FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		SHEET NO.
6	N/A		1
STATE	STATE DIST. NO.	COUNTY	
TEXAS	21	CAMERON	
CONT.	SECT.	JOB	HIGHWAY NO.
N/A	N/A	N/A	PR 100

STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED
ROADWAY AND PEDESTRIAN FACILITIES IMPROVEMENT

TOTAL LENGTH OF PROJECT ROAD = ~352 FT. – .067 MILES

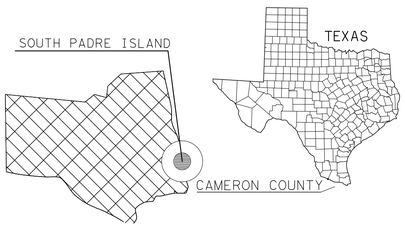
CAMERON COUNTY

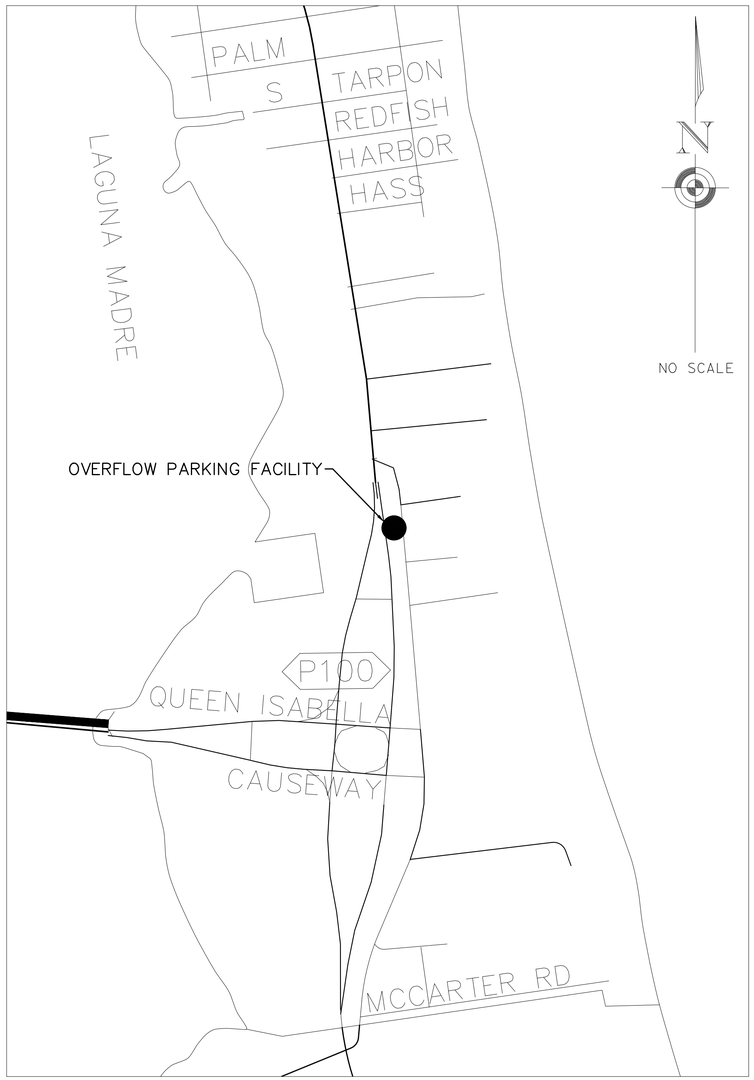
PR 100 OVERFLOW PARKING FACILITY

LIMITS: MEDIAN BETWEEN PADRE BLVD LOOP AND PADRE BLVD (PR100)
APPROXIMATELY 110' SOUTH OF PADRE BOULEVARD LOOP ACROSS FROM THE
HISTORICAL MUSEUM WITHIN THE CITY OF SOUTH PADRE ISLAND, TEXAS

FOR THE CONSTRUCTION OF PAVING, GRADING, DRAINAGE, PAVEMENT MARKING, SIGNING, LIGHTING, AND PEDESTRIAN CROSSWALK.

100%





PROJECT DATA

POSTED SPEED:	PR 100 – 30 MPH
ADT:	ADT 2019: 3,572 ADT 2039: 5,307
FUNCTIONAL CLASS:	MAJOR COLLECTOR
EXCEPTION:	NONE
EQUATION:	NONE
RAILROAD CROSSING:	NONE

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION ON SEPTEMBER 1, 2024 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS, SHALL GOVERN ON THIS PROJECT:

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

5/27/2025 STATE OF TEXAS — BRIAN J. LEE — 142043 — LICENSED PROFESSIONAL ENGINEER
THE ENGINEER'S SEAL APPLIES TO SHEETS 3–9, 19–21, 39, 48–49

5/27/2025 STATE OF TEXAS — JOHN W. RYAN — 141023 — LICENSED PROFESSIONAL ENGINEER
THE ENGINEER'S SEAL APPLIES TO SHEETS 1–2, 22–26, 40–42

5/27/2025 STATE OF TEXAS — B. CLAY SUTHERLAND — 138535 — LICENSED PROFESSIONAL ENGINEER
THE ENGINEER'S SEAL APPLIES TO SHEETS 10 AND 41

811 Know what's **below.** **Call** before you dig.

CONSULTANT
KIMLEY–HORN AND ASSOCIATES, INC.
CONSULTANT DESIGN ENGINEER
DATE : 5/27/2025
NAME | TITLE

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F–928

FINAL PLAN DATA :

FINAL CONTRACT PRICE: _____
CONTRACTOR'S NAME: _____
CONTRACTOR'S ADDRESS: _____
LETTING DATE: _____
(LET BY THE CITY OF SOUTH PADRE ISLAND)
DATE WORK BEGAN: _____
DATE WORK COMPLETED: _____
DATE WORK ACCEPTED: _____

CHANGE ORDERS & SUPP. AGREEMENTS :

LOCAL LET

WORK WAS COMPLETED ACCORDING TO THE PLANS AND CONTRACT.

CITY OF SOUTH PADRE ISLAND

LOCAL ENTITIES

CITY OF SOUTH PADRE ISLAND CONCURRENCE — DATE :
NAME
TITLE

South Padre ISLAND

TEXAS DEPARTMENT OF TRANSPORTATION

TXDOT CONCURRENCE :

COUNTY CAMERON PROJ. NO. N/A
HWY. NO. PR 100 LETTING DATE _____
DATE ACCEPTED _____

PR 100 OVERFLOW PARKING FACILITY
(LET BY CITY OF SOUTH PADRE ISLAND)

INDEX OF SHEETS

* THE STANDARD SHEETS SPECIFICALLY IDENTIFIED HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THS PROJECT.

JOHN W. RYAN, P.E. 5/27/2025

** THE STANDARD SHEETS SPECIFICALLY IDENTIFIED HAVE BEEN SELECTED BY ME OR UNDER MY RESPONSIBLE SUPERVISION AS BEING APPLICABLE TO THS PROJECT.

BRIAN J. LEE, P.E. 5/27/2025

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
JOHN W. RYAN
141023
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

INDEX OF SHEETS

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	2
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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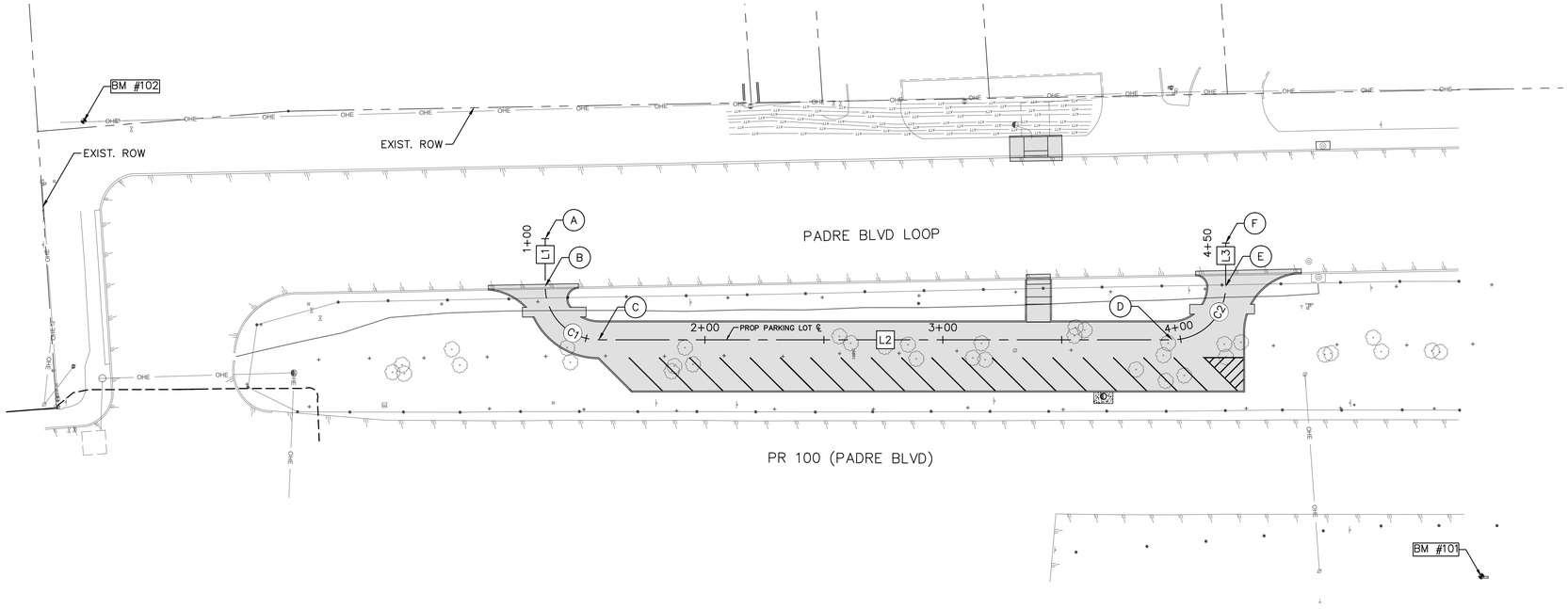

NORTH

GRAPHIC SCALE IN FEET
0 15 30 60

LEGEND

PROP PARKING LOT CONSTRUCTION

BENCHMARK DATA							
POINT NO.	BASELINE	STATION	OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
BM #101	CL ALIGNMENT PARKING LOT	4+14.83	155.797	16559852.72	1422502.5661	5.15	SQUARE CUT ON CONCRETE BASE
BM #102	CL ALIGNMENT PARKING LOT	----	----	16560449.58	1422663.0393	6.02	SQUARE CUT ON BACK OF CURB & CONCRETE WALK

PARKING LOT CL DATA					
#	DESC.	STATION CONTROL	STATION	NORTHING	EASTING
A	BEGIN	CL ALIGNMENT PARKING LOT	1+00.00	N 16560253.24	E 1422623.76
B	PC	CL ALIGNMENT PARKING LOT	1+20.00	N 16560252.19	E 1422603.79
C	PT	CL ALIGNMENT PARKING LOT	1+55.34	N 16560228.54	E 1422582.50
D	PC	CL ALIGNMENT PARKING LOT	3+96.45	N 16559987.77	E 1422595.13
E	PT	CL ALIGNMENT PARKING LOT	4+31.79	N 16559966.48	E 1422618.78
F	END	CL ALIGNMENT PARKING LOT	4+50.00	N 16559967.43	E 1422636.96

PARKING LOT LINE DATA TABLE		
LINE	LENGTH	BEARING
L1	20.00	S86°59'45.88"W
L2	241.11	S3°00'14.12"E
L3	18.21	N86°59'45.88"E

PARKING LOT CURVE DATA TABLE			
CURVE	DELTA	RADIUS	LENGTH
C1	90°00'00"	22.50'	35.34'
C2	90°00'00"	22.50'	35.34'

NOTES:

HORIZONTAL CONTROL IS BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, NAD83 SOUTH ZONE (4205).

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

PROJECT LAYOUT

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	3
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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SUMMARY OF REMOVAL ITEMS								
SHEET NO.	100 7002	100 7003	100 7004	104 7017	496 7030	496 7042	644 7073	677 7001
	PREPARING ROW	PREP ROW (TREE REMOVE) (0"-12" DIA)	PREP ROW (TREE REMOVE) (12"-24" DIA)	REMOV CONC (CURB & GUTTER)	REMOV STR (IRRIGATION GATE)	REMOV STR (WOOD STR)	REMOVE SM RD SN SUP&AM	ELIM EXT PM & MRKS (4")
	STA	EA	EA	LF	EA	EA	EA	LF
SHEET 7	5	10	15	83	3	14	2	40
PROJECT TOTALS	5	10	15	83	3	14	2	40

SUMMARY OF PAVING IMPROVEMENT ITEMS												
SHEET NO.	110 7001	132 7008	247 7044	275 7010	276 7117	360 7016	420 7006	432 7001	529 7007	531 7002	531 7006	SP 1
	EXCAV (ROADWAY)	EMBANK (FNL)(DC)(TY C1)	FL BS (CMP IN PLC)(TY A GR 1-2) (6")	CEMENT TRT (NEW BASE)(6")	CEM TRT(PLNT MX)(CL L)(TYA)(GR1-2)(6")	CONC PVMT (CPCD) (6")	CL A CONC (FLUME)	RIPRAP (CONC)(4 IN)	CONC CURB (MONO) (TY II)	CONC SIDEWALKS (5")	CURB RAMPS (TY 2)	CONC SIDEWALK DRAIN
	CY	CY	SY	SY	SY	SY	CY	CY	LF	SY	EA	EA
SHEET 8	375	22	1122	1122	1122	1040	2	1	730	15	1	1
PROJECT TOTALS	375	22	1122	1122	1122	1040	2	1	730	15	1	1

SUMMARY OF TRAFFIC CONTROL ITEMS		
SHEET NO.	500 7001	502 7001
	MOBILIZATION	BARRICADES, SIGNS AND TRAFFIC HANDLING
	LS	MO
OVERFLOW PARKING	1	3
PROJECT TOTALS	1	3

SUMMARY OF LANDSCAPE AND IRRIGATION ITEMS			
SHEET NO.	160 7002	162 7002	SP 2
	FURN & PLACE TOPSOIL (4")	BLOCK SODDING	IRRIGATION ADJUSTMENTS
	SY	SY	LS
OVERFLOW PARKING	800	800	1
PROJECT TOTALS	800	800	1

SUMMARY OF EROSION CONTROL ITEMS				
SHEET NO.	506 7039	506 7041	506 7044	506 7046
	TEMP SEDMT CONT FENCE (INSTALL)	TEMP SEDMT CONT FENCE (REMOVE)	BIODEG EROSN CONT LOGS (INSTL) (12")	BIODEG EROSN CONT LOGS (REMOVE)
	LF	LF	LF	LF
SHEET 39	630	630	30	30
PROJECT TOTALS	630	630	30	30

SUMMARY OF PAVEMENT MARKINGS AND SIGNAGE ITEMS	BID ALTERNATE ITEM
SHEET NO.	SP 5
	STAMPED THERMOPLASTIC CROSSWALK
	SF
SHEET 24	525
PROJECT TOTALS	525

SUMMARY OF PAVEMENT MARKINGS AND SIGNAGE ITEMS									
SHEET NO.	416 7042	636 7002	666 7030	666 7036	666 7171	668 7091	668 7103	6076 7003	SP 3
	DRILL SHAFT (TRF SIG POLE) (24 IN)	ALUMINUM SIGNS (TY G)	REFL PAV MRK TY I (W)12"(SLD)(100MIL)	REFL PAV MRK TY I (W)24"(SLD)(100MIL)	RE PM TY II (W) 4" (SLD)	PREFAB PM TY C (W)(ARROW)	PREFAB PM TY C (W)(WORD)	REPLACE SMALL RDSD SIGN SUPT & ASSEM	BACK-TO-BACK SOLAR POWERED RRFB
	LF	SF	LF	LF	LF	EA	EA	EA	EA
SHEET 22	12	36						2	2
SHEET 23			110	50	470	4	8		
PROJECT TOTALS	12	36	110	50	470	4	8	2	2

SUMMARY OF ILLUMINATION ITEMS							
SHEET NO.	416 7039	618 7019	620 7001	620 7002	690 7179	999 9991	SP 4
	DRILL SHAFT (RDWY ILL POLE) (24 IN)	CONDT (PVC) (SCH 40) (3/4")	ELEC CONDR (NO.14) BARE	ELEC CONDR (NO.14) INSULATED	INSTALL LUMINAIRE FIXTURE (LED)	CONNECT TO EX POWER SERVICE	PEDESTRIAN LIGHTING ASSEMBLY
	LF	LF	LF	LF	EA	LS	EA
SHEET 40	28	335	335	1500	8	1	4
PROJECT TOTALS	28	335	335	1500	8	1	4

No.	Revision	By	Date

5/27/2025

STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn

TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

ITEM SUMMARIES

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	4
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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GENERAL NOTES:

1. THE CONSTRUCTION SEQUENCE AND SCHEDULE SHALL ADDRESS MEASURES TO BE TAKEN IN THE EVENT OF HEAVY RAIN OR WET WEATHER DURING THE CONSTRUCTION. IF, IN THE OPINION OF THE ENGINEER, CITY, OR INSPECTOR, WET WEATHER RENDERS UNPAVED STREETS OR PREVENTS ACCESS TO ADJACENT PROPERTY BY RESIDENTS, THE CONTRACTOR SHALL PLACE GRAVEL OR CRUSHED STONE ON THE UNPAVED AREAS. THE COST OF FURNISHING OR PLACING SUCH MATERIALS SHALL BE INCIDENTAL TO THE UNIT COST OF THE VARIOUS PAY ITEMS FOR PAVING. CONTRACTOR'S PERSONNEL SHALL BE ON CALL 24 HOURS PER DAY TO HANDLE WET WEATHER PROBLEMS.

2. ALL EXCAVATION IS UNCLASSIFIED AND SHALL INCLUDE ALL MATERIALS ENCOUNTERED. UNUSABLE EXCAVATED MATERIAL AND ALL WASTE RESULTING FROM SITE CLEARING AND GRUBBING SHALL BE DISPOSED OF AT A LEGAL DISPOSAL FACILITY OFF SITE BY THE CONTRACTOR AT HIS EXPENSE UNLESS OTHERWISE SPECIFIED OR AGREED TO BY THE OWNER.

3. BRACING OF UTILITY POLES MAY BE REQUIRED BY UTILITY COMPANIES WHEN TRENCHING OR EXCAVATION IS IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR. THERE IS NO SEPARATE PAY ITEM FOR THIS WORK. THE COST SHALL BE CONSIDERED INCIDENTAL WORK INCLUDED IN THE CONTRACT UNIT PRICE BID FOR APPLICABLE PIPE OR STRUCTURE INSTALLATION.

4. THE LOCATIONS, ELEVATIONS AND DIMENSIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY RECORDS AND PLANS AND ARE CONSIDERED APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH UTILITY COMPANIES TO VERIFY LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ADJACENT AND/OR CONFLICTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE CONTRACTOR SHALL PRESERVE AND PROTECT PUBLIC UTILITIES AT ALL TIMES DURING CONSTRUCTION. ANY DAMAGE TO UTILITIES RESULTING FROM CONTRACTORS OPERATION SHALL BE RESTORED AT HIS EXPENSE. THE ENGINEER SHALL BE NOTIFIED WHEN PROPOSED FACILITY GRADES CONFLICT OR PLANTER BED CONFLICTS WITH EXISTING GRADES OR EXISTING UTILITIES. UTILITY COMPANIES SHALL BE NOTIFIED AT LEAST TEN (10) DAYS IN ADVANCE OF CONSTRUCTION.

5. THE CONTRACTOR SHALL REMOVE ALL SURPLUS MATERIAL FROM THE PROJECT AREA. THIS WORK SHALL BE SUBSIDIARY TO THE CONTRACT AND IS NOT A SEPARATE PAY ITEM.

6. NO ONSITE MATERIALS SHALL BE USED AS TOPSOIL UNLESS THEY MEET TOPSOIL SPECIFICATION. ALL TOPSOIL SHALL BE IMPORTED FROM A COMMERCIAL SOURCE FOR TOPSOIL AND MUST MEET SPECIFICATIONS FOR IMPORTED TOPSOIL.

7. ALL PROPOSED SOD SHALL MATCH EXISTING SURROUNDING SOD.

PAVING NOTES:

1. ALL REINFORCING STEEL AND DOWEL BARS IN PAVEMENT SHALL BE SUPPORTED AND MAINTAINED AT THE CORRECT CLEARANCES BY THE USE OF BAR CHAIRS OR OTHER APPROVED SUPPORT.

2. CONTROL JOINTS SHALL BE SAWED IN THE PAVEMENT ON THIS PROJECT. ALL CONTROL JOINTS SHALL BE SAWED NO LATER THAN 12 HOURS AFTER THE PLACEMENT OF THE PAVEMENT, OR AS DIRECTED BY THE ENGINEER. SEE THE PAVING DETAILS FOR ADDITIONAL INFORMATION. PLACE CONTROL JOINTS EVERY 10' WITH EVERY THIRD CONTROL JOINT BEING AN EXPANSION JOINT.

3. WHERE APPLICABLE, THE CONTRACTOR SHALL PROTECT NEW AND EXISTING PAVEMENTS BY PLACING RUBBER MATS OR EARTH ON THE PAVEMENT TO PROTECT IT FROM TRACK MARKS AND/OR CRACKING DURING CONSTRUCTION. THE COST OF FURNISHING OR PLACING SUCH MATERIALS SHALL BE INCIDENTAL TO THE UNIT COST OF THE VARIOUS PAY ITEMS FOR PAVING.

4. SEE DRAINAGE AREA MAP FOR MORE DETAILS ON DRAINAGE.

No.	Revision	By	Date

5/27/2025

Kimley»Horn

TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

GENERAL NOTES

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	5
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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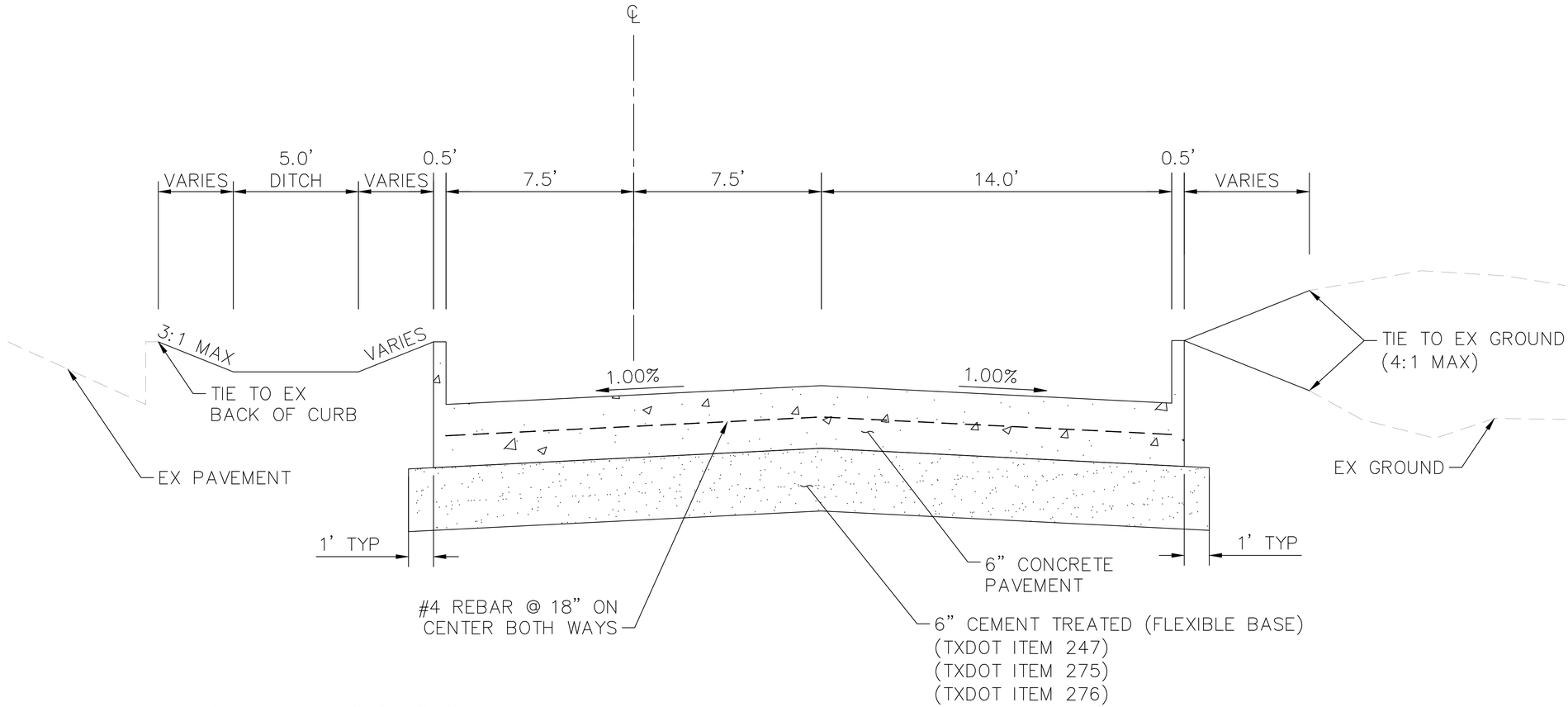

PAVEMENT SECTION: 3,500 PSI @ 28 DAYS
CONTRACTOR TO CUT 12.5' X 12.5' CONTROL JOINTS.
EXPANSION JOINTS NOT TO EXCEED 62.5 FT.

CONTRACTOR TO USE CONSTRUCTION
JOINTS WHERE NEW PAVEMENTS ARE
POURED ON TWO SEPARATE DAYS.

1

PROPOSED PARKING LOT TYPICAL SECTION
GENERAL PAVEMENT SECTION

SCALE: N.T.S.

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No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

TYPICAL SECTIONS

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	6
CONTROL	SECTION	JOB	
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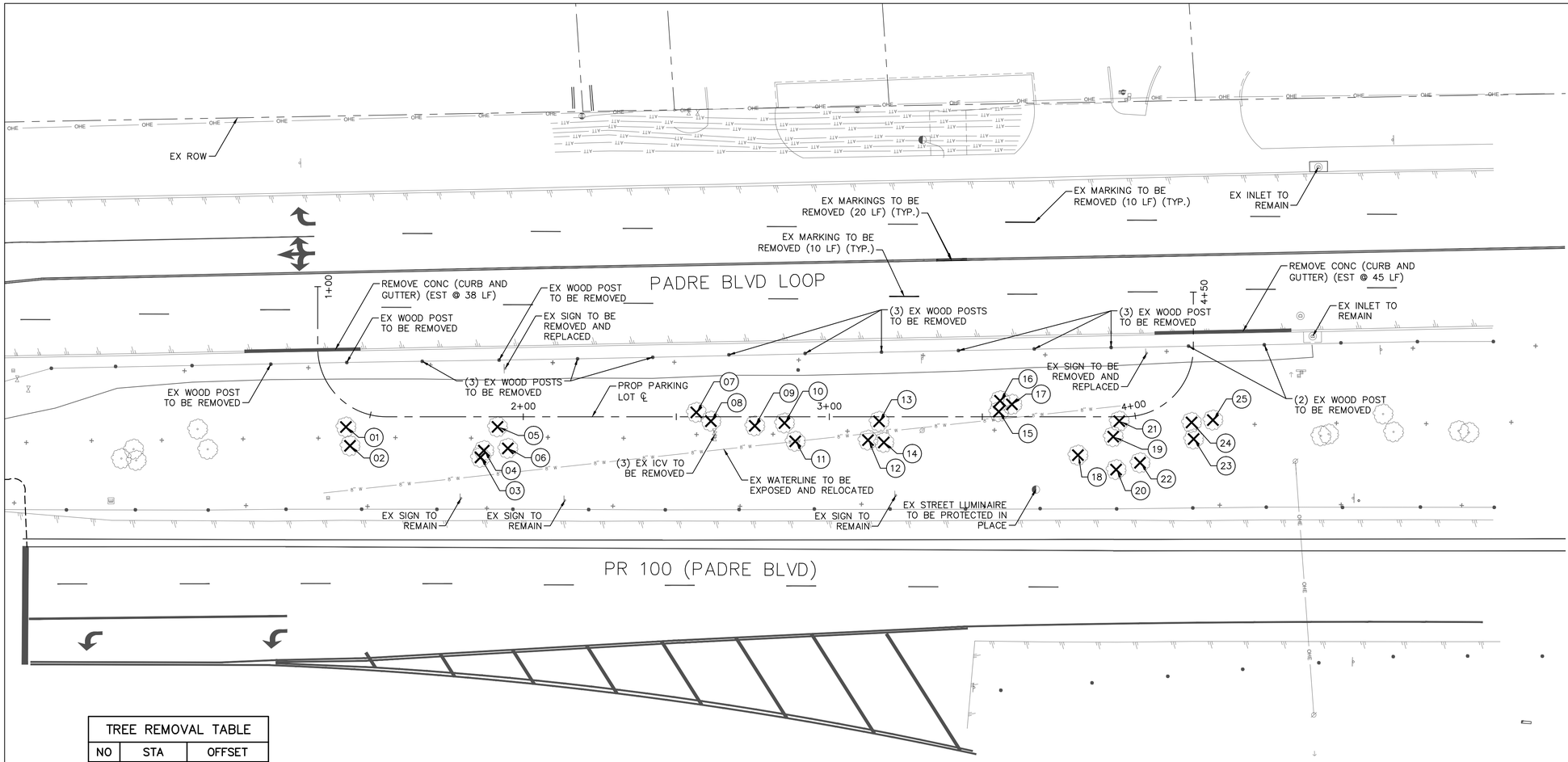

TREE REMOVAL TABLE		
NO	STA	OFFSET
01	1+44.66	RTT 6.55'
02	1+47.29	RTT 11.64'
03	1+86.02	RTT 13.24'
04	1+87.12	RTT 11.05'
05	1+91.60	RTT 3.29'
06	1+94.97	RTT 10.32'
07	2+56.55	LTT 1.45'
08	2+61.32	RTT 1.43'
09	2+75.66	RTT 2.94'
10	2+85.37	RTT 2.03'
11	2+88.87	RTT 8.00'
12	3+12.66	RTT 7.62'
13	3+16.28	RTT 1.48'
14	3+17.84	RTT 8.37'
15	3+55.38	LTT 1.68'
16	3+55.81	LTT 5.23'
17	3+59.68	LTT 4.06'
18	3+81.26	RTT 12.51'
19	3+92.78	RTT 6.50'
20	3+93.73	RTT 17.25'
21	3+94.76	RTT 1.44'
22	3+99.49	RTT 15.34'
23	4+11.07	RTT 14.88'
24	4+12.95	RTT 10.26'
25	4+16.40	RTT 14.80'

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- REMOVING CONC (CURB & GUTTER)
- REMOVING TREE

NOTES:

1. CITY OF SOUTH PADRE ISLAND TO SELF-MITIGATE TREE REMOVALS.
2. CONTRACTOR TO PROTECT ALL TREES NOT SHOWN TO BE REMOVED (NO SEPARATE PAY).

