

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

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS
SHEET NO. DESCRIPTION
SEE SHEETS 2-4 FOR INDEX OF SHEETS

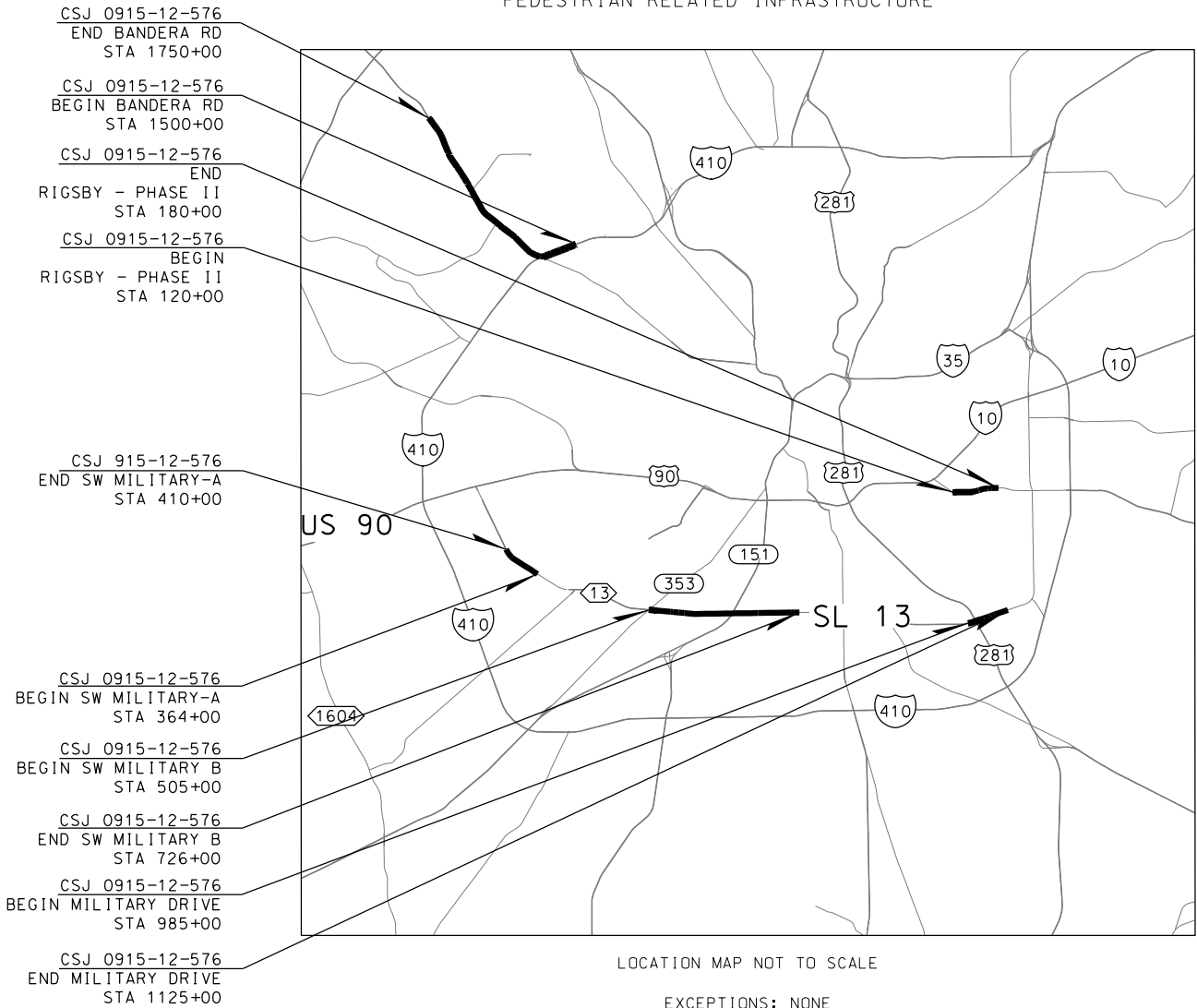
DESIGN SPEED = N/A
AREA OF DISTURBED SOIL = 0.55 ACRES
ADT: N/A

PLANS OF PROPOSED
STATE HIGHWAY IMPROVEMENT

FEDERAL AID PROJECT.

BEXAR COUNTY
VARIES

PROJ NO:
CSJ: 0915-12-576
FROM: VARIOUS LOCATIONS IN BEXAR COUNTY
TO: ON STATE SYSTEM
NET LENGTH: 0.001 MI
CONSTRUCT CURB RAMPS, SIDEWALKS AND OTHER
PEDESTRIAN RELATED INFRASTRUCTURE



REGISTERED ACCESSIBILITY SPECIALIST (RAS) INSPECTION
REQUIRED. TDLR NO. EABPRJ: _____

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).

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

Plotted on: 11/21/2018

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

SHEET NO.

DESCRIPTION

VOLUME I

GENERAL

1	TITLE SHEET
2-3	INDEX OF SHEETS
4-7	PROJECT LAYOUT MAPS
8-12	TYPICAL SECTIONS
13-24	GENERAL NOTES
25	ESTIMATE AND QUANTITIES
26-37	SUMMARY OF ROADWAY QUANTITIES
38	SUMMARY OF SIGNAGE AND PAVEMENT MARKINGS QUANTITIES
39	SUMMARY OF UTILITY QUANTITIES
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40-43	TRAFFIC CONTROL PLAN ADVANCE WARNING DEVICES
44	NARRATIVE
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46	*BC (2) -14
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48	*BC (4) -14
49	*BC (5) -14
50	*BC (6) -14
51	*BC (7) -14
52	*BC (8) -14
53	*BC (9) -14
54	*BC (10) -14
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57	*TCP (1-1) -18
58	*TCP (1-4) -18
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60	*WZ (BTS-1) -13
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63-79	HORIZONTAL AND VERTICAL CONTROL SHEETS
80-89	HORIZONTAL ALIGNMENT DATA SHEET
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92	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00
93	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00 POINT TABLES
94	EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00
95	EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00
96	EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00
97	EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00
98	EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00
99	WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 611+00
100	WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 615+00
101	WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 619+00
102	WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 623+00
103	WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 627+00
104	WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00
105	WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00
106	WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00
107	WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00
108	WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00 POINT TABLES
109	WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00
110	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00
111	WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00
112	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 661+00 POINT TABLES
113	WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT

SL 13 SW MILITARY A

114	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT
115	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00
116	WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT

SL 13 SW MILITARY B

117	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 508+00
118	EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 512+00
119	EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 512+00 DETAILS
120	EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 516+00
121	EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 516+00 DETAILS
122	EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 520+00
123	EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00
124	EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 756+00
125	EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50
126	EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00
127	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00
128	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00 DETAILS
129	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00
130	FR SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00 DETAILS

SHEET NO.

DESCRIPTION
SL 13 SW MILITARY B CONT


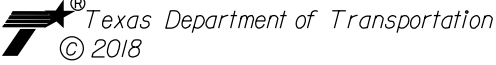
130	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00 DETAILS
131	EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00
132	EB SIDEWALK CONSTRUCTION PLAN STA 548+00 TO STA 552+00
133	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00
134	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00 POINT TABLES
135	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00
136	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00 DETAILS
137	EB SIDEWALK CONSTRUCTION PLAN STA 564+00 TO STA 566+00
138	EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00
139	EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00
140	EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 593+50
141	EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 597+00
142	EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00
143	EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00
144	EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00
145	EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75
146	EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75 DETAILS
147	EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75
148	EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25, STA 659+00 TO STA 661+00
149	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 665+00
150	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 665+00 DETAILS
151	EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00
152	EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00
153	EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00
154	EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00
155	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00
156	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00 DETAILS
157	EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55
158	EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00
159	EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00
160	EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00
161	EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00 DETAILS
162	EB SIDEWALK CONSTRUCTION PLAN STA 715+00 TO STA 719+00
163	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00
164	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00 DETAILS
165	EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT
166	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00
167	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00 DETAILS
168	WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00
169	WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00
170	WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00 DETAILS
171	WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 760+00
172	WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 760+00 DETAILS
173	WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 763+00
174	WB SIDEWALK CONSTRUCTION PLAN STA 763+00 TO STA 765+00
175	WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00
176	WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00
177	WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00 DETAILS
178	WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00
179	WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00 POINT TABLES
180	WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 780+00
181	WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 784+00
182	WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 784+00 DETAILS
183	WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00
184	WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00 DETAILS
185	WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 792+00
186	WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 792+00 DETAILS
187	WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00
188	WB SIDEWALK CONSTRUCTION PLAN STA 804+00 TO STA 806+00
189	WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00
190	WB SIDEWALK CONSTRUCTION PLAN STA 817+50 TO STA 819+50, STA 836+50 TO STA 838+50
191	WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 856+00
192	WB SIDEWALK CONSTRUCTION PLAN STA 856+00 TO STA 860+00
193	WB SIDEWALK CONSTRUCTION PLAN STA 856+00 TO STA 860+00 DETAILS
194	WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00
195	WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00 DETAILS
196	WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00
197	WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00
198	WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00
199	WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00
200	WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00
201	WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50
202	WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50 DETAILS
203	WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00
204	WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00
205	WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00
206	WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00
207	WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00
208	WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00
209	WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00
210	WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT

DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

REV. NO.	DATE	DESCRIPTION			BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>					
<div><p>Texas Department of Transportation © 2018</p></div>					
INDEX OF SHEETS					
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
					2

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\General\1113507*Index01.dgn

SHEET NO.

DESCRIPTION

		SL 13 MILITARY DRIVE	
211	EB SIDEWALK CONSTRUCTION	PLAN BEGIN PROJECT TO STA 991+50, STA 1001+50 TO STA 1003+50	
212	EB SIDEWALK CONSTRUCTION	PLAN STA 1040+00 TO STA 1042+00, STA 1054+50 TO STA 1056+50	
213	EB SIDEWALK CONSTRUCTION	PLAN STA 1095+00 TO STA 1099+00	
214	EB SIDEWALK CONSTRUCTION	PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00	
215	EB SIDEWALK CONSTRUCTION	PLAN STA 1122+50 TO END PROJECT	
216	WB SIDEWALK CONSTRUCTION	PLAN BEGIN PROJECT TO STA 1050+50, STA 1159+75 TO STA 1061+25	
217	WB SIDEWALK CONSTRUCTION	PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1091+50	
218	WB SIDEWALK CONSTRUCTION	PLAN STA 1202+50 TO STA 1204+50	
219	WB SIDEWALK CONSTRUCTION	PLAN STA 1227+00 TO STA 1231+00	
220	WB SIDEWALK CONSTRUCTION	PLAN STA 1251+00 TO STA 1255+00	
221	WB SIDEWALK CONSTRUCTION	PLAN STA 1251+00 TO STA 1255+00 POINT TABLES	
222	WB SIDEWALK CONSTRUCTION	PLAN STA 1255+00 TO STA 1259+00	
223	WB SIDEWALK CONSTRUCTION	PLAN STA 1274+00 TO STA 1276+00	
224	WB SIDEWALK CONSTRUCTION	PLAN STA 1274+00 TO STA 1276+00 POINT TABLES	
225	WB SIDEWALK CONSTRUCTION	PLAN STA 1276+00 TO STA 1280+00	
226	WB SIDEWALK CONSTRUCTION	PLAN STA 1280+00 TO END PROJECT	

VOLUME II

BANDERA RD

227	WB SIDEWALK CONSTRUCTION	PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00	
228	WB SIDEWALK CONSTRUCTION	PLAN STA 1335+00 TO STA 1339+00	
229	WB SIDEWALK CONSTRUCTION	PLAN STA 1335+00 TO STA 1339+00 DETAILS	
230	WB SIDEWALK CONSTRUCTION	PLAN STA 1344+00 TO STA 1346+00	
231	WB SIDEWALK CONSTRUCTION	PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00	
232	WB SIDEWALK CONSTRUCTION	PLAN STA 1365+00 TO STA 1367+00	
233	WB SIDEWALK CONSTRUCTION	PLAN STA 1373+00 TO STA 1376+50	
234	WB SIDEWALK CONSTRUCTION	PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00	
235	WB SIDEWALK CONSTRUCTION	PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50	
236	WB SIDEWALK CONSTRUCTION	PLAN STA 1390+00 TO STA 1394+00	
237	WB SIDEWALK CONSTRUCTION	PLAN STA 1390+00 TO STA 1394+00 DETAILS	
238	WB SIDEWALK CONSTRUCTION	PLAN STA 1399+00 TO 1401+00, STA 1799+00 TO STA 1801+00	
239	WB SIDEWALK CONSTRUCTION	PLAN STA 1402+00 TO STA 1406+00	
240	WB SIDEWALK CONSTRUCTION	PLAN STA 1402+00 TO STA 1406+00 DETAILS	
241	WB SIDEWALK CONSTRUCTION	PLAN STA 1406+00 TO STA 1410+00	
242-243	WB SIDEWALK CONSTRUCTION	PLAN STA 1406+00 TO STA 1410+00 DETAILS	
244	WB SIDEWALK CONSTRUCTION	PLAN STA 1410+00 TO STA 1414+00	
245	WB SIDEWALK CONSTRUCTION	PLAN STA 1410+00 TO STA 1414+00 DETAILS	
246	WB SIDEWALK CONSTRUCTION	PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00	
247	WB SIDEWALK CONSTRUCTION	PLAN STA 1416+00 TO STA 1420+00	
248	WB SIDEWALK CONSTRUCTION	PLAN STA 1421+00 TO STA 1423+00	
249	WB SIDEWALK CONSTRUCTION	PLAN STA 1423+00 TO STA 1427+00	
250	WB SIDEWALK CONSTRUCTION	PLAN STA 1423+00 TO STA 1427+00 DETAILS	
251	WB SIDEWALK CONSTRUCTION	PLAN STA 1427+00 TO STA 1430+00	
252	WB SIDEWALK CONSTRUCTION	PLAN STA 1427+00 TO STA 1430+00 DETAILS	
253	WB SIDEWALK CONSTRUCTION	PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00	
254	WB SIDEWALK CONSTRUCTION	PLAN STA 1432+00 TO STA 1436+00	
255-256	WB SIDEWALK CONSTRUCTION	PLAN STA 1432+00 TO STA 1436+00 DETAILS	
257	WB SIDEWALK CONSTRUCTION	PLAN STA 1436+00 TO STA 1440+00	
258	WB SIDEWALK CONSTRUCTION	PLAN STA 1436+00 TO STA 1440+00 DETAILS	
259	WB SIDEWALK CONSTRUCTION	PLAN STA 1440+00 TO STA 1444+00	
260	WB SIDEWALK CONSTRUCTION	PLAN STA 1440+00 TO STA 1444+00 DETAILS	
261	WB SIDEWALK CONSTRUCTION	PLAN STA 1444+00 TO STA 1448+00	
262	WB SIDEWALK CONSTRUCTION	PLAN STA 1444+00 TO STA 1448+00 DETAILS	
263	WB SIDEWALK CONSTRUCTION	PLAN STA 1448+00 TO STA 1452+00	
264	WB SIDEWALK CONSTRUCTION	PLAN STA 1448+00 TO STA 1452+00 DETAILS	
265	WB SIDEWALK CONSTRUCTION	PLAN STA 1452+00 TO STA 1456+00	
266	WB SIDEWALK CONSTRUCTION	PLAN STA 1452+00 TO STA 1456+00 DETAILS	
267	WB SIDEWALK CONSTRUCTION	PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50	
268	WB SIDEWALK CONSTRUCTION	PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50 DETAIL	
269	WB SIDEWALK CONSTRUCTION	PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00	
270	WB SIDEWALK CONSTRUCTION	PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00 DETAIL	
271	WB SIDEWALK CONSTRUCTION	PLAN STA 1475+00 TO STA 1479+00	
272	WB SIDEWALK CONSTRUCTION	PLAN STA 1475+00 TO STA 1479+00 DETAILS	
273	WB SIDEWALK CONSTRUCTION	PLAN STA 1479+00 TO STA 1483+00	
274-275	WB SIDEWALK CONSTRUCTION	PLAN STA 1479+00 TO STA 1483+00 DETAILS	
276	WB SIDEWALK CONSTRUCTION	PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00	
277	WB SIDEWALK CONSTRUCTION	PLAN STA 1485+00 TO STA 1489+00	
278	WB SIDEWALK CONSTRUCTION	PLAN STA 1489+00 TO STA 1493+00	
279	WB SIDEWALK CONSTRUCTION	PLAN STA 1493+00 TO STA 1497+00	
280	WB SIDEWALK CONSTRUCTION	PLAN STA 1497+00 TO STA 1500+00	
281	WB SIDEWALK CONSTRUCTION	PLAN STA 1500+00 TO STA 1504+00	
282	WB SIDEWALK CONSTRUCTION	PLAN STA 1504+00 TO STA 1508+00	
283	WB SIDEWALK CONSTRUCTION	PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50	
284	WB SIDEWALK CONSTRUCTION	PLAN STA 1512+00 TO STA 1516+00	
285	WB SIDEWALK CONSTRUCTION	PLAN STA 1526+00 TO STA 1528+00, STA 1530+00 TO STA 1532+00	
286	WB SIDEWALK CONSTRUCTION	PLAN STA 1532+00 TO STA 1536+00	
287	WB SIDEWALK CONSTRUCTION	PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00	

SHEET NO.

DESCRIPTION

		BANDERA RD CONT	
288	EB SIDEWALK CONSTRUCTION	PLAN STA 1722+00 TO 1724+00 , STA 1730+00 TO STA 1732+00	
289	EB SIDEWALK CONSTRUCTION	PLAN STA 1741+00 TO STA 1745+00	
290	EB SIDEWALK CONSTRUCTION	PLAN STA 1745+00 TO STA 1749+00	
291	EB SIDEWALK CONSTRUCTION	PLAN STA 1749+00 TO STA 1753+00	
292	EB SIDEWALK CONSTRUCTION	PLAN STA 1749+00 TO STA 1753+00 DETAILS	
293	EB SIDEWALK CONSTRUCTION	PLAN STA 1755+00 TO STA 1758+50	
294	EB SIDEWALK CONSTRUCTION	PLAN STA 1758+50 TO STA 1762+00	
295	EB SIDEWALK CONSTRUCTION	PLAN STA 1762+00 TO STA 1765+00	
296	EB SIDEWALK CONSTRUCTION	PLAN STA 1765+00 TO STA 1769+00	
297	EB SIDEWALK CONSTRUCTION	PLAN STA 1769+00 TO STA 1773+00	
298	EB SIDEWALK CONSTRUCTION	PLAN STA 1773+00 TO STA 1776+00	
299	EB SIDEWALK CONSTRUCTION	PLAN STA 1778+00 TO STA 1782+00	
300	EB SIDEWALK CONSTRUCTION	PLAN STA 1784+50 TO STA 1788+50	
301	EB SIDEWALK CONSTRUCTION	PLAN STA 1788+50 TO STA 1792+50	
302	EB SIDEWALK CONSTRUCTION	PLAN STA 1792+50 TO STA 1796+00	
303	EB SIDEWALK CONSTRUCTION	PLAN STA 1796+00 TO STA 1799+00	
304	EB SIDEWALK CONSTRUCTION	PLAN STA 1801+00 TO STA 1805+00	
305	EB SIDEWALK CONSTRUCTION	PLAN STA 1801+00 TO STA 1805+00 DETAILS	
306	EB SIDEWALK CONSTRUCTION	PLAN STA 1805+00 TO STA 1808+00	
307	EB SIDEWALK CONSTRUCTION	PLAN STA 1808+00 TO STA 1811+00	
308	EB SIDEWALK CONSTRUCTION	PLAN STA 1811+00 TO STA 1814+00	
309	EB SIDEWALK CONSTRUCTION	PLAN STA 1816+00 TO STA 1820+00	
310	EB SIDEWALK CONSTRUCTION	PLAN STA 1820+00 TO STA 1824+00	
311	EB SIDEWALK CONSTRUCTION	PLAN STA 1824+00 TO STA 1828+00	
312	EB SIDEWALK CONSTRUCTION	PLAN STA 1824+00 TO STA 1828+00 DETAILS	
313	EB SIDEWALK CONSTRUCTION	PLAN STA 1828+00 TO STA 1830+00	
314	EB SIDEWALK CONSTRUCTION	PLAN STA 1836+00 TO STA 1840+00	
315	EB SIDEWALK CONSTRUCTION	PLAN STA 1840+00 TO STA 1844+00	
316	EB SIDEWALK CONSTRUCTION	PLAN STA 1844+00 TO STA 1848+00	
317	EB SIDEWALK CONSTRUCTION	PLAN STA 1848+00 TO STA 1852+00	
318	EB SIDEWALK CONSTRUCTION	PLAN STA 1852+00 TO STA 1856+00	
319	EB SIDEWALK CONSTRUCTION	PLAN STA 1858+00 TO STA 1862+00	
320	EB SIDEWALK CONSTRUCTION	PLAN STA 1862+00 TO STA 1865+50	
321	EB SIDEWALK CONSTRUCTION	PLAN STA 1867+50 TO STA 1871+50	
322	EB SIDEWALK CONSTRUCTION	PLAN STA 1867+50 TO STA 1871+50 DETAILS	
323	EB SIDEWALK CONSTRUCTION	PLAN STA 1871+50 TO STA 1875+00	
324	EB SIDEWALK CONSTRUCTION	PLAN STA 1871+50 TO STA 1875+00 DETAILS	
325	EB SIDEWALK CONSTRUCTION	PLAN STA 1875+00 TO STA 1879+00	
326	EB SIDEWALK CONSTRUCTION	PLAN STA 1879+00 TO STA 1883+00	
327	EB SIDEWALK CONSTRUCTION	PLAN STA 1885+00 TO STA 1889+00	
328	EB SIDEWALK CONSTRUCTION	PLAN STA 1889+00 TO STA 1893+00	
329	EB SIDEWALK CONSTRUCTION	PLAN STA 1893+00 TO STA 1897+00	
330	EB SIDEWALK CONSTRUCTION	PLAN STA 1902+00 TO 1904+00, STA 1907+00 TO STA 1909+00	
331	EB SIDEWALK CONSTRUCTION	PLAN STA 1928+00 TO STA 1930+00, STA 1938+00 TO STA 1940+00	
332	EB SIDEWALK CONSTRUCTION	PLAN STA 2516+00 TO STA 2518+00	
333	WB SIDEWALK CONSTRUCTION	PLAN STA 2026+00 TO STA 2028+00	

ROADWAY - STANDARDS

334-343	SPECIAL DETAILS	
344	(VIA) TRANSIT STOP DETAILS	
345	(VIA) TRANSIT STOP DETAILS	
346-349	*PED-18	
350-352	*PRD-13	
353	*CCCG-12	
354	*ARMOR CURB SLOT WITH CONCRETE FOUNDATION (SAT DIST STANDARDS)	
355-358	*MB-15 (1)	
359	*MB-14 (2)	
360	*MB-14 (2A)	
361	*MB-14 (2B)	
362	*RW1 (L) A	
363	*RW1 (L) B	
364	*RW1 (L) C	
365	*RW2	

TRAFFIC - STANDARDS

366	*ED (1) -14	
367	*ED (3) -14	
368	*ED (4) -14	
369	*SMD (GEN) -08	
370	*SMD (SLIP-1) -08	
371	*SMD (SLIP-2) -08	
372	*SMD (SLIP-3) -08	
373-374	*D & OM (1) -15	
375	*PM (1) -12	
376	*PM (2) -12	
377	*PM (3) -12	

ENVIRONMENTAL

378	*EPIC	
379	*SW3P	
380-382	*EC (9) -16	
383	SW3P EXAMPLE INTERSECTION	

DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL

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P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

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<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div><div>PAPE-DAWSON</div><div>ENGINEERS</div></div><div><div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS</div><div>2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000</div><div>TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div></div></div></div> <tr><td colspan="4"><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div><div>Texas Department of Transportation</div><div>© 2018</div></div></div></div></td></tr> <tr><td colspan="4">INDEX OF SHEETS</td></tr> <tr><td colspan="4">SHEET 2 OF 2</td></tr> <tr><td>DGN#</td><td>FED. RD. DIV. NO.</td><td>STATE</td><td>FEDERAL AID PROJECT NO.</td><td>HIGHWAY NO.</td></tr> <tr><td>CHK DGN#</td><td>6</td><td>TEXAS</td><td></td><td>VARIES</td></tr> <tr><td>DWG#</td><td>DIST.</td><td>COUNTY</td><td>CONT. NO.</td><td>SECT. NO.</td><td>JOB NO.</td><td>SHEET NO.</td></tr> <tr><td>CHK DWG#</td><td>SAT</td><td>BEXAR</td><td>0915</td><td>12</td><td>576</td><td>3</td></tr>				<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div><div>Texas Department of Transportation</div><div>© 2018</div></div></div></div>				INDEX OF SHEETS				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	3
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DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.																																	
CHK DWG#	SAT	BEXAR	0915	12	576	3																																	

Plotted on: 11/21/2018

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SCALE: PLAN 1" = 20'

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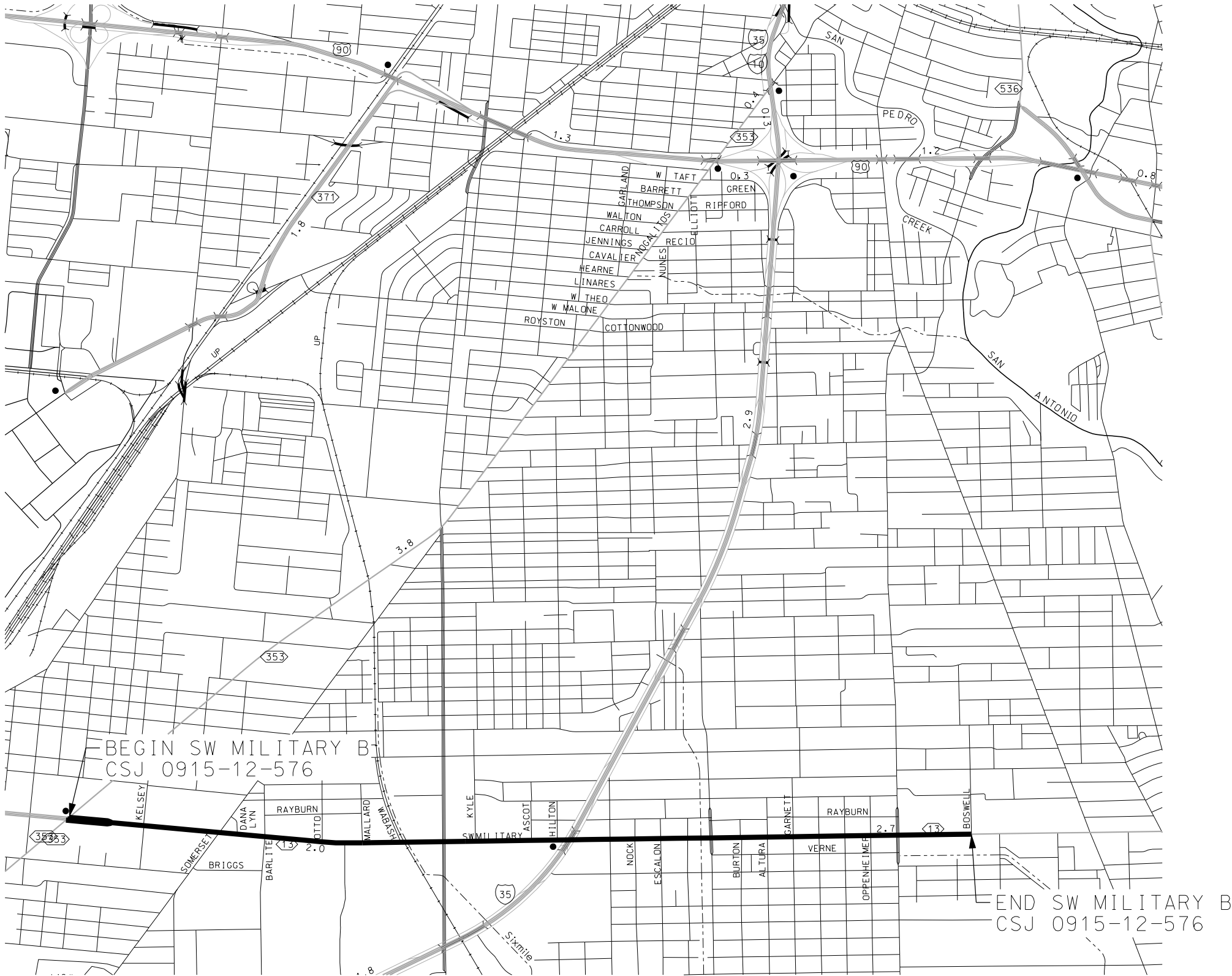
PROJECT
LAYOUT
MAPS

SHEET 1 OF 4

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	4

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\General\11113507*ProjLayout.dgn



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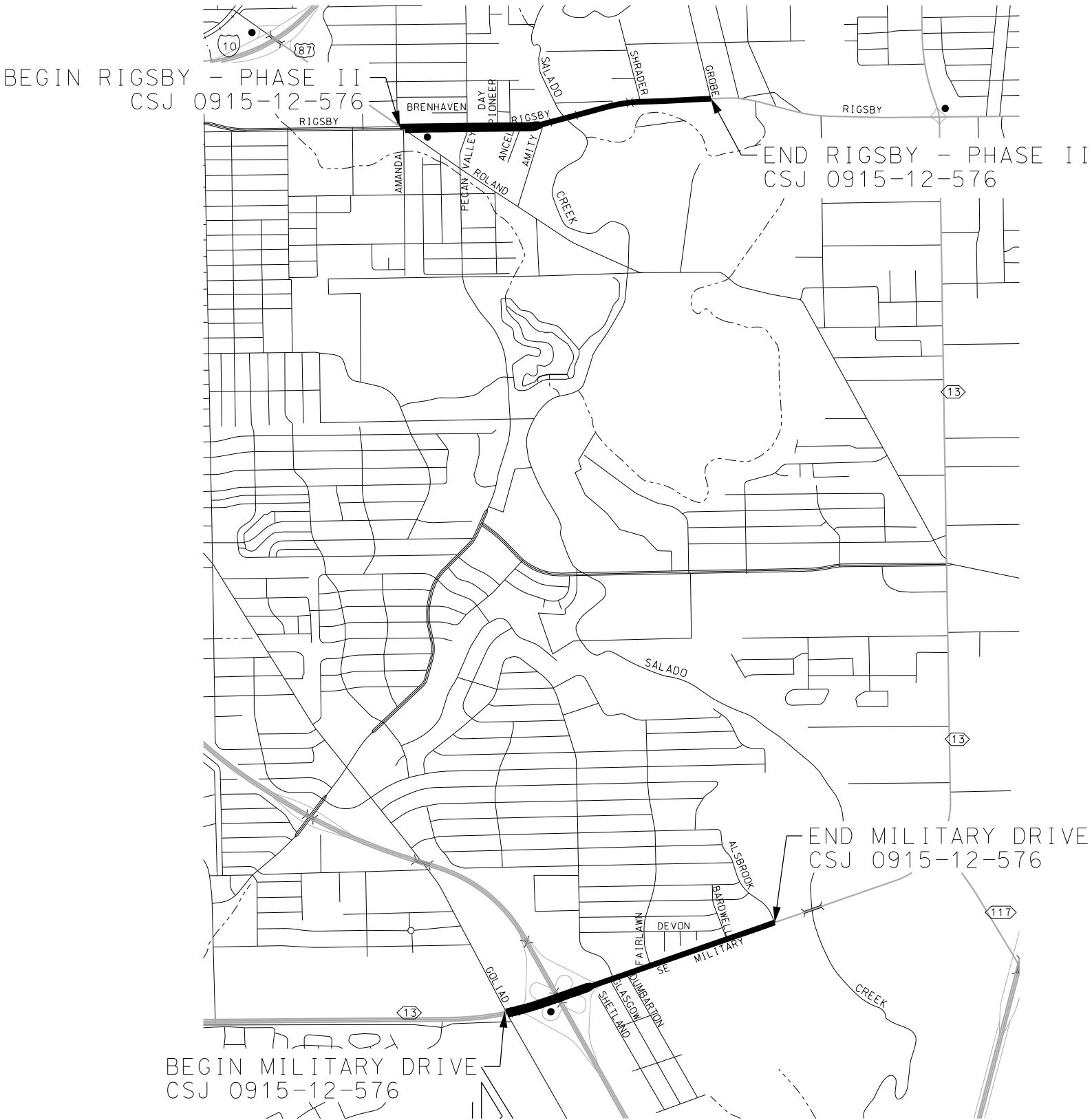
PROJECT
LAYOUT
MAPS

SHEET 2 OF 4

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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	5

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PROJECT
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SHEET 3 OF 4

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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	6

Plotted on: 11/21/2018

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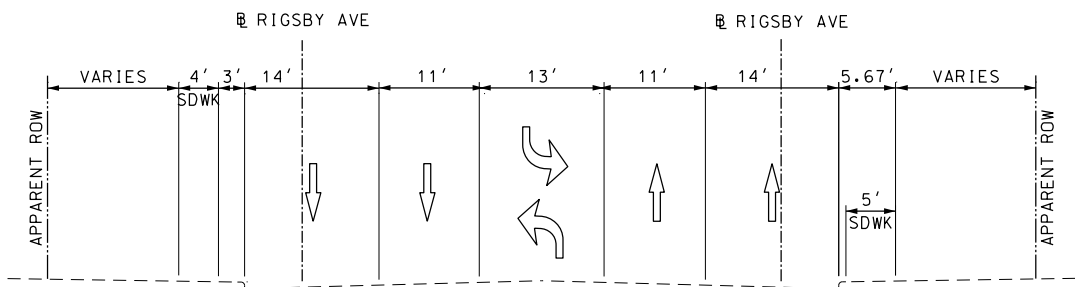
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



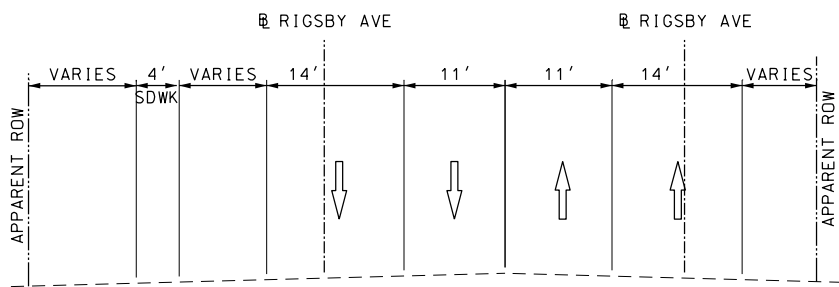
PROJECT
LAYOUT
MAPS

SHEET 4 OF 4

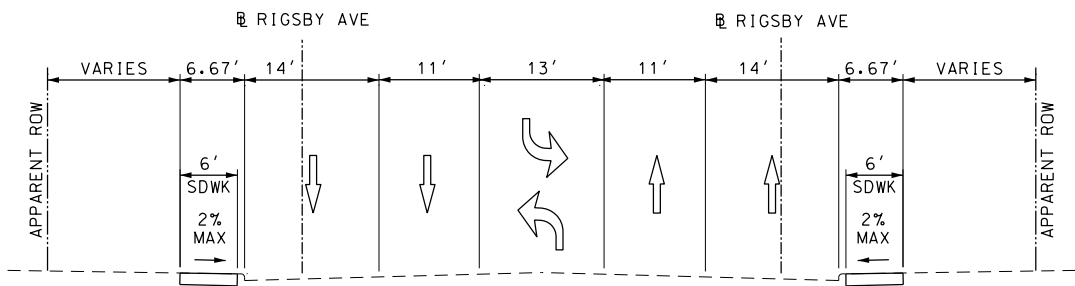
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CHK DWG#	SAT	BEXAR	0915	12	576	7



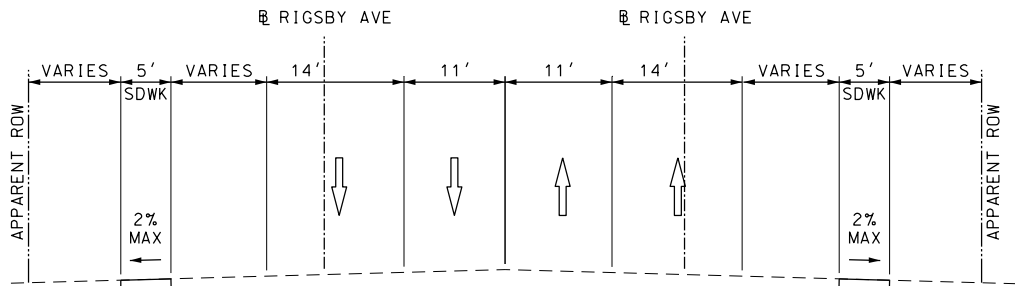
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NOT TO SCALE
FROM STA 123+00 TO STA 149+00
FROM STA 636+00 TO STA 663+00



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



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



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

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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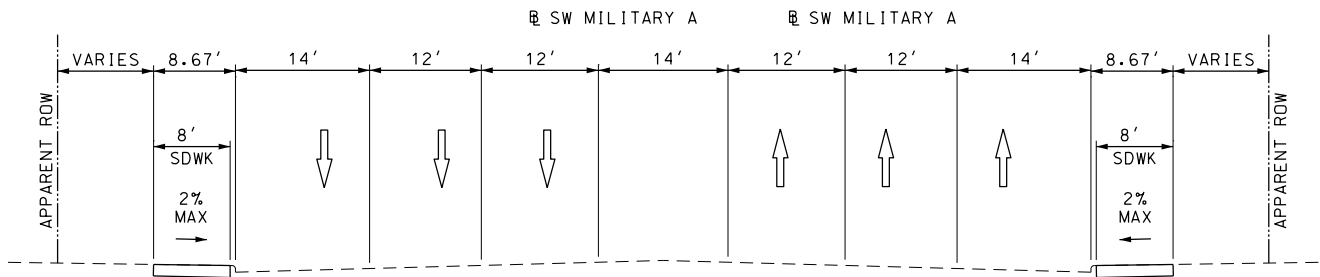
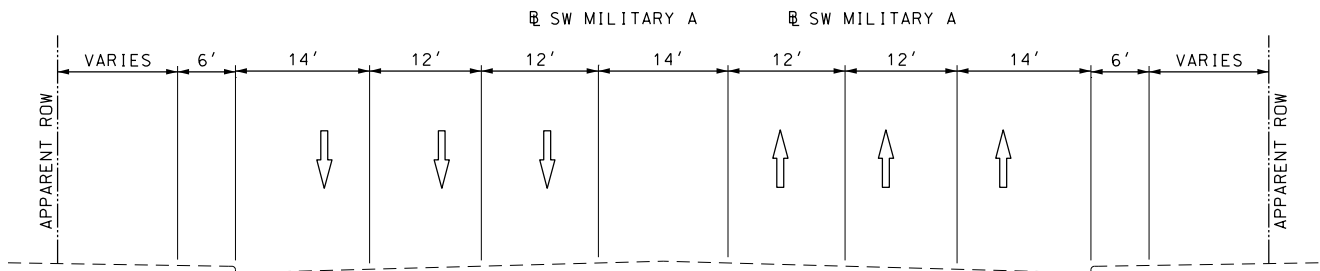
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



TYPICAL SECTIONS

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.
CHK DWG:	SAT	BEXAR	0915	12	576



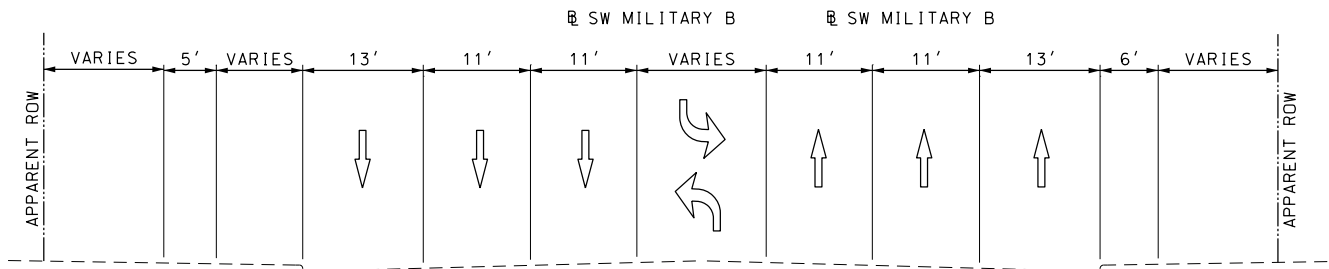
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ENGINEER: JOHN A. TYLER
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ENGINEER: JAMES A. LUTZ
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DATE: 11/21/2018

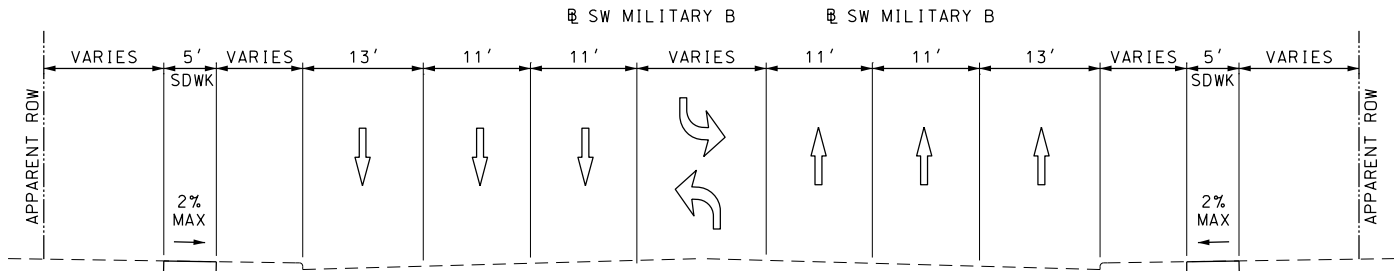
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TYPICAL SECTIONS			
SHEET 2 OF 5			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
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			JOB NO.
			SHEET NO.
			VARIES
			9

Plotted on: 11/21/2018

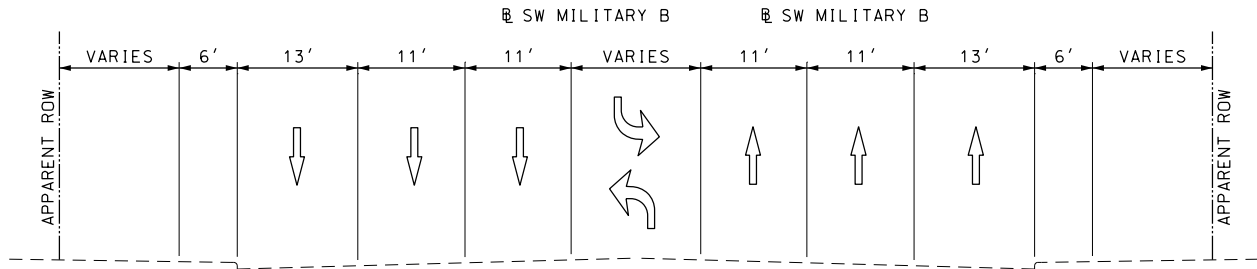
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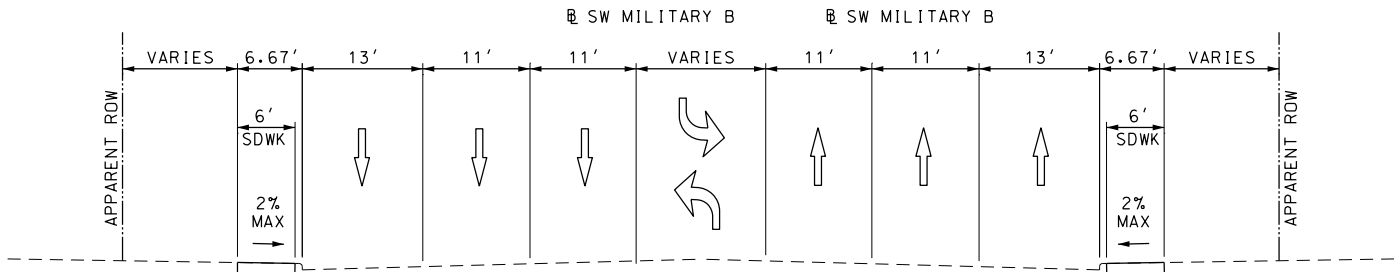
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NOT TO SCALE
FROM STA 505+00 TO STA 663+00
FROM STA 742+00 TO STA 802+00



PROPOSED TYPICAL SECTION
SW MILITARY B (SL 13)
NOT TO SCALE
FROM STA 505+00 TO STA 663+00
FROM STA 742+00 TO STA 802+00



EXISTING TYPICAL SECTION
SW MILITARY B (SL 13)
NOT TO SCALE
FROM STA 663+00 TO STA 726+00
FROM STA 802+00 TO STA 956+00



PROPOSED TYPICAL SECTION
SW MILITARY B (SL 13)
NOT TO SCALE
FROM STA 663+00 TO STA 726+00
FROM STA 802+00 TO STA 956+00

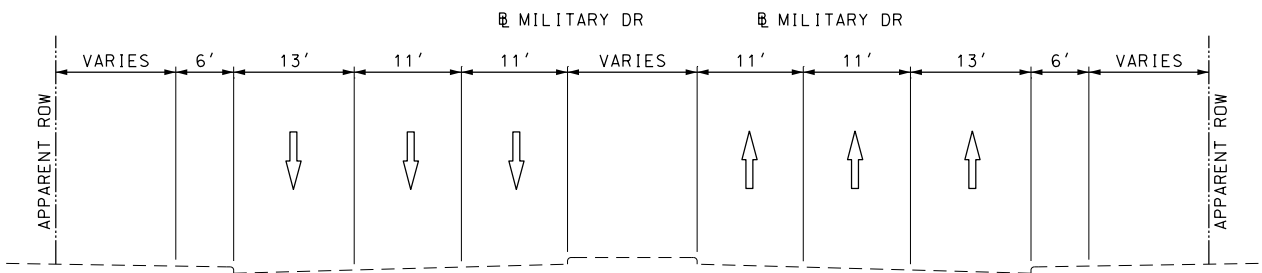
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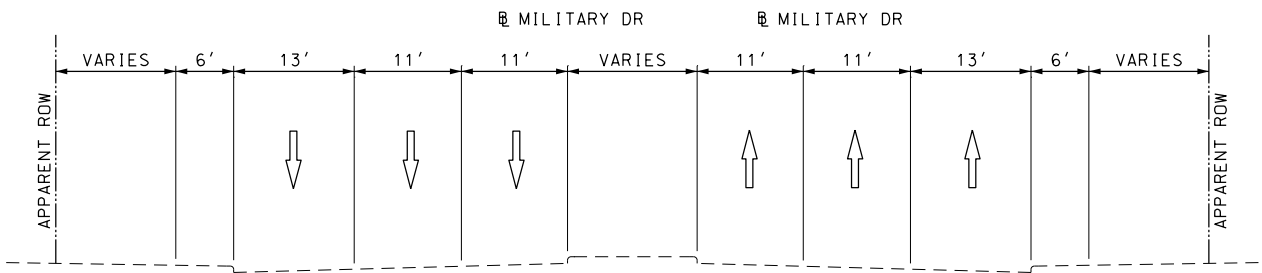
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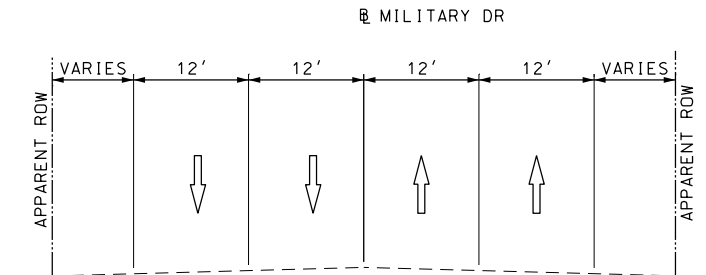
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TYPICAL SECTIONS				
SHEET 3 OF 5				
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				576
				10



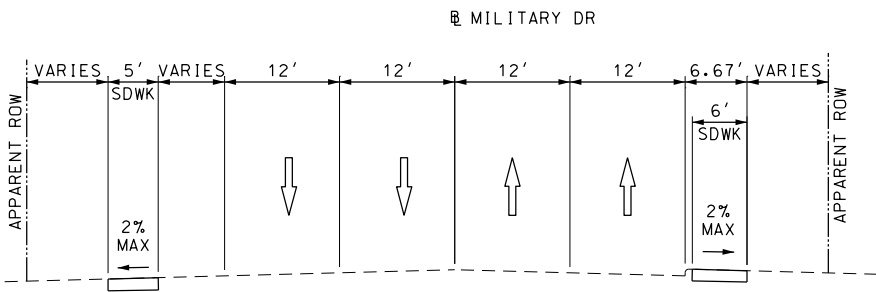
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FROM STA 981+00 TO STA 1092+00
FROM STA 1141+00 TO STA 1252+00



PROPOSED TYPICAL SECTION
MILITARY DR (SL 13)
NOT TO SCALE
FROM STA 981+00 TO STA 1092+00
FROM STA 1141+00 TO STA 1252+00



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



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

DESIGN

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PAPE-DAWSON ENGINEERS

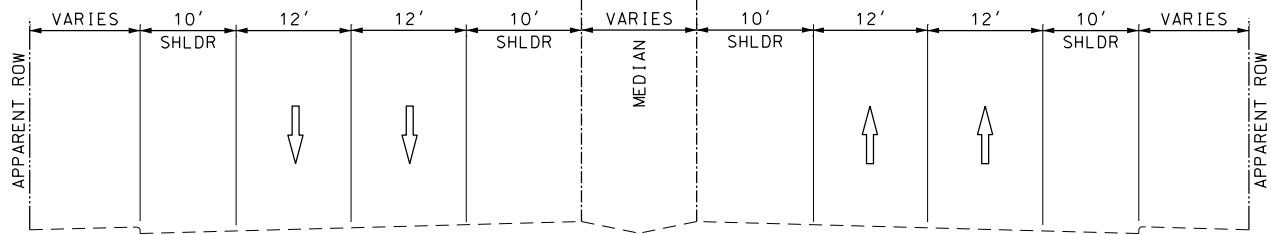
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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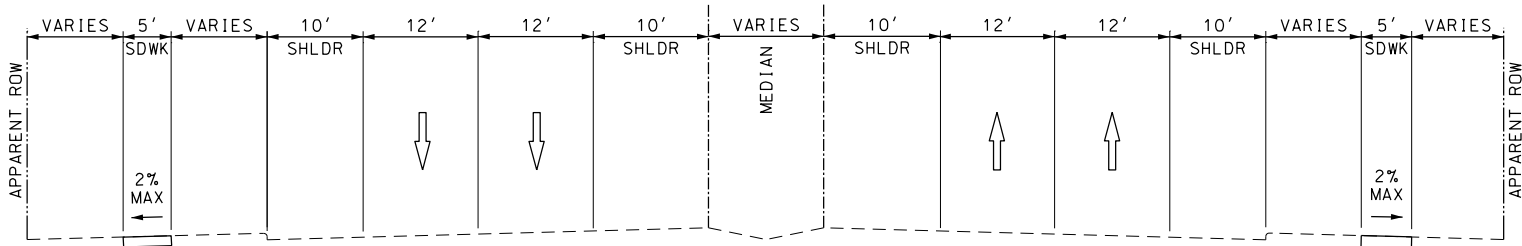
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DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
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Plotted on: 11/21/2018

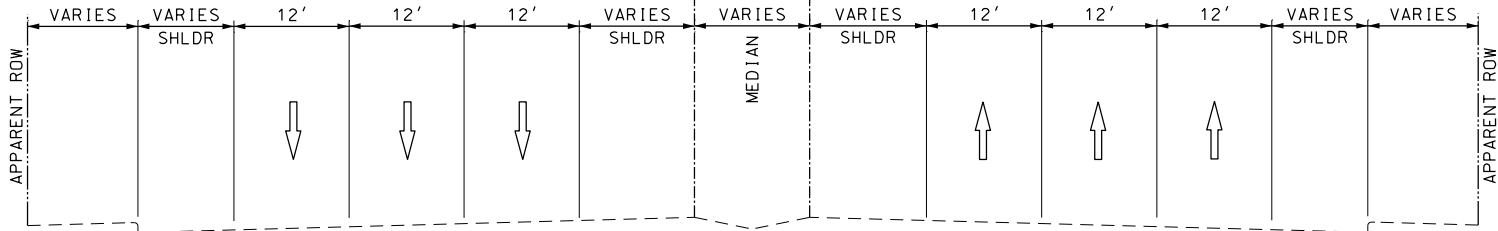
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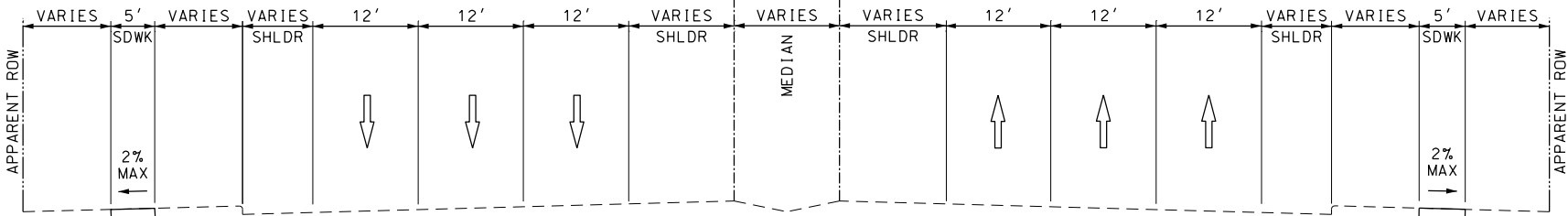
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FROM STA 1884+00 TO STA 1941+00



PROPOSED TYPICAL SECTION
BANDERA RD
NOT TO SCALE
FROM STA 1483+00 TO STA 1513+00
FROM STA 1884+00 TO STA 1941+00



EXISTING TYPICAL SECTION
BANDERA RD
NOT TO SCALE
FROM STA 1319+00 TO STA 1483+00
FROM STA 1719+00 TO STA 1884+00



PROPOSED TYPICAL SECTION
BANDERA RD
NOT TO SCALE
FROM STA 1319+00 TO STA 1483+00
FROM STA 1719+00 TO STA 1884+00

DESIGN

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TYPICAL SECTIONS

SHEET 5 OF 5

CHK	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	12

Control: 0915-12-576

County: Bexar

Highway: Various

*****GENERAL NOTES*****
2014 Specification Book (Revised June 7, 2018)

===== Basis of Estimate =====

Item	Description	Rate/Area	Quant-Unit
168	Vegetative Watering	1.3 GAL/SY-WEEK	MG
340	Hot Mix (All Types)	115 LB/SY-IN	TON

Note: The rates of asphalt and aggregate are for estimating purposes only and may be varied as directed.

- G-2
- Contact the Engineer or the City when construction operations are within 400 feet of a signalized intersection to determine/verify the location of loop detectors, conduit, ground-boxes, etc. Repair or replace any signal equipment damaged by construction operations. The method of repair or replacement shall be pre-approved and inspected. Depending on the type and extent of the damage, the Engineer reserves the right to perform the repair or replacement work and the Contractor will be billed for this work.
- G-3
- Remove existing raised pavement markings as the work progresses or as approved. This work is subsidiary to the various bid items. Properly dispose materials removed.
- G-4
- To better fit field conditions, the cross sections may be varied when approved.
- G-5
- If there are waste areas or material source areas, follow the Texas Aggregate Quarry and Pit Safety Act requirements.
- G-6
- Any materials removed and not reused and determined to be salvageable shall be stored within the project limits at an approved location or delivered undamaged to the storage yard as directed. Properly dispose unsalvageable materials in accordance with local, state, and federal regulations. Deface traffic signs so that they will not reappear in public as signs.
- G-8
- Any sign panels that are adjusted or removed and replaced, shall be done the same workday unless otherwise approved. This work shall be considered subsidiary to Item 502.
- G-9
- Locate and reference all manholes and valves within the construction area with station and offset. Each manhole and valve shall be identified by its owner (SAWS, CPS, etc.). No roadwork will begin until this list has been submitted. All valves and manhole covers have to be accessible at all times, therefore; temp. CTB, material stock piles, etc. cannot be placed over these valves or covers.

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- G-10
- Adjust or construct all manholes and valves to final pavement elevations prior to the final mat of ACP. If, between the final elevation adjustment and the final mat of ACP, the manholes and valves are going to be exposed to traffic, place temporary asphalt around the manhole and valve to provide a +/- 50:1 taper. The cost of elevation adjustment will be part of the manhole and valve work, and asphalt tapers are part of the ACP work.
- G-11
- Hurricane Evacuation

Hurricane Season is from June 1 thru November 30. As the closest metropolitan city inland from the Texas Coast, the City of San Antonio is a major shelter destination during mandatory hurricane evacuations. As such, planned work zone lane or road closures may be restricted and/or suspended during mandatory hurricane evacuation operations. The District will coordinate these restrictions at a minimum H-120 from any projected impact to the Texas Coast.

No time charges will be made if the Engineer determines that work on the project was impacted by the hurricane.

The Engineer may order changes in the Traffic Control Plan to accommodate evacuation traffic, and may suspend the work, all or in part, to ensure timely completion of this work. All work to implement changes in the Traffic Control Plan will be paid through existing bid prices or through Item 9.5, Force Account. However, the Department will not entertain any request for delay damages, loss of efficiency that may be attributed to the restriction or suspension of road or lane closures, or to changes in the Traffic Control Plan.

Removal of existing foundations, miscellaneous concrete, and various structures identified on the plans or encountered in the field, are not paid for specifically but are subsidiary to the various bid items unless otherwise shown in the plans.

Saw cutting existing pavement, concrete, and riprap is not paid for separately but is subsidiary to various bid items.

Unless otherwise shown or directed by the Engineer, miscellaneous site grading, embankment, and excavation is not paid for separately and is subsidiary to the various bid items. This includes areas behind proposed retaining walls unless otherwise specified on the plans.



It is the Contractors responsibility to ensure compliance with the PED-12A standard along the accessible route when signs are adjusted.

Irrigation heads and fixture relocations in conflict with the proposed improvements are not paid for separately but are subsidiary to various bid items.

Buildings and Structures must be protected from concrete splash at all times. The Contractor is to install a material approved by the Engineer which will guard the buildings against concrete

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Design Filename: P:\111\35\07\design\Civil\General\1113507*GeneralNotes.dgn

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County: Bexar

Highway: Various

splash. This work is considered subsidiary to Item 531 and will not be paid separately. If concrete splash litters a building facade the Contractor, at their expense, is responsible for cleaning and remedying the concrete as approved by the Engineer.

Grade street intersections and median openings for surface drainage.

Sweep and remove all litter, construction debris and surplus material on the right-of-way within the project limits to keep the jobsite neat at all times. Keep roadways and sidewalks free of sediment. Consider subsidiary to pertinent items.

Construct all ramps, sidewalks, steps, curb ramps, handrails, and other pedestrian elements in accordance with Texas Accessibility Standards (TAS) issued by the Texas Department of Licensing and Regulation. Maintain one copy of TAS at the project site at all times.

When working near aerial electrical lines and / or utility poles, provide adequate safety measures, as needed, to comply with the appropriate sections of Federal and State regulations. For electrical lines and poles shown in the plans, if the lines need to be de-energized and / or if poles require bracing, contact the electrical company to coordinate the de-energizing and bracing. Work pertaining to de-energizing lines, bracing poles and any other protective measures required will not be paid at the expense of TxDOT.

All structures are to be backfilled with cement stabilized sand as directed by the engineer.

Personnel will be experienced in items of work in contract. Safety vests and hard hats will be pre-approved and worn at all times when outside vehicles within the work area.

Pavement markers will be left in place until such time as they are in conflict with the work in progress.

All pavement markings and/or striping that are in conflict with traffic operations will be removed by the contractor. Such removal will be considered subsidiary to the various bid items, and will not be paid for directly.

Single lane closures, except as otherwise shown in the plans, will be restricted to off-peak hours as defined in the following table:

Peak Hours		Off-Peak Hours	
6 to 8:30 AM Monday through Friday	3:30 to 7 PM Monday through Friday	8:30 AM to 3:30 PM and 7 PM to 6 AM Monday through Friday	All day Saturday and Sunday

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Highway: Various

Work that requires closure of multiple travel lanes in the same direction, except as otherwise shown in the plans, will be performed at night between the hours of 9 PM and 6 AM.

Existing storm sewers and utilities are shown from the best available information. Verify the location of all underground facilities prior to starting work.

For dimensions of right of way not shown on the plans, see right of way map on file at the TxDOT District Office.

The following Holiday/Event lane closure restriction requirements apply to this project: No work that restricts or interferes with traffic shall be allowed between 3 PM on the day preceding a Holiday or Event and 9 AM on the day after the Holiday or Event.

Holiday Lane Closure Restrictions	
New Year's Eve and New Year's Day (December 31 through January 1)	3 PM December 30 through 9 AM January 2
Easter Holiday Weekend (Friday through Sunday)	3PM Thursday through 9 AM Monday
Memorial Day Weekend (Friday through Monday)	3 PM Thursday through 9 AM Tuesday
Independence Day (July 3 through July 5)	3 PM July 2 through 9 AM July 6
Labor Day Weekend (Friday through Monday)	3 PM Thursday through 9 AM Tuesday
Thanksgiving Holiday (Wednesday through Sunday)	3 PM Tuesday through 9 AM Monday
Christmas Holiday (December 23 through December 26)	3 PM December 22 through 9 AM December 27

Plan work schedules around the appropriate dates above to ensure productive work is performed without lane closures.



Modifications to Lane Closure / Work Restrictions:

Submit a request in writing for approval by the Engineer a minimum of 10 days in advance of implementing a change to lane closure restrictions.

When deemed necessary, the Engineer will lengthen, shorten, or otherwise modify lane closure restrictions as traffic conditions warrant.

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When deemed necessary, the Engineer will modify the list of major events when new events develop, existing events are rescheduled, or when warranted.

Special Events/ Special Situations will be handled on a case by case basis. No work restricting lane closures is allowed from 3 PM a day before to 9 AM the day after the Special Event or Special Situation.

The Contractor's attention is directed to the list of temporary easements provided by TxDOT and their expiration dates as identified in the project's Right of Entry agreements.

Complete all work in these easement areas prior to the expiration dates shown. In any event that work is done after these expiration dates, all costs for extending these dates will be borne by the Contractor.

Erect temporary fencing in the easement areas as necessary to secure the property. Provide at least one week notice to the property owner prior to removing or relocating the fence. Restore permanent fencing to an equal or better condition.

Mail box manipulation made necessary because of construction will be in accordance with Item 560 "Mailbox Assemblies," except that this work will not be paid for directly but will subsidiary to the pertinent bid items.

Provide all-weather surface for temporary ingress and egress to adjacent property, as directed. Materials, labor, equipment and incidentals necessary to provide temporary ingress and egress will not be paid for directly, but will be subsidiary to the various bid items.

Where necessary, the governing slopes indicated herein may be varied from the limits shown, to the extent approved.

All driveway openings will be determined by the Engineer and will conform with Texas Department of Transportation "Regulations for Access Driveways to State Highways" adopted September 1953, and revised June 2004.

Take care that existing curb and gutter is not discolored or damaged during construction operations. In the event of discoloration or damage, clean or repair as directed.

Provide temporary drain openings at all low points or other drainage structures, as required, at the Contractor's expense.

Remove any obstructions to existing drainage due to the contractor's operations, as required, at the Contractor's expense.

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Install all required concrete riprap flumes immediately following the construction of ditches in which they are to be placed. In addition, apply all erosion control measures as shown on the plans or as directed, immediately following construction of channels to their required line, grade, and section.

--Item 5--

5-1 Reference all existing striping and other pavement markings to allow these markings to be re-established. Ensure the markings (lane lines, edge lines, ramp gores, etc.) are in line with signs, TMS arrows, etc. located on overhead sign supports.

5-2 Taper ACP placed at curb inlets, traffic inlets and slotted drains.

5-5 When working near aerial electrical lines or utility poles, comply with Federal, State and local regulations. A horizontal boom or equivalent equipment is required for construction in the vicinity of the CPS Energy electric lines in order to provide vertical clearance of equipment during construction. Contact CPS Energy Utility Coordination Group sixteen (16) week in anticipation of pole bracing. The estimated duration for pole bracing is 6 to 10 weeks (or longer if temporary construction easements are required) after invoice is paid. For de-energizing or sleeving of the overhead electrical lines depicted on the plans, please contact CPS Energy Utility Coordination Group sixteen (16) week in anticipation of needed de-energization. The estimated duration for de-energizing is approximately 4 to 6 weeks (after invoice is paid) but could vary on system scenario and backfeed requirements. De-energizing may not be possible in all instances or may be restricted during specific periods of time due to load demand. Contractor will be reimbursed for the invoice cost for pole bracing and/or de-energizing or sleeving through force account.

5-6 Prevention of Migratory Bird Nesting



It is anticipated that migratory birds, a protected group of species, may try to nest on bridges, culverts, vegetation, or gravel substrate, at any time of the year. The preferred nesting season for migratory birds is from February 15 through October 1. When practicable, schedule construction operations outside of the preferred nesting season. Otherwise, nests containing migratory birds must be avoided and no work will be performed in the nesting areas until the young birds have fledged.

Structures

Bridge and culvert construction operations can not begin until swallow nesting prevention is implemented, until after October 1 if it's determined that swallow nesting is actively occurring, or until it's determined swallow nests have been abandoned. If the State installed nesting deterrent on the bridges and culverts, maintain the existing nesting deterrent to prevent swallow nesting until October 1 or completion of the bridge and culvert work, whichever occurs earlier. If new nests are built and occupied after the beginning of the work, do not perform work that can

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Highway: Various

interfere with or discourage swallows from returning to their nests. Prevention of swallow nesting can be performed by one of the following methods:

1. By February 15 begin the removal of any existing mud nests and all other mud placed by swallows for the construction of nests on any portion of the bridge and culverts. The Engineer will inspect the bridges and culverts for nest building activity. If swallows begin nest building, scrape or wash down all nest sites. Perform these activities daily unless the Engineer determines the need to do this work more frequently. Remove nests and mud through October 1 or until bridge and culvert construction operations are completed.

2. By February 15 place a nesting deterrent (which prevents access to the bridge and culvert by swallows) on the entire bridge (except deck and railing) and culverts.

No extension of time or compensation payment will be granted for a delay or suspension of work caused by nesting swallows. This work is subsidiary to the various bid items.

5-7 Provide a non-intrusive back-up alarm system on all heavy equipment used in close proximity to residential areas. This item is subsidiary to various bid items.

When shop drawings, shop details, erection drawings, working drawings, forming plans, or other drawings are required, the drawings will be prepared and submitted on sheets 8-1/2 by 11 inches, 17 by 22 inches, or full size drawings reduced to half scale if completely legible. If, in the opinion of the Engineer, the drawings are not completely legible, they will be prepared and submitted on sheets 22 by 34 inches, with a 1-1/2 inch left margin, and 1/2 inch top, right, and bottom margins.

All sheets submitted will have a title in the lower right hand corner. The title must include the sheet index data shown on the lower right corner of the project plans, name of the structure or element or stream, sheet numbering for the shop drawings, name of the fabricator and the name of the Contractor.

--Item 6--
6-1 Show the stockpile lot and/or sub lot numbers on all tickets for all materials.

--Item 7--
7-2 The total disturbed areas within the project is anticipated at less than one (1) acre. Due to this type of construction, the project qualifies for exclusion under the Construction General Permit (CGP) issued by the Texas Commission on Environmental Quality (TCEQ). However; should the sum of the Engineer's anticipated disturbances and the Contractor's (On ROW and off ROW) PSL's equal or exceed the one (1) acre threshold; both TxDOT and the Contractor have project responsibilities under the CGP that reverts to non-exclusion status. Obtain approval for all non-depicted areas of disturbance that increases the initial soil and vegetation disturbed area estimates before work starts at these locations.

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7-3 Notify the Engineer of the disturbed acreage within one (1) mile of the project limits. Obtain authorization from the TCEQ for Contractor PSL's for construction support activities on or off ROW.

7-4 Roadway closures during the following key dates and/or special event are prohibited. See the TCP Narrative for these dates.

--Item 8--
8-1 Working days will be computed and charged in accordance with Article 8.3.1.4 standard work week.

8-5 Create and maintain a Bar Chart schedule.

--Item 9--
9-1 When approved, provide uniformed, off-duty law enforcement officers with marked vehicles during work that requires a lane closure. The officer in marked vehicles shall be located as approved to monitor or direct traffic during the closure. The method used to direct traffic at signalized intersections shall be as approved. Additional officers and vehicles may be provided when approved or directed.

Complete the daily tracking form provided by the department and submit invoices that agree with the tracking form for payment at the end of each month approved services were provided.

Show proof of certification by the Texas Commission on Law Enforcement Standards.

All law enforcement personnel used in Work Zone Traffic Control shall be trained for performing duties in work zones and are required to take "Safe and Effective Use of Law Enforcement Personnel in Work Zones" (Course #133119) which can be found online at the following site: www.nhi.fhwa.dot.gov



Certificates of completion should be available to all who finish the course. These should be kept by the officers in order to substantiate completion when reporting to the work site.

Minimums, scheduling fees, etc. will not be paid; TxDOT will consider paying cancellation fees on a case by case basis.

--Item 104--
In those areas where the pavement is not to be overlaid, provide a smooth surface after the curb removal. Planing or grinding is considered an acceptable method at these locations. Measurement and payment is in accordance with this item.

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Sheet H

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Highway: Various

Removing concrete curb is paid as a separate bid item if the existing pavement on which it rests is not removed at the same time.

Sawing of concrete or asphalt is not paid for directly, but is considered subsidiary to this item.

--Item 105--
Take possession of recycled asphalt pavement from the project and recycle the material.

Properly dispose of unsalvageable material at your own expense.

132-1 --Item 132--
At no time shall the retaining wall backfill material exceed the adjacent embankment operation by more than one embankment lift. At no time will the embankment adjacent to the retaining wall backfill exceed the wall backfill by any elevation.

162-1 --Item 162--
Furnish and place block grass sod.

168-1 --Item 168--
Apply vegetative watering as needed to supplement natural rainfall during the vegetation establishment period. Plan quantity of irrigation water is based on the application of a total of 1.3 gal of water each week for each sq. yd. of area that is sodded or seeded. Establishment time is estimated to be 12 weeks for both sod and permanent seed mixes. Temporary seeding will require less time for establishment. Provide a schedule and coordinate watering cycles and rates per cycle with the Engineer. Obtain approval if the quantity of water to be applied is expected to exceed the plan quantity. Adjust the amount of water applied with each cycle and the number of cycles each wk. according to actual site conditions. Drought or other conditions, as determined by the Engineer, may require the application of supplemental irrigation during hours other than normal working hours.

1. --Item 340, 341, 342, 344, 346, 347, & 348--
Table 10, in Item 340, Table 10 in Item 341 and Table 11 in Item 344, Hamburg Wheel Test Requirements tested in accordance with Tex-242-F are changed for PG 64-22 or lower and PG 70-22. Minimum number of passes at 1/2" Rut Depth, Tested at 122 degrees F will be 5,000 and 10,000 respectively.

2. Design all mixture types using a target laboratory-molded density of 96.5%, when the Texas Gyrator Compactor is utilized. Increase the target laboratory-molded density to 97.0% or 97.5% at the Contractor's discretion. When utilizing SGC, design all mixture types at 50 gyrations (N-Design) and a target laboratory-molded density of 96.0%, but may be reduced to no less than 35 gyrations at the Contractor's discretion.

3. The asphalt plant shall have truck scales as defined in Item 520. Give three weight tickets bearing the date, the truck number, the gross, net & tare weights to the truck driver for the State

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inspector at the spreading and finishing operation. Trucks may be required to weigh on public scales or portable platform scales to verify the weight of the ticket.

4. Submit a copy of the Tex 233-F production charts on a weekly basis. At the end of the ACP work, provide all originals.

5. Crushing of aggregate for hot mix and immediate use for production of the mix is not allowed. Stockpile the aggregate until enough material is available for five days of production unless prior approval is provided. Hold a pre-placement meeting one month prior to the placement of the hot mix.

6. The main purpose of hot mix cores taken by the State are for payment calculations. If (for quality control purposes) the core information is needed sooner, take additional cores.

7. Do not use diesel or solvents as asphalt release agents in production, transportation, or construction. A list of approved asphalt release agents is available from the District Laboratory.

8. No more than one hot mix lot will be open for any specific type of hot mix, unless authorized. After a lot is open and the Contractor gets approval to change plants, the previous lot will be closed and a new lot will be opened. The numbering for the lots produced at the new plant will start with No. 1. If allowed to switch back to the original or previous plant, the next lot from that plant will resume numbering sequentially from the last lot produced by that plant.

9. Schedule lay-down placement where uneven travel lanes are minimized and eliminated weekly.

10. If asphalt material is obtained from other than a commercial source presently inspected by TxDOT, furnish a Type D structure for the asphalt mix control laboratory for the Engineer's use. Provide a minimum height of 8 feet and a minimum of 400 square feet of gross floor area for permanently located asphalt plants or 200 square feet for a temporary plant. The floor area will be partitioned into a minimum of two rooms, with a minimum of two windows per room. The floor shall have an impervious cover and sufficient strength to support the testing equipment. Portable structures shall be support blocked for stability and shall be tied down.

11. The use of Recycled Asphalt Shingles (RAS) will not be allowed on the final riding surface.



12. When placing item 346 mixtures, utilize a material transfer vehicle as defined in the plans for item 320.

Minimum Roadway Placement Temperature

--Item 340, 341, & 344--
1. Place mixture when the roadway surface temperature is equal to or higher than listed in Table 1 unless otherwise approved or shown on the plans. Measure the roadway surface temperature with a hand-held thermal camera or infrared thermometer. Placement may be allowed to begin

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prior to the roadway surface reaching the required temperature if conditions are such that the roadway surface will reach the required temperature within 2 hrs. of beginning placement operations. Place mixtures only when weather and moisture conditions of the roadway surface are suitable in the opinion of the Engineer. The Engineer may restrict the Contractor from paving if the ambient temperature is likely to drop below 32°F within 12 hr. of paving.

Table 1
Minimum Pavement Surface Temperatures

Specification Item Number	High Temperature Binder Grade	Minimum Pavement Surface Temperatures in Degrees Fahrenheit *	
		Subsurface Layers or Night Paving Operations	Surface Layers Placed in Daylight Operations
340, 341, & 344	PG 64	45	50
	PG 70	55	60
	PG 76	60	60

* Except for PG 64, may pave at temperatures 10° F lower than the values shown in Table 1 when utilizing a Material Transfer Vehicle that is capable of providing a remixing, and continuous flow of material from the haul truck to the paver, such as a Roadtec SM-2500e/ex, that eliminates thermal segregation. In these cases, use either an infrared bar attached to the paver, or a hand held thermal camera or infrared thermometer, or a hand held infrared thermometer operated in accordance with Text Method 244-F to demonstrate that the uncompacted mat has no more than 10° F of thermal segregation.

Substitute Binder
--Item 340, 341 & 344--

The Contractor may use a substitute PG binder listed below in Table 1 instead of the PG binder originally specified in Table 5 of the Standard Specification, if the substitute PG binder and mixture made with the substitute PG binder meet the following:

- ◆ The substitute binder meets the specification requirements for the substitute binder grade in accordance with Section 300.2.10., "Performance-Graded Binders;" and
- ◆ The mixture has less than 10.0 mm of rutting on the Hamburg Wheel test (Tex-242-F) after the number of passes required for the originally specified binder. Use of substitute PG binders may only be allowed at the discretion of the Engineer if the Hamburg Wheel test results are between 10.0 mm and 12.5 mm.

Table 1

General Notes

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County: Bexar

Highway: Various

Allowable Substitute PG Binders and Maximum Recycled Binder Ratios

Originally Specified PG Binder	Allowable Substitute PG Binder	Maximum Ratio of Recycled Binder ¹ to Total Binder (%)		
		Surface	Intermediate	Base
HMA				
76-22 ^{2,5}	70-22	20.0	20.0	20.0
	70-28	20.0	35.0	40.0
70-22 ²	64-22	20.0	20.0	20.0
	64-28 or 58-28	20.0	35.0	40.0
64-22 ²	58-28	20.0	35.0	40.0
76-28 ^{2,5}	70-28	20.0	20.0	20.0
70-28 ²	64-28 or 58-28	20.0	20.0	20.0
	64-34 or 58-34	20.0	35.0	40.0
64-28 ²	58-28	20.0	20.0	20.0
	58-34	20.0	35.0	40.0
WMA ³				
76-22 ^{2,5}	70- 22	20.0	35.0	40.0
70-22 ²	64-22 or 58-28	20.0	35.0	40.0
64-22 ⁴	58-28	20.0	35.0	40.0
76-28 ^{2,5}	70-28	20.0	35.0	40.0
70-28 ²	64-28 or 58-28	20.0	35.0	40.0
64-28 ⁴	58-28	20.0	35.0	40.0

1. Combined recycled binder from RAP and RAS.
2. Use no more than 20.0% recycled binder when using this originally specified PG binder.
3. WMA as defined in Section 341.2.6.2., "Warm Mix Asphalt (WMA)."
4. When used with WMA, this originally specified PG binder is allowed for use at the maximum recycled binder ratios shown in this table.
5. No more than 1-PG grade lower than what is show on the plans will be permitted for Surface mixtures

--Item 354--
Retain planed material.

420-1 **--Item 420--**
Mass concrete will be measured in place.



423-1 **--Item 423--**
The backfill material for pre cast retaining walls shall be approved before placement. Build stockpile(s) in lifts not to exceed 2 feet and a minimum working face of not less than 10 feet, but not more than 20 feet.

432-1 **--Item 432--**
In all riprap slopes, provide 3 inch diameter weep holes at 10 foot maximum spacing and backed with loose graded gravel or crushed stone and galvanized hardware cloth.

432-2
In areas where guard fence posts are to be placed in riprap, the riprap shall have an 18 inch +/- blocked out area (round or square). After the posts are installed, the blocked out area shall be

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Sheet L

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- 432-3
- topped off with 4 inches of low strength grout/mortar consisting of about 1 sack of cement per cubic yard of mix.
- Match the slope of the Riprap (Mow Strip) to the slope of the adjacent roadway.
- In large areas of riprap, provide one-half (1/2)-inch thick expansion joint material at approximately 15-foot intervals, or as determined by the Engineer.
- Place asphalt expansion joint material between proposed riprap and utility poles, guy wires, vent pipes, stand pipes and as directed.
- Place felt or filter fabric at open joints as required by the Engineer. This will be considered subsidiary.
- All concrete riprap will be 5" (.42') in thickness, unless otherwise shown on the plans, and must be reinforced.
- An 8 inch (.67 ft.) by 18 inch (1.5 ft.) toe wall is required at the exposed edges of all concrete riprap, unless otherwise directed.
- Locations and lengths of riprap flumes shown on the plans are approximate. Actual lengths and locations are to be determined in the field.
- 462-1

--Item 462--
Use lean concrete or 2 sack flowable backfill for fill between pre-cast boxes. Lean concrete and 2 sack flowable backfill shall be considered subsidiary to this bid item.
- 465-1

--Item 465--
Concrete Class B invert shaping is required at all inlets, manholes and junction boxes in order to insure positive flow. The material and work performed for the placement of the inverts shall be considered subsidiary to this item.
- 496-1

--Item 496--
The Contractor will submit a demolition plan for all structures to be replaced and/or removed in accordance with Item 496.
- 500-1

--Item 500--
"Materials on Hand" payments will not be considered in determining percentages for mobilization payments.
- 502-1

--Item 502--
Place standard markings no later than 14 days after surface treatment operations are completed.

General Notes

Sheet M

Control: 0915-12-576



County: Bexar

Highway: Various

- 502-2
- When advanced warning flashing arrow panels and/or changeable message sign is specified, have one standby unit in good condition at the job site. Standby time shall be considered subsidiary to the bid item.
- 502-3
- Treat the pavement drop-offs as shown in the TCP.
- 502-4
- After written notification, the time frame to provide properly maintained signs and barricades before considered in non-compliance is 48 hours from receipt of the notification. Failure to make corrections as noted may result in payment for this item being withheld.
- 502-6
- Moving an existing sign to a temporary location is subsidiary to this Item. Installations with permanent supports at permanent locations will be paid for under the applicable bid item (s).
- 502-7
- Mount temporary mailboxes on plastic drum in accordance with Compliant Work Zone Traffic Control Devices, Section K. Mounting and moving the mailbox as needed for the various construction phases is subsidiary to this Item.
- 502-8
- Notify the Engineer in writing 10 business days in advance of any temporary or permanent lane, ramp, connector, etc. closures/detours, restrictions to lane widths, alterations to vertical clearances, or modifications to radii. Any other modifications to the roadway that may adversely affect the mobility of oversized/overweight trucks also require 10 business days advance written notice to the Engineer. Unless shown in the TCP, no lane, ramp, connector, etc. closures are allowed during special events. At least one lane has to remain open at all times. Lane closures will not be allowed if this reporting requirement is not met.
- 502-9
- Avoid placing stockpiles within the roadway's horizontal clear zone. If a stockpile is placed within the clear zone, address in accordance with the TMUTCD.
- 502-10
- Do not place barricades, signs, or any other traffic control devices where they interfere with sight distance at driveways or side streets.
- 502-11
- In addition to providing a Contractor's Responsible Person and a phone number for emergency contact, have an employee available to respond on the project for emergencies and for taking corrective measures within 2 hours or within a reasonable time frame as specified by the Engineer.
- 502-12
- Temporary Rumble Strips are to be used according to WZ (RS)-16.
- 502-13
- If Nighttime work is required and work is not behind positive barrier then full TY 3 reflective gear is required to be worn by all workers, hard hat halos are required to be worn by the flaggers at flagging stations, TY III barricades are required to be spaced at 500 ft, and a mandatory night work meeting is required.

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Highway: Various

Prior to beginning construction, the Engineer shall approve the routing of traffic and sequence of work.

Additional signs and barricades as directed by the Engineer shall be considered subsidiary to Item 502.

Wash the channelizing devices and barricades following each rainfall or snowfall event and at times deemed necessary by the Engineer.

Fill any holes left by barricade or sign supports and restore the area to its original condition.

502-14 The Contractor Force Account “Safety Contingency” that has been established for this project is intended to be utilized for work zone enhancements, to improve the effectiveness of the Traffic Control Plan, that could not be foreseen in the project planning and design stage. These enhancements will be mutually agreed upon by the Engineer and the Contractor’s Responsible Person based on weekly or more frequent traffic management reviews on the project. The Engineer may choose to use existing bid items if it does not slow the implementation of enhancement.

506-1 **–Item 506–**
An Inspector will perform a regularly scheduled SWP3 inspection every 7 calendar days.

506-3 Failure to address items noted on the SW3P inspection report within two report cycles may result in the Department stopping all construction operations, exclusive of time charges, or withholding that month’s estimate until the SW3P deficiencies are corrected unless the Engineer determines that the area is too wet to correct SW3P deficiencies.

Erosion control logs, sandbags and other BMPs will be placed and relocated as directed by the Engineer in order to comply fully with the SW3P requirements.

Water pumped off the project must have sediment and any other solids in suspension removed before discharging.

Place one-half (1/2)-inch pre-molded expansion joint material at 40-foot intervals and at the beginning and end of all radii. Place 3/25-inch grooved or sawed construction joints, as directed by the Engineer, spaced equally, with the spacing not to exceed ten feet between joints.

Remove accumulated sediment or replace SW3P controls when the capacity has been reduced by 50% or when the depth of sediment at the control structure exceeds one foot.

506-4 Failure to correctly maintain daily monitoring reports and submitting to TxDOT on a daily/weekly basis may result in the monthly estimate being withheld.

General Notes

Sheet O

Control: 0915-12-576

County: Bexar

Highway: Various

529-1 **–Item 529–**
Class "C" concrete is required for machine extruded curb.

529-2 Curb inlets and extensions are based on an exposed curb height of 7 inches. The roadway curb height and shape will be transitioned to the inlet’s curb with a 40: 1 taper.

–Item 530–
Use Class A Concrete for all concrete driveways.

531-1 **–Item 531–**
The curb ramp locations shown in the plans have taken into account the geometric features of the intersection, traffic signals, and the pavement markings. If anything changes during construction, the location of curb ramps must be adjusted to ensure they meet TAS requirements.

High early strength concrete for proposed driveways to be available as deemed necessary and as directed.

The furnishing and installation of the sand cushion in proposed sidewalks, sidewalk ramps, and driveways will not be paid for directly but will be subsidiary to this bid item.

Truncated dome pavers are prohibited.

All detectable warning surfaces are to be prefabricated panels constructed of cast iron or composite materials of contrasting color to the surrounding material, as approved by the Engineer.

Proposed curb ramps, sidewalks, curbs, and riprap is to be doveled 8in minimum, unless otherwise shown, into existing concrete using ½ in reinforcement placed on 12 in centers.

Curb wall along ramps and landings, unless otherwise shown on the plans, is not paid for separately but is subsidiary to the ramp or landing. If the wall extends above the plane of the ramp, retaining wall, unless otherwise noted on the plans, should be utilized. Retaining wall quantities are shown for Contractor information only, payment is subsidiary to Item 531 Sidewalks. See special details sheets for more information.



Areas labeled with a “T” on the construction drawings allow the Contractor to transition to existing conditions. Slope and grade of all transitions must be approved by the Engineer.

For driveways and turnouts, coarse aggregate Grade No. 3 through No. 8 conforming to the gradation requirements specified in the Item, “Hydraulic Cement Concrete” will be permitted.

All compliant ramps are to remain in place.

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Highway: Various

Construct compliant curb ramps based upon referenced design criteria, Texas Accessibility Standards and TxDOT Pedestrian Facilities Standards. Consider the locations of existing traffic and pedestrian control devices including loop detectors and pedestrian push buttons during curb ramp construction at signalized intersections, and construct ramps to allow such existing facilities to remain undisturbed and reused to the fullest extent possible while providing for full ADA compliance. All corners are unique and it may be necessary to use various combinations of ramp elements to achieve a compliant ramp configuration.

Review the curb ramp location and layout with the inspector prior to demolition so that both parties agree that the curb ramp can be installed properly. Should it become apparent at any time during the ramp layout and construction process that a curb ramp cannot be installed as indicated on the Project Drawings, promptly notify the inspector.

Any approval, inspection, or checking of the Contractor’s layout and the acceptance of all or any part of it shall not relieve the Contractor of his responsibility to secure the proper dimensions, grades and elevations of the various parts of the work.

Construction of each curb ramp is to be completed within seven (7) working days after start of construction process. Construction process of curb ramps shall include: demolition of existing conditions, placement of concrete or brick, removal of lips, street surface patching in front of the curb or ramp, adjustment of counter slope within 24-inches of the bottom of the ramp or curb and gutter, street level landings, backfill, placement of topsoil, grading and sodding, and clean-up. All other related work such as adjustment of crosswalk, special heat-welds, asphalt overlays, and other work that does not affect accessibility shall be completed per a schedule pre-approved by TxDOT.

Contractor is to match existing concrete color and texturing at various locations which, as directed by the Engineer, require matching.

The furnishing and installation of the sand cushion in the proposed sidewalks, sidewalk ramps and driveways will not be paid for directly but shall be considered subsidiary to this bid item.

The furnishing and installation of pipe underdrains, filter material, and other incidentals to ensure proper drainage of special concrete sidewalk with retaining wall per Concrete Sidewalk (Special)(Type B) will not be paid for directly but shall be considered subsidiary to this bid item and in accordance with Item 556.

Removal of existing concrete, surfaces, asphalt, base material, sign posts, miscellaneous materials, and all incidentals is included in this pay item within the footprint of the proposed work. If additional work related to the removal of existing is required beyond the quantity identified for Contractors information only, no additional payment will be made.

In areas where there is no curb fillet or concrete pavement, saw cut the existing curb and gutter and remove the curb.

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Sheet Q

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Highway: Various

When lack of right of way width or obstructions creates insufficient space, the ramp may be relocated within the right of way when authorized by the Engineer. All deficient ramps will be removed and replaced at the Contractor's expense.

For curb ramps, form tooled joints on each side of the ramp section where it meets a flare or curb wall, at each break in ramp slope or geometry, and at intervals equivalent to the width of the sidewalk for the purpose of cracking control. Place expansion joint material between proposed ramps and existing concrete.

Place expansion joint material between proposed sidewalk and utility poles, guy wires, vent pipes, stand pipes and as directed.

Construct concrete steps, as shown in the plans or as directed by the Engineer, measured by the cubic yard and paid for as Item 420 Concrete Substructures.

Notify the Engineer 48 hours in advance of beginning operations at a new location.

Schedule work such that two-way traffic is provided through all intersections and intersecting streets at all times, unless otherwise authorized by the Engineer.

Limit operations such that no more than 12 separate curb ramp locations are under construction and incomplete at any time, unless otherwise authorized by the Engineer.

–Item 560–

Move and replace all mailboxes within the project limits such that they may be served by the mail carrier from his car at all times during and after construction. This work will be considered subsidiary to the various bid items of this contract.

–Item 610–

Fabricate steel roadway illumination poles in accordance with the RIP standards. Poles fabricated according to RIP require no shop drawings. Alternate designs or the use of aluminum to fabricate poles will require the submission of shop drawings electronically.



For instructions on submitting shop drawings electronically go to: <http://www.txdot.gov/business/resources/specifications/shop-drawings.html> File is titled: Guide to Electronic Shop Drawing Submittal.

Provide lamps from the pre-qualified Materials Producers List, Category is “Roadway Illumination and Electrical Supplies” located on the Construction Divisions (CST) web site.

Ballast/capacitors removed from the light assembly, will remain the property of the State. Assume all ballast/capacitors contain Polychlorinated Biphenyl (PCB), unless a notation appears

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Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\General\1113507*General\Notes.dgn

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Highway: Various

on the outside of the unit that specifies it does not contain PCB’s. All ballast/capacitors with PCB’s shall be placed in 55 gallon open top drum in accordance with Department of Transportation (DOT) specifications. Place six (6) inches of sawdust or other absorbent material in the bottom of the drum. Furnish and place a DOT approved PCB warning label on the outside of the drum. Do not fill a drum more than ¾ of capacity. Avoid rupturing the ballast/capacitor(s). If a ballast/capacitor is ruptured, use proper procedures, specialist trained staff and personal protective equipment for the clean-up operations.

610-3 The lamps in light fixtures may contain hazardous levels of mercury, halide, and sodium vapors. Observe and comply with all federal, state and local laws, ordinances and regulations regarding the management of these lamps. Prevent the breakage of the lamps. At a minimum, package all lamps removed from the light fixture(s) in a container that minimizes the breakage of the lamps. Broken lamps shall be collected in a sealed plastic bag (i.e. Ziploc). Broken lamps shall be stored in separate containers from unbroken lamps. Furnish a suitable container and attach a label stating “Universal Waste Lamps” on the container. Write the date the first lamp was placed in the container on the “Universal Waste Lamp” label. Within one (1) week after the first lamp is placed in a container, notify the Engineer. The lamps and PCB containing ballast/capacitors, placed in properly labeled containers, will remain the property of the State. Place the container in an area where it is protected from damage and the elements. The Engineer will make arrangements to collect, transport, and dispose/recycle the container. The ballast/capacitor and lamp’s removal and storage is subsidiary to this item.

610-4 Stencil each illumination assembly with the circuit, light and relay numbers in black paint on the roadway side of the pole at a 45 degree angle. The numbers shall be in 3” tall and begin 6’ from the top of the foundation. This work will be considered subsidiary to this item.

–Item 613–

613-1 Use an electrically conducting protective thread lubricant compound (Crouse-Hinds TL-2, 0Z/Gedney STL, Thomas & Betts Kopr-Shield) for the pipe joint compound to coat the threads of the anchor bolts, prior to installation of nuts.

–Item 614–

614-14 Fabricate high mast ring assemblies in accordance with shop drawings approved by the Department. Submit shop drawings for each project, or use pre-approved standard shop drawings.

For project specific shop drawings, furnish seven sets of drawings of the complete assembly in accordance with Item 441, “Steel Structures”. Deliver shop drawings to the Director of Traffic Operations Division, Texas Department of Transportation, 125 East 11th Street, Austin, Texas 78701-2483.

To be eligible to use pre-approved standard shop drawings, the shop drawing must be submitted and approved by the Department prior to use on the project. Deviation from the pre-approved

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Highway: Various

standard shop drawing will require resubmission of the shop drawings. The Engineer may approve, in writing, the use of updated standard drawings in cases where the standard drawings have been updated and the updated version has been approved by the Department.

For pre-approval and updates to previously approved standard shop drawings, furnish seven sets of drawings of the complete assembly in accordance with Item 441, “Steel Structures” to the Director of Traffic Operations Division, Texas Department of Transportation, 125 East 11th Street, Austin, Texas 78701-2483.

Copies of the standard shop drawings are on file with Traffic Operations Division, Bridge Division, and the Materials Section of Construction Division. Additional shop drawings for high mast illumination assemblies built in accordance with these drawings are not required. Pre-approved shop drawing manufacturers and assembly model numbers can be found on the Materials Produce list of the Construction Divisions (CST) web site.

Category is roadway illumination and electrical supplies.

–Item 618–

618-1 It might be necessary to cut concrete for placement of conduit. Saw cut existing concrete, remove the concrete from the steel reinforcement (bars or fabric) and bend the steel to install the conduit. After the conduit has been placed, bend the steel back to its original position and back-fill the trench with an approved concrete. This work is subsidiary to this Item.



618-2 The conduit depth for illumination under the City of San Antonio streets is 36 inches.

618-3 Use materials from Material Producers list as shown on the Construction Division’s (CST) web site. Category is “Roadway Illumination and Electrical Supplies.”

The location of conduit is diagrammatic and may be varied to meet local conditions upon approval of the Engineer. Ensure all couplings and connectors are made wrench tight. Trenching depths shall provide a minimum of 2.5 feet (30 inches) of cover unless otherwise approved by the Engineer. The Contractor must ensure that conduit is not damaged during trench or bore pit backfilling operations. No conductors shall be pulled through conduit until all backfilling for the conduit run is complete and the template, having a diameter of not less than 75 percent of the inside diameter of the conduit, has been drawn through the conduit. Open ends of all conduit shall be fitted with temporary caps or plugs to prevent entry of dirt or debris during construction operations. A non-metallic pull rope shall be used to pull electrical conductors and traffic signal cables through non-metallic conduit. A 1/4-inch nylon or polypropylene pull rope shall be pulled through each conduit run and shall remain in the conduit for future use. A minimum of three feet of pull rope shall be neatly left coiled in the ground boxes at each end of the conduit run. The pull rope will not be paid for directly but shall be considered subsidiary to Item 618, “Conduit.” After the work is completed, the Contractor shall restore any curbs, walks, driveways or raised concrete medians which have been damaged or disturbed to an equivalent

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Sheet T

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County: Bexar

Highway: Various

original condition and to the satisfaction of the Engineer. This work shall not be paid for directly but shall be considered subsidiary to Item 618, "Conduit."

Use Schedule 80 PVC conduit for all traffic and illumination portion of this project. Bored conduit runs placed under driveways and streets or highway approaches shall maintain a minimum of 30 inches below the proposed natural ground elevation or 36 inches below the existing driveway or proposed top of pavement backfill and compact trenches the same day or erect plastic fencing to discourage entry into the trenched area by pedestrians or vehicles.

--Item 620--

Grounding conductors that share the same conduit, junction box, ground box or structure shall be bonded together at every accessible point in accordance with the electrical detail sheets (ED), and the latest edition of the National Electrical Code. See Item 7 Section 19.13 "Electrical Requirements" for additional details.

--Item 644--

644-1 The wedge anchor system shown on State Standard Sheet SMD (TWT) is not allowed.

644-2 The set screw type for Triangular Slipbase Systems is not allowed. Use the following products for the Triangular Slipbase System.

Triangular Slip Base Systems
(For use with 10 BWG and Schedule 80 Round Posts)

Southern Plains Fabrication	SPF Triangular Slipbase Housing	Info@SouthernPlainsFabrication.com http://SouthernPlainsFabrication.com (806) 241-0060
Structural and Steel Products	Triangular Slipbase Breakaway Support	CustServ@s-steel.com http://s-steel.com (800) 782-5804

This note was added because the set screw type triangular slipbase system doesn't have enough surface contact/friction to keep the wind from causing the signs to rotate and eventually stripping the set screw.

--Item 658--

658-1 CTB reflectors will not be paid for directly but will be considered subsidiary to the barrier.

--Item 666--

666-1 Use TY II material (vs. an acrylic or epoxy) as the sealer for the TY I markings, place the TY II a minimum of 14 calendar days (to provide adequate curing) before placing the TY I markings.

General Notes

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Highway: Various

Collection of retroreflectivity readings using a mobile retroreflectometer is the preferred method. If retroreflectivity readings are collected using a portable or handheld unit, then measurement is defined as a collective average of at least 20 readings taken along a 200-foot test section. A minimum of three measurements will be required per mile of roadway. Measurements collected on a centerline stripe will be averaged separately for stripe in each direction of travel. A TxDOT inspector must witness the calibration and collection of all retro-reflectivity data.

666-2 Failure to provide the retroflectometer testing data within the time specified in the specifications will result in non-payment of the bid item.

--Item 672--

672-1 Place all adhesive material directly from the heated dispenser to the pavement. Do not use portable or non-heated containers. Use adhesive of sufficient thickness so that when the marker is pressed into the adhesive, 1/8" or more adhesive will remain under 100% of the marker. The adhesive should extend not less than 1/2" but not more than 1 1/2" beyond the perimeter of the marker.

--Item 677--

677-1 Obtain approval before using the mechanical method for the elimination of existing thermoplastic pavement markings.

--Item 682--

682-1 Provide all signal heads from the same manufacturer. Pedestrian signals may be by a different manufacturer than the vehicle signal heads.

682-2 Cover all signal faces until placed in operation.

682-3 All pedestrian signal faces shall be single section LED Type. Die cast polycarbonate is acceptable in lieu of die cast aluminum. All mounting attachments shall be constructed of steel pipe and mounted as shown on the plans.

--Item 684--

684-1 Provide an extra 10' for each cable terminating in the controller cabinet. All cables shall be continuous without splices from terminal point to terminal point. All proposed signal cable shall be #12 AWG stranded copper.

--Item 686 & 687--



686-1 Provide all signal poles from the same manufacturer. Pedestrian poles may be from a different manufacturer.

--Item 688--

688-1 The sealant used for vehicle loop wire must be approved.

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Highway: Various

688-2 The pedestrian push button shall be raised or flush and a minimum of 2 inches in the smallest dimension. The force to activate the control shall be no greater than 5 lb/f. The button placement has to be coordinated with the concrete pad to access the button. The concrete pad (if required) shall be paid separately.

688-3 The pedestrian push button shall be wired with a 2/C#14 loop detector cable in lieu of a #12 A.W.G. XHHW wire.

Provide push buttons for pedestrian actuation meeting current ADA requirements.

Vehicle loop detectors are to be placed where construction activities impact the functionality of the system. Areas outside of the limits of construction where vehicle loop detectors are destroyed are to be replaced at the contractor's expense. Use of vehicle loop detectors must be approved by the engineer prior to placement. Sealing existing saw cut lines in not paid for separately and is incidental to this pay item.

Any deviation of location for proposed loop detector work shall be as approved. Install loop vehicle detectors in accordance with plan Standard Sheet LD1-03 (Loop Detector Installation Details). All loop detectors shall be rectangular.

Use 2/c #14 AWG shielded for loop lead-ins and #14 AWG for loop wire in pavement. Splices for loop wire will be permitted only at ground boxes or pole base with approved weather-proof splice kits.

A minimum length of 2 feet for each cable shall be left in each ground box. All wiring not covered by the plans and specifications shall be in accordance with the latest edition of the National Electrical Code.

Plugging and patching existing holes where existing push buttons or pedestrian signals are relocating is not paid for separately but is subsidiary to the corresponding removal item. Use a method approved by the engineer to repair the area impacted by the removal.

Provide pedestrian push buttons a minimum of 2 in. diameter in the smallest dimension. Install a rubber grommet or bushing between the push button assembly and the signal pole to protect the conductors.

If existing audible pedestrian push buttons are encountered and shown for adjustment, proposed buttons should also be audible. No additional payment will be made for audible push buttons. When an existing push button is adjusted, pay item includes payment for a new pedestrian push button assembly. The Engineer may approve use of the existing button if it is compliant and only requires adjustment.

--Item 5003--

General Notes

Sheet W

Control: 0915-12-576

County: Bexar

Highway: Various

Apply an approved surface applied detectable warning surface to otherwise compliant existing curb ramp as directed.

Truncated dome pavers are prohibited.

All detectable warning surfaces are to be prefabricated panels constructed of cast iron or composite materials of contrasting color to the surrounding material, as approved by the Engineer.

--Item 6001--
Provide all portable changeable message signs and arrow panels with a photoelectric device to allow for automatic dimming of operations to approximately 50% of their normal brightness when ambient light drops to approximately five footcandles, and then increase back again for daytime operations.



2 electronic portable changeable message sign unit(s) will be required. Individual or collective use of signs will be required by the Engineer when deemed necessary to supplement the traffic control plan.

Each sign must have programmed in its permanent memory the following 15 messages:


- 1. Right Lane
- 2. Left Lane
- 3. Closed Ahead
- 4. Two Lane
- 5. Detour Ahead
- 6. Thru Traffic
- 7. Prepare To Stop
- 8. Merging Traffic
- 9. Expect 15 Minute Delay
- 10. Merge Right
- 11. Merge Left

General Notes

Sheet X


REV. NO.	DATE	DESCRIPTION	BY
<div> SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>			
<div> <i>Texas Department of Transportation</i> © 2018</div>			
GENERAL NOTES			
SHEET 12 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			12
			JOB NO.
			576
			SHEET NO.
			24

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | 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

		SHEET		OF		
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	25

Plotted on: 11/21/2018

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



SHT NO	ITEM		0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0104-6040	0105-6037	0132-6003	0162-6002	0168-6001
	CSJ 0915-12-576		REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING CONC (PAVERS)	REMOVING STAB BASE AND ASPH PAV (0" - 16")	EMBANKMENT (FINAL) (ORD COMP) (TY B)	BLOCK SODDING	VEGETATIVE WATERING
			SY	SY	SY	LF	SY	SY	SY	CY	SY	MG
84	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00				120	1		20		56	0.87
85	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00		56		95	4		137		35	0.55
87	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00		53		214	18		109		61	0.95
88	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00				136					42	0.66
89	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00				24			132	35	254	3.96
90	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00									268	4.18
91	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00									86	1.34
92	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 611+00		13			6		151		268	4.18
93	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 615+00		14					16		243	3.79
94	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 619+00		11			28		9		199	3.10
95	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 623+00					42		69		340	5.30
96	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 627+00				30	12				220	3.43
97	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00		57		191	7		155		100	1.56
98	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00		19		231			159		150	2.34
99	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00		92		208	9				95	1.48
100	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00	1	239		138	8		179		26	0.41
102	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00	11	93		195	9		61		70	1.09
103	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00		199		95	21		438			
104	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00		108		248			282		28	0.44
106	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT	13	43		71	12		117		70	1.09
143	SL 13 SW MILITARY A	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT				15					10	0.16
144	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00				10						
145	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT										
146	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 508+00		143		186					340	5.30
147	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 512+00		206		267					390	6.08
149	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 516+00		247		256					350	5.46
151	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 520+00		14		112			28		150	2.34
152	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00		46		51			6		50	0.78
153	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 756+00		25		94	8		12		65	1.01
154	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50		181		129			66		25	0.39
155	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00		95		95			161			
157	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00		32		109			29		50	0.78
159	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00		101		273			88		65	1.01
161	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00		191		139					95	1.48
162	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 548+00 TO STA 552+00				37					20	0.31
165	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00		107		248	12		30		80	1.25
167	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00		139		184	62		64			
169	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 564+00 TO STA 566+00		40		17	12					
170	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00		5		8					15	0.23
171	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00		111		48			82		35	0.55
172	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 593+50		106		34			48			
173	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 597+00		175		38						
174	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00										
175	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00									70	1.09
176	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00		123		27			77		30	0.47
177	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 637+25, STA 643+75 TO STA 645+75		362		283	7		17		25	0.39
179	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						
180	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25, STA 659+00 TO STA 661+00	5	97		69			28		20	0.31
181	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 665+00		227		99	11		180		125	1.95
183	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00		78		127			67			
184	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00		57		81			135			
187	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00		61		86			115			
188	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00	49	125		127	9		97			
189	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00		341		151			42			
192	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55		94		195			195		25	0.39
193	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00		49		47			94			
194	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00	8			82						
195	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00		165		185			57			
197	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 715+00 TO STA 719+00		60		161			88			
198	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00		123		148			211			
200	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT		49		12			58			
201	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00		93		179			389			

REV. NO.	DATE	DESCRIPTION	BY
<div><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></div>			
<div><p>© 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 1 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			SHEET NO.
			26

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn



SHT NO	ITEM		0340-6066	0351-6028	0354-6023	0420-6074	0423-6008	0432-6003	0450-6048	0471-6003	0479-6001	0496-6027
	CSJ 0915-12-576		D-CR HMA (SQ) TY-C PG76-22	FLEX PAVE STRUCTURE REPAIR (8"-10")	PLANE ASPH CONC PAV (0" TO 4")	CL C CONC (MISC)	RETAINING WALL (CAST - IN - PLACE)	RIPRAP (CONC) (6 IN)	RAIL (HANDRAIL) (TY B)	GRATE & FRAME	ADJUSTING MANHOLES	REMOV STR (BUS STOP)
			TON	SY	SY	CY	SF	CY	LF	EA	EA	EA
84	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00				2						
85	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00				2						
87	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00				5						
88	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00				2.1				9		
89	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00				2.1				9		
90	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00				6	66		33			
91	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00	2.0	10		9				9		
92	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 611+00				6						
93	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 615+00										
94	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 619+00										
95	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 623+00				9		2		9		
96	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 627+00										
97	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00				2.1		1		9		
98	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00				5						
99	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00										
100	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00						1				
102	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00				5						
103	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00										
104	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00										
106	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT				6						
143	SL 13 SW MILITARY A	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT	16.0		132							
144	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00										
145	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT										
146	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 508+00										
147	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 512+00										
149	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 516+00										
151	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 520+00										
152	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00										
153	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 756+00										
154	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50										
155	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00										
157	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00										
159	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00										
161	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00										
162	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 548+00 TO STA 552+00				1						
165	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00										
167	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00						3				
169	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 564+00 TO STA 566+00						1				
170	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00										
171	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00										
172	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 593+50										
173	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 597+00				1				3		
174	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00										
175	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00										
176	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00										
177	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75						2				
179	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75						1				
180	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25, STA 659+00 TO STA 661+00										
181	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 665+00										
183	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00										
184	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00				6						
187	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00										
188	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00						9				
189	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00										
192	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55									1	
193	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00										
194	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00				5						
195	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00										
197	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 715+00 TO STA 719+00										
198	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00										
200	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT										
201	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00										

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 2 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			SHEET NO.
			VARIES
			27

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn



SHT NO	ITEM		0529-6001	0529-6002	0529-6012	0529-6020	0530-6004	0530-6005	0531-6001	0531-6018	0531-6019	0531-6020
	CSJ 0915-12-576		CONC CURB (TY 1)	CONC CURB (TY 1)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)	CONC SIDEWALKS (4')	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)
			LF	LF	LF	LF	SY	SY	SY	SY	SY	SY
84	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00	26	125			58	9	95			
85	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00	20	208			115	68	147			
87	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00	33	172			56	123	136			
88	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00		136					89			
89	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00		72		14	135		202			
90	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00		33					228			
91	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00		59					85			
92	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 611+00		52			30	135	168			
93	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 615+00					17	13	207			
94	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 619+00					14	7	184			
95	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 623+00		90			8	61	235			
96	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 627+00		40					215			
97	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00		266			94	104	144			
98	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00		226			263	61	148			
99	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00		203			103		131			
100	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00	44	99			182	245	83			
102	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00		203			96	64	87			
103	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00	74	33			215	445	62			
104	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00	39	209			109	282	169			
106	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT		75			47	108	74		33	
143	SL 13 SW MILITARY A	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT							11			
144	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00	15						23			
145	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT		10					3			
146	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 508+00		186			143		115			
147	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 512+00		300			206		175			
149	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 516+00		256			247		153			
151	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 520+00		112			42		70			
152	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00		51			46	6	28			
153	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 756+00		94			25	12	67			
154	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50		128			183	66	87			
155	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00		95			95	161	67			
157	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00	21	83			33	29	99			
159	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00		278			111	89	183			
161	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00		104			191		104			
162	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 548+00 TO STA 552+00		37					74			
165	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00		248			107	30	124			
167	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00		176			147	64	115			
169	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 564+00 TO STA 566+00		17			40		23			
170	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00		79					69	28		
171	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00		48			111	82	15			
172	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 593+50		34			106	48	37			
173	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 597+00		53			177		108	11		
174	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00							40			
175	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00							74			
176	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00		29			110	91	6			
177	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 637+25, STA 643+75 TO STA 645+75		297			362	17	61			
179	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75		14					14			
180	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25, STA 659+00 TO STA 661+00		69			97	28	86			
181	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 665+00		117			247	148	144			
183	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00		127			78	67	51			
184	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00		81			57	135	52			
187	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00		86			61	115	73			
188	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00		137			103	122	102			
189	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00		172			341	42	120			
192	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55		195			94	195	109			
193	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00		47			49	94	7			
194	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00		82					62		19	
195	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00		185			165	57	25			
197	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 715+00 TO STA 719+00		288			60	88			14	
198	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00		148			123	211				
200	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT	12				49	58				
201	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00		153			242	274	111			

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 3 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			28

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn



SHT NO	ITEM		0531 - 6022	0531 - 6023	0531 - 6024	0531 - 6027	0531 - 6029	0531 - 6030	0531 - 6032	0531 - 6033	0560 - 6014
	CSJ 0915-12-576		CURB RAMP (TY 5)	CURB RAMP (TY 6)	CURB RAMP (TY 7)	CURB RAMP (TY 10)	CURB RAMP (TY 20)	CURB RAMP (TY 21)	CONC SIDEWALKS (SPECIAL) (TYPE A)	CONC SIDEWALKS (SPECIAL) (TYPE B)	MAT/BOX INSTALL-S (TWG-POST) TY 4
			SY	SY	SY	SY	SY	SY	SY	SY	EA
84	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00								8	
85	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00									
87	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00				12					
88	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00									
89	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 157+00 TO STA 161+00									
90	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00									
91	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00									
92	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 611+00									
93	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 611+00 TO STA 615+00									
94	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 619+00									
95	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 619+00 TO STA 623+00									
96	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 623+00 TO STA 627+00									
97	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00									
98	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00									
99	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00									1
100	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00								7	
102	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00								43	
103	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00									
104	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00									
106	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT									
143	SL 13 SW MILITARY A	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO END PROJECT									
144	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO 425+00, STA 448+00 TO 450+00									
145	SL 13 SW MILITARY A	WB SIDEWALK CONSTRUCTION PLAN STA 468+00 TO END PROJECT								5	
146	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 508+00									
147	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 508+00 TO STA 512+00									
149	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 512+00 TO STA 516+00									
151	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 516+00 TO STA 520+00									
152	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 520+00 TO STA 524+00									
153	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00, STA 754+00 TO STA 756+00									
154	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 526+00 TO STA 529+50									
155	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00									
157	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00									
159	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00								20	1
161	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00								19	
162	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 548+00 TO STA 552+00									
165	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00									
167	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00									
169	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 564+00 TO STA 566+00									
170	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 574+00 TO STA 576+00, STA 804+00 TO STA 806+00									
171	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 583+00 TO STA 587+00									
172	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 593+50								8	
173	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 593+50 TO STA 597+00								6	
174	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00, STA 603+00 TO STA 605+00									
175	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00									
176	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 629+00 TO STA 633+00								12	
177	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75								16	
179	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 648+00 TO STA 650+00, STA 653+00 TO STA 654+75									
180	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25, STA 659+00 TO STA 661+00									
181	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO STA 665+00								4	
183	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 666+50 TO STA 670+00								18	
184	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00	16								
187	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00									
188	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00									
189	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00			18						
192	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 694+50 TO STA 698+55								31	
193	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 701+00 TO STA 705+00								33	
194	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00, STA 939+00 TO STA 941+00									
195	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 711+00 TO STA 715+00								57	
197	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 715+00 TO STA 719+00								81	
198	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00								85	
200	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 723+00 TO END PROJECT								8	
201	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 746+00									

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 4 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			SHEET NO.
			VARIES
			29



Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn

ITEM		0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0104-6040	0105-6037	0132-6003	0162-6002	0168-6001
CSJ 0915-12-576		REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING CONC (PAVERS)	REMOVING STAB BASE AND ASPH PAV (0" - 16")	EMBANKMENT (FINAL) (ORD COMP) (TY B)	BLOCK SODDING	VEGETATIVE WATERING
SHT NO		SY	SY	SY	LF	SY	SY	SY	CY	SY	MG
203	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00		124		226			7			
204	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00		359		155			140			
206	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 760+00		392		242	147					
208	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 763+00		83		60	19		271			
210	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00		64		172			3			
211	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00		255		155			283			
213	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00		29					123			
215	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 780+00		101		85			24			
216	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 784+00		111		140			69			
218	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00			231		202			142		
220	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 792+00		147		156			124			
221	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00				35					20	0.31
222	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00			61		98					
224	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00			57			3				
226	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 856+00		73		46			62			
227	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 856+00 TO STA 860+00			104		70			25		
229	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00				159	154	33	196			
231	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00		119		45	7					
232	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00			171		168			135		
233	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00			72		48			106		
234	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00		81		197			105			
235	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00		54		217			123			
236	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50		90		190			328			
237	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1339+00				50					200	3.12
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00		17		33			68			
239	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00		55		121			131			
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00		80		82			25			
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00		42		100			72			
242	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00		38		227						
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00		109		256			41			
244	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00		22		238			18			
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT		134		193						
246	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 991+50, STA 1001+50 TO STA 1003+50	2			51						
247	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1040+00 TO STA 1042+00, STA 1054+50 TO STA 1056+50	14		22	70						
248	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00										
249	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00		40		105			25			
250	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1122+50 TO END PROJECT				120						
251	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1050+50, STA 1159+75 TO STA 1061+25				72	7					
252	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1091+50	9		9	46						
253	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50				21						
254	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00		79		53						
255	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00	11	148		37	15				175	2.73
257	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1259+00				39			239		190	2.96
258	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1274+00 TO STA 1276+00				36					80	1.25
260	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00									267	4.17
261	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT									260	4.06
262	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00										
264	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00		220								
266	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1410+00 DETAILS		595								
269	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1367+00										
270	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50		372								
271	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00										
272	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1414+00 DETAILS										
273	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50							72			
274	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00		43								
275	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1399+00 TO 1401+00, STA 1799+00 TO STA 1801+00		98								
276	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1406+00				4						
277	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1410+00										
278	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1414+00										
279	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00							241			
280	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1420+00					69					
281	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00				70						

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 5 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			576
			SHEET NO.
			30

Design Filename: P:\111\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.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									
 Texas Department of Transportation © 2018									
<h1>SUMMARY OF ROADWAY QUANTITIES</h1>									
SHEET 6 OF 12									
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		31		

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn

ITEM		0529-6001	0529-6002	0529-6012	0529-6020	0530-6004	0530-6005	0531-6001	0531-6018	0531-6019	0531-6020
CSJ 0915-12-576		CONC CURB (TY 1)	CONC CURB (TY 1)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)	CONC SIDEWALKS (4')	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)
SHT NO		LF	LF	LF	LF	SY	SY	SY	SY	SY	SY
203	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00		203			150	7	135			
204	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00		142			380	143	100			
206	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 760+00		224			396		163			
208	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 763+00		60			83	267	135			
210	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00		155			65	3	123			
211	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00		155			230	283	110			
213	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00		86			34	123	104			
215	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 780+00		85			101	24	80			
216	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 784+00		140			111	69	69			
218	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00		202			231	125	141			
220	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 792+00		156			147	124	85			
221	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00		35					10			
222	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00		98			61		83			
224	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00					57	1	11			
226	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 856+00		46			73	62	80	14		
227	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 856+00 TO STA 860+00		108			104	25	161			
229	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00		159			155	196	131			
231	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00		37			119		31			
232	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00		162			171	135	90			
233	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00		48			122	55	28			
234	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00		197			160	53	84			
235	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00		212			79	100	30			
236	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50		190			120	322	129			
237	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1339+00		50					164			
238	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00		28			21	68	25			
239	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00		121			105	81	86			
240	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00		82			80	25	58			
241	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00		100			42	72	81			
242	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00		227			38		155			
243	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00		256			109	41	168	21		
244	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00		238			22	18	137			
245	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT		193			134		154	15		
246	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 991+50, STA 1001+50 TO STA 1003+50		51					34			
247	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1040+00 TO STA 1042+00, STA 1054+50 TO STA 1056+50		70					27			16
248	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00		215		14			115			
249	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00		91	14	14	40	23	46		65	33
250	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1122+50 TO END PROJECT		120					67			
251	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1050+50, STA 1159+75 TO STA 1061+25		72					61			
252	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1091+50		46					26			
253	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50		21					8			
254	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00		27	26		79		12			
255	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00		37			148		101			
257	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1259+00		39				239	184			
258	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1274+00 TO STA 1276+00		36					105	9		
260	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00							271			
261	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT		20					217			
262	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00		30					15			
264	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00					220		12			
266	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1410+00 DETAILS					595		18			
269	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1367+00		185					73	78		
270	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50		30			372					
271	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00		277					20			
272	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1414+00 DETAILS		400								
273	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50		228			80		24			
274	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00		230			40		9		34	
275	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1399+00 TO 1401+00, STA 1799+00 TO STA 1801+00		197			102		12			
276	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1406+00		29							28	
277	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1410+00		254								
278	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1414+00							42			
279	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00		17			317	61	129			
280	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1420+00		216					50		30	
281	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00		70					30			

REV. NO.

DATE

DESCRIPTION

BY

PAPE-DAWSON
ENGINEERS

SAN ANTONIO | 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 7 OF 12

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

32

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn



SHT NO	ITEM		0531 -6022	0531 -6023	0531 -6024	0531 -6027	0531 -6029	0531 -6030	0531 -6032	0531 -6033	0560 -6014
	CSJ 0915-12-576		CURB RAMP5 (TY	CURB RAMP6 (TY	CURB RAMP7 (TY	CURB RAMP10 (TY	CURB RAMP20 (TY	CURB RAMP21 (TY	CONC SIDEWALKS (SPECIAL) (TYPE A)	CONC SIDEWALKS (SPECIAL) (TYPE B)	MAT.BOX INSTALL-S (TWG-POST) TY 4
			SY	SY	SY	SY	SY	SY	SY	SY	EA
203	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 746+00 TO STA 750+00									
204	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 750+00 TO STA 754+00									
206	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 756+00 TO STA 760+00									
208	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 760+00 TO STA 763+00									
210	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 765+00 TO STA 768+00								13	
211	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00									
213	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 772+00 TO STA 776+00									
215	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 776+00 TO STA 780+00								4	
216	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 784+00									
218	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00									
220	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 792+00									
221	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1320+00 TO 1322+00, STA 1329+00 TO STA 1331+00									
222	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 796+50 TO STA 798+50, STA 802+00 TO STA 804+00									
224	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 806+00 TO STA 810+00									
226	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 856+00									
227	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 856+00 TO STA 860+00									
229	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00									
231	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00									
232	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00									
233	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 889+00 TO STA 893+00									
234	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 893+00 TO STA 895+00, STA 902+00 TO STA 904+00								20	
235	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 904+00 TO STA 908+00								119	
236	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50									
237	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1339+00								38	
238	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00			5						
239	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00									
240	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00									
241	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00									
242	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00									
243	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 944+00 TO STA 948+00									
244	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00								37	
245	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT									
246	SL 13 MILITARY DRIVE	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 991+50, STA 1001+50 TO STA 1003+50									
247	SL 13 MILITARY DRIVE	EB SIDEWALK CONSTRUCTION PLAN STA 1040+00 TO STA 1042+00, STA 1054+50 TO STA 1056+50								13	
248	SL 13 MILITARY DRIVE	EB SIDEWALK CONSTRUCTION PLAN STA 1095+00 TO STA 1099+00							16		
249	SL 13 MILITARY DRIVE	EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00		54						12	
250	SL 13 MILITARY DRIVE	EB SIDEWALK CONSTRUCTION PLAN STA 1122+50 TO END PROJECT									
251	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 1050+50, STA 1159+75 TO STA 1061+25									
252	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1183+50 TO STA 1185+50, STA 1189+50 TO STA 1091+50									
253	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50								7	
254	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1227+00 TO STA 1231+00								4	
255	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1251+00 TO STA 1255+00									
257	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1255+00 TO STA 1259+00									
258	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1274+00 TO STA 1276+00									
260	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00									
261	SL 13 MILITARY DRIVE	WB SIDEWALK CONSTRUCTION PLAN STA 1280+00 TO END PROJECT									
262	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1344+00 TO STA 1346+00								78	
264	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1353+00 TO 1355+00, STA 1753+00 TO STA 1755+00								131	
266	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1410+00 DETAILS								123	
269	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1367+00								72	
270	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1373+00 TO STA 1376+50								173	
271	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1376+50 TO 1378+50, STA 1776+00 TO STA 1778+00								151	
272	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1414+00 DETAILS								222	
273	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1382+50 TO 1384+50, STA 1782+50 TO STA 1784+50								128	
274	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1390+00 TO STA 1394+00								160	
275	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1399+00 TO 1401+00, STA 1799+00 TO STA 1801+00								138	
276	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1402+00 TO STA 1406+00		23			8			14	
277	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1406+00 TO STA 1410+00								132	
278	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1410+00 TO STA 1414+00									
279	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1414+00 TO 1416+00, STA 1814+00 TO STA 1816+00									
280	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1416+00 TO STA 1420+00								103	
281	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1421+00 TO STA 1423+00									

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 8 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			SHEET NO.
			VARIES
			33

Plotted on: 11/21/2018



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

SHT NO	ITEM					0104-6009	0104-6017	0104-6024	0104-6029	0104-6036	0104-6040	0105-6037	0132-6003	0162-6002	0168-6001
	CSJ 0915-12-576					REMOVING CONC (RIPRAP)	REMOVING CONC (DRIVEWAYS)	REMOVING CONC (RETAINING WALLS)	REMOVING CONC (CURB OR GUTTER)	REMOVING CONC (SIDEWALK OR RAMP)	REMOVING CONC (PAVERS)	REMOVING STAB BASE AND ASPH PAV (0" - 16")	EMBANKMENT (FINAL) (ORD COMP) (TY B)	BLOCK SODDING	VEGETATIVE WATERING
						SY	SY	SY	LF	SY	SY	SY	CY	SY	MG
282	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1423+00 TO STA 1427+00						48						
283	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1427+00 TO STA 1430+00												
284	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00				258								
286	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1432+00 TO STA 1436+00				404								
287	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1436+00 TO STA 1440+00									41			
288	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1440+00 TO STA 1444+00									111			
289	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1444+00 TO STA 1448+00						86			307			
290	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1448+00 TO STA 1452+00									220			
291	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1452+00 TO STA 1456+00									82			
292	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50									352			
293	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00												
294	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1475+00 TO STA 1479+00												
295	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1479+00 TO STA 1483+00												
296	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00												
297	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1485+00 TO STA 1489+00									382			
299	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1489+00 TO STA 1493+00									242			
300	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1493+00 TO STA 1497+00												
301	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1497+00 TO STA 1500+00												
302	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1500+00 TO STA 1504+00												
303	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1504+00 TO STA 1508+00												
304	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50												
306	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1512+00 TO STA 1516+00												
307	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1532+00 TO STA 1536+00												
308	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00												
309	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1722+00 TO 1724+00 , STA 1730+00 TO STA 1732+00												
310	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1741+00 TO STA 1745+00												
311	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1745+00 TO STA 1749+00												
312	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1749+00 TO STA 1753+00												
313	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1755+00 TO STA 1758+50												
314	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1758+50 TO STA 1762+00				427								
316	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1762+00 TO STA 1765+00				360								
318	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1765+00 TO STA 1769+00												
319	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1769+00 TO STA 1773+00												
320	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1773+00 TO STA 1776+00												
321	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1778+00 TO STA 1782+00												
322	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1784+50 TO STA 1788+50												
323	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1788+50 TO STA 1792+50												
324	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1792+50 TO STA 1796+00												
325	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1796+00 TO STA 1799+00						35						
326	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1801+00 TO STA 1805+00						35						
	TOTALS (CSJ 0915-12-586)					133	10688	727	10927	1302	36	9025	443	5838	91.07

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF ROADWAY QUANTITIES			
SHEET 9 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
		SECT. NO.	JOB NO.
		12	576
			SHEET NO.
			34

Design Filename: P:\111\35\07\design\Civil\Summaries\1113507*Summaries*RDWY.dgn

SHT	NO		TON	SY	SY	CY	SF	CY	LF	EA	EA	EA
282	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00	20.0			9	497					
283	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1430+00				2	991			6		
284	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00					949					
286	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1432+00 TO STA 1436+00										
287	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1436+00 TO STA 1440+00										
288	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1440+00 TO STA 1444+00										
289	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1444+00 TO STA 1448+00				9	342					
290	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1448+00 TO STA 1452+00										
291	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1452+00 TO STA 1456+00										
292	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50				11	93			6		
293	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00										
294	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1475+00 TO STA 1479+00										
295	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1479+00 TO STA 1483+00										
296	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00										
297	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00										
299	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1489+00 TO STA 1493+00										
300	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00	12.0									
301	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00										
302	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00										
303	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1504+00 TO STA 1508+00										
304	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50										
306	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1512+00 TO STA 1516+00										
307	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1532+00 TO STA 1536+00	18.0									
308	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00	12.0									
309	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1722+00 TO 1724+00 , STA 1730+00 TO STA 1732+00										
310	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1741+00 TO STA 1745+00				9	32					
311	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1745+00 TO STA 1749+00										
312	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1749+00 TO STA 1753+00										
313	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1755+00 TO STA 1758+50										
314	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1758+50 TO STA 1762+00										
316	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1762+00 TO STA 1765+00										
318	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1765+00 TO STA 1769+00				15	31		111			
319	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1769+00 TO STA 1773+00										
320	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1773+00 TO STA 1776+00										
321	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1778+00 TO STA 1782+00				12	29			9		
322	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1784+50 TO STA 1788+50										
323	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50										
324	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1792+50 TO STA 1796+00				9	28					
325	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1796+00 TO STA 1799+00				9	99					
326	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1801+00 TO STA 1805+00				9						
	TOTALS (CSJ 0915-12-586)		80.0	10	132	309.7	3673	34	144	153	1	1

REV. NO.	DATE	DESCRIPTION						BY	
 <p>PAPE-DAWSON ENGINEERS</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><i>Texas Department of Transportation</i> © 2018</p>									
<h1>SUMMARY OF ROADWAY QUANTITIES</h1>									
SHEET 10 OF 12									
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		35		

Plotted on: 11/21/2018

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

		ITEM										0529-6001	0529-6002	0529-6012	0529-6020	0530-6004	0530-6005	0531-6001	0531-6018	0531-6019	0531-6020									
		CSJ 0915-12-576										CONC CURB (TY 1)	CONC CURB (TY 11)	CONC CURB (SLOTTED)	CONC CURB & GUTTER (ARMOR CURB)	DRIVEWAYS (CONC)	DRIVEWAYS (ACP)	CONC SIDEWALKS (4")	CURB RAMPS (TY 1)	CURB RAMPS (TY 2)	CURB RAMPS (TY 3)									
SHT NO												LF	LF	LF	LF	SY	SY	SY	SY	SY	SY									
282	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1423+00	TO	STA 1427+00														48								
283	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1427+00	TO	STA 1430+00																10		10				
284	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1430+00	TO	1432+00, STA 1830+00	TO	STA 1832+00																				
286	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1432+00	TO	STA 1436+00																						
287	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1436+00	TO	STA 1440+00																						
288	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1440+00	TO	STA 1444+00																						
289	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1444+00	TO	STA 1448+00													86									
290	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1448+00	TO	STA 1452+00																220	180					
291	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1452+00	TO	STA 1456+00																82	144					
292	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1465+50	TO	1467+50, STA 1865+50	TO	STA 1867+50																352	13			
293	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1467+50	TO	1469+50, STA 1473+00	TO	STA 1475+00																	96			
294	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1475+00	TO	STA 1479+00																		28				
295	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1479+00	TO	STA 1483+00																		90				
296	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1483+00	TO	1485+00, STA 1883+00	TO	STA 1885+00																	58			
297	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1485+00	TO	STA 1489+00																		382	185			
299	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1489+00	TO	STA 1493+00																		242	138			
300	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1493+00	TO	STA 1497+00																144	106	79				
301	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1497+00	TO	STA 1500+00																			167			
302	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1500+00	TO	STA 1504+00																			77			
303	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1504+00	TO	STA 1508+00																			80			
304	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1510+50	TO	1512+00, STA 1910+50	TO	STA 1912+50																		143		
306	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1512+00	TO	STA 1516+00																				111		
307	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1532+00	TO	STA 1536+00																		172	36	7		
308	BANDERA RD	WB	SIDEWALK	CONSTRUCTION	PLAN	STA 1536+00	TO	1538+00, STA 1936+00	TO	STA 1938+00																106	201			
309	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1722+00	TO	1724+00 , STA 1730+00	TO	STA 1732+00																		222		
310	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1741+00	TO	STA 1745+00													400							30		
311	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1745+00	TO	STA 1749+00													43							22		
312	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1749+00	TO	STA 1753+00																				151		
313	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1755+00	TO	STA 1758+50																				93		
314	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1758+50	TO	STA 1762+00																		427		80		
316	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1762+00	TO	STA 1765+00																		360		146		
318	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1765+00	TO	STA 1769+00													100							42	21	
319	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1769+00	TO	STA 1773+00													156									
320	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1773+00	TO	STA 1776+00																				9		
321	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1778+00	TO	STA 1782+00																				28		
322	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1784+50	TO	STA 1788+50																				84		
323	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1788+50	TO	STA 1792+50																				23	7	9
324	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1792+50	TO	STA 1796+00																				19		
325	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1796+00	TO	STA 1799+00																				35		
326	BANDERA RD	EB	SIDEWALK	CONSTRUCTION	PLAN	STA 1801+00	TO	STA 1805+00																				35		
TOTALS (CSJ 0915-12-586)												284	15184	40	42	13140	8856	13865	211	242	49									

REV. NO.	DATE	DESCRIPTION	BY
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SAN ANTONIO | 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 11 OF 12

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	36

Plotted on: 11/21/2018

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



SHT NO	ITEM					0531 -6022	0531 -6023	0531 -6024	0531 -6027	0531 -6029	0531 -6030	0531 -6032	0531 -6033	0560 -6014
	CSJ 0915-12-576					CURB RAMP5 (TY	CURB RAMP6 (TY	CURB RAMP7 (TY	CURB RAMP10 (TY	CURB RAMP20 (TY	CURB RAMP21 (TY	CONC SIDEWALKS (SPECIAL) (TYPE A)	CONC SIDEWALKS (SPECIAL) (TYPE B)	MAT-BOX INSTALL-S (TWG-POST) TY 4
						SY	SY	SY	SY	SY	SY	SY	SY	EA
282	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1423+00 TO STA 1427+00										57	
283	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1427+00 TO STA 1430+00									8	185	
284	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1430+00 TO 1432+00, STA 1830+00 TO STA 1832+00										177	
286	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1432+00 TO STA 1436+00											
287	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1436+00 TO STA 1440+00											
288	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1440+00 TO STA 1444+00											
289	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1444+00 TO STA 1448+00					19					36	
290	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1448+00 TO STA 1452+00											
291	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1452+00 TO STA 1456+00											
292	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50									8	10	
293	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1467+50 TO 1469+50, STA 1473+00 TO STA 1475+00											
294	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1475+00 TO STA 1479+00											
295	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1479+00 TO STA 1483+00					19						
296	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00											
297	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1485+00 TO STA 1489+00											
299	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1489+00 TO STA 1493+00											
300	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1493+00 TO STA 1497+00											
301	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1497+00 TO STA 1500+00											
302	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1500+00 TO STA 1504+00											
303	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1504+00 TO STA 1508+00											
304	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1510+50 TO 1512+00, STA 1910+50 TO STA 1912+50											
306	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1512+00 TO STA 1516+00											
307	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1532+00 TO STA 1536+00											
308	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN	STA 1536+00 TO 1538+00, STA 1936+00 TO STA 1938+00											
309	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1722+00 TO 1724+00 , STA 1730+00 TO STA 1732+00											
310	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1741+00 TO STA 1745+00										185	
311	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1745+00 TO STA 1749+00										107	
312	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1749+00 TO STA 1753+00											
313	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1755+00 TO STA 1758+50											
314	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1758+50 TO STA 1762+00										80	
316	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1762+00 TO STA 1765+00											
318	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1765+00 TO STA 1769+00										44	
319	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1769+00 TO STA 1773+00										101	
320	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1773+00 TO STA 1776+00										74	
321	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1778+00 TO STA 1782+00										157	
322	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1784+50 TO STA 1788+50											
323	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1788+50 TO STA 1792+50								7			
324	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1792+50 TO STA 1796+00										22	
325	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1796+00 TO STA 1799+00											
326	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN	STA 1801+00 TO STA 1805+00											
	TOTALS (CSJ 0915-12-586)					16	77	61	12	8	7	32	3588	2

REV. NO.	DATE	DESCRIPTION	BY
<div><div><div>PAPE-DAWSON ENGINEERS</div></div><div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div></div>			
<div><div><div>Texas Department of Transportation © 2018</div></div></div>			
<div>SUMMARY OF ROADWAY QUANTITIES</div>			
SHEET 12 OF 12			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			12
			576
			37

Plotted on: 11/21/2018

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



SHT NO	ITEM	0644-6001	0644-6070	0644-6076	0658-6050	0658-6060	0666-6048	0666-6230	0677-6001	0677-6007	0678-6008
		IN SM RD SN SUP&AM TY10BWG (1) SA (P)	RELOCATE SM RD SN SUP&AM TY S80	REMOVE SM RD SN SUP&AM	INSTL OM ASSM (OM-2Z) (FLX) SRF	REMOVE DELIN & OBJECT MARKER ASSMS	REFL PAV MRK TY I (W) 24" (SLD) (100 MIL)	PAVEMENT SEALER 24"	ELIM EXT PAV MRK & MRKS (4")	ELIM EXT PAV MRK & MRKS (24")	PAV SURF PREP FOR MRK (24")
		EA	EA	EA	EA	EA	LF	LF	LF	LF	LF
83	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00		2								
84	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00		1		1	1					
86	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00		2	1			40	40		70	40
89	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 161+00 TO STA 165+00		1								
90	US 87 RIGSBY AVE EB SIDEWALK CONSTRUCTION PLAN STA 165+00 TO STA 180+00		1	1							
91	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 607+00 TO STA 611+00		1								
93	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 615+00 TO STA 619+00			1							
97	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 637+00 TO STA 641+00		1	1							
98	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 641+00 TO STA 645+00		1								
101	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 649+00 TO STA 653+00		1								
102	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00		1								
103	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00		1								
105	US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 661+00 TO END PROJECT	1	1				164	164	132		164
175	SL 13 SW MILITARY B EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00		1								
193	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 768+00 TO STA 772+00		1								
216	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00		1								
217	SL 13 SW MILITARY B WB SIDEWALK CONSTRUCTION PLAN STA 915+00 TO STA 919+00		1								
225	SL 13 MILITARY DRIVE EB SIDEWALK CONSTRUCTION PLAN STA 1040+00 TO STA 1042+00, STA 1054+50 TO STA 1056+50		1								
231	SL 13 MILITARY DRIVE WB SIDEWALK CONSTRUCTION PLAN STA 1202+50 TO STA 1204+50		1								
243	SW LOOP 410 SB SIDEWALK CONSTRUCTION PLAN STA 284+00 TO 288+00		11								
279	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1483+00 TO 1485+00, STA 1883+00 TO STA 1885+00		1								
280	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1485+00 TO STA 1489+00		2								
284	BANDERA RD WB SIDEWALK CONSTRUCTION PLAN STA 1500+00 TO STA 1504+00		2								
330	BANDERA RD EB SIDEWALK CONSTRUCTION PLAN STA 1889+00 TO STA 1893+00		1								
	TOTALS (CSJ 0915-12-586)	1	37	4	1	1	204	204	132	70	204

REV. NO.	DATE	DESCRIPTION	BY
<div><div>PAPE-DAWSON ENGINEERS</div><div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div></div>			
<div><div>Texas Department of Transportation © 2018</div></div>			
SUMMARY OF SIGNAGE AND PAVEMENT MARKINGS QUANTITIES			
SHEET 1 OF 1			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			SHEET NO.
			38

Plotted on: 11/21/2018

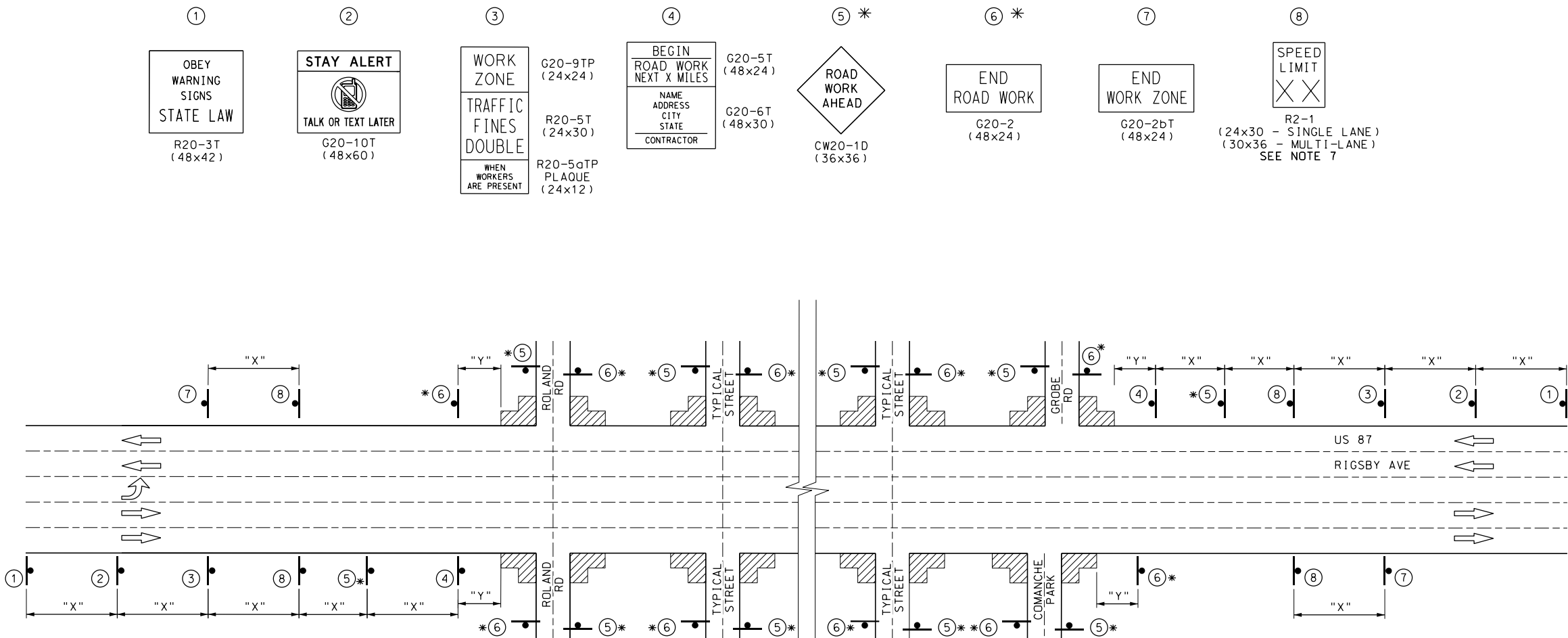
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SHT NO	ITEM		7027-6001	7090-6001	7091-6001	7091-6003	7091-6004
	CSJ 0915-12-576		ADJUST GAS FACILITY ACCESS COVER	SANITARY SEWER (ADJUST MANHOLE)	ADJUST EXISTING VALVE BOX	ADJUST EXISTING METER AND NEW METER BOX	RELOCATE FIRE HYDRANT
			EA	EA	EA	EA	EA
84	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN BEGIN PROJECT TO STA 130+00				1	
85	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 130+00 TO STA 134+00		1		3	
87	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 134+00 TO STA 147+00			1	1	
88	US 87 RIGSBY AVE	EB SIDEWALK CONSTRUCTION PLAN STA 150+00 TO STA 157+00			1		
97	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 633+00 TO STA 637+00	2				
103	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 657+00				3	
104	US 87 RIGSBY AVE	WB SIDEWALK CONSTRUCTION PLAN STA 657+00 TO STA 661+00				4	
155	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 529+50 TO STA 533+00			1		
157	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 537+00 TO STA 541+00		1	2		
159	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 541+00 TO STA 545+00		1		3	1
161	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 545+00 TO STA 548+00			1		
165	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 556+00 TO STA 560+00		1			
167	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 560+00 TO STA 564+00		1			
172	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 589+50 TO STA 593+50	1				
175	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 610+25 TO STA 614+00			1		
177	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 635+25 TO STA 637+25, STA 643+75 TO STA 645+75			2		
184	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 670+00 TO STA 672+00, STA 900+00 TO STA 902+00			2	3	
187	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 676+00 TO STA 680+00			1		1
188	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 680+00 TO STA 684+00				1	
189	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 684+00 TO STA 689+00		1	1	1	
197	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 715+00 TO STA 719+00		1			
198	SL 13 SW MILITARY B	EB SIDEWALK CONSTRUCTION PLAN STA 719+00 TO STA 723+00			1		
216	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 780+00 TO STA 784+00		1			
218	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00			1	3	
220	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 788+00 TO STA 792+00				1	
226	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 852+00 TO STA 856+00	1		1	1	
227	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 856+00 TO STA 860+00			1		
229	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 863+00 TO STA 865+00, STA 879+00 TO STA 881+00			1	1	
231	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 881+00 TO STA 885+00			1		
232	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 885+00 TO STA 889+00	1				
234	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		
236	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 908+00 TO STA 911+50				1	
238	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 911+50 TO STA 913+00			1		
240	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 925+00 TO STA 928+00		1			
241	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 928+00 TO STA 931+00		1			
242	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 941+00 TO STA 944+00			1		
244	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 948+00 TO STA 952+00		2	1		
245	SL 13 SW MILITARY B	WB SIDEWALK CONSTRUCTION PLAN STA 952+00 TO END PROJECT		1	3		
249	SL 13 MILITARY DRIVE	EB SIDEWALK CONSTRUCTION PLAN STA 1099+00 TO STA 1101+00, STA 1259+00 TO STA 1261+00			2		
269	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1365+00 TO STA 1367+00			1		
282	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1423+00 TO STA 1427+00			1		
283	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1427+00 TO STA 1430+00			1		
292	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1465+50 TO 1467+50, STA 1865+50 TO STA 1867+50			1		
301	BANDERA RD	WB SIDEWALK CONSTRUCTION PLAN STA 1497+00 TO STA 1500+00				1	
323	BANDERA RD	EB SIDEWALK CONSTRUCTION PLAN STA 1788+50 TO STA 1792+50			1		
	TOTALS (CSJ 0915-12-586)		5	14	33	28	2

REV. NO.	DATE	DESCRIPTION	BY
<div><p>PAPE-DAWSON ENGINEERS</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></div>			
<div><p>Texas Department of Transportation © 2018</p></div>			
SUMMARY OF UTILITY QUANTITIES			
SHEET 1 OF 1			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			12
			JOB NO.
			576
			SHEET NO.
			39

Plotted on: 11/21/2018

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- 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

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



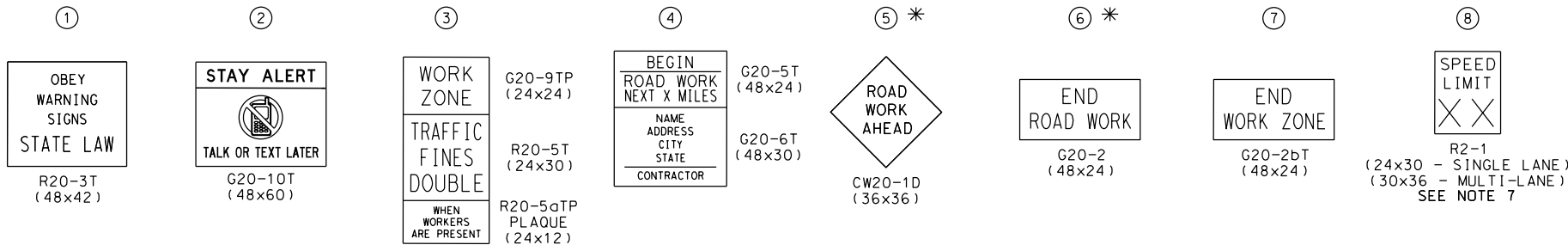
TRAFFIC CONTROL PLAN
ADVANCE WARNING
DEVICES

SHEET 1 OF 4

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	40

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\TCP\1113507*TCP*LINED\AGRAMS02.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"

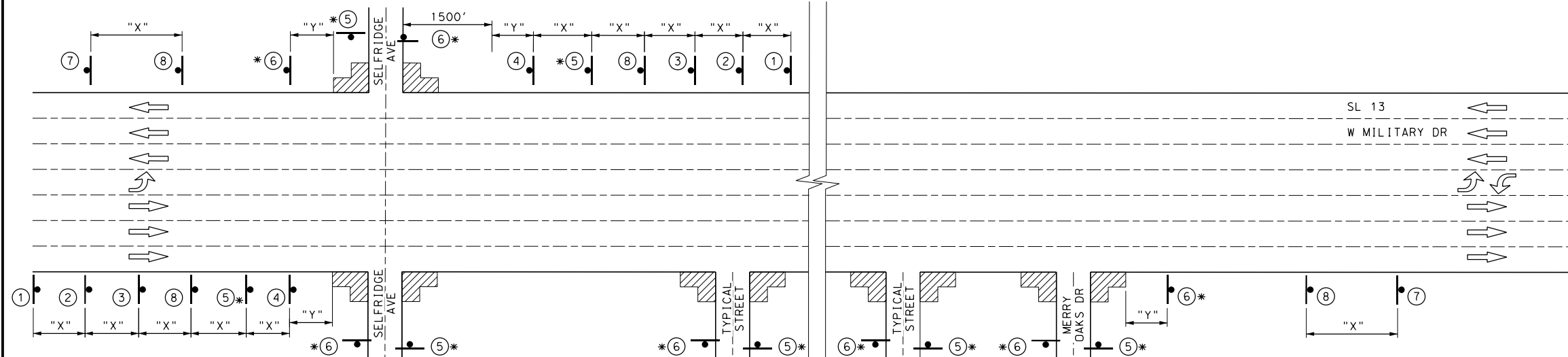
LEGEND	
	CONSTRUCTION WARNING SIGN
	TRAFFIC FLOW
	WORK ZONE

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 114 - 116 - REFER TO TCP (1-1a) FOR ADDITIONAL INFORMATION



DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY
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PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



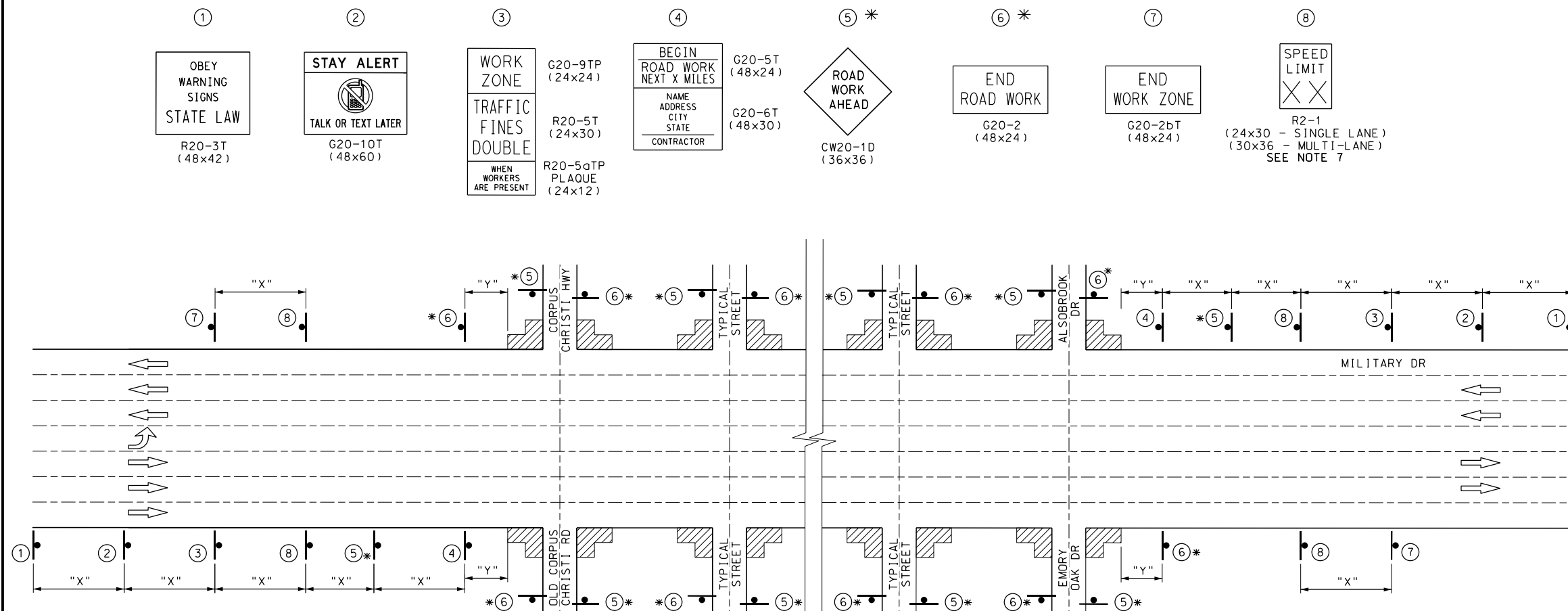
TRAFFIC CONTROL PLAN
ADVANCE WARNING
DEVICES

SHEET 2 OF 4

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	41

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\TCP\1113507*TCP*LINED\IAGRAMS03.dgn



MILITARY DR FROM OLD CORPUS CHRISTI RD TO ALSOBROOK DR/ EMORY OAK DR

SHEETS 211 - 226 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

NOTE:

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

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

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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



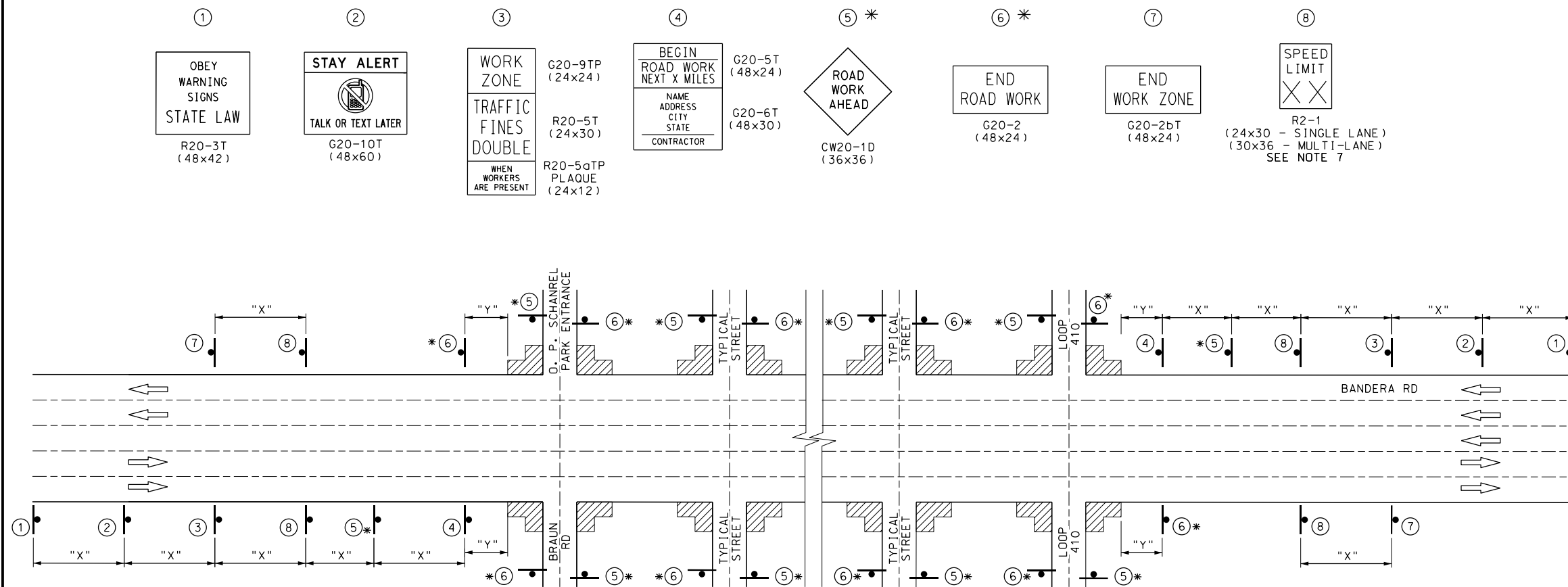
TRAFFIC CONTROL PLAN
ADVANCE WARNING
DEVICES

SHEET 3 OF 4

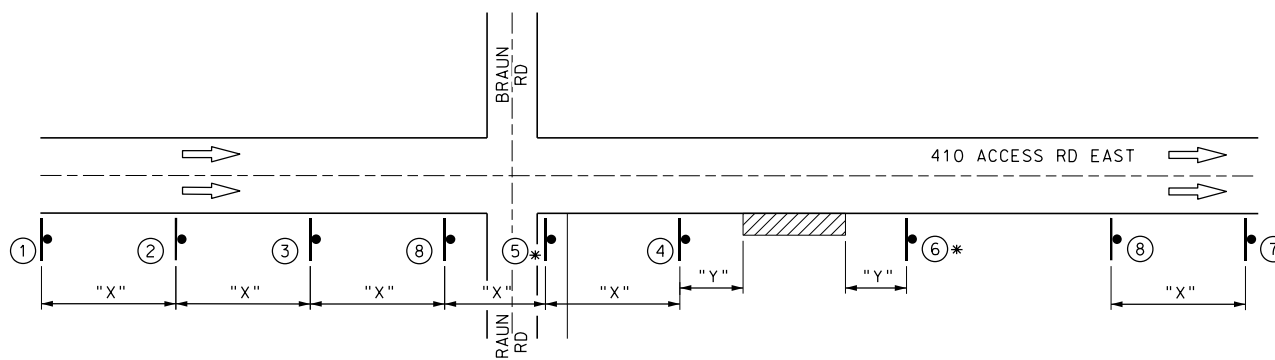
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	42

Plotted on: 11/21/2018

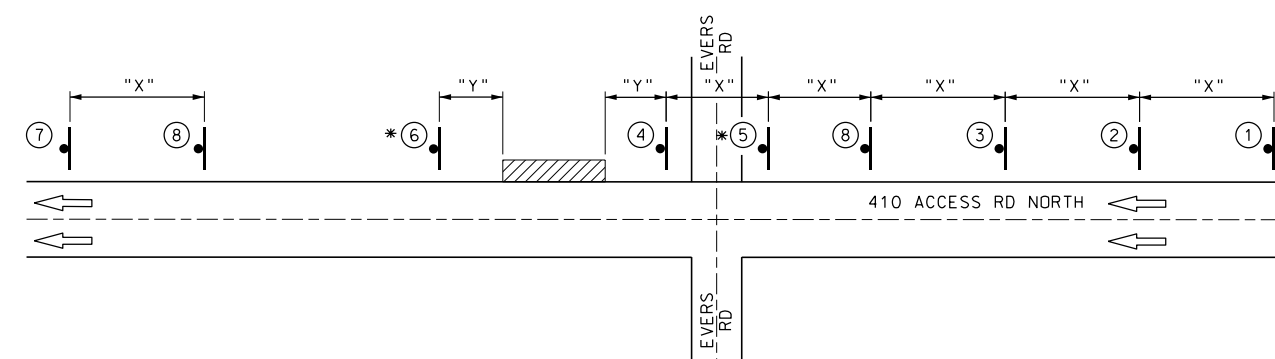
Design File name: P:\111\35\07\design\Civil\TCP\1113507*TCP*LINE\IAGRAMS04.dgn



BANDERA RD FROM BRAUN RD TO LOOP 410
SHEETS 227 - 331 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION



410 ACCESS RD EASTBOUND FROM BANDERA RD TO DAUGHTRY RD
SHEET 332 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION



410 ACCESS RD WESTBOUND FROM KENWICK ST TO EVERS RD
SHEET 333 - REFER TO TCP (1-4a) FOR ADDITIONAL INFORMATION

- 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

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 4 OF 4

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	43

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\TCP\1113507*TCP*NARRATIVE.dgn

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 CONSEQUITIVE INTERSECTING ROADWAYS BE CLOSED AT ONE TIME DURING CONSTRUCTION.

8. AT NO TIME SHALL TWO CONSEQUITIVE 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:

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 (#) 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 OCCURING, 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. A BRIEF DESCRIPTION OF THESE PHASES ARE AS FOLLOWS:

BANDERA; RIGSBY; MILITARY DR; SW MILITARY A; SW MILITARY B

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. 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.

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.

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

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL

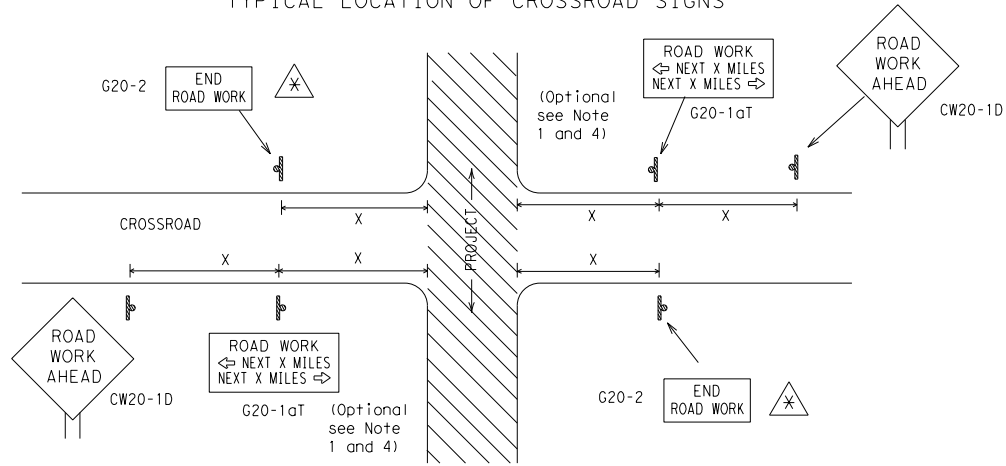
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

REV. NO.	DATE	DESCRIPTION	BY
<div> SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>			
<div> © 2018</div>			
TRAFFIC CONTROL PLAN NARRATIVE			
SHEET 1 OF 1			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			JOB NO.
			576
			SHEET NO.
			44
			HIGHWAY NO.
			VARIES

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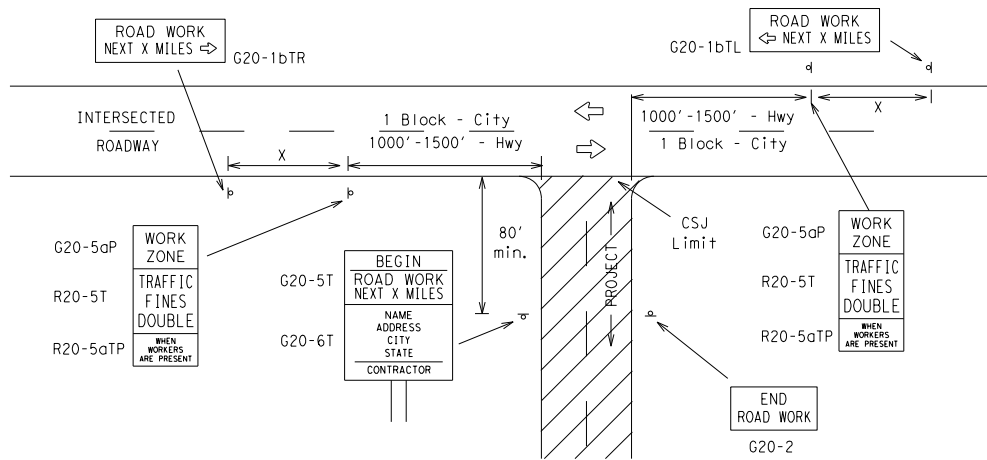
TYPICAL LOCATION OF CROSSROAD SIGNS



May be mounted on back of "ROAD WORK AHEAD" (CW20-1D) sign with approval of Engineer.
(See note 2 below)

1. 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.
2. 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.
3. 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.
4. 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.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. 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

1. 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.
2. 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^{1,5,6}

Sign Number or Series	SIZE		SPACING	
	Conventional Road	Expressway/ Freeway	Posted Speed MPH	Sign Δ Spacing "X" Feet (Apprx.)
CW20 ⁴	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 ²
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"	60	600 ²
			65	700 ²
			70	800 ²
			75	900 ²
			80	1000 ²
			*	* ³

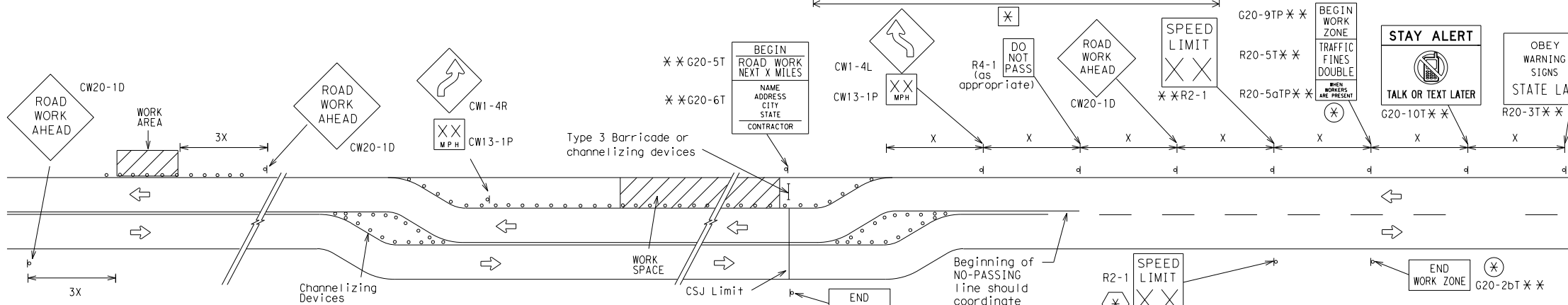
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

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

GENERAL NOTES

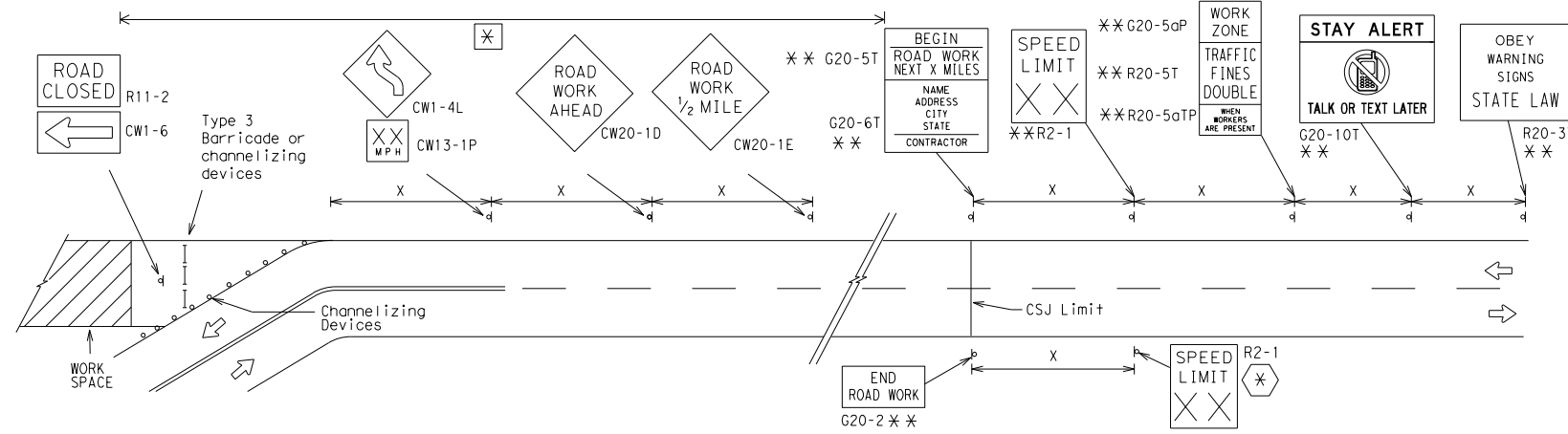
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D) signs may be used on low volume crossroads at the discretion of the Engineer. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. 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 DOWNSTREAM OF 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.

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
REVISIONS		0915	12	576	VARIES
9-07	8-14	DIST	COUNTY		SHEET NO.
7-13		SAT	BEXAR		46

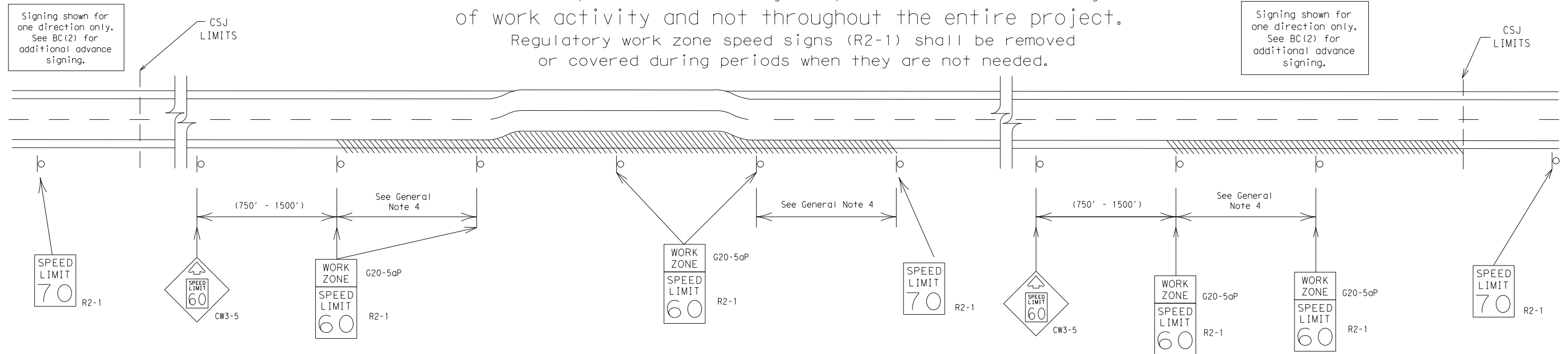
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TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

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.

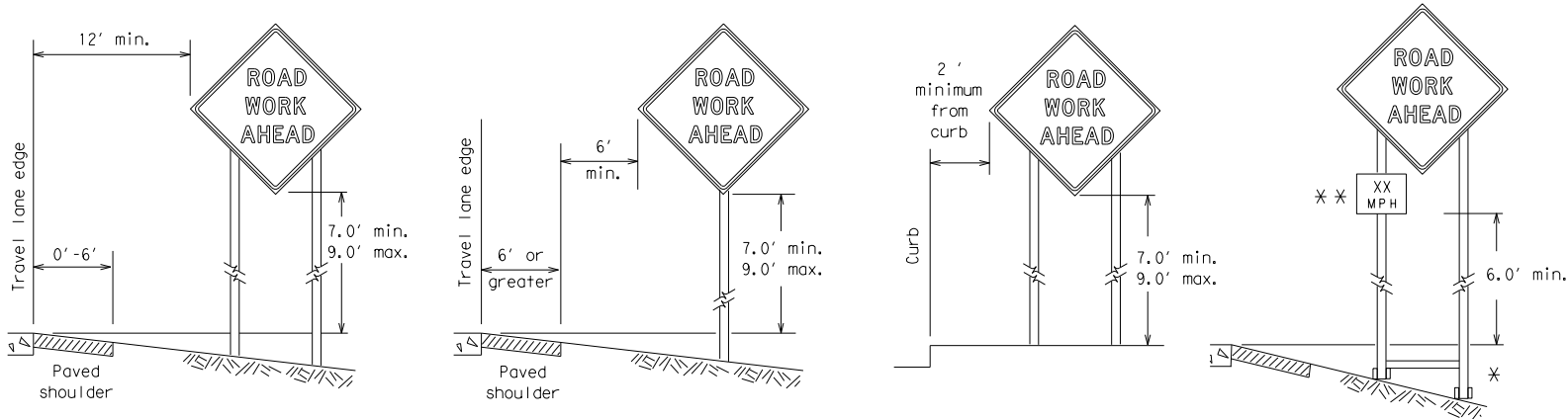
SHEET 3 OF 12

				Traffic Operations Division Standard	
BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT					
BC (3) - 14					
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© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY	
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7-13	SAT	BEXAR		47	

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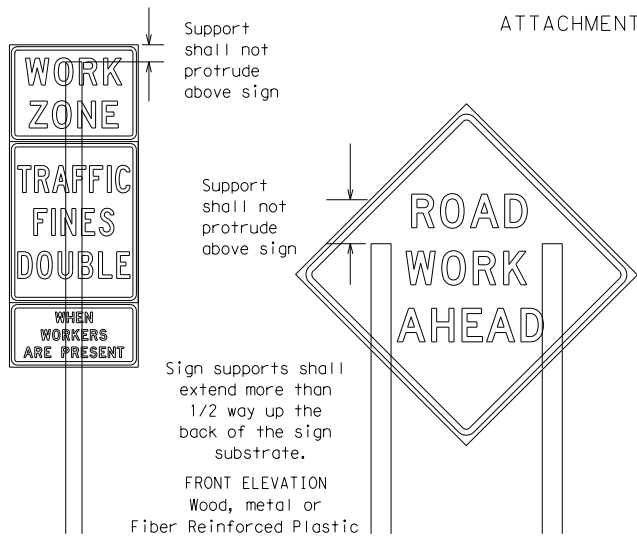
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



✱ 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.

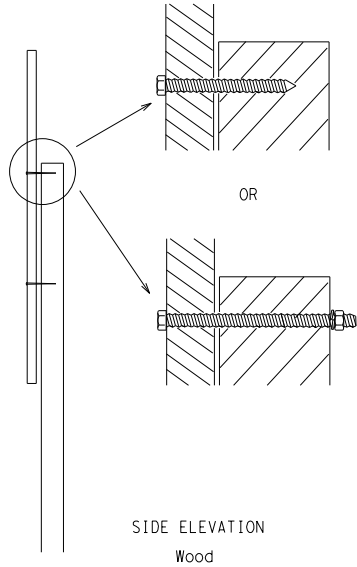
✱✱ When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

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.

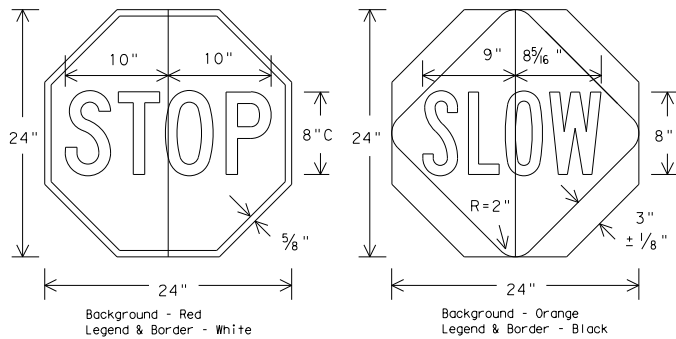
Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports



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.

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.

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_{FL} or Type C_{FL}, 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.

SHEET 4 OF 12

**Texas Department of Transportation**

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

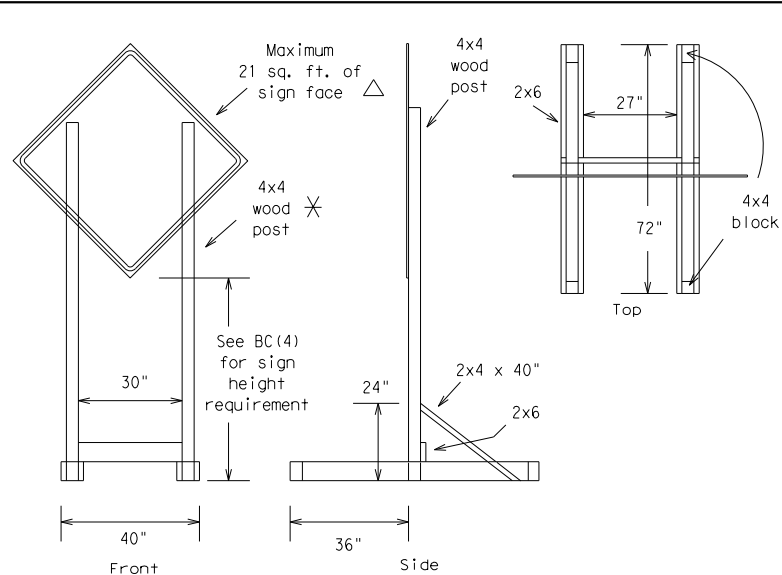
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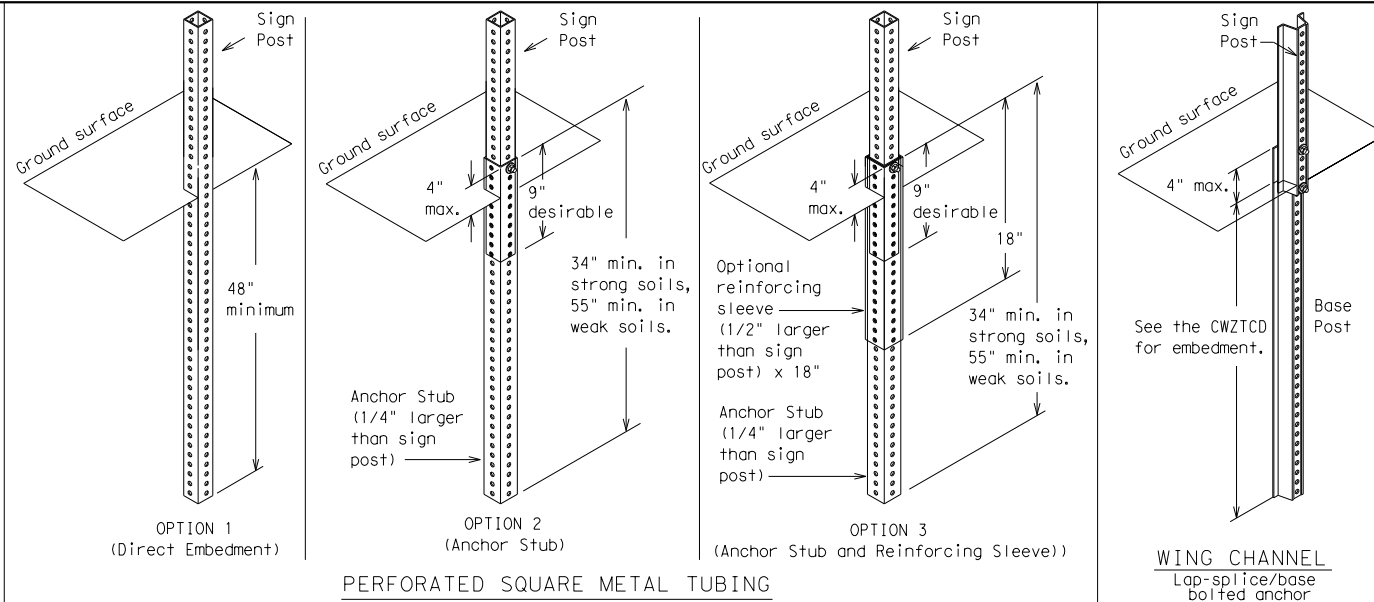
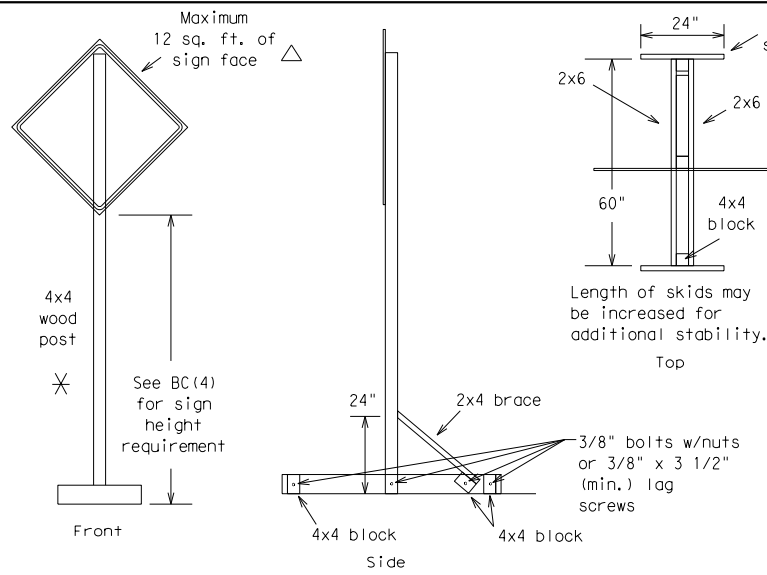
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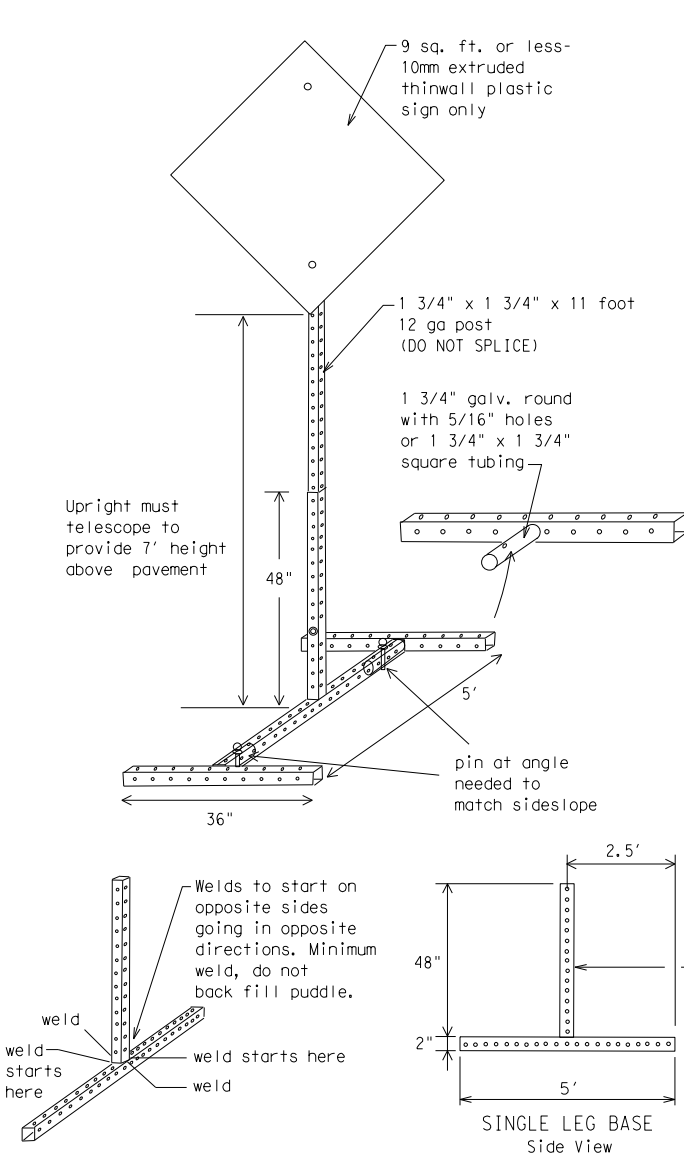
SKID MOUNTED WOOD SIGN SUPPORTS

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

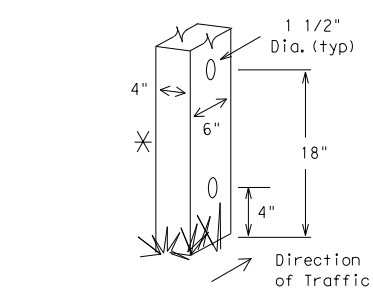
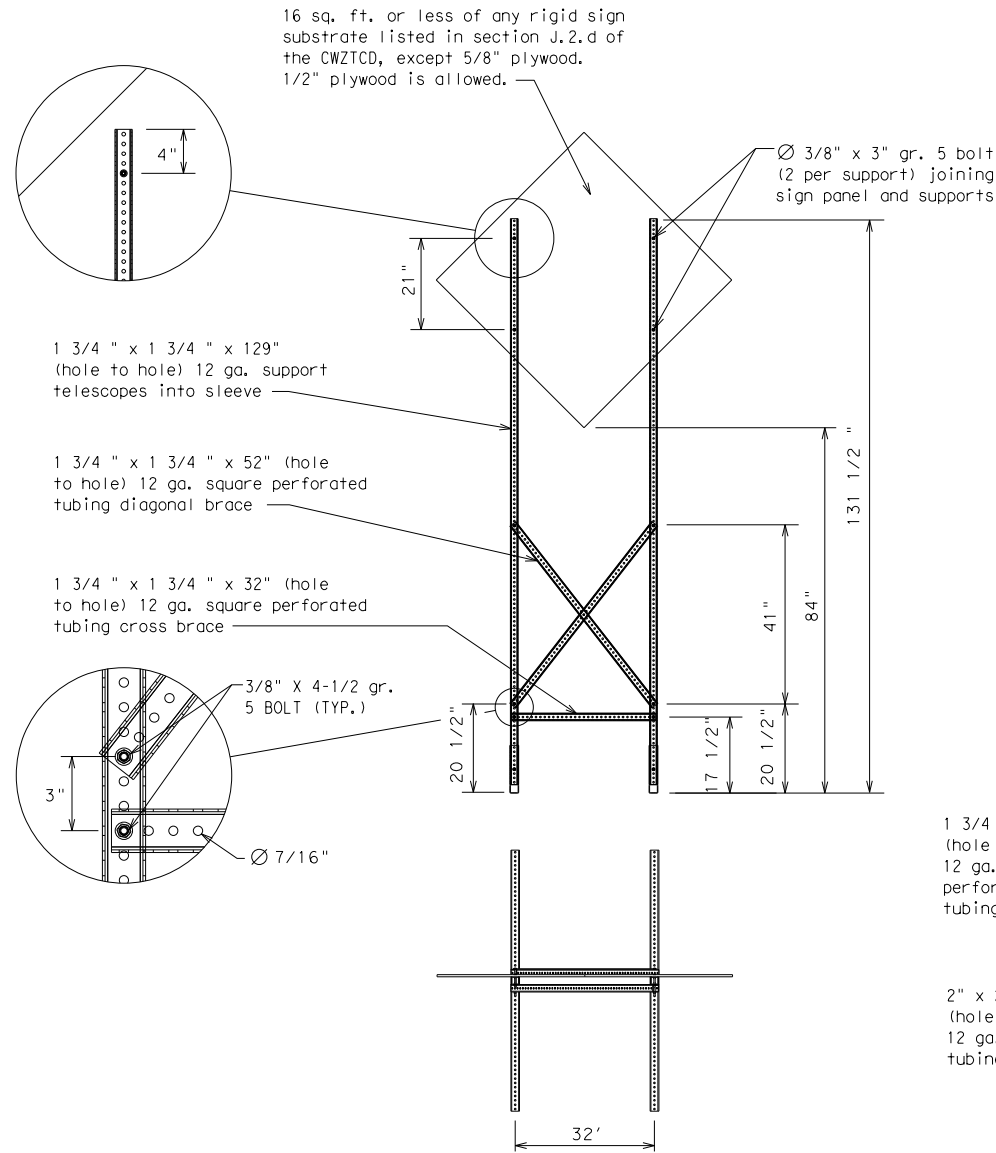


GROUND MOUNTED SIGN SUPPORTS

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.

☐ 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.

\triangle 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

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. 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.
3. 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.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. 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.
8. 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.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. 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.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. 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.
15. 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.
16. Each line of text should be centered on the message board rather than left or right justified.
17. 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
Access Road	ACCS RD
Alternate	ALT
Avenue	AVE
Best Route	BEST RTE
Boulevard	BLVD
Bridge	BRDG
Cannot	CANT
Center	CTR
Construction Ahead	CONST AHD
CROSSING	XING
Detour Route	DETOUR RTE
Do Not	DONT
East	E
Eastbound	(route) E
Emergency	EMER
Emergency Vehicle	EMER VEH
Entrance, Enter	ENT
Express Lane	EXP LN
Expressway	EXPWY
XXXX Feet	XXXX FT
Fog Ahead	FOG AHD
Freeway	FRWY, FWY
Freeway Blocked	FWY BLKD
Friday	FRI
Hazardous Driving	HAZ DRIVING
Hazardous Material	HAZMAT
High-Occupancy	HOV
Vehicle	
Highway	HWY
Hour(s)	HR, HRS
Information	INFO
It Is	ITS
Junction	JCT
Left	LFT
Left Lane	LFT LN
Lane Closed	LN CLOSED
Lower Level	LWR LEVEL
Maintenance	MAINT

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

WORD OR PHRASE	ABBREVIATION
Major	MAJ
Miles	MI
Miles Per Hour	MPH
Minor	MNR
Monday	MON
Normal	NORM
North	N
Northbound	(route) N
Parking	PKING
Road	RD
Right Lane	RT LN
Saturday	SAT
Service Road	SERV RD
Shoulder	SHLDR
Slippery	SLIP
South	S
Southbound	(route) S
Speed	SPD
Street	ST
Sunday	SUN
Telephone	PHONE
Temporary	TEMP
Thursday	THURS
To Downtown	TO DWNTN
Traffic	TRAF
Travelers	TRVLRS
Tuesday	TUES
Time Minutes	TIME MIN
Upper Level	UPR LEVEL
Vehicles (s)	VEH, VEHS
Warning	WARN
Wednesday	WED
Weight Limit	WT LIMIT
West	W
Westbound	(route) W
Wet Pavement	WET PVMT
Will Not	WONT

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

ROADWORK XXX FT	ROAD REPAIRS XXXX FT
FLAGGER XXXX FT	LANE NARROWS XXXX FT
RIGHT LN NARROWS XXXX FT	TWO-WAY TRAFFIC XX MILE
MERGING TRAFFIC XXXX FT	CONST TRAFFIC XXX FT
LOOSE GRAVEL XXXX FT	UNEVEN LANES XXXX FT
DETOUR X MILE	ROUGH ROAD XXXX FT
ROADWORK PAST SH XXXX	ROADWORK NEXT FRI-SUN
BUMP XXXX FT	US XXX EXIT X MILES
TRAFFIC SIGNAL XXXX FT	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	FORM X LINES RIGHT
DETOUR NEXT X EXITS	USE XXXXX RD EXIT
USE EXIT XXX	USE EXIT I-XX NORTH
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N
TRUCKS USE US XXX N	WATCH FOR TRUCKS
WATCH FOR TRUCKS	EXPECT DELAYS
EXPECT DELAYS	PREPARE TO STOP
REDUCE SPEED XXX FT	END SHOULDER USE
USE OTHER ROUTES	WATCH FOR WORKERS
STAY IN LANE	

Location List

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

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. 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.
6. 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.

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

1. 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.
2. 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.
3. 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.
4. 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.

WORDING ALTERNATIVES

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

SHEET 6 OF 12



Texas Department of Transportation

Traffic
Operations
Division
Standard

BARRICADE AND CONSTRUCTION
PORTABLE CHANGEABLE
MESSAGE SIGN (PCMS)

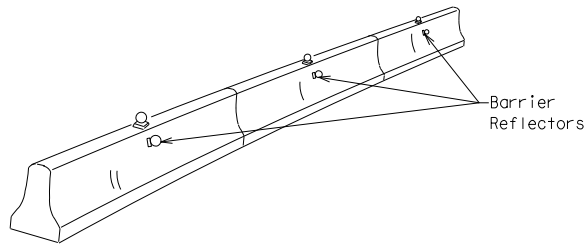
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	REVISIONS	0915	12	576	VARIES				
9-07	8-14			COUNTY				SHEET NO.	
7-13		SAT		BEXAR				50	

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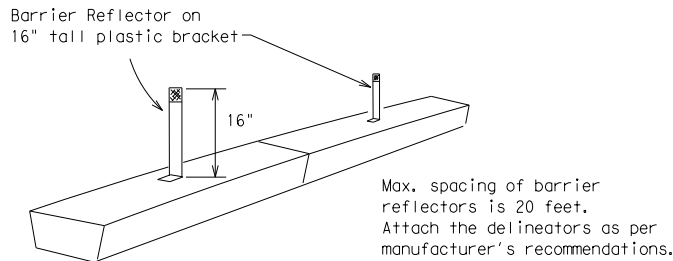
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- Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
- Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.

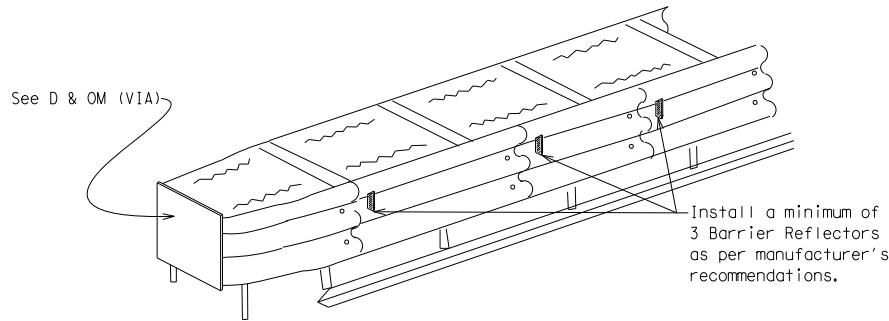


CONCRETE TRAFFIC BARRIER (CTB)

- 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.



LOW PROFILE CONCRETE BARRIER (LPCB)



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

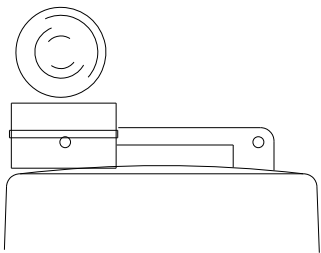
- Warning lights shall meet the requirements of the TMUTCD.
- Warning lights shall NOT be installed on barricades.
- Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet 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_{FL} or C_{FL} 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.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

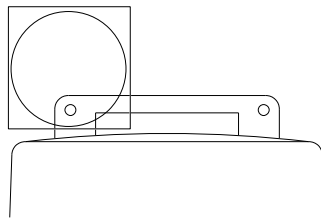
- Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
- Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
- A series of sequential flashing warning lights placed on channelizing 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 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.



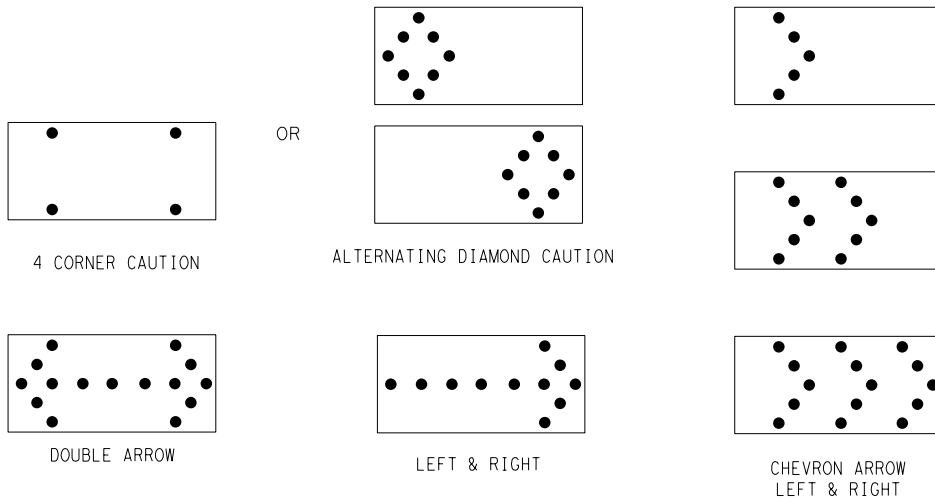
Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



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

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.



Traffic Operations Division Standard

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:

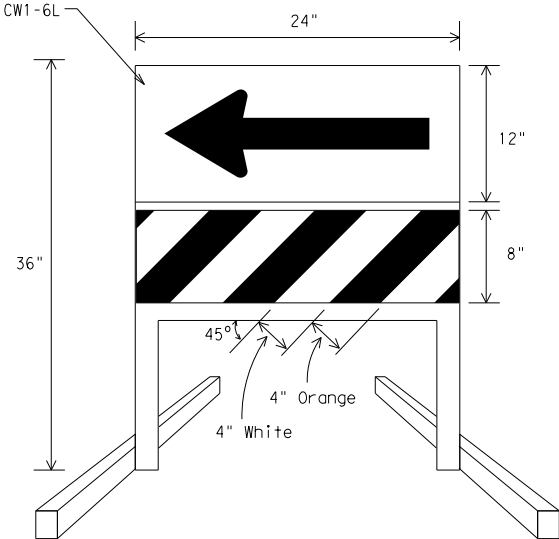
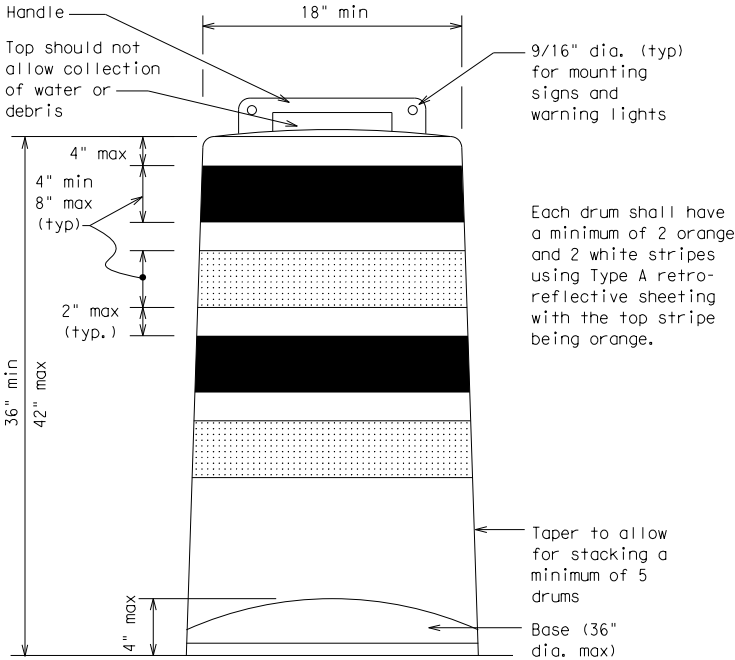
- Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
- The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents 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.

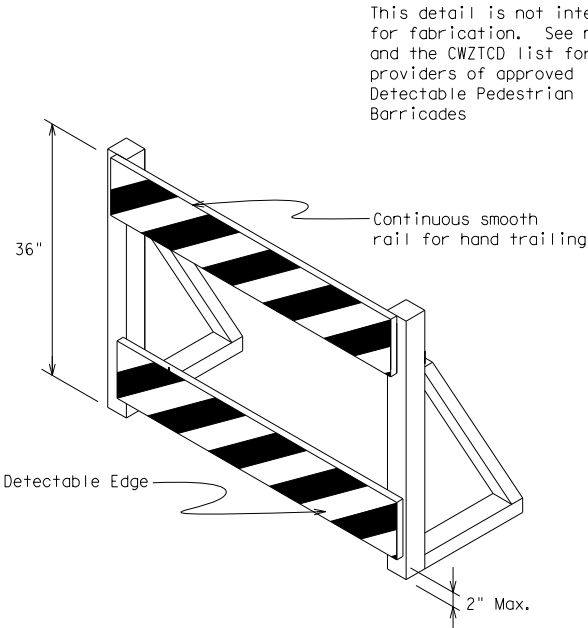
BALLAST

- 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.



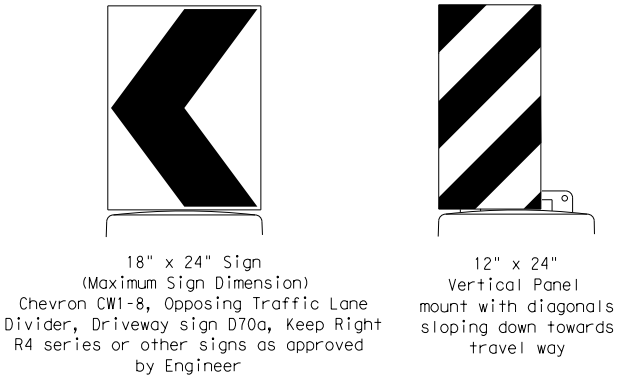
DIRECTION INDICATOR BARRICADE

- 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_{FL} or Type C_{FL} 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.




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_{FL} or Type C_{FL} 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.

SHEET 8 OF 12



Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

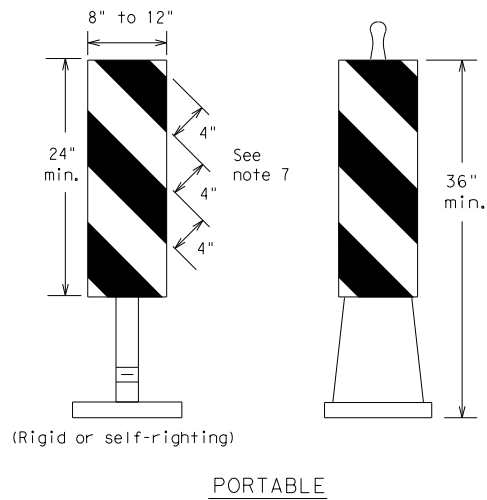
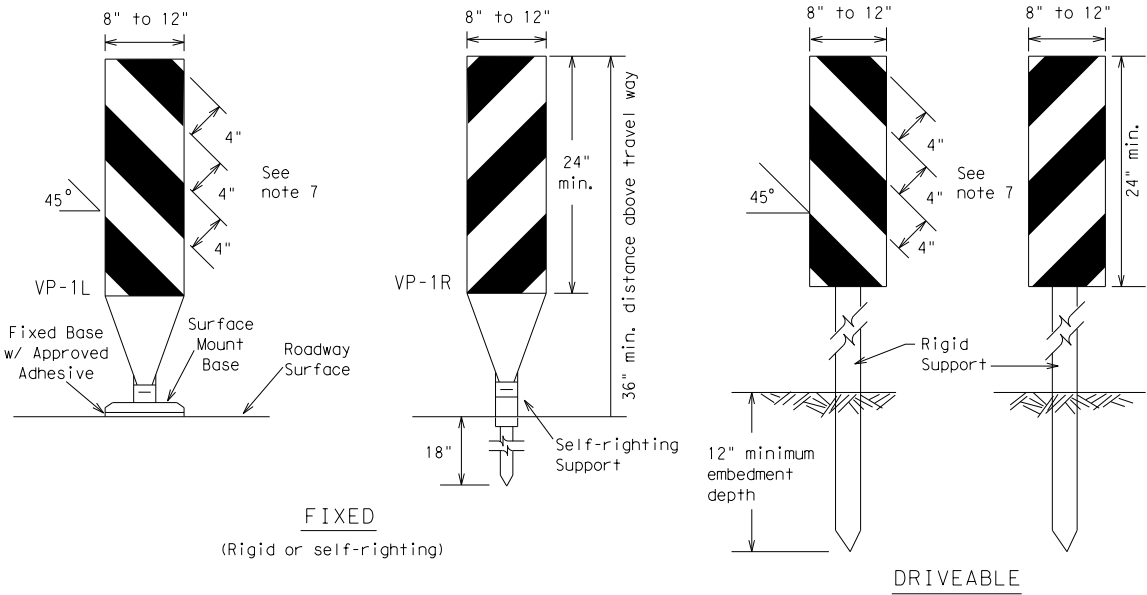
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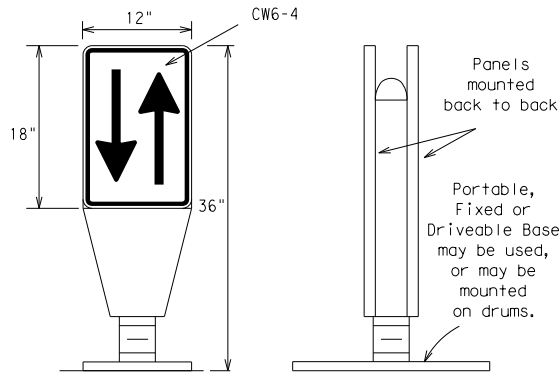
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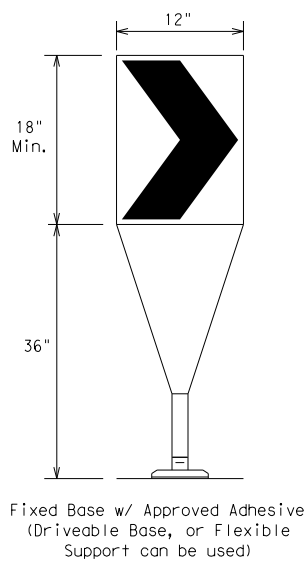
- Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
- VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is 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.

VERTICAL PANELS (VPs)



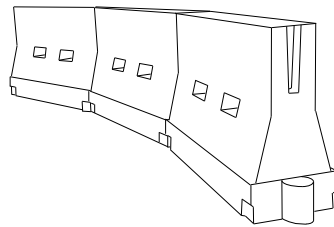
- Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base 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_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.

OPPOSING TRAFFIC LANE DIVIDERS (OTLD)



- 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_{FL} or Type C_{FL} 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 cones 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	$L = \frac{WS^2}{60}$	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

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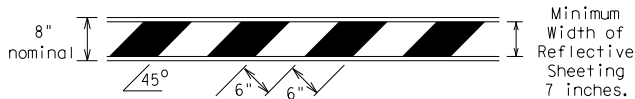
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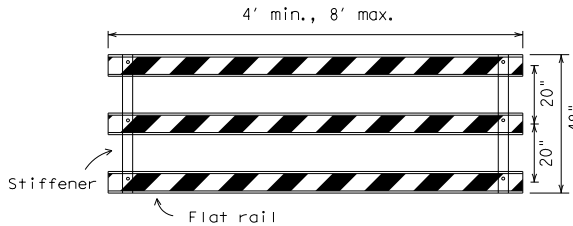
TYPE 3 BARRICADES

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.

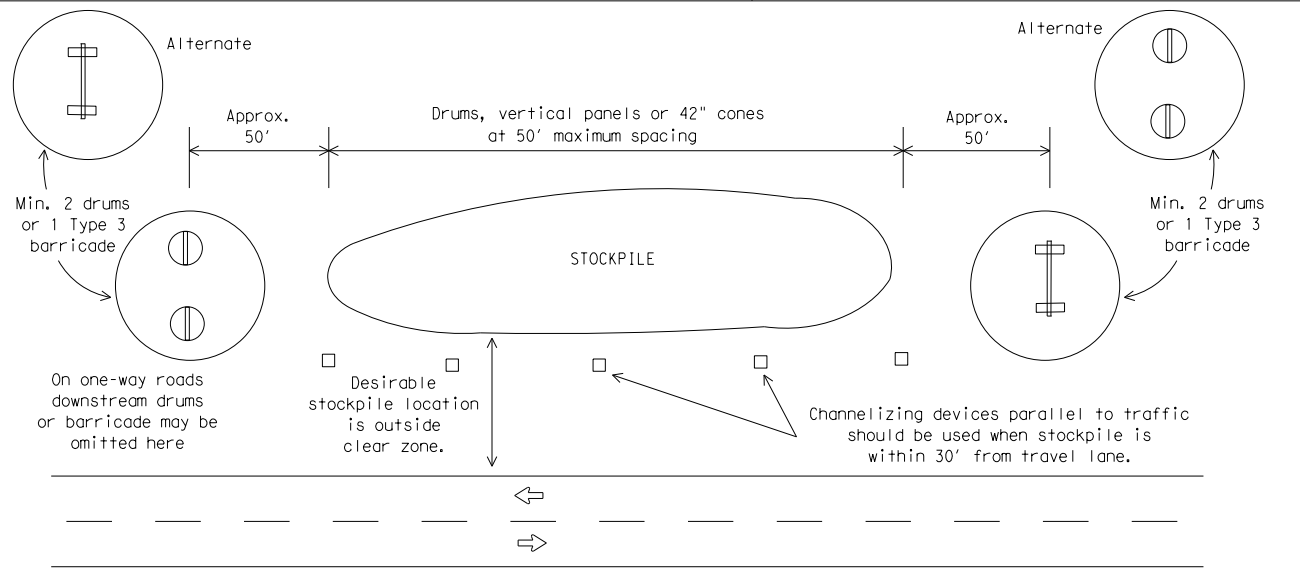


TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



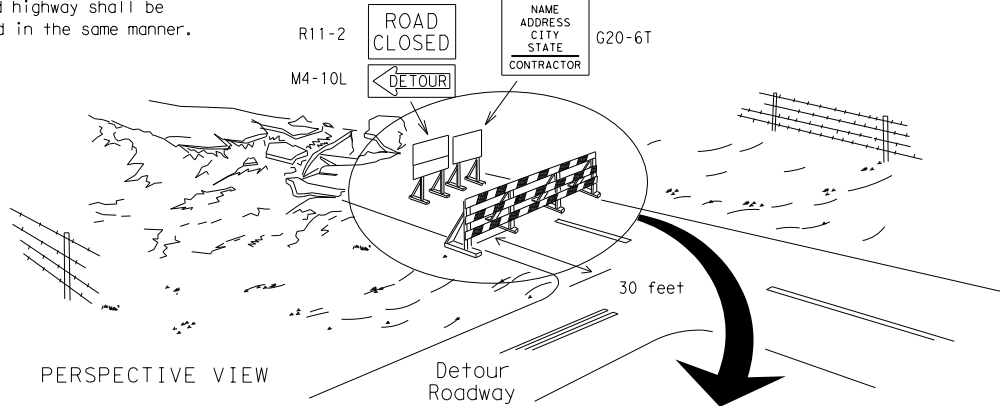
Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES



TRAFFIC CONTROL FOR MATERIAL STOCKPILES

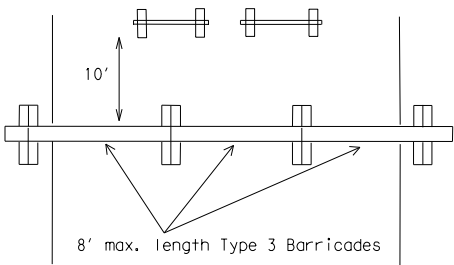
Each roadway of a divided highway shall be barricaded in the same manner.



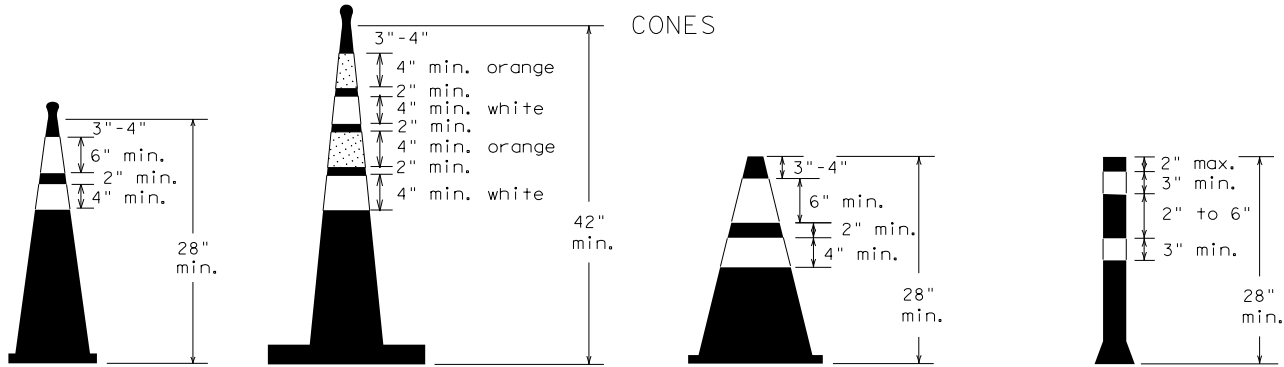
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic. Barricade striping should slant downward in the direction of detour.

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



PLAN VIEW



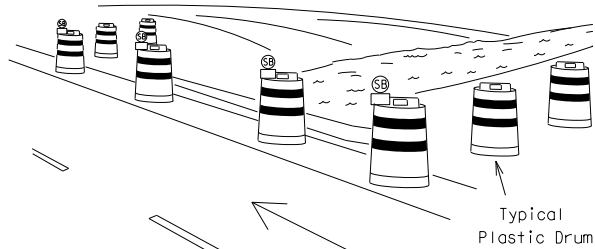
Two-Piece cones

One-Piece cones

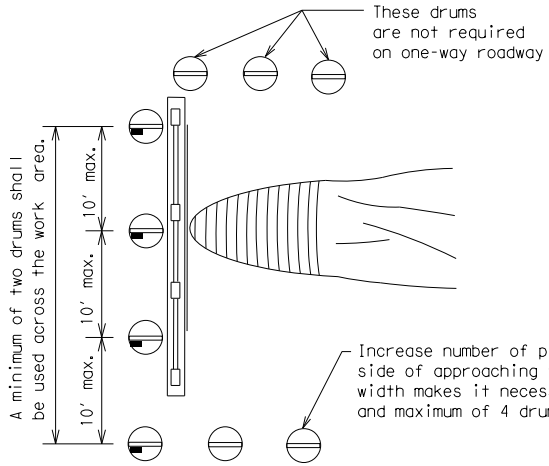
Tubular Marker

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.

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.



PERSPECTIVE VIEW



PLAN VIEW

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS

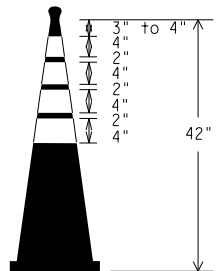
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder 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

These drums are not required on one-way roadway
Increase number of plastic drums on the side of approaching traffic if the crown width makes it necessary. (minimum of 2 and maximum of 4 drums)

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.

SHEET 10 OF 12



Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC (10) - 14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DN: TxDOT	CK: TxDOT
© TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
9-07 8-14	DIST	COUNTY	SHEET NO.	
7-13	SAT	BEXAR	54	

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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.

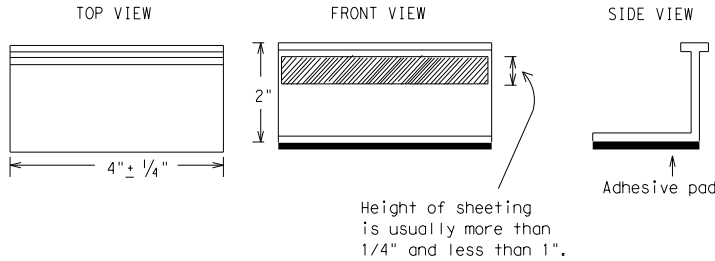
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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



Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS

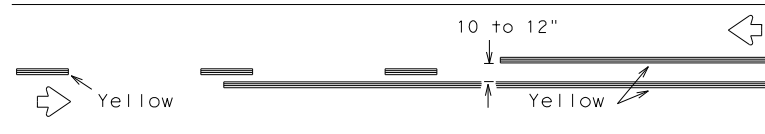
BC (1 1) - 1 4

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© TxDOT February 1998	CONT	SECT	JOB		HIGHWAY				
REVISIONS	0915	12	576		VARIES				
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1-02 7-13	SAT		BEXAR				55		
11-02 8-14									
105									

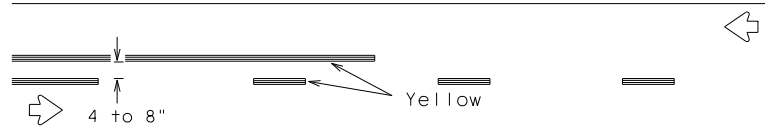
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DATE: 11/21/2018 3:07:04 PM
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PAVEMENT MARKING PATTERNS

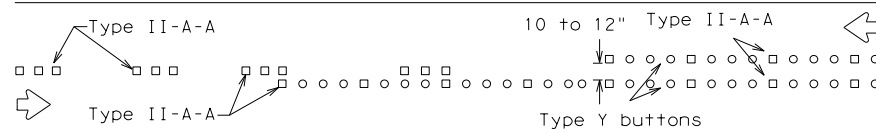


REFLECTORIZED PAVEMENT MARKINGS - PATTERN A

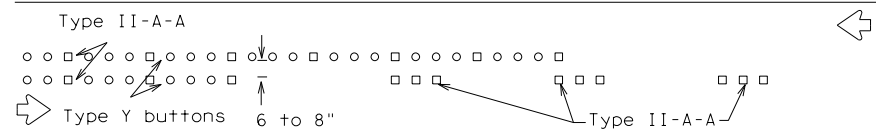


REFLECTORIZED PAVEMENT MARKINGS - PATTERN B

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.

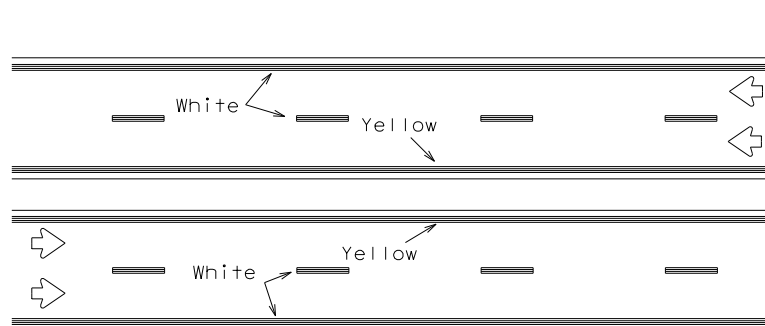


RAISED PAVEMENT MARKERS - PATTERN A



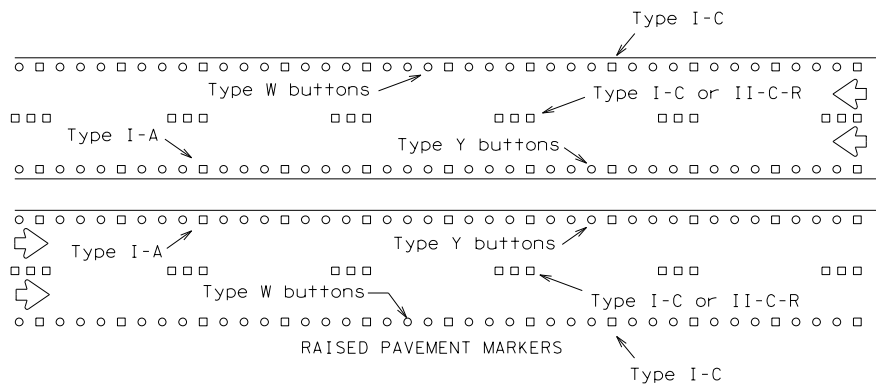
RAISED PAVEMENT MARKERS - PATTERN B

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



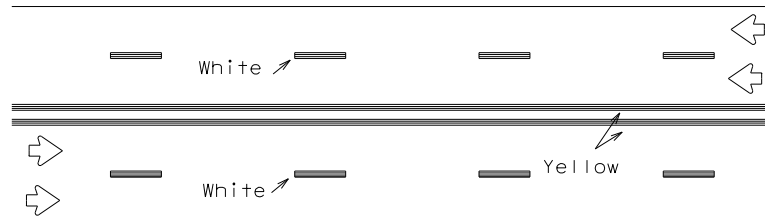
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.



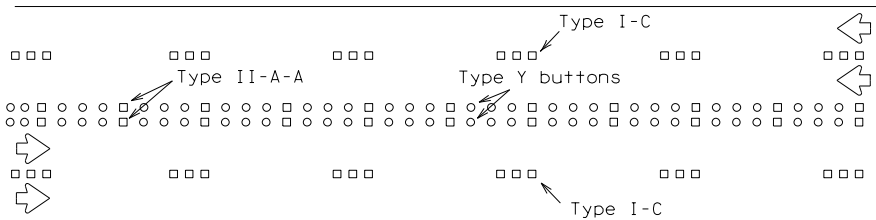
RAISED PAVEMENT MARKERS

EDGE & LANE LINES FOR DIVIDED HIGHWAY



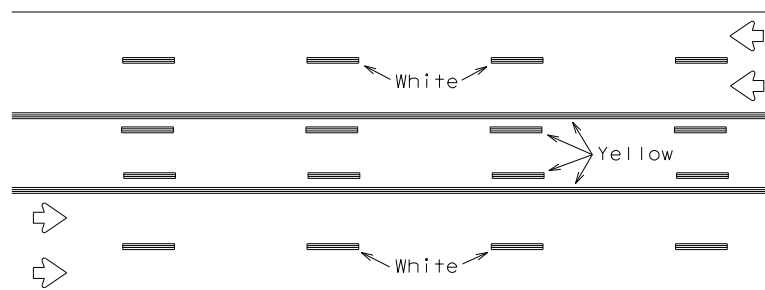
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.



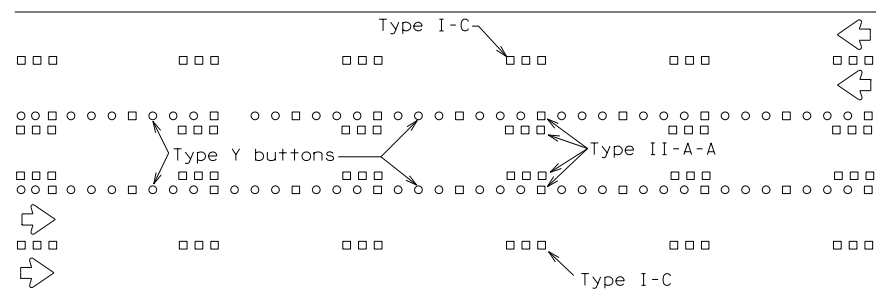
RAISED PAVEMENT MARKERS

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS

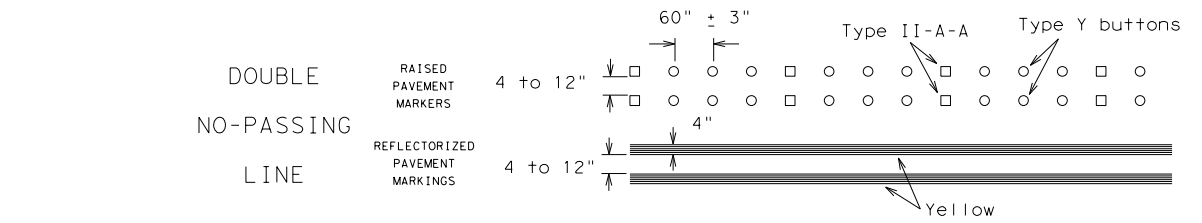
Prefabricated markings may be substituted for reflectORIZED pavement markings.



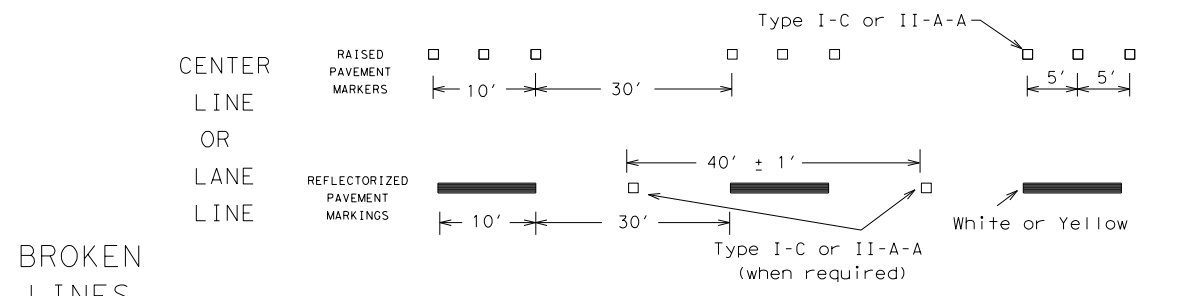
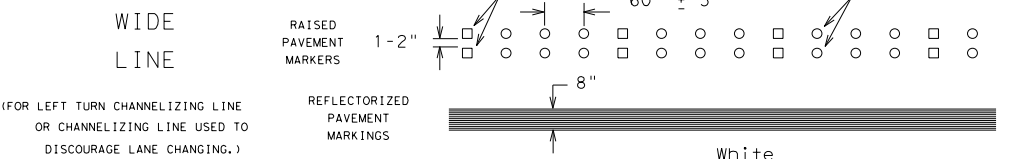
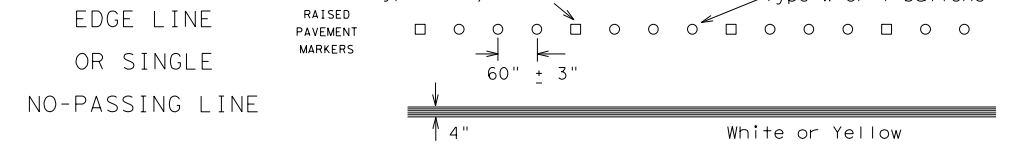
RAISED PAVEMENT MARKERS

TWO-WAY LEFT TURN LANE

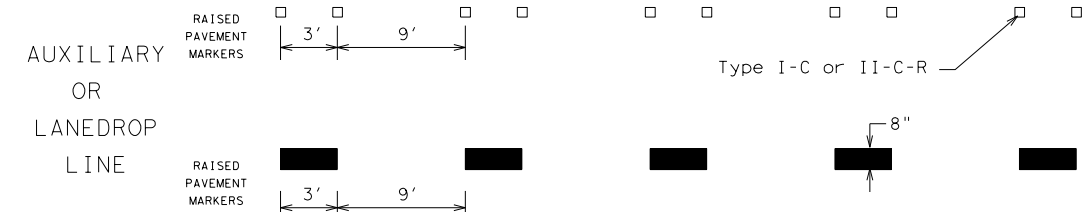
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS



SOLID LINES

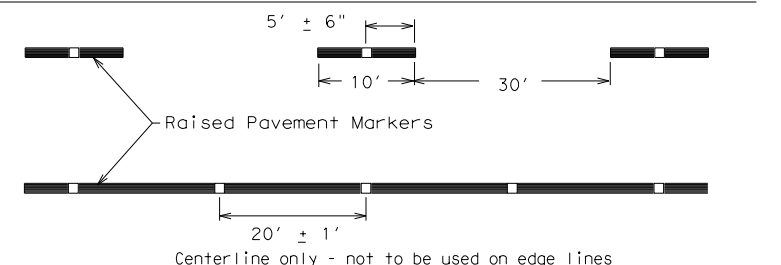


BROKEN LINES




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



Texas Department of Transportation

Traffic Operations
Division
Standard

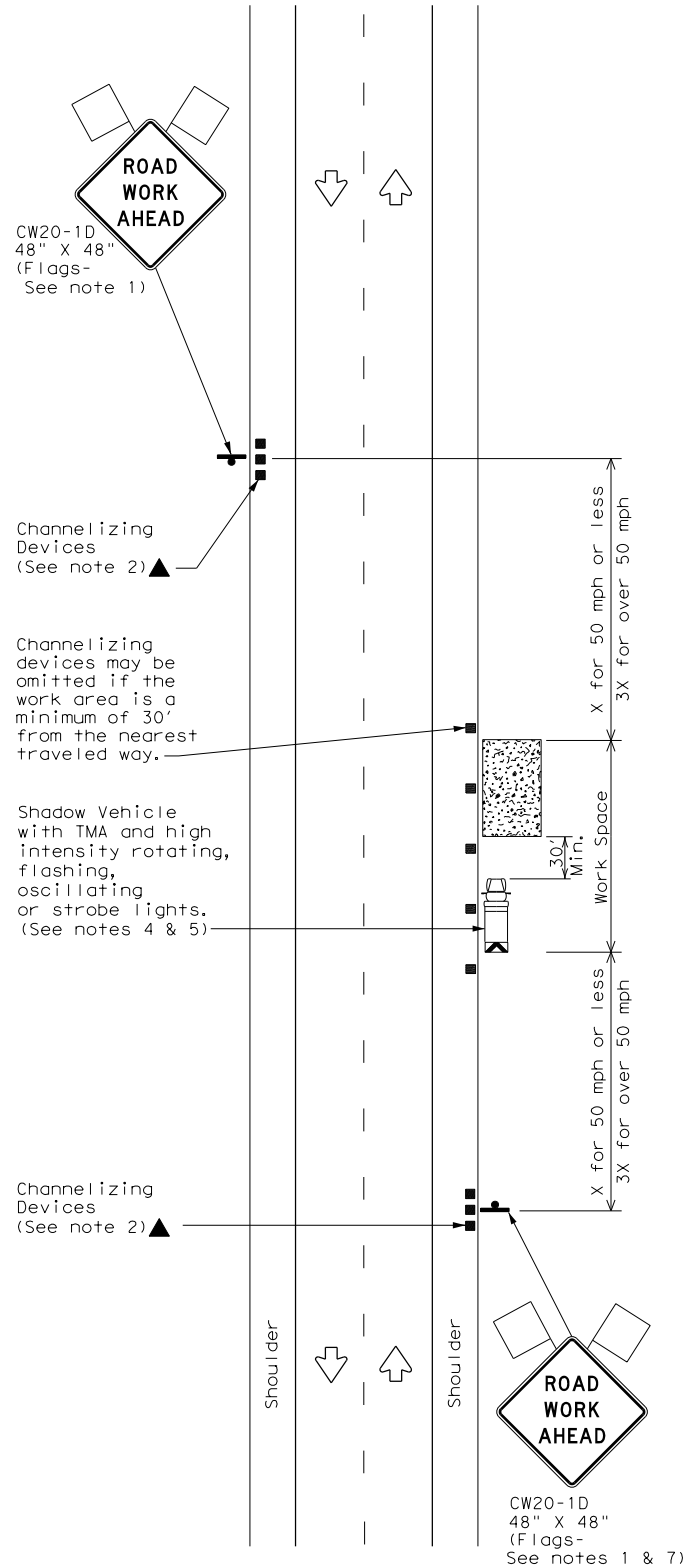
BARRICADE AND CONSTRUCTION
PAVEMENT MARKING PATTERNS

BC (12) - 14

FILE:	bc-14.dgn	DN:	TxDOT	CK:	TxDOT	DW:	TxDOT	CK:	TxDOT
© TxDOT February 1998	CONT	SECT	JOB	HIGHWAY					
REVISIONS	0915	12	576	VARIES					
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2-98 7-13	SAT	BEXAR						56	
11-02 8-14									
106									

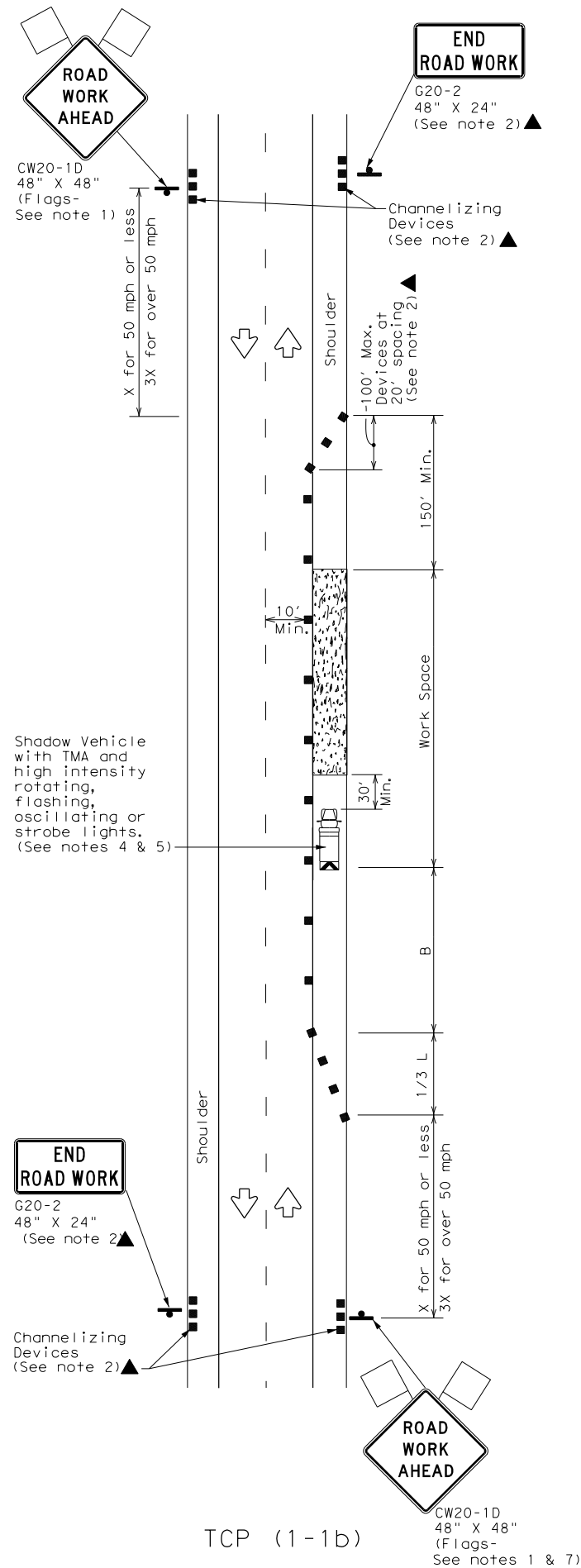
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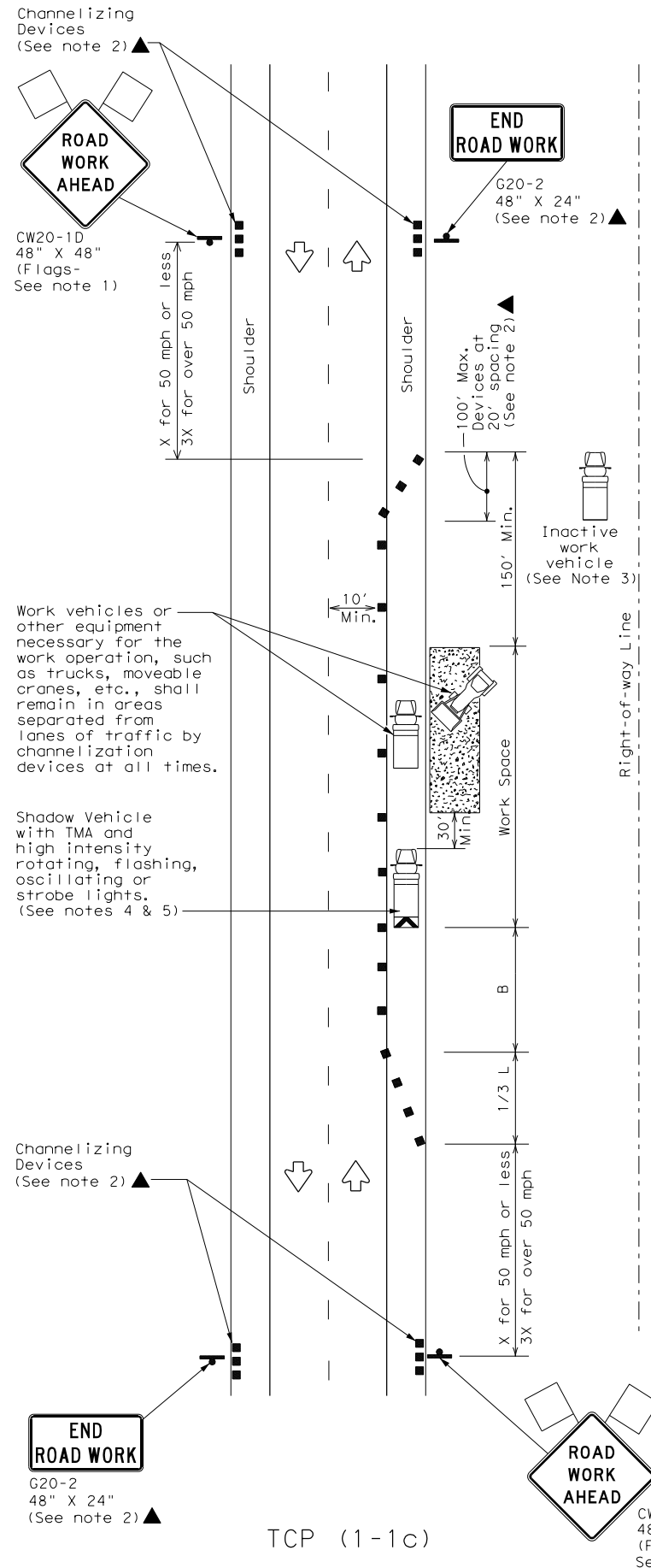
TCP (1-1a)

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.

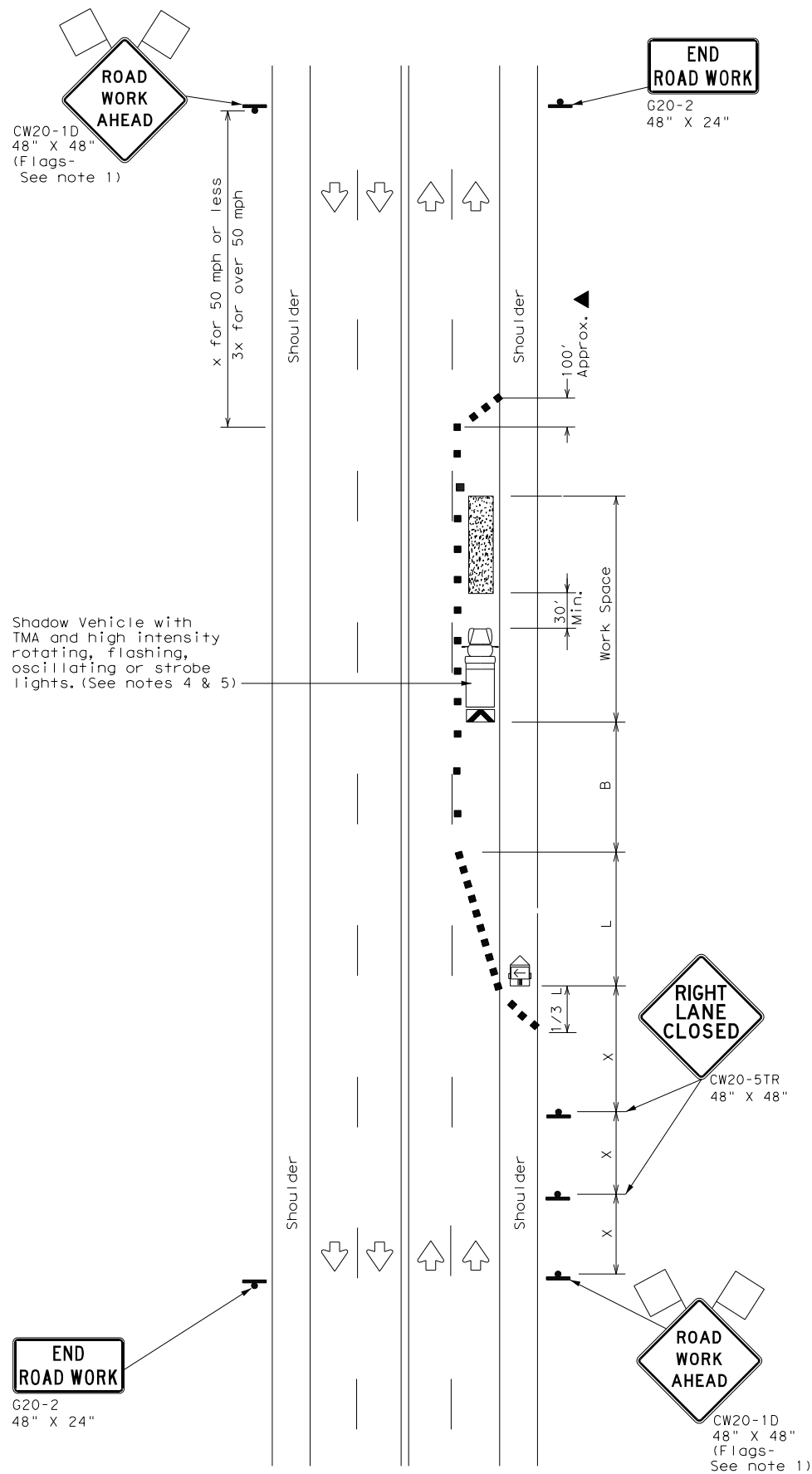
TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

TCP (1-1) - 18

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© TxDOT December 1985		CONT	SECT	JOB			HIGHWAY		
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8-95	2-12	SAT		BEXAR			57		
1-97	2-18								

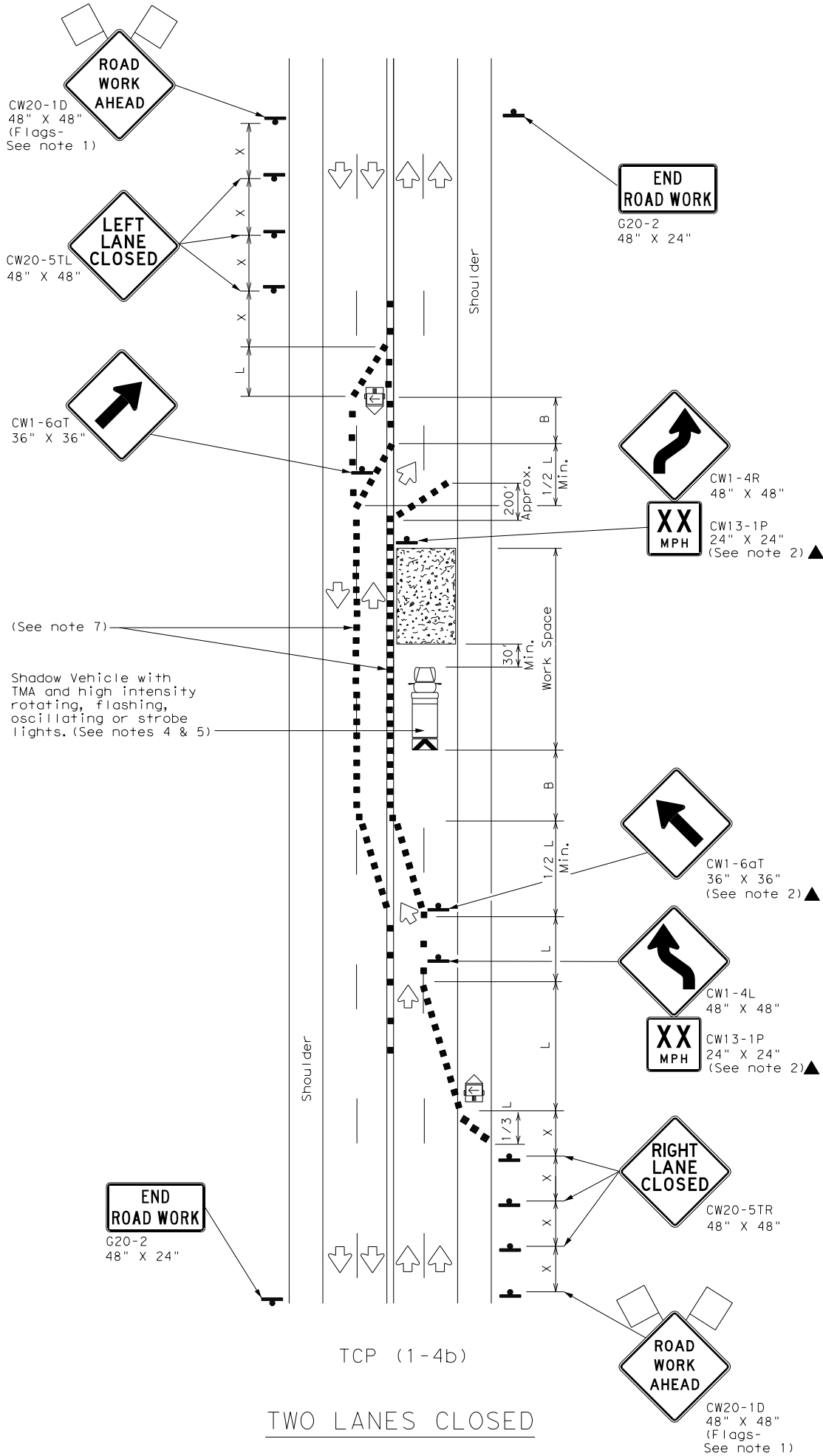
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DATE:
FILE:



TCP (1-4a)

ONE LANE CLOSED



TCP (1-4b)

TWO LANES CLOSED

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 * 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.
- 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

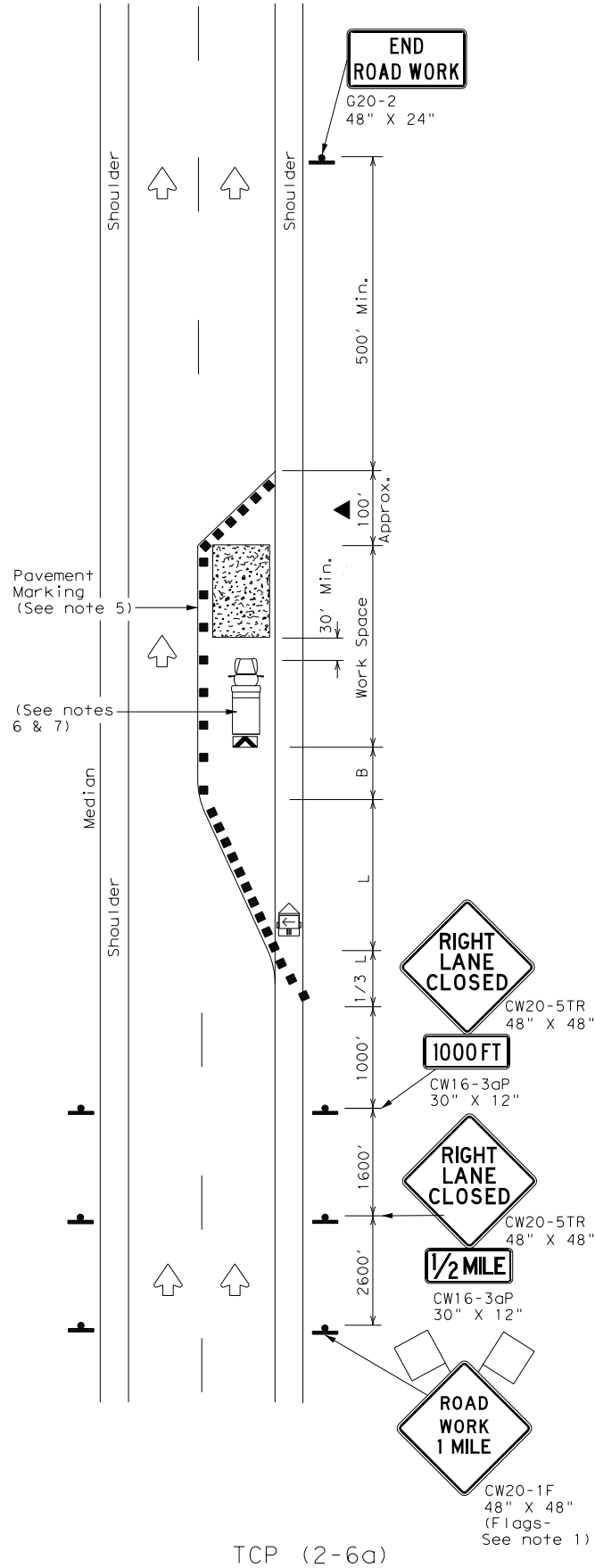
LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS

TCP (1 - 4) - 18

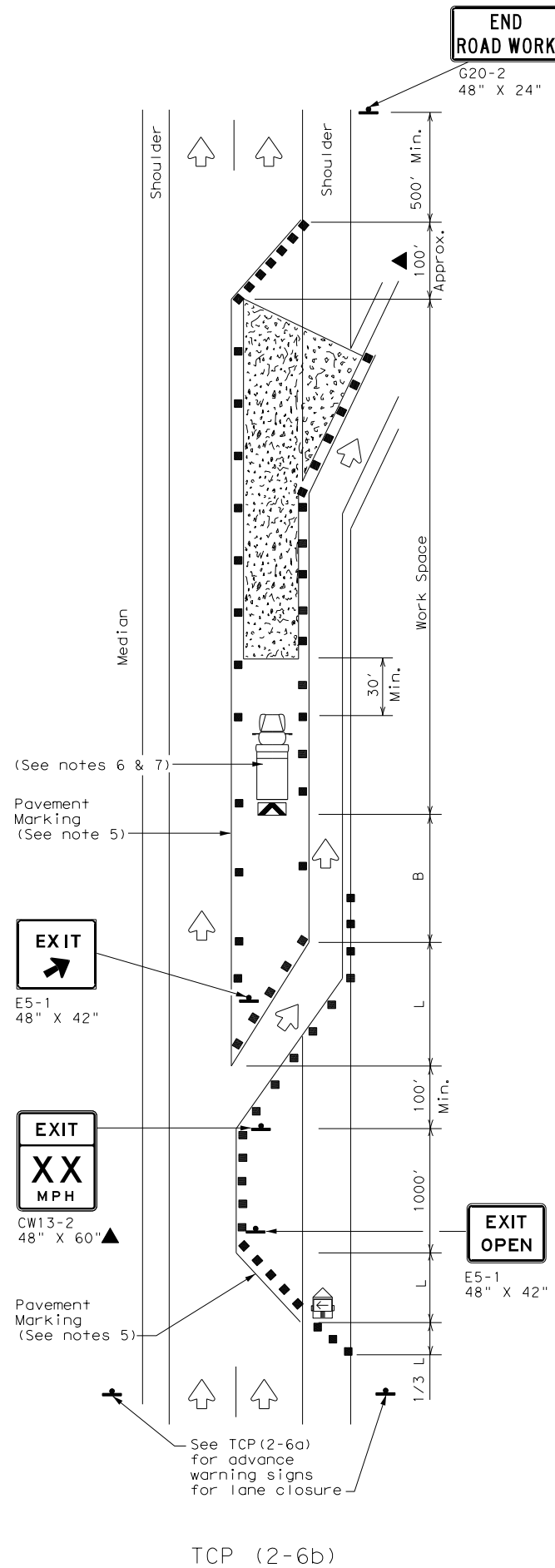
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2-94	4-98	DIST		COUNTY		SHEET NO.			
8-95	2-12	SAT		BEXAR		58			
1-97	2-18								
154									

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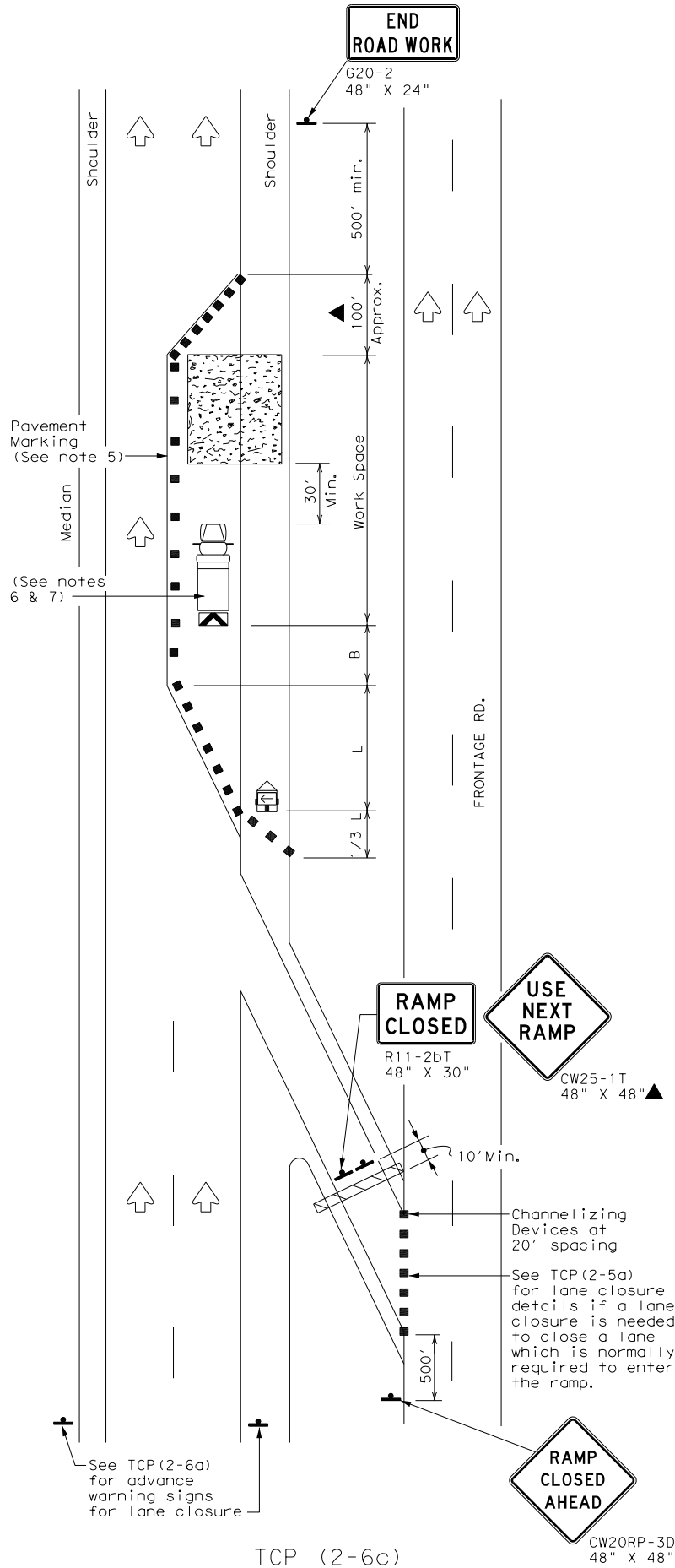
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FILE:



TCP (2-6a)
ONE LANE CLOSURE



TCP (2-6b)
LANE CLOSURE NEAR EXIT RAMP



TCP (2-6c)
LANE CLOSURE NEAR ENTRANCE RAMP

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		450'	495'	540'	45'	90'	320'	195'
50		500'	550'	600'	50'	100'	400'	240'
55	L = WS	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
			✓	✓

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN

LANE CLOSURES ON

DIVIDED HIGHWAYS

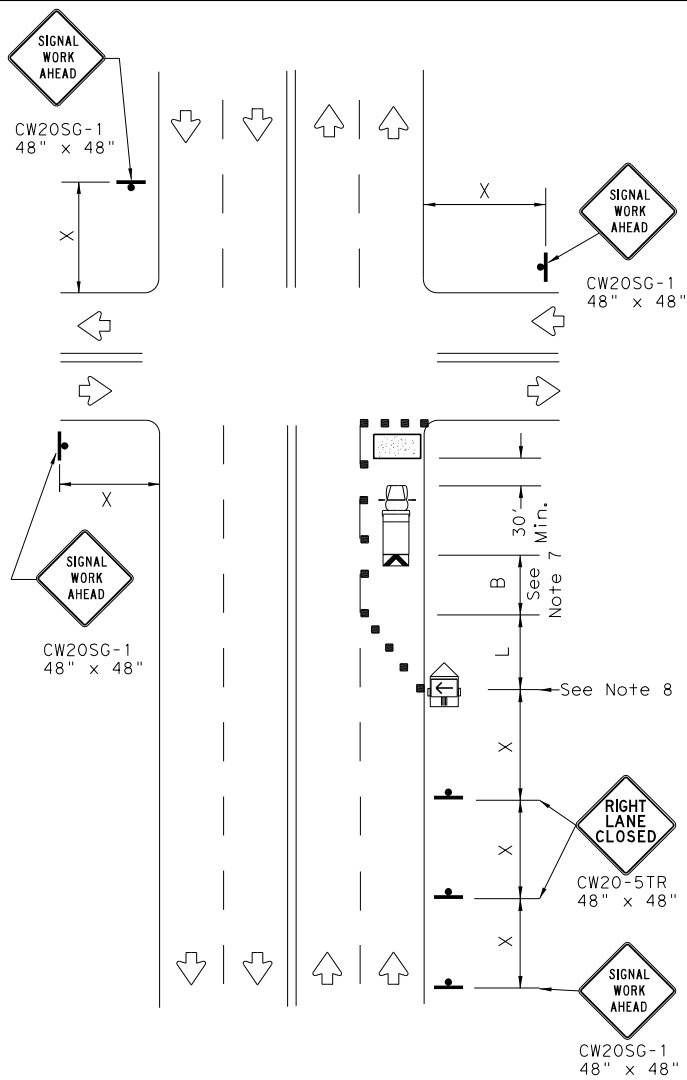
TCP (2-6) - 18

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2-94	4-98	DIST:	COUNTY:	SHEET NO.					
8-95	2-12	SAT	BEXAR	59					
1-97	2-18								

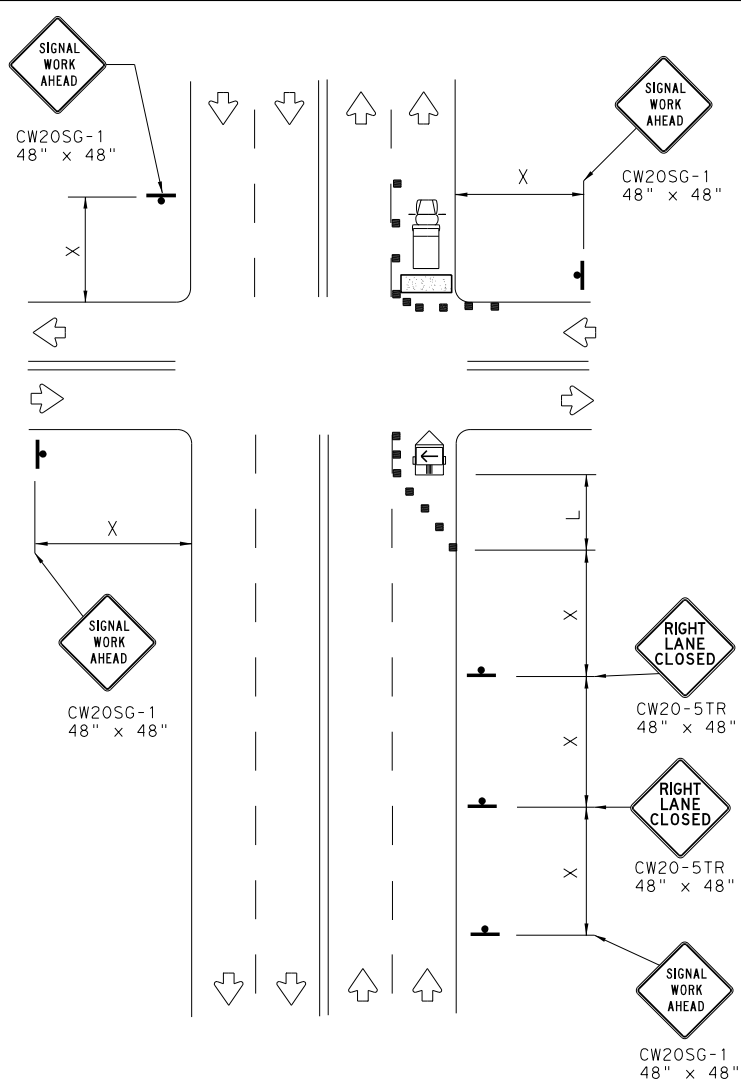
166

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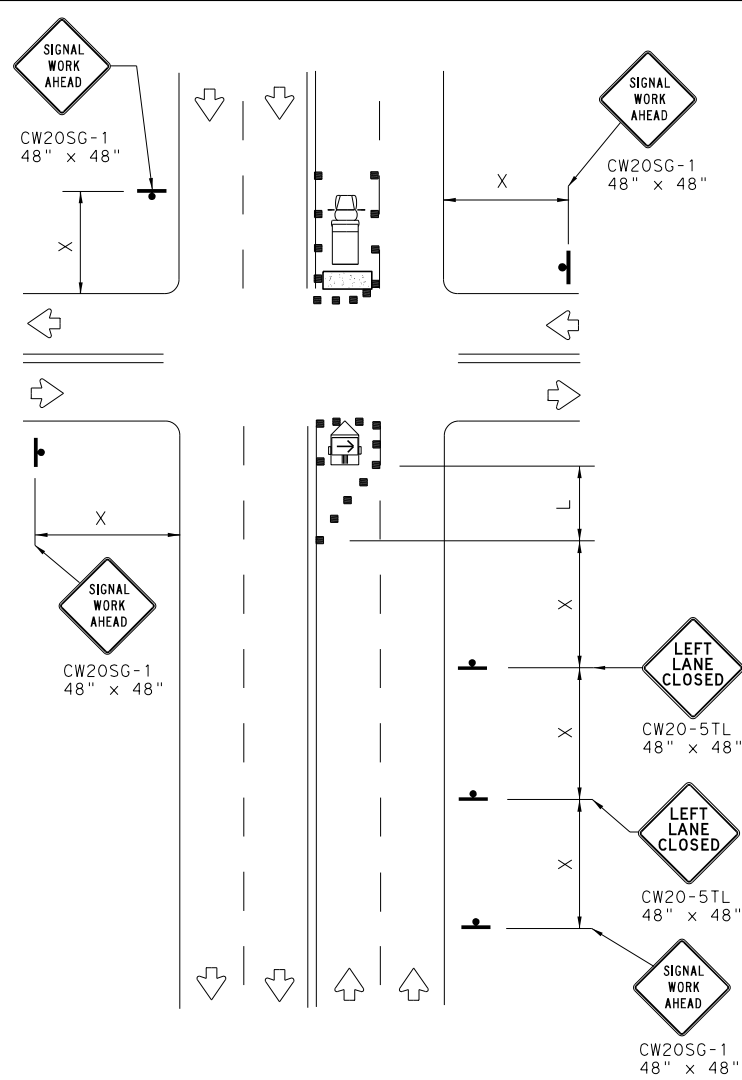
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NEAR SIDE LANE CLOSURE
SHORT DURATION OR SHORT TERM STATIONARY



FAR SIDE RIGHT LANE CLOSURE
SHORT DURATION OR SHORT TERM STATIONARY



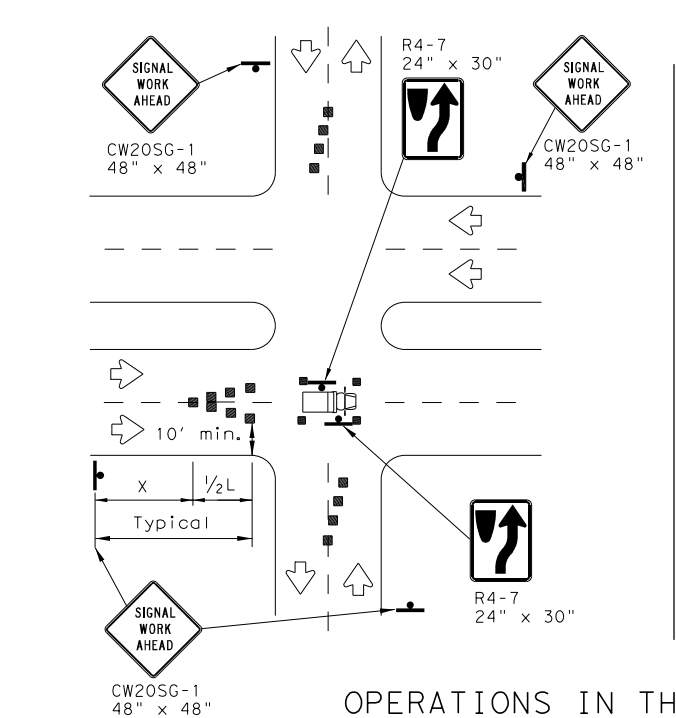
FAR SIDE LEFT LANE CLOSURE
SHORT DURATION OR SHORT TERM STATIONARY

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

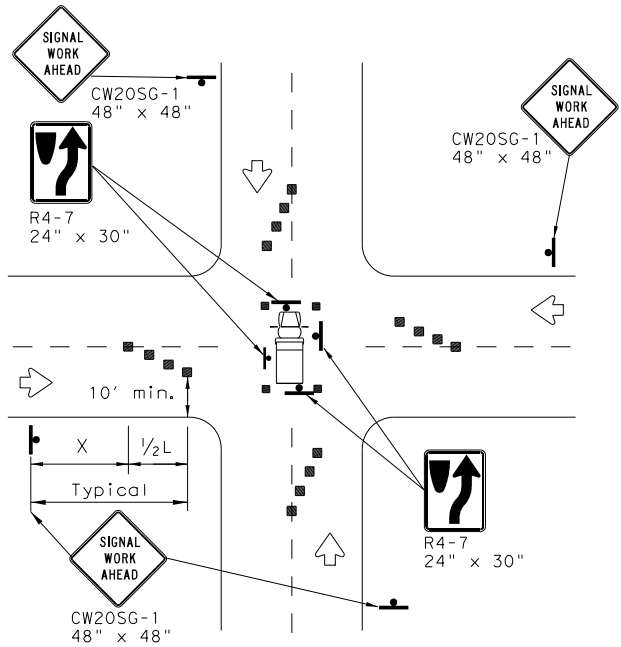
Posted Speed *	Formula	Minimum Desirable Taper Lengths * X			Suggested Maximum Spacing of Channelizing Devices		Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
		10' Offset	11' Offset	12' Offset	On a Taper	On a Tangent		
30	$L = \frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'
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)

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.

