SOUTH PADRE ISLAND, TX
GULF BOULEVARD PHASE 4, HIBISCUS STREET AND OLEANDER STREET IMPROVEMENTS

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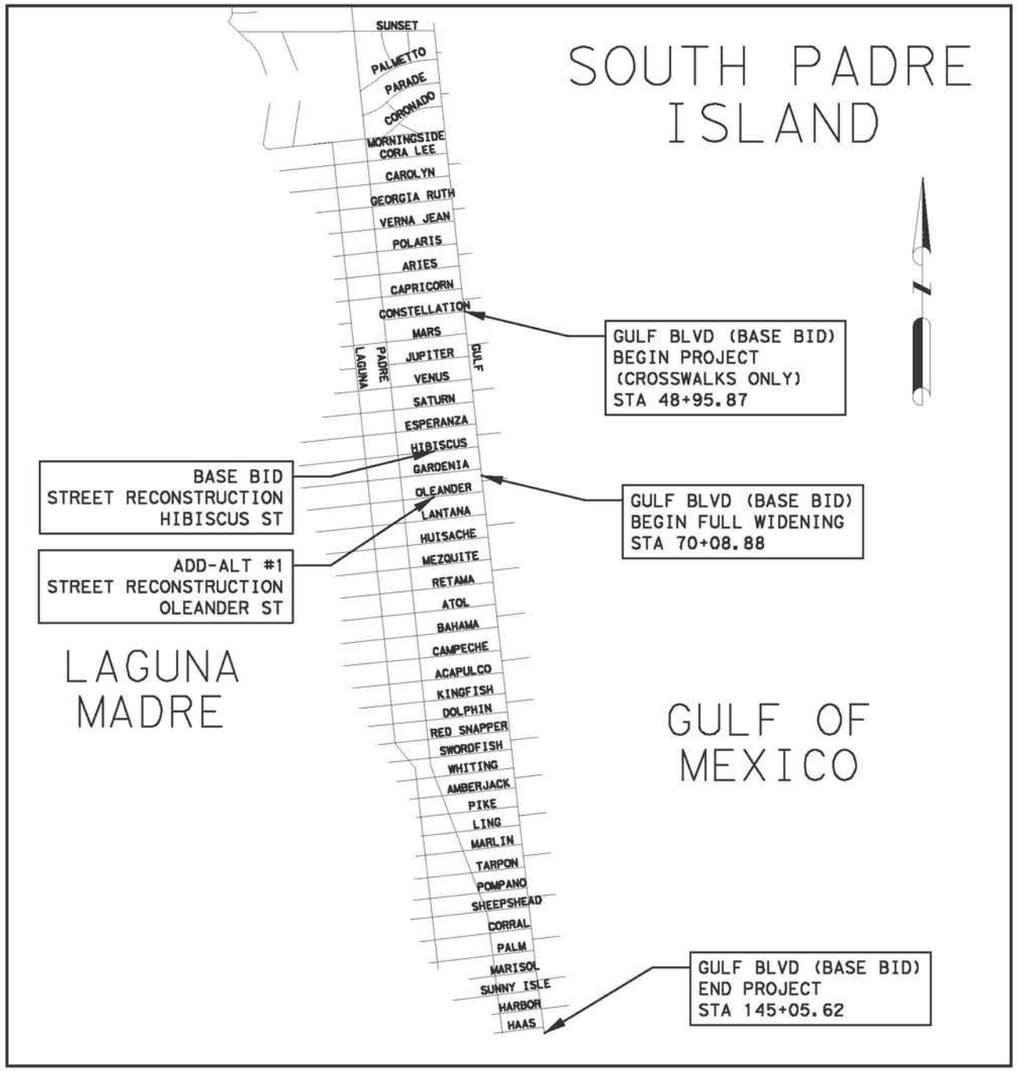
SOUTH PADRE ISLAND OFFICIALS

BARRY PATEL	MAYOR
ALITA BAGLEY	MAYOR PRO-TEAM
PAUL MUNARRIZ	CITY COUNCIL MEMBER
DENNIS STAHL	CITY COUNCIL MEMBER
THERESA METTY	CITY COUNCIL MEMBER
ALEX AVALOS	CITY COUNCIL MEMBER
PAUL CUNNINGHAM	CITY ATTORNEY
DARLA JONES	ASSISTANT CITY MANAGER



VICINITY MAP

0′ 2000′ 4000′

SCALE: 1"= 2000′

PLANS PREPARED BY:

Kimley»Horn
TX FIRM NO. F-928

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED
PROFESSIONAL ENGINEER

SUBMITTED FOR LETTING 4-22-2016

Brian C. Boecker PE

PROJECT MANAGER
KIMLEY-HORN AND ASSOCIATES, INC.

South Padre ISLAND

FILENAME: G:\069234000\Gul1\Rehabs\Design\GULF1i1e01.dgn
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FILENAME: G:\069234000*Gulf*Rehabe\Design\GULFgeo01.dgn
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GULF BLVD

℄ GULF contains:
GULF01 CUR GULF-1 CUR GULF-2 CUR GULF-3 CUR GULF-4 CUR GULF-5 CUR GULF-6 CUR GULF-7 CUR GULF-8 CUR GULF-9 CUR GULF-10 CUR GULF-11 CUR GULF-12 CUR GULF-13 CUR-GULF-14 CUR GULF-15 CUR GULF-16 CUR GULF-17 CUR GULF-18 CUR GULF-19 CUR GULF-20 CUR GULF-21 CUR GULF-22 CUR GULF-23 CUR GULF-24 CUR GULF-25 CUR GULF-26 CUR GULF-27 CUR GULF-28 CUR GULF-29 CUR GULF-30 CUR GULF-31 CUR GULF-32 CUR GULF-33 CUR GULF-34 CUR GULF-35 CUR GULF-36 CUR GULF-37 CUR GULF-38 GULF02

Beginning ℄ GULF description

Point GULF01 N 18,433.037 E 3,513.522 Sta 10+00.00

Course from GULF01 to PC GULF01 S 5° 58′ 59.94" E Dist 1,246.626

Curve Data

Curve GULF01					
P.I. Station	22+56.62	N	17,183.260	E	3,644.511
Delta =	2° 17′ 26.20"	(LT)			
Degree =	11° 27′ 32.96"				
Tangent =	9.996				
Length =	19.989				
Radius =	500.000				
External =	0.100				
Long Chord =	19.988				
Mid. Ord. =	0.100				
P.C. Station	22+46.63	N	17,193.202	E	3,643.469
P.T. Station	22+66.62	N	17,173.368	E	3,645.949
C.C.		N	17,245.321	E	4,140.745
Back = S	5° 58′ 59.94" E				
Ahead = S	8° 16′ 26.14" E				
Chord Bear = S	7° 07′ 43.04" E				

Course from PT GULF01 to PC GULF02 S 8° 16′ 26.14" E Dist 30.048

Curve Data

Curve GULF02					
P.I. Station	23+06.66	N	17,133.741	E	3,651.712
Delta =	2° 17′ 26.20"	(RT)			
Degree =	11° 27′ 32.96"				
Tangent =	9.996				
Length =	19.989				
Radius =	500.000				
External =	0.100				
Long Chord =	19.988				
Mid. Ord. =	0.100				
P.C. Station	22+96.66	N	17,143.633	E	3,650.274
P.T. Station	23+16.65	N	17,123.800	E	3,652.754
C.C.		N	17,071.680	E	3,155.478
Back = S	8° 16′ 26.14" E				
Ahead = S	5° 58′ 59.94" E				
Chord Bear = S	7° 07′ 43.04" E				

Course from PT GULF02 to PC GULF03 S 5° 58′ 59.94" E Dist 247.067

Curve Data

Curve GULF03					
P.I. Station	25+73.72	N	16,868.137	E	3,679.550
Delta =	2° 17′ 26.20"	(RT)			
Degree =	11° 27′ 32.96"				
Tangent =	9.996				
Length =	19.989				
Radius =	500.000				
External =	0.100				
Long Chord =	19.988				
Mid. Ord. =	0.100				
P.C. Station	25+63.72	N	16,878.079	E	3,678.508
P.T. Station	25+83.71	N	16,858.162	E	3,680.194
C.C.		N	16,825.959	E	3,181.232
Back = S	5° 58′ 59.94" E				
Ahead = S	3° 41′ 33.75" E				
Chord Bear = S	4° 50′ 16.85" E				

Course from PT GULF03 to PC GULF04 S 3° 41′ 33.75" E Dist 30.048

Curve Data

Curve GULF04					
P.I. Station	26+23.75	N	16,818.201	E	3,682.773
Delta =	2° 17′ 26.20"	(LT)			
Degree =	11° 27′ 32.96"				
Tangent =	9.996				
Length =	19.989				
Radius =	500.000				
External =	0.100				
Long Chord =	19.988				
Mid. Ord. =	0.100				
P.C. Station	26+13.76	N	16,828.176	E	3,682.129
P.T. Station	26+33.75	N	16,808.260	E	3,683.815
C.C.		N	16,860.379	E	4,181.091
Back = S	3° 41′ 33.75" E				
Ahead = S	5° 58′ 59.94" E				
Chord Bear = S	4° 50′ 16.85" E				

Course from PT GULF04 to PC GULF05 S 5° 58′ 59.94" E Dist 93.037

Curve Data

Curve GULF05					
P.I. Station	27+36.78	N	16,705.788	E	3,694.555
Delta =	2° 17′ 26.20"	(LT)			
Degree =	11° 27′ 32.96"				
Tangent =	9.996				
Length =	19.989				
Radius =	500.000				
External =	0.100				
Long Chord =	19.988				
Mid. Ord. =	0.100				
P.C. Station	27+26.78	N	16,715.729	E	3,693.513
P.T. Station	27+46.77	N	16,695.896	E	3,695.993
C.C.		N	16,767.849	E	4,190.789
Back = S	5° 58′ 59.94" E				
Ahead = S	8° 16′ 26.14" E				
Chord Bear = S	7° 07′ 43.04" E				

Course from PT GULF05 to PC GULF06 S 8° 16′ 26.14" E Dist 30.374

Curve Data

Curve GULF06					
P.I. Station	27+86.82	N	16,656.269	E	3,701.756
Delta =	2° 12′ 57.53"	(RT)			
Degree =	11° 27′ 32.96"				
Tangent =	9.670				
Length =	19.338				
Radius =	500.000				
External =	0.094				
Long Chord =	19.337				
Mid. Ord. =	0.093				
P.C. Station	27+77.15	N	16,665.838	E	3,700.364
P.T. Station	27+96.48	N	16,646.652	E	3,702.776
C.C.		N	16,593.885	E	3,205.569
Back = S	8° 16′ 26.14" E				
Ahead = S	6° 03′ 28.61" E				
Chord Bear = S	7° 09′ 57.38" E				

Course from PT GULF06 to PC GULF07 S 6° 03′ 28.61" E Dist 247.216

Curve Data

Curve GULF07					
P.I. Station	30+63.62	N	16,381.008	E	3,730.968
Delta =	2° 16′ 56.49"	(RT)			
Degree =	5° 43′ 46.48"				
Tangent =	19.920				
Length =	39.835				
Radius =	1,000.000				
External =	0.198				
Long Chord =	39.832				
Mid. Ord. =	0.198				
P.C. Station	30+43.70	N	16,400.817	E	3,728.866
P.T. Station	30+83.54	N	16,361.131	E	3,732.280
C.C.		N	16,295.282	E	2,734.451
Back = S	6° 03′ 28.61" E				
Ahead = S	3° 46′ 32.13" E				
Chord Bear = S	4° 55′ 00.37" E				

Course from PT GULF07 to PC GULF08 S 3° 46′ 32.13" E Dist 60.041

Curve Data

Curve GULF08					
P.I. Station	31+63.70	N	16,281.146	E	3,737.559
Delta =	2° 18′ 18.39"	(LT)			
Degree =	5° 43′ 46.48"				
Tangent =	20.119				
Length =	40.232				
Radius =	1,000.000				
External =	0.202				
Long Chord =	40.229				
Mid. Ord. =	0.202				
P.C. Station	31+43.58	N	16,301.221	E	3,736.234
P.T. Station	31+83.81	N	16,261.140	E	3,739.690
C.C.		N	16,367.069	E	4,734.063
Back = S	3° 46′ 32.13" E				
Ahead = S	6° 04′ 50.52" E				
Chord Bear = S	4° 55′ 41.32" E				

Course from PT GULF08 to PC GULF09 S 6° 04′ 50.52" E Dist 1,290.263

Curve Data

Curve GULF09					
P.I. Station	44+93.90	N	14,958.418	E	3,878.467
Delta =	2° 16′ 19.29"	(LT)			
Degree =	5° 43′ 46.48"				
Tangent =	19.830				
Length =	39.654				
Radius =	1,000.000				
External =	0.197				
Long Chord =	39.652				
Mid. Ord. =	0.197				
P.C. Station	44+74.07	N	14,978.137	E	3,876.366
P.T. Station	45+13.73	N	14,938.799	E	3,881.347
C.C.		N	15,084.066	E	4,870.740
Back = S	6° 04′ 50.52" E				
Ahead = S	8° 21′ 09.80" E				
Chord Bear = S	7° 13′ 00.16" E				

Course from PT GULF09 to PC GULF10 S 8° 21′ 09.80" E Dist 60.177

Curve Data

Curve GULF10					
P.I. Station	45+93.98	N	14,859.400	E	3,893.005
Delta =	2° 17′ 59.82"	(RT)			
Degree =	5° 43′ 46.48"				
Tangent =	20.074				
Length =	40.142				
Radius =	1,000.000				
External =	0.201				
Long Chord =	40.139				
Mid. Ord. =	0.201				
P.C. Station	45+73.90	N	14,879.261	E	3,890.089
P.T. Station	46+14.04	N	14,839.438	E	3,895.122
C.C.		N	14,733.994	E	2,900.696
Back = S	8° 21′ 09.80" E				
Ahead = S	6° 03′ 09.99" E				
Chord Bear = S	7° 12′ 09.89" E				

Course from PT GULF10 to PC GULF11 S 6° 03′ 09.99" E Dist 257.055

Curve Data

Curve GULF11					
P.I. Station	48+85.94	N	14,569.058	E	3,923.792
Delta =	2° 16′ 01.94"	(RT)			
Degree =	7° 38′ 21.97"				
Tangent =	14.841				
Length =	29.678				
Radius =	750.000				
External =	0.147				
Long Chord =	29.676				
Mid. Ord. =	0.147				
P.C. Station	48+71.10	N	14,583.816	E	3,922.227
P.T. Station	49+00.78	N	14,554.250	E	3,924.771
C.C.		N	14,504.733	E	3,176.408
Back = S	6° 03′ 09.99" E				
Ahead = S	3° 47′ 08.05" E				
Chord Bear = S	4° 55′ 09.02" E				

Course from PT GULF11 to PC GULF12 S 3° 47′ 08.05" E Dist 45.281

Curve Data

Curve GULF12					
P.I. Station	49+60.99	N	14,494.163	E	3,928.747
Delta =	2° 16′ 55.07"	(LT)			
Degree =	7° 38′ 21.97"				
Tangent =	14.937				
Length =	29.871				
Radius =	750.000				
External =	0.149				
Long Chord =	29.869				
Mid. Ord. =	0.149				
P.C. Station	49+46.06	N	14,509.068	E	3,927.761
P.T. Station	49+75.93	N	14,479.310	E	3,930.326
C.C.		N	14,558.585	E	4,676.124
Back = S	3° 47′ 08.05" E				
Ahead = S	6° 04′ 03.12" E				
Chord Bear = S	4° 55′ 35.58" E				

Course from PT GULF12 to PC GULF13 S 6° 04′ 03.12" E Dist 1,355.275

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

HORIZONTAL ALIGNMENT DATA

GULF BLVD IMPROVEMENTS

SCALE	PROJECT NO.	SHEET NO.
		2

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GULF BLVD CONTINUED

Curve Data

Curve GULF13			
P.I. Station	63+41.20	N 13,121.687	E 4,074.636
Delta =	2° 17' 26.20"	(LT)	
Degree =	11° 27' 32.96"		
Tangent =	9.996		
Length =	19.989		
Radius =	500.000		
External =	0.100		
Long Chord =	19.988		
Mid. Ord. =	0.100		
P.C. Station	63+31.20	N 13,131.627	E 4,073.579
P.T. Station	63+51.19	N 13,111.797	E 4,076.089
C.C.		N 13,184.477	E 4,570.778
Back = S	6° 04' 03.12" E		
Ahead = S	8° 21' 29.31" E		
Chord Bear = S	7° 12' 46.22" E		

Course from PT GULF13 to PC GULF14 S 8° 21' 29.31" E Dist 30.048

Curve Data

Curve GULF14			
P.I. Station	63+91.24	N 13,072.178	E 4,081.910
Delta =	2° 17' 26.20"	(RT)	
Degree =	11° 27' 32.96"		
Tangent =	9.996		
Length =	19.989		
Radius =	500.000		
External =	0.100		
Long Chord =	19.988		
Mid. Ord. =	0.100		
P.C. Station	63+81.24	N 13,082.068	E 4,080.457
P.T. Station	64+01.23	N 13,062.238	E 4,082.966
C.C.		N 13,009.388	E 3,585.767
Back = S	8° 21' 29.31" E		
Ahead = S	6° 04' 03.12" E		
Chord Bear = S	7° 12' 46.22" E		

Course from PT GULF14 to PC GULF15 S 6° 04' 03.12" E Dist 278.553

Curve Data

Curve GULF15			
P.I. Station	66+89.78	N 12,775.306	E 4,113.466
Delta =	2° 17' 26.20"	(RT)	
Degree =	11° 27' 32.96"		
Tangent =	9.996		
Length =	19.989		
Radius =	500.000		
External =	0.100		
Long Chord =	19.988		
Mid. Ord. =	0.100		
P.C. Station	66+79.78	N 12,785.246	E 4,112.410
P.T. Station	66+99.77	N 12,765.332	E 4,114.125
C.C.		N 12,732.396	E 3,615.211
Back = S	6° 04' 03.12" E		
Ahead = S	3° 46' 36.92" E		
Chord Bear = S	4° 55' 20.02" E		

Course from PT GULF15 to PC GULF16 S 3° 46' 36.92" E Dist 30.048

Curve Data

Curve GULF16			
P.I. Station	67+39.82	N 12,725.375	E 4,116.762
Delta =	2° 17' 26.20"	(LT)	
Degree =	11° 27' 32.96"		
Tangent =	9.996		
Length =	19.989		
Radius =	500.000		
External =	0.100		
Long Chord =	19.988		
Mid. Ord. =	0.100		
P.C. Station	67+29.82	N 12,735.349	E 4,116.104
P.T. Station	67+49.81	N 12,715.435	E 4,117.819
C.C.		N 12,768.285	E 4,615.018
Back = S	3° 46' 36.92" E		
Ahead = S	6° 04' 03.12" E		
Chord Bear = S	4° 55' 20.02" E		

Course from PT GULF16 to PC GULF17 S 6° 04' 03.12" E Dist 968.290

Curve Data

Curve GULF17			
P.I. Station	77+33.09	N 11,737.659	E 4,221.753
Delta =	2° 17' 26.20"	(LT)	
Degree =	7° 38' 21.97"		
Tangent =	14.994		
Length =	29.984		
Radius =	750.000		
External =	0.150		
Long Chord =	29.982		
Mid. Ord. =	0.150		
P.C. Station	77+18.10	N 11,752.570	E 4,220.168
P.T. Station	77+48.08	N 11,722.825	E 4,223.932
C.C.		N 11,831.845	E 4,965.966
Back = S	6° 04' 03.12" E		
Ahead = S	8° 21' 29.31" E		
Chord Bear = S	7° 12' 46.22" E		

Course from PT GULF17 to PC GULF18 S 8° 21' 29.31" E Dist 46.724

Curve Data

Curve GULF18			
P.I. Station	78+08.15	N 11,663.397	E 4,232.663
Delta =	2° 02' 17.69"	(RT)	
Degree =	7° 38' 21.97"		
Tangent =	13.342		
Length =	26.681		
Radius =	750.000		
External =	0.119		
Long Chord =	26.679		
Mid. Ord. =	0.119		
P.C. Station	77+94.81	N 11,676.597	E 4,230.724
P.T. Station	78+21.49	N 11,650.136	E 4,234.132
C.C.		N 11,567.577	E 3,488.690
Back = S	8° 21' 29.31" E		
Ahead = S	6° 19' 11.62" E		
Chord Bear = S	7° 20' 20.47" E		

Course from PT GULF18 to PC GULF19 S 6° 19' 11.62" E Dist 692.513

Curve Data

Curve GULF19			
P.I. Station	85+31.53	N 10,944.412	E 4,312.293
Delta =	2° 40' 38.55"	(LT)	
Degree =	7° 38' 21.97"		
Tangent =	17.527		
Length =	35.047		
Radius =	750.000		
External =	0.205		
Long Chord =	35.044		
Mid. Ord. =	0.205		
P.C. Station	85+14.00	N 10,961.832	E 4,310.363
P.T. Station	85+49.05	N 10,927.101	E 4,315.034
C.C.		N 11,044.392	E 5,055.806
Back = S	6° 19' 11.62" E		
Ahead = S	8° 59' 50.17" E		
Chord Bear = S	7° 39' 30.90" E		

Course from PT GULF19 to PC GULF20 S 8° 59' 50.17" E Dist 41.225

Curve Data

Curve GULF20			
P.I. Station	86+06.60	N 10,870.254	E 4,324.035
Delta =	2° 29' 40.97"	(RT)	
Degree =	7° 38' 21.97"		
Tangent =	16.330		
Length =	32.656		
Radius =	750.000		
External =	0.178		
Long Chord =	32.653		
Mid. Ord. =	0.178		
P.C. Station	85+90.27	N 10,886.383	E 4,321.481
P.T. Station	86+22.93	N 10,854.028	E 4,325.884
C.C.		N 10,769.093	E 3,580.709
Back = S	8° 59' 50.17" E		
Ahead = S	6° 30' 09.20" E		
Chord Bear = S	7° 44' 59.69" E		

Course from PT GULF20 to PC GULF21 S 6° 30' 09.20" E Dist 577.166

Curve Data

Curve GULF21			
P.I. Station	92+15.09	N 10,265.675	E 4,392.945
Delta =	2° 17' 28.03"	(RT)	
Degree =	7° 38' 21.97"		
Tangent =	14.997		
Length =	29.991		
Radius =	750.000		
External =	0.150		
Long Chord =	29.989		
Mid. Ord. =	0.150		
P.C. Station	92+00.09	N 10,280.576	E 4,391.247
P.T. Station	92+30.08	N 10,250.718	E 4,394.046
C.C.		N 10,195.640	E 3,646.071
Back = S	6° 30' 09.20" E		
Ahead = S	4° 12' 41.17" E		
Chord Bear = S	5° 21' 25.19" E		

Course from PT GULF21 to PC GULF22 S 4° 12' 41.17" E Dist 47.302

Curve Data

Curve GULF22			
P.I. Station	92+90.13	N 10,190.834	E 4,398.456
Delta =	1° 56' 48.86"	(LT)	
Degree =	7° 38' 21.97"		
Tangent =	12.744		
Length =	25.485		
Radius =	750.000		
External =	0.108		
Long Chord =	25.484		
Mid. Ord. =	0.108		
P.C. Station	92+77.39	N 10,203.544	E 4,397.520
P.T. Station	93+02.87	N 10,178.164	E 4,399.823
C.C.		N 10,258.621	E 5,145.495
Back = S	4° 12' 41.17" E		
Ahead = S	6° 09' 30.03" E		
Chord Bear = S	5° 11' 05.60" E		

Course from PT GULF22 to PC GULF23 S 6° 09' 30.03" E Dist 1,256.663

Curve Data

Curve GULF23			
P.I. Station	105+74.52	N 8,913.852	E 4,536.241
Delta =	3° 26' 01.91"	(LT)	
Degree =	11° 27' 32.96"		
Tangent =	14.988		
Length =	29.966		
Radius =	500.000		
External =	0.225		
Long Chord =	29.962		
Mid. Ord. =	0.224		
P.C. Station	105+59.53	N 8,928.753	E 4,534.633
P.T. Station	105+89.50	N 8,899.074	E 4,538.739
C.C.		N 8,982.391	E 5,031.748
Back = S	6° 09' 30.03" E		
Ahead = S	9° 35' 31.95" E		
Chord Bear = S	7° 52' 30.99" E		

Course from PT GULF23 to PC GULF24 S 9° 35' 31.95" E Dist 20.390

Curve Data

Curve GULF24			
P.I. Station	106+24.60	N 8,864.466	E 4,544.587
Delta =	3° 22' 12.43"	(RT)	
Degree =	11° 27' 32.96"		
Tangent =	14.709		
Length =	29.410		
Radius =	500.000		
External =	0.216		
Long Chord =	29.406		
Mid. Ord. =	0.216		
P.C. Station	106+09.89	N 8,878.969	E 4,542.136
P.T. Station	106+39.30	N 8,849.843	E 4,546.182
C.C.		N 8,795.652	E 4,049.127
Back = S	9° 35' 31.95" E		
Ahead = S	6° 13' 19.51" E		
Chord Bear = S	7° 54' 25.73" E		

Course from PT GULF24 to PC GULF25 S 6° 13' 19.51" E Dist 388.896

Curve Data

Curve GULF25			
P.I. Station	110+40.69	N 8,450.820	E 4,589.685
Delta =	2° 51' 44.66"	(LT)	
Degree =	11° 27' 32.96"		
Tangent =	12.492		
Length =	24.979		
Radius =	500.000		
External =	0.156		
Long Chord =	24.977		
Mid. Ord. =	0.156		
P.C. Station	110+28.20	N 8,463.239	E 4,588.331
P.T. Station	110+53.17	N 8,438.484	E 4,591.658
C.C.		N 8,517.430	E 5,085.386
Back = S	6° 13' 19.51" E		
Ahead = S	9° 05' 04.17" E		
Chord Bear = S	7° 39' 11.84" E		

Course from PT GULF25 to PC GULF26 S 9° 05' 04.17" E Dist 25.078

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

HORIZONTAL ALIGNMENT DATA

GULF BLVD IMPROVEMENTS

SCALE	PROJECT NO.	SHEET NO.
		3

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GULF BLVD CONTINUED

Curve Data						
Curve GULF26						
P.I. Station	110+90.75	N	8,401.385	E	4,597.590	
Delta =	2° 51′ 44.66"	(RT)				
Degree =	11° 27′ 32.96"					
Tangent =	12.492					
Length =	24.979					
Radius =	500.000					
External =	0.156					
Long Chord =	24.977					
Mid. Ord. =	0.156					
P.C. Station	110+78.25	N	8,413.721	E	4,595.617	
P.T. Station	111+03.23	N	8,388.967	E	4,598.943	
C.C.		N	8,334.775	E	4,101.889	
Back = S	9° 05′ 04.17" E					
Ahead = S	6° 13′ 19.51" E					
Chord Bear = S	7° 39′ 11.84" E					

Course from PT GULF26 to PC GULF27 S 6° 13′ 19.51" E Dist 384.068

Curve Data						
Curve GULF27						
P.I. Station	115+07.29	N	7,987.287	E	4,642.737	
Delta =	2° 17′ 26.20"	(RT)				
Degree =	5° 43′ 46.48"					
Tangent =	19.992					
Length =	39.979					
Radius =	1,000.000					
External =	0.200					
Long Chord =	39.976					
Mid. Ord. =	0.200					
P.C. Station	114+87.30	N	8,007.161	E	4,640.570	
P.T. Station	115+27.28	N	7,967.342	E	4,644.107	
C.C.		N	7,898.779	E	3,646.460	
Back = S	6° 13′ 19.51" E					
Ahead = S	3° 55′ 53.32" E					
Chord Bear = S	5° 04′ 36.42" E					

Course from PT GULF27 to PC GULF28 S 3° 55′ 53.32" E Dist 55.878

Curve Data						
Curve GULF28						
P.I. Station	116+07.37	N	7,887.443	E	4,649.598	
Delta =	2° 46′ 25.49"	(LT)				
Degree =	5° 43′ 46.48"					
Tangent =	24.210					
Length =	48.411					
Radius =	1,000.000					
External =	0.293					
Long Chord =	48.406					
Mid. Ord. =	0.293					
P.C. Station	115+83.16	N	7,911.596	E	4,647.938	
P.T. Station	116+31.57	N	7,863.398	E	4,652.425	
C.C.		N	7,980.159	E	5,645.585	
Back = S	3° 55′ 53.32" E					
Ahead = S	6° 42′ 18.81" E					
Chord Bear = S	5° 19′ 06.07" E					

Course from PT GULF28 to PC GULF29 S 6° 42′ 18.81" E Dist 1,003.664

Curve Data						
Curve GULF29						
P.I. Station	126+45.23	N	6,856.672	E	4,770.781	
Delta =	2° 17′ 26.20"	(LT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	126+35.23	N	6,866.599	E	4,769.614	
P.T. Station	126+55.22	N	6,846.798	E	4,772.344	
C.C.		N	6,924.980	E	5,266.194	
Back = S	6° 42′ 18.81" E					
Ahead = S	8° 59′ 45.01" E					
Chord Bear = S	7° 51′ 01.91" E					

Course from PT GULF29 to PC GULF30 S 8° 59′ 45.01" E Dist 30.048

Curve Data						
Curve GULF30						
P.I. Station	126+95.26	N	6,807.247	E	4,778.606	
Delta =	2° 17′ 26.20"	(RT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	126+85.27	N	6,817.120	E	4,777.043	
P.T. Station	127+05.26	N	6,797.319	E	4,779.773	
C.C.		N	6,738.939	E	4,283.193	
Back = S	8° 59′ 45.01" E					
Ahead = S	6° 42′ 18.81" E					
Chord Bear = S	7° 51′ 01.91" E					

Course from PT GULF30 to PC GULF31 S 6° 42′ 18.81" E Dist 254.435

Curve Data						
Curve GULF31						
P.I. Station	129+69.69	N	6,534.697	E	4,810.648	
Delta =	2° 17′ 26.20"	(RT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	129+59.69	N	6,544.624	E	4,809.481	
P.T. Station	129+79.68	N	6,524.730	E	4,811.418	
C.C.		N	6,486.244	E	4,312.901	
Back = S	6° 42′ 18.81" E					
Ahead = S	4° 24′ 52.62" E					
Chord Bear = S	5° 33′ 35.71" E					

Course from PT GULF31 to PC GULF32 S 4° 24′ 52.62" E Dist 30.048

Curve Data						
Curve GULF32						
P.I. Station	130+19.73	N	6,484.805	E	4,814.500	
Delta =	2° 17′ 26.20"	(LT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	130+09.73	N	6,494.772	E	4,813.731	
P.T. Station	130+29.72	N	6,474.878	E	4,815.667	
C.C.		N	6,533.258	E	5,312.247	
Back = S	4° 24′ 52.62" E					
Ahead = S	6° 42′ 18.81" E					
Chord Bear = S	5° 33′ 35.71" E					

Course from PT GULF32 to PC GULF33 S 6° 42′ 18.81" E Dist 193.025

Curve Data						
Curve GULF33						
P.I. Station	132+32.74	N	6,273.245	E	4,839.372	
Delta =	2° 17′ 26.09"	(LT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	132+22.75	N	6,283.172	E	4,838.205	
P.T. Station	132+42.73	N	6,263.372	E	4,840.935	
C.C.		N	6,341.553	E	5,334.785	
Back = S	6° 42′ 18.81" E					
Ahead = S	8° 59′ 44.90" E					
Chord Bear = S	7° 51′ 01.86" E					

Course from PT GULF33 to PC GULF34 S 8° 59′ 44.90" E Dist 31.313

Curve Data						
Curve GULF34						
P.I. Station	132+82.78	N	6,223.820	E	4,847.197	
Delta =	2° 00′ 02.95"	(RT)				
Degree =	11° 27′ 32.96"					
Tangent =	8.731					
Length =	17.460					
Radius =	500.000					
External =	0.076					
Long Chord =	17.460					
Mid. Ord. =	0.076					
P.C. Station	132+74.05	N	6,232.444	E	4,845.831	
P.T. Station	132+91.51	N	6,215.154	E	4,848.260	
C.C.		N	6,154.263	E	4,351.982	
Back = S	8° 59′ 44.90" E					
Ahead = S	6° 59′ 41.96" E					
Chord Bear = S	7° 59′ 43.43" E					

Course from PT GULF34 to PC GULF35 S 6° 59′ 41.96" E Dist 170.670

Curve Data						
Curve GULF35						
P.I. Station	134+72.18	N	6,035.831	E	4,870.262	
Delta =	2° 17′ 27.76"	(RT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.998					
Length =	19.993					
Radius =	500.000					
External =	0.100					
Long Chord =	19.992					
Mid. Ord. =	0.100					
P.C. Station	134+62.18	N	6,045.755	E	4,869.045	
P.T. Station	134+82.17	N	6,025.867	E	4,871.082	
C.C.		N	5,984.863	E	4,372.766	
Back = S	6° 59′ 41.96" E					
Ahead = S	4° 42′ 14.20" E					
Chord Bear = S	5° 50′ 58.08" E					

Course from PT GULF35 to PC GULF36 S 4° 42′ 14.20" E Dist 30.035

Curve Data						
Curve GULF36						
P.I. Station	135+22.20	N	5,985.969	E	4,874.365	
Delta =	2° 17′ 27.76"	(LT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.998					
Length =	19.993					
Radius =	500.000					
External =	0.100					
Long Chord =	19.992					
Mid. Ord. =	0.100					
P.C. Station	135+12.21	N	5,995.933	E	4,873.545	
P.T. Station	135+32.20	N	5,976.046	E	4,875.583	
C.C.		N	6,036.937	E	5,371.861	
Back = S	4° 42′ 14.20" E					
Ahead = S	6° 59′ 41.96" E					
Chord Bear = S	5° 50′ 58.08" E					

Course from PT GULF36 to PC GULF37 S 6° 59′ 41.96" E Dist 401.335

Curve Data						
Curve GULF37						
P.I. Station	139+43.53	N	5,567.777	E	4,925.675	
Delta =	2° 17′ 26.20"	(RT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	139+33.53	N	5,577.698	E	4,924.458	
P.T. Station	139+53.52	N	5,557.814	E	4,926.495	
C.C.		N	5,516.807	E	4,428.180	
Back = S	6° 59′ 41.96" E					
Ahead = S	4° 42′ 15.76" E					
Chord Bear = S	5° 50′ 58.86" E					

Course from PT GULF37 to PC GULF38 S 4° 42′ 15.76" E Dist 30.048

Curve Data						
Curve GULF38						
P.I. Station	139+93.57	N	5,517.905	E	4,929.779	
Delta =	2° 17′ 26.20"	(LT)				
Degree =	11° 27′ 32.96"					
Tangent =	9.996					
Length =	19.989					
Radius =	500.000					
External =	0.100					
Long Chord =	19.988					
Mid. Ord. =	0.100					
P.C. Station	139+83.57	N	5,527.868	E	4,928.960	
P.T. Station	140+03.56	N	5,507.984	E	4,930.997	
C.C.		N	5,568.875	E	5,427.275	
Back = S	4° 42′ 15.76" E					
Ahead = S	6° 59′ 41.96" E					
Chord Bear = S	5° 50′ 58.86" E					

Course from PT GULF38 to GULF02 S 6° 59′ 41.96" E Dist 523.423

Point GULF02 N 4,988.457 E 4,994.740 Sta 145+26.98

Ending ohain GULF desoription

STATE OF TEXAS
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PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

HORIZONTAL ALIGNMENT DATA

GULF BLVD IMPROVEMENTS

SCALE	PROJECT NO.	SHEET NO.
		4

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HIBISCUS ST

℄ HIBISCUS contains:
HIB01 HIB02

Beginning ℄ HIBISCUS description

Point HIB01	N	12,681.129 E	3,075.940 Sta	10+00.00
Course from HIB01 to HIB02 N 83° 56' 00.00" E Dist 1,045.663				
Point HIB02	N	12,791.641 E	4,115.747 Sta	20+45.66

Ending chain HIBISCUS description

OLEANDER ST

℄ OLEANDER contains:
OLE01 OLE02

Beginning ℄ OLEANDER description

Point OLE01	N	12,086.396 E	3,138.357 Sta	10+00.00
Course from OLE01 to OLE02 N 83° 56' 00.00" E Dist 1,046.450				
Point OLE02	N	12,196.991 E	4,178.947 Sta	20+46.45

Ending chain OLEANDER description

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94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

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South Padre ISLAND

HORIZONTAL ALIGNMENT DATA

GULF BLVD IMPROVEMENTS

SCALE	PROJECT NO.	SHEET NO.
		5

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TRAFFIC CONTROL GENERAL NOTES:

1. MAINTAIN ACCESS TO PROPERTY AT ALL TIMES
2. TIE-IN PAVEMENT (IF NEEDED) TO MAINTAIN ACCESS TO ADJACENT PROPERTIES WILL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
3. UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER, NO WORK ALLOWED ON GULF BOULEVARD ON THE WEEKEND AND SHOULD BE OPEN TO TWO-LANES AT ALL TIMES 7:00 PM ON FRIDAY THROUGH 7:00 AM ON THE FOLLOWING MONDAY.
4. ABOVE GROUND AND BURIED UTILITIES ARE LOCATED IN THE RIGHT OF WAY. UTILITIES SHOWN IN PLANS ARE APPROXIMATE AND NOT NECESSARILY ALL ENCOMPASSING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITIES PRIOR TO CONSTRUCTION TO VERIFY IF ANY CONFLICTS EXIST.

GULF BLVD SEQUENCE OF CONSTRUCTION:

1. CONSTRUCTION MUST BE SEQUENCED AS SHOWN IN THE PHASES BELOW. PHASE 1 CONSTRUCTION MUST BE COMPLETE PRIOR TO BEGINNING PHASE 2 CONSTRUCTION. PHASE 2 CONSTRUCTION MUST BE COMPLETED PRIOR TO BEGINNING PHASE 3 CONSTRUCTION. ANY DEVIATION IN CONSTRUCTION SEQUENCING MUST BE APPROVED IN WRITING BY THE ENGINEER.

CONSTRUCTION PHASE 1: WIDENING FROM GARDENIA ST THROUGH ACAPULCO ST

1. PLACE ADVANCE WARNING SIGNS IN ACCORDANCE WITH TXDOT STANDARD BC(2)-14.
2. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN PLANS.
3. REPAIR ASPHALT PAVEMENT (UP TO THE FINAL 1.5" OVERLAY SURFACE) TO THE LIMITS SHOWN ON "ASPHALT PAVEMENT REPAIR" SHEETS. REPAIR LIMITS SHALL END AT THE PROPOSED LIP OF GUTTER.
4. REMOVE EXISTING CENTER LINE STRIPING AND INSIDE PARKING STRIPING.
5. MILL 1.5" OF EXIST PAVEMENT AS SHOWN IN PLANS IN ACCORDANCE WITH TCP(7-1)-13.
6. PLACE WORK ZONE STRIPING FOR TEMPORARY CENTER LINE AND EDGE LINES PROVIDING A 3' MIN BUFFER BETWEEN WORK ZONE AND SOUTHBOUND LANE. TEMPORARY LANES WILL BE ~12'. PLACE CHANNELIZING DEVICES BETWEEN WORK ZONE AND SOUTHBOUND LANE IN ACCORDANCE WITH TCP (2-1)-12.
7. CONSTRUCT CURB AND GUTTER, PAVEMENT WIDENING, PARKING BAYS, SIDEWALKS, AND DRIVEWAYS AS SHOWN IN PLANS. MAINTAIN POSITIVE DRAINAGE TOWARDS SIDE STREETS.
8. PLACE CHANNELIZING DEVICES IN ACCORDANCE WITH TCP (2-1)-12 AND CONSTRUCT CURB AND GUTTER AND RAISED SIDEWALK FOR SHARED PATH AT SPECIFIC LOCATIONS SHOWN IN PLANS ON EAST SIDE OF GULF BLVD.
9. CONSTRUCT PAVEMENT LEVEL-UP AT SPECIFIC LOCATIONS SHOWN IN PLANS. VERIFY PAVEMENT MAINTAINS POSITIVE DRAINAGE FROM E TO W.
10. CONSTRUCT 1.5" OVERLAY FINAL SURFACE IN ACCORDANCE WITH TXDOT TCP STANDARD TCP(7-1)-13.
11. INSTALL FINAL SIGNING AND PLACE FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH TXDOT STANDARDS TCP(3-1)-13 AND TCP(3-3)-13.
12. SHAPE SLOPES TO MAINTAIN POSITIVE DRAINAGE. 70% RE-VEGETATION REQUIRED BEFORE REMOVAL OF EROSION CONTROLS.

GULF BLVD SEQUENCE OF CONSTRUCTION:

CONSTRUCTION PHASE 2: WIDENING FROM ACAPULCO ST THROUGH MARLIN ST

1. PLACE ADVANCE WARNING SIGNS IN ACCORDANCE WITH TXDOT STANDARD BC(2)-14.
2. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN PLANS.
3. REPAIR ASPHALT PAVEMENT (UP TO THE FINAL 1.5" OVERLAY SURFACE) TO THE LIMITS SHOWN ON "ASPHALT PAVEMENT REPAIR" SHEETS. REPAIR LIMITS SHALL END AT THE PROPOSED LIP OF GUTTER.
4. REMOVE EXISTING CENTER LINE STRIPING AND INSIDE PARKING STRIPING.
5. MILL 1.5" OF EXIST PAVEMENT AS SHOWN IN PLANS IN ACCORDANCE WITH TCP(7-1)-13.
6. PLACE WORK ZONE STRIPING FOR TEMPORARY CENTER LINE AND EDGE LINES PROVIDING A 3' MIN BUFFER BETWEEN WORK ZONE AND SOUTHBOUND LANE. TEMPORARY LANES WILL BE ~12'. PLACE CHANNELIZING DEVICES BETWEEN WORK ZONE AND SOUTHBOUND LANE IN ACCORDANCE WITH TCP (2-1)-12.
7. CONSTRUCT CURB AND GUTTER, PAVEMENT WIDENING, PARKING BAYS, SIDEWALKS, AND DRIVEWAYS AS SHOWN IN PLANS. MAINTAIN POSITIVE DRAINAGE TOWARDS SIDE STREETS.

GULF BLVD SEQUENCE OF CONSTRUCTION PHASE 2 CONTINUED

8. PLACE CHANNELIZING DEVICES IN ACCORDANCE WITH TCP (2-1)-12 AND CONSTRUCT CURB AND GUTTER AND RAISED SIDEWALK FOR SHARED PATH AT SPECIFIC LOCATIONS SHOWN IN PLANS ON EAST SIDE OF GULF BLVD.
9. CONSTRUCT PAVEMENT LEVEL-UP AT SPECIFIC LOCATIONS SHOWN IN PLANS. VERIFY PAVEMENT MAINTAINS POSITIVE DRAINAGE FROM E TO W.
10. CONSTRUCT 1.5" OVERLAY FINAL SURFACE IN ACCORDANCE WITH TXDOT TCP STANDARD TCP(7-1)-13.
11. INSTALL FINAL SIGNING AND PLACE FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH TXDOT STANDARDS TCP(3-1)-13 AND TCP(3-3)-13.
12. SHAPE SLOPES TO MAINTAIN POSITIVE DRAINAGE. 70% RE-VEGETATION REQUIRED BEFORE REMOVAL OF EROSION CONTROLS.

GULF BLVD SEQUENCE OF CONSTRUCTION:

CONSTRUCTION PHASE 3: WIDENING FROM MARLIN ST THROUGH HAAS ST

1. PLACE ADVANCE WARNING SIGNS IN ACCORDANCE WITH TXDOT STANDARD BC(2)-14.
2. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN PLANS.
3. REPAIR ASPHALT PAVEMENT (UP TO THE FINAL 1.5" OVERLAY SURFACE) TO THE LIMITS SHOWN ON "ASPHALT PAVEMENT REPAIR" SHEETS. REPAIR LIMITS SHALL END AT THE PROPOSED LIP OF GUTTER.
4. REMOVE EXISTING CENTER LINE STRIPING AND INSIDE PARKING STRIPING.
5. MILL 1.5" OF EXIST PAVEMENT AS SHOWN IN PLANS IN ACCORDANCE WITH TCP(7-1)-13.
6. PLACE WORK ZONE STRIPING FOR TEMPORARY CENTER LINE AND EDGE LINES PROVIDING A 3' MIN BUFFER BETWEEN WORK ZONE AND SOUTHBOUND LANE. TEMPORARY LANES WILL BE ~12'. PLACE CHANNELIZING DEVICES BETWEEN WORK ZONE AND SOUTHBOUND LANE IN ACCORDANCE WITH TCP (2-1)-12
7. CONSTRUCT CURB AND GUTTER, PAVEMENT WIDENING, PARKING BAYS, SIDEWALKS, AND DRIVEWAYS AS SHOWN IN PLANS. MAINTAIN POSITIVE DRAINAGE TOWARDS SIDE STREETS.
8. PLACE CHANNELIZING DEVICES IN ACCORDANCE WITH TCP (2-1)-12 AND CONSTRUCT CURB AND GUTTER AND RAISED SIDEWALK FOR SHARED PATH AT SPECIFIC LOCATIONS SHOWN IN PLANS ON EAST SIDE OF GULF BLVD.
9. CONSTRUCT PAVEMENT LEVEL-UP AT SPECIFIC LOCATIONS SHOWN IN PLANS. VERIFY PAVEMENT MAINTAINS POSITIVE DRAINAGE FROM E TO W.
10. CONSTRUCT 1.5" OVERLAY FINAL SURFACE IN ACCORDANCE WITH TXDOT TCP STANDARD TCP(7-1)-13.
11. INSTALL FINAL SIGNING AND PLACE FINAL PAVEMENT MARKINGS IN ACCORDANCE WITH TXDOT STANDARDS TCP(3-1)-13 AND TCP(3-3)-13.
12. SHAPE SLOPES TO MAINTAIN POSITIVE DRAINAGE. 70% RE-VEGETATION REQUIRED BEFORE REMOVAL OF EROSION CONTROLS.

CONSTRUCTION PHASE 4: CONSTRUCT CROSSWALKS

ADJUST ADVANCE WARNING SIGNS IN ACCORDANCE WITH TXDOT STANDARD BC(2)-14.

1. TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN PLANS TO REMAIN.
2. PHASE CONSTRUCT THE PROPOSED BRICK PAVED CROSSWALKS STARTING WITH THE WEST END. WORK FROM NORTH TO SOUTH. CONSTRUCT CONCRETE BASE USING HES CONCRETE. SHIFT TRAFFIC TO ONE-LANE TWO-WAY OPERATION WITH FLAGGERS IN ACCORDANCE WITH TCP STANDARD TCP(1-2)-12. MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES DURING CROSSWALK INSTALLATION.

HIBISCUS STREET RECONSTRUCTION SEQUENCE:

1. PLACE ADVANCE WARNING SIGNS IN ACCORDANCE WITH TXDOT STANDARD BC(2)-14.
2. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN PLANS.
3. CLOSE HIBISCUS STREET TO THROUGH TRAFFIC BETWEEN PADRE BOULEVARD AND GULF BOULEVARD. MAINTAIN ACCESS TO PROPERTY OWNERS AT ALL TIMES.
4. CONSTRUCT PROPOSED PAVEMENT IN ONE-HALF SECTIONS AS SHOWN IN PLANS FROM STATION 10+43.35 TO STATION 20+07.00.
5. TIE-IN PAVEMENT (IF NEEDED) TO MAINTAIN ACCESS TO ADJACENT PROPERTIES WILL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
6. INSTALL FINAL SIGNING AND OPEN TO TRAFFIC UNRESTRICTED.
7. 70% RE-VEGETATION REQUIRED BEFORE REMOVAL OF EROSION CONTROLS.

OLEANDER STREET RECONSTRUCTION SEQUENCE:

1. PLACE ADVANCE WARNING SIGNS IN ACCORDANCE WITH TXDOT STANDARD BC(2)-14.
2. PLACE TEMPORARY EROSION CONTROL DEVICES AS SHOWN IN PLANS.
3. CLOSE OLEANDER STREET TO THROUGH TRAFFIC BETWEEN PADRE BOULEVARD AND GULF BOULEVARD. MAINTAIN ACCESS TO PROPERTY OWNERS AT ALL TIMES.
4. CONSTRUCT PROPOSED PAVEMENT IN ONE-HALF SECTIONS AS SHOWN IN PLANS FROM STATION 10+43.35 TO STATION 20+29.80.
5. TIE-IN PAVEMENT (IF NEEDED) TO MAINTAIN ACCESS TO ADJACENT PROPERTIES WILL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
6. INSTALL FINAL SIGNING AND OPEN TO TRAFFIC UNRESTRICTED.
7. 70% RE-VEGETATION REQUIRED BEFORE REMOVAL OF EROSION CONTROLS.

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

TRAFFIC CONTROL PLAN

GULF BLVD IMPROVEMENTS

SCALE	PROJECT NO.	SHEET NO.
		6

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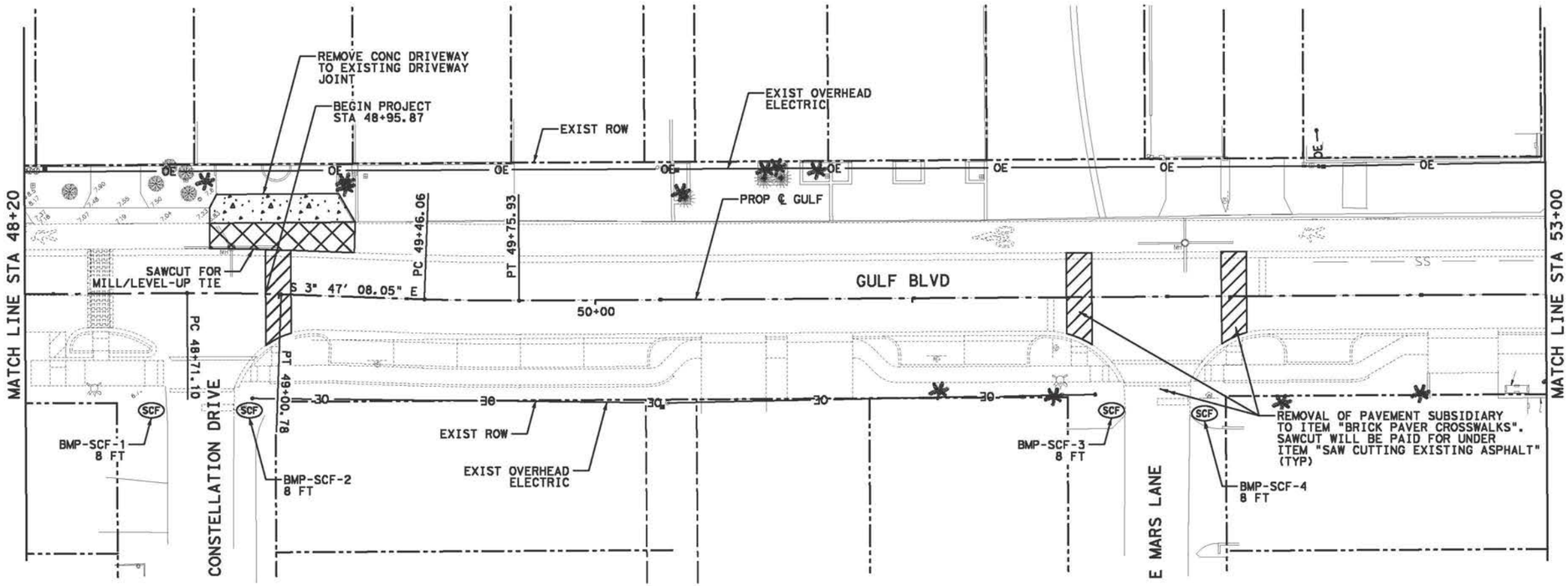

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
- CONCRETE SIDEWALK REMOVAL
- BRICK DRIVEWAY REMOVAL
- SCF — SEDIMENT CONTROL FENCE

NOTES:

1. CONTRACTOR WILL BE REQUIRED TO PROTECT PALM TREES SHOWN TO REMAIN.
2. APPLY SEEDING TO DISTURBED AREAS WITHIN ROW. SEEDING SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
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5. REMOVE EXISTING STRIPING IN CONFLICT WITH PROPOSED STRIPING. THIS WILL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
6. BURIED UTILITIES EXIST WITHIN CORRIDOR. CONTRACTOR TO LOCATE UTILITIES PRIOR TO CONSTRUCTION.

0 20 40
SCALE: 1"=40'

STATE OF TEXAS
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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS

SHEET 1 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	.	7

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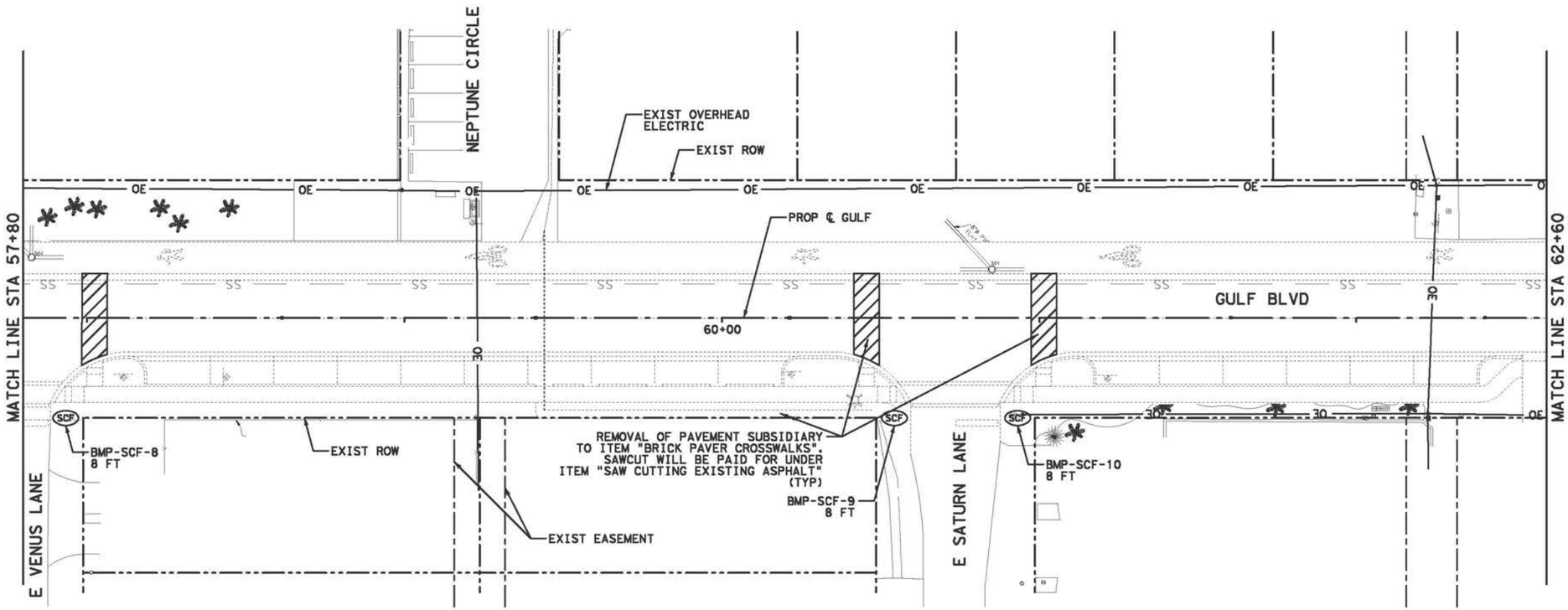

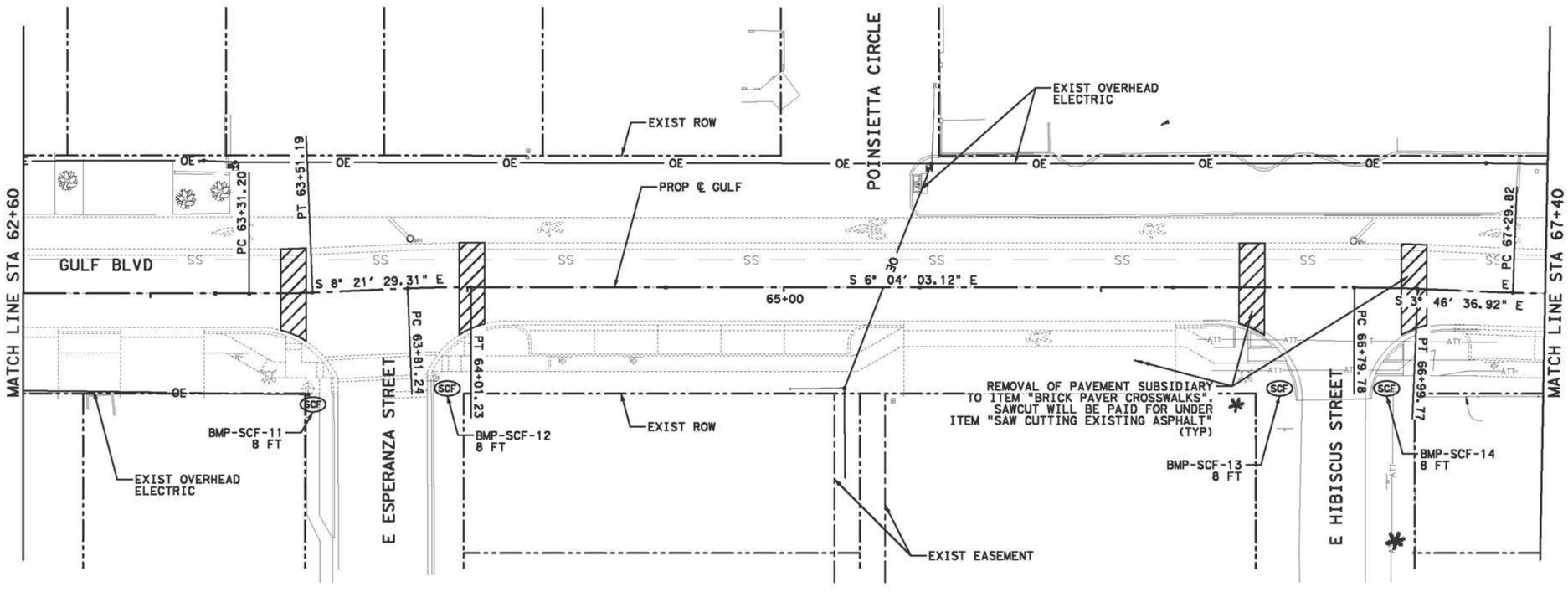

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
- CONCRETE SIDEWALK REMOVAL
- BRICK DRIVEWAY REMOVAL
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0 20 40
SCALE: 1"=40'

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 2 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		8

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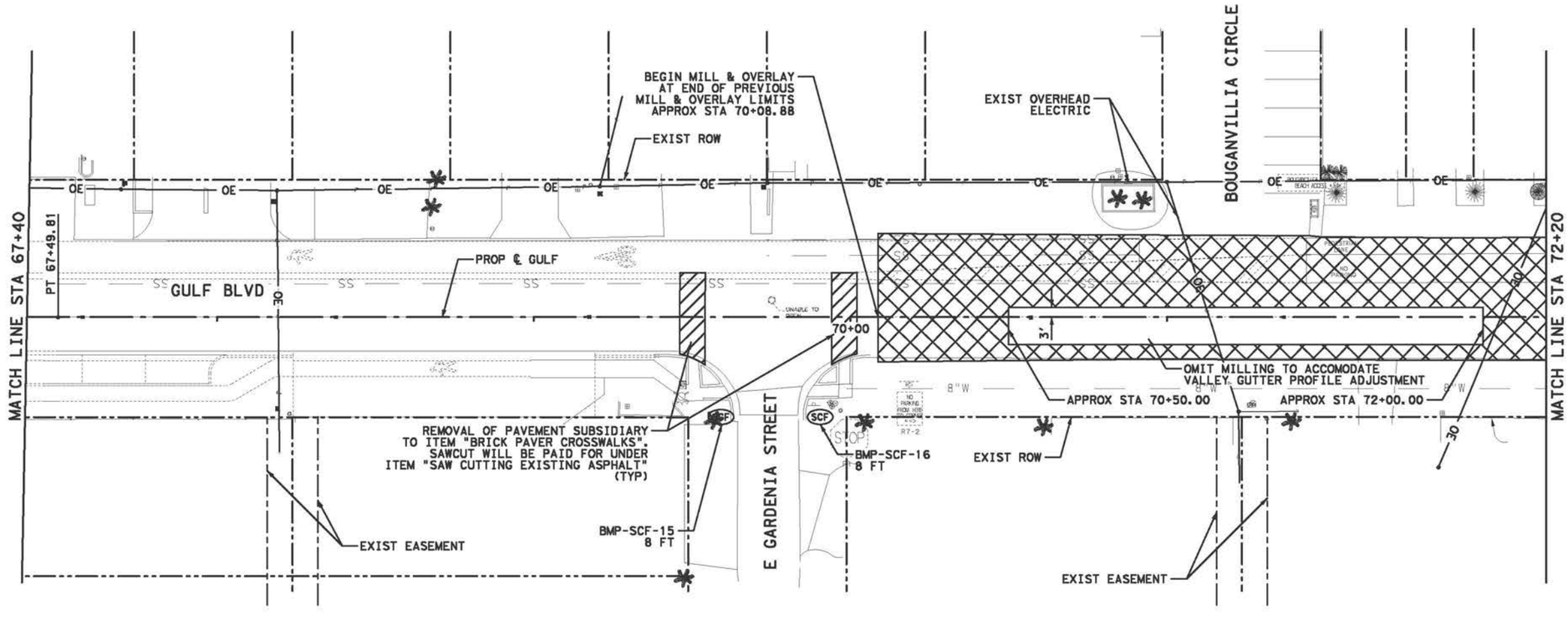

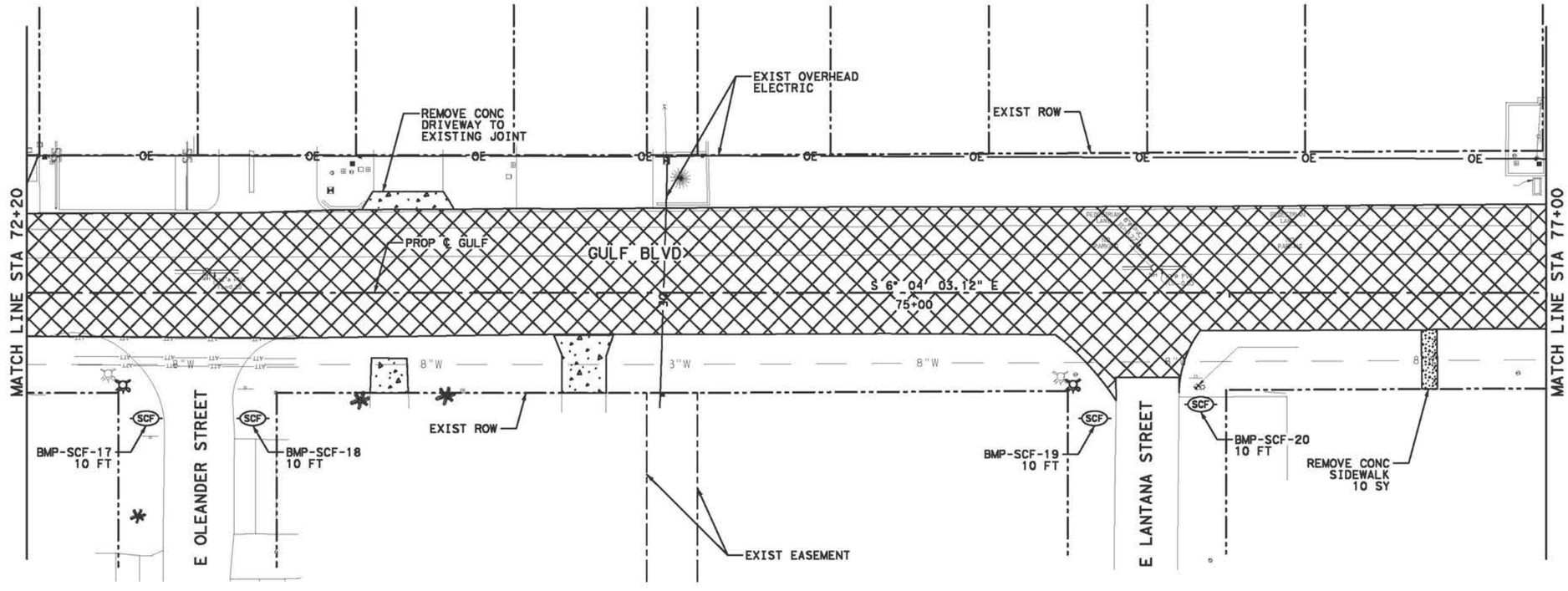

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
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0 20 40
SCALE: 1"=40'

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 3 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	9

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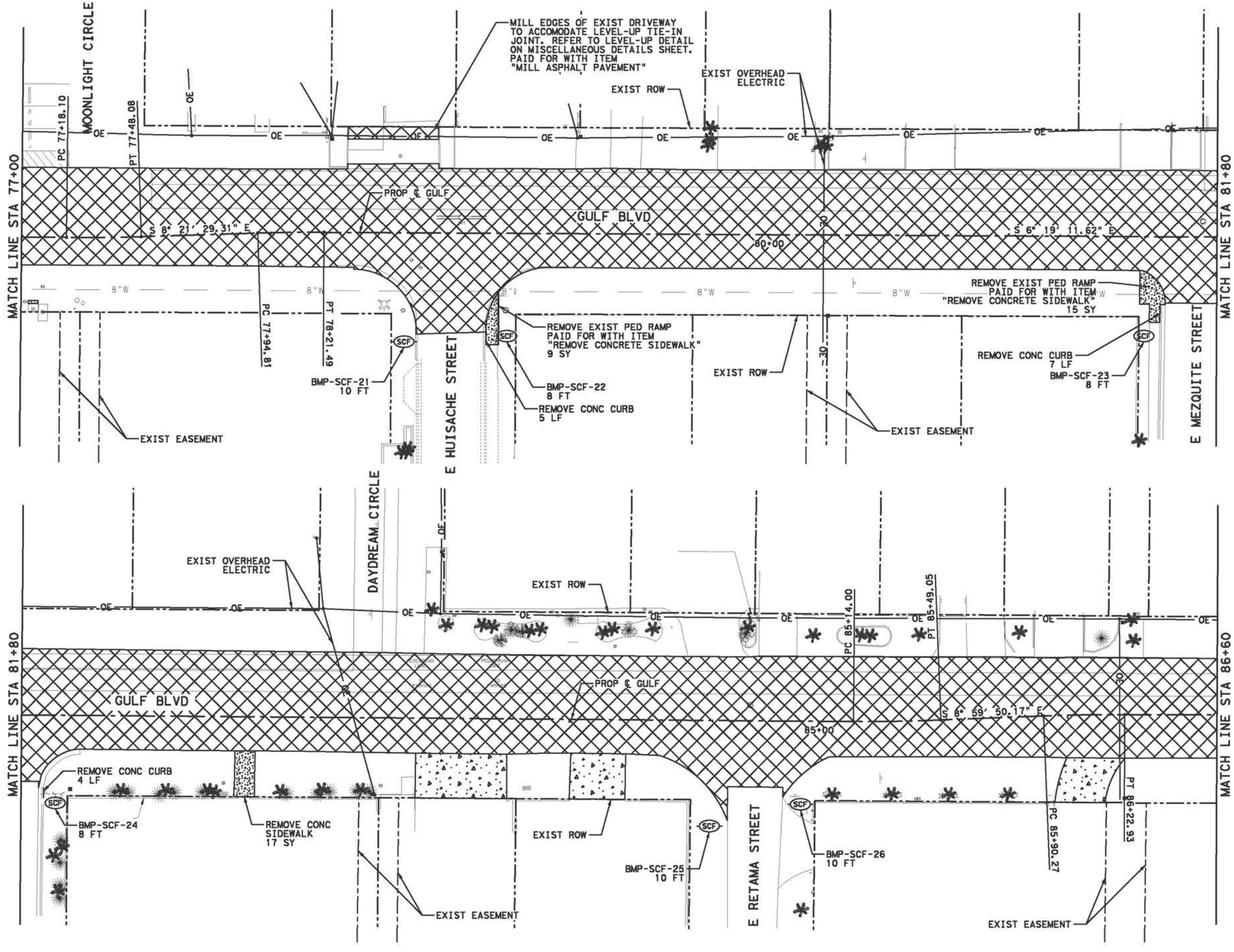

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
- CONCRETE SIDEWALK REMOVAL
- BRICK DRIVEWAY REMOVAL
- (SCF) SEDIMENT CONTROL FENCE

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0 20 40
SCALE: 1"=40'

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 4 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	10

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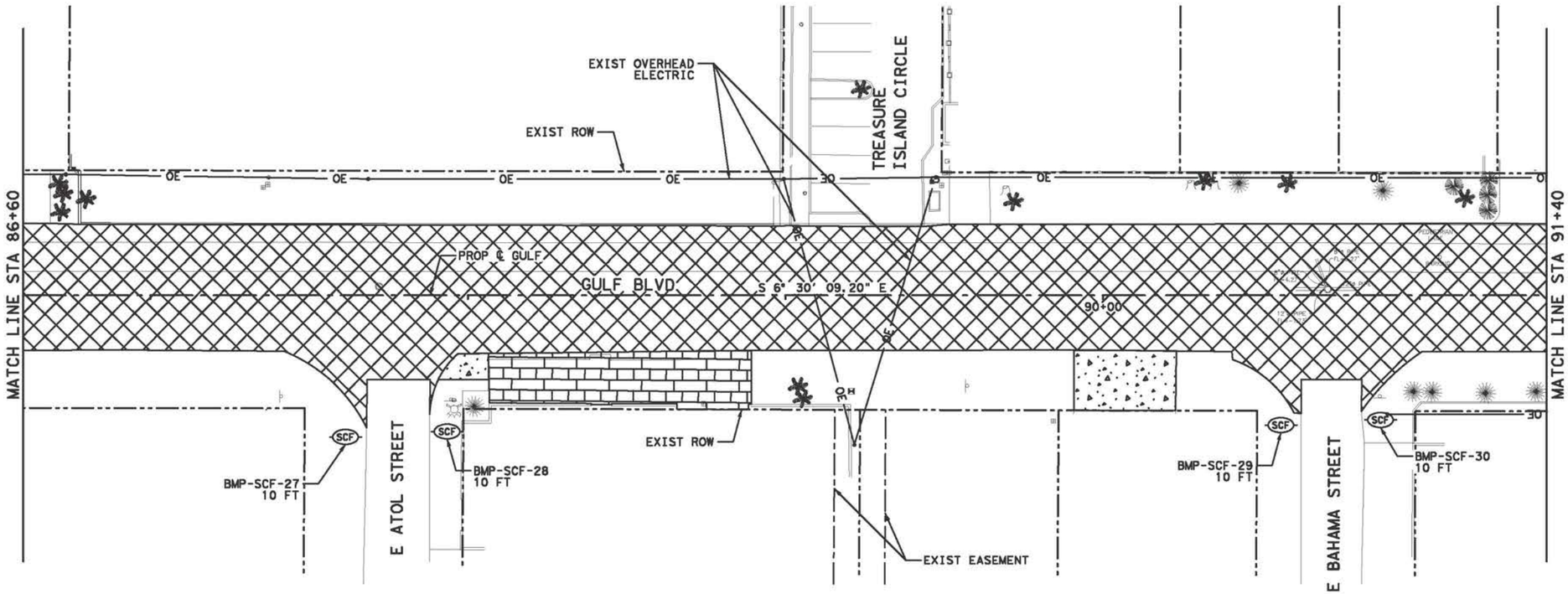