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

REMOVAL PLAN

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	7
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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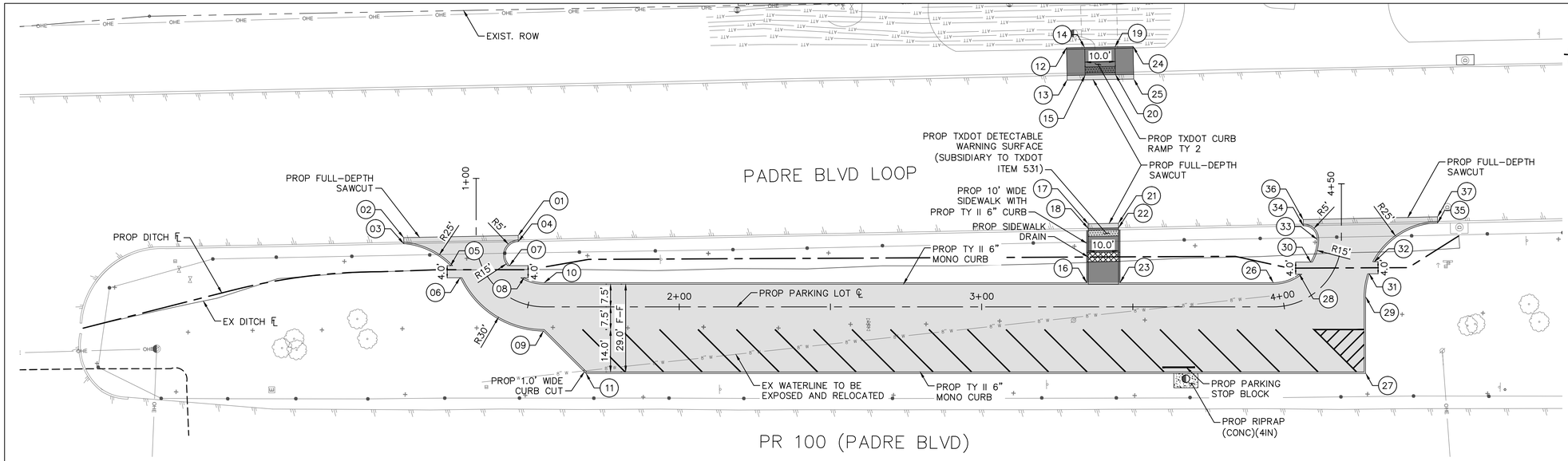
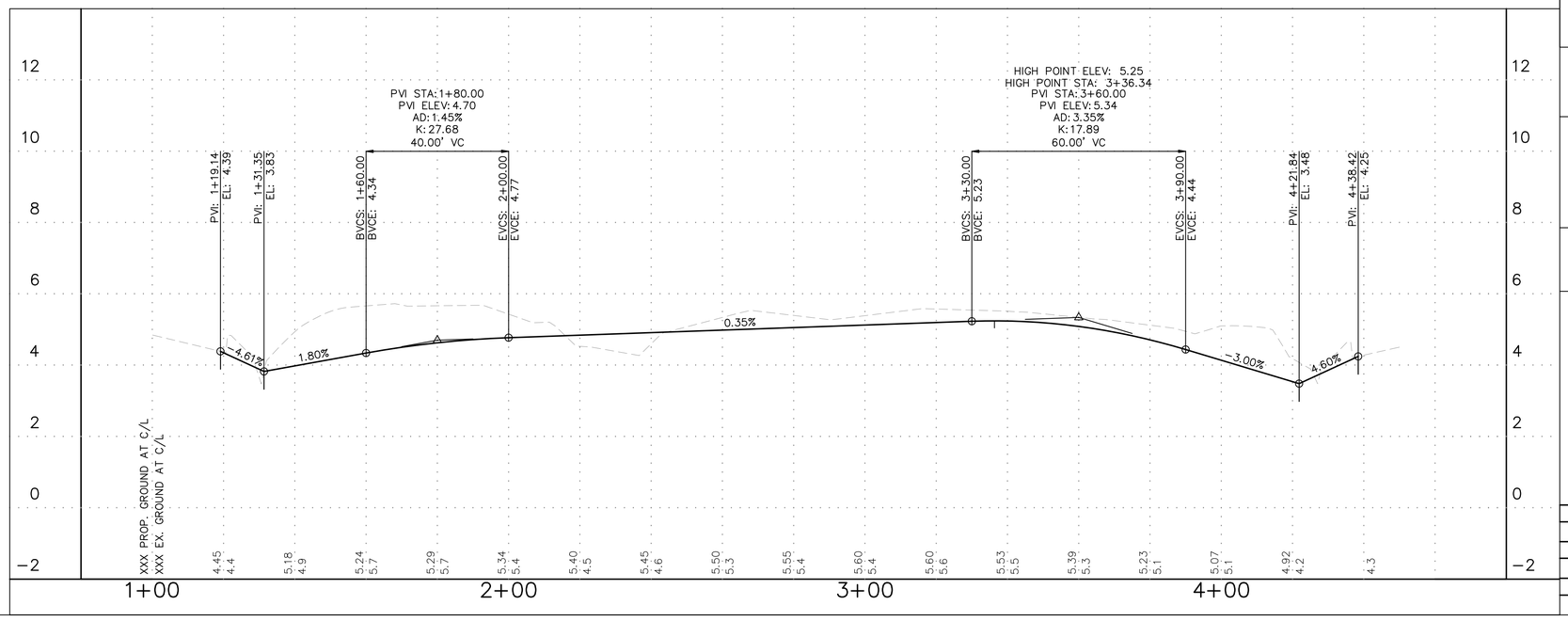


PR 100 (PADRE BLVD)

CONSTRUCTION POINTS					
POINT NO.	DESCRIPTION	ALIGNMENT	STATION	ELEV	OFFSET
01	PI–ME	CL ALIGNMENT PARKING LOT	1+18.88	4.40	13.92 LT
02	PI–ME	CL ALIGNMENT PARKING LOT	1+19.59	4.36	23.95 RT
03	PC–TC	CL ALIGNMENT PARKING LOT	1+20.77	4.82	23.93 RT
04	PC–TC	CL ALIGNMENT PARKING LOT	1+22.30	4.87	13.91 LT
05	PC–TC	CL ALIGNMENT PARKING LOT	1+26.28	3.93	9.70 RT
06	PC–TC	CL ALIGNMENT PARKING LOT	1+29.76	3.88	8.12 RT
07	PC–TC	CL ALIGNMENT PARKING LOT	1+34.82	3.92	8.00 LT
08	PC–TC	CL ALIGNMENT PARKING LOT	1+44.58	3.94	8.00 LT
09	PT–TC	CL ALIGNMENT PARKING LOT	1+55.19	4.83	8.00 RT
10	PT–TC	CL ALIGNMENT PARKING LOT	1+55.34	4.68	8.00 LT
11	PI–TC	CL ALIGNMENT PARKING LOT	1+69.14	4.93	22.00 RT
12	PI–TC	CL ALIGNMENT PARKING LOT	3+28.07	5.09	85.71 LT
13	PI–ME	CL ALIGNMENT PARKING LOT	3+28.27	4.32	75.05 LT

CONSTRUCTION POINTS					
POINT NO.	DESCRIPTION	ALIGNMENT	STATION	ELEV	OFFSET
14	PI–TC	CL ALIGNMENT PARKING LOT	3+34.07	5.08	85.83 LT
15	PI–ME	CL ALIGNMENT PARKING LOT	3+34.25	4.27	76.69 LT
16	PI–TC	CL ALIGNMENT PARKING LOT	3+34.74	5.67	8.00 LT
17	PI–ME	CL ALIGNMENT PARKING LOT	3+35.21	4.39	27.47 LT
18	PI–SW	CL ALIGNMENT PARKING LOT	3+35.24	4.35	25.97 LT
19	PI–TC	CL ALIGNMENT PARKING LOT	3+44.06	5.06	86.04 LT
20	PI–ME	CL ALIGNMENT PARKING LOT	3+44.24	4.25	76.84 LT
21	PI–ME	CL ALIGNMENT PARKING LOT	3+45.21	4.38	27.66 LT
22	PI–SW	CL ALIGNMENT PARKING LOT	3+45.24	4.34	26.16 LT
23	PI–TC	CL ALIGNMENT PARKING LOT	3+45.74	5.64	8.00 LT
24	PI–TC	CL ALIGNMENT PARKING LOT	3+50.06	5.06	86.16 LT
25	PI–ME	CL ALIGNMENT PARKING LOT	3+50.27	4.28	75.38 LT
26	PC–TC	CL ALIGNMENT PARKING LOT	3+96.45	4.67	8.00 LT

CONSTRUCTION POINTS					
POINT NO.	DESCRIPTION	ALIGNMENT	STATION	ELEV	OFFSET
27	PI–TC	CL ALIGNMENT PARKING LOT	4+09.97	4.21	31.45 RT
28	PC–TC	CL ALIGNMENT PARKING LOT	4+10.70	3.65	8.00 LT
29	PC–TC	CL ALIGNMENT PARKING LOT	4+19.15	4.03	13.54 RT
30	PC–TC	CL ALIGNMENT PARKING LOT	4+19.25	3.60	8.00 LT
31	PC–TC	CL ALIGNMENT PARKING LOT	4+23.92	3.50	11.27 RT
32	PC–TC	CL ALIGNMENT PARKING LOT	4+26.78	3.54	11.79 RT
33	PC–TC	CL ALIGNMENT PARKING LOT	4+31.50	4.43	8.00 LT
34	PT–TC	CL ALIGNMENT PARKING LOT	4+36.16	4.75	12.59 LT
35	PT–TC	CL ALIGNMENT PARKING LOT	4+37.07	4.48	31.80 RT
36	PI–ME	CL ALIGNMENT PARKING LOT	4+38.16	4.28	12.63 LT
37	PI–ME	CL ALIGNMENT PARKING LOT	4+39.08	4.00	31.76 RT



LEGEND

- PROP PAVEMENT
- PROP SIDEWALK
- PROP TACTILE WARNING
- EX TREE
- 01 PROP PAVING POINT

NOTES

1. STATIONS AND OFFSETS GIVEN AT TOP BACK OF CURB UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.

ABBREVIATION KEY

TC	TOP OF CURB
ME	MATCH EXISTING
SW	SIDEWALK

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

PLAN & PROFILE

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	8
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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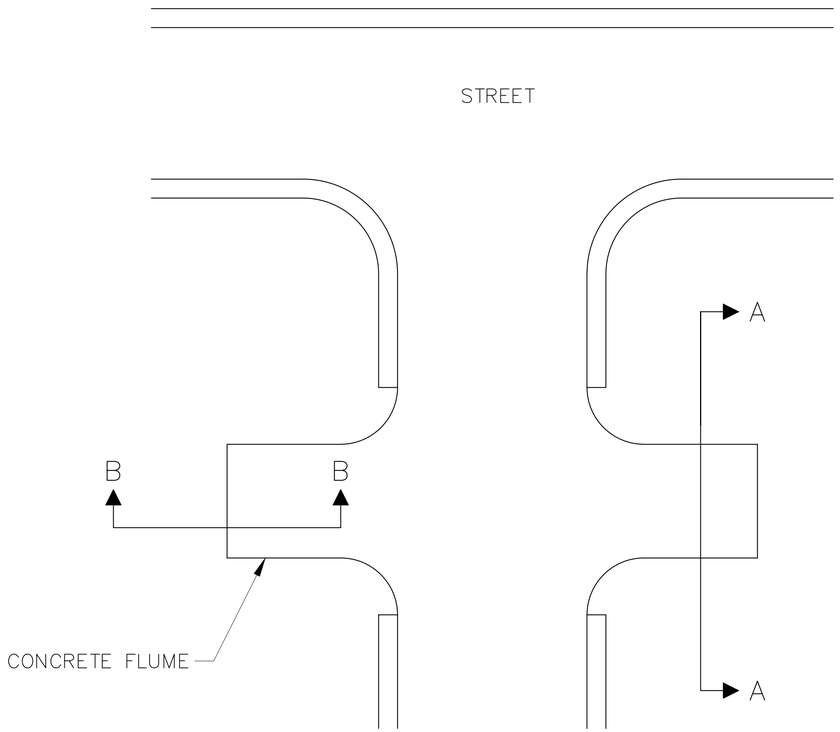
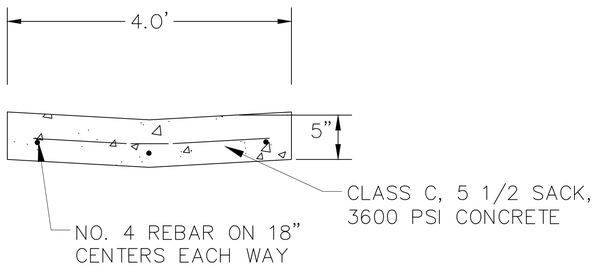
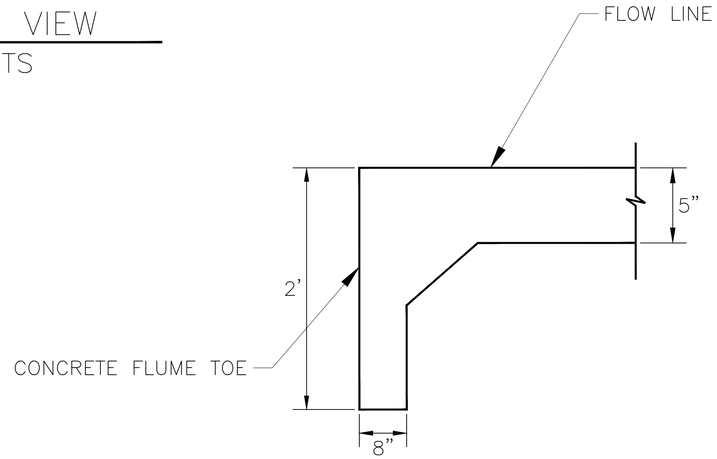


PLAN VIEW
NTS



SECTION A–A
NTS



SECTION B–B
NTS

NOTES:

1. FLUME NEEDS TO BE FLARED AT ENTRANCE ONLY FOR HYDRAULIC PURPOSES.

CONCRETE FLUME
NTS

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No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

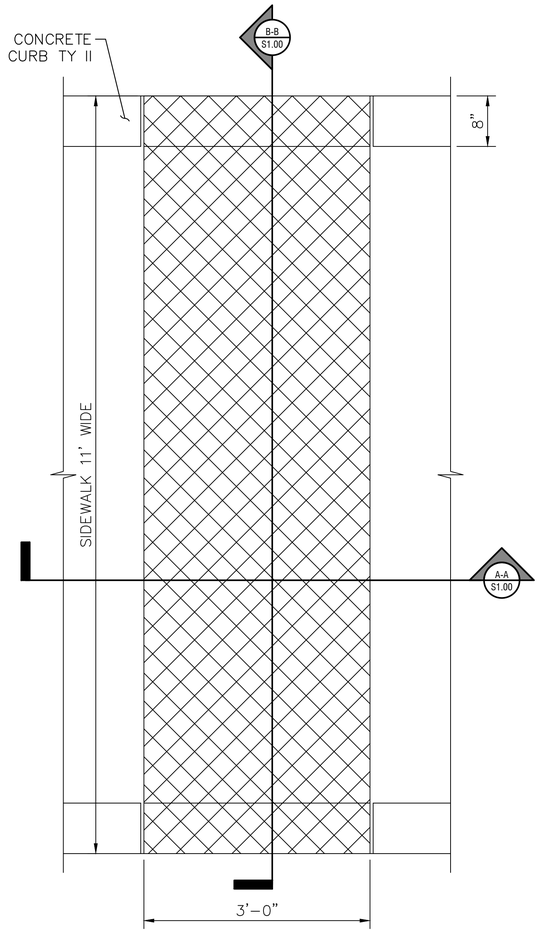
PR 100 OVERFLOW PARKING FACILITY

CITY PAVING DETAILS

SHEET 1 OF 1

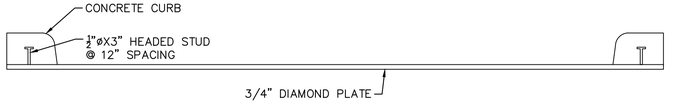
FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	9
CONTROL	SECTION	JOB	
N/A	N/A	N/A	



1 S1.00 CONCRETE SIDEWALK DRAIN FLOW AWAY FROM STREET

SCALE: N.T.S.



2 S1.00 SECTION B-B

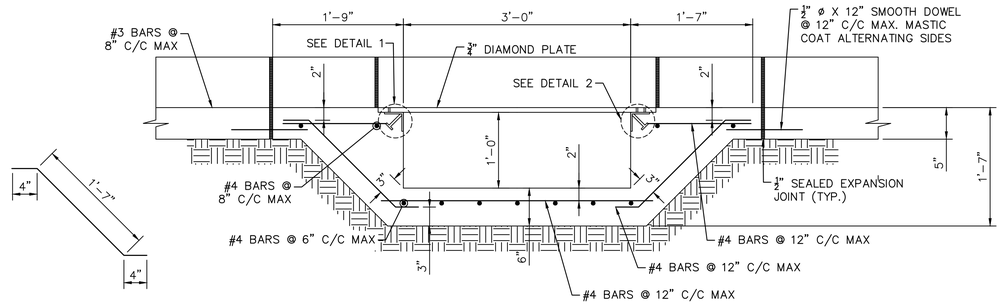
SCALE: 3/4"=1'-0"

CONCRETE NOTES:

1. ALL CONCRETE SHALL BE DESIGNED, MIXED, TRANSPORTED, AND PLACED IN ACCORDANCE WITH TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MAINTENANCE OF HIGHWAYS, STREETS, AND BRIDGES, 2014, AND THE LATEST EDITION OF ACI-318.
2. CONCRETE MIX DESIGN SHALL BE IN ACCORDANCE WITH TXDOT ITEM 421, HYDRAULIC CEMENT CONCRETE. CONCRETE SHALL BE CLASS C AND HAVE A MINIMUM 28-DAY COMPRESSION STRENGTH OF 3600 PSI UNLESS OTHERWISE NOTED. ALL MIX DESIGNS SHALL BE SUBMITTED FOR APPROVAL.
3. ALL REINFORCING STEEL SHALL BE ASTM A615 GRADE 60 IN ACCORDANCE WITH TXDOT ITEM 440, REINFORCING STEEL. CONTRACTOR SHALL SUBMIT CERTIFICATION FOR REINFORCING STEEL.
4. ALL REINFORCING BAR DIMENSIONS ARE TO THE OUTSIDE OF BAR UNLESS OTHERWISE SHOWN. UNLESS OTHERWISE NOTED, REINFORCING BARS SHALL HAVE A MINIMUM CLEAR COVER OF 3" FOR CONCRETE CAST AGAINST EARTH AND 2" FOR ALL OTHER CASES.
5. JOINT SEALERS AND FILLERS SHALL BE IN ACCORDANCE WITH TXDOT ITEM 438, CLEANING AND SEALING JOINTS AND CRACKS (RIGID PAVEMENT AND BRIDGE DECK). SUBMIT PRODUCT DATA FOR ALL JOINTS AND SEALANTS FOR APPROVAL. SEALANT SHALL BE POLYURETHANE CLASS I PER TxDOT MATERIAL SPECIFICATION DMS-6310.

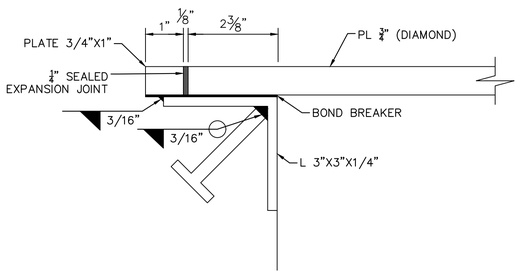
STEEL NOTES:

1. ALL STRUCTURAL STEEL SHALL BE A36 AND SHALL BE HOT DIPPED GALVANIZED AS A UNIT PRIOR TO PLACEMENT. NO FIELD WELDING OF MEMBERS WILL BE PERMITTED.
2. ALL BOLTS SHALL BE ASTM A325 N UNLESS OTHERWISE NOTED AND SHALL BE INSTALLED AND TIGHTENED IN ACCORDANCE WITH AISC SPECIFICATIONS.
3. ALL WELDS SHALL BE MADE BY CERTIFIED WELDERS IN ACCORDANCE WITH AWS STANDARDS USING E70XX EXLECTRODES UNLESS OTHERWISE SHOWN.
4. VERIFY ALL DIMENSIONS BEFORE FABRICATION OF PARTS
5. THE INITIALS "C. P." ON A WELD SYMBOL INDICATED A "COMPLETE PENETRATION" WELD AND SHALL BE MADE IN ACCORDANCE WITH ALL AWS AND AISC REQUIREMENTS.



3 S1.00 SECTION A-A

SCALE: 3/4"=1'-0"



4 S1.00 DETAIL 1

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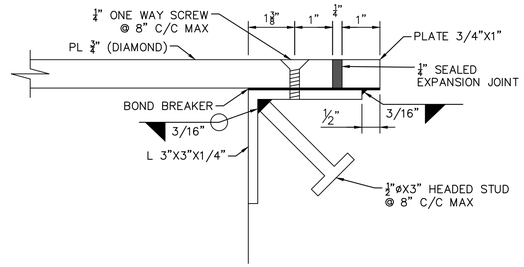

5 S1.00 DETAIL 2

SCALE: N.T.S.

No.	Revision	By	Date

5/27/2025

STATE OF TEXAS
B. CLAY SUTHERLAND
138535
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn

TBPE REGISTERED ENGINEERING FIRM F-928

South Padre Island

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

SIDEWALK DRAIN DETAIL

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.		HIGHWAY NO.
6	N/A		PR 100
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	S1.00
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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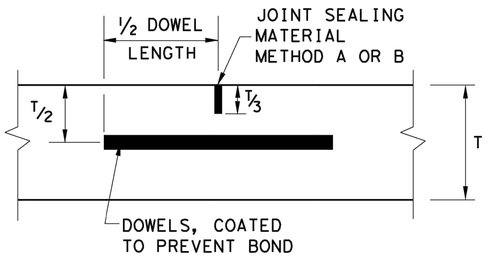
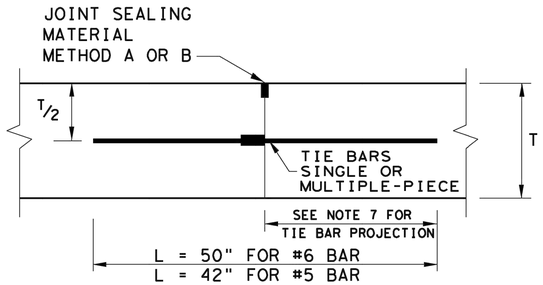
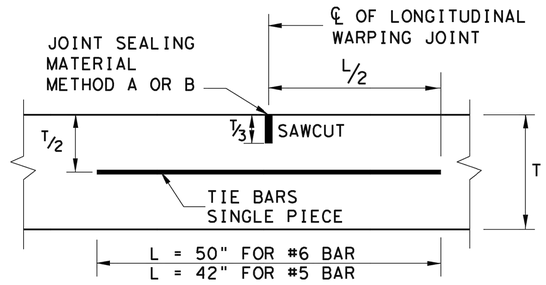


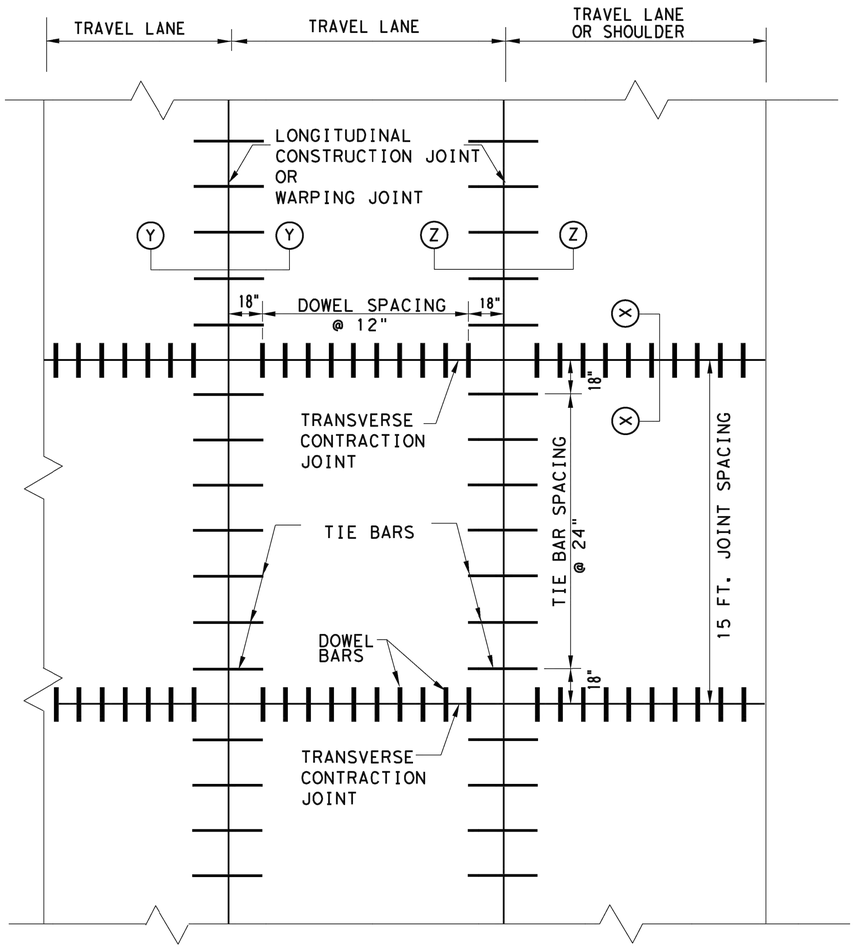
TRANSVERSE CONTRACTION JOINT
SECTION X-X



LONGITUDINAL CONSTRUCTION JOINT
SECTION Y-Y



LONGITUDINAL WARPING JOINT
SECTION Z-Z



TYPICAL PAVEMENT LAYOUT
PLAN VIEW (NOT TO SCALE)

GENERAL NOTES

1. DETAILS FOR PAVEMENT WIDTH, PAVEMENT THICKNESS AND THE CROWN CROSS-SLOPE SHALL BE SHOWN ELSEWHERE IN THE PLANS. FOR PAVEMENTS WIDER THAN 100 FT. WITHOUT A FREE LONGITUDINAL JOINT, ADDITIONAL DETAILS MAY BE SHOWN ELSEWHERE IN THE PLANS.
2. FOR FURTHER INFORMATION REGARDING THE PLACEMENT OF CONCRETE AND LOAD TRANSFER DEVICES REFER TO THE GOVERNING SPECIFICATION FOR "CONCRETE PAVEMENT".
3. THE SPACING BETWEEN TRANSVERSE CONTRACTION JOINTS SHALL BE 15 FT. UNLESS OTHERWISE SHOWN IN THE PLANS.
4. TRANSVERSE CONSTRUCTION JOINTS MAY BE FORMED BY USE OF METAL OR WOOD FORMS EQUAL IN DEPTH TO THE DEPTH OF PAVEMENT, OR BY METHODS APPROVED BY THE ENGINEER.
5. USE HAND-OPERATED IMMERSION VIBRATORS TO CONSOLIDATE THE CONCRETE ADJACENT TO ALL THE FORMED JOINTS.
6. PAVEMENT WIDTHS OF MORE THAN 15 FT. SHALL HAVE A LONGITUDINAL JOINT (SECTION Z-Z OR SECTION Y-Y). THESE JOINTS SHALL BE LOCATED WITHIN 6 IN. OF THE LANE LINE UNLESS THE JOINT LOCATION IS SHOWN ELSEWHERE ON THE PLANS.
7. THE MINIMUM PROJECTION OF TIE BARS INTO THE ADJACENT PLACEMENT IS 22.5 IN. FOR #6 BARS AND 18.5 IN. FOR #5 BARS.
8. WHEN TYING CONCRETE GUTTER AT A LONGITUDINAL JOINT, THE TIE BAR LENGTH OR POSITION MAY BE ADJUSTED. PROVIDE 3 IN. OF CONCRETE COVER FROM THE BACK OF GUTTER TO THE END OF TIE BAR.
9. REPLACE MISSING OR DAMAGED TIE BARS WITHOUT ADDITIONAL COMPENSATION BY DRILLING MIN. 10 IN. DEEP AND GROUTING TIE BARS WITH TYPE III, CLASS C EPOXY. MEET THE PULL-OUT TEST REQUIREMENTS IN ITEM 361.
10. WHEN A MONOLITHIIC CURB IS SPECIFIED, THE JOINT IN THE CURB SHALL COINCIDE WITH PAVEMENT JOINTS AND MAY BE FORMED BY ANY MEANS APPROVED BY THE ENGINEER.
11. DOWEL BAR PLACEMENT TOLERANCE SHALL BE +/- 1/4 IN. HORIZONTALLY AND VERTICALLY UNLESS OTHERWISE SPECIFIED. WHERE DOWEL BAR BASKETS ARE USED, REMOVE OR CUT THE SHIPPING WIRES.
12. THE DETAIL FOR JOINT SEALANT AND RESERVOIR IS SHOWN ON STANDARD SHEET "CONCRETE PAVING DETAILS, JOINT SEALS."

