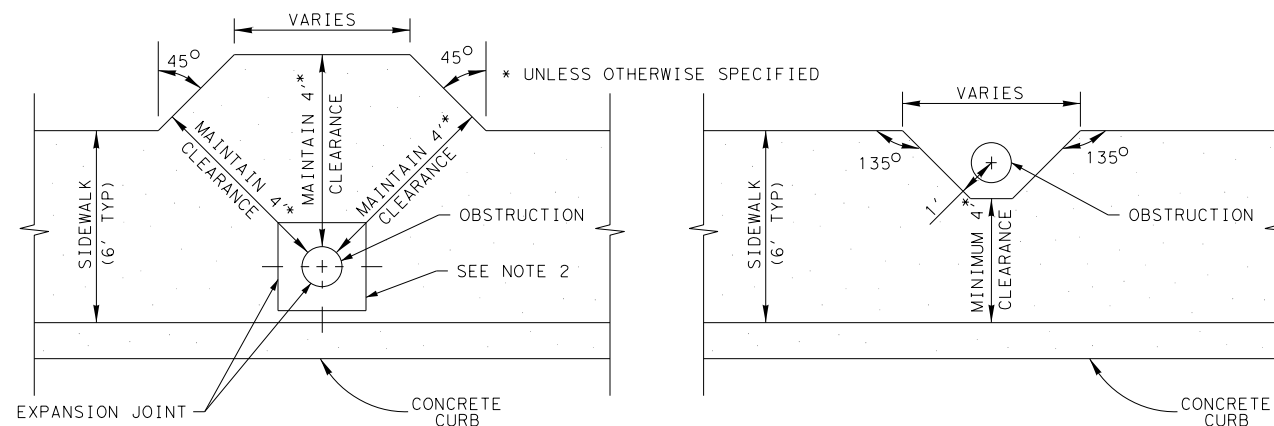
# MANHOLE RING ENCASEMENT DETAIL



- NOTE:
1. ALL ENCASEMENT IS SUBSIDIARY TO ITEM 7090.
  2. THE CONCRETE SHALL BE 4,000 PSI, MIN, AND REINFORCED WITH NO. 4 BARS, AS SHOWN.
  3. MANHOLE RING ENCASEMENT IS REQUIRED ON ALL MANHOLES.

## OBSTRUCTION CONFLICT

- NOTES:
1. UTILIZE DETAIL AT OBSTRUCTION ENCROACHMENTS INTO THE PEDESTRIAN ACCESS ROUTE. A MINIMUM UNOBSTRUCTED CLEARANCE OF 4' UNLESS OTHERWISE SPECIFIED, SHOULD BE MAINTAINED AROUND THE OBSTRUCTION MEASURED FROM THE MOST RESTRICTIVE LOCATION OR AS APPROVED BY THE ENGINEER.
  2. IF OBSTRUCTION IS LOCATED WITHIN THE SIDEWALK, CONSTRUCT 2' SQUARE CONSTRUCTION JOINT CENTERED ON OBSTRUCTION TO FACILITATE FUTURE MAINTENANCE WITHOUT FULL SIDEWALK PANEL REMOVAL/REPLACEMENT.



## OBSTRUCTION IN SIDEWALK

## OBSTRUCTION OUTSIDE SIDEWALK

DESIGN

STATE OF TEXAS  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E. 5/3/2019 DATE

REVIEW AND APPROVAL

STATE OF TEXAS  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E. 5/3/2019 DATE

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REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

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SPECIAL DETAILS

SHEET 4 OF 10

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CHK:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK:	SAT	BEXAR	0915	12
DWG:				576
				573

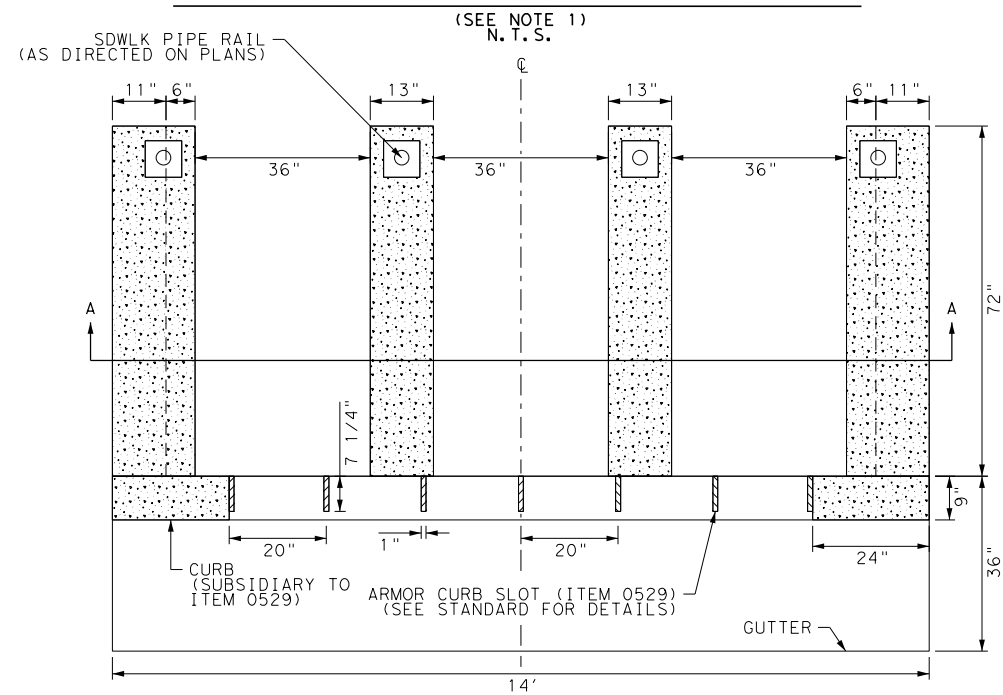
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Plotted on: 5/3/2019

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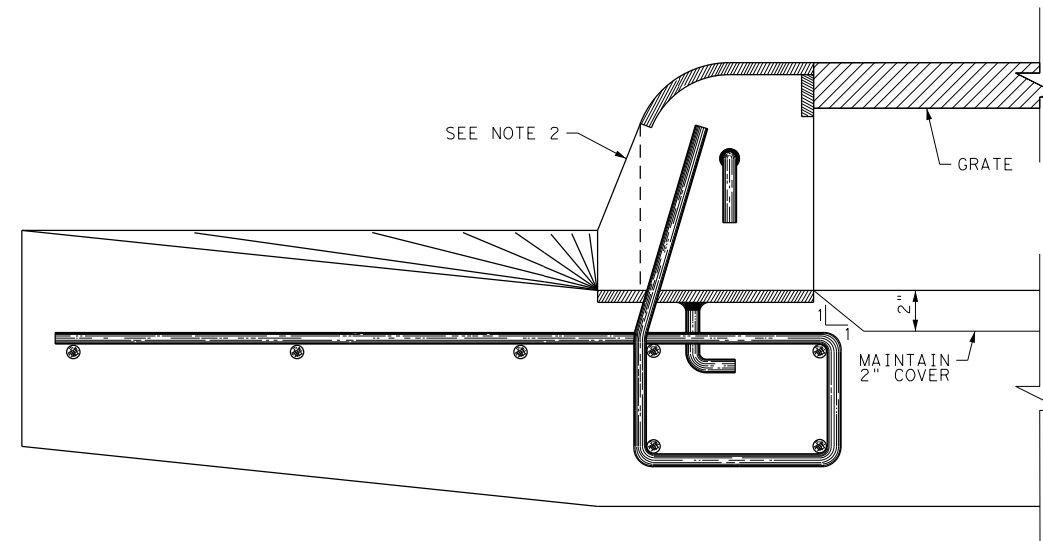
### SIDEWALK (TYPE A) DETAIL



NOTE: GRATE AND FRAMES NOT SHOWN IN PLAN VIEW FOR CLARITY

### ARMOR CURB SLOT DETAIL

N. T. S.

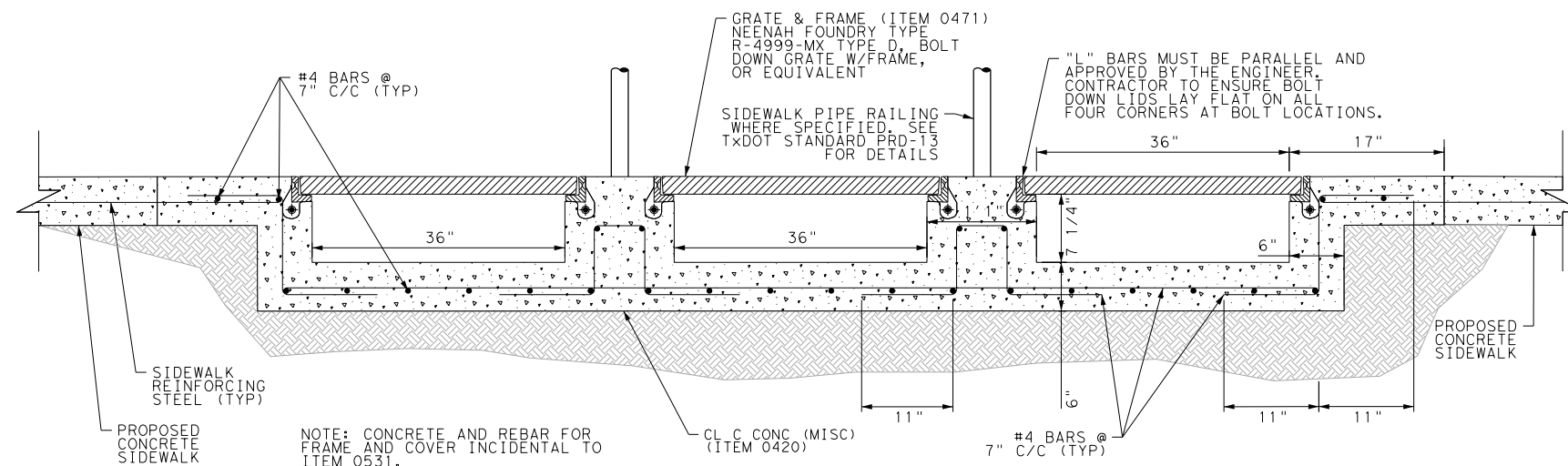


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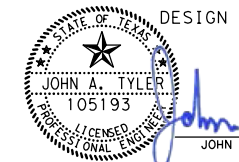
- 1) SIDEWALK (TY A) IS PAID SEPARATELY UNDER THE FOLLOWING PAY ITEMS UNLESS OTHERWISE SHOW:  
 ITEM 0104-6029 REMOVING CONC (CURB OR CURB & GUTTER)  
 ITEM 0471-6003 GRATE & FRAME  
 ITEM 0529-6020 CONC CURB & GUTTER (ARMOR CURB)  
 ITEM 0420-6074 CL C CONC (MISC)
- 2) SEE ARMOR CURB SLOT STANDARD FOR ADDITIONAL DETAILS

### SECTION A-A

N. T. S.



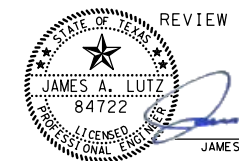
NOTE: CONCRETE AND REBAR FOR FRAME AND COVER INCIDENTAL TO ITEM 0531.



DESIGN

JOHN A. TYLER, P.E.  
DATE

5/3/2019



REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
DATE

5/3/2019

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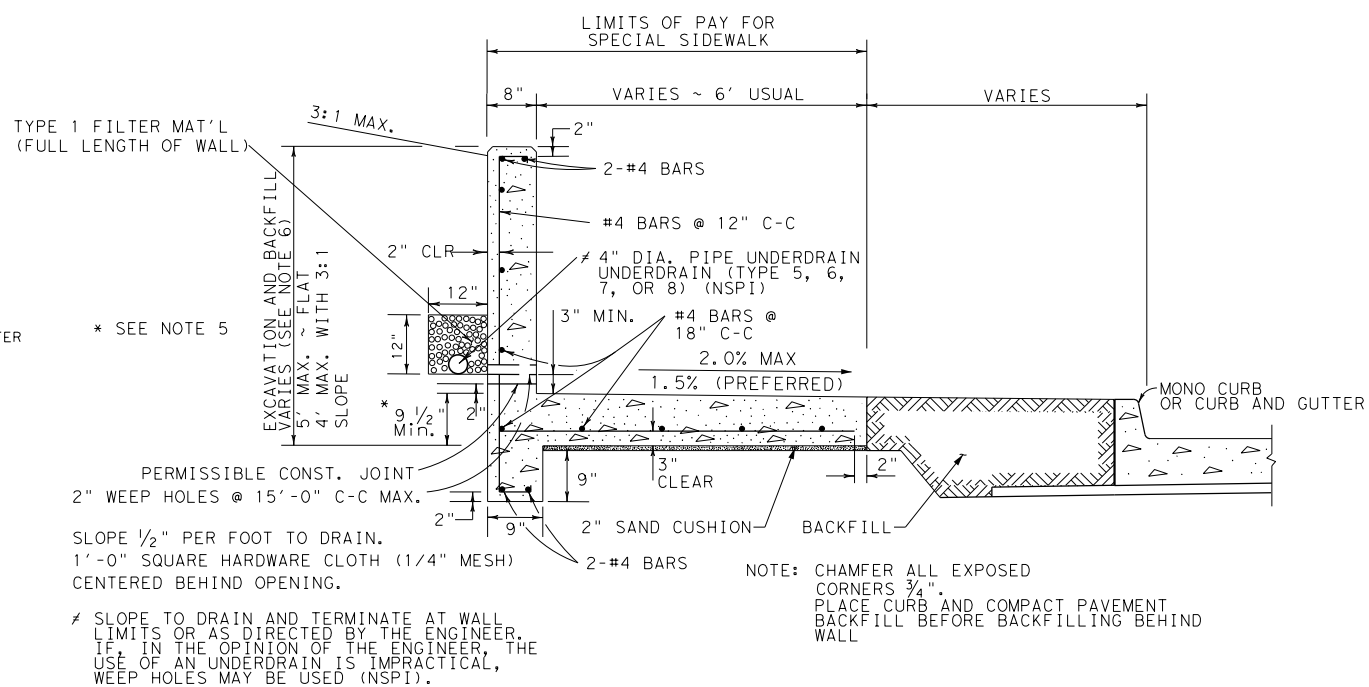
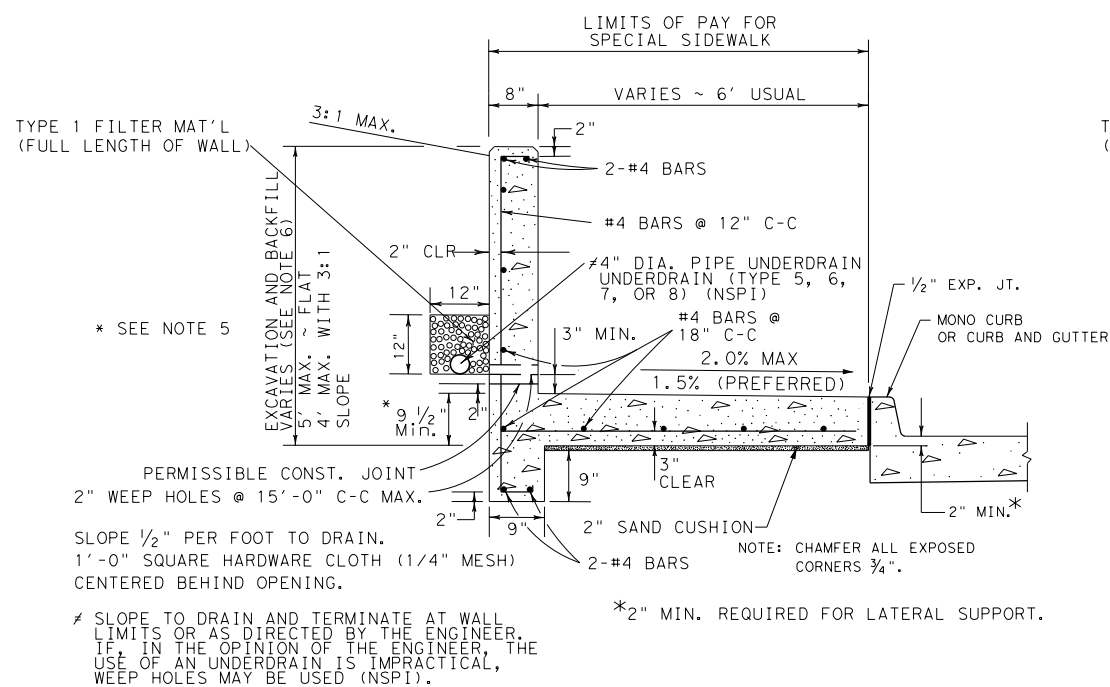


SIDEWALK TYPE A  
 SPECIAL DETAILS

SHEET 5 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	574

**SPECIAL CONCRETE SIDEWALK w/ RETAINING WALL**  
**(CONCRETE SIDEWALK (SPECIAL) (TY B))**



\* SEE NOTE 5  
 EXCAVATION AND BACKFILL VARIES (SEE NOTE 6)  
 5' MAX. ~ FLAT  
 4' MAX. WITH 3:1 SLOPE  
 PERMISSIBLE CONST. JOINT  
 2" WEEP HOLES @ 15'-0" C-C MAX.  
 SLOPE 1/2" PER FOOT TO DRAIN.  
 1'-0" SQUARE HARDWARE CLOTH (1/4" MESH)  
 CENTERED BEHIND OPENING.  
 SLOPE TO DRAIN AND TERMINATE AT WALL LIMITS OR AS DIRECTED BY THE ENGINEER. IF, IN THE OPINION OF THE ENGINEER, THE USE OF AN UNDERDRAIN IS IMPRACTICAL, WEEP HOLES MAY BE USED (NSPI).

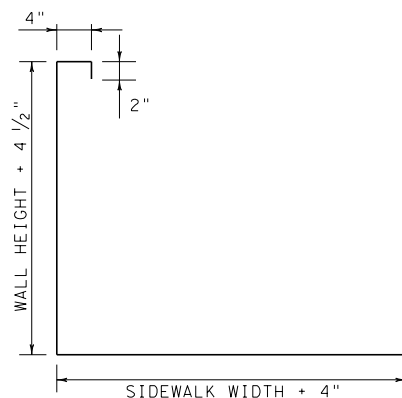
\*2" MIN. REQUIRED FOR LATERAL SUPPORT.

ADJACENT TO CURB

\* SEE NOTE 5  
 EXCAVATION AND BACKFILL VARIES (SEE NOTE 6)  
 5' MAX. ~ FLAT  
 4' MAX. WITH 3:1 SLOPE  
 PERMISSIBLE CONST. JOINT  
 2" WEEP HOLES @ 15'-0" C-C MAX.  
 SLOPE 1/2" PER FOOT TO DRAIN.  
 1'-0" SQUARE HARDWARE CLOTH (1/4" MESH)  
 CENTERED BEHIND OPENING.  
 SLOPE TO DRAIN AND TERMINATE AT WALL LIMITS OR AS DIRECTED BY THE ENGINEER. IF, IN THE OPINION OF THE ENGINEER, THE USE OF AN UNDERDRAIN IS IMPRACTICAL, WEEP HOLES MAY BE USED (NSPI).

NOTE: CHAMFER ALL EXPOSED CORNERS 3/4".  
 PLACE CURB AND COMPACT PAVEMENT BACKFILL BEFORE BACKFILLING BEHIND WALL

SEPARATED FROM CURB

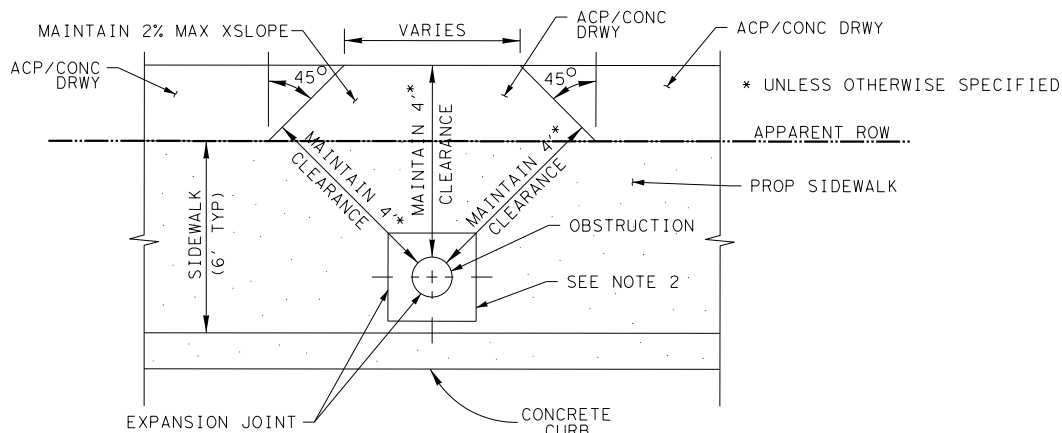


REINFORCING STEEL DETAIL

**PARKING LOT GRADING DETAIL**

NOTES:

1. CONSTRUCT ACP DRIVEWAY AT 2% XSLOPE WHERE INDICATED.
2. IF OBSTRUCTION IS LOCATED WITHIN THE SIDEWALK, CONSTRUCT 2' SQUARE CONSTRUCTION JOINT CENTERED ON OBSTRUCTION TO FACILITATE FUTURE MAINTENANCE WITHOUT FULL SIDEWALK PANEL REMOVAL/REPLACEMENT



OBSTRUCTION IN SIDEWALK

NOTES:

1. SEE PLAN SHEETS FOR LOCATIONS OF SIDEWALKS AND RETAINING WALLS.
2. LONGITUDINAL SLOPE OF SIDEWALKS SHALL NOT EXCEED 5% EXCEPT IN CASES WHERE THE ADJACENT ROADWAY SLOPE EXCEEDS 5%. IF ROADWAY SLOPE EXCEEDS 5%, LONGITUDINAL SLOPE OF SIDEWALK MAY MATCH THAT OF ROADWAY.
3. IF SIDEWALK WIDTH IS LESS THAN 5', PROVIDE 5' x 5' PASSING AREAS AT INTERVALS NOT TO EXCEED 200' SPACING.
4. WHERE SIDEWALK WITH RETAINING WALL IS SPECIFIED, RETAINING WALL WILL BE SUBSIDIARY TO THE ITEM, "CONCRETE SIDEWALK (SPECIAL) (TYPE B)", ITEM 0531-6033 WITH LIMITS OF PAY AS SHOWN HEREON. ESTIMATED FACE OF RETAINING WALL IS INDICATED ON THE PLANS FOR CONTRACTOR INFORMATION ONLY.
5. CONCRETE SIDEWALK (SPECIAL) (TY B) THICKNESS IS PERMITTED TO BE 6" IN AREAS WHERE WALL HEIGHTS ARE LESS THAN OR EQUAL TO 3', AS MEASURED FROM TOP OF SIDEWALK TO TOP OF WALL. THE SIDEWALK THICKNESS SHALL BE CONSTRUCTED AS INDICATED ON DETAIL FOR WALL HEIGHTS IN EXCESS OF 3' OR WHERE WALLS OF ANY HEIGHT ARE TO BE CONSTRUCTED ADJACENT TO PARKING.
6. EXCAVATION, HAULING, AND DISPOSAL OF EXCAVATED MATERIAL IS NOT PAID FOR SEPARATELY, CONSIDERED SUBSIDIARY TO ITEM 531.

DESIGN  
 JOHN A. TYLER, P.E.  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ, P.E.  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

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**Pape-Dawson**  
**ENGINEERS**

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SIDEWALK TYPE B  
 SPECIAL DETAILS

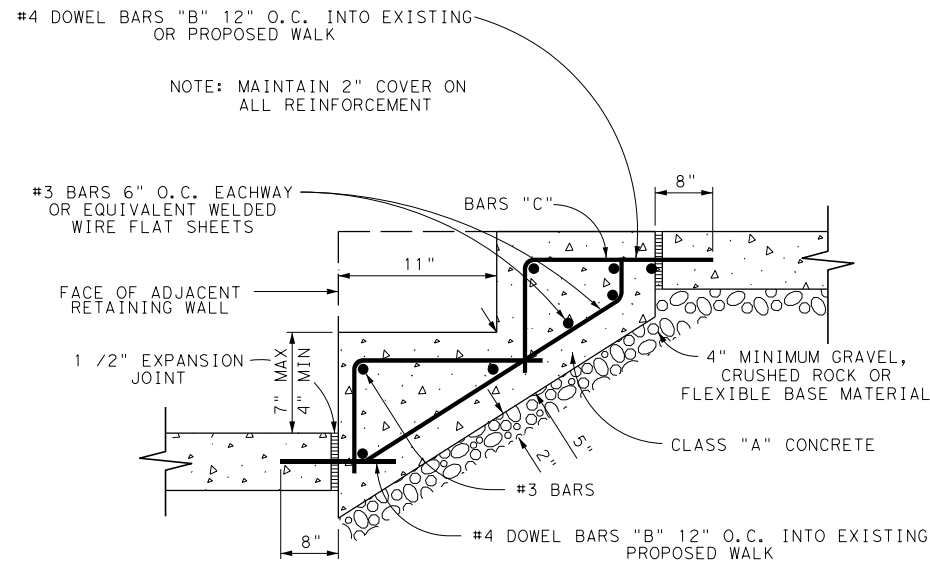
SHEET 6 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
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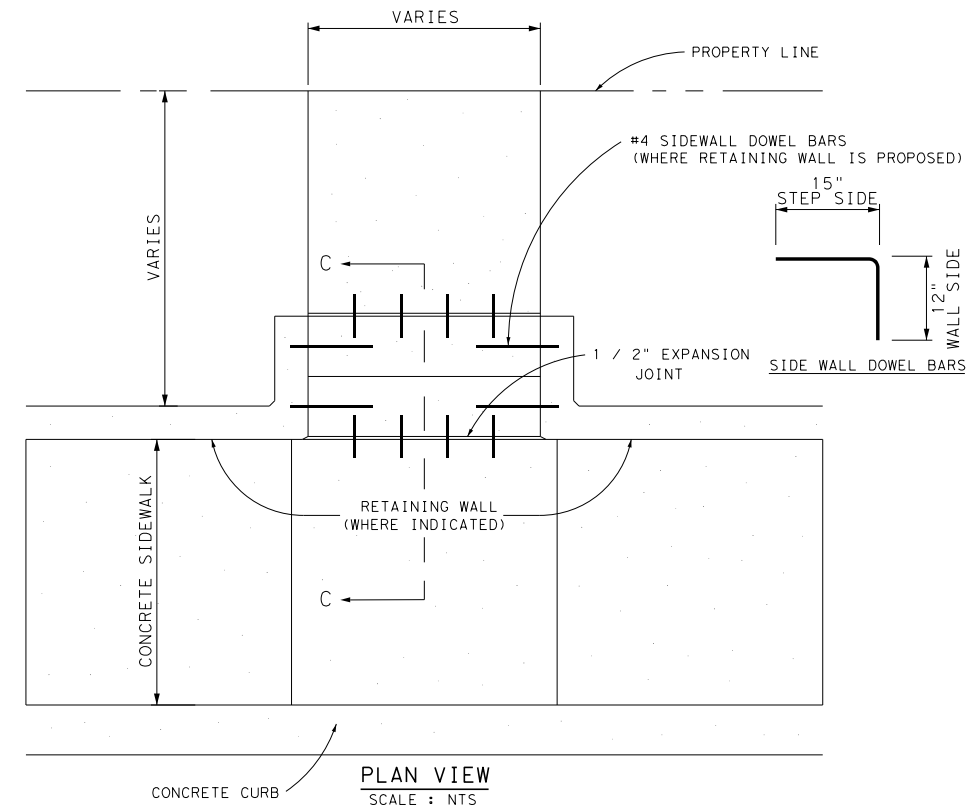
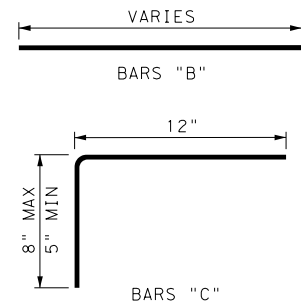
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# CONCRETE STEPS

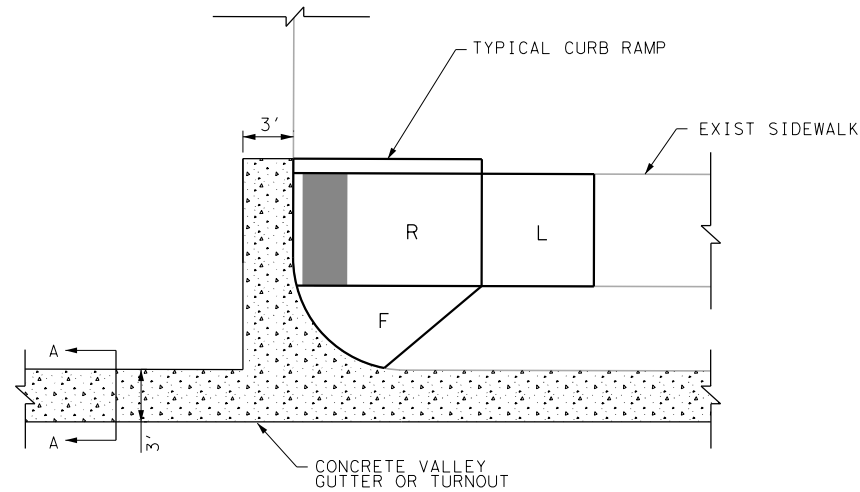


SECTION "C-C"  
SCALE : NTS



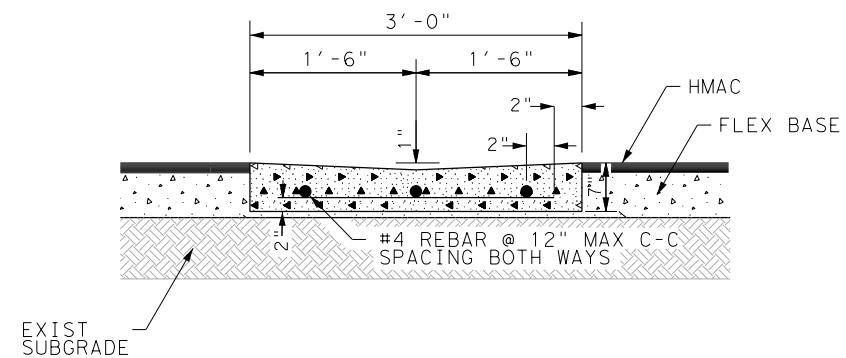
PLAN VIEW  
SCALE : NTS

# TYPICAL CONC. VALLEY GUTTER



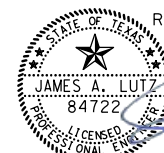
# CONC. VALLEY GUTTER

TO BE USED WHERE REQUIRED TO CARRY DRAINAGE  
ACROSS SIDE STREETS



SECTION A-A  
N. T. S.

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson**  
**ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

 Texas Department of Transportation  
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SPECIAL DETAILS

SHEET 7 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	576

Plotted on: 5/3/2019

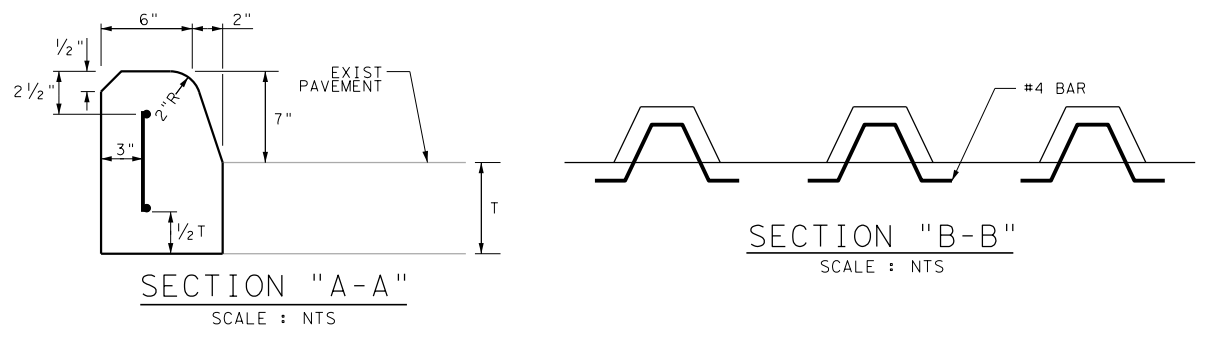
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Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_smp\le09.dgn

### SLOTTED CURB DETAIL

N. T. S.



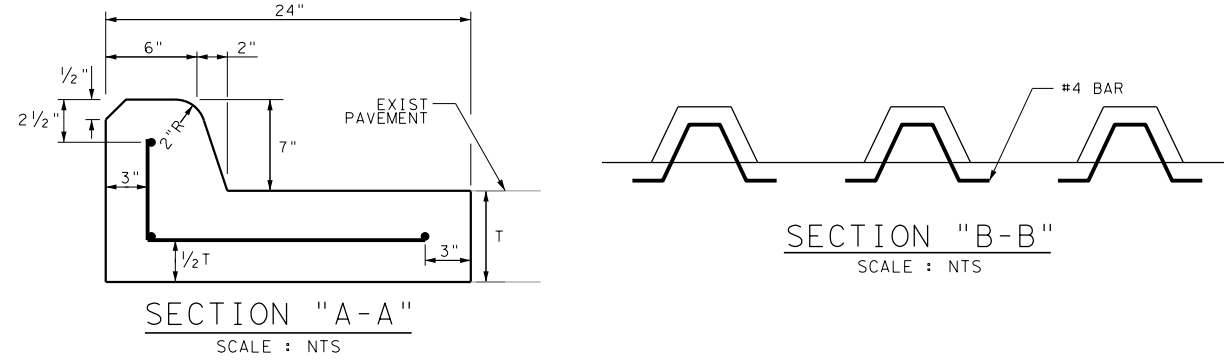
SECTION "A-A"  
SCALE : NTS

SECTION "B-B"  
SCALE : NTS

PLAN VIEW  
SCALE : NTS

### SLOTTED CURB AND GUTTER DETAIL

N. T. S.



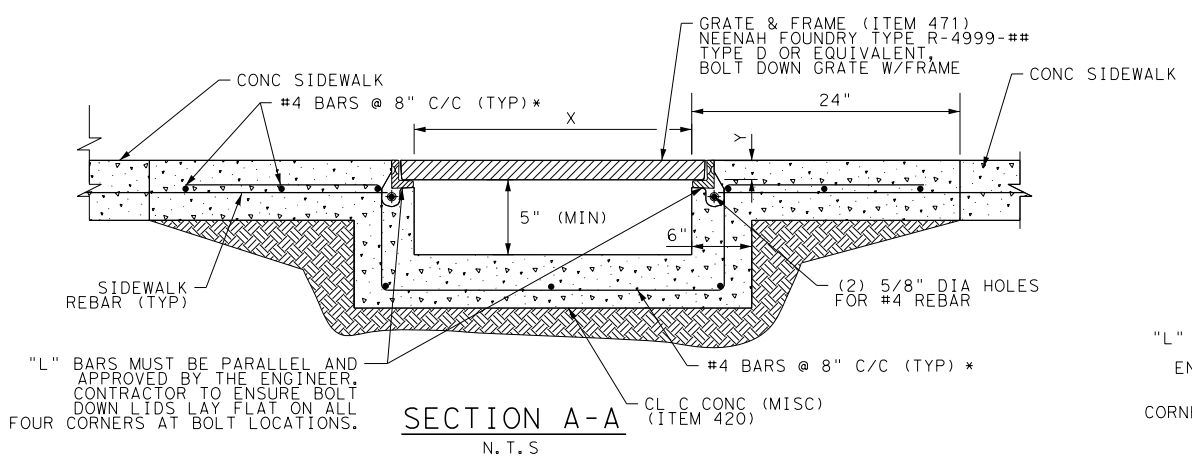
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SCALE : NTS

SECTION "B-B"  
SCALE : NTS

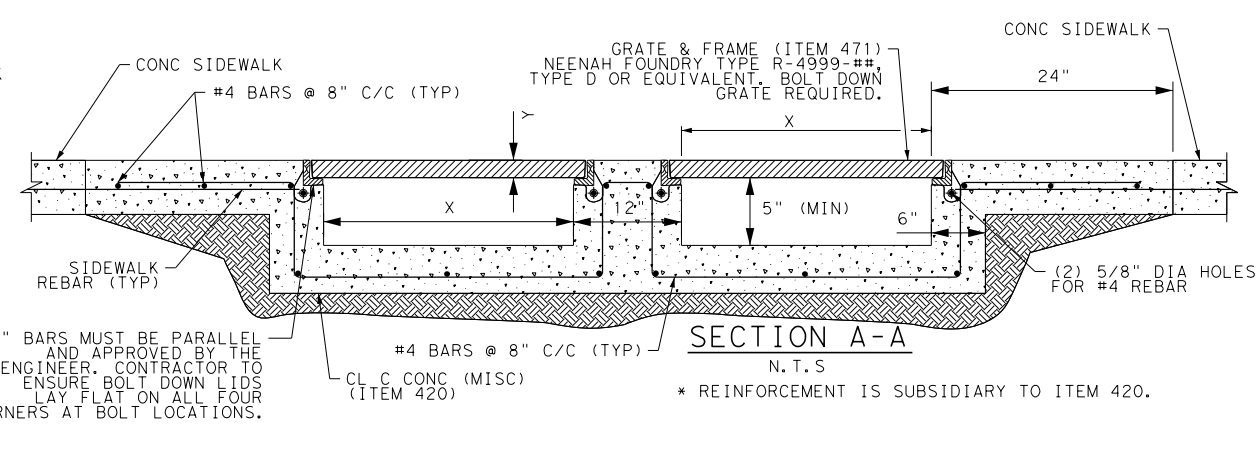
PLAN VIEW  
SCALE : NTS

### GRATE & FRAME DETAIL

N. T. S.



SECTION A-A  
N. T. S.



SECTION A-A  
N. T. S.

"L" BARS MUST BE PARALLEL AND APPROVED BY THE ENGINEER. CONTRACTOR TO ENSURE BOLT DOWN LIDS LAY FLAT ON ALL FOUR CORNERS AT BOLT LOCATIONS.

"L" BARS MUST BE PARALLEL AND APPROVED BY THE ENGINEER. CONTRACTOR TO ENSURE BOLT DOWN LIDS LAY FLAT ON ALL FOUR CORNERS AT BOLT LOCATIONS.

\* REINFORCEMENT IS SUBSIDIARY TO ITEM 420.

\* REINFORCEMENT IS SUBSIDIARY TO ITEM 420.

GRATE LENGTH	X	Y	R-4999-##
24"	24"	1.5"	HK
36"	36"	2.0"	MX
48"	48"	2.0"	OX

DESIGN

John A. Tyler, P.E.  
5/3/2019 DATE

REVIEW AND APPROVAL

James A. Lutz, P.E.  
5/3/2019 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028800

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SPECIAL DETAILS

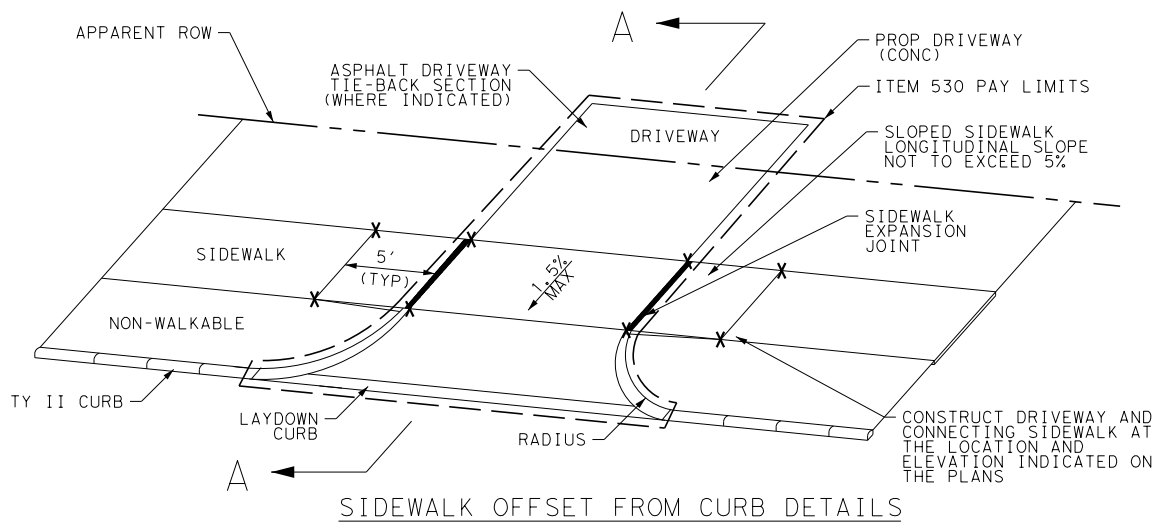
SHEET 8 OF 10

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	577

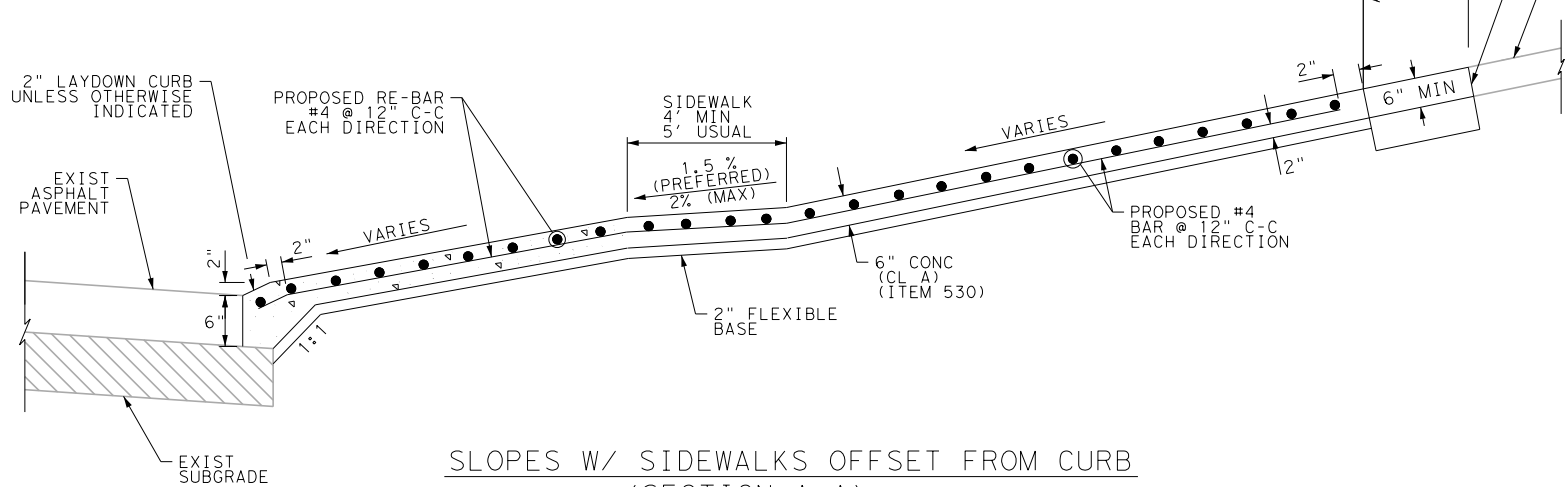


Plotted on: 5/3/2019

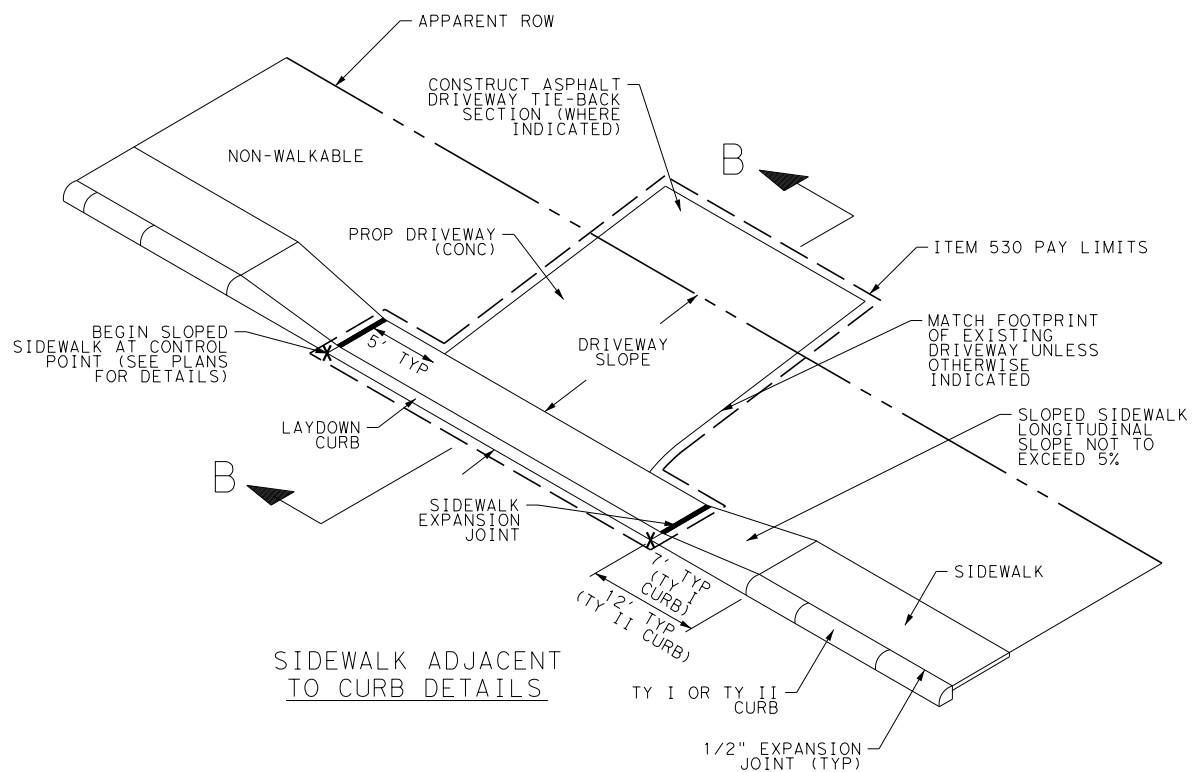
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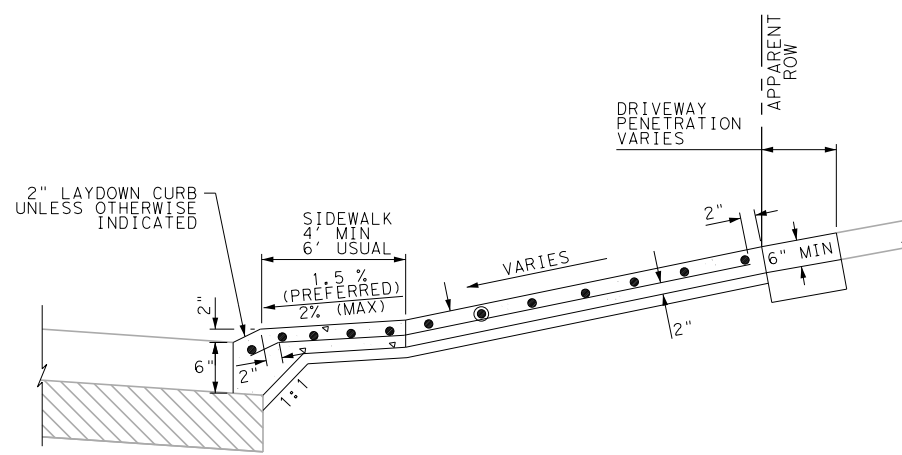
SIDEWALK OFFSET FROM CURB DETAILS



SLOPES W/ SIDEWALKS OFFSET FROM CURB (SECTION A-A)



SIDEWALK ADJACENT TO CURB DETAILS



DRIVEWAY SLOPES W/ SIDEWALKS ADJACENT TO CURB (SECTION B-B)

**LEGEND**  
 X CONTROL POINT  
 NOTES:

- 1) SLOPED SIDEWALK SEGMENT LENGTHS ARE SHOWN TO CONSERVATIVELY ACCOMMODATE STANDARD CURB HEIGHTS ON LEVEL STREETS. SOME SLOPED SIDEWALK SEGMENTS MAY REQUIRE ADDITIONAL LENGTH TO ENSURE LONGITUDINAL SLOPES DO NOT EXCEED 5%. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY EXTEND THE SLOPED SIDEWALK SEGMENT TO THE NEXT PLANAR ELEMENT (LS, L, SL, R, T, ETC.) OR UNTIL THE SLOPED SIDEWALK REACHES CURB HEIGHT, WHICHEVER IS SHORTER.
- 2) IF DRIVEWAY TIE-BACK IS SPECIFIED AS CONCRETE, SAWCUT EXISTING CONCRETE AT THE TIE-IN LOCATION MIN. 1/2", THEN BREAKBACK, CLEAN, AND EXPOSE 18" STEEL REINFORCING IN EXISTING CONCRETE. INSTALL FLEXIBLE BASE AS INDICATED. CONSTRUCT CONCRETE DRIVEWAY PER ITEM 530.  
 IF DRIVEWAY TIE-BACK IS SPECIFIED AS ASPHALT, SAWCUT EXISTING ASPHALT AT THE TIE-IN LOCATION. INSTALL 6" FLEXIBLE BASE OR ASPHALTIC CONCRETE BASE (SUBSIDIARY TO ITEM 530). CONSTRUCT ASPHALT DRIVEWAY (PG 64-22 SAC C) PER ITEM 530.

DESIGN  
 JOHN A. TYLER  
 105193  
 LICENSED PROFESSIONAL ENGINEER  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
 JAMES A. LUTZ  
 84722  
 LICENSED PROFESSIONAL ENGINEER  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
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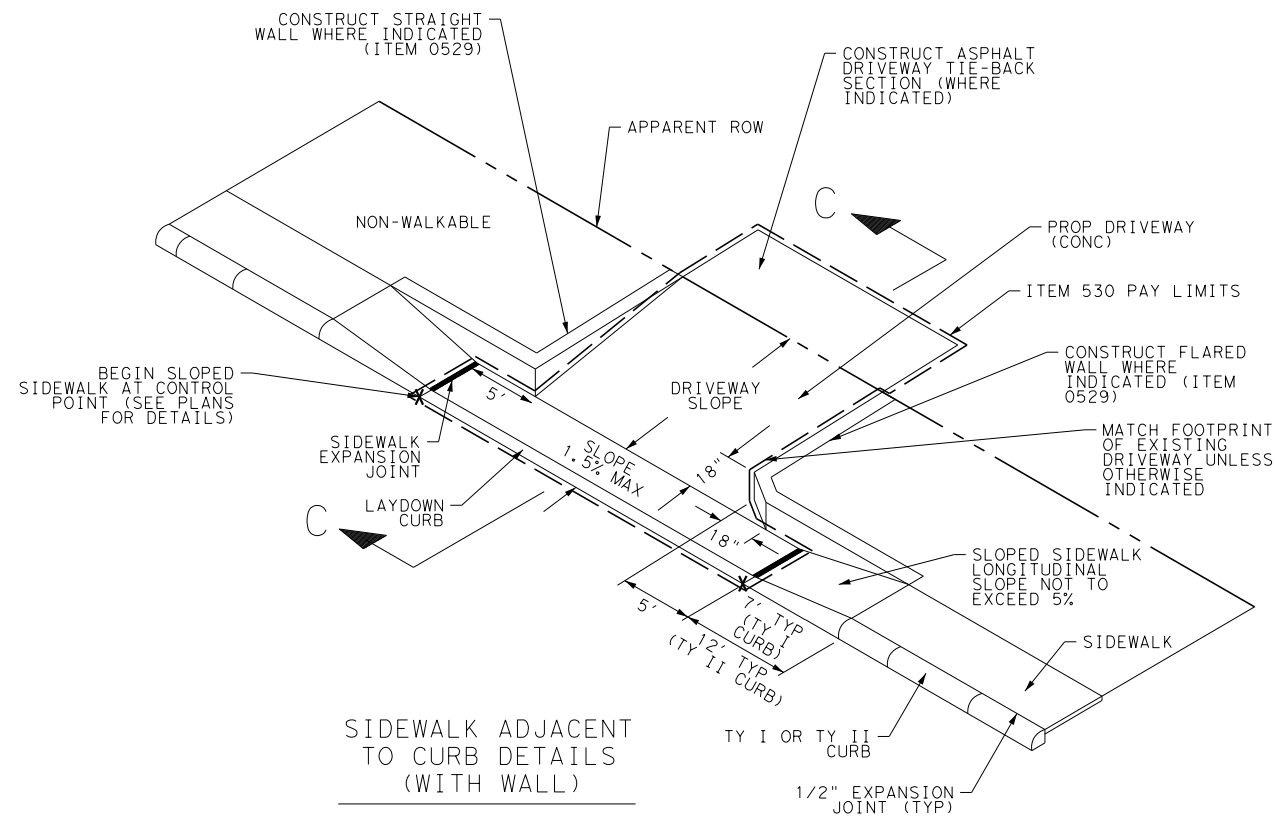
SPECIAL DETAILS

SHEET 9 OF 10

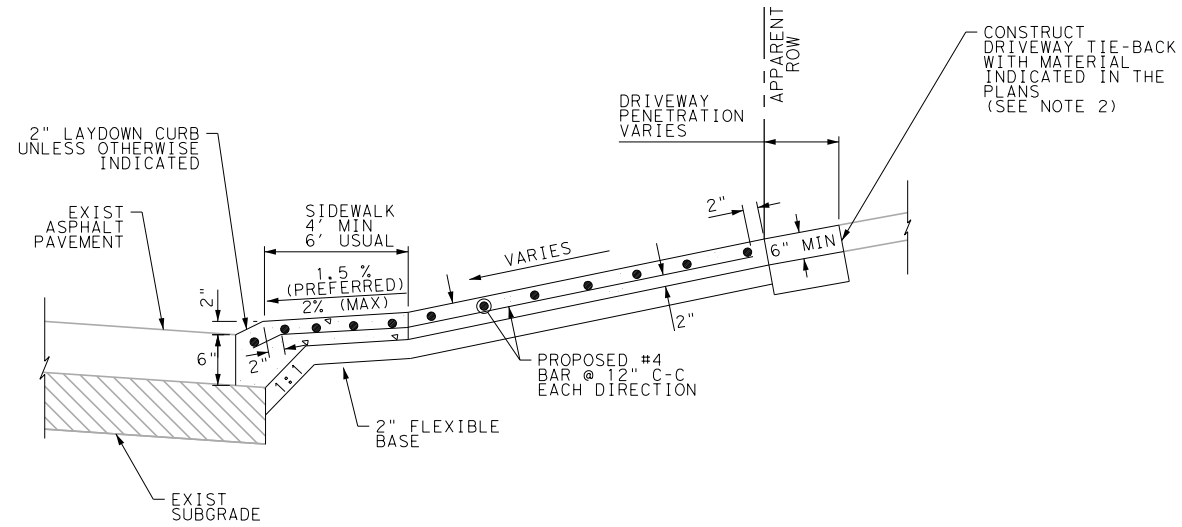
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CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	578

Plotted on: 5/3/2019

Design File name: P:\111\35\08\Design\Civil\General\1113508\_smp\1e13.dgn



SIDEWALK ADJACENT TO CURB DETAILS (WITH WALL)



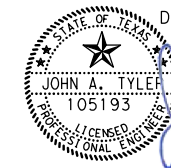
DRIVEWAY SLOPES W/ SIDEWALKS ADJACENT TO CURB (SECTION C-C)

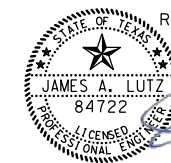
LEGEND

X CONTROL POINT

NOTES:

- 1) SLOPED SIDEWALK SEGMENT LENGTHS ARE SHOWN TO CONSERVATIVELY ACCOMMODATE STANDARD CURB HEIGHTS ON LEVEL STREETS. SOME SLOPED SIDEWALK SEGMENTS MAY REQUIRE ADDITIONAL LENGTH TO ENSURE LONGITUDINAL SLOPES DO NOT EXCEED 5%. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY EXTEND THE SLOPED SIDEWALK SEGMENT TO THE NEXT PLANAR ELEMENT (L.S., L.S.R., I, ETC.) OR UNTIL THE SLOPED SIDEWALK REACHES CURB HEIGHT, WHICHEVER IS SHORTER.
- 2) IF DRIVEWAY TIE-BACK IS SPECIFIED AS CONCRETE, SAWCUT EXISTING CONCRETE AT THE TIE-IN LOCATION MIN. 1/2", THEN BREAKBACK, CLEAN, AND EXPOSE 18" STEEL REINFORCING IN EXISTING CONCRETE. INSTALL FLEXIBLE BASE AS INDICATED. CONSTRUCT CONCRETE DRIVEWAY PER ITEM 530.  
IF DRIVEWAY TIE-BACK IS SPECIFIED AS ASPHALT, SAWCUT EXISTING ASPHALT AT THE TIE-IN LOCATION. INSTALL 6" FLEXIBLE BASE OR ASPHALTIC CONCRETE BASE (SUBSIDIARY TO ITEM 530). CONSTRUCT ASPHALT DRIVEWAY (PG 64-22 SAC C) PER ITEM 530.

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019  
 DATE

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



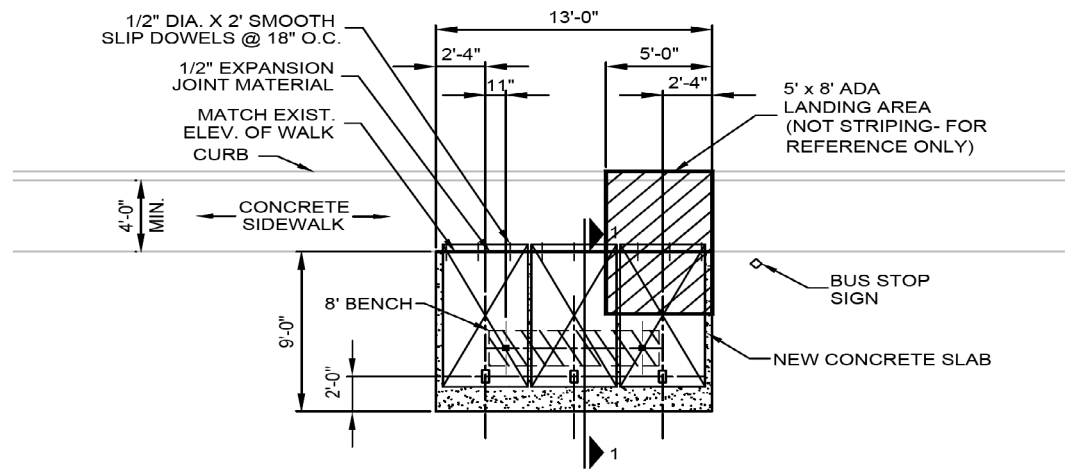
SPECIAL DETAILS

SHEET 10 OF 10

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	579

Plotted on: 5/4/2019

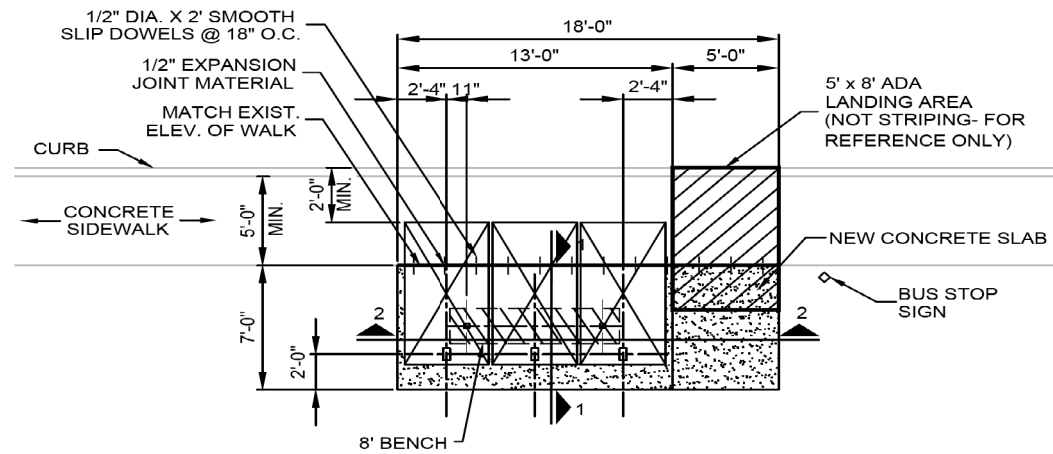
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NEXT GEN TY I - SUFFICIENT ROW DETAIL

N. T. S.

\*SEE SHEET 581 FOR SECTION 1-1\* (SEE NOTE 1)



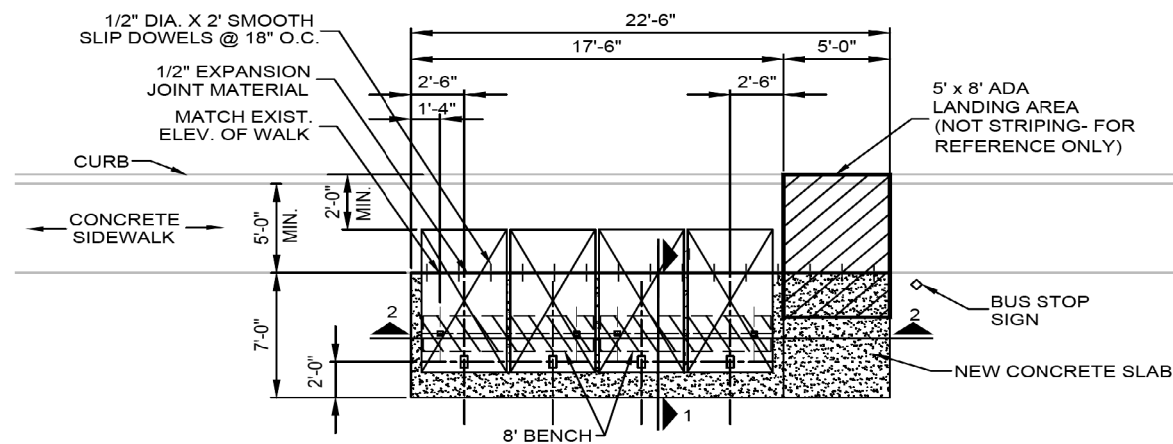
NEXT GEN TY II - INSUFFICIENT ROW DETAIL

N. T. S.

\*SEE SHEET 581 FOR SECTION 1-1, 2-2\* (SEE NOTE 1)

NOTES:

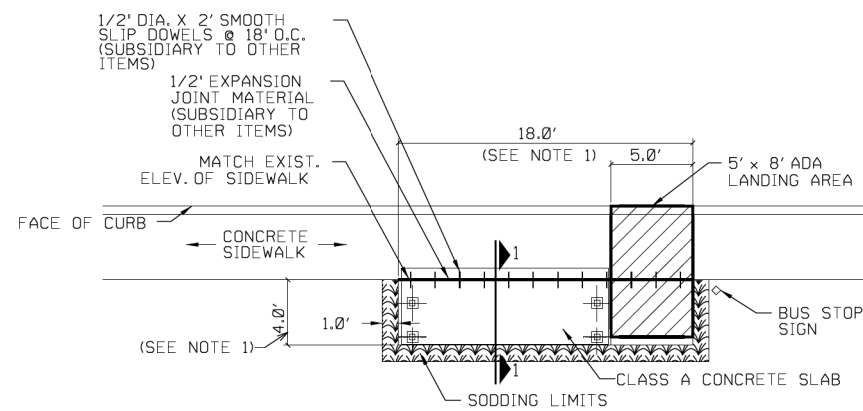
1. IF ADDITIONAL UNITS ARE SPECIFIED ON THE PLANS, ADD 4.5' TO THE SLAB WIDTH FOR EACH ADDITIONAL UNIT SPECIFIED.
2. EXISTING STRUCTURES (TRANSIT SHELTERS) THAT CONFLICT WITH PROPOSED STRUCTURES ARE TO BE REMOVED BY OTHERS PRIOR TO REMOVAL OF EXISTING CONCRETE.



NEXT GEN TY III - INSUFFICIENT ROW DETAIL

N. T. S.

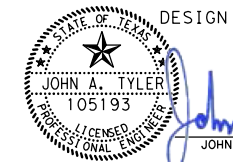
\*SEE SHEET 581 FOR SECTION 1-1, 2-2\* (SEE NOTE 1)



TY IV - BARREL ROOF DETAIL

N. T. S.

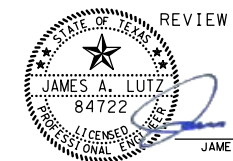
\*SEE SHEET 581 FOR SECTION 1-1\*



DESIGN

John A. Tyler  
JOHN A. TYLER, P.E.

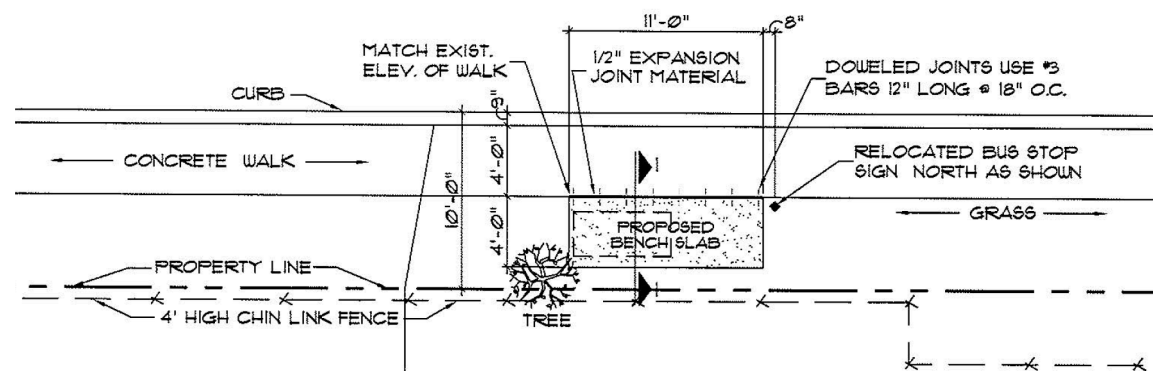
5/4/2019  
DATE



REVIEW AND APPROVAL

James A. Lutz  
JAMES A. LUTZ, P.E.

5/4/2019  
DATE



TY V - BENCH SLAB DETAIL

N. T. S.

\*SEE SHEET 581 FOR SECTION 1-1\*

NOTES:

\* NEW BASE IS SUBSIDIARY TO ITEM 420.



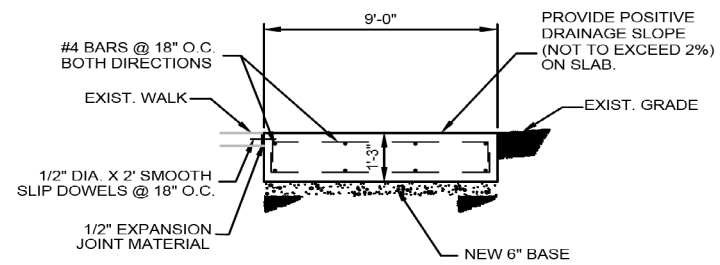
TRANSIT STOP DETAILS

SHEET 1 OF 2

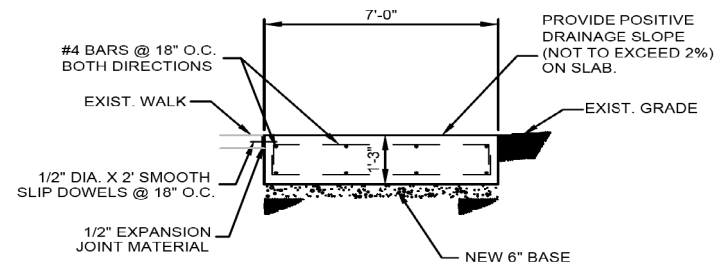
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:		HIGHWAY NO.:
CHK DGN:	6	TEXAS			VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:
CHK DWG:	SAT	BEXAR	0915	12	576
					580

Plotted on: 5/4/2019

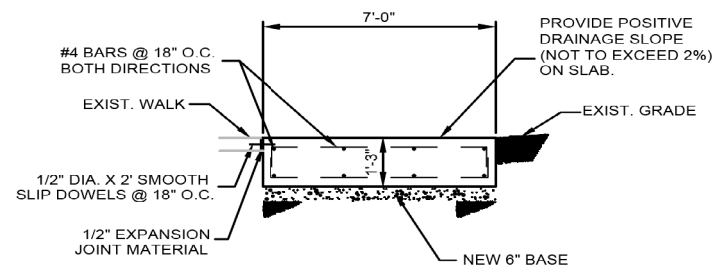
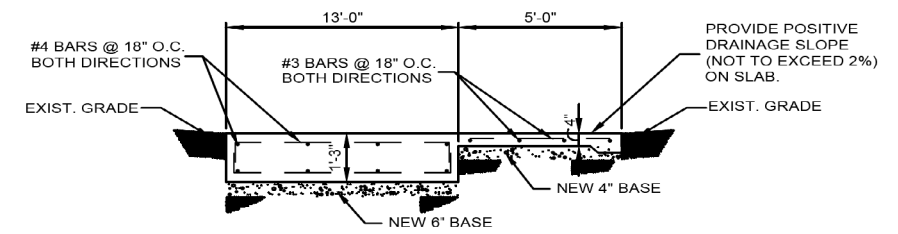
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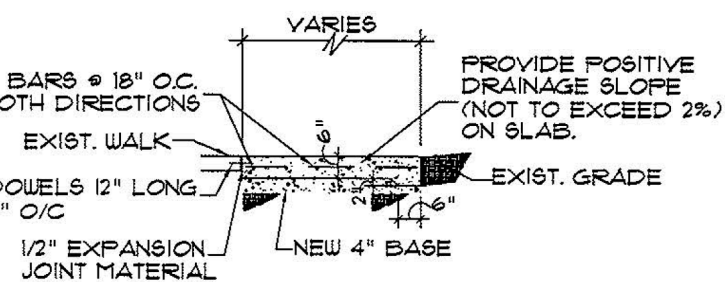
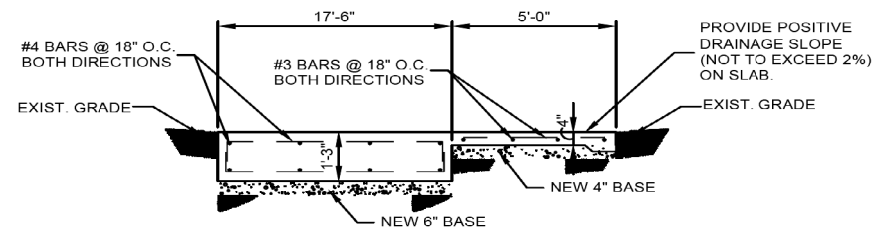
NEXT GEN TY I - SUFFICIENT ROW SECTION 1-1  
N. T. S.



NEXT GEN TY II - INSUFFICIENT ROW SECTION 1-1, 2-2  
N. T. S.

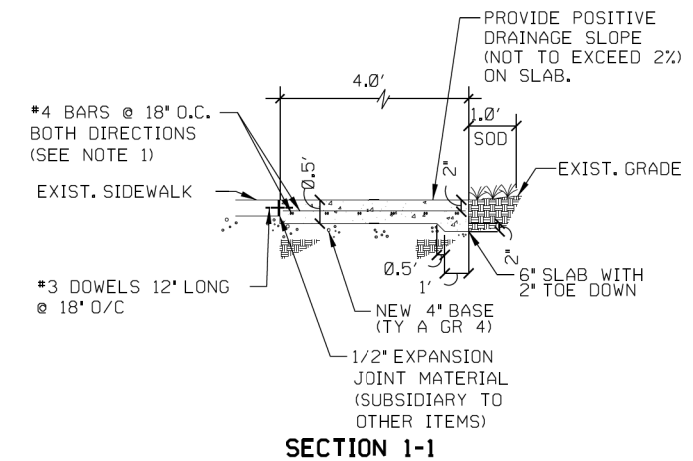


NEXT GEN TY III - INSUFFICIENT ROW SECTION 1-1, 2-2  
N. T. S.

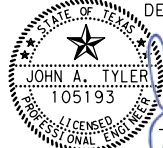


① DETAIL  
SCALE: 3/8"=1'-0"

TY V - BENCH SLAB SECTION 1-1  
N. T. S.



TY IV - BARREL ROOF SECTION 1-1  
N. T. S.

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/4/2019  
 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/4/2019  
 DATE



TRANSIT STOP DETAILS

SHEET 2 OF 2

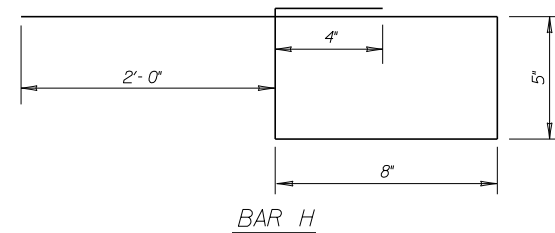
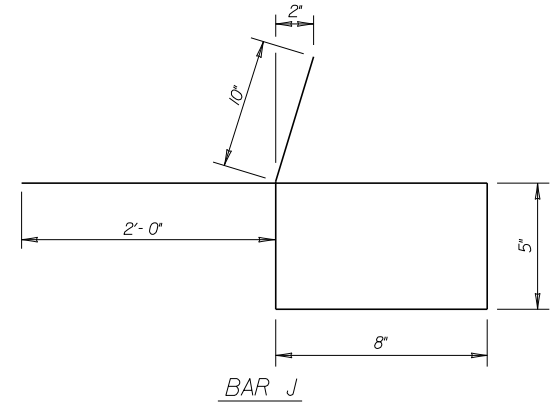
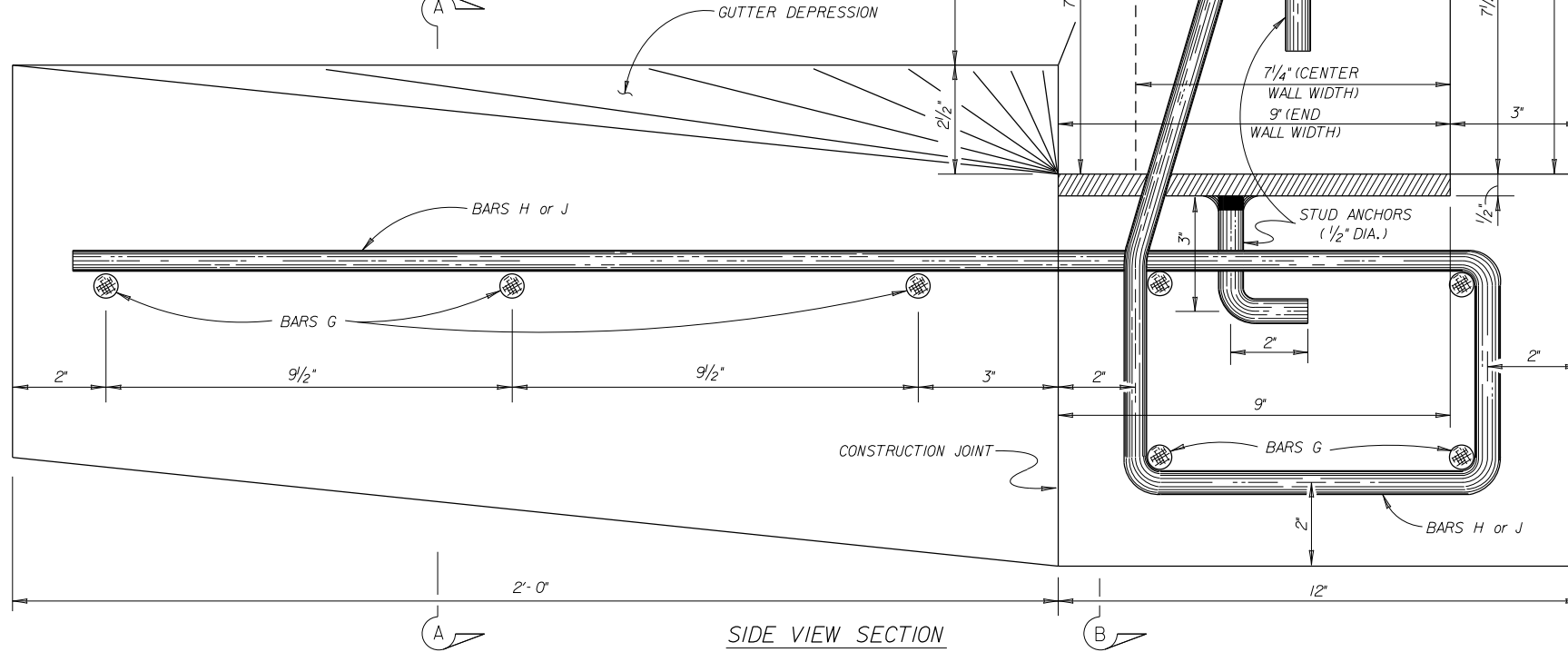
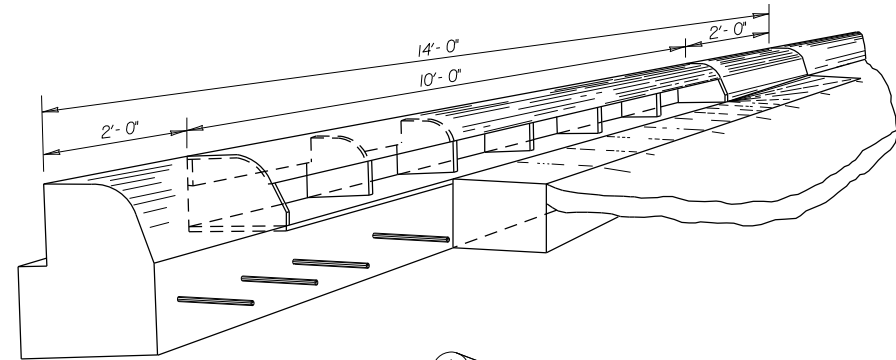
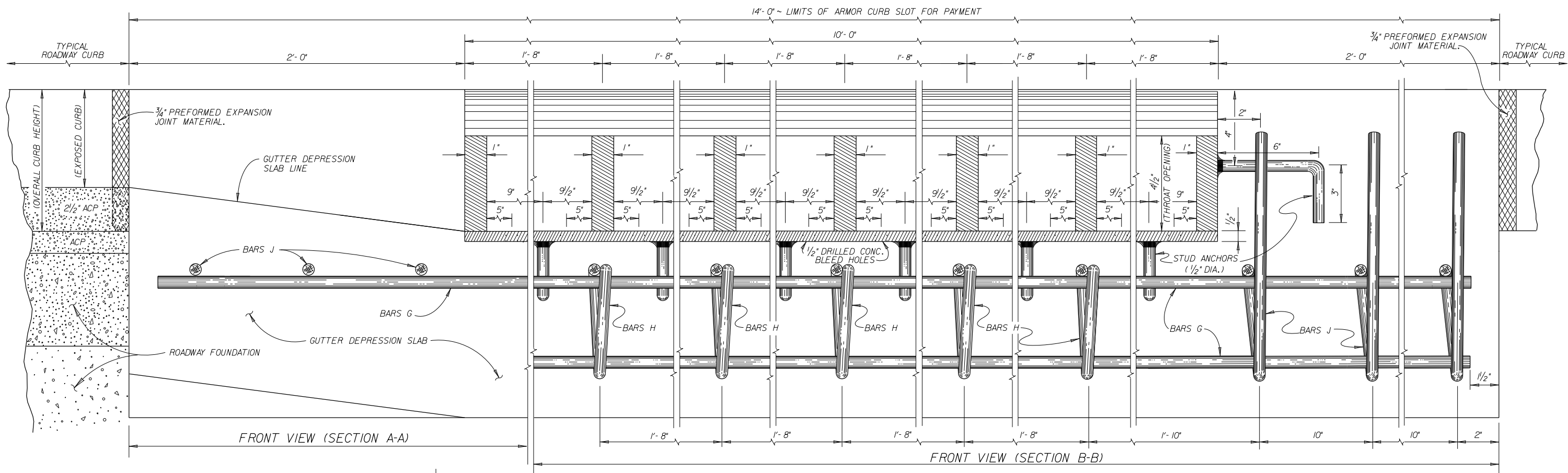
NOTES:  
 \* NEW BASE IS SUBSIDIARY TO ITEM 420.

DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	581

DATE: 5/3/2019

FILE NAME: P:\IN\35108\Design\Civil Standards\Roadway\armorcurbSAT1.dgn

STRUCTURE DESIGN  
/BRIDGE/STDS/ARMORCURB.DGN



**ESTIMATED QUANTITIES FOR REINFORCING STEEL & CONCRETE**

BAR	NO.	SIZE	SPAC.	LENGTH	WEIGHT
G	7	#4	SHOWN	13'-9"	64
H	5	#4	1'-8"	4'-6"	15
J	6	#4	8"	5'-0"	20
TOTAL WEIGHT *					LBS. 99
CONCRETE FOR FOUNDATION *					C.Y. 0.47
CONCRETE FOR GUTTER DEPRESSION *					C.Y. 0.78

**STRUCTURAL STEEL FOR ARMOR CURB SLOT**

STUD ANCHORS (1/2" DIA.)	LBS.	3.5
STEEL PLATE	LBS.	451
TOTAL WEIGHT *	LBS.	454.5

\* FOR CONTRACTORS INFO ONLY.

**GENERAL NOTES:**  
 ALL CONCRETE SHALL BE CL."A".  
 ALL STEEL SHALL BE ASTM A36.  
 ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.  
 ALL SIDES OF ARMOR CURB SLOT AND STUD ANCHORS SHALL BE 1/4" FILLET WELDS.  
 ALL EXPOSED STRUCTURAL STEEL (ARMOR) SHALL BE GALVANIZED UNDER ITEM 445.  
 ALL EXPOSED EDGES ON ARMOR CURB SHALL RECEIVE A 1/8" BEVEL.  
 THE SHAPE OF THE TYPICAL ROADWAY CURB SHALL TRANSITION TO THE ARMOR CURB AS APPROVED BY THE ENGINEER.