SHEET 1 OF 2



Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC SIGNAL WORK
TYPICAL DETAILS

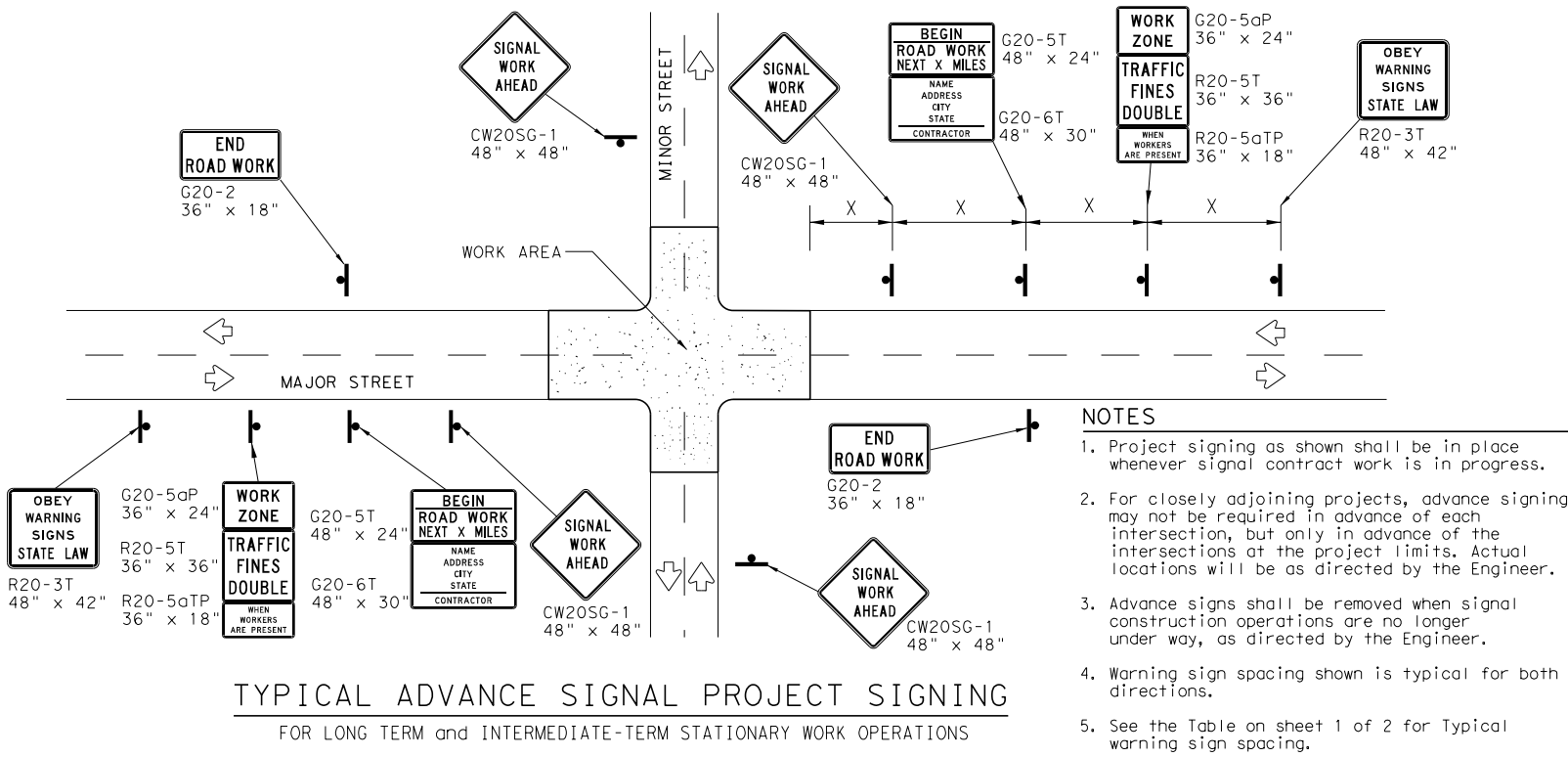
WZ (BTS-1) - 13

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2-98	10-99	7-13	DIST		COUNTY			SHEET NO.	
4-98	3-03		SAT		BEXAR			60	

114

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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 6G.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

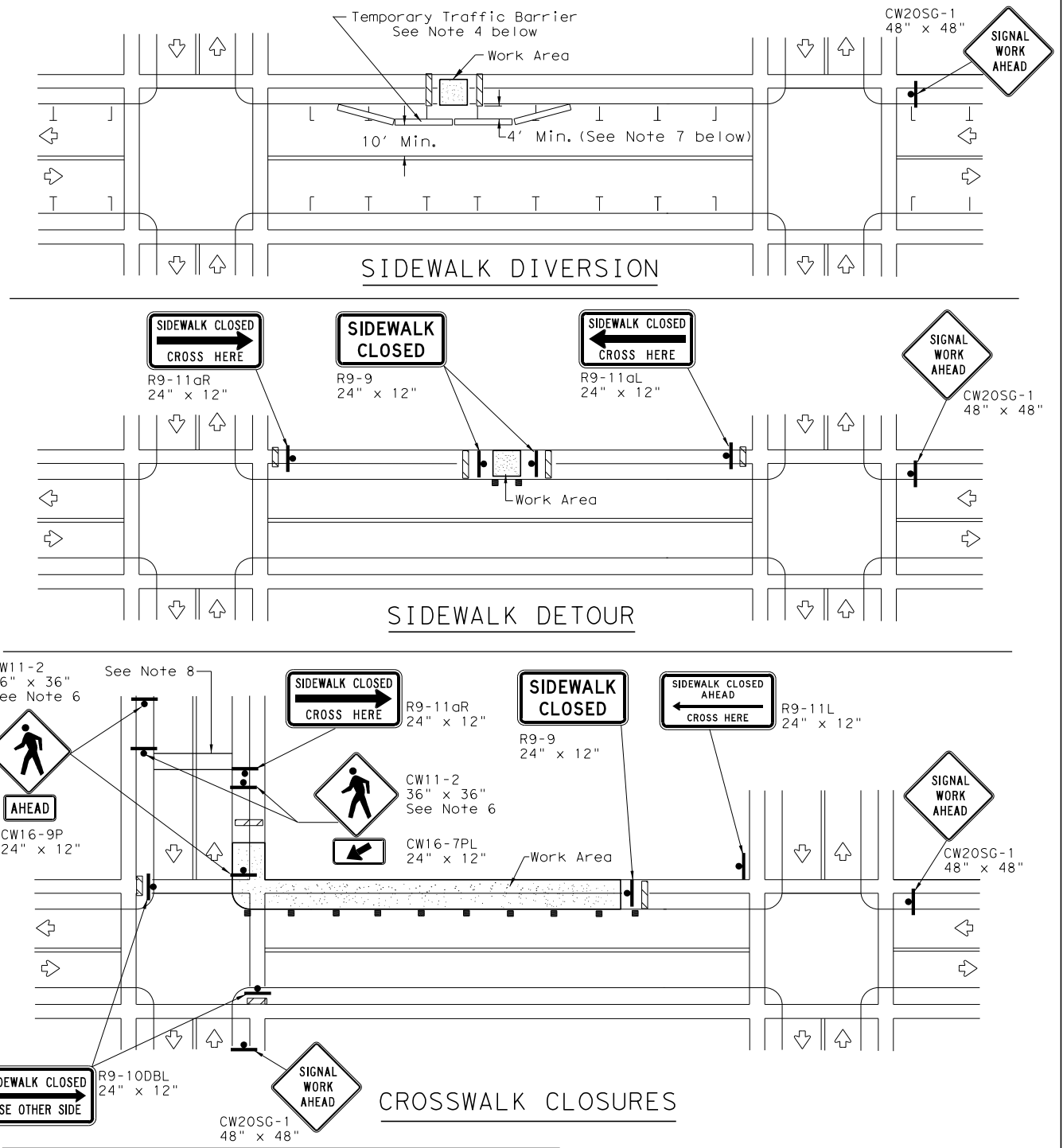
- Weights used to keep signs from turning over should be sandbags filled with dry, cohesionless material.
- The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
- Rock, concrete, iron, steel or other solid objects will not be permitted for use as sign support 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 _{FL} OR TYPE C _{FL} 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



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



Texas Department of Transportation

Traffic Operations Division Standard

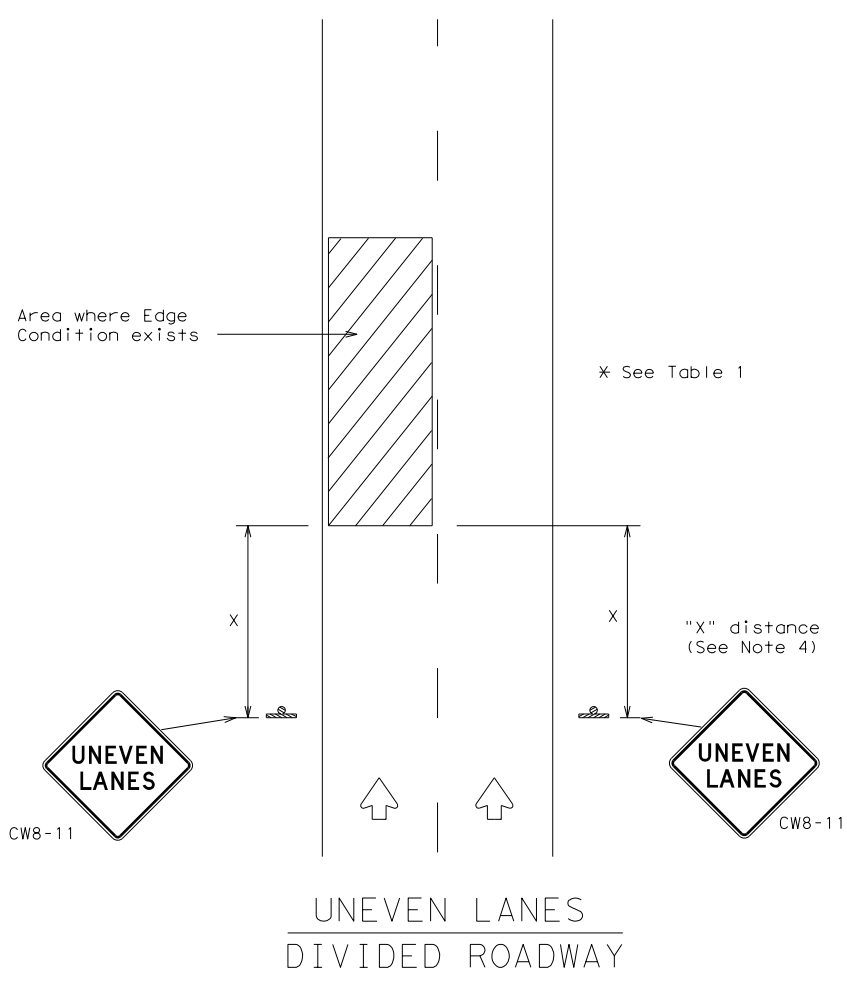
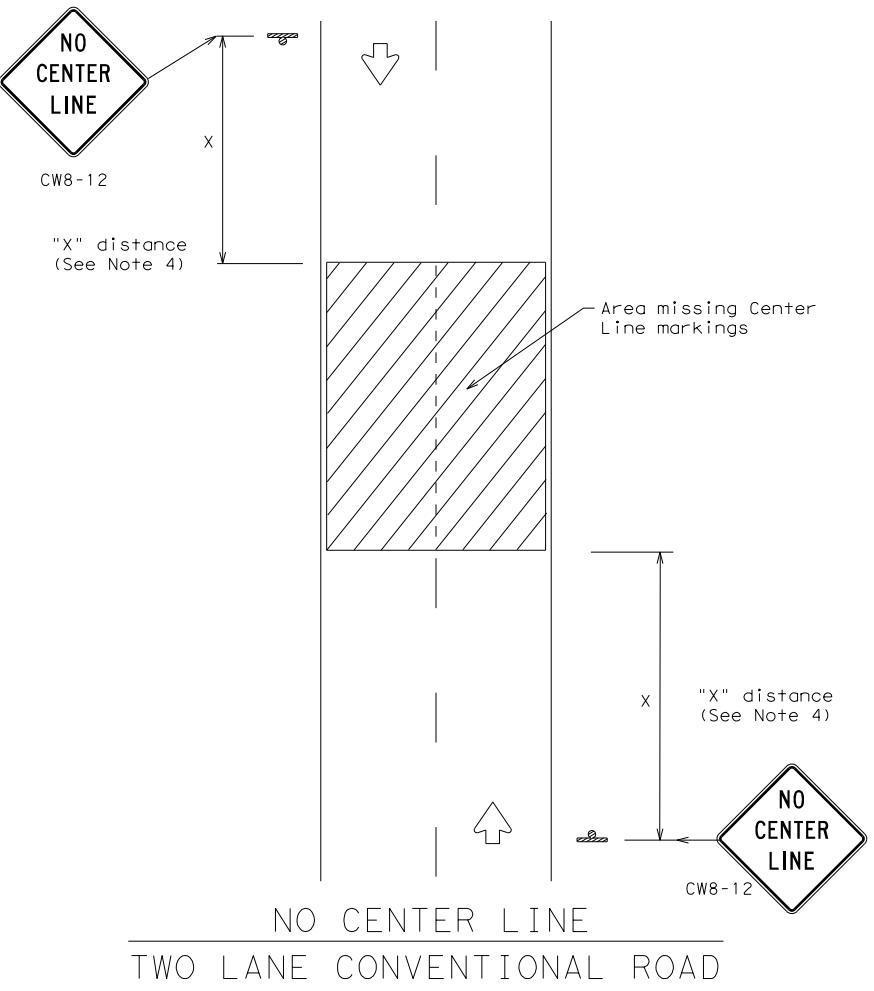
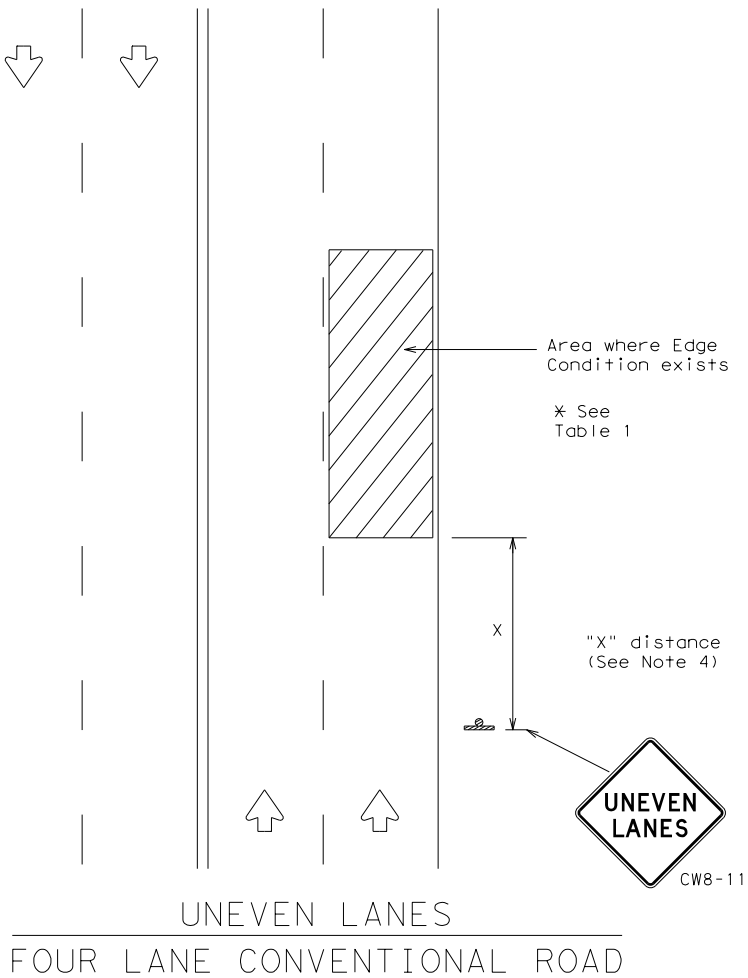
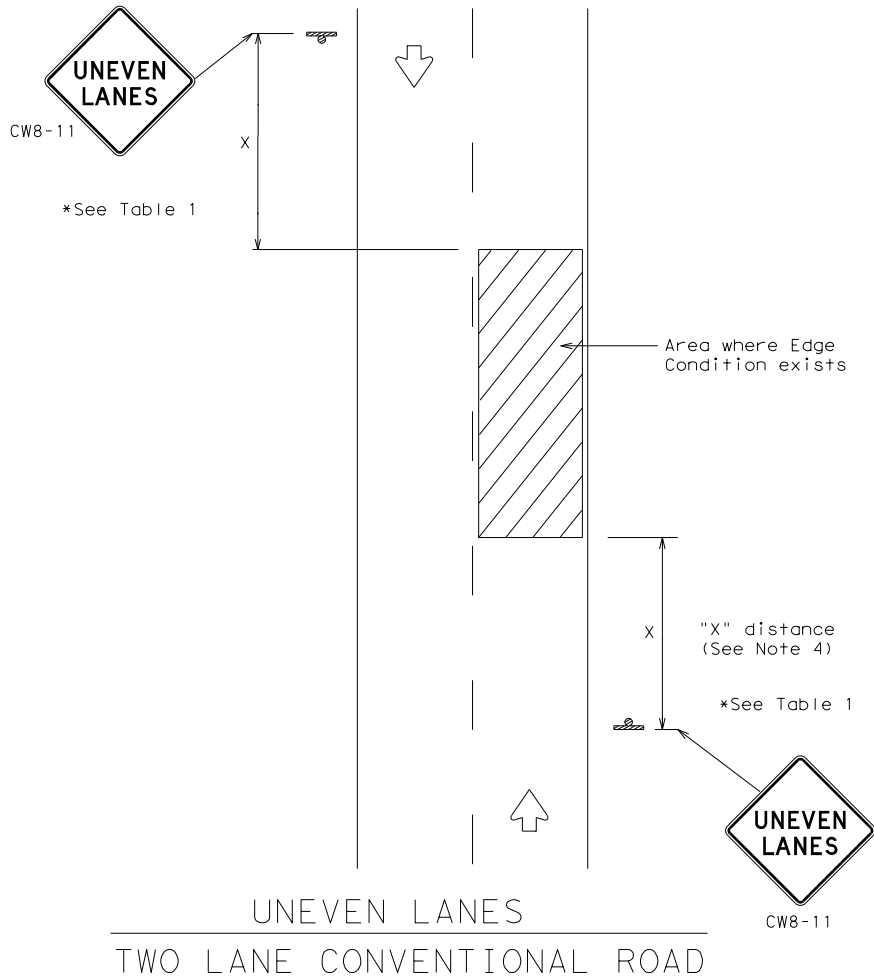
TRAFFIC SIGNAL WORK BARRICADES AND SIGNS

WZ (BTS-2) - 13

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© TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
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2-98 10-99 7-13	DIST	COUNTY		SHEET NO.
4-98 3-03	SAT	BEXAR		61
115				

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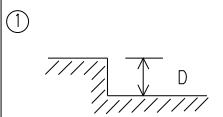
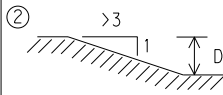
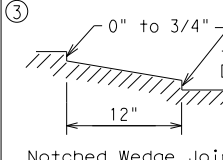


DEPARTMENTAL MATERIAL SPECIFICATIONS		
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240	
TEMPORARY (REMOVABLE) PREFABRICATED PAVEMENT MARKINGS	DMS-8241	
SIGN FACE MATERIALS	DMS-8300	

COLOR	USAGE	SHEETING MATERIAL
ORANGE	BACKGROUND	TYPE B _{FL} OR TYPE C _{FL} 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.

TABLE 1		
Edge Condition	Edge Height (D)	* Warning Devices
	Less than or equal to: 1 1/4" (maximum-planing) 1 1/2" (typical-overlay)	Sign: CW8-11
	Distance "D" may be a maximum of 1 1/4 " for planing operations and 2" for overlay operations if uneven lanes with edge condition 1 are open to traffic after work operations cease.	
	Less than or equal to 3"	Sign: CW8-11
	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"



Traffic Operations Division Standard

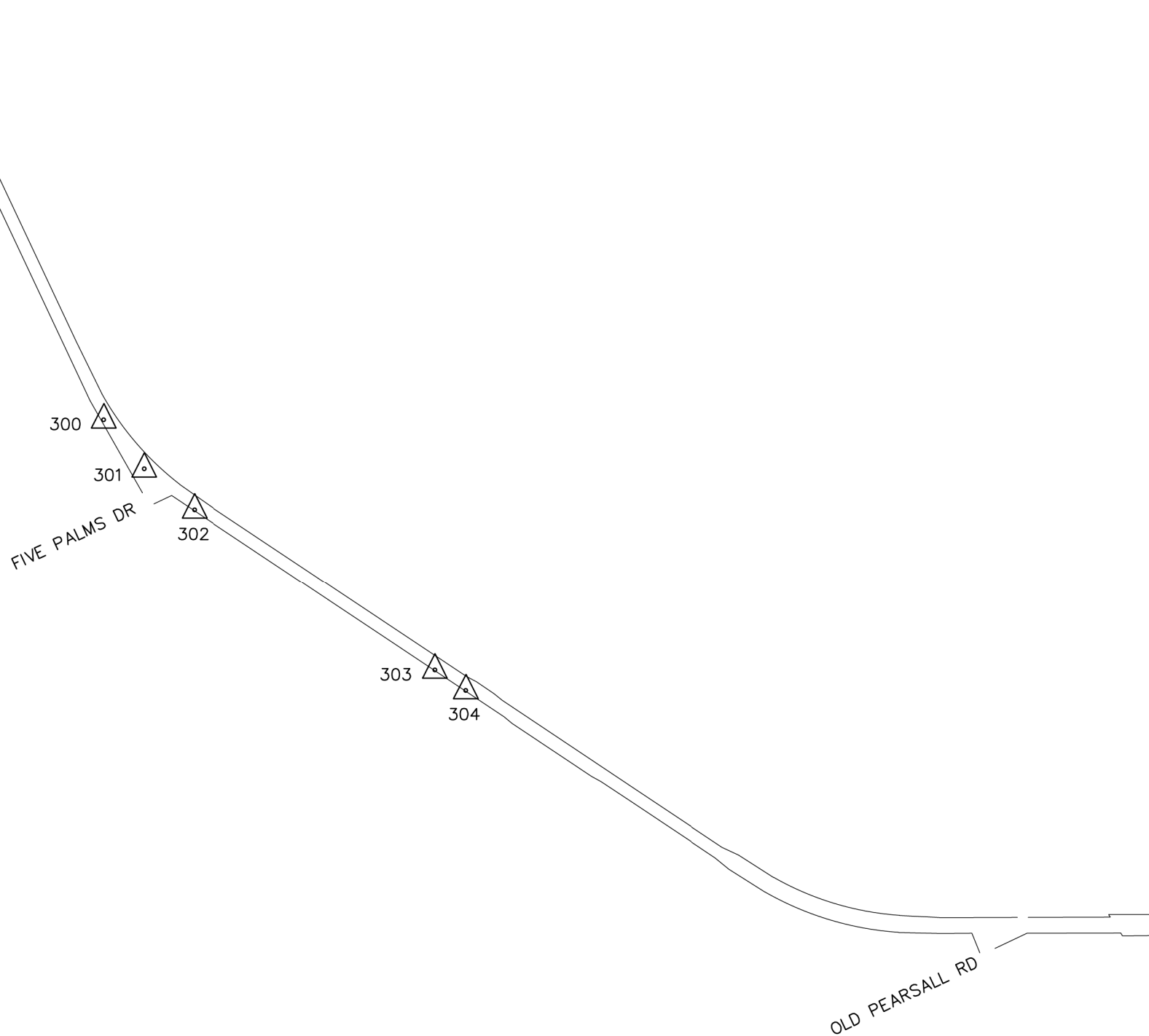
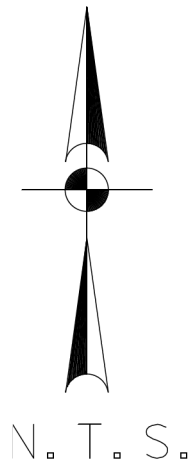
SIGNING FOR UNEVEN LANES

WZ (UL) - 13

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1-97 3-03	SAT	BEXAR	62	

112

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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
N.T.S. NOT TO SCALE

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
TXPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #100288000



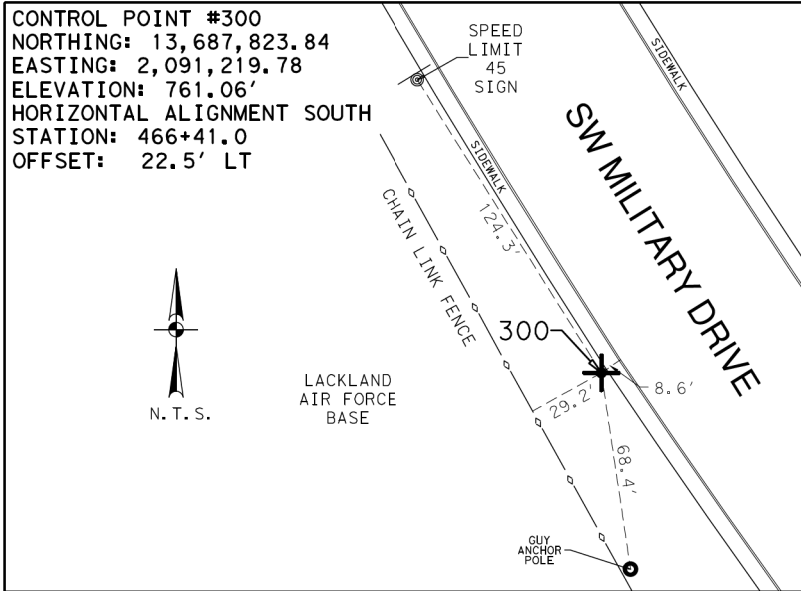
Texas Department of Transportation
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SL 13
SW MILITARY A
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

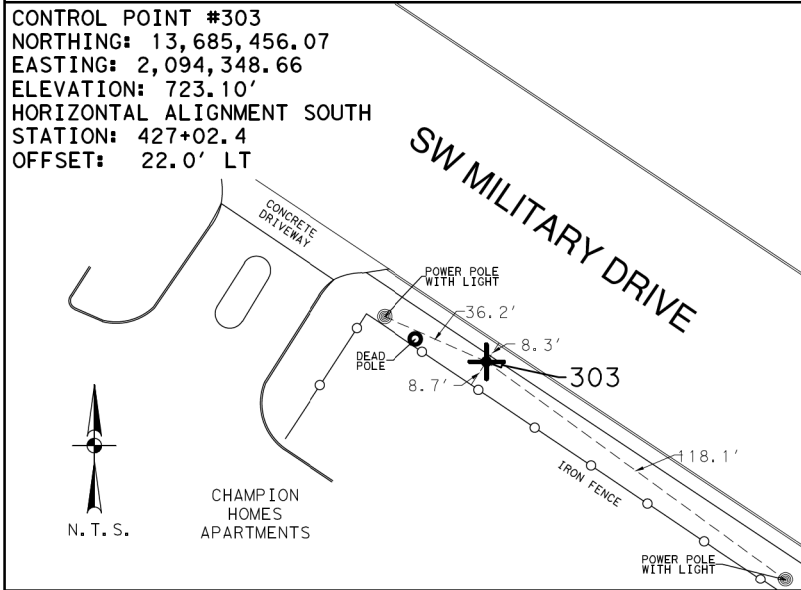
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						SHEET NO.
						63

SHEET 1 OF 2

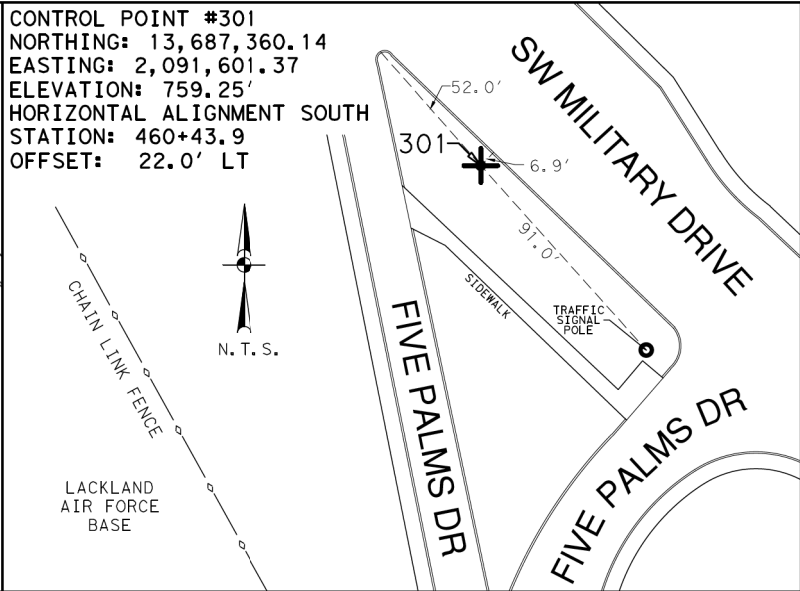
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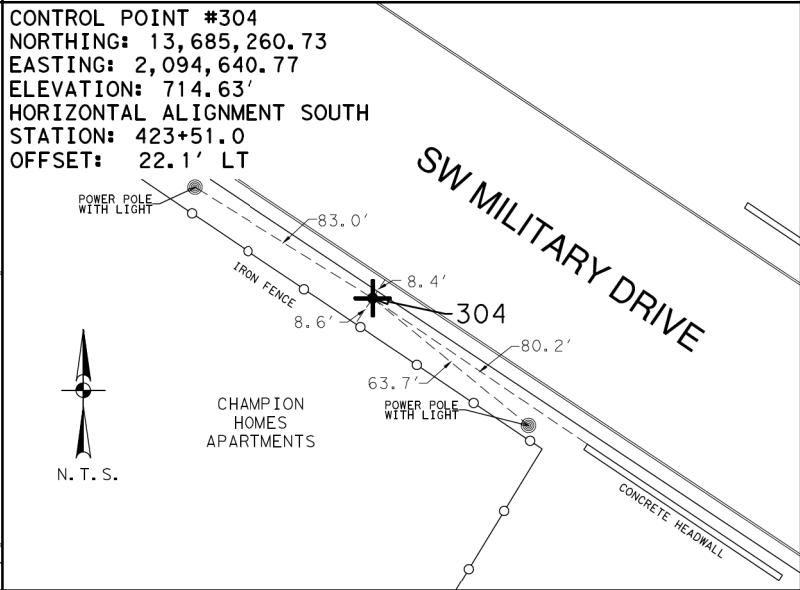
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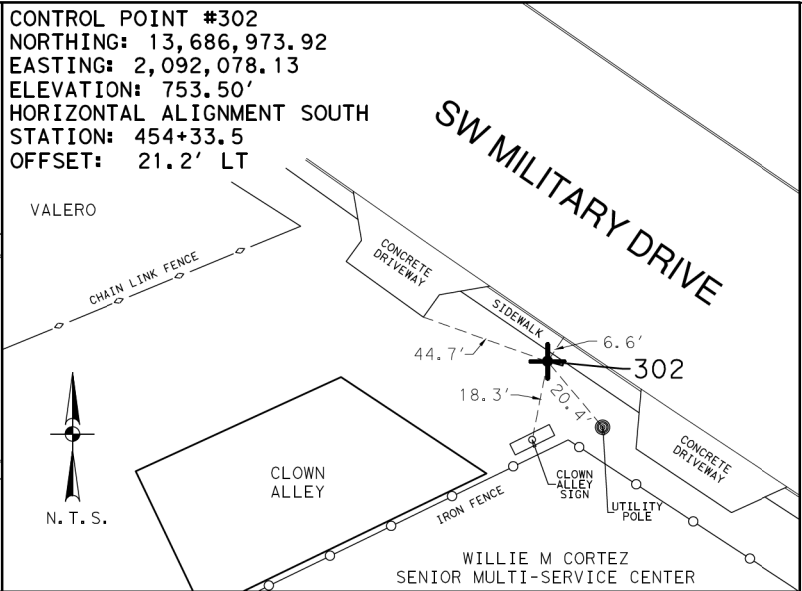
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1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED IN THE ISLAND CLOSE TO THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND FIVE PALMS DRIVE



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



MAG NAIL WITH WASHER IN ASPHALT LOCATED APPROXIMATELY 330 FEET NORTHWEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND BUCKHORN PLACE 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
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

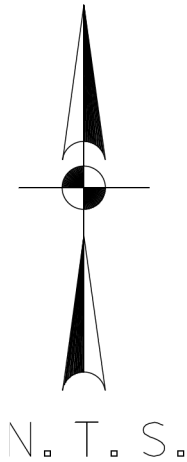
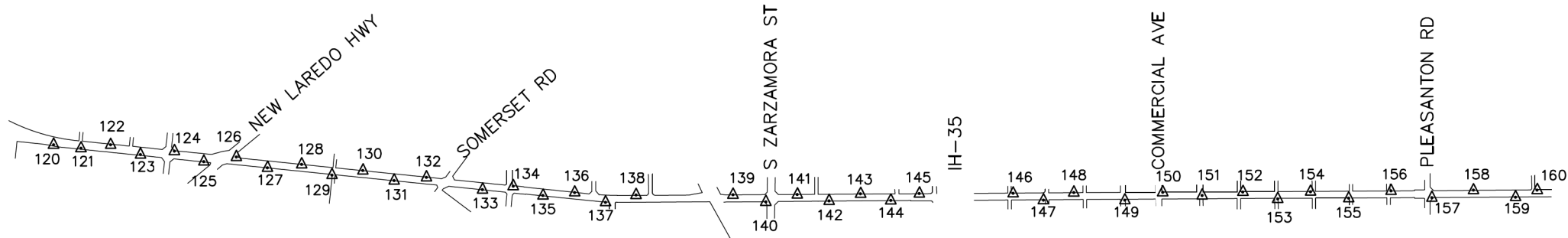
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SL 13
SW MILITARY A
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

SHEET 2 OF 2

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	6	TEXAS				SL 353
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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.

LEGEND
△ CONTROL POINT
N.T.S. NOT TO SCALE

SCALE: NOT TO SCALE

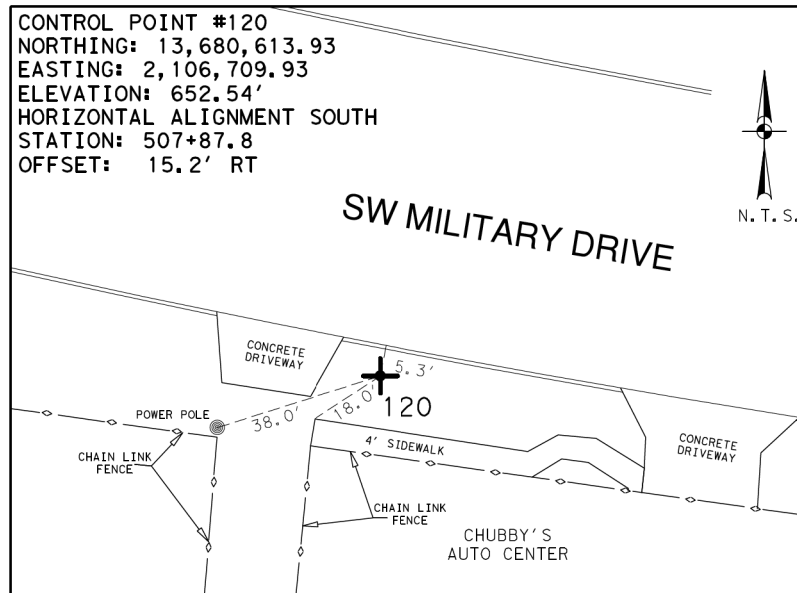
Pape-Dawson Engineers
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TDAE FIRM REGISTRATION #470 | TDAE FIRM REGISTRATION #10028000

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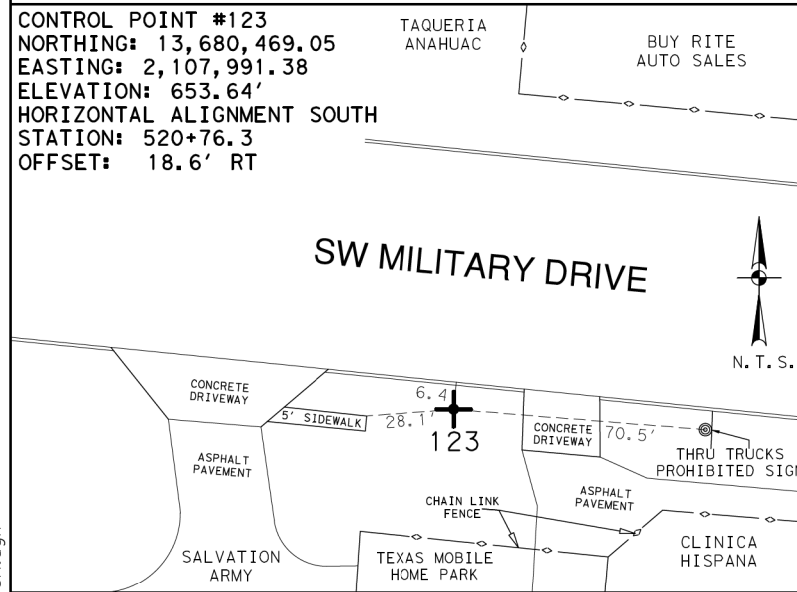
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SW MILITARY B
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

SHEET 1 OF 6						
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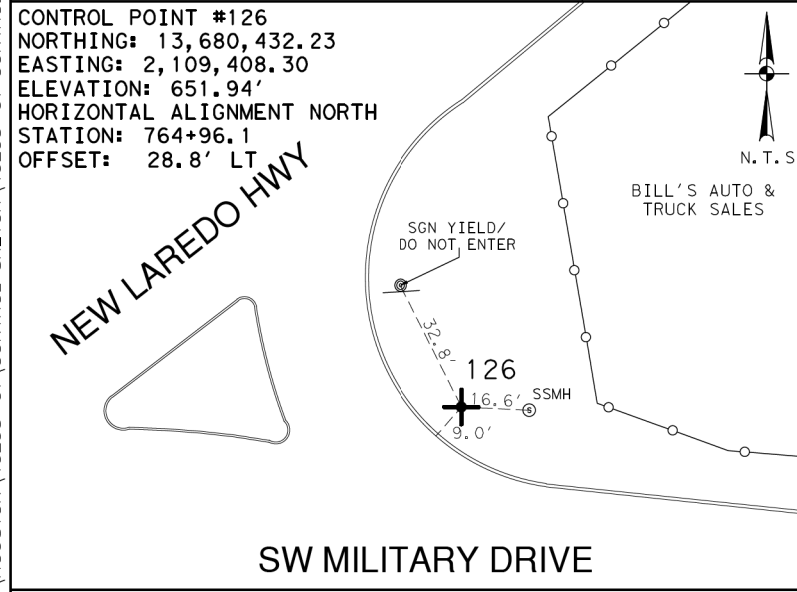
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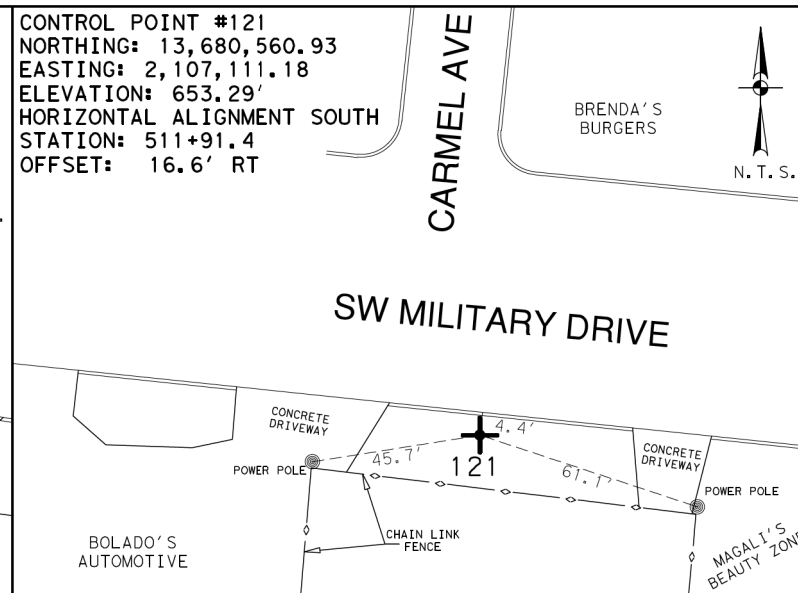
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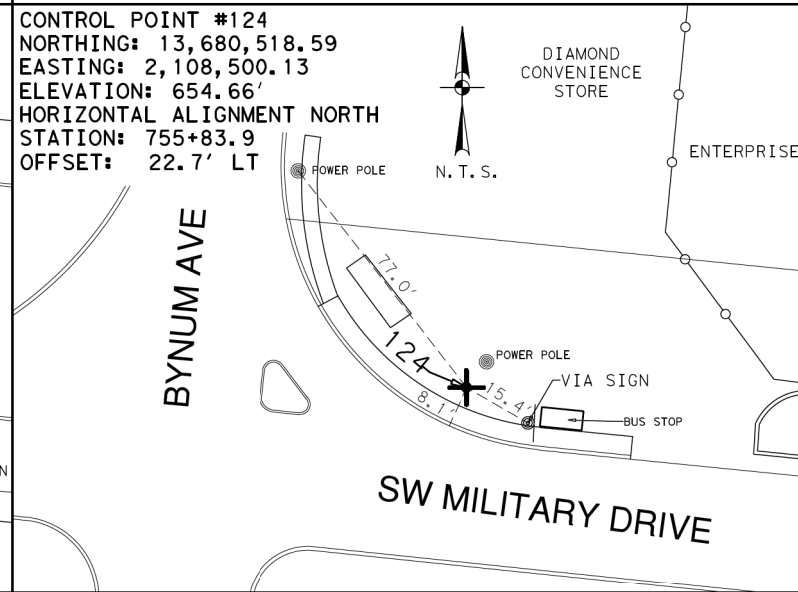
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 410 FEET WEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND BYNUM AVENUE ON THE SOUTH SIDE OF SW MILITARY DRIVE



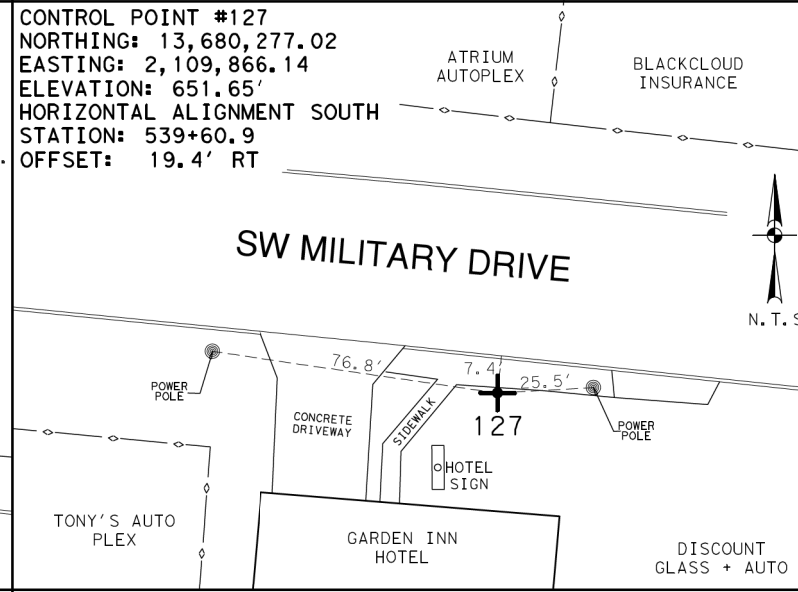
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SW MILITARY DRIVE AND NEW LAREDO HWY



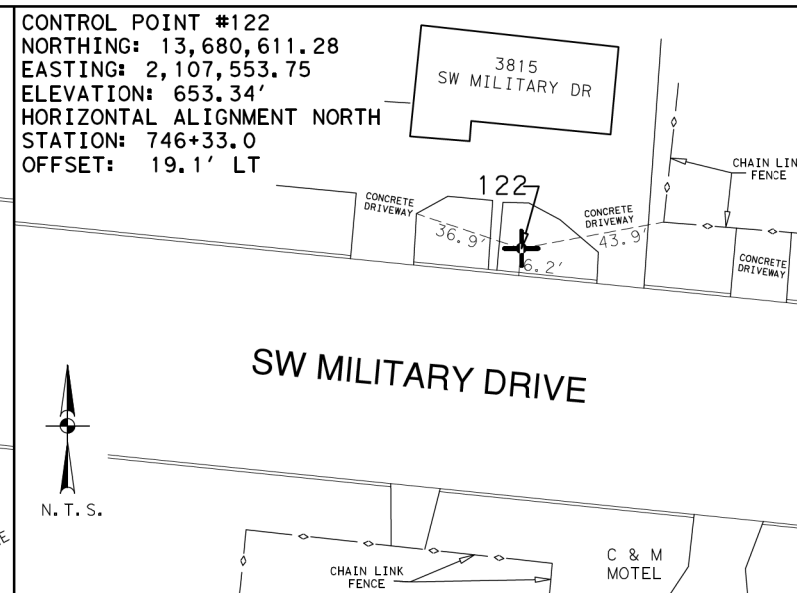
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED SOUTHEAST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND CARMEL AVENUE



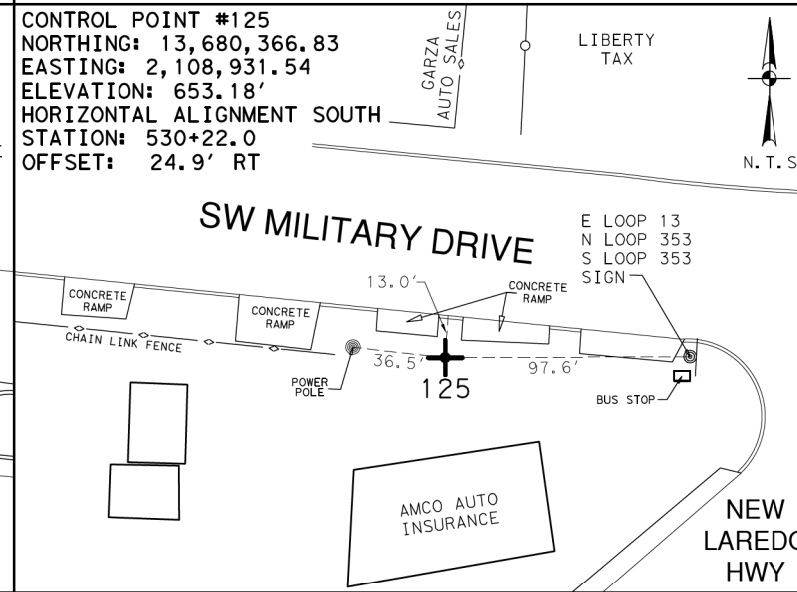
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF SW MILITARY DRIVE AND BYNUM AVENUE



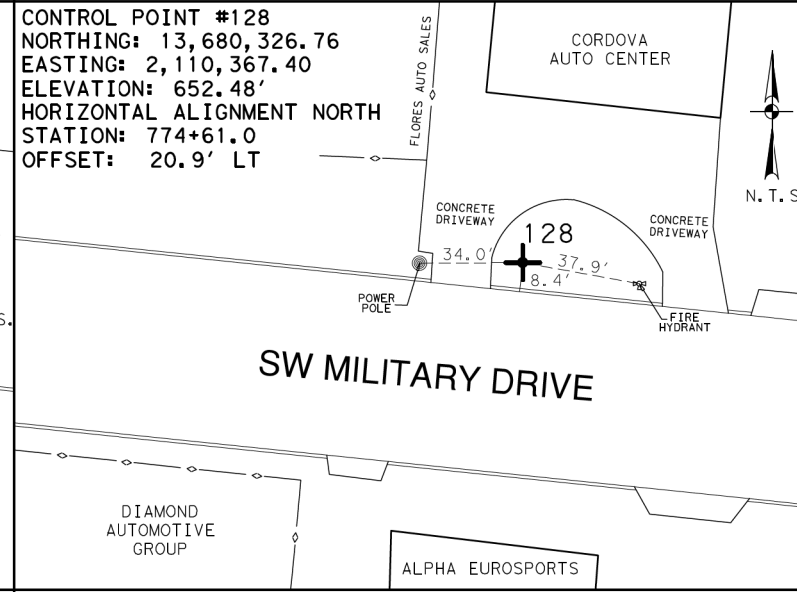
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 730 FEET EAST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND NEW LAREDO HWY ON THE SOUTH SIDE OF SW MILITARY DRIVE



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



MAG NAIL WITH WASHER IN ASPHALT LOCATED APPROXIMATELY 200 FEET WEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND NEW LAREDO HWY 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 CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY AVENUE 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
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TDPUS FIRM REGISTRATION #10028000

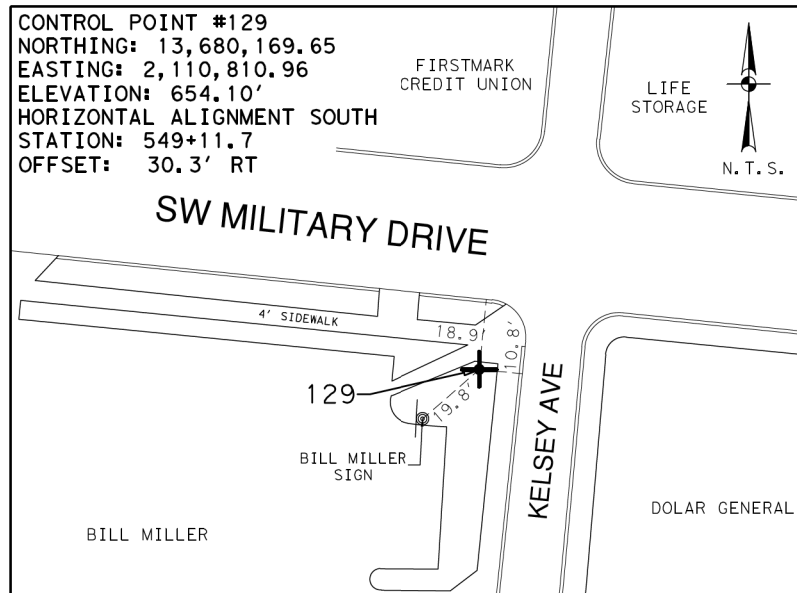
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SL 13
SW MILITARY B
HORIZONTAL AND VERTICAL
CONTROL SHEETS

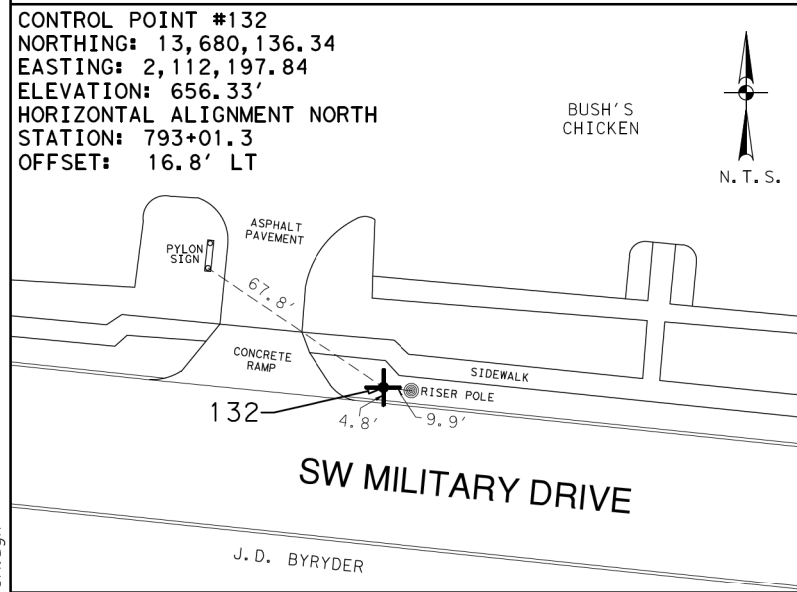
SHEET 2 OF 6

GN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK GN	6	TEXAS				SL 13
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0017	10	280	66

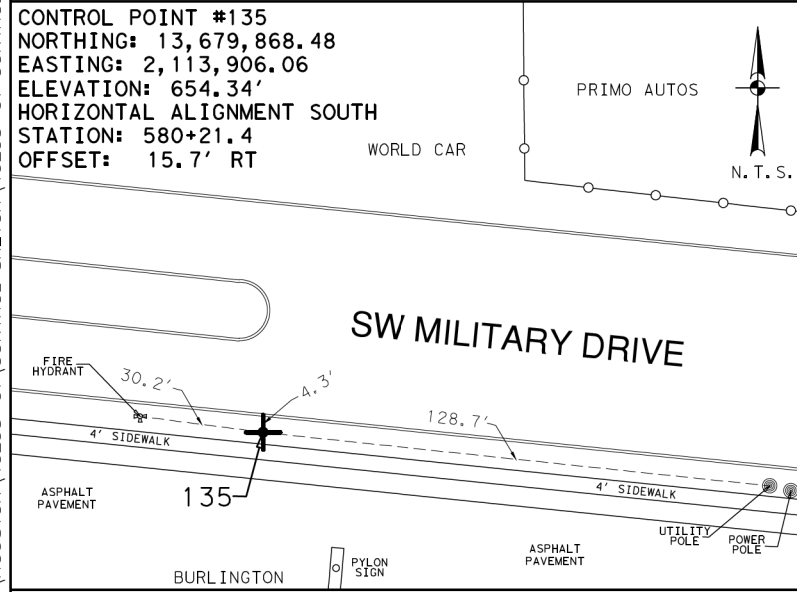
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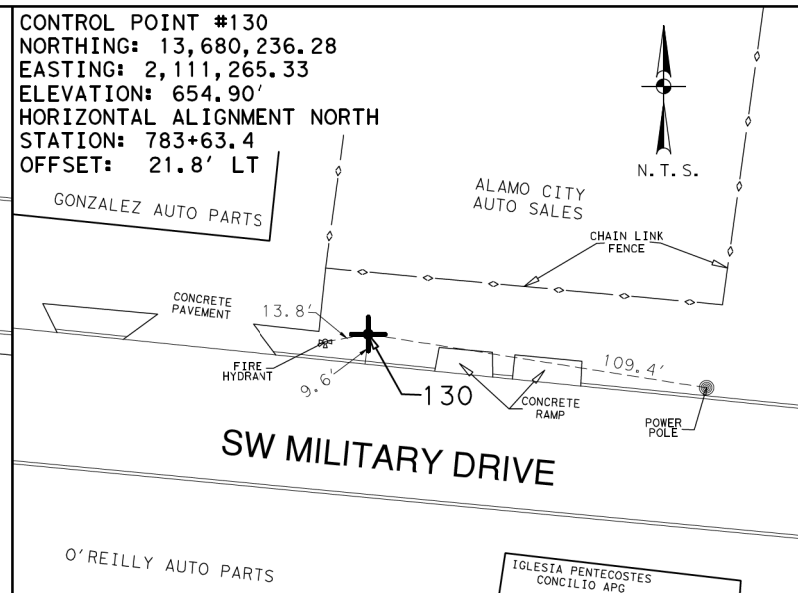
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED IN THE PLANTING STRIP AT THE SOUTHWEST CORNER OF THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY AVENUE



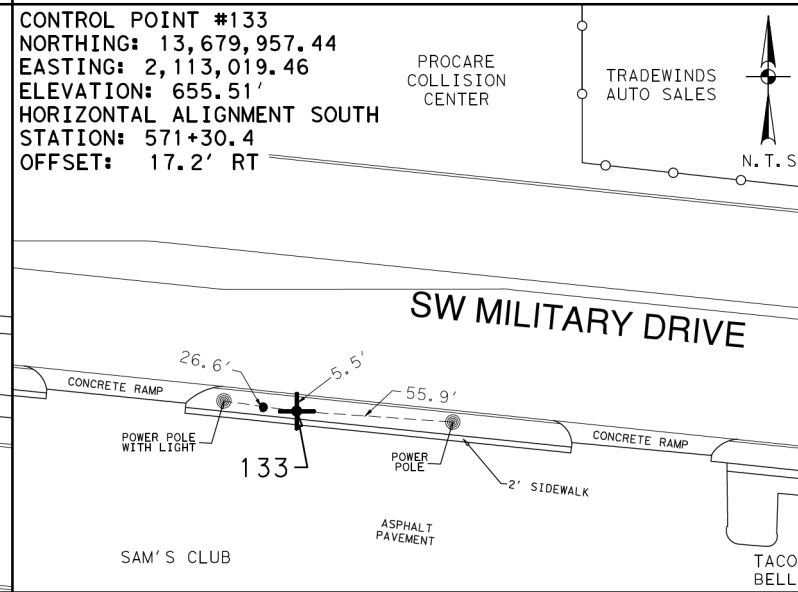
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 270 FEET WEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND SOMERSET ROAD ON THE NORTH SIDE OF SW MILITARY DRIVE



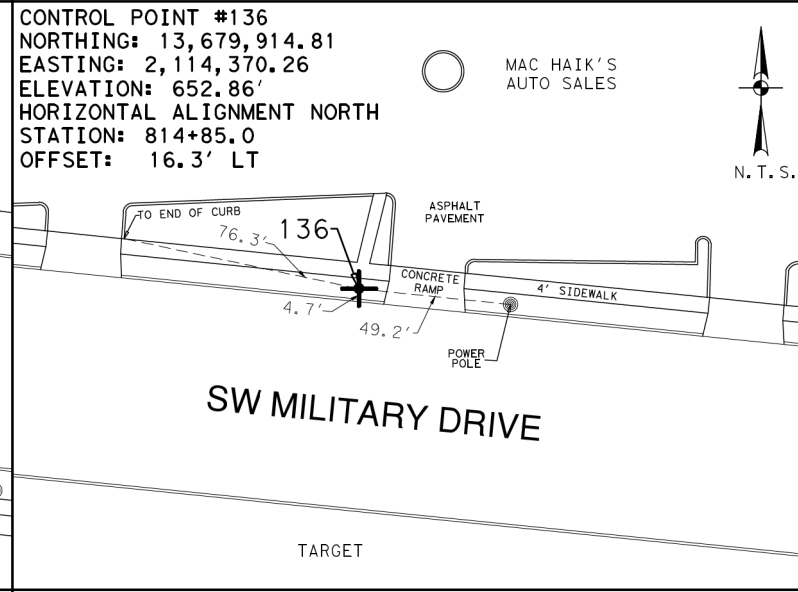
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED ON THE PLANTING STRIP APPROXIMATELY 500 FEET EAST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND SOMERSET ROAD ON THE SOUTH SIDE OF SW MILITARY DRIVE



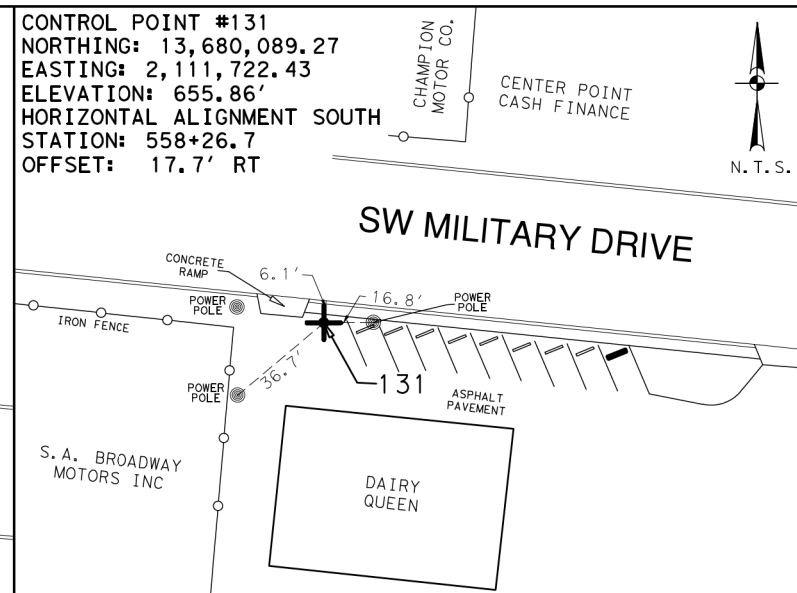
MAG NAIL WITH WASHER IN ASPHALT LOCATED APPROXIMATELY 430 FEET EAST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY AVENUE ON THE NORTH SIDE OF SW MILITARY DRIVE



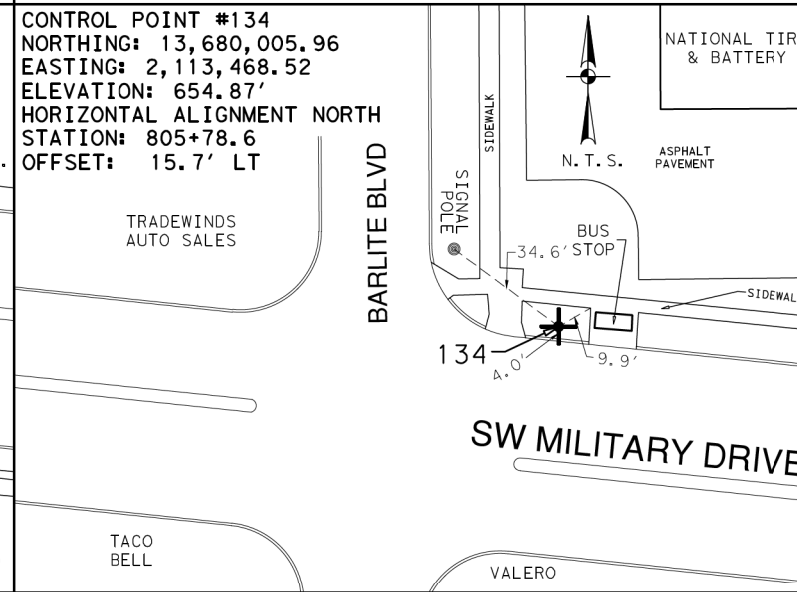
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 400 FEET WEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND BARLITE BOULEVARD ON THE SOUTH SIDE OF SW MILITARY DRIVE



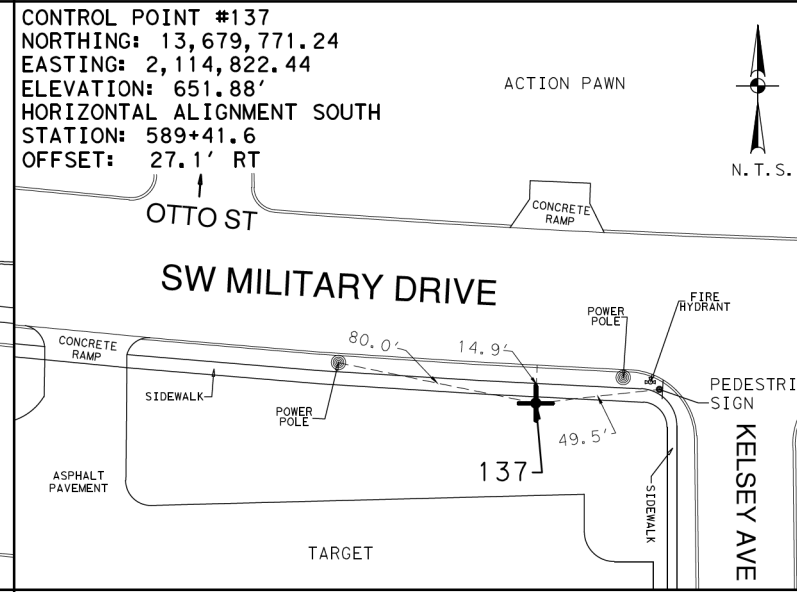
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED ON THE PLANTING STRIP APPROXIMATELY 280 FEET WEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND OTTO STREET ON THE NORTH SIDE OF SW MILITARY DRIVE



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



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



1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 100 FEET WEST FROM THE CENTER OF THE INTERSECTION OF SW MILITARY DRIVE AND KELSEY 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.

LEGEND
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE HIGHWAY

SCALE: NOT TO SCALE

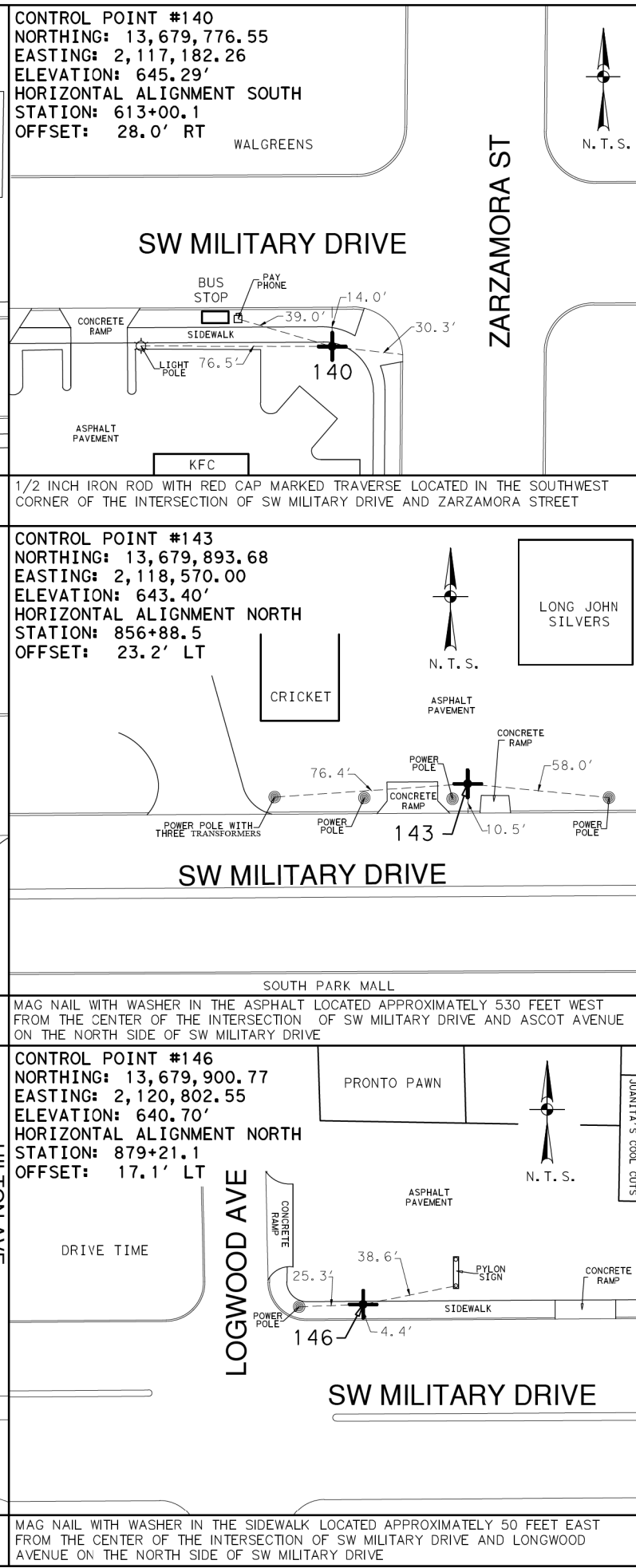
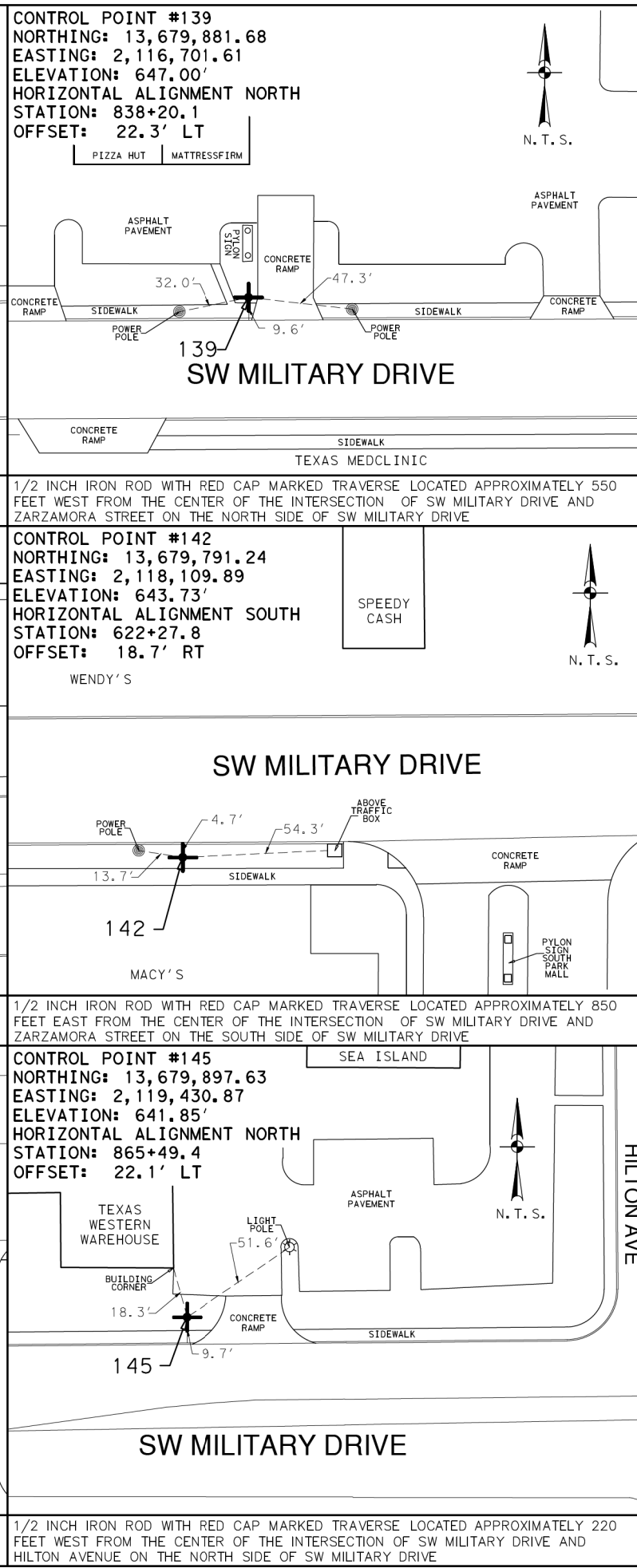
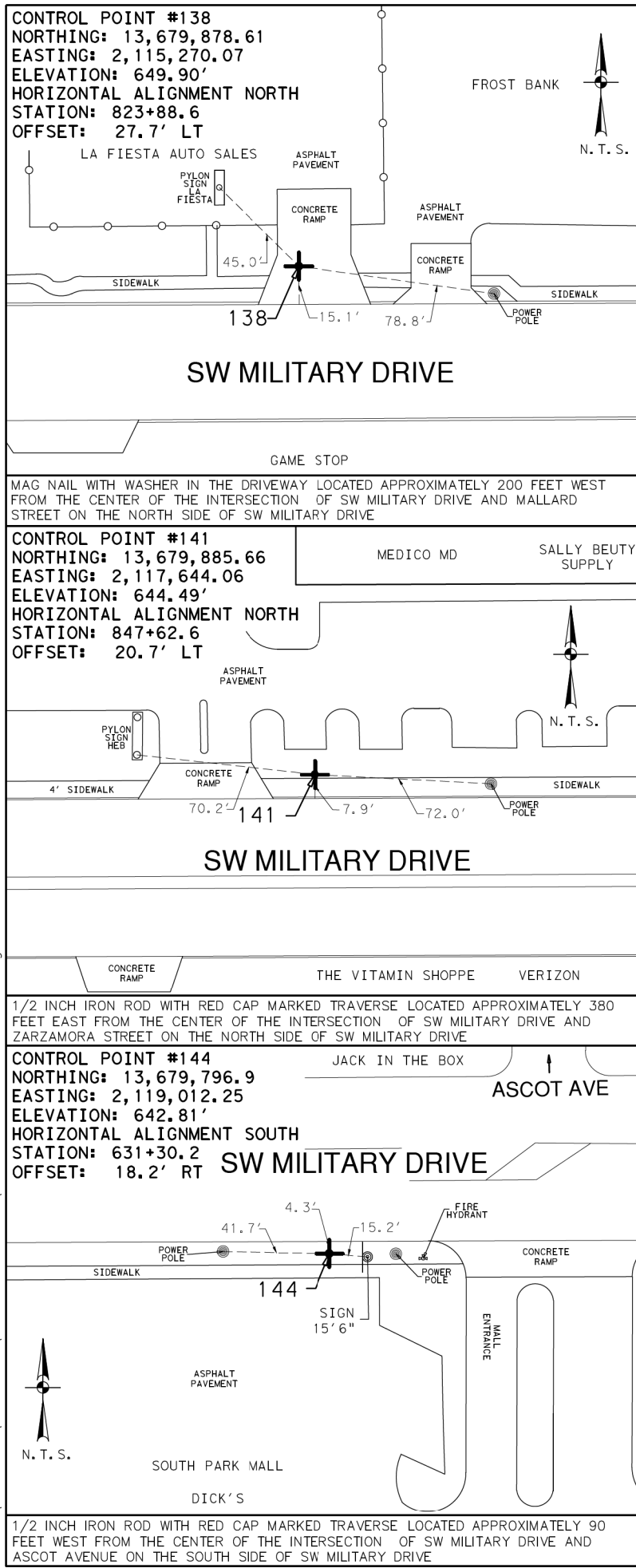
REV. NO.	DATE	DESCRIPTION	BY

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

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SL 13 SW MILITARY B 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.	JOB NO.
CHK	15	BEXAR	0017	10	280
DWG					67

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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

+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TDLPS FIRM REGISTRATION #10028000

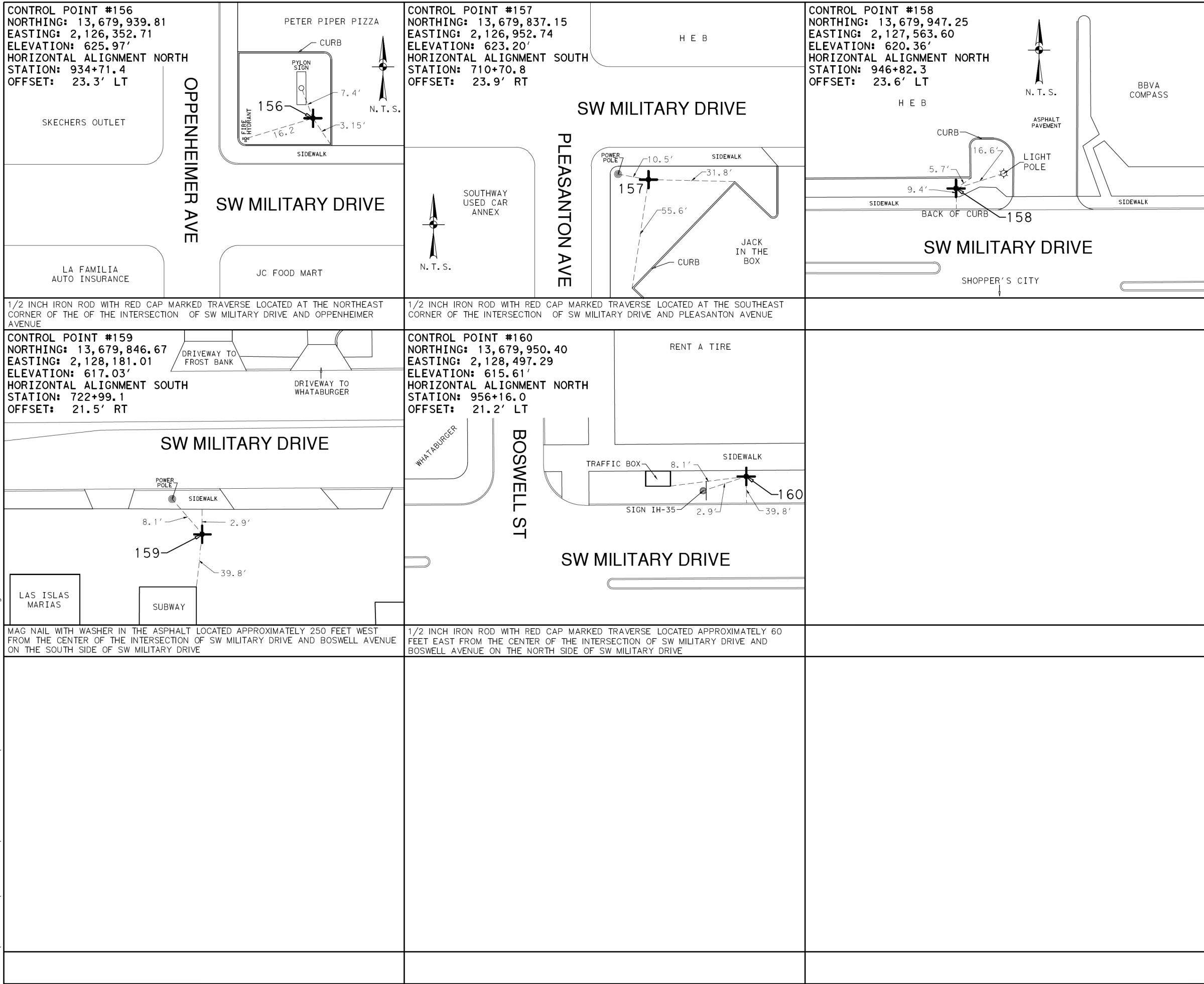
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SL 13
SW MILITARY B
HORIZONTAL AND VERTICAL
CONTROL SHEETS

SHEET 4 OF 6

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.	JOB NO.	SHEET NO.
CHK DWG	15	BEXAR	0017	10	280	68

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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
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TYPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #100028000

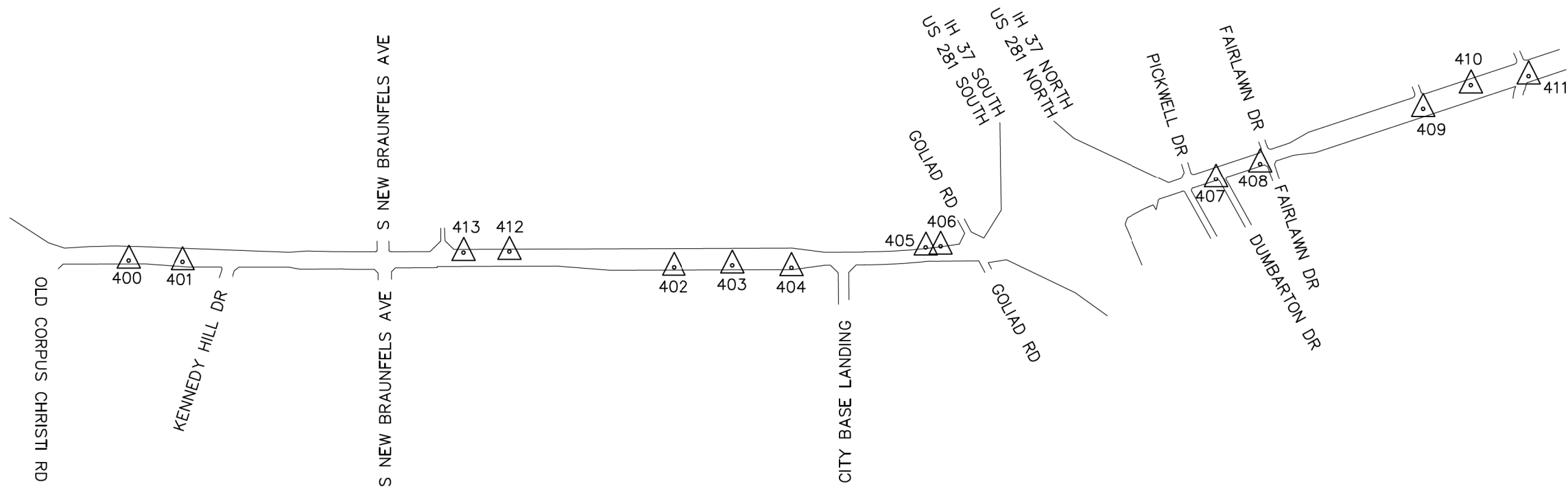
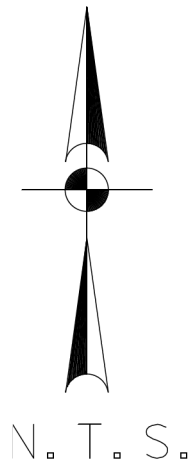
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SL 13
SW MILITARY B
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

SHEET 6 OF 6

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK	6	TEXAS		SL 13		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	15	BEXAR	0017	10	280	70

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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
N.T.S. NOT TO SCALE


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
TAMPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #10028000

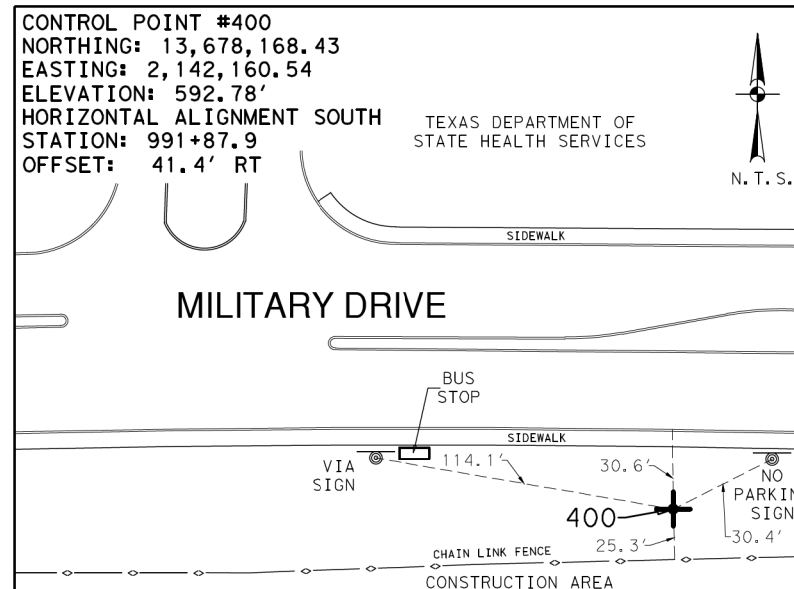


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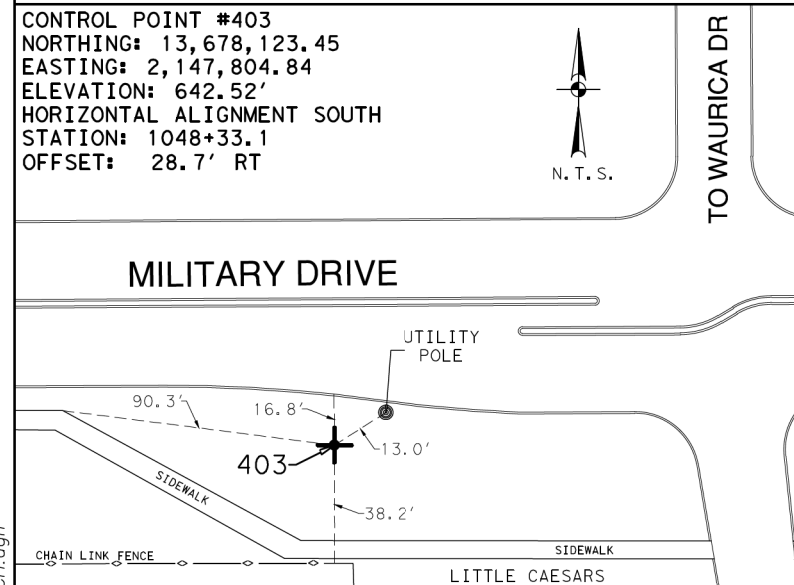
SL 13
MILITARY DRIVE
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

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.	JOB NO.
CHK DWG#		15	BEXAR	0017	10	280
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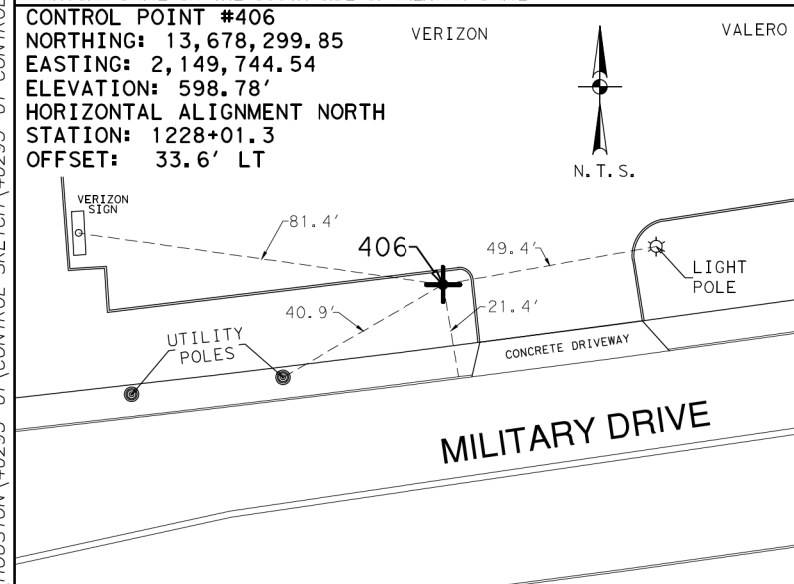
SHEET 1 OF 3



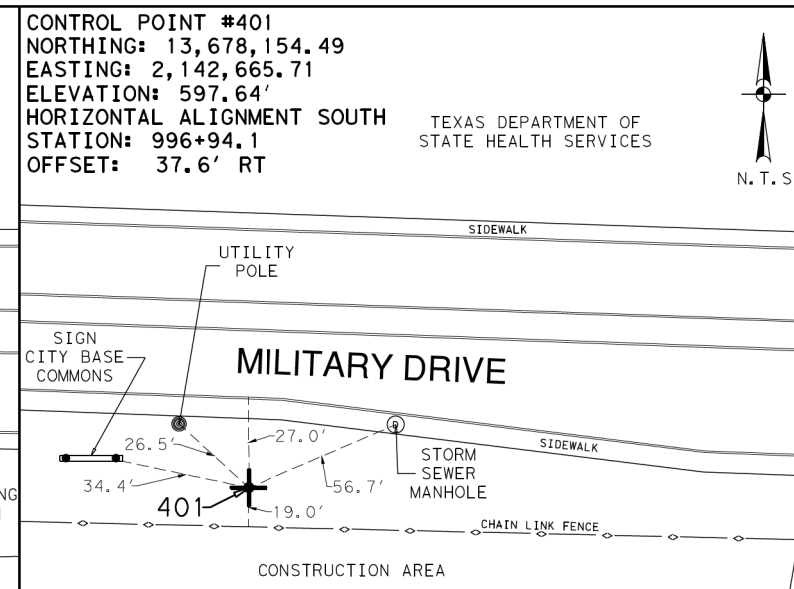
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 750 FEET EAST FROM THE CENTER OF THE INTERSECTION OF MILITARY DRIVE AND OLD CORPUS CHRISTI ROAD ON THE SOUTH SIDE OF MILITARY DRIVE



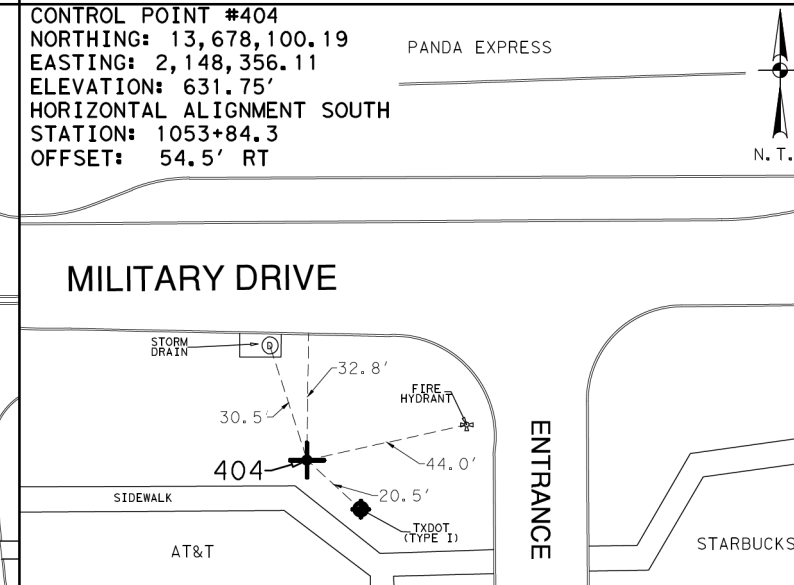
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 680 FEET EAST FROM THE CENTER OF THE INTERSECTION OF MILITARY DRIVE AND PAWHUSKA DRIVE ON THE SOUTH SIDE OF MILITARY DRIVE



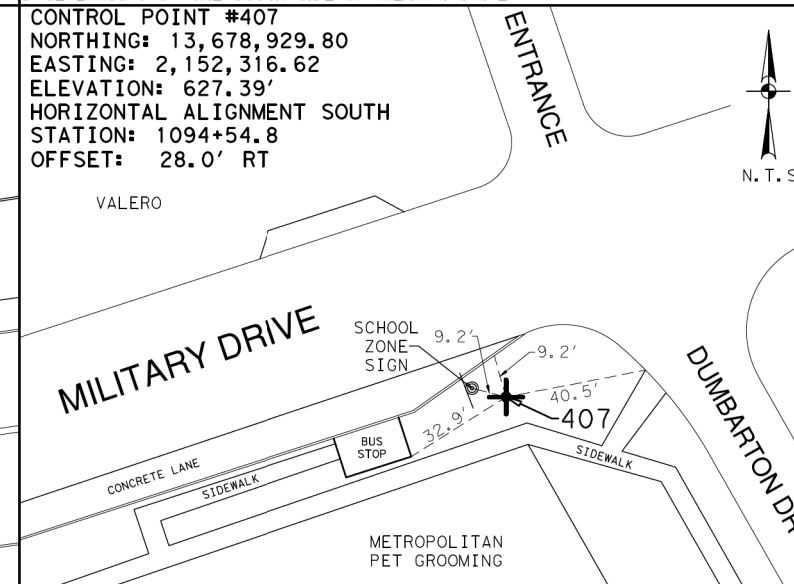
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 320 FEET WEST FROM THE CENTER OF THE INTERSECTION OF MILITARY DRIVE AND GOLIAD ROAD ON THE NORTH SIDE OF MILITARY DRIVE



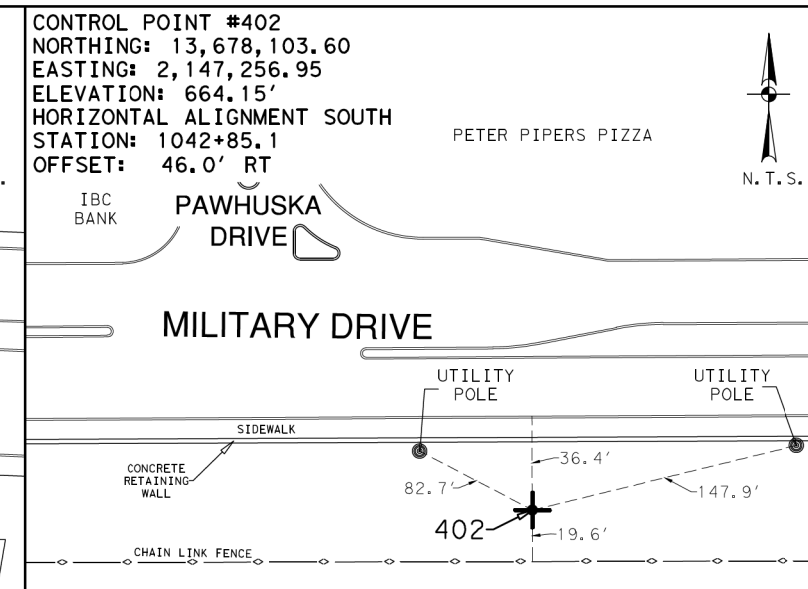
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 1,200 FEET EAST FROM THE CENTER OF THE INTERSECTION OF MILITARY DRIVE AND OLD CORPUS CHRISTI ROAD ON THE SOUTH SIDE OF MILITARY DRIVE



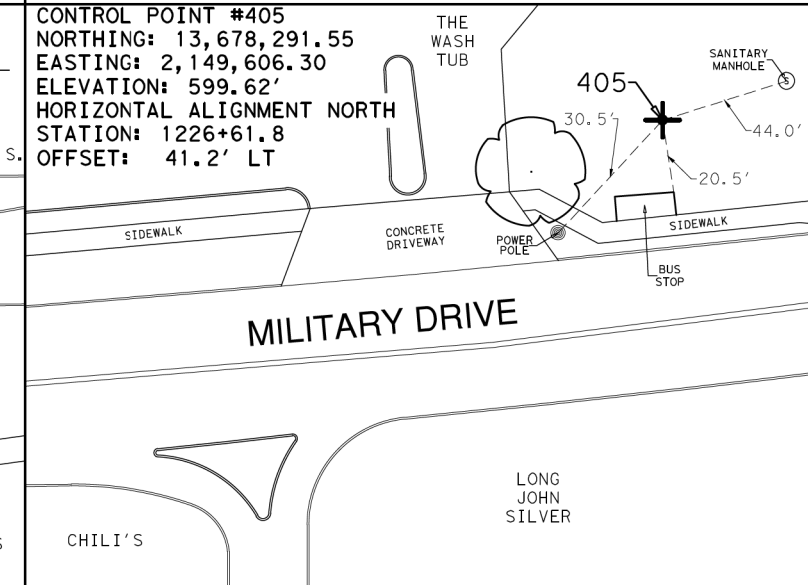
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 420 FEET WEST FROM THE CENTER OF THE INTERSECTION OF MILITARY DRIVE AND CITY BASE LANDING ON THE SOUTH SIDE OF MILITARY DRIVE



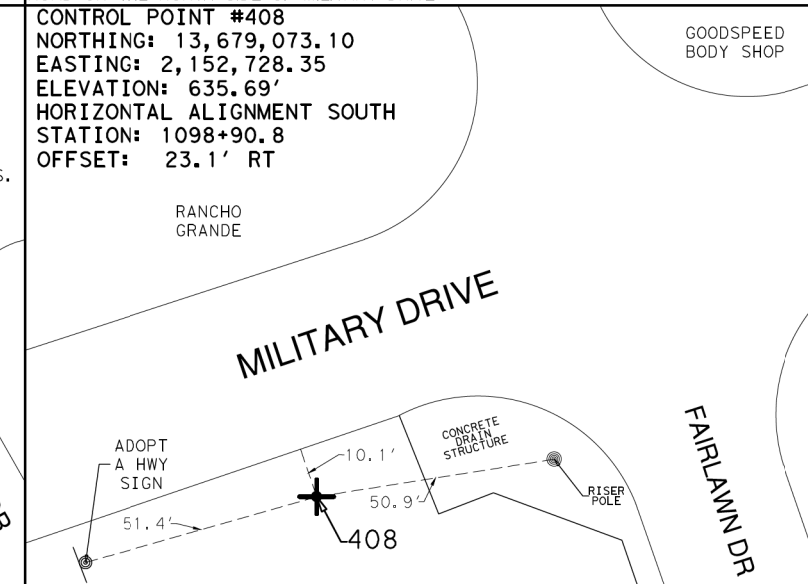
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 50 FEET WEST FROM THE CENTER OF THE INTERSECTION OF MILITARY DRIVE AND DUMBARTON DRIVE ON THE SOUTH SIDE OF MILITARY DRIVE



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



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



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

+	CP	CONTROL POINT
N.T.S.		NOT TO SCALE
SH		STATE 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
 TBE FIRM REGISTRATION #470 | TBE'S FIRM REGISTRATION #10000000

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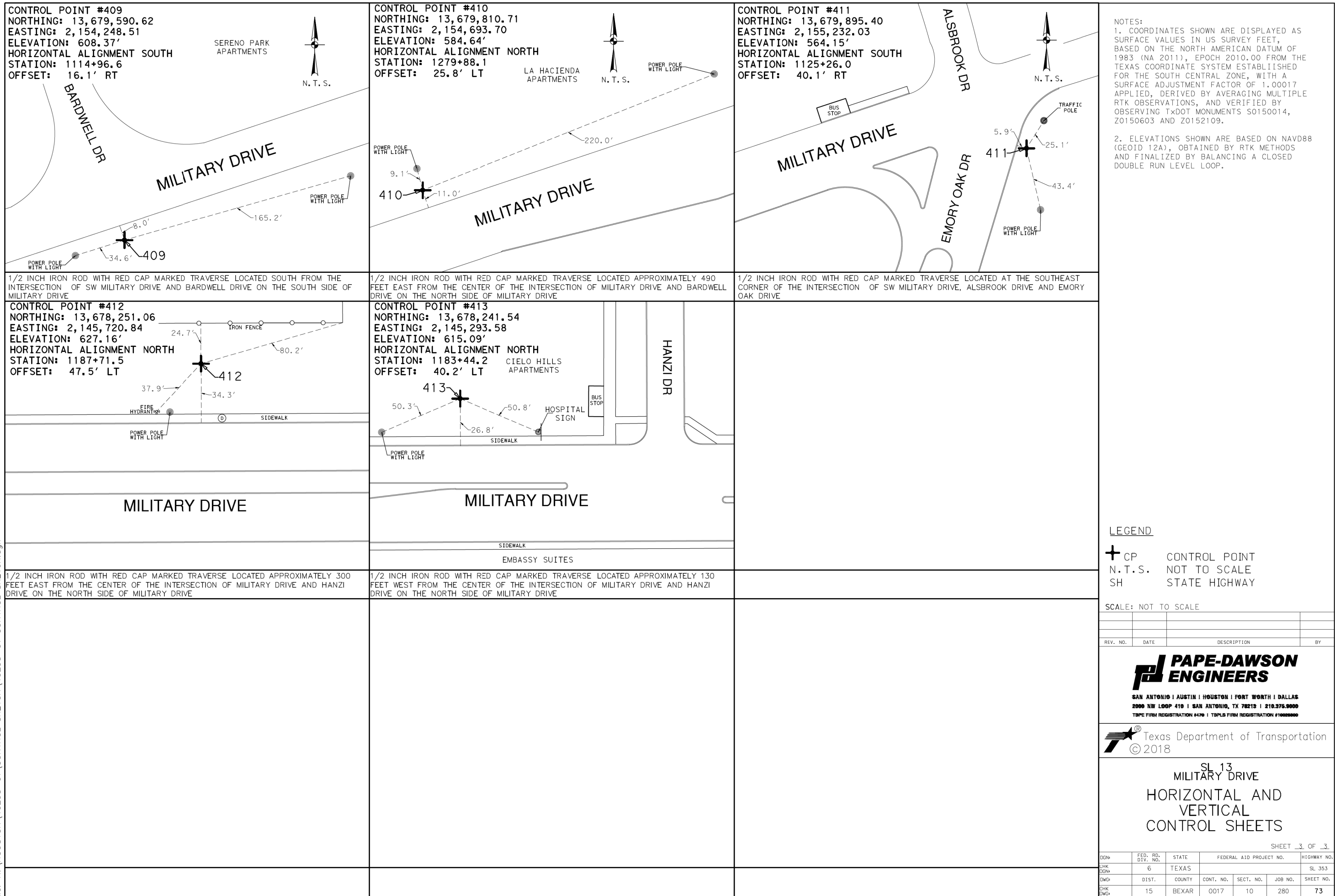
SL 13
MILITARY DRIVE
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

SHEET 2 OF 3

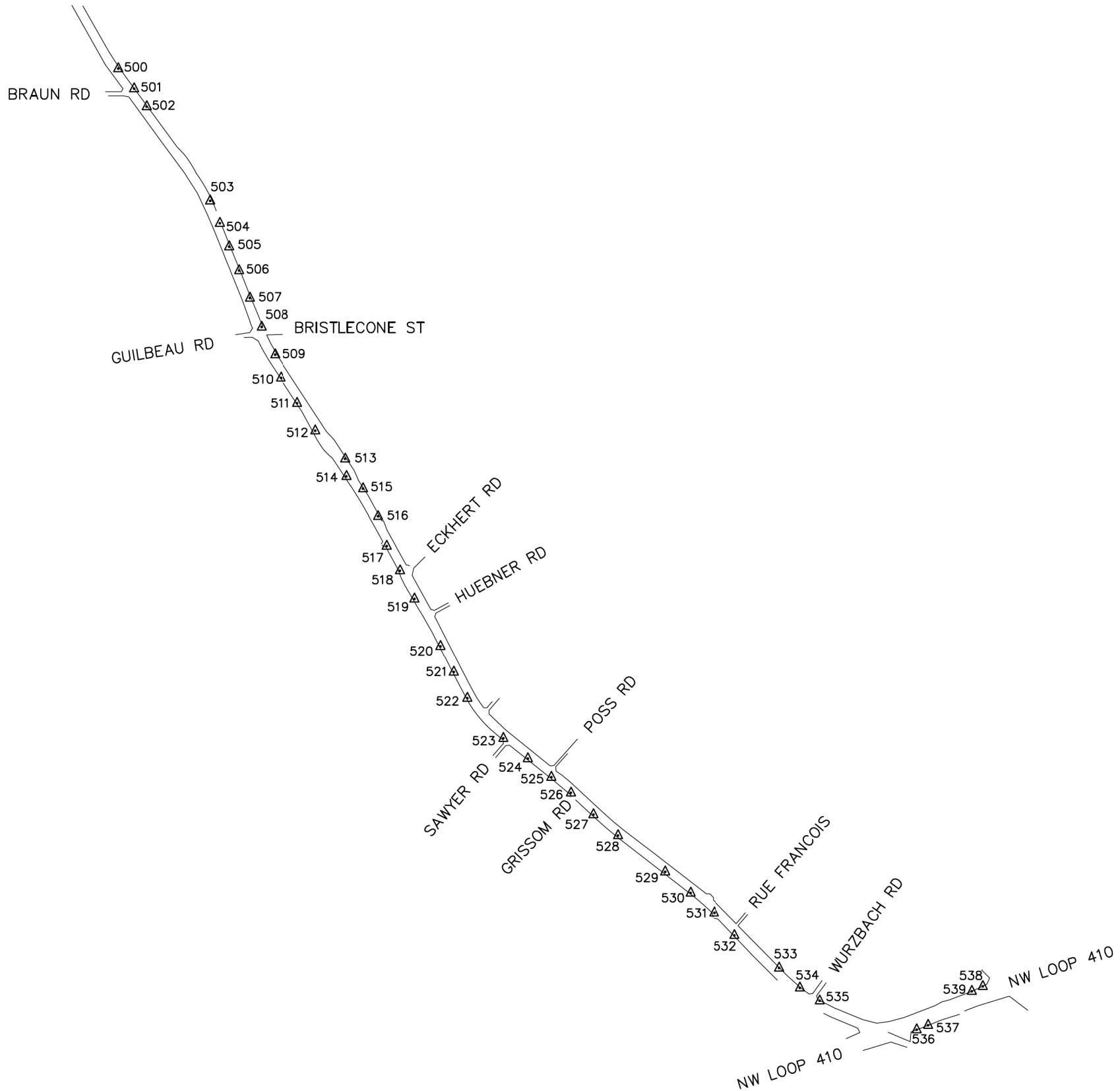
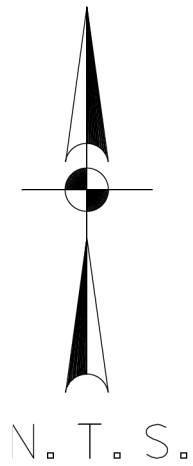
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				SL 353
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	15	BEXAR	0017	10	280	72

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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
N.T.S. NOT TO SCALE


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
TXPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #100288000

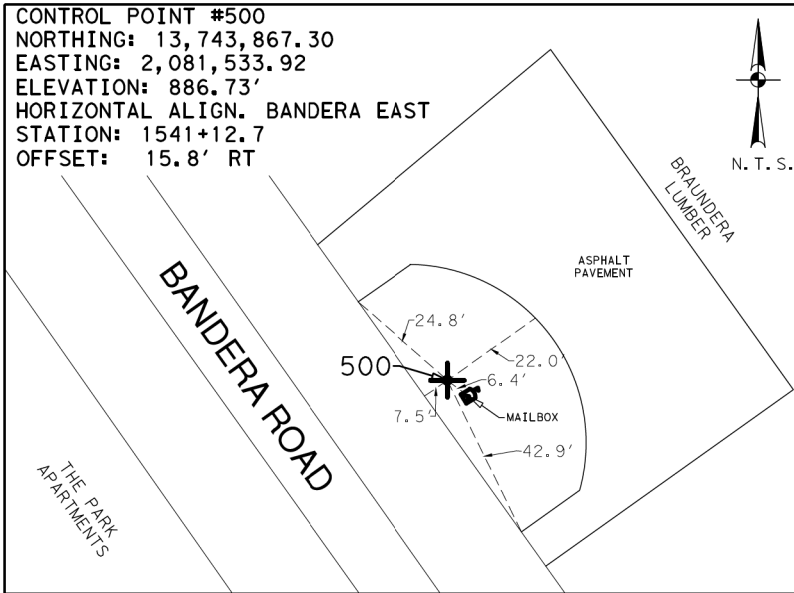


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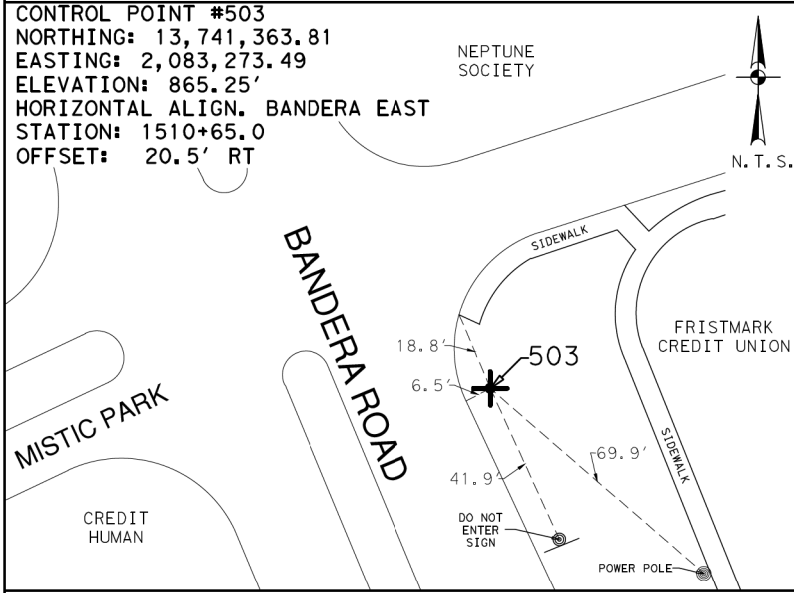
SH 16
BANDERA ROAD
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

SHEET 1 OF 6			
DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN	6	TEXAS	SL 13
DWG	DIST.	COUNTY	CONT. NO.
CHK DWG	15	BEXAR	0017
		SECT. NO.	JOB NO.
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		SHEET NO.	74

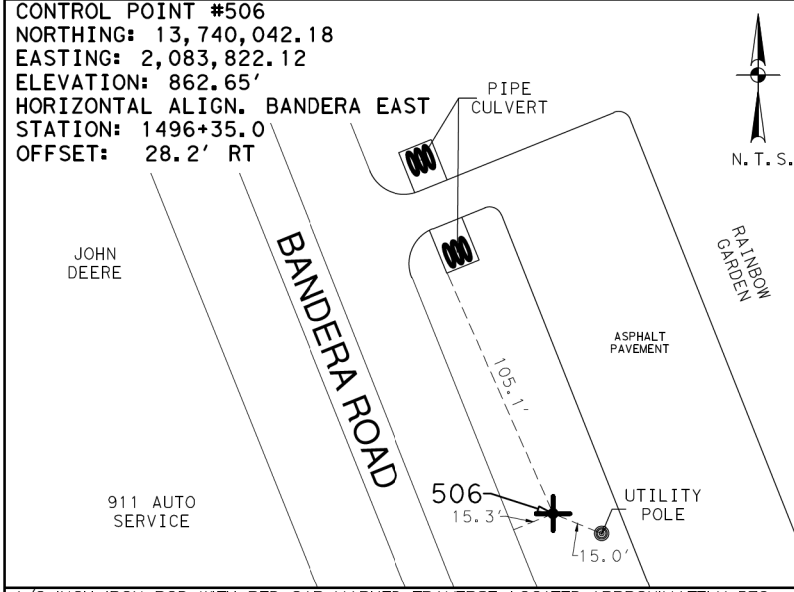
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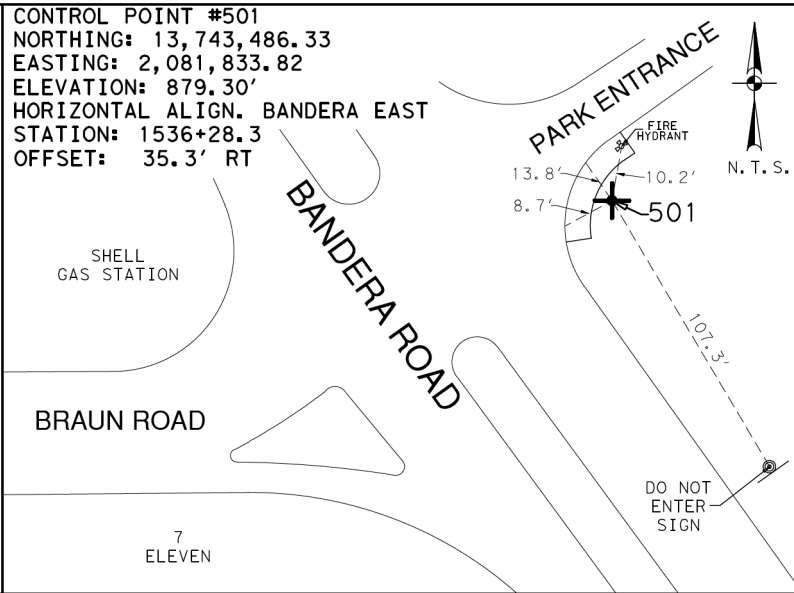
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 490 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND BRAUN ROAD ON THE EAST SIDE OF BANDERA ROAD



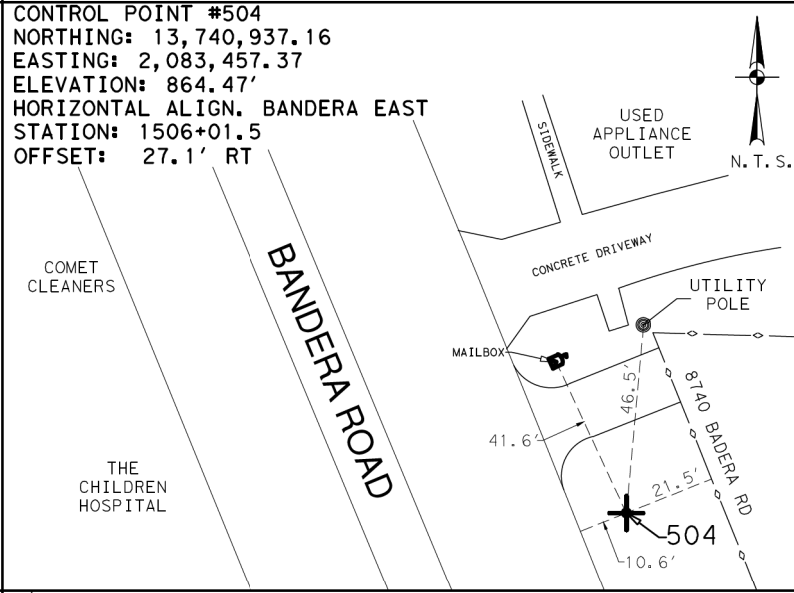
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BANDERA ROAD, BRESNAHAN STREET AND MISTIC PARK



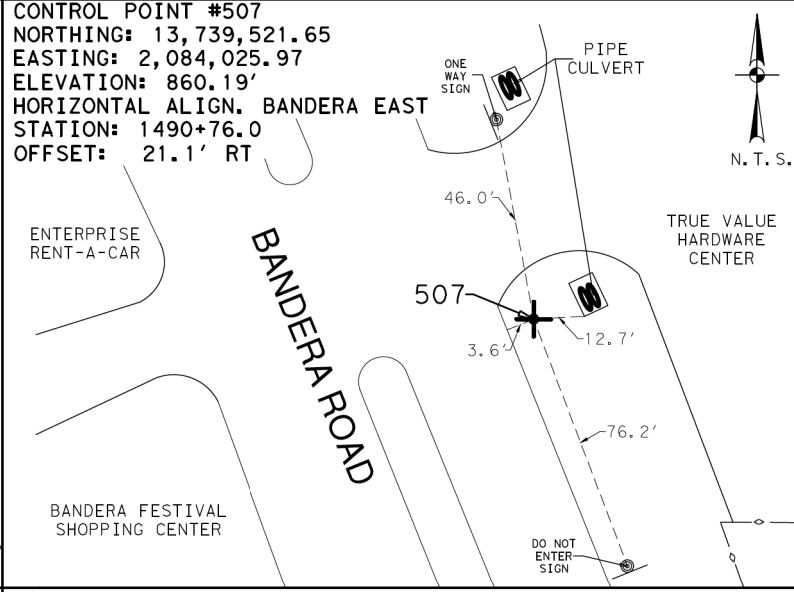
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 570 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND PRESERVATION ON THE EAST SIDE OF BANDERA ROAD



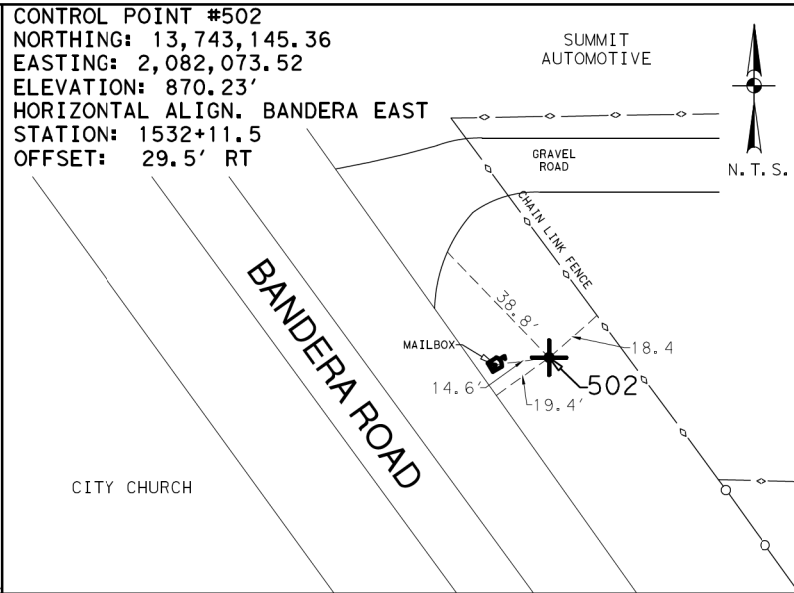
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BANDERA ROAD, BRAUN ROAD AND O.P. SCHNABEL PARK ENTRANCE



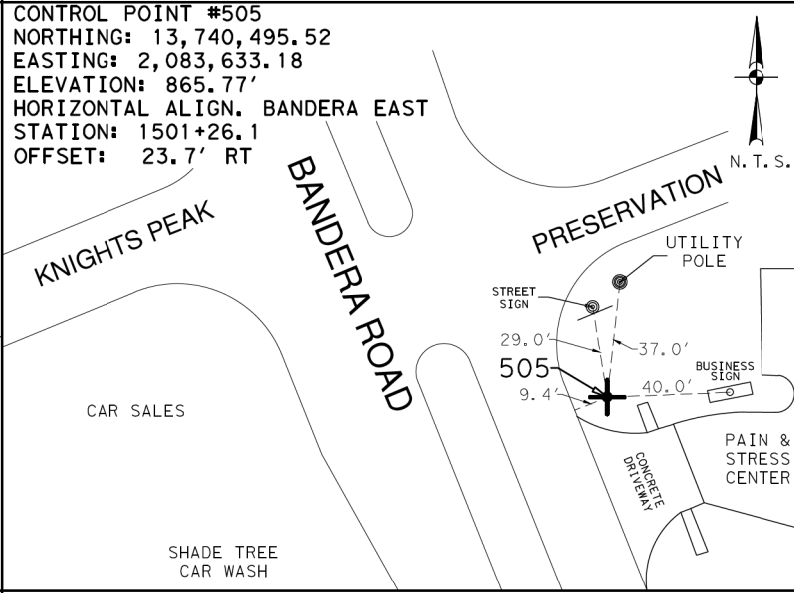
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 660 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND BRESNAHAN STREET ON THE EAST SIDE OF BANDERA ROAD



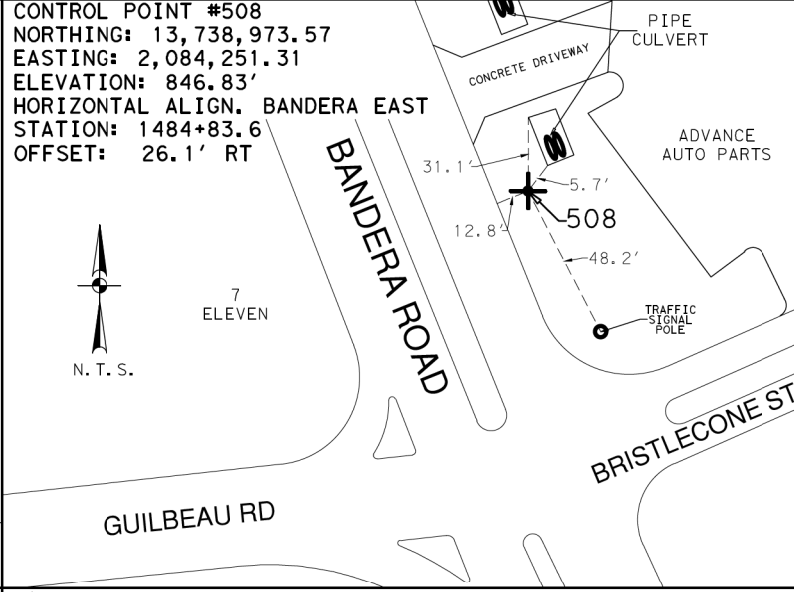
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 690 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND BRISTLECONE STREET ON THE EAST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 420 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND BRAUN ROAD ON THE EAST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE SOUTHEAST CORNER OF THE INTERSECTION OF BANDERA ROAD AND PRESERVATION



1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 110 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND BRISTLECONE STREET 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.

LEGEND
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TDLPS FIRM REGISTRATION #10008000

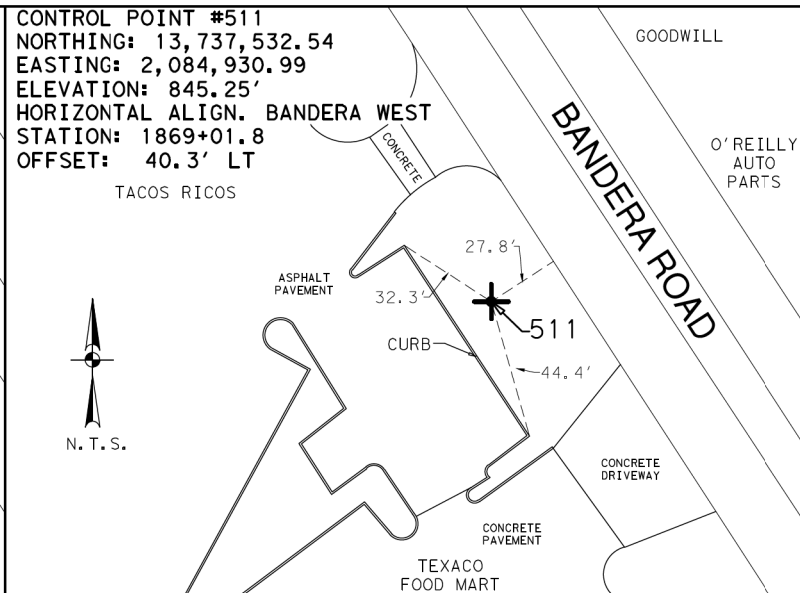
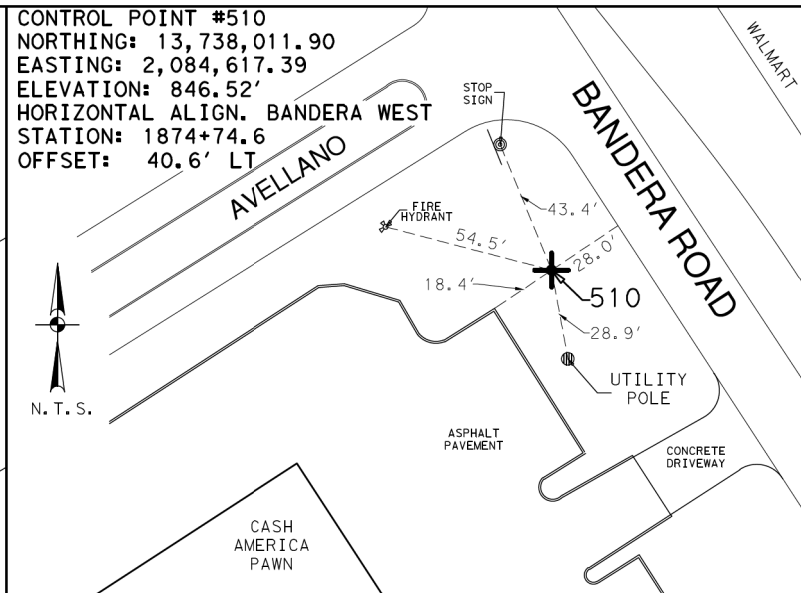
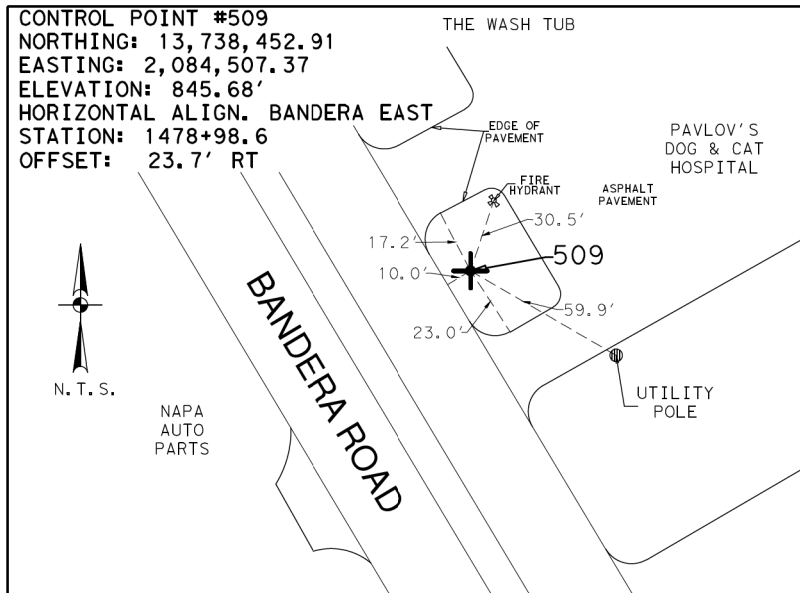
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SH 16
BANDERA ROAD
HORIZONTAL AND
VERTICAL
CONTROL SHEETS

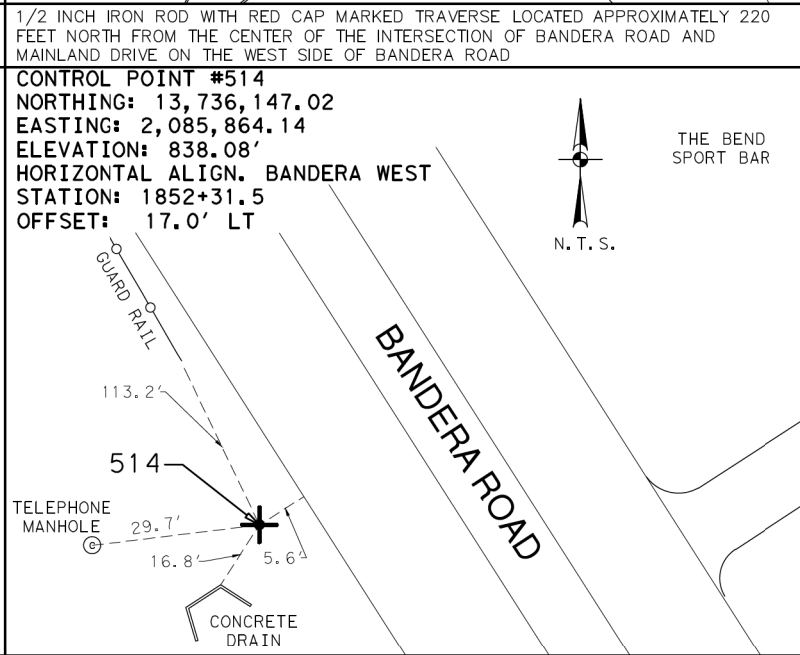
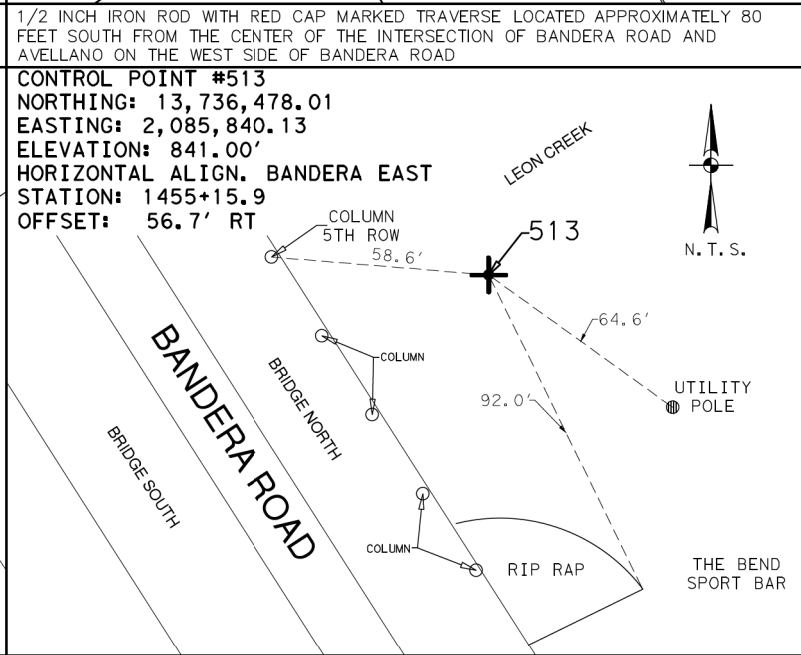
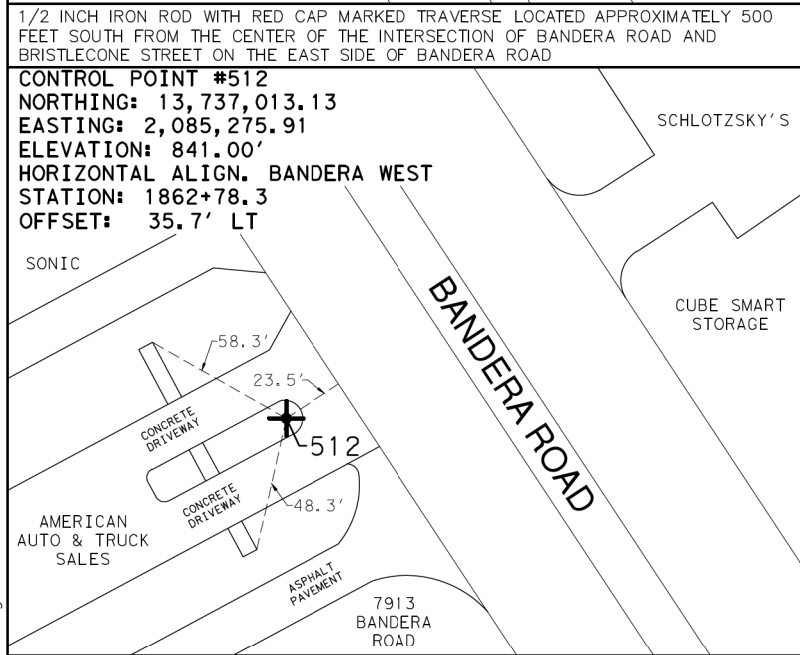
SHEET 2 OF 6

	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
	6	TEXAS				STATE ROUTE
	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	15	BEXAR	0017	10	280	75

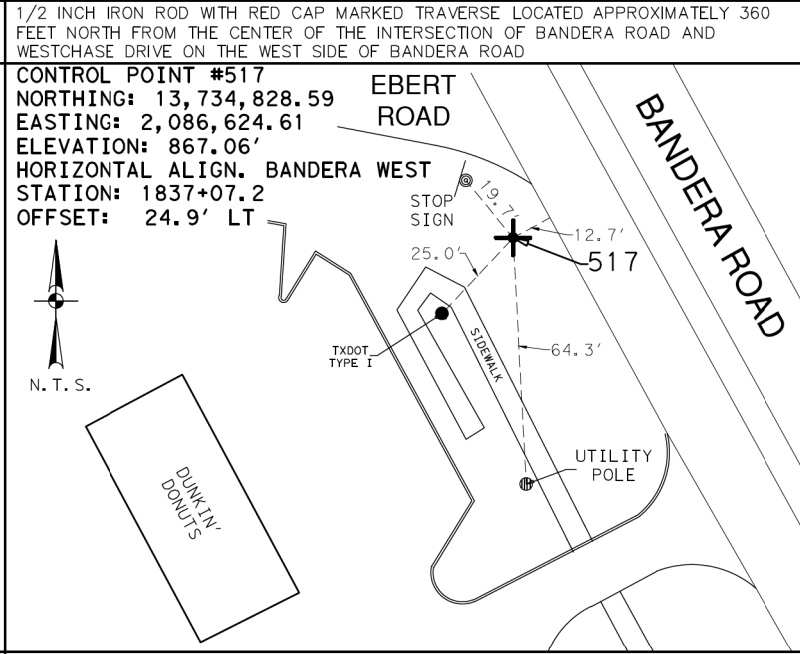
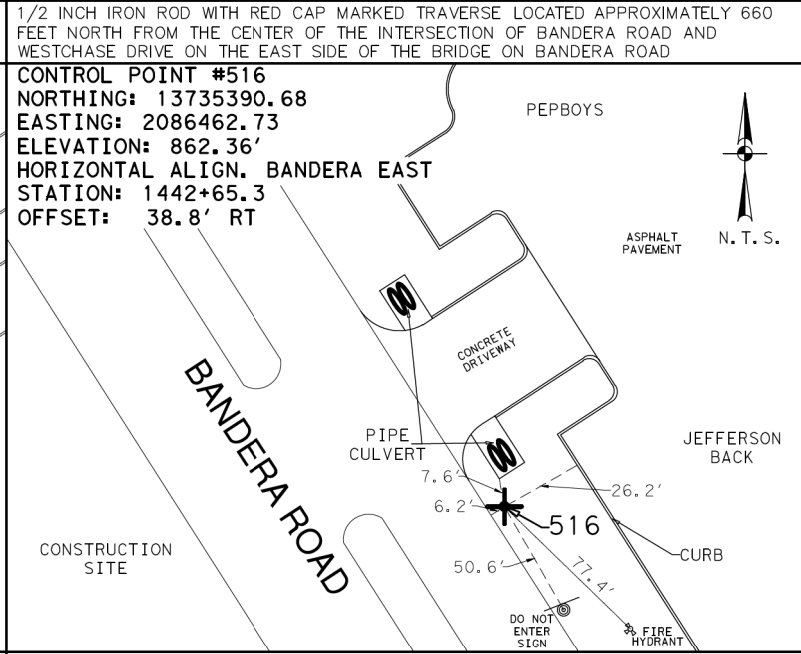
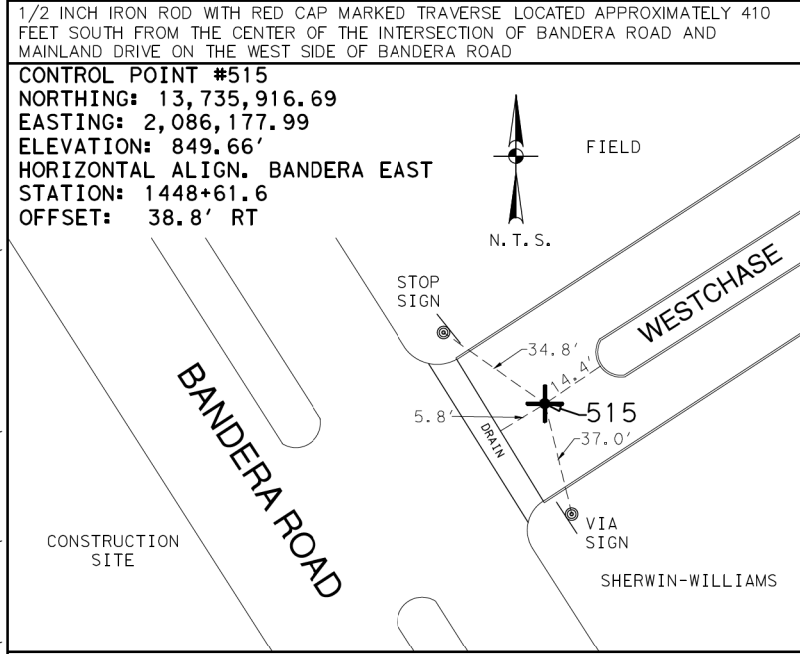
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NOTES:
1. COORDINATES SHOWN ARE DISPLAYED AS SURFACE VALUES IN US SURVEY FEET, BASED ON THE NORTH AMERICAN DATUM OF 1983 (NA 2011), EPOCH 2010.00 FROM THE TEXAS COORDINATE SYSTEM ESTABLISHED FOR THE SOUTH CENTRAL ZONE, WITH A SURFACE ADJUSTMENT FACTOR 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
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TBPFS FIRM REGISTRATION #100028000

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SH 16
BANDERA ROAD
HORIZONTAL AND VERTICAL
CONTROL SHEETS

SHEET 3 OF 6

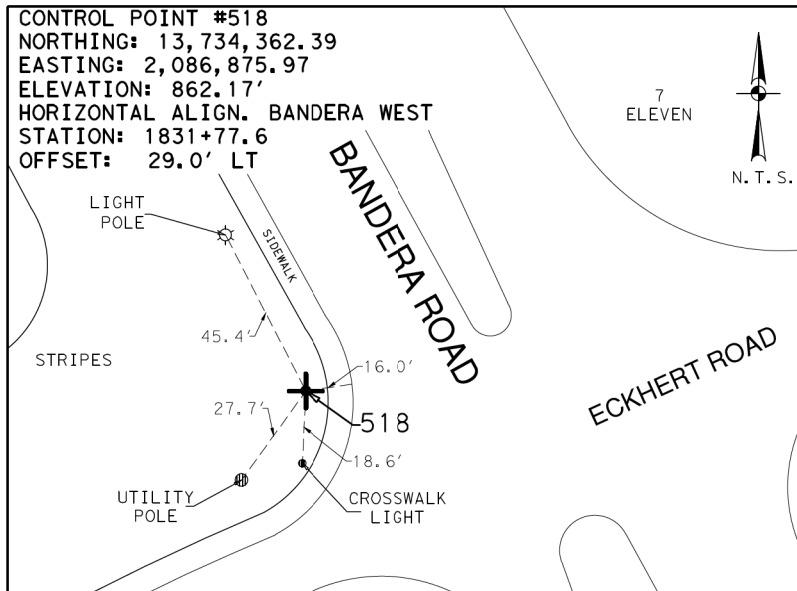
MAG NAIL WITH WASHER IN ASPHALT LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF BANDERA ROAD AND WESTCHASE DRIVE

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

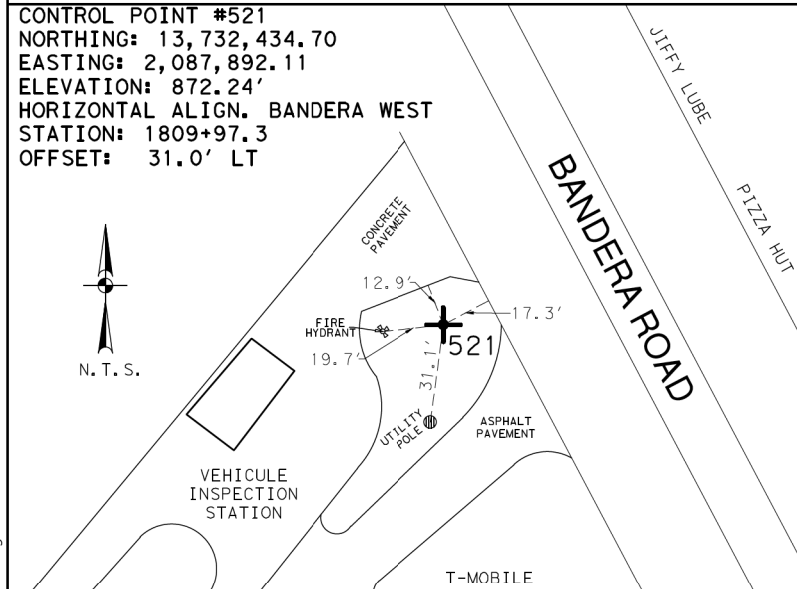
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE SOUTHWEST CORNER OF THE INTERSECTION OF BANDERA ROAD AND EBERT ROAD ON THE WEST SIDE OF BANDERA ROAD

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
DGN	6	TEXAS		SL 353
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	15	BEXAR	0017	10
DWG				280
				76

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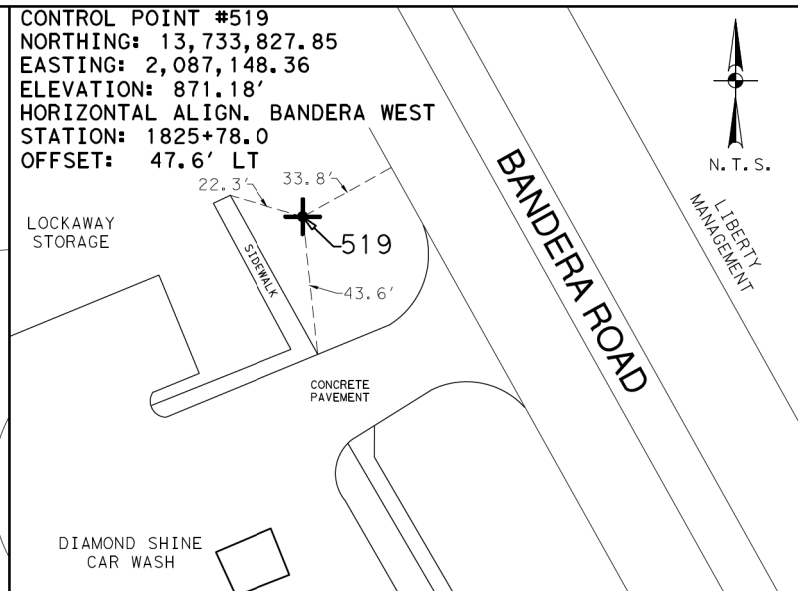
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF BANDERA ROAD AND ECKHART ROAD ON THE WEST SIDE OF BANDERA ROAD



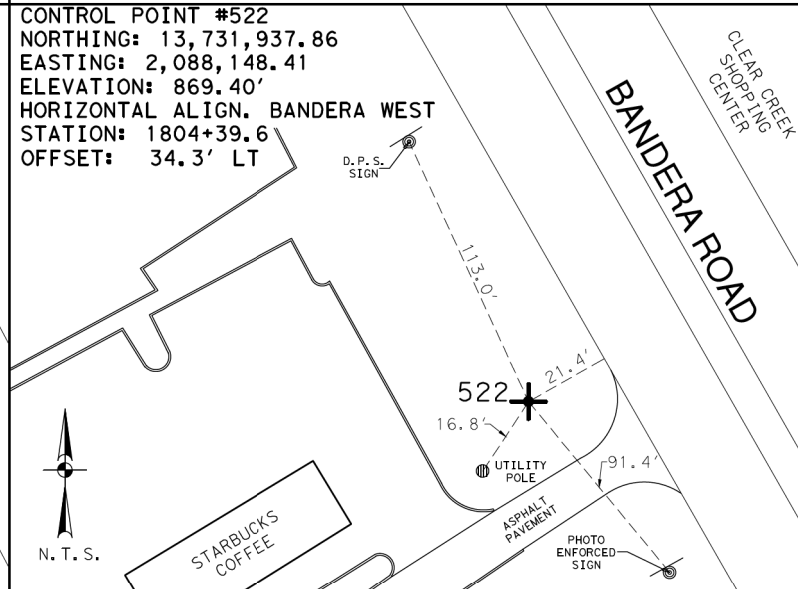
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 480 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND REINDEER ROAD ON THE WEST SIDE OF BANDERA ROAD



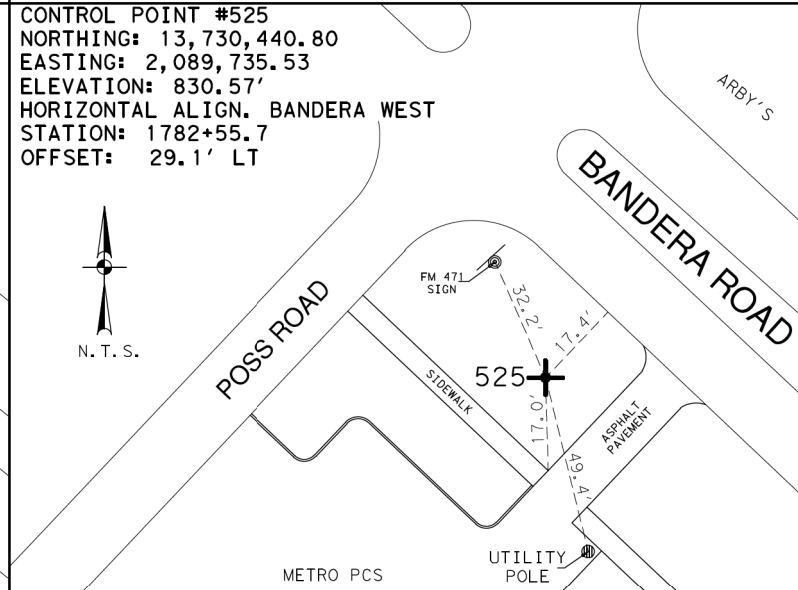
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 500 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND SAWYER ROAD ON THE WEST SIDE OF BANDERA ROAD



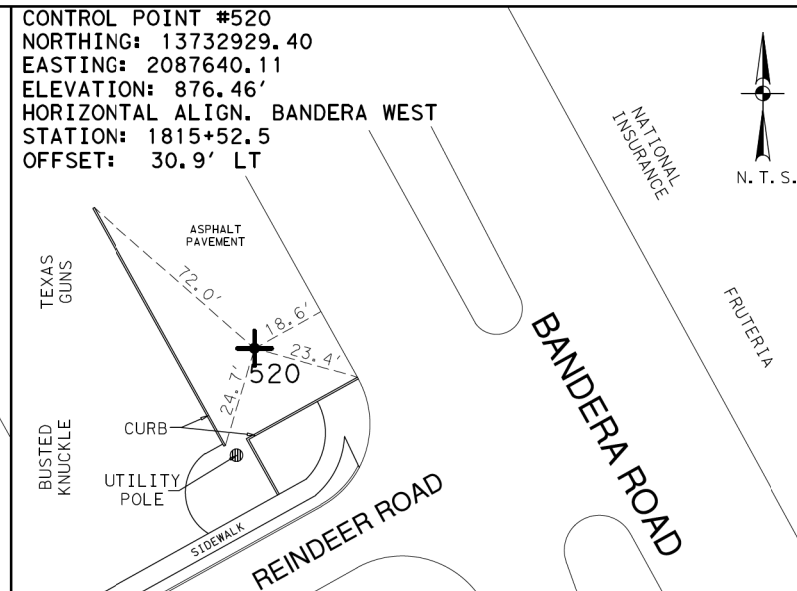
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 550 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND ECKHART ROAD ON THE WEST SIDE OF BANDERA ROAD



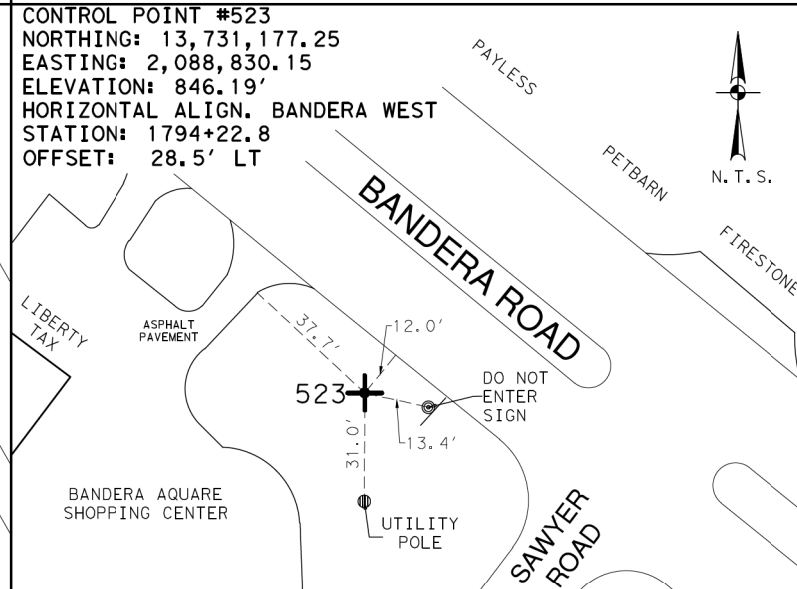
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 410 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND HUEBNER ROAD ON THE WEST SIDE OF BANDERA ROAD



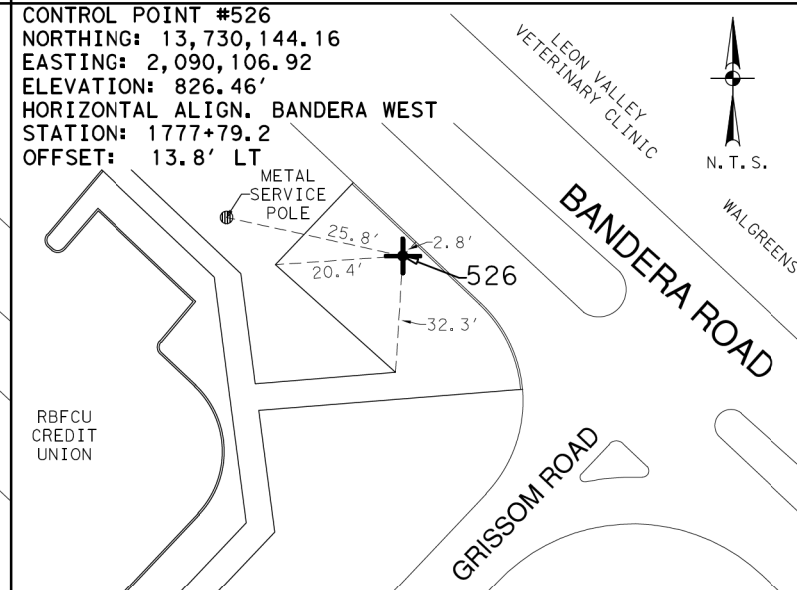
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 90 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND POSS ROAD ON THE WEST SIDE OF BANDERA ROAD



MAG NAIL WITH WASHER IN ASPHALT LOCATED APPROXIMATELY 60 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND REINDEER 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 CENTER OF THE INTERSECTION OF BANDERA ROAD AND SAWYER 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.

LEGEND
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TDLPS FIRM REGISTRATION #10028000

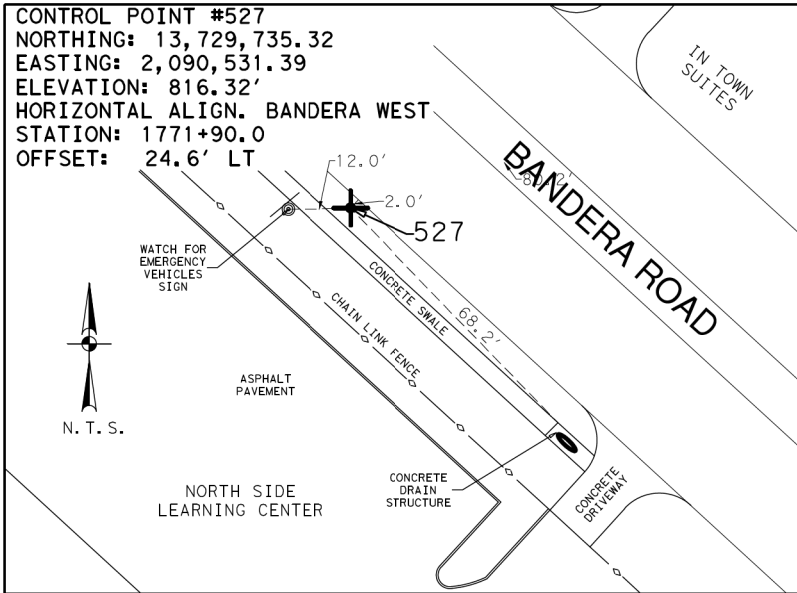
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SH 16
BANDERA ROAD
HORIZONTAL AND VERTICAL
CONTROL SHEETS

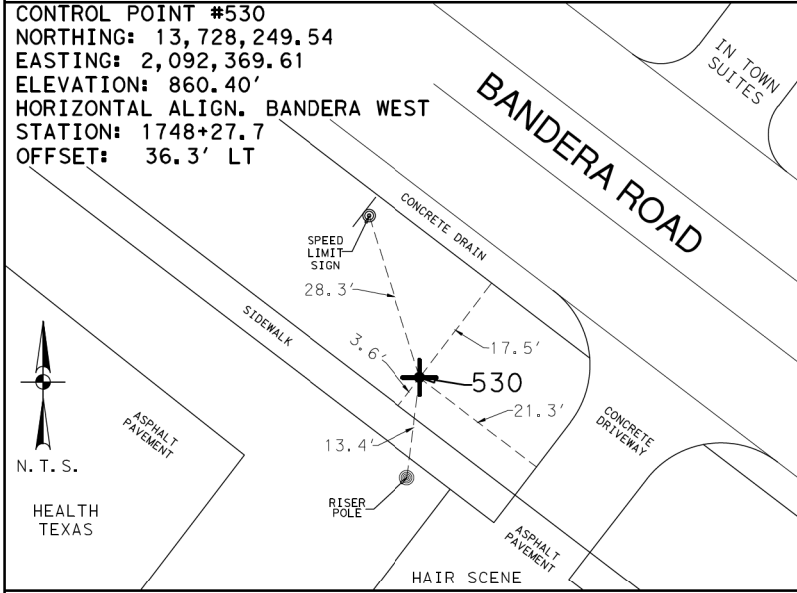
SHEET 4 OF 6

CHK DIV.	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
DGN	6	TEXAS				SL 353
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DGN	15	BEXAR	0017	10	280	77

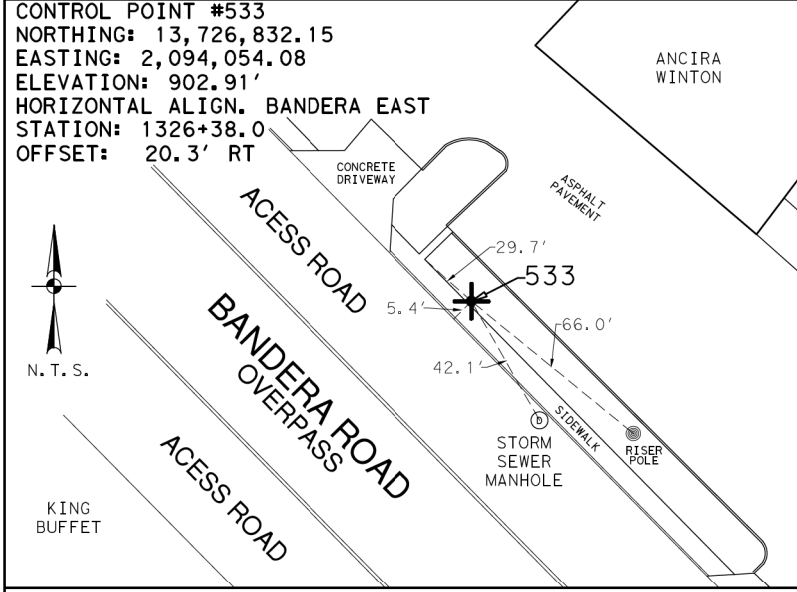
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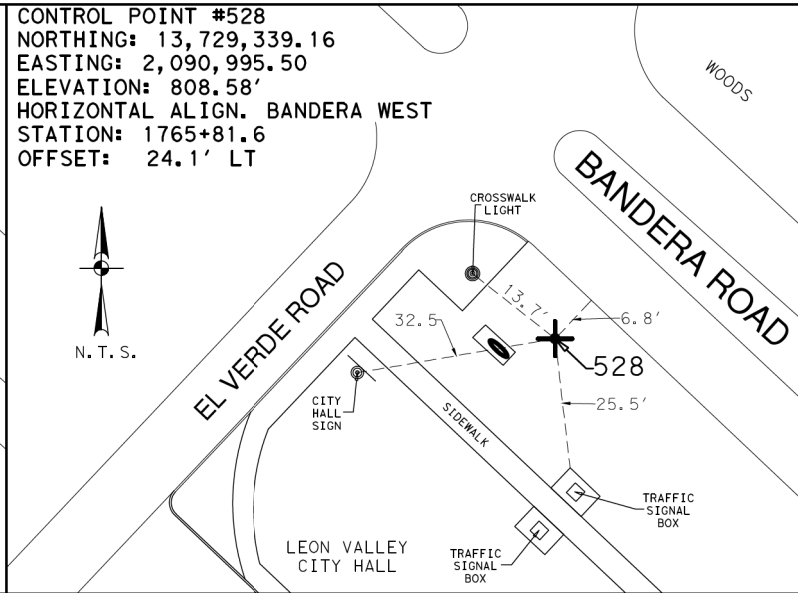
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 500 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND GRISSOM ROAD ON THE WEST SIDE OF BANDERA ROAD



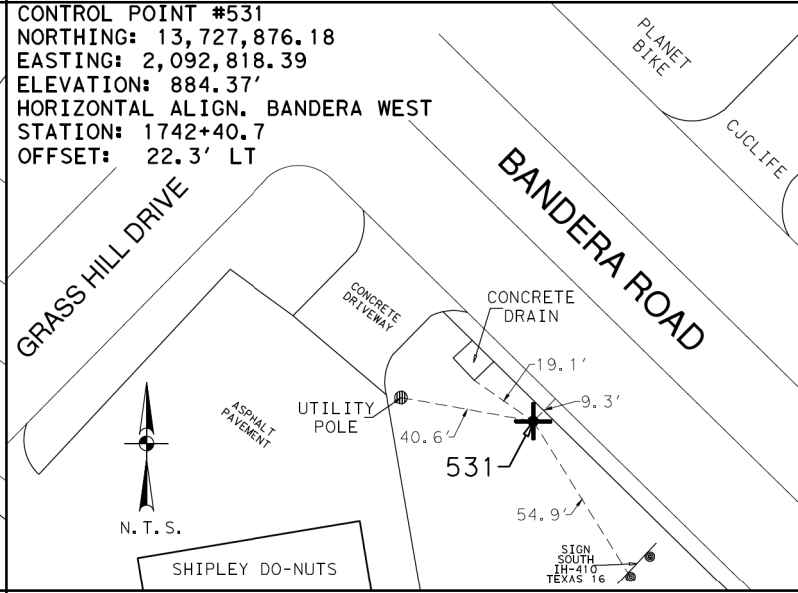
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 560 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND SENECA DRIVE ON THE WEST SIDE OF BANDERA ROAD



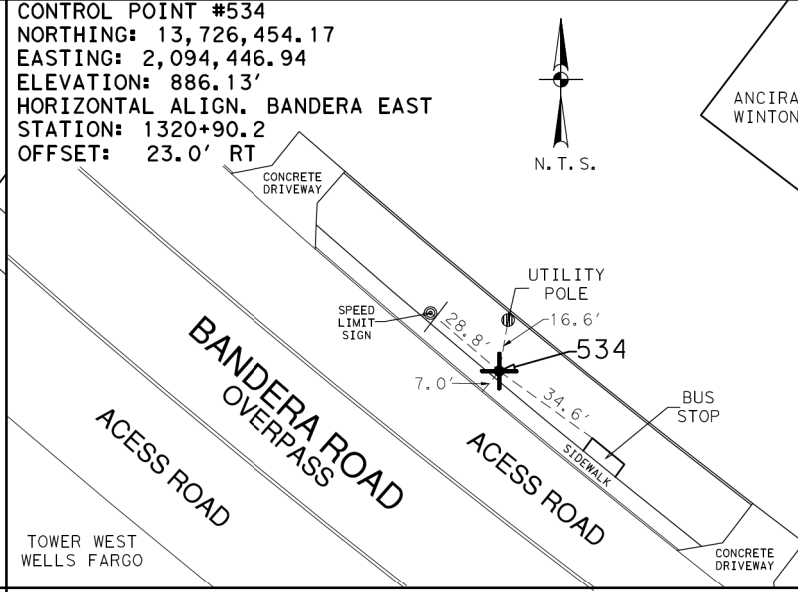
MAG NAIL WITH WASHER IN CONCRETE LOCATED APPROXIMATELY 850 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND WURZBACH ROAD ON THE EAST SIDE OF BANDERA ROAD



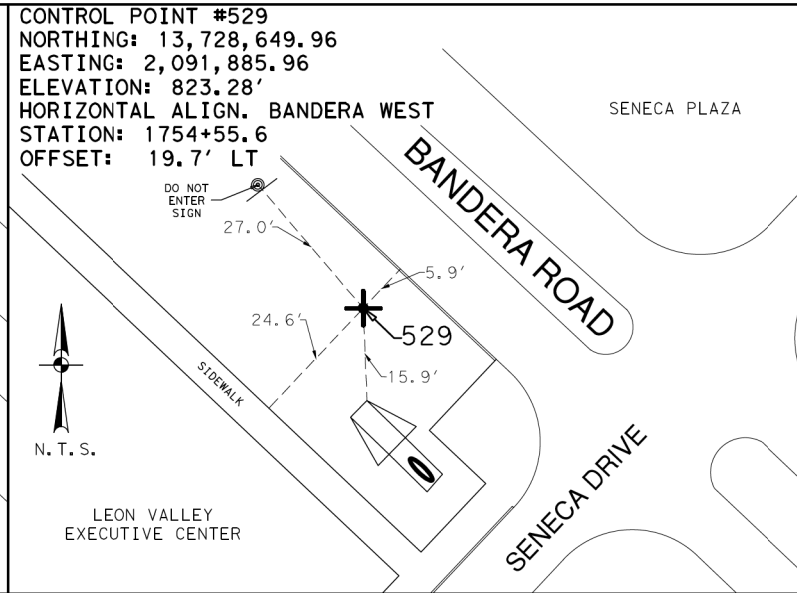
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 40 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND EL VERDE ROAD ON THE WEST SIDE OF BANDERA ROAD



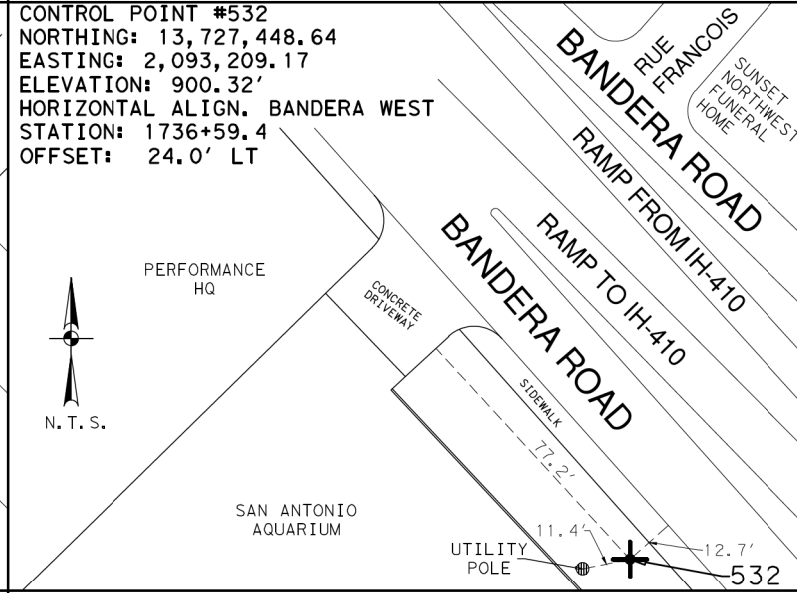
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 140 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND GRASS HILL DRIVE ON THE WEST SIDE OF BANDERA ROAD



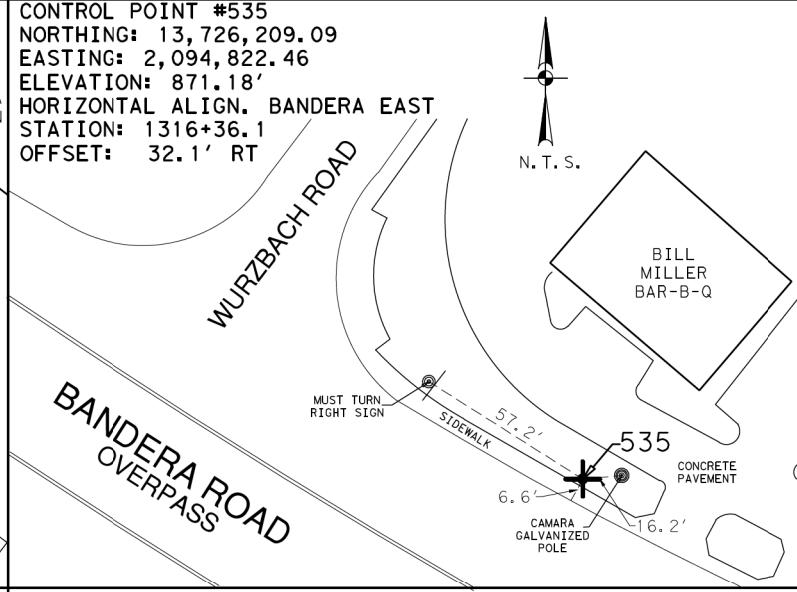
1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 310 FEET NORTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND WURZBACH ROAD ON THE EAST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 60 FEET NORTH FROM THE CENTER OF 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 150 FEET SOUTH FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND RUE FRANCOIS ON THE WEST SIDE OF BANDERA ROAD



1/2 INCH IRON ROD WITH RED CAP MARKED TRAVERSE LOCATED APPROXIMATELY 130 FEET SOUTH FROM THE CENTER OF 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.

LEGEND
+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TXPE FIRM REGISTRATION #470 | TDBLS FIRM REGISTRATION #10008000

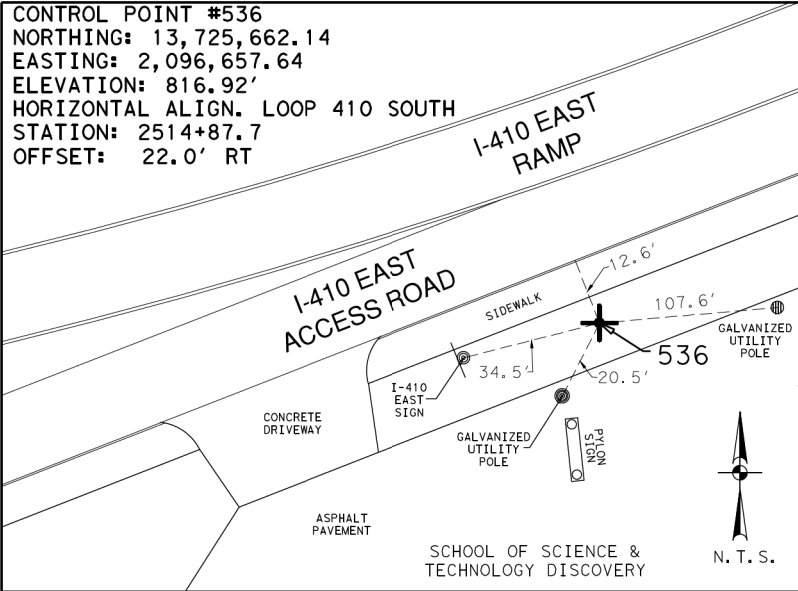
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SH 16
BANDERA ROAD
HORIZONTAL AND VERTICAL CONTROL SHEETS

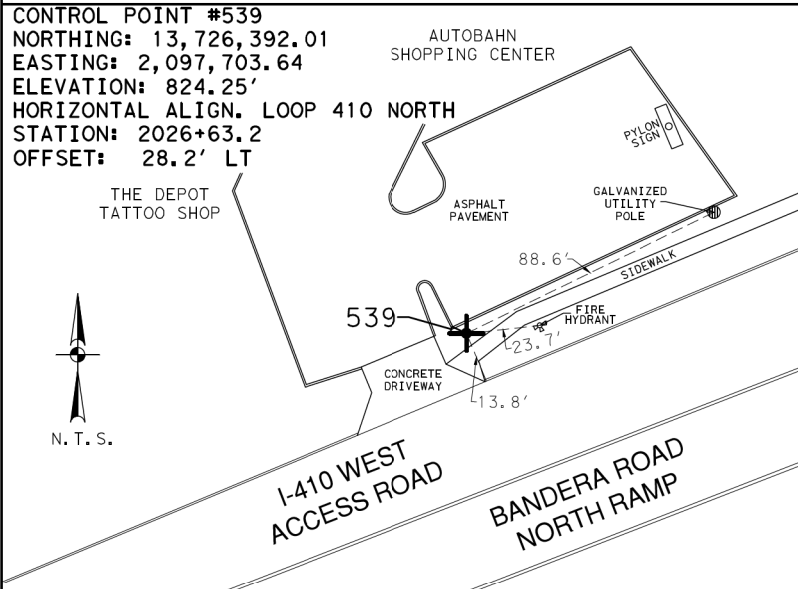
SHEET 5 OF 6

	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
DGN	6	TEXAS				SL 353
	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
DWG	15	BEXAR	0017	10	280	78

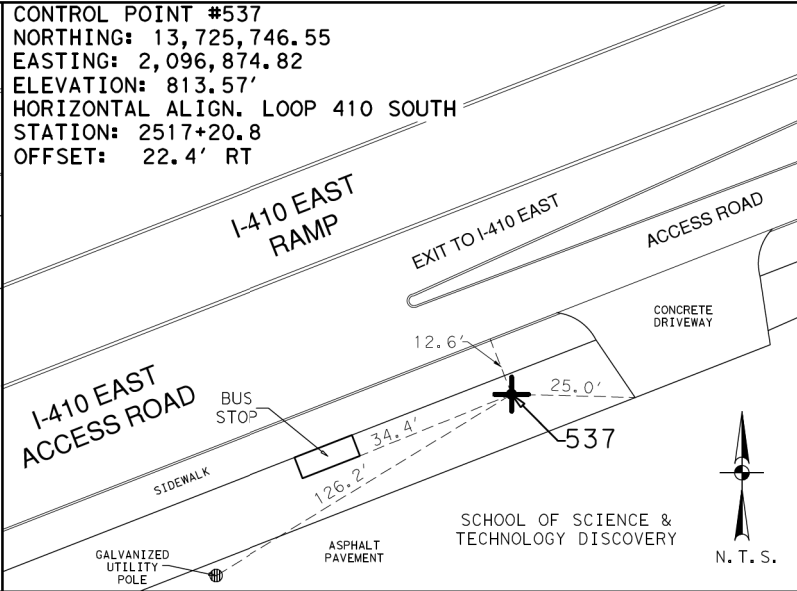
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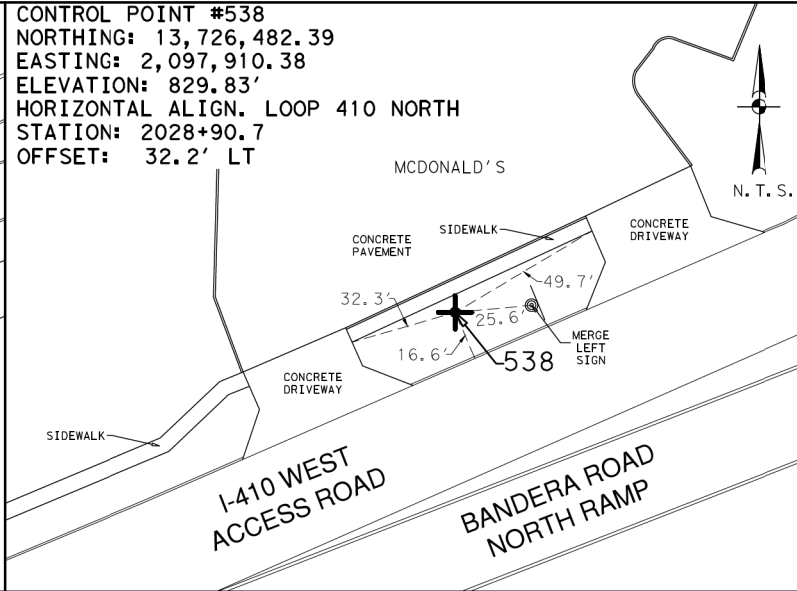
MAG NAIL WITH WASHER LOCATED APPROXIMATELY 430 FEET EAST FROM THE CENTER OF THE INTERSECTION OF BANDERA ROAD AND I-410 ON THE SOUTH SIDE OF I-410



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



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



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

+ CP CONTROL POINT
N.T.S. NOT TO SCALE
SH STATE 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
TAMPE FIRM REGISTRATION #470 | TAMPLS FIRM REGISTRATION #100028000

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SH 16 BANDERA ROAD HORIZONTAL AND VERTICAL CONTROL SHEETS			
SHEET 6 OF 6			
CHK DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
DWG	6	TEXAS	SL 353
CHK DWG	DIST.	COUNTY	CONT. NO.
15	BEXAR	0017	10
		JOB NO.	SHEET NO.
		280	79

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\General\1113507*HALN*Data01.dgn

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

REV. NO.	DATE	DESCRIPTION	BY
<div> SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>			
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HORIZONTAL ALIGNMENT DATA SHEET			
SHEET 1 OF 10			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			12
			576
			80

Plotted on: 11/21/2018

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

REV. NO.	DATE	DESCRIPTION	BY
<div><div>PAPE-DAWSON ENGINEERS</div><div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div></div>			
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HORIZONTAL ALIGNMENT DATA SHEET			
SHEET 2 OF 10			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			SECT. NO.
			12
			JOB NO.
			576
			SHEET NO.
			81

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SW MILITARY B EB HORIZONTAL ALIGNMENT

Beginning chain SWMILITARYB_2 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			
Course from PT RDCL134_1 to PC RDCL134_4 S 84° 10' 25.31" E Dist 7,634.9877					
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			
Course from PT RDCL134_4 to RDCL1346 N 89° 40' 07.61" E Dist 13,443.1671					
Point RDCL1346	N 13,679,870.2390	E	2,128,543.4265	Sta	726+61.64
=====					
Ending chain SWMILITARYB_2 description					

SW MILITARY B WB HORIZONTAL ALIGNMENT

Beginning chain SWMILITARYB_1 description					
=====					
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 RDCL10_1 to PC RDCL10_4 S 84° 11' 23.38" E Dist 7,618.1629					
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 RDCL10_4 to RDCL106 N 89° 39' 39.76" E Dist 13,382.8280					
Point RDCL106	N 13,679,929.4426	E	2,128,538.6419	Sta	956+57.20
=====					
Ending chain SWMILITARYB_1 description					

REV. NO.	DATE	DESCRIPTION	BY
<div><div><div></div><div></div></div><div>PAPE-DAWSON ENGINEERS</div></div> <div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>			
<div><div><div></div><div></div></div><div>Texas Department of Transportation © 2018</div></div>			
HORIZONTAL ALIGNMENT DATA SHEET			
SHEET 3 OF 10			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			12
			576
			82

Plotted on: 11/21/2018

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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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<h1>HORIZONTAL ALIGNMENT DATA SHEET</h1>									
SHEET 4 OF 10									
DGN#	FED. 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	83			

Plotted on: 11/21/2018

Design File name: P:\111135\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

REV. NO.	DATE	DESCRIPTION	BY
<div> SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>			
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HORIZONTAL ALIGNMENT DATA SHEET			
SHEET 5 OF 10			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			12
			576
			84

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Course from 258 to 259 N 65° 35' 12.90" W Dist 1,105.4692

Course from 259 to PC RDCL_BANDERA_5 N 67° 26' 24.83" W Dist 251.5404

Course from PT RDCL_BANDERA_5 to 260 N 44° 20' 40.55" W Dist 926.5840

Course from 260 to 261 N 46° 12' 39.27" W Dist 542.3376

Course from 261 to PC RDCL_BANDERA_12 N 44° 45' 06.39" W Dist 374.7307

Course from PT RDCL_BANDERA_12 to 262 N 52° 15' 12.16" W Dist 1,843.4396

Course from 262 to 263 N 49° 16' 01.61" W Dist 432.8245

Course from 263 to 264 N 47° 07' 51.52" W Dist 798.6939

Course from 264 to 265 N 50° 43' 50.35" W Dist 748.0455

Course from 265 to PC RDCL_BANDERA_23 N 51° 07' 32.93" W Dist 871.3067

Course from PT RDCLBANDERA2_11 to RDCLBANDERA214 N 45° 19' 43.69" W Dist 848.1984

Course from RDCLBANDERA214 to RDCLBANDERA216 N 43° 52' 26.02" W Dist 510.1989

Course from RDCLBANDERA216 to PC RDCLBANDERA2_18 N 40° 54' 49.88" W Dist 241.5316

Course from PT RDCLBANDERA2_18 to RDCLBANDERA221 N 51° 40' 50.57" W Dist 285.3810



Course from RDCLBANDERA221 to PC RDCLBANDERA2_23 N 52° 01' 57.74" W Dist 1,585.9166

Course from PT RDCLBANDERA2_23 to PC RDCLBANDERA2_26 N 47° 07' 30.67" W Dist 763.9709

Course from PT RDCLBANDERA2_26 to PC RDCLBANDERA2_29 N 50° 54' 06.37" W Dist 1,515.1331

Course from PT RDCLBANDERA2_29 to RDCLBANDERA232 N 27° 32' 40.70" W Dist 454.0851

Course from RDCLBANDERA232 to PC RDCLBANDERA2_34 N 26° 59' 55.19" W Dist 1,071.3331

REV. NO.	DATE	DESCRIPTION				BY	
<div> PAPE-DAWSON ENGINEERS</div> <div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>							
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HORIZONTAL ALIGNMENT DATA SHEET							
SHEET 6 OF 10							
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	85	

Plotted on: 11/21/2018

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Course from EB4101 to PC EB410_3 N 61° 15' 51.98" E Dist 34.3435

Course from PT EB410_3 to PC EB410_6 N 72° 39' 20.84" E Dist 47.9432

Course from PT EB410_6 to PC EB410_9 N 68° 39' 40.28" E Dist 33.0318

Course from PT EB410_9 to PC EB410_12 N 65° 03' 04.03" E Dist 184.9129

Course from PT EB410_12 to PC EB410_15 N 68° 39' 40.28" E Dist 1,380.7903

Course from PT EB410_15 to PC EB410_18 N 73° 07' 55.94" E Dist 226.6753

Course from PT EB410_18 to PC EB410_21 N 67° 50' 28.63" E Dist 130.2817


Course from PT EB410_21 to PC EB410_24 N 62° 22' 24.98" E Dist 53.4495

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

REV. NO.	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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HORIZONTAL ALIGNMENT DATA SHEET

SHEET 9 OF 10

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.
CHK DWG#	SAT	BEXAR	0915	12	576	88

Plotted on: 11/21/2018


Design Filename: P:\111\35\07\design\Civil\General\1113507*HALN*Data01.dgn

Course from PT WB412_12 to PC WB412_15 N 65° 03' 35.03" E Dist 116.8864

=====


Ending chain WB412 description

REV. NO.	DATE	DESCRIPTION			BY



PAPE-DAWSON ENGINEERS

SAN ANTONIO | 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 10 OF 10

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.
CHK DWG#	SAT	BEXAR	0915	12	576	89

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\General\1113507*sample17.dgn

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	2137635.48	--	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	702.54	PROP
09814	13709408.78	2137666.62	702.46	PROP
09815	13709413.87	2137676.16	702.63	PROP
09816	13709408.87	2137676.21	702.70	PROP

PROP = PROPOSED ELEVATION

ME = CONTRACTOR SHALL MATCH PROPOSED IMPROVEMENTS FLUSH WITH SURROUNDINGS

POINTS ARE PROVIDED FOR HORIZONTAL CONTROL ONLY

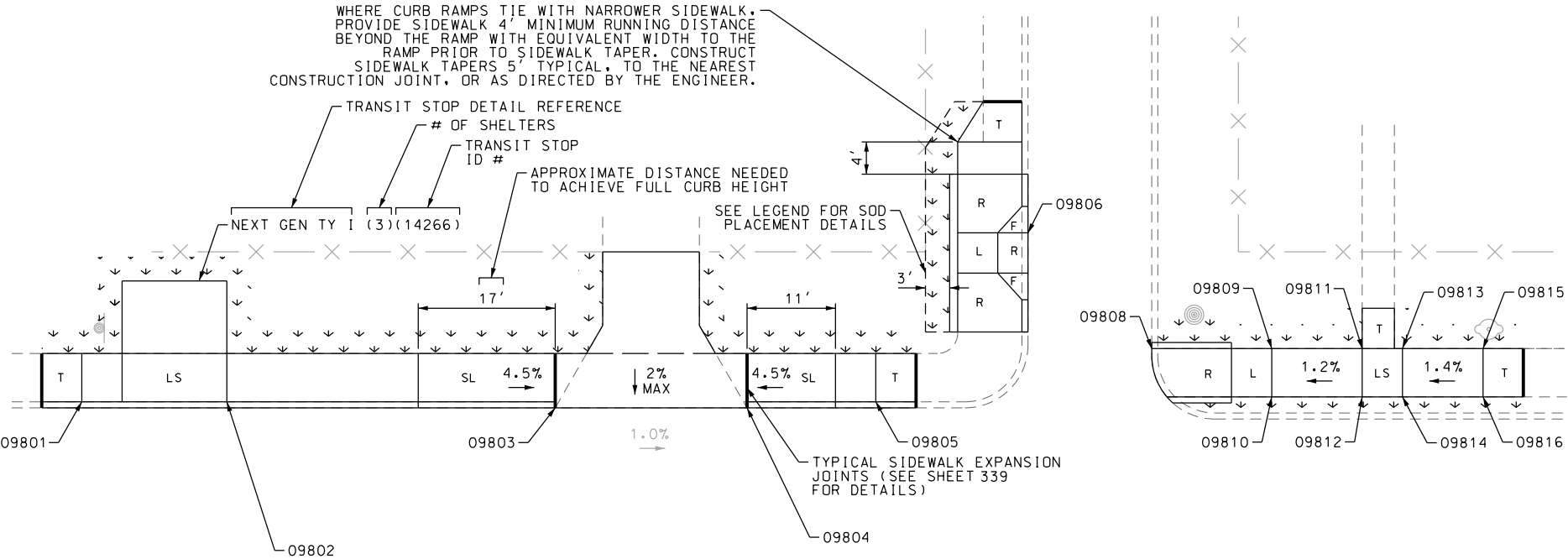
MATCH ELEVATION FLUSH WITH ADJACENT SURFACE OR AS DIRECTED

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

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		EXISTING ROADWAY OR DRIVEWAY SLOPE
	PEDESTAL SIGNAL POLE		PROPOSED ROADWAY, SIDEWALK OR DRIVEWAY SLOPE

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; PLACED ADJACENT TO IMPROVEMENTS WHERE EXISTING VEGETATION IS DISTURBED, PLACED FULL LIMITS BETWEEN BACK OF CURB AND IMPROVEMENTS IF DIVORCED OR AS SHOWN ON THE PLANS

- 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

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

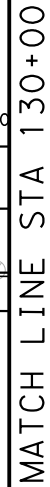
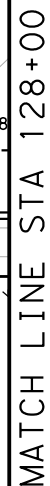
© 2018

SAMPLE PLAN LAYOUT AND LEGEND OF SYMBOLS

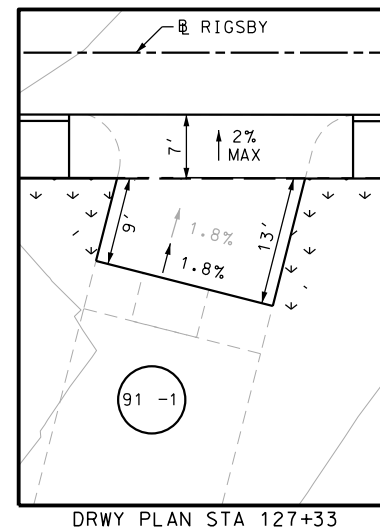
SHEET 1 OF 1

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	90

Design Filename: P:\111\35\07\design\Civi\Roadway\Rigsby\1113507*Rigsby*07.dgn



POINT	NORTHING	EASTING	ELEV	DESC
10401	13695003.62	2148736.51	--	ME.
10402	13695003.61	2148754.51	--	ME.
10403	13695003.60	2148811.08	--	ME.
10404	13695003.62	2148833.71	--	ME.
10405	13695003.63	2148863.31	--	ME.
10406	13695002.98	2148931.53	--	ME.
10407	13695002.03	2149083.42	--	ME.
10408	13695003.70	2149098.42	--	ME.



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	120
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	1
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	20
0162-6002	BLOCK SODDING	SY	56
0168-6001	VEGETATIVE WATERING	MG	0.87
0420-6074	CL C CONC (MISC)	CY	2.0
0529-6001	CONC CURB (TY I)	LF	26
0529-6002	CONC CURB (TY II)	LF	125
0530-6004	DRIVEWAYS (CONC)	SY	58
0530-6005	DRIVEWAYS (ACP)	SY	9
0531-6001	CONC SIDEWALKS (4")	SY	95
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8
0618-6016	CONDT (PVC) (SCH 40) (1")	LF	9
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	2
7091-6003	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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

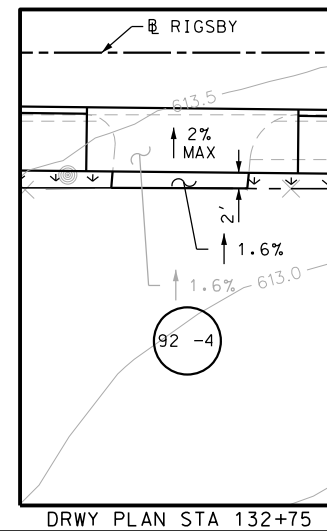
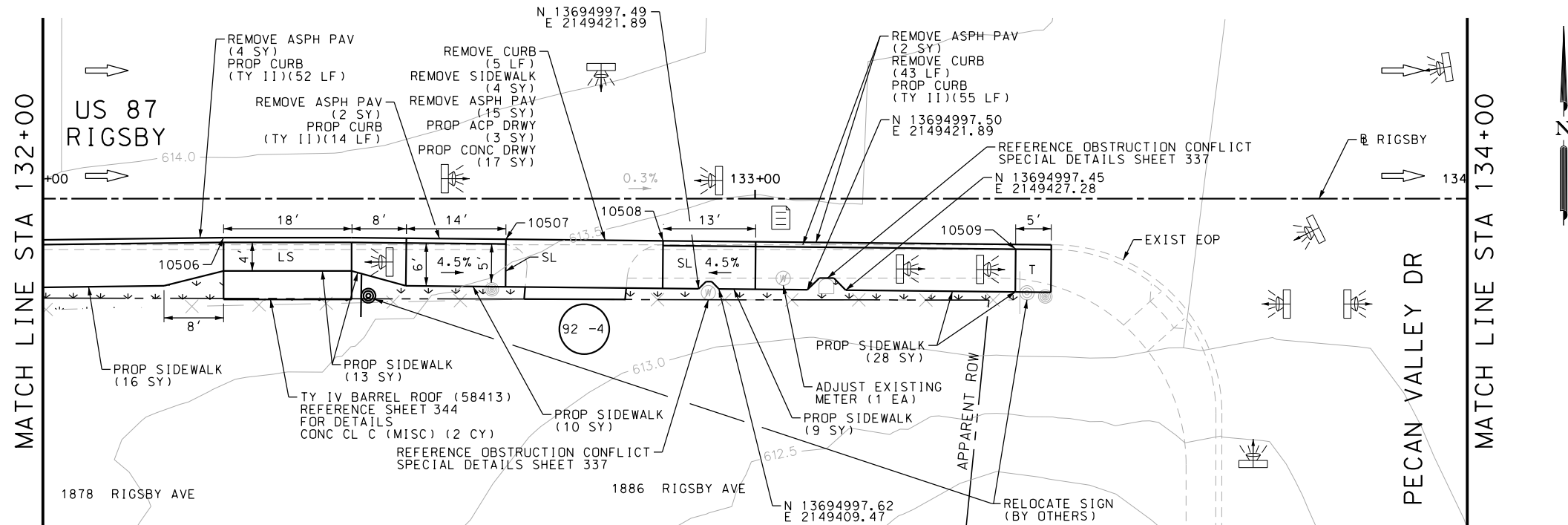


US 87
RIGSBY AVE EB
SIDEWALK
CONSTRUCTION PLAN
BEGIN PROJECT TO STA 130+00

SHEET 1 OF 23

OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK. OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK. DWG:	SAT	BEXAR	0915	12	576	91

Design Filename: P:\111\35\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*08.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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REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

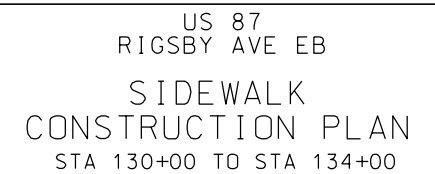
P.E. SERIAL NO: 84722

DATE: 11/21/2018

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
TBPB FIRM REGISTRATION #470 | TDBLS FIRM REGISTRATION #10028800



SHEET 2 OF 23

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	92

SEE SHEET 93 FOR POINT TABLE

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*08a.dgn

SEE SHEET 92

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.

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW


DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

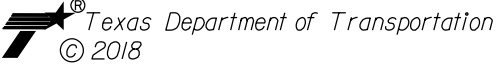
P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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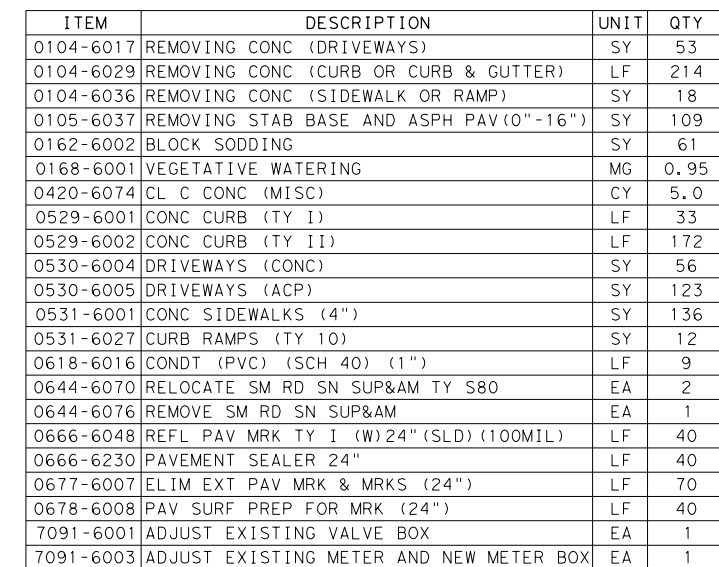
US 87
RIGSBY AVE EB

SIDEWALK
CONSTRUCTION PLAN
STA 130+00 TO STA 134+00
POINT TABLES

SHEET 3 OF 23

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	93

Design Filename: P:\11\35\07\design\Civil\Roadway\Rigsby\113507*Rigsby*09.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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

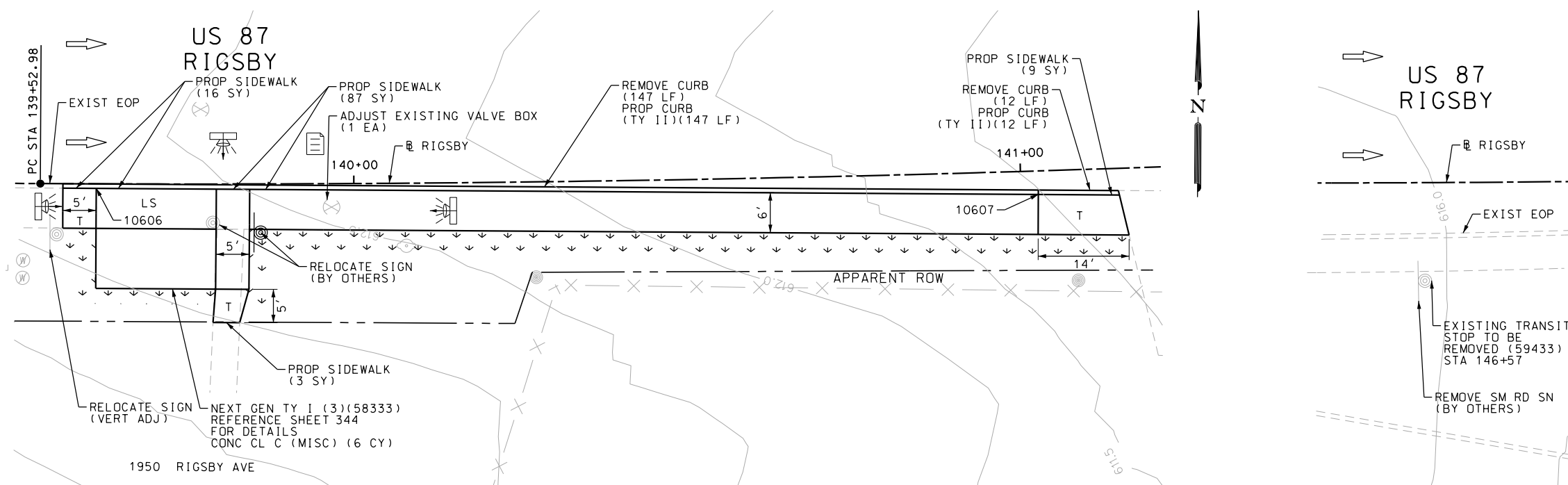
CONTRACT NO.	DATE	DESCRIPTION	BY
REV. NO.	DATE	DESCRIPTION	BY
 PAPE-DAWSON ENGINEERS			
SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800			

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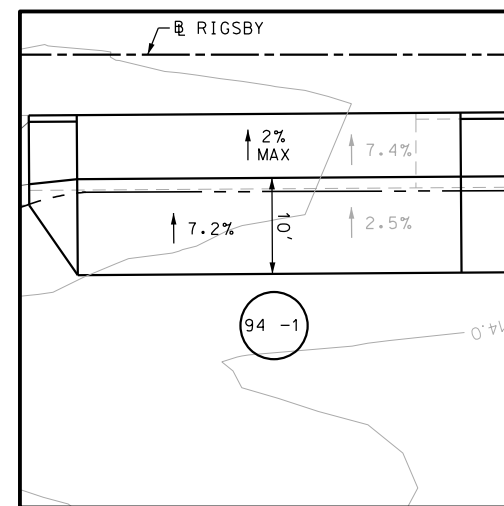
US 87
RIGSBY AVE EB
SIDEWALK
CONSTRUCTION PLAN
STA 134+00 TO STA 147+00

SHEET 4 OF 23

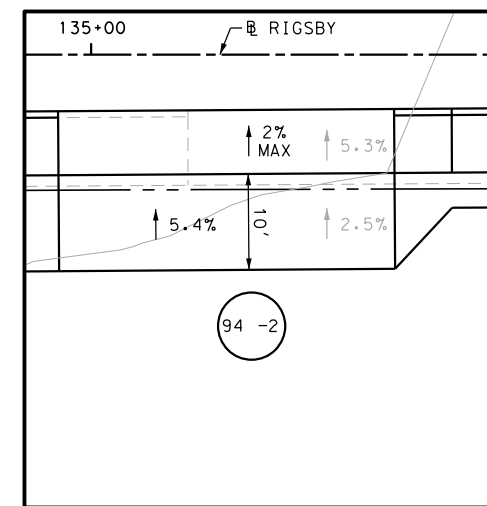
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	94



POINT	NORTHING	EASTING	ELEV	DESC
10601	13695004.03	2149549.38	--	ME.
10602	13695004.31	2149589.38	--	ME.
10603	13695004.47	2149611.13	--	ME.
10604	13695004.72	2149646.13	--	ME.
10605	13694998.22	2149669.57	--	ME.
10606	13695010.54	2150075.94	--	ME.
10607	13695009.82	2150217.24	--	ME.



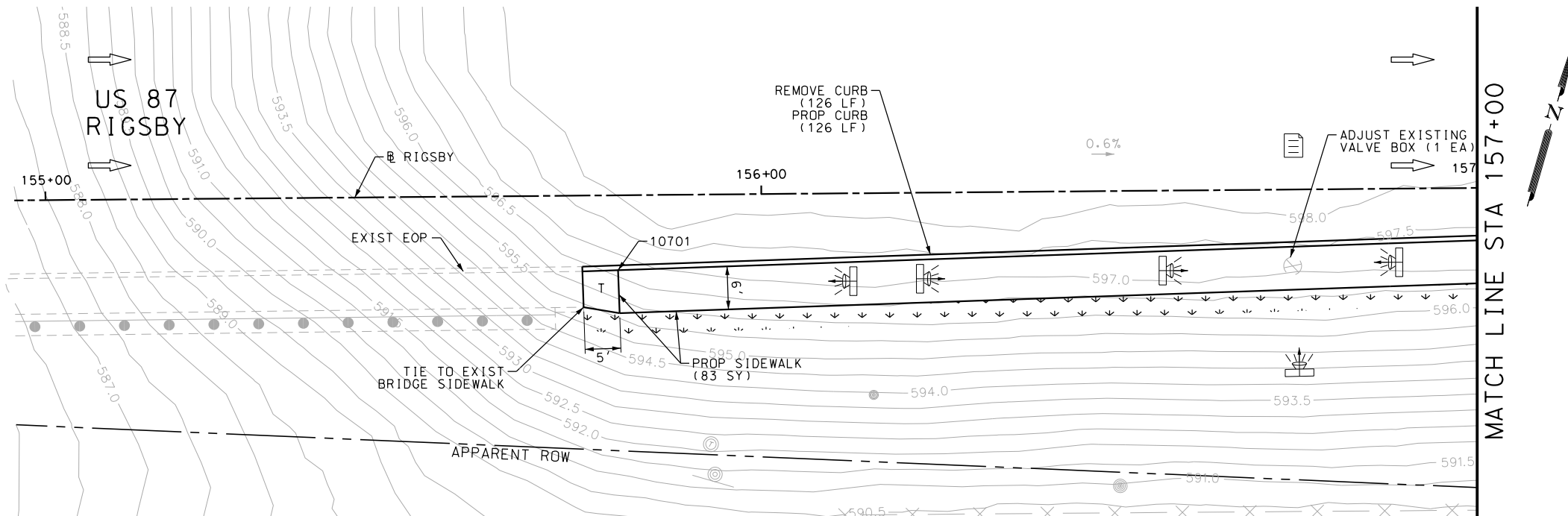
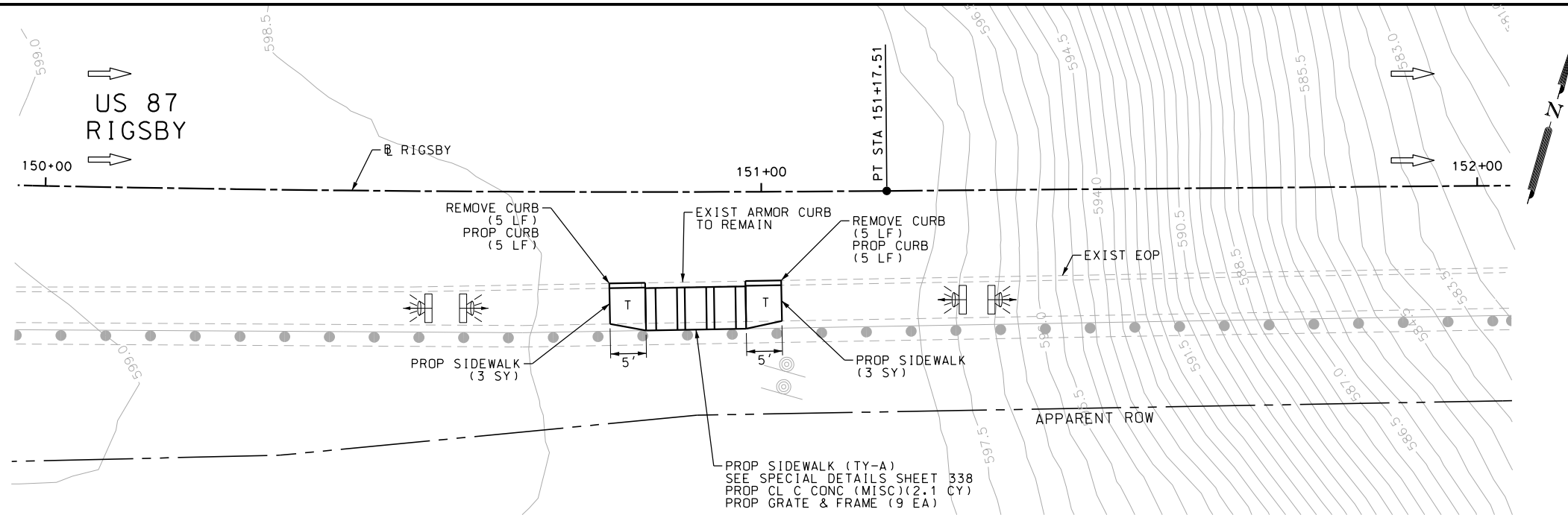
DRWY PLAN STA 134+55



DRWY PLAN STA 135+18

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*10.dgn



POINT	NORTHING	EASTING	ELEV	DESC
10701	13695298.91	2151662.27	--	ME.

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	136
0162-6002	BLOCK SODDING	SY	42
0168-6001	VEGETATIVE WATERING	MG	0.66
0420-6074	CL C CONC (MISC)	CY	2.1
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	136
0531-6001	CONC SIDEWALKS (4")	SY	89
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
- * FOR CONTRACTOR INFORMATION ONLY
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

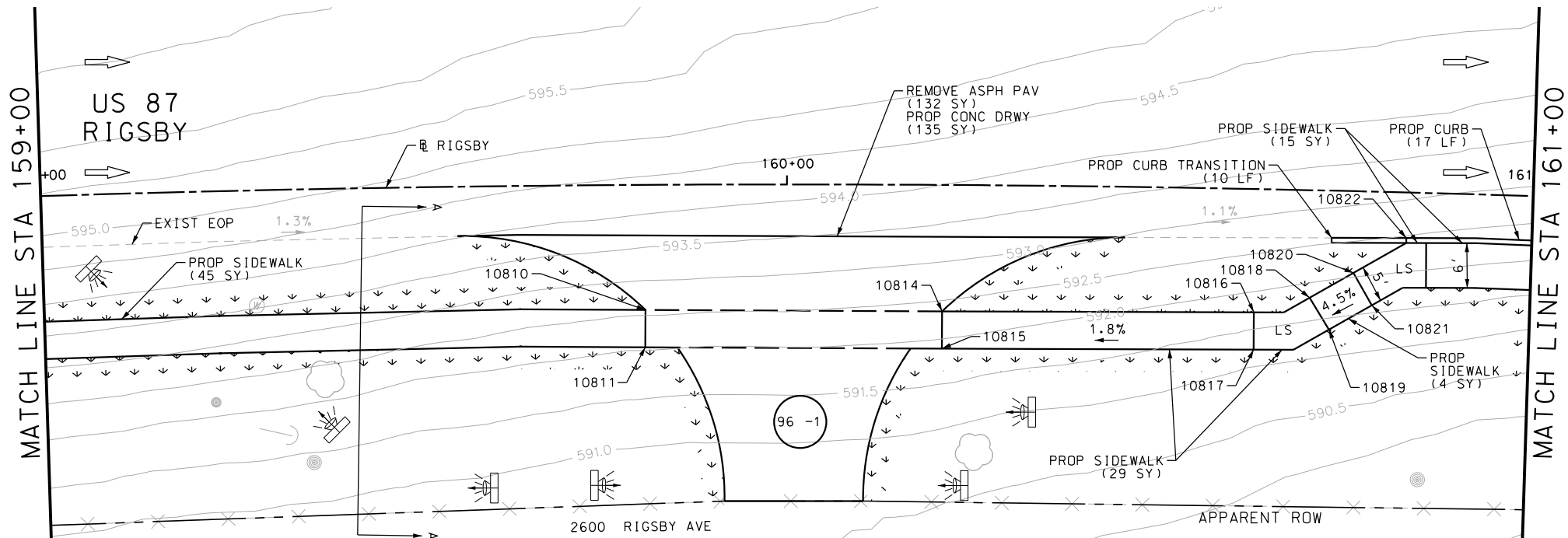
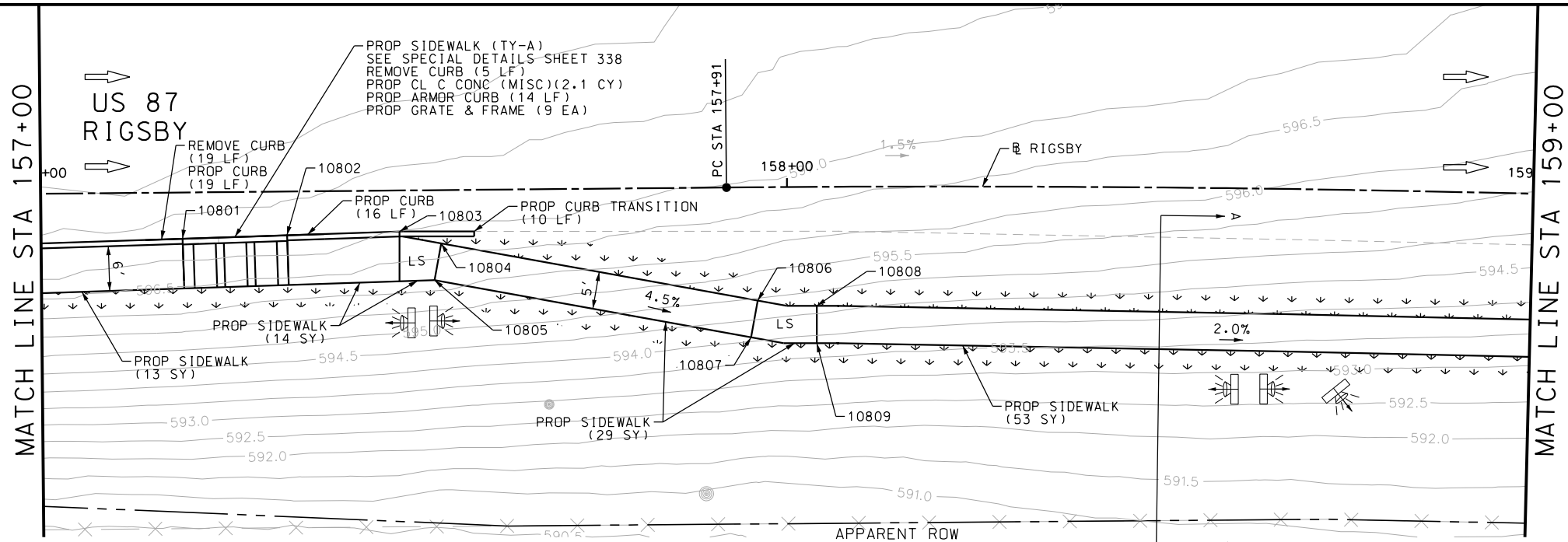
SIDEWALK
CONSTRUCTION PLAN

STA 150+00 TO STA 157+00

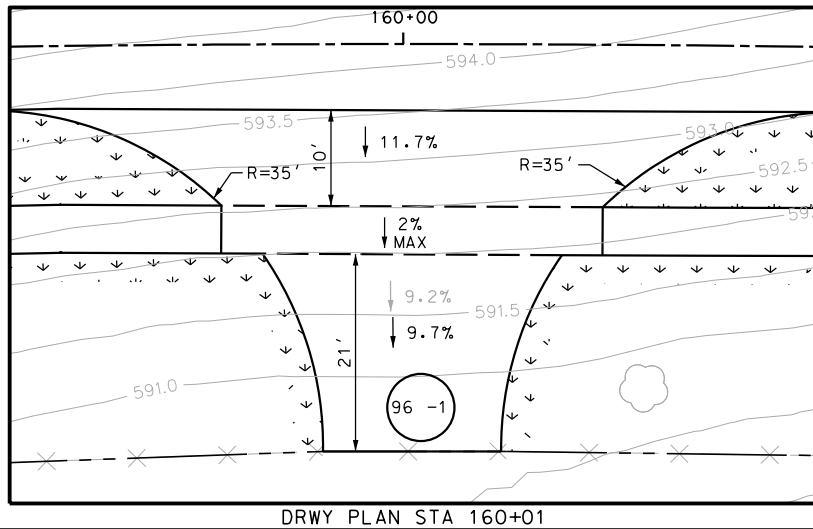
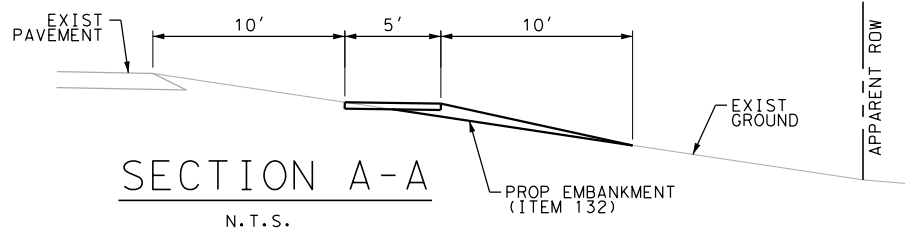
SHEET 5 OF 23					
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK DGN:	6	TEXAS			VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*11.dgn



POINT	NORTHING	EASTING	ELEV	DESC
10801	13695342.55	2151794.38	--	ME.
10802	13695346.85	2151807.70	--	ME.
10803	13695351.48	2151822.01	--	ME.
10804	13695351.50	2151827.85	597.92	PROP.
10805	13695346.52	2151828.35	597.85	PROP.
10806	13695355.82	2151870.72	595.98	PROP.
10807	13695350.84	2151871.22	595.91	PROP.
10808	13695357.32	2151878.54	595.86	PROP.
10809	13695352.52	2151879.92	595.79	PROP.
10810	13695401.28	2152049.08	592.75	PROP.
10811	13695396.40	2152050.16	592.68	PROP.
10814	13695409.90	2152087.88	592.24	PROP.
10815	13695405.02	2152088.96	592.17	PROP.
10816	13695419.03	2152128.61	593.00	PROP.
10817	13695414.15	2152129.71	592.93	PROP.
10818	13695422.59	2152135.47	593.12	PROP.
10819	13695419.00	2152138.95	593.05	PROP.
10820	13695427.13	2152140.47	593.42	PROP.
10821	13695423.43	2152143.83	593.35	PROP.
10822	13695433.25	2152146.33	--	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	35
0162-6002	BLOCK SODDING	SY	254
0168-6001	VEGETATIVE WATERING	MG	3.96
0420-6074	CL C CONC (MISC)	CY	2.1
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	72
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	135
0531-6001	CONC SIDEWALKS (4")	SY	202

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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY
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PAPE-DAWSON ENGINEERS

SAN ANTONIO | 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

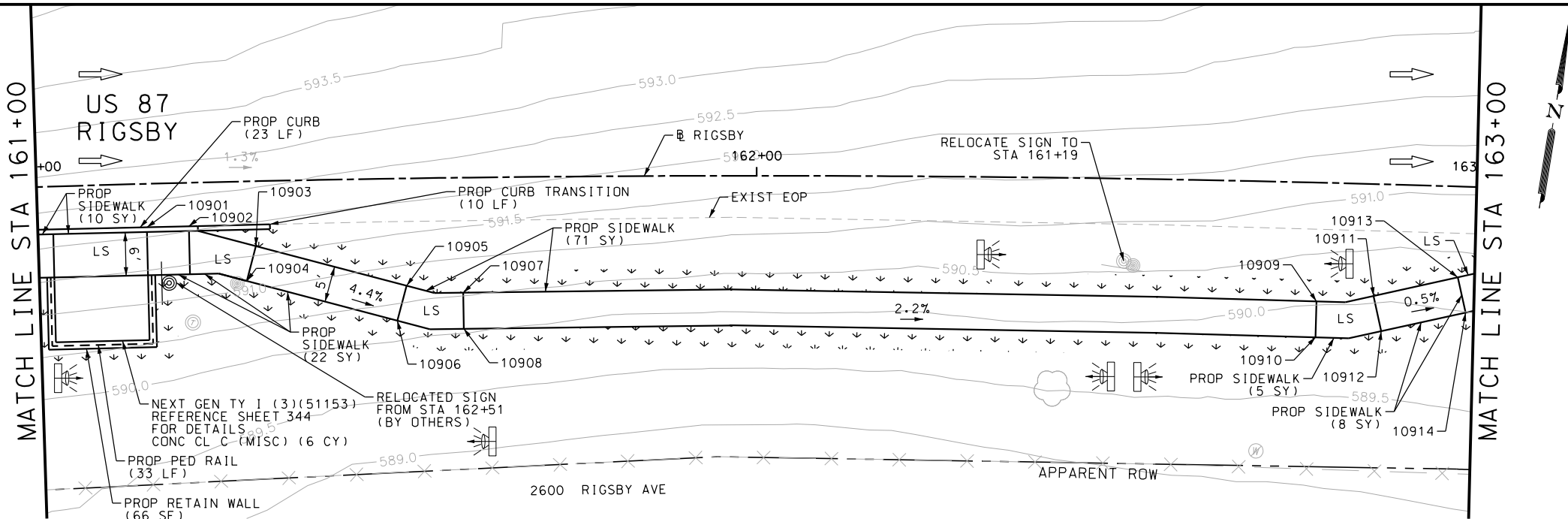
SIDEWALK
CONSTRUCTION PLAN

STA 157+00 TO STA 161+00

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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*12.dgn



ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	268
0168-6001	VEGETATIVE WATERING	MG	4.18
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	66
0450-6048	RAIL (HANDRAIL) (TY B)	LF	33
0529-6002	CONC CURB (TY II)	LF	33
0531-6001	CONC SIDEWALKS (4")	SY	228
0618-6016	CONDT (PVC) (SCH 40) (1")	LF	9
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

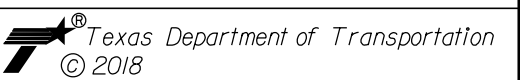
REV. NO.	DATE	DESCRIPTION	BY

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 161+00 TO STA 165+00

SHEET 7 OF 23

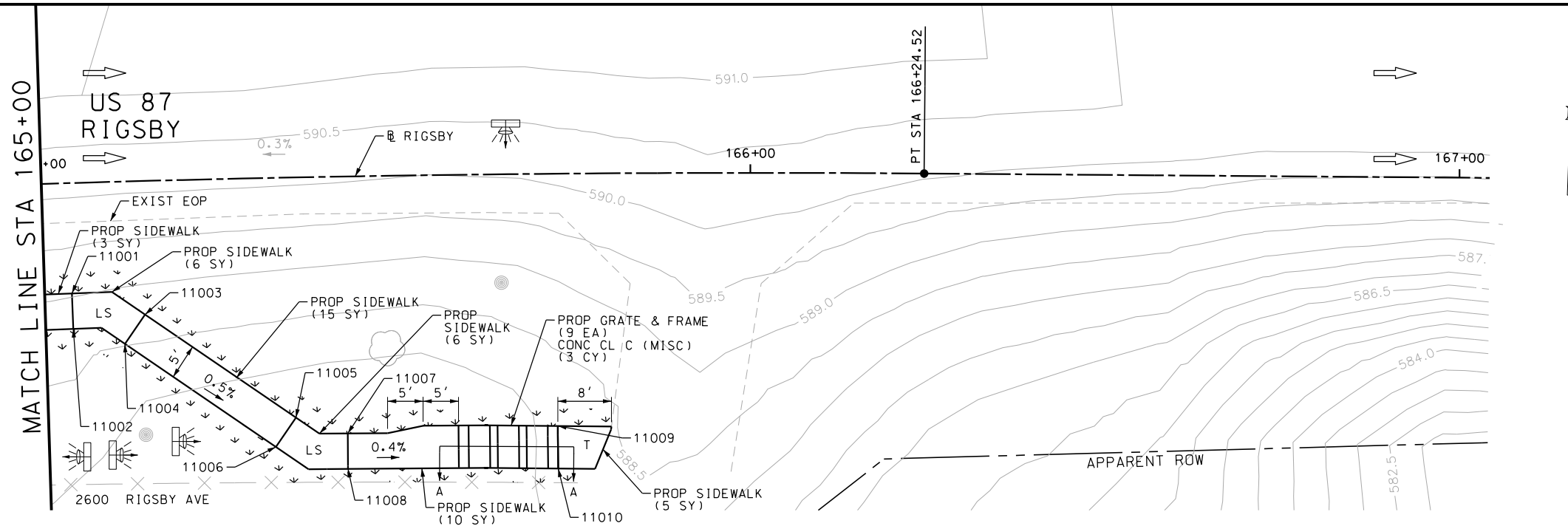
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	97

POINT	NORTHING	EASTING	ELEV	DESC
10901	13695439.45	2152177.70	--	ME.
10902	13695440.52	2152183.44	--	ME.
10903	13695439.29	2152193.06	592.88	PROP.
10904	13695434.31	2152192.58	592.95	PROP.
10905	13695437.21	2152214.59	592.07	PROP.
10906	13695432.23	2152214.11	592.00	PROP.
10907	13695437.51	2152222.51	591.99	PROP.
10908	13695432.59	2152223.37	591.92	PROP.
10909	13695455.30	2152339.62	589.40	PROP.
10910	13695450.34	2152340.28	589.33	PROP.
10911	13695457.30	2152347.30	589.35	PROP.
10912	13695452.65	2152349.14	589.28	PROP.
10913	13695461.72	2152358.46	589.29	PROP.
10914	13695457.08	2152360.30	589.22	PROP.
10915	13695463.58	2152372.53	589.17	PROP.
10916	13695458.62	2152371.95	589.10	PROP.
10917	13695462.20	2152384.45	589.15	PROP.
10918	13695457.23	2152383.87	589.08	PROP.
10919	13695462.24	2152392.39	589.13	PROP.
10920	13695457.28	2152393.03	589.05	PROP.

POINT	NORTHING	EASTING	ELEV	DESC
10921	13695463.43	2152362.75	589.25	PROP.
10922	13695464.12	2152367.94	589.21	PROP.
10923	13695463.43	2152362.75	589.18	PROP.
10924	13695459.08	2152367.98	589.14	PROP.

Plotted on: 11/21/2018

Design File name: P:\11\35\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*13.dgn



ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	86
0168-6001	VEGETATIVE WATERING	MG	1.34
0340-6066	D-GR HMA(SQ) TY-C PG76-22	TON	2.0
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	10
0420-6074	CL C CONC (MISC)	CY	9.0
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	59
0531-6001	CONC SIDEWALKS (4")	SY	85
0618-6016	CONDT (PVC) (SCH 40) (1")	LF	9
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
0644-6076	REMOVE SM RD SN SUP&AM	EA	1

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

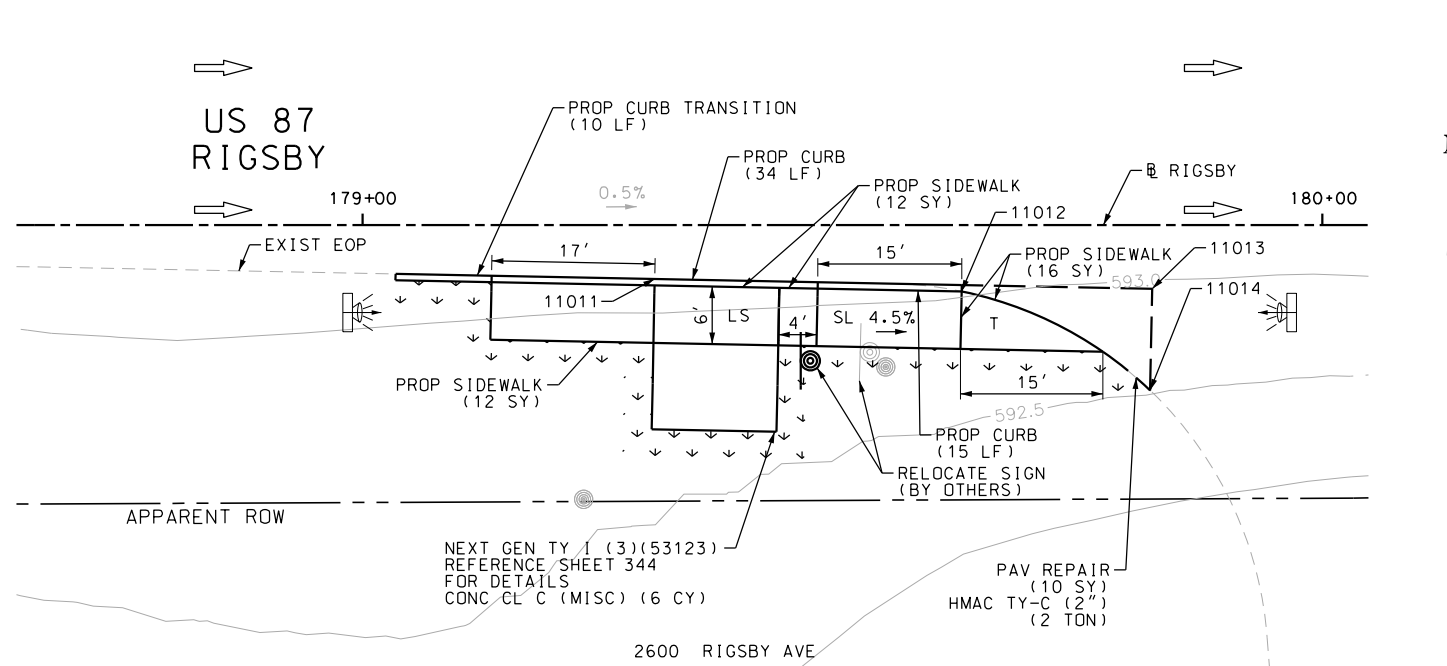
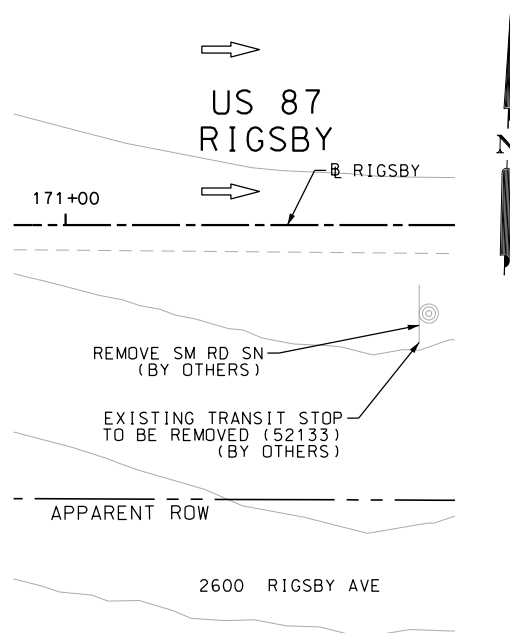
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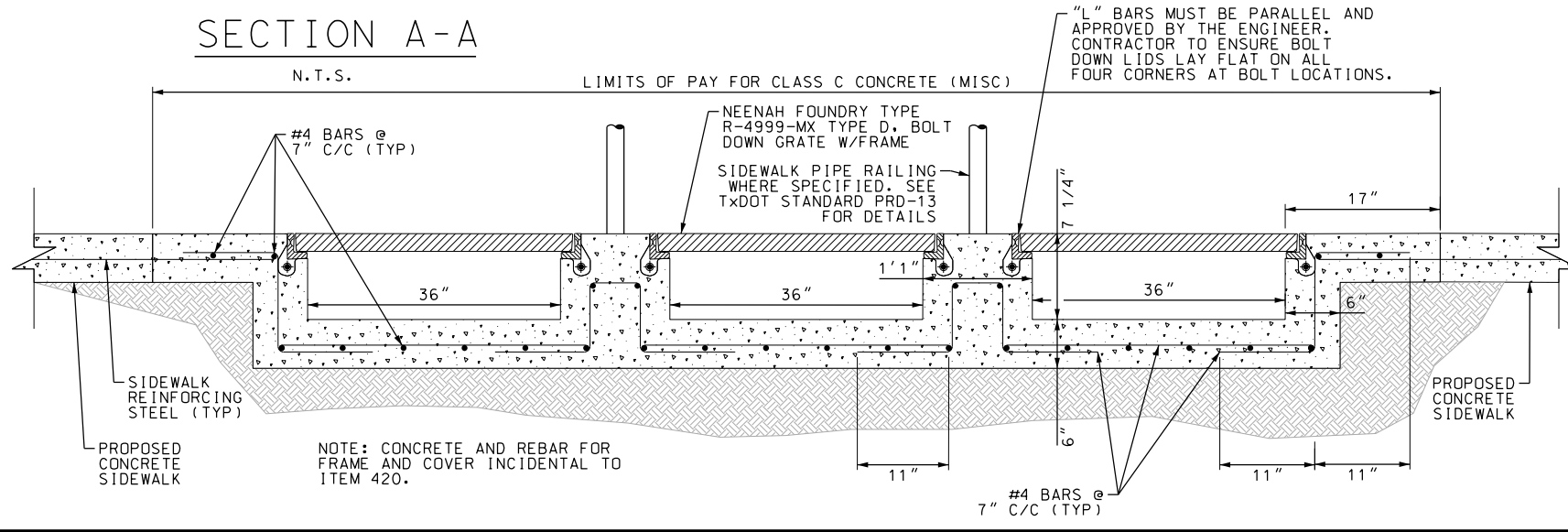
SIDEWALK
CONSTRUCTION PLAN

STA 165+00 TO STA 180+00

SHEET 8 OF 23					
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

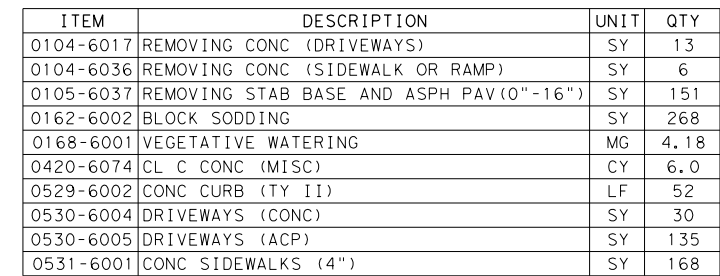


POINT	NORTHING	EASTING	ELEV	DESC
11001	13695478.85	2152562.94	589.00	PROP.
11002	13695473.87	2152563.30	588.93	PROP.
11003	13695476.25	2152573.34	588.98	PROP.
11004	13695472.02	2152570.67	588.91	PROP.
11005	13695462.49	2152595.13	588.86	PROP.
11006	13695458.26	2152592.46	588.79	PROP.
11007	13695460.53	2152602.51	588.84	PROP.
11008	13695455.53	2152602.73	588.77	PROP.
11009	13695462.63	2152632.08	588.72	PROP.
11010	13695456.64	2152632.34	588.65	PROP.
11011	13695531.18	2153987.98	--	ME.
11012	13695530.79	2154019.99	--	ME.
11013	13695531.63	2154039.82	--	ME.
11014	13695521.04	2154039.91	--	ME.



NOTE: CONCRETE AND REBAR FOR FRAME AND COVER INCIDENTAL TO ITEM 420.

Design Filename: P:\111\35\07\design\Civi\Roadway\Rigsby\1113507*Rigsby*63.dgn



NOTES:

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

**PAPE-DAWSON
ENGINEERS**

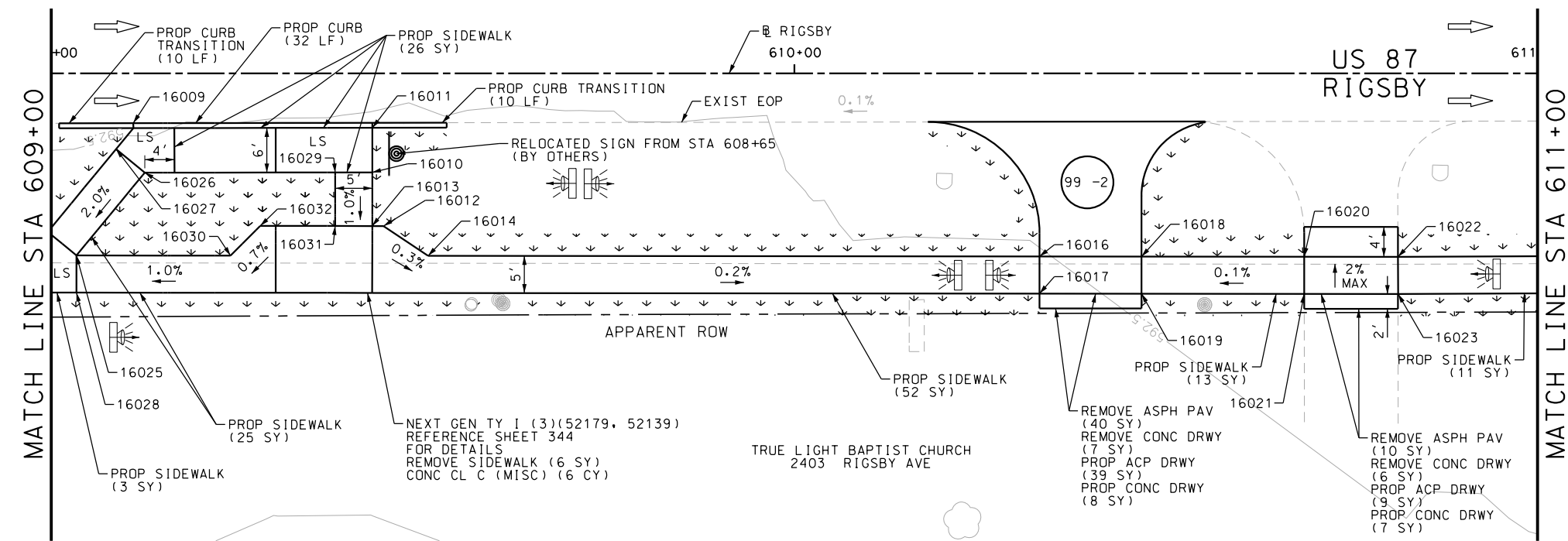
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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RIGSBY AVE WB
SIDEWALK
CONSTRUCTION PLAN
STA 607+00 TO STA 611+00

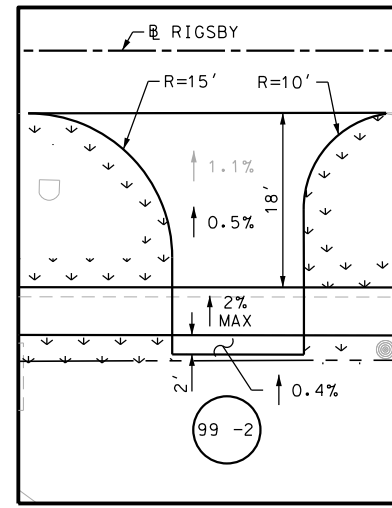
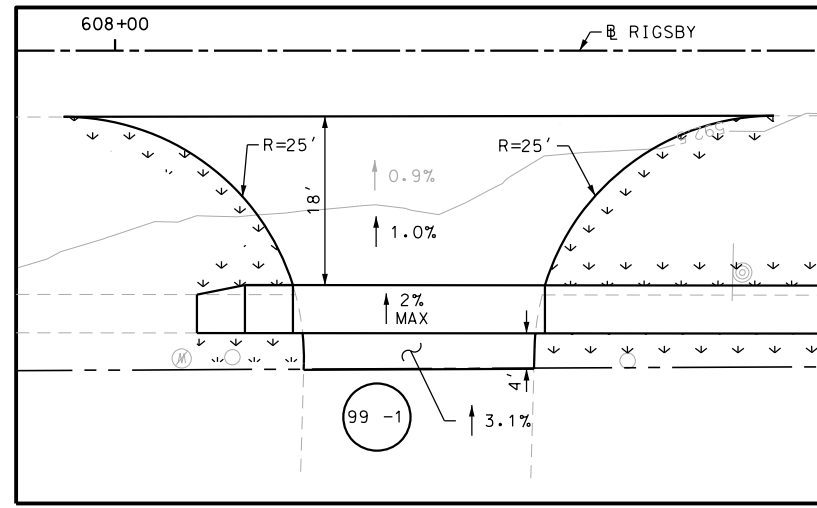
SHEET 9 OF 23

DGN _i	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN _i	6	TEXAS				VARIES
DWG _i	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG _i	SAT	BEXAR	0915	12	576	99



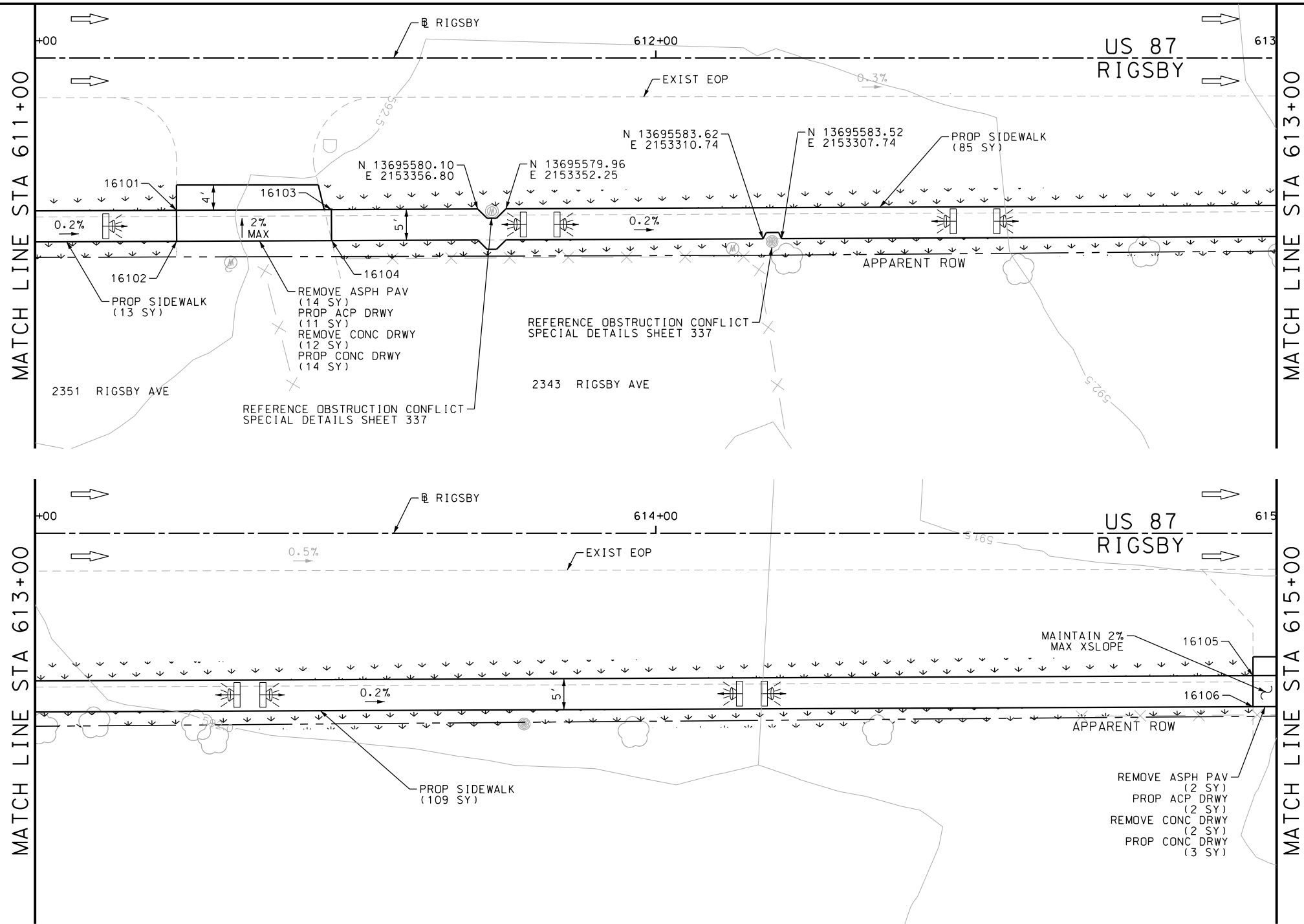
POINT	NORTHING	EASTING	ELEV	DESC
16001	13695590.27	2153714.43	592.56	PROP.
16002	13695595.27	2153714.28	592.64	PROP.
16003	13695590.14	2153709.43	592.25	PROP.
16004	13695595.14	2153709.28	592.30	PROP.
16005	13695589.43	2153683.17	592.35	PROP.
16006	13695594.42	2153683.03	592.40	PROP.
16007	13695588.01	2153631.07	592.55	PROP.
16008	13695593.01	2153630.92	592.62	PROP.
16009	13695570.49	2153617.43	--	ME.
16010	13695570.53	2153585.11	592.92	PROP.
16011	13695569.54	2153585.27	--	ME.
16012	13695582.72	2153583.41	592.84	PROP.
16013	13695582.76	2153584.92	592.85	PROP.
16014	13695586.56	2153577.29	592.82	PROP.
16016	13695584.32	2153495.05	592.68	PROP.
16017	13695589.32	2153494.92	592.72	PROP.
16018	13695583.95	2153481.33	592.67	PROP.
16019	13695588.95	2153481.19	592.68	PROP.
16020	13695583.36	2153459.45	592.66	PROP.
16021	13695588.36	2153459.31	592.74	PROP.

POINT	NORTHING	EASTING	ELEV	DESC
16022	13695583.02	2153446.84	592.63	PROP.
16023	13695588.02	2153446.67	592.70	PROP.
16024	13695584.77	2153628.54	592.60	PROP.
16025	13695587.84	2153624.59	592.55	PROP.
16026	13695576.44	2153615.73	592.90	PROP.
16027	13695573.37	2153619.67	592.94	PROP.
16029	13695575.68	2153590.11	592.91	PROP.
16030	13695587.27	2153603.87	592.74	PROP.
16031	13695582.89	2153589.91	592.84	PROP.
16032	13695583.17	2153599.98	592.78	PROP.



Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*64.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	14
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	16
0162-6002	BLOCK SODDING	SY	243
0168-6001	VEGETATIVE WATERING	MG	3.79
0530-6004	DRIVEWAYS (CONC)	SY	17
0530-6005	DRIVEWAYS (ACP)	SY	13
0531-6001	CONC SIDEWALKS (4")	SY	207

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
16101	13695581.67	2153405.29	592.56	PROP.
16102	13695586.67	2153405.13	592.63	PROP.
16103	13695580.87	2153380.35	592.53	PROP.
16104	13695585.86	2153380.19	592.60	PROP.
16105	13695569.60	2153032.08	591.93	PROP.
16106	13695574.60	2153031.92	592.00	PROP.

PAPE-DAWSON ENGINEERS

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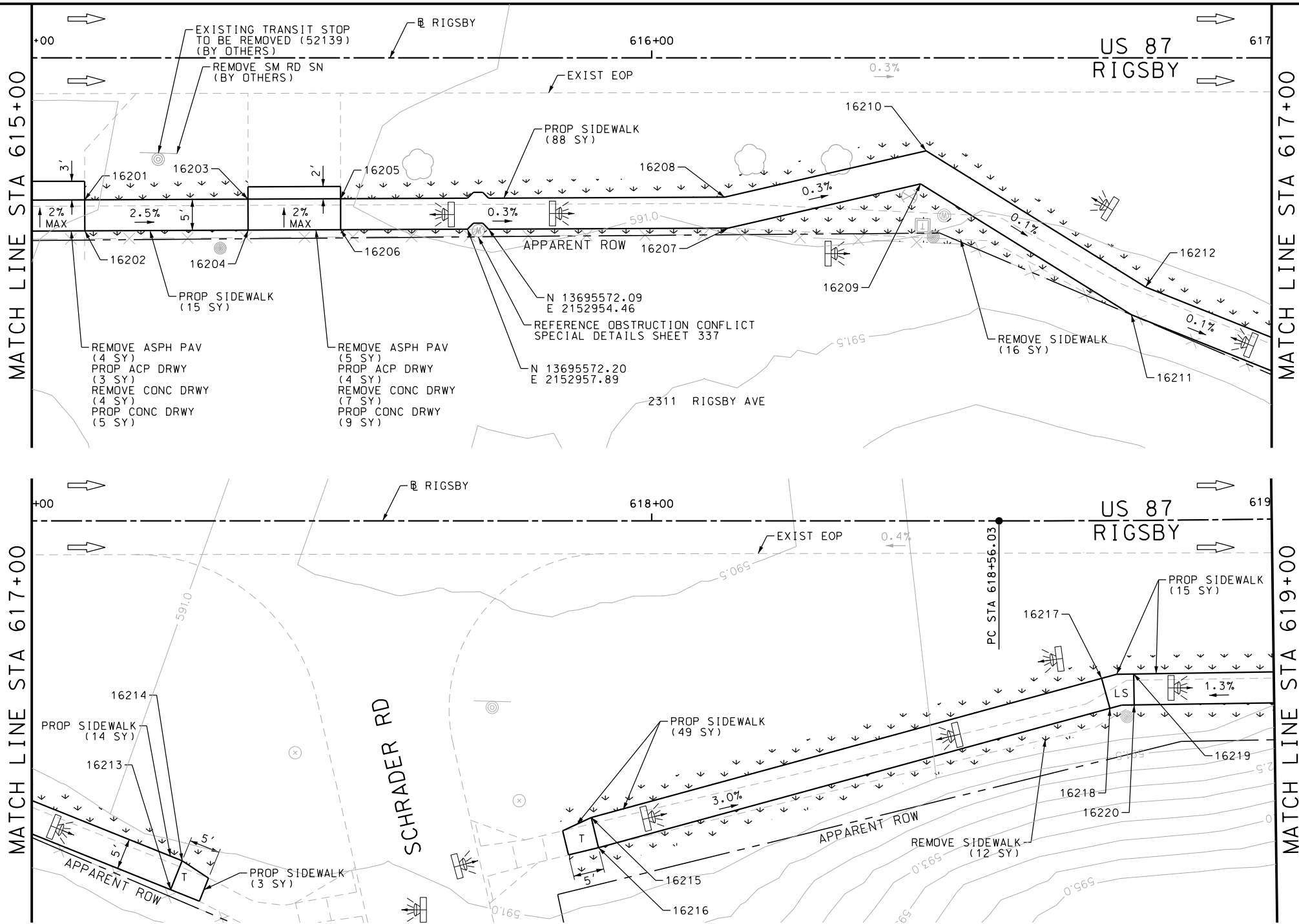
SIDEWALK
CONSTRUCTION PLAN
STA 611+00 TO STA 615+00

SHEET 10 OF 23

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	100

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*65.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	11
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	28
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	9
0162-6002	BLOCK SODDING	SY	199
0168-6001	VEGETATIVE WATERING	MG	3.10
0530-6004	DRIVEWAYS (CONC)	SY	14
0530-6005	DRIVEWAYS (ACP)	SY	7
0531-6001	CONC SIDEWALKS (4")	SY	184

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ENGINEER: JOHN A. TYLER

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P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
16201	13695569.20	2153019.74	592.03	PROP.
16202	13695574.20	2153019.58	592.10	PROP.
16203	13695568.35	2152993.42	591.36	PROP.
16204	13695573.34	2152993.26	591.43	PROP.
16205	13695567.86	2152978.49	591.22	PROP.
16206	13695572.86	2152978.33	591.29	PROP.
16207	13695570.84	2152915.85	591.07	PROP.
16208	13695565.86	2152916.57	591.00	PROP.
16209	13695557.46	2152884.28	590.90	PROP.
16210	13695562.82	2152885.02	590.83	PROP.
16211	13695582.97	2152850.42	591.02	PROP.
16212	13695578.43	2152848.28	590.95	PROP.
16213	13695599.76	2152804.94	591.23	PROP.
16214	13695595.07	2152803.21	591.16	PROP.
16215	13695586.22	2152737.43	590.98	PROP.
16216	13695591.05	2152736.12	591.05	PROP.
16217	13695561.46	2152655.77	588.50	PROP.
16218	13695566.27	2152654.31	588.57	PROP.
16219	13695560.61	2152650.61	588.56	PROP.
16220	13695565.60	2152650.40	588.63	PROP.

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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**SIDEWALK
CONSTRUCTION PLAN**

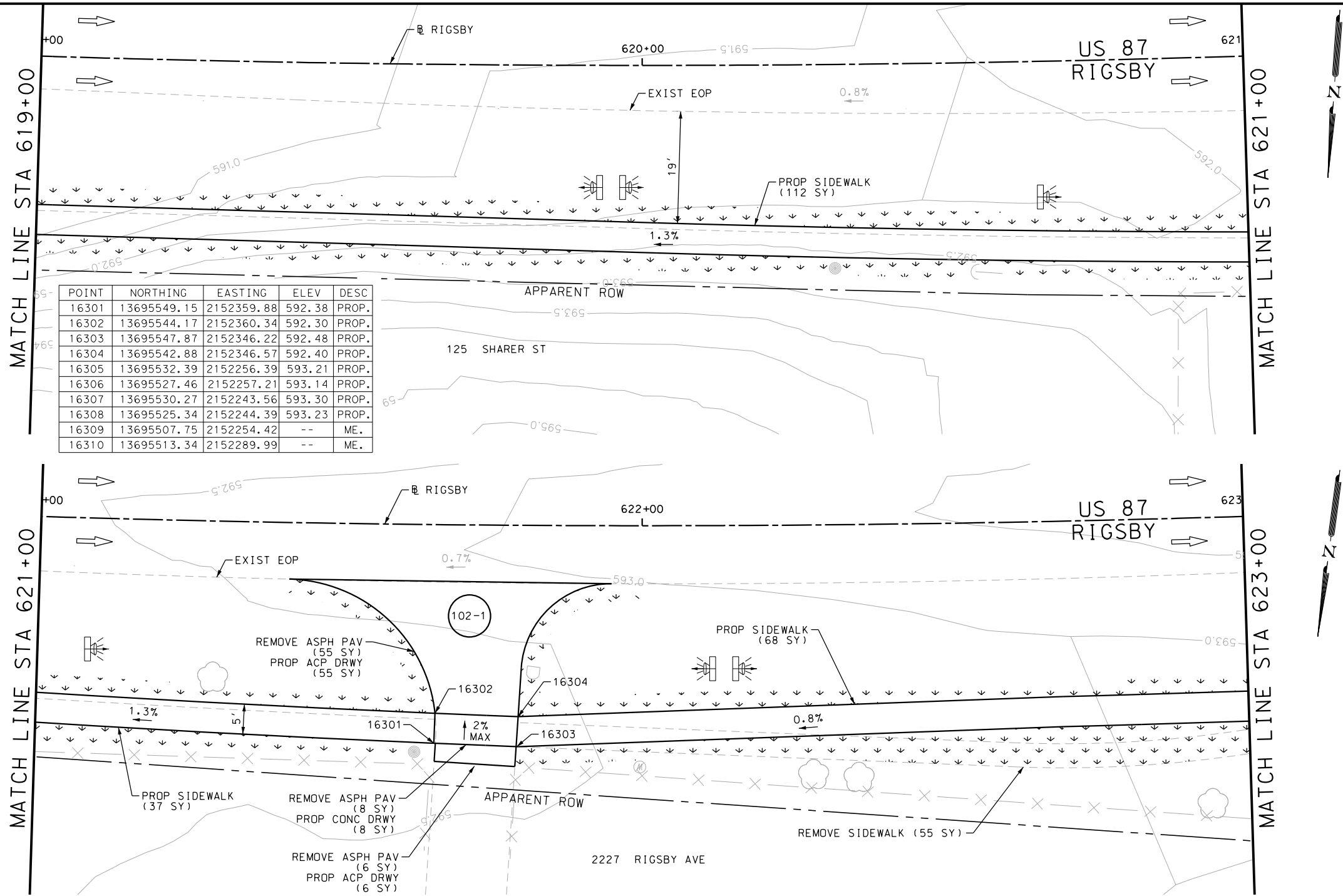
STA 615+00 TO STA 619+00

SHEET 11 OF 23

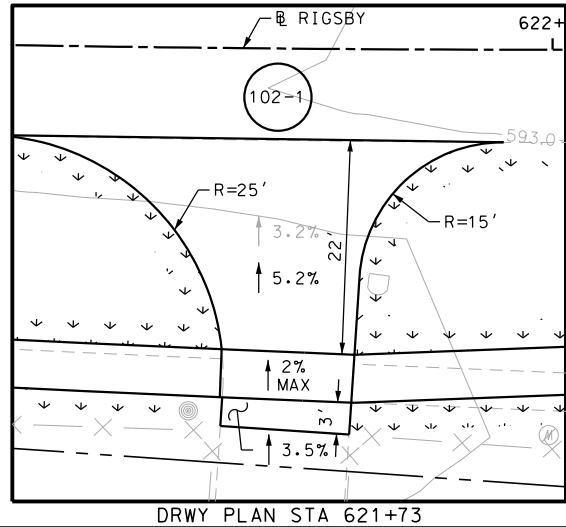
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DWG:	6	TEXAS		VARIES
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				101

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*66.dgn



POINT	NORTHING	EASTING	ELEV	DESC
16301	13695549.15	2152359.88	592.38	PROP.
16302	13695544.17	2152360.34	592.30	PROP.
16303	13695547.87	2152346.22	592.48	PROP.
16304	13695542.88	2152346.57	592.40	PROP.
16305	13695532.39	2152256.39	593.21	PROP.
16306	13695527.46	2152257.21	593.14	PROP.
16307	13695530.27	2152243.56	593.30	PROP.
16308	13695525.34	2152244.39	593.23	PROP.
16309	13695507.75	2152254.42	--	ME.
16310	13695513.34	2152289.99	--	ME.



ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	42
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	69
0162-6002	BLOCK SODDING	SY	340
0168-6001	VEGETATIVE WATERING	MG	5.30
0420-6074	CL C CONC (MISC)	CY	9.0
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	90
0530-6004	DRIVEWAYS (CONC)	SY	8
0530-6005	DRIVEWAYS (ACP)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	235

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

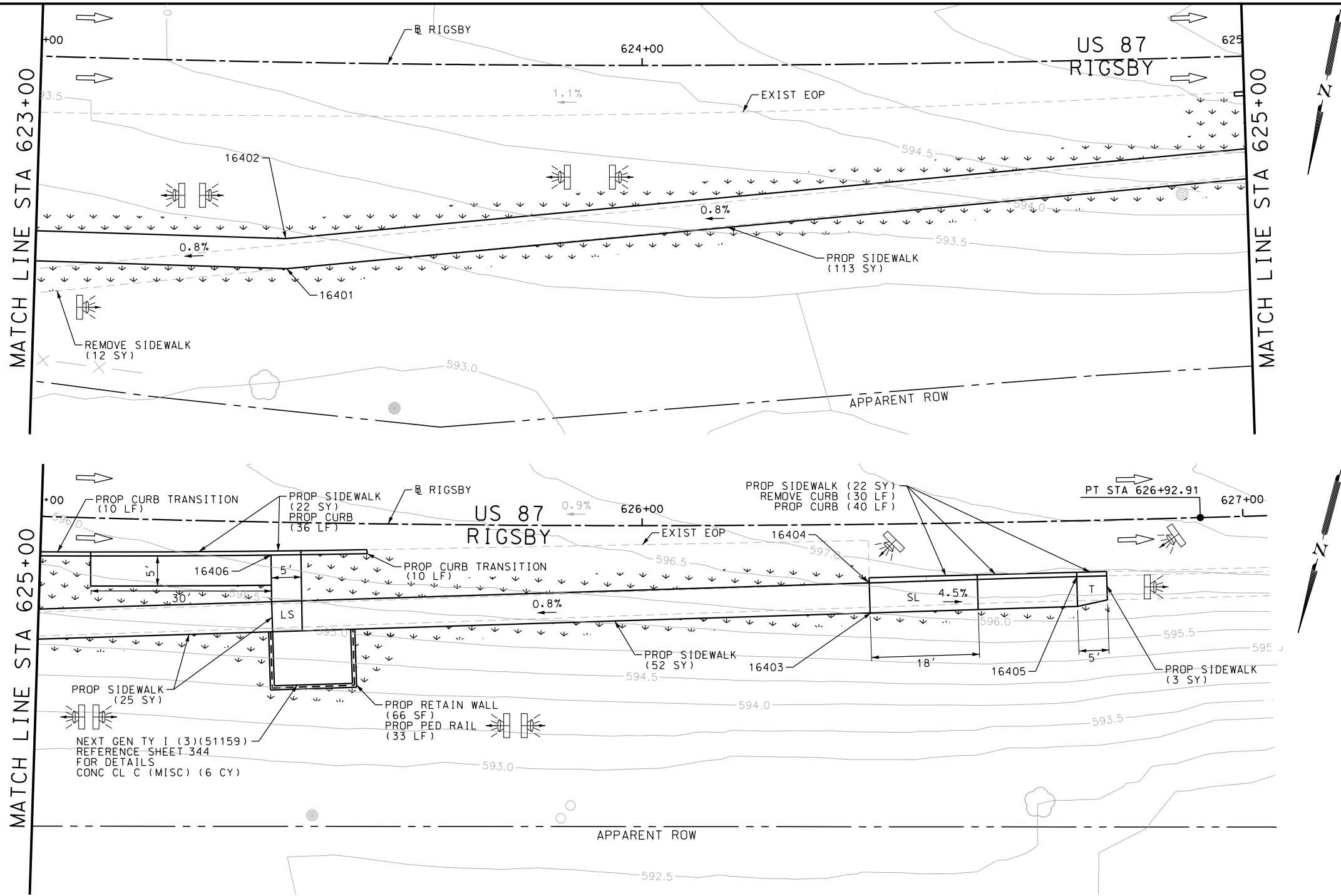
SIDEWALK
CONSTRUCTION PLAN

STA 619+00 TO STA 623+00

SHEET 12 OF 23					
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

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*67.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	30
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0162-6002	BLOCK SODDING	SY	220
0168-6001	VEGETATIVE WATERING	MG	3.43
0529-6002	CONC CURB (TY II)	LF	40
0531-6001	CONC SIDEWALKS (4")	SY	215

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

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INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

POINT	NORTHING	EASTING	ELEV	DESC
16401	13695520.44	2152184.55	593.80	PROP.
16402	13695515.56	2152185.68	593.73	PROP.
16403	13695435.14	2151897.87	598.46	PROP.
16404	13695430.35	2151899.30	598.39	PROP.
16405	13695420.54	2151866.15	--	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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US 87
RIGSBY AVE WB

SIDEWALK
CONSTRUCTION PLAN

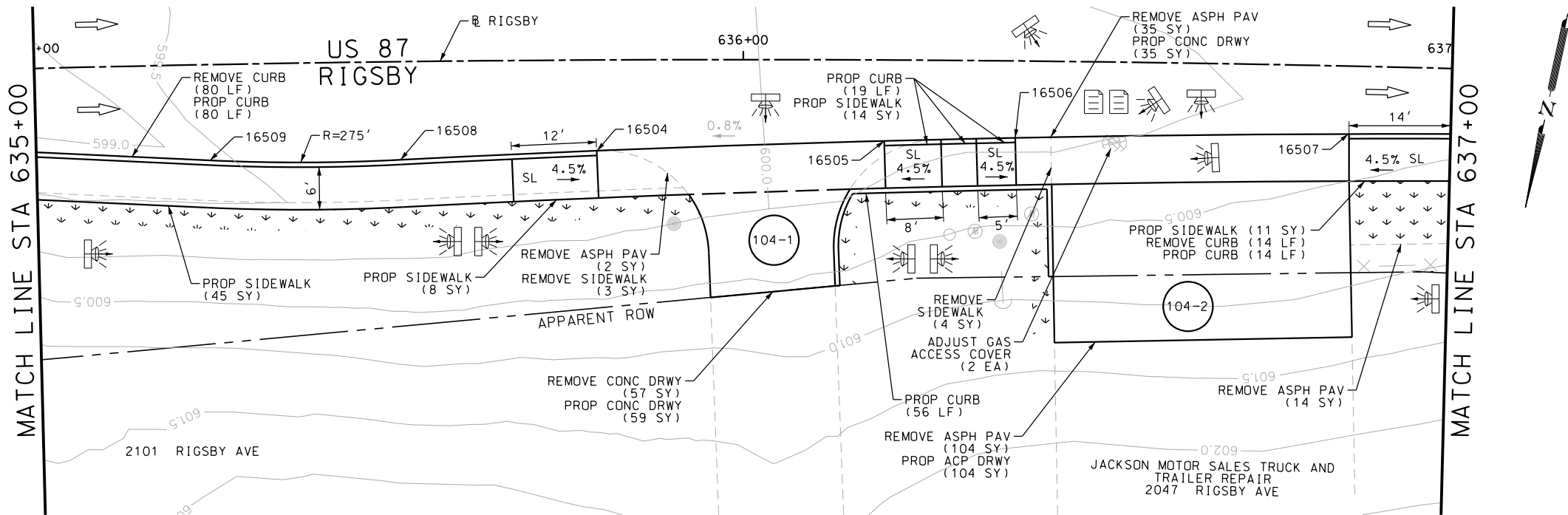
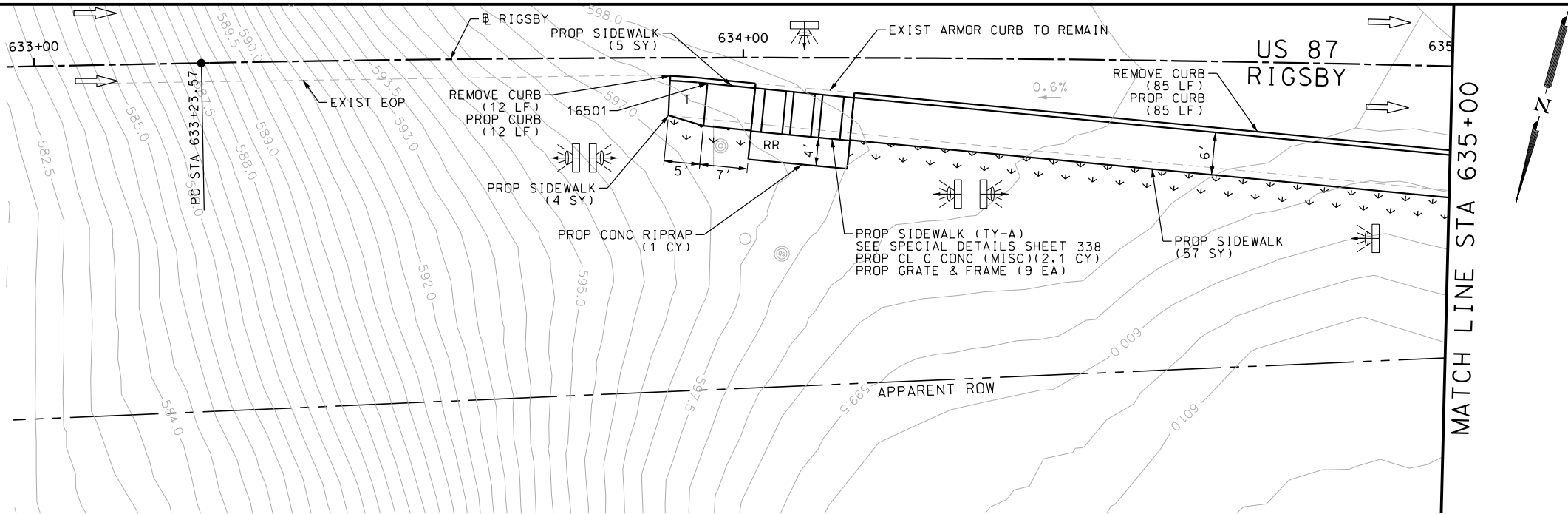
STA 623+00 TO STA 627+00

SHEET 13 OF 23

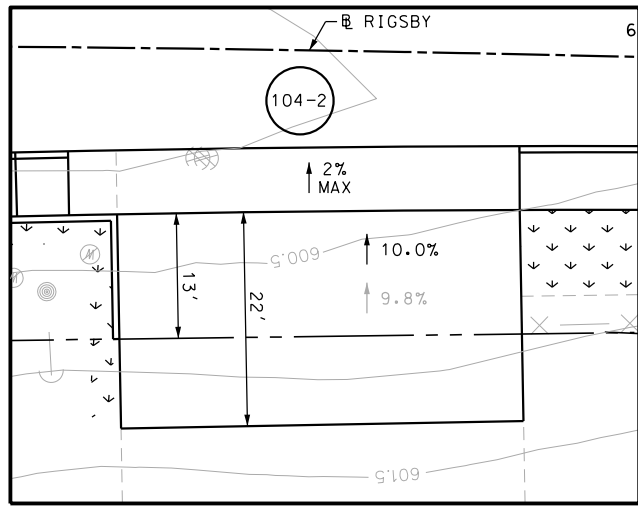
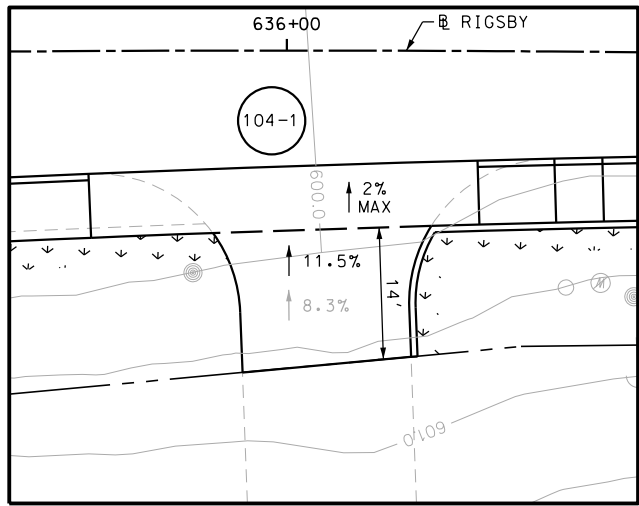
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				103

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*68.dgn



POINT	NORTHING	EASTING	ELEV	DESC
16501	13695211.56	2151174.18	--	ME.
16504	13695175.76	2150993.55	--	ME.
16505	13695165.67	2150954.27	--	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	57
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
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	1
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY I)	LF	266
0530-6004	DRIVEWAYS (CONC)	SY	94
0530-6005	DRIVEWAYS (ACP)	SY	104
0531-6001	CONC SIDEWALKS (4")	SY	144
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	2

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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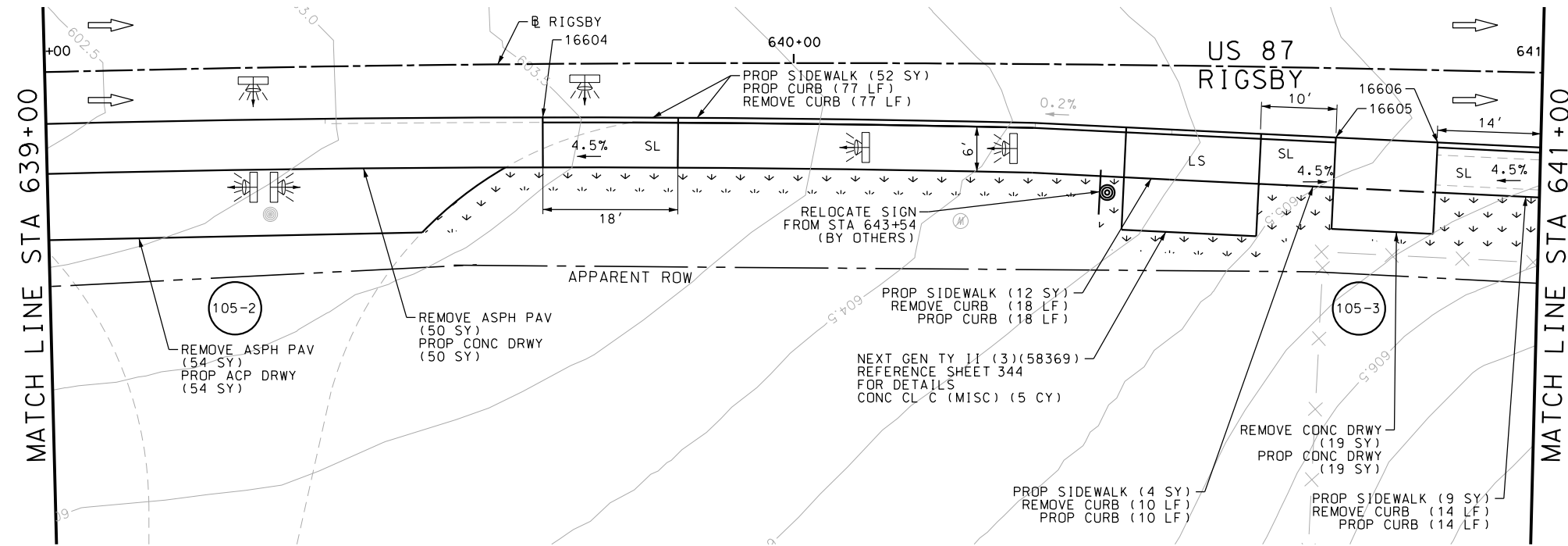
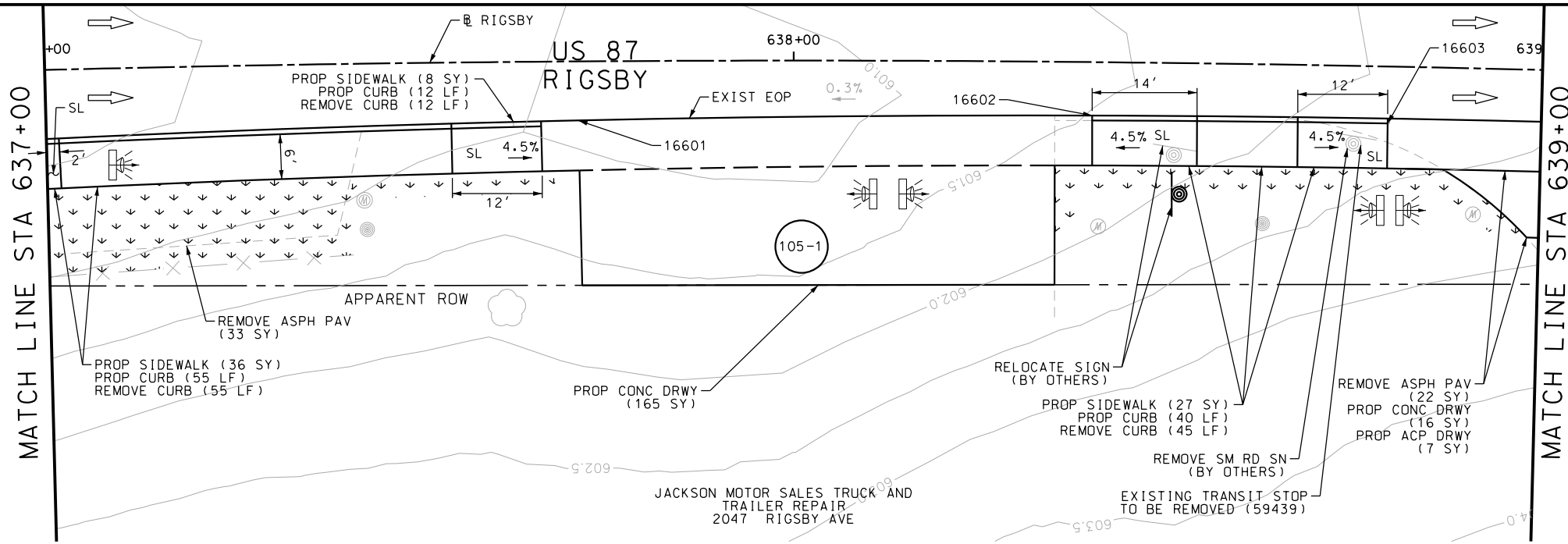
SIDEWALK
CONSTRUCTION PLAN

STA 633+00 TO STA 637+00

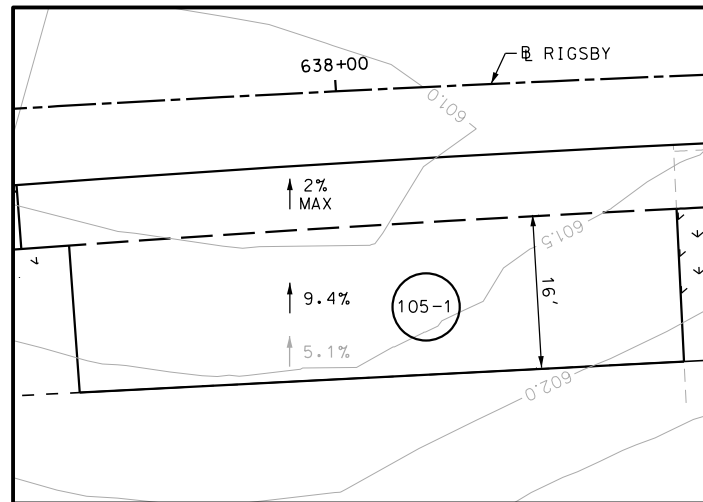
SHEET 14 OF 23					
DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK DGN:	6	TEXAS			VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

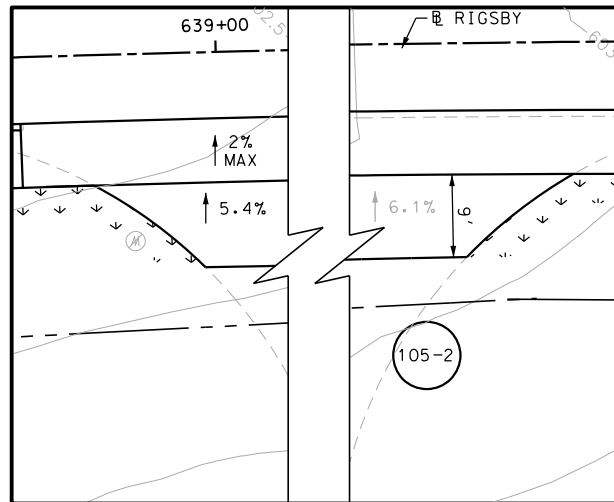
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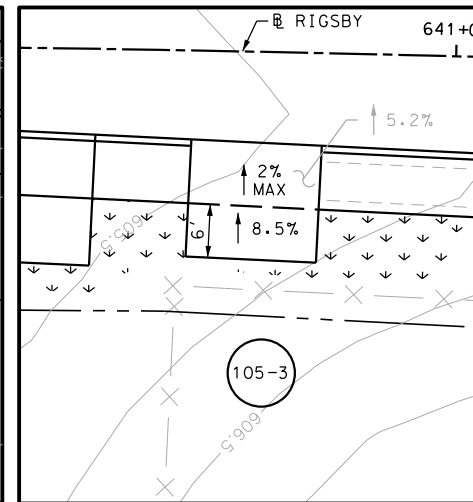
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16602	13695121.19	2150739.33	--	ME.
16603	13695115.02	2150700.35	--	ME.
16604	13695103.42	2150614.29	--	ME.
16605	13695093.69	2150508.82	--	ME.
16606	13695092.76	2150495.25	--	ME.



DRY PLAN STA 637+96



DRY PLAN STA 639+24



DRY PLAN STA 639+24

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	19
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	231
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	159
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0420-6074	CL C CONC (MISC)	CY	5.0
0529-6002	CONC CURB (TY II)	LF	226
0530-6004	DRIVEWAYS (CONC)	SY	263
0530-6005	DRIVEWAYS (ACP)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	148
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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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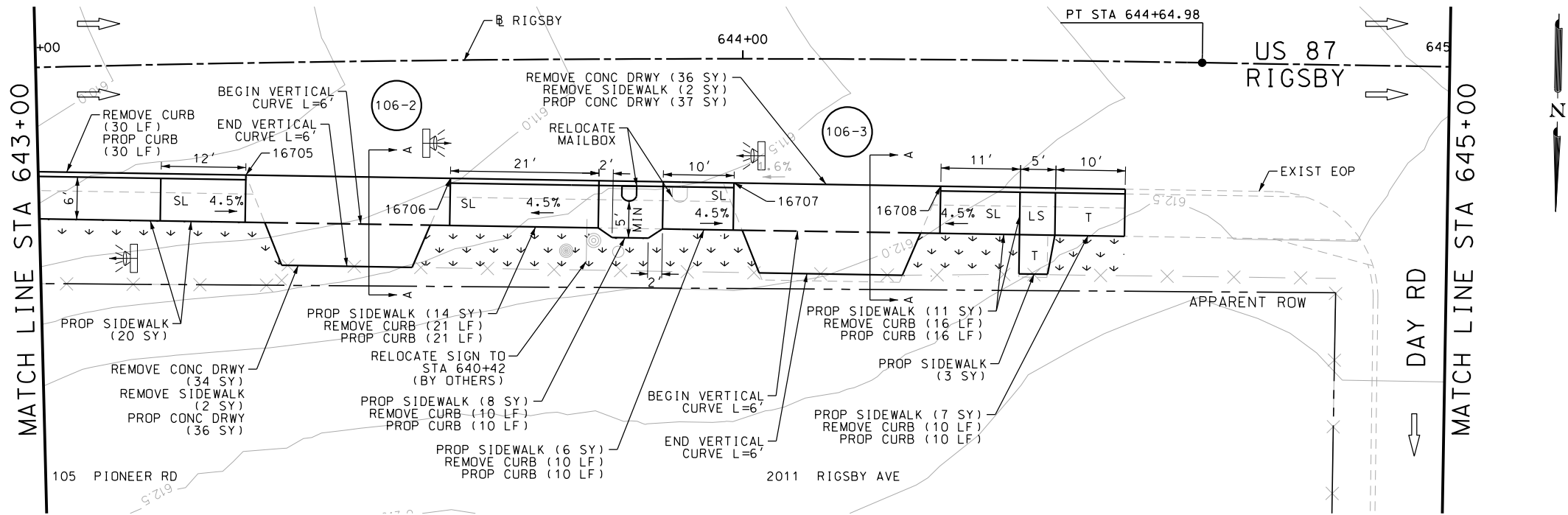
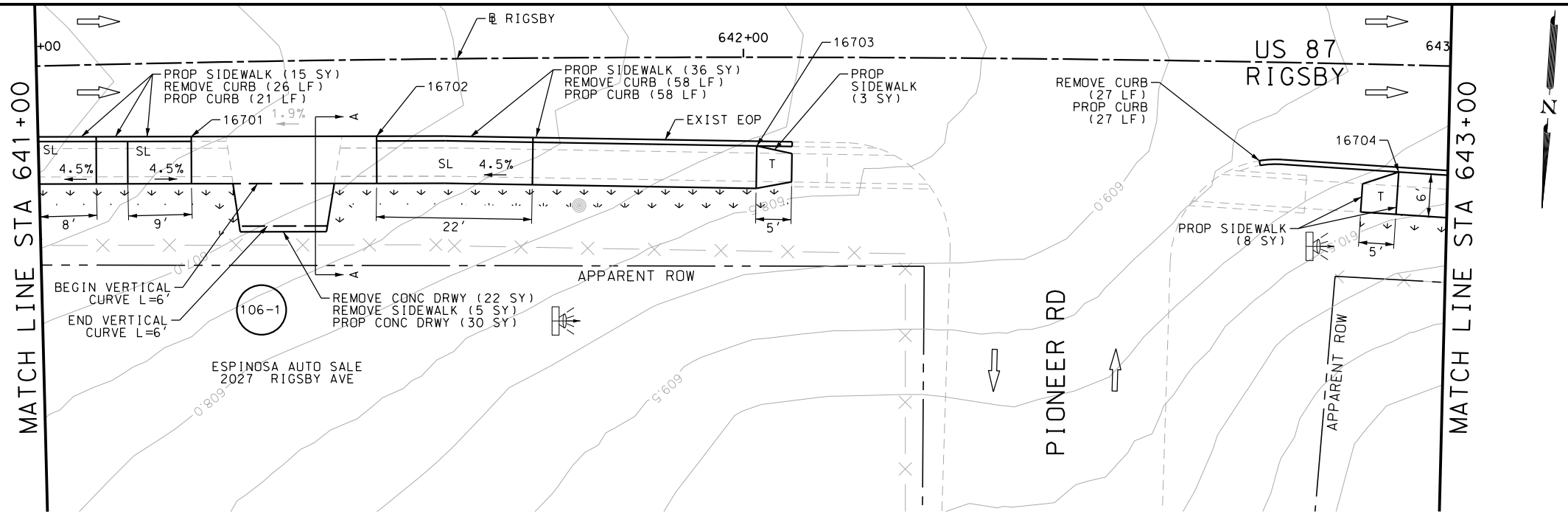
US 87
RIGSBY AVE WB
SIDEWALK
CONSTRUCTION PLAN
STA 637+00 TO STA 641+00

SHEET 15 OF 23

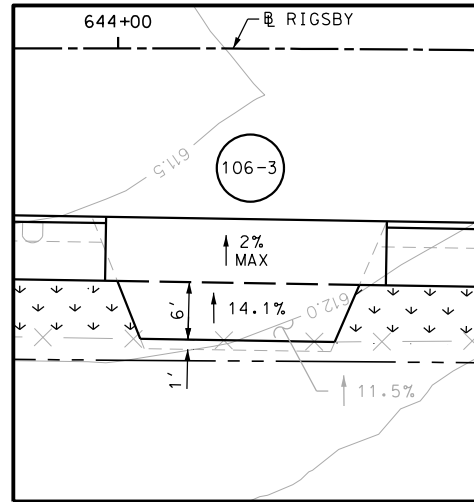
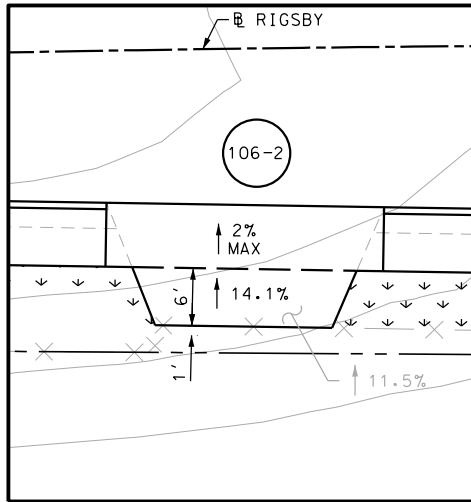
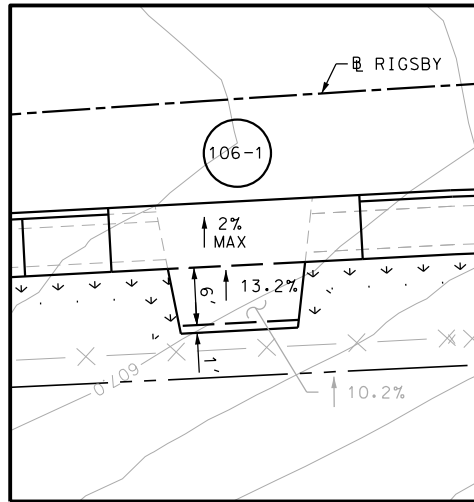
OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	105

Plotted on: 11/21/2018

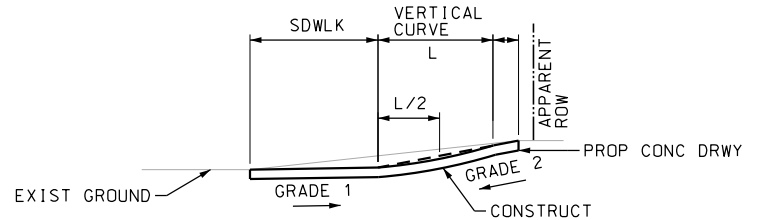
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POINT	NORTHING	EASTING	ELEV	DESC
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16702	13695088.54	2150433.74	--	ME.
16703	13695086.33	2150380.00	--	ME.
16704	13695083.94	2150289.19	--	ME.
16705	13695083.24	2150252.92	--	ME.
16706	13695083.21	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
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



SECTION A-A

- NOTES:
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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

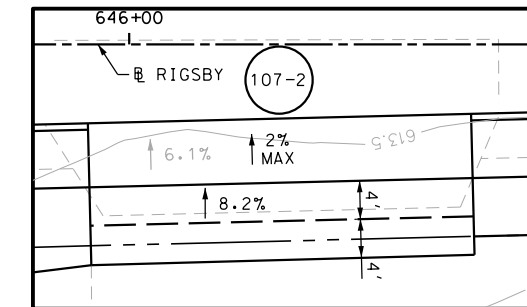
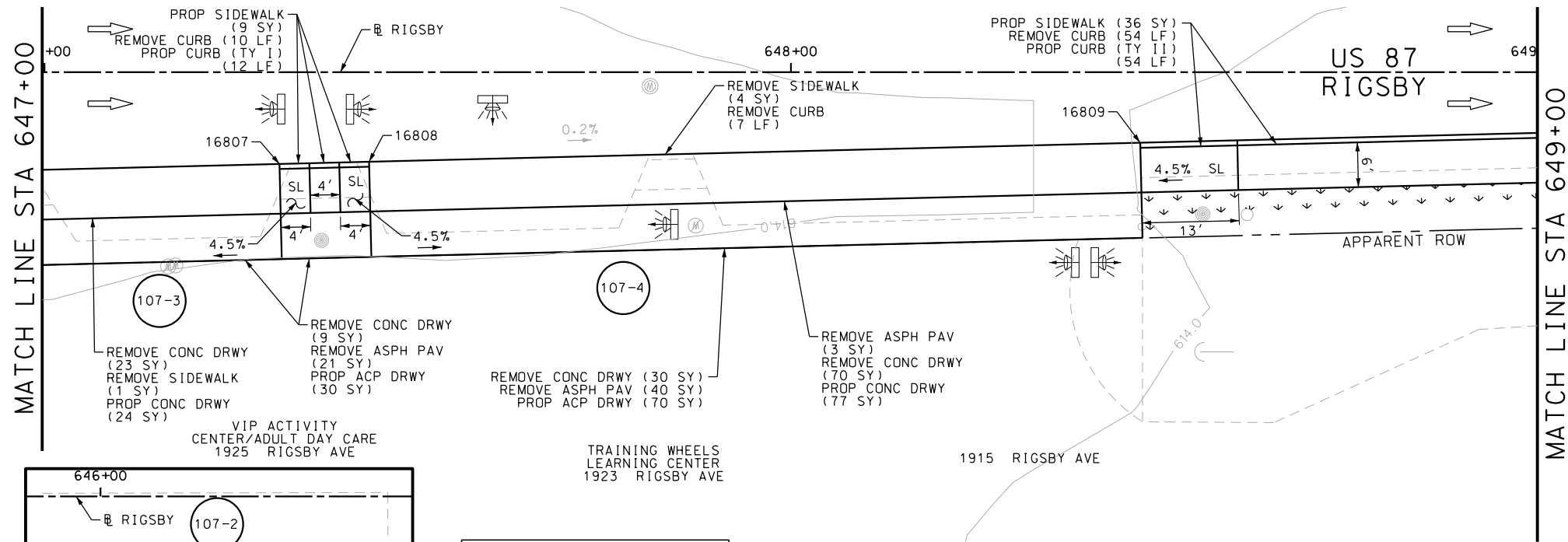
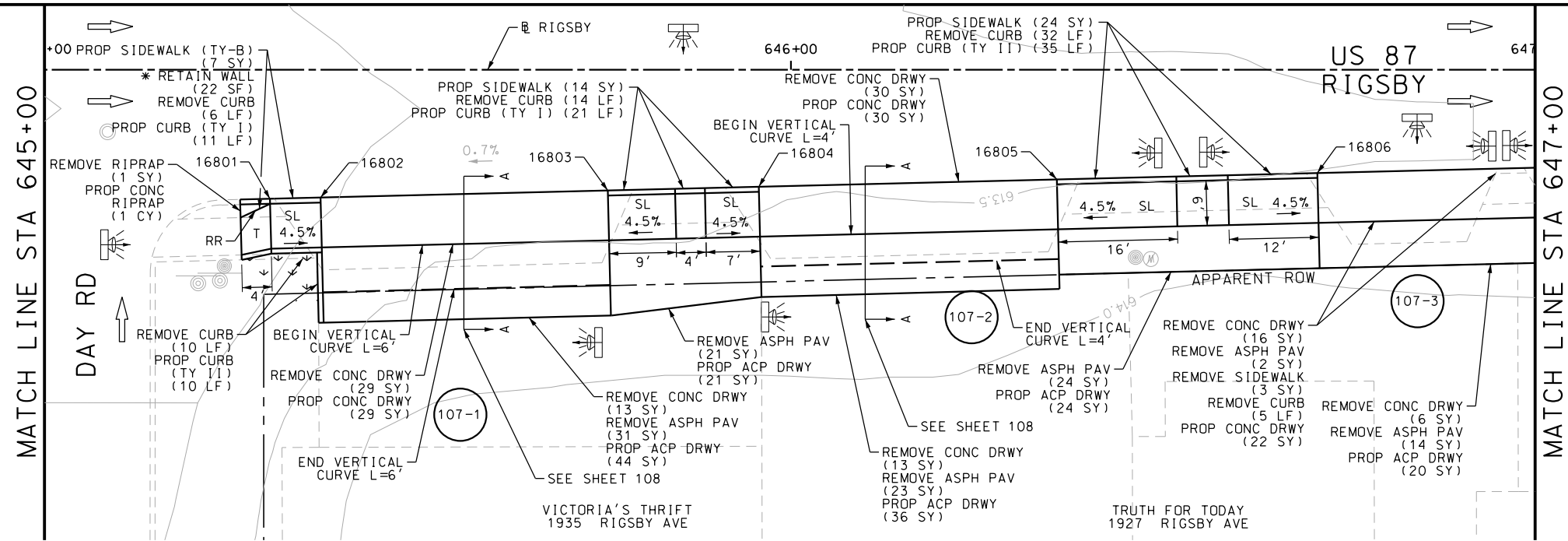
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US 87
RIGSBY AVE WB
SIDEWALK
CONSTRUCTION PLAN
STA 641+00 TO STA 645+00

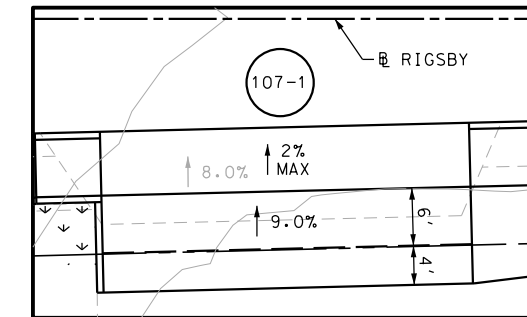
SHEET 16 OF 23					
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CHK	6	TEXAS			VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Rigsby\1113507*Rigsby*71.dgn

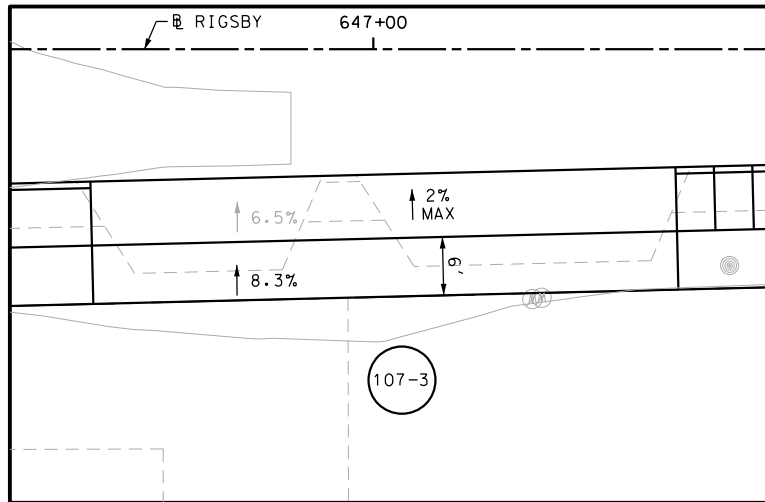


DRWY PLAN STA 646+16

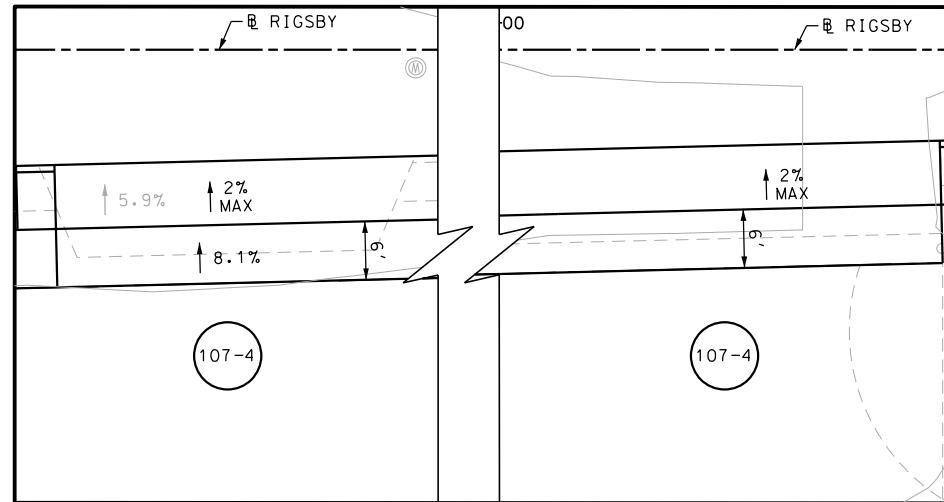


DRWY PLAN STA 645+56

SEE SHEET 108 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
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

NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

PAPE-DAWSON ENGINEERS
SAN ANTONIO | 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 WB
SIDEWALK
CONSTRUCTION PLAN
STA 645+00 TO STA 649+00

SHEET 17 OF 23

OGN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN ₁	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₁	SAT	BEXAR	0915	12	576	107

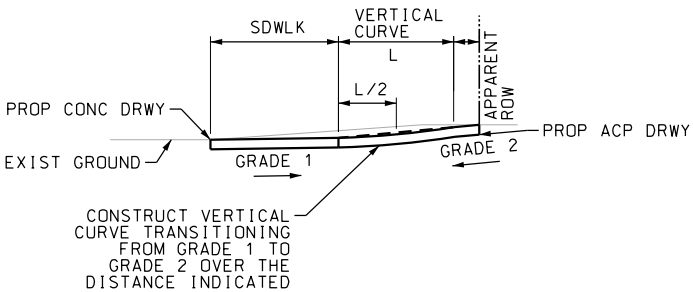
Plotted on: 11/21/2018

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SEE SHEET 107

POINT	NORTHING	EASTING	ELEV	DESC
16801	13695082.30	2150052.72	--	ME.
16802	13695082.13	2150045.94	--	ME.
16803	13695081.17	2150007.47	--	ME.
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 107



SECTION A-A
N.T.S

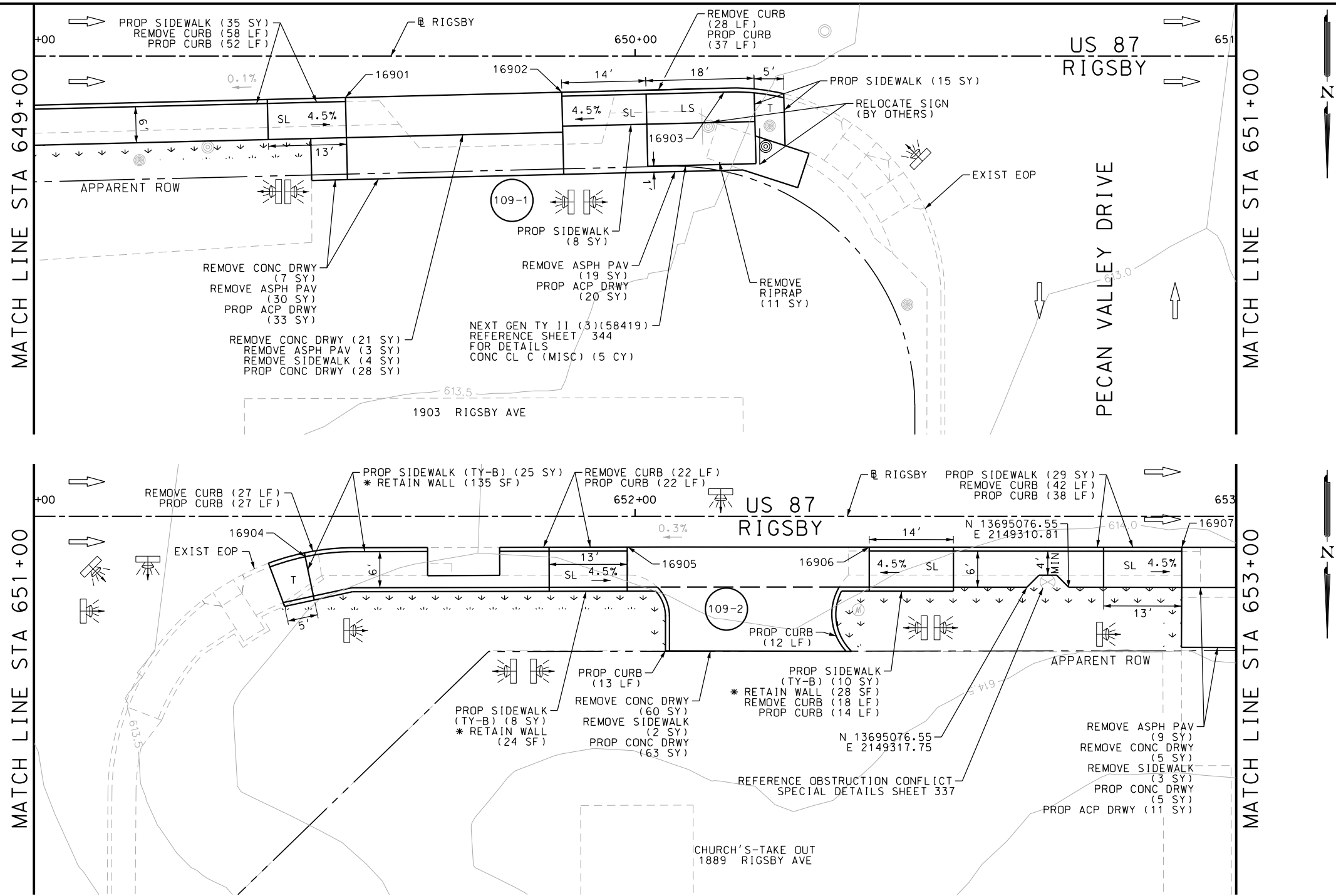
DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

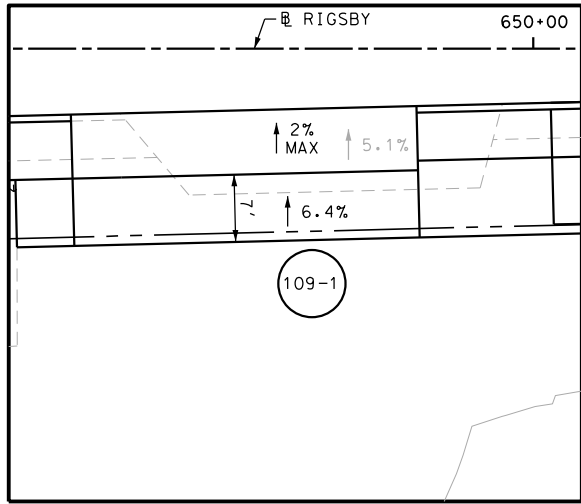
REV. NO.	DATE	DESCRIPTION	BY
<div>PAPE-DAWSON ENGINEERS</div> <div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div>			
<div>Texas Department of Transportation © 2018</div>			
US 87 RIGSBY AVE WB			
SIDEWALK CONSTRUCTION PLAN STA 645+00 TO STA 649+00 POINT TABLES			
SHEET 18 OF 23			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
		SECT. NO.	12
		JOB NO.	576
		SHEET NO.	108

Plotted on: 11/21/2018

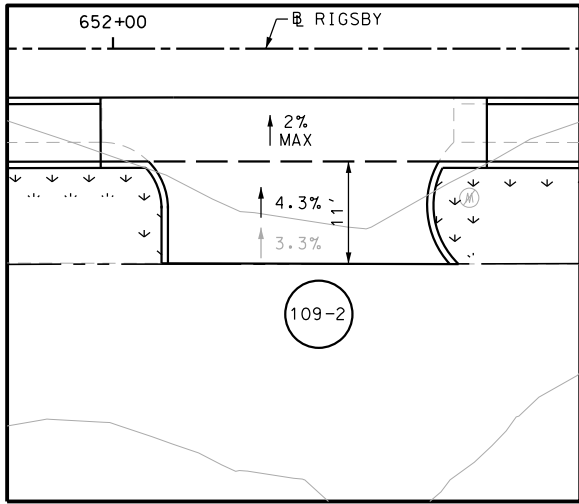
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POINT	NORTHING	EASTING	ELEV	DESC
16901	13695071.76	2149631.11	--	ME.
16902	13695070.86	2149595.12	--	ME.
16903	13695070.86	2149568.11	--	ME.
16904	13695071.53	2149437.81	--	ME.
16905	13695069.89	2149384.24	--	ME.
16906	13695069.88	2149343.98	--	ME.
16907	13695069.89	2149292.00	--	ME.



DRY PLAN STA 649+75



DRY PLAN STA 652+19

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



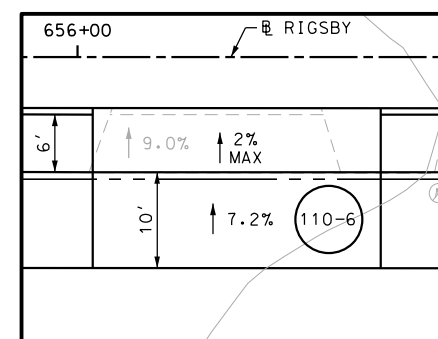
US 87
RIGSBY AVE WB

SIDEWALK
CONSTRUCTION PLAN

STA 649+00 TO STA 653+00

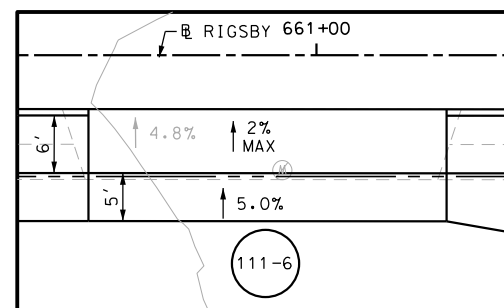
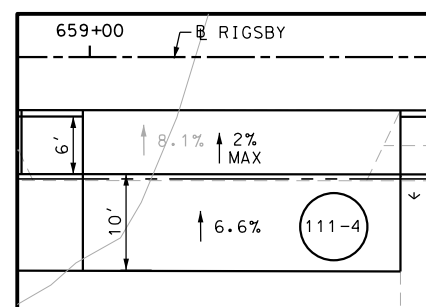
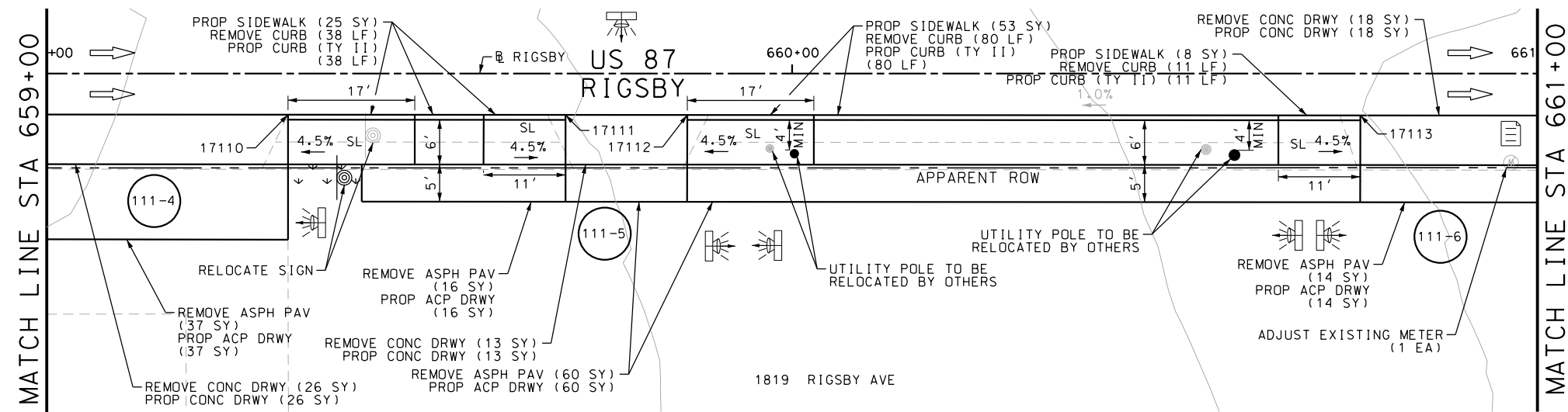
SHEET 19 OF 23

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	109



OGN _i	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN _i	6	TEXAS				VARIES
DWG _i	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG _i	SAT	BEXAR	0915	12	576	110

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NOTES:

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- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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
TBPB FIRM REGISTRATION #470 | TBPDS FIRM REGISTRATION #10028600



SHEET 21 OF 23

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIATION NO.
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	111

Plotted on: 11/21/2018

SEE SHEET 110

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 111

POINT	NORTHING	EASTING	ELEV	DESC
17101	13695070.01	2148849.54	--	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

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

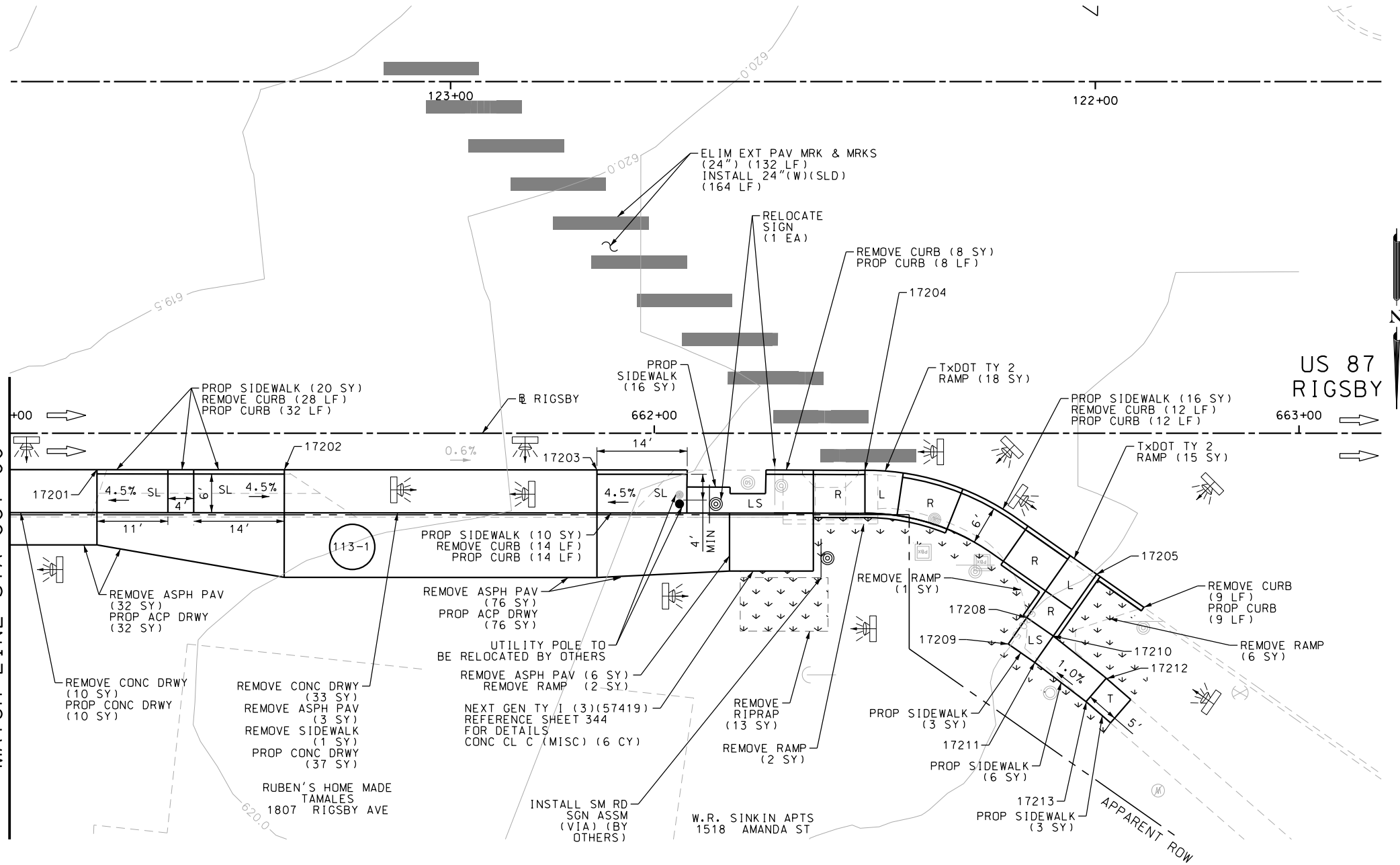
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REV. NO.	DATE	DESCRIPTION	BY
<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>PAPE-DAWSON</div><div>ENGINEERS</div></div><div>SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800</div></div>			
<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>®</div><div>Texas Department of Transportation</div><div>© 2018</div></div></div>			
<div>US 87 RIGSBY AVE WB SIDEWALK CONSTRUCTION PLAN STA 653+00 TO STA 661+00 POINT TABLES</div>			
SHEET 22 OF 23			
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.
CHK DGN:	6	TEXAS	
DWG:	DIST.	COUNTY	CONT. NO.
CHK DWG:	SAT	BEXAR	0915
			12
			576
			112

Plotted on: 11/21/2018

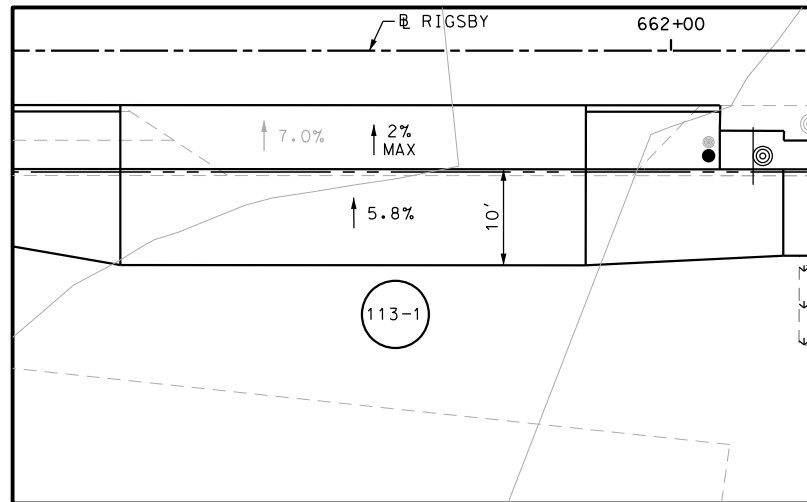
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MATCH LINE STA 661+00



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.

- NOTES:
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 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED



DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

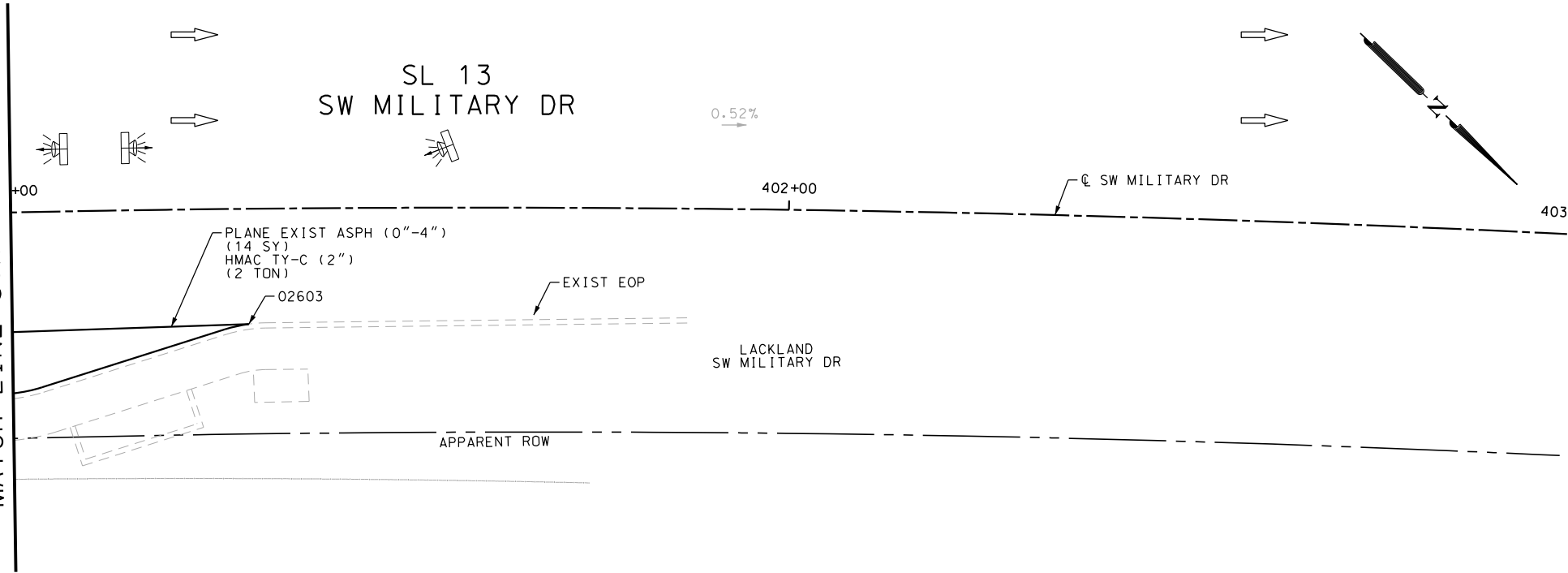
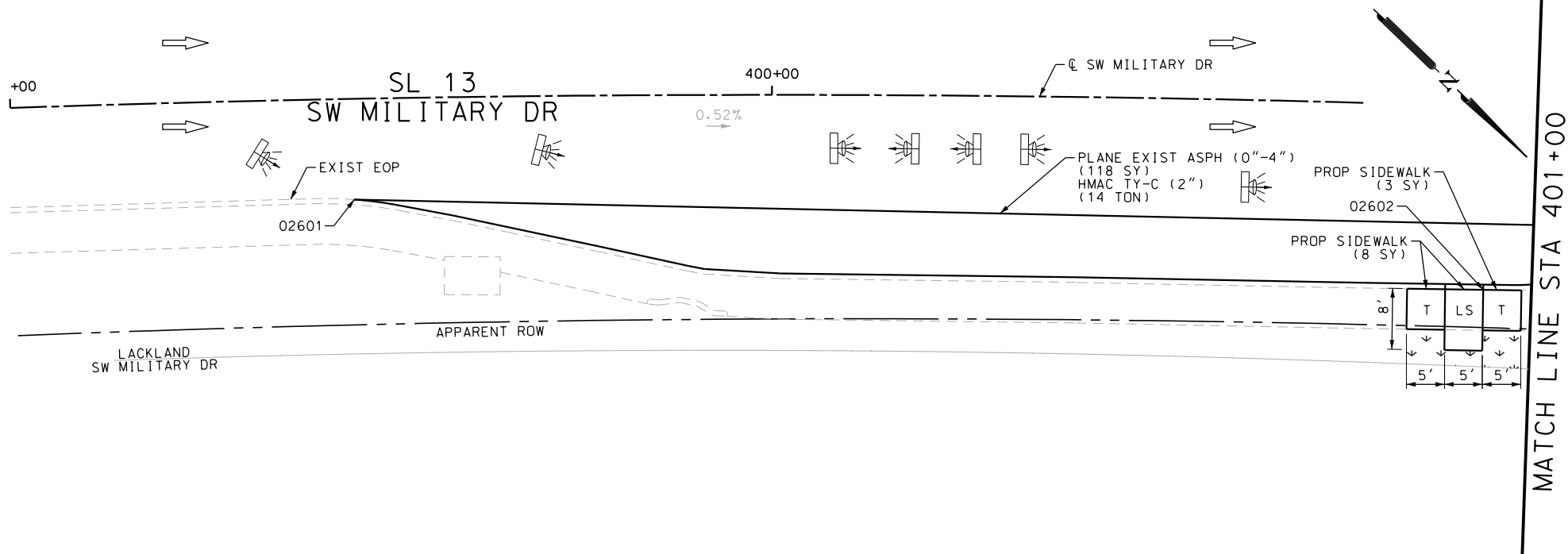


US 87
RIGSBY AVE WB
SIDEWALK
CONSTRUCTION PLAN
STA 661+00 TO END PROJECT

SHEET 23 OF 23					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryA\1113507*SWMilitaryA*01.dgn



POINT	NORTHING	EASTING	ELEV	DESC
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ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	10
0168-6001	VEGETATIVE WATERING	MG	0.16
0340-6066	D-GR HMA (SQ) TY-C PG76-22	TON	16.0
0354-6023	PLANE ASPH CONC PAV (0" TO 4")	SY	132
0531-6001	CONC SIDEWALKS (4")	SY	11

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY
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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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SL 13
SW MILITARY A

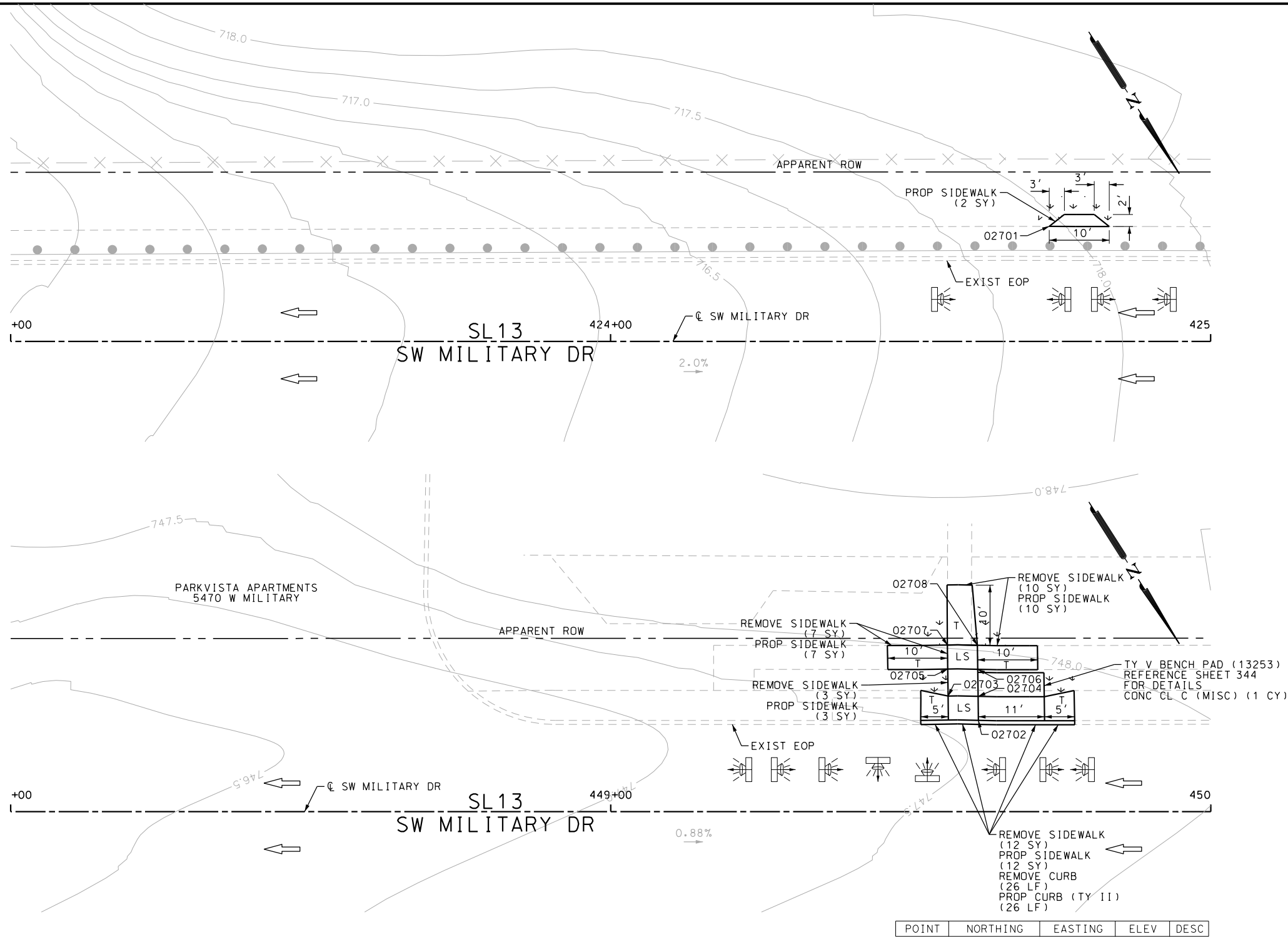
**SIDEWALK
CONSTRUCTION PLAN**

BEGIN PROJECT TO END PROJECT

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.
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\113507*SWMilitaryA*WB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	15
0529-6001	CONC CURB (TY I)	LF	15
0531-6001	CONC SIDEWALKS (4")	SY	23

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

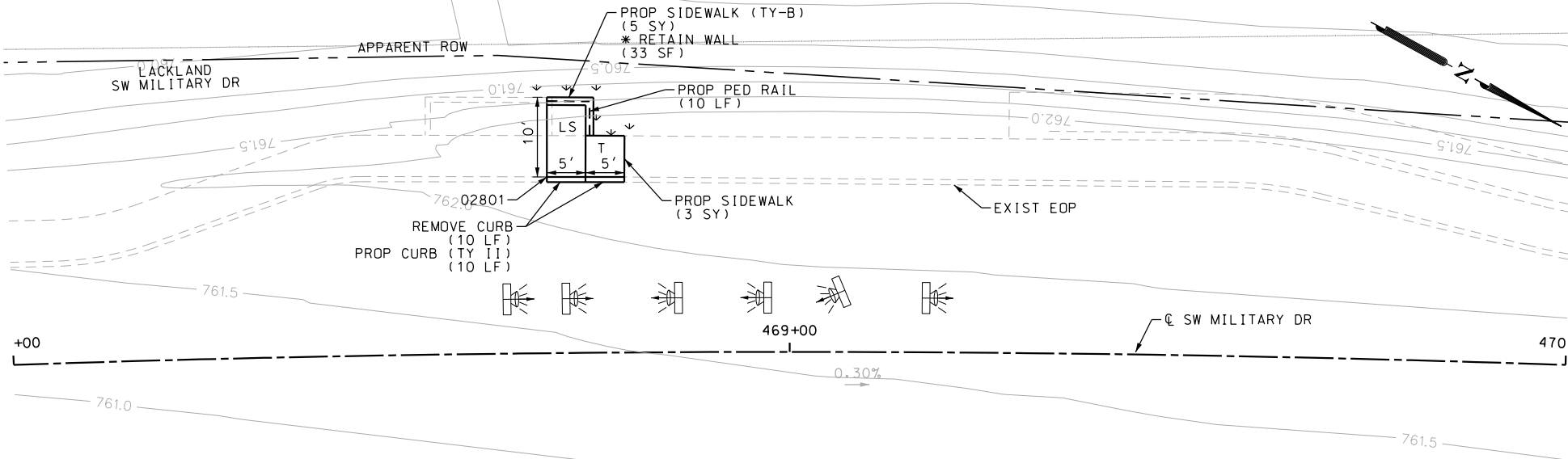
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13 SW MILITARY A					
SIDEWALK CONSTRUCTION PLAN					
BEGIN PROJECT TO 425+00 STA 448+00 TO 450+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.:
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitary\113507*SWMilitaryA*WB02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	10
0529-6002	CONC CURB (TY II)	LF	10
0531-6001	CONC SIDEWALKS (4")	SY	3
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	5

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
-------	----------	---------	------	------

PAPE-DAWSON ENGINEERS

SAN ANTONIO | 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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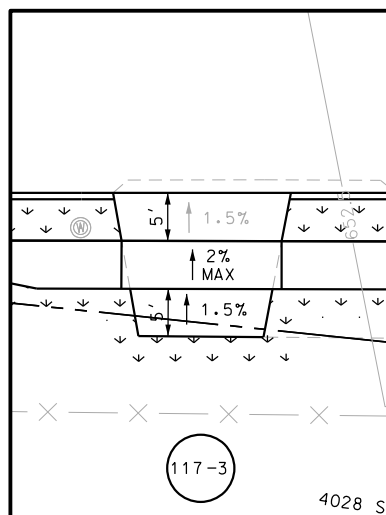
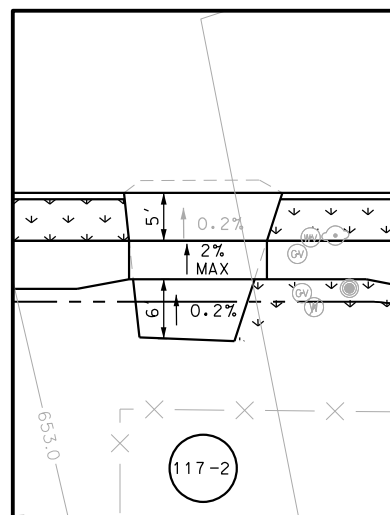
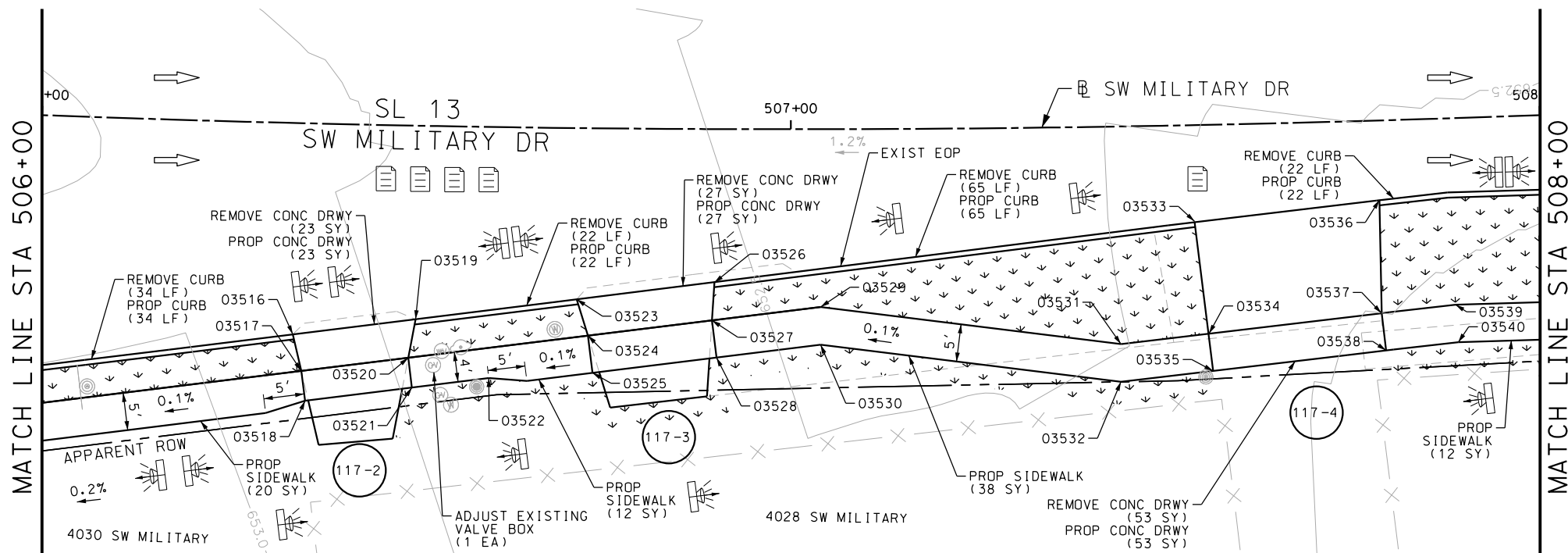
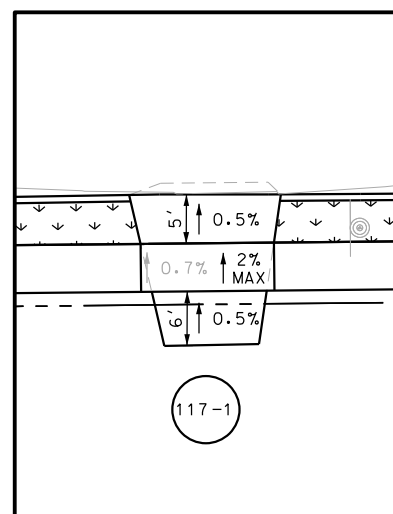
SL 13
SW MILITARY A

**SIDEWALK
CONSTRUCTION PLAN**
STA 468+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	116

Design Filename: P:\111\35\07\design\Civil\Roadway\SWM\ilitaryB\113507*SWM\ilitaryB*01.dgn



POINT	NORTHING	EASTING	ELEV	DESC
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03502	13680633.38	2106466.98	--	
03503	13680633.10	2106469.45	--	
03504	13680634.94	2106474.41	--	
03505	13680631.76	2106470.55	--	
03506	13680625.70	2106475.55	--	
03507	13680628.89	2106479.40	--	
03508	13680622.92	2106477.84	--	
03509	13680627.70	2106480.38	--	
03510	13680627.52	2106482.29	--	
03511	13680622.54	2106481.82	--	
03512	13680626.71	2106490.77	--	
03513	13680621.73	2106490.30	--	
03514	13680620.30	2106505.39	--	
03515	13680625.27	2106505.95	--	
03516	13680624.14	2106516.00	--	
03517	13680619.17	2106515.45	--	
03518	13680640.51	2106504.13	--	
03519	13680638.81	2106519.86	--	
03520	13680635.09	2106555.95	--	

POINT	NORTHING	EASTING	ELEV
03521	13680633.41	2106572.38	--
03522	13680620.00	2106556.03	--
03523	13680615.03	2106555.52	--
03524	13680618.98	2106566.03	--
03525	13680614.01	2106565.52	--
03526	13680611.05	2106594.58	--
03527	13680616.03	2106595.08	--
03528	13680614.73	2106608.03	--
03529	13680609.75	2106607.53	--
03530	13680629.37	2106612.37	--
03531	13680631.22	2106619.93	--
03532	13680622.91	2106676.66	--
03533	13680620.28	2106701.36	--
03534	13680607.99	2106675.16	--
34907	13729201.51	2091130.61	--
34908	13729205.46	2091133.68	--
34909	13729224.09	2091101.60	--
34910	13729228.04	2091104.67	--
34911	13729236.39	2091085.80	--
34912	13729240.34	2091088.87	--

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	143
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	186
0162-6002	BLOCK SODDING	SY	340
0168-6001	VEGETATIVE WATERING	MG	5.30
0529-6002	CONC CURB (TY II)	LF	186
0530-6004	DRIVEWAYS (CONC)	SY	143
0531-6001	CONC SIDEWALKS (4")	SY	115

NOTES:

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- 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 #100268



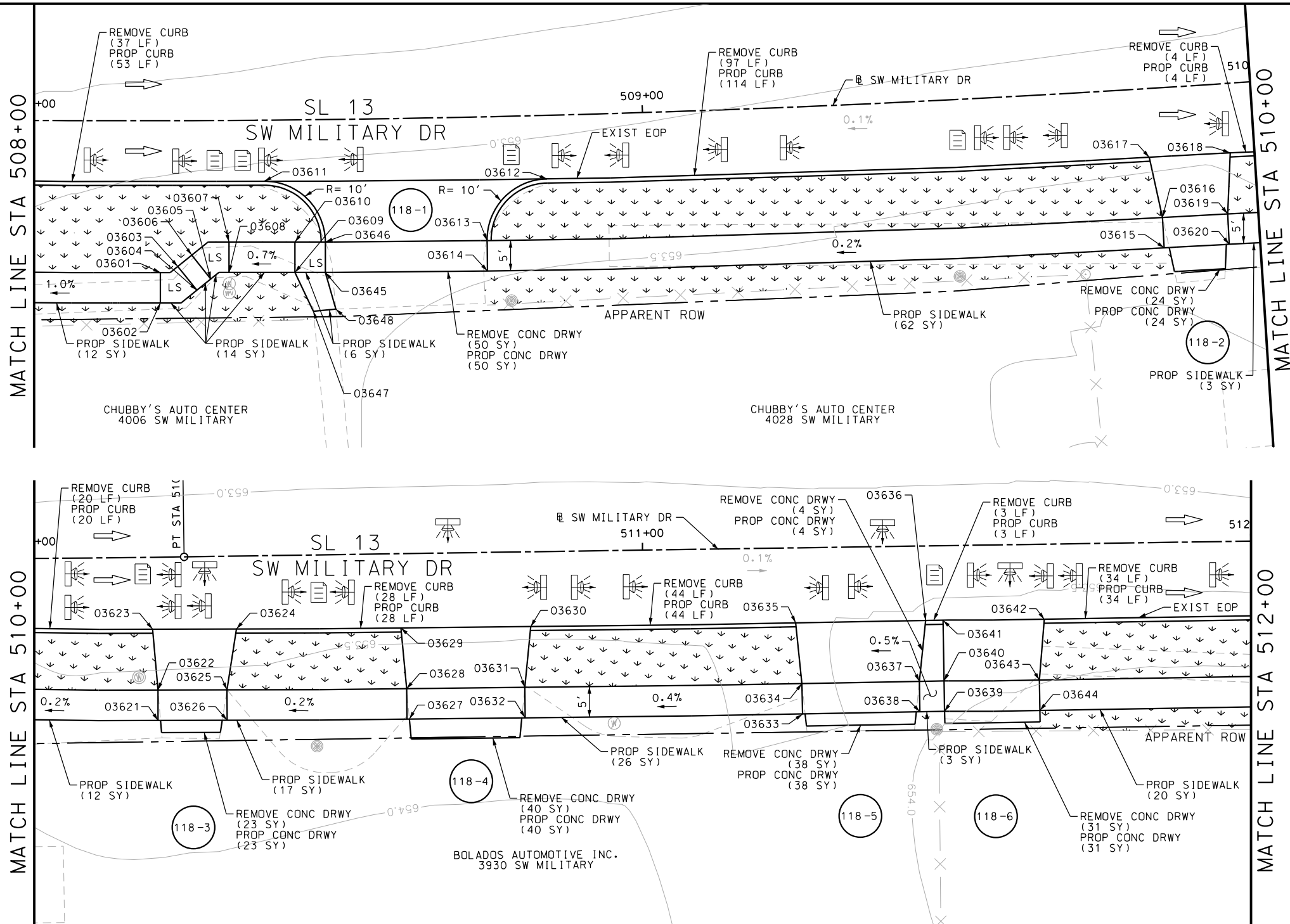
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
BEGIN PROJECT TO STA 508+00

SHEET 1 OF 49

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	117

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\B*02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	206
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	267
0162-6002	BLOCK SODDING	SY	390
0168-6001	VEGETATIVE WATERING	MG	6.08
0529-6002	CONC CURB (TY II)	LF	300
0530-6004	DRIVEWAYS (CONC)	SY	206
0531-6001	CONC SIDEWALKS (4")	SY	175

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 508+00 TO STA 512+00

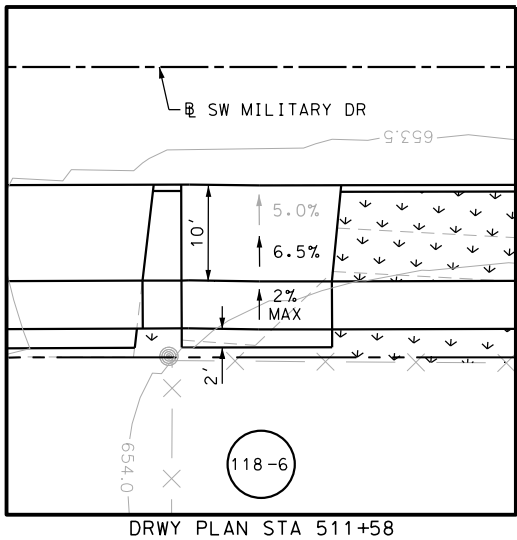
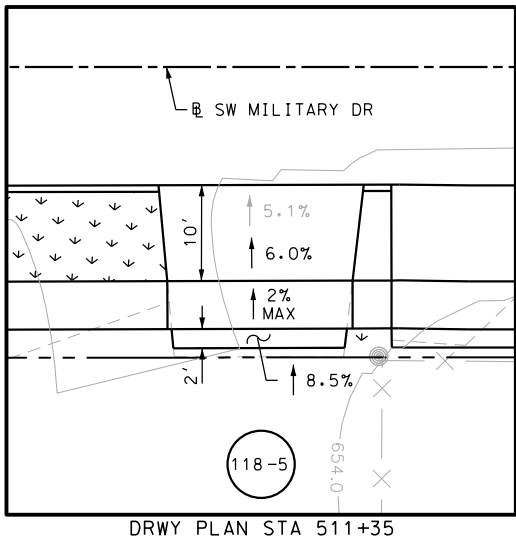
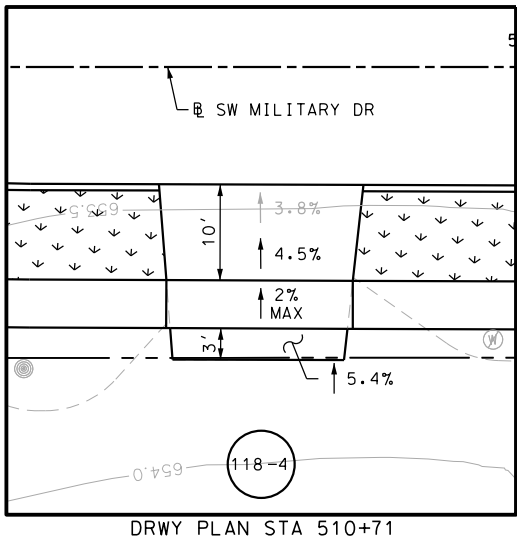
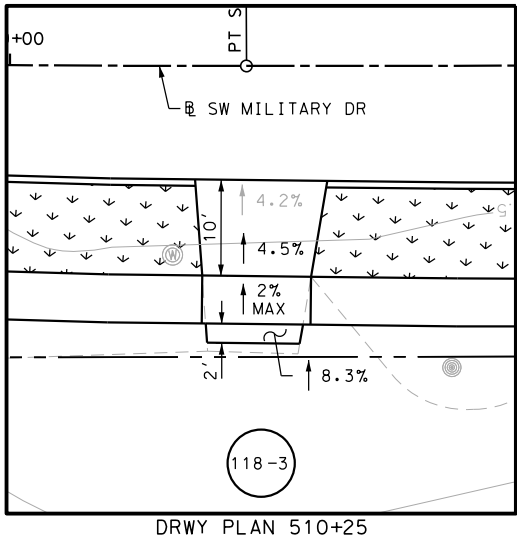
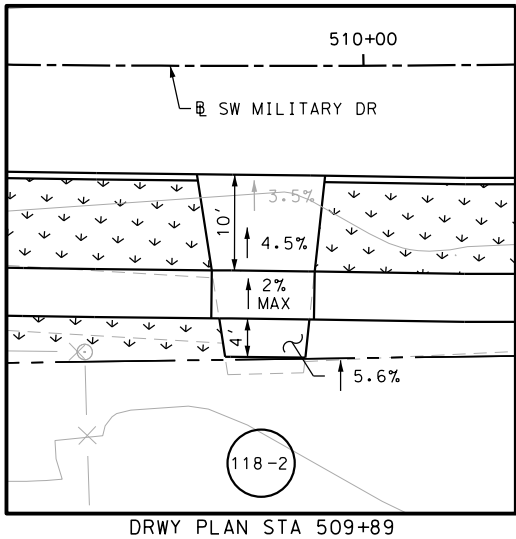
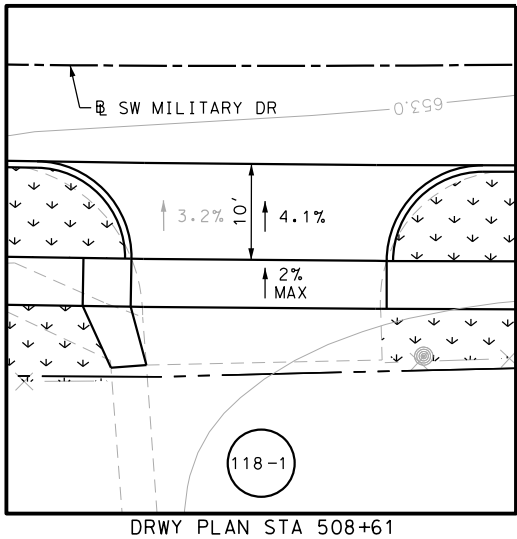
SHEET 2 OF 49

OGN _i	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN _i	6	TEXAS				VARIES
DWG _i	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG _i	SAT	BEXAR	0915	12	576	118

POINT	NORTHING	EASTING	ELEV	DESC
03601	13680598.27	2106740.68	--	
03602	13680593.35	2106739.79	--	
03603	13680598.74	2106743.67	--	
03604	13680594.34	2106746.05	--	
03605	13680595.75	2106748.65	--	
03606	13680600.14	2106746.26	--	
03607	13680601.18	2106752.67	--	
03608	13680596.26	2106751.78	--	
03609	13680593.43	2106767.36	--	
03610	13680598.35	2106768.25	--	
03611	13680609.97	2106760.19	--	
03612	13680602.00	2106805.97	--	
03613	13680593.80	2106794.45	--	
03614	13680588.87	2106793.62	--	
03615	13680572.65	2106903.73	--	
03616	13680577.61	2106904.36	--	
03617	13680587.73	2106903.98	--	
03618	13680586.05	2106917.22	--	
03619	13680576.25	2106914.99	--	
03620	13680571.30	2106914.34	--	

POINT	NORTHING	EASTING	ELEV
03621	13680568.14	2106939.62	--
03622	13680573.10	2106940.18	--
03623	13680583.14	2106940.48	--
03624	13680581.57	2106954.17	--
03625	13680571.81	2106951.46	--
03626	13680566.85	2106950.89	--
03627	13680563.61	2106980.28	--
03628	13680568.58	2106980.81	--
03629	13680578.61	2106981.04	--
03630	13680576.37	2107002.25	--
03631	13680566.54	2107000.13	--
03632	13680561.56	2106999.60	--
03633	13680556.89	2107044.96	--
03634	13680561.87	2107045.45	--
03635	13680571.91	2107045.57	--
03636	13680569.81	2107066.85	--
03637	13680559.97	2107064.67	--
03638	13680555.00	2107064.17	--
35821	13731910.51	2088150.45	--
35822	13731913.07	2088154.75	--

POINT	NORTHING	EASTING	ELEV
35901	13732127.37	2088032.99	--
35902	13732129.64	2088037.45	--
35903	13732173.83	2088008.06	--
35904	13732176.10	2088012.51	--



- NOTES:
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 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

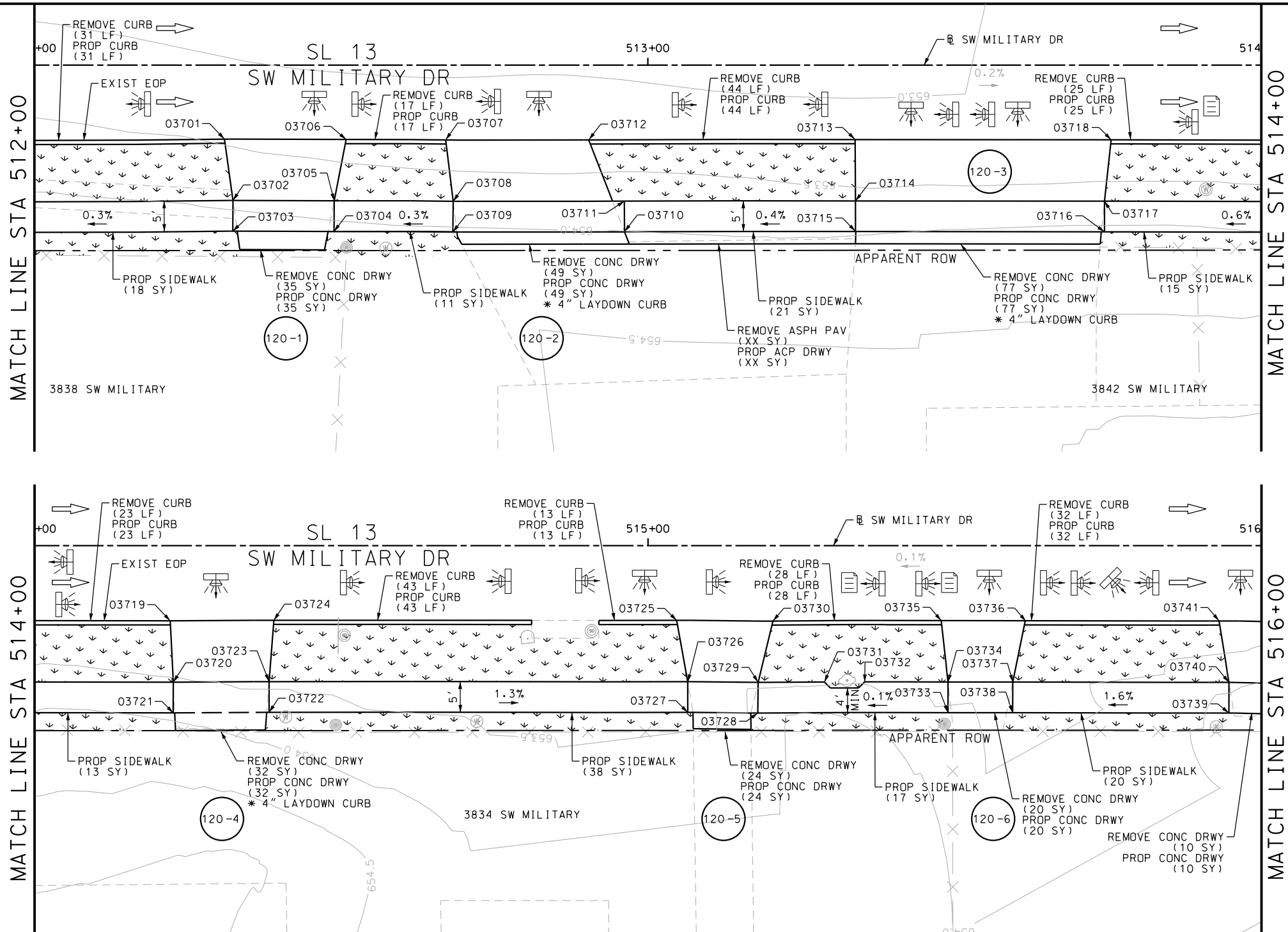
SIDEWALK CONSTRUCTION PLAN

STA 508+00 TO STA 512+00

SHEET 3 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	247
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	256
0162-6002	BLOCK SODDING	SY	350
0168-6001	VEGETATIVE WATERING	MG	5.46
0529-6002	CONC CURB (TY II)	LF	256
0530-6004	DRIVEWAYS (CONC)	SY	247
0531-6001	CONC SIDEWALKS (4")	SY	153

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

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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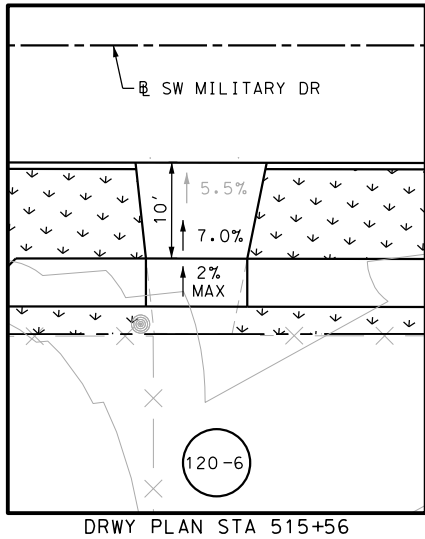
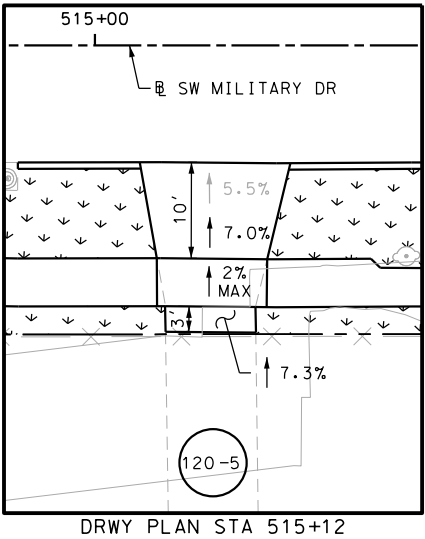
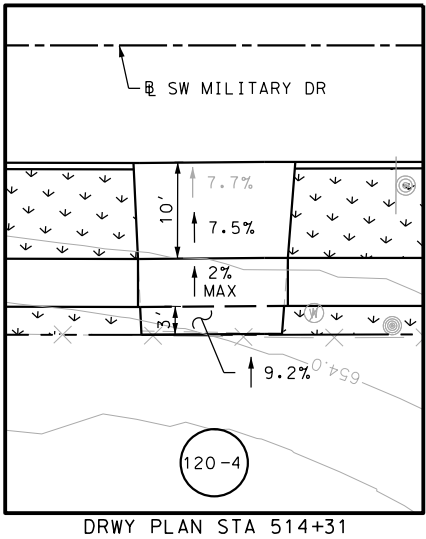
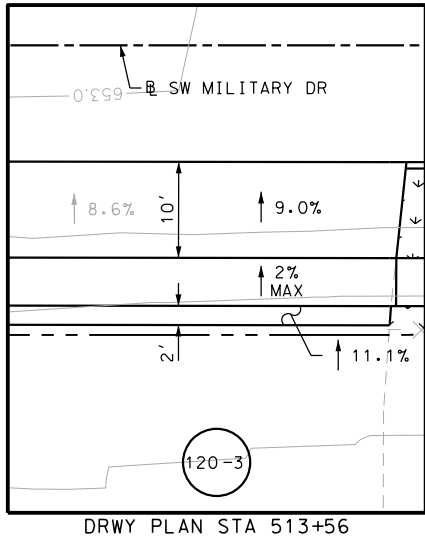
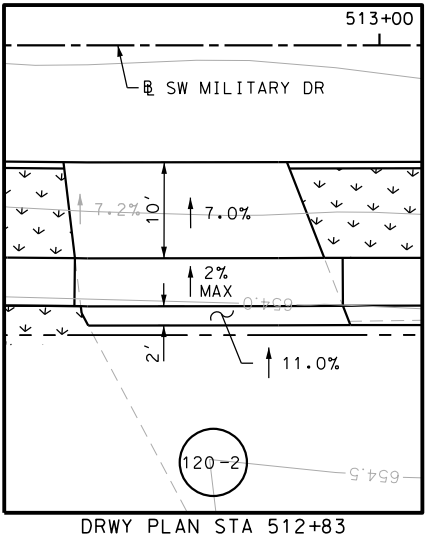
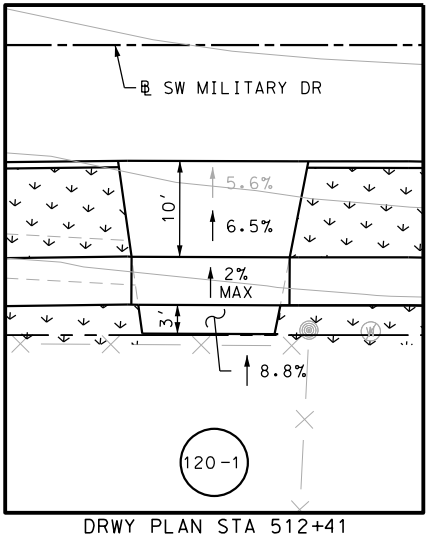
SL 13
SW MILITARY B
**SIDEWALK
CONSTRUCTION PLAN**
STA 512+00 TO STA 516+00

SHEET 4 OF 49					
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK	6	TEXAS			VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK	SAT	BEXAR	0915	12	576
DWG					120

POINT	NORTHING	EASTING	ELEV	DESC
03701	13680561.41	2107151.04	--	
03702	13680551.33	2107151.42	--	
03703	13680546.36	2107150.89	--	
03704	13680544.62	2107167.29	--	
03705	13680549.59	2107167.82	--	
03706	13680559.34	2107170.77	--	
03707	13680557.63	2107186.93	--	
03708	13680547.54	2107187.12	--	
03709	13680542.57	2107186.56	--	
03710	13680539.76	2107214.39	--	
03711	13680544.74	2107214.88	--	
03712	13680555.26	2107210.10	--	
03713	13680550.91	2107253.31	--	
03714	13680540.95	2107252.37	--	
03715	13680535.98	2107251.86	--	
03716	13680531.82	2107292.22	--	
03717	13680536.79	2107292.74	--	
03718	13680546.63	2107294.82	--	
03719	13680541.82	2107341.20	--	
03720	13680531.82	2107340.66	--	

POINT	NORTHING	EASTING	ELEV
03721	13680526.85	2107340.14	--
03722	13680525.36	2107355.70	--
03723	13680530.33	2107356.20	--
03724	13680540.20	2107357.99	--
03725	13680533.51	2107423.32	--
03726	13680523.39	2107424.09	--
03727	13680518.41	2107423.59	--
03728	13680517.15	2107434.95	--
03729	13680522.12	2107435.51	--
03730	13680531.82	2107438.92	--
03731	13680521.08	2107446.26	--
03732	13680520.44	2107452.80	--
03733	13680514.06	2107465.79	--
03734	13680519.04	2107466.30	--
03735	13680529.10	2107466.22	--
36706	13735073.00	2086500.37	--
36707	13735073.59	2086505.75	--
36708	13734823.22	2086611.99	--
36709	13734824.21	2086607.09	--
36801	13735125.67	2086477.25	--

POINT	NORTHING	EASTING	ELEV
36802	13735172.89	2086451.39	--



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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

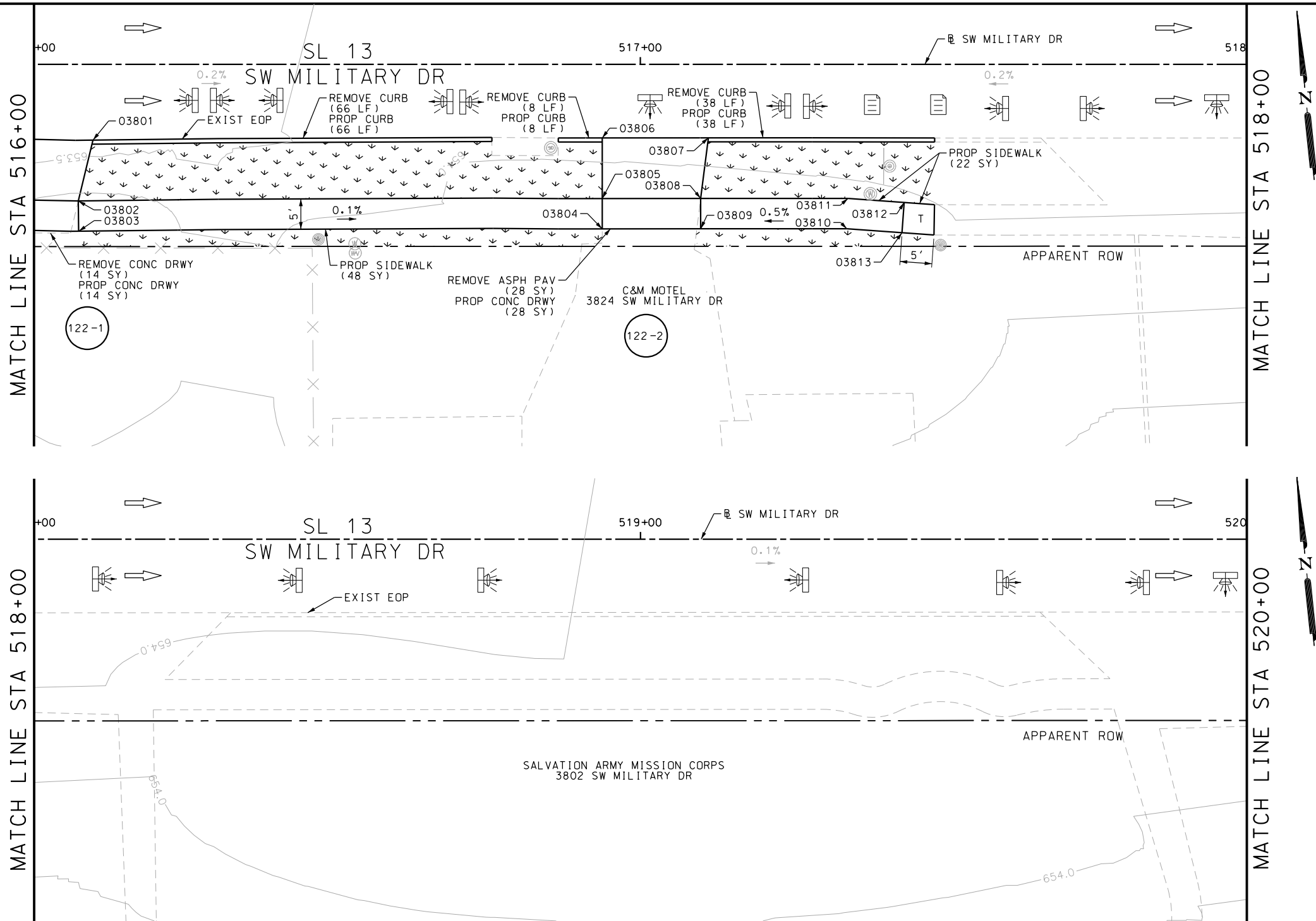
**SIDEWALK
CONSTRUCTION PLAN**

STA 512+00 TO STA 516+00

SHEET 5 OF 49					
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.
	SAT	BEXAR	0915	12	576
CHK DWG					121

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*04.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	14
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	112
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	28
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0529-6002	CONC CURB (TY II)	LF	112
0530-6004	DRIVEWAYS (CONC)	SY	42
0531-6001	CONC SIDEWALKS (4")	SY	70

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

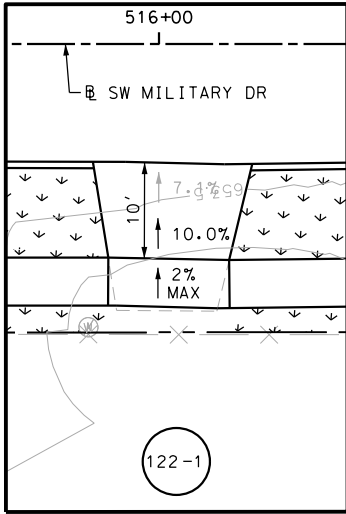
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 516+00 TO STA 520+00

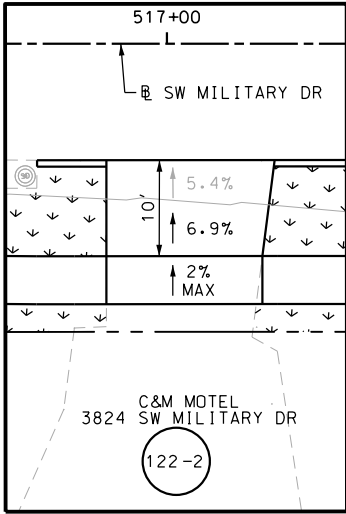
SHEET 6 OF 49

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	122

POINT	NORTHING	EASTING	ELEV	DESC
03801	13680522.53	2107527.80	--	
03802	13680512.80	2107524.37	--	
03803	13680507.82	2107523.92	--	
03804	13680499.45	2107609.86	--	
03805	13680504.42	2107610.36	--	
03806	13680514.37	2107611.38	--	
03807	13680512.60	2107628.81	--	
37923	13739597.46	2083836.82	--	
37924	13739598.90	2083840.55	--	
37925	13739607.15	2083834.15	--	
37926	13739608.95	2083838.81	--	
37927	13739637.28	2083822.50	--	
37928	13739639.09	2083827.17	--	



DRWY PLAN STA 516+02

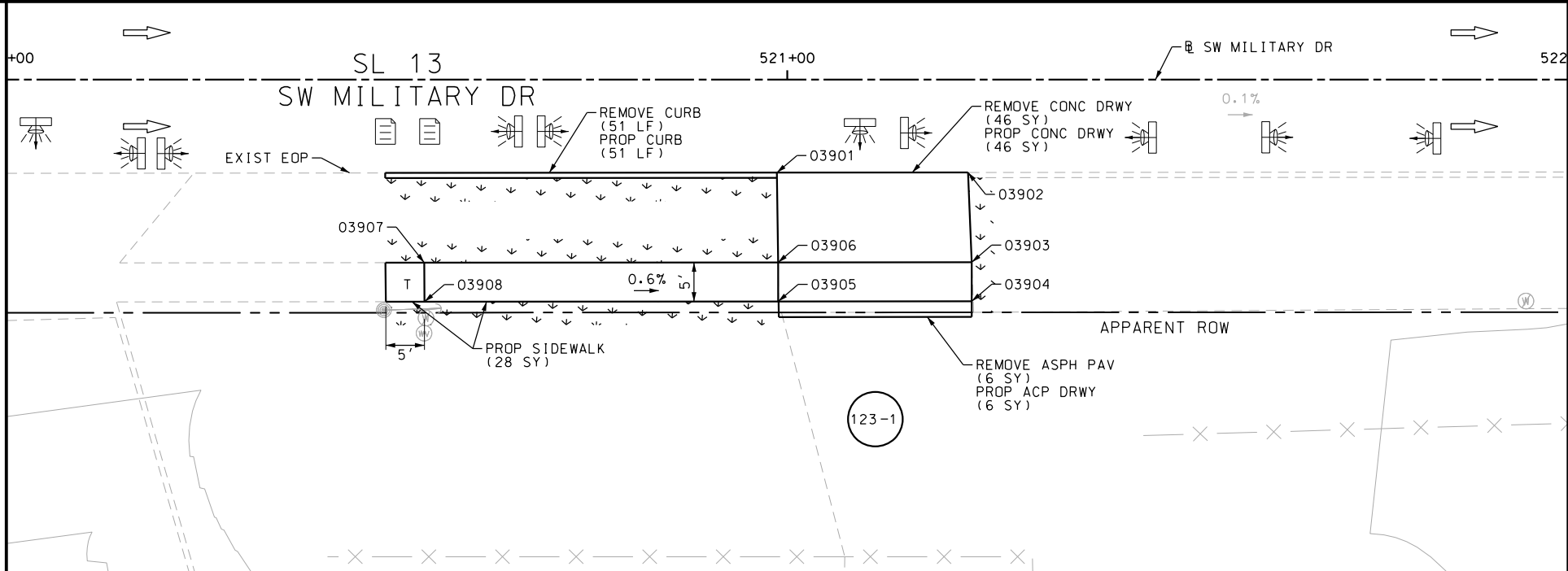


DRWY PLAN STA 517+01

Plotted on: 11/21/2018

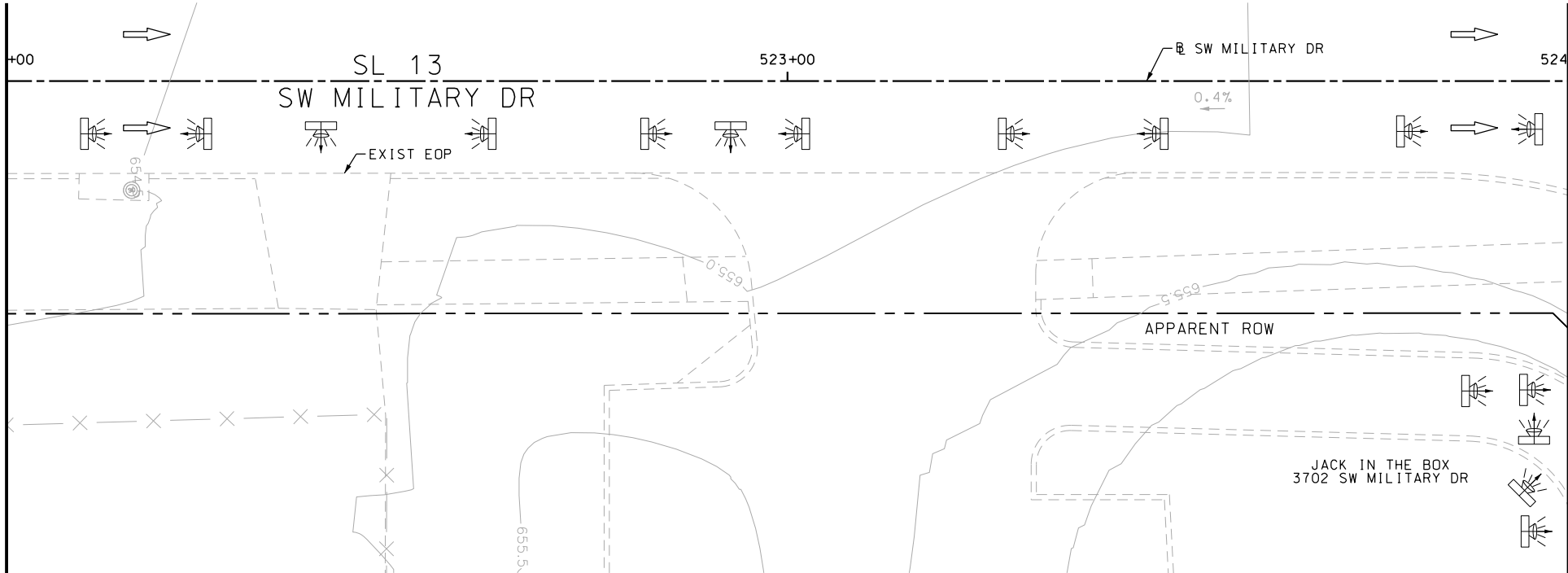
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MATCH LINE STA 520+00

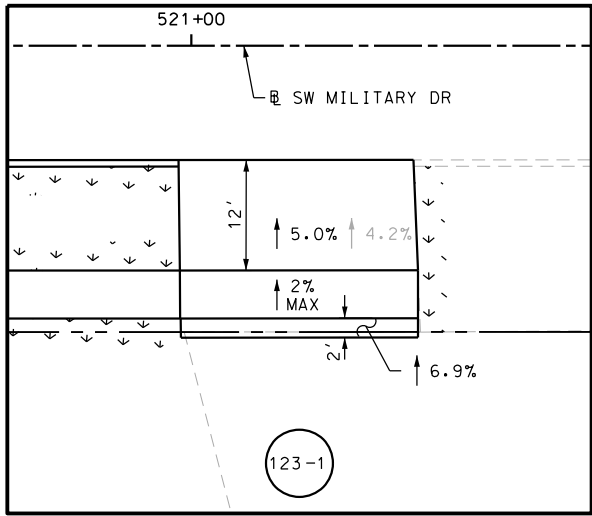


MATCH LINE STA 522+00

MATCH LINE STA 522+00



MATCH LINE STA 524+00



DRWY PLAN STA 521+11

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	46
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	51
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	6
0162-6002	BLOCK SODDING	SY	50
0168-6001	VEGETATIVE WATERING	MG	0.78
0529-6002	CONC CURB (TY II)	LF	51
0530-6004	DRIVEWAYS (CONC)	SY	46
0530-6005	DRIVEWAYS (ACP)	SY	6
0531-6001	CONC SIDEWALKS (4")	SY	28

NOTES:

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- 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

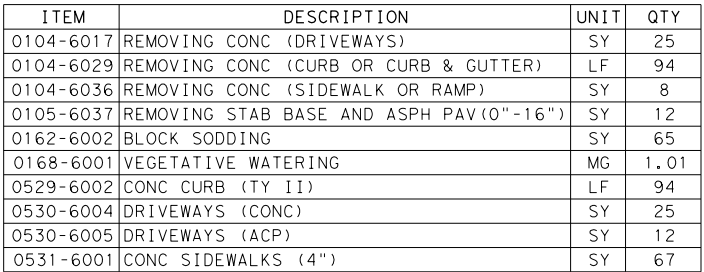
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 520+00 TO STA 524+00

SHEET 7 OF 49					
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

Design Filename: P:\111\35\07\design\CivilitaryB\1113507*SWMilitaryB*06.dgn



- 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

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW



DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

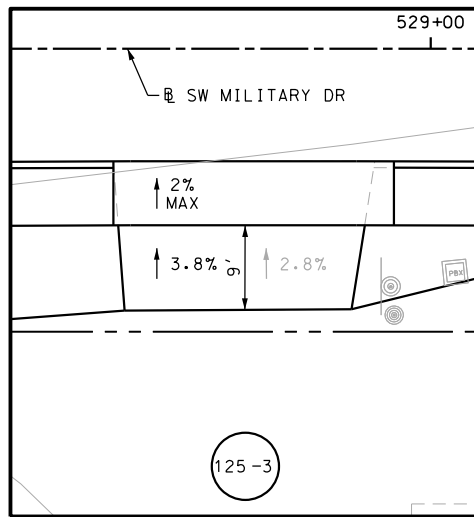
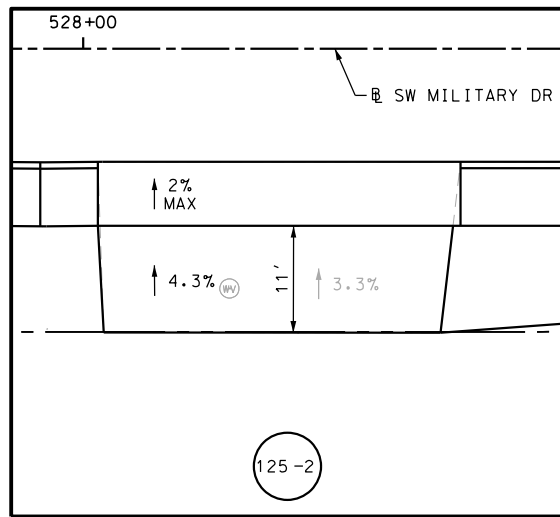
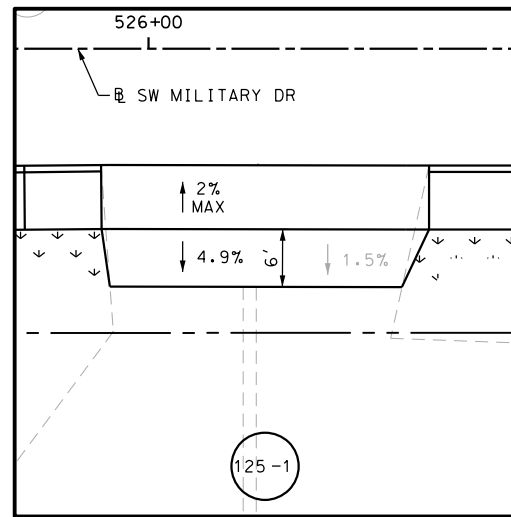
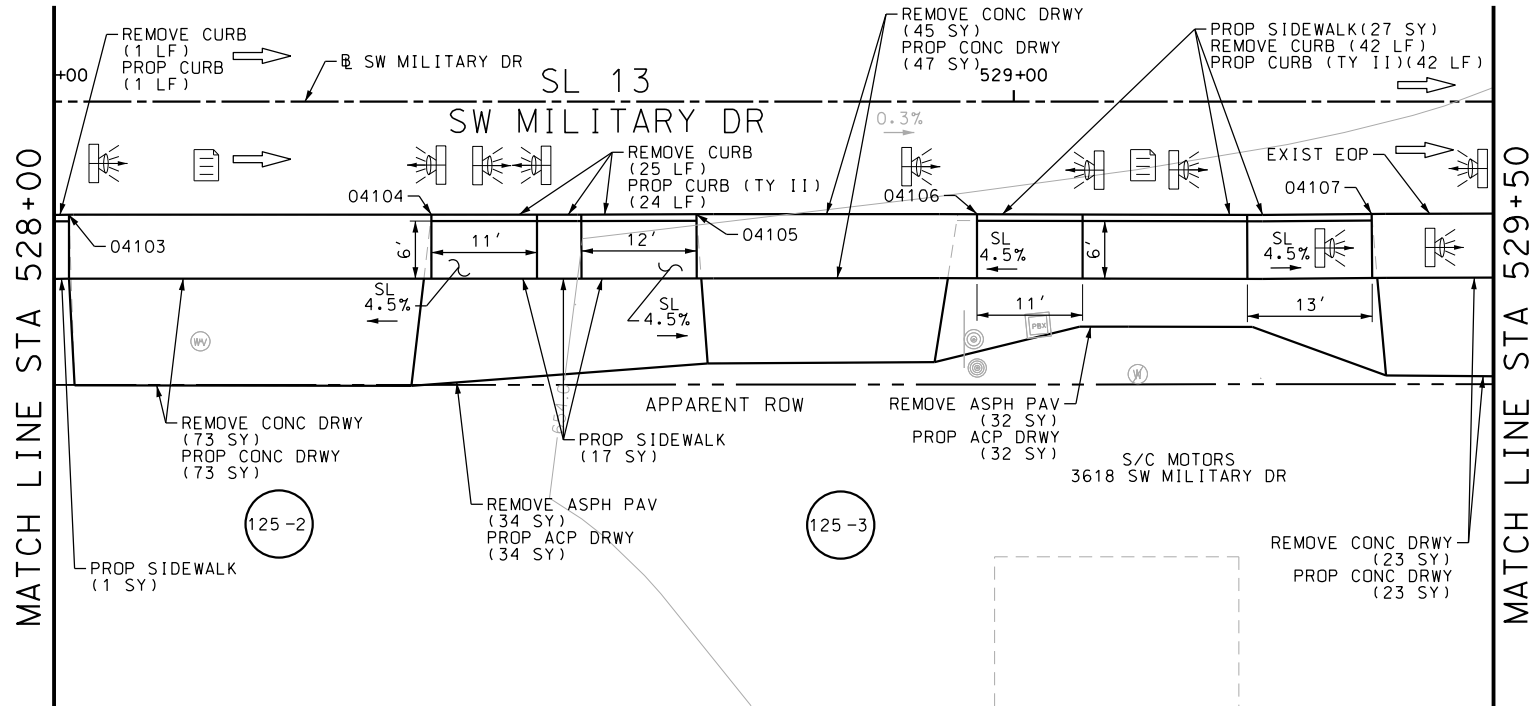
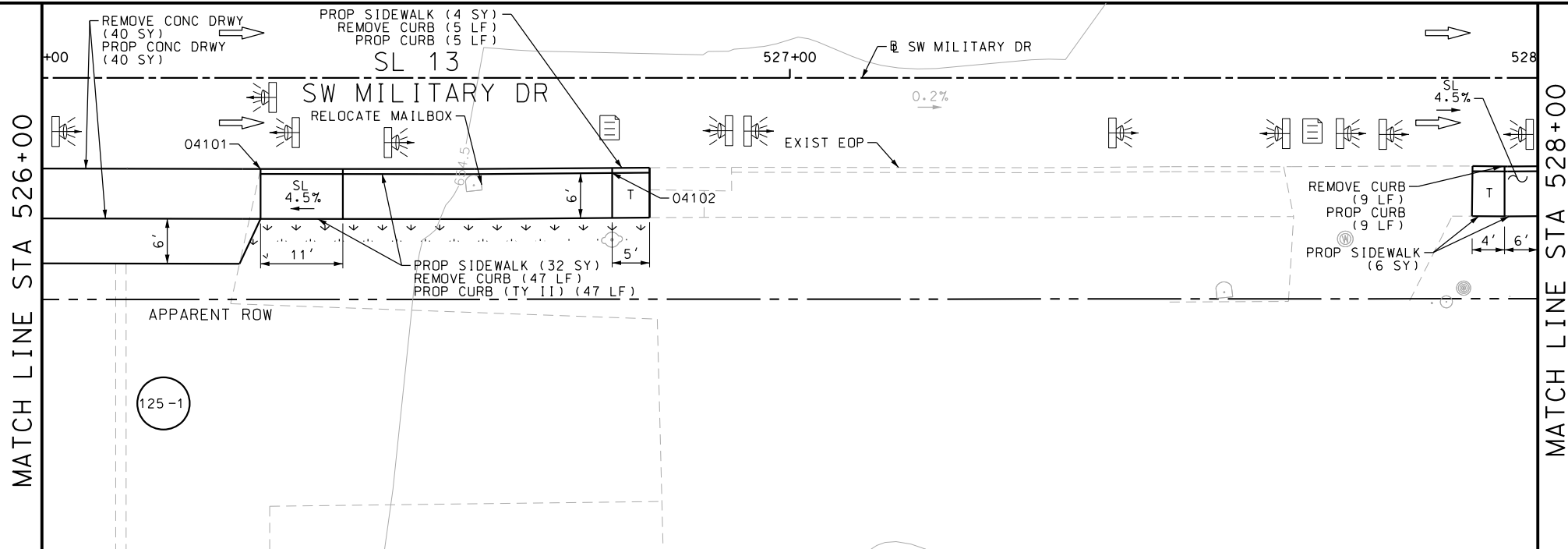
DATE: 11/21/2018

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									
 <i>Texas Department of Transportation</i> © 2018									
SL 13 SW MILITARY B SIDEWALK CONSTRUCTION PLAN STA 524+00 TO STA 526+00 STA 754+00 TO STA 756+00 <div style="text-align: right;">SHEET 8 OF 49</div>									
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 DGN:	SAT	BEXAR	0915	12	576	124			

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\07.dgn



POINT	NORTHING	EASTING	ELEV	DESC
04101	13680419.36	2108542.07	--	
04102	13680414.25	2108593.81	--	
04103	13680402.25	2108713.53	--	
04104	13680398.25	2108752.86	--	
04105	13680395.84	2108776.85	--	
04106	13680392.70	2108807.68	--	
04107	13680388.55	2108848.60	--	

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	181
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	129
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	66
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0529-6002	CONC CURB (TY II)	LF	128
0530-6004	DRIVEWAYS (CONC)	SY	183
0530-6005	DRIVEWAYS (ACP)	SY	66
0531-6001	CONC SIDEWALKS (4")	SY	87

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

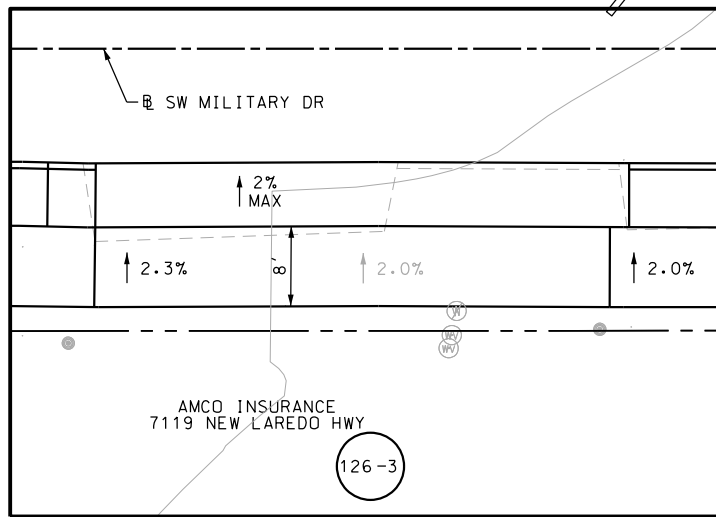
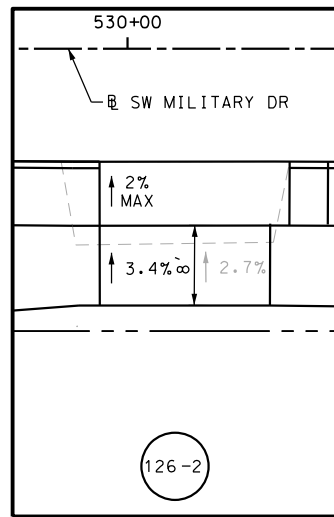
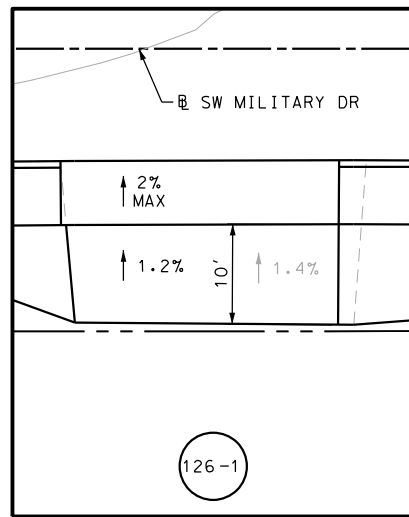
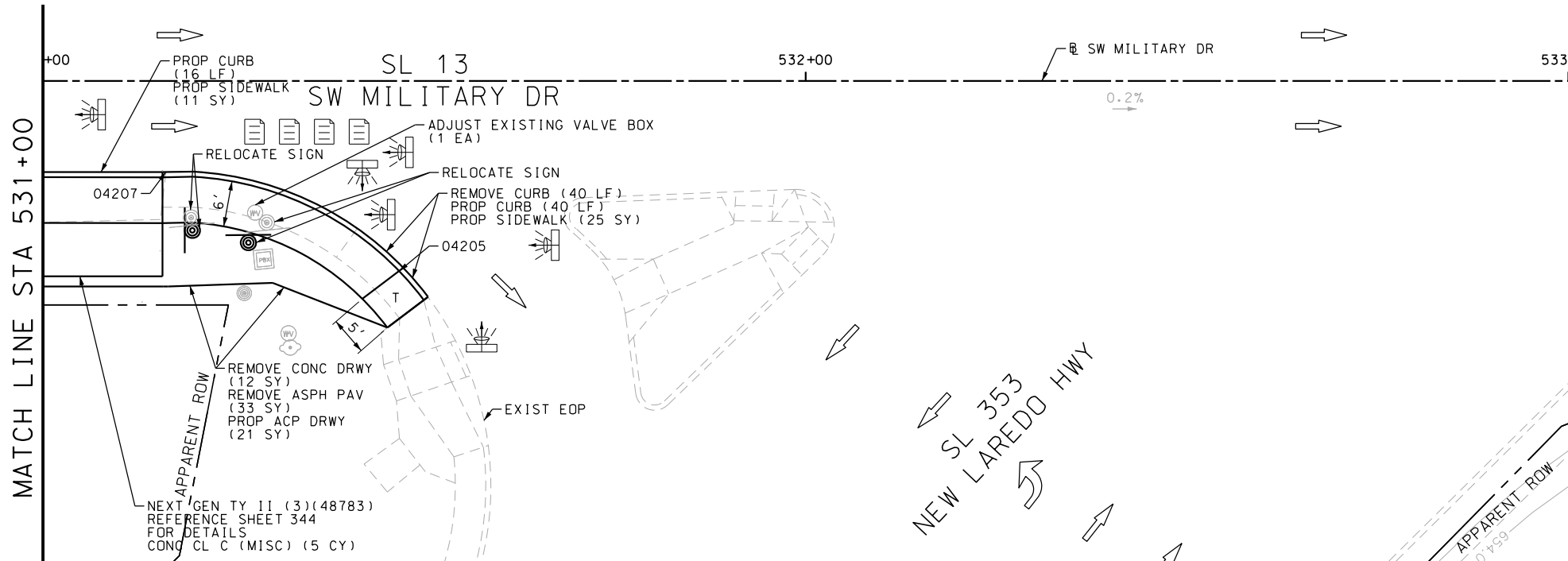
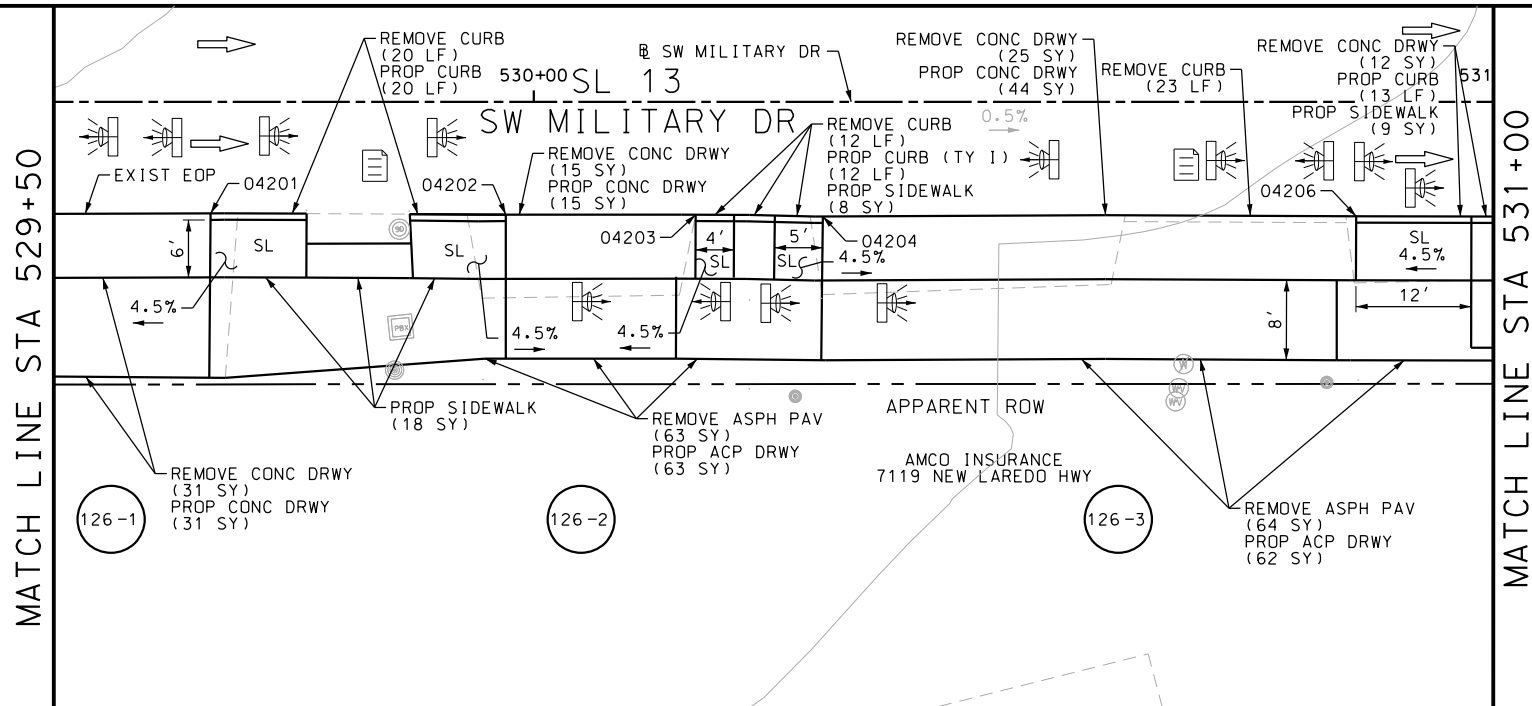
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 526+00 TO STA 529+50

SHEET 9 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\1113507*SWMilitaryB*08.dgn



POINT	NORTHING	EASTING	ELEV	DESC
04201	13680385.68	2108877.48	--	
04202	13680382.43	2108908.06	--	
04203	13680380.43	2108927.76	--	
04204	13680379.05	2108939.59	--	
04205	13680375.83	2108972.29	--	
04206	13680373.39	2108995.13	--	
04207	13680370.15	2109026.46	--	

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	95
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	95
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	161
0529-6002	CONC CURB (TY II)	LF	95
0530-6004	DRIVEWAYS (CONC)	SY	95
0530-6005	DRIVEWAYS (ACP)	SY	161
0531-6001	CONC SIDEWALKS (4")	SY	67
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

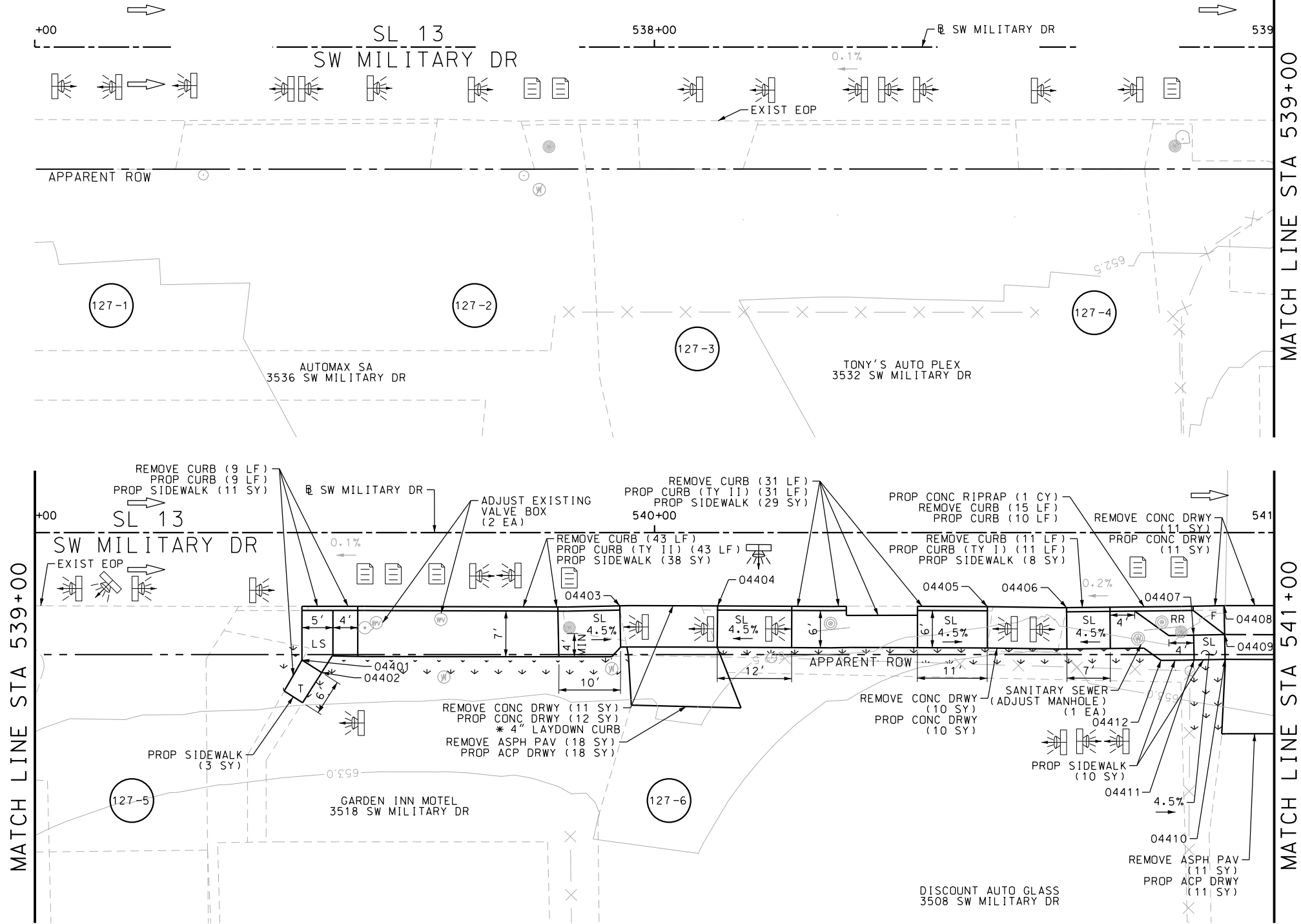
STA 529+50 TO STA 533+00

SHEET 10 OF

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DGN:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DGN:	SAT	BEXAR	0915	12	576	126

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB*10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	128
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	238
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	208
0162-6002	BLOCK SODDING	SY	65
0168-6001	VEGETATIVE WATERING	MG	1.01
0529-6002	CONC CURB (TY II)	LF	225
0530-6004	DRIVEWAYS (CONC)	SY	136
0530-6005	DRIVEWAYS (ACP)	SY	208
0531-6001	CONC SIDEWALKS (4")	SY	181
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	2
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7091-6001	ADJUST EXISTING VALVE BOX	EA	2

NOTES:

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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

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
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 537+00 TO STA 541+00

SHEET 11 OF 49

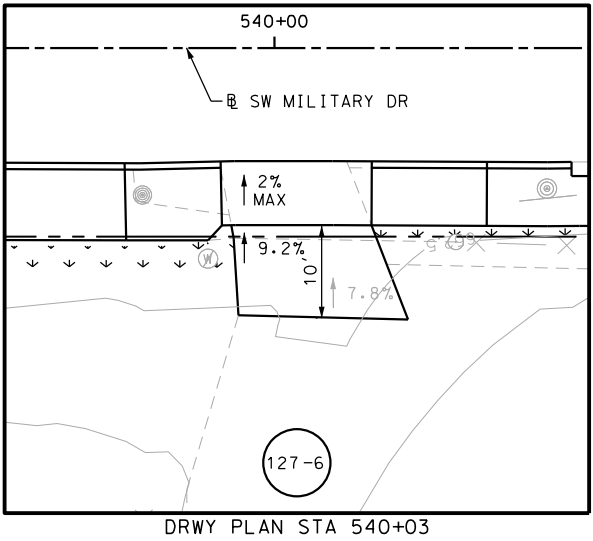
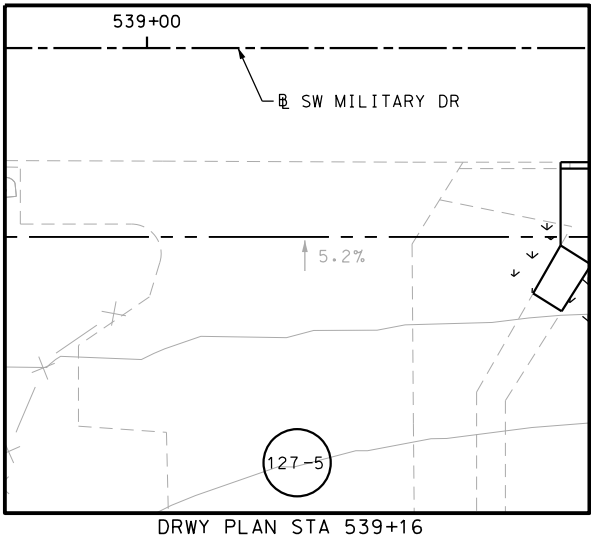
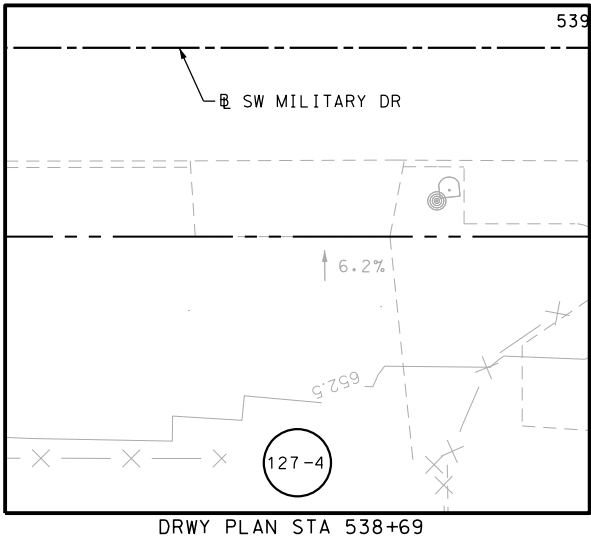
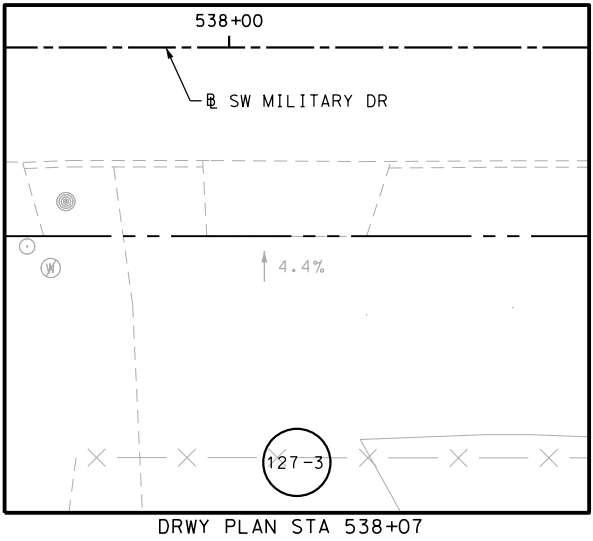
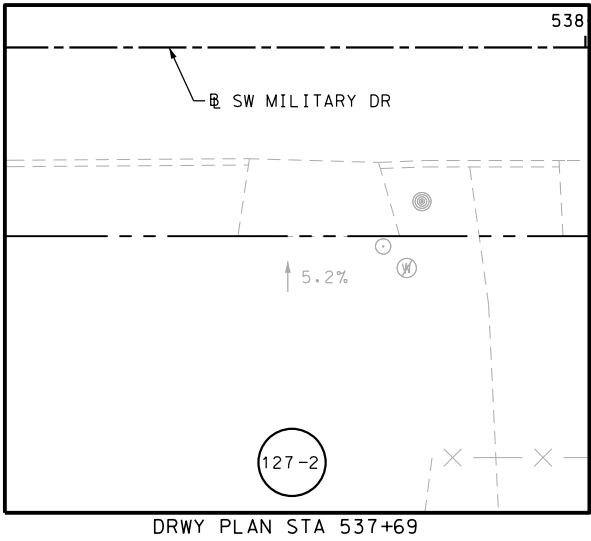
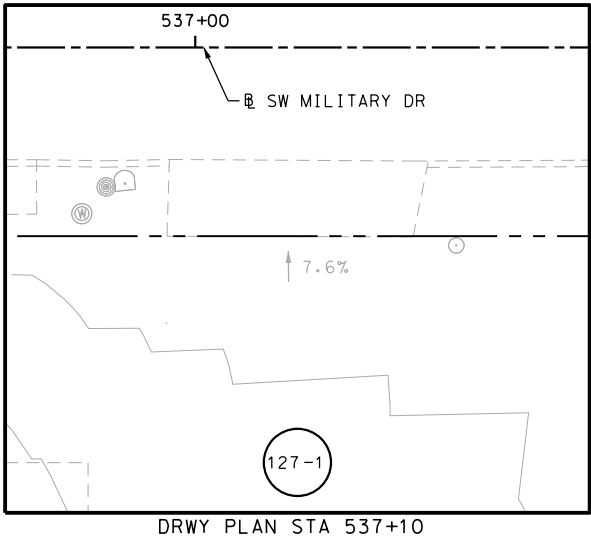
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	127

POINT	NORTHING	EASTING	ELEV	DESC
04401	13680308.52	2109631.49	--	
04402	13680305.23	2109665.80	--	
04403	13680302.79	2109687.01	--	
04404	13680301.17	2109704.10	--	
04405	13680299.08	2109723.58	--	
04406	13680294.98	2109764.84	--	
04407	13680292.78	2109787.01	--	
04408	13680290.90	2109804.73	--	
04409	13680287.28	2109839.05	--	
04410	13680285.59	2109849.12	--	
04411	13680277.63	2109848.31	--	
04412	13680275.31	2109851.27	--	
04413	13680281.13	2109900.21	--	
04414	13680279.52	2109915.91	--	
04415	13680274.99	2109959.23	--	
04416	13680273.53	2109971.93	--	
04417	13680267.27	2109988.89	--	
04418	13680262.43	2109987.01	--	
04419	13680267.02	2109991.87	--	
04420	13680262.03	2109991.46	--	

POINT	NORTHING	EASTING	ELEV
04421	13680266.60	2109996.86	--
04422	13680261.62	2109996.45	--

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*10A.dgn



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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

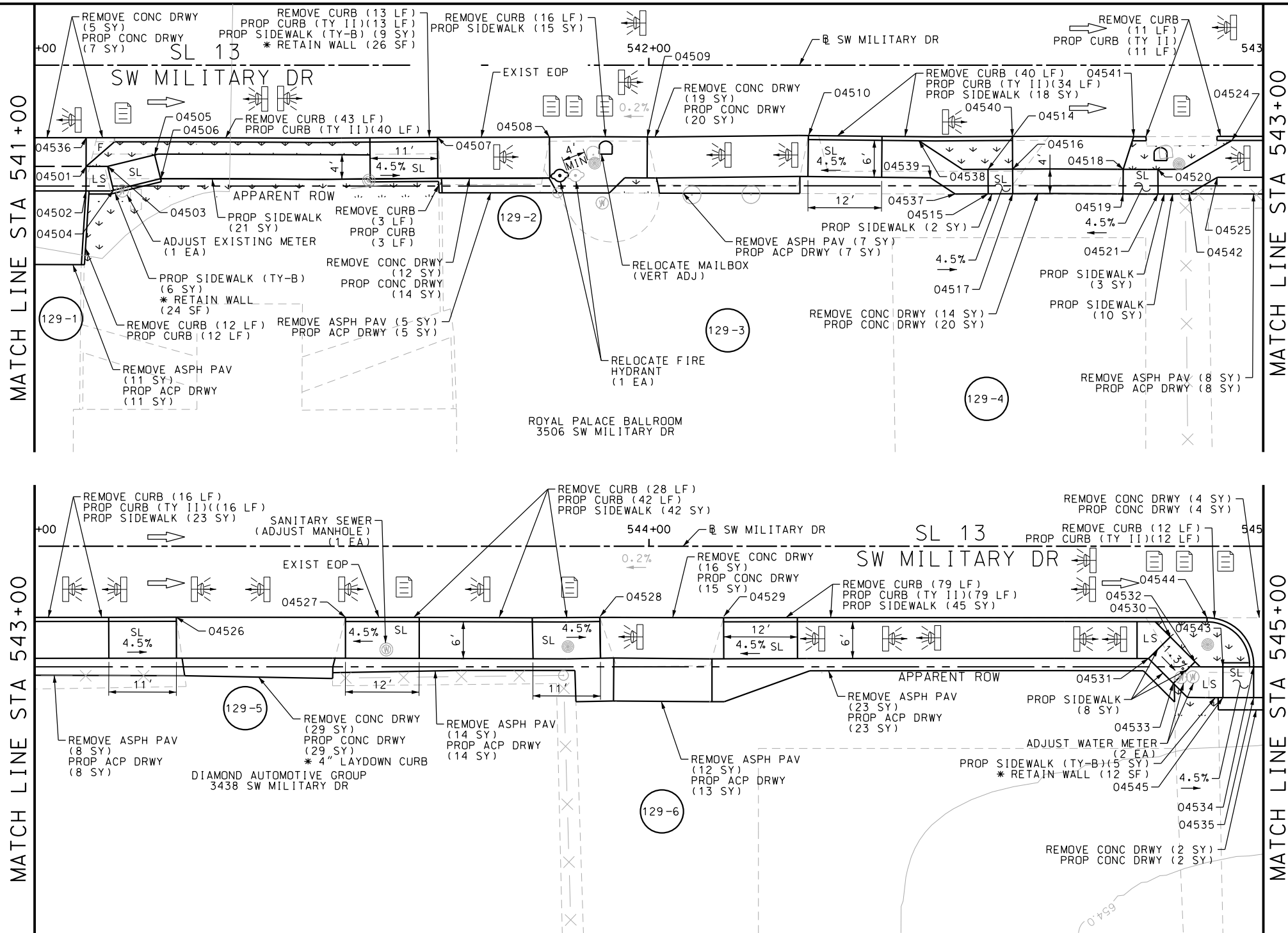
SIDEWALK CONSTRUCTION PLAN

STA 537+00 TO STA 541+00

SHEET 12 OF 49						
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	128

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\11.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	101
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	273
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	88
0162-6002	BLOCK SODDING	SY	65
0168-6001	VEGETATIVE WATERING	MG	1.01
0529-6002	CONC CURB (TY II)	LF	278
0530-6004	DRIVEWAYS (CONC)	SY	111
0530-6005	DRIVEWAYS (ACP)	SY	89
0531-6001	CONC SIDEWALKS (4")	SY	183
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	20
0560-6014	MAILBOX INSTALL-S (TWG-POST) TY 4	EA	1
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	3
7091-6004	RELOCATE FIRE HYDRANT	EA	1

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

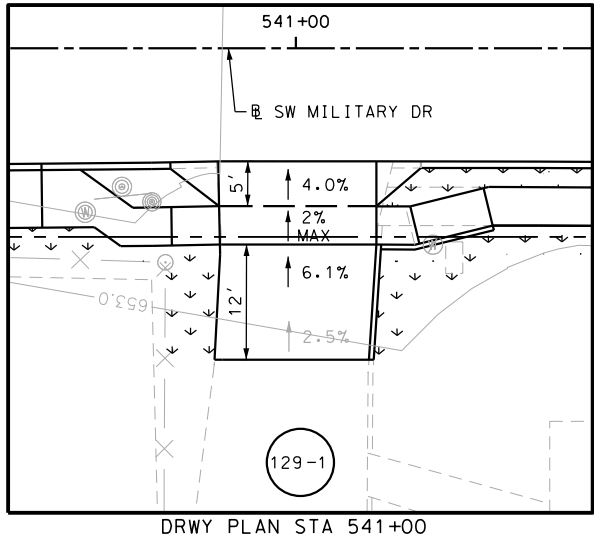
SHEET 13 OF 49					
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:	
DWG:	6	TEXAS		VARIES	
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:
	SAT	BEXAR	0915	12	576

POINT	NORTHING	EASTING	ELEV	DESC
04501	13680264.87	2110013.77	--	
04502	13680259.89	2110013.26	--	
04503	13680264.25	2110019.74	--	
04504	13680259.28	2110019.23	--	
04505	13680267.72	2110025.12	--	
04506	13680261.70	2110025.01	--	
04507	13680263.82	2110070.54	--	
04508	13680262.01	2110088.68	--	
04509	13680260.42	2110104.51	--	
04510	13680257.99	2110130.63	--	
04511	13680255.04	2110150.90	--	
04512	13680249.24	2110148.76	--	
04513	13680246.09	2110153.44	--	
04514	13680249.57	2110159.01	--	
04515	13680245.59	2110158.63	--	
04516	13680249.17	2110163.14	--	
04517	13680245.19	2110162.75	--	
04518	13680247.31	2110181.05	--	
04519	13680243.34	2110180.63	--	
04520	13680246.80	2110186.03	--	

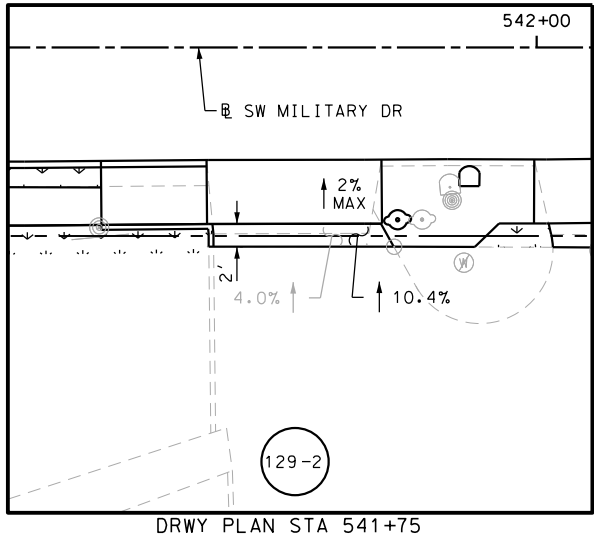
POINT	NORTHING	EASTING	ELEV
04521	13680242.82	2110185.63	--
04522	13680246.34	2110190.66	--
04523	13680242.26	2110191.33	--
04524	13680250.18	2110199.14	--
04525	13680244.45	2110196.18	--
04526	13680248.03	2110227.22	--
04527	13680245.22	2110254.62	--
04528	13680241.02	2110295.80	--
04529	13680238.90	2110315.83	--
04530	13680231.13	2110385.64	--
04531	13680225.28	2110383.96	--
04532	13680223.09	2110392.19	--
04533	13680218.33	2110389.61	--
04534	13680222.26	2110400.19	--
04535	13680217.29	2110399.67	--

Plotted on: 11/21/2018

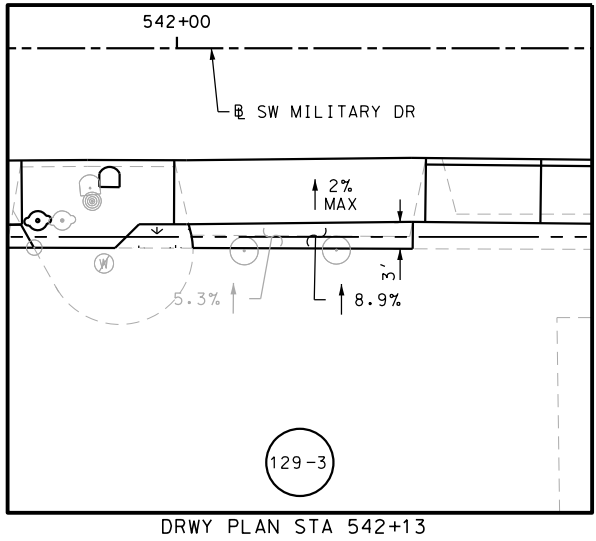
Design File name: P:\111135\07\design\Civil\Roadway\SWMilitaryB\11A.dgn



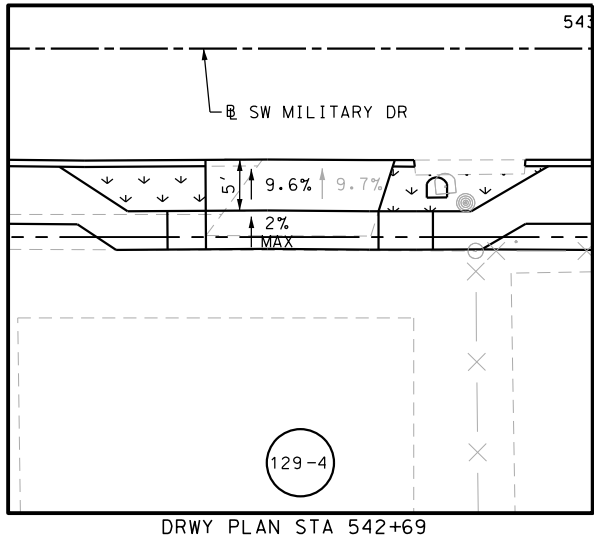
DRWY PLAN STA 541+00



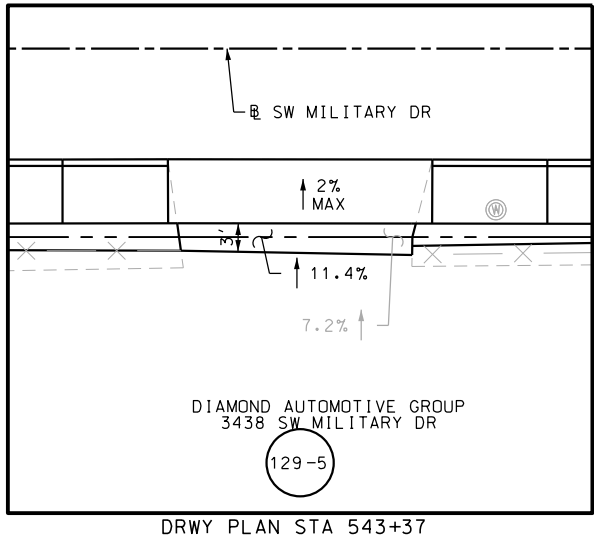
DRWY PLAN STA 541+75



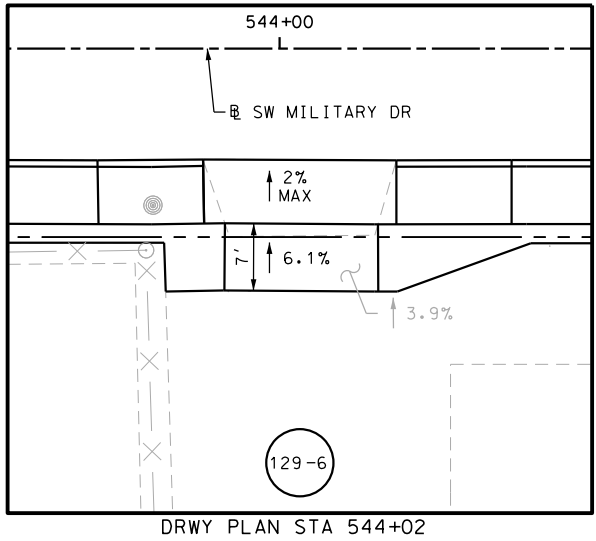
DRWY PLAN STA 542+13



DRWY PLAN STA 542+69



DRWY PLAN STA 543+37



DRWY PLAN STA 544+02

- NOTES:
- * FOR CONTRACTOR INFORMATION ONLY
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

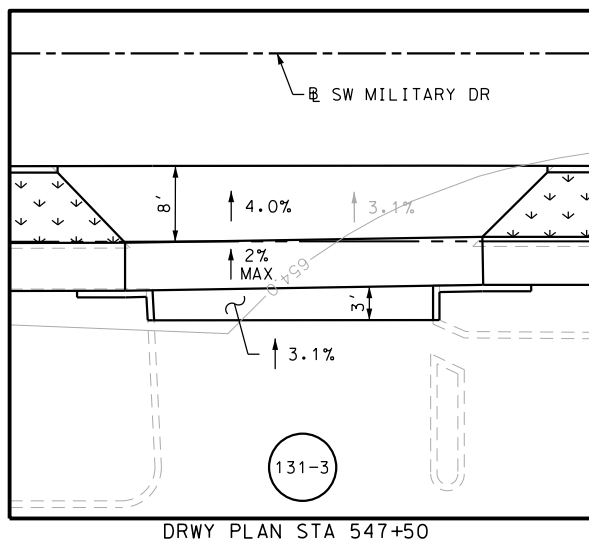
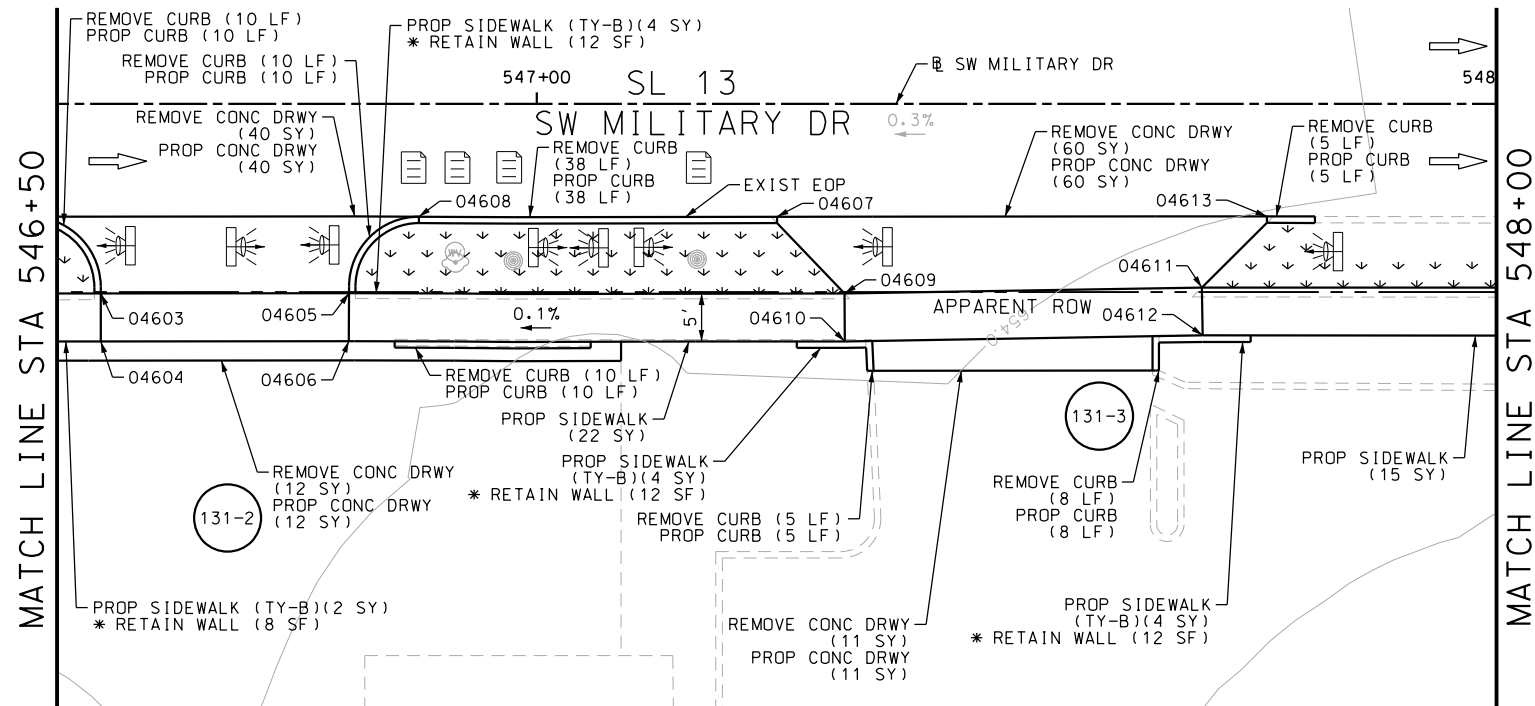
**SIDEWALK
CONSTRUCTION PLAN**

STA 541+00 TO STA 545+00

SHEET 14 OF 49

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIABLE
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	130

Design Filename: P:\111\35\07\design\Civil\Roadway\SWMIilitaryB\1113507*SWMIilitaryB*12.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	191
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	139
0162-6002	BLOCK SODDING	SY	95
0168-6001	VEGETATIVE WATERING	MG	1.48
0529-6002	CONC CURB (TY II)	LF	104
0530-6004	DRIVEWAYS (CONC)	SY	191
0531-6001	CONC SIDEWALKS (4")	SY	104
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	19
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	RY



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



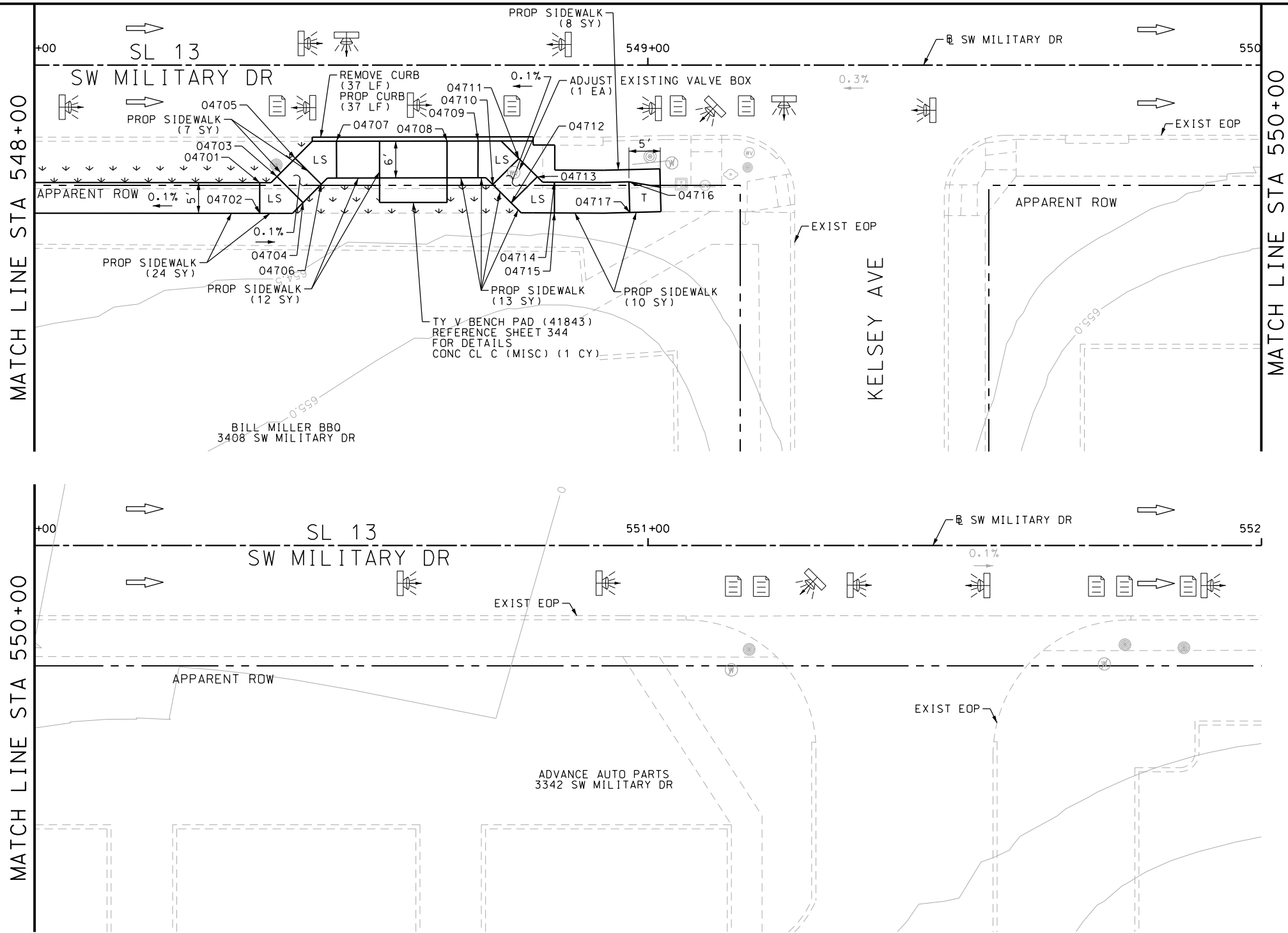
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 545+00 TO STA 548+00

SHEET 15 OF 49

OCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY
CHK OCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	131

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*13.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	37
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0420-6074	CL C CONC (MISC)	CY	1.0
0529-6002	CONC CURB (TY II)	LF	37
0531-6001	CONC SIDEWALKS (4")	SY	74

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
04701	13680188.32	2110737.44	--	
04702	13680183.35	2110736.93	--	
04703	13680189.01	2110740.35	--	
04704	13680184.37	2110744.15	--	
04705	13680191.68	2110743.62	--	
04706	13680187.04	2110747.42	--	
04707	13680193.76	2110750.59	--	
04708	13680191.97	2110768.51	--	
04709	13680191.46	2110773.54	--	
04710	13680184.15	2110775.22	--	
04711	13680187.93	2110779.88	--	
04712	13680180.88	2110777.90	--	
04713	13680184.66	2110782.56	--	
04714	13680183.50	2110785.26	--	
04715	13680178.53	2110784.75	--	
04716	13680182.34	2110797.35	--	
04717	13680177.35	2110796.96	--	

PAPE-DAWSON ENGINEERS

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Texas Department of Transportation
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SL 13
SW MILITARY B
**SIDEWALK
CONSTRUCTION PLAN**
STA 548+00 TO STA 552+00

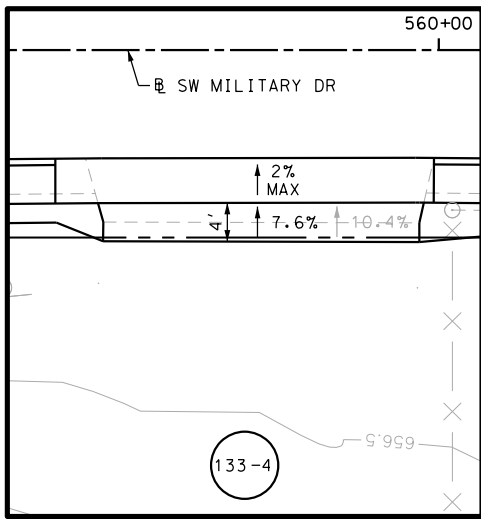
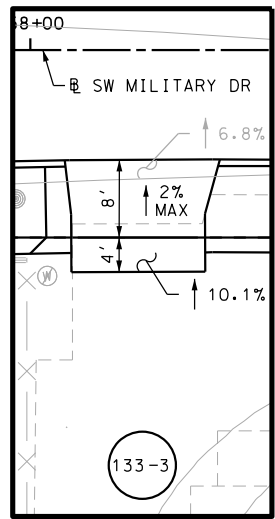
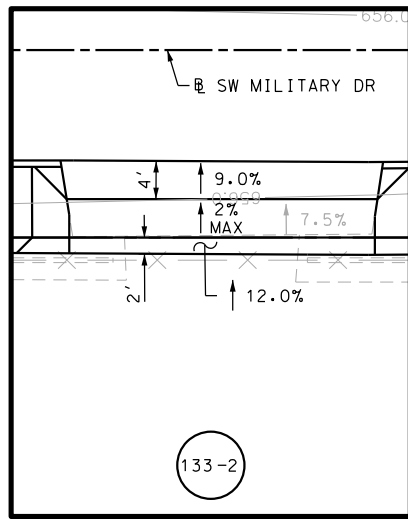
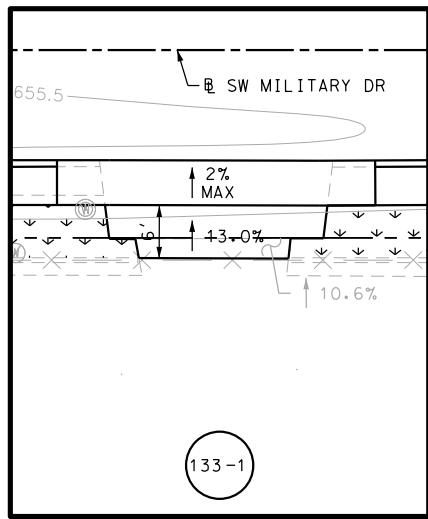
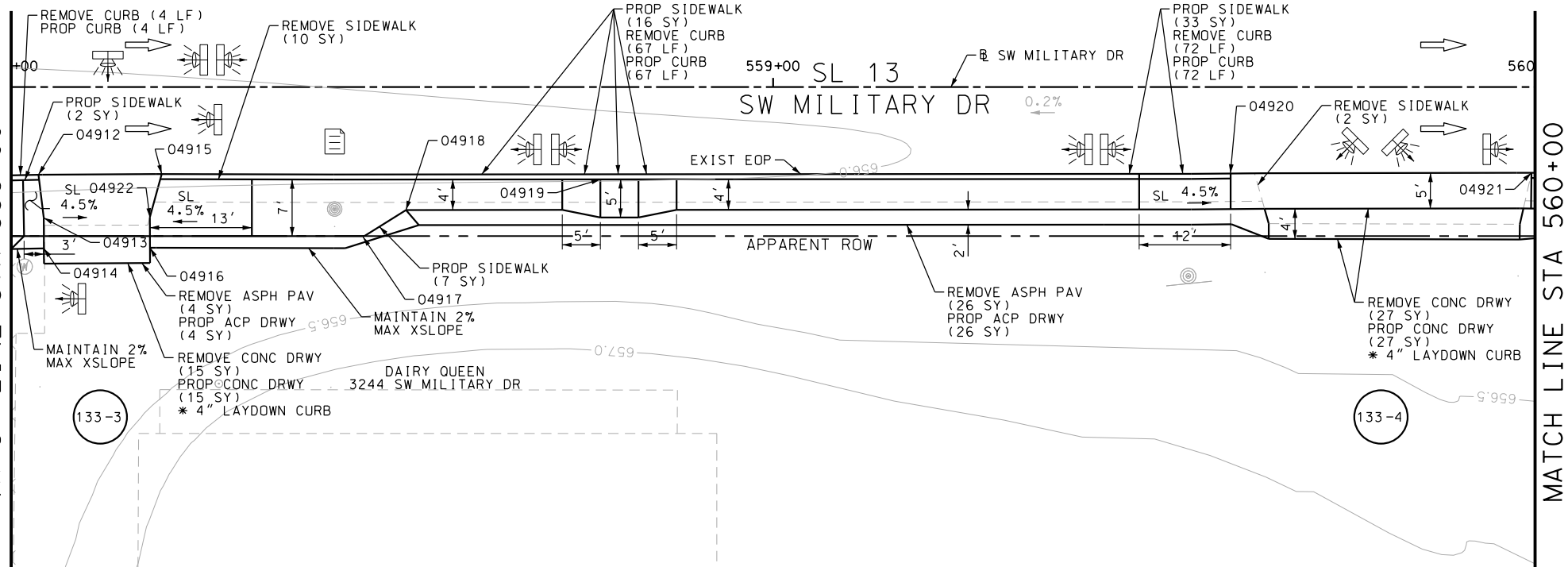
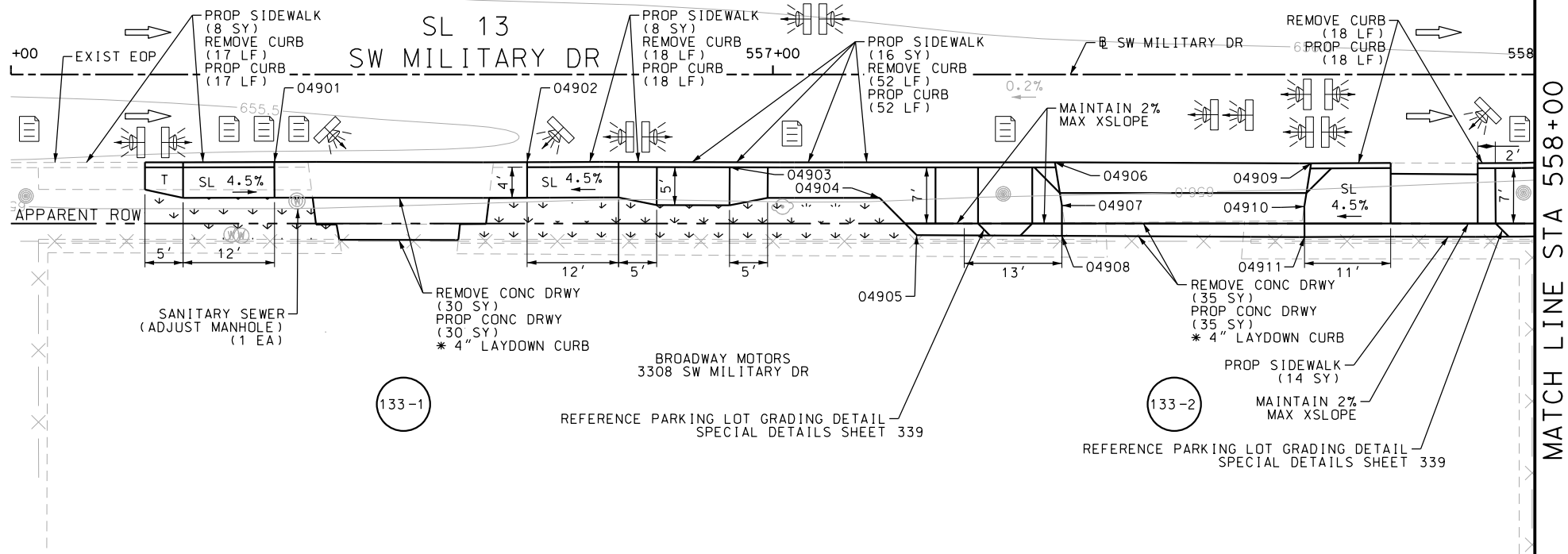
SHEET 16 OF 49

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	132

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*15.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	107
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	266
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	30
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0529-6002	CONC CURB (TY II)	LF	266
0530-6004	DRIVEWAYS (CONC)	SY	107
0530-6005	DRIVEWAYS (ACP)	SY	30
0531-6001	CONC SIDEWALKS (4")	SY	136
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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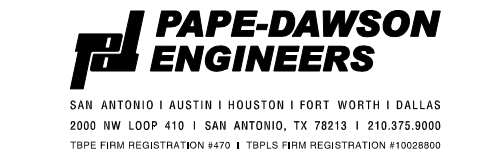
ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 556+00 TO STA 560+00

SHEET 17 OF 49					
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
					133

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI\itaryB\1113507*SWMI\itaryB*15A.dgn

POINT	NORTHING	EASTING	ELEV	DESC
04901	13680112.88	2111505.85	--	
04902	13680114.95	2111531.95	--	
04903	13680111.57	2111564.94	--	
04904	13680103.71	2111595.88	--	
04905	13680106.38	2111609.03	--	
04906	13680104.56	2111614.29	--	
04907	13680101.17	2111612.16	--	
04908	13680101.03	2111619.92	--	
04909	13680097.64	2111617.79	--	
04910	13680099.91	2111623.24	--	
04911	13680095.93	2111622.84	--	
04912	13680104.53	2111633.85	--	
04913	13680098.80	2111634.18	--	
04914	13680094.82	2111633.78	--	
04915	13680091.43	2111665.46	--	
04916	13680095.41	2111665.84	--	
04917	13680100.97	2111667.30	--	
04918	13680097.79	2111700.10	--	
04919	13680092.09	2111700.20	--	
04920	13680088.11	2111699.82	--	

POINT	NORTHING	EASTING	ELEV
04921	13680086.76	2111713.68	--
04922	13680090.75	2111714.07	--
04923	13680096.23	2111716.20	--
04924	13680089.51	2111726.00	--
04925	13680085.53	2111725.62	--
04926	13680084.49	2111735.66	--
04927	13680088.47	2111736.07	--
04928	13680088.93	2111739.88	--
04929	13680085.35	2111741.65	--
04930	13680087.58	2111746.14	--
04931	13680091.16	2111744.37	--
04932	13680092.11	2111749.60	--
04933	13680089.70	2111773.40	--
04934	13680082.08	2111855.76	--
04935	13680078.15	2111895.04	--

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722


DATE: 11/21/2018

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

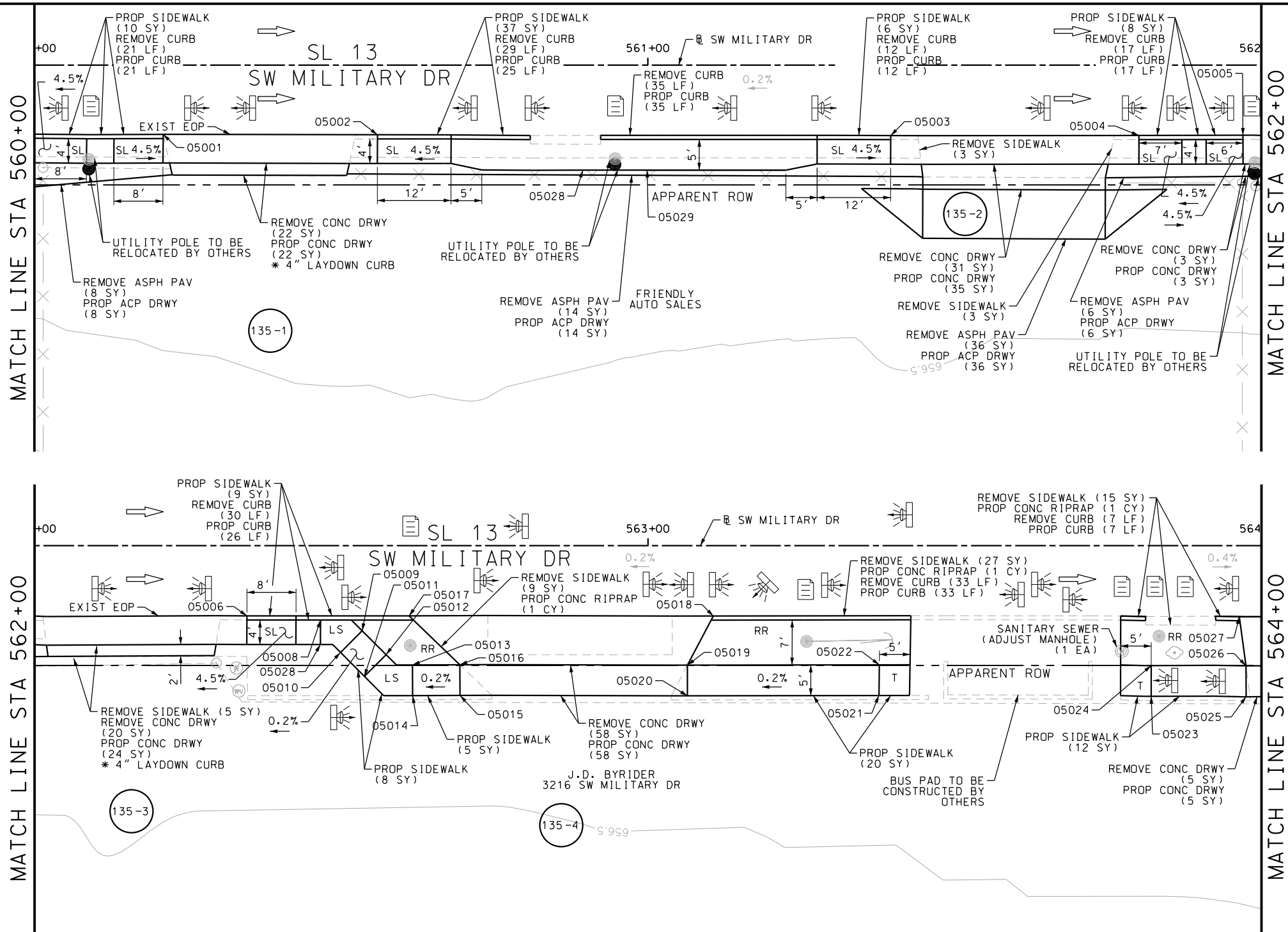
STA 556+00 TO STA 560+00

SHEET 18 OF 49

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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB*16.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	139
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	184
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	62
0105-6037	REMOVING STAB BASE AND ASPH PAV (0'-16")	SY	64
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0529-6002	CONC CURB (TY II)	LF	176
0530-6004	DRIVEWAYS (CONC)	SY	147
0530-6005	DRIVEWAYS (ACP)	SY	64
0531-6001	CONC SIDEWALKS (4")	SY	115
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

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INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 19 OF 49

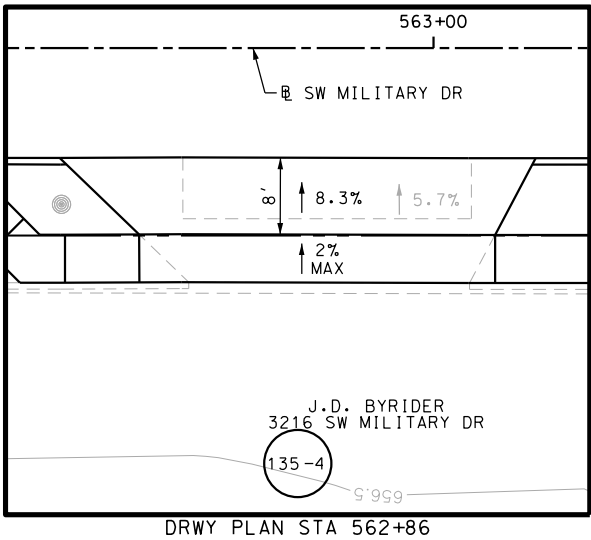
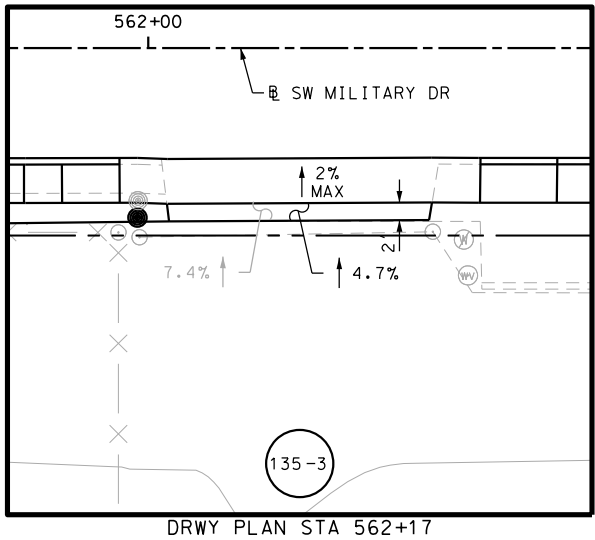
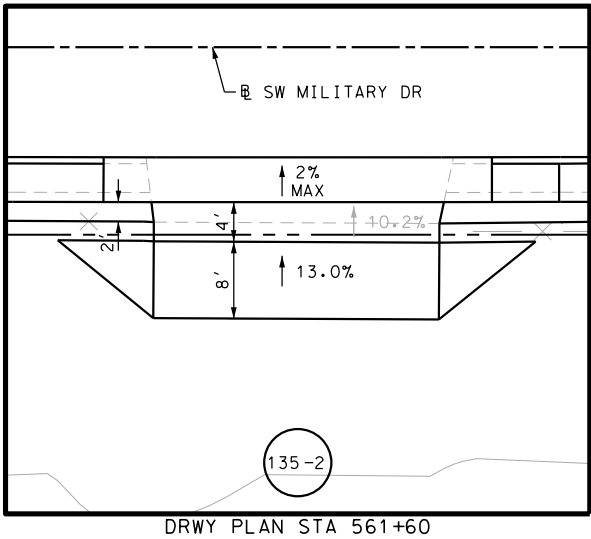
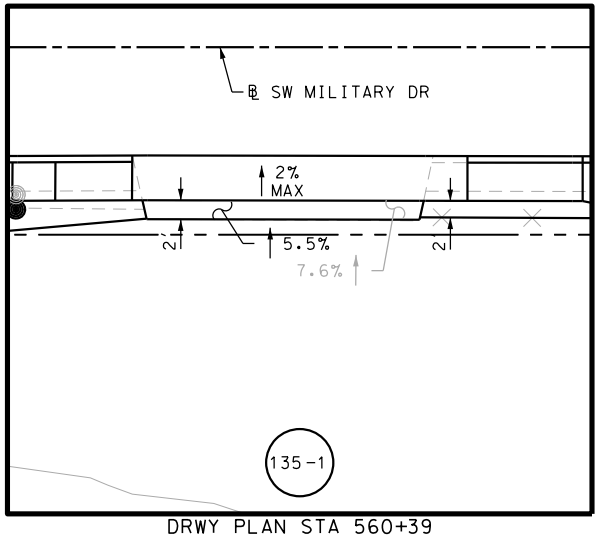
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	135

POINT	NORTHING	EASTING	ELEV	DESC
05001	13680075.93	2111916.39	--	
05002	13680072.33	2111951.14	--	
05003	13680063.71	2112034.37	--	
05004	13680059.61	2112074.62	--	
05005	13680057.92	2112091.49	--	
05006	13680054.08	2112128.92	--	
05007	13680052.20	2112140.78	--	
05008	13680051.69	2112145.79	--	
05009	13680049.77	2112147.35	--	
05010	13680046.61	2112143.47	--	
05011	13680042.34	2112146.96	--	
05012	13680045.50	2112150.83	--	
05013	13680043.39	2112154.93	--	
05014	13680038.41	2112154.45	--	
05015	13680037.67	2112162.12	--	
05016	13680042.64	2112162.60	--	
05017	13680051.40	2112155.21	--	
05018	13680046.35	2112204.55	--	
05019	13680038.81	2112199.52	--	
05020	13680033.84	2112199.02	--	

POINT	NORTHING	EASTING	ELEV
05021	13680030.72	2112230.08	--
05022	13680035.69	2112230.66	--
05023	13680026.09	2112274.21	--
05024	13680031.07	2112274.74	--
05025	13680024.48	2112289.62	--
05026	13680029.46	2112290.10	--
05027	13680037.54	2112289.84	--
05028	13680063.19	2111983.86	--
05029	13680062.13	2111994.29	--

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*16A.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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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**

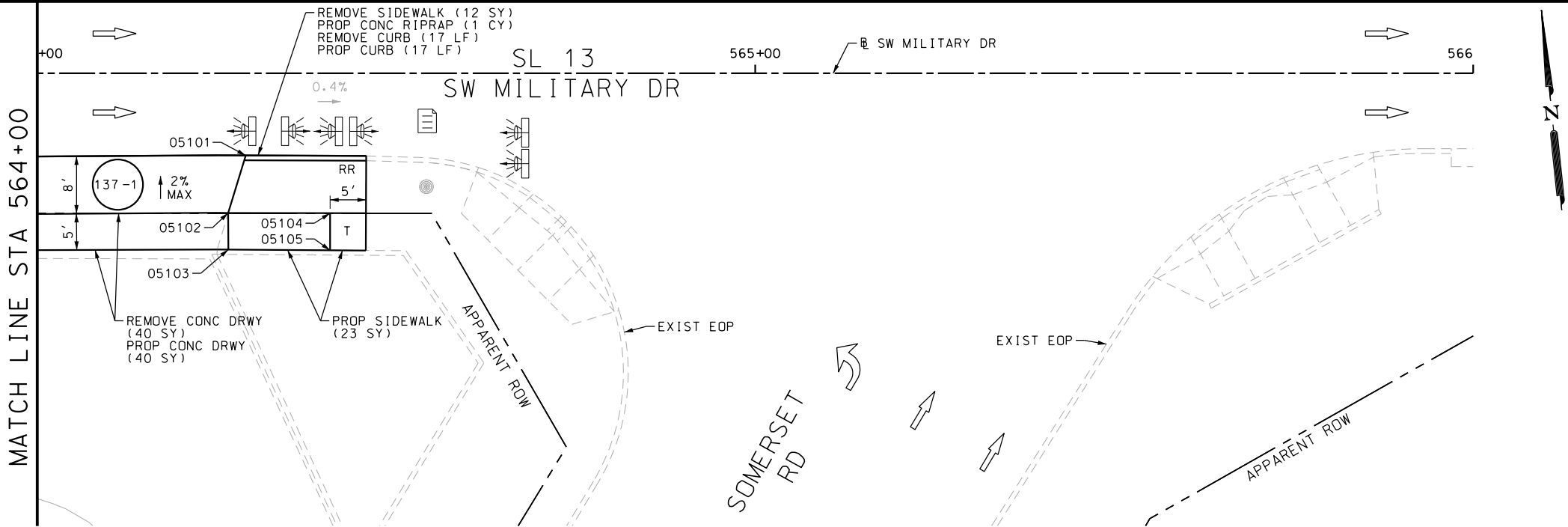
STA 560+00 TO STA 564+00

SHEET 20 OF 49

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: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*17.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	40
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	17
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	12
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	17
0530-6004	DRIVEWAYS (CONC)	SY	40
0531-6001	CONC SIDEWALKS (4")	SY	23

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

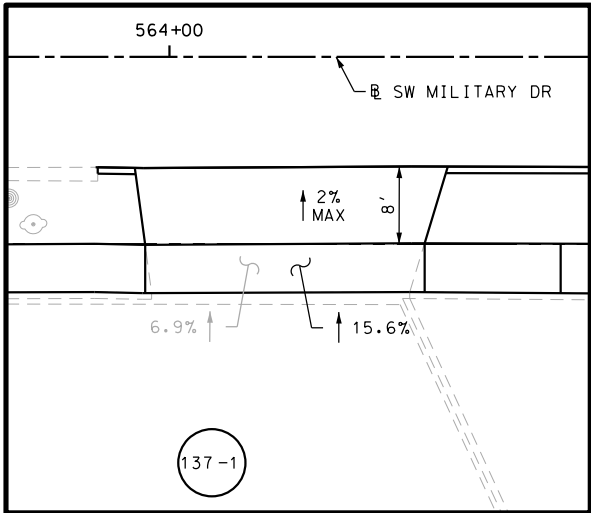
ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
05101	13680034.36	2112322.32	--	
05102	13680026.66	2112319.08	--	
05103	13680021.68	2112318.56	--	
05104	13680025.18	2112333.19	--	
05105	13680020.05	2112332.65	--	



DRWY PLAN STA 564+13

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
SW MILITARY B

**SIDEWALK
CONSTRUCTION PLAN**

STA 564+00 TO STA 566+00

SHEET 21 OF 49

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	137

NOTES:

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INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'



**PAPE-DAWSON
ENGINEERS**

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



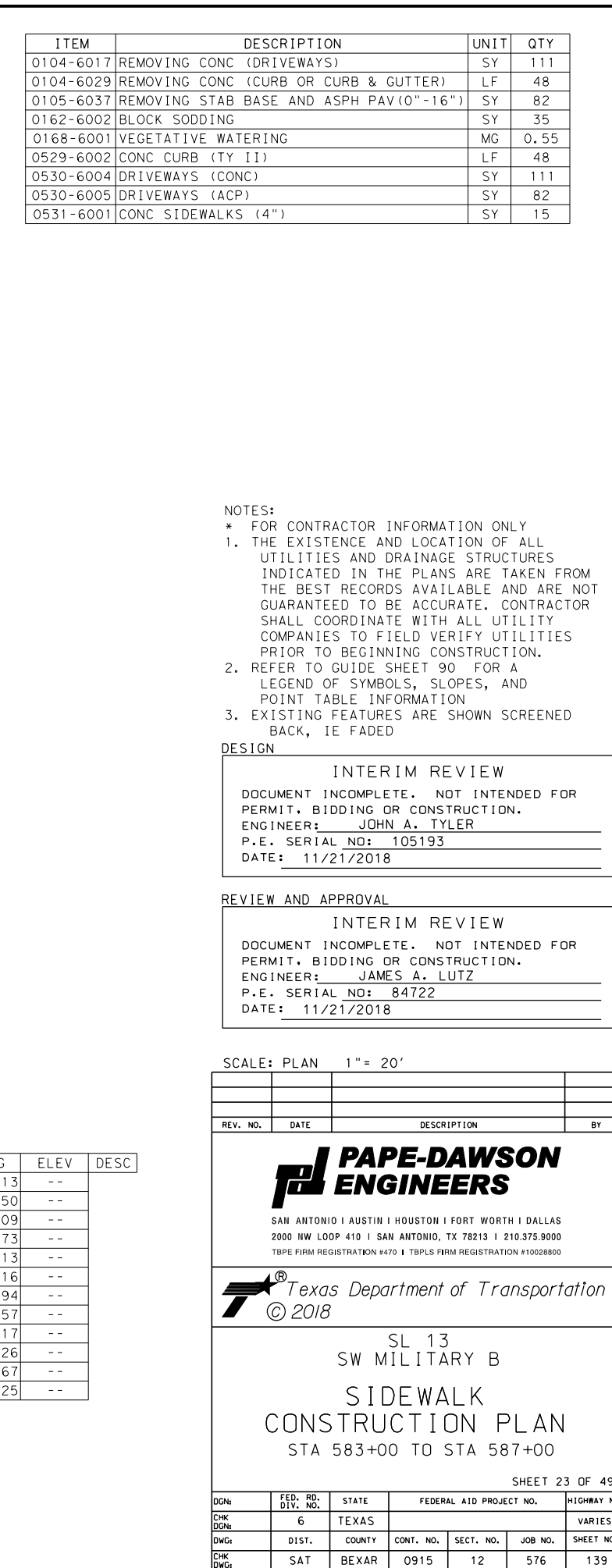
SL 13
SW MILITARY B

SIDEWALK CONSTRUCTION PLAN

STA 574+00 TO STA 576+00
STA 804+00 TO STA 806+00

DCN:	FED. RD. DIV.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY
CHK DCN:	6	TEXAS				VARIATION
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	138

Design Filename: P:\111\35\07\design\Civil\Roadway\SWM\ilitaryB\1113507*SWM\ilitaryB*20.dgn



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
0162-6002	BLOCK SODDING	SY	35
0168-6001	VEGETATIVE WATERING	MG	0.55
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

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722


DATE: 11/21/2018

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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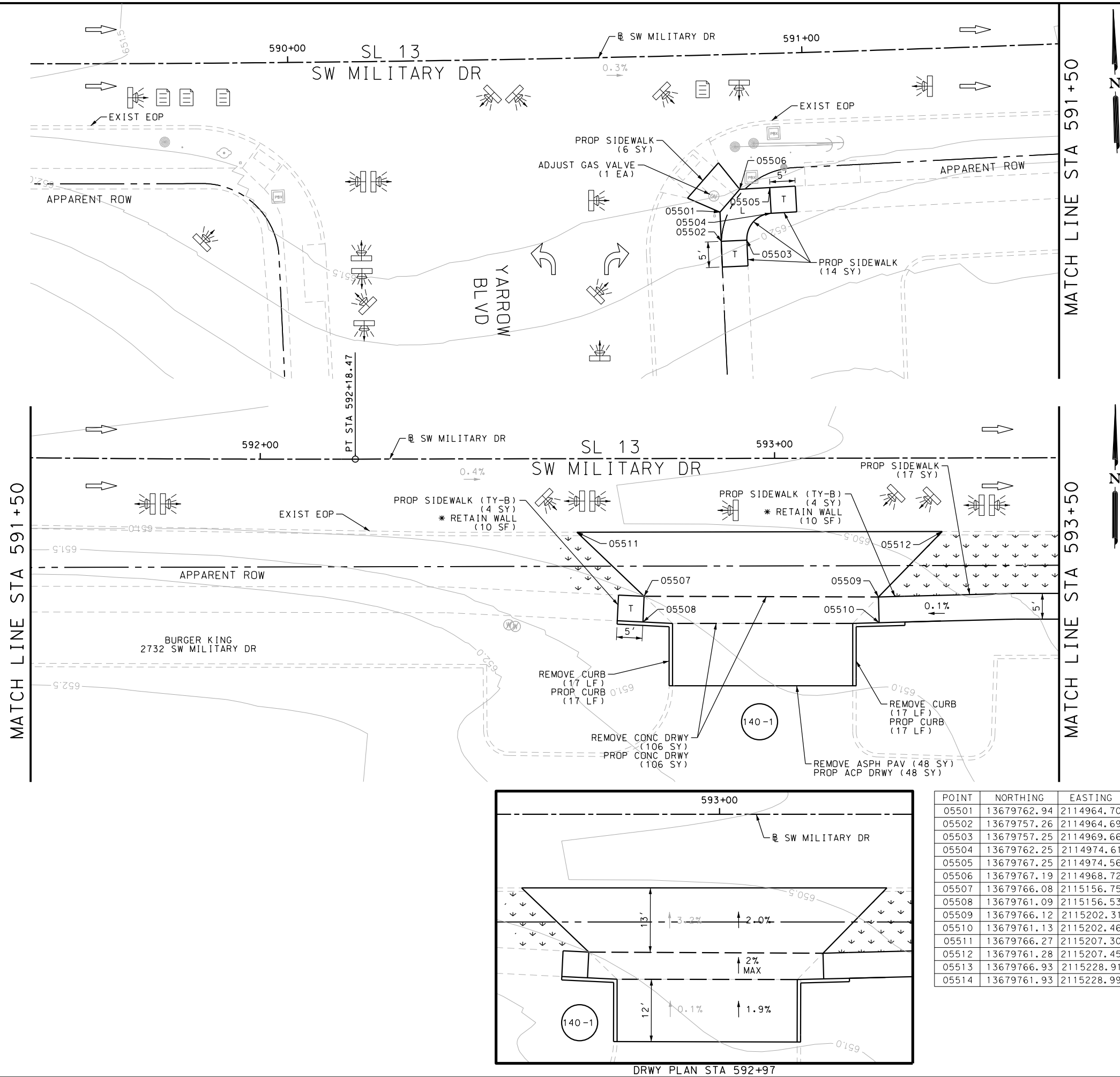
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 583+00 TO STA 587+00

SHEET 23 OF 49

DCN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN ₂	6	TEXAS				VARIATION
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₂	SAT	BEXAR	0915	12	576	139

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\1113507*SWMilitaryB*21.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	106
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	34
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	48
0529-6002	CONC CURB (TY II)	LF	34
0530-6004	DRIVEWAYS (CONC)	SY	106
0530-6005	DRIVEWAYS (ACP)	SY	48
0531-6001	CONC SIDEWALKS (4")	SY	37
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1

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DESIGN

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DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
05501	13679762.94	2114964.70	--	
05502	13679757.26	2114964.69	--	
05503	13679757.25	2114969.66	--	
05504	13679762.25	2114974.61	--	
05505	13679767.25	2114974.56	--	
05506	13679767.19	2114968.72	--	
05507	13679766.08	2115156.75	--	
05508	13679761.09	2115156.53	--	
05509	13679766.12	2115202.31	--	
05510	13679761.13	2115202.46	--	
05511	13679766.27	2115207.30	--	
05512	13679761.28	2115207.45	--	
05513	13679766.93	2115228.91	--	
05514	13679761.93	2115228.99	--	

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ENGINEERS

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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 589+50 TO STA 593+50

SHEET 24 OF 49

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	140

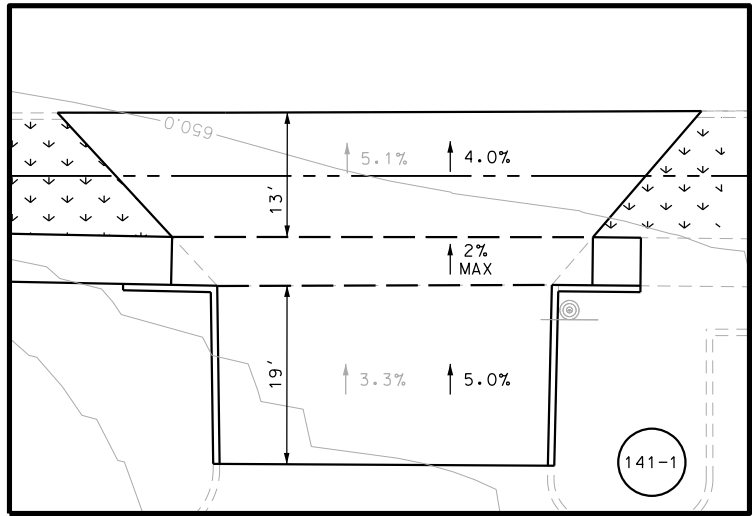
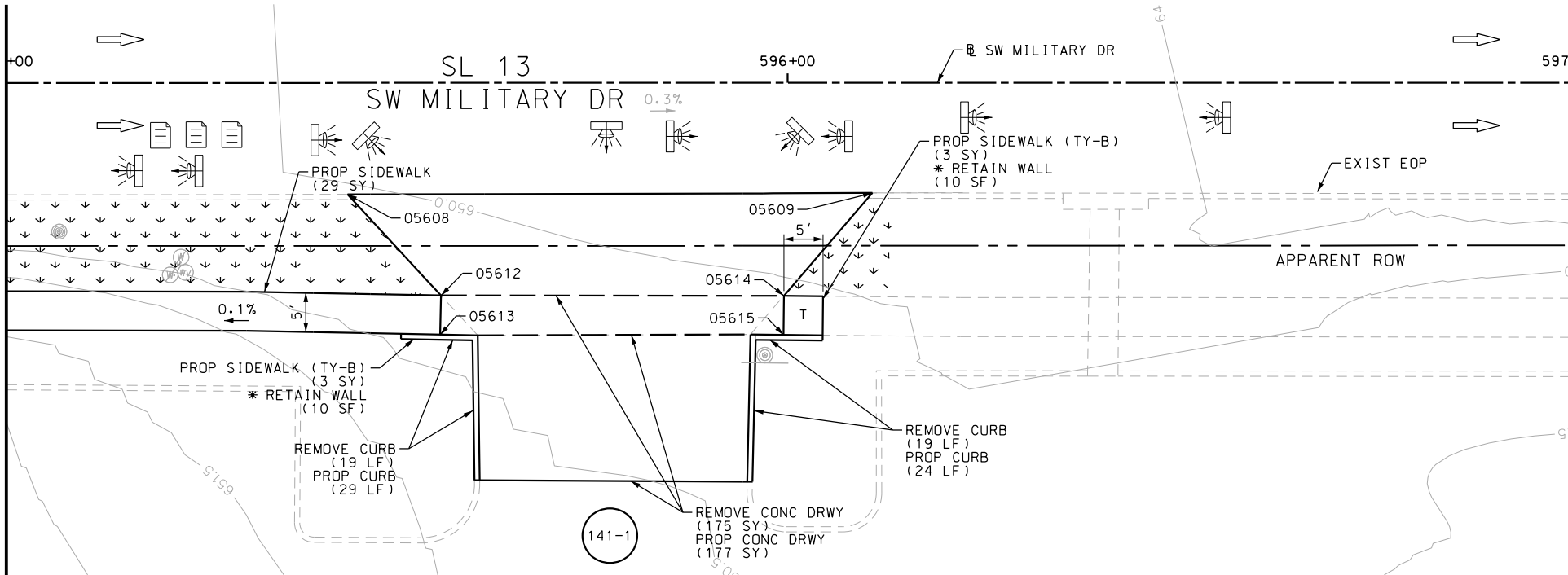
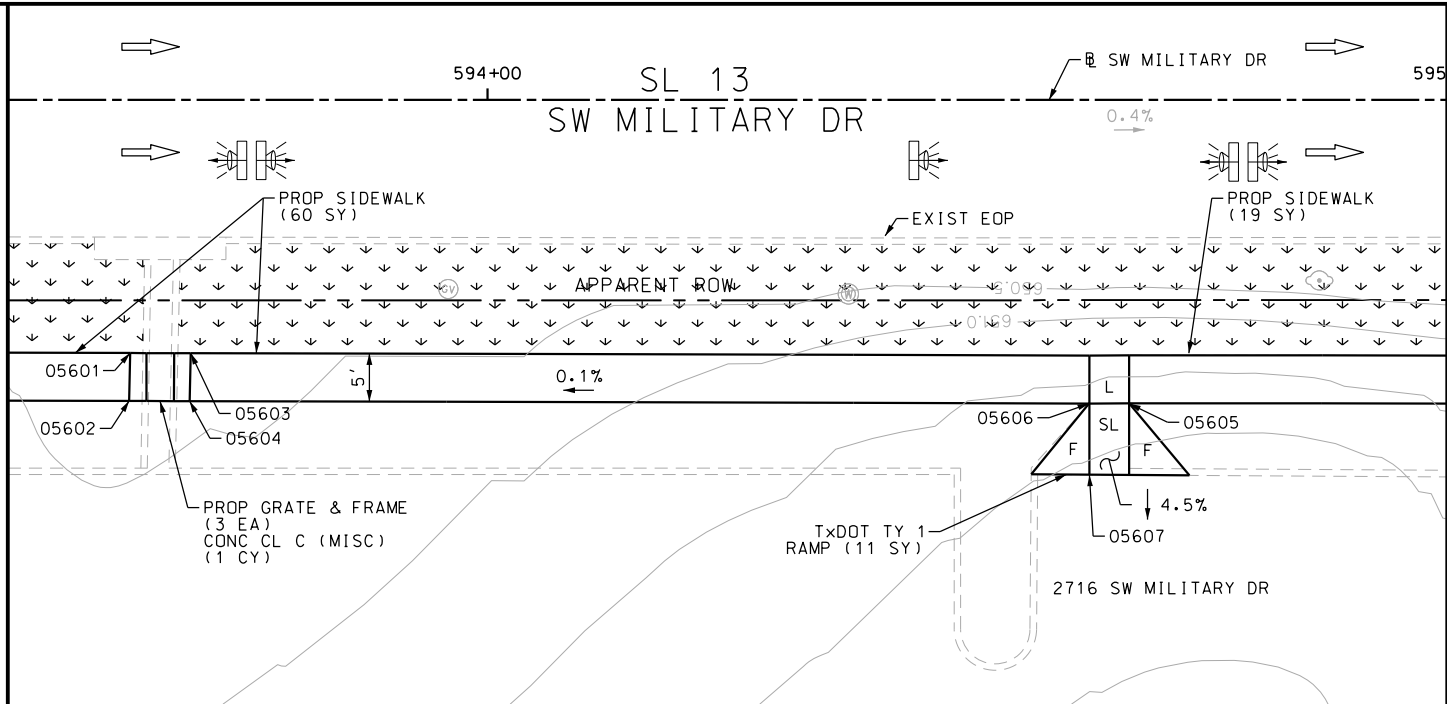
Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*22.dgn

MATCH LINE STA 593+50

MATCH LINE STA 595+00

MATCH LINE STA 597+00



DRWY PLAN STA 595+77

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	175
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	38
0420-6074	CL C CONC (MISC)	CY	1.0
0471-6003	GRATE & FRAME	EA	3
0529-6002	CONC CURB (TY 11)	LF	53
0530-6004	DRIVEWAYS (CONC)	SY	177
0531-6001	CONC SIDEWALKS (4")	SY	108
0531-6018	CURB RAMPS (TY 1)	SY	11
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	6

NOTES:

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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
05601	13679766.99	2115244.91	--	
05602	13679761.99	2115244.85	--	
05603	13679767.01	2115251.22	--	
05604	13679762.01	2115251.14	--	
05605	13679767.31	2115344.86	--	
05606	13679762.31	2115344.89	--	
05607	13679754.89	2115344.94	--	
05608	13679767.35	2115349.01	--	
05609	13679762.35	2115349.04	--	
05610	13679767.35	2115432.84	--	
05611	13679762.35	2115432.77	--	
05612	13679767.28	2115437.84	--	
05613	13679762.28	2115437.77	--	
05614	13679767.48	2115481.69	--	
05615	13679762.48	2115481.67	--	

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
SW MILITARY B

**SIDEWALK
CONSTRUCTION PLAN**

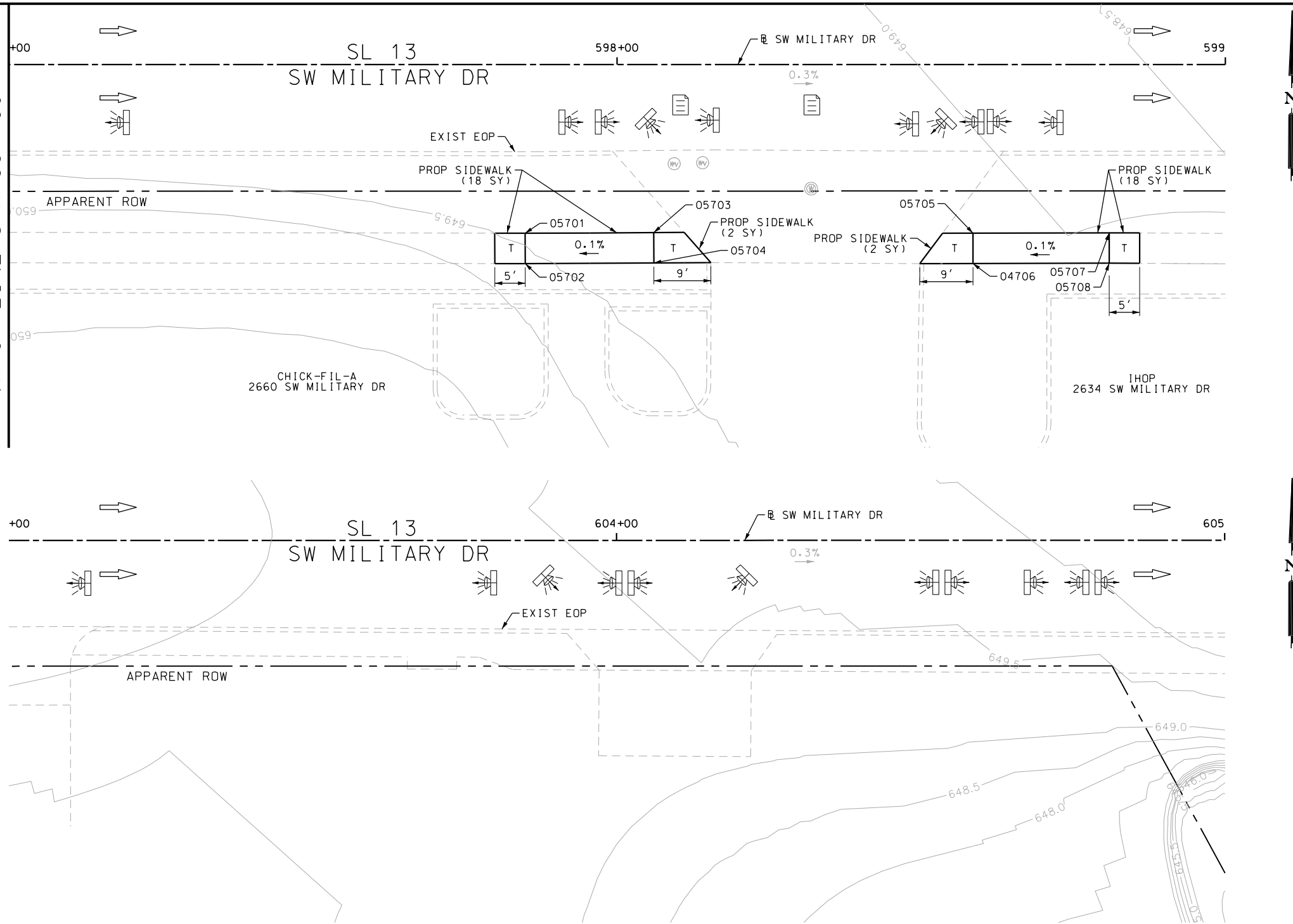
STA 593+50 TO STA 597+00

SHEET 25 OF 49					
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
					141

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB*23.dgn

MATCH LINE STA 597+00



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	40

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INTERIM REVIEW	
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ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
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ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

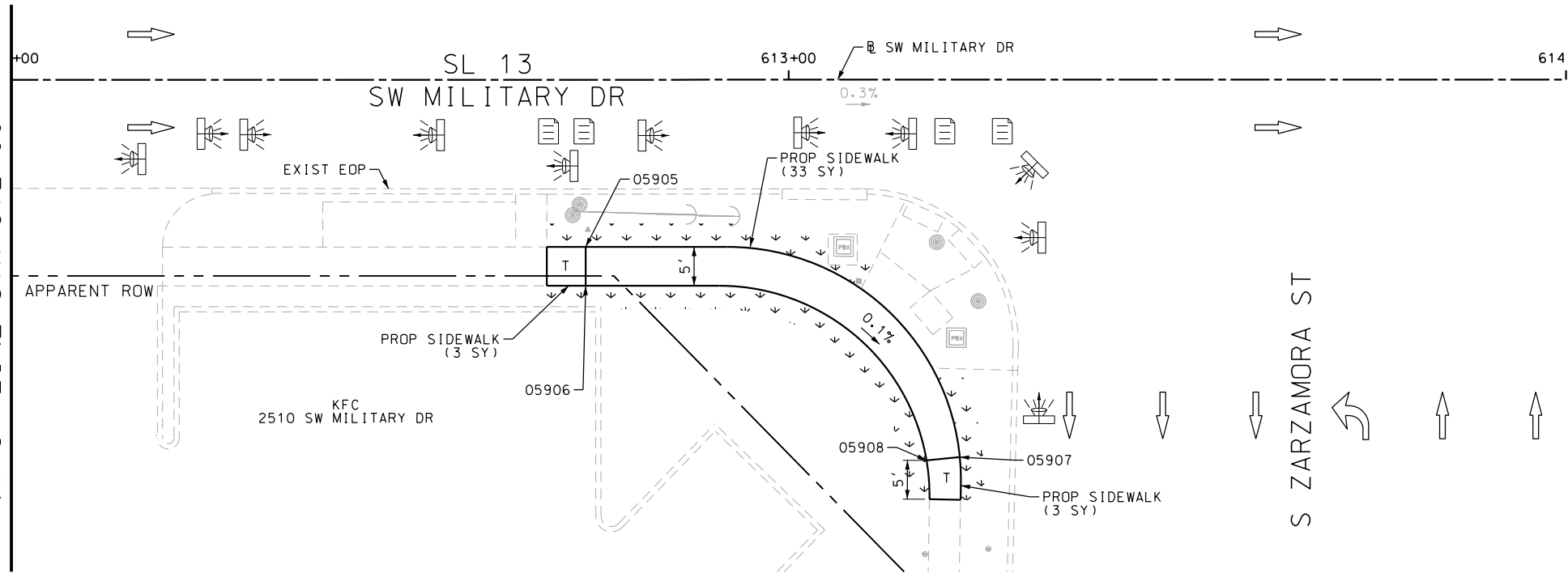
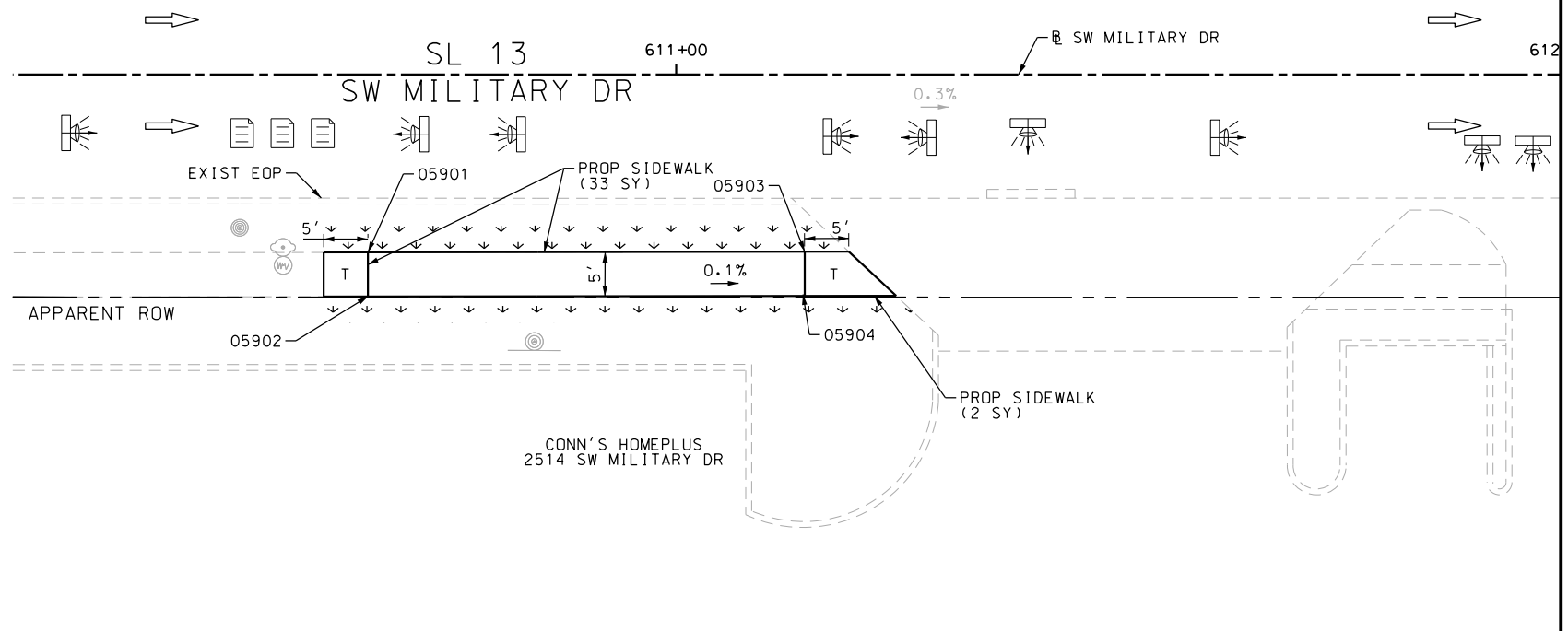
SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
05701	13679768.07	2115667.04	--	
05702	13679763.07	2115667.11	--	
05703	13679768.37	2115693.19	--	
05704	13679763.38	2115693.25	--	
05705	13679768.47	2115735.66	--	
05706	13679763.47	2115735.70	--	
05707	13679768.70	2115763.06	--	
05708	13679763.70	2115763.10	--	

		SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800	
		© 2018	
SL 13 SW MILITARY B SIDEWALK CONSTRUCTION PLAN STA 597+00 TO STA 599+00 STA 603+00 TO STA 605+00 SHEET 26 OF 49			
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:
CHK DGN:	6	TEXAS	
DWG:	DIST.:	COUNTY:	CONT. NO. SECT. NO. JOB NO.
CHK DWG:	SAT	BEXAR	0915 12 576

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\MilitaryBx25.dgn



POINT	NORTHING	EASTING	ELEV	DESC
05901	13679783.09	2116947.23	--	
05902	13679778.09	2116947.27	--	
05903	13679783.48	2117001.60	--	
05904	13679778.52	2117006.98	--	
05905	13679782.88	2117155.98	--	
05906	13679777.88	2117156.01	--	
05907	13679782.99	2117174.26	--	
05908	13679777.98	2117173.25	--	
05909	13679755.66	2117200.01	--	
05910	13679756.10	2117204.28	--	

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	70
0168-6001	VEGETATIVE WATERING	MG	1.09
0531-6001	CONC SIDEWALKS (4")	SY	74
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

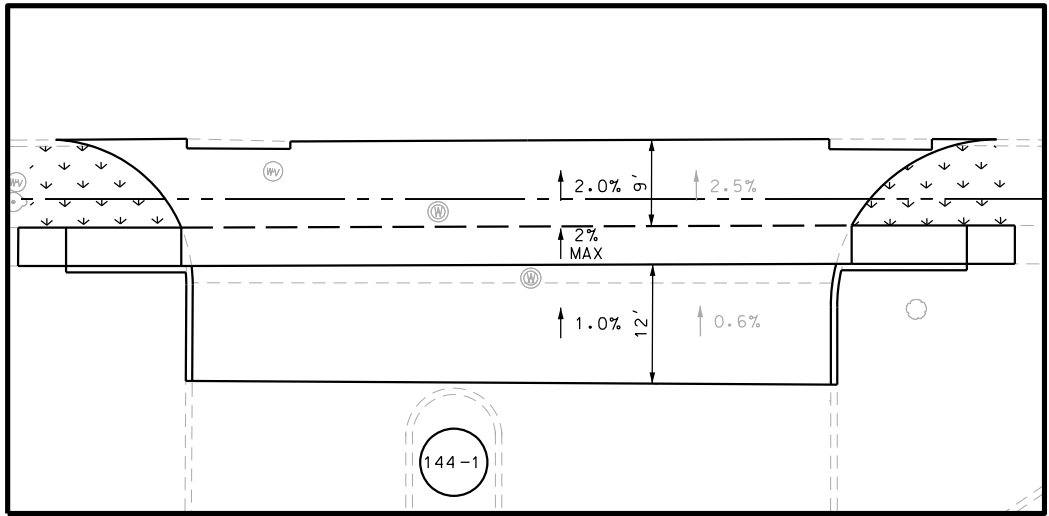
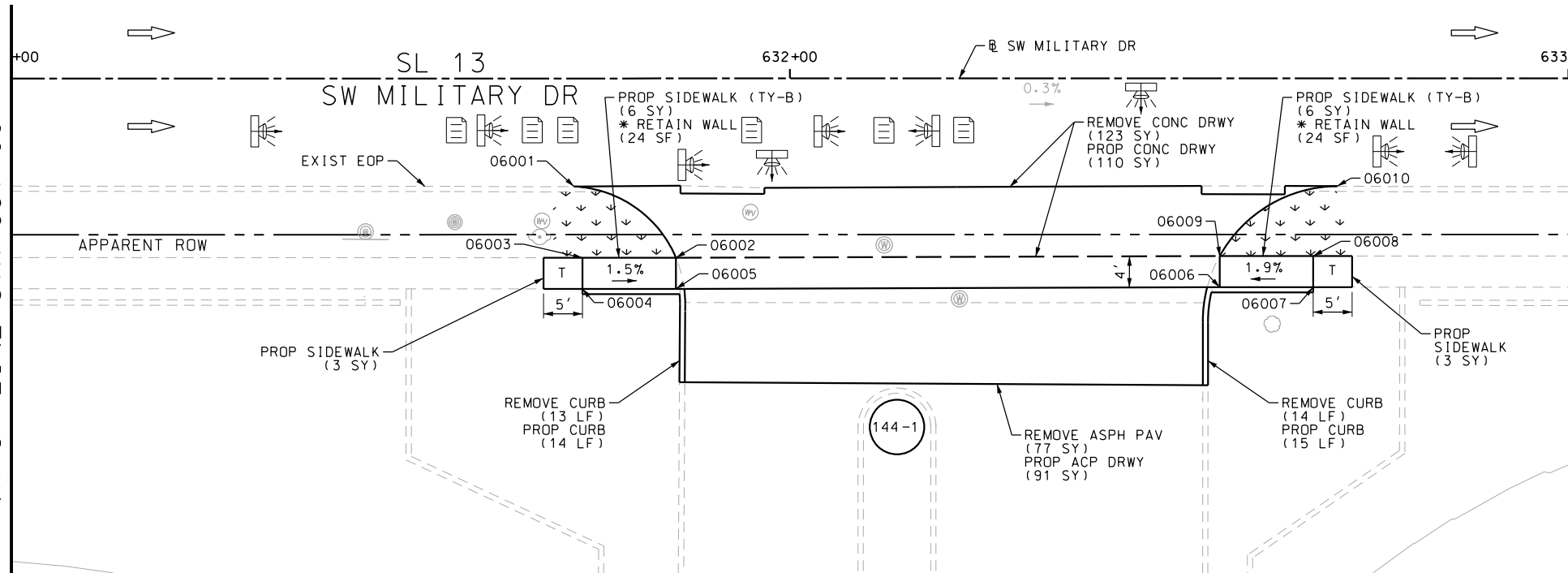
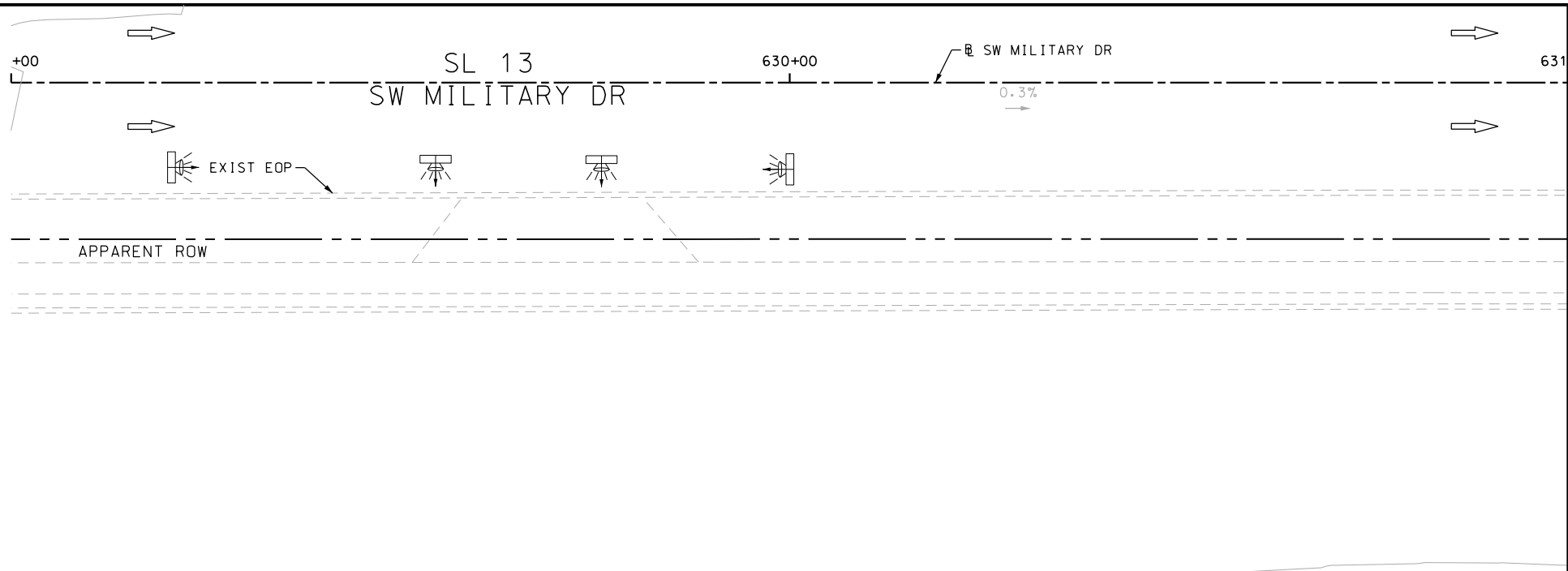
**SIDEWALK
CONSTRUCTION PLAN**

STA 610+25 TO STA 614+00

SHEET 27 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*26.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	123
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	27
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	77
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	110
0530-6005	DRIVEWAYS (ACP)	SY	91
0531-6001	CONC SIDEWALKS (4")	SY	6
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	12

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

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

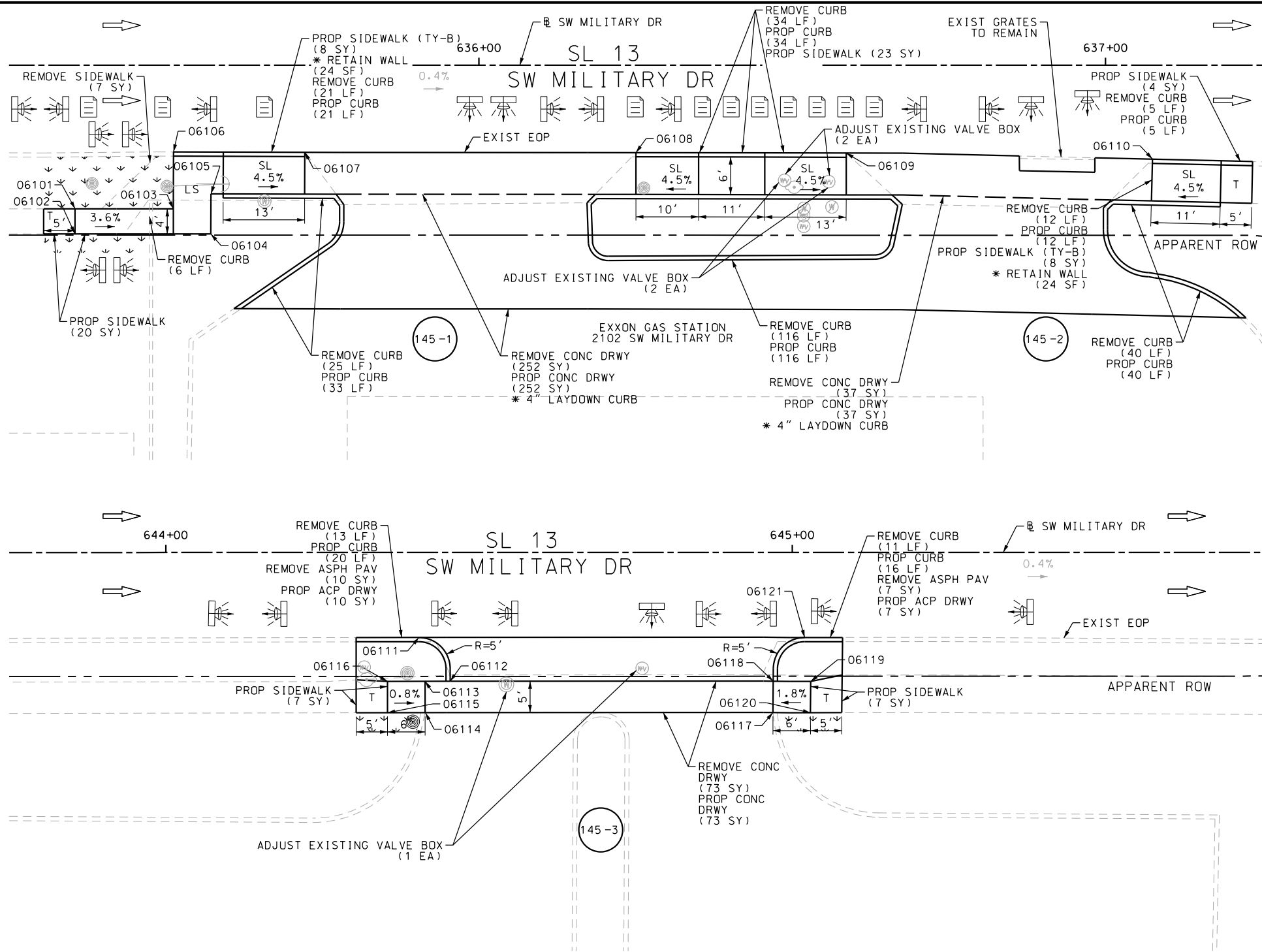
Texas Department of Transportation
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SL 13
SW MILITARY B
SIDEWALK CONSTRUCTION PLAN
STA 629+00 TO STA 633+00

SHEET 28 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\MilitaryB.dgn



POINT	NORTHING	EASTING	ELEV	DESC
06101	13679794.57	2119417.61	--	.
06102	13679790.57	2119417.63	--	.
06103	13679794.65	2119433.29	--	.
06104	13679790.69	2119439.29	--	.
06105	13679797.09	2119439.28	--	.
06106	13679803.08	2119433.27	--	.
06107	13679803.80	2119454.22	--	.
06108	13679804.05	2119507.08	--	.
06109	13679804.18	2119540.64	--	.
06110	13679803.50	2119589.51	--	.
06111	13679809.15	2120322.38	--	.
06112	13679802.18	2120327.43	--	.
06113	13679802.15	2120323.43	--	.
06114	13679797.15	2120323.47	--	.
06115	13679797.11	2120317.47	--	.
06116	13679802.11	2120317.43	--	.
06117	13679797.49	2120378.96	--	.
06118	13679802.49	2120378.98	--	.
06119	13679802.50	2120384.98	--	.
06120	13679797.50	2120384.96	--	.

POINT	NORTHING	EASTING	ELEV	DESC
06121	13679809.49	2120383.96	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	362
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	283
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	17
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0529-6002	CONC CURB (TY II)	LF	297
0530-6004	DRIVEWAYS (CONC)	SY	362
0530-6005	DRIVEWAYS (ACP)	SY	17
0531-6001	CONC SIDEWALKS (4")	SY	61
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	16
7091-6001	ADJUST EXISTING VALVE BOX	EA	2

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

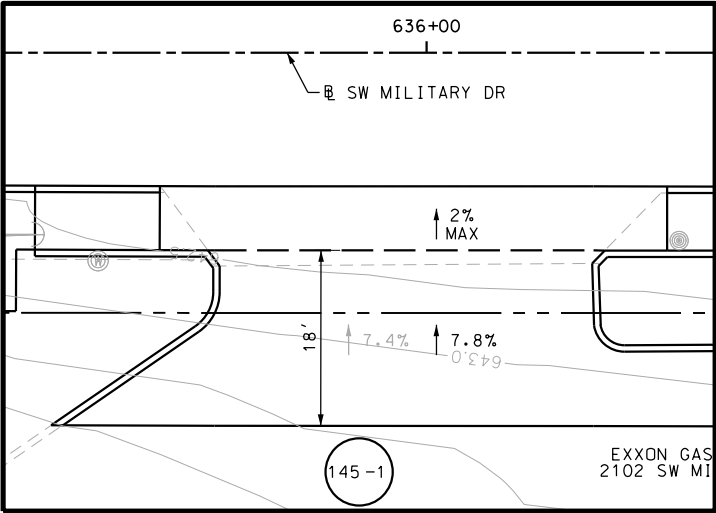
STA 635+25 TO STA 637+25
STA 643+75 TO STA 645+75

SHEET 29 OF 49

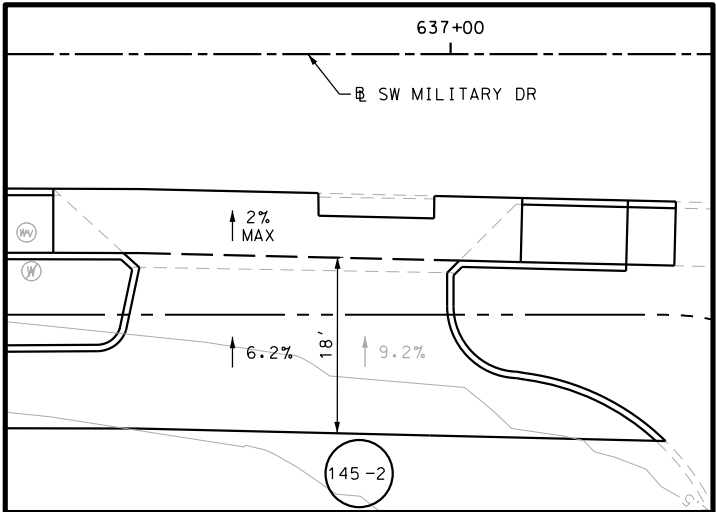
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12

Plotted on: 11/21/2018

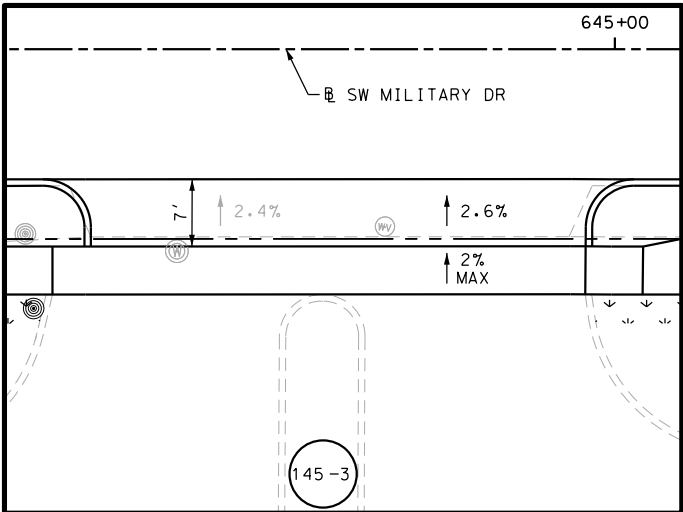
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DRWY PLAN STA 635+92



DRWY PLAN STA 636+90



DRWY PLAN STA 644+72

- 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

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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**

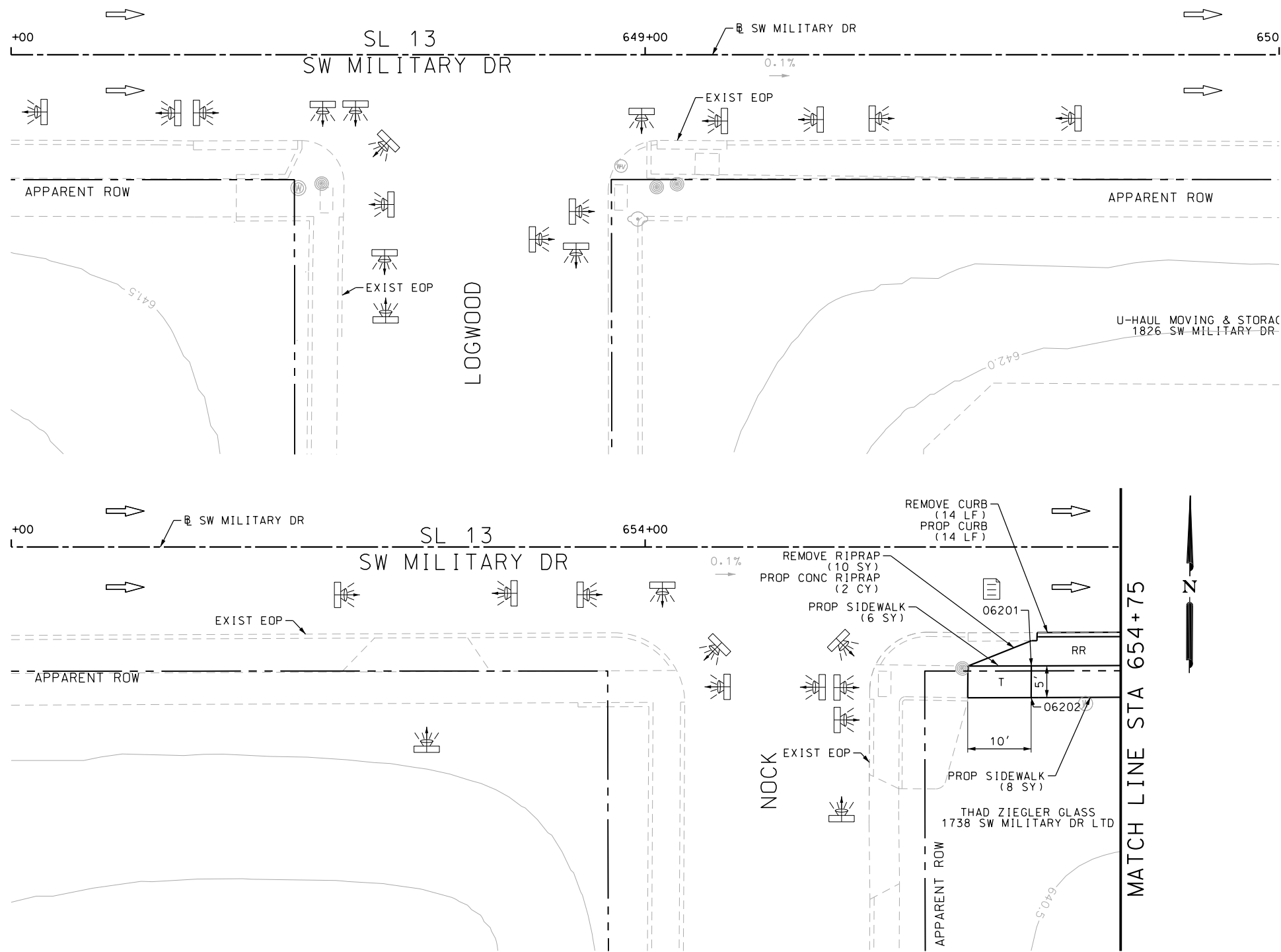
STA 635+25 TO STA 637+25
STA 643+75 TO STA 645+75

SHEET 30 OF 49

DDN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DDN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	146

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB*28.dgn



POINT	NORTHING	EASTING	ELEV	DESC
06201	13679809.85	2121342.92	--	.
06202	13679804.85	2121342.92	--	.