TABLE NO. 1 DOWELS (SMOOTH BARS)

SLAB THICKNESS T (IN.)	BAR DIA. AND LENGTH	AVERAGE SPACING (IN.)
6 to 7.5	1" X 18"	12
8 to 10	1 1/4" X 18"	12
>= 10.5	1 1/2" X 18"	12

TABLE NO. 2 TIE BARS (DEFORMED BARS)

SLAB THICKNESS T, (IN.)	BAR SIZE	AVERAGE SPACING (IN.)
6 to 7.5	#5	24
>= 8	#6	24

Texas Department of Transportation

Design Division Standard

CONCRETE PAVEMENT CONTRACTION DESIGN

T-6 to 12 INCHES

CPCD-24

FILE: cpcd24.dgn	DN: CES		DN: KM	DW:	CK: AN
©TxDOT: Sept 2024	CONT	SECT	JOB		HIGHWAY
REVISIONS					
	DIST	COUNTY			SHEET NO.
					11

DATE:
FILE:

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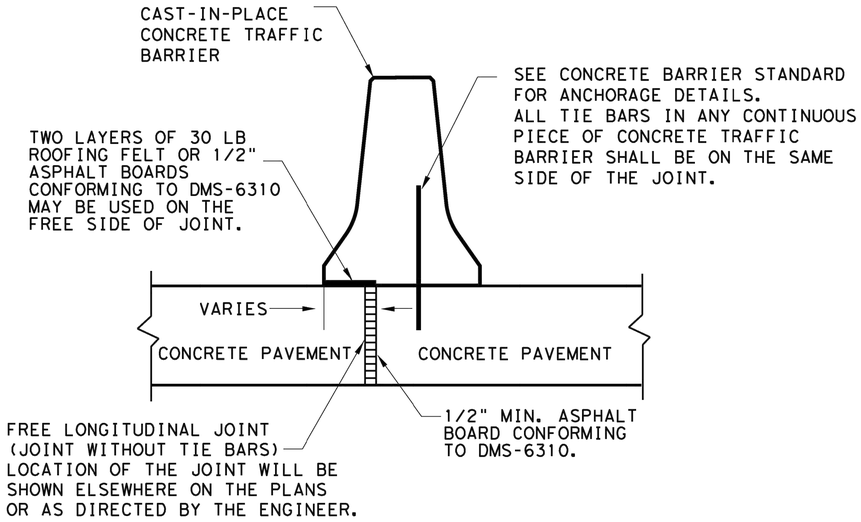
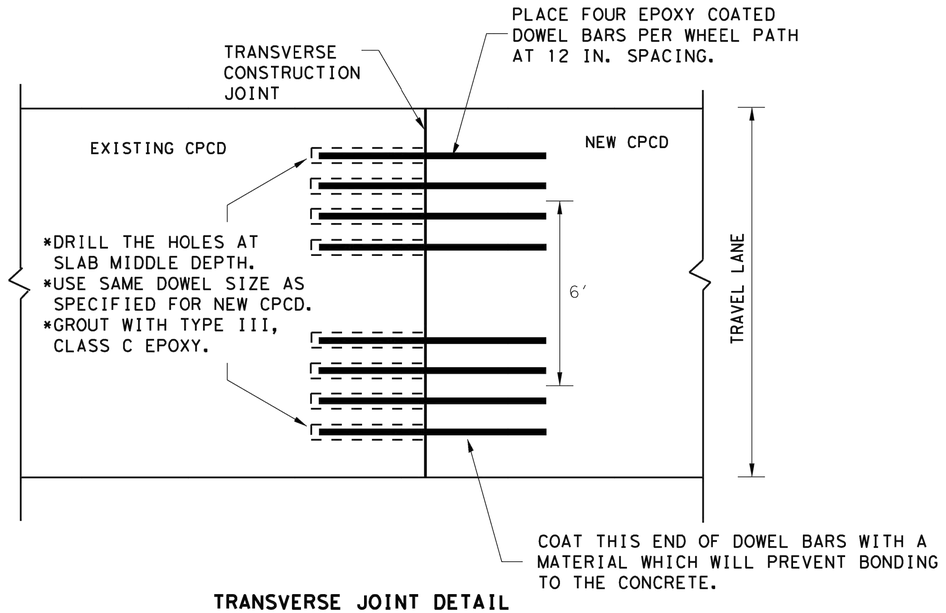


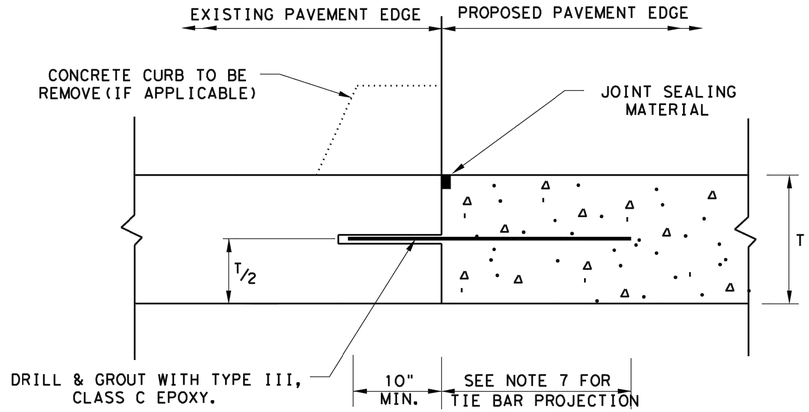
FREE LONGITUDINAL JOINT DETAIL



TRANSVERSE JOINT DETAIL

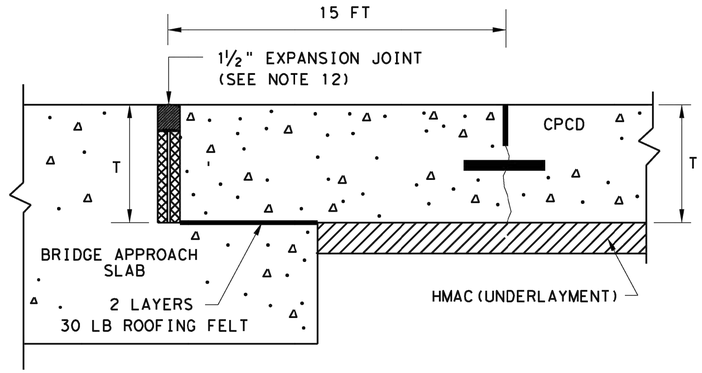
EXISTING CPCD TO NEW CPCD

PLAN VIEW (NOT TO SCALE)



1. USE A DRILL BIT WITH A DIAMETER THAT IS 1/8 IN. GREATER THAN THAT OF THE TIE BAR DIAMETER.
2. BEFORE CONCRETE PLACEMENT, PERFORM PULL-OUT TESTS ON EPOXY-GROUTED TIE BARS IN ACCORDANCE WITH ITEM 360.
3. SPACE TIE BARS AT 24" SPACING. USE #6 TIE BARS FOR 8" AND THICKER PAVEMENTS, USE #5 TIE BARS FOR LESS THAN 8" THICK PAVEMENTS.
4. THE TRANSVERSE JOINTS OF PROPOSED PAVEMENT SHALL COINCIDE WITH EXISTING PAVEMENT JOINTS UNLESS OTHERWISE SHOWN ON THE PLANS.

LONGITUDINAL WIDENING JOINT DETAIL



TRANSVERSE EXPANSION JOINT DETAIL

AT BRIDGE APPROACH

SHEET 2 OF 2

Texas Department of Transportation

Design Division Standard

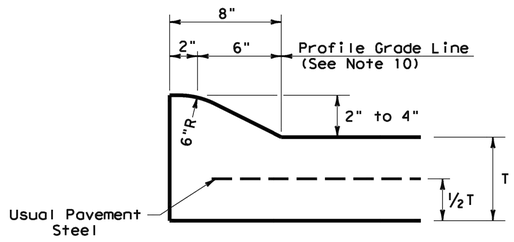
CONCRETE PAVEMENT CONTRACTION DESIGN

T-6 to 12 INCHES

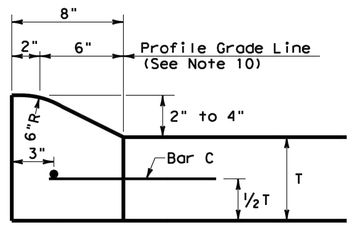
CPCD-24

FILE: cpcd24.dgn	DN: CES	DN: KM	DW:	CK: AN
©TxDOT: Sept 2024	CONT	SECT	JOB	HIGHWAY
REVISIONS				
	DIST	COUNTY		SHEET NO.
				12

DATE:
FILE:



TYPE I CURB (MONOLITHIC)
2" - 4" HEIGHT



TYPE I CURB
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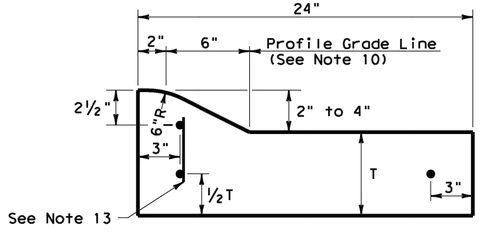
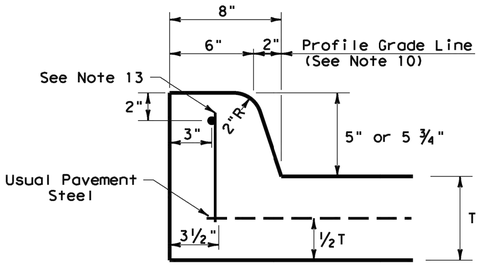
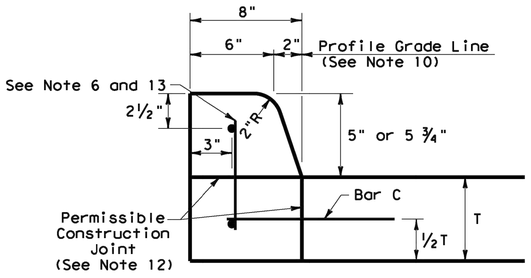


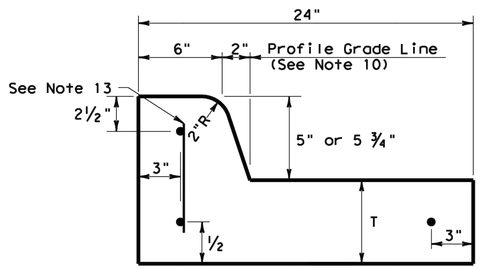
TYPE I CURB AND GUTTER
2" - 4" HEIGHT



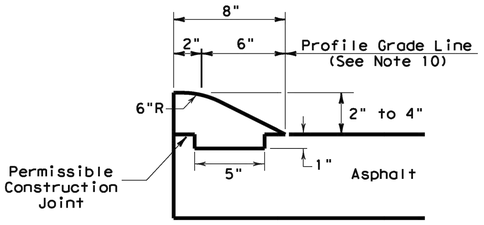
TYPE II CURB (MONOLITHIC)
5" - 5 ¾" HEIGHT



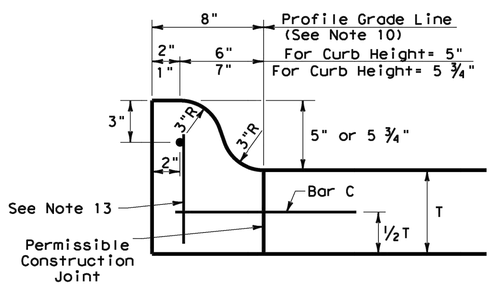
TYPE II CURB
5" - 5 ¾" HEIGHT



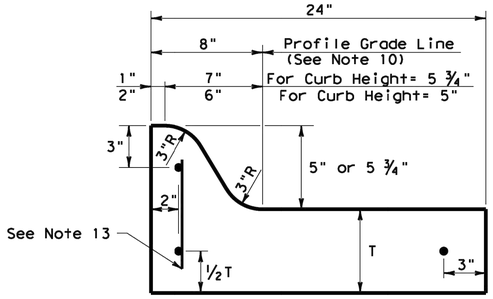
TYPE II CURB AND GUTTER
5" - 5 ¾" HEIGHT



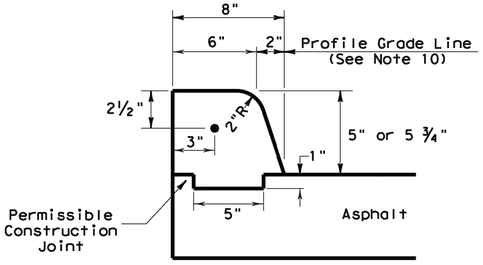
TYPE III CURB (KEYED)
2" - 4" HEIGHT



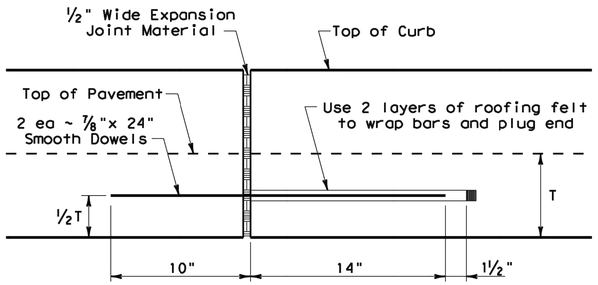
TYPE IIa CURB
5" - 5 ¾" HEIGHT



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

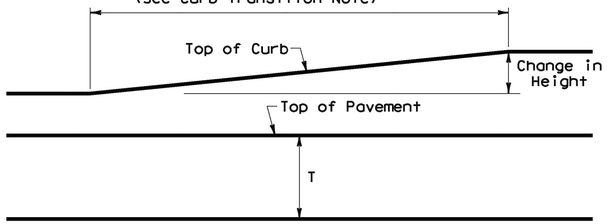


TYPE IV CURB (KEYED)
5" - 5 ¾" HEIGHT



EXPANSION JOINT DETAIL

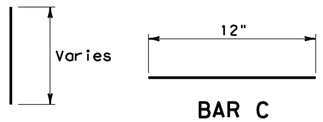
CURB TRANSITION NOTE:
Field conditions may require a longer or shorter transition, and shall be shown elsewhere in the plans, or as directed by the Engineer.



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 fiber reinforced concrete in lieu of reinforcing steel is acceptable. Use fibers meeting the requirements of DMS 4550, "Fibers for Concrete," and dose fibers in accordance with Material Producers List (MPL) "Fibers for Class A and B Concrete Applications."
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 to be placed on existing concrete pavement, Bar B may be drilled and grouted in place, or may be inserted into fresh concrete.
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 horizontal permissible construction joints are used, the longitudinal pavement steel shall be placed in accordance with pavement details shown elsewhere in the plans. Reinforcing steel for curb section shall then conform to that required for concrete curb.
13. Bar B placement as needed (typically at four ft. C-C) to support curb reinforcing steel during concrete placement.



BAR B

BAR C

Texas Department of Transportation

Design Division Standard

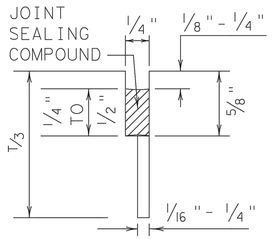
CONCRETE CURB AND CURB AND GUTTER

CCCG-22

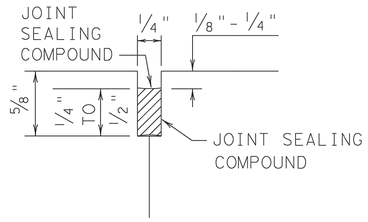
FILE: cccg21.dgn	DN: TXDOT	CK: AN	DW: CS	CK: KM	
© TxDOT: JUNE 2022	CONT	SECT	JOB	HIGHWAY	
REVISIONS					
	DIST	COUNTY		SHEET NO.	
				13	

DATE:
FILE:

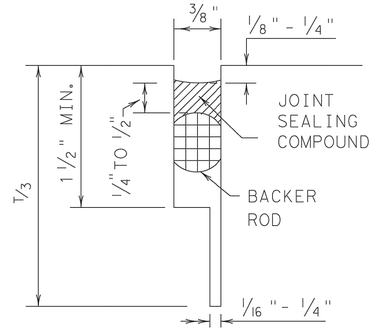
METHOD B: JOINT SEALING COMPOUND



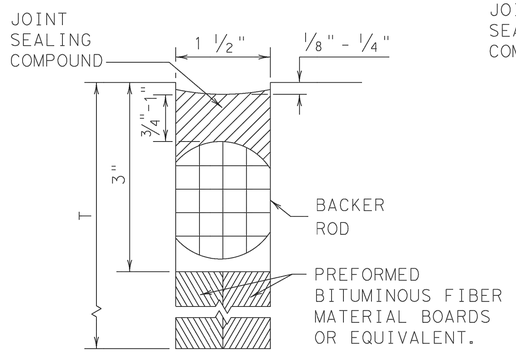
LONGITUDINAL SAWED CONTRACTION JOINT



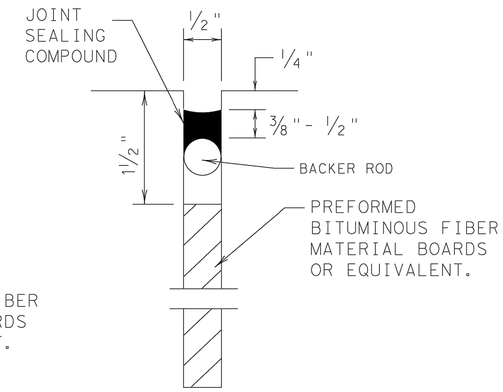
LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT



TRANSVERSE SAWED CONTRACTION JOINT

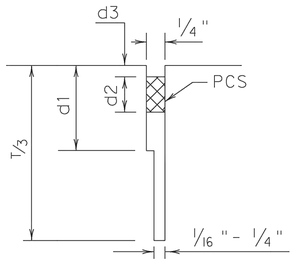


TRANSVERSE FORMED EXPANSION JOINT

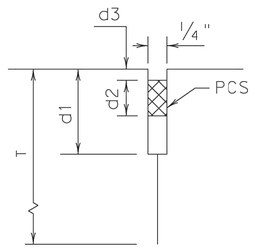


FORMED ISOLATION JOINT

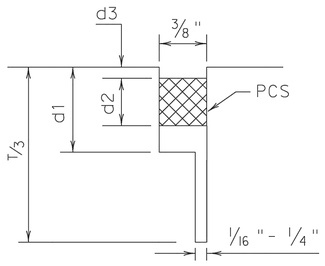
METHOD A: PREFORMED COMPRESSION SEALS (PCS)(DMS-6310 CLASS 6)



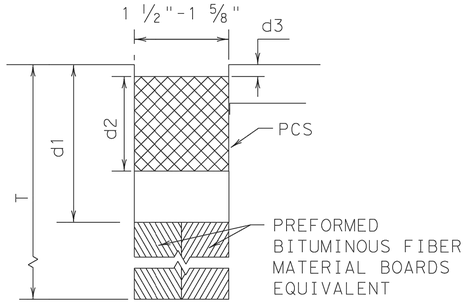
LONGITUDINAL SAWED CONTRACTION JOINT



LONGITUDINAL CONSTRUCTION JOINT



TRANSVERSE SAWED CONTRACTION JOINT



TRANSVERSE FORMED EXPANSION JOINT

GENERAL NOTES

1. UNLESS OTHERWISE SHOWN IN THE PLANS, EITHER METHOD "A" OR METHOD "B" MAY BE USED.
2. THE LOCATION OF JOINTS SHALL BE AS SHOWN ELSEWHERE IN THE PLANS.
3. THE JOINT RESERVOIR FOR SEALANT OR PCS SHALL BE SAWED UNLESS OTHERWISE SHOWN ON THE PLANS FOR THE LONGITUDINAL AND TRANSVERSE CONSTRUCTION JOINTS AND THE SAWED JOINTS.
4. DIMENSIONS d1, d2, AND d3 SHOWN IN METHOD A SHALL BE IN ACCORDANCE WITH THE PREFORMED COMPRESSION SEAL MANUFACTURER'S RECOMMENDATION.
5. REFER TO DMS-6310 "JOINT SEALANTS AND FILLERS" FOR THE CLASSIFICATIONS.
6. FOR SAWED LONGITUDINAL JOINT, LONGITUDINAL OR TRANSVERSE CONSTRUCTION JOINT, USE JOINT SEALANT CLASS 5 OR 8 UNLESS OTHERWISE SHOWN ON THE PLAN OR APPROVED.
7. FOR TRANSVERSE SAWED CONTRACTION, TRANSVERSE FORMED EXPANSION JOINT, AND ISOLATION JOINT USE JOINT SEALANT CLASS 5 OR 8 AT NEW JOINTS. USE JOINT SEALANT CLASS 4,5,7,OR 8 FOR MAINTAINING EXISTING JOINTS.
8. THE JOINTS SHALL BE CLEANED IN ACCORDANCE WITH THE ITEM 438 "CLEANING AND SEALING JOINTS" OR ITEM 713 "CLEANING AND SEALING JOINTS AND CRACKS (CONCRETE PAVEMENT)".
9. ISOLATION JOINTS ACCOMMODATE HORIZONTAL AND VERTICAL MOVEMENTS THAT OCCUR BETWEEN A PAVEMENT AND A STRUCTURE. ISOLATION JOINTS MAY BE USED FOR BRIDGE ABUTMENTS, INTERSECTIONS, CURB AND GUTTER, OLD AND NEW PAVEMENTS, OR AROUND DRAINAGE INLETS, MANHOLES, FOOTINGS AND LIGHTING STRUCTURES.

Texas Department of Transportation

Design Division Standard

CONCRETE PAVING DETAILS

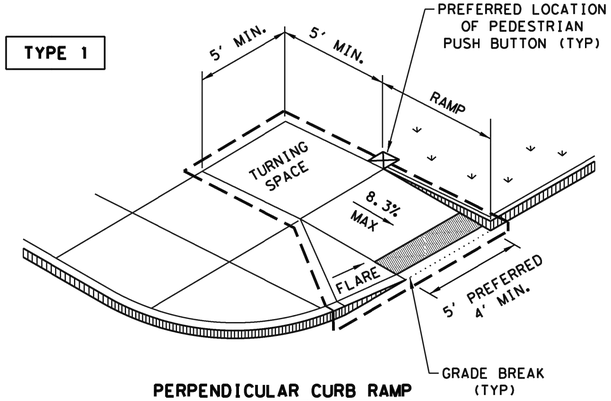
JOINT SEALS

JS-14

FILE: js14.dgn	DN: TxDOT	DN: HC	DW: HC	CK: AN	
©TxDOT: DECEMBER 2014	CONT	SECT	JOB	HIGHWAY	
REVISIONS					
	DIST	COUNTY		SHEET NO.	
				14	

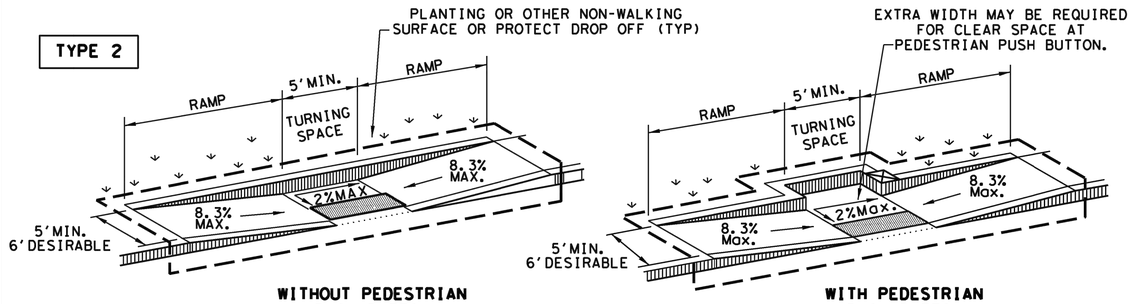
DATE:
FILE:

TYPE 1



PERPENDICULAR CURB RAMP

TYPE 2

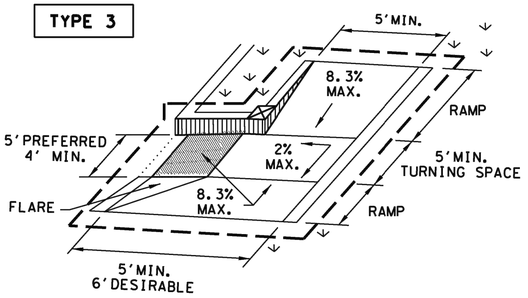


WITHOUT PEDESTRIAN PUSH BUTTON

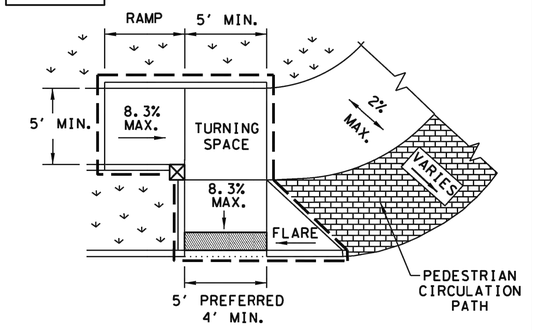
WITH PEDESTRIAN PUSH BUTTON

PARALLEL CURB RAMP

TYPE 3

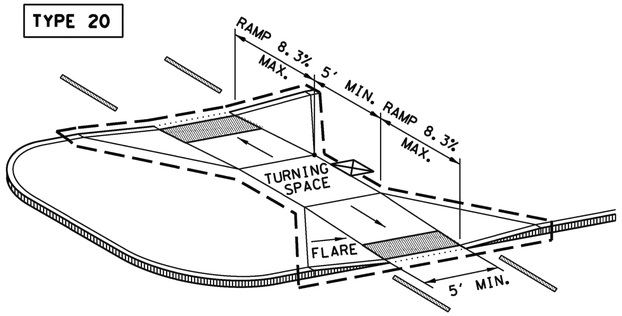


TYPE 6



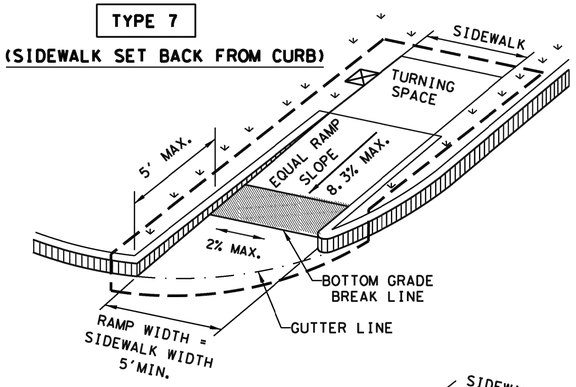
COMBINATION CURB RAMPS

TYPE 20

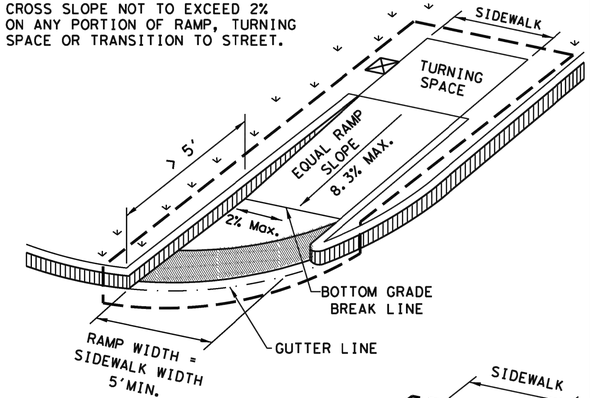


CURB RAMPS AT MEDIAN ISLANDS

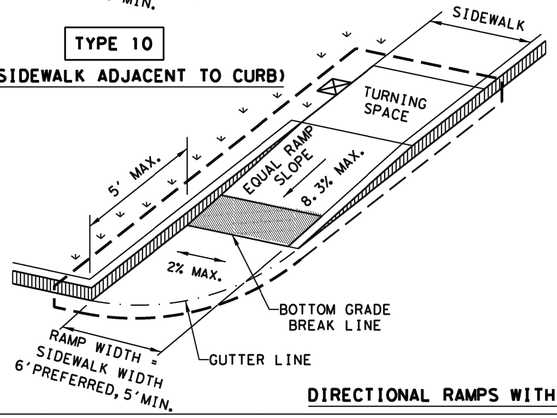
TYPE 7
(SIDEWALK SET BACK FROM CURB)



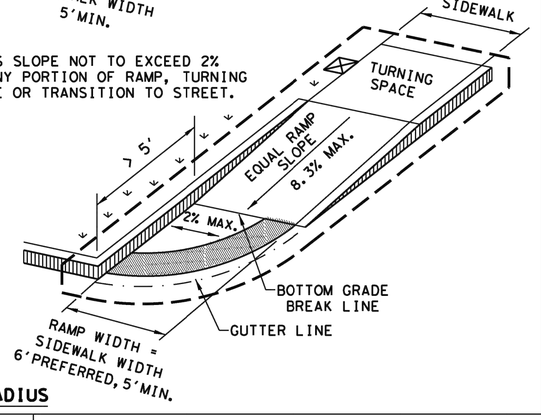
CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



TYPE 10
(SIDEWALK ADJACENT TO CURB)

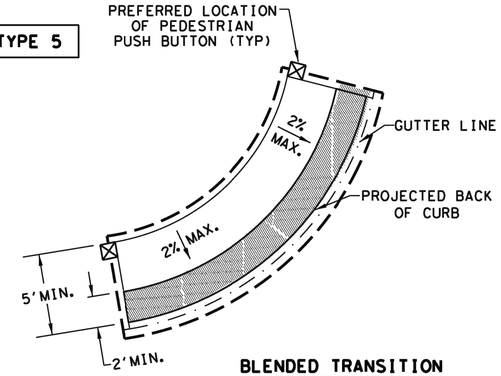


CROSS SLOPE NOT TO EXCEED 2% ON ANY PORTION OF RAMP, TURNING SPACE OR TRANSITION TO STREET.