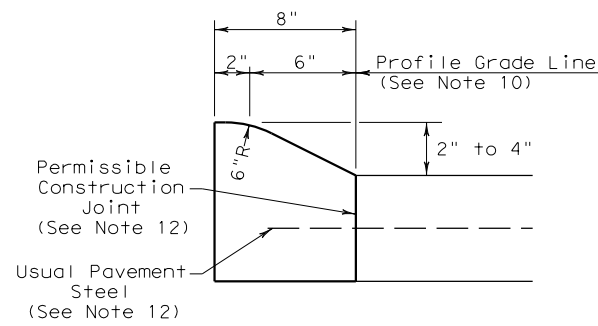
**ARMOR CURB SLOT** © 1998 Texas Department of Transportation  
 WITH CONCRETE FOUNDATION  
 SAN ANTONIO DISTRICT STANDARDS

FED. RD. DIV. NO.	PROJECT NO.	SHEET NO.	
6		582	
STATE	STATE DISTRICT	COUNTY	
TEXAS	SAT	BEXAR	
CONT.	SECT.	JOB	HIGHWAY NO.
0915	12	576	VARIES

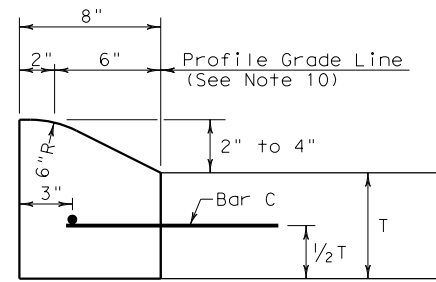
10/95  
REV. 07/01  
REV. 12/04

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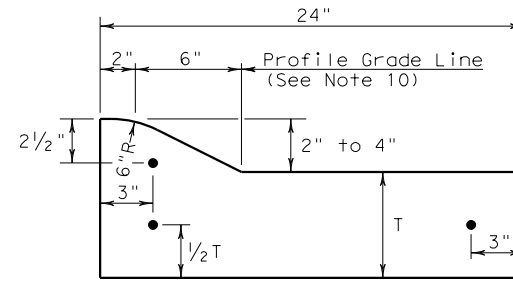
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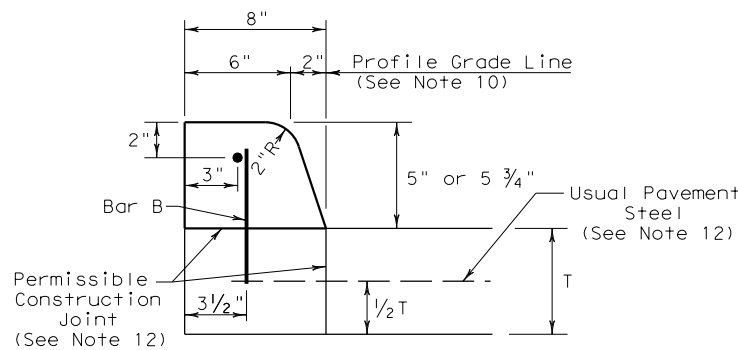
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 2" - 4" HEIGHT



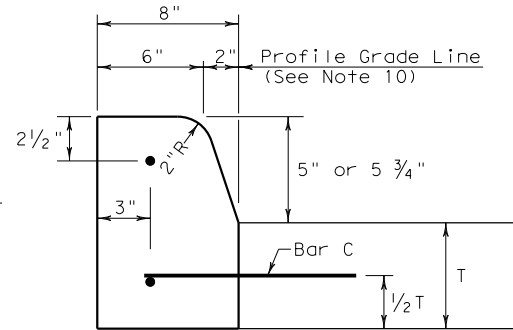
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 2" - 4" HEIGHT



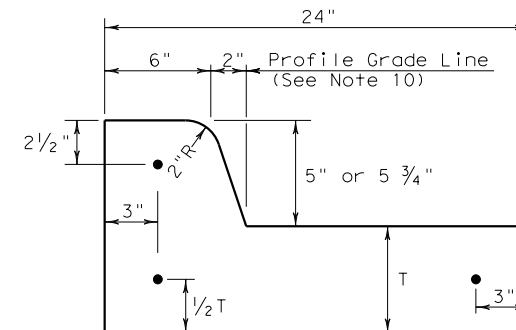
TYPE I CURB AND GUTTER  
 2" - 4" HEIGHT



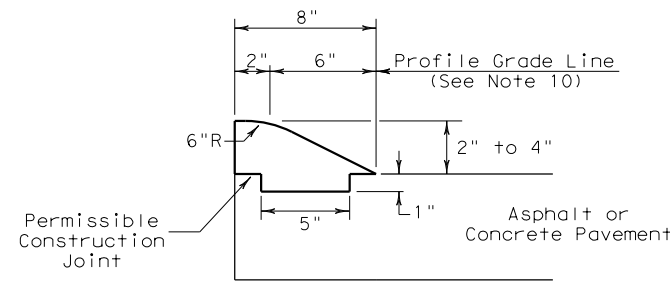
TYPE II CURB (MONOLITHIC)  
 5" - 5 3/4" HEIGHT



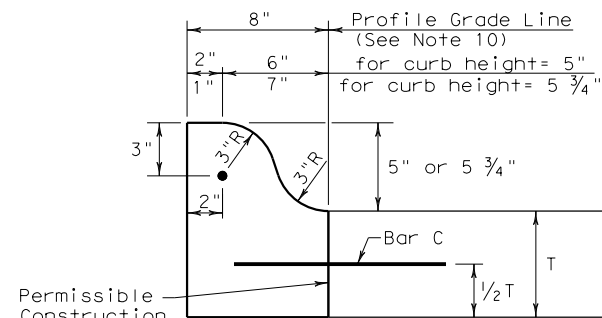
TYPE II CURB  
 5" - 5 3/4" HEIGHT



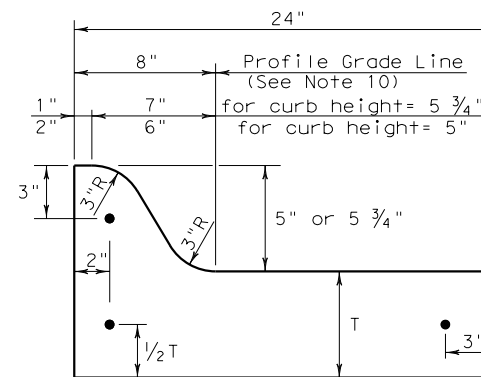
TYPE II CURB AND GUTTER  
 5" - 5 3/4" HEIGHT



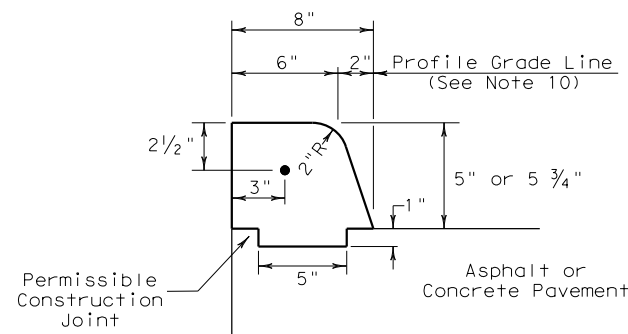
TYPE III CURB (KEYED)  
 2" - 4" HEIGHT



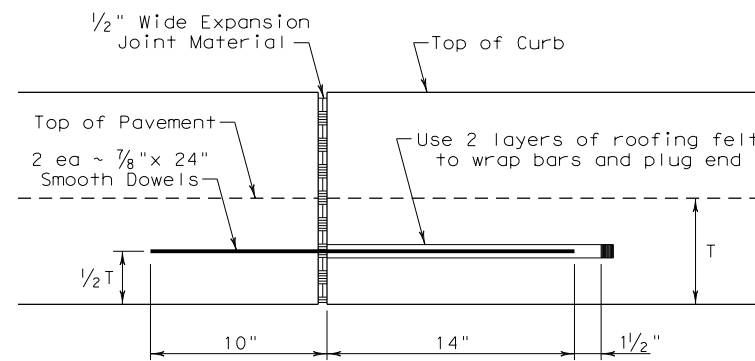
TYPE IIa CURB  
 5" - 5 3/4" HEIGHT



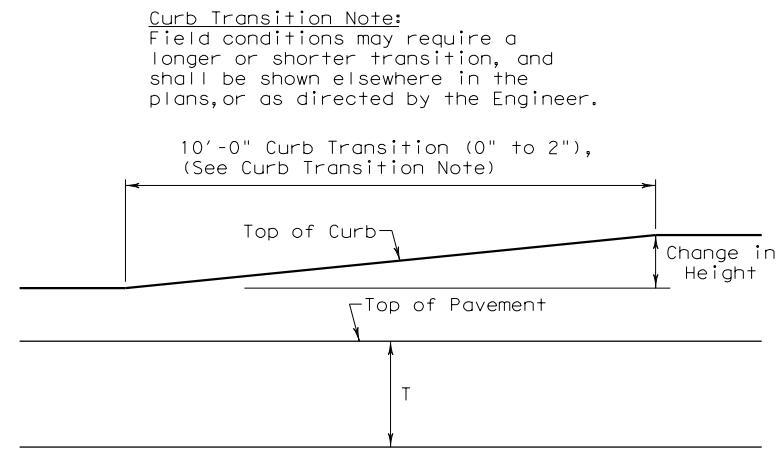
TYPE IIa CURB AND GUTTER  
 5" - 5 3/4" HEIGHT



TYPE IV CURB (KEYED)  
 5" - 5 3/4" HEIGHT



EXPANSION JOINT DETAIL

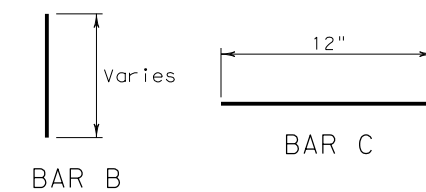


CURB TRANSITION

Note: To be paid for as Highest Curb

General Notes

- All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
- Concrete shall be Class A.
- When reinforcing bars are used, they shall be No.4 unless otherwise shown. The use of synthetic fiber in lieu of steel reinforcing is acceptable, provided the fiber producer is on the Department Producer List (MPL), maintained by TxDOT, Construction Division.
- Round exposed sharp edges with a rounding tool, to a minimum radius of 1/4 inch.
- All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
- Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
- Expansion and contraction joints shall be constructed to match pavement joints in all curbs and curb and gutter adjacent to jointed concrete pavement. Where placement of curb or curb and gutter is not adjacent to concrete pavement, expansion joints shall be provided at structures, curb returns at streets, and at locations directed by The Engineer.
- Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
- Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
- Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
- One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
- When vertical permissible construction joints are used, resulting in a longitudinal construction joint in the pavement, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans for longitudinal construction joints. Reinforcing steel for curb section shall then conform to that required for concrete curb.

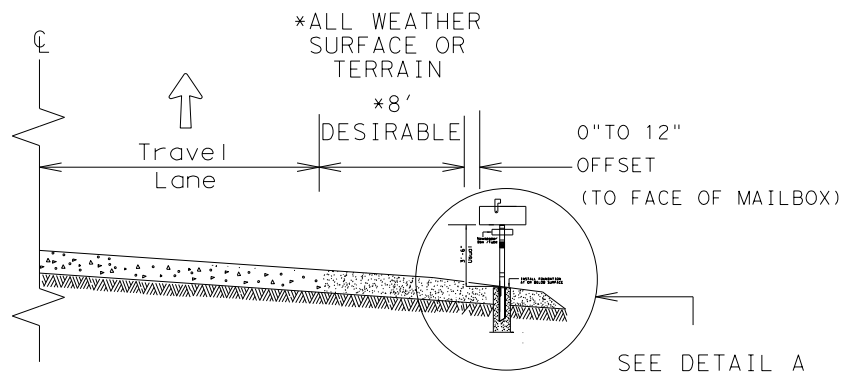


Curb Transition Note:  
 Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.

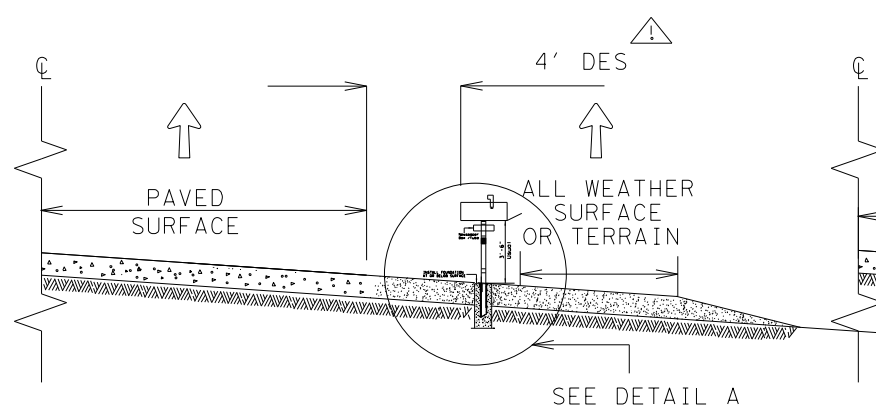
				<b>Design Division Standard</b>	
<h2>CONCRETE CURB AND GUTTER</h2> <h3>CCCG-12</h3>					
FILE: cccg12.dgn	DN: TxDOT	CK: AM	DW: VP	CK: VP	
© TxDOT: 1995	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0915	12	576	VARIABLES	
UPDATED 2012 - VP	DIST	COUNTY	SHEET NO.		
	SAT	BEXAR	583		

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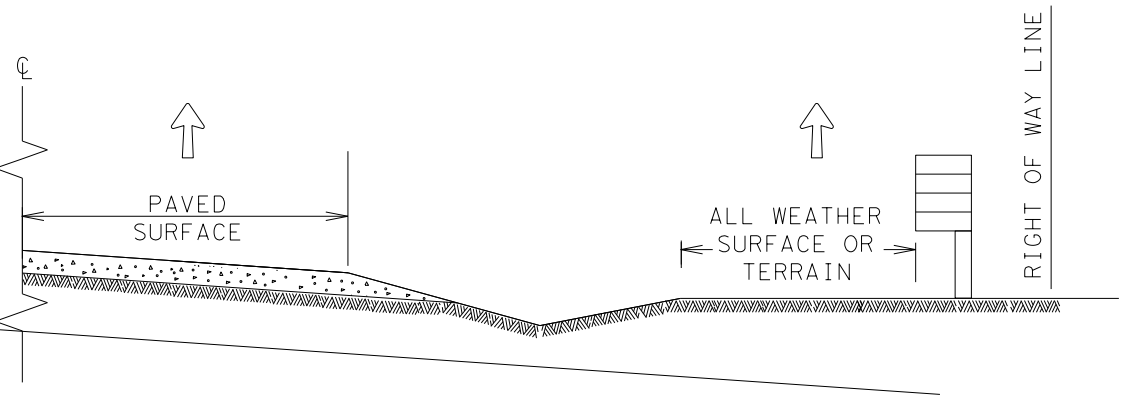
DATE: 5/3/2019 6:34:26 PM  
 FILE: P:\111\35\08\Design\Civil\Standards\Roadway\mb-14(2).dgn



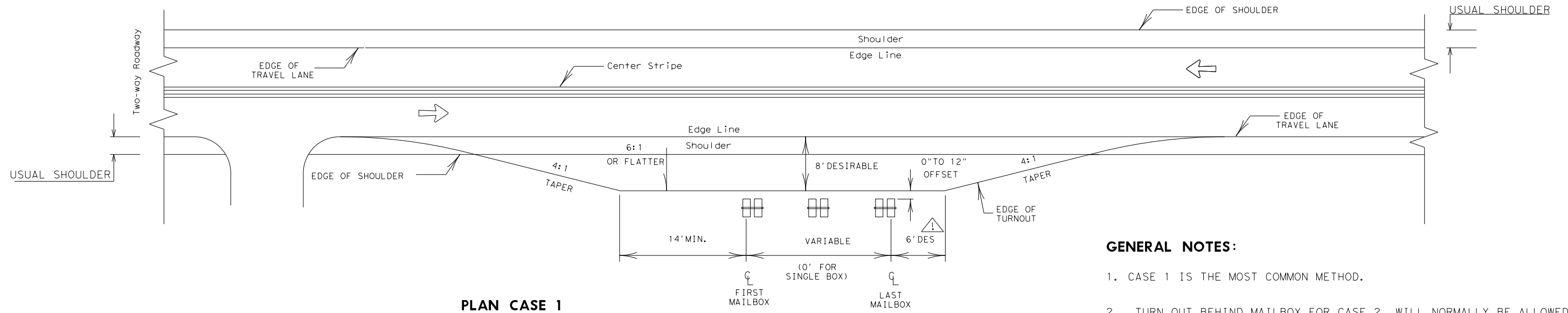
**CASE 1. OFF TRAVEL WAY DELIVERY**



**CASE 2. BACK SIDE DELIVERY**



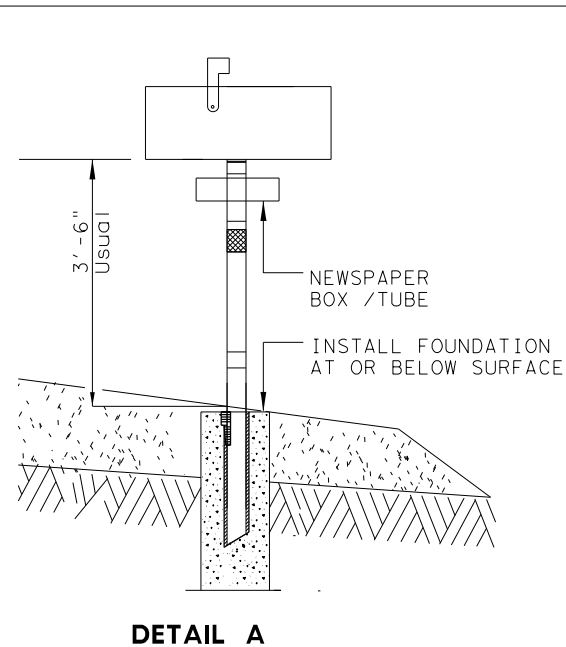
**CASE 3. DELIVERY NEAR RIGHT OF WAY LINE**



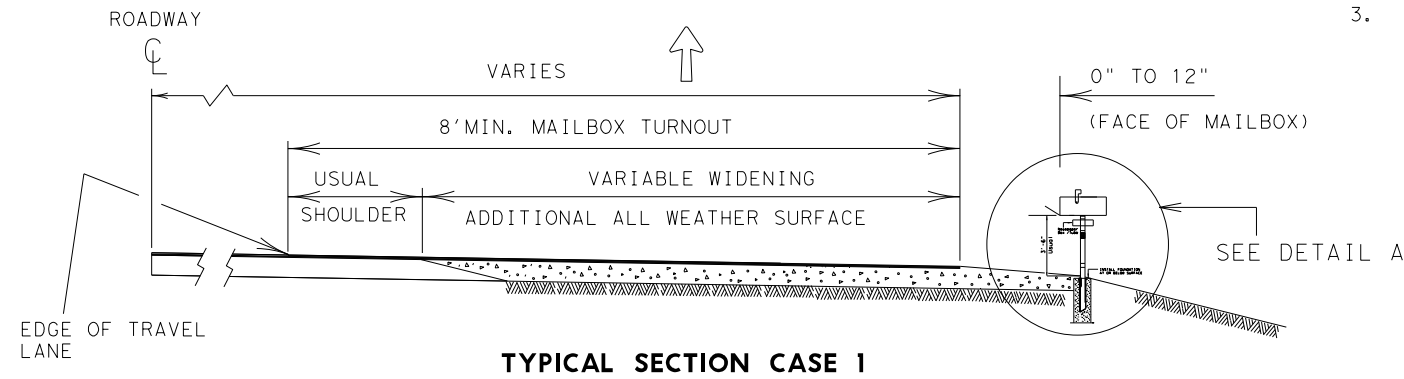
**PLAN CASE 1**

**GENERAL NOTES:**

1. CASE 1 IS THE MOST COMMON METHOD.
2. TURN OUT BEHIND MAILBOX FOR CASE 2 WILL NORMALLY BE ALLOWED FOR NATURAL TERRAIN THAT WILL SERVE AS AN ALL WEATHER SURFACE.
3. ALL WEATHER DRIVEWAYS FOR CASE 3 MAILBOXES LOCATED AT THE RIGHT OF WAY LINE SHOULD NORMALLY BE PLACED IN CONJUNCTION WITH COUNTY ROADS OR OTHER CONNECTING COMMUNITY ROADS OR STREETS. IF THE NUMBER OF MAILBOXES EXCEEDS FOUR, A COMMUNITY MAIL BOX SHOULD BE ENCOURAGED AT THESE LOCATIONS.



**DETAIL A**



**TYPICAL SECTION CASE 1**

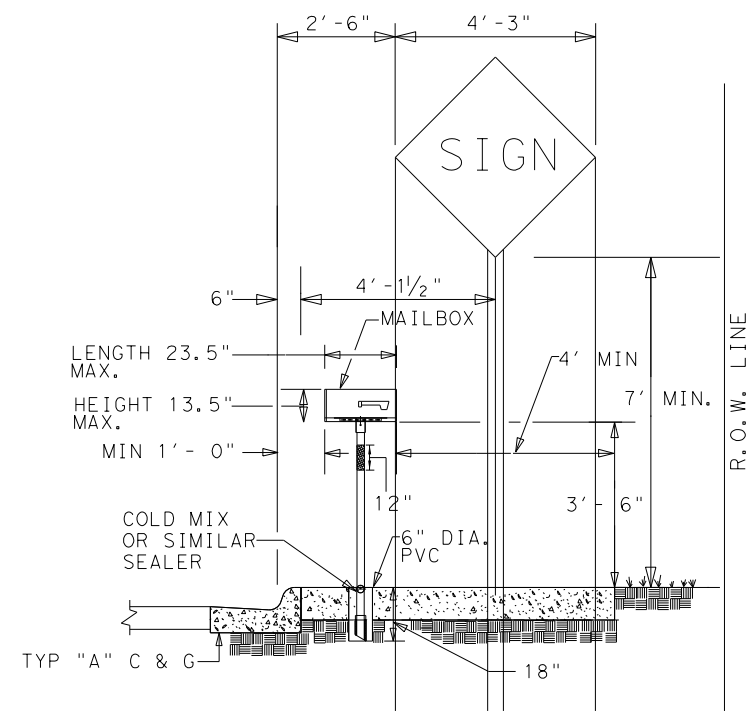
↑ MAIL DELIVERY VEHICLE TRAVEL DIRECTION

SHEET 1 OF 3

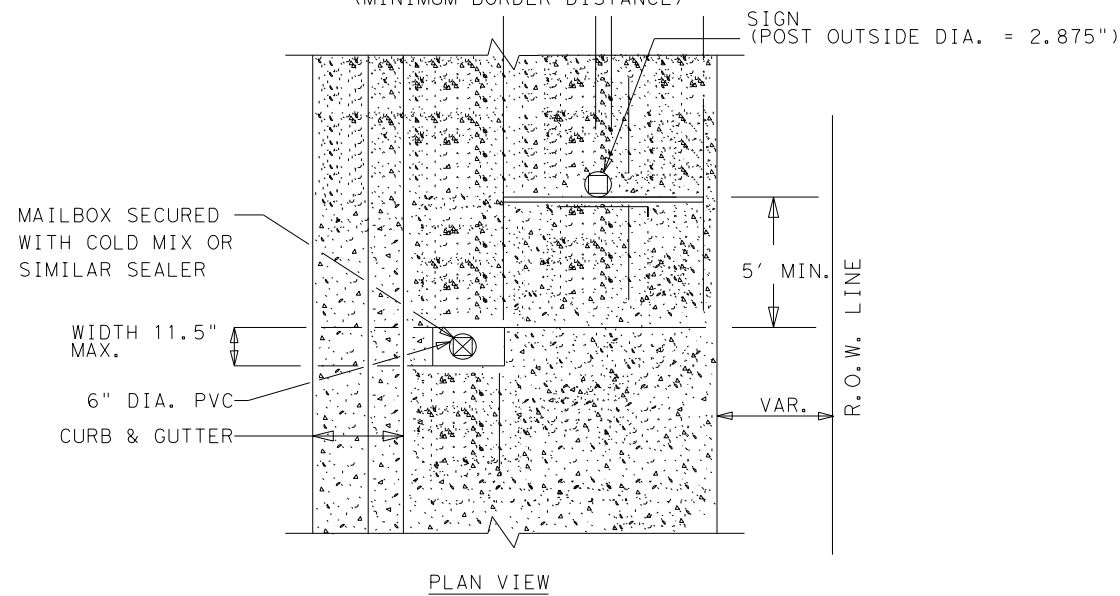
		<b>Maintenance Division Standard</b>	
<i>Guideline</i> <b>MAILBOX SIDE ROAD PLACEMENT AND TURNOUTS MB-14(2)</b>			
FILE: MB14(2).DGN	DN: JEO	CK:	DW: JEO
© TxDOT MAY 2014	CONT	SECT	JOB
REVISIONS	0915	12	576
DECEMBER 2012-NEW TxDOT TITLE BLOCK	DIST	COUNTY	SHEET NO.
	SAT	BEXAR	584

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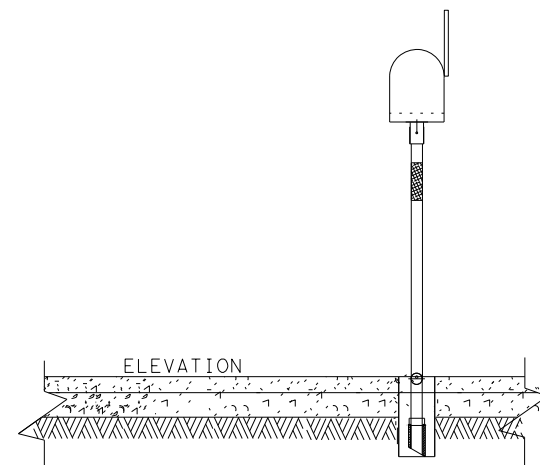
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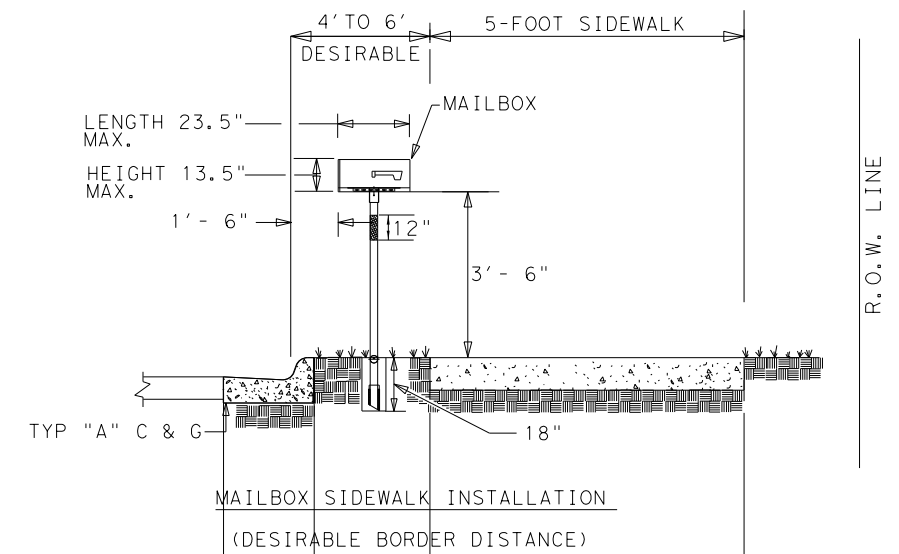
MAILBOX SIDEWALK INSTALLATION RELATIVE TO ANY OTHER OBSTRUCTION SUCH AS A SIGN (MINIMUM BORDER DISTANCE)



PLAN VIEW



ELEVATION



SEE MB-15(1) SHEET 3 OF 4

WIDTH 11.5" MAX.

CURB & GUTTER  
 BUFFER AREA BETWEEN CURB AND SIDEWALK (GRASS)

PLAN VIEW

SHEET 2 OF 3



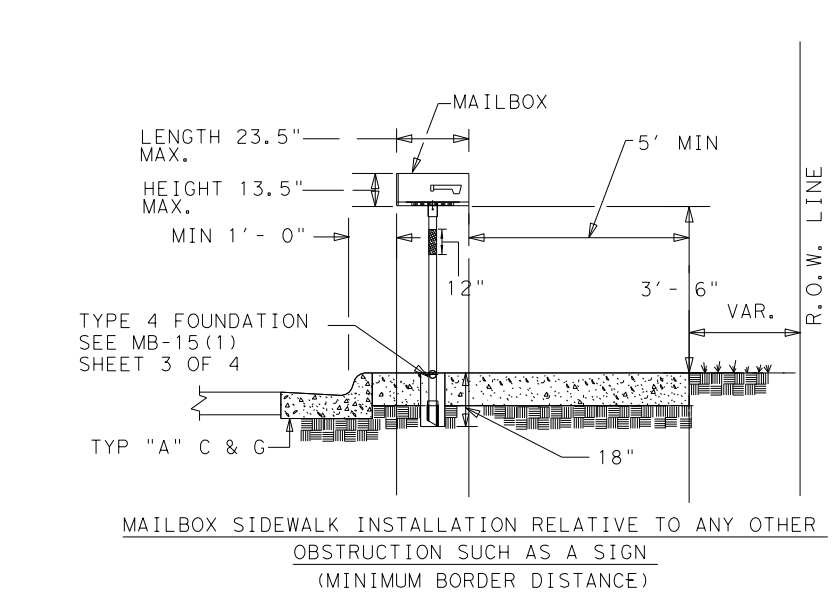
**SINGLE MAILBOX PLACEMENT  
 BEHIND CURBS WITH OR WITHOUT  
 SIDEWALKS  
 MB-14(2A)**

FILE: MB-14(2A)	DN:	CK:	DW:	CK:
© TxDOT MAY 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	585	

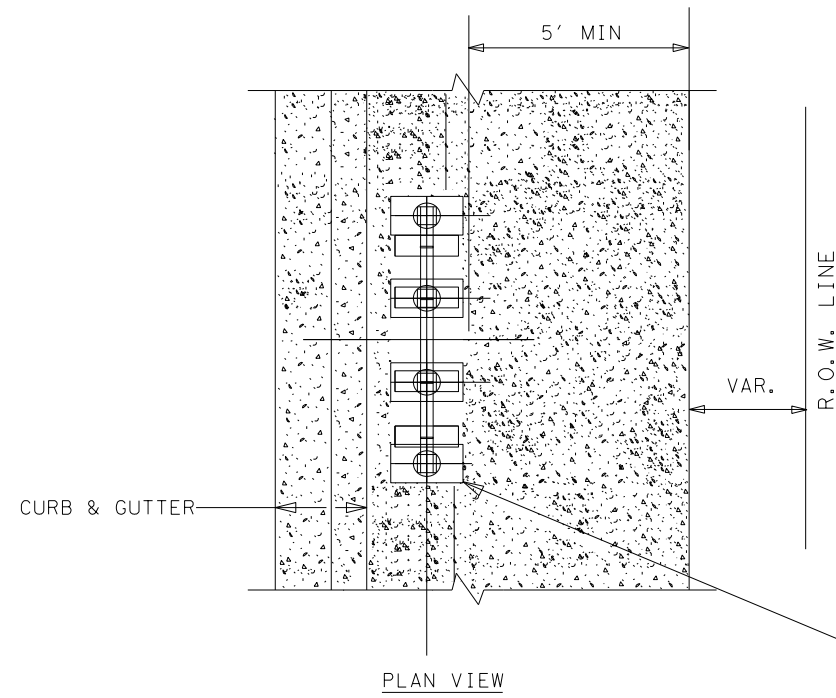


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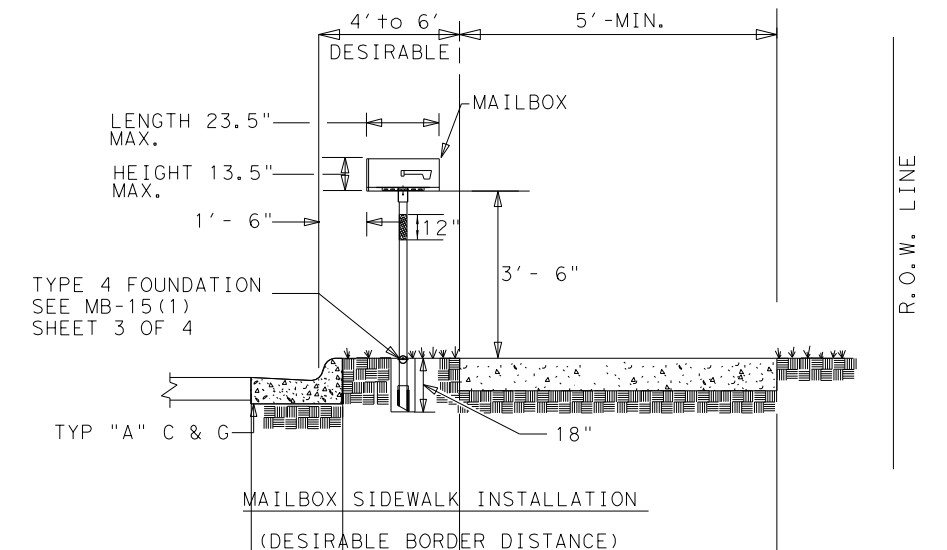
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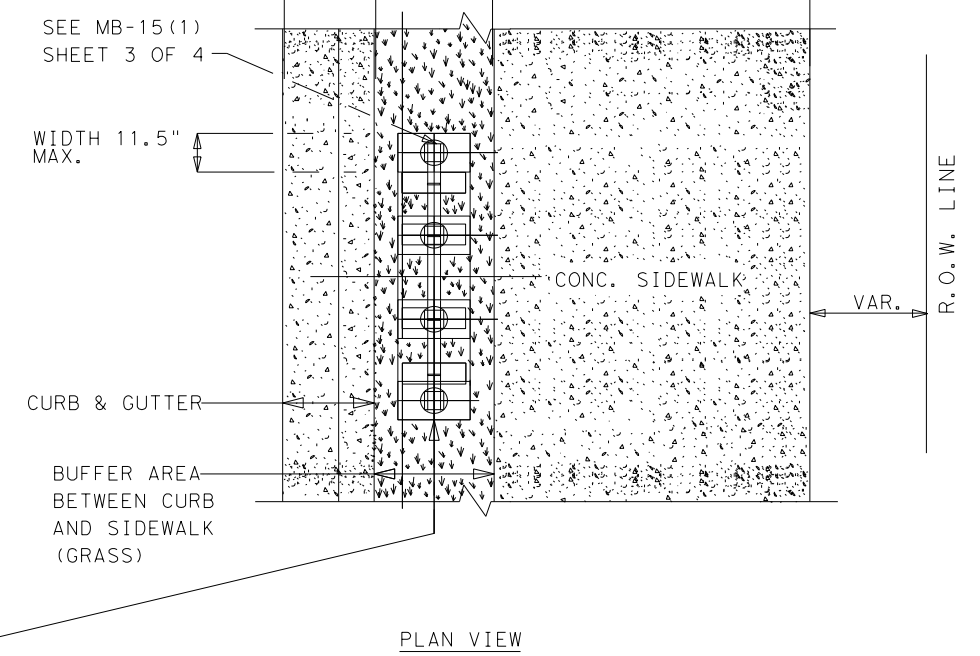
MAILBOX SIDEWALK INSTALLATION RELATIVE TO ANY OTHER OBSTRUCTION SUCH AS A SIGN (MINIMUM BORDER DISTANCE)



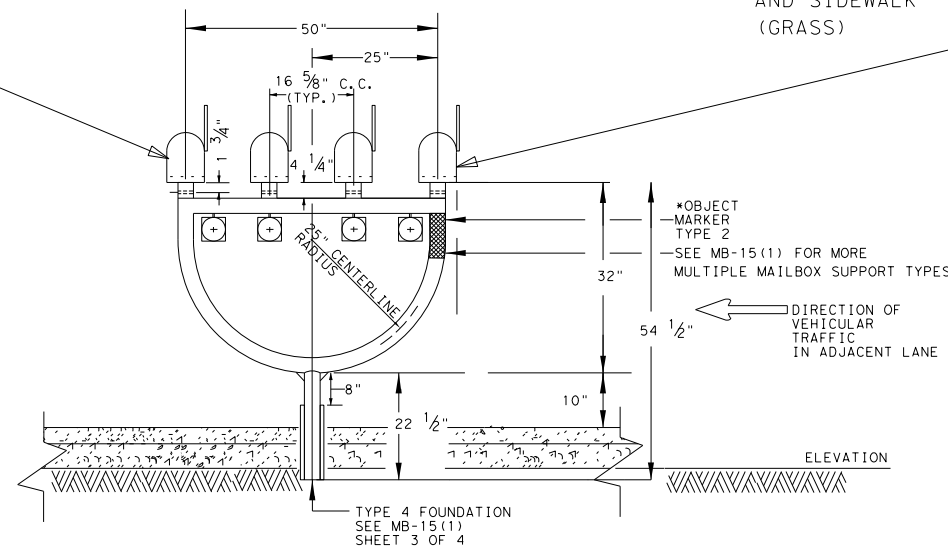
PLAN VIEW



MAILBOX SIDEWALK INSTALLATION (DESIRABLE BORDER DISTANCE)



PLAN VIEW



TYPE 4 FOUNDATION SEE MB-15(1) SHEET 3 OF 4

SHEET 3 OF 3



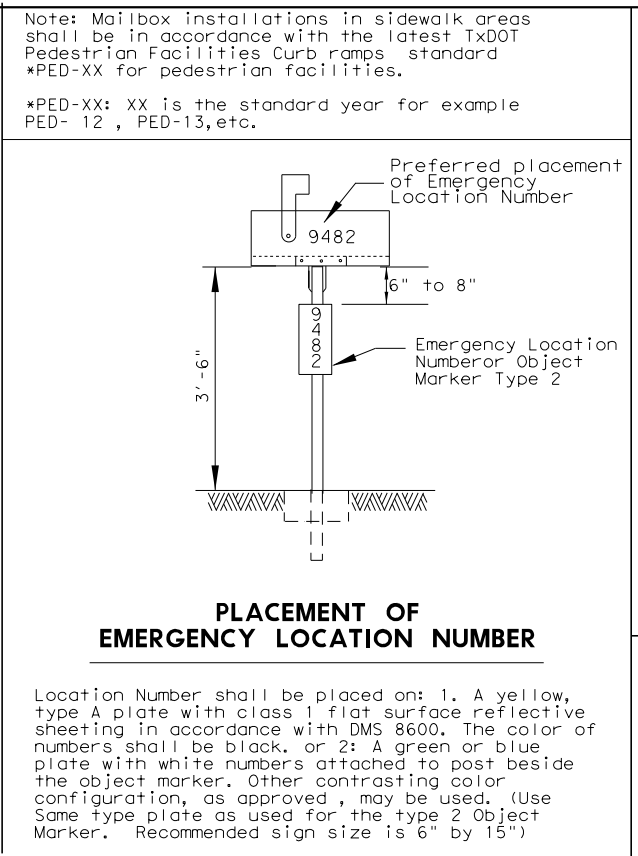
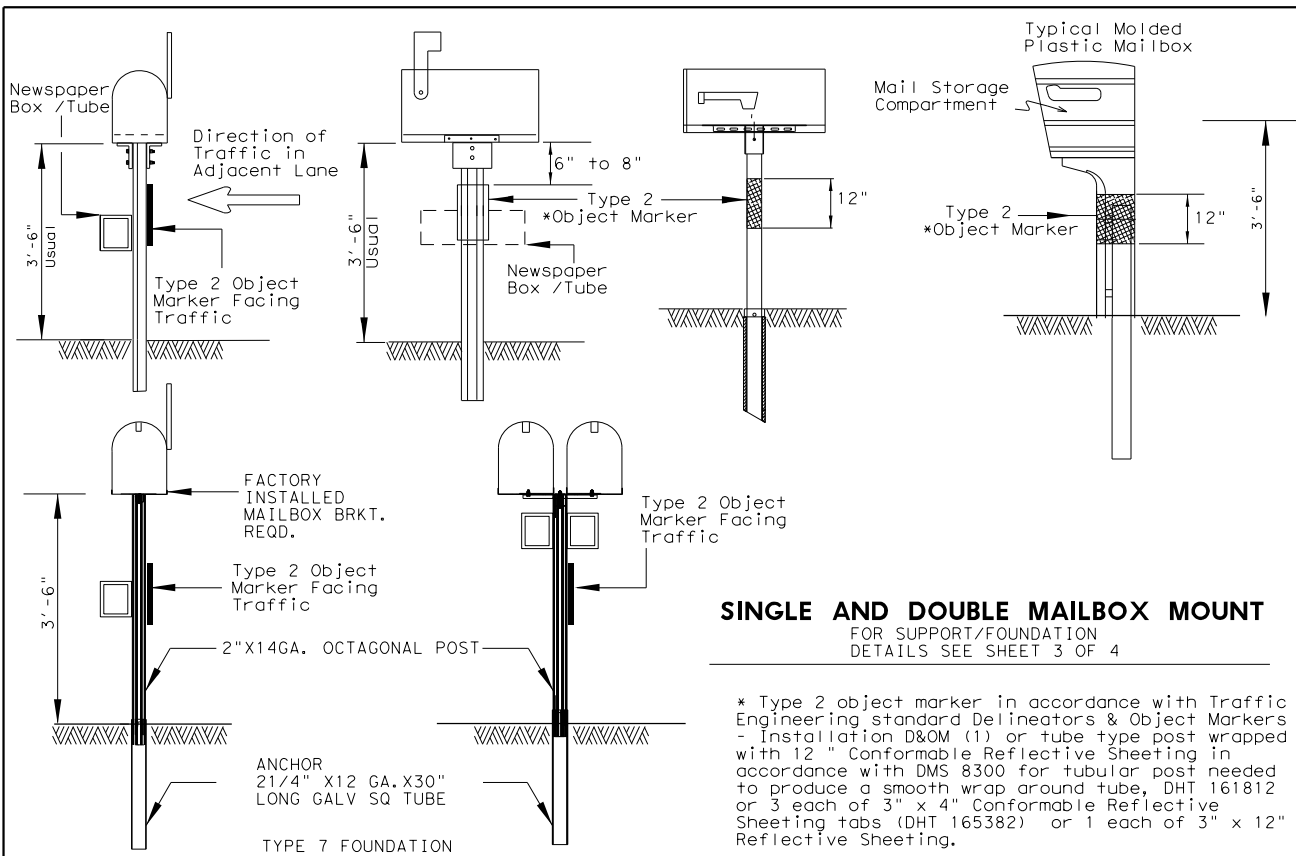
**MULTIPLE MAILBOX PLACEMENT BEHIND CURBS WITH OR WITHOUT SIDEWALKS**

**MB-14(2B)**

FILE: MB-14(2A)	DN:	CK:	DW:	CK:
© TxDOT MAY 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIABLES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	586	

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**TYPICAL MAILBOX SIZE**

SIZE	INCHES			MAXIMUM WEIGHT	
	LENGTH	WIDTH	HEIGHT	POUNDS	
SMALL	19 1/2	6	7	5	5
MEDIUM	22 1/2	8	11 1/2	7	7
LARGE	23 1/2*	11 1/2*	13 1/2*	10	10

\* Maximum allowed dimensions for mailbox  
 \*\* Excluding Molded Plastic on 4 X 4 Post

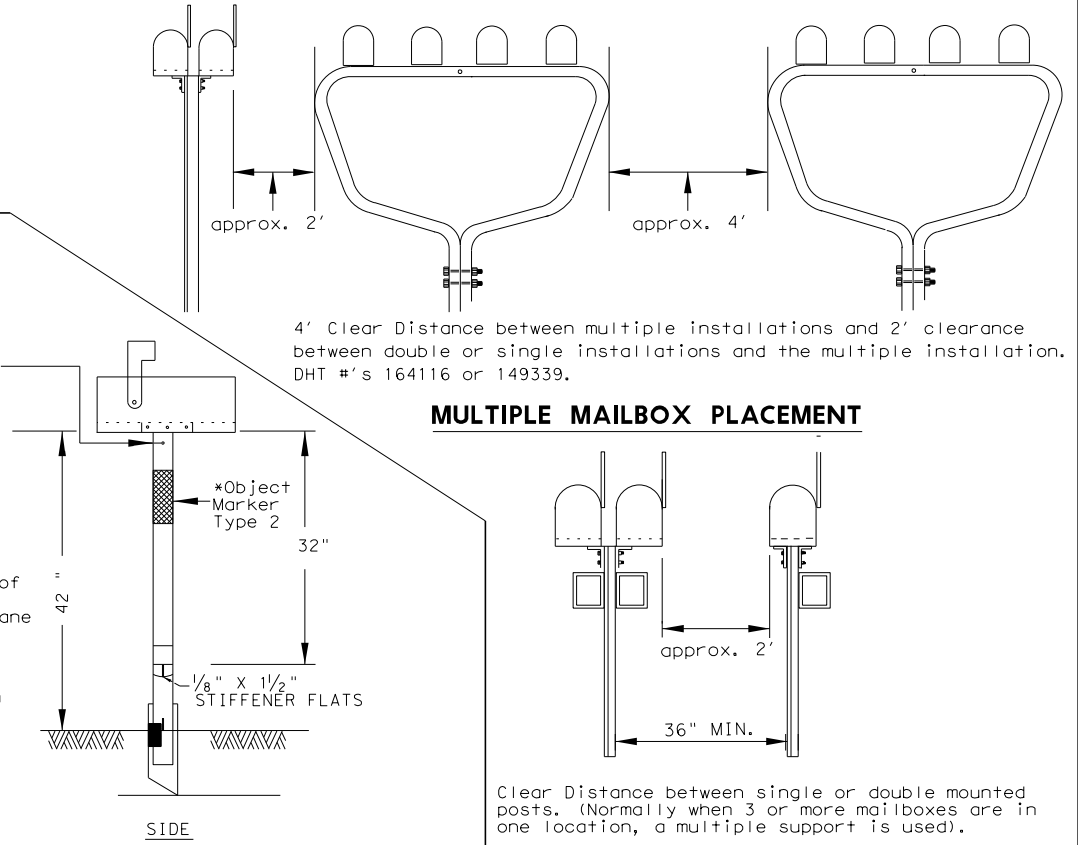
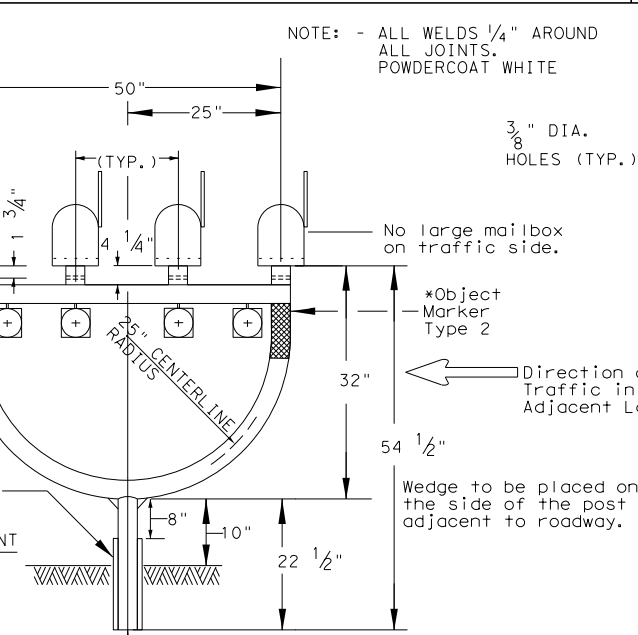
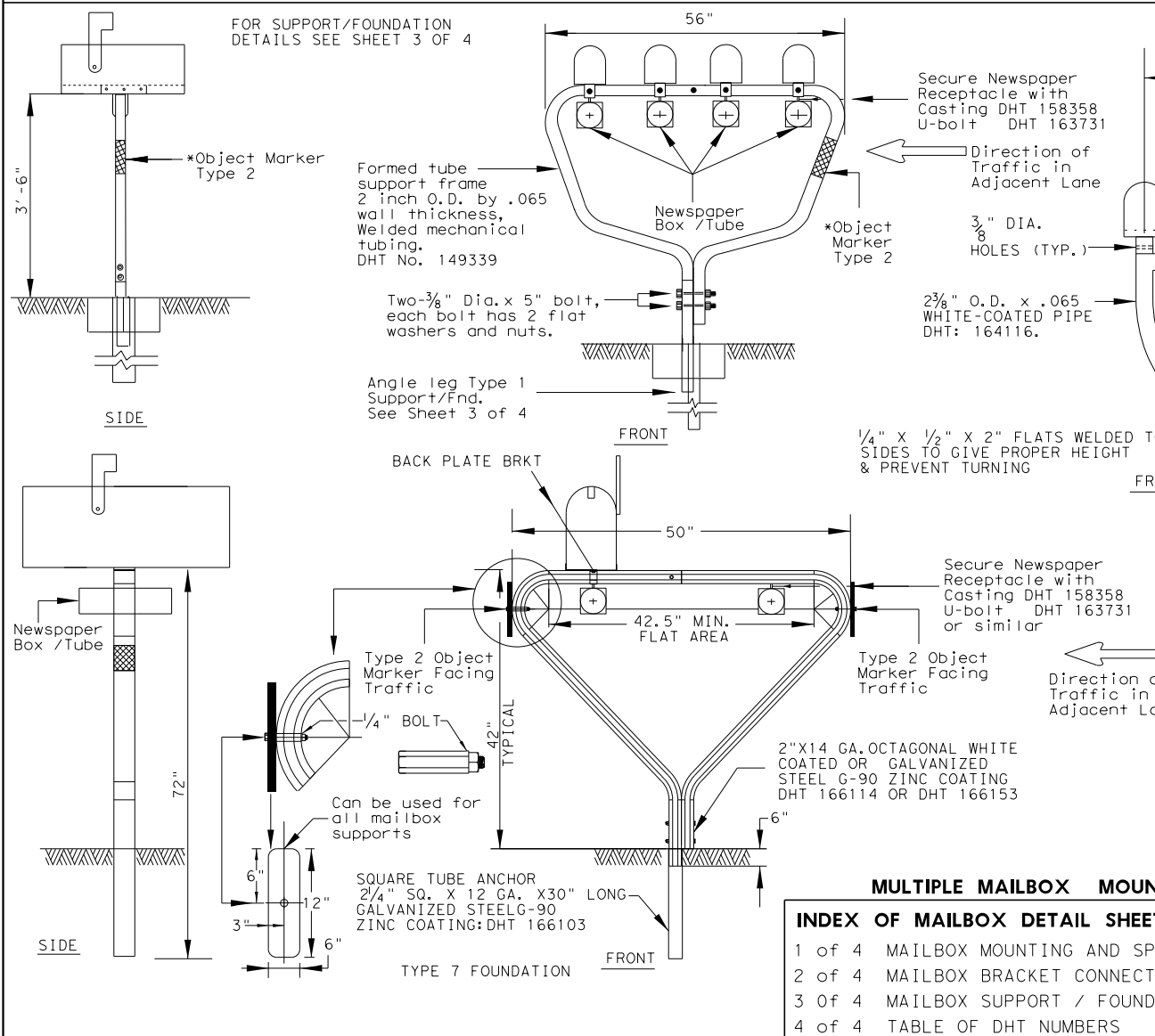
**LOCKABLE ARCHITECTURAL MAILBOX SIZE (INCHES)**

VIEW	TOP	BOTTOM	FRONT SIDE	BACK SIDE	WEIGHT (POUNDS)
SIDE	18	15	18.3	15	22.4
BACK	11 1/2	11 1/2		15	

Mailboxes shall be made of light weight sheet metal or light weight plastic. Lockable architectural mailboxes shall meet the requirements of the above table.

Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.

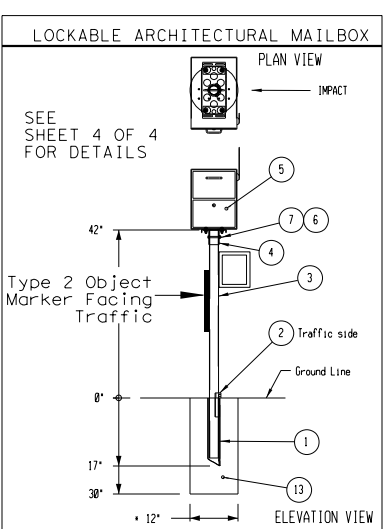
SEE TOP RIGHT CORNER OF SHEET 2 OF 4



**NEWSPAPER RECEPTACLE**

A light weight receptacle for newspaper delivery can be attached to mailbox posts as shown on this page if the receptacle:

- Does not touch the mailbox.
- Does not present a hazard to traffic or delivery of the mail.
- Does not extend beyond the front of the mailbox.
- Does not display advertising, except the publication title.
- Newspaper receptacles on separate supports are prohibited.



**INDEX OF MAILBOX DETAIL SHEETS**

1 of 4	MAILBOX MOUNTING AND SPACING
2 of 4	MAILBOX BRACKET CONNECTING DETAILS
3 of 4	MAILBOX SUPPORT / FOUNDATION
4 of 4	TABLE OF DHT NUMBERS

SHEET 1 OF 4

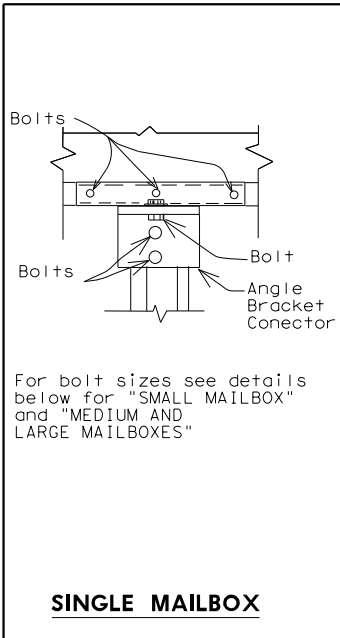
**Texas Department of Transportation**

Maintenance Division Standard

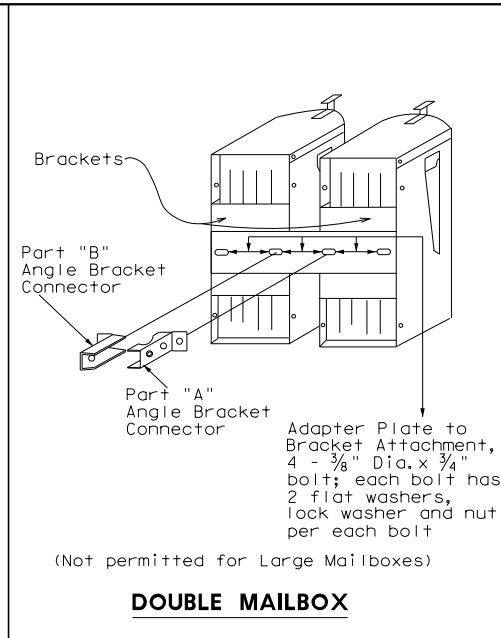
**MAILBOX MOUNTING AND SPACING MB-15(1)**

FILE: MB14(1).DGN	DWG: JEO	CHK: JEO	DWG:	CHK:
© TxDOT APRIL 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS:	0915	12	576	VARIES
Added additional newspaper receptacle for double mailbox support	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	587	

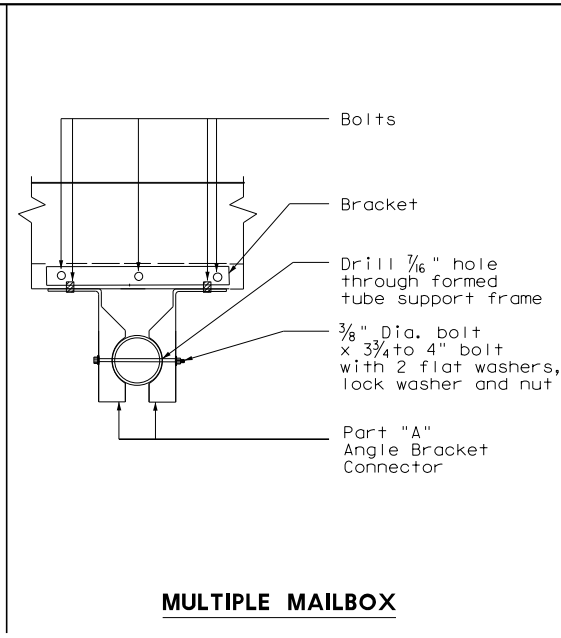
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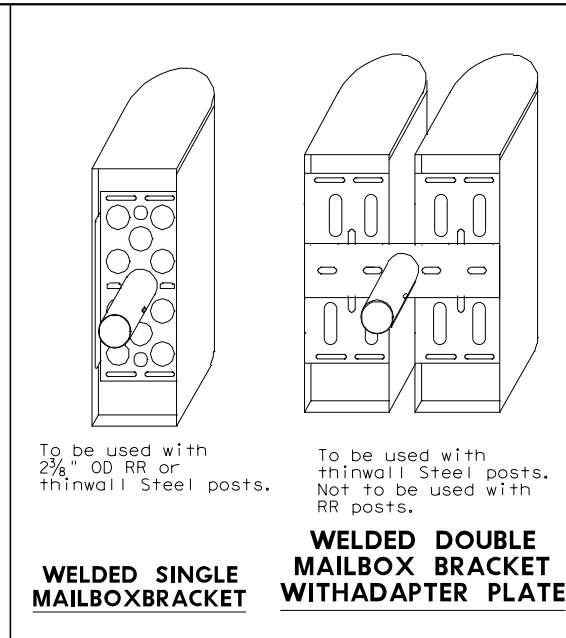
**SINGLE MAILBOX**



**DOUBLE MAILBOX**

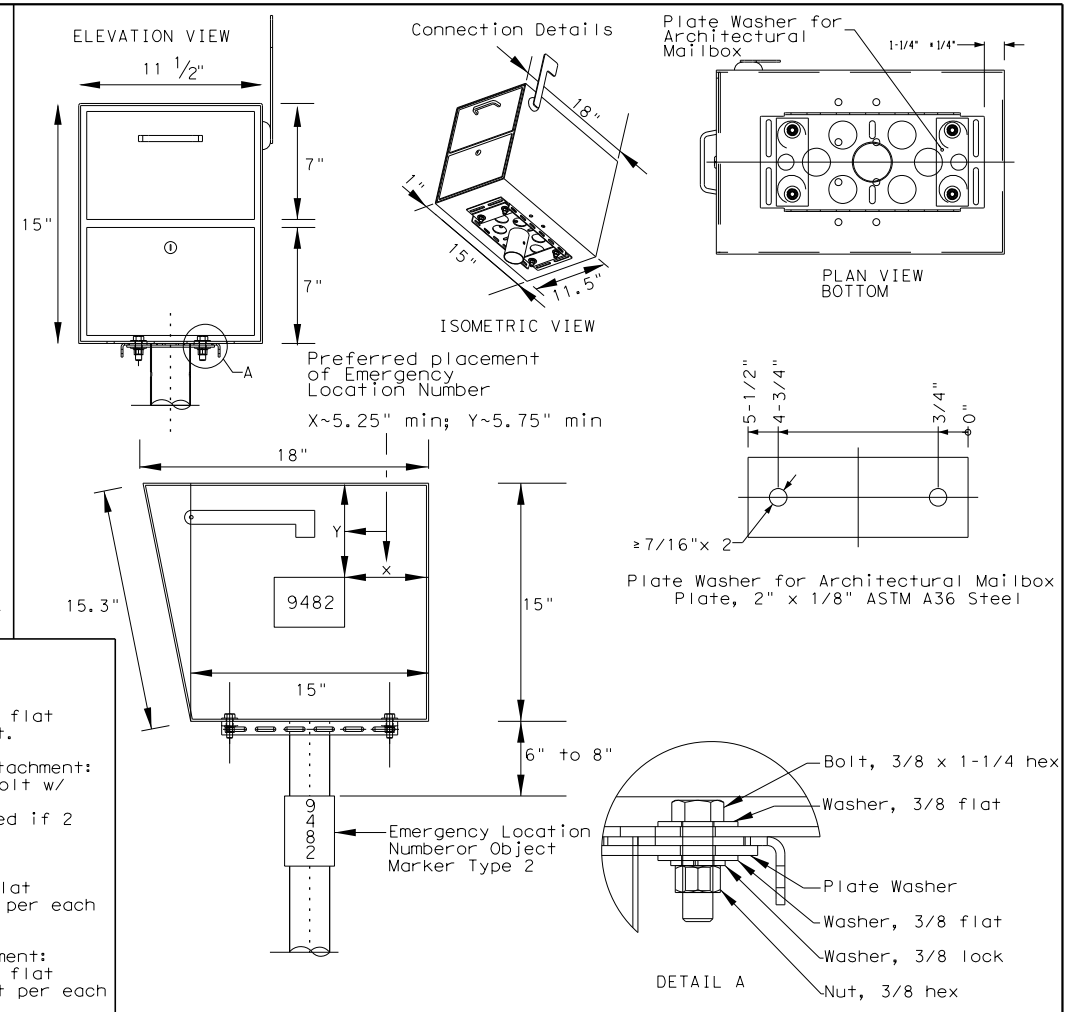


**MULTIPLE MAILBOX**

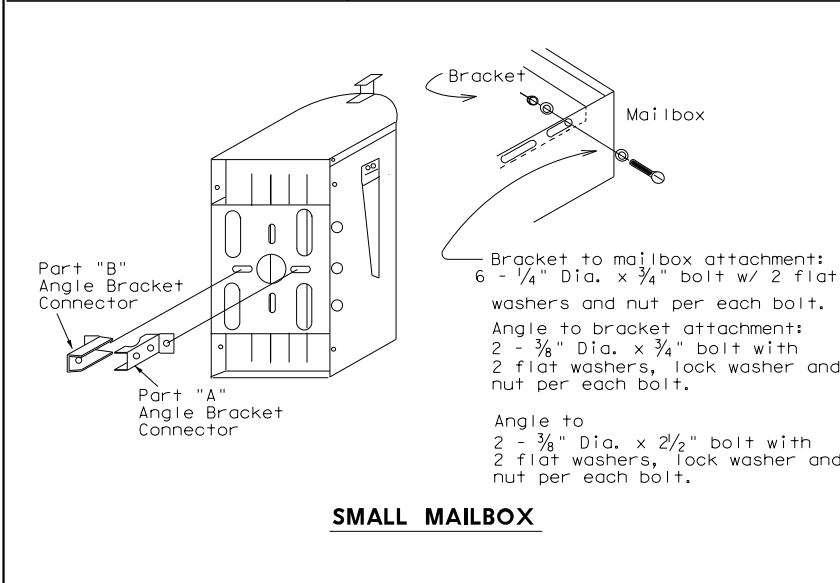


**WELDED SINGLE MAILBOX BRACKET**

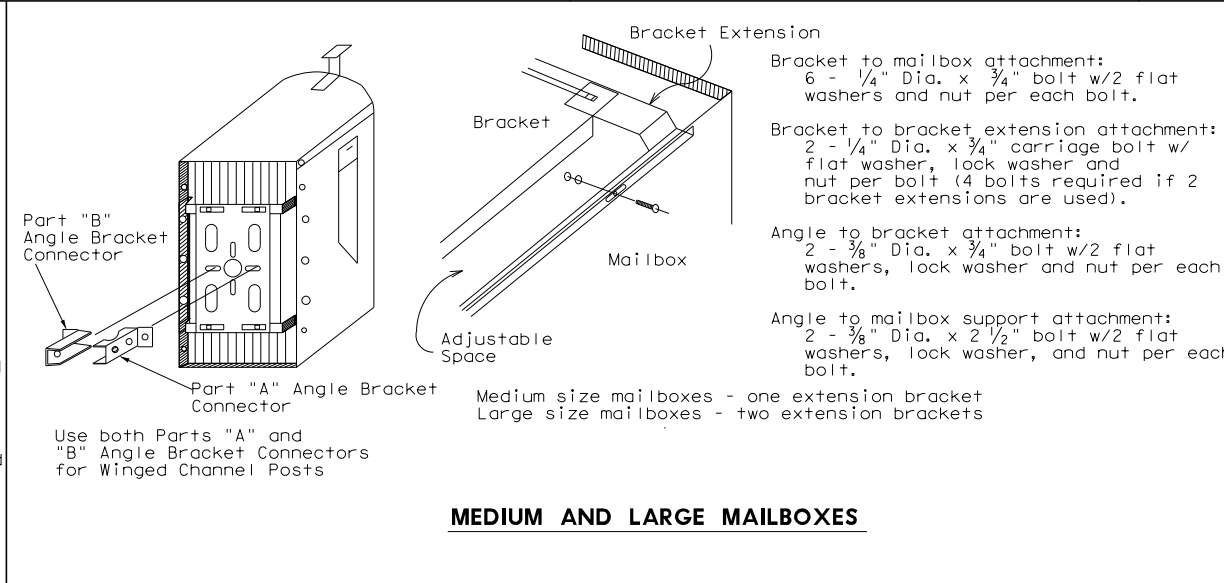
**WELDED DOUBLE MAILBOX BRACKET WITH ADAPTER PLATE**



**LOCKABLE ARCHITECTURAL MAILBOX CONNECTION DETAILS**



**SMALL MAILBOX**

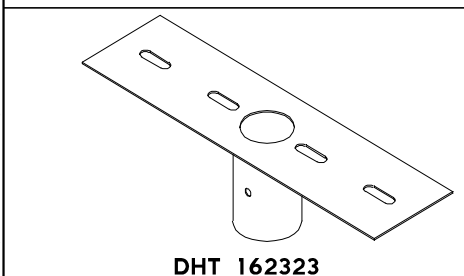


**MEDIUM AND LARGE MAILBOXES**

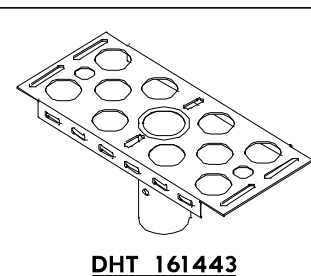
**GENERAL NOTES**

- Connecting hardware detailed on this sheet is for the hardware that the Department stocks at the Regional Warehouses. This hardware is available to the contractor only when so stated elsewhere in the plans or specification.
- Hardware for mounting mailboxes to the support/foundation furnished by industry should be used when shown on the Maintenance Divisions "Approved Products List." Only mailbox hardware that have been crash tested in accordance with NCHRP Report 350, will be on the approved list.
- Hardware furnished by industry shall be erected in accordance with the manufacturer's recommendation.
- Bracket and bracket extension shall be constructed of 14 gauge galvanized steel sheet metal.
- The angles, brackets and adapter plates shall be constructed of 12 gauge galvanized steel sheet metal.
- Items with evidence of damage to the galvanized coating or wet storage stains (white rust) will not be accepted.

SHEET 2 OF 4



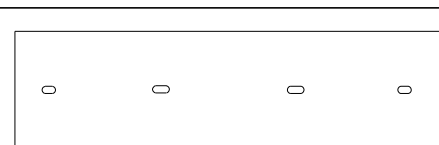
**DHT 162323**



**DHT 161443**

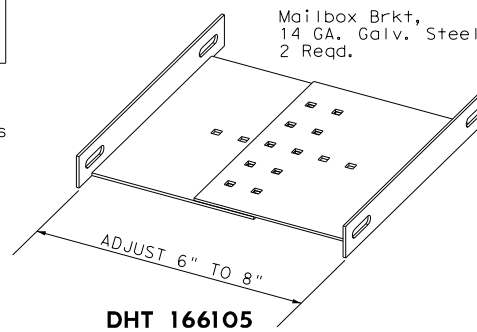
For use with galvanized thinwall steel posts DHT # 143426 or powder-coated thinwall steel post DHT # 162911.

For use with RCR post DHT # 161442 or galvanized thinwall steel post DHT # 143426 or powder-coated thinwall steel post. DHT # 162911.



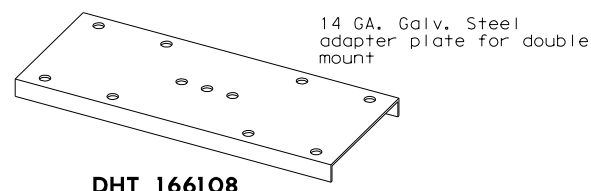
**DHT #3789**

Used for mounting two Mailboxes on the same post.



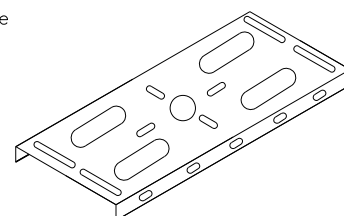
**DHT 166105**

Mailbox Brkt, 14 GA. Galv. Steel 2 Reqd.



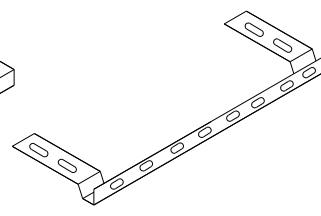
**DHT 166108**

14 GA. Galv. Steel adapter plate for double mount



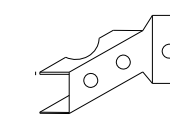
**DHT 148939**

Mailbox Bracket



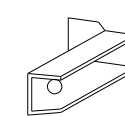
**DHT 148938**

Used for extending 6" wide bracket to attach larger mailboxes.  
Bracket Extension



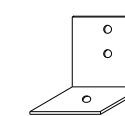
**DHT 159489**

Part "A" Angle Bracket Connector



**DHT 159490**

Part "B" Angle Bracket Connector



**DHT 2917**

Angle Bracket For Temporary Mailbox

**HARDWARE AT TXDOT REGIONAL WAREHOUSES**

Brackets and adapter plate shown in this section should be available to the Contractor when stated elsewhere in plans or specifications.

See Table of Applicable DHT Numbers on sheet 4 of 4 for DHT description and unit of measure.

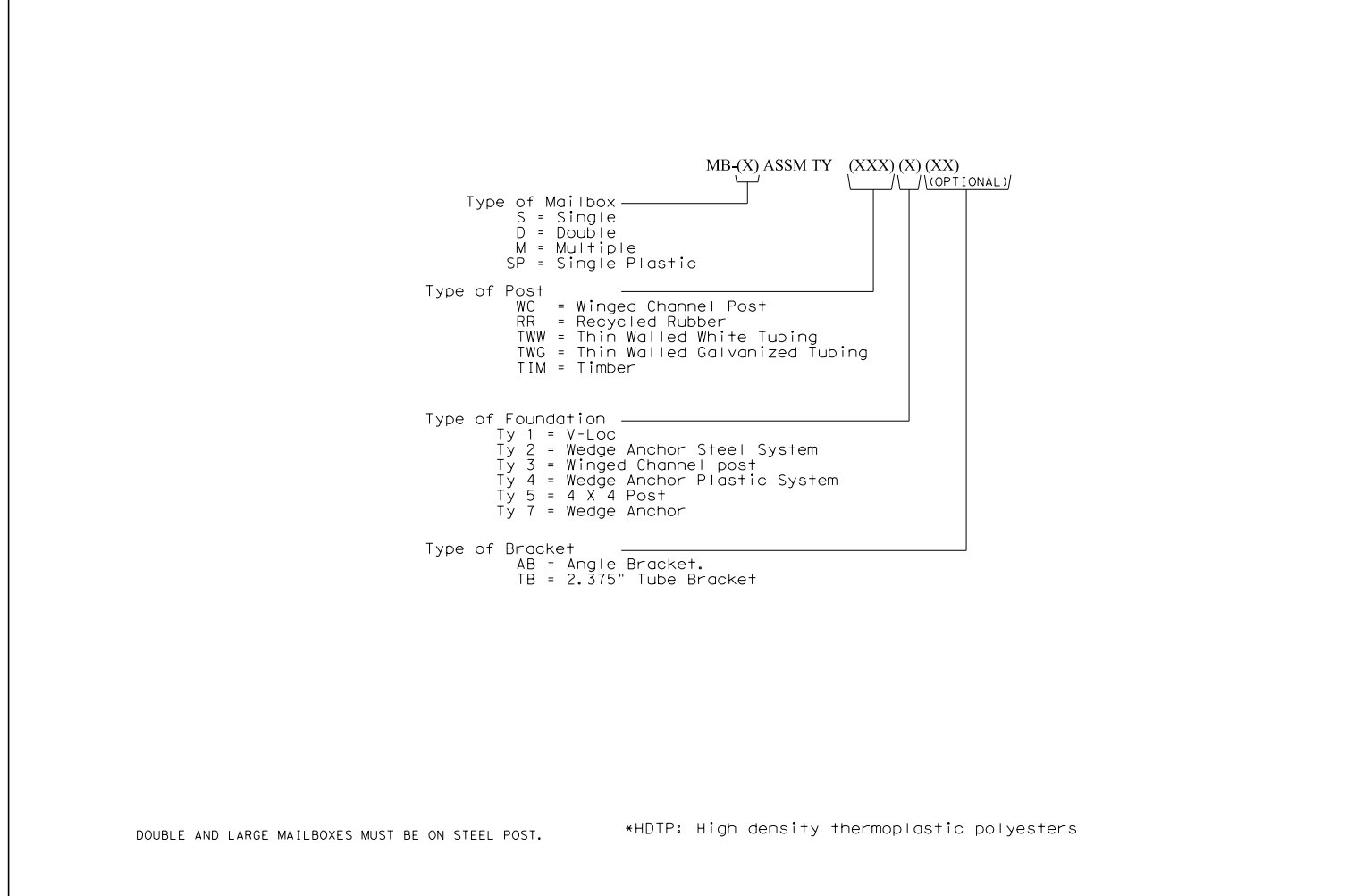
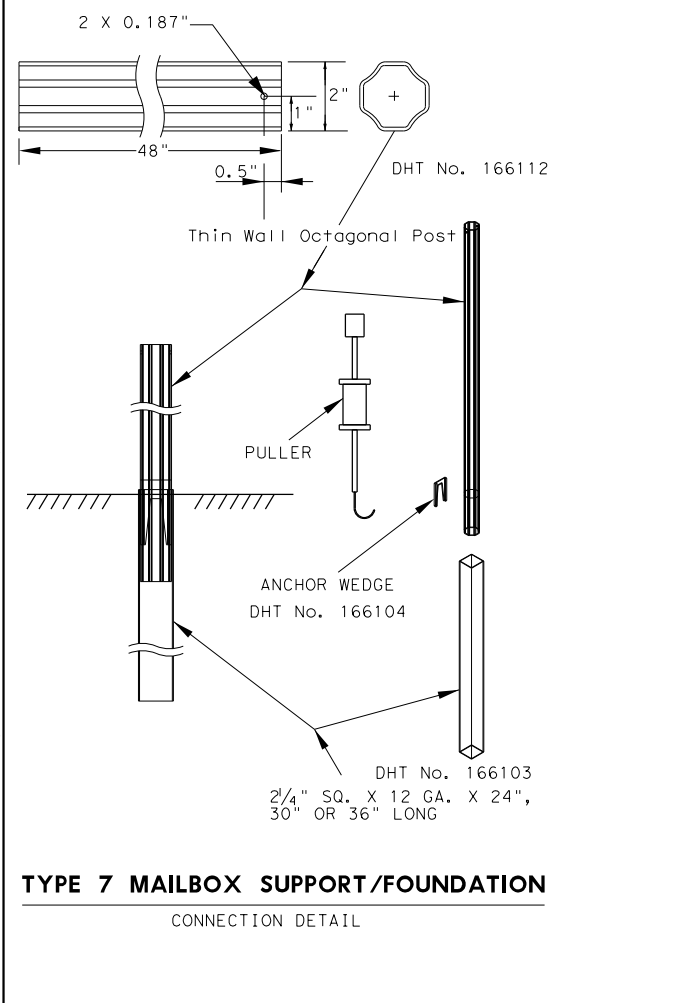
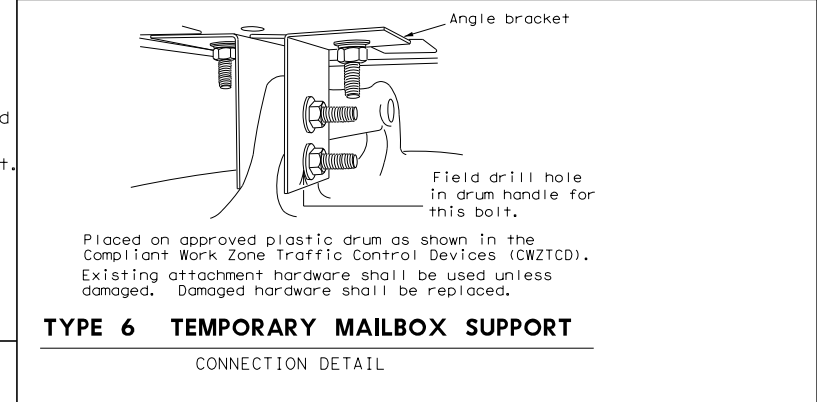
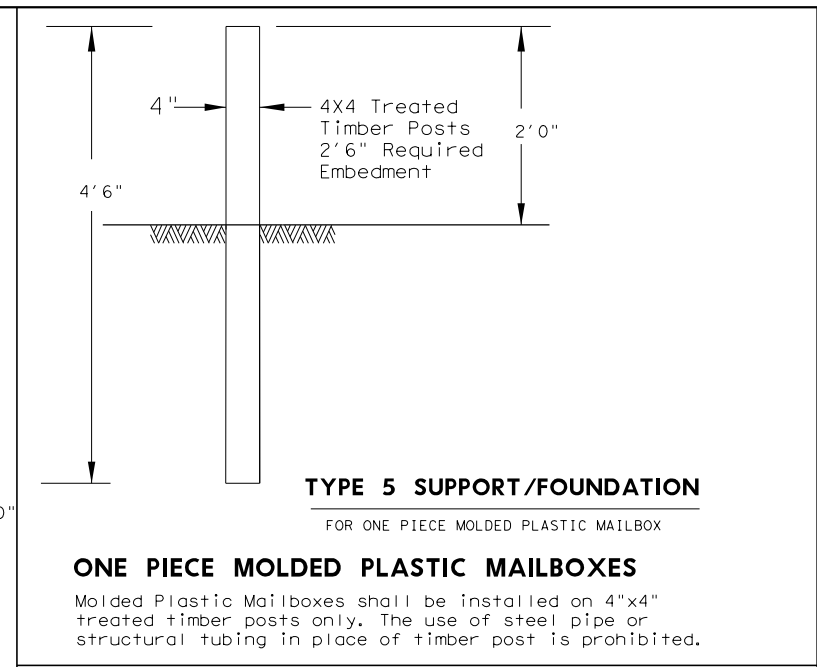
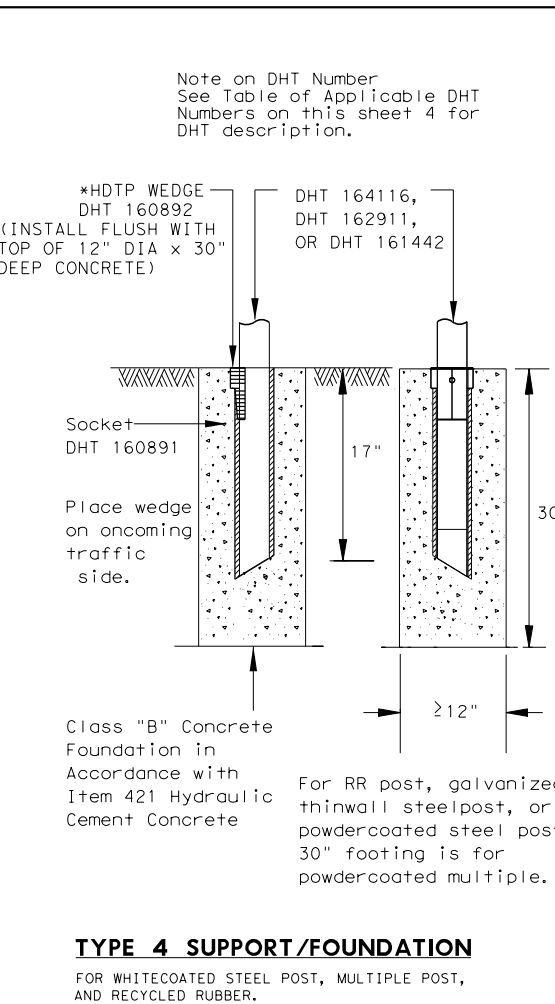
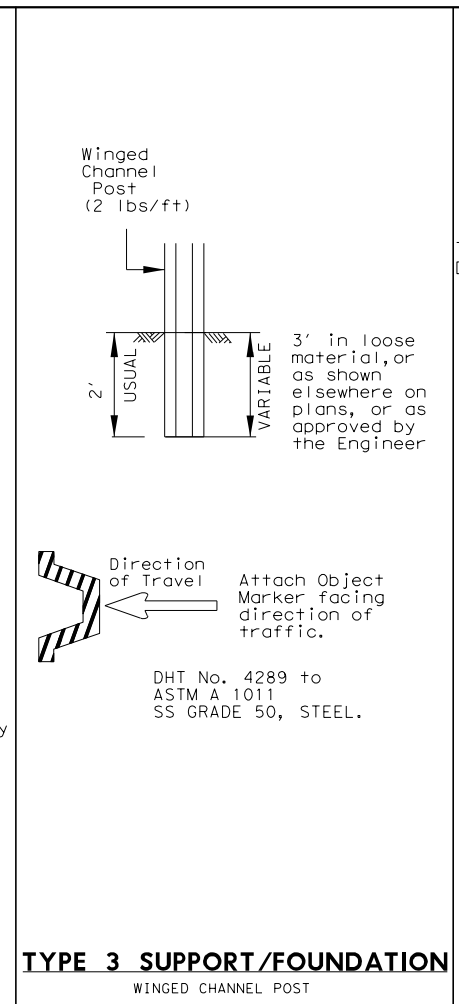
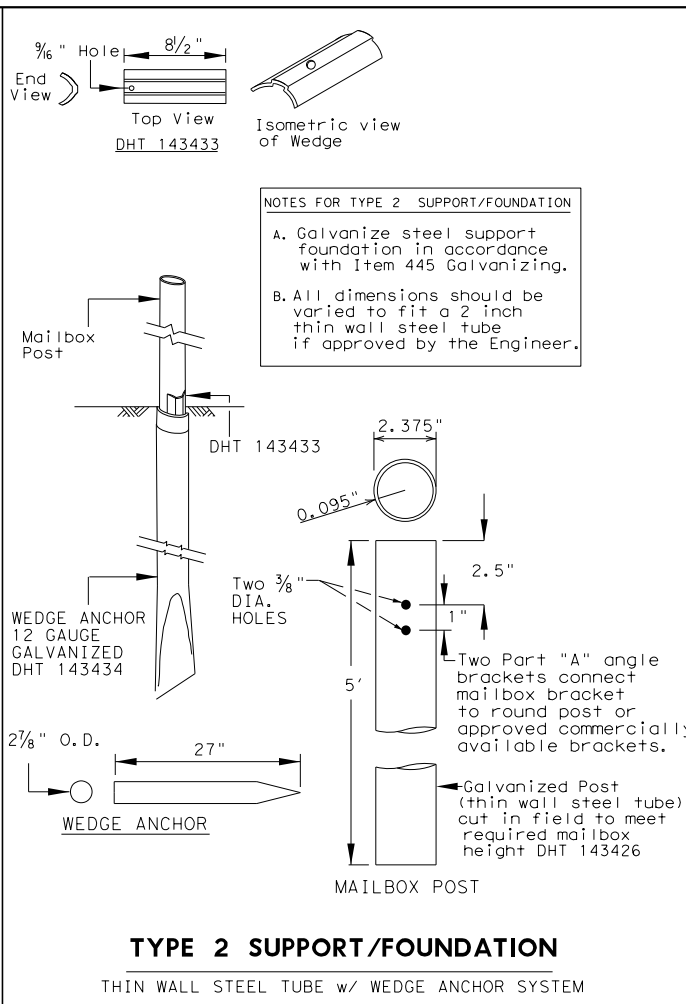
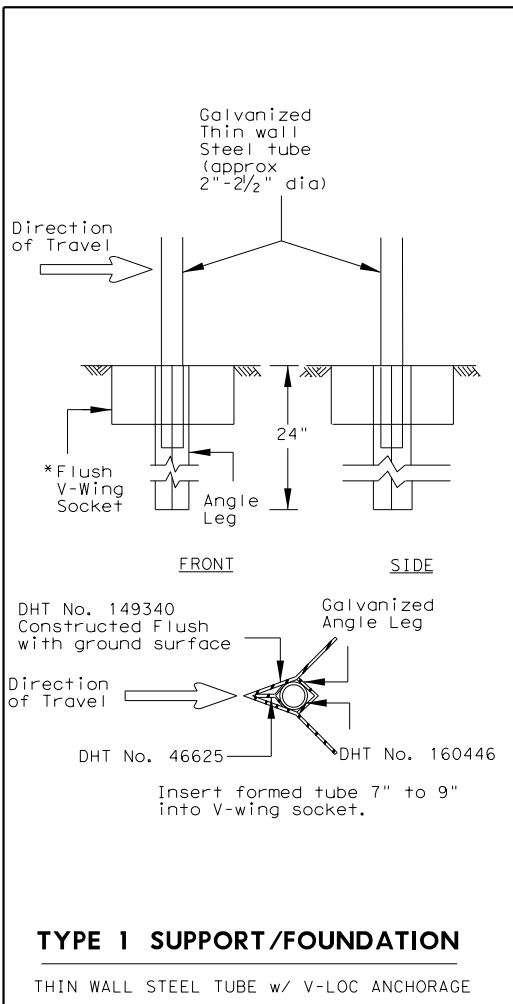
Texas Department of Transportation  
Maintenance Division Standard

**MAILBOX BRACKET CONNECTING DETAILS MB-15(1)**

FILE: MB14(1).DGN	DWG: JEO	CHK:	DWG: JEO	CHK:
© TxDOT APRIL 2015	CONT	SECT	JOB	HIGHWAY
ADDED DHT 163730	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	588	

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- GENERAL NOTES**
- Erect post plumb or vertical.
  - When galvanized part is required galvanize in accordance with Item 445.
  - type 1, 2, 3, 4 or 7 supports or foundation can be used for single or double mailbox installations. The RCR post should be used only for a single installation with a small mailbox. The Type 5 support/foundation is used for the single molded plastic mailbox. The Type 4 support/foundation is used for the 2.375" O.D. RR post, thin wall steel post, and white multiple mailbox post.
  - The Type 1 or type 7 support/foundation can be used for a multiple mailbox mount.
  - The Type 4 support should be used with thin wall steel pipe for the medium, large and double mailbox installations.
  - Use a concrete footing as shown or when directed. Concrete footing will be required when soils do not hold the support/foundations in a stable condition.

SHEET 3 OF 4

**Texas Department of Transportation**  
 Maintenance Division Standard

**MAILBOX SUPPORT AND FOUNDATION**  
**MB-15(1)**

FILE: MB15(1).DGN	DN: JEO	CK:	DW: JEO	CK:
© TxDOT APRIL 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	589	

DOUBLE AND LARGE MAILBOXES MUST BE ON STEEL POST.