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

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

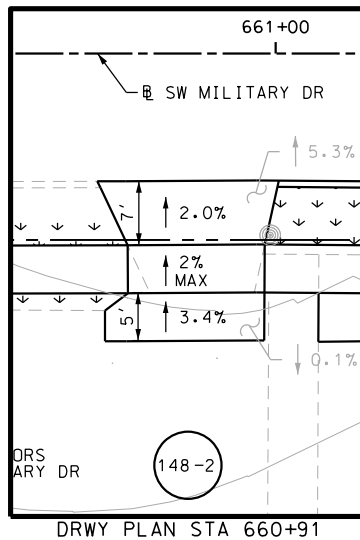
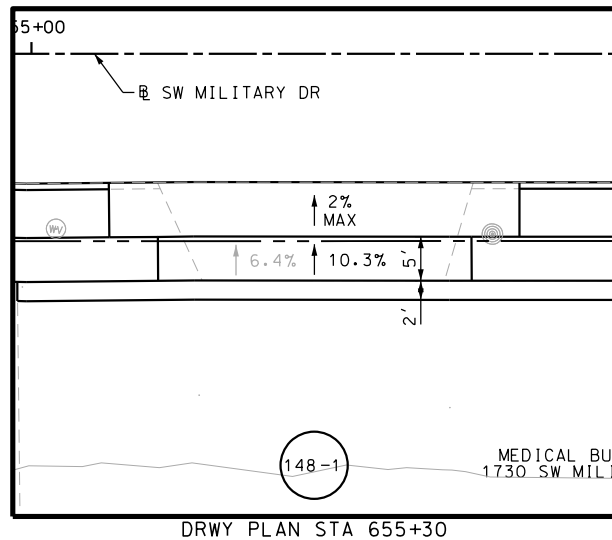
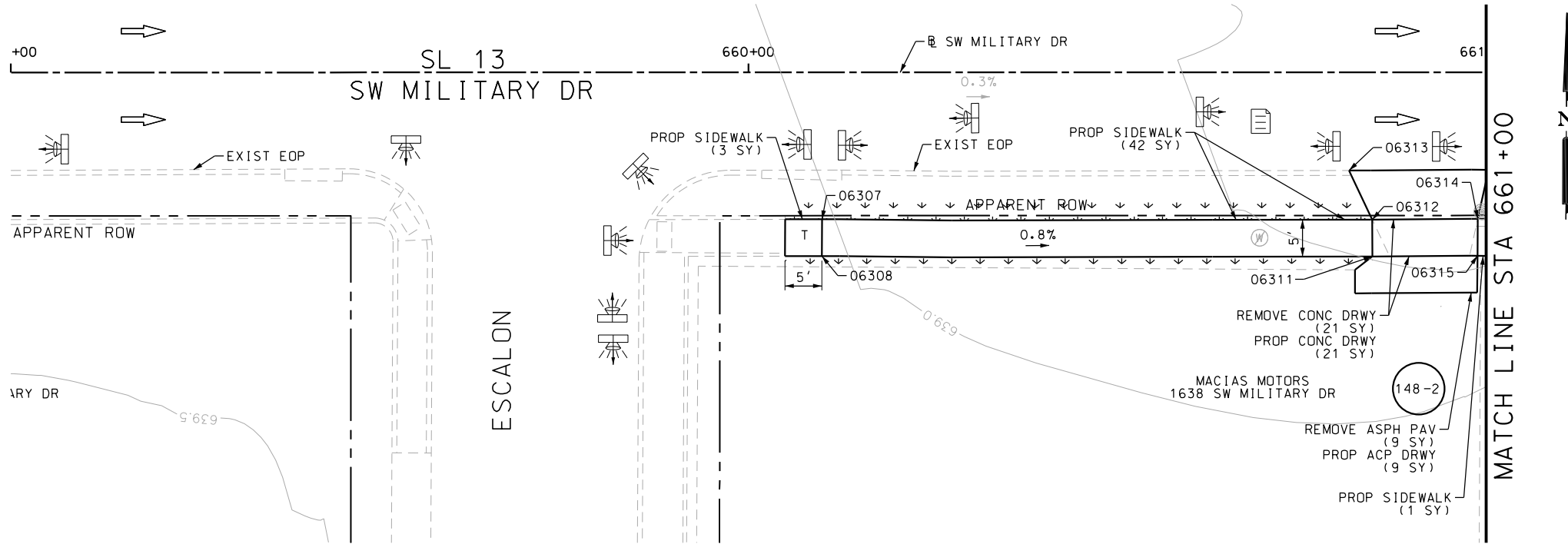
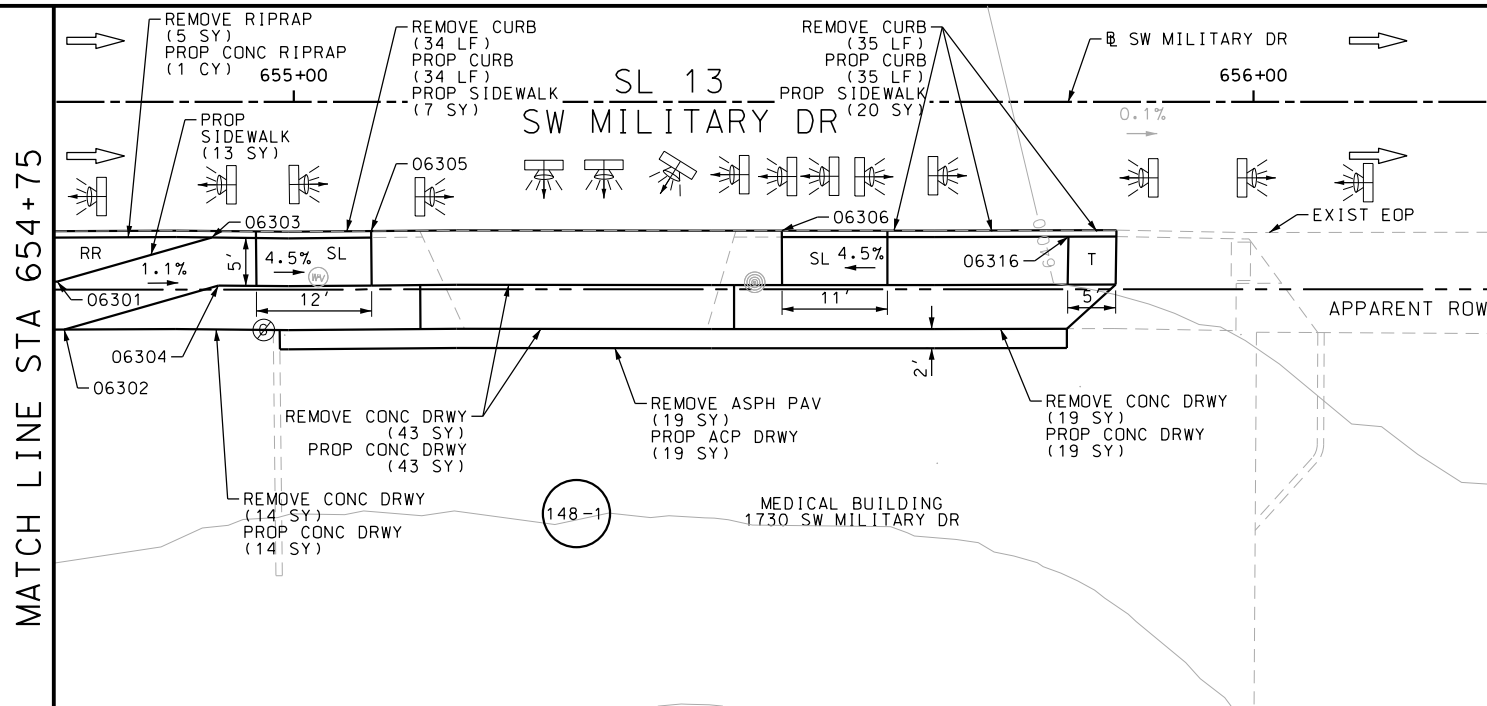
**SIDEWALK
CONSTRUCTION PLAN**

STA 648+00 TO STA 650+00
STA 653+00 TO STA 654+75
SHEET 31 OF 49

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	147

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*29.dgn



POINT	NORTHING	EASTING	ELEV	DESC
06301	13679809.98	2121357.38	--	.
06302	13679804.99	2121358.12	--	.
06303	13679814.66	2121373.44	--	.
06304	13679809.66	2121374.14	--	.
06305	13679815.42	2121390.05	--	.
06306	13679815.72	2121432.85	--	.
06307	13679811.87	2121891.99	--	.
06308	13679806.87	2121891.99	--	.
06309	13679812.20	2121960.58	--	.
06310	13679807.20	2121960.64	--	.
06311	13679807.25	2121966.64	--	.
06312	13679812.25	2121966.58	--	.
06313	13679818.90	2121963.39	--	.
06314	13679812.42	2121980.88	--	.
06315	13679807.42	2121980.87	--	.
06316	13679815.26	2121462.70	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	5
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	97
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	69
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	28
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0529-6002	CONC CURB (TY II)	LF	69
0530-6004	DRIVEWAYS (CONC)	SY	97
0530-6005	DRIVEWAYS (ACP)	SY	28
0531-6001	CONC SIDEWALKS (4")	SY	86

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

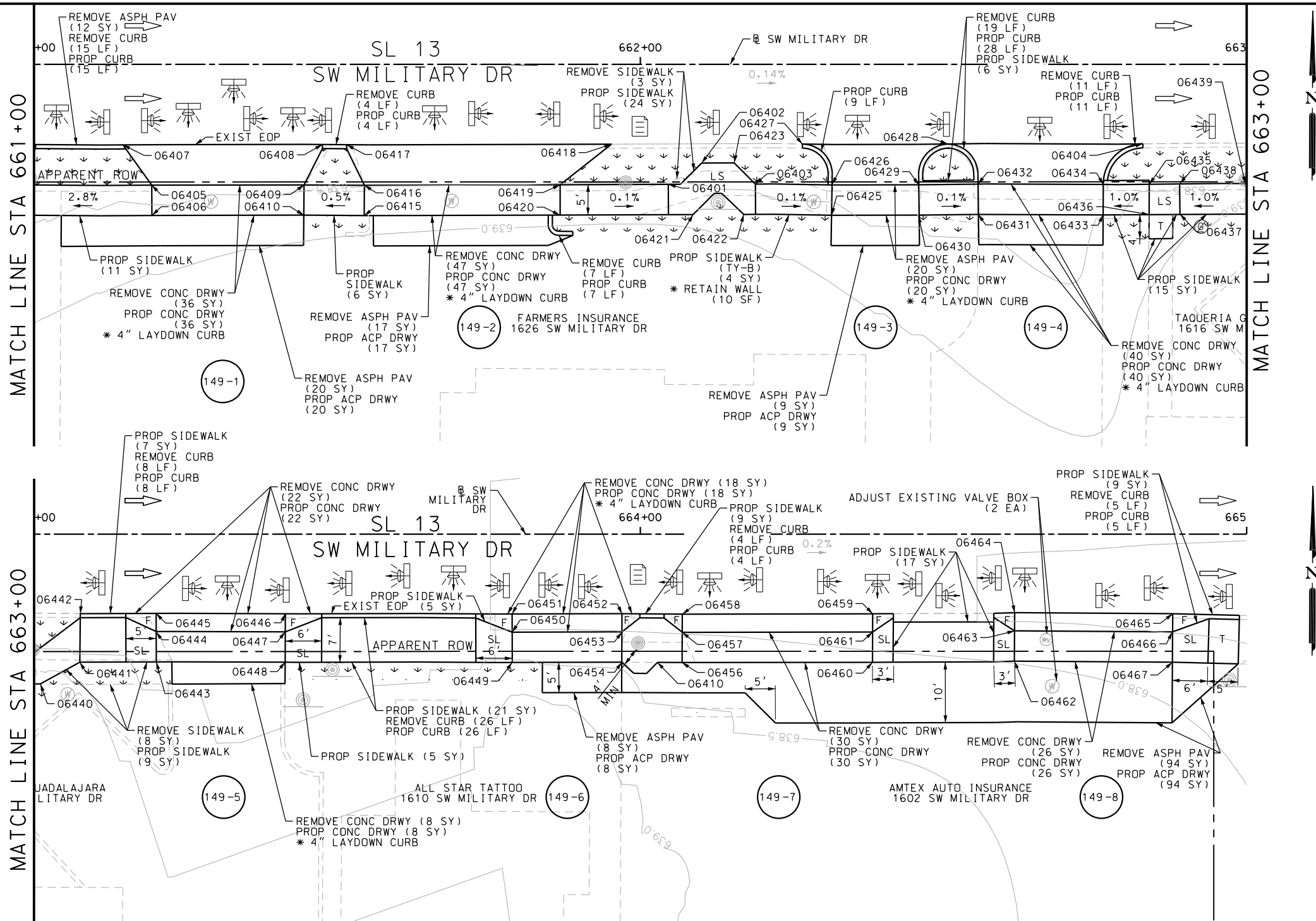
REV. NO.	DATE	DESCRIPTION	BY



SL 13 SW MILITARY B SIDEWALK CONSTRUCTION PLAN STA 654+75 TO STA 656+25 STA 659+00 TO STA 661+00 SHEET 32 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\B*30.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	227
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	99
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	11
0105-6037	REMOVING STAB BASE AND ASPH PAV (0'-16')	SY	180
0162-6002	BLOCK SODDING	SY	125
0168-6001	VEGETATIVE WATERING	MG	1.95
0529-6002	CONC CURB (TY II)	LF	117
0530-6004	DRIVEWAYS (CONC)	SY	247
0530-6005	DRIVEWAYS (ACP)	SY	148
0531-6001	CONC SIDEWALKS (4")	SY	144
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4

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REVIEW AND APPROVAL
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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

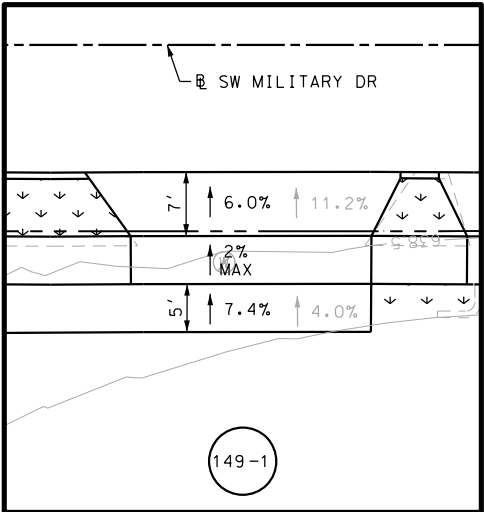
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 661+00 TO STA 665+00

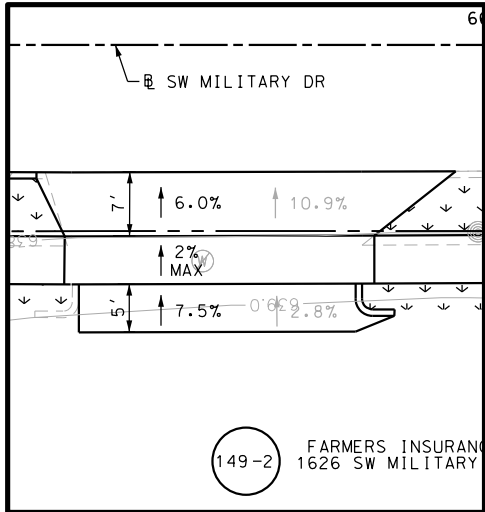
SHEET 33 OF 49					
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK DGN:	6	TEXAS			VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

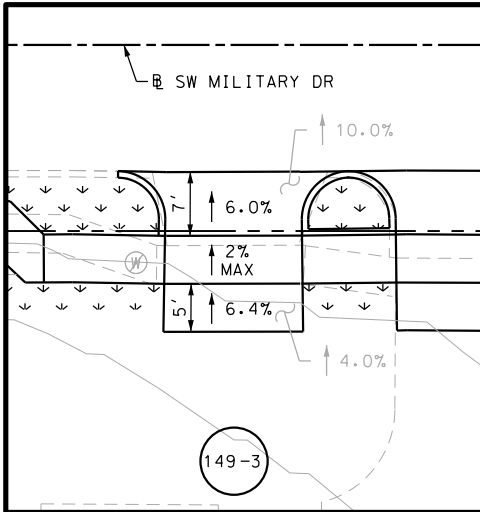
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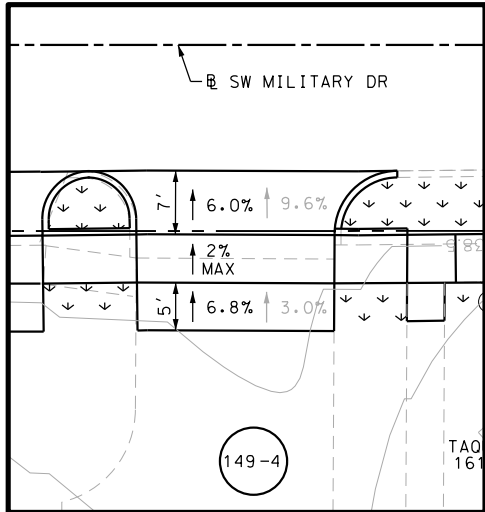
DRWY PLAN STA 661+31



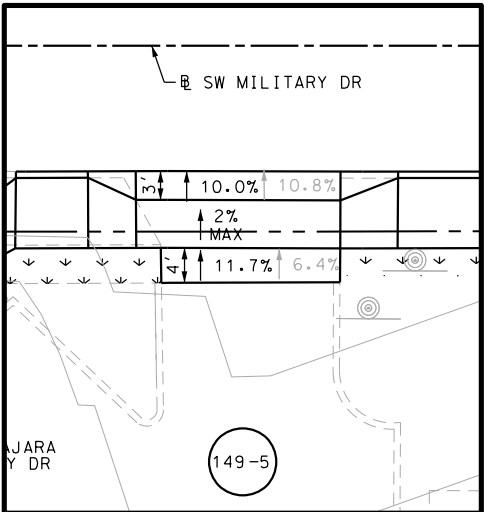
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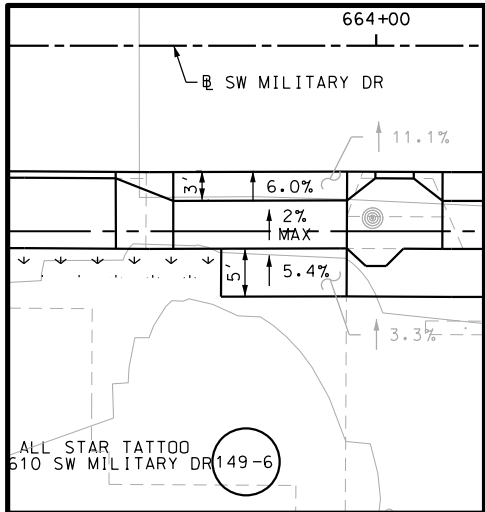
DRWY PLAN STA 662+39



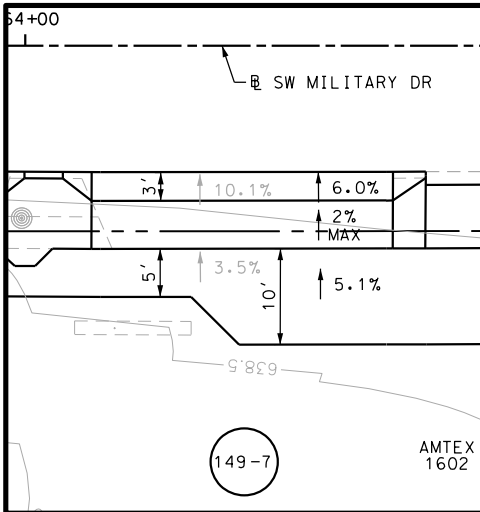
DRWY PLAN STA 662+87



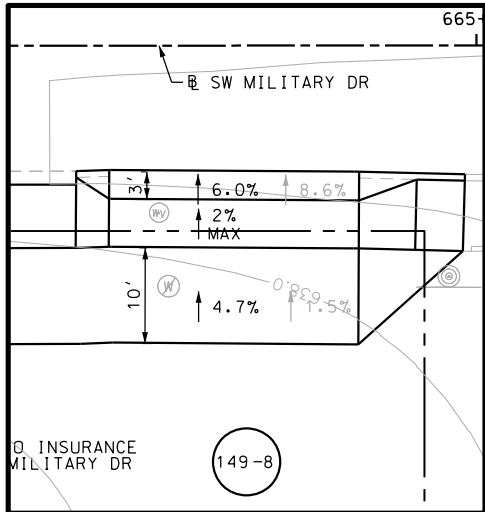
DRWY PLAN STA 663+29



DRWY PLAN STA 663+86



DRWY PLAN STA 664+23



DRWY PLAN STA 664+76

POINT	NORTHING	EASTING	ELEV	DESC
06401	13679812.41	2121986.88	--	.
06402	13679807.41	2121986.87	--	.
06403	13679807.43	2121995.50	--	.
06404	13679812.43	2121995.43	--	.
06405	13679812.50	2122001.43	--	.
06406	13679807.50	2122001.49	--	.
06407	13679819.11	2121996.63	--	.
06408	13679819.36	2122029.53	--	.
06409	13679812.69	2122026.54	--	.
06410	13679807.69	2122026.53	--	.
06411	13679807.69	2122029.52	--	.
06412	13679812.69	2122029.52	--	.
06413	13679812.68	2122033.52	--	.
06414	13679807.68	2122033.52	--	.
06415	13679807.68	2122036.50	--	.
06416	13679812.68	2122036.51	--	.
06417	13679819.35	2122033.53	--	.
06418	13679819.71	2122077.21	--	.
06419	13679812.96	2122068.77	--	.
06420	13679807.96	2122068.81	--	.

POINT	NORTHING	EASTING	ELEV	DESC
06421	13679808.16	2122090.74	--	.
06422	13679808.24	2122099.09	--	.
06423	13679808.25	2122107.60	--	.
06424	13679813.25	2122107.65	--	.
06425	13679808.18	2122113.58	--	.
06426	13679813.18	2122113.63	--	.
06427	13679819.90	2122108.71	--	.
06428	13679820.04	2122132.70	--	.
06429	13679813.29	2122127.92	--	.
06430	13679808.29	2122128.01	--	.
06431	13679808.47	2122137.79	--	.
06432	13679813.47	2122137.70	--	.
06433	13679808.51	2122158.36	--	.
06434	13679813.51	2122158.35	--	.
06435	13679813.60	2122165.94	--	.
06436	13679808.60	2122165.95	--	.
06437	13679808.69	2122171.02	--	.
06438	13679813.69	2122170.94	--	.
06439	13679813.79	2122181.79	--	.
06440	13679808.78	2122183.08	--	.

POINT	NORTHING	EASTING	ELEV	DESC
06441	13679812.39	2122189.56	--	.
06442	13679819.74	2122189.60	--	.
06443	13679812.52	2122202.17	--	.
06444	13679817.52	2122202.12	--	.
06445	13679820.52	2122202.09	--	.
06446	13679820.59	2122223.42	--	.
06447	13679817.59	2122223.42	--	.
06448	13679812.59	2122223.42	--	.
06449	13679812.75	2122260.87	--	.
06450	13679817.75	2122260.83	--	.
06451	13679820.75	2122260.80	--	.
06452	13679820.90	2122278.94	--	.
06453	13679817.90	2122278.94	--	.
06454	13679812.90	2122278.94	--	.
06455	13679812.90	2122284.83	--	.
06456	13679812.90	2122288.88	--	.
06457	13679817.90	2122288.88	--	.
06458	13679820.90	2122288.88	--	.
06459	13679821.12	2122320.28	--	.
06460	13679818.12	2122320.28	--	.

POINT	NORTHING	EASTING	ELEV	DESC
06461	13679813.12	2122320.28	--	.
06462	13679813.44	2122343.69	--	.
06463	13679818.44	2122343.69	--	.
06464	13679821.45	2122343.69	--	.
06465	13679821.41	2122369.75	--	.
06466	13679818.41	2122369.75	--	.
06467	13679813.41	2122369.75	--	.

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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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**

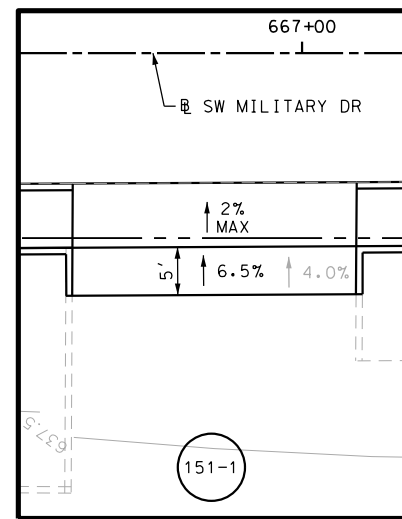
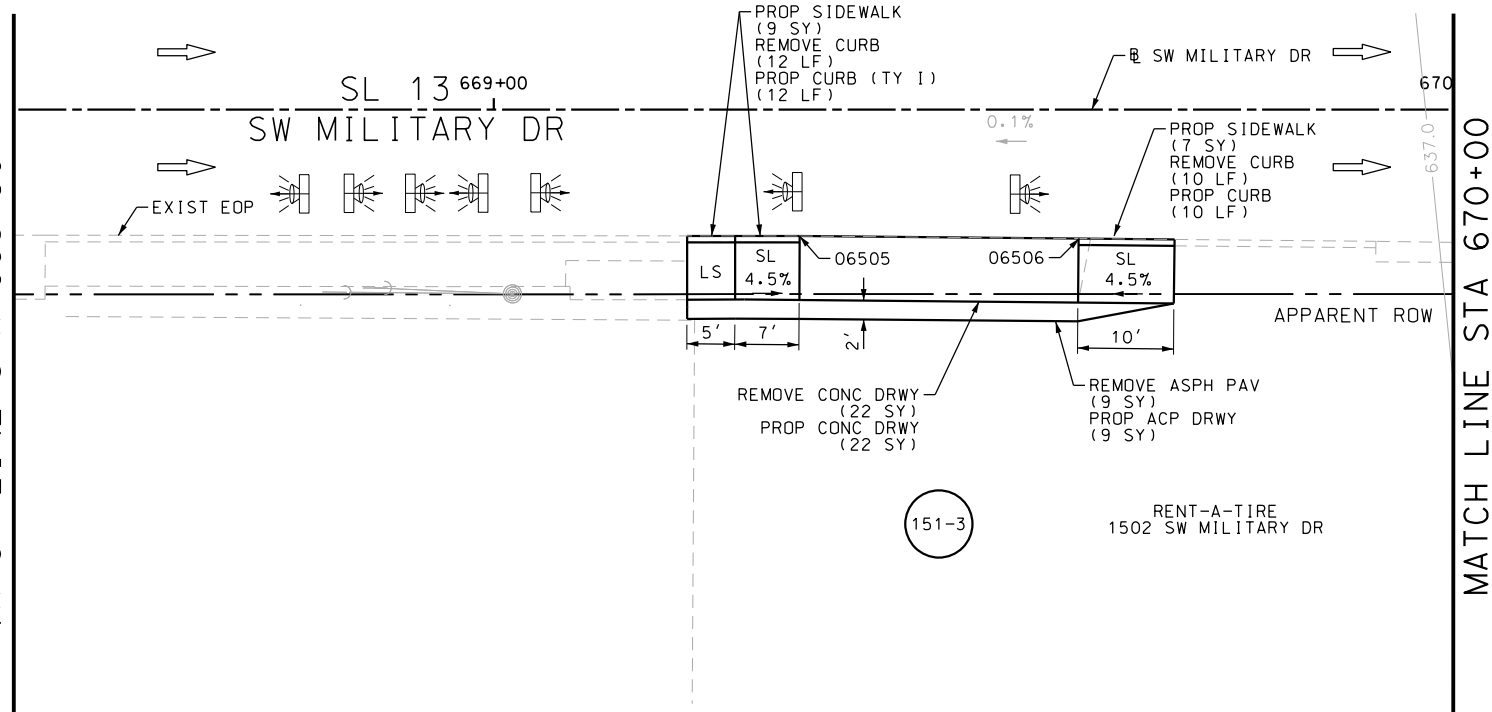
STA 661+00 TO STA 665+00

SHEET 34 OF 49					
CHK DGN:	FED. RD. DIV. NO. 6	STATE TEXAS	FEDERAL AID PROJECT NO.		HIGHWAY NO. VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO. SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576 150

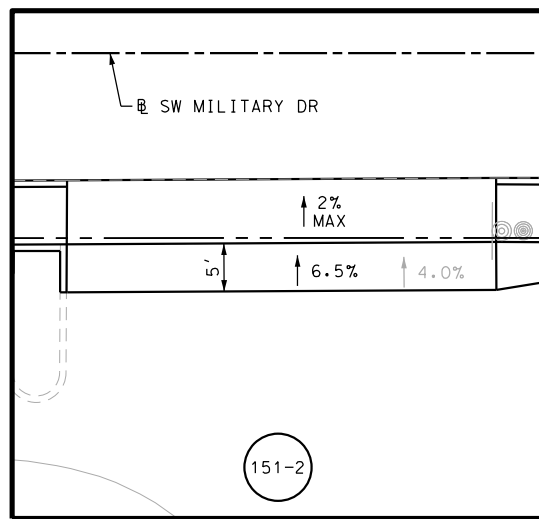
Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\1113507*SWMilitaryB*31.dgn

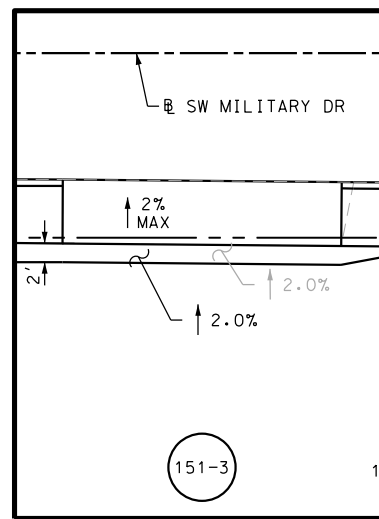
MATCH LINE STA 668+50



DRWY PLAN STA 666+91



DRWY PLAN STA 667+64



DRWY PLAN STA 669+46

POINT	NORTHING	EASTING	ELEV	DESC
06501	13679822.04	2122558.07	--	.
06502	13679822.36	2122587.65	--	.
06503	13679822.77	2122623.95	--	.
06504	13679823.27	2122668.66	--	.
06505	13679823.96	2122813.84	--	.
06506	13679823.86	2122842.90	--	.

MATCH LINE STA 668+50

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	78
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	127
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	67
0529-6002	CONC CURB (TY II)	LF	127
0530-6004	DRIVEWAYS (CONC)	SY	78
0530-6005	DRIVEWAYS (ACP)	SY	67
0531-6001	CONC SIDEWALKS (4")	SY	51
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	18

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

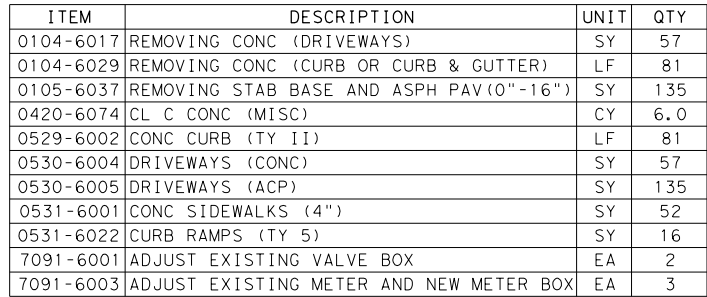
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 666+50 TO STA 670+00

SHEET 35 OF 49					
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

Design Filename: P:\111\35\07\design\Civil\Roadway\SWMIilitaryB\1113507*SWMIilitaryB*32.dgn



NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

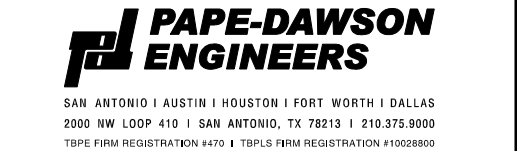
ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

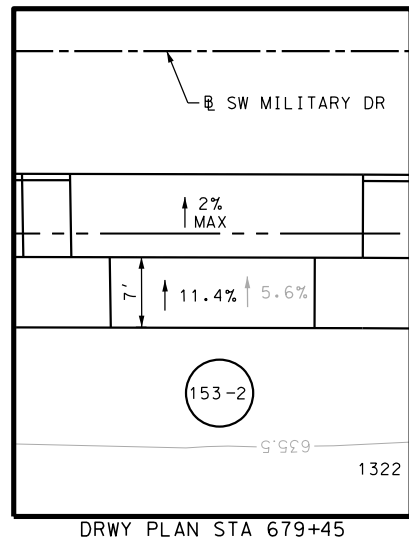
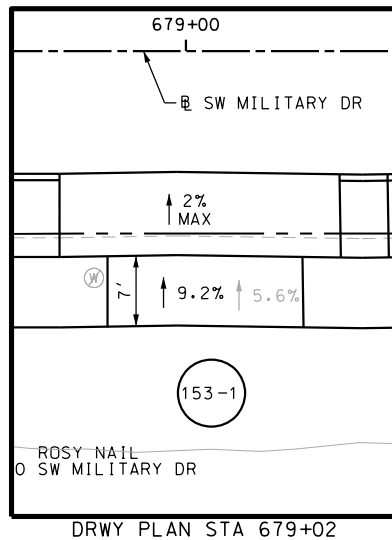
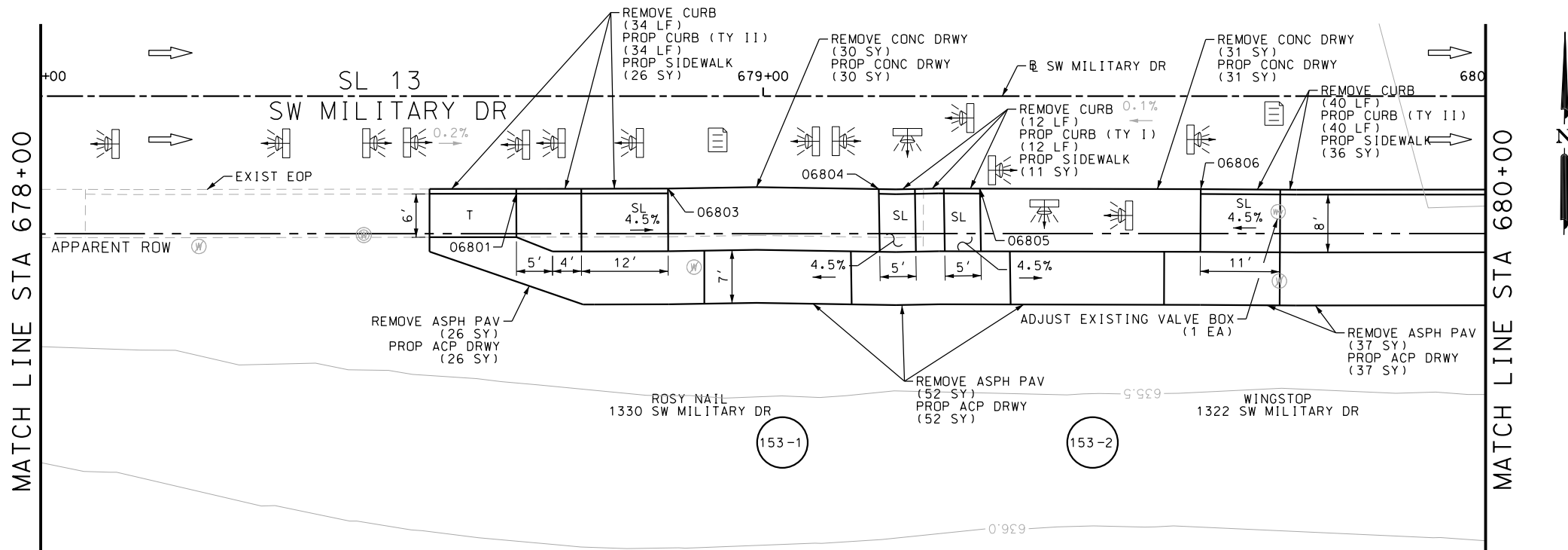
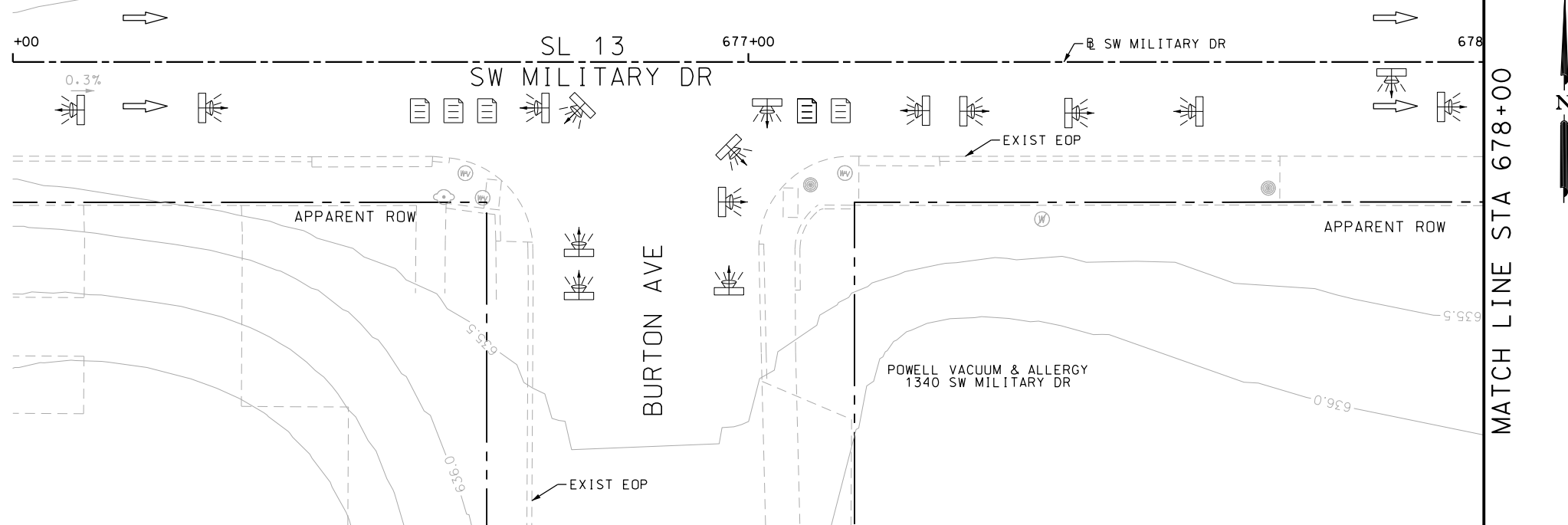


SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 670+00 TO STA 672+00
STA 900+00 TO STA 902+00

IN	FED. RD. DIV.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
IK GN	6	TEXAS				VARIES
IG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
IK IG	SAT	BEXAR	0915	12	576	152

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\34.dgn



POINT	NORTHING	EASTING	ELEV	DESC
06801	13679828.34	2123522.59	--	.
06802	13679829.71	2123747.78	--	.
06803	13679829.86	2123768.78	--	.
06804	13679829.96	2123798.95	--	.
06805	13679830.10	2123810.95	--	.
06806	13679830.21	2123842.51	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	61
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	86
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	115
0529-6002	CONC CURB (TY II)	LF	86
0530-6004	DRIVEWAYS (CONC)	SY	61
0530-6005	DRIVEWAYS (ACP)	SY	115
0531-6001	CONC SIDEWALKS (4")	SY	73
7091-6001	ADJUST EXISTING VALVE BOX	EA	1
7091-6004	RELOCATE FIRE HYDRANT	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

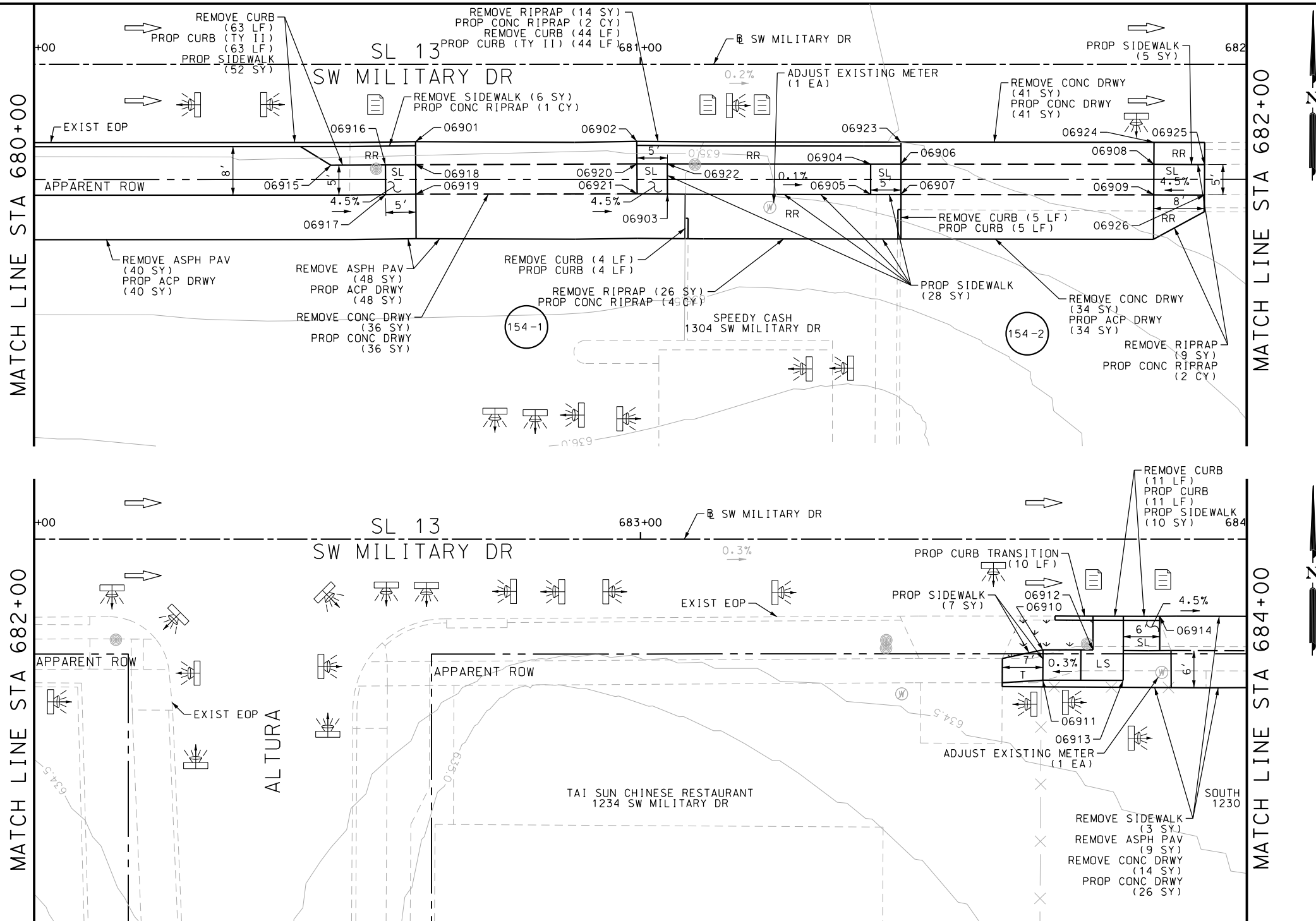
**SIDEWALK
CONSTRUCTION PLAN**

STA 676+00 TO STA 680+00

SHEET 37 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*35.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	49
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	125
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	127
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	9
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	97
0432-6003	RIPRAP (CONC) (6 IN)	CY	9
0529-6002	CONC CURB (TY II)	LF	137
0530-6004	DRIVEWAYS (CONC)	SY	103
0530-6005	DRIVEWAYS (ACP)	SY	122
0531-6001	CONC SIDEWALKS (4")	SY	102
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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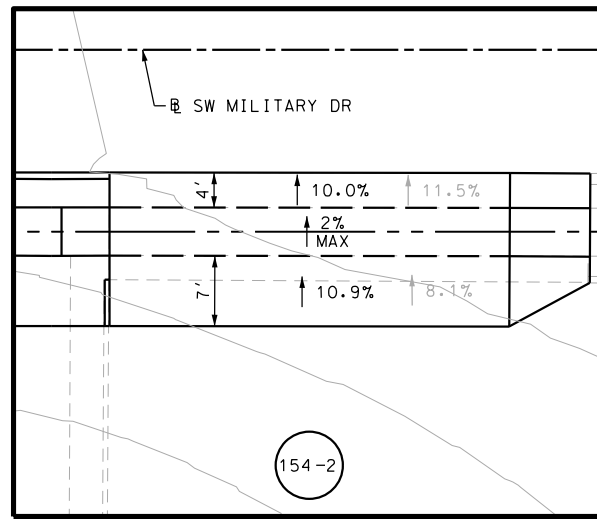
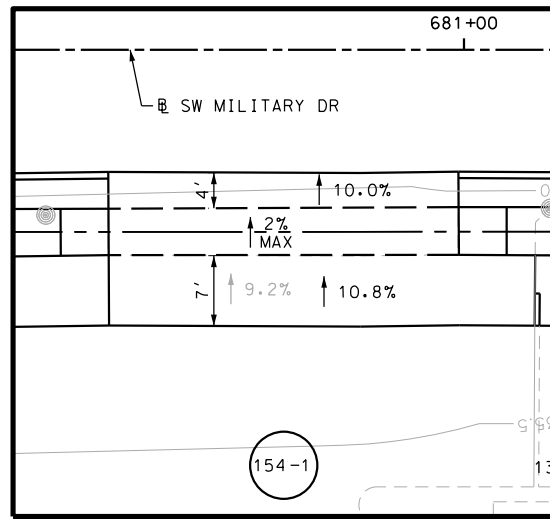
SL 13
SW MILITARY B

**SIDEWALK
CONSTRUCTION PLAN**

STA 680+00 TO STA 684+00

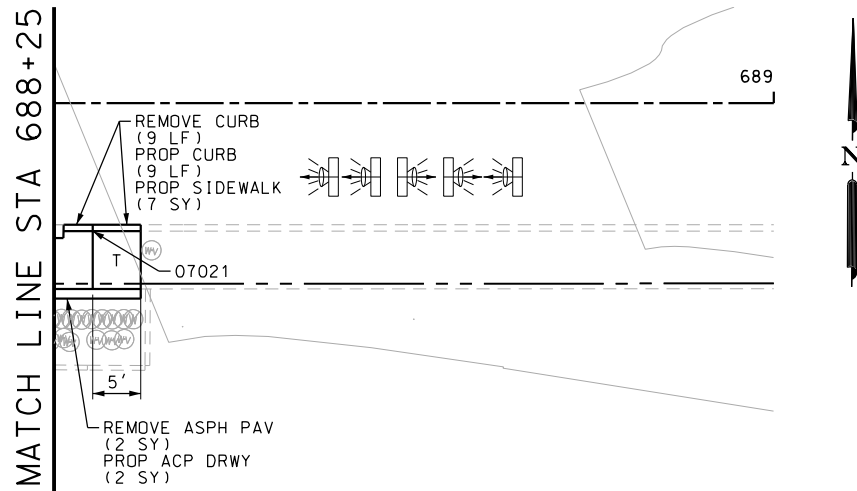
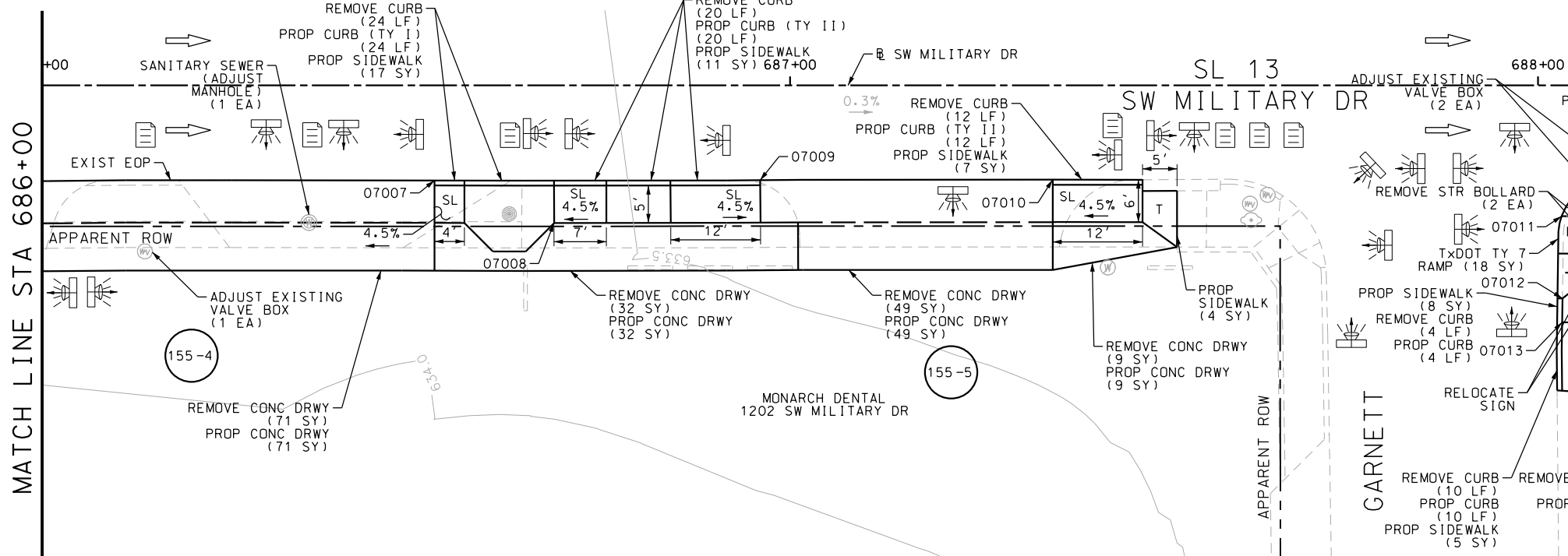
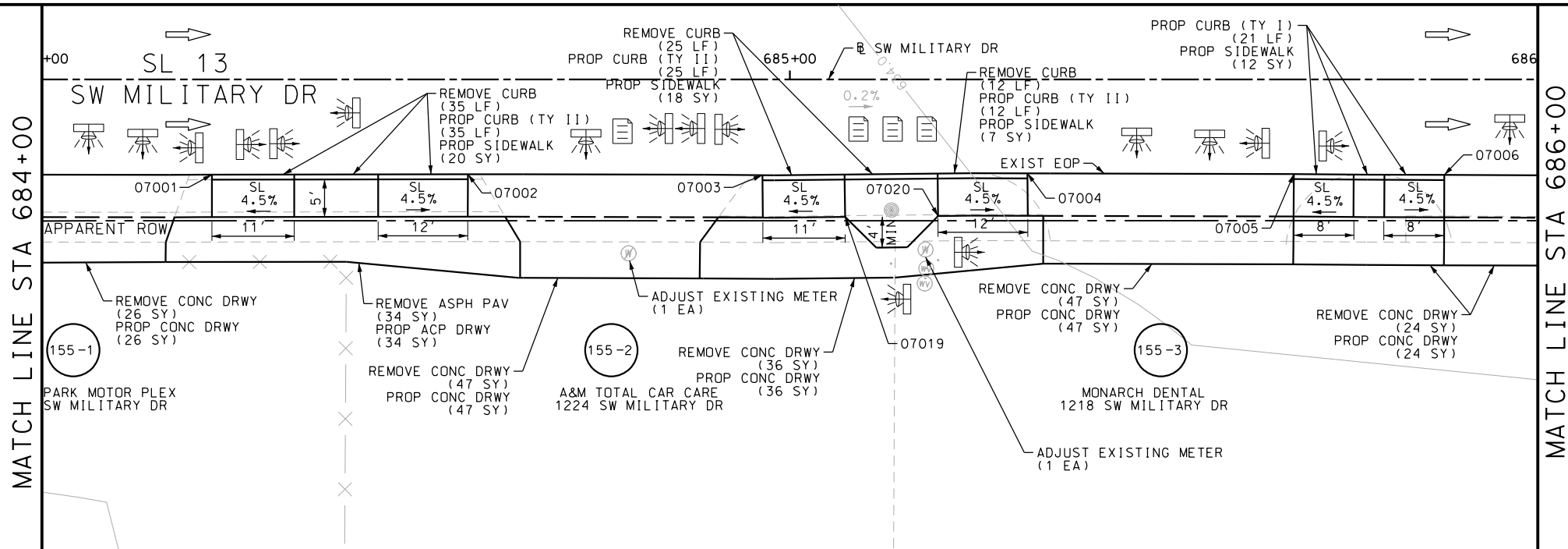
SHEET 38 OF 49

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



Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\36.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	341
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	151
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	42
0529-6002	CONC CURB (TY II)	LF	172
0530-6004	DRIVEWAYS (CONC)	SY	341
0530-6005	DRIVEWAYS (ACP)	SY	42
0531-6001	CONC SIDEWALKS (4")	SY	120
0531-6024	CURB RAMPS (TY 7)	SY	18
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7091-6001	ADJUST EXISTING VALVE BOX	EA	1
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

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SL 13
SW MILITARY B

SIDEWALK
CONSTRUCTION PLAN

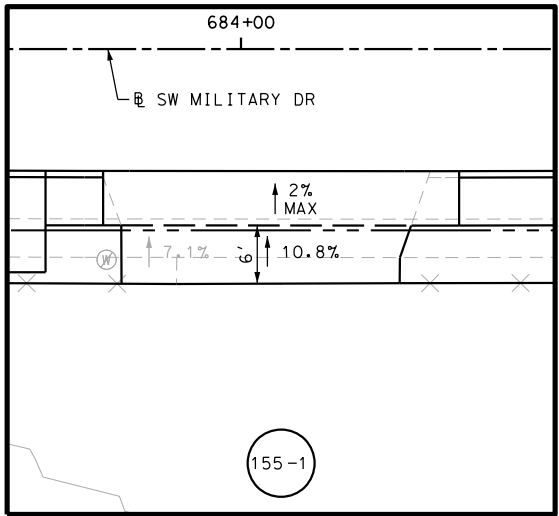
STA 684+00 TO STA 689+00

SHEET 39 OF 49					
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

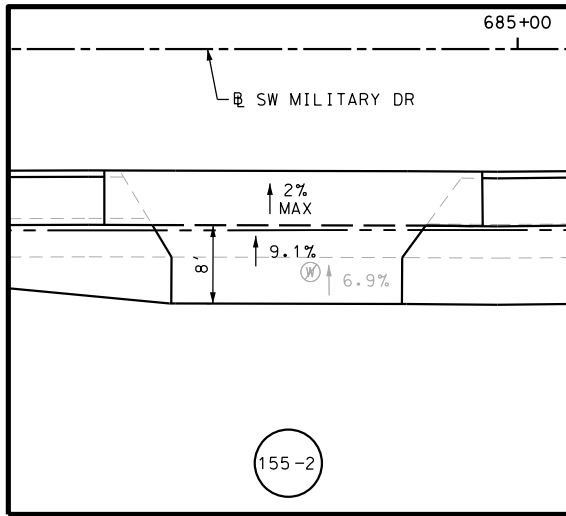
POINT	NORTHING	EASTING	ELEV	DESC
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07002	13679833.28	2124338.88	--	.
07003	13679833.38	2124377.25	--	.
07004	13679833.83	2124413.68	--	.
07005	13679833.93	2124449.32	--	.
07006	13679833.93	2124469.42	--	.
07007	13679834.34	2124534.40	--	.
07008	13679828.74	2124550.41	--	.
07009	13679834.64	2124577.94	--	.
07010	13679834.93	2124617.04	--	.
07011	13679830.44	2124685.13	--	.
07012	13679819.44	2124685.30	--	.
07013	13679816.25	2124685.27	--	.
07014	13679825.43	2124692.83	--	.
07015	13679828.64	2124697.84	--	.
07016	13679823.01	2124697.83	--	.
07017	13679834.02	2124700.28	--	.
07018	13679835.41	2124710.96	--	.

Plotted on: 11/21/2018

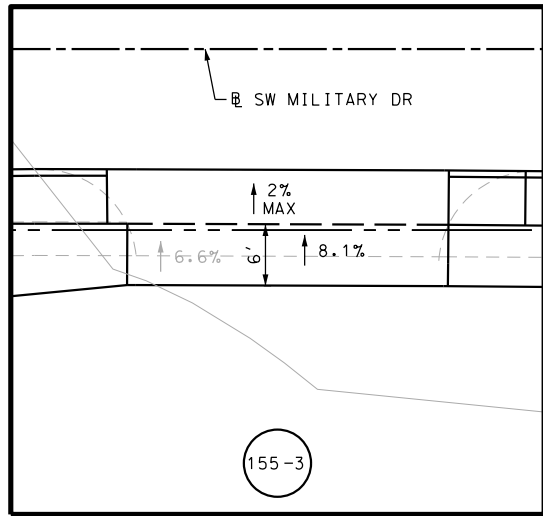
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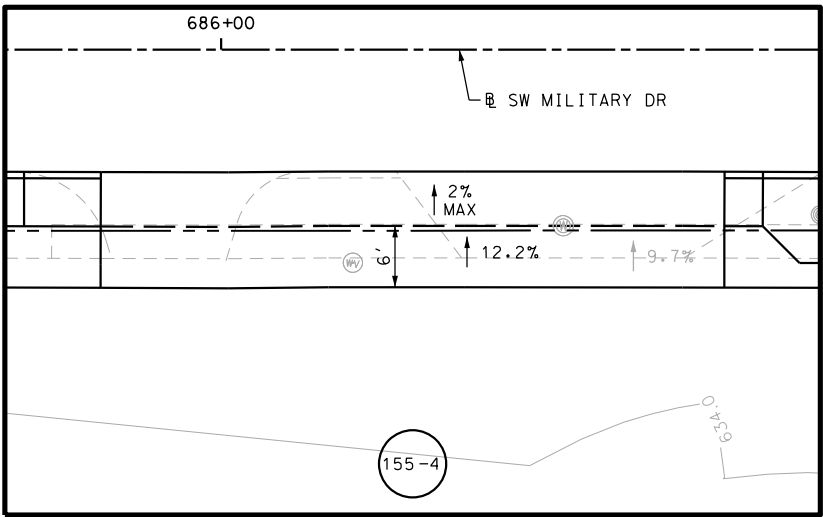
DRWY PLAN STA 684+04



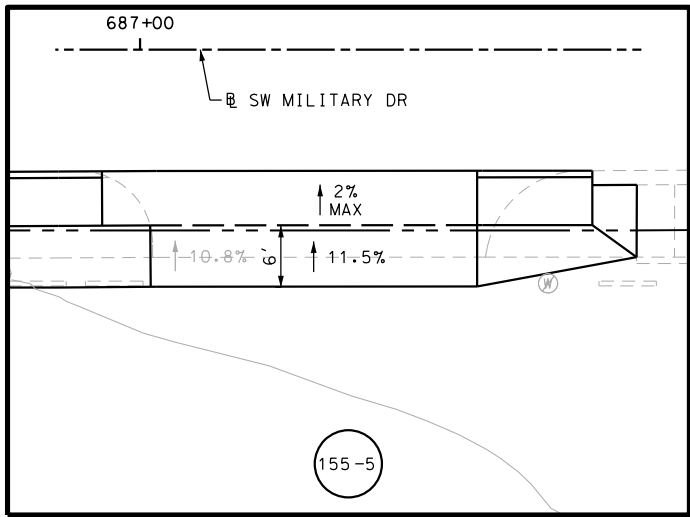
DRWY PLAN STA 6804+76



DRWY PLAN STA 685+50



DRWY PLAN STA 686+20



DRWY PLAN STA 687+22

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

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

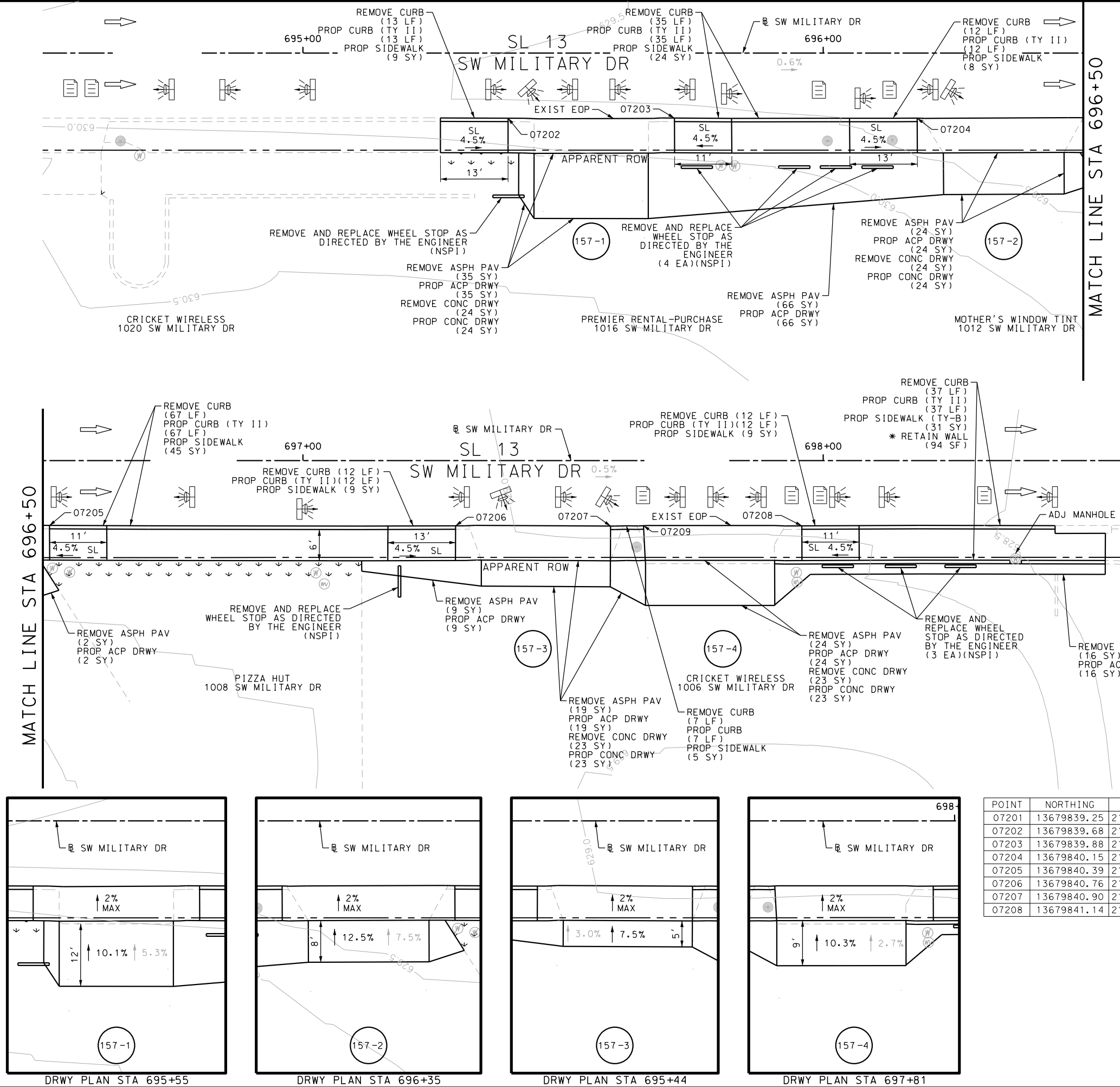
**SIDEWALK
CONSTRUCTION PLAN**

STA 684+00 TO STA 689+00

SHEET 40 OF 49						
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	156

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\1113507*SWMilitaryB*38.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	94
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	195
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	195
0162-6002	BLOCK SODDING	SY	25
0168-6001	VEGETATIVE WATERING	MG	0.39
0479-6001	ADJUSTING MANHOLES	EA	1
0529-6002	CONC CURB (TY II)	LF	195
0530-6004	DRIVEWAYS (CONC)	SY	94
0530-6005	DRIVEWAYS (ACP)	SY	195
0531-6001	CONC SIDEWALKS (4")	SY	109
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	31

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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SL 13
SW MILITARY B

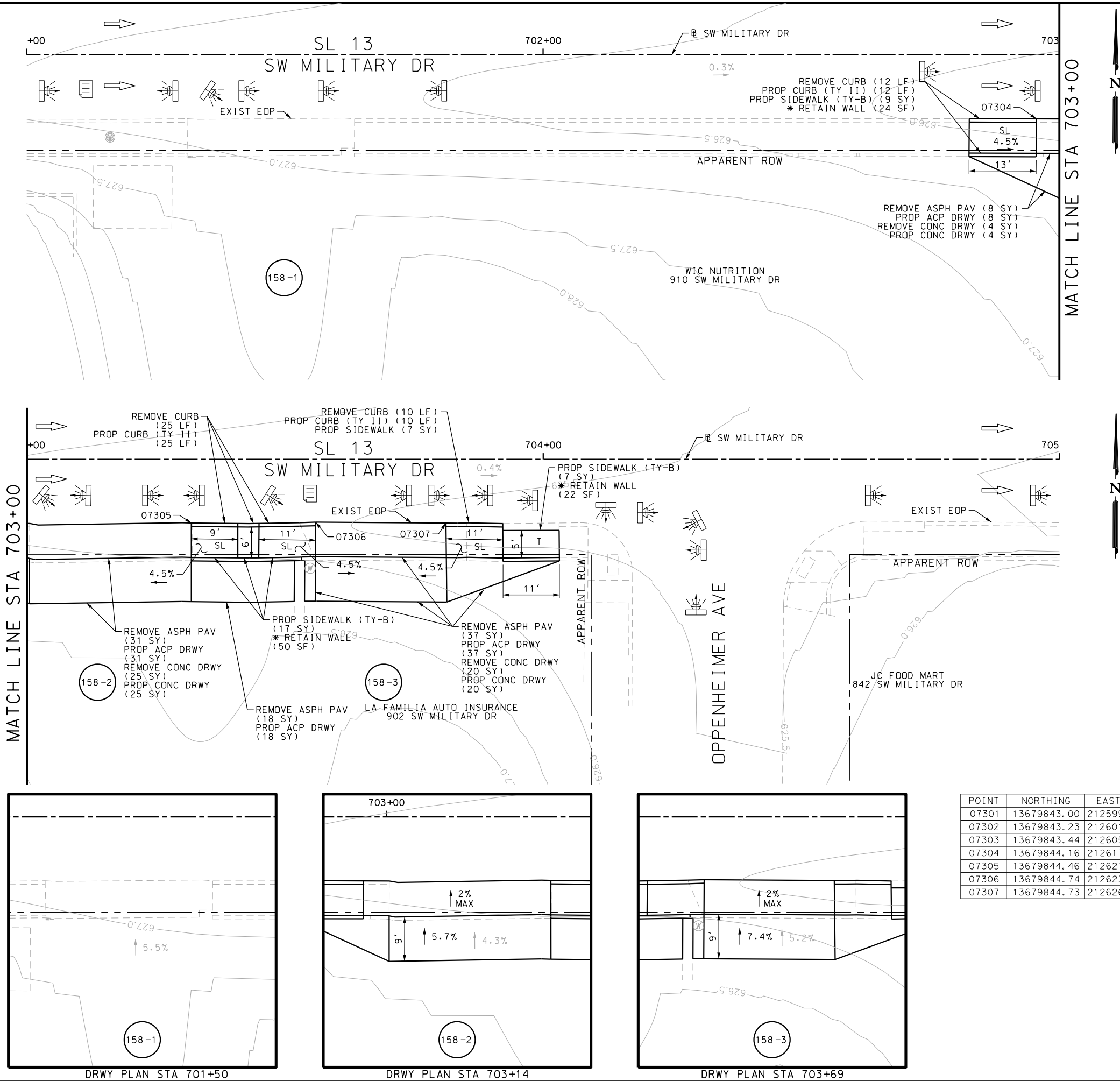
**SIDEWALK
CONSTRUCTION PLAN**

STA 694+50 TO STA 698+55

SHEET 41 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\39.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	49
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	47
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	94
0529-6002	CONC CURB (TY II)	LF	47
0530-6004	DRIVEWAYS (CONC)	SY	49
0530-6005	DRIVEWAYS (ACP)	SY	94
0531-6001	CONC SIDEWALKS (4")	SY	7
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	33

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
07301	13679843.00	2125992.97	--	.
07302	13679843.23	2126013.09	--	.
07303	13679843.44	2126050.38	--	.
07304	13679844.16	2126177.44	--	.
07305	13679844.46	2126213.73	--	.
07306	13679844.74	2126237.84	--	.
07307	13679844.73	2126264.05	--	.

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SL 13
SW MILITARY B

**SIDEWALK
CONSTRUCTION PLAN**

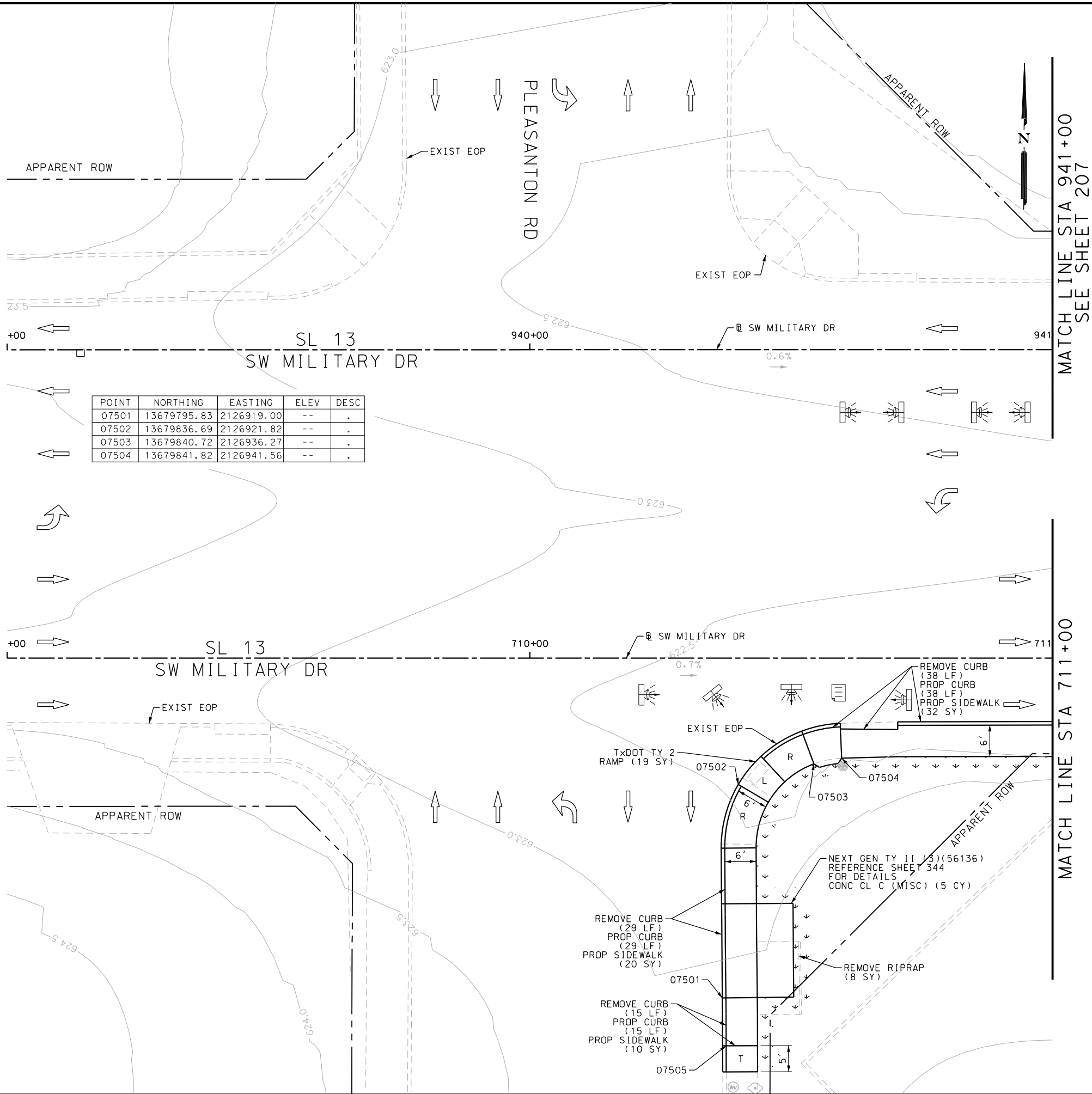
STA 701+00 TO STA 705+00

SHEET 42 OF 49

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.:
				158

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*41.dgn



POINT	NORTHING	EASTING	ELEV	DESC
07501	13679795.83	2126919.00	--	.
07502	13679836.69	2126921.82	--	.
07503	13679840.72	2126936.27	--	.
07504	13679841.82	2126941.56	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	8
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	82
0420-6074	CL C CONC (MISC)	CY	5.0
0529-6002	CONC CURB (TY II)	LF	82
0531-6001	CONC SIDEWALKS (4")	SY	62
0531-6019	CURB RAMPS (TY 2)	SY	19

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

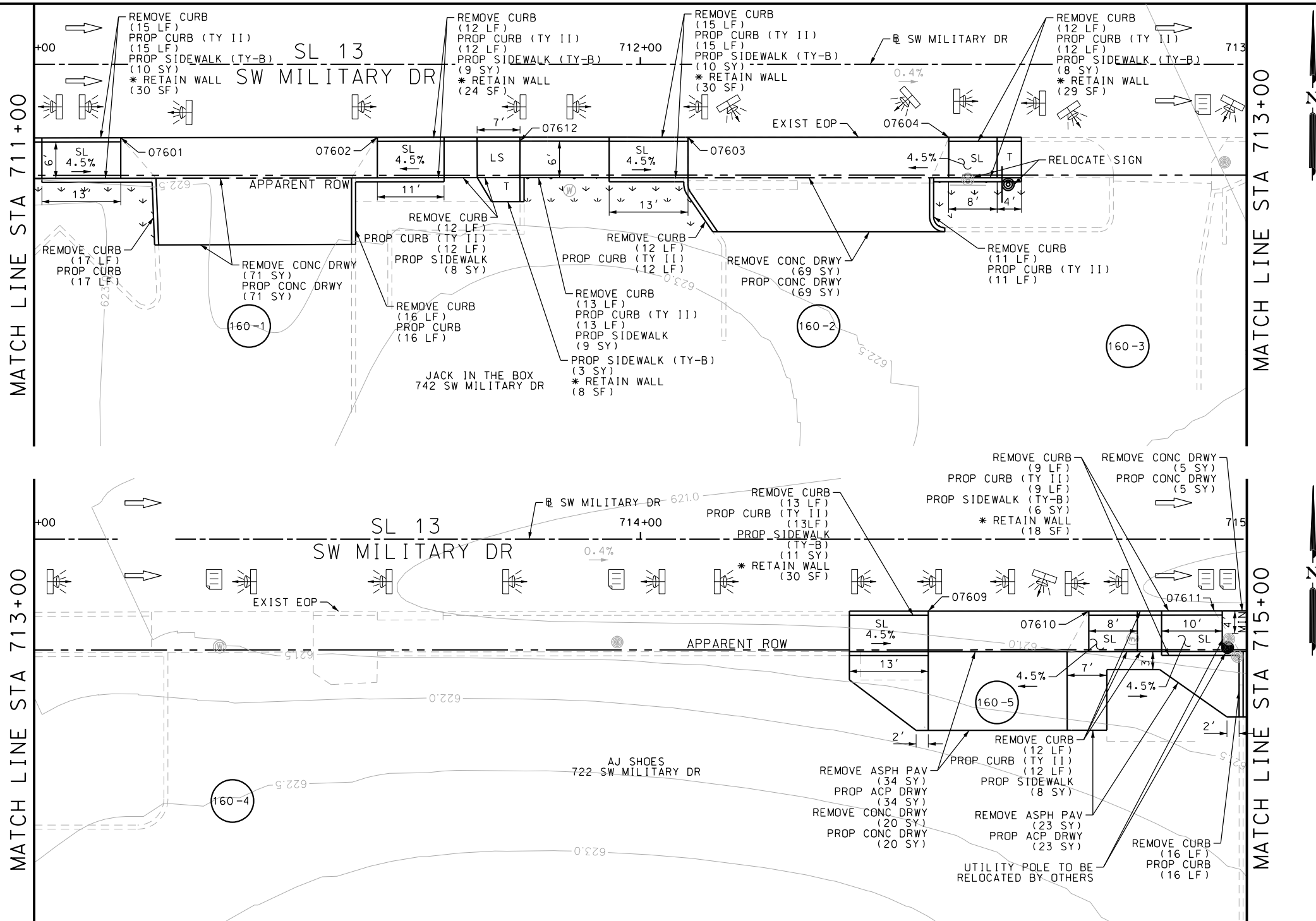
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13 SW MILITARY B SIDEWALK CONSTRUCTION PLAN STA 709+00 TO STA 711+00 STA 939+00 TO STA 941+00 SHEET 43 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\42.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	165
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	185
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	57
0529-6002	CONC CURB (TY II)	LF	185
0530-6004	DRIVEWAYS (CONC)	SY	165
0530-6005	DRIVEWAYS (ACP)	SY	57
0531-6001	CONC SIDEWALKS (4")	SY	25
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	57

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
07601	13679849.18	2126996.18	--	.
07602	13679849.51	2127038.50	--	.
07603	13679849.82	2127089.74	--	.
07604	13679850.06	2127132.77	--	.
07605	13679850.17	2127153.74	--	.
07606	13679850.30	2127177.89	--	.
07607	13679850.50	2127201.21	--	.
07608	13679850.74	2127227.91	--	.
07609	13679851.37	2127329.34	--	.
07610	13679851.54	2127355.81	--	.
07611	13679851.67	2127376.51	--	.

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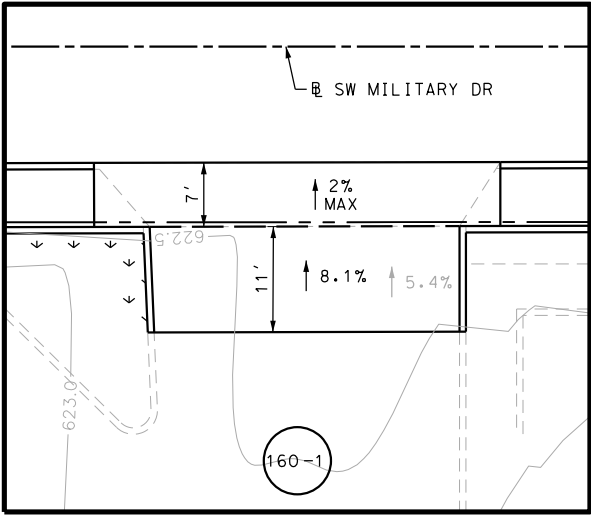
SL 13
SW MILITARY B

SIDEWALK
CONSTRUCTION PLAN

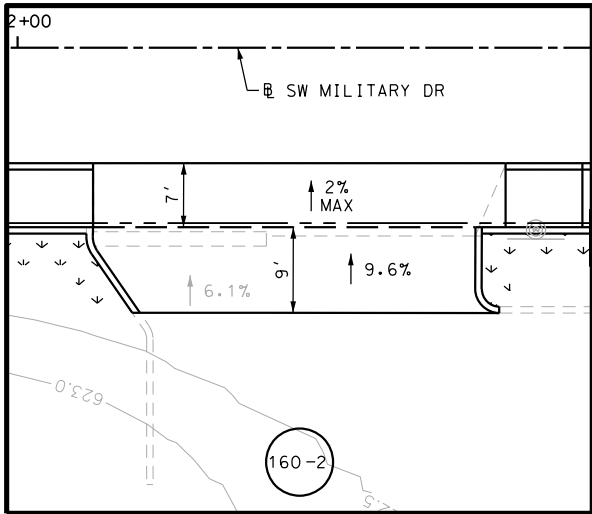
STA 711+00 TO STA 715+00

SHEET 44 OF 49

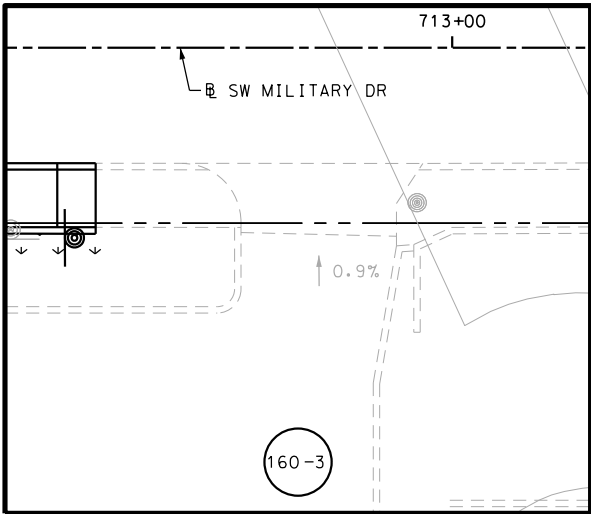
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				160



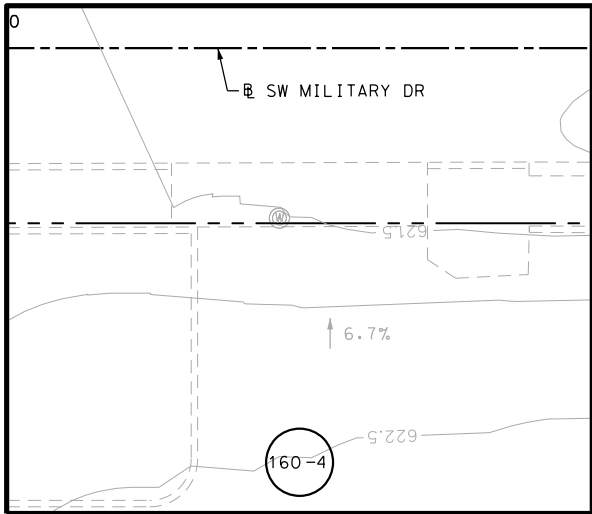
DRWY PLAN STA 711+35



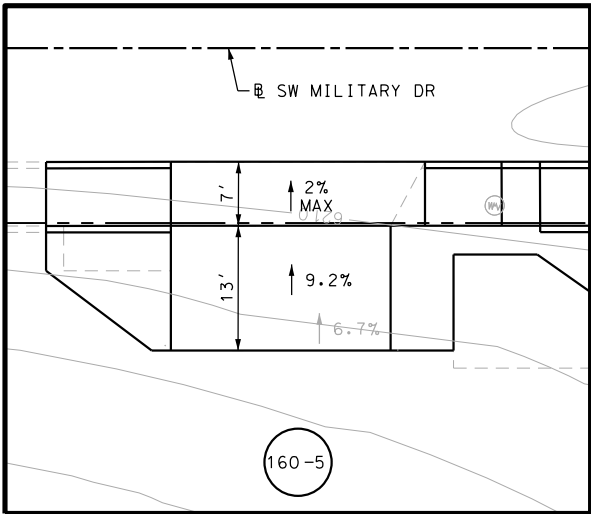
DRWY PLAN STA 712+29



DRWY PLAN STA 712+84



DRWY PLAN STA 713+32



DRWY PLAN STA 714+80

NOTES:

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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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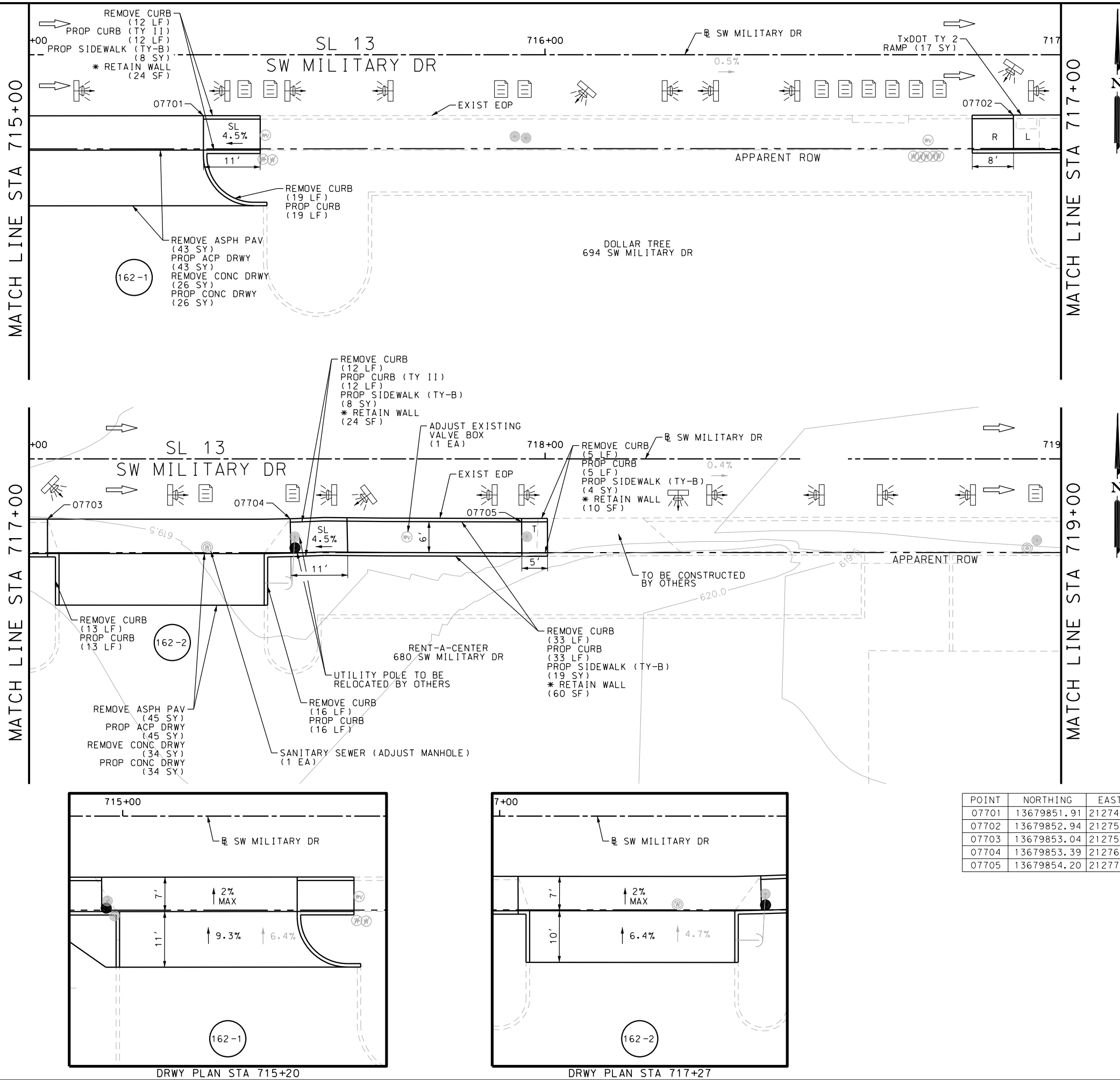
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SL 13
SW MILITARY B
SIDEWALK CONSTRUCTION PLAN
STA 711+00 TO STA 715+00

SHEET 45 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*43.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	60
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	161
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	88
0529-6002	CONC CURB (TY 11)	LF	288
0530-6004	DRIVEWAYS (CONC)	SY	60
0530-6005	DRIVEWAYS (ACP)	SY	88
0531-6019	CURB RAMPS (TY 2)	SY	14
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	81
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
07701	13679851.91	2127415.69	--	.
07702	13679852.94	2127572.64	--	.
07703	13679853.04	2127585.43	--	.
07704	13679853.39	2127632.48	--	.
07705	13679854.20	2127724.23	--	.

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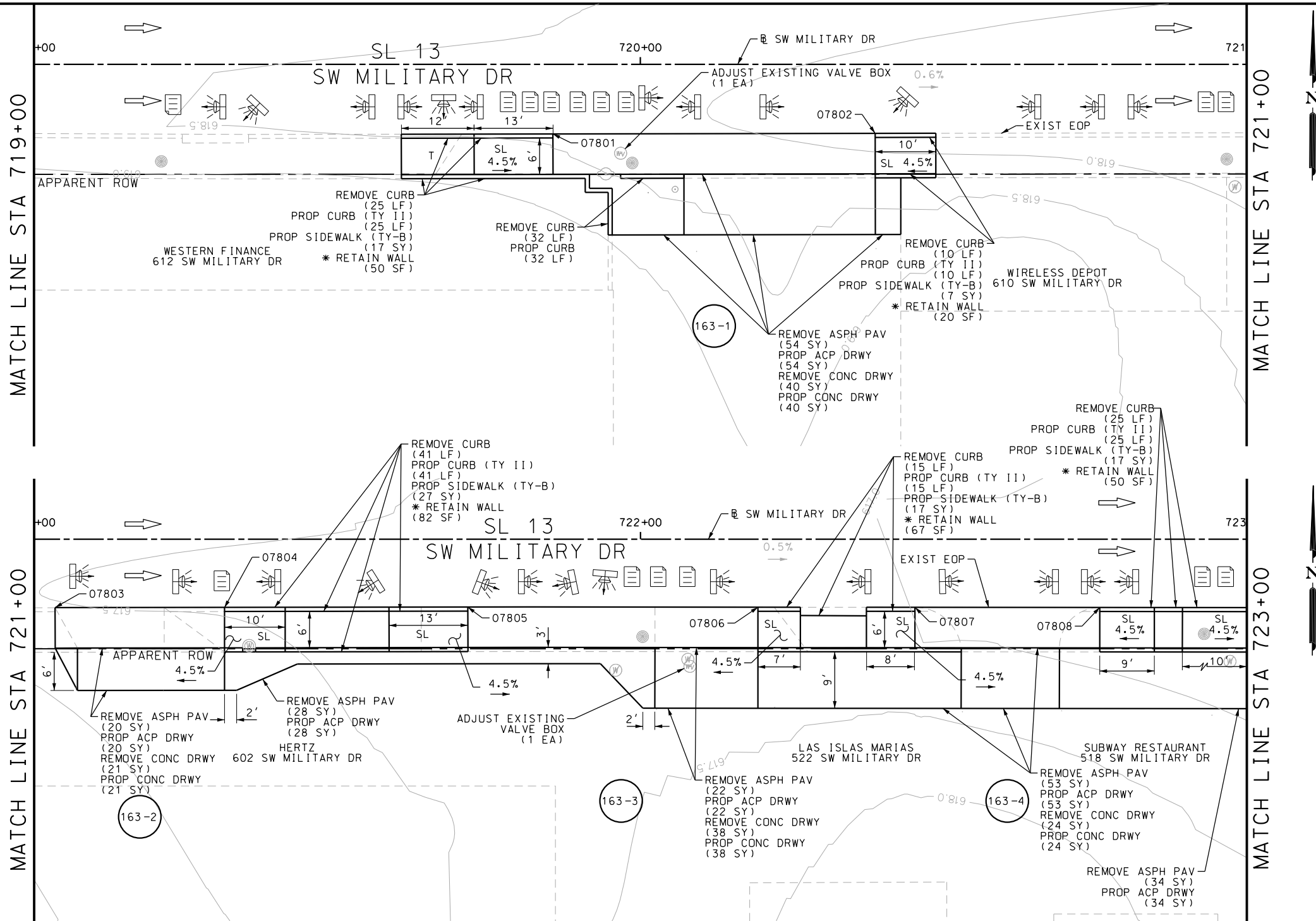
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 715+00 TO STA 719+00

SHEET 46 OF 49					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB44.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	123
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	148
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	211
0529-6002	CONC CURB (TY II)	LF	148
0530-6004	DRIVEWAYS (CONC)	SY	123
0530-6005	DRIVEWAYS (ACP)	SY	211
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	85
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
07801	13679854.86	2127867.45	--	.
07802	13679855.26	2127920.59	--	.
07803	13679855.73	2127985.31	--	.
07804	13679855.93	2128013.25	--	.
07805	13679856.22	2128053.39	--	.
07806	13679856.49	2128103.92	--	.
07807	13679856.62	2128127.13	--	.
07808	13679856.76	2128157.61	--	.

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SL 13
SW MILITARY B

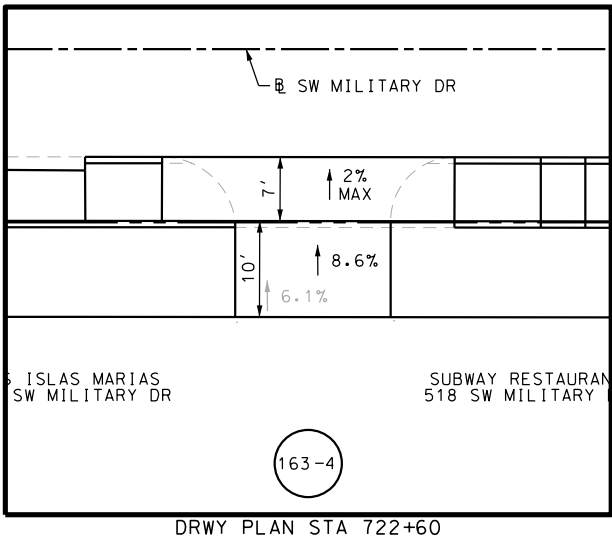
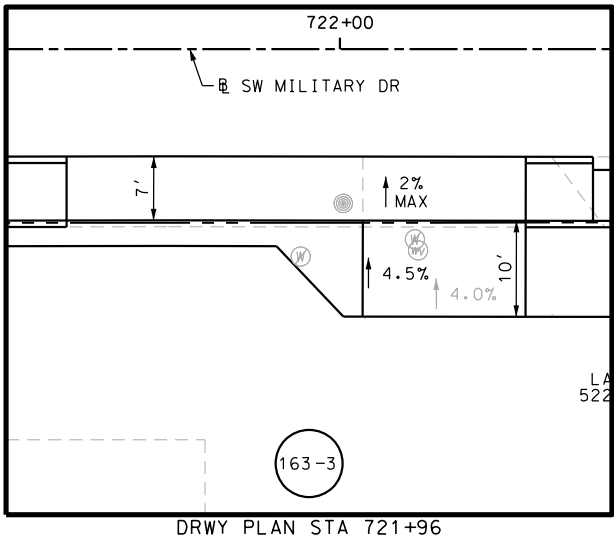
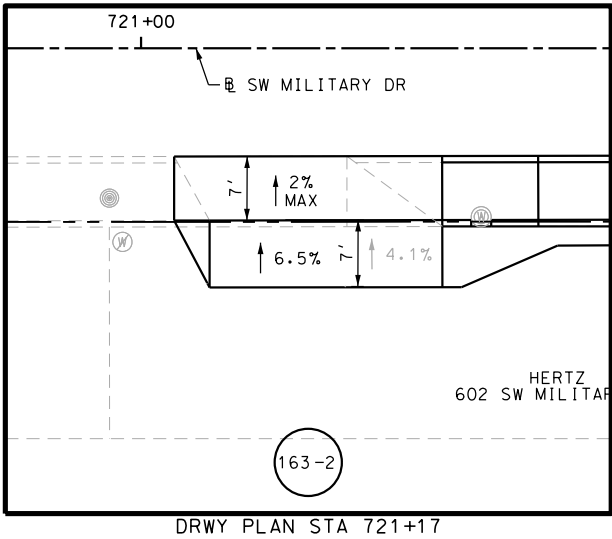
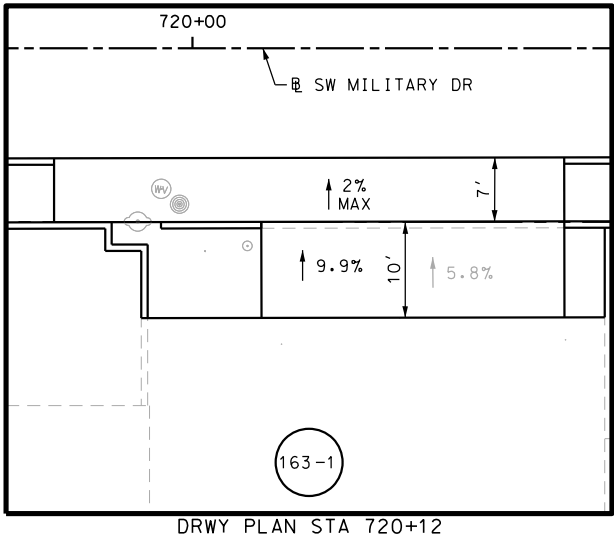
**SIDEWALK
CONSTRUCTION PLAN**

STA 719+00 TO STA 723+00

SHEET 47 OF 49					
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.
					163

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*44A.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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

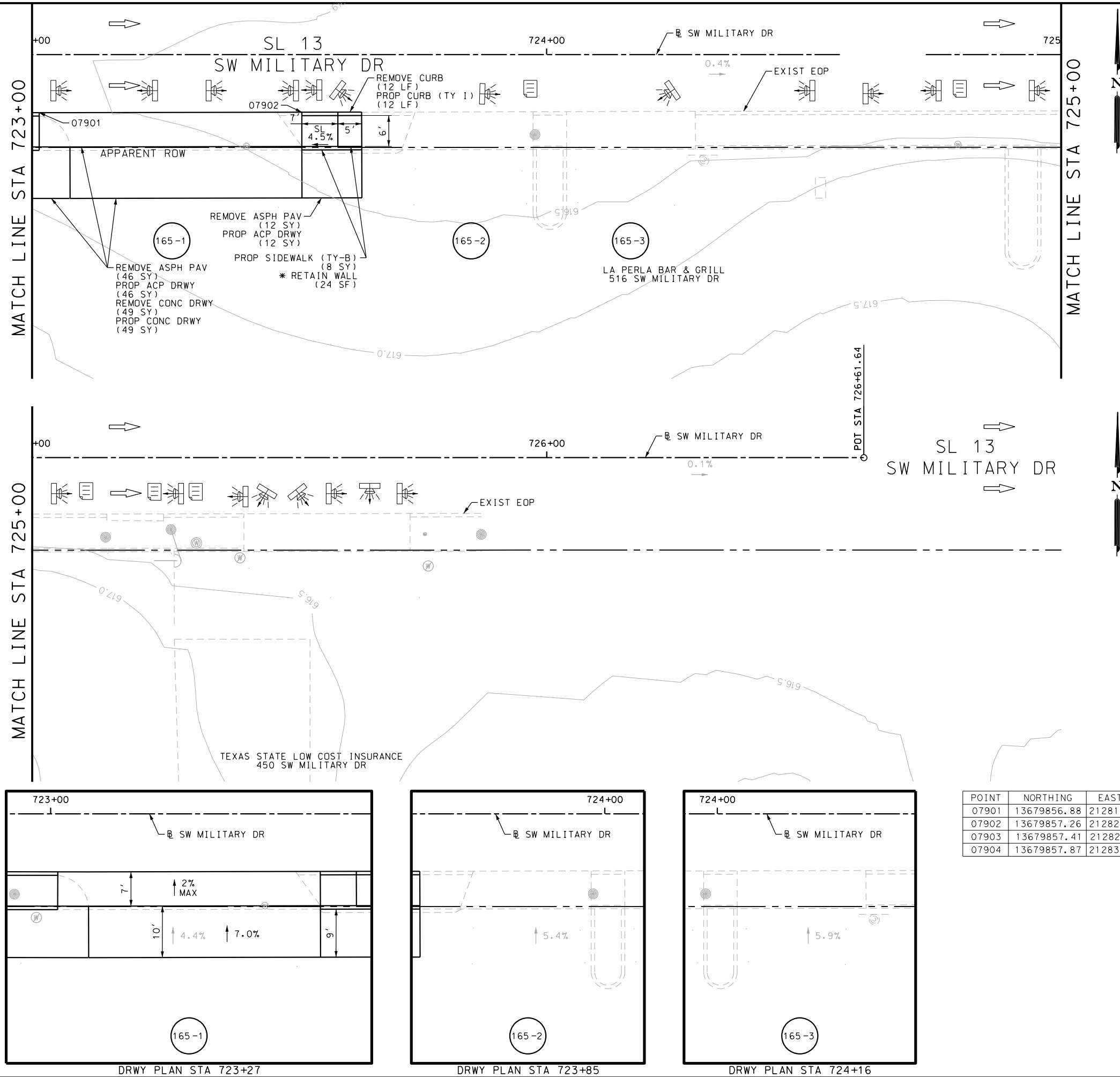
**SIDEWALK
CONSTRUCTION PLAN**

STA 719+00 TO STA 721+00

SHEET 48 OF 49						
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*45.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	49
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	12
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	58
0529-6001	CONC CURB (TY 1)	LF	12
0530-6004	DRIVEWAYS (CONC)	SY	49
0530-6005	DRIVEWAYS (ACP)	SY	58
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	8

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
07901	13679856.88	2128183.24	--	.
07902	13679857.26	2128234.27	--	.
07903	13679857.41	2128253.91	--	.
07904	13679857.87	2128310.72	--	.

PAPE-DAWSON ENGINEERS

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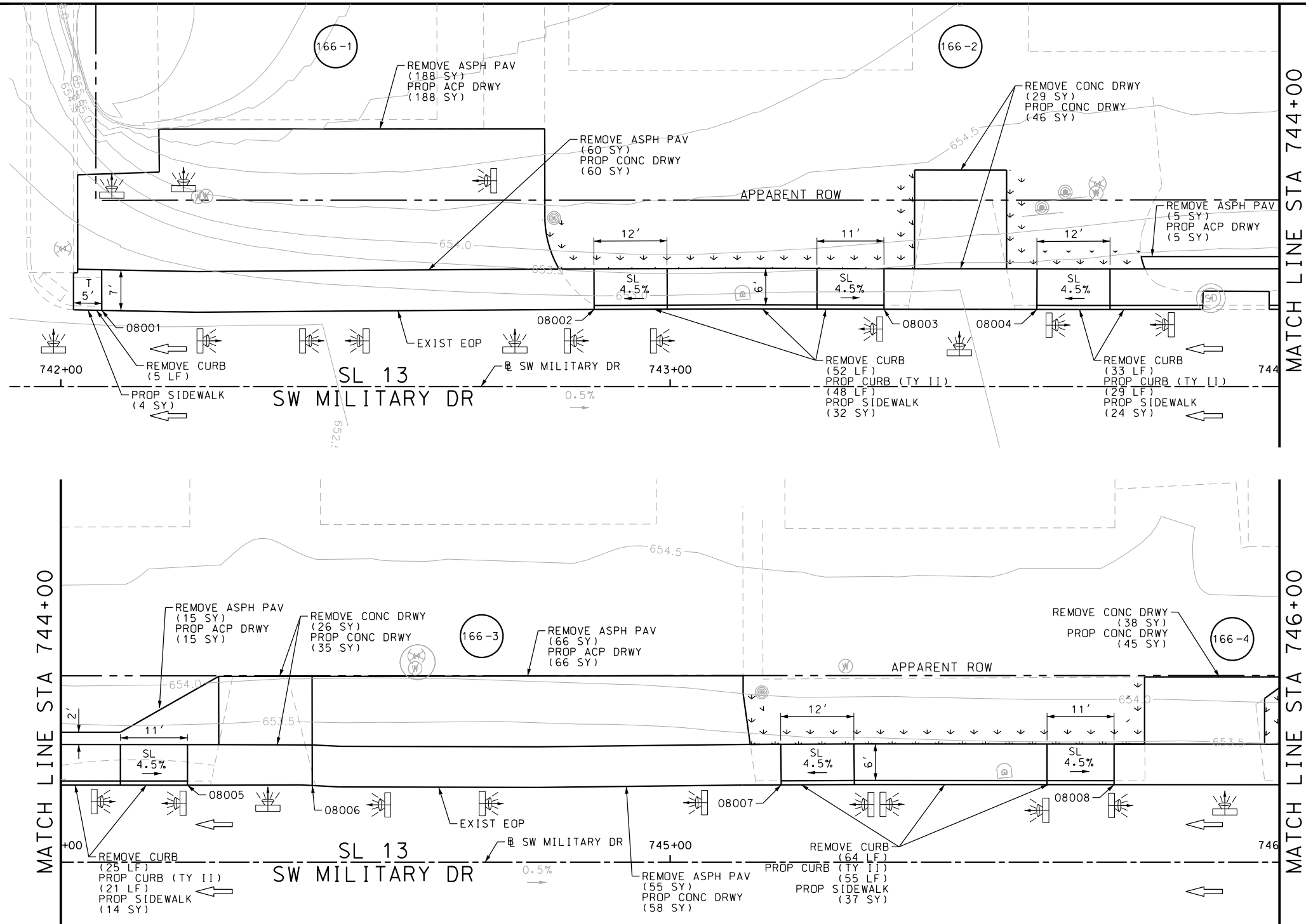
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 723+00 TO END PROJECT

SHEET 49 OF 49

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	165

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WBO1.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	93
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	179
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	389
0529-6002	CONC CURB (TY II)	LF	153
0530-6004	DRIVEWAYS (CONC)	SY	242
0530-6005	DRIVEWAYS (ACP)	SY	274
0531-6001	CONC SIDEWALKS (4")	SY	111

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
08001	13680647.83	2107129.02	--	.
08002	13680639.79	2107209.42	--	.
08003	13680635.02	2107256.74	--	.
08004	13680632.45	2107281.72	--	.
08005	13680626.31	2107341.99	--	.
08006	13680624.16	2107362.37	--	.
08007	13680616.49	2107438.95	--	.
08008	13680610.99	2107493.29	--	.

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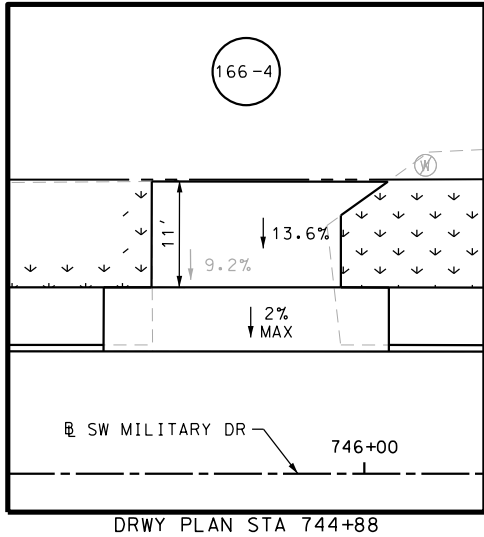
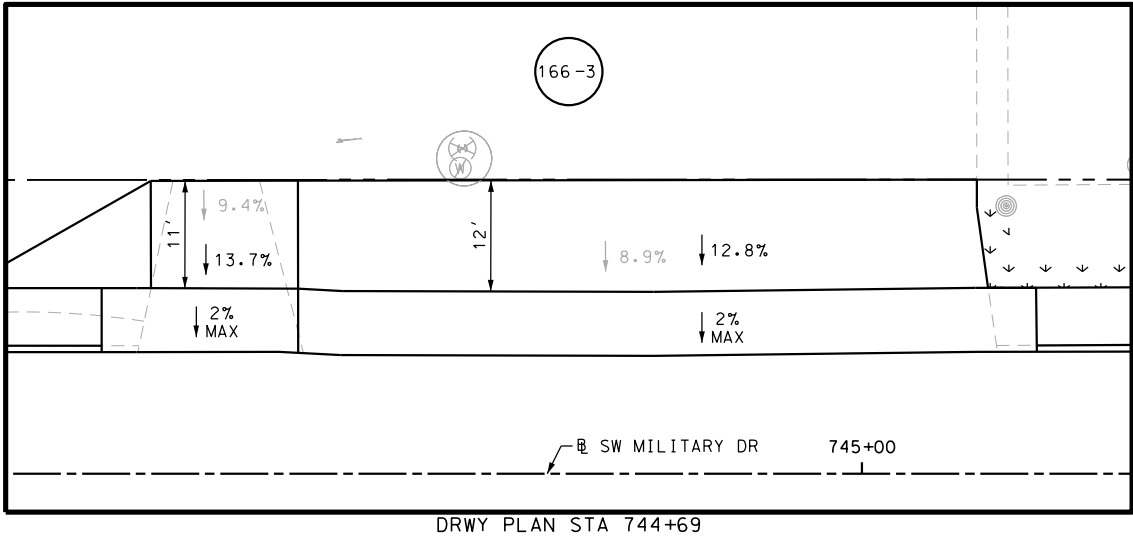
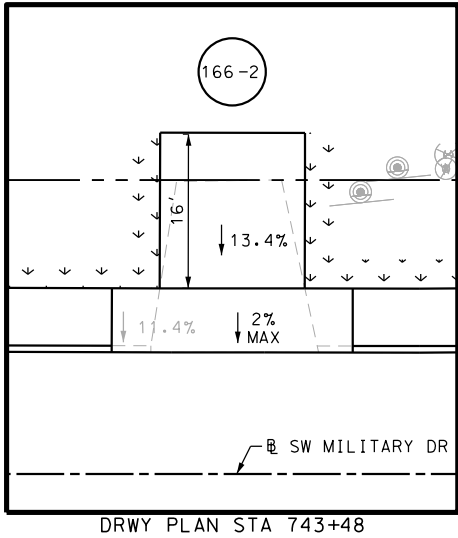
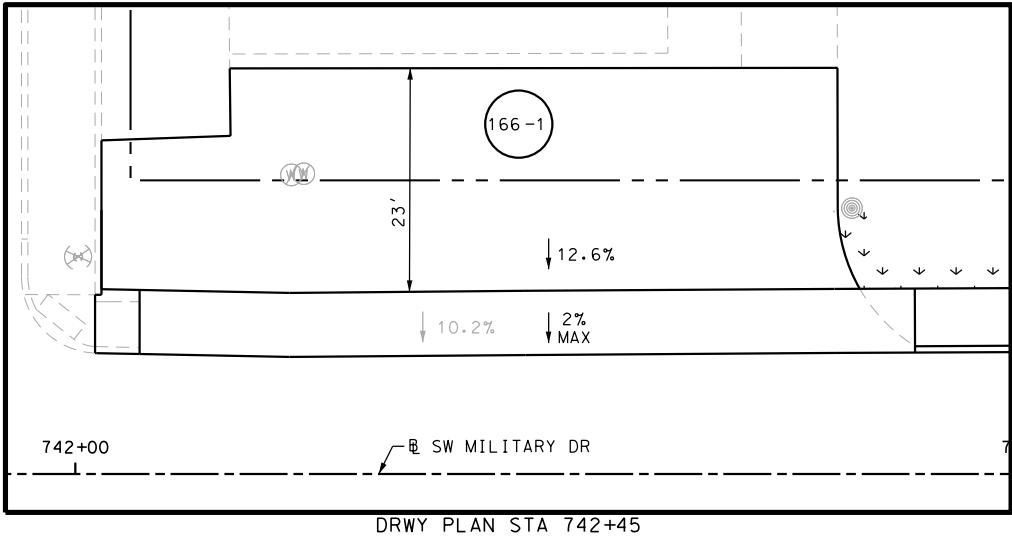
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
BEGIN PROJECT TO STA 746+00

SHEET 1 OF 45

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	166

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*WB01A.dgn



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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
SW MILITARY B

**SIDEWALK
CONSTRUCTION PLAN**

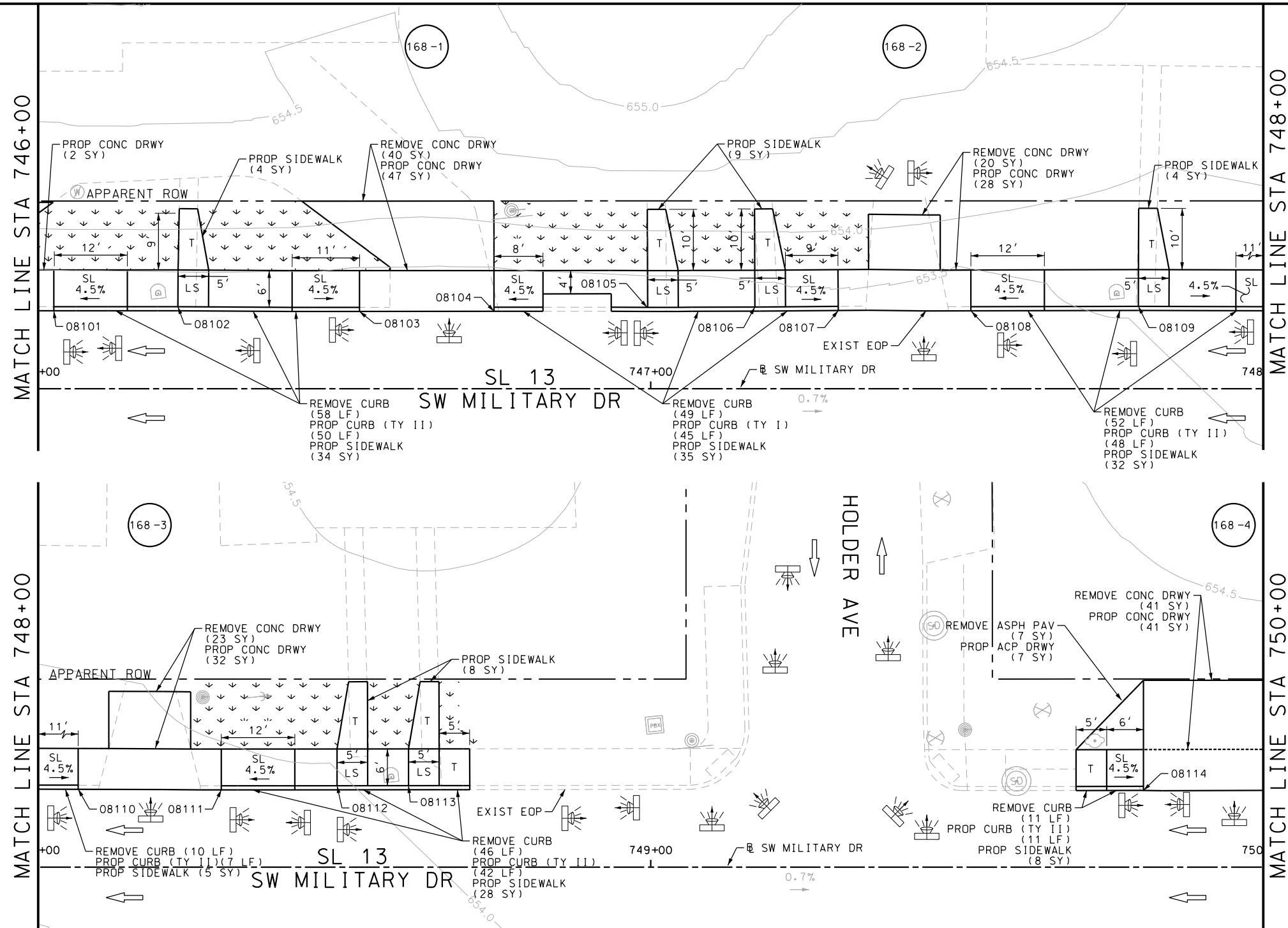
BEGIN PROJECT TO STA 746+00

SHEET 2 OF 45

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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\ilitaryB-WB02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	124
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	226
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	7
0529-6002	CONC CURB (TY II)	LF	203
0530-6004	DRIVEWAYS (CONC)	SY	150
0530-6005	DRIVEWAYS (ACP)	SY	7
0531-6001	CONC SIDEWALKS (4")	SY	135

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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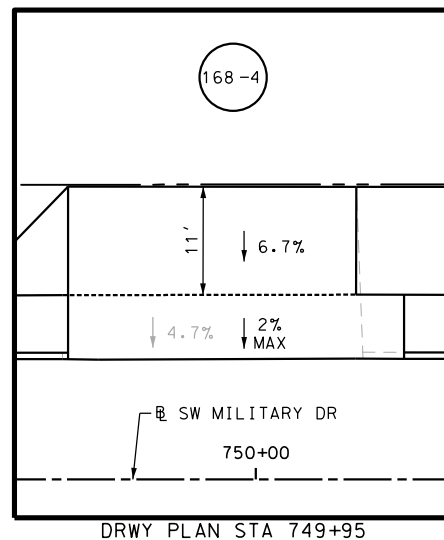
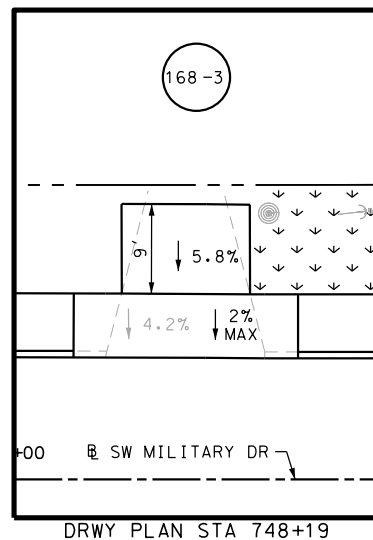
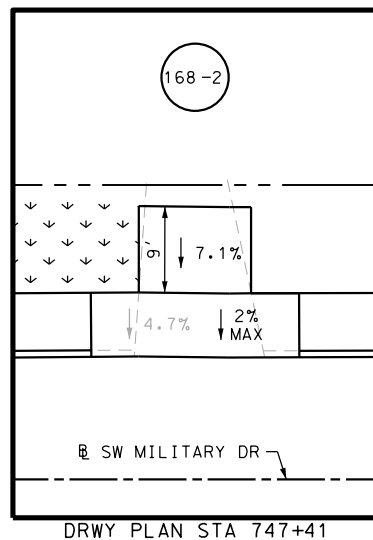
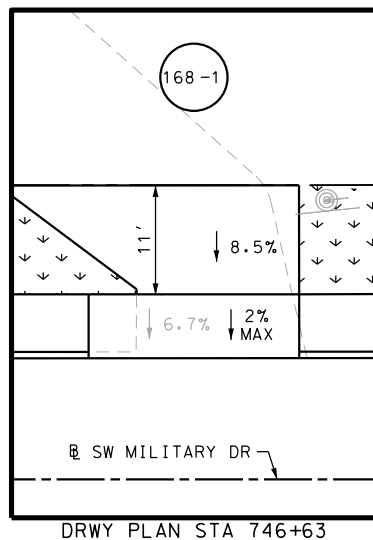
SL 13
SW MILITARY B

SIDEWALK
CONSTRUCTION PLAN

STA 746+00 TO STA 750+00

SHEET 3 OF 45

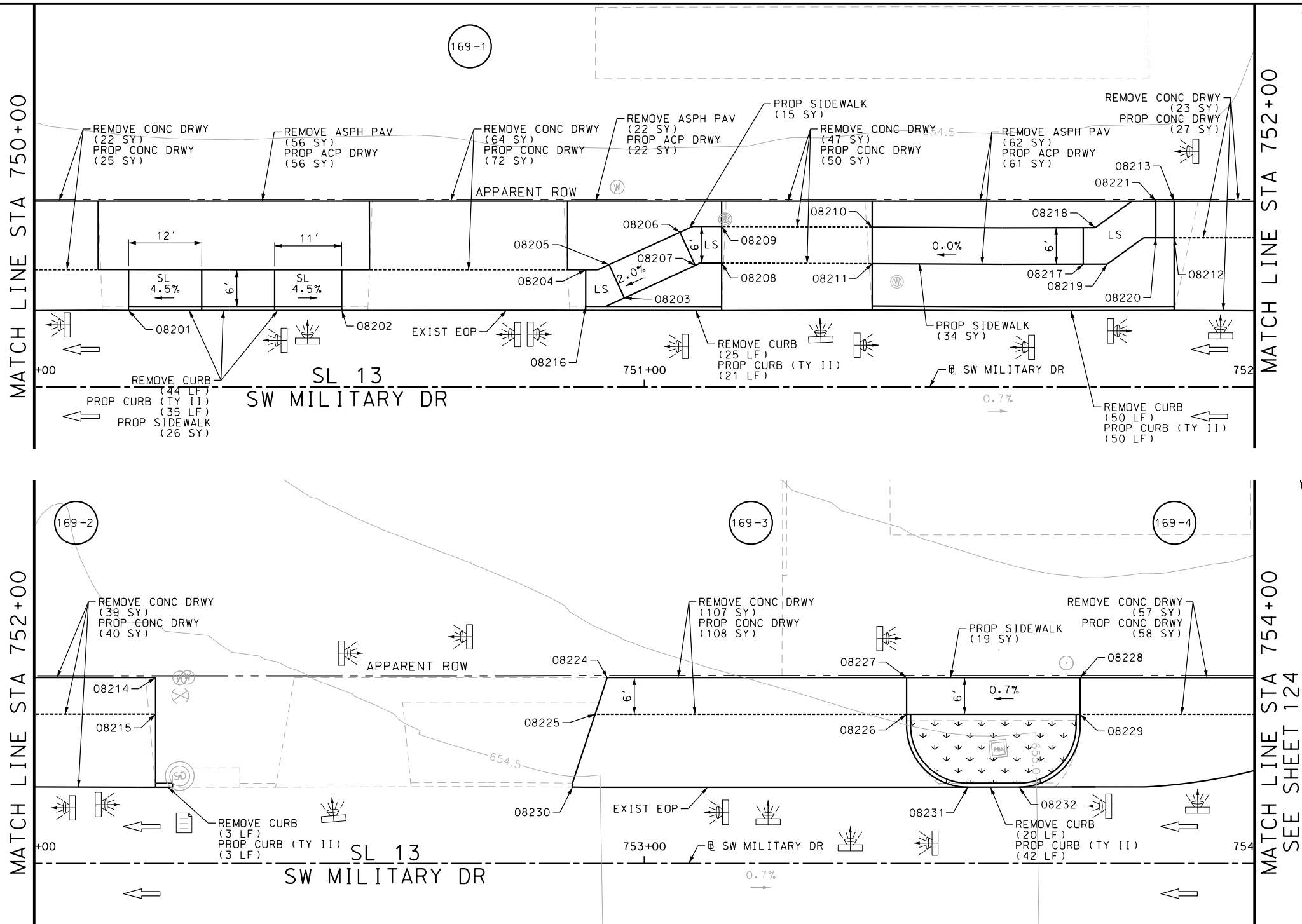
OGN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN ₁	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₁	SAT	BEXAR	0915	12	576	168



POINT	NORTHING	EASTING	ELEV	DESC
08101	13680607.98	2107522.84	--	.
08102	13680606.63	2107542.76	--	.
08103	13680602.83	2107572.49	--	.
08104	13680600.63	2107594.33	--	.
08105	13680598.80	2107618.60	--	.
08106	13680597.06	2107636.28	--	.
08107	13680595.06	2107650.25	--	.
08108	13680592.82	2107671.80	--	.
08109	13680590.85	2107698.43	--	.
08110	13680587.32	2107725.76	--	.
08111	13680584.85	2107749.02	--	.
08112	13680583.55	2107768.56	--	.
08113	13680581.81	2107785.75	--	.
08114	13680569.59	2107898.18	--	.

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	359
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	155
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	140
0529-6002	CONC CURB (TY II)	LF	142
0530-6004	DRIVEWAYS (CONC)	SY	380
0530-6005	DRIVEWAYS (ACP)	SY	143
0531-6001	CONC SIDEWALKS (4")	SY	100

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 750+00 TO STA 754+00

SHEET 4 OF 45

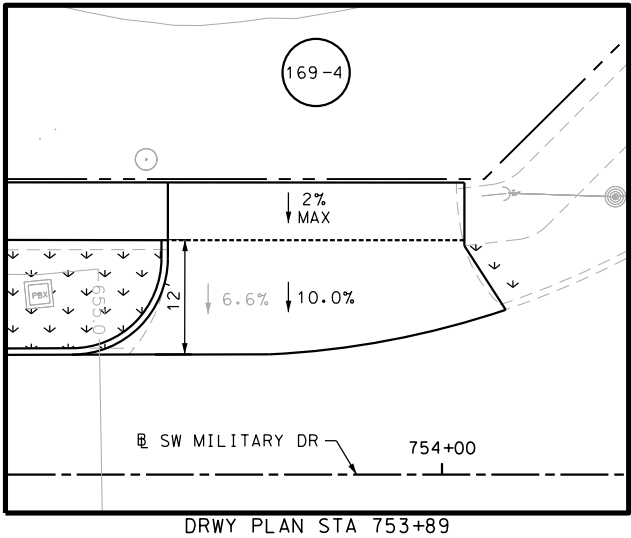
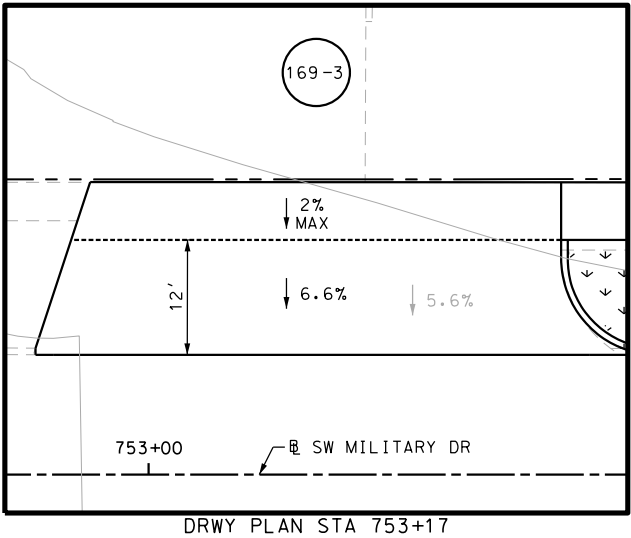
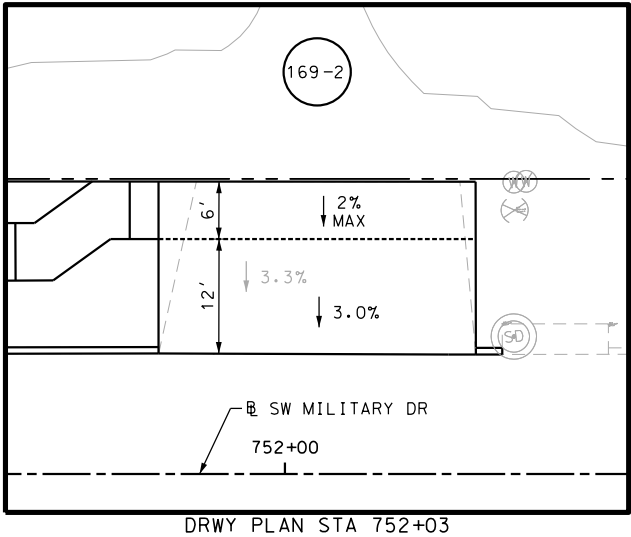
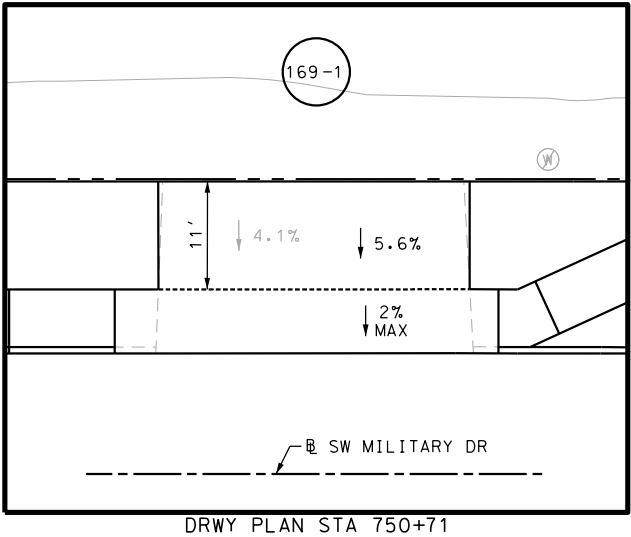
CHK DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
	6	TEXAS				VARIES
CHK DGN	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	SAT	BEXAR	0915	12	576	169

POINT	NORTHING	EASTING	ELEV	DESC
08201	13680566.03	2107933.61	--	.
08202	13680562.48	2107968.38	--	.
08203	13680558.23	2108010.14	--	.
08204	13680558.90	2108010.21	--	.
08205	13680564.87	2108010.83	--	.
08206	13680570.38	2108027.01	--	.
08207	13680564.27	2108027.69	--	.
08208	13680563.92	2108031.12	--	.
08209	13680569.89	2108031.73	--	.
08210	13680567.27	2108056.25	--	.
08211	13680561.30	2108055.65	--	.
08212	13680556.25	2108104.89	--	.
08213	13680562.22	2108105.49	--	.
08214	13680558.77	2108138.35	--	.
08215	13680552.80	2108137.75	--	.
08216	13680552.00	2108145.60	--	.
08217	13680558.15	2108144.45	--	.
08218	13680561.83	2108151.65	--	.
08219	13680555.68	2108152.80	--	.
08220	13680555.48	2108154.81	--	.

POINT	NORTHING	EASTING	ELEV	DESC
08221	13680561.45	2108155.39	--	.
08222	13680550.38	2108204.90	--	.
08223	13680556.39	2108205.52	--	.
08224	13680555.86	2108210.49	--	.
08225	13680549.86	2108209.88	--	.
08226	13680544.69	2108260.67	--	.
08227	13680550.67	2108261.28	--	.
08228	13680547.78	2108289.57	--	.
08229	13680541.80	2108288.96	--	.

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB\WB03A.dgn



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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 750+00 TO STA 754+00

SHEET 5 OF 45

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

Design Filename: P:\11135\07\design\Civil\Roadway\SWM\ilitaryB\1113507*SWM\ilitaryB*WB04.dgn



DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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P.E. SERIAL NO: 105193

DATE: 11/21/2018

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INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

 *Texas Department of Transportation*
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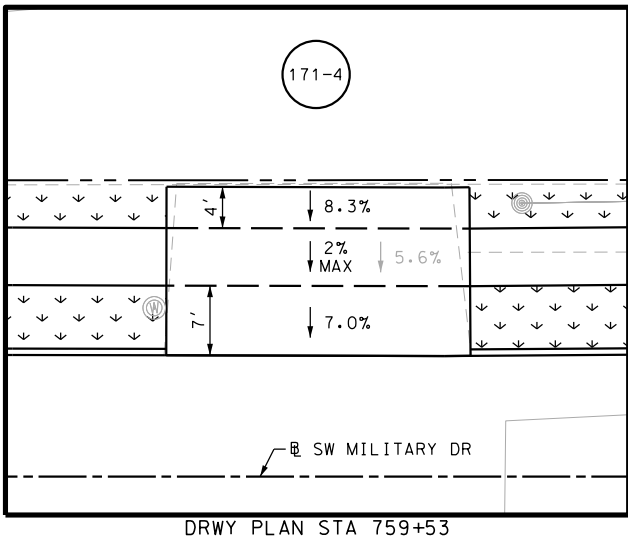
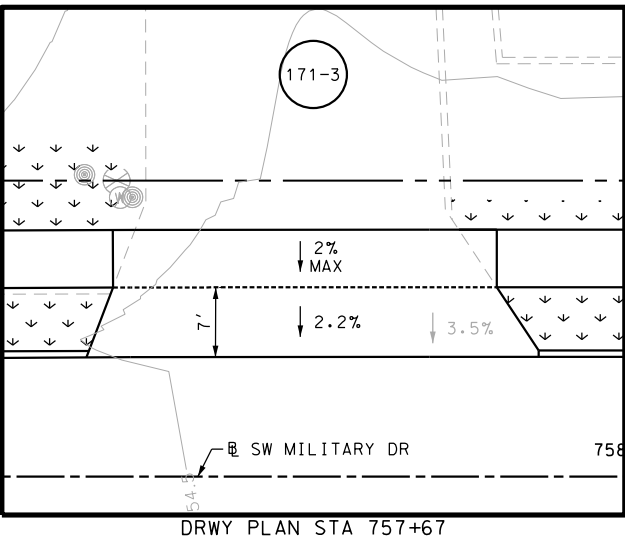
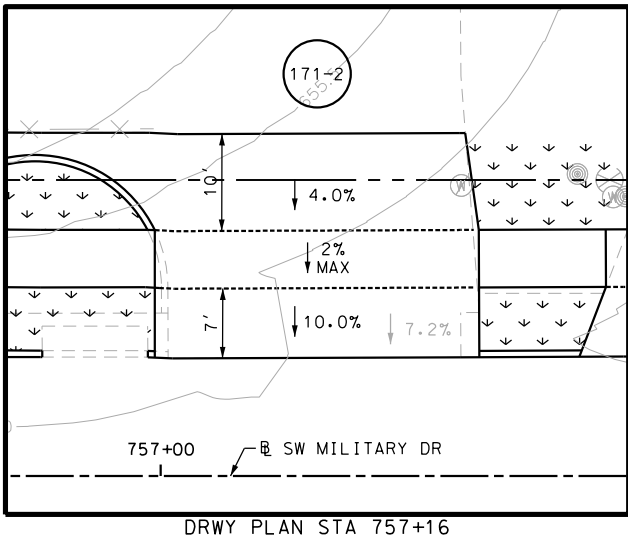
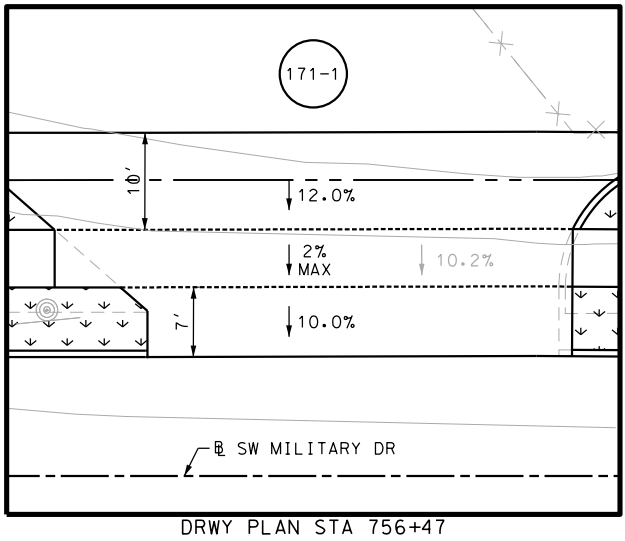
SHEET 6 OF 45

OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	171

POINT	NORTHING	EASTING	ELEV	DESC
08321	13680497.89	2108733.85	--	.
08322	13680497.07	2108742.27	--	.
08323	13680486.02	2108851.63	--	.
08324	13680480.06	2108851.01	--	.
08325	13680476.79	2108882.49	--	.
08326	13680482.77	2108883.06	--	.

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB*WB04A.dgn



- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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**

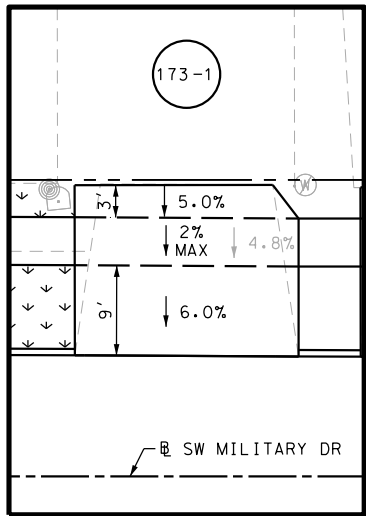
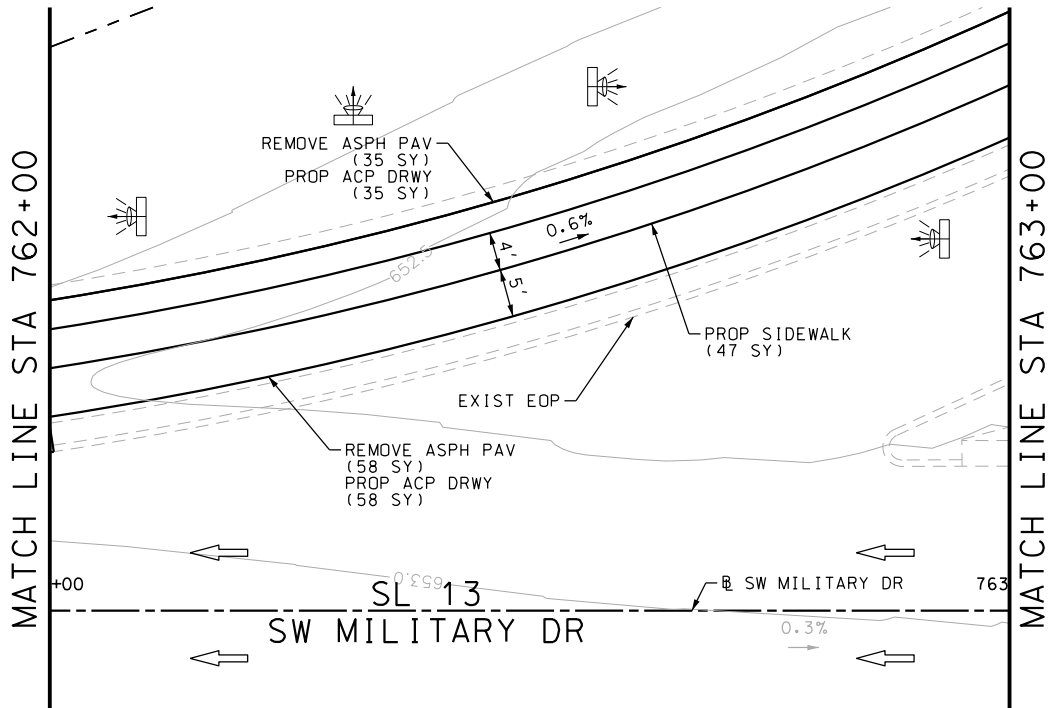
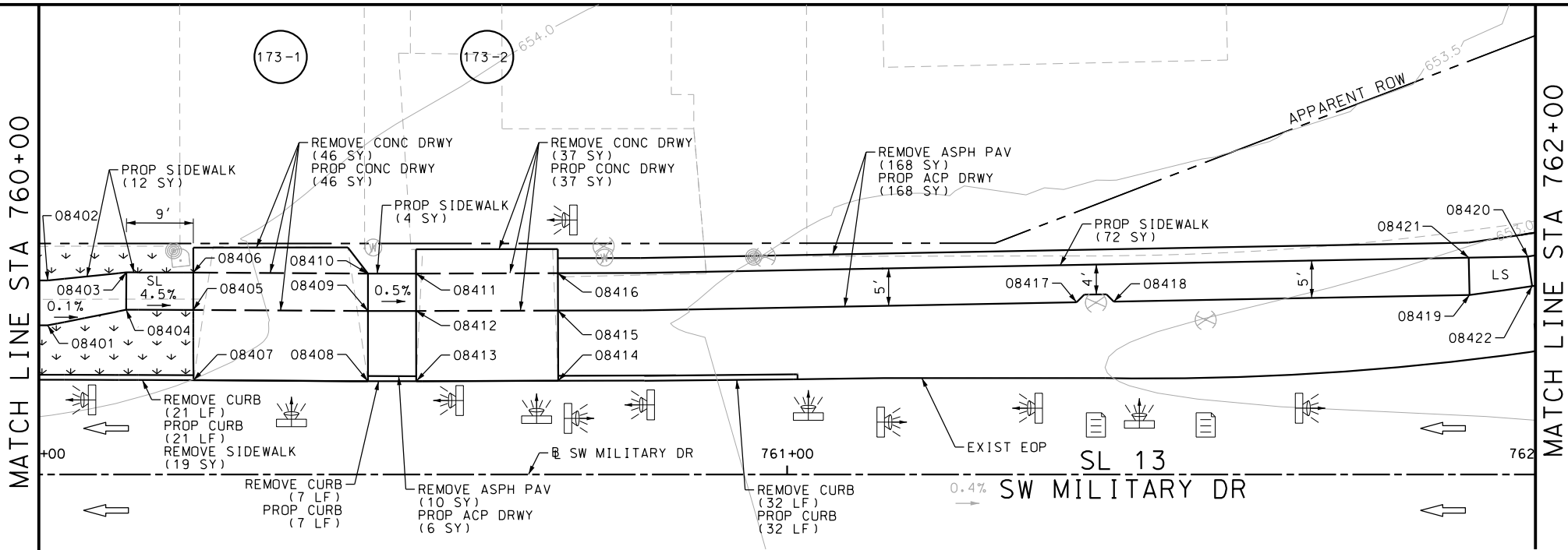
STA 756+00 TO STA 760+00

SHEET 7 OF 45

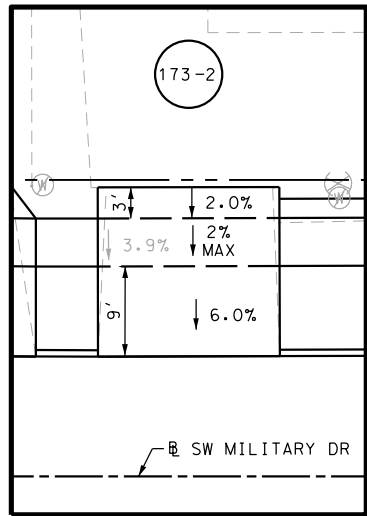
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	172

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\113507*SWMI\itaryB*WB05.dgn



DRWY PLAN STA 760+32



DRWY PLAN STA 760+60

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	83
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	60
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	19
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	271
0529-6002	CONC CURB (TY II)	LF	60
0530-6004	DRIVEWAYS (CONC)	SY	83
0530-6005	DRIVEWAYS (ACP)	SY	267
0531-6001	CONC SIDEWALKS (4")	SY	135

NOTES:

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INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

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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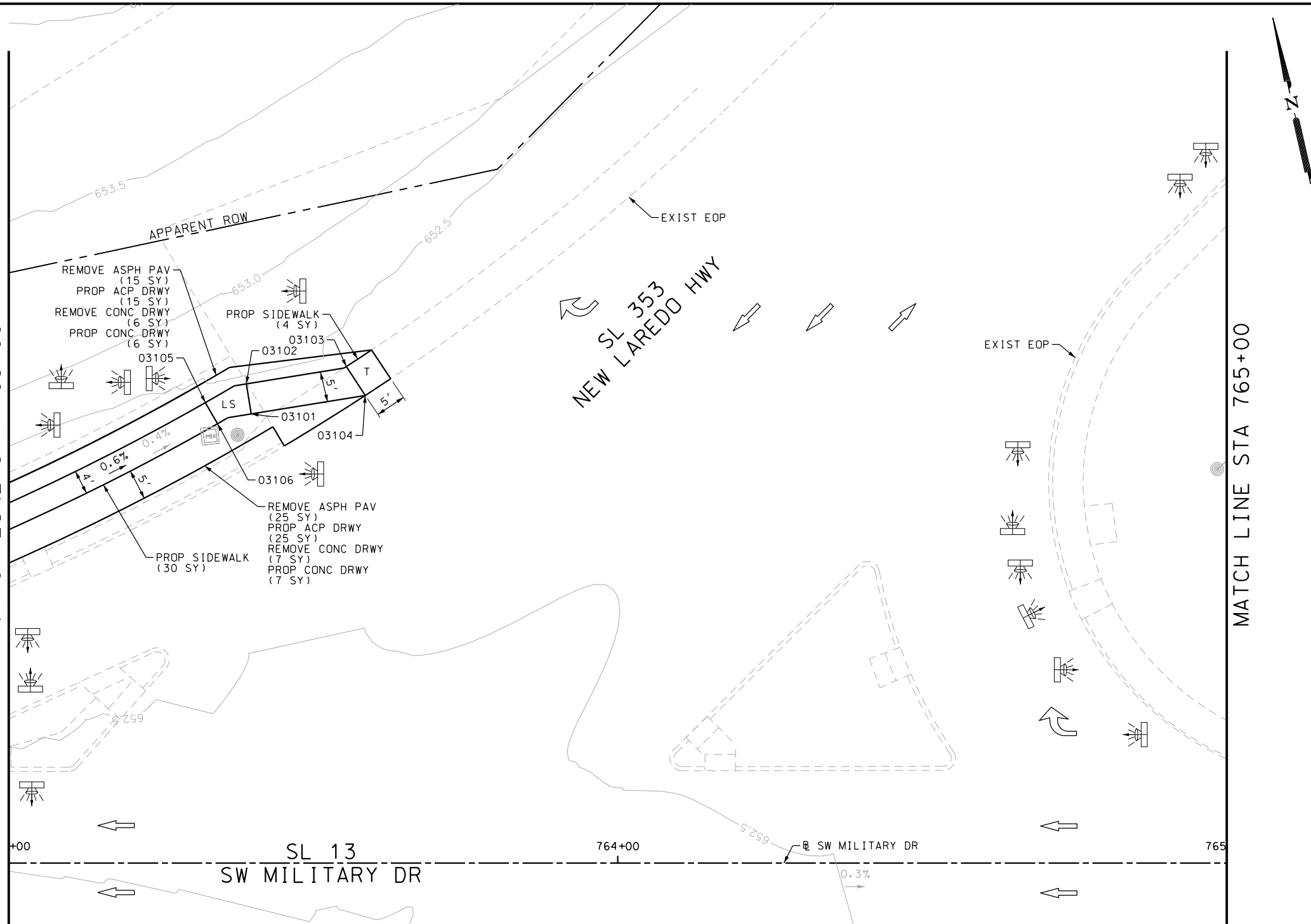
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 760+00 TO STA 763+00

SHEET 8 OF 45					
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.
	SAT	BEXAR	0915	12	576
CHK DWG:					173

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\WB05\A.dgn

MATCH LINE STA 763+00



ITEM	DESCRIPTION	UNIT	QTY
------	-------------	------	-----

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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	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
03101	13680497.70	2109255.06	--	
03102	13680492.60	2109253.51	--	
03103	13680493.95	2109276.29	--	
03104	13680493.95	2109276.29	--	

PAPE-DAWSON ENGINEERS

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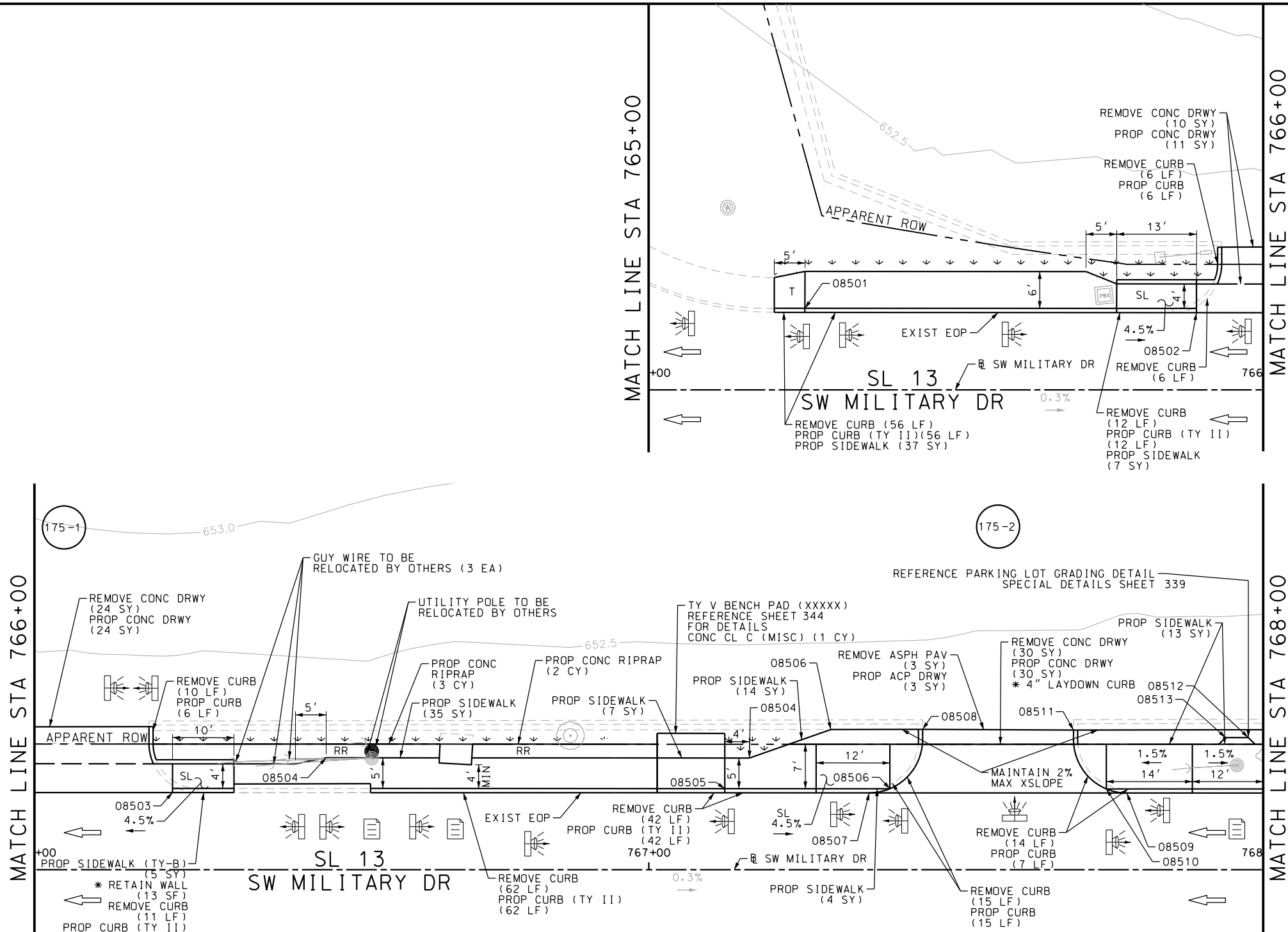
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 763+00 TO STA 765+00

SHEET 9 OF 45

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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB06.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	64
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	172
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	3
0529-6002	CONC CURB (TY II)	LF	155
0530-6004	DRIVEWAYS (CONC)	SY	65
0530-6005	DRIVEWAYS (ACP)	SY	3
0531-6001	CONC SIDEWALKS (4")	SY	123
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	13

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

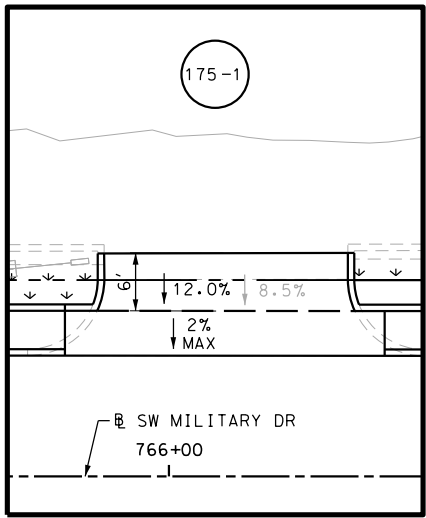
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 764+00 TO STA 768+00

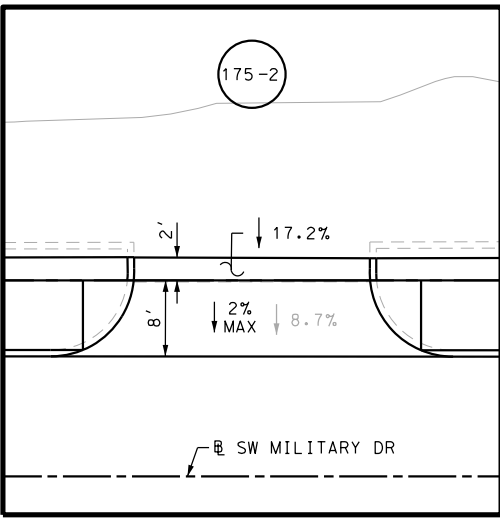
SHEET 10 OF 45

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	175

POINT	NORTHING	EASTING	ELEV	DESC
08501	13680413.88	2109435.88	--	.
08502	13680406.83	2109498.22	--	.
08503	13680403.43	2109531.38	--	.
08504	13680403.65	2109594.87	--	.
08505	13680396.94	2109594.93	--	.
08506	13680405.12	2109605.07	--	.
08507	13680399.66	2109609.28	--	.
08508	13680400.77	2109647.53	--	.
08509	13680395.80	2109647.02	--	.
08510	13680400.16	2109653.50	--	.
08511	13680395.19	2109652.99	--	.
08512	13680397.41	2109680.45	--	.
08513	13680392.43	2109679.94	--	.
08514	13680396.80	2109686.42	--	.
08515	13680391.82	2109685.91	--	.
08516	13680394.67	2109707.16	--	.
08517	13680389.70	2109706.65	--	.

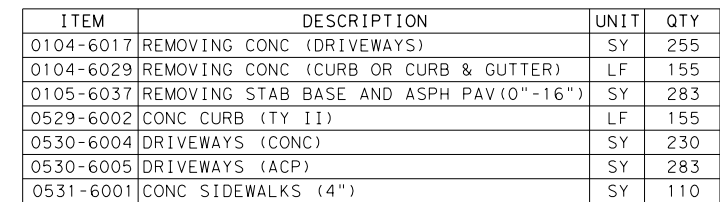


DRYW PLAN STA 766+05



DRYW PLAN STA 767+57

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DATE: 11/21/2018

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



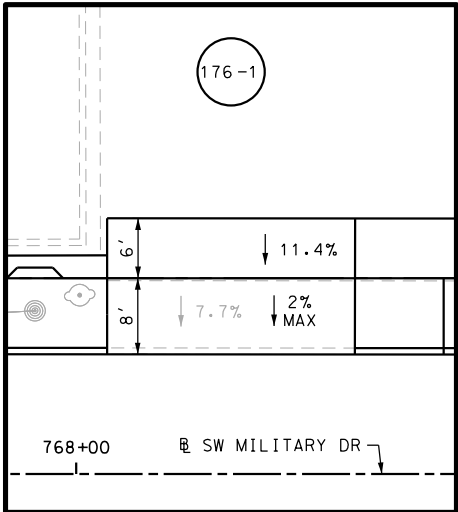
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 768+00 TO STA 772+00

SHEET 11 OF 45

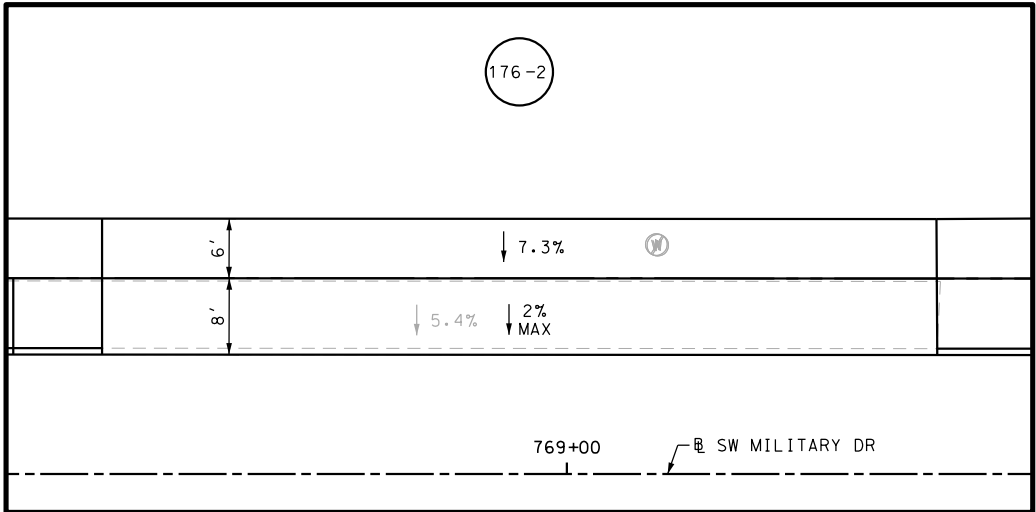
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CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	176

Plotted on: 11/21/2018

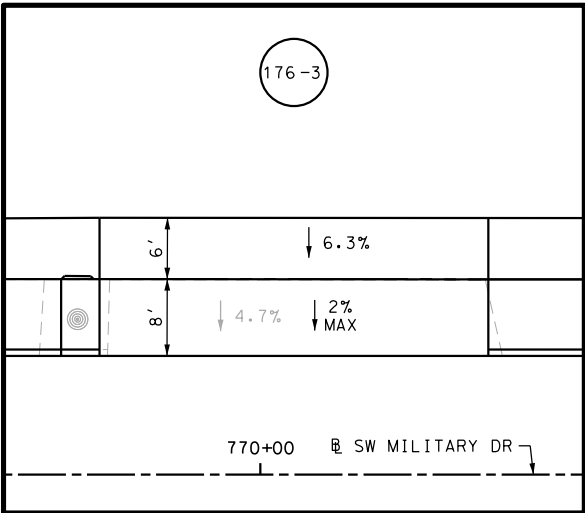
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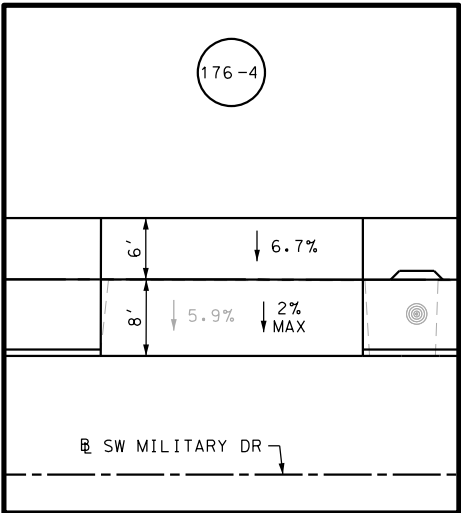
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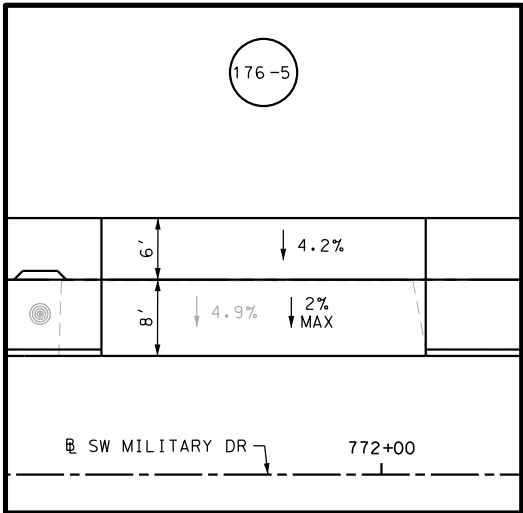
DRWY PLAN STA 768+95



DRWY PLAN STA 770+03



DRWY PLAN STA 771+45



DRWY PLAN STA 771+88

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DATE:	11/21/2018

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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



SL 13
SW MILITARY B

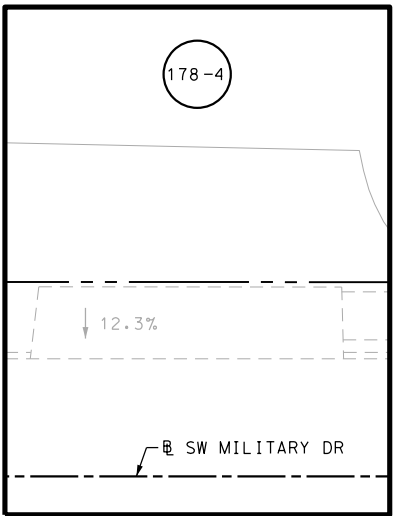
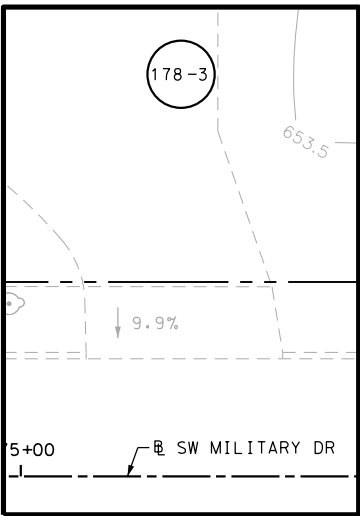
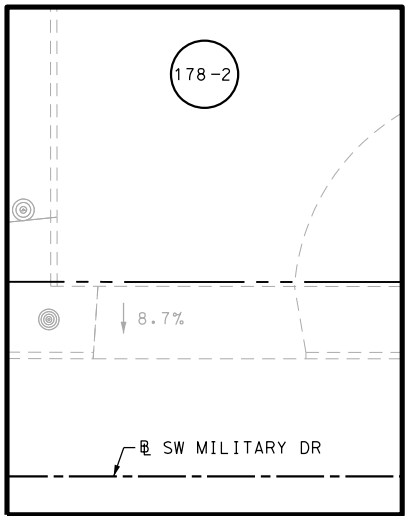
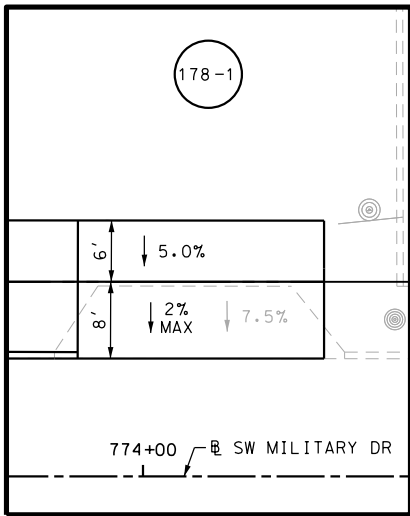
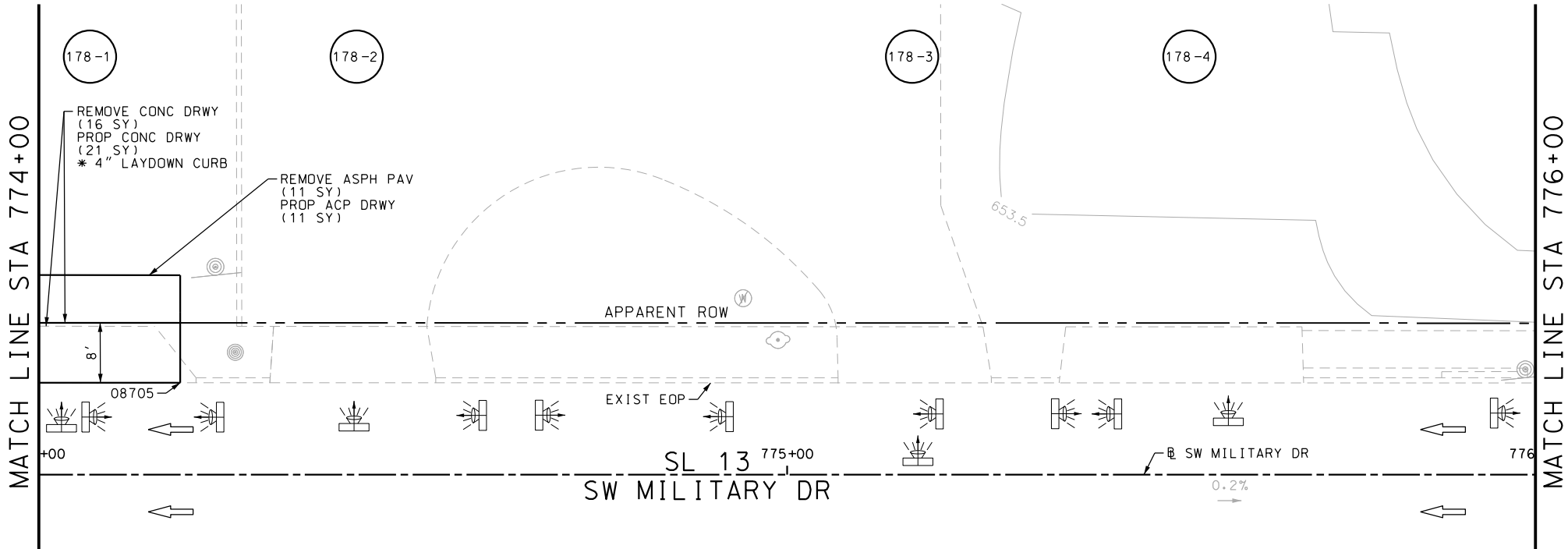
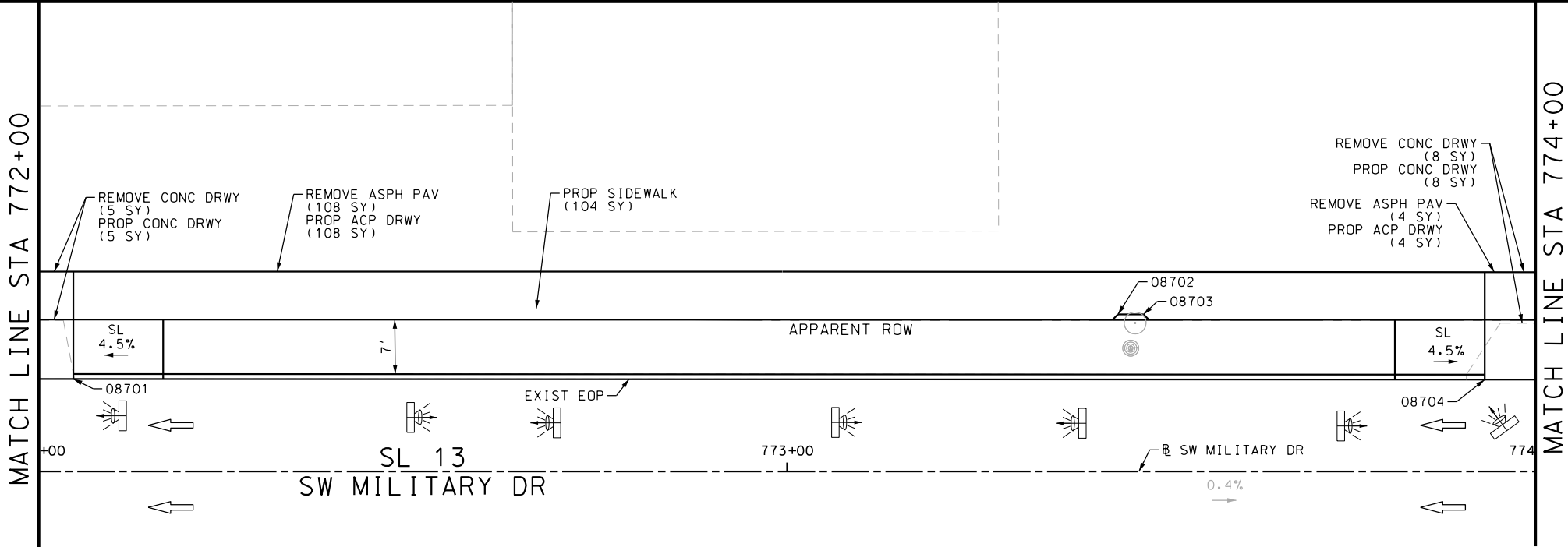
**SIDEWALK
CONSTRUCTION PLAN**

STA 768+00 TO STA 772+00

SHEET 12 OF 45						
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	177

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB08.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	29
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	123
0529-6002	CONC CURB (TY II)	LF	86
0530-6004	DRIVEWAYS (CONC)	SY	34
0530-6005	DRIVEWAYS (ACP)	SY	123
0531-6001	CONC SIDEWALKS (4")	SY	104

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ENGINEER: JAMES A. LUTZ
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DATE: 11/21/2018

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 772+00 TO STA 776+00

SHEET 13 OF

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: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWM\MilitaryB\WB08A.dgn

POINT	NORTHING	EASTING	ELEV	DESC
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08702	13680348.56	2110111.95	--	.
08703	13680334.37	2110300.08	--	.
08704	13680329.39	2110299.57	--	.
08705	13680326.77	2110325.10	--	.
08706	13680331.75	2110325.61	--	.
08707	13680331.34	2110329.59	--	.
08708	13680326.37	2110329.08	--	.
08709	13680330.93	2110333.57	--	.
08710	13680325.96	2110333.06	--	.
08711	13680325.56	2110337.04	--	.
08712	13680330.52	2110337.55	--	.
08713	13680328.38	2110358.62	--	.
08714	13680323.42	2110358.11	--	.
08715	13680313.52	2110412.13	--	.
08716	13680311.50	2110431.94	--	.
08717	13680310.29	2110443.88	--	.
08718	13680307.24	2110473.80	--	.
08719	13680306.35	2110489.22	--	.
08720	13680311.43	2110488.62	--	.

POINT	NORTHING	EASTING	ELEV	DESC
08721	13680314.55	2110497.55	--	.
08722	13680309.46	2110498.15	--	.

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

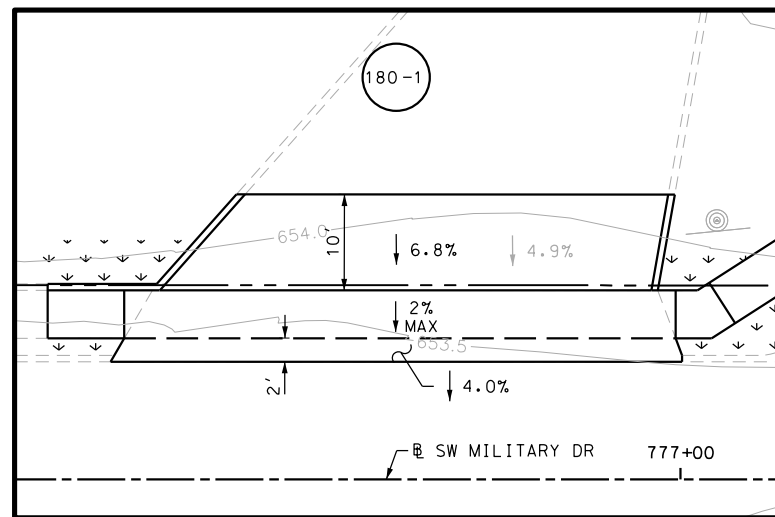
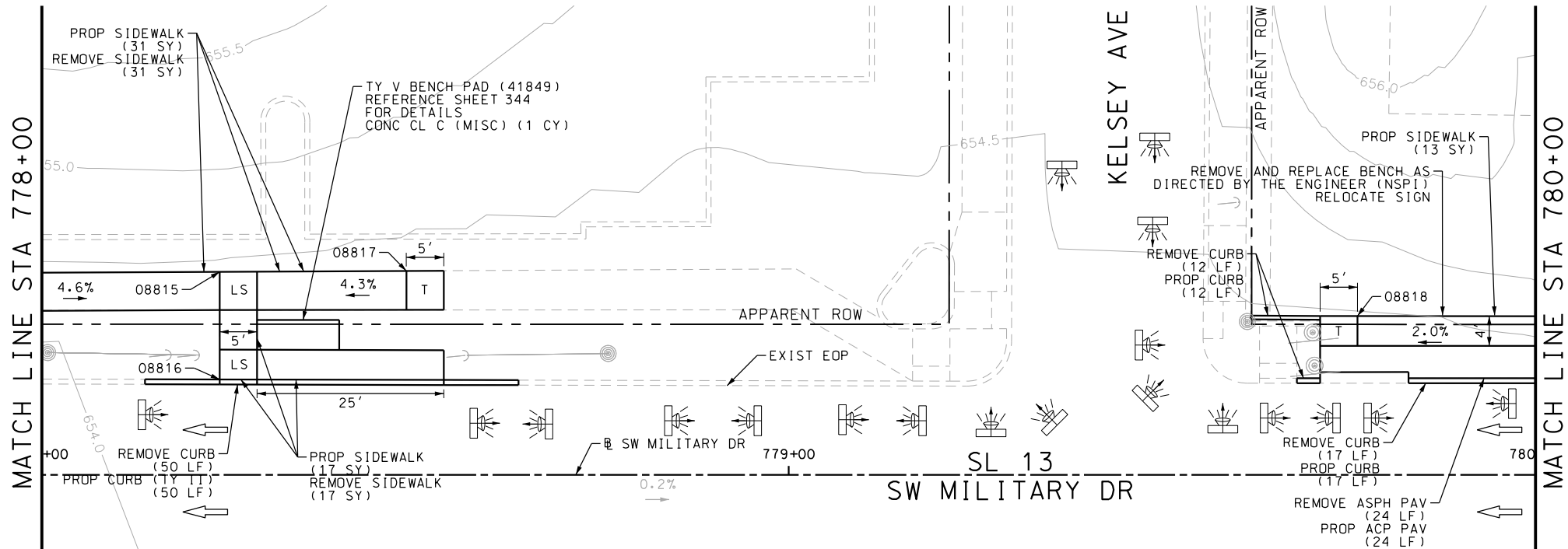
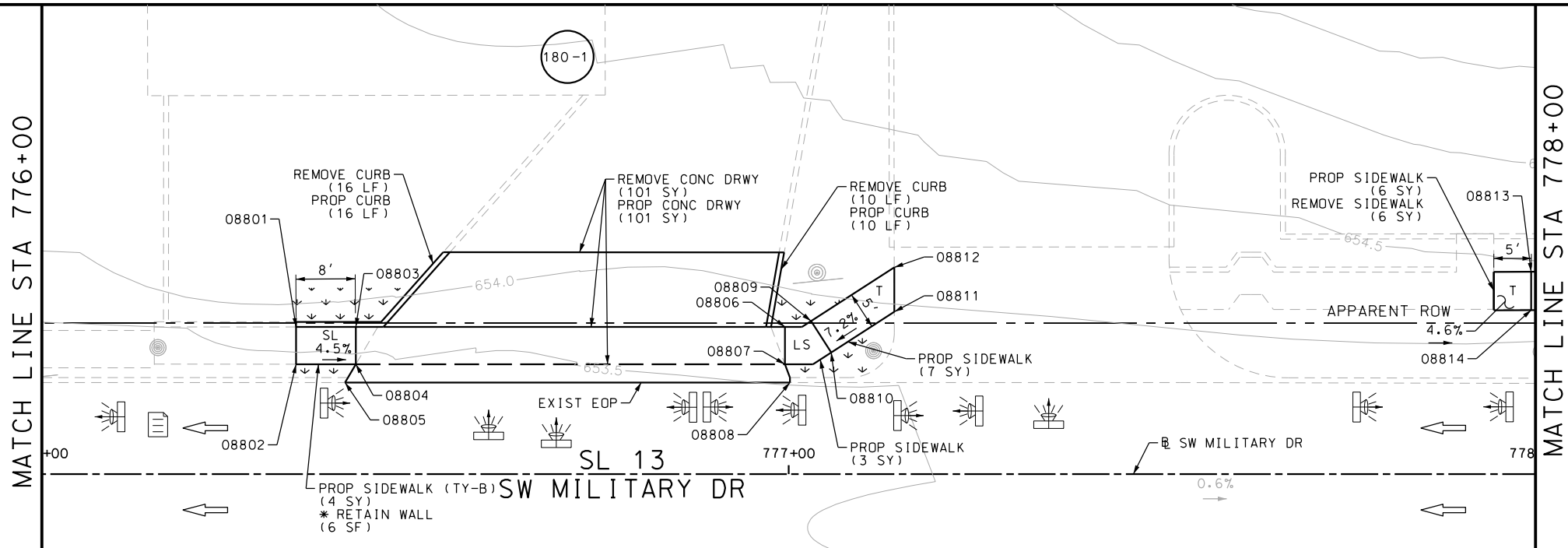
SIDEWALK
CONSTRUCTION PLAN
STA 772+00 TO STA 776+00

SHEET 14 OF 45

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	179

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\ilitaryB\WB09.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	101
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	85
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	24
0529-6002	CONC CURB (TY II)	LF	85
0530-6004	DRIVEWAYS (CONC)	SY	101
0530-6005	DRIVEWAYS (ACP)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	80
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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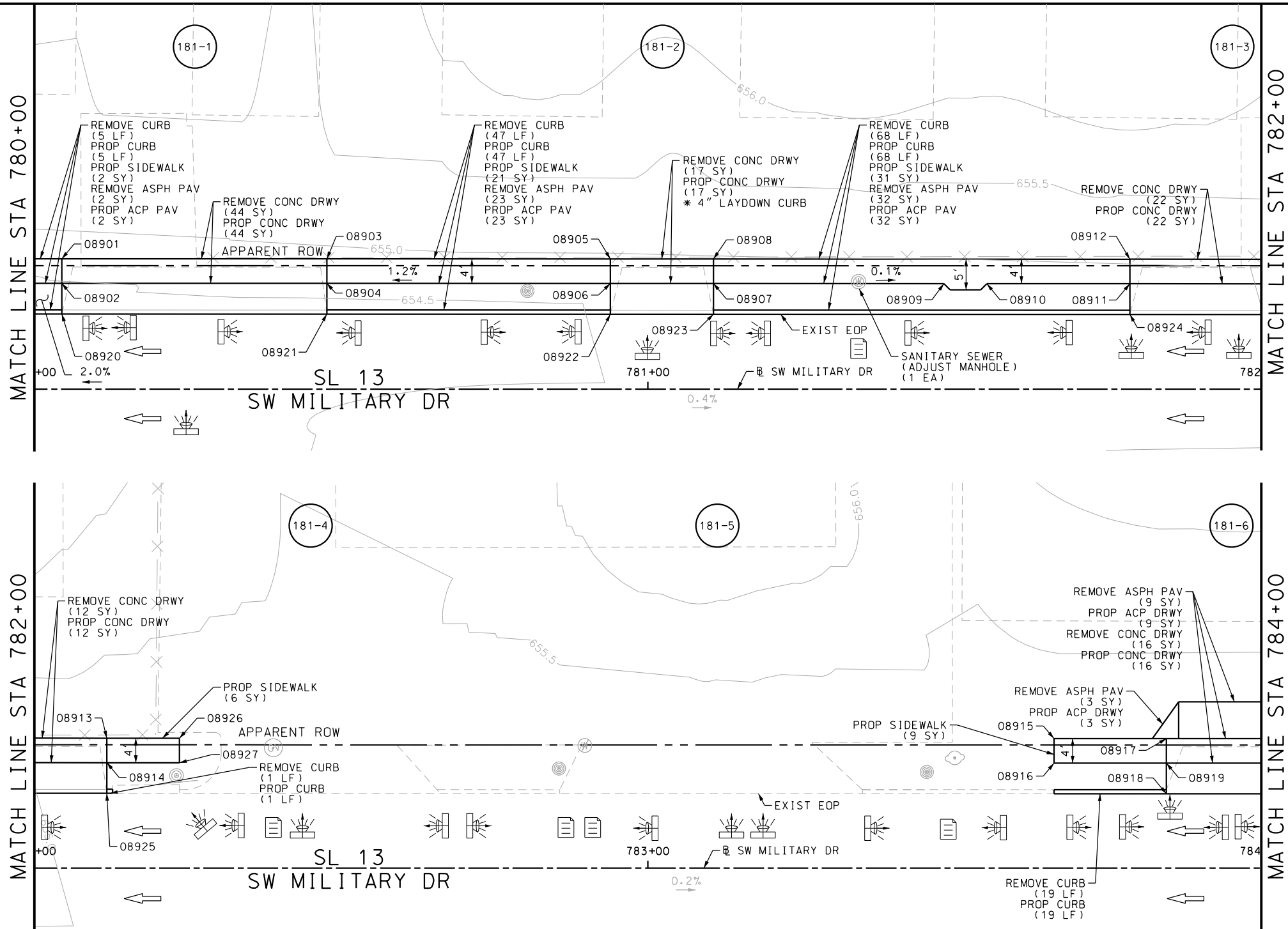
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 776+00 TO STA 780+00

SHEET 15 OF 45					
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

POINT	NORTHING	EASTING	ELEV	DESC
08801	13680310.86	2110533.79	--	.
08802	13680306.00	2110532.22	--	.
08803	13680308.14	2110538.54	--	.
08804	13680303.27	2110536.97	--	.
08805	13680302.86	2110540.95	--	.
08806	13680307.84	2110541.46	--	.
08807	13680307.24	2110547.43	--	.
08808	13680302.26	2110546.92	--	.
08809	13680296.45	2110604.07	--	.
08810	13680301.42	2110604.58	--	.
08811	13680301.84	2110608.14	--	.
08812	13680297.38	2110610.41	--	.
08813	13680296.28	2110729.02	--	.
08814	13680291.18	2110728.50	--	.
08815	13680288.18	2110758.35	--	.
08816	13680293.40	2110758.88	--	.
08817	13680274.97	2110879.99	--	.
08818	13680270.99	2110879.58	--	.

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\MilitaryB-WB10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	111
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	140
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	69
0529-6002	CONC CURB (TY II)	LF	140
0530-6004	DRIVEWAYS (CONC)	SY	111
0530-6005	DRIVEWAYS (ACP)	SY	69
0531-6001	CONC SIDEWALKS (4")	SY	69
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 780+00 TO STA 784+00

SHEET 16 OF 45

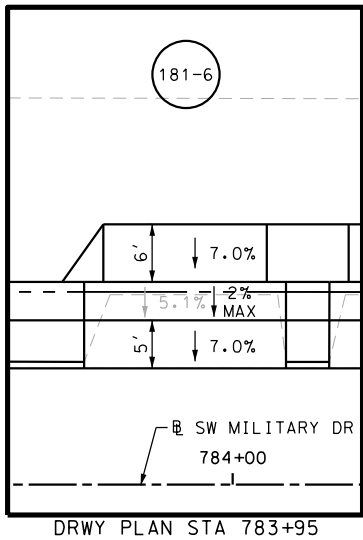
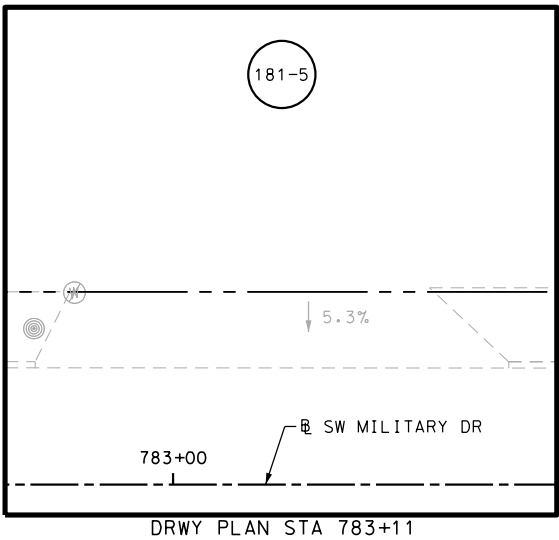
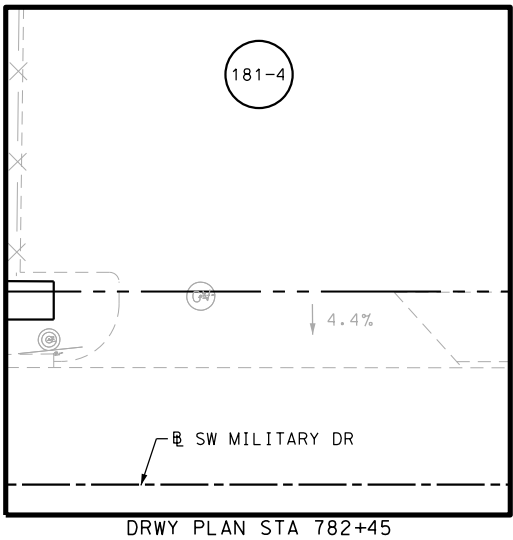
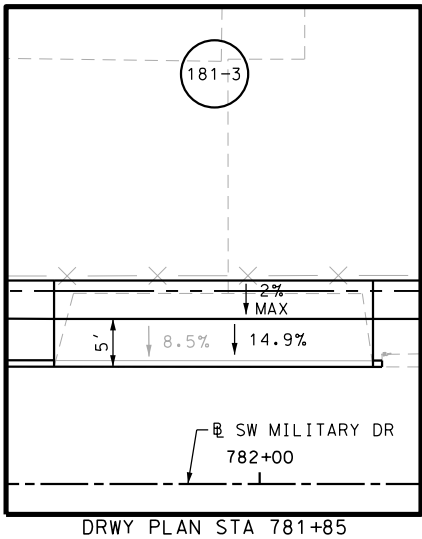
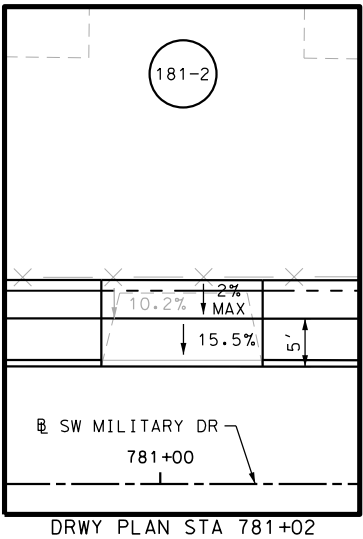
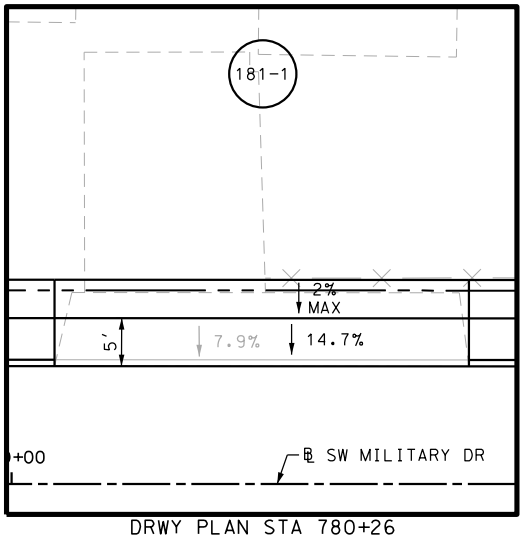
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	181

POINT	NORTHING	EASTING	ELEV	DESC
08901	13680272.09	2110908.15	--	.
08902	13680268.11	2110907.74	--	.
08903	13680267.70	2110951.13	--	.
08904	13680263.72	2110950.72	--	.
08905	13680263.00	2110997.10	--	.
08906	13680259.02	2110996.69	--	.
08907	13680257.32	2111013.42	--	.
08908	13680261.29	2111013.83	--	.
08909	13680253.50	2111050.79	--	.
08910	13680252.79	2111057.76	--	.
08911	13680250.42	2111080.95	--	.
08912	13680254.39	2111081.35	--	.
08913	13680251.01	2111114.41	--	.
08914	13680247.04	2111114.00	--	.
08915	13680249.13	2111132.95	--	.
08916	13680245.17	2111132.32	--	.
08917	13680240.86	2111125.27	--	.
08918	13680236.54	2111167.61	--	.
08919	13680241.51	2111168.12	--	.
08920	13680245.48	2111168.52	--	.

POINT	NORTHING	EASTING	ELEV	DESC
08921	13680240.92	2111173.92	--	.
08922	13680240.21	2111180.88	--	.
08923	13680239.35	2111189.29	--	.
08924	13680243.32	2111189.70	--	.
08925	13680238.49	2111236.94	--	.
08926	13680234.52	2111236.54	--	.
08927	13680233.47	2111286.24	--	.
08928	13680229.49	2111285.84	--	.

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\SWM\1113507*SWM\ilitaryB*WB10A.dgn



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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

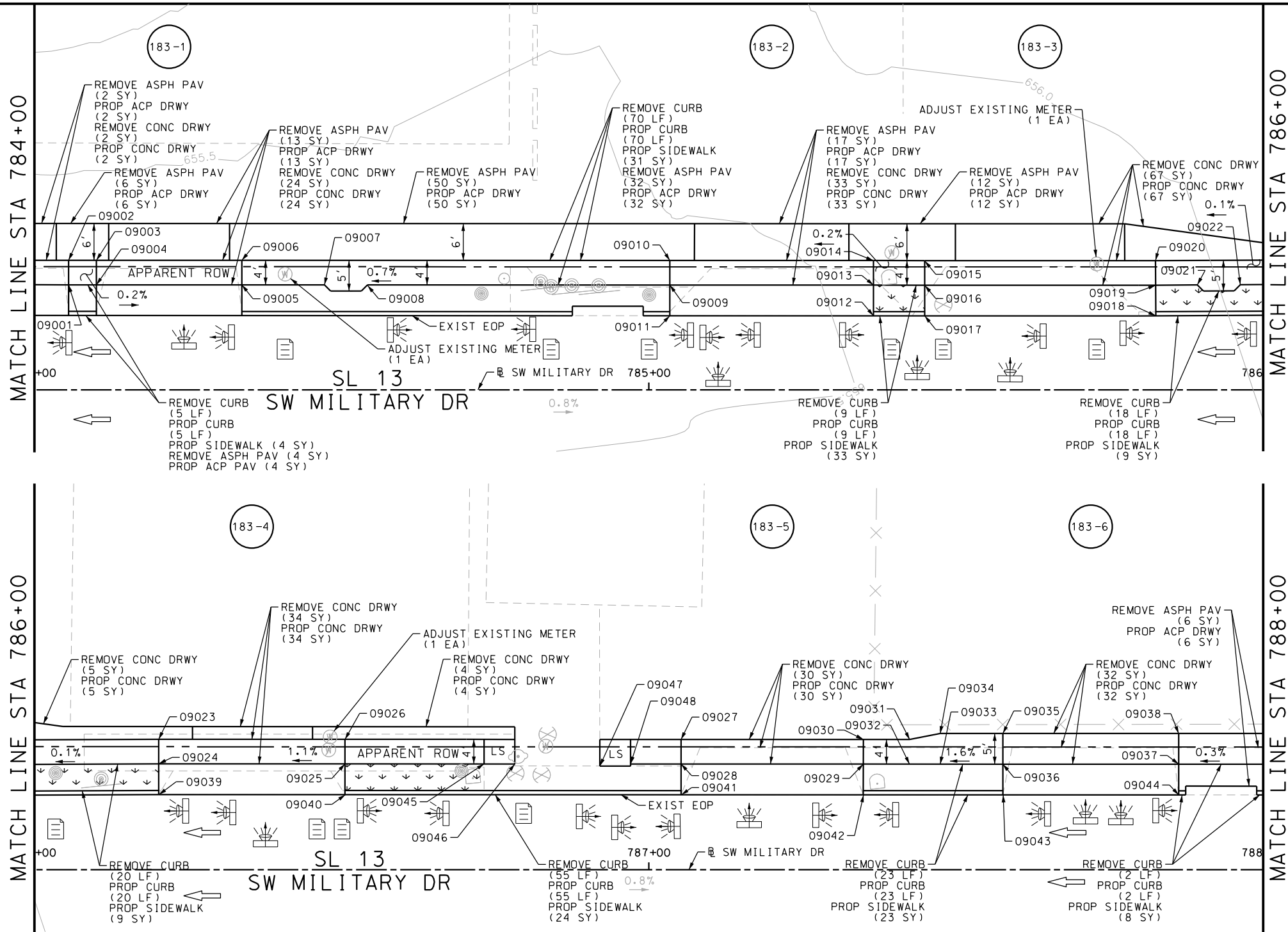
STA 780+00 TO STA 784+00

SHEET 17 OF 45

DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIABLE
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	182

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\MilitaryB-WB1.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	231
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	202
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	142
0529-6002	CONC CURB (TY II)	LF	202
0530-6004	DRIVEWAYS (CONC)	SY	231
0530-6005	DRIVEWAYS (ACP)	SY	125
0531-6001	CONC SIDEWALKS (4")	SY	141
7091-6001	ADJUST EXISTING VALVE BOX	EA	1
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	3

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 784+00 TO STA 788+00

SHEET 18 OF 45

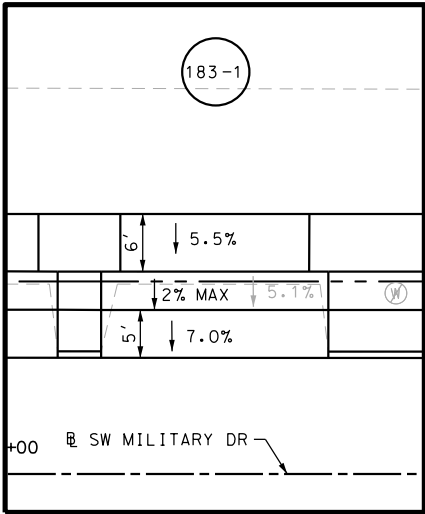
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	183

POINT	NORTHING	EASTING	ELEV	DESC
09001	13680227.35	2111306.75	--	.
09002	13680231.32	2111307.16	--	.
09003	13680230.86	2111311.65	--	.
09004	13680226.89	2111311.25	--	.
09005	13680224.48	2111334.81	--	.
09006	13680228.45	2111335.22	--	.
09007	13680223.12	2111348.19	--	.
09008	13680222.40	2111355.15	--	.
09009	13680217.40	2111404.12	--	.
09010	13680221.38	2111404.53	--	.
09011	13680212.43	2111403.61	--	.
09012	13680209.06	2111436.58	--	.
09013	13680214.03	2111437.08	--	.
09014	13680218.00	2111437.49	--	.
09015	13680217.17	2111445.78	--	.
09016	13680213.19	2111445.37	--	.
09017	13680208.21	2111444.86	--	.
09018	13680204.41	2111482.29	--	.
09019	13680209.38	2111482.77	--	.
09020	13680213.36	2111483.16	--	.

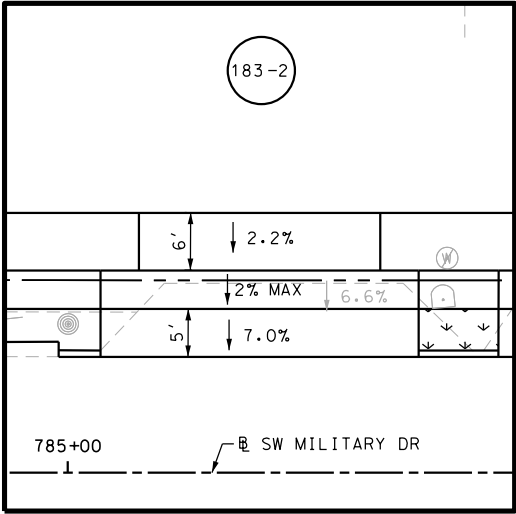
POINT	NORTHING	EASTING	ELEV	DESC
09021	13680208.73	2111489.53	--	.
09022	13680208.05	2111496.50	--	.
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09024	13680205.75	2111520.33	--	.
09025	13680202.67	2111550.49	--	.
09026	13680206.64	2111550.90	--	.
09027	13680201.08	2111605.33	--	.
09028	13680197.10	2111604.92	--	.
09029	13680194.09	2111634.43	--	.
09030	13680198.07	2111634.84	--	.
09031	13680197.30	2111642.32	--	.
09032	13680193.33	2111641.92	--	.
09033	13680192.82	2111646.89	--	.
09034	13680197.79	2111647.40	--	.
09035	13680196.76	2111657.54	--	.
09036	13680191.78	2111657.03	--	.
09037	13680188.87	2111685.50	--	.
09038	13680193.85	2111686.01	--	.

Plotted on: 11/21/2018

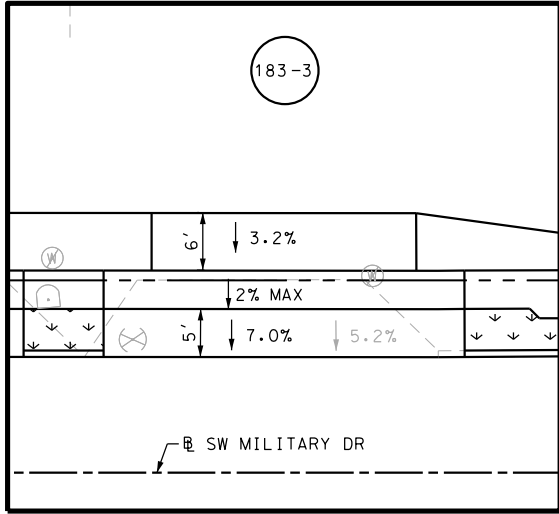
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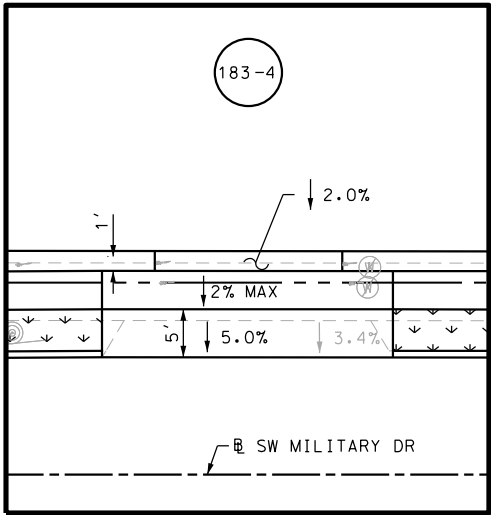
DRWY PLAN STA 784+22



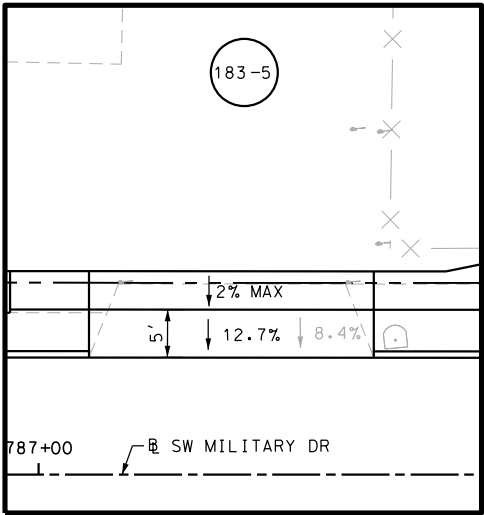
DRWY PLAN STA 785+20



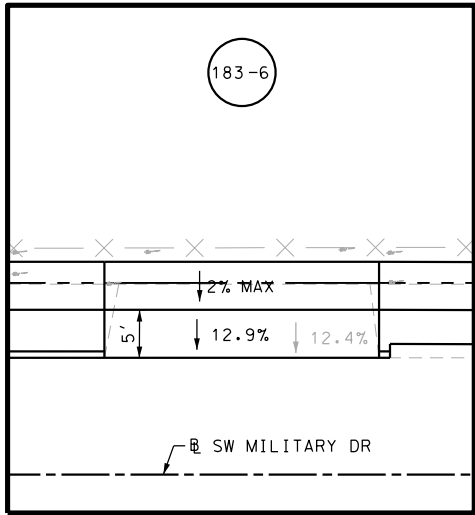
DRWY PLAN STA 785+64



DRWY PLAN STA 786+35



DRWY PLAN STA 787+20



DRWY PLAN STA 787+72

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

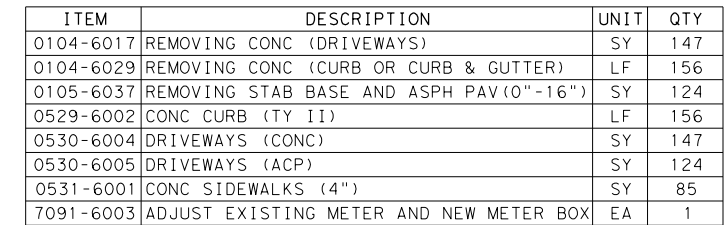
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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SL 13 SW MILITARY B SIDEWALK CONSTRUCTION PLAN STA 784+00 TO STA 788+00					
SHEET 19 OF 45					
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

Design Filename: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*WB12.dgn



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P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



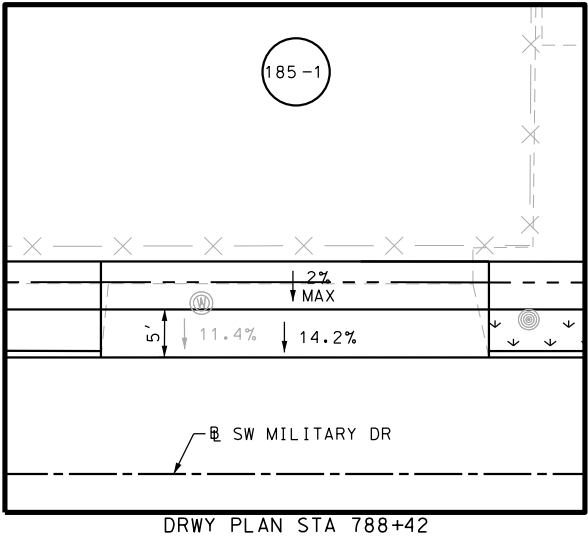
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



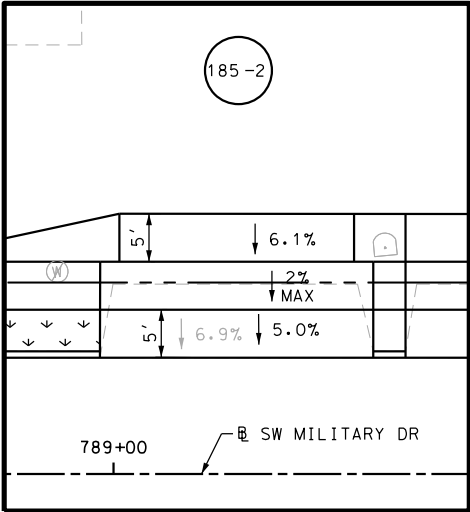
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 788+00 TO STA 792+00

SHEET 20 OF 45

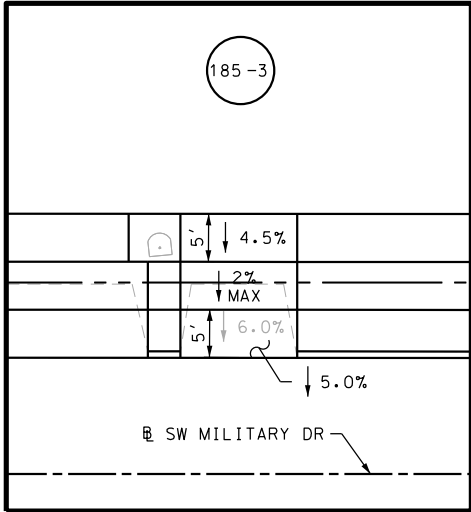
DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWGr:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWGr:	SAT	BEXAR	0915	12	576	185



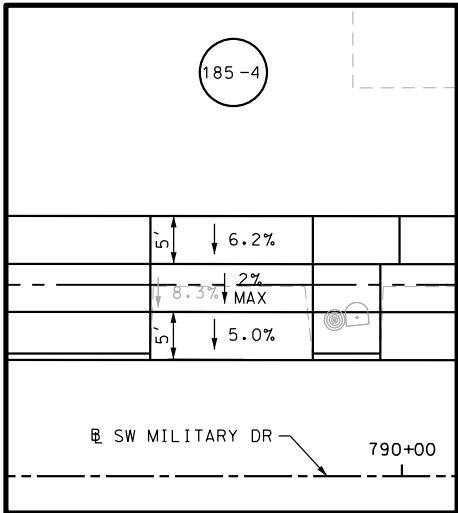
DRWY PLAN STA 788+42



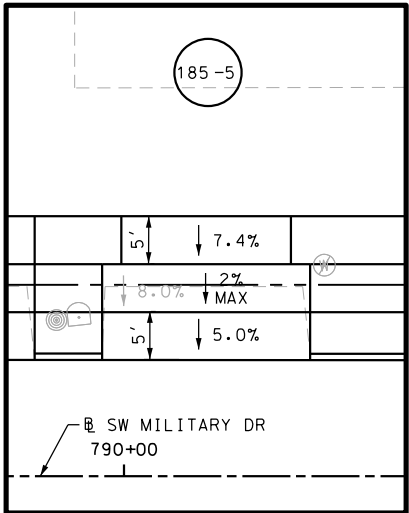
DRWY PLAN STA 789+13



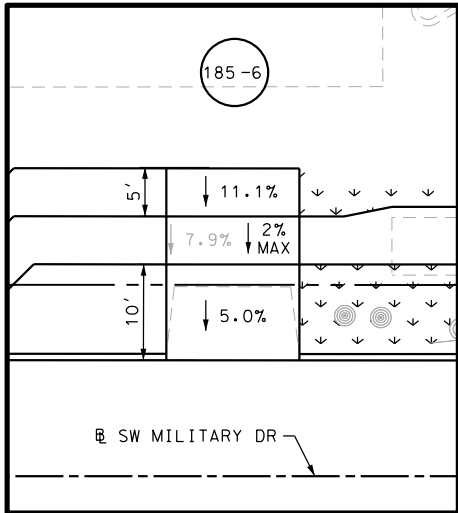
DRWY PLAN STA 789+37



DRWY PLAN STA 789+82



DRWY PLAN STA 790+09



DRWY PLAN STA 790+91

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

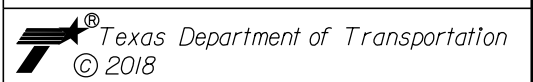
REV. NO.	DATE	DESCRIPTION	BY

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**

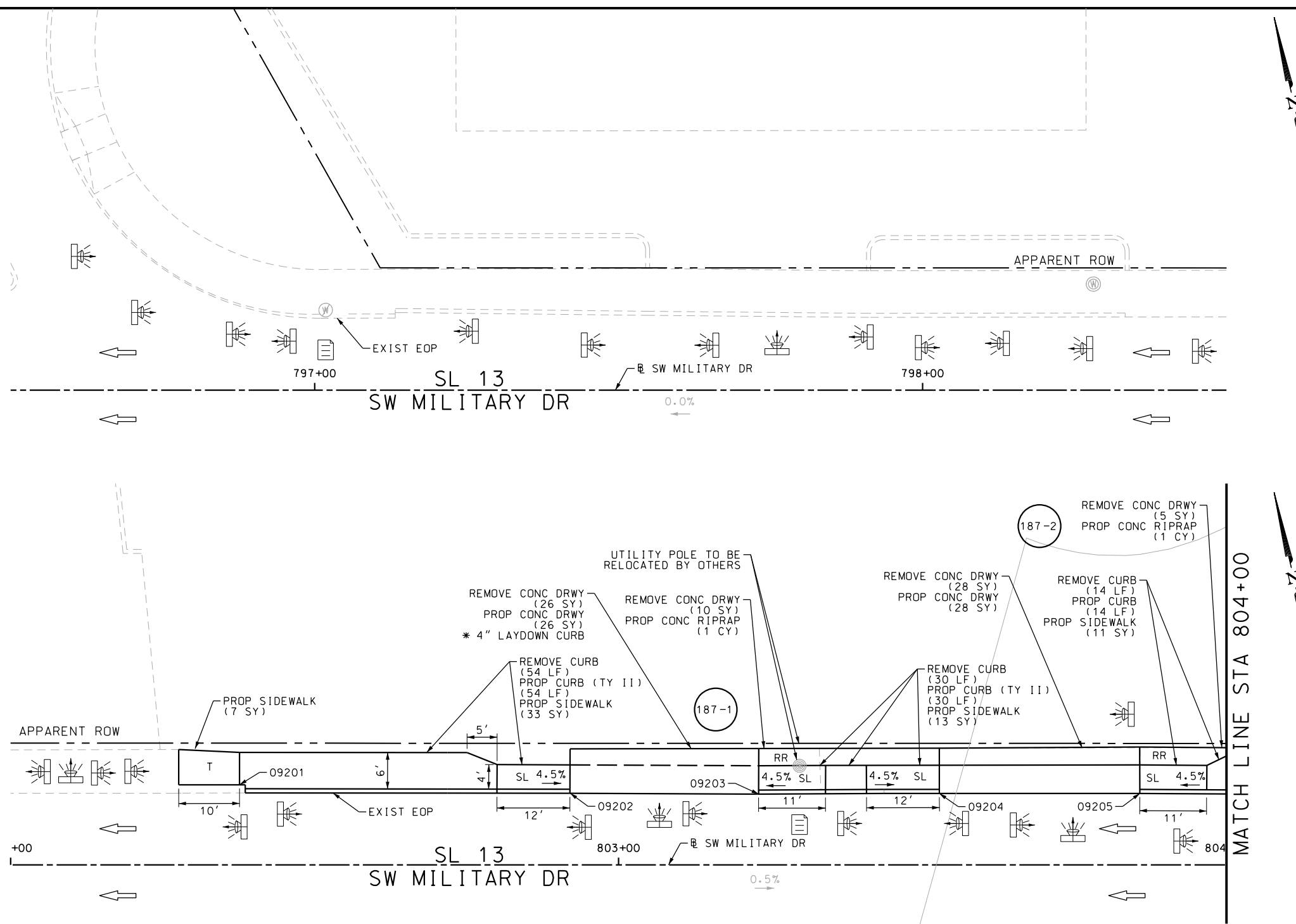
STA 788+00 TO STA 792+00

SHEET 21 OF 45

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	186

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB13A.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	61
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	98
0529-6002	CONC CURB (TY II)	LF	98
0530-6004	DRIVEWAYS (CONC)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	83

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ENGINEER: JAMES A. LUTZ	
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SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

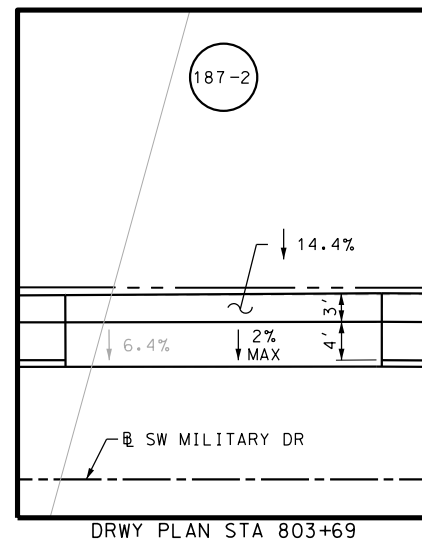
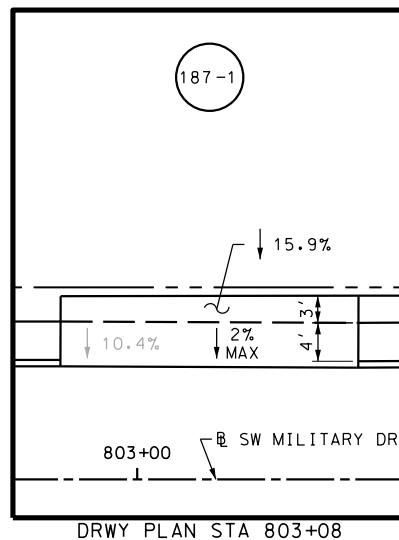
PAPE-DAWSON ENGINEERS

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



SL 13
SW MILITARY B
SIDEWALK CONSTRUCTION PLAN
STA 796+50 TO STA 798+50
STA 802+00 TO STA 804+00
SHEET 22 OF 45

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

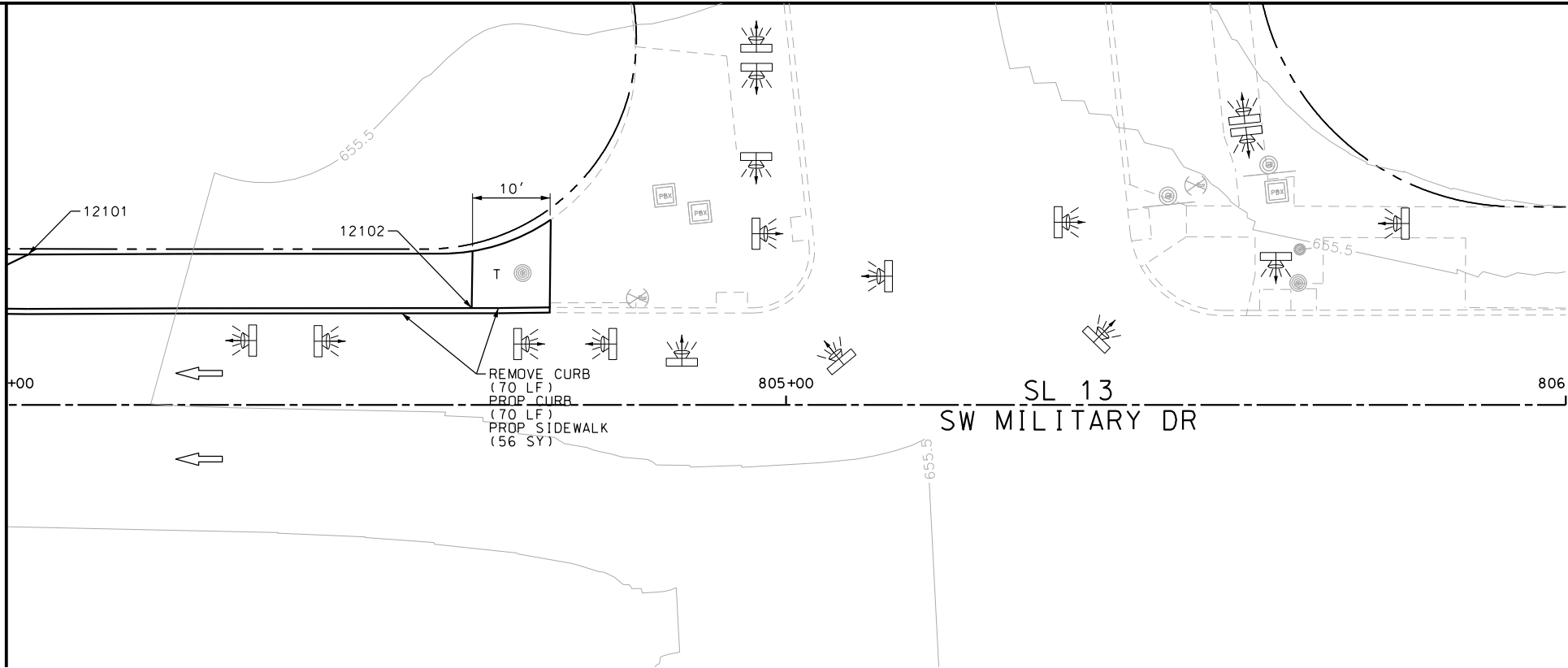


POINT	NORTHING	EASTING	ELEV	DESC
09201	13680037.97	2113129.04	--	.
09202	13680031.07	2113183.01	--	.
09203	13680027.81	2113213.87	--	.
09204	13680024.89	2113243.43	--	.
09205	13680021.57	2113276.23	--	.

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB*WB13B.dgn

MATCH LINE STA 804+00



ITEM	DESCRIPTION	UNIT	QTY
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ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

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ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

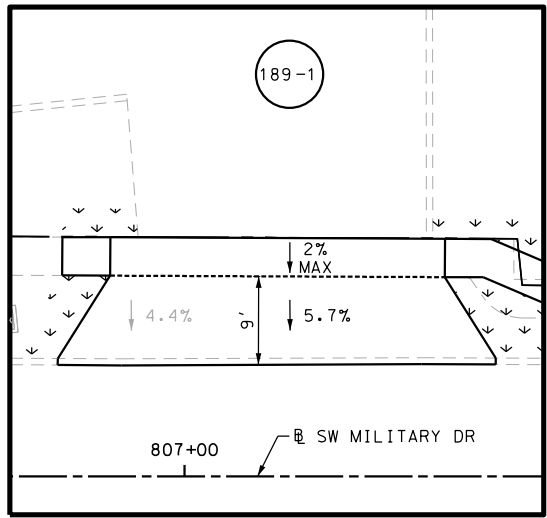
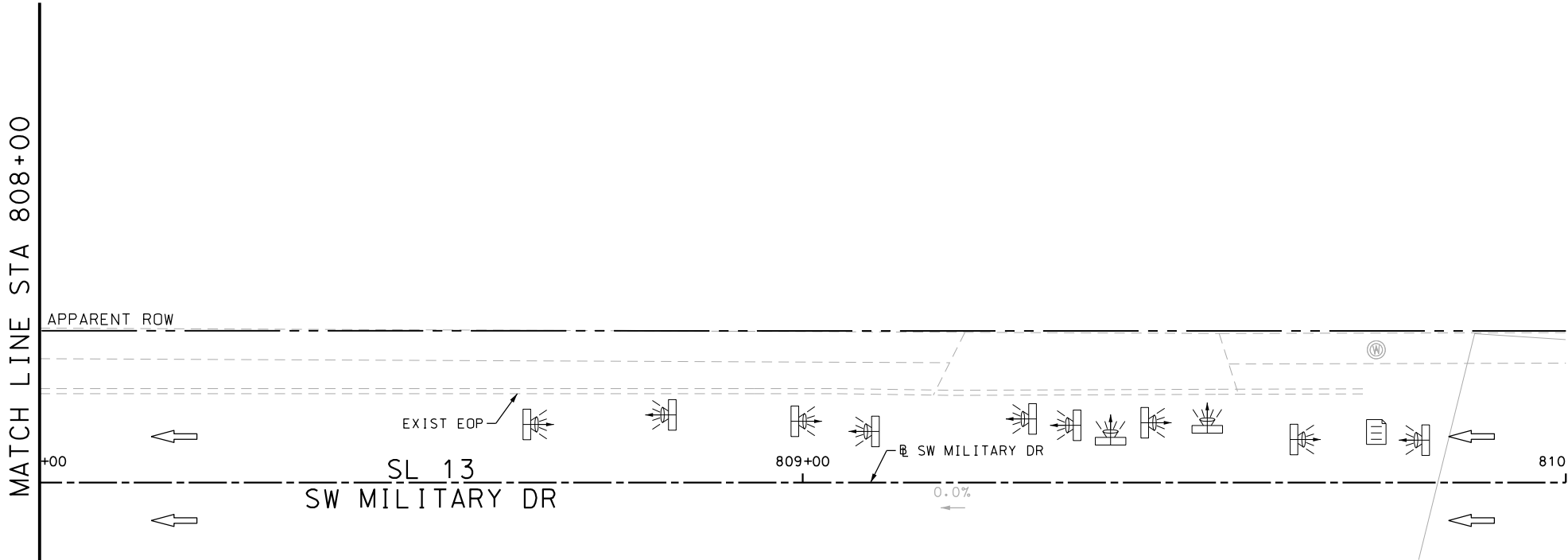
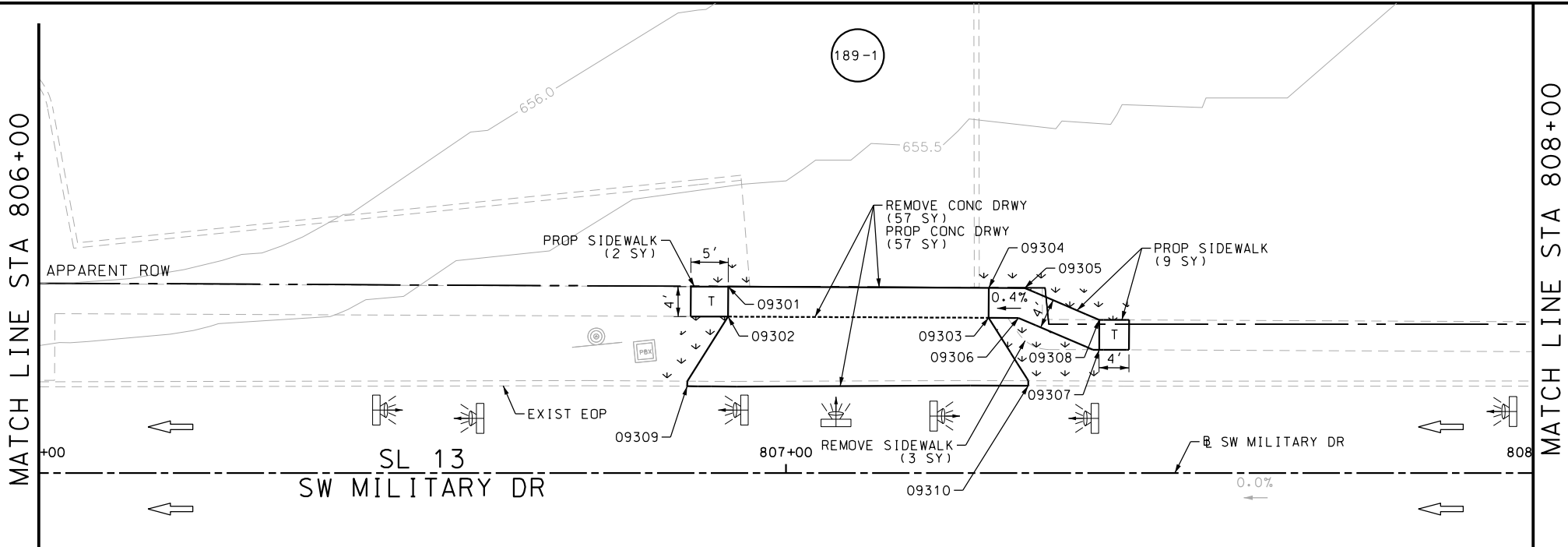
SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
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SAN ANTONIO 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 13 SW MILITARY B SIDEWALK CONSTRUCTION PLAN STA 804+00 TO STA 806+00					
SHEET 23 OF 45					
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
					188

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMI\113507*SWMI\itaryB*WB14.dgn



POINT	NORTHING	EASTING	ELEV	DESC
09301	13680003.63	2113582.51	--	.
09302	13679999.65	2113582.09	--	.
09303	13679995.97	2113616.77	--	.
09304	13679999.95	2113617.19	--	.
09305	13679999.44	2113621.97	--	.
09306	13679995.55	2113620.75	--	.
09307	13679990.22	2113631.05	--	.
09308	13679994.20	2113631.47	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	57
0104-6040	REMOVING CONC (PAVERS)	SY	3
0530-6004	DRIVEWAYS (CONC)	SY	57
0530-6005	DRIVEWAYS (ACP)	SY	1
0531-6001	CONC SIDEWALKS (4")	SY	11

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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

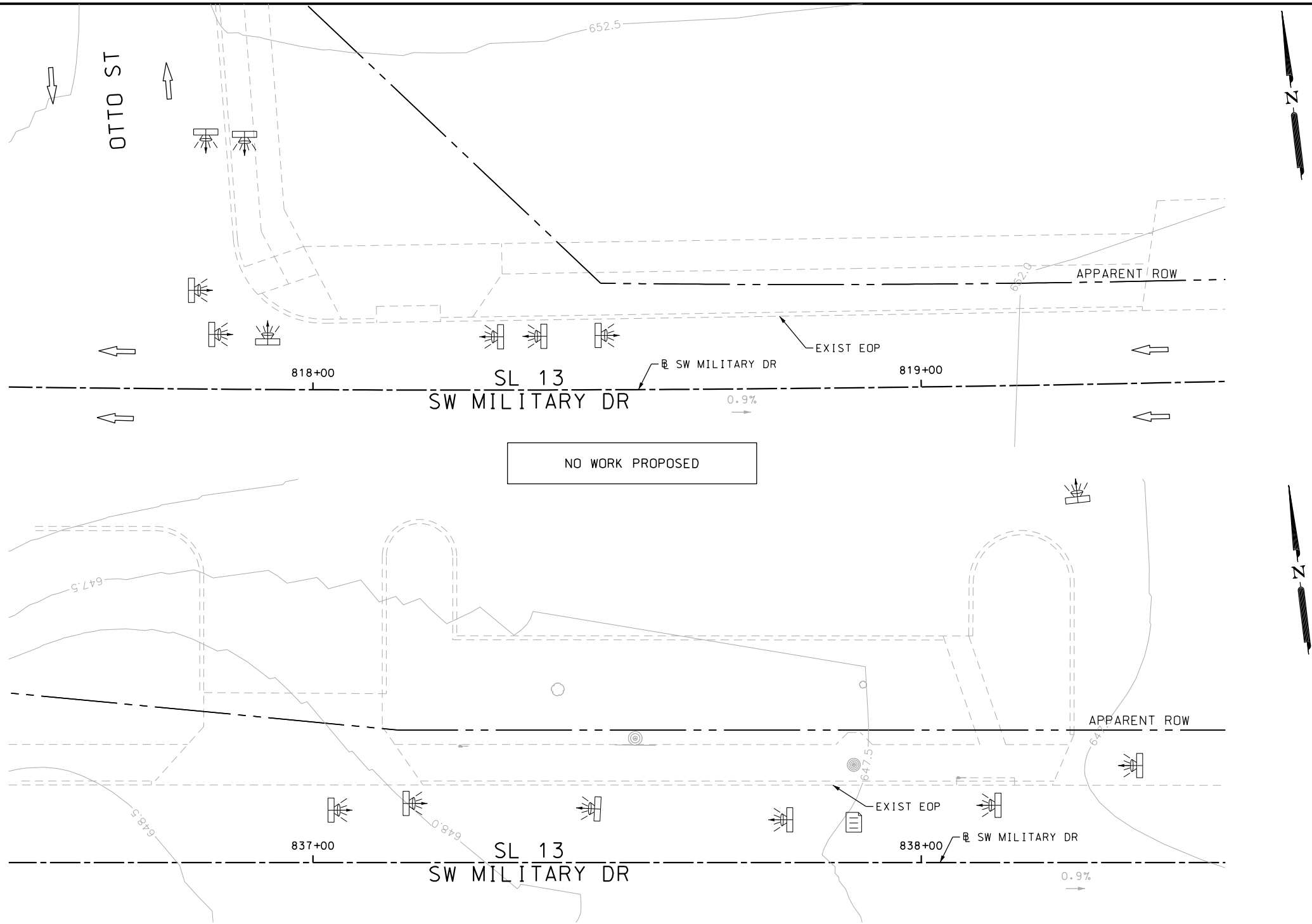
Texas Department of Transportation
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 806+00 TO STA 810+00

SHEET 24 OF 45					
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

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\B15.dgn



ITEM	DESCRIPTION	UNIT	QTY
------	-------------	------	-----


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DATE: 11/21/2018	

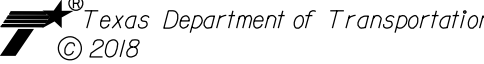
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INTERIM REVIEW	
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ENGINEER: JAMES A. LUTZ	
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SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
09401	13679872.35	2116622.00	--	.



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SL 13
SW MILITARY B

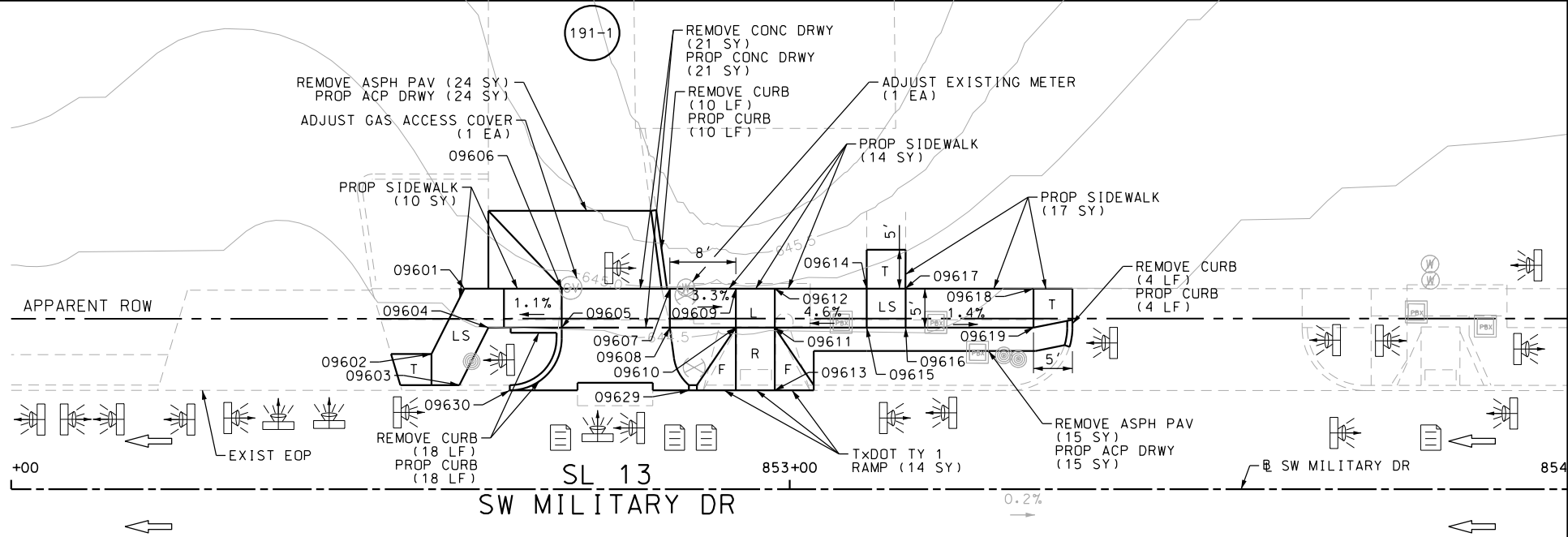
**SIDEWALK
CONSTRUCTION PLAN**

STA 817+50 TO STA 819+50
STA 836+50 TO STA 838+50
SHEET 25 OF 45

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	190

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB17.dgn



MATCH LINE STA 854+00

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	73
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	46
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	62
0529-6002	CONC CURB (TY II)	LF	46
0530-6004	DRIVEWAYS (CONC)	SY	73
0530-6005	DRIVEWAYS (ACP)	SY	62
0531-6001	CONC SIDEWALKS (4")	SY	80
0531-6018	CURB RAMPS (TY 1)	SY	14
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1
7091-6001	ADJUST EXISTING VALVE BOX	EA	1
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

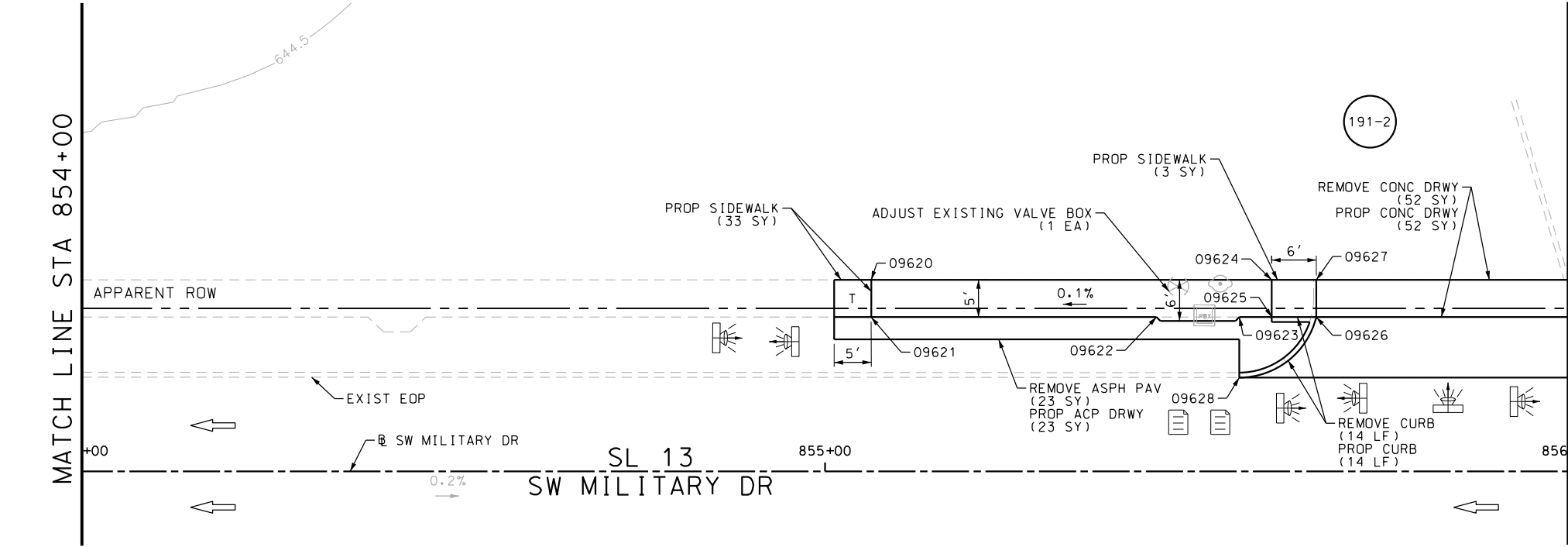
Texas Department of Transportation

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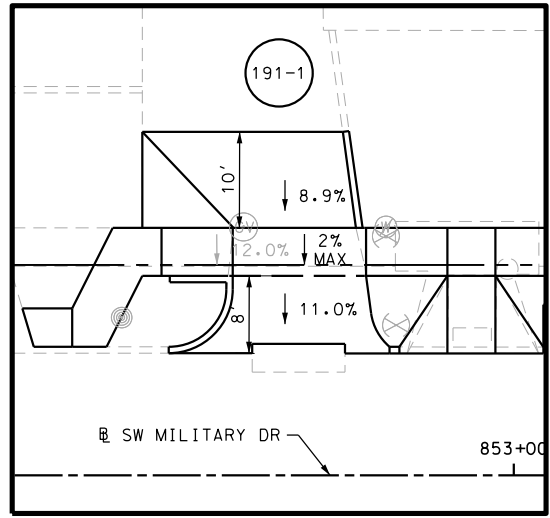
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 852+00 TO STA 856+00

SHEET 26 OF 45

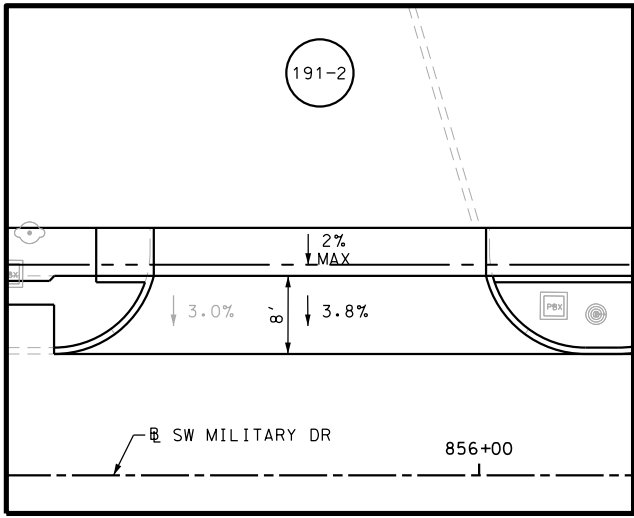
GN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK GN	6	TEXAS				VARIES
WGt	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK WGt	SAT	BEXAR	0915	12	576	191



MATCH LINE STA 856+00



DRWY PLAN STA 852+76



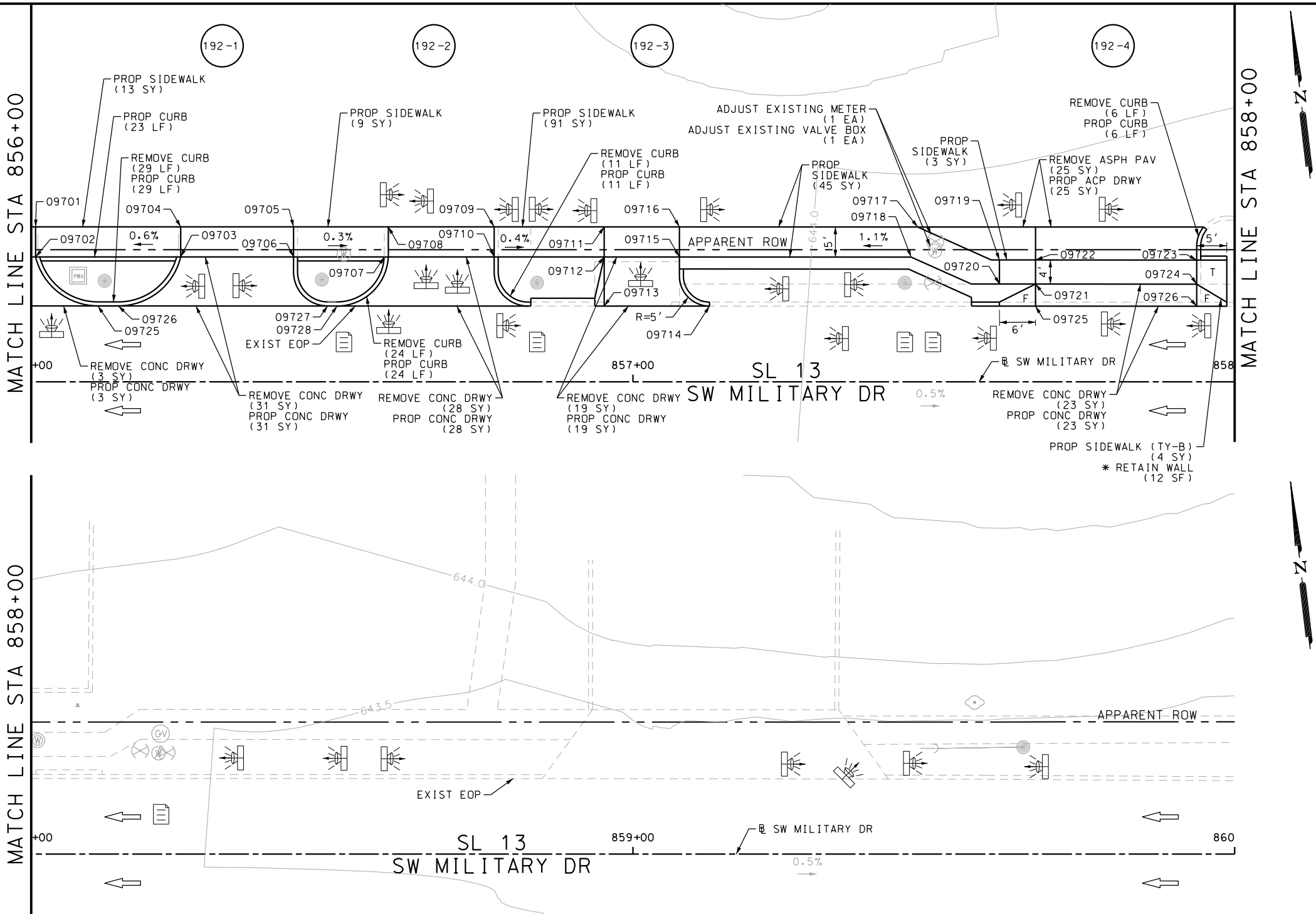
DRWY PLAN STA 855+83

POINT	NORTHING	EASTING	ELEV	DESC
09601	13679893.65	2118133.94	--	.
09602	13679888.65	2118133.97	--	.
09603	13679893.72	2118145.62	--	.
09604	13679888.72	2118145.65	--	.
09605	13679888.76	2118152.21	--	.
09606	13679893.76	2118152.18	--	.
09607	13679893.84	2118166.07	--	.
09608	13679888.84	2118166.10	--	.
09609	13679893.89	2118174.54	--	.
09610	13679888.89	2118174.57	--	.
09611	13679888.92	2118179.57	--	.
09612	13679893.92	2118179.54	--	.
09613	13679880.85	2118179.62	--	.
09614	13679893.99	2118191.35	--	.
09615	13679888.99	2118191.38	--	.
09616	13679889.02	2118196.38	--	.
09617	13679894.02	2118196.35	--	.
09618	13679894.12	2118212.77	--	.
09619	13679889.12	2118212.80	--	.
09620	13679895.15	2118387.67	--	.

POINT	NORTHING	EASTING	ELEV	DESC
09621	13679890.15	2118387.70	--	.
09622	13679890.38	2118426.10	--	.
09623	13679890.45	2118437.24	--	.
09624	13679895.47	2118441.56	--	.
09625	13679890.47	2118441.59	--	.
09626	13679890.51	2118447.59	--	.
09627	13679895.51	2118447.56	--	.

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\113507*SWMI\itaryB*WB18.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	104
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	70
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	25
0420-6074	CL C CONC (MISC)	CY	12.0
0529-6002	CONC CURB (TY II)	LF	108
0530-6004	DRIVEWAYS (CONC)	SY	104
0530-6005	DRIVEWAYS (ACP)	SY	25
0531-6001	CONC SIDEWALKS (4")	SY	161
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

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P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

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PAPE-DAWSON ENGINEERS

SAN ANTONIO | 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

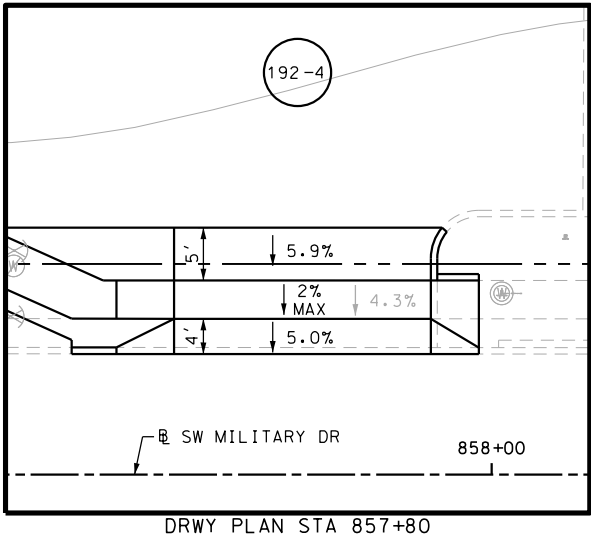
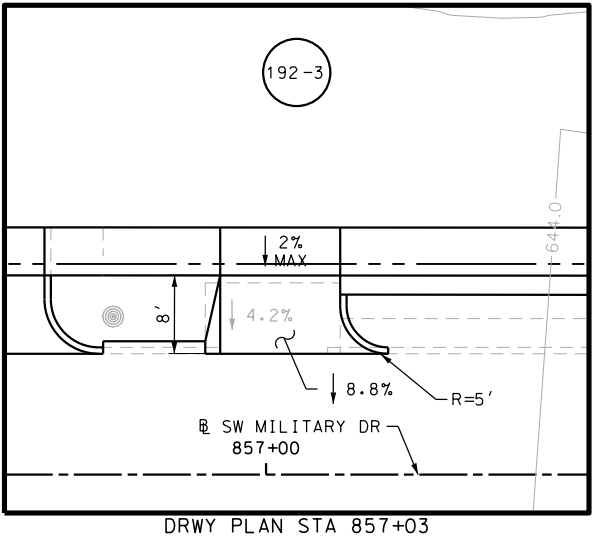
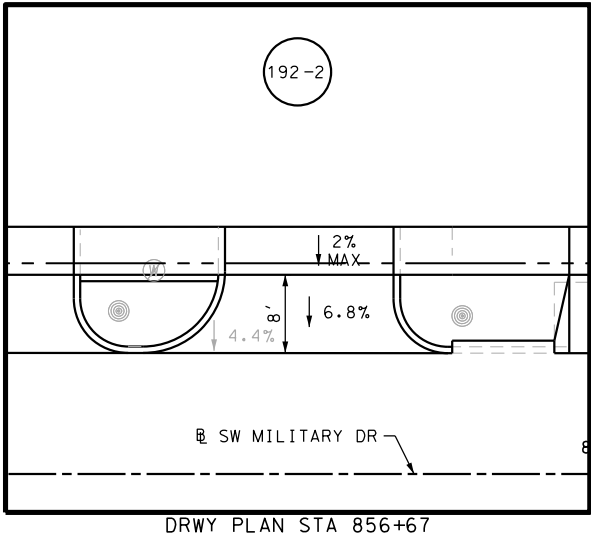
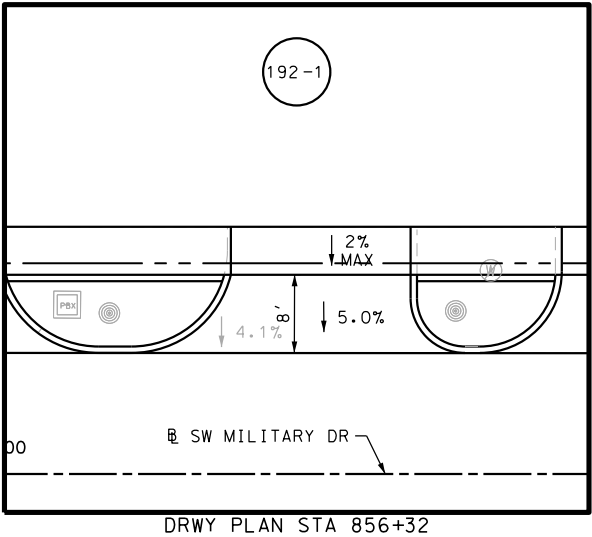
**SIDEWALK
CONSTRUCTION PLAN**

STA 856+00 TO STA 860+00

SHEET 27 OF 45					
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

POINT	NORTHING	EASTING	ELEV	DESC
09701	13679895.71	2118482.18	--	.
09702	13679890.71	2118482.21	--	.
09703	13679890.86	2118506.34	--	.
09704	13679895.86	2118506.31	--	.
09705	13679895.97	2118525.05	--	.
09706	13679890.97	2118525.08	--	.
09707	13679891.06	2118540.82	--	.
09708	13679896.06	2118540.80	--	.
09709	13679896.16	2118558.38	--	.
09710	13679891.16	2118558.41	--	.
09711	13679896.27	2118576.69	--	.
09712	13679891.27	2118576.72	--	.
09713	13679883.11	2118576.76	--	.
09714	13679883.21	2118594.27	--	.
09715	13679891.34	2118589.22	--	.
09716	13679896.34	2118589.19	--	.
09717	13679896.56	2118628.76	--	.
09718	13679891.56	2118627.72	--	.
09719	13679891.15	2118642.40	--	.
09720	13679887.15	2118642.42	--	.

POINT	NORTHING	EASTING	ELEV	DESC
09721	13679887.18	2118648.42	--	.
09722	13679891.18	2118648.40	--	.
09723	13679891.34	2118675.17	--	.
09724	13679887.34	2118675.20	--	.



- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

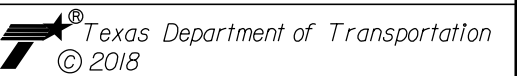
REV. NO.	DATE	DESCRIPTION	BY

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**

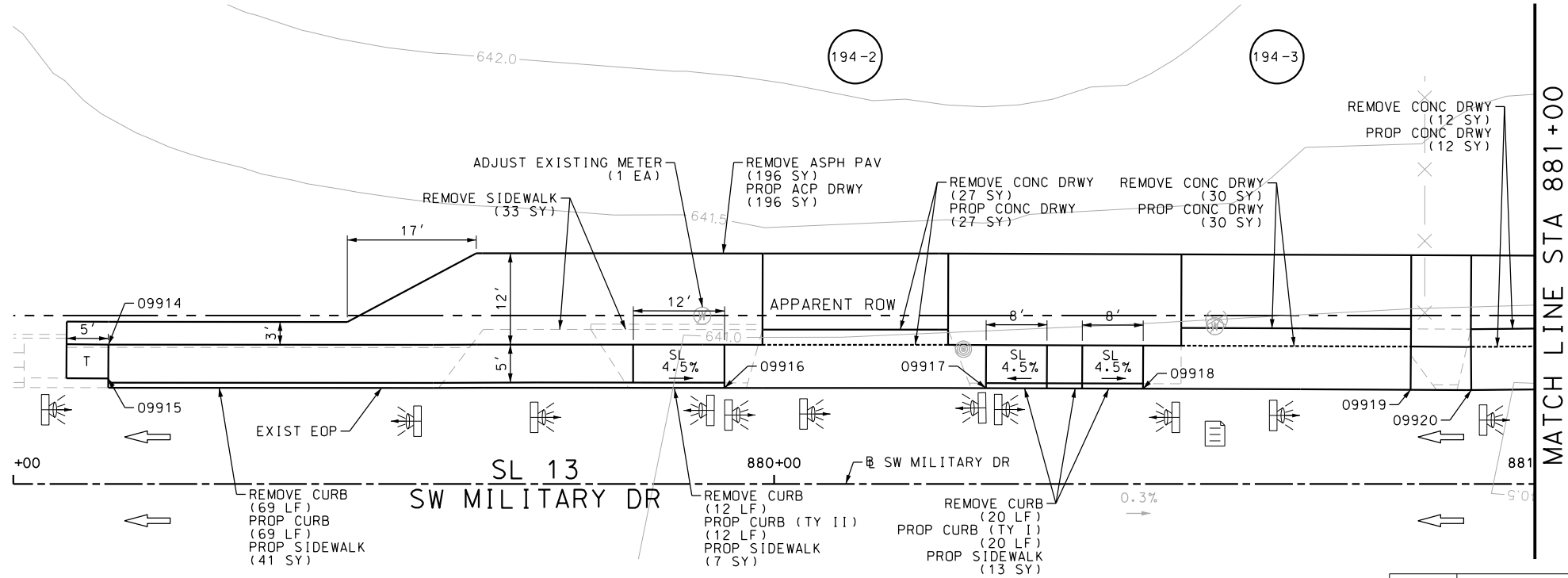
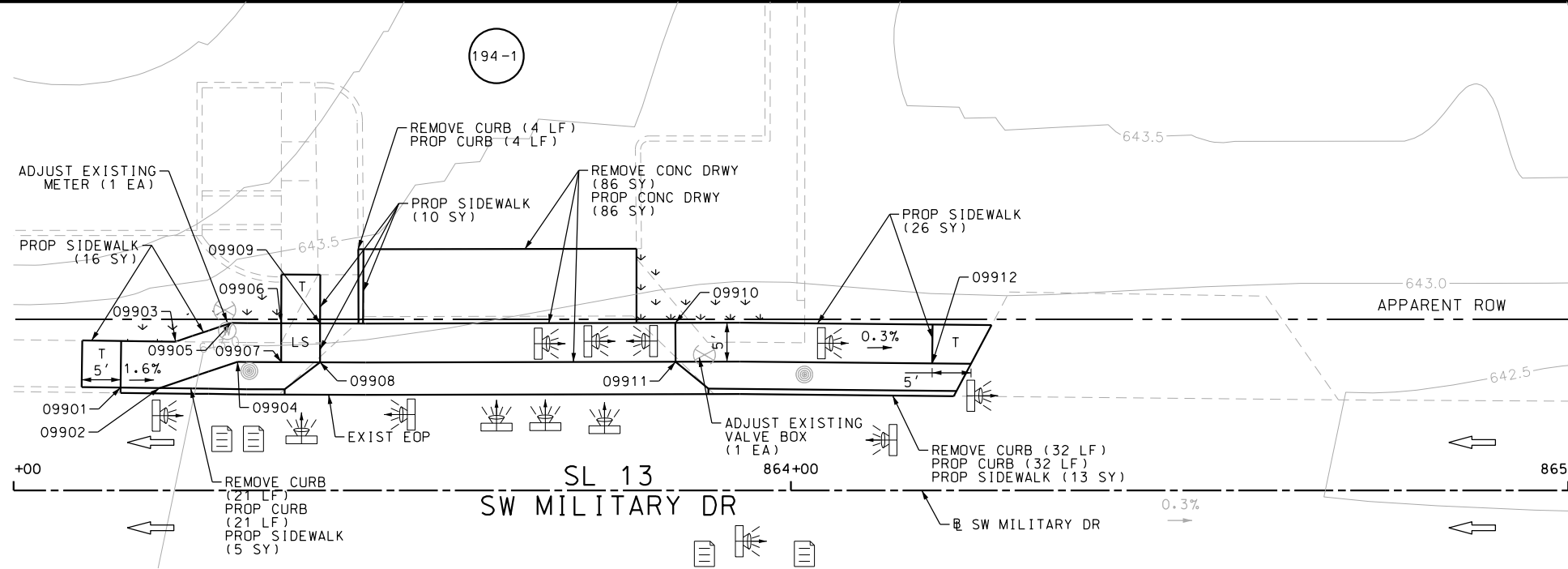
STA 856+00 TO STA 860+00

SHEET 28 OF 45

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
	6	TEXAS				VARIES
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
	SAT	BEXAR	0915	12	576	193

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\itaryB\WB20.dgn



POINT	NORTHING	EASTING	ELEV	DESC
09901	13679887.39	2119195.28	--	.
09902	13679887.36	2119200.28	--	.
09903	13679893.35	2119202.32	--	.
09904	13679890.80	2119210.30	--	.
09905	13679895.80	2119209.48	--	.
09906	13679895.80	2119215.91	--	.
09907	13679890.80	2119215.92	--	.
09908	13679890.81	2119220.92	--	.
09909	13679895.81	2119220.91	--	.
09910	13679896.13	2119266.62	--	.
09911	13679891.13	2119266.65	--	.
09912	13679891.09	2119304.67	--	.
09913	13679900.37	2119309.54	--	.
09914	13679901.96	2120793.96	--	.
09915	13679897.51	2120793.96	--	.
09916	13679896.75	2120874.97	--	.
09917	13679896.91	2120909.34	--	.
09918	13679896.96	2120929.97	--	.
09919	13679897.03	2120965.17	--	.
09920	13679897.05	2120973.15	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	159
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	154
0104-6040	REMOVING CONC (PAVERS)	SY	33
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	196
0529-6002	CONC CURB (TY II)	LF	159
0530-6004	DRIVEWAYS (CONC)	SY	155
0530-6005	DRIVEWAYS (ACP)	SY	196
0531-6001	CONC SIDEWALKS (4")	SY	131
7091-6001	ADJUST EXISTING VALVE BOX	EA	1
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

NOTES:

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DESIGN

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

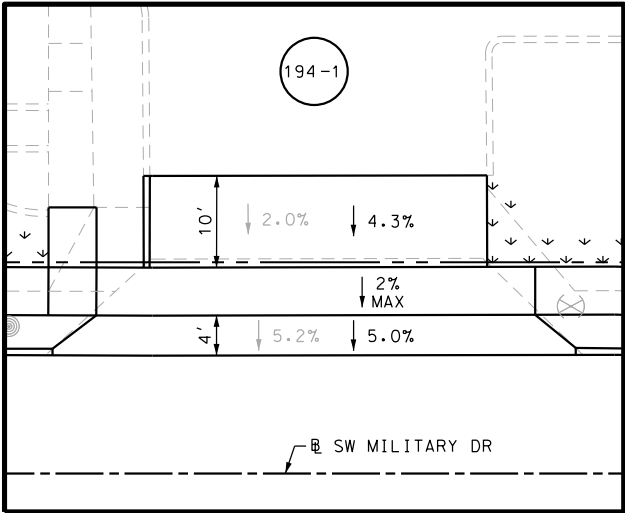
PAPE-DAWSON ENGINEERS

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

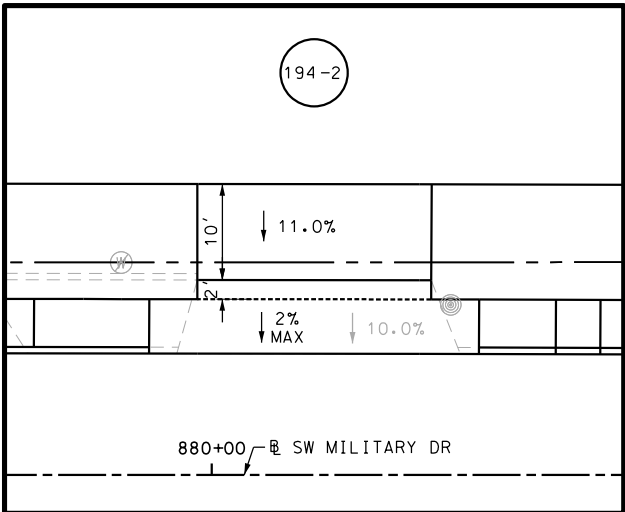
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SL 13
SW MILITARY B
SIDEWALK CONSTRUCTION PLAN
STA 863+00 TO STA 865+00
STA 879+00 TO STA 881+00
SHEET 29 OF 45

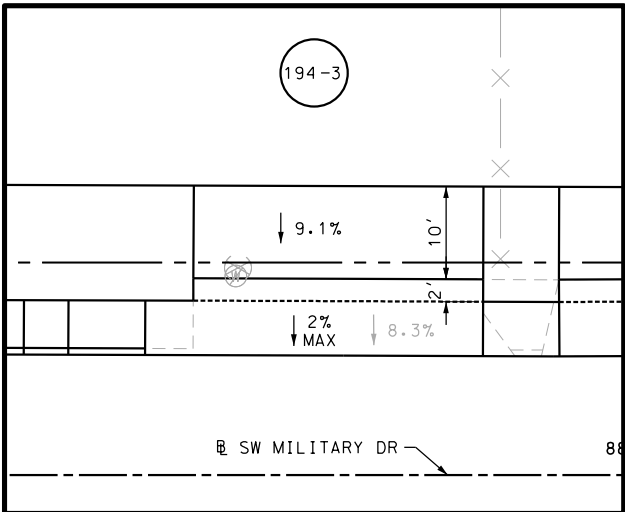
IGN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK IGN ₂	6	TEXAS				VARIES
IWG ₂	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK IWG ₂	SAT	BEXAR	0915	12	576	194



DRWY PLAN STA 863+62



DRWY PLAN STA 880+10



DRWY PLAN STA 880+66

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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON
ENGINEERS**

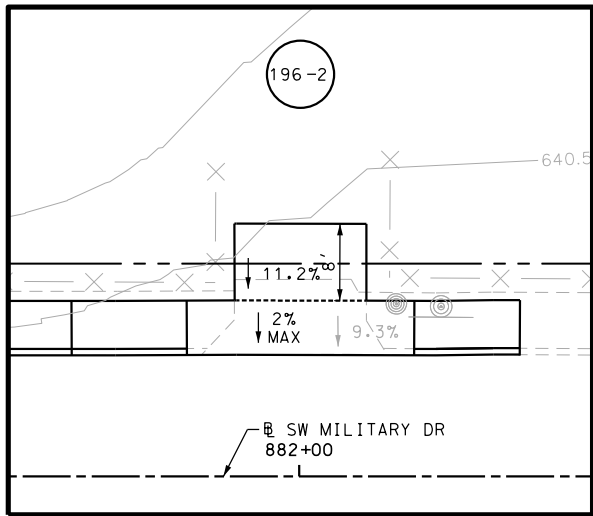
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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SL 13 SW MILITARY B					
SIDEWALK CONSTRUCTION PLAN					
STA 863+00 TO STA 865+00 STA 879+00 TO STA 881+00					
SHEET 30 OF 45					

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

Design Filename: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*WB21.dgn




NOTES:

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REVIEW AND APPROVAL	
INTERIM REVIEW	
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ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

REV. NO.	DATE	DESCRIPTION	BY



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SL 13 SW MILITARY B

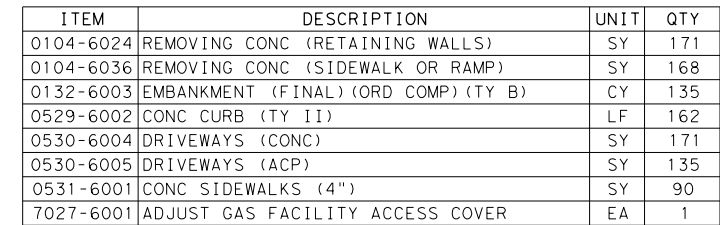
SIDEWALK CONSTRUCTION PLAN

STA 881+00 TO STA 885+00

SHEET 31 OF 45

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY
CHK	6	TEXAS				VARIES
CHK	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	196

Design Filename: P:\111\35\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB*WB22.dgn



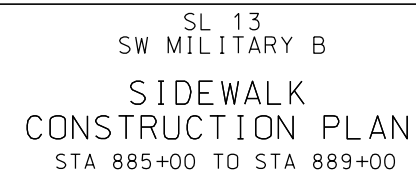
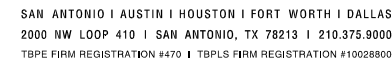
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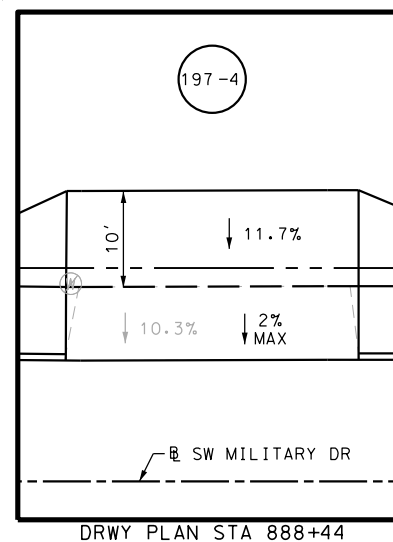
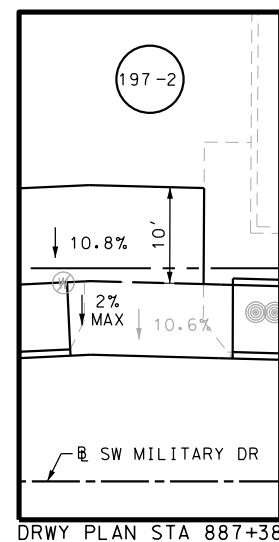
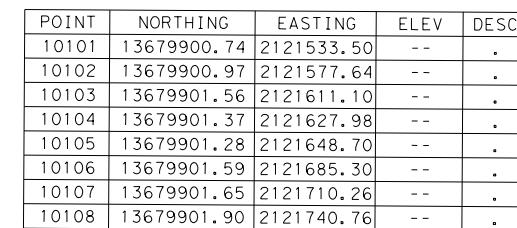
DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

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PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY

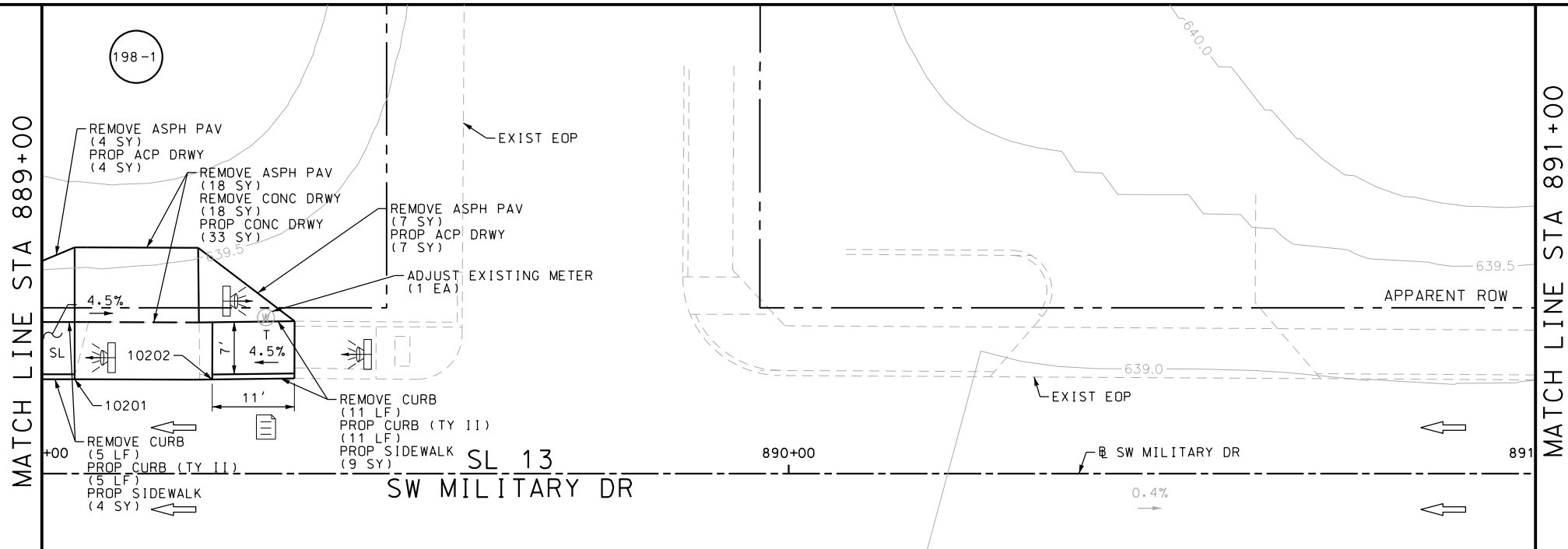


DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWGr	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWGr	SAT	BEXAR	0915	12	576	197



Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitary\113507*SWMilitaryB*WB23.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	72
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	48
0132-6003	EMBANKMENT (FINAL) (ORD COMP) (TY B)	CY	106
0529-6002	CONC CURB (TY II)	LF	48
0530-6004	DRIVEWAYS (CONC)	SY	122
0530-6005	DRIVEWAYS (ACP)	SY	55
0531-6001	CONC SIDEWALKS (4")	SY	28

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

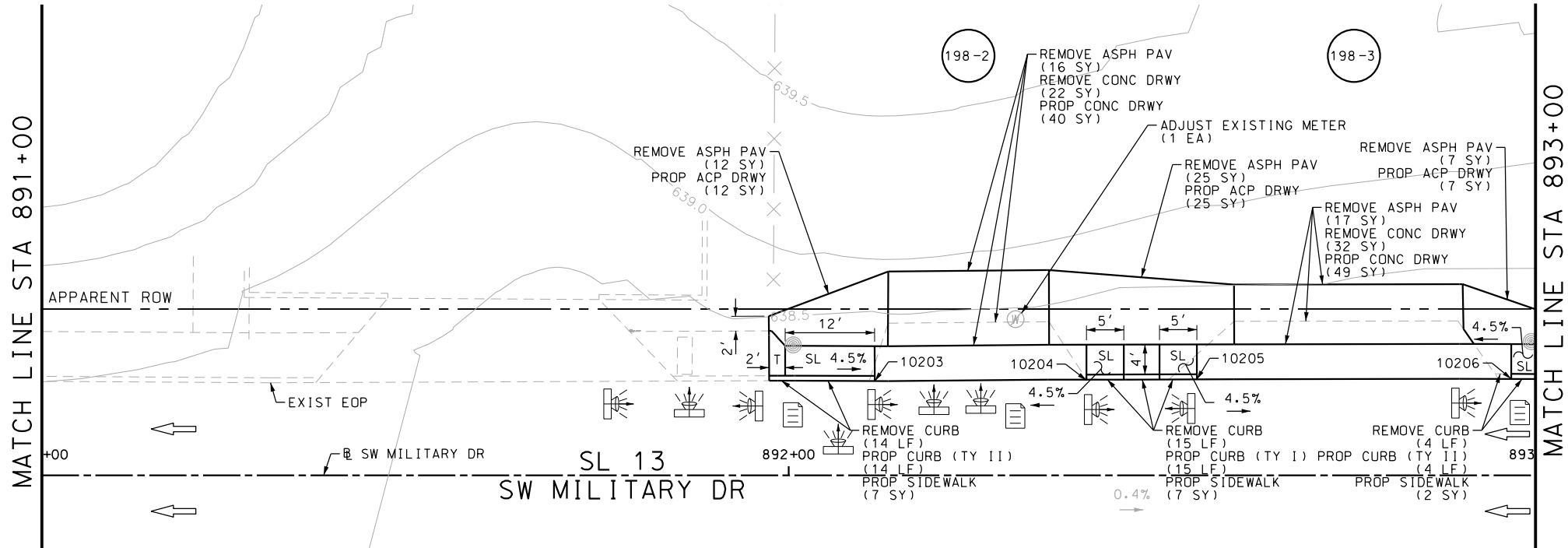
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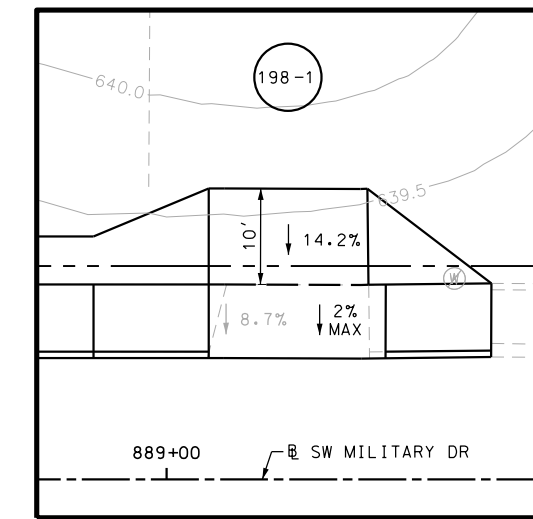
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 889+00 TO STA 893+00

SHEET 33 OF 45

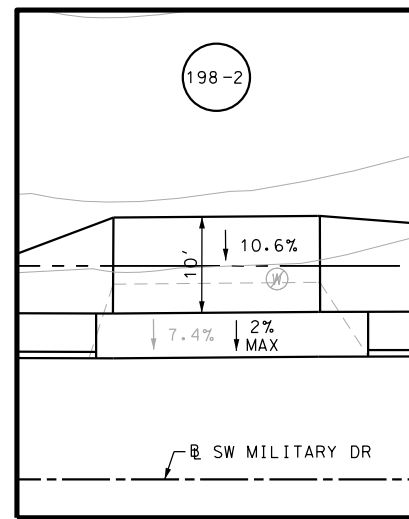
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	198



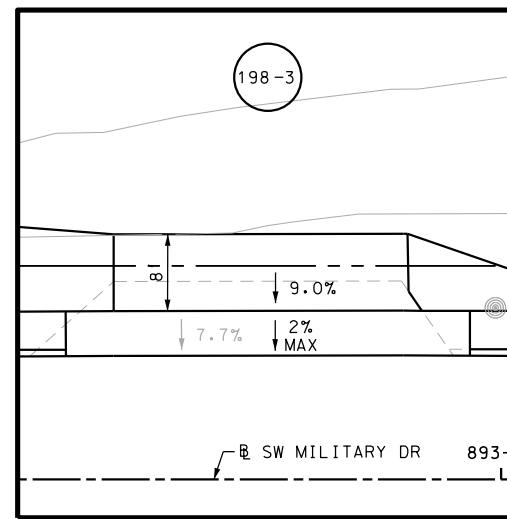
POINT	NORTHING	EASTING	ELEV	DESC
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10202	13679902.20	2121802.61	--	.
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10204	13679904.28	2122121.34	--	.
10205	13679904.41	2122136.12	--	.
10206	13679904.71	2122178.22	--	.