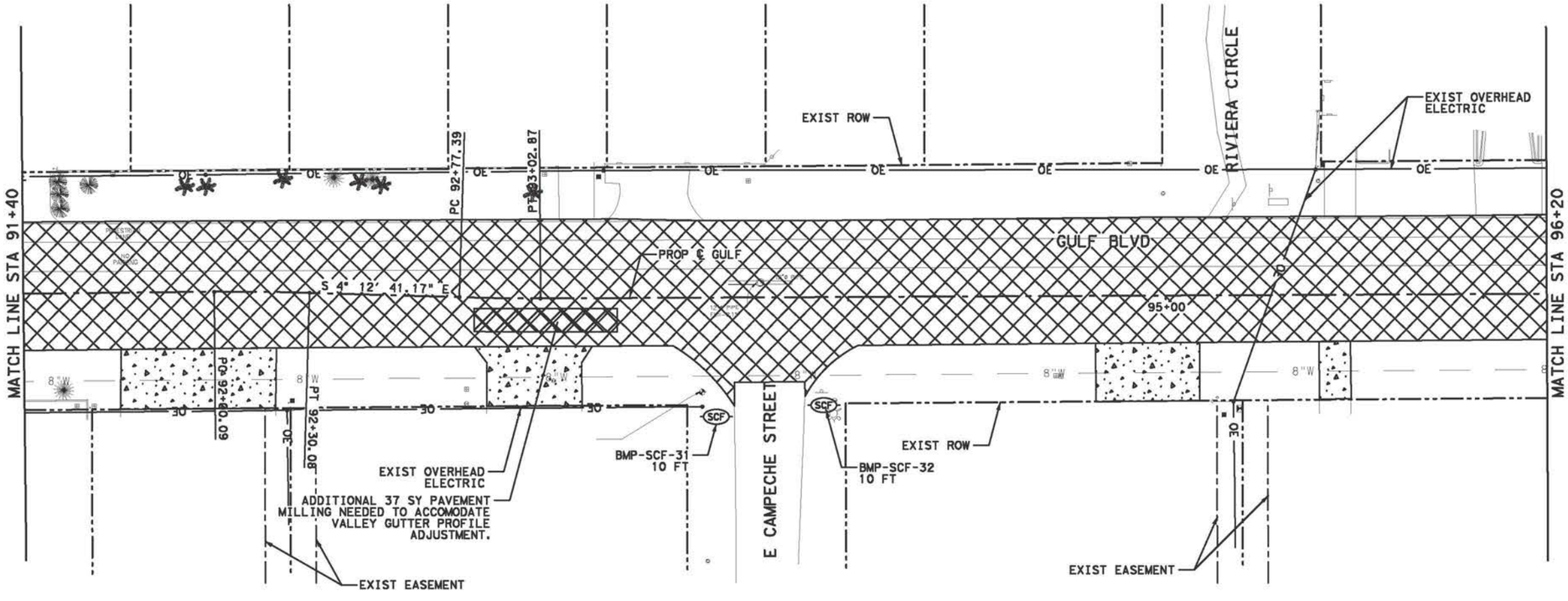

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
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- CONCRETE SIDEWALK REMOVAL
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0 20 40
SCALE: 1"=40'

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 5 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	11

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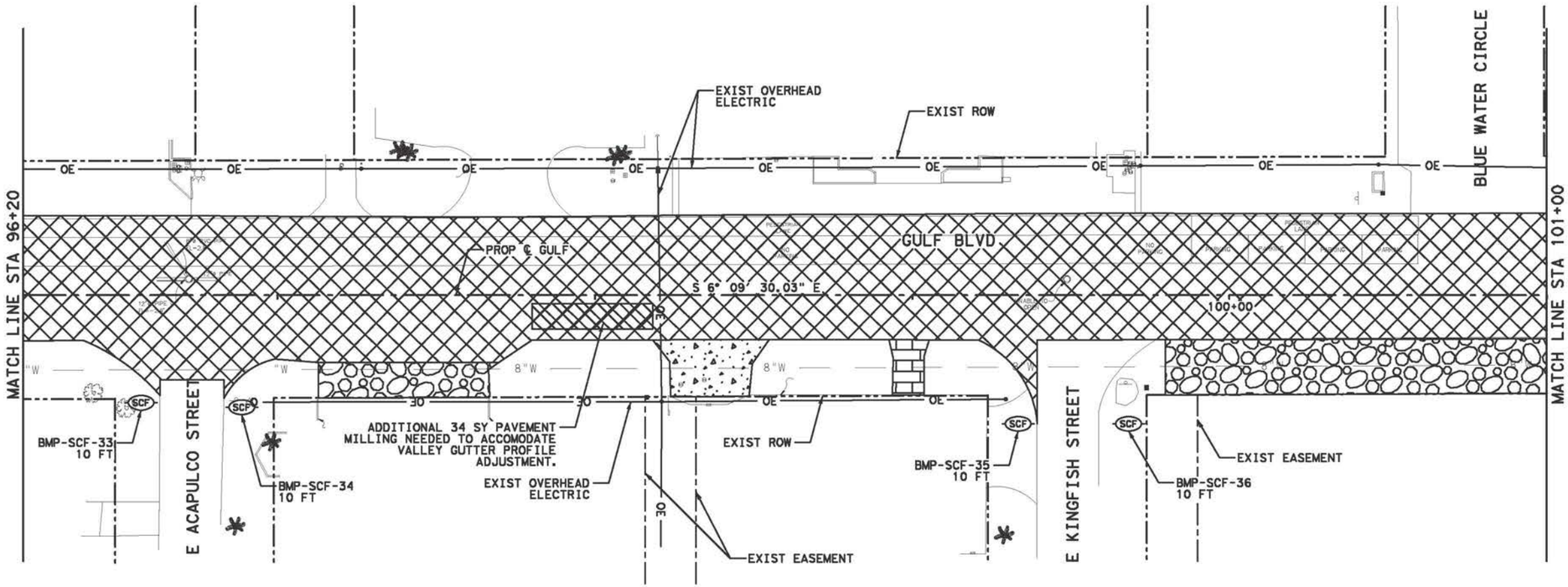

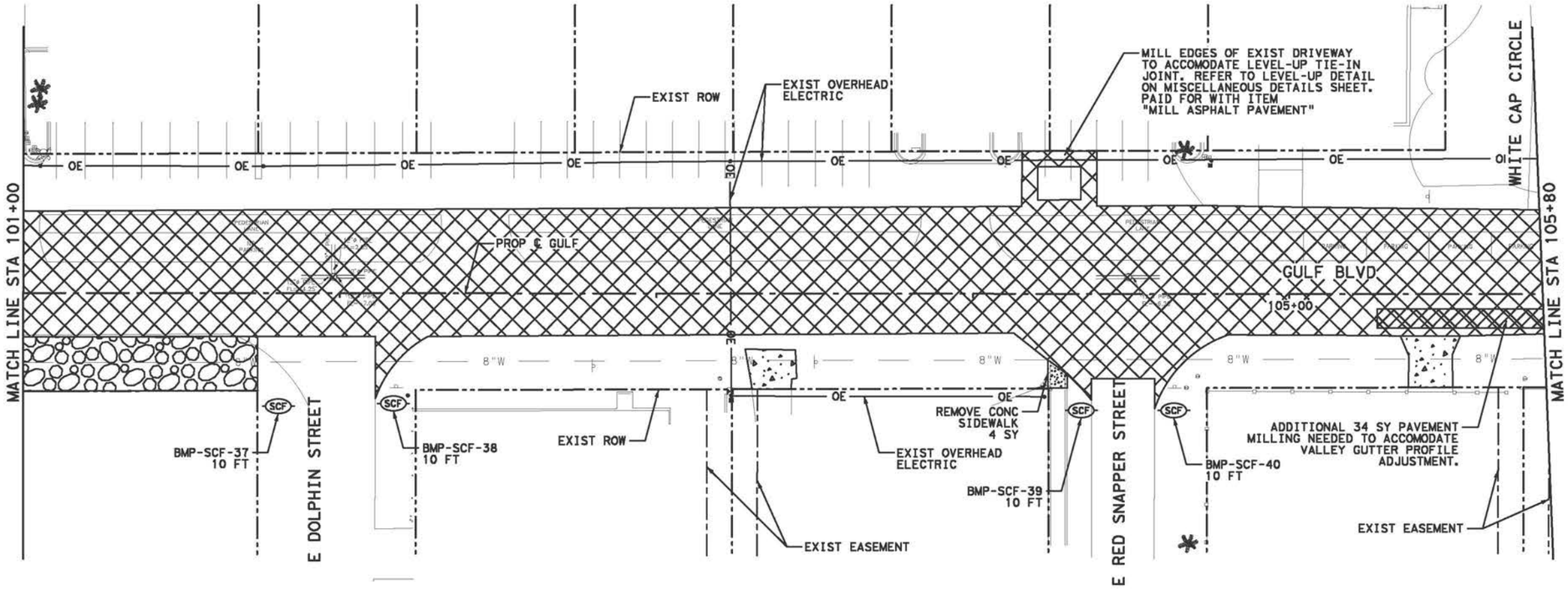

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
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0 20 40
SCALE: 1"=40'

STATE OF TEXAS
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4-22-2016

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS

SHEET 6 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	12

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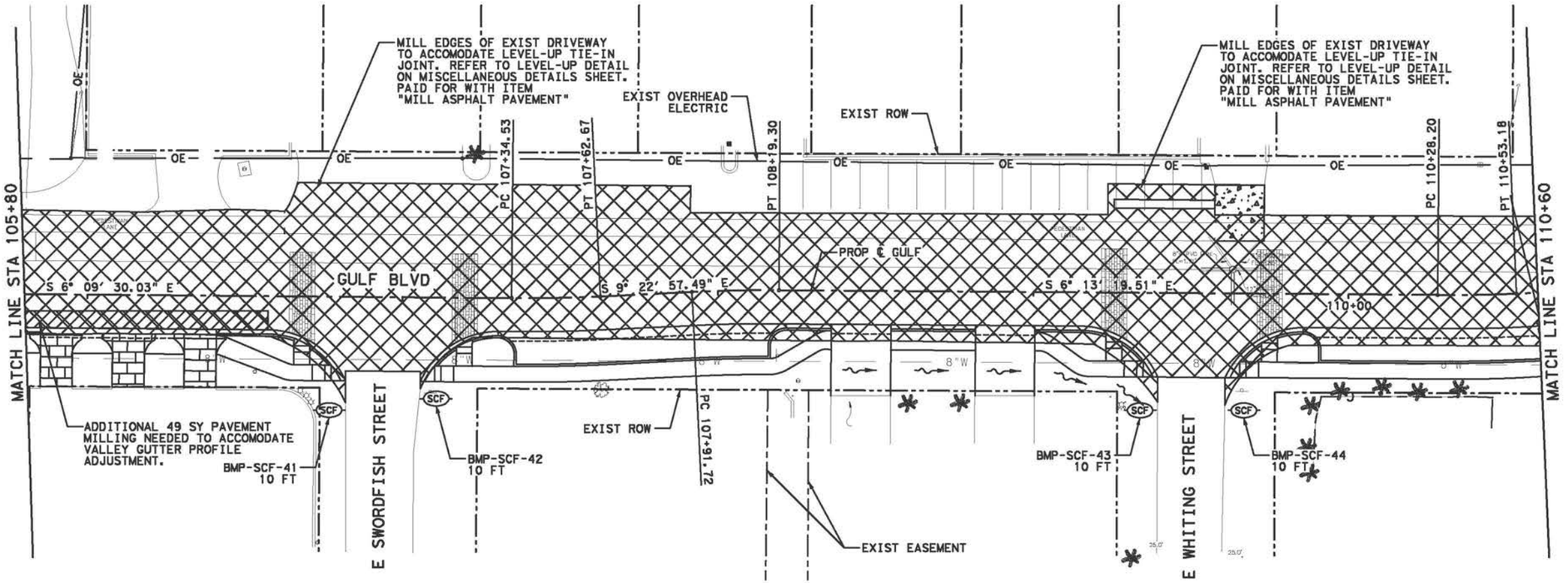

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
- CONCRETE SIDEWALK REMOVAL
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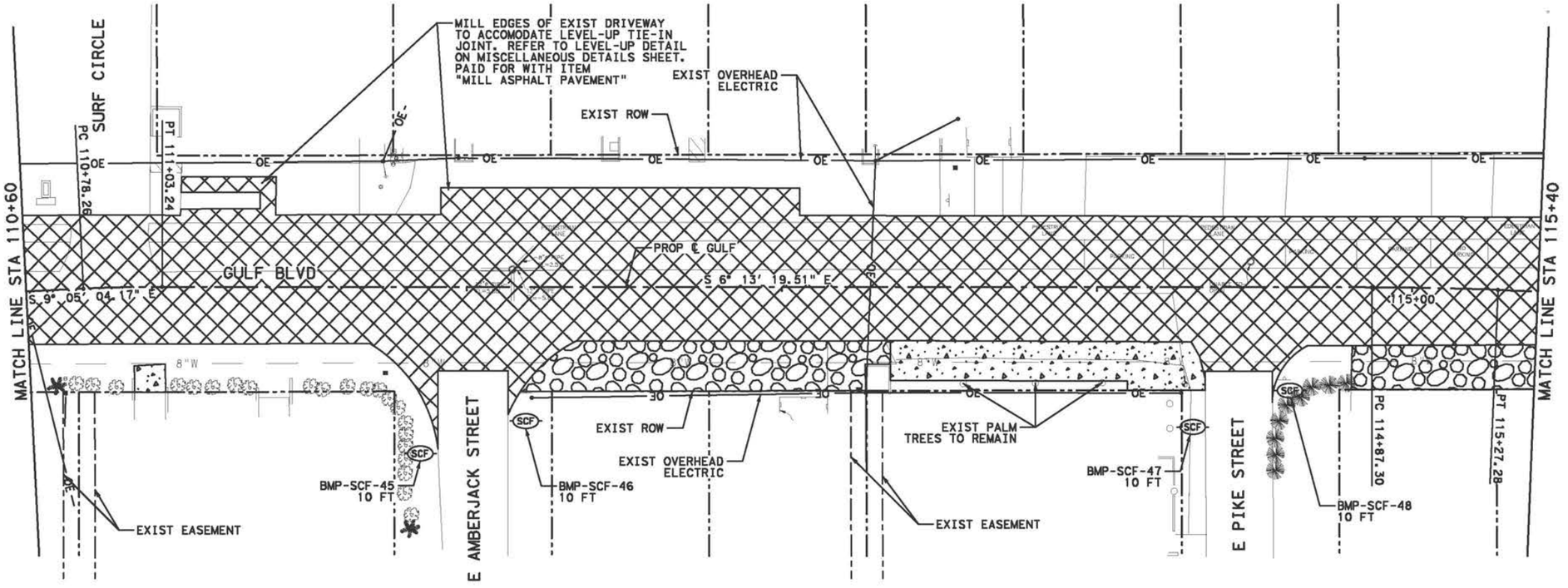

0 20 40
SCALE: 1"=40'

STATE OF TEXAS
BRIAN C. BOECKER
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4-22-2016

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 7 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	13

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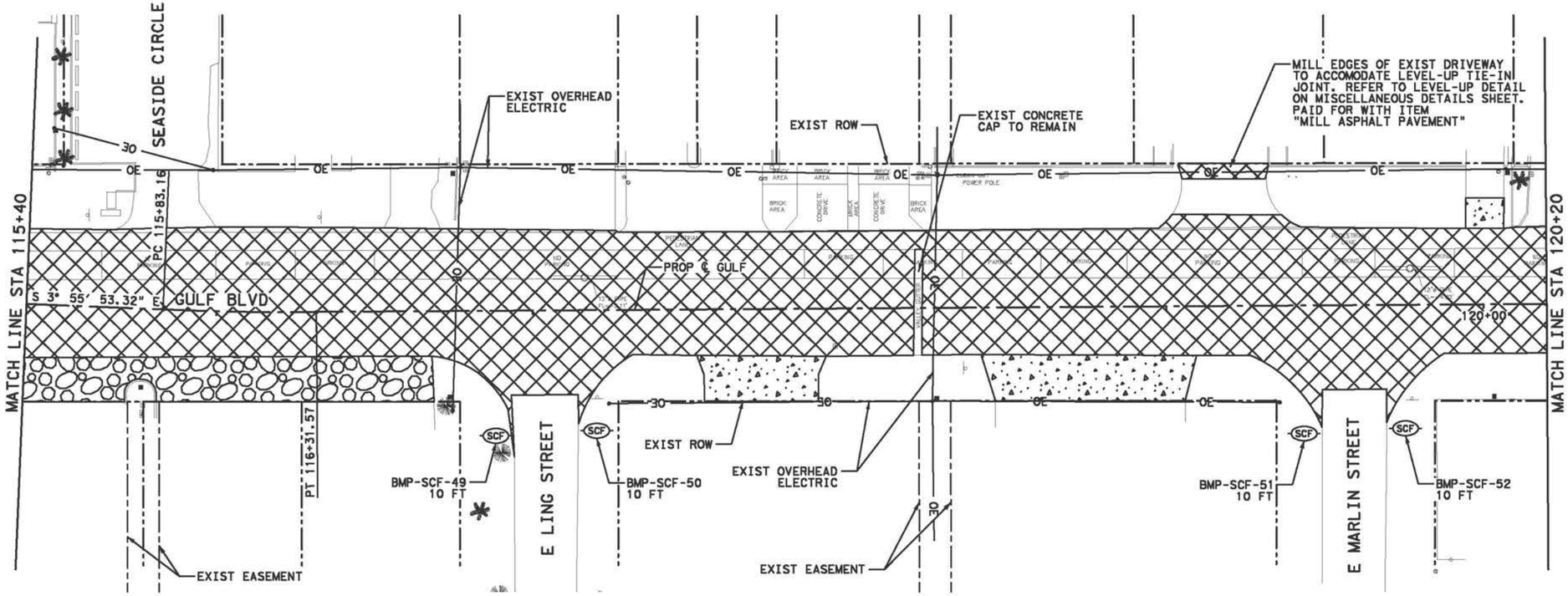

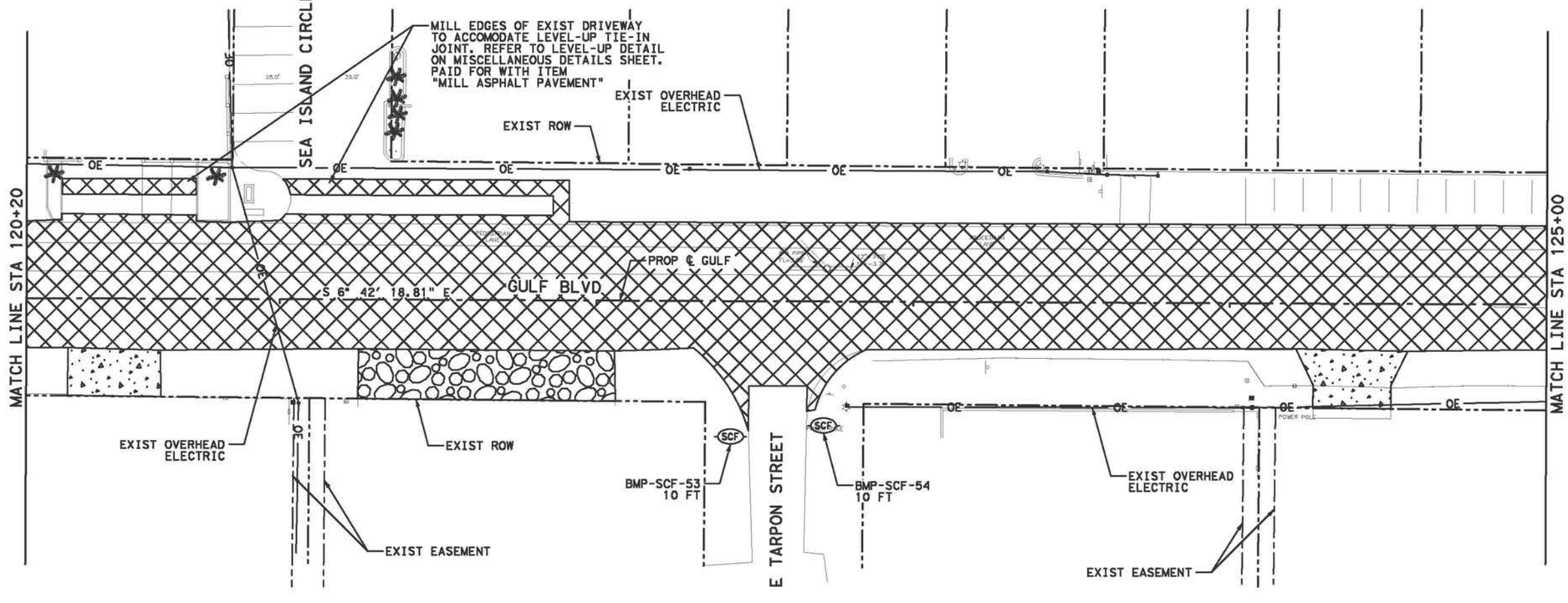

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
- CONCRETE SIDEWALK REMOVAL
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0 20 40
SCALE: 1"=40'

STATE OF TEXAS
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Kimley»Horn F-928

South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 8 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	14

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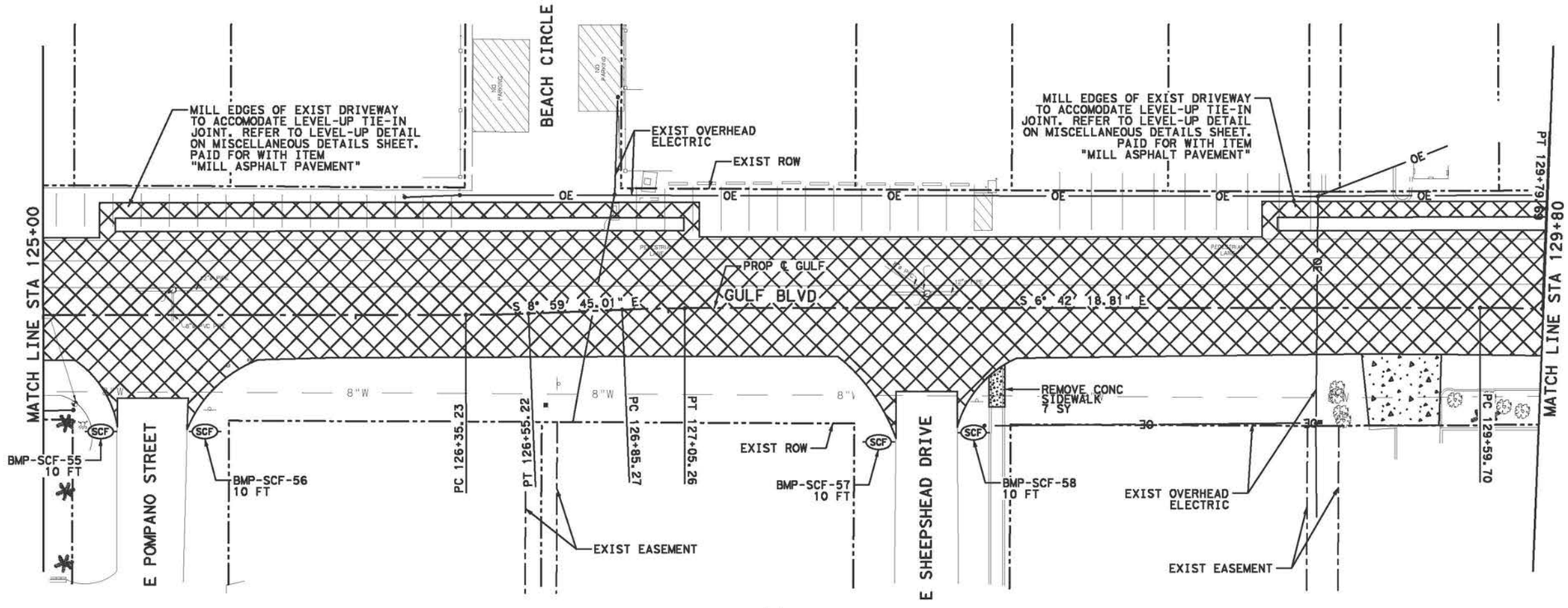

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
- ASPHALT PAVEMENT REMOVAL
- CONCRETE DRIVEWAY REMOVAL
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0 20 40
SCALE: 1"=40'

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 9 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		15

12

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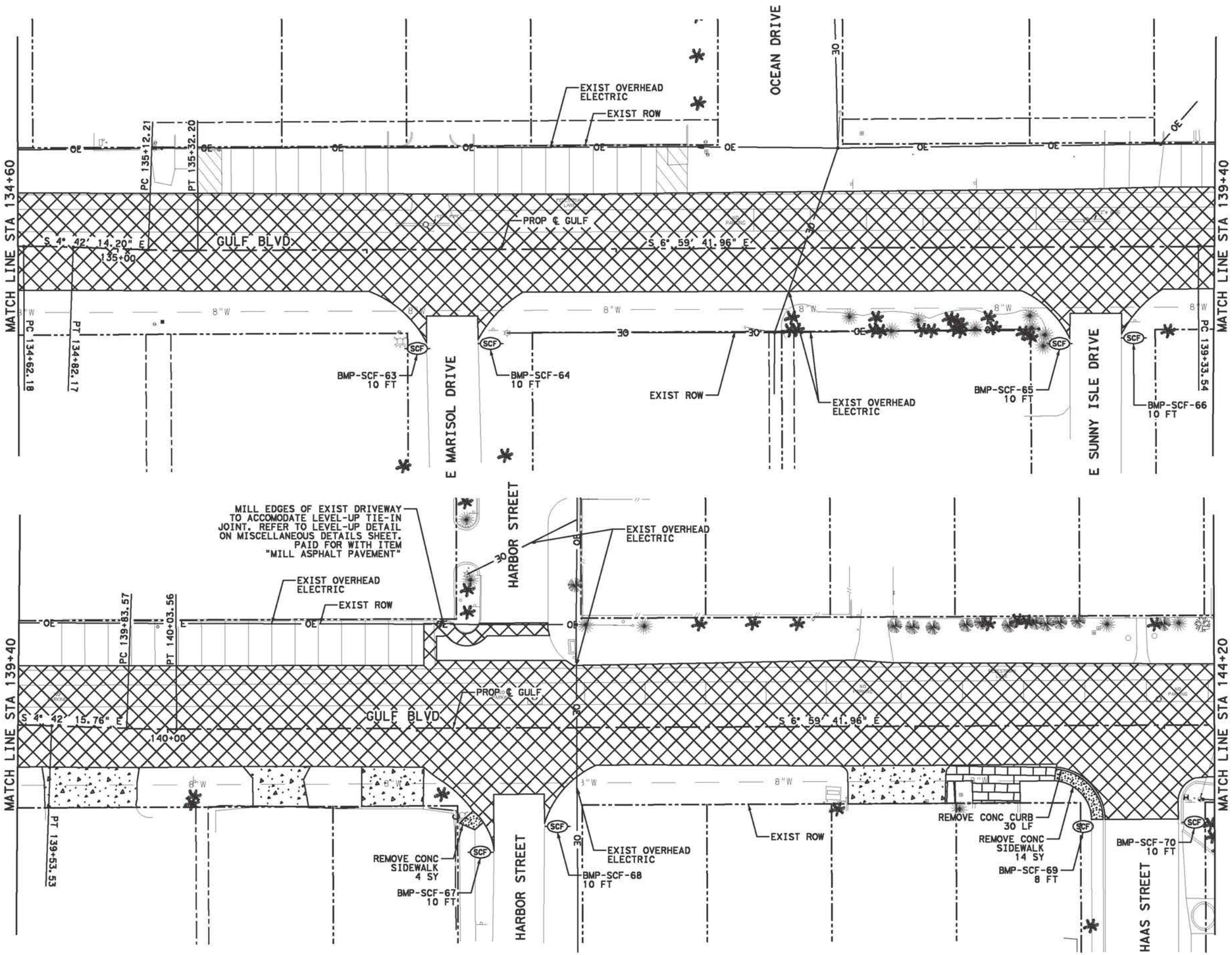

LEGEND

- PAVEMENT MILL
- ASPHALT DRIVEWAY REMOVAL
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0 20 40
SCALE: 1"=40'

STATE OF TEXAS
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4-22-2016

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 10 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	16

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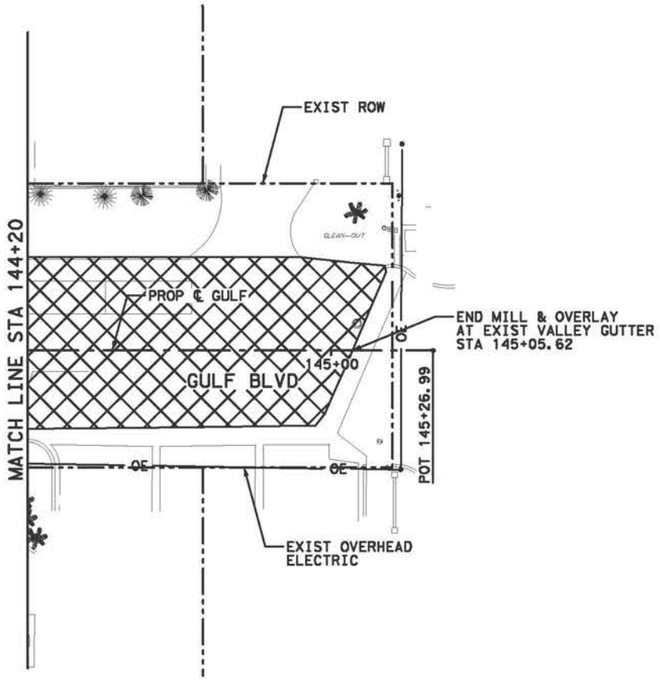

LEGEND

- PAVEMENT MILL
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- ASPHALT PAVEMENT REMOVAL
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0 20 40
SCALE: 1"=40'

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South Padre ISLAND

EROSION CONTROL PLAN AND REMOVAL LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 11 OF 11

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	11-7

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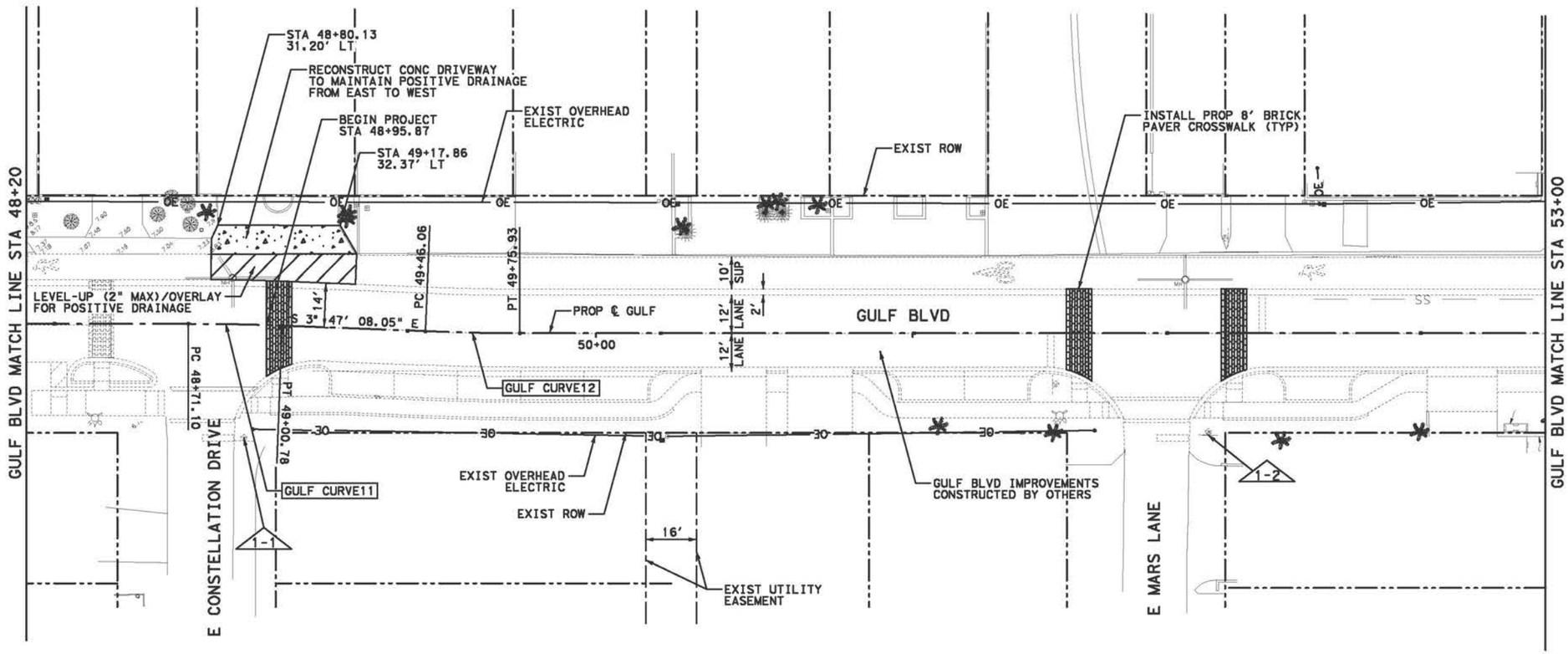

STOP
R1-1

1-1
1-2

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 1 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	1-8

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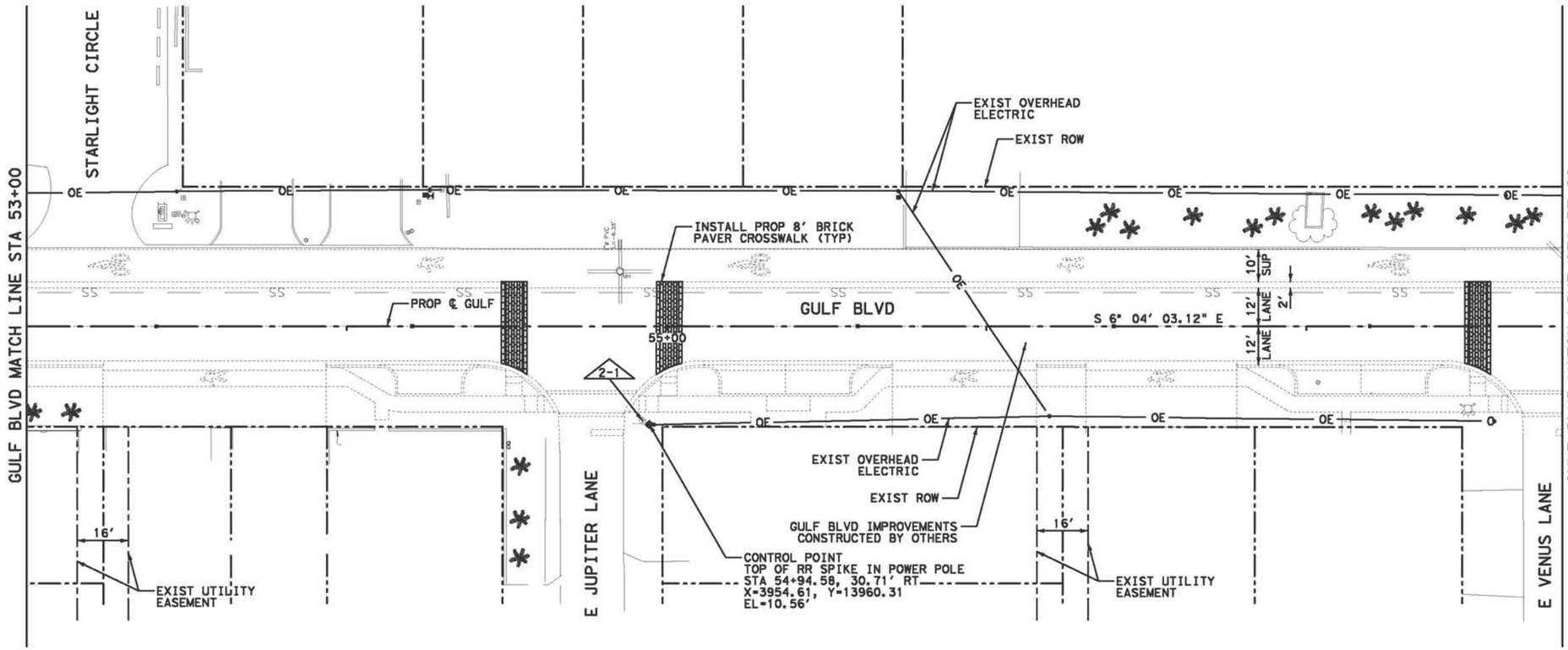

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NOTES:

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2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
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5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
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4-22-2016

Brian C. Boecker PE

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 2 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	19

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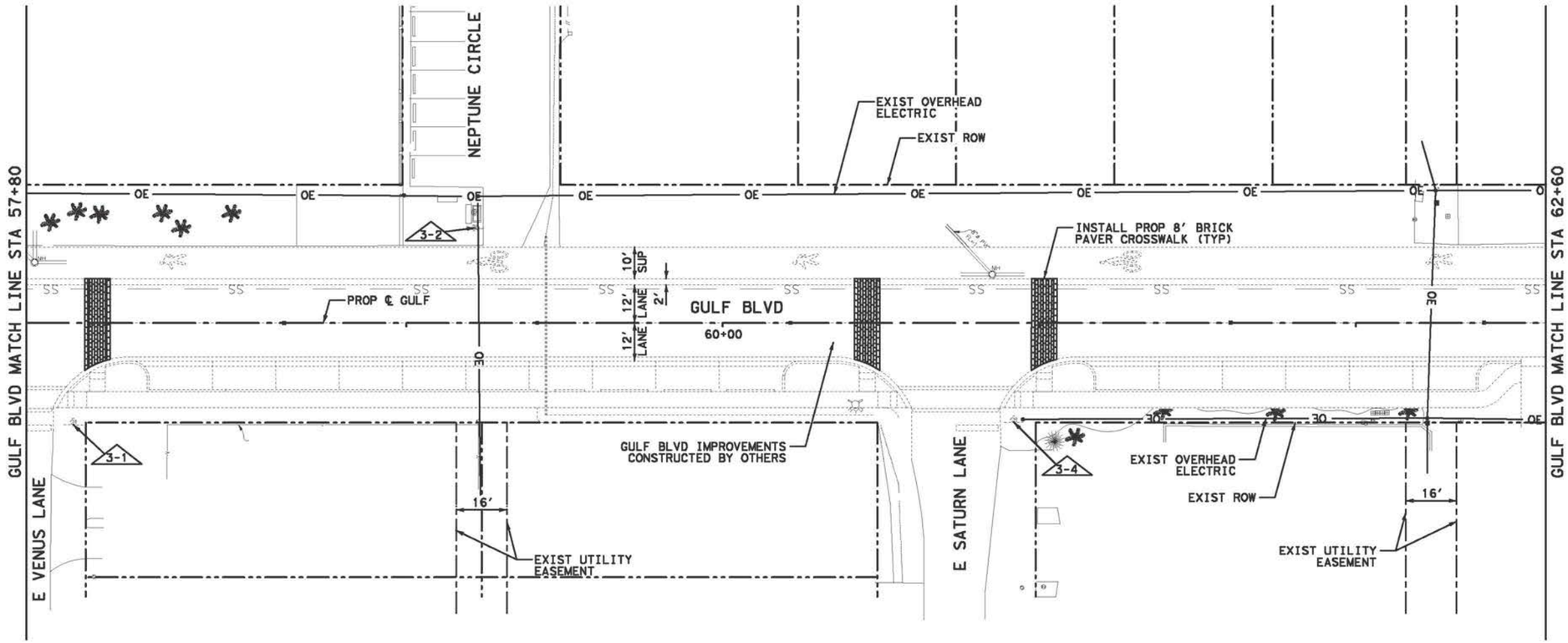

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
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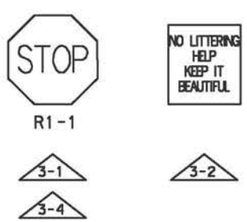
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



NOTES:

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2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
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4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
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LICENSED
PROFESSIONAL ENGINEER
4-22-2016

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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 3 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		20

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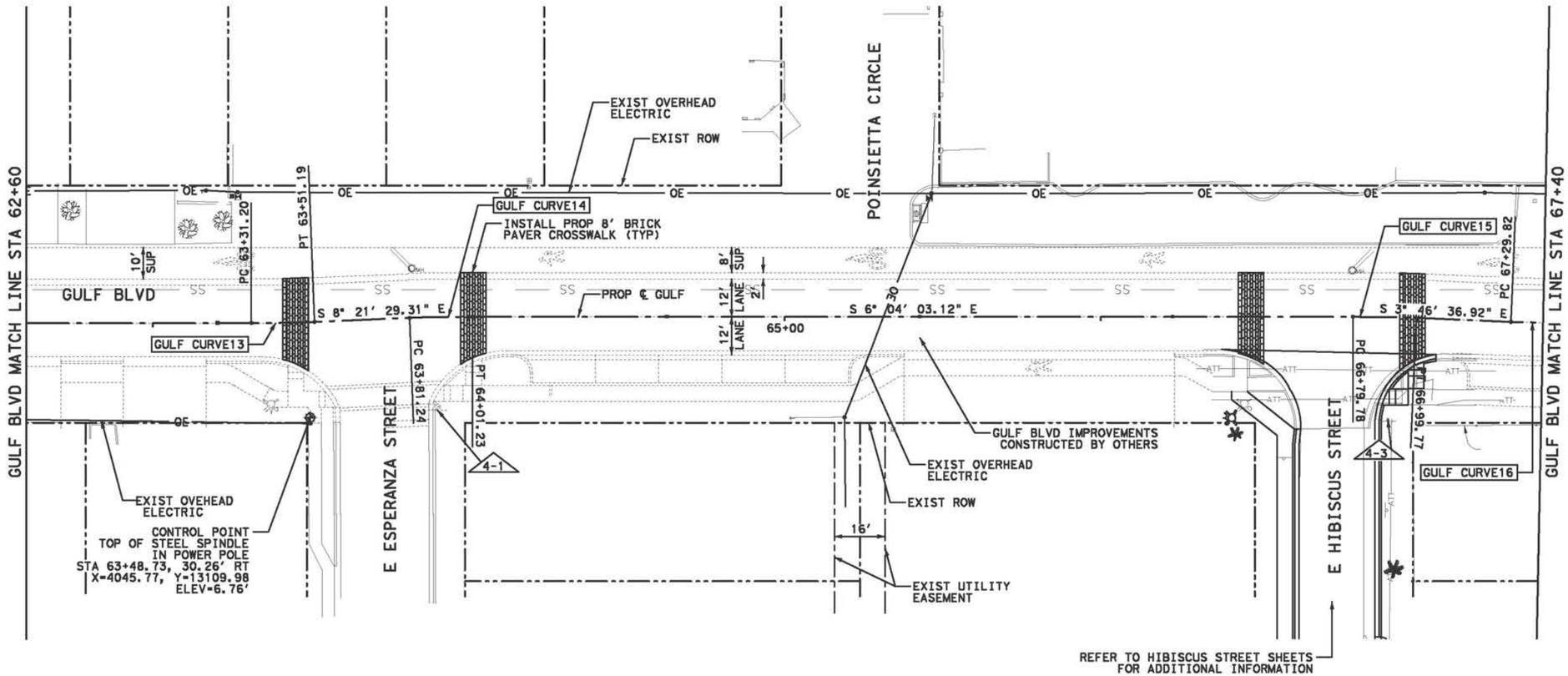

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

R1-1

4-1

4-3

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
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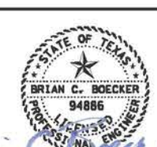
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.



4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 4 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	21

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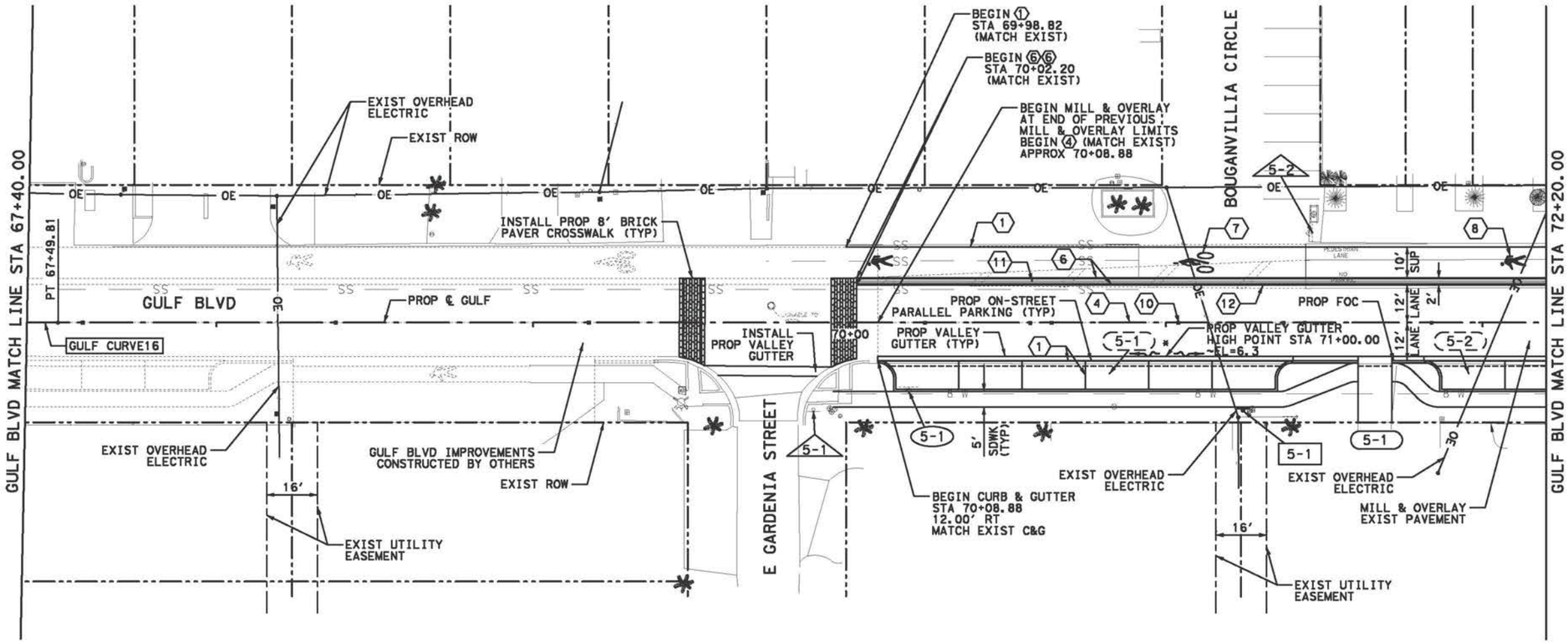

* PROP VALLEY GUTTER HIGH POINT IS ABOVE EXIST GRADE. CONTRACTOR TO SET VALLEY GUTTER GRADES TO MAINTAIN POSITIVE DRAINAGE TO GARDENIA ST AND OLEANDER ST AS SHOWN. APPROXIMATLEY 178 SY OF LEVEL-UP (5" MAX) WILL BE NEEDED BETWEEN PROP GUTTER HIGH POINT AND OLEANDER ST ALONG WITH BETWEEN PROP GUTTER HIGH POINT AND GARDENIA ST.

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
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STATE OF TEXAS
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4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 5 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		22

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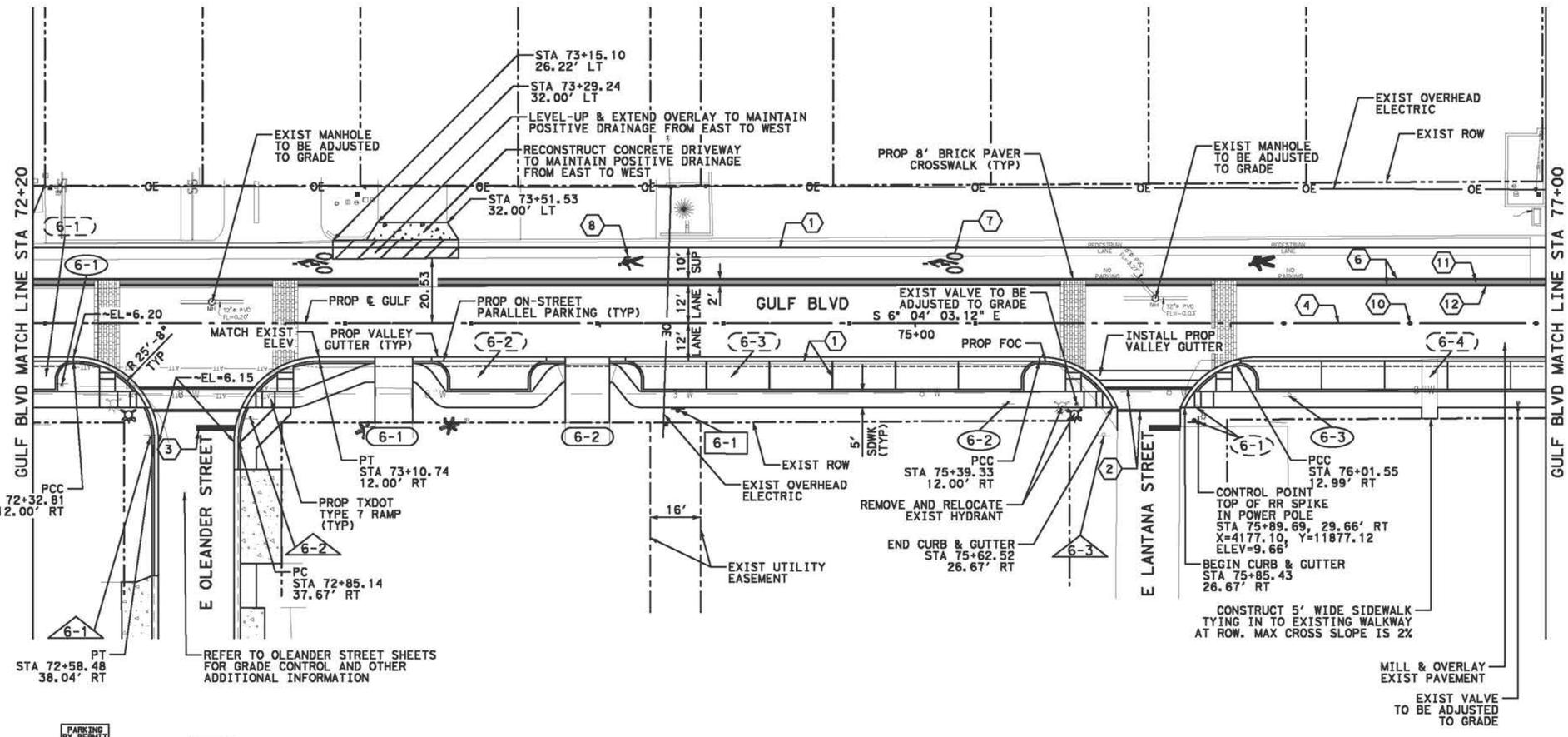

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
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5	REFL PAV MRK TY I CONTRAST 7" (SLD)
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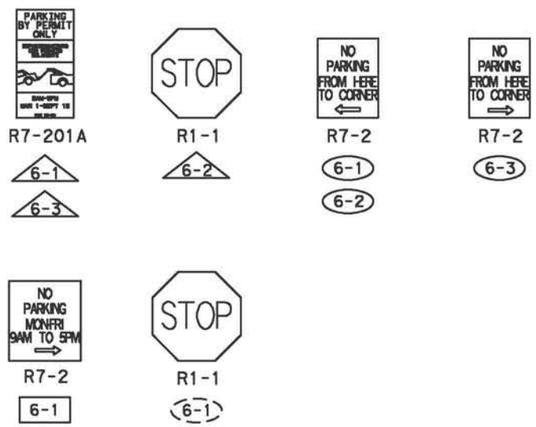
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



NOTES:

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Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 6 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		23

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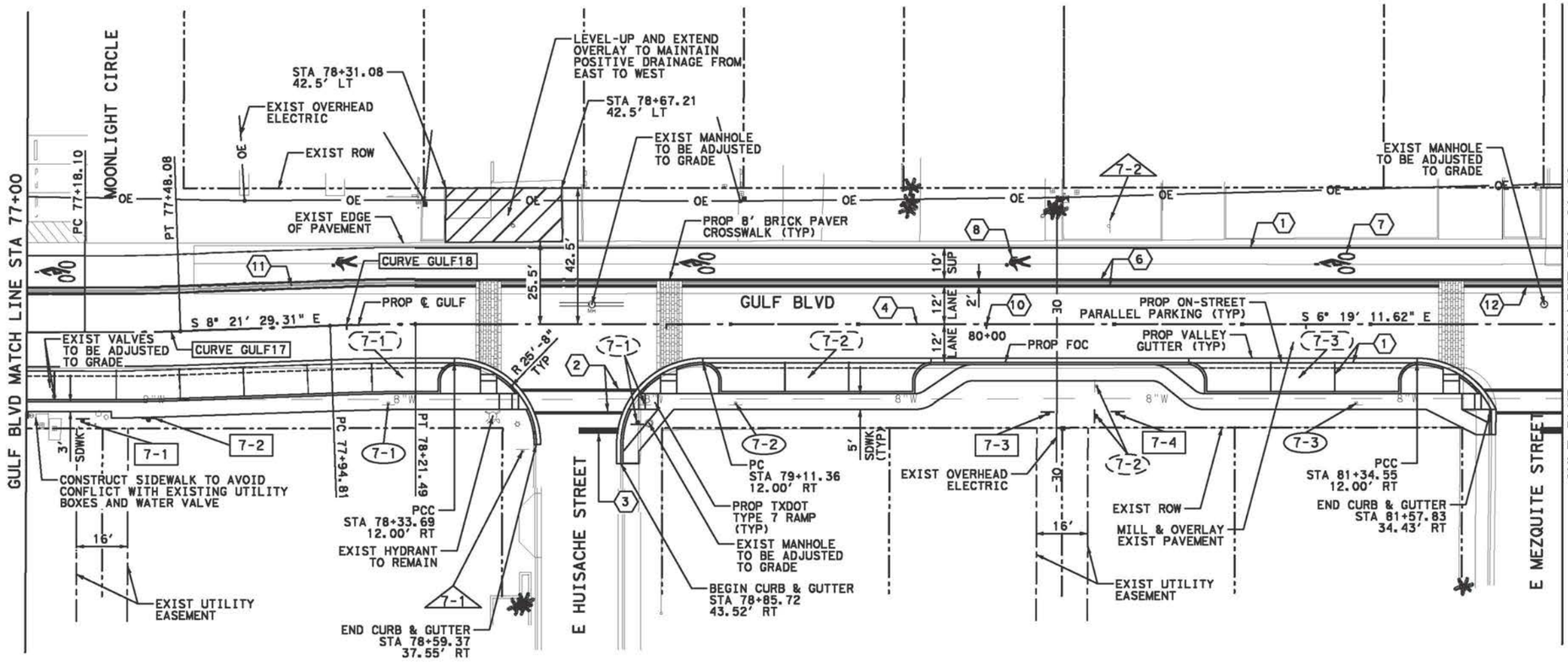
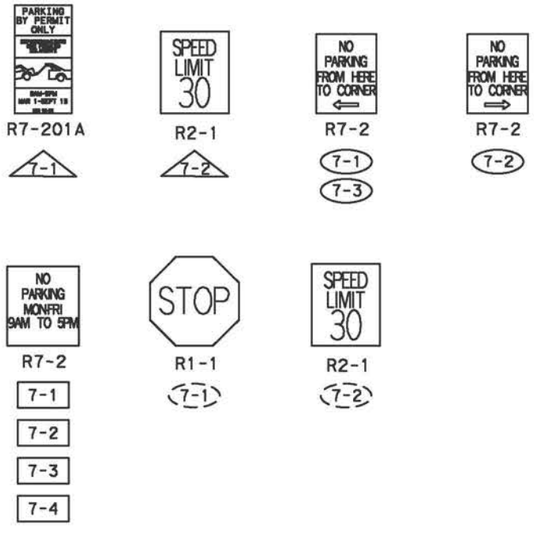


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



NOTES:

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4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
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4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS

SHEET 7 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		24

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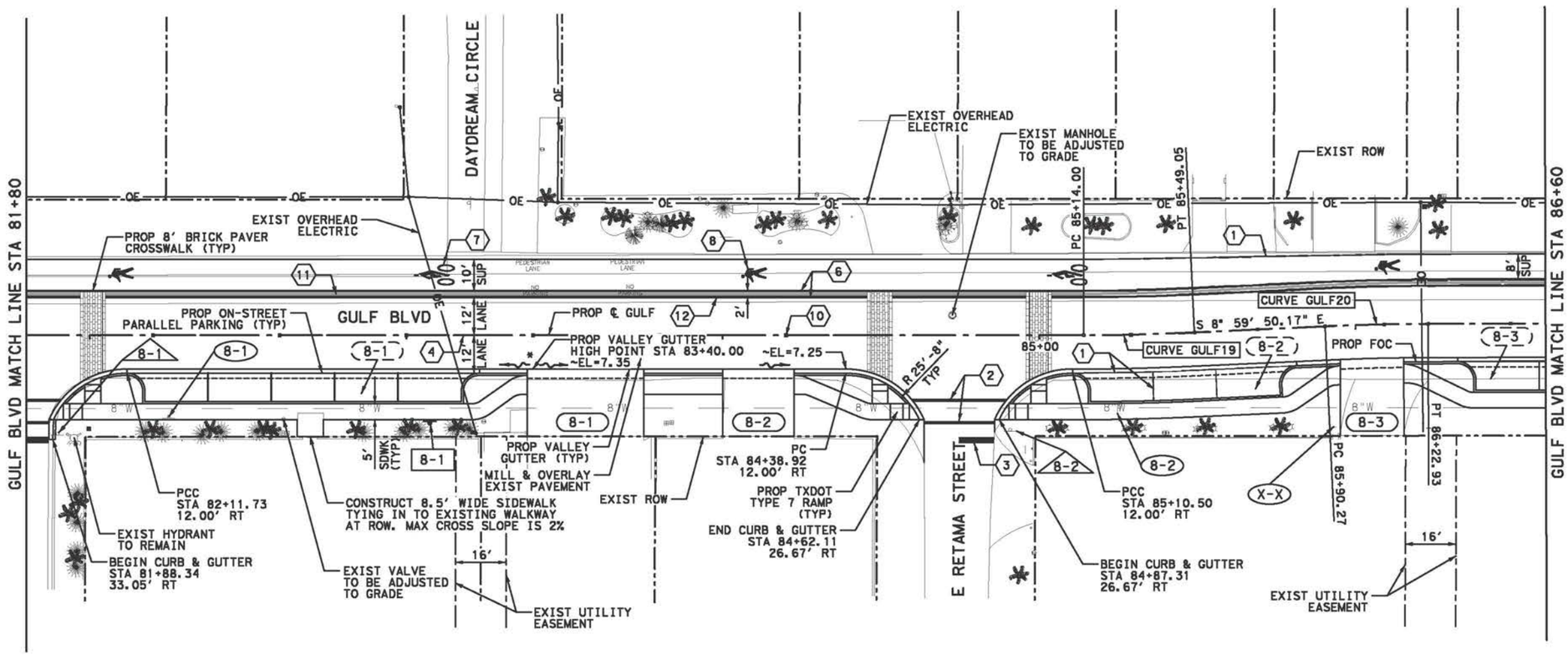

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
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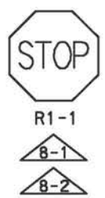
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



* VALLEY GUTTER HIGH POINT MATCHES EXISTING PAVEMENT ELEVATION. CONTRACTOR TO FOLLOW EXISTING PAVEMENT SLOPE FROM PROP GUTTER HIGH POINT TO MEZQUITE ST. CONTRACTOR TO ADD APPROXIMATLEY 40 SY OF LEVEL-UP (1" MAX) BETWEEN PROP GUTTER HIGH POINT AND RETAMA ST TO MAINTAIN POSITIVE DRAINAGE.

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

4-22-2016

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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 8 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	25

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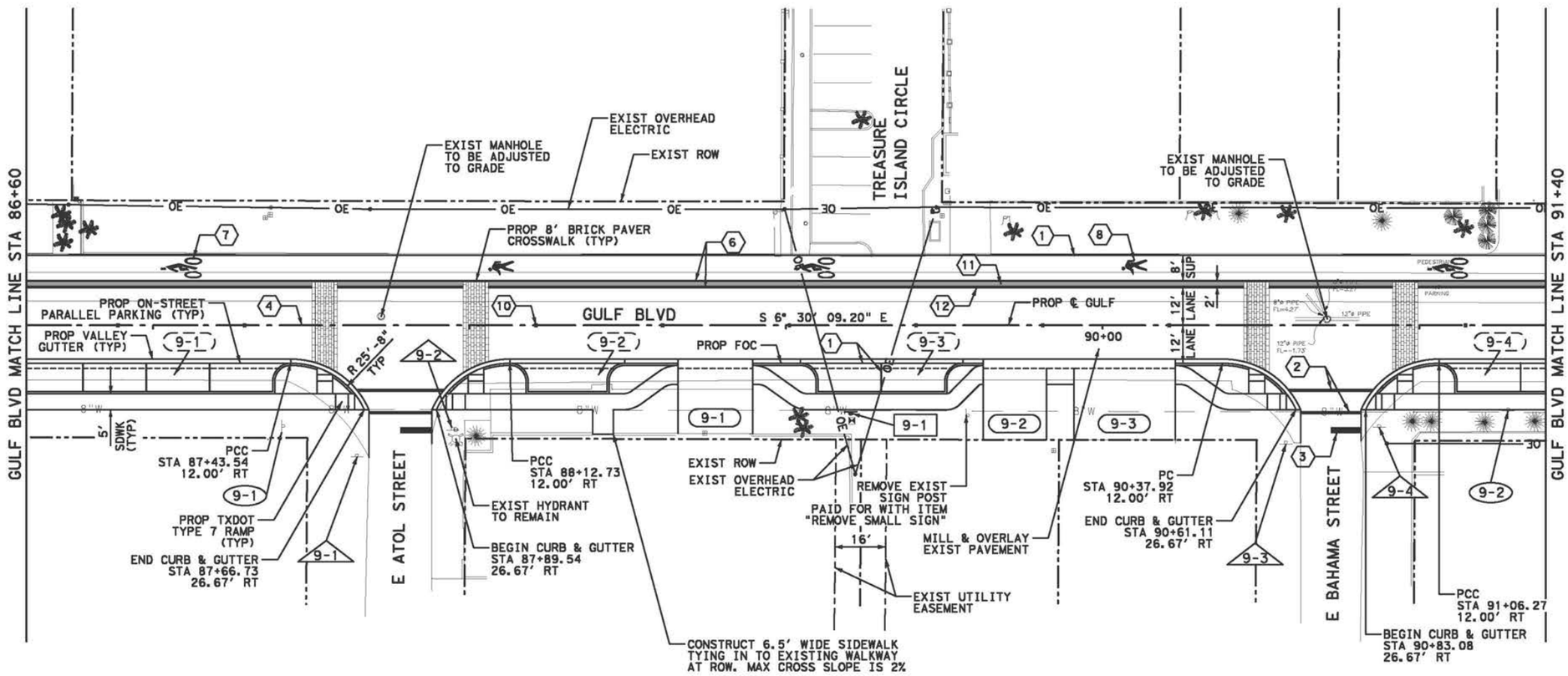

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
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7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NO PARKING FROM HERE TO CORNER ⇐
R7-2
9-1

NO PARKING FROM HERE TO CORNER ⇒
R7-2
9-2

NO PARKING MON-FRI 9AM TO 5PM
R7-2
9-1

PARKING BY PERMIT ONLY
R7-201A
9-1
9-3

STOP
R1-1
9-2
9-4

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 9 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		26

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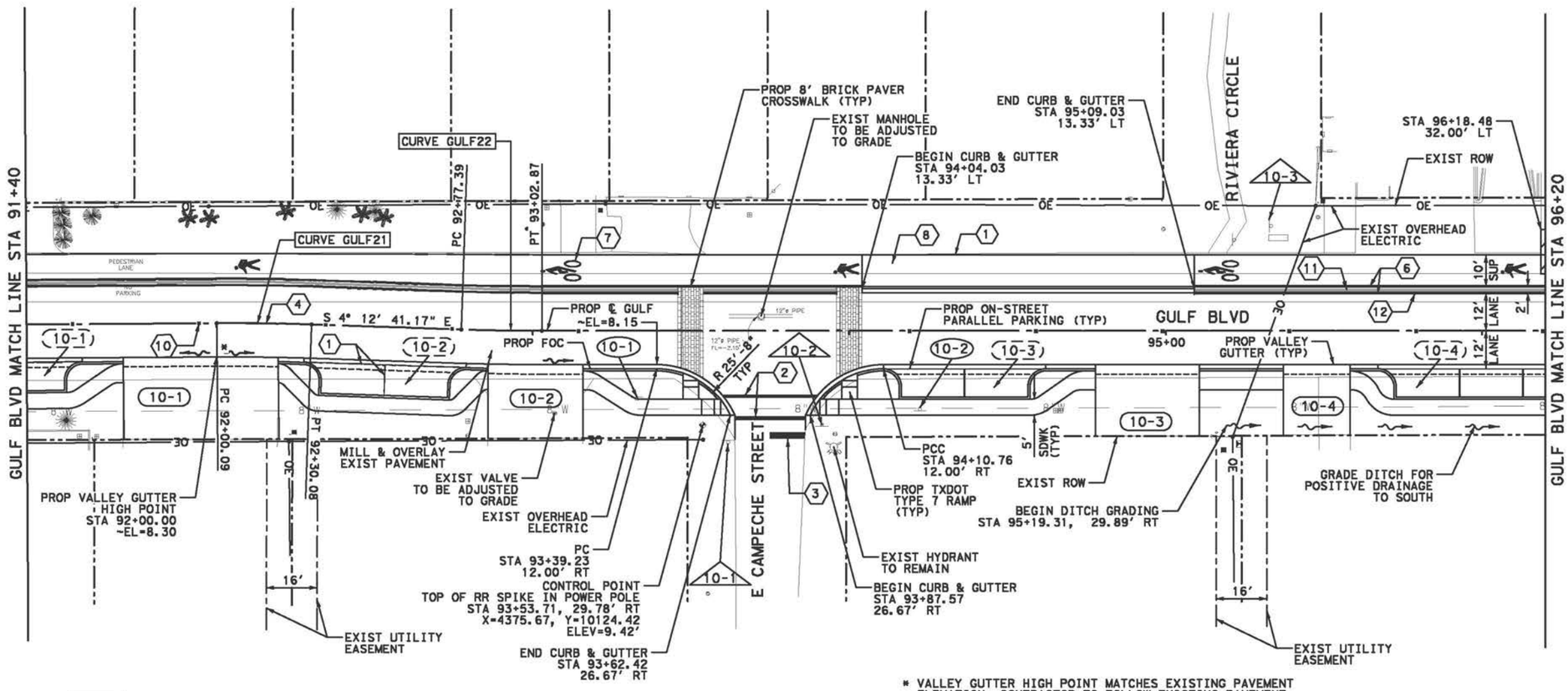

* VALLEY GUTTER HIGH POINT MATCHES EXISTING PAVEMENT ELEVATION. CONTRACTOR TO FOLLOW EXISTING PAVEMENT SLOPE FROM PROP GUTTER HIGH POINT TO BAHAMA ST. CONTRACTOR TO MILL APPROXIMATLEY 37 SY OF ADDITIONAL PAVEMENT (3" MAX) BETWEEN PROP GUTTER HIGH POINT AND CAMPECHE ST TO MAINTAIN POSITIVE DRAINAGE.

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 10 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		27

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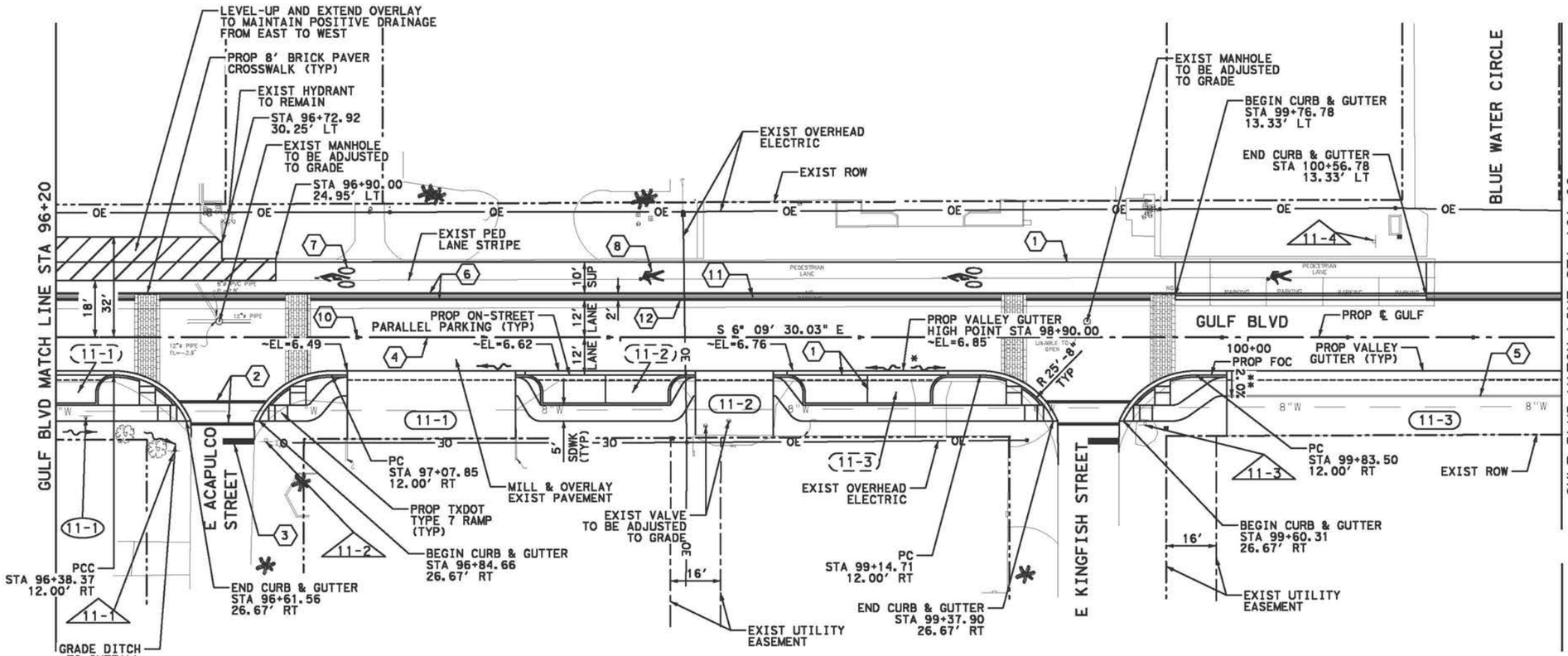

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

R7-201A
11-1

R1-1
11-2
11-3

11-4

R7-2
11-1

* VALLEY GUTTER HIGH POINT MATCHES EXISTING PAVEMENT ELEVATION. CONTRACTOR TO FOLLOW EXISTING PAVEMENT SLOPE FROM PROP GUTTER HIGH POINT TO KINGFISH ST. CONTRACTOR TO MILL APPROXIMATLEY 34 SY OF ADDITIONAL PAVEMENT (1" MAX) BETWEEN PROP GUTTER HIGH POINT AND ACAPULCO ST TO MAINTAIN POSITIVE DRAINAGE.