\*HOTP: High density thermoplastic polyesters

**LOCKABLE ARCHITECTURAL MAILBOX**

SINGLE-MOUNT INSTALLATION PARTS			
#	PART NAME	PART/DHT #	QTY
1	SOCKET, TYPE 4 FOUNDATION	160891	1
2	WEDGE FOR TYPE 4 FOUNDATION	160892	1
3	THIN-WALL WHITE STEEL TUBE 2.375 OD	162911	1
4	BRACKET FOR ATTACHING MAILBOX	161443	1
5	ARCHITECTURAL MAILBOX	SEE NOTE	1
6	NUT, 5/16" HEX	NUT, 5/16" HEX	1
7	BOLT, 5/16 X 3 HEX	GRADE 5	1
8	PLATE WASHER FOR ARCHITECTURAL MAILBOX	SEE SEE SHEET 2	2
9	WASHER, 3/8 FLAT		8
10	WASHER, 3/8 LOCK		4
11	NUT, 3/8 HEX		4
12	BOLT, 3/8 X 1-1/4 HEX	GRADE 5	4
13	CONCRETE, CLASS B (2000 PSI)		1

LOCKABLE ARCHITECTURAL MAILBOX DETAILS

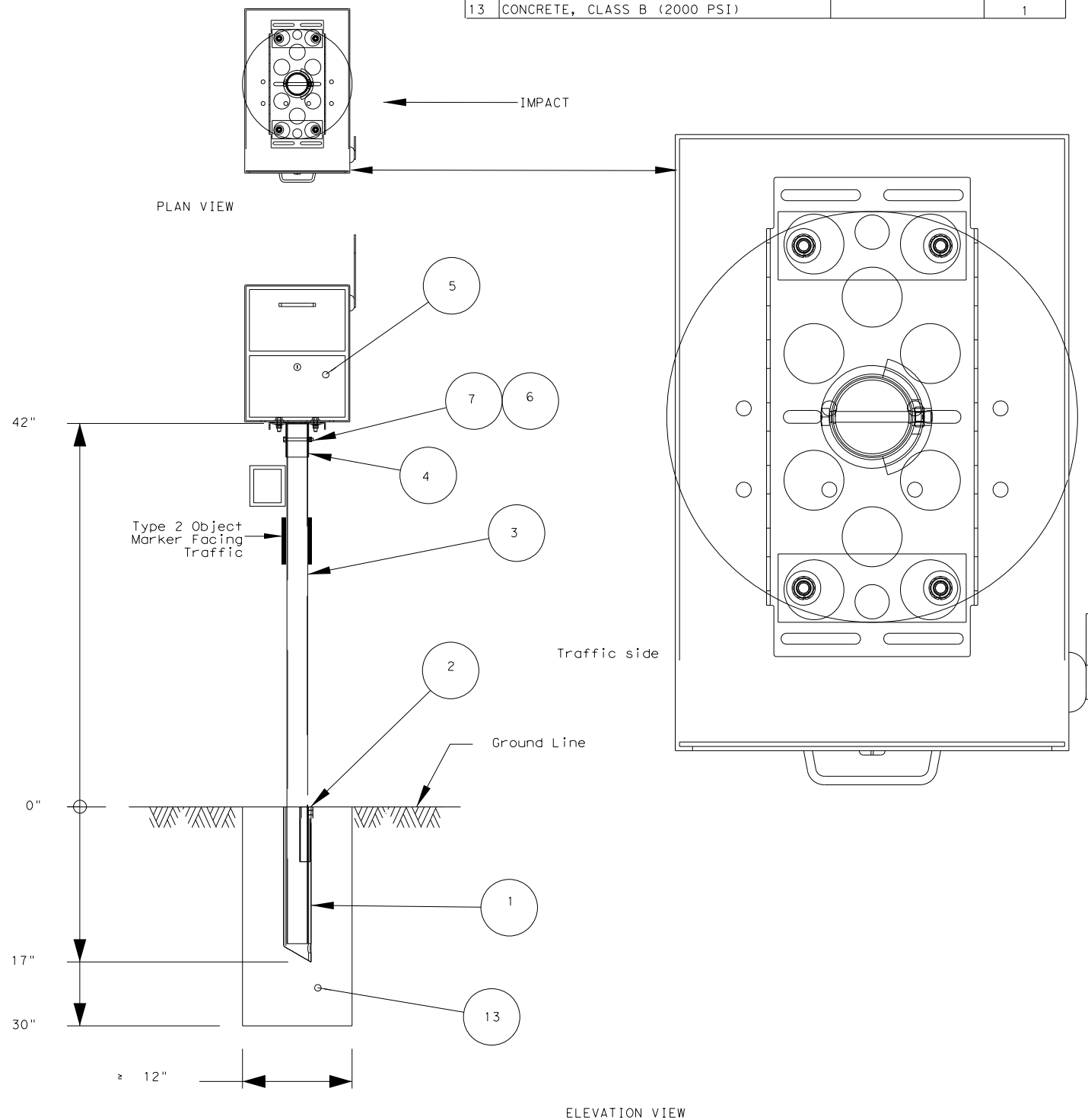


TABLE OF APPLICABLE DHT NUMBERS

DHT NUMBER	DESCRIPTION
FOUNDATIONS	
46625	WEDGE FOR V-WING SOCKET FOR TYPE 1 FOUNDATION
149340	V-WING SOCKET FOR TYPE 1 FOUNDATION
143433	WEDGE FOR TYPE 2 FOUNDATION
143434	ANCHOR FOR TYPE 2 FOUNDATION
166103	ANCHOR FOR TYPE 7 FOUNDATION
160891	SOCKET FOR TYPE 4 FOUNDATION
160892	WEDGE FOR TYPE 4 FOUNDATION
166104	WEDGE FOR TYPE 7 FOUNDATION
POSTS	
4289	WINGED CHANNEL MAILBOX POST
149339	MULTIPLE MAILBOX POST (GALVANIZED TUBING)
164116	MULTIPLE MAILBOX POST (WHITE COATED)
166114	MULTIPLE MAILBOX POST (WHITE COATED OCTAGONAL)
166153	MULTIPLE MAILBOX POST (GALVANIZED OCTAGONAL)
161442	RECYCLED RUBBER POST. FOR SMALL MAILBOX ONLY
143426	THIN-WALL GALVANIZED STEEL TUBE 2.375" OUTER DIAMETER
162911	THINWALL WHITE STEEL TUBE 2.375" OUTER DIAMETER
	SINGLE OR DOUBLE THIN-WALL MAILBOX POST GALVANIZED
166152	2" OCTAGONAL
	SINGLE OR DOUBLE THIN-WALL MAILBOX POST WHITECOATED
166112	2" OCTAGONAL
REFLECTIVE SHEETING	
161812	REFLECTIVE SHEETING FOR EMERGENCY LOCATION NUMBER PANEL
CONNECTING HARDWARE	
2917	ANGLE BRACKET USED FOR TEMPORARY MAILBOX SUPPORT
166105	BRACKET FOR SINGLE MOUNTING OF MAILBOXES (MOUNTING KIT)
3789	PLATE FOR DOUBLE MOUNTING OF MAILBOXES
166108	BRACKET FOR DOUBLE MOUNTING OF MAILBOXES (MOUNTING KIT)
166111	BRACKET FOR MULTIPLE MOUNTING OF MAILBOXES (MOUNTING KIT)
148939	BRACKET FOR ATTACHING SMALL OR MEDIUM SIZE MAIL BOX
148938	EXTENDER TO BRACKET FOR ATTACHING LARGE MAILBOX
159489	ANGLE BRACKET PART A
159490	ANGLE BRACKET PART B
	BRACKET FOR DOUBLE MOUNTING OF MAILBOXES ON THINWALL
162323	STEEL POST, GALVANIZED OR POWDERCOATED.
	BRACKET FOR ATTACHING MAILBOX TO RECYCLED RUBBER POST
161443	AND TO MULTIPLE WHITE MAILBOX POST
158358	CASTING (NEWSPAPER RECEPTACLE BRACKET)
163731	U-BOLT (NEWSPAPER RECEPTACLE BRACKET)
160698	BOLT; HEX HEAD, GALV; 3/8"DIA X 3/4"L HD, W/2-FLAT WASHERS
163750	BOLT; HEX HEAD, GALV; 3/8" X 1-1/2, 16 NC, W/WASHERS
160701	BOLT; HEX HEAD, GALV; 3/8"DIA X 2-1/2"L, HD, W/2-FLAT WASHERS
163730	BOLT; HEX HEAD, GALV; 3/8" X 3-1/2", NC, W/NUT, 2 FLAT WASHERS
160699	BOLT; HEX HEAD, GALV; 3/8"DIA X 3-3/4"L HD, W/2-FLAT WASHERS
160700	BOLT; HEX HEAD, GALV; 3/8"DIA X 4"L HD, W/2-FLAT WASHERS

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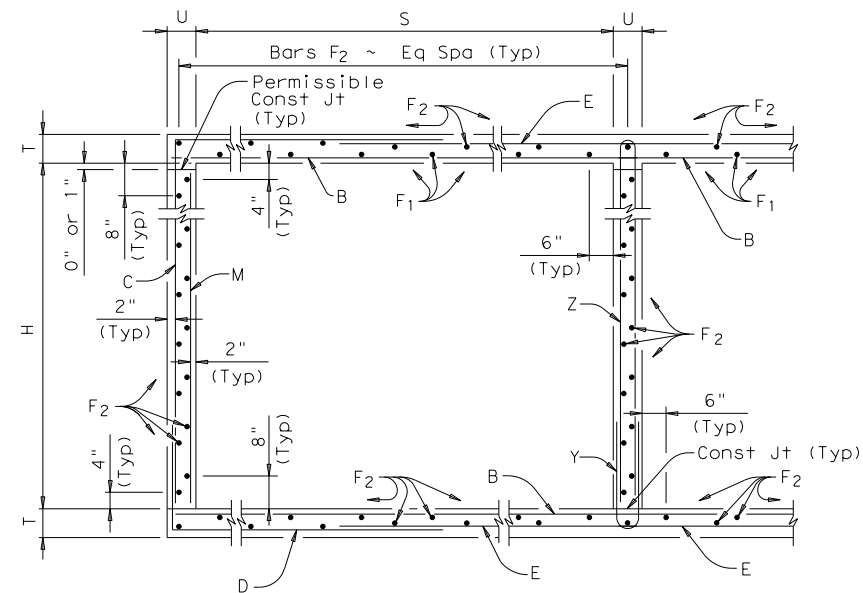


**DHT NUMBERS TABLE  
MB-15(1)**

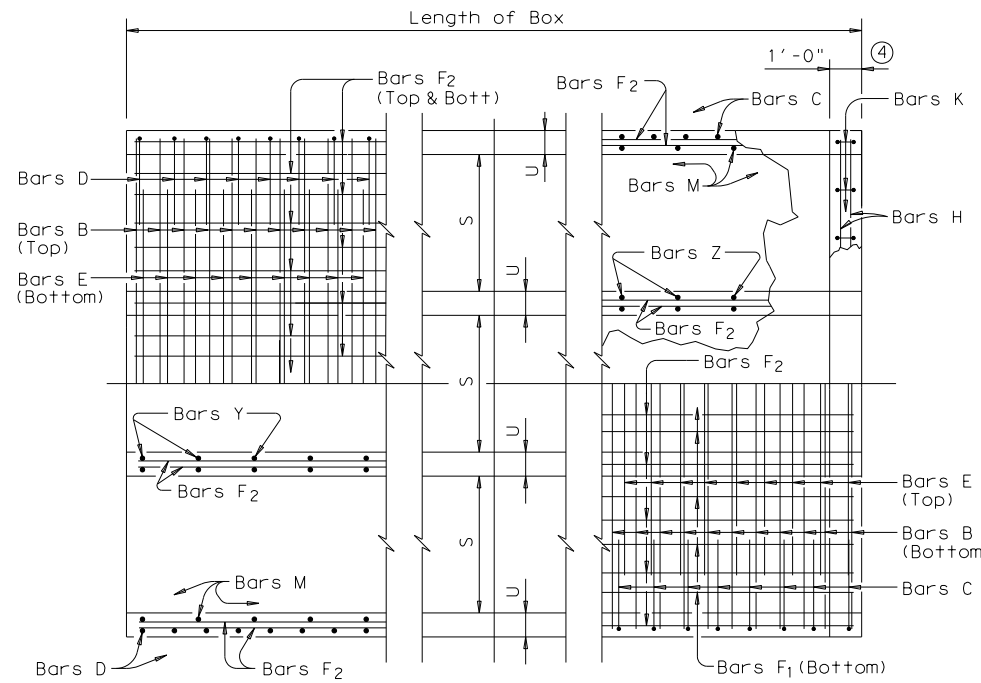
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© TxDOT APRIL 2015	CONT	SECT	JOB	HIGHWAY
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	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	590	

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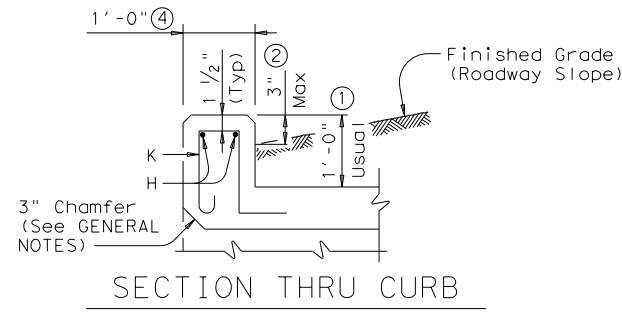
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TYPICAL SECTION

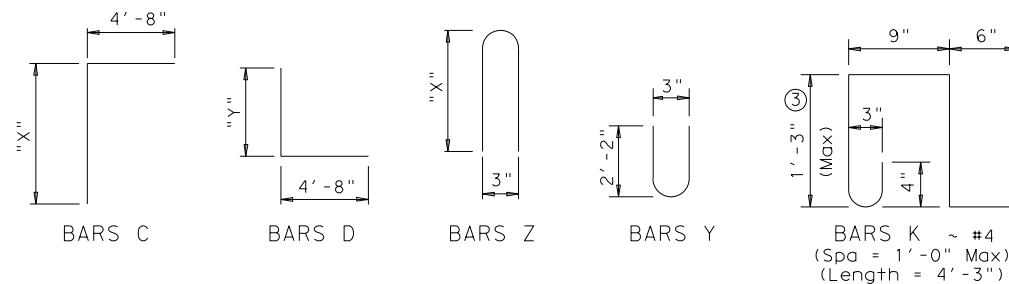


BOTTOM SLAB PART PLANS TOP SLAB



SECTION THRU CURB

H	Bar Dimensions	
	"X"	"Y"
2'-0"	2'-5"	2'-2"
3'-0"	3'-5"	2'-2"
4'-0"	4'-5"	2'-2"
5'-0"	5'-5"	2'-2"



- 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
- For vehicle safety, the following requirements must be met:
  - For structures without bridge rail, curbs shall project no more than 3" above finished grade.
  - For structures with bridge rail, curbs shall be flush with finished grade.
 Curb heights shall be reduced, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- For curbs less than 1'-0" high, tilt bars K or reduce bar height as necessary to maintain cover. For curbs less than 3" high, bars K may be omitted.
- 1'-0" typical. 2'-0" when RAC standard is referred to elsewhere in the plans.

Deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064 may be used to replace conventional reinforcement shown at the Contractor's option. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes.

Example Conversion: Replacement of No. 6 Gr 60 at 6" Spacing with WWR.  
 WWR required = (0.44 sq in / 0.5') x (60 ksi / 70 ksi) = 0.754 sq in/ft.  
 If D30.6 wire is used to meet the 0.754 sq in/ft requirement in this example, the required spacing = (0.306 sq in / 0.754 sq in/ft) x 12 in/ft = 4.87" Max spacing.  
 Required lap length for the provided D30.6 wire is 2'-2" (Lap required for uncoated No. 5 bars, as shown in Item 440).

GENERAL NOTES:  
 Designed according to AASHTO LRFD Specifications.  
 Designed to the maximum fill height shown.  
 All reinforcing steel shall be Grade 60.  
 All concrete shall be Class "C" with these exceptions: use Class "S" for top slabs of culverts with overlay, with 1-to-2 course surface treatment, or with the top slab as the final riding surface.  
 Class "C" concrete shall have a minimum compressive strength of 3,600 psi. Class "S" concrete shall have a minimum compressive strength of 4,000 psi.  
 The use of permanent forms is not allowed.  
 The bottom edge of the top slab shall be chamfered 3" at the entrance.  
 Reinforcing bars shall be adjusted to provide a minimum of 1 1/4" clear cover.  
 Construction joints shown at the flow line may be raised a maximum of 6" at the Contractor's option. If this option is used, Bars M may be cut off or raised, Bars C and D may be reversed, and Bars Y and Z may be reversed.  
 See standard MC-MD for skewed ends, angle sections and lengthening details.

HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation  
 Bridge Division Standard

**MULTIPLE BOX CULVERTS  
 CAST-IN-PLACE  
 5'-0" SPAN  
 0' TO 20' FILL**

**MC-5-20**

FILE: mc520ste.dgn	DN: GAF	CK: LMW	DW: BWH/TxDOT	CK: GAF
©TxDOT February 2010	CONTRACT	SECTION	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIABLES
10-12: Added WWR	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	591	

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NUMBER OF SPANS	SECTION DIMENSIONS				BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																								QUANTITIES																	
					Bars B				Bars C & D				Bars E				Bars F <sub>1</sub> ~#4		Bars F <sub>2</sub> ~#4 at 1'-6" Max		Bars M~#4 at 1'-6" Max		Bars Y & Z~#4 at 1'-0" Max				Bars H 4~#4		Bars K		Per foot of Barrel		Curb		Total											
	S	H	T	U	No.	Size	Spa	Length	Wt	No.	Size	Spa	Bar C		Bar D		No.	Size	Spa	Length	Wt	No.	Spa	Length	Wt	No.	Length	Wt	No.	Length	Wt	No.	Bar Y Length	Bar Y Wt	Bar Z Length	Bar Z Wt	Length	Weight	No.	Weight	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)	Conc (CY)	Reinf (Lb)
2	5'-0"	2'-0"	7"	7"	194	#4	5"	11'-6"	1,490	162	#4	6"	7'-1"	767	6'-10"	739	162	#5	6"	5'-8"	957	14	8"	39'-9"	372	38	39'-9"	1,009	56	2'-0"	75	41	4'-6"	123	5'-0"	137	11'-6"	31	26	74	0.637	141.7	0.9	105	26.4	5,774
3	5'-0"	2'-0"	7"	7"	194	#4	5"	17'-1"	2,214	162	#4	6"	7'-1"	767	6'-10"	739	162	#5	6"	11'-3"	1,901	21	8"	39'-9"	558	54	39'-9"	1,434	56	2'-0"	75	82	4'-6"	246	5'-0"	274	17'-1"	46	36	102	0.922	205.2	1.3	148	38.2	8,356
4	5'-0"	2'-0"	7"	7"	194	#4	5"	22'-8"	2,937	162	#4	6"	7'-1"	767	6'-10"	739	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	70	39'-9"	1,859	56	2'-0"	75	123	4'-6"	370	5'-0"	411	22'-8"	61	48	136	1.206	268.6	1.7	197	49.9	10,942
5	5'-0"	2'-0"	7"	7"	194	#4	5"	28'-3"	3,661	162	#4	6"	7'-1"	767	6'-10"	739	162	#5	6"	22'-5"	3,788	35	8"	39'-9"	929	86	39'-9"	2,284	56	2'-0"	75	164	4'-6"	493	5'-0"	548	28'-3"	75	60	170	1.491	332.1	2.1	245	61.7	13,529
6	5'-0"	2'-0"	7"	7"	194	#4	5"	33'-10"	4,385	162	#4	6"	7'-1"	767	6'-10"	739	162	#5	6"	28'-0"	4,731	42	8"	39'-9"	1,115	102	39'-9"	2,708	56	2'-0"	75	205	4'-6"	616	5'-0"	685	33'-10"	90	70	199	1.775	395.5	2.5	289	73.5	16,110
2	5'-0"	3'-0"	7"	7"	194	#4	5"	11'-6"	1,490	138	#4	7"	8'-1"	745	6'-10"	630	162	#5	6"	5'-8"	957	14	8"	39'-9"	372	44	39'-9"	1,168	56	3'-0"	112	41	4'-6"	123	7'-0"	192	11'-6"	31	26	74	0.702	144.7	0.9	105	29.0	5,894
3	5'-0"	3'-0"	7"	7"	194	#4	5"	17'-1"	2,214	138	#4	7"	8'-1"	745	6'-10"	630	162	#5	6"	11'-3"	1,901	21	8"	39'-9"	558	62	39'-9"	1,646	56	3'-0"	112	82	4'-6"	246	7'-0"	383	17'-1"	46	36	102	1.008	210.9	1.3	148	41.6	8,583
4	5'-0"	3'-0"	7"	7"	194	#4	5"	22'-8"	2,937	138	#4	7"	8'-1"	745	6'-10"	630	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	80	39'-9"	2,124	56	3'-0"	112	123	4'-6"	370	7'-0"	575	22'-8"	61	48	136	1.314	277.0	1.7	197	54.3	11,277
5	5'-0"	3'-0"	7"	7"	194	#4	5"	28'-3"	3,661	138	#4	7"	8'-1"	745	6'-10"	630	162	#5	6"	22'-5"	3,788	35	8"	39'-9"	929	98	39'-9"	2,602	56	3'-0"	112	164	4'-6"	493	7'-0"	767	28'-3"	75	60	170	1.620	343.2	2.1	245	66.9	13,972
6	5'-0"	3'-0"	7"	7"	194	#4	5"	33'-10"	4,385	138	#4	7"	8'-1"	745	6'-10"	630	162	#5	6"	28'-0"	4,731	42	8"	39'-9"	1,115	116	39'-9"	3,080	56	3'-0"	112	205	4'-6"	616	7'-0"	959	33'-10"	90	70	199	1.926	403.3	2.5	289	79.5	16,662
2	5'-0"	4'-0"	7"	7"	194	#4	5"	11'-6"	1,490	138	#4	7"	9'-1"	837	6'-10"	630	162	#5	6"	5'-8"	957	14	8"	39'-9"	372	44	39'-9"	1,168	56	4'-0"	150	41	4'-6"	123	9'-0"	246	11'-6"	31	26	74	0.767	149.3	0.9	105	31.6	6,078
3	5'-0"	4'-0"	7"	7"	194	#4	5"	17'-1"	2,214	138	#4	7"	9'-1"	837	6'-10"	630	162	#5	6"	11'-3"	1,901	21	8"	39'-9"	558	62	39'-9"	1,646	56	4'-0"	150	82	4'-6"	246	9'-0"	493	17'-1"	46	36	102	1.095	216.9	1.3	148	45.1	8,823
4	5'-0"	4'-0"	7"	7"	194	#4	5"	22'-8"	2,937	138	#4	7"	9'-1"	837	6'-10"	630	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	80	39'-9"	2,124	56	4'-0"	150	123	4'-6"	370	9'-0"	739	22'-8"	61	48	136	1.422	284.4	1.7	197	58.6	11,571
5	5'-0"	4'-0"	7"	7"	194	#4	5"	28'-3"	3,661	138	#4	7"	9'-1"	837	6'-10"	630	162	#5	6"	22'-5"	3,788	35	8"	39'-9"	929	98	39'-9"	2,602	56	4'-0"	150	164	4'-6"	493	9'-0"	986	33'-10"	75	60	170	1.750	351.9	2.1	245	72.1	14,321
6	5'-0"	4'-0"	7"	7"	194	#4	5"	33'-10"	4,385	138	#4	7"	9'-1"	837	6'-10"	630	162	#5	6"	28'-0"	4,731	42	8"	39'-9"	1,115	116	39'-9"	3,080	56	4'-0"	150	205	4'-6"	616	9'-0"	1,232	33'-10"	90	70	199	2.078	419.4	2.5	289	85.6	17,065
2	5'-0"	5'-0"	7"	7"	194	#4	5"	11'-6"	1,490	138	#4	7"	10'-1"	930	6'-10"	630	162	#5	6"	5'-8"	957	14	8"	39'-9"	372	50	39'-9"	1,328	56	5'-0"	187	41	4'-6"	123	11'-0"	301	11'-6"	31	26	74	0.832	158.0	0.9	105	34.2	6,423
3	5'-0"	4'-0"	7"	7"	194	#4	5"	17'-1"	2,214	138	#4	7"	10'-1"	930	6'-10"	630	162	#5	6"	11'-3"	1,901	21	8"	39'-9"	558	70	39'-9"	1,859	56	5'-0"	187	82	4'-6"	246	11'-0"	603	17'-1"	46	36	102	1.181	228.2	1.3	148	48.5	9,276
4	5'-0"	5'-0"	7"	7"	194	#4	5"	22'-8"	2,937	138	#4	7"	10'-1"	930	6'-10"	630	162	#5	6"	16'-10"	2,844	28	8"	39'-9"	743	90	39'-9"	2,390	56	5'-0"	187	123	4'-6"	370	11'-0"	904	22'-8"	61	48	136	1.530	298.4	1.7	197	62.9	12,132
5	5'-0"	5'-0"	7"	7"	194	#4	5"	28'-3"	3,661	138	#4	7"	10'-1"	930	6'-10"	630	162	#5	6"	22'-5"	3,788	35	8"	39'-9"	929	110	39'-9"	2,921	56	5'-0"	187	164	4'-6"	493	11'-0"	1,205	28'-3"	75	60	170	1.880	368.6	2.1	245	77.3	14,989
6	5'-0"	5'-0"	7"	7"	194	#4	5"	33'-10"	4,385	138	#4	7"	10'-1"	930	6'-10"	630	162	#5	6"	28'-0"	4,731	42	8"	39'-9"	1,115	130	39'-9"	3,452	56	5'-0"	187	205	4'-6"	616	11'-0"	1,506	33'-10"	90	70	199	2.229	438.8	2.5	289	91.7	17,841

Deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064 may be used to replace conventional reinforcement shown at the Contractor's option. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4" Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes.

Example Conversion: Replacement of No. 6 Gr 60 at 6" Spacing with WWR.  
WWR required = (0.44 sq in/ 0.5') x (60 ksi/70 ksi) = 0.754 sq in/ft.  
If D30.6 wire is used to meet the 0.754 sq in/ft requirement in this example, the required spacing = (0.306 sq in/ 0.754 sq in/ft) x 12 in/ft = 4.87" Max spacing.  
Required lap length for the provided D30.6 wire is 2'-2" (Lap required for uncoated No. 5 bars, as shown in Item 440).

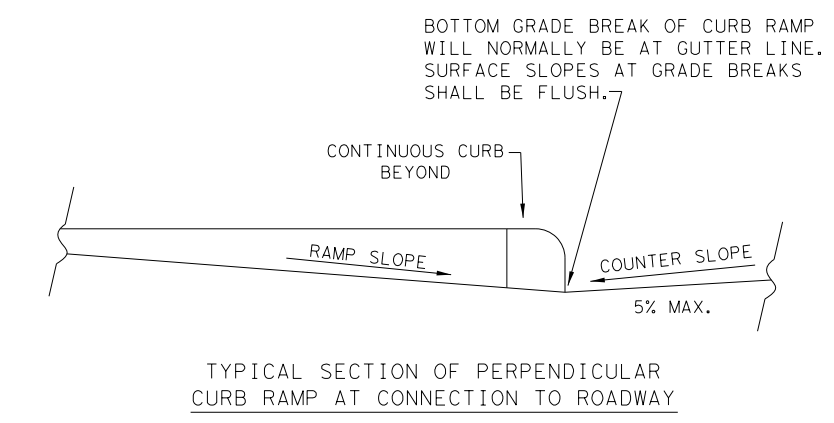
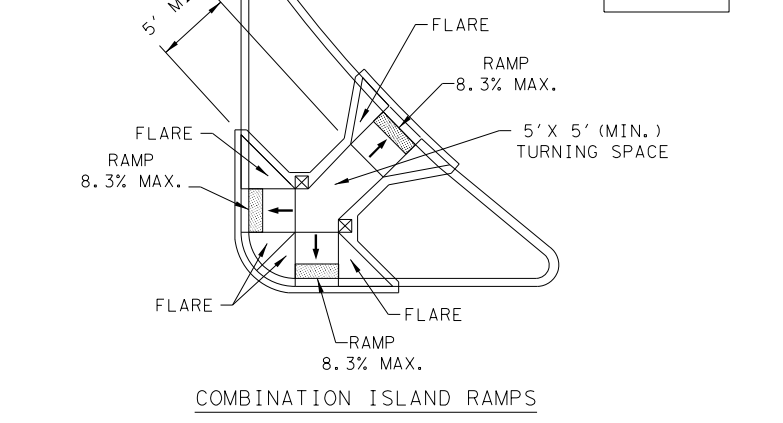
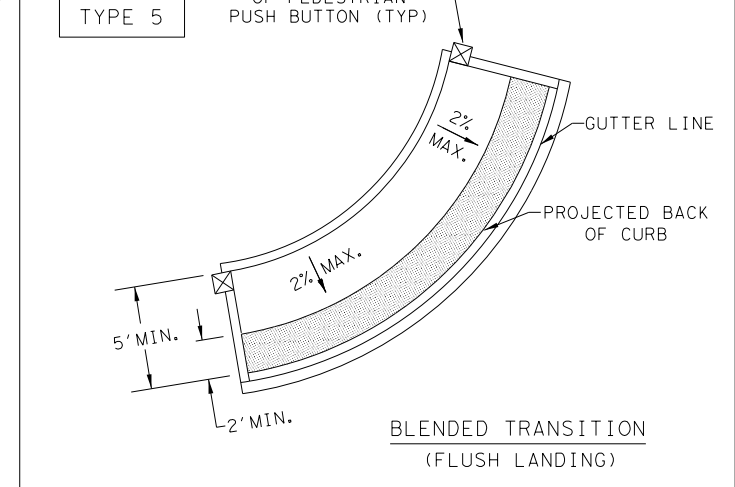
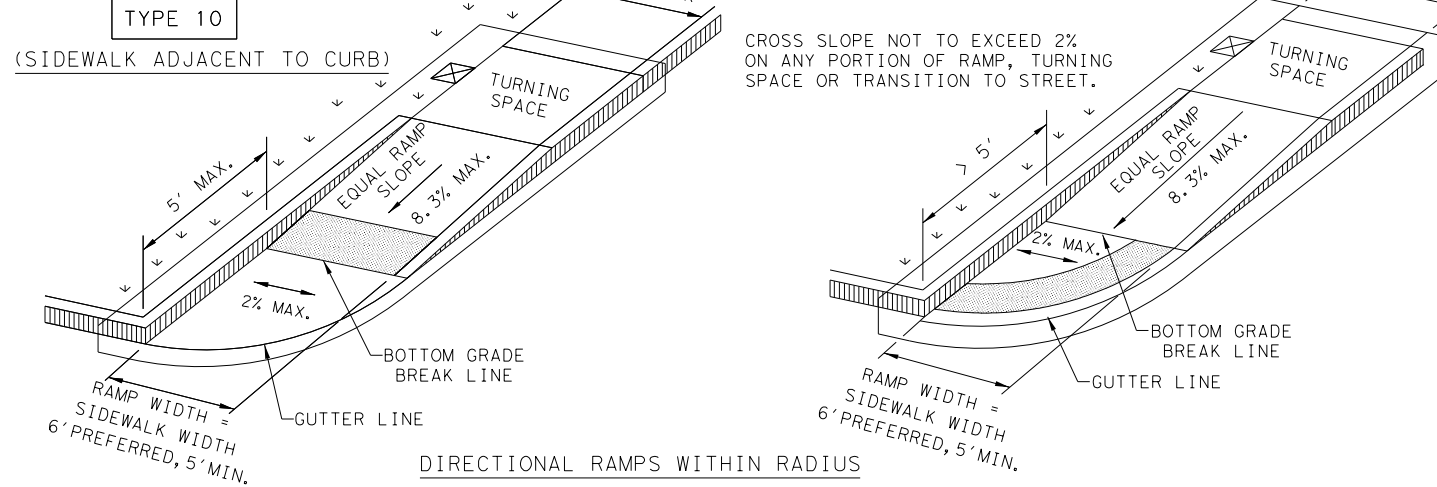
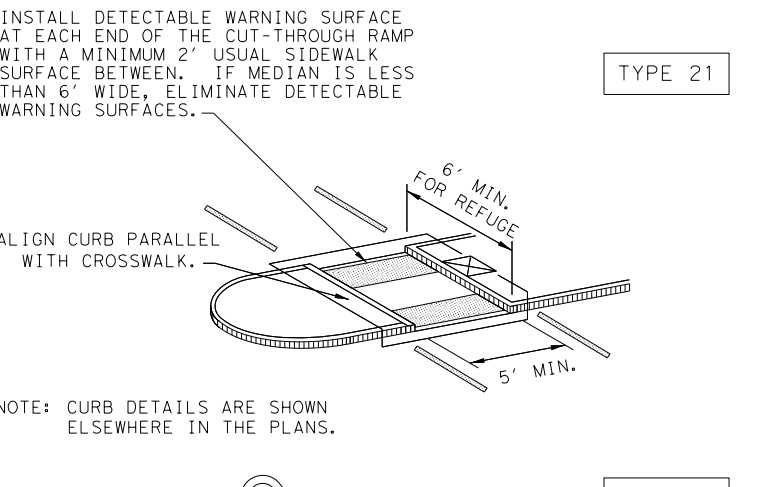
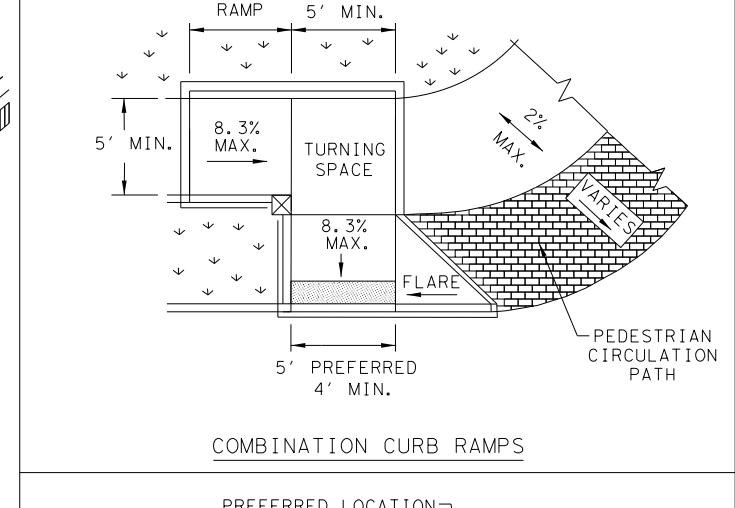
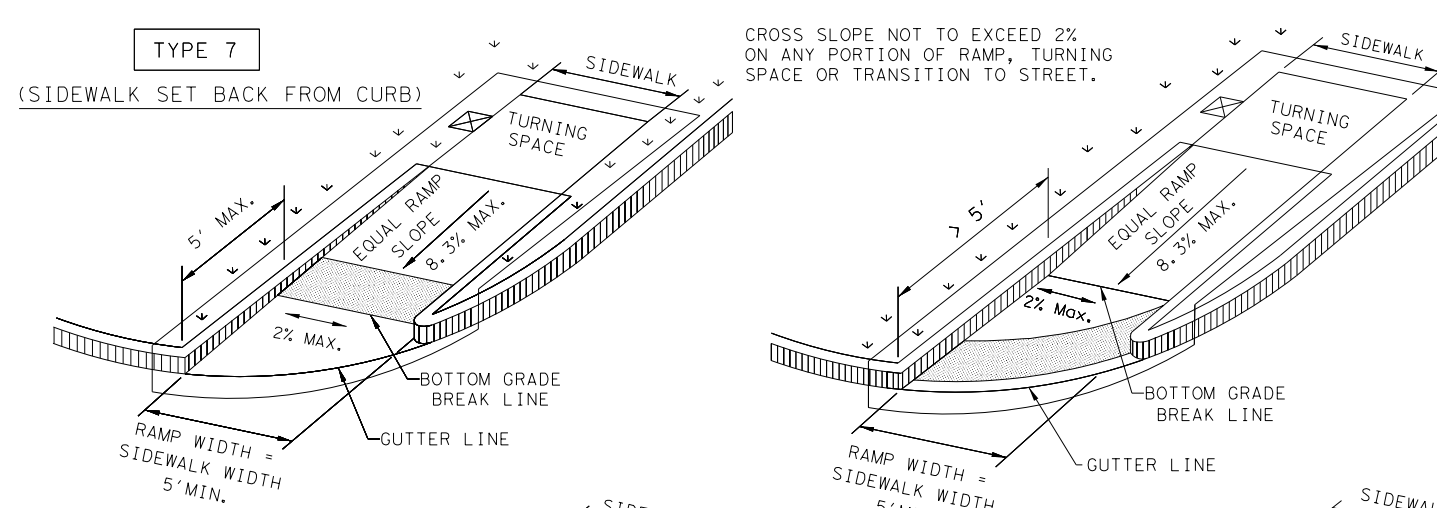
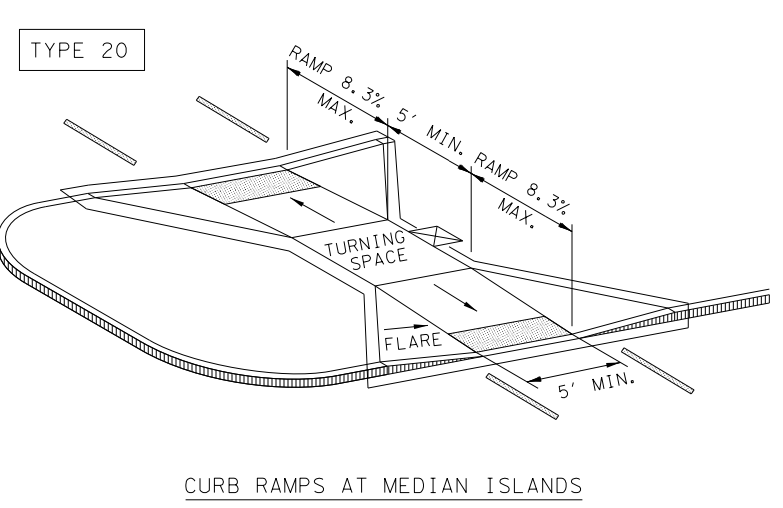
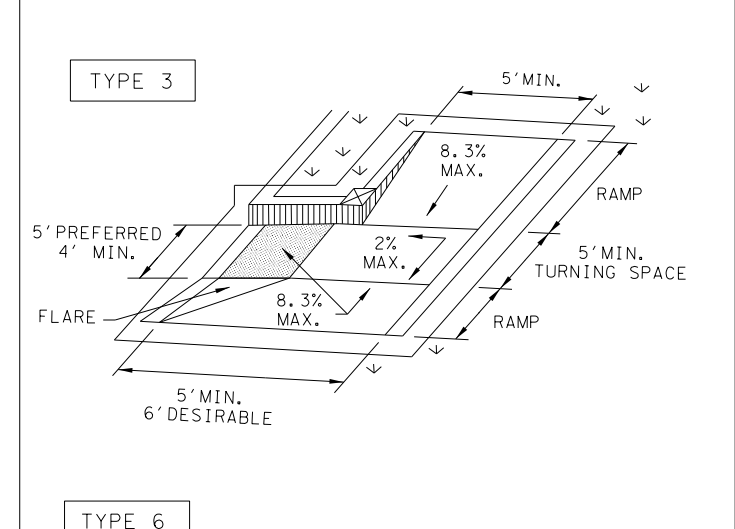
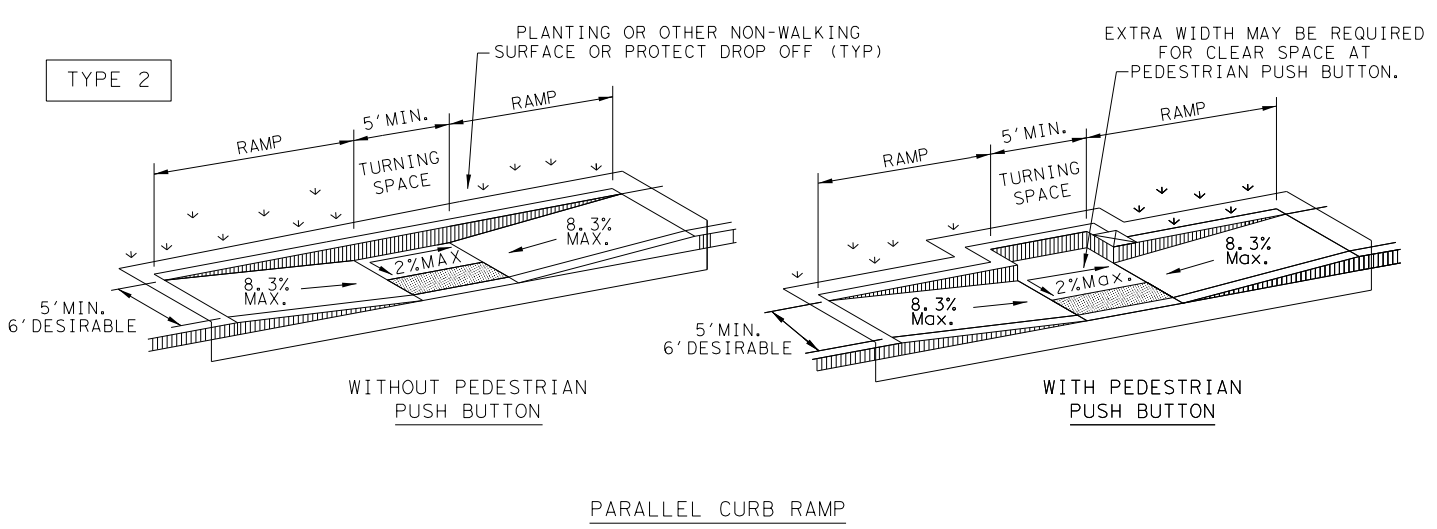
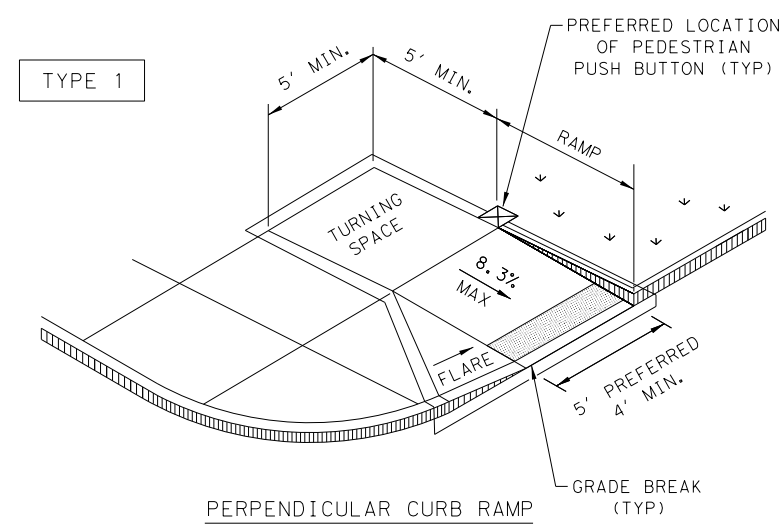


**MULTIPLE BOX CULVERTS  
CAST-IN-PLACE  
5'-0" SPAN  
0' TO 20' FILL**

**MC-5-20**

FILE: mc520ste.dgn	DN: GAF	CK: LMW	DW: BWH/TXDOT	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIABLES
10-12: Added WWR	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	592	

DATE: 5/3/2019  
 FILE: P:\111\35\08\Design\Civil\Standards\Roadway\ped18.dgn  
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**NOTES / LEGEND:**  
 SEE GENERAL NOTES ON SHEET 2 OF 4 FOR MORE INFORMATION.

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.

Detectable Warning Surface

Gutter Line

Grade Break

Ramp Limits of Payment

SHEET 1 OF 4

**Texas Department of Transportation**  
 Design Division Standard

## PEDESTRIAN FACILITIES CURB RAMPS

### PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
REVISED 08, 2009	DIST	COUNTY	SHEET NO.	
REVISED 06, 2012	SAT	BEXAR	593	
REVISED 01, 2018				



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DATE: 5/3/2019  
 FILE: P:\11\35\08\Design\Civil\Standards\Roadway\ped18.dgn

**GENERAL NOTES**

**CURB RAMP**

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5' x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5' x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5' x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicable standards may remain in place unless otherwise shown on the plans.

**DETECTABLE WARNING MATERIAL**

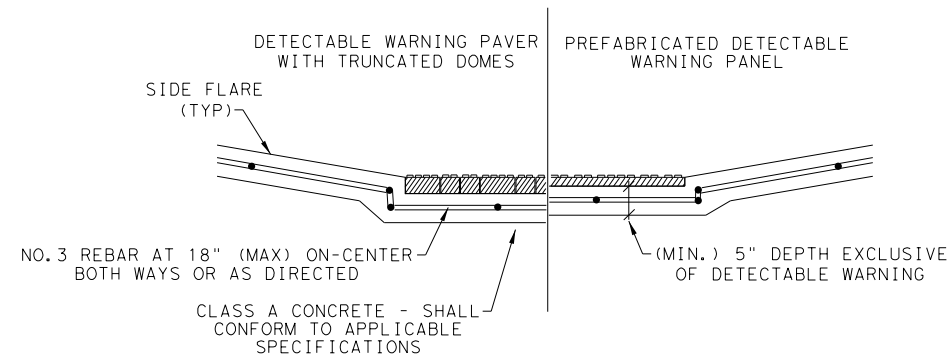
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

**DETECTABLE WARNING PAVERS (IF USED)**

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

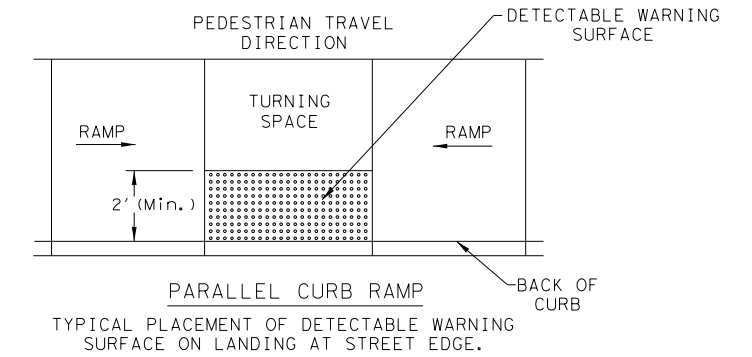
**SIDEWALKS**

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.

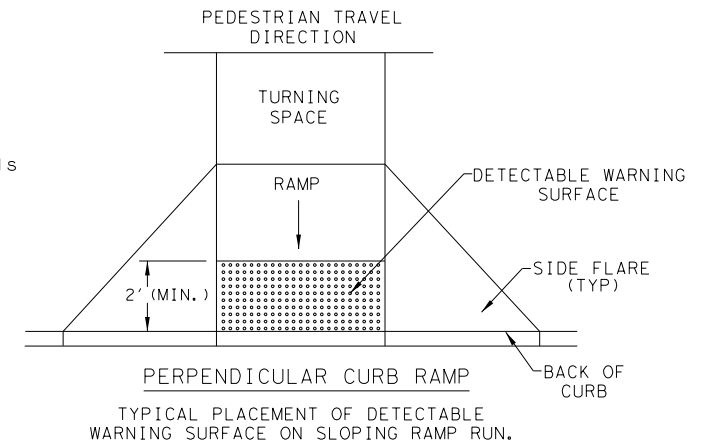


SECTION VIEW DETAIL  
 CURB RAMP AT DETECTIBLE WARNINGS

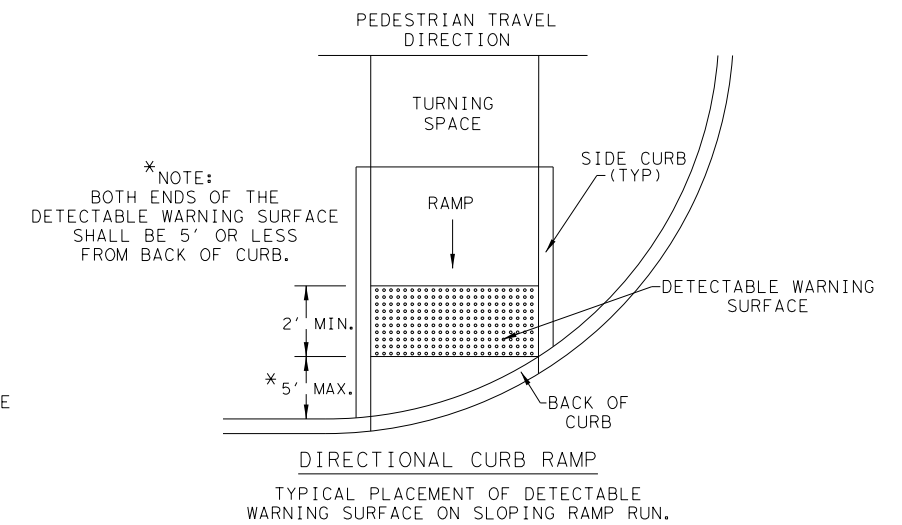
**DETECTABLE WARNING SURFACE DETAILS**



PARALLEL CURB RAMP  
 TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP  
 TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



\* NOTE:  
 BOTH ENDS OF THE  
 DETECTABLE WARNING SURFACE  
 SHALL BE 5' OR LESS  
 FROM BACK OF CURB.

DIRECTIONAL CURB RAMP  
 TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

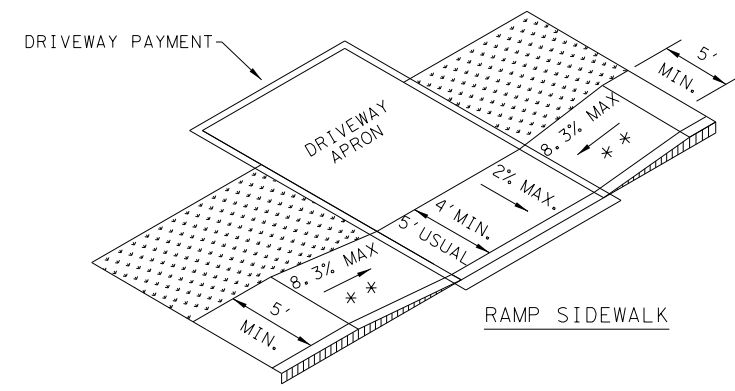
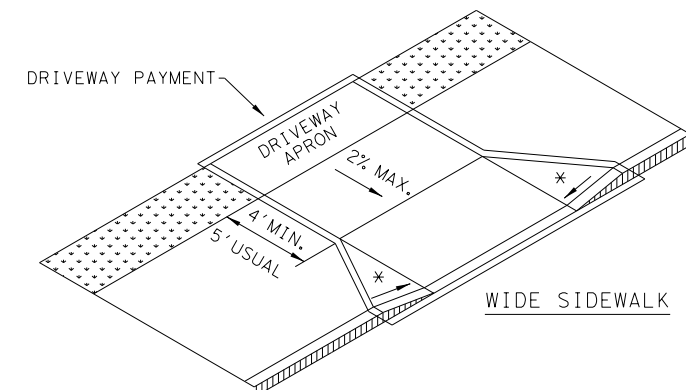
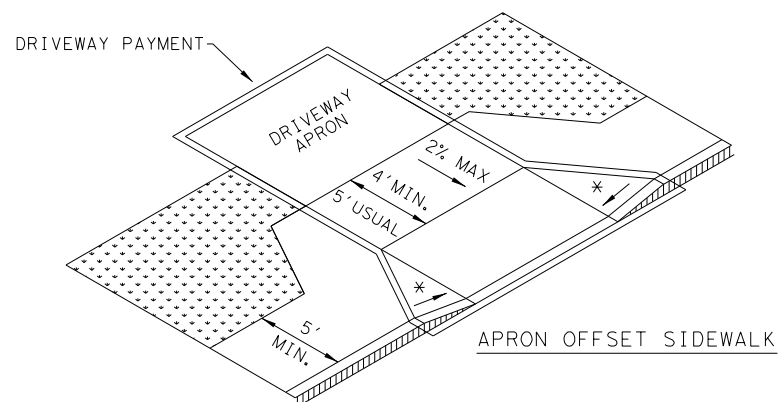
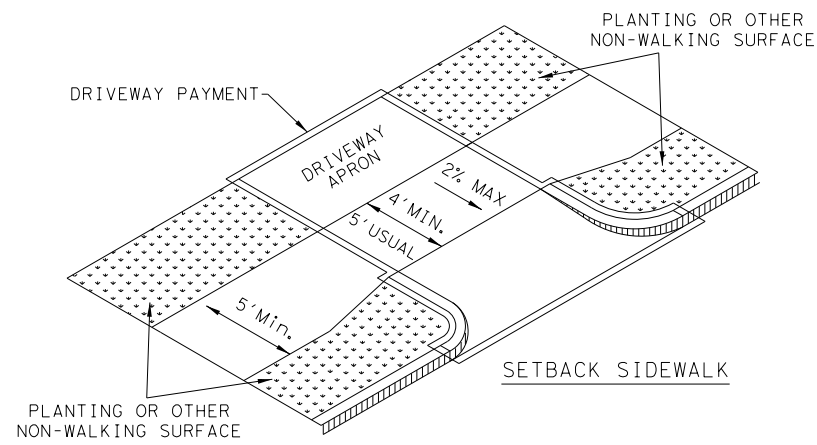
SHEET 2 OF 4

		<b>Design Division Standard</b>	
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FILE: ped18	DN: TxDOT	DW: VP	CK: KM
© TxDOT: MARCH, 2002	CONT	SECT	JOB
REVISIONS	0915	12	576
REVISED 08, 2009	DIST	COUNTY	SHEET NO.
REVISED 06, 2012	SAT	BEXAR	594
REVISED 01, 2018			

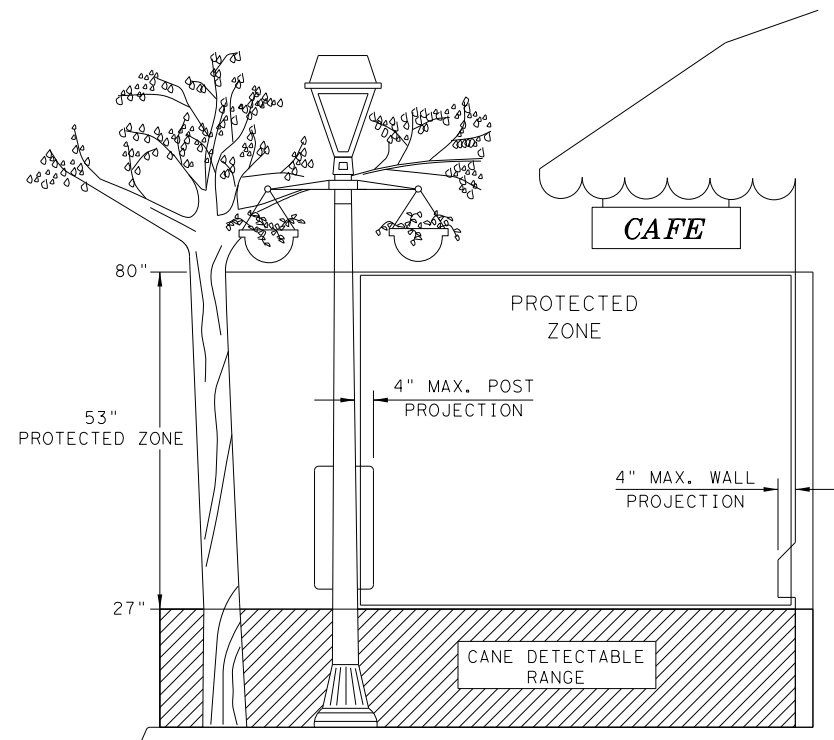
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DATE: 5/3/2019  
 FILE: P:\111\35\08\Des\ign\Civil\Standards\Roadway\ped18.dgn

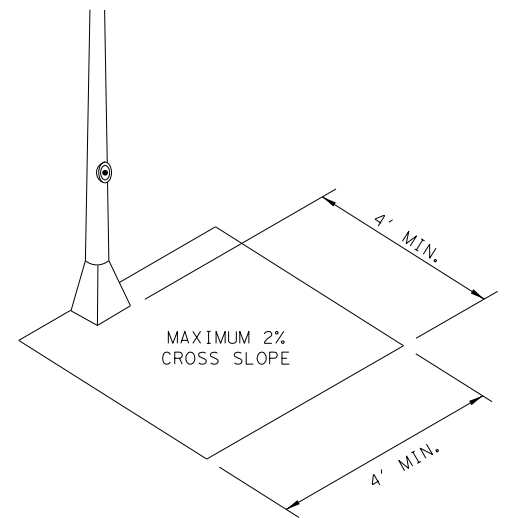
SIDEWALK TREATMENT AT DRIVEWAYS



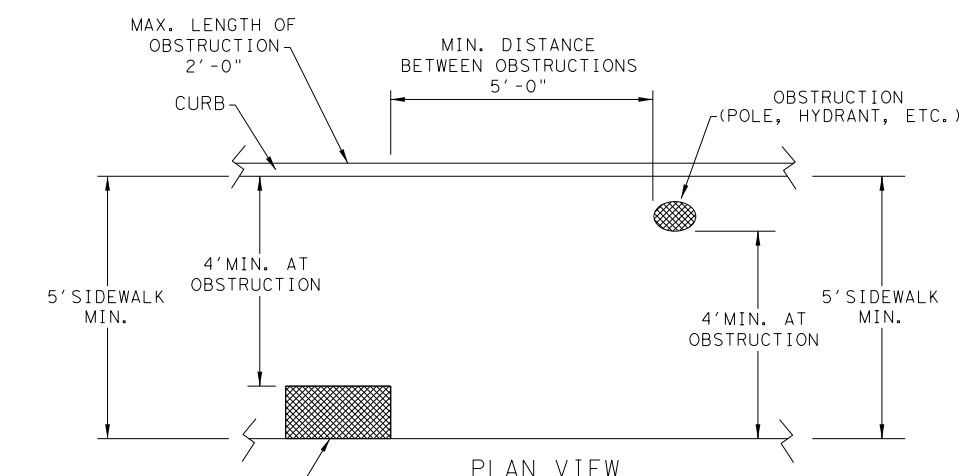
NOTES:  
 \* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.  
 \* \* IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.

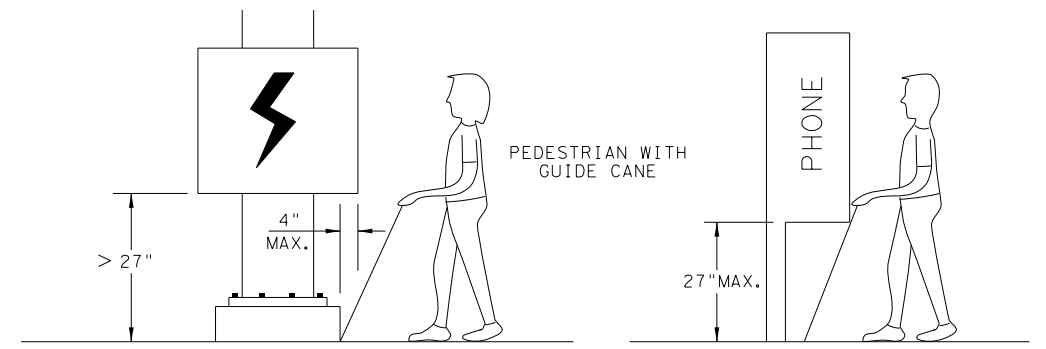


CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



PLAN VIEW  
PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.

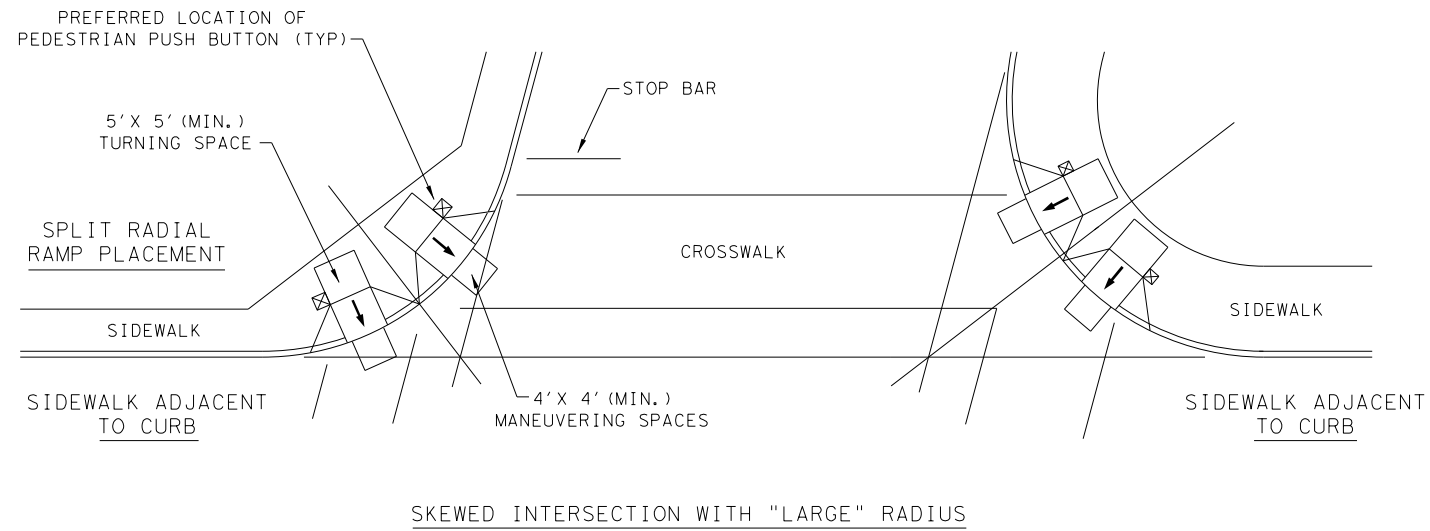
PROTRUDING OBJECTS OF A HEIGHT ≤ 27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

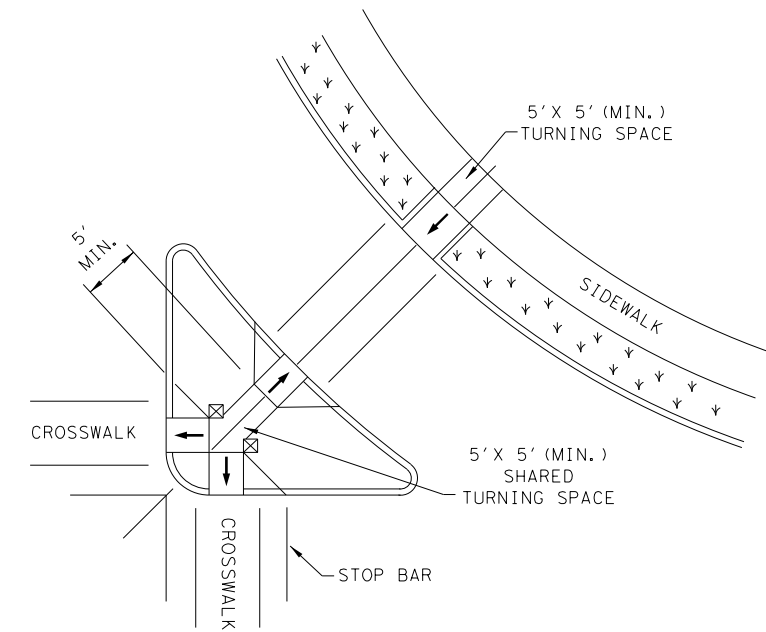
SHEET 3 OF 4

		<b>Design Division Standard</b>	
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© TxDOT: MARCH, 2002	CONT	SECT	JOB
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REVISOR	DIST	COUNTY	SHEET NO.
REVISED 08, 2005	SAT	BEXAR	595
REVISED 06, 2012			
REVISED 01, 2018			

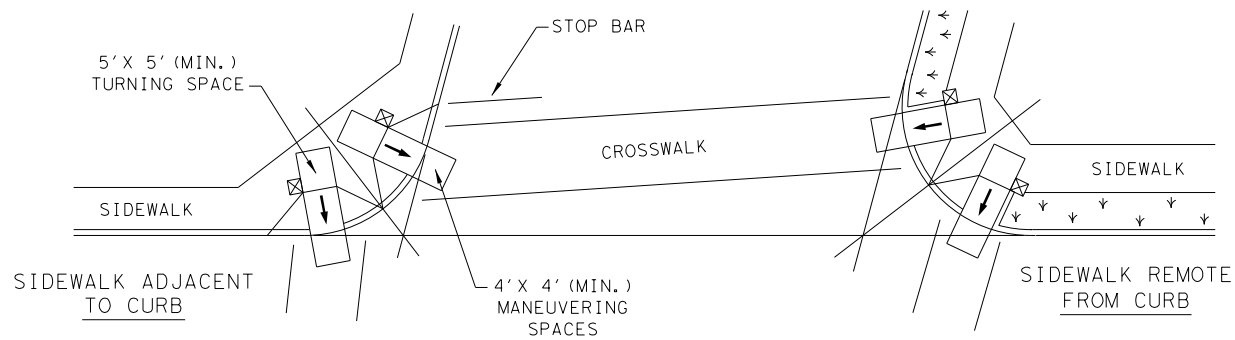
TYPICAL CROSSING LAYOUTS  
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



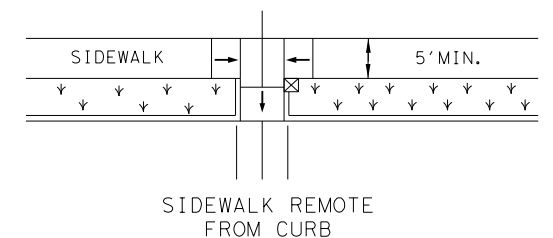
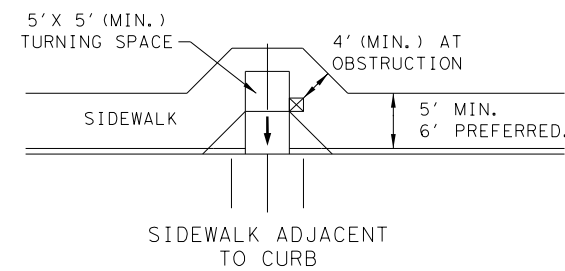
SKewed INTERSECTION WITH "LARGE" RADIUS



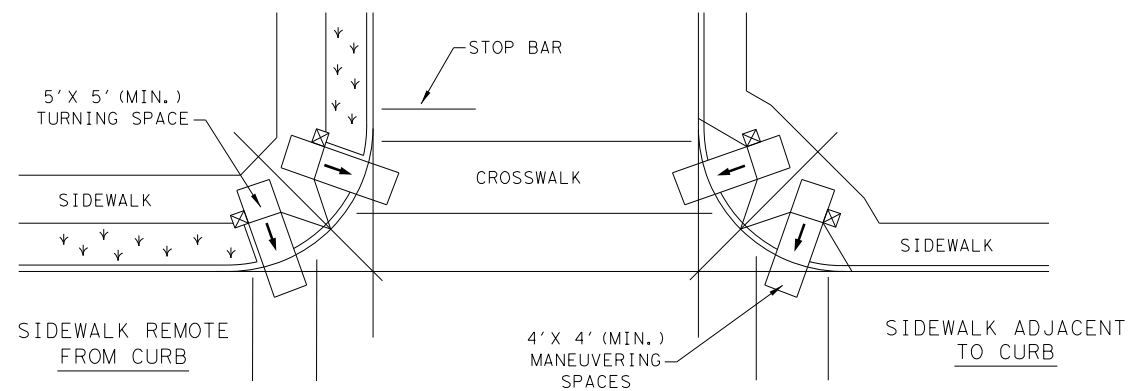
AT INTERSECTION W/FREE RIGHT TURN & ISLAND



SKewed INTERSECTION WITH "SMALL" RADIUS



MID-BLOCK PLACEMENT PERPENDICULAR RAMPS



NORMAL INTERSECTION WITH "SMALL" RADIUS

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ☒

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH. ↙ ↘ ↙ ↘ ↙ ↘

SHEET 4 OF 4



PEDESTRIAN FACILITIES  
CURB RAMPS

PED-18

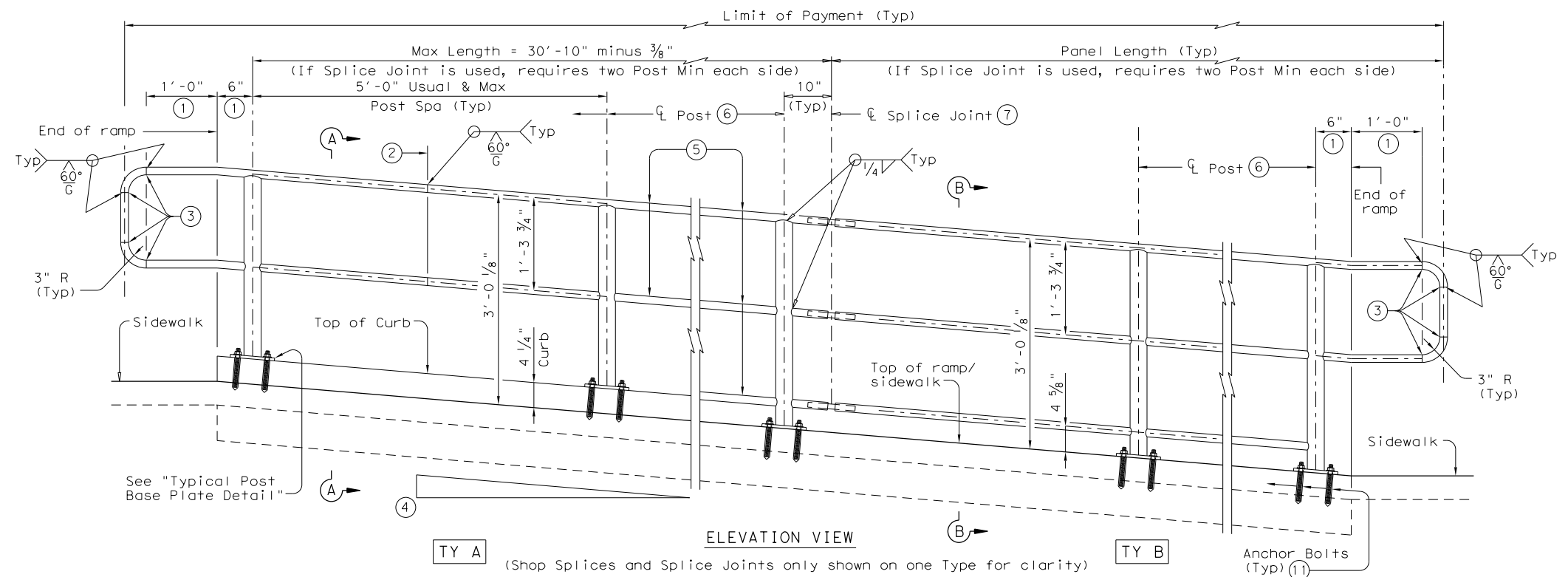
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© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
REVISED 08, 2005	DIST	COUNTY	SHEET NO.	
REVISED 06, 2012	SAT	BEXAR	596	
REVISED 01, 2018				

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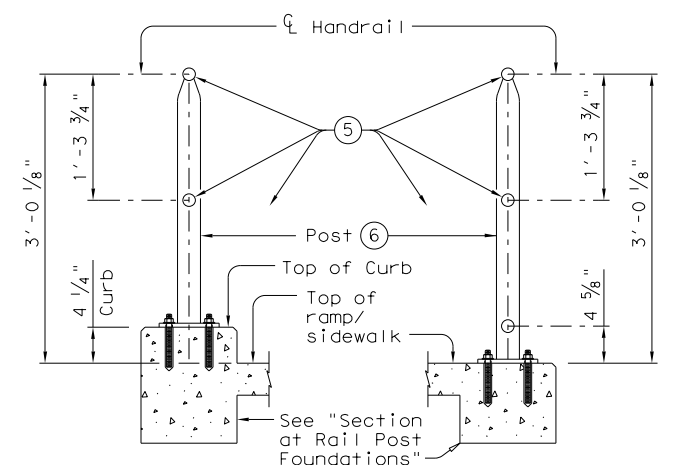
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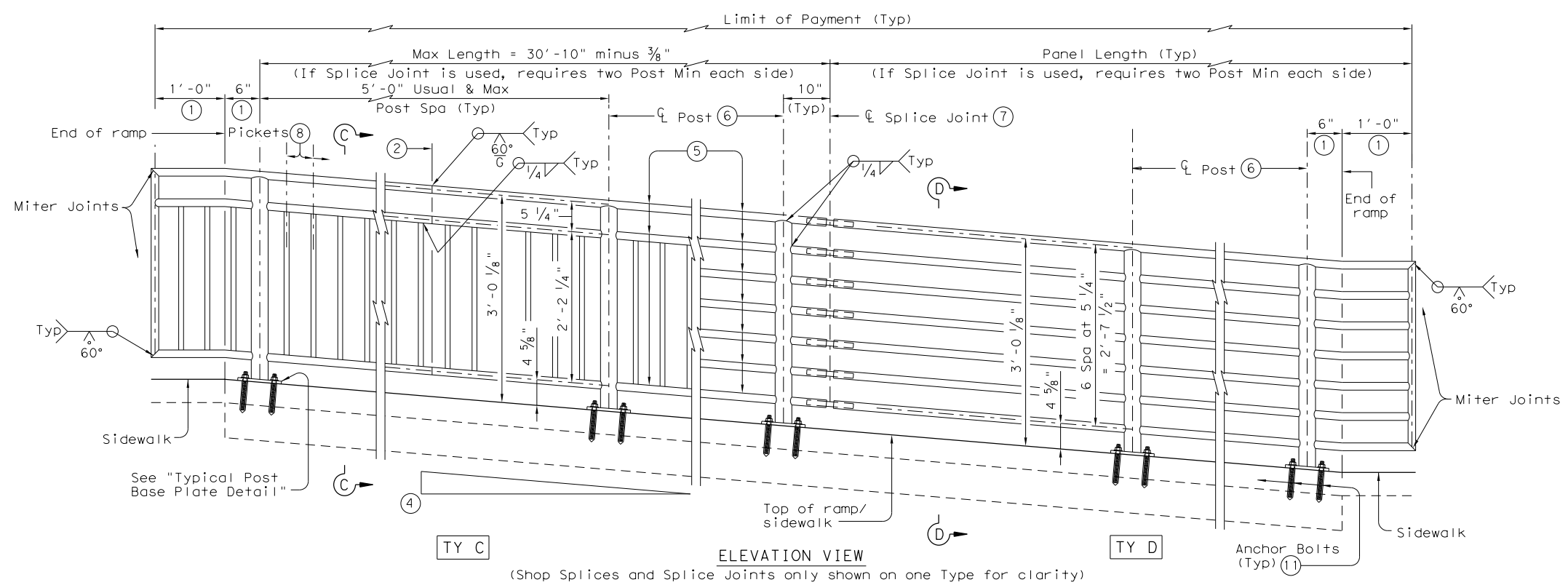


TY A (Shop Splices and Splice Joints only shown on one Type for clarity) TY B

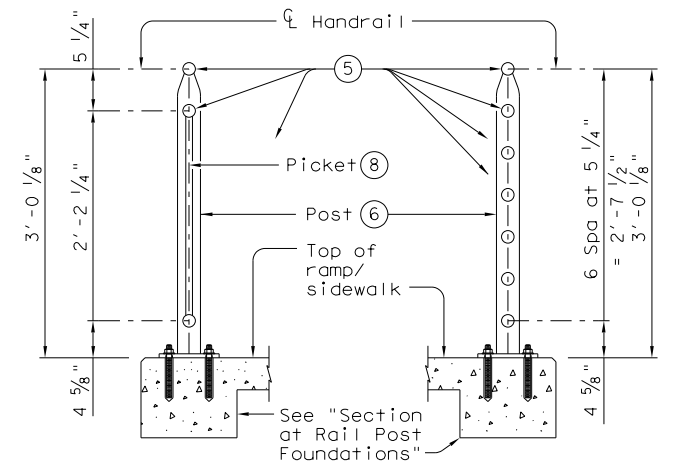
RECOMMENDED USAGE (9) (10)	
Dropoff Height/Condition	Recommended Rail Options
< 30" dropoff	TY A, TY B, TY C, or TY D
≥ 30" dropoff, or along Bike Path	TY E or TY F



SECTION A-A (Showing Handrail TY A) SECTION B-B (Showing Handrail TY B)



TY C (Shop Splices and Splice Joints only shown on one Type for clarity) TY D



SECTION C-C (Showing Handrail TY C) SECTION D-D (Showing Handrail TY D)

- ① Parallel to ground.
- ② One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- ③ Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- ④ See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.
- ⑤ 1 1/2" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp / sidewalk. Provide holes as needed in 1 1/2" Dia. pipe for galvanizing drainage and venting.

- ⑥ 2 1/2" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). See "Post Mount Detail" for crimping and trimming post to fit Dia. of top rail. Provide holes as needed in post for galvanizing drainage and venting. Plumb all posts.
- ⑦ See "Handrail Fabrication Details" for Splice Joints.
- ⑧ 5/8" Dia. Round Bar equal spacing at 4 1/2" Max. Plumb all pickets.
- ⑨ When needed for accessibility (grade > 5 percent) or as needed for pedestrian safety.
- ⑩ Not to be used on bridges.
- ⑪ See "General Notes" for anchor bolt information.

SHEET 1 OF 3



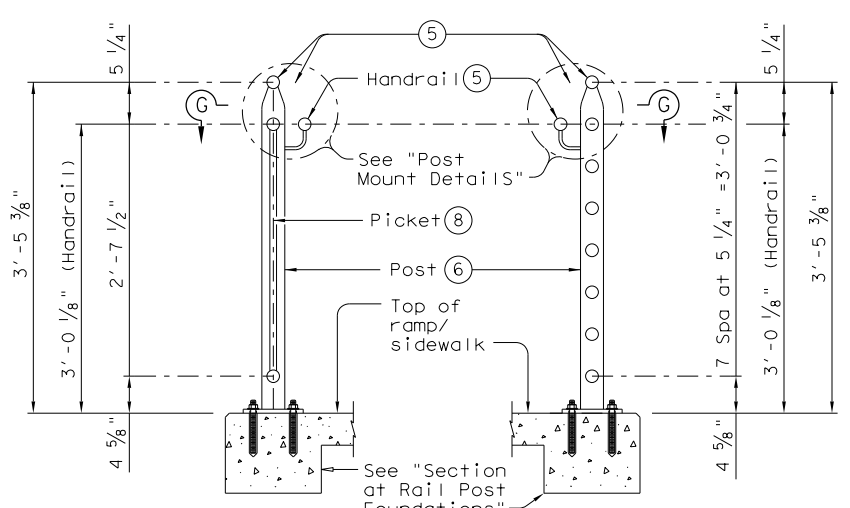
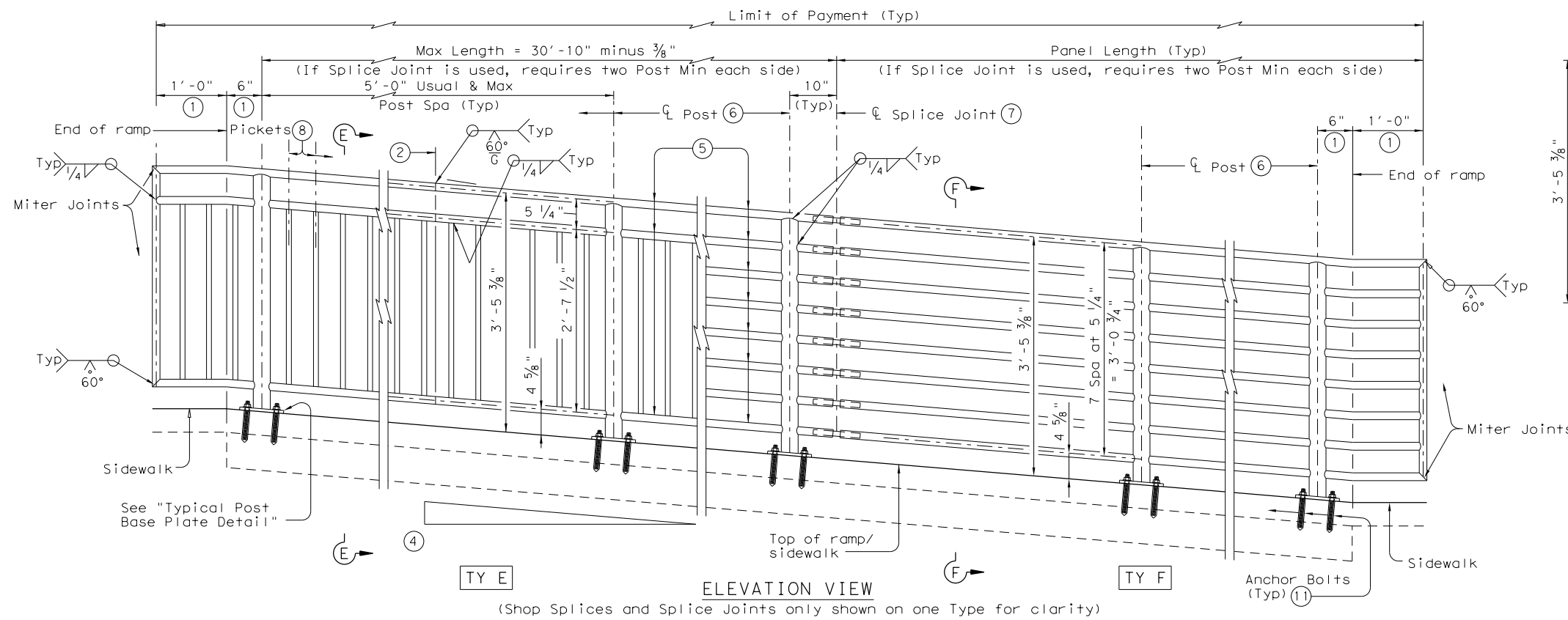
## PEDESTRIAN HANDRAIL DETAILS

### PRD-13

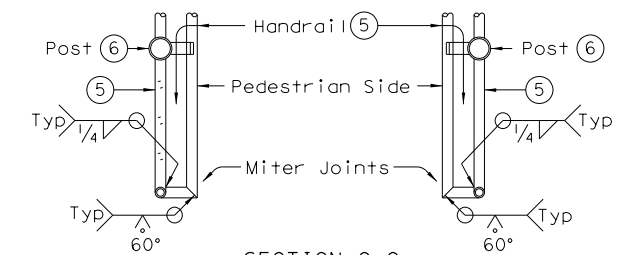
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© TxDOT December 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
REVISED MAY, 2013 (VP)	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	597	

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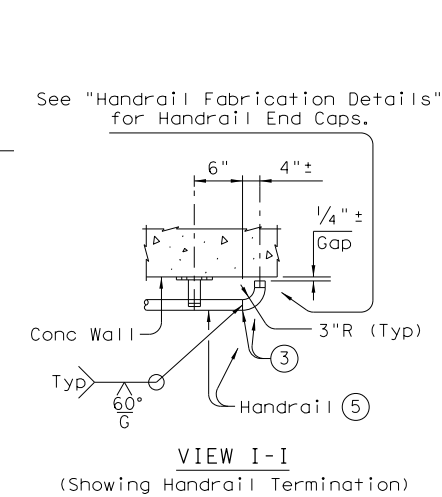
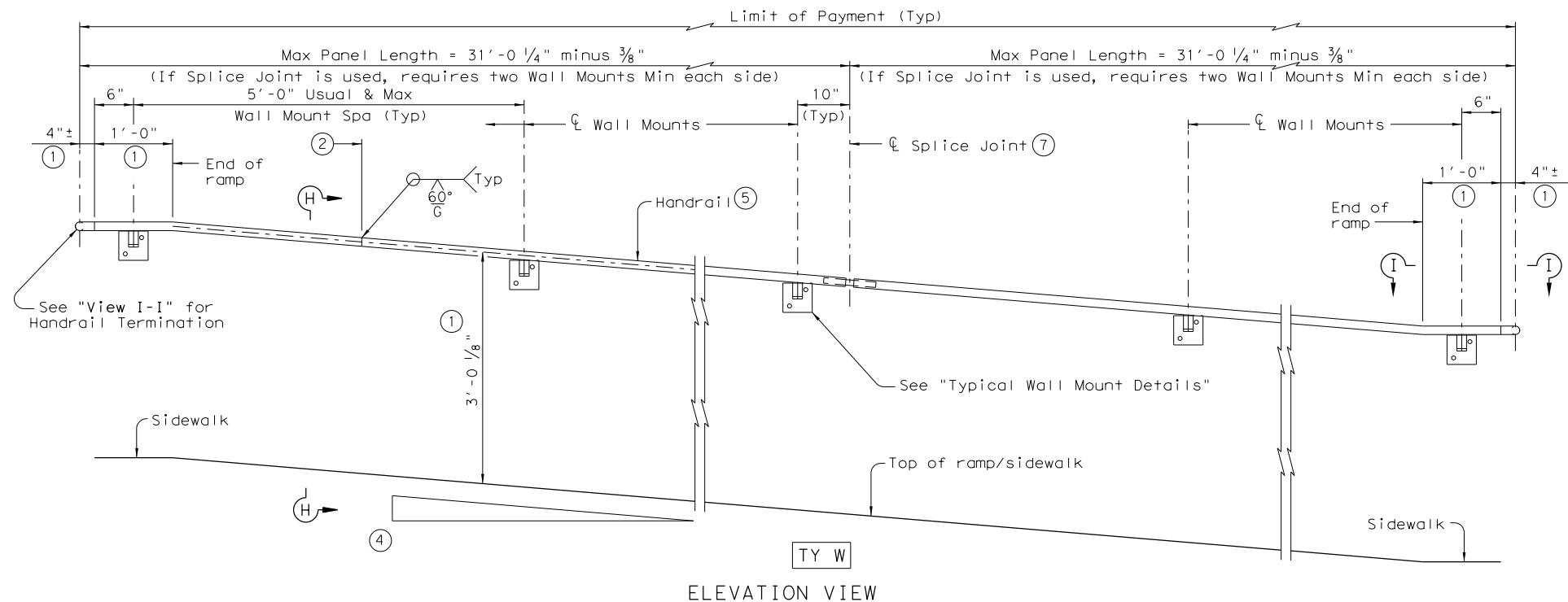
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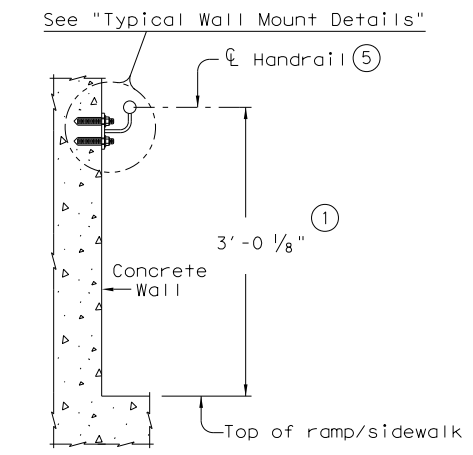
SECTION E-E (Showing Handrail TY E)  
 SECTION F-F (Showing Handrail TY F)



SECTION G-G (Showing Handrail Termination)



VIEW I-I (Showing Handrail Termination)



SECTION H-H (Showing Handrail TY W)

- ① Parallel to ground.
- ② One shop splice per panel is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- ③ Shop splice is permitted with minimum 85 percent penetration. The weld may be square groove or single vee groove. Grind smooth.
- ④ See Ramp Details located elsewhere in plans for ramp slope and dimensions. Maximum ramp slope will not exceed 8.3 percent. Level landing required for each 30" rise if grade exceeds 5 percent.
- ⑤ 1 1/2" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp / sidewalk. Provide holes as needed in 1 1/2" Dia. pipe for galvanizing drainage and venting.

- ⑥ 2 1/2" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). See "Post Mount Detail" for crimping and trimming post to fit Dia. of top rail. Provide holes as needed in post for galvanizing drainage and venting. Plumb all posts.
- ⑦ See "Handrail Fabrication Details" for Splice Joints.
- ⑧ 5/8" Dia. Round Bar equal spacing at 4 1/2" Max. Plumb all pickets.
- ⑪ See "General Notes" for anchor bolt information.