DIRECTIONAL RAMPS WITHIN RADIUS

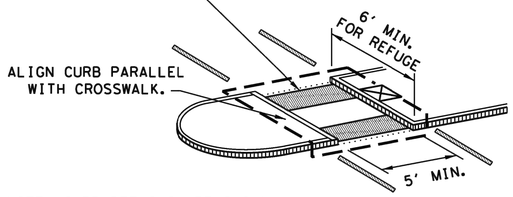
TYPE 5



BLENDED TRANSITION
(FLUSH LANDING)

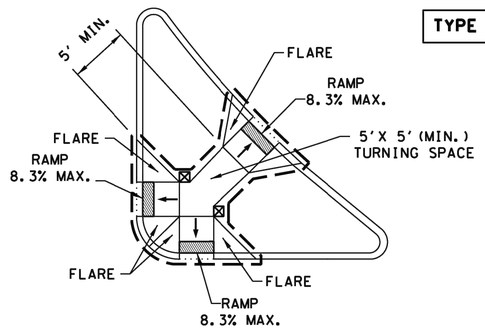
TYPE 21

INSTALL DETECTABLE WARNING SURFACE AT EACH END OF THE CUT-THROUGH RAMP WITH A MINIMUM 2' USUAL SIDEWALK SURFACE BETWEEN. IF MEDIAN IS LESS THAN 6' WIDE, ELIMINATE DETECTABLE WARNING SURFACES.



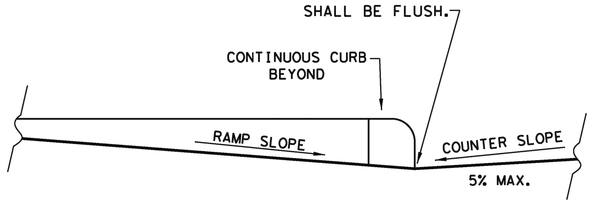
NOTE: CURB DETAILS ARE SHOWN ELSEWHERE IN THE PLANS.

TYPE 22



COMBINATION ISLAND RAMPS

BOTTOM GRADE BREAK OF CURB RAMP WILL NORMALLY BE AT GUTTER LINE. SURFACE SLOPES AT GRADE BREAKS SHALL BE FLUSH.



TYPICAL SECTION OF PERPENDICULAR CURB RAMP AT CONNECTION TO ROADWAY

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.

DETECTABLE WARNING SURFACE

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON IF APPLICABLE. ☒

GUTTER LINE — · —

GRADE BREAK .....

RAMP LIMITS OF PAYMENT — —

SHEET 1 OF 4

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY
REVISIONS				
REVISED 08, 2005	DIST	COUNTY		SHEET NO.
REVISED 06, 2012				15
REVISED 01, 2018				

DATE:
FILE:

GENERAL NOTES

CURB RAMPS

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Cross slopes of 1.5% and lesser running should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
4. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is desirable. Where a 5' sidewalk cannot be provided due to site constraints, sidewalk width may be reduced to 4' for short distances. 5'x 5' passing areas at intervals not to exceed 200' are required.
5. Turning Spaces shall be 5'x 5' minimum. Cross slope shall be maximum 2%.
6. Clear space at the bottom of curb ramps shall be a minimum of 4'x 4' wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the latest draft of the Proposed Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) as published by the U.S. Architectural and Transportation Barriers Compliance Board (Access Board).
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5'x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Furnish and install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
16. Provide a smooth transition where the curb ramps connect to the street.
17. Curbs shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
18. Existing features that comply with applicalble standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

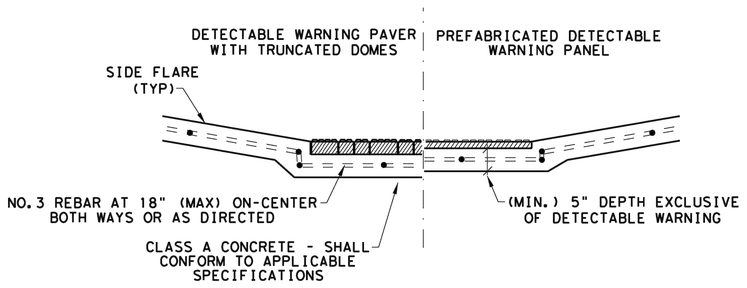
19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
20. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.

DETECTABLE WARNING PAVERS (IF USED)

25. Furnish detectable warning paver units meeting all requirements of ASTM C-936, C-33. Lay in a two by two unit basket weave pattern or as directed.
26. Lay full-size units first followed by closure units consisting of at least 25 percent (25%) of a full unit. Cut detectable warning paver units using a power saw.

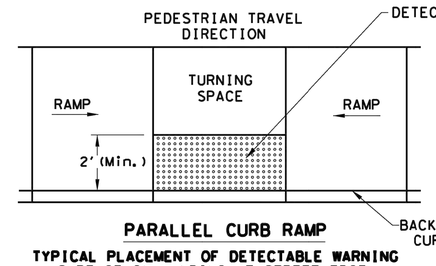
SIDEWALKS

27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
29. Street grades and cross slopes shall be as shown elsewhere in the plans.
30. Changes in level greater than 1/4 inch are not permitted.
31. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the parallel roadway. Where a continuous grade greater than five percent (5%) must be provided, handrails may be desirable to improve accessibility. Handrails may also be needed to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with PROWAG R409.
32. Handrail extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
33. Driveways and turnouts shall be constructed and paid for in accordance with Item "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
34. Sidewalk details are shown elsewhere in the plans.



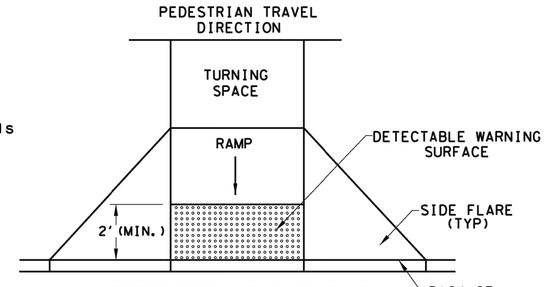
SECTION VIEW DETAIL
CURB RAMP AT DETECTIBLE WARNINGS

DETECTABLE WARNING SURFACE DETAILS



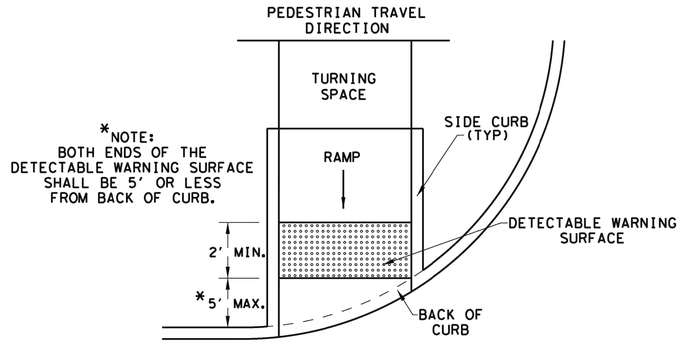
PARALLEL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE.



PERPENDICULAR CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.



DIRECTIONAL CURB RAMP

TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON SLOPING RAMP RUN.

SHEET 2 OF 4

Texas Department of Transportation | Design Division Standard

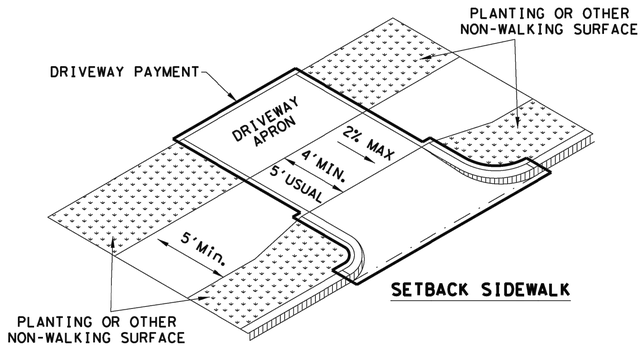
PEDESTRIAN FACILITIES CURB RAMPS

PED-18

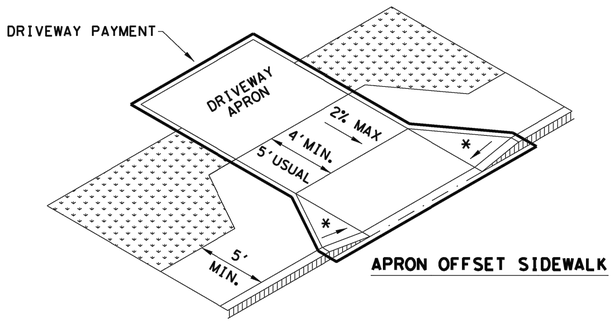
FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
REVISED 08, 2005 REVISED 06, 2012 REVISED 01, 2018	DIST	COUNTY			SHEET NO.
					16

DATE:
FILE:

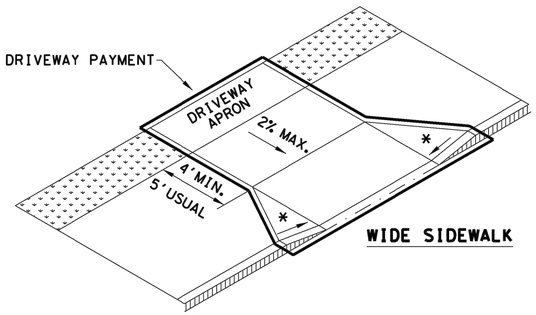
SIDEWALK TREATMENT AT DRIVEWAYS



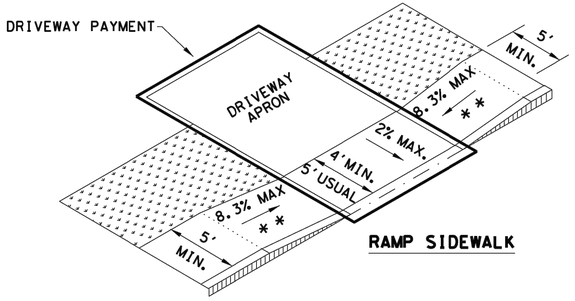
SETBACK SIDEWALK



APRON OFFSET SIDEWALK



WIDE SIDEWALK

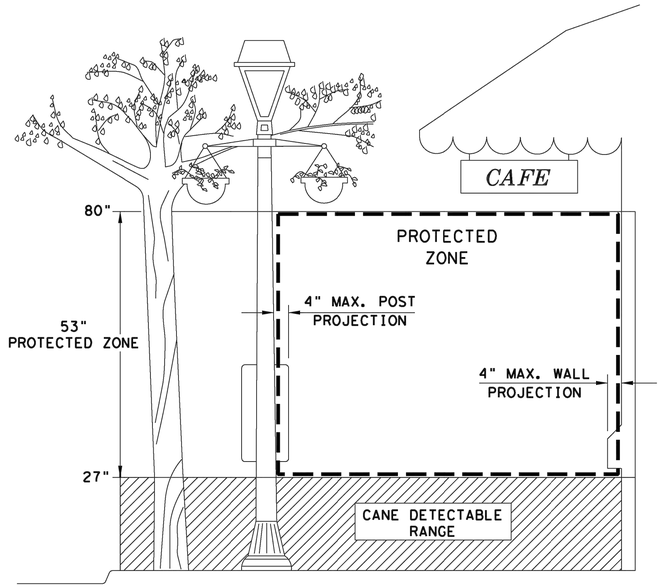


RAMP SIDEWALK

NOTES:

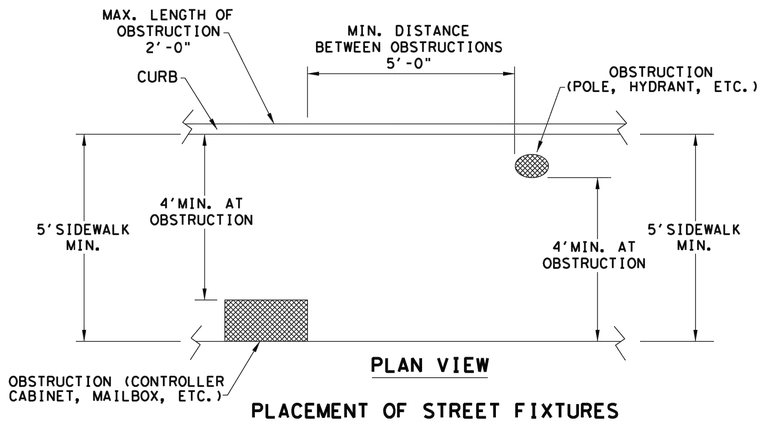
* WHERE DRIVEWAYS CROSS THE PEDESTRIAN ROUTE, SIDES SHALL BE FLARED AT 10% MAX SLOPE.

* * IF CURB HEIGHT IS GREATER THAN 6 INCHES, USE GRADE LESS THAN OR EQUAL TO 5%. HANDRAIL AND DETECTABLE WARNING ARE NOT REQUIRED.



PROTECTED ZONE

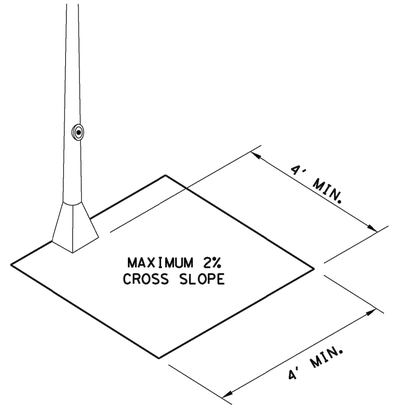
NOTE: IN PEDESTRIAN CIRCULATION AREA, MAXIMUM 4" PROJECTION FOR POST OR WALL MOUNTED OBJECTS BETWEEN 27" AND 80" ABOVE THE SURFACE.



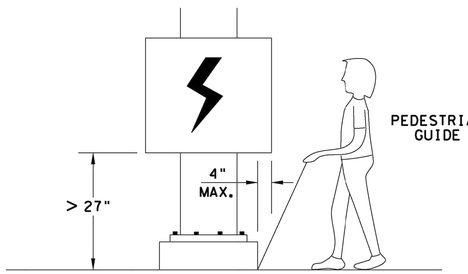
PLAN VIEW

PLACEMENT OF STREET FIXTURES

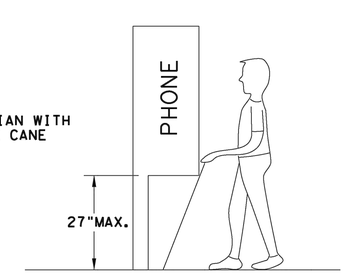
NOTE: ITEMS NOT INTENDED FOR PUBLIC USE. MINIMUM 4' X 4' CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.



CLEAR SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON



WHEN AN OBSTRUCTION OF A HEIGHT GREATER THAN 27" FROM THE SURFACE WOULD CREATE A PROTRUSION OF MORE THAN 4" INTO THE PEDESTRIAN CIRCULATION AREA, CONSTRUCT ADDITIONAL CURB OR FOUNDATION AT THE BOTTOM TO PROVIDE A MAXIMUM 4" OVERHANG.



PROTRUDING OBJECTS OF A HEIGHT ≤ 27" ARE DETECTABLE BY CANE AND DO NOT REQUIRE ADDITIONAL TREATMENT.

DETECTION BARRIER FOR VERTICAL CLEARANCE < 80"

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

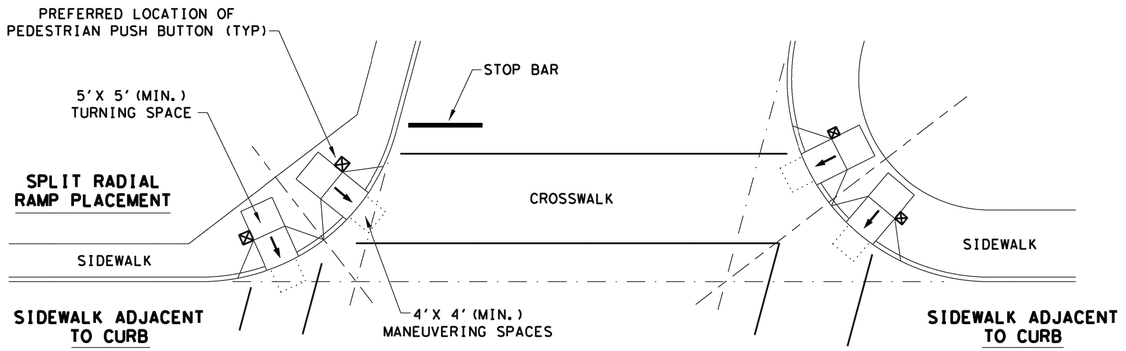
PED-18

FILE: ped18	DN: TxDOT	DW: VP	CK: KM	CK: PK & JG	
© TxDOT: MARCH, 2002	CONT	SECT	JOB	HIGHWAY	
REVISIONS					
REVISED 08,2005 REVISED 06,2012 REVISED 01,2018	DIST	COUNTY		SHEET NO.	
				17	

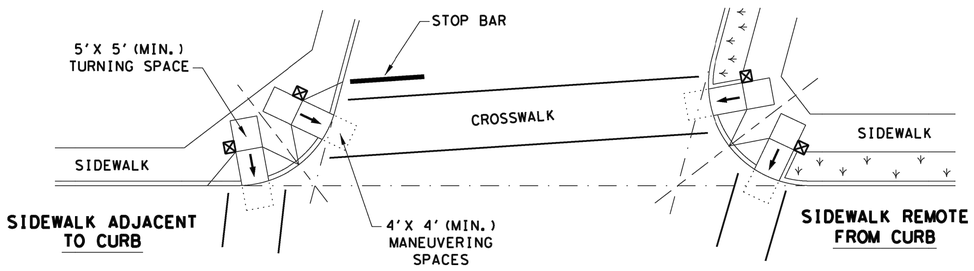
DATE:
FILE:

TYPICAL CROSSING LAYOUTS

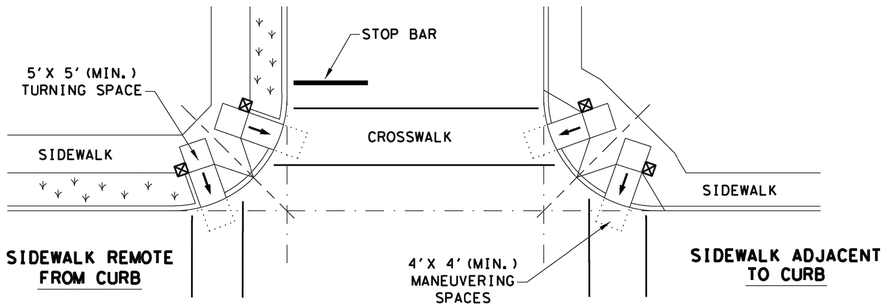
SEE SHEET 1 OF 4 FOR DETAILS AND DIMENSIONS



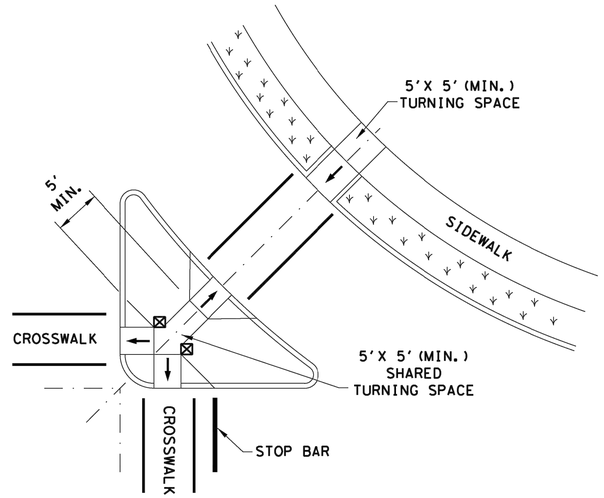
SKEWED INTERSECTION WITH "LARGE" RADIUS



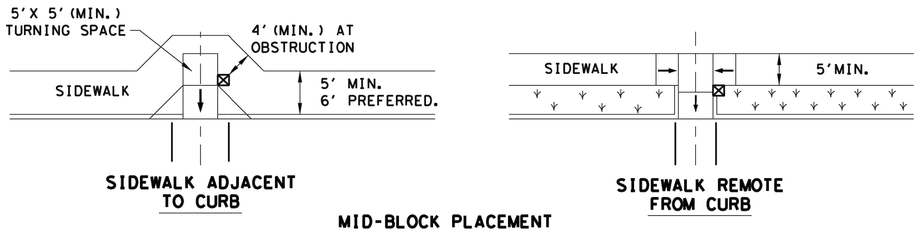
SKEWED INTERSECTION WITH "SMALL" RADIUS



NORMAL INTERSECTION WITH "SMALL" RADIUS



AT INTERSECTION
W/FREE RIGHT TURN & ISLAND



MID-BLOCK PLACEMENT
PERPENDICULAR RAMPS

LEGEND:

SHOWS DOWNWARD SLOPE. →

DENOTES PREFERRED LOCATION OF PEDESTRIAN PUSH BUTTON (IF APPLICABLE). ⊠

DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

Texas Department of Transportation

Design Division Standard

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

FILE: ped18	DN: TxDOT		DW: VP	CK: KM	CK: PK & JG
© TxDOT: MARCH, 2002	CONT	SECT	JOB		HIGHWAY
REVISIONS					
REVISED 08, 2005	DIST	COUNTY			SHEET NO.
REVISED 06, 2012					18
REVISED 01, 2018					

DRAINAGE AREA TABLE							
DRAINAGE AREA NO.	AREA (ac)	RUNOFF COEFFICIENT "C"	ANTECEDENT FACTOR "Ca"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"10 (in/hr)	TOTAL FLOW Q10 (cfs)	REMARKS
A1	1.06	0.604	1.00	10.00	8.03	5.148	EX INLET

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- # / XX ac — DRAINAGE AREA NUMBER / DRAINAGE AREA SIZE (ACRES)
- FLOW DIRECTION
- DRAINAGE AREA BOUNDARY
- EXISTING STORM STRUCTURE

EXIST. ROW

PADRE BLVD LOOP

PR 100 (PADRE BLVD)

EX DITCH ℄

1+00

2+00

3+00

4+00

4+50

AREA A1
CATCH POINT

A1
1.06 ac

CONCRETE BASE

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

EXISTING DRAINAGE AREA MAP

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	19
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:55 PM BY: CAMDEN.PATOVISTI
FILE: K:\LAC_TPTO\1PROJECT\069234014_SPI_PR100PARKINGLOT\CADD\PLANSHEETS\EX DRAINAGE AREA MAP.DWG

DRAINAGE AREA TABLE							
DRAINAGE AREA NO.	AREA (ac)	RUNOFF COEFFICIENT "C"	ANTECEDENT FACTOR "Ca"	TIME OF CONCENTRATION (minutes)	RAINFALL INTENSITY "I"10 (in/hr)	TOTAL FLOW Q10 (cfs)	REMARKS
A1	0.80	0.74	1.00	10.00	8.03	4.80	PROP DITCH
A2	0.07	0.30	1.00	10.00	8.03	0.16	SIDEWALK DRAIN
A3	0.24	0.80	1.00	10.00	8.03	1.56	EX INLET

NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

— DRAINAGE AREA NUMBER
XX ac — DRAINAGE AREA SIZE (ACRES)
FLOW DIRECTION
DRAINAGE AREA BOUNDARY

EXIST. ROW

PROP 10 YEAR DISCHARGE: 4.80 CFS

PROP 10 YEAR DISCHARGE: 4.96 CFS

PADRE BLVD LOOP

PROP DITCH ℄

EX DITCH ℄

A1 0.80 ac

A2 0.07 ac

A3 0.24 ac

PR 100 (PADRE BLVD)

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
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South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