** SIDEWALK GRADE CHANGES ACROSS DRIVEWAY

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS

SHEET 11 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		28

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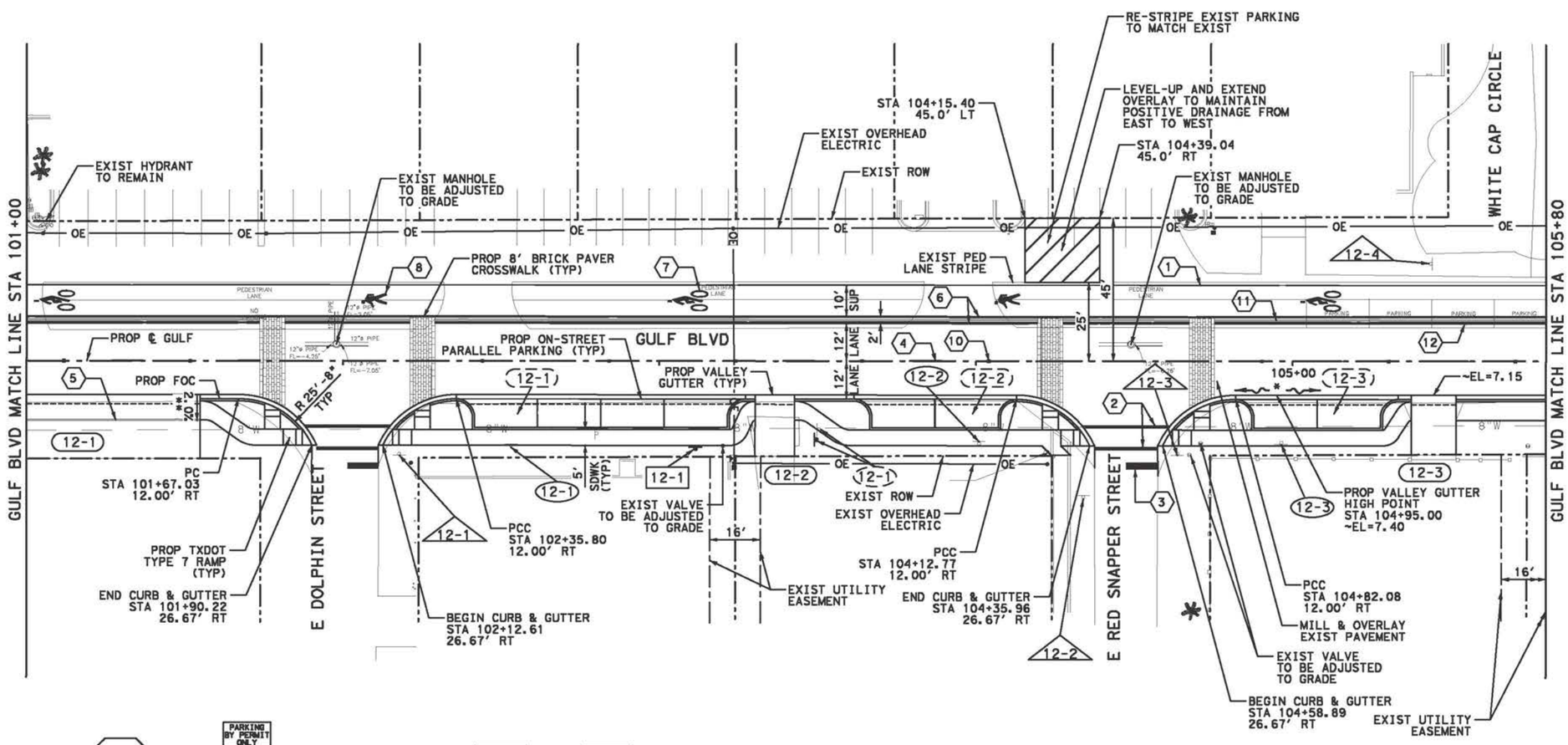
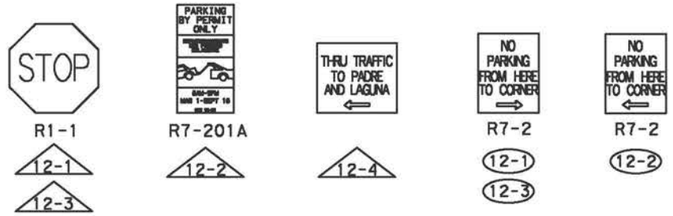


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



* VALLEY GUTTER HIGH POINT MATCHES EXISTING PAVEMENT ELEVATION. CONTRACTOR TO FOLLOW EXISTING PAVEMENT SLOPE FROM PROP GUTTER HIGH POINT TO RED SNAPPER ST. CONTRACTOR TO MILL APPROXIMATLEY 83 SY OF ADDITIONAL PAVEMENT (1" MAX) BETWEEN PROP GUTTER HIGH POINT AND SWORDFISH ST TO MAINTAIN POSITIVE DRAINAGE.

** SIDEWALK GRADE CHANGES ACROSS DRIVEWAY

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 12 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		29

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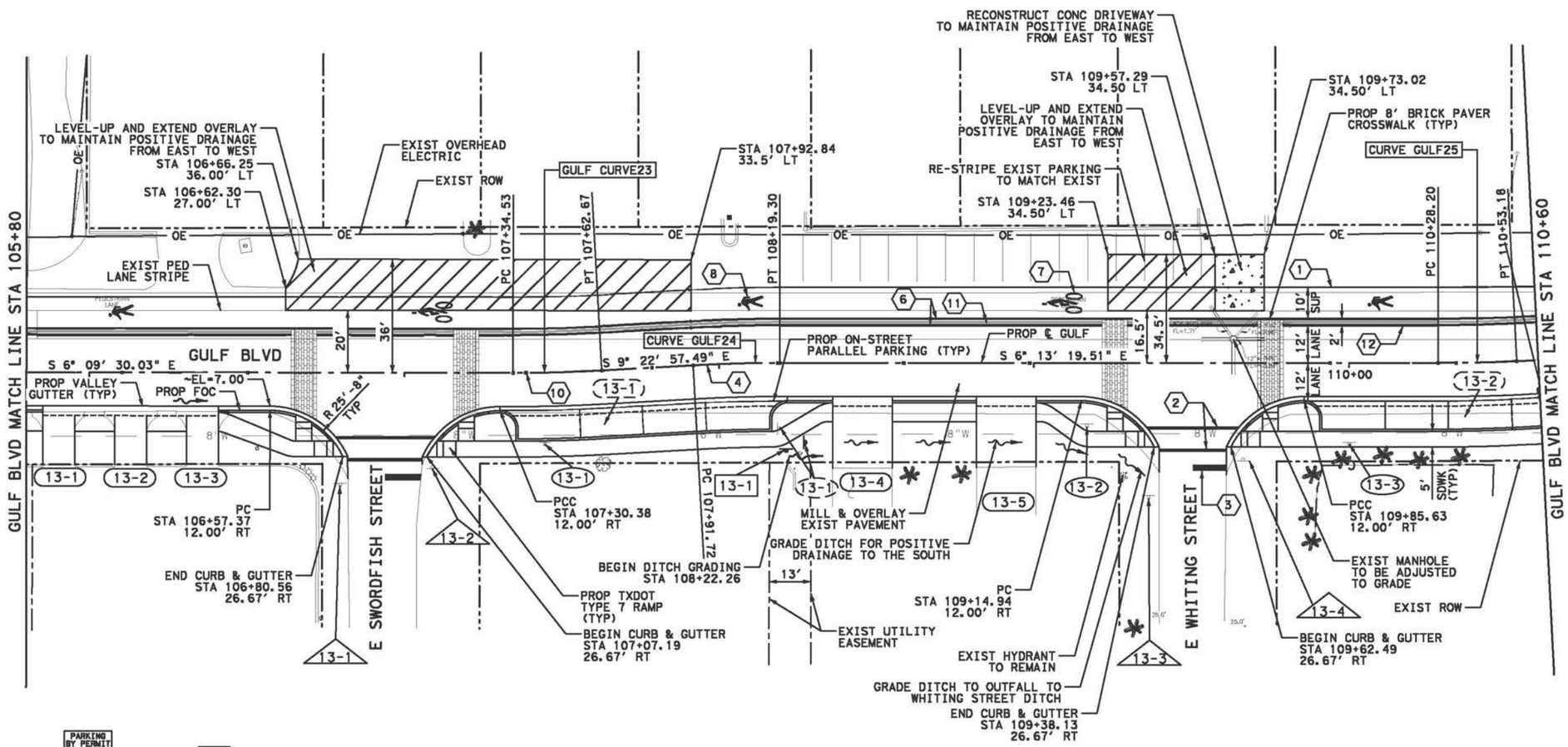
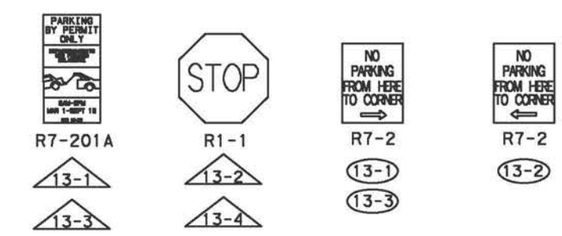


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



** SIDEWALK GRADE CHANGES ACROSS DRIVEWAY

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
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4-22-2016

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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 13 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		30

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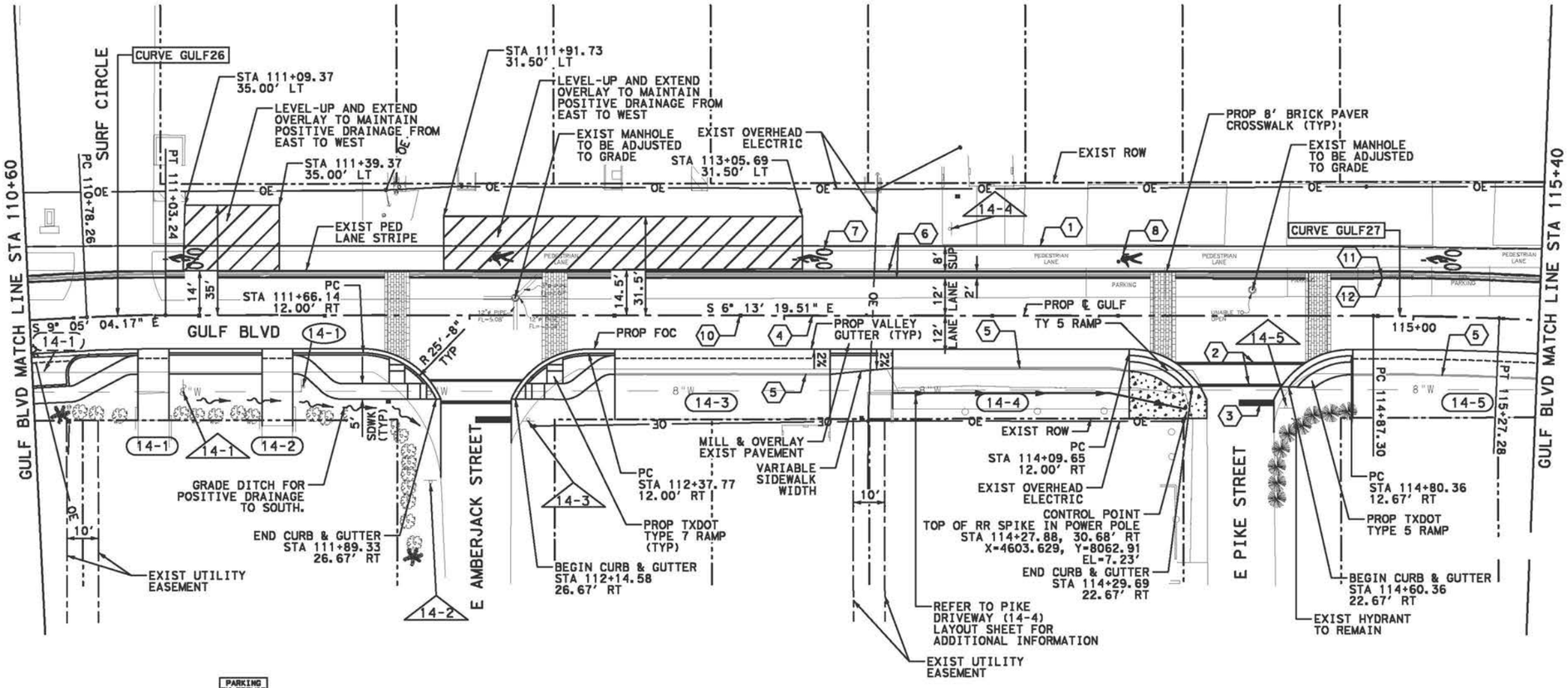

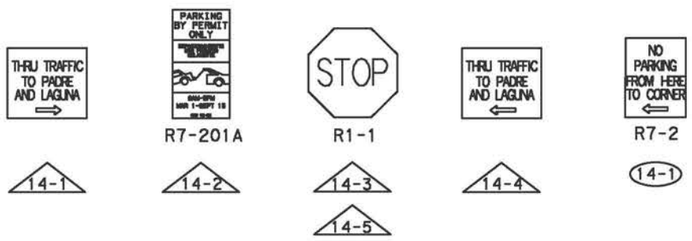

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
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4-22-2016

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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 14 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	31

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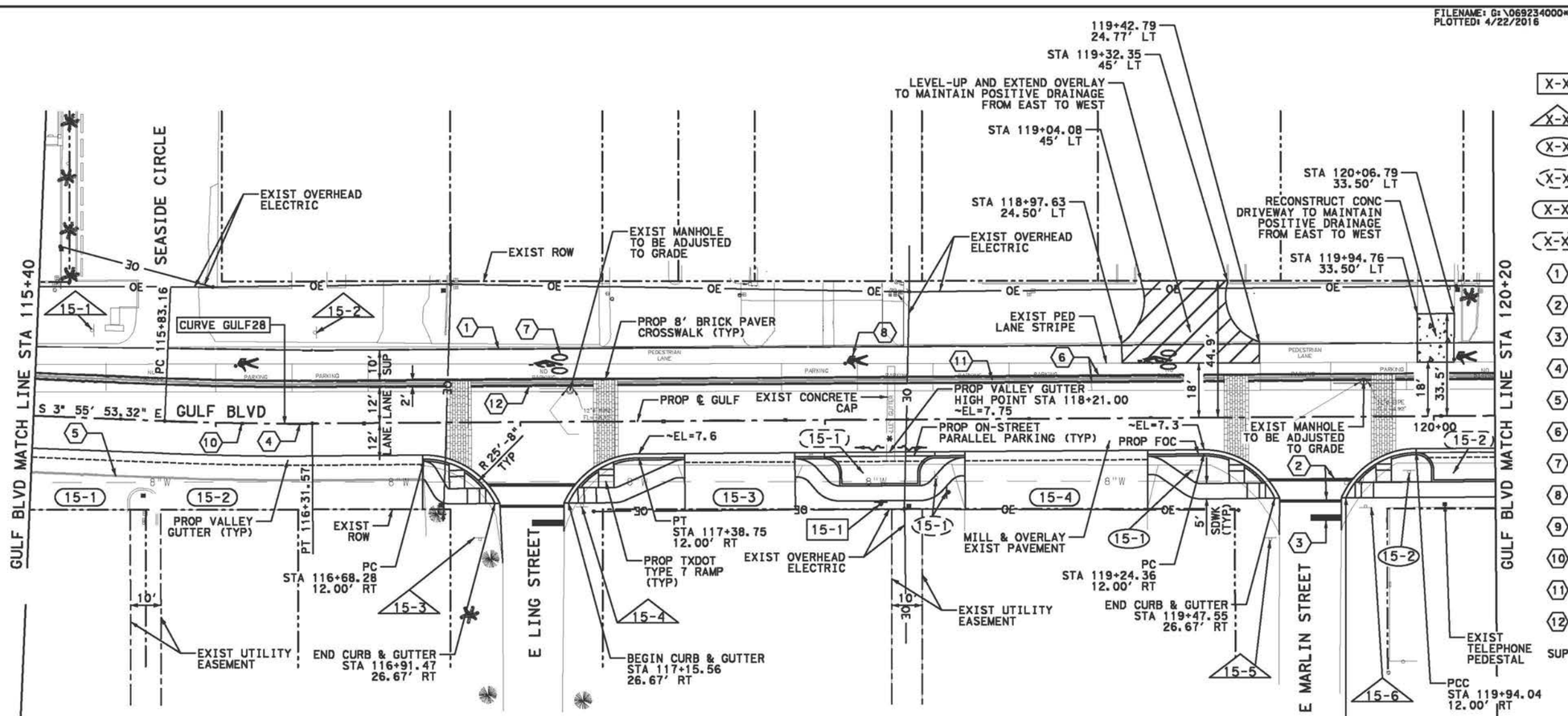

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
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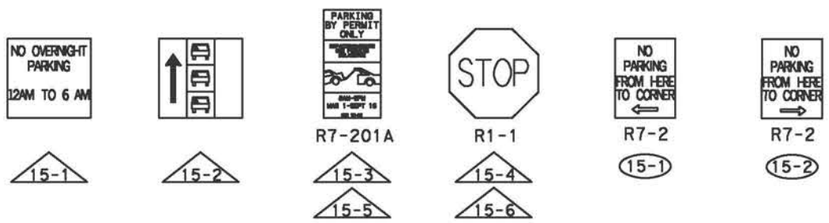
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



* VALLEY GUTTER HIGH POINT MATCHES EXISTING PAVEMENT ELEVATION. CONTRACTOR TO SET VALLEY GUTTER GRADES TO MAINTAIN POSITIVE DRAINAGE TO LING ST AND MARLIN ST AS SHOWN. APPROXIMATLEY 65 SY OF LEVEL-UP (3" MAX) WILL BE NEEDED BETWEEN THE PROP GUTTER HIGH POINT AND MARLIN ST ALONG WITH BETWEEN THE PROP GUTTER HIGH POINT AND LING ST TO MAINTAIN POSITIVE DRAINAGE.

NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
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4-22-2016

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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS

SHEET 15 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		32

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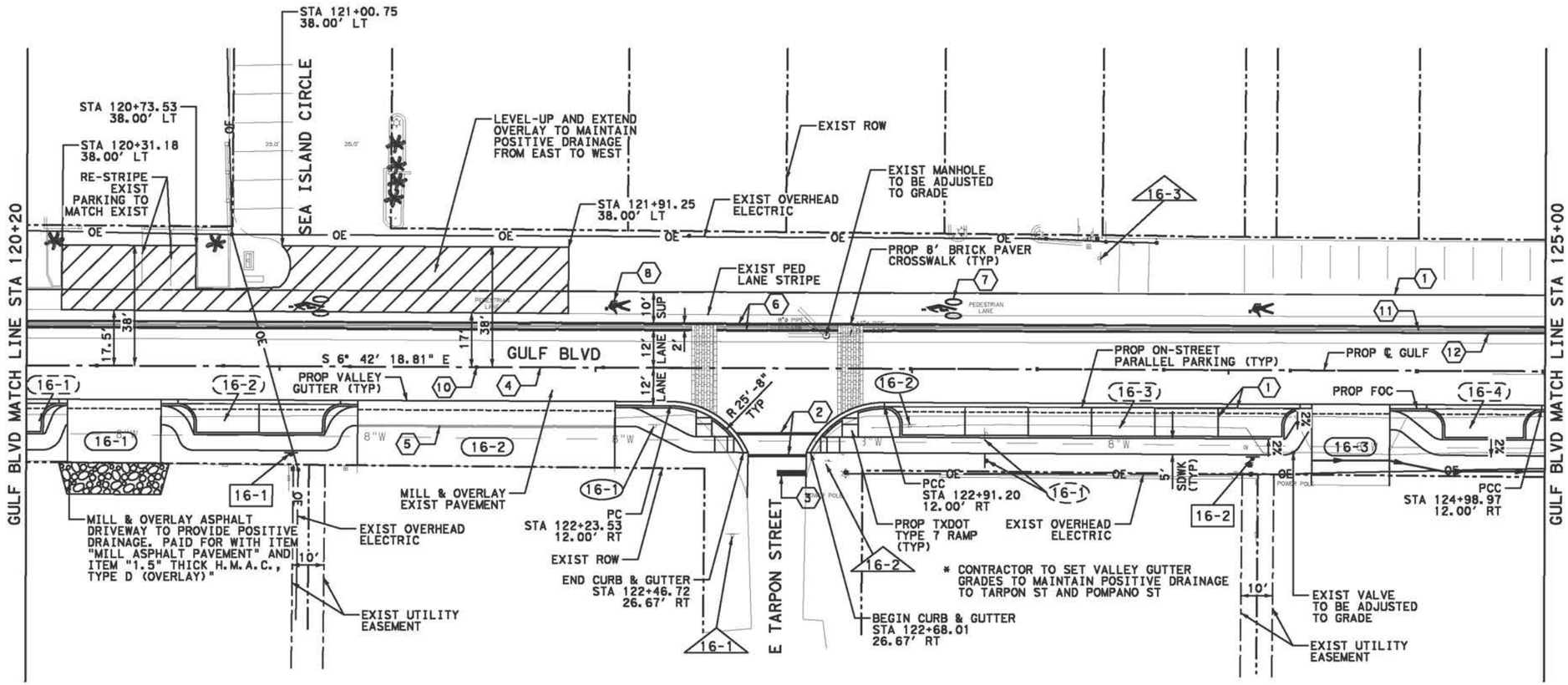
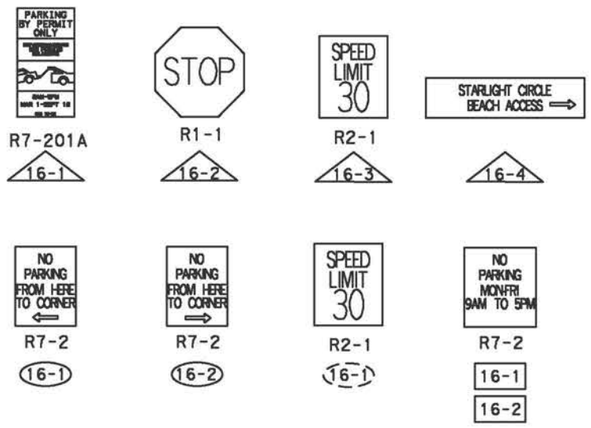


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
BRIAN C. BOECKER
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LICENSED PROFESSIONAL ENGINEER
4-22-2016
Brian C. Boecker PE
Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 16 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	33

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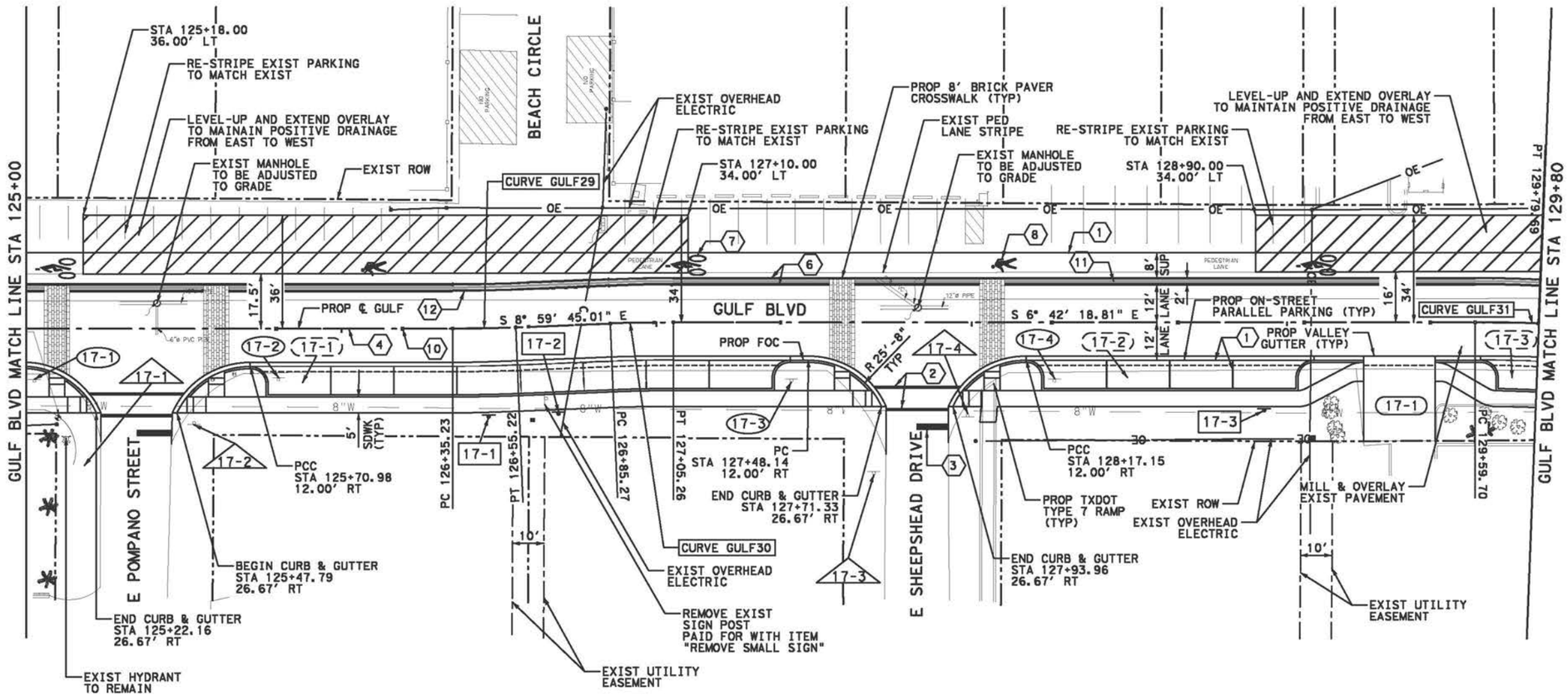
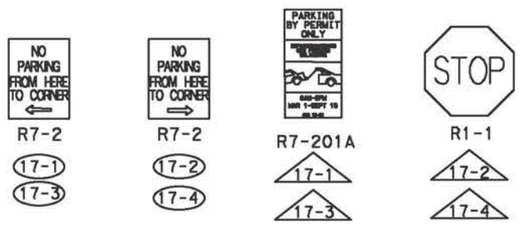


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH



NOTES:

1. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT FACE OF CURB UNLESS OTHERWISE NOTED.
2. SEE MISCELLANEOUS DETAILS FOR DRIVEWAY AND PARKING BAY DETAILS.
3. SEE REMOVAL SHEETS FOR LIMITS OF DRIVEWAY REMOVAL.
4. SEE MISCELLANEOUS DETAILS FOR CURB TRANSITION DETAILS AT BEGIN/END CURBS.
5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
6. CURB & GUTTER / VALLEY GUTTERS TO FOLLOW EXISTING ROADWAY GRADE UNLESS OTHERWISE NOTED IN THE PLANS BY SPECIFIC SPOT ELEVATIONS TO CONTROL GRADE OF CURB & GUTTER / VALLEY GUTTER.

STATE OF TEXAS
BRIAN C. BOECKER
94886
LICENSED
PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 17 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		34

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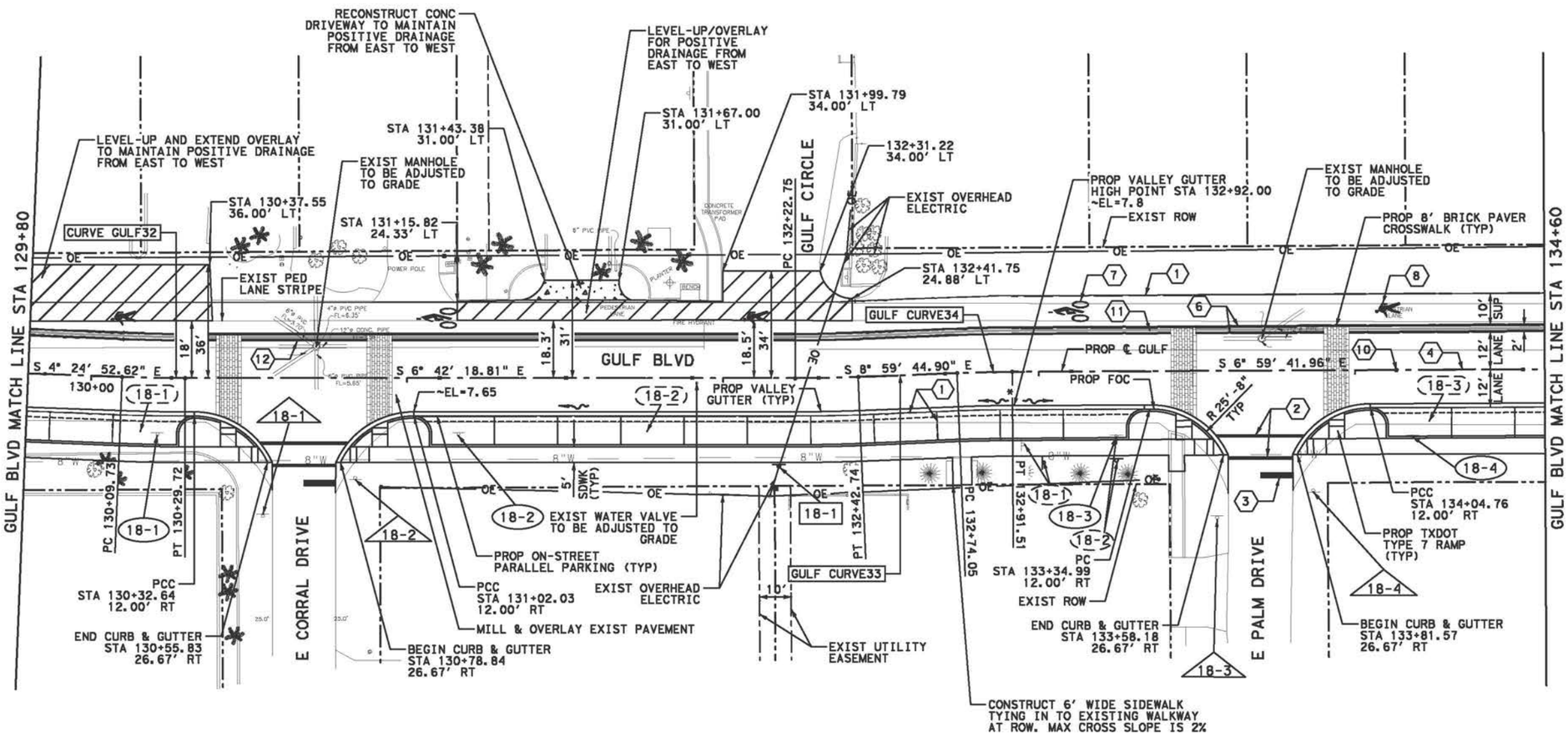
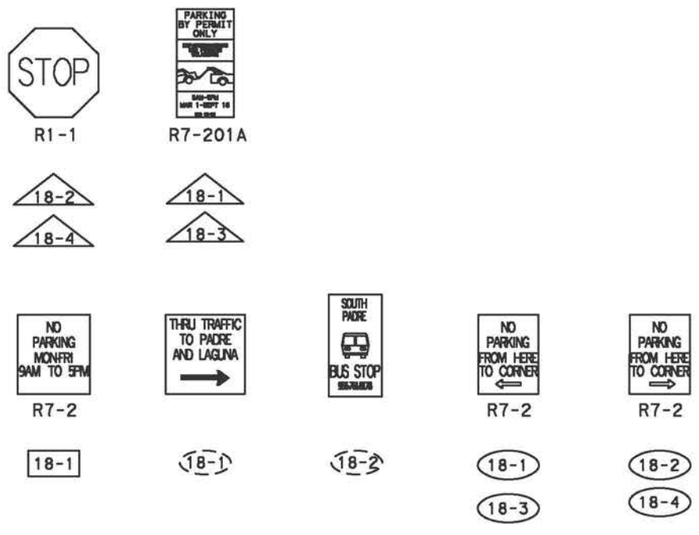


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

* VALLEY GUTTER HIGH POINT MATCHES EXISTING PAVEMENT ELEVATION. CONTRACTOR TO FOLLOW EXISTING PAVEMENT SLOPE FROM PROP GUTTER HIGH POINT TO PALM DR. CONTRACTOR TO ADD APPROXIMATLEY 114 SY OF LEVEL-UP (2" MAX) BETWEEN PROP GUTTER HIGH POINT AND CORRAL DR TO MAINTAIN POSITIVE DRAINAGE.



NOTES:

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5. SEE MISCELLANEOUS DETAILS FOR MEDIAN AND IRRIGATION SLEEVE DETAILS.
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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 18 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	35

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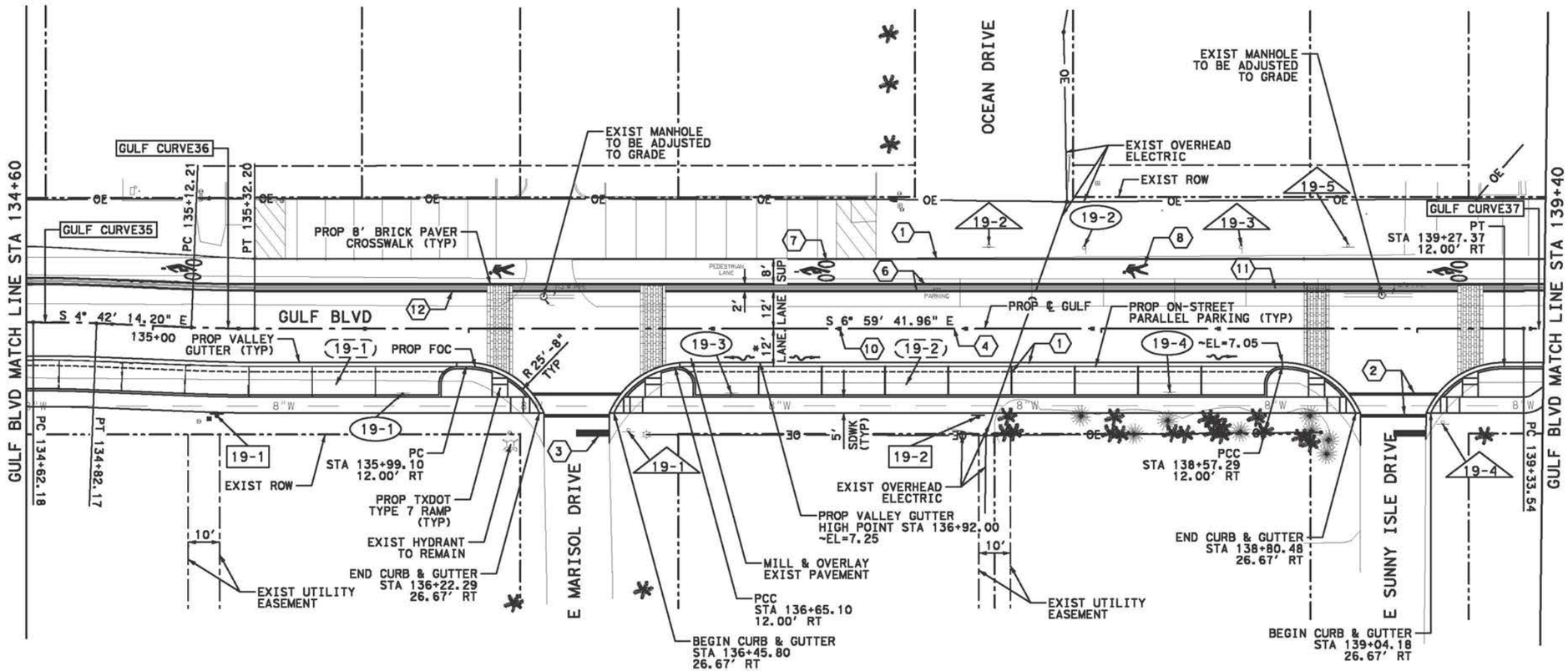
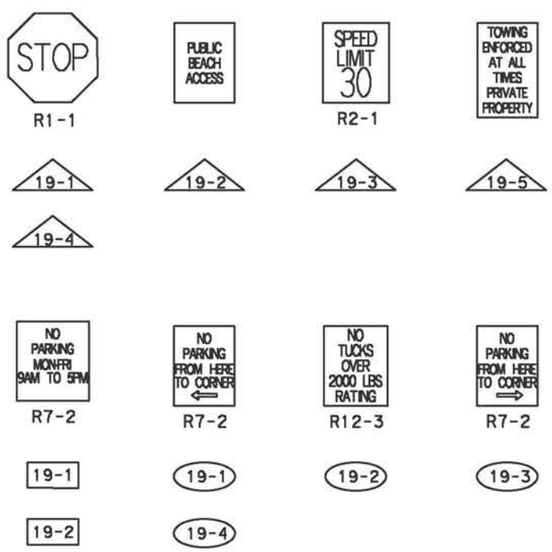


LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

* VALLEY GUTTER HIGH POINT TO MATCH EXIST PAVEMENT ELEVATION. CONTRACTOR TO FOLLOW EXISTING PAVEMENT SLOPE FROM PROP GUTTER HIGH POINT TO MARISOL DR. CONTRACTOR TO ADD APPROXIMATLEY 50 SY OF LEVEL-UP (1" MAX) BETWEEN PROP GUTTER HIGH POINT AND SUNNY ISLE DR TO MAINTAIN POSITIVE DRAINAGE.



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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 19 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		36

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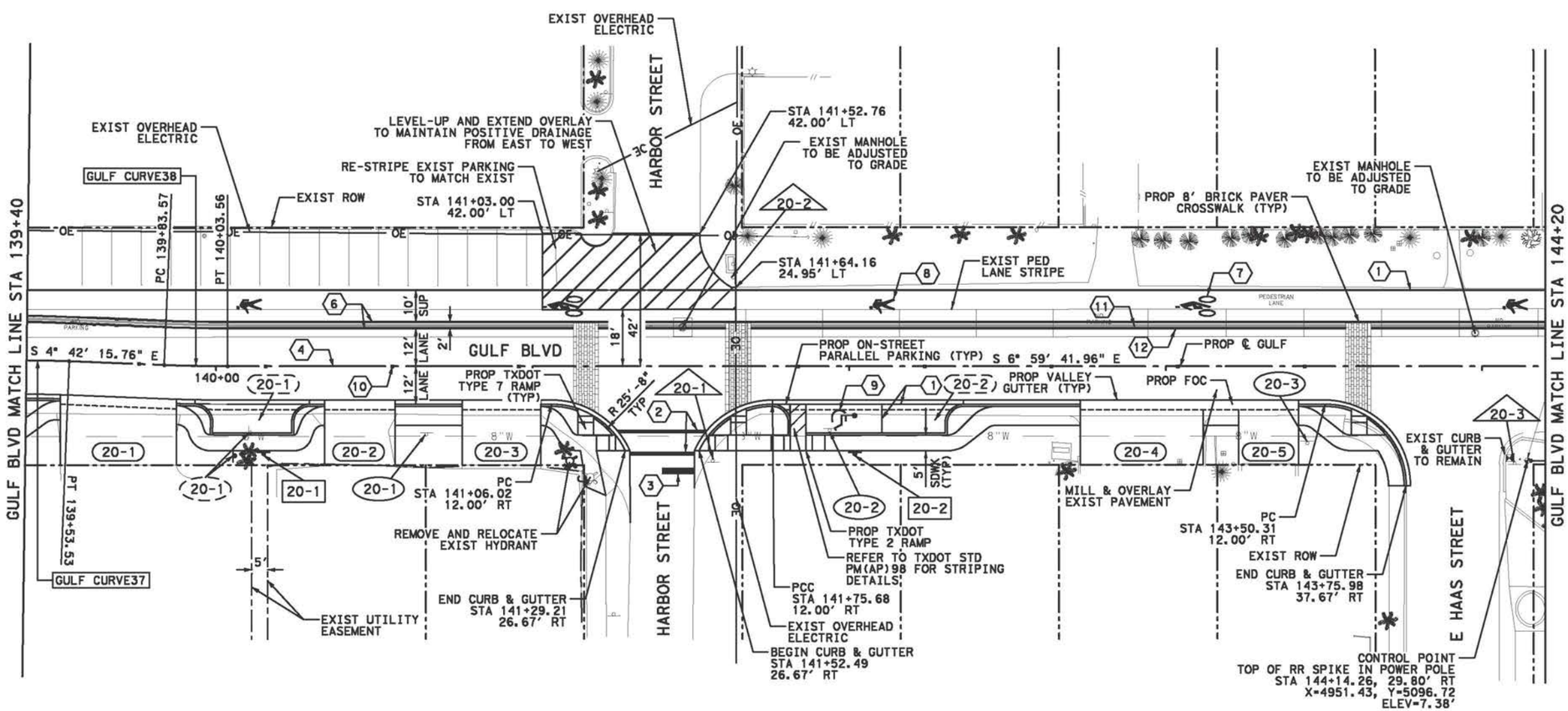

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
X-X	PROPOSED DRIVEWAY
X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
2	REFL PAV MRK TY I (W) 12" (SLD)
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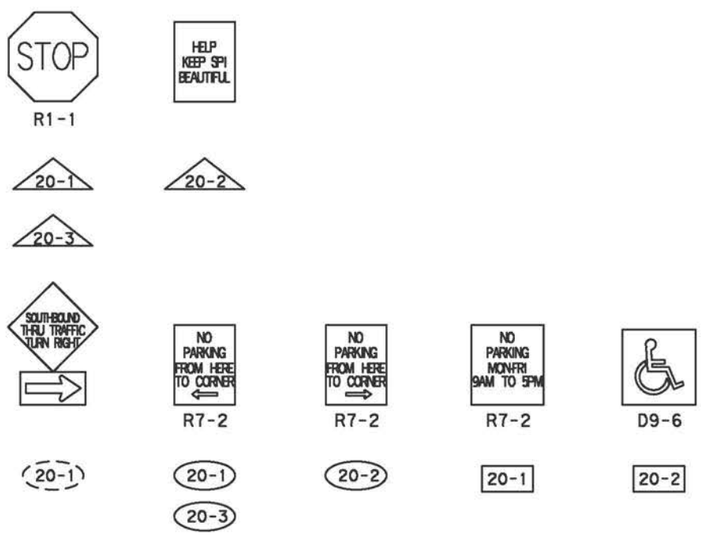
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'



NOTES:

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South Padre ISLAND

PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 20 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	37

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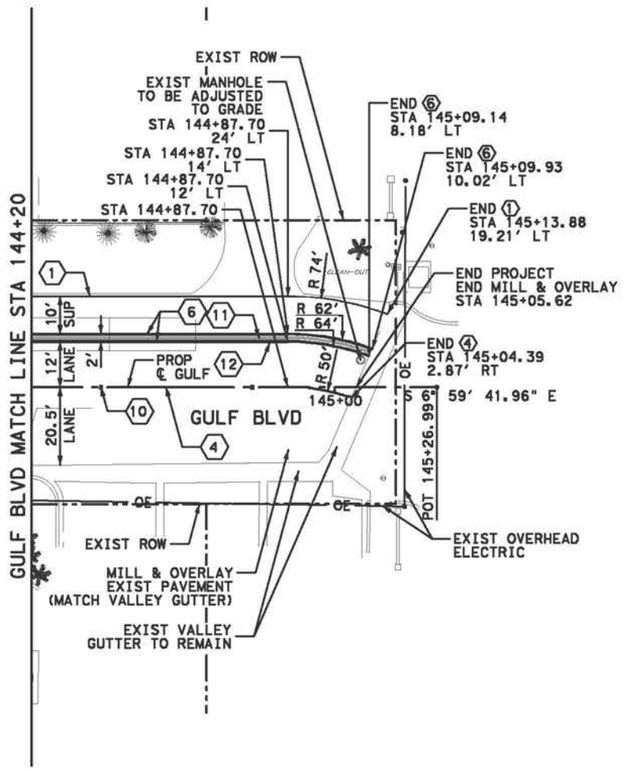

LEGEND

X-X	PROPOSED SIGN
X-X	EXISTING SIGN TO REMAIN
X-X	EXISTING SIGN TO BE REMOVED
X-X	EXISTING SIGN TO BE RELOCATED
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X-X	PROPOSED PARKING BAY
1	REFL PAV MRK TY I (W) 4" (SLD)
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3	REFL PAV MRK TY I (W) 24" (SLD)
4	REFL PAV MRK TY I (Y) 4" (BRK)
5	REFL PAV MRK TY I CONTRAST 7" (SLD)
6	REFL PAV MRK TY I (W) 8" (SLD)
7	REFL PAV MRK TY 1 (W) BIKE SYML
8	REFL PAV MRK TY 1 (W) PED SYML
9	REFL PAV MRK TY I (W) HANDICAP SYML
10	REFL PAV MRKR TY II-A-A
11	REFL PAV MRK TY I (GREEN) 8" (SLD)
12	REFL PAV MRK PROF PATTERN EDGELINE (4")
SUP	SHARED USE PATH

0 20 40
SCALE: 1"=40'

NOTES:

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PLAN & PAVEMENT MARKINGS & SIGNAGE

GULF BLVD IMPROVEMENTS
SHEET 21 OF 21

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		38

FILENAME: G:\069234000*Gulf*Rehabe\Design\GULFint-PIKE01.dgn
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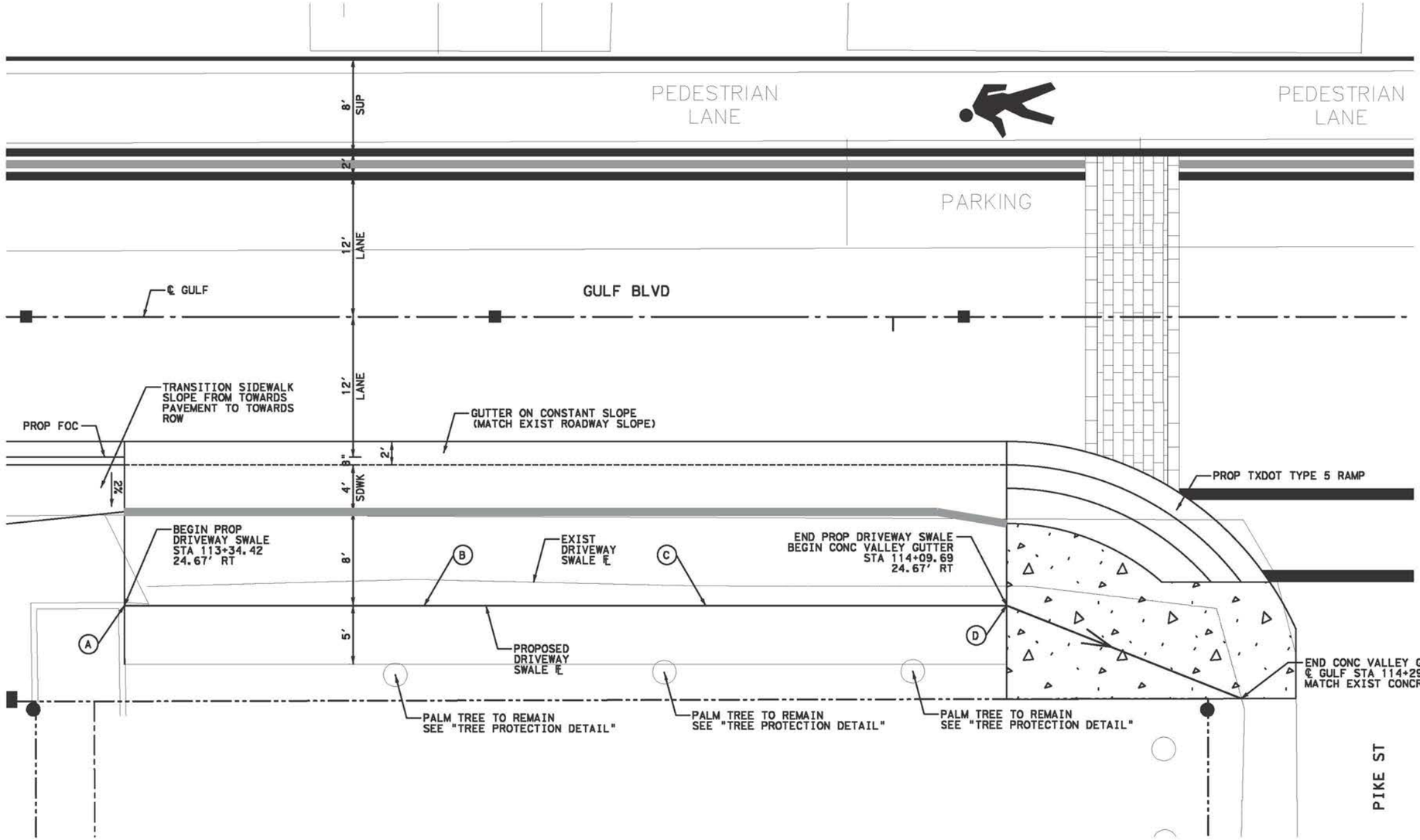
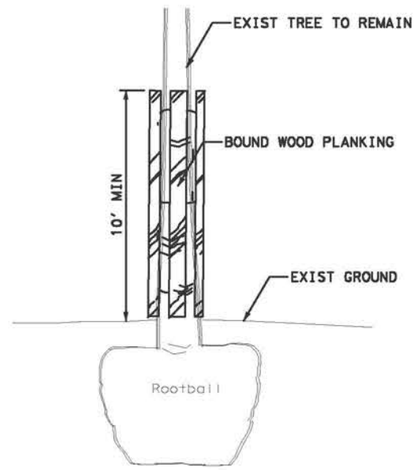
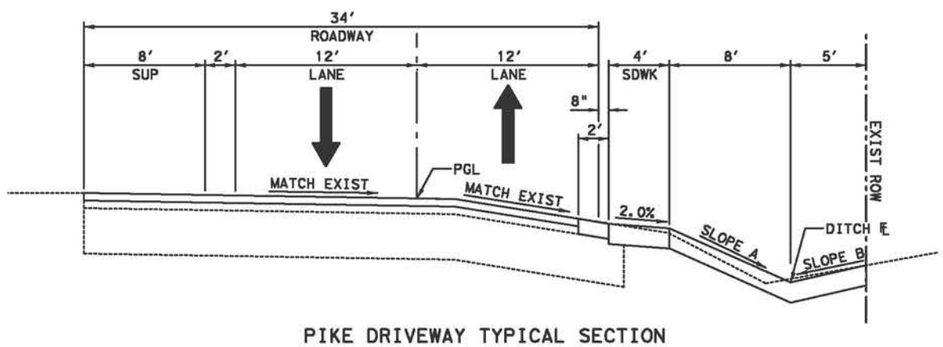




TREE PROTECTION DETAIL

NOTES:

PROTECT THE TREE TRUNK WITH BOUND WOOD PLANKING. WOOD PLANKS MAY BE CONSTRUCTION GRADE LUMBER A MINIMUM OF 1 INCH BY 5 INCH NOMINAL. BAND PLANKS TOGETHER WITH ROPE, BAND OR STRAP OF SUFFICIENT GAUGE AND QUALITY TO KEEP PROTECTIVE PLANKING IN PLACE AROUND TREE TRUNK FOR DURATION OF THE PROJECT. INSTALL WOOD PLANKS TO A HEIGHT OF 8 FEET MINIMUM. DO NOT USE NAILS, SCREWS OR OTHER DAMAGING ATTACHMENT METHODS. TREE PROTECTION SUBSIDIARY TO PERTINENT ITEMS.



PIKE DRIVEWAY TYPICAL SECTION

(NTS)

PIKE DRIVEWAY DETAILS

POINT	STATION	OFFSET	SLOPE A	SLOPE B	DITCH FL
A	113+34.42	24.67' RT	-6.86%	1.47%	6.24
B	113+60.00	24.67' RT	-7.57%	5.79%	6.18
C	113+84.00	24.67' RT	-7.32%	4.52%	6.12
D	114+09.69	24.67' RT	-9.96%	3.57%	6.06

(-) SLOPE IS DOWN LEFT TO RIGHT LOOKING FORWARD STATION
(+) SLOPE IS UP LEFT TO RIGHT LOOKING FORWARD STATION

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South Padre ISLAND

PIKE DRIVEWAY (14-4) LAYOUT

GULF BLVD IMPROVEMENTS
SHEET 1 OF 1

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		39

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DRIVEWAY DETAILS

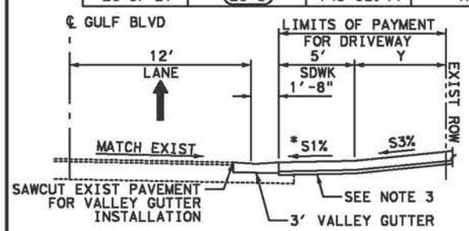
PLAN AND PROFILE SHEET	DRIVEWAY NUMBER	STATION	DRIVEWAY TYPE	PROP WIDTH (FT)	Y AT ℄ DRIVEWAY (FT)	(S1)%	(S2)%	(S3)%	EXIST SURF TYPE	PROP SURF TYPE
GULF BLVD										
5 OF 21	5-1	71+65.98	A	10.68	12.85	2.00%	-	1.95%	GRAVEL	CONCRETE
6 OF 21	6-1	73+34.44	A	11.98	12.85	2.00%	-	13.62%	CONCRETE	CONCRETE
6 OF 21	6-2	73+95.92	A	14.00	12.85	2.00%	-	7.32%	CONCRETE	CONCRETE
8 OF 21	8-1	83+56.60	A	36.82	13.39	2.00%	-	4.33%	CONCRETE	CONCRETE
8 OF 21	8-2	84+11.27	A	22.49	13.35	2.00%	-	8.24%	CONCRETE	CONCRETE
8 OF 21	8-3	86+04.23	A	20.07	16.47	2.00%	-	1.09%	CONCRETE	CONCRETE
9 OF 21	9-1	88+77.64	A	23.51	15.60	2.00%	-	3.59%	BRICK	CONCRETE
9 OF 21	9-2	89+72.19	A	20	17.65	2.00%	-	1.53%	N/A	CONCRETE
9 OF 21	9-3	90+06.92	A	32.06	17.65	2.00%	-	1.53%	CONCRETE	CONCRETE
10 OF 21	10-1	91+95.03	A	48.98	18.09	0.26%	-	0.26%	CONCRETE	CONCRETE
10 OF 21	10-2	93+00.94	A	29.88	15.28	2.00%	-	9.62%	CONCRETE	CONCRETE
10 OF 21	10-3	94+94.13	A	32.80	14.57	2.00%	-	1.37%	CONCRETE	CONCRETE
10 OF 21	10-4	95+47.67	B	21.00	14.21	-2.00%	-1.41%	1.55%	CONCRETE	CONCRETE
11 OF 21	11-1	97+39.70	A	53.67	13.68	2.00%	-	4.75%	ASPHALT	CONCRETE
11 OF 21	11-2	98+36.27	A	24.79	12.62	1.42%	-	1.42%	CONCRETE	CONCRETE
11,12 OF 21	11-3 12-1	100+74.05	A	161.74	12.76	1.30%	-	1.30%	CONCRETE	CONCRETE
12 OF 21	12-2	103+36.41	A	12.49	11.51	2.00%	-	3.39%	CONCRETE	CONCRETE
12 OF 21	12-3	105+44.54	A	14.06	10.76	0.44%	-	0.44%	CONCRETE	CONCRETE
13 OF 21	13-1	105+90.28	A	10.14	10.57	2.00%	-	3.51%	BRICK	CONCRETE
13 OF 21	13-2	106+13.10	A	10.07	10.50	2.00%	-	3.90%	BRICK	CONCRETE
13 OF 21	13-3	106+35.71	A	10.10	10.42	2.00%	-	3.55%	BRICK	CONCRETE
13 OF 21	13-4	108+45.47	B	18.86	14.70	-2.00%	-1.90%	1.50%	GRAVEL	CONCRETE
13 OF 21	13-5	108+91.17	B	18.88	14.43	-2.00%	-8.32%	2.77%	GRAVEL	CONCRETE
14 OF 21	14-1	110+99.10	A	9.89	14.75	1.11%	-	1.11%	CONCRETE	CONCRETE
14 OF 21	14-2	111+38.83	B	9.68	16.57	-2.00%	-9.29%	1.39%	GRAVEL	CONCRETE
14 OF 21	14-3	112+80.31	A	68.38	14.46	2.00%	-	1.73%	ASPHALT	CONCRETE
14 OF 21	14-4	113+69.10	SEE "PIKE DRIVEWAY 14-4 LAYOUT" SHEET FOR ADD. INFO						CONCRETE	CONCRETE
14,15 OF 21	14-5 15-1	115+27.07	A	96.20	12.93	0.78%	-	0.78%	ASPHALT	CONCRETE
15 OF 21	15-2	116+24.40	A	91.00	9.84	1.15%	-	1.15%	ASPHALT	CONCRETE
15 OF 21	15-3	117+71.94	A	36.16	10.86	2.00%	-	6.17%	CONCRETE	CONCRETE
15 OF 21	15-4	118+75.80	A	59.99	11.07	2.00%	-	7.50%	CONCRETE	CONCRETE
16 OF 21	16-1	120+47.84	B	29.60	12.00	0.24%	-	0.24%	ASPHALT	CONCRETE
16 OF 21	16-2	121+65.41	A	81.38	12.78	2.00%	-	6.65%	ASPHALT	CONCRETE
16 OF 21	16-3	124+38.68	B	24.7	17.42	-2.00%	-8.50%	4.59%	CONCRETE	CONCRETE
17 OF 21	17-1	129+35.57	A	22.65	19.03	0.87%	-	0.87%	CONCRETE	CONCRETE
20 OF 21	20-1	139+70.34	A	36.69	18.54	2.00%	-	1.08%	CONCRETE	CONCRETE
20 OF 21	20-2	140+45.32	A	22.33	12.53	2.00%	-	7.18%	CONCRETE	CONCRETE
20 OF 21	20-3	140+90.12	A	24.76	12.50	2.00%	-	3.12%	CONCRETE	CONCRETE
20 OF 21	20-4	142+92.35	A	38.86	12.37	2.00%	-	8.49%	CONCRETE	CONCRETE
20 OF 21	20-5	143+32.44	A	19.08	12.34	2.00%	-	7.13%	BRICK	CONCRETE

⬓ DRIVE GRADES SHOWN ARE AT ℄ OF DRIVE. MATCH EXISTING DRIVEWAY ELEVATIONS AT BACK OF PROPOSED DRIVE

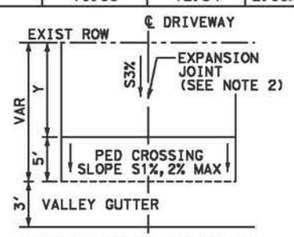
(+) SLOPE IS UP TO THE RIGHT LOOKING FORWARD STATION
(-) SLOPE IS DOWN TO THE RIGHT LOOKING FORWARD STATION

PARALLEL PARKING BAY DETAILS

PLAN AND PROFILE SHEET	PARKING BAY NUMBER	POINT 1		POINT 2		W (FT)	# OF SPACES
		STA	OFF (FT)	STA	OFF (FT)		
5 OF 21	5-1	70+14.55	21	71+34.55	21	120	6
5,6 OF 21	5-2 6-1	71+87.15	21	72+27.15	21	40	2
6 OF 21	6-2	73+52.19	21	73+77.19	21	25	1
6 OF 21	6-3	74+13.66	21	75+33.66	21	120	6
6,7 OF 21	6-4 7-1	76+08.78	21	78+28.69	21	220	11
7 OF 21	7-2	79+17.02	21	79+77.02	21	60	3
7 OF 21	7-3	80+68.88	21	81+28.88	21	60	3
8 OF 21	8-1	82+17.39	21	83+17.39	21	100	5
8 OF 21	8-2	85+16.11	21	85+75.19	21	60	3
8,9 OF 21	8-3 9-1	86+37.87	21	87+37.87	21	100	5
9 OF 21	9-2	88+18.40	21	88+43.40	21	25	1
9 OF 21	9-3	89+10.14	21	89+50.14	21	40	2
9,10 OF 21	9-4 10-1	91+11.94	21	91+51.94	21	40	2
10 OF 21	10-2	92+33.74	21	92+73.74	21	40	2
10 OF 21	10-3	94+16.42	21	94+56.42	21	40	2
10,11 OF 21	10-4 11-1	95+72.70	21	96+32.70	21	60	3
11 OF 21	11-2	97+75.21	21	98+15.21	21	40	2
11 OF 21	11-3	98+58.73	21	98+98.73	21	40	2
12 OF 21	12-1	102+41.47	21	103+21.47	21	80	4
12 OF 21	12-2	103+67.10	21	104+07.10	21	40	2
12 OF 21	12-3	104+87.74	21	105+27.74	21	40	2
13 OF 21	13-1	107+35.99	21	108+15.89	21	80	4
13,14 OF 21	13-2 14-1	109+91.34	21	110+70.81	21	80	4
15 OF 21	15-1	118+05.31	21	118+30.31	21	25	1
15,16 OF 21	15-2 16-1	199+99.70	21	120+24.70	21	25	1
16 OF 21	16-2	120+73.68	21	121+13.68	21	40	2
16 OF 21	16-3	122+96.87	21	124+16.87	21	120	6
16 OF 21	16-4	124+68.30	21	124+93.30	21	25	1
17 OF 21	17-1	125+76.64	21	127+36.64	21	160	8
17 OF 21	17-2	128+22.81	21	129+02.81	21	80	4
17,18 OF 21	17-3 18-1	129+67.29	21	130+27.08	21	60	3
18 OF 21	18-2	131+07.70	21	133+27.59	21	220	11
18,19 OF 21	18-3 19-1	134+10.42	21	135+90.46	21	180	9
19 OF 21	19-2	136+71.62	21	138+51.62	21	180	9
20 OF 21	20-1	139+98.96	21	140+23.77	21	25	1
20 OF 21	20-2	141+81.35	21	142+30.35	21	49	2

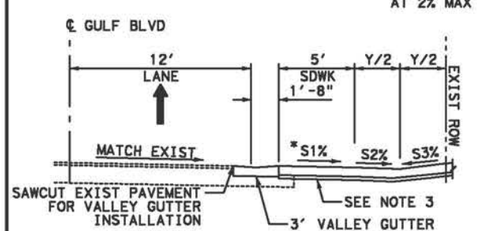


DRIVEWAY ELEVATION VIEW AT ℄ OF DRIVE (TYPE A)
NTS

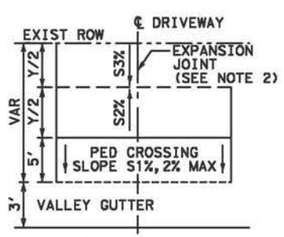


DRIVEWAY PLAN VIEW (TYPE A)
NTS

* SIDEWALK SLOPE AT 2% MAX



DRIVEWAY ELEVATION VIEW AT ℄ OF DRIVE (TYPE B)
NTS

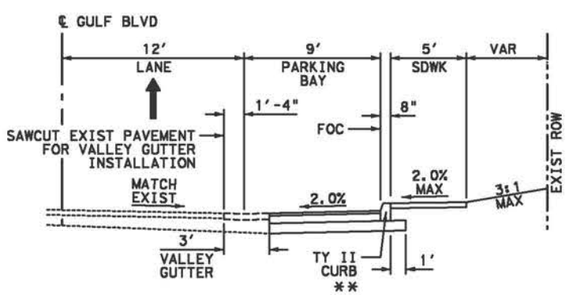


DRIVEWAY PLAN VIEW (TYPE B)
NTS

NOTES:

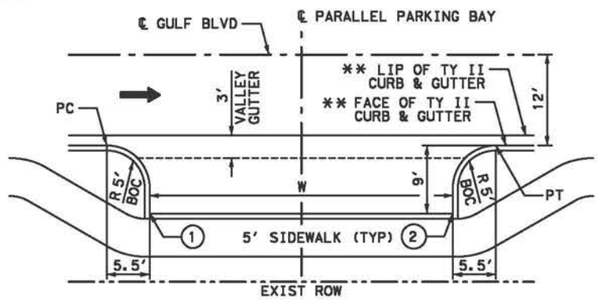
1. DRIVEWAYS SHOULD EXTEND TO THE LIMITS SHOWN IN PLANS UNLESS DIRECTED BY THE ENGINEER TO TIE INTO EXIST DRIVEWAY JOINTS WITHIN ROW.
2. PLACE A ½" ASPHALT BOARD EXPANSION JOINT WITH DOWELS ALONG THE ROW OR END OF DRIVEWAY RECONSTRUCTION AND DOWN THE CENTER OF DRIVEWAY. FOR DRIVEWAYS WIDER THAN 40', PLACE ½" ASPHALT BOARD EXPANSION JOINTS WITH DOWELS AT MAX SPACING OF 20'.
3. CONCRETE DRIVEWAYS SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS FOR RESIDENTIAL AND COMMERICIAL DRIVEWAYS.

** SEE TXDOT STANDARD CCCG-12 FOR MORE INFORMATION.



PARALLEL PARKING BAY
NTS

ELEVATION VIEW



PARALLEL PARKING BAY
NTS

PLAN VIEW

BRIAN C. BOECKER 94886 LICENSED PROFESSIONAL ENGINEER
STATE OF TEXAS
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

MISCELLANEOUS DETAILS

GULF BLVD IMPROVEMENTS
SHEET 1 OF 3

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		40

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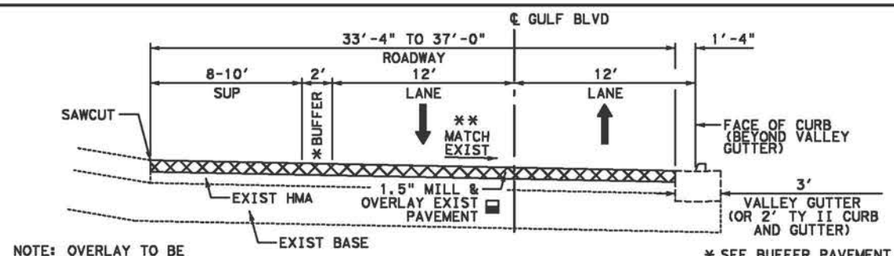
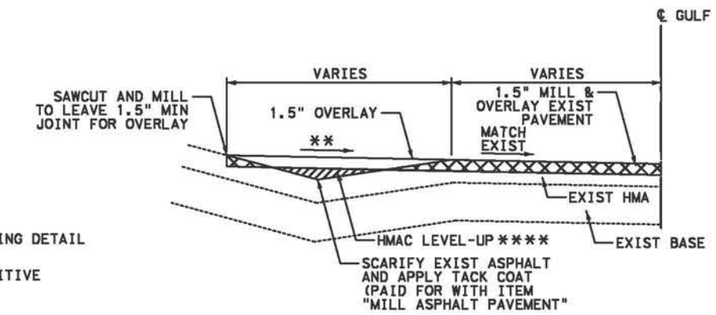


MILL & OVERLAY DETAIL
NTS

* SEE BUFFER PAVEMENT MARKING DETAIL FOR MORE INFORMATION

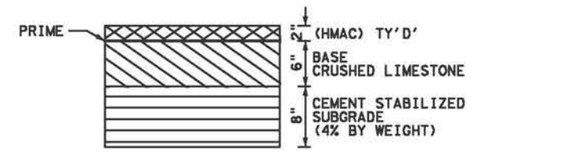
** CONTRACTOR TO VERIFY POSITIVE DRAINAGE MAINTAINED.

REMOVAL OF EXISTING PAVEMENT WEST OF VALLEY GUTTER AND/OR CURB IS INCLUDED FOR PAVEMENT IN "MILL ASPHALT PAVEMENT"

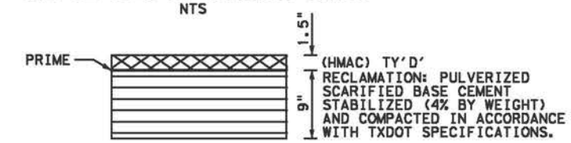


LEVEL-UP DETAIL
NTS

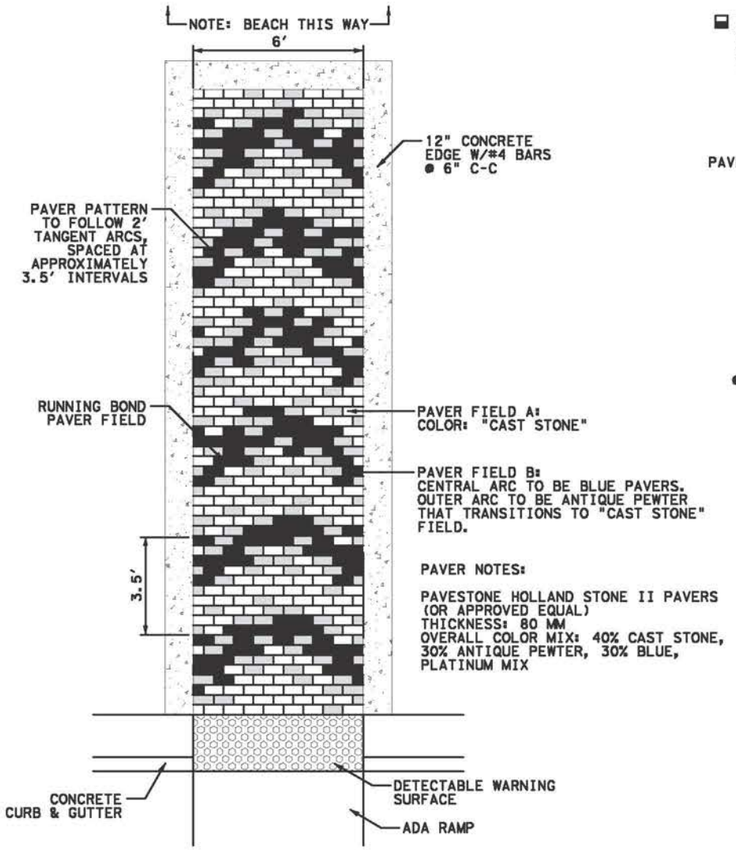
**** AT CONTRACTOR'S OPTION, LEVEL-UP ASPHALT MAY BE LAID WITH THE OVERLAY



ASPHALT PAVEMENT SECTION
(TO BE USED AT PARKING BAYS)
NTS



ASPHALT PAVEMENT RESTORATION SECTION
NTS
(FOR USE ON PAVEMENT RESTORATION AREAS ALONG GULF BLVD)



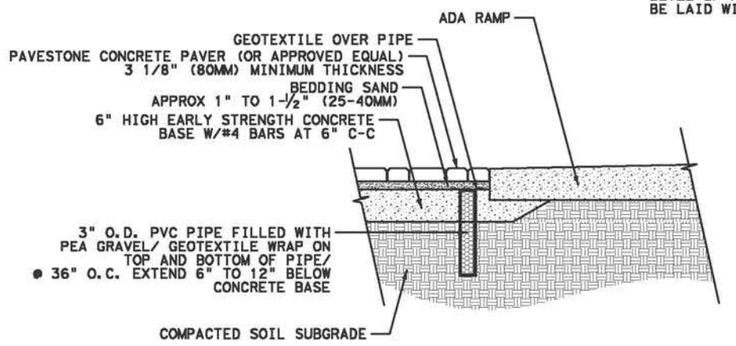
PAVER NOTES:

PAVESTONE HOLLAND STONE II PAVERS (OR APPROVED EQUAL)
THICKNESS: 80 MM
OVERALL COLOR MIX: 40% CAST STONE, 30% ANTIQUE PEWTER, 30% BLUE, PLATINUM MIX

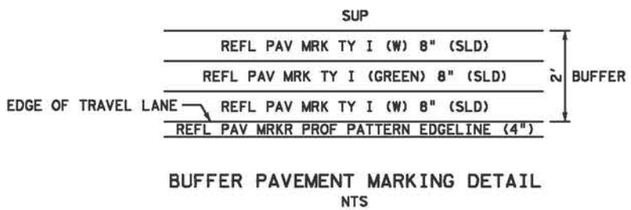
CROSSWALK PAVER PATTERN
NTS

NOTE:

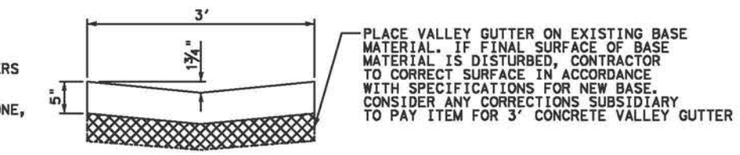
PAVER PATTERN SHOULD MATCH EXISTING PAVERS ON GULF BLVD CROSSWALKS. CONTRACTOR TO PROVIDE 5'X5' MOCK-UP OF CONCRETE PAVERS FOR CITY APPROVAL PRIOR TO INSTALLING CONCRETE PAVERS.