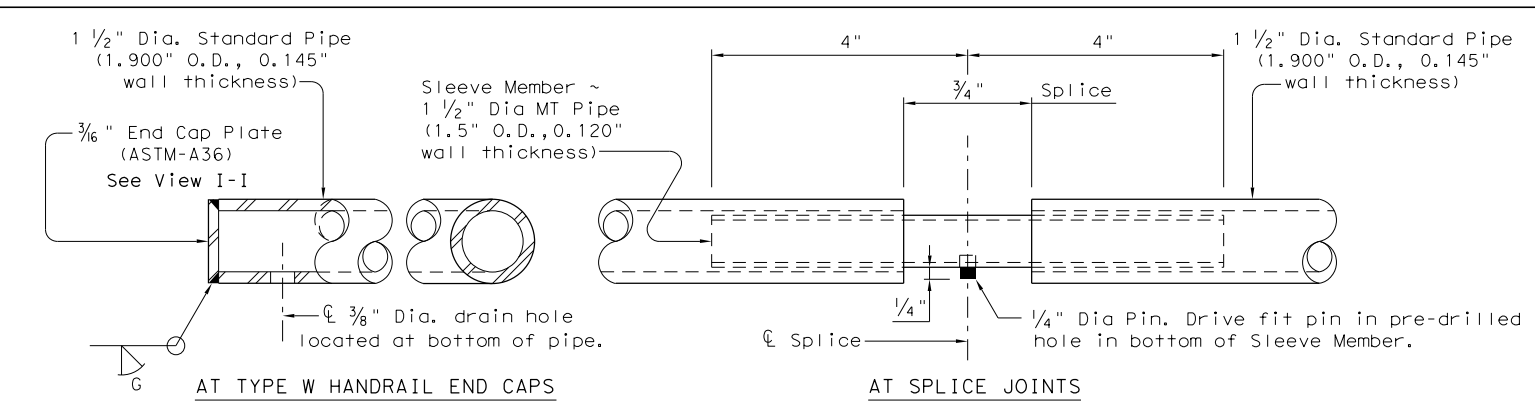
SHEET 2 OF 3



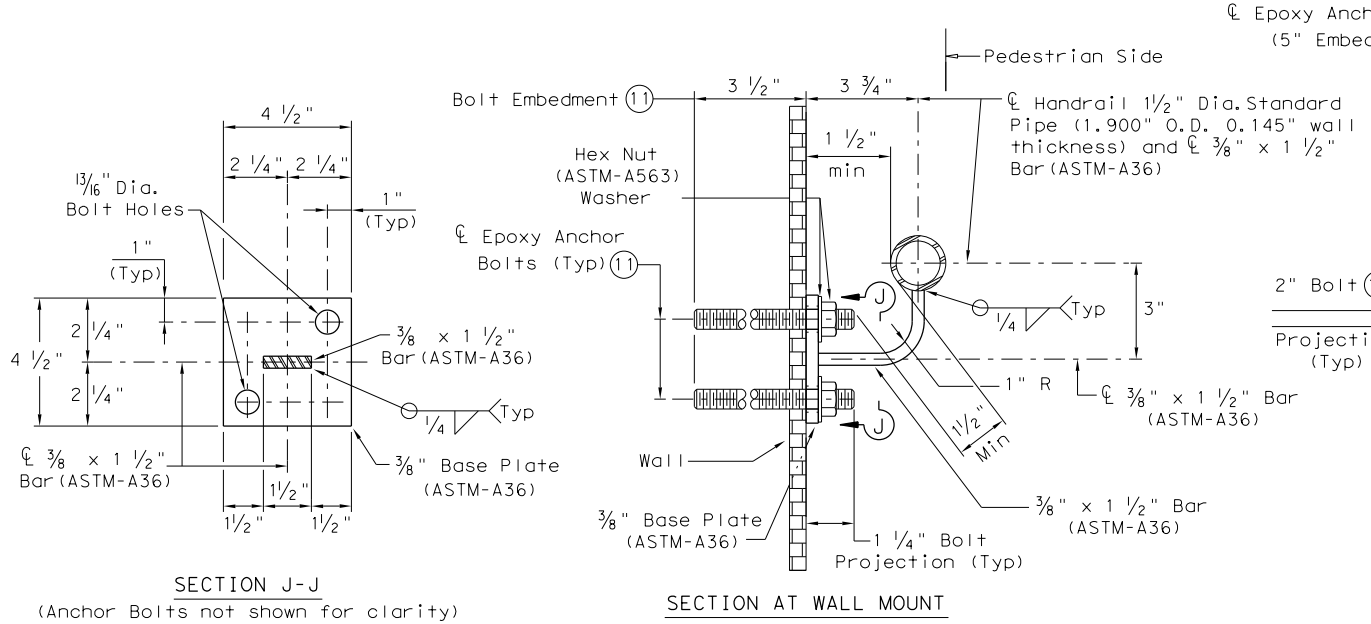
PEDESTRIAN HANDRAIL  
 DETAILS  
 PRD-13

FILE: prd13.dgn	DN: TxDOT	CK: AM	DW: JTR	CK: CGL
© TxDOT December 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
REVISED MAY, 2013 (VP)	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	598	

DATE: 5/3/2019  
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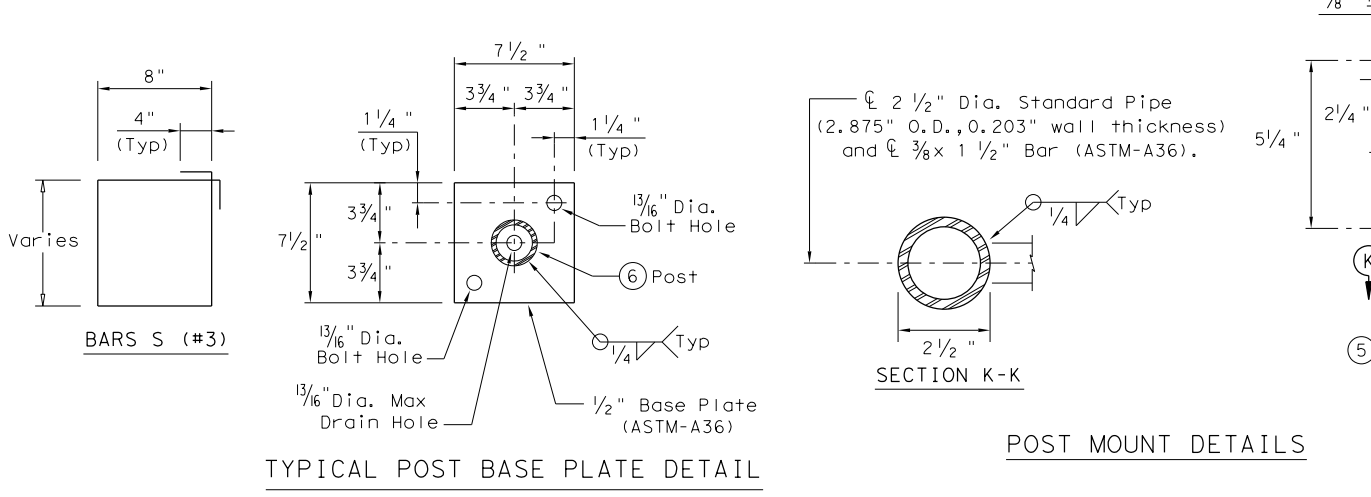


HANDRAIL FABRICATION DETAILS



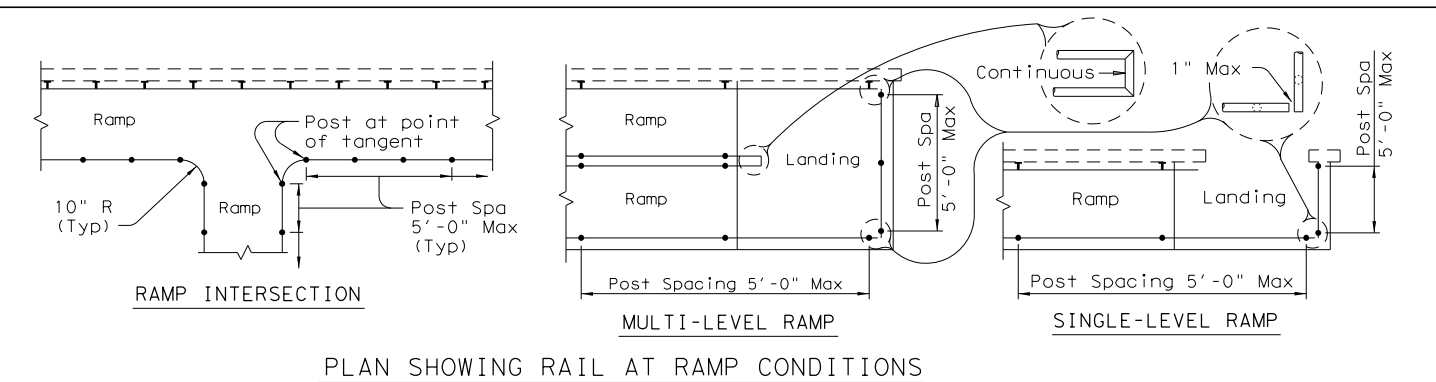
TYPICAL WALL MOUNT DETAILS

- (5) 1 1/2" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp/sidewalk. Provide holes as needed in 1 1/2" Dia. pipe for galvanizing drainage and venting.
- (6) 2 1/2" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post Mount Detail" for crimping and trimming post to fit the diameter of top rail. Provide holes as needed in post for galvanizing drainage and venting.
- (11) See "General Notes" for anchor bolt information.
- (12) Bars S(#3) spaced at 12" Max (Spaced 3" from outside edge of overall length of Ramp/Sidewalk).
- (13) Provide 1 1/2" end cover to Bars D(#4) from outside edge of overall length of Ramp/Sidewalk.



TYPICAL POST BASE PLATE DETAIL

POST MOUNT DETAILS



PLAN SHOWING RAIL AT RAMP CONDITIONS

GENERAL NOTES

Designed according to ADAAG, Texas Accessibility Standards, Uniform Building Code, and AASHTO LRFD Specifications.

Handrail anchorage details shown on this standard may require modification for select structure types. See appropriate details elsewhere in plans for these modifications.

Pipe will conform to ASTM-A53 Grade B or A500 Grade B. Steel plates and steel bars will conform to ASTM-A36. Mechanical tubing (MT) will conform to ASTM A513 Grade 1015 or higher. Galvanize all steel components except reinforcing steel unless noted otherwise.

Concrete for foundations will be in accordance with Item 531 "Sidewalks". All reinforcing steel must be Grade 60. Bar laps, where required, will be as follows: Uncoated ~ #4 = 1'-5" Epoxy coated ~ #4 = 2'-1"

When the plans require painted steel, follow the requirements for painting galvanized steel in Item 446, "Cleaning and Painting Steel". Sleeve Members will receive galvanization and only get field painted after installation unless directed otherwise by Engineer.

Epoxy Anchor bolts for wall mount and post base plate will be 5/8" Dia. ASTM A36 threaded rods with one hex nut and one hardened steel washer at each bolt. 3/8" Dia. threaded rod embedment depth for wall mounts is 3 1/2" and embedment depth for post base plate is 5".

Embed threaded rods into concrete with a Type III (Class C) epoxy meeting the requirements of DMS-6100, "Epoxyes and Adhesives". Mix and dispense adhesive with the manufacturer's static mixing nozzle/dual cartridge system. Core drill holes (percussion drilling not permitted).

At the contractor's option the post base plate anchor bolts may be cast with the Ramp/Sidewalk (See Cast-in-Place Anchor Bolt Options).

Optional cast-in-place anchor bolts will be 5/8" Dia ASTM A307 Grade A bolts (or A36 threaded rods with one tack welded hex nut each) with one hex nut and one hardened steel washer at each bolt. Embedment depth of cast-in-place bolt will be 8" for post base plate.

Handrails and any wall or other surface adjacent to them will be free of any sharp or abrasive elements.

Submit shop drawings to the Engineer unless otherwise noted. For curved handrail applications, fabricate the handrail to the curve if radius is less than 600 ft. Shop drawings are required when rail is fabricated to the curve.

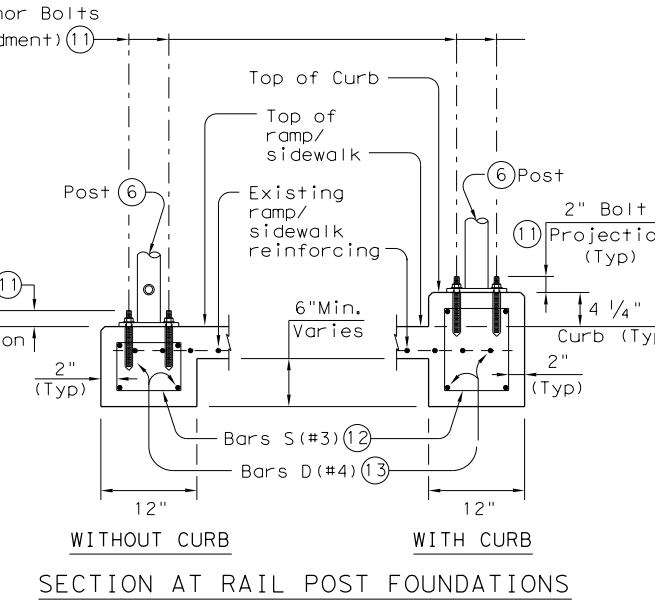
For all handrails, erection drawings will be submitted to the Engineer for approval to ensure proper installation.

Drawings will show handrail mount locations with bolts setting, spacing, ramp slope, and/or splice joint locations, and handrail lengths with identification showing where each handrail goes on the layout.

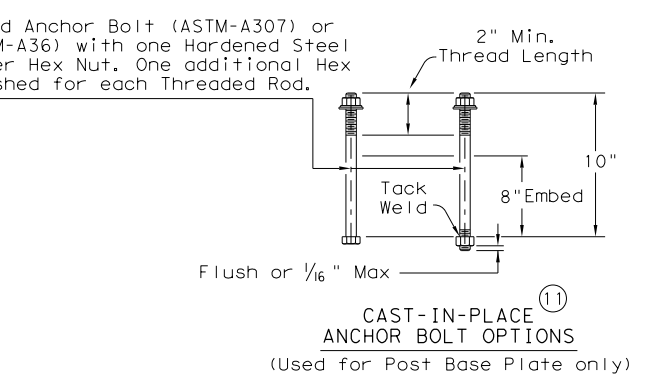
Payment for concrete sidewalks or curb ramps will be paid for in accordance with Item 531 "Sidewalks".

Payment for all items shown is to be included in unit price bid in accordance with Item 450 "Railing" of the type specified.

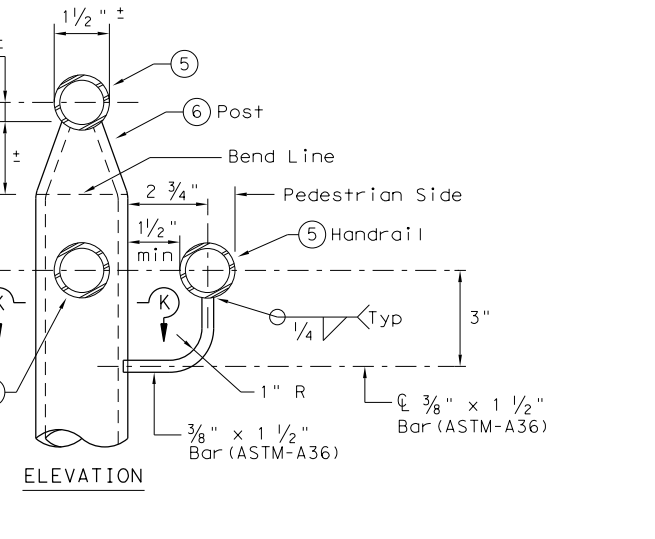
All exposed edges will be rounded or chamfered to approximately 1/8" by grinding.



SECTION AT RAIL POST FOUNDATIONS



CAST-IN-PLACE ANCHOR BOLT OPTIONS (Used for Post Base Plate only)

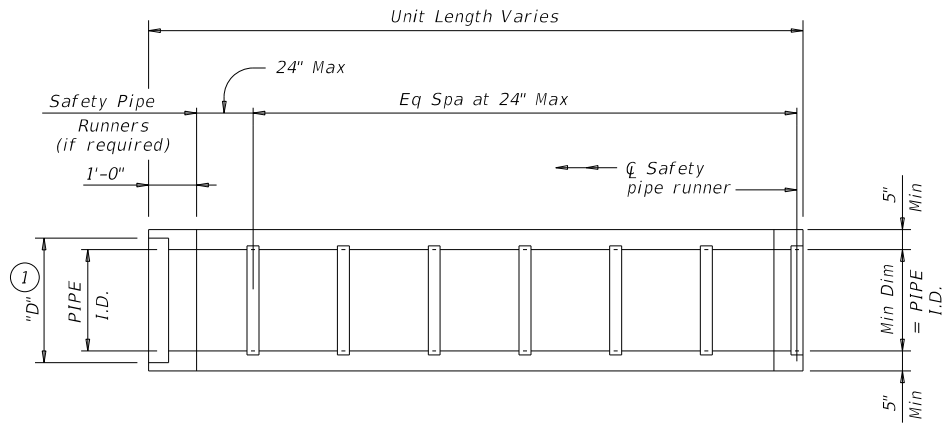


ELEVATION

		<b>Design Division Standard</b>	
<h2>PEDESTRIAN HANDRAIL DETAILS</h2> <h3>PRD-13</h3>			
FILE: prdl3.dgn	DN: TxDOT	CK: AM	DW: JTR
©TxDOT December 2006	CONT	SECT	JOB
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REVISED MAY, 2013 (VP)	DIST	COUNTY	SHEET NO.
	SAT	BEXAR	599

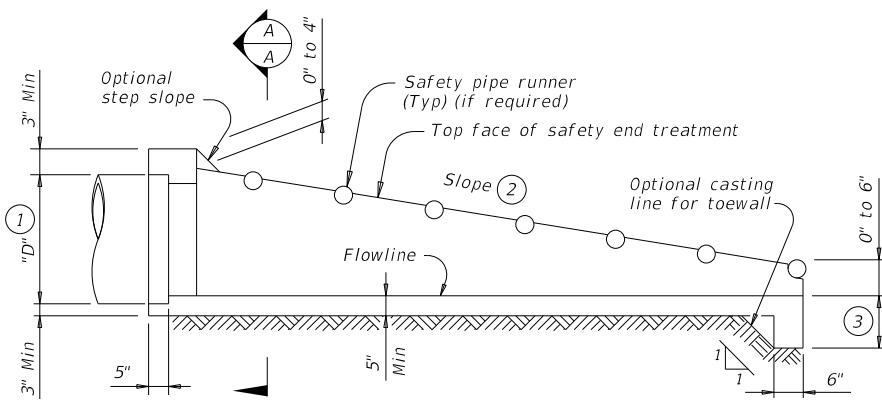
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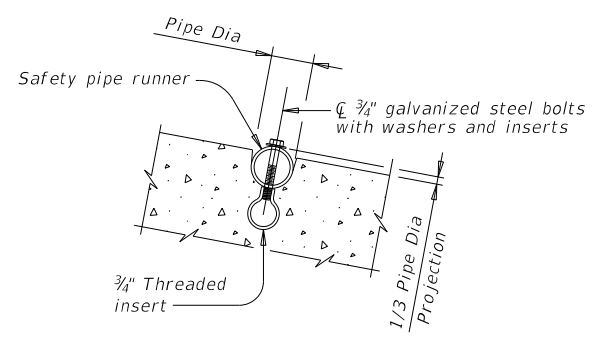
**PLAN**

(Showing bell end connection)



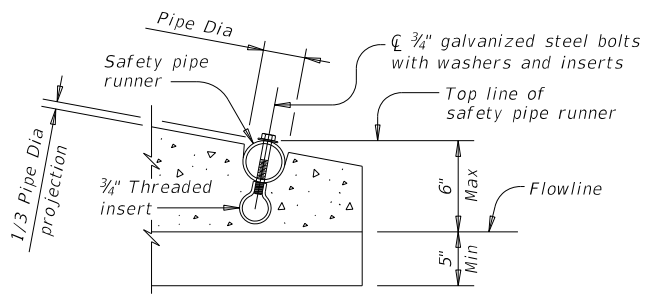
**LONGITUDINAL ELEVATION**

(Showing bell end connection)

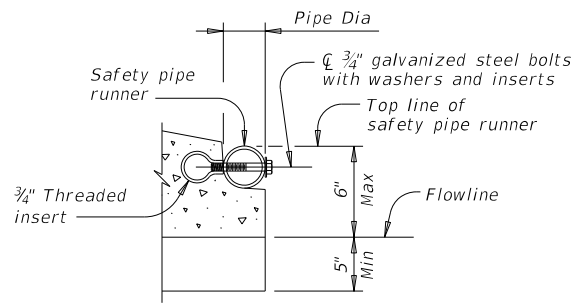


**INSTALLATION DETAIL FOR SAFETY PIPE RUNNERS**

(If required)



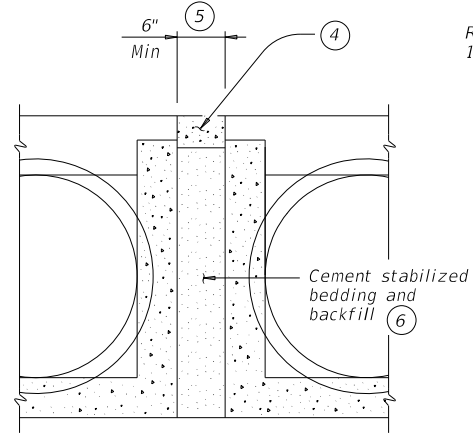
**OPTION A**



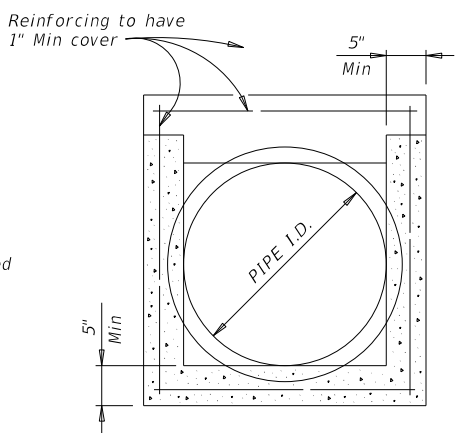
**OPTION B**

**END DETAILS FOR INSTALLATION OF SAFETY PIPE RUNNERS**

(If required)

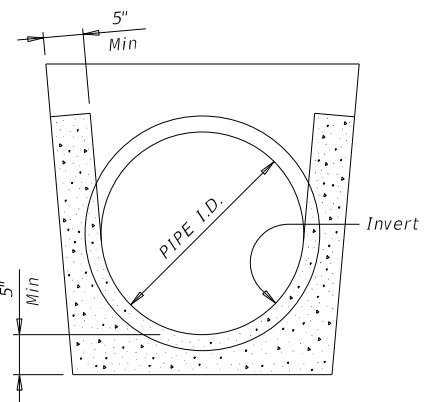


**MULTIPLE PIPE INSTALLATION**

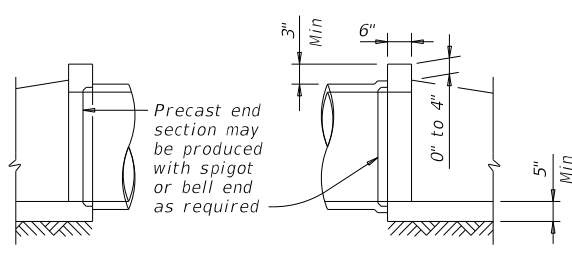


**OPTION WITH SQUARE BOTTOM**

**SECTION A-A**



**OPTION WITH INVERT BOTTOM**



**OPTIONAL JOINT FOR RCP**

(Showing joint between RCP and precast safety end treatment)

PIPE I.D.	RCP WALL "B" THICKNESS	TP WALL THICKNESS (7)	"D" (1)	MAXIMUM SLOPE	MINIMUM LENGTH OF UNIT	PIPE RUNNERS REQUIRED		REQUIRED PIPE RUNNER SIZES		
						SINGLE PIPE	MULTIPLE PIPE	NOMINAL DIA.	O.D.	I.D.
12"	2"	1.15"	17"	6:1	4'-9"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
15"	2.25"	1.30"	20.50"	6:1	6'-5"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
18"	2.50"	1.60"	24"	6:1	8'-0"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
24"	3"	1.95"	31"	6:1	11'-3"	No	Yes, for >2 pipes	3" STD	3.500"	3.068"
30"	3.50"	2.65"	38.50"	6:1	14'-8"	No	Yes	4" STD	4.500"	4.026"
36"	4"	2.75"	45.50"	6:1	17'-11"	Yes	Yes	4" STD	4.500"	4.026"
42"	4.50"	N/A	52.50"	6:1	21'-2"	Yes	Yes	4" STD	4.500"	4.026"

- Dimension "D" is based on Reinforced Concrete Pipe (RCP) meeting the requirements of ASTM C-76, Class III, (RCP Wall "B" thickness). Adjust "D" for any other wall thickness used. For Thermoplastic Pipe (TP) take into account the annular space requirements for grouted connections.
- Slope as shown elsewhere in the plans. Slope of 6:1 or flatter is required for vehicle safety.
- Toewall to be used only when dimension is shown elsewhere in the plans.
- Fill the top 4" of void between precast end treatments with concrete riprap. Concrete riprap is considered subsidiary to the Item "Safety End Treatment".
- Adjust clear distance between pipes to provide for the minimum distance between safety end treatments.
- Provide cement stabilized bedding and backfill in accordance with the Item, "Excavation and Backfill for Structures". Bedding and backfill is considered subsidiary to the Item "Safety End Treatment". When concrete riprap is specified around the safety end treatment, backfill as directed by Engineer.
- Thermoplastic pipe wall thickness may vary. Adjust accordingly. Thermoplastic pipe requires the safety end treatments to have a bell end for grouted connections.

**GENERAL NOTES:**

Precast safety end treatment for reinforced concrete pipe (RCP), and thermoplastic pipe (TP) may be used for TYPE II end treatment as specified in Item "Safety End Treatment".  
 When precast safety end treatment is used as a Contractor's alternate to mitered RCP, riprap will not be required unless noted otherwise on the plans.  
 Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.  
 Manufacture this product in accordance with Item "Safety End Treatment" except as noted below:  
 A. Provide minimum reinforcing of #4 at 6" (Grade 40) or #4 at 9" (Grade 60) each way or 6"x6" - D12 x D12 or 5"x5" - D10 x D10 welded wire reinforcement (WWR).  
 B. For precast (steel formed) sections, provide Class "C" concrete (f'c = 3,600 psi).  
 At the option and expense of the Contractor the next larger size of safety end treatment may be furnished; as long as the "D" dimension cast is that of the required size of pipe.  
 Pipe runners are designed for a traversing load of 10,000 Lbs at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.  
 Provide pipe runners meeting the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.  
 Galvanize all steel components except reinforcing steel after fabrication. Repair galvanizing damaged during transport or construction in accordance with the specifications.  
 Connect RCP using the Optional Joint for RCP detail shown or in accordance with Item 464 "Reinforced Concrete Pipe". Connect TP by grouting. See PBGC standard for grouted connections with TP and precast safety end treatment.

**Texas Department of Transportation**  
 Bridge Division Standard

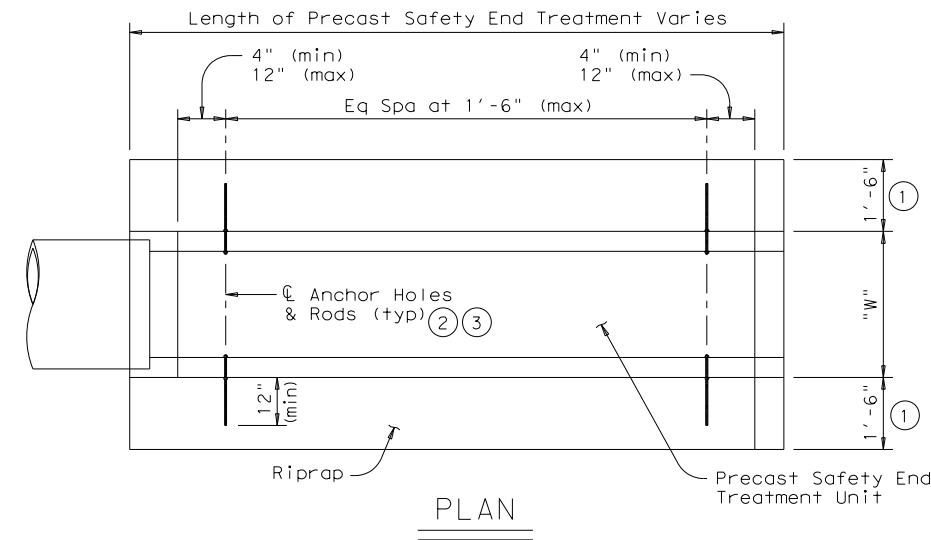
**PRECAST SAFETY END TREATMENT TYPE II ~ PARALLEL DRAINAGE**

**PSET-SP**

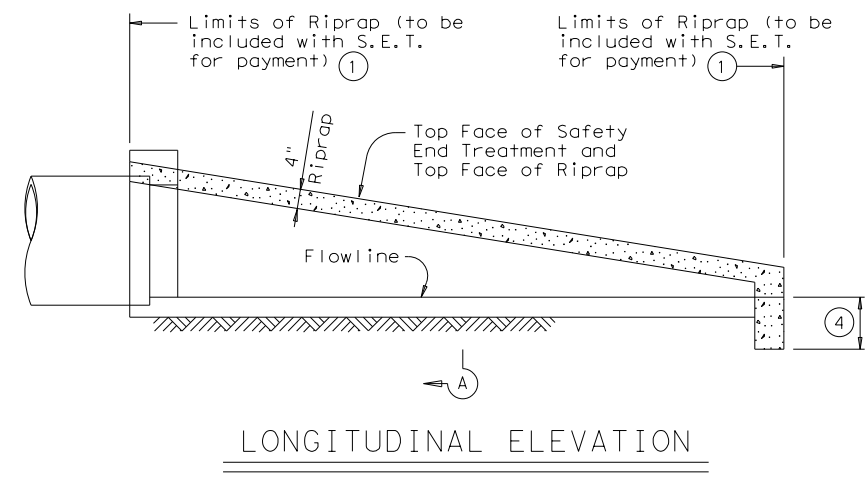
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©TxDOT February 2010	CONTRACT	SECTION	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
11-10: Add note for synthetic fibers. 09-18: Added Thermoplastic Pipe in table.	DIST	COUNTY	SHEET NO.	
SAT	BEXAR	600		

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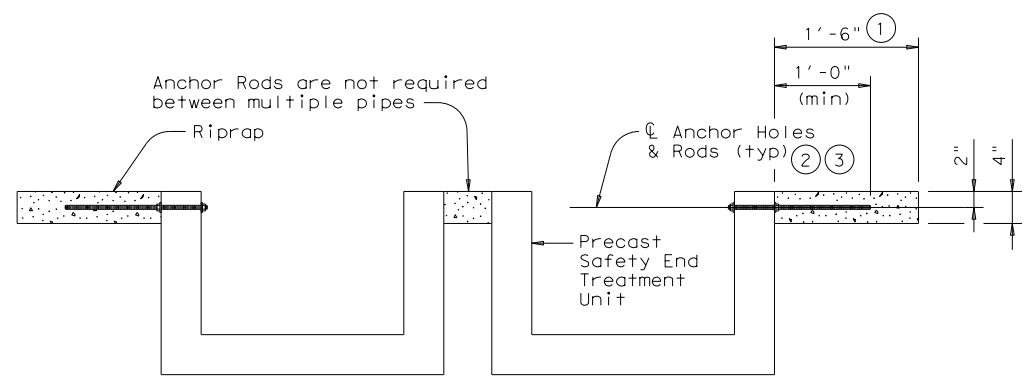
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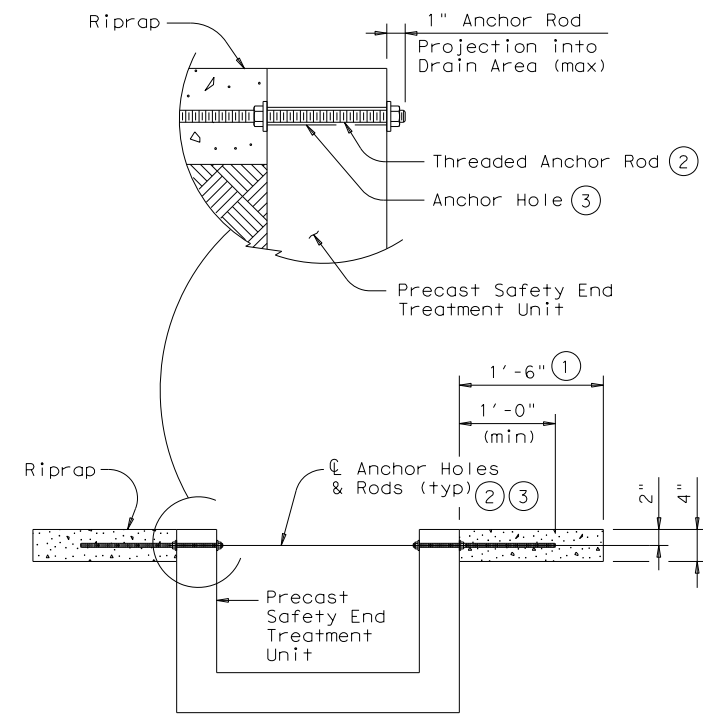
PLAN



LONGITUDINAL ELEVATION



MULTIPLE PIPE INSTALLATION



SINGLE PIPE INSTALLATION

SECTION A-A

ESTIMATED CONCRETE RIPRAP QUANTITIES (CY) ⑤								
Nominal Culvert (Pipe) I.D.	PSET-SC & PSET-SP Standards				PSET-RC & PSET-RP Standards			
	Unit Width "W"	Side Slope			Unit Width "W"	Side Slope		
		3:1	4:1	6:1		3:1	4:1	6:1
12"	23.0"	0.1	0.2	0.2	16.0"	0.1	0.1	0.2
15"	26.5"	0.2	0.2	0.3	19.5"	0.1	0.2	0.2
18"	30.0"	0.2	0.2	0.3	23.0"	0.2	0.2	0.3
24"	37.0"	0.3	0.3	0.5	30.0"	0.2	0.3	0.4
30"	44.5"	0.3	0.4	0.6	37.0"	0.3	0.3	0.5
36"	51.5"	0.4	0.5	0.7	44.0"	0.3	0.4	0.6
42"	58.5"	0.5	0.6	0.8	51.0"	0.4	0.5	0.7

- ① Riprap placed beyond the limits shown will be paid as Concrete Riprap in accordance with Item 432, "Riprap". When Riprap is cast integrally with the Precast Safety End Treatment, this dimension shall be 1'-0" minimum.
- ② 1/2" Diam A307 Gr.A threaded Anchor Rod w/ 2 nuts & 2 washers. All components shall be galvanized in accordance with Item 445, "Galvanizing". Galvanizing that is damaged during transport or construction shall be repaired in accordance with the specifications.
- ③ 3/4" through holes in walls of Safety End Treatment for Riprap Anchor Rods may be drilled with rotary (coring or masonry) type drilling equipment or may be formed. Percussive (star) type drilling equipment shall not be used. If holes are drilled, spalls in the inside face of the wall exceeding 1/2" from the holes shall be patched.
- ④ Provide Riprap Toe Wall when dimension is shown elsewhere in the plans or when field conditions require a Toe Wall.
- ⑤ Quantities shown are for one end of one reinforced concrete pipe culvert. For multiple pipe culverts, quantities will need to be adjusted. Riprap quantities are for Contractor's information only. Quantities are based on the minimum unit lengths shown on the Precast S.E.T. standards.

GENERAL NOTES:

Precast Safety End Treatment for reinforced concrete pipe may be used for TYPE II end treatment as specified in Item 467, "Safety End Treatment". Riprap shall be Class "B" Riprap in accordance with Item 432, "Riprap". Payment for Riprap and Toewalls is included in the Price Bid for each Safety End Treatment.

Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise. The anchor rods shown are always required.

Refer to PSET-SC or PSET-SP standard sheets for details of square Safety End Treatments not shown. Refer to PSET-RC or PSET-RP standard sheets for details of round Safety End Treatments not shown.

For precast units with integrally cast Riprap, reinforcing steel in the amount on 0.26 sq in/ft minimum shall be substituted for the threaded anchor rods shown. When requested, sealed engineering drawings shall be submitted for approval prior to construction. Shop drawings will not be required. Note that a proprietary precast unit with integral Riprap is available from L&R Precast Concrete Works, Inc. (956) 583-6293 or www.lrpcast.com.

These Riprap details are only applicable when notes that require placement of Riprap with Precast Safety End Treatments are shown elsewhere in the plans.

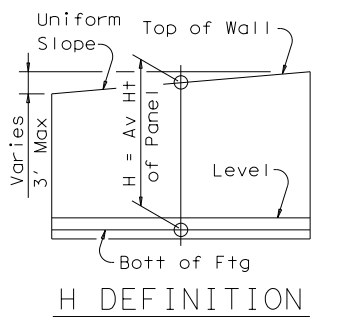
Precast units with integrally cast Riprap shall be permitted unless noted otherwise on the plans.

				<b>Bridge Division Standard</b>	
<b>PRECAST SAFETY END TREATMENT TYPE II RIPRAP DETAILS</b> <b>PSET-RR</b>					
FILE: psetrrse.dgn	DN: GAF	CK: TxDOT	DW: JRP	CK: GAF	
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY	
REVISIONS	0915	12	576	VARIES	
11-10: Add note for synthetic fibers.	DIST	COUNTY	SHEET NO.		
	SAT	BEXAR	601		

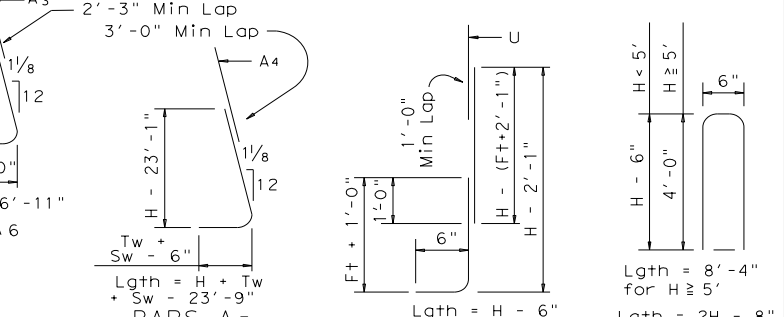
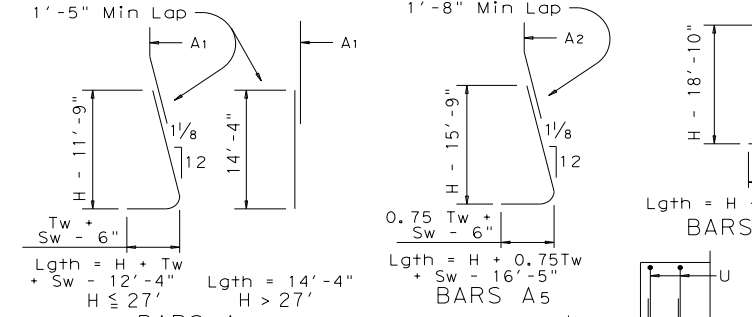
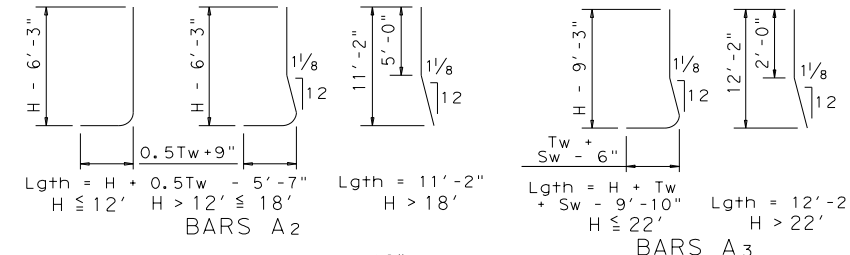
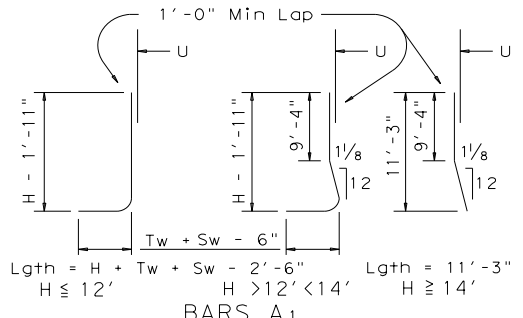




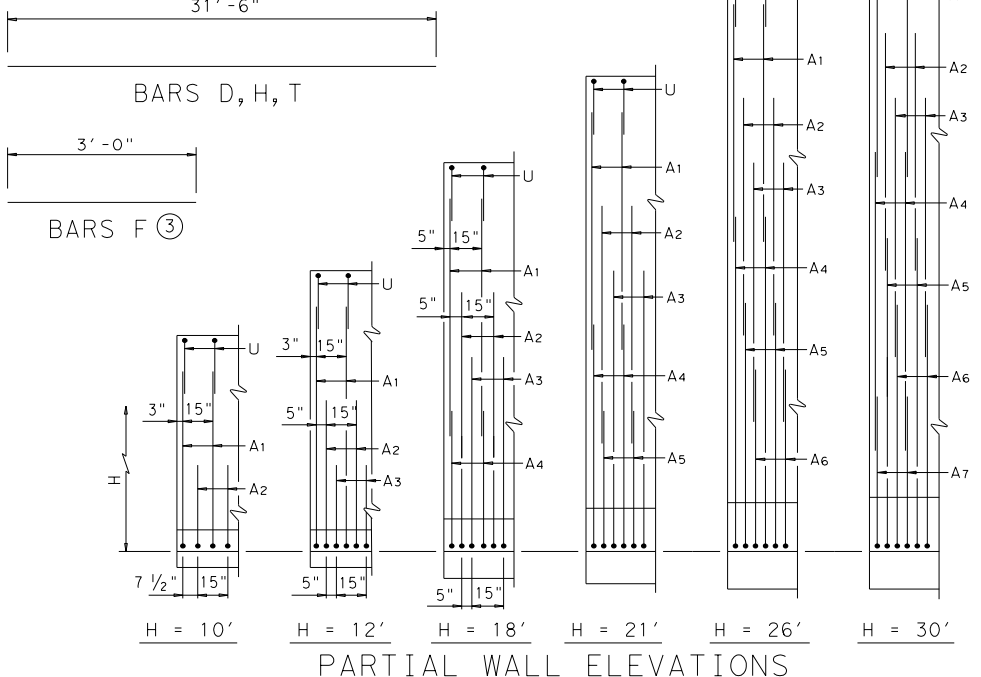
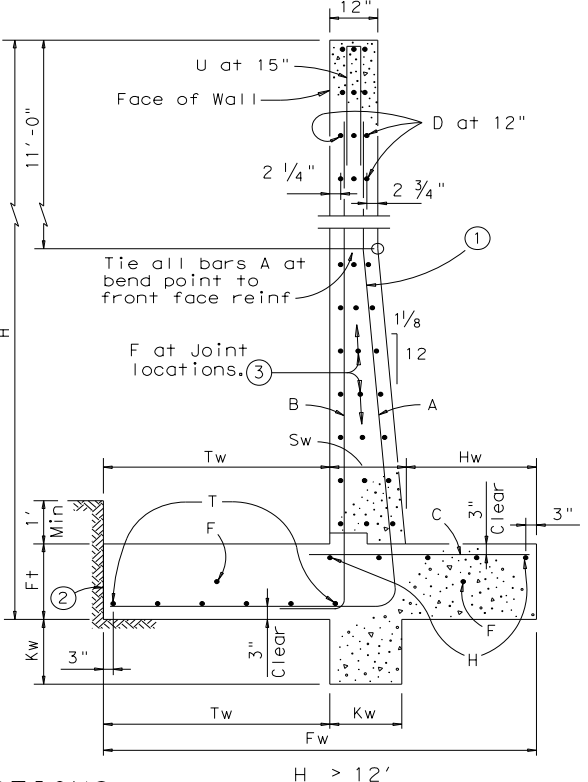
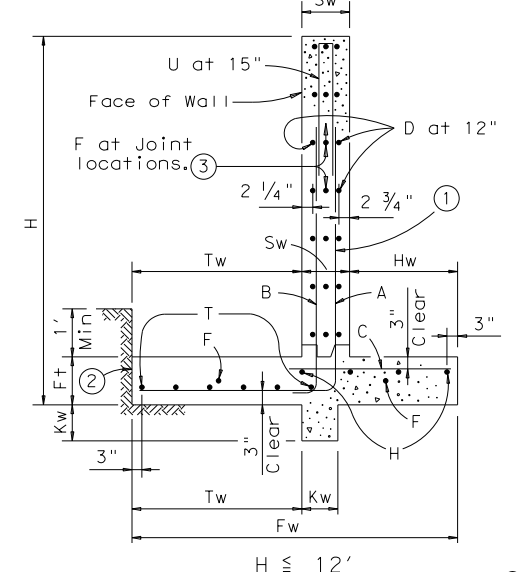
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Wall Height "H"	PROPERTIES								REINFORCING STEEL FOR ONE 32' PANEL (DESIGN B)																				QUANTITY FOR ONE 32' PANEL		Wall Height "H" (Ft)										
	WALL DIMENSIONS								Max Soil Press		A1 ~ 26 #5 at 15" c-c		A2 ~ 25 #6 at 15" c-c		A3 ~ 25 #7 at 15" c-c		A4 ~ 26 #8 at 15" c-c		A5 ~ 25 #9 at 15" c-c		A6 ~ 25 #11 at 15" c-c		A7 ~ 26 #11 at 15" c-c		B ~ 26 #5 at 15" c-c		C		D (#5) at 12" c-c			Dowel F at 12" c-c		H (#5) at 12" c-c		T (#5) at 12" c-c		U ~ 26 #5 at 15" c-c		CONC (CY)	REINF (LB)
	(Ft)	Fw	Tw	Sw	Hw	Ft	Kw	T/SF	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Size	No	Spa	Lgth	Wt	No	Wt	No		Wt	No	Wt	No	Wt	No	Wt	Lgth	Wt	
2	2'-8"	1'-4"	1'-0"	4"	1'-0"	9"	0.15																#4	26	15"	1'-10"	32	4	131	4	32	2	66	2	66	3'-4"	90	5.0	418	2	
3	3'-6"	1'-9"	1'-0"	9"	1'-0"	9"	0.18																#4	26	15"	2'-3"	39	6	197	5	40	2	66	3	99	5'-4"	145	7.2	586	3	
4	4'-3"	2'-2"	1'-0"	1'-1"	1'-0"	9"	0.21	4'-8"	127														#4	26	15"	2'-8"	46	8	263	6	48	3	99	3	99	7'-4"	199	9.3	976	4	
5	5'-0"	2'-6"	1'-0"	1'-6"	1'-0"	9"	0.24	6'-0"	163														#4	26	15"	3'-0"	52	10	329	7	56	3	99	3	99	8'-4"	226	11.3	1146	5	
6	5'-8"	2'-10"	1'-0"	1'-10"	1'-0"	9"	0.28	7'-4"	199														#4	26	15"	3'-4"	58	12	394	8	64	3	99	4	131	8'-4"	226	13.3	1321	6	
7	6'-4"	3'-2"	1'-0"	2'-2"	1'-0"	9"	0.31	8'-8"	235														#4	26	15"	3'-8"	64	14	460	9	72	3	99	4	131	8'-4"	226	15.3	1463	7	
8	7'-0"	3'-6"	1'-0"	2'-6"	1'-0"	9"	0.35	10'-0"	271	4'-2"	156												#4	38	10"	4'-0"	102	16	526	10	80	4	131	4	131	8'-4"	226	17.3	1825	8	
9	7'-9"	3'-10"	1'-0"	2'-11"	1'-0"	9"	0.38	11'-4"	307	5'-4"	200												#6	38	10"	4'-4"	247	18	591	11	88	4	131	5	164	8'-4"	226	19.3	2185	9	
10	8'-6"	4'-3"	1'-0"	3'-3"	1'-0"	9"	0.40	12'-9"	346	6'-7"	247												#6	38	10"	4'-9"	271	20	657	12	96	4	131	5	164	8'-4"	226	21.4	2396	10	
11	9'-2"	4'-7"	1'-0"	3'-7"	1'-0"	9"	0.43	14'-1"	382	7'-8"	288	6'-9"	345										#7	38	10"	5'-1"	395	22	723	13	104	5	164	6	197	8'-4"	226	23.4	3103	11	
12	9'-10"	4'-11"	1'-0"	3'-11"	1'-0"	9"	0.46	15'-5"	418	8'-11"	335	8'-1"	413										#8	38	10"	5'-5"	550	24	789	14	112	5	164	6	197	8'-4"	226	25.9	3515	12	
13	10'-6"	5'-3"	1'-1 1/8"	4'-1 7/8"	1'-0"	9"	0.50	16'-10"	456	10'-1"	379	9'-6"	485										#8	38	10"	5'-9"	743	26	854	15	120	6	197	6	197	8'-4"	226	27.9	3996	13	
14	11'-2"	5'-7"	1'-2"	4'-5"	1'-3"	9"	0.55	11'-3"	307	11'-2"	419	10'-11"	558	8'-5"	584								#9	38	10"	6'-1"	786	28	920	16	128	6	197	7	230	8'-4"	226	33.7	4721	14	
15	11'-10"	5'-11"	1'-3 1/8"	4'-7 7/8"	1'-3"	9"	0.59	11'-3"	307	12'-5"	466	12'-4"	630	9'-10"	683								#9	38	10"	6'-5"	829	30	986	17	136	7	230	7	230	8'-4"	226	36.1	5116	15	
16	12'-6"	6'-3"	1'-4"	4'-11"	1'-6"	9"	0.64	11'-3"	307	13'-7"	510	13'-9"	703	11'-2"	775								#9	38	10"	6'-9"	872	30	986	17	136	7	230	8	263	8'-4"	226	41.9	5427	16	
17	13'-3"	6'-7"	1'-5"	5'-3"	1'-6"	9"	0.67	11'-3"	307	14'-9"	554	15'-2"	775	12'-8"	879								#9	38	10"	7'-2"	926	32	1051	18	144	7	230	8	263	8'-4"	226	45.7	5802	17	
18	13'-10"	6'-11"	1'-6 1/4"	5'-4 3/4"	1'-6"	9"	0.71	11'-3"	307	15'-11"	598	16'-7"	847	14'-1"	978								#10	38	10"	7'-5"	1213	34	1117	19	152	8	263	8	263	8'-4"	226	48.5	6439	18	
19	14'-6"	7'-3"	1'-7"	5'-8"	1'-9"	9"	0.76	11'-3"	307	11'-2"	419	18'-0"	920	15'-5"	1070	9'-7"	815						#10	38	10"	7'-9"	1267	36	1183	20	160	8	263	9	296	8'-4"	226	55.4	7428	19	
20	15'-2"	7'-7"	1'-8 1/8"	5'-10 7/8"	1'-9"	9"	0.80	11'-3"	307	11'-2"	419	19'-5"	992	16'-11"	1174	10'-11"	928						#10	38	10"	8'-1"	1322	38	1248	21	168	8	263	9	296	8'-4"	226	58.7	7872	20	
21	16'-0"	8'-0"	1'-9 1/4"	6'-2 3/4"	1'-9"	9"	0.81	11'-3"	307	11'-2"	419	20'-11"	1069	18'-5"	1278	12'-4"	1048						#8	76	5"	8'-6"	1725	40	1314	22	176	9	296	10	329	8'-4"	226	62.4	8743	21	
22	16'-6"	8'-3"	1'-10 1/8"	6'-4 7/8"	2'-0"	9"	0.88	11'-3"	307	11'-2"	419	22'-3"	1137	19'-9"	1371	13'-7"	1155						#8	76	5"	8'-9"	1776	42	1380	23	184	9	296	10	329	8'-4"	226	70.0	9163	22	
23	17'-3"	8'-7"	1'-11 1/4"	6'-8 3/4"	2'-0"	9"	0.91	11'-3"	307	11'-2"	419	12'-2"	622	21'-2"	1469	15'-0"	1275	6'-1"	808				#8	76	5"	9'-2"	1860	44	1446	24	192	9	296	10	329	8'-4"	226	74.0	9859	23	
24	18'-0"	9'-0"	2'-0 1/8"	6'-11 1/8"	2'-3"	9"	0.95	11'-3"	307	11'-2"	419	12'-2"	622	22'-8"	1574	16'-4"	1388	7'-1"	941				#8	76	5"	9'-6"	1928	46	1511	25	200	10	329	11	361	8'-4"	226	82.9	10443	24	
25	18'-6"	9'-4"	2'-1 1/4"	7'-0 3/4"	2'-3"	9"	0.99	11'-3"	307	11'-2"	419	12'-2"	622	24'-1"	1672	17'-8"	1502	8'-1"	1074				#9	76	5"	9'-10"	2541	48	1577	26	208	10	329	11	361	8'-4"	226	86.6	11502	25	
26	19'-3"	9'-7"	2'-2 3/8"	7'-5 5/8"	2'-3"	9"	1.03	11'-3"	307	11'-2"	419	12'-2"	622	25'-5"	1764	19'-0"	1615	9'-1"	1206				#9	76	5"	10'-1"	2606	50	1643	27	217	10	329	12	394	8'-4"	226	92.1	12040	26	
27	20'-0"	10'-0"	2'-3 1/2"	7'-8 1/2"	2'-3"	9"	1.05	11'-3"	307	11'-2"	419	12'-2"	622	27'-0"	1874	20'-5"	1735	10'-1"	1339				#9	76	5"	10'-5"	2692	52	1708	28	225	11	361	12	394	8'-4"	226	96.8	12621	27	
28	20'-6"	10'-4"	2'-4 5/8"	7'-9 3/8"	2'-3"	9"	1.09	11'-3"	307	11'-2"	419	12'-2"	622	14'-4"	995	21'-9"	1849	11'-1"	1472	17'-0"	2348		#10	76	5"	10'-9"	3516	54	1774	29	233	11	361	12	394	8'-4"	226	100.9	15261	28	
29	21'-3"	10'-7"	2'-5 3/4"	8'-2 1/4"	2'-3"	9"	1.12	11'-3"	307	11'-2"	419	12'-2"	622	14'-4"	995	23'-0"	1955	12'-1"	1605	18'-4"	2533		#10	76	5"	11'-2"	3652	56	1840	30	241	11	361	13	427	8'-4"	226	105.8	15955	29	
30	22'-0"	11'-0"	2'-6 1/2"	8'-5 1/2"	2'-6"	9"	1.16	11'-3"	307	11'-2"	419	12'-2"	622	14'-4"	995	24'-5"	2075	13'-1"	1738	19'-10"	2740		#10	76	5"	11'-6"	3761	56	1840	30	241	12	394	13	427	8'-4"	226	116.5	16584	30	



- Place vertical bars inside of horizontal bars (Typ both faces).
- Place footing toe against undisturbed soil.
- See standard RW 2 for size.



GENERAL NOTES:  
 All concrete to be Class "C".  
 All reinforcing steel to be Grade 60.  
 For notes and details not shown on this sheet see sheet RW2.  
 Quantities are based on "H" being average height of panel.  
 Retaining Walls are designed to be coded as follows on Retaining Wall Layout Sheets.  
 HC - 21 - 28  
 LA - 28 - 32  
 Panel Length ~ 32' is standard; 28' requires special quantities.  
 Average Height "H" of panel  
 Design - A = no surcharge or slope above wall  
 B = slopes up to 4:1  
 C = traffic surcharge and/or slopes up to 2.5:1  
 Footing pressure design ~ L = low, H = high

**Texas Department of Transportation**  
Bridge Division Standard

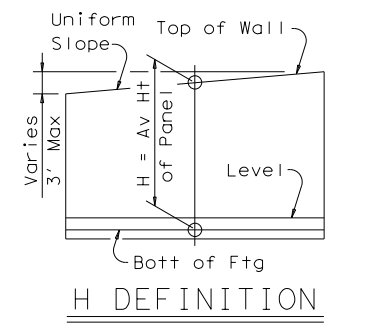
## RETAINING WALLS

### RW 1(L)B

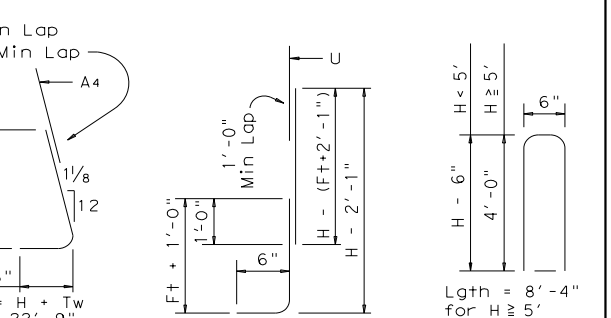
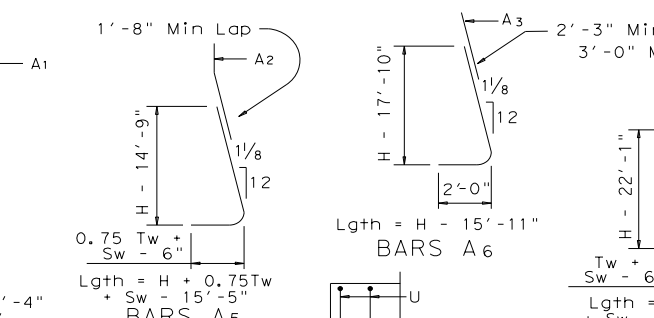
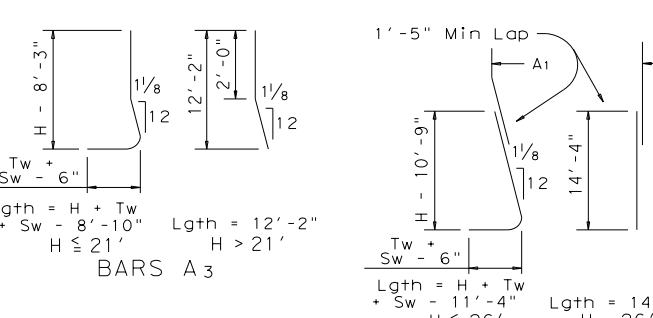
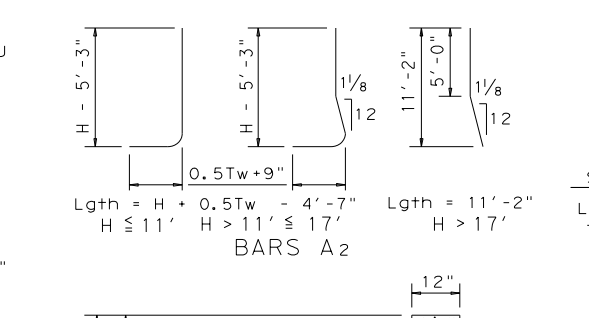
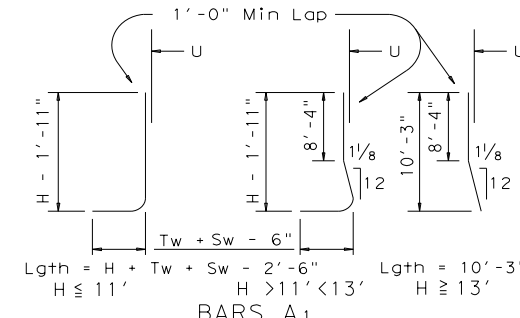
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	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	603	

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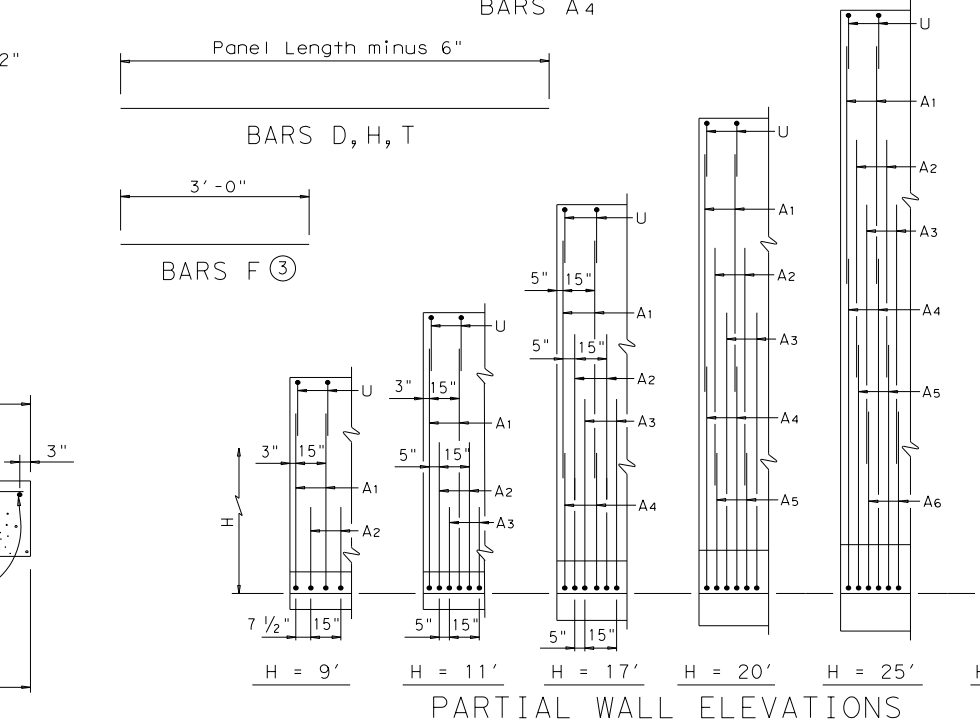
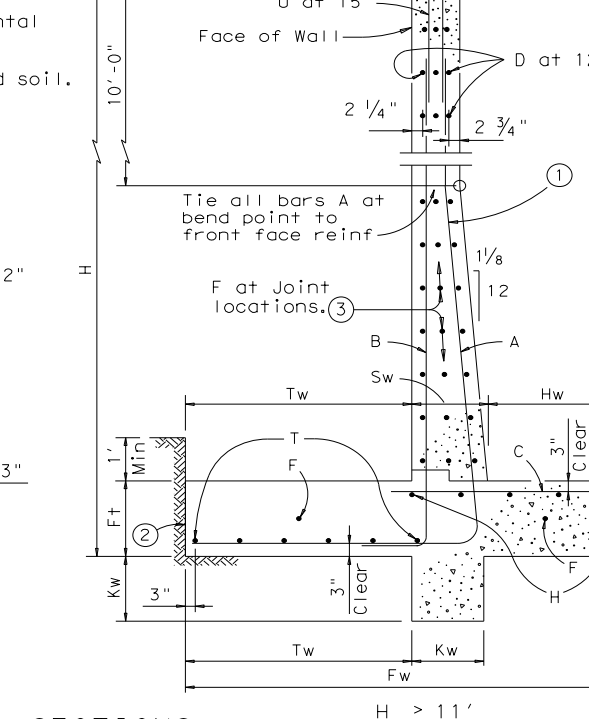
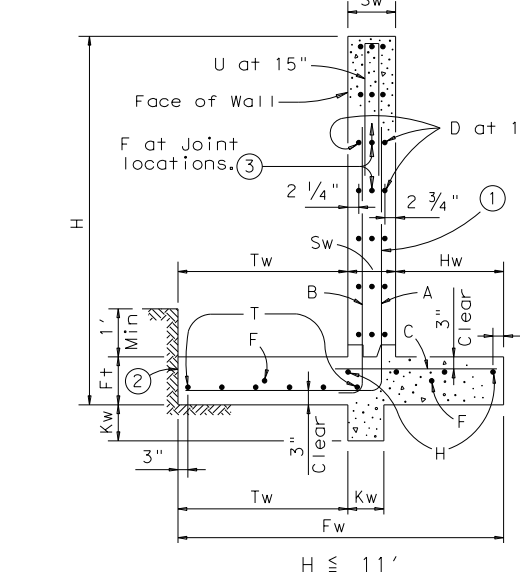
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Wall Height "H"	PROPERTIES							REINFORCING STEEL FOR ONE 32' PANEL (DESIGN C)																							QUANTITY FOR ONE 32' PANEL		Wall Height "H"							
	WALL DIMENSIONS							Max Soil Press	A1 ~ 26 #5 at 15" c-c		A2 ~ 25 #6 at 15" c-c		A3 ~ 25 #7 at 15" c-c		A4 ~ 26 #8 at 15" c-c		A5 ~ 25 #9 at 15" c-c		A6 ~ 25 #11 at 15" c-c		A7 ~ 26 #11 at 15" c-c		B ~ 26 #5 at 15" c-c		C		D (#5) at 12" c-c		F (#5) at 12" c-c		H (#5) at 12" c-c			T (#5) at 12" c-c		U ~ 26 #5 at 15" c-c		CONC (CY)	REINF (LB)	
	(Ft)	Fw	Tw	Sw	Hw	Ft	Kw		T/SF	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Size	No	Spa	Lgth	Wt	No	Wt	No	Wt		No	Wt	No	Wt			Lgth
2	3'-6"	1'-9"	1'-0"	9"	1'-0"	9"	0.14																#4	26	15"	2'-3"	39	4	131	4	32	2	66	3	99	3'-4"	90	6.0	458	2
3	4'-3"	2'-2"	1'-0"	1'-1"	1'-0"	9"	0.17																#4	26	15"	2'-8"	46	6	197	5	40	3	99	3	99	5'-4"	145	8.1	626	3
4	5'-0"	2'-6"	1'-0"	1'-6"	1'-0"	9"	0.20	5'-0"	136														#4	26	15"	3'-0"	52	8	263	6	48	3	99	3	99	7'-4"	199	10.1	991	4
5	5'-8"	2'-10"	1'-0"	1'-10"	1'-0"	9"	0.24	6'-4"	172														#4	26	15"	3'-4"	58	10	329	7	56	4	131	8'-4"	226	12.1	1193	5		
6	6'-4"	3'-2"	1'-0"	2'-2"	1'-0"	9"	0.28	7'-8"	208														#4	26	15"	3'-8"	64	12	394	8	64	3	99	4	131	8'-4"	226	14.1	1336	6
7	7'-0"	3'-6"	1'-0"	2'-6"	1'-0"	9"	0.32	9'-0"	244	4'-2"	156												#4	38	10"	4'-0"	102	14	460	9	72	4	131	4	131	8'-4"	226	16.1	1698	7
8	7'-9"	3'-10"	1'-0"	2'-11"	1'-0"	9"	0.35	10'-4"	280	5'-4"	200												#6	38	10"	4'-4"	124	16	526	10	80	4	131	5	164	8'-4"	226	18.1	2056	8
9	8'-6"	4'-3"	1'-0"	3'-3"	1'-0"	9"	0.37	11'-9"	319	6'-7"	247												#6	38	10"	4'-9"	146	18	591	11	88	4	131	5	164	8'-4"	226	20.2	2268	9
10	9'-2"	4'-7"	1'-0"	3'-7"	1'-0"	9"	0.41	13'-1"	355	7'-8"	288	6'-9"	345										#8	38	10"	5'-1"	168	20	657	12	96	5	164	6	197	8'-4"	226	22.2	2981	10
11	9'-10"	4'-11"	1'-0"	3'-11"	1'-0"	9"	0.44	14'-5"	391	8'-11"	335	8'-1"	413										#8	38	10"	5'-5"	190	22	723	13	104	5	164	6	197	8'-4"	226	24.7	3382	11
12	10'-6"	5'-3"	1'-1 1/8"	4'-1 7/8"	1'-0"	9"	0.45	15'-10"	429	10'-1"	379	9'-6"	485										#9	38	10"	5'-9"	212	24	789	14	112	6	197	6	197	8'-4"	226	26.7	3868	12
13	11'-7"	5'-7"	1'-2"	4'-5"	1'-3"	9"	0.54	10'-3"	278	11'-2"	419	10'-11"	558	8'-5"	584								#9	38	10"	6'-1"	234	26	854	15	120	6	197	7	230	8'-4"	226	32.5	4591	13
14	11'-10"	5'-11"	1'-3 1/8"	4'-7 7/8"	1'-3"	9"	0.57	10'-3"	278	12'-5"	466	12'-4"	630	9'-10"	683								#9	38	10"	6'-5"	256	28	920	16	128	7	230	7	230	8'-4"	226	34.9	4986	14
15	12'-6"	6'-3"	1'-4"	4'-11"	1'-6"	9"	0.63	10'-3"	278	13'-7"	510	13'-9"	703	11'-2"	775								#9	38	10"	6'-9"	278	28	920	16	128	7	230	8	263	8'-4"	226	40.8	5298	15
16	13'-3"	6'-7"	1'-5"	5'-3"	1'-6"	9"	0.66	10'-3"	278	14'-9"	554	15'-2"	775	12'-8"	879								#9	38	10"	7'-2"	300	30	986	17	136	7	230	8	263	8'-4"	226	44.5	5672	16
17	13'-10"	6'-11"	1'-6 1/4"	5'-4 3/4"	1'-6"	9"	0.70	10'-3"	278	15'-11"	598	16'-7"	847	14'-1"	978								#10	38	10"	7'-5"	322	32	1051	18	144	8	263	8	263	8'-4"	226	47.3	6308	17
18	14'-6"	7'-3"	1'-7"	5'-8"	1'-9"	9"	0.76	10'-3"	278	11'-2"	419	18'-0"	920	15'-5"	1070	9'-7"	815						#10	38	10"	7'-9"	344	34	1117	19	152	8	263	9	296	8'-4"	226	54.2	7298	18
19	15'-2"	7'-7"	1'-8 1/8"	5'-10 7/8"	1'-9"	9"	0.79	10'-3"	278	11'-2"	419	19'-5"	992	16'-11"	1174	10'-11"	928						#10	38	10"	8'-1"	366	36	1183	20	160	8	263	9	296	8'-4"	226	57.5	7743	19
20	16'-0"	8'-0"	1'-9 1/4"	6'-2 3/4"	1'-9"	9"	0.80	10'-3"	278	11'-2"	419	20'-11"	1069	18'-5"	1278	12'-4"	1048						#10	38	10"	8'-5"	388	38	1248	21	168	9	296	10	329	8'-4"	226	61.3	8613	20
21	16'-6"	8'-3"	1'-10 1/8"	6'-4 7/8"	2'-0"	9"	0.88	10'-3"	278	11'-2"	419	22'-3"	1137	19'-9"	1371	13'-7"	1155						#10	38	10"	8'-9"	410	40	1314	22	176	9	296	10	329	8'-4"	226	68.8	9033	21
22	17'-3"	8'-7"	1'-11 1/4"	6'-8 3/4"	2'-0"	9"	0.91	10'-3"	278	11'-2"	419	12'-2"	622	21'-2"	1469	15'-0"	1275	6'-1"	808				#10	38	10"	9'-2"	432	42	1380	23	184	9	296	10	329	8'-4"	226	72.8	9729	22
23	18'-0"	9'-0"	2'-0 1/8"	6'-11 1/8"	2'-3"	9"	0.95	10'-3"	278	11'-2"	419	12'-2"	622	22'-8"	1574	16'-4"	1388	7'-1"	941				#10	38	10"	9'-6"	454	44	1446	24	192	10	329	11	361	8'-4"	226	81.7	10314	23
24	18'-6"	9'-4"	2'-1 1/4"	7'-0 3/4"	2'-3"	9"	0.99	10'-3"	278	11'-2"	419	12'-2"	622	24'-1"	1672	17'-8"	1502	8'-1"	1074				#10	38	10"	9'-10"	476	46	1511	25	200	10	329	11	361	8'-4"	226	85.4	11372	24
25	19'-3"	9'-7"	2'-2 3/8"	7'-5 5/8"	2'-3"	9"	1.03	10'-3"	278	11'-2"	419	12'-2"	622	25'-5"	1764	19'-0"	1615	9'-1"	1206				#10	38	10"	10'-1"	498	48	1577	26	208	10	329	12	394	8'-4"	226	91.0	11909	25
26	20'-0"	10'-0"	2'-3 1/2"	7'-8 1/2"	2'-3"	9"	1.05	10'-3"	278	11'-2"	419	12'-2"	622	27'-0"	1874	20'-5"	1735	10'-1"	1339				#10	38	10"	10'-5"	520	50	1643	27	217	11	361	12	394	8'-4"	226	95.6	12491	26
27	20'-6"	10'-4"	2'-4 5/8"	7'-9 3/8"	2'-3"	9"	1.09	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	21'-9"	1849	11'-1"	1472	17'-0"	2348		#10	38	10"	10'-9"	542	52	1708	28	225	11	361	12	394	8'-4"	226	99.7	15132	27
28	21'-3"	10'-7"	2'-5 3/4"	8'-2 1/4"	2'-3"	9"	1.13	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	23'-0"	1955	12'-1"	1605	18'-4"	2533		#10	38	10"	11'-2"	564	54	1774	29	233	11	361	13	427	8'-4"	226	104.6	15825	28
29	22'-0"	11'-0"	2'-6 1/2"	8'-5 1/2"	2'-6"	9"	1.17	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	24'-5"	2075	13'-1"	1738	19'-10"	2740		#10	38	10"	11'-6"	586	54	1774	29	233	12	394	13	427	8'-4"	226	115.3	16454	29



- Place vertical bars inside of horizontal bars (Typ both faces).
- Place footing toe against undisturbed soil.
- See standard RW 2 for size.



**GENERAL NOTES:**  
 All concrete to be Class "C".  
 All reinforcing steel to be Grade 60.  
 For notes and details not shown on this sheet see sheet RW2.  
 Quantities are based on "H" being average height of panel.  
 Retaining Walls are designed to be coded as follows on Retaining Wall Layout Sheets.  
 HC - 21 - 28  
 LA - 28 - 32  
 Panel Length ~ 32' is standard; 28' requires special quantities.  
 Average Height "H" of panel.  
 Design - A = no surcharge or slope above wall  
 B = slopes up to 4:1  
 C = traffic surcharge and/or slopes up to 2.5:1  
 Footing pressure design ~ L = low, H = high

Texas Department of Transportation  
 Bridge Division Standard

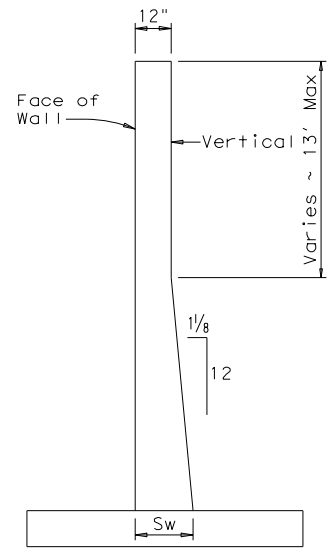
## RETAINING WALLS

**RW 1(L/C)**

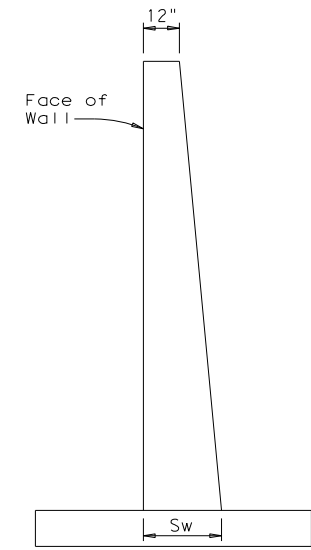
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DIST	COUNTY	SHEET NO.		
SAT	BEXAR	604		

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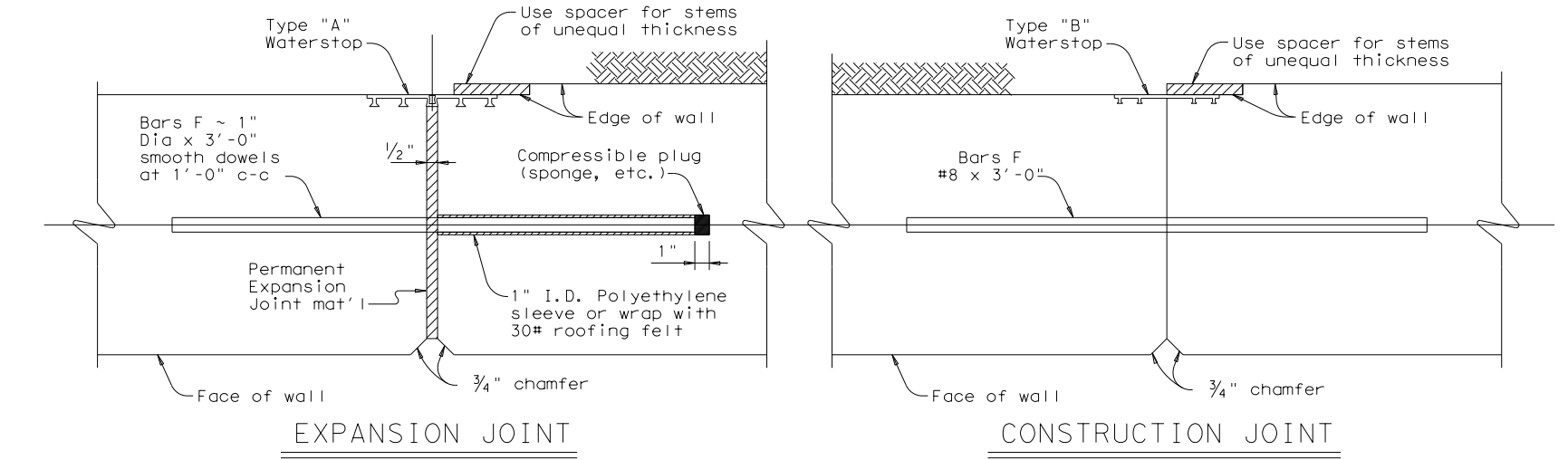
AS DETAILED ALL HEIGHTS  
 (Basis for payment)



FRONT FACE VERTICAL  
 BACK FACE SLOPED

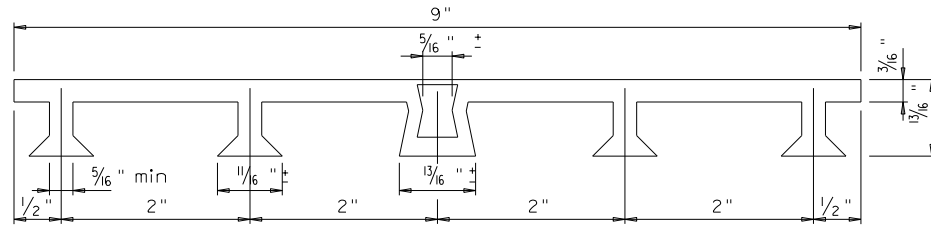
**ALTERNATE STEM SLOPE DETAILS**

Walls with slopes other than those shown may be used after approval by the Engineer. Sw shall not be less than shown in Table on Sheet 1. No payment will be made for excess concrete due to changing of slope of wall stem.



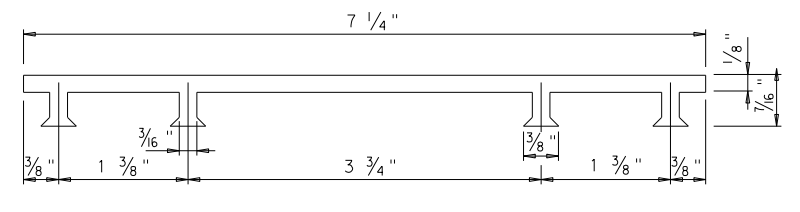
**EXPANSION JOINT**

**CONSTRUCTION JOINT**

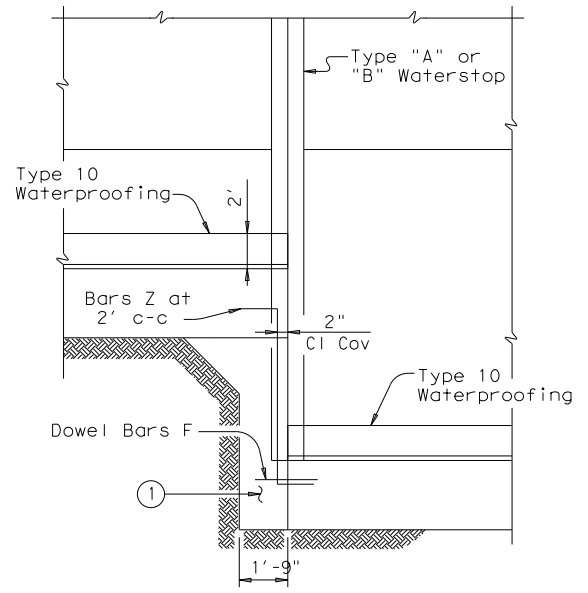


**PVC WATERSTOP TYPE "A"**

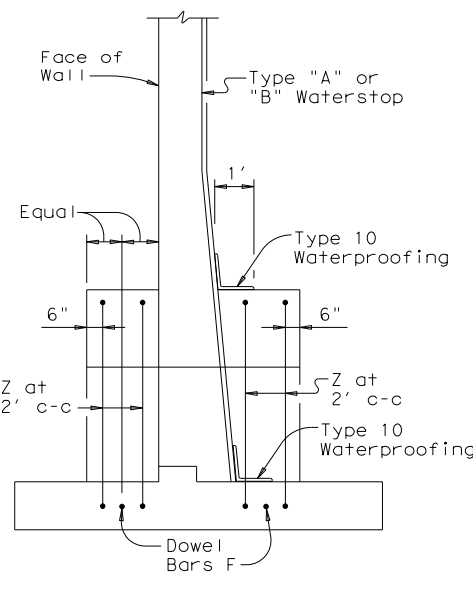
Note: Dimensions and shapes may vary slightly depending on manufacturer.



**PVC WATERSTOP TYPE "B"**



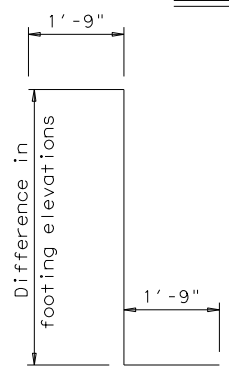
PARTIAL ELEVATION



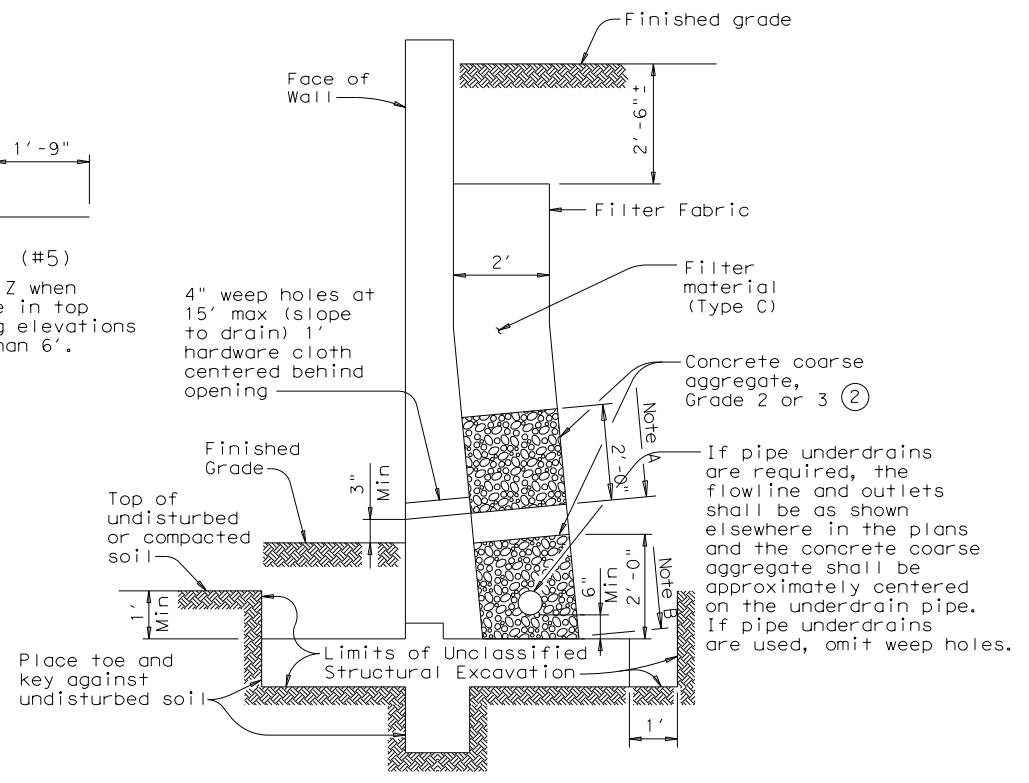
PARTIAL SECTION

**SHOWING WATERSTOP AT FOOTING JOINT**

① Unreinforced Class "C" Concrete when difference in top of footing elevations is less than 6'. Omit when Dowel Bars F can be placed between adjacent footings with 4" cover top and bottom.



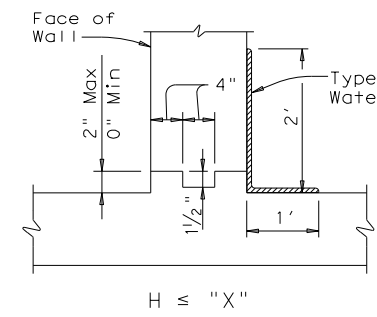
BARS Z (#5)  
 Omit Bars Z when difference in top of footing elevations is less than 6'.



**DRAINAGE DETAILS AND EXCAVATION DIAGRAM**

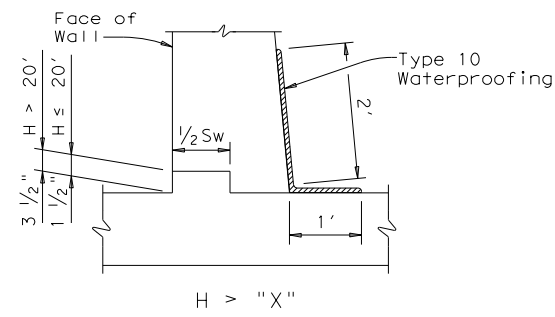
Note A: Stop coarse aggregate at this level when weep holes are used.  
 Note B: Use coarse aggregate to here with filter material above when underdrains are used.

**GENERAL NOTES:**  
 Walls are designed assuming unit weight of soil = 120 pcf, and coefficient of horizontal earth pressure = 0.33.  
 Walls are designed to provide a minimum factor of safety against sliding of 1.5. The undisturbed or compacted soil depth in front of walls, from bottom of Key up, shall not be less than  $K_w + Ft + 1'$ .  
 Retaining walls are detailed to be placed on grades up thru 10% with footing level, with no changes in reinforcing steel. Steeper grades can be accommodated by shortening Bars A1 and B and increasing length of legs of Bars U by the same amount. No change in Quantities will be involved.  
 Retaining walls may be placed on Horizontal Curves by adjusting lengths of footing Bars T and H. Minor revisions of Concrete Quantities may be required.  
 Designed in accordance with current AASHTO Standard and Interim Specifications.  
 All concrete to be Class "C".  
 All reinforcing steel to be Grade 60.