DRWY PLAN STA 889+12



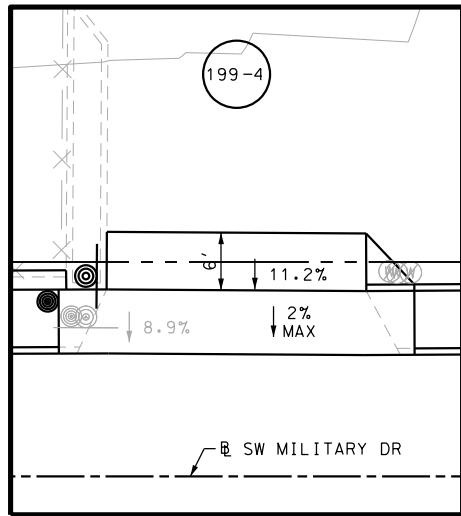
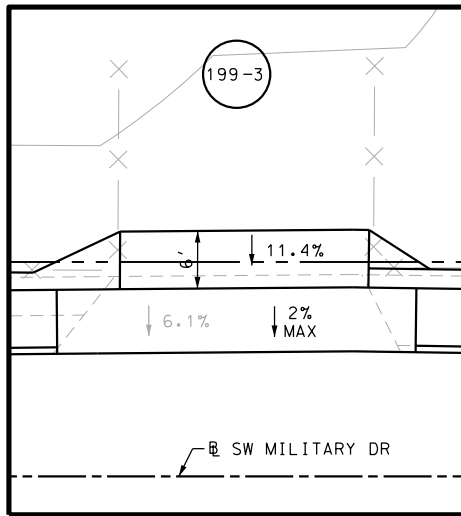
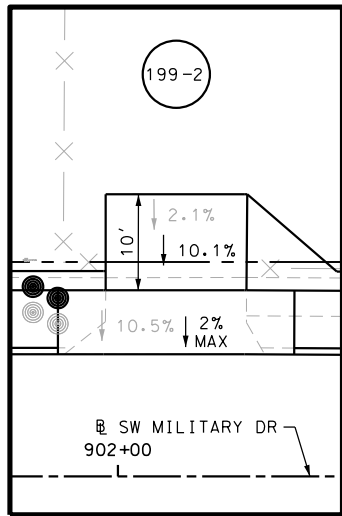
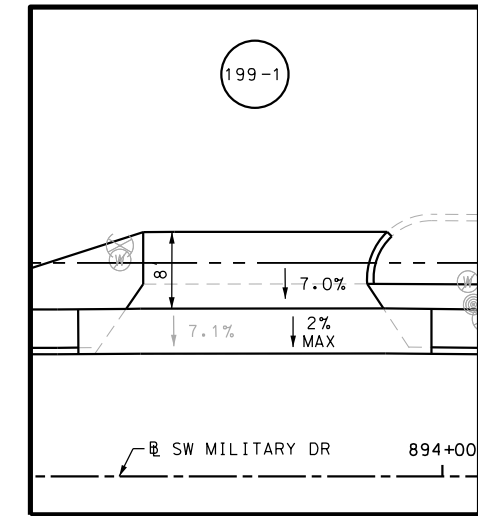
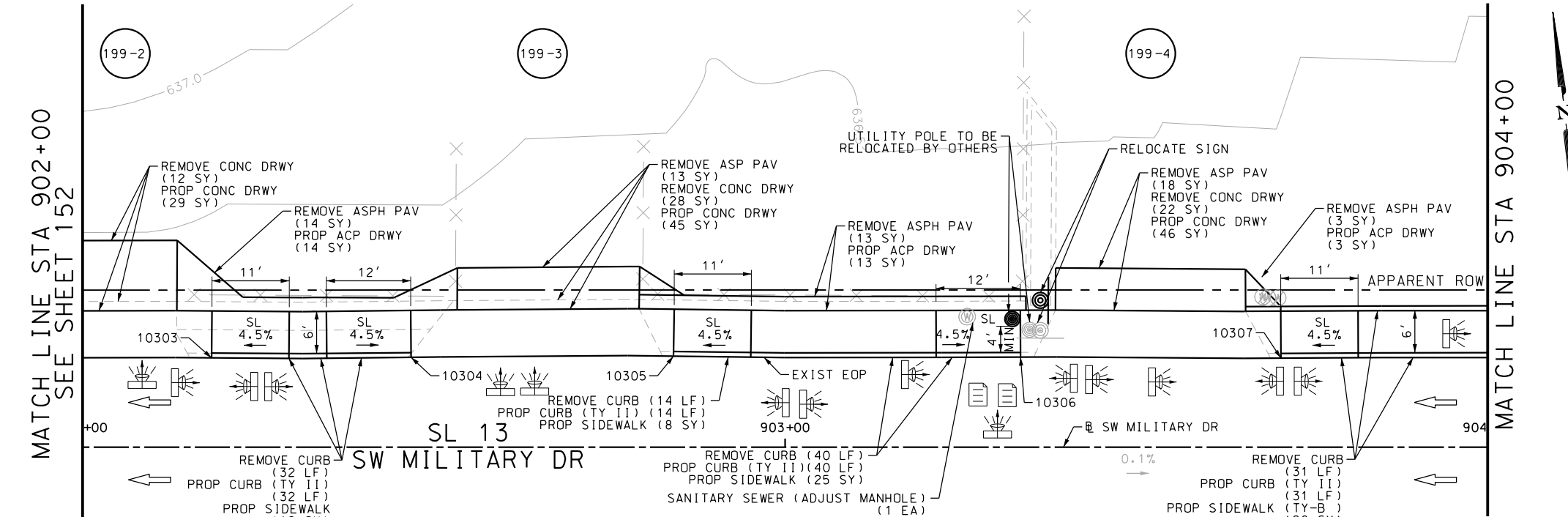
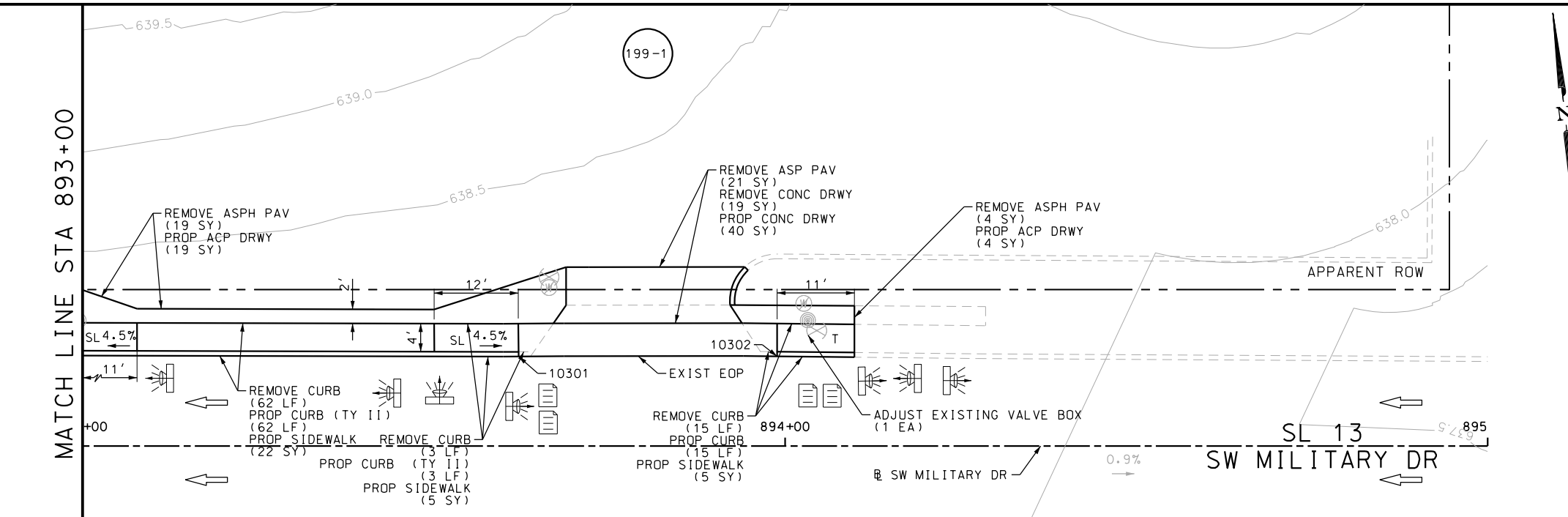
DRWY PLAN STA 892+29



DRWY PLAN STA 892+76

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB24.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	81
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	197
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	105
0529-6002	CONC CURB (TY II)	LF	197
0530-6004	DRIVEWAYS (CONC)	SY	160
0530-6005	DRIVEWAYS (ACP)	SY	53
0531-6001	CONC SIDEWALKS (4")	SY	84
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	20
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 893+00 TO STA 895+00

STA 902+00 TO STA 904+00

SHEET 34 OF 45

OGN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN ₁	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₁	SAT	BEXAR	0915	12	576	199

Plotted on: 11/21/2018

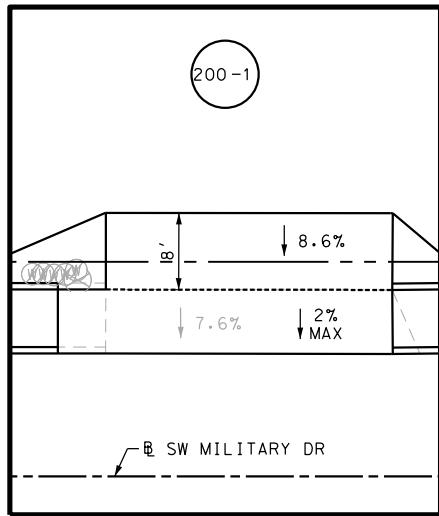
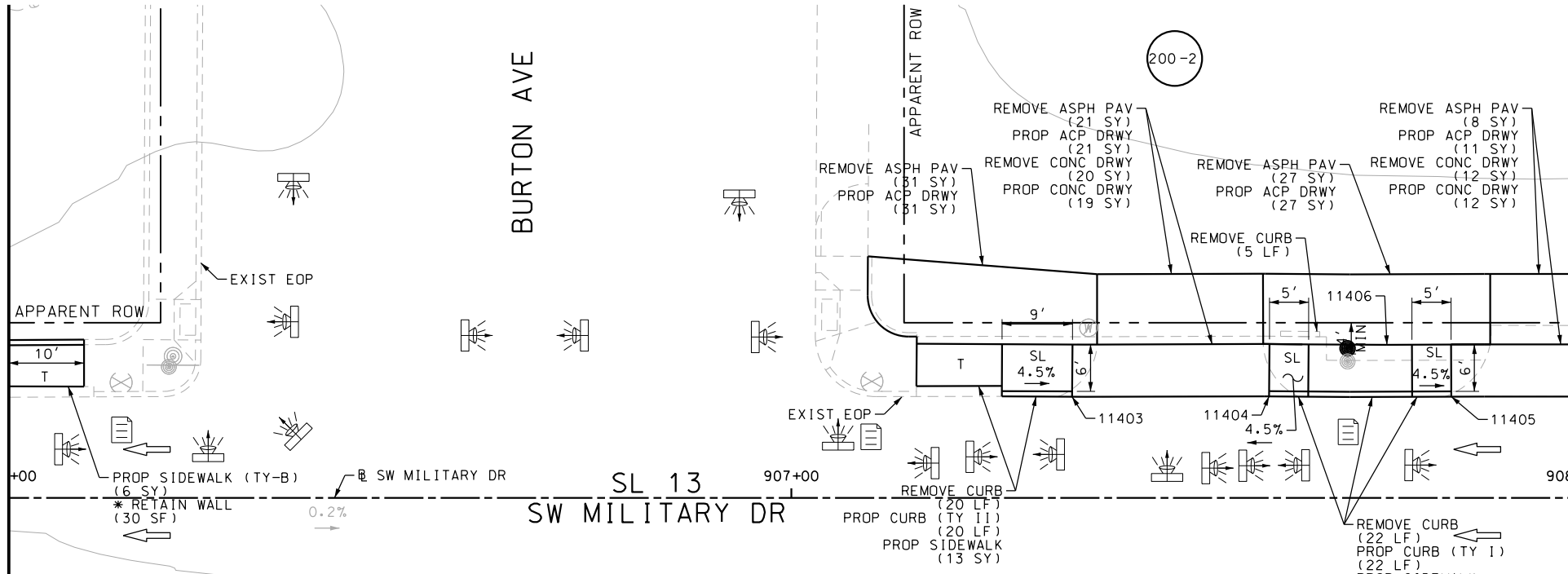
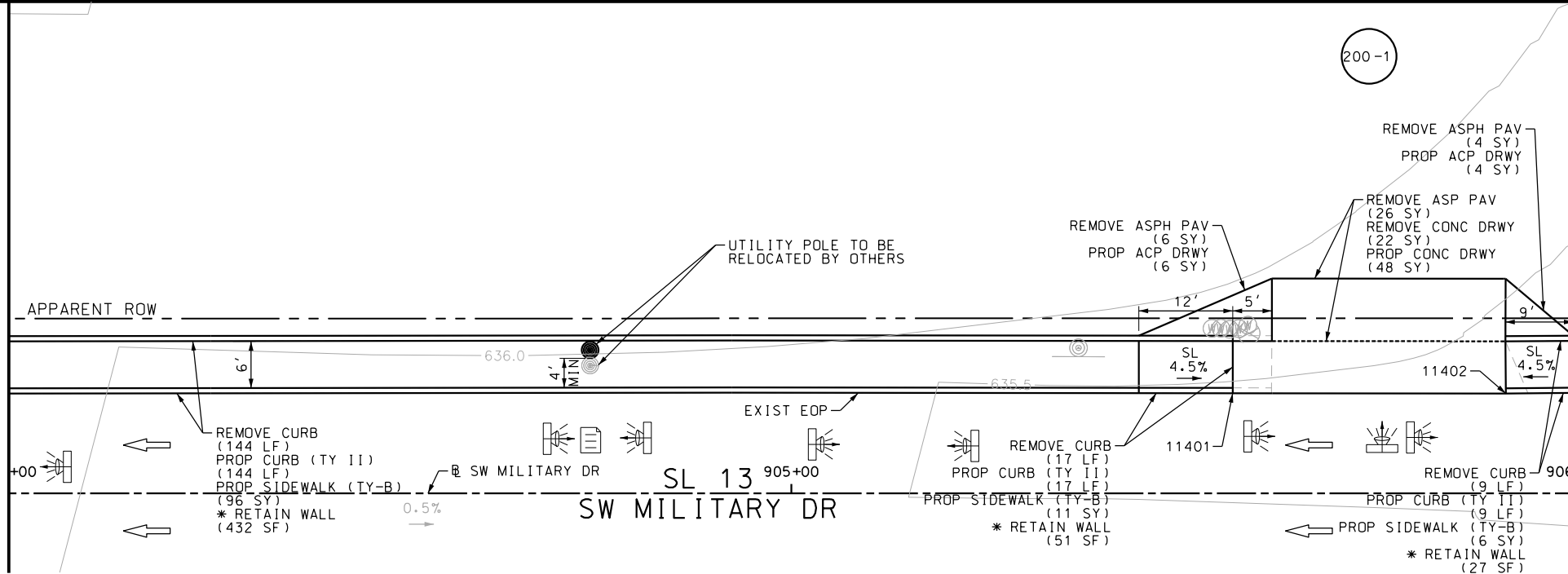
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MATCH LINE STA 904+00

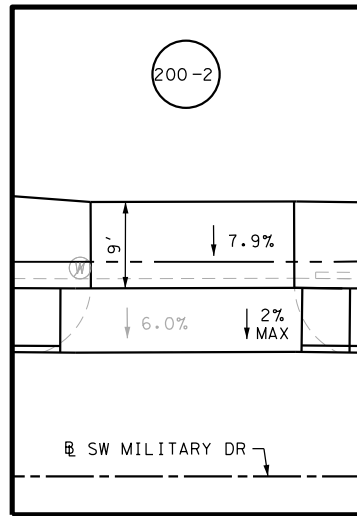
MATCH LINE STA 906+00

MATCH LINE STA 906+00

MATCH LINE STA 908+00



DRWY PLAN STA 905+74



DRWY PLAN STA 907+49

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	54
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	217
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	123
0529-6002	CONC CURB (TY II)	LF	212
0530-6004	DRIVEWAYS (CONC)	SY	79
0530-6005	DRIVEWAYS (ACP)	SY	100
0531-6001	CONC SIDEWALKS (4")	SY	30
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

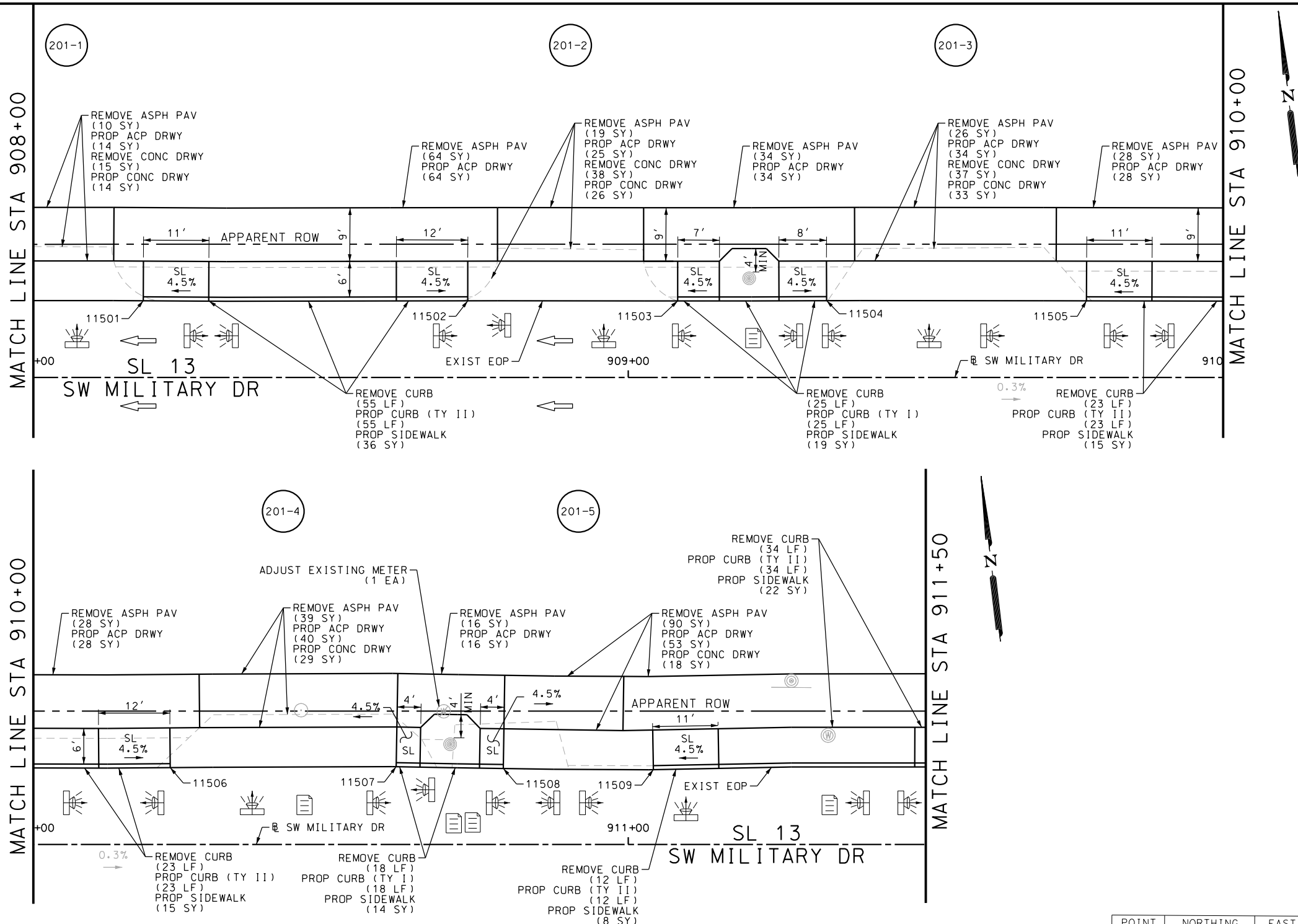
**SIDEWALK
CONSTRUCTION PLAN**

STA 904+00 TO STA 908+00

SHEET 35 OF 45					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\1113507*SWMilitaryB-WB26.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	90
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	190
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	328
0529-6002	CONC CURB (TY II)	LF	190
0530-6004	DRIVEWAYS (CONC)	SY	120
0530-6005	DRIVEWAYS (ACP)	SY	322
0531-6001	CONC SIDEWALKS (4")	SY	129
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11501	13679913.72	2123699.91	--	.
11502	13679914.03	2123754.46	--	.
11503	13679914.23	2123789.02	--	.
11504	13679914.42	2123814.53	--	.
11505	13679914.65	2123858.47	--	.
11506	13679914.93	2123904.45	--	.
11507	13679915.31	2123942.44	--	.
11508	13679915.12	2123960.44	--	.
11509	13679915.07	2123985.67	--	.

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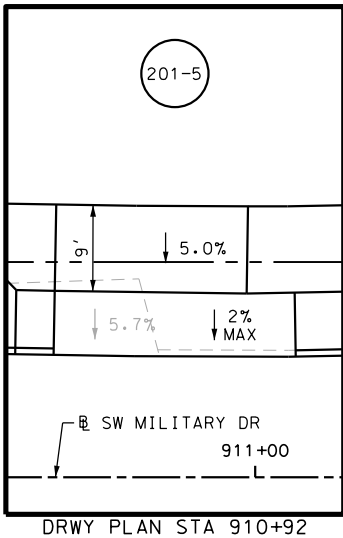
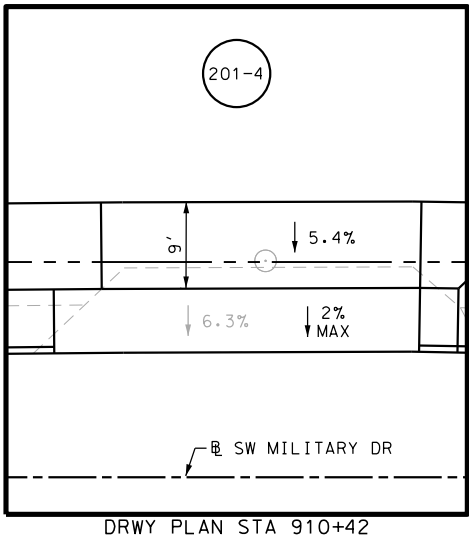
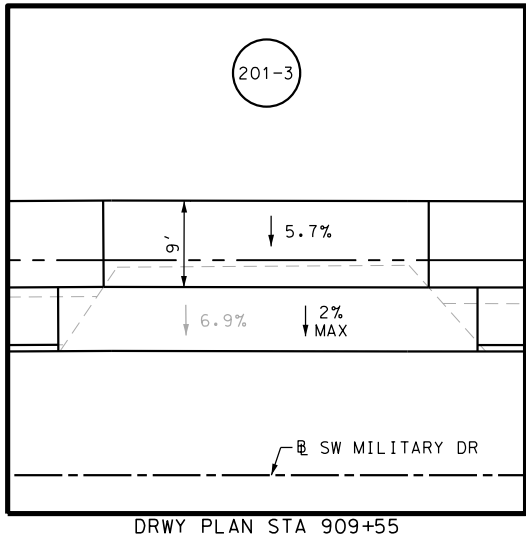
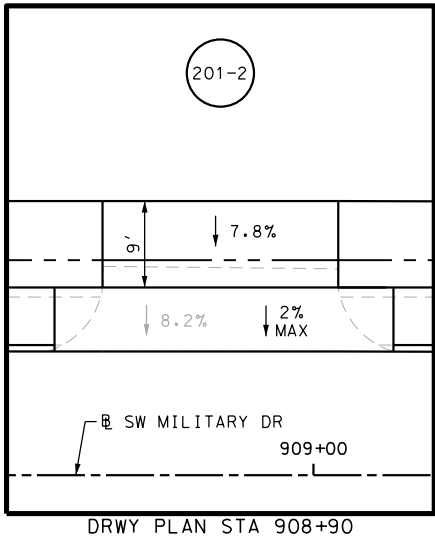
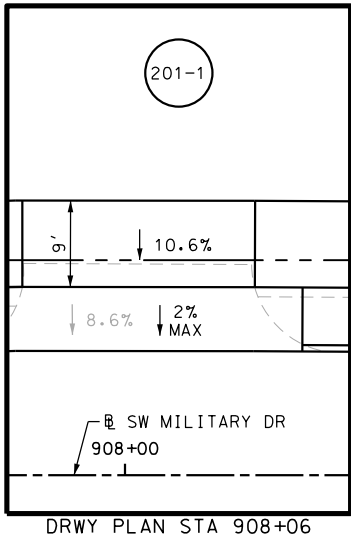
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SL 13
SW MILITARY B

SIDEWALK
CONSTRUCTION PLAN
STA 908+00 TO STA 911+50

SHEET 36 OF 45

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	201



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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
SW MILITARY B

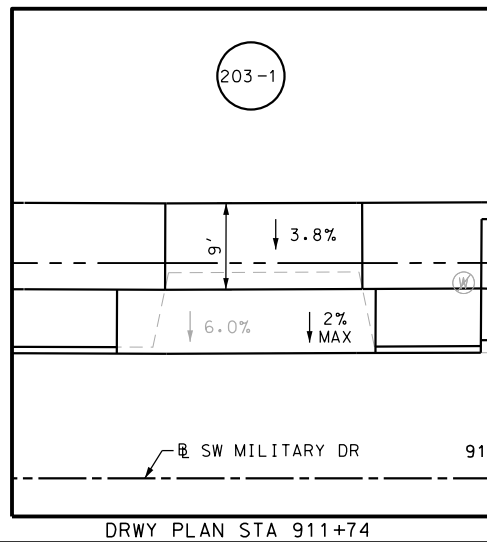
**SIDEWALK
CONSTRUCTION PLAN**

STA 908+00 TO STA 911+50 DETAILS

SHEET 37 OF 45

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

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NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW


DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722


DATE: 11/21/2018

SCALE: PLAN		1" = 20'	
REV. NO.	DATE	DESCRIPTION	BY



PAPE-DAWSON ENGINEERS

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SL 13

SW MILITARY B

SIDEWALK
CONSTRUCTION PLAN

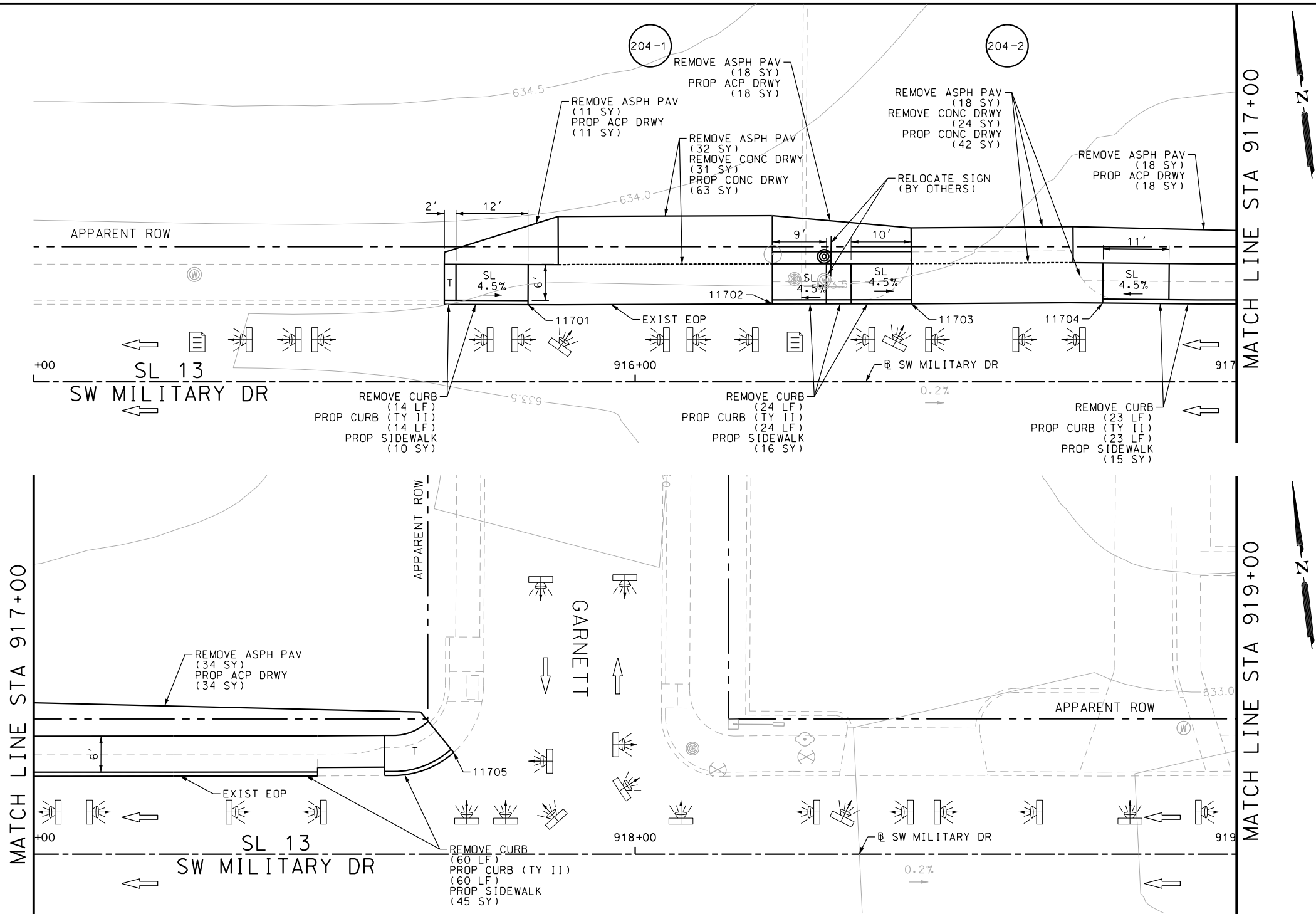
STA 911+50 TO STA 913+00

SHEET 38 OF 45

DN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
JK	6	TEXAS				VARIES
DN						
Gt	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
JGt	SAT	BEXAR	0915	12	576	203

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB28.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	55
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	121
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	131
0529-6002	CONC CURB (TY II)	LF	121
0530-6004	DRIVEWAYS (CONC)	SY	105
0530-6005	DRIVEWAYS (ACP)	SY	81
0531-6001	CONC SIDEWALKS (4")	SY	86
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

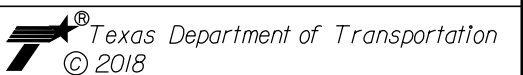
REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

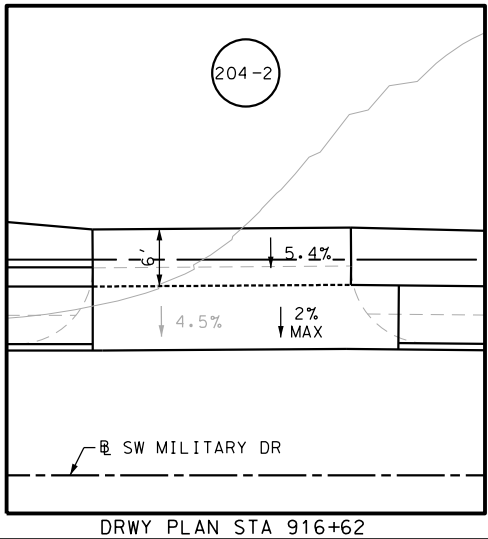
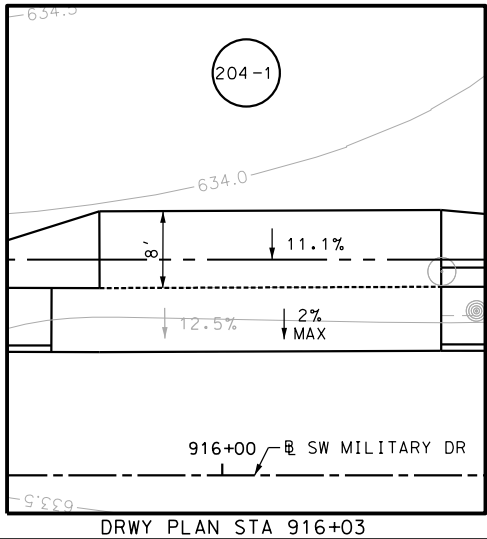
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SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 915+00 TO STA 919+00

SHEET 39 OF 45					
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
					204



POINT	NORTHING	EASTING	ELEV	DESC
11701	13679918.18	2124463.63	--	.
11702	13679918.54	2124504.25	--	.
11703	13679918.70	2124527.35	--	.
11704	13679919.01	2124559.17	--	.

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NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ


P.E. SERIAL NO: 84722

DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON
ENGINEERS**

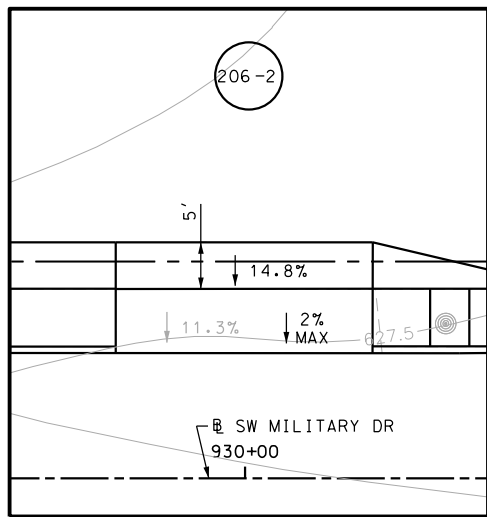
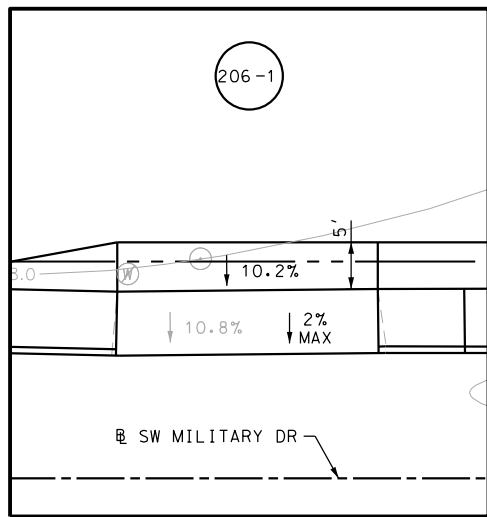
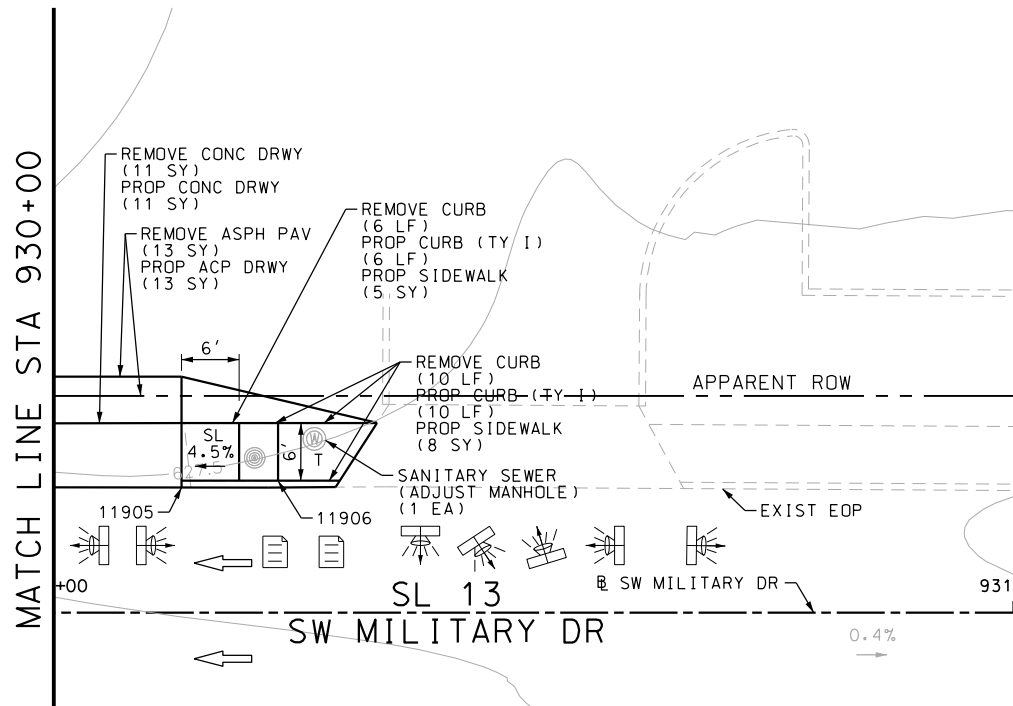
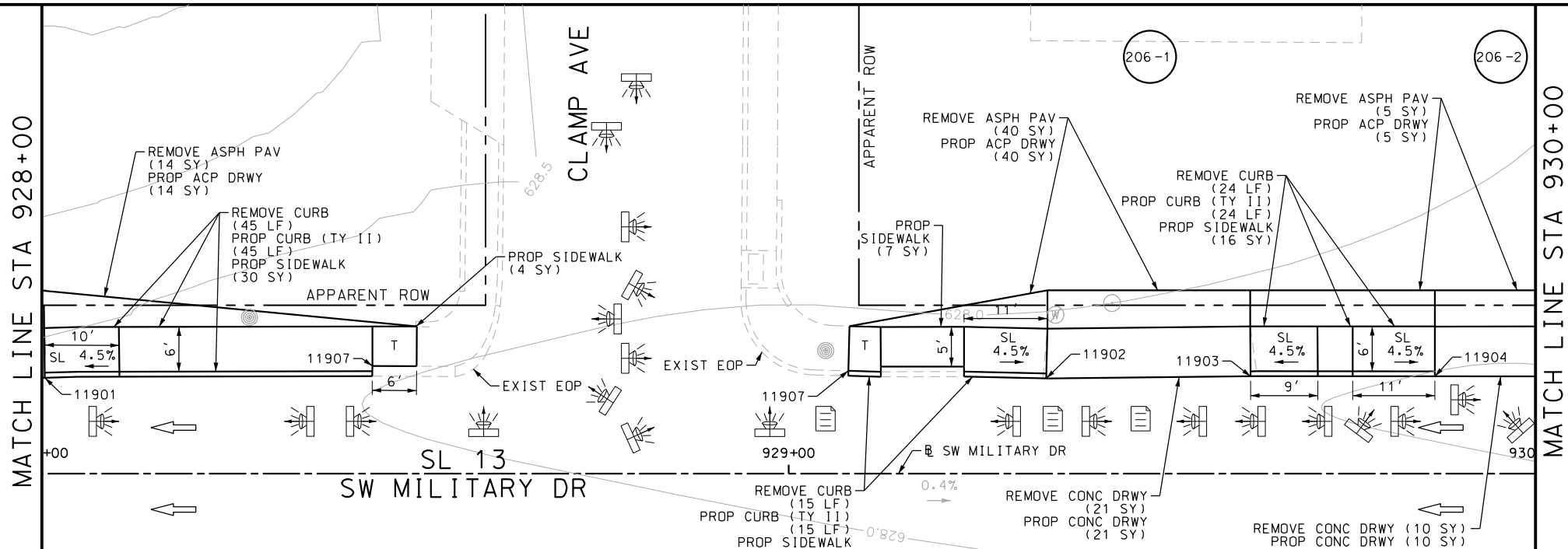
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SHEET 40 OF 45

CDGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK CDGN	6	TEXAS				VARIES
DWGr	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWGr	SAT	BEXAR	0915	12	576	205

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMI\113507*SWMI\itaryB*WB30.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	42
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	100
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	72
0529-6002	CONC CURB (TY II)	LF	100
0530-6004	DRIVEWAYS (CONC)	SY	42
0530-6005	DRIVEWAYS (ACP)	SY	72
0531-6001	CONC SIDEWALKS (4")	SY	81
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
11901	13679925.40	2125681.80	--	.
11902	13679926.11	2125815.44	--	.
11903	13679926.56	2125844.15	--	.
11904	13679926.69	2125867.93	--	.
11905	13679926.84	2125895.68	--	.
11906	13679926.96	2125910.77	--	.

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

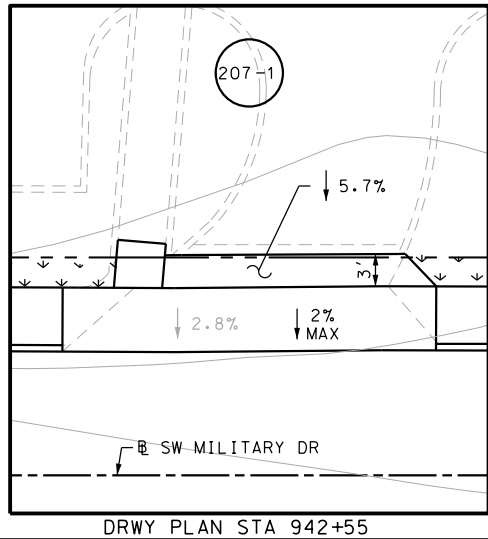
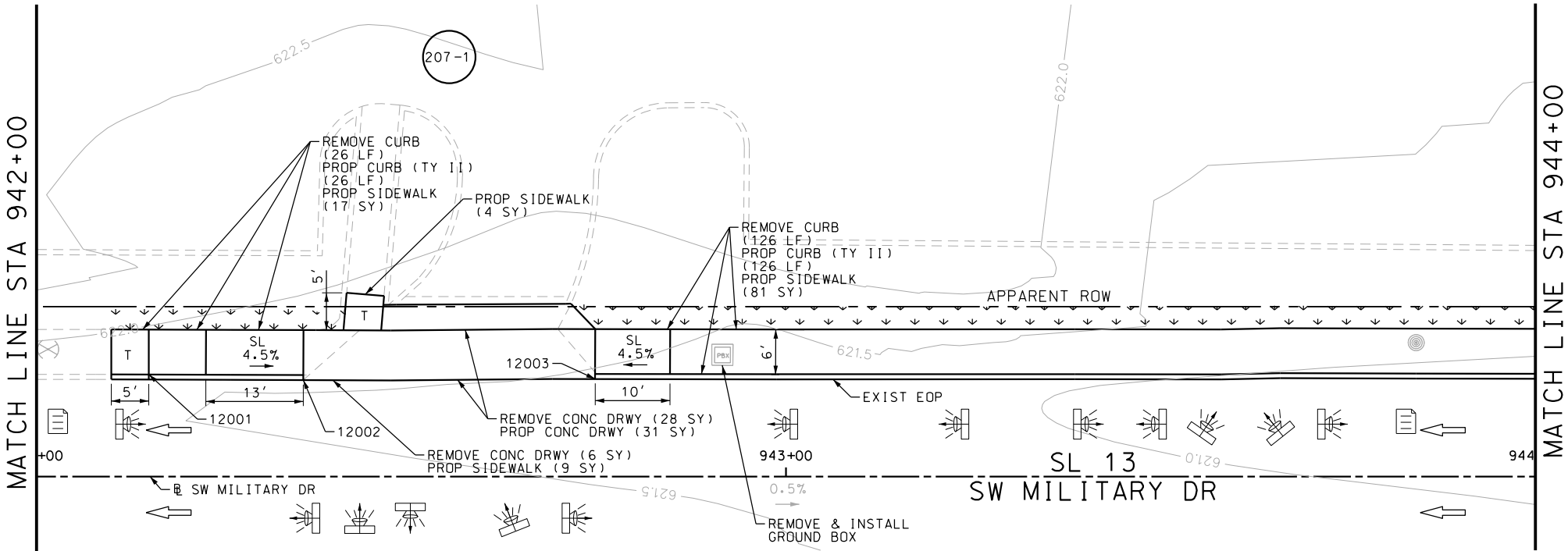
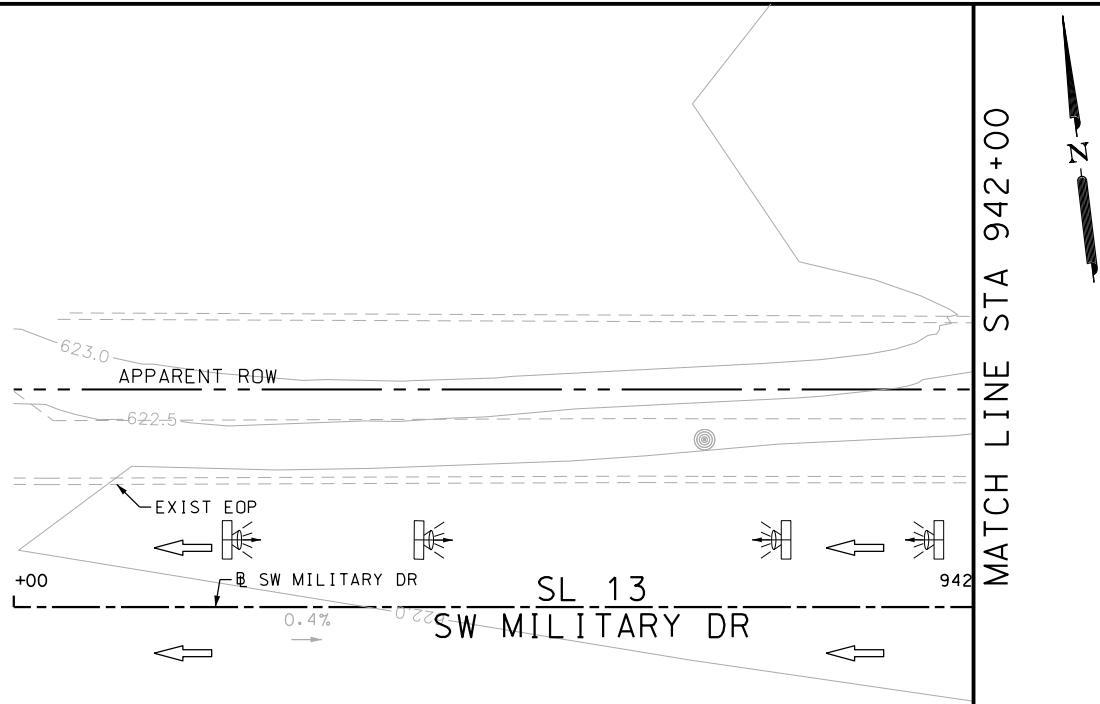


SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 928+00 TO STA 931+00

SHEET 41 OF 45					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\WB31.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	38
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	227
0529-6002	CONC CURB (TY II)	LF	227
0530-6004	DRIVEWAYS (CONC)	SY	38
0531-6001	CONC SIDEWALKS (4")	SY	155
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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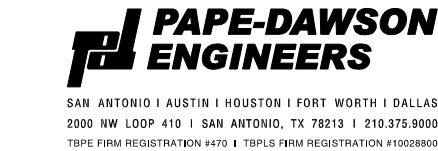
ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
12001	13679933.32	2127016.33	--	.
12002	13679940.28	2127048.45	--	.
12003	13679940.32	2127058.21	--	.
12004	13679933.91	2127116.98	--	.
12005	13679934.27	2127155.91	--	.



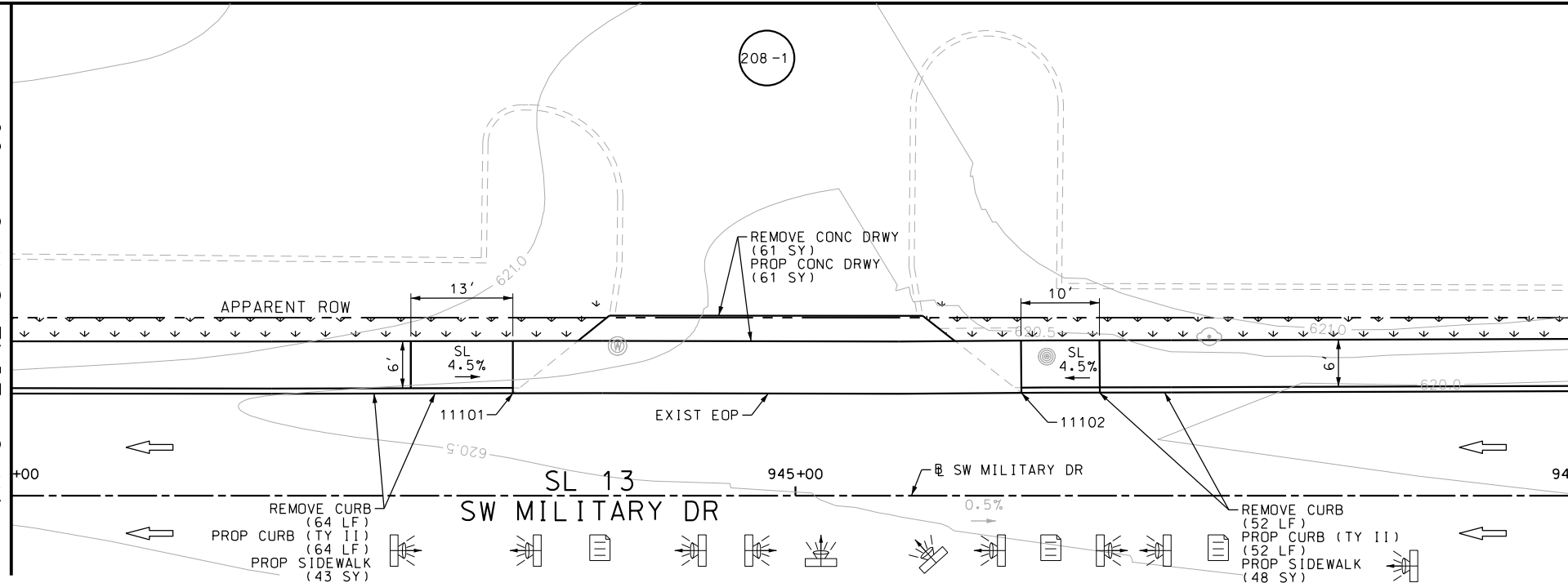
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 941+00 TO STA 944+00

SHEET 42 OF 45					
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
					207

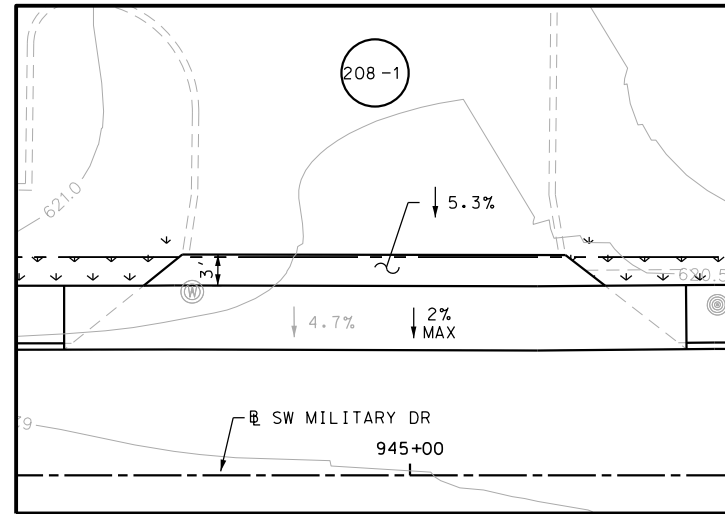
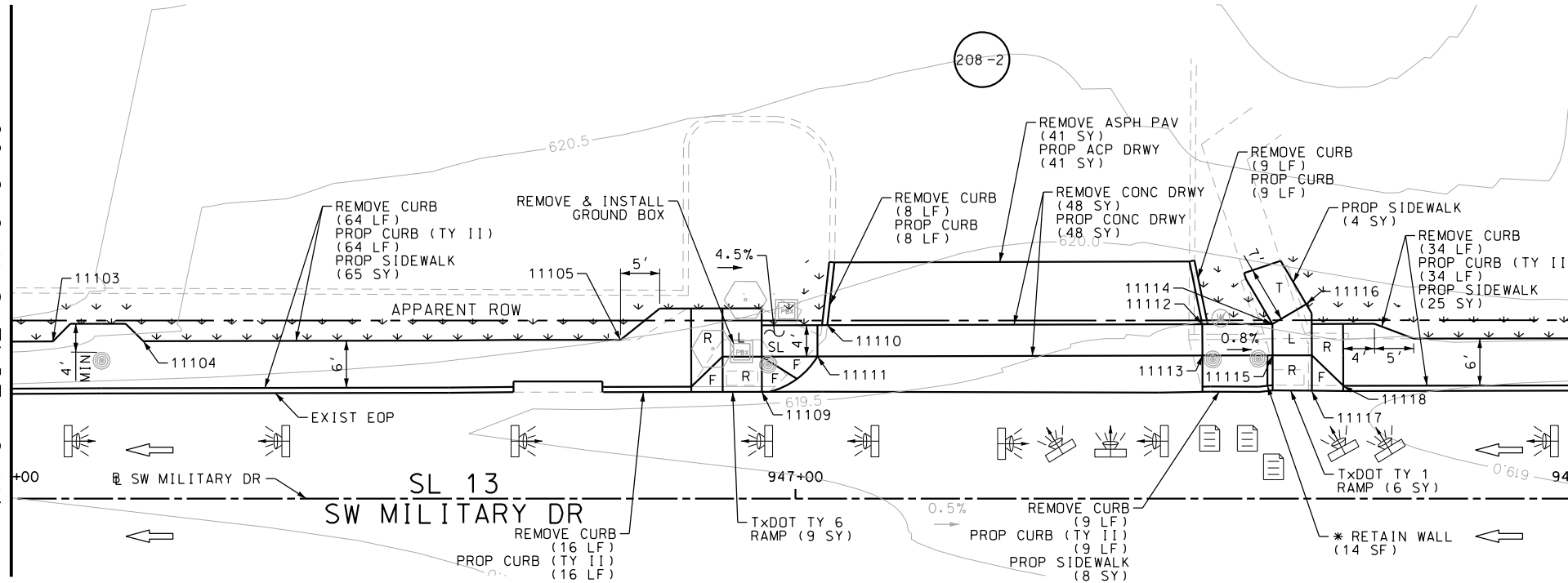
Plotted on: 11/21/2018

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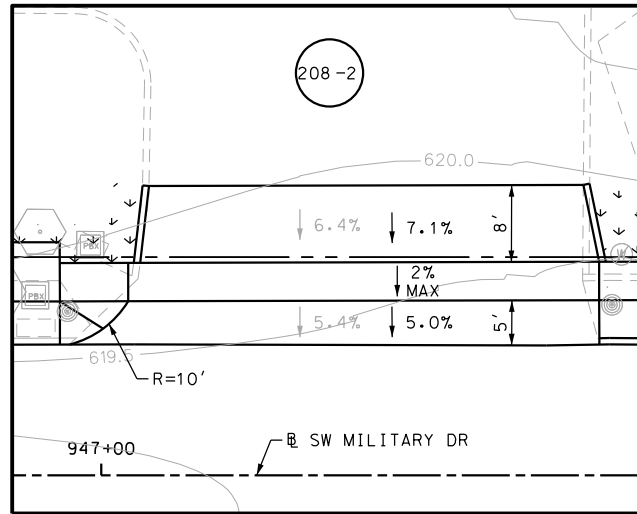
MATCH LINE STA 944+00



MATCH LINE STA 946+00



DRWY PLAN STA 944+97



DRWY PLAN STA 947+24

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	109
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	256
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	41
0529-6002	CONC CURB (TY II)	LF	256
0530-6004	DRIVEWAYS (CONC)	SY	109
0530-6005	DRIVEWAYS (ACP)	SY	41
0531-6001	CONC SIDEWALKS (4")	SY	168
0531-6018	CURB RAMPS (TY I)	SY	21

NOTES:

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- 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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 944+00 TO STA 948+00

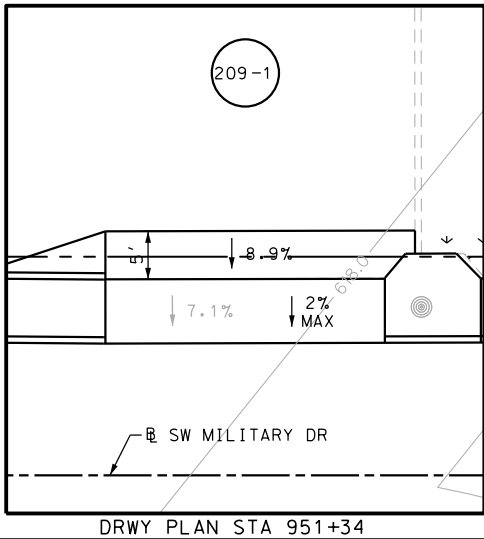
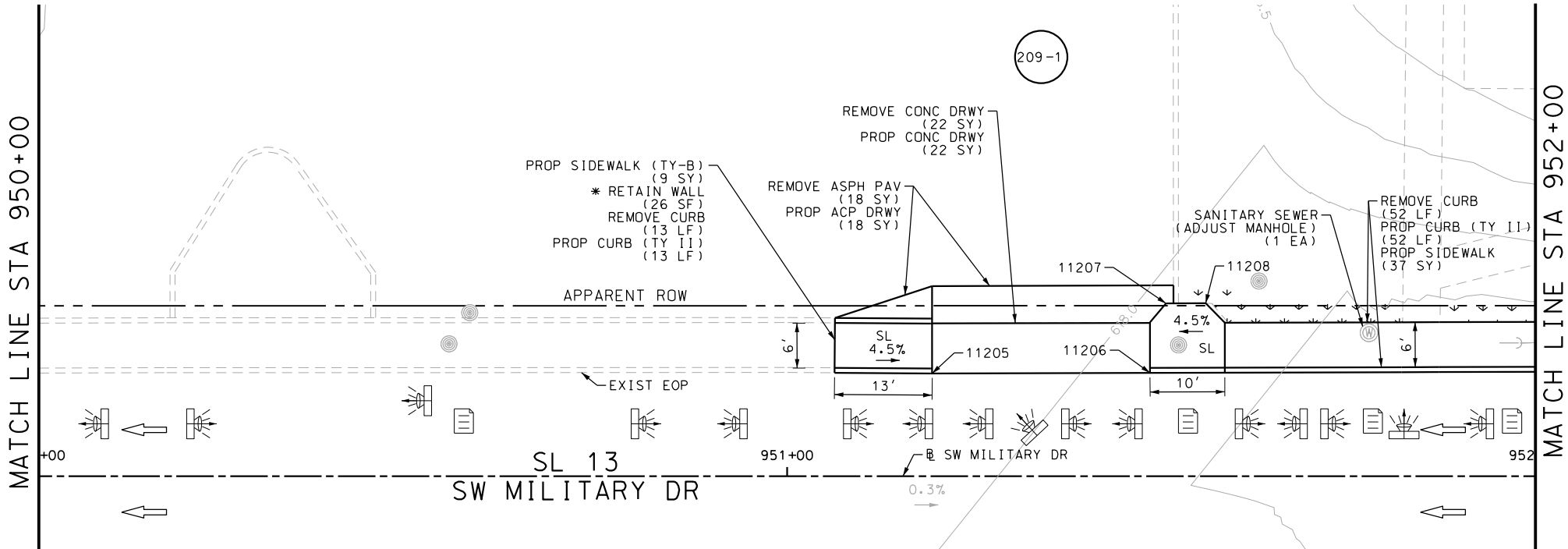
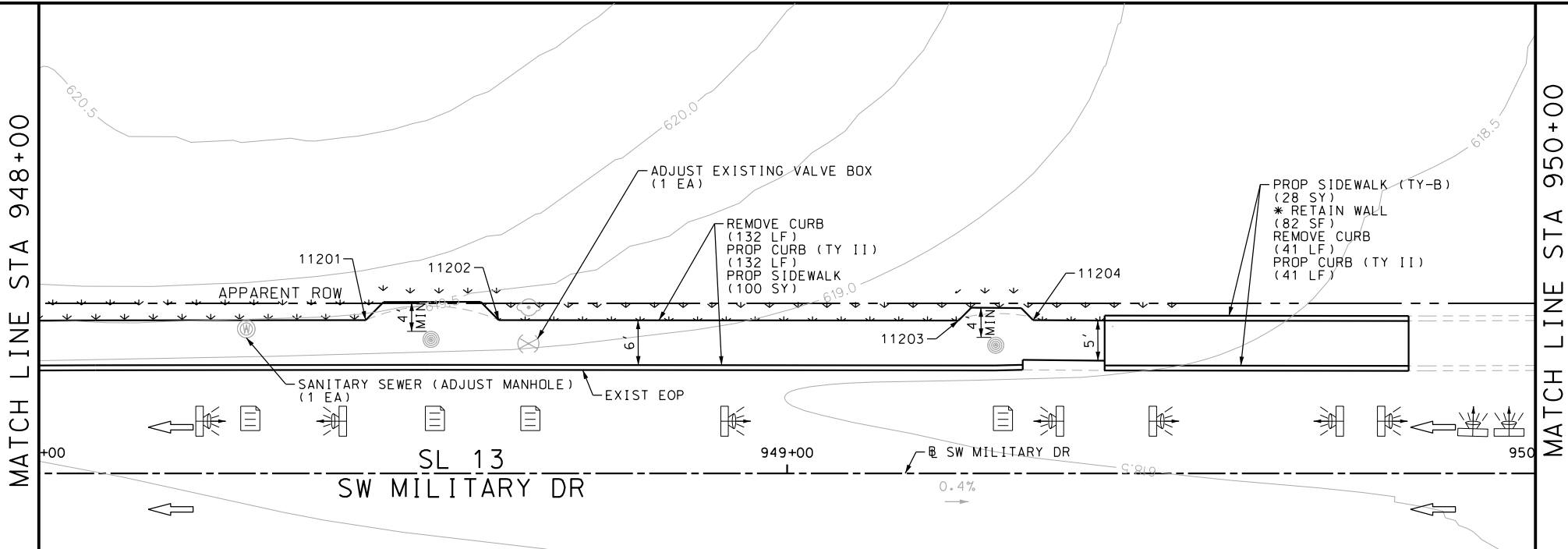
SHEET 43 OF 45

OGNs	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGNs	6	TEXAS				VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	208

POINT	NORTHING	EASTING	ELEV	DESC
11101	13679935.46	2127345.34	--	.
11102	13679935.90	2127410.19	--	.
11103	13679943.26	2127486.63	--	.
11104	13679943.36	2127498.17	--	.
11105	13679938.58	2127556.74	--	.
11106	13679943.87	2127557.03	--	.
11107	13679946.74	2127562.00	--	.
11108	13679941.78	2127566.04	--	.
11109	13679937.37	2127577.08	--	.
11111	13679941.92	2127584.15	--	.
11112	13679946.33	2127633.20	--	.
11113	13679942.33	2127633.23	--	.
11114	13679946.40	2127642.16	--	.
11115	13679942.40	2127642.19	--	.
11116	13679948.97	2127646.45	--	.
11117	13679937.94	2127647.22	--	.

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\SWMilitaryB\113507*SWMilitaryB\WB33.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	22
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	362
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	LF	18
0529-6002	CONC CURB (TY II)	LF	362
0530-6004	DRIVEWAYS (CONC)	SY	22
0530-6005	DRIVEWAYS (ACP)	SY	18
0531-6001	CONC SIDEWALKS (4")	SY	137
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	119
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	2
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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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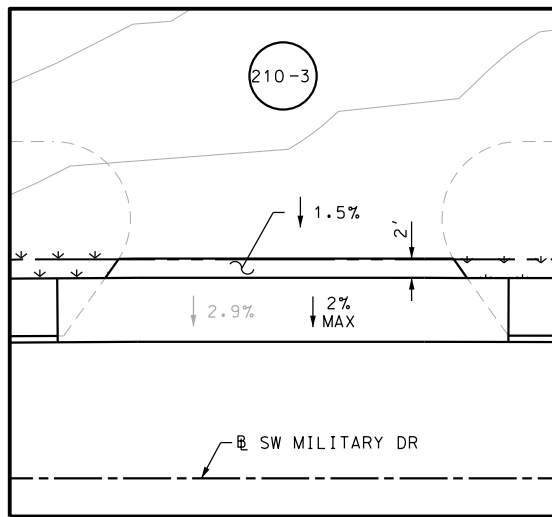
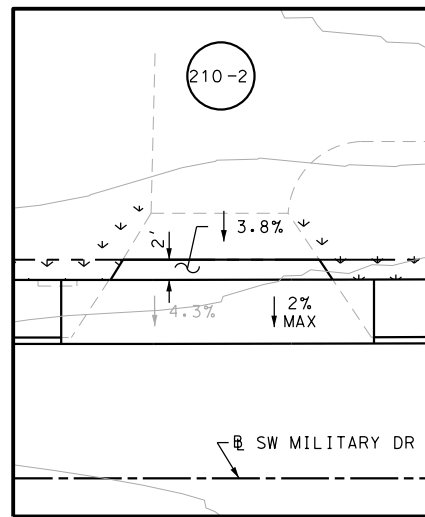
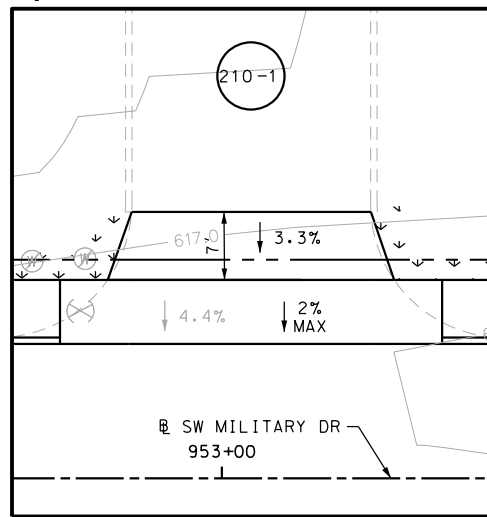
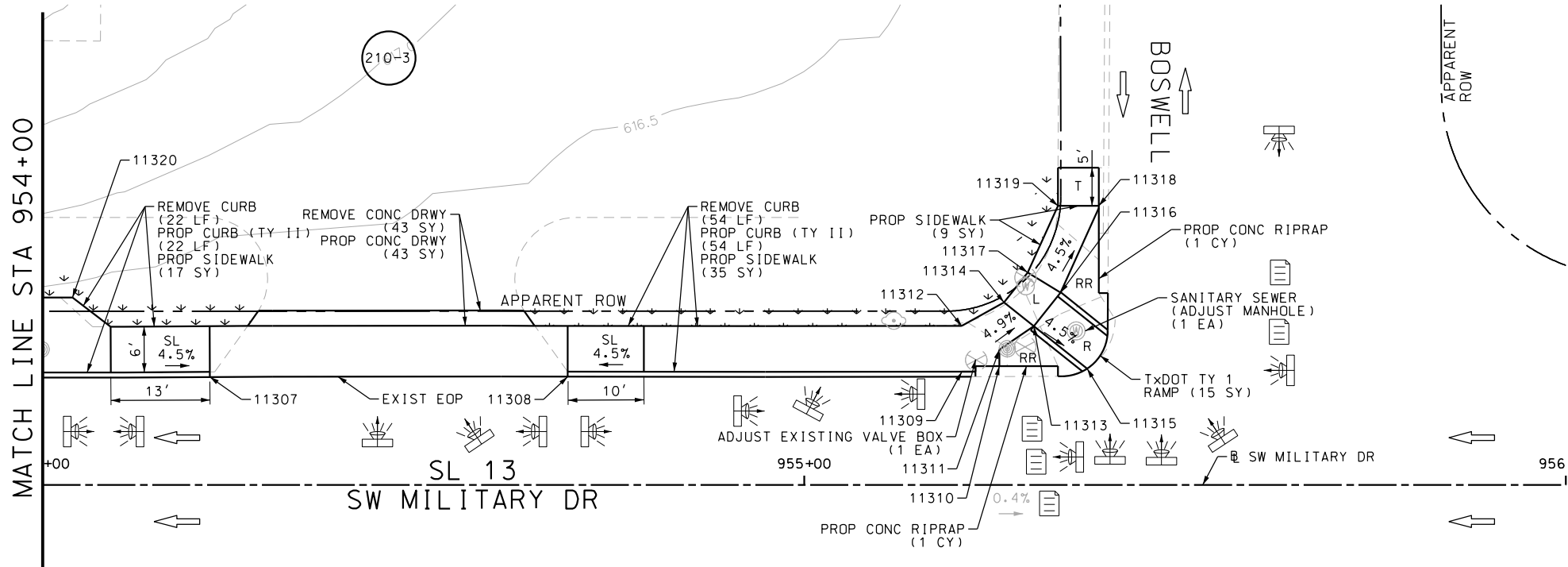
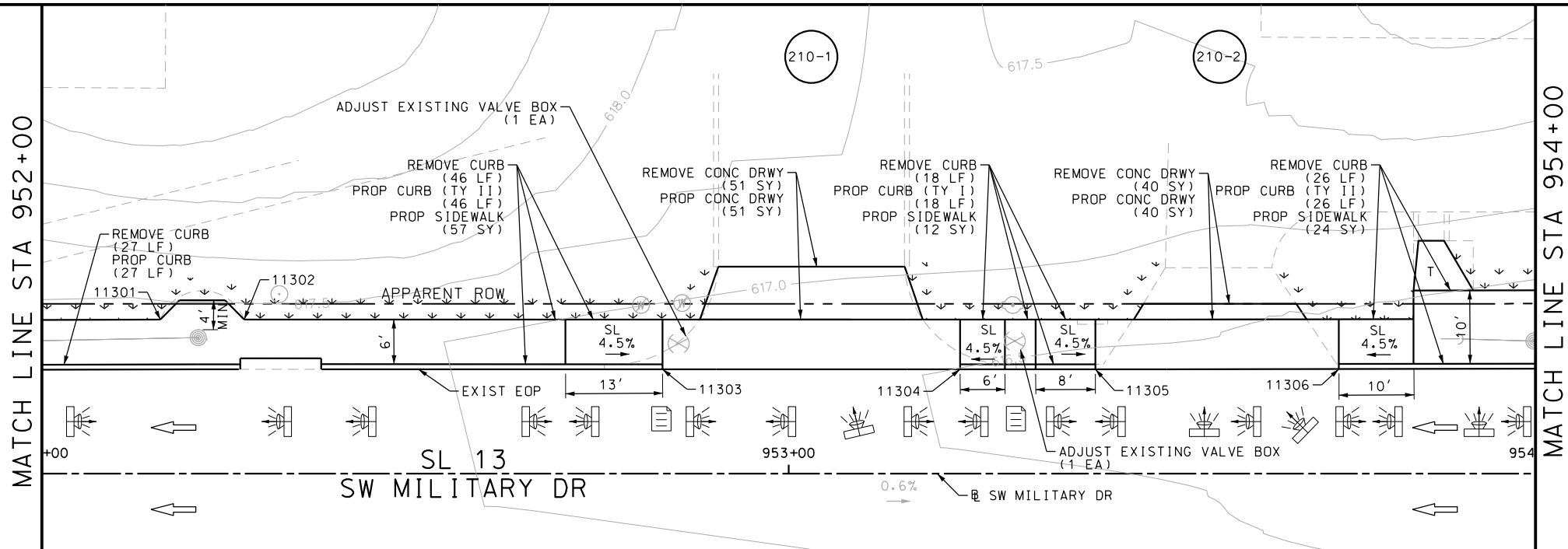
SL 13
SW MILITARY B
SIDEWALK
CONSTRUCTION PLAN
STA 948+00 TO STA 952+00

SHEET 44 OF 45

DGN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN	6	TEXAS				VARIES
WG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK WG#	SAT	BEXAR	0915	12	576	209

Plotted on: 11/21/2018

Design File name: P:\1135\07\design\Civil\Roadway\SWMI\ilitaryB\WB34.dgn



POINT	NORTHING	EASTING	ELEV	DESC
11301	13679947.49	2128097.18	--	.
11302	13679947.56	2128108.42	--	.
11303	13679941.23	2128164.47	--	.
11304	13679941.45	2128204.31	--	.
11305	13679941.55	2128222.42	--	.
11306	13679941.80	2128255.73	--	.
11307	13679942.20	2128303.31	--	.
11308	13679942.52	2128350.29	--	.
11309	13679943.49	2128402.04	--	.
11310	13679944.25	2128406.95	--	.
11311	13679946.40	2128406.94	--	.
11312	13679949.49	2128402.00	--	.
11313	13679949.52	2128411.46	--	.
11314	13679952.61	2128407.53	--	.
11315	13679943.97	2128418.50	--	.
11316	13679953.93	2128414.94	--	.
11317	13679956.54	2128410.62	--	.
11318	13679965.35	2128419.90	--	.
11319	13679965.31	2128414.54	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	134
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	193
0432-6003	RIPRAP (CONC) (6 IN)	CY	2
0529-6002	CONC CURB (TY II)	LF	193
0530-6004	DRIVEWAYS (CONC)	SY	134
0531-6001	CONC SIDEWALKS (4")	SY	154
0531-6018	CURB RAMPS (TY I)	SY	15
7090-6001	SANITARY SEWER (ADJUST MANHOLE)	EA	1
7091-6001	ADJUST EXISTING VALVE BOX	EA	3

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

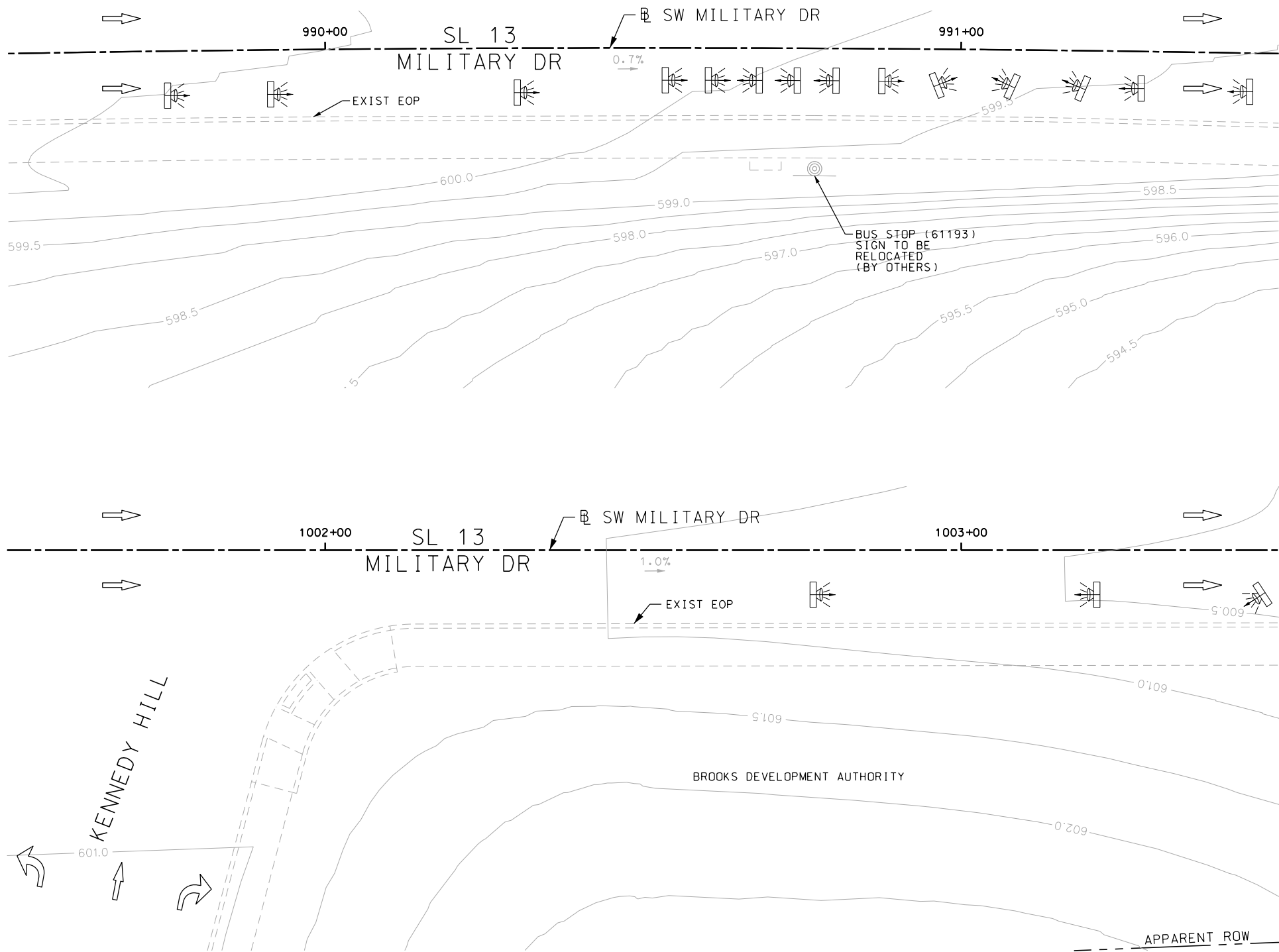
SIDEWALK
CONSTRUCTION PLAN

STA 952+00 TO END PROJECT

SHEET 45 OF 45					
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.
CHK DWG	SAT	BEXAR	0915	12	576
					210

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507*MilitaryDr*01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	10
0168-6001	VEGETATIVE WATERING	MG	0.16
0340-6066	D-GR HMA (SQ) TY-C PG76-22	TON	16.0
0354-6023	PLANE ASPH CONC PAV (0" TO 4")	SY	132
0531-6001	CONC SIDEWALKS (4")	SY	11

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INTERIM REVIEW	
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ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

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
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SL 13
MILITARY DRIVE

SIDEWALK
CONSTRUCTION PLAN

BEGIN PROJECT TO STA 991+50
STA 1001+50 TO STA 1003+50
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	211

Design Filename: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507*MilitaryDr*02.dgn

N

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

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

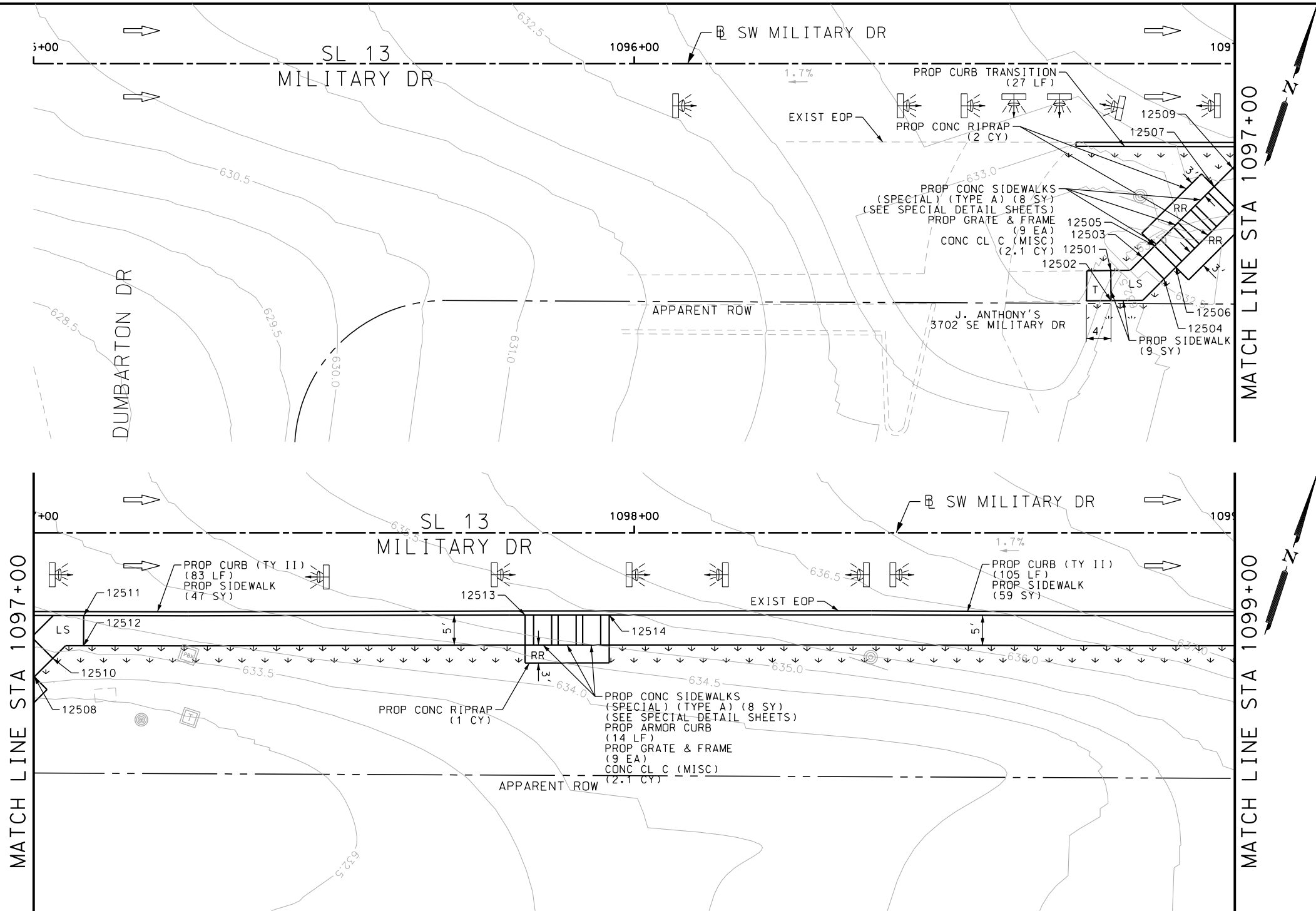


SL 13
MILITARY DRIVE
SIDEWALK
CONSTRUCTION PLAN
STA 1040+00 TO STA 1042+00
STA 1054+50 TO STA 1056+50
SHEET 4

OGN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN ₂	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₂	SAT	BEXAR	0915	12	576	212

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr*05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	4.2
0432-6003	RIPRAP (CONC) (6 IN)	CY	3
0471-6003	GRATE & FRAME	EA	18
0529-6002	CONC CURB (TY II)	LF	215
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0531-6001	CONC SIDEWALKS (4")	SY	115
0531-6032	CONC SIDEWALKS (SPECIAL) (TYPE A)	SY	16

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
12501	13678995.14	2152531.51	--	.
12502	13678990.41	2152533.15	--	.
12503	13678998.88	2152535.90	--	.
12504	13678996.65	2152540.38	--	.
12505	13679001.35	2152537.14	--	.
12506	13678999.12	2152541.61	--	.
12507	13679013.88	2152543.40	--	.
12508	13679011.64	2152547.87	--	.
12509	13679017.78	2152545.34	--	.
12510	13679015.54	2152549.82	--	.
12511	13679023.92	2152552.42	--	.
12512	13679019.18	2152554.00	--	.
12513	13679047.41	2152622.07	--	.
12514	13679051.87	2152635.34	--	.

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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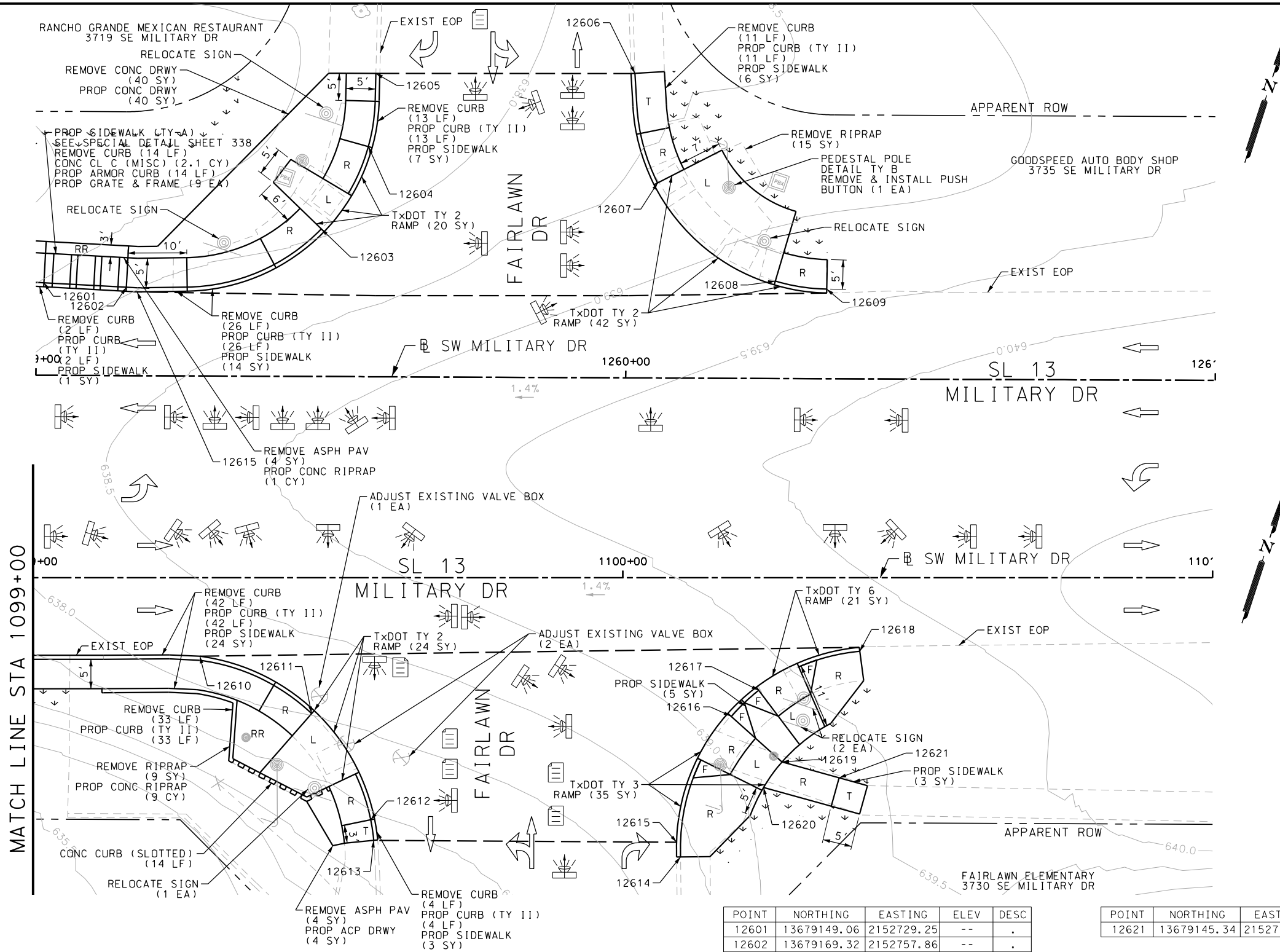
SL 13
MILITARY DRIVE
SIDEWALK
CONSTRUCTION PLAN
STA 1095+00 TO STA 1099+00

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.:
CHK DWG:	SAT	BEXAR	0915	12

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr*06.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	40
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	105
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	25
0420-6074	CL C CONC (MISC)	CY	2.1
0432-6003	RIPRAP (CONC) (6 IN)	CY	1
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	91
0529-6012	CONC CURB (SLOTTED)	LF	14
0529-6020	CONC CURB & GUTTER (ARMOR CURB)	LF	14
0530-6004	DRIVEWAYS (CONC)	SY	40
0530-6005	DRIVEWAYS (ACP)	SY	23
0531-6001	CONC SIDEWALKS (4")	SY	46
0531-6019	CURB RAMPS (TY 2)	SY	65
0531-6020	CURB RAMPS (TY 3)	SY	33
0531-6023	CURB RAMPS (TY 6)	SY	54
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	12
7091-6001	ADJUST EXISTING VALVE BOX	EA	2

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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
MILITARY DRIVE

**SIDEWALK
CONSTRUCTION PLAN**

STA 1099+00 TO STA 1101+00
STA 1259+00 TO STA 1261+00

SHEET 4 OF 5

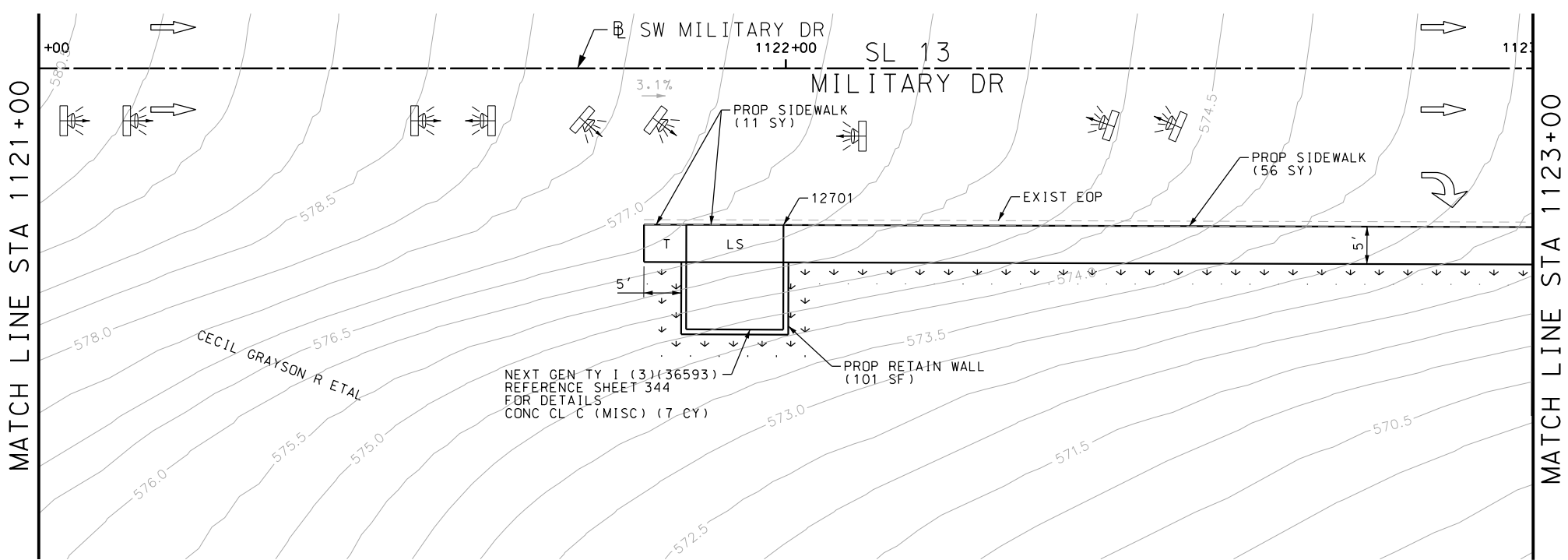
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	214

POINT	NORTHING	EASTING	ELEV	DESC
12601	13679149.06	2152729.25	--	.
12602	13679169.32	2152757.86	--	.
12603	13679185.41	2152761.06	--	.
12604	13679194.68	2152808.38	--	.
12605	13679186.29	2152822.82	--	.
12606	13679091.80	2152782.11	--	.
12607	13679077.64	2152797.65	--	.
12608	13679119.42	2152851.92	--	.
12609	13679113.66	2152848.75	--	.
12610	13679087.81	2152848.26	--	.
12611	13679108.78	2152860.07	--	.
12612	13679103.69	2152858.48	--	.
12613	13679197.76	2152758.29	--	.
12614	13679211.28	2152798.68	--	.
12615	13679149.56	2152731.05	--	.
12616	13679186.56	2152841.97	--	.
12617	13679094.36	2152760.80	--	.
12618	13679131.37	2152866.33	--	.
12619	13679074.44	2152799.29	--	.
12620	13679090.20	2152847.46	--	.

POINT	NORTHING	EASTING	ELEV	DESC
12621	13679145.34	2152715.75	--	.

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Military Dr\1113507*MilitaryDr*07.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	120
0420-6074	CL C CONC (MISC)	CY	6.0
0529-6002	CONC CURB (TY II)	LF	120
0531-6001	CONC SIDEWALKS (4")	SY	67

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

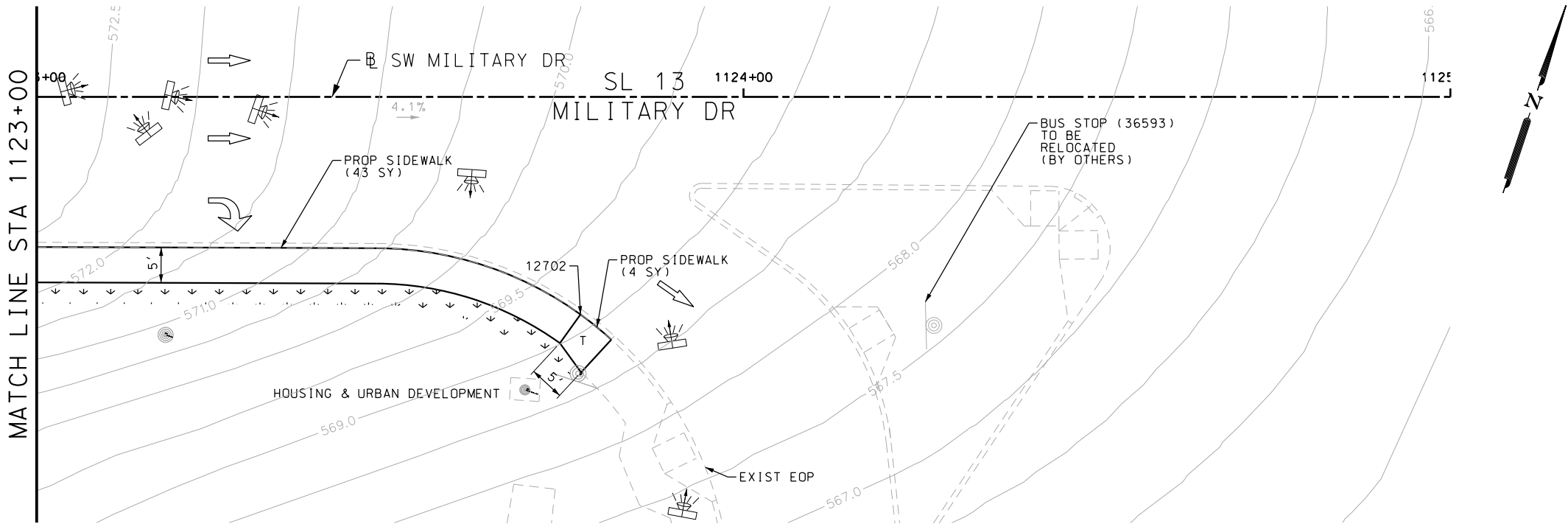
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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018



POINT	NORTHING	EASTING	ELEV	DESC
12701	13679840.11	2155008.04	--	.
12702	13679856.81	2155087.79	--	.

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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SL 13
MILITARY DRIVE

SIDEWALK
CONSTRUCTION PLAN

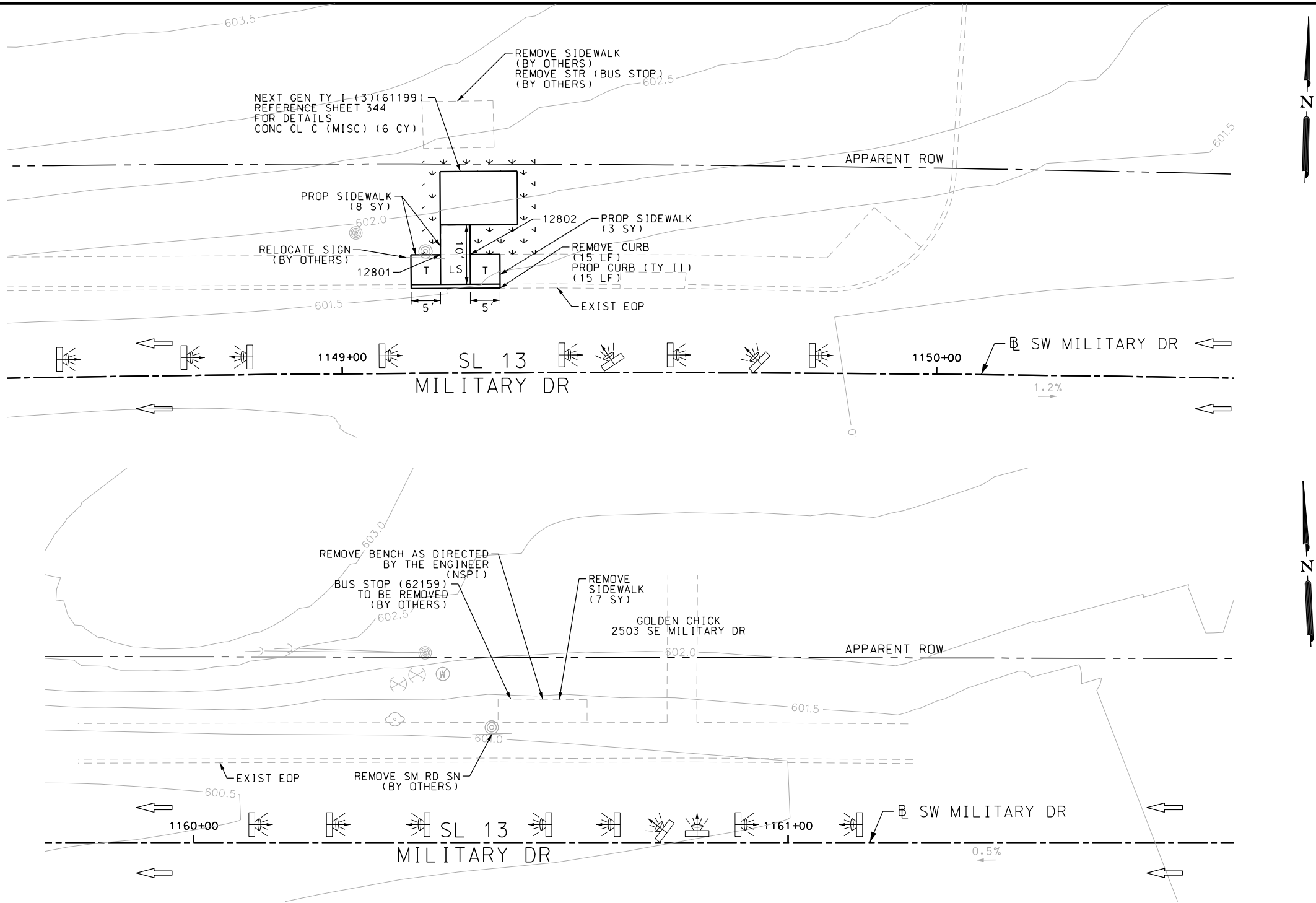
STA 1122+50 TO END PROJECT

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.:
CHK DWG:	SAT	BEXAR	0915	12

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	72
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	7
0420-6074	CL C CONC (MISC)	CY	12.0
0496-6027	REMOV STR (BUS STOP)	EA	1
0529-6002	CONC CURB (TY 11)	LF	72
0531-6001	CONC SIDEWALKS (4")	SY	61

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
12801	13678286.10	2141866.86	--	.
12802	13678286.29	2141871.85	--	.
12803	13678260.60	2142980.62	--	.
12804	13678259.73	2143004.32	--	.
12805	13678259.25	2143017.32	--	.
12806	13678258.51	2143037.34	--	.

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SL 13
MILITARY DRIVE

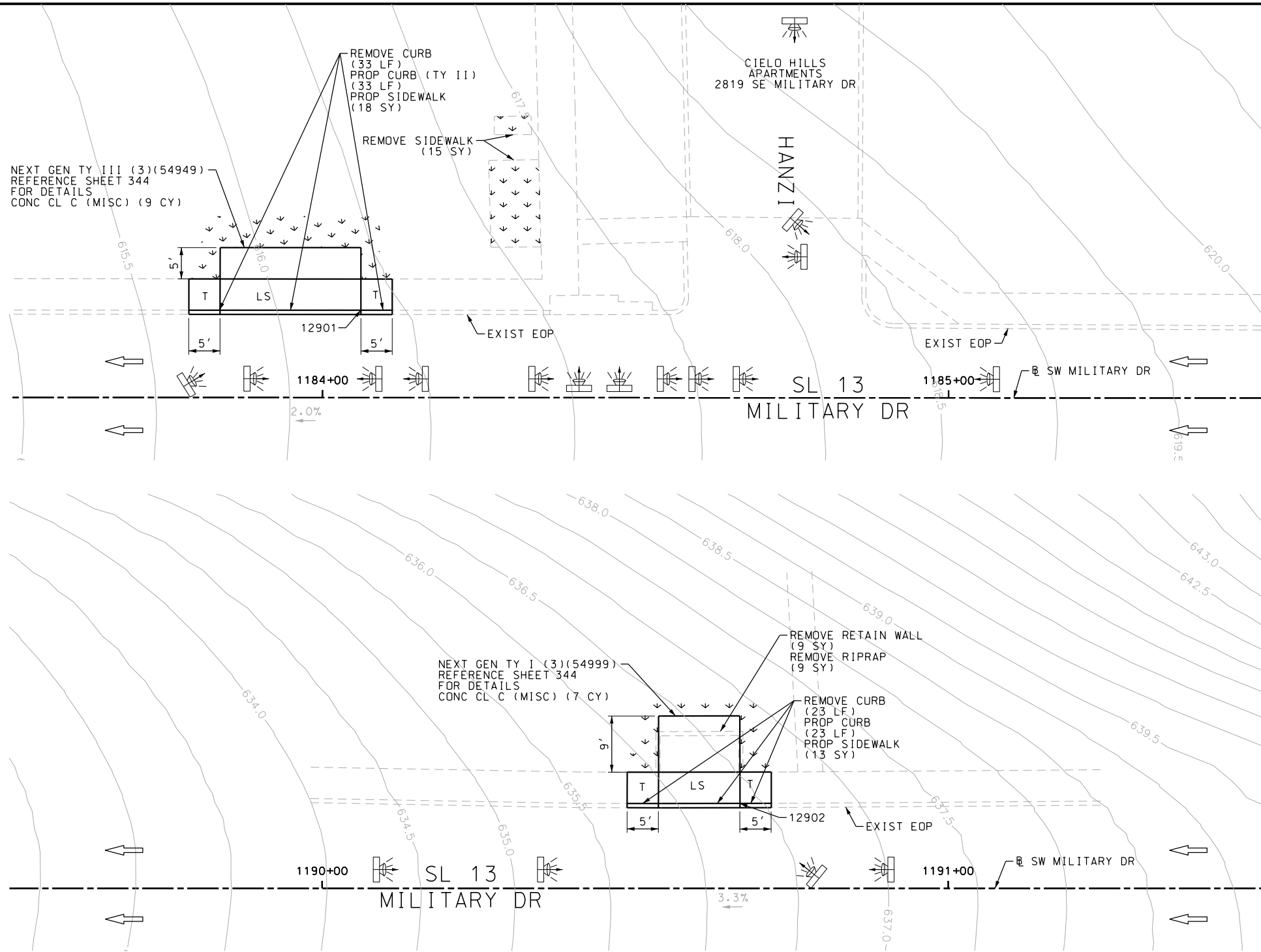
SIDEWALK
CONSTRUCTION PLAN

BEGIN PROJECT TO STA 1050+50
STA 1159+75 TO STA 1061+25
SHEET 1 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	216

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507*MilitaryDr-WB02.dgn



POINT	NORTHING	EASTING	ELEV	DESC
12901	13678214.92	2145355.70	--	.
12902	13678218.08	2146016.31	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	9
0104-6024	REMOVING CONC (RETAINING WALLS)	SY	9
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	46
0420-6074	CL C CONC (MISC)	CY	12.0
0529-6002	CONC CURB (TY II)	LF	46
0531-6001	CONC SIDEWALKS (4")	SY	26

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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SL 13
MILITARY DRIVE

SIDEWALK
CONSTRUCTION PLAN

STA 1183+50 TO STA 1185+50
STA 1189+50 TO STA 1091+50

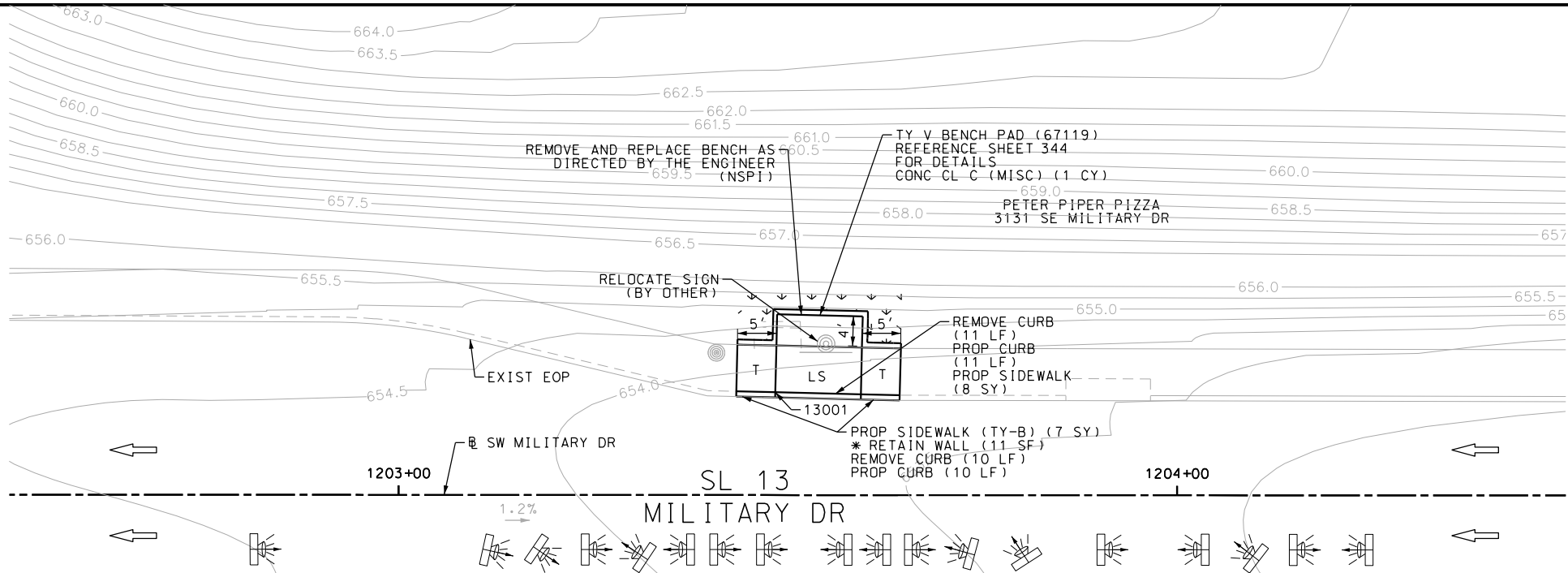
SHEET 2 OF 11

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

JOB NO.:	SHEET NO.:
576	217

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507*MilitaryDr*WB03.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	21
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	11
0529-6002	CONC CURB (TY II)	LF	21
0531-6001	CONC SIDEWALKS (4")	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	7

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

POINT	NORTHING	EASTING	ELEV	DESC
13001	13678224.62	2147297.90	--	.

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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SL 13
MILITARY DRIVE

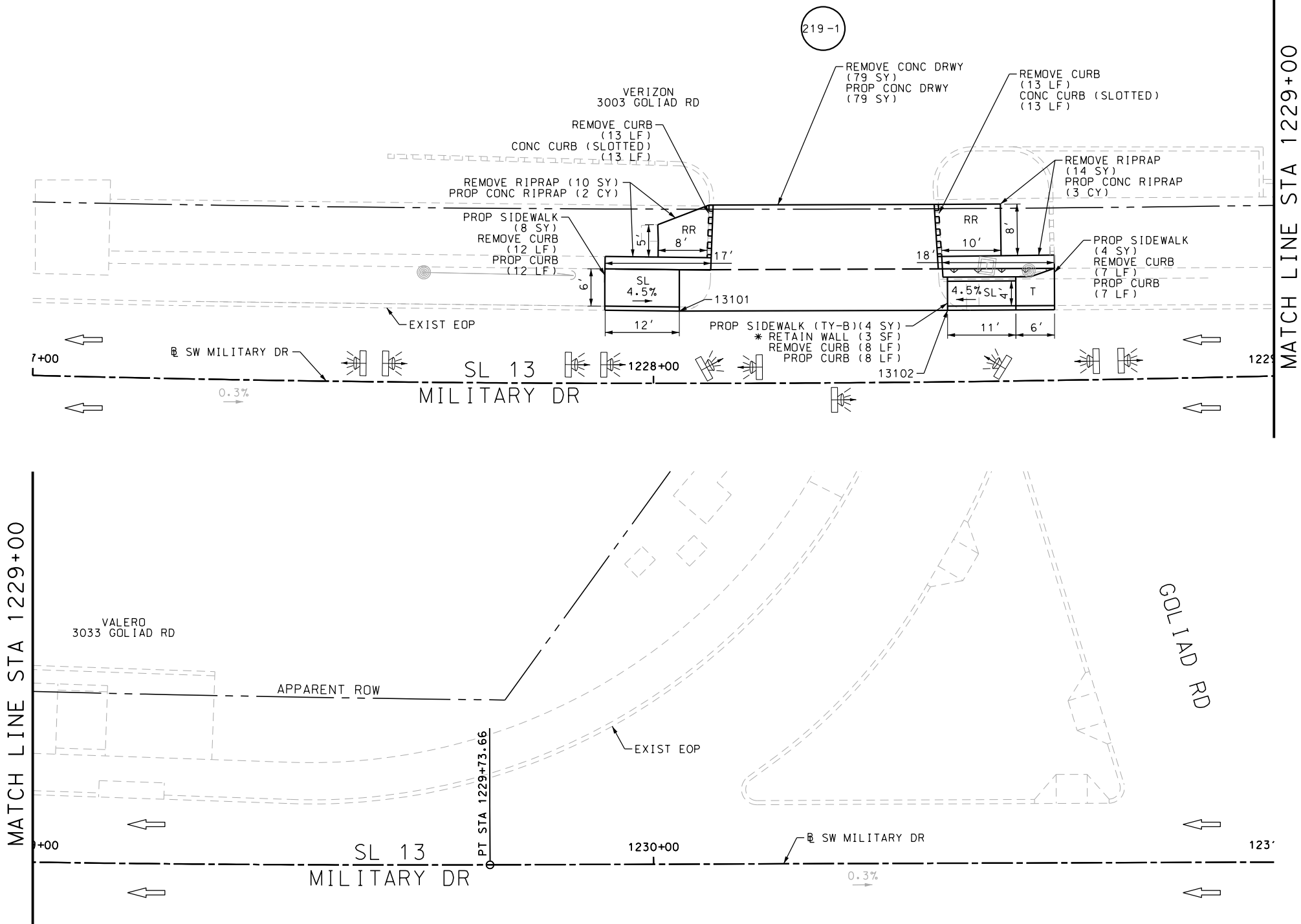
SIDEWALK
CONSTRUCTION PLAN
STA 1202+50 TO STA 1204+50

SHEET 3 OF 11

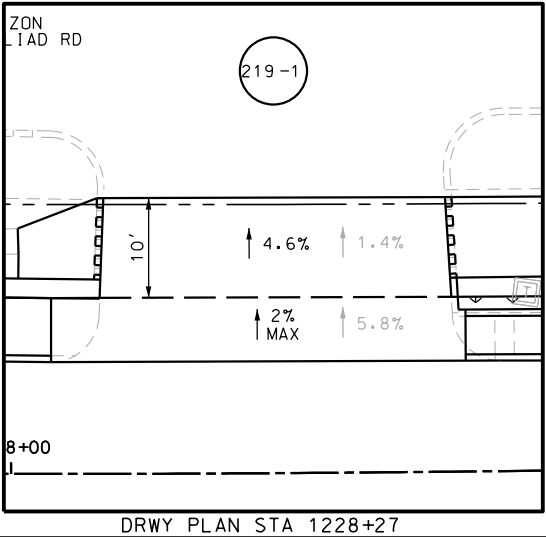
DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	218

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB04.dgn



POINT	NORTHING	EASTING	ELEV	DESC
13101	13678278.46	2149750.23	--	.
13102	13678284.72	2149796.06	--	.



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	79
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	53
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	3
0529-6002	CONC CURB (TY II)	LF	27
0529-6012	CONC CURB (SLOTTED)	LF	26
0530-6004	DRIVEWAYS (CONC)	SY	79
0531-6001	CONC SIDEWALKS (4")	SY	12
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	4

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DESIGN
INTERIM REVIEW
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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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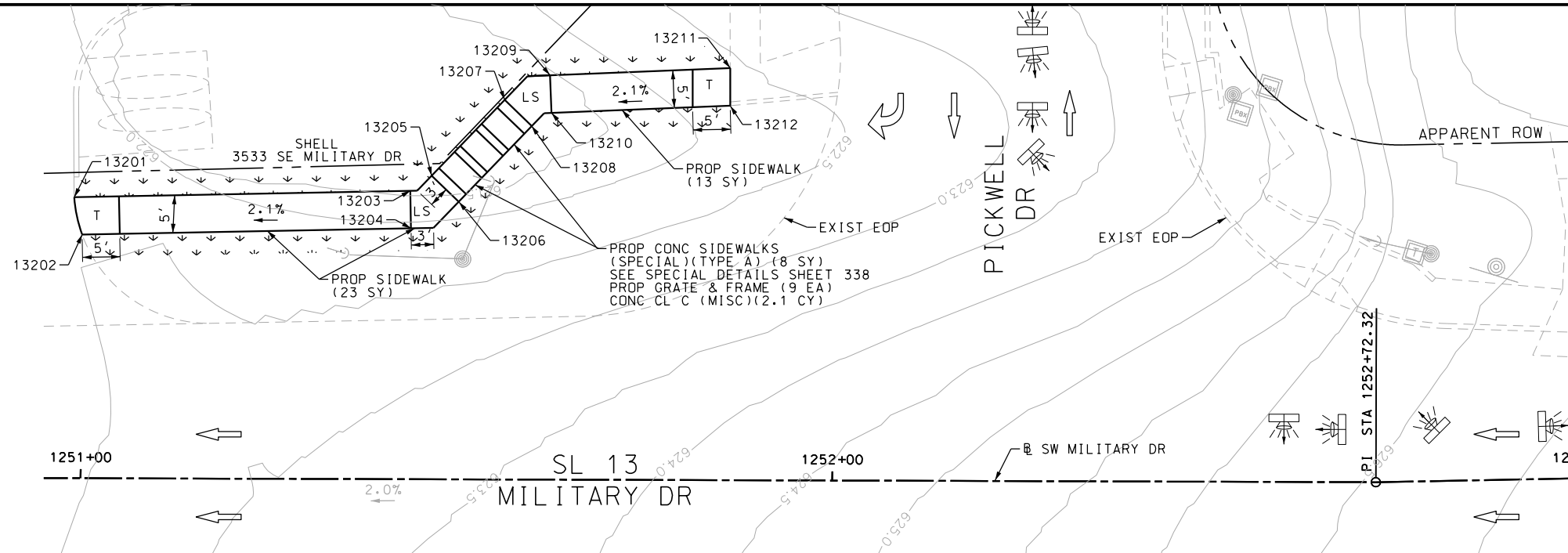
SL 13
MILITARY DRIVE
SIDEWALK
CONSTRUCTION PLAN
STA 1227+00 TO STA 1231+00

SHEET 4 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	219

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB05.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6009	REMOVING CONC (RIPRAP)	SY	11
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	148
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	37
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	15
0162-6002	BLOCK SODDING	SY	175
0168-6001	VEGETATIVE WATERING	MG	2.73
0420-6074	CL C CONC (MISC)	CY	8.1
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	37
0530-6004	DRIVEWAYS (CONC)	SY	148
0531-6001	CONC SIDEWALKS (4")	SY	101

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INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

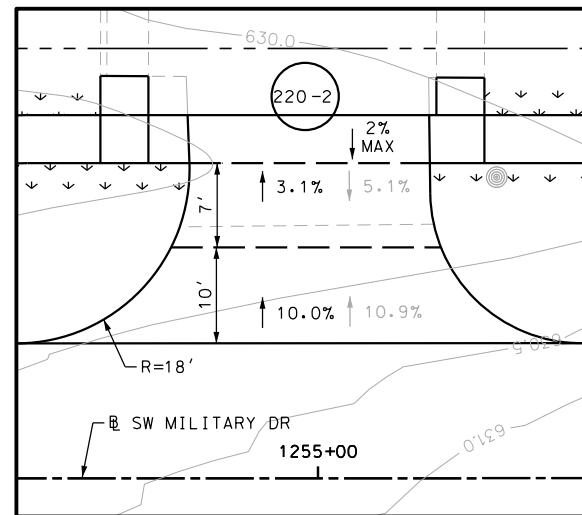
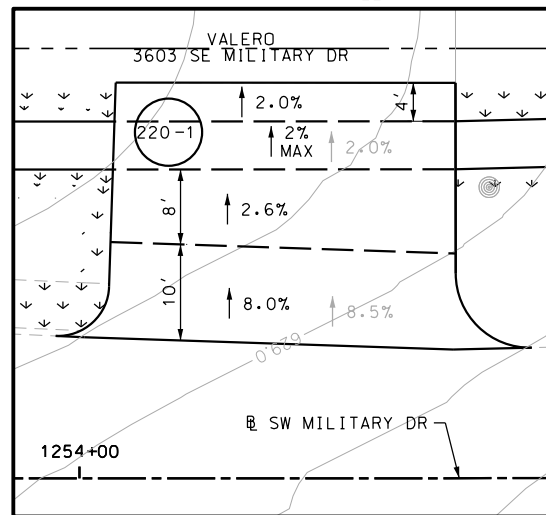
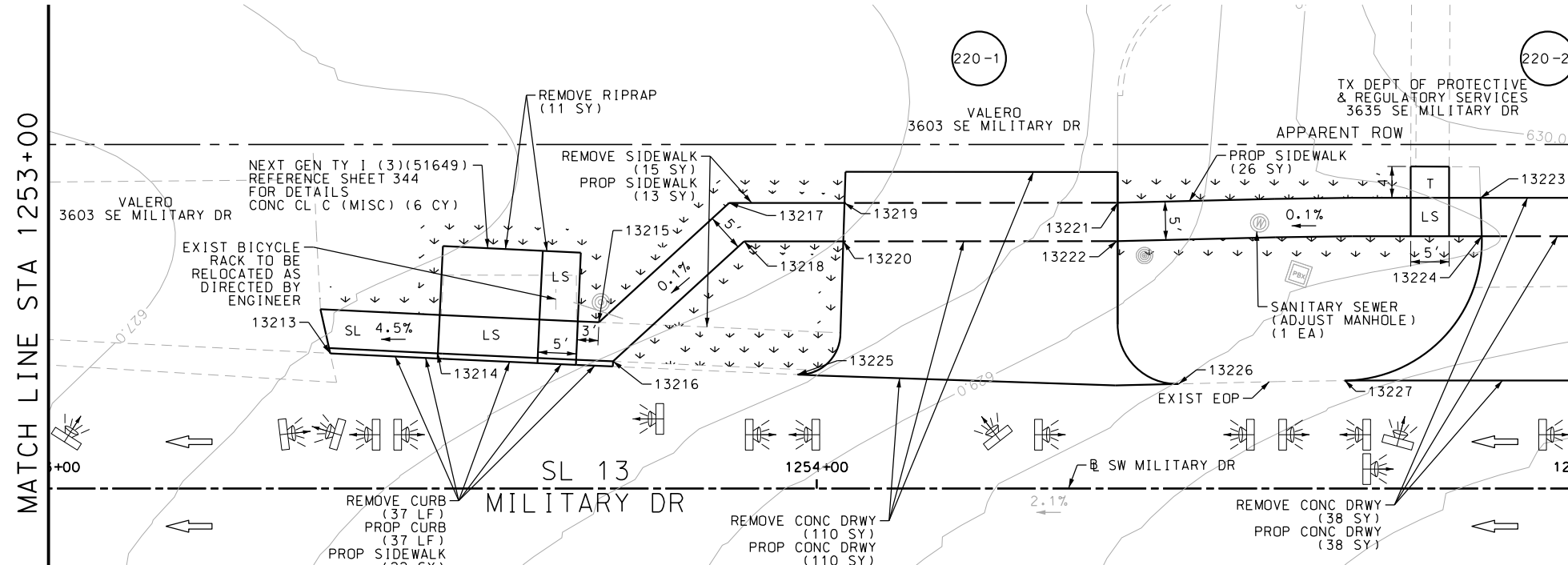
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SL 13
MILITARY DRIVE
SIDEWALK
CONSTRUCTION PLAN
STA 1251+00 TO STA 1255+00

SHEET 5 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.
CHK DWG:	SAT	BEXAR	0915	12	576



SEE SHEET 221 FOR POINT TABLE

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB05a.dgn

SEE SHEET 220

POINT	NORTHING	EASTING	ELEV	DESC
13201	13678917.78	2151947.09	--	.
13202	13678914.25	2151949.17	--	.
13203	13678932.19	2151990.75	--	.
13204	13678928.91	2151993.57	--	.
13205	13678935.02	2151992.17	--	.
13206	13678933.22	2151995.74	--	.
13207	13678947.52	2151998.47	--	.
13208	13678945.72	2152002.04	--	.
13209	13678951.08	2152000.26	--	.
13210	13678947.84	2152003.11	--	.
13211	13678959.94	2152025.29	--	.
13212	13678956.12	2152026.48	--	.
13213	13678973.22	2152188.55	--	.
13214	13678974.29	2152192.40	--	.
13215	13678985.37	2152210.86	--	.
13216	13678980.48	2152214.40	--	.
13217	13678992.36	2152214.77	--	.
13218	13678988.22	2152218.18	--	.
13219	13679000.40	2152239.23	--	.
13220	13678995.60	2152240.64	--	.

POINT	NORTHING	EASTING	ELEV	DESC
13221	13679011.59	2152273.31	--	.
13222	13679006.85	2152274.88	--	.
13223	13679026.15	2152317.61	--	.
13224	13679020.64	2152316.88	--	.

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1"= 20'

REV. NO.	DATE	DESCRIPTION	BY



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SL 13
MILITARY DRIVE

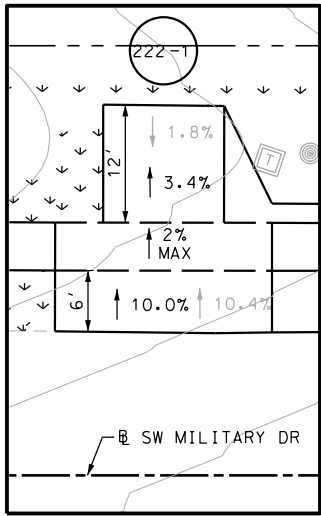
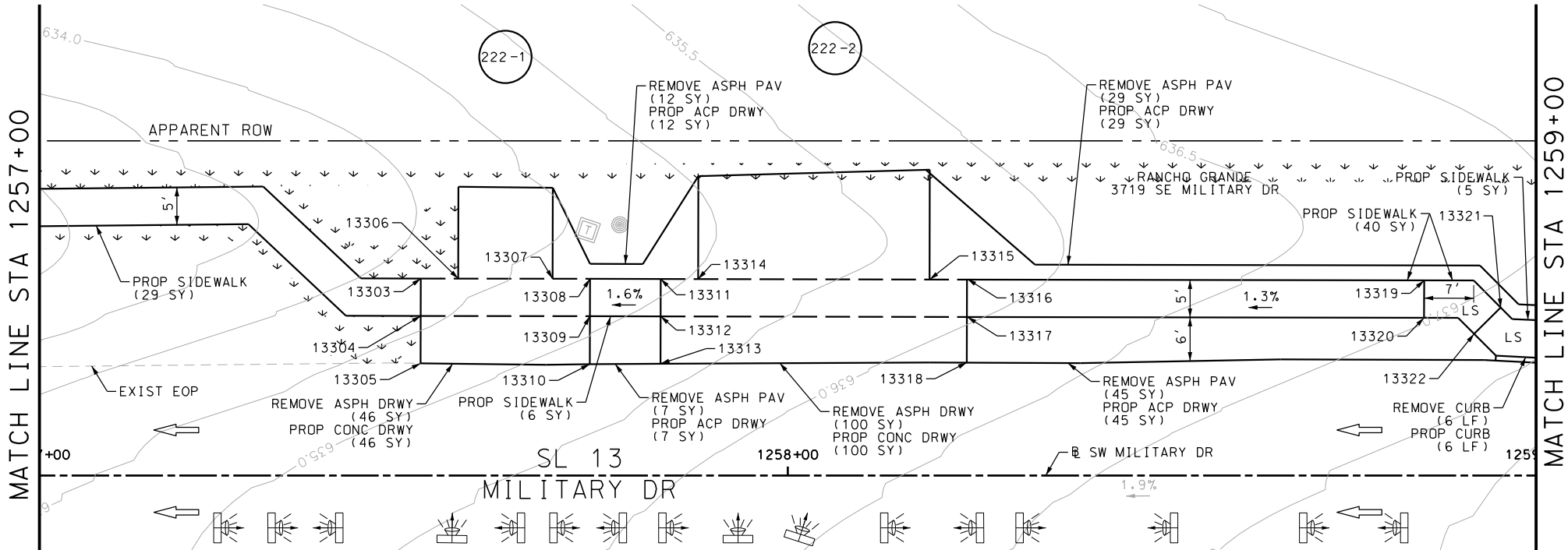
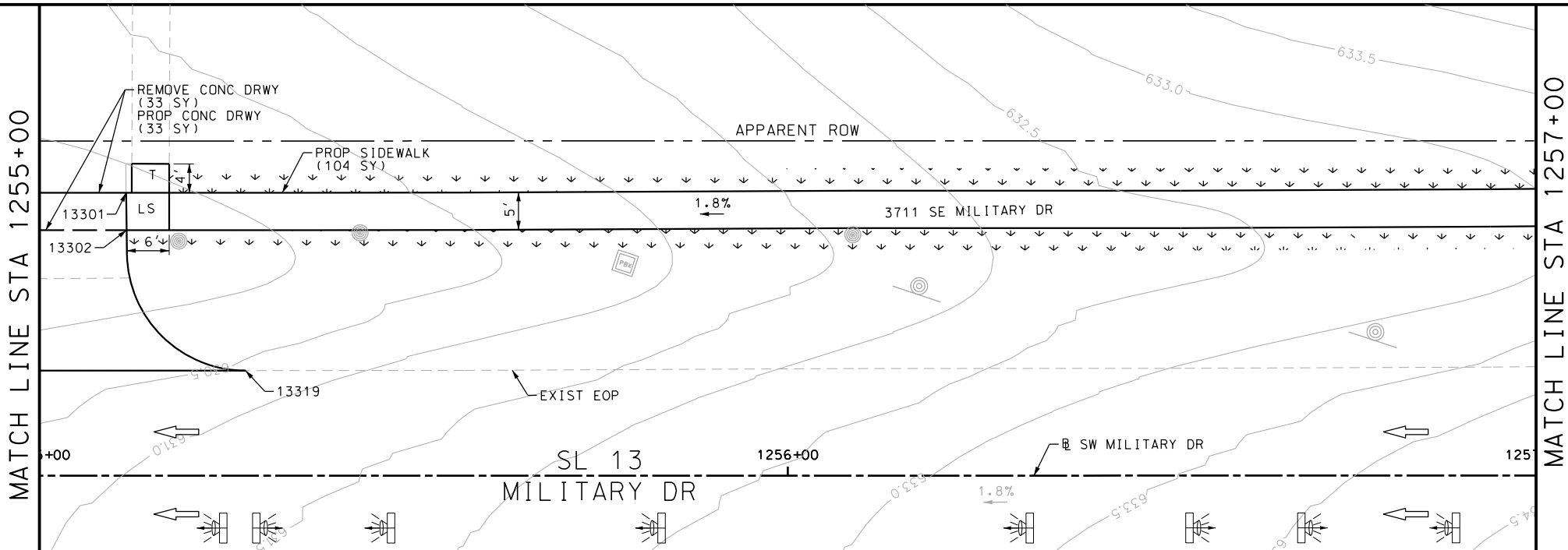
SIDEWALK
CONSTRUCTION PLAN
STA 1251+00 TO STA 1255+00
POINT TABLES

SHEET 6 OF 11

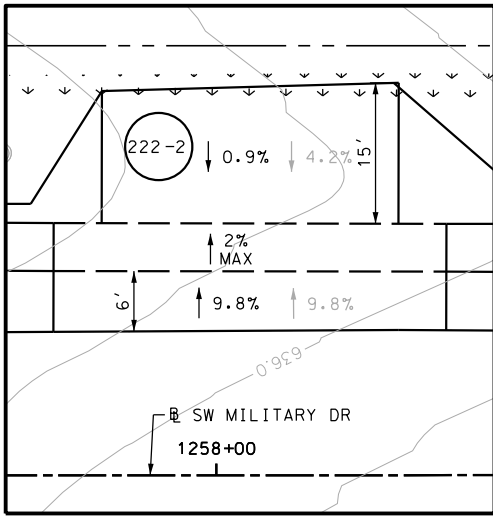
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	221

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Military Dr\1113507\Military Dr-WB06.dgn



DRWY PLAN STA 1257+62



DRWY PLAN STA 1258+04

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	39
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	239
0162-6002	BLOCK SODDING	SY	190
0168-6001	VEGETATIVE WATERING	MG	2.96
0529-6002	CONC CURB (TY II)	LF	39
0530-6005	DRIVEWAYS (ACP)	SY	239
0531-6001	CONC SIDEWALKS (4")	SY	184

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INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

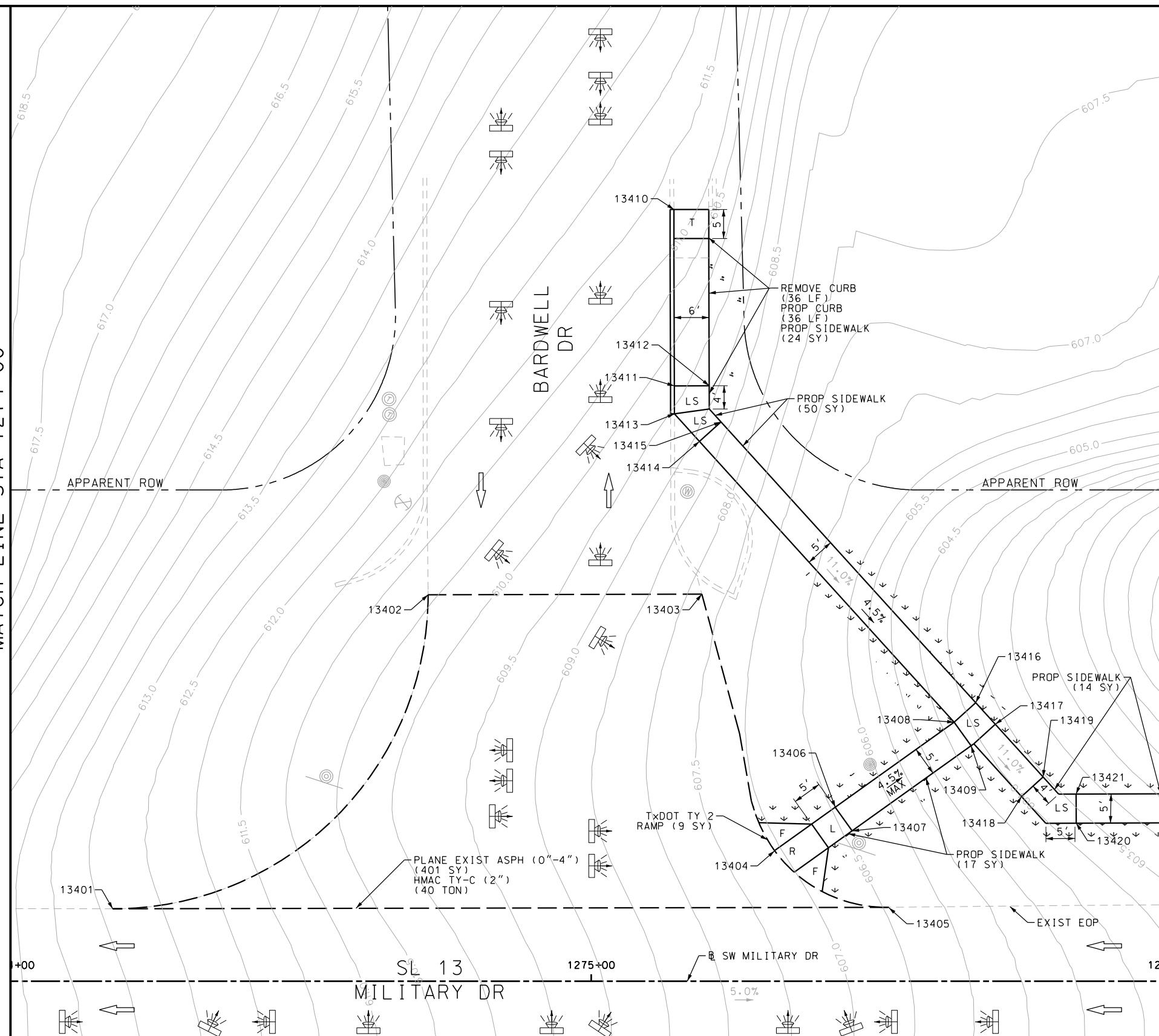
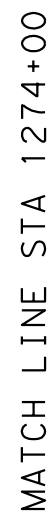


SL 13
MILITARY DRIVE
SIDEWALK
CONSTRUCTION PLAN
STA 1255+00 TO STA 1259+00

SHEET 7 OF 11					
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK	6	TEXAS			VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK	SAT	BEXAR	0915	12	576
DWG					222

POINT	NORTHING	EASTING	ELEV	DESC
13301	13679034.33	2152342.50	--	.
13302	13679030.18	2152345.89	--	.
13303	13679108.91	2152569.52	--	.
13304	13679104.16	2152571.08	--	.
13305	13679110.47	2152574.27	--	.
13306	13679114.41	2152586.25	--	.
13307	13679115.97	2152591.00	--	.
13308	13679111.22	2152592.56	--	.
13309	13679118.92	2152599.98	--	.
13310	13679114.17	2152601.54	--	.
13311	13679120.48	2152604.73	--	.
13312	13679130.14	2152634.12	--	.
13313	13679131.70	2152638.87	--	.
13314	13679126.95	2152640.43	--	.
13315	13679152.83	2152703.20	--	.
13316	13679147.44	2152702.79	--	.
13317	13679149.55	2152709.69	--	.
13318	13679143.57	2152709.34	--	.

Design Filename: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507*MilitaryDr*WB07.dgn



MATCH LINE STA 1276+00

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	36
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0529-6002	CONC CURB (TY II)	LF	36
0531-6001	CONC SIDEWALKS (4")	SY	105
0531-6018	CURB RAMPS (TY 1)	SY	9

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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
- 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13
MILITARY DRIVE
SIDEWALK
CONSTRUCTION PLAN
STA 1274+00 TO STA 1276+00

SHEET 8 OF 11

OGN	FED. RD. DIV.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN	6	TEXAS				VARIES
DWGr	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWGr	SAT	BEXAR	0915	12	576	223

SEE SHEET 224 FOR POINT TABLE

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr*WB07a.dgn

SEE SHEET 223

POINT	NORTHING	EASTING	ELEV	DESC
13401	13679618.98	2154156.24	--	.
13402	13679687.41	2154190.84	--	.
13403	13679702.29	2154235.56	--	.
13404	13679664.29	2154261.34	--	.
13405	13679661.20	2154283.10	--	.
13406	13679758.97	2154211.76	--	.
13407	13679734.88	2154219.81	--	.
13408	13679736.79	2154225.50	--	.
13409	13679727.16	2154226.92	--	.
13410	13679731.51	2154229.38	--	.
13411	13679674.65	2154268.90	--	.
13412	13679671.70	2154272.94	--	.
13413	13679699.35	2154286.22	--	.
13414	13679696.87	2154290.60	--	.
13415	13679695.00	2154283.76	--	.
13416	13679692.05	2154287.80	--	.
13417	13679690.84	2154301.25	--	.
13418	13679686.49	2154298.79	--	.
13419	13679689.82	2154307.58	--	.
13420	13679685.08	2154309.17	--	.

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018


REVIEW AND APPROVAL

INTERIM REVIEW


DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1"= 20'

REV. NO.	DATE	DESCRIPTION	BY



SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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SL 13
MILITARY DRIVE

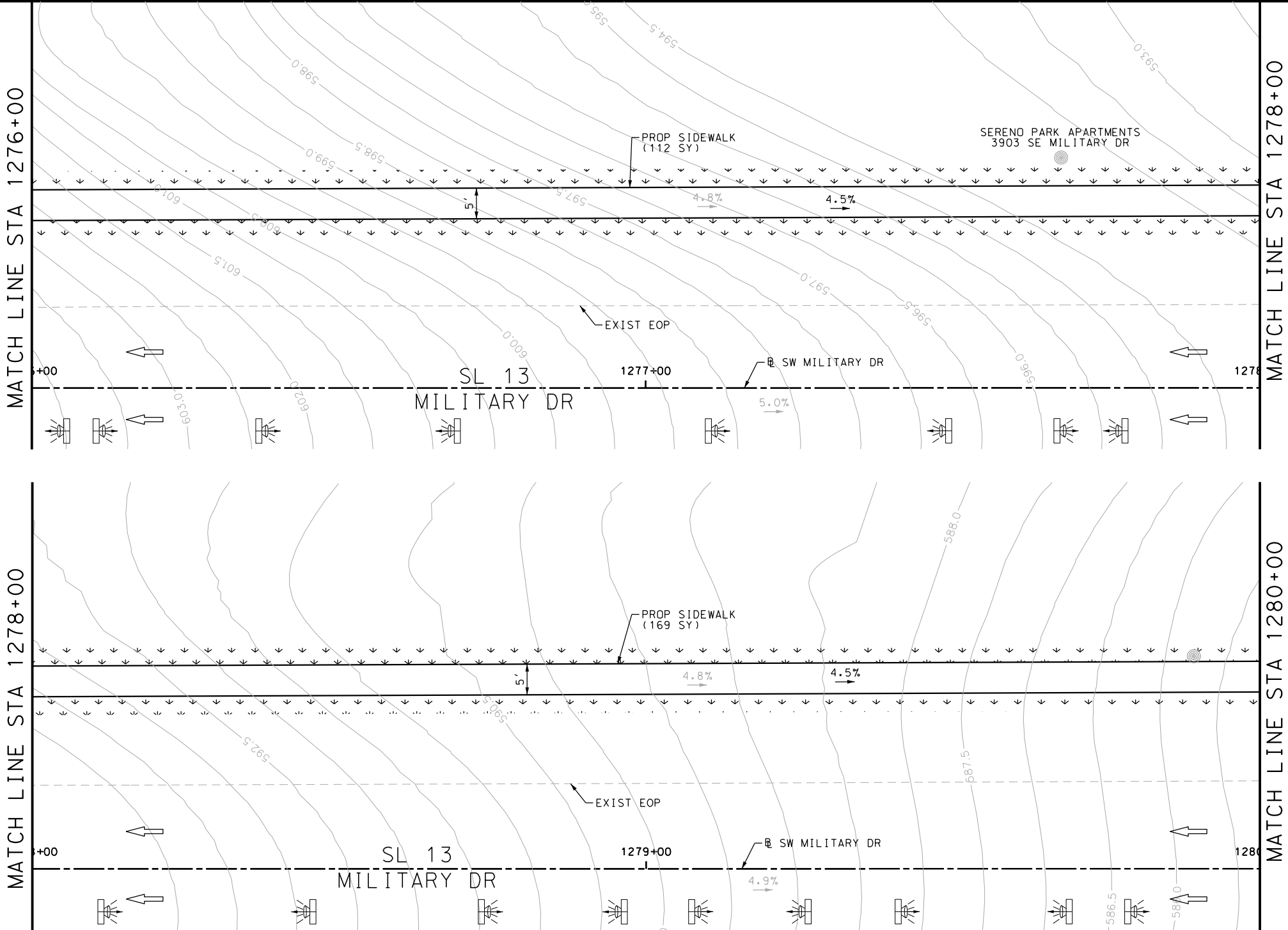
SIDEWALK
CONSTRUCTION PLAN
STA 1274+00 TO STA 1276+00
POINT TABLES

SHEET 9 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	224

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB08.dgn



POINT	NORTHING	EASTING	ELEV	DESC
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ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	267
0168-6001	VEGETATIVE WATERING	MG	4.17
0531-6001	CONC SIDEWALKS (4")	SY	271

- 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
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY
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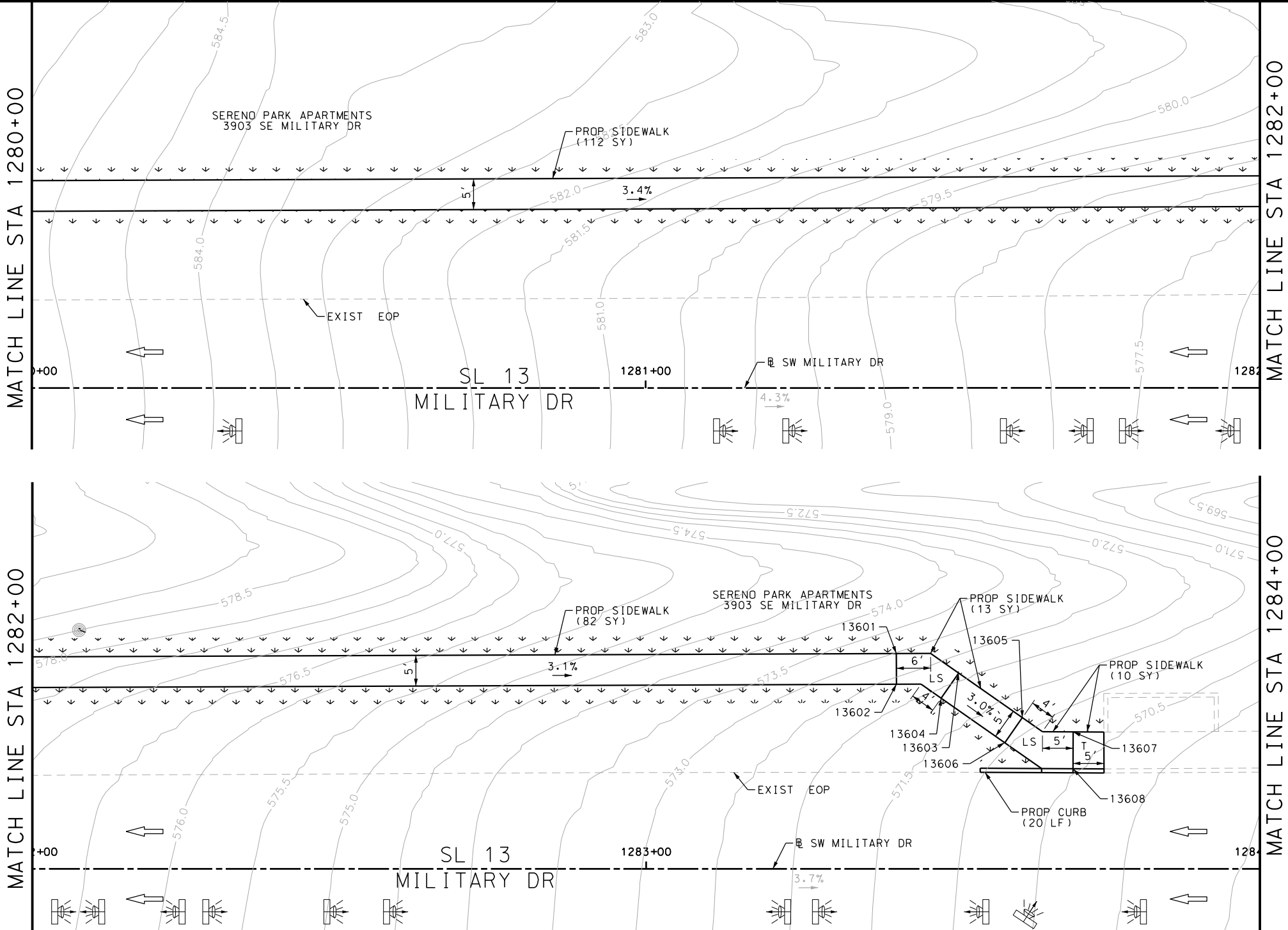
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



SL 13 MILITARY DRIVE SIDEWALK CONSTRUCTION PLAN STA 1276+00 TO STA 1280+00					
SHEET 10 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.
CHK DWG:	SAT	BEXAR	0915	12	576
					225

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Military Dr\1113507\MilitaryDr-WB09.dgn



ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	260
0168-6001	VEGETATIVE WATERING	MG	4.06
0529-6002	CONC CURB (TY II)	LF	20
0531-6001	CONC SIDEWALKS (4")	SY	217

- NOTES:
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INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
13601	13679930.26	2155025.65	--	.
13602	13679925.52	2155027.24	--	.
13603	13679930.43	2155036.30	--	.
13604	13679925.64	2155034.86	--	.
13605	13679926.79	2155048.42	--	.
13606	13679922.01	2155046.98	--	.
13607	13679927.19	2155057.01	--	.
13608	13679921.48	2155058.86	--	.

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SL 13
MILITARY DRIVE

SIDEWALK
CONSTRUCTION PLAN

STA 1280+00 TO END PROJECT

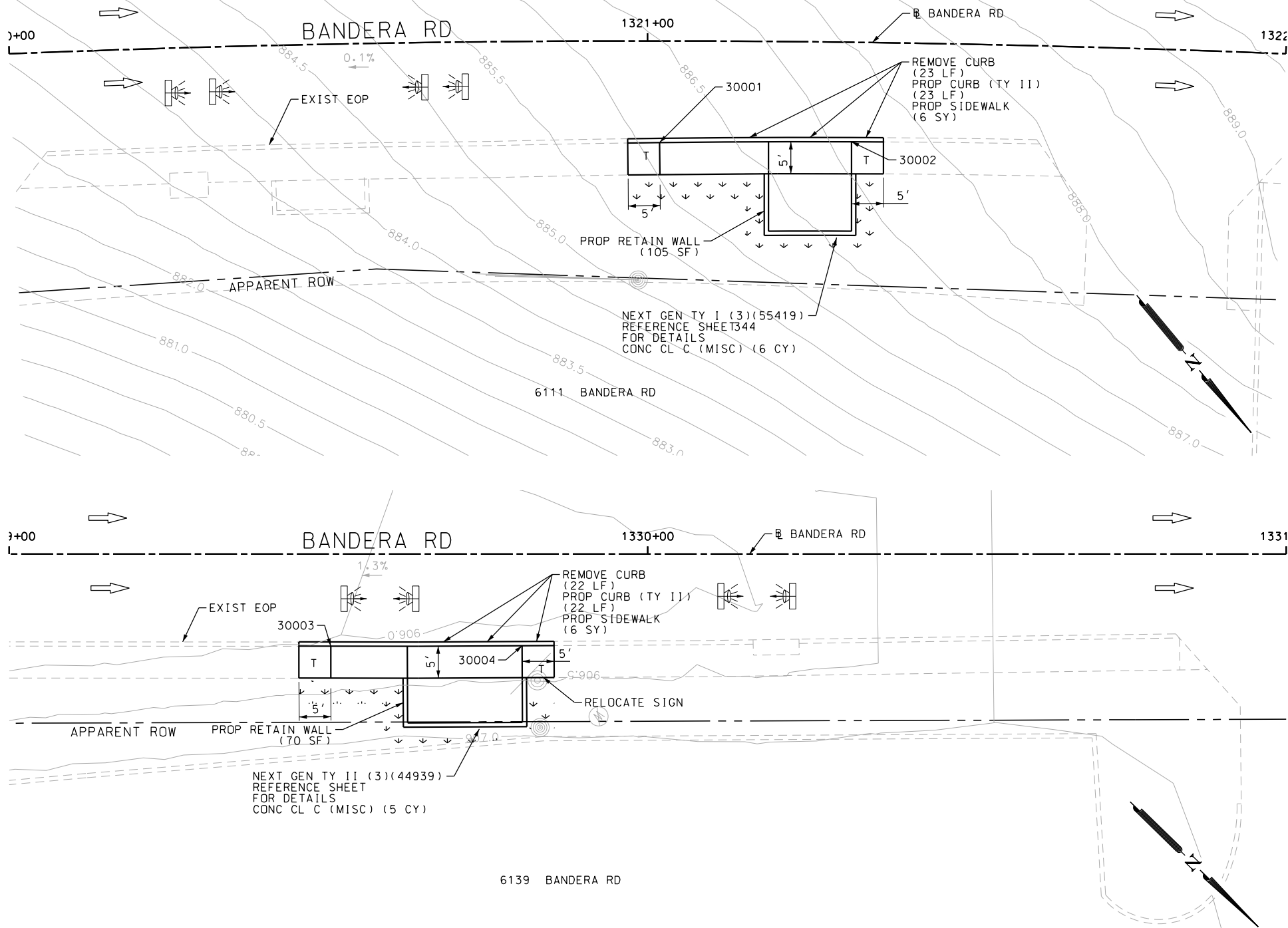
SHEET 11 OF 11

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.:	SHEET NO.:
576	226

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	70
0420-6074	CL C CONC (MISC)	CY	12.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	180
0529-6002	CONC CURB (TY II)	LF	70
0531-6001	CONC SIDEWALKS (4")	SY	29

- NOTES:
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INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

POINT	NORTHING	EASTING	ELEV	DESC
30001	13726424.15	2094476.36	--	.
30002	13726439.98	2094457.00	--	.
30003	13727067.74	2093815.64	--	.
30004	13727085.54	2093798.08	--	.

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

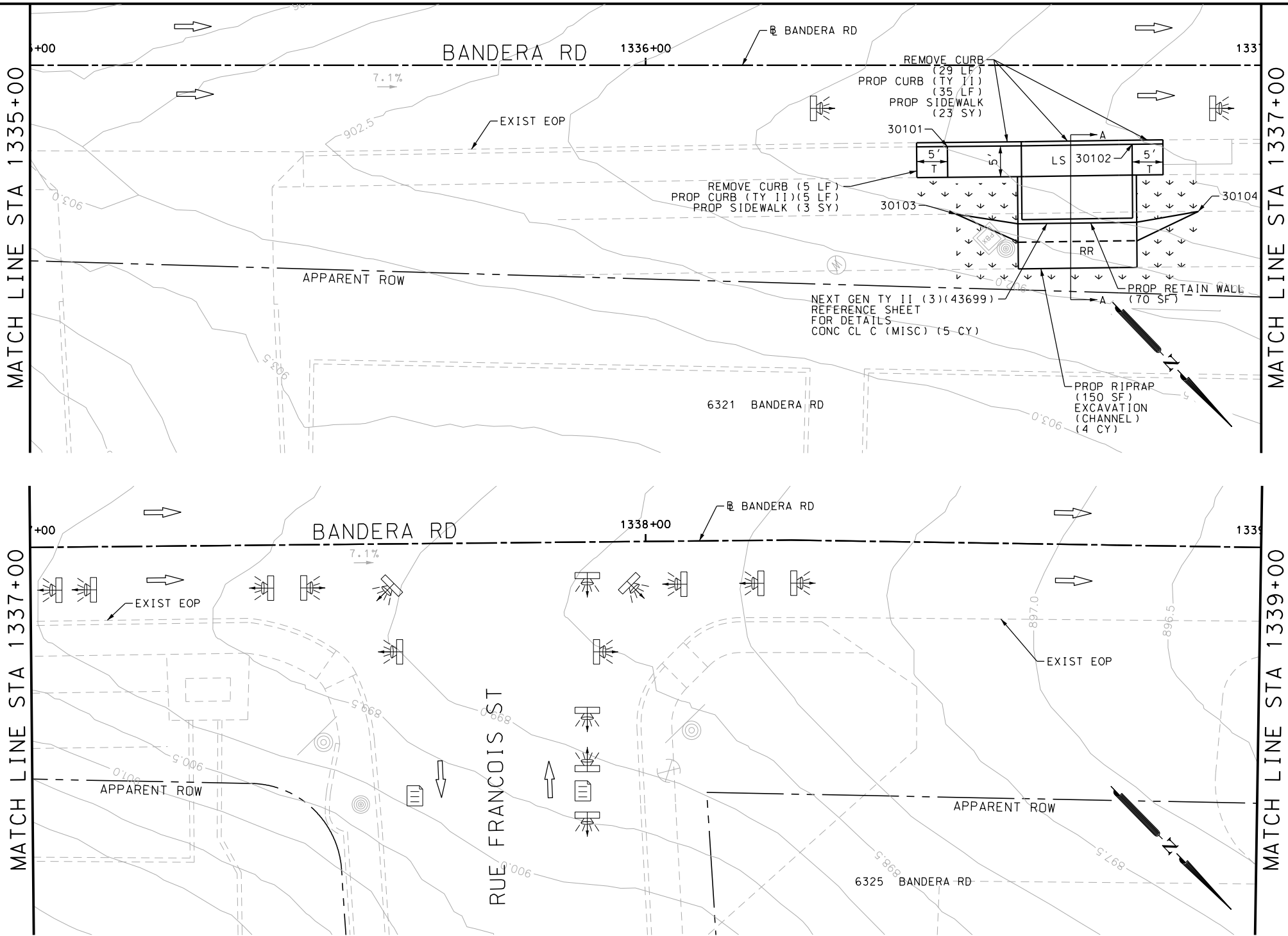
Texas Department of Transportation
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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1320+00 TO STA 1322+00
STA 1329+00 TO STA 1331+00
SHEET 1 OF 107

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

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*02.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	35
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	99
0529-6002	CONC CURB (TY II)	LF	35
0531-6001	CONC SIDEWALKS (4")	SY	10

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
30101	13727545.49	2093329.20	--	.
30102	13727562.83	2093311.20	--	.

SAN ANTONIO AUSTIN HOUSTON FORT WORTH DALLAS 2000 NW LOOP 410 SAN ANTONIO, TX 78213 210.375.9000 TBPE FIRM REGISTRATION #470 TBPLS FIRM REGISTRATION #10028800					
BANDERA RD SIDEWALK CONSTRUCTION PLAN STA 1335+00 TO STA 1339+00 SHEET 2 OF 107					
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

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*02*A.dgn



NOTES:

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



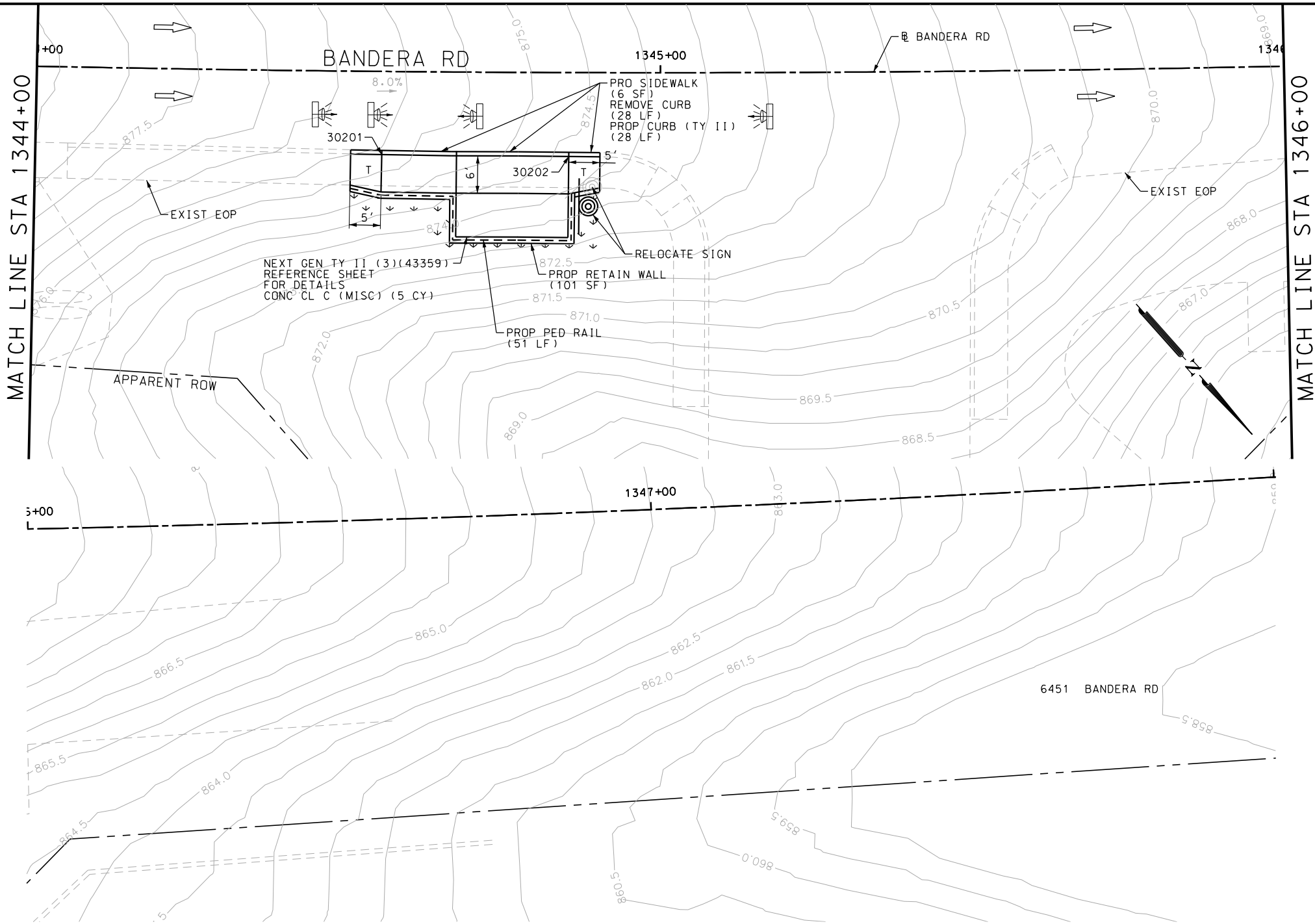
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1335+00 TO STA 1339+00

SHEET 3 OF 107

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	229

Plotted on: 11/21/2018

Design File name: P:\111135\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	37
0162-6002	BLOCK SODDING	SY	20
0168-6001	VEGETATIVE WATERING	MG	0.31
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	133
0529-6002	CONC CURB (TY II)	LF	37
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10

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ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1"= 20'

POINT	NORTHING	EASTING	ELEV	DESC
30201	13728112.19	2092752.09	--	.
30202	13728129.00	2092733.59	--	.

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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BANDERA RD

SIDEWALK
CONSTRUCTION PLAN

STA 1344+00 TO STA 1346+00

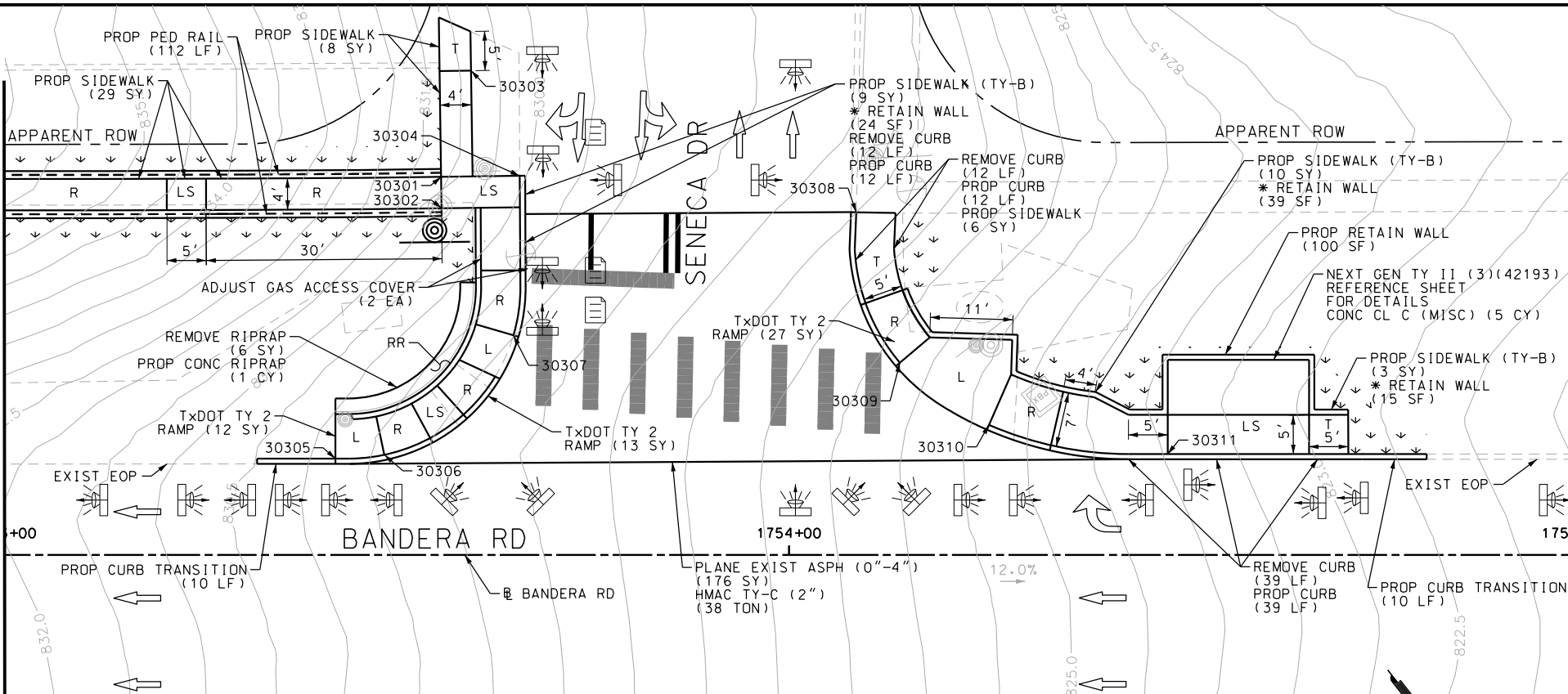
SHEET 4 OF 107

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	230

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*04.dgn

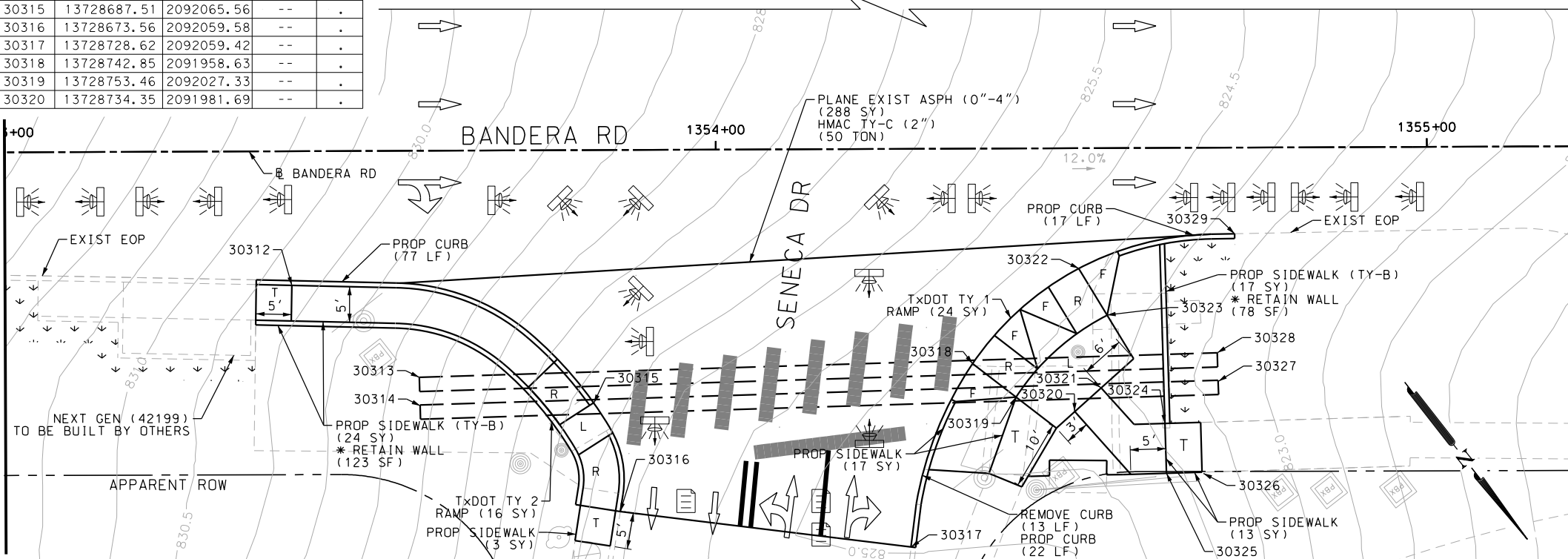
MATCH LINE STA 1753+00
SEE SHEET 291



POINT	NORTHING	EASTING	ELEV	DESC
30301	13728568.39	2091945.56	--	.
30302	13728573.77	2091938.59	--	.
30303	13728572.35	2091948.61	--	.
30304	13728577.73	2091941.63	--	.
30305	13728587.39	2091949.57	--	.
30306	13728578.90	2091941.90	--	.
30307	13728587.21	2091979.92	--	.
30308	13728604.52	2091908.62	--	.
30309	13728646.55	2091903.20	--	.
30310	13728616.38	2091914.15	--	.
30311	13728655.47	2091891.66	--	.
30312	13728663.16	2092072.84	--	.
30313	13728691.71	2092047.47	--	.
30314	13728684.27	2092063.22	--	.
30315	13728687.51	2092065.56	--	.
30316	13728673.56	2092059.58	--	.
30317	13728728.62	2092059.42	--	.
30318	13728742.85	2091958.63	--	.
30319	13728753.46	2092027.33	--	.
30320	13728734.35	2091981.69	--	.

POINT	NORTHING	EASTING	ELEV	DESC
30321	13728735.37	2091998.25	--	.
30322	13728753.98	2091966.60	--	.
30323	13728757.23	2091968.95	--	.
30324	13728558.93	2091937.43	--	.
30325	13728562.19	2091933.64	--	.
30326	13728724.31	2092055.65	--	.
30327	13728754.62	2092018.11	--	.
30328	13728758.80	2092015.36	--	.
30329	13728762.60	2091979.26	--	.
30330	13728766.52	2091982.37	--	.

MATCH LINE STA 1353+00



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	119
0340-6066	D-GR HMA(SQ) TY-C PG76-22	TON	51.0
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	464
0420-6074	CL C CONC (MISC)	CY	12.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	266
0464-6005	RC PIPE (CL III)(24 IN)	LF	52
0529-6002	CONC CURB (TY II)	LF	119
0531-6001	CONC SIDEWALKS (4")	SY	69
0531-6018	CURB RAMPS (TY 1)	SY	24
0531-6019	CURB RAMPS (TY 2)	SY	59
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	116
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	2
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

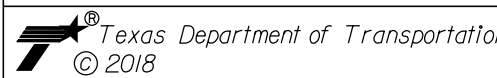
REV. NO.	DATE	DESCRIPTION	BY

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1353+00 TO STA 1355+00

STA 1753+00 TO STA 1755+00

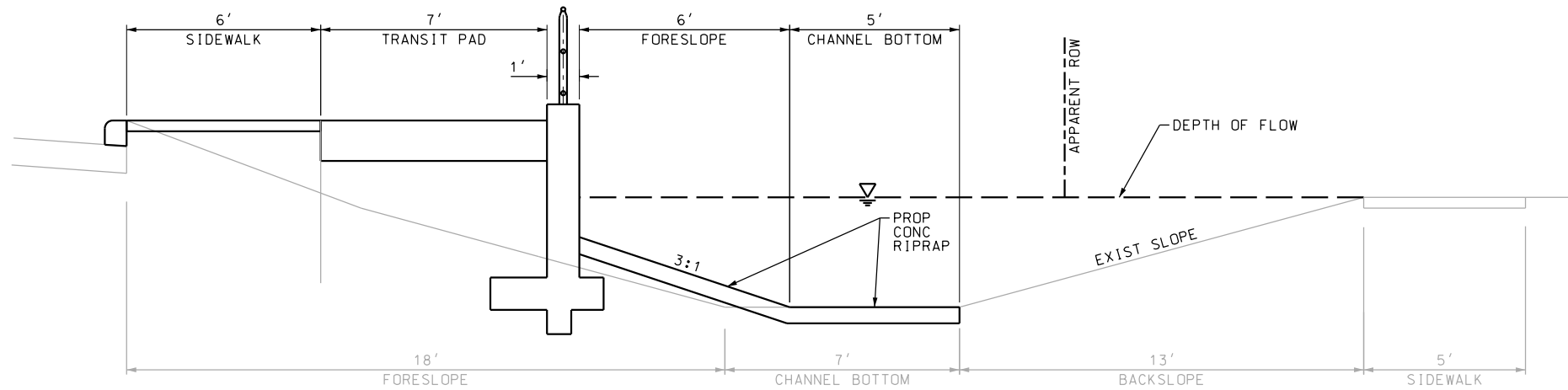
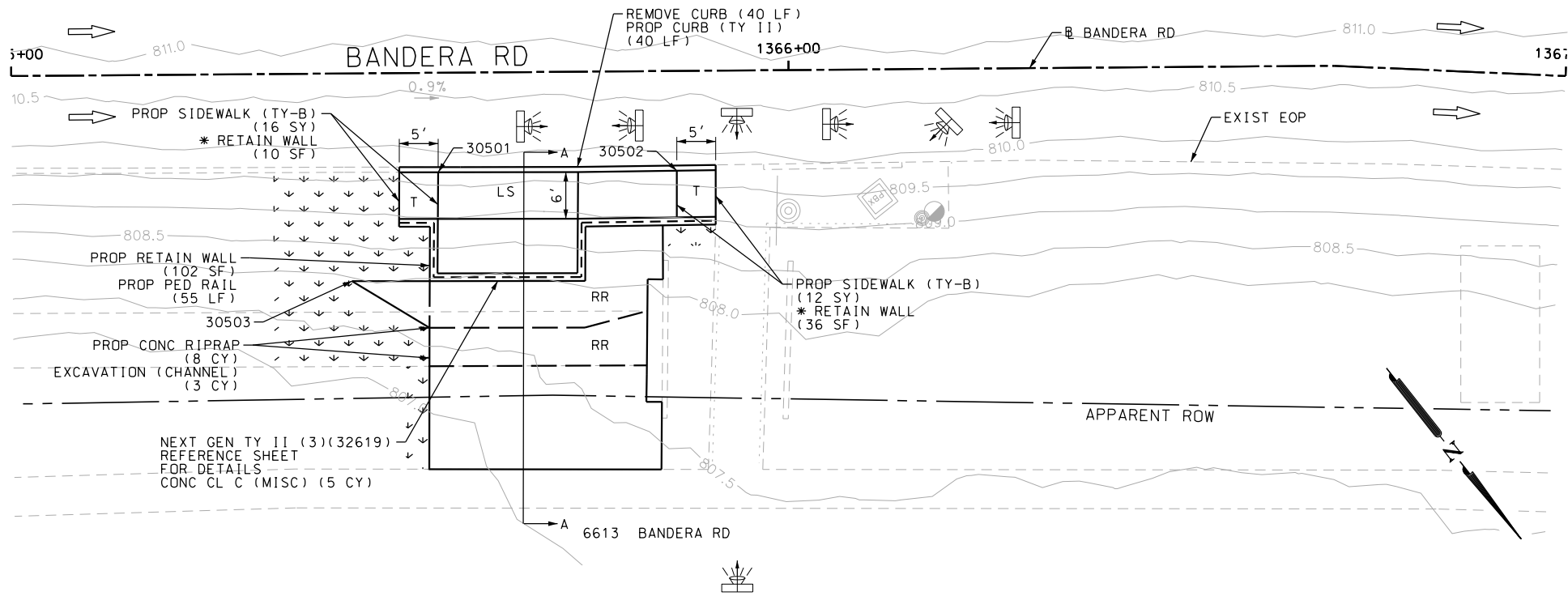
SHEET 5 OF 107

SHEET 5 OF 1

DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VAR
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	231

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*06.dgn



EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^*(2/3))(S^*(1/2))$				$Q = (Z/n)A(R^*(2/3))(S^*(1/2))$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.003	FT/FT	S	FL SLOPE	0.003	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.022	
A	AREA	66.5	SQ FT	A	AREA	54.10	SQ FT
P	WETTED PERIMETER	32.8	FT	P	WETTED PERIMETER	26.30	FT
R	HYDRAULIC RADIUS	2.03	FT	R	HYDRAULIC RADIUS	2.06	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	289.0	CFS	Q	DISCHARGE	323.7	CFS

POINT	NORTHING	EASTING	ELEV	DESC
30501	13729408.40	2091099.28	--	.
30502	13729423.14	2091081.62	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	40
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	90
0529-6002	CONC CURB (TY II)	LF	40
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	13

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

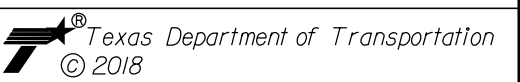
DATE: 11/21/2018

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



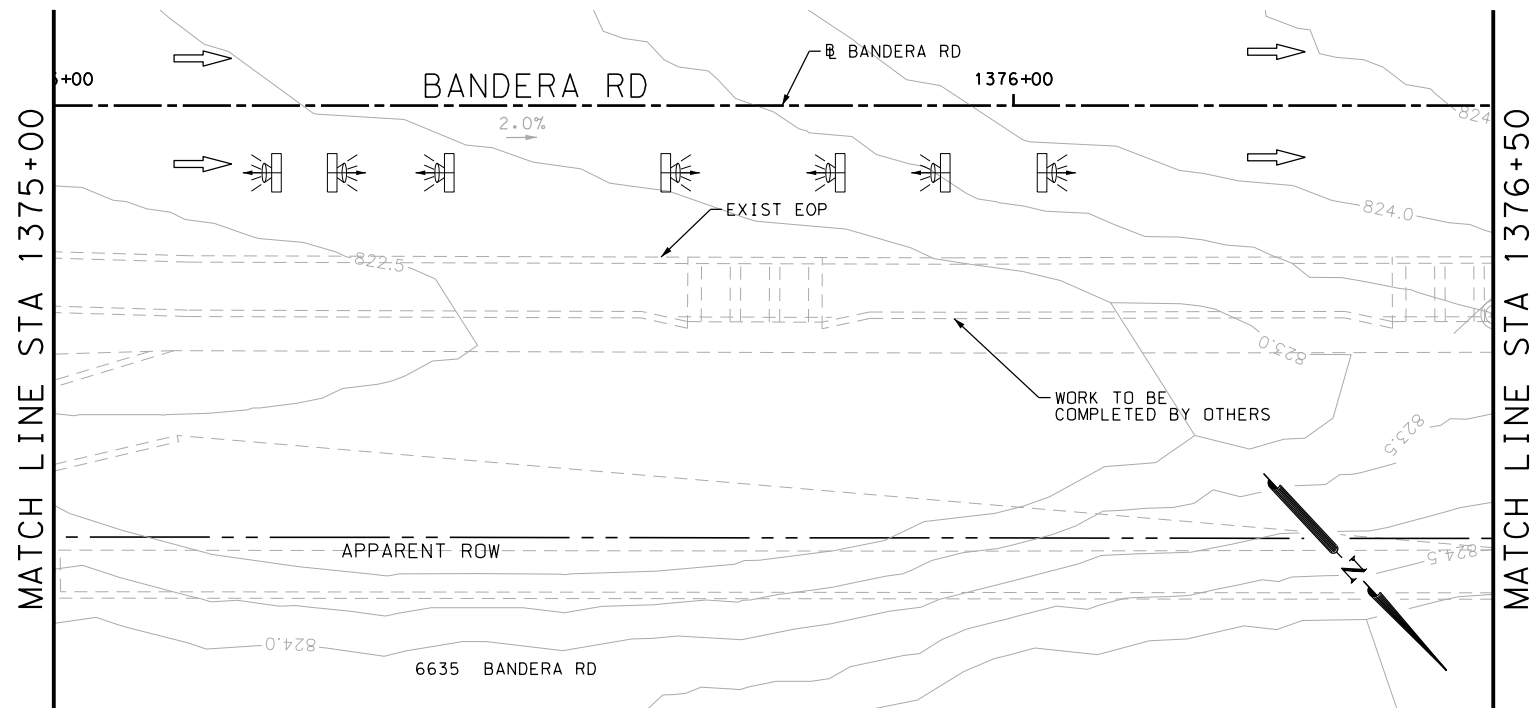
BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1365+00 TO STA 1367+00

SHEET 6 OF 107					
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
					232

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*07.dgn



NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW


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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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 TPBE FIRM REGISTRATION #470 TBPFS FIRM REGISTRATION #10028800				

BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1373+00 TO STA 1376+50

SHEET 7 OF 107

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	233

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*08.dgn



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INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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



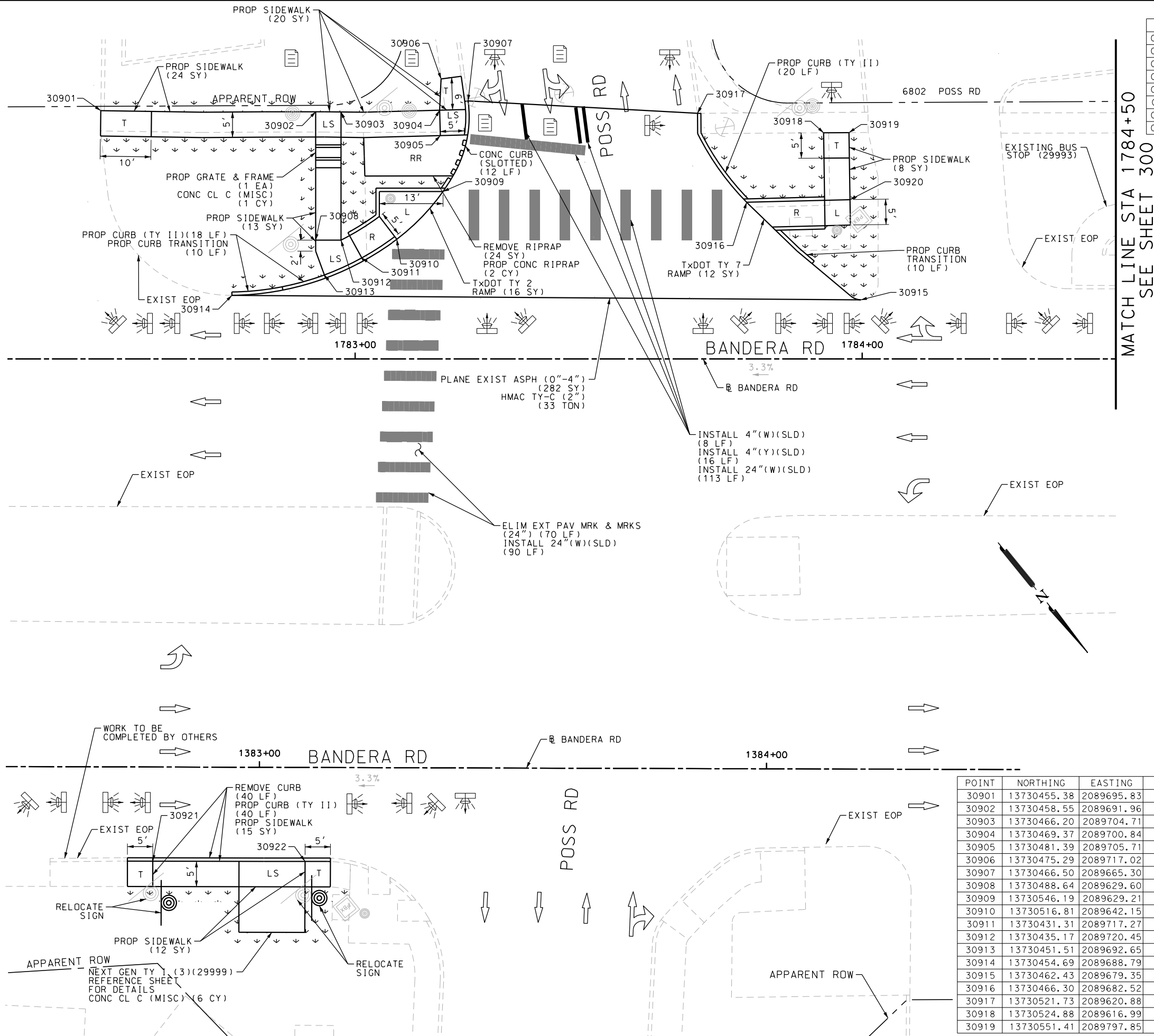
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1376+50 TO STA 1378+50
STA 1776+00 TO STA 1778+00

SHEET 8 OF 107

DCN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN ₂	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₂	SAT	BEXAR	0915	12	576	234

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr-WB*10.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	102
0340-6066	D-GR HMA (SQ) TY-C PG76-22	TON	28.0
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	256
0420-6074	CL C CONC (MISC)	CY	6.0
0529-6002	CONC CURB (TY II)	LF	102
0531-6001	CONC SIDEWALKS (4")	SY	65
0531-6018	CURB RAMPS (TY 1)	SY	8
0531-6019	CURB RAMPS (TY 2)	SY	16

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
30901	13730455.38	2089695.83	--	.
30902	13730458.55	2089691.96	--	.
30903	13730466.20	2089704.71	--	.
30904	13730469.37	2089700.84	--	.
30905	13730481.39	2089705.71	--	.
30906	13730475.29	2089717.02	--	.
30907	13730466.50	2089665.30	--	.
30908	13730488.64	2089629.60	--	.
30909	13730546.19	2089629.21	--	.
30910	13730516.81	2089642.15	--	.
30911	13730431.31	2089717.27	--	.
30912	13730435.17	2089720.45	--	.
30913	13730451.51	2089692.65	--	.
30914	13730454.69	2089688.79	--	.
30915	13730462.43	2089679.35	--	.
30916	13730466.30	2089682.52	--	.
30917	13730521.73	2089620.88	--	.
30918	13730524.88	2089616.99	--	.
30919	13730551.41	2089797.85	--	.

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1382+50 TO STA 1384+50

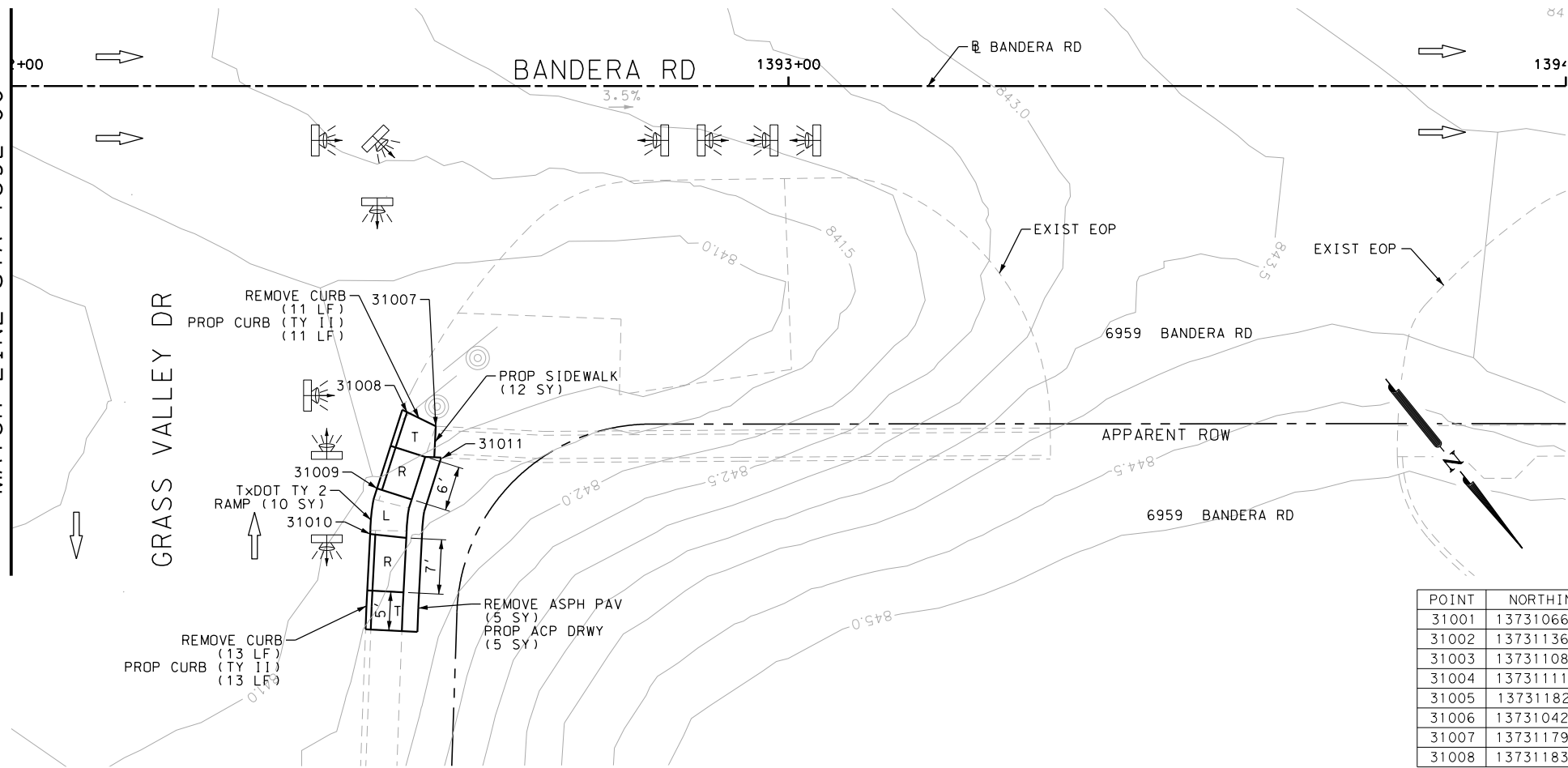
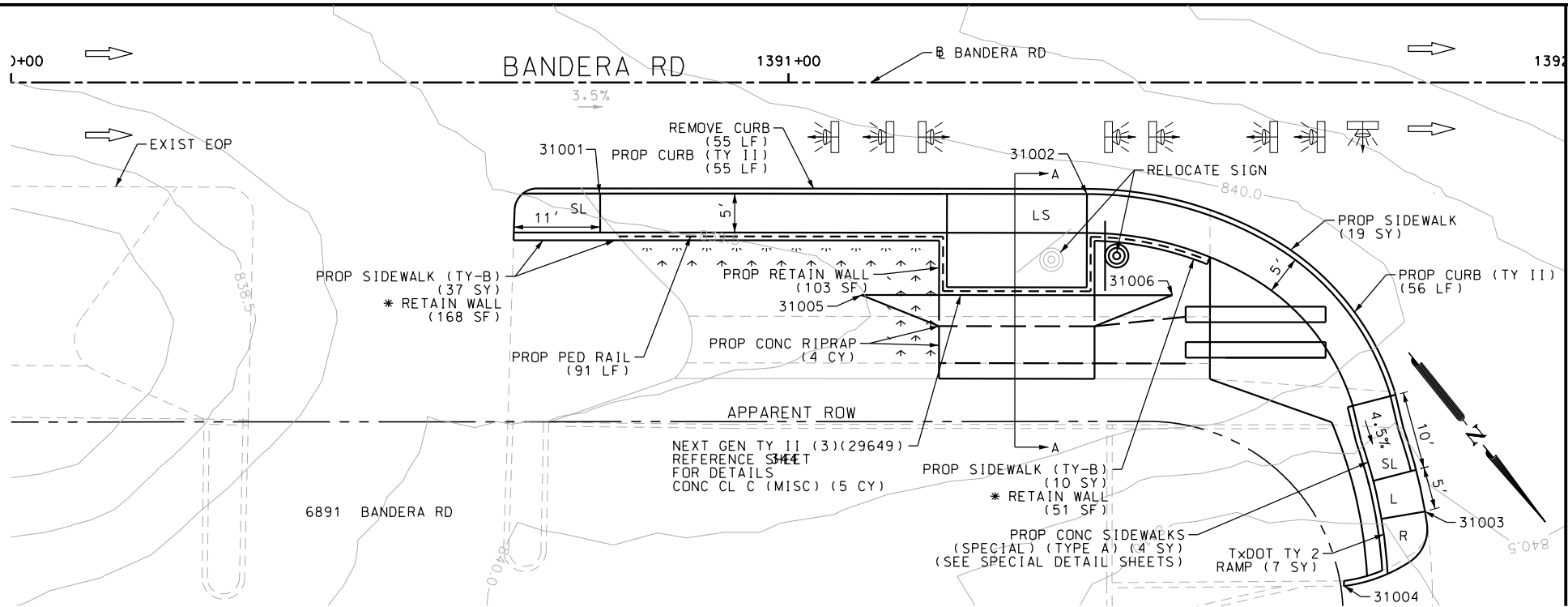
STA 1782+50 TO STA 1784+50

SHEET 9 OF 107

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	SAT	BEXAR	0915	12
DWG				576
				235

Plotted on: 11/21/2018

Design File name: P:\11135\05\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*11.dgn



POINT	NORTHING	EASTING	ELEV	DESC
31001	13731066.04	2089160.40	--	.
31002	13731136.86	2089128.55	--	.
31003	13731108.88	2089140.99	--	.
31004	13731111.83	2089143.18	--	.
31005	13731182.11	2089080.40	--	.
31006	13731042.36	2089190.53	--	.
31007	13731179.34	2089066.39	--	.
31008	13731183.26	2089069.49	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	69
0340-6066	D-GR HMA(SQ) TY-C PG76-22	TON	52.0
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	473
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	93
0464-6005	RC PIPE (CL III) (24 IN)	LF	30
0529-6002	CONC CURB (TY II)	LF	69
0531-6001	CONC SIDEWALKS (4")	SY	33
0531-6019	CURB RAMPS (TY 2)	SY	15
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	38

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



BANDERA RD

SIDEWALK

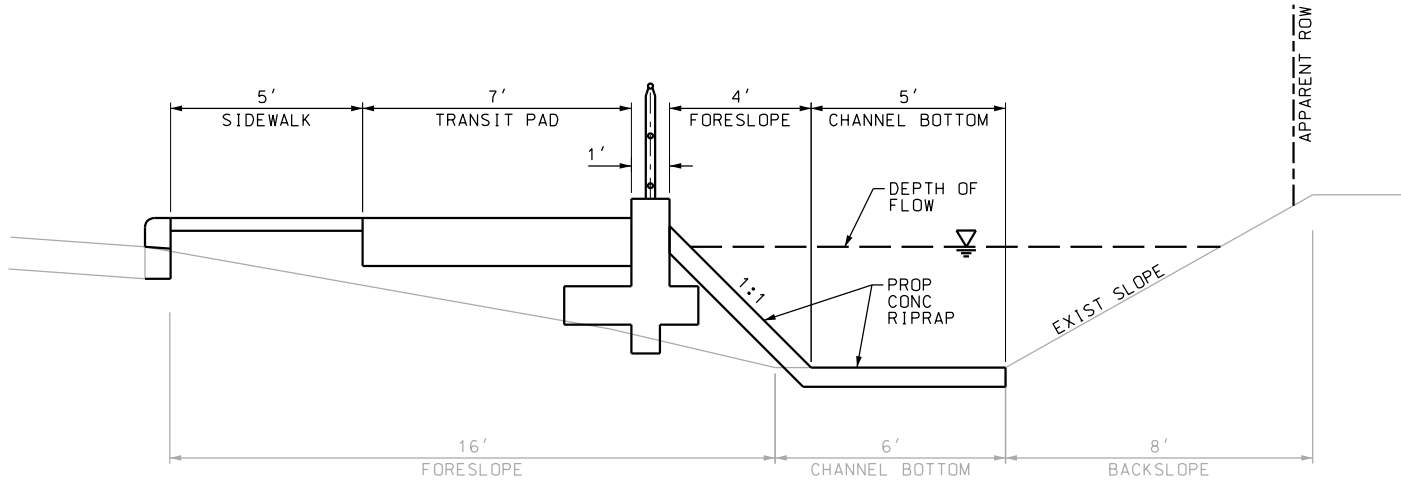
CONSTRUCTION PLAN

STA 1390+00 TO STA 1394+00

SHEET 10 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*11*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.007	FT/FT	S	FL SLOPE	0.007	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.015	
A	AREA	51.4	SQ FT	A	AREA	29.70	SQ FT
P	WETTED PERIMETER	28.6	FT	P	WETTED PERIMETER	15.90	FT
R	HYDRAULIC RADIUS	1.80	FT	R	HYDRAULIC RADIUS	1.87	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	314.9	CFS	Q	DISCHARGE	373.4	CFS

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DATE: 11/21/2018

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P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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BANDERA RD

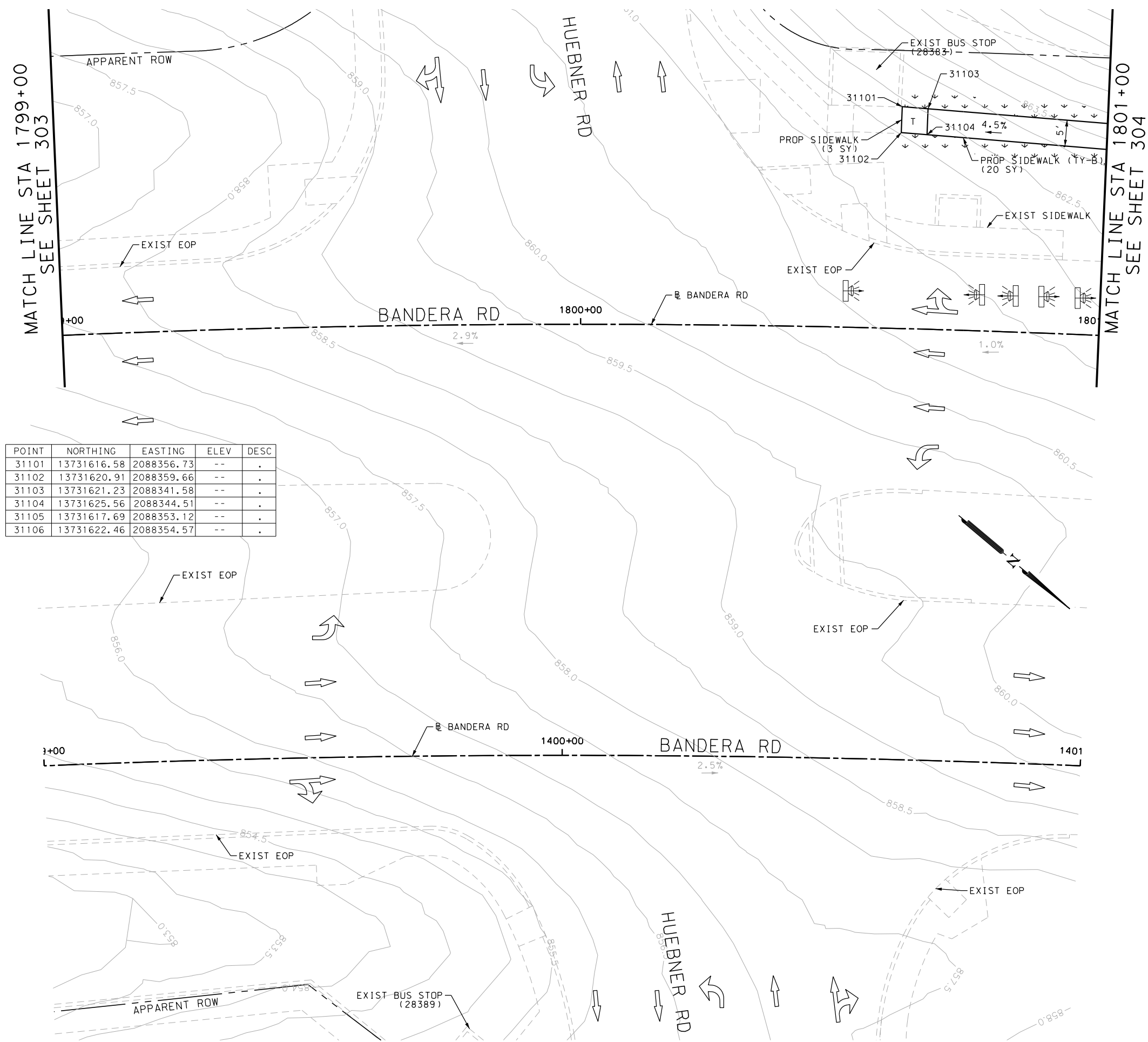
SIDEWALK
CONSTRUCTION PLAN

STA 1390+00 TO STA 1394+00

SHEET 11 OF 107						
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	237

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*12.dgn



POINT	NORTHING	EASTING	ELEV	DESC
31101	13731616.58	2088356.73	--	.
31102	13731620.91	2088359.66	--	.
31103	13731621.23	2088341.58	--	.
31104	13731625.56	2088344.51	--	.
31105	13731617.69	2088353.12	--	.
31106	13731622.46	2088354.57	--	.

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	30
0168-6001	VEGETATIVE WATERING	MG	0.47
0531-6001	CONC SIDEWALKS (4")	SY	24

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P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

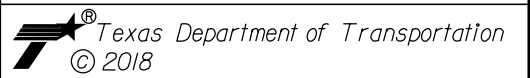
REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000

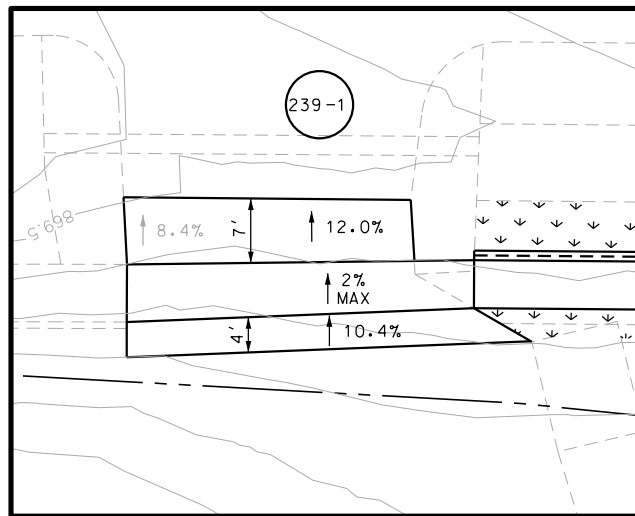
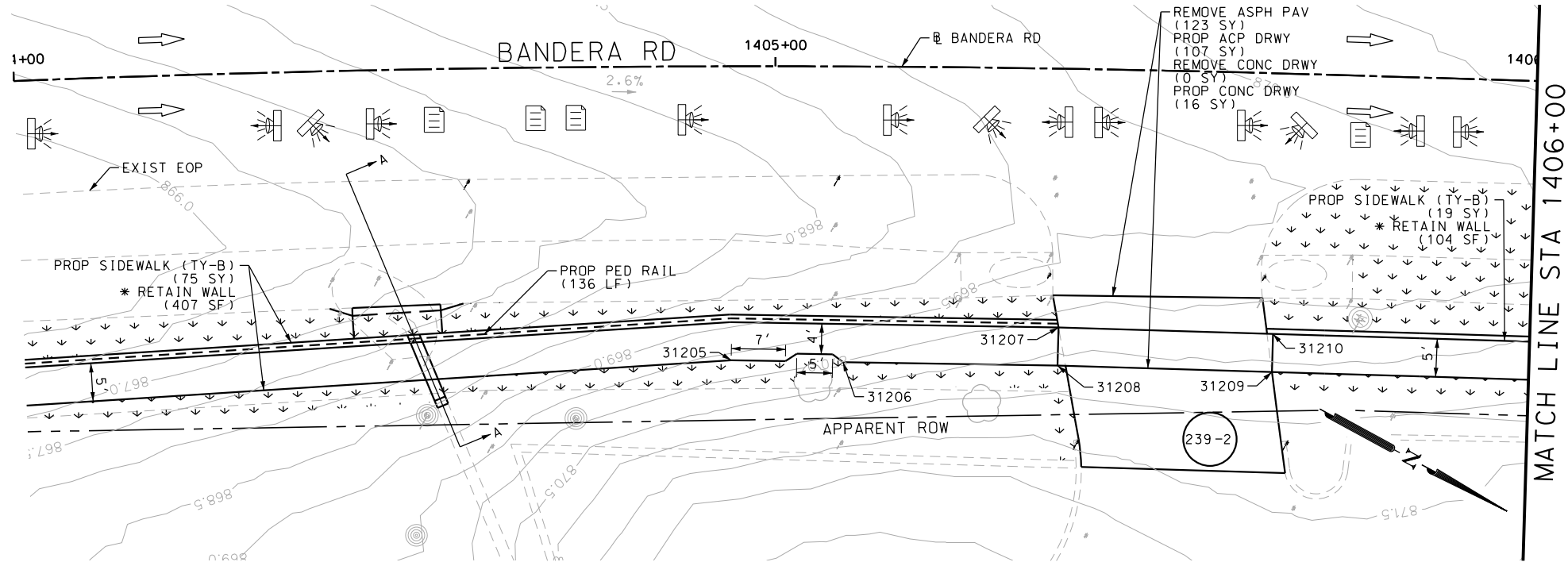
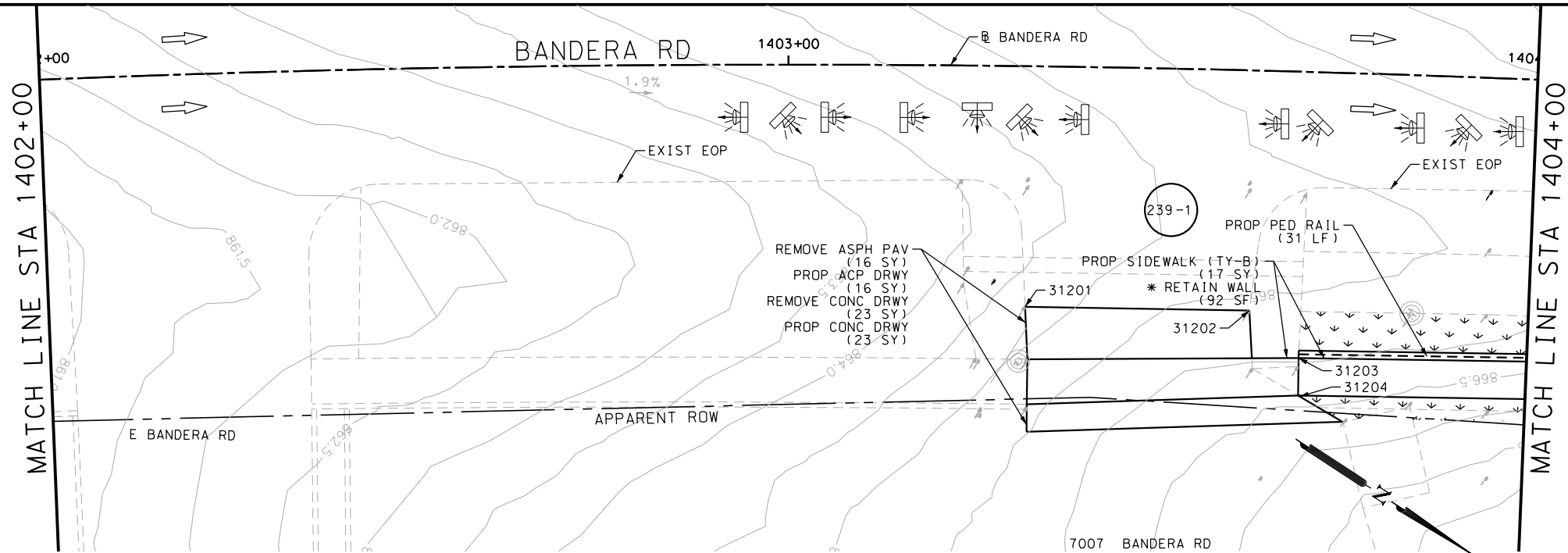
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



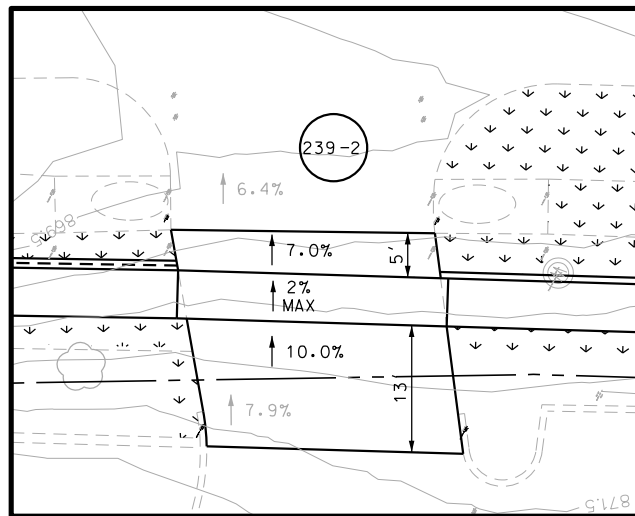
BANDERA RD					
SIDEWALK					
CONSTRUCTION PLAN					
STA 1399+00 TO STA 1401+00					
STA 1799+00 TO STA 1801+00					
SHEET 12 OF 107					
DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.	
CHK DGN:	6	TEXAS		VARIES	
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*WB*13.dgn



DRWY PLAN STA 1403+51



DRWY PLAN STA 1405+53

POINT	NORTHING	EASTING	ELEV	DESC
31201	13732022.12	2088275.43	--	.
31202	13732023.38	2088280.49	--	.
31203	13732037.62	2088276.09	--	.
31204	13732039.87	2088281.19	--	.
31205	13732047.08	2088264.77	--	.
31206	13732050.33	2088268.68	--	.
31207	13732102.81	2088233.48	--	.
31208	13732106.04	2088237.40	--	.
31209	13731967.02	2088307.85	--	.
31210	13731969.56	2088312.16	--	.
31211	13732113.09	2088221.43	--	.
31212	13732116.89	2088224.67	--	.
31213	13732138.74	2088205.70	--	.
31214	13732140.94	2088210.19	--	.

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	135
0168-6001	VEGETATIVE WATERING	MG	2.11
0531-6001	CONC SIDEWALKS (4")	SY	44
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	77
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	1
7090-6001	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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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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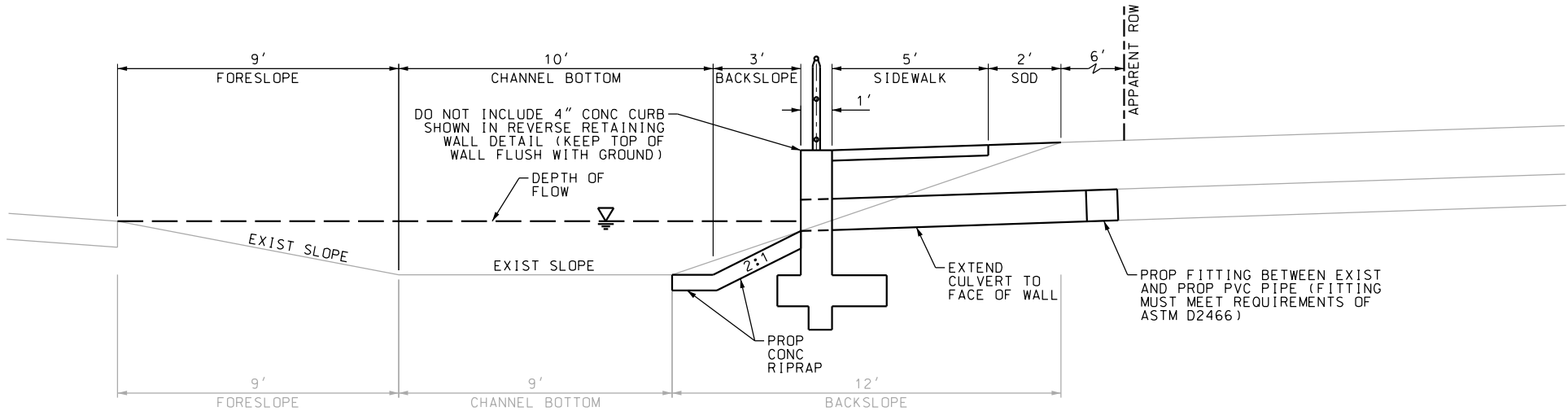
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1402+00 TO STA 1406+00

SHEET 13 OF 107

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK	6	TEXAS				VARIES
WG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK	SAT	BEXAR	0915	12	576	239

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*13*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.055	FT/FT	S	FL SLOPE	0.055	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	27.1	SQ FT	A	AREA	27.90	SQ FT
P	WETTED PERIMETER	23.3	FT	P	WETTED PERIMETER	22.70	FT
R	HYDRAULIC RADIUS	1.17	FT	R	HYDRAULIC RADIUS	1.23	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	349.3	CFS	Q	DISCHARGE	371.9	CFS

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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BANDERA RD

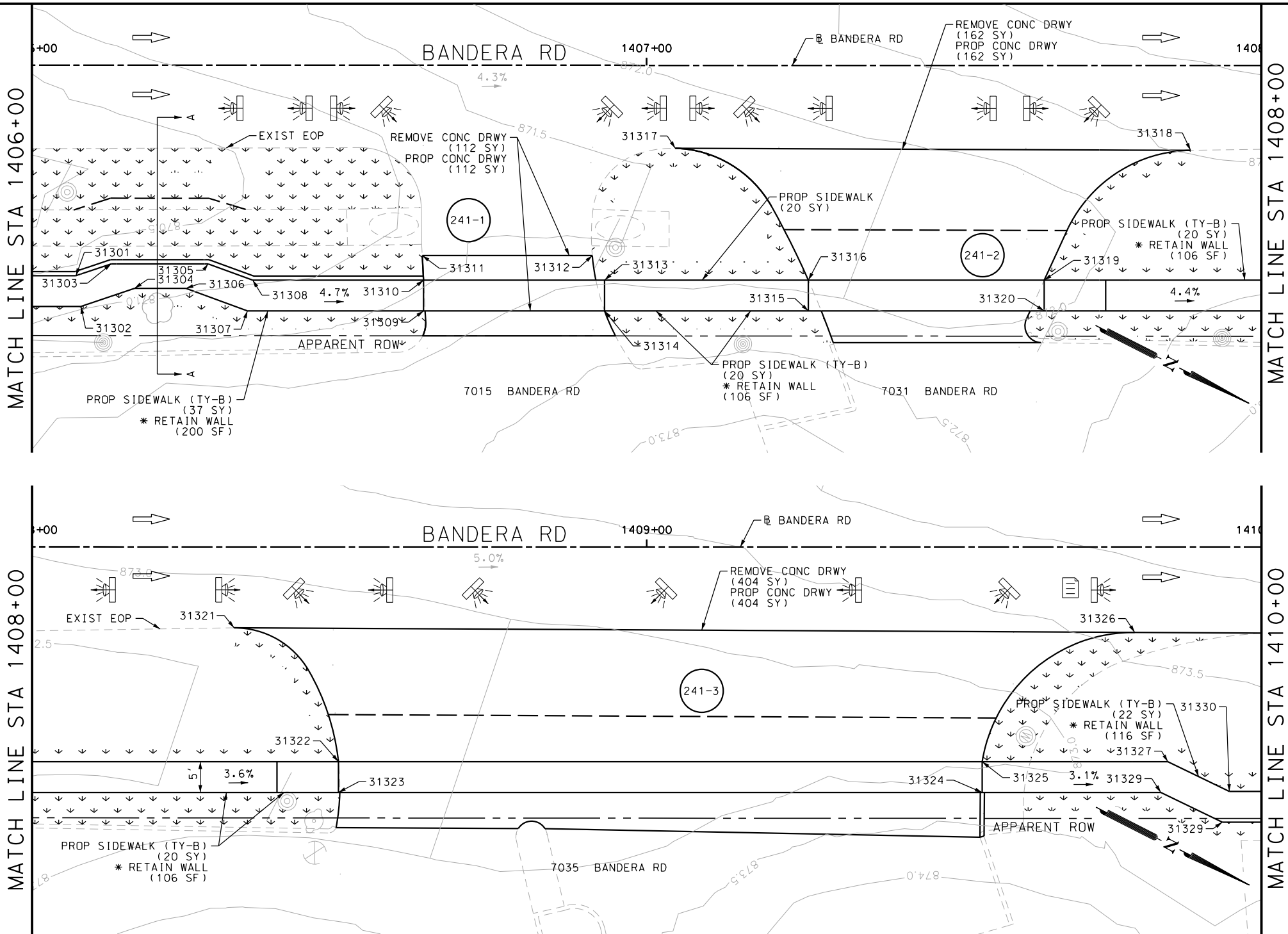
SIDEWALK
CONSTRUCTION PLAN

STA 1402+00 TO STA 1406+00

SHEET 14 OF 107						
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	240

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\WB*14.dgn



ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0531-6001	CONC SIDEWALKS (4")	SY	90
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	38

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
31301	13732215.92	2088167.96	--	.
31302	13732218.11	2088172.45	--	.
31303	13732247.46	2088153.09	--	.
31304	13732249.73	2088157.55	--	.
31305	13732270.08	2088141.55	--	.
31306	13732272.35	2088146.00	--	.
31307	13732311.53	2088121.51	--	.
31308	13732313.80	2088125.96	--	.
31309	13732379.63	2088086.75	--	.
31310	13732381.90	2088091.20	--	.
31311	13732489.33	2088031.94	--	.
31312	13732491.49	2088036.45	--	.

PAPE-DAWSON ENGINEERS

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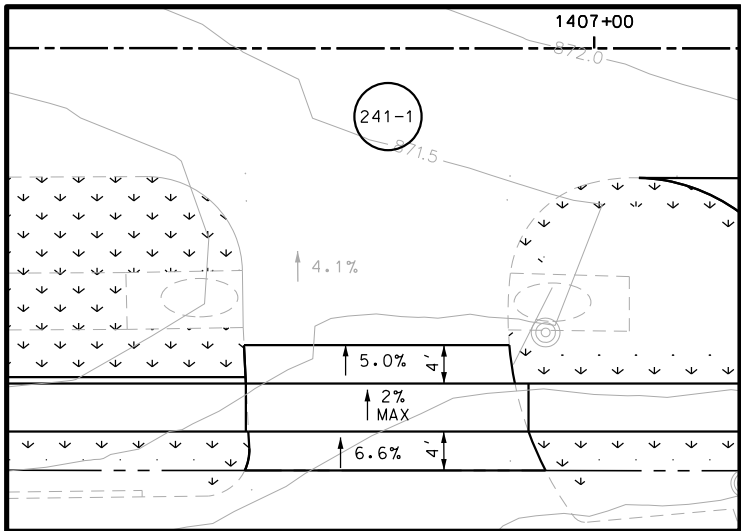
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1406+00 TO STA 1410+00

SHEET 15 OF 107

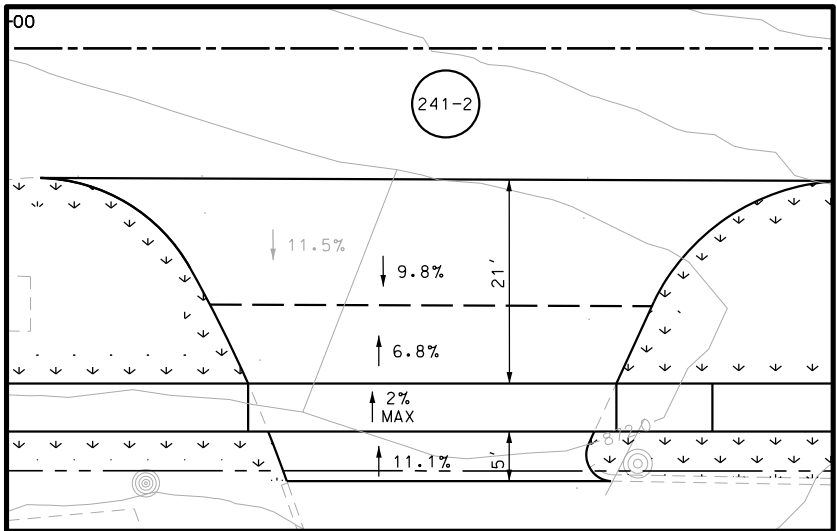
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12

Plotted on: 11/21/2018

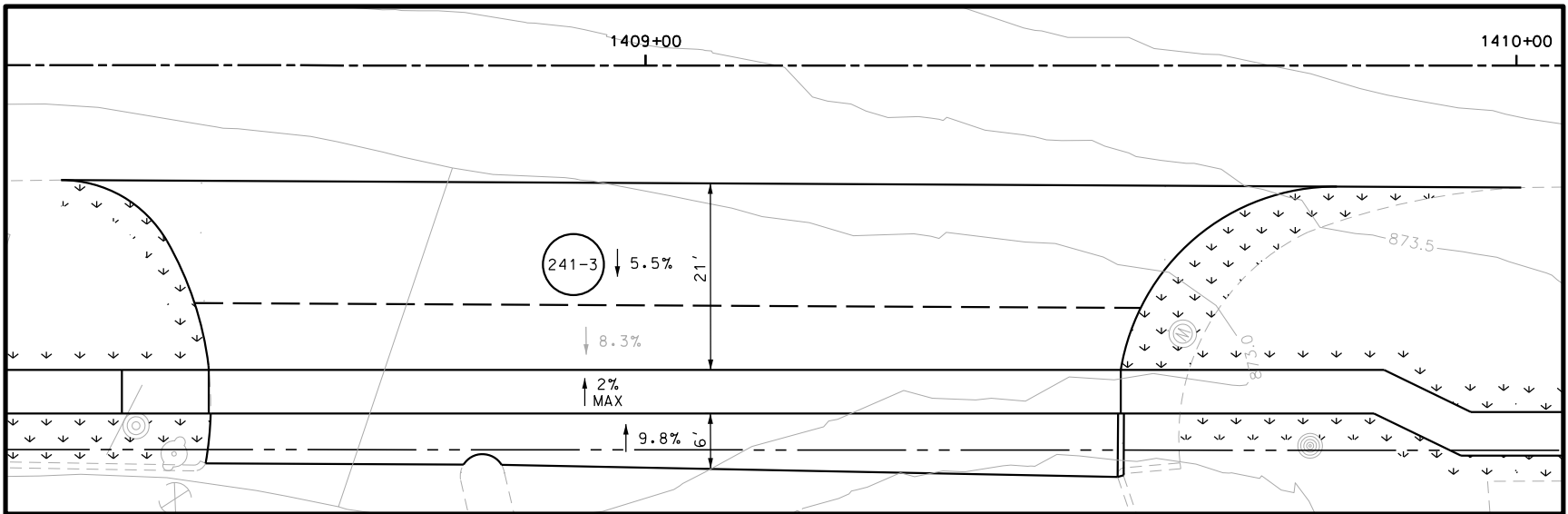
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DRWY PLAN STA 1406+78



DRWY PLAN STA 1407+46



DRWY PLAN STA 1409+06

NOTES:

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DESIGN

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

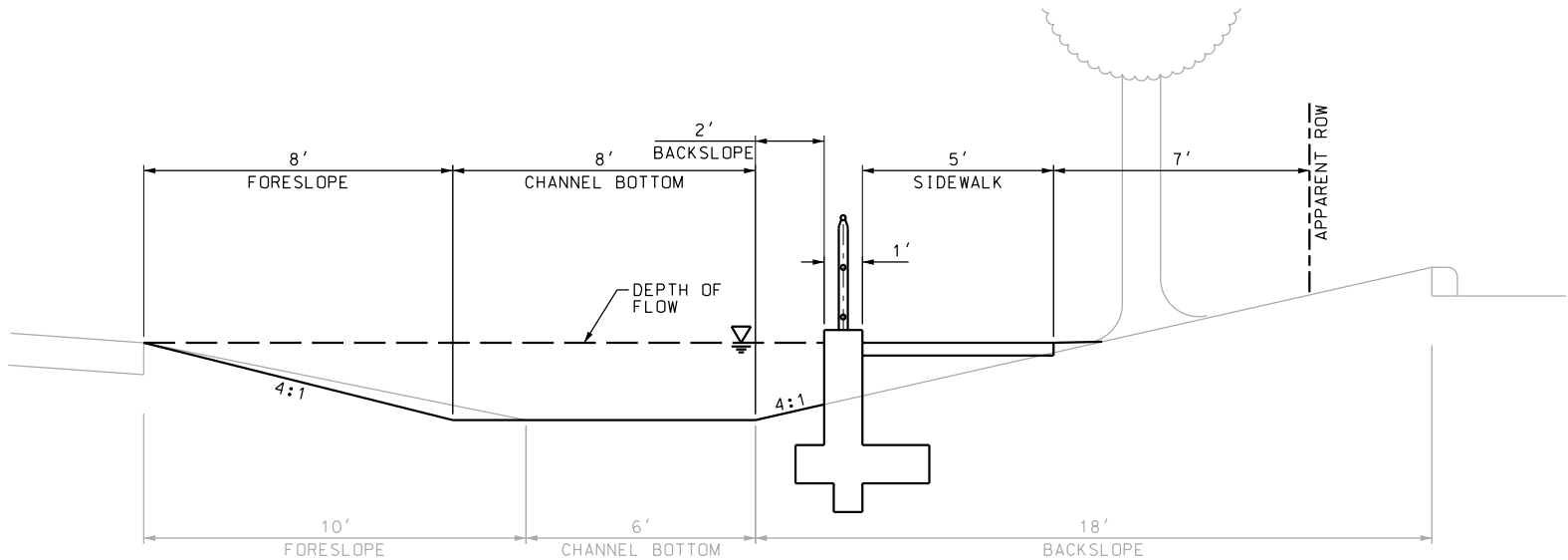


BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1406+00 TO STA 1410+00

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

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*14*B.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.011	FT/FT	S	FL SLOPE	0.011	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	31.3	SQ FT	A	AREA	27.43	SQ FT
P	WETTED PERIMETER	25.4	FT	P	WETTED PERIMETER	18.10	FT
R	HYDRAULIC RADIUS	1.23	FT	R	HYDRAULIC RADIUS	1.52	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	186.9	CFS	Q	DISCHARGE	188.0	CFS

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

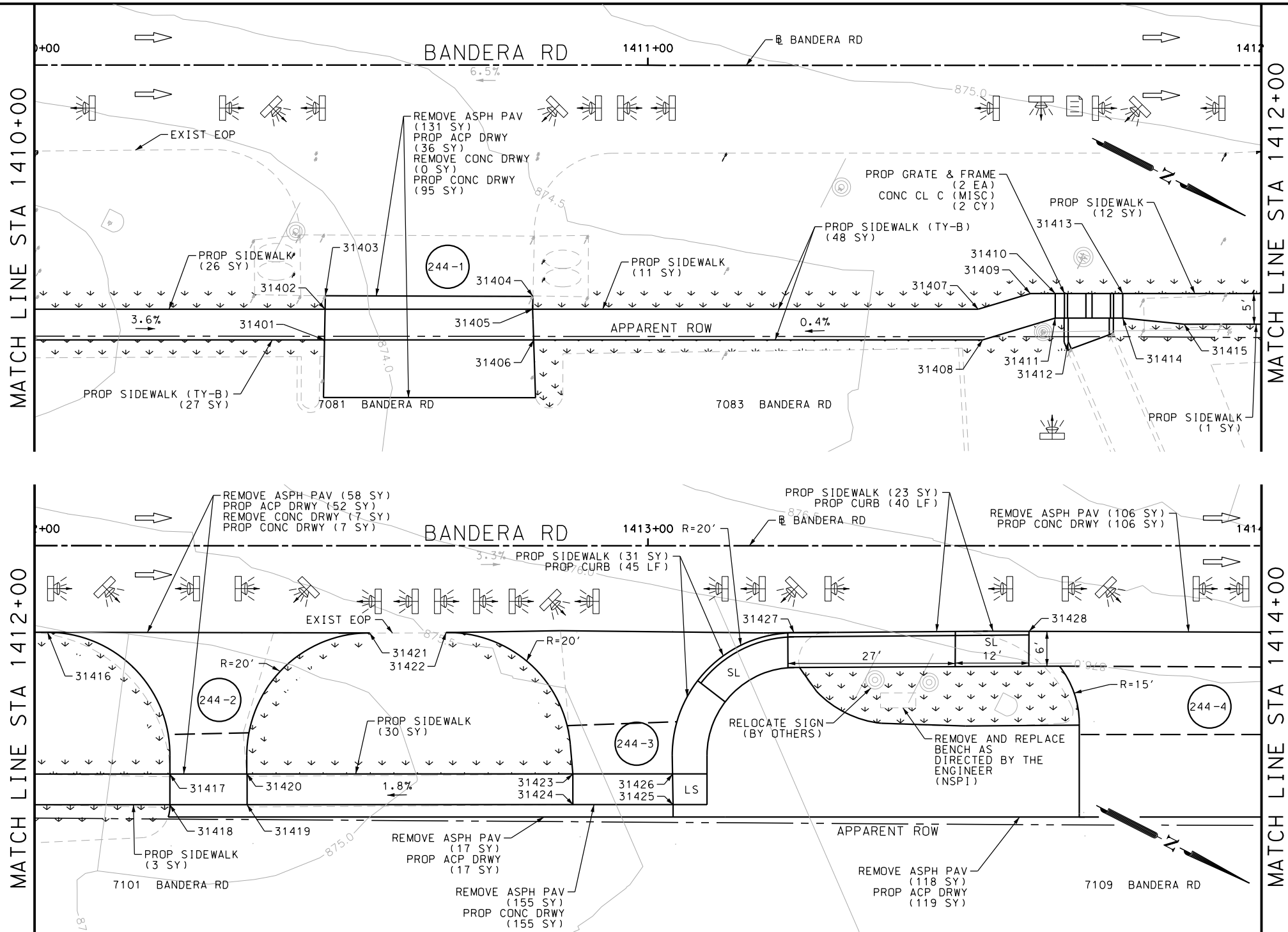
STA 1406+00 TO STA 1410+00

SHEET 17 OF 107

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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\WB*15.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	50
0162-6002	BLOCK SODDING	SY	200
0168-6001	VEGETATIVE WATERING	MG	3.12
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	99
0529-6002	CONC CURB (TY II)	LF	50
0531-6001	CONC SIDEWALKS (4")	SY	164
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	38

- NOTES:
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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

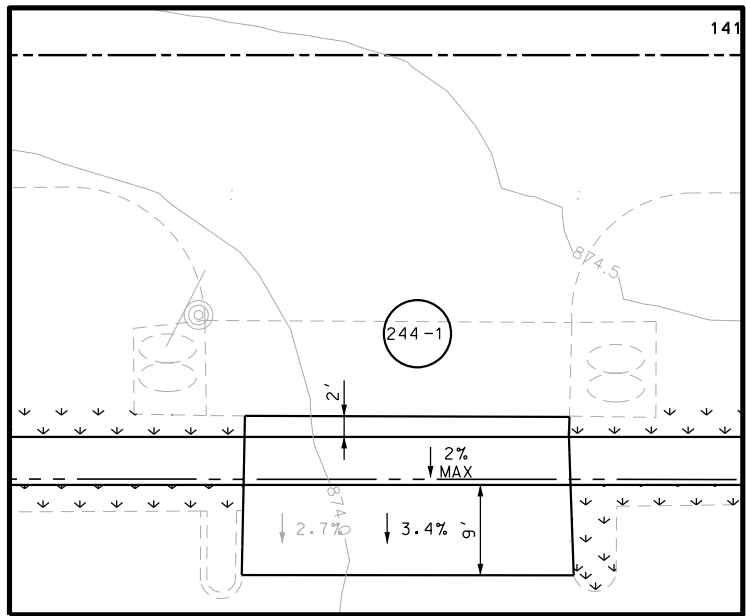
SIDEWALK CONSTRUCTION PLAN

STA 1410+00 TO STA 1414+00

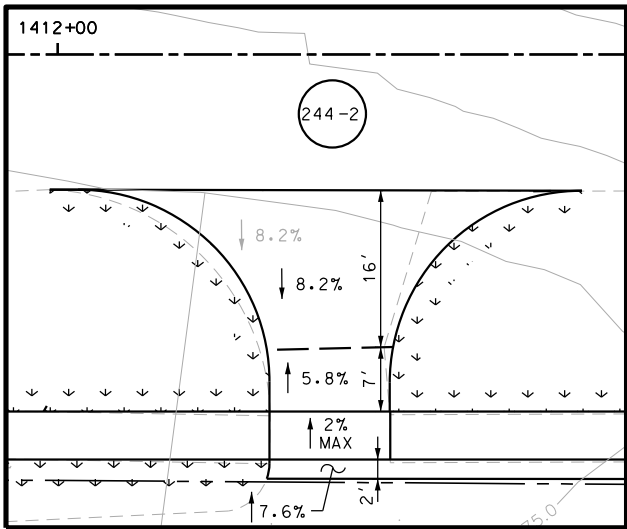
SHEET 18 OF 107					
CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:	
	6	TEXAS		VARIES	
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:
	SAT	BEXAR	0915	12	576
					244

Plotted on: 11/21/2018

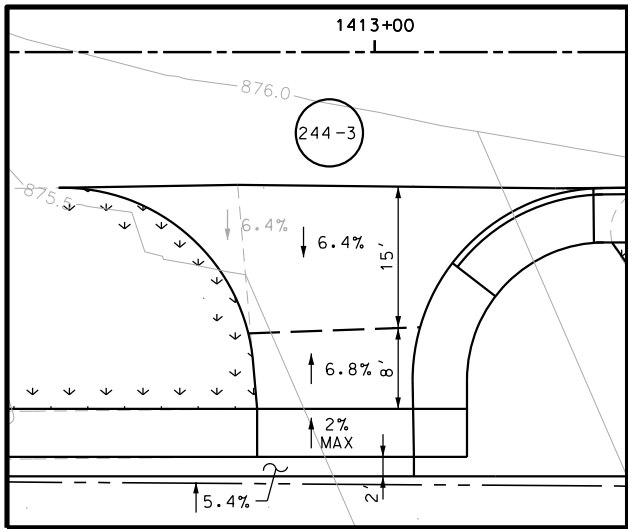
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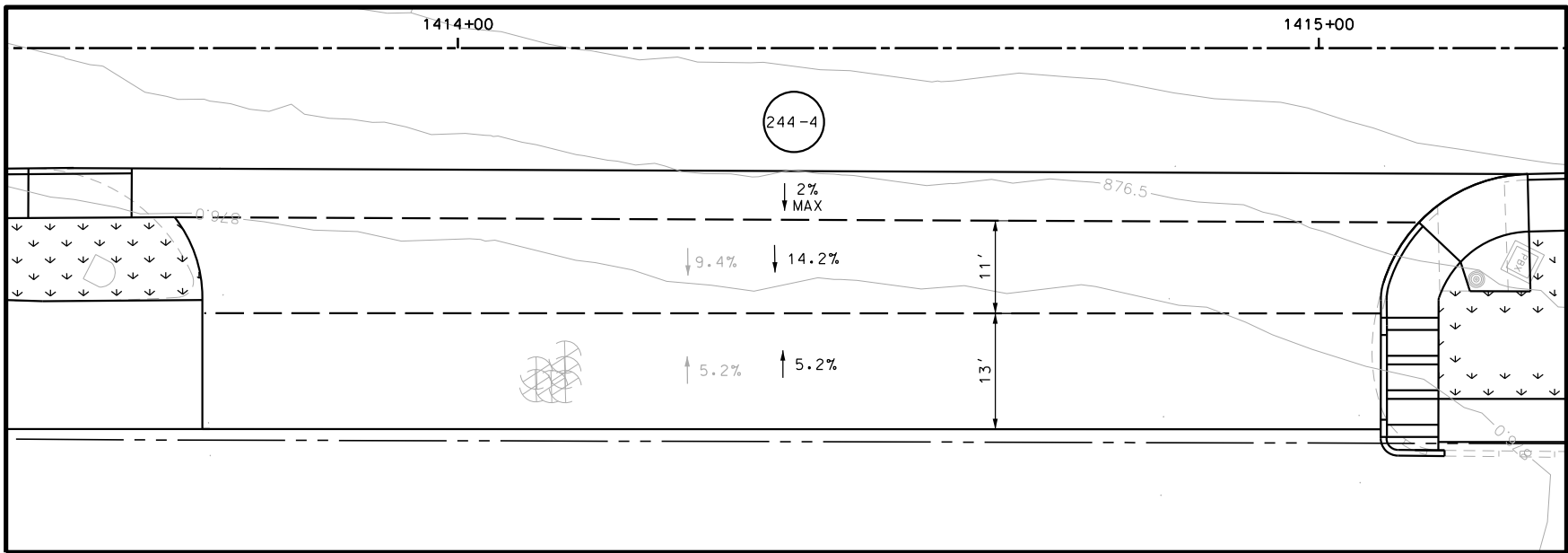
DRWY PLAN STA 1410+64



DRWY PLAN STA 1412+28



DRWY PLAN STA 1412+97



DRWY PLAN STA 1414+40

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1410+00 TO STA 1414+00

SHEET 19 OF

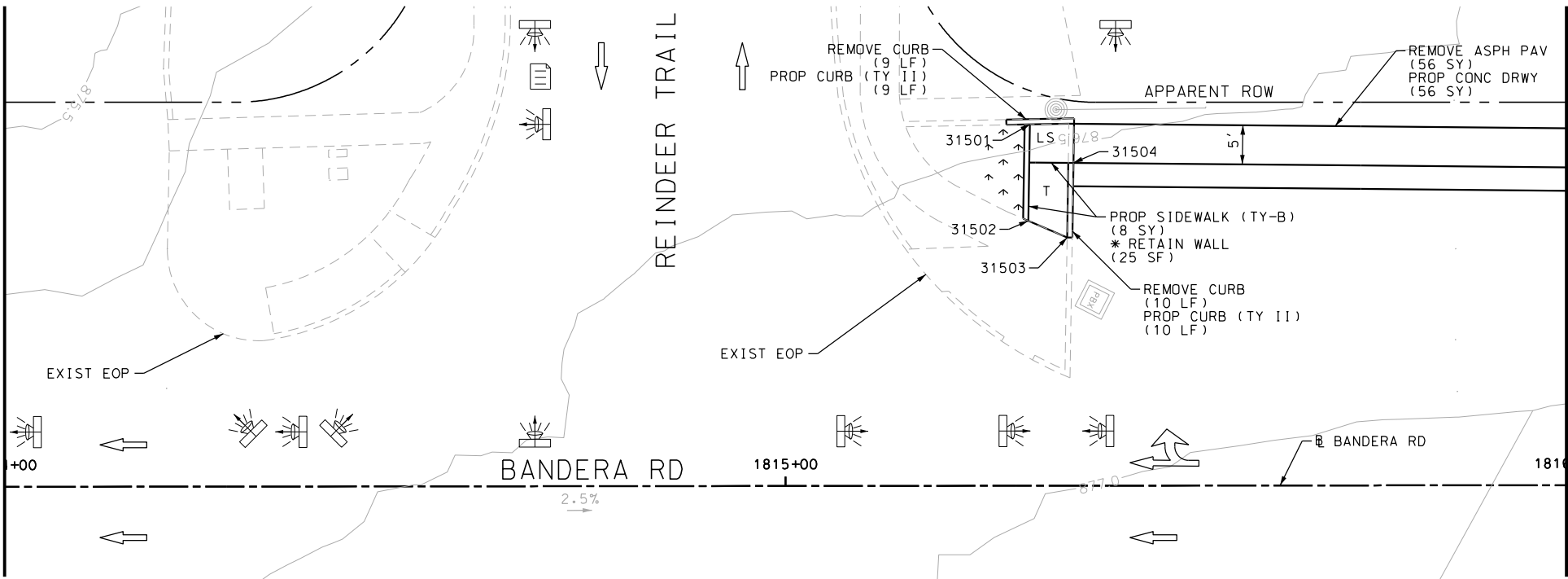
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	245

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*16.dgn

POINT	NORTHING	EASTING	ELEV	DESC
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31502	13732832.48	2087678.49	--	.
31503	13732907.80	2087642.00	--	.
31504	13732912.74	2087641.28	--	.
31505	13732906.51	2087633.14	--	.
31506	13732911.97	2087635.94	--	.
31507	13732970.06	2087778.58	--	.
31508	13732974.51	2087776.31	--	.
31509	13732975.65	2087789.53	--	.
31510	13732980.15	2087787.36	--	.
31511	13732977.82	2087794.04	--	.
31512	13732982.33	2087791.86	--	.

MATCH LINE STA 1814+00
SEE SHEET 308



MATCH LINE STA 1816+00
SEE SHEET 309

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	220
0168-6001	VEGETATIVE WATERING	MG	3.43
0531-6001	CONC SIDEWALKS (4")	SY	186
7027-6001	ADJUST GAS FACILITY ACCESS COVER	EA	3

- NOTES:
- * FOR CONTRACTOR INFORMATION ONLY
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

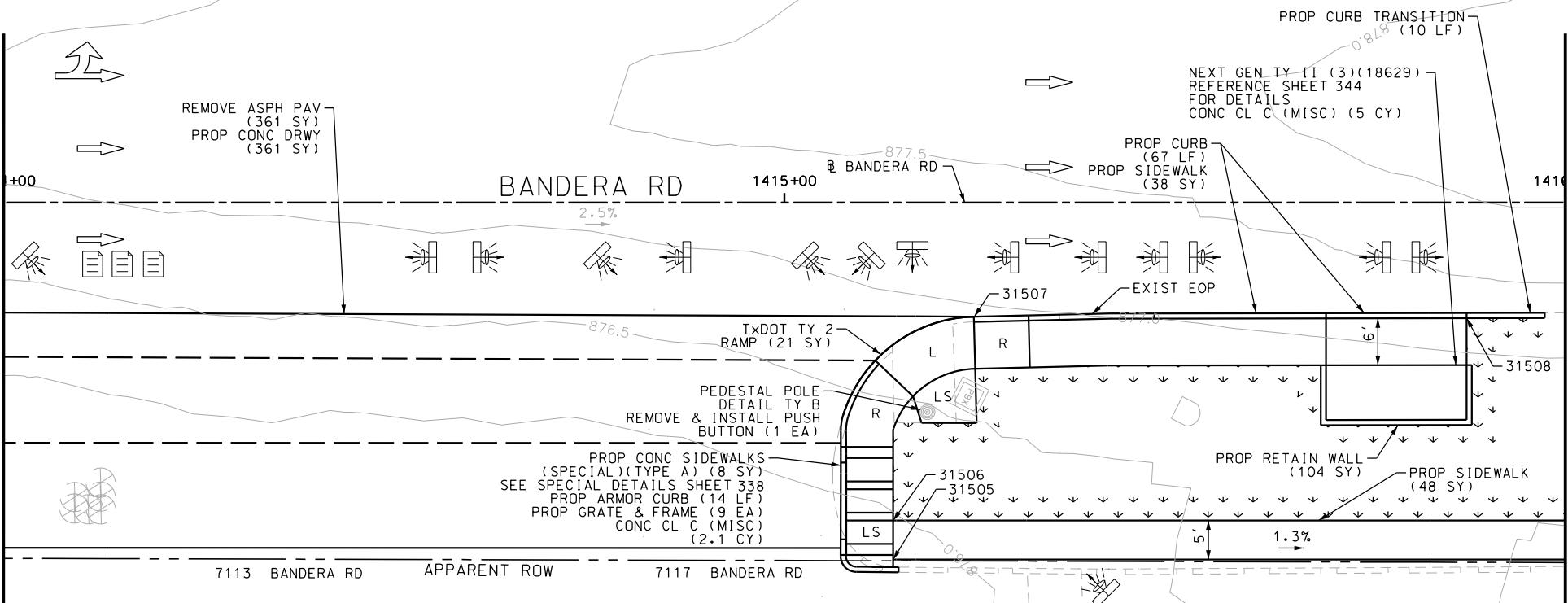
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1414+00 TO STA 1416+00
STA 1814+00 TO STA 1816+00
SHEET 20 OF 107

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	246

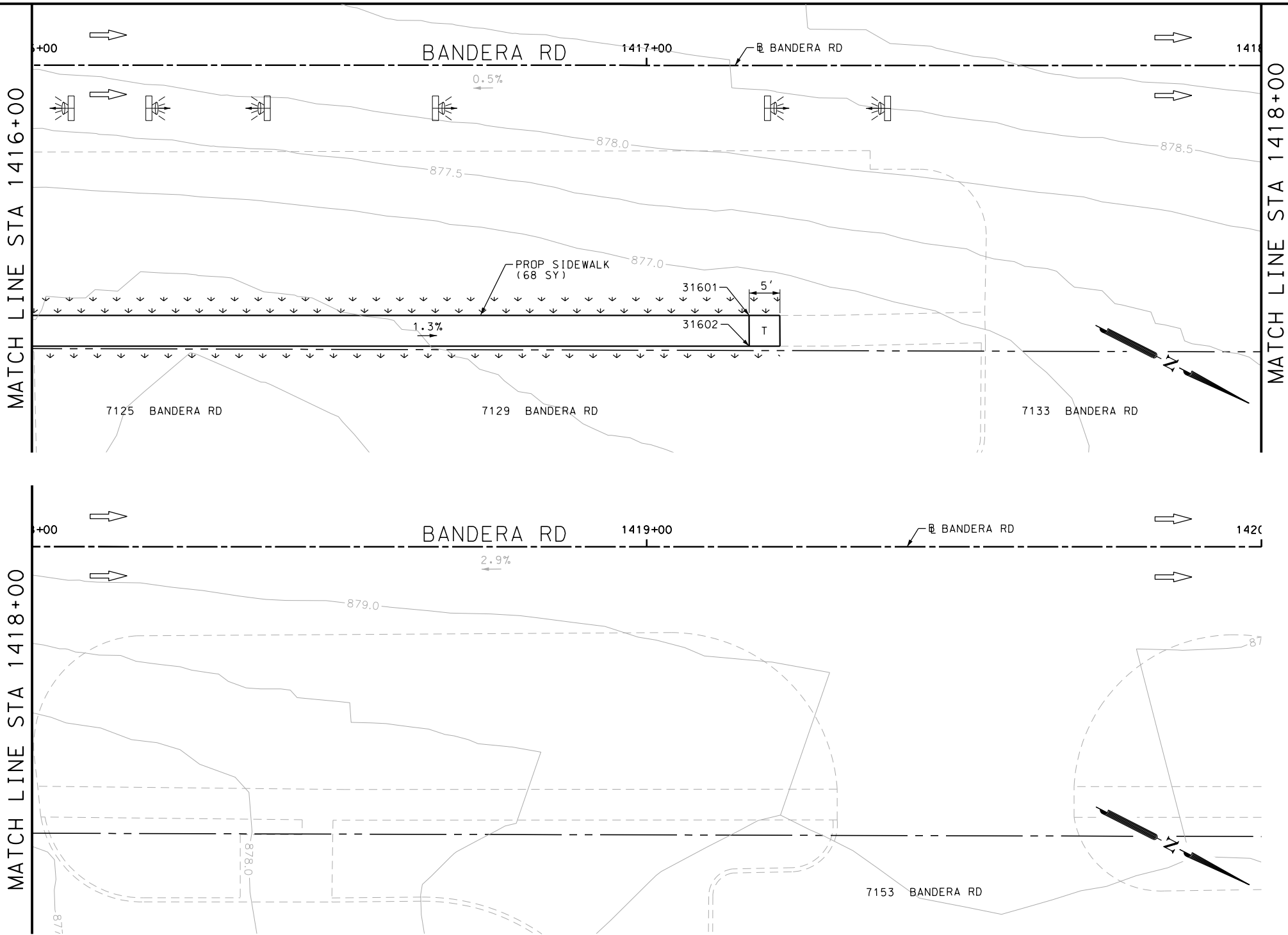
MATCH LINE STA 1414+00



MATCH LINE STA 1416+00

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr-WB*17.dgn



POINT	NORTHING	EASTING	ELEV	DESC
31601	13733162.63	2087694.88	--	.
31602	13733164.89	2087699.34	--	.

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	85
0168-6001	VEGETATIVE WATERING	MG	1.33
0531-6001	CONC SIDEWALKS (4")	SY	70

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

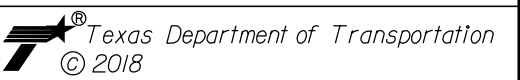
DATE: 11/21/2018

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



BANDERA RD

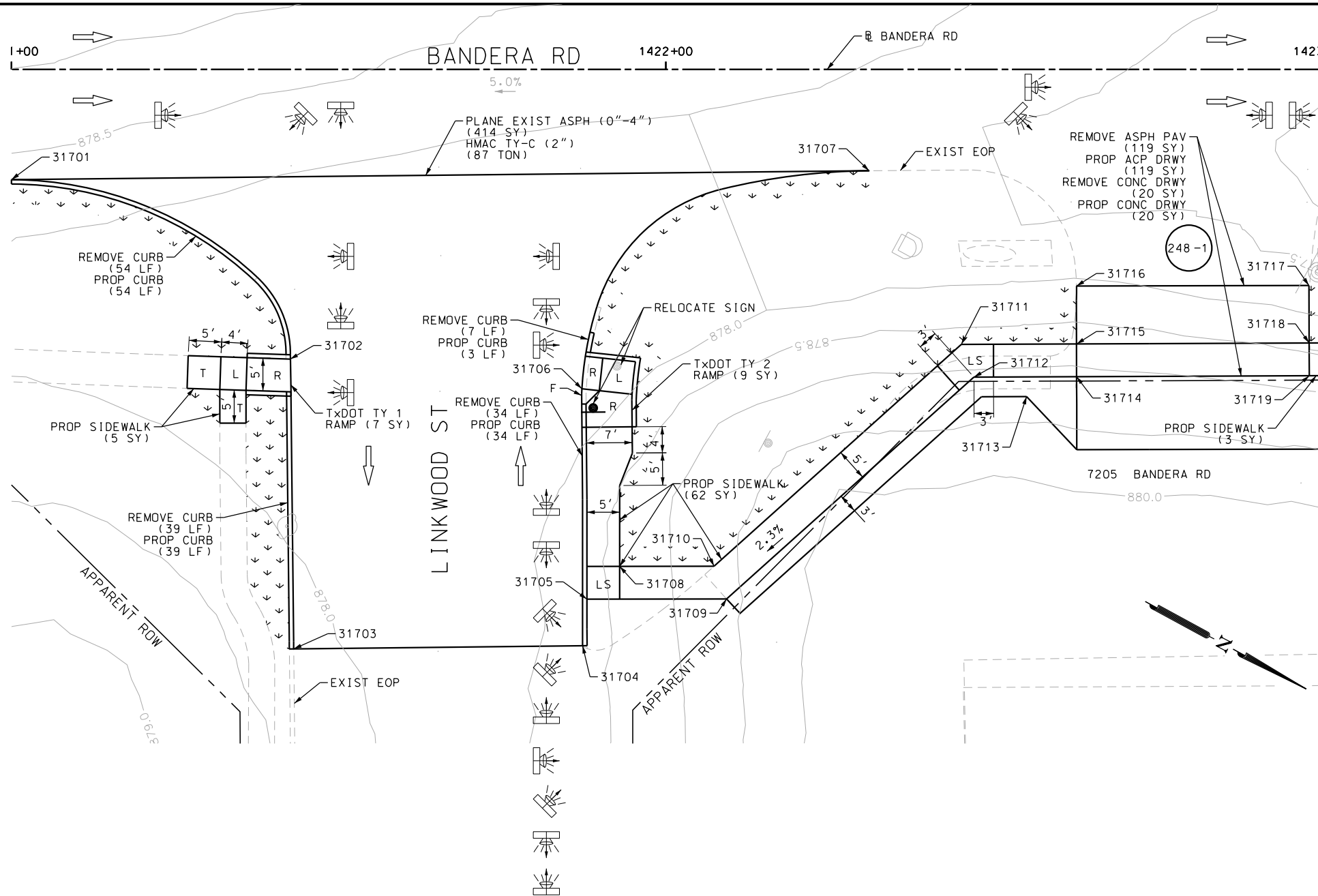
SIDEWALK CONSTRUCTION PLAN

STA 1416+00 TO STA 1420+00

SHEET 21 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*18.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	125
0162-6002	BLOCK SODDING	SY	100
0168-6001	VEGETATIVE WATERING	MG	1.56
0340-6066	D-GR HMA(SQ) TY-C PG76-22	TON	24.0
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	424
0529-6002	CONC CURB (TY II)	LF	125
0531-6001	CONC SIDEWALKS (4")	SY	26
0531-6018	CURB RAMPS (TY 1)	SY	7
0531-6019	CURB RAMPS (TY 2)	SY	14
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	44

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

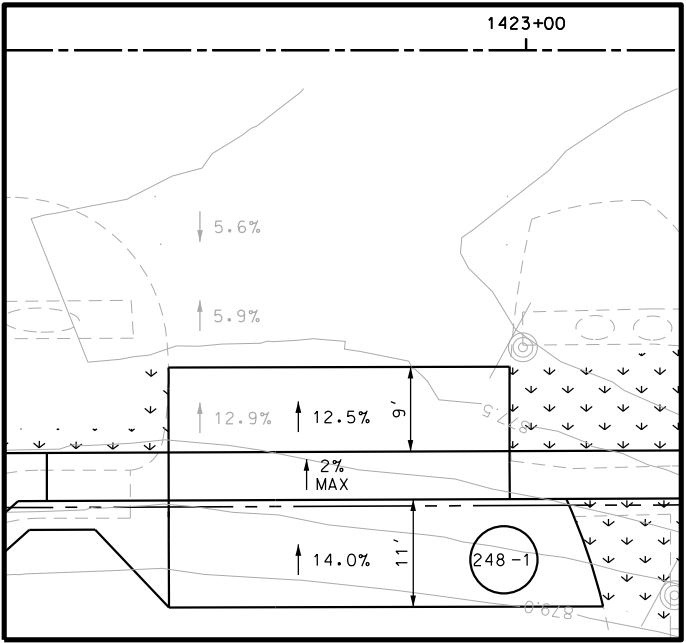
INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018



POINT	NORTHING	EASTING	ELEV	DESC
31701	13733539.89	2087502.83	--	.
31702	13733493.17	2087496.03	--	.
31703	13733562.13	2087540.11	--	.
31704	13733586.11	2087492.05	--	.
31705	13733602.30	2087437.76	--	.
31706	13733600.80	2087519.12	--	.
31707	13733607.89	2087513.45	--	.
31708	13733611.54	2087518.23	--	.
31709	13733623.28	2087468.48	--	.
31710	13733627.38	2087471.94	--	.
31711	13733650.60	2087453.59	--	.
31712	13733652.97	2087457.99	--	.