BRICK PAVERS ON CONCRETE BASE
NTS



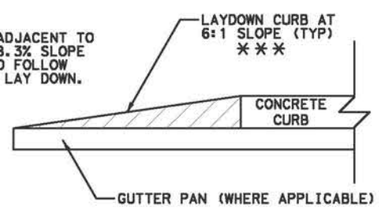
BUFFER PAVEMENT MARKING DETAIL
NTS



PLACE VALLEY GUTTER ON EXISTING BASE MATERIAL. IF FINAL SURFACE OF BASE MATERIAL IS DISTURBED, CONTRACTOR TO CORRECT SURFACE IN ACCORDANCE WITH SPECIFICATIONS FOR NEW BASE. CONSIDER ANY CORRECTIONS SUBSIDIARY TO PAY ITEM FOR 3' CONCRETE VALLEY GUTTER

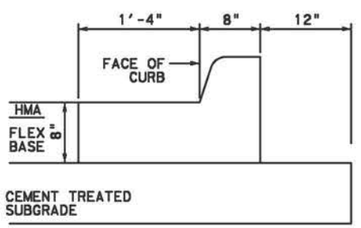
VALLEY GUTTER DETAIL
NTS

*** WHERE SIDEWALK IS ADJACENT TO BACK OF CURB, USE 8.3% SLOPE SIDEWALK PROFILE TO FOLLOW 8.3% SLOPE OF CURB LAY DOWN.

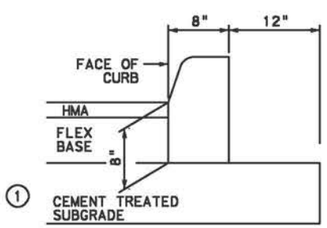


ELEVATION
CURB LAYDOWN DETAILS
NTS

① IF TYPE II CURB/CURB AND GUTTER IS INSTALLED ON EXISTING BASE, CONTRACTOR TO COMPACT EXISTING BASE ACCORDING TO BASE SPECIFICATIONS. PLACE CURB/CURB AND GUTTER ON EXISTING BASE MATERIAL. IF FINAL SURFACE OF BASE MATERIAL IS DISTURBED, CONTRACTOR TO CORRECT SURFACE IN ACCORDANCE WITH SPECIFICATIONS FOR NEW BASE. CONSIDER ANY CORRECTIONS SUBSIDIARY TO PAY ITEM FOR CONCRETE CURB/CURB AND GUTTER



TY II CURB & GUTTER
NTS
(SHOWN ON NEW PAVING)



TY II CURB
NTS

CURB DETAILS (SEE TXDOT STANDARD CCCG-12 FOR ADDITIONAL INFORMATION)

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4-22-2016

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MISCELLANEOUS DETAILS

GULF BLVD IMPROVEMENTS
SHEET 2 OF 3

SCALE	PROJECT NO.	SHEET NO.
		41

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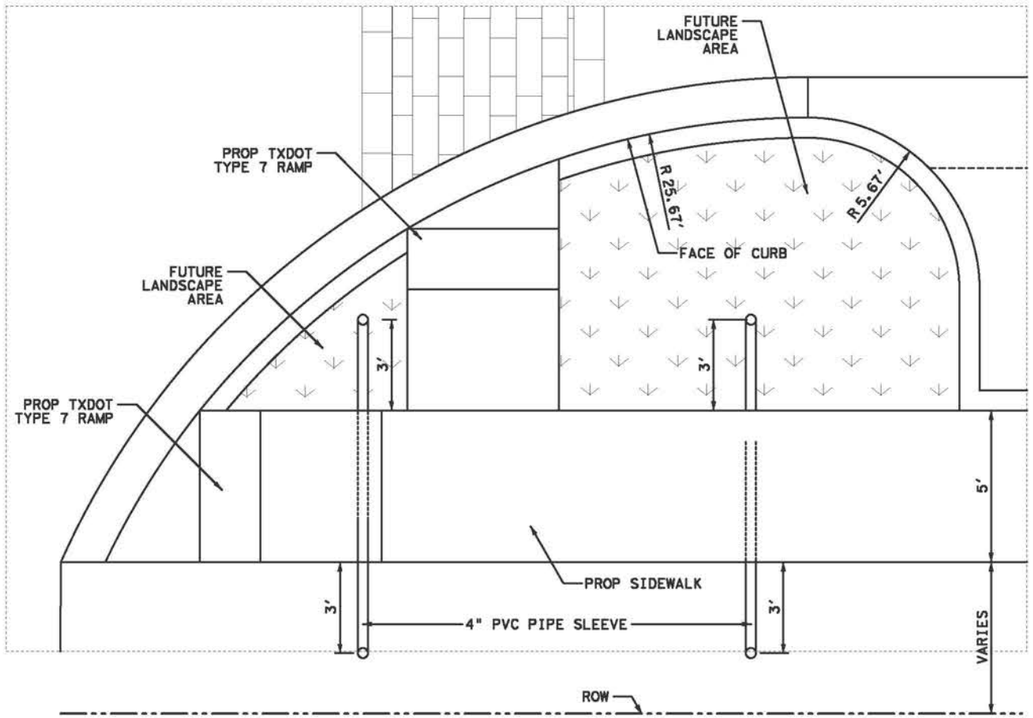
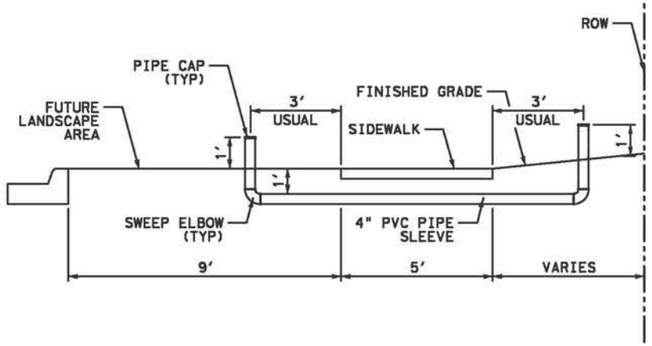
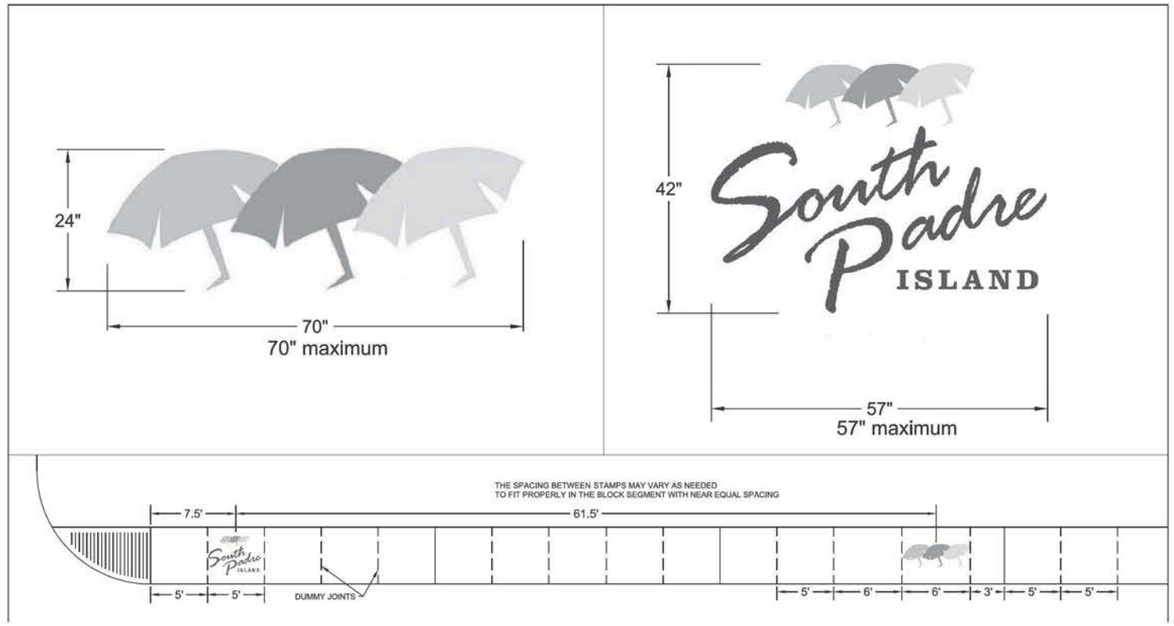


MEDIAN AND IRRIGATION SLEEVE DETAIL
NTS
PLAN VIEW

NOTE:
PIPE ELBOWS AND CAPS ARE INCLUDED WITH PAYMENT FOR 4" PVC PIPE SLEEVE.



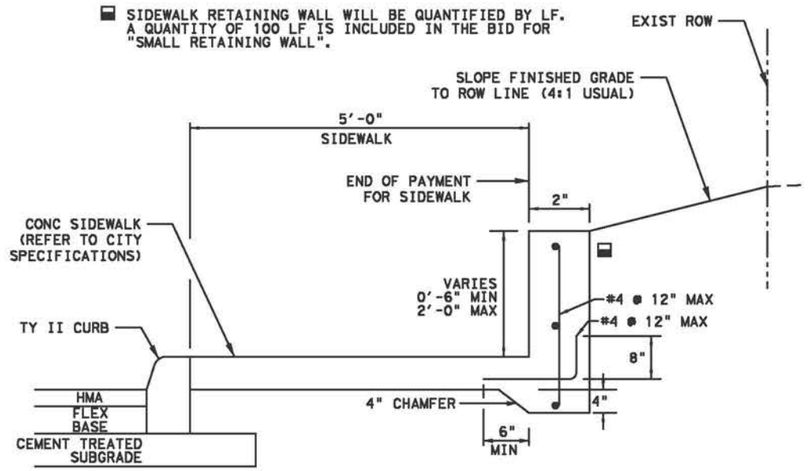
MEDIAN AND IRRIGATION SLEEVE DETAIL
NTS
ELEVATION VIEW



STAMPED CONCRETE SIDEWALK DECALS DETAIL

CITY TO PROVIDE STAMP. CONTRACTOR TO IMPRINT AS DIRECTED BY CITY. CONTRACTOR TO VERIFY PLACEMENT OF DECALS WITH CITY PRIOR TO SIDEWALK CONSTRUCTION.

■ SIDEWALK RETAINING WALL WILL BE QUANTIFIED BY LF. A QUANTITY OF 100 LF IS INCLUDED IN THE BID FOR "SMALL RETAINING WALL".



SIDEWALK RETAINING WALL DETAIL

STATE OF TEXAS
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South Padre ISLAND

MISCELLANEOUS DETAILS

GULF BLVD IMPROVEMENTS
SHEET 3 OF 3

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		42

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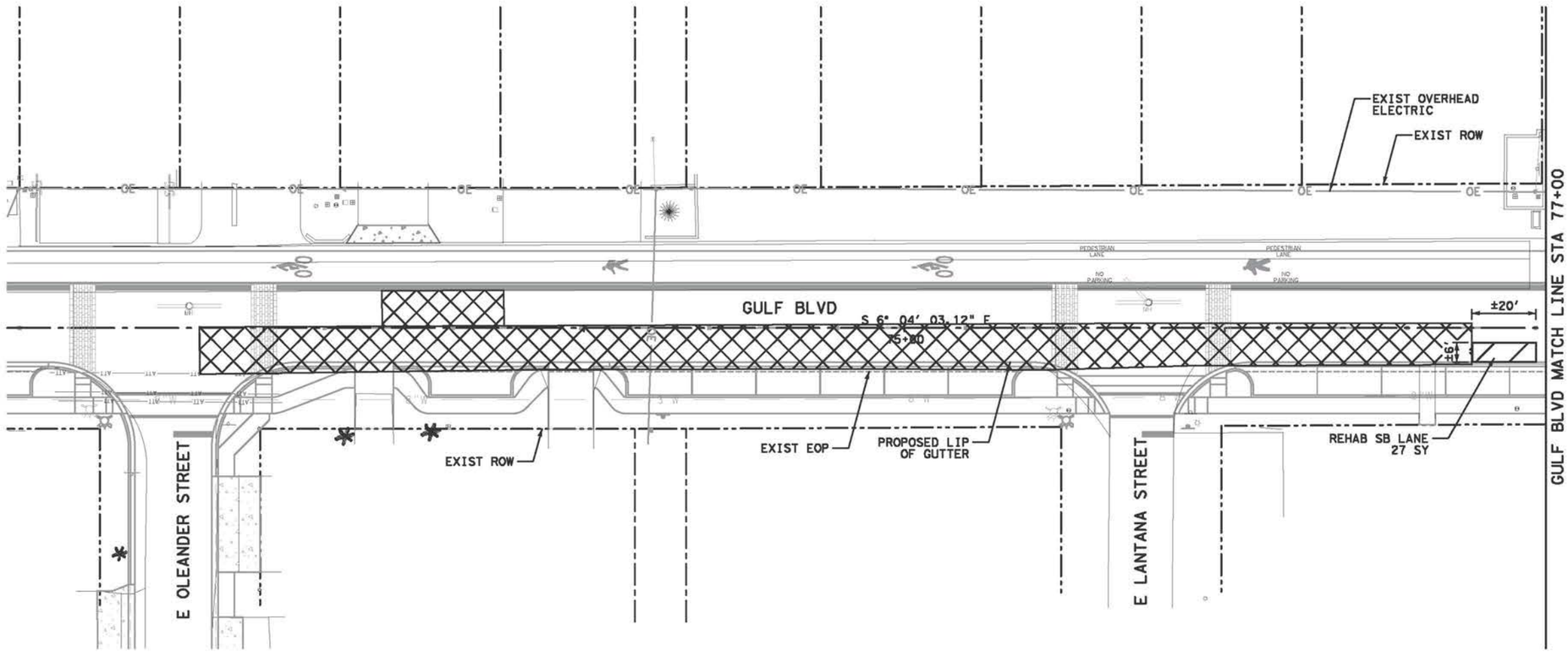

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
2. CONTRACTOR TO VERIFY RECLAMATION AREAS/LIMITS WITH CITY PRIOR TO SAWCUT FOR RECLAMATION.
3. NB AND SB LANES DEFINED IN ASPHALT PAVEMENT REPAIR SHEETS REFER TO EXISTING NB AND SB LANES (NOT PROPOSED ℄ MODIFICATIONS)

STATE OF TEXAS
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South Padre ISLAND

ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 1 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	43

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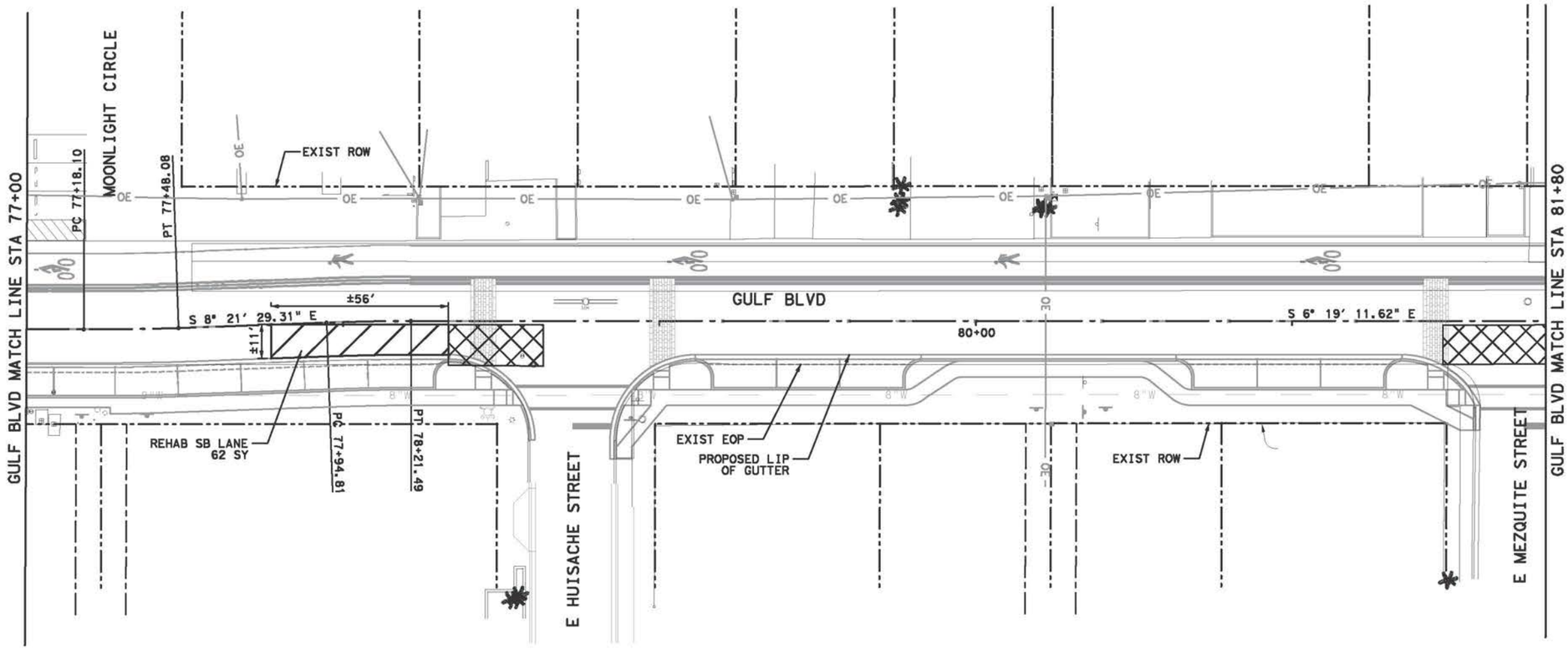

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 2 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		44

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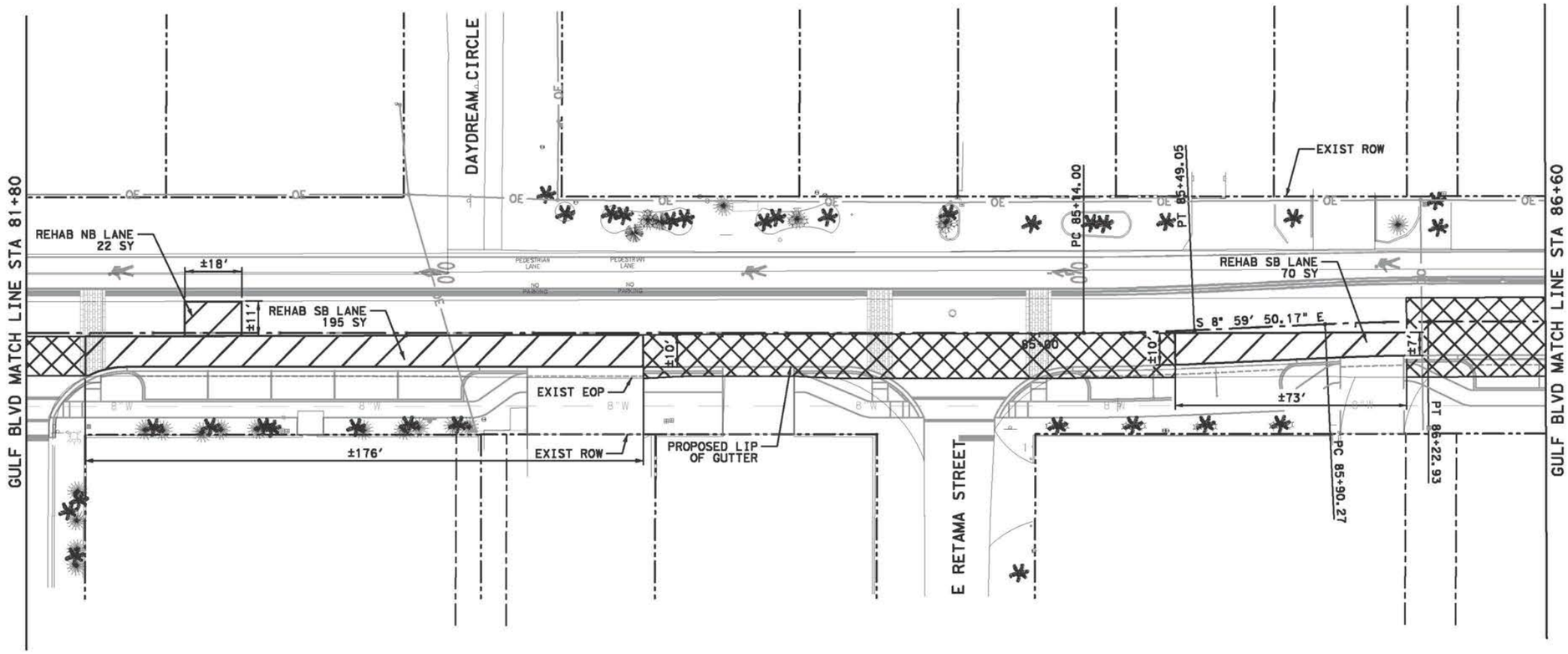

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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3. NB AND SB LANES DEFINED IN ASPHALT PAVEMENT REPAIR SHEETS REFER TO EXISTING NB AND SB LANES (NOT PROPOSED ℄ MODIFICATIONS)

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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS
SHEET 3 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	45

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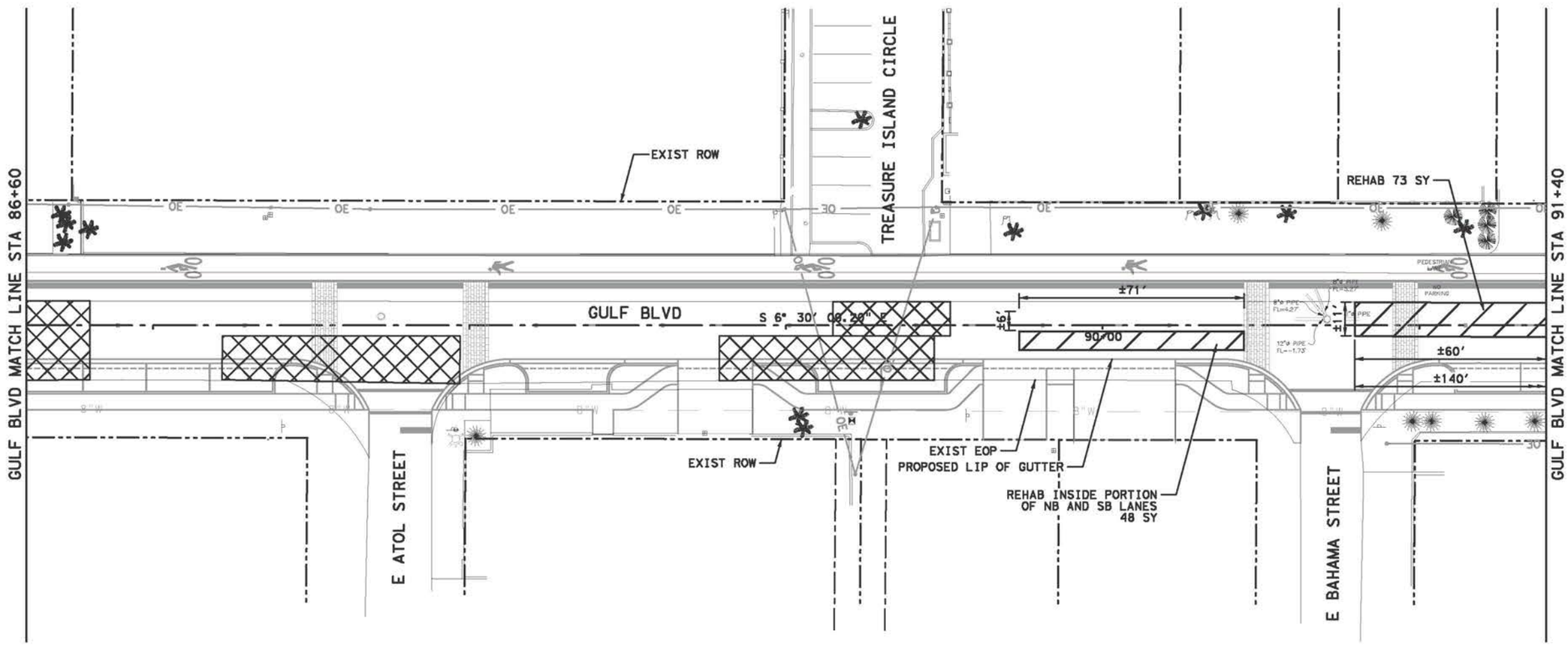

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
2. CONTRACTOR TO VERIFY RECLAMATION AREAS/LIMITS WITH CITY PRIOR TO SAWCUT FOR RECLAMATION.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 4 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		46

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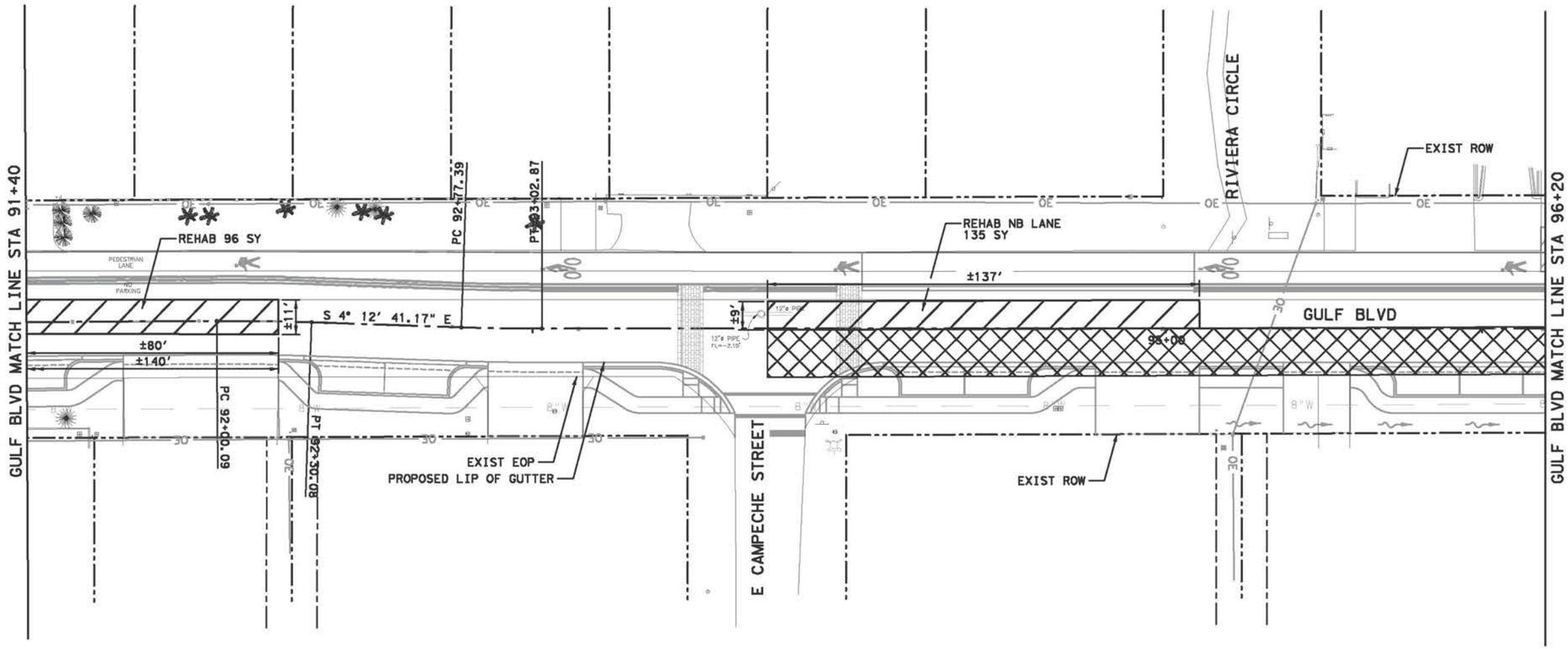

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
2. CONTRACTOR TO VERIFY RECLAMATION AREAS/LIMITS WITH CITY PRIOR TO SAWCUT FOR RECLAMATION.
3. NB AND SB LANES DEFINED IN ASPHALT PAVEMENT REPAIR SHEETS REFER TO EXISTING NB AND SB LANES (NOT PROPOSED ℄ MODIFICATIONS)

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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS
SHEET 5 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		47

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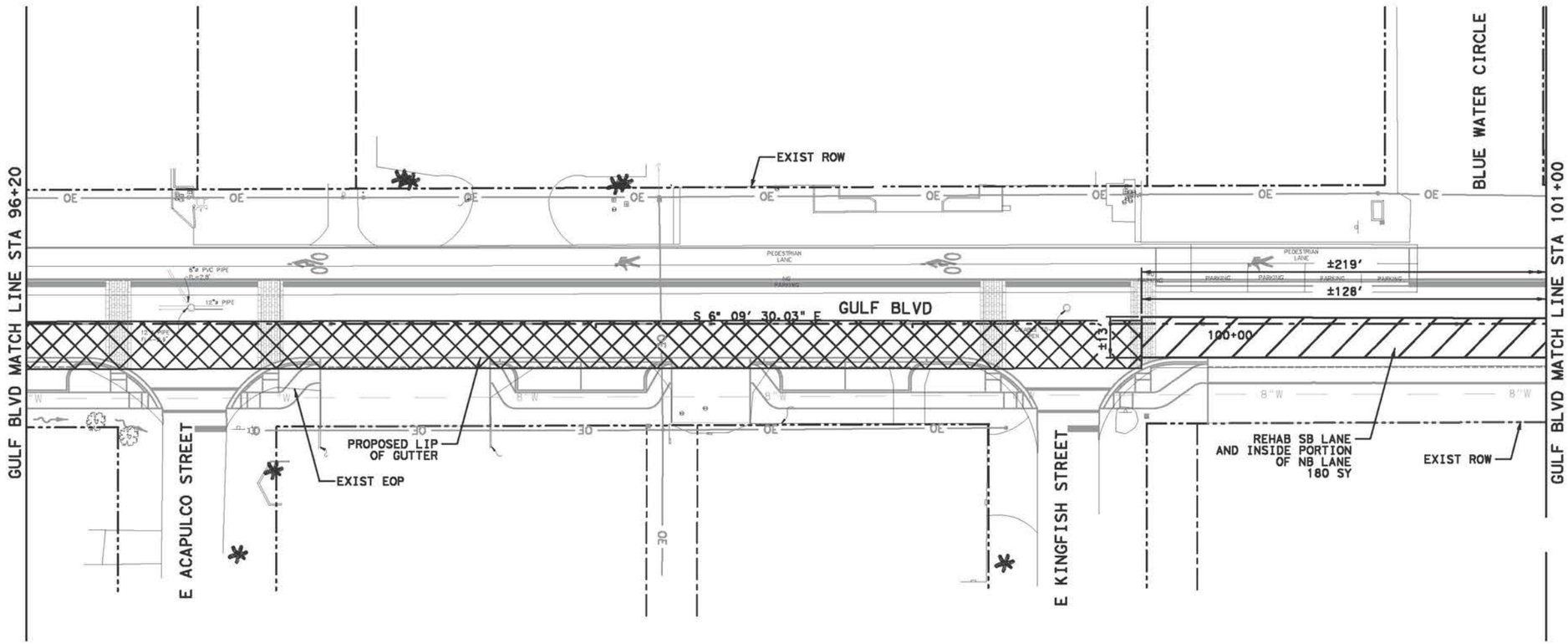

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
2. CONTRACTOR TO VERIFY RECLAMATION AREAS/LIMITS WITH CITY PRIOR TO SAWCUT FOR RECLAMATION.
3. NB AND SB LANES DEFINED IN ASPHALT PAVEMENT REPAIR SHEETS REFER TO EXISTING NB AND SB LANES (NOT PROPOSED ℄ MODIFICATIONS)

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4-22-2016

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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 6 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	48

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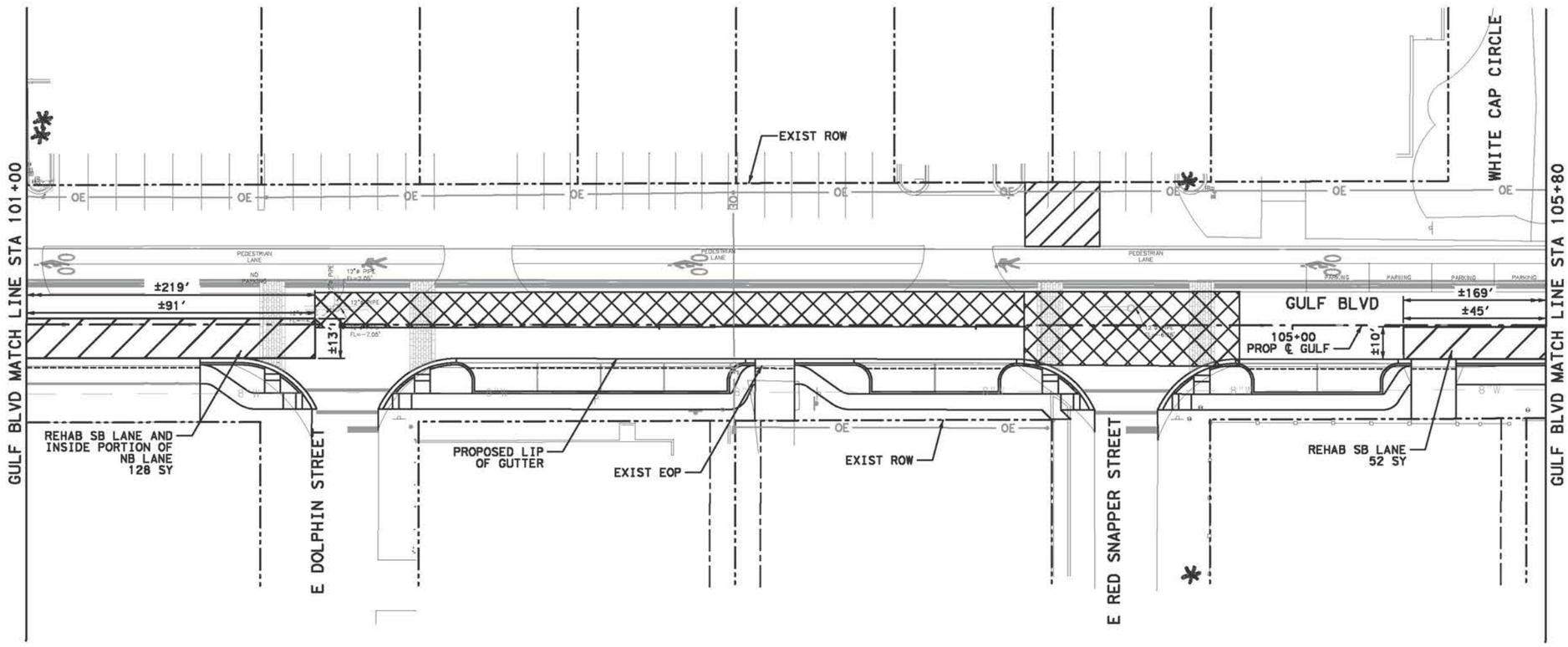

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
2. CONTRACTOR TO VERIFY RECLAMATION AREAS/LIMITS WITH CITY PRIOR TO SAWCUT FOR RECLAMATION.
3. NB AND SB LANES DEFINED IN ASPHALT PAVEMENT REPAIR SHEETS REFER TO EXISTING NB AND SB LANES (NOT PROPOSED ℄ MODIFICATIONS)

STATE OF TEXAS
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94886
LICENSED PROFESSIONAL ENGINEER
4-22-2016

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South Padre ISLAND

ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 7 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	49

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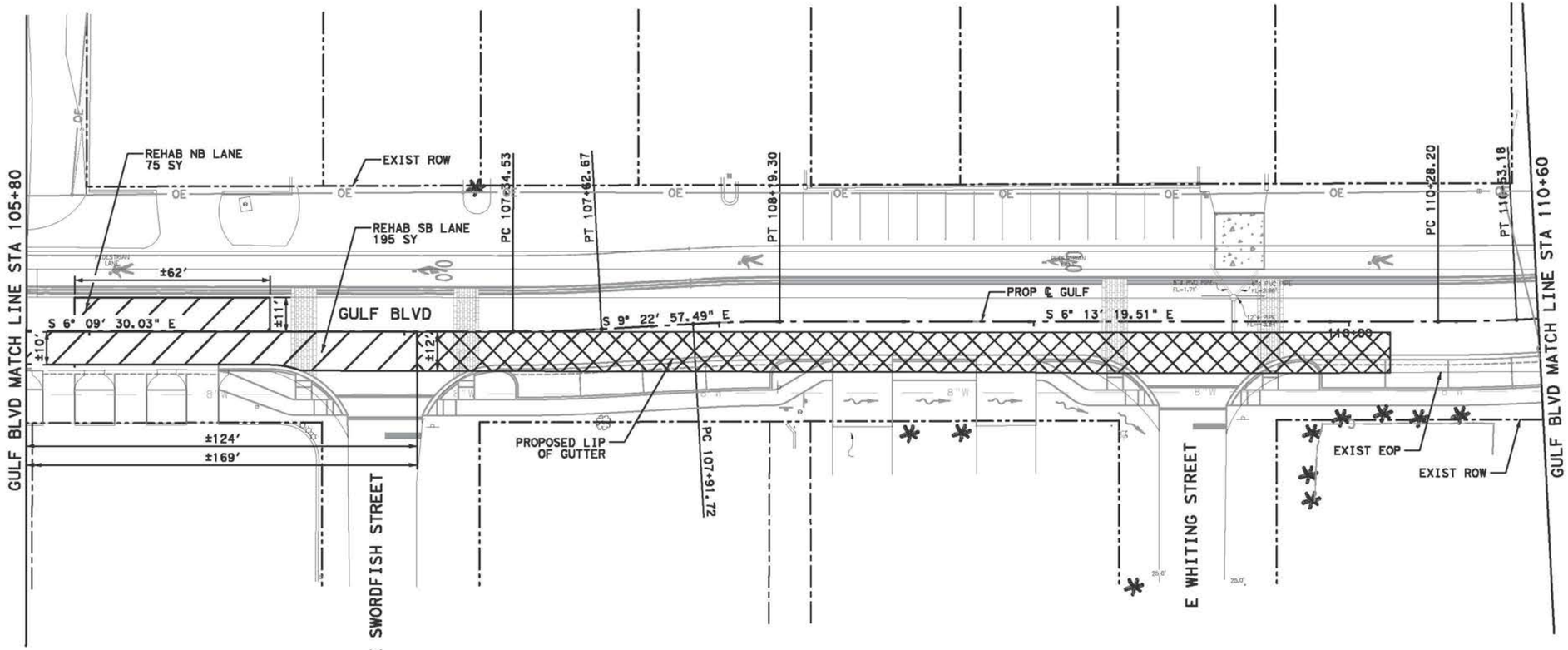
LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS



0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 8 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	50

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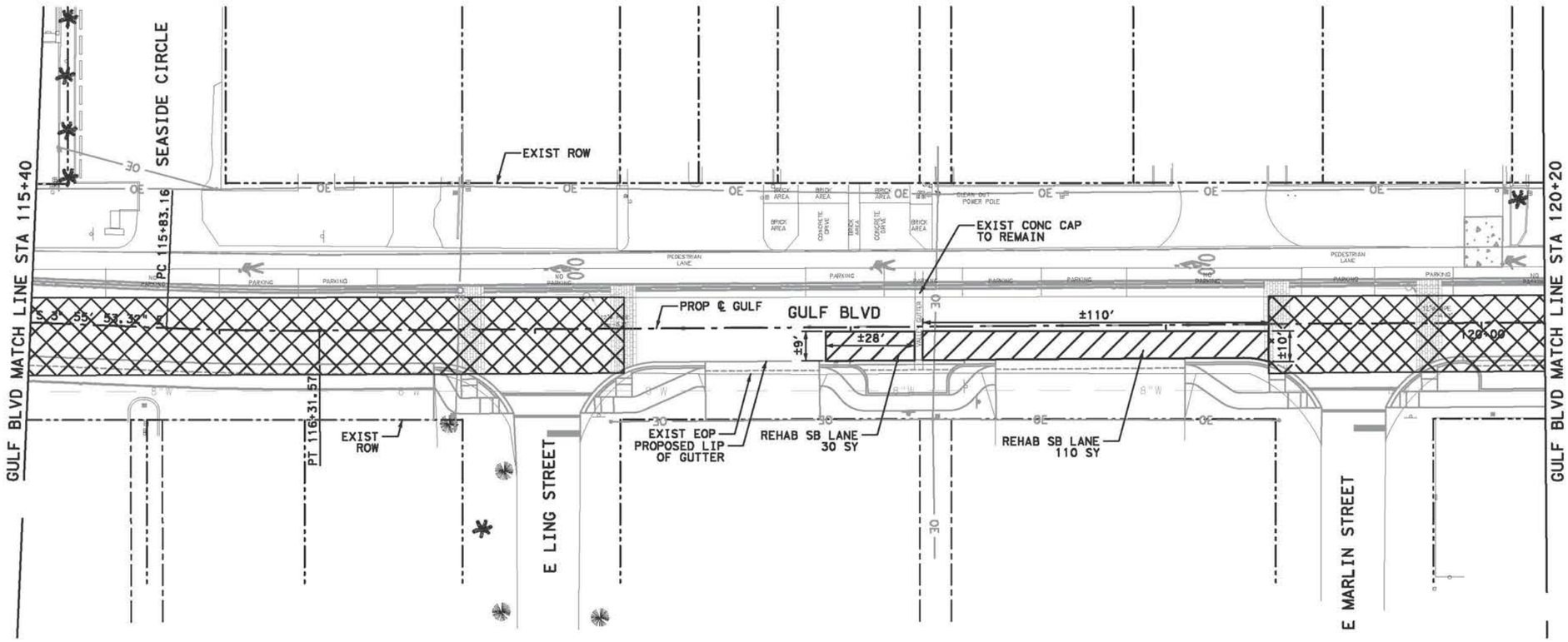
LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS



0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 9 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	51

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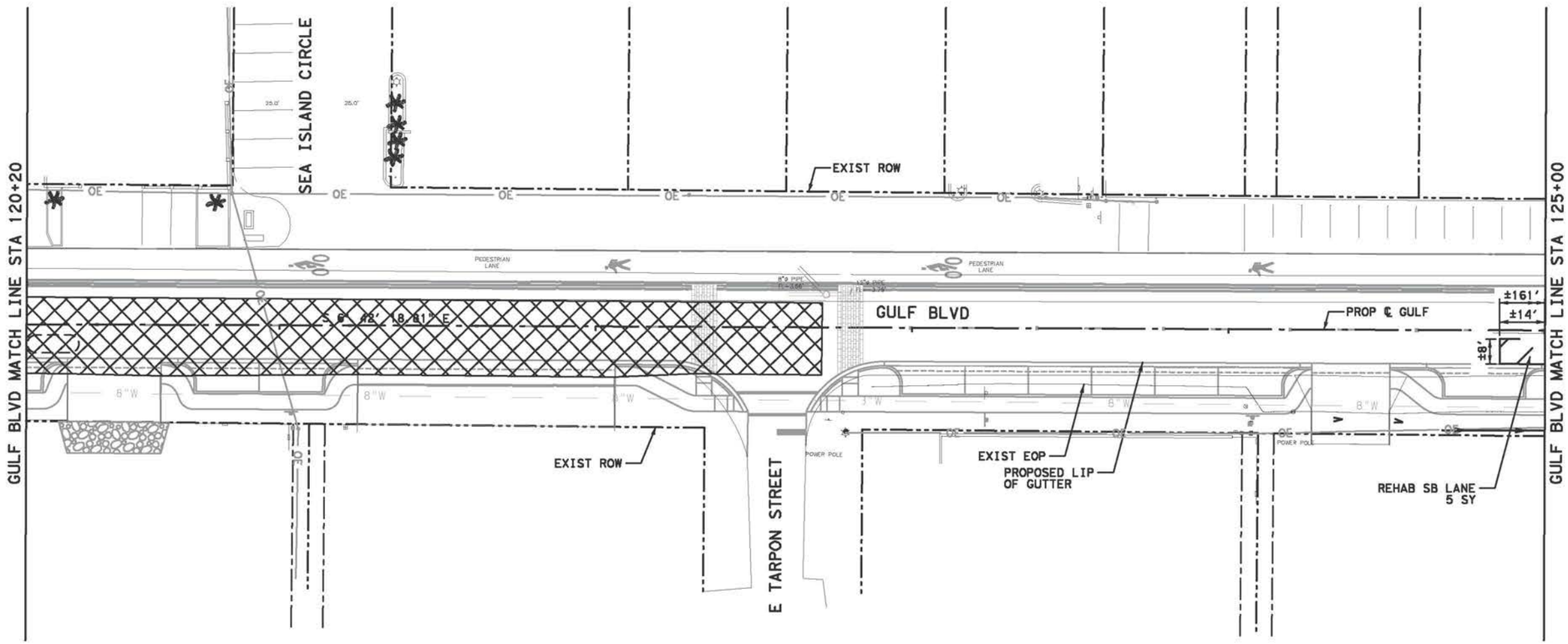

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS
SHEET 10 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'		52

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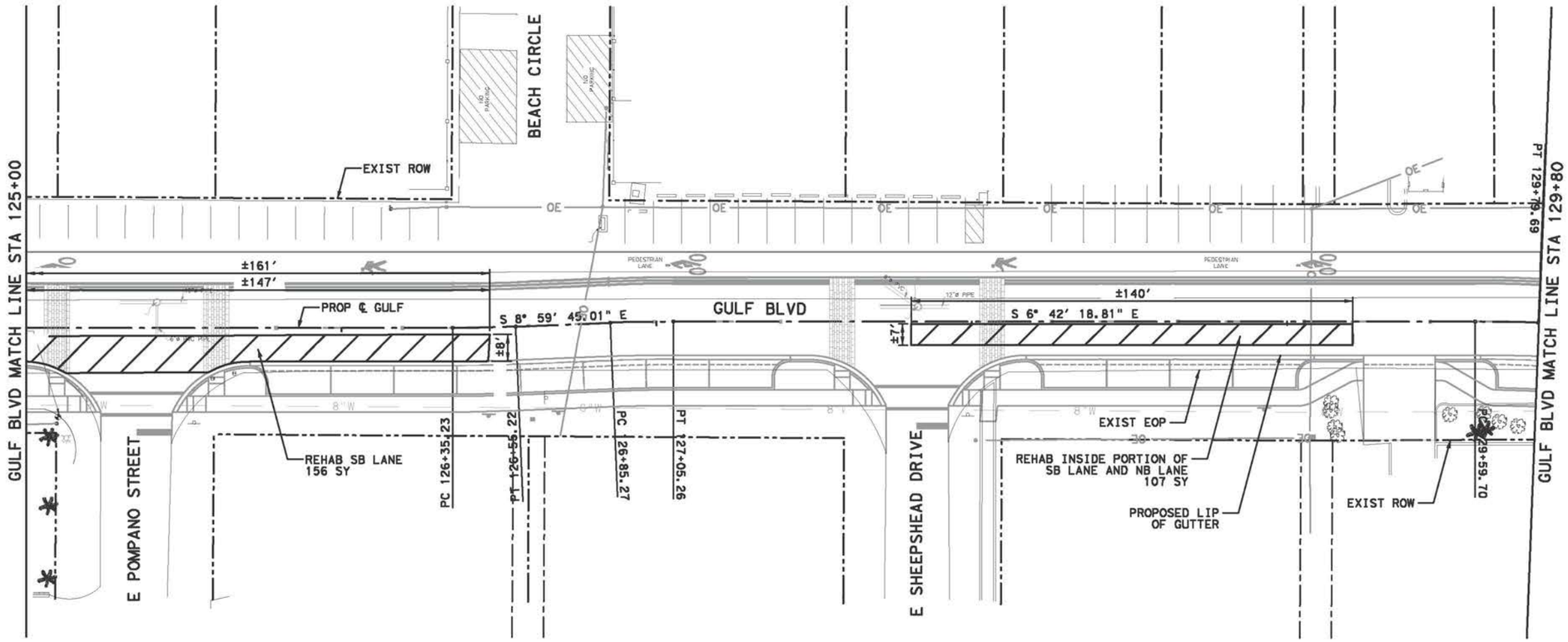

NOTES:

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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 11 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	53

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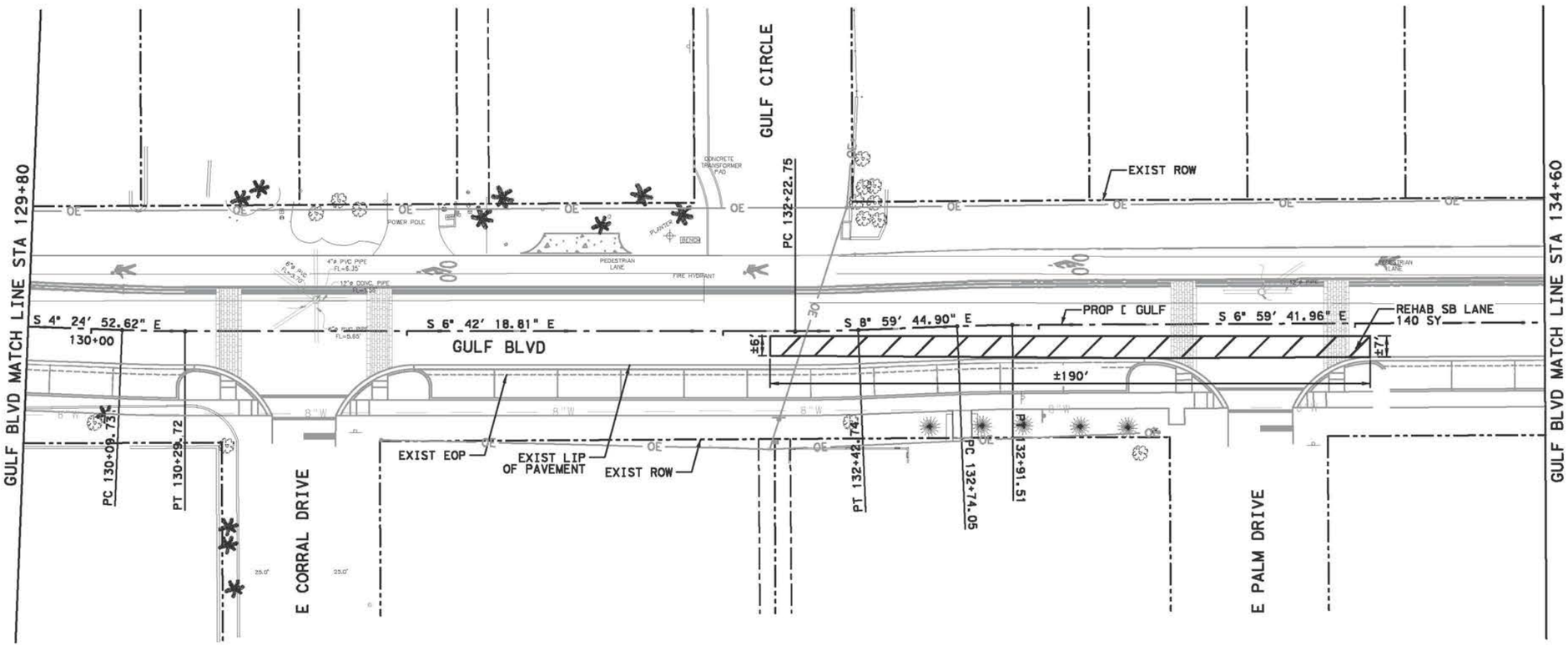

LEGEND

- PREVIOUSLY REHABILITATED AREAS
- PROPOSED REHABILITATION AREAS

0 20 40
SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS
SHEET 12 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	54

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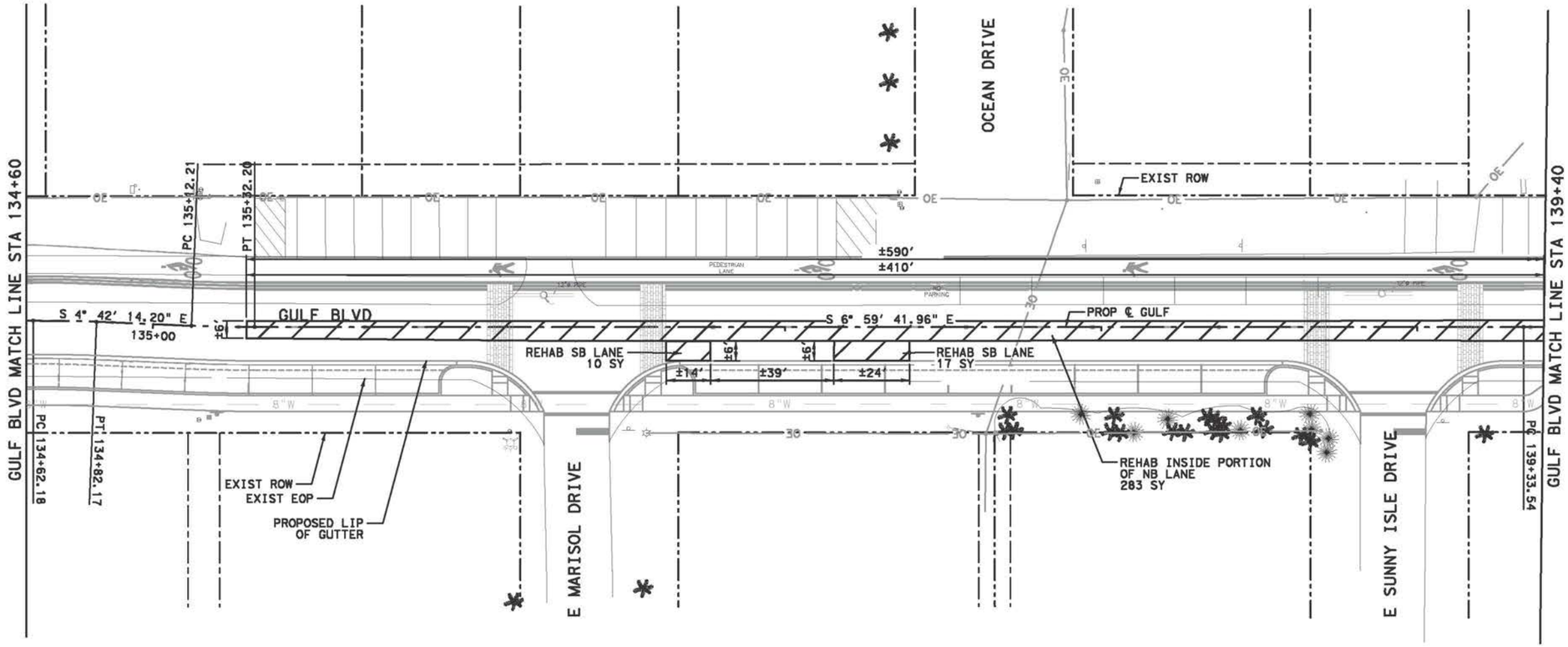
LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS



0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 13 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	·	55

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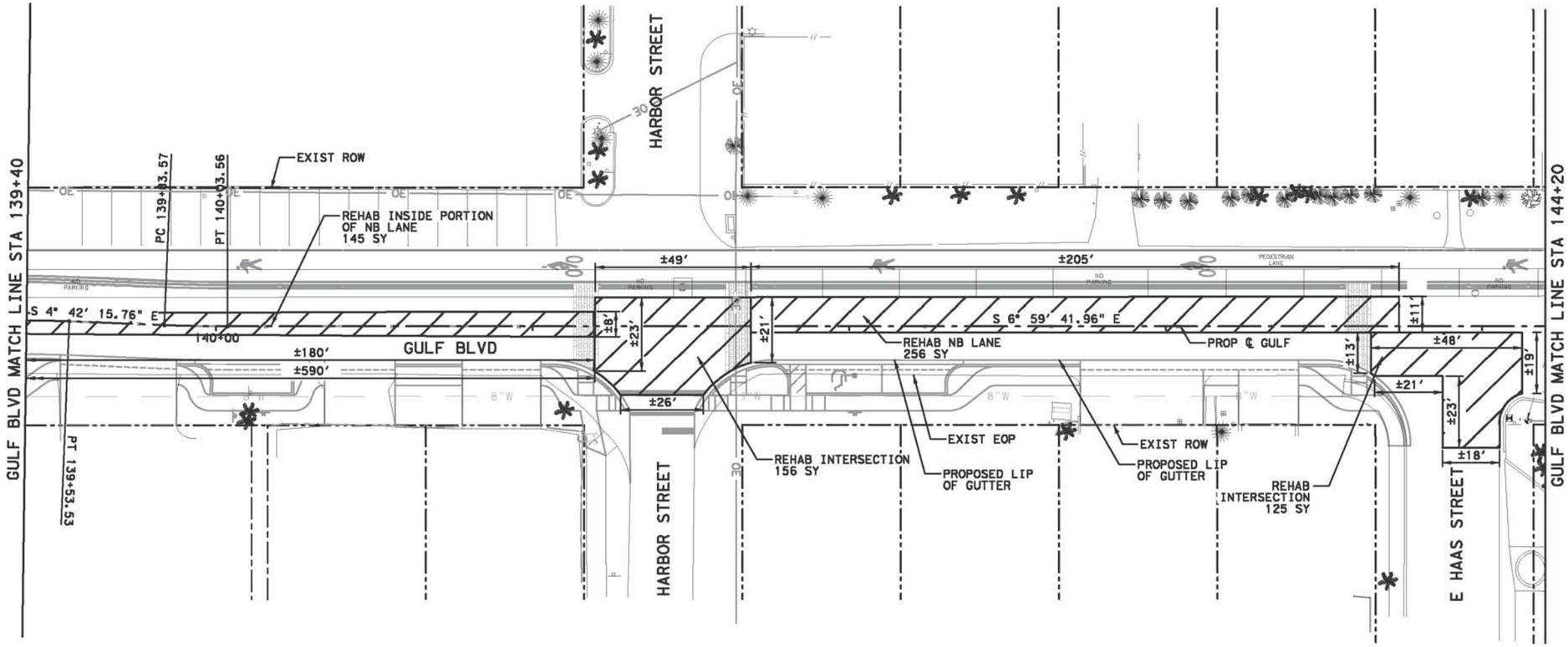

LEGEND

PREVIOUSLY REHABILITATED AREAS

PROPOSED REHABILITATION AREAS

0 20 40

SCALE: 1"=40'

NOTES:

1. LIMITS OF PAYMENT FOR RECLAMATION SECTION WILL BE TO LIP OF GUTTER OF PROPOSED VALLEY GUTTER OR CURB & GUTTER.
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ASPHALT PAVEMENT REPAIRS

GULF BLVD IMPROVEMENTS

SHEET 14 OF 14

SCALE	PROJECT NO.	SHEET NO.
1" = 40'	-	56

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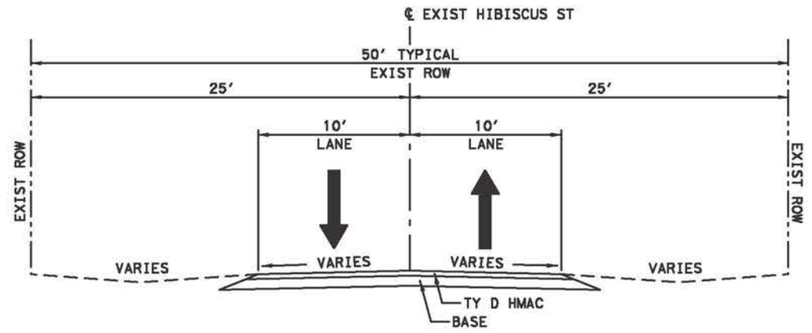
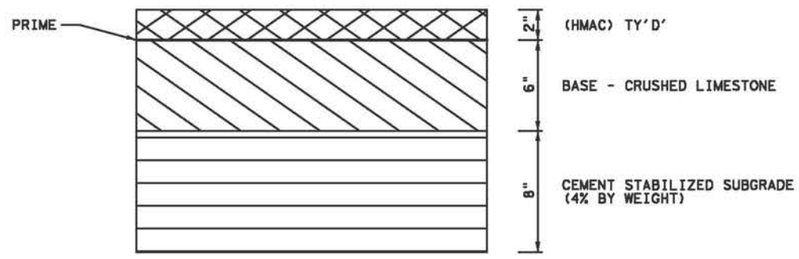


HIBISCUS ST EXIST TYPICAL SECTION

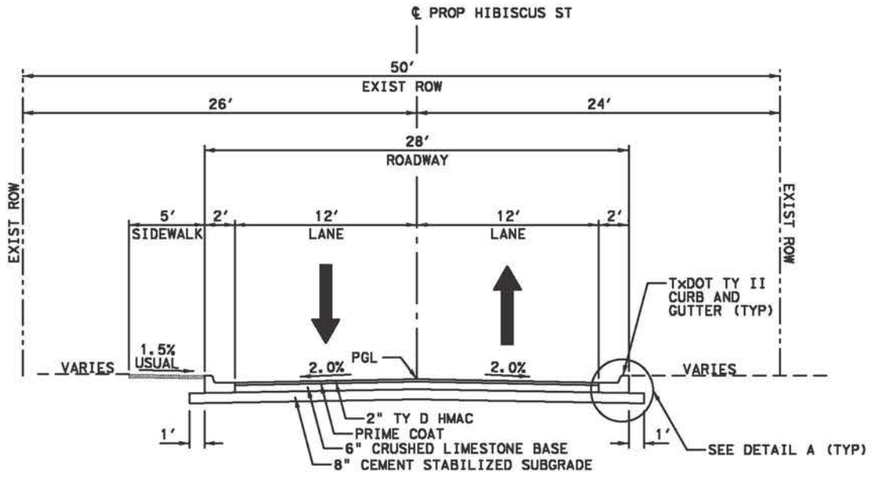
STA 10+43.35 TO STA 20+30.00



ASPHALT PAVEMENT RECONSTRUCTION SECTION

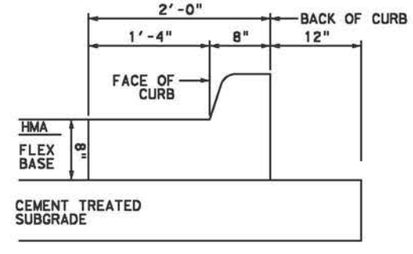
NTS

(FOR USE AT HIBISCUS ST)



HIBISCUS ST PROP TYPICAL SECTION

STA 10+43.35 TO STA 20+30.00



DETAIL A

TY II CURB & GUTTER

NTS

(SHOWN ON NEW PAVING)

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South Padre ISLAND

HIBISCUS STREET IMPROVEMENT
FULL RECONSTRUCTION

HIBISCUS TYPICAL SECTION

SCALE	PROJECT NO.	SHEET NO.
1" = 20'		57

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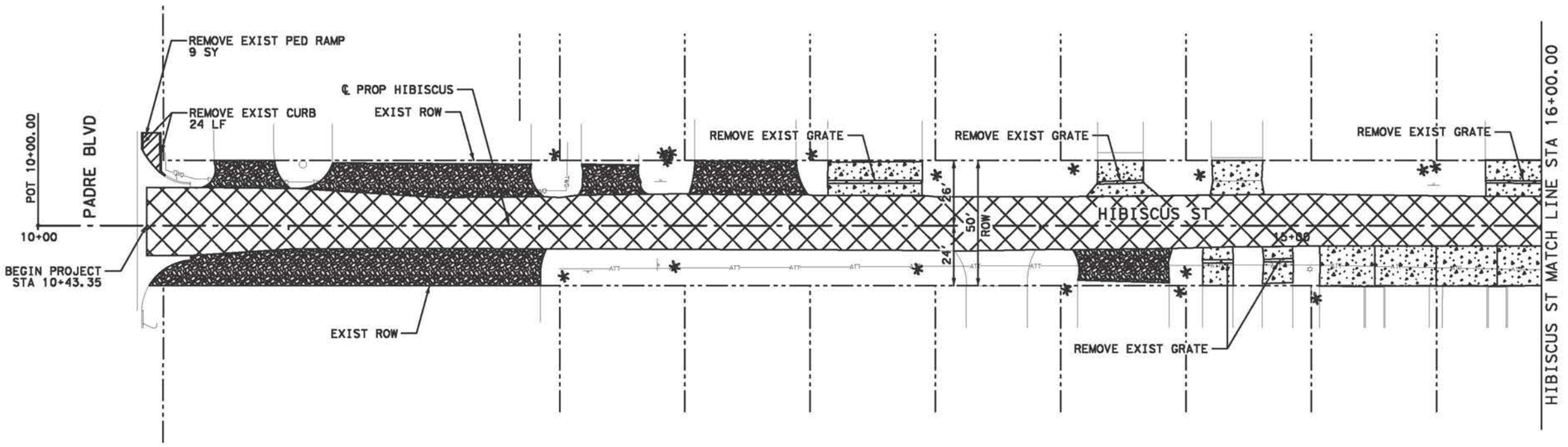

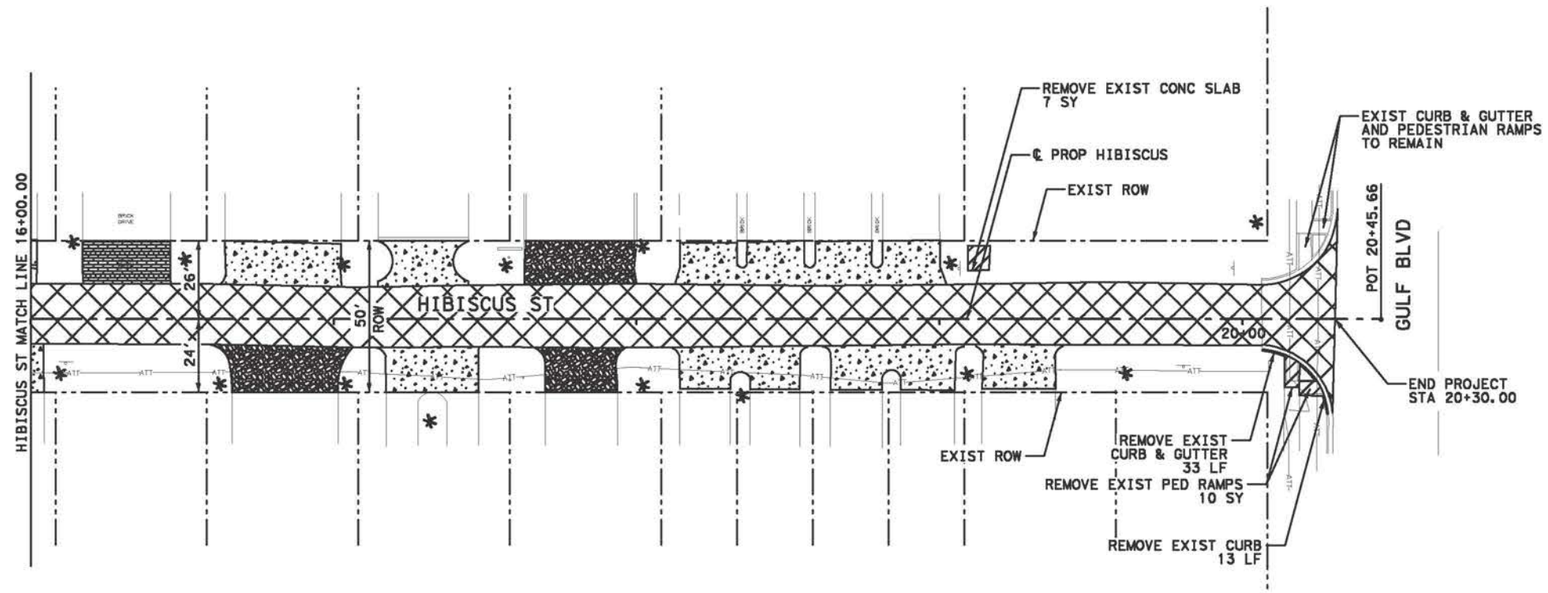

REMOVE ASPHALT PAVEMENT
REMOVE ASPHALT DRIVEWAY
REMOVE CONCRETE DRIVEWAY
REMOVE BRICK DRIVEWAY
REMOVE PEDESTRIAN RAMP
SCF PROP SEDIMENT CONTROL FENCE
SB PROP SANDBAGS

0 25 50
SCALE: 1"=50'

NOTES:

1. CONTRACTOR WILL BE REQUIRED TO PROTECT PALM TREES SHOWN TO REMAIN.
2. APPLY SEEDING TO DISTURBED AREAS WITHIN ROW. SEEDING SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
3. CONTRACTOR TO PROVIDE 15 LF OF SANDBAGS AT INLET NORTH OF HIBISCUS DRIVE ON PADRE BLVD.
4. EROSION CONTROL DEVICES SHOWN WILL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
5. BURIED UTILITIES EXIST WITHIN CORRIDOR. CONTRACTOR TO LOCATE UTILITIES PRIOR TO CONSTRUCTION.