H ≤ "X"

DESIGN	"X"
A	14'
B	12'
C	11'



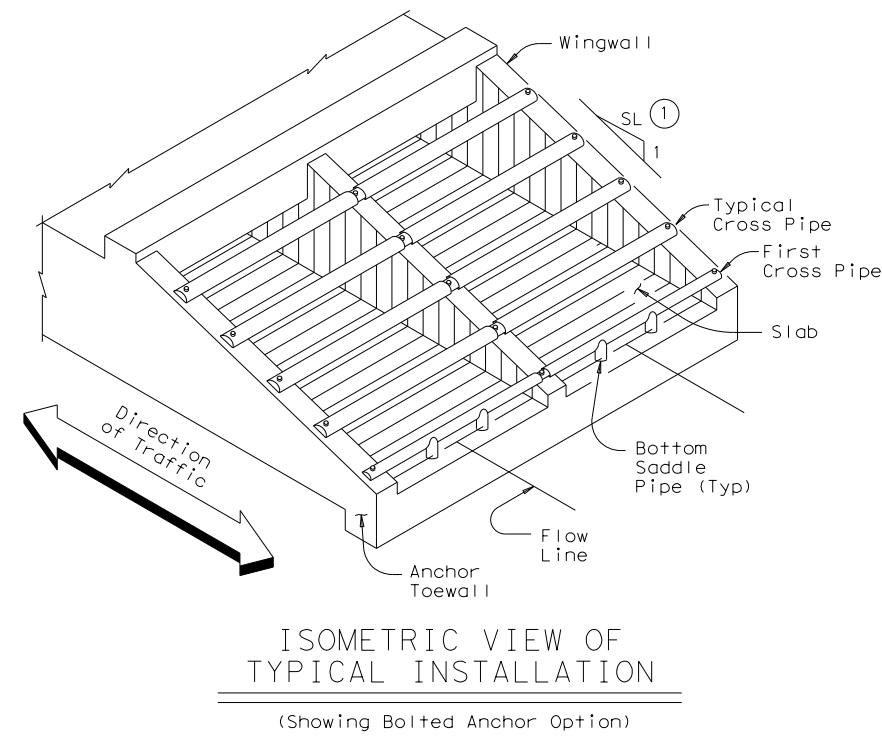
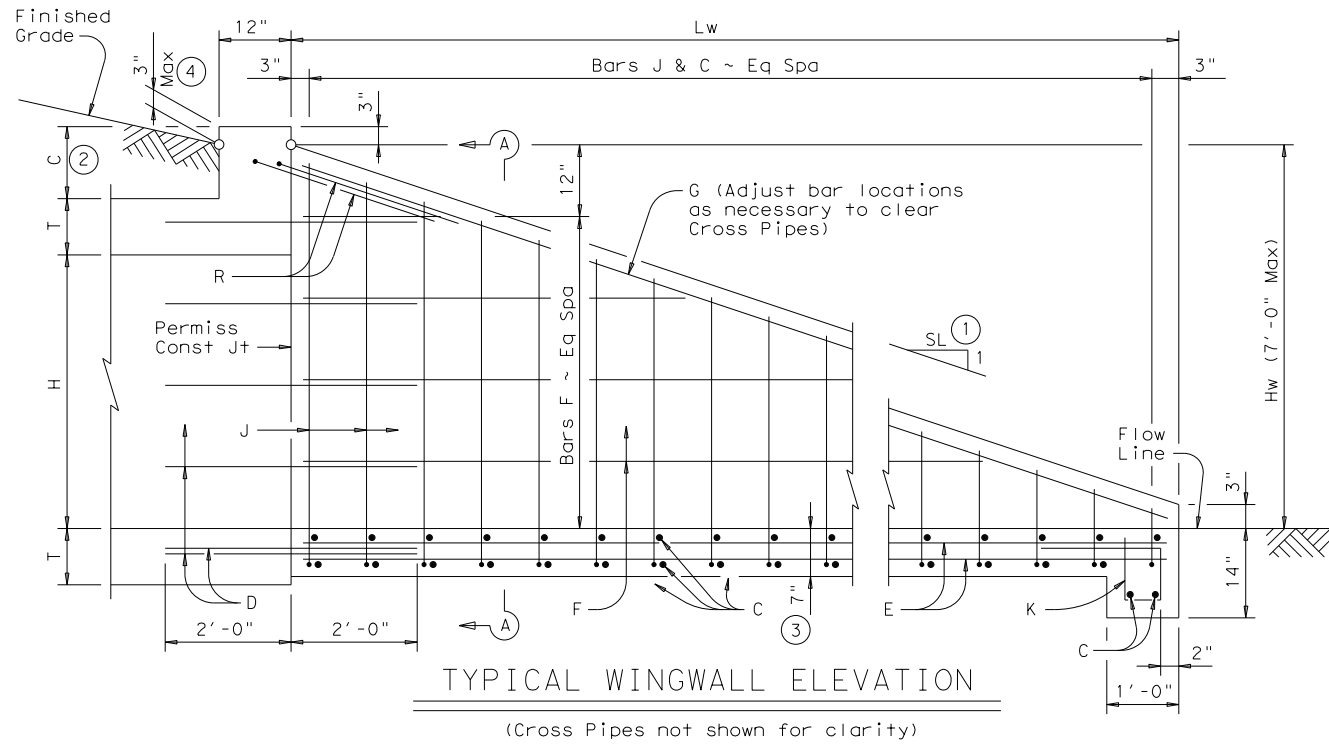
H > "X"

**JOINT AND WATERSTOP DETAILS**

		<b>Bridge Division Standard</b>	
<b>RETAINING WALL MISCELLANEOUS DETAILS</b>			
<b>RW 2</b>			
FILE: rwstde1.dgn	DN: TxDOT	CK: TxDOT	DW: JGD
©TxDOT March 2010	CONTRACT	SECTION	JOB
REVISIONS	0915	12	576
04-11: Added Note 2.	DIST	COUNTY	SHEET NO.
	SAT	BEXAR	605

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 FILE: P:\11\35\08\Des\ign\C:\i\Standards\Roadway\setbpdse.dgn



Formulas: (All values are in Feet)  
 $Hw = H + T + C - 0.250'$   
 $Lw = (Hw - 0.250') (SL)$

For Cast-in-place culverts:  
 $Atw = (N) (S) + (N+1) (U)$

For Precast culverts:  
 $Atw = (N) (2U+S) + (N-1) (0.500')$

Total Wingwall Area (S.F.)  
 $= (0.5) (Hw + 0.250') (Lw) (N+1)$

Total Concrete Volume (C.Y.)  
 $= [(Wingwall Area) (0.583') + (Lw) (Atw) (0.583') + (Atw) (1.000') (1.167' - 0.583')] \div (27)$

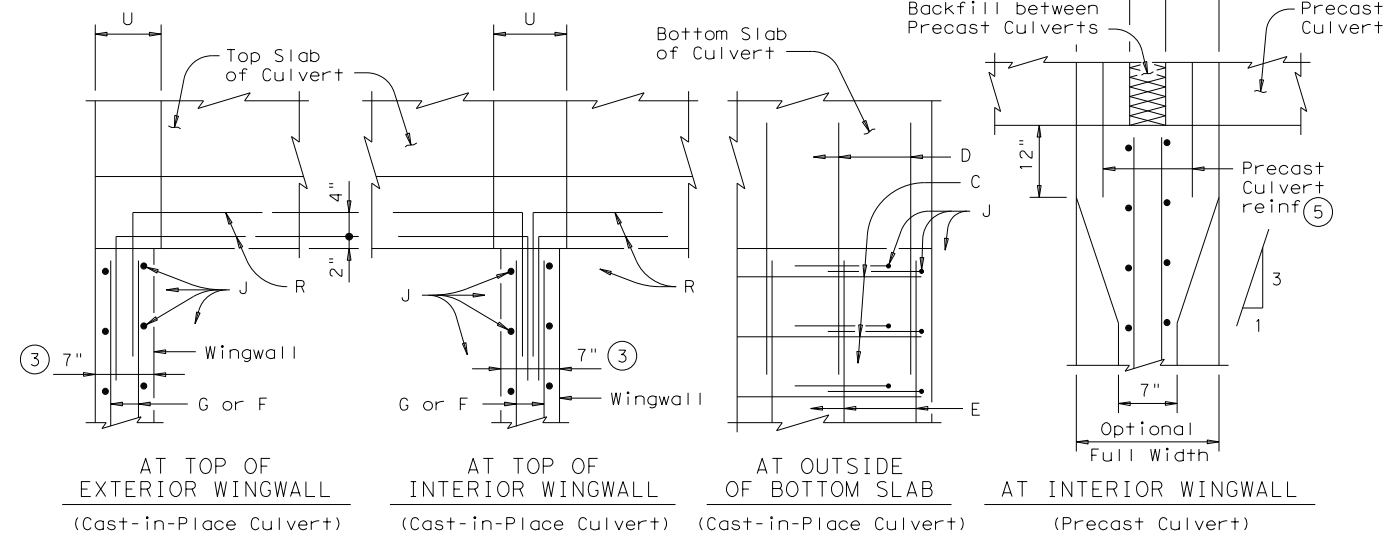
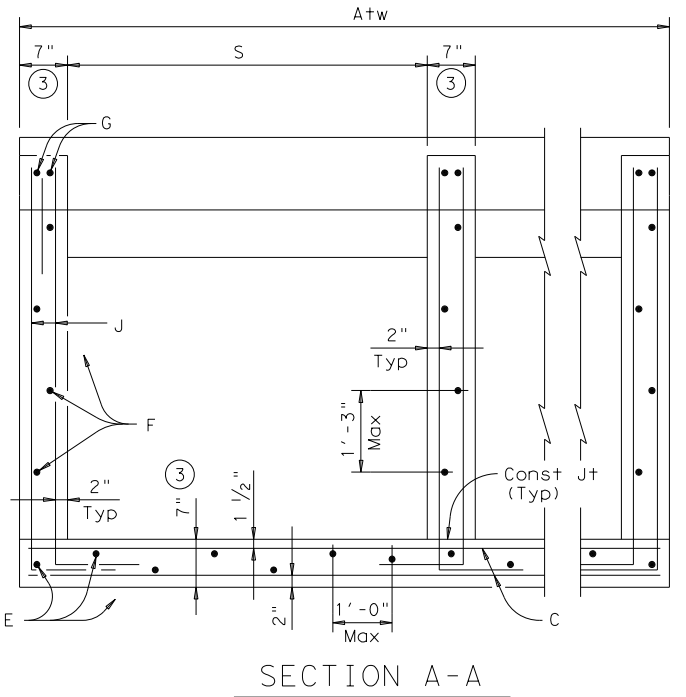
Total Reinforcing (Lbs)  
 $= (1.55) (Lw) (Atw) + (4.43) (Atw) + (K) (Hw) (N+1) (\sqrt{Lw})$

C = Height of Curb above top of Top Slab  
 Hw = Height of Wingwall  
 K = Constant Value for use in formulas  
 Slope SL:1 =  $\frac{K}{6:1} \sim 10.41$

Atw = Anchor Toewall Length  
 Lw = Length of Wingwall  
 N = Number of Culvert Barrels  
 S = Clear Span of each Barrel  
 SL:1 = Side Slope Ratio (Horizontal : 1 Vertical)

See applicable box culvert standard for H, S, T, and U values.

GENERAL NOTES:  
 Designed according to AASHTO LRFD Specifications.  
 The Safety End Treatments shown herein are intended for use in those installations where out of control vehicles are likely to traverse the openings approximately perpendicular to the Cross Pipes.  
 Cross Pipes are designed for a traversing load of 10,000 pounds at yield as recommended by Research Report 280-2F, "Safety Treatment of Roadside Parallel-Drainage Structures", Texas Transportation Institute, March 1981.  
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.  
 All reinforcing steel shall be Grade 60. All reinforcing shall be adjusted as necessary to provide a minimum clear cover of 1 1/4".  
 The quantities for concrete, reinforcing steel, and Cross Pipes resulting from the formulas given herein are for Contractor's information only.  
 Cross Pipes, Sleeve Pipes, and Saddle Pipes shall conform to the requirements of ASTM A53 (Type E or S, Grade B), ASTM A500 (Grade B), or API 5LX52.  
 Bolts and nuts shall conform to ASTM A307. All steel components, except the concrete reinforcing, shall be galvanized after fabrication. Galvanizing damaged during transport or construction shall be repaired in accordance with the specifications.  
 See BCS standard sheet for additional dimensions and information.  
 Alternate design drawings bearing the seal of a professional engineer will be acceptable for precast construction of the Safety End Treatments.



PLAN VIEWS OF CORNER DETAILS

TABLE OF REINFORCING BAR SIZES & SPACING		
Bar	Size	Spacing
C	#4	10" Max
D	#4	match F & E
E	#4	1'-0" Max
F	#4	1'-3" Max
G	#6	Shown
J	#4	10" Max
K	#4	1'-0" Max
R	#4	Shown

- Slope will be 6:1 or flatter.
- 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures without railing and curbs taller than 1'-0", refer to ECD standard.
- Wingwall and slab thicknesses may be the same as the adjacent culvert wall and slab thicknesses (7" Minimum). If thicknesses greater than the minimum (7") are used, no changes will be made in quantities and no additional compensation will be allowed.
- For vehicle safety, curbs shall project no more than 3" above finished grade. Curb heights shall be reduced, if necessary, to meet these requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- For Culverts with C = 0", the precast culvert reinforcing may extend 1'-0" minimum into Wingwall. Wingwall Bars D and R may be omitted. Otherwise, refer to the "Wingwall Connection Detail" on the SCP-MD standard.

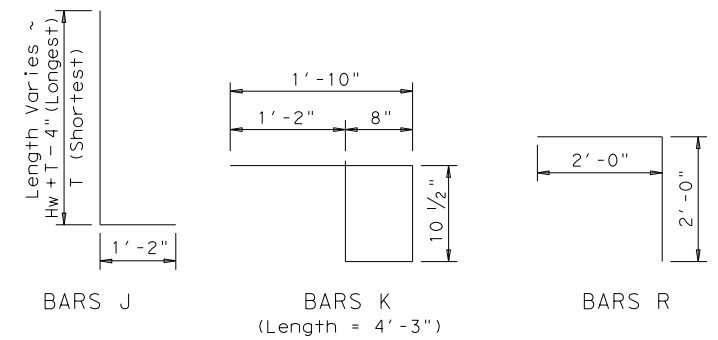
SHEET 1 OF 2

**Texas Department of Transportation**  
 Bridge Division Standard

**SAFETY END TREATMENT**  
 FOR BOX CULVERTS  
 (MAXIMUM Hw = 7'-0")  
 TYPE I ~ PARALLEL DRAINAGE

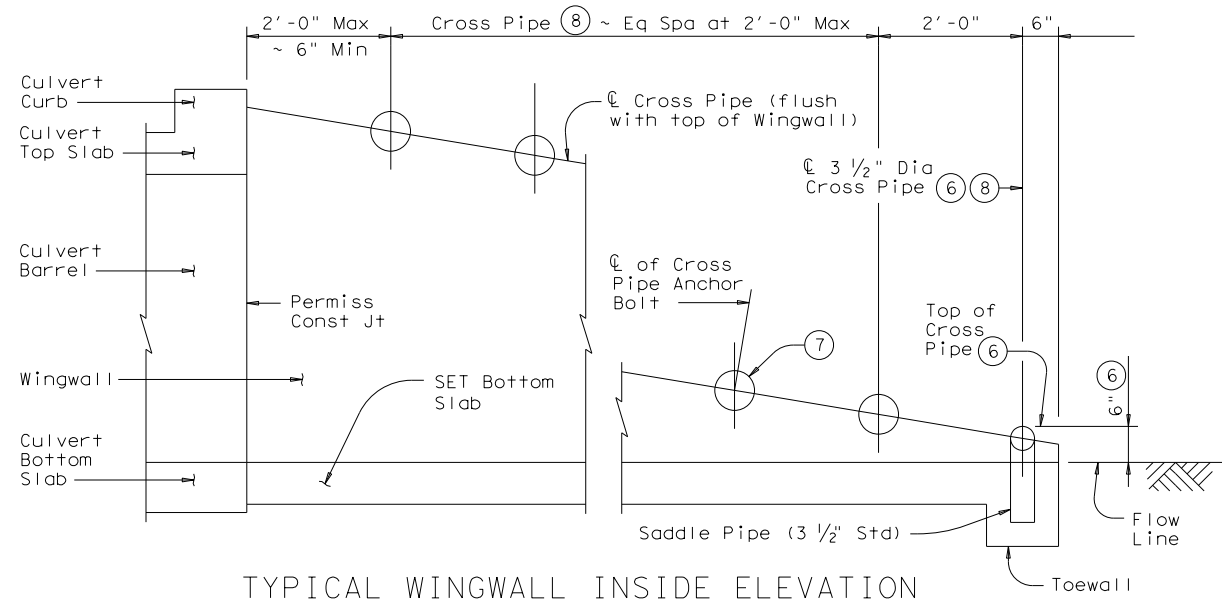
**SETB-PD**

FILE: setbpdse.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIABLES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	606	

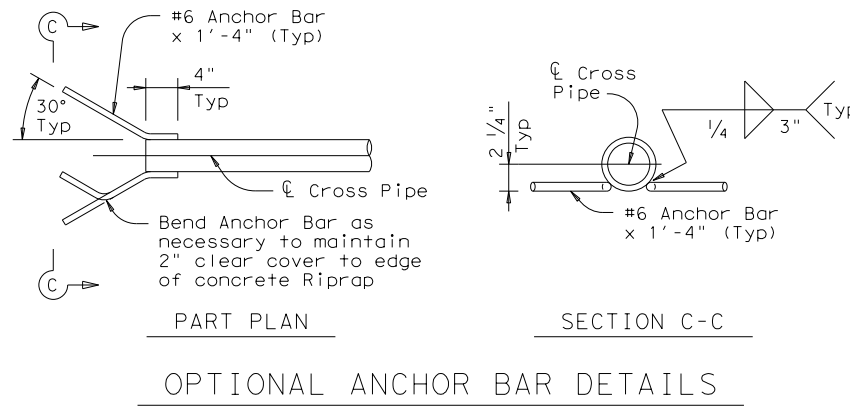


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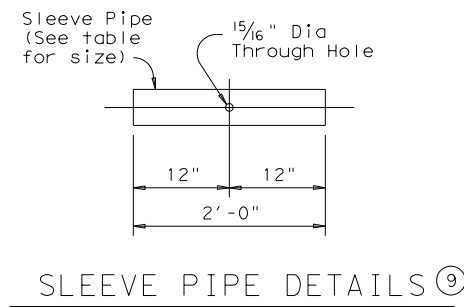
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TYPICAL WINGWALL INSIDE ELEVATION  
 (Showing installation of Cross Pipes)



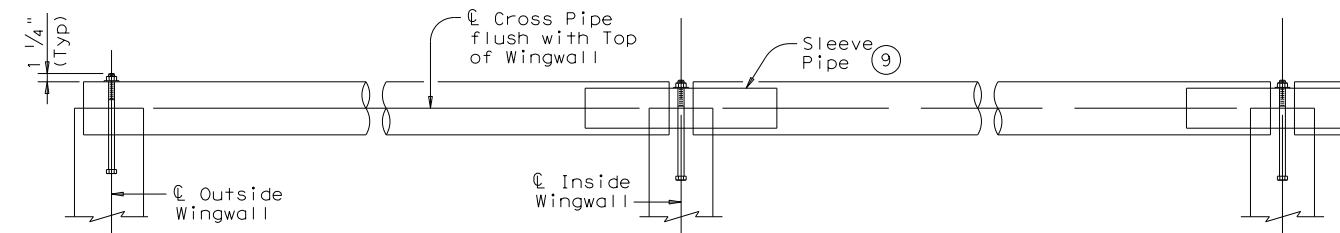
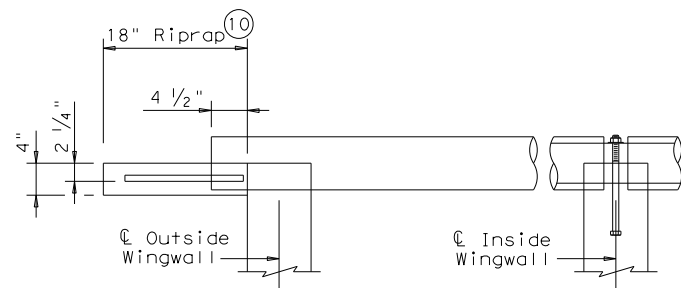
OPTIONAL ANCHOR BAR DETAILS



SLEEVE PIPE DETAILS

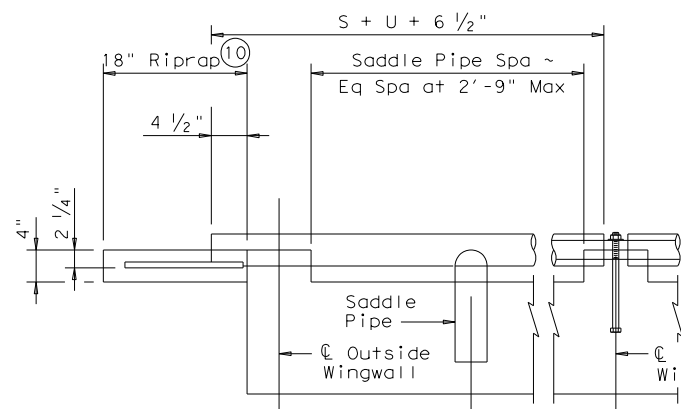
REQUIRED PIPE SIZES (8)			STANDARD PIPE SIZES		
Culvert Span Sizes	Cross Pipe Size	Sleeve Pipe Size (9)	Pipe Size	Pipe O.D.	Pipe I.D.
First Pipe	3 1/2" STD	2 1/2" STD	2 1/2" STD	2.875"	2.469"
30" to 42"	4" STD	3" STD	3" STD	3.500"	3.068"
48" to 72"	5" STD	4" STD	3 1/2" STD	4.000"	3.548"
78" to 120"	6" STD	5" STD	4" STD	4.500"	4.026"
			5" STD	5.563"	5.047"
			6" STD	6.625"	6.065"

- (6) The proper installation of the first Cross Pipe is critical for vehicle safety. The top of the first Cross Pipe must be placed at no more than 6" above the flow line.
- (7) The third Cross Pipe from the bottom of the Culvert shall always be installed using a bolted connection. Care shall be taken to ensure that concrete does not flow into this Cross Pipe so as to permit disassembly of the bolted connection to allow cleanout access.
- (8) Cross Pipes and Sleeve Pipes (if required) shall be as shown in the REQUIRED PIPE SIZES table. Saddle Pipes for the 3 1/2" first Cross Pipe shall also be 3 1/2".
- (9) At Contractor's option, the Cross Pipe may be continuous across the Inside Wingwalls. If such option is selected the Sleeve Pipe shall be omitted and a 15/16" diameter through hole made in the Cross Pipe to accept the anchor bolt at the centerline of each Interior Wingwall.
- (10) Riprap will be required when using the optional Anchor Bar details and shall be included in the Price Bid for Safety End Treatment. Such Riprap shall be concrete Riprap in accordance with Item 432, "Riprap".

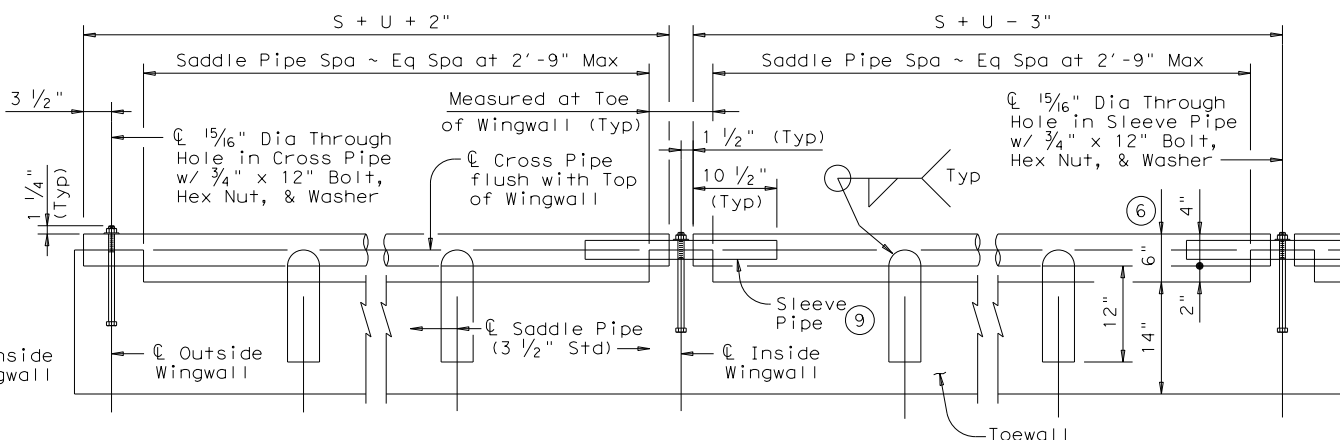


SECTION THROUGH INSTALLATION OF TYPICAL FULL CROSS PIPE

(Anchor details and dimensions are similar to those shown below in SECTION THROUGH INSTALLATION OF 3 1/2" FIRST CROSS PIPE detail.)



OUTSIDE CULVERT BARREL WITH OPTIONAL ANCHOR BARS & RIPRAP



OUTSIDE CULVERT BARREL WITH BOLTED ANCHOR

INSIDE CULVERT BARREL

CROSS PIPE INSTALLATION DETAILS

SHEET 2 OF 2



**SAFETY END TREATMENT**  
 FOR BOX CULVERTS  
 (MAXIMUM Hw = 7'-0")  
 TYPE I ~ PARALLEL DRAINAGE

**SETB-PD**

FILE: setbpdse.dgn	DN: GAF	CK: CAT	DW: JRP	CK: GAF
©TxDOT February 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	607	

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Dimensions	Variable Reinforcing				Estimated Quantities per ft of wing length (2-Wings)	
	W	X	Y	Z	Reinf (Lb/Ft)	Conc (CY/Ft)
2'-6"	2'-5"	1'-0"	9"	7"	#4 1'-0"	0.248
3'-0"	2'-5"	1'-0"	9"	7"	#4 1'-0"	0.261
3'-6"	2'-5"	1'-0"	9"	7"	#4 1'-0"	0.273
4'-0"	2'-5"	1'-0"	9"	7"	#4 1'-0"	0.285
4'-6"	3'-2"	1'-6"	1'-0"	7"	#4 1'-0"	0.330
5'-0"	3'-2"	1'-6"	1'-0"	7"	#4 1'-0"	0.343
5'-6"	3'-2"	1'-6"	1'-0"	7"	#4 1'-0"	0.355
6'-0"	3'-2"	1'-6"	1'-0"	7"	#4 1'-0"	0.367
7'-0"	3'-8"	1'-9"	2'-3"	7"	#4 1'-0"	0.414
8'-0"	4'-2"	2'-0"	1'-6"	8"	#5 1'-0"	0.486
9'-0"	4'-8"	2'-3"	1'-9"	8"	#4 6"	0.535
10'-0"	5'-2"	2'-6"	2'-0"	8"	#5 6"	0.584
11'-0"	5'-8"	2'-9"	2'-3"	8"	#6 6"	0.634
12'-0"	6'-2"	3'-0"	2'-6"	9"	#7 6"	0.721
13'-0"	6'-8"	3'-3"	2'-9"	11"	#7 6"	0.856
14'-0"	7'-2"	3'-6"	3'-0"	1'-0"	#8 6"	0.959
15'-0"	7'-8"	4'-0"	3'-0"	1'-1"	#9 6"	1.068
16'-0"	8'-2"	4'-6"	3'-0"	1'-3"	#9 6"	1.234

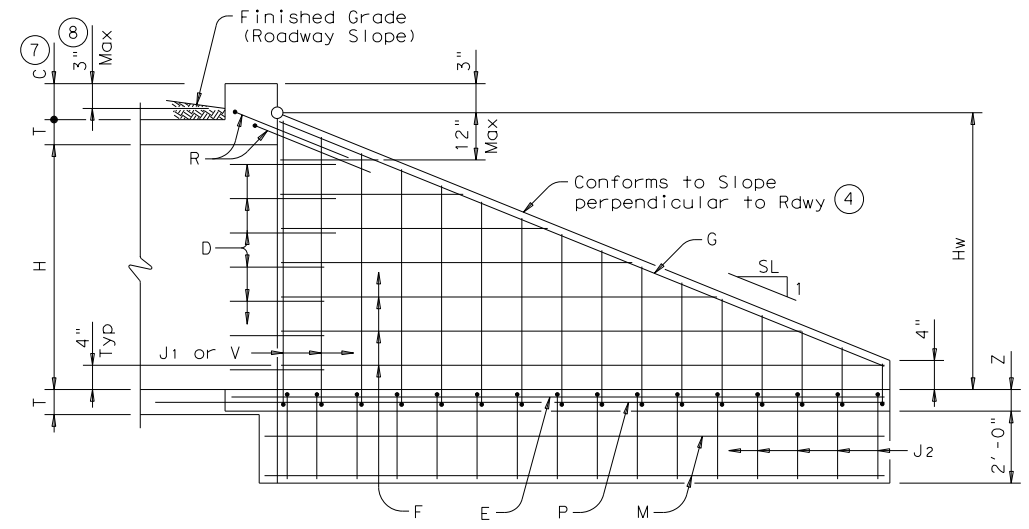
Bar	Size	No.	Spa
D	#5	~	1'-0"
E	#4	~	1'-0"
F	#4	~	1'-0"
G	#6	4	~
M	#4	4	~
P	#4	~	1'-0"
R	#5	6	~
V	#4	~	1'-0"

Bar	Size	No.	Spa
L	#4	~	1'-6"
Q	#4	1	~
Reinf (Lb/Ft)	2.45		
Conc (CY/Ft)	0.037		

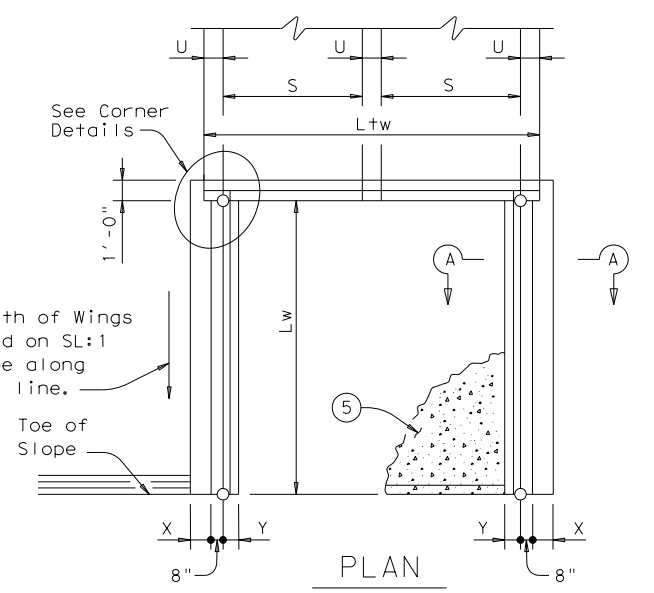
**WING DIMENSION CALCULATIONS:**  
 Formulas: (All values are in Feet)  
 $Hw = H + T + C - 0.250'$   
 $Lw = (Hw - 0.333') (SL)$   
 For Cast-in-place culverts:  
 $Ltw = (N) (S) + (N+1) (U)$   
 For Precast culverts:  
 $Ltw = (N) (2U + S) + (N-1) (0.5')$   
 $Total\ Wingwall\ Area\ (Two\ Wings\ \sim\ S.F.) = (Hw + 0.333') (Lw)$

$Hw$  = Height of Wingwall  
 $SL:1$  = Side Slope Ratio (Horizontal:1 Vertical)  
 $Lw$  = Length of Wingwall  
 $Ltw$  = Culvert Toewall Length  
 $N$  = Number of Culvert Spans  
 See applicable box culvert standard for H, S, T, and U values.

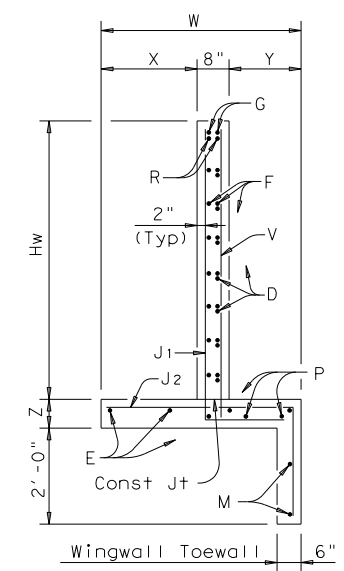
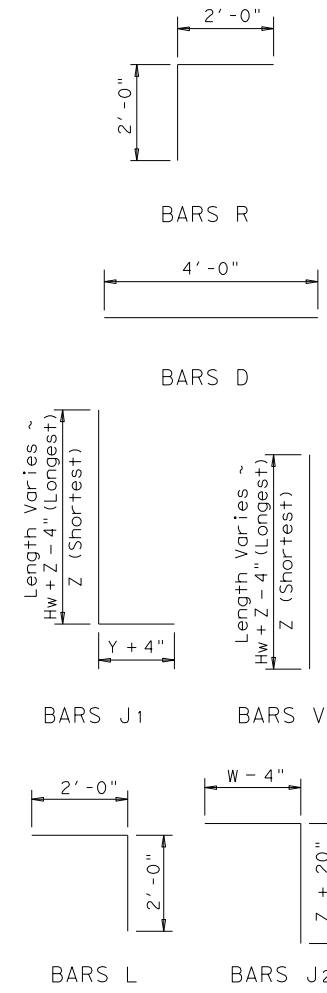
- Extend Bars P 3'-0" minimum into bottom slab of Box Culvert.
- Adjust to fit as necessary to maintain 1/4" clear cover and 4" minimum between bars.
- Quantities shown are based on an average wing height for two wings (one structure end). To determine total quantities for two wings multiply the tabulated values by Lw.
- Recommended values of Slope are: 2:1, 3:1, 4:1, & 6:1.
- When shown elsewhere on the plans, a 5" deep concrete riprap shall be constructed. Payment for riprap shall be as required by Item 432, "Riprap". Unless otherwise shown on the plans or directed by the Engineer, the riprap shall have a 6" wide by 1'-6" deep reinforced concrete toewall along all edges adjacent to natural ground; the toewall shall be reinforced by extending typical riprap reinforcing into the toewall; construction joints or grooved joints, oriented in the direction of flow, shall extend across the full distance of the riprap, at intervals of approximately 20'. When such riprap is provided, the culvert toewall shown in SECTION B-B will not be required.
- At Contractor's option, Culvert Toewall may be ended flush with Wingwall Toewall. Adjust reinforcing from that shown as necessary.
- 0" min to 5'-0" max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail, bicycle rail or curbs taller than 1'-0", refer to ECD standard. For structures with T6 bridge rail, refer to T6-CM standard. For structures with traffic rail, other than T6, refer to RAC standard.
- For vehicle safety, curb heights and wall heights shall be reduced, if necessary, to provide a maximum 3" projection above finished grade. No changes will be made in quantities and no additional compensation will be allowed for this work.



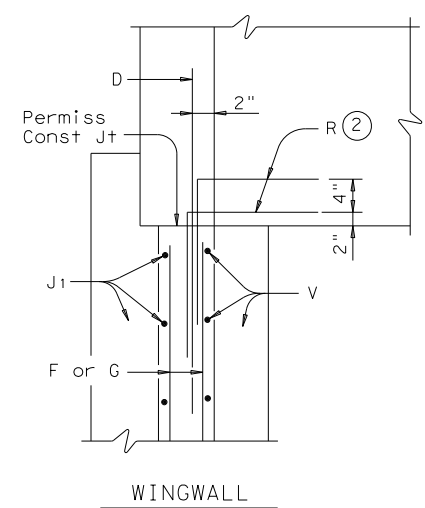
**INSIDE ELEVATION**  
(Showing reinforcing. Culvert and Culvert Toewall reinforcing not shown for clarity.)



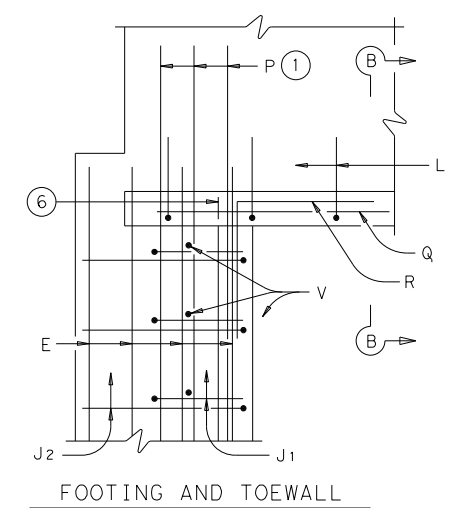
**PLAN**  
(Showing Dimensions)



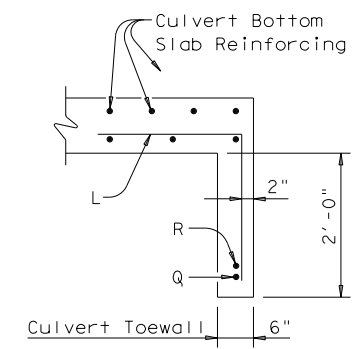
**SECTION A-A**



**CORNER DETAILS**



**FOOTING AND TOEWALL**



**SECTION B-B**

**GENERAL NOTES:**  
 Designed according to AASHTO LRFD Specifications.  
 All reinforcing steel shall be Grade 60.  
 Synthetic fibers listed on the "Fibers for Concrete" Material Producer List (MPL) may be used in lieu of steel reinforcing in riprap concrete unless noted otherwise.  
 All concrete shall be Class "C" and shall have a minimum compressive strength of 3600 psi.  
 All reinforcing bars shall be adjusted to provide a minimum of 1/4" clear cover.  
 When structure is founded on solid rock, depth of toewalls for culverts and wingwalls may be reduced or eliminated as directed by the Engineer.  
 See BCS sheet for additional dimensions and information.  
 The quantities for concrete and reinforcing steel resulting from the formulas given on this sheet are for Contractor's information only.

		<b>Bridge Division Standard</b>	
<b>CONCRETE WINGWALLS WITH STRAIGHT WINGS FOR 0° SKEW BOX CULVERTS</b>			
<b>SW-0</b>			
FILE: sw-0std.e.dgn	DN: GAF	CK: CAT	DW: TxDOT
©TxDOT February 2010	CON: 0915	SECT: 12	JOB: 576
REVISIONS	SAT		HIGHWAY: VARIES
11-10: Add note for synthetic fibers.	DIST: BEXAR	COUNTY: BEXAR	SHEET NO: 609

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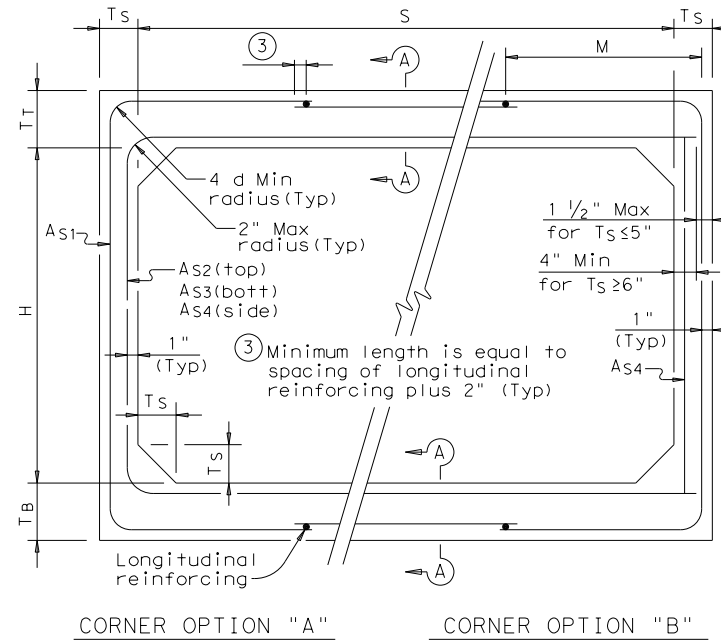
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BOX DATA

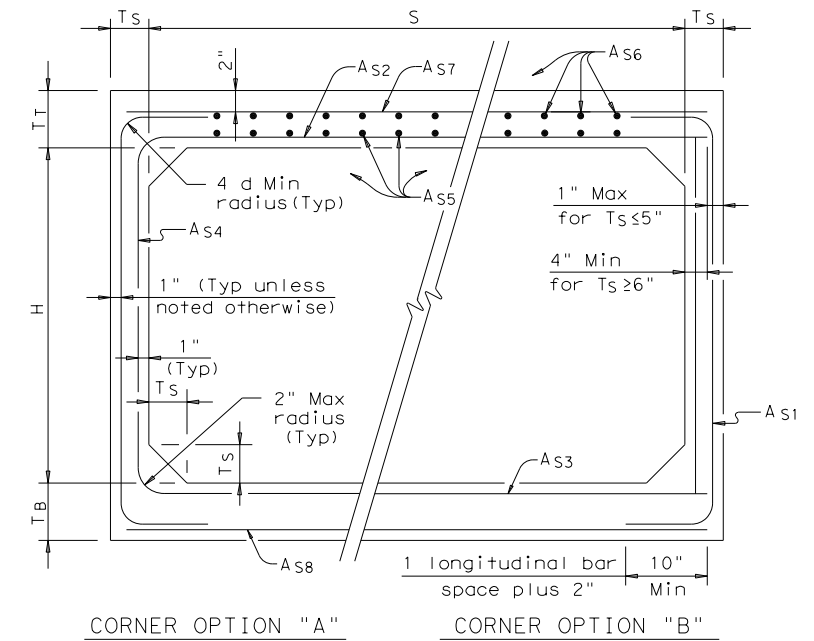
SECTION DIMENSIONS					Fill Height (ft)	M (in)	REINFORCING (in <sup>2</sup> /ft) ②								Lift Weight (Tons) ①
S (ft)	H (ft)	T <sub>T</sub> (in)	T <sub>B</sub> (in)	T <sub>S</sub> (in)			A <sub>S1</sub>	A <sub>S2</sub>	A <sub>S3</sub>	A <sub>S4</sub>	A <sub>S5</sub>	A <sub>S6</sub>	A <sub>S7</sub>	A <sub>S8</sub>	
6	3	8	7	7	<2	-	0.20	0.31	0.22	0.17	0.19	0.19	0.19	0.17	7.9
6	3	7	7	7	2<3	43	0.21	0.24	0.19	0.17	-	-	-	-	7.5
6	3	7	7	7	3-5	39	0.17	0.18	0.17	0.17	-	-	-	-	7.5
6	3	7	7	7	10	39	0.17	0.18	0.19	0.17	-	-	-	-	7.5
6	3	7	7	7	15	38	0.22	0.24	0.24	0.17	-	-	-	-	7.5
6	3	7	7	7	20	38	0.28	0.31	0.31	0.17	-	-	-	-	7.5
6	3	7	7	7	25	38	0.35	0.38	0.39	0.17	-	-	-	-	7.5
6	3	7	7	7	30	38	0.42	0.46	0.46	0.17	-	-	-	-	7.5
6	4	8	7	7	<2	-	0.19	0.34	0.25	0.17	0.19	0.19	0.19	0.17	8.6
6	4	7	7	7	2<3	43	0.19	0.27	0.21	0.17	-	-	-	-	8.2
6	4	7	7	7	3-5	39	0.17	0.21	0.19	0.17	-	-	-	-	8.2
6	4	7	7	7	10	39	0.17	0.20	0.21	0.17	-	-	-	-	8.2
6	4	7	7	7	15	38	0.18	0.27	0.27	0.17	-	-	-	-	8.2
6	4	7	7	7	20	38	0.24	0.34	0.35	0.17	-	-	-	-	8.2
6	4	7	7	7	25	38	0.29	0.43	0.42	0.17	-	-	-	-	8.2
6	4	7	7	7	30	38	0.35	0.51	0.52	0.17	-	-	-	-	8.2
6	5	8	7	7	<2	-	0.19	0.37	0.28	0.17	0.19	0.19	0.19	0.17	9.3
6	5	7	7	7	2<3	43	0.17	0.30	0.24	0.17	-	-	-	-	8.9
6	5	7	7	7	3-5	43	0.17	0.23	0.21	0.17	-	-	-	-	8.9
6	5	7	7	7	10	39	0.17	0.22	0.23	0.17	-	-	-	-	8.9
6	5	7	7	7	15	38	0.17	0.28	0.29	0.17	-	-	-	-	8.9
6	5	7	7	7	20	38	0.20	0.37	0.38	0.17	-	-	-	-	8.9
6	5	7	7	7	25	38	0.25	0.45	0.46	0.17	-	-	-	-	8.9
6	5	7	7	7	30	38	0.30	0.54	0.55	0.17	-	-	-	-	8.9
6	6	8	7	7	<2	-	0.19	0.38	0.30	0.17	0.19	0.19	0.19	0.17	10.0
6	6	7	7	7	2<3	52	0.17	0.32	0.26	0.17	-	-	-	-	9.6
6	6	7	7	7	3-5	52	0.17	0.24	0.22	0.17	-	-	-	-	9.6
6	6	7	7	7	10	43	0.17	0.23	0.24	0.17	-	-	-	-	9.6
6	6	7	7	7	15	39	0.17	0.29	0.31	0.17	-	-	-	-	9.6
6	6	7	7	7	20	39	0.18	0.38	0.39	0.17	-	-	-	-	9.6
6	6	7	7	7	25	38	0.23	0.46	0.48	0.17	-	-	-	-	9.6
6	6	7	7	7	30	38	0.27	0.55	0.57	0.17	-	-	-	-	9.6

① For Box Length = 8'-0"

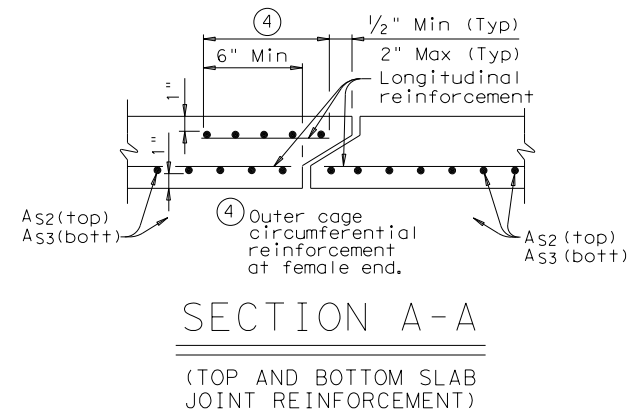
② A<sub>S1</sub> thru A<sub>S4</sub>, A<sub>S7</sub> and A<sub>S8</sub> are minimum required areas of reinforcement per linear foot of box length. A<sub>S6</sub> and A<sub>S5</sub> are minimum required areas of reinforcement per linear foot of box width.



FILL HEIGHT 2 FT AND GREATER



FILL HEIGHT LESS THAN 2 FT



SECTION A-A  
 (TOP AND BOTTOM SLAB JOINT REINFORCEMENT)

GENERAL NOTES:  
 Designs shown conform to ASTM C1577. Refer to ASTM C1577 for information or details not shown.  
 All concrete shall be Class "H" Concrete with a minimum compressive strength of 5,000 psi.  
 See SCP-MD standard sheet for miscellaneous details and notes not shown.  
 In lieu of furnishing the designs shown on this sheet, the contractor may furnish an alternate design that is equal to or exceeds the box design for the design fill height in the table. Shop plans for alternate designs shall be submitted in accordance with Item "Precast Concrete Structural Members (Fabrication)".

HL93 LOADING

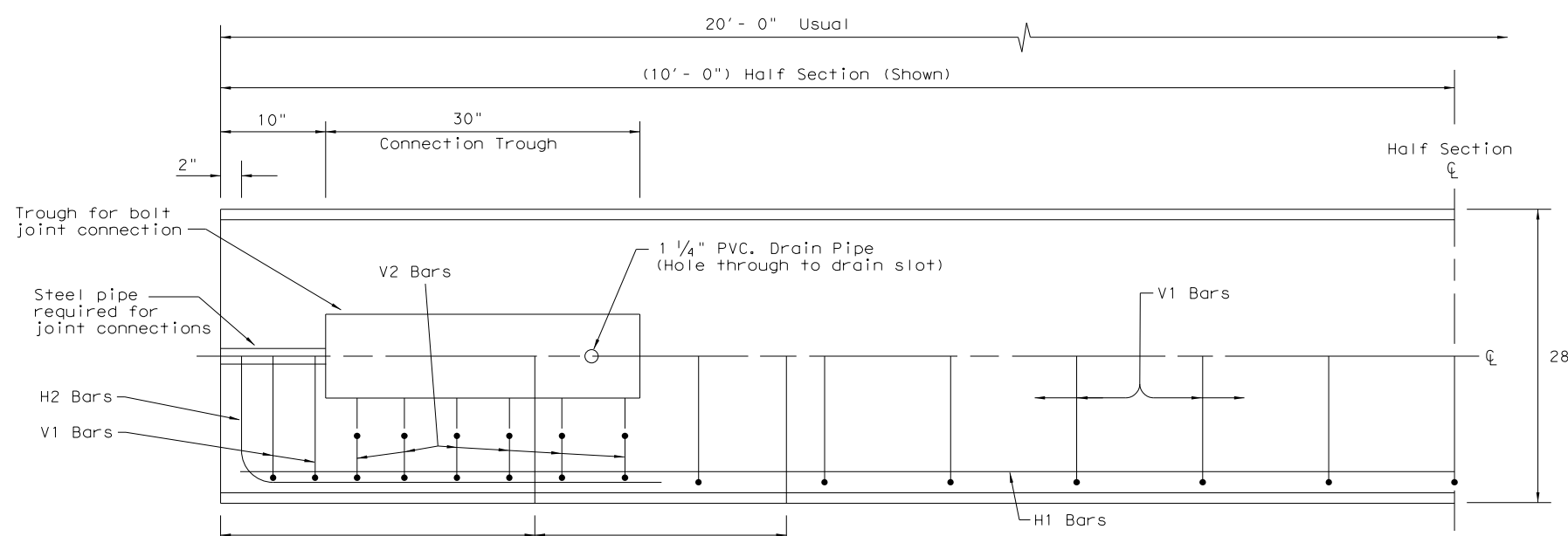
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<b>SINGLE BOX CULVERTS          PRECAST          6'-0" SPAN</b>			
<b>SCP-6</b>			
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©TxDOT February 2010	CONT SECT	JOB	HIGHWAY
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SAT	BEXAR	610	



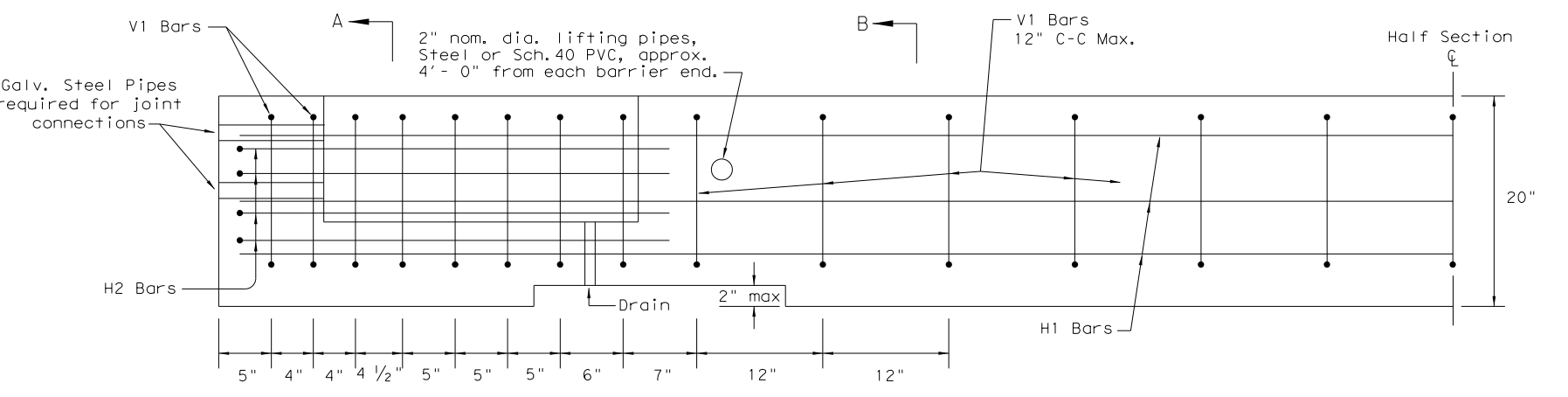


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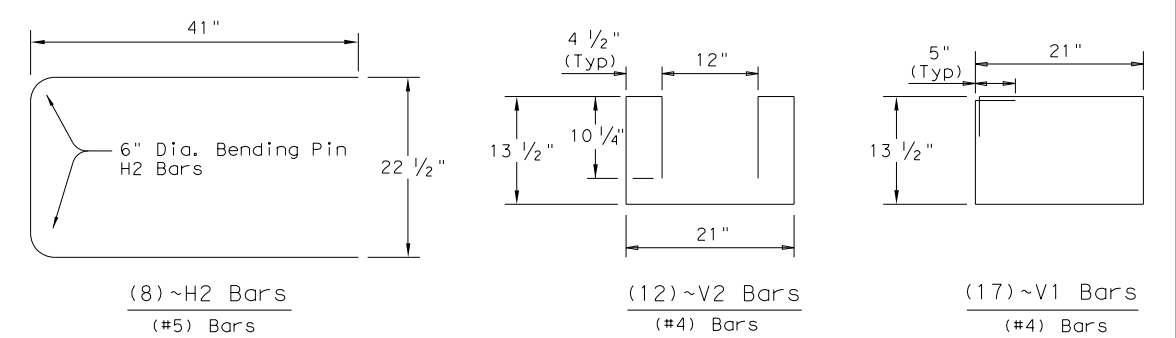
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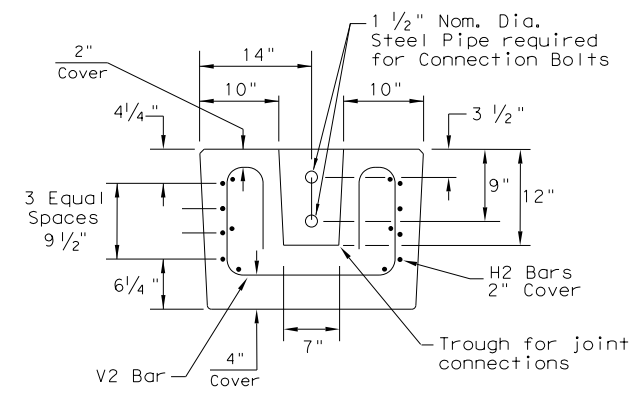
PLAN  
 (TYPE 1) BARRIER SEGMENT  
 (SYMMETRICAL ABOUT CENTER LINES)



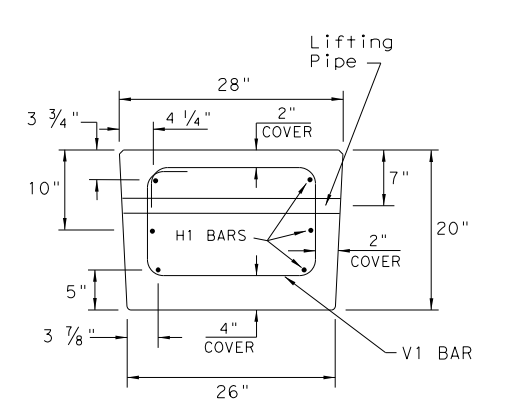
ELEVATION  
 (TYPE 1) BARRIER SEGMENT  
 (SYMMETRICAL ABOUT CENTER LINES)



REINFORCING STEEL DETAILS  
 TYPE 1 - BARRIER SEGMENT  
 Note: Use 2" Dia. Bending Pin, unless otherwise shown



SECTION A-A



SECTION B-B

- GENERAL NOTES**
1. Low Profile Concrete Barrier (LPCB), is approved for use in temporary work zone locations, where the posted speed is 45 mph, or less.
  2. Concrete shall be Class H for precast barrier with a minimum compressive strength of 3,600 psi.
  3. Where used, rebar reinforcement shall be Grade 60 and conform to ASTM A615.
  4. Precast LPCB barrier length shall be 20 ft.
  5. All barrier edges shall have 3/4" chamfer or a tooled radius.
  6. Joint connection hardware shall be in accordance with Item 449, "Anchor Bolts." and is considered subsidiary.
  7. Steel pipe required for joint connection bolts shall be galvanized in accordance with Item 445, "Galvanizing."
  8. Welded wire reinforcement (WWR) may be used in lieu of conventional reinforcement for Type 1 barrier, and shall meet the requirements shown.

FOR CONTRACTORS INFORMATION ONLY

(TYPE 1) APPROX. QUANTITIES 20 FT. SECTION		
CONCRETE	CY	2.6
REINFORCING STEEL	LBS	330
TOTAL BARRIER WT.	LBS	11000

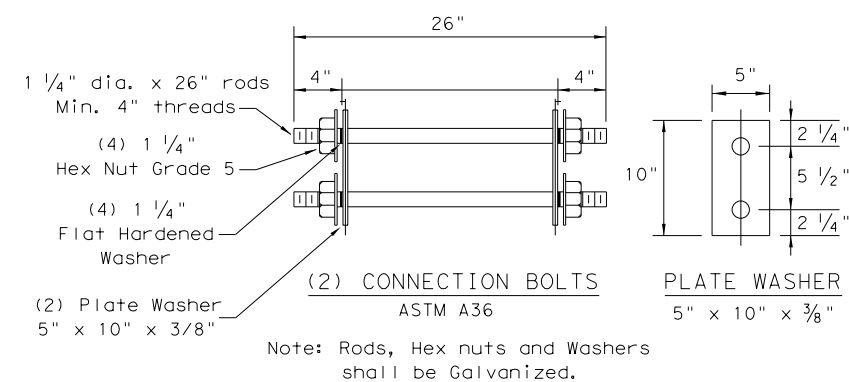
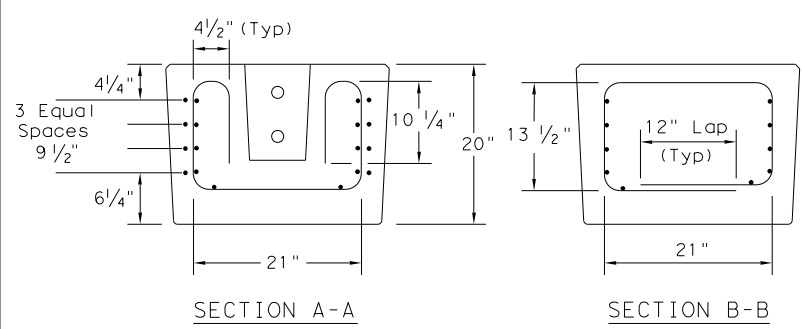
(WWR) GENERAL NOTES

1. Deformed Welded Wire Reinforcement shall conform to ASTM A497.
2. Welded wire cage may be cut or bent, if necessary, but must be approved by the Engineer.
3. Combinations of reinforcing steel and WWR are permitted, as directed by the Engineer. The dimensions from the end of the barrier section to the first wire shall not exceed 3".

REQUIRED (WWR) WIRE DESIGN

- 8 ~ (D31) Horizontal Wires (Equally spaced)
- 10 ~ (D20) Horizontal Wires (Equally spaced)
- 29 ~ (D20) Vertical Wires (Spaced as shown in Elevation View)

WELDED WIRE REINFORCEMENT (WWR) - OPTIONAL REINFORCING



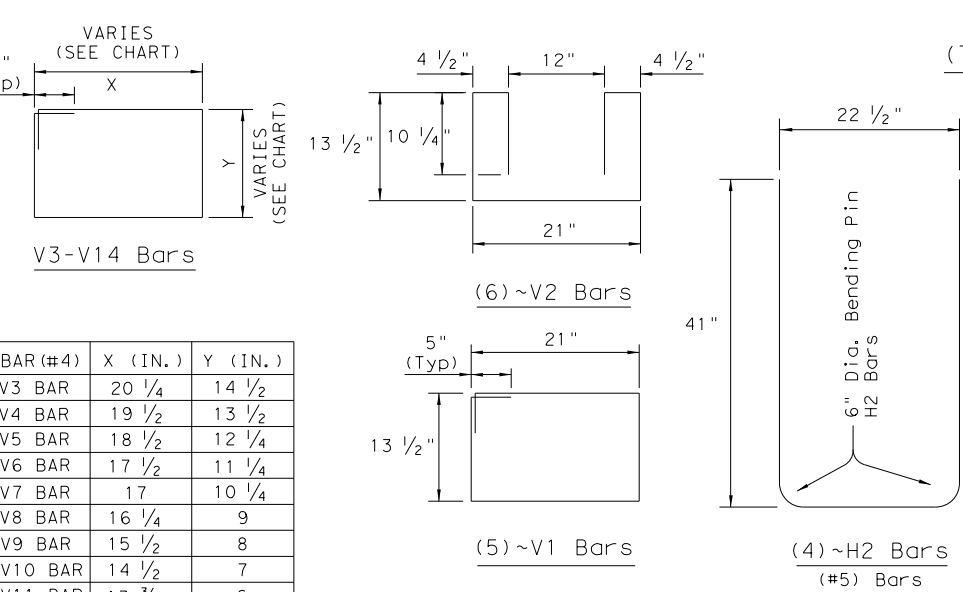
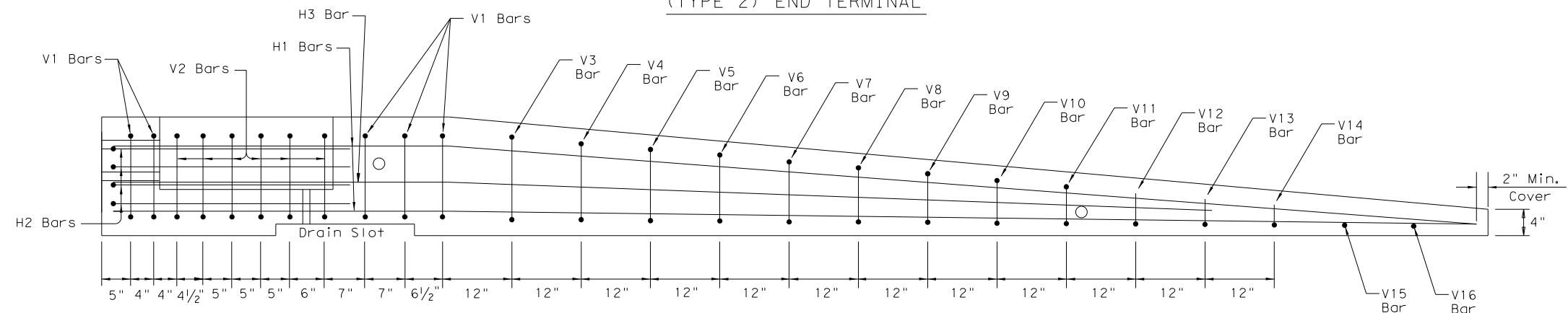
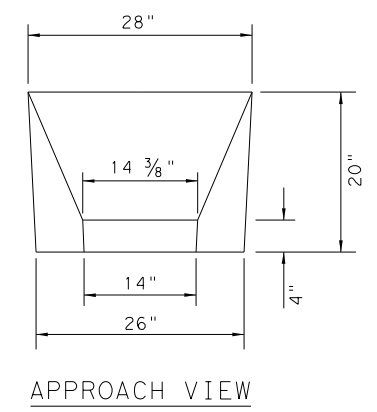
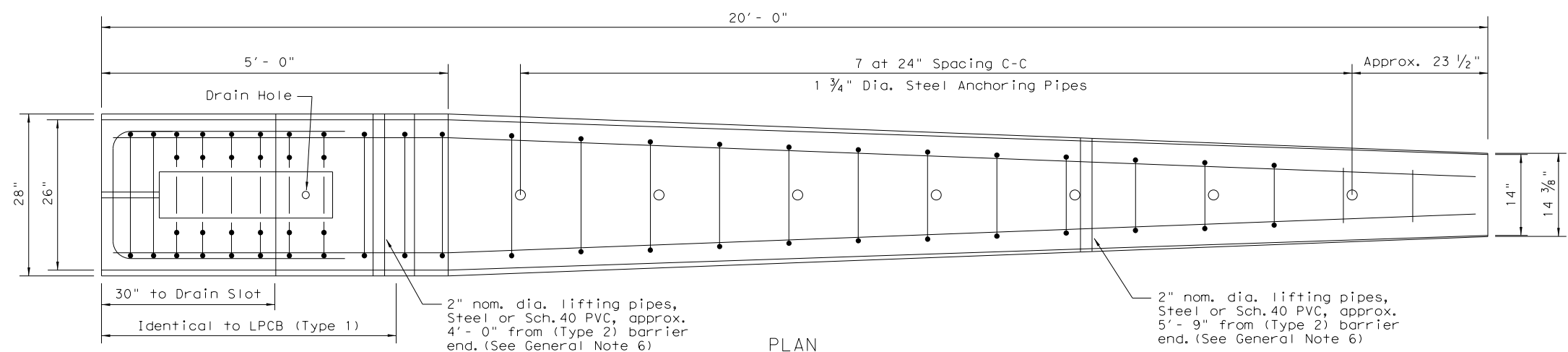
**Texas Department of Transportation**  
 Design Division Standard

**LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 1) LPCB-13**

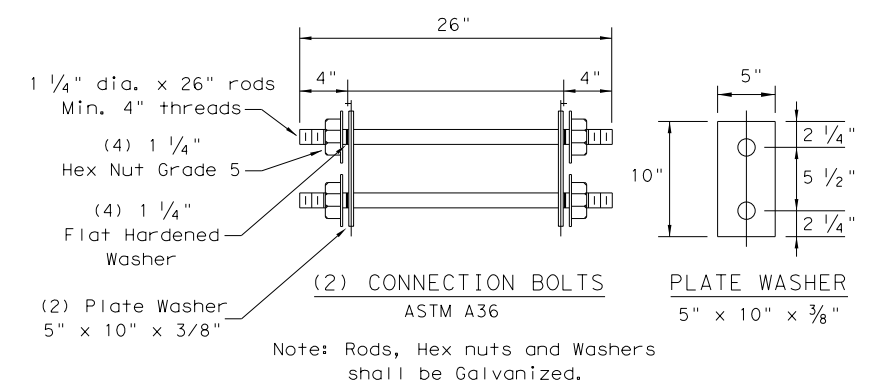
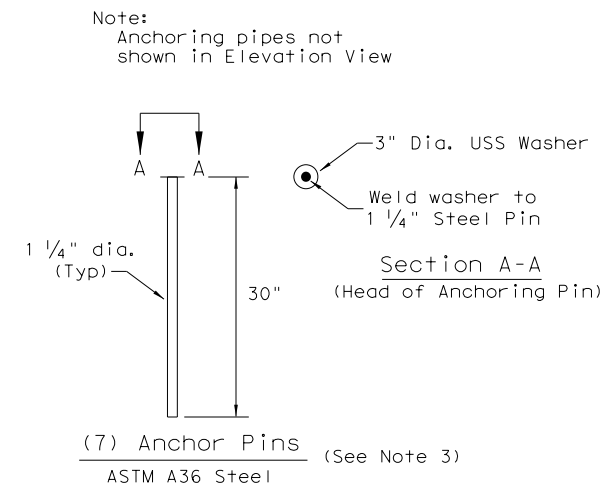
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©TxDOT December 2010	CONT	SECT	JOB	HIGHWAY
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	SAT	BEXAR	612	

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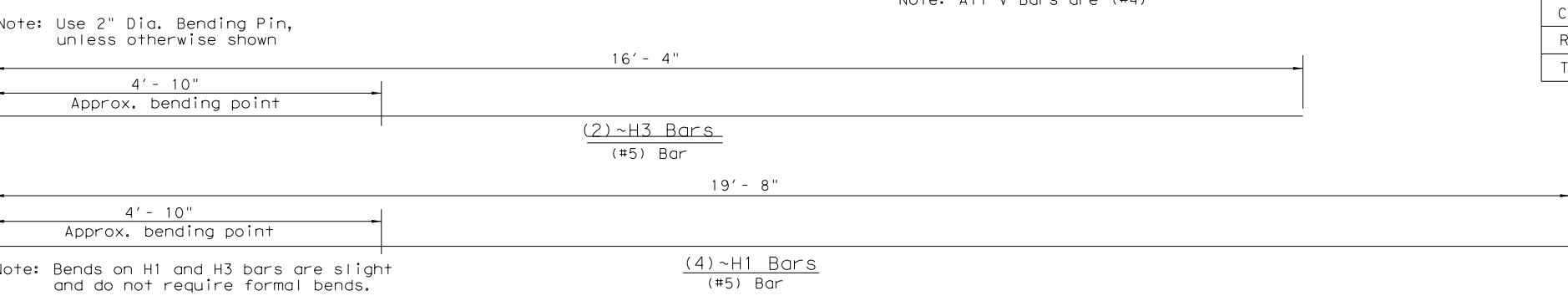


BAR (#4)	X (IN.)	Y (IN.)
V3 BAR	20 1/4	14 1/2
V4 BAR	19 1/2	13 1/2
V5 BAR	18 1/2	12 1/4
V6 BAR	17 1/2	11 1/4
V7 BAR	17	10 1/4
V8 BAR	16 1/4	9
V9 BAR	15 1/2	8
V10 BAR	14 1/2	7
V11 BAR	13 3/4	6



FOR CONTRACTORS INFORMATION ONLY

(TYPE 2) APPROX. QUANTITIES 20 FT. SECTION			
CONCRETE	CY	1.65	
REINFORCING STEEL	LBS	240	
TOTAL BARRIER WT.	LBS	7000	



TYPE 2 - NOTES

1. Welded wire reinforcement (WWR) is "not" an option for Type 2 Barrier.
2. Type 2 Barrier shall be used as an end treatment for the Type 1 barrier segments, when applicable.
3. The end treatment can be used without the anchor pins in locations that can accommodate approximately 4 ft. of lateral displacement of the end treatment. The use of non-pinned end treatment does not affect the performance or the deflection of the Low-Profile barrier system.
4. The anchor pins are all the same length and are to be driven flush with the top of the (Type 2) barrier surface.
5. The bends in the H3 and H1 bars are slight, no formal bend is necessary.
6. The Type 2 barrier segment must be lifted from the rear first, to prevent cracking of sloped section.
7. See LPCB sheet 1 for additional information.

**Texas Department of Transportation** Design Division Standard

LOW PROFILE CONCRETE BARRIER PRECAST BARRIER (TYPE 2) LPCB-13

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## GENERAL NOTES FOR ALL ELECTRICAL WORK

- The location of all conduits, junction boxes, ground boxes, and electrical services is diagrammatic and may be shifted to accommodate field conditions.
- Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC), TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA), and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association (CSA), Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Where reference is made to NEMA listed devices, International Electrotechnical Commission (IEC) listed devices will not be considered an acceptable equal to a NEMA listed device. Acceptable devices may have both a NEMA and IEC listing. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection. Replace or reinstall rejected material or equipment at no additional cost to the Department.
- Miscellaneous nuts, bolts and hardware, except for high strength bolts, may be stainless steel when plans specify galvanized, provided the bolt size is 1/2 in. or less in diameter.
- Provide the following test equipment as required by the Engineer to confirm compliance with the contract and the NEC: voltmeter, ammeter, megohm meter (1000 volt DC), ground resistance tester, torque wrenches, and torque screwdrivers. Ensure all equipment has been properly calibrated within the last year. Provide calibration certification to the Engineer upon request. Operate test equipment during inspection as requested by the Engineer.
- Install grounding as shown on the plans and in accordance with the NEC. Ensure all metallic conduits; metal poles; luminaires; and metal enclosures are bonded to the equipment grounding conductor. Provide stranded bare copper or green insulated grounding conductors. Ground rods, connectors, and bonding jumpers are subsidiary to the various bid items.
- When required by the Engineer, notify the Department in writing of materials from the Material Producers List (MPL) intended for use on each project. Prequalified materials are listed on the MPL on TxDOT's website under "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials on this list.

## CONDUIT


### A. MATERIALS

- Provide conduit, junction boxes, fittings, and hardware as per TxDOT Departmental Material Specification (DMS) 11030 "Conduit" and Item 618 "Conduit" of TxDOT's "Standard Specifications For Construction And Maintenance Of Highways, Streets, And Bridges," latest edition. Provide conduits listed under Item 618 on the MPL under "Roadway Illumination and Electrical Supplies." Provide conduit types according to the descriptive code or as shown on the plans. Do not substitute other types of conduits for those shown. Provide liquidtight flexible metal conduit (LFMC) when flexible conduit is called for on galvanized steel rigid metallic conduit (RMC) systems. Provide liquidtight flexible nonmetallic conduit (LFNC) when flexible conduit is called for on polyvinyl chloride (PVC) systems.
  - Provide galvanized steel RMC for all exposed conduits, unless otherwise shown on the plans. Properly bond all metal conduits.
  - Unless otherwise shown on the plans, provide junction boxes with a minimum size as shown in the following table, which applies to the greatest number of conductors entering the box through one conduit with no more than four conduits per box. When a mixture of conductor sizes is present, count the conductors as if all are of the larger size. For situations not applicable to the table, size junction boxes in accordance with NEC.
- | AWG | 3 CONDUCTORS   | 5 CONDUCTORS   | 7 CONDUCTORS   |
|-----|----------------|----------------|----------------|
| #1  | 10" x 10" x 4" | 12" x 12" x 4" | 16" x 16" x 4" |
| #2  | 8" x 8" x 4"   | 10" x 10" x 4" | 12" x 12" x 4" |
| #4  | 8" x 8" x 4"   | 10" x 10" x 4" | 10" x 10" x 4" |
| #6  | 8" x 8" x 4"   | 8" x 8" x 4"   | 10" x 10" x 4" |
| #8  | 8" x 8" x 4"   | 8" x 8" x 4"   | 8" x 8" x 4"   |
- Junction boxes with an internal volume of less than 100 cu. in. and supported by entering raceways must have threaded entries or hubs identified for the intended purpose and supported by connection of two or more rigid metal conduits. Secure conduit within 3 ft. of the enclosure or within 18 in. of the enclosure if all conduit entries are on the same side. Mechanically secure all junction boxes with an internal volume greater than 100 cu. inches.
  - Provide hot dipped galvanized cast iron or sand cast aluminum outlet boxes for junction boxes containing only 10 AWG or 12 AWG conductors. Do not use die cast aluminum boxes. Size outlet boxes according to the NEC.
  - Do not use intermediate metal conduit (IMC) or electrical metallic tubing (EMT) unless specifically required by the plan sheets. When EMT is called for, provide junction boxes made from galvanized steel sheeting, listed and approved for outdoor use, unless otherwise noted on the plans. Size all galvanized steel junction boxes in accordance with the NEC. Provide junction boxes for IMC conduit systems that meet the same requirements for junction boxes used with RMC systems.
  - Provide PVC junction boxes intended for outdoor use on PVC conduit systems, unless otherwise noted on the plans.

- Provide PVC elbows in PVC conduit systems, unless otherwise shown on the plans. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the PVC conduit system. When galvanized steel RMC elbows are specifically called for in the plans and any portion of the RMC elbow is buried less than 18 in., ground the RMC elbow by means of a grounding bushing on a rigid metal extension. Grounding of the rigid metal elbow is not required if the entire RMC elbow is encased in a minimum of 2 in. of concrete. PVC extensions are allowed on these concrete encased rigid metal elbows. RMC or PVC elbows are subsidiary to various bid items.
- When required, provide High-Density Polyethylene (HDPE) conduit with factory installed internal conductors according to Item 622 "Duct Cable." At the Contractor's request and with approval by the Engineer, substitute HDPE conduit with no conductors for bored schedule 40 or schedule 80 PVC conduit bid under Item 618. Ensure bored HDPE substituted for PVC is schedule 40 and of the same size PVC called for in the plans. Ensure the substituted HDPE meets the requirements of Item 622, except that the conduit is supplied without factory-installed conductors. Make the transition of the HDPE conduit to PVC (or RMC elbow when required) at the bore pit. Provide conduit of the size and schedule as shown on the plans. Do not extend substituted conduit into ground boxes or foundations. Provide PVC or galvanized steel RMC elbows as called for at all ground boxes and foundations.
- Use two-hole straps when supporting 2 in. and larger conduits. On electrical service poles, properly sized stainless steel or hot dipped galvanized one-hole standoff straps are allowed on the service riser conduit.

### B. CONSTRUCTION METHODS

- Provide and install expansion joint conduit fittings on all structure-mounted conduits at the structure's expansion joints to allow for movement of the conduit. In addition, provide and install expansion joint fittings on all continuous runs of galvanized steel RMC conduit externally exposed on structures such as bridges at maximum intervals of 150 ft. When requested by the project Engineer, supply manufacturer's specification sheet for expansion joint conduit fittings. Repair or replace expansion joint fittings that do not allow for movement at no additional cost to the Department. Provide the method of determining the amount of expansion to the Engineer upon request. Do not use LFMC or LFNC as a substitute for the required expansion conduit fittings.
- Space all conduit supports at maximum intervals of 5 ft. Install conduit spacers when attaching metal conduit to surface of concrete structures. See "Conduit Mounting Options" on ED(2). Install conduit support within 3 ft. of all enclosures and conduit terminations.
- Do not attach conduit supports directly to pre-stressed concrete beams except as shown specifically in the plans or as approved by the Engineer.
- Unless otherwise shown on the plans, jack or bore conduit placed beneath existing roadways, driveways, sidewalks, or after the base or surfacing operation has begun. Backfill and compact the bore pits below the conduit per Item 476 "Jacking, Boring, or Tunneling Pipe or Box" prior to installing conduit or duct cable to prevent bending of the connections.
- When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans. When placing conduit in the sub-base of new roadways, backfill all trenches with cement-stabilized base as per requirements of Items 110 "Excavation", 400 "Excavation and Backfill for Structures", 401 "Flowable Backfill", 402 "Trench Excavation Protection", and 403 "Temporary Special Shoring."
- Provide and place warning tape approximately 10 in. above all trenched conduit as per Item 618.
- During construction, temporarily cap or plug open ends of all conduit and raceways immediately after installation to prevent entry of dirt, debris and animals. Temporary caps constructed of durable duct tape are allowed. Tightly fix the tape to the conduit opening. Clean out the conduit and prove it clear in accordance with Item 618 prior to installing any conductors.
- Ensure conduit entry into the top of any enclosure is waterproof by installing conduit sealing hubs or using boxes with threaded bosses. This includes surface mounted safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes. Grounding bushings on water tight sealing hubs are not required.
- Fit the ends of all PVC conduit terminations with bushings or bell end fittings. Provide and install a grounding type bushing on all metal conduit terminations.
- Install a bonding jumper from each grounding bushing to the nearest ground rod, grounding lug, or equipment grounding conductor. Ensure all bonding jumpers are the same size as the equipment grounding conductor. Bonding of conduit used as a casing under roadways for duct cable is not required, if the duct extends the full length through the casing.
- At all electrical services, install a 6 AWG solid copper grounding electrode conductor.
- Place conduits entering ground boxes so that the conduit openings are between 3 in. and 6 in. from the bottom of the box. See the ground box detail on sheet ED(4).
- Seal ends of all conduits with duct seal, expandable foam, or by other methods approved by the Engineer. Seal conduit immediately after completion of conductor installation and pull tests. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a conduit sealant.
- File smooth the cut ends of all mounting strut and conduit. Before installing, paint the field cut ends of all mounting strut and RMC (threaded or non-threaded) with zinc rich paint (94% or more zinc content) to alleviate overspray. Use zinc rich paint to touch up galvanized material as allowed under Item 445 "Galvanizing." Do not paint non-galvanized material with a zinc rich paint as an alternative for materials required to be galvanized.

		<b>Traffic Operations Division Standard</b>		
<h1>ELECTRICAL DETAILS CONDUITS &amp; NOTES</h1>				
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DISTRICT:	COUNTY		SHEET NO.	
SAT:	BEXAR		614	

# ELECTRICAL CONDUCTORS

## A. MATERIAL INFORMATION

1. Provide Type XHHW insulated conductors in accordance with Departmental Material Specification (DMS) 11040 "Conductors" and Item 620 "Electrical Conductors." Provide conductors as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies" Item 620. Color code insulated conductors in conformance with the NEC. Identify grounded (neutral) conductors with white insulation. Identify grounding conductors (ground wires) with green insulation or bare conductors. Identify ungrounded (hot) conductors with any color insulation except green, white, or gray. Keep color scheme consistent throughout the wiring system. Identify conductors 6 American Wire Gauge (AWG) and smaller by continuous color jacket. Identify electrical conductors 4 AWG and larger by continuous color jacket or by colored tape. When identifying conductors with colored tape, mark at least 6 in. of the conductor's insulation with half laps of tape.
2. Provide a solid copper 6 AWG grounding electrode conductor to bond the electrical service equipment to the concrete encased grounding electrode or the ground rod at the service location. Connect the grounding electrode conductor to the ground rod with a UL listed connector in accordance with DMS 11040. Connect the grounding electrode conductor to the concrete encased grounding electrode as shown in the plans.
3. Where two or more circuits are present in one conduit or enclosure, permanently identify the conductors of each branch circuit by attaching a non-metallic tag around both circuit conductors at each accessible location. Provide tags with two straps, large enough to indicate circuit number, letter, or other identification as shown in the plans. Print circuit identification on the tag with a permanent marker.
4. Use listed compression or screw type pressure connectors, terminal blocks, or split bolt connectors for splicing as specified in DMS 11040. Use hot melt adhesive tape to fill the gap and seal the ends of heat shrink tubing. Provide UL listed gel-filled insulating splice covers. Splicing materials, insulating materials, breakaway disconnects, splice covers, and fuse holders are subsidiary to various bid items.

## B. CONSTRUCTION METHODS

1. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the conduit system. After installing conductors in conduit, perform conductor pull test. If a conductor cannot be freely pulled, make any needed alterations or repairs at no additional cost to the department. Perform insulation resistance tests in accordance with Item 620. Coordinate with the Engineer to witness the tests.
2. Leave 2 ft. minimum, 3 ft. maximum length for each conductor up to the splice in ground boxes. Leave 3 ft. minimum, 4 ft. maximum length of conductor in ground boxes when pulled through with no splice. Leave 1 ft. minimum, 1.5 ft. maximum length of conductor at enclosures, weatherheads and pole bases.
3. Make splices only in junction boxes, ground boxes, pole bases, or electrical enclosures and use only listed compression or screw type pressure connectors, terminal blocks, or split bolt connectors. Insulate splices with heavy wall heat shrink tubing or gel-filled insulating splice covers to provide a watertight seal. Overlap conductor insulation with heat shrink tubing a minimum of 2 in. past both sides of the splice. Where heat shrink tubing may not shrink sufficiently to provide a watertight seal around the individual conductors, prior to heating the tubing, increase the diameter of the conductor insulation using hot melt adhesive tape to provide a watertight seal between the individual conductors and the heat shrink tubing. Ensure the tape extends past the heat shrink tubing. Use hot melt adhesive tape to fill the gap and seal the ends of heat shrink tubing. Heat shrink tubing that appears to have been burned, or overheated, is considered defective and must be replaced.
4. Size and install gel-filled insulating splice covers according to manufacturer's specifications when used in place of heat shrink tubing.
5. Wire nuts with factory applied waterproof sealant may be used for 8 AWG or smaller conductors in above ground junction boxes, but not in pole bases or ground boxes. Install wire nuts in an upright position to prevent the accumulation of water.
6. Support conductors in illumination poles with a J-hook at the top of the pole.
7. When terminating conductors, remove the insulation and jacketing material without nicking the individual strands of the conductor. Conductors with nicked individual conductor strands or removed strands will be considered damaged.
8. Replace conductors and cables that are damaged beyond repair or that fail an insulation resistance test at no additional cost to the department.
9. Do not repair damaged conductors with duct tape, electrical tape, or wire nuts. Use only approved splicing methods.
10. Do not terminate more than one conductor under a single connector, unless the connector is rated for multiple conductors. Do not exceed the pressure connector's listing for maximum number and size of conductors allowed.
11. Install breakaway connectors on conductors bid under Item 620 whenever those conductors pass through a breakaway support device. Follow manufacturer's instructions when terminating conductors to breakaway connectors. Properly torque threaded connections. Proper terminations are critical to the safe operation of breakaway devices. Trim waterproofing boots on breakaway connectors to fit snugly around the conductor to ensure waterproof connection. Only one conductor may enter a single opening in a boot. Provide waterproof boots with the correct number of openings. Leave unused openings factory sealed. Use prequalified breakaway connectors as shown on the MPL.

12. Provide and install a separate stranded equipment grounding conductor (EGC) in all conduits that contain circuit wiring of 50 volts or more. Unless shown elsewhere, size the EGC to be the same size as the largest current carrying conductor contained in the conduit. Ensure all EGCs are bonded together at every accessible location. For traffic signal installations, provide a minimum size 8 AWG EGC. The EGC is paid for under Item 620.

## C. TEMPORARY WIRING

1. Install temporary conductors and electrical equipment in accordance with the NEC article "Temporary Installations" and Department standard sheets.
2. Provide a ground fault circuit interrupter (GFCI) for power outlets for portable electrical equipment, power tools, ice machines, ice storage bins and refrigerators located outdoors at grade. GFCI may be any one of the following: molded cord and plug set, receptacle, or circuit breaker type.
3. Use listed wire nuts with factory applied sealant for temporary wiring where approved.
4. Enclose conductor splices within a listed enclosure or ground box, or ensure the splices are more than 10 ft. above grade vertically and more than 5 ft. horizontally from any metal structure. Where installing temporary conductors in areas subject to vehicle traffic or mobile construction equipment, ensure the vertical clearance to ground is at least 18 ft. when measured at the lowest point. Ground messenger wires that support power conductors in conformance with the NEC.
5. Protect and when necessary repair any existing electrical conduits uncovered during the construction process in a timely manner and in conformance with the NEC.