PROPOSED DRAINAGE AREA MAP

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	20
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:55 PM BY: CAMDEN.PATOVISTI
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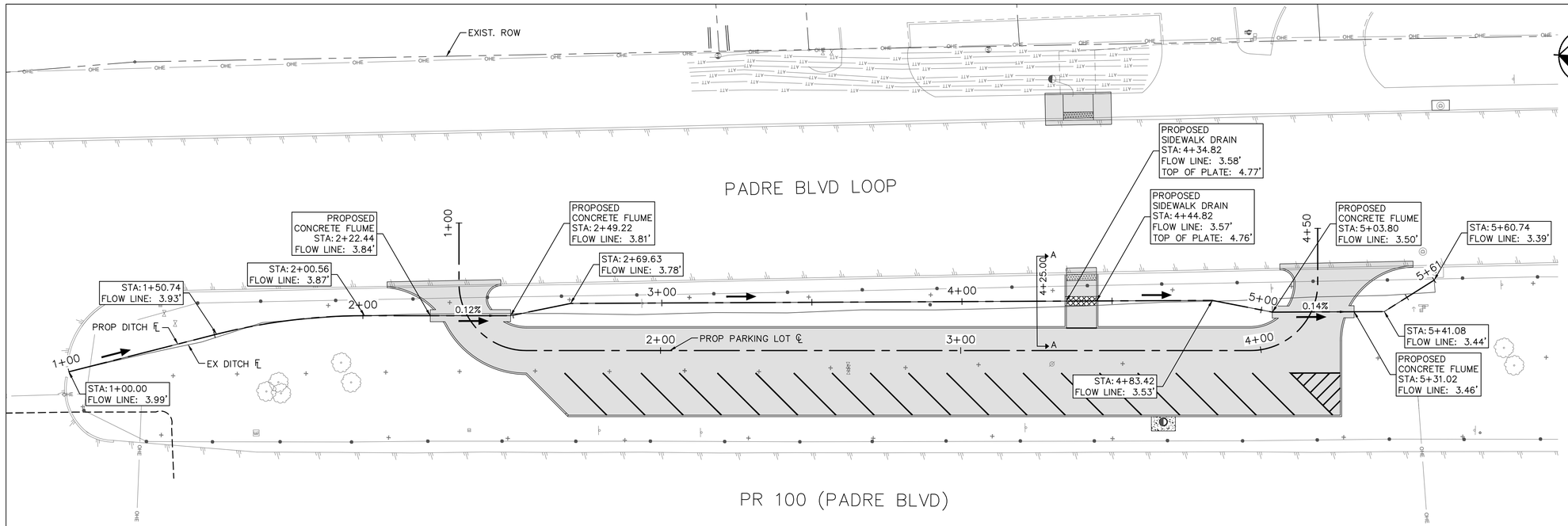
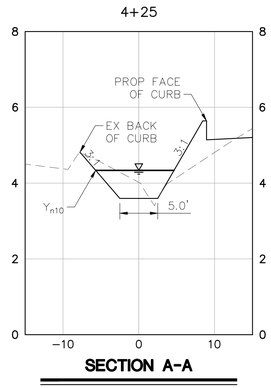


LEGEND

PROP FLOW DIRECTION



SECTION A-A

SCALE: H: 1"=20'
SCALE: V: 1"=4'

Q_{10}= 4.80 cfs
V_{10}= 0.90 ft/s
S = 0.001 ft/ft
n = 0.035

NORMAL DEPTH
Y_{n10}= 0.74 ft

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Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

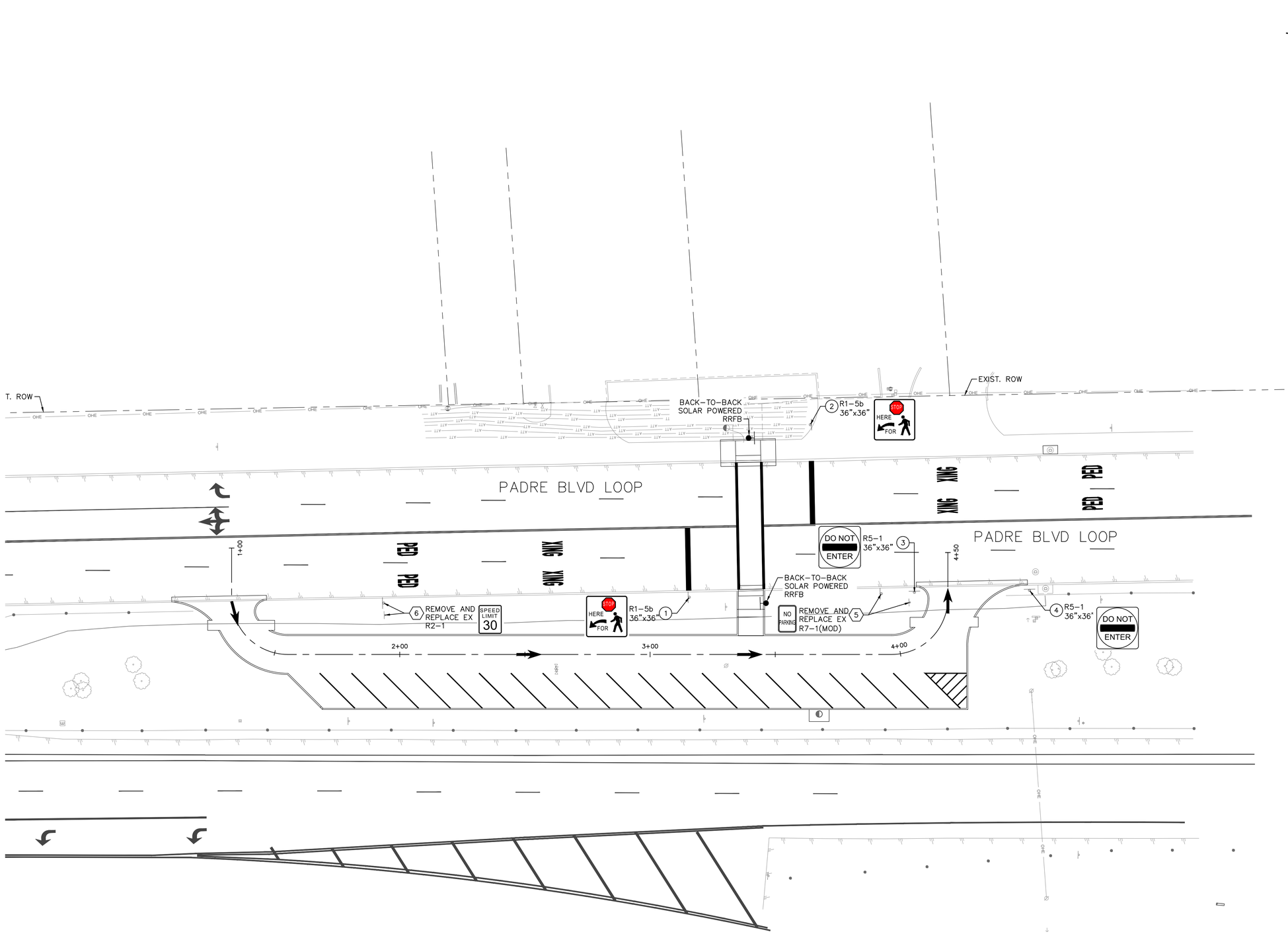
DRAINAGE LAYOUT

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	21
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:55 PM BY KEEGAN.HALL
FILE: K:\LAC_TPTO\1PROJECT\069234014_SPI_PR100PARKINGLOT\CADD\PLANSHEETS\DRAINAGE LAYOUT.DWG



NOTES

1. EXISTING SMALL SIGNS AND LARGE GUIDE SIGNS TO REMAIN UNLESS OTHERWISE NOTED IN THE SIGNING PLANS.
2. SEE PAVING PLAN AND PAVEMENT MARKING LAYOUTS FOR ADDITIONAL DETAILS.
3. SIGNS SHALL BE PLACED IN ROW. EDGE OF SIGNS SHALL NOT BE PLACED LESS THAN 2.0' FROM F.O.C. SIGN HEIGHT PLACEMENT SHALL FOLLOW ADA STANDARDS. SIGNS SHALL BE PLACED OUTSIDE OF SIDEWALK WHEN POSSIBLE, AND WHEN NOT POSSIBLE, SHALL BE PLACED IN SUCH A WAY TO MINIMIZE OBSTRUCTION TO PEDESTRIANS.
4. SEE TXDOT DETAILS FOR FURTHER CLARIFICATION TO SIGN PLACEMENT.
5. FOR MORE INFORMATION ON PEDESTRIAN IN-ROADWAY SIGNS AND LED FLASHER SIGNS SEE DETAILS.

No.	Revision	By	Date

5/27/2025
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JOHN W. RYAN
141023
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PROFESSIONAL ENGINEER

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Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

SIGNING LAYOUT

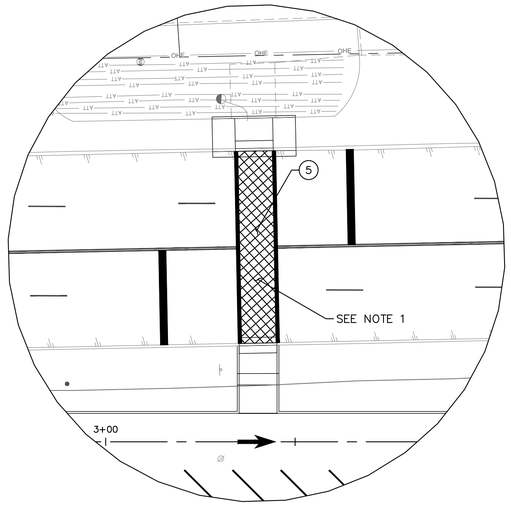
SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	22
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:55 PM BY MARIA.PENA
FILE: K:\LAC_TPTO\PROJECT\069234014_SPI_PR100PARKINGLOT\CADD\PLANSHEETS\SIGNING_MARKING.DWG

DETAIL A
(BID ALTERNATE WORK)



GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

STRIPING LEGEND

1	PREFAB PAV MRK TY C(W) ARROW
2	REFL PAV MRK TY I (W)24"(SLD) (100MIL)
3	REFL PAV MRK TY I (W)12"(SLD) (100MIL)
4	RE PM TY II (Y)4"(SLD)
5	STAMPED THERMOPLASTIC CROSSWALK
6	PREFAB PAV MRK TY C (W) (PED)
7	PREFAB PAV MRK TY C (W) (XING)

NOTES

1. SEE PAVEMENT MARKING DETAILS SHEET FOR TRAFFIC PATTERN CROSSWALK.

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PR 100 OVERFLOW PARKING FACILITY

PAVEMENT MARKINGS LAYOUT

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	23
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:55 PM BY MARIA.PENA
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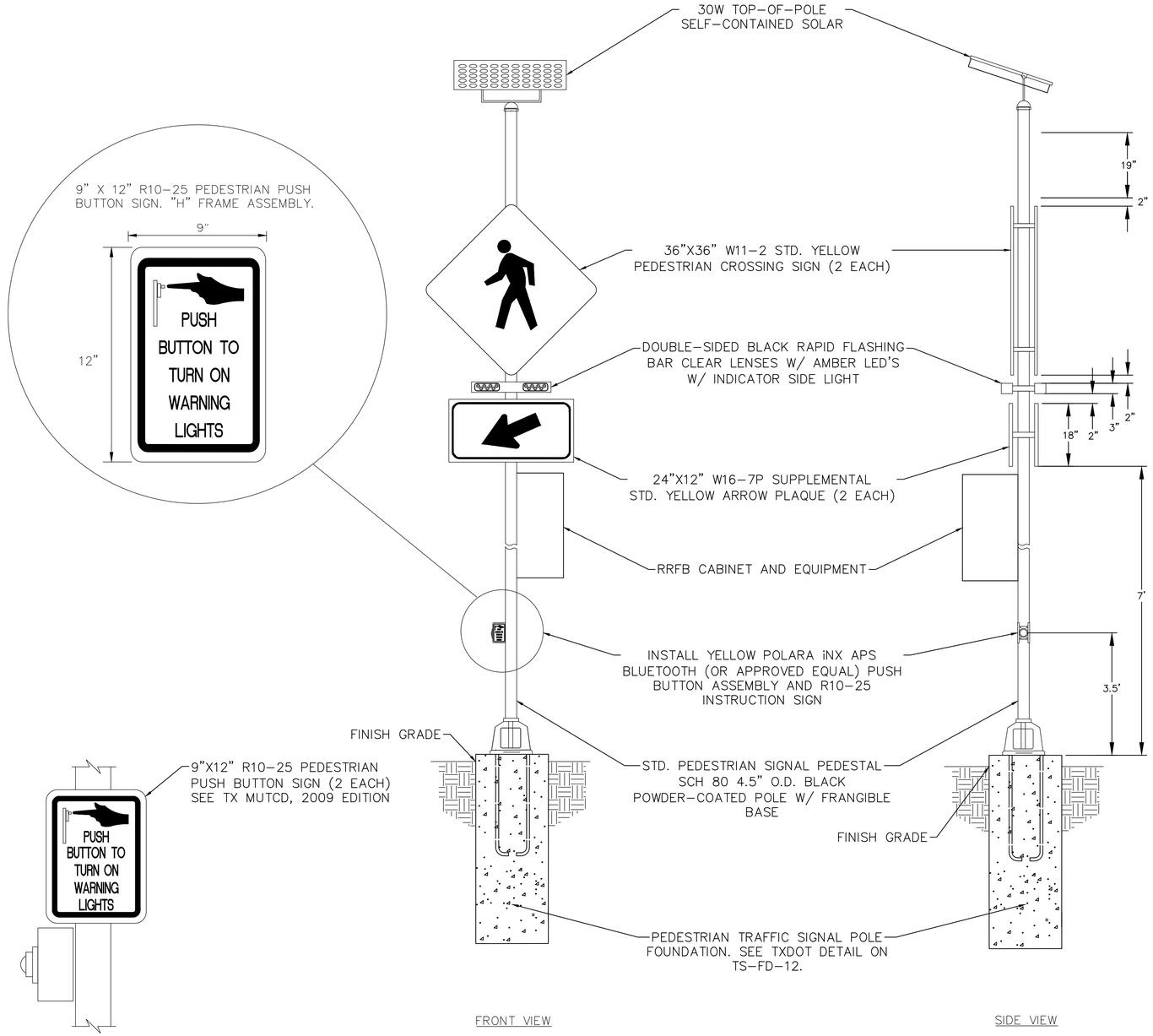

SOLAR POWERED RECTANGULAR RAPID FLASHING BEACON SYSTEM PEDESTRIAN PEDESTAL INSTALLATION (DOUBLE SIDED)

NOTES

1. PUSH BUTTON EXTENDERS SHALL BE INSTALLED IF REQUIRED TO MAINTAIN ADA REACH REQUIREMENTS (NO EXTRA PAY).

SOLAR POWERED TO BE RRFB SYSTEM PROVIDED BY TAPCO OR APPROVED EQUAL:

- DC PEDESTRIAN CROSSING W/ POLARA iNX APS BLUETOOTH PUSHBUTTON (INCLUDES CABINET, PUSH TO ACTIVATE SIGN, 30 WATT SOLAR PANEL, AND 58 Ah BATTERY)
- IMSA 6 COND WIRE FOR INX PUSHBUTTON
- BLACK POWDER-COATED ALUMINUM ENCLOSURE RECTANGULAR RAPID FLASHING BEACON: DOUBLE SIDED RRFB (W/ CONFIRMATION LIGHT) (BANDING MOUNT)
- W11-2 (36"x36") STANDARD YELLOW
- W16-7PL (24"X12") STANDARD YELLOW AND W16-7PR (24"X12") STANDARD YELLOW (2 SIGNS TO POINT TO THE LEFT, 2 SIGNS TO POINT TO THE RIGHT)
- 6' DEEP TXDOT 24" DRILLED SHAFT FOUNDATION AND ANCHOR BOLTS
- 15' 4.5" O.D. BLACK POWDER-COATED POLE AND BASE
- ALL ASSOCIATED SIGN MOUNTING HARDWARE
- ALL MATERIALS/WIRING/TOOLS NECESSARY TO INSTALL RRFB SYSTEM AND MAKE FULLY OPERATIONAL.

ALL RRFB POLES SHALL FLASH WHEN PUSH BUTTONS ARE ACTIVATED TO ALLOW PEDESTRIAN TO CROSS.

FLASH TIME: 60FT CROSSING / 3.5 FT/S = 17 SECOND FLASH TIME

REFER TO SPECIFICATION SHEETS INCLUDED IN PROJECT MANUAL FOR MORE INFORMATION

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
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141023
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South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

RECTANGULAR RAPID FLASHING BEACON DETAIL

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	24
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:56 PM BY MARIA.PENA
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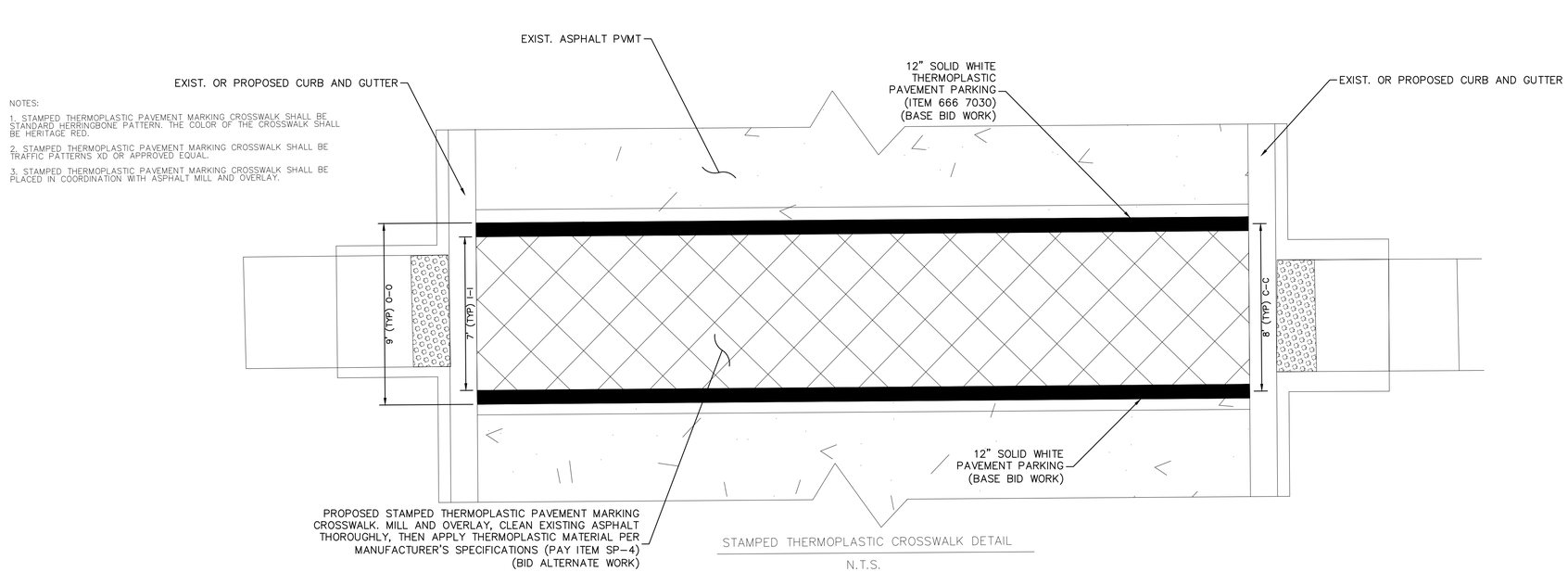

STAMPED THERMOPLASTIC CROSSWALK DETAIL

N.T.S.

No.	Revision	By	Date

5/27/2025

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South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

STAMPED THERMOPLASTC CROSSWALK DETAIL (BID ALTERNATE)

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	25
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:56 PM BY MARIA.PENA
FILE: K:\LAC_TPTO\1PROJECT\069234014_SPI_PR100PARKINGLOT\CADD\PLANSHEETS\SPI_MARKING DETAILS.DWG

SUMMARY OF SMALL SIGNS

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

PLAN SHEET NO.	SIGN NO.	SIGN NOMENCLATURE	SIGN	DIMENSIONS	FLAT ALUMINUM (TYPE A)	EXAL ALUMINUM (TYPE G)	POST TYPE FRP = Fiberglass TWT = Thin-Wall 10BWG = 10 BWG S80 = Sch 80	POSTS 1 or 2	ANCHOR TYPE UA=Universal Conc UB=Universal Bolt SA=Slipbase-Conc SB=Slipbase-Bolt WS=Wedge Steel WP=Wedge Plastic	MOUNTING DESIGNATION PREFABRICATED P = "Plain" T = "T" U = "U"	1EXT or 2EXT = # of Ext BM = Extruded Wind Beam WC = 1.12 #/ft Wing Channel EXAL= Extruded Alum Sign Panels	BRIDGE MOUNT CLEARANCE SIGNS (See Note 2) TY = TYPE TY N TY S
17	1	R1-5b		36"x36"	✓		S80	1	SA	P		
	2			36"x36"	✓		S80	1	SA	P		
17	3	R5-1		36"x36"	✓		S80	1	SA	P		
	4			36"x36"	✓		S80	1	SA	P		
17	5	R7-1(MOD)		EXISTING								
17	6	R2-1		EXISTING								

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DATE:
FILE:

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141023
LICENSED
PROFESSIONAL ENGINEER

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"

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

http://www.txdot.gov/

NOTE:

1. Sign supports shall be located as shown on the plans, except that the Engineer may shift the sign supports, within design guidelines, where necessary to secure a more desirable location or to avoid conflict with utilities. Unless otherwise shown on the plans, the Contractor shall stake and the Engineer will verify all sign support locations.
2. For installation of bridge mount clearance signs, see Bridge Mounted Clearance Sign Assembly (BMCS)Standard Sheet.
3. For Sign Support Descriptive Codes, see Sign Mounting Details Small Roadside Signs General Notes & Details SMD(GEN).

Texas Department of Transportation

Traffic Operations Division Standard

SUMMARY OF SMALL SIGNS

SOSS

FILE: sums16.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
© TxDOT May 1987	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
4-16 8-16	DIST	COUNTY		SHEET NO.
	PHR	CAMERON		26

DATE:
FILE:

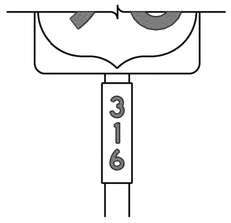
REQUIREMENTS FOR INDEPENDENT MOUNTED ROUTE SIGNS

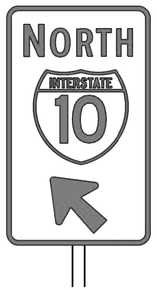
SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	WHITE	TYPE A SHEETING
BACKGROUND	ALL OTHERS	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE A SHEETING
LEGEND & BORDERS	BLACK	ACRYLIC NON-REFLECTIVE FILM
LEGEND & BORDERS	ALL OTHERS	TYPE B or C SHEETING

TYPICAL EXAMPLES

REQUIREMENTS FOR BLUE, BROWN & GREEN D AND I SERIES GUIDE SIGNS

SHEETING REQUIREMENTS		
USAGE	COLOR	SIGN FACE MATERIAL
BACKGROUND	ALL	TYPE B OR C SHEETING
LEGEND & BORDERS	WHITE	TYPE D SHEETING
LEGEND, SYMBOLS & BORDERS	ALL OTHERS	TYPE B OR C SHEETING





TYPICAL EXAMPLES

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. White legend shall use the Clearview Alphabet. The following Clearview fonts shall be used to replace the existing white Federal Highway Administration (FHWA) Standard Highway Alphabets, when not specified in the SHSD, or in the plans.

B	CV-1W
C	CV-2W
D	CV-3W
E	CV-4W
Emod	CV-5WR
F	CV-6W

3. Route sign legend (ie. IH, US, SH and FM shields) shall use the Federal Highway Administration (FHWA) Standard Highway Alphabets B, C, D, E, Emod or F).

4. 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.

5. Independent mounted route sign with white or colored legend and borders shall be applied by screening process with transparent color ink, transparent colored overlay film to white background sheeting or cut-out white sheeting to colored background sheeting, or combination thereof. White legend, symbols and borders on all other signs shall be cut-out white sheeting applied to colored background sheeting.

6. Information regarding borders and radii for signs is found in the "Standard Highway Sign Designs for Texas". Dimensions shown and described for borders and corner radii on parent sign are nominal. Borders may vary in width as much as 1/2 inch. Corner radii above 3 inches may vary in width as much as 1 inch. Borders and corner radii within a parent sign must be of matching widths. The sign area outside the corner radius should be trimmed or rounded.

7. Sign substrate shall be any material that meets the Departmental Material Specification requirements of DMS-7110 or approved alternative.

8. Mounting details of roadside signs are shown in the "SMD series" Standard Plan Sheets.

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

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

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

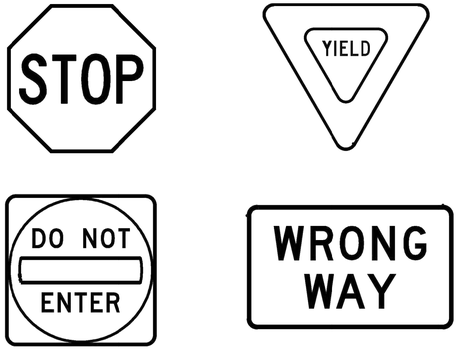
TSR(3)-13

FILE: tsr3-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	CAMERON		27

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

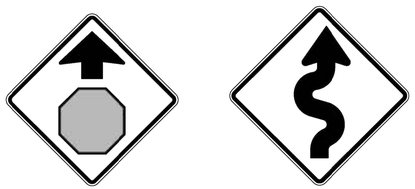
REQUIREMENTS FOR WHITE BACKGROUND REGULATORY SIGNS

(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	N\A	N\A	N\A	PR100
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	CAMERON		28

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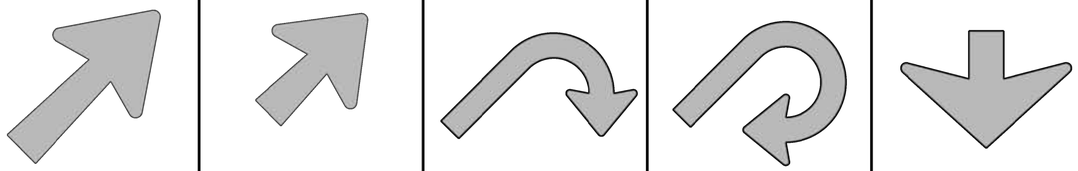
DATE:
FILE:

ARROW DETAILS

for Large Ground-Mounted and Overhead Guide Signs



TYPE	LETTER SIZE	USE
A-1	10.67" U/L and 10" Caps	Single Lane Exits
A-2	13.33" U/L and 12" Caps	
A-3	16" & 20" U/L	
B-1	10.67" U/L and 10" Caps	Multiple Lane Exits
B-2	13.33" U/L and 12" Caps	
B-3	16" & 20" U/L	

CODE	USED ON SIGN NO.
E-3	E5-1aT
E-4	E5-1bT

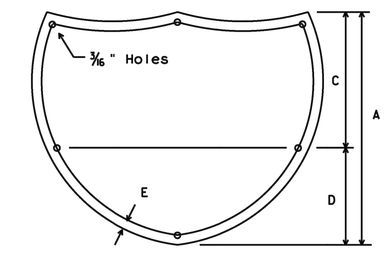
NOTE

Arrow dimensions are shown in the "Standard Highway Sign Designs for Texas" manual.

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

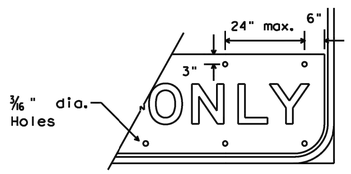
http://www.txdot.gov/

SIGN BLANK PUNCHING DETAILS FOR ATTACHMENTS WHEN SPECIFIED TO BE TYPE A ALUMINUM SIGNS (FOR MOUNTING TO GUIDE SIGN FACE)

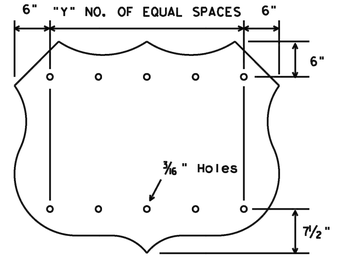


INTERSTATE ROUTE MARKERS

A	C	D	E
36	21	15	1 1/2
48	28	20	1 3/4

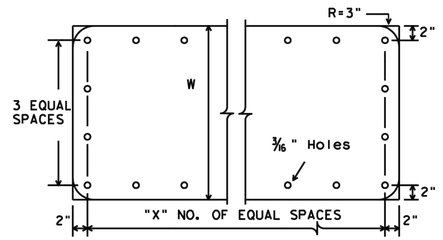


EXIT ONLY PANEL



U.S. ROUTE MARKERS

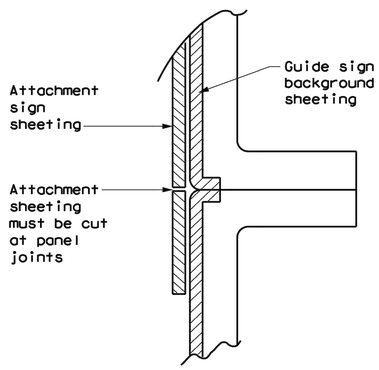
Sign Size	"Y"
24x24	2
30x24	3
36x36	3
45x36	4
48x48	4
60x48	5



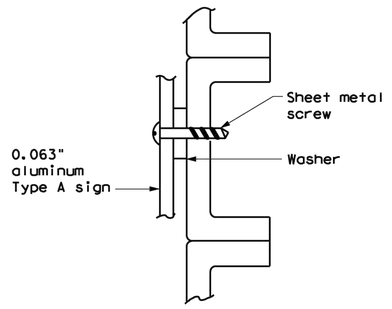
STATE ROUTE MARKERS

No. of Digits	W	X
4	24	4
4	36	5
4	48	6
3	24	3
3	36	4
3	48	5

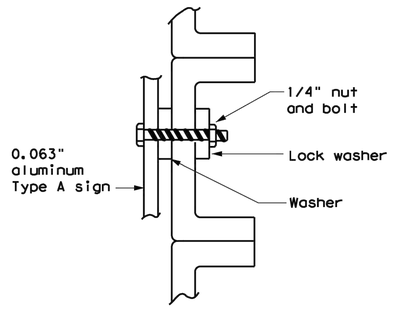
MOUNTING DETAILS OF ATTACHMENTS TO GUIDE SIGN FACE ("EXIT ONLY" AND "LEFT EXIT" PANELS, ROUTE MARKERS AND OTHER ATTACHMENTS)



DIRECT APPLIED ATTACHMENT



SCREW ATTACHMENT



NUT/BOLT ATTACHMENT

NOTE:

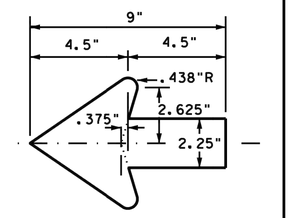
1. Sheeting for legend, symbols, and borders must be cut at panel joints.
2. Direct applied attachment signs will be subsidiary to "Aluminum Signs" or "Fiberglass Signs".