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HIBISCUS STREET IMPROVEMENT FULL RECONSTRUCTION

EROSION CONTROL PLAN AND REMOVAL LAYOUT

SCALE	PROJECT NO.	SHEET NO.
1" = 50'	·	58

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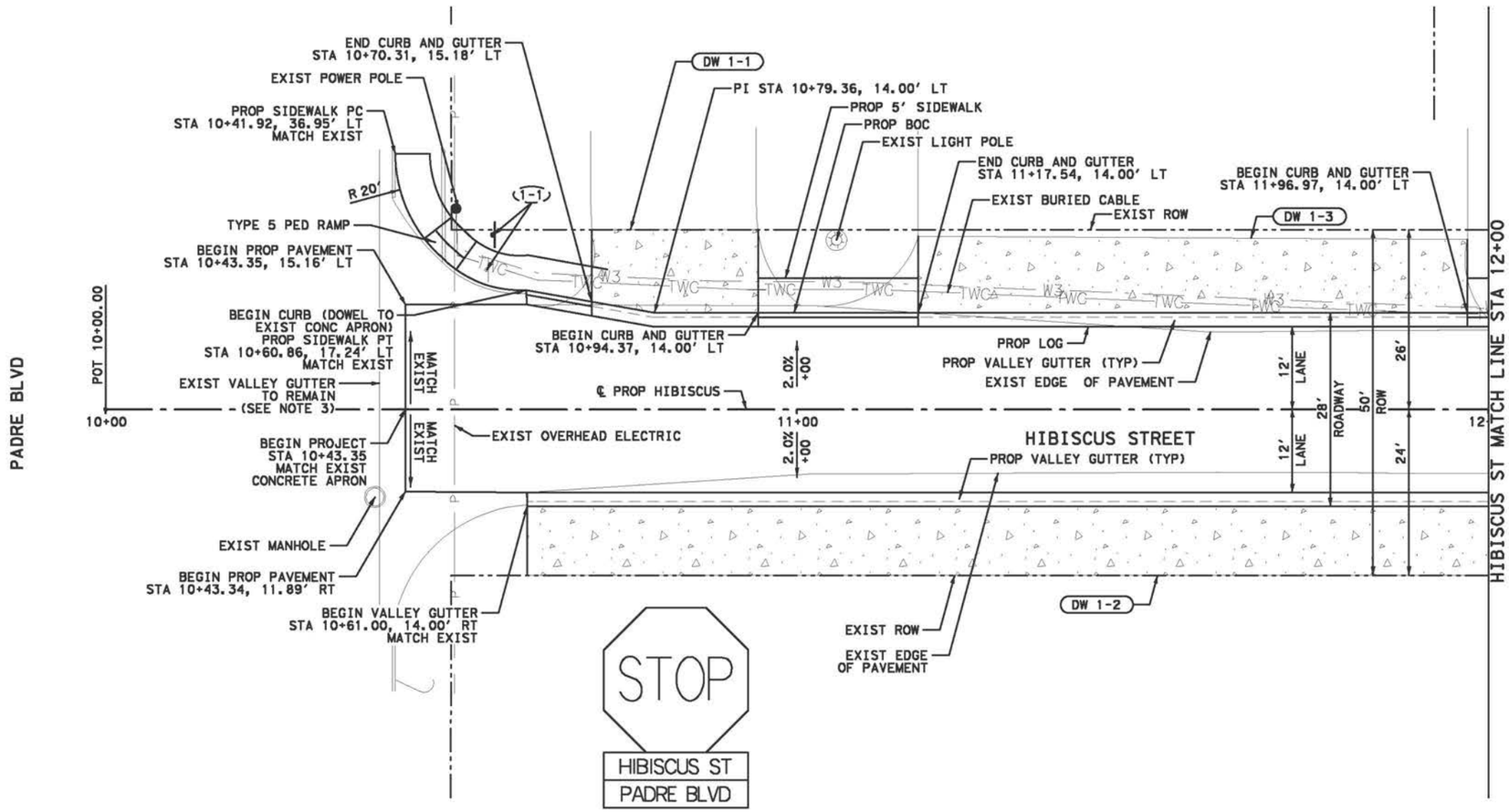
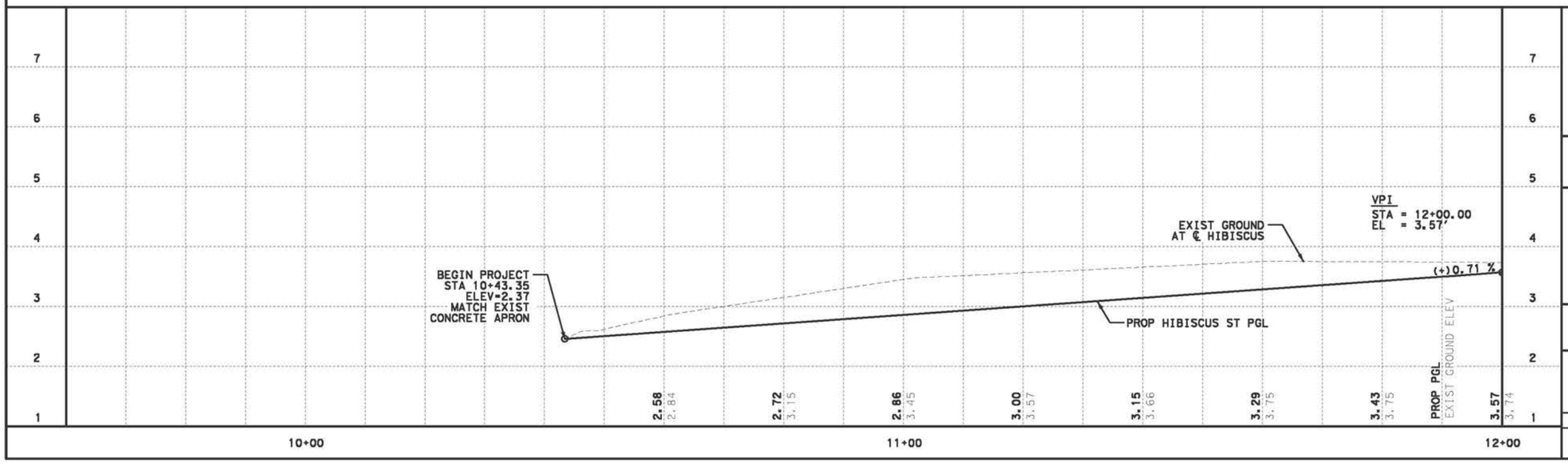


NOTES:
1. SEE DRIVEWAY DETAIL SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN ARE AT BACK OF CURB UNLESS NOTED OTHERWISE.
3. CONTRACTOR RESPONSIBLE FOR ANY DAMAGES TO EXIST VALLEY GUTTER TO REMAIN. GRADE ASPHALT AT INTERSECTION TO MATCH GRADES OF VALLEY GUTTER.

LEGEND

(X-X)	REMOVE EXIST SIGN
(X-X)	RELOCATE EXIST SIGN
X-X	EXIST SIGN TO REMAIN

0 10 20
SCALE: 1"=20'



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HIBISCUS STREET IMPROVEMENT
FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE
BEGIN PROJECT TO STA 12+00

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	59

FILENAME: G:\069234000*Gulf*Rehabe\Design\HIBrpp02.dgn
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HIBISCUS ST MATCH LINE STA 12+00

HIBISCUS ST MATCH LINE STA 14+40

EXIST BURIED CABLE

DW 2-2

DW 2-3

DW 2-4

DW 2-6

2-1

PROP 5' SIDEWALK

EXIST ROW

PROP BOC

PROP LOG

END CURB AND GUTTER
STA 12+62.06, 14.00' LT

BEGIN CURB AND GUTTER
STA 12+39.65, 14.00' LT

END CURB AND GUTTER
STA 12+16.79, 14.00' LT

BEGIN CURB AND GUTTER
STA 13+52.93, 14.00' LT

END CURB AND GUTTER
STA 14+22.89, 14.00' LT

EXIST EDGE
OF PAVEMENT

PROP VALLEY
GUTTER (TYP)

HIBISCUS STREET

2.0%

2.0%

13+00

℄ PROP HIBISCUS

14+00

12' LANE

28' ROADWAY

12' LANE

50' ROW

26'

24'

BEGIN CURB AND GUTTER
STA 12+02.59, 14.00' RT

END CURB AND GUTTER
STA 13+68.50, 14.00' RT

PROP VALLEY
GUTTER (TYP)

ATT

EXIST UTILITY
MARKER

CONTROL POINT ½" IRON PIN
STA 12+08.23, 24.24' RT
X=3285.65, Y=12678.18
EL=4.2'

DW 2-1

PROP BOC

EXIST BURIED CABLE

PROP LOG

EXIST ROW

EXIST EDGE
OF PAVEMENT

DW 2-5

DW 2-7

BEGIN CURB AND GUTTER
STA 13+96.94, 14.00' RT

END CURB AND GUTTER
STA 14+12.95, 14.00' RT

R2-1
SPEED LIMIT 25
SLOW
CHILDREN AT PLAY

(2-1)

PARKING BY PERMIT ONLY
ESTACIONAMIENTO CON PERMISO SOLAMENTE
8PM-8PM
MAR. 1-SEPT. 15
ORD. 10-03

(2-1)

NOTES:
1. SEE DRIVEWAY DETAIL SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN ARE AT BACK OF CURB UNLESS NOTED OTHERWISE.

LEGEND

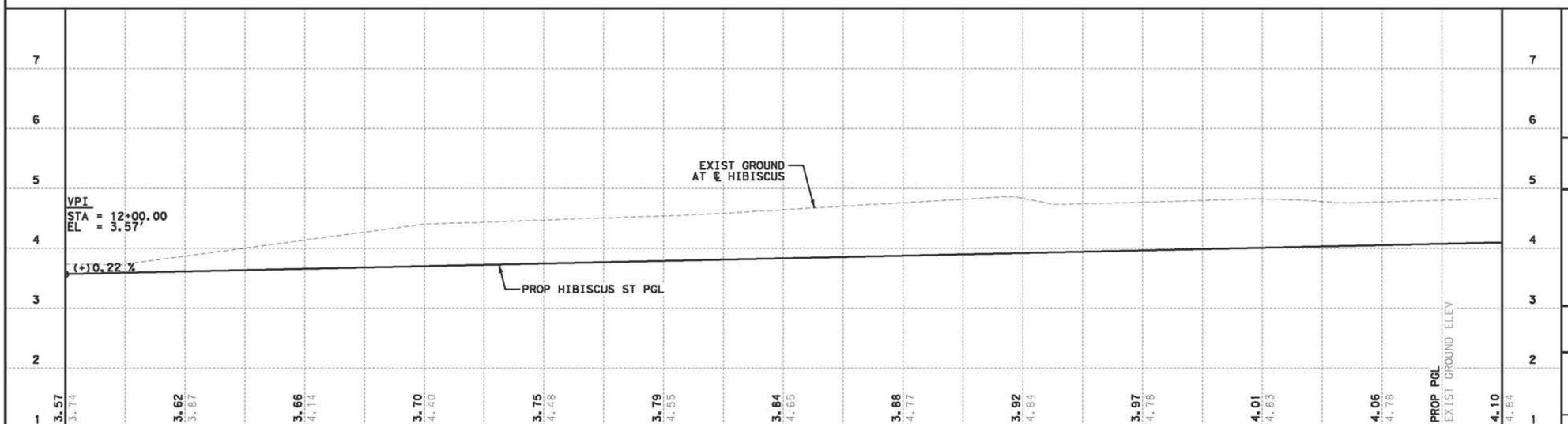
(X-X) REMOVE EXIST SIGN

(X-X) RELOCATE EXIST SIGN

X-X EXIST SIGN TO REMAIN

0 10 20

SCALE: 1"=20'



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HIBISCUS STREET IMPROVEMENT
FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE
STA 12+00 TO STA 14+40

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	·	60

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HIBISCUS ST MATCH LINE STA 14+40

HIBISCUS ST MATCH LINE STA 16+80

DW 3-1

BEGIN CURB AND GUTTER STA 14+41.03, 14.00' LT

DW 3-4

EXIST ROW

3-1

DW 3-9

DW 3-11

DW 3-12

CONTROL POINT 1/2" IRON PIN STA 16+58.00, 25.92' LT X=3727.63, Y=12775.45 EL=5.0'

PROP 5' SIDEWALK

PROP BOC

PROP LOG

END CURB AND GUTTER STA 15+77.68, 14.00' LT

BEGIN CURB AND GUTTER STA 14+88.77, 14.00' LT

EXIST EDGE OF PAVEMENT

END CURB AND GUTTER STA 14+68.41, 14.00' LT

PROP VALLEY GUTTER (TYP)

BEGIN CURB AND GUTTER STA 16+46.10, 14.00' LT

END CURB AND GUTTER STA 16+64.04 14.00' LT

12' LANE

12' LANE

28' ROADWAY

50' ROW

26'

24'

2.0%

2.0%

N 83° 56' 00.00" E

HIBISCUS STREET

15+00

16+00

℄ PROP HIBISCUS

BEGIN CURB AND GUTTER STA 16+06.34, 14.00' RT

END CURB AND GUTTER STA 16+64.32 14.00' RT

EXIST MANHOLE TO BE ADJUSTED TO GRADE

PROP VALLEY GUTTER (TYP)

DW 3-3

DW 3-5

DW 3-6

DW 3-7

DW 3-8

DW 3-10

DW 3-13

3-2

DW 3-2

EXIST POWER POLE

EXIST TELEPHONE BOX

EXIST OVERHEAD ELECTRIC

EXIST TELEPHONE BOX

EXIST EDGE OF PAVEMENT

PROP BOC

PROP LOG

EXIST ROW

EXIST BURIED CABLE

NOTES:
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2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN ARE AT BACK OF CURB UNLESS NOTED OTHERWISE.

LEGEND

(X-X) REMOVE EXIST SIGN

(X-X) RELOCATE EXIST SIGN

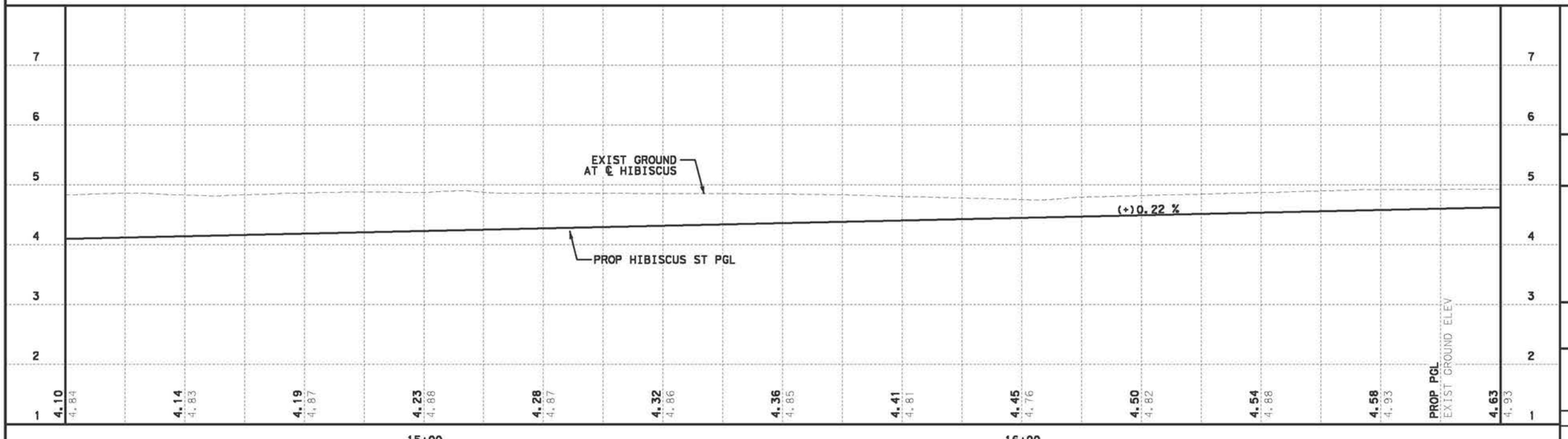
X-X EXIST SIGN TO REMAIN

0 10 20

SCALE: 1"=20'

3-1

3-2



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HIBISCUS STREET IMPROVEMENT FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE STA 14+40 TO STA 16+80

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	61

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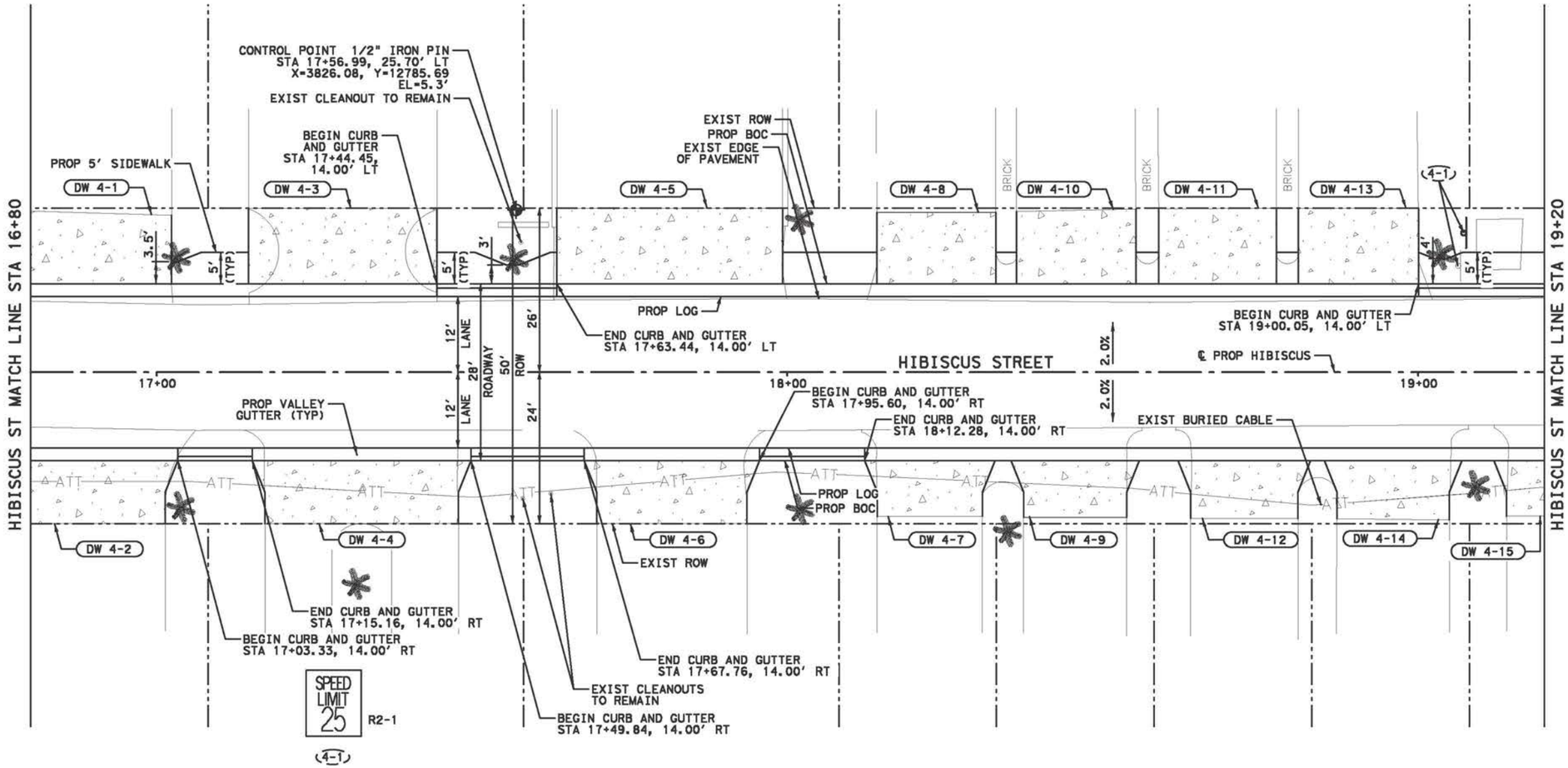

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2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN ARE AT BACK OF CURB UNLESS NOTED OTHERWISE.

LEGEND

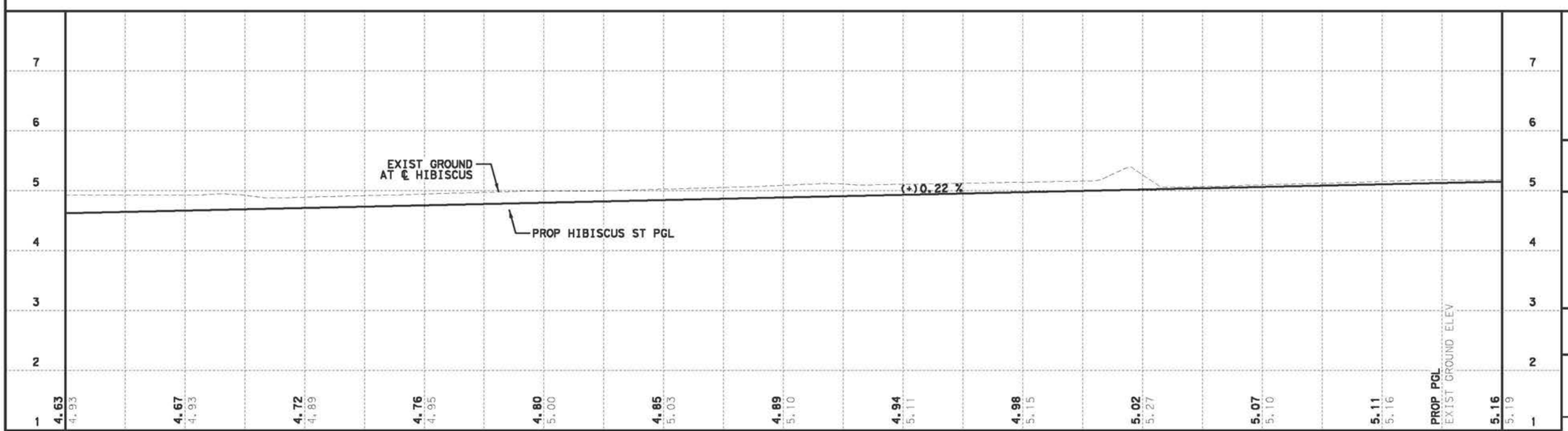
(X-X) REMOVE EXIST SIGN

(X-X) RELOCATE EXIST SIGN

X-X EXIST SIGN TO REMAIN

0 10 20

SCALE: 1"=20'



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LICENSED PROFESSIONAL ENGINEER
4-22-2016

Kimley»Horn F-928

South Padre ISLAND

HIBISCUS STREET IMPROVEMENT FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE STA 16+80 TO STA 19+20

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	62

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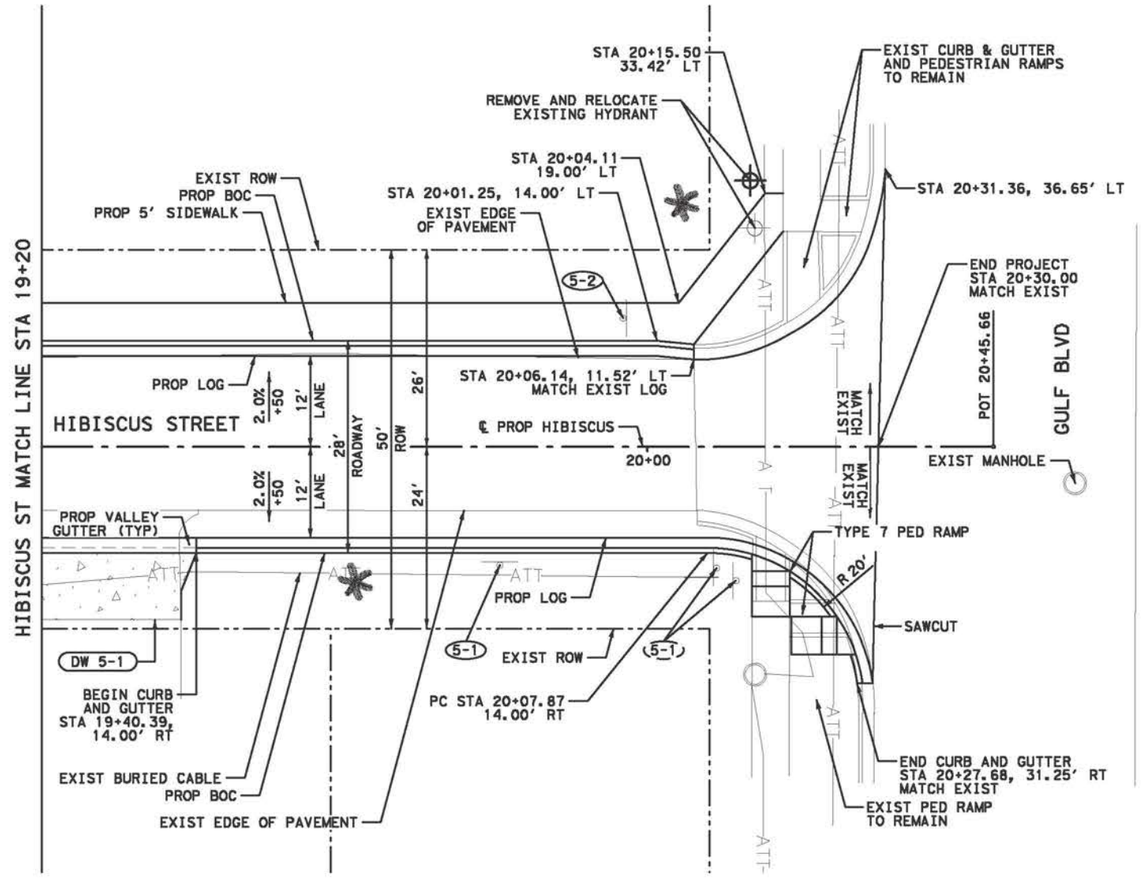


NOTES:
1. SEE DRIVEWAY DETAIL SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN ARE AT BACK OF CURB UNLESS NOTED OTHERWISE.

LEGEND

(X-X) REMOVE EXIST SIGN

(X-X) RELOCATE EXIST SIGN

X-X EXIST SIGN TO REMAIN

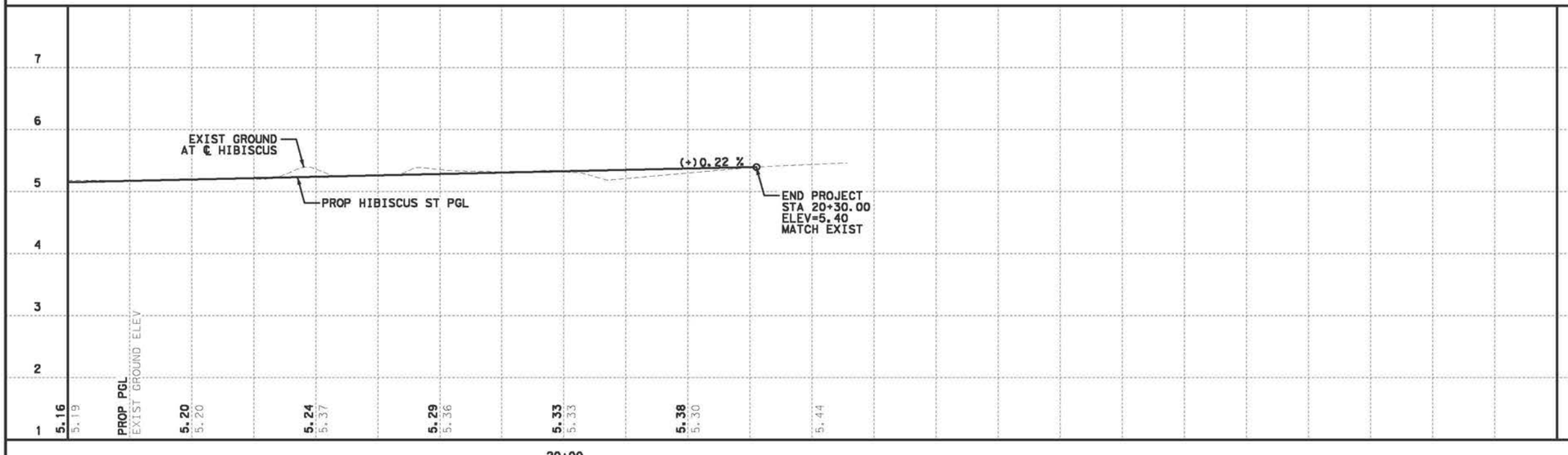
0 10 20

SCALE: 1"=20'

5-1

5-2

5-1



STATE OF TEXAS
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HIBISCUS STREET IMPROVEMENT
FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE
STA 19+20 TO END PROJECT

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	63

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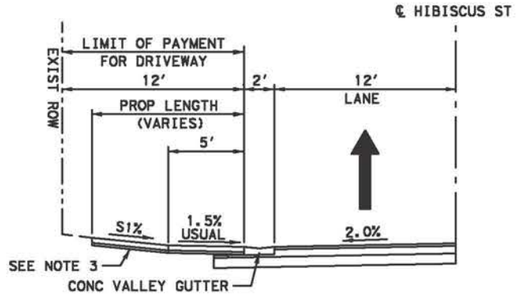
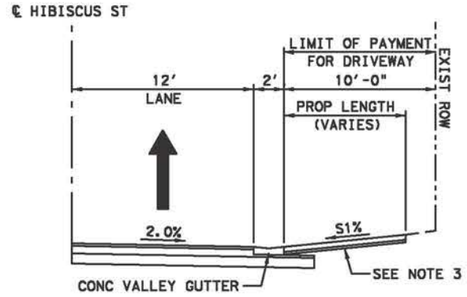
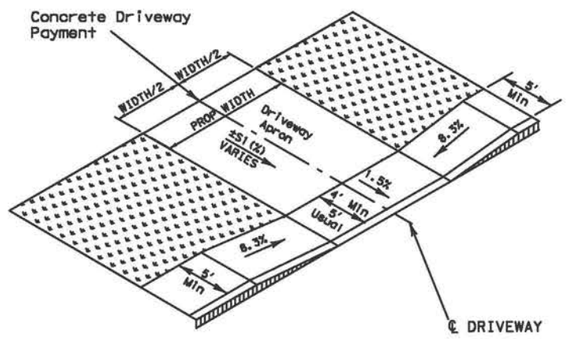


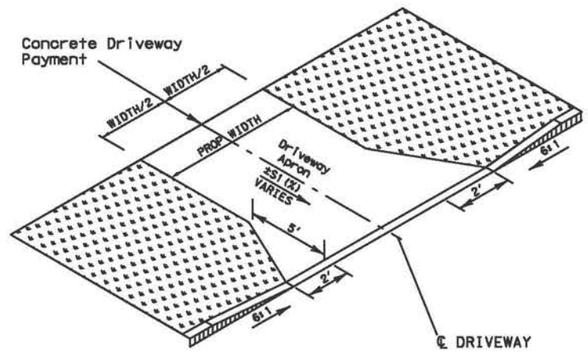
HIBISCUS ST PROPOSED TYPICAL RESIDENTIAL DRIVEWAY SECTIONS WITH SIDEWALK



HIBISCUS ST PROPOSED TYPICAL RESIDENTIAL DRIVEWAY SECTIONS WITHOUT SIDEWALK

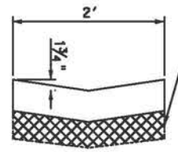


DRIVEWAY DETAIL WITH SIDEWALK



DRIVEWAY DETAIL WITHOUT SIDEWALK

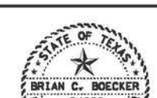
PLAN AND PROFILE	DRIVEWAY NUMBER	℄ DRIVEWAY STATION	LEFT OR RIGHT	PROP WIDTH (FT)	PROP LENGTH (FT)	DRIVEWAY SLOPE (S1) (%)	EXIST SURF TYPE	DRIVEWAYS (CONC) (SY)
HIBISCUS ST								
1 OF 5	1-1	10+82.34	LT	24.1	12.0	11.6	ASPH	32
1/2 OF 5	1-2/2-1	11+30.80	RT	139.6	10.0	8.8	ASPH	156
1 OF 5	1-3	11+57.25	LT	79.4	10.8	6.2	ASPH	96
2 OF 5	2-2	12+28.22	LT	22.9	10.3	10.9	ASPH	27
2 OF 5	2-3	12+82.30	LT	40.5	11.9	1.8	ASPH	54
2 OF 5	2-4	13+34.05	LT	37.8	11.5	9.1	CONC	49
2 OF 5	2-5	13+82.72	RT	24.4	10.0	8.4	DIRT	29
2/3 OF 5	2-6/3-1	14+31.96	LT	18.1	12.0	6.4	CONC	25
2/3 OF 5	2-7/3-2	14+33.24	RT	36.6	8.3	8.6	ASPH	35
3 OF 5	3-3	14+70.92	RT	12.1	10.0	10.4	CONC	15
3 OF 5	3-4	14+78.59	LT	20.4	12.0	2.1	CONC	28
3 OF 5	3-5	14+94.75	RT	12.1	9.0	10.3	CONC	14
3 OF 5	3-6	15+20.45	RT	17.8	10.0	14.0	CONC	21
3 OF 5	3-7	15+46.51	RT	17.8	10.0	13.3	CONC	21
3 OF 5	3-8	15+69.48	RT	17.8	10.0	11.9	CONC	21
3 OF 5	3-9	15+89.85	LT	24.3	12.0	12.5	CONC	33
3 OF 5	3-10	15+95.41	RT	17.9	10.0	12.2	CONC	21
3 OF 5	3-11	16+31.58	LT	29.0	12.0	6.8	BRICK	39
3/4 OF 5	3-12/4-1	16+83.21	LT	38.3	11.4	11.6	CONC	49
3/4 OF 5	3-13/4-2	16+83.83	RT	35.0	10.0	8.8	ASPH	40
4 OF 5	4-3	17+29.49	LT	29.9	12.0	9.9	CONC	40
4 OF 5	4-4	17+32.50	RT	30.7	10.0	10.1	CONC	36
4 OF 5	4-5	17+81.36	LT	35.8	12.0	6.0	ASPH	48
4 OF 5	4-6	17+81.68	RT	23.8	10.0	5.7	ASPH	28
4 OF 5	4-7	18+22.59	RT	16.6	8.9	10.2	CONC	18
4 OF 5	4-8	18+23.62	LT	18.8	11.3	10.1	CONC	24
4 OF 5	4-9	18+45.65	RT	16.3	9.0	8.9	CONC	18
4 OF 5	4-10	18+45.80	LT	18.9	11.6	8.6	CONC	25
4 OF 5	4-11	18+68.21	LT	18.7	11.9	8.2	CONC	25
4 OF 5	4-12	18+72.47	RT	17.0	9.2	6.7	CONC	19
4 OF 5	4-13	18+90.54	LT	19.0	12.0	7.5	CONC	26
4 OF 5	4-14	18+96.03	RT	17.8	9.3	8.0	CONC	20
4/5 OF 5	4-15/5-1	19+26.20	RT	24.4	8.9	9.0	CONC	26



VALLEY GUTTER DETAIL
NTS

NOTES:

1. DRIVEWAYS SHOULD EXTEND TO THE LIMITS SHOWN IN THE PLANS UNLESS DIRECTED BY THE ENGINEER TO TIE INTO EXIST DRIVEWAY JOINTS WITHIN EXIST ROW.
2. PLACE A 1/2" ASPHALT BOARD EXPANSION JOINT WITH DOWELS ALONG THE ROW OR END OF DRIVEWAY RECONSTRUCTION AND DOWN THE CENTER OF DRIVEWAY. FOR DRIVEWAYS WIDER THAN 40′, PLACE 1/2" ASPHALT BOARD EXPANSION JOINTS WITH DOWELS AT MAX SPACING OF 20′.
3. CONCRETE DRIVEWAYS SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS FOR RESIDENTIAL AND COMMERICIAL .
4. ALL DRIVEWAY SLOPES ARE AT THE CENTER OF THE DRIVEWAY AND ARE APPROXIMATE. CONTRACTOR TO TIE IN ALL PROPOSED DRIVEWAYS TO EXISTING CONSTRUCTION JOINTS.



4-26-2016

Kimley»Horn F-928

South Padre ISLAND

HIBISCUS STREET IMPROVEMENT
FULL RECONSTRUCTION

DRIVEWAY SUMMARY

SCALE	PROJECT NO.	SHEET NO.
		64

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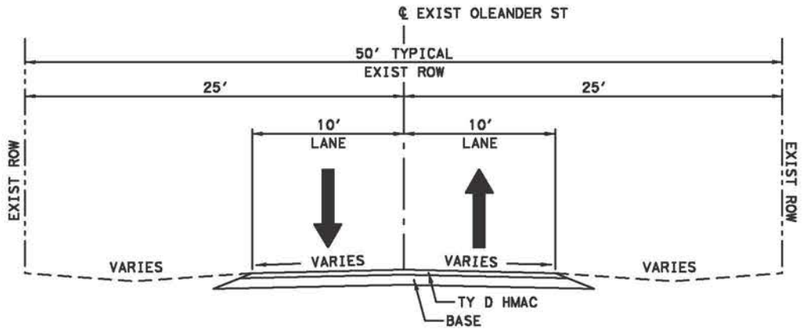
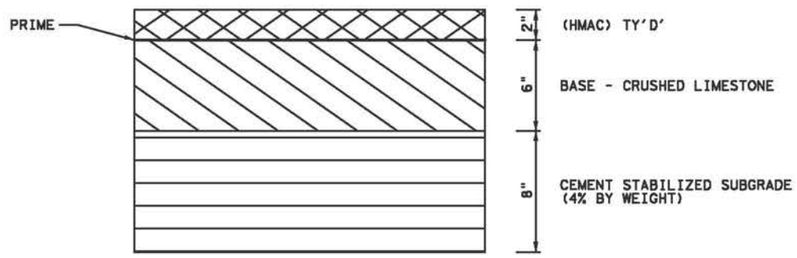


OLEANDER ST EXIST TYPICAL SECTION

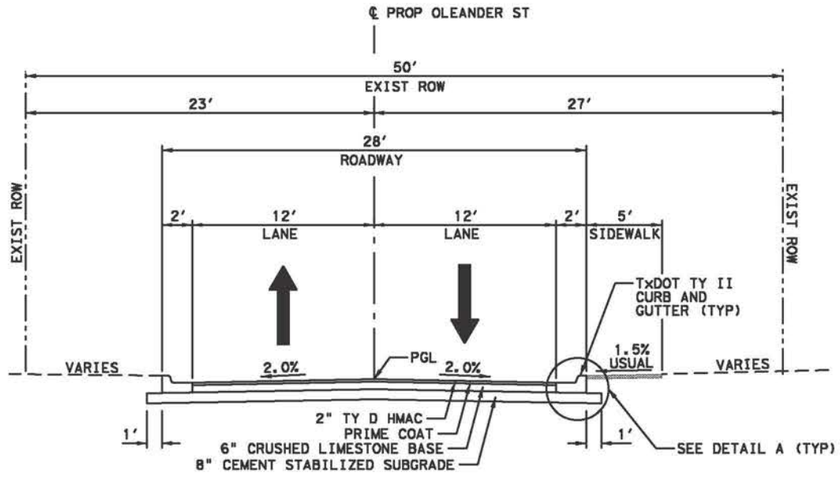
STA 10+43.33 TO 20+02.31



ASPHALT PAVEMENT RECONSTRUCTION SECTION

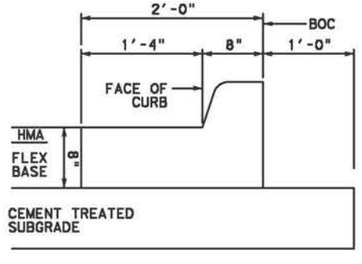
NTS

(FOR USE AT OLEANDER ST)



OLEANDER ST PROP TYPICAL SECTION

STA 10+43.33 TO 20+02.31



DETAIL A

TY II CURB & GUTTER

NTS

(SHOWN ON NEW PAVING)

STATE OF TEXAS
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OLEANDER STREET IMPROVEMENT
FULL RECONSTRUCTION

TYPICAL SECTIONS AND
PAVEMENT SECTIONS

SCALE	PROJECT NO.	SHEET NO.
1" = 20'		65

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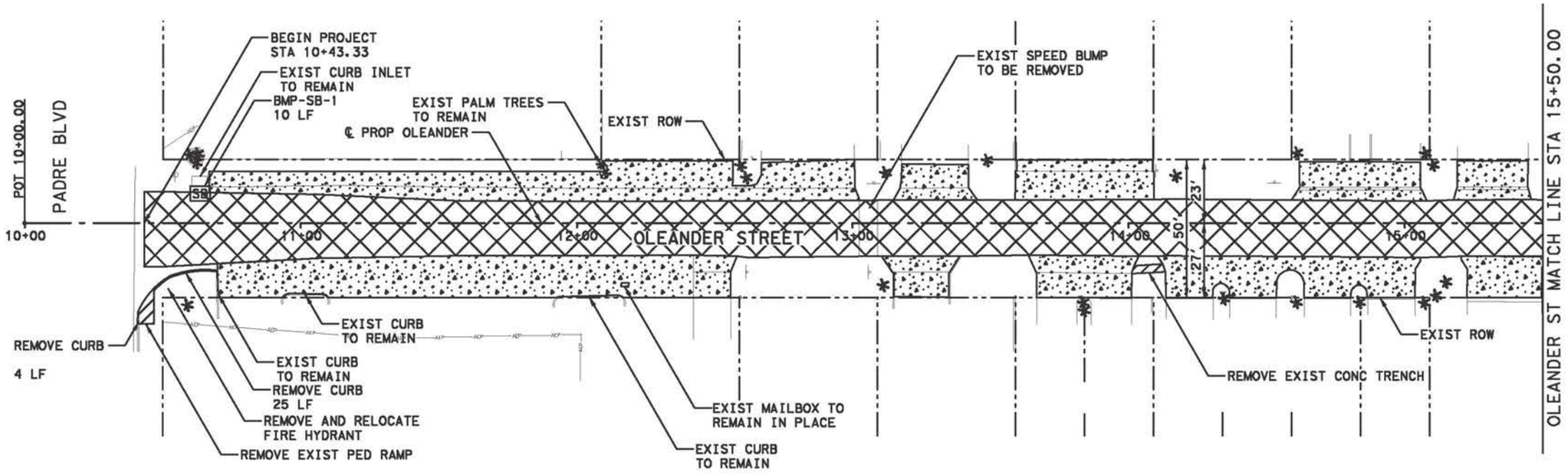

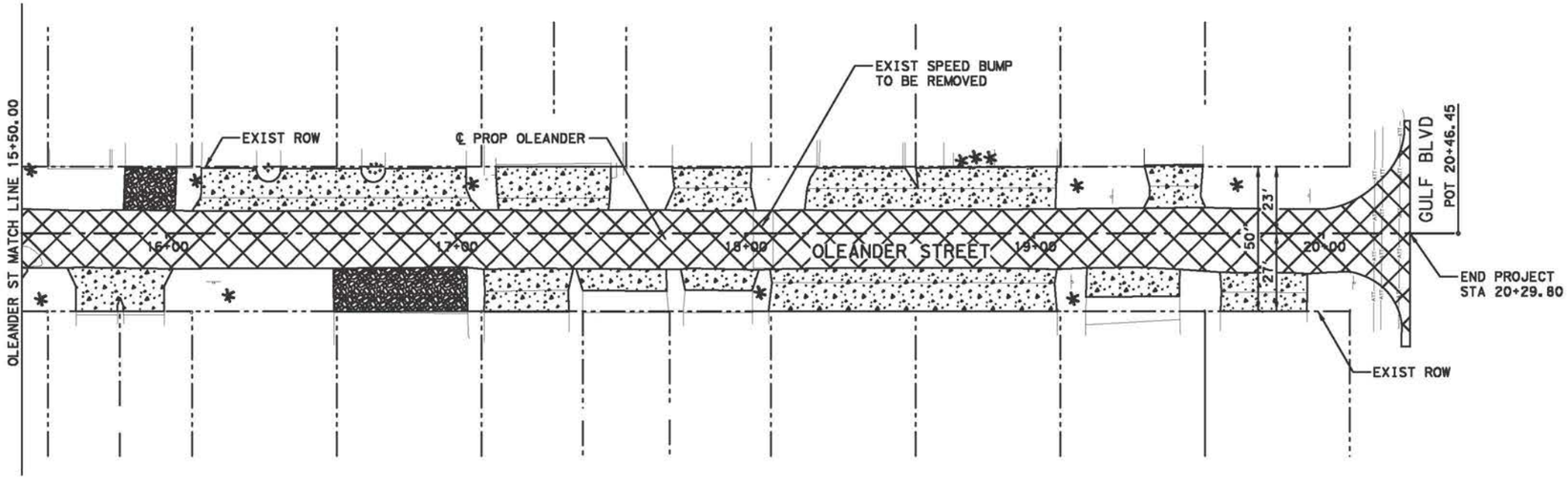

REMOVE ASPHALT PAVEMENT

REMOVE ASPHALT DRIVEWAY

REMOVE CONCRETE DRIVEWAY

REMOVE PEDESTRIAN RAMP

SCF PROP SEDIMENT CONTROL FENCE

SB PROP SANDBAGS

0 25 50
SCALE: 1"=50'

NOTES:

1. CONTRACTOR WILL BE REQUIRED TO PROTECT PALM TREES SHOWN TO REMAIN.
2. APPLY SEEDING TO DISTURBED AREAS WITHIN ROW. SEEDING SHALL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
3. CONTRACTOR TO PROVIDE 15 LF OF SANDBAGS AT PADRE BLVD INLET JUST NORTH OF LANTANA.
4. EROSION CONTROL DEVICES SHOWN WILL BE CONSIDERED SUBSIDIARY TO PERTINENT ITEMS.
5. BURIED UTILITIES EXIST WITHIN CORRIDOR. CONTRACTOR TO LOCATE UTILITIES PRIOR TO CONSTRUCTION.

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OLEANDER STREET IMPROVEMENT FULL RECONSTRUCTION

EROSION CONTROL PLAN AND REMOVAL LAYOUT

SCALE	PROJECT NO.	SHEET NO.
1" = 50'		66

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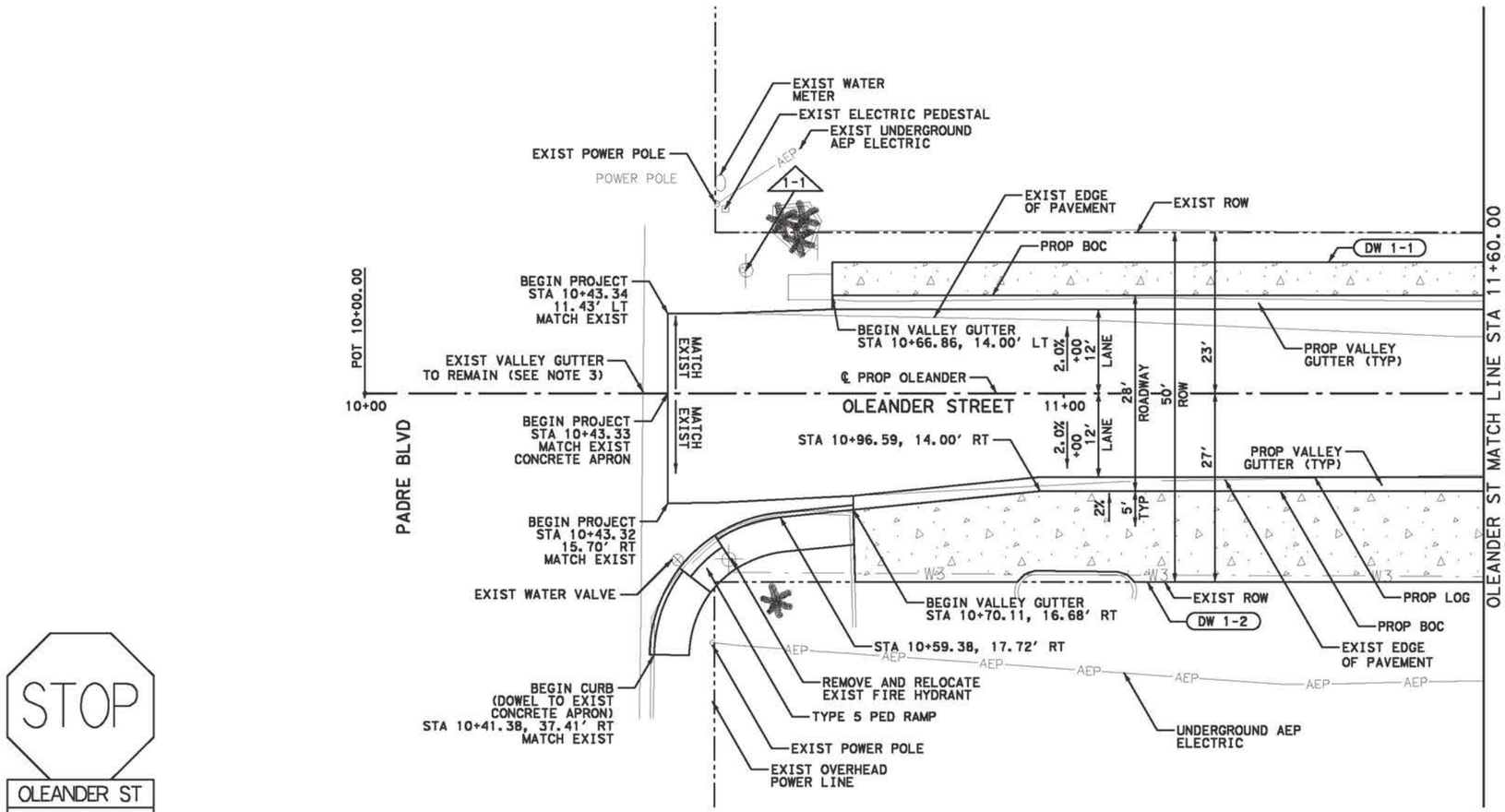

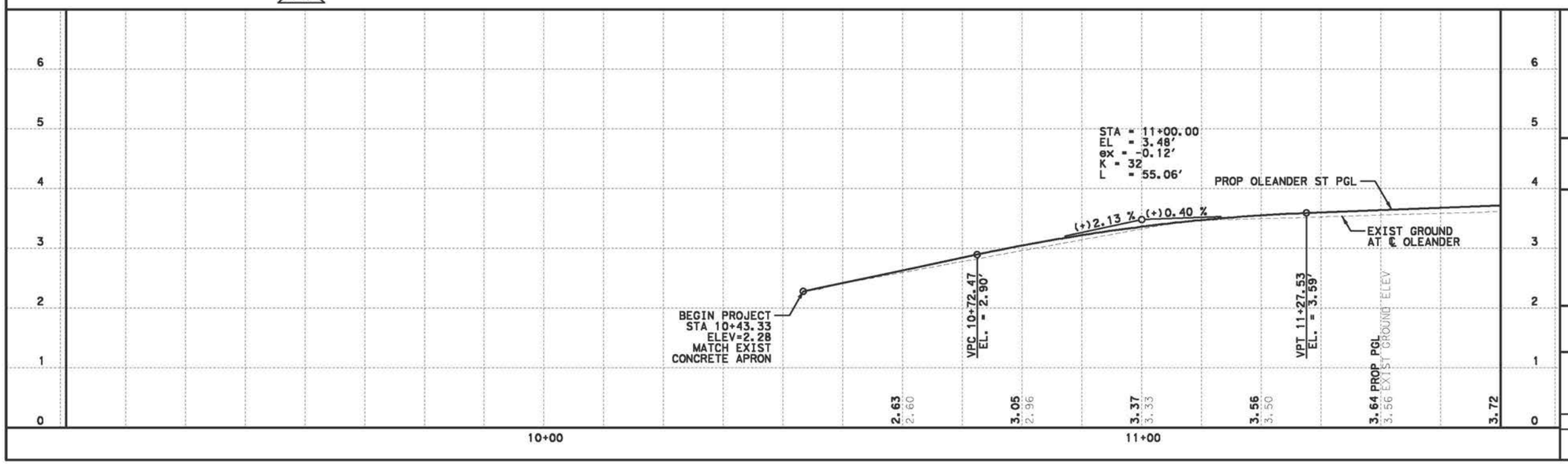

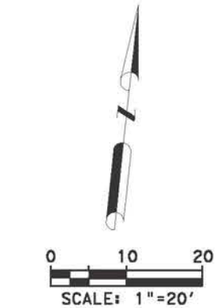

LEGEND

- (X-X) REMOVE EXIST SIGN
- (X-X) RELOCATE EXIST SIGN
- X-X EXIST SIGN TO REMAIN

NOTES:

1. SEE DRIVEWAY DETAILS SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT BACK OF CURB UNLESS OTHERWISE NOTED.
3. CONTRACTOR RESPONSIBLE FOR ANY DAMAGES TO EXIST CONCRETE APRON TO REMAIN. GRADE ASPHALT AT INTERSECTION TO MATCH GRADES OF CONCRETE APRON.

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OLEANDER STREET IMPROVEMENT FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE BEGIN PROJECT TO STA 11+60

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	67

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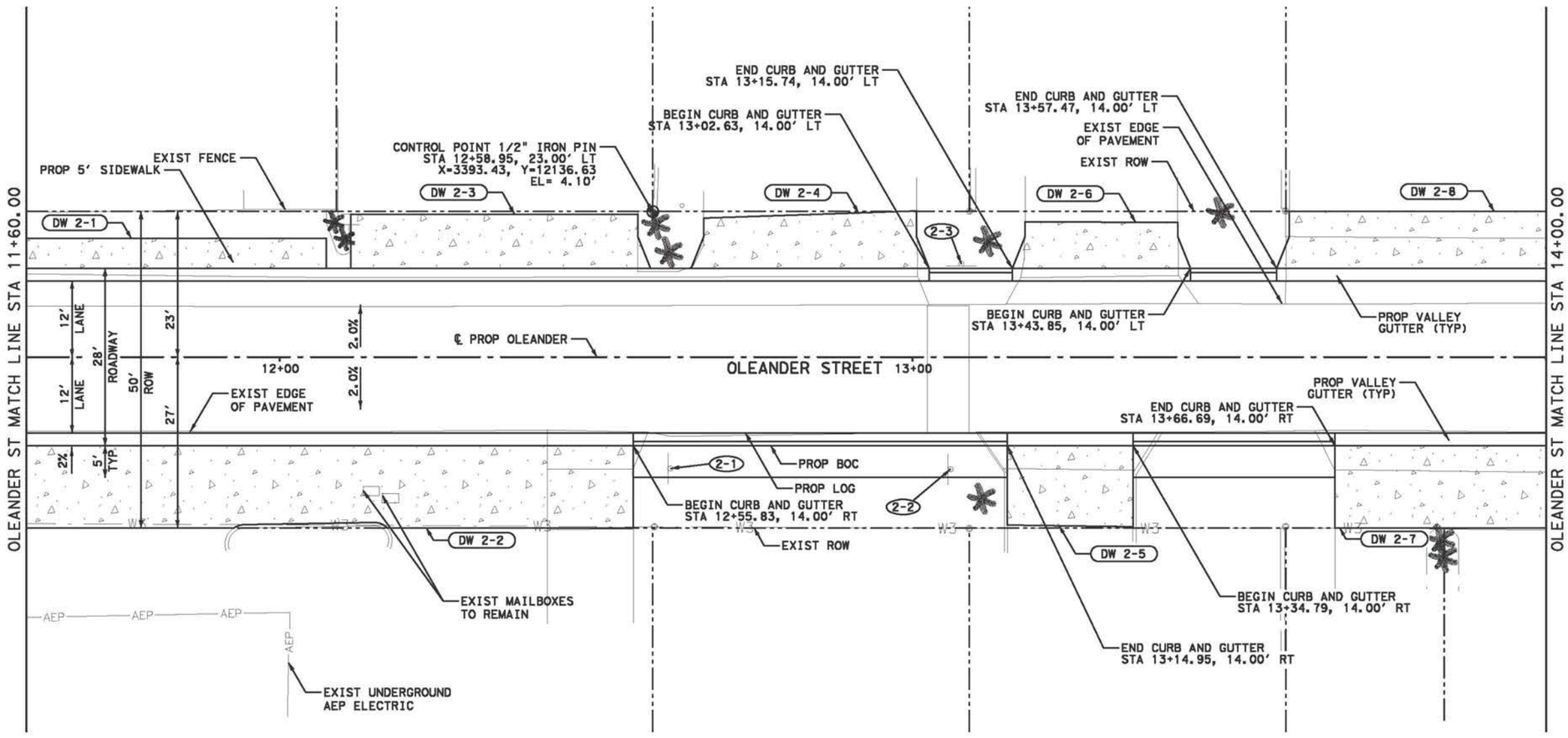
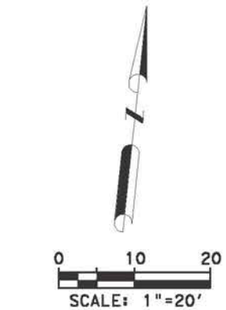


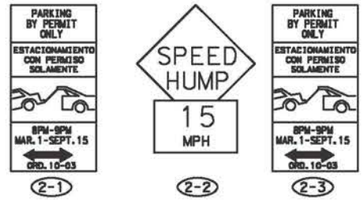


LEGEND

(X-X) REMOVE EXIST SIGN

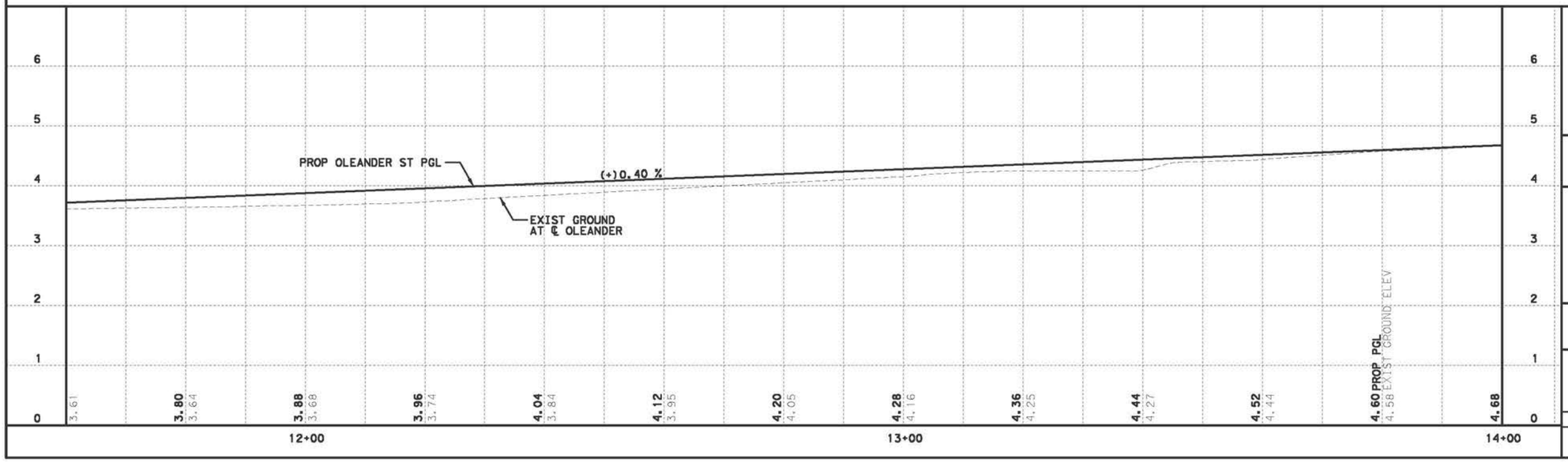
(X-X) RELOCATE EXIST SIGN

X-X EXIST SIGN TO REMAIN



NOTES:

1. SEE DRIVEWAY DETAILS SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT BACK OF CURB UNLESS OTHERWISE NOTED.



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OLEANDER STREET IMPROVEMENT FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE STA 11+60 TO STA 14+00

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	.	68

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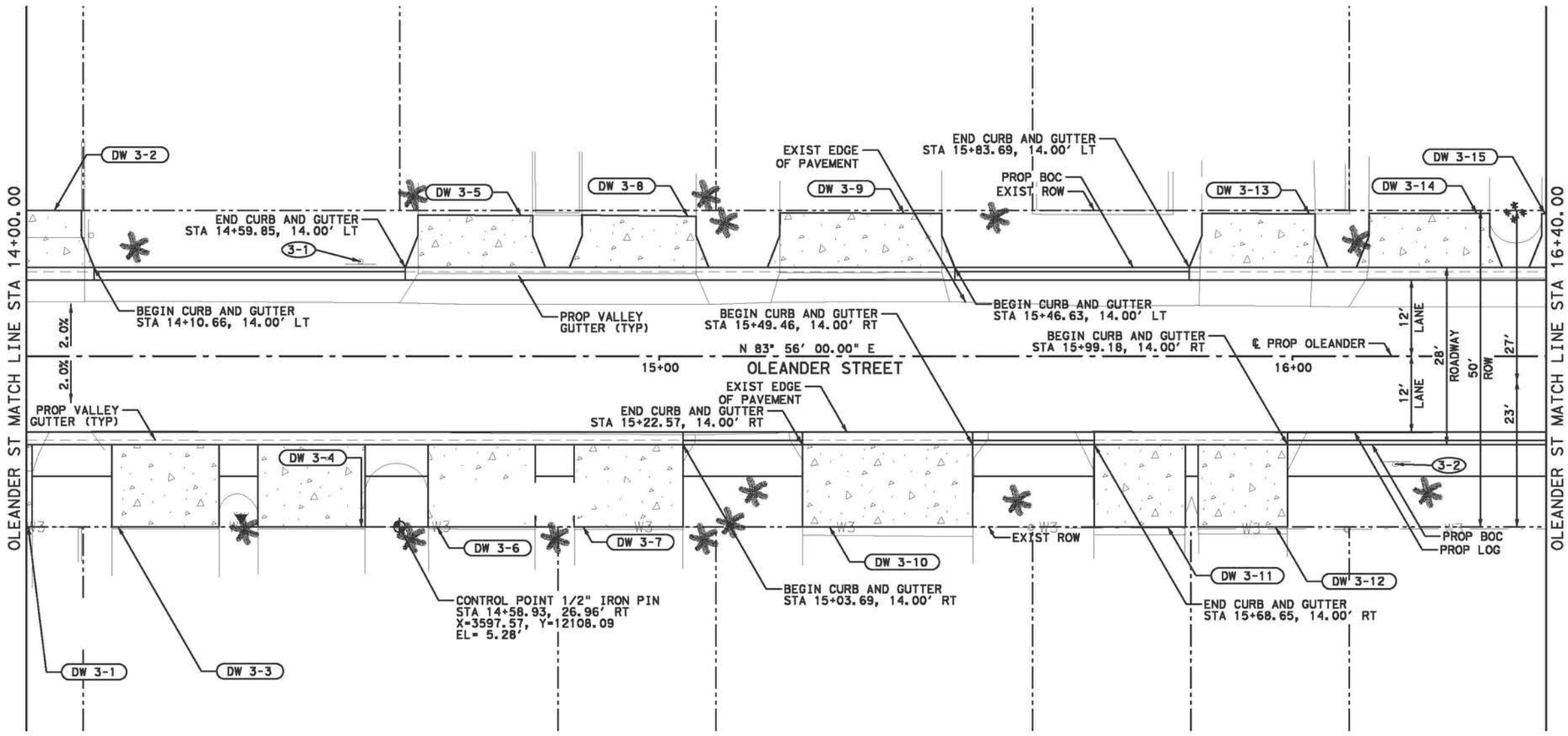
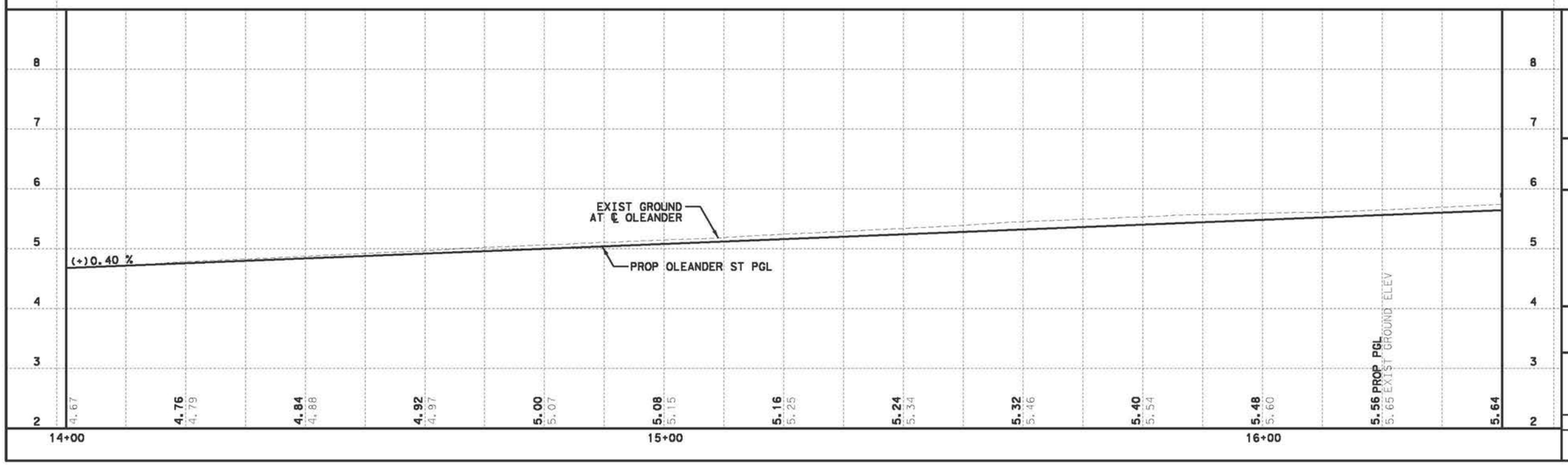


NOTES:

1. SEE DRIVEWAY DETAILS SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT BACK OF CURB UNLESS OTHERWISE NOTED.



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OLEANDER STREET IMPROVEMENT FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE STA 14+00 TO STA 16+40

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	69

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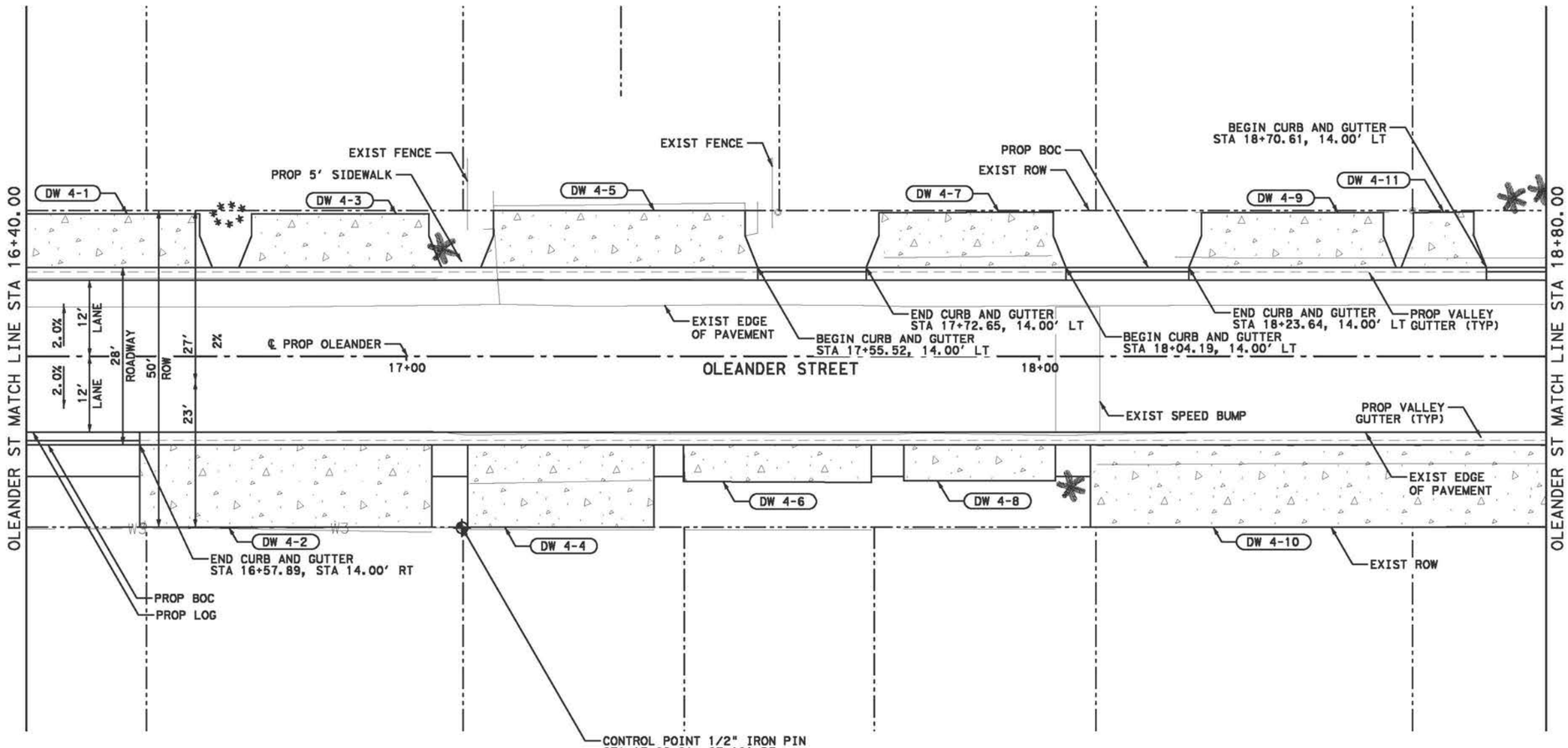
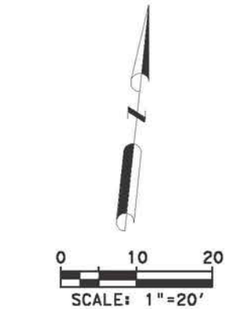


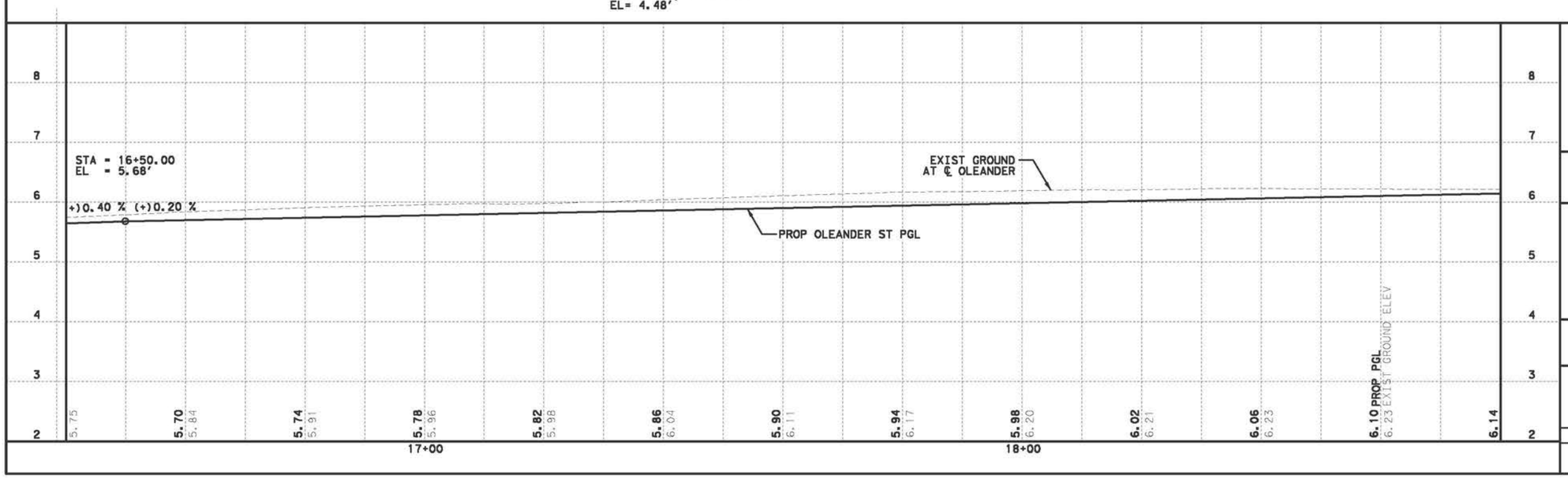


LEGEND

- (X-X) REMOVE EXIST SIGN
- (X-X) RELOCATE EXIST SIGN
- X-X EXIST SIGN TO REMAIN

NOTES:

1. SEE DRIVEWAY DETAILS SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT BACK OF CURB UNLESS OTHERWISE NOTED.



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OLEANDER STREET IMPROVEMENT FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE STA 16+40 TO STA 18+80

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	·	70

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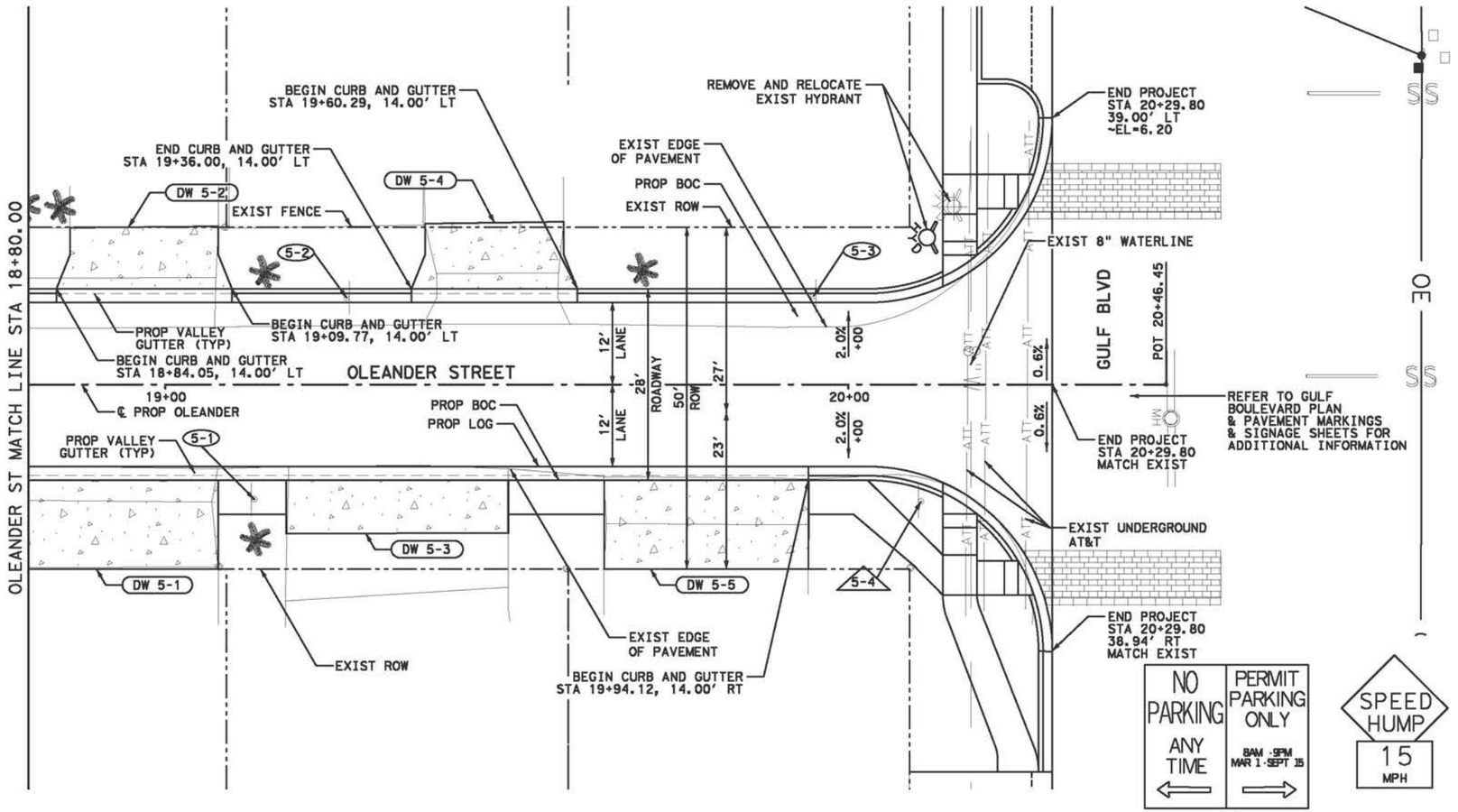
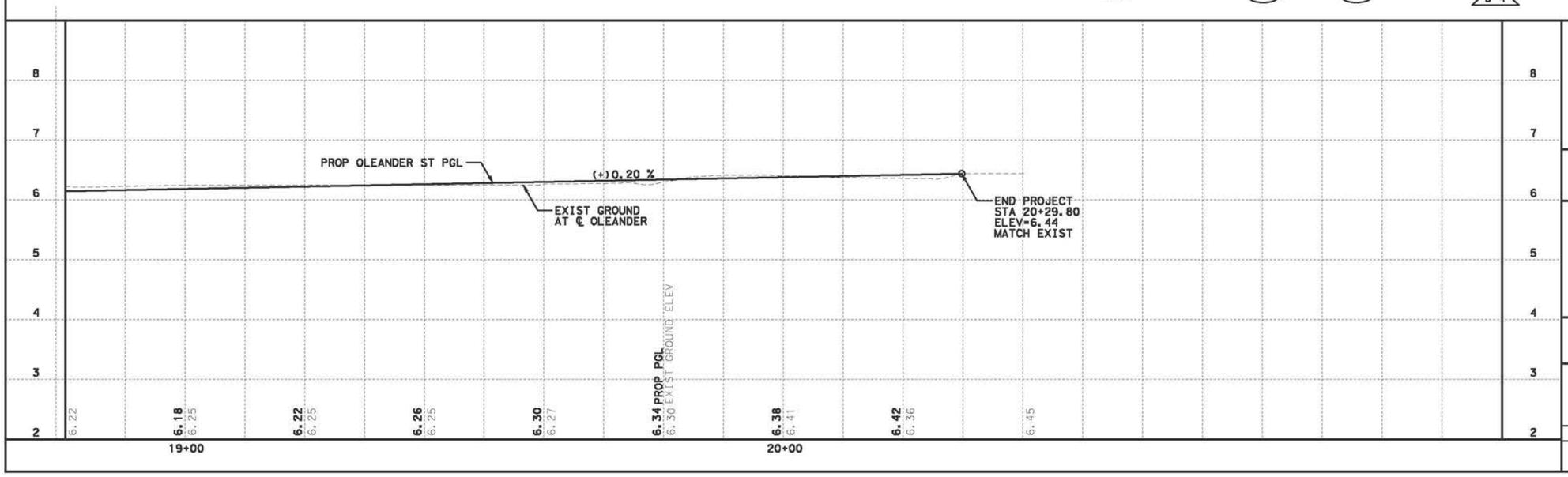


NOTES:

1. SEE DRIVEWAY DETAILS SHEET FOR ADDITIONAL INFORMATION.
2. DIMENSIONS, STATIONS, AND OFFSETS GIVEN AT BACK OF CURB UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO REFER TO GULF BOULEVARD SHEETS FOR ADDITIONAL INFORMATION.