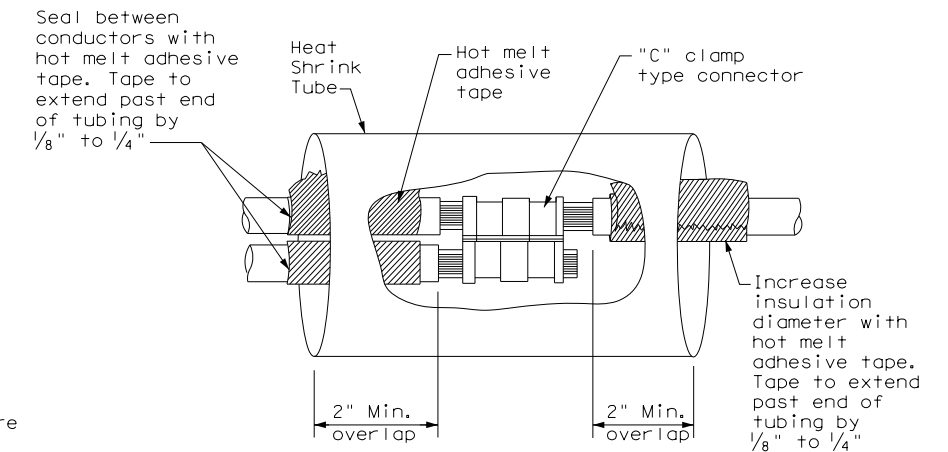
## GROUND RODS & GROUNDING ELECTRODES

### A. MATERIAL INFORMATION

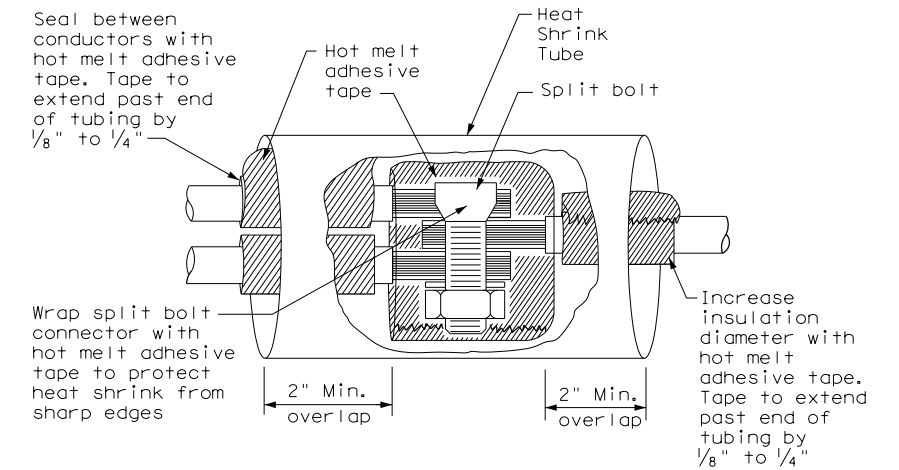
1. Provide and install a grounding electrode at electrical services. Provide ground rods according to DMS 11040 and the plans. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets. Concrete encased grounding electrodes may be called for in specific locations including electrical service, see individual plan sheets.

### B. CONSTRUCTION METHODS

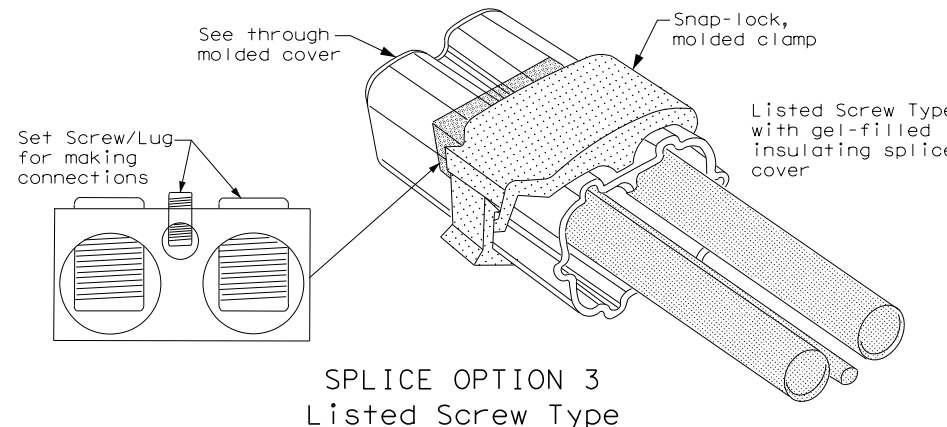
1. Furnish auxiliary ground rods for lightning protection and install in soil, concrete, or both, as called for in the plans. For ground rods installed in concrete, ensure the connection of the conductor to the ground rod is readily accessible for inspection or repairs. For ground rods installed in soil, ensure that the upper end is between 2 to 4 in. below finished grade.
2. Do not place ground rods in the same drilled hole as a timber pole.
3. Install ground rods so the imprinted part number is at the upper end of the rod.
4. Remove all non-conductive coatings such as concrete splatter from the rod at the clamp location.
5. Route all conductors as short and straight as possible for connection to lightning protection ground rods. When a bend is required, ensure a minimum radius bend of four inches for these conductors.
6. Unless otherwise called for in the plans, protect grounding electrode conductors with non-metallic conduit. When protecting grounding electrode conductors with metal conduit, provide and install a grounding type bushing and properly sized bonding jumper on each end of the metal conduit.
7. Written authorization is required before installing a ground rod in a horizontal trench for rocky soil or a solid rock bottom.



SPLICE OPTION 1  
Compression Type



SPLICE OPTION 2  
Split Bolt Type

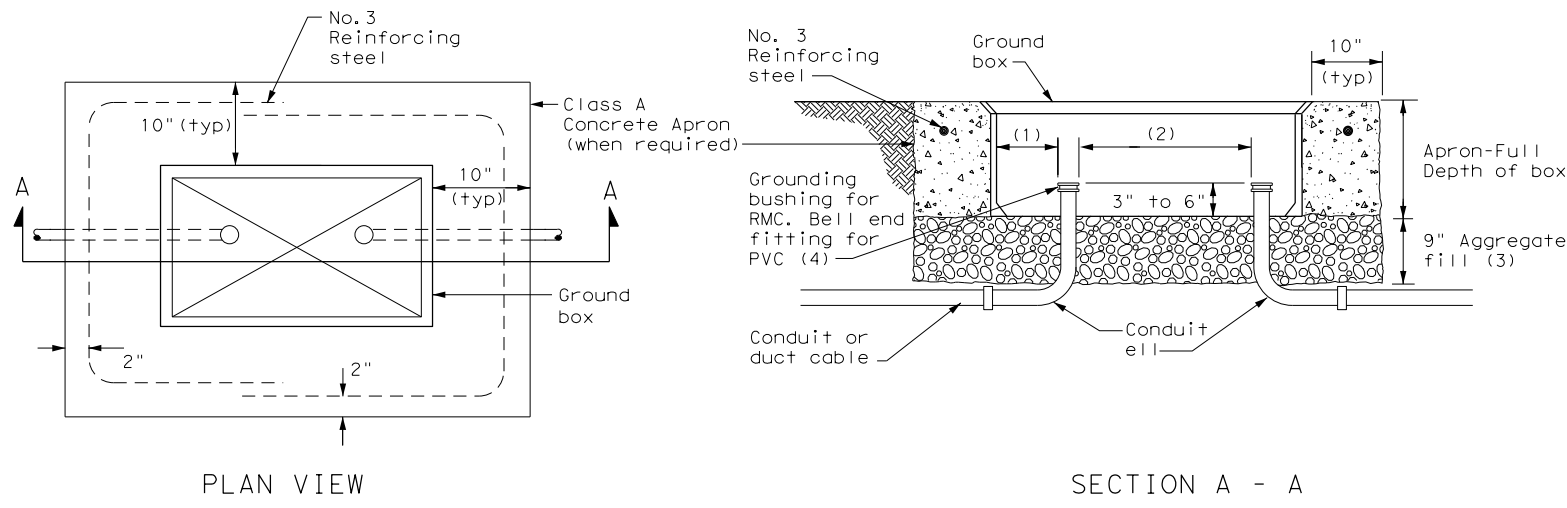


SPLICE OPTION 3  
Listed Screw Type

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		<b>Texas Department of Transportation</b>		<b>Traffic Operations Division Standard</b>	
<h2>ELECTRICAL DETAILS CONDUCTORS</h2>					
<h3>ED(3) - 14</h3>					
FILE:	ed3-14.dgn	DN:	TxDOT	CK:	TxDOT
© TxDOT	October 2014	CONT:	0915	SECT:	12
REVISIONS		JOB:	576	HIGHWAY:	VARIABLES
		DIST:	BEXAR	COUNTY:	SHEET NO.
		SAT:			615

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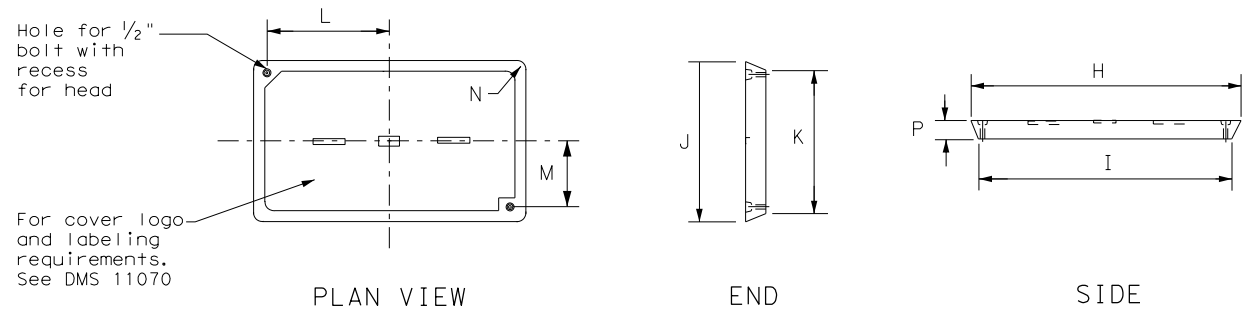


APRON FOR GROUND BOX

- (1) Uniformly space ends of conduits within the ground box. Position ends of conduits so that ground box walls do not interfere with the installation of grounding bushings or bell end fittings.
- (2) Maintain sufficient space between conduits to allow for proper installation of bushings.
- (3) Place aggregate under the box, not in the box. Aggregate should not encroach on the interior volume of the box.
- (4) Install a grounding bushing on the upper end of all RMC terminating in a ground box. Ground RMC elbow when any part of the elbow is less than 18 in. below the bottom of the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC conduits terminating in a ground box.

GROUND BOX DIMENSIONS	
TYPE	OUTSIDE DIMENSIONS (INCHES) (Width x Length X Depth)
A	12 X 23 X 11
B	12 X 23 X 22
C	16 X 29 X 11
D	16 X 29 X 22
E	12 X 23 X 17

GROUND BOX COVER DIMENSIONS								
TYPE	DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2



GROUND BOX COVER

GROUND BOXES

A. MATERIALS

1. Provide polymer concrete ground boxes measuring 16x30x24 in. (WxLxD) or smaller in accordance with Departmental Material Specification (DMS) 11070 "Ground Boxes" and Item 624 "Ground Boxes."
2. Provide Type A, B, C, D, and E ground boxes as shown in the plans, and as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies," Item 624.

3. Ensure ground box cover is correctly labeled in accordance with DMS 11070.

4. Provide larger ground boxes in accordance with Item 624 and as shown in the plans.

B. CONSTRUCTION METHODS

1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate and setting ground box. Provide Grade 3 or 4 coarse aggregate as shown on Table 2 of Item 302 "Aggregates for Surface Treatments." Ensure aggregate bed is in place and at least 9 inches deep, prior to setting the ground box. Install ground box on top of aggregate.
2. Cast ground box aprons in place. Reinforcing steel may be field bent. Ensure the depth of concrete for the apron extends from finished grade to the top of the aggregate bed under the box. Ground box aprons, including concrete and reinforcing steel, are subsidiary to ground boxes when called for by descriptive code.
3. Keep bolt holes in the box clear of dirt. Bolt covers down when not working in ground boxes.
4. Install all conduits and ells in a neat and workmanlike manner. Uniformly space conduits so grounding bushings and bell end fittings can easily be installed.
5. Temporarily seal all conduits in the ground box until conductors are installed.
6. Permanently seal conduits immediately after the completion of conductor installation and pull tests. Permanently seal the ends of all conduits with duct seal, expandable foam, or other method as approved. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a sealant.
7. When a ground rod is present in a ground box, bond all equipment grounding conductors together and to the ground rod with listed connectors.
8. When a type B or D ground box is stacked to meet volume requirements, it is allowable to cut an appropriately sized hole for conduit entry in the side wall at least 18 inches below grade.
9. If an existing ground box in the contract has a metal cover, bond the cover to the equipment grounding conductor with a 3 ft. long stranded bonding jumper the same size as the grounding conductor. The bonding jumper is subsidiary to various bid items. Verify existing ground boxes with metal covers are shown on the plans, with notes fully describing the work required.
10. If other ground boxes with metal covers are within the project limits but are not part of the contract, the Engineer may direct the Contractor to bond the metal covers, identifying the specific boxes in writing. This work will be paid for separately.
11. Bond metal ground box covers to the grounding conductor with a tank ground type lug.

				<b>Traffic Operations Division Standard</b>	
<h2>ELECTRICAL DETAILS</h2> <h3>GROUND BOXES</h3> <h4>ED(4) - 14</h4>					
FILE:	ed4-14.dgn	DN:	TxDOT	CK:	TxDOT
© TxDOT	October 2014	CONT:	0915	SECT:	12
REVISIONS		JOB:	576	HIGHWAY:	VARIABLES
DIST:	SAT	COUNTY:	BEXAR	SHEET NO.:	616

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### SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

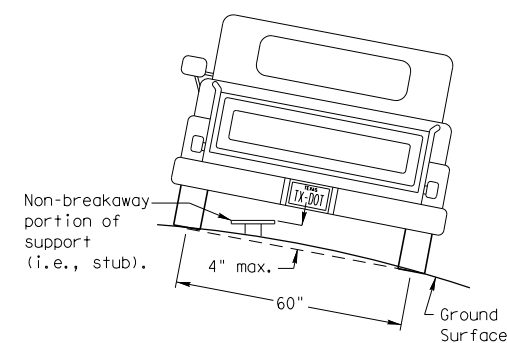
SM RD SGN ASSM TY XXXXX (X) XX (X-XXXX)

Post Type \_\_\_\_\_  
 FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))  
 TWT = Thin-Walled Tubing (see SMD(TWT))  
 10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))  
 S80 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2) \_\_\_\_\_  
 Anchor Type \_\_\_\_\_  
 UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))  
 UB = Universal Anchor - Bolted down (see SMD(FRP) and (TWT))  
 WS = Wedge Anchor Steel - (see SMD(TWT))  
 WP = Wedge Anchor Plastic (see SMD(TWT))  
 SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))  
 SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

Sign Mounting Designation  
 P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))  
 T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))  
 U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))  
 IF REQUIRED  
 1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))  
 BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))  
 WC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))  
 EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

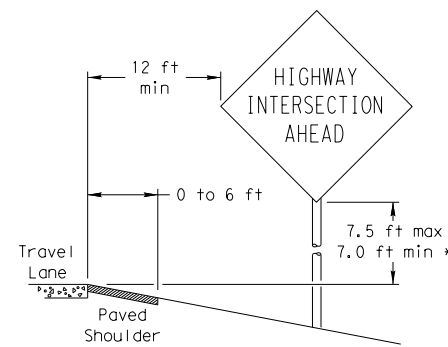
### REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

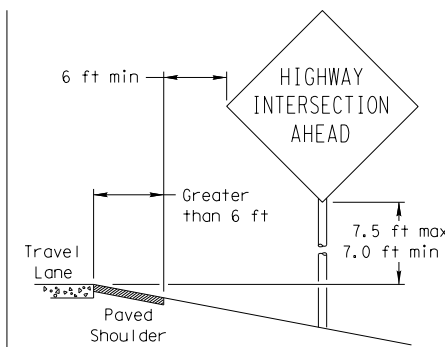
### SIGN LOCATION

#### PAVED SHOULDERS



LESS THAN 6 FT. WIDE

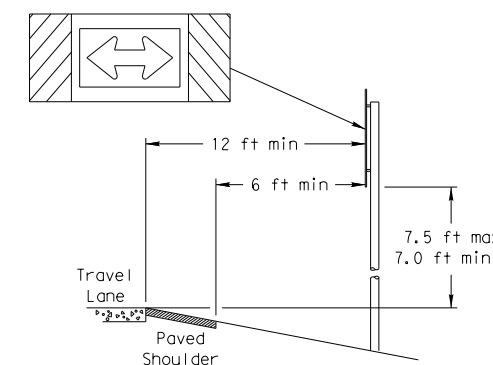
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



GREATER THAN 6 FT. WIDE

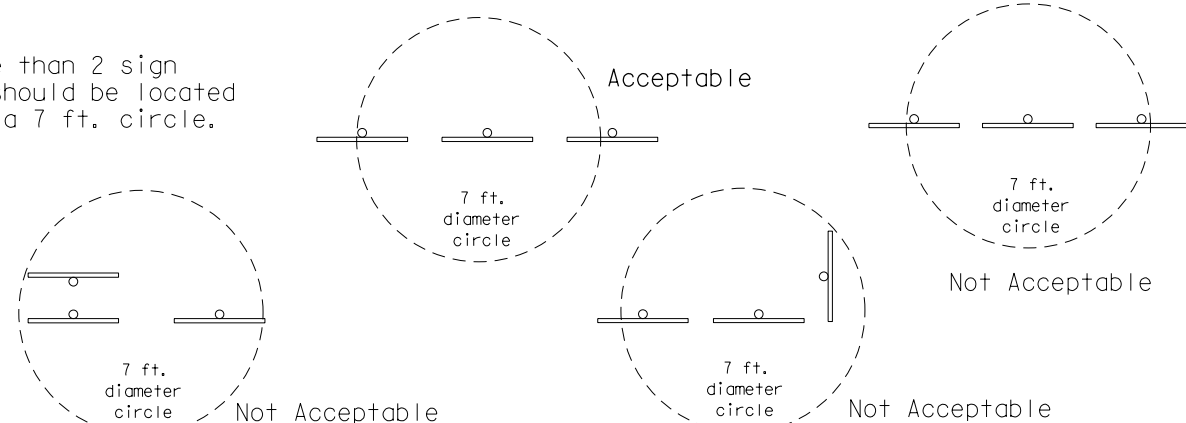
When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

#### T-INTERSECTION

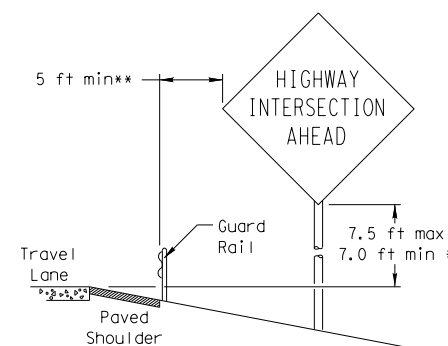


When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.

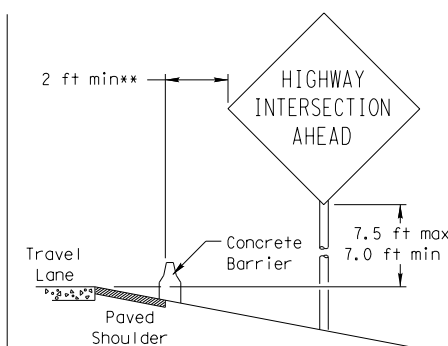
No more than 2 sign posts should be located within a 7 ft. circle.



#### BEHIND BARRIER



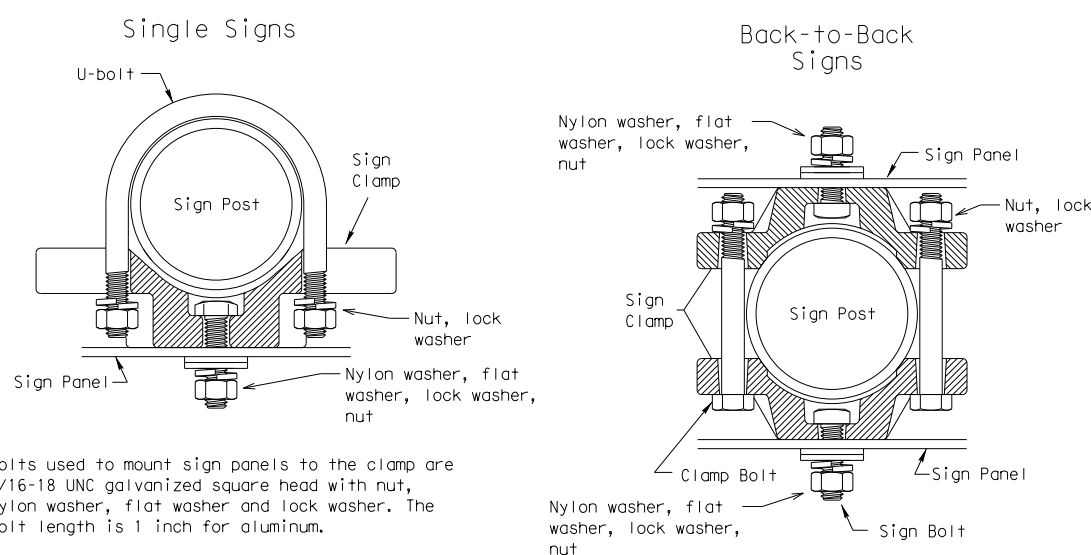
BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

\*\*Sign clearance based on distance required for proper guard rail or concrete barrier performance.

### TYPICAL SIGN ATTACHMENT DETAIL



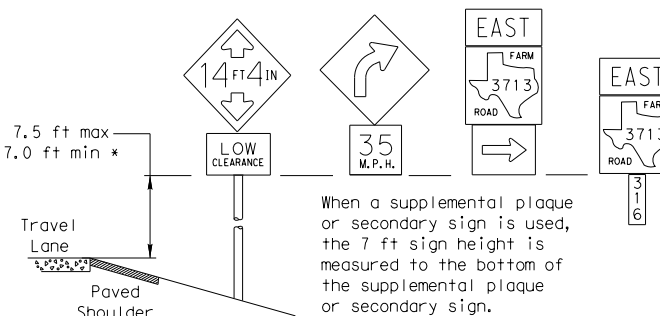
Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

Sign clamps may be either the specific size clamp or the universal clamp.

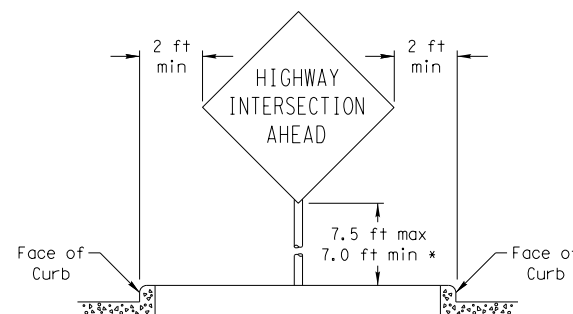
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

#### SIGNS WITH PLAQUES

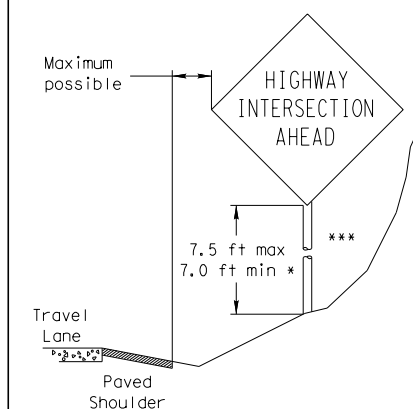


When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

#### CURB & GUTTER OR RAISED ISLAND



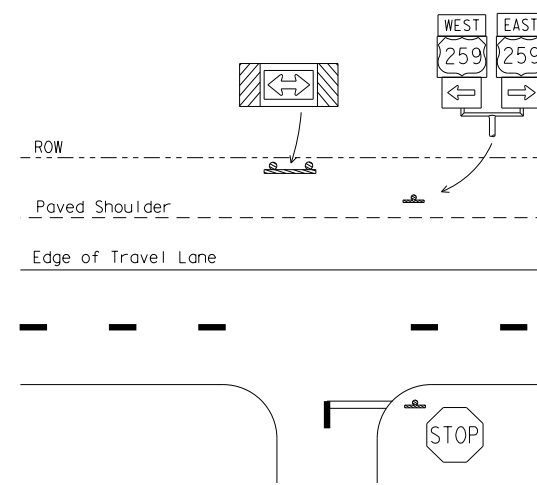
#### RESTRICTED RIGHT-OF-WAY (When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

\*\*\* Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.



\* Signs shall be mounted using the following condition that results in the greatest sign elevation:

- (1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or
- (2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

The website address is:  
<http://www.txdot.gov/publications/traffic.htm>



## SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

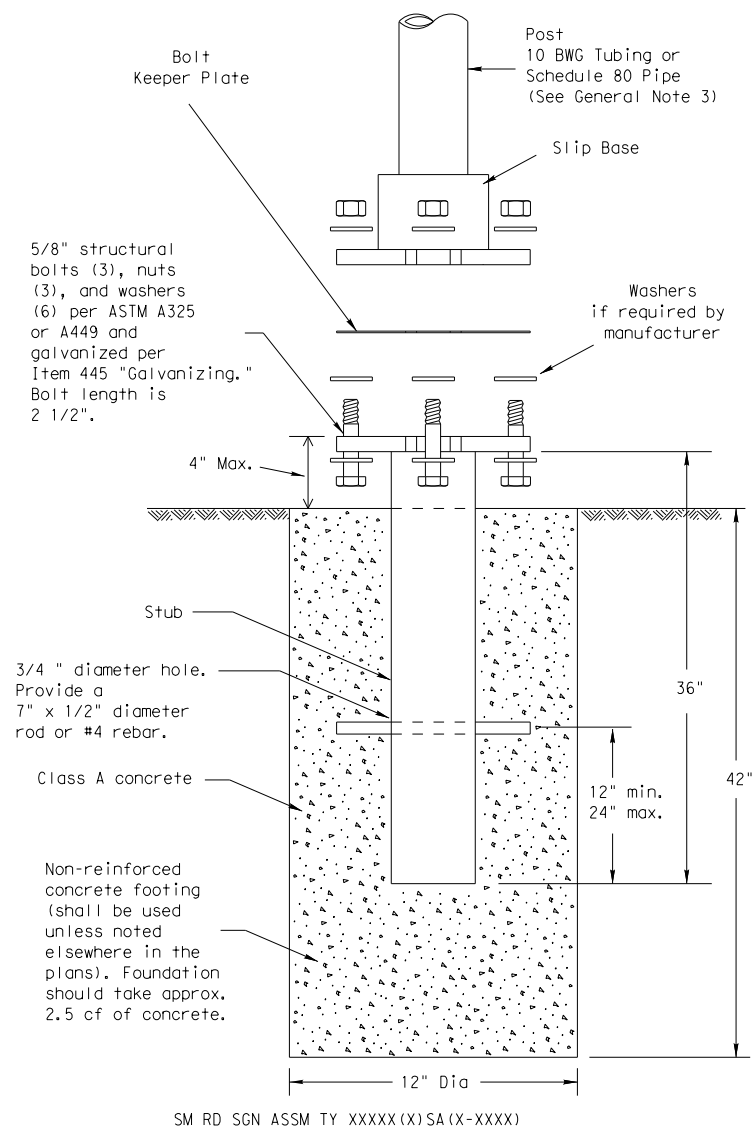
© TxDOT July 2002	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
9-08	REVISIONS	CONT	SECT	JOB
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## TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



### NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. [http://www.txdot.gov/business/producer\\_list.htm](http://www.txdot.gov/business/producer_list.htm) The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

### GENERAL NOTES:

- Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
- Material used as post with this system shall conform to the following specifications:
  - 10 BWG Tubing (2.875" outside diameter)
    - 0.134" nominal wall thickness
    - Seamless or electric-resistance welded steel tubing or pipe
    - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
    - Other steels may be used if they meet the following:
      - 55,000 PSI minimum yield strength
      - 70,000 PSI minimum tensile strength
      - 20% minimum elongation in 2"
    - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
    - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
    - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
  - Schedule 80 Pipe (2.875" outside diameter)
    - 0.276" nominal wall thickness
    - Steel tubing per ASTM A500 Gr C
    - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
      - 46,000 PSI minimum yield strength
      - 62,000 PSI minimum tensile strength
      - 21% minimum elongation in 2"
    - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
    - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
    - Galvanization per ASTM A123
- See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: <http://www.txdot.gov/publications/traffic.htm>
- Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

### ASSEMBLY PROCEDURE

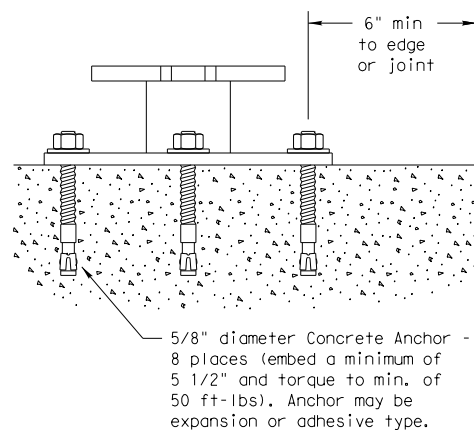
#### Foundation

- Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
- The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
- Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
- Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
- The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

#### Support

- Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
- Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

### CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxyes and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

 Texas Department of Transportation  
Traffic Operations Division

SIGN MOUNTING DETAILS  
 SMALL ROADSIDE SIGNS  
 TRIANGULAR SLIPBASE SYSTEM

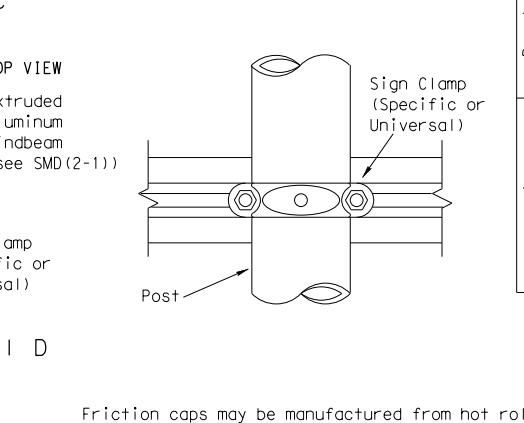
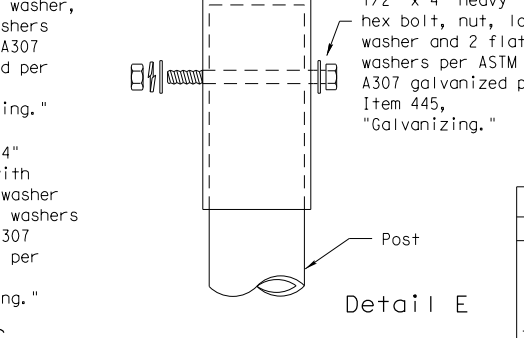
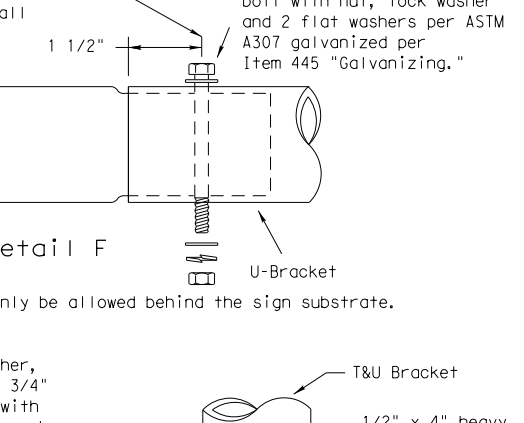
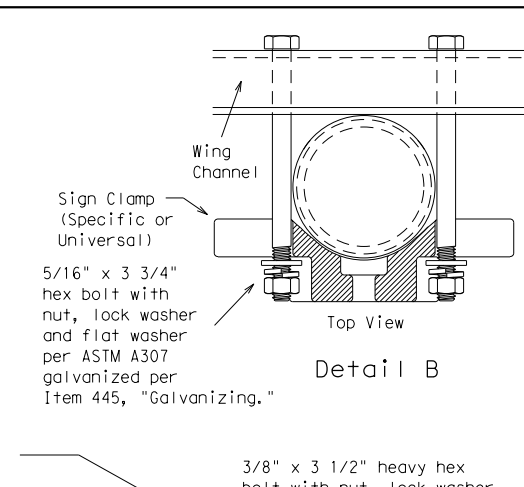
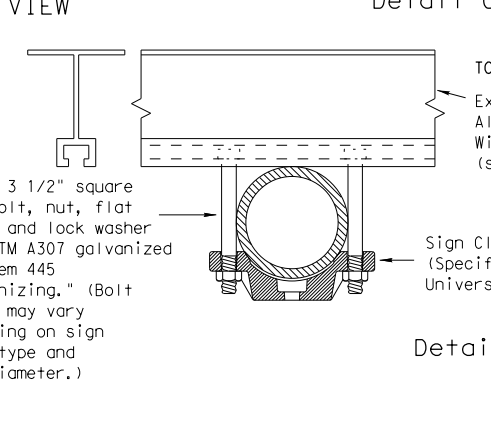
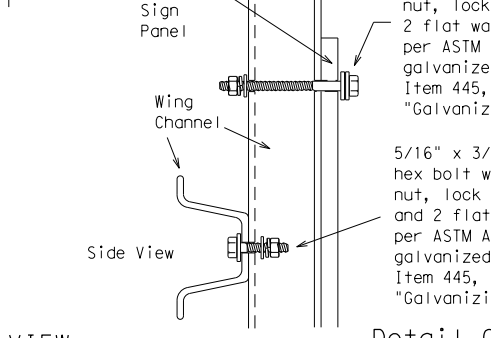
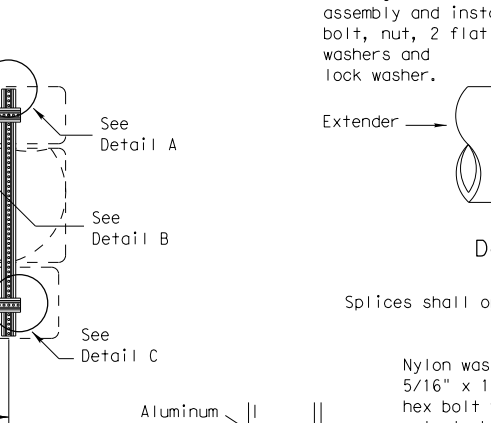
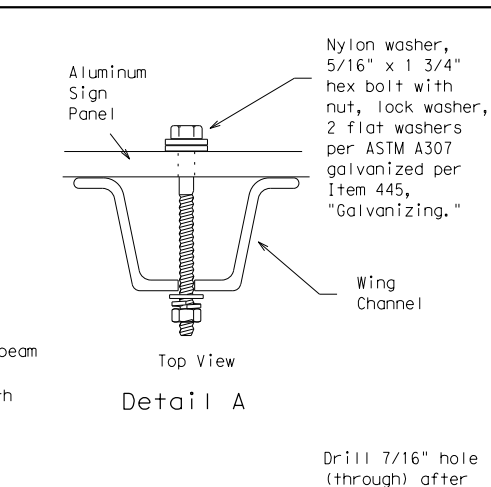
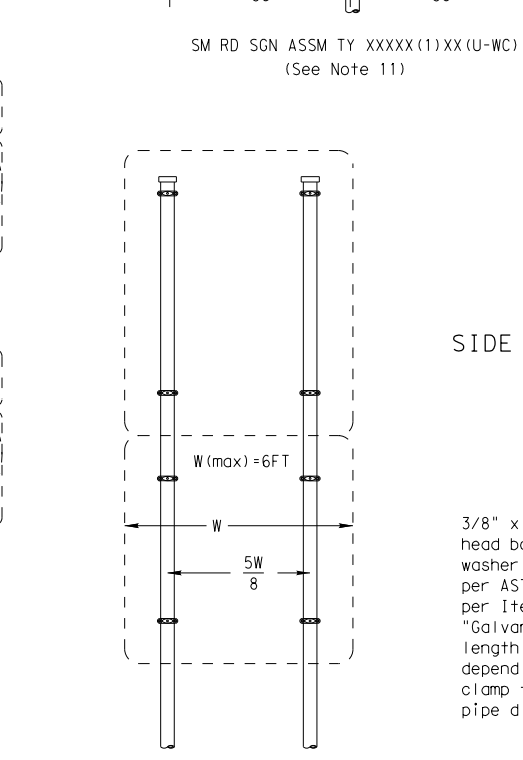
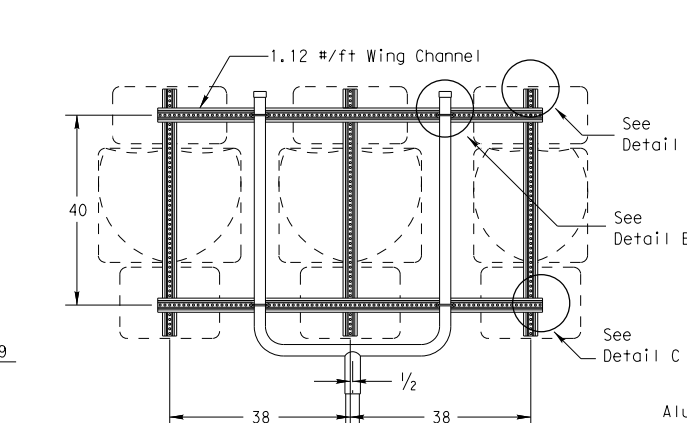
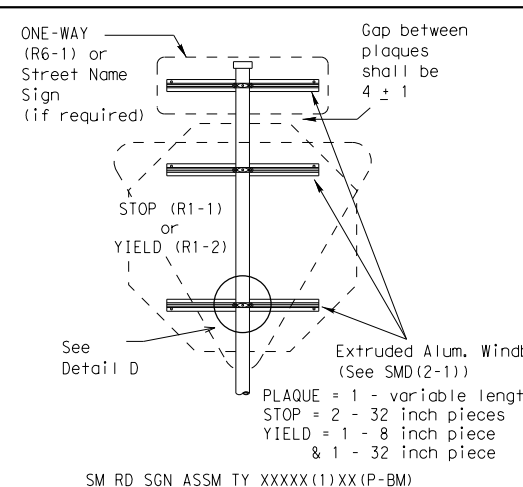
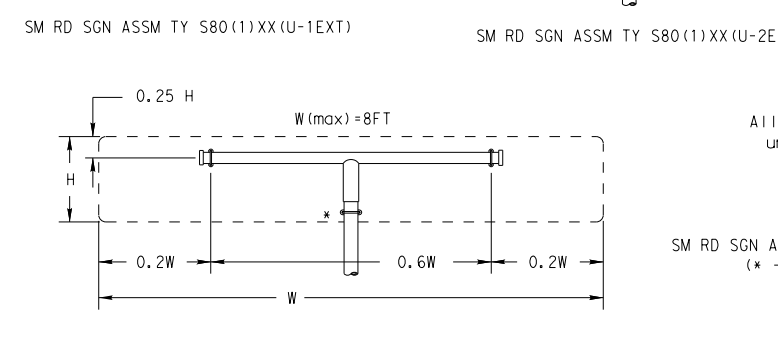
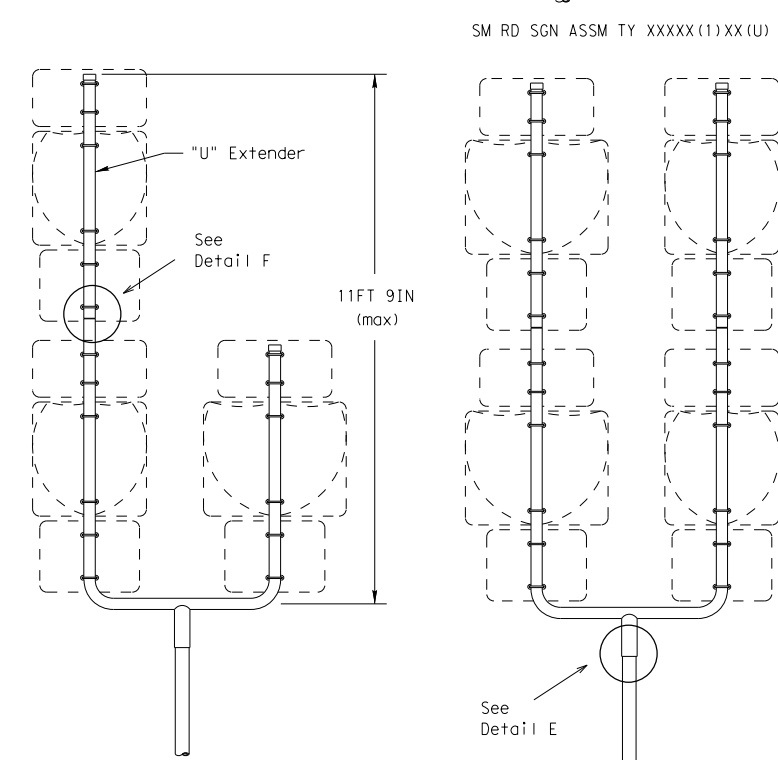
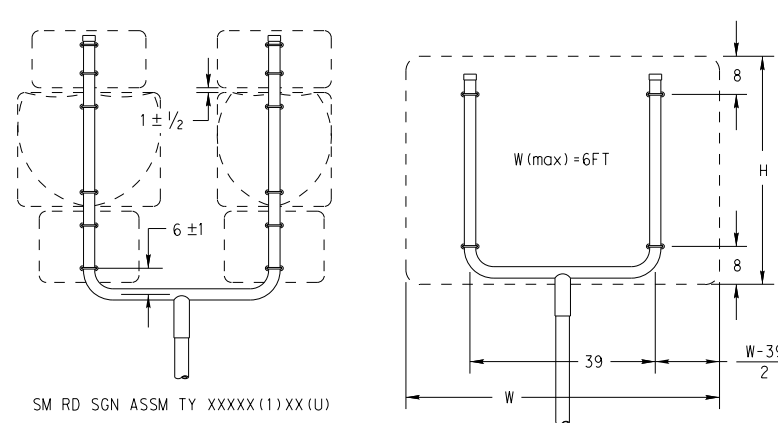
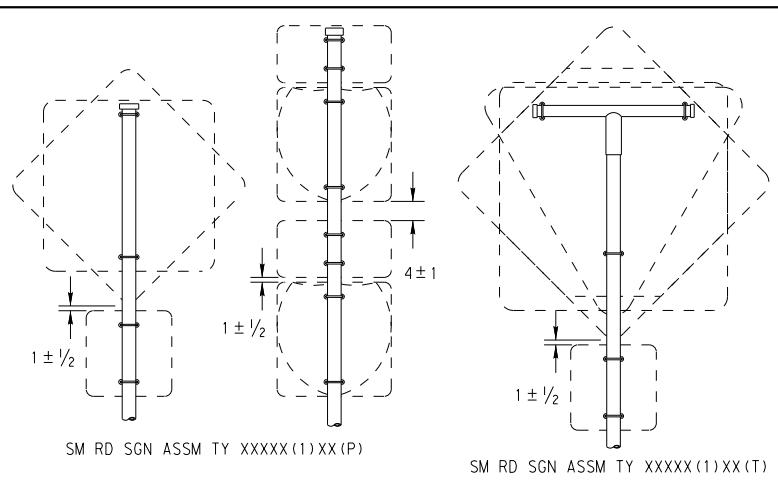
SMD(SLIP-1)-08

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9-08	REVISIONS		CONT	SECT	JOB
			0915	12	576
			DIST	COUNTY	SHEET NO.
		SAT	BEXAR		618



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- GENERAL NOTES:
1. 

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF
  2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
  3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
  4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
  5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
  6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
  7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
  8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
  9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
  10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
  11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
  12. Post open ends shall be fitted with Friction Caps.
  13. Sign blanks shall be the sizes and shapes shown on the plans.

		REQUIRED SUPPORT	
		SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)	
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)	
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)	
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)	
Warning	48x60-inch signs	TY S80(1)XX(T)	
	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)	
	48x60-inch signs	TY S80(1)XX(T)	
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)	
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)	
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)	

Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes. The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture. Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

Texas Department of Transportation  
 Traffic Operations Division

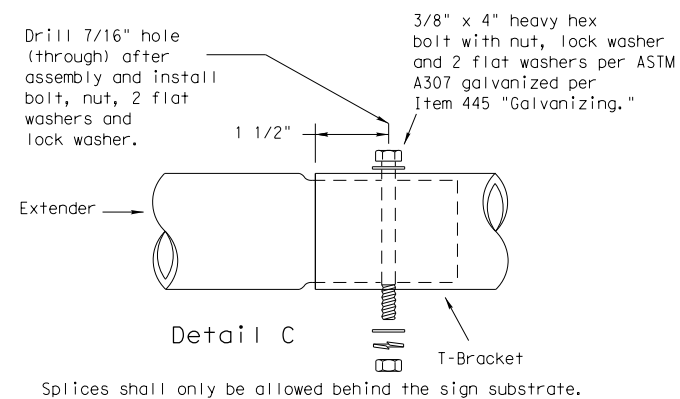
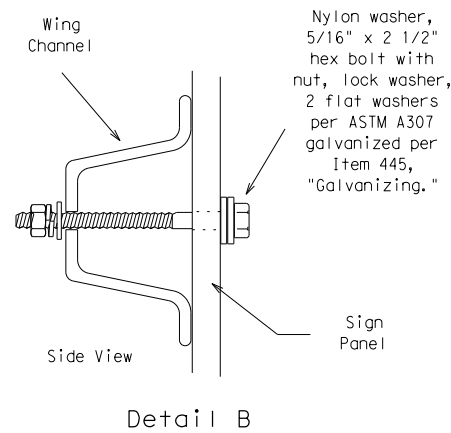
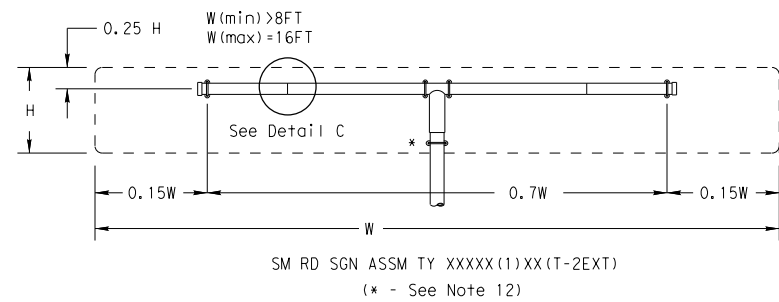
## SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2) - 08

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9-08	REVISIONS	CONT	SECT	JOB	HIGHWAY
		0915	12	576	VARIES
		DIST	COUNTY		SHEET NO.
		SAT	BEXAR		619

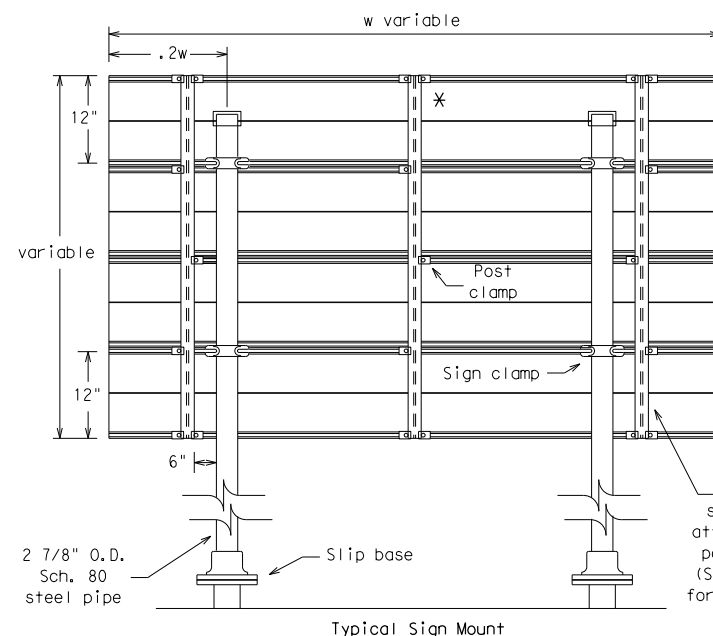
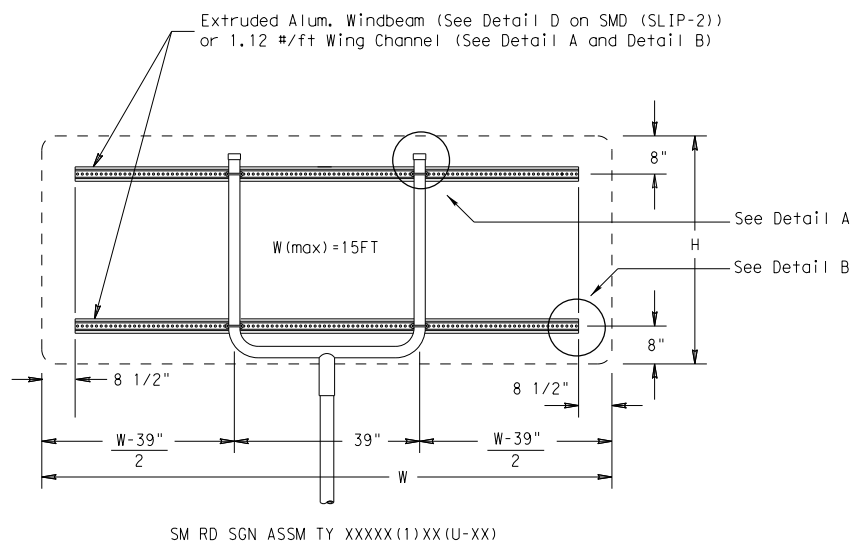
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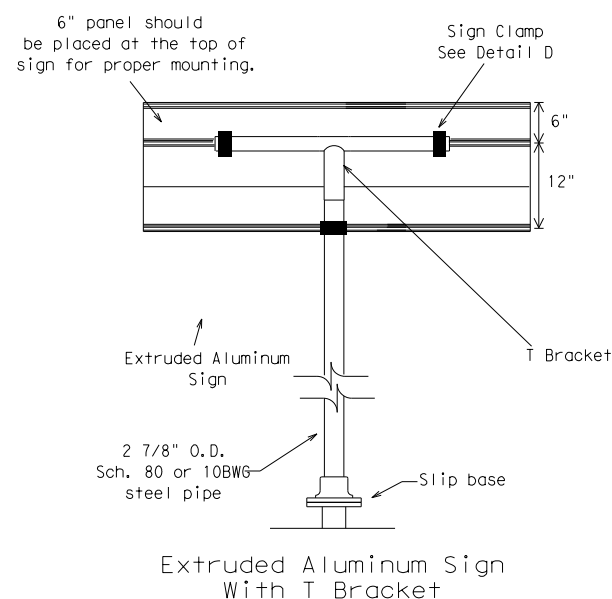
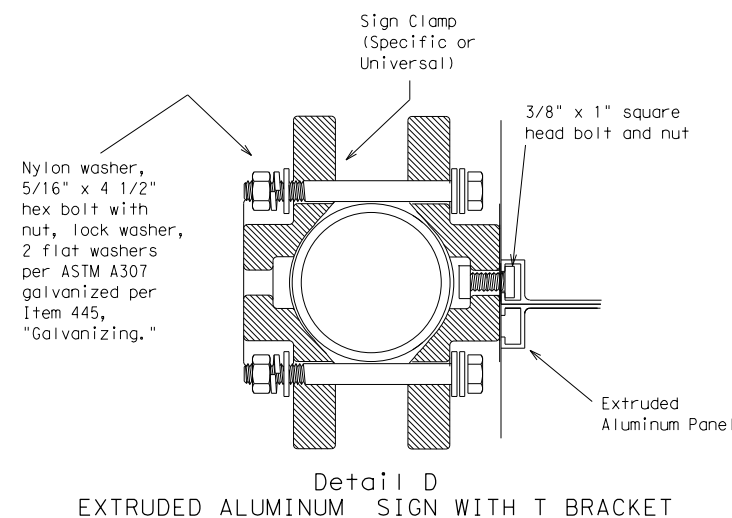
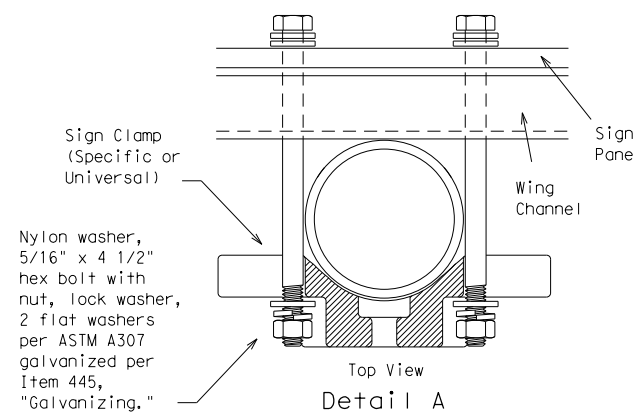
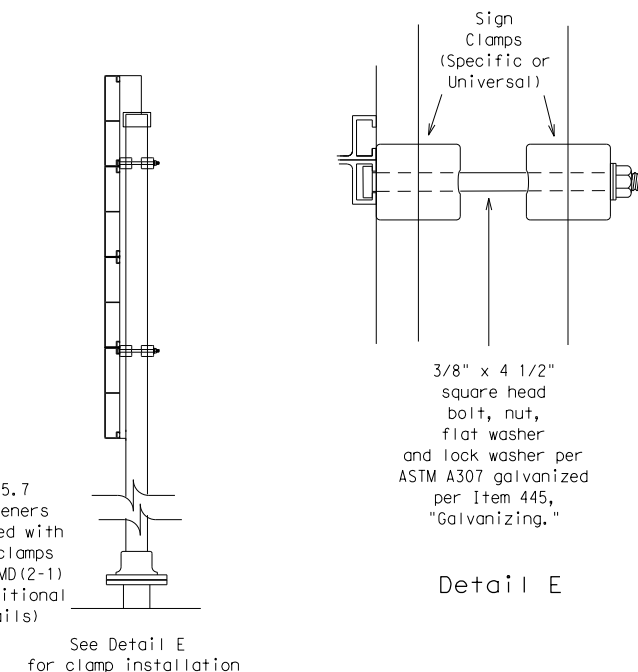


GENERAL NOTES:

- | SIGN SUPPORT | # OF POSTS | MAX. SIGN AREA |
|--------------|------------|----------------|
| 10 BWG       | 1          | 16 SF          |
| 10 BWG       | 2          | 32 SF          |
| Sch 80       | 1          | 32 SF          |
| Sch 80       | 2          | 64 SF          |
- The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
- Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
- Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
- Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
- For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
- When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
- Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
- Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
- Sign blanks shall be the sizes and shapes shown on the plans.
- Additional sign clamp required on the "T-bracket" post for 24 inch high signs. Place the clamp 3 inches above bottom of sign when possible.
- Post open ends shall be fitted with Friction Caps.



\* Additional stiffener placed at approximate center of signs when sign width is greater than 10'.



Use Extruded Alum. Windbeam as stiffeners See SMD (2-1) for additional details  
 See Detail E for clamp installation

		REQUIRED SUPPORT	
		SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)	
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)	
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)	
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)	
Warning	48x60-inch signs	TY S80(1)XX(T)	
	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)	
	48x60-inch signs	TY S80(1)XX(T)	
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)	
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)	
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)	

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SIGN MOUNTING DETAILS  
 SMALL ROADSIDE SIGNS  
 TRIANGULAR SLIPBASE SYSTEM  
 SMD(SLIP-3) -08

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		0915	12	576
		DIST	COUNTY	SHEET NO.
		SAT	BEXAR	620

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REFLECTOR UNIT SIZES FOR DELINEATORS AND OBJECT MARKERS				DELINEATORS				D & OM DESCRIPTIVE CODES	
DEVICE	SIZE 1	SIZE 2	SIZE 3	SIZE 4	SINGLE		DOUBLE		
									INSTL DEL ASSM (D-XX)SZ X (XXX)XXX(XX) NUMBER OF REFLECTORS S = Single D = Double COLOR OF REFLECTORS W = White Y = Yellow R = Red REFLECTOR UNIT SIZE 1 or 2 TYPE OF POST OR DELINEATOR WC = Wing Channel Post FLX = Flexible Post BRF = Barrier Reflector TYPE OF MOUNT GND = Embedded (drivable or set in concrete) CTB = Concrete Barrier Mount GF1 or GF2 = Guard Fence Attachment SRF = Surface Mount DIRECTION If Required BI = Bi-Directional BR = Bi-Directional with red on back
SHEETING	Yellow, White or Red Type B or C reflective sheeting			SHEETING		Yellow, White or Red Type B or C Reflective Sheeting			
NOTE	1. Size 1 and 4 - Direct applied reflective sheeting for use on flexible post (flx). 2. Size 2 and 3 - For use on wing channel (wc) post only. Use approved metal, plastic or fiberglass backplate with 17/64" mounting holes.			POST TYPE	WC	FLX	WC	FLX	INSTL OM ASSM (OM-XX) (XXX)XXX(XX) TYPE OF OBJECT MARKER 1, 2, 3, or 4 NUMBER OF REFLECTORS OR DIRECTION X = 3-Size 2 reflector units (Type 2 only) Y = 1-Size 3 reflector unit (Type 2 only) Z = 3-Size 1 or 1-Size 4 reflector unit(s) (Type 2 only) L = Left Side (Type 3 Object Marker only) R = Right Side (Type 3 Object Marker only) C = Center (Type 3 Object Marker only) TYPE OF POST WC = Wing Channel Post FLX = Flexible Post TWT = Thin Walled Tubing TYPE OF MOUNT GND = Embedded (drivable) SRF = Surface Mount WAS = Wedge Anchor Steel WAP = Wedge Anchor Plastic DIRECTION If Required BI = Bi-Directional
MOUNT TYPE	GND			MOUNT TYPE	GND	GND, SRF	GND	GND, SRF	

OBJECT MARKERS								
DEVICE	Type 1 (OM-1)		Type 2 (OM-2)			Type 3 (OM-3)		Type 4 (OM-4)
	OM-1	OM-2X	OM-2Y	OM-2Z	OM-3L	OM-3R	OM-3C	OM-4
								SHEETING: Yellow-Type B <sub>FL</sub> or C <sub>FL</sub> Sheeting POST TYPE: TWT MOUNT TYPE: WAS, WAP
	Yellow - Type B or C Sheeting		Yellow - Type B or C Sheeting			Alternating acrylic black and retroreflective yellow - Type B <sub>FL</sub> or C <sub>FL</sub> Sheeting		Red -Type B <sub>FL</sub> or C <sub>FL</sub> Sheeting
	WAS, WAP		GND			WAS, WAP		WAS, WAP

BARRIER REFLECTORS (BRF)			CHEVRONS				ONE DIRECTION LARGE ARROW		
DEVICE	GF1	GF2	CTB	CHEVRONS				ONE DIRECTION LARGE ARROW	
				W1-8	W1-8	W1-8	W1-8	W1-6	W1-6
SHEETING	Yellow, White, Red			NOTE				NOTE:	
NOTE	1. Minimum 9 square inches of reflective surface area.			1. CHEVRON (W1-8) signs and ONE DIRECTION LARGE ARROW (W1-6) Signs shall be installed per Sign Mounting Details (SMD) Standard Sheets and paid under Item 644 (Small Roadside Sign Assemblies). 2. The Texas version of the ONE DIRECTION LARGE ARROW sign (W1-9T) may be used instead of the ONE DIRECTIONAL LARGE ARROW (W1-6).				Delineator and object marker backplates and sign substrates shall be 0.080" Aluminum sign blank to conform to ASTM B-209 Alloy 6061-T6 or approved alternative.	

DEPARTMENTAL MATERIAL SPECIFICATIONS	
FLEXIBLE DELINEATOR & OBJECT MARKER POSTS (EMBEDDED & SURFACE MOUNT TYPES)	DMS-4400
SIGN FACE MATERIALS	DMS-8300
DELINEATORS, OBJECT MARKERS AND BARRIER REFLECTORS	DMS-8600

**Texas Department of Transportation** Traffic Operations Division Standard

### DELINEATOR & OBJECT MARKER MATERIAL DESCRIPTION

#### D & OM(1) - 15

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© TXDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIABLES
10-09 3-15	DIST	COUNTY	SHEET NO.	
4-10	SAT	BEXAR	621	

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**POST TYPE AND SUPPORT FOUNDATION DETAILS**

**TYPE OF BARRIER MOUNTS**

**WING CHANNEL (WC)**

**FLEXIBLE POSTS (FLX)**

**WEDGE ANCHOR SYSTEMS**

**GUARD FENCE ATTACHMENT**

GND

GND

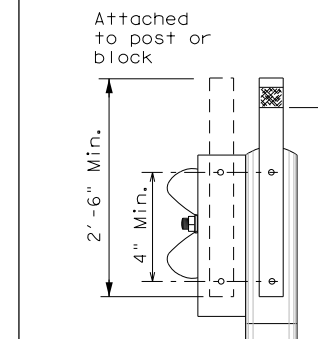
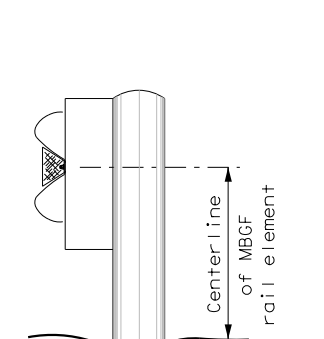
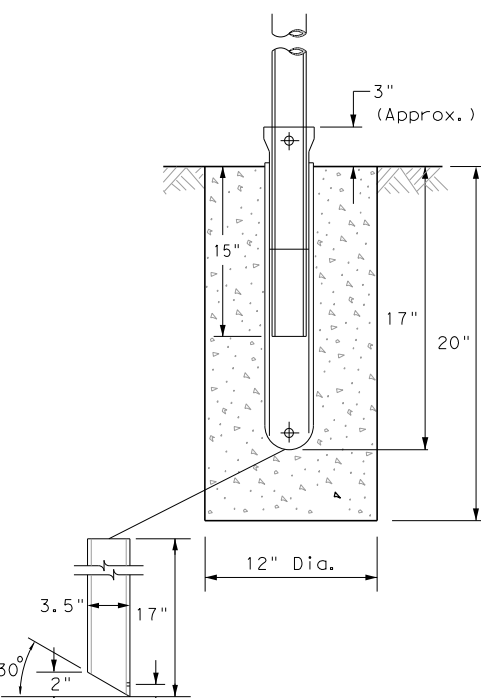
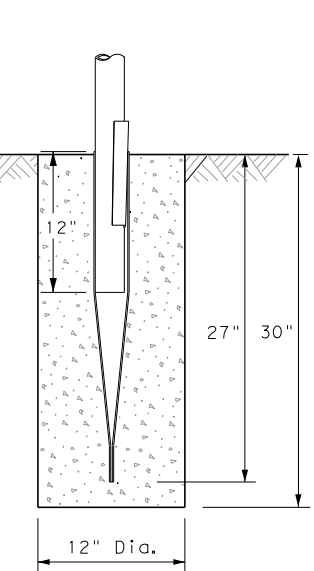
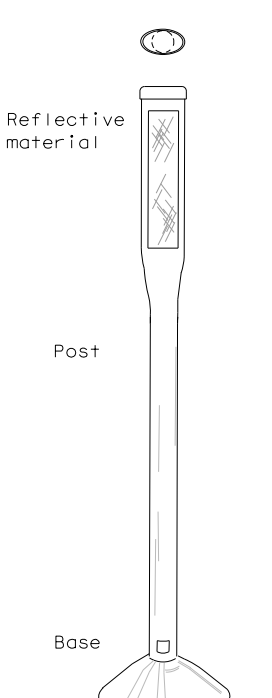
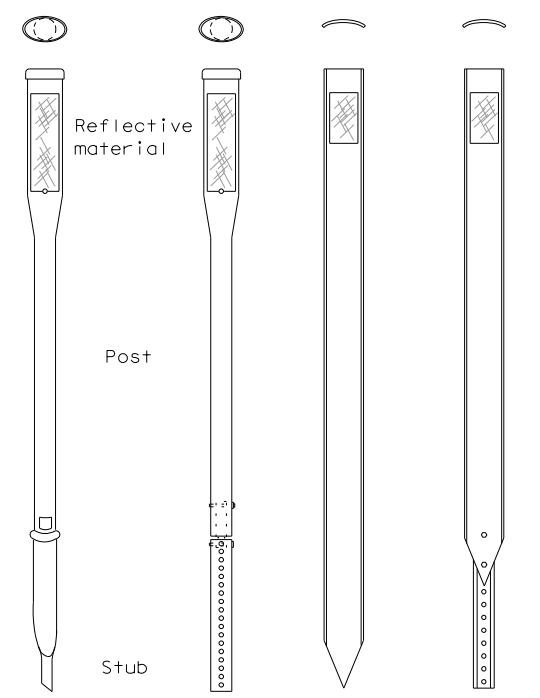
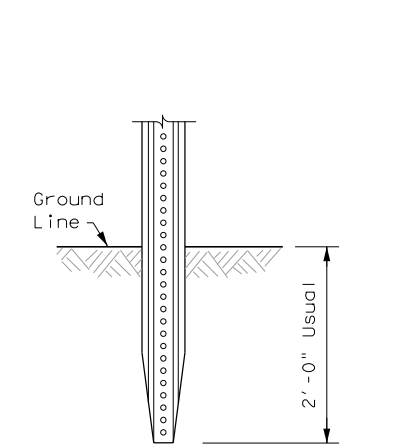
SRF

WAS

WAP

GF 1

GF 2



**NOTES**

1. Embedded Wing Channel (WC) post option may be used for Type 2 Object Markers and Delineators only.
2. 1.12 lbs/ft steel per ASTM A 1011 SS Gr. 50, or ASTM A499.

**EMBEDDED**

**NOTES**

1. See "Flexible Delineator and Object Marker Posts" Material Producer List for approved devices.
2. Install per manufacturer's recommendations.
3. Post length may vary to meet field conditions.

**SURFACE MOUNT**

**STEEL**

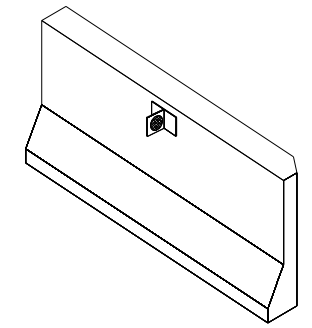
**NOTE**

1. Install per manufacturer's recommendations.

**PLASTIC**

**CONCRETE BARRIER / BRIDGE RAIL**

CTB

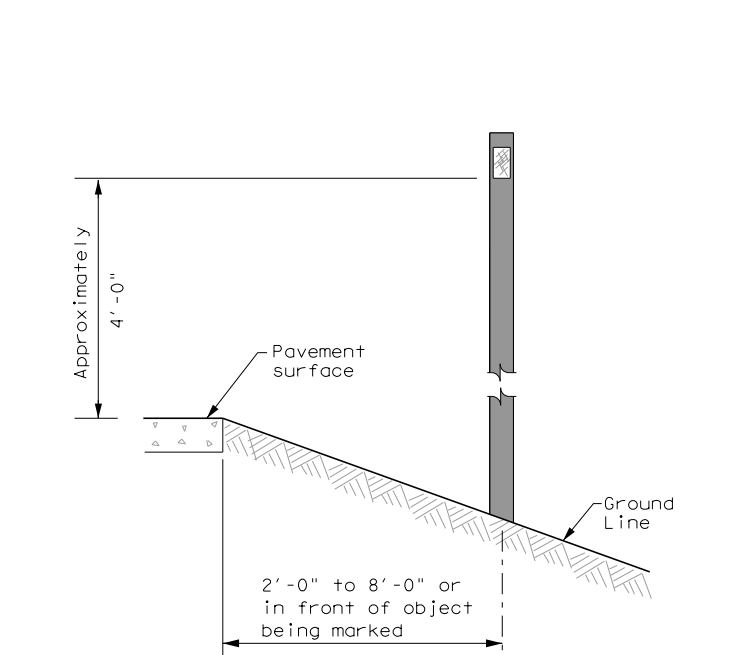
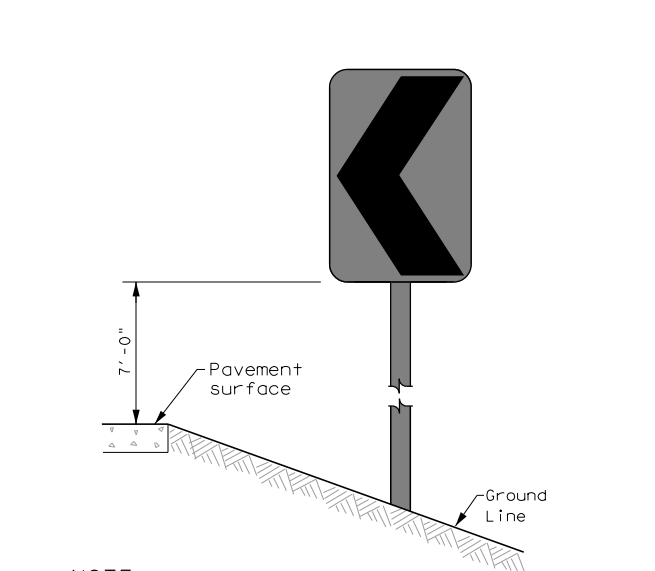
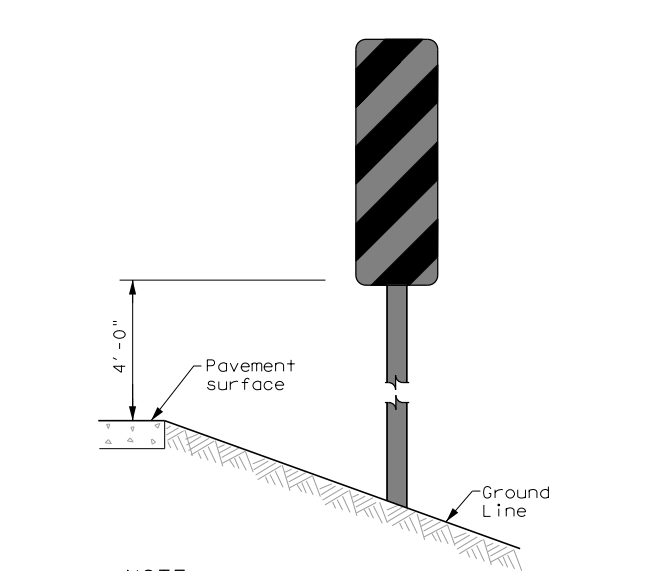


**TYPES 1,3, AND 4 OBJECT MARKERS AND CHEVRONS**

**CHEVRONS AND ONE DIRECTION LARGE ARROW SIGN**

**DELINEATORS AND TYPE 2 OBJECT MARKERS**

- GENERAL NOTES**
1. Place delineators on a section of roadway at a consistent distance from the edge of pavement.
  2. Where a restriction prevents consistent placement from the pavement edge, place the affected object markers in line with the innermost edge of the obstruction.
  3. When Type 2 object markers and delineators are more than 8'-0" from the edge of the pavement, it may not be possible to maintain a height of approximately 4'-0". If this is the case, place the object marker or delineator as close to the desired height as possible.
  4. Install all delineators, object markers and barrier reflectors in accordance with the manufacturer's recommendation.
  5. Barrier reflectors should be installed a minimum of 18 inches above the edge of the pavement surface.



**NOTE**

Mounting at 4 feet to the bottom of the chevron is permitted for chevrons that will not exceed a height of 6'-6" to the top of the chevron (sizes 24" x 30" and smaller)

**NOTE**

Chevrons 30" x 36" and larger shall be mounted at a height of 7' to the bottom of the chevron. Chevron sign and ONE DIRECTIONAL LARGE ARROW sign (W1-9T) shall be installed per SMD standard sheets and paid under item 644.

See general notes 1, 2 and 3.



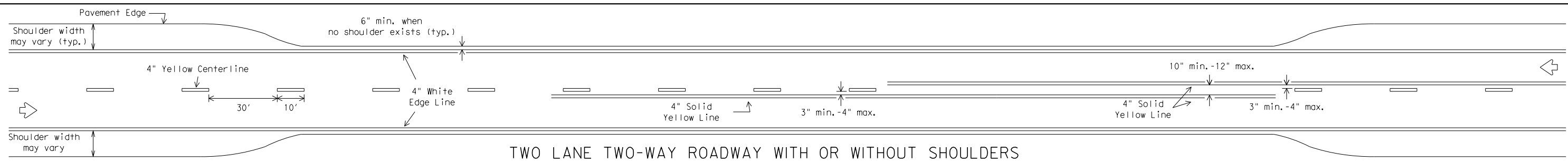
**DELINEATOR & OBJECT MARKER INSTALLATION**

**D & OM(2) - 15**

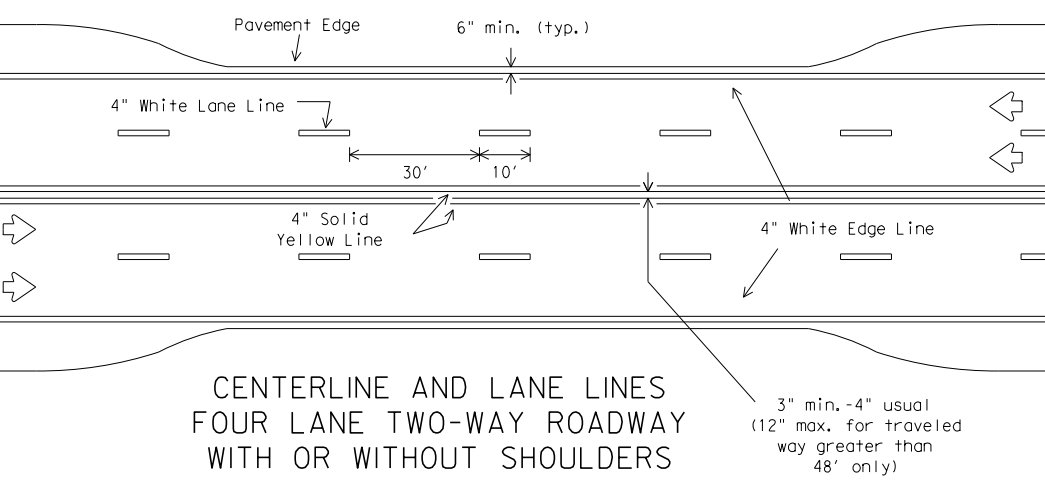
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10-09 3-15	DIST	COUNTY	SHEET NO.	
4-10	SAT	BEXAR	622	

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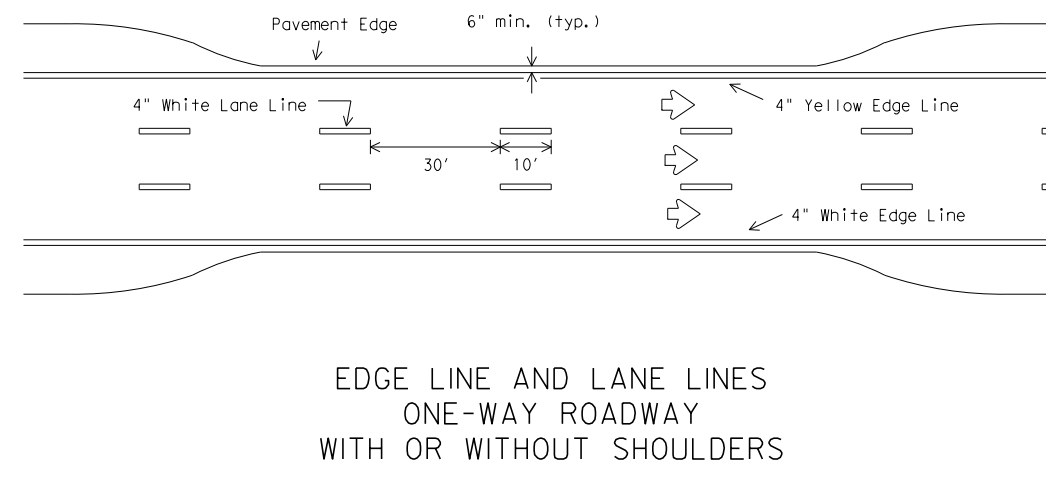
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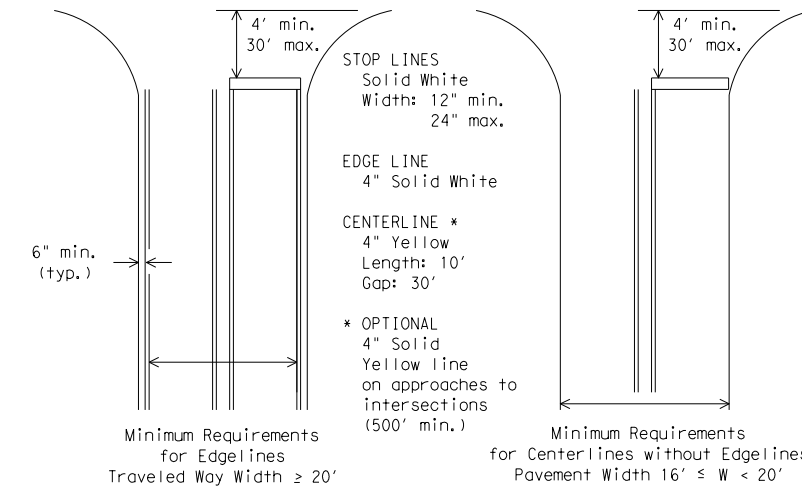
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



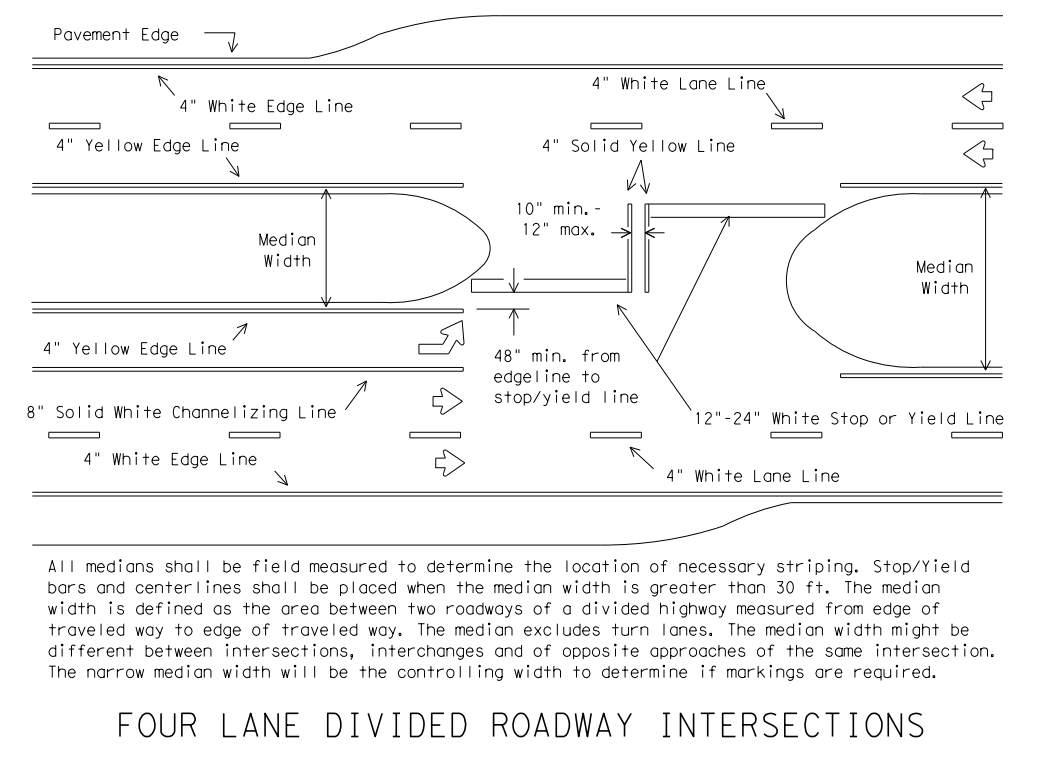
CENTERLINE AND LANE LINES  
 FOUR LANE TWO-WAY ROADWAY  
 WITH OR WITHOUT SHOULDERS



EDGE LINE AND LANE LINES  
 ONE-WAY ROADWAY  
 WITH OR WITHOUT SHOULDERS

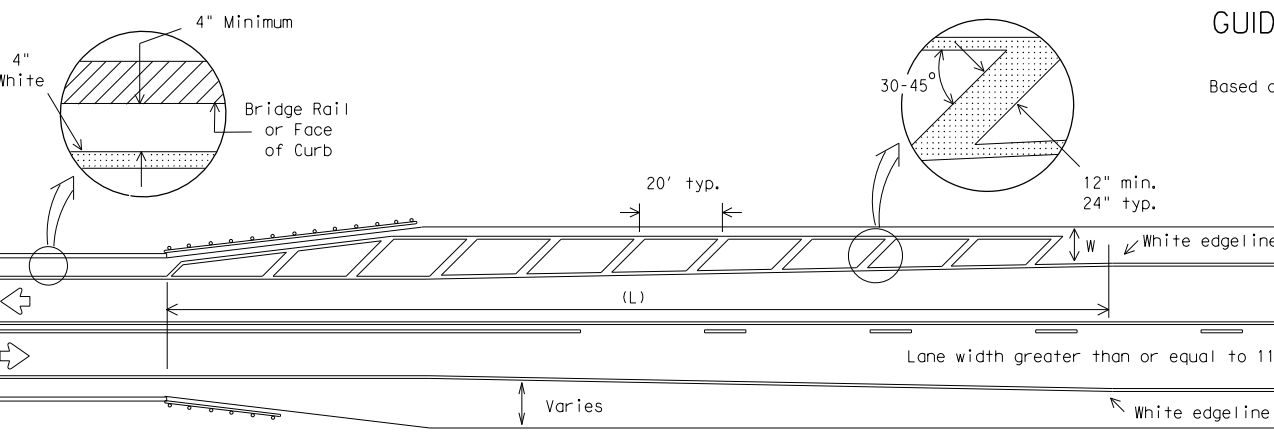


GUIDE FOR PLACEMENT OF STOP LINES,  
 EDGE LINE & CENTERLINE  
 Based on Traveled Way and Pavement Widths for Undivided Highways



All medians shall be field measured to determine the location of necessary striping. Stop/Yield bars and centerlines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges and of opposite approaches of the same intersection. The narrow median width will be the controlling width to determine if markings are required.

FOUR LANE DIVIDED ROADWAY INTERSECTIONS



- NOTES:
- No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.
  - For crosshatching length (L) see Table 1.
  - The width of the offset (W) and the required crosshatching width is the full shoulder width in advance of the bridge.
  - The crosshatching is not required if delineators or barrier reflectors are used along the structure.
  - For guard fence details, refer elsewhere in the plans.

ROADWAYS WITH REDUCED SHOULDER  
 WIDTHS ACROSS BRIDGE OR CULVERT

TABLE 1 - TYPICAL LENGTH (L)

Posted Speed *	Formula
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	$L = WS$

\* 85th Percentile Speed may be used on roads where traffic speeds normally exceed the posted speed limit. Crosshatching length should be rounded up to nearest 5 foot increment.  
 L=Length of Crosshatching (FT.) W=Width of Offset (FT.)  
 S=Posted Speed (MPH)

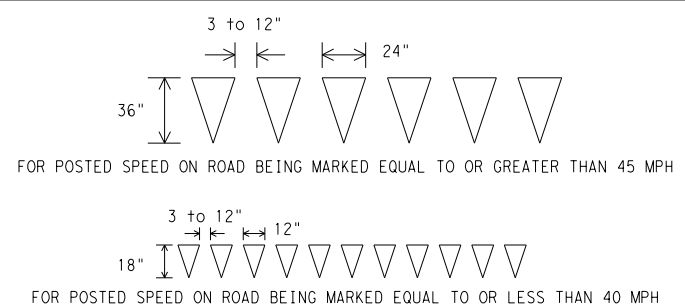
EXAMPLES:  
 An 8 foot shoulder in advance of a bridge reduces to 4 feet on a 70 MPH roadway. The length of the crosshatching should be:  
 $L = 8 \times 70 = 560$  ft.  
 A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the crosshatching should be:  
 $L = 4(40)^2 / 60 = 106.67$  ft. rounded to 110 ft.