NOTE:

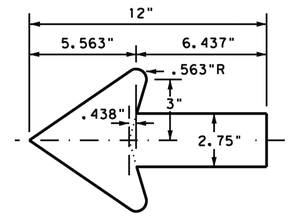
Furnish Type A aluminum sign attachments only when specified in the plans. These signs will be paid for under "Aluminum Signs".

ARROW DETAILS

for Destination Signs (Type D)



Standard arrow to be used with 6 inch letters.



Standard arrow to be used with 8 inch letters.

Texas Department of Transportation

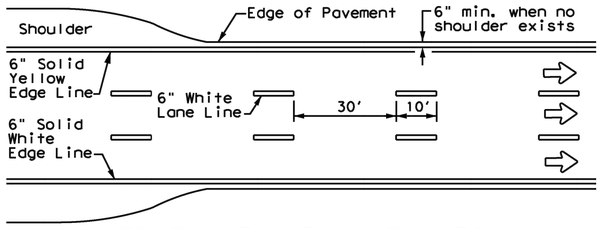
Traffic Operations Division Standard

TYPICAL SIGN REQUIREMENTS

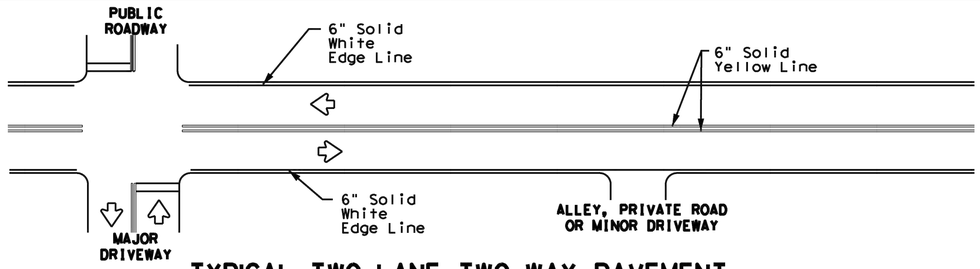
TSR(5)-13

FILE: tsr5-13.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2003	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
12-03 7-13	DIST	COUNTY		SHEET NO.
9-08	PHR	CAMERON		29

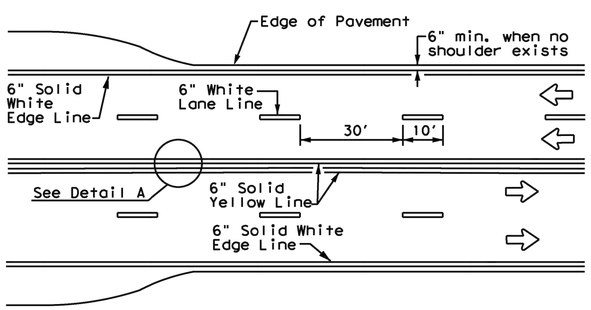
DATE:
FILE:

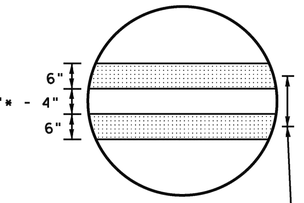


EDGE LINE AND LANE LINES ONE-WAY ROADWAY WITH OR WITHOUT SHOULDERS



TYPICAL TWO-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

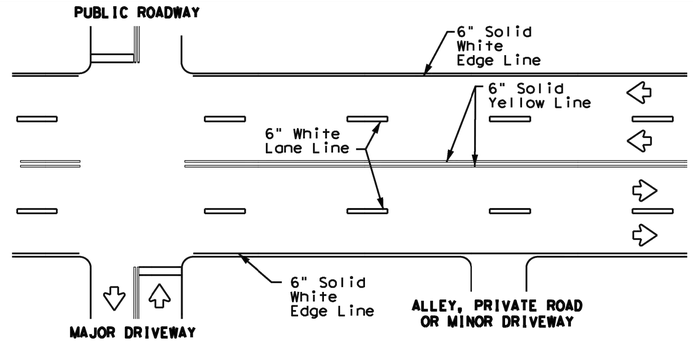




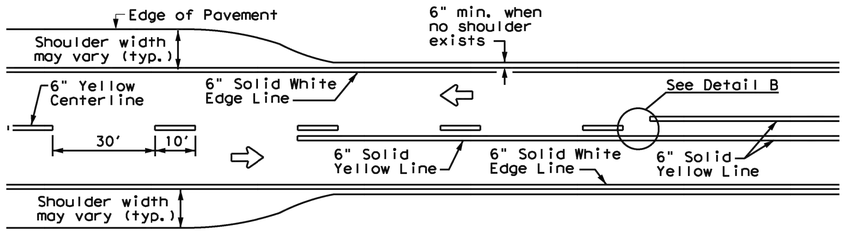
CENTERLINE AND LANE LINES FOUR LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS

* 2" minimum for restripe projects when approved by the Engineer.

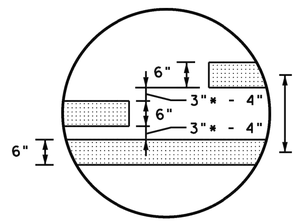
** 8" minimum for restripe projects when approved by the Engineer.



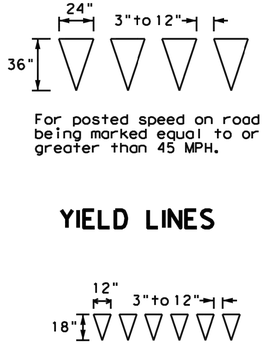
TYPICAL MULTI-LANE, TWO-WAY PAVEMENT MARKINGS THROUGH INTERSECTIONS

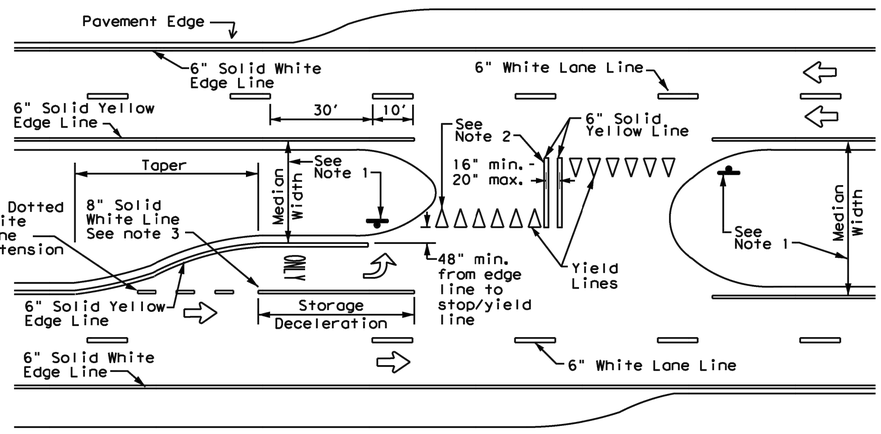


TWO LANE TWO-WAY ROADWAY WITH OR WITHOUT SHOULDERS



* 2" minimum for restripe projects when approved by the Engineer.





FOUR LANE DIVIDED ROADWAY CROSSOVERS

NOTES

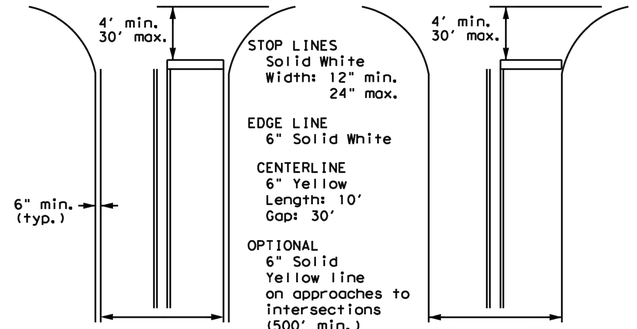
1. Where divided highways are separated by median widths at the median opening itself of 30 feet or more, median openings shall be signed as two separate intersections. Each median opening has two width measurements, with one measurement for each approach. The narrow median width will be the controlling width to determine if signs are required. Yield signs are the typical intersection control. Stop signs and stop bars are optional as determined by the Engineer.
2. Install median striping (double yellow centerlines and stop lines/yield lines) when a 50' or greater median centerline can be placed. Stop lines shall only be used with stop signs. Yield lines shall only be used with yield signs.
3. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer.

GENERAL NOTES

1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions. Edge lines 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. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled ways shall be measured from the center of edge line to the center of edge line 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.



NOTE: Traveled way is exclusive of shoulder widths. Refer to General Note 2 for additional details.

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Roadways

Texas Department of Transportation

Traffic Safety Division Standard

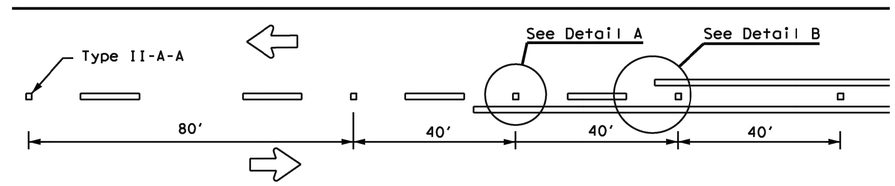
TYPICAL STANDARD PAVEMENT MARKINGS

PM(1)-22

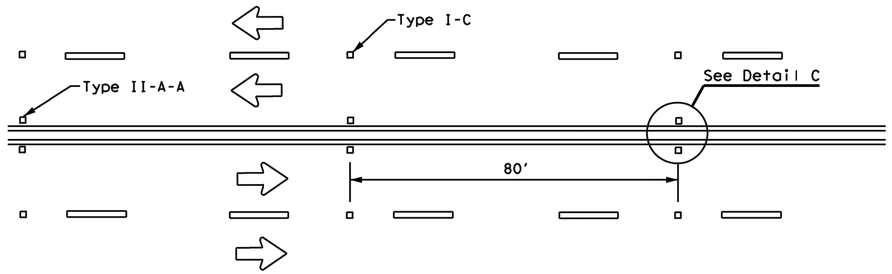
FILE: pm1-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 11-78 8-00 6-20	N\A	N\A	N\A	PR100
8-95 3-03 12-22	DIST	COUNTY		SHEET NO.
5-00 2-12	PHR	CAMERON		30

22A

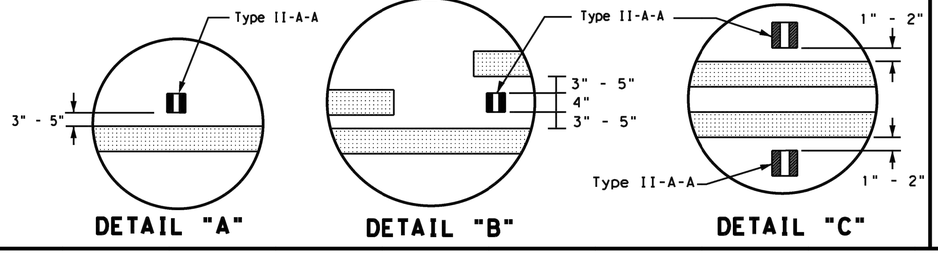
REFLECTIVE RAISED PAVEMENT MARKERS FOR VEHICLE POSITIONING GUIDANCE

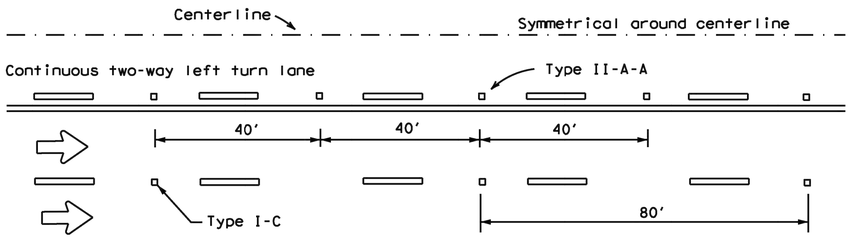


CENTERLINE FOR ALL TWO LANE TWO-WAY ROADWAYS

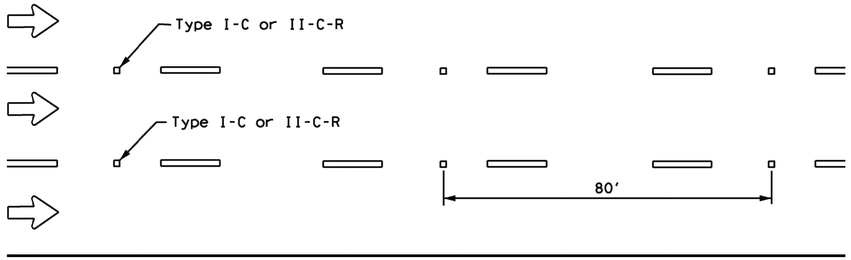


CENTERLINE & LANE LINES FOR FOUR LANE TWO-WAY ROADWAYS





CENTERLINE AND LANE LINES FOR TWO-WAY LEFT TURN LANE



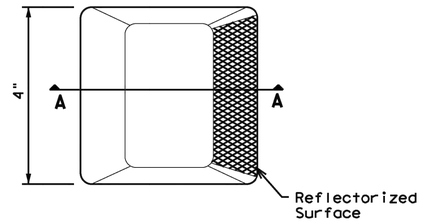
LANE LINES FOR ONE-WAY ROADWAY (NON-FREEWAY FACILITIES)

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

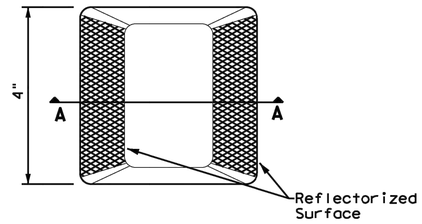
See Note 3.

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

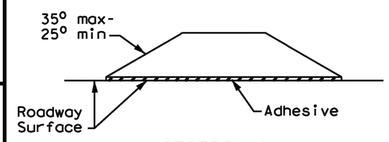
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



Type I (Top View)

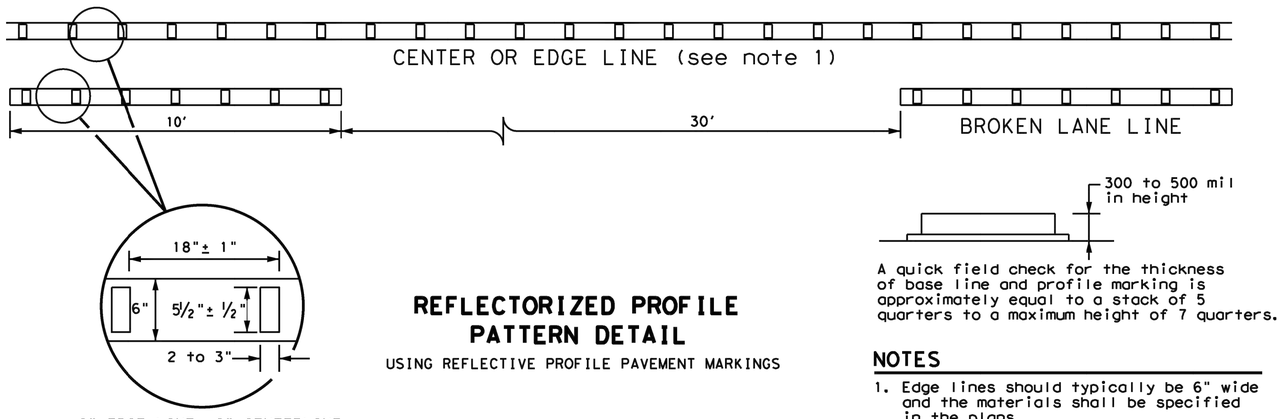


Type II (Top View)



SECTION A

RAISED PAVEMENT MARKERS



6" EDGE LINE, 6" CENTERLINE OR 6" LANE LINE

REFLECTORIZED PROFILE PATTERN DETAIL

USING REFLECTIVE PROFILE PAVEMENT MARKINGS

A quick field check for the thickness of base line and profile marking is approximately equal to a stack of 5 quarters to a maximum height of 7 quarters.

NOTES

1. Edge lines should typically be 6" wide and the materials shall be specified in the plans.
2. Profile markings shall not be placed on roadways with a posted speed limit of 45 MPH or less.

GENERAL NOTES

1. All raised pavement markers placed along broken lines shall be placed in line with and midway between the stripes.
2. On concrete pavements, the raised pavement markers should be placed to one side of the longitudinal joints.
3. Use raised pavement marker Type I-C with undivided roadways, flush medians, and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.

Texas Department of Transportation

Traffic Safety Division Standard

POSITION GUIDANCE USING RAISED MARKERS REFLECTORIZED PROFILE MARKINGS PM(2)-22

FILE: pm2-22.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
4-77 8-00 6-20	DIST	COUNTY		SHEET NO.
4-92 2-10 12-22	PHR	CAMERON		31
5-00 2-12				

228

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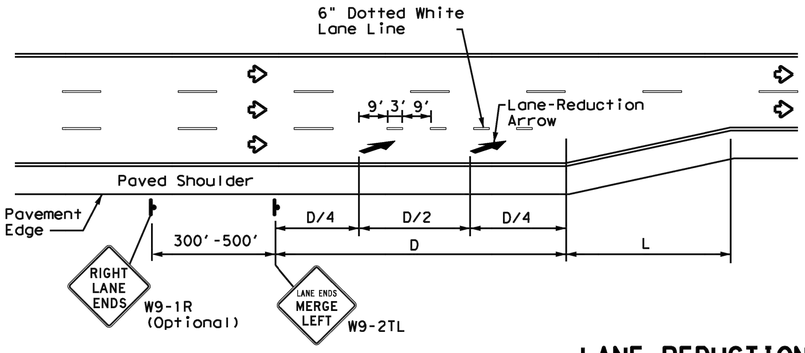
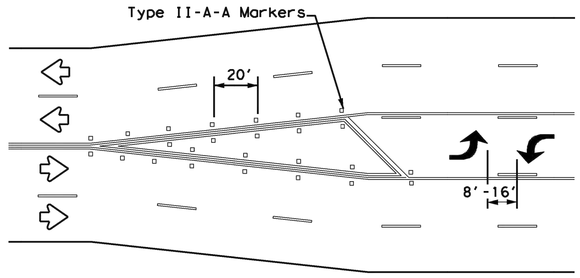


LANE REDUCTION

NOTES

1. Lane reduction pavement markings are used where the number of through lanes is reduced because of narrowing of the roadway or because of a section of on-street parking in what would otherwise be a through lane. For Texas Super 2 Passing Lanes, see TS2(PL) standard sheets.
2. On divided highways, an additional RIGHT LANE ENDS (W9-1R) sign may be installed in the median aligned with the W9-1R sign on the right side of the highway.
3. Lane reduction arrows are required for speeds of 45 mph or greater. An optional third lane reduction arrow may be added based on engineering judgement. If used, the optional third lane reduction arrow should be centered between the first and last lane reduction arrows.
4. For lane reductions on Freeways and Expressways, signing shall conform to the TxDOT Freeway Signing Handbook.

ADVANCED WARNING SIGN DISTANCE (D)		
Posted Speed	D (ft)	L (ft)
30 MPH	460	$L=\frac{WS^2}{60}$
35 MPH	565	
40 MPH	670	
45 MPH	775	L=WS
50 MPH	885	
55 MPH	990	
60 MPH	1,100	
65 MPH	1,200	
70 MPH	1,250	
75 MPH	1,350	



A two-way left-turn (TWLT) lane-use arrow pavement marking should be used at or just downstream from the beginning of a two-way left-turn lane within a corridor. Repeating the marking after each intersection or dedicated turn bay is not required unless stated elsewhere in the plans.

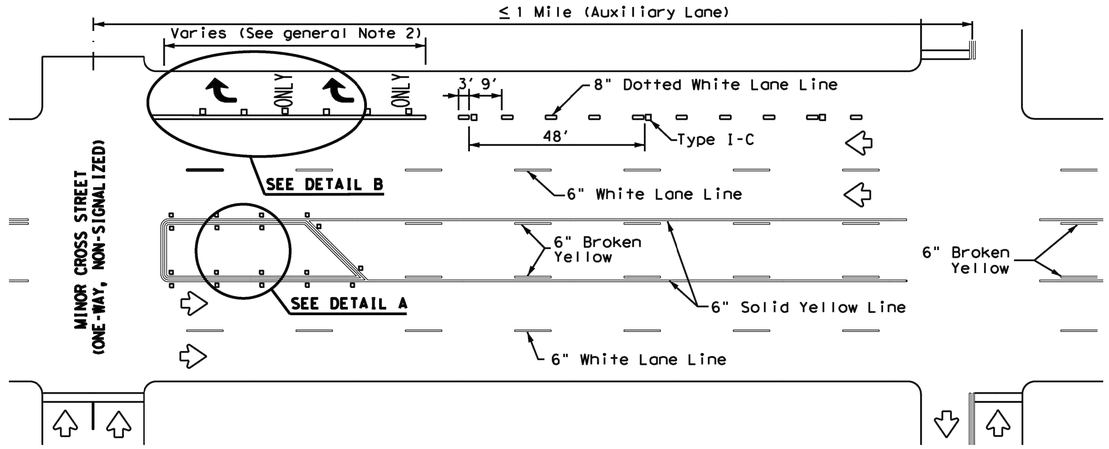
TYPICAL TRANSITION FOR TWLTL AND DIVIDED HIGHWAY

GENERAL NOTES

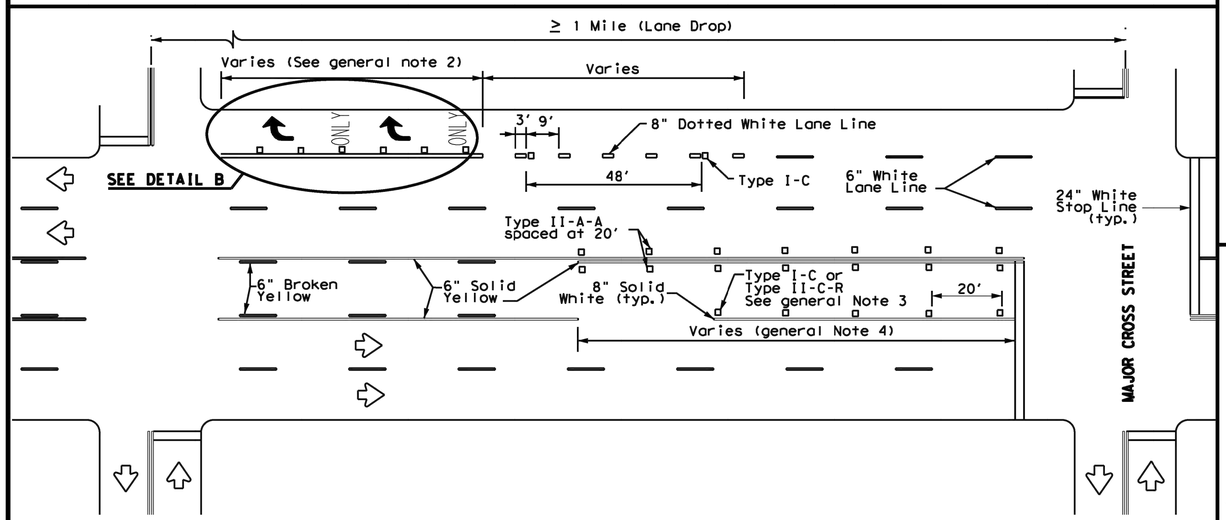
1. Lane use word and arrow markings shall be used where through lanes approaching an intersection become mandatory turn lanes. Lane use word and arrow markings should be used in auxiliary lanes of substantial length. Lane use arrow markings or word and arrow markings may be used in other lanes and turn bays for emphasis. Details for words and arrows are as shown in the Standard Highway Sign Designs for Texas.
2. When lane-use words and arrow markings are used, two sets of arrows should be used if the length of the bay is greater than 180 feet. When a single lane use arrow or word and arrow marking is used for a short turn lane, it should be located at or near the upstream end of the full-width turn lane.
3. Use raised pavement marker Type I-C with undivided highways, flush medians and two way left turn lanes. Use raised pavement marker Type II-C-R with divided highways and raised medians.
4. Length of turn bays, including taper, deceleration, and storage lengths shall be as shown on the plans or as directed by the Engineer. See Chapter 3 of the Roadway Design Manual for additional information on turning lanes or storage lengths.

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

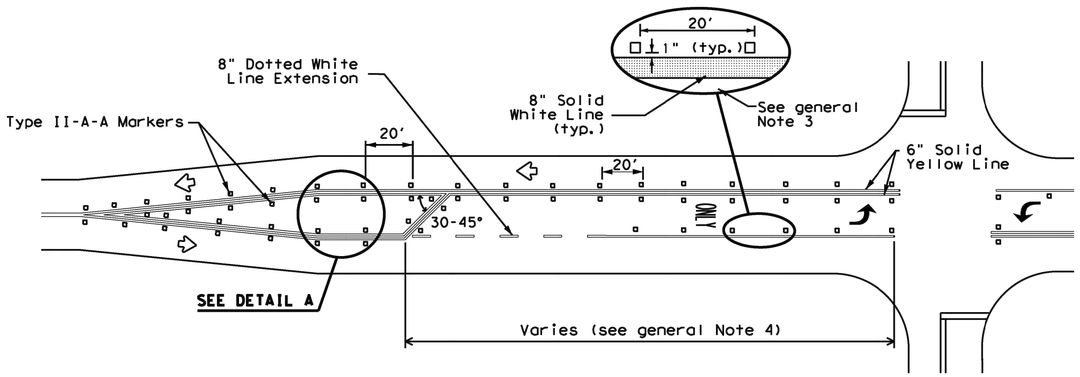
All pavement marking materials shall meet the required Departmental Material Specifications as specified by the plans.



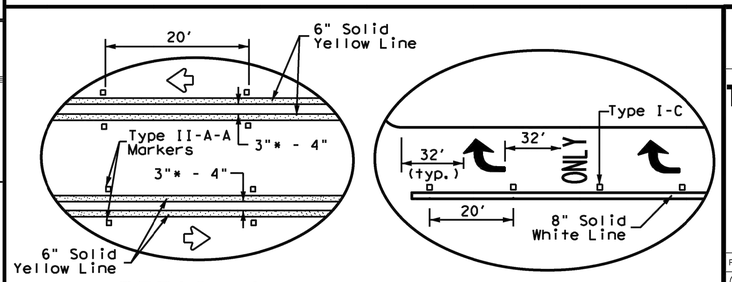
TYPICAL TWLTL AT ONE-WAY STREET AND RIGHT TURN AUXILIARY LANE



TYPICAL TWLTL AT TWO-WAY CROSS STREET AND RIGHT TURN LANE DROP



TYPICAL TWO-LANE ROADWAY INTERSECTION WITH LEFT TURN BAYS



* 2" minimum allowed for restripe projects when approved by the Engineer.