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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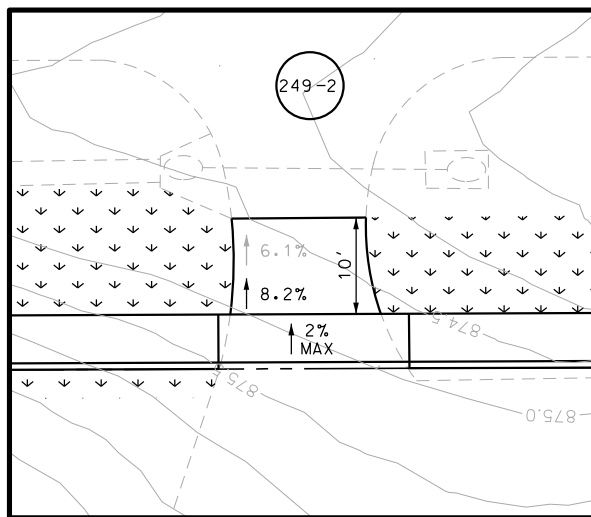
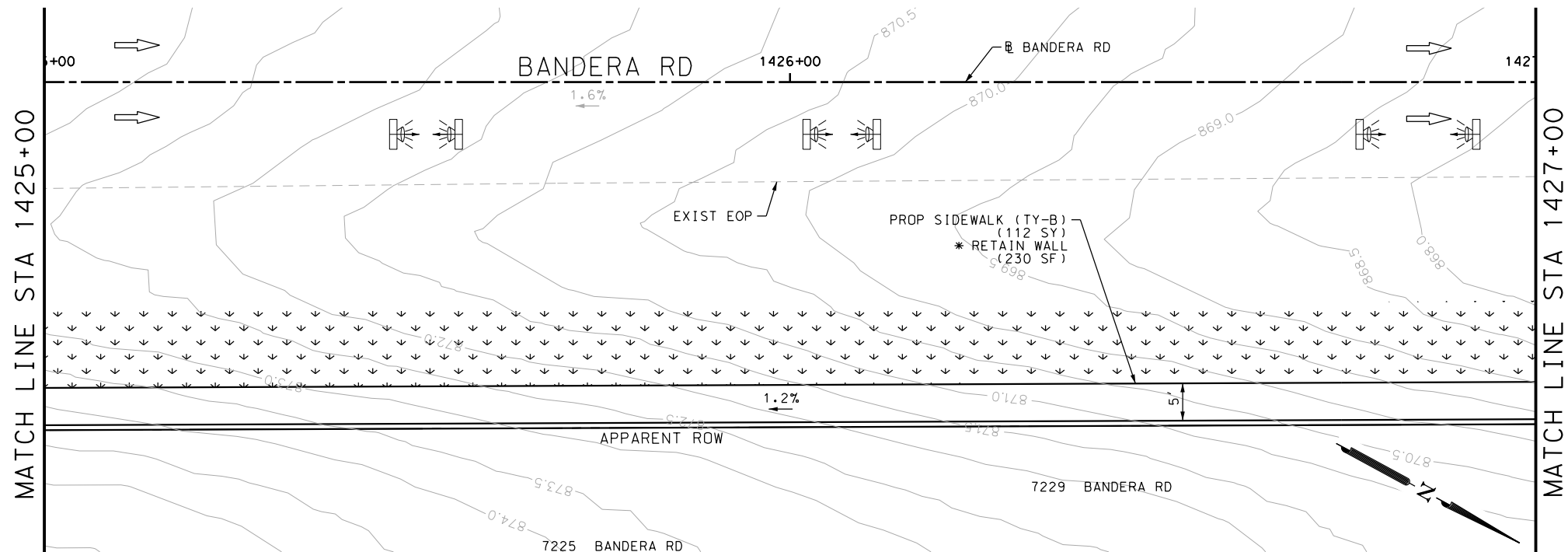
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1421+00 TO STA 1423+00

SHEET 22 OF 107

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	248

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*19.dgn



POINT	NORTHING	EASTING	ELEV	DESC
31801	13733683.35	2087435.74	--	.
31802	13733685.74	2087440.13	--	.
31803	13733702.16	2087425.49	--	.
31804	13733704.55	2087429.88	--	.
31805	13733717.73	2087417.00	--	.
31806	13733720.13	2087421.39	--	.
31807	13733806.30	2087368.73	--	.
31808	13733808.71	2087373.11	--	.
31809	13733818.60	2087362.02	--	.
31810	13733821.00	2087366.41	--	.

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	200
0168-6001	VEGETATIVE WATERING	MG	3.12
0340-6066	D-GR HMA (SQ) TY-C PG76-22	TON	19.0
0351-6028	FLEX PAVE STRUCTURE REPAIR (8"-10")	SY	170
0450-6048	RAIL (HANDRAIL) (TY B)	LF	101
0531-6001	CONC SIDEWALKS (4")	SY	72
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	133

NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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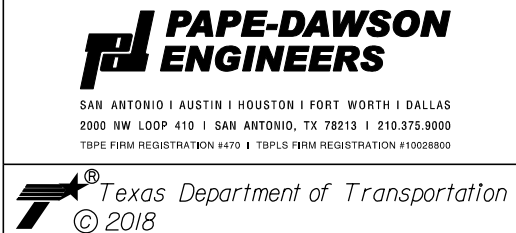
ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



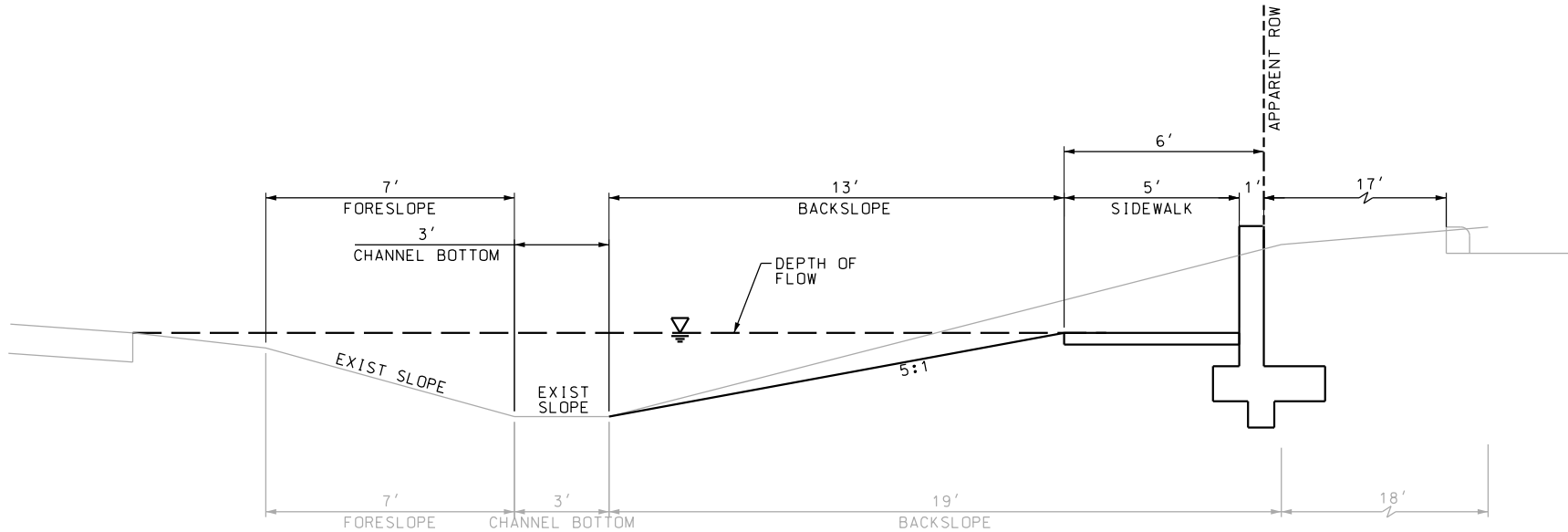
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1423+00 TO STA 1427+00

SHEET 23 OF 10

OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	249

Plotted on: 11/21/2018

Design File name: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*19*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.015	FT/FT	S	FL SLOPE	0.015	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	28.4	SQ FT	A	AREA	34.30	SQ FT
P	WETTED PERIMETER	23.5	FT	P	WETTED PERIMETER	28.30	FT
R	HYDRAULIC RADIUS	1.21	FT	R	HYDRAULIC RADIUS	1.21	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	195.5	CFS	Q	DISCHARGE	236.5	CFS

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON
ENGINEERS**

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BANDERA RD

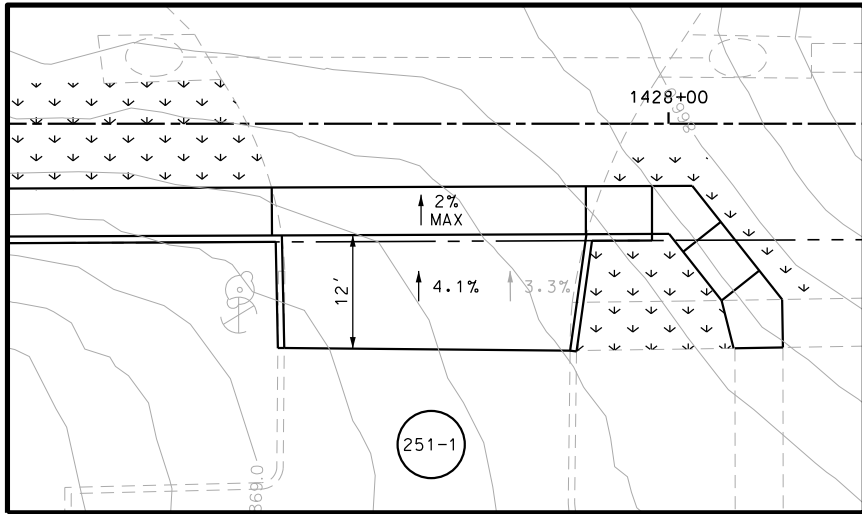
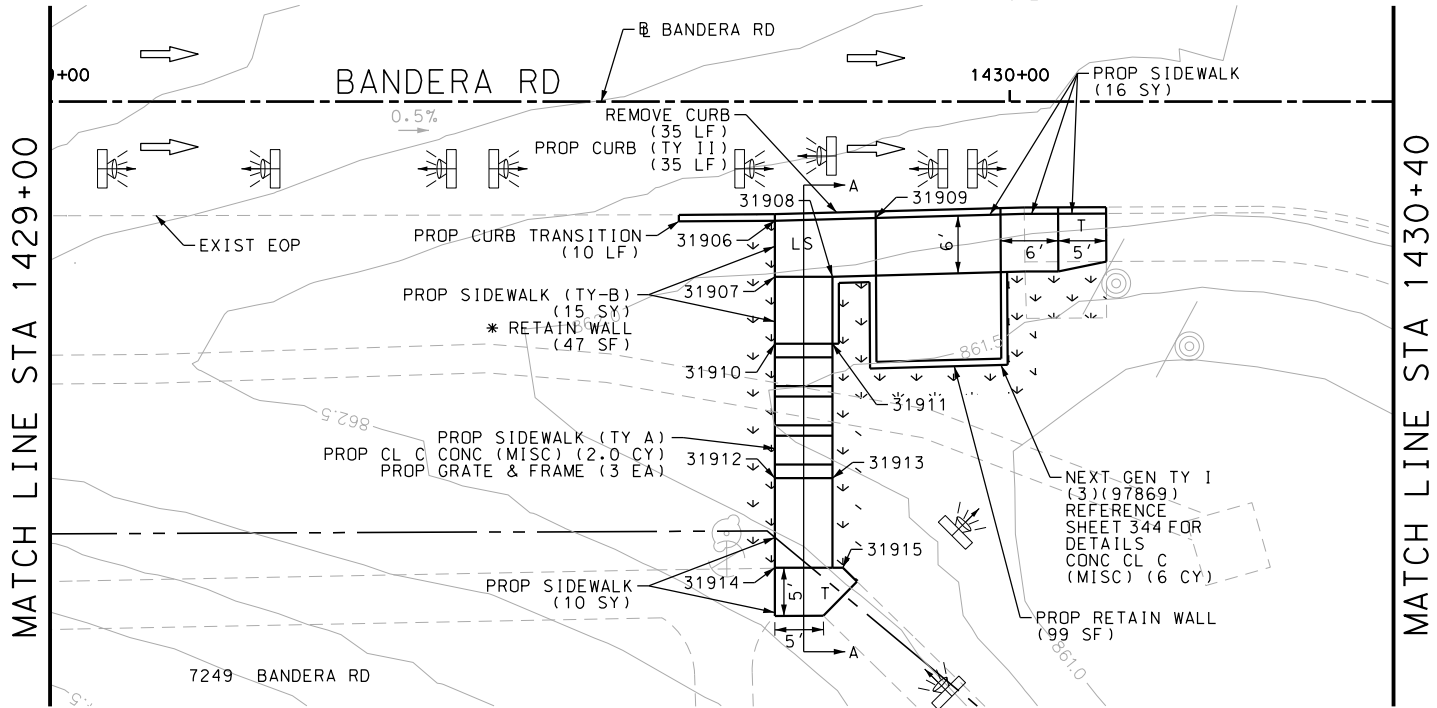
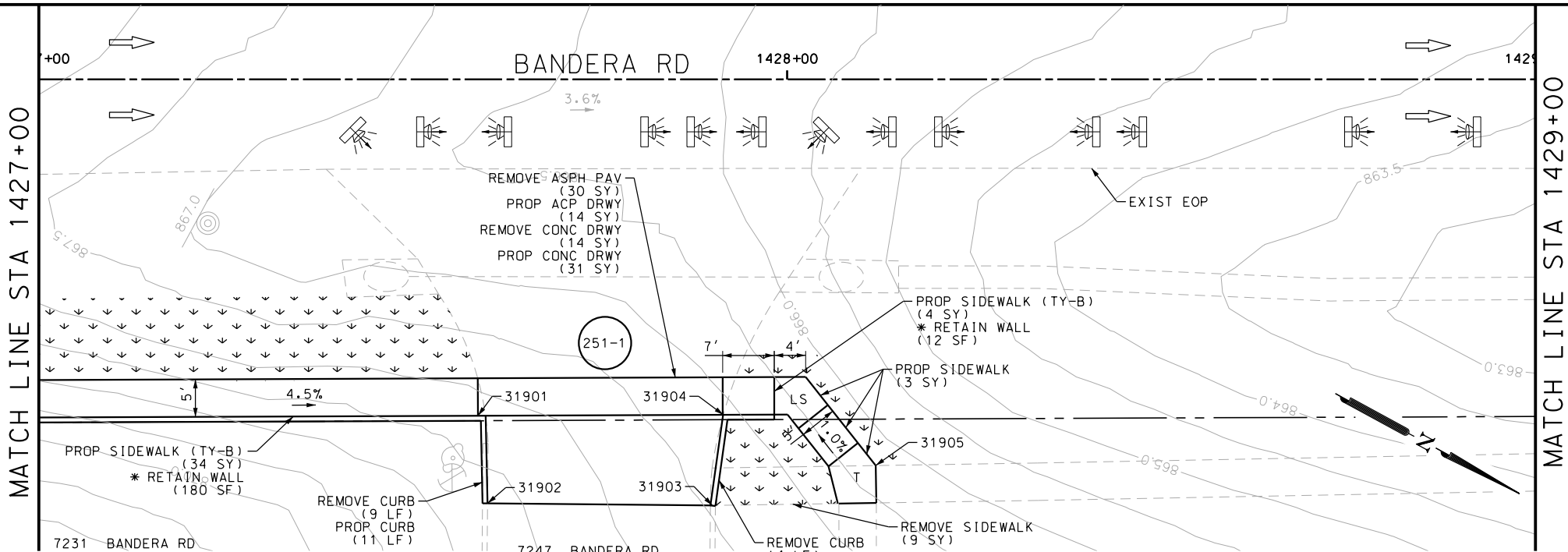
SIDEWALK
CONSTRUCTION PLAN

STA 1423+00 TO STA 1427+00

SHEET 24 OF 107						
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: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*20.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	41
0162-6002	BLOCK SODDING	SY	80
0168-6001	VEGETATIVE WATERING	MG	1.25
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	74
0529-6002	CONC CURB (TY II)	LF	37
0531-6001	CONC SIDEWALKS (4")	SY	43
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	14

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

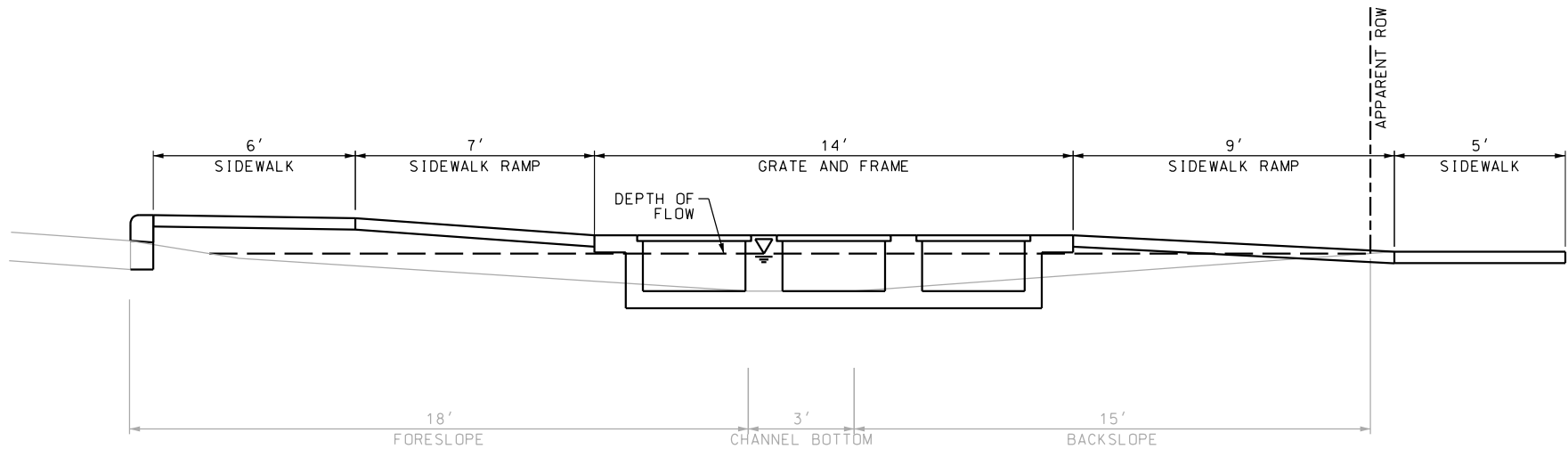
STA 1427+00 TO STA 1430+00

SHEET 25 OF

DCN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN	6	TEXAS				VAR
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	251

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*WB*20*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^*(2/3))(S^*(1/2))$				$Q = (Z/n)A(R^*(2/3))(S^*(1/2))$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.020	FT/FT	S	FL SLOPE	0.020	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.015	
A	AREA	21.0	SQ FT	A	AREA	10.20	SQ FT
P	WETTED PERIMETER	34.1	FT	P	WETTED PERIMETER	15.60	FT
R	HYDRAULIC RADIUS	0.62	FT	R	HYDRAULIC RADIUS	0.65	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	106.5	CFS	Q	DISCHARGE	107.7	CFS

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ENGINEER: JOHN A. TYLER

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



BANDERA RD

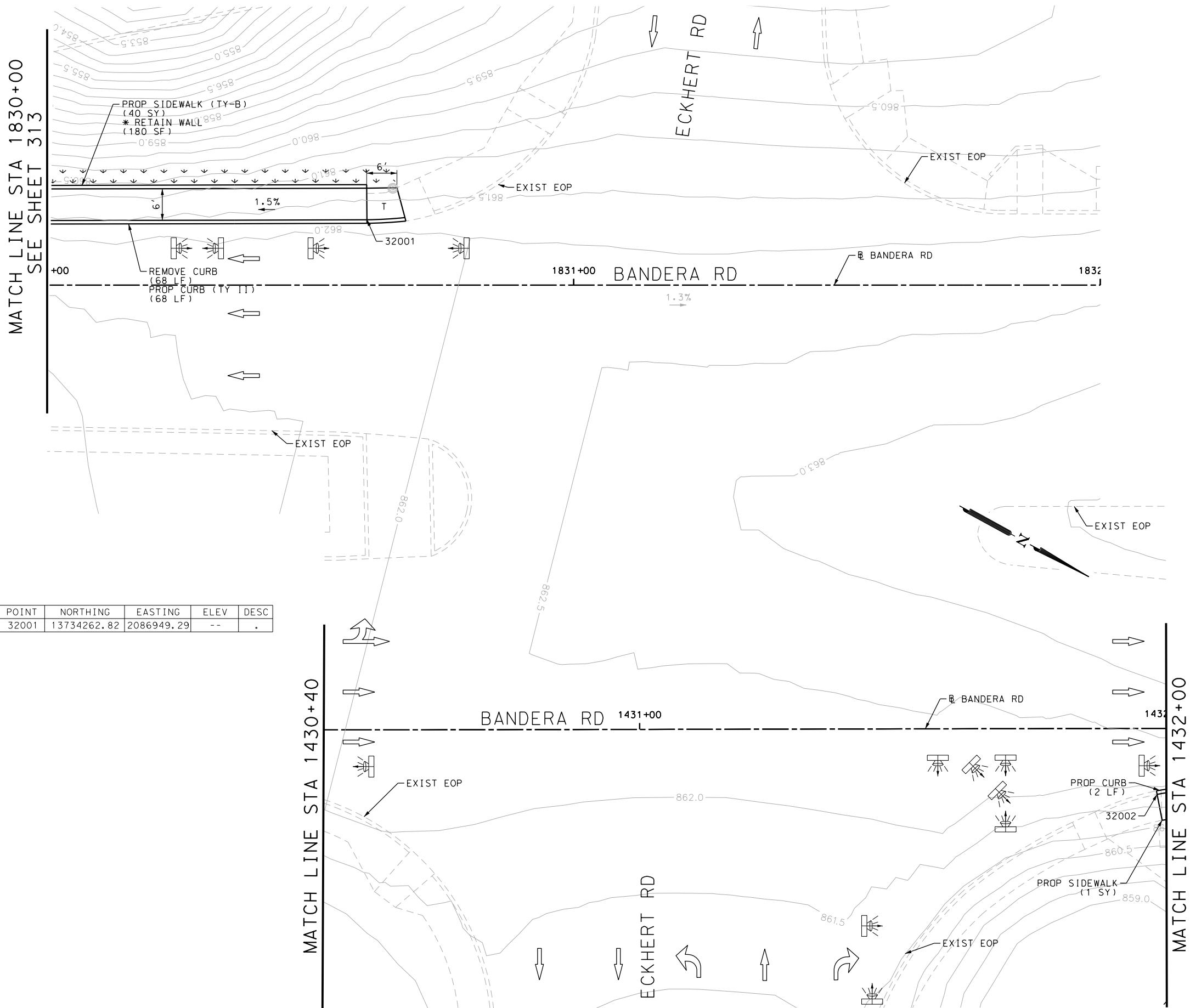
SIDEWALK CONSTRUCTION PLAN

STA 1427+00 TO STA 1430+00

SHEET 26 OF 107						
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: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*21.dgn



POINT	NORTHING	EASTING	ELEV	DESC
32001	13734262.82	2086949.29	--	.

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	60
0168-6001	VEGETATIVE WATERING	MG	0.94
0529-6002	CONC CURB (TY II)	LF	6
0531-6001	CONC SIDEWALKS (4")	SY	34
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	1

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

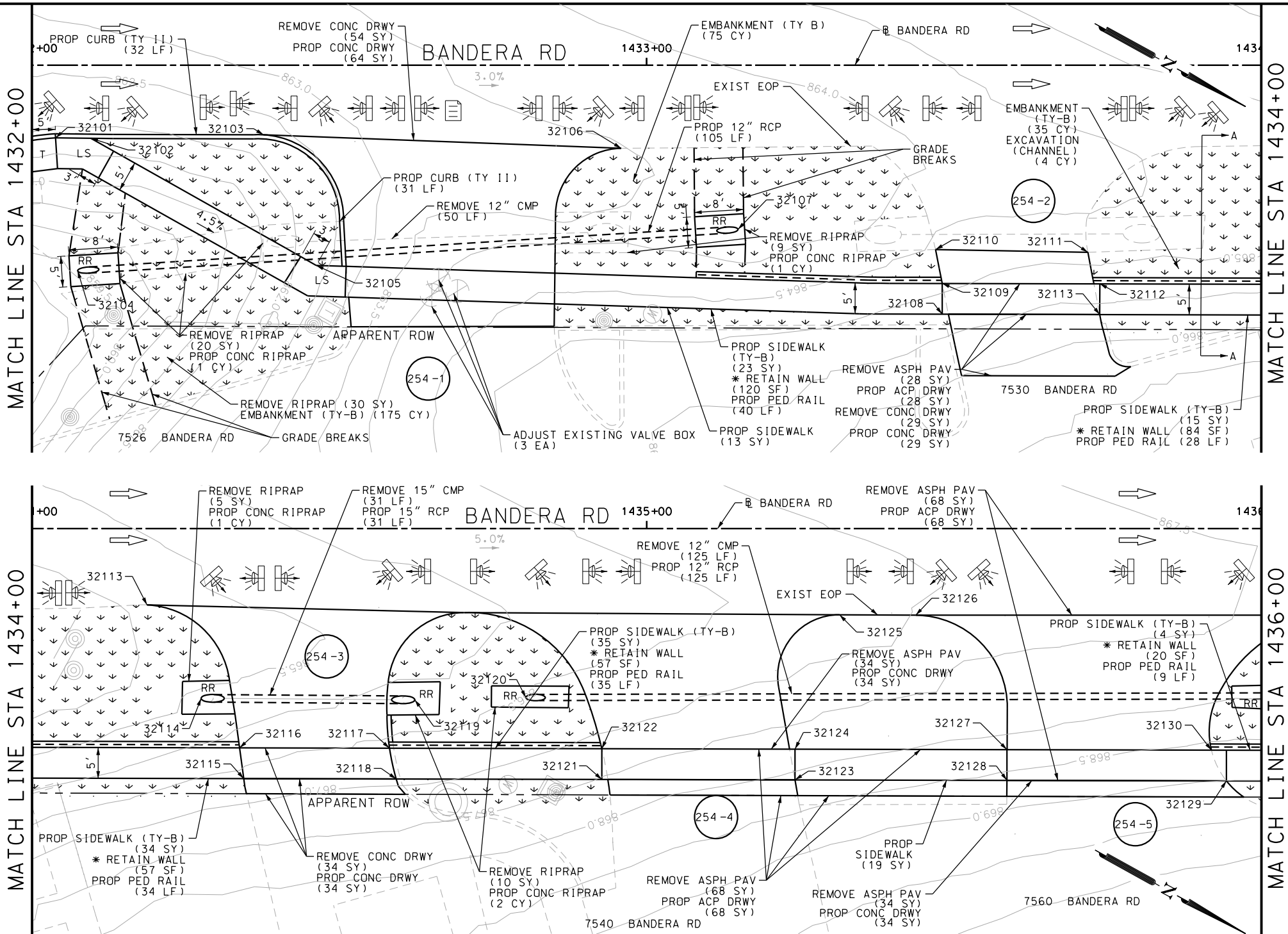
STA 1430+00 TO STA 1432+00
STA 1830+00 TO STA 1832+00

SHEET 27 OF 107

DGN#	FED. RD. DIV.	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: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*22.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	491
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0420-6074	CL C CONC (MISC)	CY	3.0
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	66
0530-6004	DRIVEWAYS (CONC)	SY	491
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	146

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

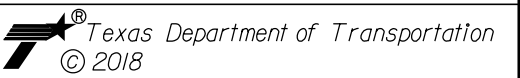
REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



BANDERA RD

SIDEWALK

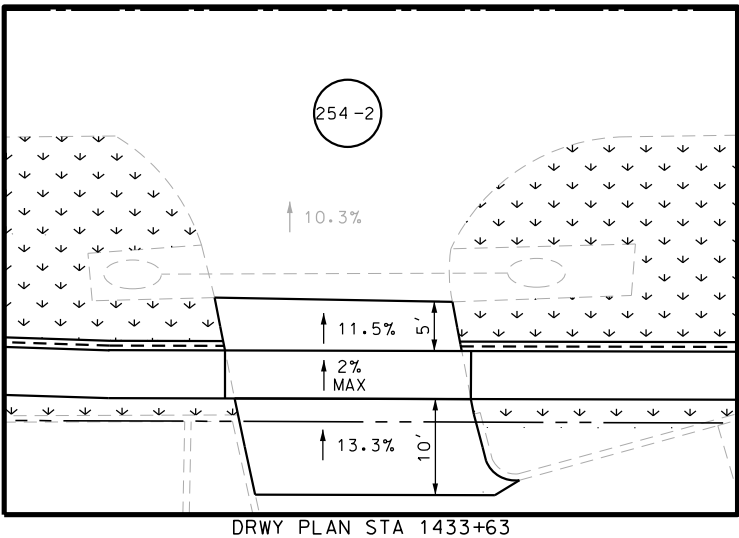
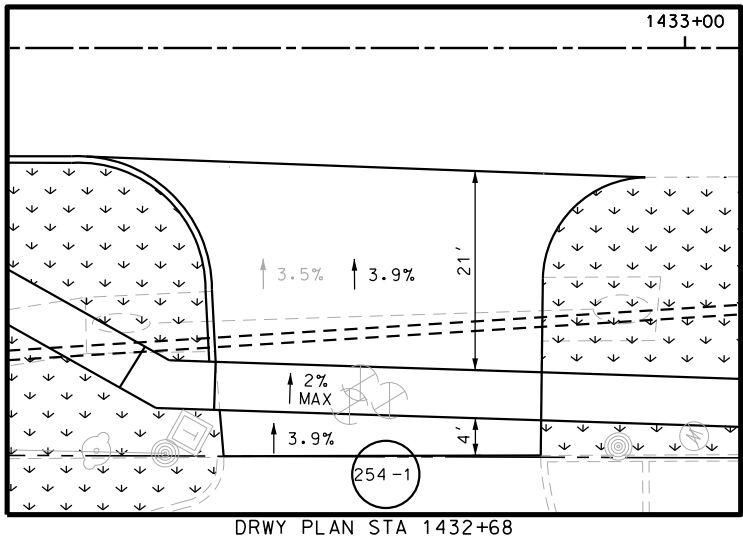
CONSTRUCTION PLAN

STA 1432+00 TO STA 1436+00

SHEET 28 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*22*A.dgn



- NOTES:
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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

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INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

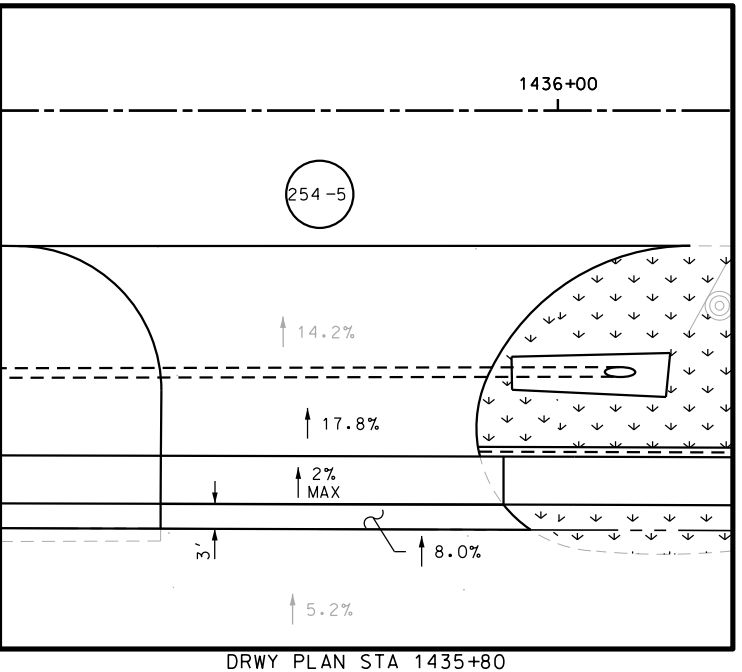
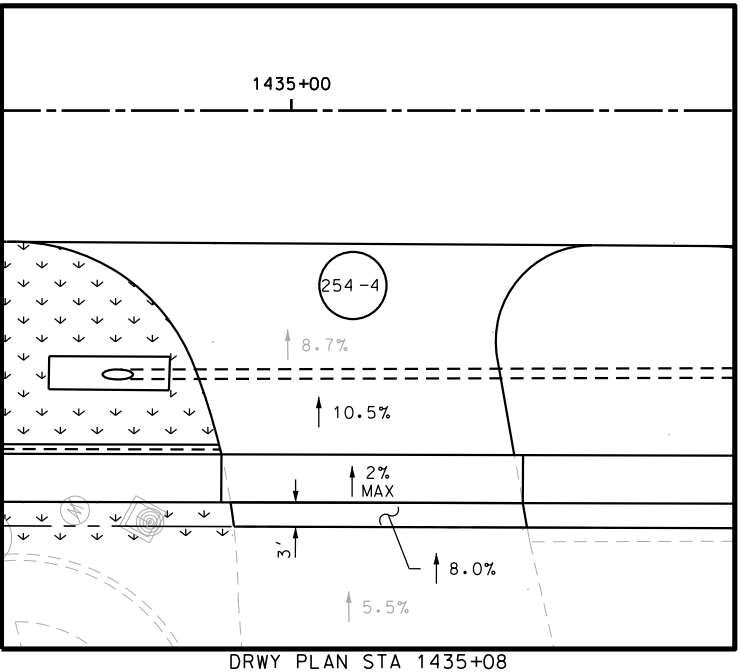
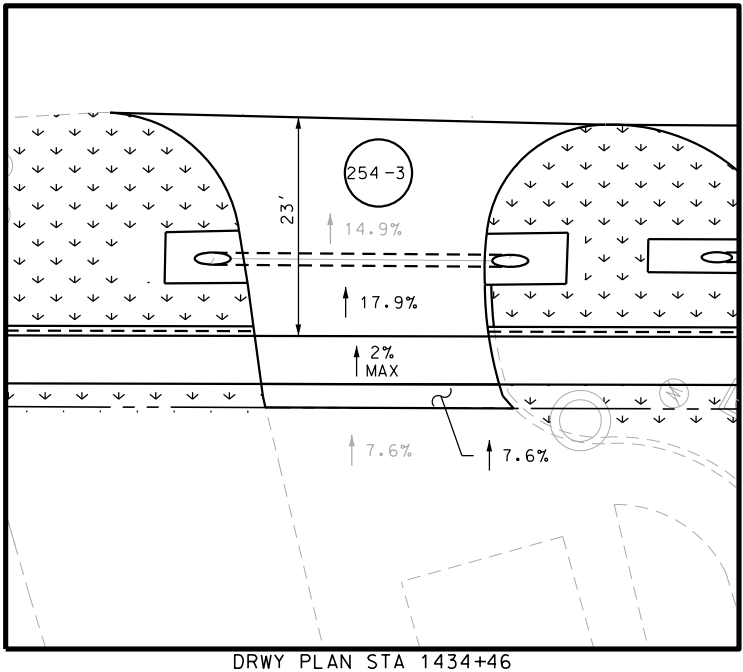


BANDERA RD

SIDEWALK CONSTRUCTION PLAN

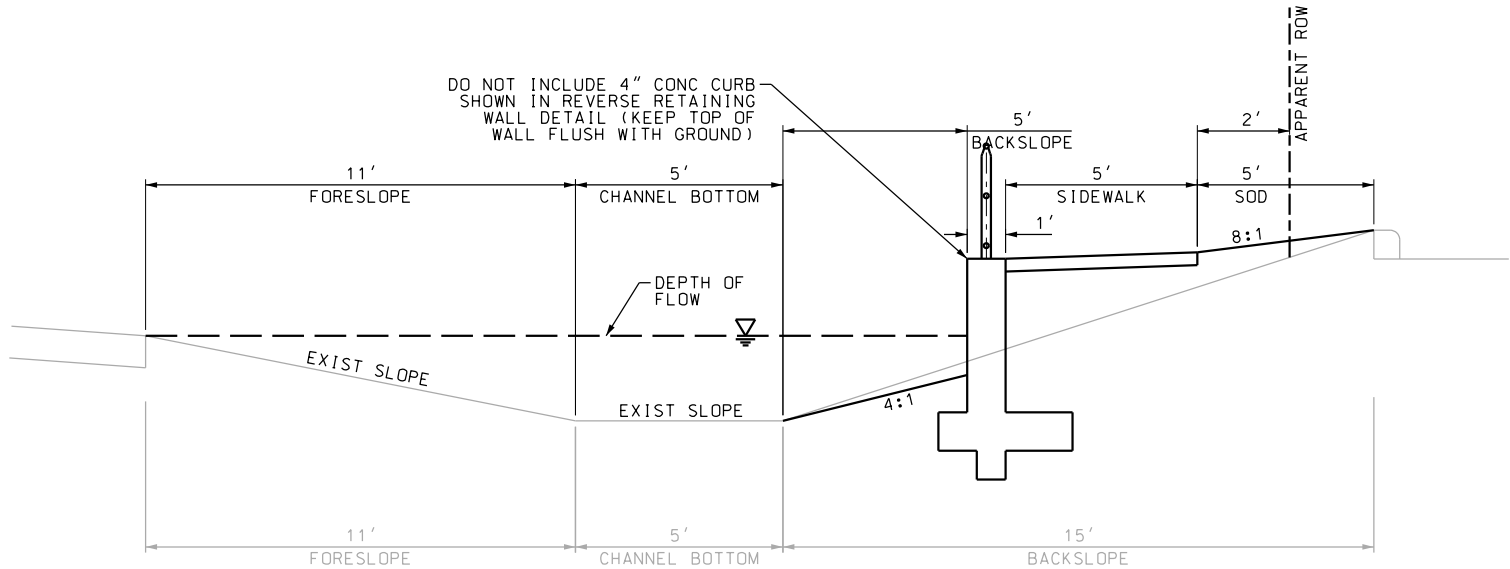
STA 1432+00 TO STA 1436+00

SHEET 29 OF 107					
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



Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*22*B.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.009	FT/FT	S	FL SLOPE	0.009	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	32.1	SQ FT	A	AREA	32.20	SQ FT
P	WETTED PERIMETER	24.0	FT	P	WETTED PERIMETER	22.80	FT
R	HYDRAULIC RADIUS	1.34	FT	R	HYDRAULIC RADIUS	1.41	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	183.1	CFS	Q	DISCHARGE	190.5	CFS

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1"= 20'

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON
ENGINEERS**

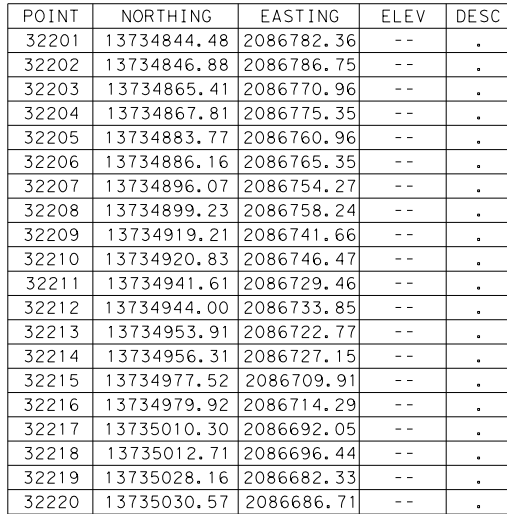
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



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BANDERA RD					
SIDEWALK CONSTRUCTION PLAN					
STA 1432+00 TO STA 1436+00					
SHEET 30 OF 107					
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

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*23.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	381
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0420-6074	CL C CONC (MISC)	CY	6.0
0471-6003	GRATE & FRAME	EA	18
0530-6004	DRIVEWAYS (CONC)	SY	381
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	155
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



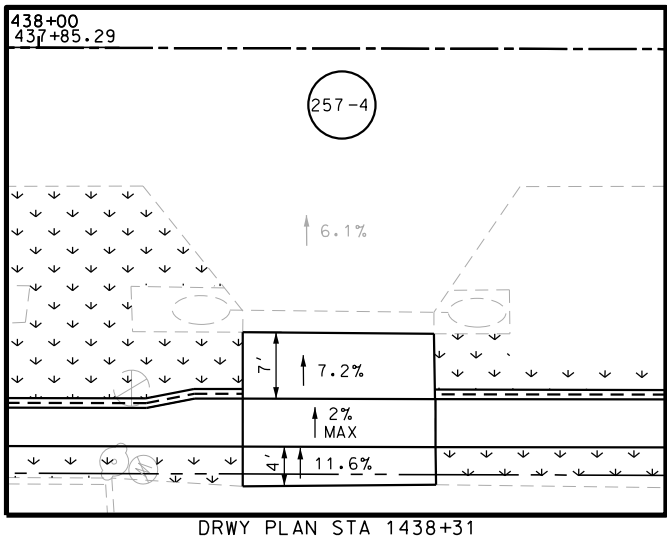
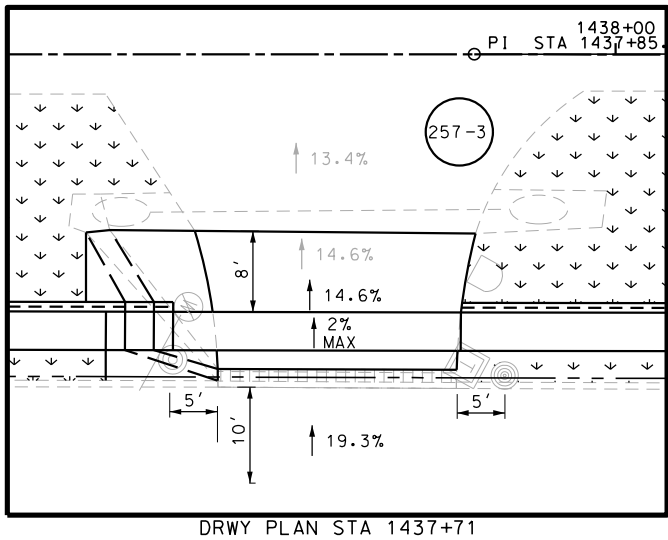
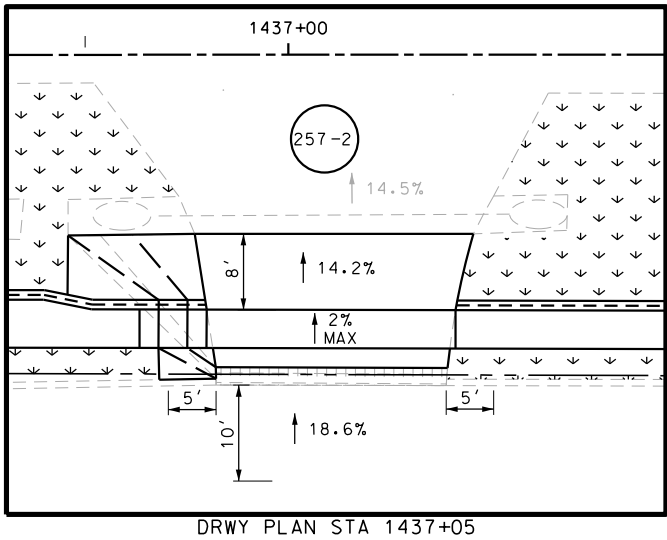
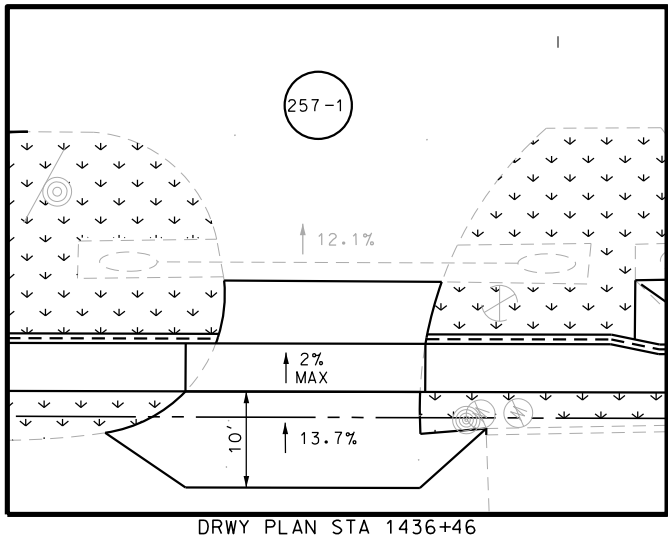
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1436+00 TO STA 1440+00

SHEET 31 OF 107

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	257

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*23*A.dgn



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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

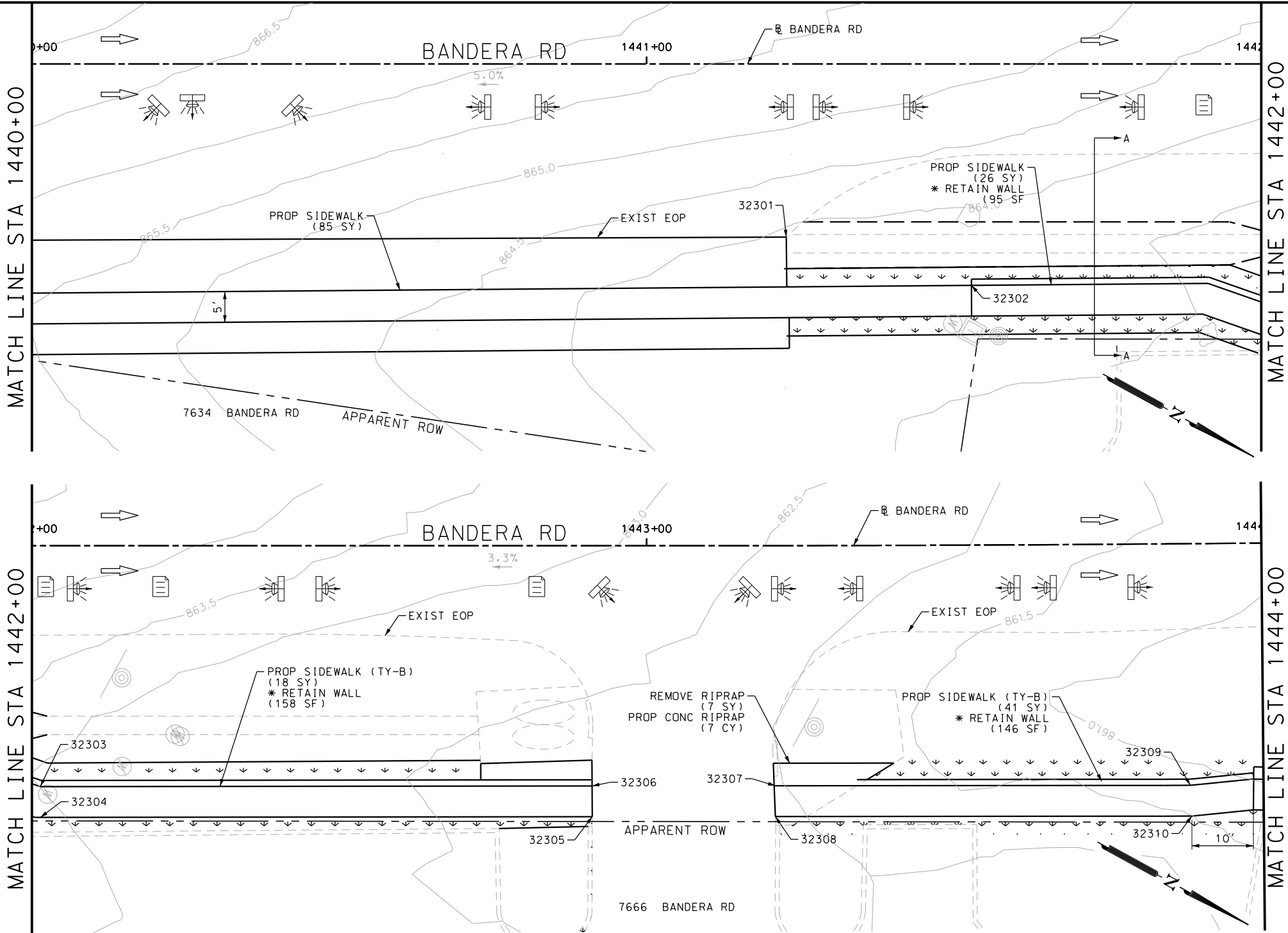
SIDEWALK CONSTRUCTION PLAN

STA 1436+00 TO STA 1440+00

SHEET 32 OF 107						
CHK	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	258

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\WB*24.dgn



POINT	NORTHING	EASTING	ELEV	DESC
32301	13735422.64	2086467.28	--	.
32302	13735425.05	2086471.67	--	.
32303	13735449.09	2086452.84	--	.
32304	13735451.49	2086457.22	--	.
32305	13735515.29	2086416.67	--	.
32306	13735517.69	2086421.06	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	111
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0420-6074	CL C CONC (MISC)	CY	0.5
0471-6003	GRATE & FRAME	EA	3
0530-6004	DRIVEWAYS (CONC)	SY	111
0531-6001	CONC SIDEWALKS (4")	SY	68
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	137
7091-6001	ADJUST EXISTING VALVE BOX	EA	1
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

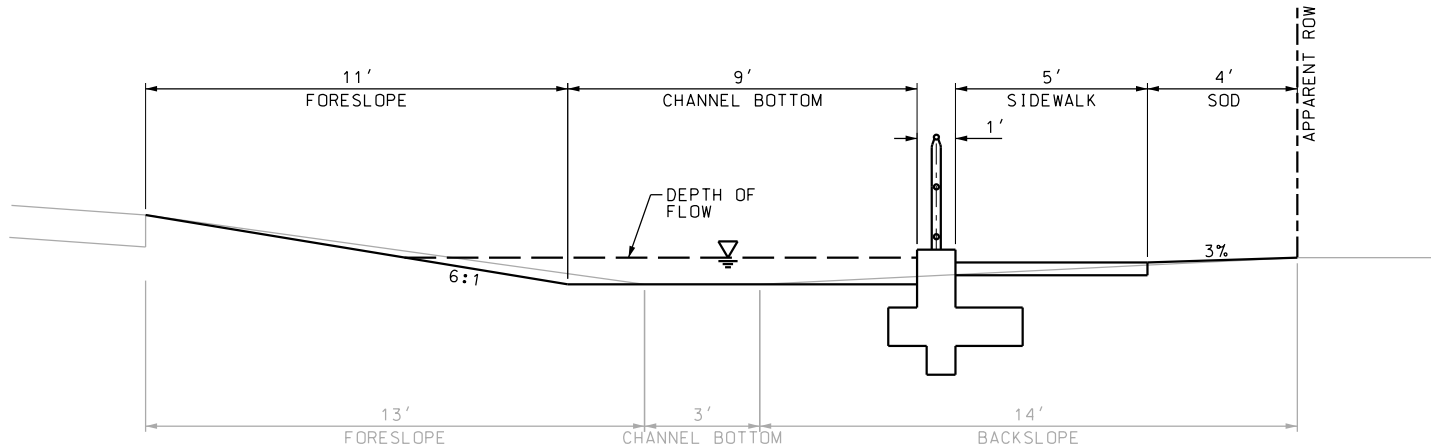
STA 1440+00 TO STA 1444+00

SHEET 33 OF 107

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	259

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*24*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{\frac{2}{3}})(S^{\frac{1}{2}})$				$Q = (Z/n)A(R^{\frac{2}{3}})(S^{\frac{1}{2}})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.016	FT/FT	S	FL SLOPE	0.016	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	8.8	SQ FT	A	AREA	7.90	SQ FT
P	WETTED PERIMETER	22.1	FT	P	WETTED PERIMETER	14.10	FT
R	HYDRAULIC RADIUS	0.40	FT	R	HYDRAULIC RADIUS	0.56	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	29.8	CFS	Q	DISCHARGE	33.6	CFS

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation

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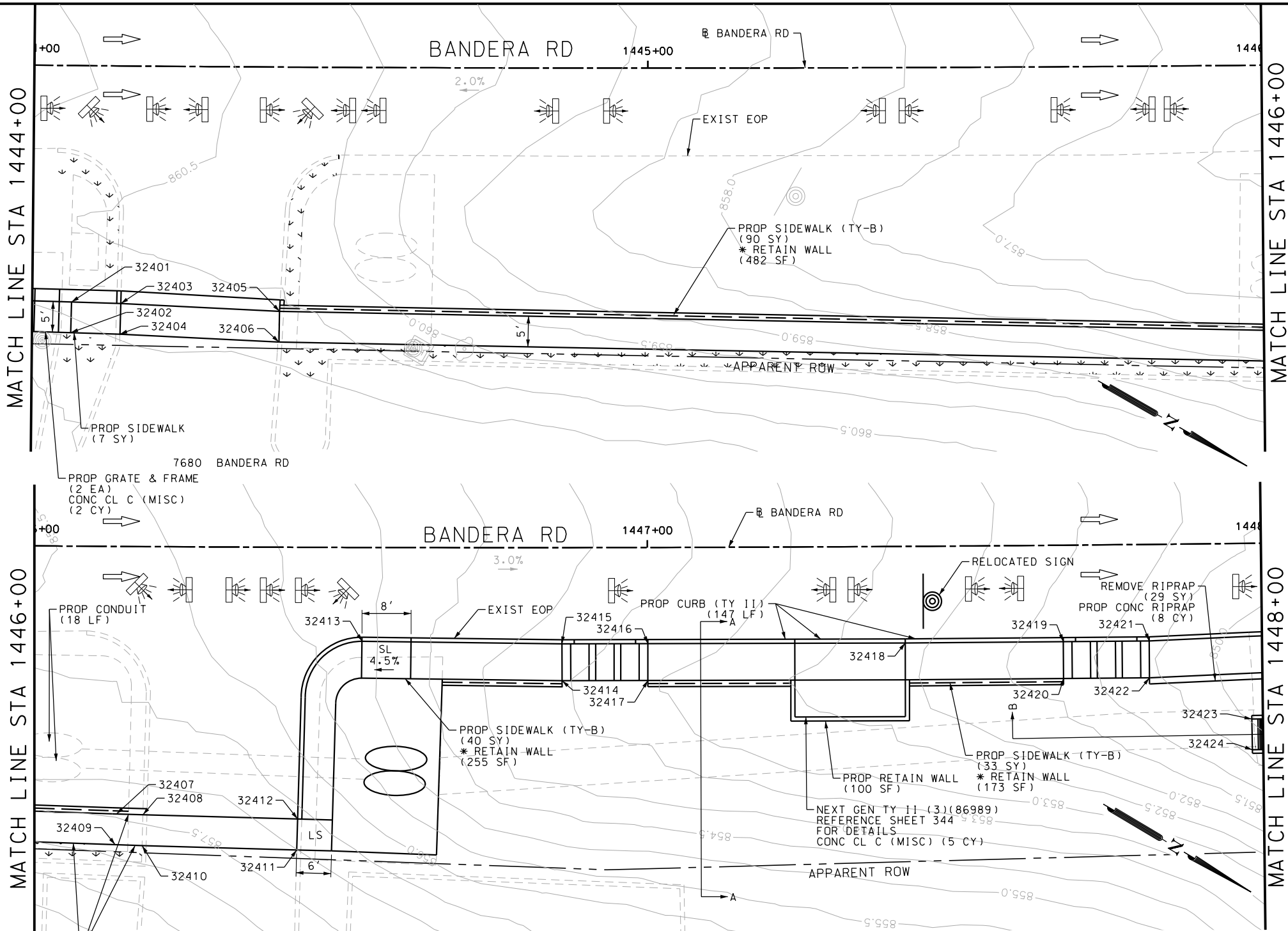
SIDEWALK CONSTRUCTION PLAN

STA 1440+00 TO STA 1444+00

SHEET 34 OF 107						
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	260

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*25.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	195
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0420-6074	CL C CONC (MISC)	CY	6.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	29
0464-6003	RC PIPE (CL III)(18 IN)	LF	42
0471-6003	GRATE & FRAME	EA	6
0529-6002	CONC CURB (TY II)	LF	145
0530-6004	DRIVEWAYS (CONC)	SY	195
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	80

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.


ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

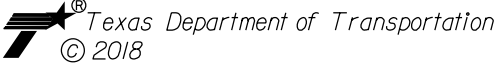
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
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32402	13735529.98	2086414.34	--	.
32403	13735532.33	2086407.36	--	.
32404	13735534.73	2086411.75	--	.
32405	13735555.14	2086394.90	--	.
32406	13735557.55	2086399.28	--	.
32407	13735707.52	2086311.65	--	.
32408	13735711.86	2086309.16	--	.
32409	13735685.59	2086315.01	--	.
32410	13735687.49	2086318.48	--	.
32411	13735686.67	2086295.15	--	.
32412	13735734.20	2086267.91	--	.
32413	13735764.97	2086249.79	--	.
32414	13735856.59	2086205.34	--	.
32415	13735858.73	2086208.73	--	.
32416	13735709.92	2086316.03	--	.
32417	13735714.40	2086313.59	--	.



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BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

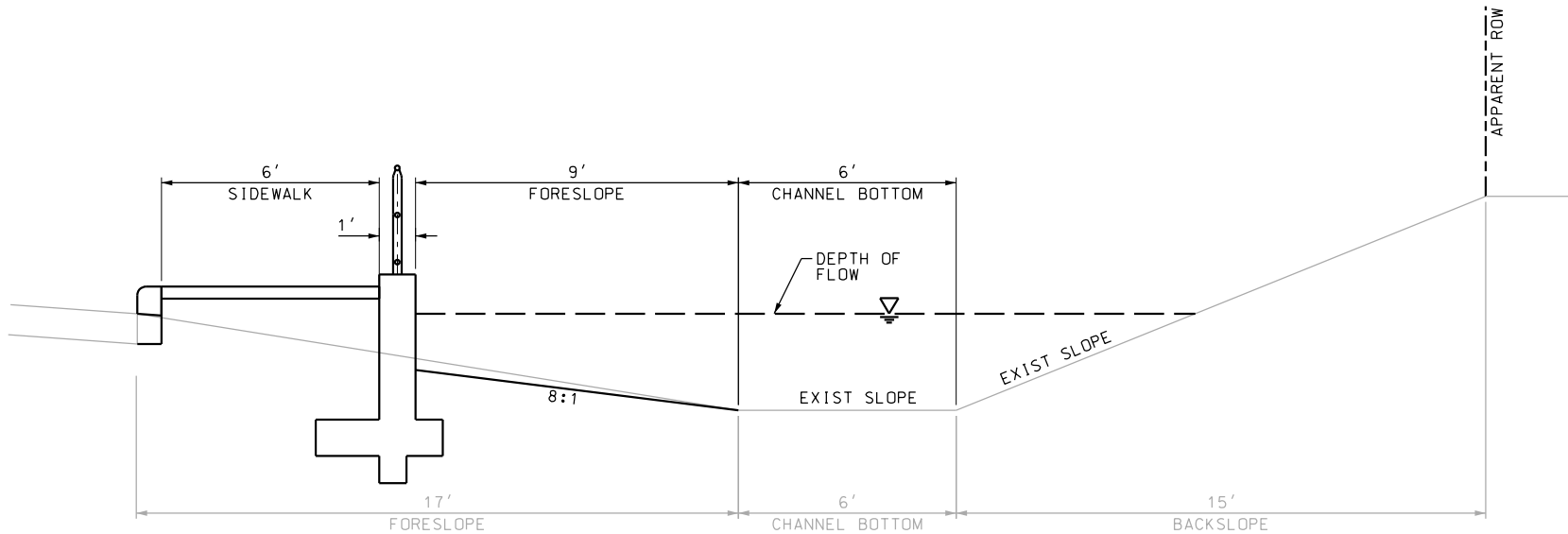
STA 1444+00 TO STA 1448+00

SHEET 35 OF 107

CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
OGN	6	TEXAS		VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
OGN	SAT	BEXAR	0915	12
DWG				JOB NO.
OGN				576
				SHEET NO.
				261

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*25*A.dgn



EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.033	FT/FT	S	FL SLOPE	0.033	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	46.9	SQ FT	A	AREA	43.60	SQ FT
P	WETTED PERIMETER	29.9	FT	P	WETTED PERIMETER	23.60	FT
R	HYDRAULIC RADIUS	1.57	FT	R	HYDRAULIC RADIUS	1.85	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	569.7	CFS	Q	DISCHARGE	590.7	CFS

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

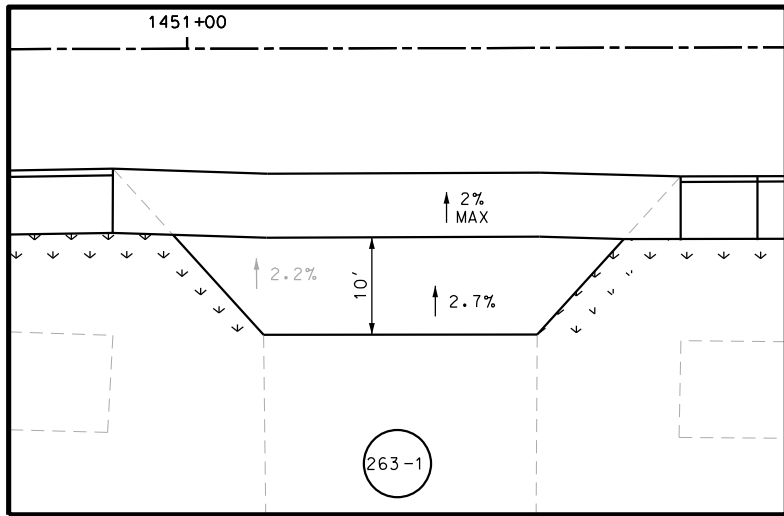
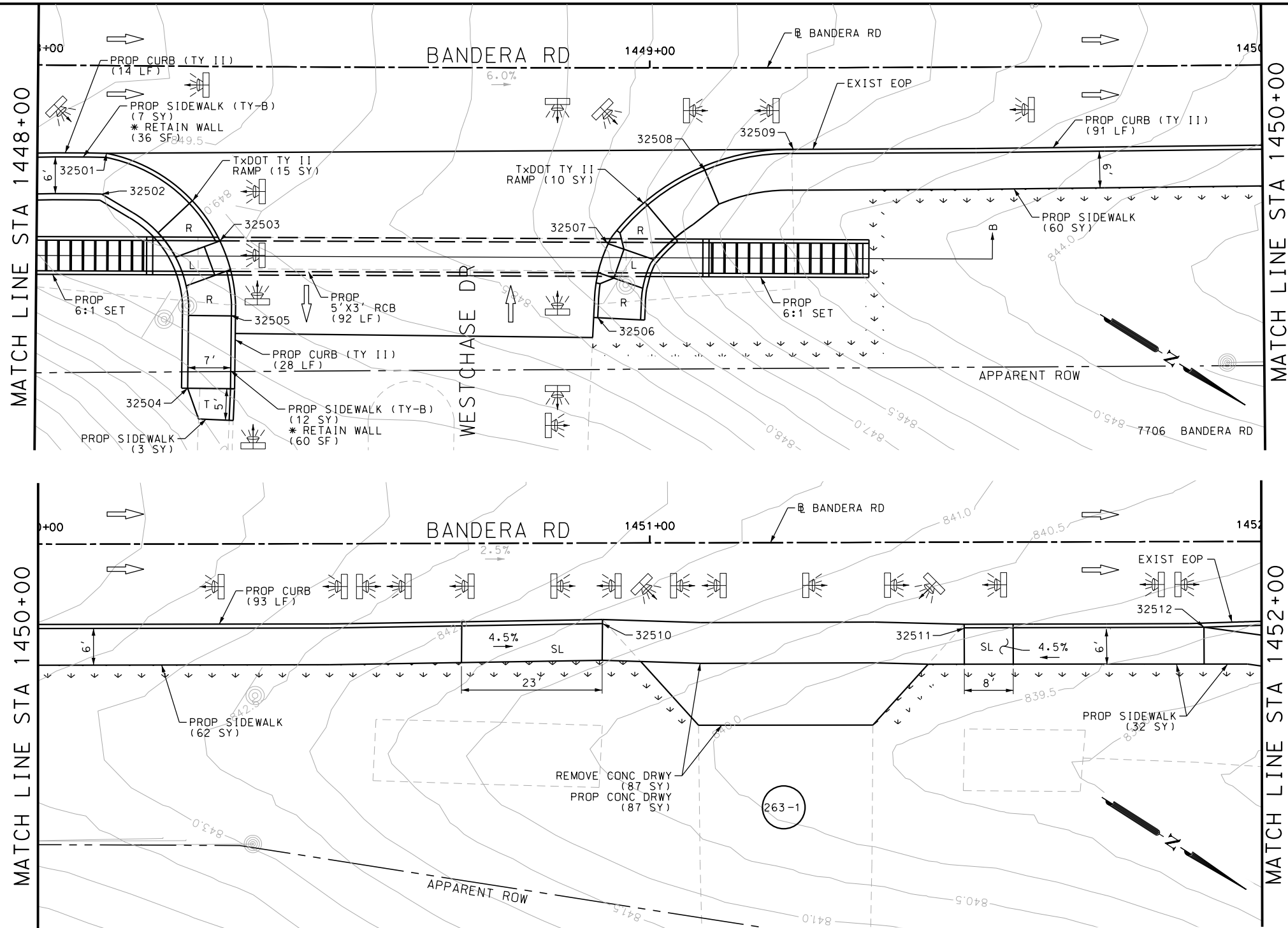
SIDEWALK CONSTRUCTION PLAN

STA 1444+00 TO STA 1448+00

SHEET 36 OF 107						
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	262

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*26.dgn



DRWY PLAN STA 1451+22

ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	150
0168-6001	VEGETATIVE WATERING	MG	2.34
0529-6002	CONC CURB (TY II)	LF	225
0531-6001	CONC SIDEWALKS (4")	SY	13
0531-6018	CURB RAMPS (TY 1)	SY	26
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	141

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

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

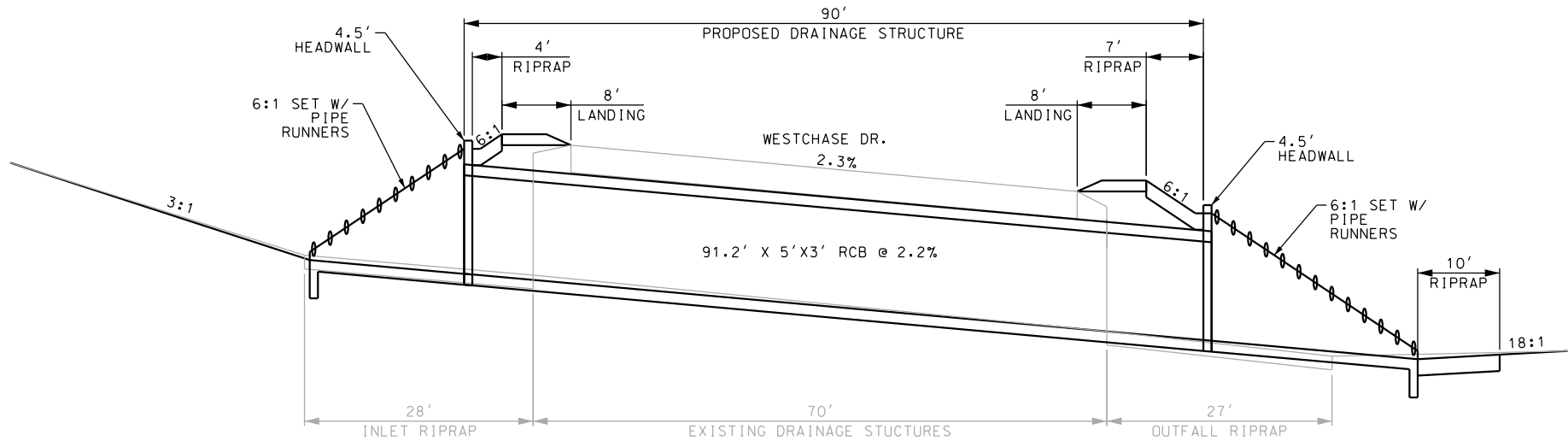
Texas Department of Transportation
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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1448+00 TO STA 1452+00

SHEET 37 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*26*A.dgn



SECTION B-B

EXISTING PIPE (36")				PROPOSED BOX (5'X3' RCB)			
Q = (Z/n)A(R° (2/3)) (S° (1/2))				Q = (Z/n)A(R° (2/3)) (S° (1/2))			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.024	FT/FT	S	FL SLOPE	0.022	FT/FT
n	MANNING'S N-VALUE	0.02		n	MANNING'S N-VALUE	0.012	
A	AREA	7.1	SQ FT	A	AREA	15.00	SQ FT
P	WETTED PERIMETER	9.4	FT	P	WETTED PERIMETER	16.00	FT
R	HYDRAULIC RADIUS	0.75	FT	R	HYDRAULIC RADIUS	0.94	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	56.1	CFS	Q	DISCHARGE	263.9	CFS
EXISTING BOX (3'X4')							
Q = (Z/n)A(R° (2/3)) (S° (1/2))							
Equation 7-1							
S	FL SLOPE	0.024	FT/FT				
n	MANNING'S N-VALUE	0.01					
A	AREA	12.0	SQ FT				
P	WETTED PERIMETER	14.0	FT				
R	HYDRAULIC RADIUS	0.86	FT				
Z	CONVERSION FACTOR	1.49					
Q	DISCHARGE	207.7	CFS				
ESTIMATED TOTAL							
		263.8	CFS				

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

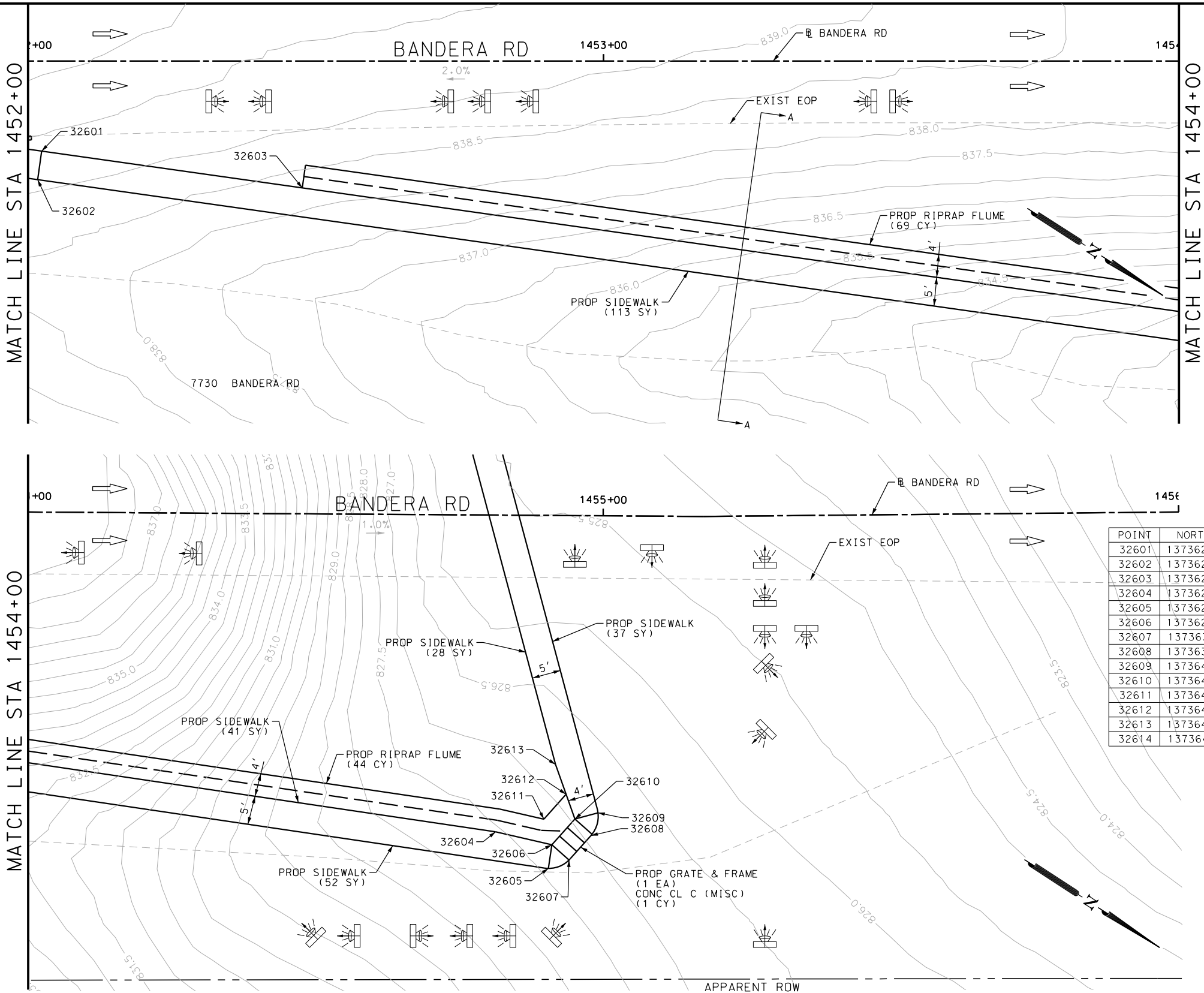
SIDEWALK CONSTRUCTION PLAN

STA 1448+00 TO STA 1452+00

SHEET 38 OF 107						
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	264

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*27.dgn



ITEM	DESCRIPTION	UNIT	QTY
0162-6002	BLOCK SODDING	SY	250
0168-6001	VEGETATIVE WATERING	MG	3.90
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	218

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

POINT	NORTHING	EASTING	ELEV	DESC
32601	13736208.50	2085968.91	--	.
32602	13736210.03	2085973.67	--	.
32603	13736234.05	2085960.70	--	.
32604	13736235.58	2085965.46	--	.
32605	13736280.69	2085941.19	--	.
32606	13736283.00	2085945.63	--	.
32607	13736363.41	2085898.00	--	.
32608	13736365.73	2085902.44	--	.
32609	13736405.73	2085879.86	--	.
32610	13736407.35	2085884.59	--	.
32611	13736449.30	2085865.00	--	.
32612	13736450.92	2085869.73	--	.
32613	13736456.23	2085806.80	--	.
32614	13736458.91	2085802.58	--	.

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

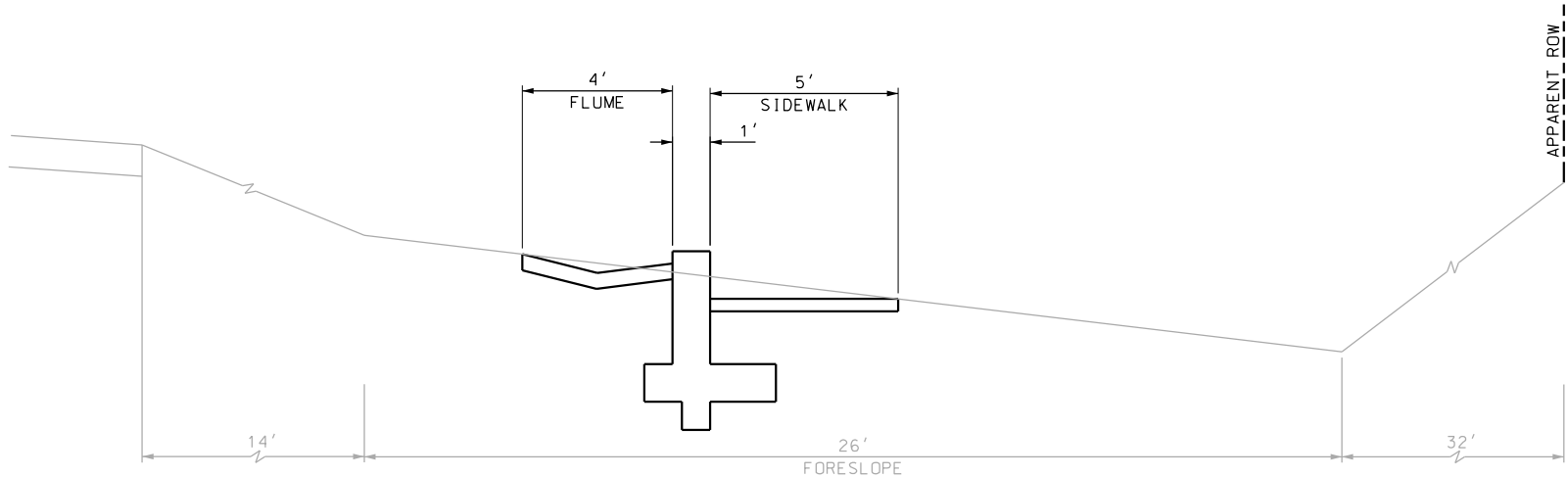


BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1452+00 TO STA 1456+00

SHEET 39 OF 107					
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

Plotted on: 11/21/2018

Design Filename: P:\1111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*27*A.dgn



SECTION A-A

- 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

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



**PAPE-DAWSON
ENGINEERS**

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BANDERA RD

SIDEWALK
CONSTRUCTION PLAN

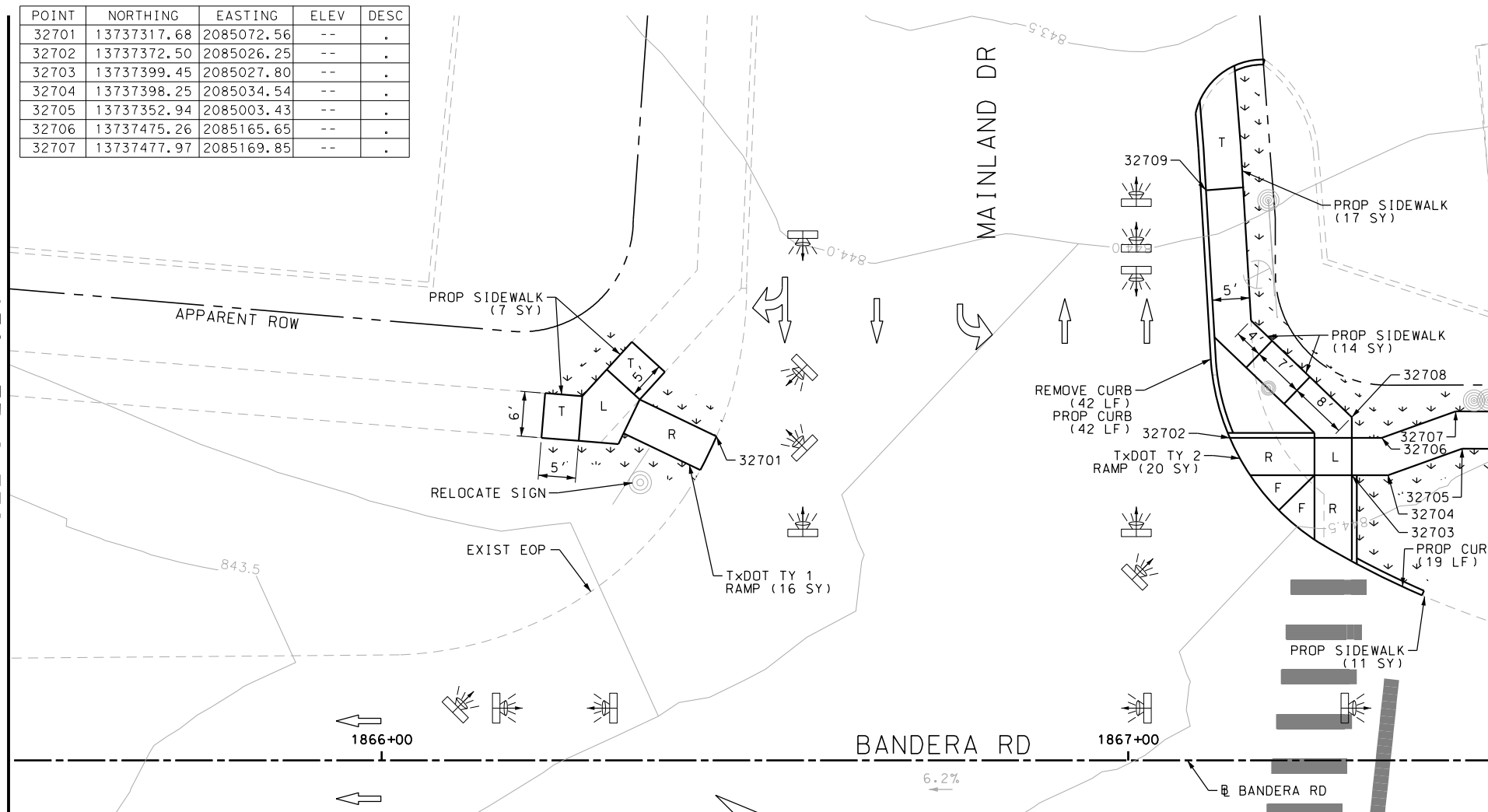
STA 1452+00 TO STA 1456+00

SHEET 40 OF 107						
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	266

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*28.dgn

MATCH LINE STA 1865+50
SEE SHEET 320



ITEM	DESCRIPTION	UNIT	QTY
0529-6002	CONC CURB (TY II)	LF	40
0531-6001	CONC SIDEWALKS (4")	SY	23
0531-6018	CURB RAMPS (TY 1)	SY	18
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	17
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

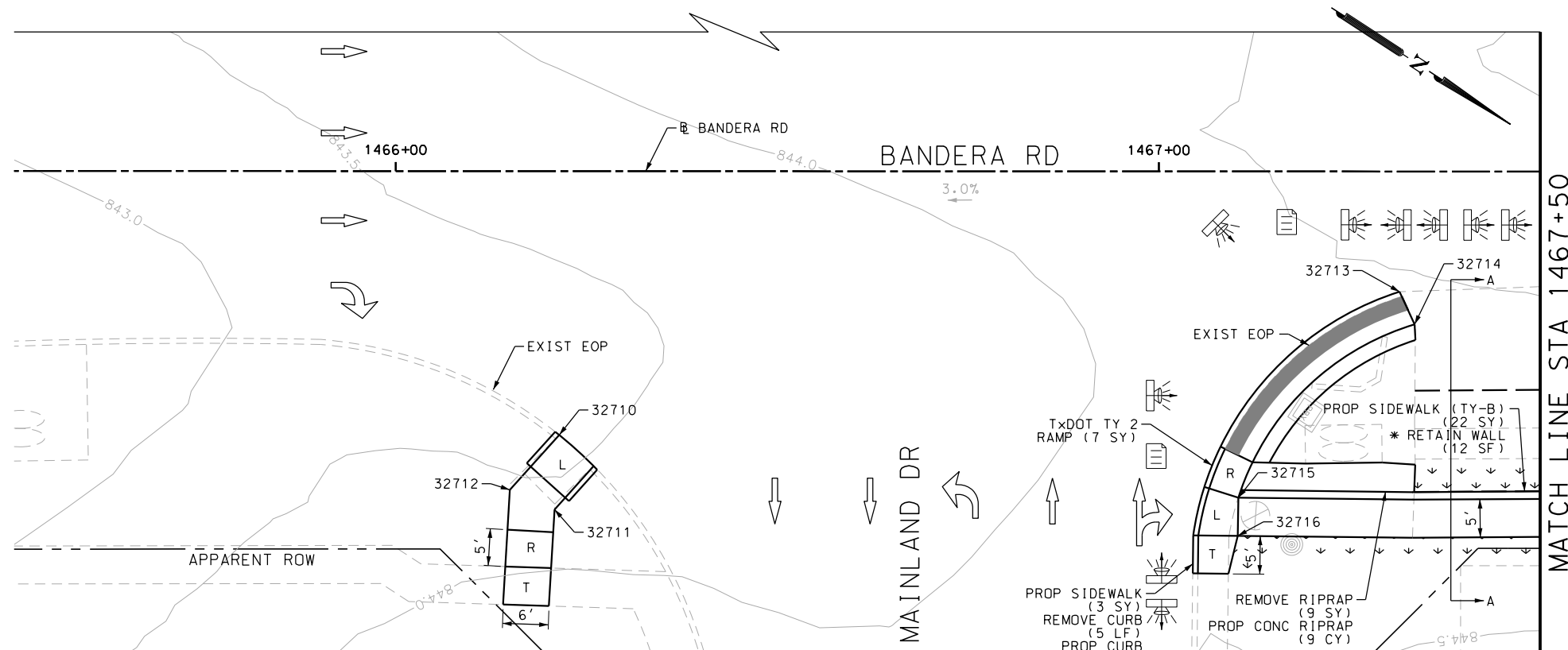
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



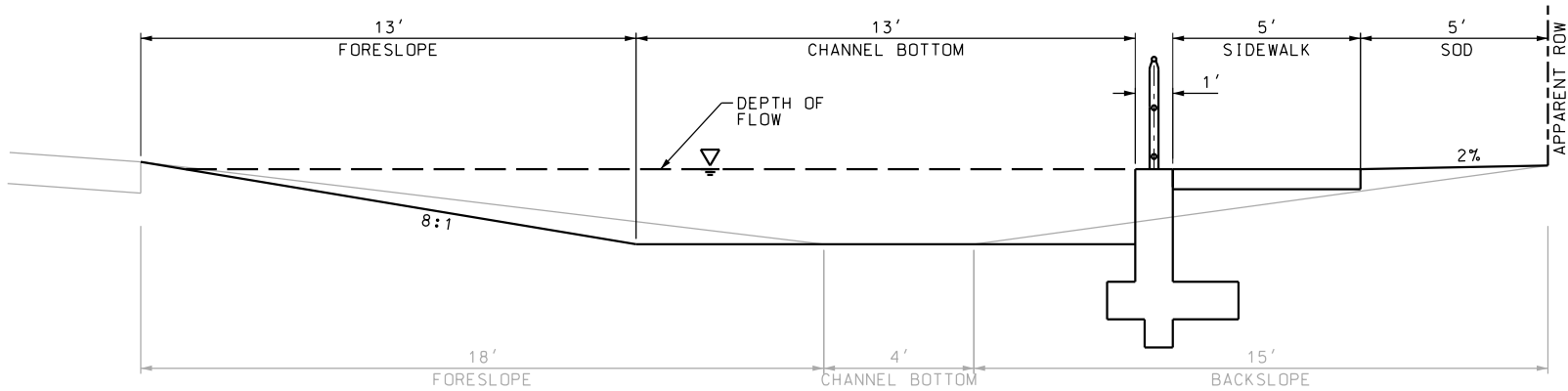
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1465+50 TO STA 1467+50
STA 1865+50 TO STA 1867+50
SHEET 41 OF 107

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



Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*28*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.008	FT/FT	S	FL SLOPE	0.008	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	42.7	SQ FT	A	AREA	38.60	SQ FT
P	WETTED PERIMETER	36.9	FT	P	WETTED PERIMETER	27.50	FT
R	HYDRAULIC RADIUS	1.16	FT	R	HYDRAULIC RADIUS	1.40	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	208.5	CFS	Q	DISCHARGE	214.4	CFS

- NOTES:
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INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

STA 1465+50 TO STA 1467+50

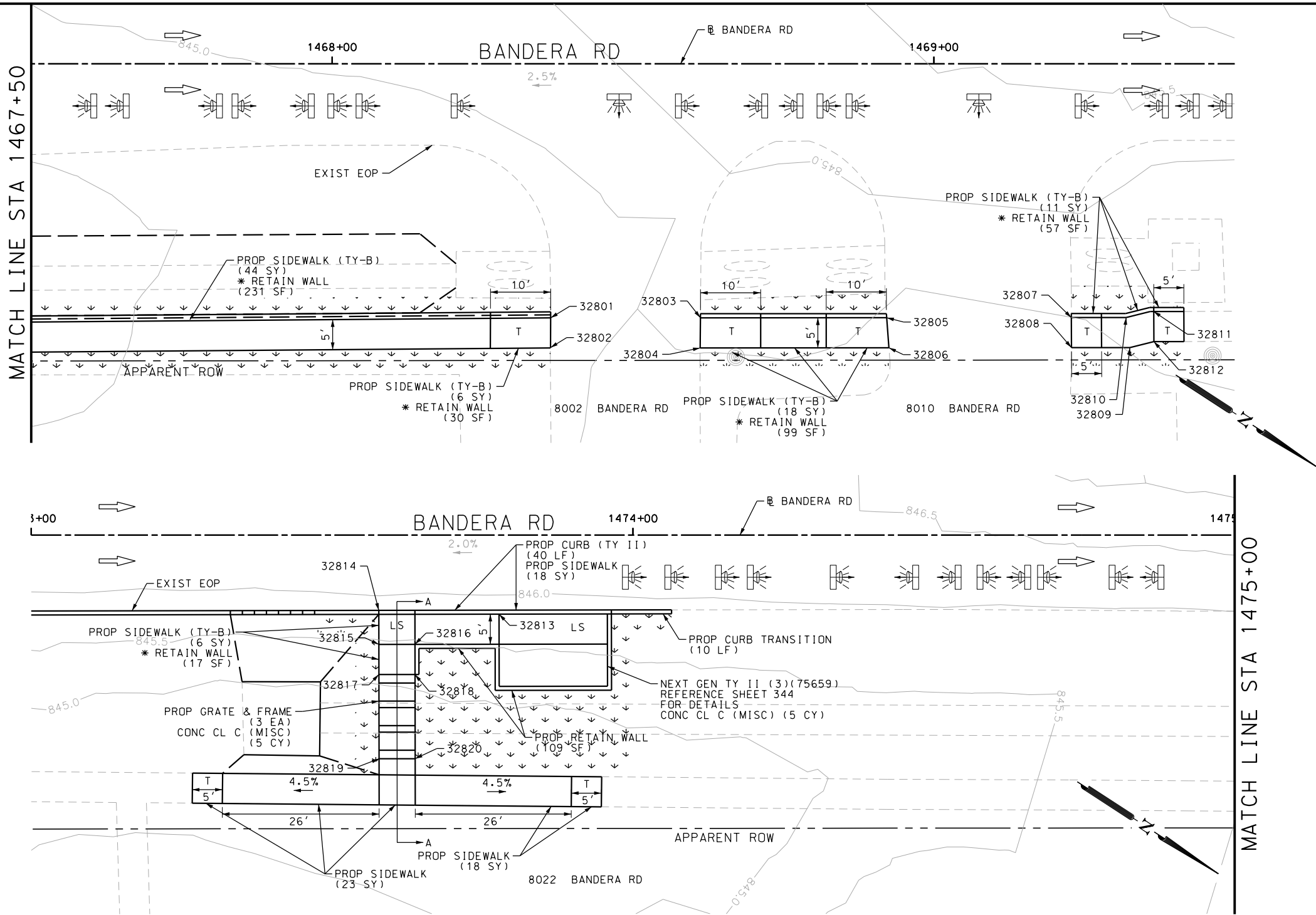
STA 1865+50 TO STA 1867+50

SHEET 42 OF 107

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	268

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*29.dgn



ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	12.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	34
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	30
0531-6001	CONC SIDEWALKS (4")	SY	15
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	78

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
32801	13737571.17	2085103.67	--	.
32802	13737573.89	2085107.87	--	.
32803	13737600.58	2085084.64	--	.
32804	13737603.34	2085088.81	--	.
32805	13737619.59	2085072.07	--	.
32806	13737622.34	2085076.25	--	.
32807	13737651.01	2085051.31	--	.
32808	13737653.76	2085055.48	--	.
32809	13737655.49	2085054.33	--	.
32810	13737656.20	2085050.84	--	.
32811	13737658.58	2085043.27	--	.
32812	13737661.34	2085047.44	--	.
32813	13738042.47	2084759.22	--	.
32814	13738033.33	2084765.76	--	.
32815	13738036.05	2084769.95	--	.
32816	13738040.02	2084767.37	--	.
32817	13738037.63	2084772.38	--	.
32818	13738041.82	2084769.65	--	.
32819	13738045.26	2084784.12	--	.
32820	13738049.45	2084781.39	--	.

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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BANDERA RD

SIDEWALK
CONSTRUCTION PLAN

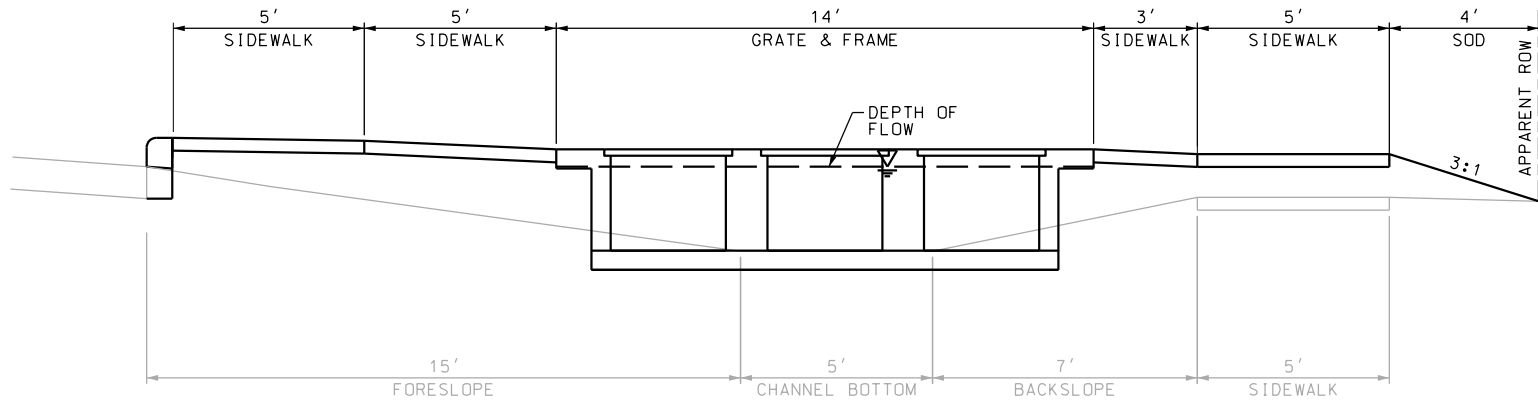
STA 1467+50 TO STA 1469+50
STA 1473+00 TO STA 1475+00

SHEET 43 OF 107

CHK DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
	SAT	BEXAR	0915	12
CHK DWG:				
				576
				269

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*29*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.002	FT/FT	S	FL SLOPE	0.002	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.023	
A	AREA	18.9	SQ FT	A	AREA	19.70	SQ FT
P	WETTED PERIMETER	22.3	FT	P	WETTED PERIMETER	22.10	FT
R	HYDRAULIC RADIUS	0.85	FT	R	HYDRAULIC RADIUS	0.89	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	37.5	CFS	Q	DISCHARGE	52.7	CFS

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

STA 1467+50 TO STA 1469+50

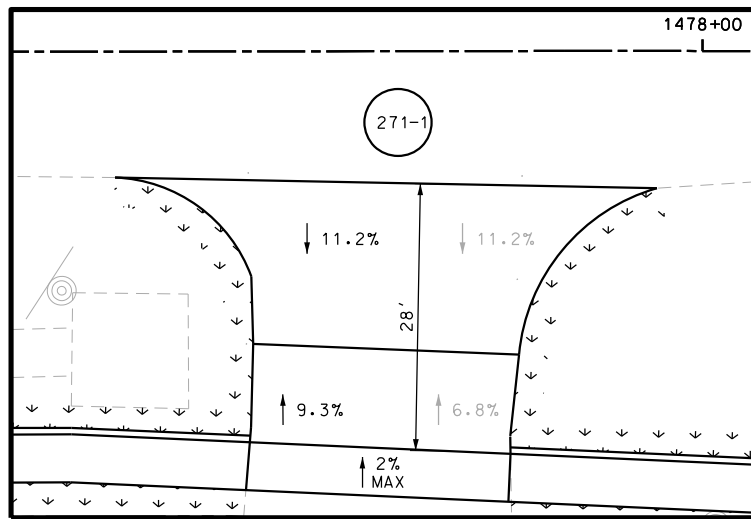
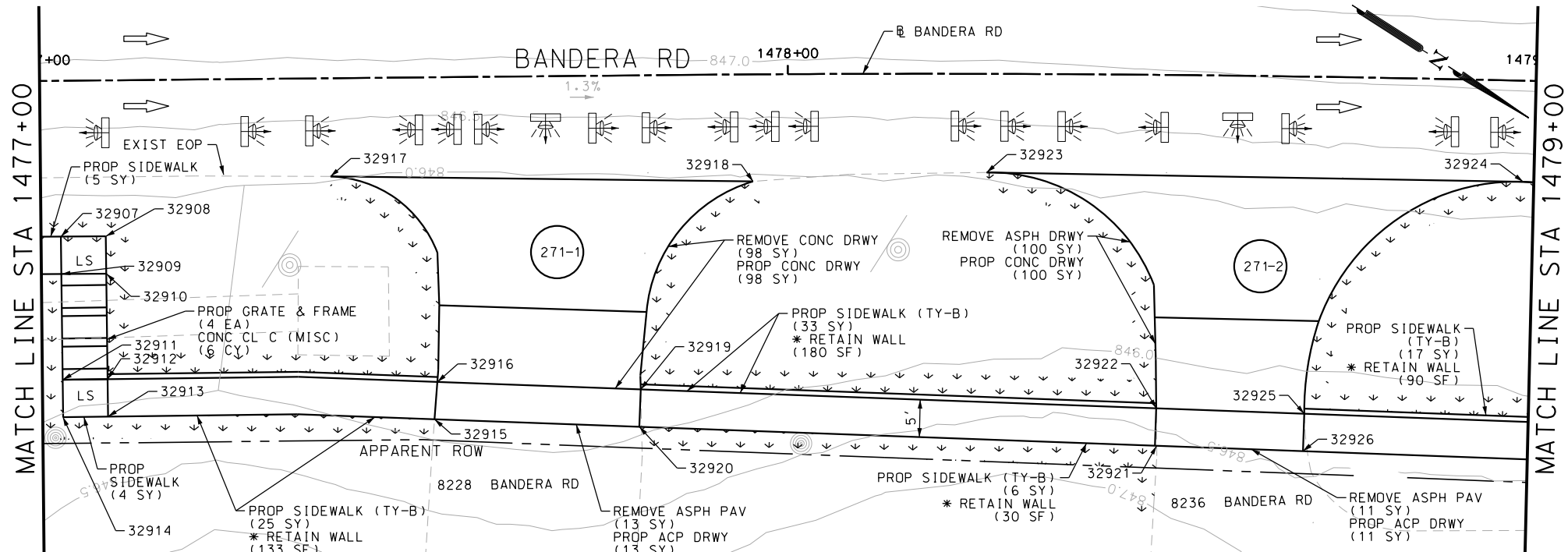
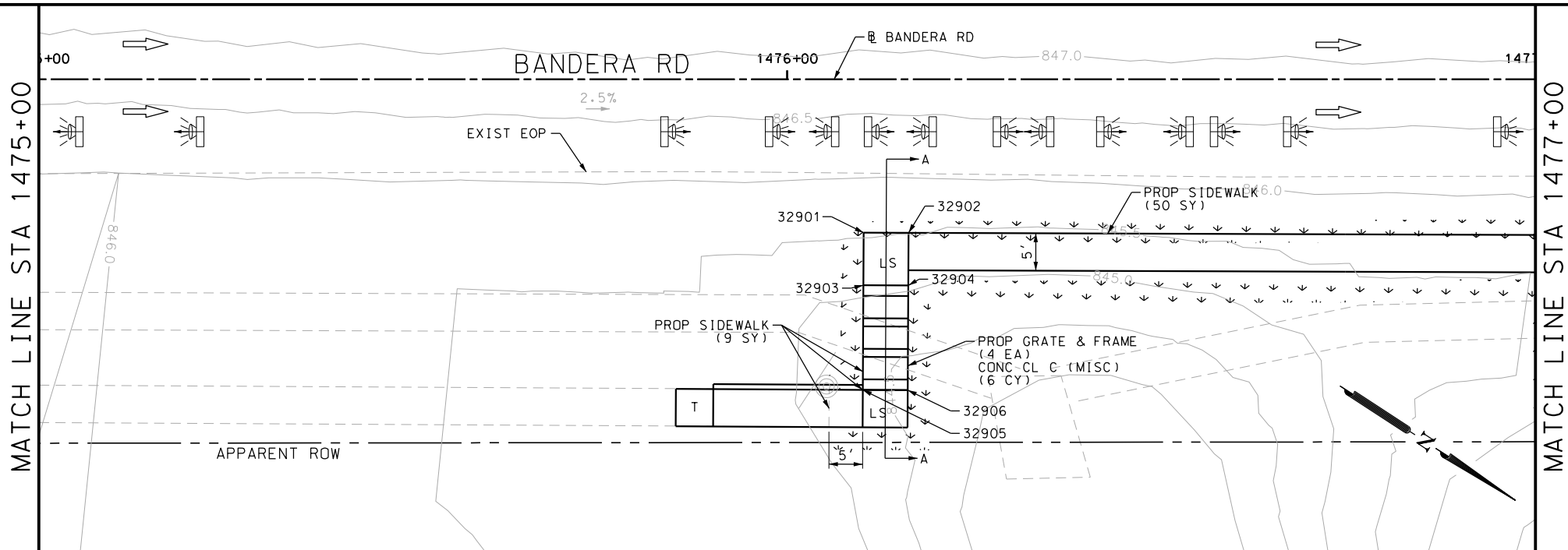
STA 1473+00 TO STA 1475+00

SHEET 44 OF 107

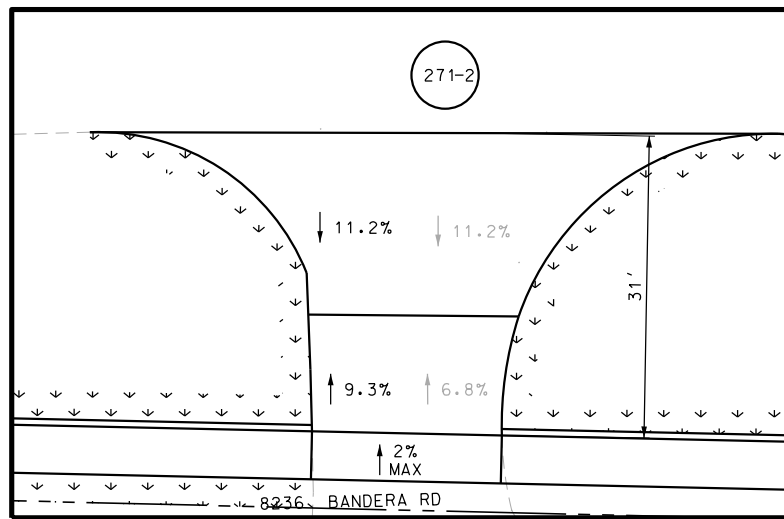
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	270

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*30.dgn



DRWY PLAN STA 1477+67



DRWY PLAN STA 1478+59

POINT	NORTHING	EASTING	ELEV	DESC
32901	13738217.20	2084679.47	--	.
32902	13738221.40	2084676.74	--	.
32903	13738212.48	2084672.19	--	.
32904	13738216.66	2084669.45	--	.
32905	13738293.06	2084619.44	--	.
32906	13738297.26	2084616.69	--	.
32907	13738297.28	2084625.88	--	.
32908	13738301.53	2084623.02	--	.
32909	13738340.14	2084597.13	--	.
32910	13738342.73	2084601.41	--	.
32911	13738365.69	2084581.67	--	.
32912	13738368.28	2084585.94	--	.
32913	13738423.69	2084546.98	--	.
32914	13738426.23	2084551.29	--	.
32915	13738441.72	2084536.37	--	.
32916	13738444.25	2084540.68	--	.
32917	13738209.75	2084667.99	--	.
32918	13738213.92	2084665.27	--	.
32919	13738290.32	2084615.26	--	.
32920	13738294.54	2084612.49	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	220
0420-6074	CL C CONC (MISC)	CY	6.0
0471-6003	GRATE & FRAME	EA	18
0530-6004	DRIVEWAYS (CONC)	SY	220
0531-6001	CONC SIDEWALKS (4")	SY	12
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	131

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

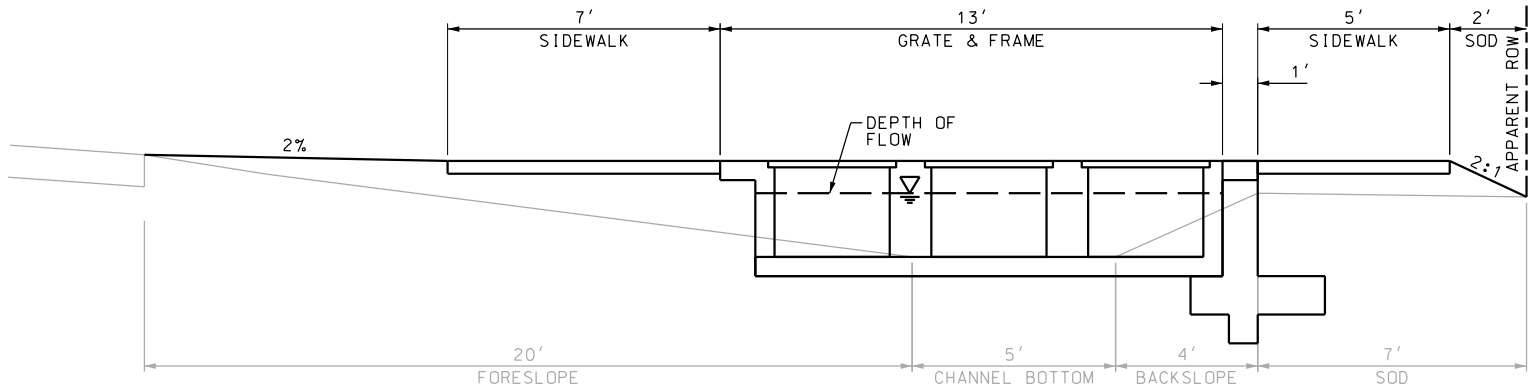
SIDEWALK CONSTRUCTION PLAN

STA 1475+00 TO STA 1479+00

SHEET 45 OF 107					
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.	
CHK	6	TEXAS		VARIES	
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK	SAT	BEXAR	0915	12	576
DWG					271

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*30*A.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n)A(R^{2/3})(S^{1/2})$				$Q = (Z/n)A(R^{2/3})(S^{1/2})$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.027	FT/FT	S	FL SLOPE	0.027	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.023	
A	AREA	15.7	SQ FT	A	AREA	14.90	SQ FT
P	WETTED PERIMETER	21.2	FT	P	WETTED PERIMETER	19.00	FT
R	HYDRAULIC RADIUS	0.74	FT	R	HYDRAULIC RADIUS	0.78	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	104.6	CFS	Q	DISCHARGE	134.5	CFS

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DESIGN

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018


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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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1475+00 TO STA 1479+00

SHEET 46 OF 107						
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	272

Design Filename: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*31.dgn



NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY

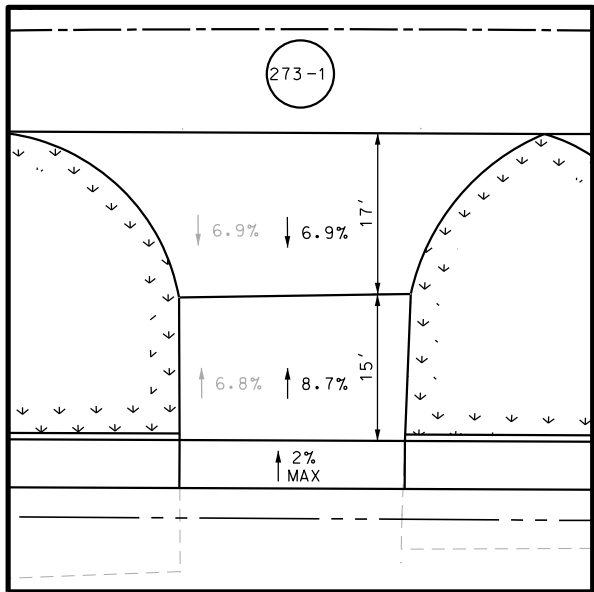


SHEET 47 OF 107

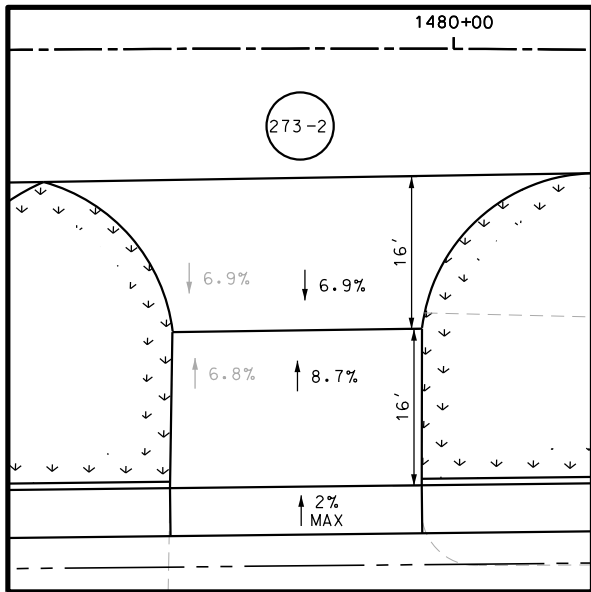
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CHK OGN ₂	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₁	SAT	BEXAR	0915	12	576	273

Plotted on: 11/21/2018

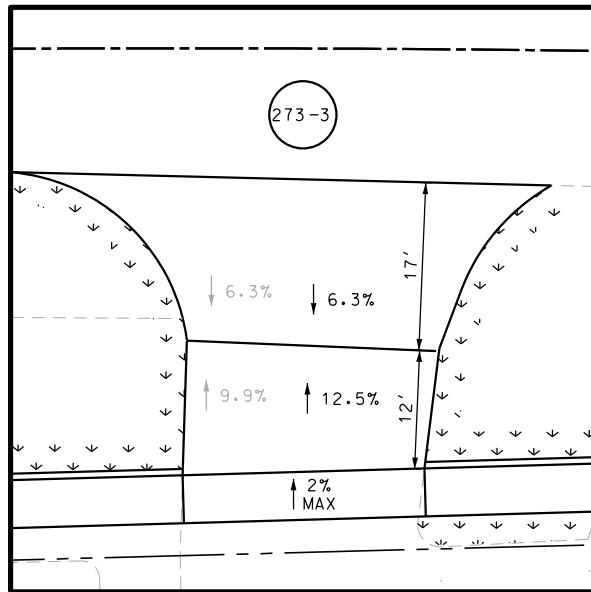
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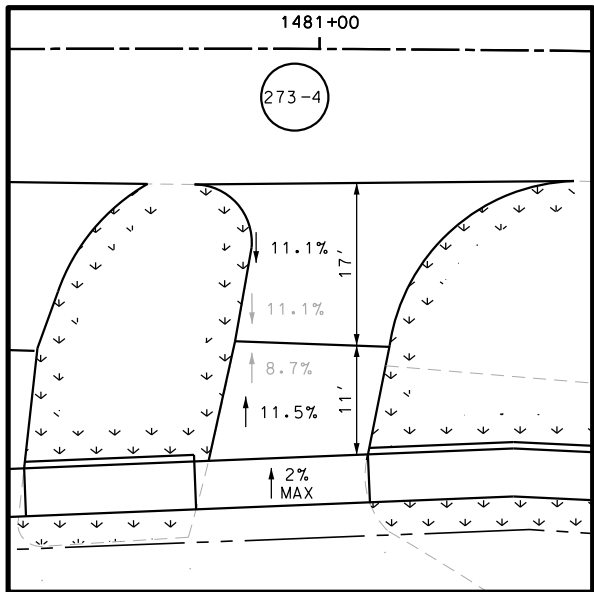
DRWY PLAN STA 1479+32



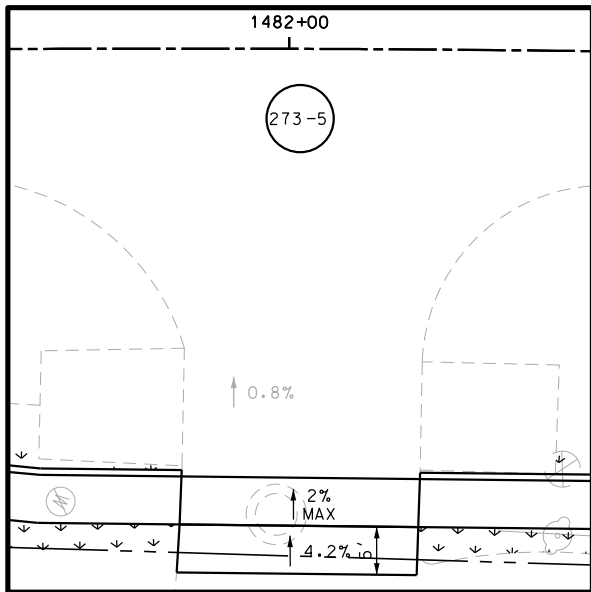
DRWY PLAN STA 1479+84



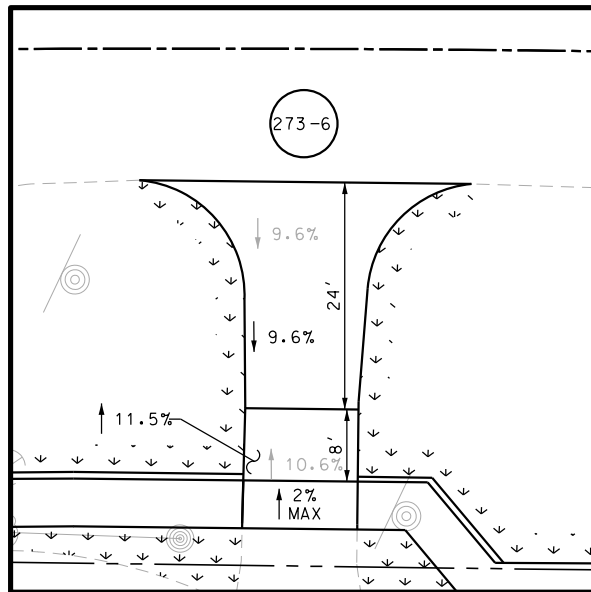
DRWY PLAN STA 1480+56



DRWY PLAN STA 1480+98



DRWY PLAN STA 1482+01



DRWY PLAN STA 1482+60

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

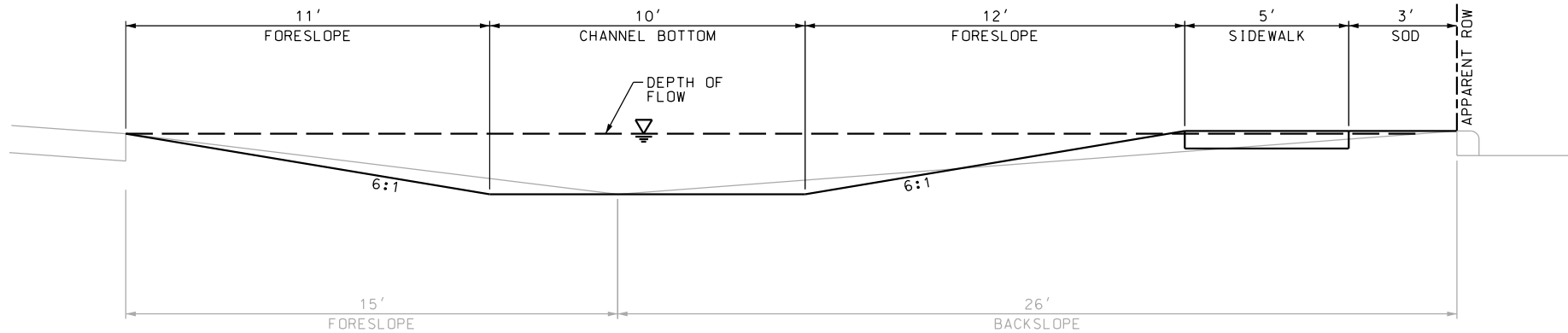
STA 1479+00 TO STA 1483+00

SHEET 48 OF 107

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	274

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*31*B.dgn



SECTION A-A

EXISTING DITCH				PROPOSED DITCH			
$Q = (Z/n) A (R^2 (2/3)) (S^2 (1/2))$				$Q = (Z/n) A (R^2 (2/3)) (S^2 (1/2))$			
Equation 7-1				Equation 7-1			
S	FL SLOPE	0.003	FT/FT	S	FL SLOPE	0.003	FT/FT
n	MANNING'S N-VALUE	0.03		n	MANNING'S N-VALUE	0.030	
A	AREA	36.6	SQ FT	A	AREA	38.30	SQ FT
P	WETTED PERIMETER	39.7	FT	P	WETTED PERIMETER	32.10	FT
R	HYDRAULIC RADIUS	0.92	FT	R	HYDRAULIC RADIUS	1.19	FT
Z	CONVERSION FACTOR	1.49		Z	CONVERSION FACTOR	1.49	
Q	DISCHARGE	94.1	CFS	Q	DISCHARGE	116.9	CFS

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

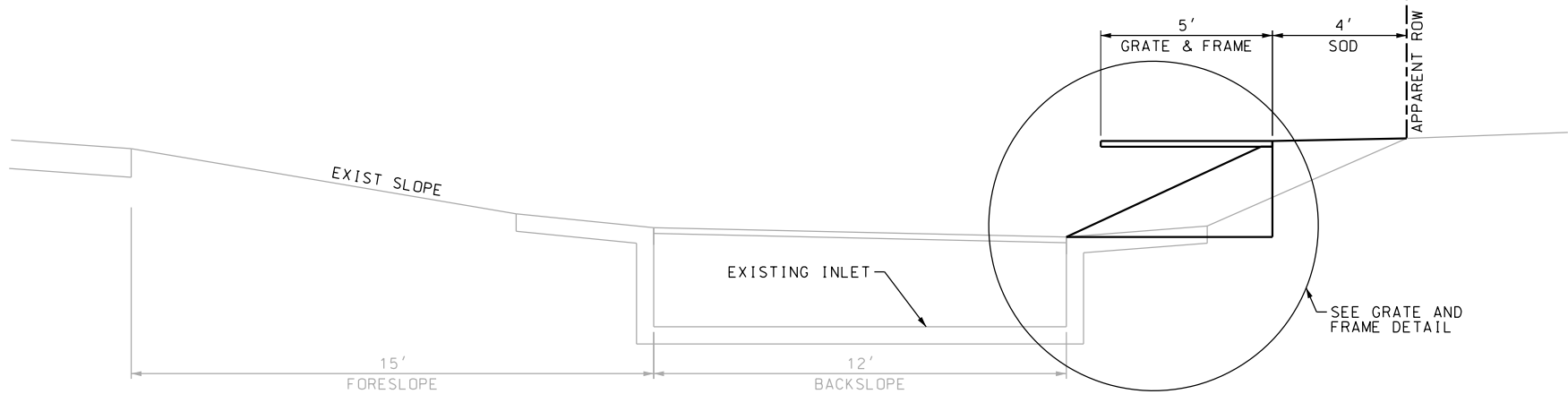
INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

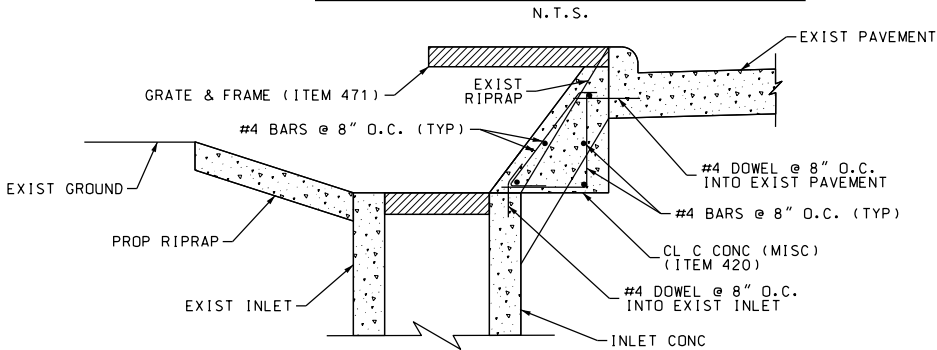
P.E. SERIAL NO: 84722

DATE: 11/21/2018



SECTION B-B

GRATE & FRAME DETAIL



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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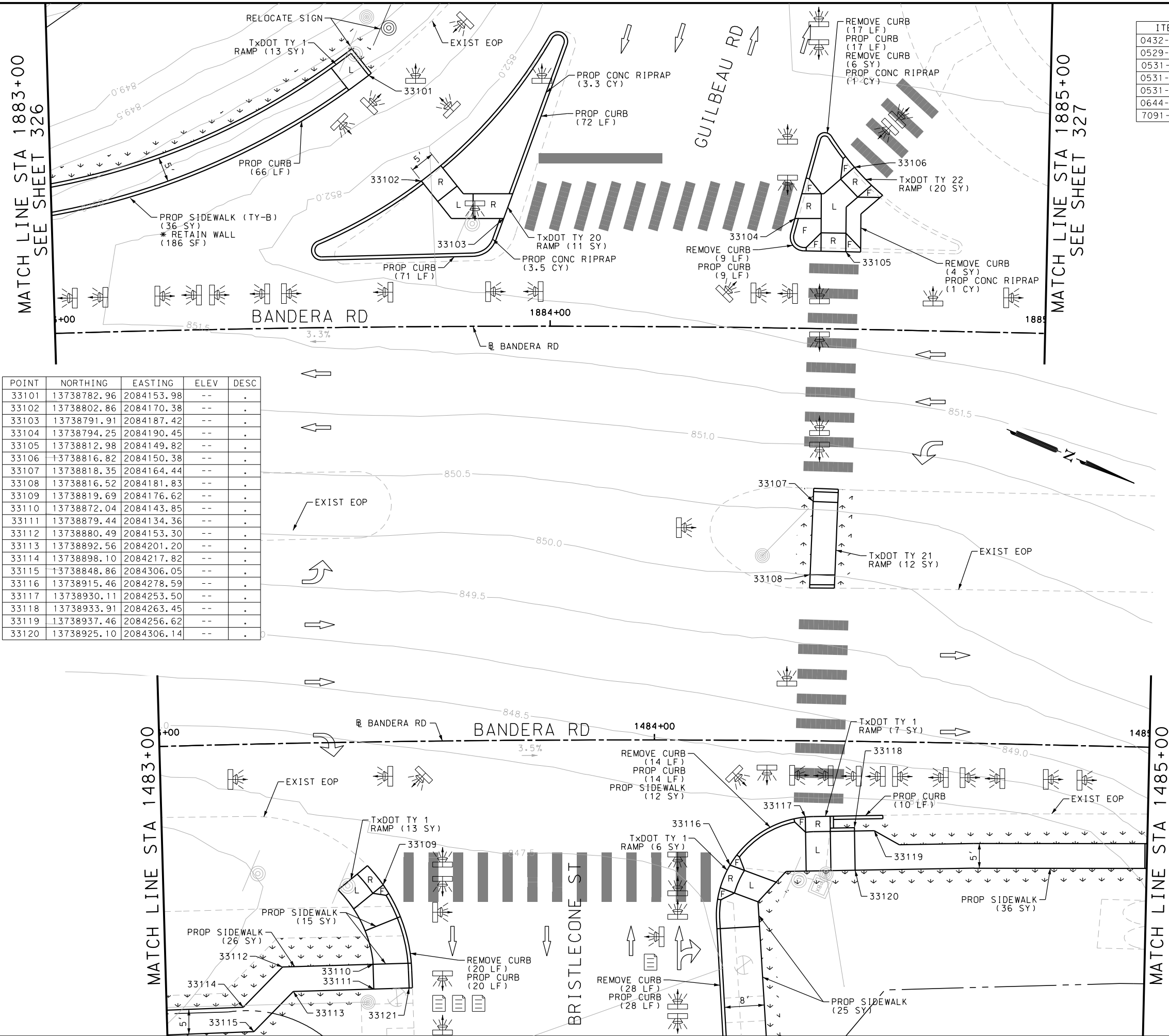
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1479+00 TO STA 1483+00

SHEET 49 OF 107

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	275

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*32.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33101	13738782.96	2084153.98	--	.
33102	13738802.86	2084170.38	--	.
33103	13738791.91	2084187.42	--	.
33104	13738794.25	2084190.45	--	.
33105	13738812.98	2084149.82	--	.
33106	13738816.82	2084150.38	--	.
33107	13738818.35	2084164.44	--	.
33108	13738816.52	2084181.83	--	.
33109	13738819.69	2084176.62	--	.
33110	13738872.04	2084143.85	--	.
33111	13738879.44	2084134.36	--	.
33112	13738880.49	2084153.30	--	.
33113	13738892.56	2084201.20	--	.
33114	13738898.10	2084217.82	--	.
33115	13738848.86	2084306.05	--	.
33116	13738915.46	2084278.59	--	.
33117	13738930.11	2084253.50	--	.
33118	13738933.91	2084263.45	--	.
33119	13738937.46	2084256.62	--	.
33120	13738925.10	2084306.14	--	.

ITEM	DESCRIPTION	UNIT	QTY
0432-6003	RIPRAP (CONC) (6 IN)	CY	7
0529-6002	CONC CURB (TY II)	LF	185
0531-6001	CONC SIDEWALKS (4")	SY	73
0531-6018	CURB RAMPS (TY I)	SY	78
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	72
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	1
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1483+00 TO STA 1485+00

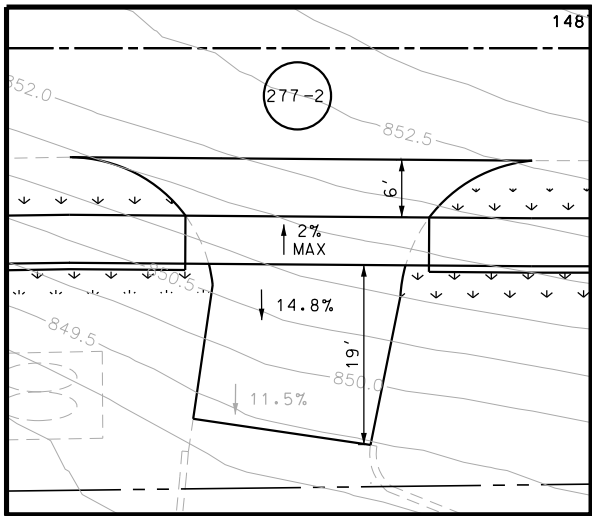
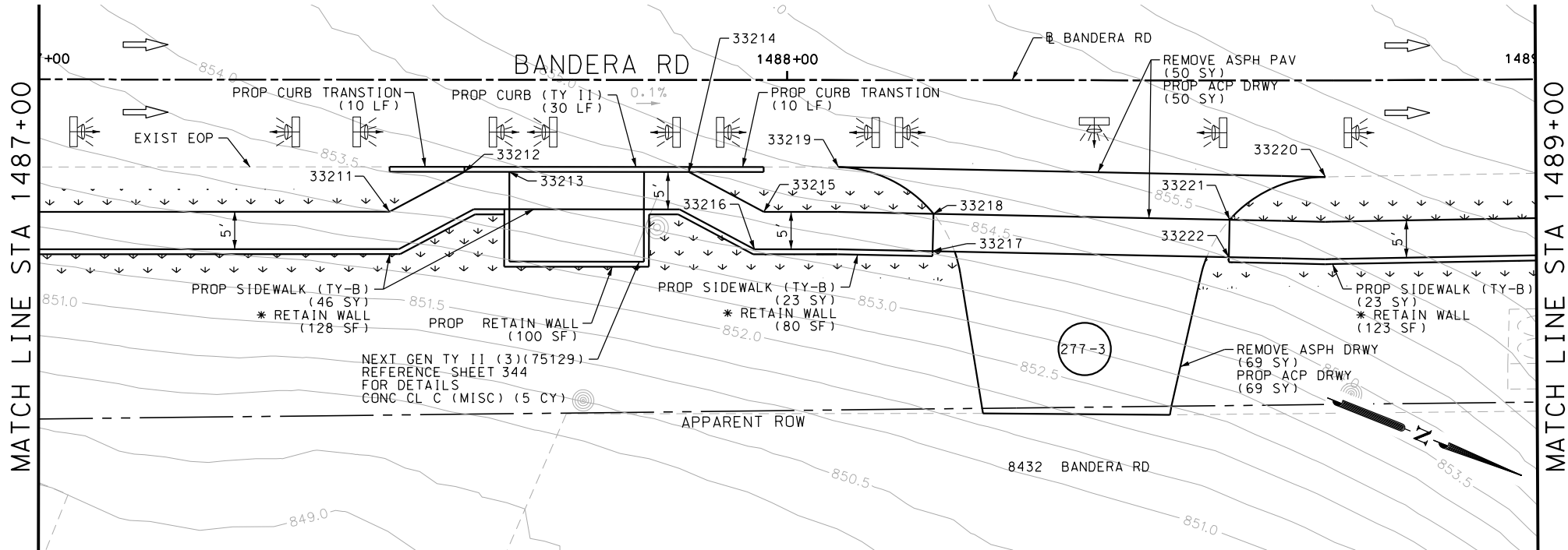
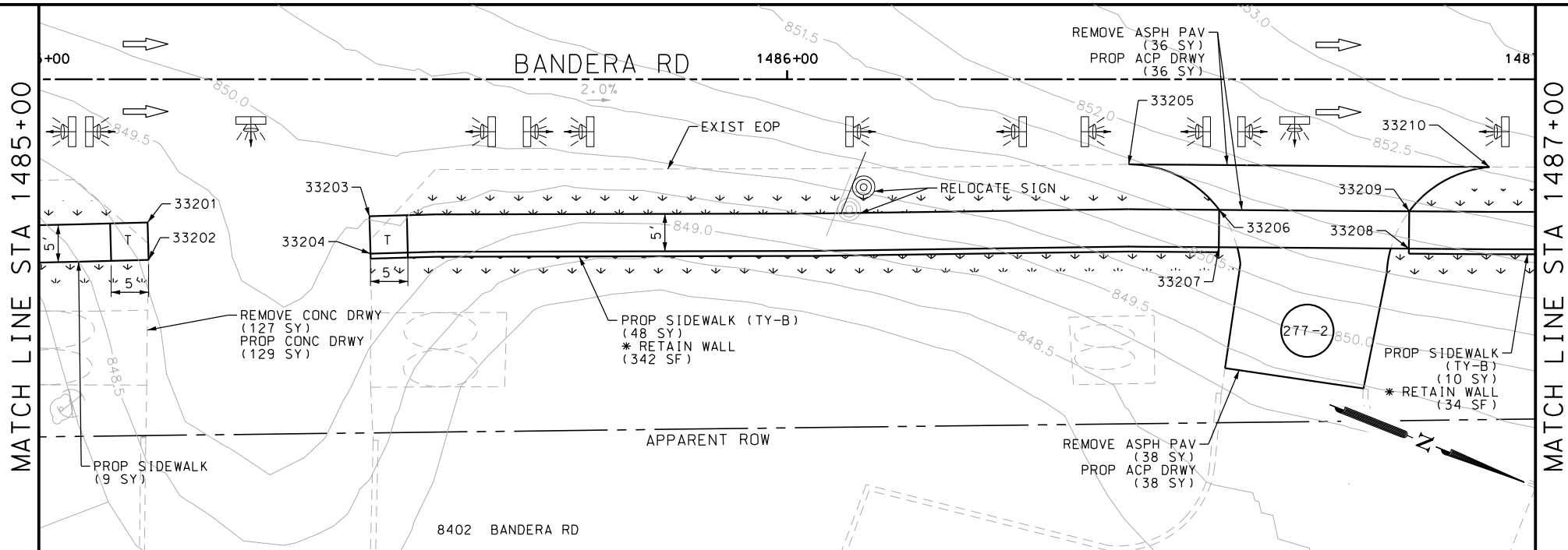
STA 1883+00 TO STA 1885+00

SHEET 50 OF 107

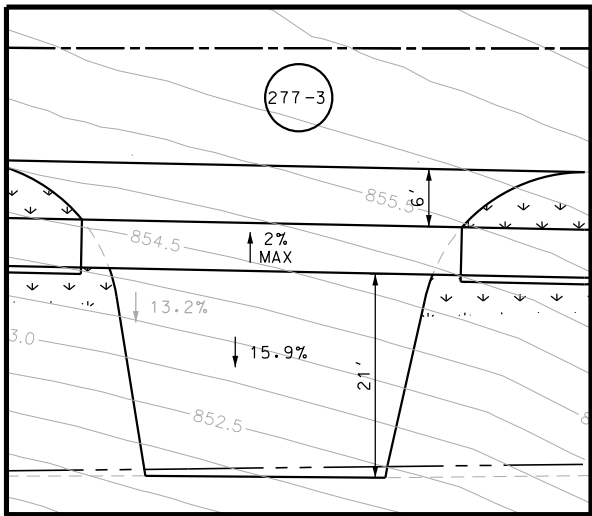
DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DGN:	6	TEXAS		VARIES		
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	276

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*33.dgn



DRWY PLAN STA 1486+70



DRWY PLAN STA 1488+42

POINT	NORTHING	EASTING	ELEV	DESC
33201	13738996.86	2084232.61	--	.
33202	13739002.09	2084235.88	--	.
33203	13739031.17	2084218.73	--	.
33204	13739029.26	2084224.90	--	.
33205	13739132.44	2084177.79	--	.
33206	13739136.59	2084181.51	--	.
33207	13739157.11	2084167.82	--	.
33208	13739156.71	2084173.38	--	.
33209	13739228.24	2084139.06	--	.
33210	13739237.14	2084128.99	--	.
33211	13739256.07	2084127.81	--	.
33212	13739257.95	2084132.44	--	.
33213	13739285.00	2084116.11	--	.
33214	13739289.15	2084119.83	--	.
33215	13739316.52	2084103.37	--	.
33216	13739316.12	2084108.93	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	372
0420-6074	CL C CONC (MISC)	CY	8.8
0529-6002	CONC CURB (TY II)	LF	30
0530-6004	DRIVEWAYS (CONC)	SY	372
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	173
0644-6070	RELOCATE SM RD SN SUP&AM TY S80	EA	2

- NOTES:
- * FOR CONTRACTOR INFORMATION ONLY
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

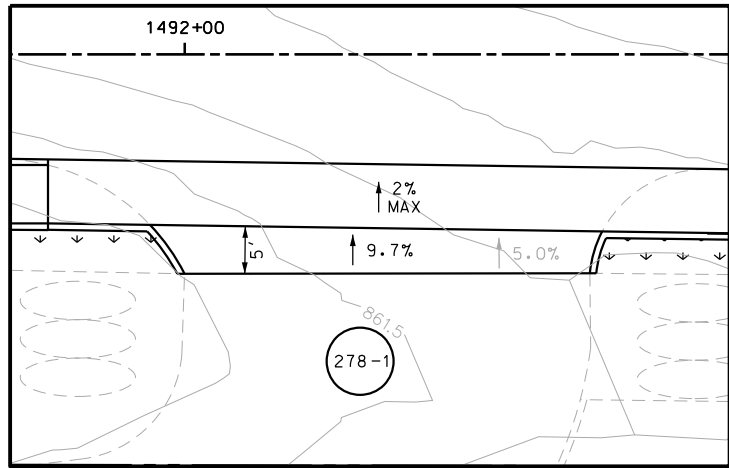
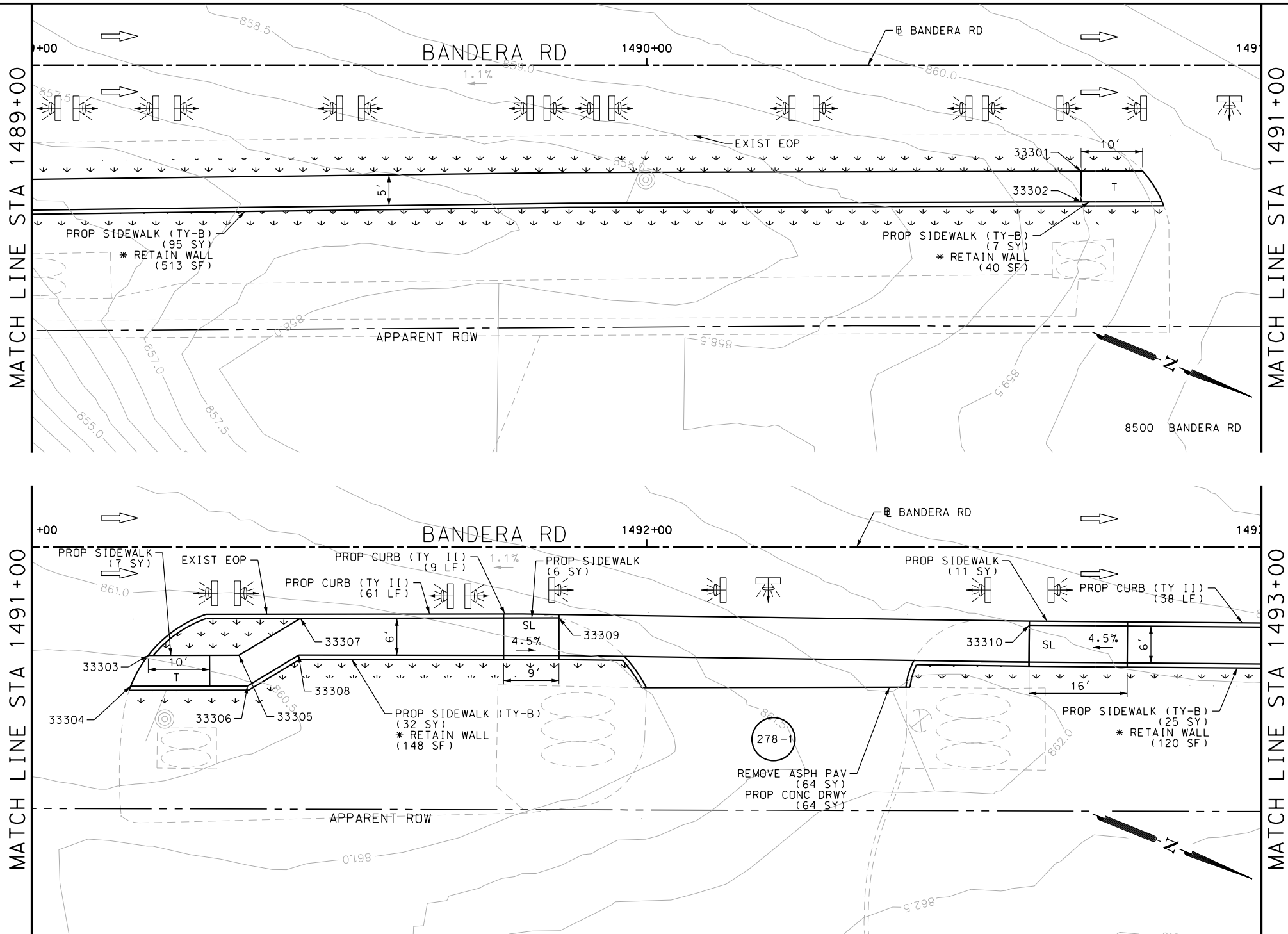
STA 1485+00 TO STA 1489+00

SHEET 51 OF 1

DCN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN#	6	TEXAS				VARIABLE
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	277

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*WB*34.dgn



DW PLAN STA 1492+20

ITEM	DESCRIPTION	UNIT	QTY
0529-6002	CONC CURB (TY II)	LF	277
0531-6001	CONC SIDEWALKS (4")	SY	20
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	151

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
33301	13739515.02	2084023.12	--	.
33302	13739516.90	2084027.75	--	.
33303	13739568.52	2084001.49	--	.
33304	13739570.39	2084006.12	--	.
33305	13739571.23	2084000.39	--	.
33306	13739575.03	2084004.25	--	.
33307	13739574.27	2083993.23	--	.
33308	13739578.06	2083997.09	--	.
33309	13739618.09	2083975.51	--	.
33310	13739688.47	2083947.06	--	.

PAPE-DAWSON ENGINEERS

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

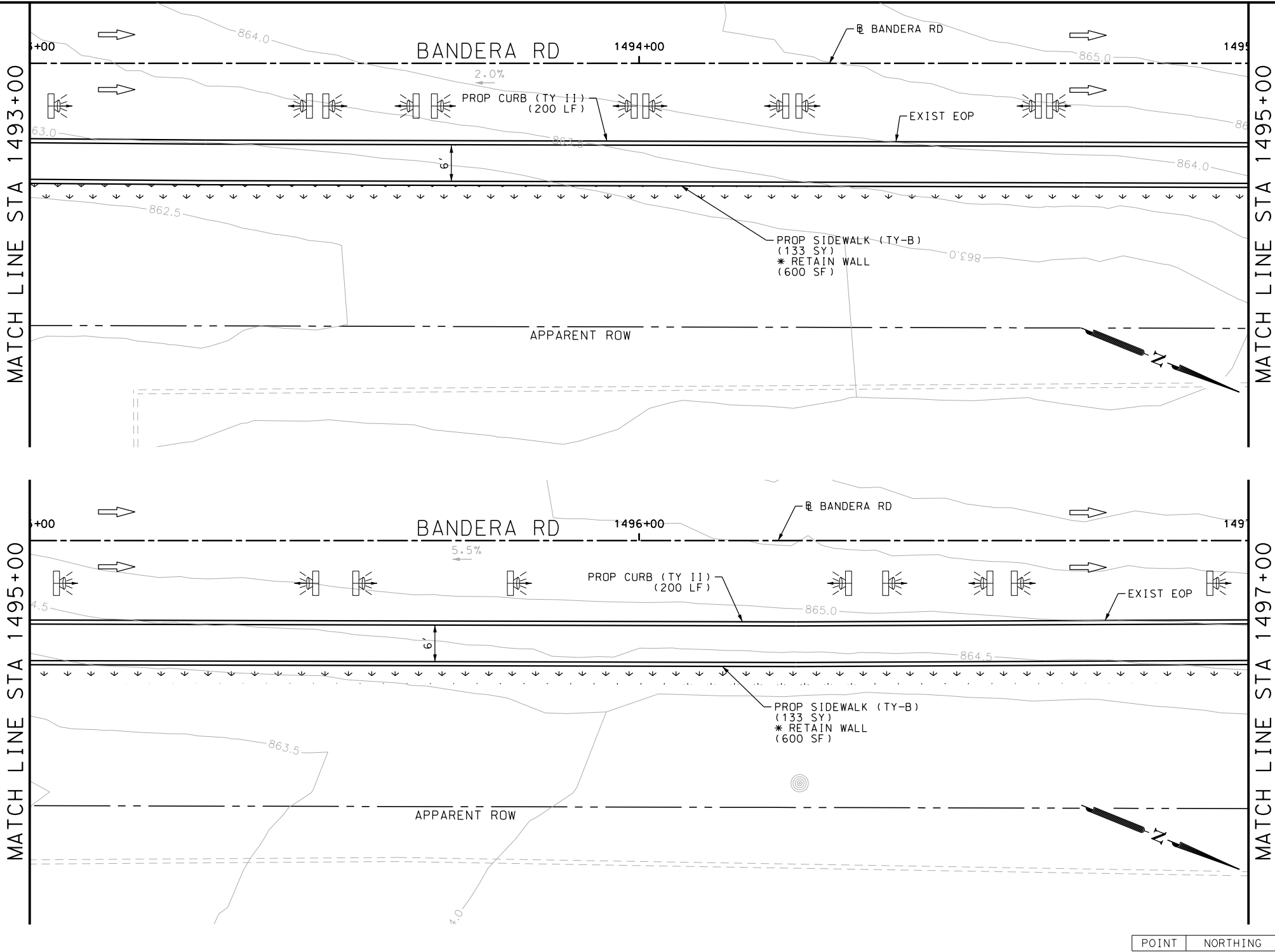
STA 1489+00 TO STA 1493+00

SHEET 52 OF 107

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.:
				278

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*35.dgn



POINT	NORTHING	EASTING	ELEV	DESC
-------	----------	---------	------	------

ITEM	DESCRIPTION	UNIT	QTY
0529-6002	CONC CURB (TY II)	LF	400
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	222

- NOTES:
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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY
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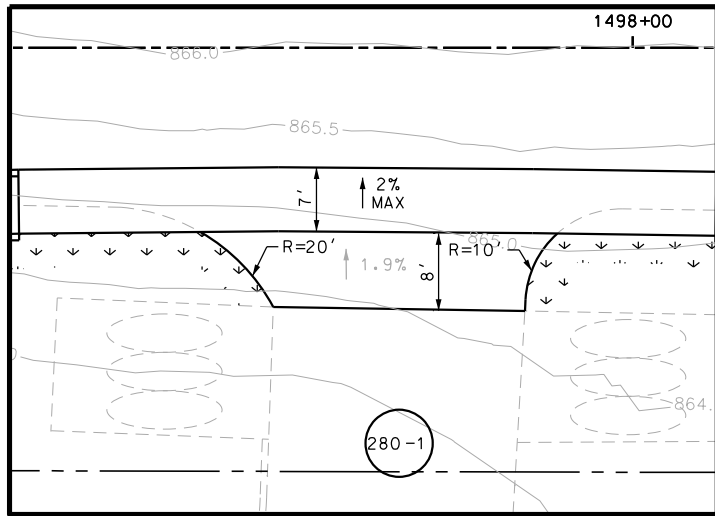
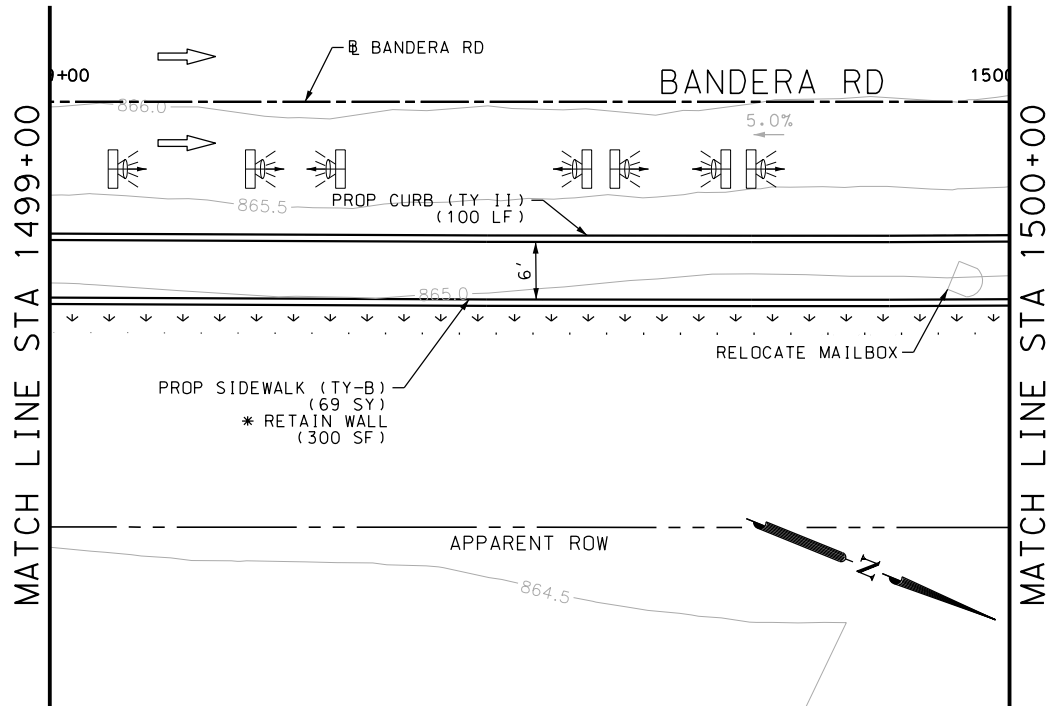
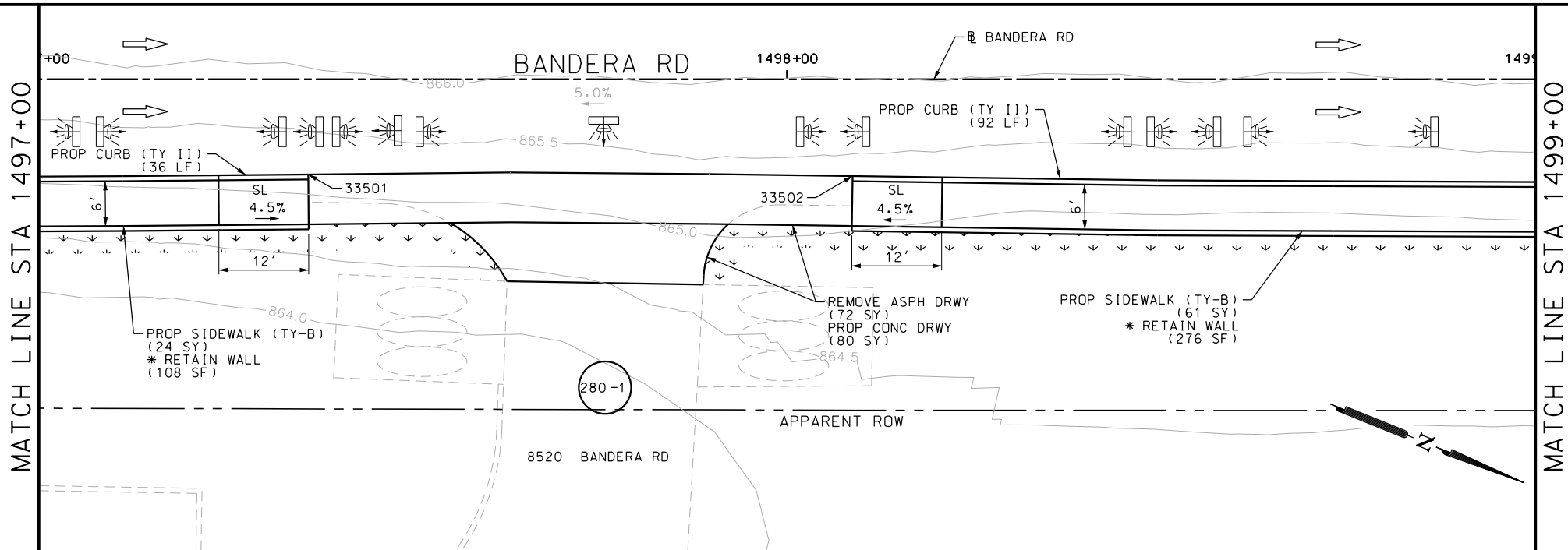
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



BANDERA RD SIDEWALK CONSTRUCTION PLAN STA 1493+00 TO STA 1497+00 SHEET 53 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*36.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33501	13740129.94	2083769.80	--	.
33502	13740197.42	2083742.62	--	.

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	72
0529-6002	CONC CURB (TY II)	LF	228
0530-6004	DRIVEWAYS (CONC)	SY	80
0531-6001	CONC SIDEWALKS (4")	SY	24
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	128

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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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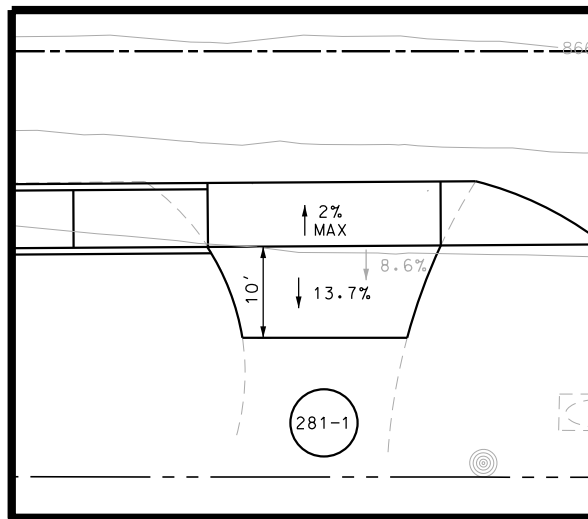
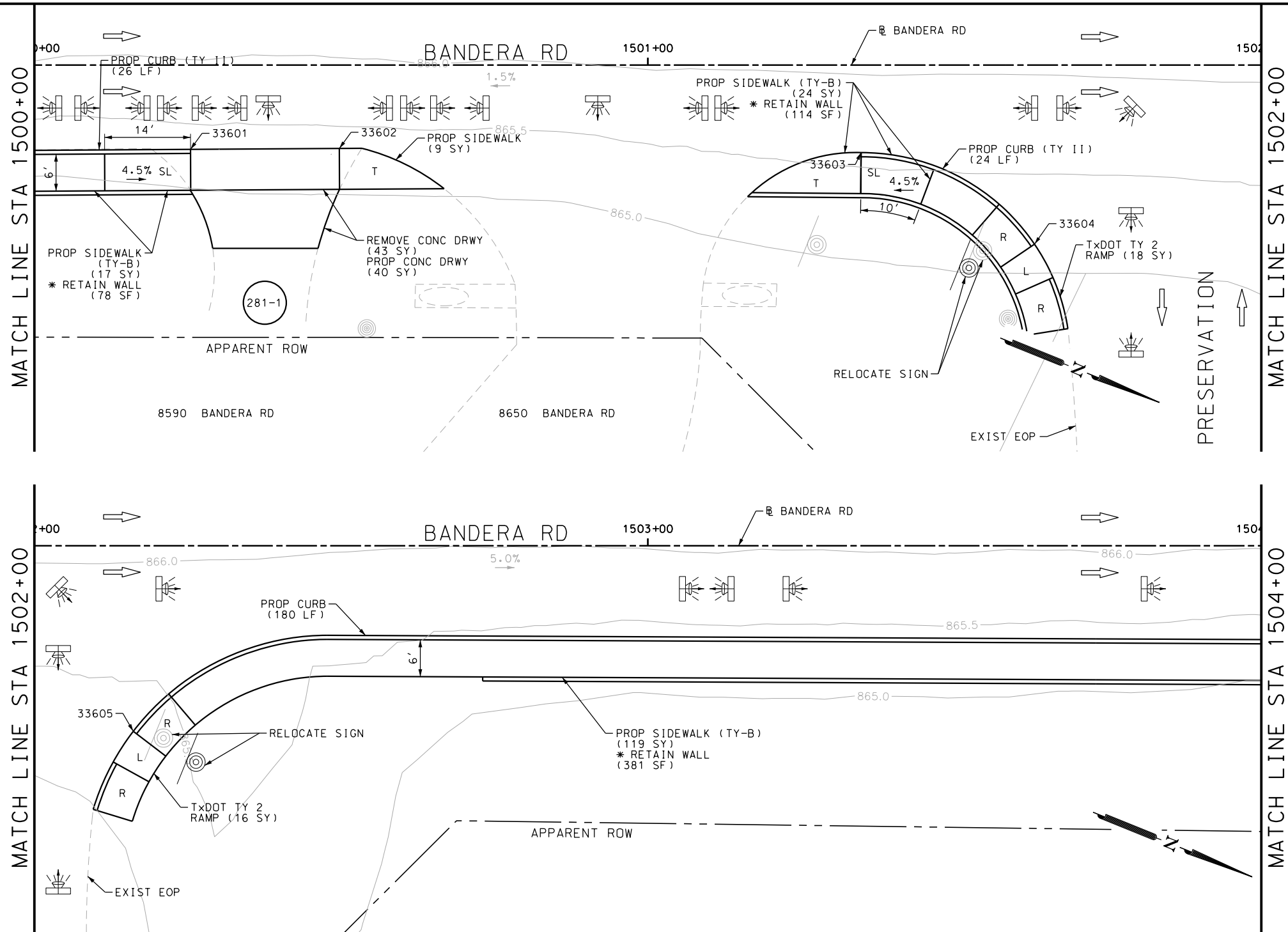
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1497+00 TO STA 1500+00

SHEET 54 OF 107

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	280

Plotted on: 11/21/2018

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	--	.
33602	13740420.90	2083652.54	--	.
33603	13740499.97	2083621.16	--	.
33604	13740531.78	2083624.34	--	.
33605	13740581.35	2083605.32	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	43
0529-6002	CONC CURB (TY II)	LF	230
0530-6004	DRIVEWAYS (CONC)	SY	40
0531-6001	CONC SIDEWALKS (4")	SY	9
0531-6019	CURB RAMPS (TY 2)	SY	34
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	160
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	2

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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BANDERA RD

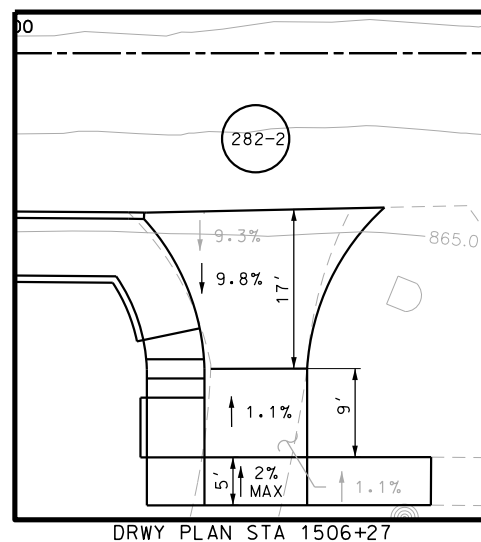
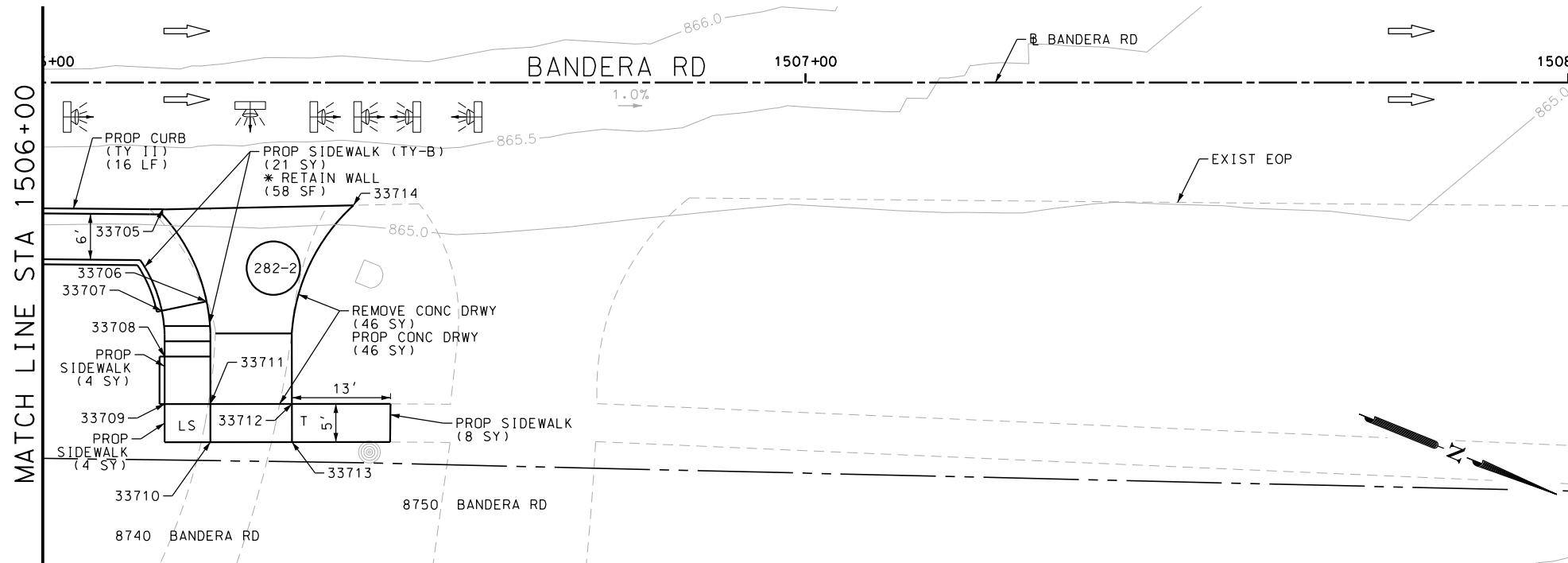
SIDEWALK

CONSTRUCTION PLAN

STA 1500+00 TO STA 1504+00

SHEET 55 OF 107					
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

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*WB*38.dgn



NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY

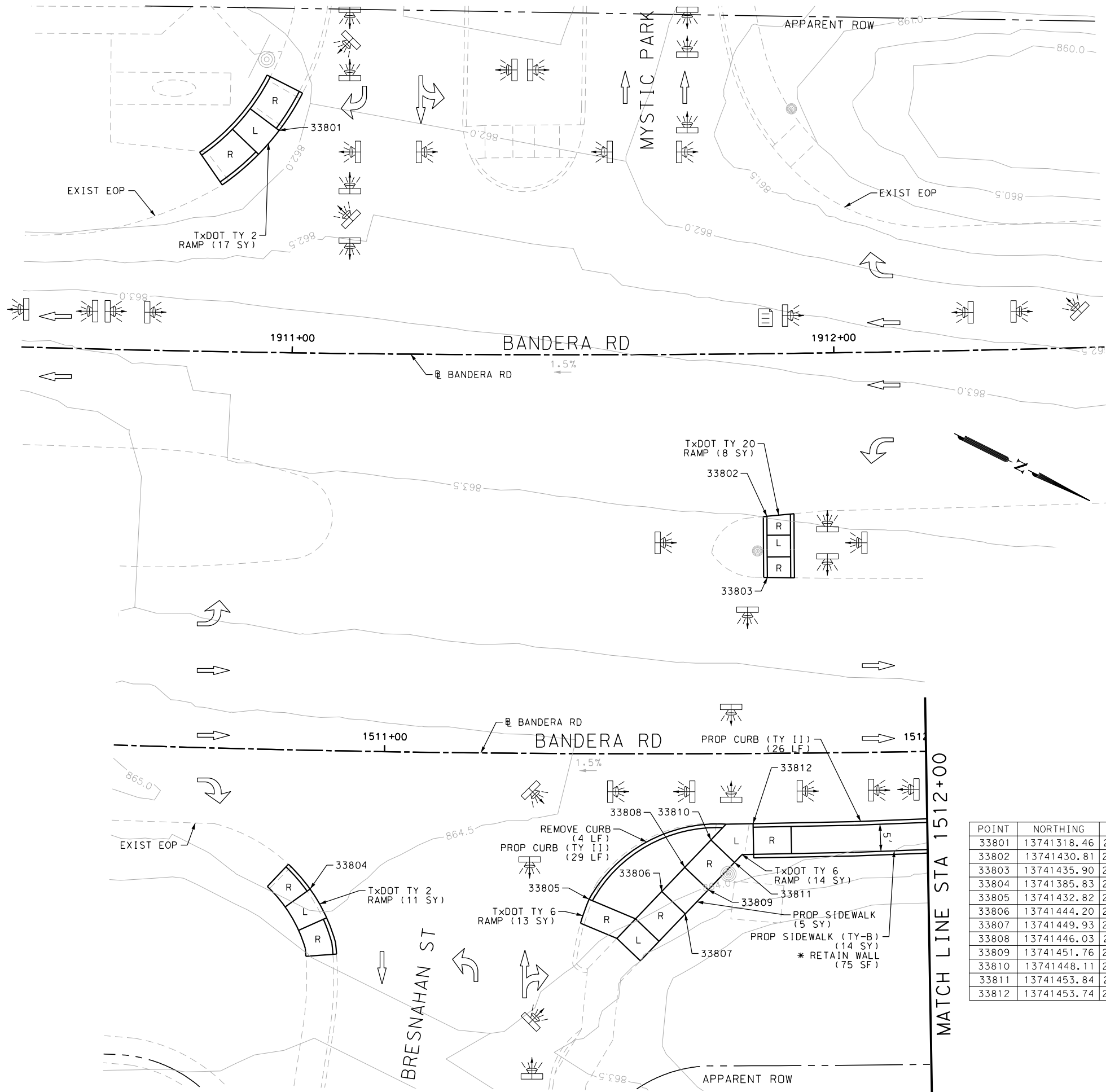


SHEET 56 OF 107

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	282

Plotted on: 11/21/2018

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	4
0529-6002	CONC CURB (TY II)	LF	29
0531-6019	CURB RAMPS (TY 2)	SY	28
0531-6023	CURB RAMPS (TY 6)	SY	23
0531-6029	CURB RAMPS (TY 20)	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	14

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
33801	13741318.46	2083145.91	--	.
33802	13741430.81	2083169.69	--	.
33803	13741435.90	2083179.78	--	.
33804	13741385.83	2083268.84	--	.
33805	13741432.82	2083247.65	--	.
33806	13741444.20	2083240.38	--	.
33807	13741449.93	2083242.16	--	.
33808	13741446.03	2083234.51	--	.
33809	13741451.76	2083236.29	--	.
33810	13741448.11	2083227.82	--	.
33811	13741453.84	2083229.61	--	.
33812	13741453.74	2083221.67	--	.

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1510+50 TO STA 1512+00

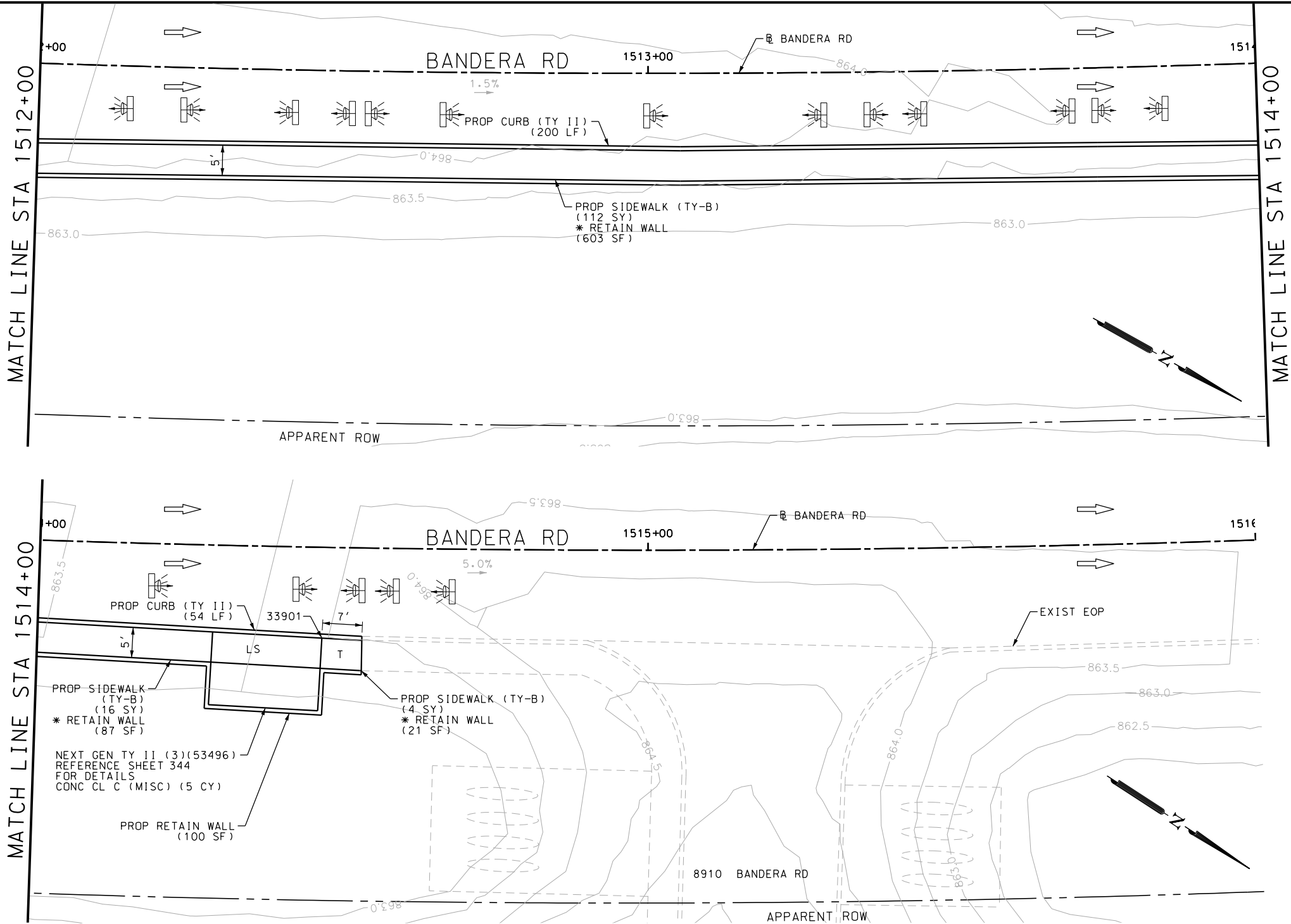
STA 1910+50 TO STA 1912+50

SHEET 57 OF 107

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
				283

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*40.dgn



POINT	NORTHING	EASTING	ELEV	DESC
33901	13741698.14	2083085.44	--	.

ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	28
0529-6002	CONC CURB (TY II)	LF	254
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	132

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INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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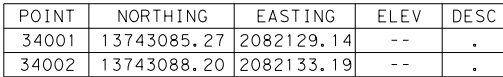
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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1512+00 TO STA 1516+00

SHEET 58 OF 107

DCN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	284

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*41.dgn



NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

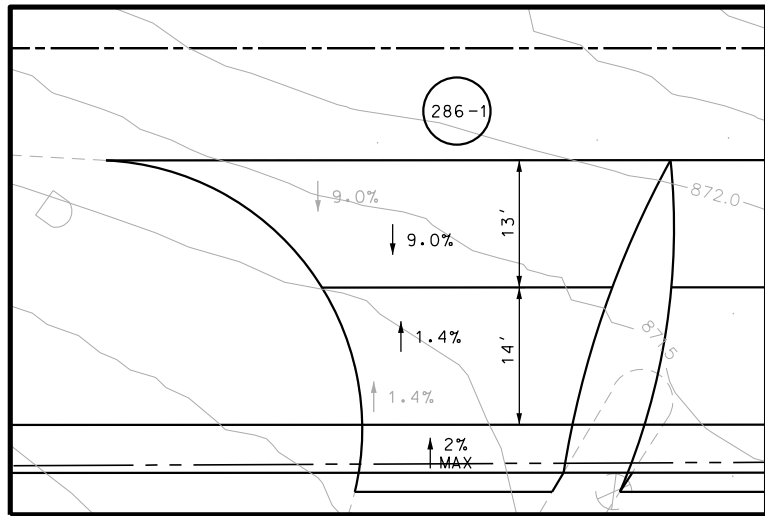
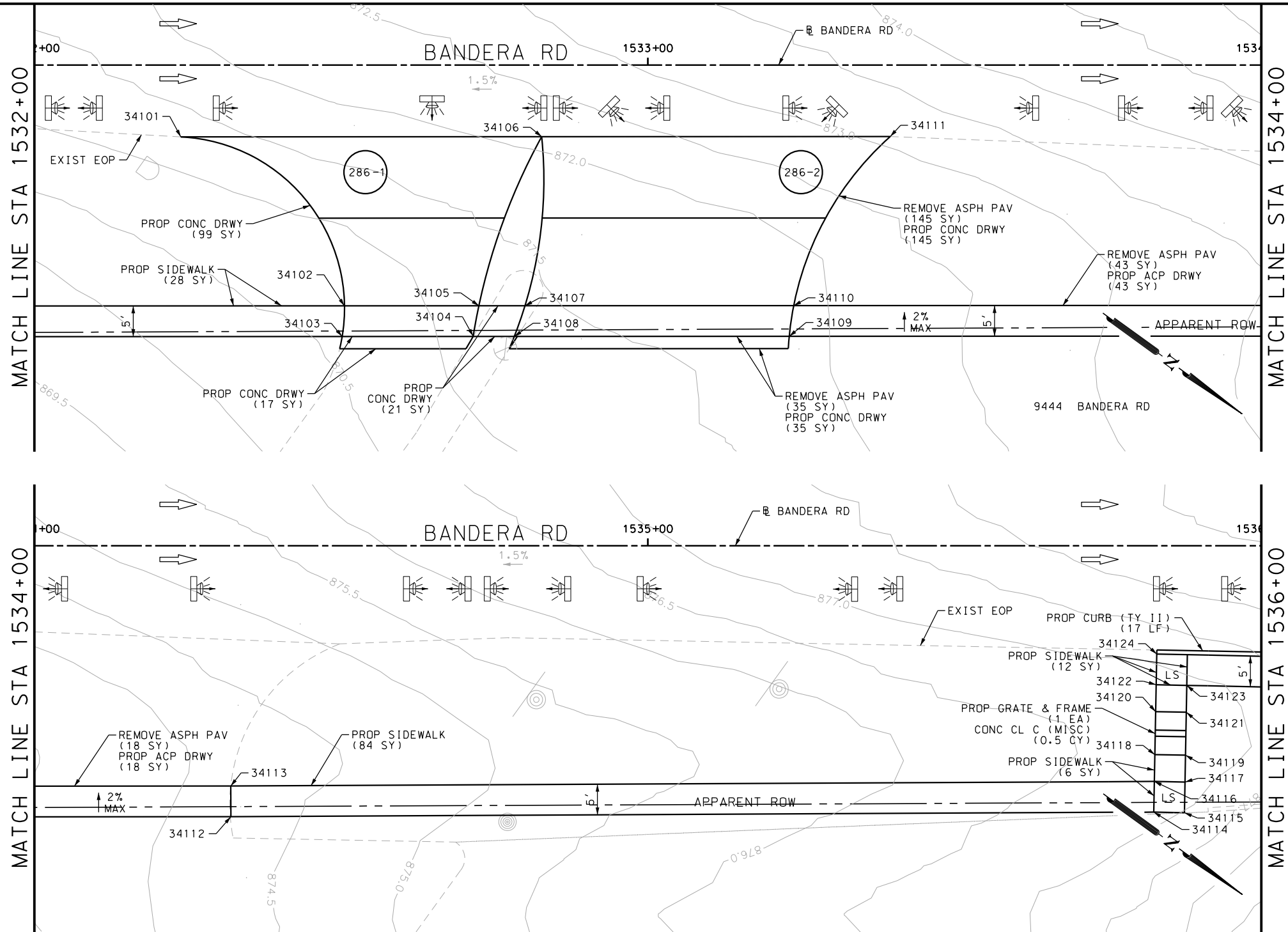
REV. NO.	DATE	DESCRIPTION	BY



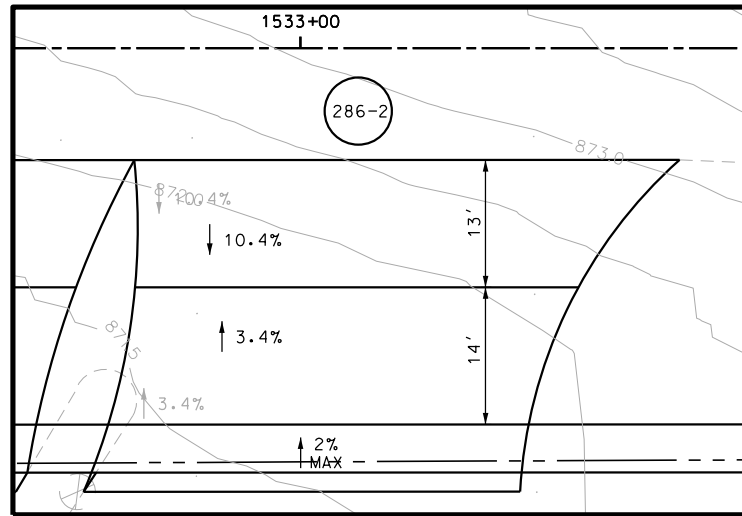
AGENCY	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK AGENCY	6	TEXAS				VARIES
FWG2	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK FWG2	SAT	BEXAR	0915	12	576	285

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*42.dgn



DRWY PLAN STA 1532+53



DRWY PLAN STA 1533+11

POINT	NORTHING	EASTING	ELEV	DESC
34101	13743172.63	2082065.84	--	.
34102	13743175.56	2082069.88	--	.
34103	13743182.67	2082058.56	--	.
34104	13743185.32	2082062.81	--	.
34105	13743200.43	2082045.69	--	.
34106	13743202.62	2082050.28	--	.
34107	13743206.52	2082041.28	--	.
34108	13743208.04	2082046.35	--	.
34109	13743241.99	2082015.57	--	.
34110	13743244.33	2082020.05	--	.
34111	13743329.62	2081952.07	--	.
34112	13743332.57	2081956.11	--	.
34113	13743339.31	2081944.99	--	.
34114	13743342.26	2081949.02	--	.
34115	13743453.99	2081867.27	--	.
34116	13743458.09	2081864.41	--	.
34117	13743451.13	2081863.16	--	.
34118	13743455.24	2081860.31	--	.
34119	13743448.63	2081859.57	--	.
34120	13743452.74	2081856.71	--	.

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	241
0420-6074	CL C CONC (MISC)	CY	2.1
0471-6003	GRATE & FRAME	EA	6
0529-6002	CONC CURB (TY II)	LF	17
0530-6004	DRIVEWAYS (CONC)	SY	317
0530-6005	DRIVEWAYS (ACP)	SY	61
0531-6001	CONC SIDEWALKS (4")	SY	129

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

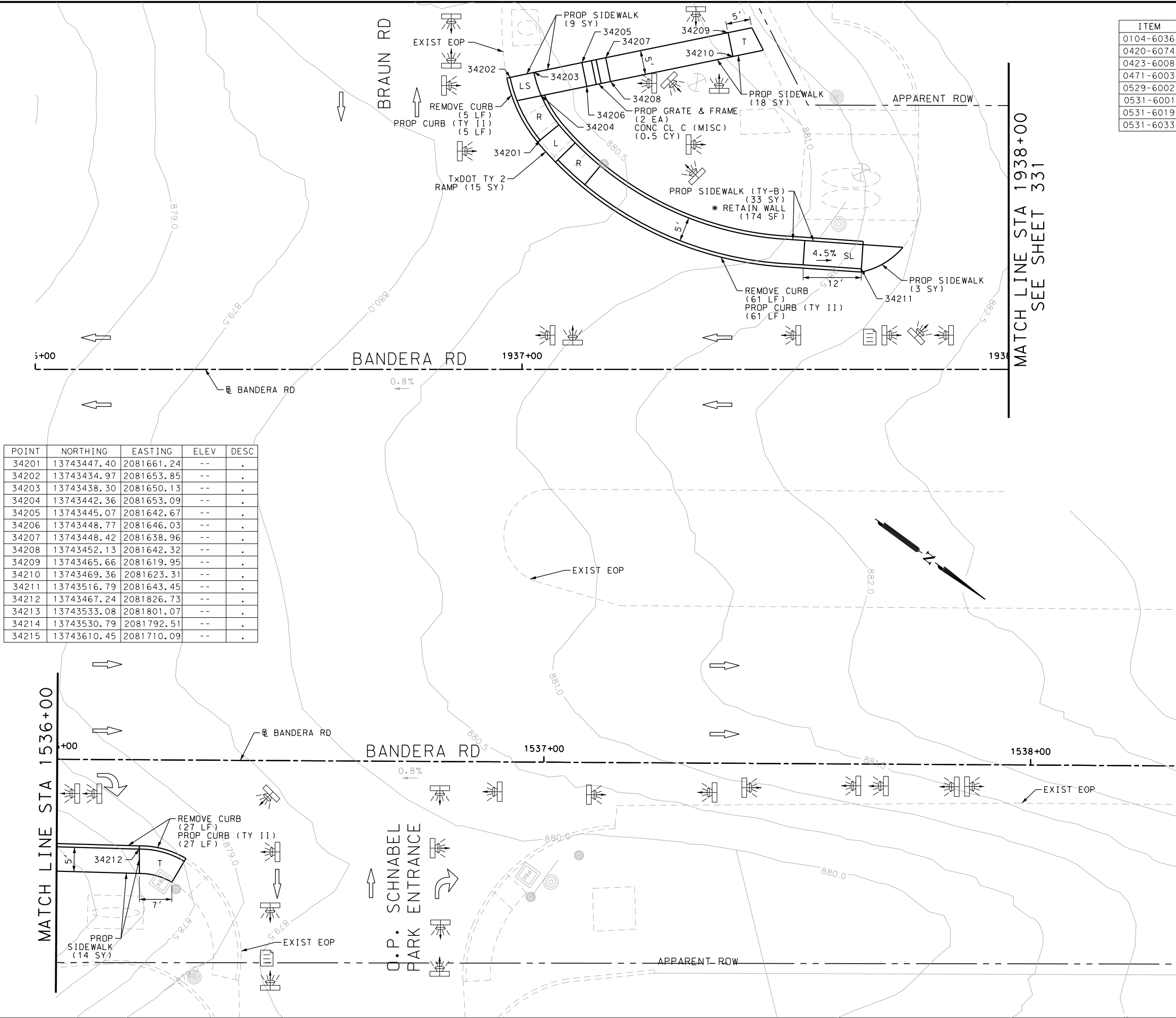
STA 1532+00 TO STA 1536+00

SHEET 60 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*WB*43.dgn

POINT	NORTHING	EASTING	ELEV	DESC
34201	13743447.40	2081661.24	--	.
34202	13743434.97	2081653.85	--	.
34203	13743438.30	2081650.13	--	.
34204	13743442.36	2081653.09	--	.
34205	13743445.07	2081642.67	--	.
34206	13743448.77	2081646.03	--	.
34207	13743448.42	2081638.96	--	.
34208	13743452.13	2081642.32	--	.
34209	13743465.66	2081619.95	--	.
34210	13743469.36	2081623.31	--	.
34211	13743516.79	2081643.45	--	.
34212	13743467.24	2081826.73	--	.
34213	13743533.08	2081801.07	--	.
34214	13743530.79	2081792.51	--	.
34215	13743610.45	2081710.09	--	.



ITEM	DESCRIPTION	UNIT	QTY
0104-6036	REMOVING CONC (SIDEWALK OR RAMP)	SY	69
0420-6074	CL C CONC (MISC)	CY	12.1
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	28
0471-6003	GRATE & FRAME	EA	6
0529-6002	CONC CURB (TY 11)	LF	216
0531-6001	CONC SIDEWALKS (4")	SY	50
0531-6019	CURB RAMPS (TY 2)	SY	30
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	103

- NOTES:
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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

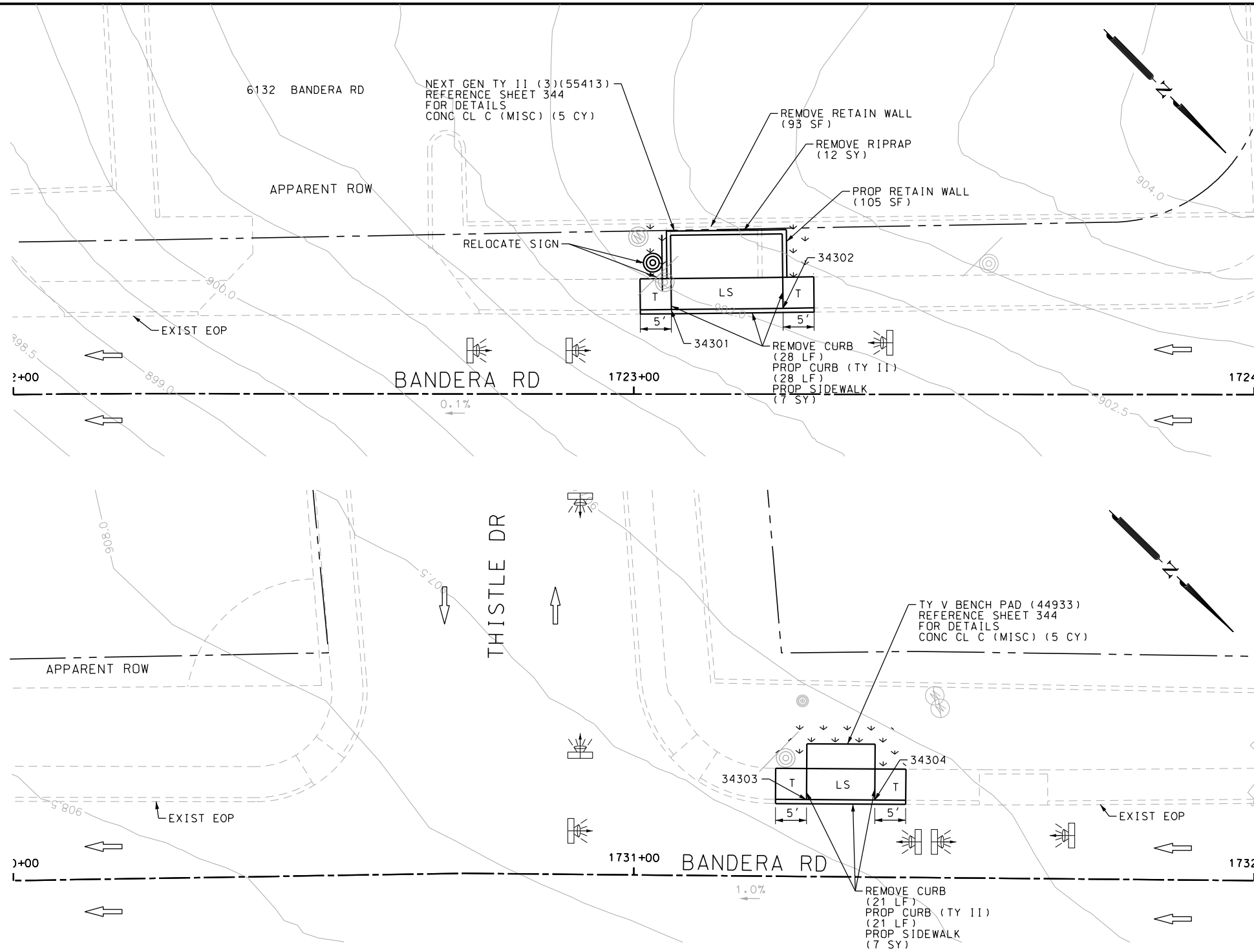
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

Texas Department of Transportation
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BANDERA RD					
SIDEWALK CONSTRUCTION PLAN					
STA 1536+00 TO STA 1538+00					
STA 1936+00 TO STA 1938+00					
SHEET 61 OF 107					
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

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*EB*44.dgn



POINT	NORTHING	EASTING	ELEV	DESC
34301	13726489.24	2094169.35	--	.
34302	13726506.14	2094150.93	--	.
34303	13727071.34	2093583.03	--	.
34304	13727089.13	2093565.47	--	.
34314	13727880.02	2092829.12	--	.
34315	13727990.60	2092667.22	--	.
34316	13727993.80	2092663.38	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	70
0420-6074	CL C CONC (MISC)	CY	11.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	93
0529-6002	CONC CURB (TY II)	LF	70
0531-6001	CONC SIDEWALKS (4")	SY	30

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

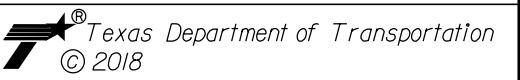
REV. NO.	DATE	DESCRIPTION	BY

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



BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

STA 1722+00 TO STA 1724+00

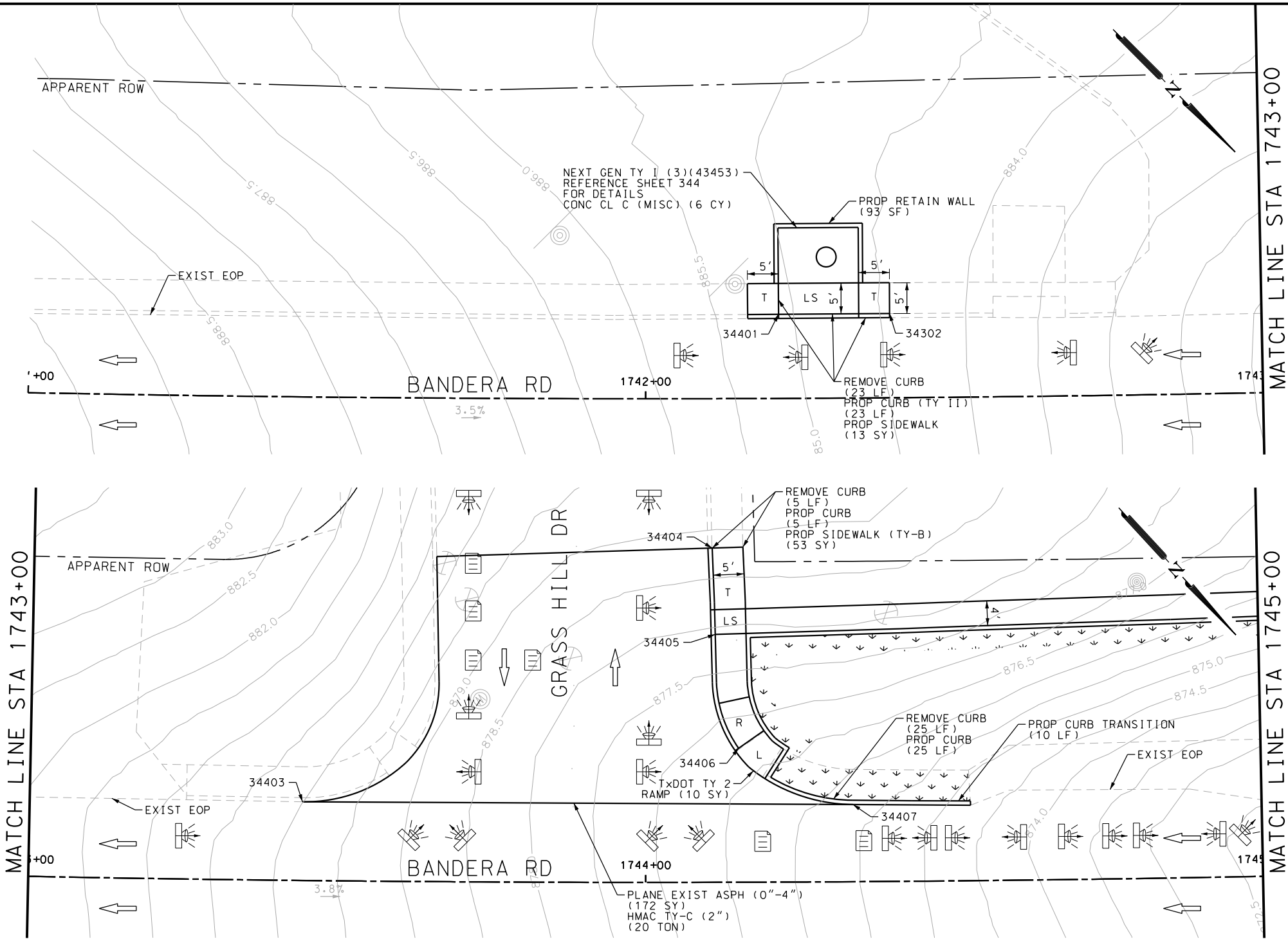
STA 1730+00 TO STA 1732+00

SHEET 62 OF 107

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	288

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB*45.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	48
0340-6066	D-GR HMA(SQ) TY-C PG76-22	TON	20.0
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	497
0529-6002	CONC CURB (TY 11)	LF	48
0531-6001	CONC SIDEWALKS (4")	SY	10
0531-6019	CURB RAMPS (TY 2)	SY	10
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	57
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
34401	13727862.77	2092847.23	--	.
34402	13727955.61	2092751.73	--	.
34403	13727951.07	2092713.21	--	.
34404	13727978.68	2092681.56	--	.
34405	13728018.39	2092684.41	--	.
34406	13727998.13	2092692.11	--	.
34407	13727998.03	2092685.56	--	.
34408	13728003.03	2092685.49	--	.
34409	13727997.84	2092673.24	--	.
34410	13728002.84	2092673.17	--	.
34411	13728002.81	2092670.87	--	.
34412	13727994.45	2092670.42	--	.
34413	13727997.64	2092666.57	--	.

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Texas Department of Transportation

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

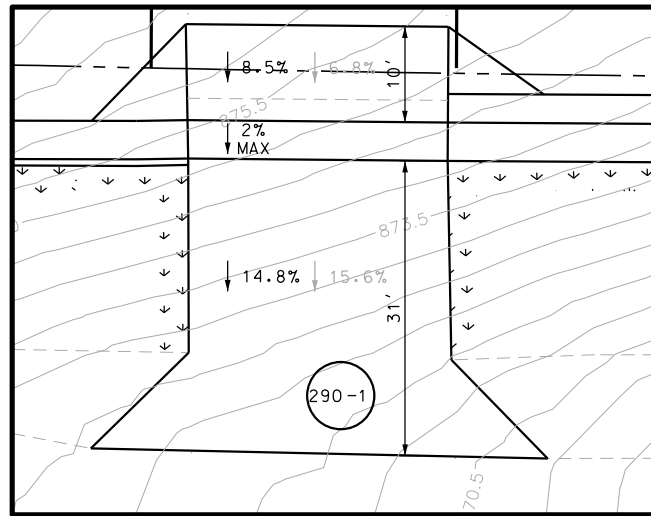
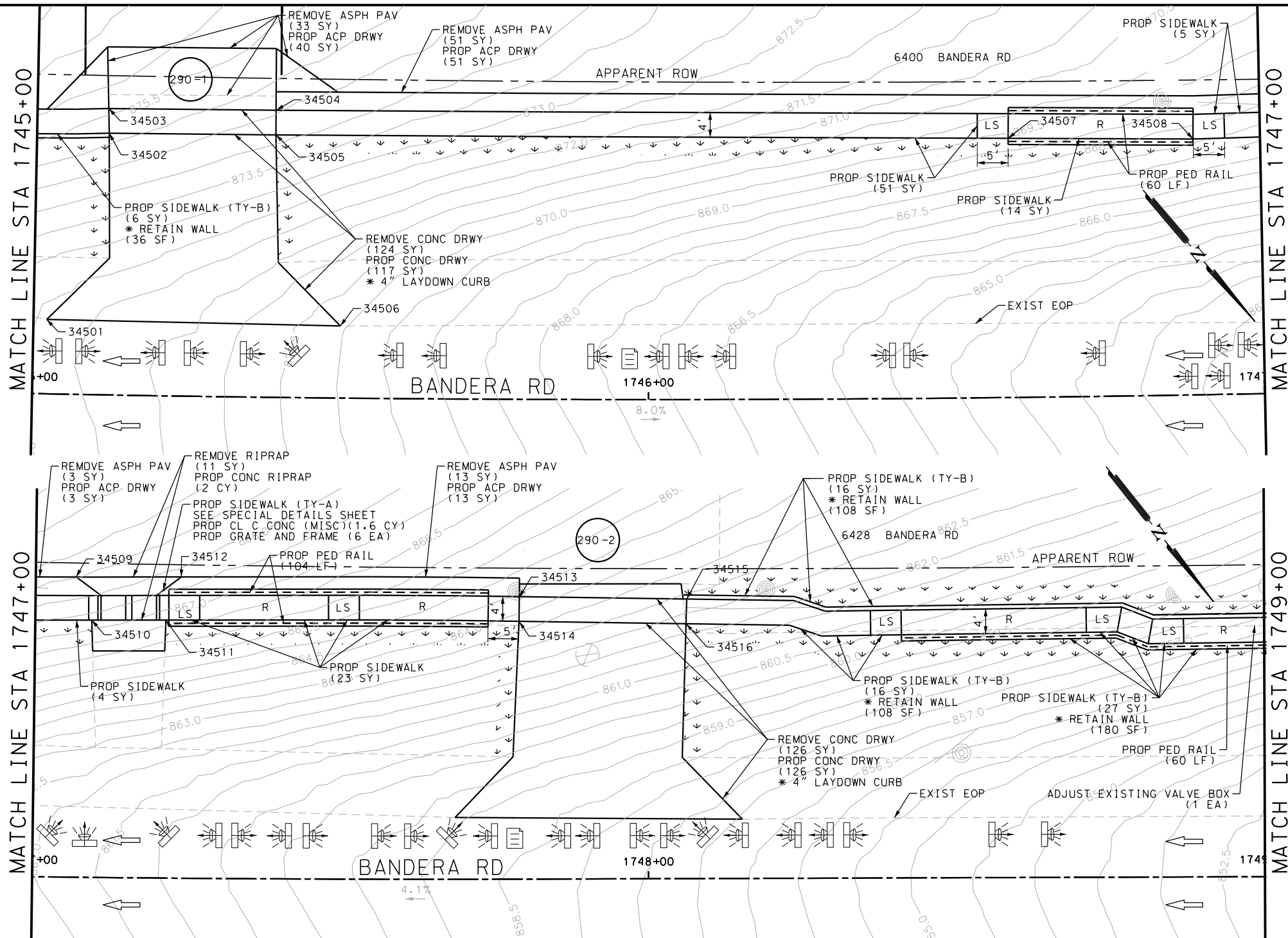
STA 1741+00 TO STA 1745+00

SHEET 63 OF 107

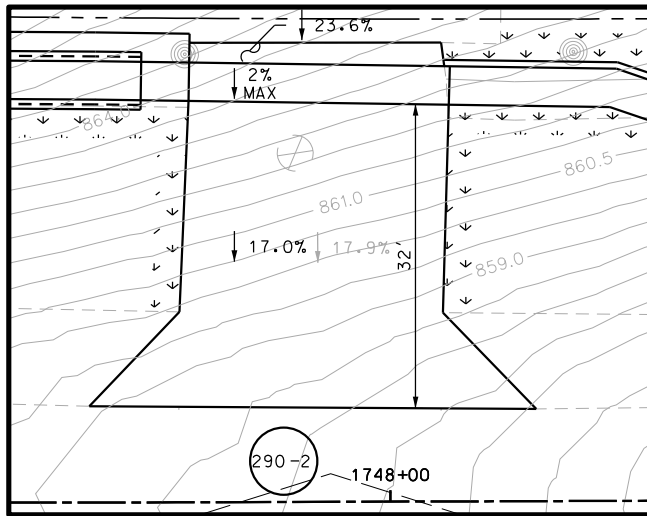
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:			HIGHWAY NO.:
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	289

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*46.dgn



DRYW PLAN STA 1745+28



DRYW PLAN STA 1747+94

POINT	NORTHING	EASTING	ELEV	DESC
34501	13728043.75	2092603.25	--	.
34502	13728047.49	2092606.57	--	.
34503	13728061.01	2092582.47	--	.
34504	13728064.75	2092585.79	--	.
34505	13728167.84	2092453.87	--	.
34506	13728171.69	2092457.07	--	.
34507	13728176.79	2092443.10	--	.
34508	13728180.64	2092446.30	--	.
34509	13728212.23	2092400.44	--	.
34510	13728216.13	2092403.57	--	.
34511	13728229.35	2092379.56	--	.
34512	13728233.25	2092382.69	--	.

ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	258
0420-6074	CL C CONC (MISC)	CY	2.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	991
0471-6003	GRATE & FRAME	EA	6
0530-6004	DRIVEWAYS (CONC)	SY	258
0531-6032	CONC SIDEWALKS (SPECIAL) (TYPE A)	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	185
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

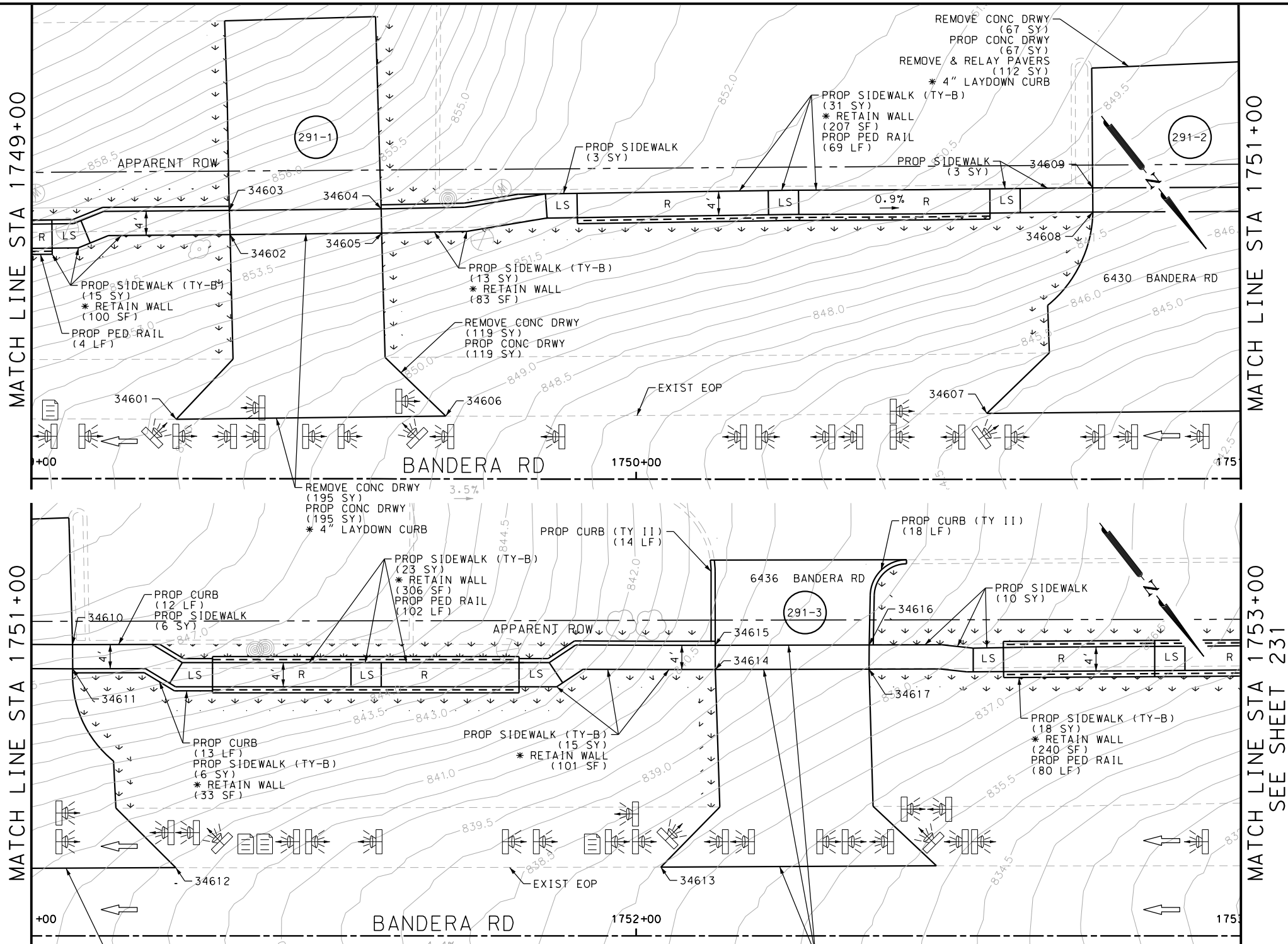


BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1745+00 TO STA 1749+00

SHEET 64 OF 107					
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. 290

Plotted on: 11/21/2018

Design File name: P:\111\35\05\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*47.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	404
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	949
0530-6004	DRIVEWAYS (CONC)	SY	404
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	177

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P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

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INTERIM REVIEW	
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ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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BANDERA RD

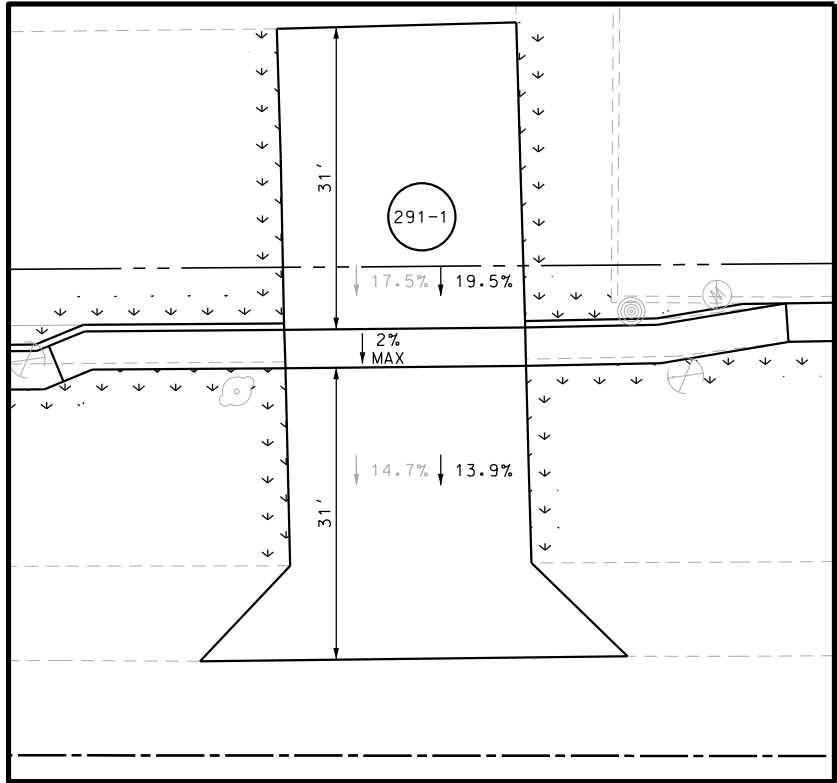
SIDEWALK CONSTRUCTION PLAN

STA 1749+00 TO STA 1753+00

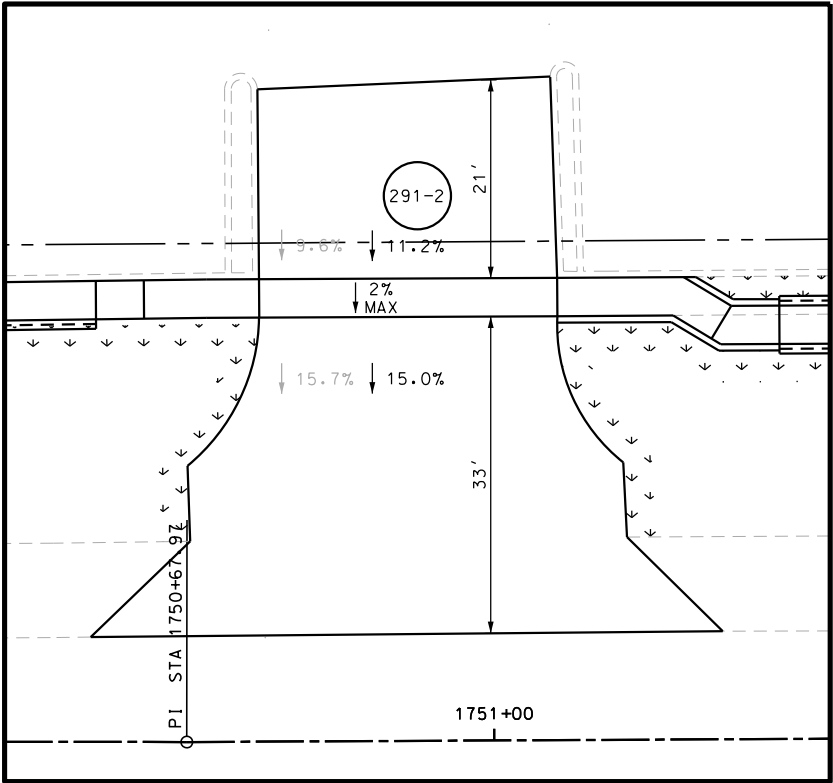
SHEET 65 OF 107

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
DWG:	6	TEXAS		VARIES
CHK DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
	SAT	BEXAR	0915	12
			JOB NO.:	SHEET NO.:
			576	291

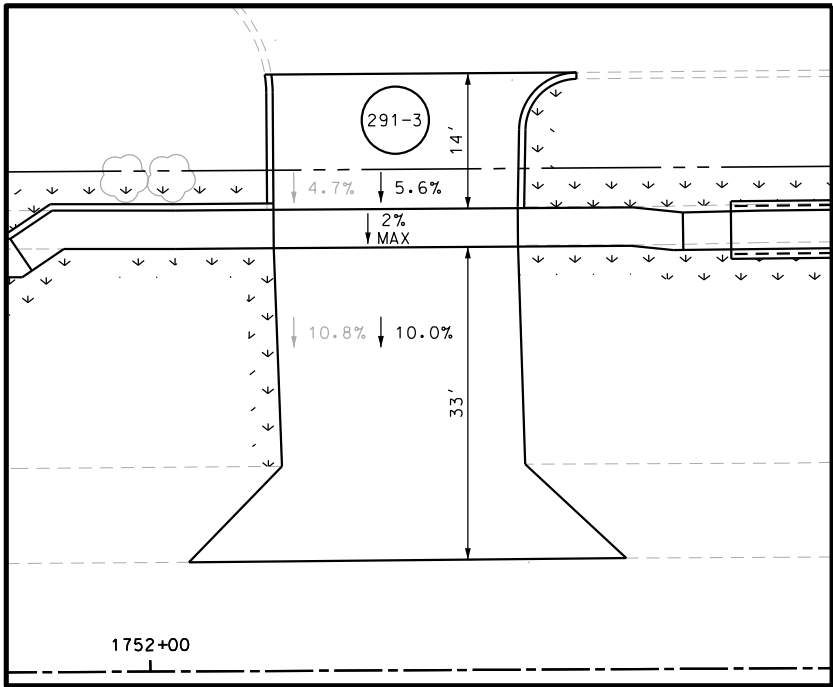
POINT	NORTHING	EASTING	ELEV	DESC
34601	13728309.29	2092281.44	--	.
34602	13728313.24	2092284.50	--	.
34603	13728325.71	2092261.27	--	.
34604	13728329.67	2092264.33	--	.
34605	13728397.20	2092169.45	--	.
34606	13728401.15	2092172.51	--	.
34607	13728416.81	2092144.16	--	.
34608	13728420.76	2092147.22	--	.
34609	13728472.80	2092071.94	--	.
34610	13728476.76	2092075.00	--	.
34611	13728477.63	2092063.03	--	.
34612	13728481.59	2092066.09	--	.
34613	13728480.70	2092059.08	--	.
34614	13728484.65	2092062.14	--	.
34615	13728496.63	2092038.53	--	.
34616	13728500.58	2092041.59	--	.



DRWY PLAN STA 1749+47



DRWY PLAN STA 1750+92



DRWY PLAN STA 1752+28

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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



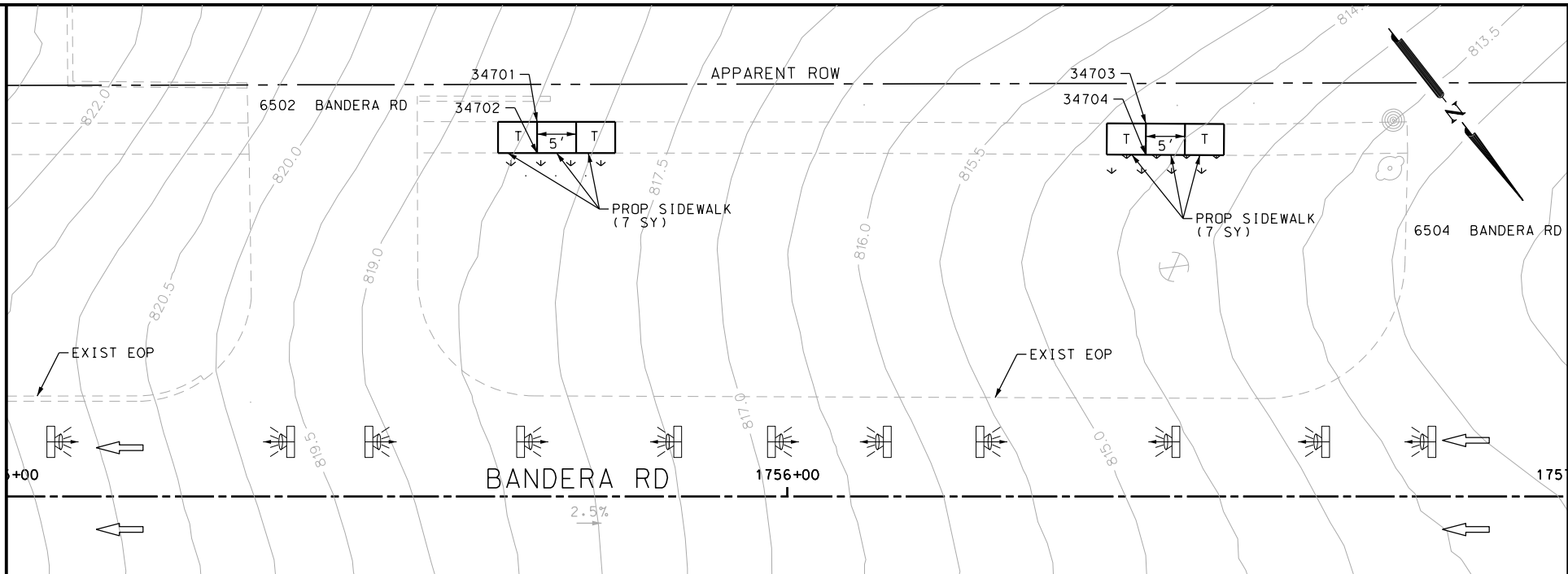
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1749+00 TO STA 1753+00

SHEET 66 OF 107					
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
					292

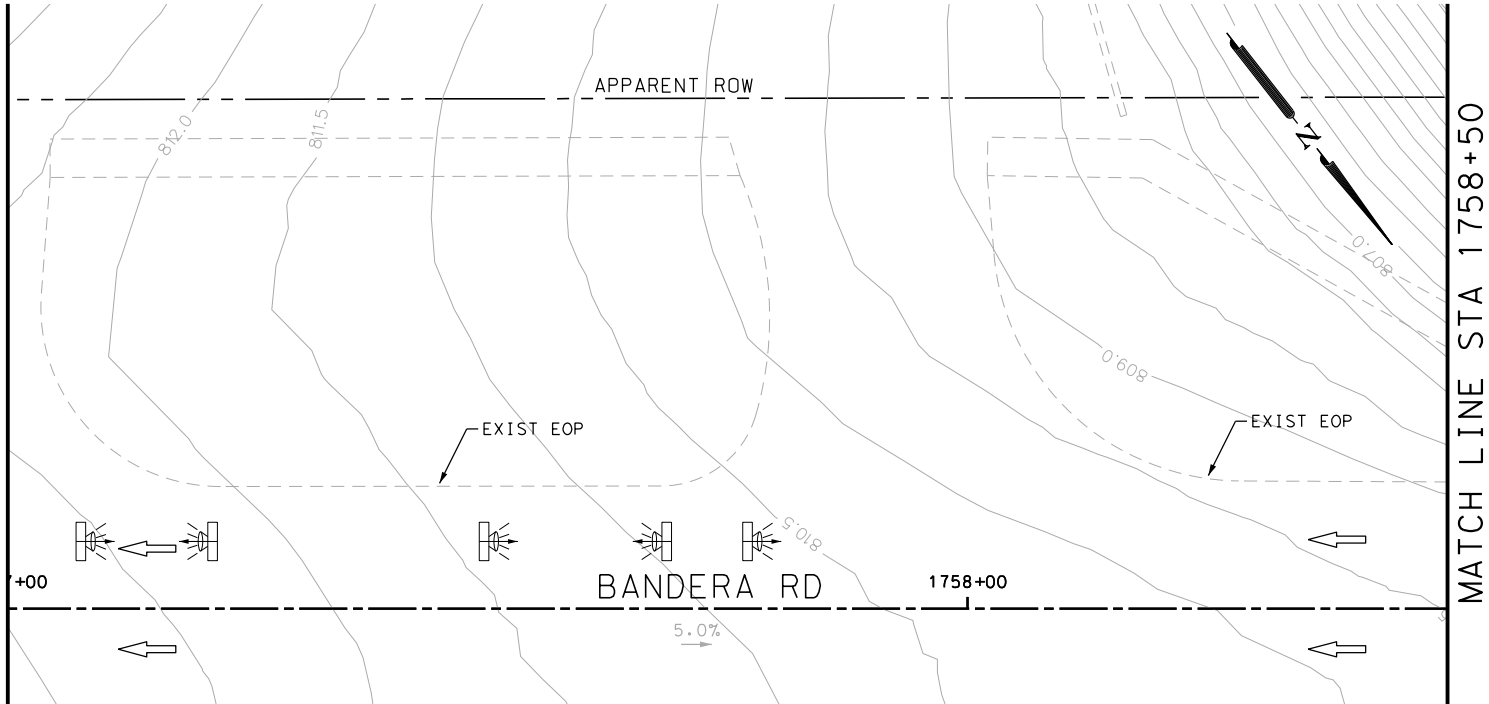
Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*48.dgn

MATCH LINE STA 1755+00
SEE SHEET 231



MATCH LINE STA 1757+00



MATCH LINE STA 1758+50

ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	65

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
34701	13728697.08	2091779.57	--	.
34702	13728701.03	2091782.63	--	.
34703	13728761.93	2091695.73	--	.
34704	13728765.89	2091698.79	--	.

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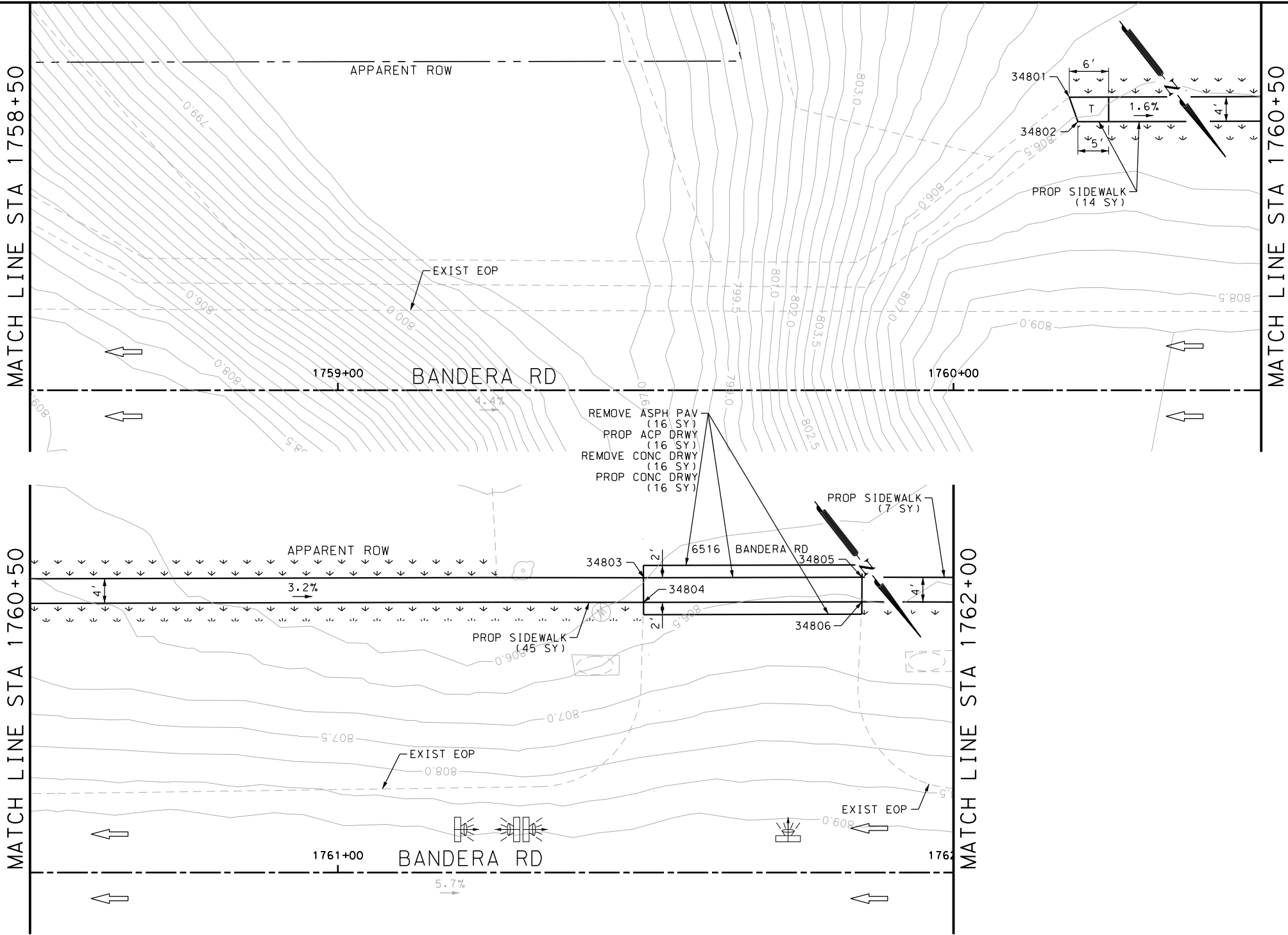
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1755+00 TO STA 1758+50

SHEET 67 OF 107

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	293

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*49.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	41
0530-6004	DRIVEWAYS (CONC)	SY	17
0530-6005	DRIVEWAYS (ACP)	SY	24
0531-6001	CONC SIDEWALKS (4")	SY	55

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

SCALE: PLAN 1"= 20'

POINT	NORTHING	EASTING	ELEV	DESC
34801	13729039.98	2091338.16	--	.
34802	13729043.93	2091341.23	--	.
34803	13729054.09	2091320.04	--	.
34804	13729058.03	2091323.11	--	.
34805	13729072.52	2091296.35	--	.
34806	13729076.47	2091299.43	--	.

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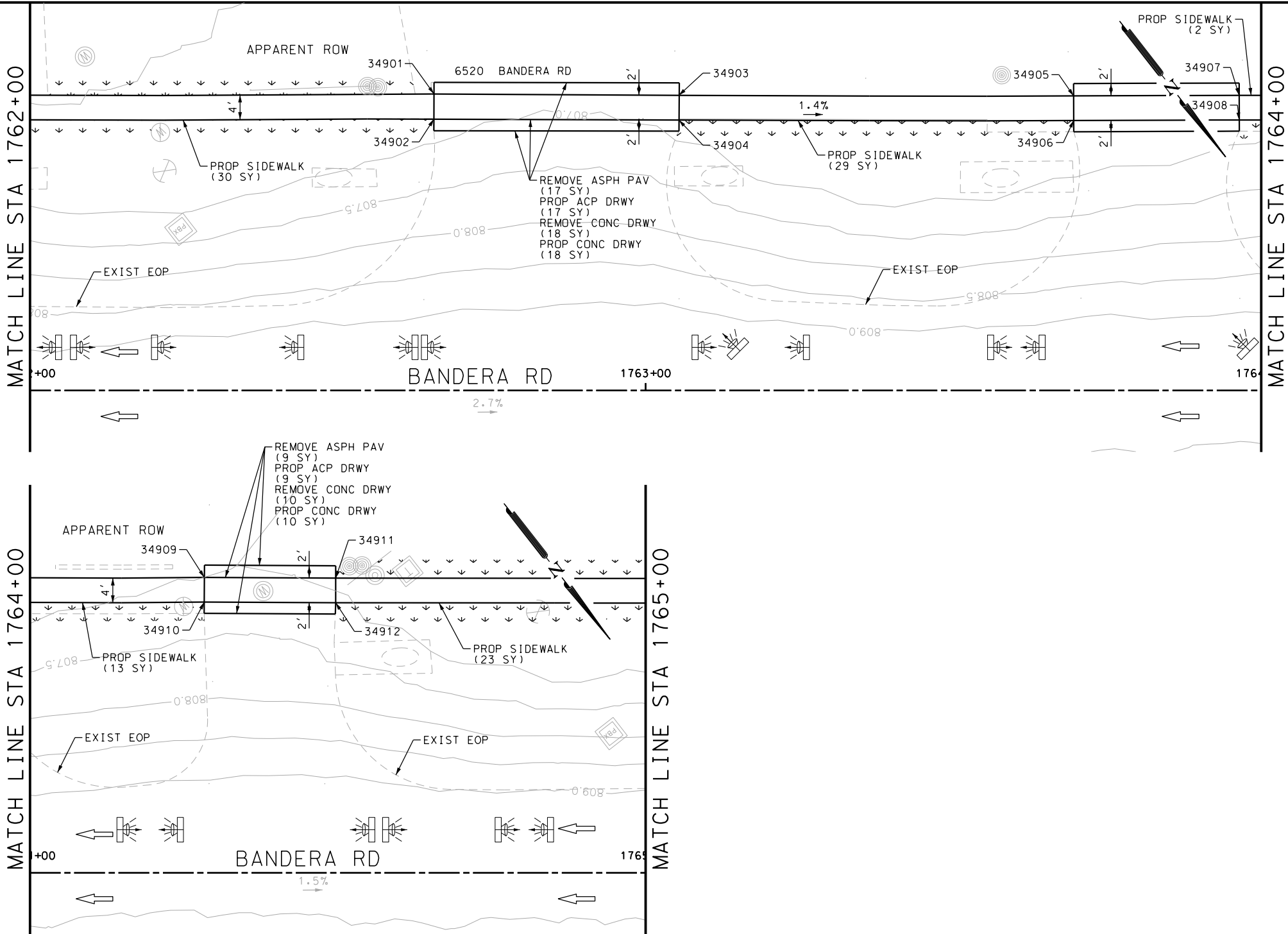
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1758+50 TO STA 1762+00

SHEET 68 OF 107

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	294

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*50.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	111
0530-6004	DRIVEWAYS (CONC)	SY	47
0530-6005	DRIVEWAYS (ACP)	SY	64
0531-6001	CONC SIDEWALKS (4")	SY	125

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
34901	13729121.56	2091233.35	--	.
34902	13729125.50	2091236.42	--	.
34903	13729146.13	2091201.77	--	.
34904	13729150.08	2091204.84	--	.
34905	13729189.22	2091146.41	--	.
34906	13729193.17	2091149.48	--	.
34907	13729201.51	2091130.61	--	.
34908	13729205.46	2091133.68	--	.
34909	13729224.09	2091101.60	--	.
34910	13729228.04	2091104.67	--	.
34911	13729236.39	2091085.80	--	.
34912	13729240.34	2091088.87	--	.

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

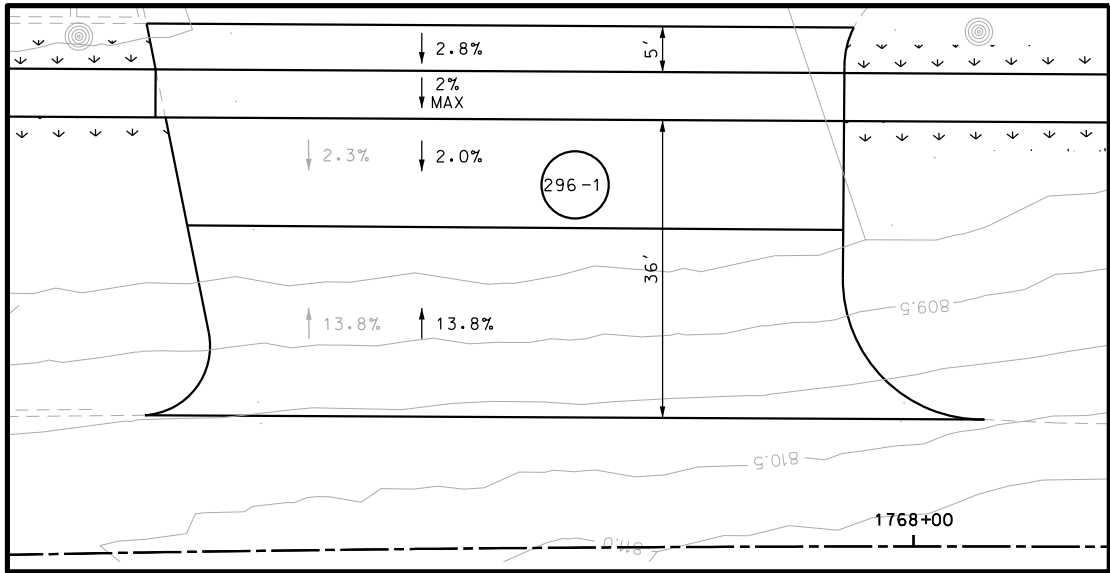
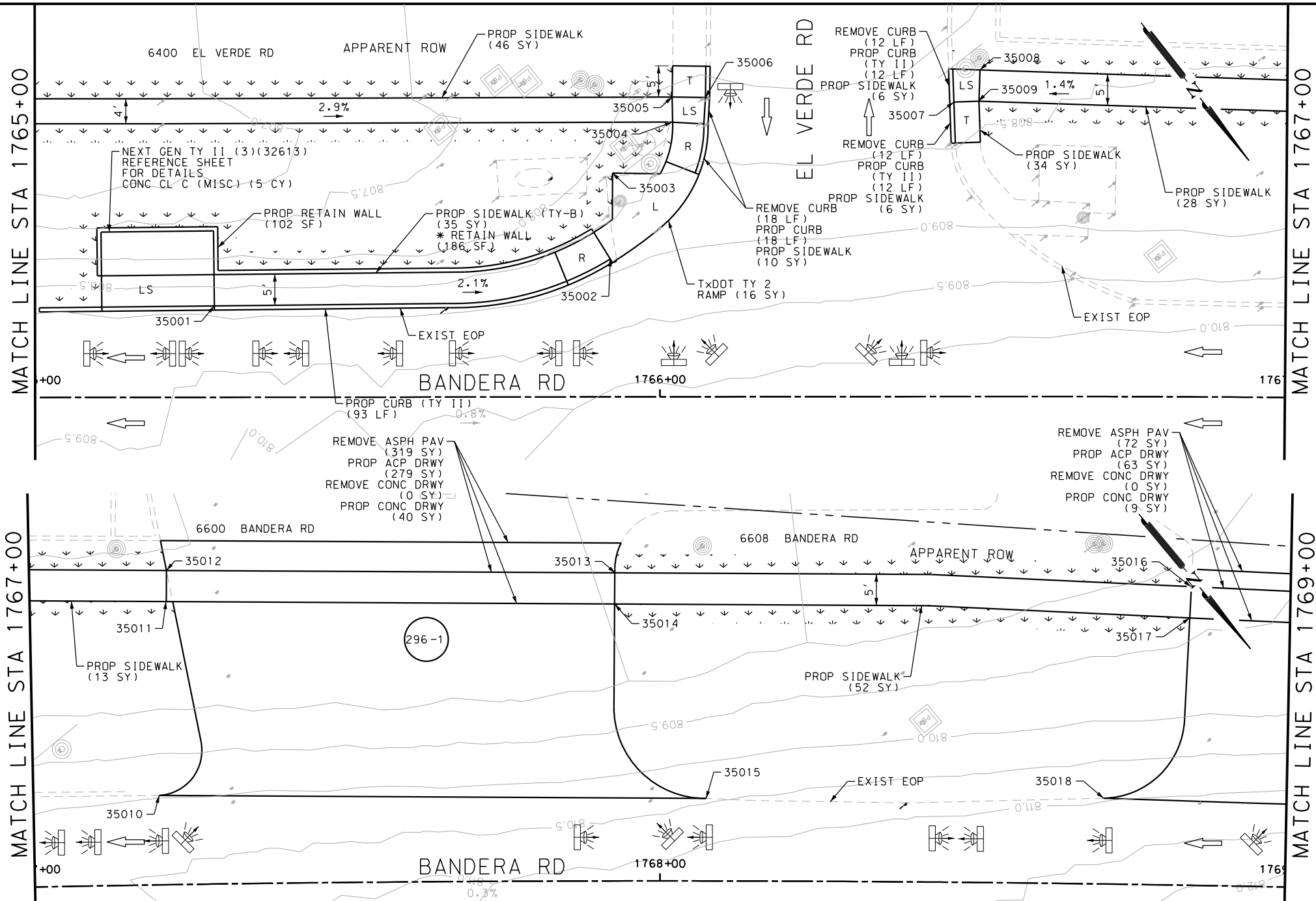
STA 1762+00 TO STA 1765+00

SHEET 69 OF 107

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: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB*51.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	86
0105-6037	REMOVING STAB BASE AND ASPH PAV(0"-16")	SY	307
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	342
0529-6002	CONC CURB (TY II)	LF	86
0530-6005	DRIVEWAYS (ACP)	SY	307
0531-6001	CONC SIDEWALKS (4")	SY	175
0531-6024	CURB RAMPS (TY 7)	SY	19
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	36

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
35001	13729313.28	2091042.20	--	.
35002	13729351.61	2090991.62	--	.
35003	13729365.61	2090932.41	--	.
35004	13729367.96	2090928.00	--	.
35005	13729415.87	2090865.08	--	.
35006	13729419.68	2090868.32	--	.
35007	13729457.83	2090815.44	--	.
35008	13729461.64	2090818.68	--	.
35009	13729494.52	2090772.25	--	.
35010	13729498.28	2090775.54	--	.
35011	13729523.18	2090740.51	--	.
35012	13729526.89	2090743.86	--	.
35013	13729364.18	2090924.72	--	.
35014	13729335.08	2090958.80	--	.
35015	13729332.10	2090962.81	--	.
35016	13729336.12	2090965.79	--	.

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BANDERA RD

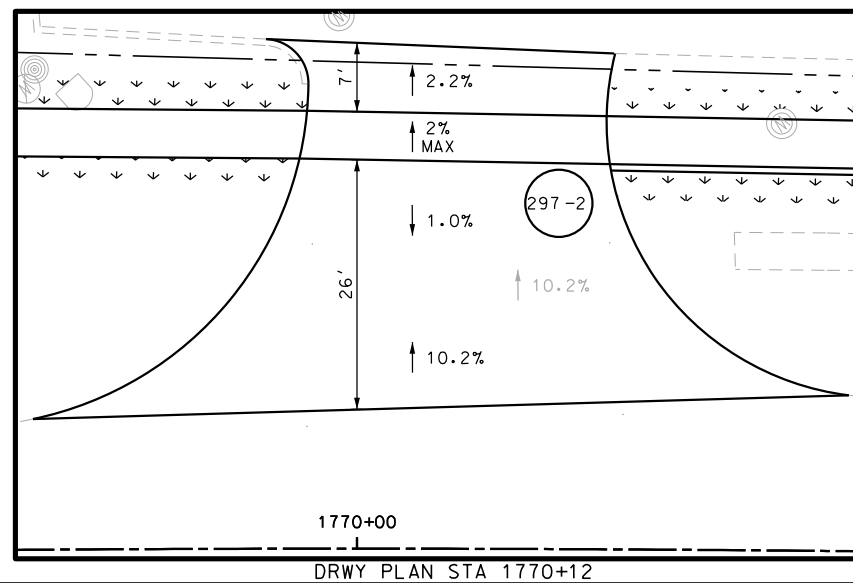
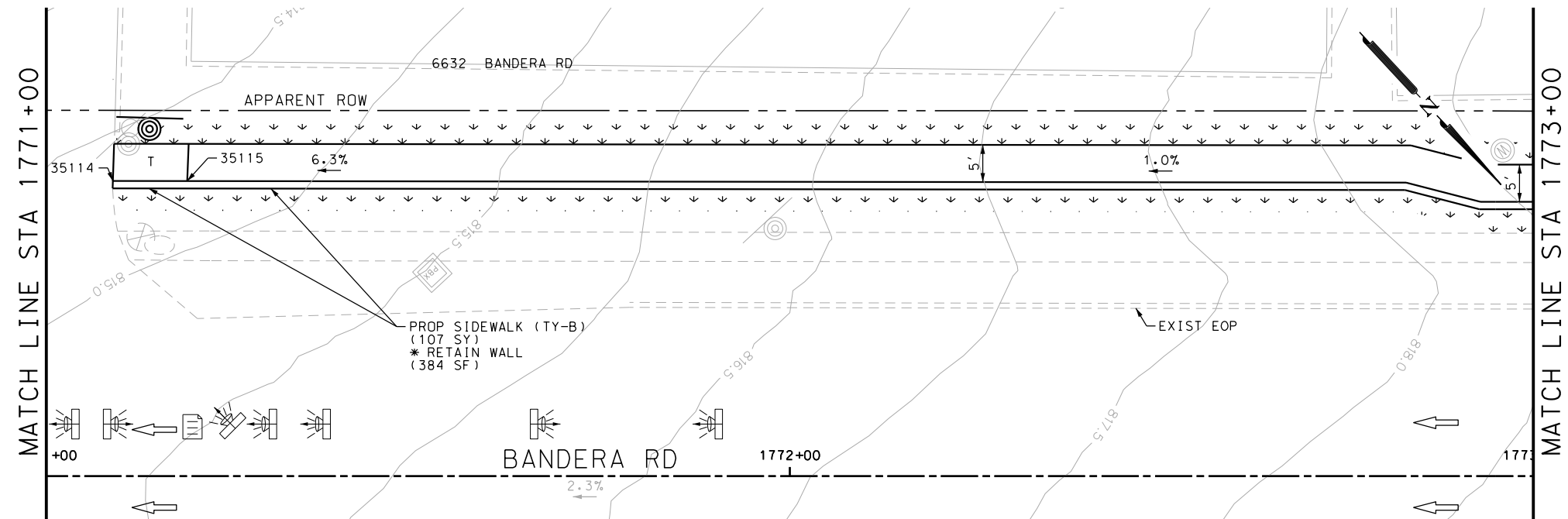
SIDEWALK CONSTRUCTION PLAN

STA 1765+00 TO STA 1769+00

SHEET 70 OF 107

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
	SAT	BEXAR	0915	12
CHK DWG:				
				576
				296

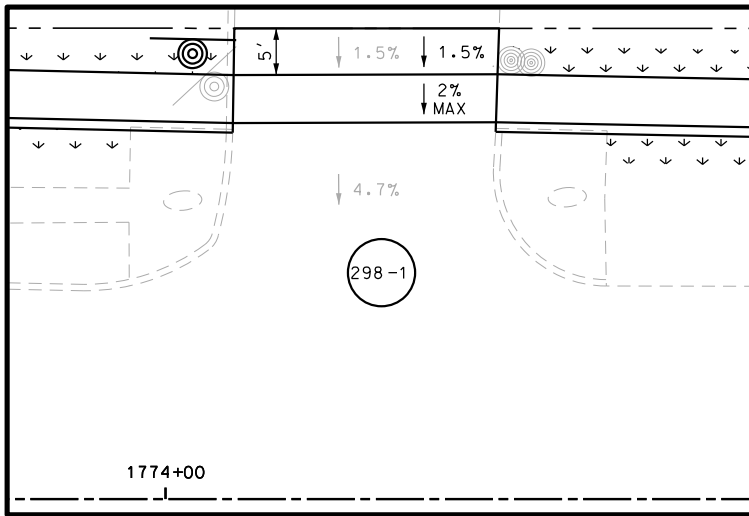
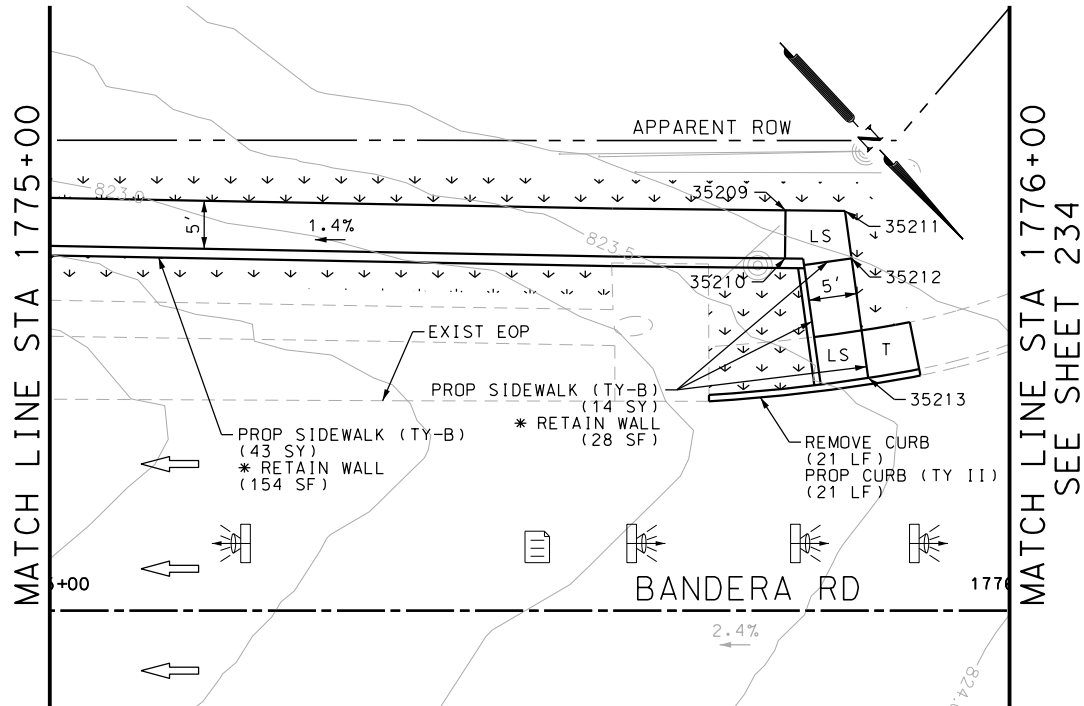
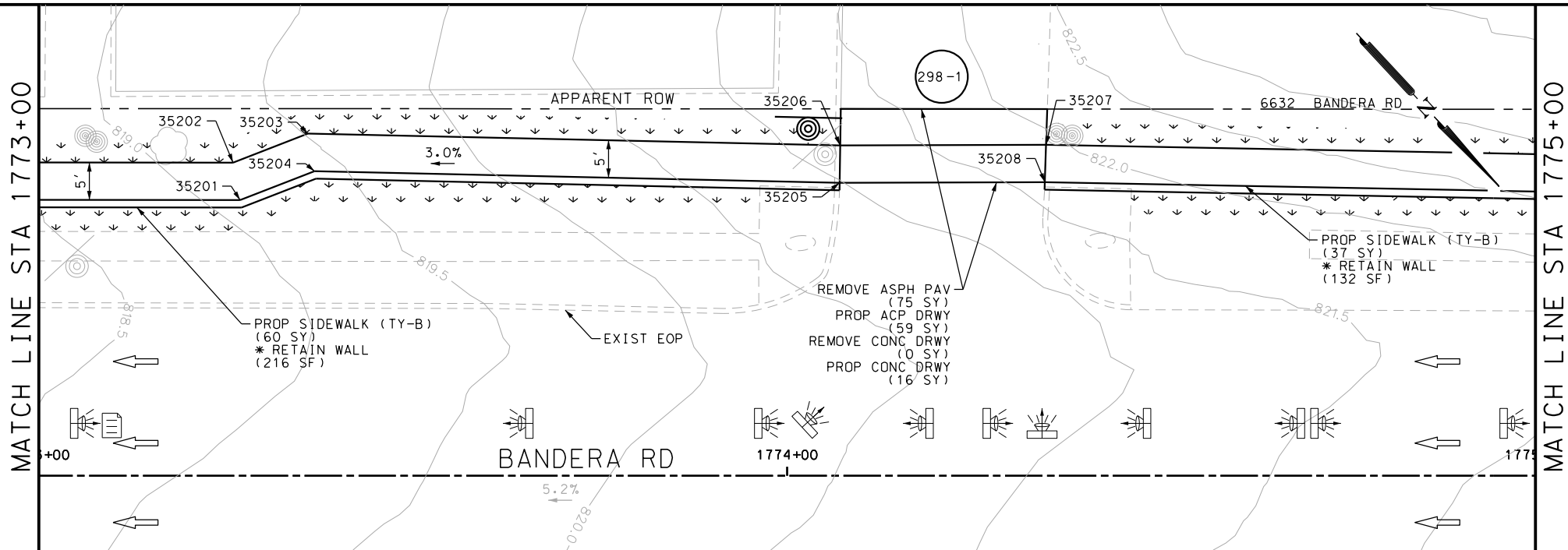
Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*52.dgn



OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VAR1
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET
CHK DWG:	SAT	BEXAR	0915	12	576	29

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*53.dgn



DRWY PLAN STA 1774+23

ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	82
0530-6005	DRIVEWAYS (ACP)	SY	82
0531-6001	CONC SIDEWALKS (4")	SY	144

- NOTES:
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 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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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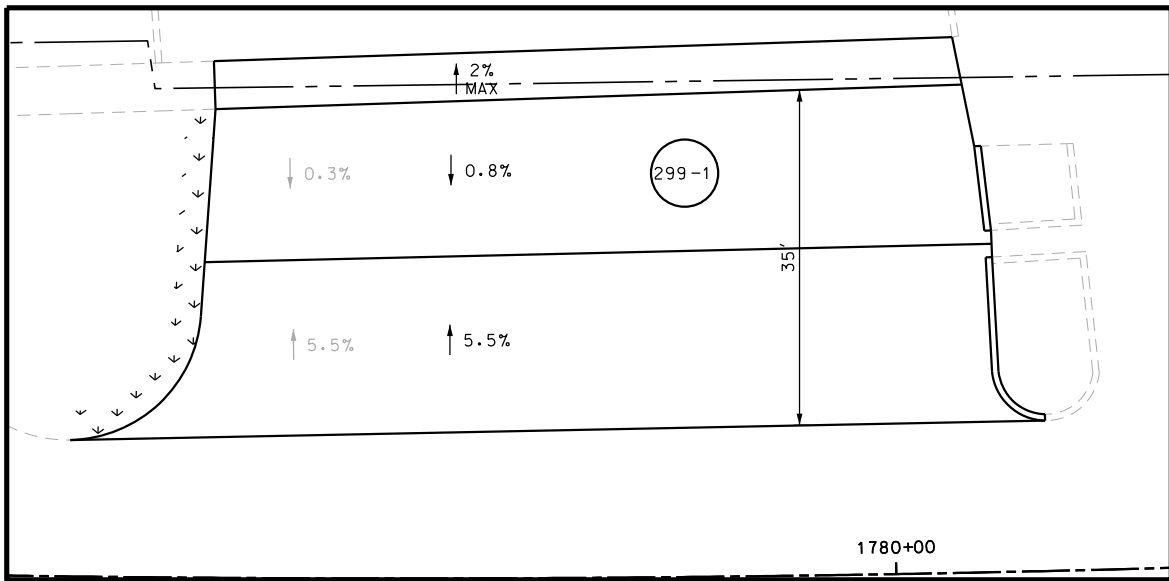
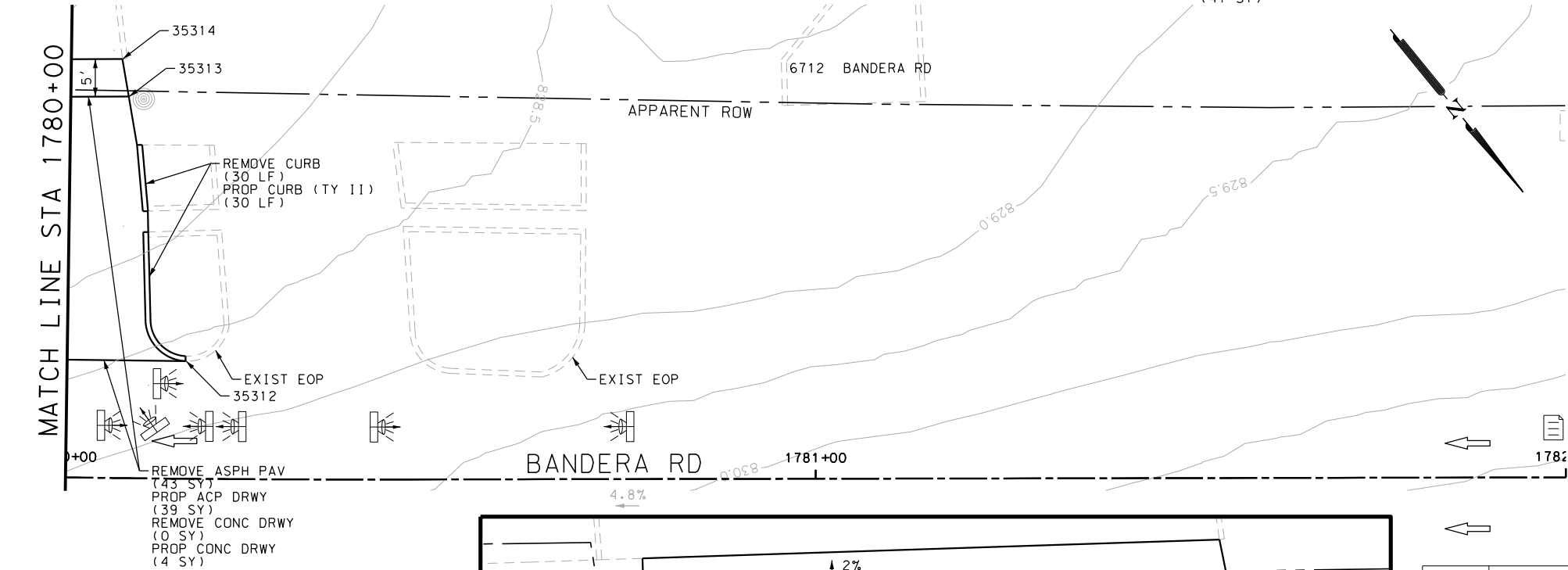
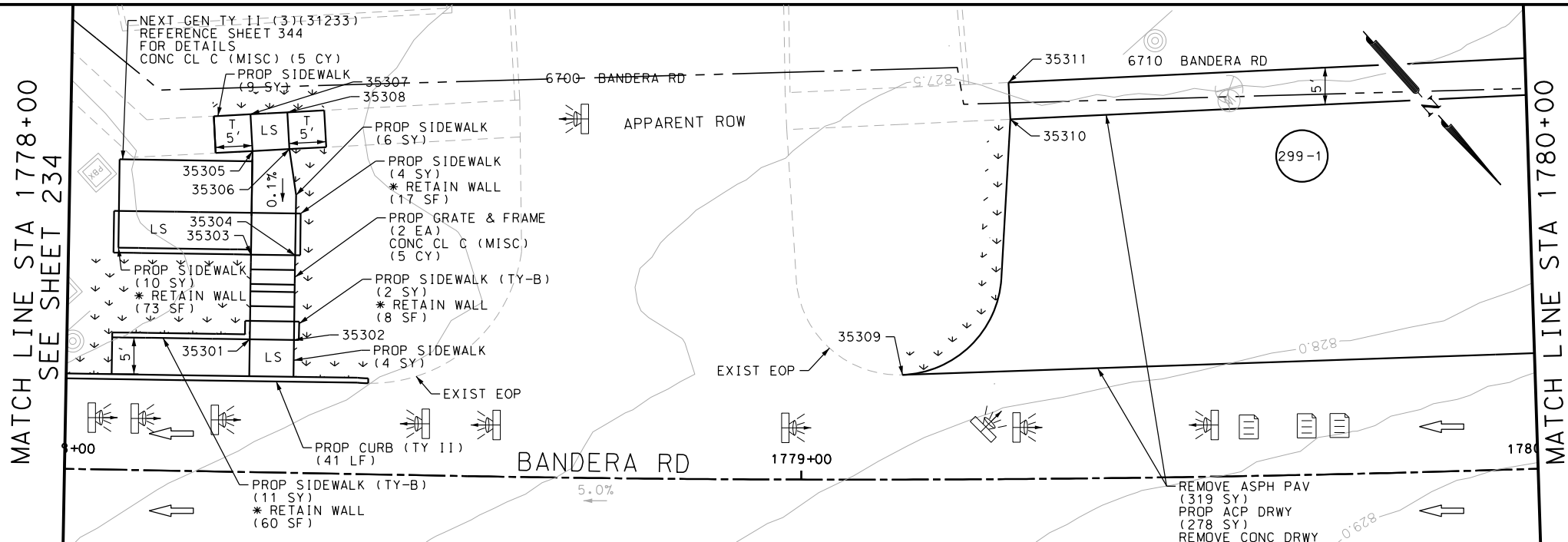
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1773+00 TO STA 1776+00

SHEET 72 OF 107

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	298

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*54.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	352
0420-6074	CL C CONC (MISC)	CY	11.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	93
0471-6003	GRATE & FRAME	EA	6
0530-6005	DRIVEWAYS (ACP)	SY	352
0531-6001	CONC SIDEWALKS (4")	SY	13
0531-6032	CONC SIDEWALKS (SPECIAL) (TYPE A)	SY	8
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	10
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
35301	13730167.71	2090089.94	--	.
35302	13730171.25	2090069.14	--	.
35303	13730174.54	2090065.37	--	.
35304	13730160.70	2090059.94	--	.
35305	13730163.98	2090056.17	--	.
35306	13730239.45	2090006.42	--	.
35307	13730304.31	2089928.49	--	.
35308	13730151.50	2090051.92	--	.
35309	13730154.79	2090048.15	--	.
35310	13730155.46	2090055.38	--	.
35311	13730158.70	2090051.57	--	.