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OLEANDER STREET IMPROVEMENT
FULL RECONSTRUCTION

ROADWAY PLAN AND PROFILE
STA 18+80 TO END

SCALE	PROJECT NO.	SHEET NO.
1" = 20'	-	71

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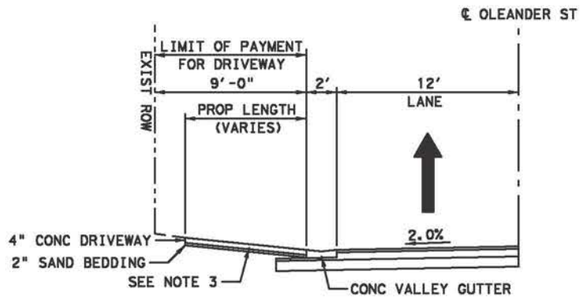
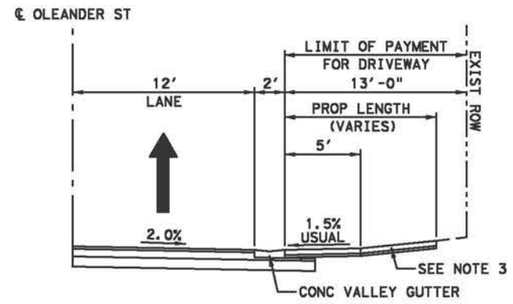
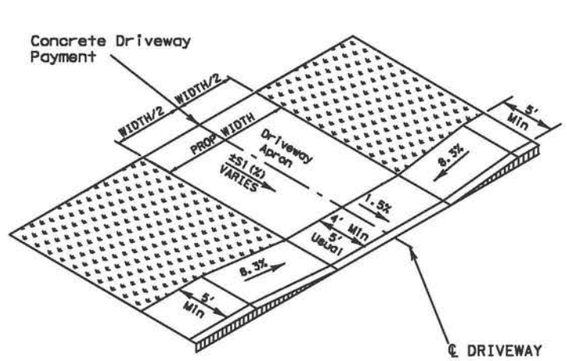


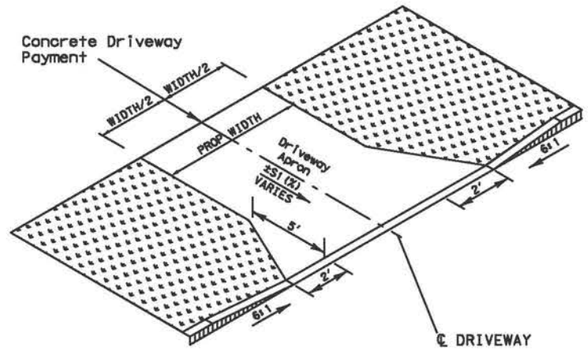
OLEANDER ST PROPOSED TYPICAL
RESIDENTIAL DRIVEWAY SECTIONS
WITHOUT SIDEWALK



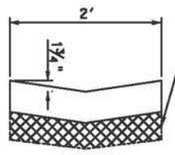
OLEANDER ST PROPOSED TYPICAL
RESIDENTIAL DRIVEWAY SECTIONS
WITH SIDEWALK



DRIVEWAY DETAIL
WITH SIDEWALK



DRIVEWAY DETAIL
WITHOUT SIDEWALK



PLACE VALLEY GUTTER ON EXISTING BASE MATERIAL. IF FINAL SURFACE OF BASE MATERIAL IS DISTURBED, CONTRACTOR TO CORRECT SURFACE IN ACCORDANCE WITH SPECIFICATIONS FOR NEW BASE. CONSIDER ANY CORRECTIONS SUBSIDIARY TO PAY ITEM FOR 2' CONCRETE VALLEY GUTTER

EXPANSION JOINTS @ 20' MAX
TRANSVERSE JOINT @ 10' MAX
STEEL #3 @ 12" C-C
3000 PSI CONCRETE

VALLEY GUTTER DETAIL
NTS

PLAN AND PROFILE	DRIVEWAY NUMBER	℄ DRIVEWAY STATION	LEFT OR RIGHT	PROP WIDTH (FT)	PROP LENGTH (FT)	DRIVEWAY SLOPE (S1) (%)	EXIST SURF TYPE	DRIVEWAYS (CONC) (SY)
OLEANDER STREET								
1/2 OF 5	1-1/2-1	11+37.11	LT	140.5	4.8	14.2	CONC	75
1/2 OF 5	1-2/2-2	11+62.97	RT	185.7	13.0	14.0	CONC	261
2 OF 5	2-3	12+33.90	LT	45.4	8.6	3.8	CONC	44
2 OF 5	2-4	12+83.80	LT	33.7	8.5	2.1	CONC	33
2 OF 5	2-5	13+24.87	RT	19.8	12.7	9.8	CONC	28
2 OF 5	2-6	13+29.79	LT	24.1	7.3	6.4	CONC	21
2/3 OF 5	2-7/3-1	13+83.79	RT	34.2	13.0	14.1	CONC	50
2/3 OF 5	2-8/3-2	13+84.06	LT	49.2	9.0	6.4	CONC	50
3 OF 5	3-3	14+21.96	RT	16.9	13.0	6.2	CONC	25
3 OF 5	3-4	14+45.04	RT	16.9	13.0	6.9	CONC	25
3 OF 5	3-5	14+70.92	LT	18.1	8.3	5.7	CONC	18
3 OF 5	3-6	14+71.89	RT	16.9	13.0	6.4	CONC	25
3 OF 5	3-7	14+95.09	RT	17.2	13.0	5.6	CONC	25
3 OF 5	3-8	14+96.74	LT	18.0	8.2	4.8	CONC	18
3 OF 5	3-9	15+31.83	LT	25.6	8.6	11.4	CONC	26
3 OF 5	3-10	15+36.01	RT	26.9	13.0	12.7	CONC	39
3 OF 5	3-11	15+75.85	RT	14.4	13.0	10.3	CONC	21
3 OF 5	3-12	15+92.12	RT	14.1	13.0	10.4	CONC	21
3 OF 5	3-13	15+94.63	LT	17.9	8.5	5.0	ASPH	19
3 OF 5	3-14	16+21.59	LT	19.1	8.5	11.0	CONC	20
3/4 OF 5	3-15/4-1	16+53.36	LT	28.0	8.5	10.6	CONC	28
4 OF 5	4-2	16+80.95	RT	46.1	13.0	7.9	ASPH	67
4 OF 5	4-3	16+89.60	LT	28.0	8.5	10.7	CONC	28
4 OF 5	4-4	17+24.41	RT	29.4	13.0	12.7	CONC	43
4 OF 5	4-5	17+33.66	LT	39.7	9.0	10.7	CONC	41
4 OF 5	4-6	17+58.62	RT	29.7	5.9	15.0	CONC	20
4 OF 5	4-7	17+88.41	LT	27.5	8.7	7.0	CONC	28
4 OF 5	4-8	17+90.55	RT	23.9	5.7	10.6	CONC	16
4 OF 5	4-9	18+40.00	LT	28.7	8.7	4.6	CONC	29
4/5 OF 5	4-10/5-1	18+57.92	RT	99.7	13.0	12.8	CONC	144
4 OF 5	4-11	18+63.86	LT	9.5	8.7	4.4	CONC	11
5 OF 5	5-2	18+96.91	LT	21.7	9.0	3.6	CONC	23
5 OF 5	5-3	19+33.95	RT	32.5	7.8	6.5	CONC	29
5 OF 5	5-4	19+48.15	LT	20.3	9.8	2.3	CONC	23
5 OF 5	5-5	19+79.17	RT	30.0	13.0	9.4	CONC	44

NOTES:

1. DRIVEWAYS SHOULD EXTEND TO THE LIMITS SHOWN IN THE PLANS UNLESS DIRECTED BY THE ENGINEER TO TIE INTO EXIST DRIVEWAY JOINTS WITHIN EXIST ROW.
2. PLACE A ½" ASPHALT BOARD EXPANSION JOINT WITH DOWELS ALONG THE ROW OR END OF DRIVEWAY RECONSTRUCTION AND DOWN THE CENTER OF DRIVEWAY. FOR DRIVEWAYS WIDER THAN 40', PLACE ½" ASPHALT BOARD EXPANSION JOINTS WITH DOWELS AT MAX SPACING OF 20'.
3. CONCRETE DRIVEWAYS SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS FOR RESIDENTIAL AND COMMERICIAL.
4. ALL DRIVEWAY SLOPES ARE AT THE CENTER OF THE DRIVEWAY AND ARE APPROXIMATE. CONTRACTOR TO TIE IN ALL PROPOSED DRIVEWAYS TO EXISTING CONSTRUCTION JOINTS.

4-26-2016

Kimley»Horn F-928

South Padre ISLAND

OLEANDER STREET IMPROVEMENT
FULL RECONSTRUCTION

DRIVEWAY SUMMARY

SCALE	PROJECT NO.	SHEET NO.
		72

DATE:
FILE:

BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).

2. The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.

3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.

4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.

5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.

6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.

7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.

8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.

9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.

10. As shown on BC(2), the OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER (see Sign Detail G20-10T) and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. However, the TRAFFIC FINES DOUBLE sign will not be required on projects consisting solely of mobile operation work, such as striping or milling edgeline rumble strips. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits.

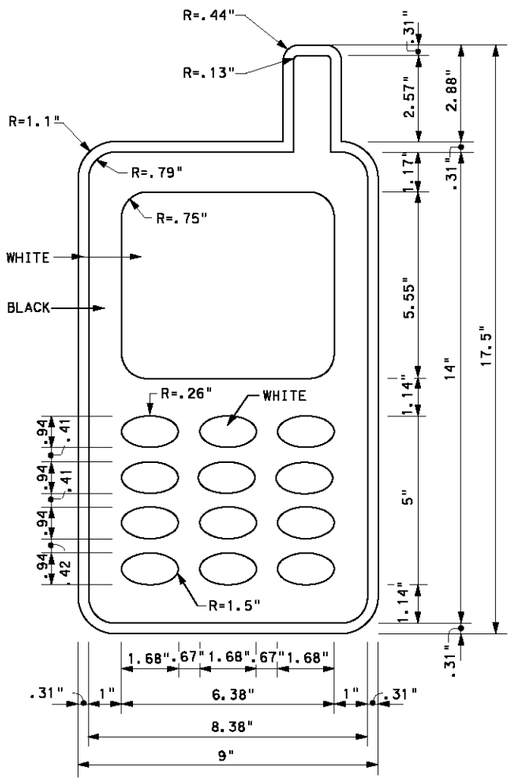
11. Except for devices required by Note 10, traffic control devices should be in place only while work is actually in progress or a definite need exists.

12. The Engineer has the final decision on the location of all traffic control devices.

13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.

WORKER SAFETY APPAREL NOTES:

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



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

SIGN DETAIL (G20-10T)

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

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

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

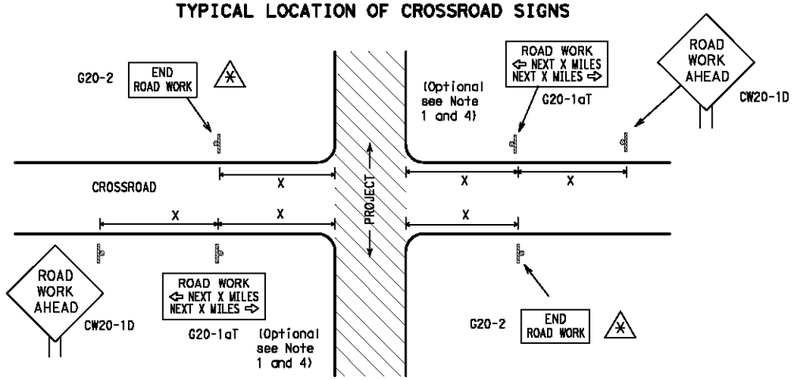
Texas Department of Transportation | Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION GENERAL NOTES AND REQUIREMENTS

BC(1)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	.	.	.	.
4-03 5-10 8-14	DIST	COUNTY		SHEET NO.
9-07 7-13	.	.		73

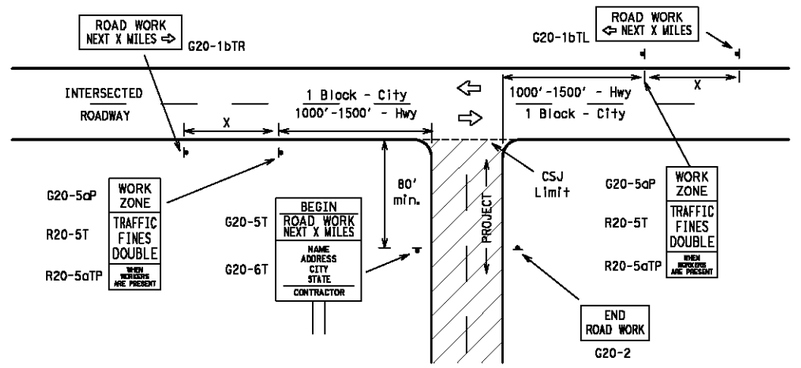
TYPICAL LOCATION OF CROSSROAD SIGNS



✱ 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]

SIZE

Sign Number or Series	Conventional Road	Expressway/ Freeway
CW20[4] CW21 CW22 CW23 CW25	48" x 48"	48" x 48"
CW1, CW2, CW7, CW8, CW9, CW11, CW14	36" x 36"	48" x 48"
CW3, CW4, CW5, CW6, CW8-3, CW10, CW12	48" x 48"	48" x 48"

SPACING

Posted Speed	Sign Spacing "X" △
MPH	Feet (Apprx.)
30	120
35	160
40	240
45	320
50	400
55	500[2]
60	600[2]
65	700[2]
70	800[2]
75	900[2]
80	1000[2]
✱	✱[3]

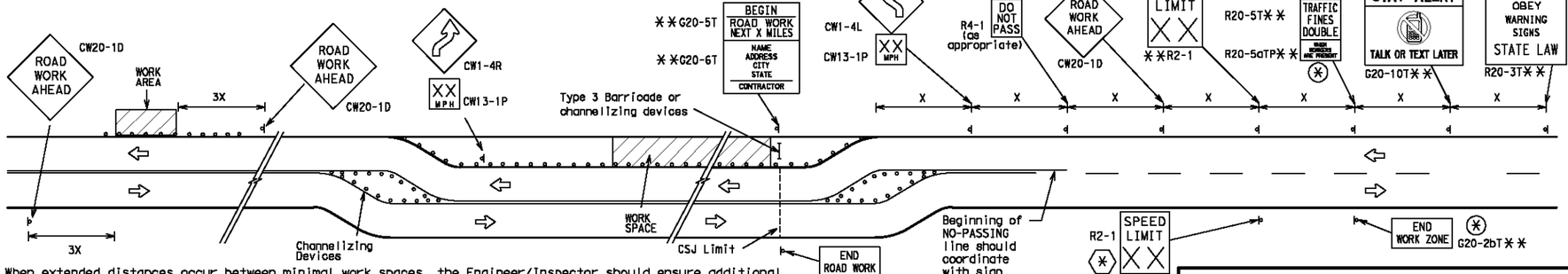
✱ For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

△ 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.

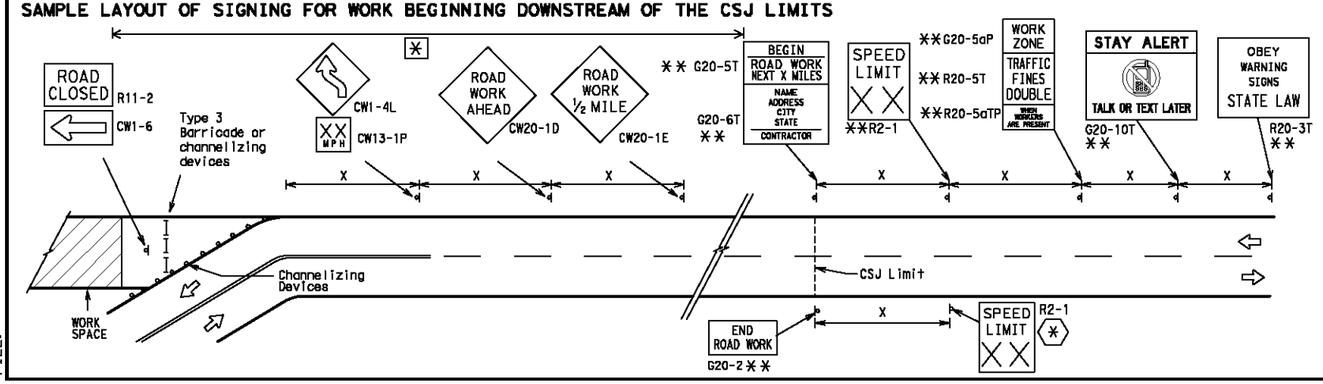
WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



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 AT THE CSJ LIMITS

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.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC(2)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT November 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS	.	.	.	.
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13	.	.		74

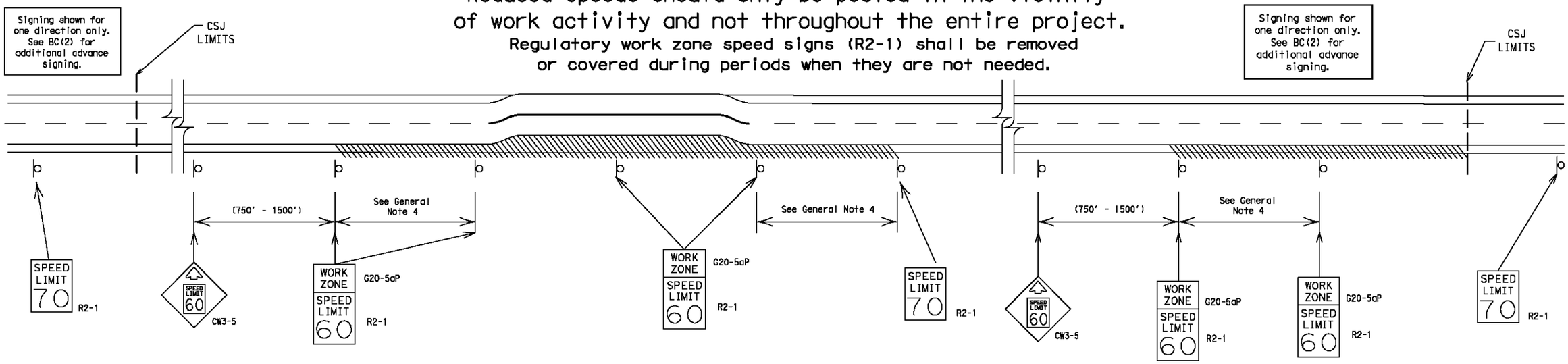
DATE:
FILE:

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:

a) rough road or damaged pavement surface
b) substantial alteration of roadway geometrics (diversions)
c) construction detours
d) grade
e) width
f) 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

1. Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
2. Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
3. Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
4. 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
5. Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
6. 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.
7. Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
8. Techniques that may help reduce traffic speeds include but are not limited to:
   A. Law enforcement.
   B. Flagger stationed next to sign.
   C. Portable changeable message sign (PCMS).
   D. Low-power (drone) radar transmitter.
   E. Speed monitor trailers or signs.
9. Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
10. 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.

Texas Department of Transportation | Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT

BC(3)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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REVISIONS	.	.	.	.
9-07 8-14	DIST	COUNTY		SHEET NO.
7-13	.	.		75

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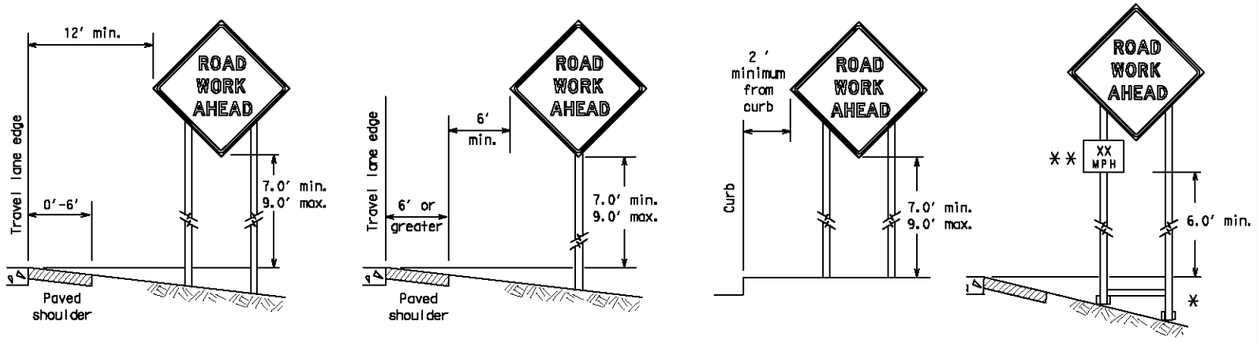
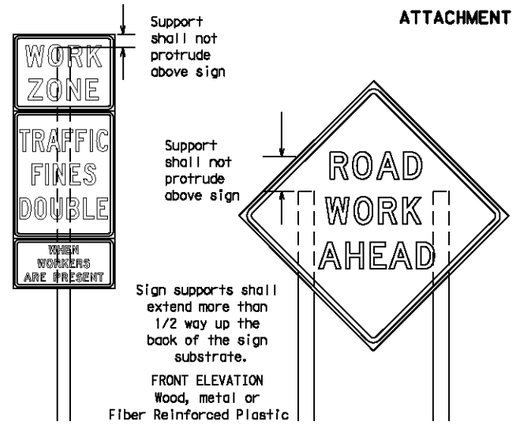
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



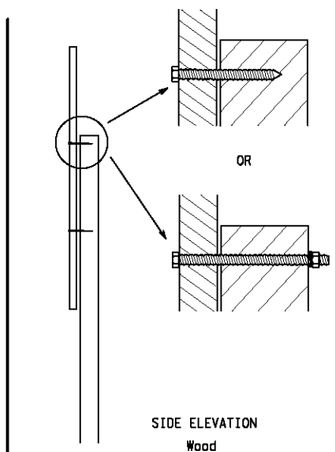
* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

** 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 spice 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.

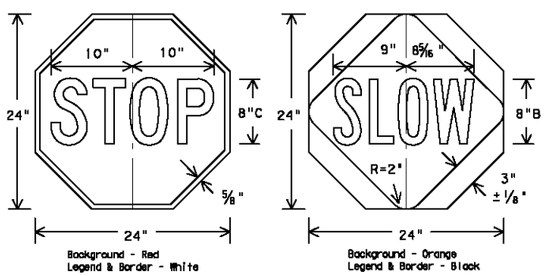


Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports

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

1. 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.
2. When used at night, the STOP/SLOW paddle shall be retroreflectorized.
3. STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
4. 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

1. 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.
2. 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.
3. When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
4. 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.
5. 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.
6. 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

1. Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
2. Wooden sign posts shall be painted white.
3. Barricades shall NOT be used as sign supports.
4. 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.
5. 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.
6. 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.
7. 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.
8. 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.
9. 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)

1. 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.
   a. Long-term stationary - work that occupies a location more than 3 days.
   b. 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.
   c. Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
   d. Short, duration - work that occupies a location up to 1 hour.
   e. Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

1. 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.
2. 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.
3. Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
4. 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.
5. 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

1. 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

1. 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.
2. "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
3. 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

1. 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).
2. White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
3. 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

1. 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

1. When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
2. 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.
3. 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.
4. 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.
5. Burlap shall NOT be used to cover signs.
6. Duct tape or other adhesive material shall NOT be affixed to a sign face.
7. Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

1. Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
2. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
3. Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
4. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
5. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
6. 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.
7. 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.
8. Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

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

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BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES

BC(4)-14

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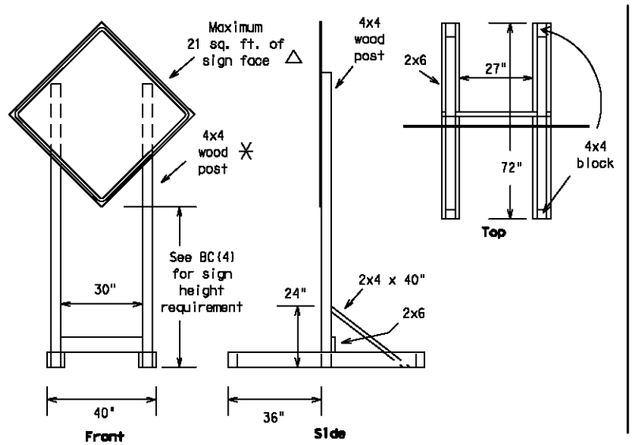
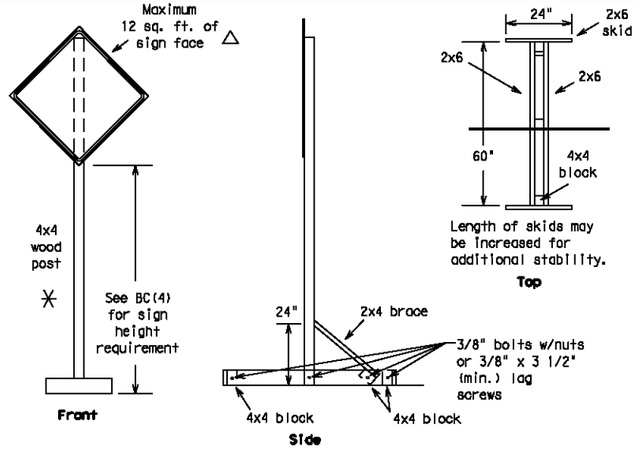
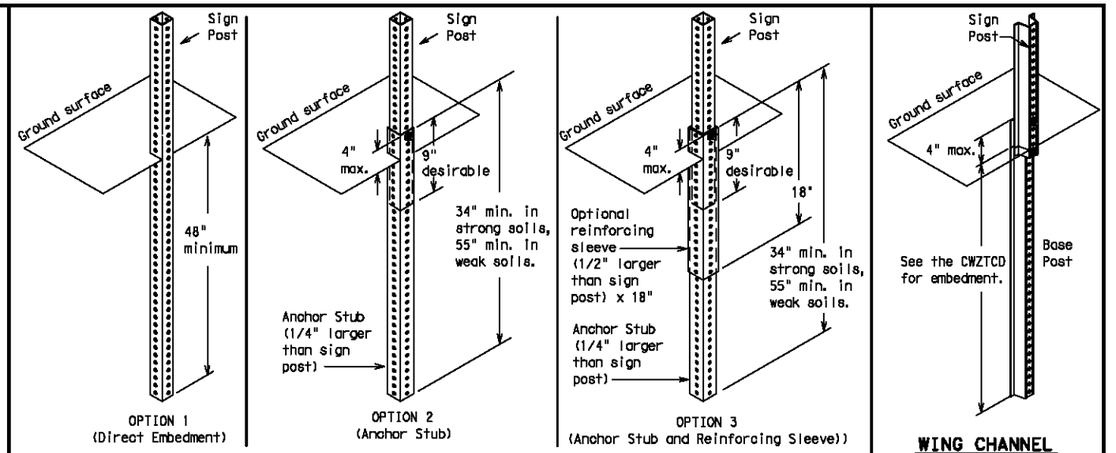




SKID MOUNTED WOOD SIGN SUPPORTS

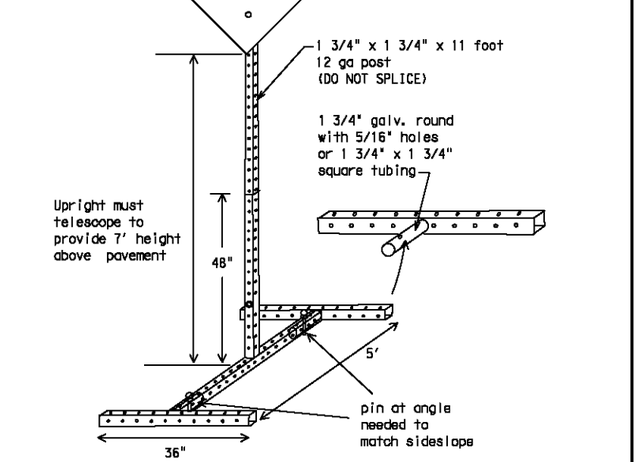
LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS □

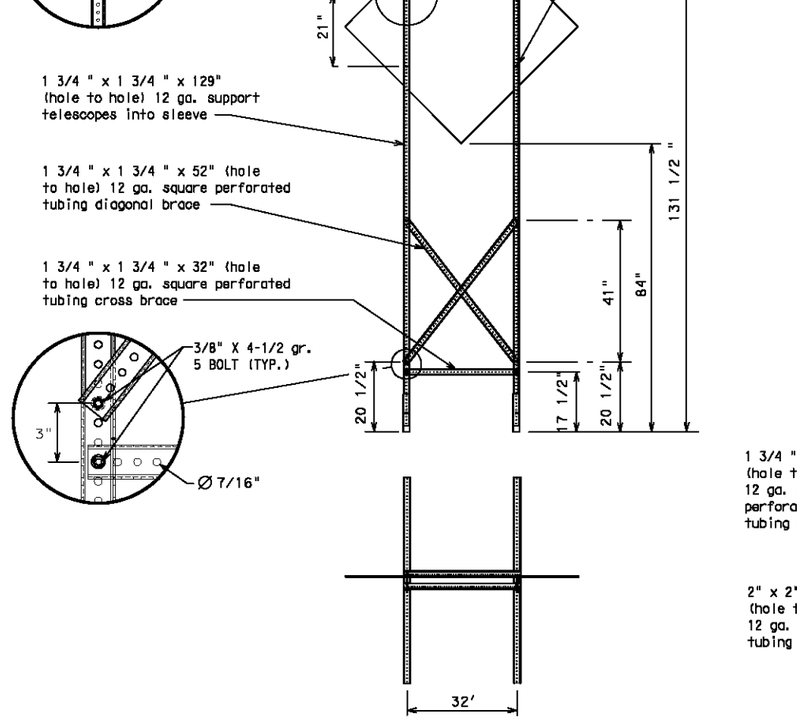


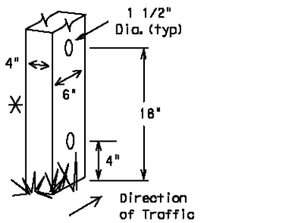
PERFORATED SQUARE METAL TUBING

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.

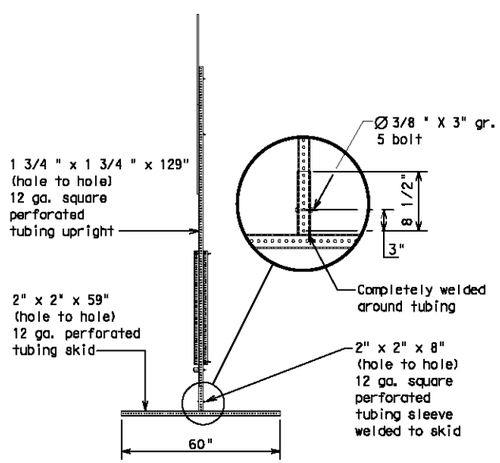






Nominal Post Size	Number of Posts	Maximum Sq. feet of Sign Face	Minimum Soil Embedment	Drilled Hole(s) Required
4 x 4	1	12	36"	NO
4 x 4	2	21	36"	NO
4 x 6	1	21	36"	YES
4 x 6	2	36	36"	YES

WOOD POST SYSTEM FOR GROUND MOUNTED 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

1. 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.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. 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."

✳ Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.

△ See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

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Texas Department of Transportation | Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5)-14

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SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

DATE:
FILE:

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

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

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

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

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

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY CLOSED X MILE	FRONTAGE ROAD CLOSED
ROAD CLOSED AT SH XXX	SHOULDER CLOSED XXX FT
ROAD CLSD AT FM XXXX	RIGHT LN CLOSED XXX FT
RIGHT X LANES CLOSED	RIGHT X LANES OPEN
CENTER LANE CLOSED	DAYTIME LANE CLOSURES
NIGHT LANE CLOSURES	I-XX SOUTH EXIT CLOSED
VARIOUS LANES CLOSED	EXIT XXX CLOSED X MILE
EXIT CLOSED	RIGHT LN TO BE CLOSED
MALL DRIVEWAY CLOSED	X LANES CLOSED TUE - FRI
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		Location List	Warning List	** Advance Notice List
MERGE RIGHT	FORM X LINES RIGHT	AT FM XXXX	SPEED LIMIT XX MPH	TUE-FRI XX AM- X PM
DETOUR NEXT X EXITS	USE XXXXX RD EXIT	BEFORE RAILROAD CROSSING	MAXIMUM SPEED XX MPH	APR XX-XX X PM-X AM
USE EXIT XXX	USE EXIT I-XX NORTH	NEXT X MILES	MINIMUM SPEED XX MPH	BEGINS MONDAY
STAY ON US XXX SOUTH	USE I-XX E TO I-XX N	PAST US XXX EXIT	ADVISORY SPEED XX MPH	BEGINS MAY XX
TRUCKS USE US XXX N	WATCH FOR TRUCKS	XXXXXXX TO XXXXXXX	RIGHT LANE EXIT	MAY X-X XX PM - XX AM
WATCH FOR TRUCKS	EXPECT DELAYS	US XXX TO FM XXXX	USE CAUTION	NEXT FRI-SUN
EXPECT DELAYS	PREPARE TO STOP		DRIVE SAFELY	XX AM TO XX PM
REDUCE SPEED XXX FT	END SHOULDER USE		DRIVE WITH CARE	NEXT TUE AUG XX
USE OTHER ROUTES	WATCH FOR WORKERS			TONIGHT XX PM- XX AM
STAY IN LANE *				

** 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.

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.

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.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS)

BC(6)-14

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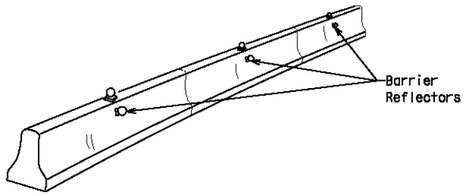
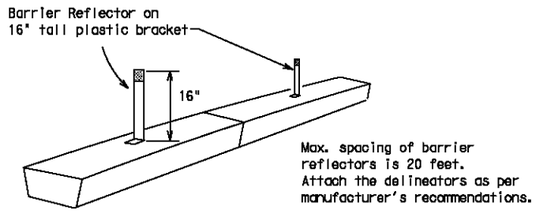
1. Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
2. Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost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

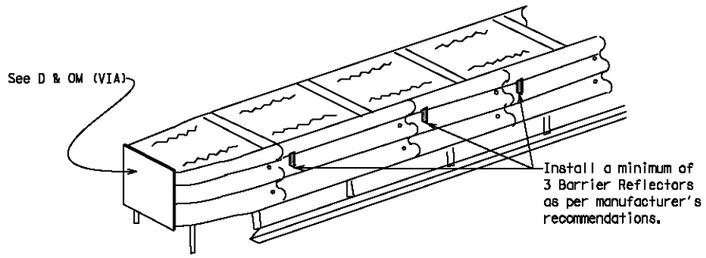


CONCRETE TRAFFIC BARRIER (CTB)

3. 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.
4. 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.
5. When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
6. Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
7. Maximum spacing of Barrier Reflectors is forty (40) feet.
8. Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
9. Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
10. Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
11. Single slope barriers shall be delineated as shown on the above detail.



LOW PROFILE CONCRETE BARRIER (LPCB)

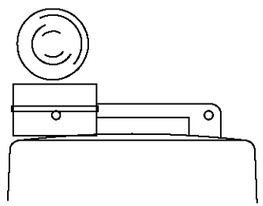


DELINEATION OF END TREATMENTS

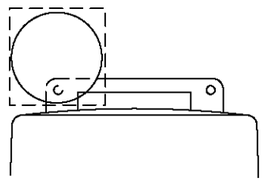
END TREATMENTS FOR CTB'S USED IN WORK ZONES

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



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

WARNING LIGHTS

1. Warning lights shall meet the requirements of the TMUTCD.
2. Warning lights shall NOT be installed on barricades.
3. 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.
4. 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".
5. The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
6. 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.
7. 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.
8. The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

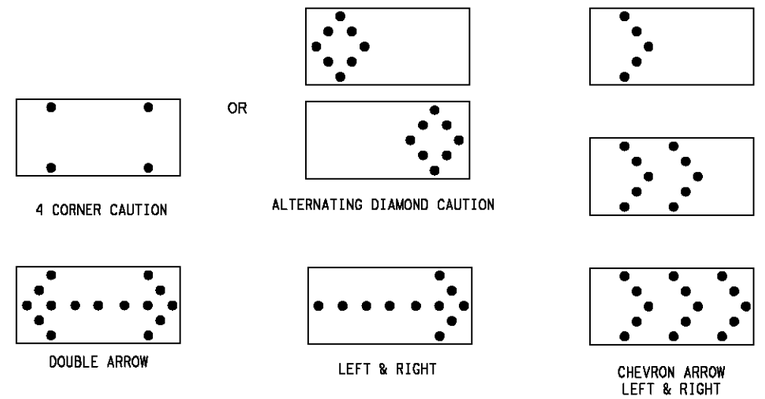
1. Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
2. Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
3. A series of sequential flashing warning lights placed on channelizing 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.
4. 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.
5. Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
6. Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
7. 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

1. 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.
2. 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.
3. The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
4. Round reflectors shall be fully reflectorized, including the area where attached to the drum.
5. 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.
6. 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.
7. When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
8. The warning reflector should be mounted on the side of the handle nearest approaching traffic.
9. The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.

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

1. 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.
2. 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.
3. 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.
4. The Flashing Arrow Board should be able to display the following symbols:



5. The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
6. The straight line caution display is NOT ALLOWED.
7. 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.
8. 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.
9. The sequential arrow display is NOT ALLOWED.
10. The flashing arrow display is the TxDOT standard; however, the sequential Chevron display may be used during daylight operations.
11. The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
12. A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
13. 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.
14. 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

TRUCK-MOUNTED ATTENUATORS

1. 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).
2. Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
3. Refer to the CWZTCD for a list of approved TMAs.
4. TMAs are required on freeways unless otherwise noted in the plans.
5. 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.
6. 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.

Texas Department of Transportation

Traffic Operations Division Standard

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

BC(7)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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9-07 8-14	DIST	COUNTY		SHEET NO.
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DATE:
FILE:

GENERAL NOTES

1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. 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.
3. 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.
4. 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).
5. 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.
6. 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:

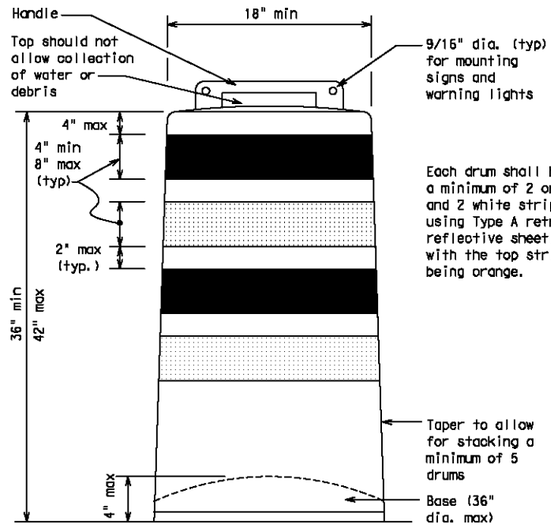
1. Plastic drums shall be a two-piece design; the "body" of the drum shall be the top portion and the "base" shall be the bottom.
2. The body and base shall lock together in such a manner that the body separates from the base when impacted by a vehicle traveling at a speed of 20 MPH or greater but prevents accidental separation due to normal handling and/or air turbulence created by passing vehicles.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. Plastic drums shall be constructed of ultra-violet stabilized, orange, high-density polyethylene (HDPE) or other approved material.
9. Drum body shall have a maximum unballasted weight of 11 lbs.
10. Drum and base shall be marked with manufacturer's name and model number.

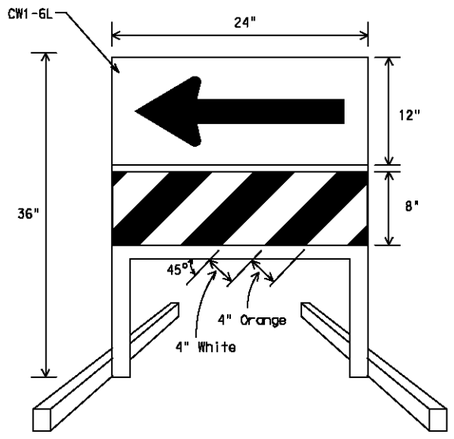
RETROREFLECTIVE SHEETING

1. 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.
2. 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

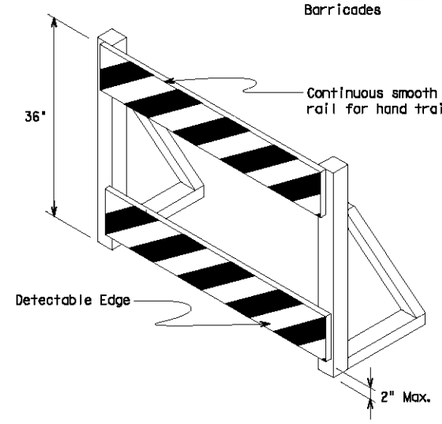
1. Unballasted bases shall be large enough to hold up to 50 lbs. of sand. This base, when filled with the ballast material, should weigh between 35 lbs (minimum) and 50 lbs (maximum). The ballast may be sand in one to three sandbags separate from the base, sand in a sand-filled plastic base, or other 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.
2. 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.
3. Recycled truck tire sidewalls may be used for ballast on drums approved for this type of ballast on the CWZTCD list.
4. 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.
5. 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.
6. Ballast shall not be placed on top of drums.
7. Adhesives may be used to secure base of drums to pavement.





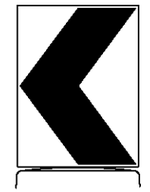
DIRECTION INDICATOR BARRICADE

1. The Direction Indicator Barricade may be used in tapers, transitions, and other areas where specific directional guidance to drivers is necessary.
2. If used, the Direction Indicator Barricade should be used in series to direct the driver through the transition and into the intended travel lane.
3. 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.
4. Double arrows on the Direction Indicator Barricade will not be allowed.
5. Approved manufacturers are shown on the CWZTCD List. Ballast shall be as approved by the manufacturers instructions.

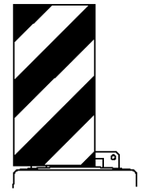


DETECTABLE PEDESTRIAN BARRICADES

1. 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.
2. 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.
3. 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.
4. 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.
5. Warning lights shall not be attached to detectable pedestrian barricades.
6. 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.



18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane Divider, Driveway sign D70a, Keep Right R4 series or other signs as approved by Engineer



12" x 24"
Vertical Panel
mount with diagonals sloping down towards travel way

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

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED ON PLASTIC DRUMS

1. Signs used on plastic drums shall be manufactured using substrates listed on the CWZTCD.
2. 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.
3. 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.
4. 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.
5. Signs shall be installed using a 1/2 inch bolt (nominal) and nut, two washers, and one locking washer for each connection.
6. Mounting bolts and nuts shall be fully engaged and adequately torqued. Bolts should not extend more than 1/2 inch beyond nuts.
7. 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.
8. 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.

Texas Department of Transportation

Traffic Operations Division Standard

BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(8)-14

FILE: bc-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
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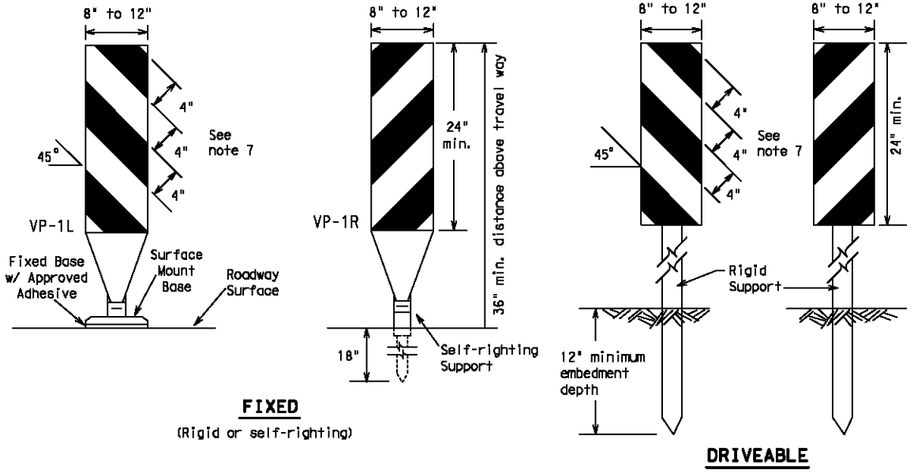
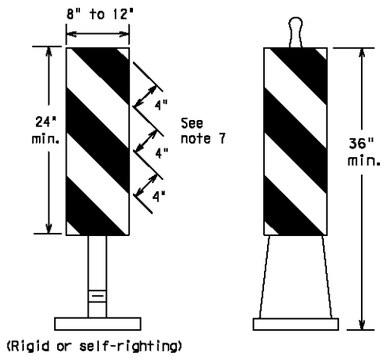


FIXED
(Rigid or self-righting)

DRIVEABLE

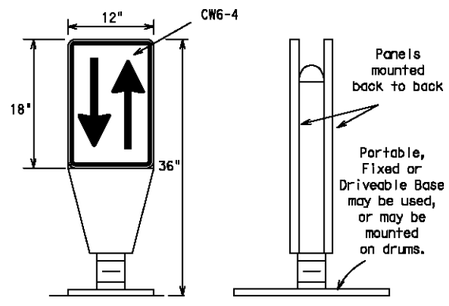


(Rigid or self-righting)

PORTABLE

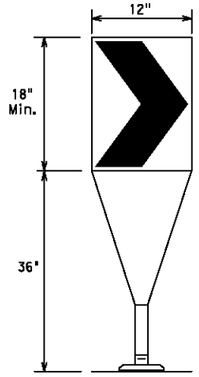
1. Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
2. VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is 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.
3. 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.
4. VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
5. Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
6. Sheeting for the VP's shall be retroreflective Type A conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
7. 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)



1. 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.
2. The OTLD may be used in combination with 42" cones or VPs.
3. Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
4. 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)



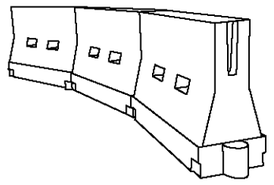
Fixed Base w/ Approved Adhesive (Driveable Base, or Flexible Support can be used)

1. The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
2. 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.
3. 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.
4. To be effective, the chevron should be visible for at least 500 feet.
5. 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.
6. 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

GENERAL NOTES

1. 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).
2. 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.
3. 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).
4. 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.
5. Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
6. 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.
7. 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.



LONGITUDINAL CHANNELIZING DEVICES (LCD)

1. 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.
2. LCDs may be used instead of a line of cones or drums.
3. LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
4. LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
5. LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
6. 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

1. 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.
2. 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.
3. 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.
4. 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.
5. When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

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

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices 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

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BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC(9)-14

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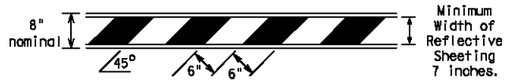
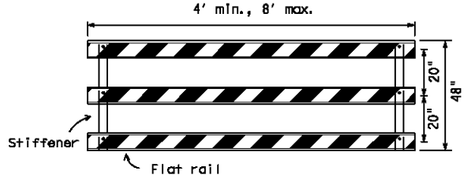
TYPE 3 BARRICADES

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.



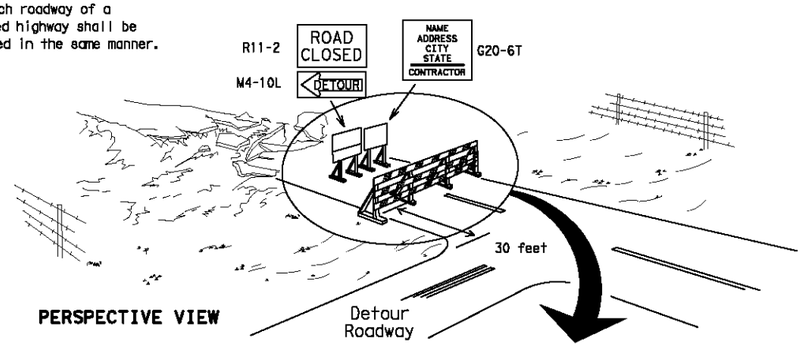
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



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

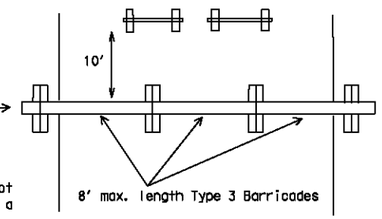
Each roadway of a divided highway shall be barricaded in the same manner.



PERSPECTIVE VIEW

The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic.

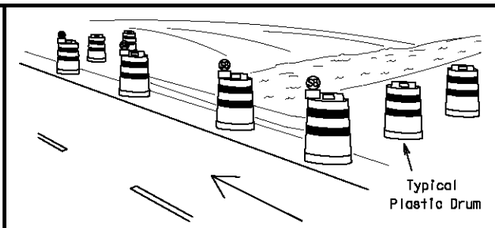
Barricade striping should slant downward in the direction of detour.



PLAN VIEW

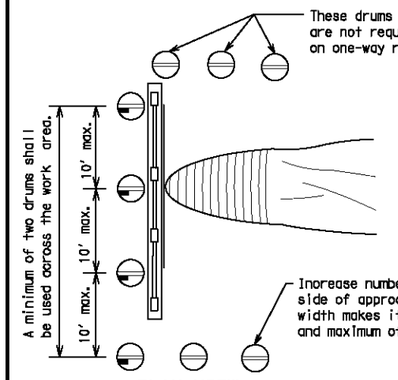
1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



PERSPECTIVE VIEW

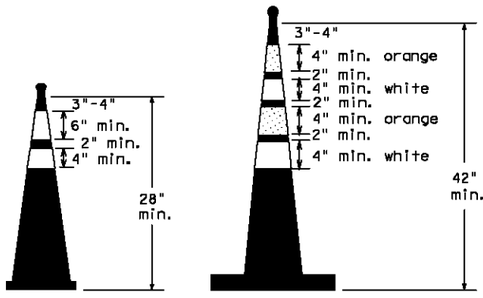
1. Where positive redirectional capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder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



PLAN VIEW

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

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS



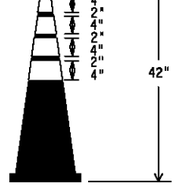
28" Cones shall have a minimum weight of 9 1/2 lbs.

42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

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.

TRAFFIC CONTROL FOR MATERIAL STOCKPILES

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



EDGELINE 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.

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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.

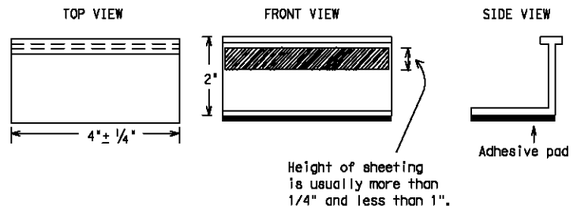
MAINTAINING WORK ZONE PAVEMENT MARKINGS

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).

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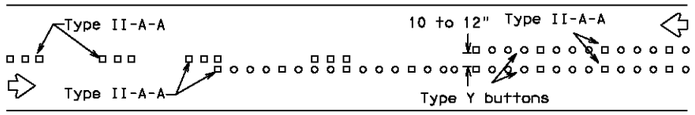
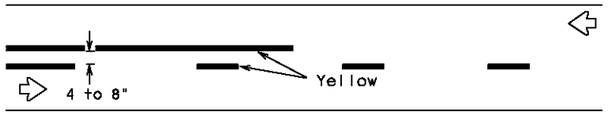
PAVEMENT MARKING PATTERNS

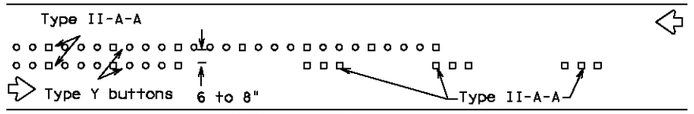
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



RAISED PAVEMENT MARKERS - PATTERN A



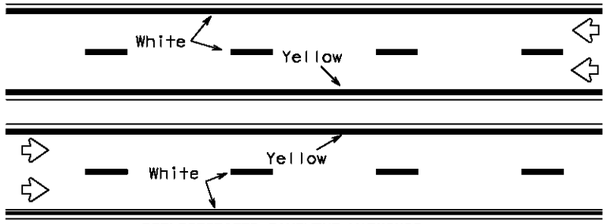
REFLECTORIZED PAVEMENT MARKINGS - PATTERN B



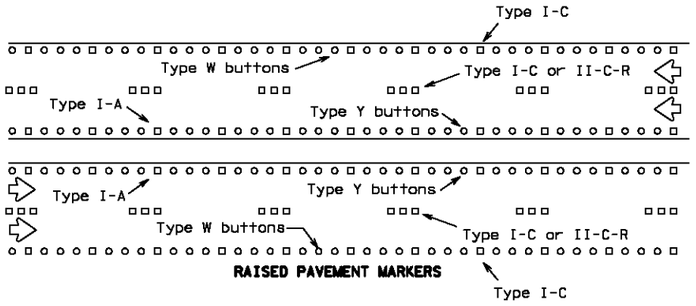
RAISED PAVEMENT MARKERS - PATTERN B

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

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



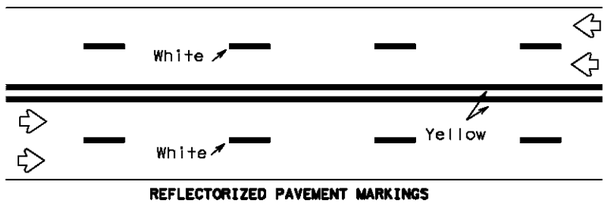
REFLECTORIZED PAVEMENT MARKINGS



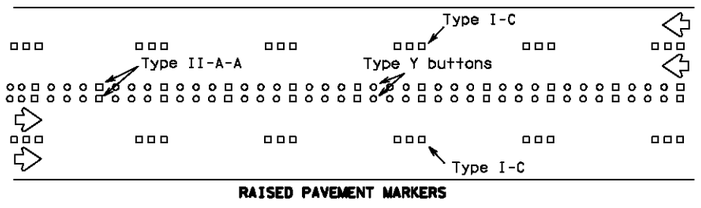
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

EDGE & LANE LINES FOR DIVIDED HIGHWAY



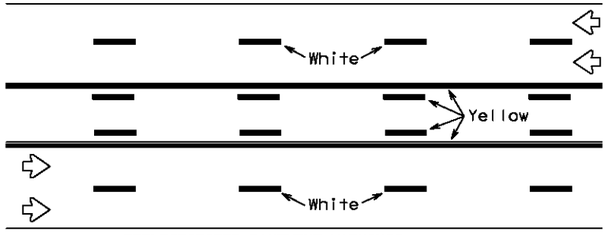
REFLECTORIZED PAVEMENT MARKINGS



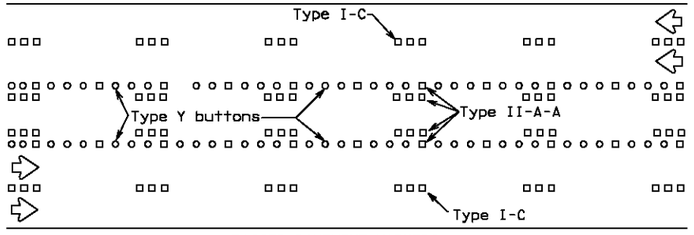
RAISED PAVEMENT MARKERS

Prefabricated markings may be substituted for reflectorized pavement markings.

LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS



RAISED PAVEMENT MARKERS

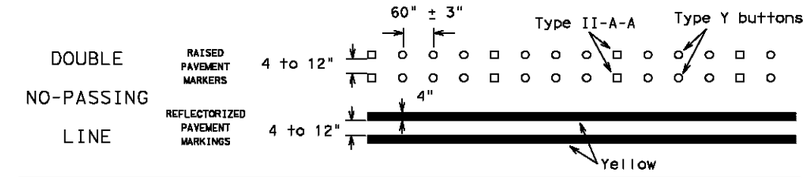
Prefabricated markings may be substituted for reflectorized pavement markings.

TWO-WAY LEFT TURN LANE

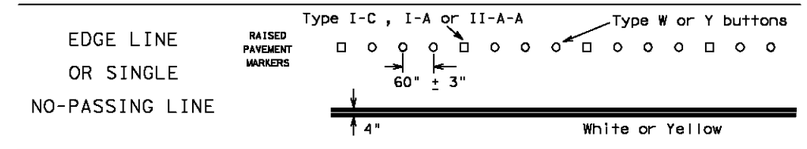
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

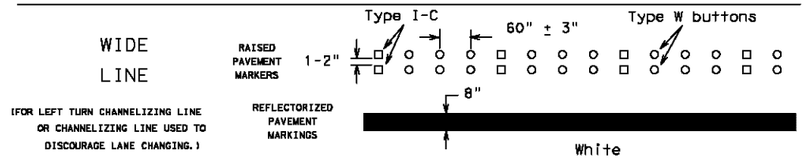


EDGE LINE OR SINGLE NO-PASSING LINE



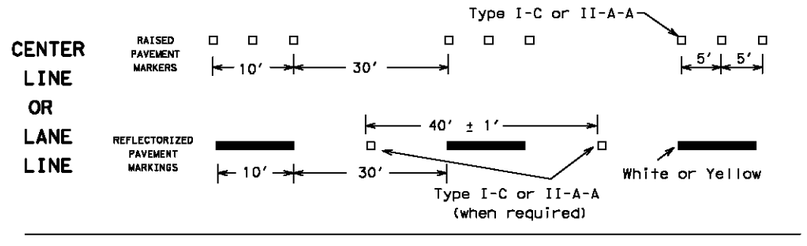
WIDE LINE

(FOR LEFT TURN CHANNELIZING LINE OR CHANNELIZING LINE USED TO DISCOURAGE LANE CHANGING.)



BROKEN LINES

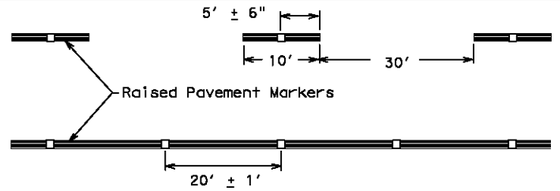
CENTER LINE OR LANE LINE



AUXILIARY OR LANEDROP LINE

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.



Centerline only - not to be used on edge lines

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

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BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

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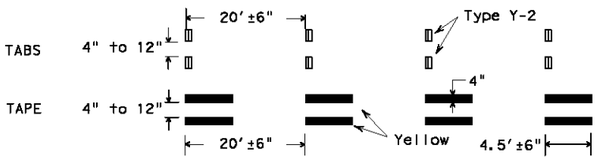
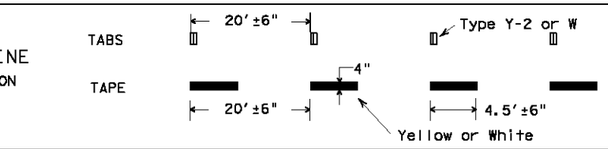
WORK ZONE SHORT TERM PAVEMENT MARKINGS DETAILS

SOLID LINES

DOUBLE NO-PASSING LINE

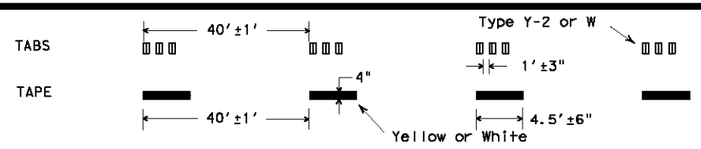


SINGLE NO-PASSING LINE or CHANNELIZATION LINE



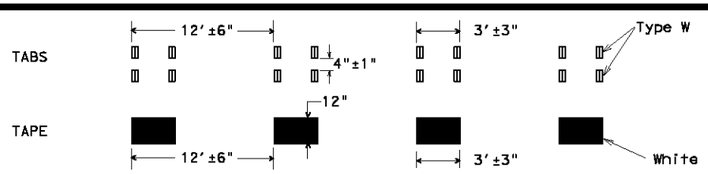
BROKEN LINES

(FOR CENTER LINE OR LANE LINE)

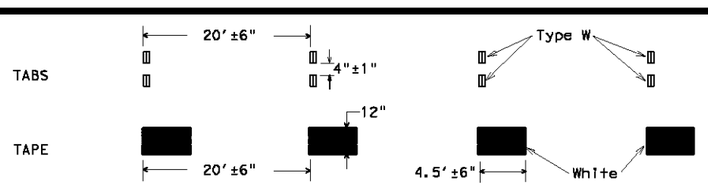


WIDE DOTTED LINES

(FOR LANE DROP LINES)



WIDE GORE MARKINGS



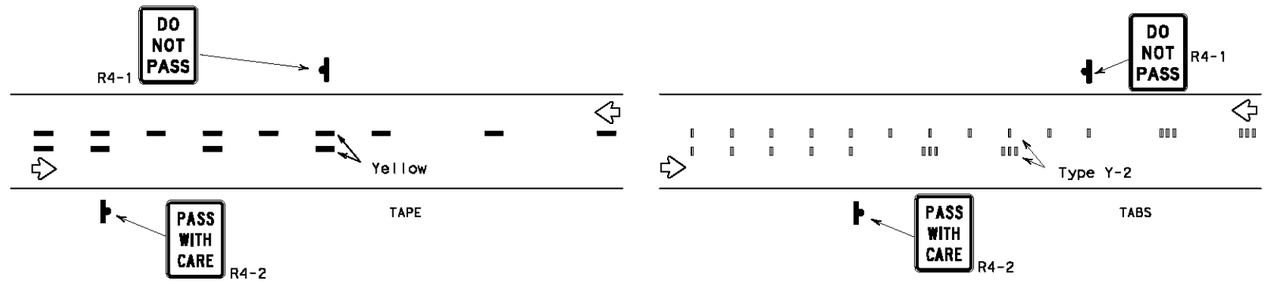
NOTES:

1. Short term pavement markings may be prefabricated markings (stick down tape) or temporary flexible-reflective roadway marker tabs unless otherwise specified elsewhere in plans.
2. Short term pavement markings shall NOT be used to simulate edge lines.
3. Dimensions indicated on this sheet are typical and approximate. Variations in size and height may occur between markers or devices made by manufacturers, by as much as 1/4 inch, unless otherwise noted.
4. Temporary flexible-reflective roadway marker tabs will require normal maintenance replacement when used on roadways with an ADT per lane of up to 7500 vehicles with no more than 10% truck mix. When roadways exceed these values, additional maintenance replacement of devices should be planned.
5. No segment of roadway open to traffic shall remain without permanent pavement markings for a period greater than 14 calendar days. The Contractor will be responsible for maintaining short term pavement markings until permanent pavement markings are in place. When the Contractor is responsible for placement of permanent pavement markings, no segment of roadway shall remain without permanent pavement markings for a period greater than 14 calendar days unless weather conditions prohibit placement. Permanent pavement markings shall be placed as soon as weather permits.
6. For two lane, two-way roadways, DO NOT PASS signs shall be erected to mark the beginning of sections where passing is prohibited and PASS WITH CARE signs shall be erected to mark the beginning of sections where passing is permitted. Signs shall be in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and may be used to indicate the limits of no-passing zones for up to 14 calendar days. Permanent pavement markings should then be placed.
7. For low volume two lane, two-way roadways of 4000 ADT or less, no-passing lines may be omitted when approved by the Engineer. DO NOT PASS and PASS WITH CARE signs shall be erected (see note 6).
8. For exit gores where a lane is being dropped place wide gore markings or retroreflective channelizing devices to guide motorist through the exit. If channelizing devices are to be used it should be noted elsewhere in the plans. One piece cones are not allowed for this purpose.

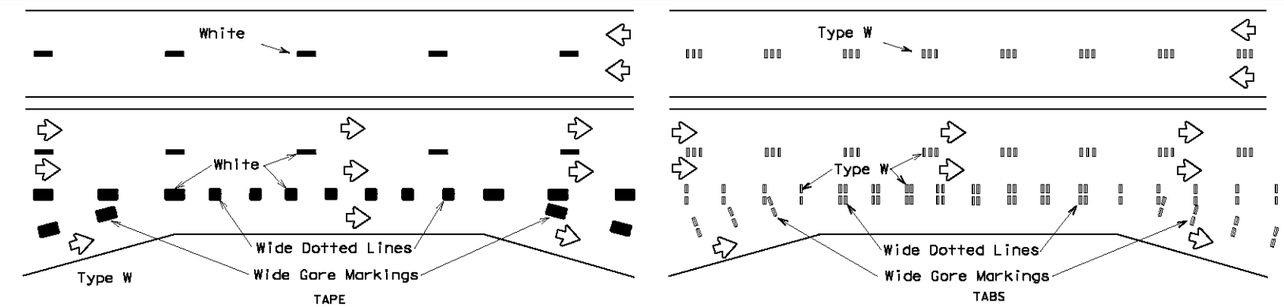
TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS (TABS)

1. Temporary flexible-reflective roadway marker tabs detailed on this sheet will be designated Type Y-2 (two amber reflective surfaces with yellow body); Type Y (one amber reflective surface with yellow body); and Type W (one white or silver reflective surface with white body). Additional details may be found on BC(11).
2. Tabs shall meet requirements of Departmental Material Specification DMS-8242.
3. When dry, tabs shall be visible for a minimum distance of 200 feet during normal daylight hours and when illuminated by automobile low-beam head light at night, unless sight distance is restricted by roadway geometrics.
4. No two consecutive tabs nor four tabs per 1000 feet of line shall be missing or fail to meet the visual performance requirements of Note 3.

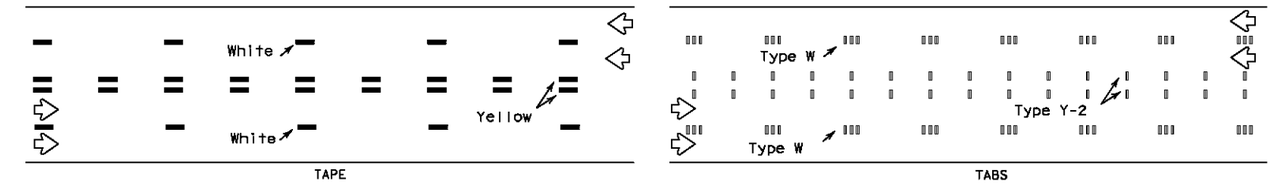
WORK ZONE SHORT TERM PAVEMENT MARKINGS PATTERNS



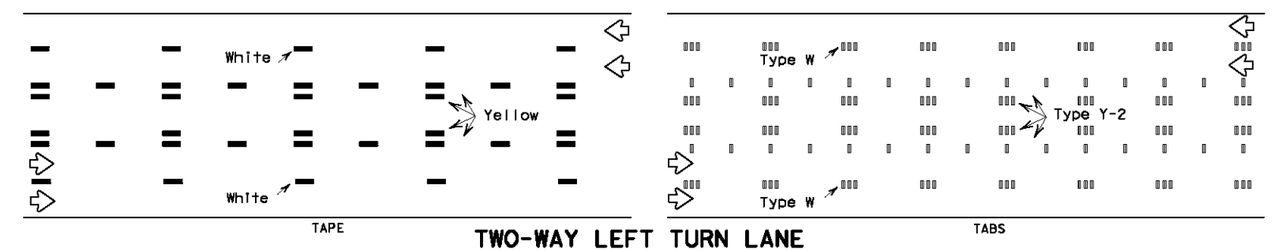
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO LANE TWO-WAY HIGHWAYS



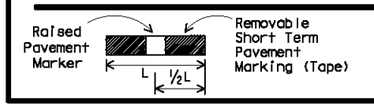
LANE LINES FOR DIVIDED HIGHWAY



LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



TWO-WAY LEFT TURN LANE



If raised pavement markers are used to supplement REMOVABLE short term markings, the markers shall be applied to the top of the tape at the approximate mid length of the tape. This allows an easier removal of raised markers and tape.