Texas Department of Transportation

Traffic Safety Division Standard

TWO-WAY LEFT TURN LANES, RURAL LEFT TURN BAYS, AND LANE REDUCTION PAVEMENT MARKINGS

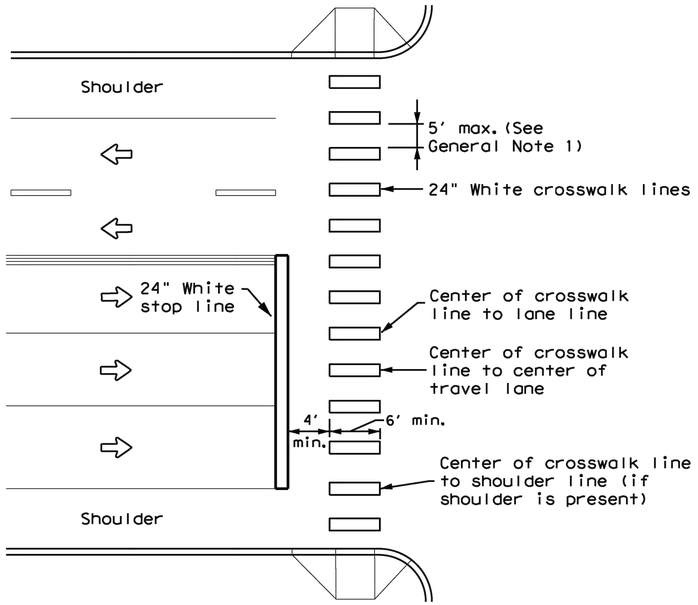
PM(3)-22

FILE: pm3-22.dgn	DN:	CK:	DW:	CK:
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS 4-98 3-03 6-20	N\A	N\A	N\A	PR100
5-00 2-10 12-22	DIST	COUNTY		SHEET NO.
8-00 2-12	PHR	CAMERON		32

22C

DATE:
FILE:

DATE:
FILE:



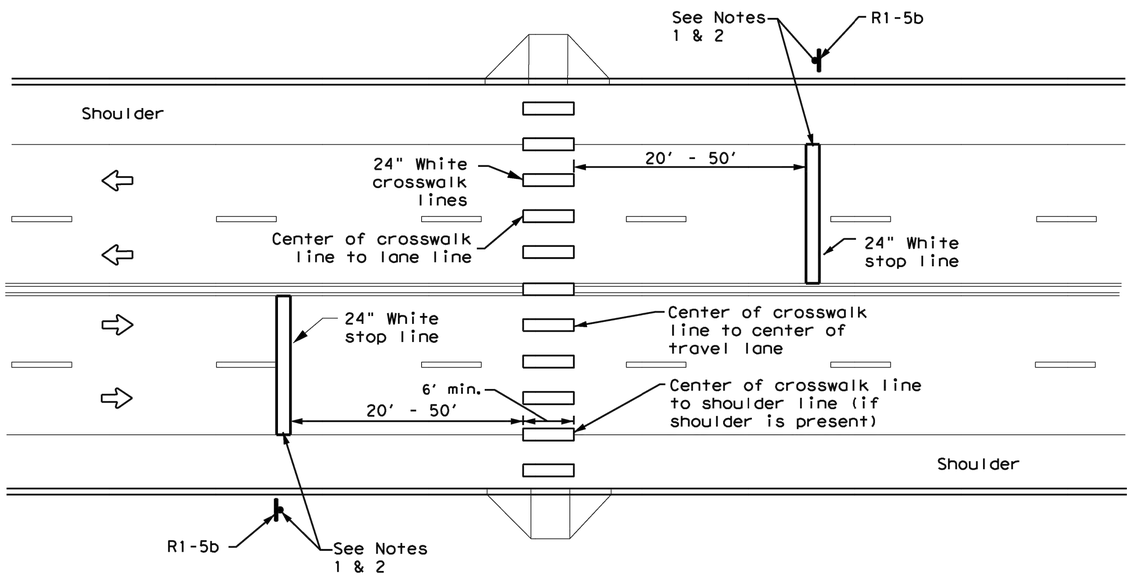
HIGH-VISIBILITY LONGITUDINAL CROSSWALK AT CONTROLLED APPROACH

GENERAL NOTES

1. Longitudinal crosswalk lines should not be placed in the wheel path of vehicles. Center the crosswalk lines on travel lanes, lane lines, and shoulder lines (if present).
2. A minimum 6" clear distance shall be provided to the curb face. If the last crosswalk line falls into this distance it must be omitted.
3. For divided roadways, adjustments in spacing of the crosswalk lines should be made in the median so that the crosswalk lines are maintained in their proper location across the travel portion of the roadway.
4. At skewed crosswalks, the crosswalk lines are to remain parallel to the lane lines.
5. Each crosswalk shall be a minimum of 6' wide.
6. The High-Visibility Longitudinal Crosswalk is the preferred crosswalk pattern on State Highways. Other crosswalk patterns as shown in the "Texas Manual on Uniform Traffic Control Devices" may be used. All crosswalk designs and dimension shall comply with the "Texas Manual on Uniform Traffic Control Devices."
7. Final placement of Stop Bar and Crosswalk shall be approved by the Engineer in the field.

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.



UNSIGNALIZED MIDBLOCK HIGH-VISIBILITY LONGITUDINAL CROSSWALK

NOTES:

1. Use stop bars with Stop Here For Pedestrians (R1-5b) signs at unsignalized midblock cross walks.
2. Use stop bars with STOP HERE ON RED (R10-6 or R10-6a) signs at mid block crosswalks controlled by traffic signals or pedestrian hybrid beacons.

Texas Department of Transportation

Traffic Safety Division Standard

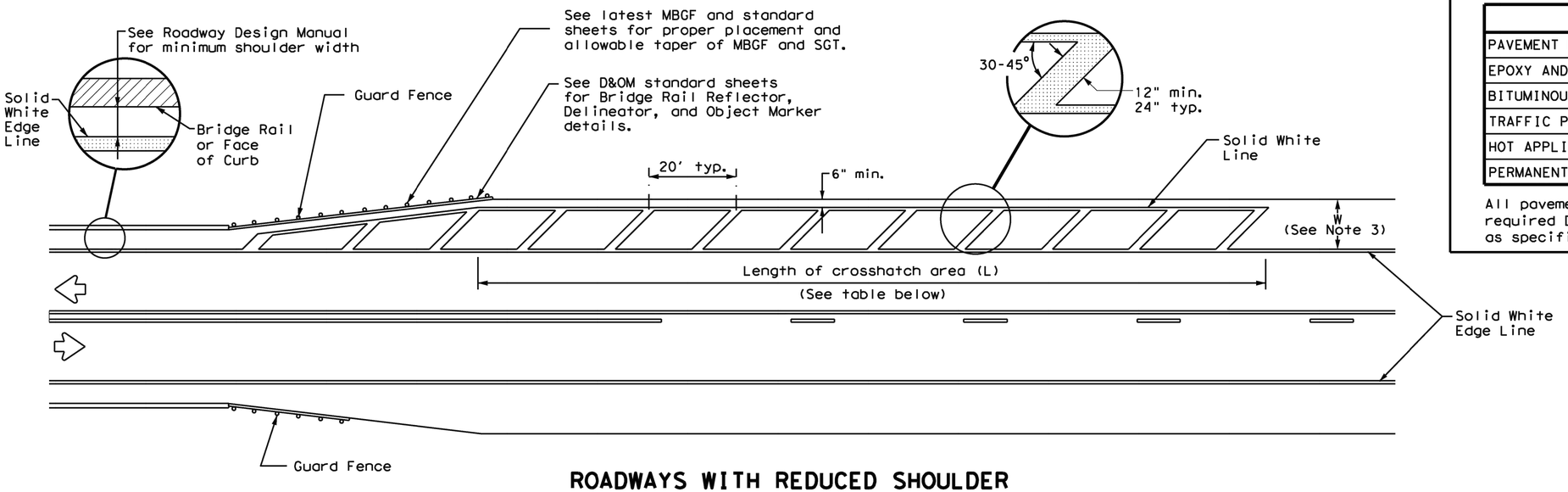
CROSSWALK PAVEMENT MARKINGS

PM(4)-22A

FILE: pm4-22a.dgn	DN:	CK:	DW:	CK:
© TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
6-20	DIST	COUNTY		SHEET NO.
6-22	PHR	CAMERON		33
12-22				

220

DATE:
FILE:



ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT

CROSSHATCH LENGTH (L)	
Posted Speed (MPH)	L (ft)
30	300 ft
35	
40	
45	
50	500 ft
55	
60	
65	
70	
75	

NOTES

1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 4 inches from the bridge rail or face of curb or 6 inches from the edge of pavement. This distance may vary due to pavement raveling or other conditions.
2. No-passing zone on bridge approach is optional. If used, the no-passing zone shall be a minimum 500 feet long from the beginning of the bridge.
3. The crosshatching should be required if the shoulder width in advance of the bridge is 4 feet or wider and a reduction of at least 3 feet in shoulder width across the bridge occurs.
4. On divided highways, review both the right and left shoulder widths for the need for narrow bridge pavement markings.

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 Safety Division Standard

PAVEMENT MARKINGS FOR ROADWAYS WITH REDUCED SHOULDER WIDTHS ACROSS BRIDGE OR CULVERT

PM(5)-22

FILE: pm5-22.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT December 2022	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
	DIST	COUNTY		SHEET NO.
	PHR	CAMERON		34

22E

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)

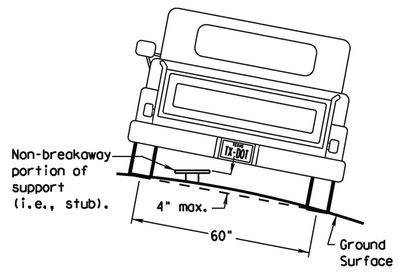
Anchor Type

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))

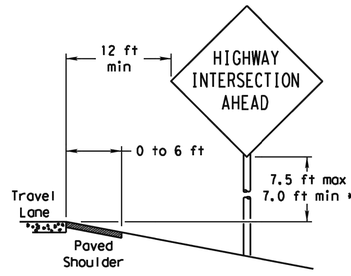
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



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).

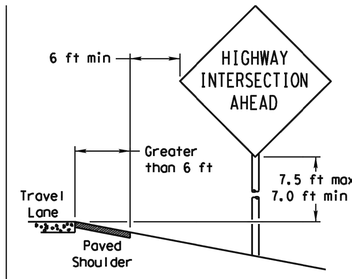
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

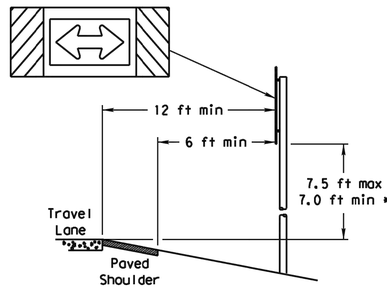
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



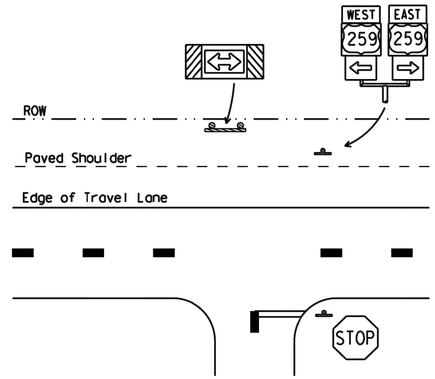
GREATER THAN 6 FT. WIDE

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.

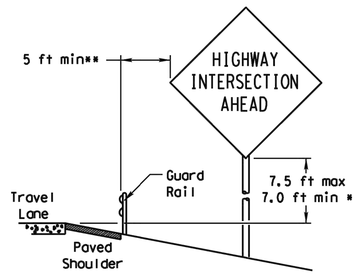
T-INTERSECTION



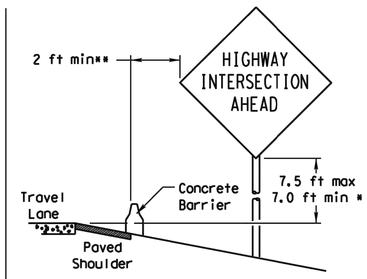
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.



BEHIND BARRIER



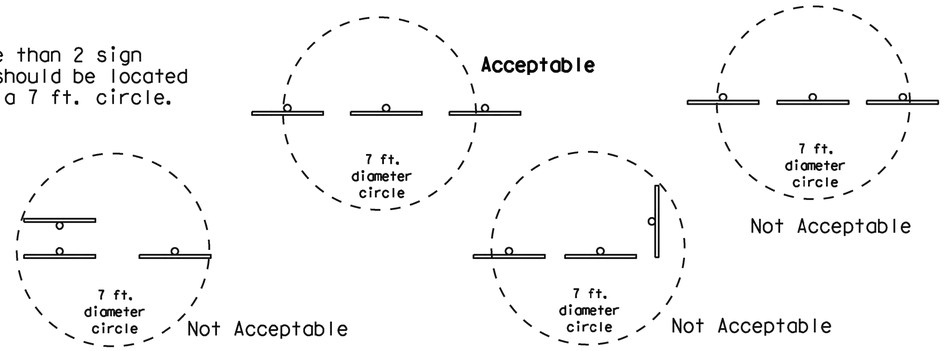
BEHIND GUARDRAIL



BEHIND CONCRETE BARRIER

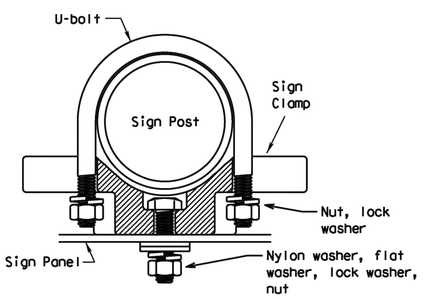
****Sign clearance based on distance required for proper guard rail or concrete barrier performance.**

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



TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

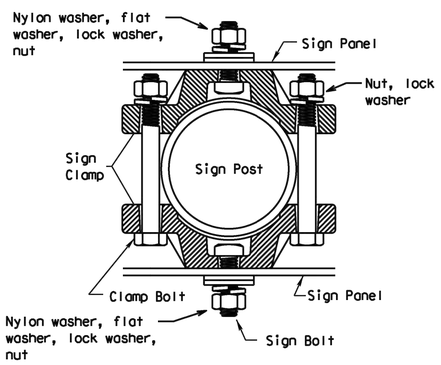


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

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.

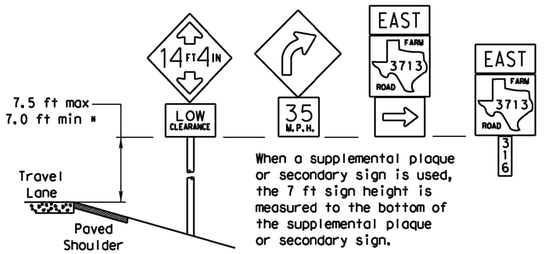
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



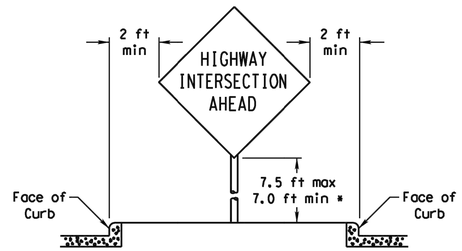
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES



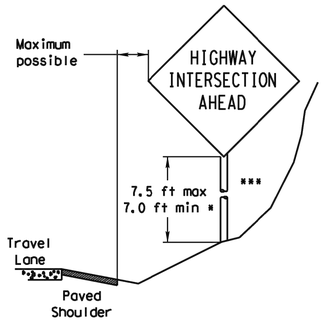
When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

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.

* 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

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

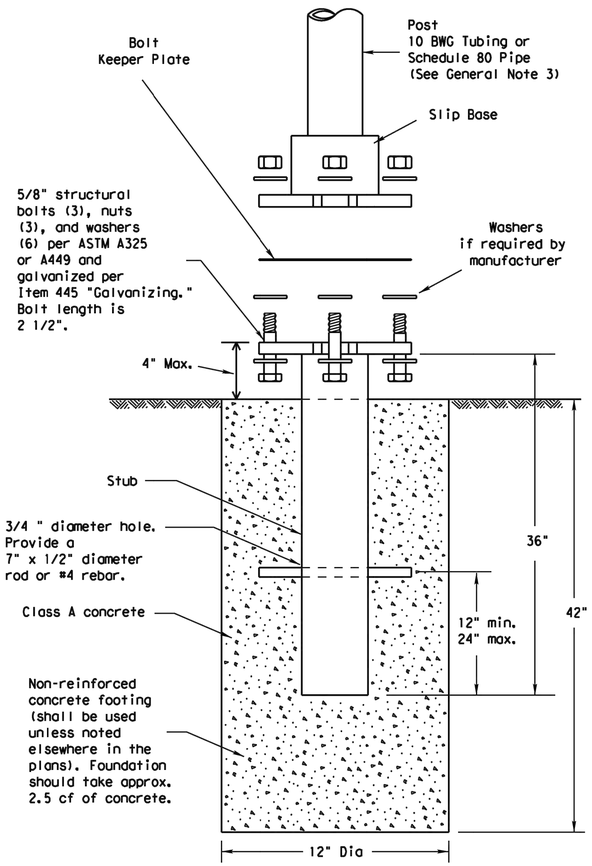
SMD(GEN)-08

REVISIONS
9-08

DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
CONT	SECT	JOB	HIGHWAY
N\A	N\A	N\A	PR100
DIST	COUNTY		SHEET NO.
PHR	CAMERON		35

DATE:
FILE:

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.

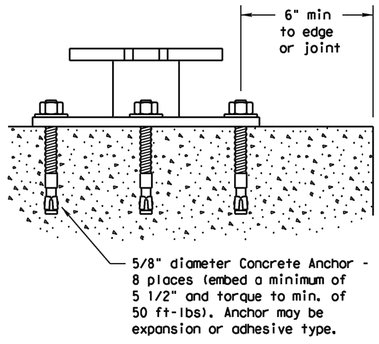
   Schedule 80 Pipe (2.875" outside diameter)
   - 0.276" nominal wall thickness
   - Steel tubing per ASTM A500 Gr C
   - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
     - 46,000 PSI minimum 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.

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	CONT	SECT	JOB	HIGHWAY
9-08	N\A	N\A	N\A	PR100
	DIST	COUNTY		SHEET NO.
	PHR	CAMERON		36

DATE:
FILE:

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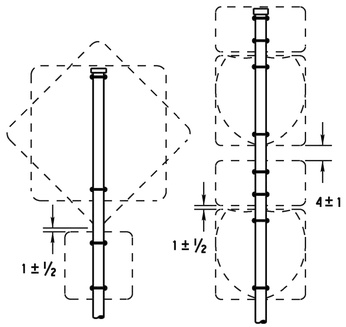
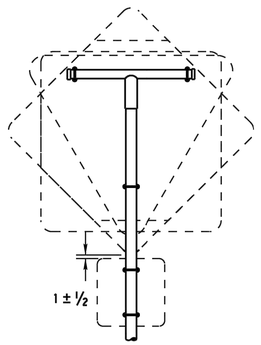
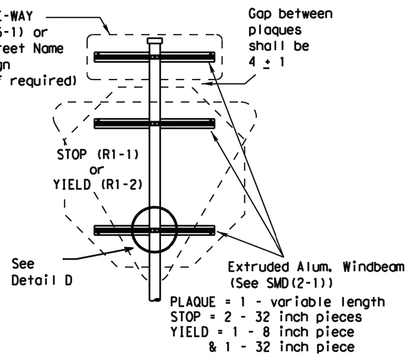


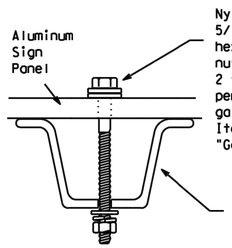
SM RD SGN ASSM TY XXXXX(1)XX(P)



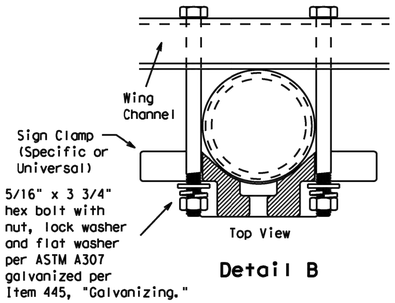
SM RD SGN ASSM TY XXXXX(1)XX(T)



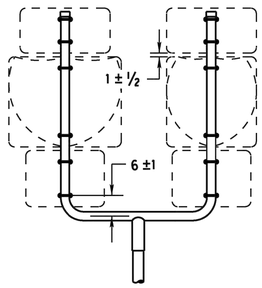
SM RD SGN ASSM TY XXXXX(1)XX(P-BM)



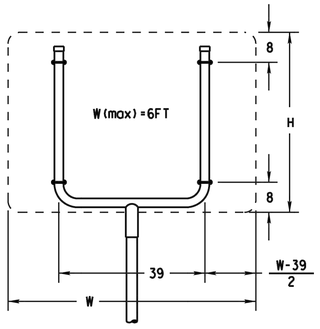
Detail A



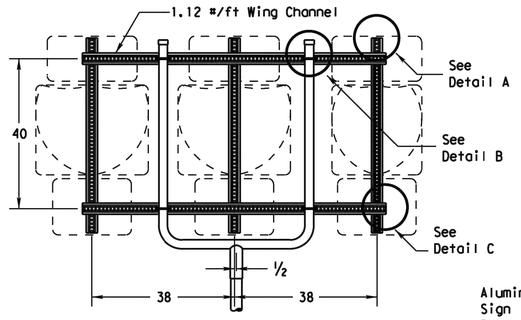
Detail B



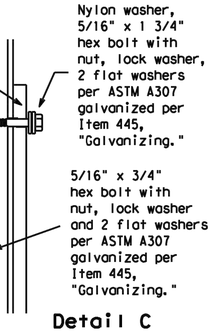
SM RD SGN ASSM TY XXXXX(1)XX(U)



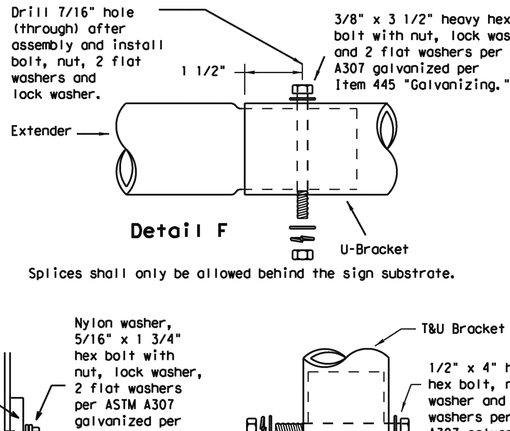
SM RD SGN ASSM TY XXXXX(1)XX(U)



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

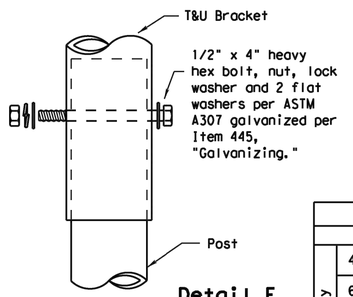


Detail C

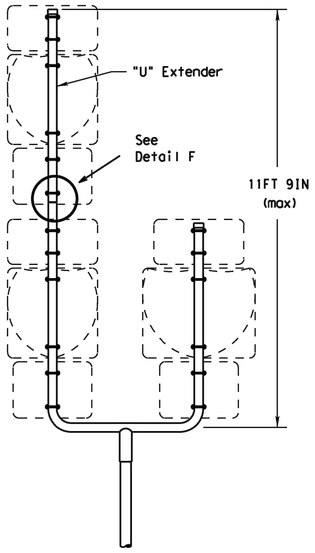


Detail F

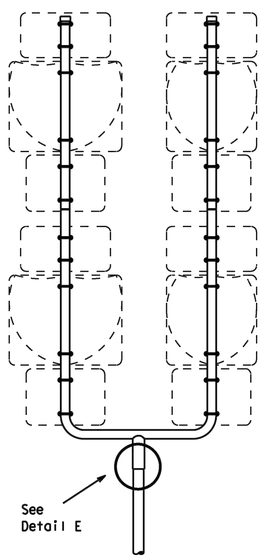
Splices shall only be allowed behind the sign substrate.



Detail E



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



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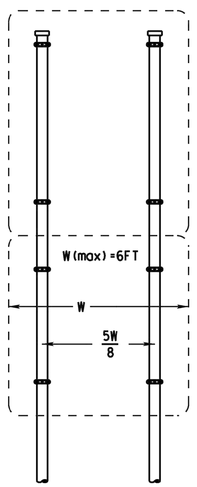
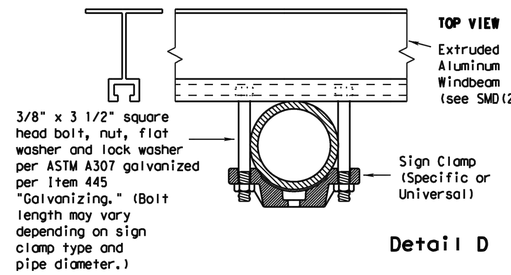
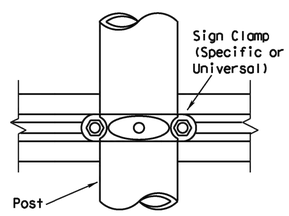


SM RD SGN ASSYM TY XXXXX(2)XX(P)

SIDE VIEW





Detail D

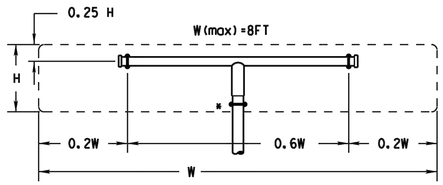
GENERAL NOTES:

1.

SIGN SUPPORT	# OF POSTS	MAX. SIGN AREA
10 BWG	1	16 SF
10 BWG	2	32 SF
Sch 80	1	32 SF
Sch 80	2	64 SF

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

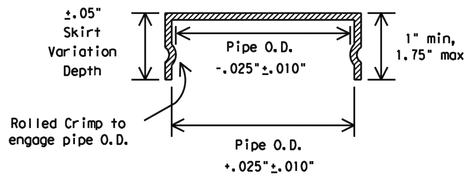
REQUIRED SUPPORT		
	SIGN DESCRIPTION	SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	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)



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.

Texas Department of Transportation
Traffic Operations Division

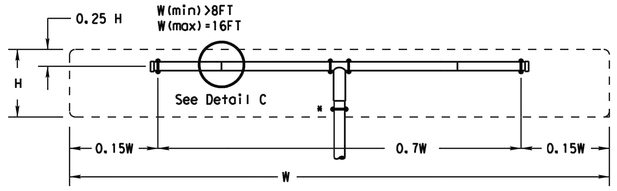
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-2)-08

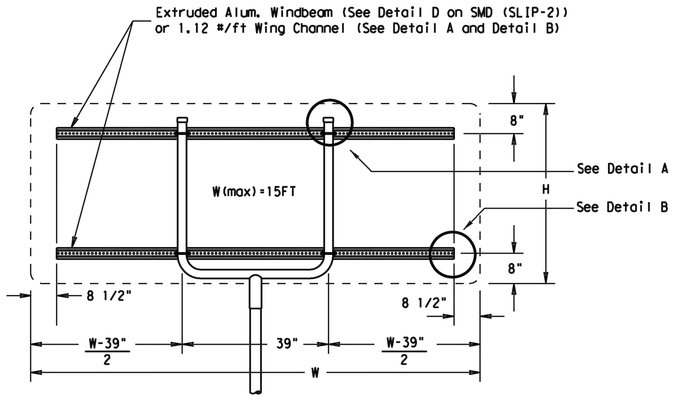
DN: TXDOT	CK: TXDOT	DW: TXDOT	CK: TXDOT
CONT	SECT	JOB	HIGHWAY
N\A	N\A	N\A	PR100
DIST	COUNTY		SHEET NO.
PHR	CAMERON		37

9-08 REVISIONS

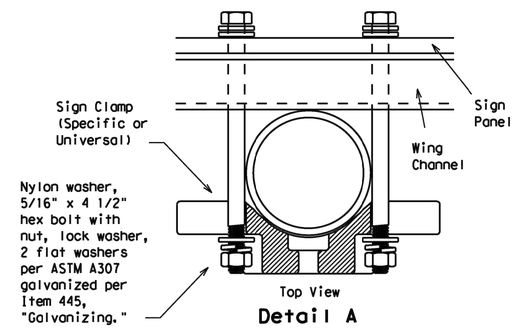
DATE:
FILE:



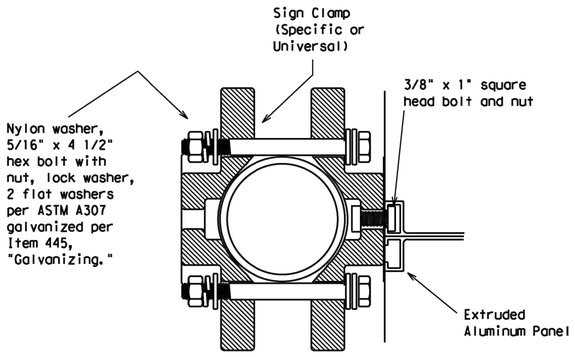
SM RD SGN ASSM TY XXXXX(1)XX(T-2EXT)
(* - See Note 12)



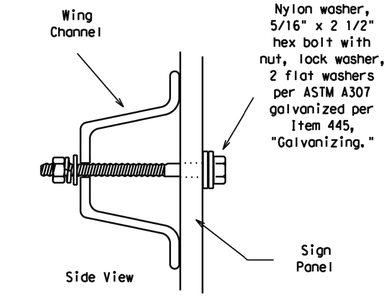
SM RD SGN ASSM TY XXXXX(1)XX(U-XX)



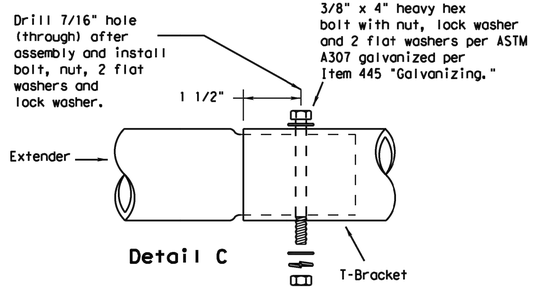
Detail A



Detail D
EXTRUDED ALUMINUM SIGN WITH T BRACKET

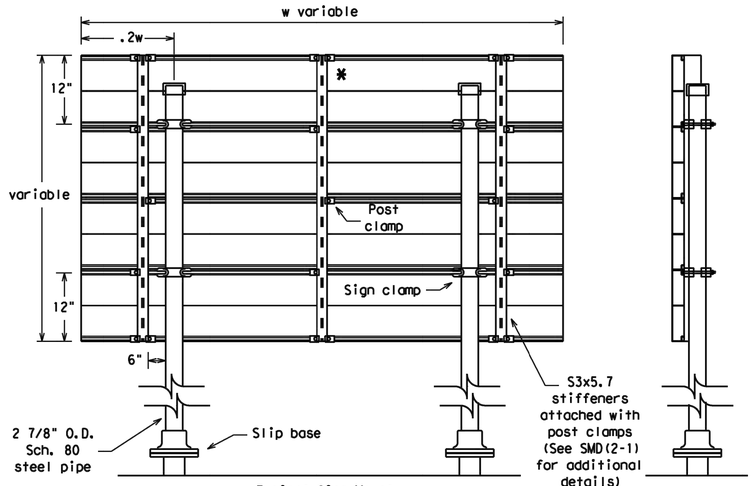


Detail B



Detail C

Splices shall only be allowed behind the sign substrate.