GENERAL NOTES

- Edgeline striping shall be as shown in the plans or as directed by the Engineer. The edgeline should typically be placed a minimum of 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edgelines are not required in curb and gutter sections of roadways.
- The traveled way includes only that portion of the roadway used for vehicular travel and not the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the inside of edgeline to inside of edgeline of a two lane roadway.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



YIELD LINES

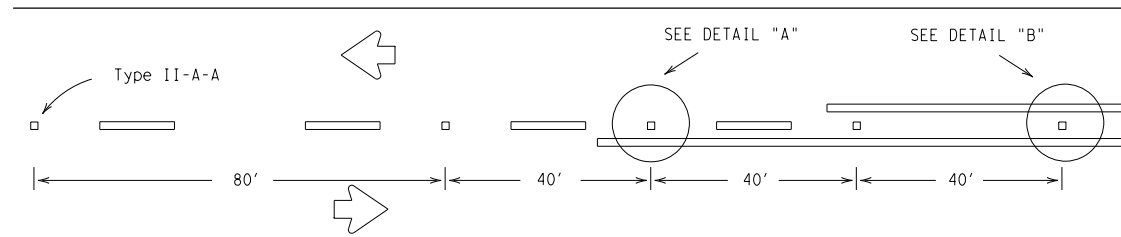


TYPICAL STANDARD  
 PAVEMENT MARKINGS

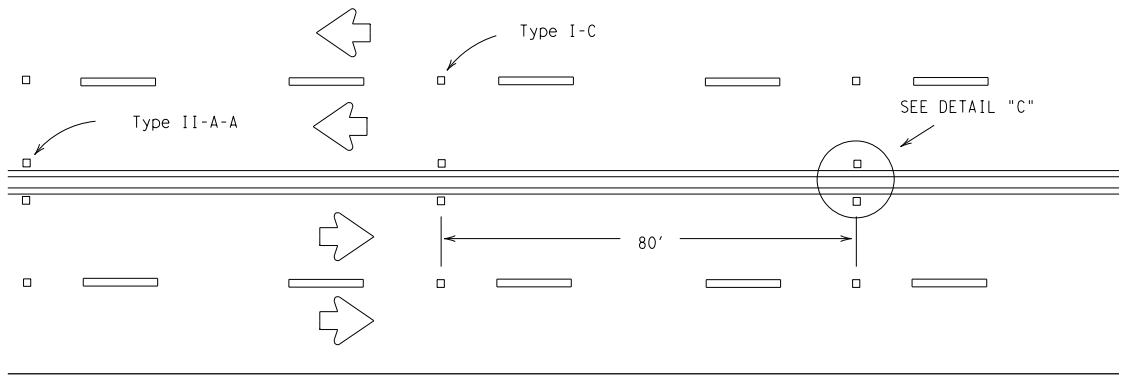
PM(1) - 12

© TxDOT November 1978		DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
REVISIONS		CONT	SECT	JOB	HIGHWAY
8-95	2-12	0915	12	576	VARIES
5-00		DIST	COUNTY		SHEET NO.
8-00		SAT	BEXAR		623
3-03					
22A					

# REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

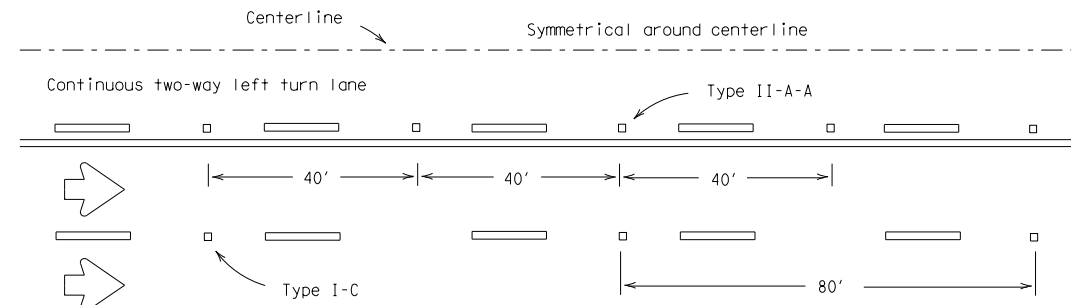


CENTERLINE FOR ALL TWO LANE ROADWAYS

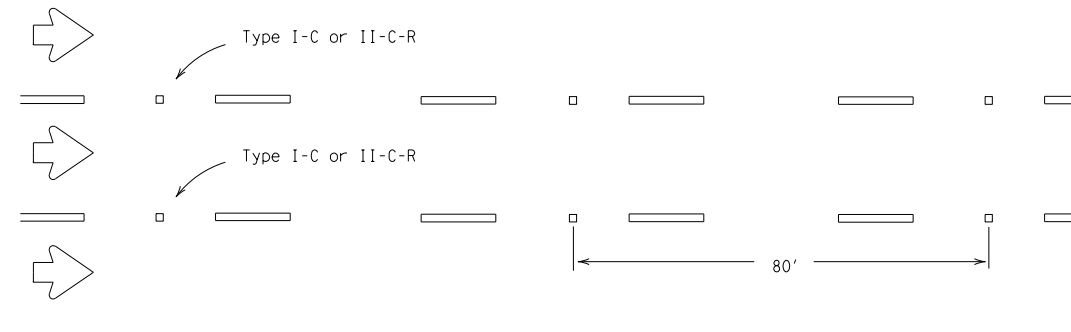


CENTERLINE & LANE LINES  
FOR FOUR LANE TWO-WAY HIGHWAYS

Raised pavement marker Type I-C, clear face toward normal traffic, shall be placed on 80-foot centers.

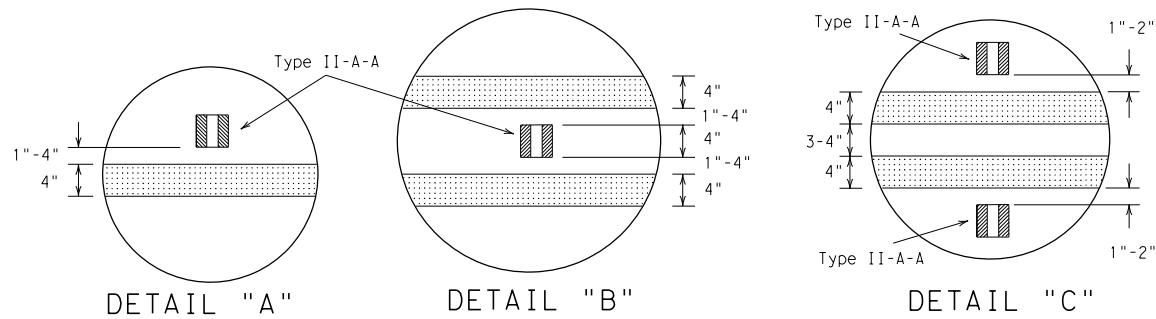


CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



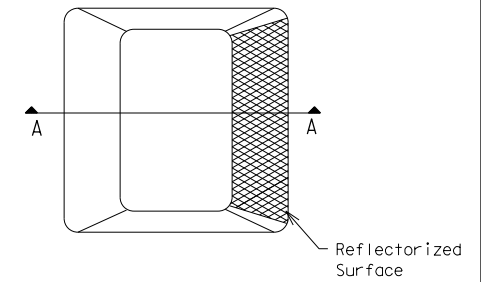
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

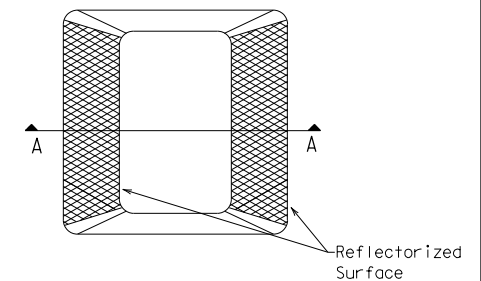


MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

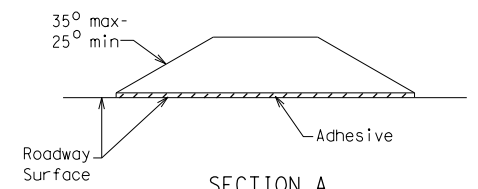
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

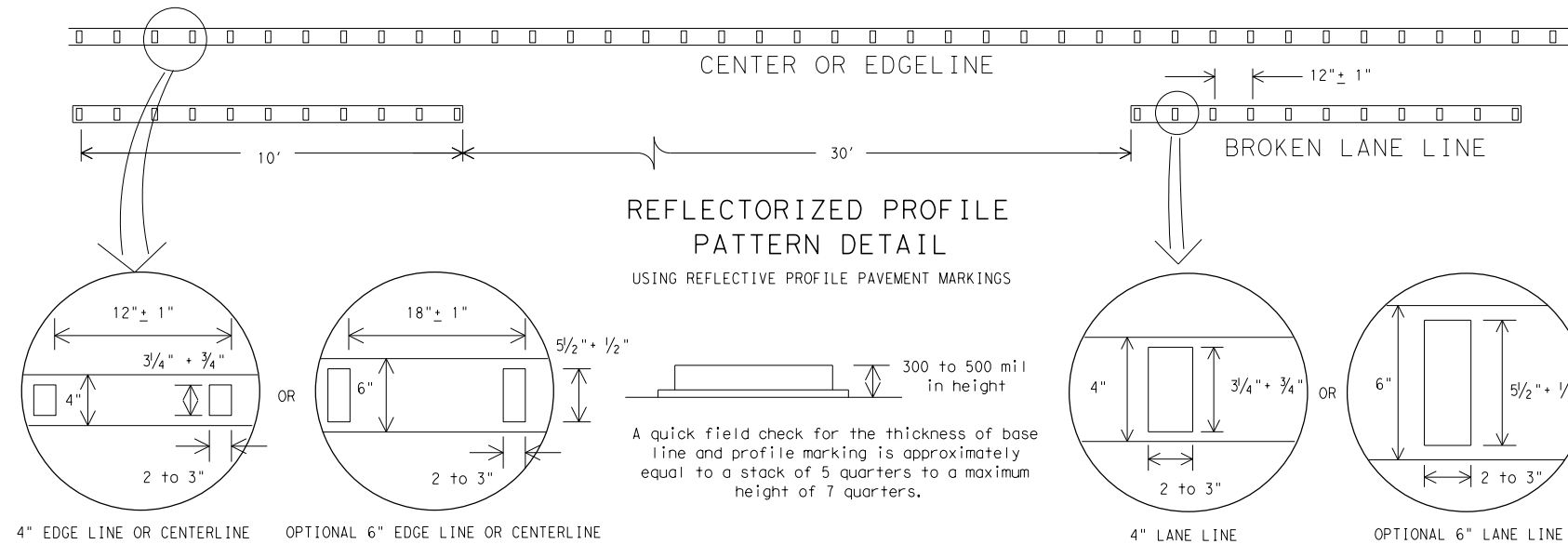


Type II (Top View)



RAISED PAVEMENT MARKERS

- GENERAL NOTES**
- All raised pavement markers placed in broken lines shall be placed in line with and midway between the stripes.
  - On concrete pavements the raised pavement markers should be placed to one side of the longitudinal joints.



**NOTE:**  
Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

**Texas Department of Transportation**  
 Traffic Operations Division

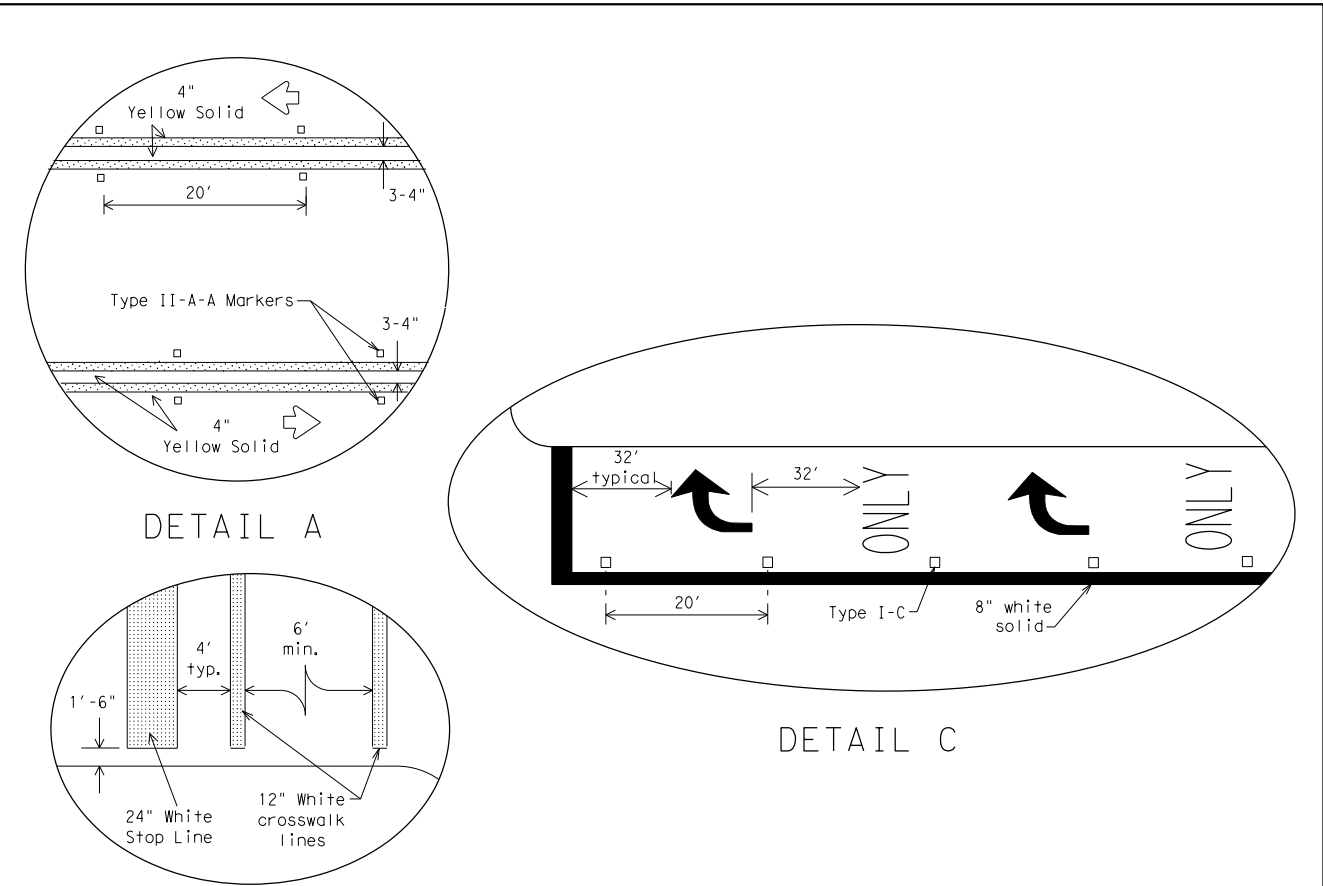
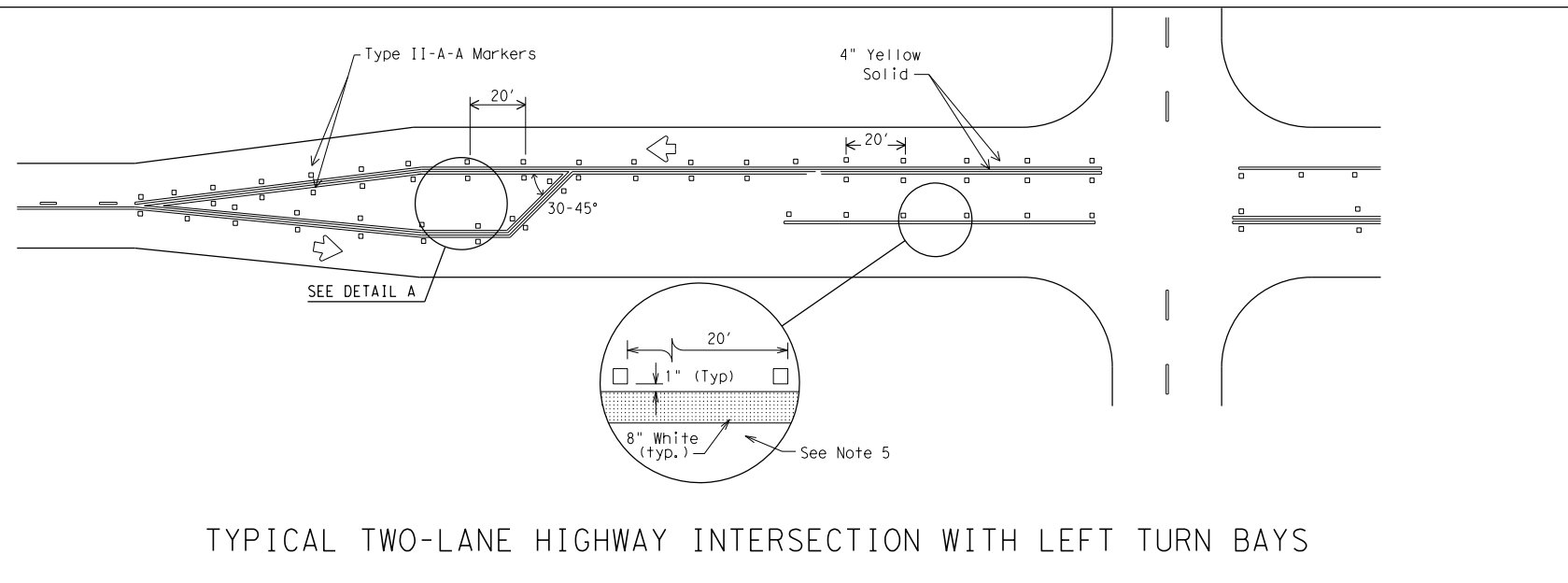
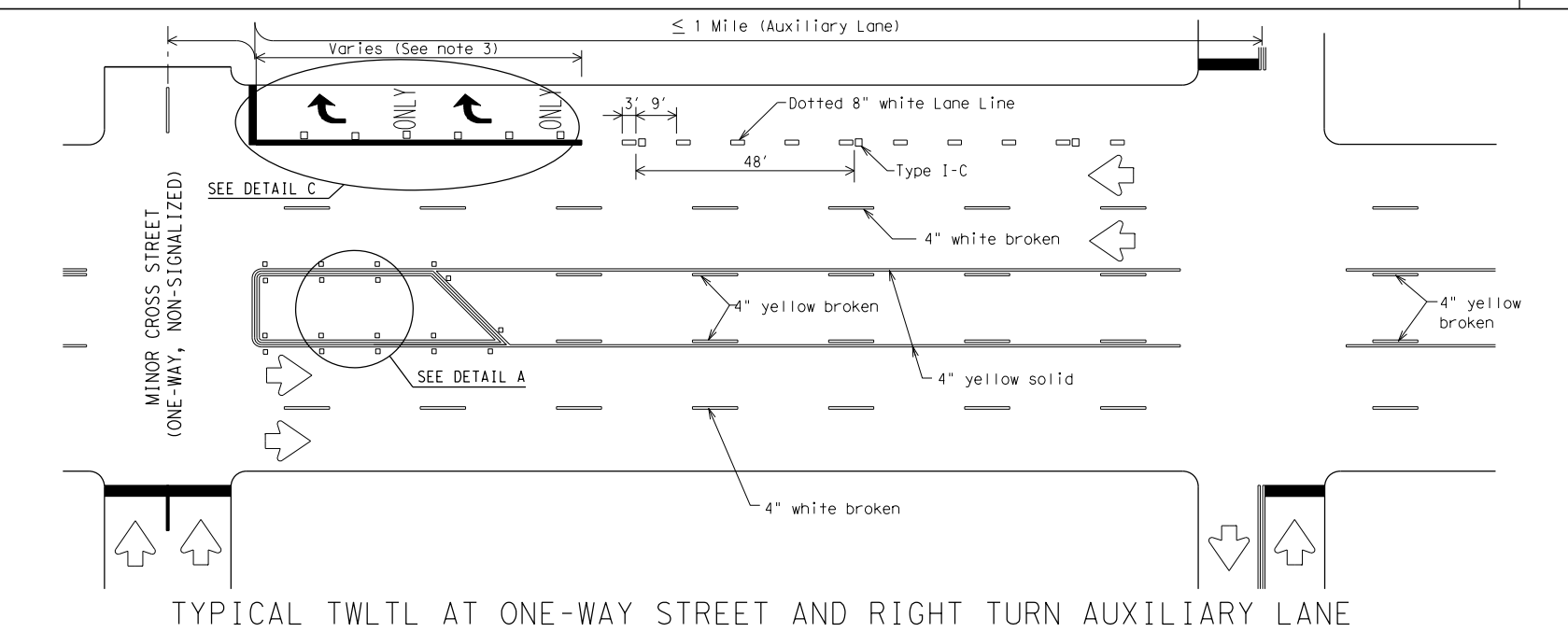
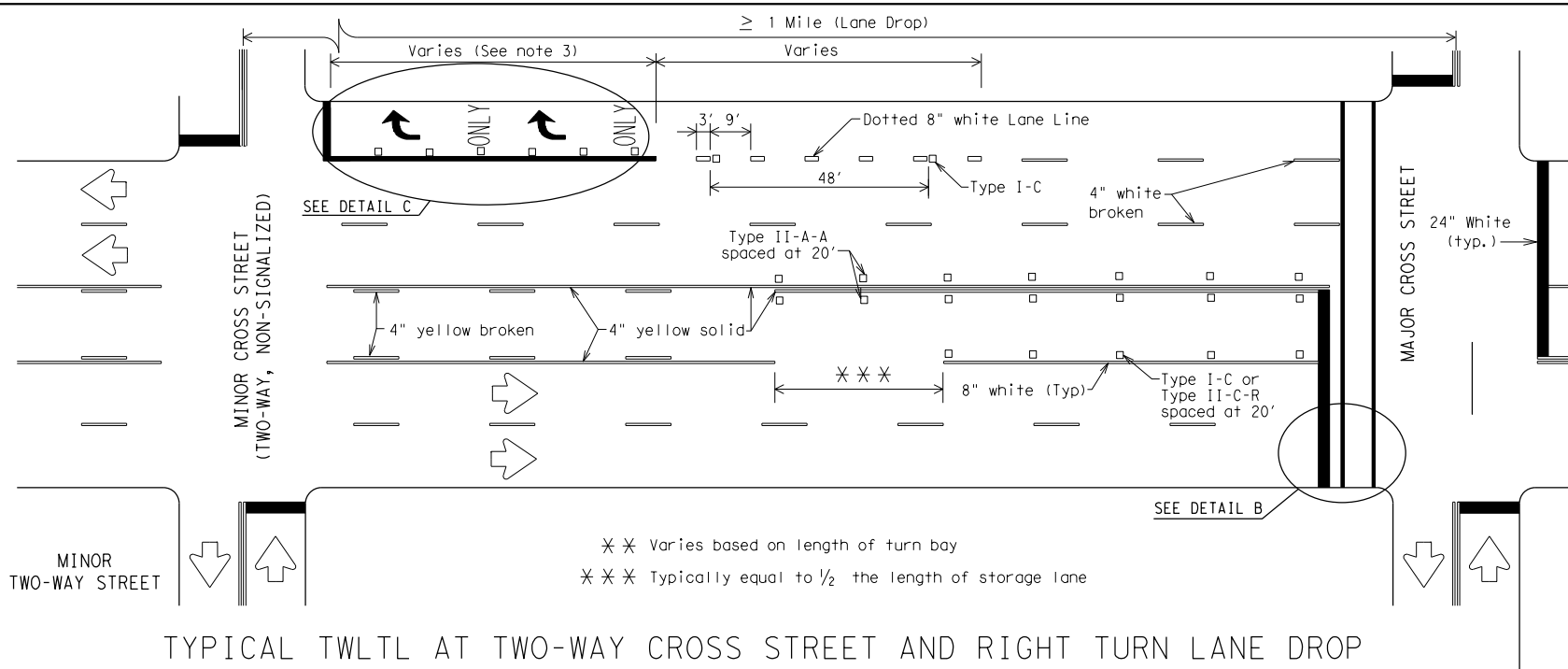
**POSITION GUIDANCE USING  
RAISED MARKERS  
REFLECTORIZED PROFILE  
MARKINGS**  
 PM(2) - 12

© TxDOT April 1977		DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
REVISIONS		CONT	SECT	JOB	HIGHWAY
4-92	2-10	0915	12	576	VARIES
5-00	2-12	DIST		COUNTY	SHEET NO.
8-00		SAT		BEXAR	624
2-08					

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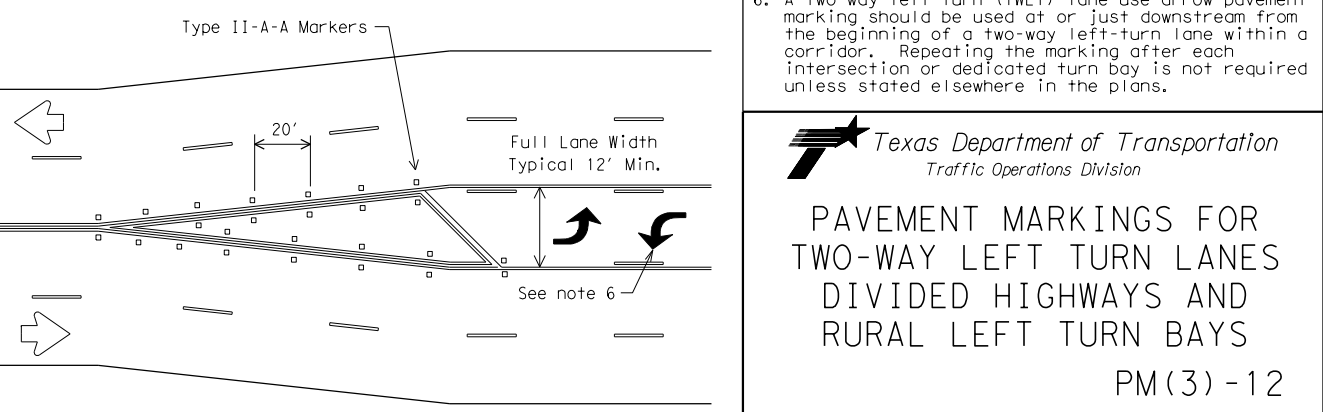
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MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.

- GENERAL NOTES**
- Refer elsewhere in plans for additional RPM placement and details.
  - Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows as shown in the Standard Highway Sign Designs for Texas.
  - When lane used word and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
  - Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used.
  - Raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Raised pavement marker Type II-C-R with divided highways and raised medians.
  - A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.



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 Traffic Operations Division

PAVEMENT MARKINGS FOR  
 TWO-WAY LEFT TURN LANES  
 DIVIDED HIGHWAYS AND  
 RURAL LEFT TURN BAYS

PM(3) - 12

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REVISIONS		CONT	SECT	JOB	HIGHWAY
5-00	2-12	0915	12	576	VARIES
8-00					
3-03		DIST	COUNTY		SHEET NO.
2-10		SAT	BEXAR		625

Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Drainage\1113507dam01.dgn



INLET					INLET COMPUTATIONS											
NO	TYPE	CONTROL	STATION	DRAINAGE AREA	Q <sub>0</sub> FROM AREA	CARRY OVER FLOW	TOTAL Q <sub>0</sub>	LONGITUDINAL SLOPE	CROSS SLOPE	DEPTH OF FLOW	ALLOWABLE PONDED WIDTH	PONDED WIDTH	INLET LENGTH	BY PASS FLOW	BYPASS TO STRUCTURE	
					CFS	CFS	CFS	FT/FT	FT/FT	FT	FT	FT	FT	CFS		
CI-A1	Type PCO Curb Inlet w/ 2 Ext (3'x5')	12.60 'LT	1744+80.00	A-1	4.94		4.94	0.05	0.02	0.19	12	9.72	14.0	1.22	CI-A1	
CI-A2	Type PCO Curb Inlet w/ 2 Ext (3'x5')	11.00 'LT	1747+50.66	A-2	2.93	1.22	4.15	0.05	0.02	0.18	12	9.11	14.0	0.82	CI-A2	
CI-A3	Type PCO Curb Inlet w/ 1 Ext (Left) (3'x5')	10.40 'LT	1749+06.00	A-3	7.28	0.82	8.09	0.05	0.02	0.23	12	11.70	9.5	4.52	CI-A3	
CI-A4	Type PCO Curb Inlet w/ 1 Ext (Left) (3'x5')	11.40 'LT	1750+50.00	A-4	3.06	4.52	7.57	0.05	0.02	0.23	12	11.41	9.5	4.11	CI-A4	
CI-A5	Type PCO Curb Inlet w/ 2 Ext (3'x5')	11.80 'LT	1751+84.50	A-5	1.17	4.11	5.28	0.05	0.02	0.20	12	9.97	14.0	1.41	CI-A5	
CI-A6	SA DIST CURB OPENING (10')	10.50 'LT	1753+30.00	A-6	1.54	1.41	2.96	0.05	0.02	0.14	12	6.94	10.0	0.44	OUTFALL	
CI-A11	Type PCO Curb Inlet (3'x5')	20.10 'LT	1744+80.00	A-11	1.01		1.01	---	---	n/a	n/a	n/a	5.0		n/a	
CI-A21	Type PCO Curb Inlet (3'x5')	18.50 'LT	1747+50.66	A-21	2.80		2.80	---	---	n/a	n/a	n/a	5.0		n/a	
CI-A31	Type PCO Curb Inlet (3'x5')	17.90 'LT	1749+06.00	A-31	1.11		1.11	---	---	n/a	n/a	n/a	5.0		n/a	
CI-A41	Type PCO Curb Inlet (3'x5')	18.90 'LT	1750+50.00	A-41	0.43		0.43	---	---	n/a	n/a	n/a	5.0		n/a	
CI-A51	Type PCO Curb Inlet (3'x5')	19.30 'LT	1751+84.50	A-51	0.25		0.25	---	---	n/a	n/a	n/a	5.0		n/a	
DI-A61	EXIST (TY Y-1)	30.64 'LT	1753+46.90	A-61	0.50		0.50	---	---	n/a	n/a	n/a	5.0		n/a	

RUNOFF COMPUTATIONS - RATIONAL METHOD						
AREA ID	AREA (ac)	COMPOSITE C <sub>s</sub>	CA	T <sub>c</sub> (MIN)	I <sub>10</sub> (IN/HR)	Q <sub>0</sub> (CFS)
A-1	0.70	0.90	0.63	10	7.83	4.94
A-2	0.43	0.88	0.37	10	7.83	2.93
A-3	1.04	0.89	0.93	10	7.83	7.28
A-4	0.46	0.84	0.39	10	7.83	3.06
A-5	0.18	0.84	0.15	10	7.83	1.17
A-6	0.24	0.83	0.20	10	7.83	1.54
A-11	0.18	0.73	0.13	10	7.83	1.01
A-21	0.47	0.75	0.36	10	7.83	2.80
A-31	0.24	0.60	0.14	10	7.83	1.11
A-41	0.10	0.56	0.05	10	7.83	0.43
A-51	0.07	0.49	0.03	10	7.83	0.25
A-61	0.13	0.49	0.06	10	7.83	0.50

- LEGEND**
- DRAINAGE AREA BOUNDARY
  - Ⓚ DRAINAGE AREA ID
  - FLOW ARROW

DESIGN  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

REV. NO.	DATE	DESCRIPTION	BY

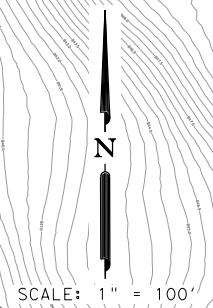
**PAPE-DAWSON ENGINEERS**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SH 16 BANDERA ROAD  
 DRAINAGE AREA  
 MAP

GRASS HILL DR TO SENECA DR

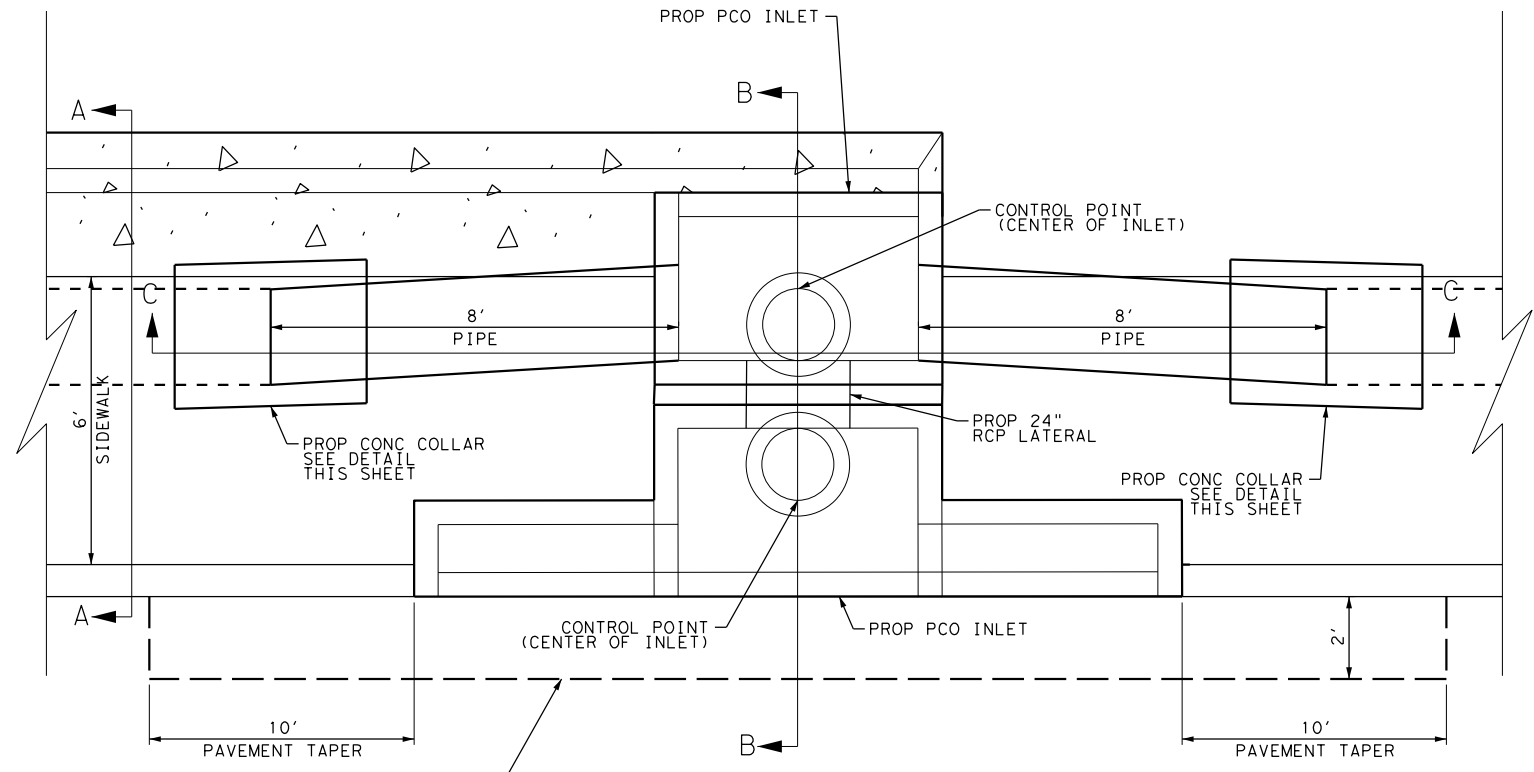
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CHK DWG:	SAT	BEXAR	0915	12	576	626





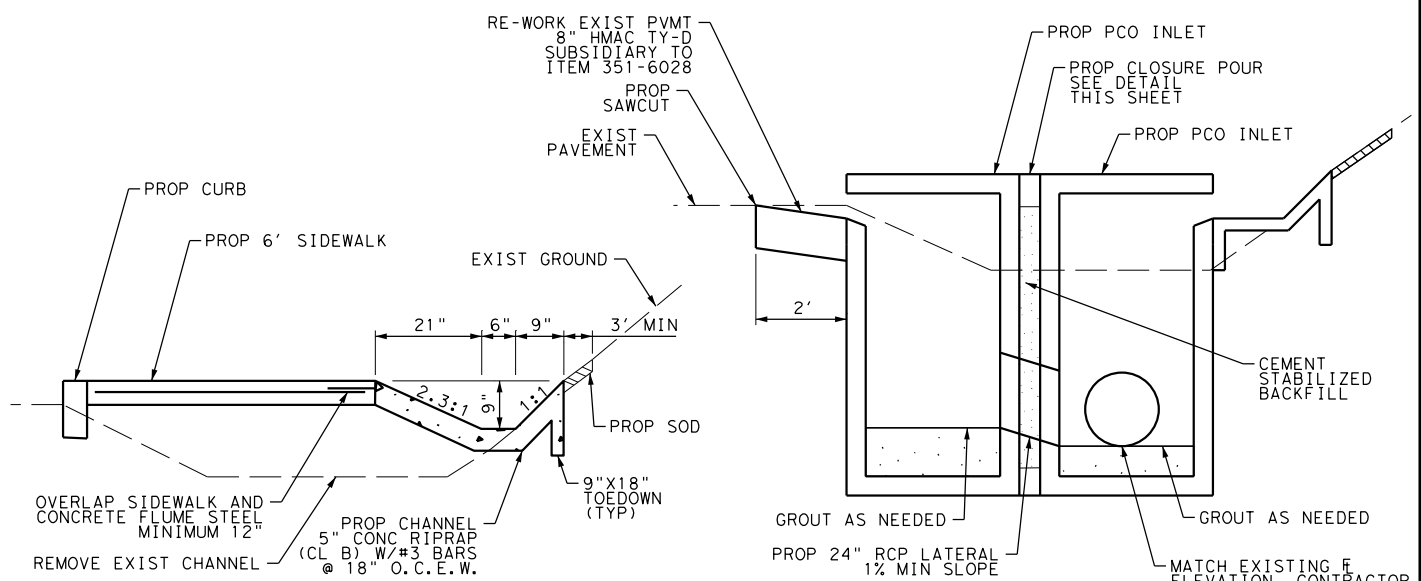
Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\Drainage\1113507drndetail.dgn



**STORM SEWER CONNECTION  
DETAIL**  
N. T. S.

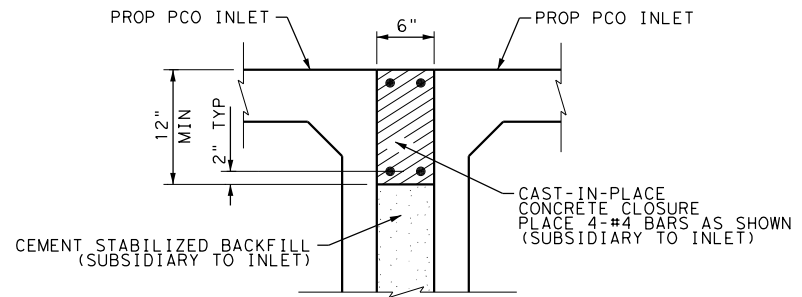
SAW CUT AND RE-WORK EXIST PAVEMENT TO ESTABLISH 3" GUTTER DEPRESSION AT FACE OF CURB



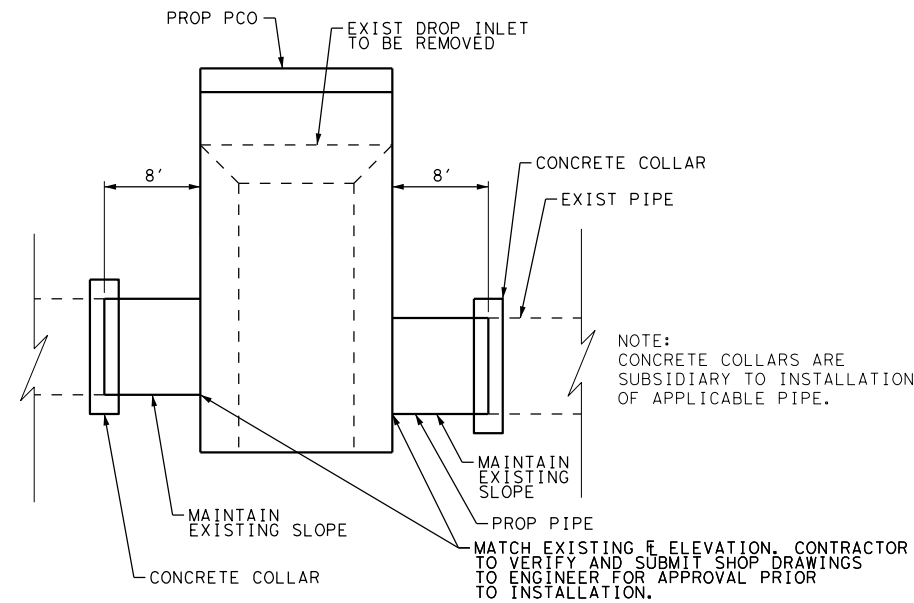
**STORM SEWER  
SECTION A-A**  
N. T. S.

**STORM SEWER  
SECTION B-B**  
N. T. S.

MATCH EXISTING F ELEVATION. CONTRACTOR TO VERIFY AND SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

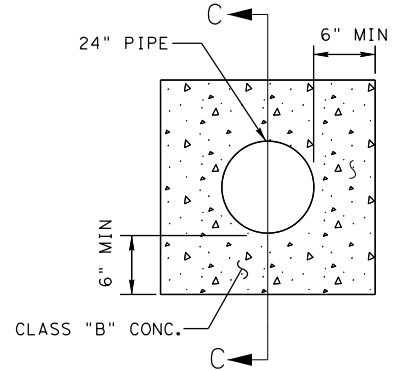


**CLOSURE POUR  
DETAIL**  
N. T. S.

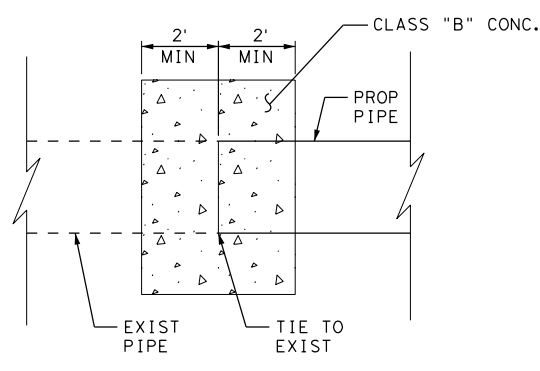


**STORM SEWER  
SECTION C-C**  
N. T. S.

NOTE: CONCRETE COLLARS ARE SUBSIDIARY TO INSTALLATION OF APPLICABLE PIPE.  
MATCH EXISTING F ELEVATION. CONTRACTOR TO VERIFY AND SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.



**CONCRETE COLLAR**  
N. T. S.



**CONCRETE COLLAR  
SECTION C-C**  
N. T. S.

DESIGN

STATE OF TEXAS  
  
 JOHN A. TYLER, P.E.  
 5/3/2019 DATE

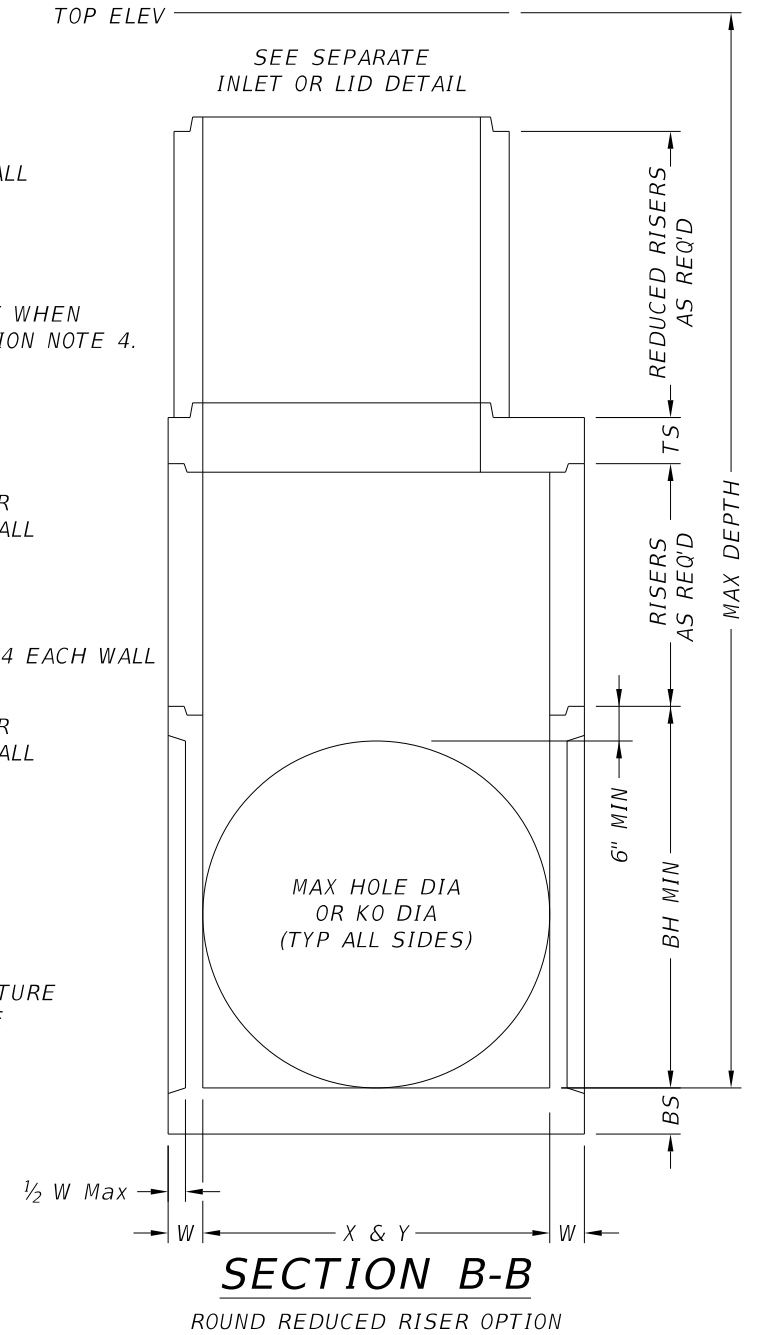
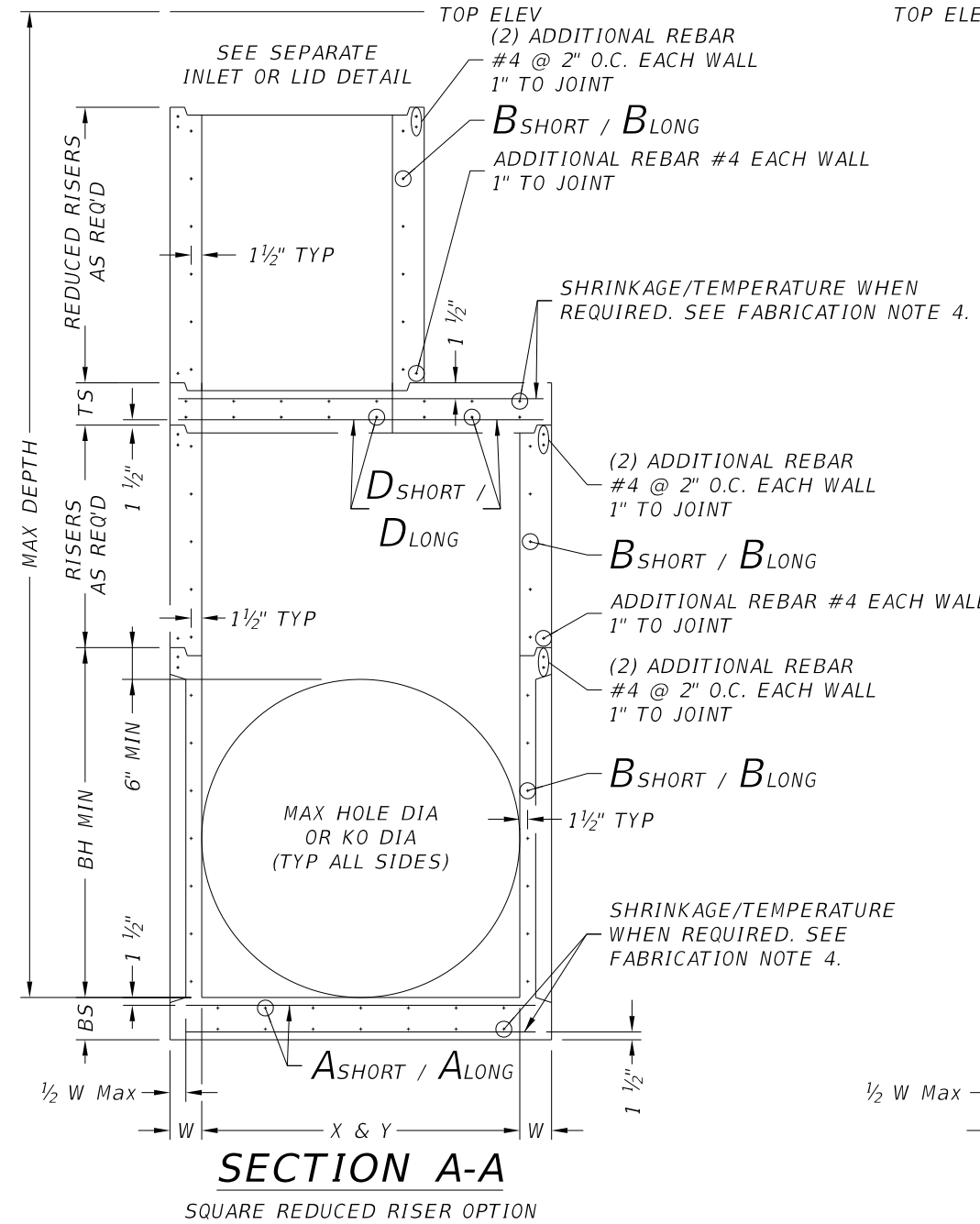
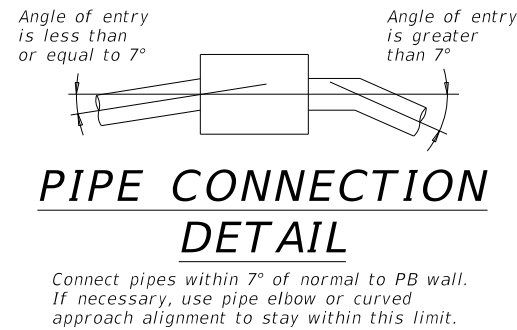
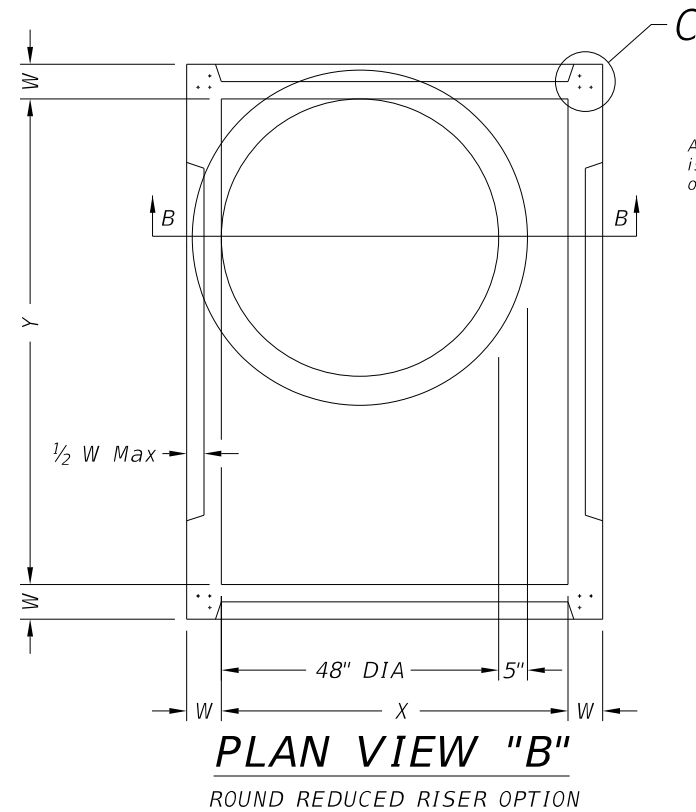
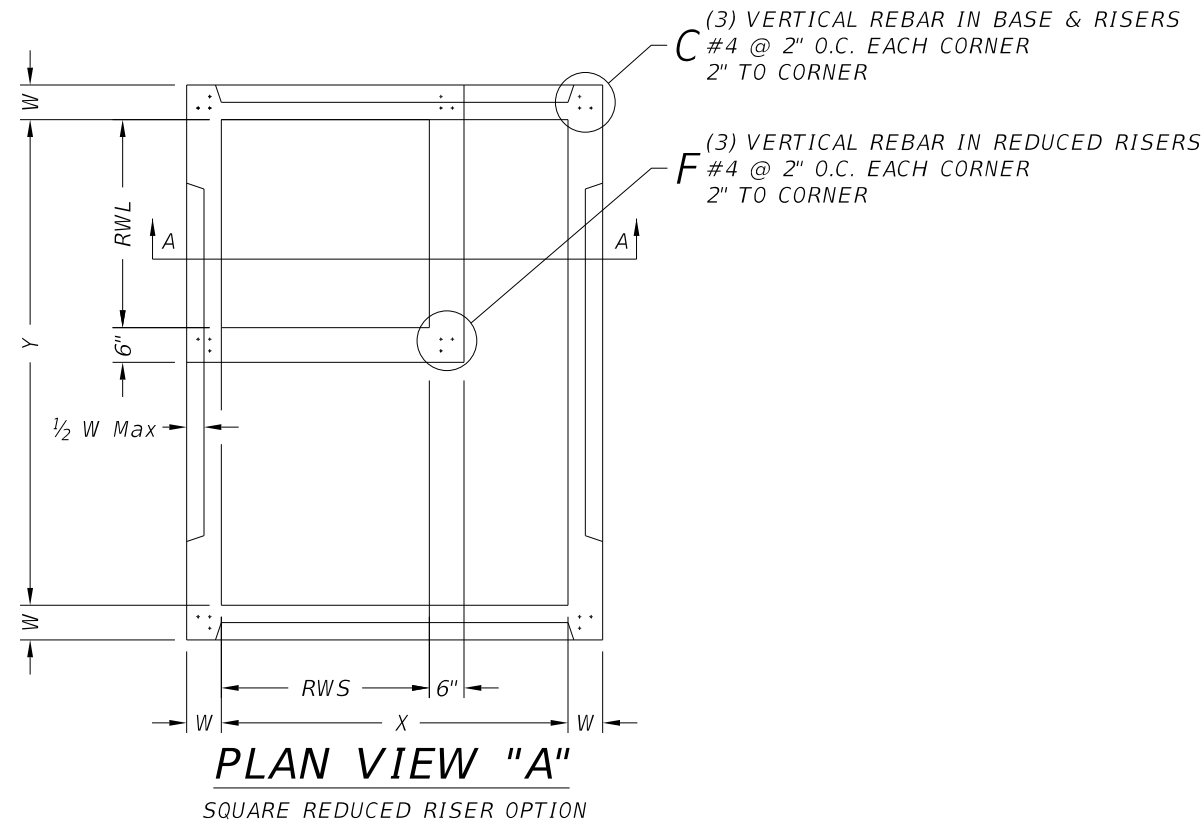
REVIEW AND APPROVAL

STATE OF TEXAS  
  
 JAMES A. LUTZ, P.E.  
 5/3/2019 DATE

REV. NO.	DATE	DESCRIPTION	BY
 SAN ANTONIO   AUSTIN   HOUSTON   FORT WORTH   DALLAS 2000 NW LOOP 410   SAN ANTONIO, TX 78213   210.375.9000 TBPE FIRM REGISTRATION #470   TBPLS FIRM REGISTRATION #10028800			
 © 2019			
SH 16 BANDERA RD DRAINAGE DETAILS			
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915 12 576 627

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DATE: 5/3/2019 6:35:28 PM  
 FILE: P:\11\35\08\Des\ign\C:\i\Standards\Drainage\prest01.dgn



**FABRICATION NOTES:**

1. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
2. Provide Grade 60 reinforcing steel or equivalent area of WWR.
3. Provide typical clear cover of 1 1/2" to reinforcing steel at interior or exterior walls.
4. Walls or slabs with a thickness of 8" or greater require shrinkage and temperature reinforcing steel. Provide steel area = 0.11 in<sup>2</sup>/ft each way.
5. No substitution is allowed for vertical and horizontal #4 bars in corners.
6. Manufacture base and risers to nearest 3" increment.
7. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is 3/4".
8. Provide lifting devices in conformance with Manufacturer's recommendations.
9. See sheet PDD for sizes, dimensions, and reinforcing steel not shown.

**INSTALLATION NOTES:**

1. Inverts (benching) to be provided by Contractor. Concrete or mortar used for invert is subsidiary to specified inlet or manhole.
2. Seal tongue and groove joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or 1/2 the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.
4. For rigid pipe, cut hole in thin wall panel (KO) 4" Max, 2" Min larger than pipe OD.
5. For flexible pipe, consult boot/seal Manufacturer's specification for placement tolerance and hole size. Center pipe in hole and install boot/seal per Manufacturer's specification.

**GENERAL NOTES:**

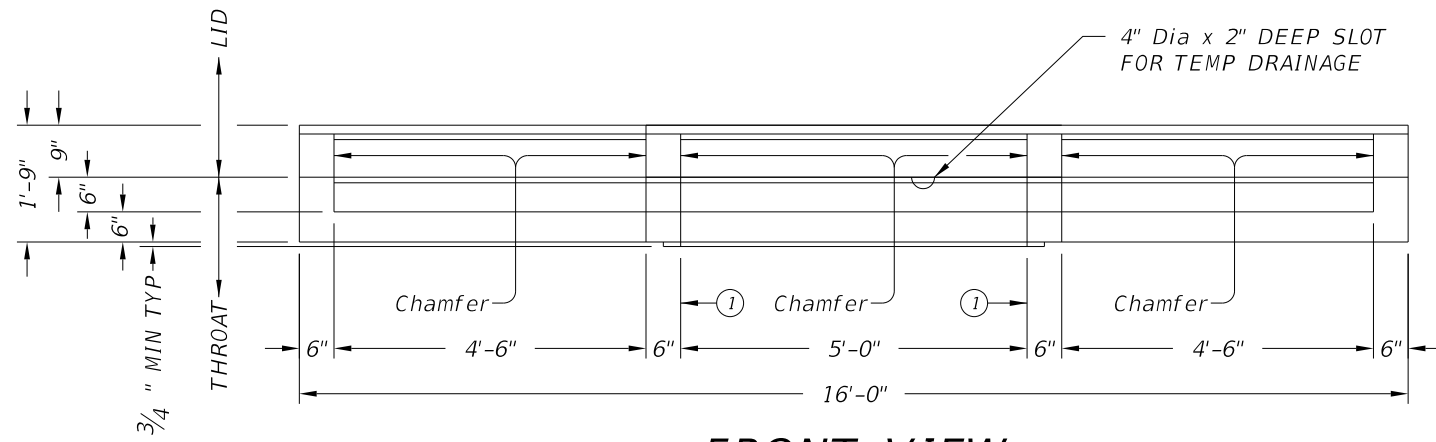
1. Precast Base consists of base slab, base unit, risers (as required), reducing slab (as required), and reduced risers (as required). See sheet PDD for sizes.
2. Designed according to ASTM C913.
3. Payment for precast base is subsidiary to the specified inlet, per Item 465, "Junction Boxes, Manholes, and Inlets."

Cover dimensions are clear dimensions, unless noted otherwise.

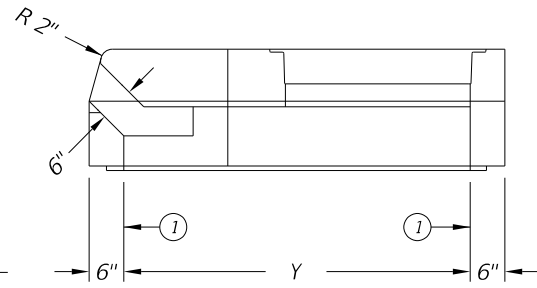
HL93 LOADING		Texas Department of Transportation		Bridge Division Standard
<b>PRECAST BASE</b>				
<b>PB</b>				
FILE: prest01.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2015	CONTRACT	SECTION	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIABLES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	628	

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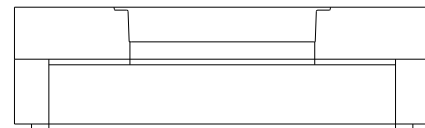
DATE: 5/3/2019 6:35:30 PM  
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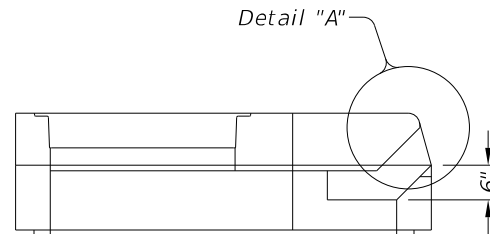
**FRONT VIEW**  
(SHOWING LEFT AND RIGHT EXTENSIONS)



**RIGHT VIEW**

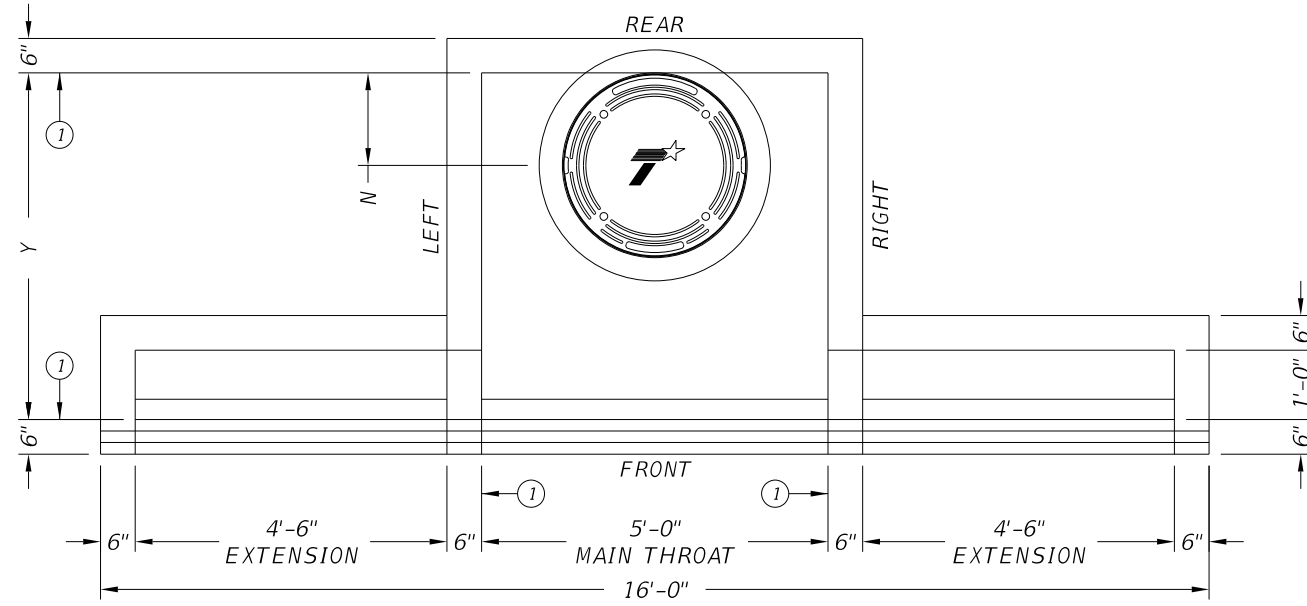


**REAR VIEW**  
(EXTENSIONS NOT SHOWN)

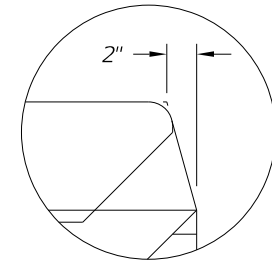


**LEFT VIEW**

① Matches inside face of wall of precast base or riser below inlet.



**PLAN VIEW**  
(SHOWING LEFT AND RIGHT EXTENSIONS)



**DETAIL "A"**

HS20 LOADING SHEET 1 OF 2



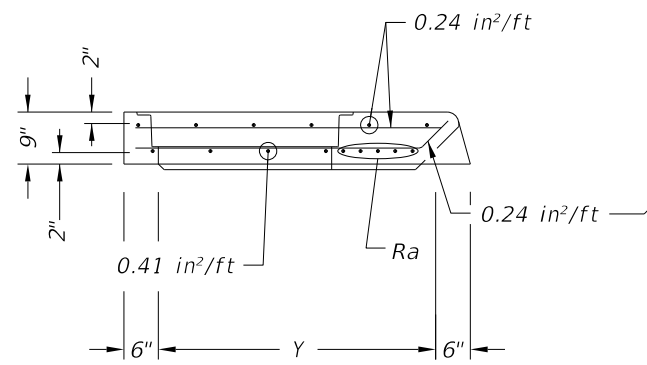
**PRECAST CURB INLET  
OUTSIDE ROADWAY**

PCO

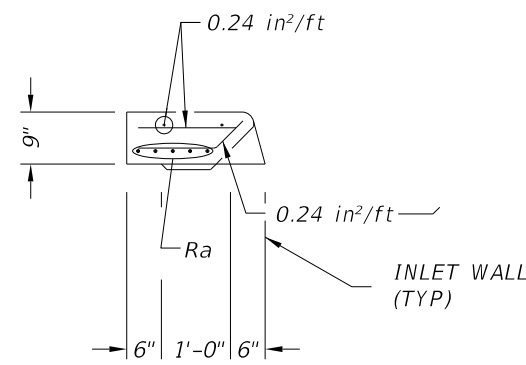
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©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	629	

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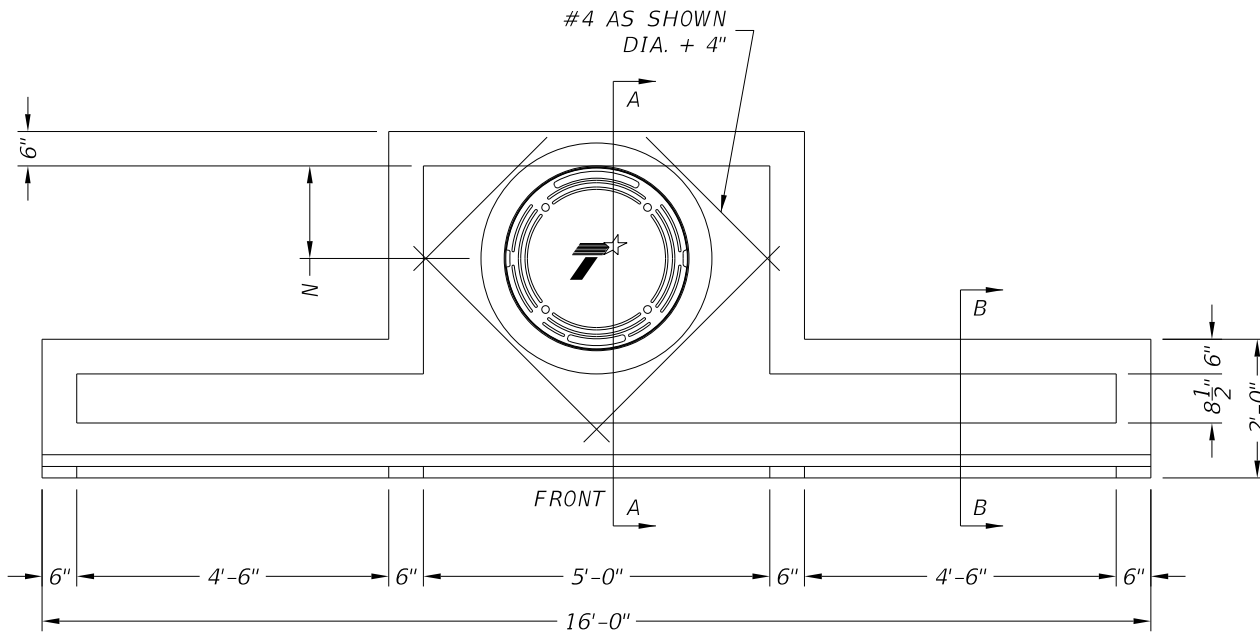
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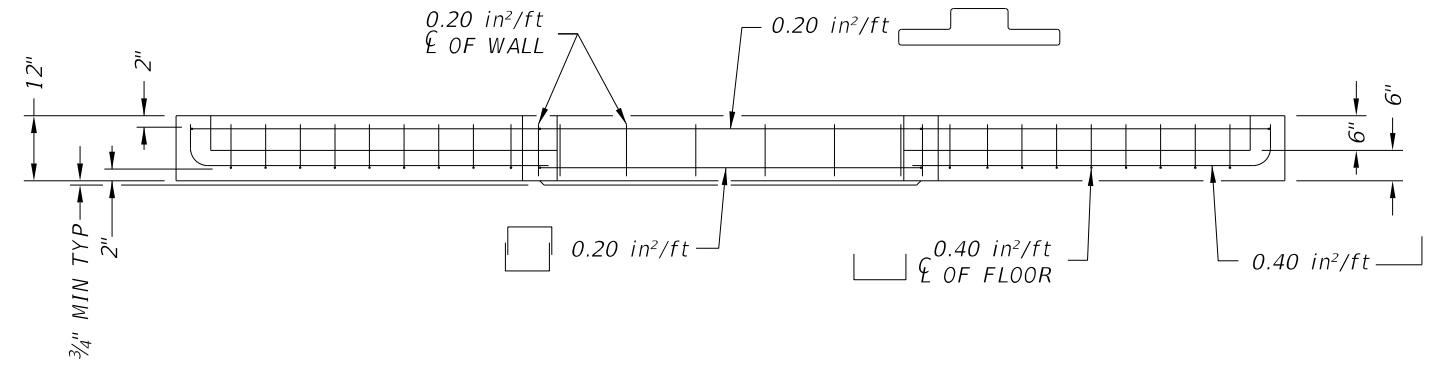
**LID SECTION A-A**



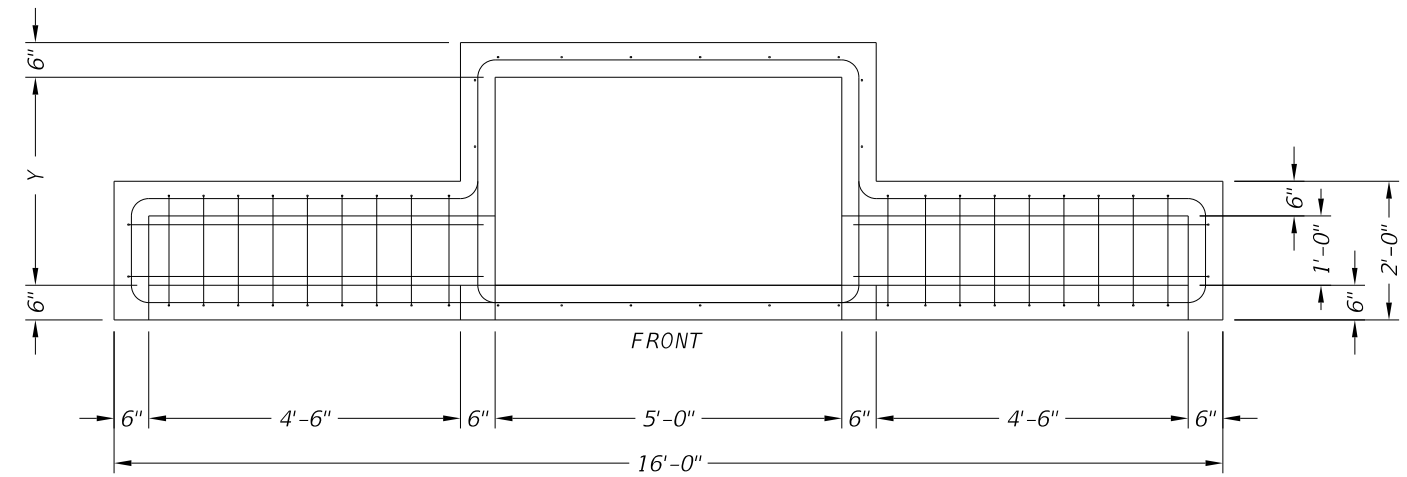
**LID SECTION B-B**



**LID PLAN VIEW**  
 (SHOWING LEFT AND RIGHT EXTENSIONS)



**THROAT ELEVATION VIEW**  
 (SHOWING LEFT AND RIGHT EXTENSIONS)



**THROAT PLAN VIEW**  
 (SHOWING LEFT AND RIGHT EXTENSIONS)

**FABRICATION NOTES:**

1. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
2. Provide Grade 60 reinforcing steel or equivalent area of WWR.
3. Extensions may be right, left, both or none. Provide extensions as specified elsewhere in the plans.
4. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is 3/4". Lid may employ a butt joint with dowels at the Contractor's option.
5. Provide lifting devices in conformance with Manufacturer's recommendations.
6. Provide cast iron solid cover, unless noted otherwise elsewhere in the plans.
7. Chamfer vertical edges of inlet lid 3/4" as shown in Front View, sheet 1.

**INSTALLATION NOTES:**

1. Inlet throat and lid are not intended for direct traffic. Do not place in roadway.
2. Seal tongue and groove joints and butt joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or 1/2 the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.

**GENERAL NOTES:**

1. Designed according to ASTM C913.
2. Open area of main throat = 360 sq in. Open area of one extension throat = 324 sq in.
3. Payment for inlet is per Item 465, "Junction Boxes, Manholes, and Inlets" by type, size, and extension placement. Extensions are subsidiary to inlet.

Cover dimensions are clear dimensions, unless noted otherwise.

SIZE (Y)	N	MH DIA*	Ra
3'	9"	18"	(4) #5 Additional
4'	16"	32"	(4) #5 Additional
5'	16"	32"	(4) #5 Additional
6'	16"	32"	(4) #5 Additional

\*Nominal ring and cover size.

HS20 LOADING SHEET 2 OF 2



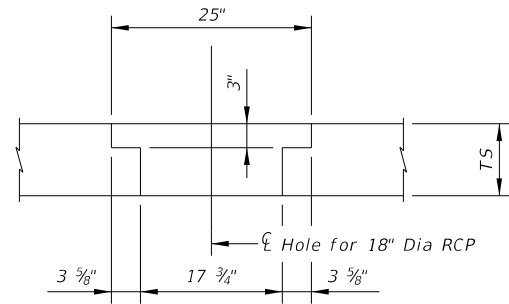
**PRECAST CURB INLET  
 OUTSIDE ROADWAY**

PCO

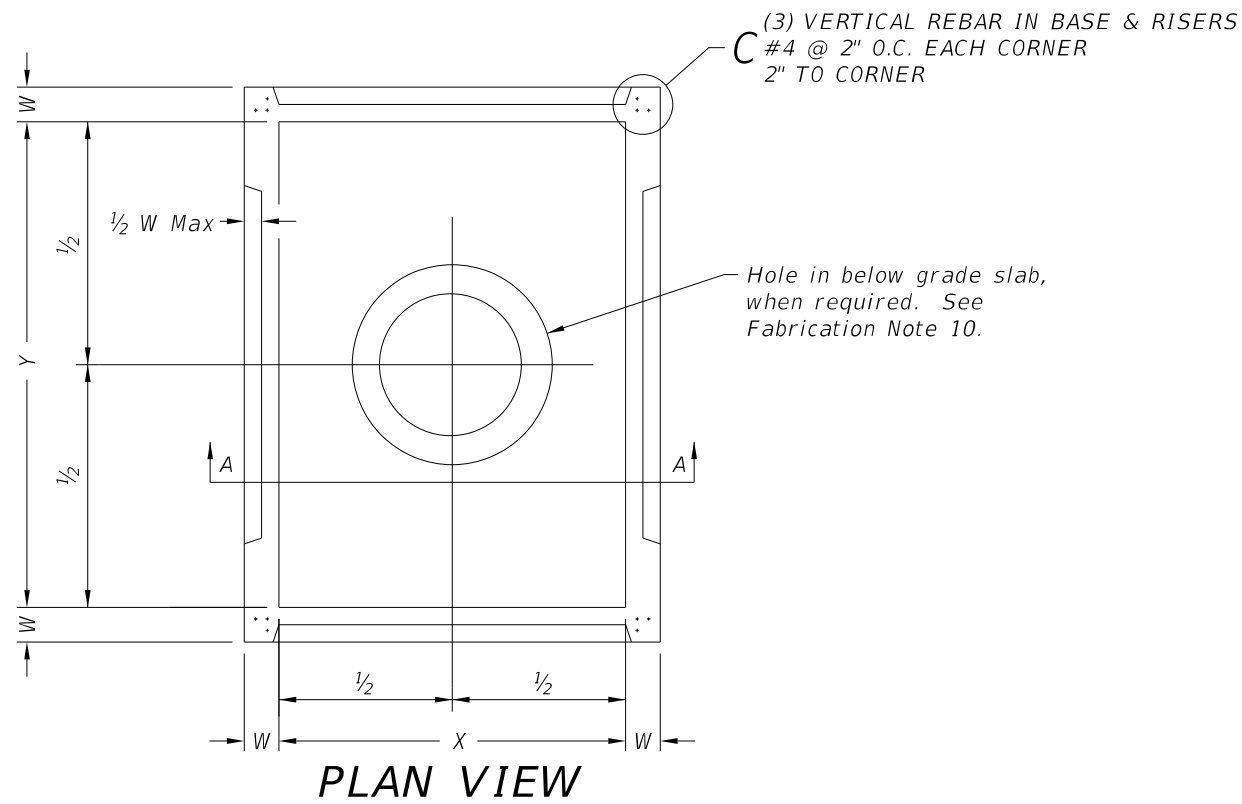
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©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	630	

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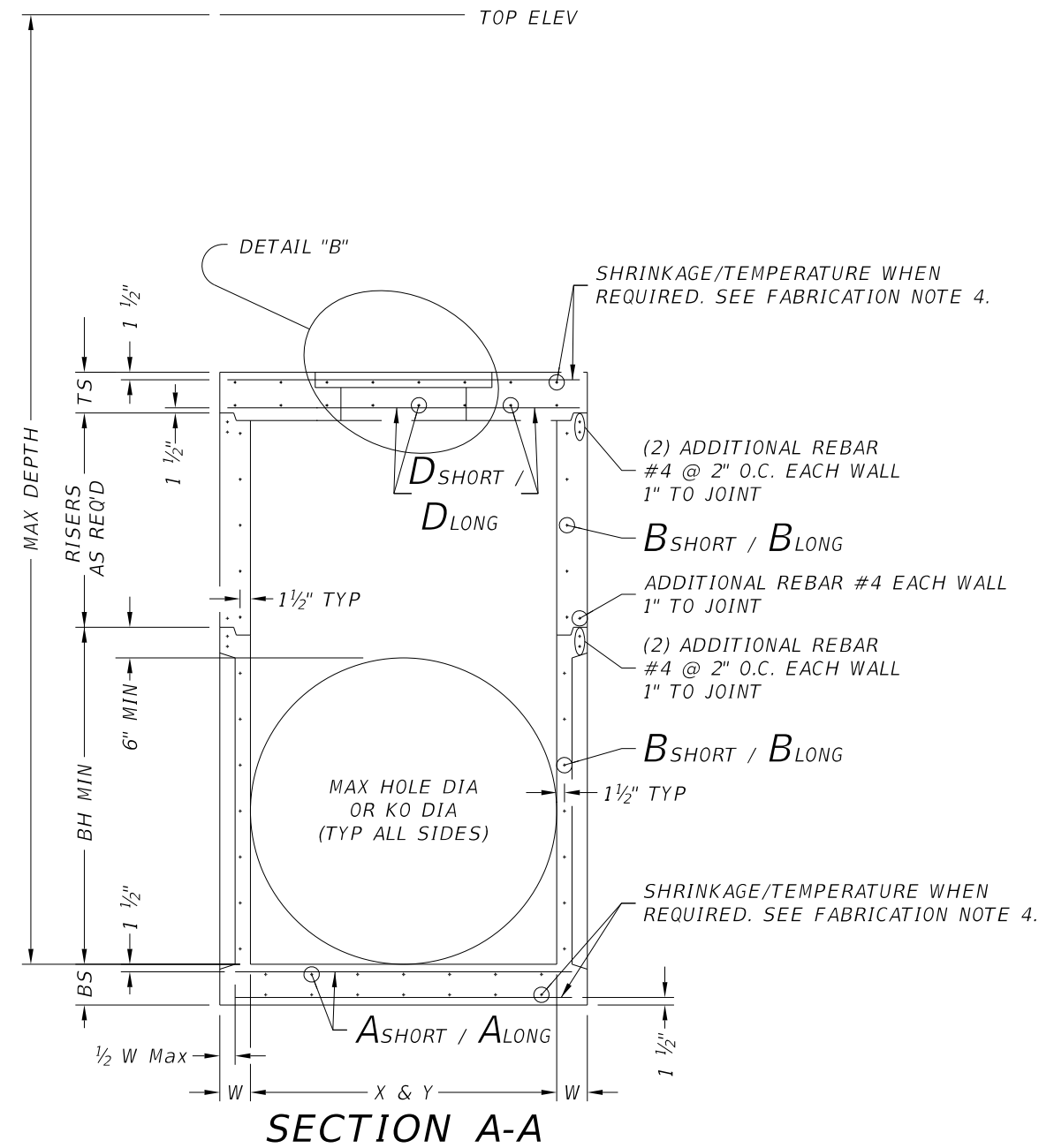
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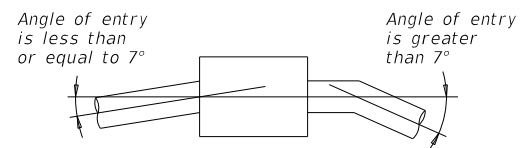
**DETAIL "B"**



**PLAN VIEW**



**SECTION A-A**



**PIPE CONNECTION DETAIL**

Connect pipes within 7° of normal to PJB wall. If necessary, use pipe elbow or curved approach alignment to stay within this limit.

**FABRICATION NOTES:**

1. Provide Class "H" concrete in accordance with Item 421 and having a minimum compressive strength of 5,000 psi.
2. Provide Grade 60 reinforcing steel or equivalent area of WWR.
3. Provide typical clear cover of 1 1/2" to reinforcing steel at interior or exterior walls.
4. Walls or slabs with a thickness of 8" or greater require shrinkage and temperature reinforcing steel. Provide steel area = 0.11 in<sup>2</sup>/ft each way.
5. No substitution is allowed for vertical and horizontal #4 bars in corners.
6. Manufacture base and risers to nearest 3" increment.
7. Design tongue and groove joints for full closure on both shoulders. Minimum spigot depth is 3/4".
8. Provide lifting devices in conformance with Manufacturer's recommendations.
9. See sheet PDD for sizes, dimensions, and reinforcing steel not shown.
10. Provide hole in below grade slab only when PJB is installed with inlet type POD.

**INSTALLATION NOTES:**

1. Inverts (benching) to be provided by Contractor. Concrete or mortar used for invert is subsidiary to junction box.
2. Seal tongue and groove joints with preformed or bulk mastic in conformance with Manufacturer's recommendations. Tongue and groove joints may be grouted no more than 1" between each section, or 1/2 the joint depth, whichever is greater.
3. Do not grout rubber gasket joints without Manufacturer's recommendation.
4. For rigid pipe, cut hole in thin wall panel (KO) 4" Max, 2" Min larger than pipe OD.
5. For flexible pipe, consult boot/seal Manufacturer's specification for placement tolerance and hole size. Center pipe in hole and install boot/seal per Manufacturer's specification.

**GENERAL NOTES:**

1. Precast Junction Box consists of base slab, base unit, risers (as required), and below grade slab. See sheet PDD for sizes.
2. Designed according to ASTM C913.
3. Payment for junction box is per Item 465 "Junction Boxes, Manholes, and Inlets" by type and size.

Cover dimensions are clear dimensions, unless noted otherwise.

HL93 LOADING



**PRECAST JUNCTION BOX**

**PJB**

FILE: prest09.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT January 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	631	

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Size	MAX DEPTH = 15 ft. to top of BASE SLAB											MAX DEPTH = 25 ft. to top of BASE SLAB											Min Height (See Gen Note 3)	Max HOLE DIA (See Fab Note 2)	Max KO DIA (See Fab Note 2)	
	Base Slab			Base Unit or Riser Walls			Below Grade Slab (w/PJB) Reducing Slab (w/PB)					Base Slab			Base Unit or Riser Walls			Below Grade Slab (w/PJB) Reducing Slab (w/PB)								
	Short Span Reinf. Steel Area	Long Span Reinf. Steel Area	Thickness	Short Span Reinf. Steel Area	Long Span Reinf. Steel Area	Thickness	Reduced Riser Size	Short Span Reinf. Steel Area	Long Span Reinf. Steel Area	Thickness	Short Span Reinf. Steel Area	Long Span Reinf. Steel Area	Thickness	Short Span Reinf. Steel Area	Long Span Reinf. Steel Area	Thickness	Reduced Riser Size	Short Span Reinf. Steel Area	Long Span Reinf. Steel Area	Thickness	Reduced Riser Size	Short Span Reinf. Steel Area				Long Span Reinf. Steel Area
X x Y	Ashort	Along	BS	Bshort	Blong	W	RWSxRWL or ID	Dshort	Dlong	TS	Ashort	Along	BS	Bshort	Blong	W	RWSxRWL or ID	Dshort	Dlong	TS	BH MIN	HOLE DIA	KO DIA			
ft.	in <sup>2</sup> /ft	in <sup>2</sup> /ft	in.	in <sup>2</sup> /ft	in <sup>2</sup> /ft	in.	ft. **	in <sup>2</sup> /ft	in <sup>2</sup> /ft	in.	in <sup>2</sup> /ft	in <sup>2</sup> /ft	in.	in <sup>2</sup> /ft	in <sup>2</sup> /ft	in.	ft. **	in <sup>2</sup> /ft	in <sup>2</sup> /ft	in.	ft.	in.	in.			
<b>Precast Junction Box (PJB)</b>																										
3x3	0.23	0.23	6	0.19	0.19	6	N/A	0.37	0.37	9	0.29	0.29	6	0.24	0.24	6	N/A	0.37	0.37	9	3.5	36	36			
4x4	0.29	0.29	6	0.24	0.24	6	N/A	0.41	0.41	9	0.47	0.47	6	0.38	0.38	6	N/A	0.41	0.41	9	4.5	48	48			
3x5	0.29	0.18	6	0.19	0.35	6	N/A	0.48	0.48	9	0.39	0.18	6	0.23	0.59	6	N/A	0.48	0.48	9	3.5	36/60	36/60			
4x5	0.36	0.18	6	0.22	0.34	6	N/A	0.42	0.42	9	0.53	0.26	6	0.39	0.59	6	N/A	0.42	0.42	9	4.5	48/60	48/60			
5x5	0.36	0.36	6	0.34	0.34	6	N/A	0.43	0.43	9	0.62	0.62	6	0.59	0.59	6	N/A	0.43	0.43	9	5.5	60	60			
5x6	0.27	0.27	9	0.34	0.45	6	N/A	0.48	0.48	9	0.47	0.45	9	0.38	0.54	8	N/A	0.48	0.48	9	5.5	60/72	60/72			
6x6	0.27	0.27	9	0.45	0.45	6	N/A	0.56	0.56	9	0.52	0.52	9	0.54	0.54	8	N/A	0.56	0.56	9	6.5	72	72			
8x8	0.46	0.46	9	0.51	0.51	8	N/A	0.45	0.45	12	0.87	0.87	9	0.59	0.59	10	N/A	0.45	0.45	12	8.5	96	72			
<b>Precast Base (PB)</b>																										
3x3	0.23	0.23	6	0.19	0.19	6	N/A	N/A	N/A	N/A	0.29	0.29	6	0.24	0.24	6	N/A	N/A	N/A	N/A	3.5	36	36			
4x4	0.29	0.29	6	0.24	0.24	6	N/A	N/A	N/A	N/A	0.47	0.47	6	0.38	0.38	6	N/A	N/A	N/A	N/A	4.5	48	48			
3x5	0.29	0.18	6	0.19	0.35	6	3x3	0.30	0.34	9	0.39	0.18	6	0.23	0.59	6	3x3	0.40	0.40	9	3.5	36/60	36/60			
4x5	0.36	0.18	6	0.22	0.34	6	3x3	0.30	0.30	9	0.53	0.26	6	0.39	0.59	6	3x3	0.46	0.37	9	4.5	48/60	48/60			
4x5	0.36	0.18	6	0.22	0.34	6	4x4	0.30	0.30	9	0.53	0.26	6	0.39	0.59	6	4x4	0.39	0.39	9	4.5	48/60	48/60			
4x5	0.36	0.18	6	0.22	0.34	6	48"	0.39	0.39	9	0.53	0.26	6	0.39	0.59	6	48"	0.47	0.47	9	4.5	48/60	48/60			
4x5	0.36	0.18	6	0.22	0.34	6	3x5	0.33	0.40	9	0.53	0.26	6	0.39	0.59	6	3x5	0.48	0.48	9	4.5	48/60	48/60			
5x5	0.36	0.36	6	0.34	0.34	6	3x3	0.34	0.34	9	0.62	0.62	6	0.59	0.59	6	3x3	0.53	0.53	9	5.5	60	60			
5x5	0.36	0.36	6	0.34	0.34	6	4x4	0.36	0.36	9	0.62	0.62	6	0.59	0.59	6	4x4	0.64	0.64	9	5.5	60	60			
5x5	0.38	0.38	6	0.34	0.34	6	48"	0.36	0.36	9	0.62	0.62	6	0.59	0.59	6	48"	0.64	0.64	9	5.5	60	60			
5x5	0.36	0.36	6	0.34	0.34	6	3x5	0.34	0.40	9	0.62	0.62	6	0.59	0.59	6	3x5	0.53	0.53	9	5.5	60	60			
5x6	0.31	0.31	9	0.34	0.45	6	3x3	0.34	0.34	9	0.47	0.45	9	0.38	0.54	8	3x3	0.61	0.50	9	5.5	60/72	60/72			
5x6	0.27	0.27	9	0.34	0.45	6	4x4	0.36	0.45	9	0.47	0.45	9	0.38	0.54	8	4x4	0.74	0.57	9	5.5	60/72	60/72			
5x6	0.29	0.29	9	0.34	0.45	6	48"	0.36	0.45	9	0.47	0.45	9	0.38	0.54	8	48"	0.74	0.57	9	5.5	60/72	60/72			
5x6	0.29	0.29	9	0.34	0.45	6	3x5	0.45	0.45	9	0.47	0.45	9	0.38	0.54	8	3x5	0.61	0.61	9	5.5	60/72	60/72			
6x6	0.29	0.29	9	0.45	0.45	6	3x3	0.41	0.41	9	0.52	0.52	9	0.54	0.54	8	3x3	0.74	0.74	9	6.5	72	72			
6x6	0.27	0.27	9	0.45	0.45	6	4x4	0.45	0.45	9	0.52	0.52	9	0.54	0.54	8	4x4	0.87	0.87	9	6.5	72	72			
6x6	0.29	0.29	9	0.45	0.45	6	48"	0.45	0.45	9	0.52	0.52	9	0.54	0.54	8	48"	0.87	0.87	9	6.5	72	72			
6x6	0.29	0.29	9	0.45	0.45	6	3x5	0.45	0.45	9	0.52	0.52	9	0.54	0.54	8	3x5	0.87	0.87	9	6.5	72	72			
8x8	0.52	0.52	9	0.51	0.51	8	3x3	0.61	0.61	12	0.91	0.91	9	0.70	0.70	10	3x3	0.85	0.85	12	8.5	96	72			
8x8	0.52	0.52	9	0.51	0.51	8	4x4	0.70	0.70	12	0.87	0.87	9	0.70	0.70	10	4x4	1.01	1.01	12	8.5	96	72			
8x8	0.52	0.52	9	0.51	0.51	8	48"	0.70	0.70	12	0.87	0.87	9	0.70	0.70	10	48"	1.01	1.01	12	8.5	96	72			
8x8	0.52	0.52	9	0.51	0.51	8	3x5	0.70	0.85	12	0.87	0.87	9	0.70	0.70	10	3x5	1.01	1.01	12	8.5	96	72			

\*\* Unless otherwise indicated.