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800



BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

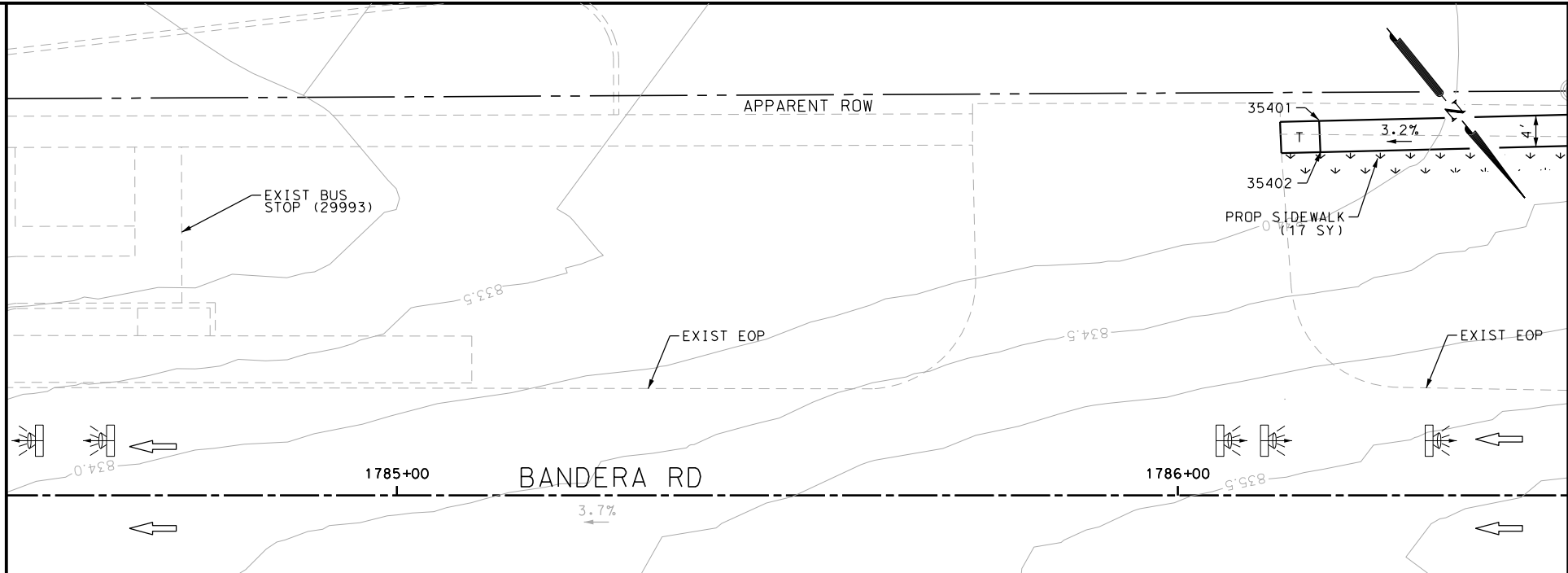
STA 1778+00 TO STA 1782+00

SHEET 73 OF 107					
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

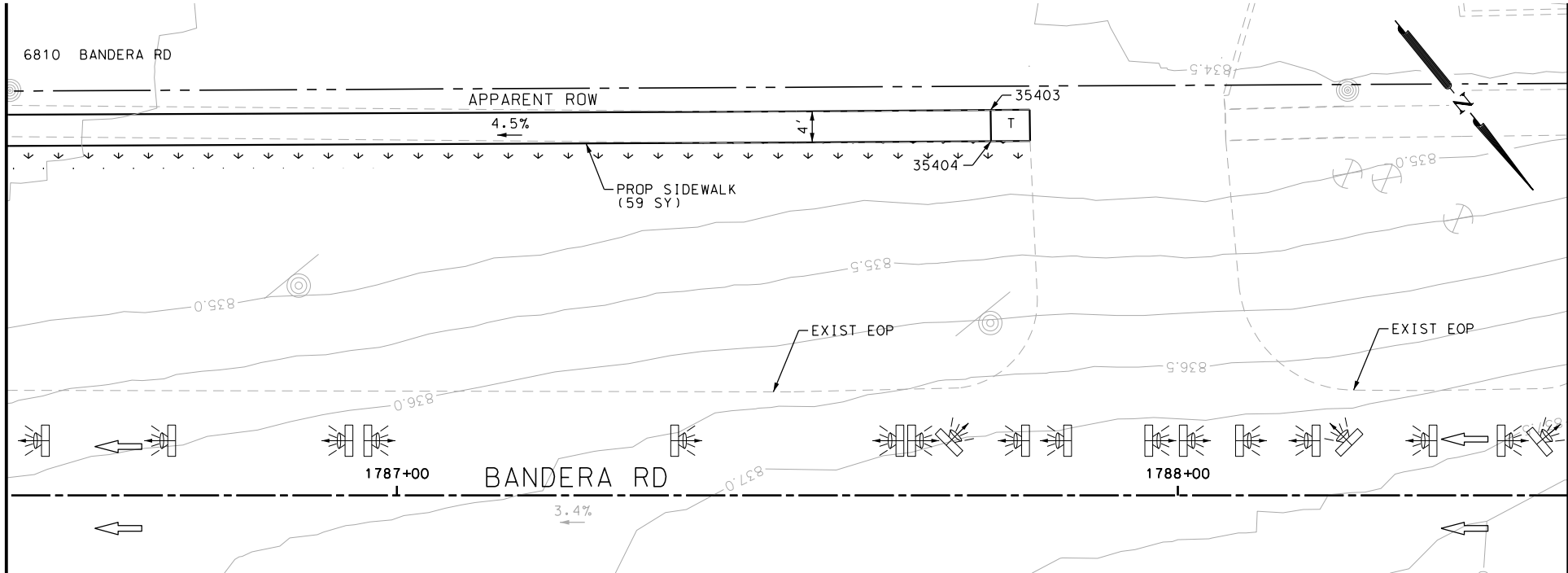
Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*55.dgn

MATCH LINE STA 1784+50
SEE SHEET 235



MATCH LINE STA 1786+50



MATCH LINE STA 1786+50

MATCH LINE STA 1788+50

POINT	NORTHING	EASTING	ELEV	DESC
35401	13730655.93	2089440.55	--	.
35402	13730659.83	2089443.69	--	.
35403	13730756.39	2089315.84	--	.
35404	13730760.28	2089318.98	--	.

ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	96

- NOTES:
- * FOR CONTRACTOR INFORMATION ONLY
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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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



BANDERA RD

SIDEWALK
CONSTRUCTION PLAN

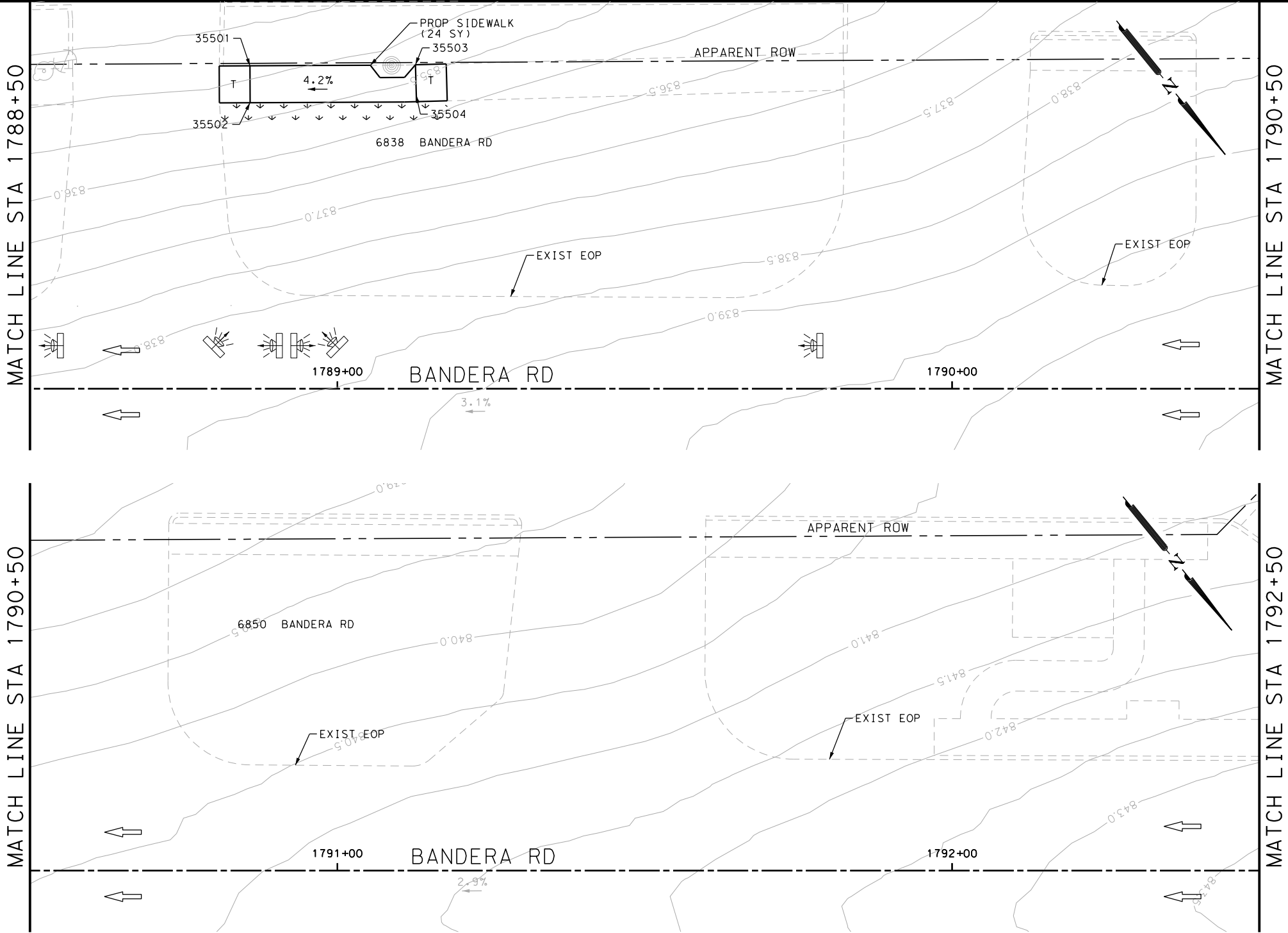
STA 1784+50 TO STA 1788+50

SHEET 74 OF 107

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: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*56.dgn



POINT	NORTHING	EASTING	ELEV	DESC
35501	13730822.52	2089231.53	--	.
35502	13730826.49	2089234.57	--	.
35503	13730846.84	2089199.78	--	.
35504	13730850.81	2089202.82	--	.

ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	28

- NOTES:
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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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

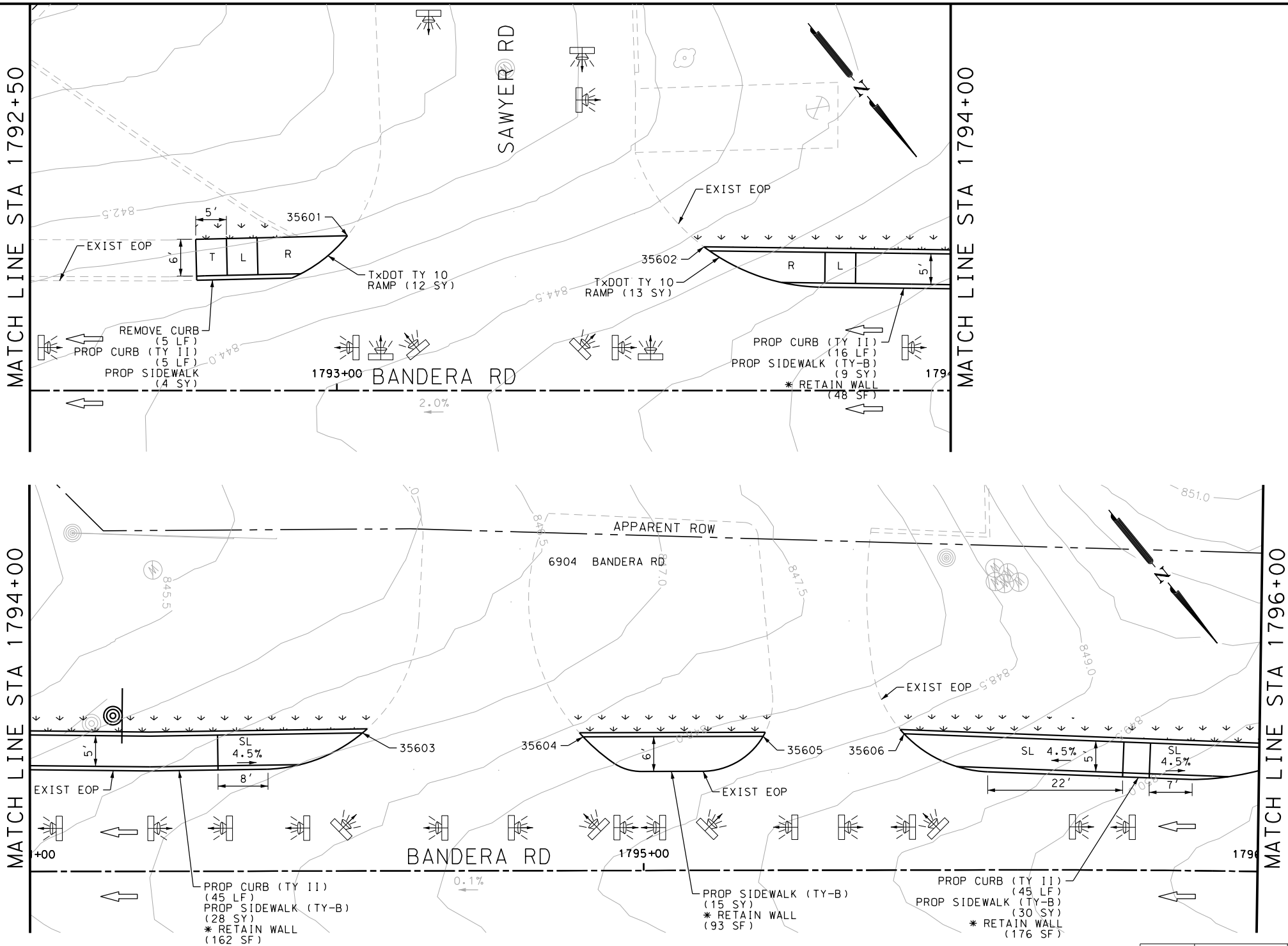


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BANDERA RD					
SIDEWALK CONSTRUCTION PLAN					
STA 1788+50 TO STA 1792+50					
SHEET 75 OF 107					
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK DGN:	6	TEXAS			VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576
					SHEET NO.
					301

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB*57.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	90
0531-6024	CURB RAMPS (TY 7)	SY	19

- NOTES:
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INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
35601	13731104.25	2088926.87	--	.
35602	13731141.24	2088883.38	--	.
35603	13731201.85	2088816.27	--	.
35604	13731232.67	2088778.12	--	.
35605	13731236.91	2088772.90	--	.
35606	13731267.31	2088736.33	--	.

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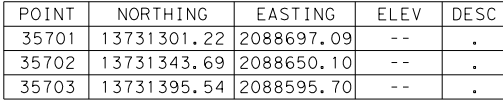
SIDEWALK CONSTRUCTION PLAN

STA 1792+50 TO STA 1796+00

SHEET 76 OF 107

DCN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DCN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				302

Design Filename: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*58.dgn



NOTES:

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

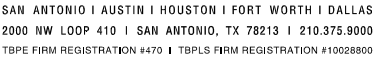
ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



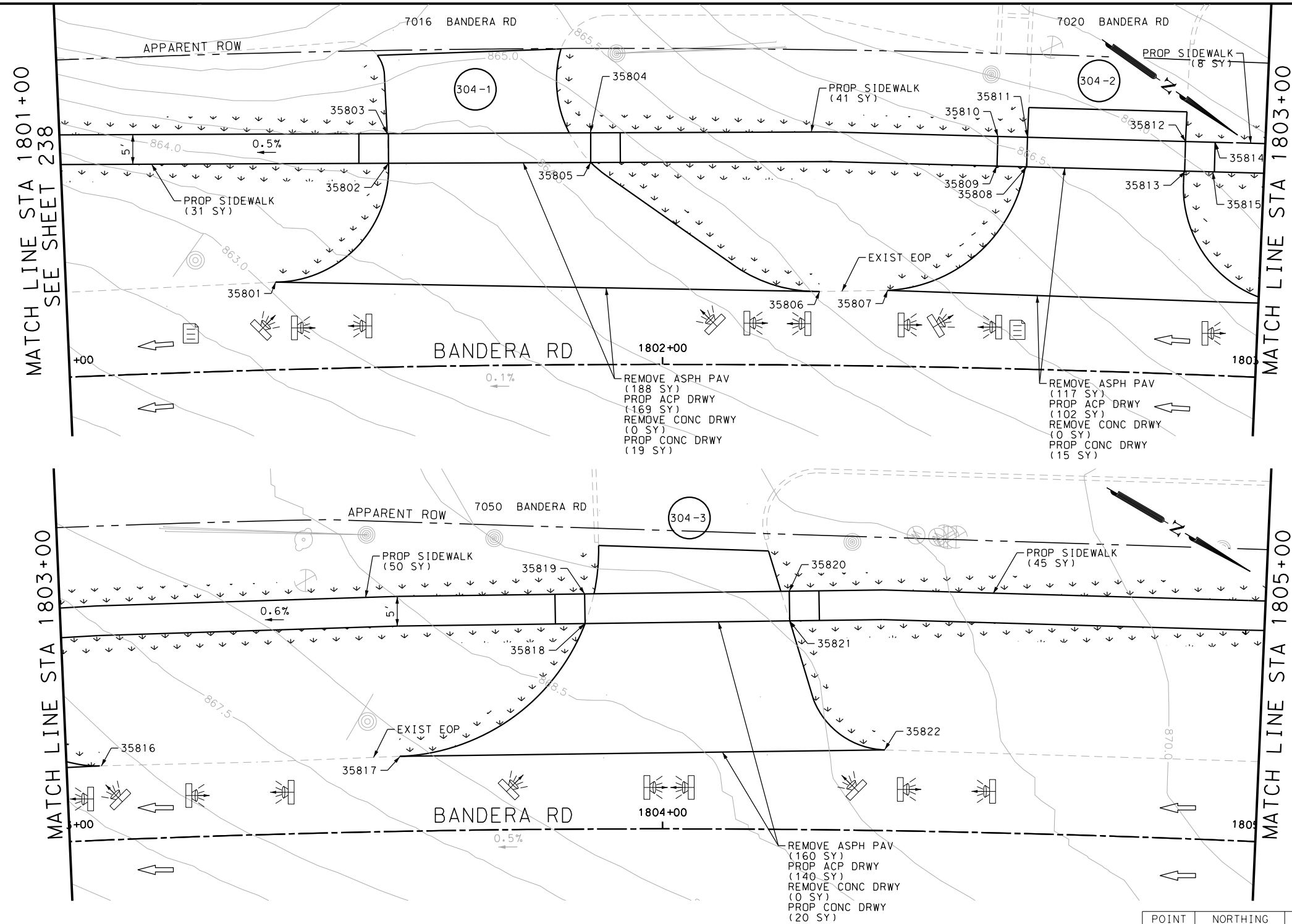
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1796+00 TO STA 1799+00

SHEET 77 OF 107

OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	303

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\EB*59.dgn



ITEM	DESCRIPTION	UNIT	QTY
0105-6037	REMOVING STAB BASE AND ASPH PAV (0"-16")	SY	382
0530-6005	DRIVEWAYS (ACP)	SY	382
0531-6001	CONC SIDEWALKS (4")	SY	185

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
35801	13731683.50	2088291.26	--	.
35802	13731686.56	2088295.21	--	.
35803	13731687.81	2088288.06	--	.
35804	13731690.75	2088292.10	--	.
35805	13731709.60	2088271.93	--	.
35806	13731712.55	2088275.97	--	.
35807	13731724.59	2088260.83	--	.
35808	13731727.48	2088264.91	--	.
35809	13731766.95	2088232.19	--	.
35810	13731769.67	2088236.39	--	.
35811	13731773.00	2088228.46	--	.
35812	13731775.78	2088232.62	--	.
35813	13731797.23	2088213.47	--	.
35814	13731800.01	2088217.63	--	.
35815	13731806.01	2088208.04	--	.
35816	13731808.56	2088212.34	--	.
35817	13731845.97	2088185.40	--	.
35818	13731848.40	2088189.78	--	.
35819	13731890.59	2088161.24	--	.
35820	13731893.15	2088165.54	--	.

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ENGINEERS

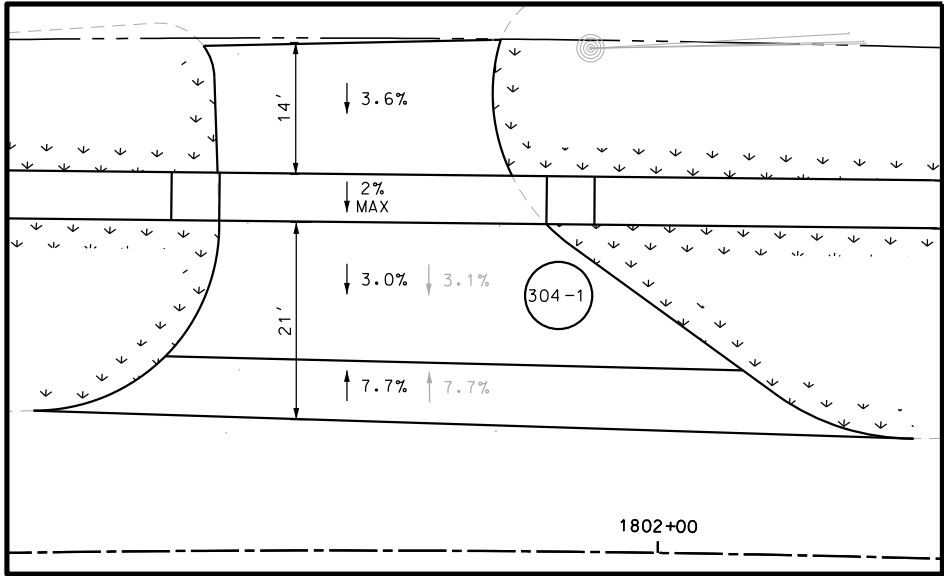
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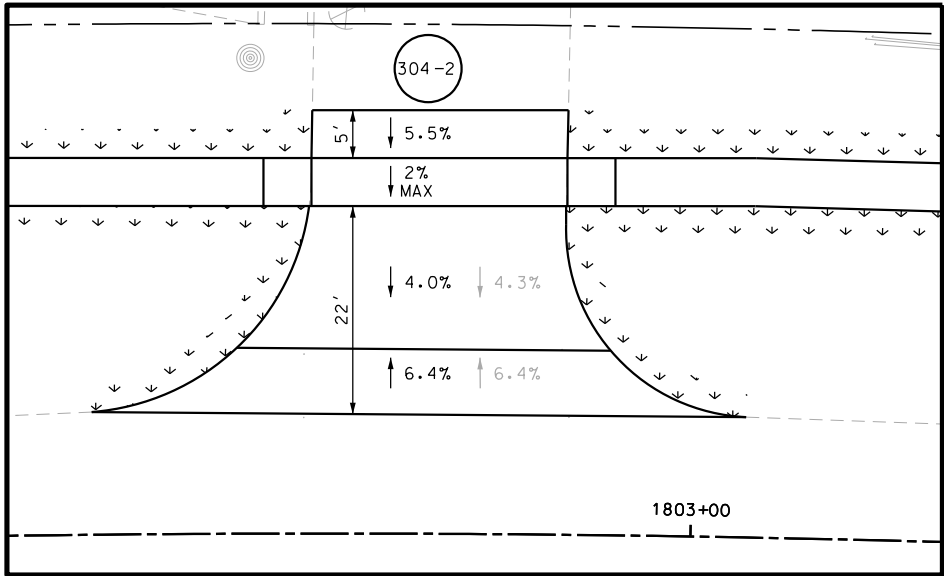
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1801+00 TO STA 1805+00

SHEET 78 OF 107

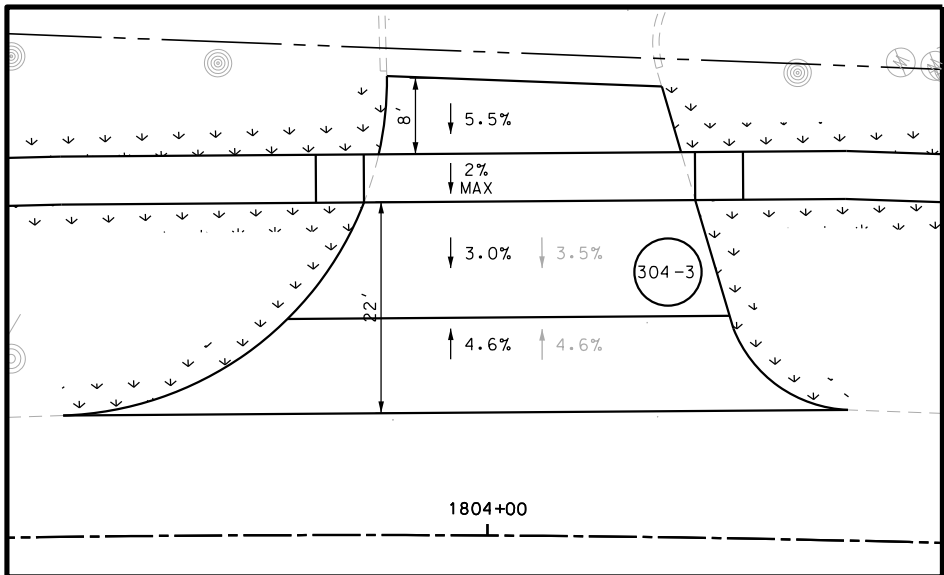
OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	304



DRWY PLAN STA 1801+72



DRWY PLAN STA 1802+75



DRWY PLAN STA 1804+05

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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY



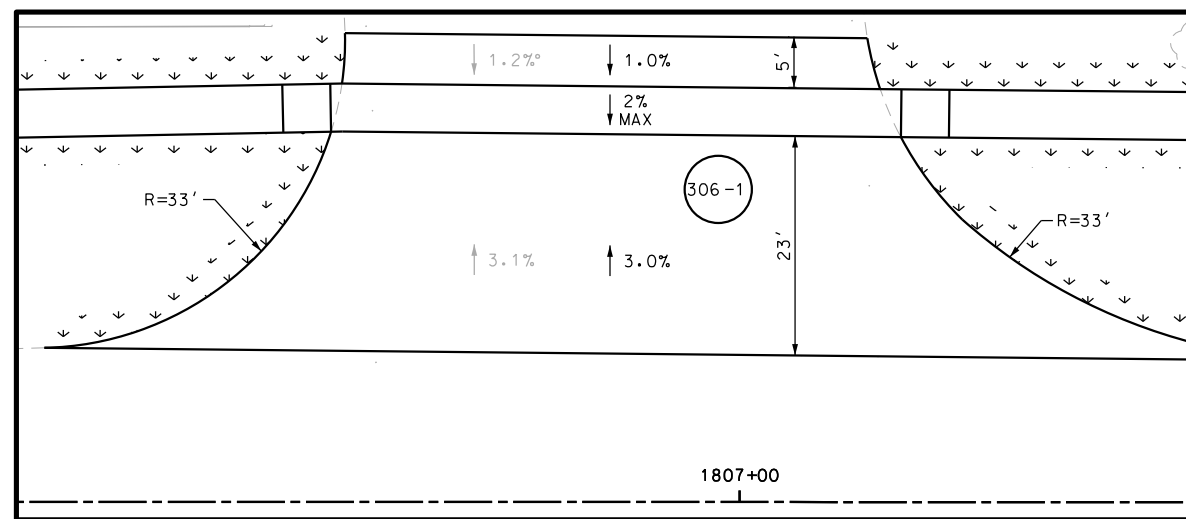
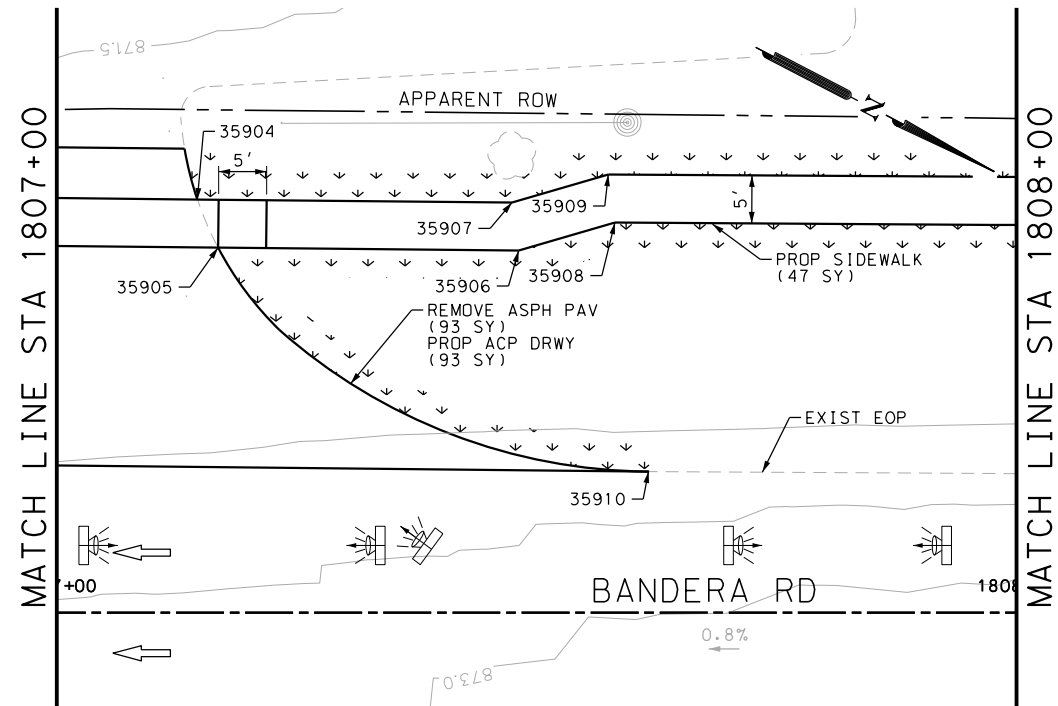
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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1801+00 TO STA 1805+00

SHEET 79 OF 107						
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	305

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NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY

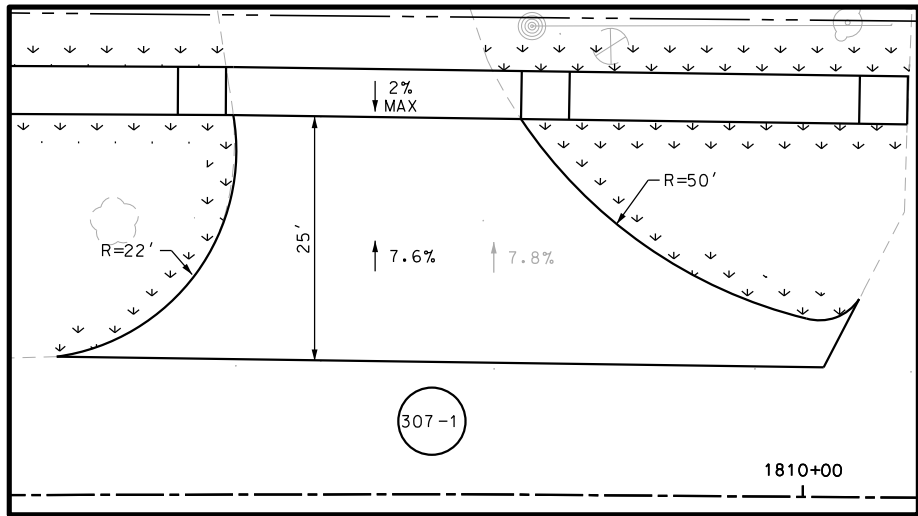
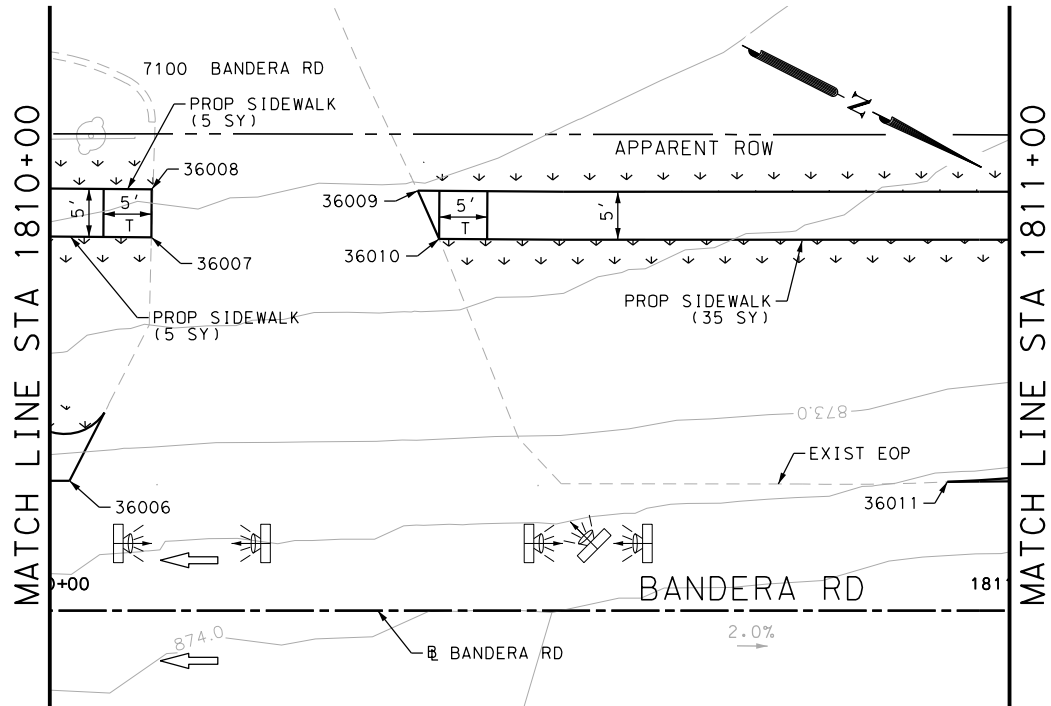
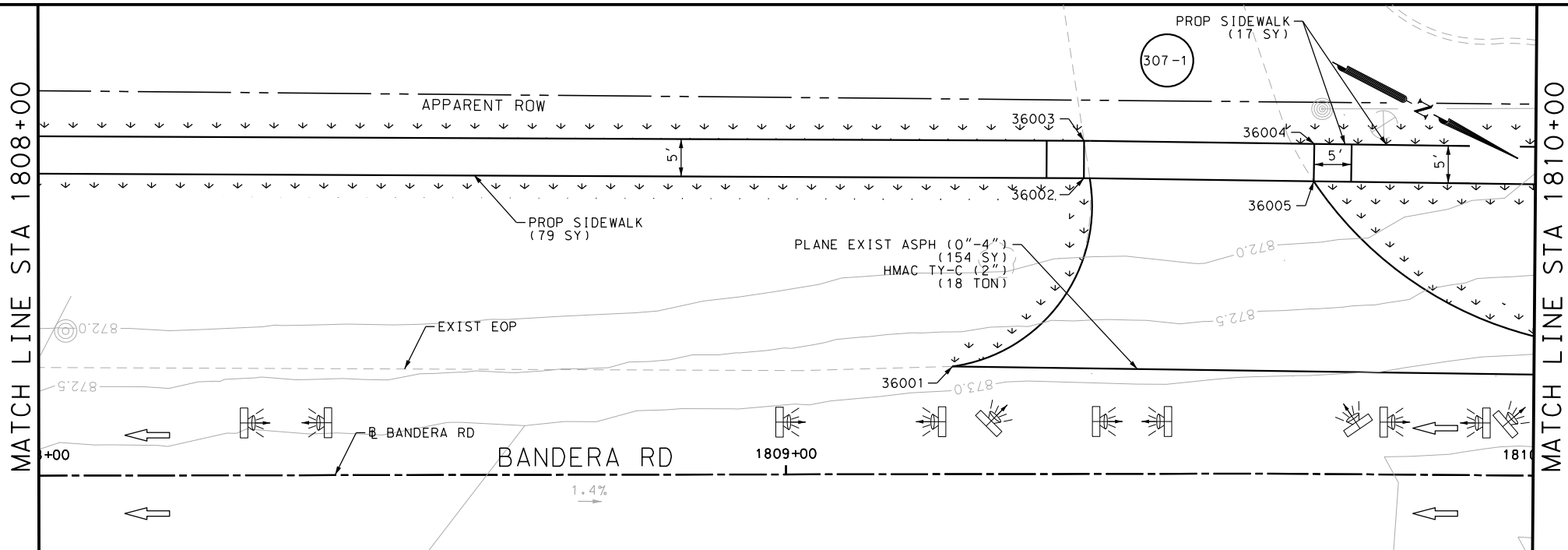
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SHEET 80 OF 107

OGNo	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO
CHK OGNo	6	TEXAS				VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	306

Plotted on: 11/21/2018

Design File name: P:\111135\05\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*61.dgn



ITEM	DESCRIPTION	UNIT	QTY
0340-6066	D-GR HMA (SQ) TY-C PG76-22	TON	12.0
0530-6004	DRIVEWAYS (CONC)	SY	144
0530-6005	DRIVEWAYS (ACP)	SY	106
0531-6001	CONC SIDEWALKS (4")	SY	79

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

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INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36001	13732377.83	2087903.80	--	.
36002	13732381.83	2087907.37	--	.
36003	13732397.86	2087893.56	--	.
36004	13732401.86	2087897.13	--	.
36005	13732438.90	2087872.85	--	.
36006	13732441.17	2087877.30	--	.
36007	13732461.64	2087861.40	--	.
36008	13732466.11	2087864.75	--	.

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BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

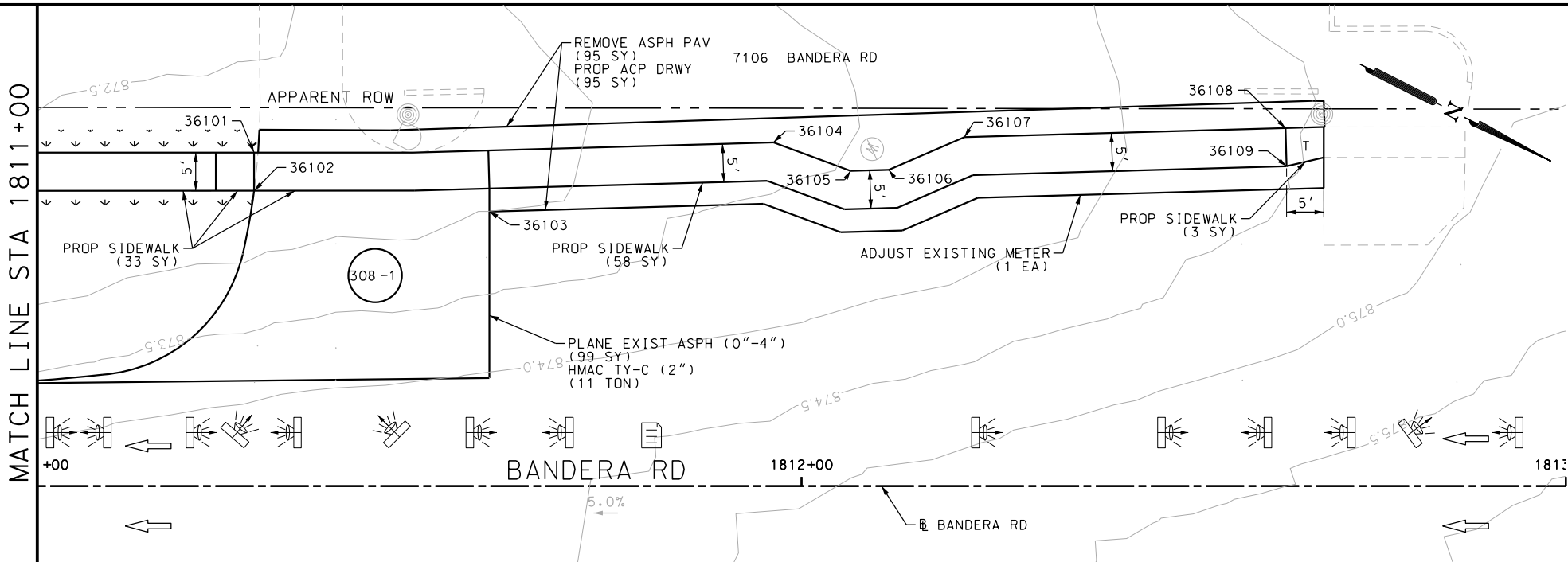
STA 1808+00 TO STA 1811+00

SHEET 81 OF 107

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	307

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*62.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	167
7091-6003	ADJUST EXISTING METER AND NEW METER BOX	EA	1

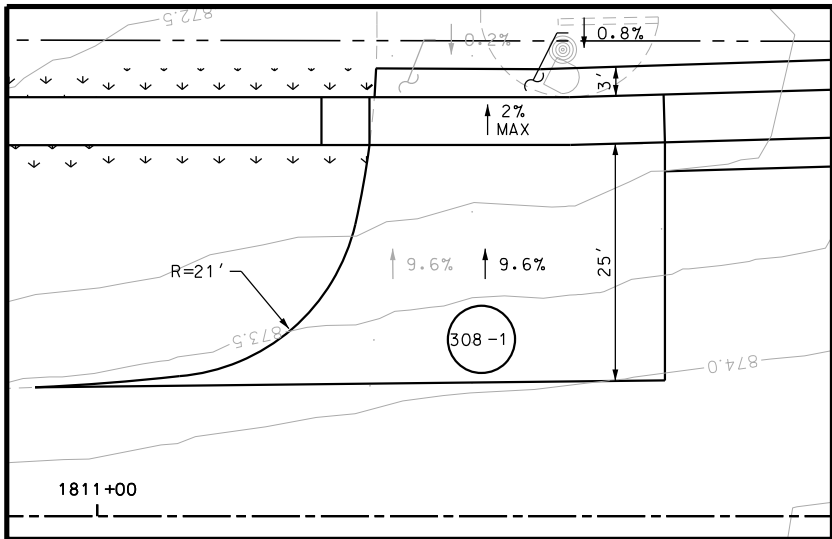
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DESIGN	
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DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36101	13732560.75	2087811.51	--	.
36102	13732563.08	2087815.93	--	.
36103	13732666.52	2087753.31	--	.
36104	13732668.81	2087757.75	--	.



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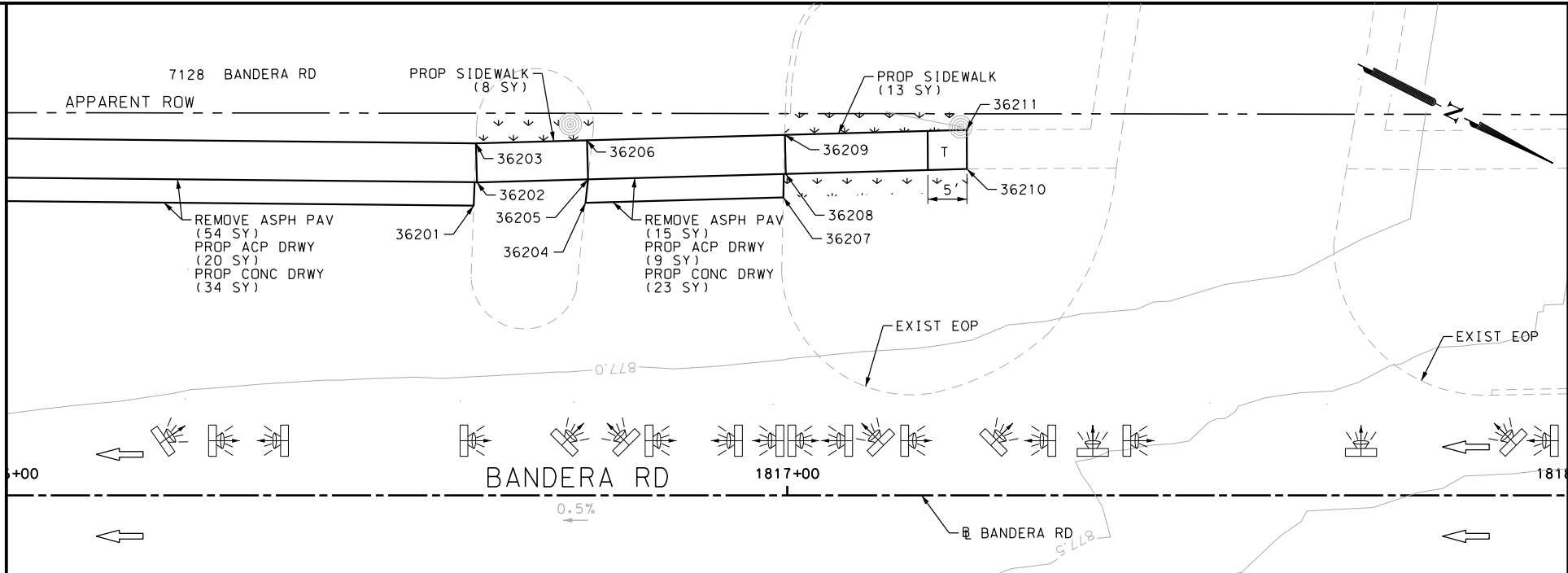
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1811+00 TO STA 1814+00
SHEET 82 OF 107

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.:
				308

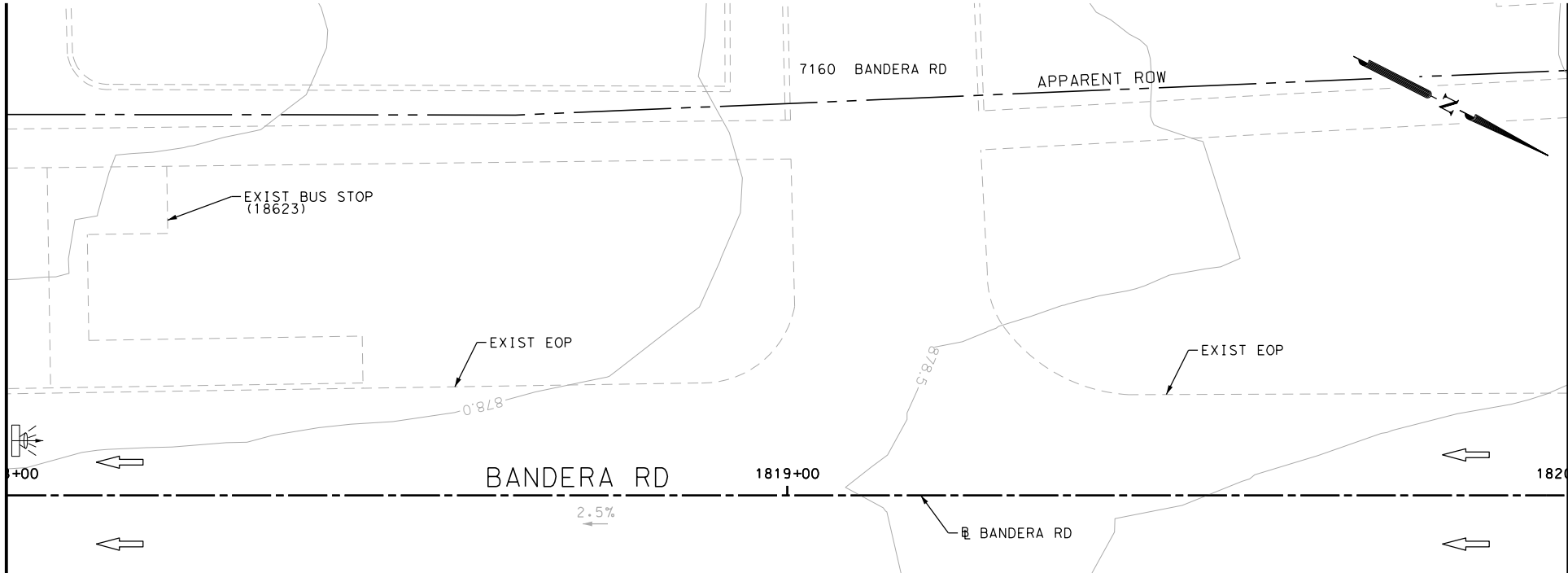
Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*63.dgn

MATCH LINE STA 1816+00
SEE SHEET 246



MATCH LINE STA 1818+00



MATCH LINE STA 1818+00

ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	77

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36201	13733078.38	2087549.14	--	.
36202	13733080.73	2087553.56	--	.
36203	13733084.57	2087545.62	--	.
36204	13733087.04	2087549.97	--	.

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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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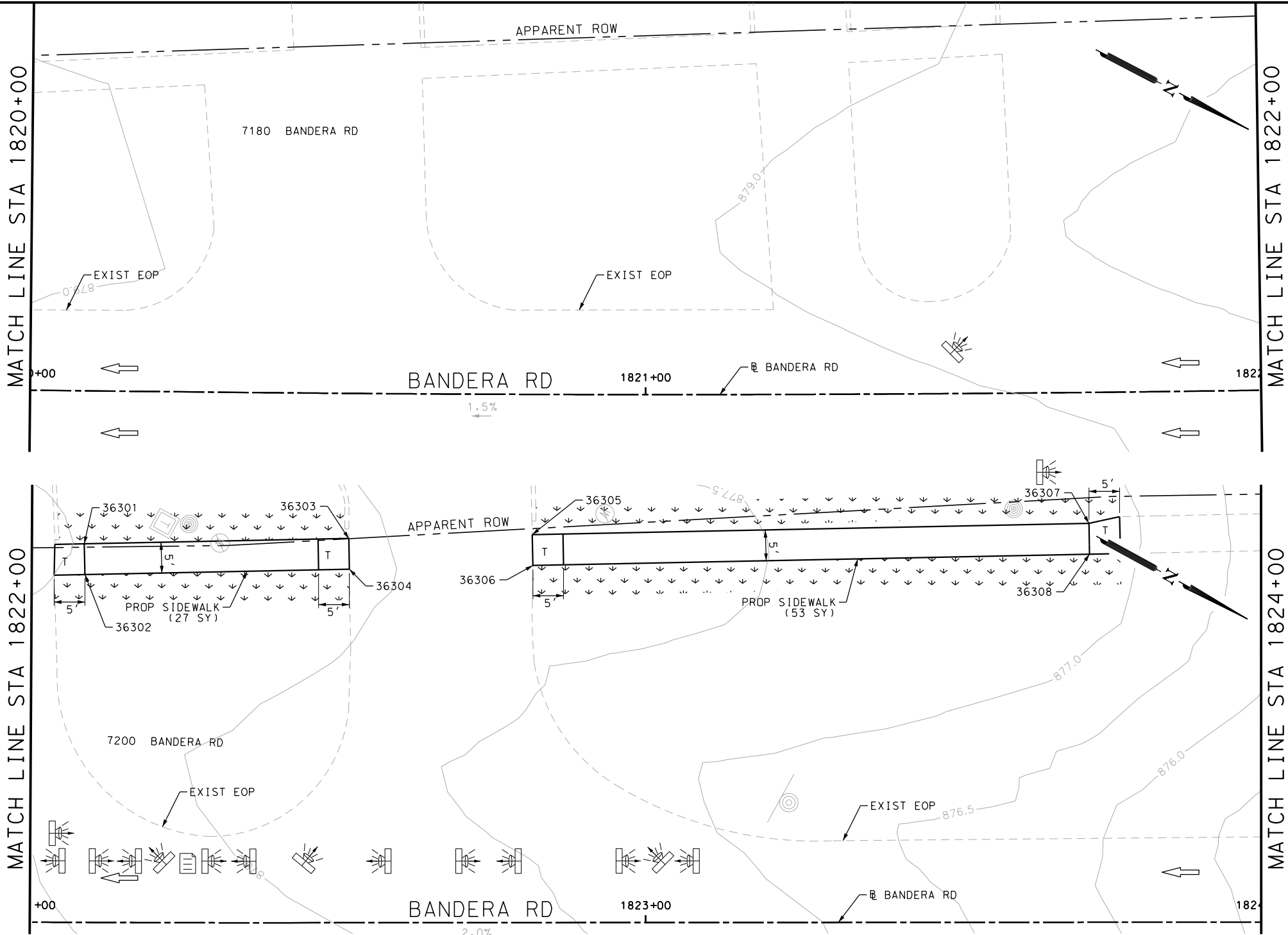
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1816+00 TO STA 1820+00

SHEET 83 OF 107

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.:
				309

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*EB*64.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	80

- 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 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

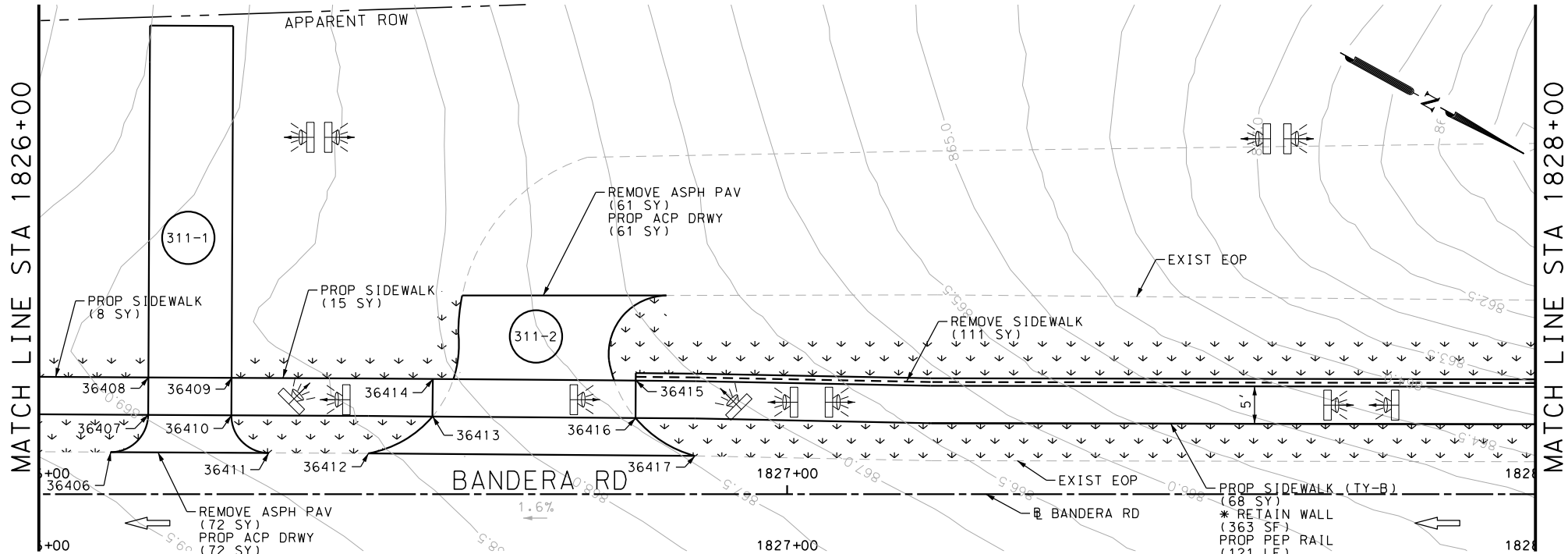
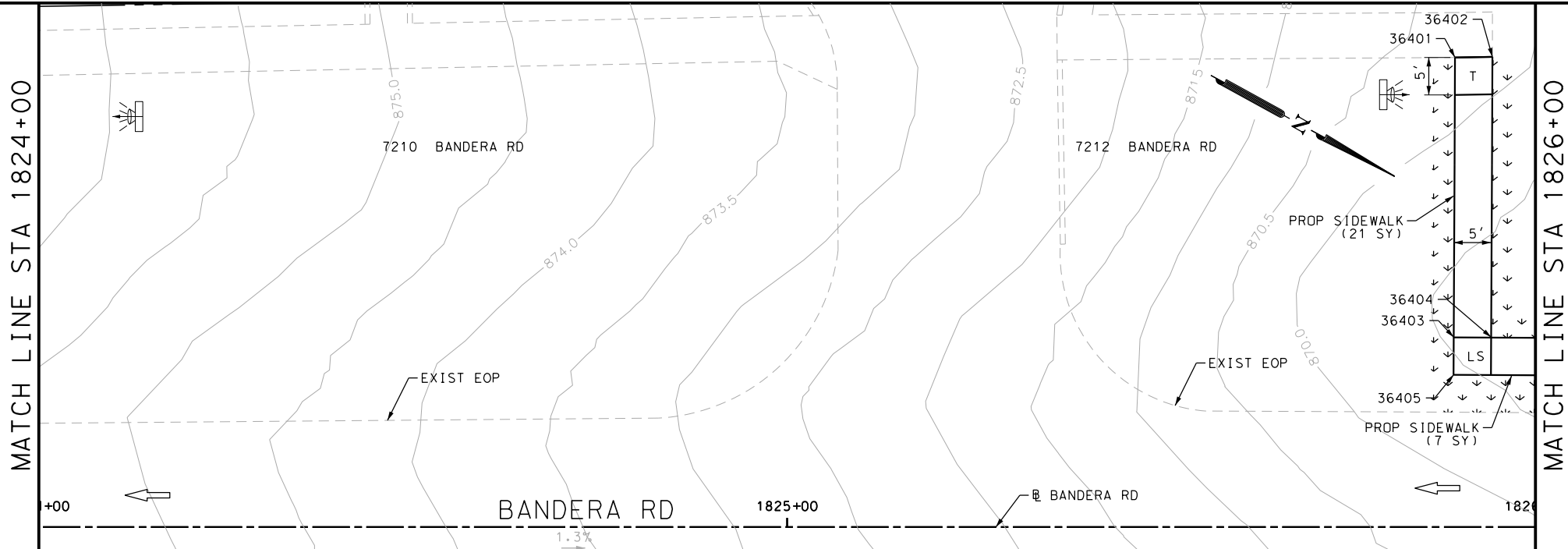
SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36301	13733497.52	2087314.44	--	.
36302	13733500.02	2087318.76	--	.
36303	13733531.28	2087294.86	--	.
36304	13733533.79	2087299.19	--	.
36305	13733565.21	2087275.19	--	.
36306	13733567.72	2087279.52	--	.
36307	13733639.48	2087232.14	--	.
36308	13733641.98	2087236.46	--	.

REV. NO.		DATE	DESCRIPTION	BY
<div><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></div>				
<div><p>© 2018</p></div>				
<p>BANDERA RD</p> <p>SIDEWALK</p> <p>CONSTRUCTION PLAN</p> <p>STA 1820+00 TO STA 1824+00</p> <p>SHEET 84 OF 107</p>				
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK	6	TEXAS		VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK	SAT	BEXAR	0915	12
DWG				JOB NO.
				576
				SHEET NO.
				310

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*65.dgn



POINT	NORTHING	EASTING	ELEV	DESC
36401	13733833.87	2087127.53	--	.
36402	13733838.26	2087125.12	--	.
36403	13733855.77	2087167.36	--	.
36404	13733860.15	2087164.95	--	.
36405	13733858.18	2087171.74	--	.

ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	143

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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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

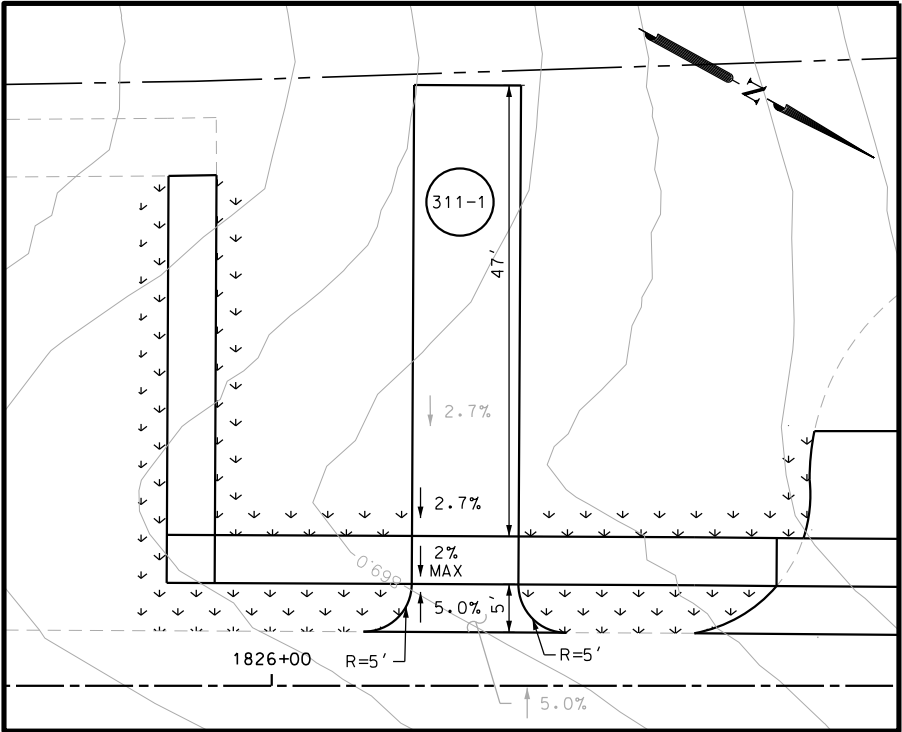


BANDERA RD

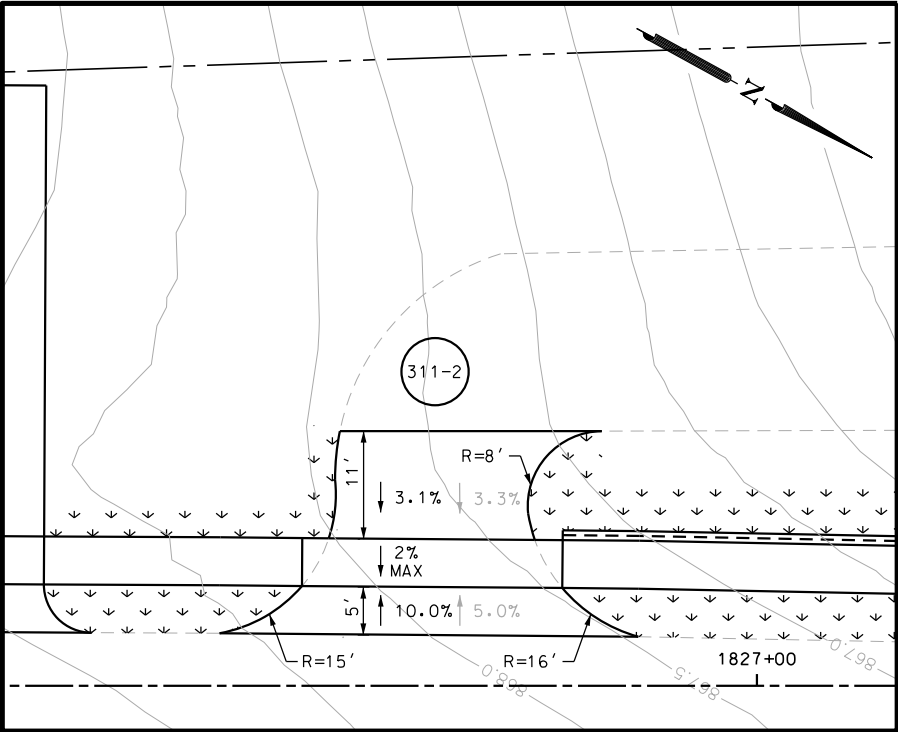
SIDEWALK CONSTRUCTION PLAN

STA 1824+00 TO STA 1828+00

SHEET 85 OF 107					
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



DRWY PLAN STA 1826+20



DRWY PLAN STA 1826+66

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



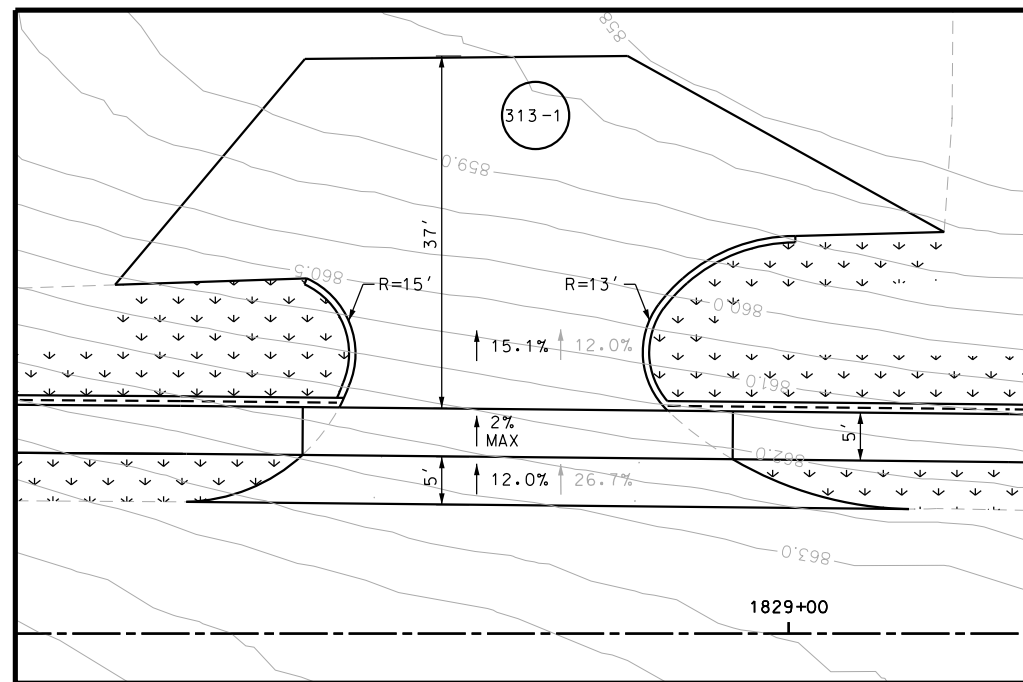
BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1824+00 TO STA 1828+00

SHEET 86 OF 107						
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	312

Design Filename: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*66.dgn

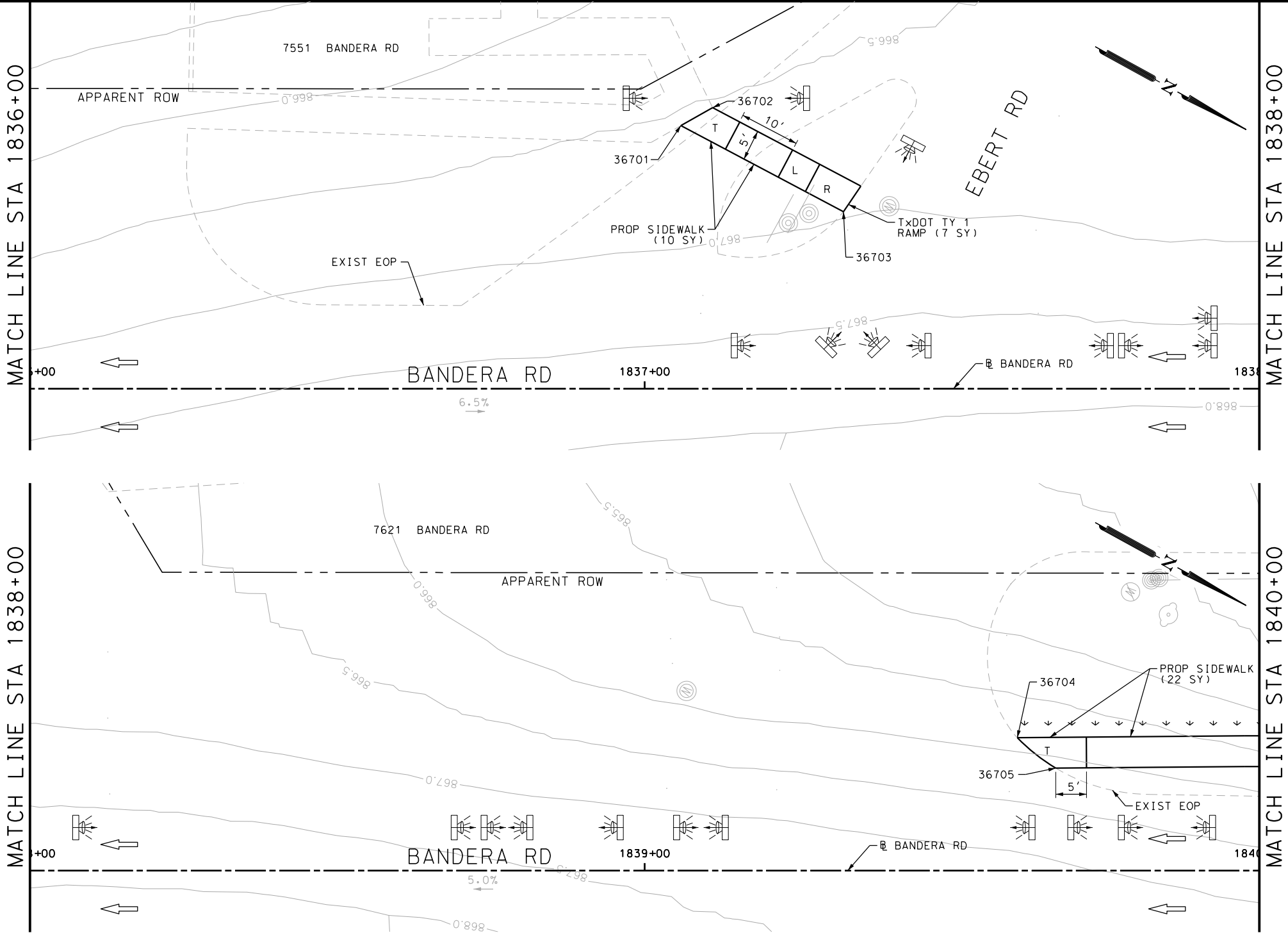


POINT	NORTHING	EASTING	ELEV	DESC
-------	----------	---------	------	------

CDG:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK CDG:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	313

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*68.dgn



ITEM	DESCRIPTION	UNIT	QTY
0340-6066	D-GR HMA (SQ) TY-C PG76-22	TON	18.0
0530-6005	DRIVEWAYS (ACP)	SY	172
0531-6001	CONC SIDEWALKS (4")	SY	36
0531-6018	CURB RAMPS (TY 1)	SY	7

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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
36701	13734853.75	2086618.11	--	.
36702	13735052.86	2086504.56	--	.
36703	13735057.41	2086507.77	--	.
36704	13735064.86	2086497.99	--	.
36705	13735065.44	2086503.37	--	.
36706	13735073.00	2086500.37	--	.
36707	13735073.59	2086505.75	--	.
36708	13734823.22	2086611.99	--	.
36709	13734824.21	2086607.09	--	.

PAPE-DAWSON ENGINEERS

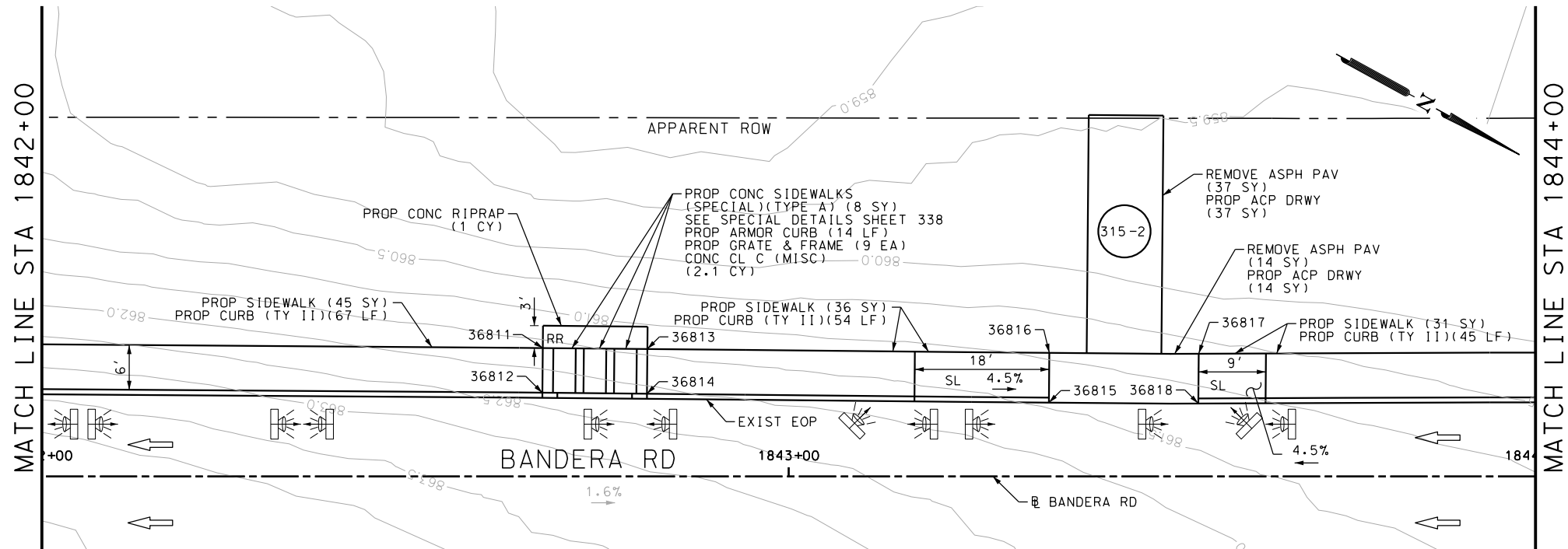
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1836+00 TO STA 1840+00
SHEET 88 OF 107

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	314

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*69.dgn



NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION. ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

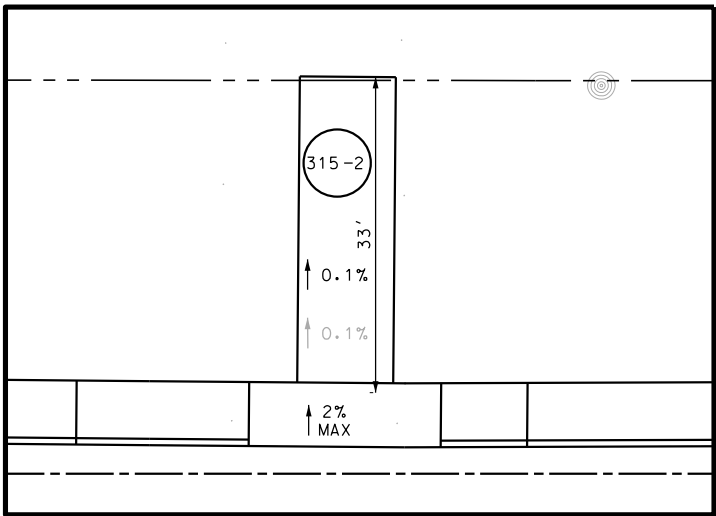
Pape-Dawson Engineers

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

BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1840+00 TO STA 1844+00

SHEET 89 OF 107

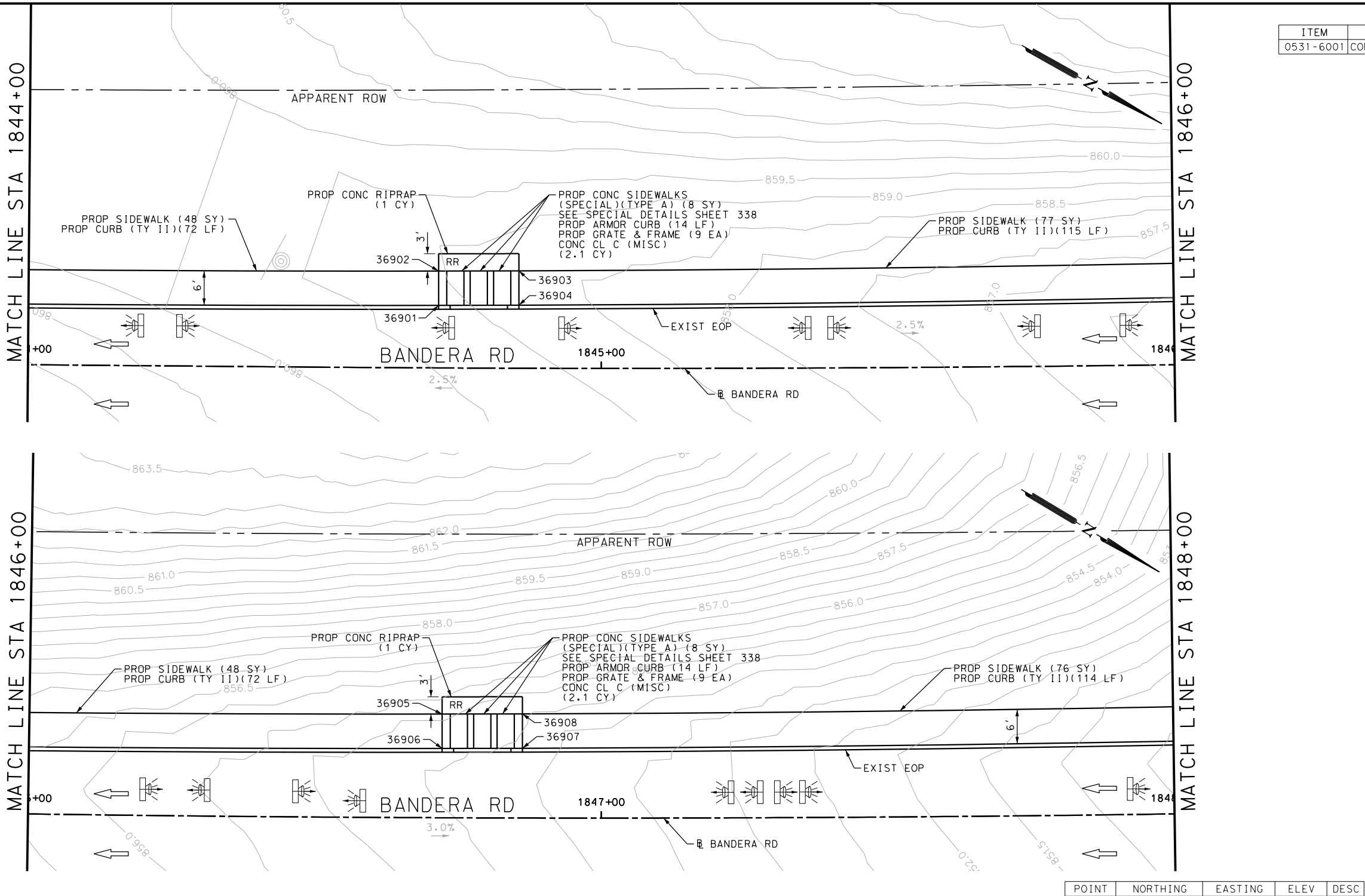
OGN ₁	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN ₁	6	TEXAS				VARIES
DWG ₁	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG ₁	SAT	BEXAR	0915	12	576	315



POINT	NORTHING	EASTING	ELEV	DESC
36801	13735125.67	2086477.25	--	.
36802	13735172.89	2086451.39	--	.

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*70.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	222

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DESIGN
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL
INTERIM REVIEW
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
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TBPE FIRM REGISTRATION #470 | TBPLS FIRM REGISTRATION #10028800

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

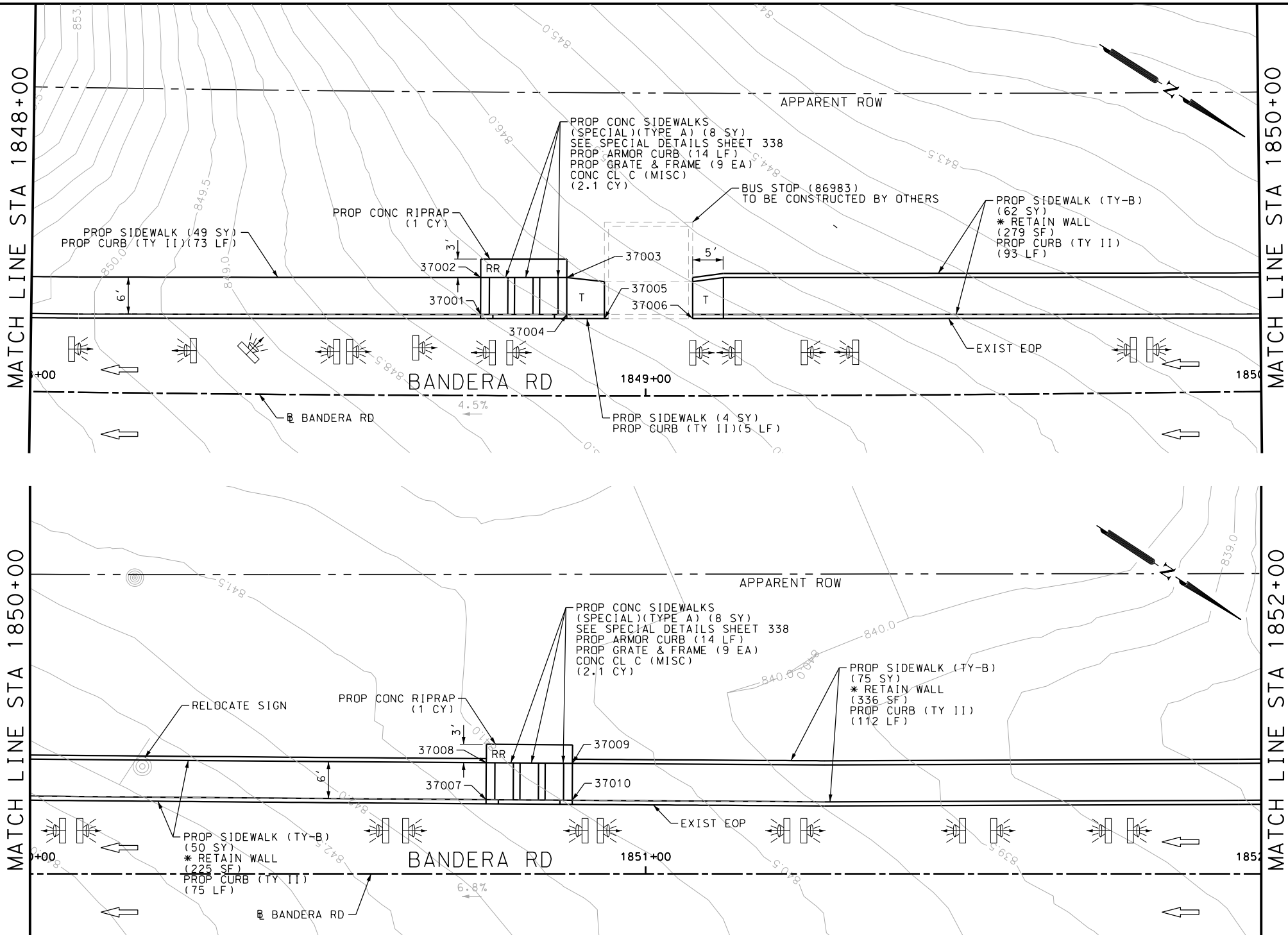
STA 1844+00 TO STA 1848+00

SHEET 90 OF 107

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: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*71.dgn



POINT	NORTHING	EASTING	ELEV	DESC
37001	13735830.68	2086079.40	--	.
37002	13735849.63	2086066.31	--	.

ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	32
0529-6002	CONC CURB (TY II)	LF	400
0531-6001	CONC SIDEWALKS (4")	SY	30
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	185

- NOTES:
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ENGINEER: JOHN A. TYLER

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DATE: 11/21/2018

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INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

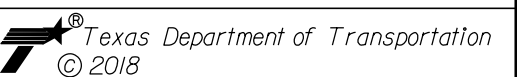
DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1848+00 TO STA 1852+00

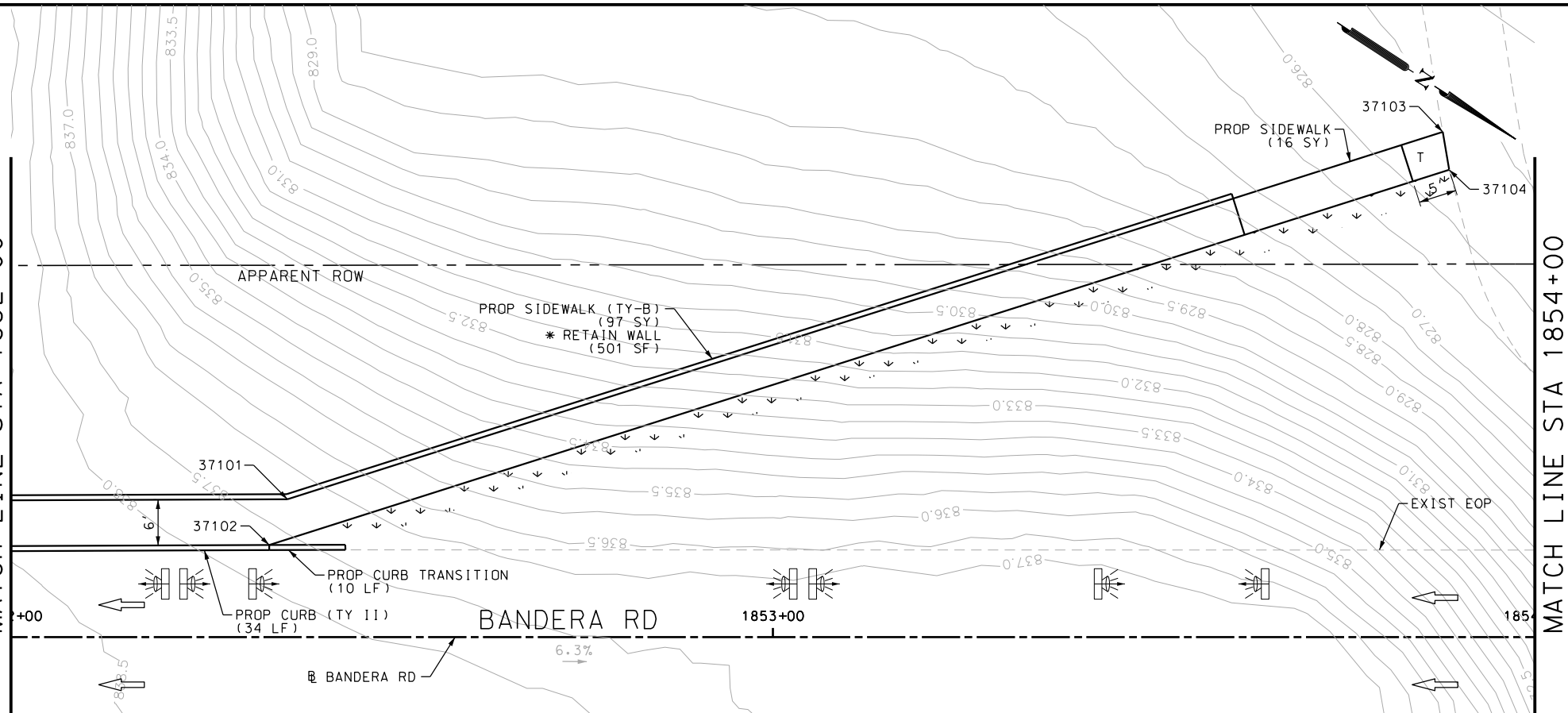
SHEET 91 OF 107

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: 11/21/2018

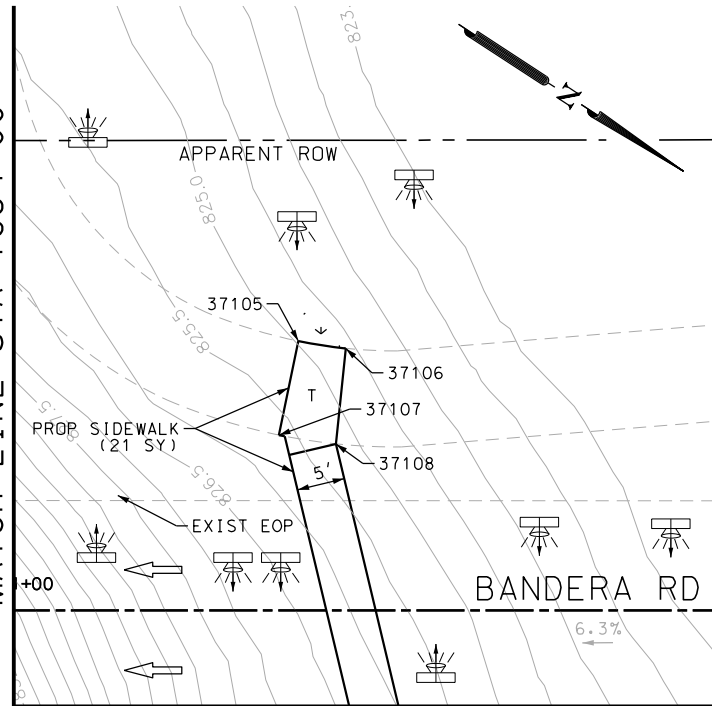
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MATCH LINE STA 1852+00



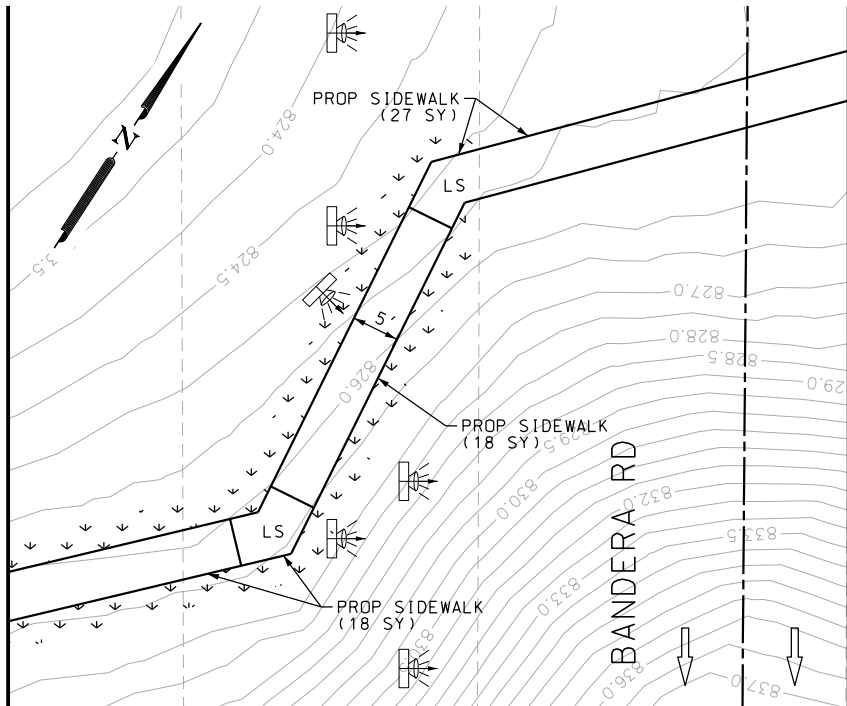
MATCH LINE STA 1854+00

MATCH LINE STA 1854+00



MATCH LINE A

MATCH LINE A



MATCH LINE B
SEE SHEET 265

POINT	NORTHING	EASTING	ELEV	DESC
37101	13736156.11	2085859.01	--	.
37102	13736159.51	2085862.75	--	.
37103	13736345.76	2085737.43	--	.
37104	13736348.44	2085733.21	--	.
37105	13736254.02	2085740.65	--	.
37106	13736257.68	2085743.71	--	.

ITEM	DESCRIPTION	UNIT	QTY
0529-6002	CONC CURB (TY II)	LF	43
0531-6001	CONC SIDEWALKS (4")	SY	22
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	107

- NOTES:
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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

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



BANDERA RD

SIDEWALK CONSTRUCTION PLAN

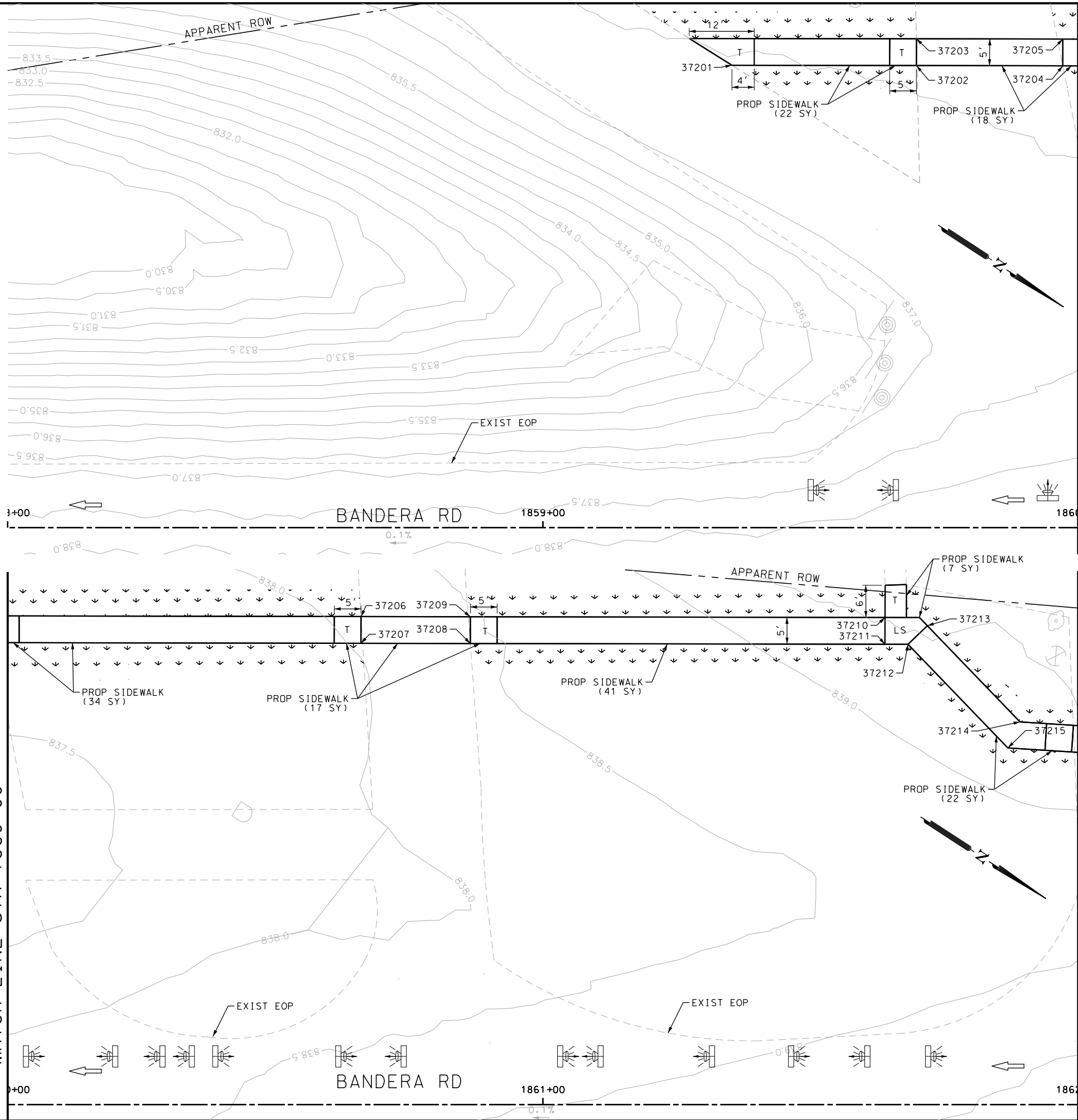
STA 1852+00 TO STA 1856+00

SHEET 92 OF 107

DCN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DCN	6	TEXAS				VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	318

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*73.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	151

- NOTES:
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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



BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

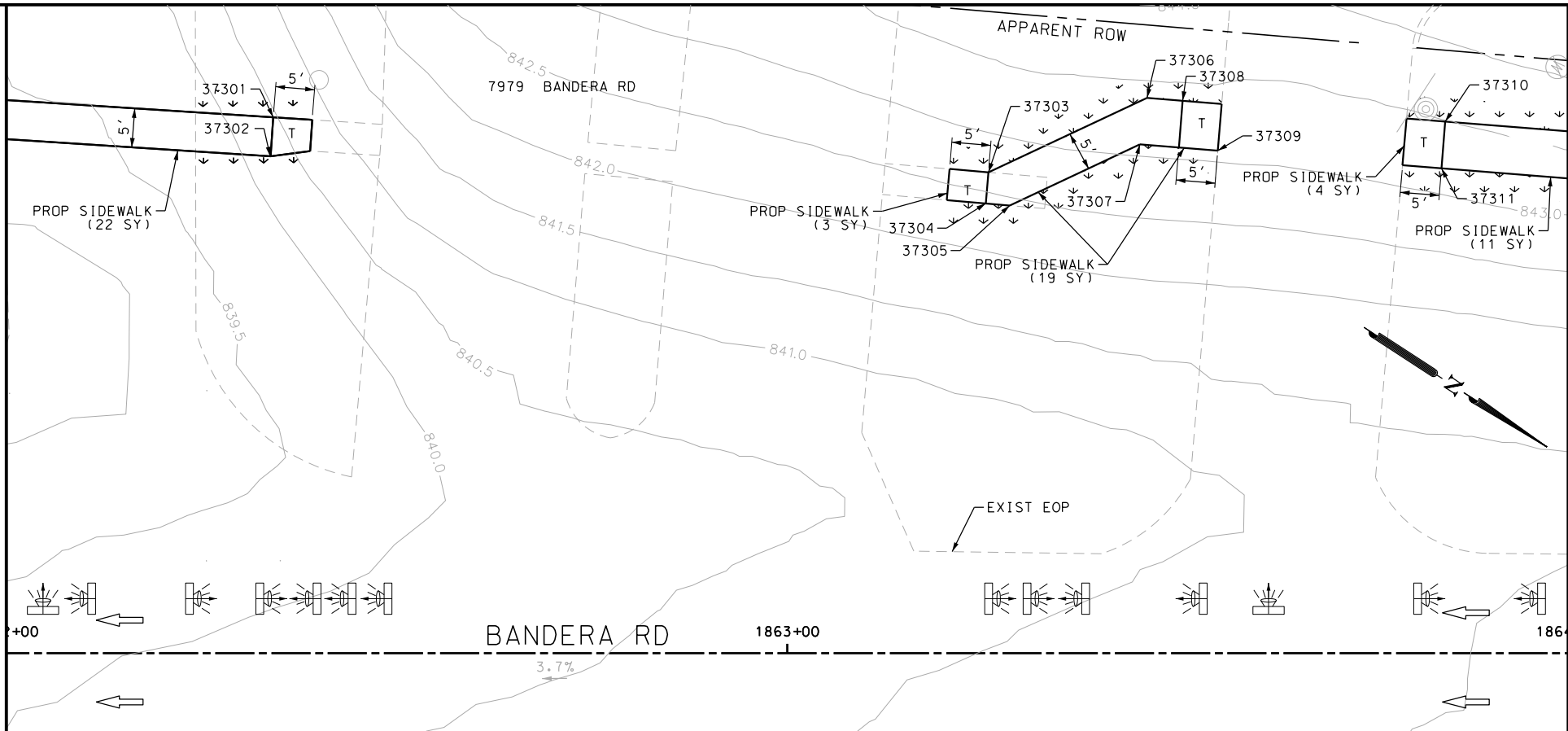
STA 1858+00 TO STA 1862+00

SHEET 93 OF 107					
CHK	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK	6	TEXAS			VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK	SAT	BEXAR	0915	12	576
DWG					319

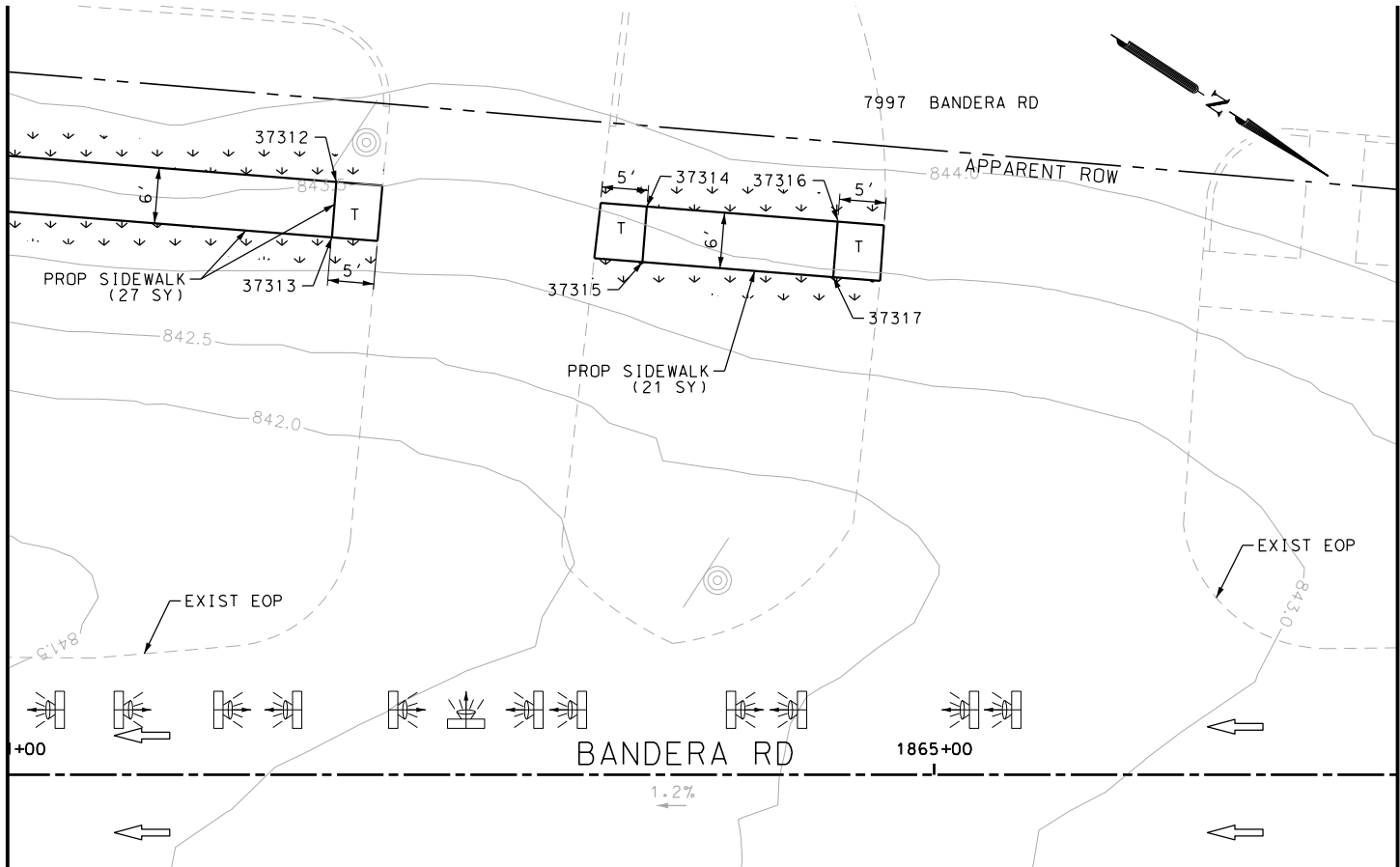
Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*74.dgn

MATCH LINE STA 1862+00



MATCH LINE STA 1864+00



MATCH LINE STA 1865+50
SEE SHEET 267

ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	93

- NOTES:
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 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37301	13736959.61	2085269.59	--	.
37302	13736962.00	2085273.98	--	.
37303	13737046.14	2085222.46	--	.
37304	13737048.51	2085226.86	--	.
37305	13737050.34	2085225.87	--	.
37306	13737050.40	2085208.11	--	.
37307	13737054.60	2085211.52	--	.
37308	13737055.83	2085205.17	--	.
37309	13737058.22	2085209.56	--	.
37310	13737086.26	2085188.68	--	.
37311	13737088.64	2085193.07	--	.
37312	13737130.76	2085164.55	--	.
37313	13737133.15	2085168.95	--	.
37314	13737160.32	2085148.53	--	.
37315	13737162.70	2085152.93	--	.
37316	13737178.39	2085138.74	--	.
37317	13737180.77	2085143.13	--	.

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

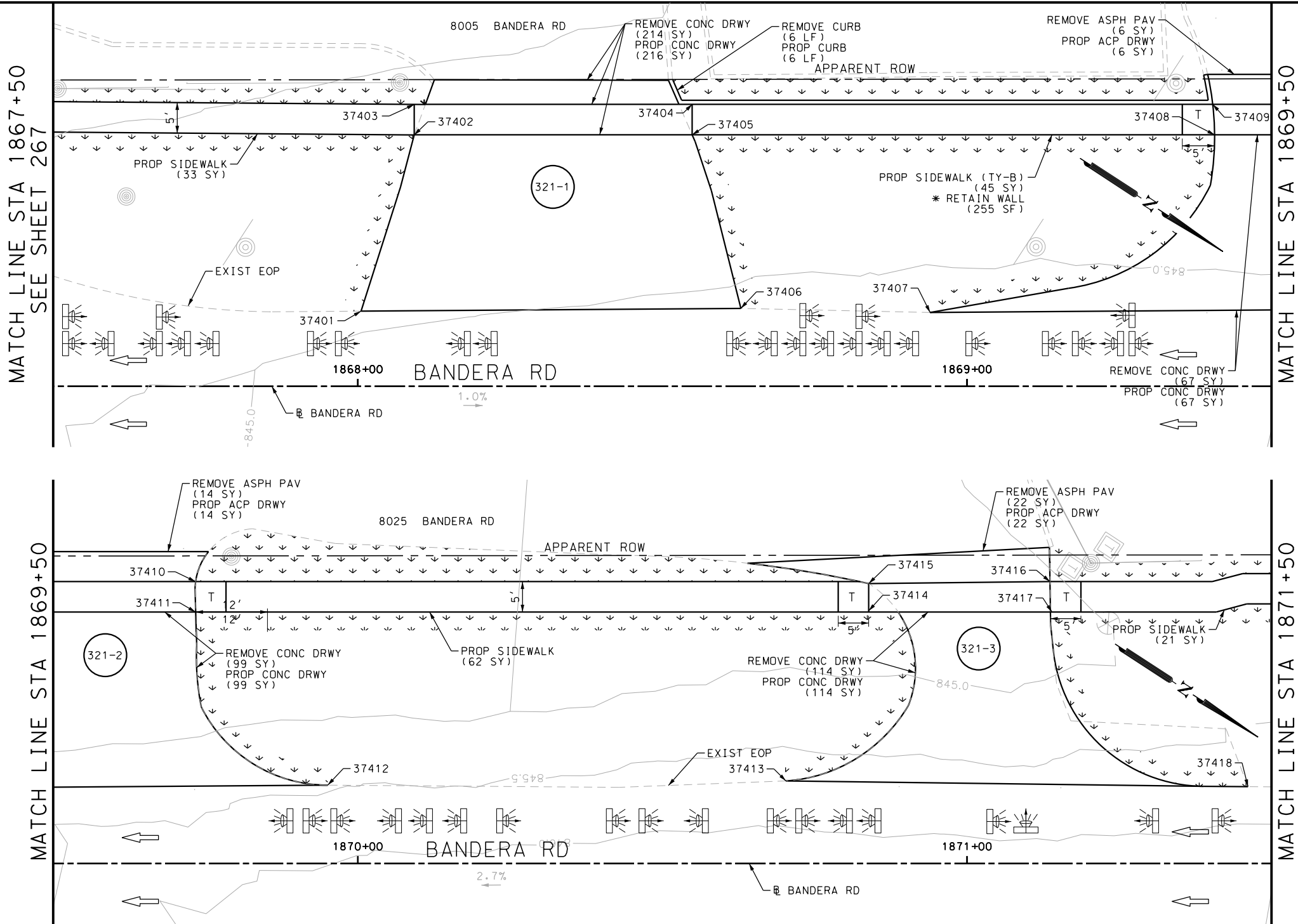
STA 1862+00 TO STA 1865+50

SHEET 94 OF 107

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

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*EB*75.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	427
0530-6004	DRIVEWAYS (CONC)	SY	427
0531-6001	CONC SIDEWALKS (4")	SY	80
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	80

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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37401	13737459.79	2084988.62	--	.
37402	13737461.65	2084993.37	--	.
37403	13737502.32	2084960.99	--	.
37404	13737506.30	2084964.37	--	.
37405	13737573.34	2084914.87	--	.
37406	13737575.34	2084919.53	--	.
37407	13737596.53	2084899.80	--	.
37408	13737599.98	2084903.53	--	.
37409	13737694.54	2084836.15	--	.
37410	13737696.55	2084840.81	--	.
37411	13737721.64	2084818.55	--	.
37412	13737727.40	2084820.77	--	.

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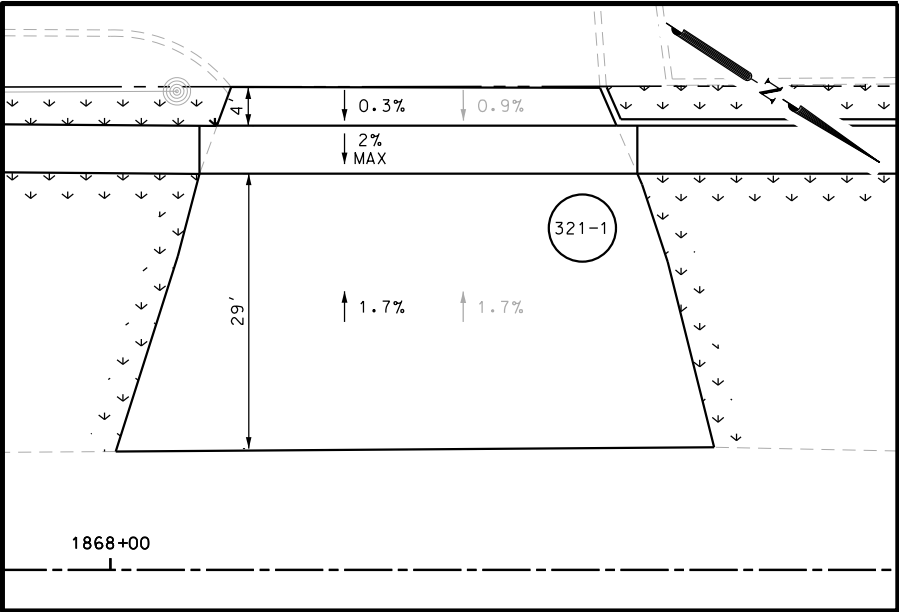
BANDERA RD

SIDEWALK CONSTRUCTION PLAN

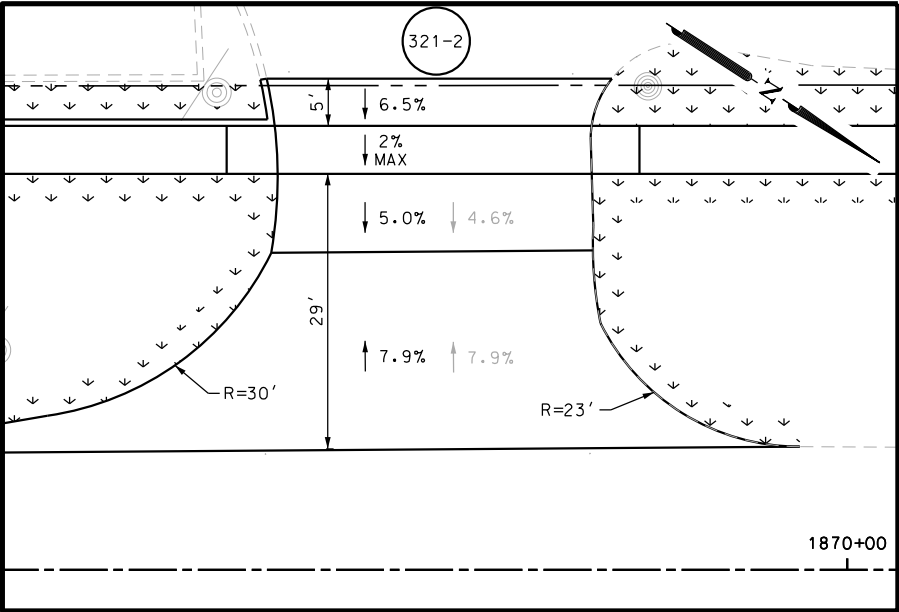
STA 1867+50 TO STA 1871+50

SHEET 95 OF 107

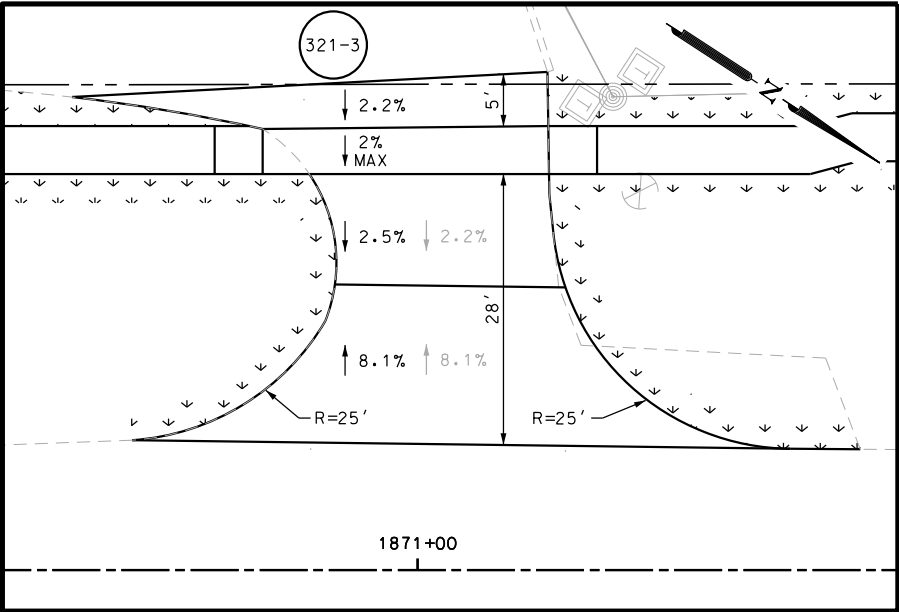
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				321



DRWY PLAN STA 1868+35



DRWY PLAN STA 1869+58



DRWY PLAN STA 1871+11

- NOTES:
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DESIGN

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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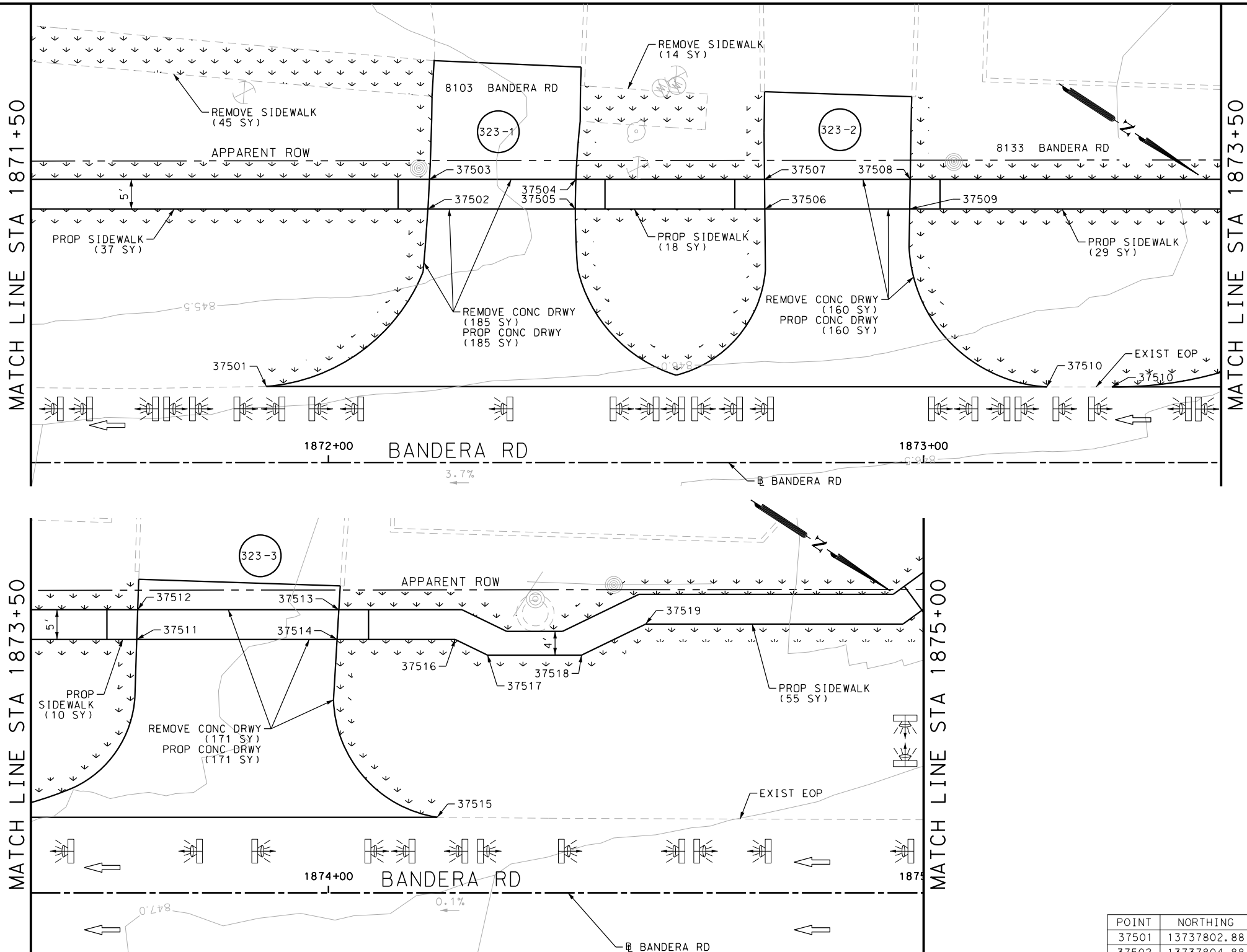
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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1867+50 TO STA 1871+50

SHEET 96 OF 107						
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	322

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*76.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6017	REMOVING CONC (DRIVEWAYS)	SY	360
0530-6004	DRIVEWAYS (CONC)	SY	360
0531-6001	CONC SIDEWALKS (4")	SY	146

- NOTES:
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DESIGN	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JOHN A. TYLER	
P.E. SERIAL NO: 105193	
DATE: 11/21/2018	

REVIEW AND APPROVAL	
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER: JAMES A. LUTZ	
P.E. SERIAL NO: 84722	
DATE: 11/21/2018	

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37501	13737802.88	2084765.79	--	.
37502	13737804.88	2084770.45	--	.
37503	13737824.24	2084751.91	--	.
37504	13737827.69	2084755.63	--	.
37505	13737850.63	2084734.77	--	.
37506	13737852.64	2084739.43	--	.
37507	13737871.97	2084720.91	--	.
37508	13737875.41	2084724.64	--	.
37509	13737929.23	2084683.72	--	.
37510	13737931.23	2084688.38	--	.
37511	13737958.74	2084664.55	--	.
37512	13737962.18	2084668.28	--	.

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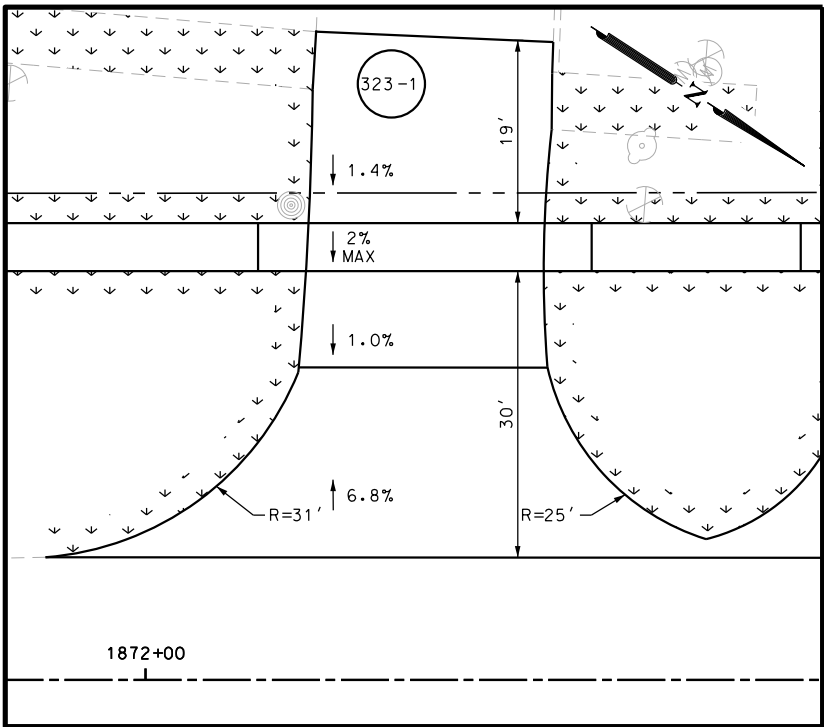
BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 1871+50 TO STA 1875+00

SHEET 97 OF 107

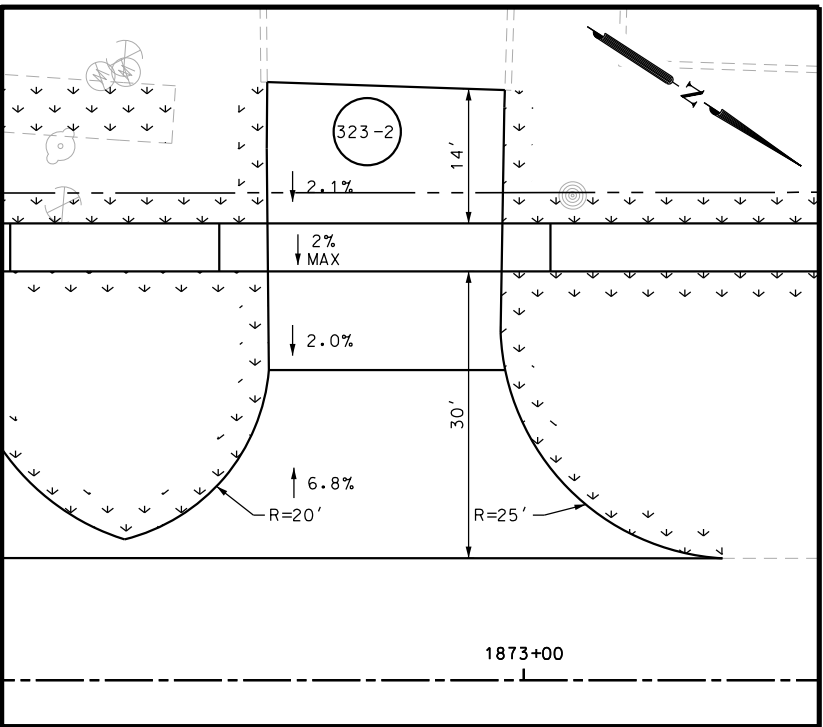
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				323

Plotted on: 11/21/2018

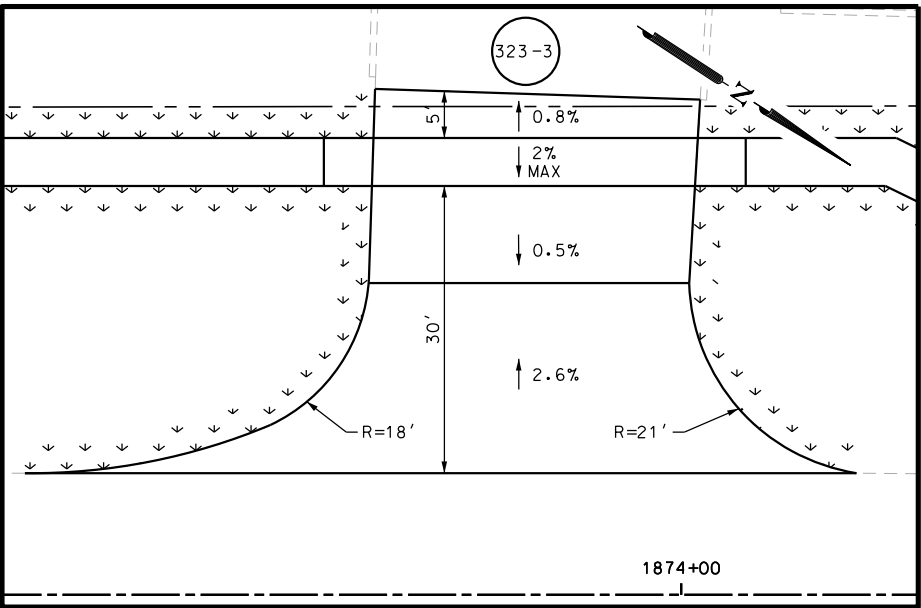
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DRWY PLAN STA 1872+31



DRWY PLAN STA 1572+88



DRWY PLAN STA 1873+87

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DESIGN

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

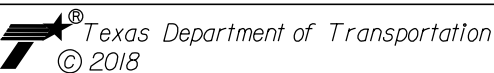
INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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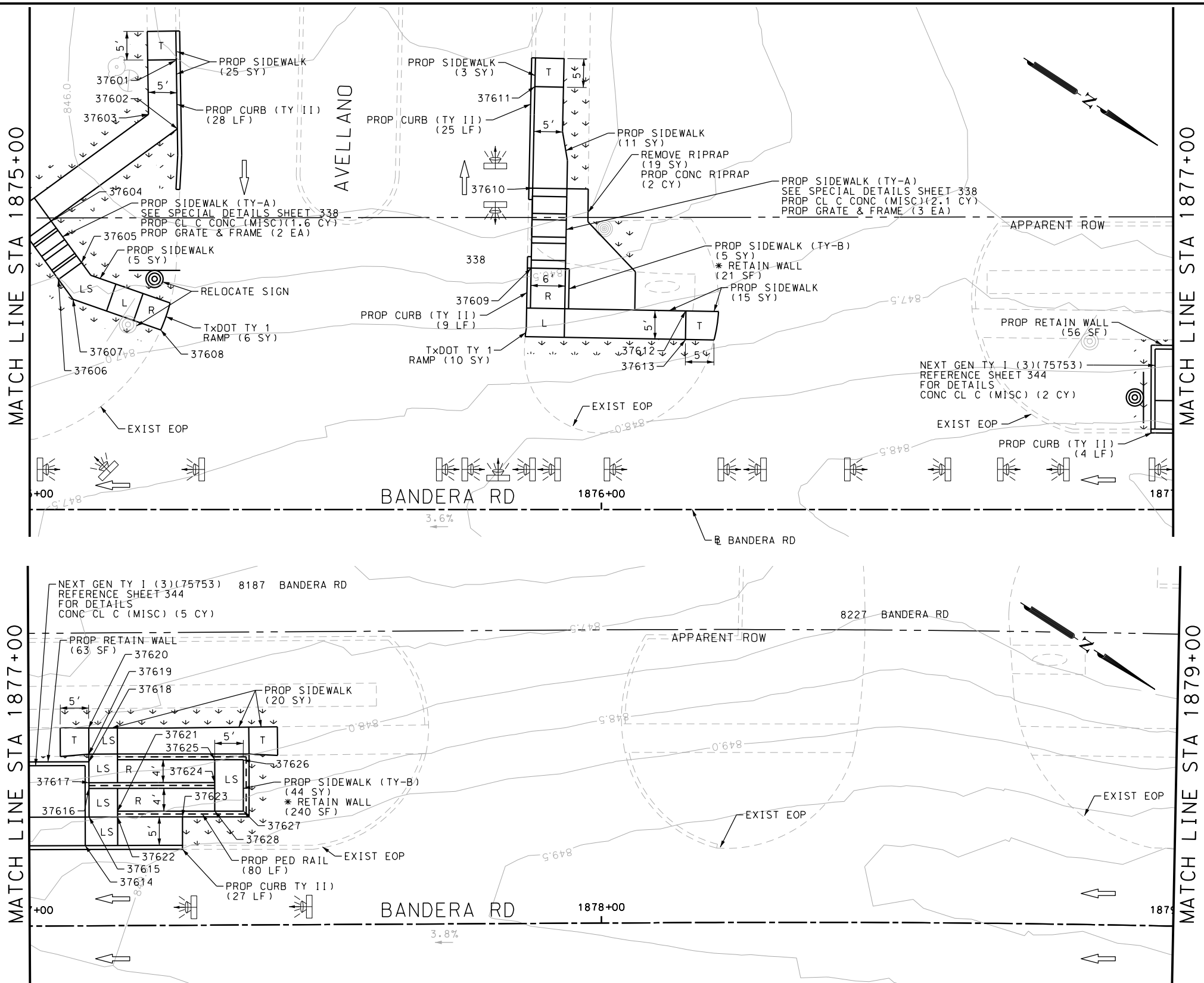
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BANDERA RD					
SIDEWALK CONSTRUCTION PLAN					
STA 1871+50 TO STA 1875+00					
SHEET 98 OF 107					
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.		HIGHWAY NO.
CHK DGN:	6	TEXAS			VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.
CHK DWG:	SAT	BEXAR	0915	12	576

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*77.dgn



ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	15.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	31
0450-6048	RAIL (HANDRAIL) (TY B)	LF	111
0529-6002	CONC CURB (TY II)	LF	100
0531-6001	CONC SIDEWALKS (4")	SY	42
0531-6018	CURB RAMPS (TY I)	SY	21
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	44

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1875+00 TO STA 1879+00

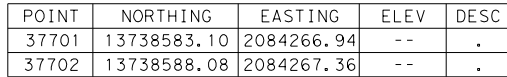
SHEET 99 OF 107

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	325

POINT	NORTHING	EASTING	ELEV	DESC
37601	13738059.56	2084598.07	--	.
37602	13738044.47	2084591.60	--	.
37603	13738049.24	2084590.12	--	.
37604	13738040.31	2084578.23	--	.
37605	13738045.09	2084576.75	--	.
37606	13738038.15	2084571.27	--	.
37607	13738042.73	2084569.16	--	.
37608	13738045.24	2084608.37	--	.
37609	13738047.96	2084612.57	--	.
37610	13738097.63	2084539.07	--	.
37611	13738105.07	2084550.93	--	.
37612	13738220.05	2084512.72	--	.

POINT	NORTHING	EASTING	ELEV	DESC
37613	13738217.84	2084507.50	--	.
37614	13738215.11	2084503.31	--	.
37615	13738222.04	2084504.79	--	.
37616	13738234.46	2084490.87	--	.
37617	13738240.85	2084491.52	--	.
37618	13738233.91	2084490.04	--	.
37619	13738235.96	2084484.02	--	.
37620	13738216.58	2084496.42	--	.

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*78.dgn



NOTES:

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REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY

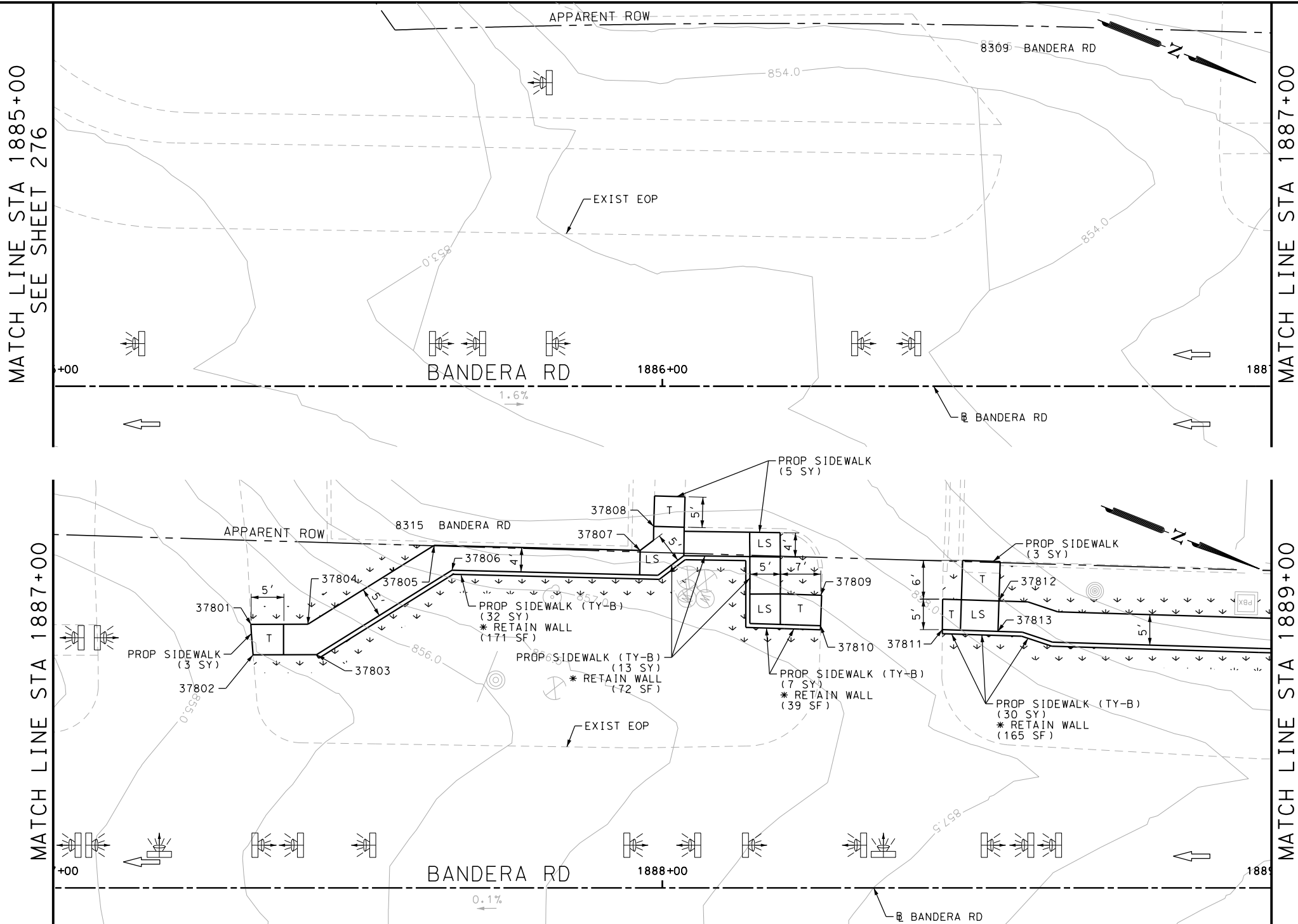


SHEET 100 OF 107

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	326

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\113507*Bandera Dr*EB*79.dgn



ITEM	DESCRIPTION	UNIT	QTY
0531-6001	CONC SIDEWALKS (4")	SY	9
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	74

- NOTES:
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DESIGN

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.

ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37801	13739133.27	2084022.44	--	.
37802	13739135.08	2084027.10	--	.
37803	13739137.01	2084026.35	--	.
37804	13739135.80	2084016.67	--	.
37805	13739139.55	2084020.57	--	.
37806	13739208.49	2083988.30	--	.
37807	13739210.31	2083992.96	--	.
37808	13739236.97	2083977.20	--	.
37809	13739238.77	2083981.87	--	.

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1885+00 TO STA 1889+00

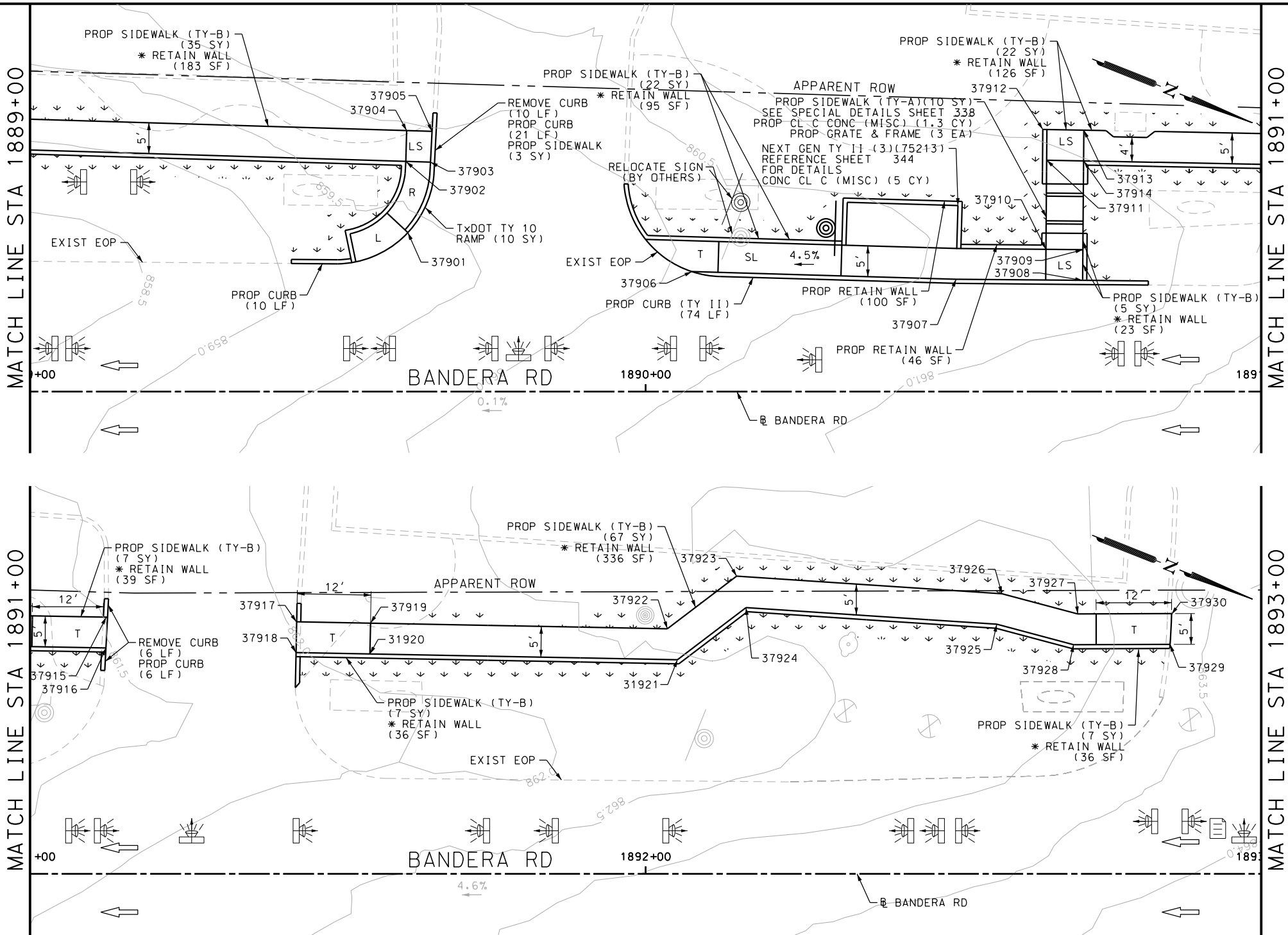
SHEET 101 OF 107

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	327

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*80.dgn



ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	12.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	29
0471-6003	GRATE & FRAME	EA	9
0529-6002	CONC CURB (TY II)	LF	62
0531-6001	CONC SIDEWALKS (4")	SY	28
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	157
0644-6070	RELOCATE SM RD SN SUP&M TY S80	EA	1

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 - 2. REFER TO GUIDE SHEET 90 FOR A LEGEND OF SYMBOLS, SLOPES, AND POINT TABLE INFORMATION
 - 3. EXISTING FEATURES ARE SHOWN SCREENED BACK, IE FADED

DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
37901	13739339.82	2083937.46	--	.
37902	13739344.55	2083935.63	--	.
37903	13739341.63	2083942.12	--	.
37904	13739346.31	2083940.38	--	.
37905	13739346.93	2083955.51	--	.
37906	13739391.50	2083943.74	--	.
37907	13739421.05	2083933.28	--	.
37908	13739449.01	2083922.35	--	.
37909	13739442.24	2083918.47	--	.
37910	13739446.93	2083916.74	--	.
37911	13739437.34	2083905.13	--	.
37912	13739442.00	2083903.33	--	.
37913	13739435.61	2083900.44	--	.
37914	13739440.20	2083898.66	--	.
37915	13739475.89	2083884.87	--	.
37916	13739477.70	2083889.54	--	.
37917	13739513.80	2083870.22	--	.
37918	13739515.60	2083874.89	--	.
37919	13739577.30	2083845.68	--	.
37920	13739579.10	2083850.35	--	.

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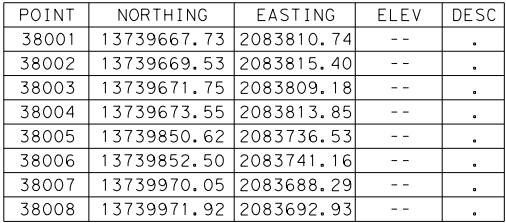
SIDEWALK CONSTRUCTION PLAN

STA 1889+00 TO STA 1893+00

SHEET 102 OF 107

CHK DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:	HIGHWAY NO.:
	6	TEXAS		VARIES
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:
	SAT	BEXAR	0915	12
				JOB NO.:
				576
				SHEET NO.:
				328

Design Filename: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*81.dgn



NOTES:

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REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

REV. NO.	DATE	DESCRIPTION	BY

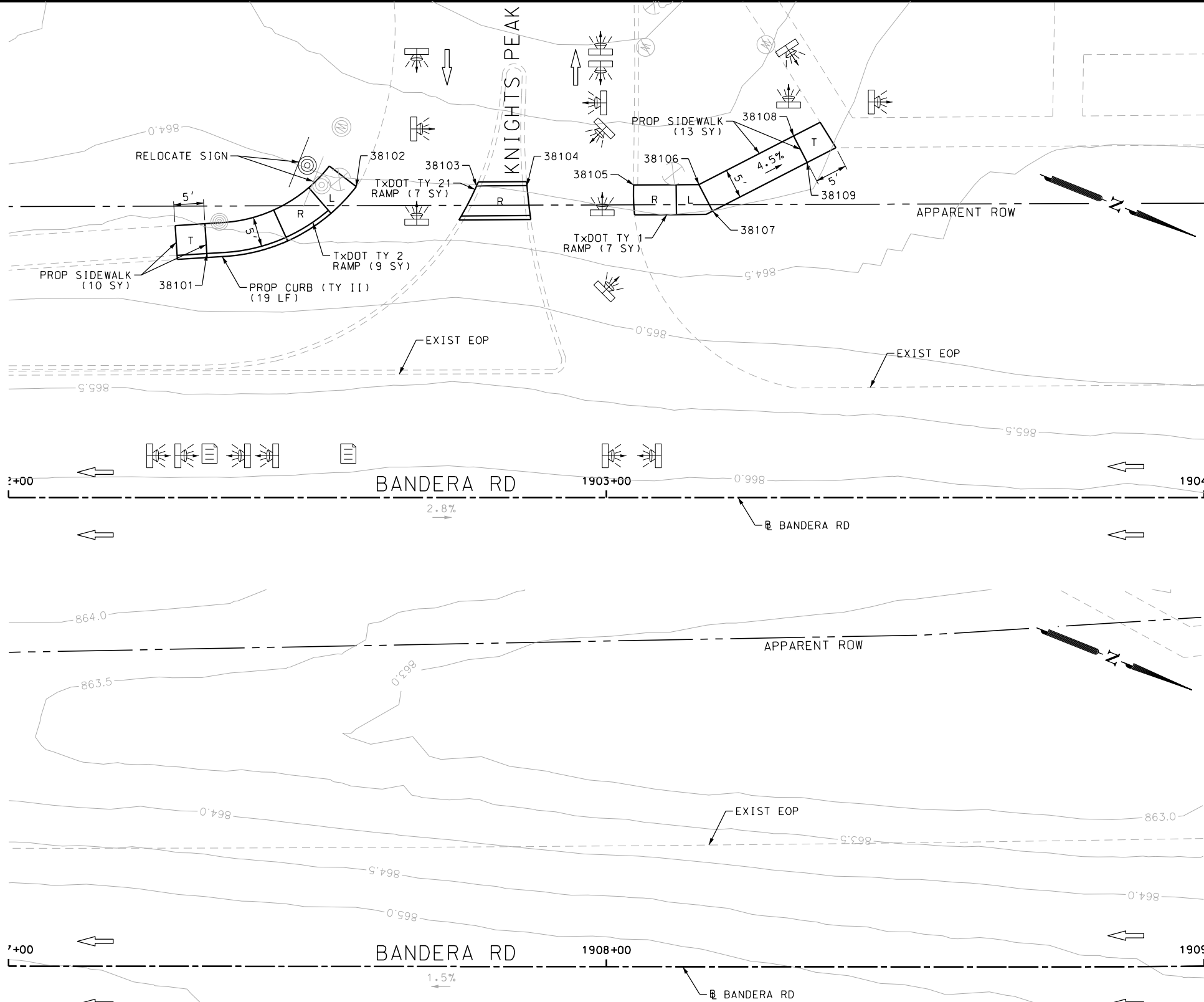


SHEET 103 OF 107

OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	329

Plotted on: 11/21/2018

Design File name: P:\11135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*EB*82.dgn



ITEM	DESCRIPTION	UNIT	QTY
0529-6002	CONC CURB (TY II)	LF	19
0531-6001	CONC SIDEWALKS (4")	SY	23
0531-6018	CURB RAMPS (TY 1)	SY	7
0531-6019	CURB RAMPS (TY 2)	SY	9
0531-6030	CURB RAMPS (TY 21)	SY	7
7091-6001	ADJUST EXISTING VALVE BOX	EA	1

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

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BANDERA RD

SIDEWALK CONSTRUCTION PLAN

STA 1902+00 TO STA 1904+00

STA 1907+00 TO STA 1909+00

SHEET 104 OF 107

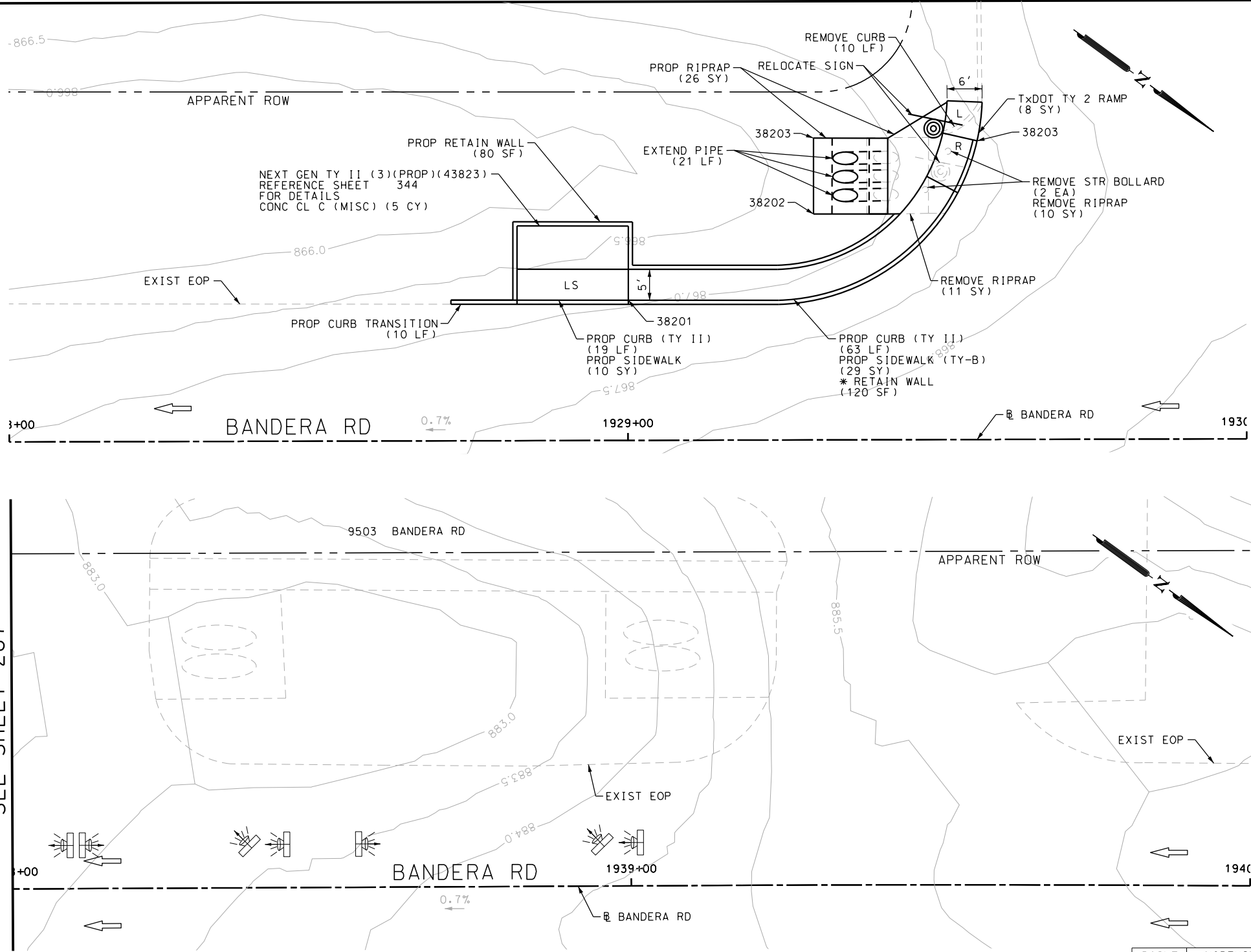
DGN:	FED. RD. DIV. NO.:	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.
CHK DGN:	6	TEXAS		VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.
CHK DWG:	SAT	BEXAR	0915	12
				JOB NO.
				576
				SHEET NO.
				330

POINT	NORTHING	EASTING	ELEV	DESC
38101	13740521.96	2083472.69	--	.
38102	13740540.74	2083452.44	--	.
38103	13740559.39	2083444.87	--	.
38104	13740567.20	2083441.69	--	.
38105	13740583.74	2083434.97	--	.
38106	13740593.86	2083430.86	--	.
38107	13740597.63	2083434.15	--	.
38108	13740605.55	2083417.45	--	.
38109	13740609.32	2083420.73	--	.

Plotted on: 11/21/2018

Design Filename: P:\111\35\07\design\Civil\Roadway\Bandera Dr\EB\83.dgn

MATCH LINE STA 1938+00
SEE SHEET 287



ITEM	DESCRIPTION	UNIT	QTY
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	28
0529-6002	CONC CURB (TY II)	LF	80
0531-6001	CONC SIDEWALKS (4")	SY	19
0531-6033	CONC SIDEWALKS (SPECIAL) (TYPE B)	SY	22

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DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER

P.E. SERIAL NO: 105193

DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

POINT	NORTHING	EASTING	ELEV	DESC
38201	13743566.76	2081605.86	--	.
38202	13743586.79	2081592.38	--	.
38203	13743631.01	2081558.78	--	.

SCALE: PLAN 1" = 20'

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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BANDERA RD

SIDEWALK

CONSTRUCTION PLAN

STA 1928+00 TO STA 1930+00

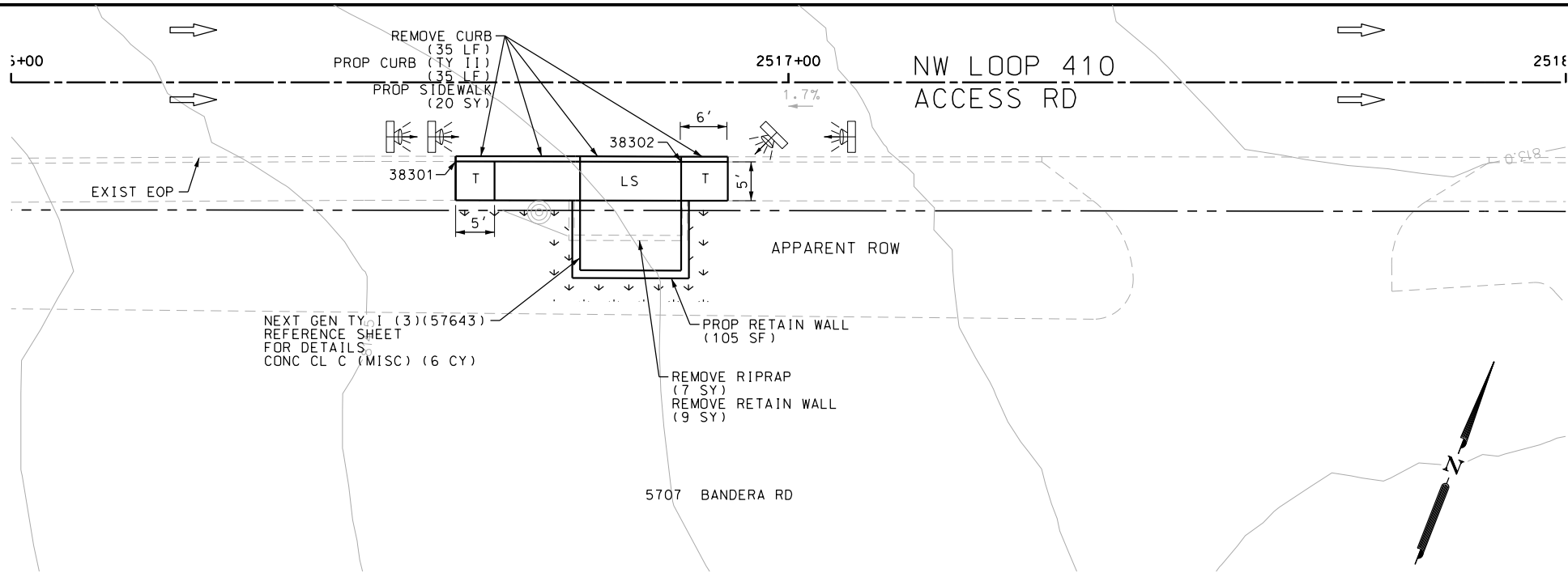
STA 1938+00 TO STA 1940+00

SHEET 105 OF 107

DCN	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.	HIGHWAY NO.		
CHK DCN	6	TEXAS		VARIES		
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	331

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\Roadway\Bandera Dr\1113507*Bandera Dr*410 EB*01.dgn



ITEM	DESCRIPTION	UNIT	QTY
0104-6029	REMOVING CONC (CURB OR CURB & GUTTER)	LF	35
0420-6074	CL C CONC (MISC)	CY	9.0
0423-6008	RETAINING WALL (CAST - IN - PLACE)	SF	99
0529-6002	CONC CURB (TY II)	LF	35
0531-6001	CONC SIDEWALKS (4")	SY	13

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DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ

P.E. SERIAL NO: 84722

DATE: 11/21/2018

SCALE: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
38301	13725748.38	2096838.08	--	.
38302	13725738.84	2096814.96	--	.

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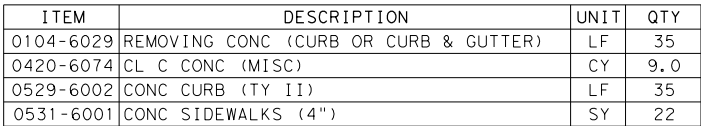
SIDEWALK
CONSTRUCTION PLAN

STA 2516+00 TO STA 2518+00

SHEET 106 OF 107

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

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DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

: PLAN 1" = 20'

POINT	NORTHING	EASTING	ELEV	DESC
38401	13726403.74	2097732.58	--	.
38402	13726397.15	2097740.77	--	.
38403	13726411.90	2097761.71	--	.
38404	13726413.84	2097766.32	--	.
38405	13726408.25	2097730.42	--	.



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BANDERA RD
SIDEWALK
CONSTRUCTION PLAN
STA 2026+00 TO STA 2028+00

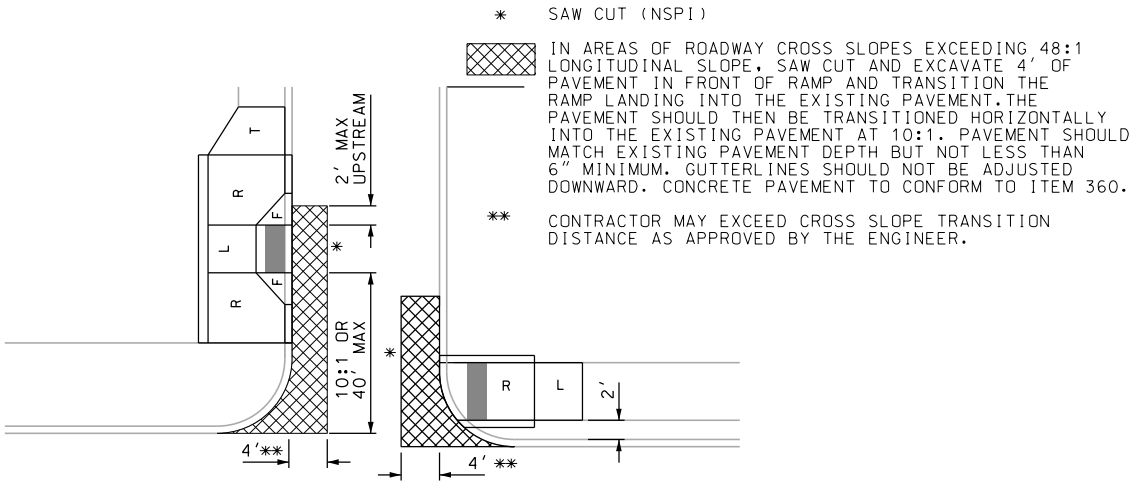
SHEET 107 OF 107

OGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	333

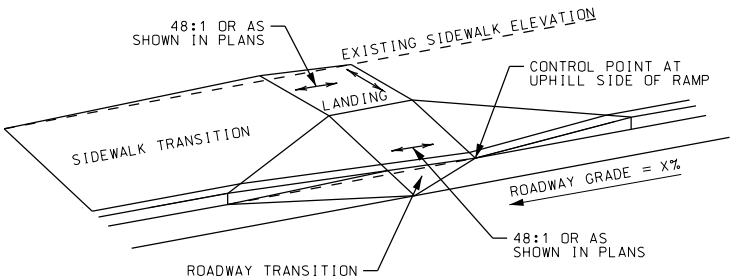
Plotted on: 11/21/2018

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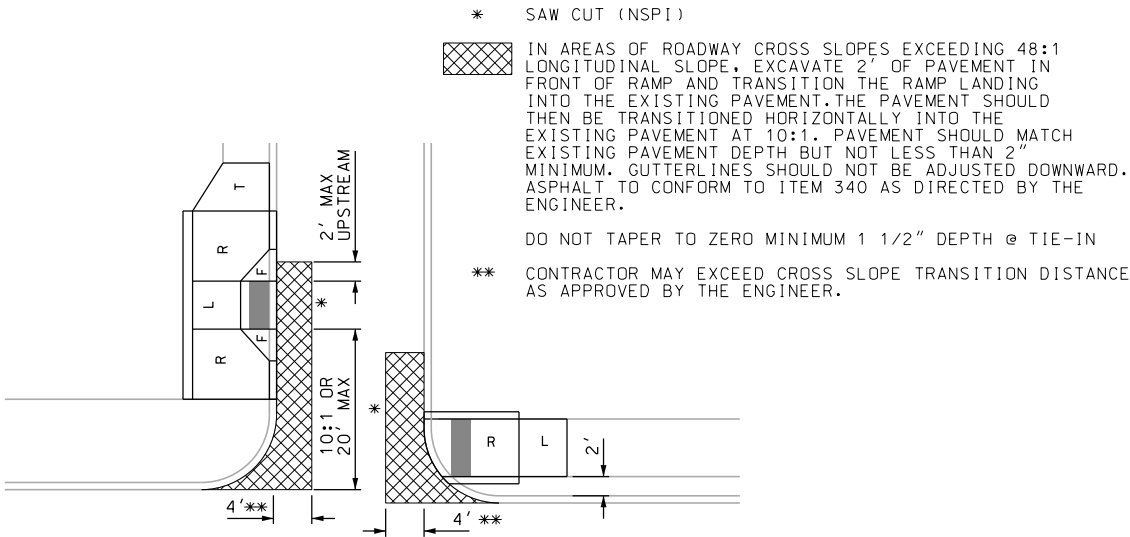
CONCRETE ROADWAY
OR
CURB AND GUTTER SECTION



ROADWAY TRANSITION



ASPHALT/SEALCOAT ROADWAY



CURB ELEVATION

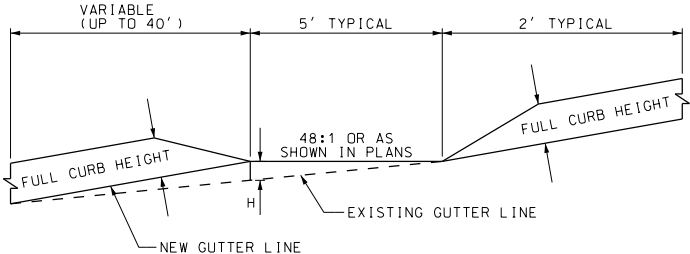


TABLE 1

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

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SCALE: NOT TO SCALE

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SPECIAL DETAILS

SHEET 1 OF 10

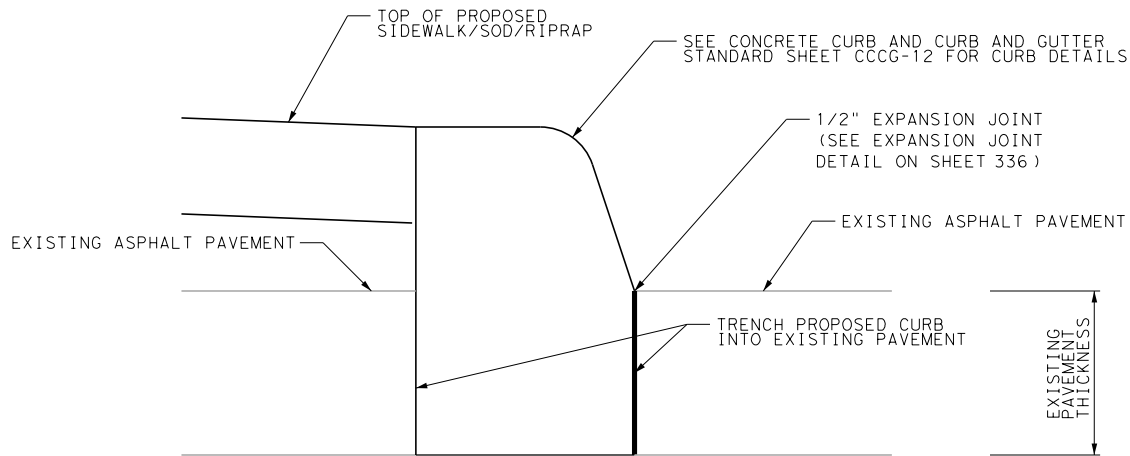
DGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN:	6	TEXAS				VARIES
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG:	SAT	BEXAR	0915	12	576	334

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\General\11113507*sample02.dgn

CURB TRENCH DETAIL

USE WHEN INSTALLING A CURB INTO EXISTING ASPHALT PAVEMENT

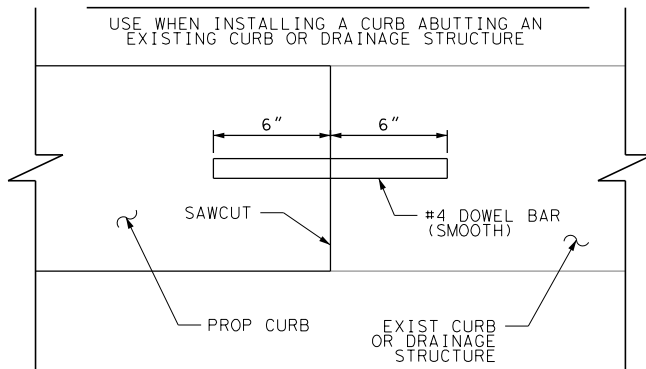


NOTES:

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

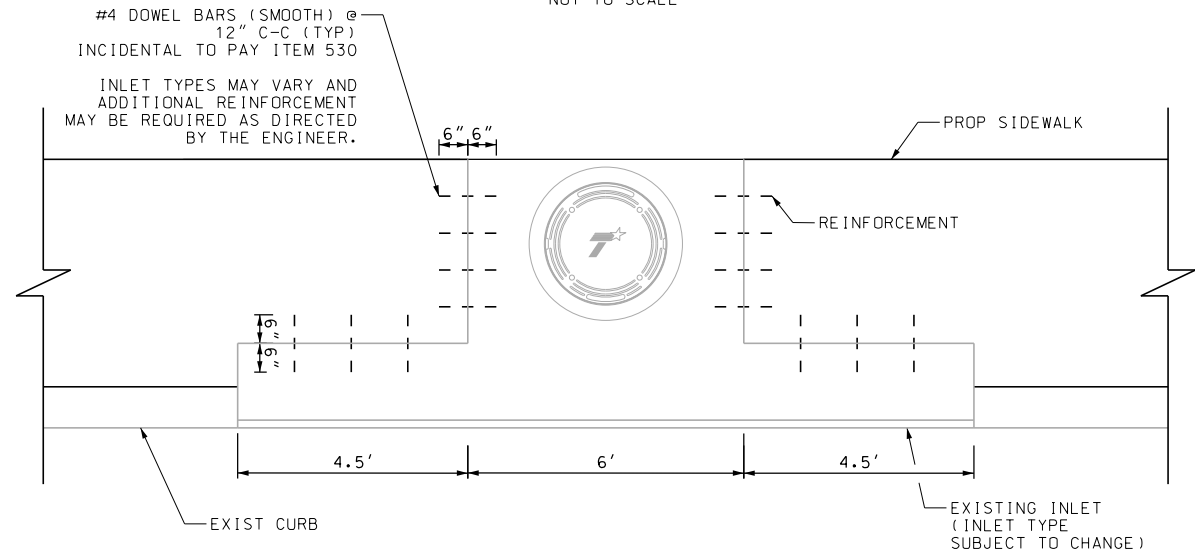
CURB TIE-IN DETAIL

USE WHEN INSTALLING A CURB ABUTTING AN EXISTING CURB OR DRAINAGE STRUCTURE

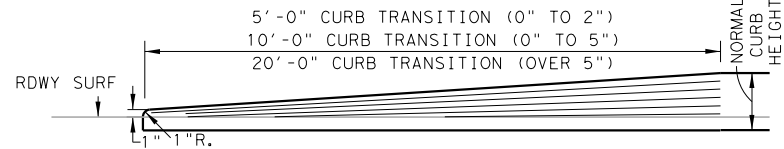


INLET DOWELING DETAIL

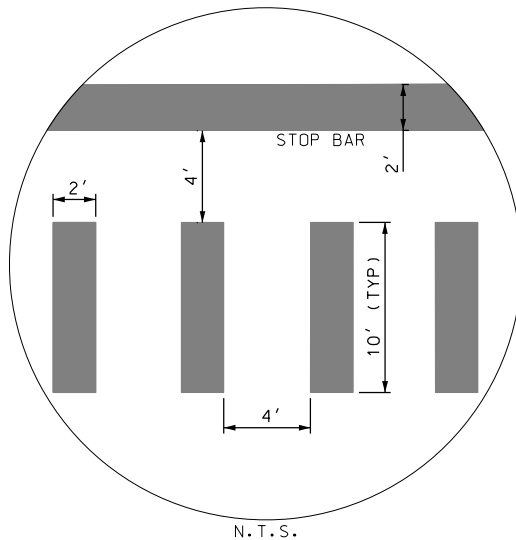
NOT TO SCALE



TYPICAL TRANSITION FOR CONCRETE CURB ENDS



TYPICAL CONTINENTAL CROSSWALK DETAIL



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ENGINEERS

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SPECIAL DETAILS

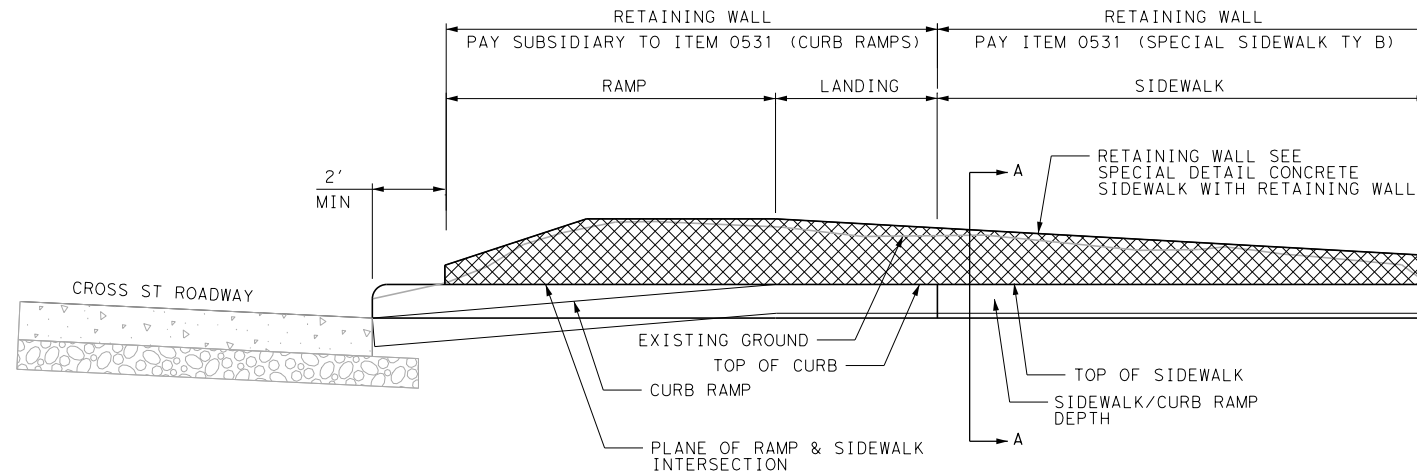
SHEET 2 OF 10

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	335

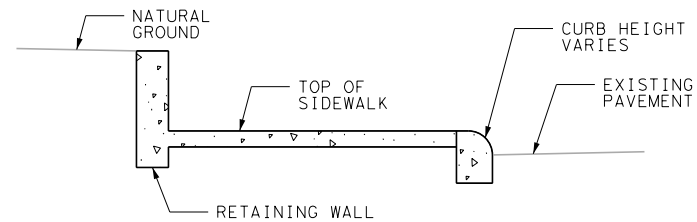
Plotted on: 11/21/2018

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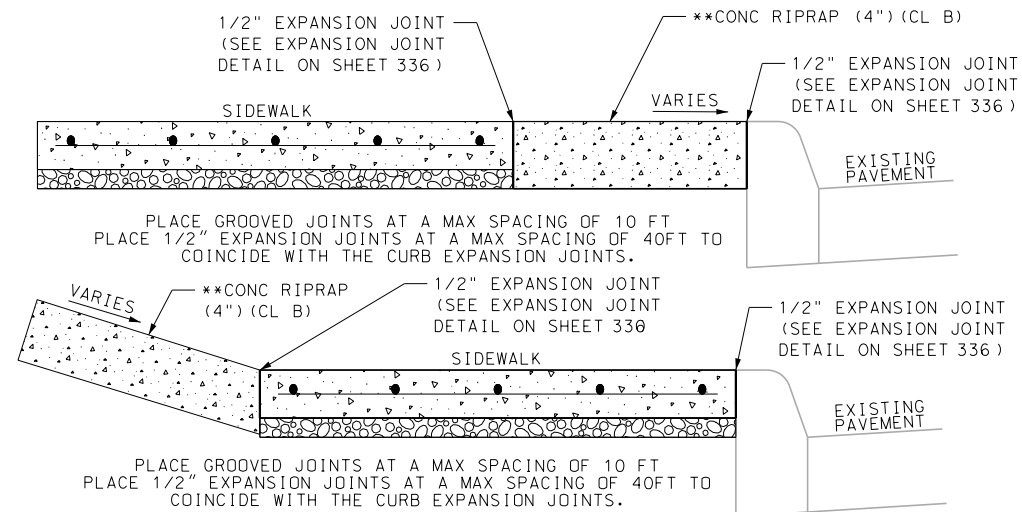
RETAINING WALL DETAIL



SECTION A-A

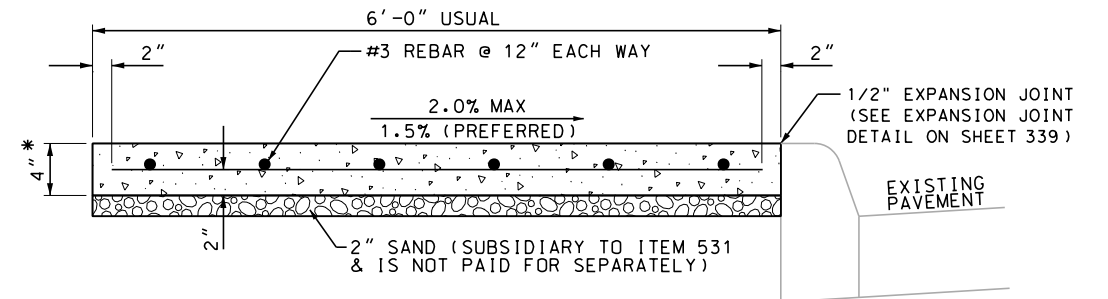


RIPRAP DETAIL



** REINFORCEMENT AS SPECIFIED IN ITEM 432

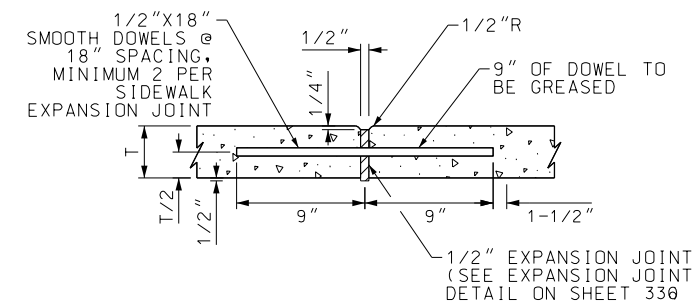
SIDEWALK DETAILS



PLACE GROOVED JOINTS IN THE SIDEWALK AT A MAX SPACING OF 10 FT
PLACE 1/2" EXPANSION JOINTS AT A MAX SPACING OF 40 FT TO COINCIDE WITH THE CURB EXPANSION JOINTS.

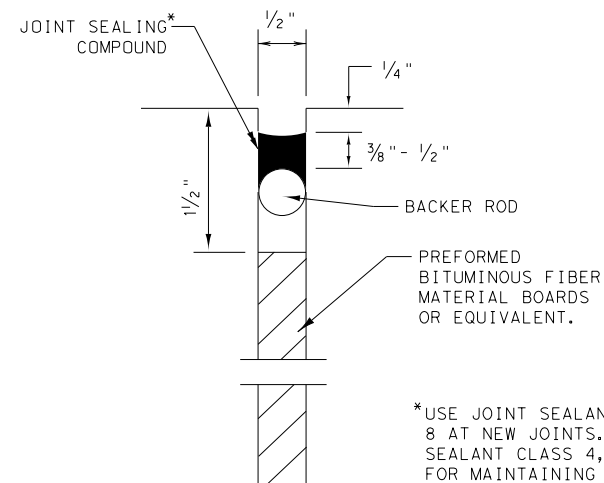
* UNLESS OTHERWISE SHOWN

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 DRIVEWAYS, WHERE DAILY WORK TERMINATES, AND AS DIRECTED BY THE ENGINEER.



*USE JOINT SEALANT CLASS 5 OR 8 AT NEW JOINTS. USE JOINT SEALANT CLASS 4, 5, 7, OR 8 FOR MAINTAINING EXISTING JOINTS.

EXPANSION JOINT DETAIL

DESIGN

INTERIM REVIEW

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DATE: 11/21/2018

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

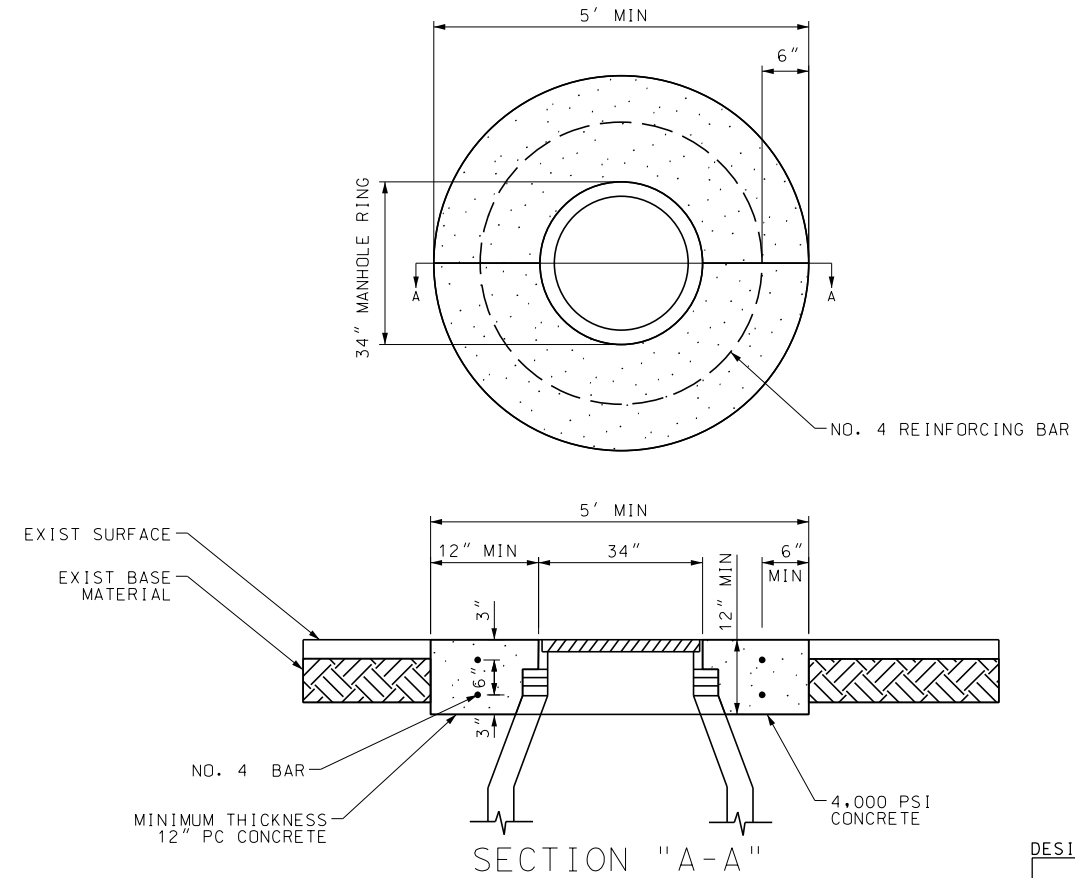
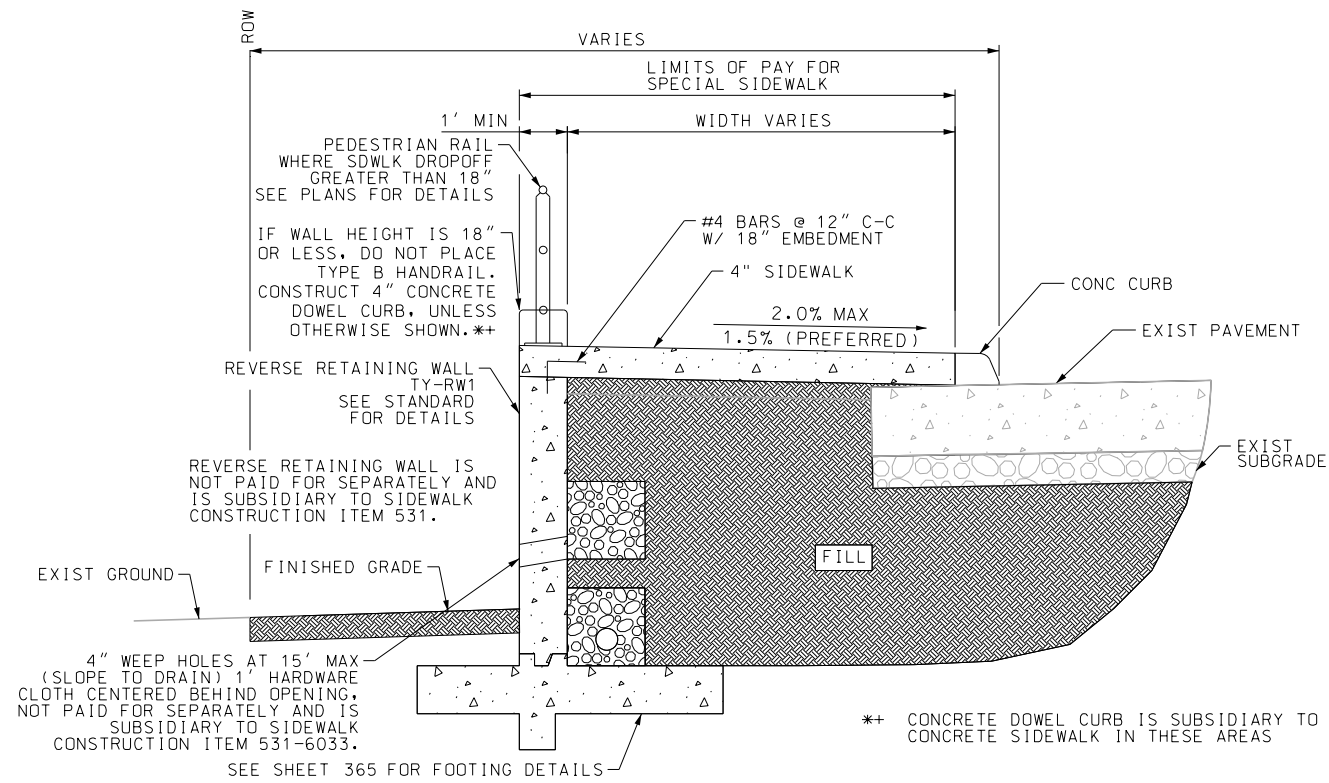
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SPECIAL DETAILS

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	336

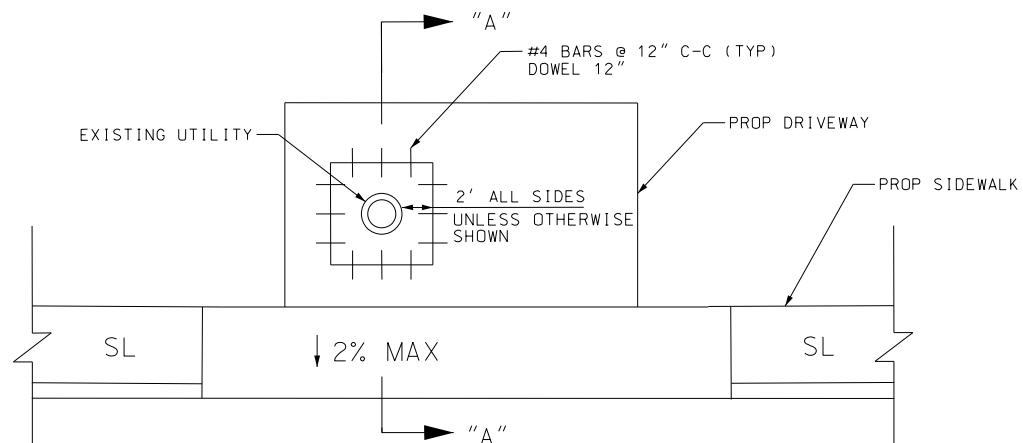
MANHOLE RING ENCASEMENT DETAIL



NOTE:

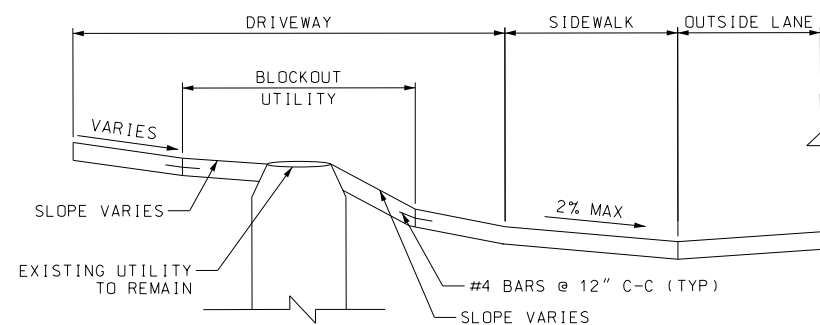
1. ALL ENCASEMENT IS SUBSIDIARY TO ITEM 7090.
2. THE CONCRETE SHALL BE 4,000 PSI, MIN. AND REINFORCED WITH NO. 4 BARS, AS SHOWN.
3. MANHOLE RING ENCASEMENT IS REQUIRED ON ALL MANHOLES.

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.



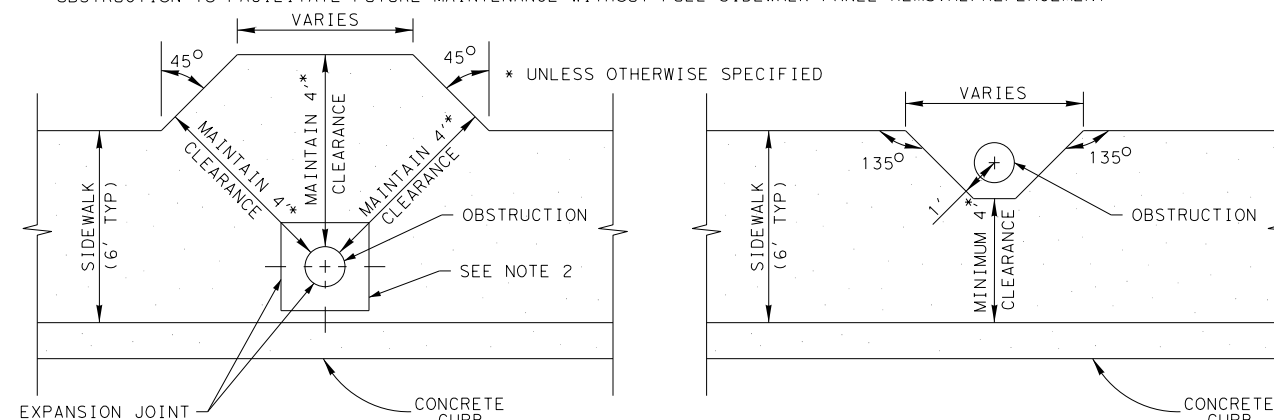
SECTION "A-A"

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

INTERIM REVIEW

DOCUMENT INCOMPLETE. NOT INTENDED FOR
PERMIT, BIDDING OR CONSTRUCTION.
ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW


DOCUMENT INCOMPLETE. NOT INTENDED FOR
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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

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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SPECIAL DETAILS

SHEET 4 OF 10

OGNs	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK OGNs	6	TEXAS				VARIES
DWG	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG	SAT	BEXAR	0915	12	576	337

Design Filename: P:\111\35\07\design\Civil\General\1113507*sample10.dgn

(SEE NOTE 1)
N.T.S.

SDWLK PIPE RAIL
(AS DIRECTED ON PLANS)

11" 6" 13" 13" 6" 11"

36" 36" 36"

7 1/4"

20" 1" 20" 24"

9"

14'

Curb
(Subsidiary to
Item 0529)

ARMOR CURB SLOT (ITEM 0529)
(SEE STANDARD FOR DETAILS)

GUTTER

ARMOR CURB SLOT DETAIL

#4 BARS @ 7" C/C (TYP)
 GRATE & FRAME (ITEM 0471)
 NEENAH FOUNDRY TYPE
 R-4999-MX TYPE D, BOLT
 DOWN GRATE W/FRAME,
 OR EQUIVALENT
 SIDEWALK PIPE RAILING
 WHERE SPECIFIED. SEE
 TxDOT STANDARD PRD-13
 FOR DETAILS
 "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.
 36" 17"
 36" 36" 6"
 1 1/4"
 6"
 11" 11" 11"
 PROPOSED CONCRETE SIDEWALK
 SIDEWALK REINFORCING STEEL (TYP)
 PROPOSED CONCRETE SIDEWALK
 CL C CONC (MISC)
 (ITEM 0420)
 #4 BARS @ 7" C/C (TYP)
 NOTE: CONCRETE AND REBAR FOR
 FRAME AND COVER INCIDENTAL TO
 ITEM 0531.

QGN:	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY
CHK QGN:	6	TEXAS				VARIET
DWG:	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET N
CHK DWG:	SAT	BEXAR	0915	12	576	338

TYPE 1 FILTER MAT'L (FULL LENGTH OF WALL)

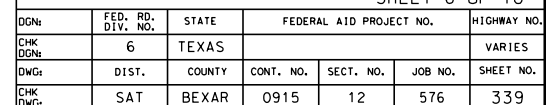
* SEE NOTE 5

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.

NOTE: CHAMFER ALL EXPOSED CORNERS 3/4".
PLACE CURB AND COMPACT PAVEMENT
BACKFILL BEFORE BACKFILLING BEHIND
WALL

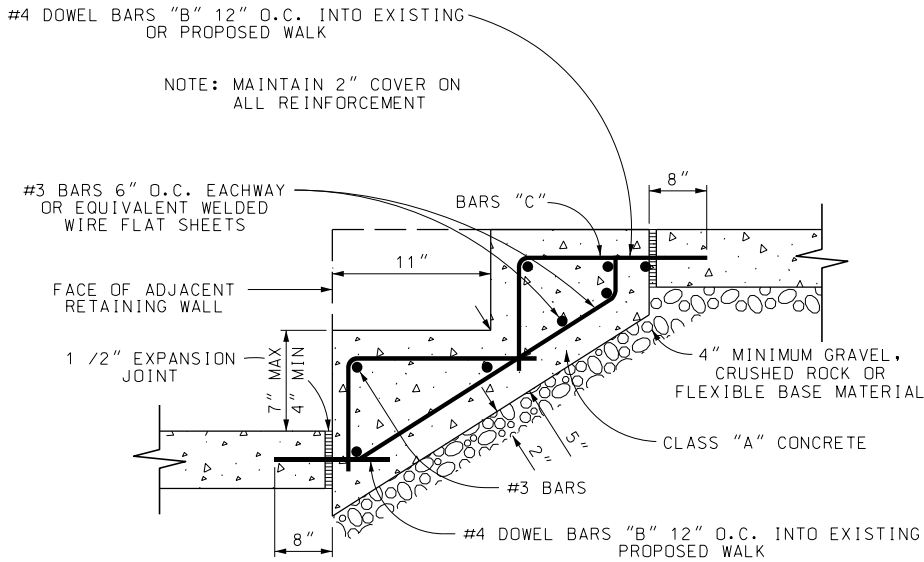
SEPARATED FROM CURB



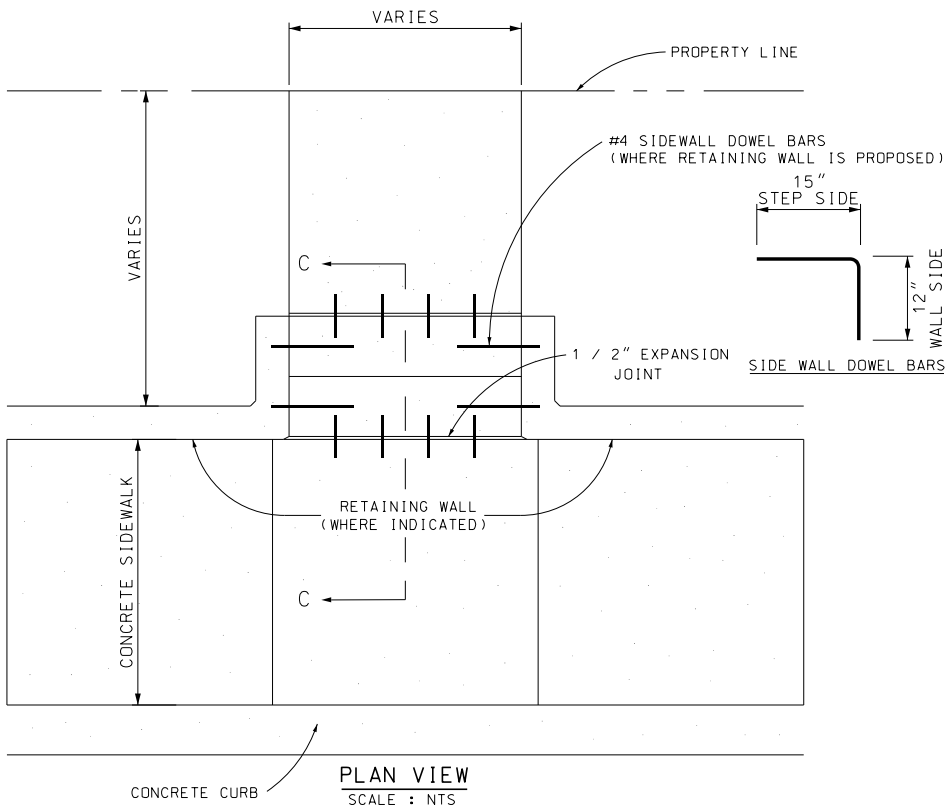
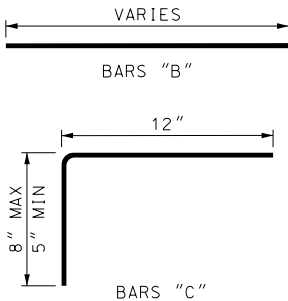
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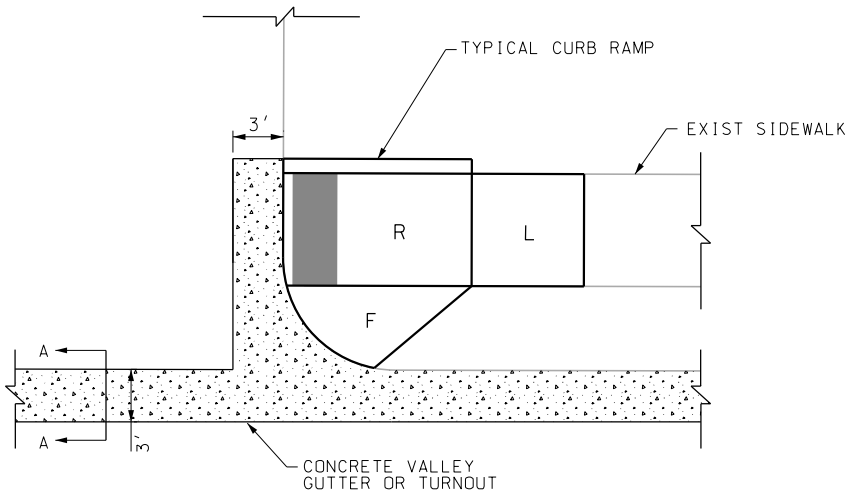
CONCRETE STEPS



SECTION "C-C"
SCALE : NTS

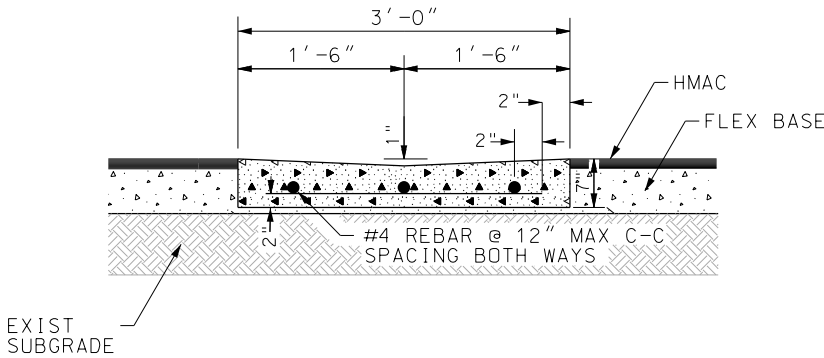


TYPICAL CONC. VALLEY GUTTER



CONC. VALLEY GUTTER

TO BE USED WHERE REQUIRED TO CARRY DRAINAGE
ACROSS SIDE STREETS



SECTION A-A
N.T.S.

DESIGN

INTERIM REVIEW			
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.			
ENGINEER: JOHN A. TYLER			
P.E. SERIAL NO: 105193			
DATE: 11/21/2018			

REVIEW AND APPROVAL

INTERIM REVIEW			
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.			
ENGINEER: JAMES A. LUTZ			
P.E. SERIAL NO: 84722			
DATE: 11/21/2018			

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY

PAPE-DAWSON ENGINEERS

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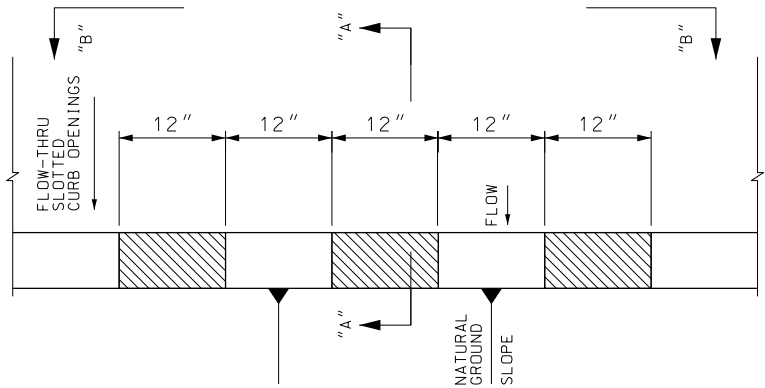
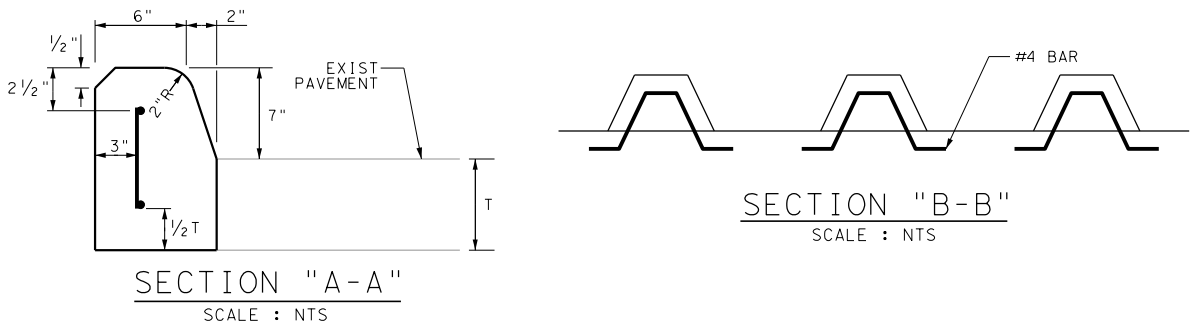
SPECIAL DETAILS						
SHEET 7 OF 10						
DGN:	FED. RD. DIV. NO.:	STATE:	FEDERAL AID PROJECT NO.:		HIGHWAY NO.:	
CHK DGN:	6	TEXAS	VARIES		VARIES	
DWG:	DIST.:	COUNTY:	CONT. NO.:	SECT. NO.:	JOB NO.:	SHEET NO.:
CHK DWG:	SAT	BEXAR	0915	12	576	340

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\General\1113507*sample09.dgn

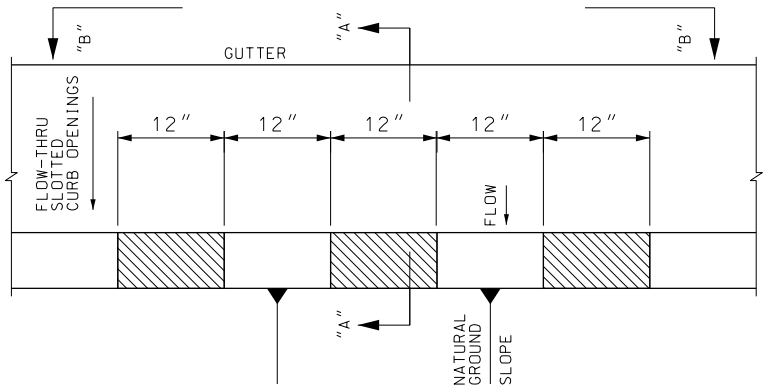
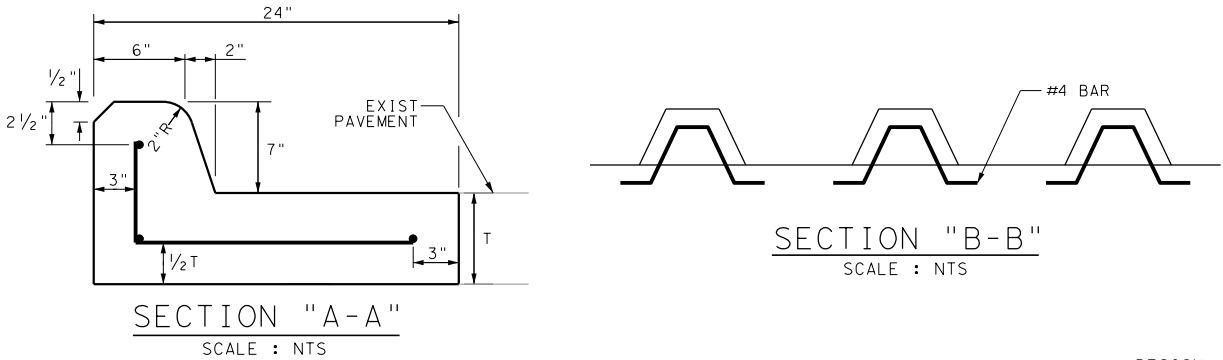
SLOTTED CURB DETAIL

N.T.S.



SLOTTED CURB AND GUTTER DETAIL

N.T.S.



DESIGN

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: NOT TO SCALE

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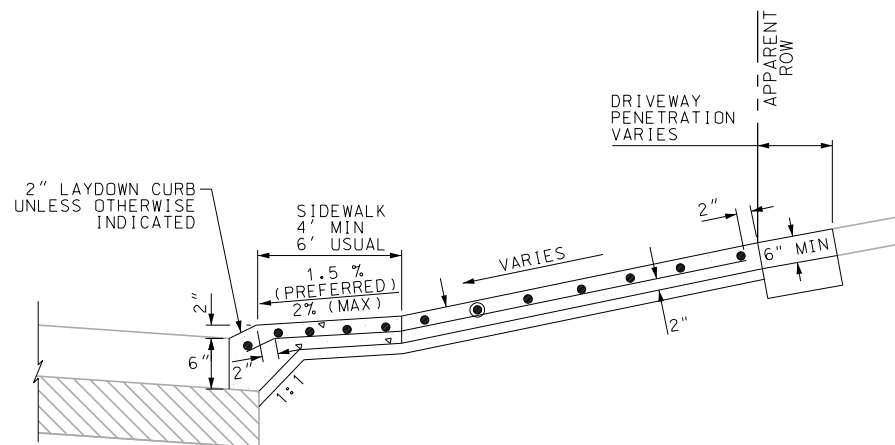
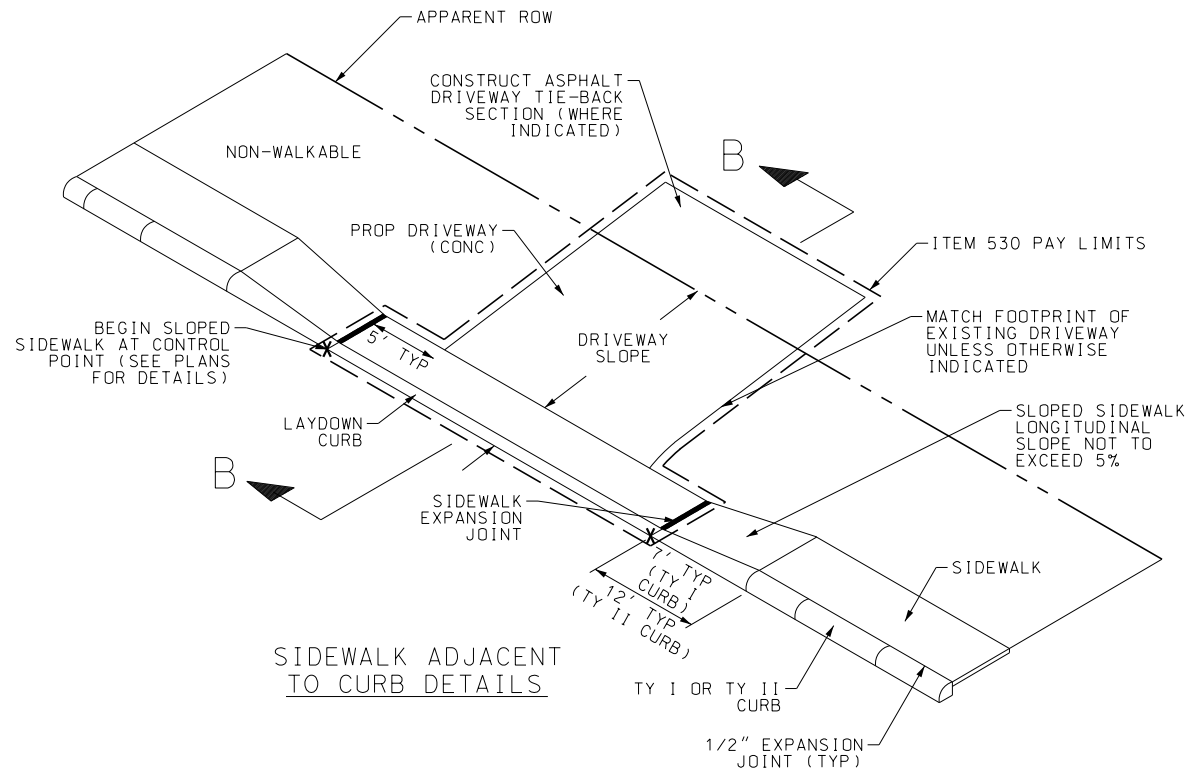
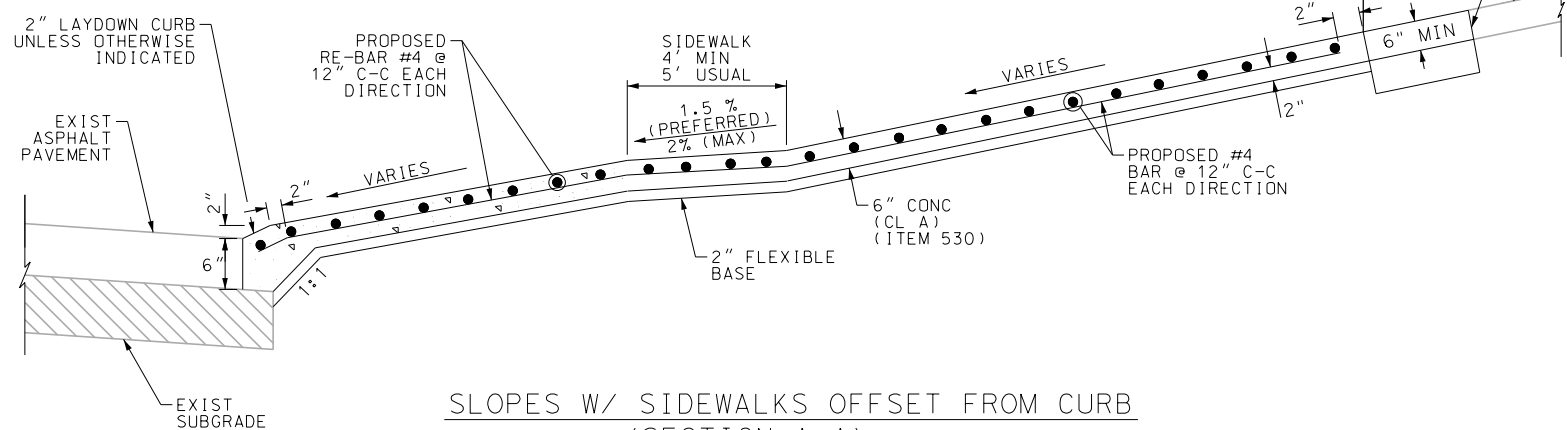
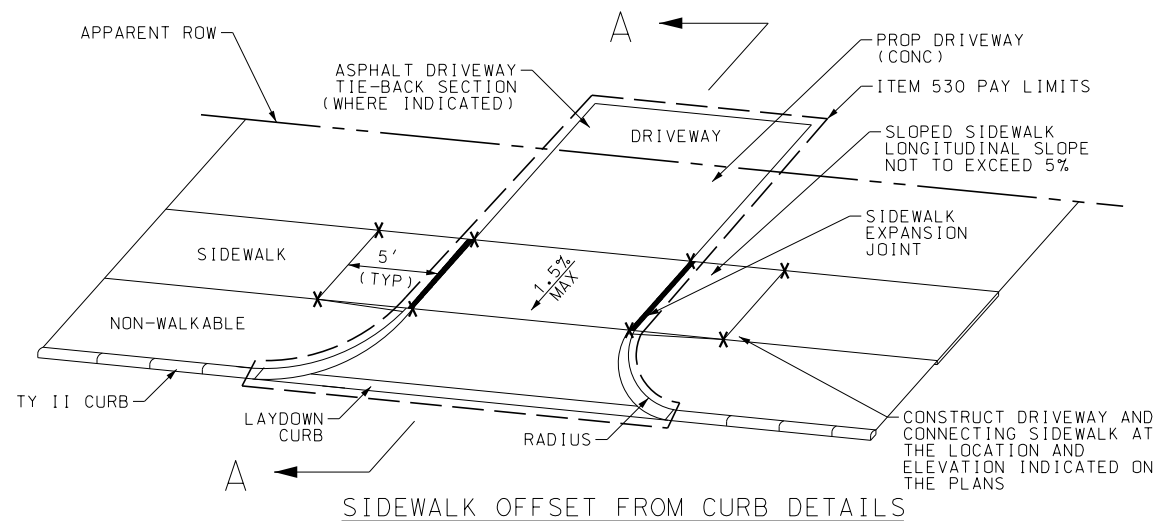
SPECIAL DETAILS

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	341

Plotted on: 11/21/2018

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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

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: NOT TO SCALE

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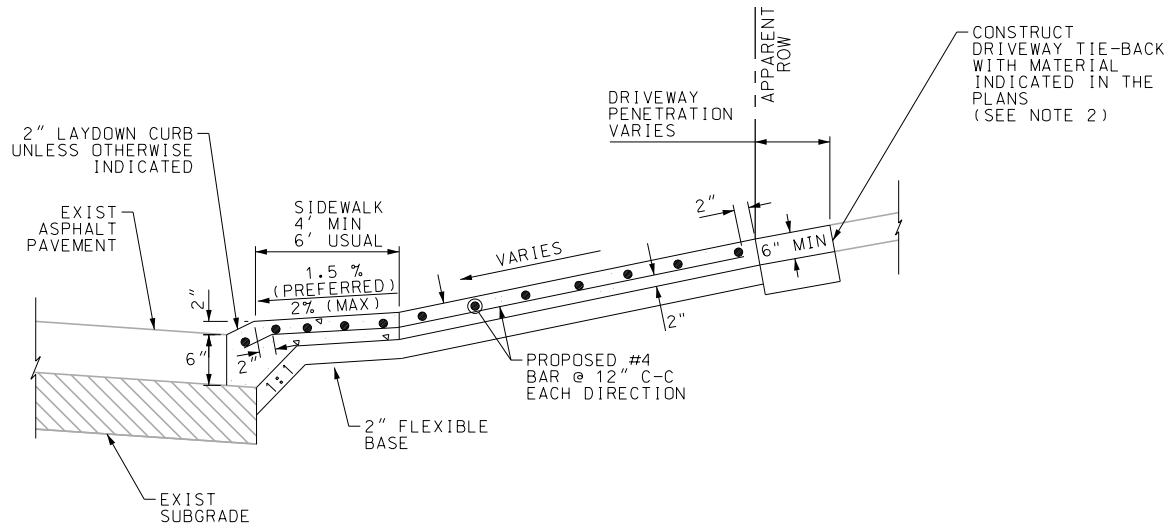
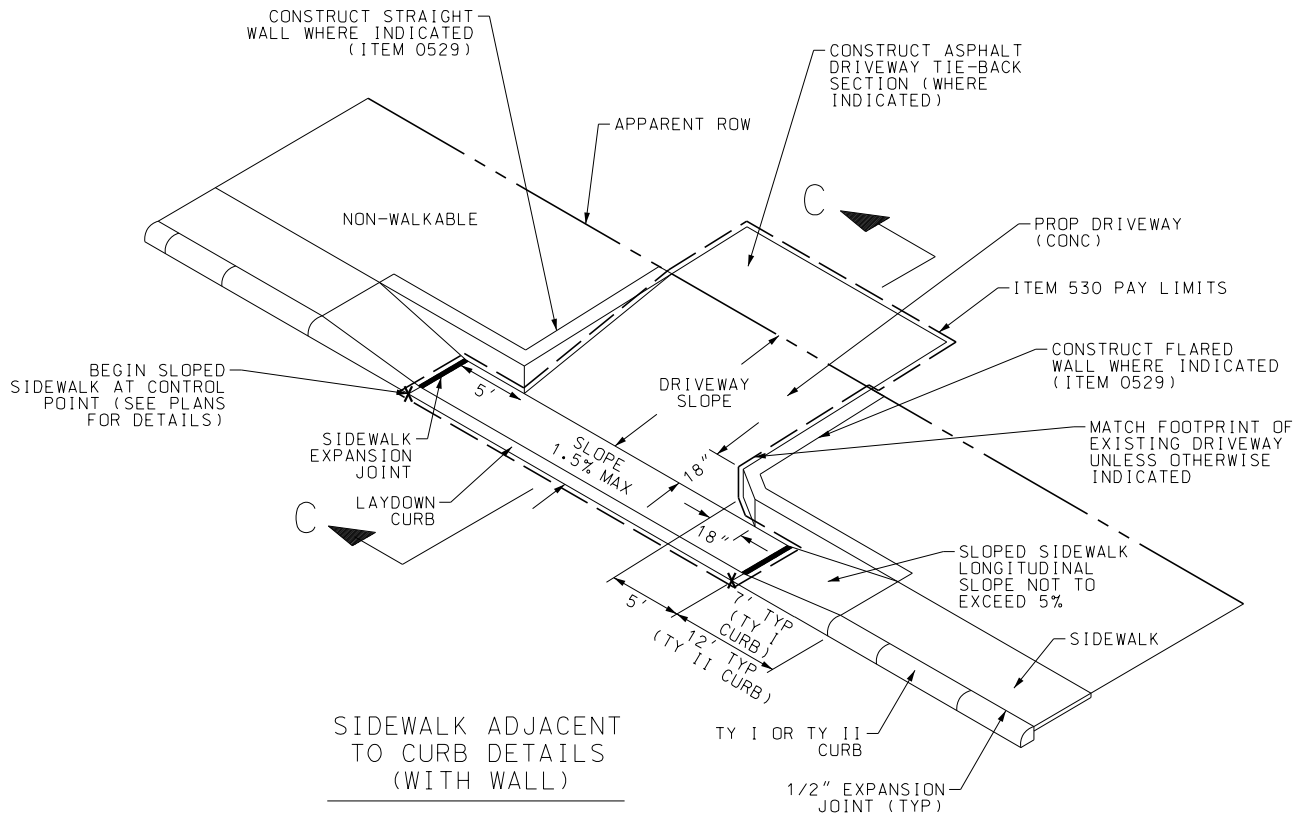
SPECIAL DETAILS

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	342

Plotted on: 11/21/2018

Design File name: P:\111135\07\design\Civil\General\11113507*sample13.dgn



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 (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

INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018

SCALE: NOT TO SCALE

REV. NO.	DATE	DESCRIPTION	BY



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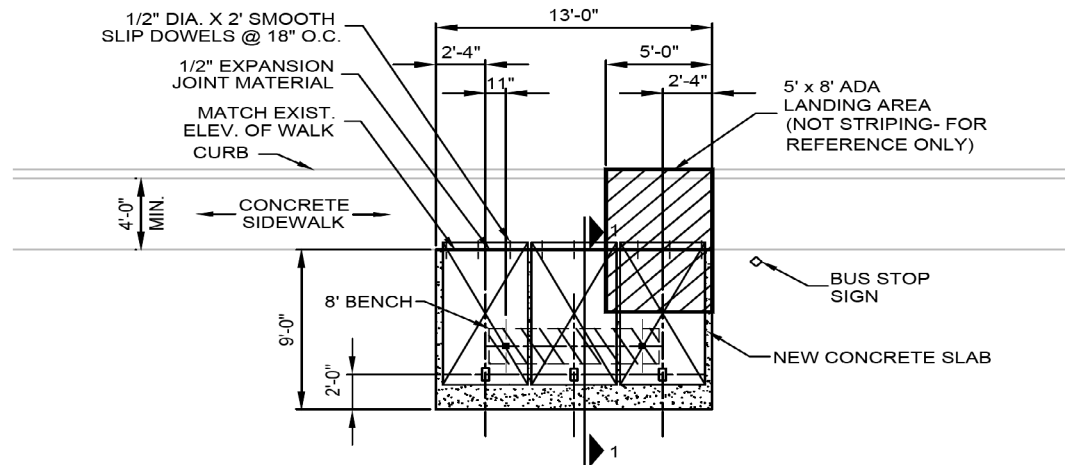
SPECIAL DETAILS

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	343

Plotted on: 11/21/2018

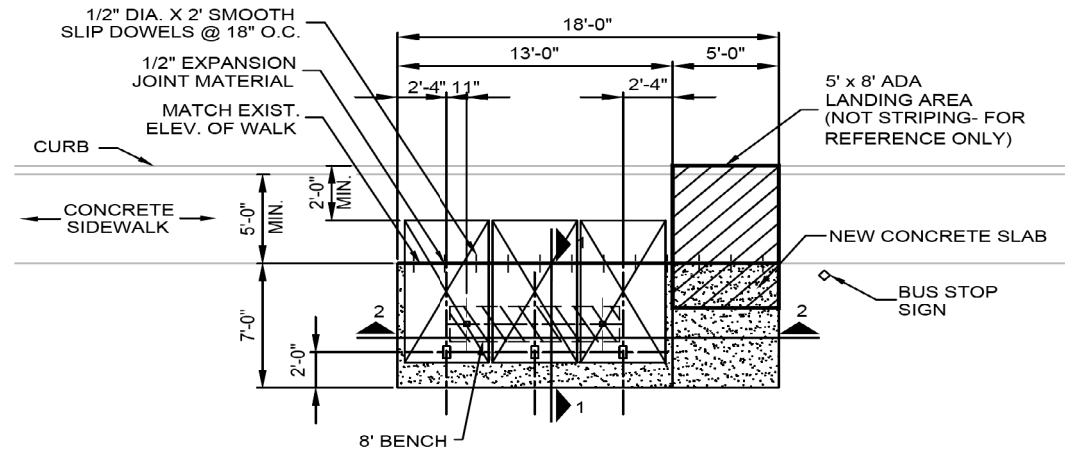
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NEXT GEN TY I - SUFFICIENT ROW DETAIL

N.T.S.

SEE SHEET 345 FOR SECTION 1-1 (SEE NOTE 1)



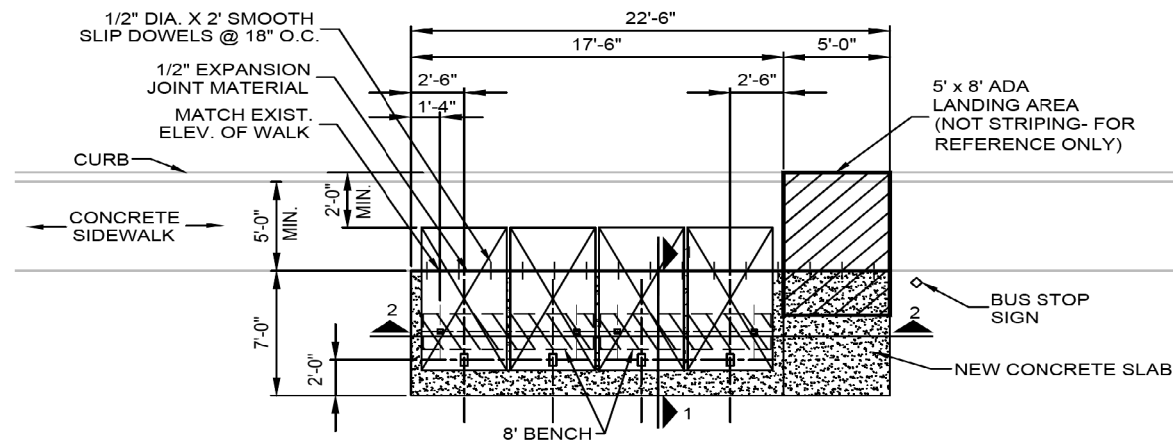
NEXT GEN TY II - INSUFFICIENT ROW DETAIL

N.T.S.

SEE SHEET 345 FOR SECTION 1-1, 2-2 (SEE NOTE 1)

NOTES:

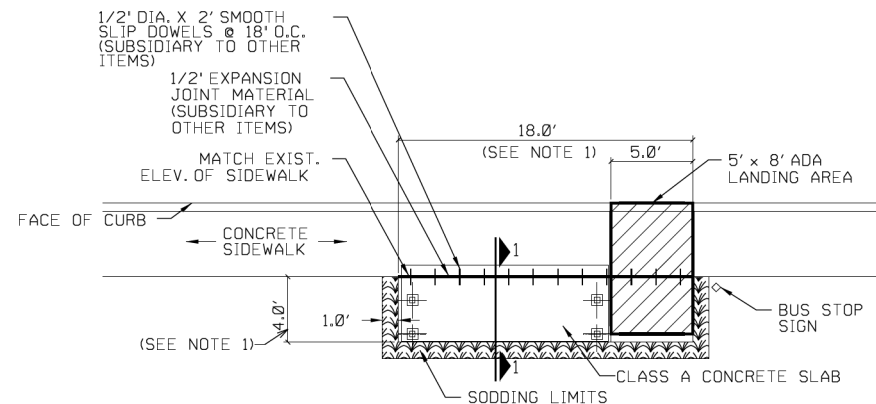
1. IF ADDITIONAL UNITS ARE SPECIFIED ON THE PLANS, ADD 4.5' TO THE SLAB WIDTH FOR EACH ADDITIONAL UNIT SPECIFIED.



NEXT GEN TY III - INSUFFICIENT ROW DETAIL

N.T.S.

SEE SHEET 345 FOR SECTION 1-1, 2-2 (SEE NOTE 1)



TY IV - BARREL ROOF DETAIL

N.T.S.

SEE SHEET 345 FOR SECTION 1-1

DESIGN

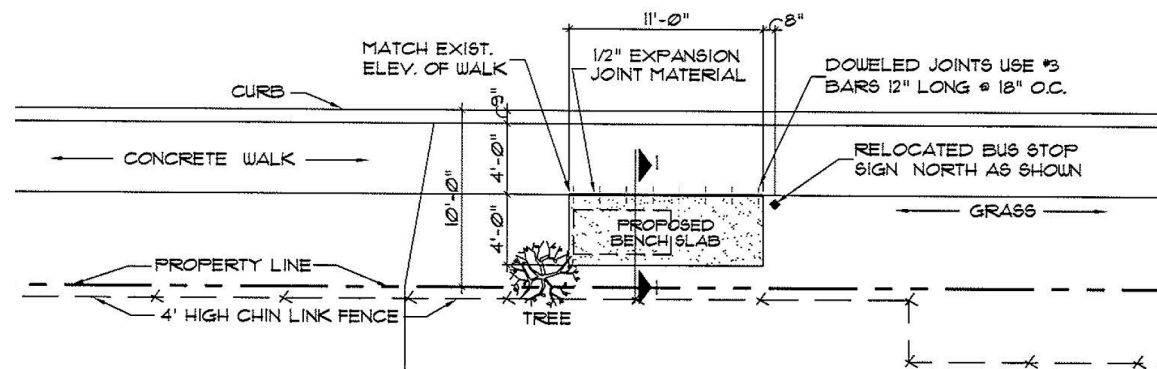
INTERIM REVIEW

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ENGINEER: JOHN A. TYLER
P.E. SERIAL NO: 105193
DATE: 11/21/2018

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ENGINEER: JAMES A. LUTZ
P.E. SERIAL NO: 84722
DATE: 11/21/2018



TY V - BENCH SLAB DETAIL

N.T.S.

SEE SHEET 345 FOR SECTION 1-1

NOTES:

- * NEW BASE IS SUBSIDIARY TO ITEM 420.



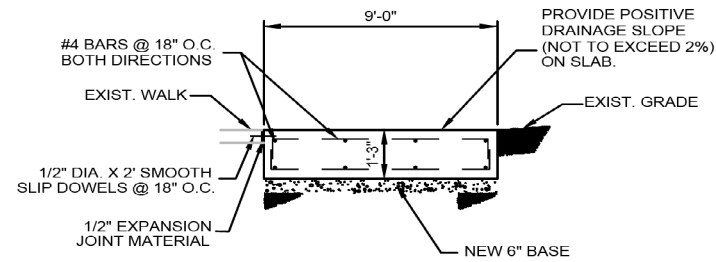
TRANSIT STOP DETAILS

SHEET 1 OF 2

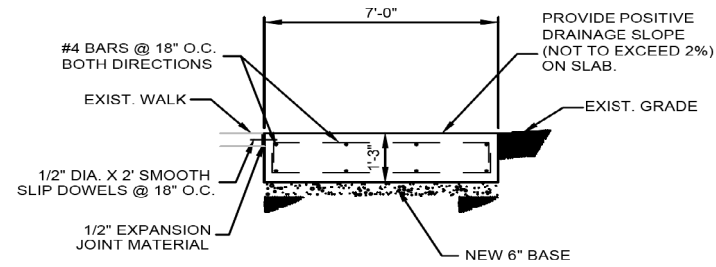
DGN#	FED. RD. DIV. NO.	STATE	FEDERAL AID PROJECT NO.			HIGHWAY NO.
CHK DGN#	6	TEXAS				VARIES
DWG#	DIST.	COUNTY	CONT. NO.	SECT. NO.	JOB NO.	SHEET NO.
CHK DWG#	SAT	BEXAR	0915	12	576	344

Plotted on: 11/21/2018

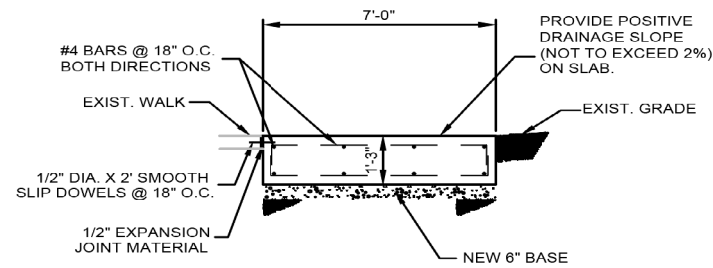
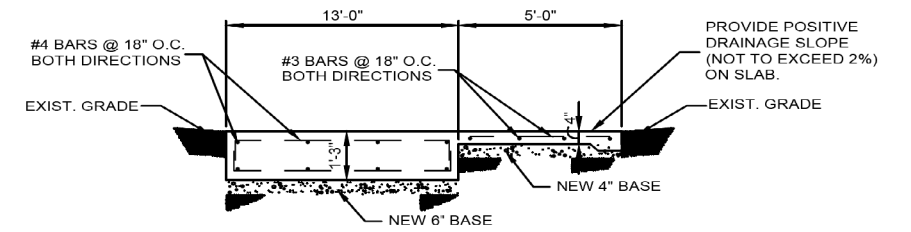
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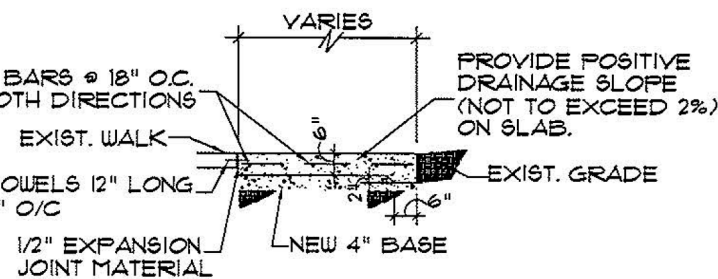
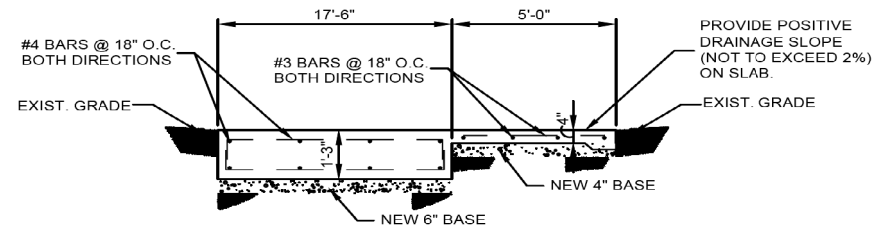
NEXT GEN TY I - SUFFICIENT ROW SECTION 1-1
N.T.S.



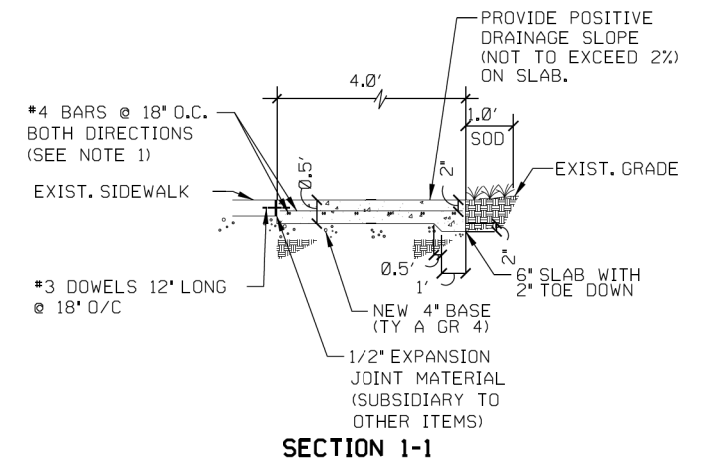
NEXT GEN TY II - INSUFFICIENT ROW SECTION 1-1, 2-2
N.T.S.



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.



SECTION 1-1
TY IV - BARREL ROOF SECTION 1-1
N.T.S.



TRANSIT STOP DETAILS

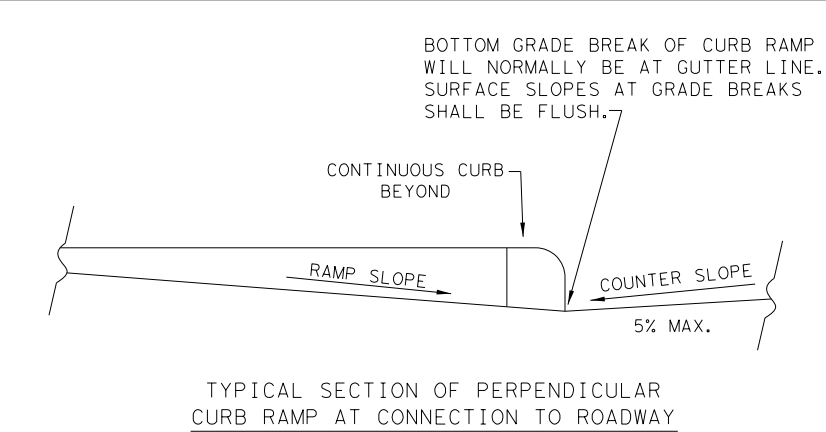
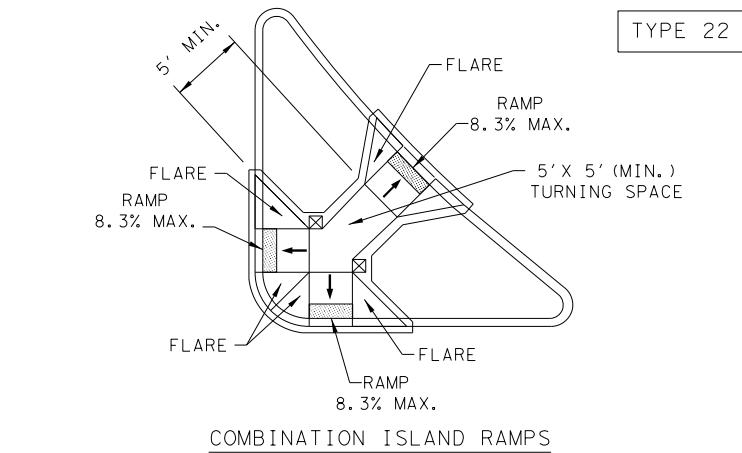
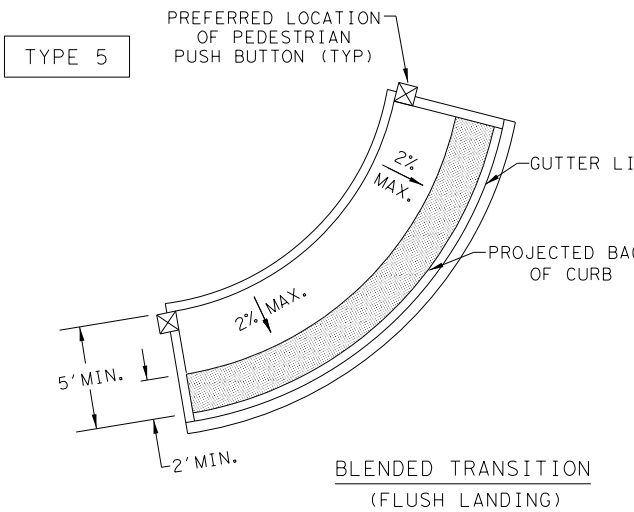
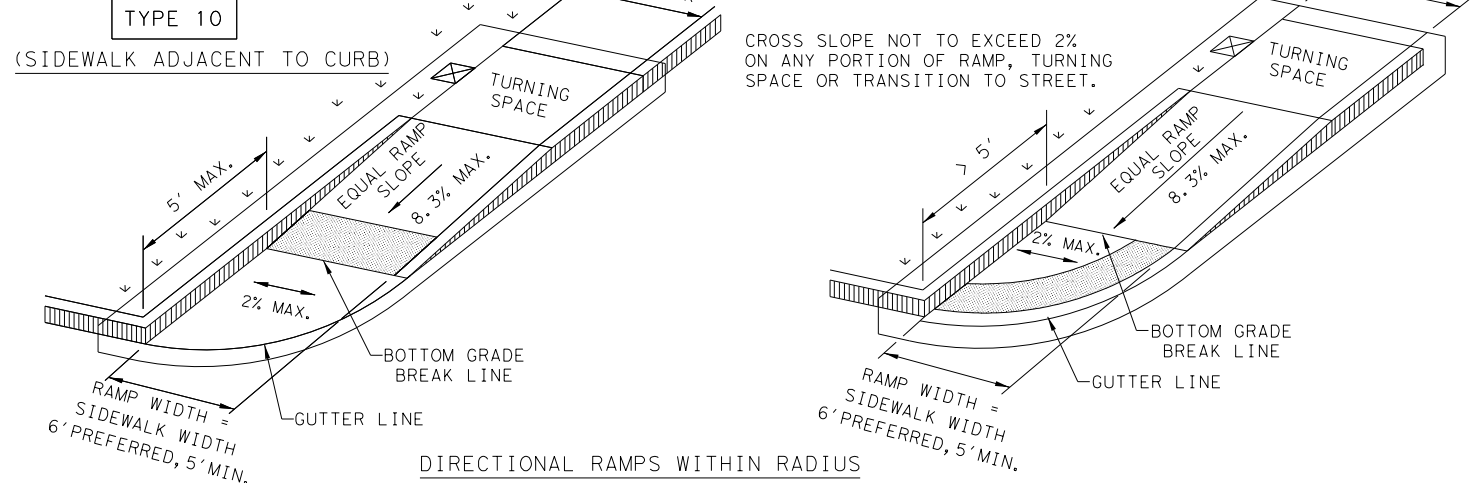
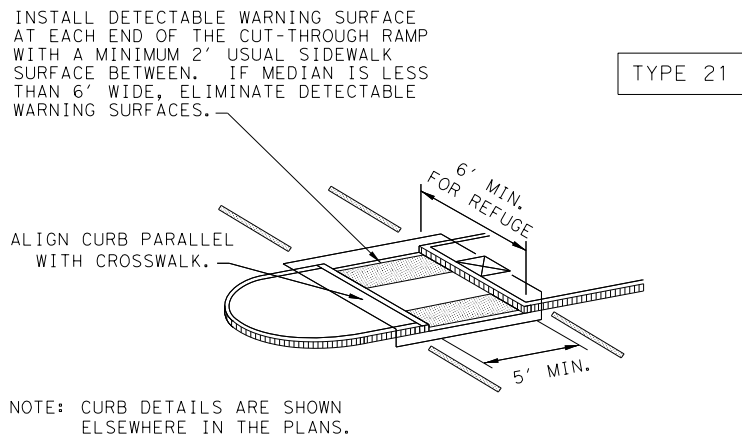
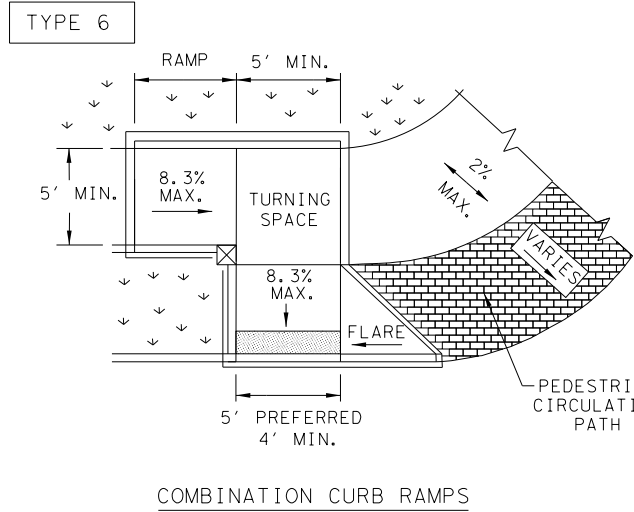
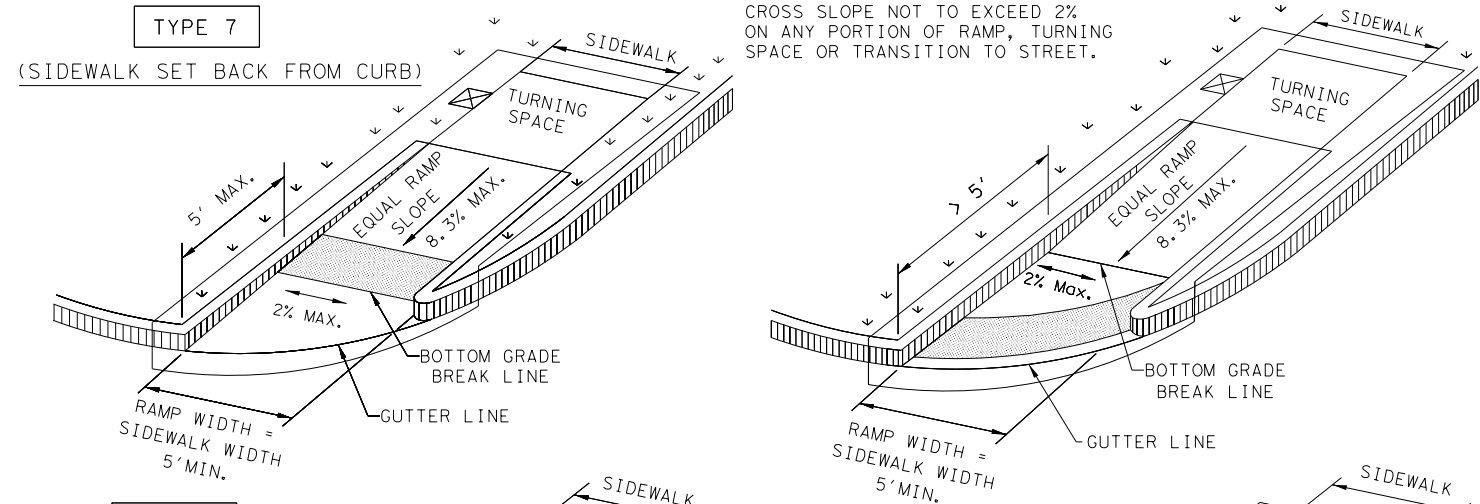
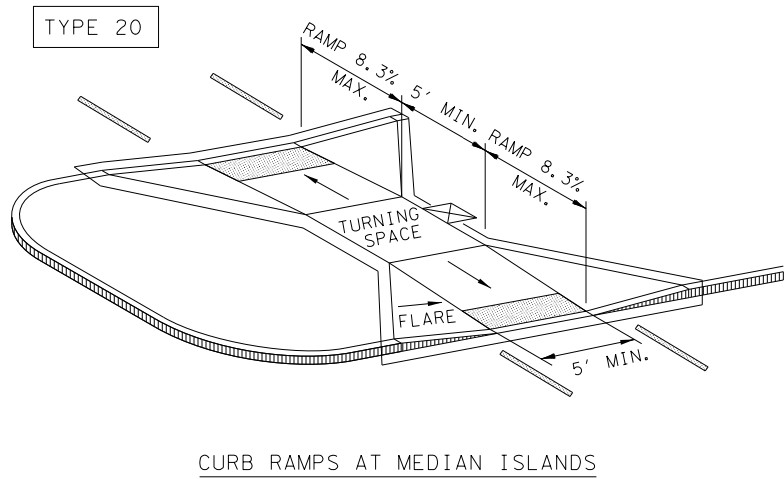
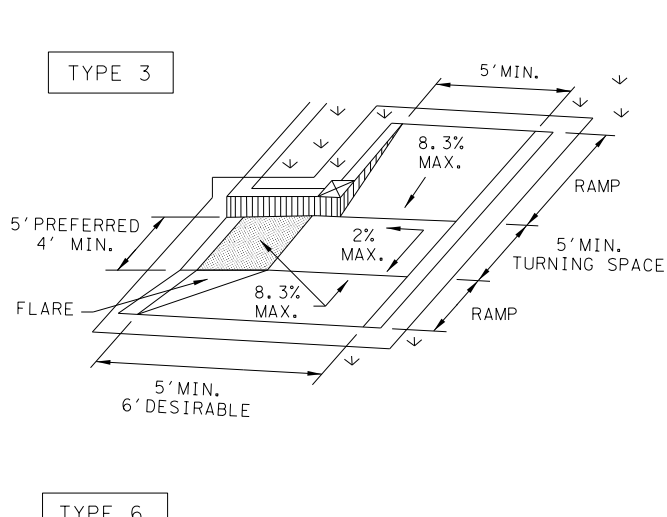
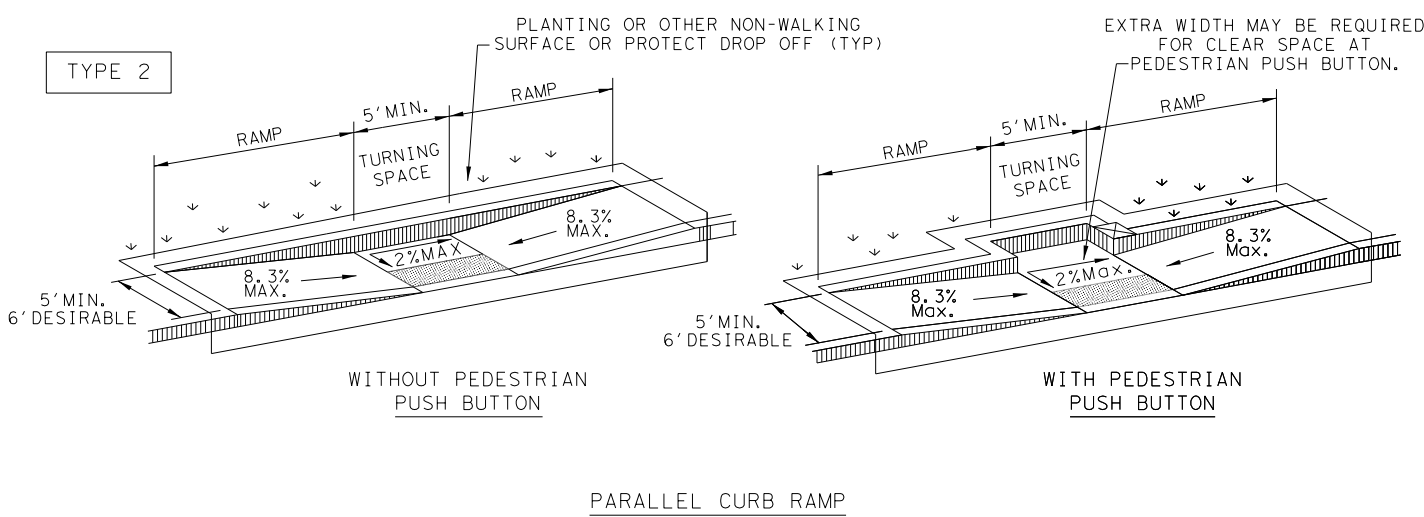
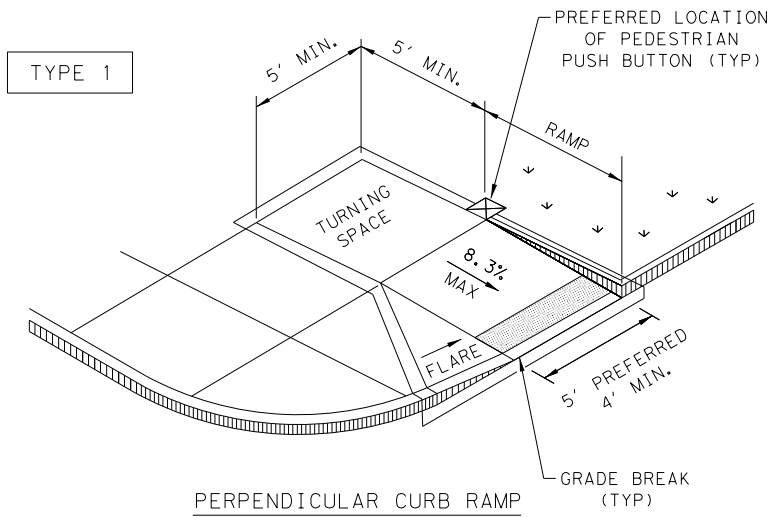
SHEET 2 OF 2

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	345

NOTES:
* NEW BASE IS SUBSIDIARY TO ITEM 420.

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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.



GUTTER LINE



DETECTABLE WARNING SURFACE



GRADE BREAK



DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE.



RAMP LIMITS OF PAYMENT



SHEET 1 OF 4



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
REVISED 08, 2005	0915	12	576	VARIES
REVISED 06, 2012	DIST	COUNTY	SHEET NO.	
REVISED 01, 2018	SAT	BEXAR	346	

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GENERAL NOTES

CURB RAMPS

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

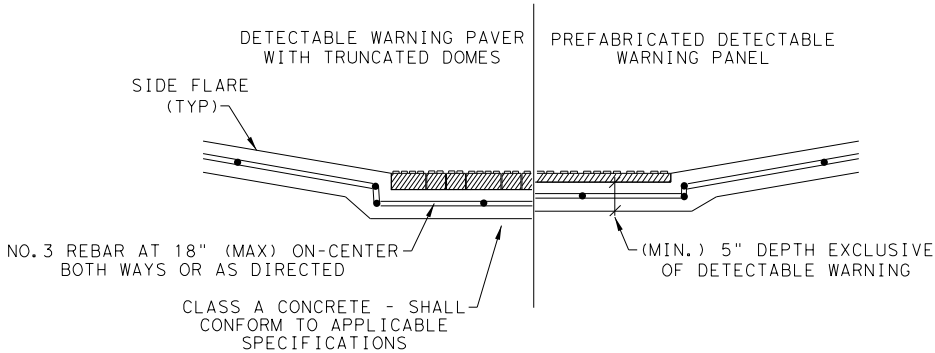
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material 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.

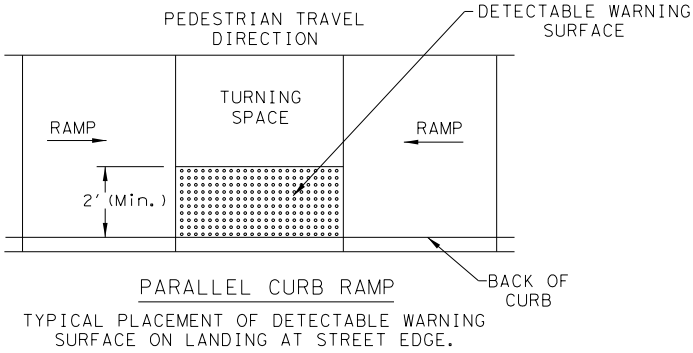
SIDEWALKS

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.