PREFABRICATED PAVEMENT MARKINGS

1. Temporary Removable Prefabricated Pavement Markings shall meet the requirements of DMS-8241.
2. Non-removable Prefabricated Pavement Markings shall meet the requirements of either DMS-8240 "Permanent Prefabricated Pavement Markings" or DMS-8243 "Temporary Costruction-Grade Prefabricated Pavement Markings."

RAISED PAVEMENT MARKERS

1. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and DMS-4200.

DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS) & MATERIAL PRODUCER LISTS (MPL)

1. DMSs referenced above can be found along with embedded links to their respective MPLs at the following website:

http://www.txdot.gov/business/contractors_consultants/material_specifications/default.htm

Texas Department of Transportation

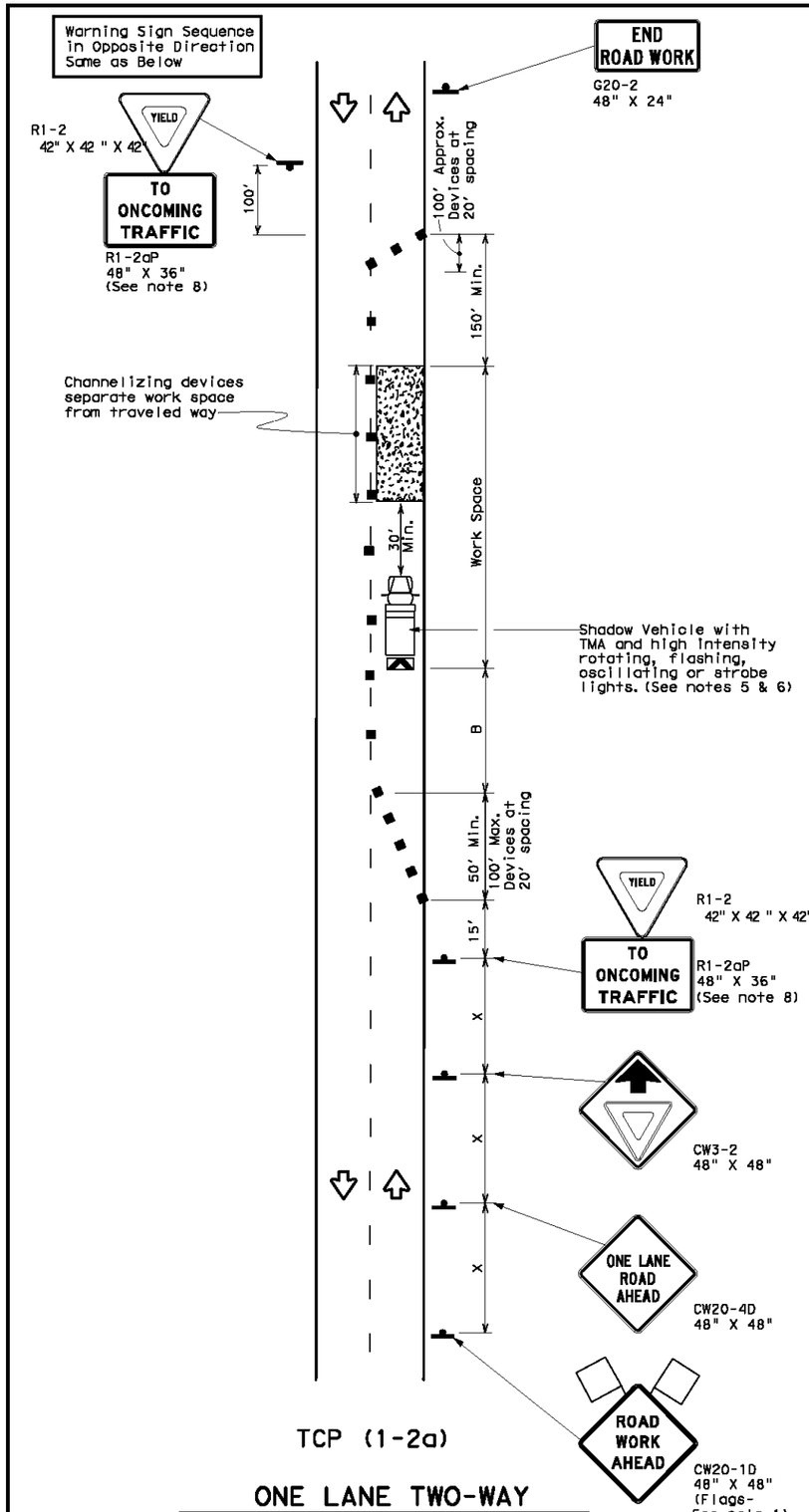
Traffic Operations Division Standard

WORK ZONE SHORT TERM PAVEMENT MARKINGS

WZ(STPM)-13

FILE: wzstpm-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT April 1992	CONT	SECT	JOB	HIGHWAY
REVISIONS	.	.	.	.
1-97	DIST	COUNTY		SHEET NO.
3-03	.	.		85
7-13				

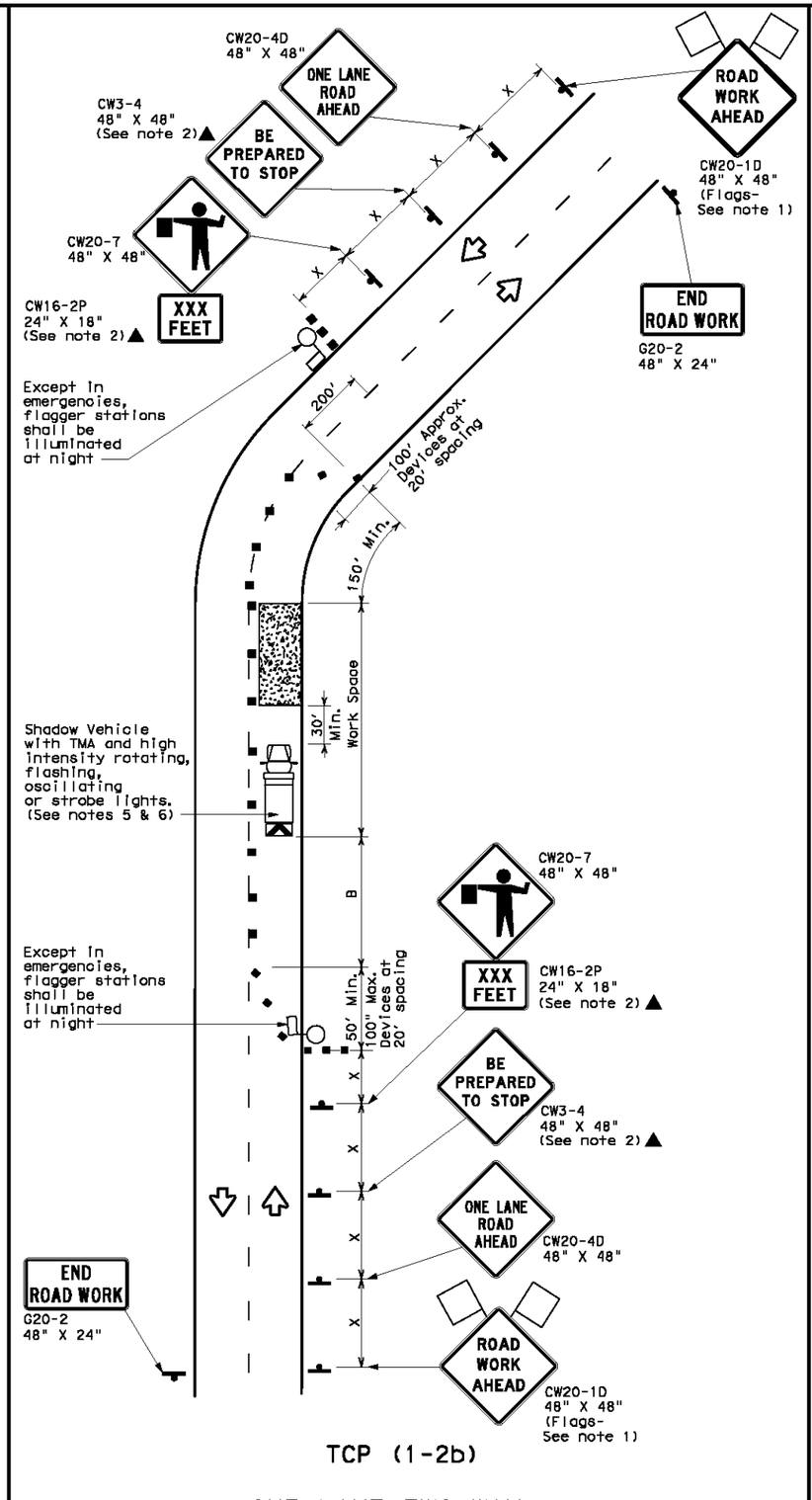
111



TCP (1-2a)

ONE LANE TWO-WAY CONTROL WITH YIELD SIGNS

(Less than 2000 ADT - See note 7)



TCP (1-2b)

ONE LANE TWO-WAY CONTROL WITH FLAGGERS

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"	Stopping Sight Distance
30	$L=\frac{WS^2}{60}$	150'	165'	180'	30'	60'	120'	90'	200'
35		205'	225'	245'	35'	70'	160'	120'	250'
40		265'	295'	320'	40'	80'	240'	155'	305'
45	L=WS	450'	495'	540'	45'	90'	320'	195'	360'
50		500'	550'	600'	50'	100'	400'	240'	425'
55		550'	605'	660'	55'	110'	500'	295'	495'
60		600'	660'	720'	60'	120'	600'	350'	570'
65		650'	715'	780'	65'	130'	700'	410'	645'
70		700'	770'	840'	70'	140'	800'	475'	730'
75		750'	825'	900'	75'	150'	900'	540'	820'

* 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

1. Flags attached to signs where shown are REQUIRED.
2. 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.
3. The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
4. Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
5. 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.
6. Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.

TCP (1-2a)

7. R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
8. R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

TCP (1-2b)

9. Flaggers should use two-way radios or other methods of communication to control traffic.
10. Length of work space should be based on the ability of flaggers to communicate.
11. If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
12. Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
13. Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

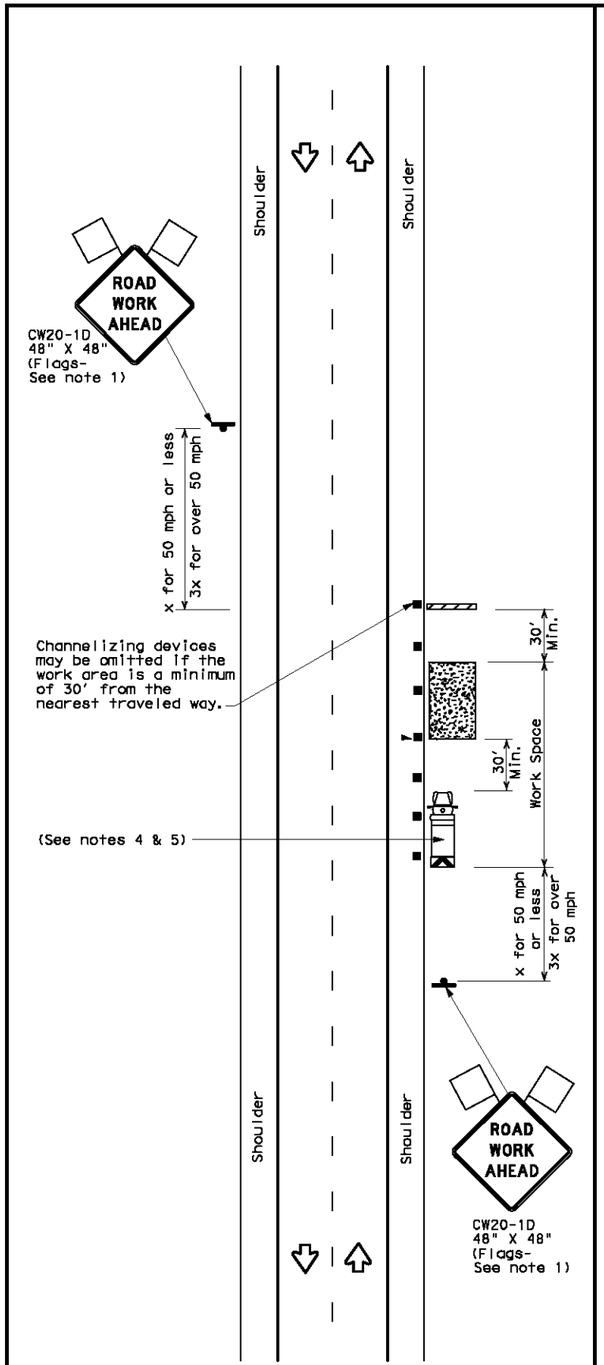
TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL

TCP(1-2)-12

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

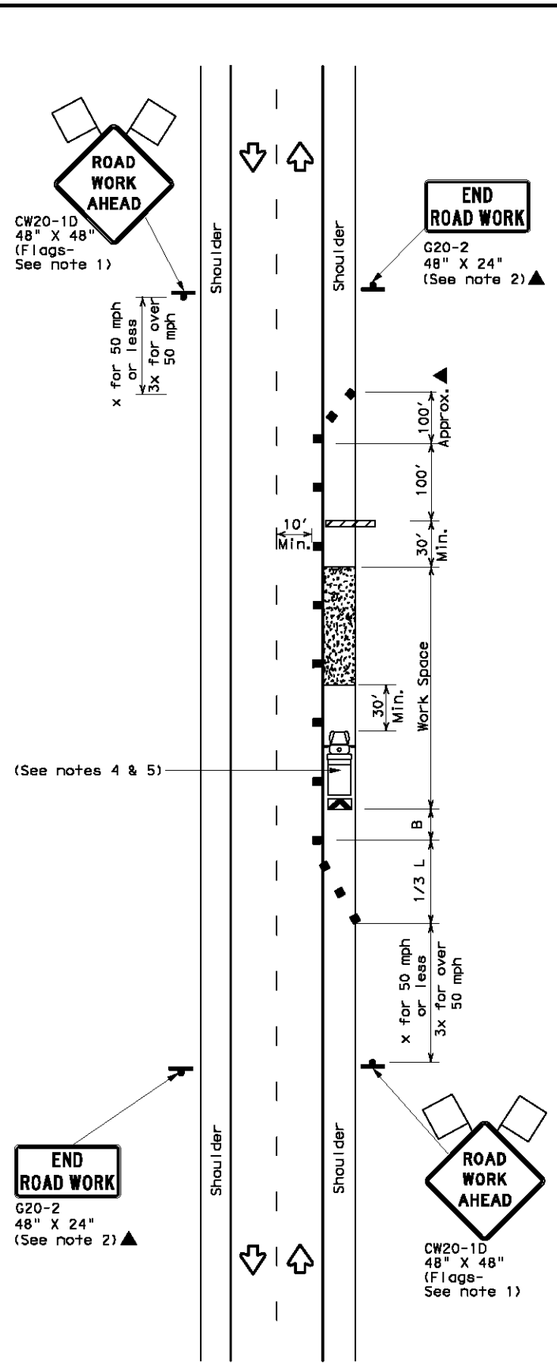
REVISIONS	CONT	SECT	JOB	HIGHWAY
4-90 2-12				
2-94	DIST	COUNTY		SHEET NO.
1-97				
4-98				85

DATE:
FILE:



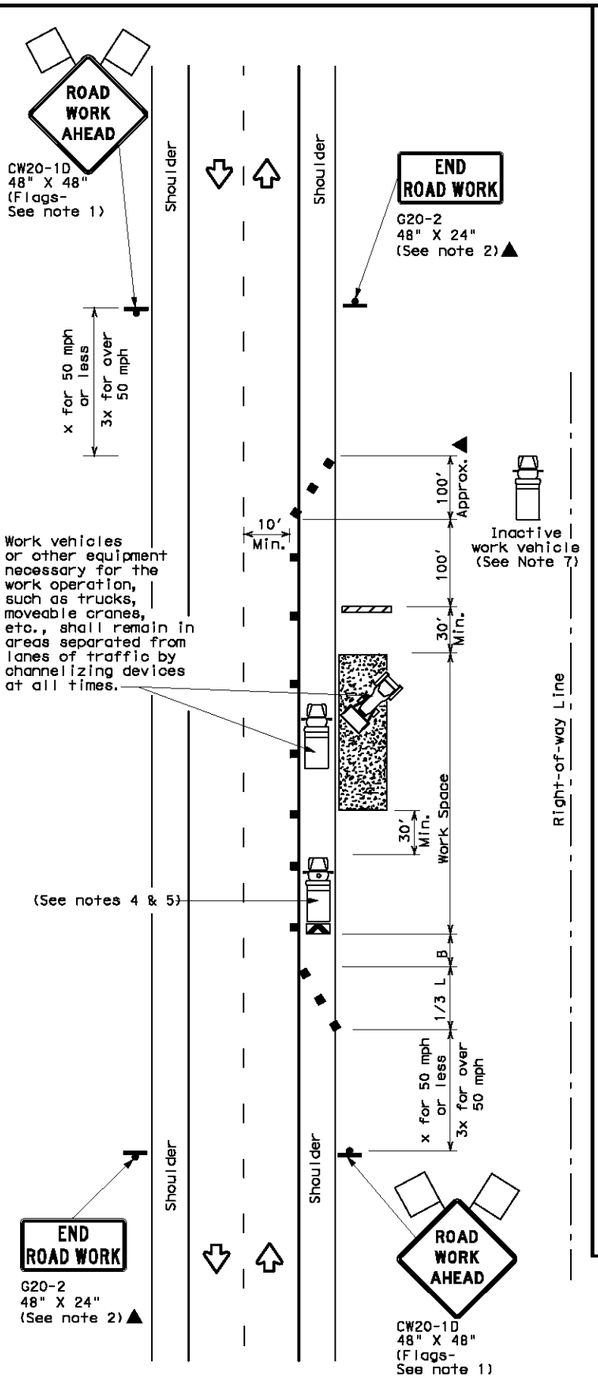
TCP (2-1a)

WORK SPACE NEAR SHOULDER
Conventional Roads



TCP (2-1b)

WORK SPACE ON SHOULDER
Conventional Roads



TCP (2-1c)

WORK VEHICLES ON SHOULDER
Conventional Roads

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

Posted Speed *	Formula	Minimum Desirable Taper Lengths ** 10' Offset	11' Offset	12' Offset	Suggested Maximum Spacing of Channelizing Devices: On a Taper	On a Tangent	Minimum Sign Spacing "X" Distance	Suggested Longitudinal Buffer Space "B"
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

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

For construction or maintenance contract work, specific project requirements for shadow vehicles can be found in the project GENERAL NOTES for Item 502, Barricades, Signs and Traffic Handling.

Texas Department of Transportation
Traffic Operations Division

TRAFFIC CONTROL PLAN CONVENTIONAL ROAD SHOULDER WORK

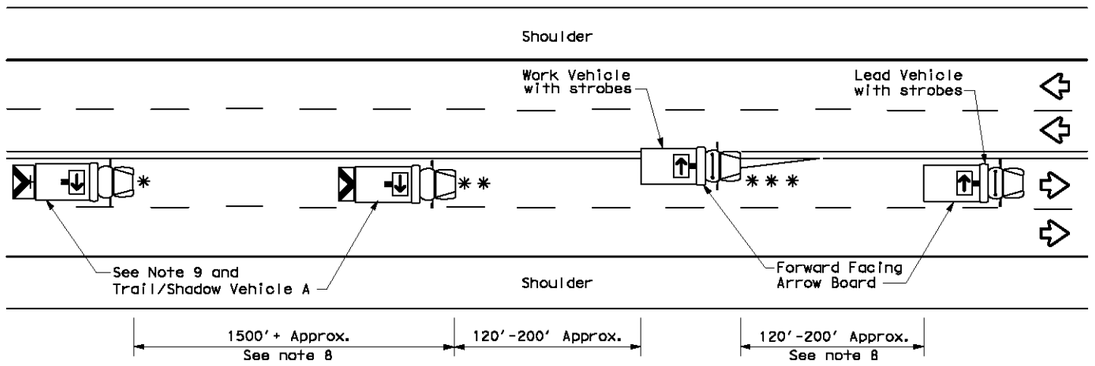
TCP(2-1)-12

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
CONT	SECT	JOB	HIGHWAY
-	-	-	-
DIST	COUNTY		SHEET NO.
-	-		87

REVISIONS
2-94 2-12
8-95
1-97
4-98

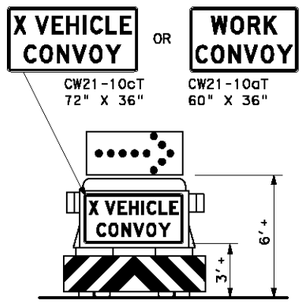
DATE:
FILE:

DATE:
FILE:



TCP (3-1a)

UNDIVIDED MULTILANE ROADWAY

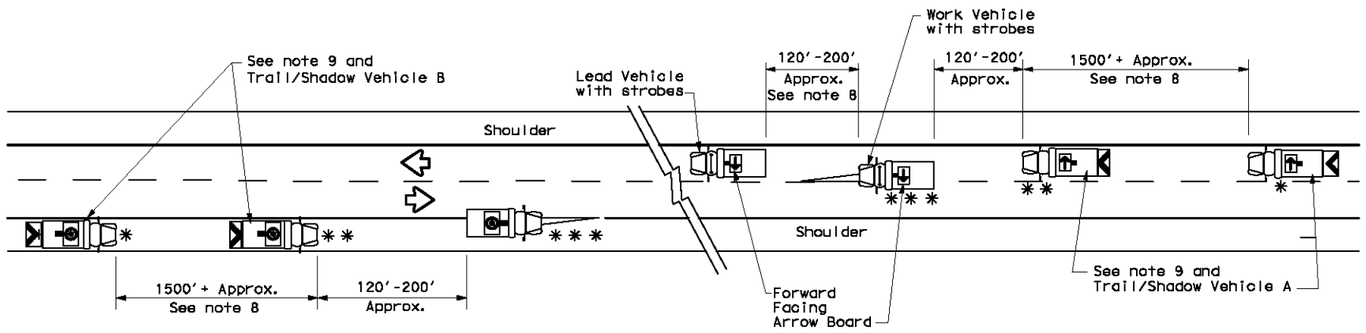


TRAIL/SHADOW VEHICLE A

with RIGHT Directional display Flashing Arrow Board

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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



WORK ON SHOULDER

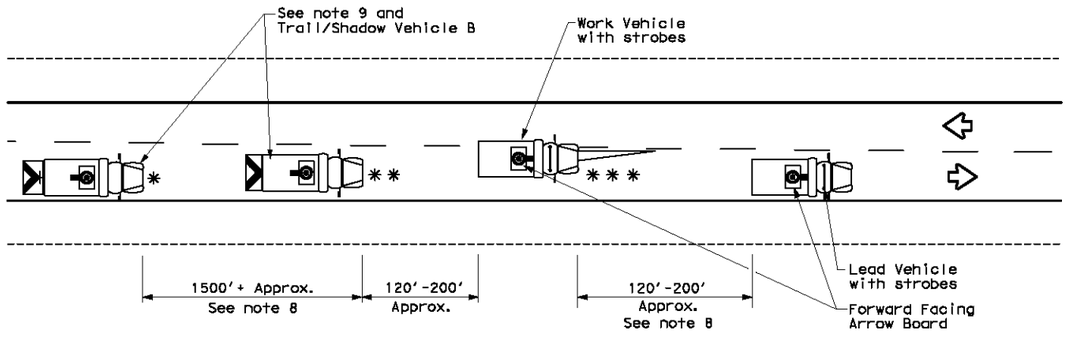
WORK ON TRAVEL LANE

TCP (3-1b)

TWO-WAY ROADWAY WITH PAVED SHOULDERS

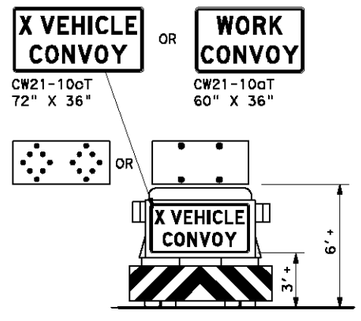
GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used the WORK vehicle must be equiped with an arrow board. The Engineer will determine if the LEAD VEHICLE and/or TRAIL VEHICLE are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the work convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. "X VEHICLE CONVOY" (CW21-10cT) or "WORK CONVOY" (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" X 48" diamond shaped "WORK CONVOY"(CW21-10T) or "X VEHICLE CONVOY" (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The "X VEHICLE CONVOY" sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a "DO NOT PASS" (R4-1) sign should be placed on the back of the rearmost protection vehicle.



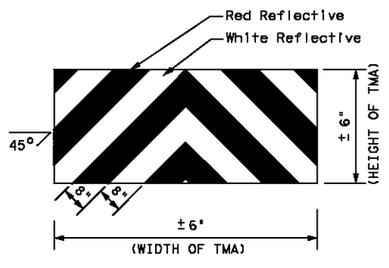
TCP (3-1c)

TWO-WAY ROADWAY WITHOUT PAVED SHOULDERS



TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board in CAUTION display



STRIPING FOR TMA

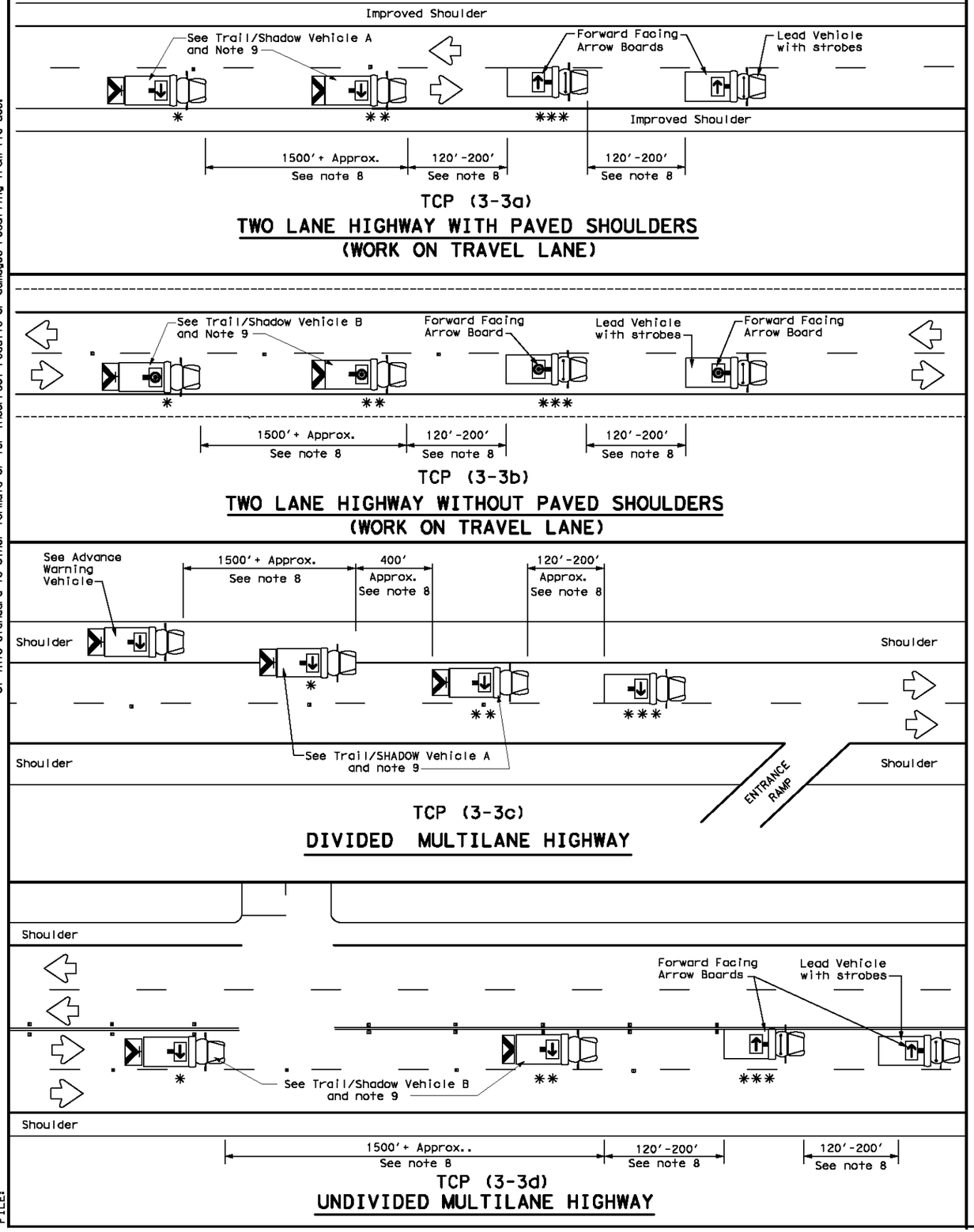
Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS UNDIVIDED HIGHWAYS

TCP(3-1)-13

FILE: tcp3-1.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT December 1985	CONT	SECT	JOB	HIGHWAY
REVISIONS	.	.	.	.
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13	.	.		88
1-97				



TCP (3-3a)

TWO LANE HIGHWAY WITH PAVED SHOULDERS (WORK ON TRAVEL LANE)

TCP (3-3b)

TWO LANE HIGHWAY WITHOUT PAVED SHOULDERS (WORK ON TRAVEL LANE)

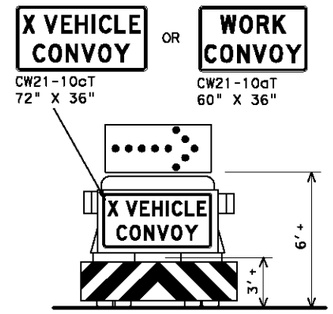
TCP (3-3c)

DIVIDED MULTILANE HIGHWAY

TCP (3-3d)

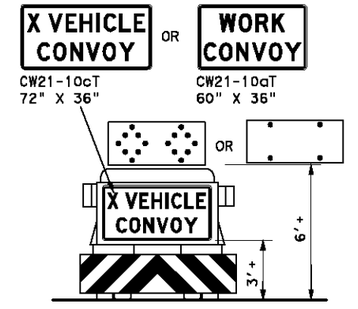
UNDIVIDED MULTILANE HIGHWAY

DATE:
FILE:



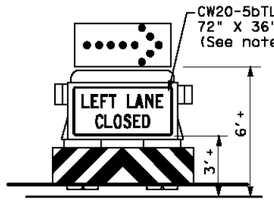
TRAIL/SHADOW VEHICLE A

with RIGHT Directional display
Flashing Arrow Board

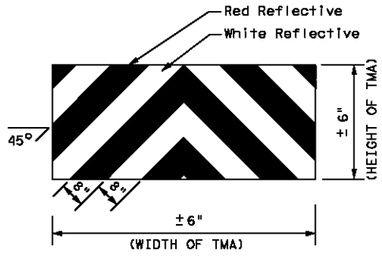


TRAIL/SHADOW VEHICLE B

with Flashing Arrow Board
In Caution Mode



ADVANCE WARNING VEHICLE



STRIPING FOR TMA

LEGEND			
*	Trail Vehicle	ARROW BOARD DISPLAY	
**	Shadow Vehicle		
***	Work Vehicle		RIGHT Directional
	Heavy Work Vehicle		LEFT Directional
	Truck Mounted Attenuator (TMA)		Double Arrow
	Traffic Flow		CAUTION (Alternating Diamond or 4 Corner Flash)

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

GENERAL NOTES

1. TRAIL, SHADOW, and LEAD vehicles shall be equipped with arrow boards as illustrated. When a LEAD vehicle is not used on two way roads the WORK vehicle must have an arrow board. For divided roadways, the arrow board on the WORK vehicle is optional based on the type of work being performed. The Engineer will determine if the LEAD vehicle and/or TRAIL vehicle are required based on prevailing roadway conditions, traffic volume, and sight distance restrictions.
2. The use of amber high intensity rotating, flashing, oscillating, or strobe lights on vehicles are required. Blue high intensity rotating, flashing, oscillating, or strobe lights when mounted on the driver's side of the vehicle may be operated simultaneously with the amber beacons or strobe lights.
3. The use of truck mounted attenuators (TMA) on the SHADOW VEHICLE, ADVANCE WARNING and TRAIL VEHICLE are required.
4. Reflective sheeting on the rear of the TMA shall meet or exceed the reflectivity and color requirements of DEPARTMENTAL MATERIAL SPECIFICATION DMS 8300, Type A.
5. Flashing arrow boards shall be Type B or Type C as per the Barricade and Construction (BC) standards. The board shall be controlled from inside the vehicle.
6. Each vehicle shall have two-way radio communication capability.
7. When work convoys must change lanes, the TRAIL VEHICLE should change lanes first to shadow the other convoy vehicles.
8. Vehicle spacing between the TRAIL VEHICLE and the SHADOW VEHICLE will vary depending on sight distance restrictions. Motorists approaching the convoy should be able to see the TRAIL VEHICLE in time to slow down and/or change lanes as they approach the TRAIL VEHICLE. Vehicle spacing between the WORK VEHICLE and SHADOW VEHICLE and vehicle spacing between WORK VEHICLE and LEAD VEHICLE may vary according to terrain, work activity and other factors.
9. X VEHICLE CONVOY (CW21-10cT) or WORK CONVOY (CW21-10aT) signs shall be used on TRAIL VEHICLES and SHADOW VEHICLES as shown. As an option 48" x 48" diamond shaped WORK CONVOY (CW21-10T) or X VEHICLE CONVOY (CW21-10bT) signs may be used where adequate mounting space exists. When used, the X VEHICLE CONVOY sign shall have the number of the convoy vehicles displayed on the sign in the number designation "X" location. The X VEHICLE CONVOY sign shall not be used on the SHADOW VEHICLE if a TRAIL VEHICLE is used.
10. For divided highways with two or three lanes in one direction, the appropriate LEFT LANE CLOSED (CW20-5bTL), RIGHT LANE CLOSED (CW20-5bTR), or CENTER LANE CLOSED (CW20-5dT) sign should be used on the Advance Warning Vehicle. As an option, a portable changeable message sign (PCMS) or truck mounted changeable message sign (TMCMS) with a minimum character height of 12", and displaying the same legend may be substituted for these signs. An appropriate directional arrow display, simulating the size and legibility of the flashing arrow board may be used in the second phase of the PCMS/TMCMS message. When this is done, the arrow board will not be required on the Advance Warning Vehicle.
11. A double arrow shall not be displayed on the arrow board on the Advance Warning Vehicle.
12. For divided highways with three or four lanes in each direction, use TCP(3-2).
13. Standard diamond shape versions of the CW20-5 series signs may be used as an option if the rectangular signs shown are not available.
14. The Advance Warning Vehicle may straddle the edgeline when Shoulder width makes it necessary.
15. On two-lane two-way roadways, the work and protection vehicles should pull over periodically to allow motor vehicle traffic to pass. If motorists are not allowed to pass the work convoy, a DO NOT PASS (R4-1) sign should be placed on the back of the rearmost protection vehicle.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL PLAN MOBILE OPERATIONS RAISED PAVEMENT MARKER INSTALLATION/ REMOVAL TCP(3-3)-14

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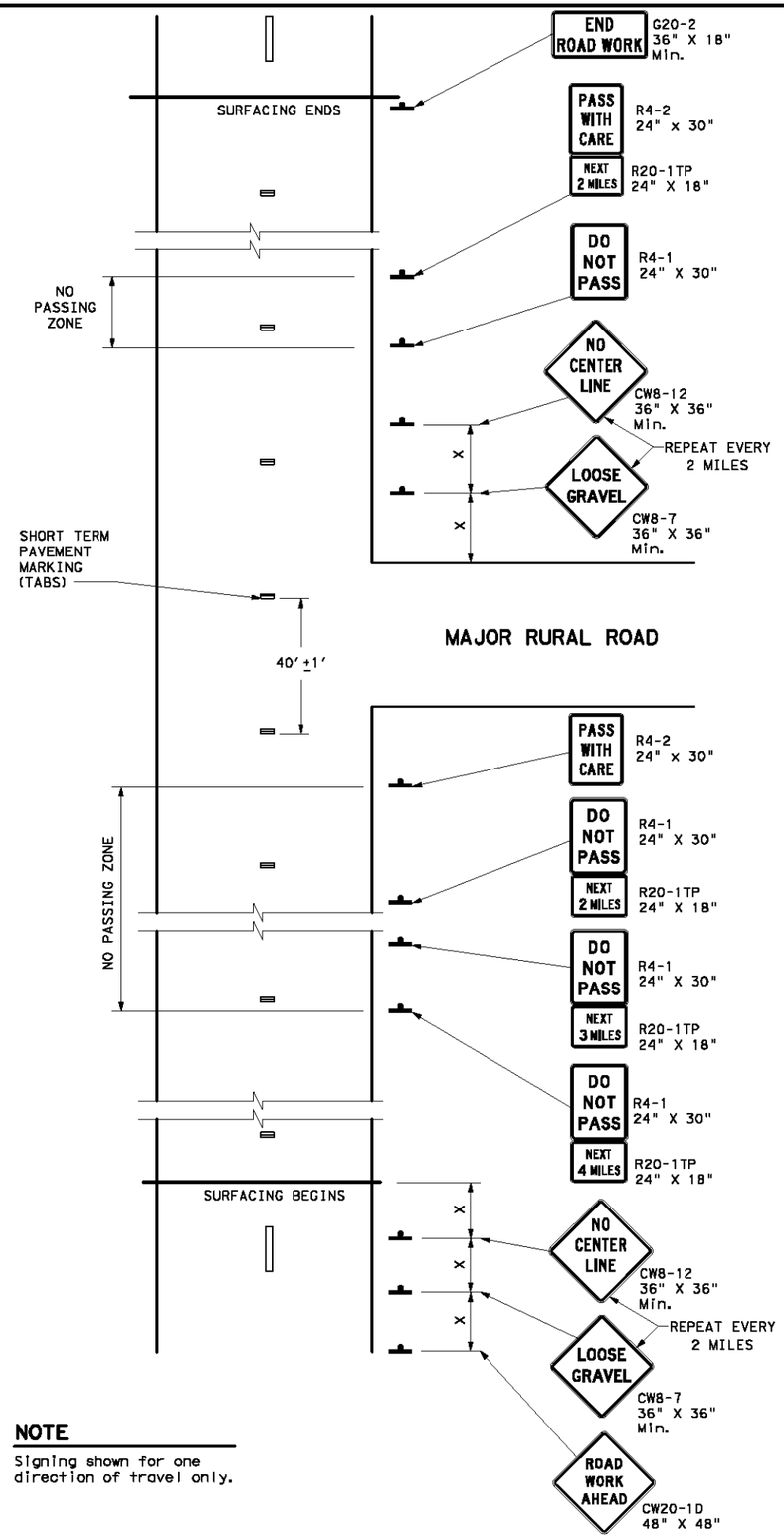
©TxDOT September 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	.	.	.	.
2-94 4-98	DIST	COUNTY		SHEET NO.
8-95 7-13				
1-97 7-14	.	.		89



NOTE

Signing shown for one direction of travel only.

NO PASSING ZONES ON TWO-LANE TWO-WAY ROADS

DATE:
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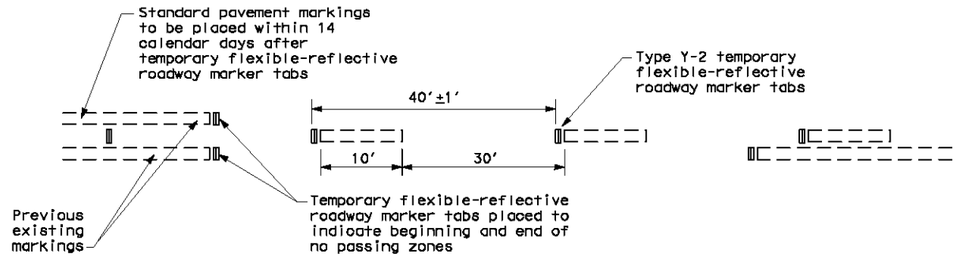

TABS ON CENTERLINES OF TWO-LANE TWO-WAY ROADS

For seal coat, micro-surface or similar operations

"DO NOT PASS" SIGN (R4-1) and NO-PASSING ZONES

A. Prior to the beginning of construction, all currently striped no-passing zones shall be signed with the DO NOT PASS (R4-1) signs and PASS WITH CARE (R4-2) signs placed at the beginning and end of each zone for each direction of travel except as otherwise provided herein. Signs marking these individual no-passing zones need not be covered prior to construction if the signs supplement the existing pavement markings.

B. At the discretion of the Engineer, in areas of numerous no-passing zones, several zones may be combined as a single zone. If passing is to be prohibited over one or more lengthy sections, a DO NOT PASS sign and a NEXT XX MILES (R20-1TP) plaque may be used at the beginning of such zones. The DO NOT PASS sign and the NEXT XX MILES plaque should be repeated every mile to the end of the no-passing zone. In areas where there is considerable distance between no-passing zones, the end of the no-passing zone may be signed with a PASS WITH CARE sign and a NEXT XX MILES plaque.

C. Depending on traffic volumes and length of sections, it may be desirable to prohibit passing throughout the project to prevent damage to windshield and lights. The DO NOT PASS sign and NEXT XX MILES plaque should be used and repeated as often as necessary for this purpose. Where several existing zones are to be combined into one idividual no-passing zone, the sign at the beginning of the zone should be covered until the surfacing operation has passed this location so as not to have the DO NOT PASS sign conflict with the existing pavement markings. Also, unless one days operation completes the entire length of such combined zones, appropriate DO NOT PASS and PASS WITH CARE signs should be placed at the beginning and end of the no-passing zones where the surfacing operation has stopped for the day.

D. R4-1 and R4-2 are to remain in place until standard pavement markings are installed.

"NO CENTER LINE" SIGN (CW8-12)

A. Center line markings are yellow pavement markings that delineate the separation of travel lanes that have opposite directions of travel on a roadway. Divided highways do not typically have center line markings.

B. At the time construction activity obliterates the existing center line markings(low volume roads may not have an existing centerline), a NO CENTER LINE (CW8-12) sign should be erected at the beginning of the work area, at approximately 2 mile intervals within the work area, beyond major intersections and other locations deemed necessary by the Engineer.

C. The NO CENTER LINE signs are to remain in place until standard pavement markings are installed.

"LOOSE GRAVEL" SIGN (CW8-7)

A. When construction begins, a LOOSE GRAVEL (CW8-7) sign should be erected at each end of the work area and repeated at intervals of approximately 2 miles in rural areas and closer in urban areas.

B. The LOOSE GRAVEL signs are to remain in place until the condition no longer exists.

PAVEMENT MARKINGS

A. Temporary markings for surfacing projects shall be Temporary Flexible-reflective Roadway Marker Tabs unless otherwise approved by the Engineer. Tabs are to be installed to provide true alignment for striping crews or as directed by the Engineer. Tabs will be placed at the spacing indicated. Tabs should be applied to the pavement no more than two (2) days before the surfacing is applied. After the surfacing is rolled and swept, the cover over the reflective strip shall be removed.

B. Tabs shall not be used to simulate edge lines.

C. Tab placement for overlay/inlay operations shall be as shown on the WZ(STPM) standard sheet.

COORDINATION OF SIGN LOCATIONS

A. The location of warning signs at the beginning and end of a work area are to be coordinated with other signing typically shown on the Barricade and Construction Standards for project limits to ensure adequate sign spacing.

B. Where possible the ROAD WORK AHEAD (CW20-1D), LOOSE GRAVEL (CW8-7), and NO CENTER LINE (CW8-12) signs should be placed in the sequence shown following the OBEY WARNING SIGNS STATE LAW (R20-3T) and the TRAFFIC FINES DOUBLE (R20-5T) sign, and one "X" sign spacing prior to the CONTRACTOR (G20-6T)sign typically located at or near the limits of surfacing. LOOSE GRAVEL and NO CENTER LINE signs will then be repeated as described above.

Posted Speed *	Minimum Sign Spacing "X" Distance
30	120'
35	160'
40	240'
45	320'
50	400'
55	500'
60	600'
65	700'
70	800'
75	900'

*** Conventional Roads Only**

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

GENERAL NOTES

1. The traffic control devices detailed on this sheet will be furnished and erected as directed by the Engineer on sections of roadway where tabs must be placed prior to the surfacing operation which will cover or obliterate the existing pavement markings.
2. The devices shown on this sheet are to be used to supplement those required by the BC Standards or others required elsewhere in the plans.
3. Signs shall be erected as detailed on the BC Standards or the Compliant Work Zone Traffic Control Devices List (CWZTCD) on supports approved for Long-Term / Intermediate-Term Work Zone Sign Supports.
4. When surfacing operations take place on divided highways, freeways or expressways, the size of diamond shaped construction warning signs shall be 48" x 48".
5. Signs on divided highways, freeways and expressways will be placed on both right and left sides of the roadway based on roadway conditions as directed by the Engineer.

Texas Department of Transportation

Traffic Operations Division Standard

TRAFFIC CONTROL DETAILS FOR SURFACING OPERATIONS

TCP(7-1)-13

FILE: tcp7-1.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT March 1991	CONT	SECT	JOB	HIGHWAY
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4-92 4-98	DIST	COUNTY		SHEET NO.
1-97 7-13	.	.		90

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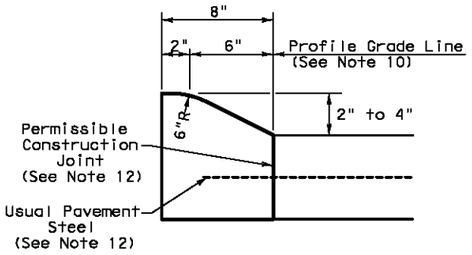

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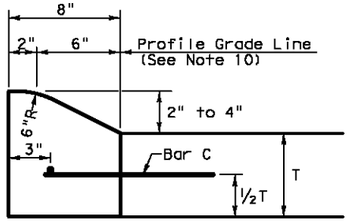
2" - 4" HEIGHT



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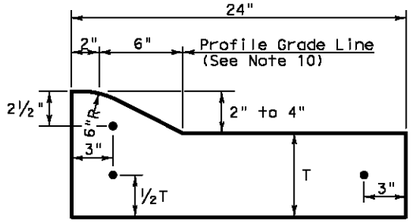
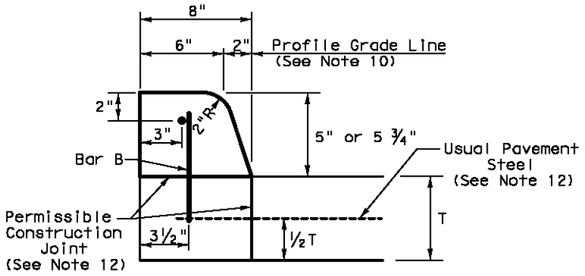
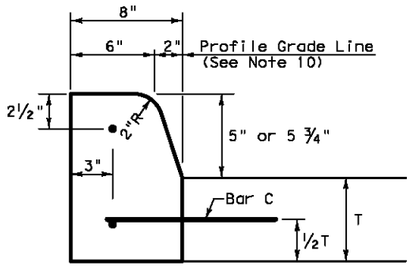


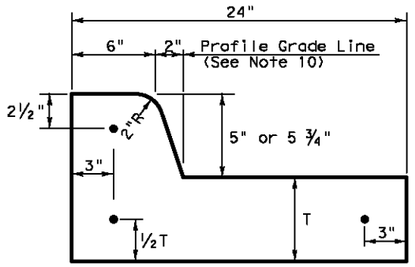
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



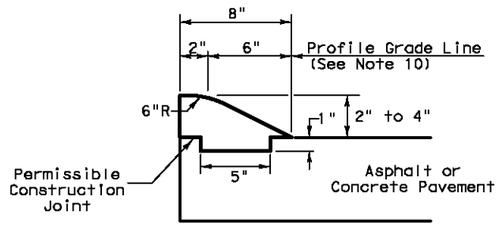
TYPE II CURB (MONOLITHIC)
5" - 5 ¾" HEIGHT



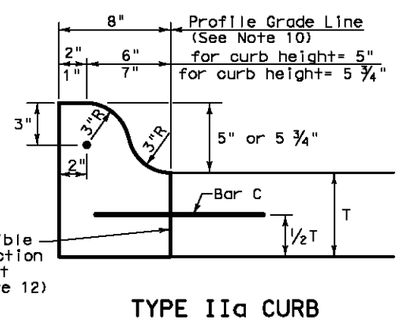
TYPE II CURB
5" - 5 ¾" HEIGHT



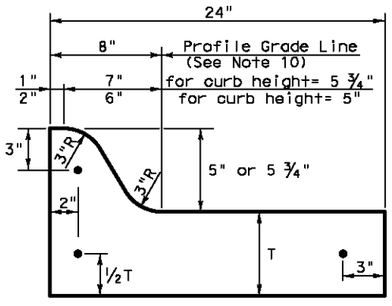
TYPE II CURB AND GUTTER
5" - 5 ¾" HEIGHT



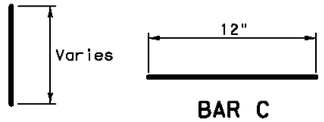
TYPE III CURB (KEYED)
2" - 4" HEIGHT



TYPE IIa CURB
5" - 5 ¾" HEIGHT

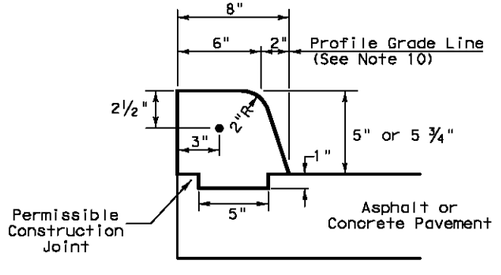


TYPE IIa CURB AND GUTTER
5" - 5 ¾" HEIGHT

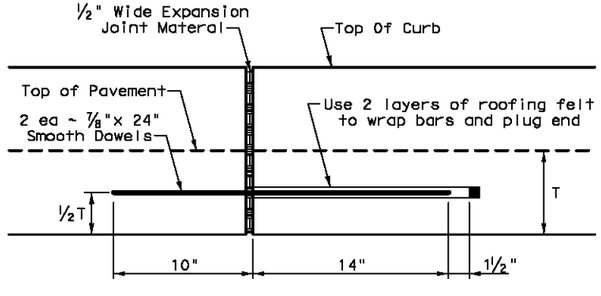


BAR B

BAR C

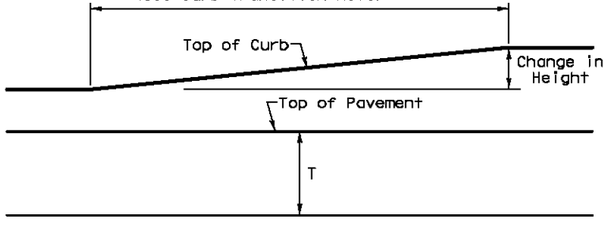


TYPE IV CURB (KEYED)
5" - 5 ¾" HEIGHT



EXPANSION JOINT DETAIL

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

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 ¼ 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.

Texas Department of Transportation
Design Division Standard

CONCRETE CURB AND CURB AND GUTTER

CCCG-12

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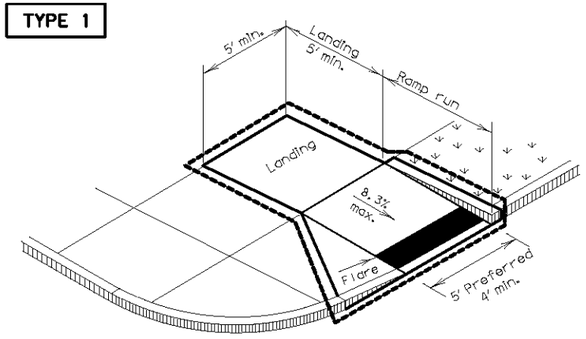
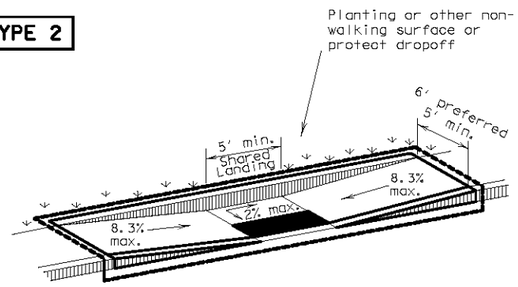
TYPE 1



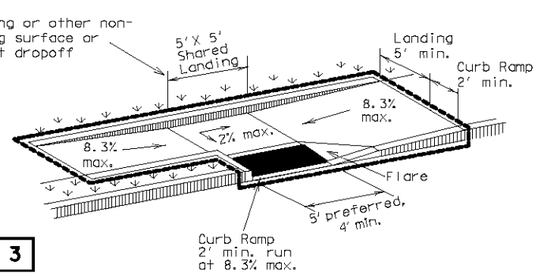
PERPENDICULAR CURB RAMP

TYPE 2

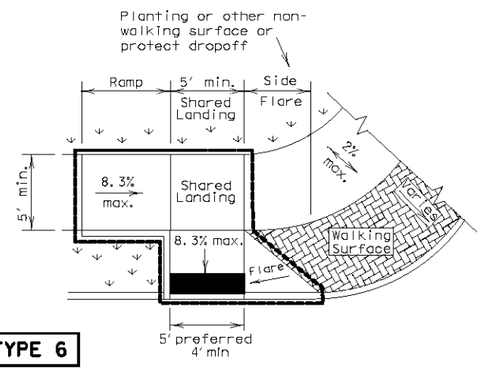


PARALLEL CURB RAMP
(Use only where water will not pond in the landing.)

TYPE 3

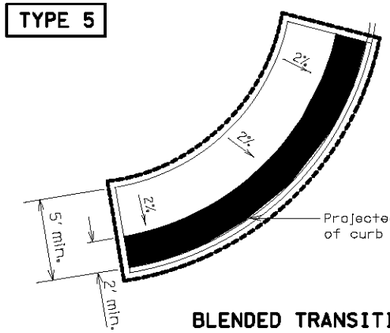


TYPE 6



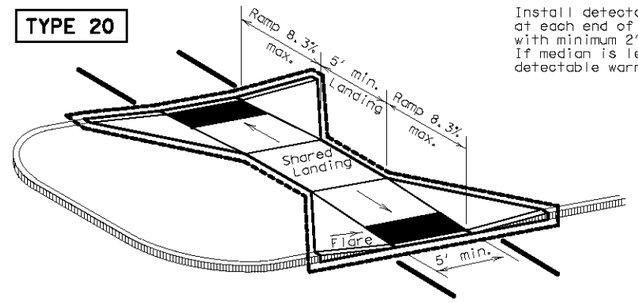
COMBINATION CURB RAMPS

TYPE 5



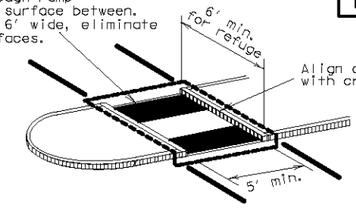
BLENDED TRANSITION

TYPE 20



Install detectable warning surface at each end of out-through ramp with minimum 2' smooth surface between. If median is less than 6' wide, eliminate detectable warning surfaces.

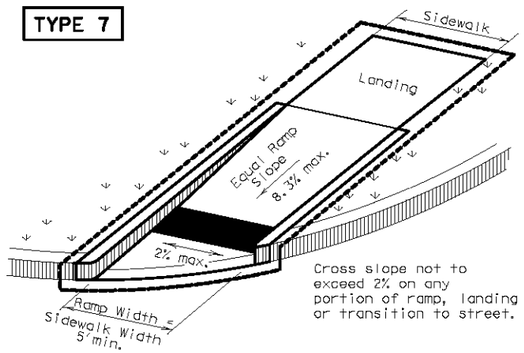
TYPE 21



Curb details are shown elsewhere in the plans.

CURB RAMPS AT MEDIAN ISLANDS

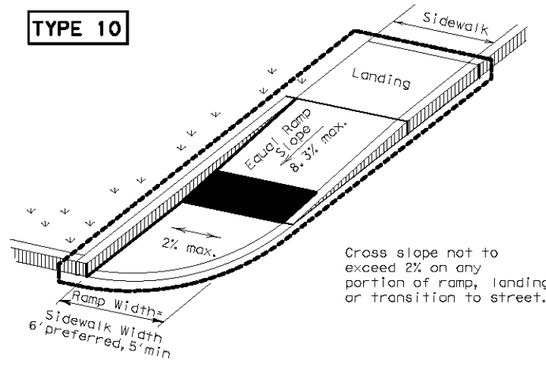
TYPE 7



Cross slope not to exceed 2% on any portion of ramp, landing or transition to street.

(Sidewalk set back from curb)

TYPE 10

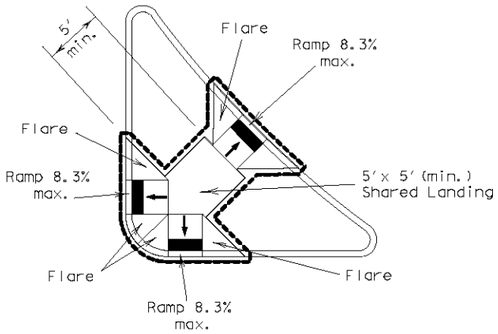


Cross slope not to exceed 2% on any portion of ramp, landing or transition to street.

(Sidewalk adjacent to curb)

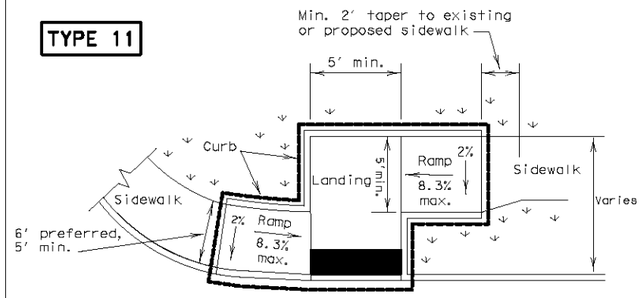
DIRECTIONAL RAMPS WITHIN RADIUS

TYPE 22



COMBINATION ISLAND RAMPS

TYPE 11



OFFSET PARALLEL CURB RAMP

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.

Ramp Limits of Payment

Detectable Warning Surface

SHEET 1 OF 4

Texas Department of Transportation
Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: PK	DW: TxDOT	CK: HD		
©TxDOT March 2002	CONT	SECT	JOB		HIGHWAY	
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VP June 13, 2012	DIST	COUNTY			SHEET NO.	
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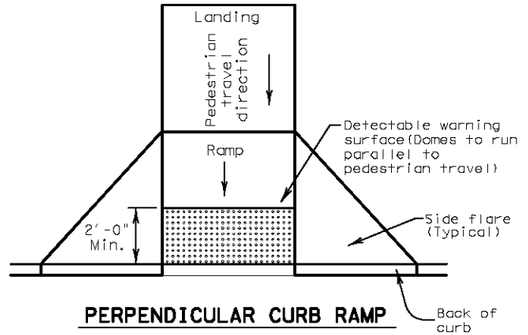
General Notes

Curb Ramps

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. 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.
4. Landings shall be 5'x 5' minimum with a maximum 2% slope in any direction.
5. Maneuvering 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.
6. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
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 current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102.
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. Handrails are not required on curb ramps. Provide curb ramps wherever on accessible route crosses (penetrates) a curb.
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. Provide a smooth transition where the curb ramps connect to the street.
16. 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.
17. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.

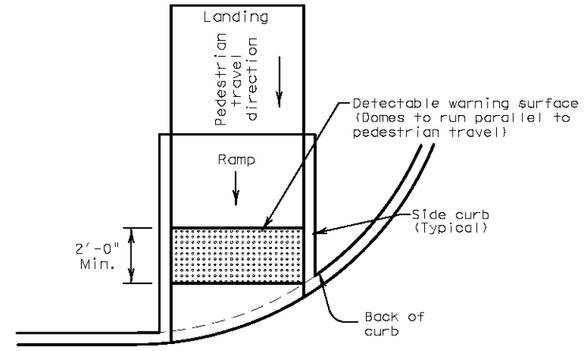
Detectable Warning Material

18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. 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.
19. 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.
20. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
21. Detectable warning surfaces shall be a minimum of 24" 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.
22. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb. Align the rows of domes to be perpendicular to the grade break between the ramp run and the street. Detectable warning surfaces may be curved along the corner radius.
23. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



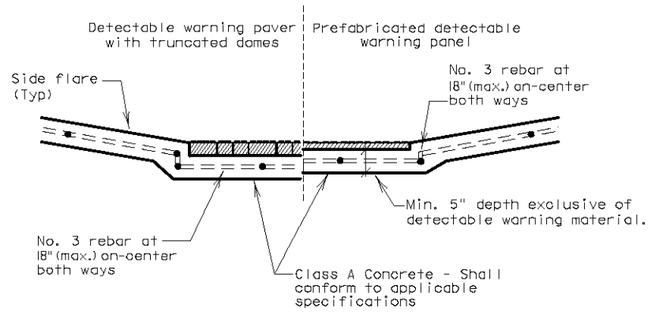
PERPENDICULAR CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.

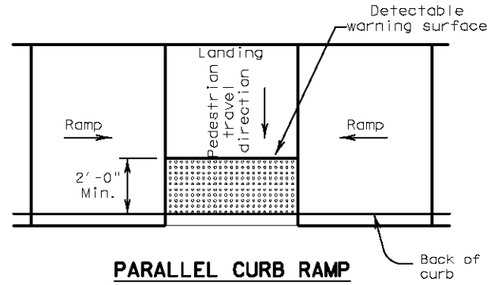


DIRECTIONAL CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.



SECTION: CURB RAMP AT DETECTABLE WARNING



PARALLEL CURB RAMP

Typical placement of detectable warning surface on landing at street edge.

DETECTABLE WARNINGS

Detectable Warning Pavers

24. 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.
25. Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning paver units using a power saw.

Sidewalks

26. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
27. 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.
28. Street grades and cross slopes shall be as shown elsewhere in the plans.
29. Changes in level greater than 1/4 inch are not permitted.
30. 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 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 TAS 505.
31. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
32. 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".
33. Sidewalk details are shown elsewhere in the plans.

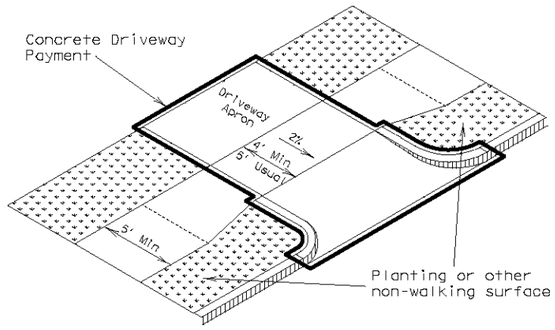
Texas Department of Transportation
Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

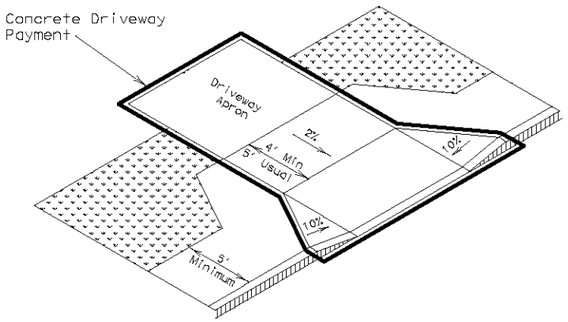
PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: PK	DW: TxDOT	CK: HD			
© TxDOT March 2002	CONT	SECT	JOB		HIGHWAY		
REVISIONS	.	.	.		.		
VP June 13, 2012	DIST	COUNTY			SHEET NO.		
SHEET 2 OF 4	.	.			93		

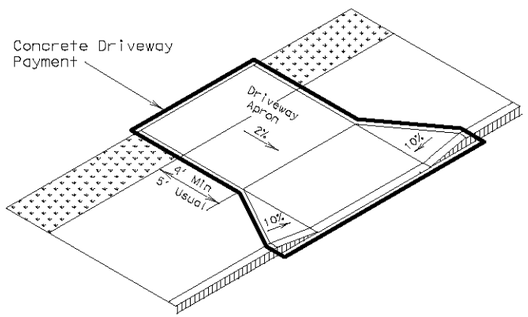
DATE:
FILE:



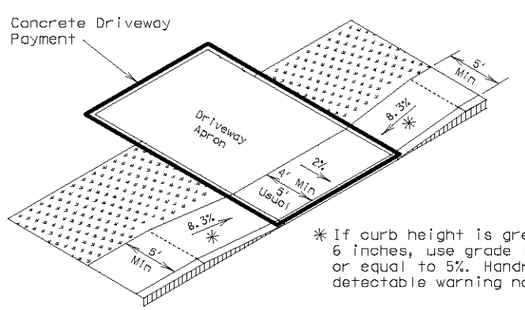
Setback sidewalk



Apron offset sidewalk



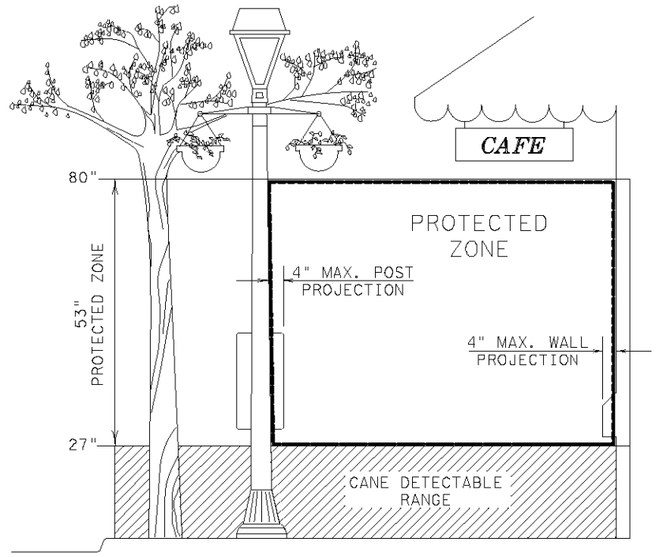
Wide sidewalk



✳ If curb height is greater than 6 inches, use grade less than or equal to 5%. Handrail and detectable warning not required.

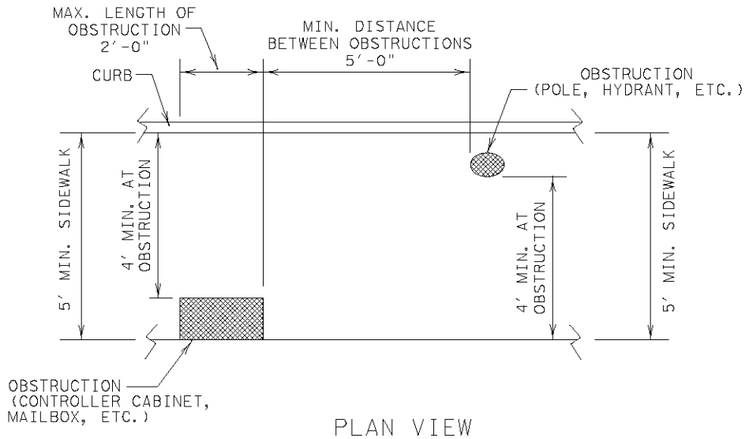
Ramp sidewalk

SIDEWALK TREATMENT AT DRIVEWAYS



PROTECTED ZONE

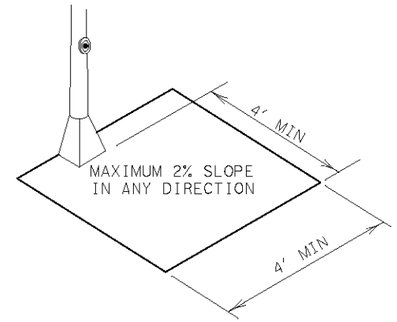
In pedestrian circulation area, maximum 4" projection for post or wall mounted objects between 27"and 80" above the surface.



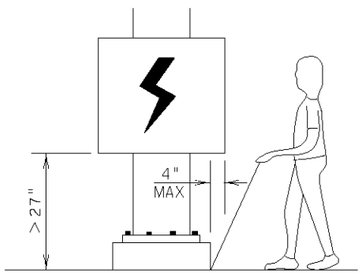
PLAN VIEW

PLACEMENT OF STREET FIXTURES

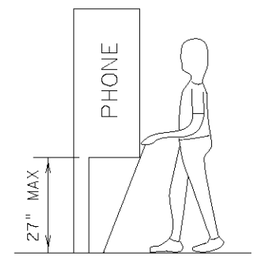
(ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' x 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)



CLEAR GROUND 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

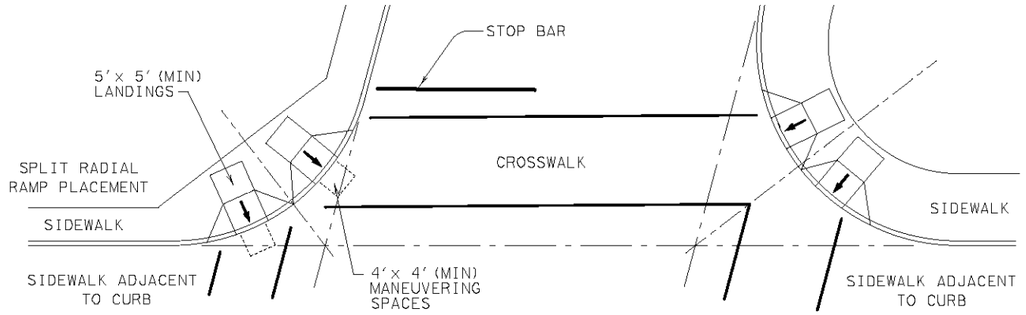
Texas Department of Transportation
Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

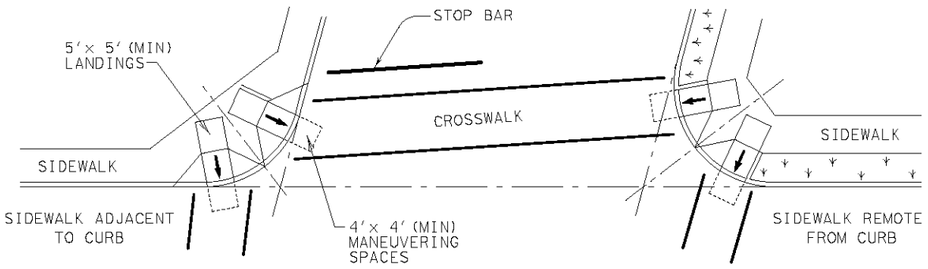
PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: PK	DW: TxDOT	CK: HD		
©TxDOT March 2002	CONT	SECT	JOB		HIGHWAY	
REVISIONS	.	.	.		.	
VP June 13, 2012	DIST	COUNTY			SHEET NO.	
SHEET 3 OF 4	.	.			94	

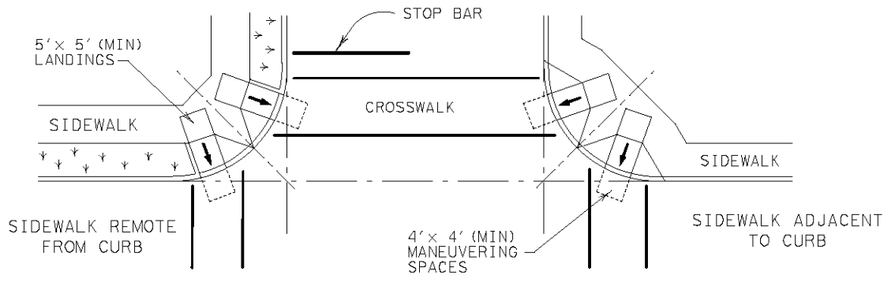
DATE:
FILE:



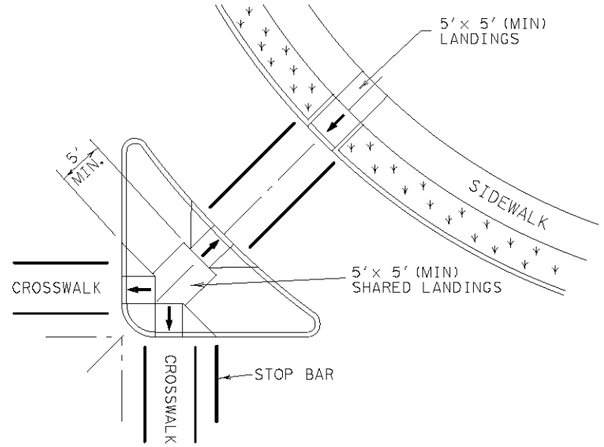
SKEWED INTERSECTION WITH "LARGE" RADIUS



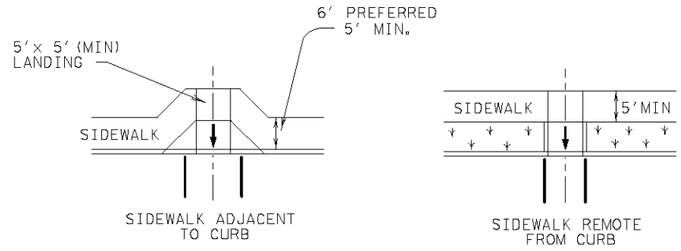
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

TYPICAL CROSSING LAYOUTS

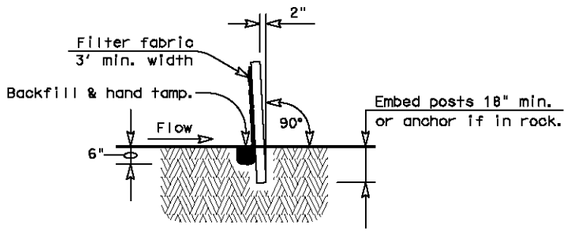
SHEET 4 OF 4

Texas Department of Transportation
Design Division Standard

PEDESTRIAN FACILITIES
CURB RAMPS

PED-12A

FILE: ped12a.dgn	DN: TxDOT	CK: PK	DW: TxDOT	CK: HD		
©TxDOT March 2002	CONT	SECT	JOB		HIGHWAY	
REVISIONS	.	.	.		.	
VP June 13, 2012	DIST	COUNTY			SHEET NO.	
SHEET 4 OF 4	.	.			95	



SECTION A-A

GENERAL NOTES

1. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

PLAN SHEET LEGEND

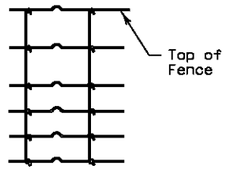
Sediment Control Fence —— SCF ——

SEDIMENT CONTROL FENCE USAGE GUIDELINES

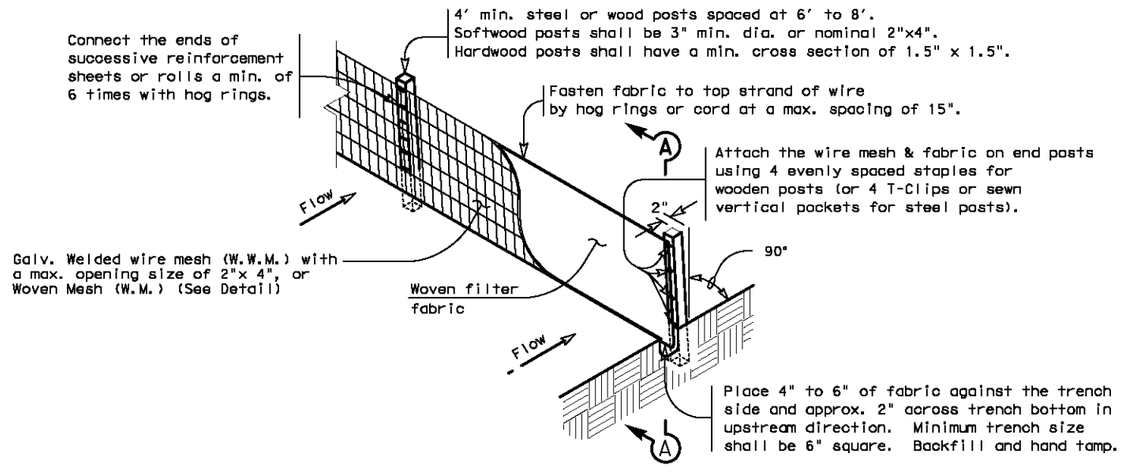
A sediment control fence may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A 2 year storm frequency may be used to calculate the flow rate to be filtered.