**FABRICATION NOTES:**

1. Maximum spacing of reinforcement is 8".
2. At manufacturer's option, provide cast or cored holes or thin wall panels (KO) to the maximum diameter shown for each. When no penetration is required, it is acceptable to provide a wall with no sectional reduction.

**GENERAL NOTES:**

1. Precast Junction Box consists of base slab, base unit, risers (as required), and below grade slab. See sheet PJB for details.
2. Precast Base consists of base slab, base unit, risers (as required), reducing slab (as required), and reduced risers (as required). See sheet PB for details.
3. Min Height shown is for stock base units. Use stock base units whenever practical. Smaller height base units can be used in special installation circumstances, when noted elsewhere in the plans. Absolute minimum height of base units is 2'-6".

**HL93 LOADING**

		<b>Bridge Division Standard</b>	
<p><b>DESIGN DATA FOR PRECAST BASE AND JUNCTION BOX</b></p> <p><b>PDD</b></p>			
FILE: prestd10.dgn	DN: TxDOT	CK: TxDOT	OW: TxDOT
©TxDOT January 2015	CONTRACT: 0915	SECTION: 12	JOB: 576
REVISIONS:	DIST: SAT	COUNTY: BEXAR	SHEET NO: 632
		<b>HIGHWAY: VARIES</b>	

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**I. STORMWATER POLLUTION PREVENTION-CLEAN WATER ACT SECTION 402**

Texas Pollutant Discharge Elimination System (TPDES) TXR 150000: Stormwater Discharge Permit or Construction General Permit (CGP) required for projects with 1 or more acres disturbed soil. Projects with any disturbed soil must protect for erosion and sedimentation in accordance with Item 506.

No Action Required       Required Action

Action No.

1. Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000.
2. Comply with the Storm Water Pollution Prevention Plan (SW3P) and revise when necessary to control pollution or required by the Engineer.
3. Post Construction Site Notice (CSN) with SW3P information on or near the site, accessible to the public and Texas Commission on Environmental Quality (TCEQ), Environmental Protection Agency (EPA) or other inspectors.
4. When Contractor project specific locations (PSL's) increase disturbed soil area to 5 acres or more, Contractor shall submit Notice of Intent (NOI) to TCEQ and the Engineer.
5. NOI required:  Yes  No

Note: If amount of soil disturbance changes, permit requirements may change.

**II. WORK IN OR NEAR STREAMS, WATERBODIES AND WETLANDS CLEAN WATER ACT SECTIONS 401 AND 404**

US Army Corps of Engineers (USACE) Permit required for filling, dredging, excavating or other work in any potential USACE jurisdictional water, such as, rivers, creeks, streams, or wetlands.

The Contractor shall adhere to all of the terms and conditions associated with the following permit(s):

- No Permit Required
- Nationwide Permit (NWP) 14 - Pre-construction Notice (PCN) not Required
- Nationwide Permit 14 - PCN Required
- Individual 404 Permit Required
- Other Nationwide Permit Required: NWP# \_\_\_\_\_

Required Actions: List waters of the US permit applies to, location in project and check Best Management Practices (BMPs) planned to control erosion, sedimentation and post-project total suspended solids (TSS).

- 1.
- 2.
- 3.
- 4.

401 Best Management Practices: (Not applicable if no USACE permit)

Erosion	Sedimentation	Post-Construction TSS
<input type="checkbox"/> Temporary Vegetation	<input type="checkbox"/> Silt Fence	<input type="checkbox"/> Vegetative Filter Strips
<input type="checkbox"/> Blankets/Matting	<input type="checkbox"/> Rock Berm	<input type="checkbox"/> Retention/Irrigation Systems
<input type="checkbox"/> Mulch	<input type="checkbox"/> Triangular Filter Dike	<input type="checkbox"/> Extended Detention Basin
<input type="checkbox"/> Sodding	<input type="checkbox"/> Sand Bag Berm	<input type="checkbox"/> Constructed Wetlands
<input type="checkbox"/> Interceptor Swale	<input type="checkbox"/> Straw Bale Dike	<input type="checkbox"/> Wet Basin
<input type="checkbox"/> Diversion Dike	<input type="checkbox"/> Brush Berms	<input type="checkbox"/> Erosion Control Compost
<input type="checkbox"/> Erosion Control Compost	<input type="checkbox"/> Erosion Control Compost	<input type="checkbox"/> Mulch Filter Berm and Socks
<input type="checkbox"/> Mulch Filter Berm and Socks	<input type="checkbox"/> Mulch Filter Berm and Socks	<input type="checkbox"/> Compost Filter Berm and Socks
<input type="checkbox"/> Compost Filter Berm and Socks	<input type="checkbox"/> Compost Filter Berm and Socks	<input type="checkbox"/> Vegetation Lined Ditches
	<input type="checkbox"/> Stone Outlet Sediment Traps	<input type="checkbox"/> Sand Filter Systems
	<input type="checkbox"/> Sediment Basins	<input type="checkbox"/> Sedimentation Chambers
		<input type="checkbox"/> Grassy Swales

**III. CULTURAL RESOURCES**

Refer to TxDOT Standard Specifications in the event historical issues or archeological artifacts are found during construction. Upon discovery of archeological artifacts (bones, burnt rock, flint, pottery, etc.) cease work in the immediate area and contact the Engineer immediately.

No Action Required       Required Action

Action No.

- 1.
- 2.
- 3.
- 4.

**IV. VEGETATION RESOURCES**

Preserve native vegetation to the extent practical. Contractor must adhere to Construction Specification Requirements Specs 162,164, 192, 193, 506, 730, 751, 752 in order to comply with requirements for invasive species, beneficial landscaping, and tree/brush removal commitments.

No Action Required       Required Action

Action No.

- 1.
- 2.
- 3.
- 4.

**V. FEDERAL LISTED, PROPOSED THREATENED, ENDANGERED SPECIES, CRITICAL HABITAT, STATE LISTED SPECIES, CANDIDATE SPECIES AND MIGRATORY BIRDS.**

No Action Required       Required Action

Action No.

1. **MIGRATORY BIRD NESTS:** Schedule construction activities as needed to meet the following requirements:

- A. Do not remove or destroy any active migratory bird nests (nests containing eggs and/or flightless birds) at any time of year. If there are any active nests, they shall not be removed until the nests become inactive.
- B. On/in structures, if there are any active nests, they shall not be removed until all nests become inactive. After inactive nests are removed and/or before nest activity begins, deterrent materials may be applied to the structures to prevent future nest building.

2. See Item 5 in General Notes.

3.

4.

If any of the listed species are observed, cease work in the immediate area, do not disturb species or habitat and contact the Engineer immediately. The work may not remove active nests from bridges and other structures during nesting season of the birds associated with the nests. If caves or sinkholes are discovered, cease work in the immediated area, and contact the Engineer immediately.

**VI. HAZARDOUS MATERIALS OR CONTAMINATION ISSUES**

General (applies to all projects):

Comply with the Hazard Communication Act (the Act) for personnel who will be working with hazardous materials by conducting safety meetings prior to beginning construction and making workers aware of potential hazards in the workplace. Ensure that all workers are provided with personal protective equipment appropriate for any hazardous materials used.

Obtain and keep on-site Material Safety Data Sheets (MSDS) for all hazardous products used on the project, which may include, but are not limited to the following categories: Paints, acids, solvents, asphalt products, chemical additives, fuels and concrete curing compounds or additives. Provide protected storage, off bare ground and covered, for products which may be hazardous. Maintain product labelling as required by the Act.

Maintain an adequate supply of on-site spill response materials, as indicated in the MSDS. In the event of a spill, take actions to mitigate the spill as indicated in the MSDS, in accordance with safe work practices, and contact the District Spill Coordinator immediately. The Contractor shall be responsible for the proper containment and cleanup of all product spills.

Contact the Engineer if any of the following are detected:

- \* Dead or distressed vegetation (not identified as normal)
- \* Trash piles, drums, canister, barrels, etc.
- \* Undesirable smells or odors
- \* Evidence of leaching or seepage of substances

Hazardous Materials or Contamination Issues Specific to this Project:

No Action Required       Required Action

Action No.

- 1.
- 2.
- 3.

Does the project involve the demolition of a span bridge?

Yes       No (No further action required)

If "Yes", a pre-demolition notification must be submitted to the Texas Department of State Health Services. The contractor shall contact TxDOT's Project Engineer 25 calendar days prior to the demolition of the bridges(s) on the project to assist with the notification.

**VII. OTHER ENVIRONMENTAL ISSUES**

(includes regional issues such as Edwards Aquifer District, etc.)

No Action Required       Required Action

Action No.

- 1.
- 2.
- 3.



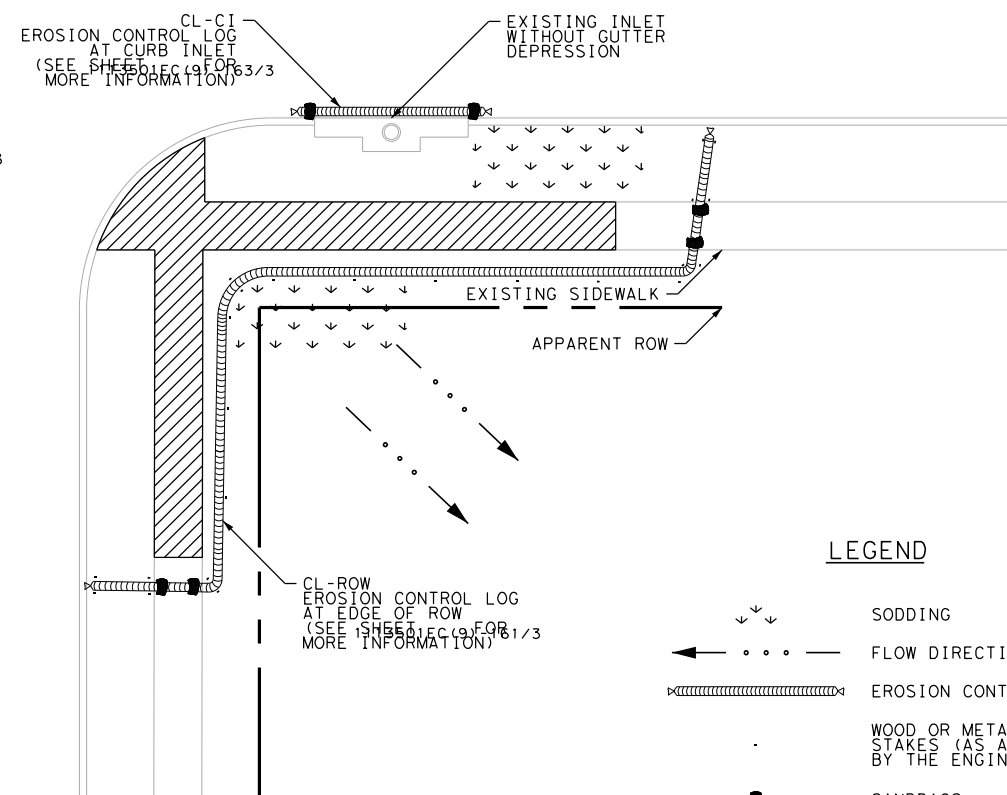
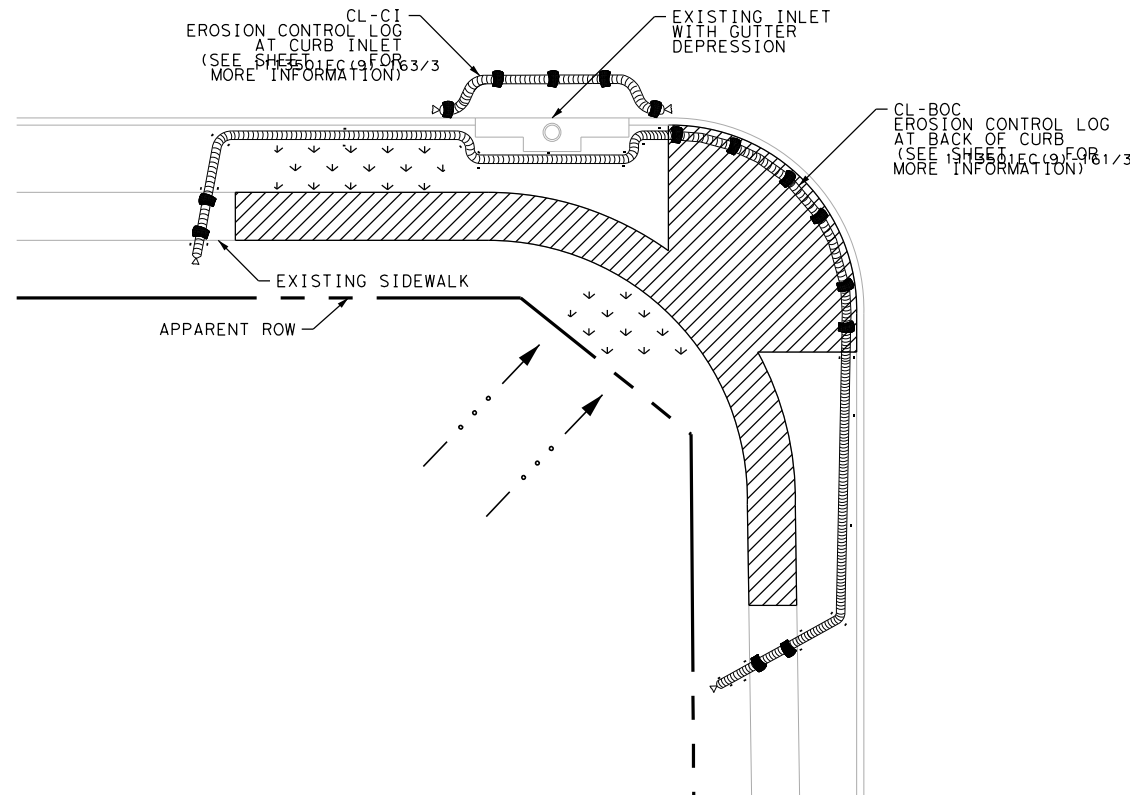
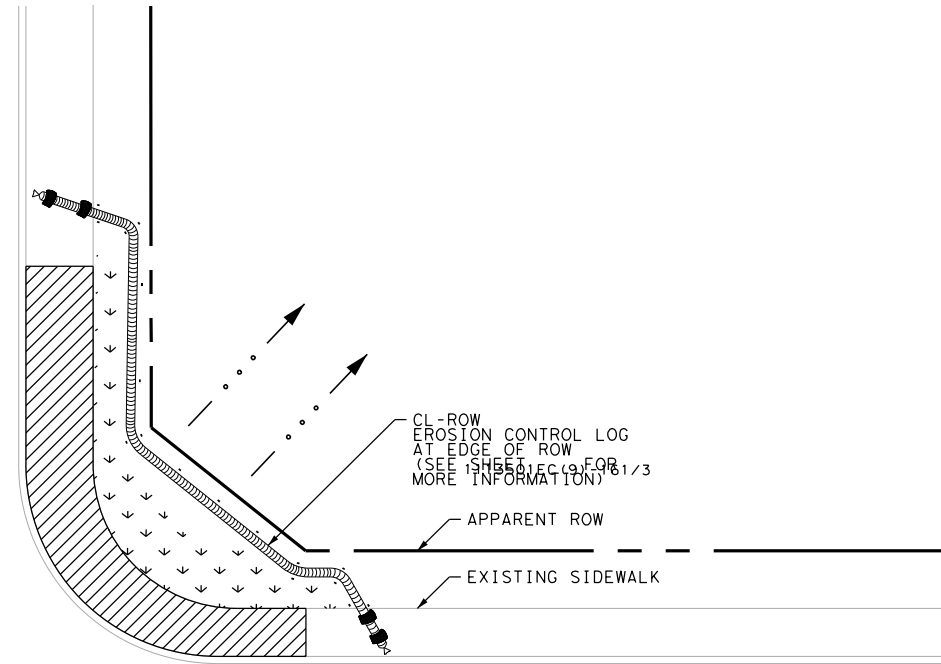
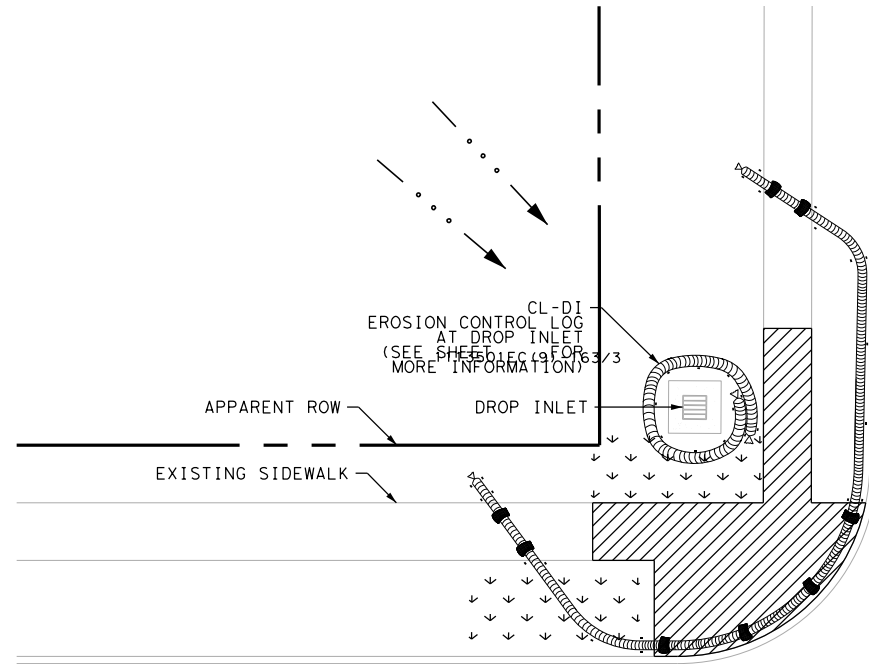
**ENVIRONMENTAL PERMITS,  
ISSUES AND COMMITMENTS**

EPIC

FILE: epic_2015-10-09_SAT.dgn	DN: TxDOT	CK: TxDOT	DW: BW	CK: GAG
© TxDOT OCTOBER 2015	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	633	

Plotted on: 5/3/2019

Design File name: P:\111135\08\Design\Civil\General\11113508\_sw3pex01.dgn



**LEGEND**

- SODDING
- FLOW DIRECTION
- EROSION CONTROL LOG
- WOOD OR METAL STAKES (AS APPROVED BY THE ENGINEER)
- SANDBAGS
- EXISTING FEATURES
- PROPOSED WORK AREA

**NOTES:**

REFERENCE ENVIRONMENTAL PERMITS, ISSUES, AND COMMITMENTS (EPIC) AND STORM WATER POLLUTION PREVENTION PLAN (SW3P) SHEETS FOR SPECIFIC CONSTRUCTION CONSIDERATIONS OR REQUIREMENTS.

EXAMPLES SHOWN ON THE SHEET ARE FOR GENERAL GUIDANCE AND MAY BE MODIFIED AS DIRECTED BY THE ENGINEER.

SITE CONDITIONS MAY DICTATE ADDITIONAL COUNTERMEASURES AS DIRECTED BY THE ENGINEER.

USE ADDITIONAL STAKES OR SAND BAGS AS NEEDED TO HOLD IN PLACE (NSPI)

INSTALLATION OF COUNTERMEASURES MUST BE APPROVED BY THE ENGINEER PRIOR TO PLACEMENT.

DESIGN

JOHN A. TYLER, P.E.  
5/3/2019  
DATE

REVIEW AND APPROVAL

JAMES A. LUTZ, P.E.  
5/3/2019  
DATE

SCALE: NOT TO SCALE 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SWP3 EXAMPLE INTERSECTION

SHEET 1 OF 1

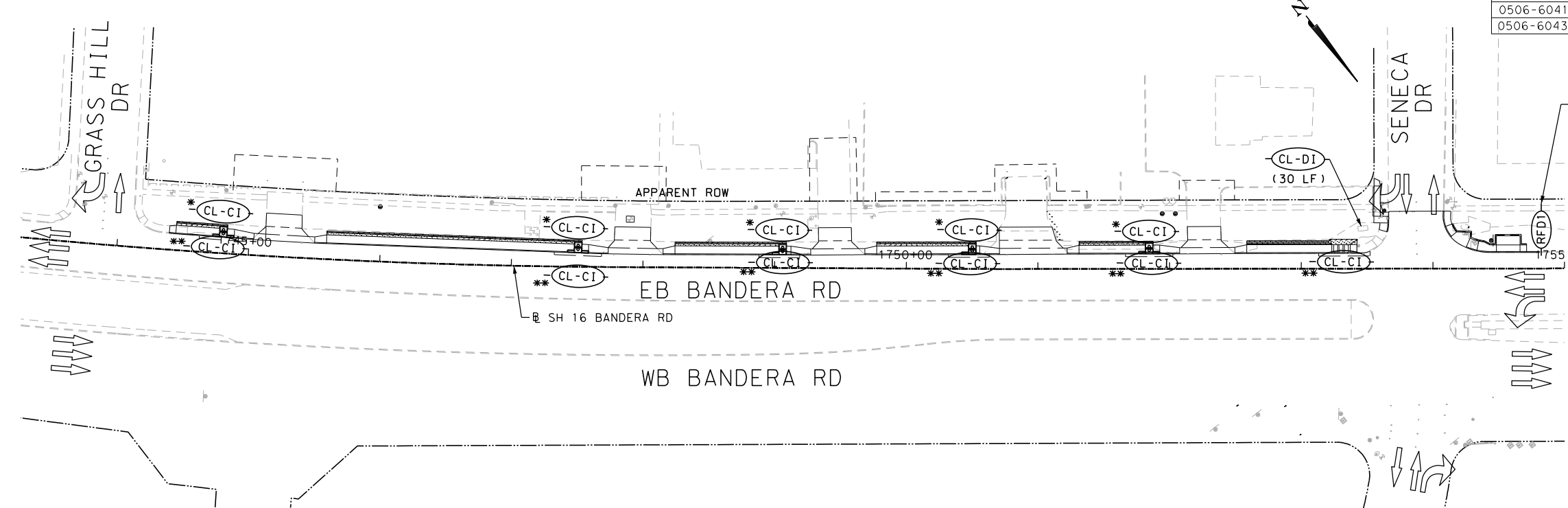
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CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	634



Plotted on: 5/3/2019

Design File name: P:\111135\07\design\Civil\SW3P\113507\*SW3P\*Bandera Dr\*01.dgn

ITEM	DESCRIPTION	UNIT	QTY
0506-6001	ROCK FILTER DAMS (INSTALL) (TY 1)	LF	25
0506-6011	ROCK FILTER DAMS (REMOVE)	LF	25
0506-6020	CONSTRUCTION EXITS (INSTALL) (TY 1)	SY	156
0506-6024	CONSTRUCTION EXITS (REMOVE)	SY	156
0506-6041	BIODEG EROSN CONT LOGS (INSTL) (12")	LF	200
0506-6043	BIODEG EROSN CONT LOGS (REMOVE)	LF	200



- LEGEND**
- (RFD) ROCK FILTER DAM TYPE 1
  - (CL-CI) EROSION CONTROL LOG AT CURB INLET
  - (CL-DI) EROSION CONTROL LOG AT DROP INLET
  - \* 10 LF OF EROSION CONTROL LOG
  - \*\* 20 LF OF EROSION CONTROL LOG

- NOTES:**
- THE EXISTENCE AND LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES INDICATED IN THE PLANS ARE TAKEN FROM THE BEST RECORDS AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES TO FIELD VERIFY UTILITIES PRIOR TO BEGINNING CONSTRUCTION.
  - EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED.
  - SEE EC(2)-16 FOR ROCK FILTER DAM INFO.
  - SEE EC(9)-16 SHEET FOR EROSION CONTROL LOG INFO.

DESIGN  
  
 JOHN A. TYLER, P.E.  
 DATE: 5/3/2019

REVIEW AND APPROVAL  
  
 JAMES A. LUTZ, P.E.  
 DATE: 5/3/2019

SCALE: PLAN 1" = 20' PROFILE 1" = 2'

REV. NO.	DATE	DESCRIPTION	BY

**Pape-Dawson Engineers**  
 SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS  
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
 TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation  
 © 2019

SH 16 BANDERA RD  
 BANDERA RD  
 SW3P LAYOUT  
 STA 1744+00 TO STA 1754+00  
 SHEET 1 OF 1

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	635

**A. GENERAL SITE DATA**

- 1. **PROJECT LIMITS:** At various locations in the San Antonio District
- 2. **PROJECT SITE MAPS:**
  - \* Project Latitude 29.356643 Project Longitude -98.527648
  - \* Project Location Map: See Sheets ~~III390388000~~ J04
  - \* Drainage Patterns: N/A
  - \* Approx. Slopes Anticipated After Major Gradings and Areas of Soil Disturbance: N/A
  - \* Major Controls and Locations of Stabilization Practices: See sheet III3507 SW3P details
  - \* Project Specific Locations: N/A
  - \* Surface Waters and Discharge Locations: N/A
- 3. **PROJECT DESCRIPTION:** For pedestrian improvements including bus shelter pads, sidewalks, ADA curb ramps
  - \* Joint-bid utilities are covered by this SW3P (Sheets X-Y)
  - Non-Joint Bid Utilities are not part of this SW3P.
- 4. **FOR MAJOR SOIL DISTURBING ACTIVITIES SEQUENCE OF EVENTS:**
  - 1. Install controls down-slope of work area and initiate inspection and maintenance activities.
  - 2. Begin phased construction with interim stabilization practices. Adjust erosion and sedimentation controls during construction to meet requirements and changing conditions and as directed/approved by the Engineer.
  - 3. Major soil disturbing activities may include but are not limited to: right-of-way preparation, cut and/or fill to improve roadway profile, final grading and placement of topsoil and the following (if marked):
    - Placement of road base
    - Extensive ditch grading
    - Upgrading or replacing culverts or bridges
    - Temporary detour road(s)
    - Other: \_\_\_\_\_
- 5. **EXISTING AND PROPOSED CONDITIONS:**
  - Description of existing vegetative cover: (Provide type and description of vegetative cover)
  - Percentage of existing vegetative cover: (Provide percentage)
  - Existing vegetative cover: (mark one)
    - Thick or uniformly established
    - Thin and Patchy
    - None or minimal cover
  - Description of soils: (Provide classification and description of soils)
  - Site Acreage: N/A Acreage disturbed: 0.55
  - Site runoff coefficient (pre-construction): N/A Site runoff coefficient (post-construction): N/A
- 6. **RECEIVING WATERS:** (Mark all that apply)
  - A classified stream does not pass through project.
  - A classified stream passes through project. Name \_\_\_\_\_ Segment Number \_\_\_\_\_
  - Name of receiving waters that will receive discharges from disturbed areas of the project: \_\_\_\_\_
  - Site is in a Municipal Separate Storm Sewer System (MS4). MS4 Operator (name): \_\_\_\_\_

**B. BEST MANAGEMENT PRACTICES**

General timing or sequence for implementation of BMPs shall be as required and/or as directed/approved by the Engineer to provide adequate controls. BMPs shown on plan sheets are to be considered "proposed" unless/until install date is shown. BMPs are to reduce sediments from road construction activities.

- 1. **SOIL STABILIZATION PRACTICES:** (Select T = Temporary or P = Permanent, as applicable)
 

<input type="checkbox"/> SEEDING	<input type="checkbox"/> PRESERVATION OF NATURAL RESOURCES
<input type="checkbox"/> MULCHING (Hay or Straw)	<input type="checkbox"/> FLEXIBLE CHANNEL LINER
<input type="checkbox"/> BUFFER ZONES	<input type="checkbox"/> RIGID CHANNEL LINER
<input type="checkbox"/> PLANTING	<input type="checkbox"/> SOIL RETENTION BLANKET
<input type="checkbox"/> COMPOST/MULCH FILTER BERM	<input type="checkbox"/> COMPOST MANUFACTURED TOPSOIL
<input checked="" type="checkbox"/> SODDING	<input type="checkbox"/> OTHER: (Specify Practice)
- 2. **STRUCTURAL PRACTICES:** (Select T = Temporary or P = Permanent, as applicable)
  - SILT FENCES
  - HAY BALES
  - ROCK FILTER DAMS
  - DIVERSION, INTERCEPTOR, OR PERIMETER DIKES
  - DIVERSION, INTERCEPTOR, OR PERIMETER SWALES
  - DIVERSION DIKE AND SWALE COMBINATIONS
  - PIPE SLOPE DRAINS
  - PAVED FLUMES
  - ROCK BEDDING AT CONSTRUCTION EXIT
  - TIMBER MATTING AT CONSTRUCTION EXIT
  - CHANNEL LINERS
  - SEDIMENT TRAPS
  - SEDIMENT BASINS
  - STORM INLET SEDIMENT TRAP
  - STONE OUTLET STRUCTURES
  - CURBS AND GUTTERS
  - STORM SEWERS
  - VELOCITY CONTROL DEVICES
  - OTHER: EROSION CONTROL LOGS
- 3. **STORM WATER MANAGEMENT:**

The proposed facility was designed in consideration of hydraulic design standards to convey stormwater in a manner that is protective of public safety and property. The control of erosion from the facility is inherent to the design. Additional factors affecting post-construction stormwater at the project location include: (mark all that apply)

  - Existing or new vegetation provides natural filtration.
  - The design includes provisions for permanent erosion controls provided by strategically placed pervious and impervious surfaces.
  - Project includes permanent sedimentation controls (other than grass).
  - Velocities do not require dissipation devices.
  - Velocity-dissipation devices included in the design.
  - Other: \_\_\_\_\_
- 4. **NON-STORM WATER DISCHARGES:**

Off-site discharges are prohibited except as follows:

  1. Discharges from fire fighting activities and/or fire hydrant flushings.
  2. Vehicle, external building, and pavement wash water where detergents and soaps are not used and where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed).
  3. Plain water used to control dust.
  4. Plain water originating from potable water sources.
  5. Uncontaminated groundwater, spring water or accumulated stormwater.
  6. Foundation or footing drains where flows are not contaminated with process materials such as solvents.
  7. Other: \_\_\_\_\_

Concrete truck wash water discharges on the site should be prohibited or minimized. If allowed by the Engineer, they must be managed in a manner so as not to contaminate surface water. They must not be located in areas of concentrated flow. Concrete truck wash-out locations must be shown on the SW3P Layout and included in the inspections.

Hazardous material spill/leak shall be prevented or minimized. At a minimum, this includes asphalt products, fuels, oils, lubricants, solvents, paints, acids, concrete curing compounds and chemical additives for soil stabilization. BMPs shall be implemented to the storage areas of these products. All spills must be cleaned and disposed properly and reported to the Engineer. Report any release at or above the reportable quantity during a 24 hour period to the National Response Center at 1-800-424-8802.

**C. OTHER REQUIREMENTS & PRACTICES**

- 1. **MAINTENANCE:**

All erosion and sediment controls shall be maintained in good working order. If a repair is necessary, it shall be performed before the next anticipated storm event but no later than 7 calendar days after the surrounding exposed ground has dried sufficiently to prevent further damage from equipment. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. Disturbed areas on which construction activities have ceased, temporarily or permanently, shall be stabilized within 14 calendar days unless they are scheduled to and do resume within 21 calendar days. The areas adjacent to creeks and drainageways shall have priority followed by protecting storm sewer inlets.
- 2. **INSPECTION:**

For areas of the construction site that have not been finally stabilized, areas used for storage of materials, structural control measures, and locations where vehicles enter or exit the site, personnel provided by the permittee and familiar with the SW3P must inspect disturbed areas at least once every seven (7) calendar days. An Inspection and Maintenance Report shall be prepared for each inspection and the controls shall be revised on the SW3P within seven (7) calendar days following the inspection.
- 3. **WASTE MATERIALS:**

All non-hazardous municipal waste materials such as litter, rubbish, trash and garbage located on or originating from the project shall be collected and stored in a securely lidded metal dumpster, provided by the Contractor. The dumpster shall be emptied as necessary or as required by local regulation and the trash shall be hauled to a permitted disposal facility. The burying of non-hazardous municipal waste on the project shall not be permitted. Construction material waste sites, stockpiles and haul roads shall be constructed to minimize and control the amount of sediment that may enter receiving waters. Construction material waste sites shall not be located in any wetland, water body or stream bed. Construction staging areas and vehicle maintenance areas shall be constructed in a manner to minimize the runoff of pollutants.
- 4. **OFFSITE VEHICLE TRACKING:**

Off-site vehicle tracking of sediments and the generation of dust must be minimized. Excess sediments on road shall be removed on a regular basis as directed/approved by the Engineer.
- 5. **OTHER:**

See the EPIC sheet for additional environmental information.

Note To Designer:  
 1. Do not alter Sheet Design or Font style, size or weight - match text attributes.  
 2. If additional space is needed for a numbered section, fence and adjust sections up or down as needed for proportioning and readability but do not relocate from its relative position.

Design Consultant Logo here - delete block if not applicable



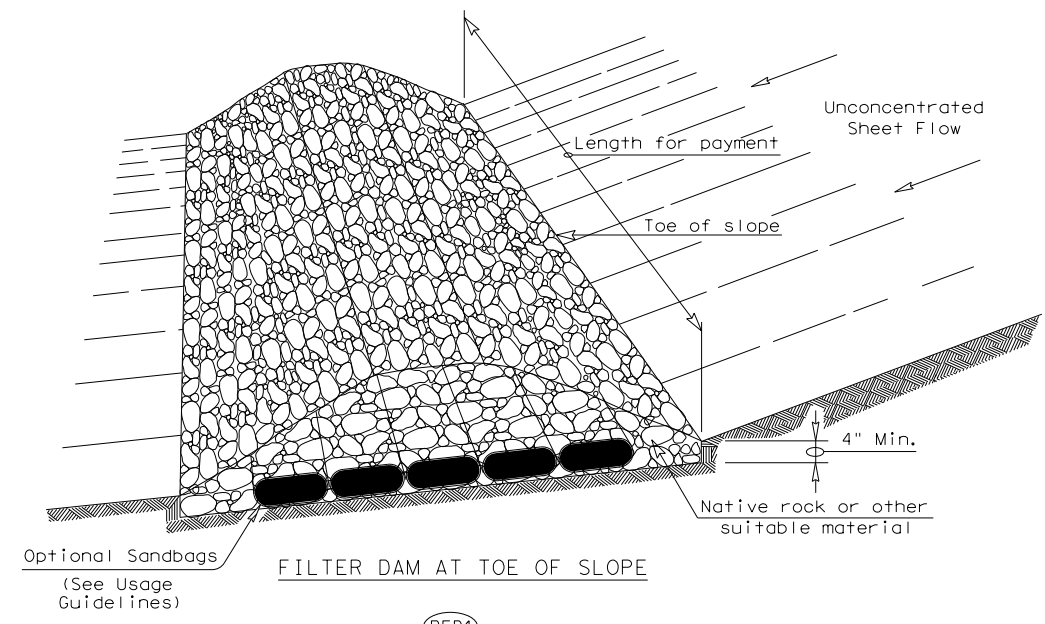
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6				VARIES
STATE	DISTRICT	COUNTY		SHEET NO.
TEXAS	SAT	BEXAR		
CONTROL	SECTION	JOB		
0915	12	576		636

REVISION DATE: 10/12

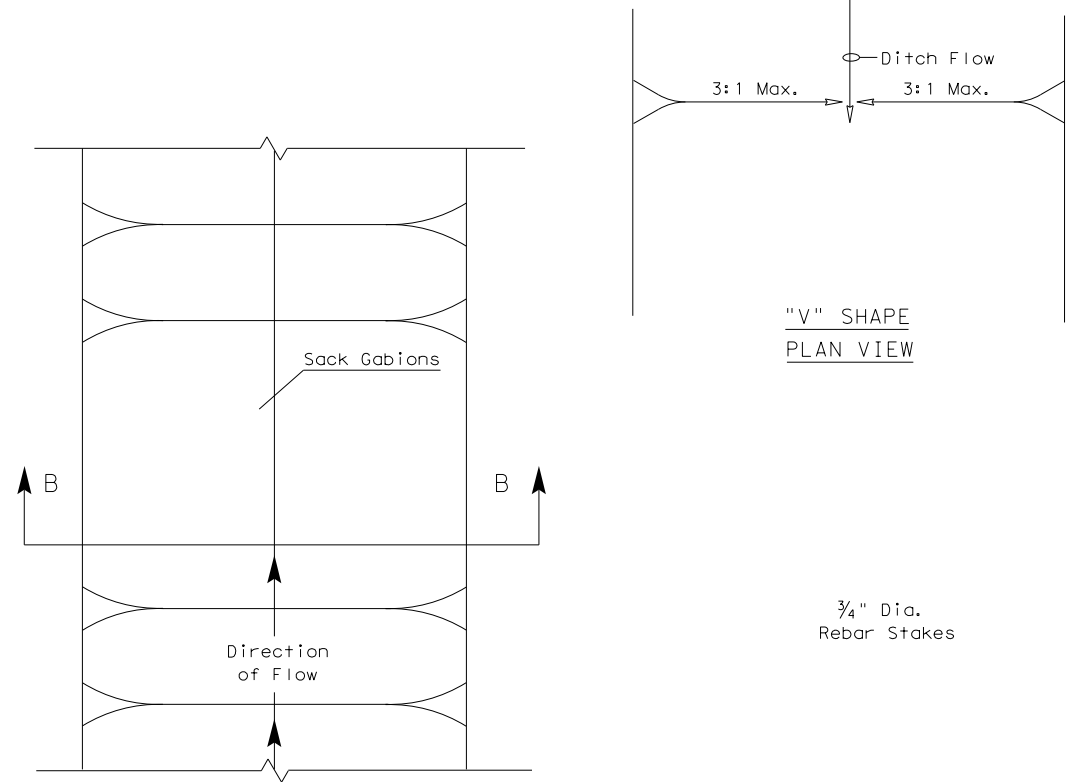
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FILTER DAM AT TOE OF SLOPE

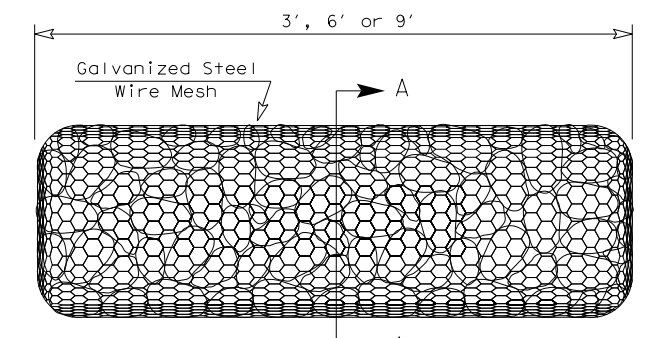
(RFD1)



PLAN VIEW

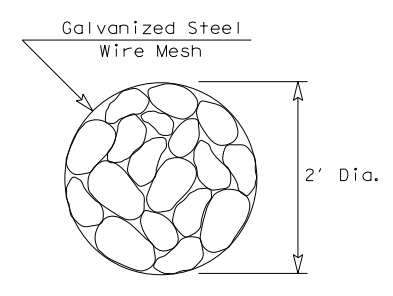
"V" SHAPE PLAN VIEW

SECTION B-B

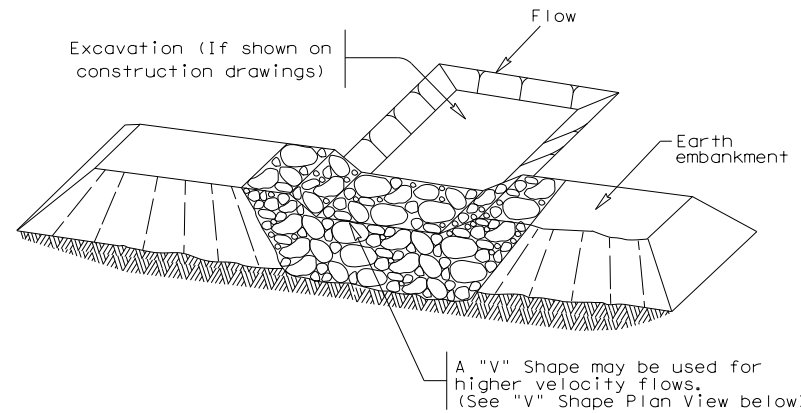


TYPE 4 (SACK GABIONS)

(RFD4)

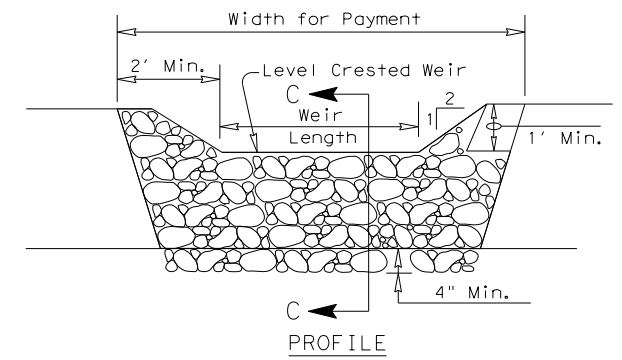


SECTION A-A

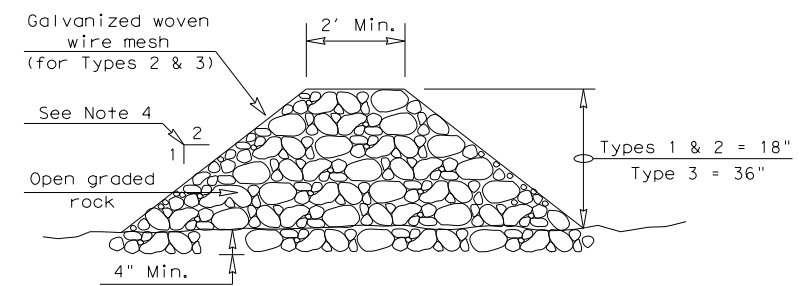


FILTER DAM AT SEDIMENT TRAP

(RFD2) OR (RFD1)



PROFILE



SECTION C-C

**ROCK FILTER DAM USAGE GUIDELINES**

Rock Filter Dams should be constructed downstream from disturbed areas to intercept sediment from overland runoff and/or concentrated flow. The dams should be sized to filter a maximum flow through rate of 60 GPM/FT<sup>2</sup> of cross sectional area. A 2 year storm frequency may be used to calculate the flow rate.

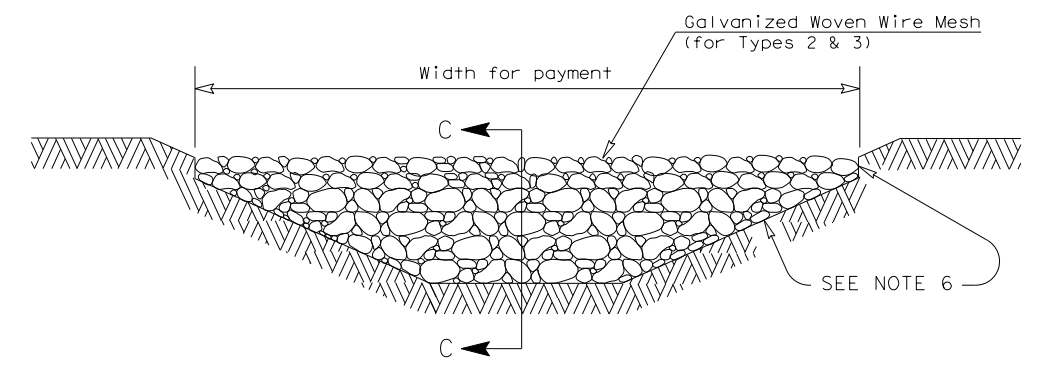
**Type 1 (18" high with no wire mesh) (3" to 6" aggregate):** Type 1 may be used at the toe of slopes, around inlets, in small ditches, and at dike or swale outlets. This type of dam is recommended to control erosion from a drainage area of 5 acres or less. Type 1 may not be used in concentrated high velocity flows (approximately 8 Ft/Sec or more) in which aggregate wash out may occur. Sandbags may be used at the embedded foundation (4" deep min.) for better filtering efficiency of low flows if called for on the plans or directed by the Engineer.

**Type 2 (18" high with wire mesh) (3" to 6" aggregate):** Type 2 may be used in ditches and at dike or swale outlets.

**Type 3 (36" high with wire mesh) (4" to 8" aggregate):** Type 3 may be used in stream flow and should be secured to the stream bed.

**Type 4 (Sack gabions) (3" to 6" aggregate):** Type 4 May be used in ditches and smaller channels to form an erosion control dam.

**Type 5:** Provide rock filter dams as shown on plans.



FILTER DAM AT CHANNEL SECTIONS

(RFD3) OR (RFD2) OR (RFD1)

**GENERAL NOTES**

1. If shown on the plans or directed by the Engineer, filter dams should be placed near the toe of slopes where erosion is anticipated, upstream and/or downstream at drainage structures, and in roadway ditches and channels to collect sediment.
2. Materials (aggregate, wire mesh, sandbags, etc.) shall be as indicated by the specification for "Rock Filter Dams for Erosion and Sedimentation Control".
3. The rock filter dam dimensions shall be as indicated on the SW3P plans.
4. Side slopes should be 2:1 or flatter. Dams within the safety zone shall have sideslopes of 6:1 or flatter.
5. Maintain a minimum of 1' between top of rock filter dam weir and top of embankment for filter dams at sediment traps.
6. Filter dams should be embedded a minimum of 4" into existing ground.
7. The sediment trap for ponding of sediment laden runoff shall be of the dimensions shown on the plans.
8. Rock filter dam types 2 & 3 shall be secured with 20 gauge galvanized woven wire mesh with 1" diameter hexagonal openings. The aggregate shall be placed on the mesh to the height & slopes specified. The mesh shall be folded at the upstream side over the aggregate and tightly secured to itself on the downstream side using wire ties or hog rings. For in stream use, the mesh should be secured or staked to the stream bed prior to aggregate placement.
9. Sack Gabions should be staked down with 3/4" dia. rebar stakes, and have a double-twisted hexagonal weave with a nominal mesh opening of 2 1/2" x 3 1/4".
10. Flow outlet should be onto a stabilized area (vegetation, rock, etc.).
11. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

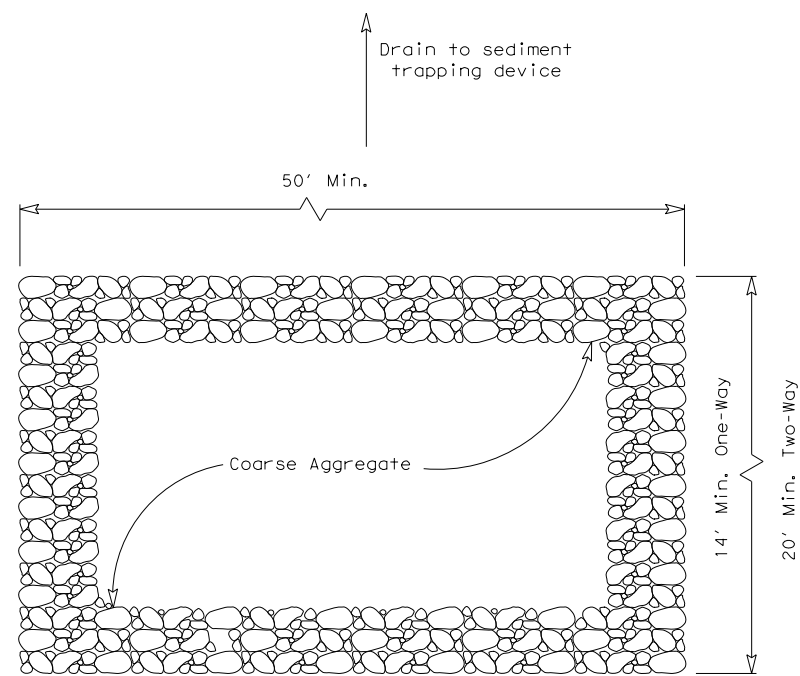
**PLAN SHEET LEGEND**

- Type 1 Rock Filter Dam (RFD1)
- Type 2 Rock Filter Dam (RFD2)
- Type 3 Rock Filter Dam (RFD3)
- Type 4 Rock Filter Dam (RFD4)

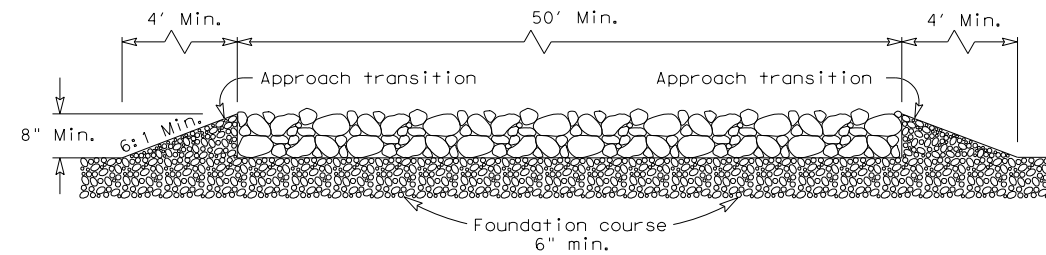
		<b>Design Division Standard</b>	
<b>TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES</b> <b>ROCK FILTER DAMS</b> <b>EC(2)-16</b>			
FILE: ec216	DN: TxDOT	CK: KM	DW: VP
© TxDOT: JULY 2016	CONT: 0915	SECT: 12	JOB: 576
REVISIONS		HIGHWAY	
DIST: SAT	COUNTY: BEXAR	SHEET NO. 637	

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PLAN VIEW

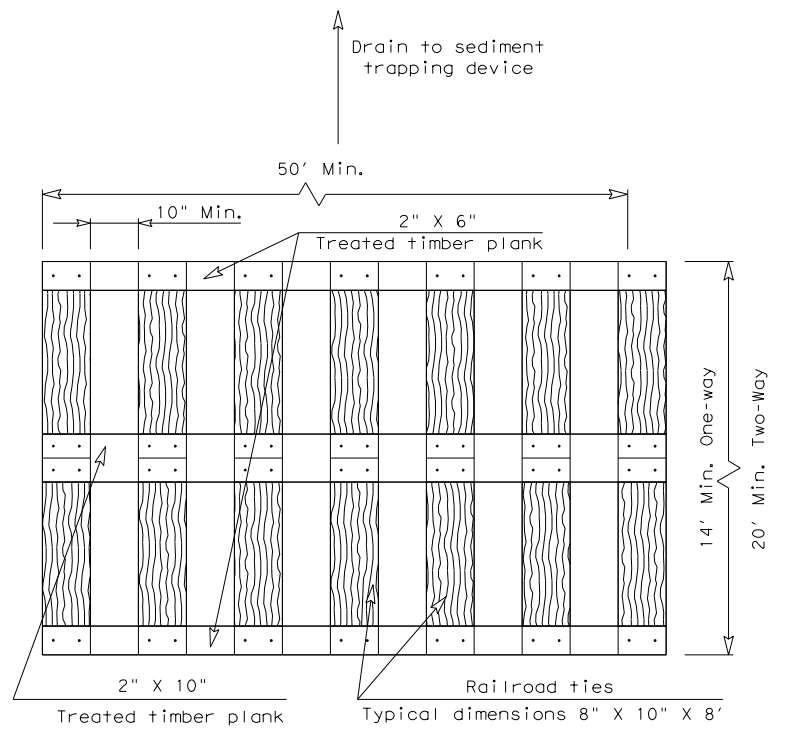


ELEVATION VIEW

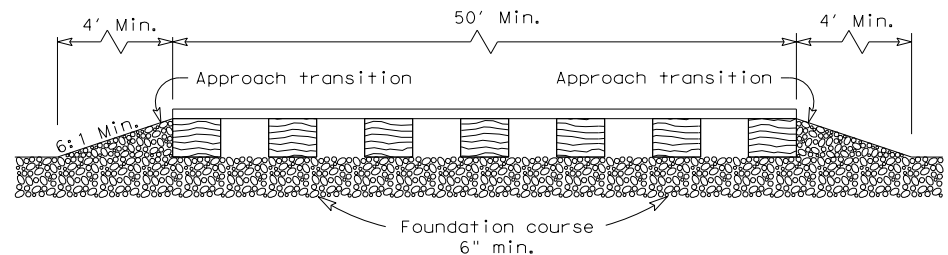
CONSTRUCTION EXIT (TYPE 1)  
 ROCK CONSTRUCTION (LONG TERM)

GENERAL NOTES (TYPE 1)

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other materials approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
7. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



PLAN VIEW

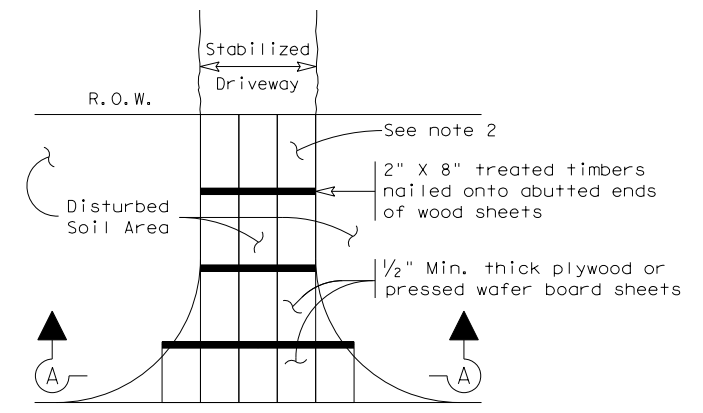


ELEVATION VIEW

CONSTRUCTION EXIT (TYPE 2)  
 TIMBER CONSTRUCTION (LONG TERM)

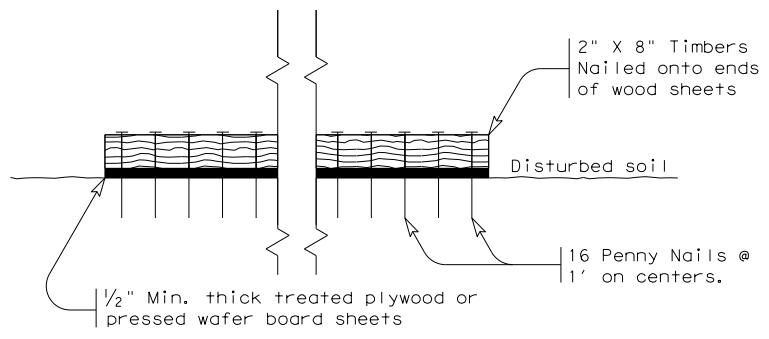
GENERAL NOTES (TYPE 2)

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with 1/2" x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.
8. Construct exits with a width of at least 14 ft. for one-way and 20 ft. for two-way traffic for the full width of the exit, or as directed by the engineer.



Paved Roadway

PLAN VIEW



SECTION A-A

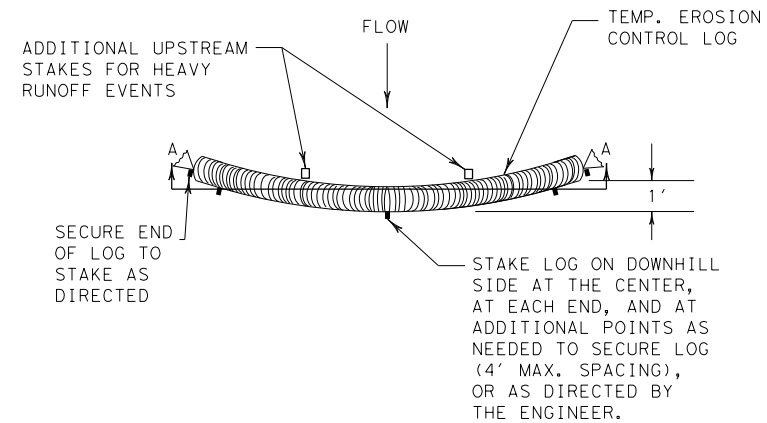
CONSTRUCTION EXIT (TYPE 3)  
 SHORT TERM

GENERAL NOTES (TYPE 3)

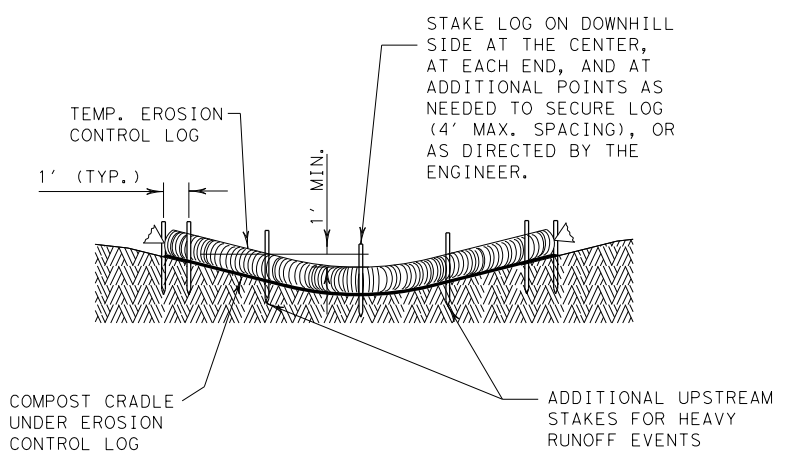
1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

		<b>Design Division Standard</b>	
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES CONSTRUCTION EXITS EC(3)-16			
FILE: ec316	DN: TxDOT	CK: KM	DW: VP
© TxDOT: JULY 2016	CONT	SECT	JOB
REVISIONS		0915	576
		DIST	COUNTY
		SAT	BEXAR
		SHEET NO. 638	

DATE: 5/3/2019  
 FILE: P:\111\35\08\Design\Civil\Standards\SW3P\ec916.dgn  
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PLAN VIEW

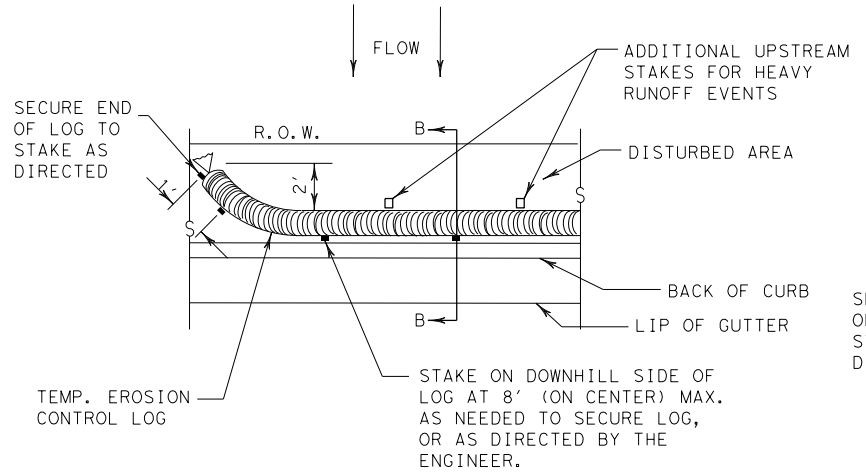


SECTION A-A

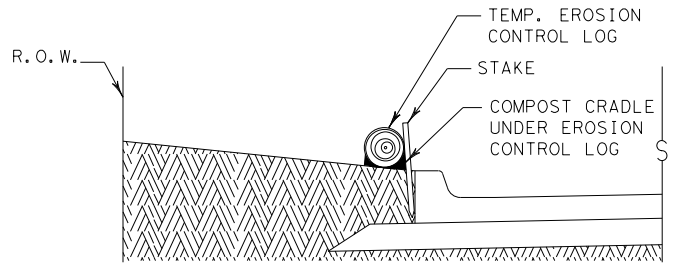
EROSION CONTROL LOG DAM

CL-D

- LEGEND**
- CL-D EROSION CONTROL LOG DAM
  - CL-BOC EROSION CONTROL LOG AT BACK OF CURB
  - CL-ROW EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY
  - CL-SST EROSION CONTROL LOGS ON SLOPES STAKE AND TRENCHING ANCHORING
  - CL-SSL EROSION CONTROL LOGS ON SLOPES STAKE AND LASHING ANCHORING
  - CL-DI EROSION CONTROL LOG AT DROP INLET
  - CL-CI EROSION CONTROL LOG AT CURB INLET
  - CL-GI EROSION CONTROL LOG AT CURB & GRATE INLET



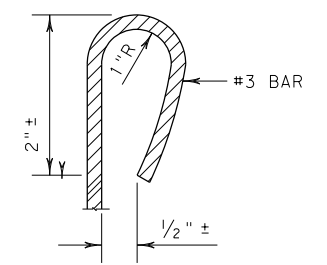
PLAN VIEW



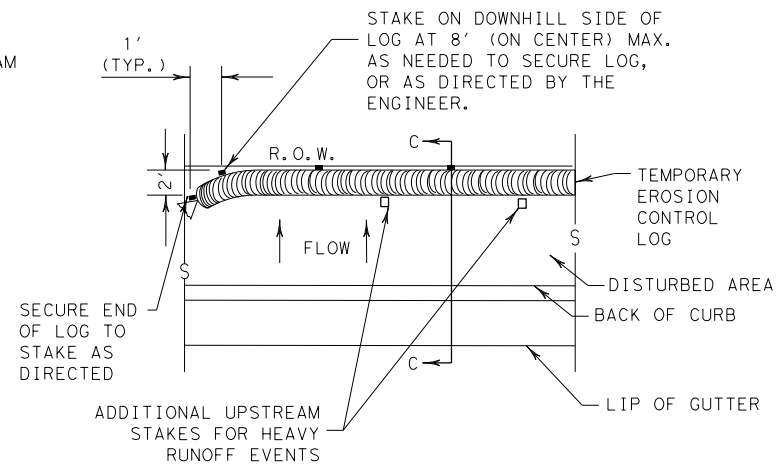
SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

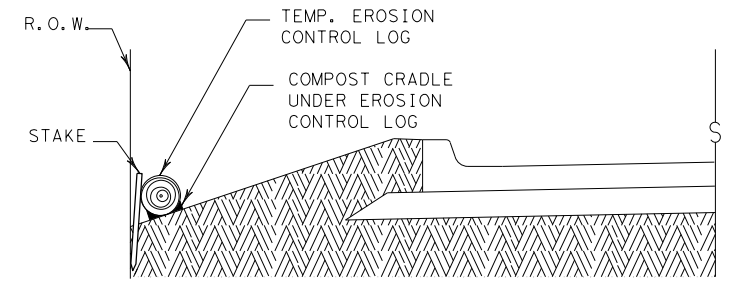
CL-BOC



REBAR STAKE DETAIL



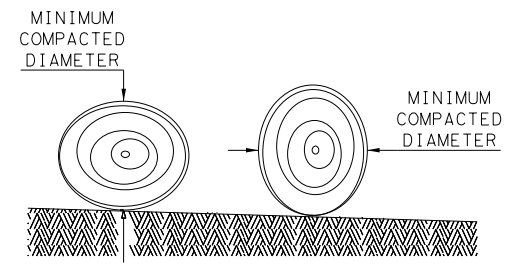
PLAN VIEW



SECTION C-C

EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

**SEDIMENT BASIN & TRAP USAGE GUIDELINES**

An erosion control log sediment trap may be used to filter sediment out of runoff draining from an unstabilized area.

**Log Traps:** The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

Control logs should be placed in the following locations:

1. Within drainage ditches spaced as needed or min. 500' on center
2. Immediately preceding ditch inlets or drain inlets
3. Just before the drainage enters a water course
4. Just before the drainage leaves the right of way
5. Just before the drainage leaves the construction limits where drainage flows away from the project.

The logs should be cleaned when the sediment has accumulated to a depth of 1/2 the log diameter.

Cleaning and removal of accumulated sediment deposits is incidental and will not be paid for separately.

**GENERAL NOTES:**

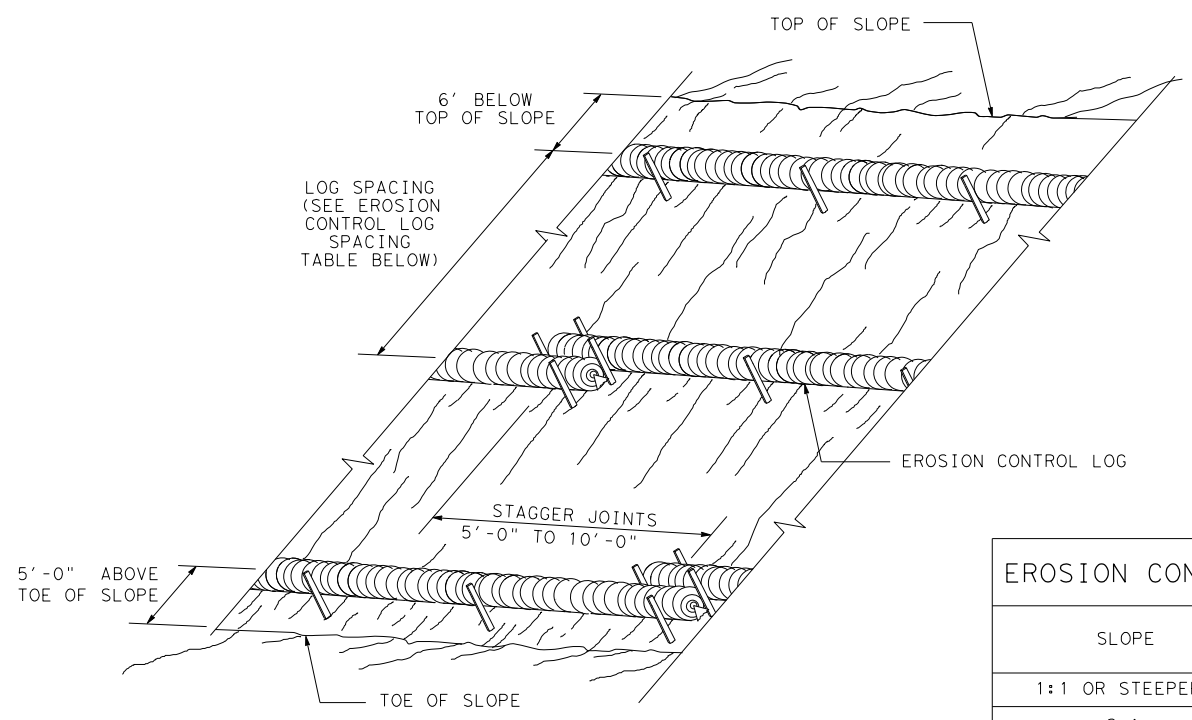
1. EROSION CONTROL LOGS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, OR AS DIRECTED BY THE ENGINEER.
2. LENGTHS OF EROSION CONTROL LOGS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND AS REQUIRED FOR THE PURPOSE INTENDED.
3. UNLESS OTHERWISE DIRECTED, USE BIODEGRADABLE OR PHOTODEGRADABLE CONTAINMENT MESH ONLY WHERE LOG WILL REMAIN IN PLACE AS PART OF A VEGETATIVE SYSTEM. FOR TEMPORARY INSTALLATIONS, USE RECYCLABLE CONTAINMENT MESH.
4. FILL LOGS WITH SUFFICIENT FILTER MATERIAL TO ACHIEVE THE MINIMUM COMPACTED DIAMETER SPECIFIED IN THE PLANS WITHOUT EXCESSIVE DEFORMATION.
5. STAKES SHALL BE 2" X 2" WOOD OR #3 REBAR, 2'-4' LONG, EMBEDDED SUCH THAT 2" PROTRUDES ABOVE LOG, OR AS DIRECTED BY THE ENGINEER.
6. DO NOT PLACE STAKES THROUGH CONTAINMENT MESH.
7. COMPOST CRADLE MATERIAL IS INCIDENTAL & WILL NOT BE PAID FOR SEPARATELY.
8. SANDBAGS USED AS ANCHORS SHALL BE PLACED ON TOP OF LOGS & SHALL BE OF SUFFICIENT SIZE TO HOLD LOGS IN PLACE.
9. TURN THE ENDS OF EACH ROW OF LOGS UPSLOPE TO PREVENT RUNOFF FROM FLOWING AROUND THE LOG.
10. FOR HEAVY RUNOFF EVENTS, ADDITIONAL UPSTREAM STAKES MAY BE NECESSARY TO KEEP LOG FROM FOLDING IN ON ITSELF.

SHEET 1 OF 3

		<b>Design Division Standard</b>		
				<b>TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES</b> <b>EROSION CONTROL LOG</b> <b>EC (9) - 16</b>
FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	639	

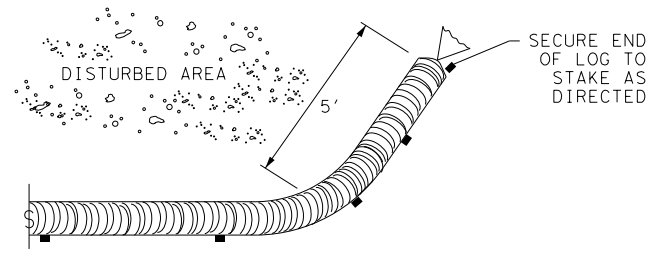
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EROSION CONTROL LOGS ON SLOPES  
 STAKE AND TRENCHING ANCHORING

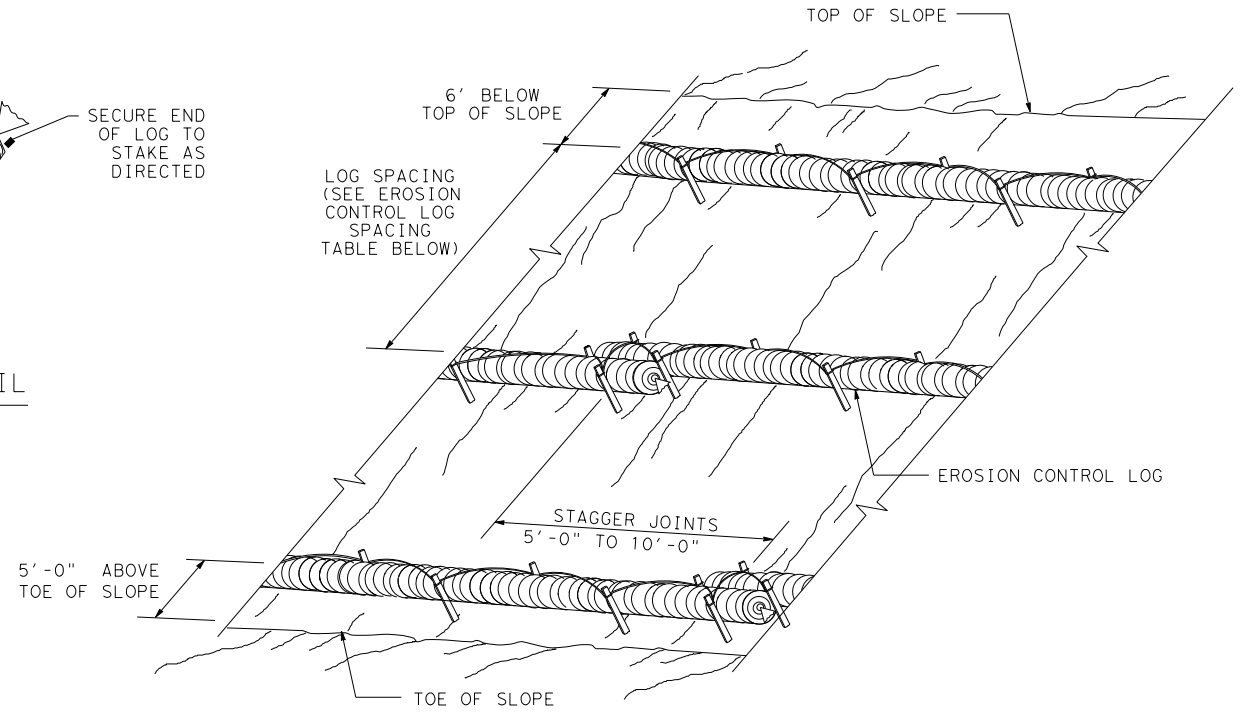
CL-SST



END SECTION RAP DETAIL

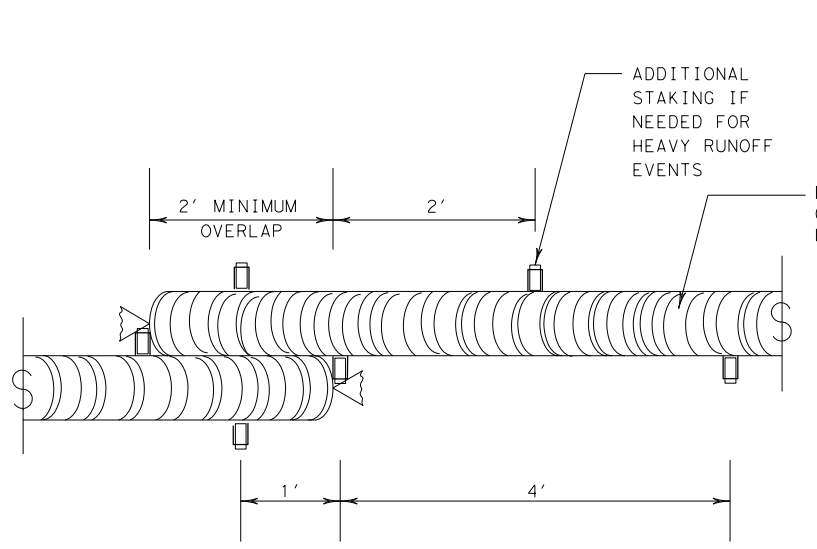
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

\* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:  
 SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;  
 HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



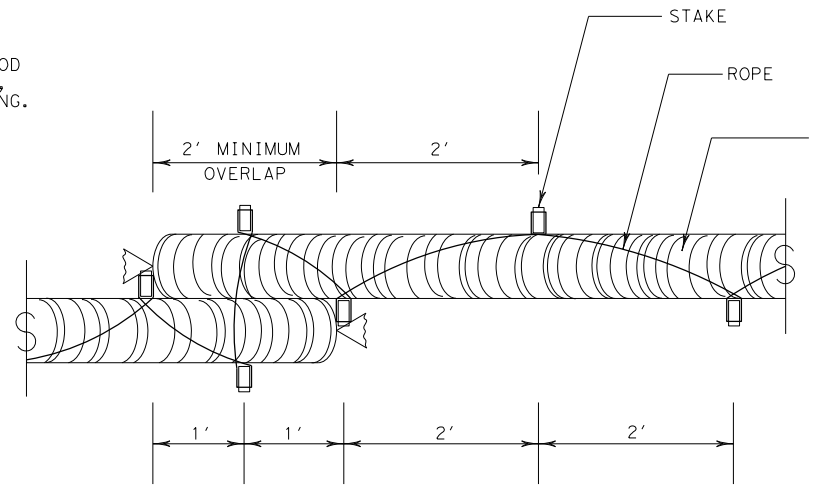
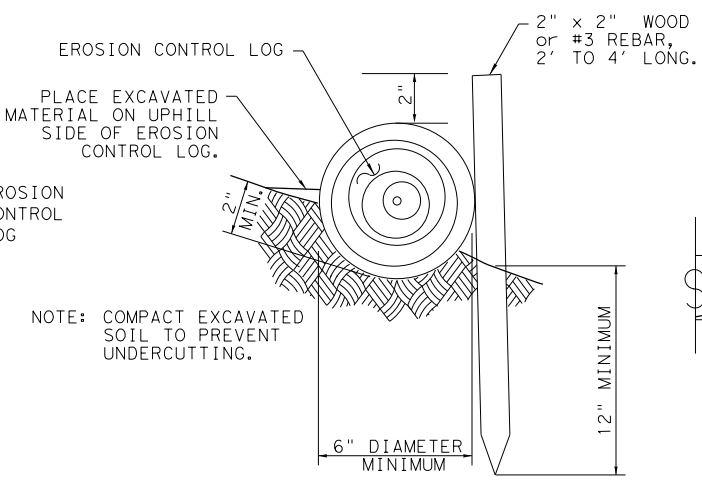
EROSION CONTROL LOGS ON SLOPES  
 STAKE AND LASHING ANCHORING

CL-SSL



STAKE AND TRENCHING ANCHORING DETAIL

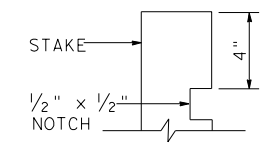
CL-SST



STAKE AND LASHING ANCHORING DETAIL

CL-SSL

LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"



STAKE NOTCH DETAIL

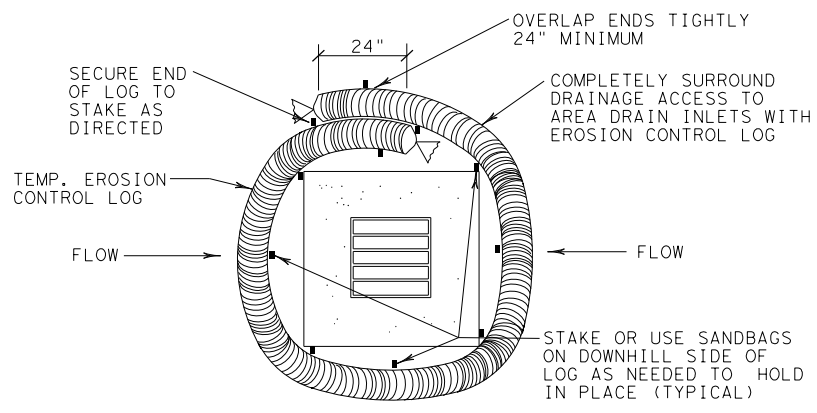
SHEET 2 OF 3

**Texas Department of Transportation** Design Division Standard

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES  
 EROSION CONTROL LOG  
 EC(9) - 16

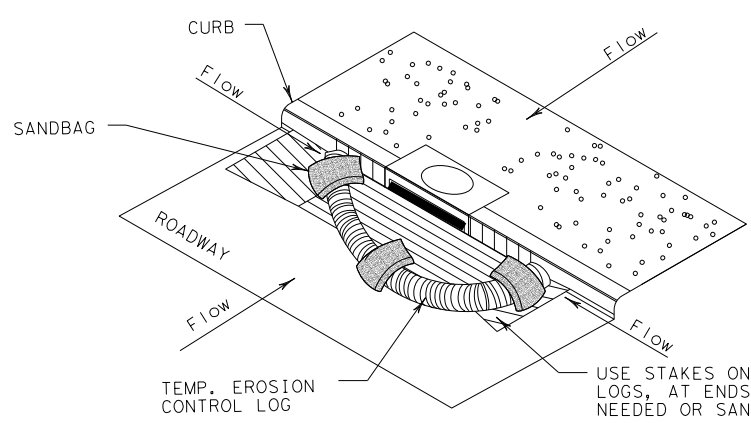
FILE: ec116	DN: TxDOT	CK: KM	DW: LS/PT	CK: LS
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REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	640	

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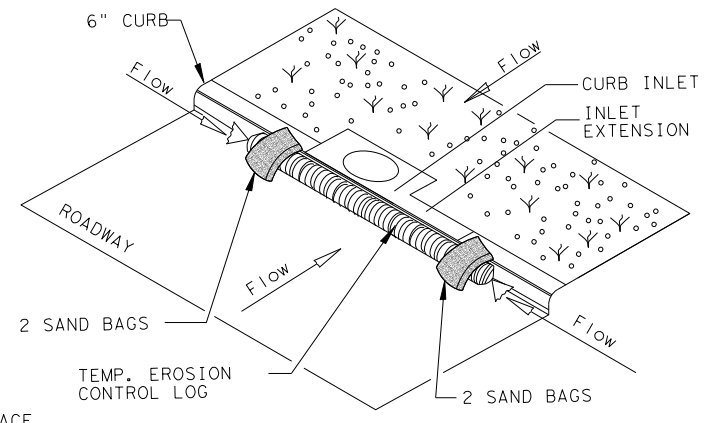
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

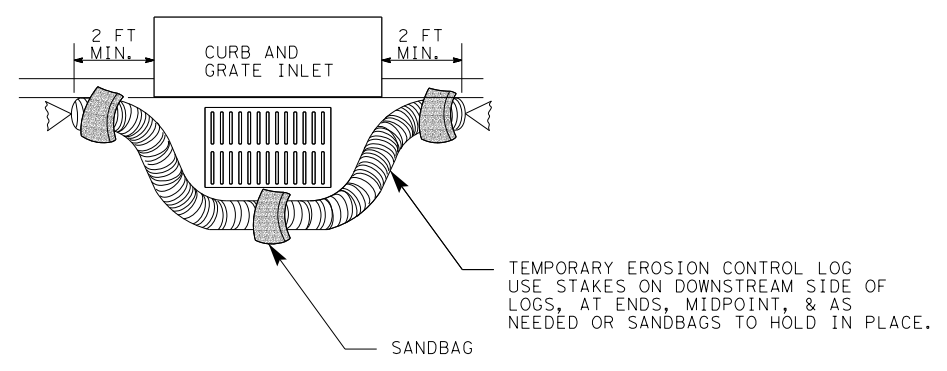
CL-CI



EROSION CONTROL LOG AT CURB INLET

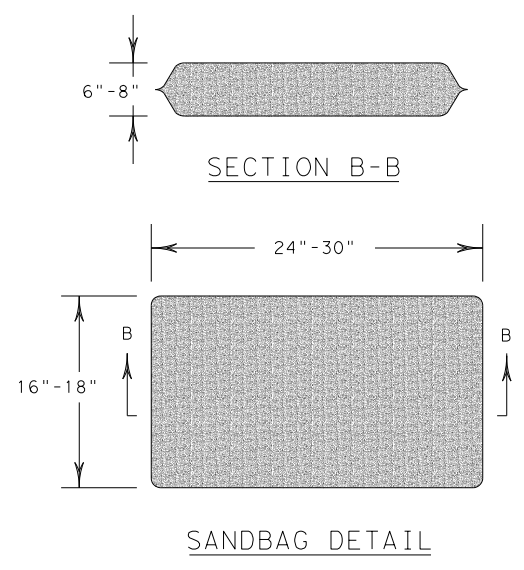
CL-CI

NOTE:  
 EROSION CONTROL LOGS USED AT CURB INLETS SHOULD ONLY BE USED IF THEY WILL NOT IMPEDE TRAFFIC OR FLOOD THE ROADWAY OR WHEN THE STORM SEWER SYSTEM IS NOT FULLY FUNCTIONAL.



EROSION CONTROL LOG AT CURB & GRADE INLET

CL-GI



SHEET 3 OF 3

		<b>Design Division Standard</b>	
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG EC (9) - 16			
FILE: ec916	DN: TxDOT	CK: KM	DW: LS/PT
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REVISIONS	0915	12	576
	DIST	COUNTY	SHEET NO.
	SAT	BEXAR	641