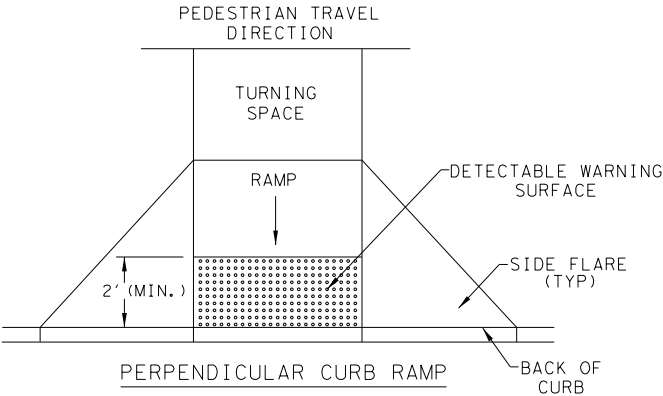


SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

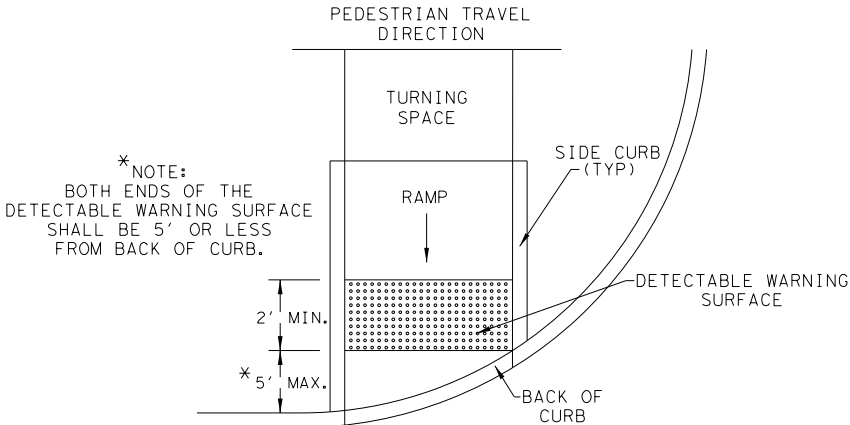
DETECTABLE WARNING SURFACE DETAILS



TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



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



Design
Division
Standard

PEDESTRIAN FACILITIES
CURB RAMPS

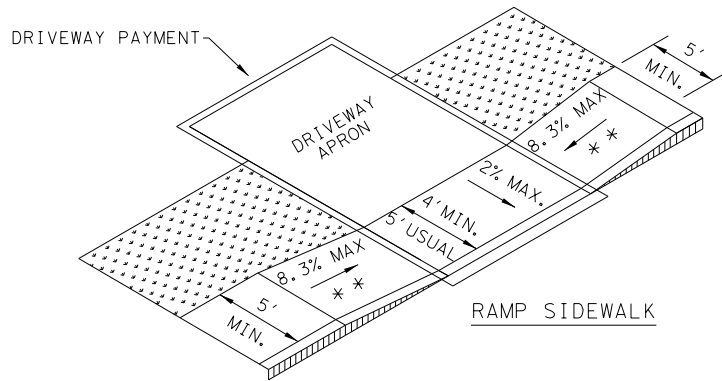
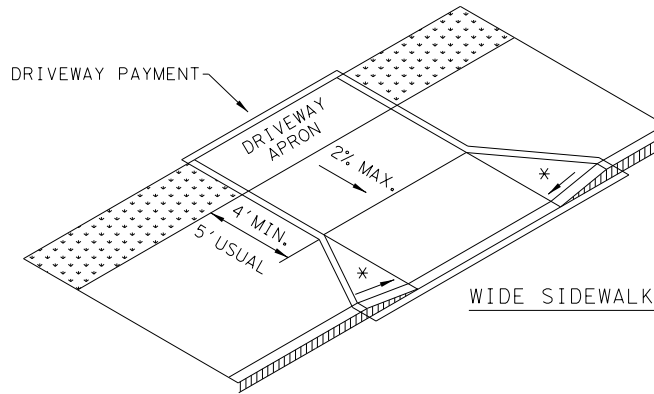
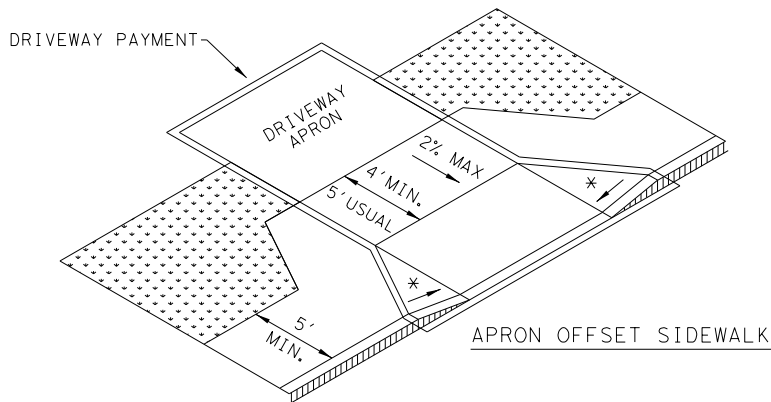
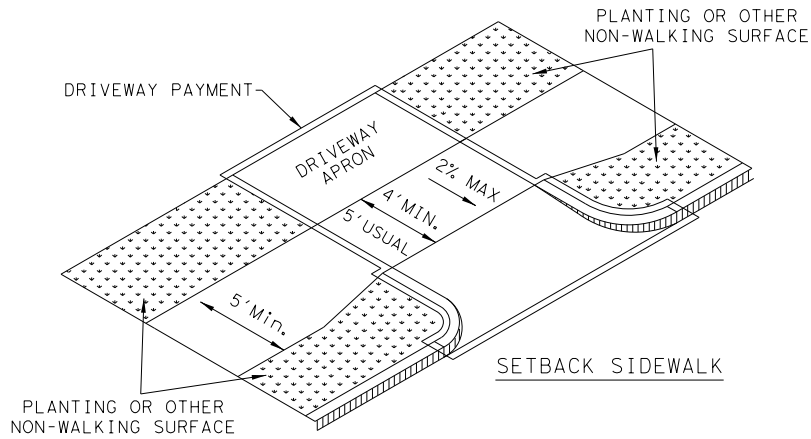
PED-18

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, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	347	

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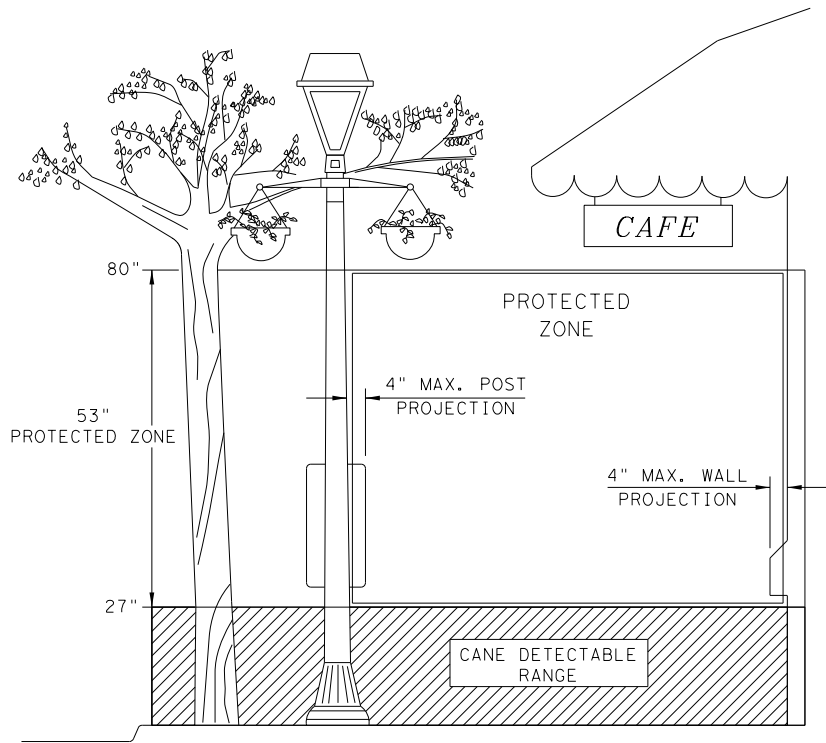
SIDEWALK TREATMENT AT DRIVEWAYS



NOTES:

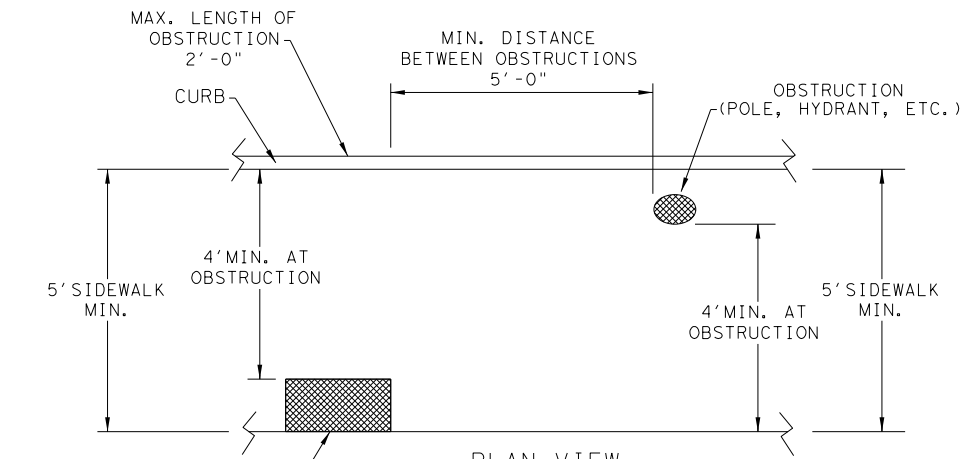
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



PROTECTED ZONE

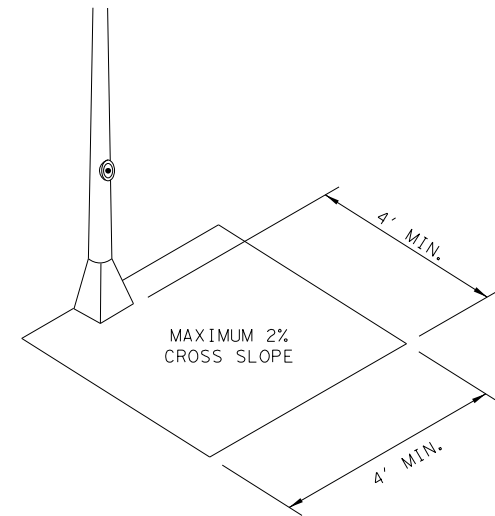
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



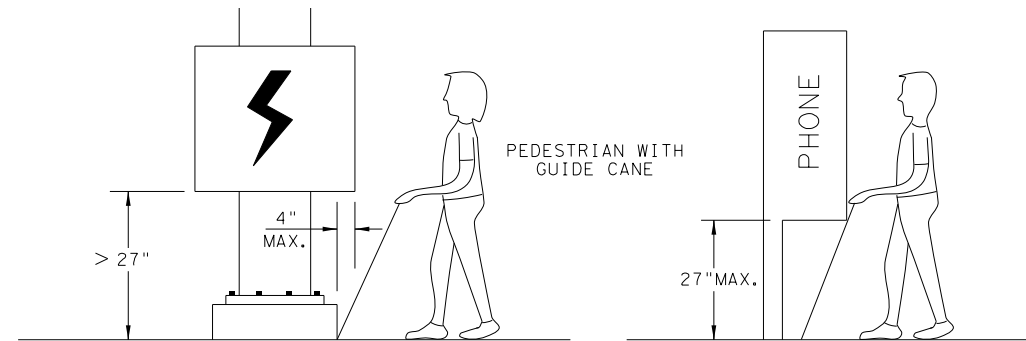
PLAN VIEW

PLACEMENT OF STREET FIXTURES

NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON




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"

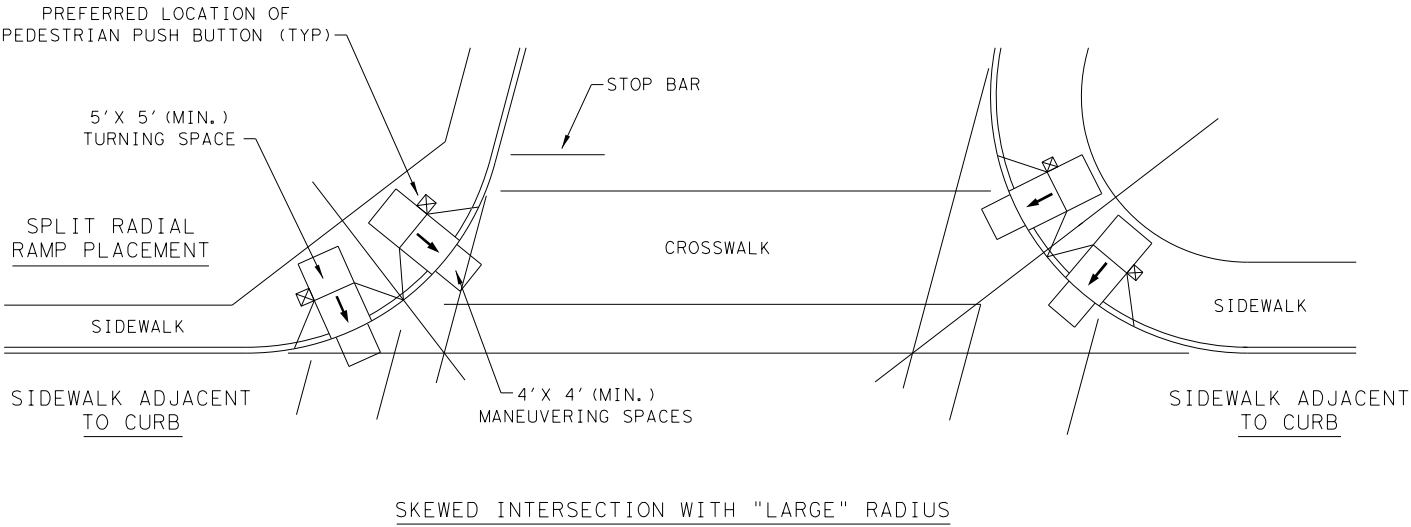
SHEET 3 OF 4

 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, 2005 REVISED 06, 2012 REVISED 01, 2018		DIST	COUNTY		SHEET NO.
		SAT	BEXAR		348

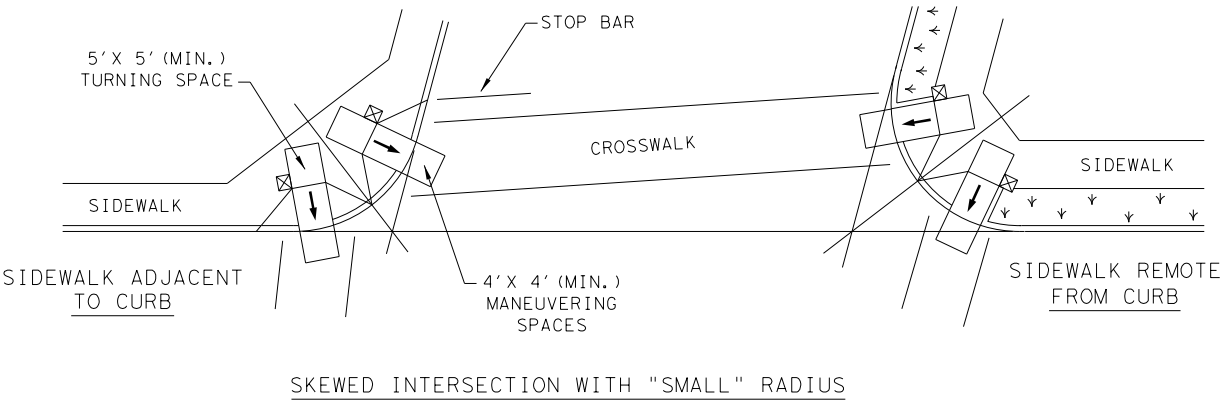
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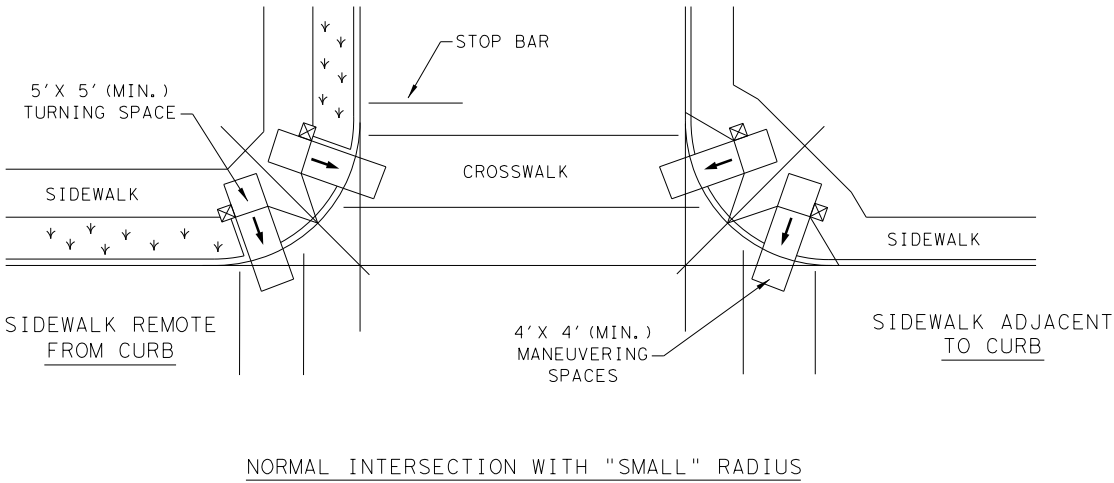
TYPICAL CROSSING LAYOUTS
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



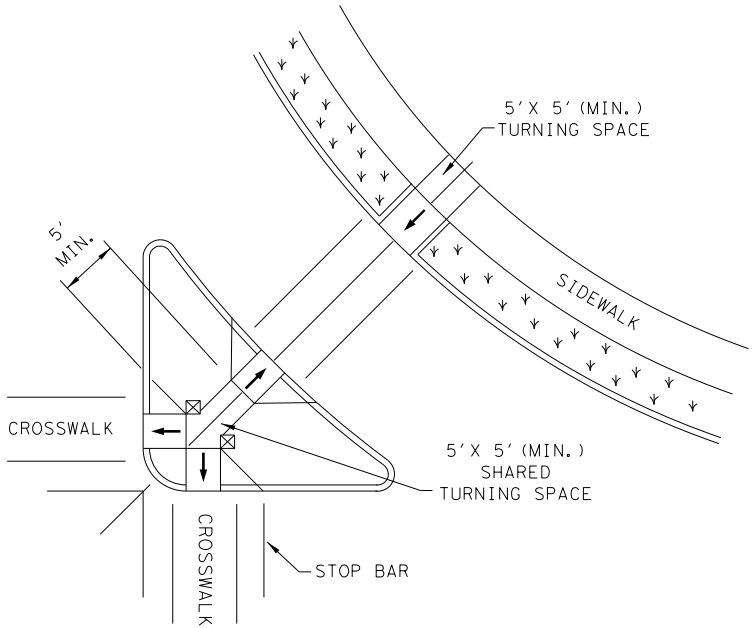
SKewed INTERSECTION WITH "LARGE" RADIUS



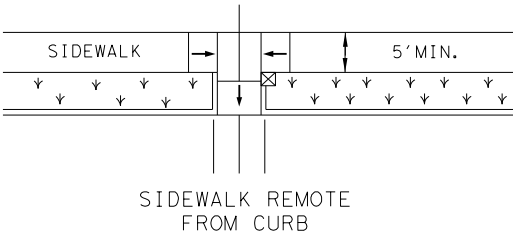
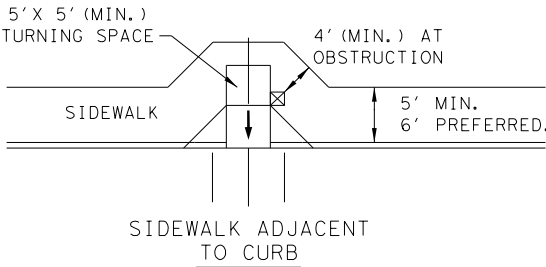
SKewed INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPs

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



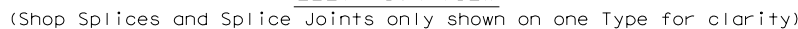
Design
Division
Standard

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, 2005	DIST	COUNTY	SHEET NO.	
REVISED 06, 2012	SAT	BEXAR		349
REVISED 01, 2018				

DATE: 11/21/2018
FILE: P:\11\35\07\design\Civil\Standards\Roadway\prdl3.dgn



- (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) 1/2" 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.

Technical drawing of a handrail assembly. The drawing shows a side view of a handrail with a central post (5) and two vertical posts (4) connected by a handrail (3). The handrail is supported by a bracket (6) attached to a post (5). The drawing includes the following dimensions and labels:

- Handrail (3)
- Post (5)
- Post (4)
- Post (6)
- Top of Curb
- Top of ramp/sidewalk
- See "Section at Rail Post Foundations"
- Dimensions: 3' - 0 1/8", 1' - 3 3/4", 4 1/4", 4 5/8"

(Showing Handrail TY A) (Showing Handrail TY B)



SHEET 1 OF 3



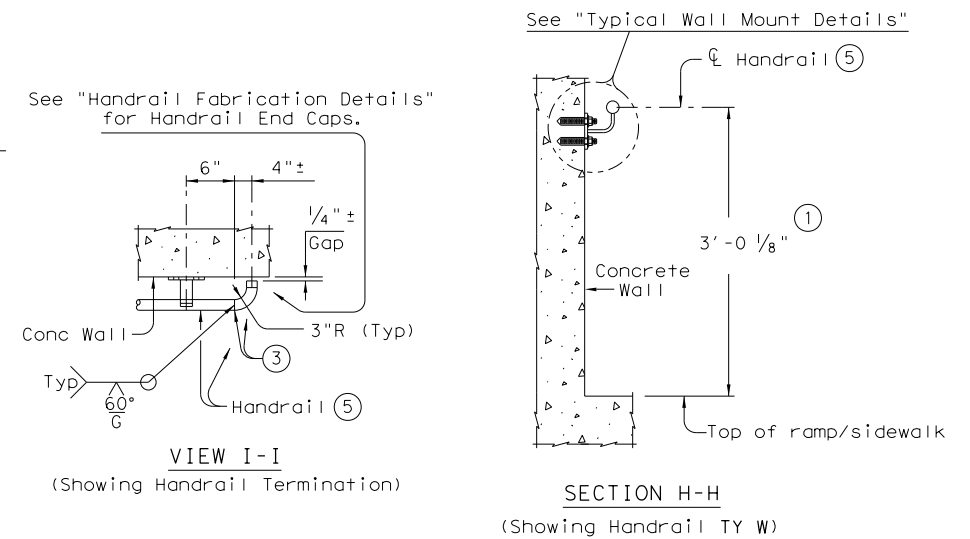
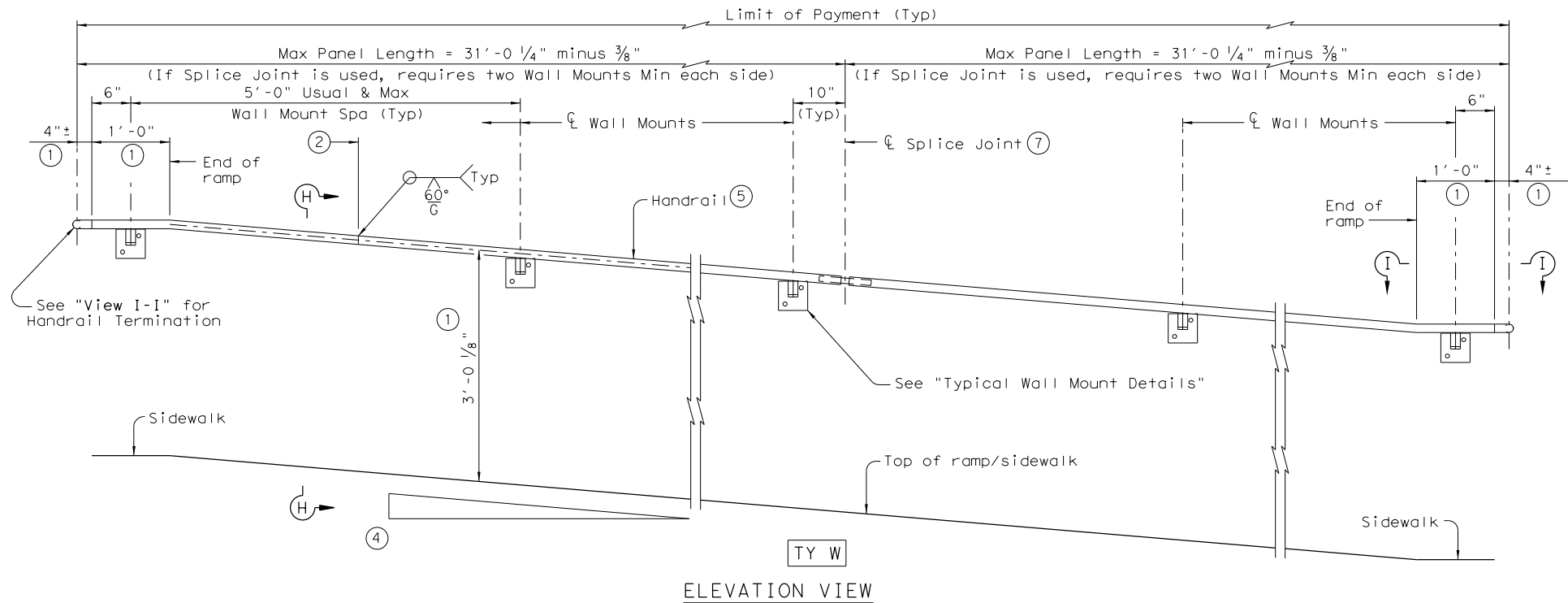
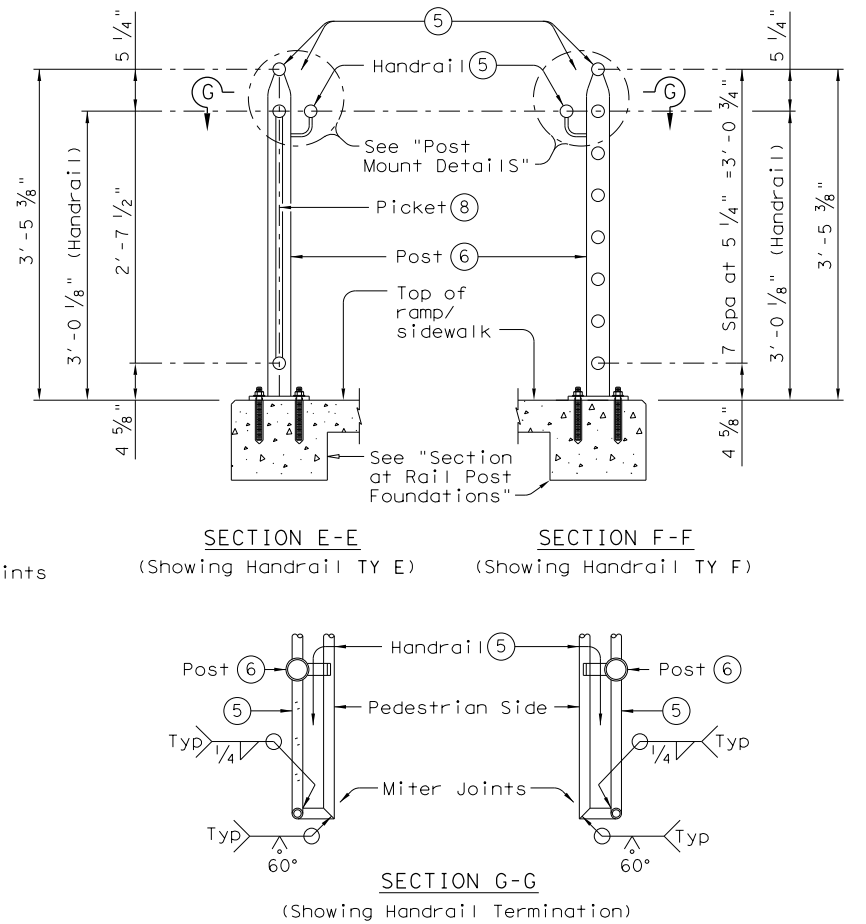
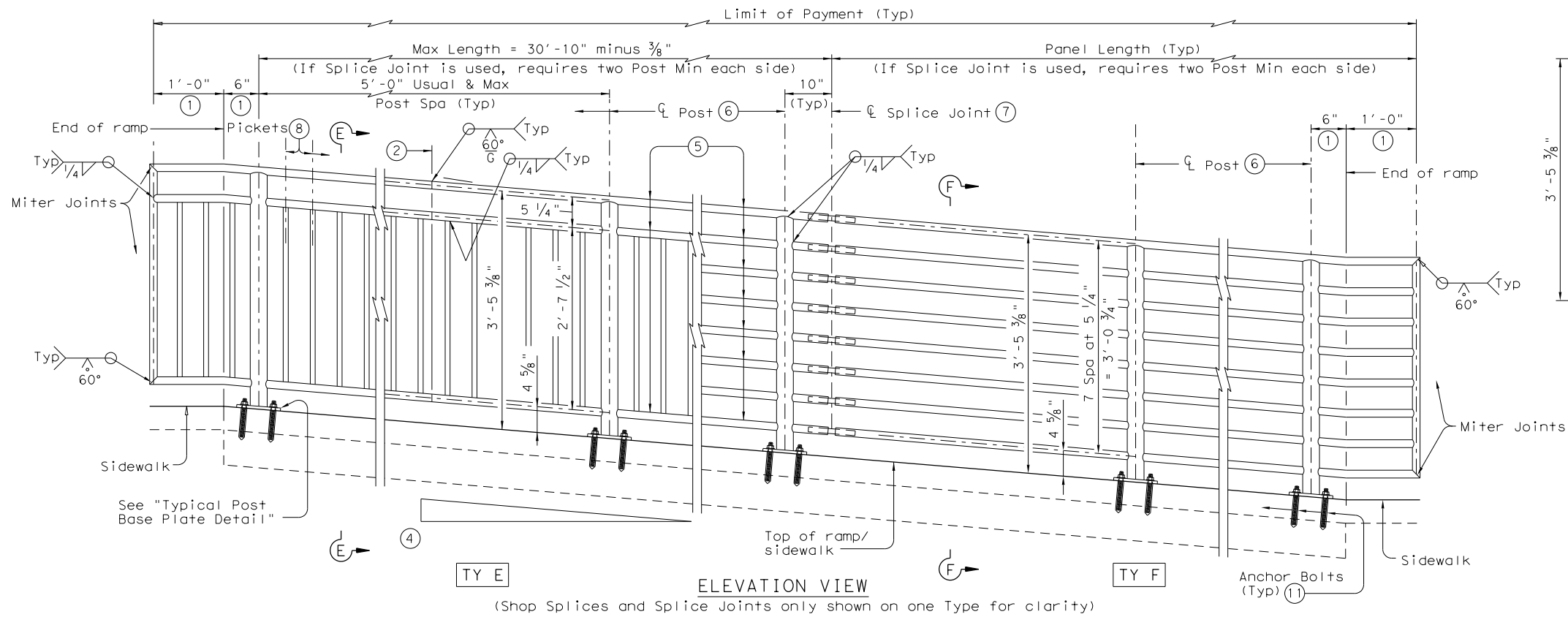
PEDESTRIAN HANDRAIL DETAILS

PRD-13

FILE: prd13.dgn	DN: TxDOT	CK: AM	DW: JTR	CK: CGL
© TxDOT Decmeber 2006	CONT	SECT	JOB	HIGHWAY
REVISED MAY, 2013 (VP)	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	350	

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- 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 1/2" 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



Texas Department of Transportation

Design Division Standard

PEDESTRIAN HANDRAIL

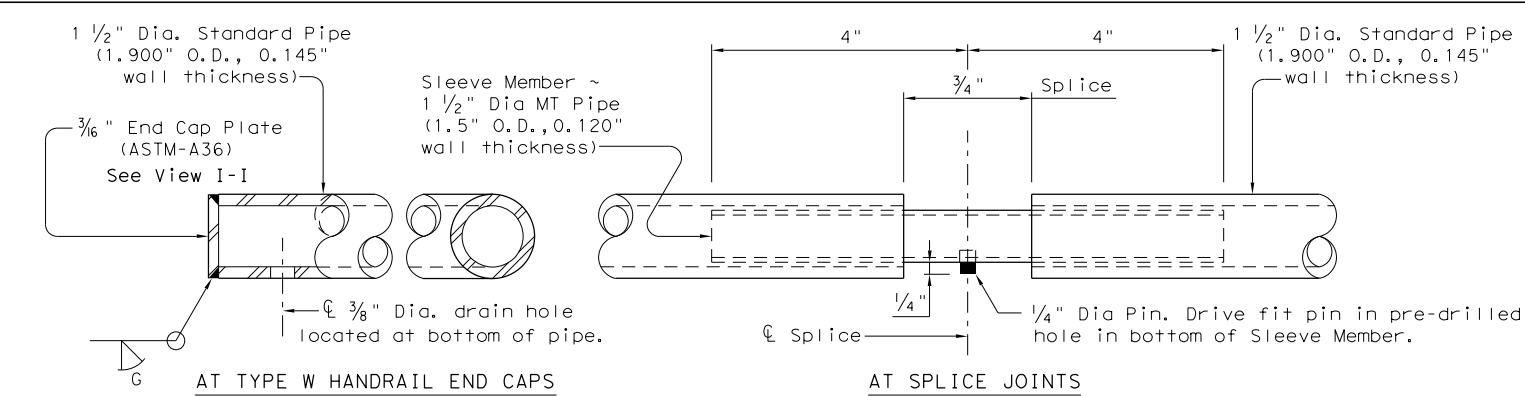
DETAILS

PRD-13

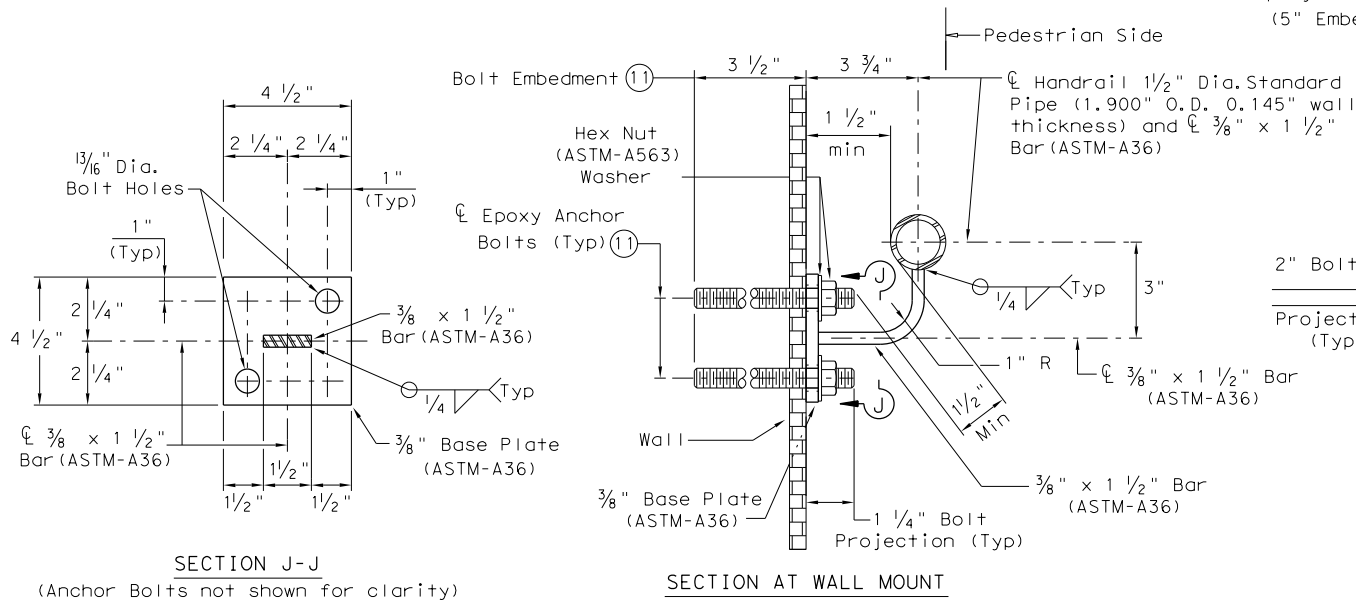
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© TxDOT December 2006	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
REVISED MAY, 2013 (VP)	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		351

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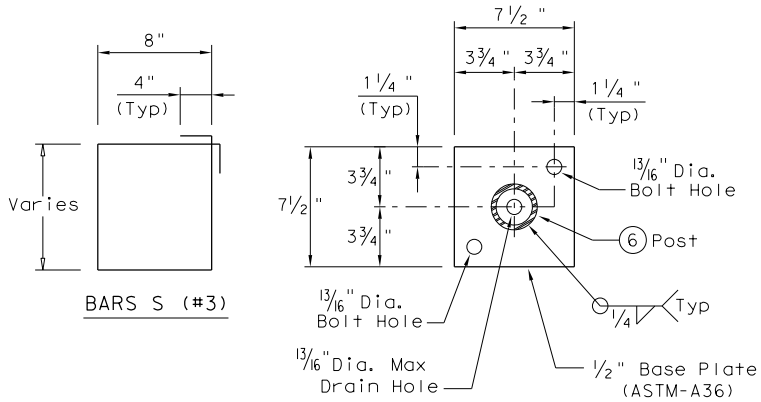


HANDRAIL FABRICATION DETAILS

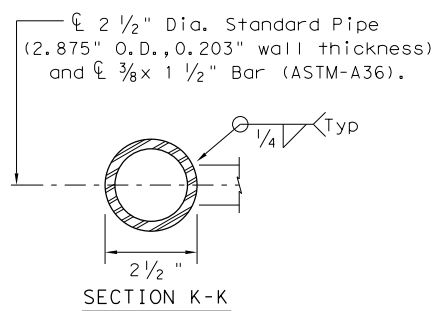


TYPICAL WALL MOUNT DETAILS

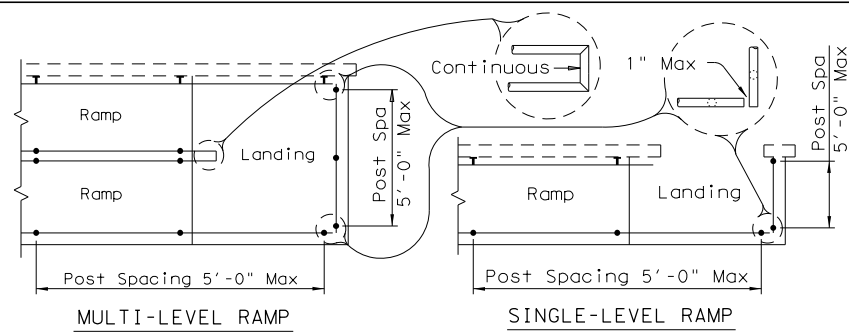
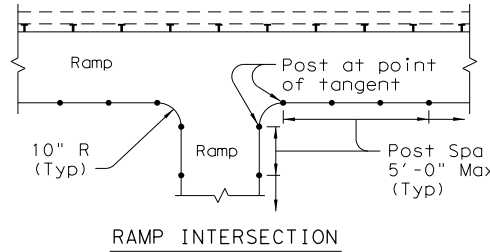
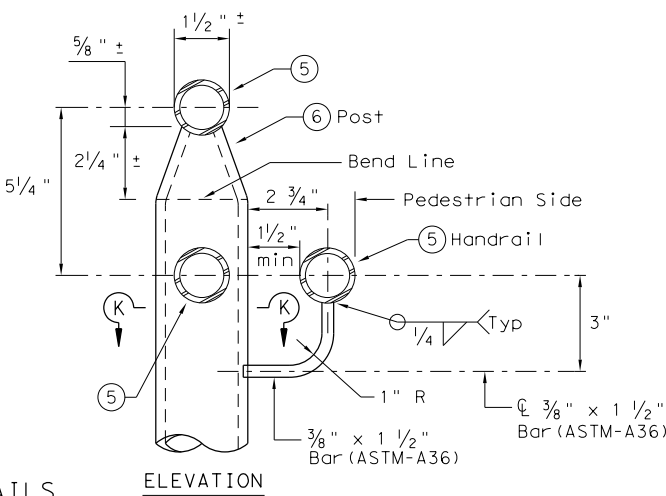
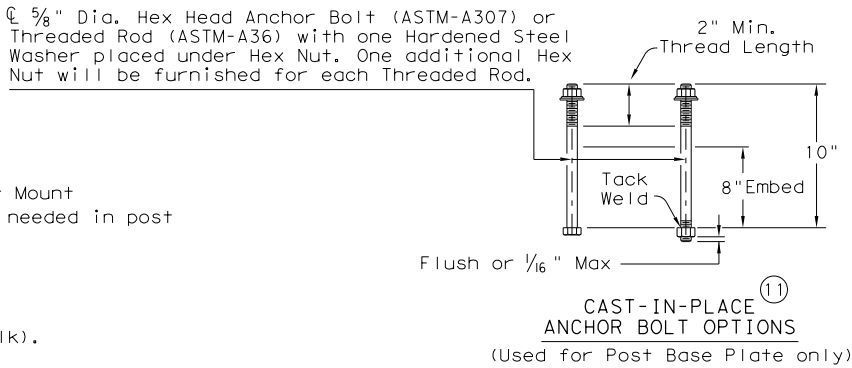
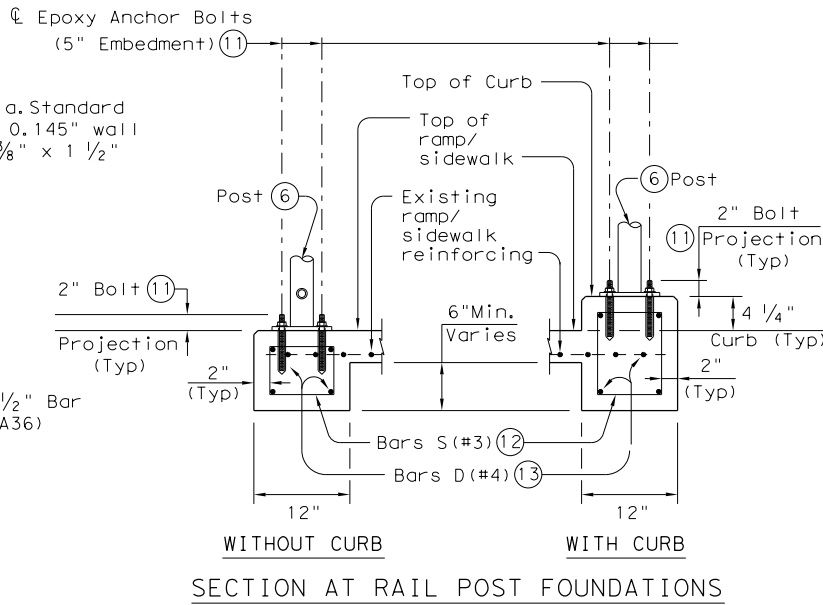
- 5 1 1/2" Dia. Standard Pipe (1.900" O.D., 0.145" wall thickness). Parallel to ramp/sidewalk. Provide holes as needed in 1 1/2" Dia. pipe for galvanizing drainage and venting.
- 6 2 1/2" Dia. Standard Pipe (2.875" O.D., 0.203" wall thickness). Plumb all posts. See "Post Mount Detail" for crimping and 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. 5/8" 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, "Epoxies 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.

SHEET 3 OF 3



Texas Department of Transportation

Design Division Standard

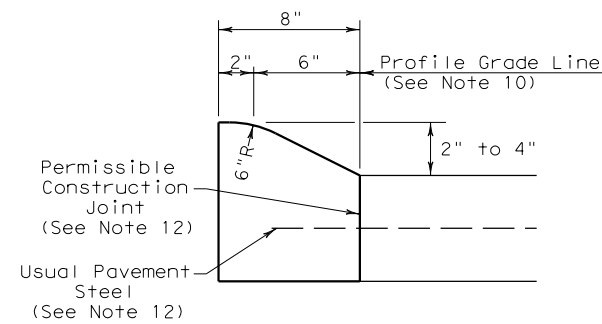
PEDESTRIAN HANDRAIL

DETAILS

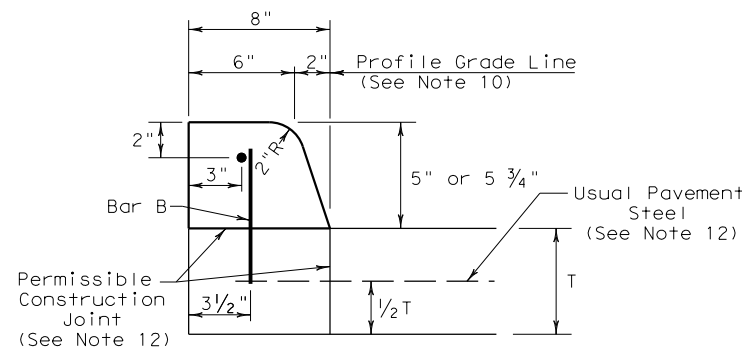
PRD-13

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© TxDOT December 2006	CONT	SECT	JOB	HIGHWAY
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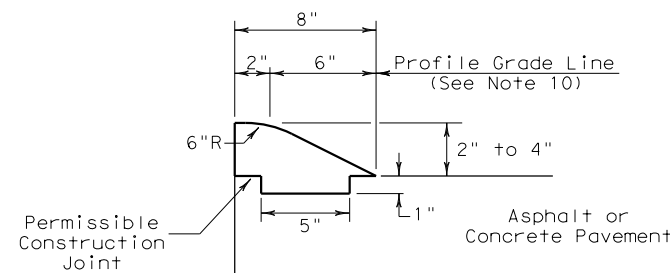
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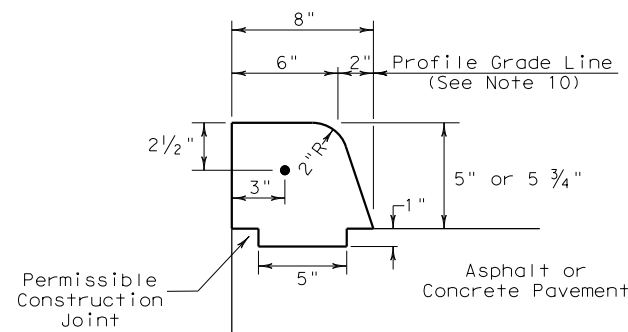
TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



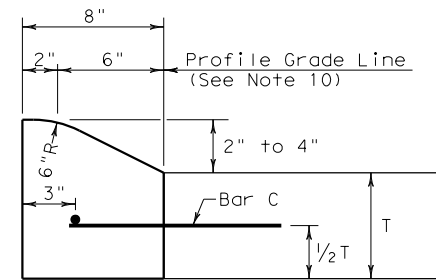
TYPE II CURB (MONOLITHIC)
5" - 5 3/4" HEIGHT



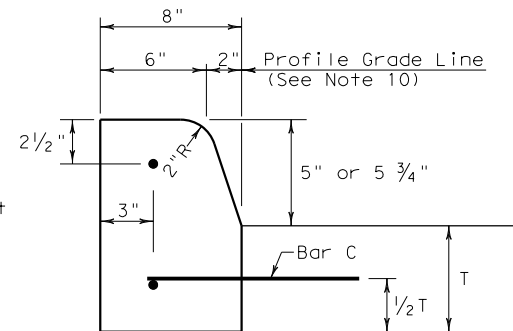
TYPE III CURB (KEYED)
2" - 4" HEIGHT



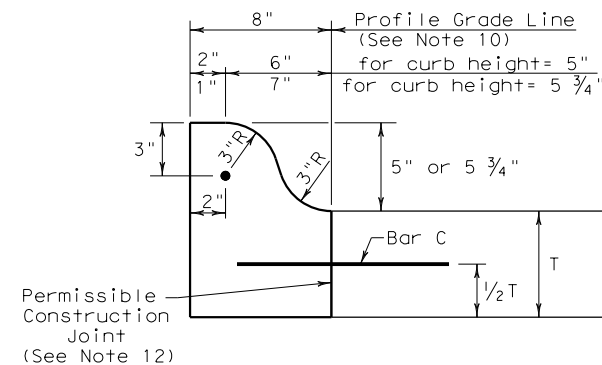
TYPE IV CURB (KEYED)
5" - 5 3/4" HEIGHT



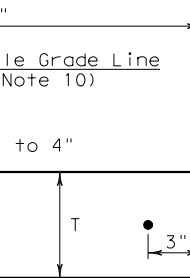
TYPE I CURB
2" - 4" HEIGHT



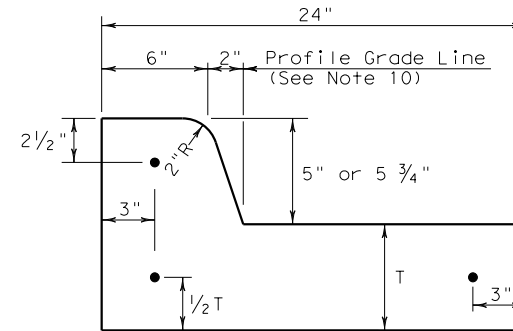
TYPE II CURB
5" - 5 3/4" HEIGHT



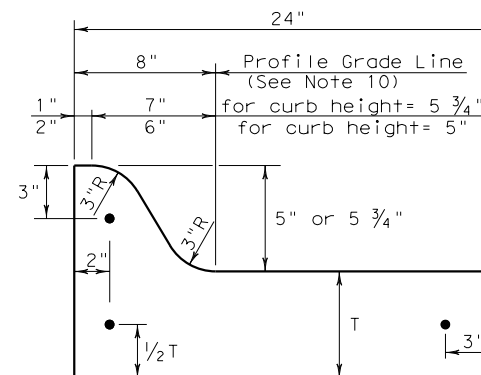
TYPE IIa CURB
5" - 5 3/4" HEIGHT



TYPE I CURB AND GUTTER
2" - 4" HEIGHT

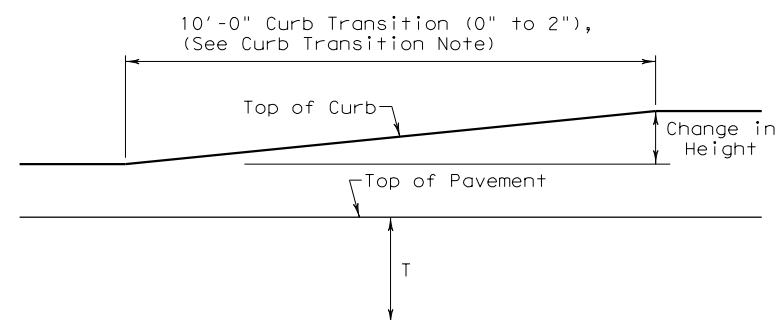


TYPE II CURB AND GUTTER
5" - 5 3/4" HEIGHT

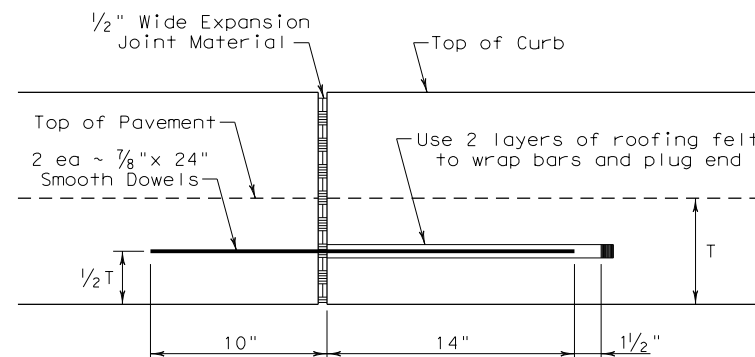


TYPE IIa CURB AND GUTTER
5" - 5 3/4" HEIGHT

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.



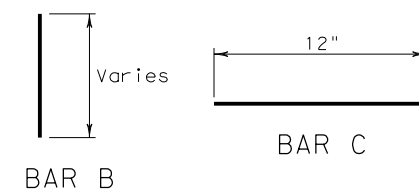
CURB TRANSITION
Note: To be paid for as Highest Curb



EXPANSION JOINT DETAIL

General Notes

1. All materials and construction shall be in accordance with Item 529, "Concrete Curb, Gutter, and Combined Curb and Gutter."
2. Concrete shall be Class A.
3. 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.
4. Round exposed sharp edges with a rounding tool, to a minimum radius of $1/4$ inch.
5. All existing curbs and driveways to be removed shall be sawed or removed at existing joints.
6. Where concrete curb is placed on existing concrete pavement, the pavement shall be drilled and the reinforcing bars grouted in place.
7. 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.
8. Vertical and horizontal dowel bars and transverse reinforcing bars shall be placed at four feet C-C.
9. Dimension 'T' shown is the thickness of concrete pavement. When curb is installed adjacent to flexible pavement dimension 'T' is 8" maximum.
10. Usual profile grade line. Refer to typical sections and plan-profile sheets for exact locations.
11. One-half inch expansion joint material shall be provided where curb or curb and gutter is adjacent to sidewalk or riprap.
12. 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.



**Design
Division
Standard**

CONCRETE CURB AND CURB AND GUTTER

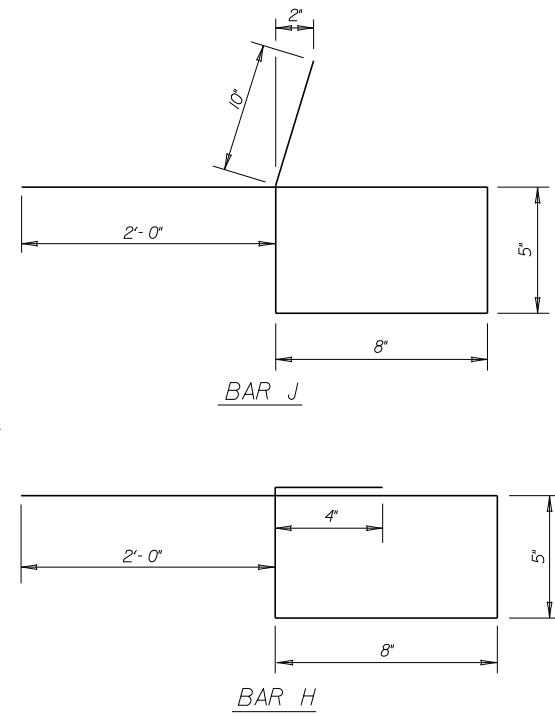
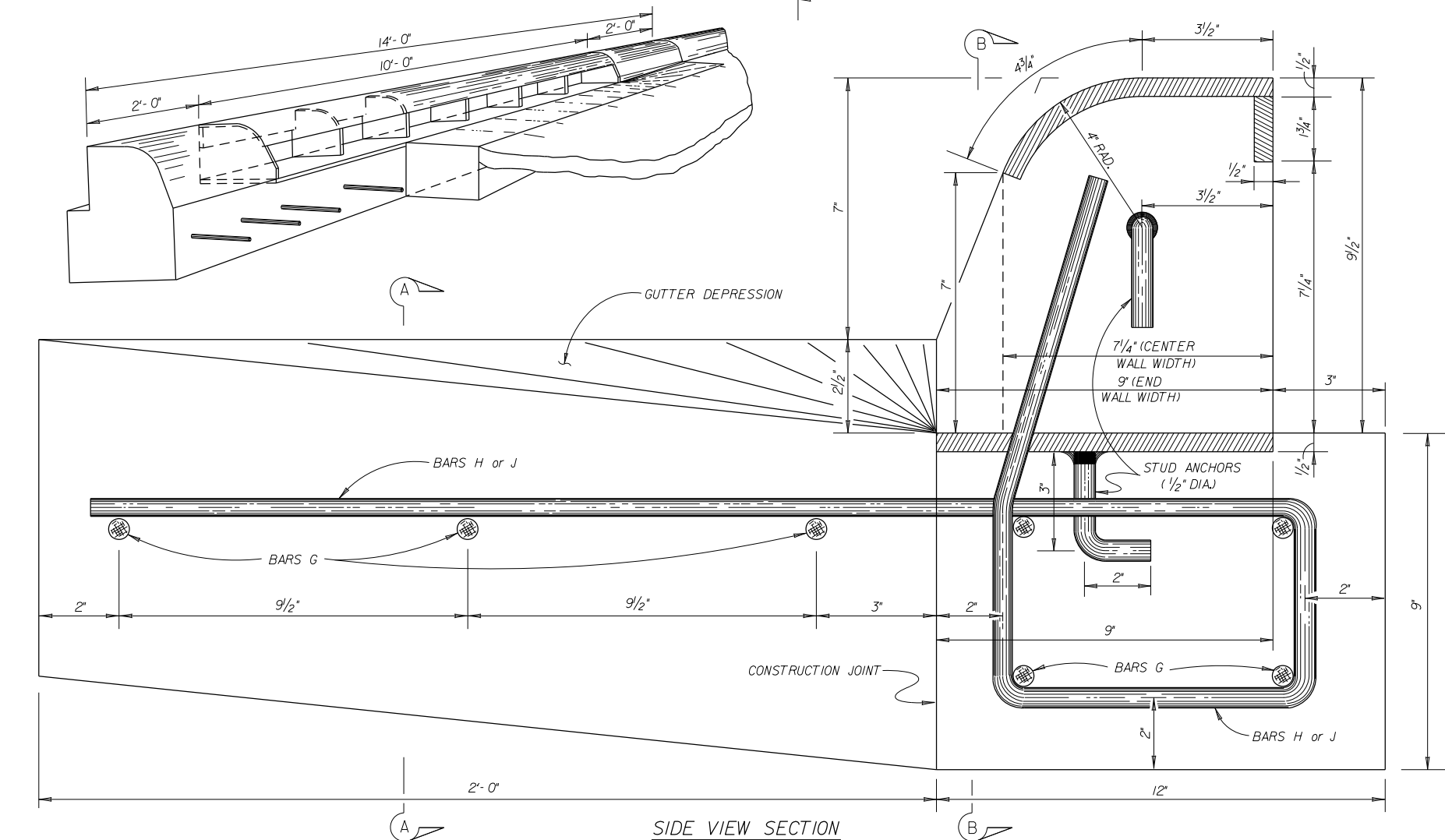
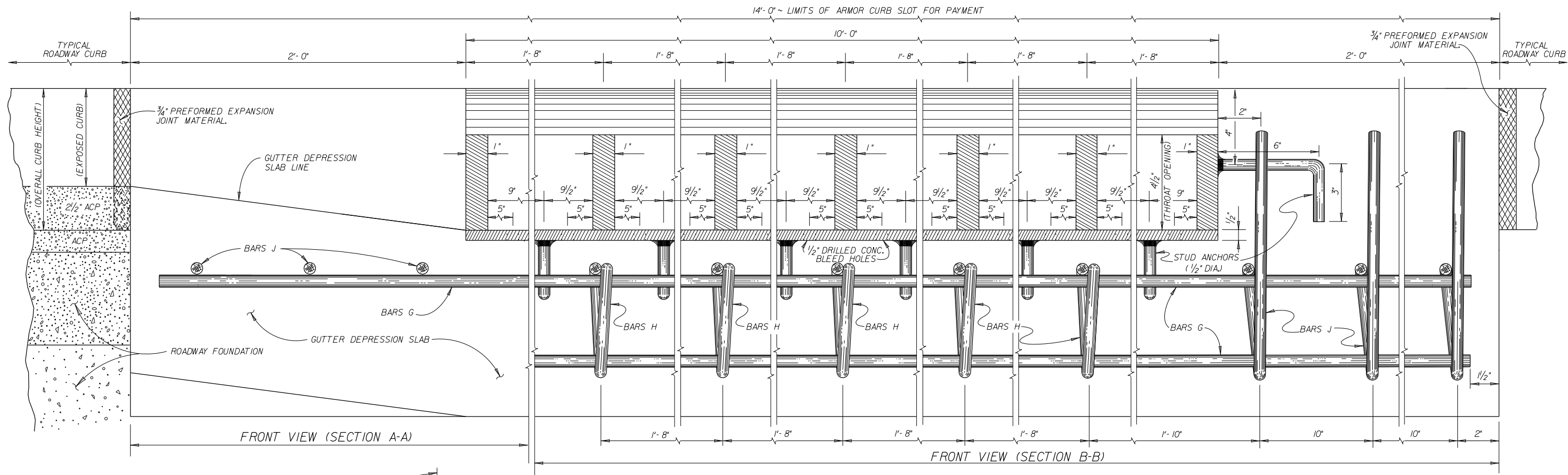
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UPDATED 2012 - VP	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	353	

DATE: 11/21/2018

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STRUCTURE DESIGN
/BRIDGE/STD DS/ARMOR CURB.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

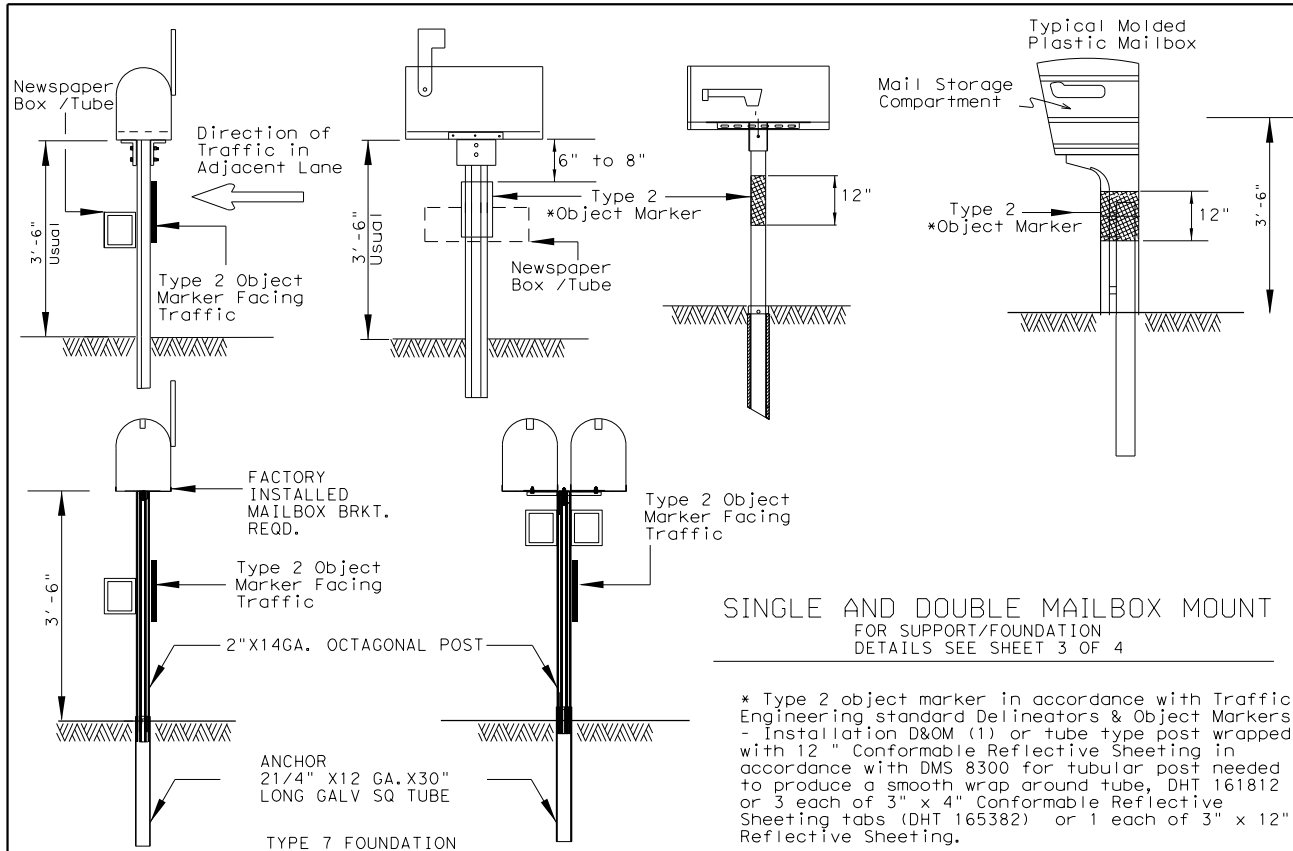
STRUCTURAL STEEL FOR ARMOR CURB SLOT		
STUD ANCHORS (1/2" DIA)	LBS.	3.5
STEEL PLATE	LBS.	451
TOTAL WEIGHT *	LBS.	454.5

* 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.

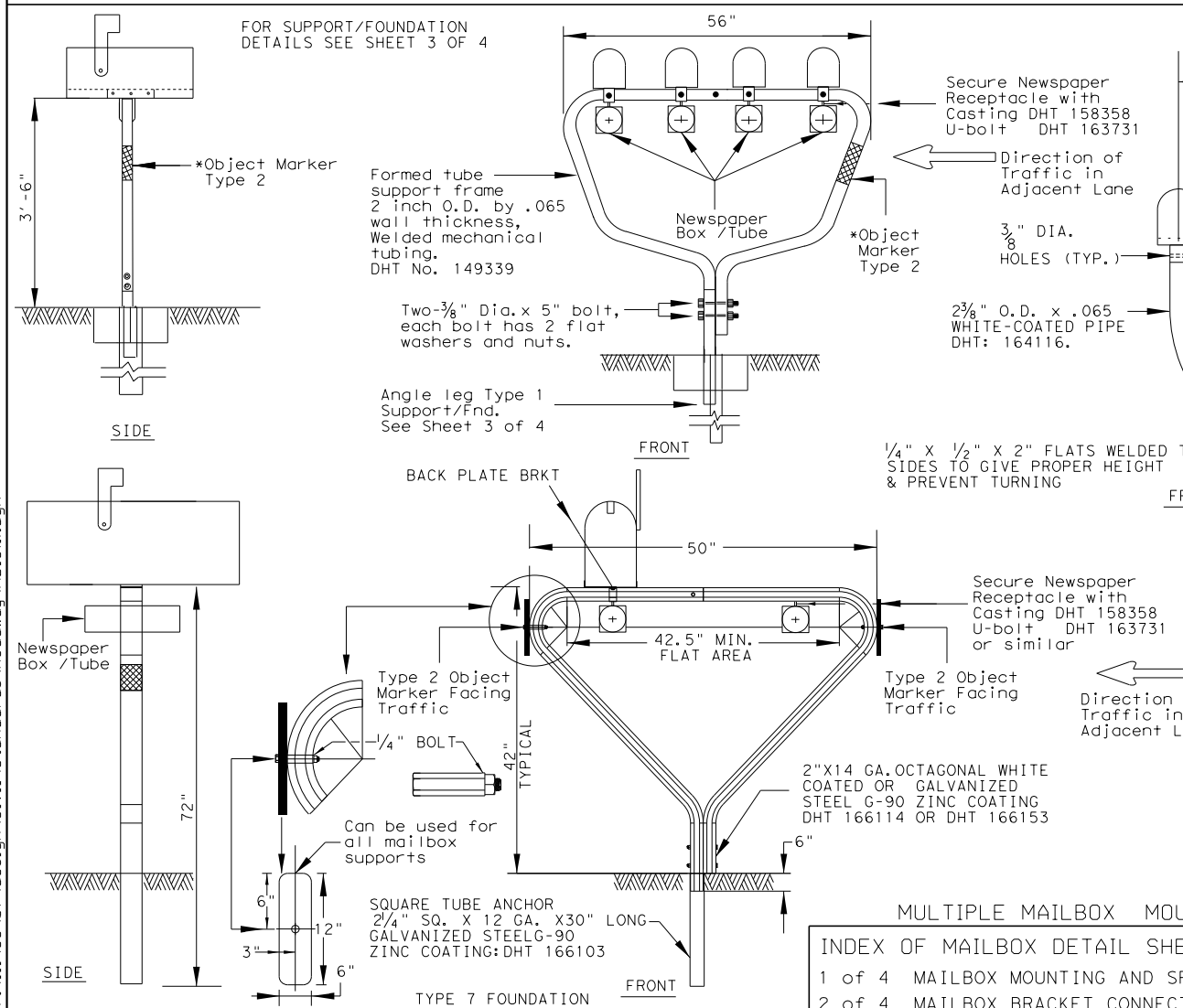
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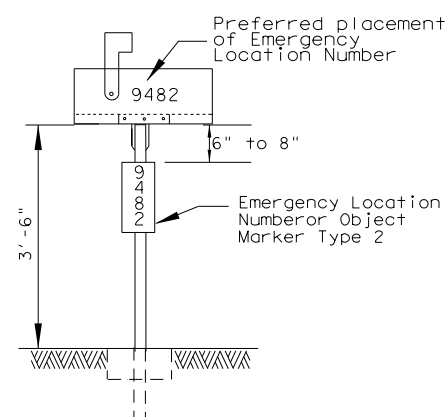
SINGLE AND DOUBLE MAILBOX MOUNT
FOR SUPPORT/FOUNDATION
DETAILS SEE SHEET 3 OF 4

* Type 2 object marker in accordance with Traffic Engineering standard Delineators & Object Markers - Installation D&OM (1) or tube type post wrapped with 12" Conformable Reflective Sheeting in accordance with DMS 8300 for tubular post needed to produce a smooth wrap around tube, DHT 161812 or 3 each of 3" x 4" Conformable Reflective Sheeting tabs (DHT 165382) or 1 each of 3" x 12" Reflective Sheeting.



Note: Mailbox installations in sidewalk areas shall be in accordance with the latest TxDOT Pedestrian Facilities Curb ramps standard *PED-XX for pedestrian facilities.

*PED-XX: XX is the standard year for example PED- 12 , PED-13,etc.



PLACEMENT OF
EMERGENCY LOCATION NUMBER

Location Number shall be placed on: 1. A yellow, type A plate with class 1 flat surface reflective sheeting in accordance with DMS 8600. The color of numbers shall be black, or 2: A green or blue plate with white numbers attached to post beside the object marker. Other contrasting color configuration, as approved, may be used. (Use Same type plate as used for the type 2 Object Marker. Recommended sign size is 6" by 15")

TYPICAL MAILBOX SIZE				LIGHT WEIGHT MATERIAL	
				SHEET METAL	**PLASTIC
SIZE	LENGTH	WIDTH	HEIGHT	MAXIMUM WEIGHT	
	INCHES			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

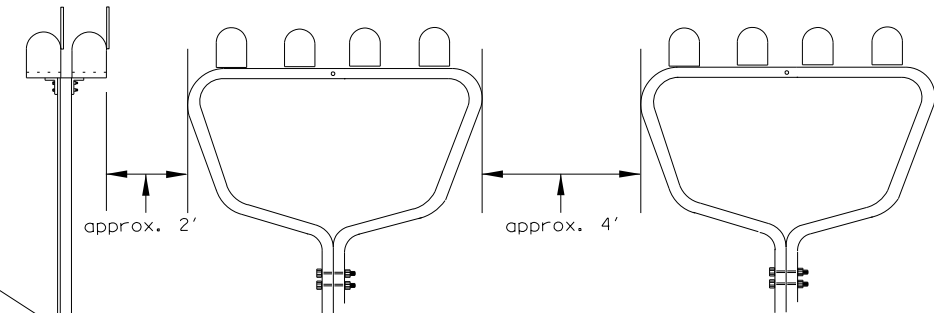
LOCKABLE ARCHITECTURAL MAILBOX SIZE (INCHES)					
VIEW	TOP	BOTTOM	FRONT SIDE	BACK SIDE	WEIGHT
SIDE	18	15	18.3	15	(POUNDS)
BACK	11 1/2	11 1/2		15	22.4

SEE TOP RIGHT
CORNER OF
SHEET 2 OF 4

Mailboxes shall be made of light weight sheet metal or light weight plastic. Lockable architectural mailboxes shall meet the requirements of the above table.

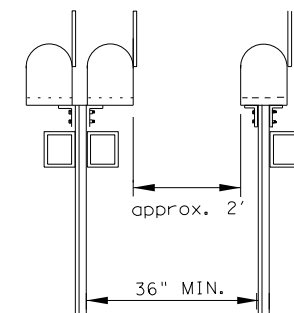
Heavy steel, cast iron or decorative mailboxes shall not be used on the state highway system.

MAILBOX SIZES



4' Clear Distance between multiple installations and 2' clearance between double or single installations and the multiple installation. DHT #'s 164116 or 149339.

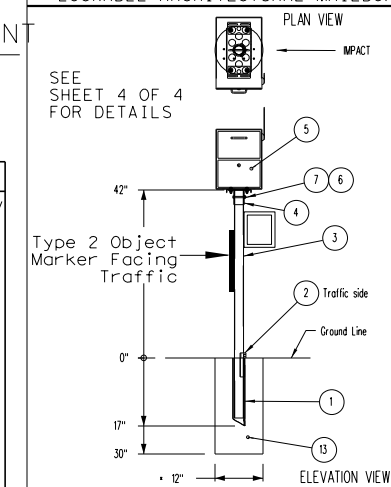
MULTIPLE MAILBOX PLACEMENT




Clear Distance between single or double mounted posts. (Normally when 3 or more mailboxes are in one location, a multiple support is used).

SINGLE & DOUBLE MAILBOX PLACEMENT

LOCKABLE ARCHITECTURAL MAILBOX



SHEET 1 OF 4



Texas Department of Transportation

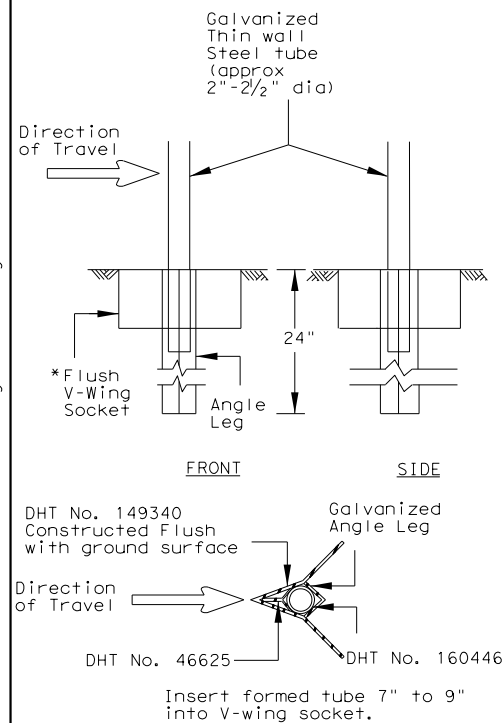
Maintenance Division Standard

MAILBOX MOUNTING AND SPACING

MB-15(1)

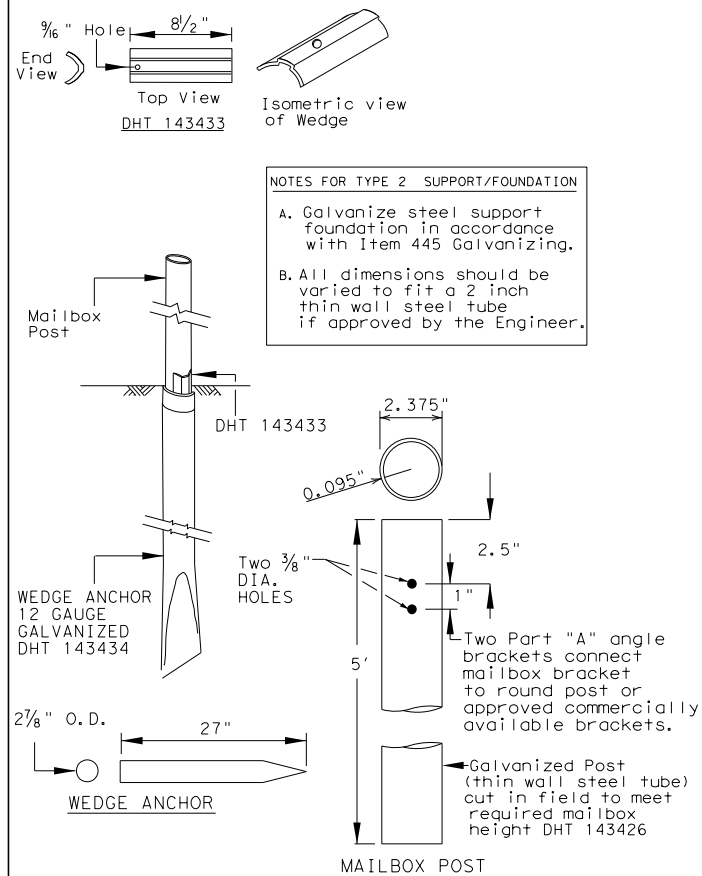
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© TxDOT APRIL 2015	CONT	SECT	JOB	HIGHWAY
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Added additional newspaper receptacle for double mailbox support	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		355

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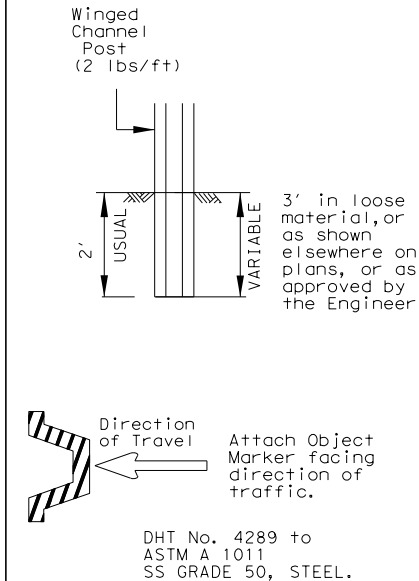


TYPE 1 SUPPORT/FOUNDATION

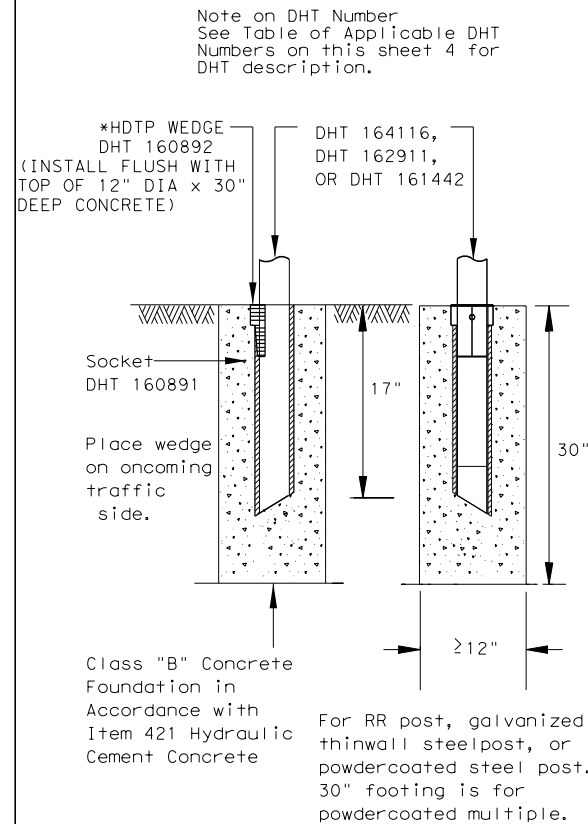
THIN WALL STEEL TUBE w/ V-LOC ANCHORAGE



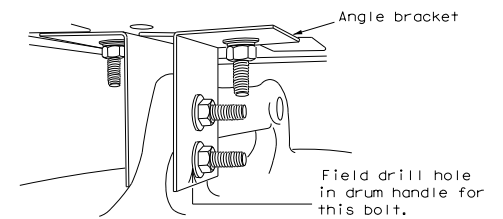
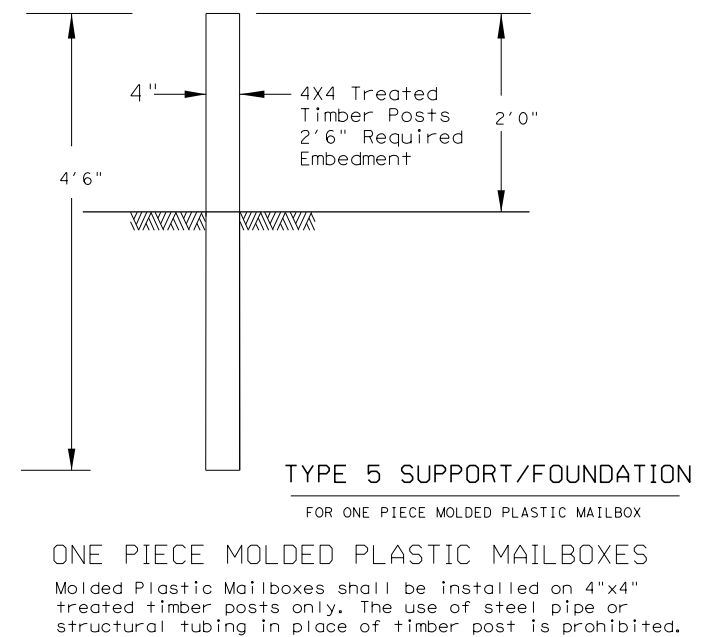
TYPE 2 SUPPORT/FOUNDATION
THIN WALL STEEL TUBE w/ WEDGE ANCHOR SYSTEM



TYPE 3 SUPPORT/FOUNDATION
WINGED CHANNEL POST



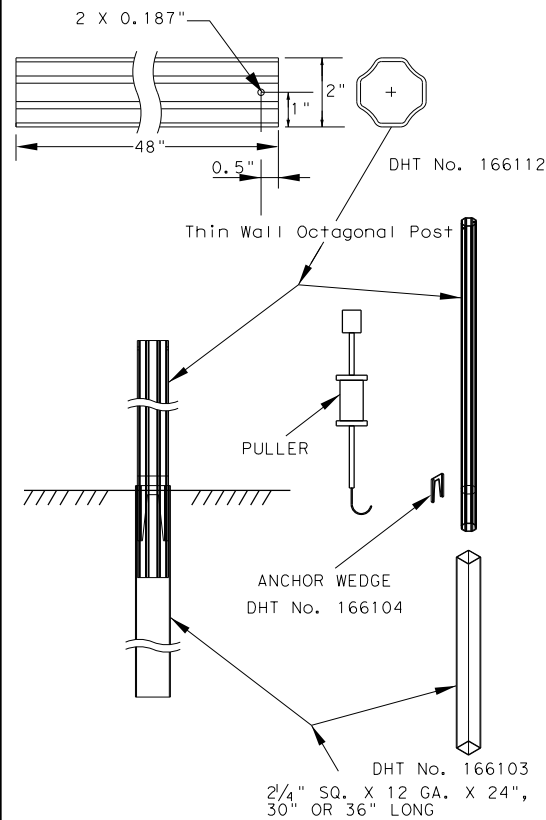
TYPE 4 SUPPORT/FOUNDATION
FOR WHITECOATED STEEL POST, MULTIPLE POST,
AND RECYCLED RUBBER.



TYPE 6 TEMPORARY MAILBOX SUPPORT

CONNECTION DETAIL

- ### GENERAL NOTES
1. Erect post plumb or vertical.
 2. When galvanized part is required galvanize in accordance with Item 445.
 3. 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.
 4. The Type 1 or type 7 support/foundation can be used for a multiple mailbox mount.
 5. The Type 4 support should be used with thin wall steel pipe for the medium, large and double mailbox installations.
 6. 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.



TYPE 7 MAILBOX SUPPORT/FOUNDATION

CONNECTION DETAIL

MB-(X) ASSM TY (XXX) (X) (XX) (OPTIONAL)
 Type of Mailbox
 S = Single
 D = Double
 M = Multiple
 SP = Single Plastic
 Type of Post
 WC = Winged Channel Post
 RR = Recycled Rubber
 TWW = Thin Walled White Tubing
 TWG = Thin Walled Galvanized Tubing
 TIM = Timber
 Type of Foundation
 Ty 1 = V-Loc
 Ty 2 = Wedge Anchor Steel System
 Ty 3 = Winged Channel post
 Ty 4 = Wedge Anchor Plastic System
 Ty 5 = 4 X 4 Post
 Ty 7 = Wedge Anchor
 Type of Bracket
 AB = Angle Bracket.
 TB = 2.375" Tube Bracket

DOUBLE AND LARGE MAILBOXES MUST BE ON STEEL POST.

*HDTP: High density thermoplastic polyesters

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© TxDOT APRIL 2015		CONT	SECT	JOB			HIGHWAY		
REVISIONS		0915	12	576			VARIES		
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		SAT	BEXAR					357	

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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

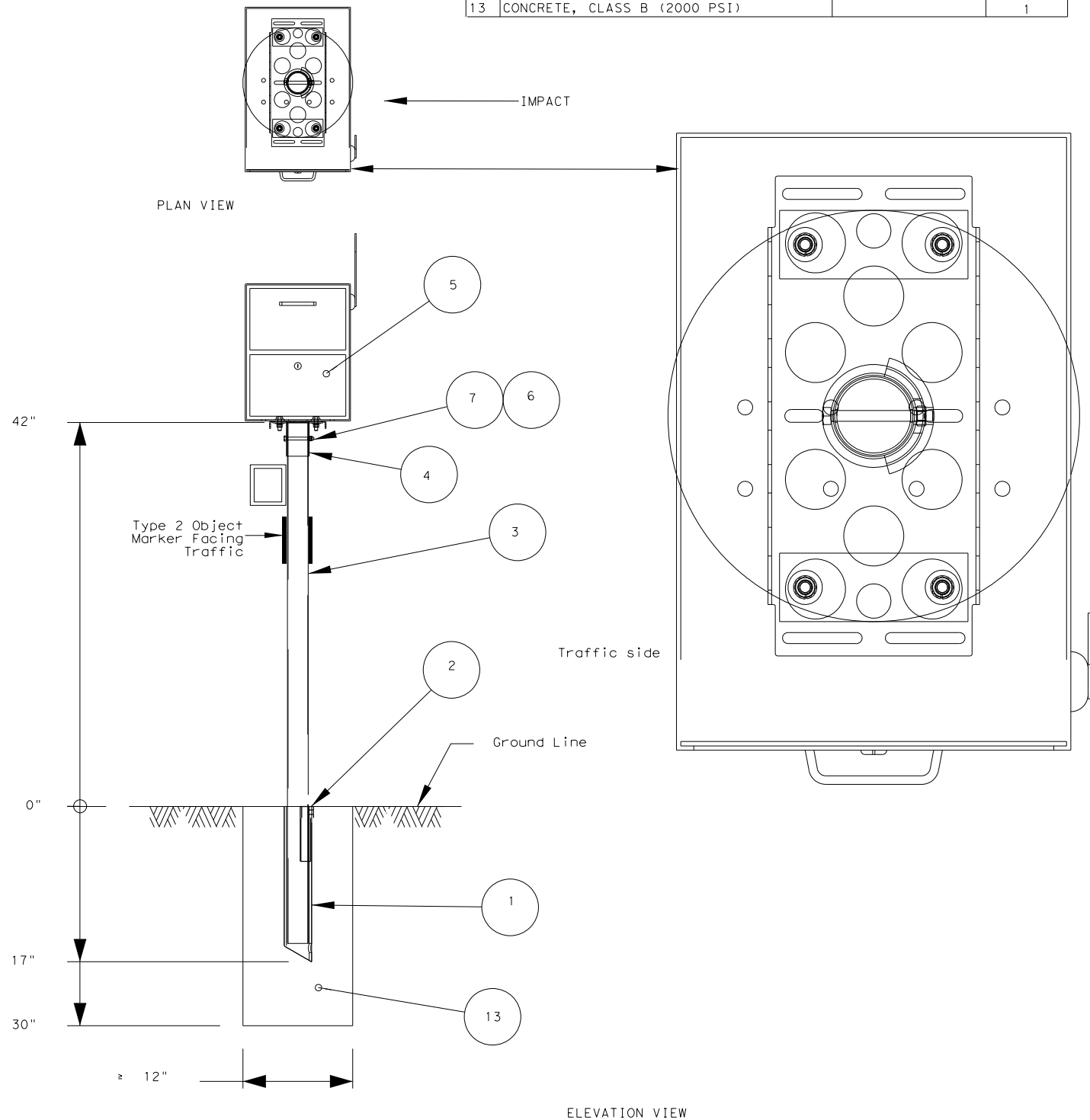


TABLE OF APPLICABLE DHT NUMBERS	
DHT NUMBER	DESCRIPTION
FOUNDATIONS	
46625	WEDGE FOR V-WING SOCKET FOR TYPE 1 FOUNDATION
149340	V-WING SOCKET FOR TYPE 1 FOUNDATION
143433	WEDGE FOR TYPE 2 FOUNDATION
143434	ANCHOR FOR TYPE 2 FOUNDATION
166103	ANCHOR FOR TYPE 7 FOUNDATION
160891	SOCKET FOR TYPE 4 FOUNDATION
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

SHEET 4 OF 4



Texas Department of Transportation

Maintenance
Division
Standard

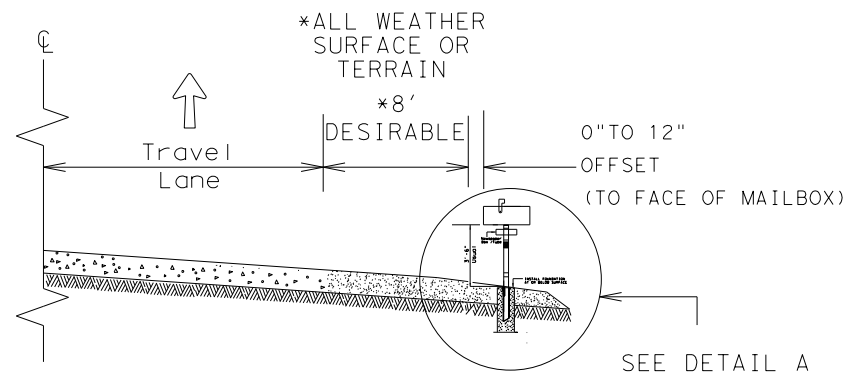
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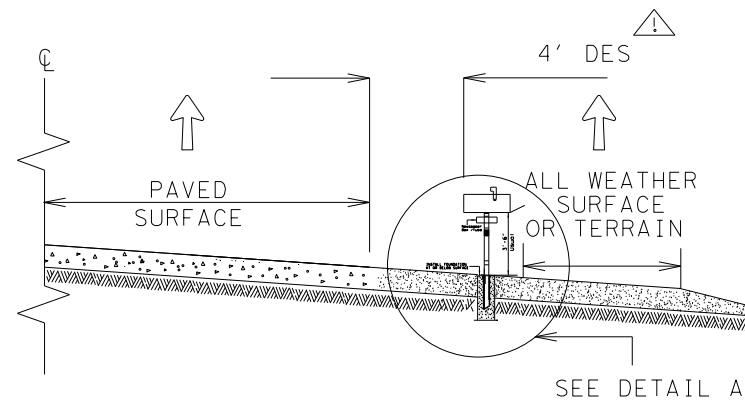
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	SAT	BEXAR	358	

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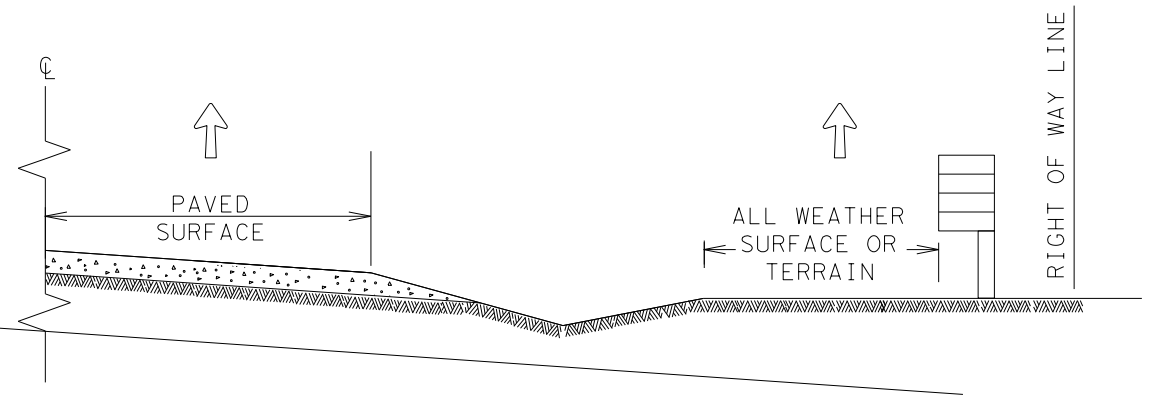
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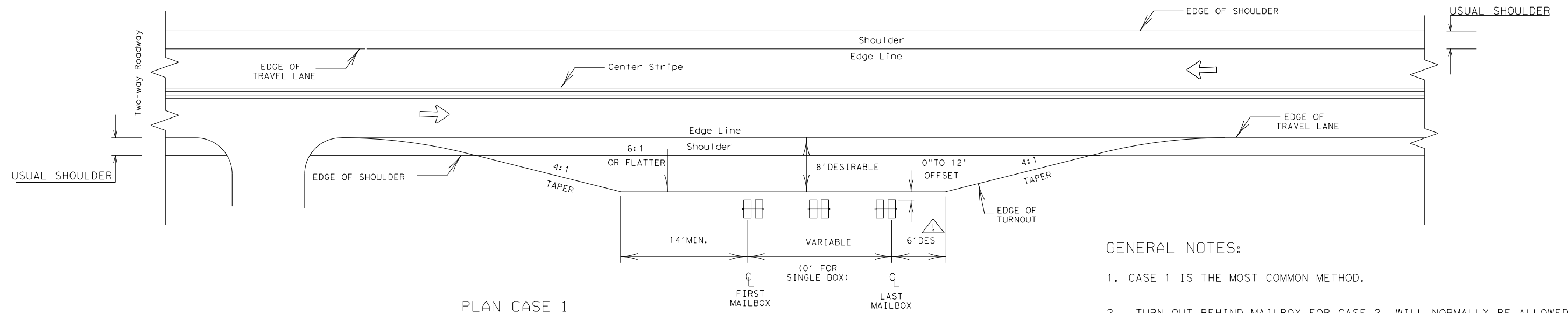
CASE 1. OFF TRAVEL WAY DELIVERY



CASE 2. BACK SIDE DELIVERY



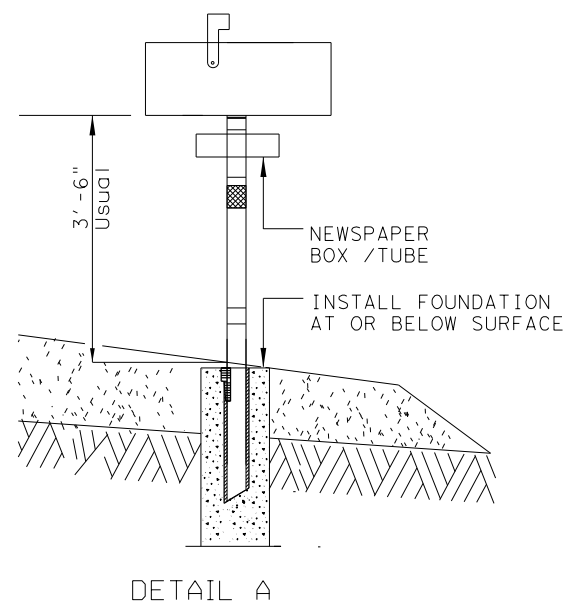
CASE 3. DELIVERY NEAR RIGHT OF WAY LINE



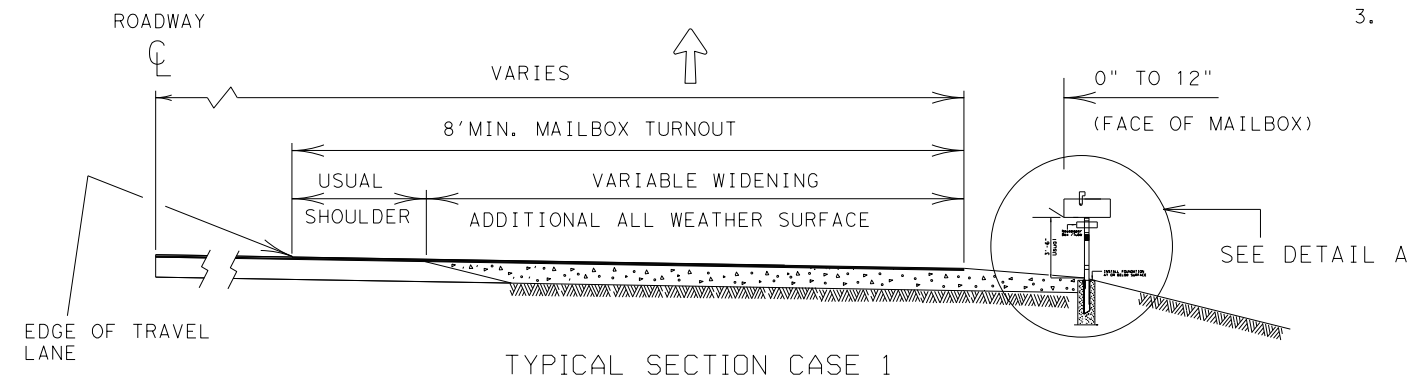
PLAN CASE 1

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

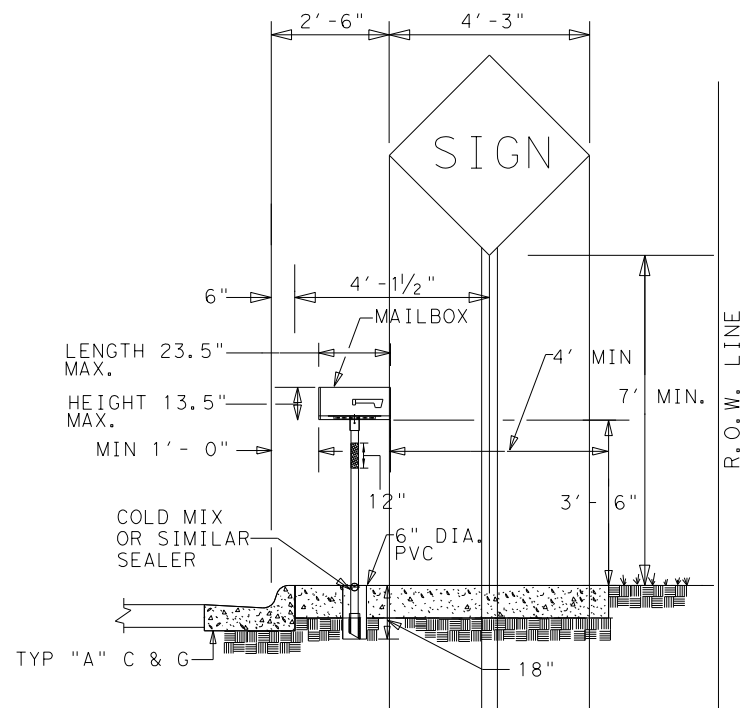


Guideline
MAILBOX SIDE ROAD PLACEMENT
AND TURNOUTS
MB-14(2)

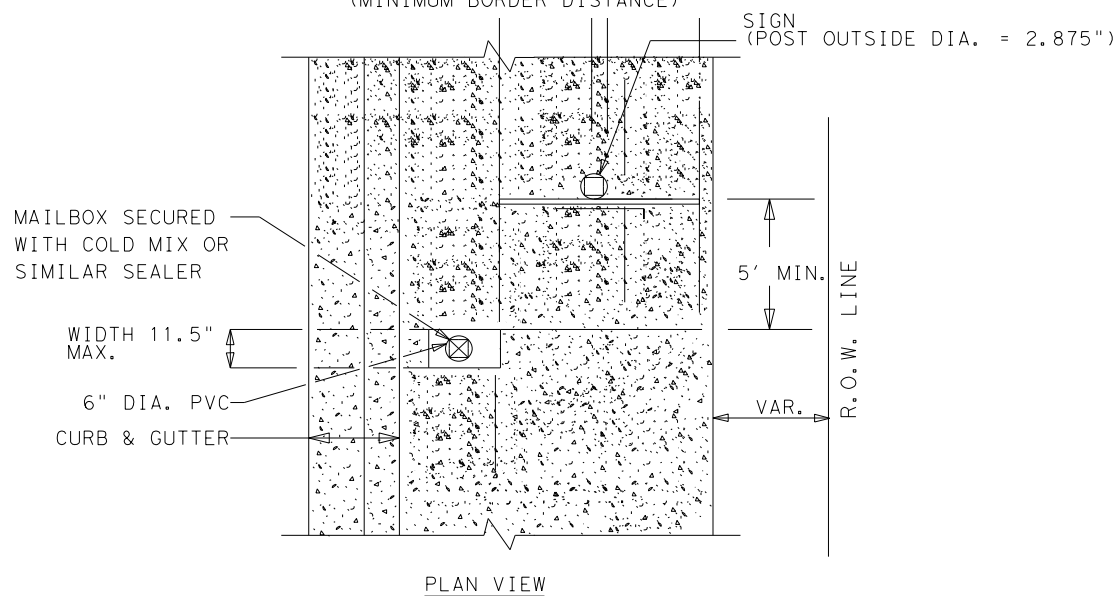
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© TxDOT MAY 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
DECEMBER 2012-NEW TxDOT TITLE BLOCK	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR		359

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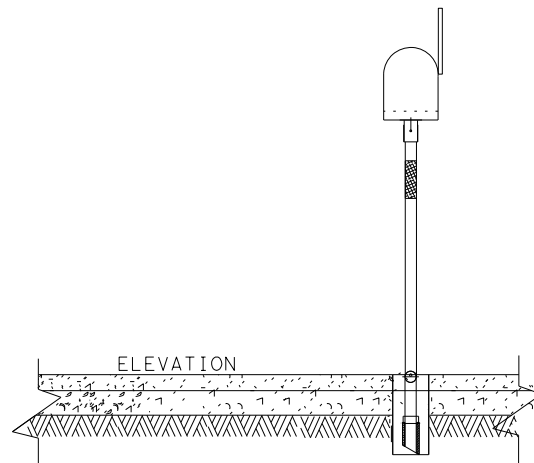
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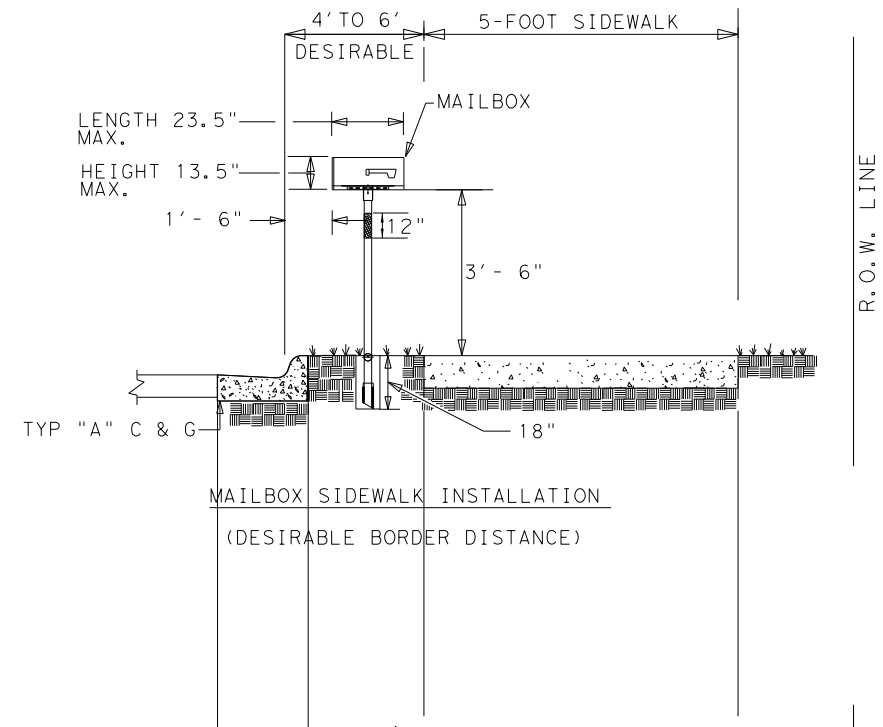
MAILBOX SIDEWALK INSTALLATION RELATIVE TO ANY OTHER OBSTRUCTION SUCH AS A SIGN (MINIMUM BORDER DISTANCE)



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

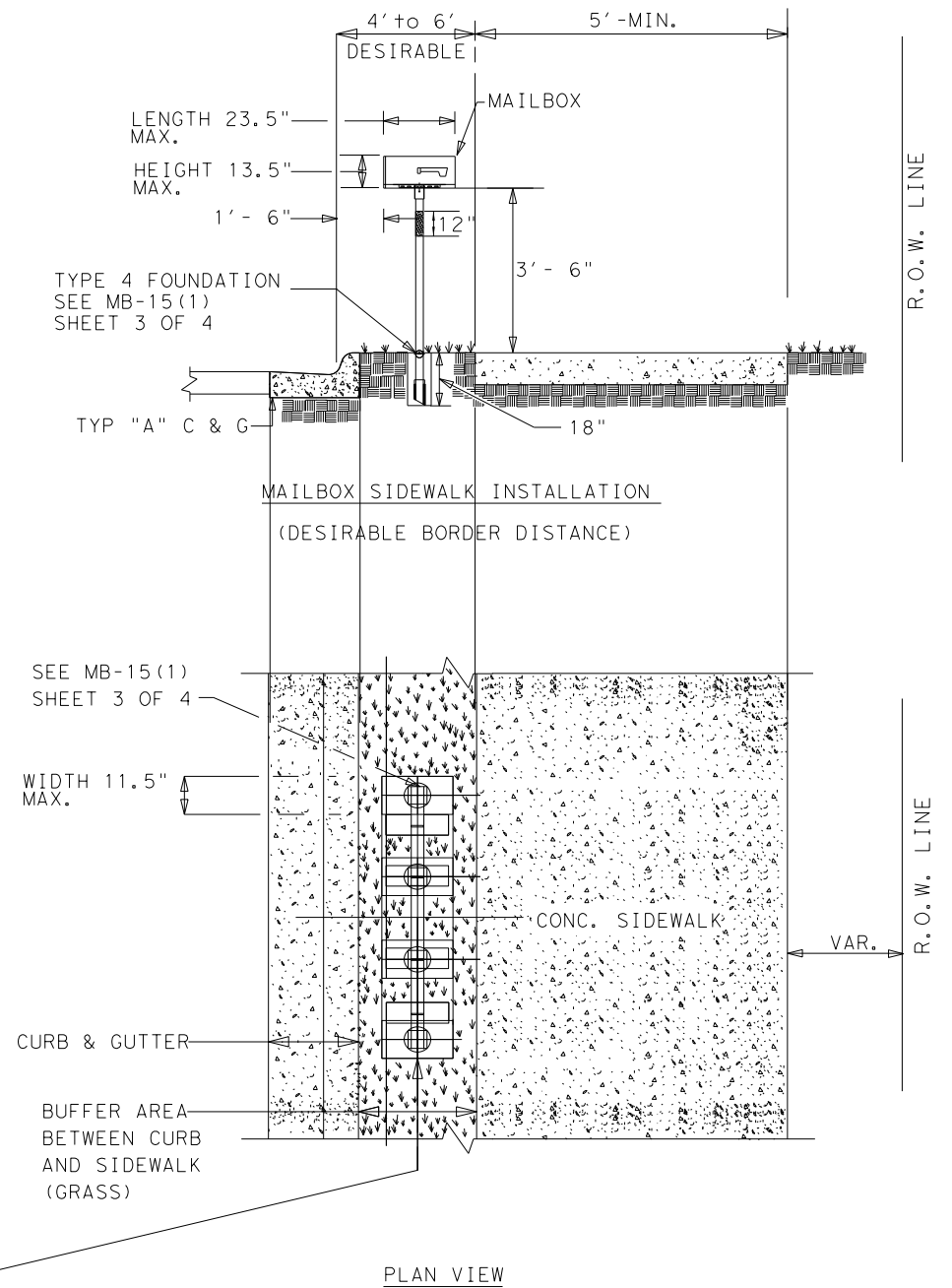
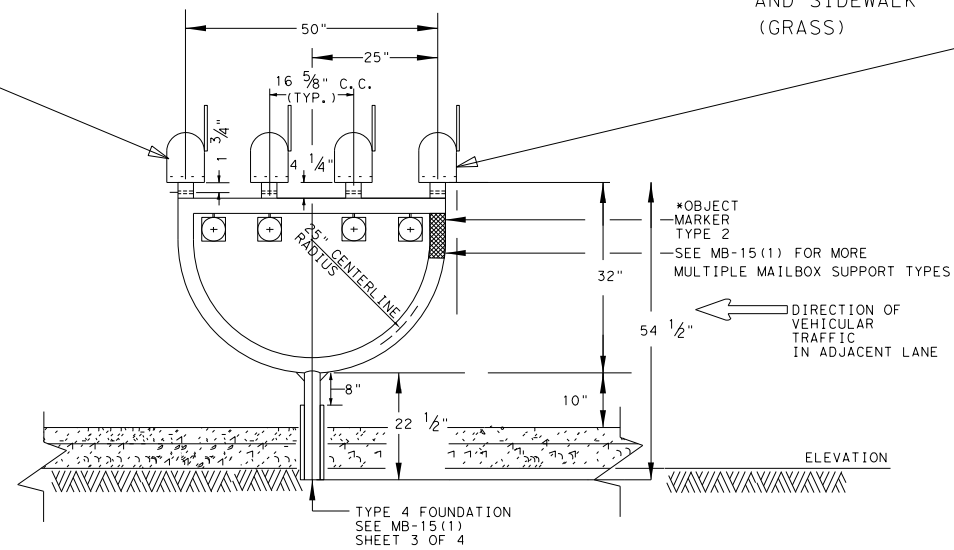
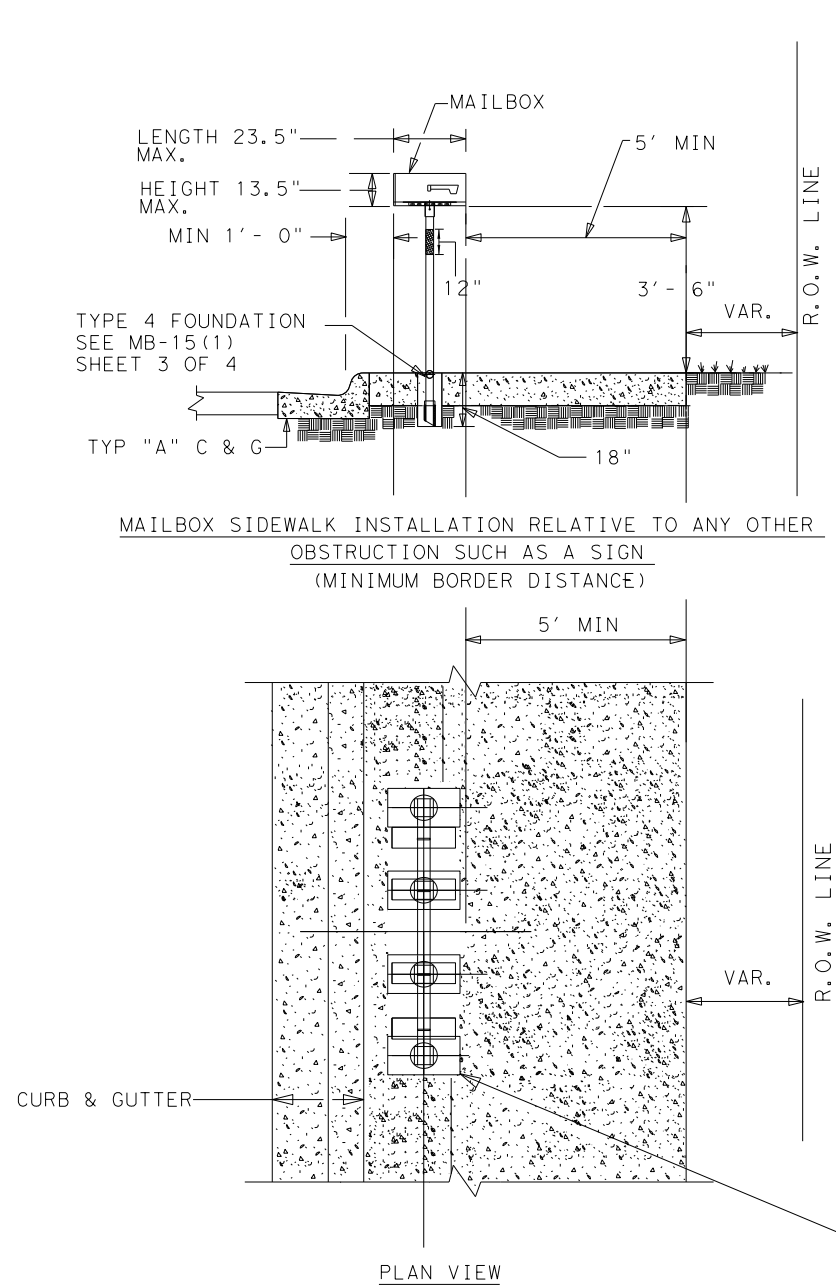


SINGLE MAILBOX PLACEMENT
BEHIND CURBS WITH OR WITHOUT
SIDEWALKS
MB-14(2A)

FILE: MB-14(2A)	DN:	CK:	DW:	CK:
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REVISIONS	0915	12	576	VARIES
	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		360

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SHEET 3 OF 3



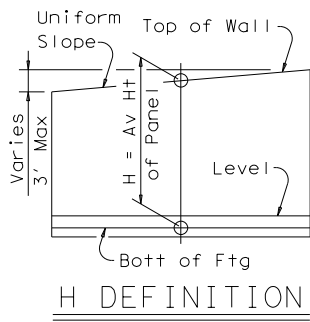
MULTIPLE MAILBOX PLACEMENT
BEHIND CURBS WITH OR WITHOUT
SIDEWALKS

MB-14(2B)

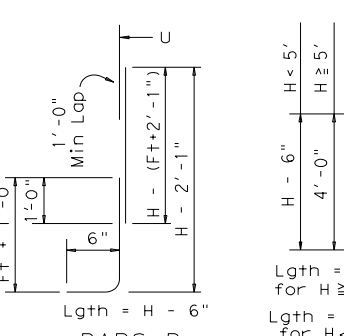
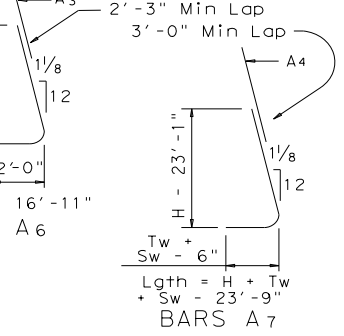
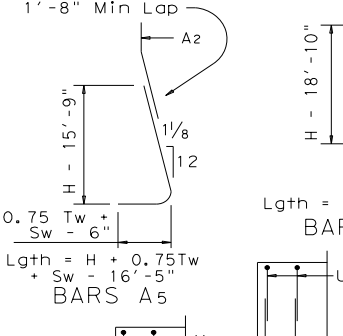
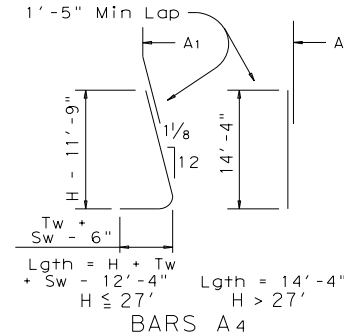
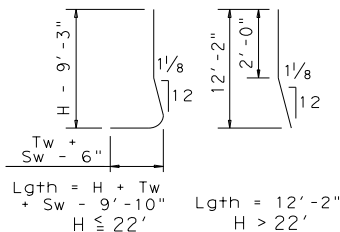
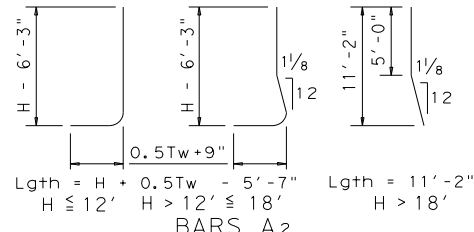
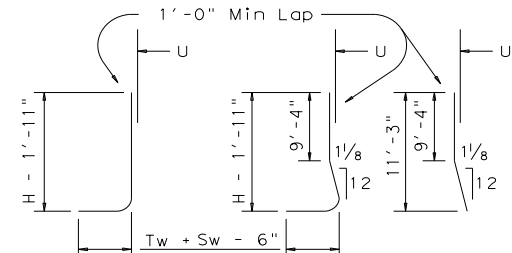
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© TxDOT MAY 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
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	SAT	BEXAR	361	

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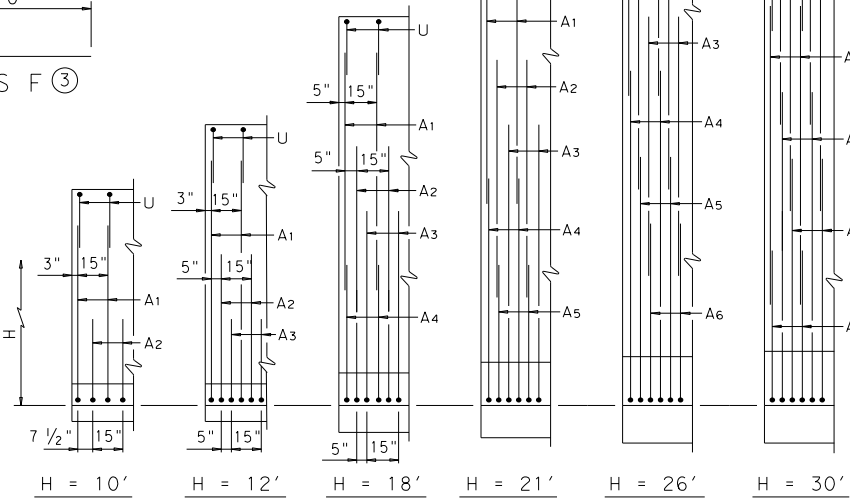
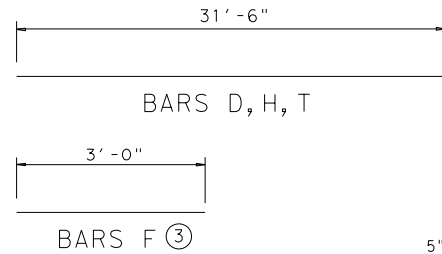
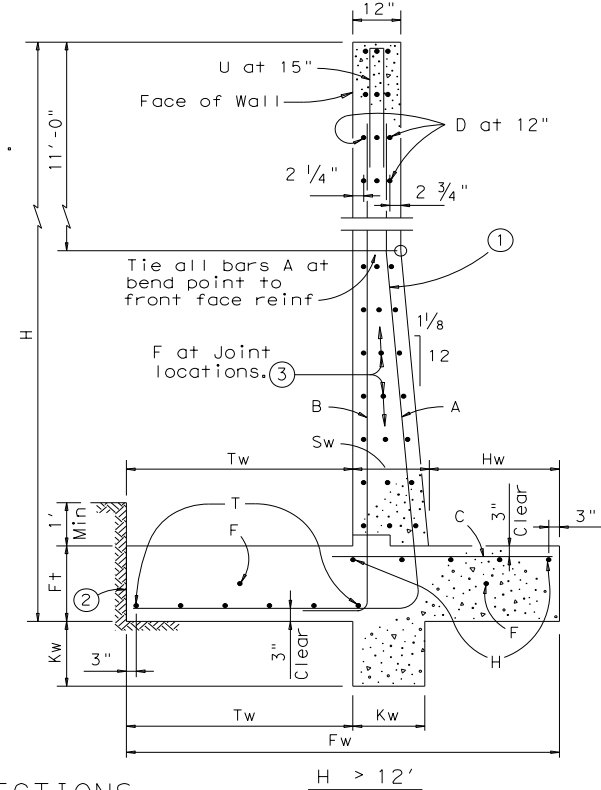
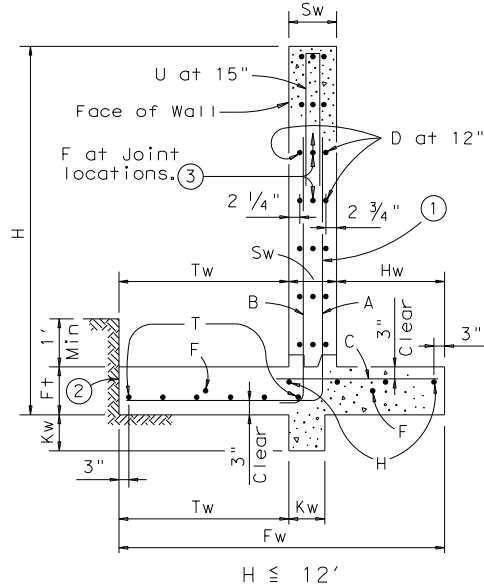
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Wall Height "H"	PROPERTIES							REINFORCING STEEL FOR ONE 32' PANEL (DESIGN B)																												QUANTITY FOR ONE 32' PANEL		Wall Height "H"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	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		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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
									Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Lgth	Wt	Size	No	Spd	Lgth	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Lgth	Wt	CONC (CY)	REINF (LB)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
	(Ft)	Fw	Tw	Sw	Hw	Ft	Kw	T/SF																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					

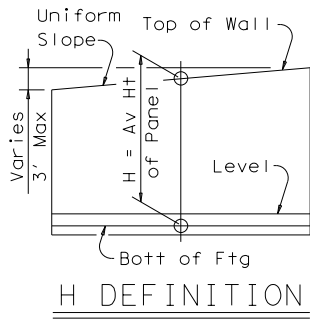


- Place vertical bars inside of horizontal bars (Typ both faces).
- Place footing toe against undisturbed soil.
- See standard RW 2 for size.

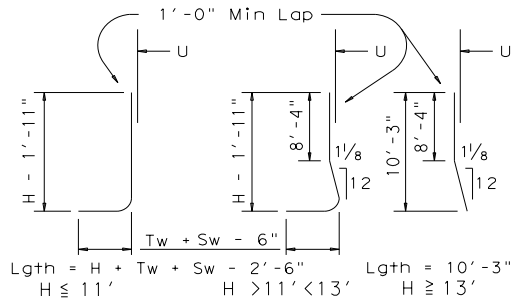


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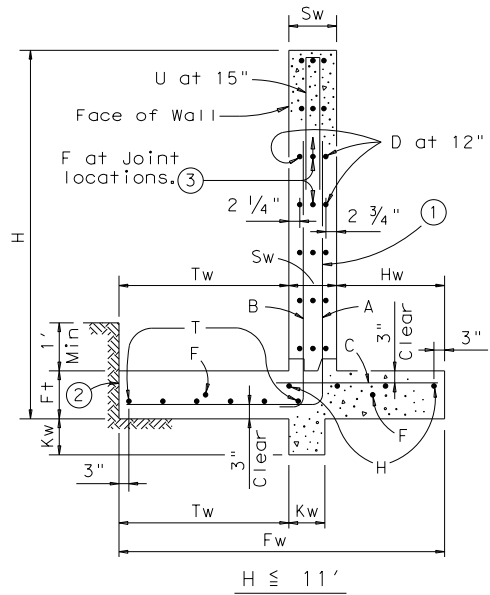
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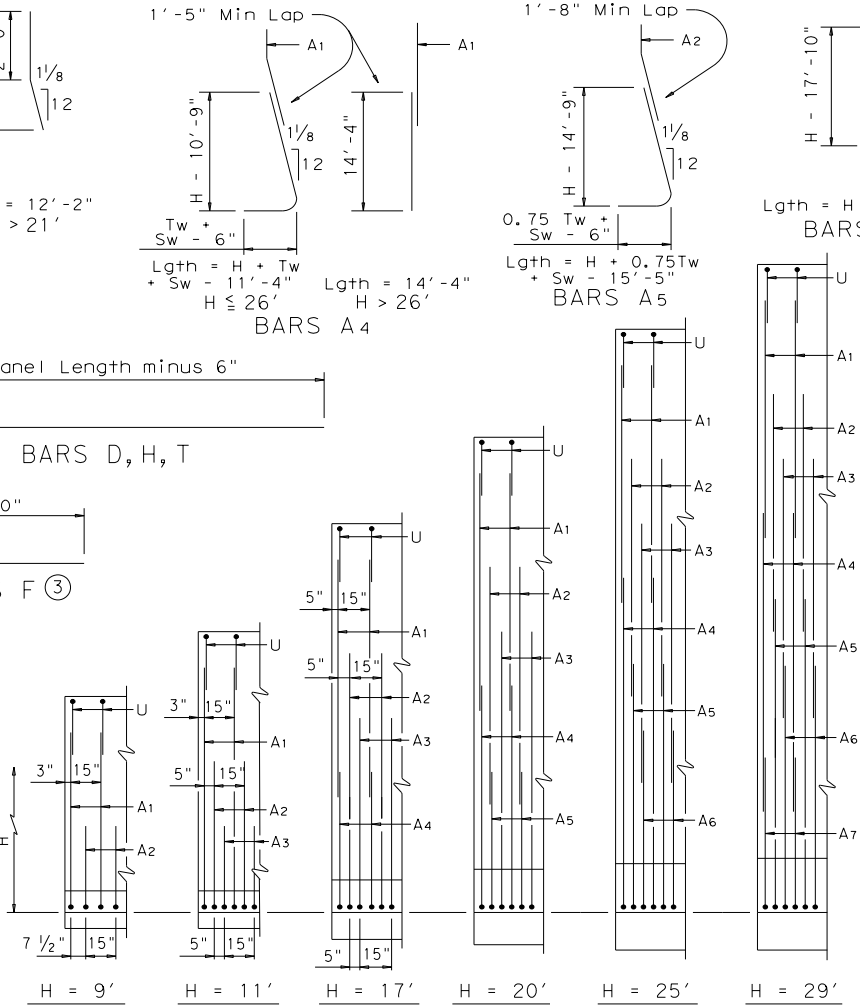
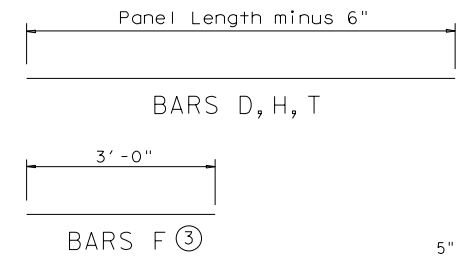
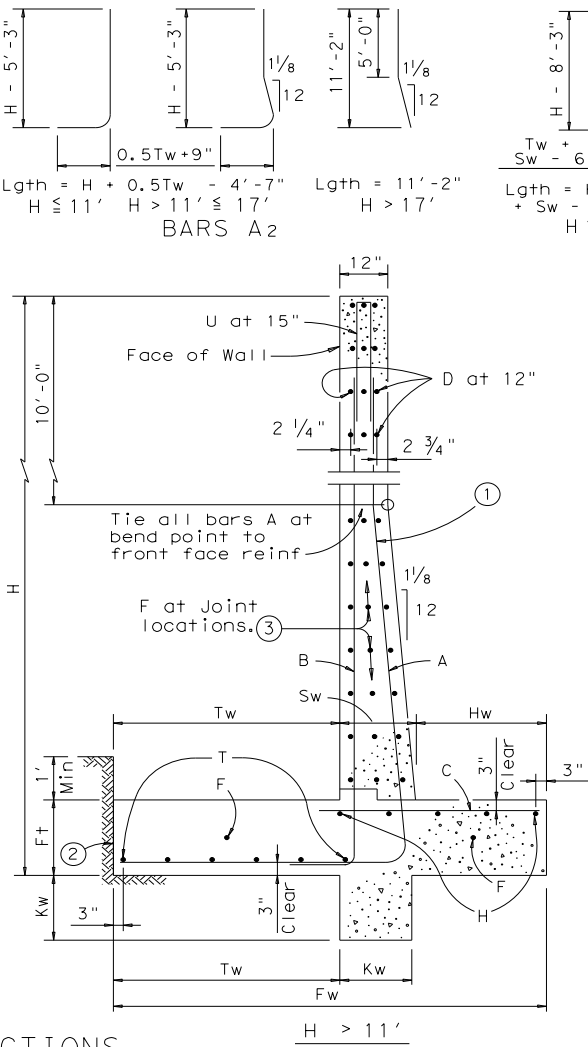
Wall Height "H"	PROPERTIES							REINFORCING STEEL FOR ONE 32' PANEL (DESIGN C)																												QUANTITY FOR ONE 32' PANEL		Wall Height "H"															
	WALL DIMENSIONS							Max Soil Press	A1 ~ 26 #5	A2 ~ 25 #6	A3 ~ 25 #7	A4 ~ 26 #8	A5 ~ 25 #9	A6 ~ 25 #11	A7 ~ 26 #11	B ~ 26 #5	C					D (#5)		Dowel F		H (#5)		T (#5)		U ~ 26 #5		CONC (CY)	REINF (LB)																				
									at 15" c-c	at 15" c-c	at 15" c-c	at 15" c-c	at 15" c-c	at 15" c-c	at 15" c-c	at 15" c-c	No	Spd	Lgth	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Lgth			Wt																			
	(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	Spd	Lgth	Wt	No	Wt	No	Wt	No	Wt	No	Wt	Lgth	Wt				(Ft)												
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													3'-6"	95	#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'-6"	122	#4	26	15"	3'-4"	58	10	329	7	56	3	99	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													5'-6"	149	#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																																										
8	7'-9"	3'-10"	1'-0"	2'-11"	1'-0"	9"	0.35	10'-4"	280	5'-4"	200																																										
9	8'-6"	4'-3"	1'-0"	3'-3"	1'-0"	9"	0.37	11'-9"	319	6'-7"	247																																										
10	9'-2"	4'-7"	1'-0"	3'-7"	1'-0"	9"	0.41	13'-1"	355	7'-8"	288	6'-9"	345																																								
11	9'-10"	4'-11"	1'-0"	3'-11"	1'-0"	1'-0"	0.44	14'-5"	391	8'-11"	335	8'-1"	413																																								
12	10'-6"	5'-3"	1'-1 1/8"	4'-1 7/8"	1'-0"	1'-0"	0.45	15'-10"	429	10'-1"	379	9'-6"	485																																								
13	11'-2"	5'-7"	1'-2"	4'-5"	1'-3"	1'-3"	0.54	10'-3"	278	11'-2"	419	10'-11"	558	8'-5"	584																																						
14	11'-10"	5'-11"	1'-3 1/8"	4'-7 7/8"	1'-3"	1'-3"	0.57	10'-3"	278	12'-5"	466	12'-4"	630	9'-10"	683																																						
15	12'-6"	6'-3"	1'-4"	4'-11"	1'-6"	1'-3"	0.63	10'-3"	278	13'-7"	510	13'-9"	703	11'-2"	775																																						
16	13'-3"	6'-7"	1'-5"	5'-3"	1'-6"	1'-6"	0.66	10'-3"	278	14'-9"	554	15'-2"	775	12'-8"	879																																						
17	13'-10"	6'-11"	1'-6 1/4"	5'-4 3/4"	1'-6"	1'-6"	0.70	10'-3"	278	15'-11"	598	16'-7"	847	14'-1	978																																						
18	14'-6"	7'-3"	1'-7"	5'-8"	1'-9"	1'-6"	0.76	10'-3"	278	11'-2"	419	18'-0"	920	15'-5"	1070	9'-7"	815																																				
19	15'-2"	7'-7"	1'-8 1/8"	5'-10 7/8"	1'-9"	1'-6"	0.79	10'-3"	278	11'-2"	419	19'-5"	992	16'-11"	1174	10'-11"	928																																				
20	16'-0"	8'-0"	1'-9 1/4"	6'-2 3/4"	1'-9"	1'-6"	0.80	10'-3"	278	11'-2"	419	20'-11"	1069	18'-5"	1278	12'-4"	1048																																				
21	16'-6"	8'-3"	1'-10 1/8"	6'-4 7/8"	2'-0"	1'-6"	0.88	10'-3"	278	11'-2"	419	22'-3"	1137	19'-9"	1371	13'-7"	1155																																				
22	17'-3"	8'-7"	1'-11 1/4"	6'-8 3/4"	2'-0"	1'-6"	0.91	10'-3"	278	11'-2"	419	12'-2"	622	21'-2"	1469	15'-0"	1275	6'-1"	808																																		
23	18'-0"	9'-0"	2'-0 1/8"	6'-11 7/8"	2'-3"	1'-6"	0.95	10'-3"	278	11'-2"	419	12'-2"	622	22'-8"	1574	16'-4"	1388	7'-1"	941																																		
24	18'-6"	9'-4"	2'-1 1/4"	7'-0 3/4"	2'-3"	1'-6"	0.99	10'-3"	278	11'-2"	419	12'-2"	622	24'-1"	1672	17'-8"	1502	8'-1"	1074																																		
25	19'-3"	9'-7"	2'-2 3/8"	7'-5 5/8"	2'-3"	1'-9"	1.03	10'-3"	278	11'-2"	419	12'-2"	622	25'-5"	1764	19'-0"	1615	9'-1"	1206																																		
26	20'-0"	10'-0"	2'-3 1/2"	7'-8 1/2"	2'-3"	1'-9"	1.05	10'-3"	278	11'-2"	419	12'-2"	622	27'-0"	1874	20'-5"	1735	10'-1"	1339																																		
27	20'-6"	10'-4"	2'-4 5/8"	7'-9 3/8"	2'-3"	1'-9"	1.09	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	21'-9"	1849	11'-1"	1472	17'-0"	2348																																
28	21'-3"	10'-7"	2'-5 3/4"	8'-2 1/4"	2'-3"	1'-9"	1.13	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	23'-0"	1955	12'-1"	1605	18'-4"	2533	27'-6"	746	#10	76	5"	11'-2"	3652	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"	1'-9"	1.17	10'-3"	278	11'-2"	419	12'-2"	622	14'-4"	995	24'-5"	2075	13'-1"	1738	19'-10"	2740	28'-6"	773	#10	76	5"	11'-6"	3761	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.




SECTIONS



PARTIAL WALL ELEVATIONS

(Showing vertical reinforcing pattern in back face)

- 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

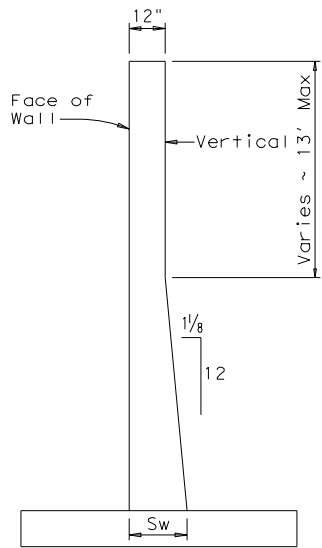
RETAINING WALLS

RW 1(L)C

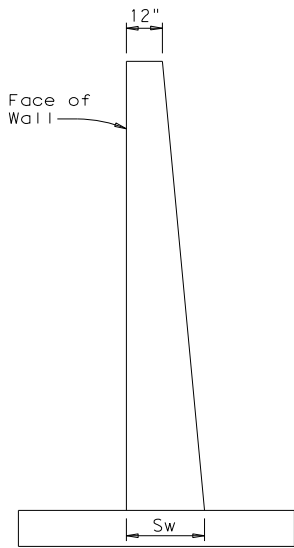
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REVISIONS		0915	12	576	VARIES
		DIST	COUNTY		SHEET NO.
		SAT	BEXAR		364

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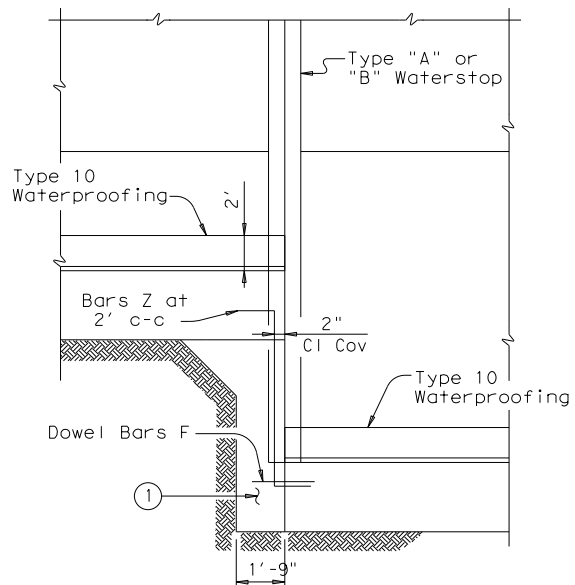
AS DETAILED
ALL HEIGHTS
(Basis for payment)



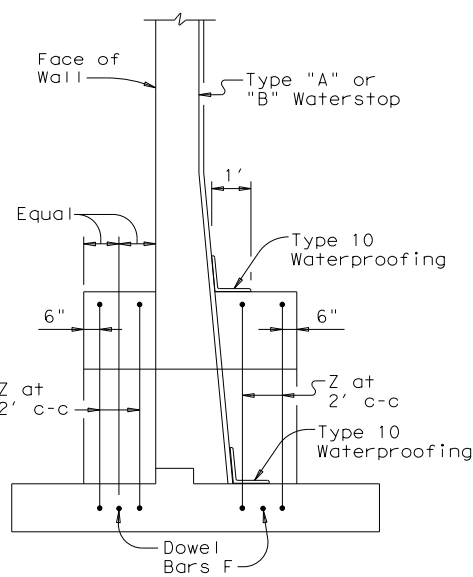
FRONT FACE VERTICAL
BACK FACE SLOPED

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.



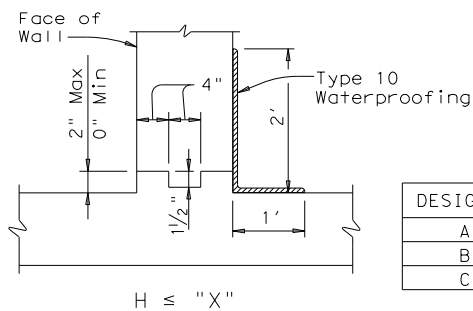
PARTIAL ELEVATION



PARTIAL SECTION

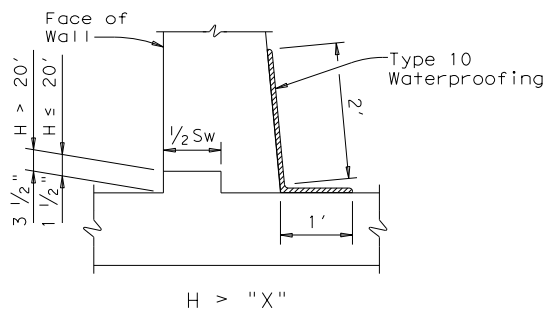
SHOWING WATERSTOP AT FOOTING JOINT

- 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.



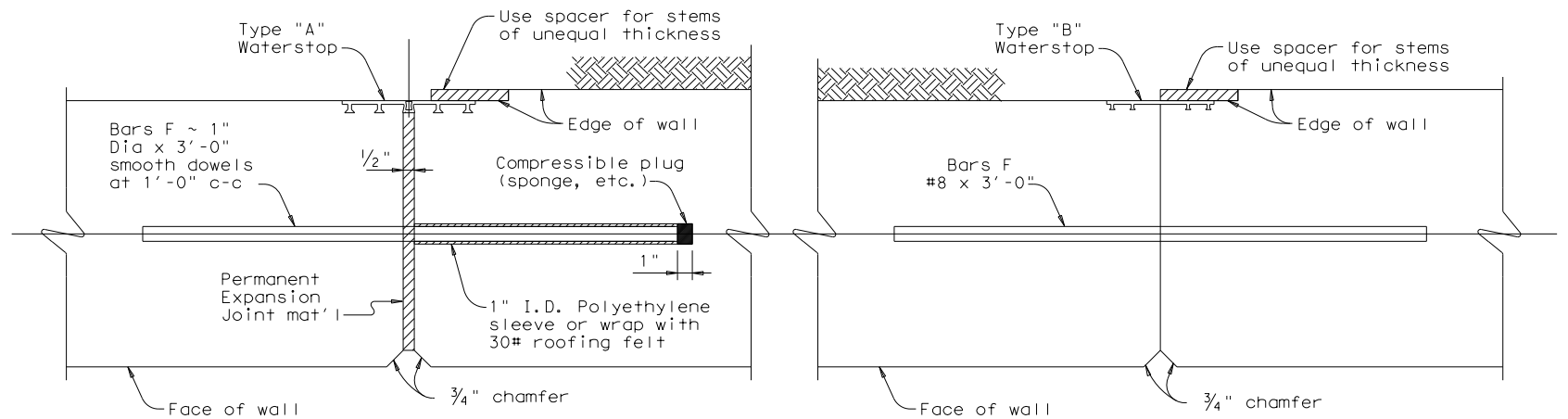
H ≤ "X"

DESIGN	"X"
A	14'
B	12'
C	11'



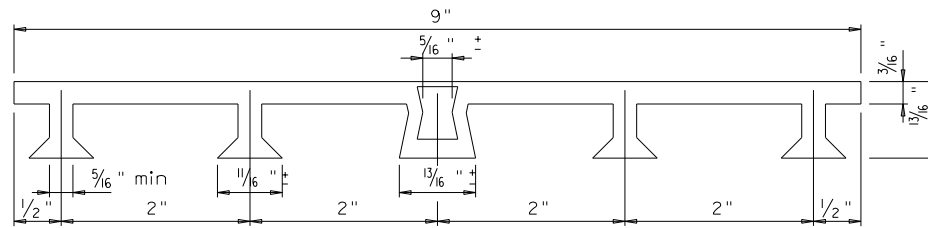
H > "X"

JOINT AND WATERSTOP DETAILS



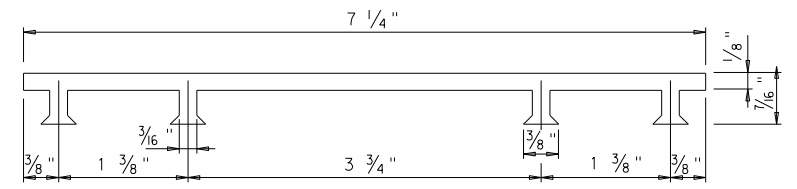
EXPANSION JOINT

CONSTRUCTION JOINT



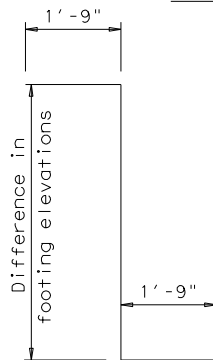
PVC WATERSTOP TYPE "A"

Note: Dimensions and shapes may vary slightly depending on manufacturer.



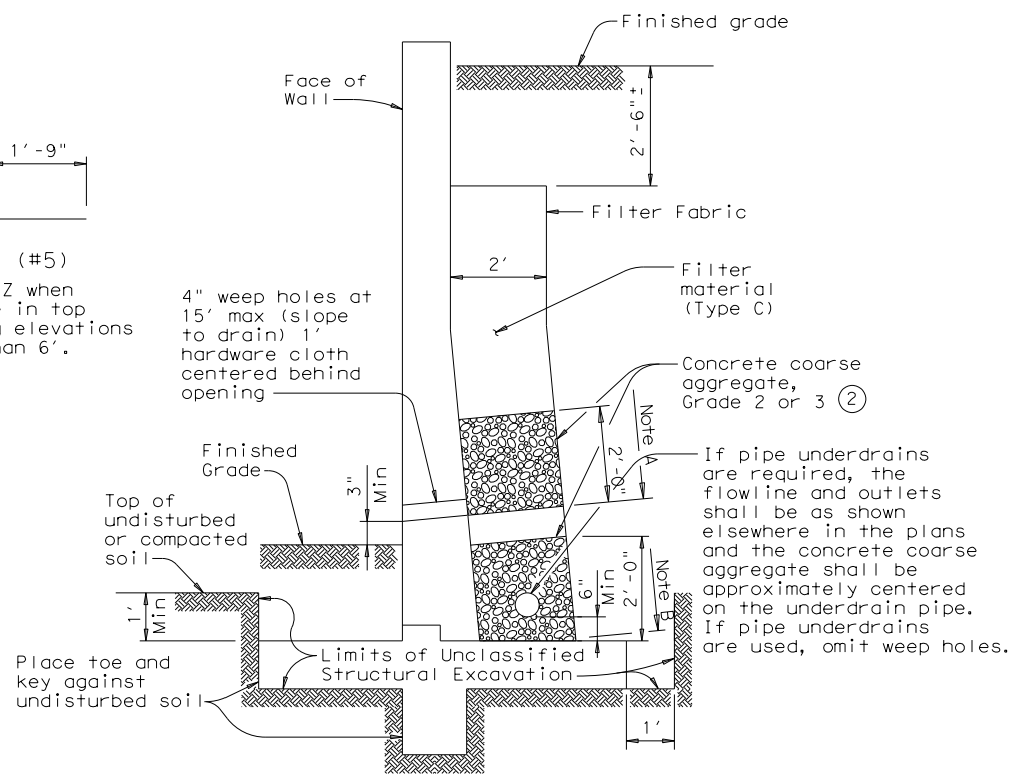
PVC WATERSTOP TYPE "B"

- ② Crushed blast furnace slag, recycled crushed hydraulic cement concrete or combination thereof may not be used.



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 Kw + 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.



Bridge
Division
Standard

RETAINING WALL MISCELLANEOUS DETAILS

RW 2

FILE: rwstde11.dgn	DN: TxDOT	CK: TxDOT	DW: JGD	CK: MJG
©TxDOT March 2010	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
04-11: Added Note 2.	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR		365

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GENERAL NOTES FOR ALL ELECTRICAL WORK

1. The location of all conduits, junction boxes, ground boxes, and electrical services is diagrammatic and may be shifted to accommodate field conditions.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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

1. 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.
2. Provide galvanized steel RMC for all exposed conduits, unless otherwise shown on the plans. Properly bond all metal conduits.
3. 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"

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.
5. 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.
6. 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.
7. Provide PVC junction boxes intended for outdoor use on PVC conduit systems, unless otherwise noted on the plans.

8. 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.
9. 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.
10. 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

1. 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.
2. 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.
3. Do not attach conduit supports directly to pre-stressed concrete beams except as shown specifically in the plans or as approved by the Engineer.
4. 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.
5. 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."
6. Provide and place warning tape approximately 10 in. above all trenched conduit as per Item 618.
7. 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.
8. 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.
9. 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.
10. 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.
11. At all electrical services, install a 6 AWG solid copper grounding electrode conductor.
12. 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).
13. 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.
14. 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.



Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
CONDUITS & NOTES

ED(1) - 14

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© TxDOT	October 2014	CONT	SECT	JOB		HIGHWAY			
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		DIST		COUNTY		SHEET NO.			
		SAT		BEXAR		366			

71A

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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 splice. 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.

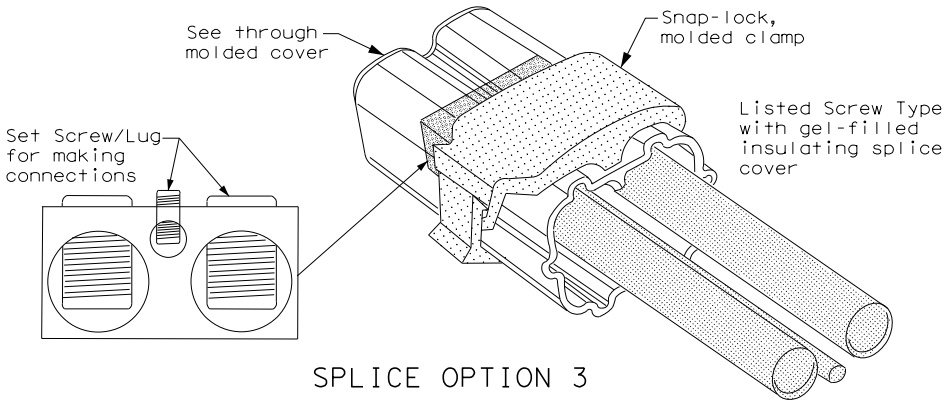
GROUND RODS & GROUNDING ELECTRODES

A. MATERIAL INFORMATION

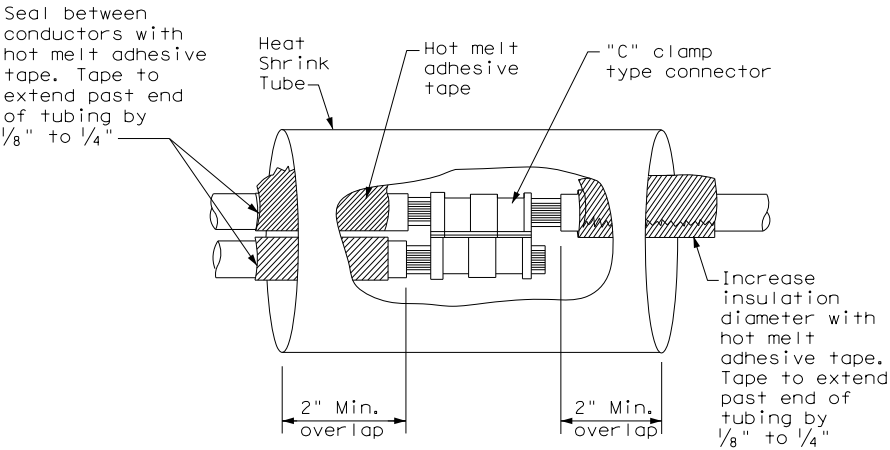
1. Provide and install a grounding electrode at electrical services. Provide ground rods according to DMS 11040 and the plans. Larger diameter or longer length rods may be called for in some specific locations, see the individual plans sheets. Concrete encased grounding electrodes may be called for in specific locations including electrical service, see individual plan sheets.

B. CONSTRUCTION METHODS

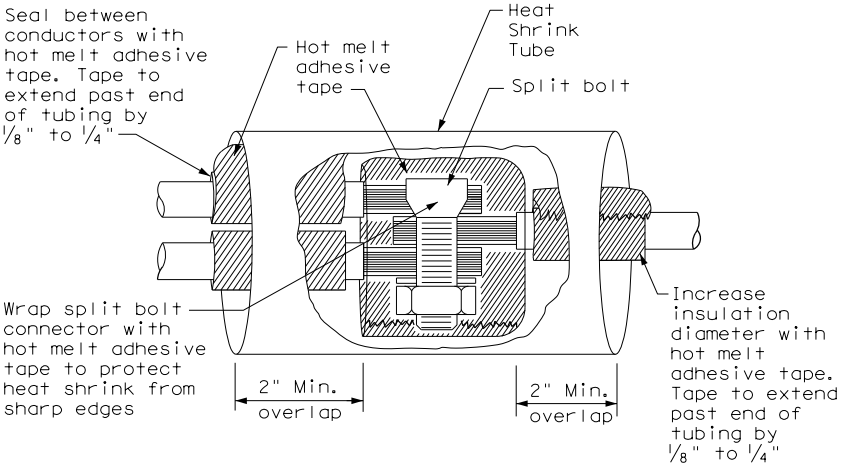
1. Furnish auxiliary ground rods for lightning protection and install in soil, concrete, or both, as called for in the plans. For ground rods installed in concrete, ensure the connection of the conductor to the ground rod is readily accessible for inspection or repairs. For ground rods installed in soil, 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 3
Listed Screw Type



SPLICE OPTION 1
Compression Type



SPLICE OPTION 2
Split Bolt Type



Texas Department of Transportation

Traffic Operations Division Standard

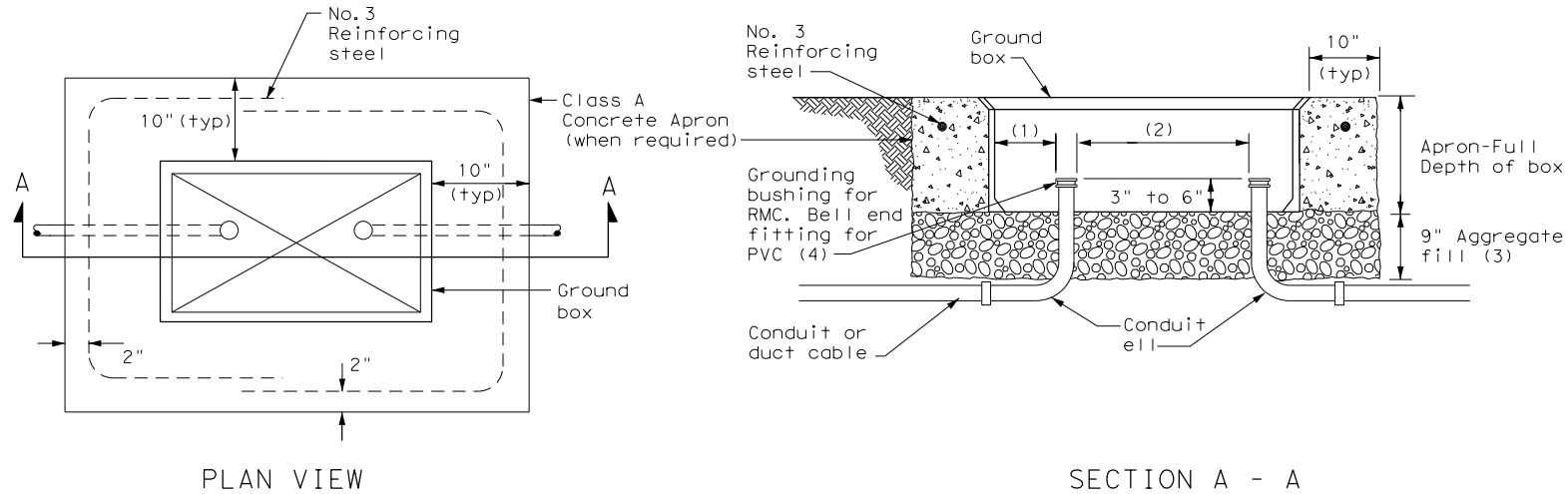
ELECTRICAL DETAILS CONDUCTORS

ED (3) - 14

FILE:	ed3-14.dgn	DN:	TxDOT	CK:	TxDOT	DW:	TxDOT	CK:	TxDOT
© TxDOT	October 2014	CONT	SECT	JOB		HIGHWAY			
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		DIST		COUNTY		SHEET NO.			
		SAT		BEXAR		367			

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APRON FOR GROUND BOX

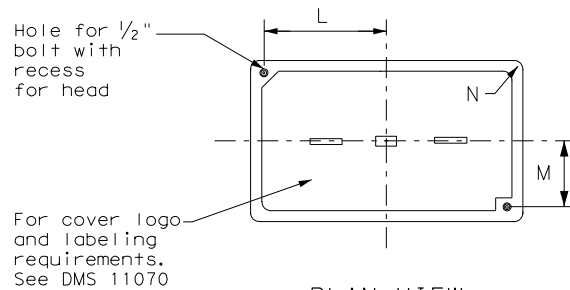
- (1) Uniformly space ends of conduits within the ground box. Position ends of conduits so that ground box walls do not interfere with the installation of grounding bushings or bell end fittings.
- (2) Maintain sufficient space between conduits to allow for proper installation of bushings.
- (3) Place 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 elbows 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

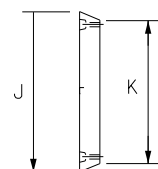
TYPE	OUTSIDE DIMENSIONS (INCHES) (Width x Length X Depth)
A	12 X 23 X 11
B	12 X 23 X 22
C	16 X 29 X 11
D	16 X 29 X 22
E	12 X 23 X 17

GROUND BOX COVER DIMENSIONS

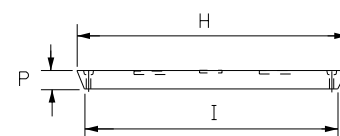
TYPE	DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2



PLAN VIEW



END



SIDE

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.



Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS

GROUND BOXES

ED(4) - 14

FILE: ed4-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	0915	12	576	VARIES
	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		368

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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)

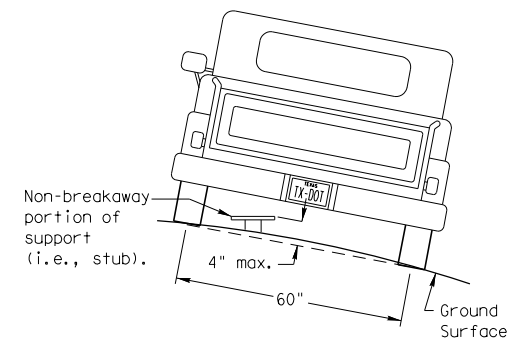
Anchor Type

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))

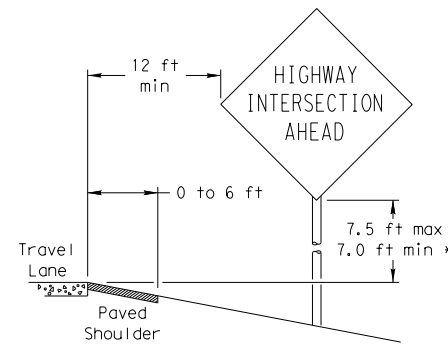
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



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).

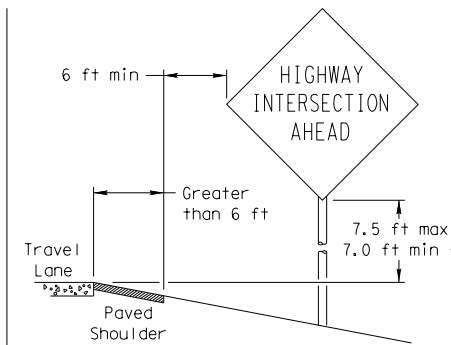
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

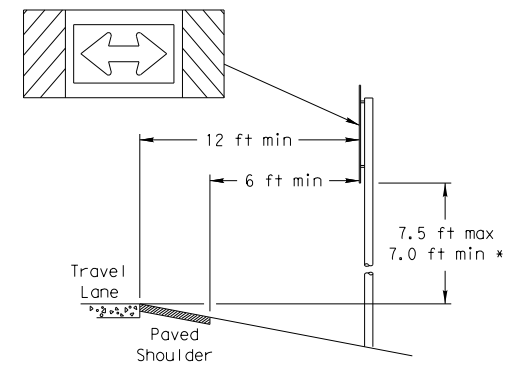
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



GREATER THAN 6 FT. WIDE

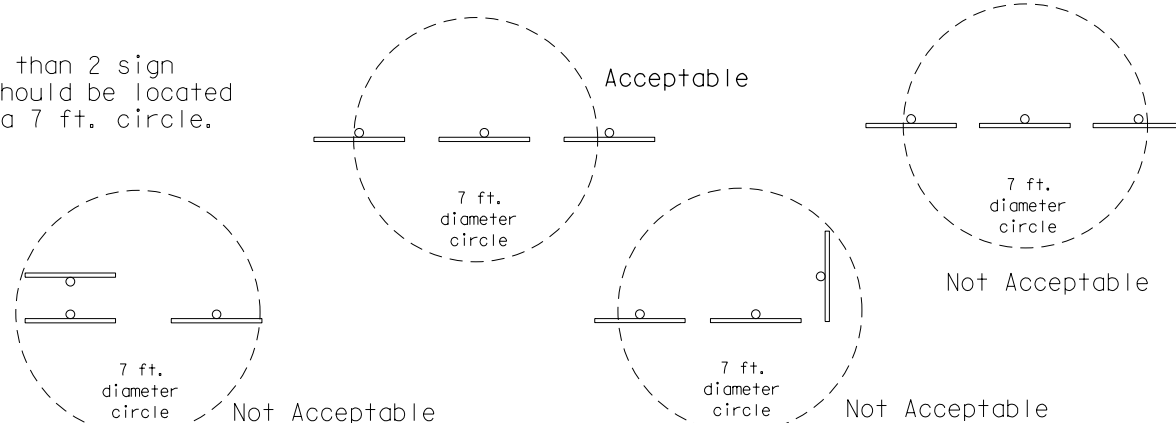
When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

T-INTERSECTION

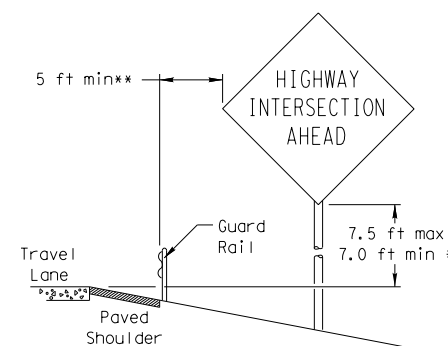


When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.

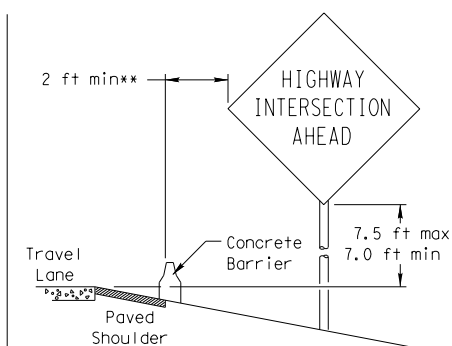
No more than 2 sign posts should be located within a 7 ft. circle.



BEHIND BARRIER



BEHIND GUARDRAIL

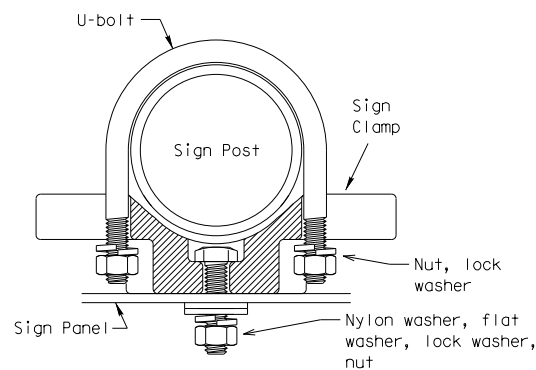


BEHIND CONCRETE BARRIER

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

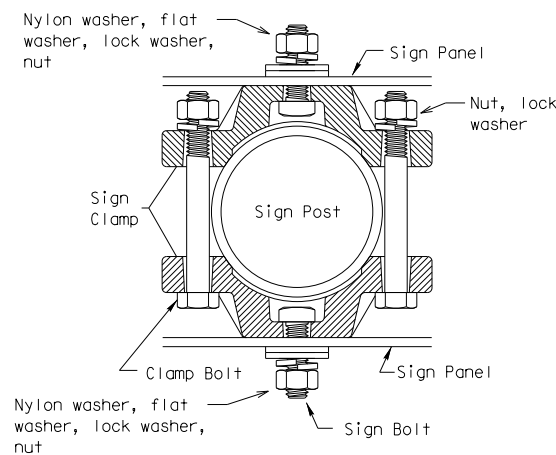


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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.

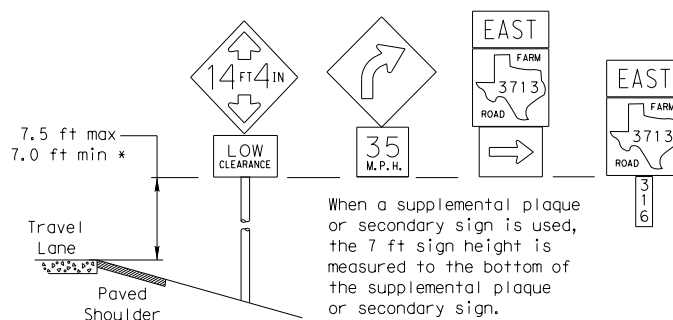
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



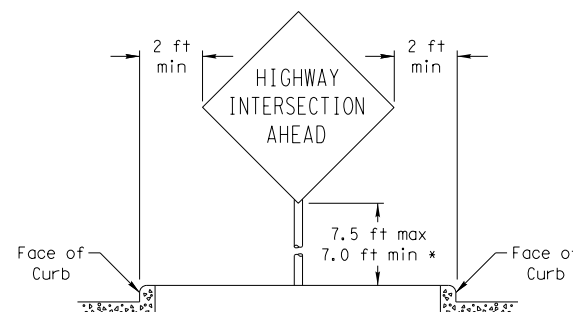
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES

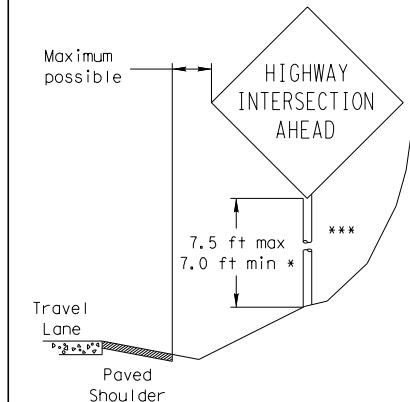


When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

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.



SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

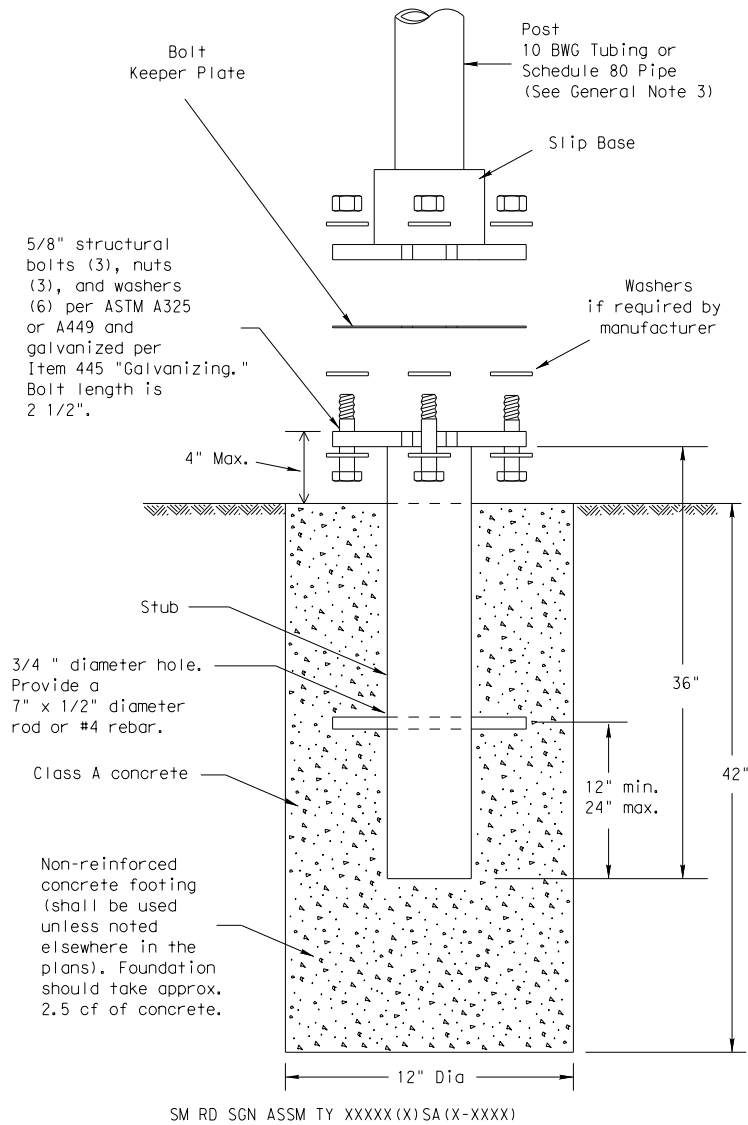
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		SAT	BEXAR	369

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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 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

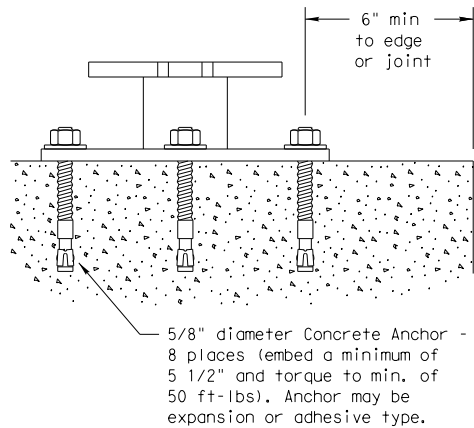
Foundation

- 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



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, "Epoxies 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.



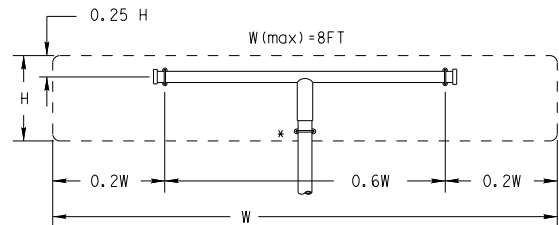
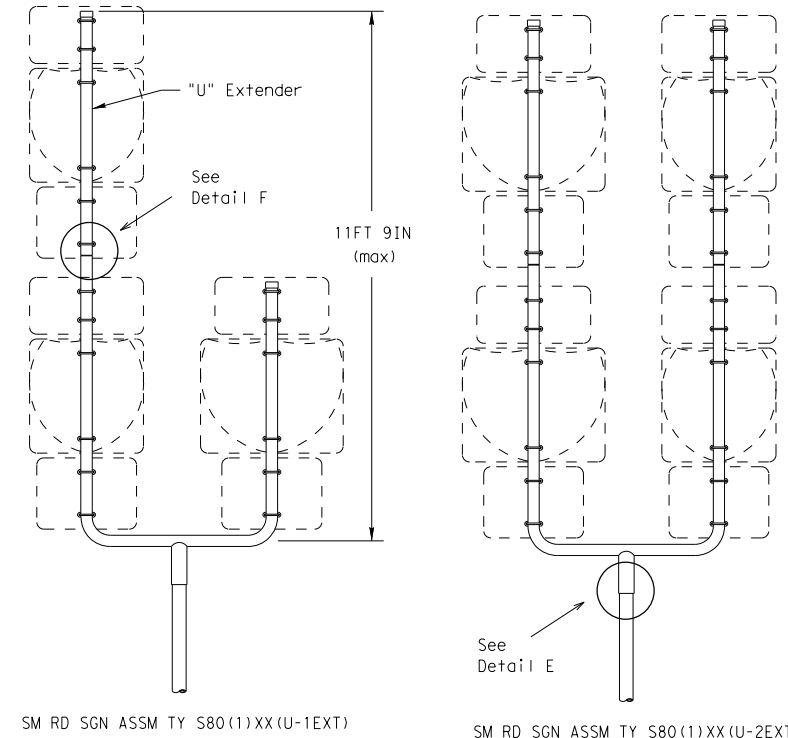
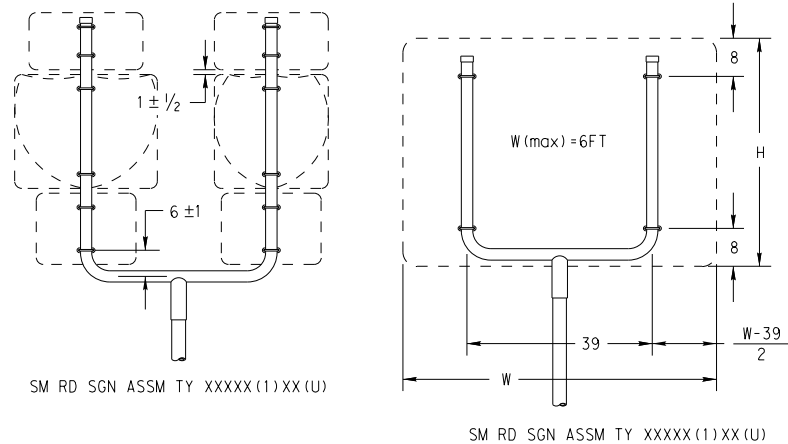
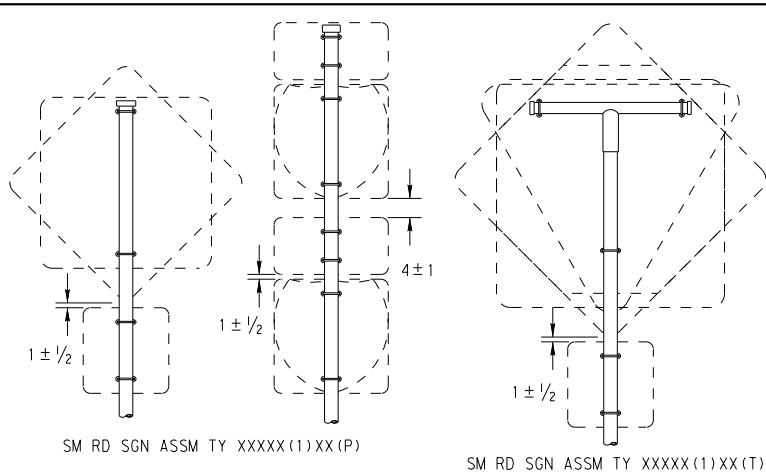
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

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		SAT	BEXAR		370

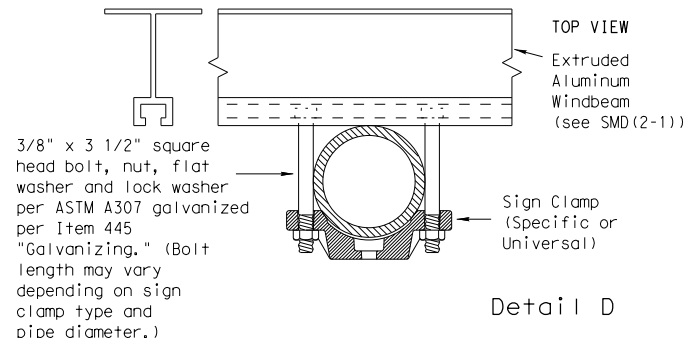
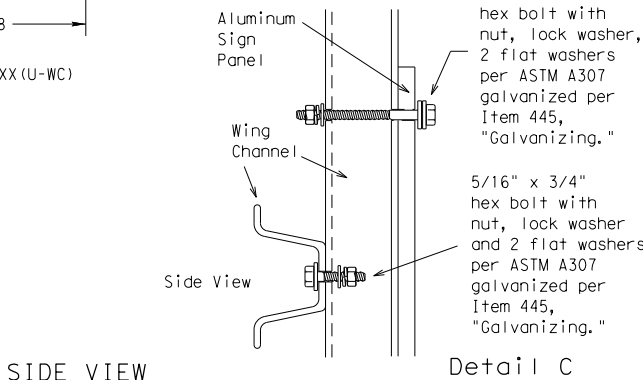
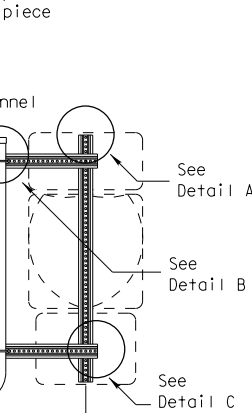
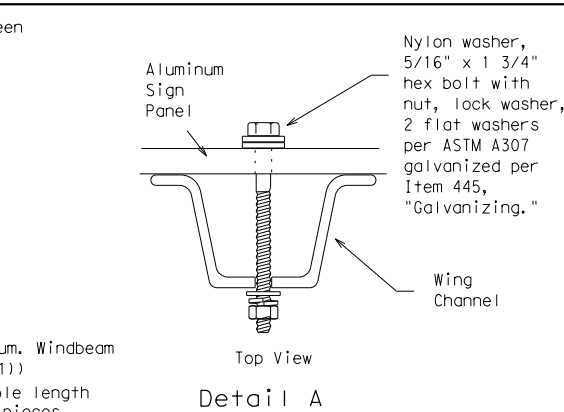
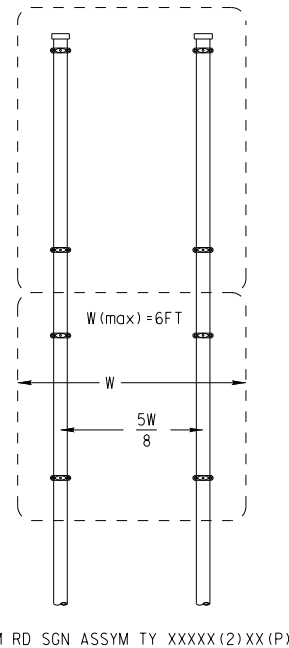
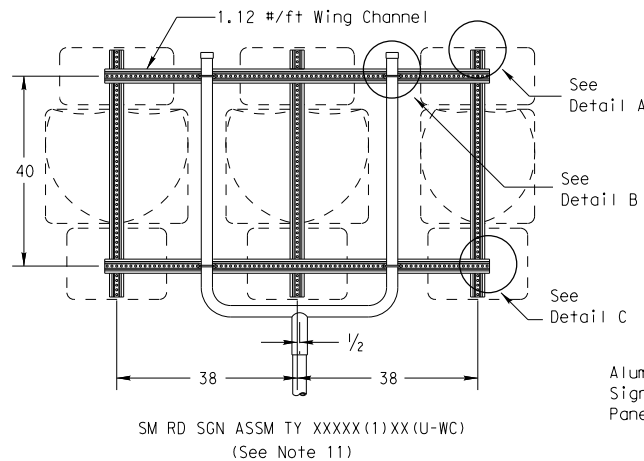
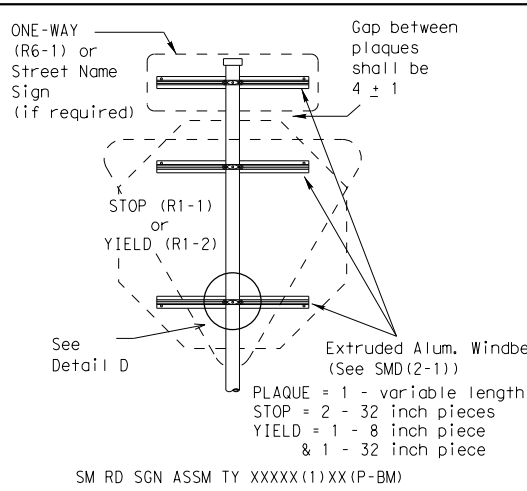
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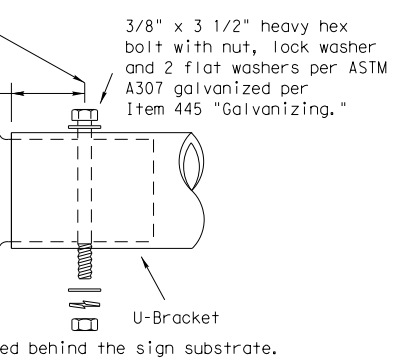
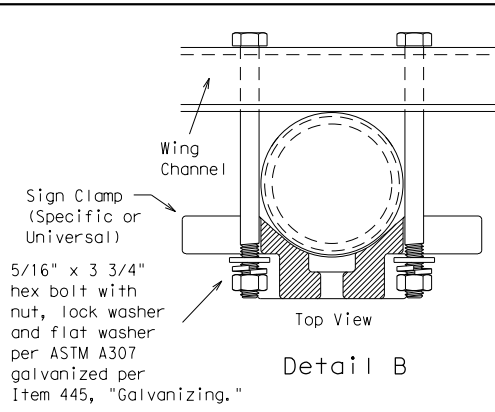
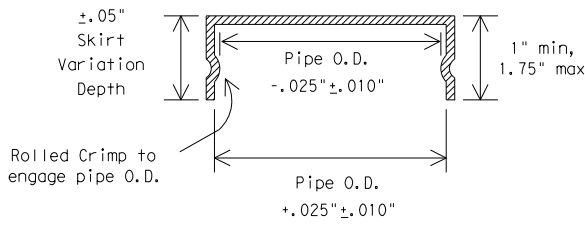


SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

All dimensions are in english
unless detailed otherwise.



FRICION CAP DETAIL



REQUIRED SUPPORT		
Regulatory	SIGN DESCRIPTION	SUPPORT
	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
Warning	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)
Warning	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	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)
Warning	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

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."
- Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
- 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.
- Post open ends shall be fitted with Friction Caps.
- Sign blanks shall be the sizes and shapes shown on the plans.



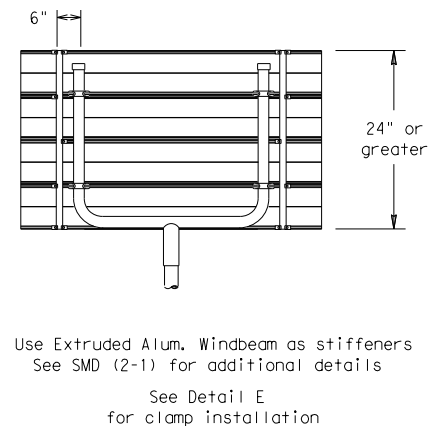
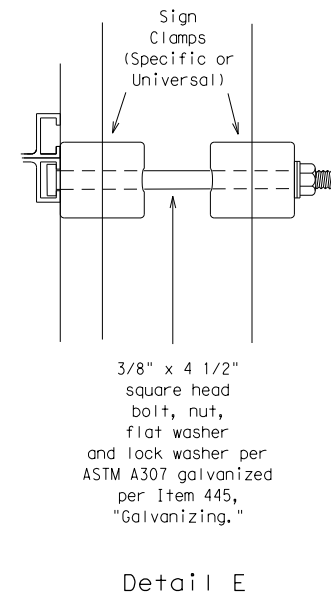
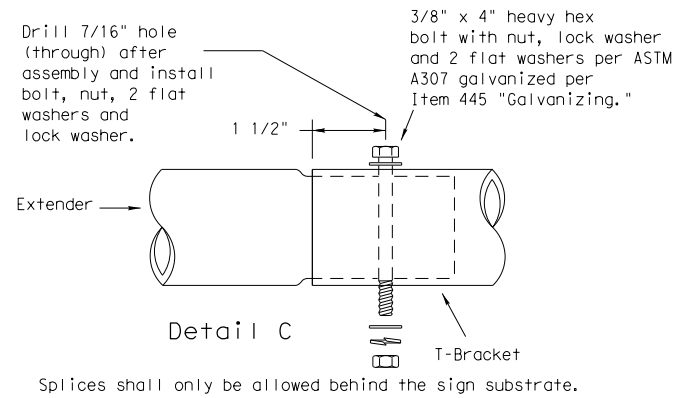
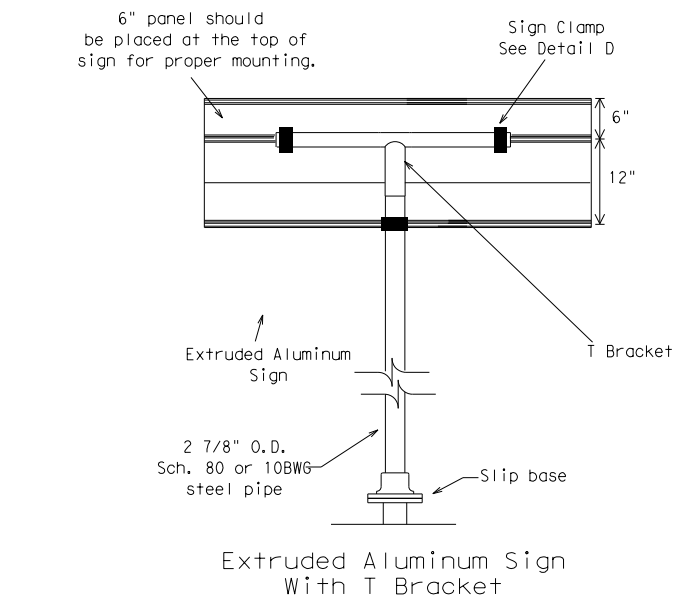
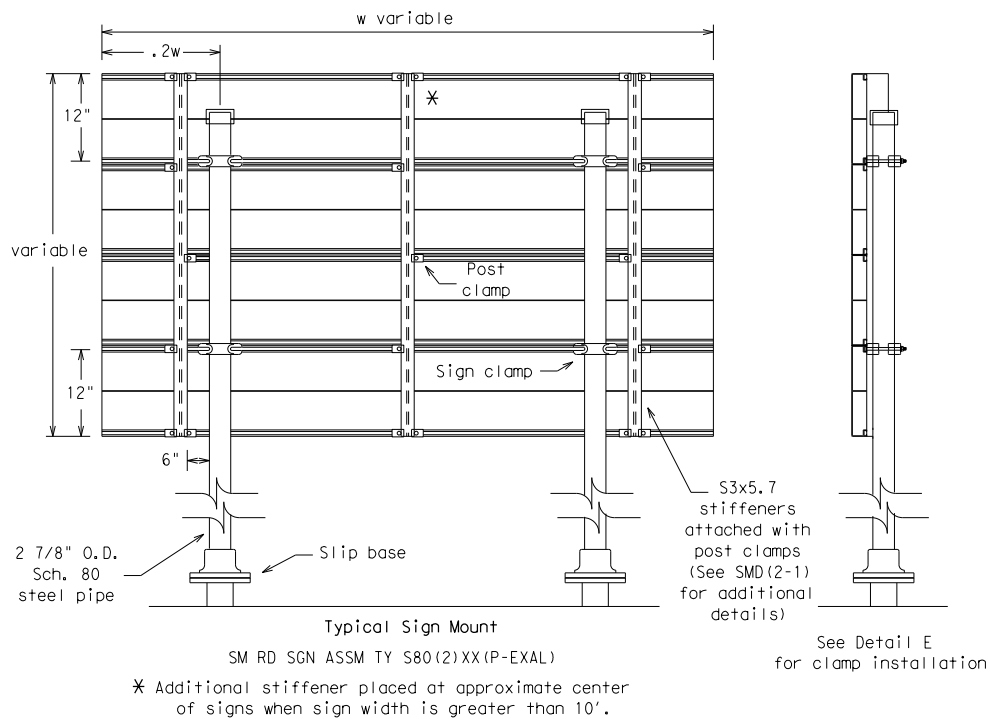
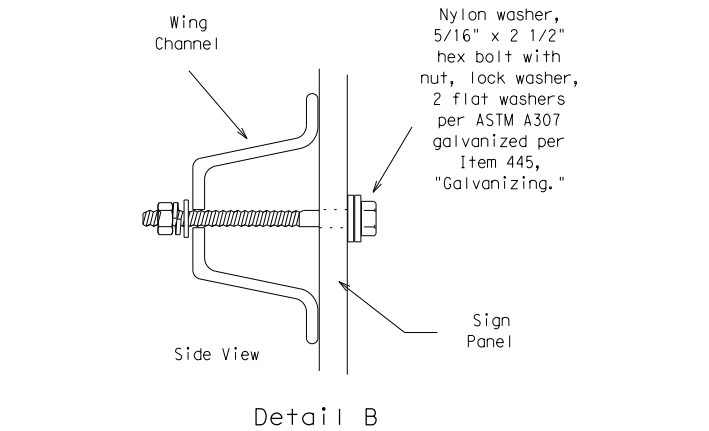
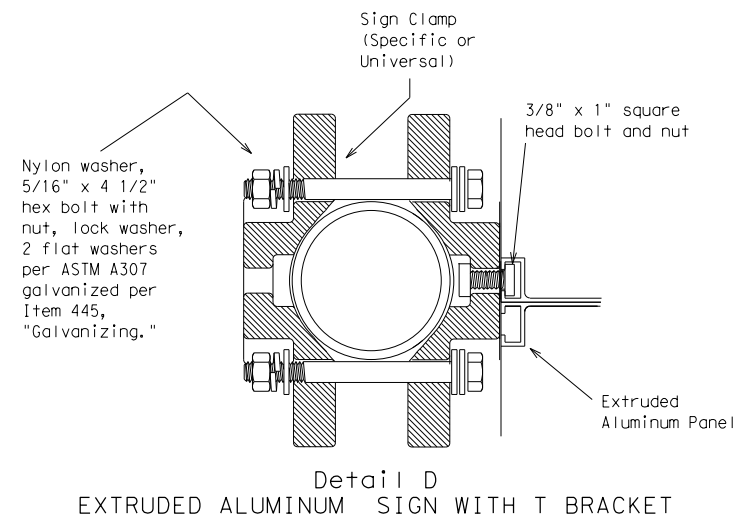
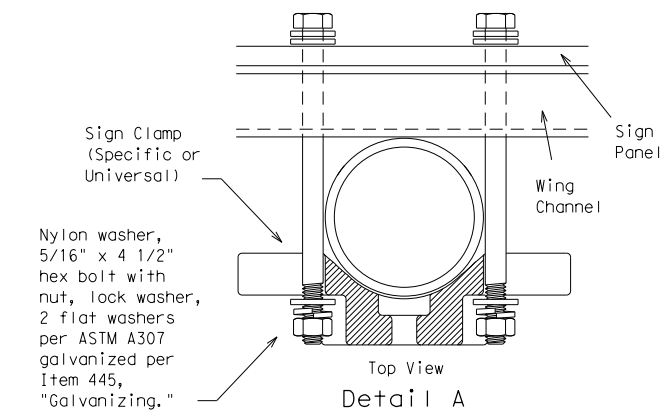
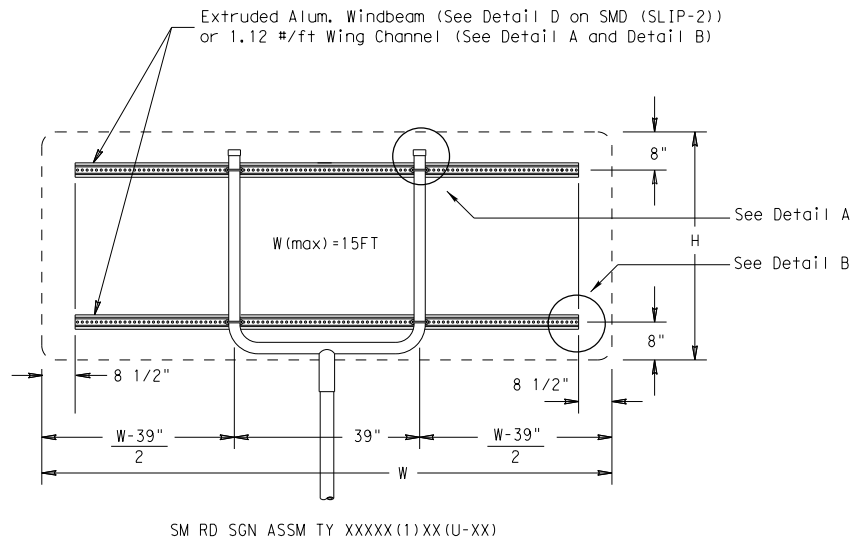
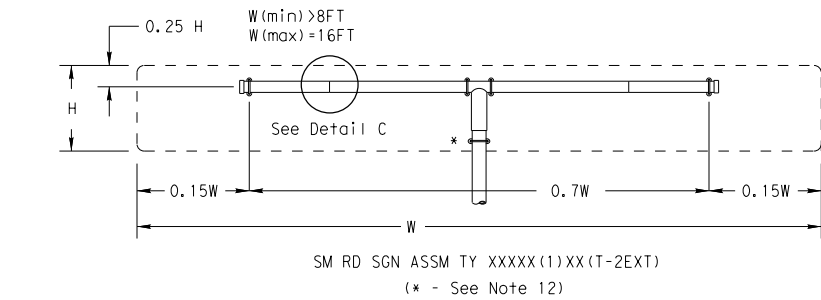
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

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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.

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)
	48x60-inch signs	TY S80(1)XX(T)
Warning	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)




SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM SMD(SLIP-3) -08

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9-08	REVISIONS	CONT	SECT	JOB
		0915	12	576
		DIST	COUNTY	SHEET NO.
		SAT	BEXAR	372

DATE: 11/21/2018 3:12:11 PM
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NOTE:
 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.

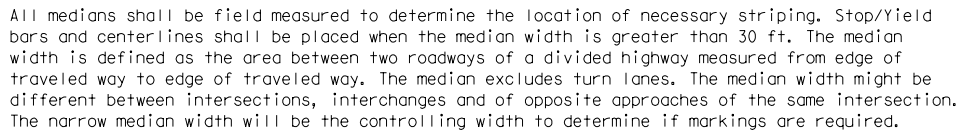
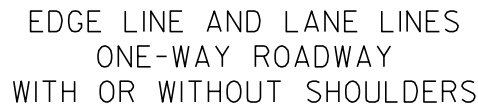
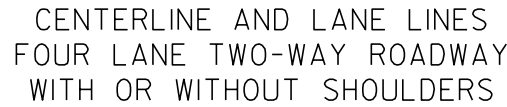
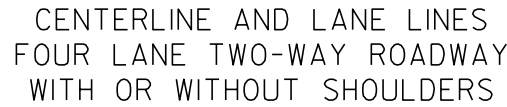
 Texas Department of Transportation	Traffic Operations Division Standard			
<h1>DELINEATOR & OBJECT MARKER MATERIAL DESCRIPTION</h1> <h2>D & OM(1) - 15</h2>				
FILE: dom1-15.dgn	DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
© TxDOT August 2004	CONT	SECT	JOB	HIGHWAY
REVISIONS 10-09 3-15 4-10	0915	12	576	VARIES
	DIST	COUNTY		SHEET NO.
	SAT	BEXAR		373
20A				

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DATE: 11/21/2018 3:12:11 PM
FILE: P:\111\35\07\design\Civil\Standards\Signing\dom2-15.dgn

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	GF1	GF2
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		SURFACE MOUNT	STEEL	PLASTIC	
	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.			NOTE 1. Install per manufacturer's recommendations.		
TYPES 1,3, AND 4 OBJECT MARKERS AND CHEVRONS		CHEVRONS AND ONE DIRECTION LARGE ARROW SIGN		DELINEATORS AND TYPE 2 OBJECT MARKERS		
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	
FILE: dom2-15.dgn		DN: TxDOT		CK: TxDOT		DW: TxDOT
© TxDOT August 2004		CONT SECT		JOB		HIGHWAY
REVISIONS		0915 12		576		VARIES
10-09 3-15		DIST COUNTY		SHEET NO.		
4-10		SAT BEXAR				374
		20B				

DATE: 11/21/2018 3:12:12 PM
FILE: P:\1111\35107\des\an\civil\Standards\PavementMarkers\bm\12.dgn



GENERAL NOTES

1. 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.
2. 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.

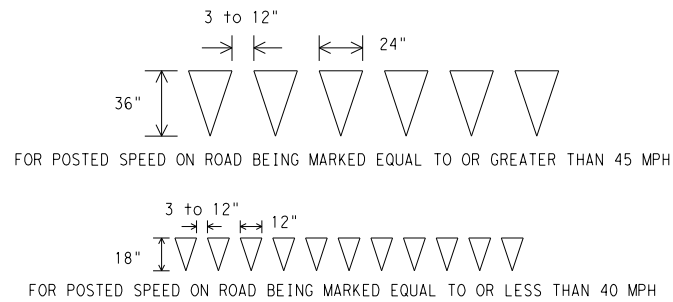


1. No-passing zone on bridge approach is optional but if used, it shall be a minimum 500 feet long.
2. For crosshatching length (L) see Table 1.
3. The width of the offset (W) and the required crosshatching width is the full shoulder width in advance of the bridge.
4. The crosshatching is not required if delineators or barrier reflectors are used along the structure.
5. For guard fence details, refer elsewhere in the plans.

ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT

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

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 cross-hatching should be:

$$L = 8 \times 70 = 560 \text{ ft.}$$

A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the cross-hatching should be:

$$L = 4(40)^2 / 60 = 106.67 \text{ ft. rounded to 110 ft.}$$


TYPICAL STANDARD PAVEMENT MARKINGS

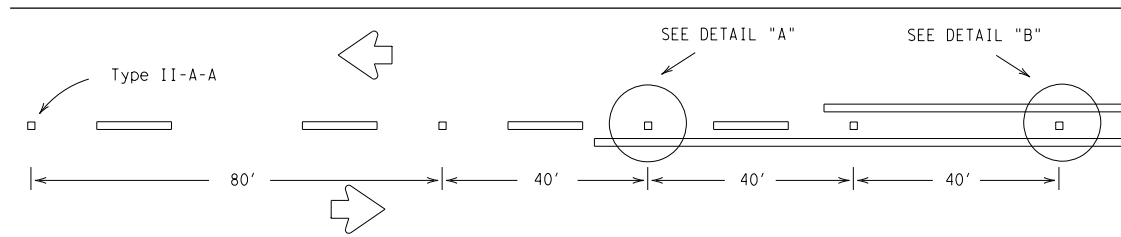
PM (1) - 12

© TxDOT November 1978		DN: TXDOT		CK: TXDOT	DW: TXDOT	CK: TXDOT
REVISONS		CONT	JOB		HIGHWAY	
8-95	2-12	0915	576		VARIES	
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8-00		SAT	BEXAR			375
3-03						
22A						

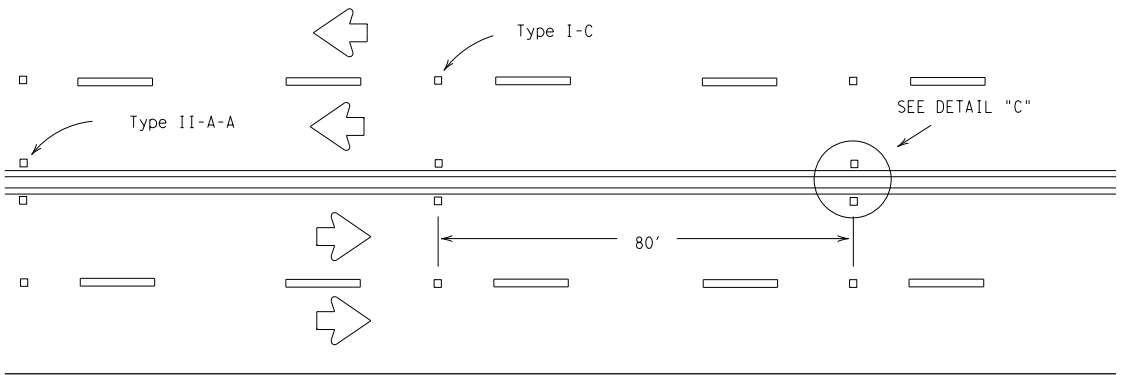
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REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

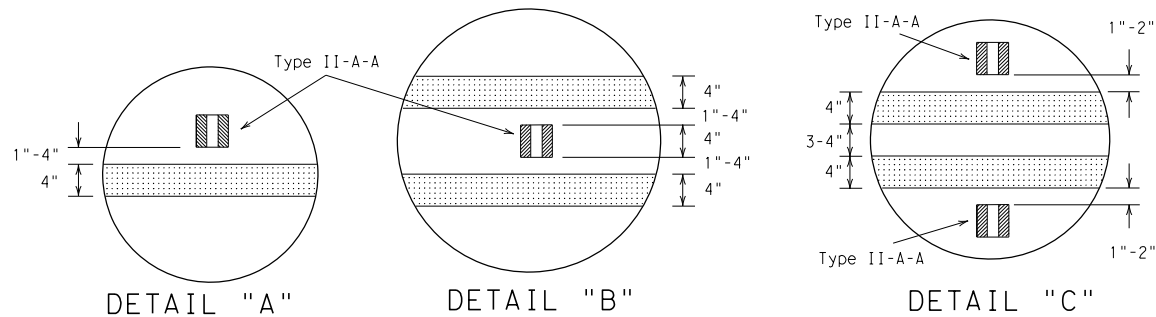


CENTERLINE FOR ALL TWO LANE ROADWAYS



CENTERLINE & LANE LINES
FOR FOUR LANE TWO-WAY HIGHWAYS

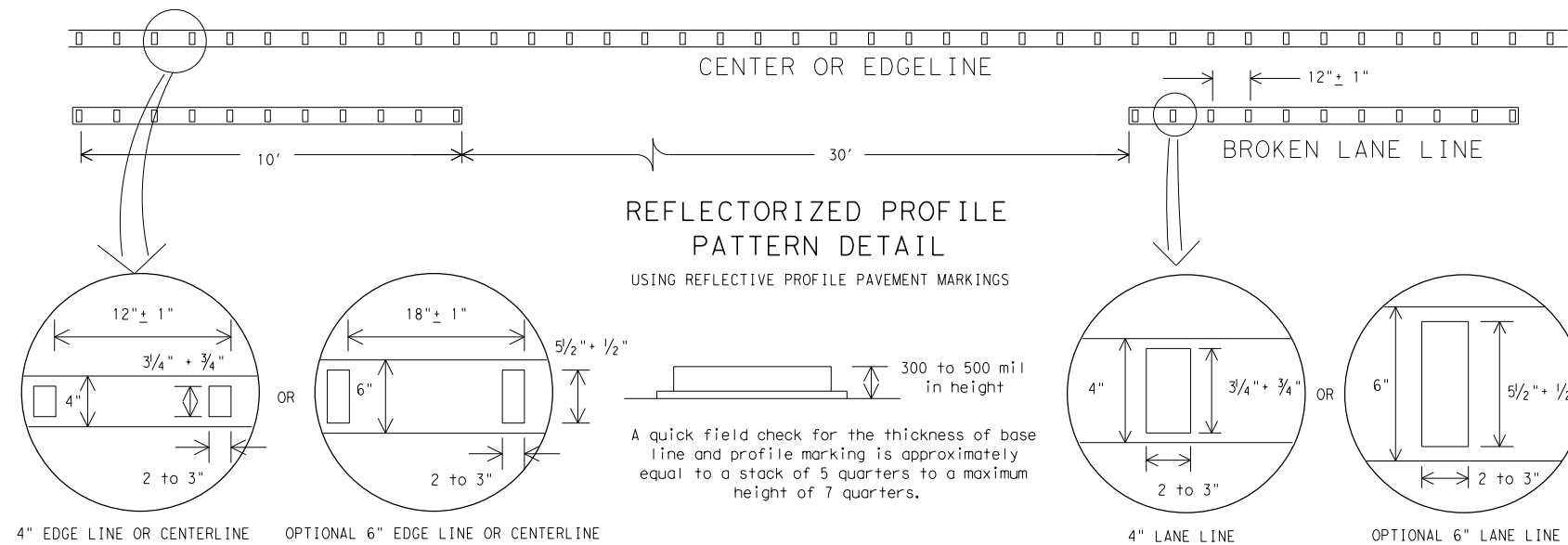
Raised pavement marker Type I-C, clear face toward normal traffic, shall be placed on 80-foot centers.



DETAIL "A"

DETAIL "B"

DETAIL "C"



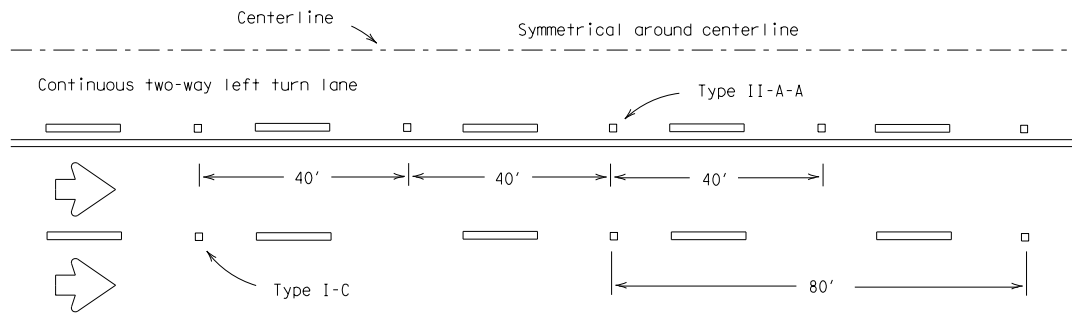
REFLECTORIZED PROFILE
PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

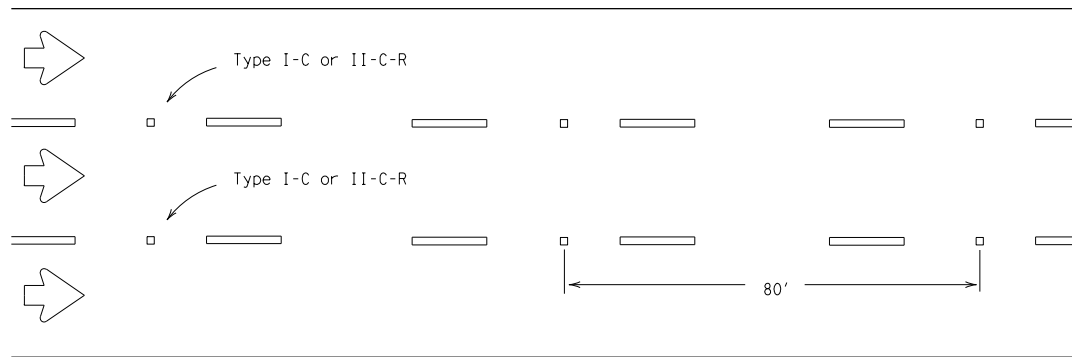
A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTE:

Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.



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.

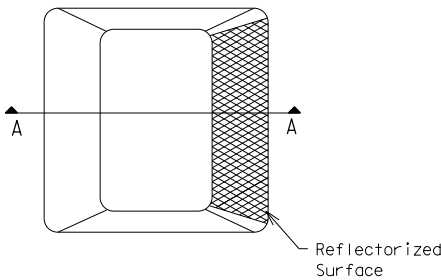
GENERAL NOTES

- 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.

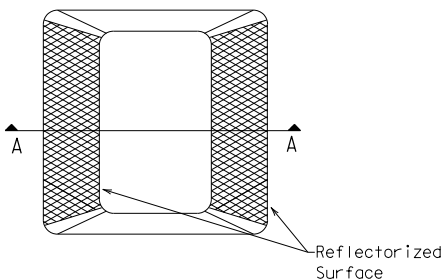
MATERIAL SPECIFICATIONS

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

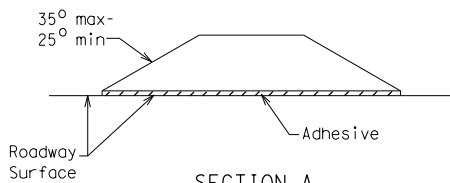
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)



Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



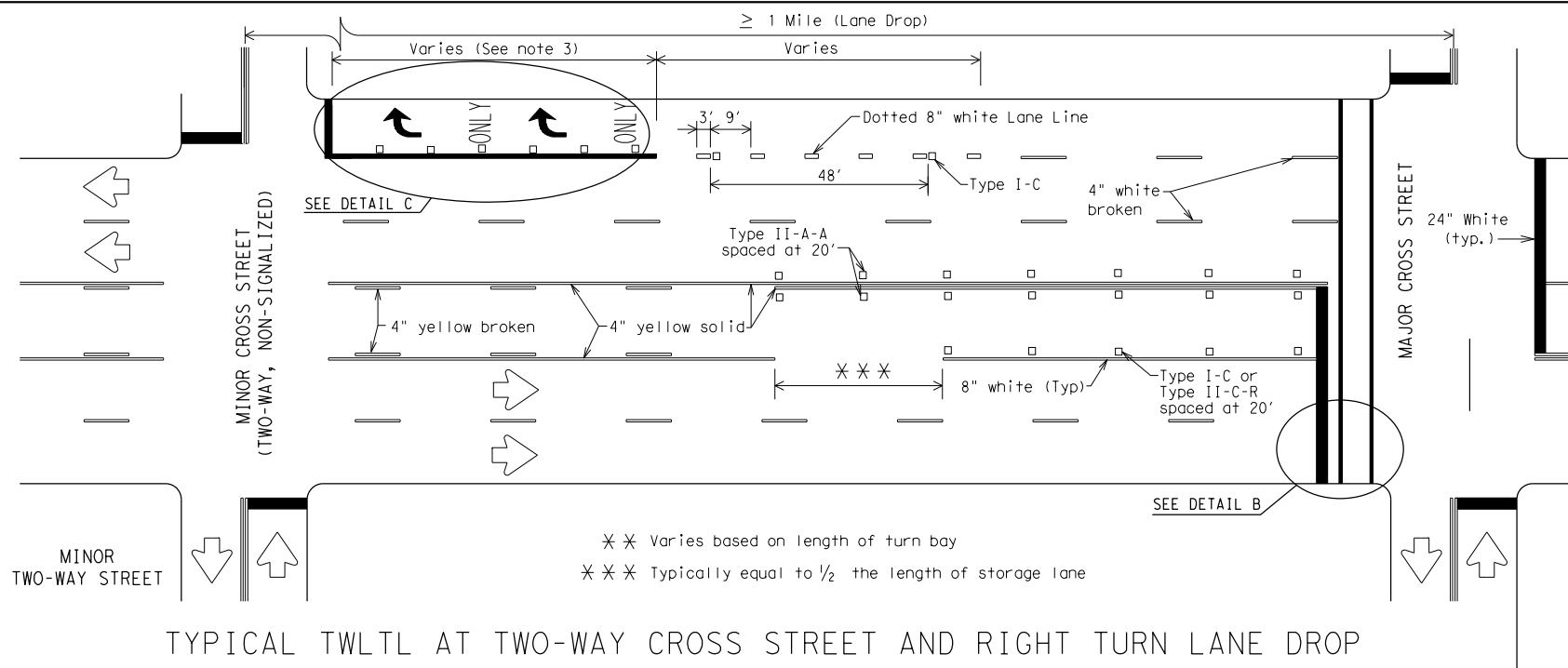
POSITION GUIDANCE USING RAISED MARKERS REFLECTORIZED PROFILE MARKINGS

PM(2)-12

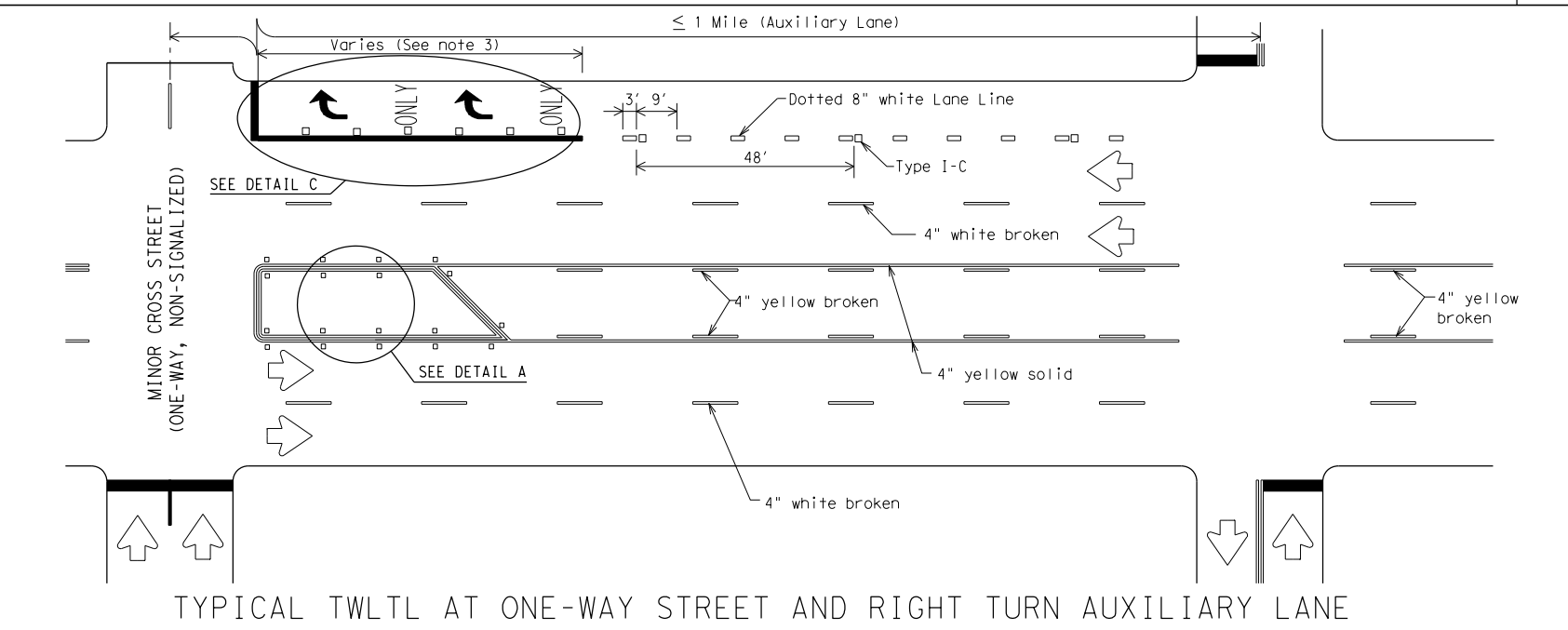
© TxDOT April 1977	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
REVISIONS	CONT	SECT	JOB	HIGHWAY
4-92 2-10	0915	12	576	VARIES
5-00 2-12	DIST	COUNTY	SHEET NO.	
8-00	SAT	BEXAR	376	
2-08				

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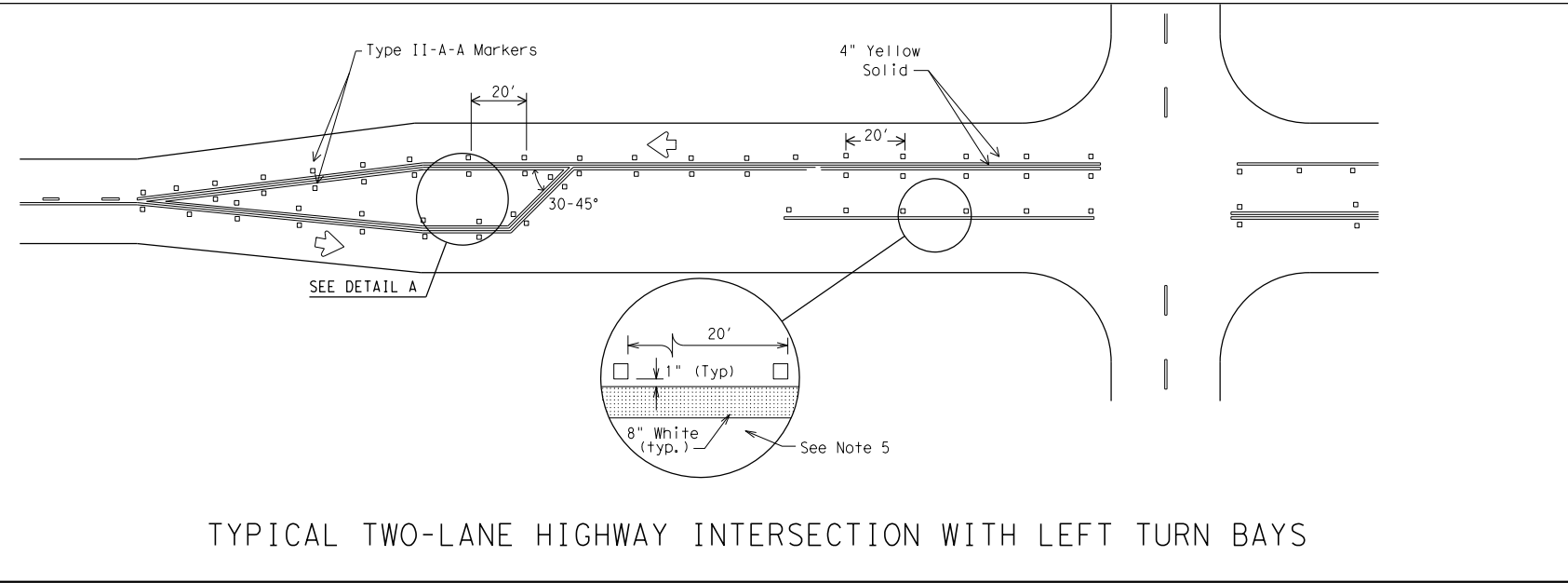
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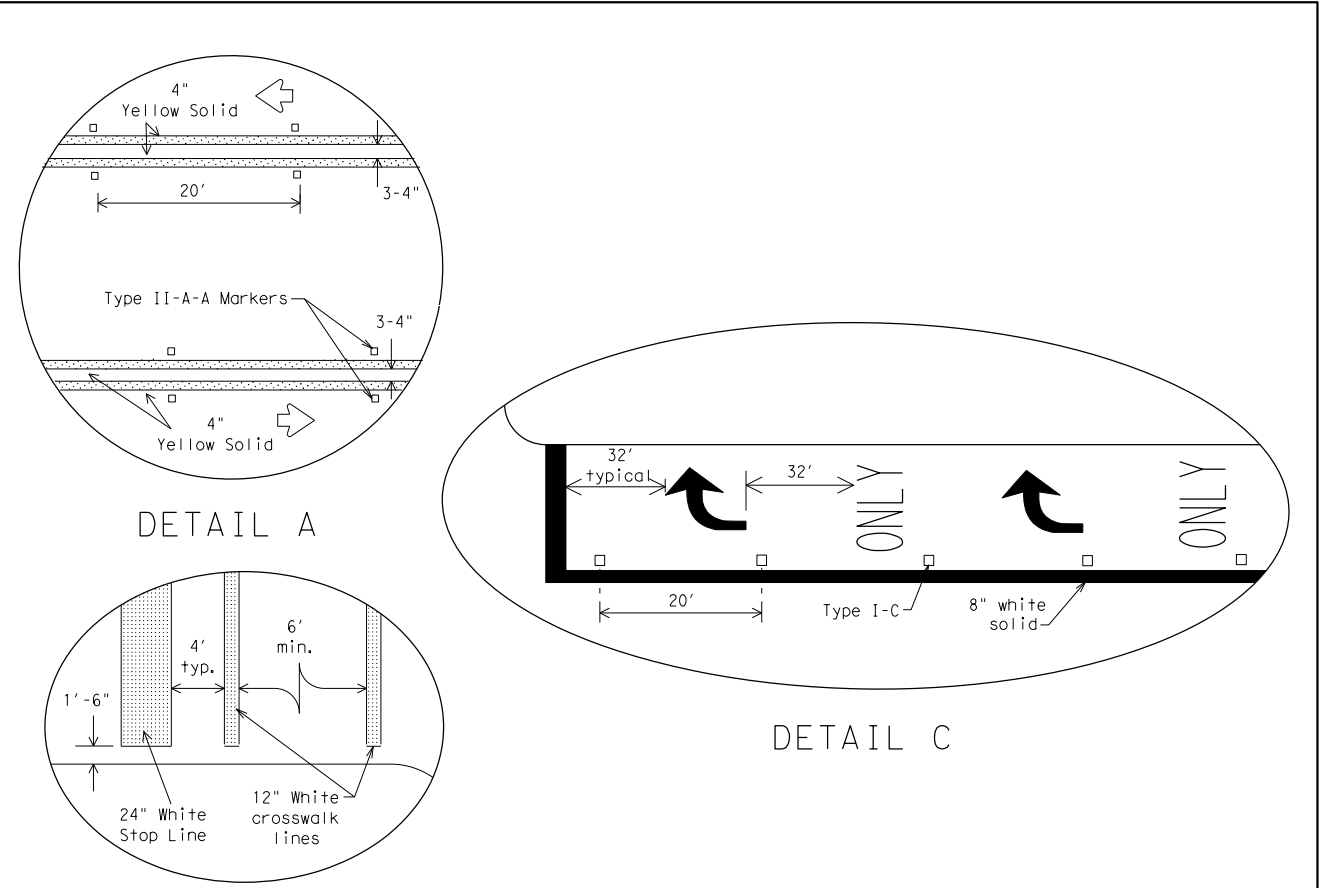
TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



TYPICAL TWO-LANE HIGHWAY INTERSECTION WITH LEFT TURN BAYS



DETAIL A

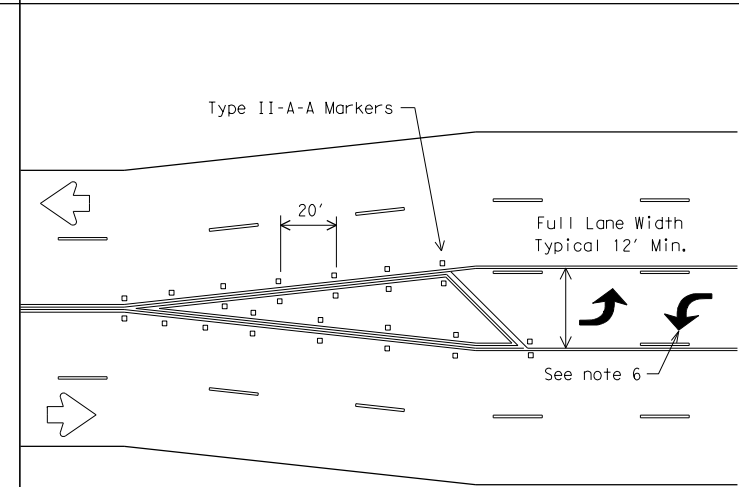
DETAIL C

Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

DETAIL B

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.



TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

- 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.

Texas Department of Transportation
Traffic Operations Division

PAVEMENT MARKINGS FOR TWO-WAY LEFT TURN LANES DIVIDED HIGHWAYS AND RURAL LEFT TURN BAYS

PM(3)-12

© TxDOT April 1998		DN: TxDOT	CK: TxDOT	DN: TxDOT	CK: TxDOT
REVISIONS		CONT	SECT	JOB	HIGHWAY
5-00	2-12	0915	12	576	VARIABLES
8-00					
3-03		DIST	COUNTY		SHEET NO.
2-10		SAT	BEXAR		377

22C

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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.

- Prevent stormwater pollution by controlling erosion and sedimentation in accordance with TPDES Permit TXR 150000.
- Comply with the Storm Water Pollution Prevention Plan (SW3P) and revise when necessary to control pollution or required by the Engineer.
- 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.
- 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.
- 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).

-
-
-
-

401 Best Management Practices: (Not applicable if no USACE permit)

Erosion

- ☐ Temporary Vegetation
- ☐ Blankets/Matting
- ☐ Mulch
- ☐ Sodding
- ☐ Interceptor Swale
- ☐ Diversion Dike
- ☐ Erosion Control Compost
- ☐ Mulch Filter Berm and Socks
- ☐ Compost Filter Berm and Socks

Sedimentation

- ☐ Silt Fence
- ☐ Rock Berm
- ☐ Triangular Filter Dike
- ☐ Sand Bag Berm
- ☐ Straw Bale Dike
- ☐ Brush Berms
- ☐ Erosion Control Compost
- ☐ Mulch Filter Berm and Socks
- ☐ Compost Filter Berm and Socks
- ☐ Stone Outlet Sediment Traps
- ☐ Sediment Basins

Post-Construction TSS

- ☐ Vegetative Filter Strips
- ☐ Retention/Irrigation Systems
- ☐ Extended Detention Basin
- ☐ Constructed Wetlands
- ☐ Wet Basin
- ☐ Erosion Control Compost
- ☐ Mulch Filter Berm and Socks
- ☐ Compost Filter Berm and Socks
- ☐ Vegetation Lined Ditches
- ☐ Sand Filter Systems
- ☐ Sedimentation Chambers
- ☐ 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.

-
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-
-

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.

-
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-
-

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.

-
-

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 follwing 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.

-
-
-

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.

-
-
-



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		378

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 it's relative position.

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. **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. PROJECT SITE MAPS:

3. PROJECT DESCRIPTION: *For pedestrian improvements including bus shelter pads, sidewalks, ADA curb ramps*

4. FOR MAJOR SOIL DISTURBING ACTIVITIES SEQUENCE OF EVENTS:

☐ 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)

X 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): _____

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)

T 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
 P CURBS AND GUTTERS
 STORM SEWERS
 VELOCITY CONTROL DEVICES
 T 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.

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.

Design Consultant Logo here -
delete block if not applicable



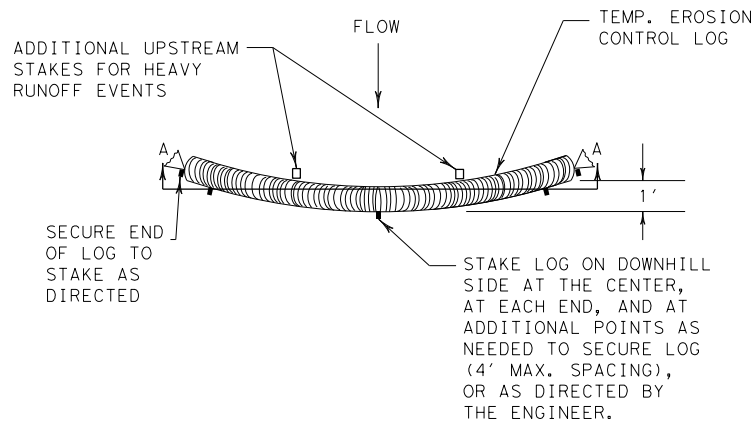
STORM WATER POLLUTION PREVENTION PLAN (SW3P)

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6			VARIES
STATE	DISTRICT	COUNTY	
TEXAS	SAT	BEXAR	
CONTROL	SECTION	JOB	
0915	12	576	SHEET NO. 379

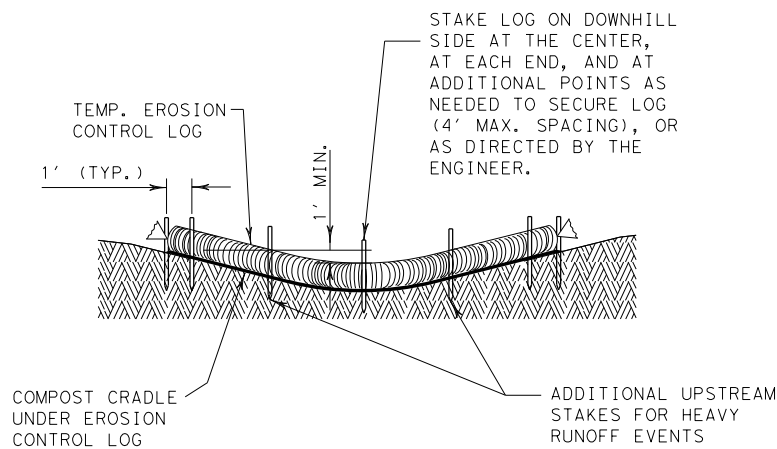
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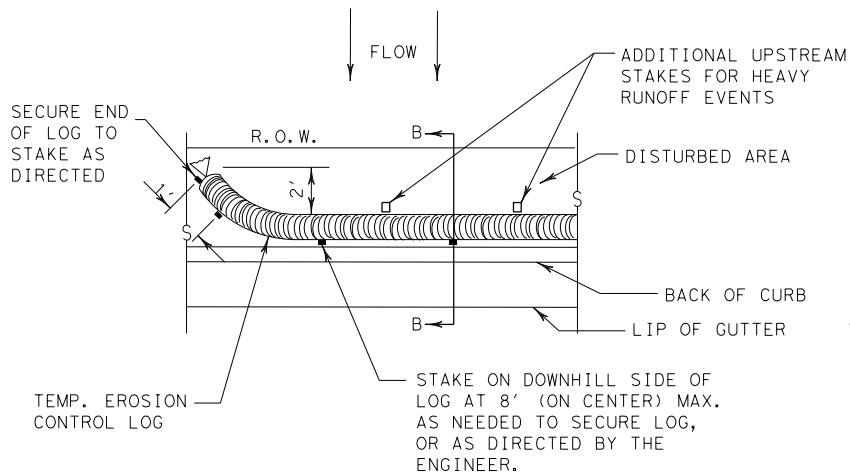
PLAN VIEW



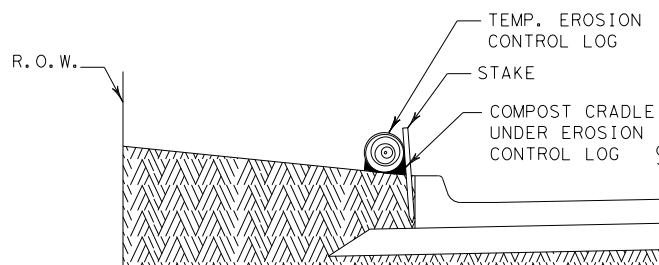
SECTION A-A

EROSION CONTROL LOG DAM

CL-D



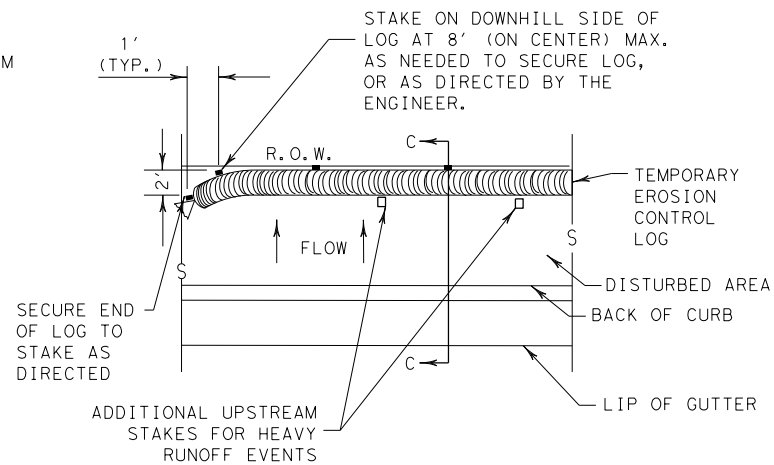
PLAN VIEW



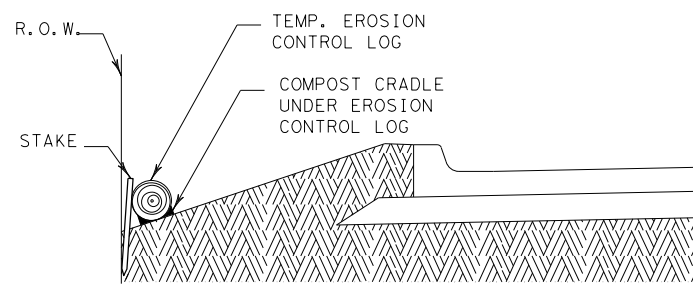
SECTION B-B

EROSION CONTROL LOG AT BACK OF CURB

CL-BOC



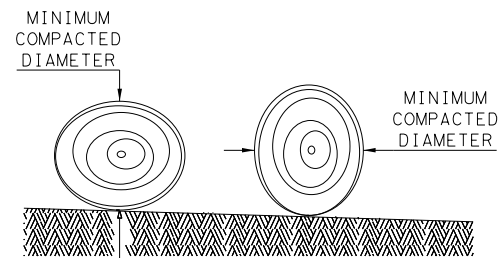
PLAN VIEW



SECTION C-C


EROSION CONTROL LOG AT EDGE OF RIGHT-OF-WAY

CL-ROW



DIAMETER MEASUREMENTS OF EROSION CONTROL LOGS SPECIFIED IN PLANS

SHEET 1 OF 3



Texas Department of Transportation

Design Division Standard

TEMPORARY EROSION,
SEDIMENT AND WATER
POLLUTION CONTROL MEASURES
EROSION CONTROL LOG
EC (9) - 16

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		380

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.

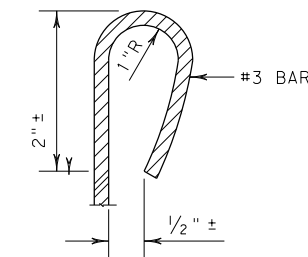
Log Traps: The drainage area for a sediment trap should not exceed 5 acres. The trap capacity should be 1800 CF/Acre (0.5" over the drainage area).

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.

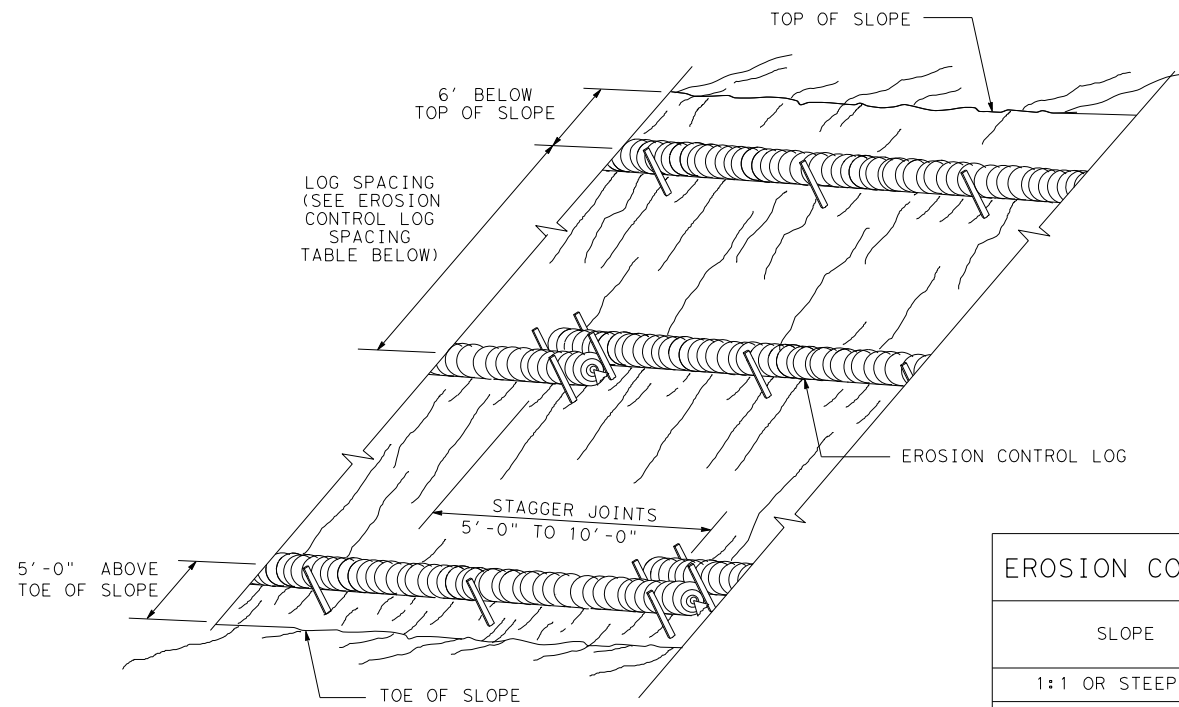


REBAR STAKE DETAIL

- 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

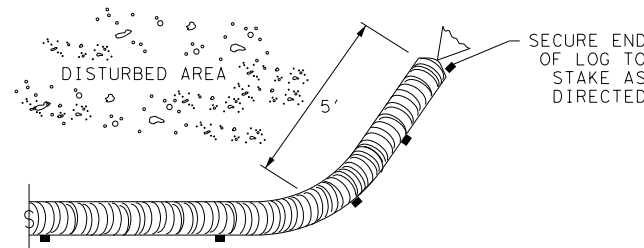
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DATE: 11/21/2018
FILE: P:\111\35\07\design\Civil\Standards\SW3P\ec916.dgn



EROSION CONTROL LOGS ON SLOPES
STAKE AND TRENCHING ANCHORING

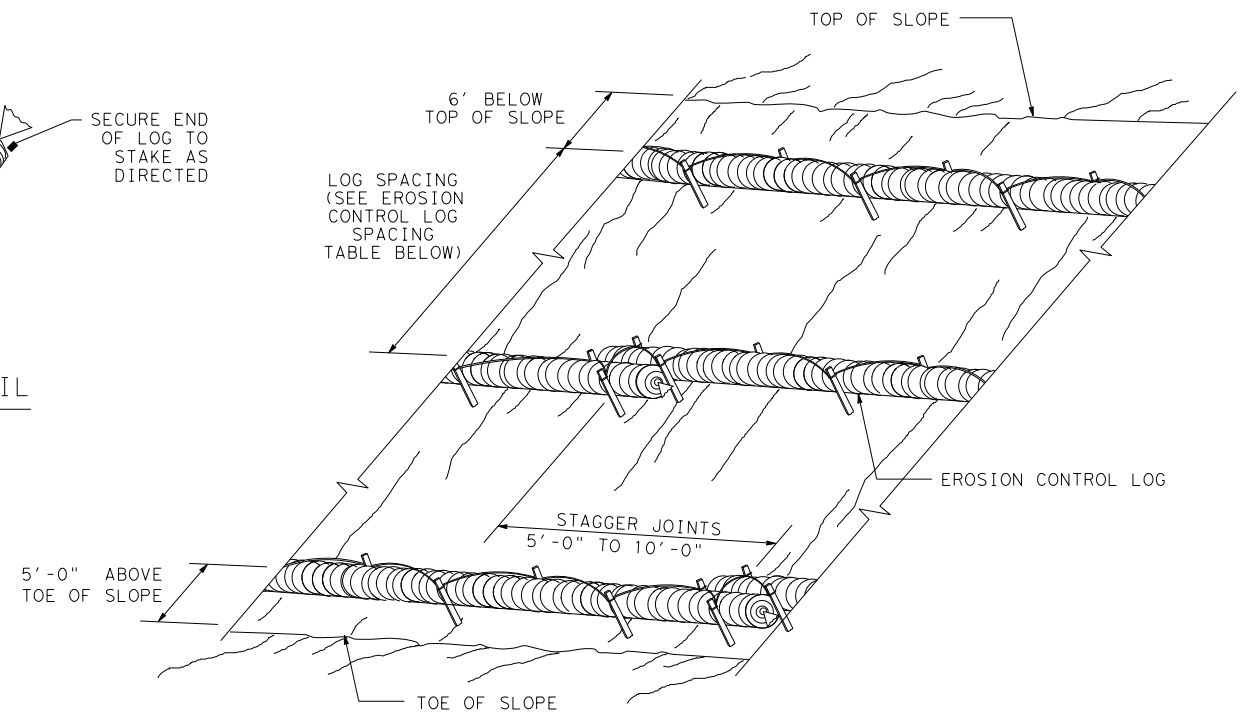
CL-SST



END SECTION RAP DETAIL

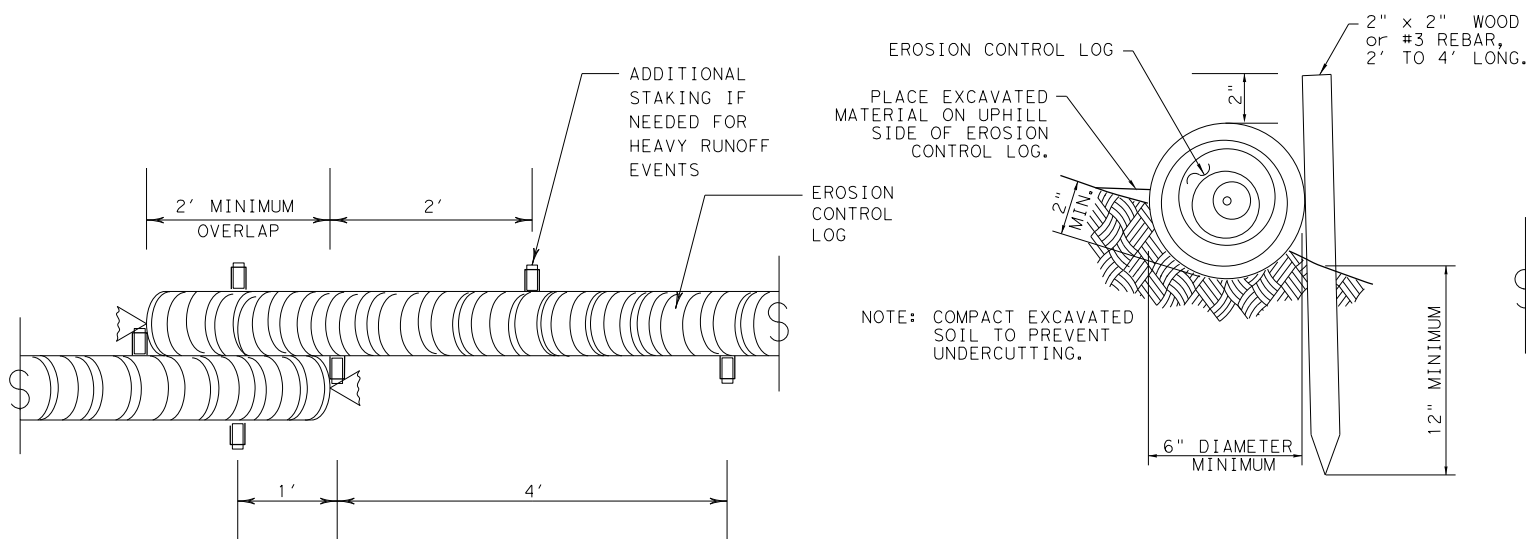
EROSION CONTROL LOG SPACING TABLE				
SLOPE	LOG DIAMETER			
	6"	8"	12"	18"
1:1 OR STEEPER	5'	10'	15'	20'
2:1	10'	20'	30'	40'
3:1	15'	30'	45'	60'
4:1 OR FLATTER	20'	40'	60'	80'

* ADJUSTMENTS CAN BE MADE FOR SOIL TYPE:
SOFT, LOAMY SOILS-ADJUST ROWS CLOSER TOGETHER;
HARD, ROCKY SOILS- ADJUST ROWS FARTHER APART



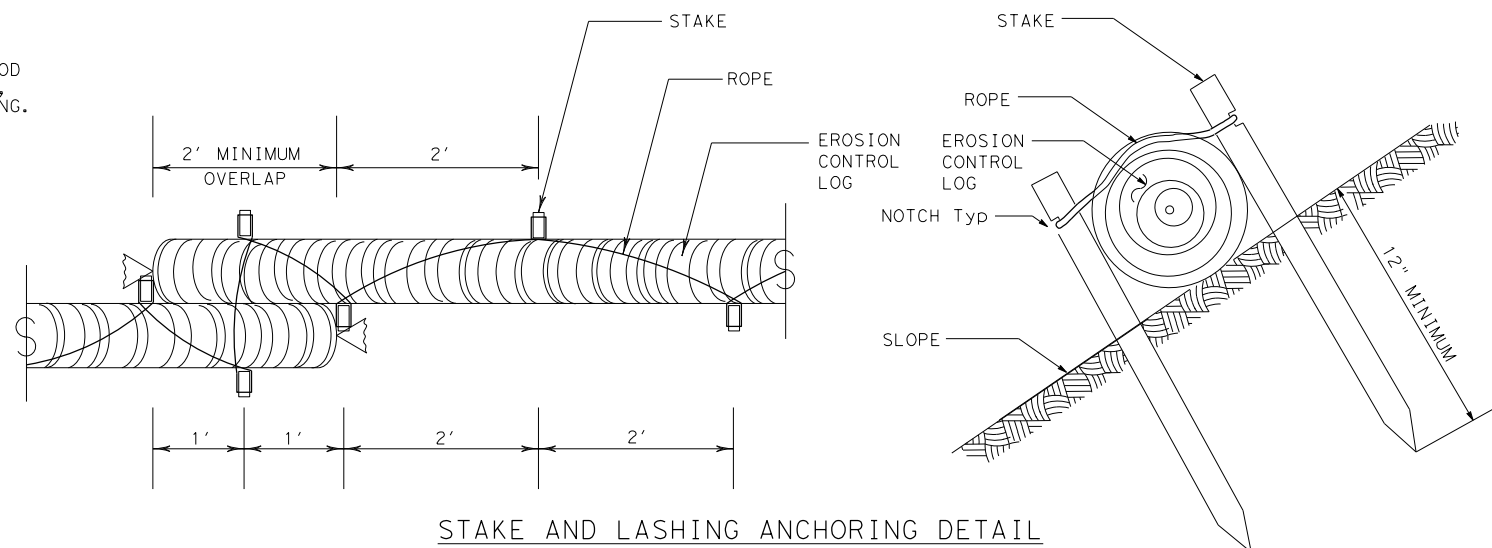
EROSION CONTROL LOGS ON SLOPES
STAKE AND LASHING ANCHORING

CL-SSL



STAKE AND TRENCHING ANCHORING DETAIL

CL-SST

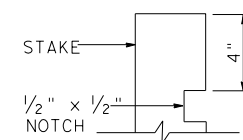


STAKE AND LASHING ANCHORING DETAIL

CL-SSL

SHEET 2 OF 3

TRENCH DEPTH TABLE	
LOG DIAMETER	DEPTH
6"	2"
8"	3"
12"	4"
18"	5"



STAKE NOTCH DETAIL

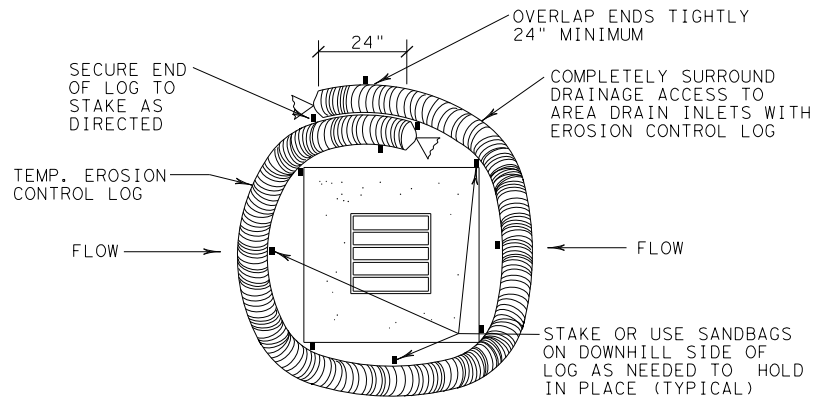
Design Division Standard

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
© TxDOT: JULY 2016	CONT	SECT	JOB	HIGHWAY
REVISIONS	0915	12	576	VARIES
	DIST	COUNTY	SHEET NO.	
	SAT	BEXAR	381	

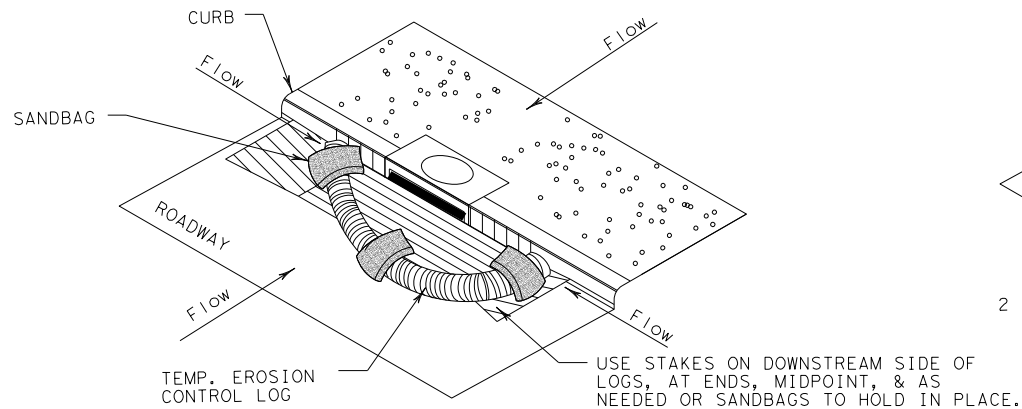
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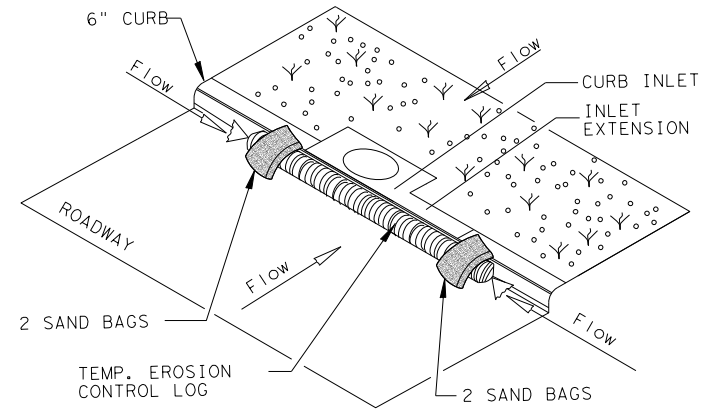
EROSION CONTROL LOG AT DROP INLET

CL-DI



EROSION CONTROL LOG AT CURB INLET

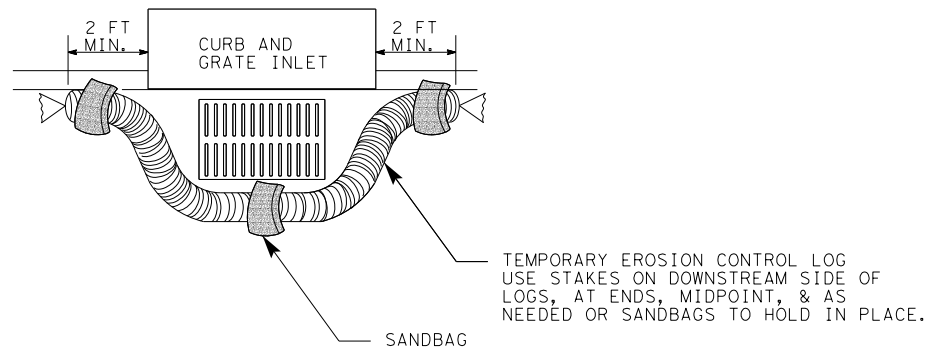
CL-CI



EROSION CONTROL LOG AT CURB INLET

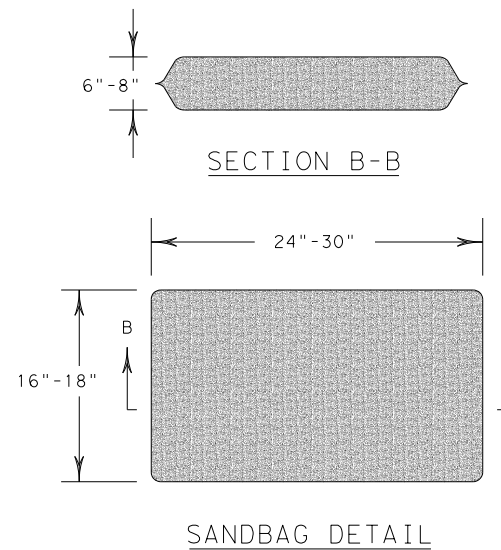
CL-CI

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



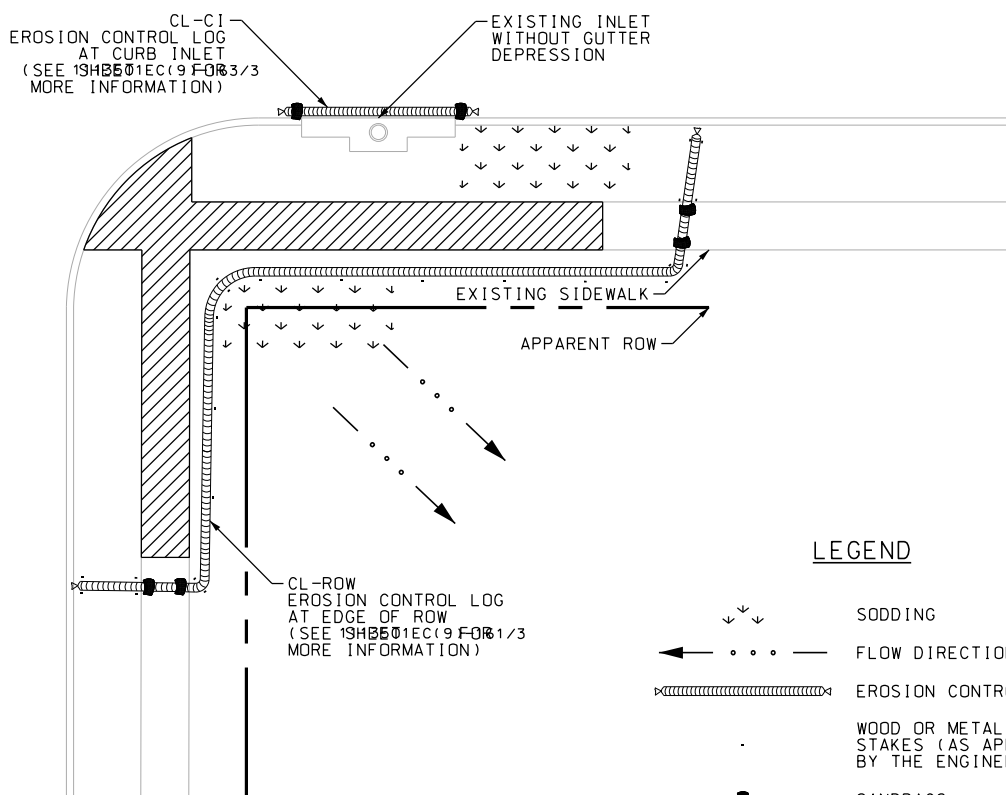
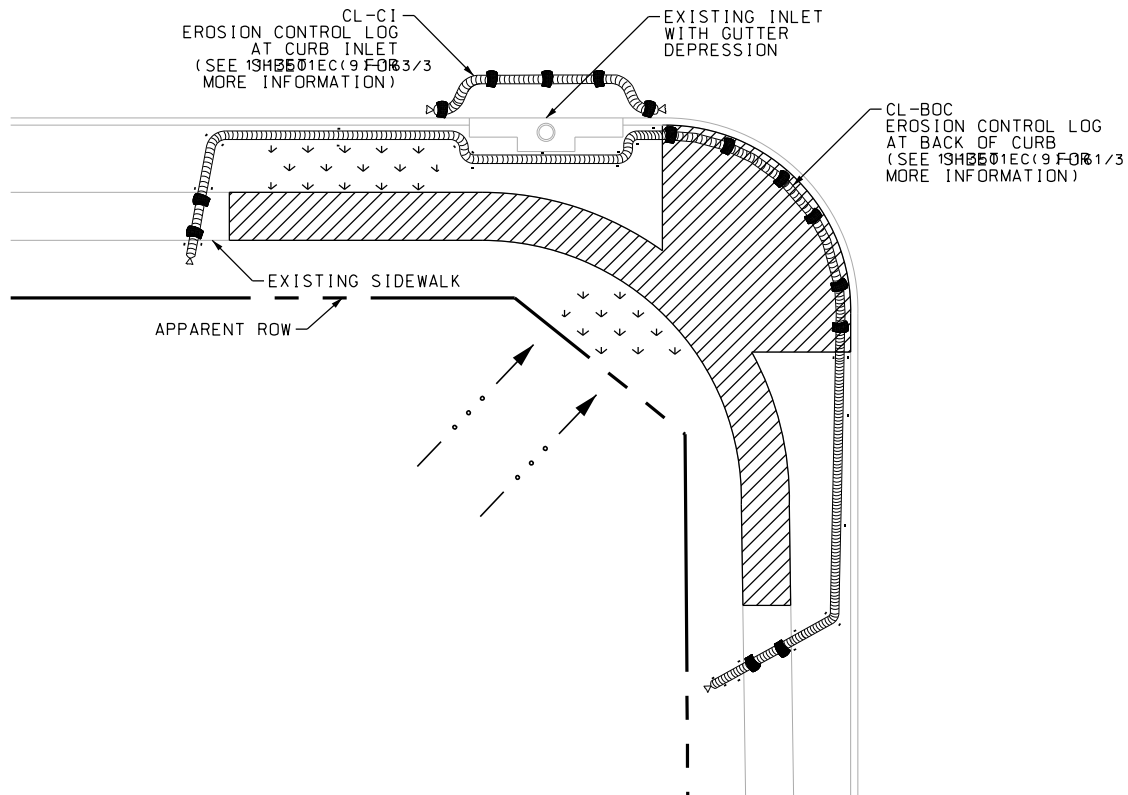
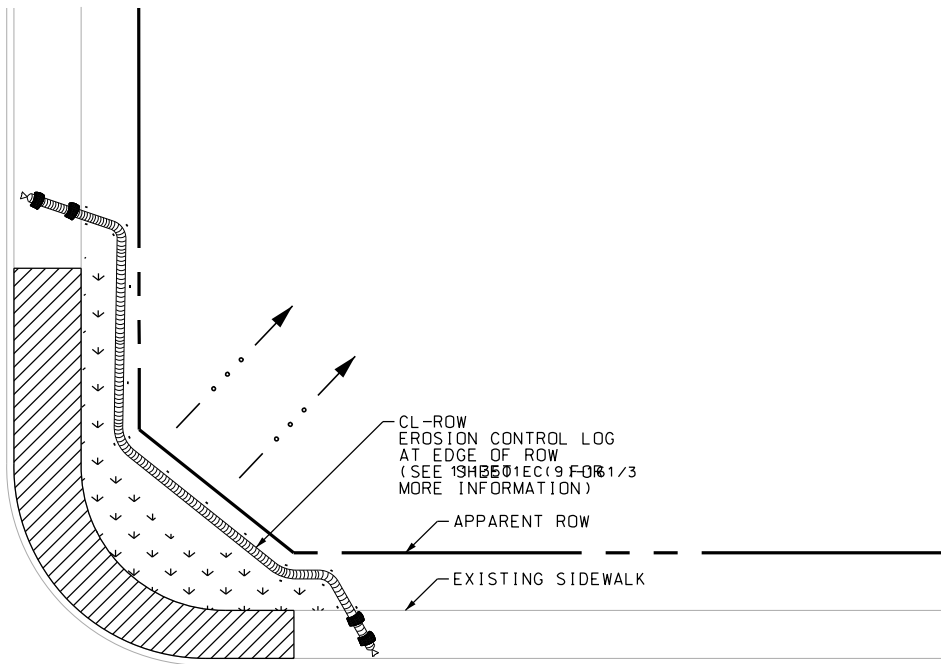
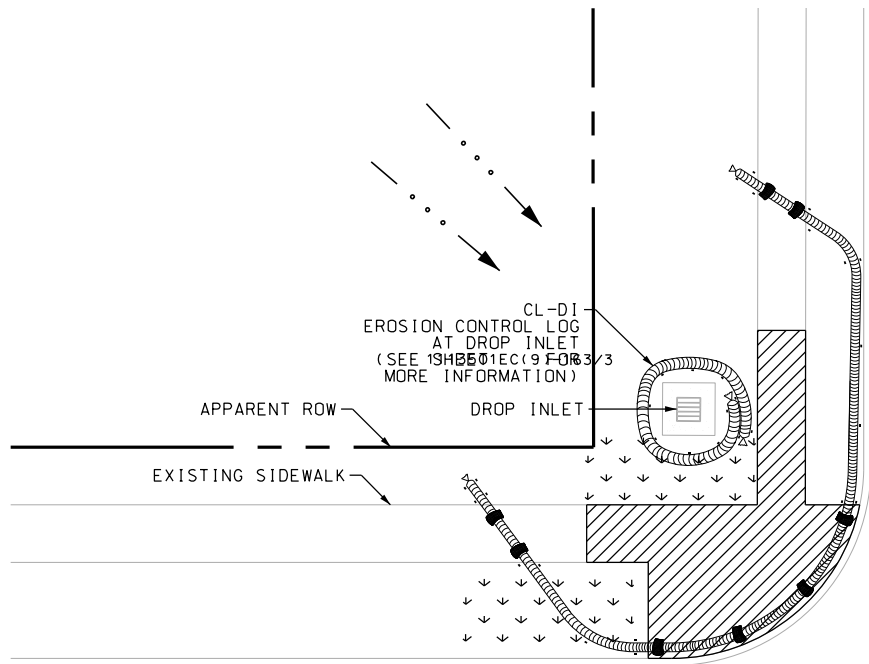
SANDBAG DETAIL

SHEET 3 OF 3

 Texas Department of Transportation				Design Division Standard		
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES EROSION CONTROL LOG EC (9) - 16						
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			382

Plotted on: 11/21/2018

Design File name: P:\111\35\07\design\Civil\General\1113507*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

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JOHN A. TYLER
P.E. SERIAL NO:	105193
DATE:	11/21/2018

REVIEW AND APPROVAL

INTERIM REVIEW	
DOCUMENT INCOMPLETE. NOT INTENDED FOR PERMIT, BIDDING OR CONSTRUCTION.	
ENGINEER:	JAMES A. LUTZ
P.E. SERIAL NO:	84722
DATE:	11/21/2018

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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SWP3 EXAMPLE INTERSECTION

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	383