Sediment control fence should be sized to filter a max. flow through rate of 100 GPM/FT^2. Sediment control fence is not recommended to control erosion from a drainage area larger than 2 acres.

Galv. Hinge joint knot woven mesh (12.5 Ga. Min.) requires a minimum of five horizontal wires spaced at a max. 12 inches apart and all vertical wires spaced at a max. 12 inches apart.

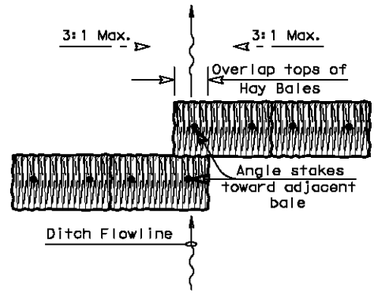


Hinge Joint Knot Woven Mesh (Option)

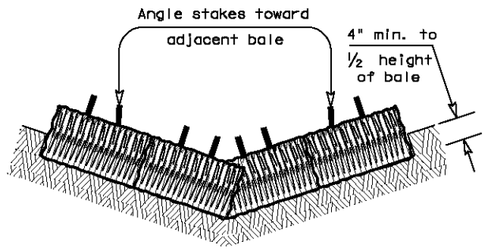


TEMPORARY SEDIMENT CONTROL FENCE

SCF



PLAN VIEW



PROFILE VIEW

PLANS SHEET LEGEND

Baled Hay —— BH ——

BALED HAY USAGE GUIDELINES

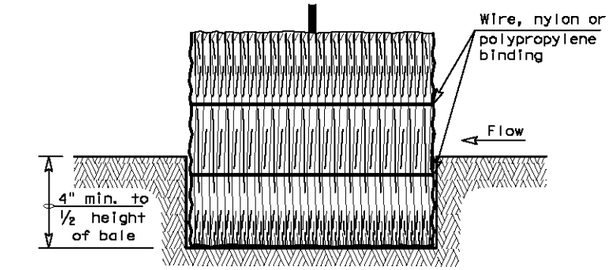
A Baled Hay installation may be constructed near the downstream perimeter of a disturbed area along a contour to intercept sediment from overland runoff. A two year storm frequency may be used to calculate the flow rate to be filtered. The installation should be sized to filter a maximum flow thru rate of 5 GPM/FT^2 of cross sectional area. Baled hay may be used at the following locations:

1. Where the runoff approaching the baled hay flows over disturbed soil for less than 100'. If the slope of the disturbed soil exceeds 10%, the length of slope upstream the baled hay should be less than 50'.
2. Where the installation will be required for less than 3 months.
3. Where the contributing drainage area is less than ½ acre.

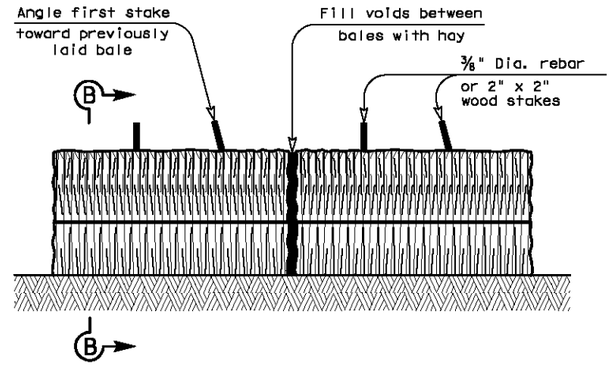
For Baled Hay installations in small ditches, the additional following considerations apply:

1. The ditch sideslopes should be graded as flat as possible to maximize the drainage flowrate thru the hay.
2. The ditch should be graded large enough to contain the overtopping drainage when sediment has filled to the top of the baled hay.

Bales should be replaced usually every 2 months or more often during wet weather when loss of structural integrity is accelerated.



SECTION B-B



BALED HAY FOR EROSION CONTROL

BH

GENERAL NOTES

1. Hay bales shall be a minimum of 30" in length and weigh a minimum of 50 Lbs.
2. Hay bales shall be bound by either wire or nylon or polypropylene string. The bales shall be composed entirely of vegetative matter.
3. Hay bales shall be embedded in the soil a minimum of 4" and where possible ½ the height of the bale.
4. Hay bales shall be placed in a row with ends tightly abutting the adjacent bales. The bales shall be placed with bindings parallel to the ground.
5. Hay bales shall be securely anchored in place with ⅜" Dia. rebar or 2" x 2" wood stakes, driven through the bales. The first stake shall be angled towards the previously laid bale to force the bales together.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

Texas Department of Transportation
Design Division (Roadway)

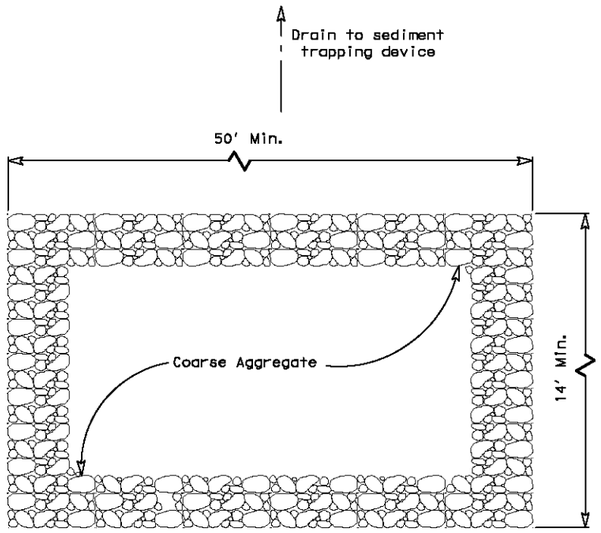
TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

FENCE & BALED HAY

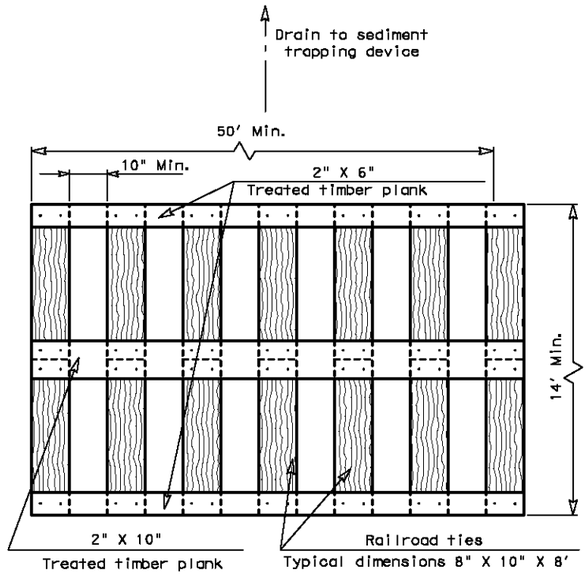
EC(1)-09

FILE: ec109.dgn	DN: HEJ	CK: HEJ	DW: BGD / TV	CK:
©TxDOT JUNE 1993	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	.	.		96
Language added to the end of the standard sheet note for silt fence to allow for the use of the new booking.	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	.	.	.	.	.

LEVELS DISPLAYED
1



PLAN



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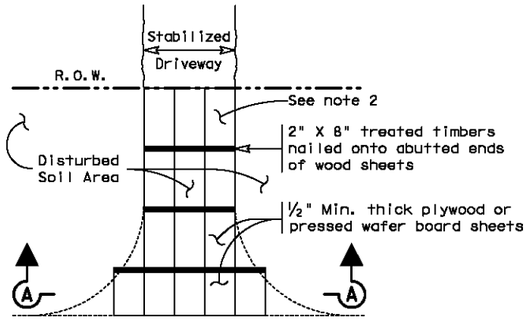
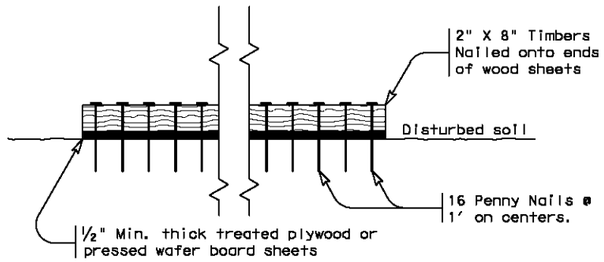
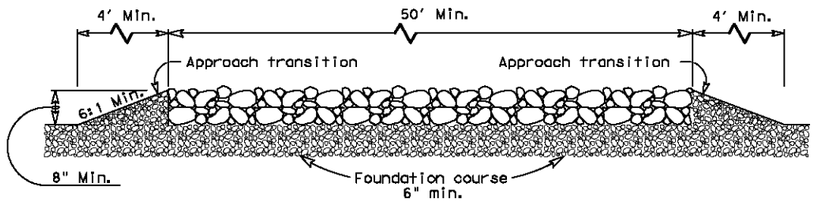


PLAN



SECTION A-A

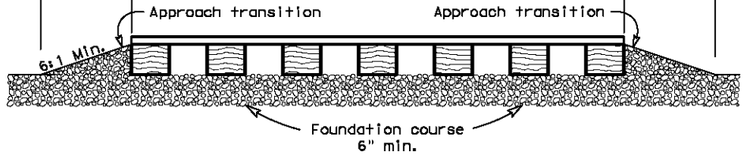


PROFILE

CONSTRUCTION EXIT (TYPE 1)

GENERAL NOTES

1. The length of the type 1 construction exit shall be as indicated on the plans, but not less than 50'.
2. The coarse aggregate should be open graded with a size of 4" to 8".
3. The approach transitions should be no steeper than 6:1 and constructed as directed by the Engineer.
4. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
5. The construction exit shall be graded to allow drainage to a sediment trapping device.
6. The guidelines shown hereon are suggestions only and may be modified by the Engineer.



PROFILE

CONSTRUCTION EXIT (TYPE 2)

GENERAL NOTES

1. The length of the type 2 construction exit shall be as indicated on the plans, but not less than 50'.
2. The treated timber planks shall be attached to the railroad ties with ½"x 6" min. lag bolts. Other fasteners may be used as approved by the Engineer.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The approach transitions shall be no steeper than 6:1 and constructed as directed by the Engineer.
5. The construction exit foundation course shall be flexible base, bituminous concrete, portland cement concrete or other material as approved by the Engineer.
6. The construction exit should be graded to allow drainage to a sediment trapping device.
7. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

CONSTRUCTION EXIT (TYPE 3)

GENERAL NOTES

1. The length of the type 3 construction exit shall be as shown on the plans, or as directed by the Engineer.
2. The type 3 construction exit may be constructed from open graded crushed stone with a size of two to four inches spread a min. of 4" thick to the limits shown on the plans.
3. The treated timber planks shall be #2 grade min., and should be free from large and loose knots.
4. The guidelines shown hereon are suggestions only and may be modified by the Engineer.

LEVELS DISPLAYED
1

Texas Department of Transportation
Design Division (Roadway)

TEMPORARY EROSION, SEDIMENT AND WATER POLLUTION CONTROL MEASURES

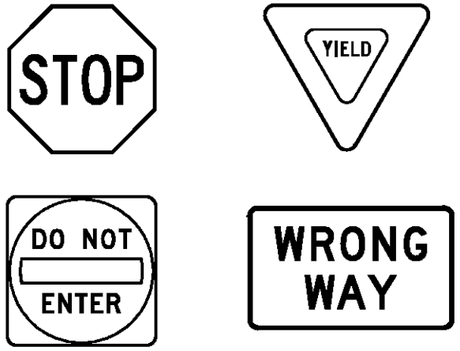
CONSTRUCTION EXITS

EC(3)-93

FILE: EC393.DGN	DN: HEJ	CK: HEJ	DW: BGD	CK:
©TxDOT JUNE 1993	DISTRICT	FEDERAL AID PROJECT		SHEET
REVISIONS	.	.		97
	COUNTY	CONTROL	SECT	JOB	HIGHWAY
	.	.	.	.	.

DATE:
FILE:

REQUIREMENTS FOR RED BACKGROUND REGULATORY SIGNS
(STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)



REQUIREMENTS FOR FOUR SPECIFIC SIGNS ONLY

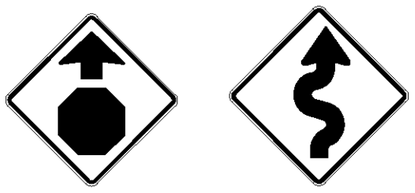
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	RED	TYPE B OR C SHEETING
BACKGROUND	WHITE	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE B OR C SHEETING
LEGEND	RED	TYPE B OR C SHEETING

REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS
(EXCLUDING STOP, YIELD, DO NOT ENTER AND WRONG WAY SIGNS)

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND, BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND, BORDERS AND SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

REQUIREMENTS FOR WARNING SIGNS



TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	FLOURESCENT YELLOW	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & SYMBOLS	ALL OTHER	TYPE B OR C SHEETING

REQUIREMENTS FOR SCHOOL SIGNS

TYPICAL EXAMPLES

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	FLOURESCENT YELLOW GREEN	TYPE B_{FL} OR C_{FL} SHEETING
LEGEND, BORDERS AND SYMBOLS	BLACK	ACRYLIC NON-REFLECTIVE FILM
SYMBOLS	RED	TYPE B OR C SHEETING

GENERAL NOTES

1. Signs to be furnished shall be as detailed elsewhere in the plans and/or as shown on sign tabulation sheet. Standard sign designs and arrow dimensions can be found in the "Standard Highway Sign Designs for Texas" (SHSD).
2. Sign legend shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets (B, C, D, E, Emod or F).
3. Lateral spacing between letters and numerals shall conform with the SHSD, and any approved changes thereto. Lateral spacing of legend shall provide a balanced appearance when spacing is not shown.
4. Black legend and borders shall be applied by screening process or cut-out acrylic non-reflective black film to background sheeting, or combination thereof.
5. White legend and borders shall be applied by screening process with transparent colored ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof.
6. Colored legend shall be applied by screening process with transparent colored ink, transparent colored overlay film or colored sheeting to background sheeting, or combination thereof.
7. Sign substrate shall be any material that meets the Departmental Material Specification requirements of DMS-7110 or approved alternative.
8. Mounting details for roadside mounted signs are shown in the "SMD series" Standard Plan Sheets.

ALUMINUM SIGN BLANKS THICKNESS	
Square Feet	Minimum Thickness
Less than 7.5	0.080
7.5 to 15	0.100
Greater than 15	0.125

DEPARTMENTAL MATERIAL SPECIFICATIONS	
ALUMINUM SIGN BLANKS	DMS-7110
SIGN FACE MATERIALS	DMS-8300

The Standard Highway Sign Designs for Texas (SHSD) can be found at the following website.

http://www.txdot.gov/

Texas Department of Transportation

Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

TSR(4)-13

FILE: tsr4-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	.	.	.	.
12-03 T-13	DIST	COUNTY		SHEET NO.
9-08	.	.		98

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)

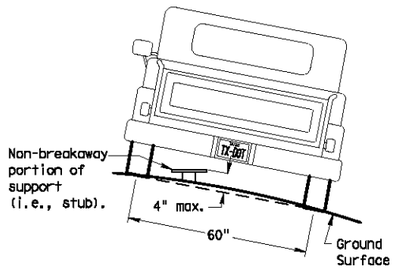
Anchor Type

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-1) to (SLIP-3))

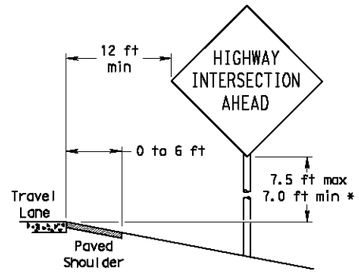
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



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).

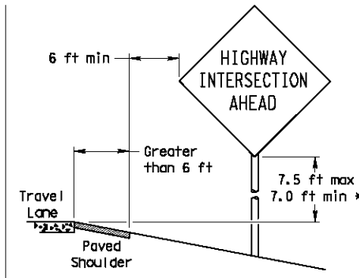
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

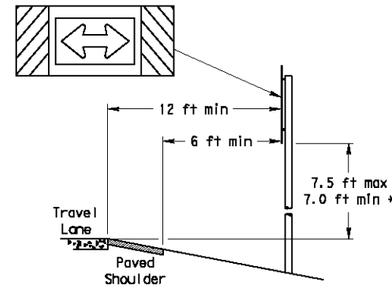
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



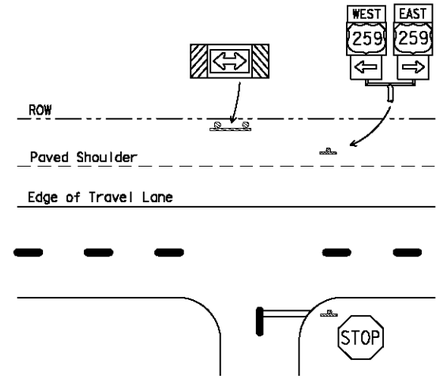
GREATER THAN 6 FT. WIDE

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.

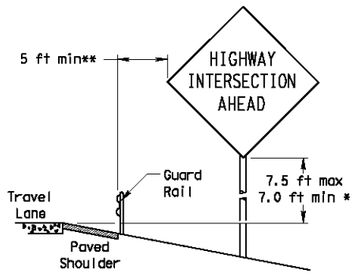
T-INTERSECTION



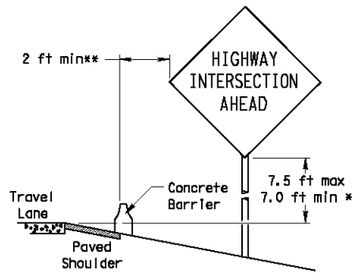
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



BEHIND BARRIER



BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.

* Signs shall be mounted using the following condition that results in the greatest sign elevation:

(1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or

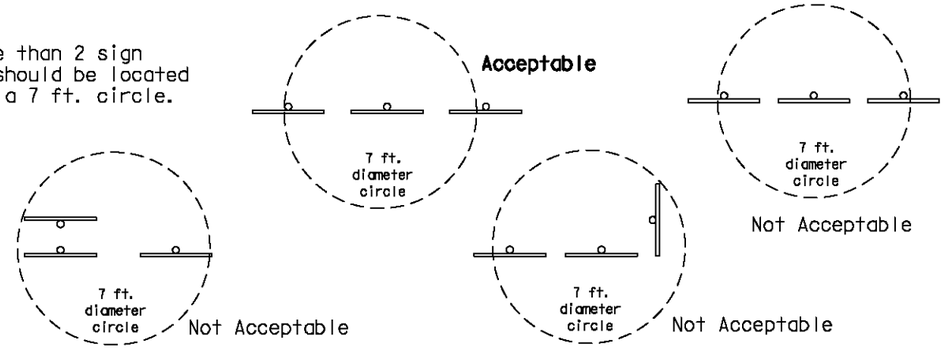
(2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

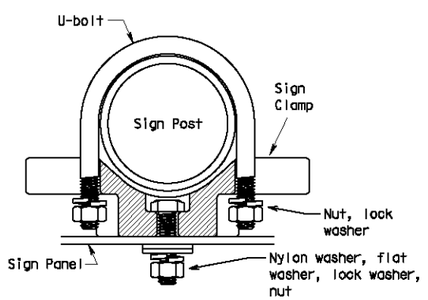
The website address is:
http://www.txdot.gov/publications/traffic.htm

No more than 2 sign posts should be located within a 7 ft. circle.



TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

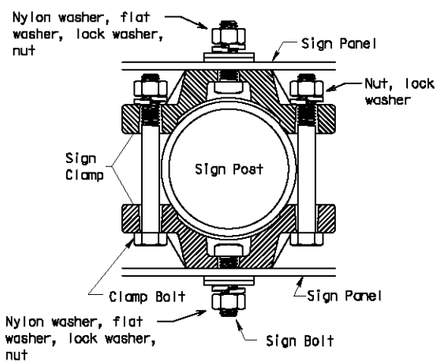


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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.

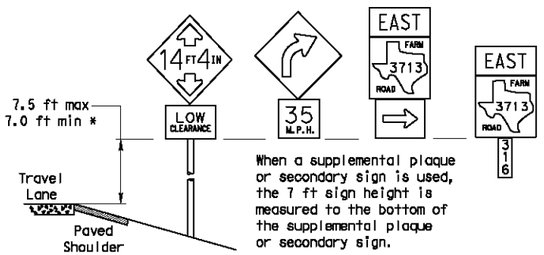
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



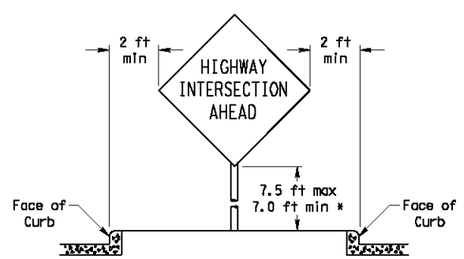
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



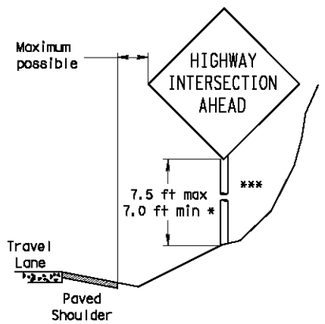
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

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.

STANDARD PLANS
TEXAS DEPARTMENT OF TRANSPORTATION
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

SMD(GEN)-08

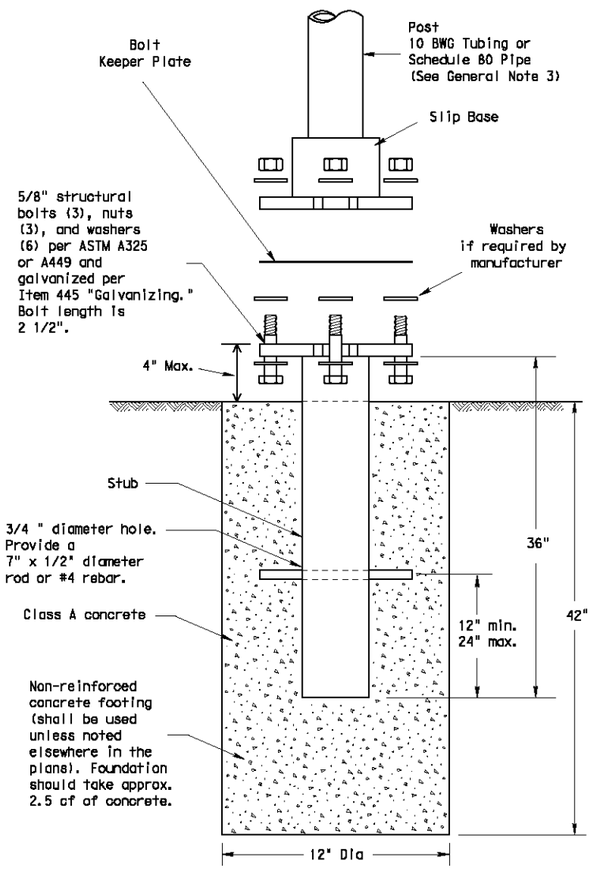
© TxDOT July 2002	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
REVISIONS 9-08	STATE DISTRICT ·	FEDERAL REGION 6	FEDERAL AID PROJECT ·	SHEET 99
COUNTY ·	CONTROL ·	SECTION ·	JOB ·	HIGHWAY ·

58A

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ACC:

TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



SM RD SGN ASSM TY XXXXX(X)SA(X-XXXX)

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:

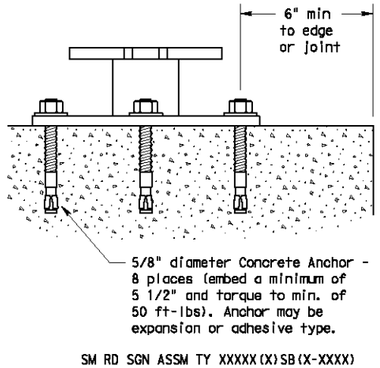
1. Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
2. Material used as post with this system shall conform to the following specifications:
   10 BWG Tubing (2.875" outside diameter)
   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
3. 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
4. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation
1. 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.
2. 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.
3. 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.
4. Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
5. The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support
1. 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.
2. Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.

CONCRETE ANCHOR



SM RD SGN ASSM TY XXXXX(X)SB(X-XXXX)

Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "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.

LEVELS DISPLAYED ACC:

1	2	3	4	5	6	7	8	9	10	11	21	31	41	51	61	
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	
49	50	51	52	53	54	55	56	57	58	59	60	61	62	63		

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

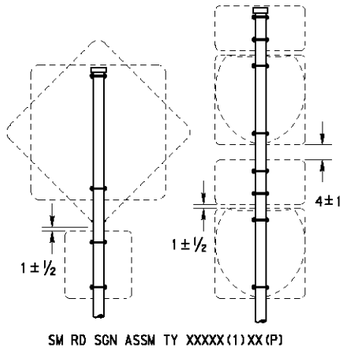
SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

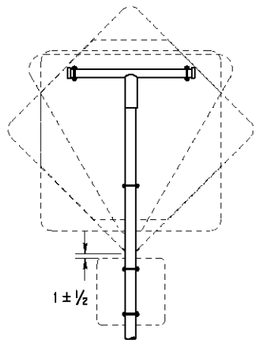
DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
9-08	·	6	·	100

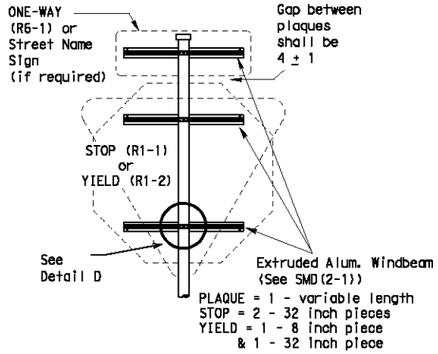
COUNTY	CONTROL	SECTION	JOB	HIGHWAY
·	·	·	·	·



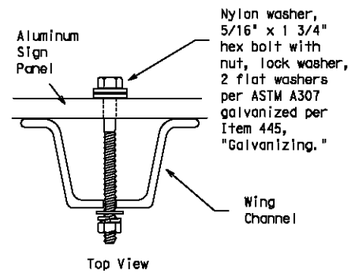
SM RD SGN ASSM TY XXXXX(1)XX(P)



SM RD SGN ASSM TY XXXXX(1)XX(T)

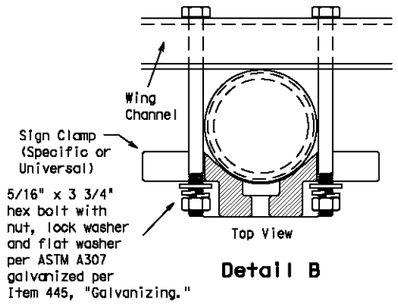


SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



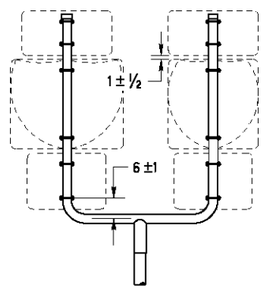
Top View

Detail A

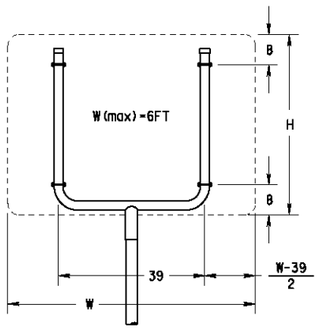


Top View

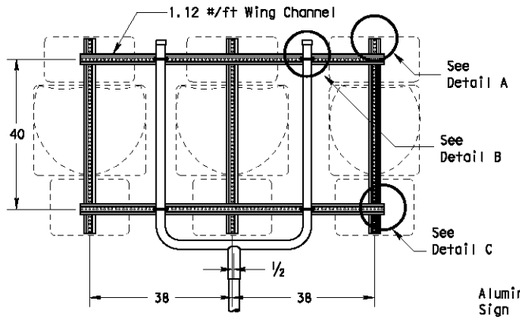
Detail B



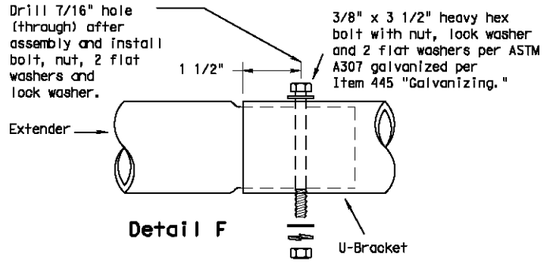
SM RD SGN ASSM TY XXXXX(1)XX(U)



SM RD SGN ASSM TY XXXXX(1)XX(U)

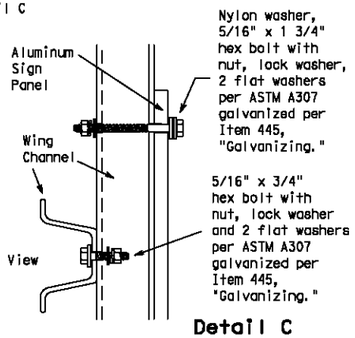


SM RD SGN ASSM TY XXXXX(1)XX(U-WC)
(See Note 11)

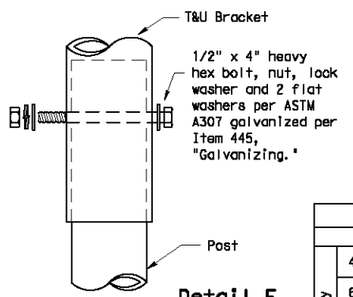


Detail F

Splices shall only be allowed behind the sign substrate.



Detail C

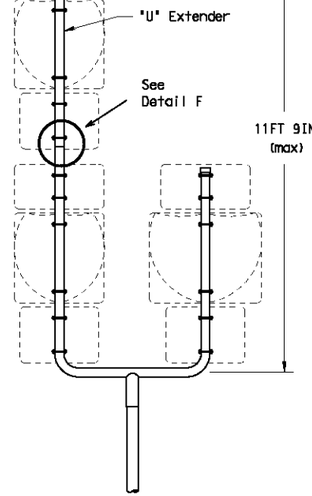


Detail E

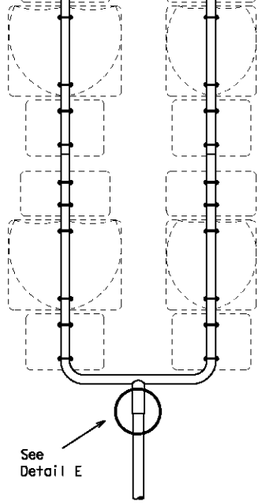
GENERAL NOTES:

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

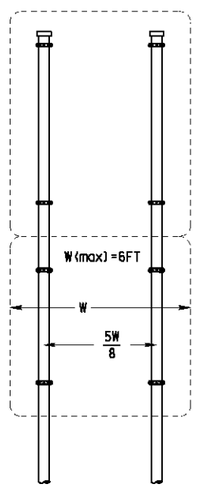
1.
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.



SM RD SGN ASSM TY S80(1)XX(U-1EXT)

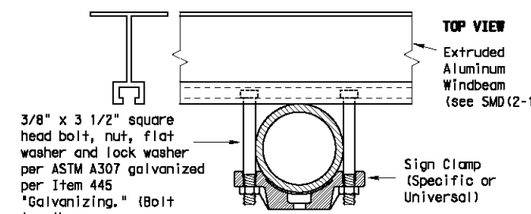


SM RD SGN ASSM TY S80(1)XX(U-2EXT)

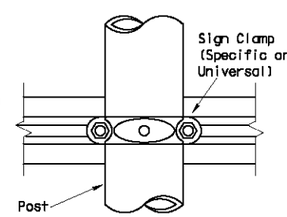


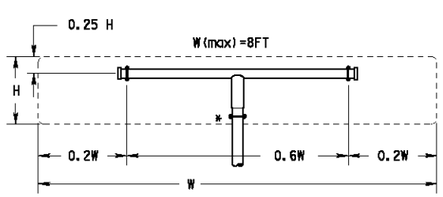
SM RD SGN ASSYM TY XXXXX(2)XX(P)

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)



Detail D

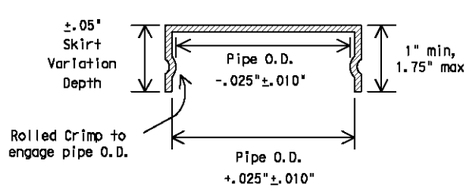




SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

All dimensions are in english unless detailed otherwise.

FRICTION CAP DETAIL



Friction caps may be manufactured from hot rolled or cold rolled steel sheets. The minimum sheet metal thickness shall be 24 gauge for all cap sizes.

The rim edges shall be reasonably straight and smooth. Caps shall be sized and formed in such a manner as to produce a drive-on friction fit and have no tendency to rock when seated on the pipe. The depth shall be sufficient to give positive protection against entrance of rainwater. They shall be free of sharp creases or indentations and show no evidence of metal fracture.

Caps shall have an electrodeposited coating of zinc in accordance with the requirements of ASTM B633 Class FE/ZN 8.

LEVELS DISPLAYED
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

ACC:

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

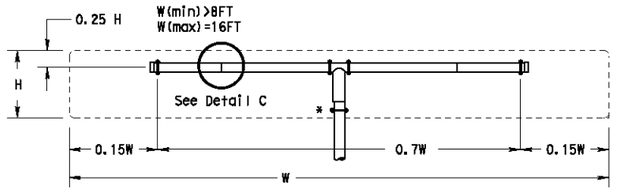
SMD(SLIP-2)-08

DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT

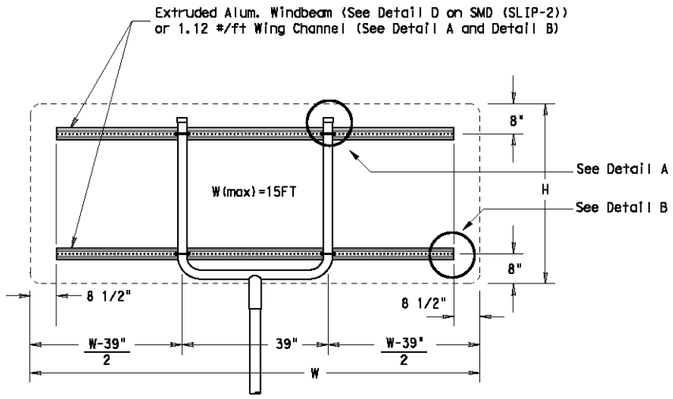
REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
9-08	.	6	.	101

COUNTY	CONTROL	SECTION	JOB	HIGHWAY
.	.	.	.	.

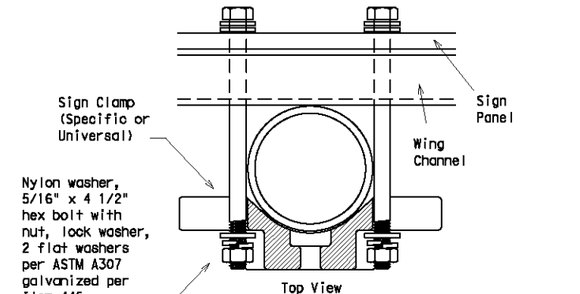
58C



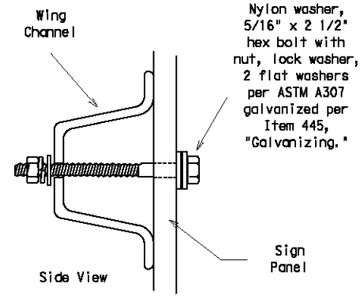
SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 12)



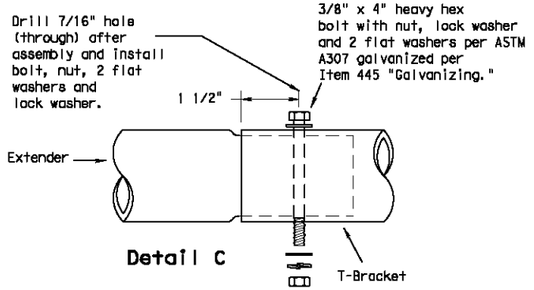
SM RD SGN ASSM TY XXXXX(1)XX(U-XX)



Detail A

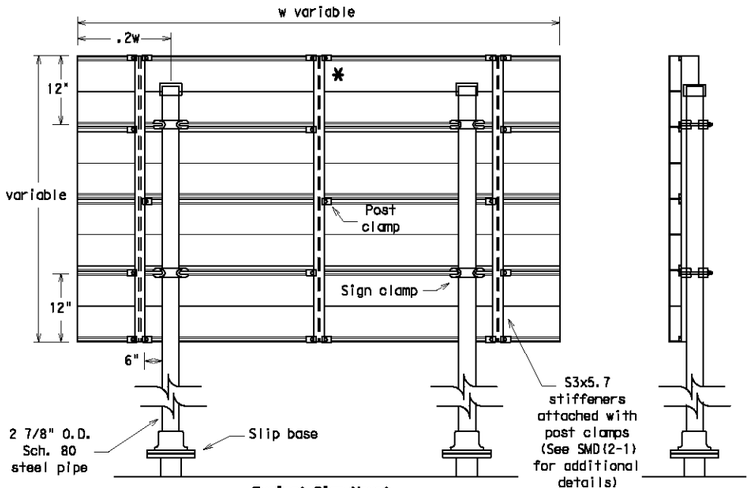


Detail B



Detail C

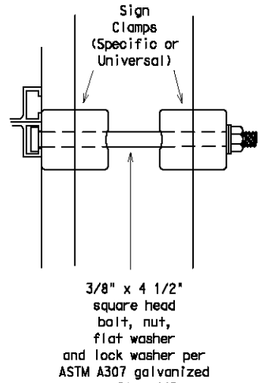
Splices shall only be allowed behind the sign substrate.



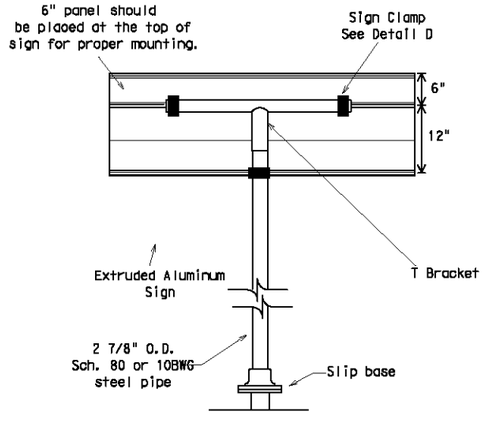
Typical Sign Mount

SM RD SGN ASSM TY S80(2)XX(P-EXAL)

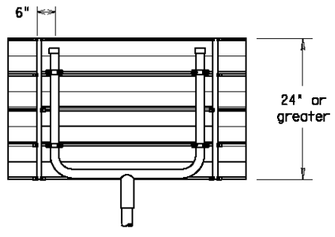
✱ Additional stiffener placed at approximate center of signs when sign width is greater than 10'.



Detail E

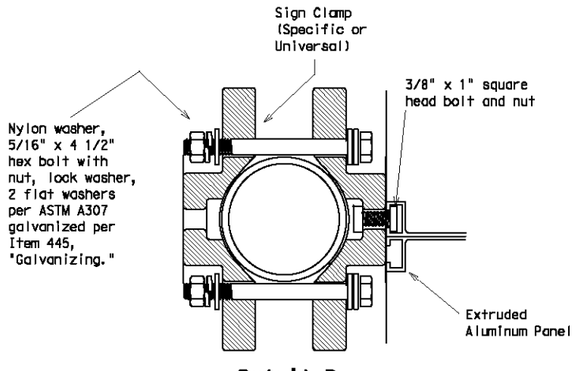


Extruded Aluminum Sign
With T Bracket



Use Extruded Alum. Windbeam as stiffeners
See SMD (2-1) for additional details

See Detail E
for clamp installation



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET

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

1. 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.
2. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
3. 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.
4. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
5. 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.
6. 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.
7. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
8. 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."
9. Sign blanks shall be the sizes and shapes shown on the plans.
10. 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.
11. 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)

STANDARD PLANS
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-3)-08

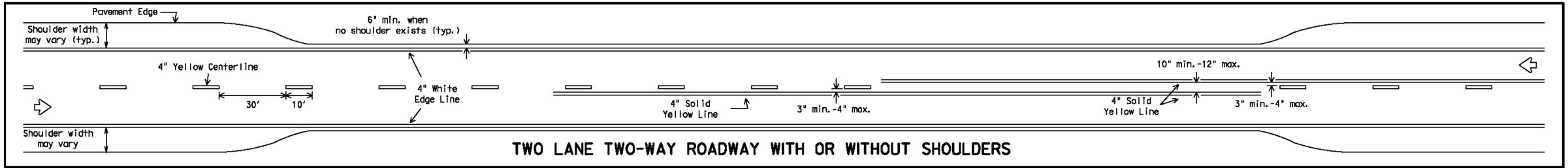
DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT

REVISIONS	STATE DISTRICT	FEDERAL REGION	FEDERAL AID PROJECT	SHEET
9-08	.	6	.	102

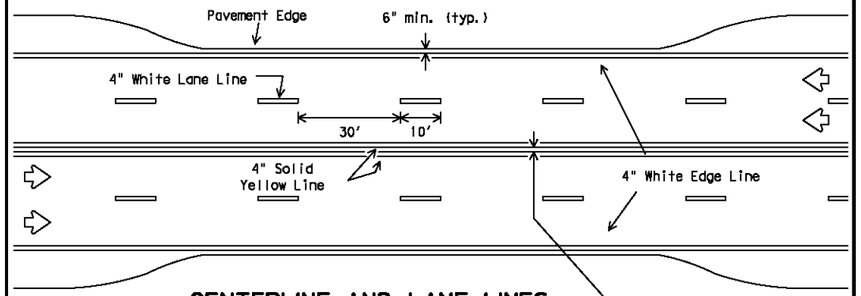
COUNTY	CONTROL	SECTION	JOB	HIGHWAY
.	.	.	.	.

LEVELS DISPLAYED
ACC:

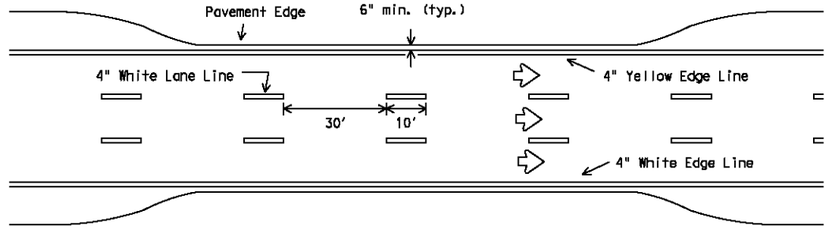
DATE:
FILE:



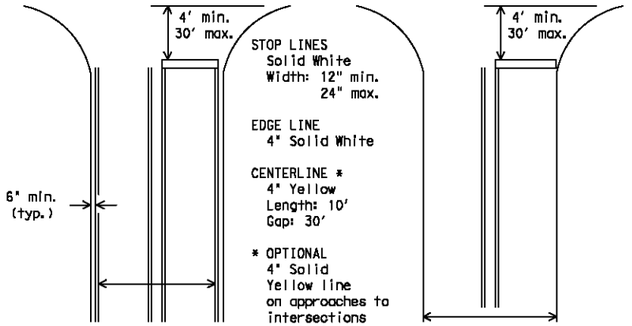
TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

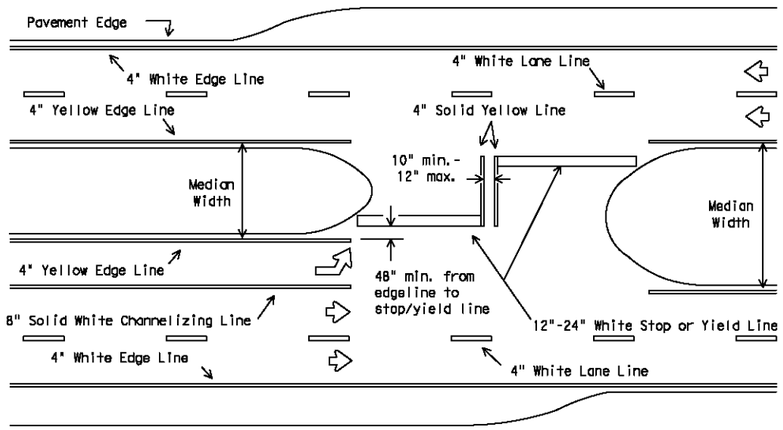


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



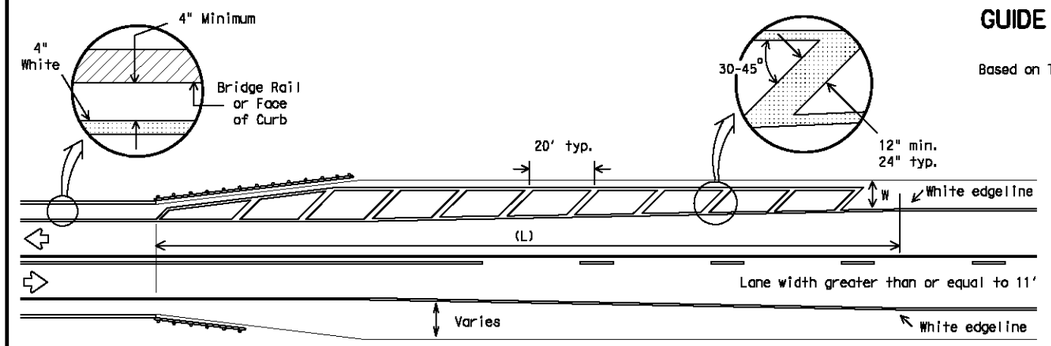
GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Highways



All medians shall be field measured to determine the location of necessary striping. Stop/Yield bars and centerlines shall be placed when the median width is greater than 30 ft. The median width is defined as the area between two roadways of a divided highway measured from edge of traveled way to edge of traveled way. The median excludes turn lanes. The median width might be different between intersections, interchanges and of opposite approaches of the same intersection. The narrow median width will be the controlling width to determine if markings are required.

FOUR LANE DIVIDED ROADWAY INTERSECTIONS



NOTES:

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

TABLE 1 - TYPICAL LENGTH (L)

Posted Speed *	Formula
≤ 40	$L = \frac{WS^2}{60}$
≥ 45	L=WS

* 85th Percentile Speed may be used on roads where traffic speeds normally exceed the posted speed limit. Crosshatching length should be rounded up to nearest 5 foot increment.

L=Length of Crosshatching (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

EXAMPLES:

An 8 foot shoulder in advance of a bridge reduces to 4 feet on a 70 MPH roadway. The length of the crosshatching should be:

$L = 8 \times 70 = 560$ ft.

A 4 foot shoulder in advance of a bridge reduces to 2 feet on a 40 MPH roadway. The length of the crosshatching should be:

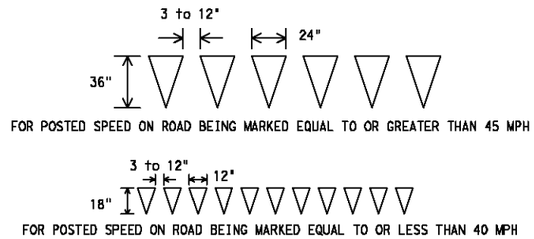
$L = 4(40)^2 / 60 = 106.67$ ft. rounded to 110 ft.

GENERAL NOTES

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.

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

Texas Department of Transportation
Traffic Operations Division

TYPICAL STANDARD PAVEMENT MARKINGS

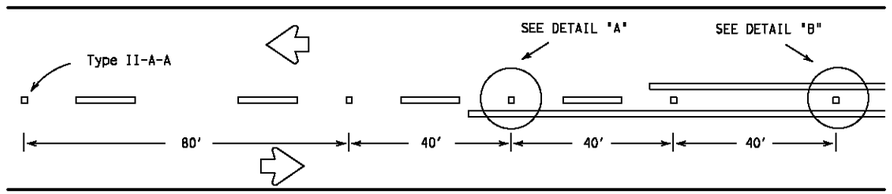
PM(1)-12

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

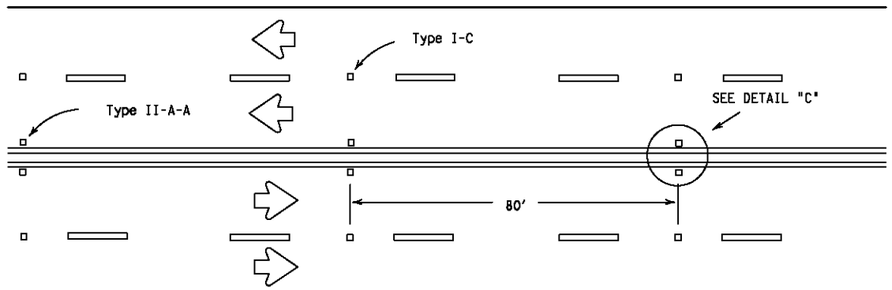
REVISIONS	CONT	SECT	JOB	HIGHWAY
8-95 2-12	.	.	.	.
5-00	DIST	COUNTY		SHEET NO.
8-00	.	.		103
3-03				

22A

REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

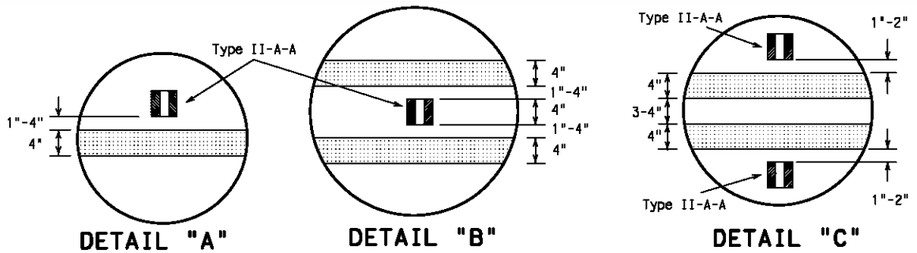


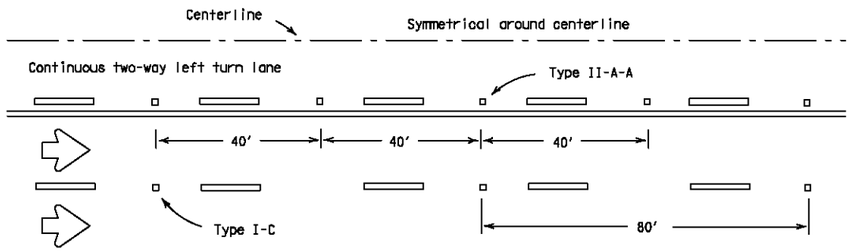
CENTERLINE FOR ALL TWO LANE ROADWAYS



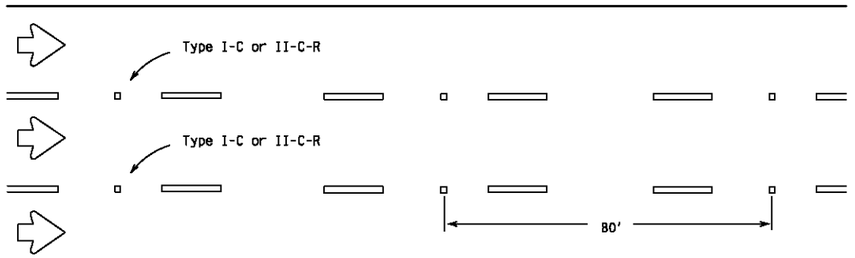
CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY HIGHWAYS

Raised pavement marker Type I-C, clear face toward normal traffic, shall be placed on 80-foot centers.





CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE

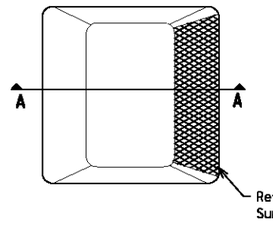


LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

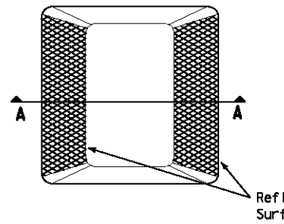
Raised pavement markers Type II-C-R shall have clear face toward normal traffic and red face toward wrong-way traffic.

MATERIAL SPECIFICATIONS	
PAVEMENT MARKERS (REFLECTORIZED)	DMS-4200
EPOXY AND ADHESIVES	DMS-6100
BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS	DMS-6130
TRAFFIC PAINT	DMS-8200
HOT APPLIED THERMOPLASTIC	DMS-8220
PERMANENT PREFABRICATED PAVEMENT MARKINGS	DMS-8240

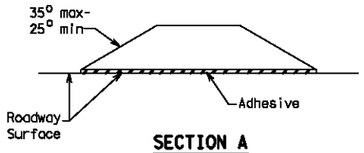
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

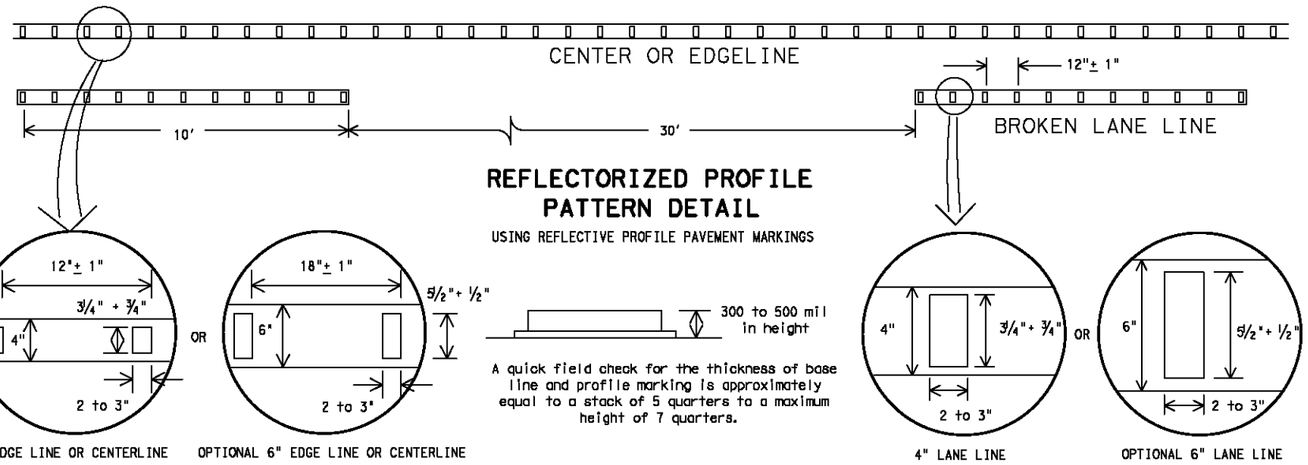


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



NOTE:
Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

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.

Texas Department of Transportation
Traffic Operations Division

POSITION GUIDANCE USING RAISED MARKERS
REFLECTORIZED PROFILE MARKINGS
PM(2)-12

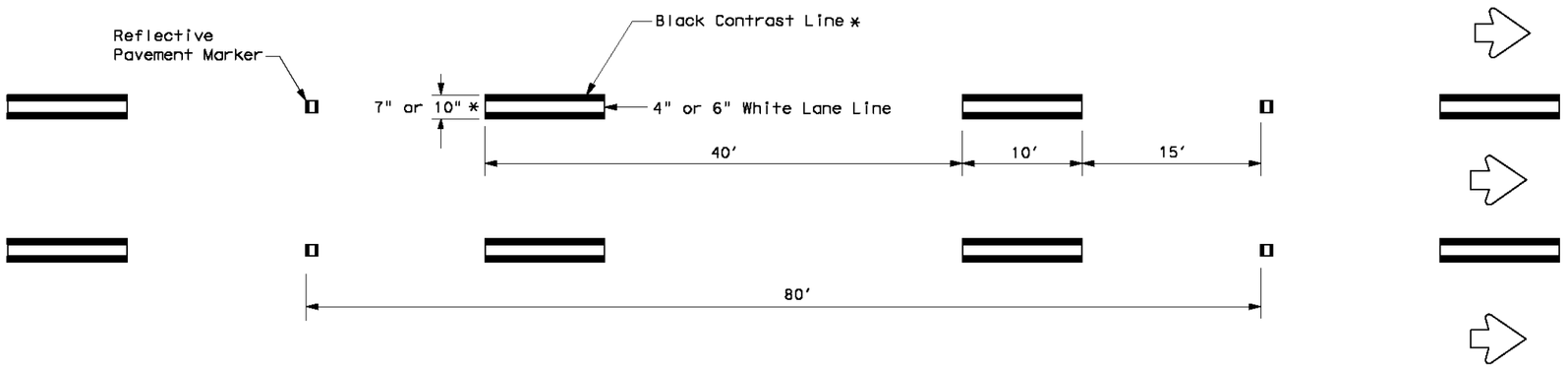
DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

REVISIONS	CONT	SECT	JOB	HIGHWAY
4-92 2-10				
5-00 2-12	DIST	COUNTY		SHEET NO.
8-00				164
2-08				

22B

DATE:
FILE:

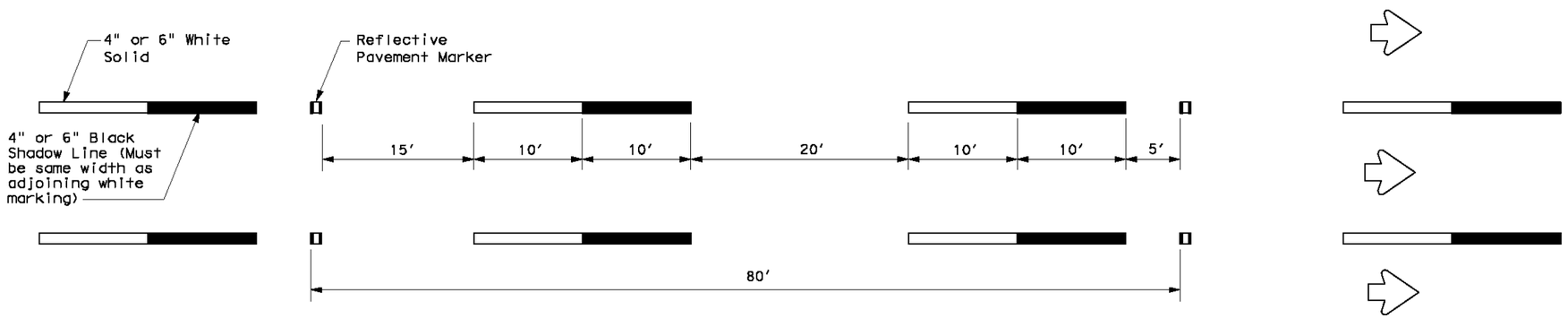
DATE:
FILE:



CONTRAST LANE LINE DESIGN

* See contrast line dimensions table for width of black line.

CONTRAST LINE DIMENSIONS		
White	Black (per side)	Total Width
4"	1.5"	7"
6"	2"	10"



SHADOW LANE LINE DESIGN

GENERAL NOTES

1. Contrast and Shadow markings may only be used on concrete pavements.
2. Contrast and Shadow markings shall not be used on edge lines.
3. Contrast lane lines shall be permanent prefabricated pavement markings meeting DMS 8240.
4. Shadow lane line designs shall be a liquid markings system approved by TxDOT.
5. All raised reflective pavement markers placed in broken lines shall be placed in line with and midway between the white stripes.
6. See PM(2) for raised reflective pavement markings installation details.

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.

Texas Department of Transportation

Traffic Operations Division Standard

CONTRAST AND SHADOW PAVEMENT MARKINGS

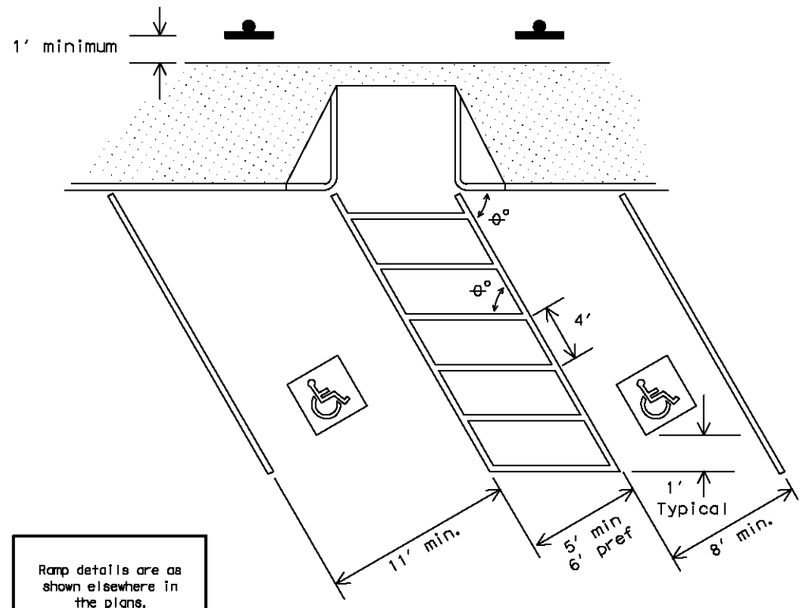
CPM(1)-14

FILE: CPM(1)14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
	CONT	SECT	JOB	HIGHWAY
REVISIONS	.		.	.
	DIST	COUNTY		SHEET NO.
		.		105

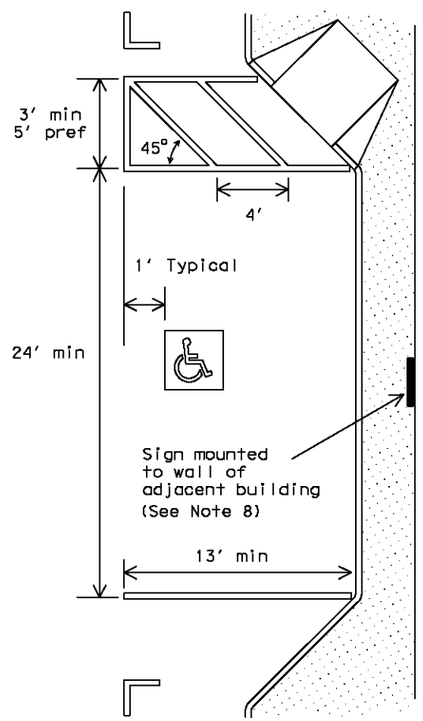
22N

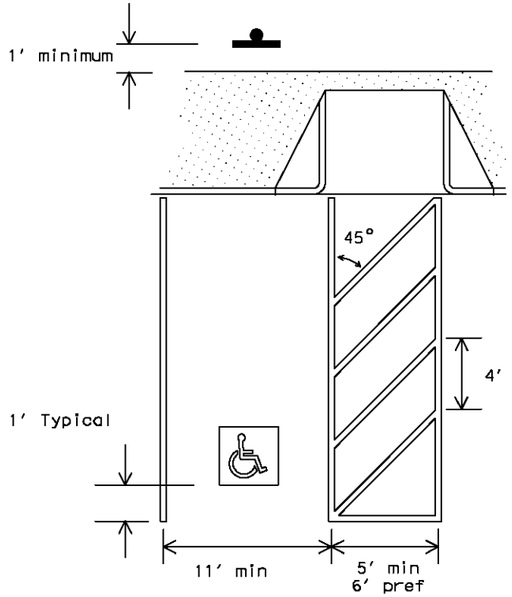
DATE:
FILE:

TYPICAL ACCESSIBLE PARKING SPACE DIMENSIONS

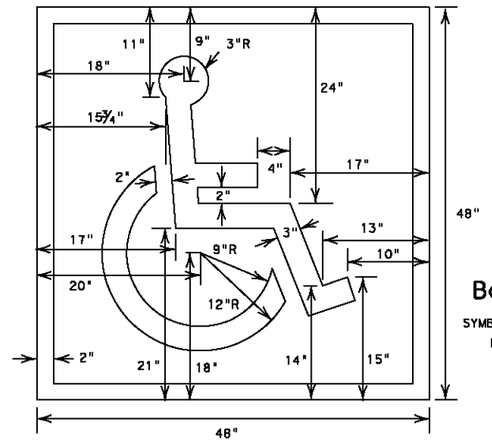


Ramp details are as shown elsewhere in the plans.



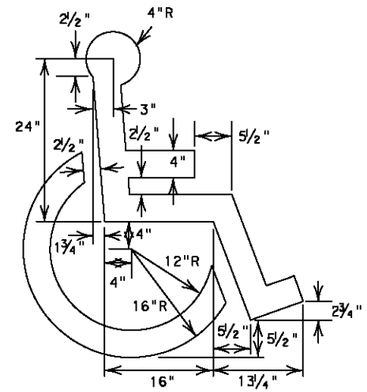


PAVEMENT MARKINGS



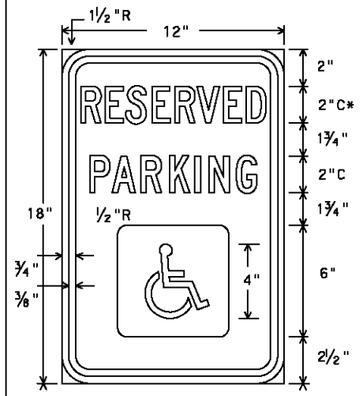
With Background

SYMBOL & BORDER: WHITE
BACKGROUND: BLUE



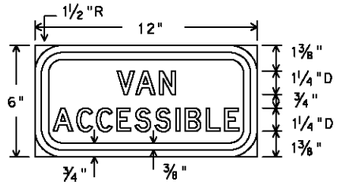
Symbol Only SYMBOL: BLUE OR WHITE

HANDICAPPED PARKING SIGN



R7-8a

LEGEND AND BORDER: GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND: WHITE



R7-8 plaque

LEGEND AND BORDER: GREEN
BACKGROUND: WHITE

SPECIFICATION REFERENCE TABLE	
MATERIALS AND TESTS DIVISION SPECIFICATIONS	
ALUMINUM SIGN BLANKS	D-9-7110
REFLECTIVE SHEETING, TYPE C (HIGH SPECIFIC INTENSITY)	D-9-8300

GENERAL SIGN NOTES:

The Alphabets and lateral spacing between letters and numerals shall conform with the Texas "Manual on Uniform Traffic Control Devices for Streets and Highways", latest edition, and any approved changes thereto. Lateral spacing of text shall provide a balanced appearance. All materials shall conform to Department Specifications.

Legend shall be applied by screening process of black and/or transparent colored ink, cut-out black vinyl non-reflective decal sheeting and/or reflective sheeting or combination thereof. Background shall be white reflective sheeting (Type C).

Sign blanks shall be one piece 0.08 inch thick sheet aluminum alloy (Type A), unless otherwise noted elsewhere in the plans.

GENERAL NOTES:

1. All parking space limit lines shall be 4" solid white lines.
2. Aisle markings shown are examples only. Other methods to indicate a NO PARKING area are acceptable. Aisle markings shall be white.
3. Dimensions of limit lines, aisle markings, and symbol (with or without background) may vary ± 10%.
4. Pavement marking symbols (with background):
   a) are REQUIRED unless stated elsewhere in the plans,
   b) should be placed toward the far end of the parking spaces so as to be visible to motorists in the travel lane,
   c) may be painted or prefabricated material, and
   d) shall be 30" x 30" minimum.
5. With approval of the Engineer, prefabricated pavement marking symbols with background of other dimensions exceeding the 30" x 30" minimum may be used. Alternative designs shall include a proportion sized symbol of accessibility, and shall conform to the illustrated colors for background, symbol and border.
6. An R7-8 sign:
   a) shall be REQUIRED for each accessible parking space,
   b) shall NOT be placed between two accessible parking spaces,
   c) shall NOT be placed in a location that restricts movement of wheelchairs within the adjacent sidewalk, and
   d) shall have a minimum mounting height of 7 feet. If mounted to wall or located so as not to be near pedestrian traffic minimum mounting height may be 7 feet.
7. Post mounted signs should be placed approximately 1 foot (or greater) behind the curb to prevent damage from vehicle overhang.
8. Signs may be mounted directly to an adjacent wall of a building when post mounting is impractical.

Texas Department of Transportation
Traffic Operations Division

PAVEMENT MARKINGS AND SIGNING FOR ACCESSIBLE PARKING

PM(AP)-98

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT

REVISIONS	CONT	SECT	JOB	HIGHWAY
4-98	·	·	·	·
	DIST	COUNTY		SHEET NO.
	·	·		166

22K