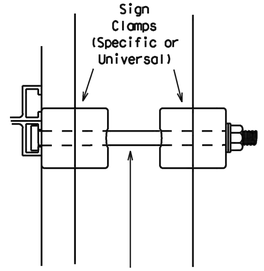


Typical Sign Mount

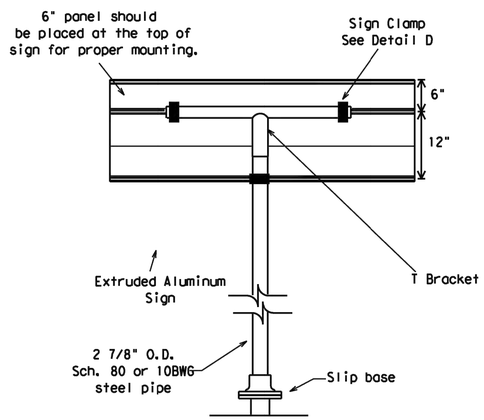
SM RD SGN ASSM TY S80(2)XX(P-EXAL)

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

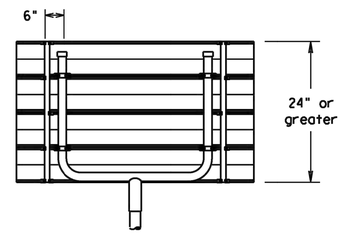
See Detail E
for clamp installation



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

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)

Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
TRIANGULAR SLIPBASE SYSTEM

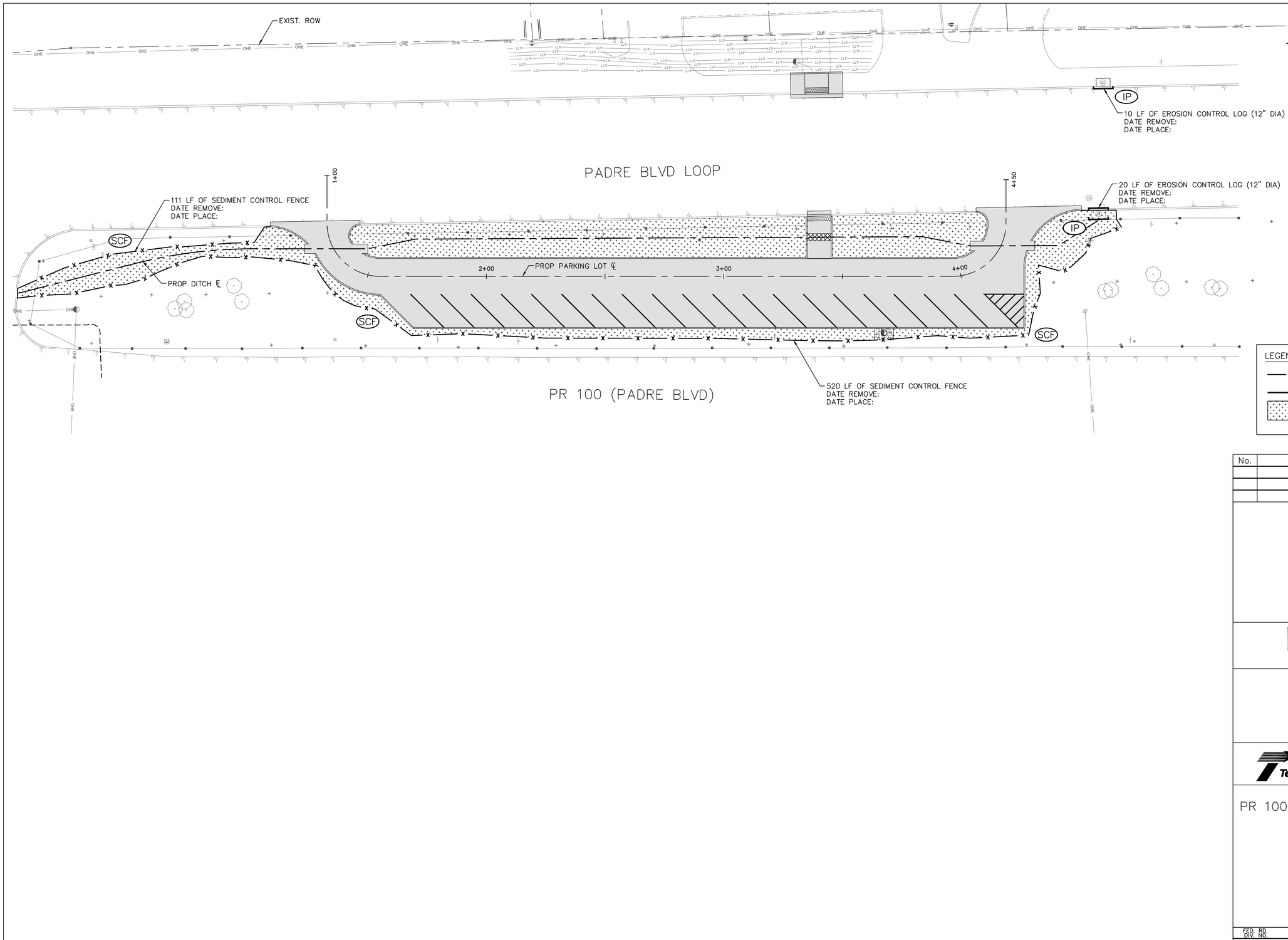
SMD(SLIP-3)-08

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

REVISIONS
9-08

CONT	SECT	JOB	HIGHWAY
N\A	N\A	N\A	PR100
DIST	COUNTY		SHEET NO.
PHR	CAMERON		38

DATE:
FILE:



NORTH

GRAPHIC SCALE IN FEET
0 10 20 40

LEGEND

- SEDIMENT CONTROL FENCE
- CURB INLET PROTECTION
- PROPOSED BLOCK SODDING

No.	Revision	By	Date

5/27/2025

STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn

TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

EROSION CONTROL PLAN

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

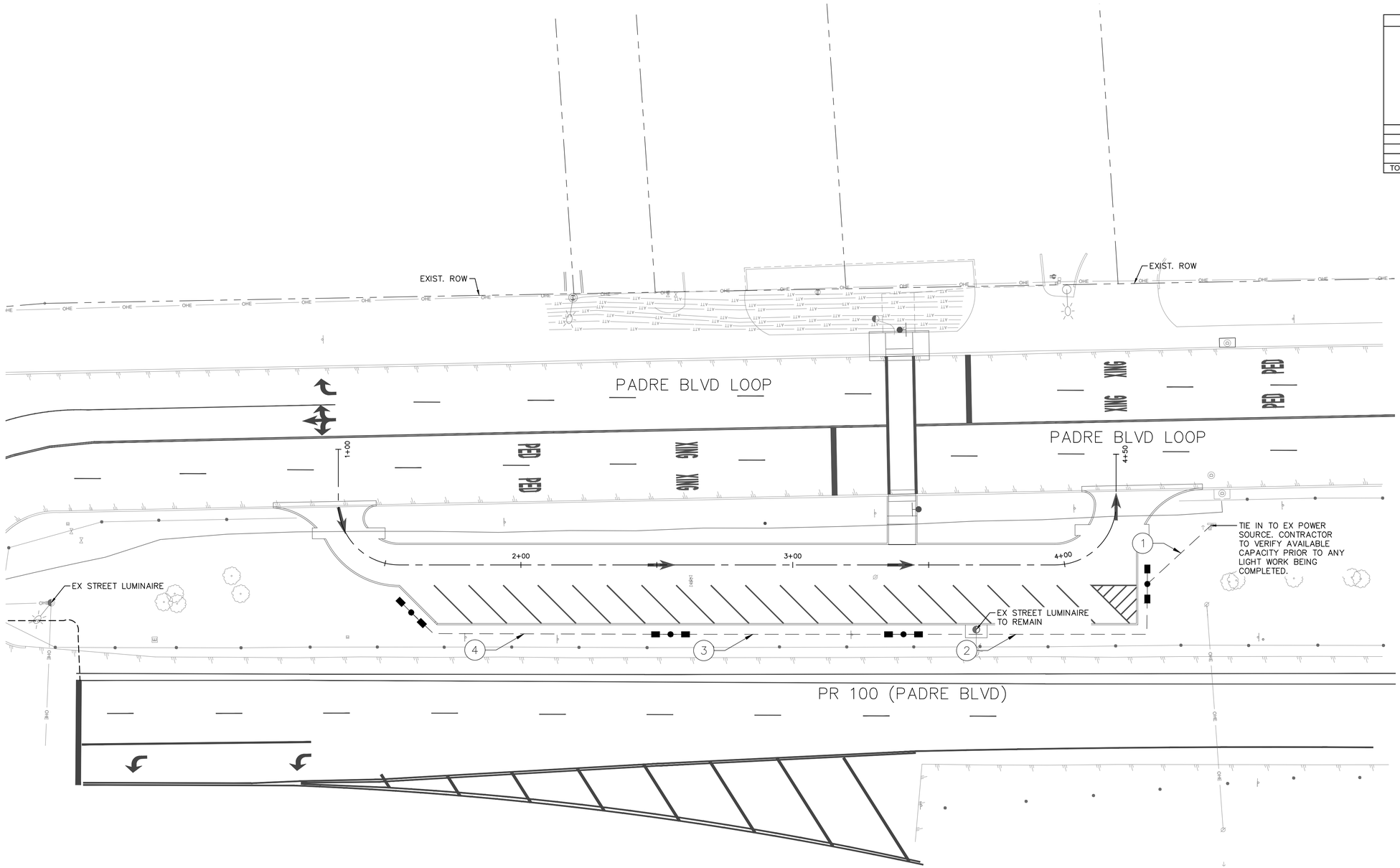
STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	39
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:58 PM BY CAMDEN.PATOVISTI
FILE: K:\LAC_TPTO\1PROJECT\069234014_SPI_PR100PARKINGLOT\CADD\PLANSHEETS\EROSION CONTROL PLAN .DWG

GRAPHIC SCALE IN FEET
0 10 20 40

NORTH

SUMMARY OF CONDUIT AND CABLES					
RUN NUMBER	3/4" PVC (TRENCH)(SCH 40)	GROUND LENGTH (FEET) #14 BARE	ITEM 620 CONDUCTOR NO. #14 INSULATED	LENGTH OF RUN	RUN NUMBER
1	35	1	8	35	1
2	110	1	6	110	2
3	90	1	4	90	3
4	100	1	2	100	4
TOTALS (LF)	335	335	1,500		



No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
JOHN W. RYAN
141023
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

LIGHTING PLAN
STA 1+60 TO STA 4+16

SHEET 1 OF 1

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	40
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:58 PM BY MARIA.PENA
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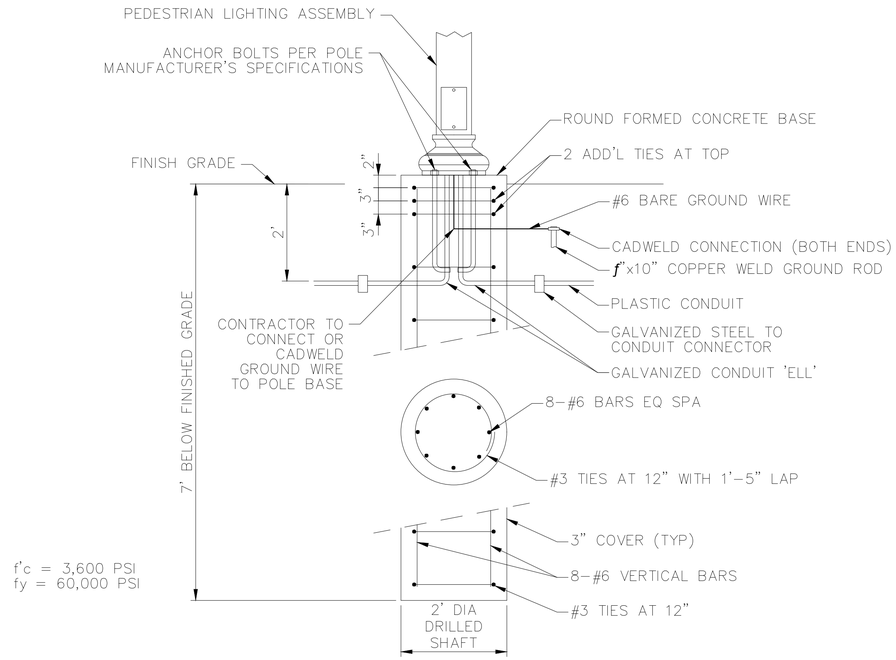


PEDESTRIAN LIGHTING FOUNDATION DETAIL

NTS

FABRICATION TOLERANCES TABLE		
PART	DIMENSION	TOLERANCE
ANCHOR BOLT	LENGTH	+1" -1/4"
	THREADED LENGTH	+1 1/2" -1/8"
	GALVANIZED LENGTH (IF REQUIRED)	+8" -1/4"
MISCELLANEOUS	BOLT HOLE SPACING	+/- 1/16"
	STRUT LOCATION IN TRUSS ARMS	+/- 1/16"

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
B. CLAY SUTHERLAND
138535
LICENSED PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

LIGHTING DETAIL

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	41
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

DATE: 5/27/2025 3:58 PM BY: CAMDEN.PATOVISTI
FILE: K:\LAC_TPTO\1PROJECT\069234014_SPI_PR100PARKINGLOT\CADD\PLANSHEETS\LIGHTING_DETAILS.DWG

GENERAL:

I. SCOPE

DETAILS HEREIN APPLY TO ROADWAY LIGHTING INSTALLATIONS BID UNDER THE FOLLOWING SPECIFICATION ITEMS: ROADWAY ILLUMINATION ASSEMBLIES, PEDESTRIAN ASSEMBLIES, IN-GRADE TREE ASSEMBLIES, FOUNDATIONS, ROADWAY, STREET AND PEDESTRIAN ILLUMINATION ASSEMBLIES, AND SPECIAL SPECIFICATIONS RELATING TO ROADWAY LIGHTING. ALL WORK, MATERIALS AND SERVICES NOT SHOWN ON THE PLANS WHICH MAY BE NECESSARY FOR COMPLETE AND PROPER CONSTRUCTION SHALL BE PERFORMED, FURNISHED AND INSTALLED BY THE CONTRACTOR. FAULTY FABRICATION OR POOR WORKMANSHIP IN ANY MATERIAL, EQUIPMENT OR INSTALLATION WILL BE CONSIDERED JUSTIFICATION FOR REJECTION. MATERIAL AND INSTALLATION SHALL COMPLY WITH THE APPLICABLE PROVISIONS OF THE NATIONAL ELECTRIC CODE, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION AND, WHEN REQUIRED, UNDERWRITERS LABORATORIES STANDARDS. WHERE MANUFACTURERS PROVIDE WARRANTIES OR GUARANTEES AS A CUSTOMARY TRADE PRACTICE, CONTRACTOR SHALL FURNISH TO THE STATE SUCH WARRANTIES OR GUARANTEES.

THE LOCATION OF POLES AND FIXTURES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS. ERECTION AND/OR REMOVAL OF POLES AND LUMINAIRES LOCATED NEAR OVERHEAD ELECTRICAL LINES SHALL BE ACCOMPLISHED USING ESTABLISHED INDUSTRY AND UTILITY SAFETY PRACTICES AND IN ACCORDANCE WITH LAWS GOVERNING SUCH WORK. THE CONTRACTOR SHALL CONSULT WITH THE APPROPRIATE UTILITY COMPANY PRIOR TO BEGINNING SUCH WORK.

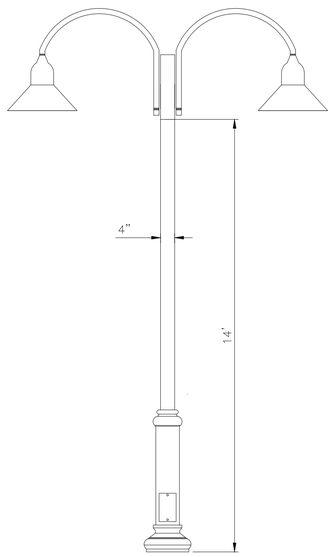
II. ROADWAY ILLUMINATION ASSEMBLIES.

A. GENERAL

1. STRUCTURAL SUPPORT DESIGN FOR LUMINAIRES – LIGHTING STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST ISSUE OF THE AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS." FOR TRANSFORMER BASE POLES, FABRICATOR SHALL INCLUDE TRANSFORMER BASE AND CONNECTING HARDWARE IN DESIGN CALCULATIONS AND SHOP DRAWING SUBMITTALS. MANUFACTURER'S SHOP DRAWINGS SHALL INCLUDE THE ASTM DESIGNATIONS FOR ALL MATERIAL TO BE USED.
2. HAND HOLES – ALL POLES SHALL HAVE HAND HOLES WITH REINFORCING FRAMES AND COVERS. THE OPENINGS ON ALL POLES SHALL BE APPROXIMATELY 4 INCHES x 10 INCHES LOCATED APPROXIMATELY 10 INCHES FROM THE BOTTOM OF THE POLE.
3. J-HOOKS – ALL POLES SHALL BE EQUIPPED WITH A J-HOOK INSIDE THE POLE, NEAR THE TOP FOR SUPPORTING VERICAL CONDUCTORS.
4. ALUMINUM POLES
   a. ALUMINUM POLES SHALL BE FABRICATED IN ACCORDANCE WITH "STRUCTURAL WELDING, ALUMINUM: ANSI/AWS D1.2.
   b. POLE COMPONENTS SHALL BE CONSTRUCTED USING THE MATERIALS LISTED IN SPECIFICATIONS
5. ALTERNATE MATERIAL EQUAL TO OR BETTER THAN MATERIAL SPECIFIED MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER.
6. INSTALLATION OF HIGH STRENGTH BOLTS – THE TIGHTENING OF NUTS ON HIGH STRENGTH BOLTS SHALL BE IN ACCORDANCE WITH THE ITEM "STRUCTURAL BOLTING."
7. ALL POLES SHALL BE ERECTED PLUMB AND TRUE. TOP OF FOUNDATION SHALL BE STRUCK LEVEL SO THE POLE WILL BE PLUMB. SHOE BASE POLES MAY USE LEVELING NUTS TO PLUMB POLE. SHIMS AND LEVELING NUTS SHALL NOT BE USED UNDER TRANSFORMER BASES. GROUT SHALL NOT BE PLACED BETWEEN BASE PLATE OR FLANGE AND THE FOUNDATION.
8. IN EACH POLE, CONTINUOUS COLOR-CODED STRANDED NO. 12 AWG COPPER TYPE XHHW OR OTHER APPROVED XLP CONDUCTIORS SHALL BE CONNECTED TO THE LINE SIDE OF EACH BALLAST.
9. ACORN NUTS WILL NOT BE ALLOWED FOR ATTACHING POLE TO TRANSFORMER BASE OR FOUNDATION. NUT COVERS WILL NOT BE ALLOWED.
10. FABRICATION TOLERANCES SHALL BE AS SHOWN ON FABRICATION TOLERANCES TABLE.

B. ALL LUMINAIRES

1. THE LUMINAIRES AND POLE ASSEMBLIES SHALL BE AS DESCRIBED IN SPECIFICATIONS FOR PEDESTRIAN AND IN-GRADE LUMINAIRES.
2. UNDERPASS LUMINAIRES SHALL BE FUSED INTERNALLY. FUSES SHALL BE 10 AMP TIME-DELAY TYPE.
3. THE CONTRACTOR MAY BE RESPONSIBLE FOR FIXTURE TESTING COSTS. SEE MATERIALS AND TESTS SECTION TEST METHOD TEX-1110-T.
4. THE CONTRACTOR SHALL FURNISH FOUR (4) SETS OF SUBMITTALS OF THE LUMINAIRE FIXTURE TO THE ENGINEER AT THE PROJECT ADDRESS. THESE SUBMITTALS SHALL BE APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR BEGINS WORK.



PEDESTRIAN LIGHTING ASSEMBLY

NTS

FABRICATION TOLERANCES TABLE

PART	DIMENSION	TOLERANCE
POLE ASSEMBLY	SHAFT DIAMETER: OTHER	+/- 1"
	I.D. OF OUTSIDE PIECE OF SLIP FITTING PIECES	+1/8" -1/16"
	O.D. OF INSIDE PIECE OF SLIP FITTING PIECES	+1/32" -1/8"
	SHAFT DIAMETER: OTHER	+3/16"
	OUT OF "ROUND"	1/4"
	STRAIGHTNESS OF SHAFT	+/- 1/4" IN 10FT
	TWIST IN SHAFT	4^ IN 50FT
	PERPENDICULAR TO BASEPLATE	+1/8" IN 24"
	POLE CENTERED ON BASEPLATE	+/- 1/4"
	LOCATION OF ATTACHMENTS	+/- 1/4"
ARM ASSEMBLY	ARM LENGTH	+/- 3"
	ARM RISE	+/- 1 3/4" IN 10FT
	ARM DIAMETER	+/- 3/16"
	OVERALL LENGTH OR WIDTH	+/- 1/4"
	THICKNESS	+1/4" -1/16"
	DEVIATION FROM FLAT	1/8" IN 12"
	SPACING BETWEEN HOLES	+/- 3/32"
	ANCHOR BOLT HOLE SIZE	+/- 1/16"

① POLE BONDING CONNECTOR BLACKBURN TTC3 OR WEAVER TGC3 OR EQUAL.

② FUSED CONNECTOR – ALL ELECTRICAL CONNECTORS FOR BREAKAWAY POLES SHALL BE WATERTIGHT AND SHALL BE DESIGNED AS BREAK-AWAY (BUCKANNAN 65U, BUSSMANN HEBW, LITTELFUSE LEB OR EQUAL). ALL FUSES SHALL BE TIME-DELAY TYPES. 10 AMP (LITTELFUSE FLQ, BUSSMAN FNQ OR EQUAL).

③ UN-FUSED CONNECTOR – ALL ELECTRICAL CONNECTIONS FOR NEUTRALS SHALL BE WATERTIGHT. FOR BREAKAWAY POLES, CONNECTIONS SHALL BE DESIGNED AS BREAKAWAY, SHALL HAVE A WHITE COLOR MARKING, AND SHALL BE A PERMANENTLY INSTALLED SOLID NEUTRAL (BUCHANNAN 20U, BUSSMAN HET, LITTELFUSE LET OR EQUAL). DUMMY/NEUTRAL FUSE SHALL BE BUSSMAN NTS-R-3 OR EQUAL.

④ SPLIT BOLT OR OTHER CONNECTOR.

⑤ GROUND ROD CLAMP – BLACKBURN GG58H, BURNDY GKP635, OR EQUAL.

⑥ WEATHERPROOF GROUND FAULT RECEPTACLE.

No.	Revision	By	Date

5/27/2025

STATE OF TEXAS
JOHN W. RYAN
141023
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn

TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

LIGHTING DETAIL

SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	42
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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GENERAL NOTES FOR ALL ELECTRICAL WORK

1. The location of all conduits, junction boxes, ground boxes, and electrical services is diagrammatic and may be shifted to accommodate field conditions.

2. Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC), TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA), and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association (CSA), Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Where reference is made to NEMA listed devices, International Electrotechnical Commission (IEC) listed devices will not be considered an acceptable equal to a NEMA listed device. Acceptable devices may have both a NEMA and IEC listing. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection. Replace or reinstall rejected material or equipment at no additional cost to the Department.

3. Miscellaneous nuts, bolts and hardware, except for high strength bolts, may be stainless steel when plans specify galvanized, provided the bolt size is ½ in. or less in diameter.

4. Provide the following test equipment as required by the Engineer to confirm compliance with the contract and the NEC: voltmeter, ammeter, megohm meter (1000 volt DC), ground resistance tester, torque wrenches, and torque screwdrivers. Ensure all equipment has been properly calibrated within the last year. Provide calibration certification to the Engineer upon request. Operate test equipment during inspection as requested by the Engineer.

5. Install grounding as shown on the plans and in accordance with the NEC. Ensure all metallic conduits; metal poles; luminaires; and metal enclosures are bonded to the equipment grounding conductor. Provide stranded bare copper or green insulated grounding conductors. Ground rods, connectors, and bonding jumpers are subsidiary to the various bid items.

6. When required by the Engineer, notify the Department in writing of materials from the Material Producers List (MPL) intended for use on each project. Prequalified materials are listed on the MPL on TxDOT's website under "Roadway Illumination and Electrical Supplies." No substitutions will be allowed for materials on this list.

CONDUIT

A. MATERIALS

1. Provide conduit, junction boxes, fittings, and hardware as per TxDOT Departmental Material Specification (DMS) 11030 "Conduit" and Item 618 "Conduit" of TxDOT's "Standard Specifications For Construction And Maintenance Of Highways, Streets, And Bridges," latest edition. Provide conduits listed under Item 618 on the MPL under "Roadway Illumination and Electrical Supplies." Provide conduit types according to the descriptive code or as shown on the plans. Do not substitute other types of conduits for those shown. Provide liquidtight flexible metal conduit (LFMC) when flexible conduit is called for on galvanized steel rigid metallic conduit (RMC) systems. Provide liquidtight flexible nonmetallic conduit (LFNC) when flexible conduit is called for on polyvinyl chloride (PVC) systems.

2. Provide galvanized steel RMC for all exposed conduits, unless otherwise shown on the plans. Properly bond all metal conduits.

3. Unless otherwise shown on the plans, provide junction boxes with a minimum size as shown in the following table, which applies to the greatest number of conductors entering the box through one conduit with no more than four conduits per box. When a mixture of conductor sizes is present, count the conductors as if all are of the larger size. For situations not applicable to the table, size junction boxes in accordance with NEC.

AWG	3 CONDUCTORS	5 CONDUCTORS	7 CONDUCTORS
#1	10" x 10" x 4"	12" x 12" x 4"	16" x 16" x 4"
#2	8" x 8" x 4"	10" x 10" x 4"	12" x 12" x 4"
#4	8" x 8" x 4"	10" x 10" x 4"	10" x 10" x 4"
#6	8" x 8" x 4"	8" x 8" x 4"	10" x 10" x 4"
#8	8" x 8" x 4"	8" x 8" x 4"	8" x 8" x 4"

4. Junction boxes with an internal volume of less than 100 cu. in. and supported by entering raceways must have threaded entries or hubs identified for the intended purpose and supported by connection of two or more rigid metal conduits. Secure conduit within 3 ft. of the enclosure or within 18 in. of the enclosure if all conduit entries are on the same side. Mechanically secure all junction boxes with an internal volume greater than 100 cu. inches.

5. Provide hot dipped galvanized cast iron or sand cast aluminum outlet boxes for junction boxes containing only 10 AWG or 12 AWG conductors. Do not use die cast aluminum boxes. Size outlet boxes according to the NEC.

6. Do not use intermediate metal conduit (IMC) or electrical metallic tubing (EMT) unless specifically required by the plan sheets. When EMT is called for, provide junction boxes made from galvanized steel sheeting, listed and approved for outdoor use, unless otherwise noted on the plans. Size all galvanized steel junction boxes in accordance with the NEC. Provide junction boxes for IMC conduit systems that meet the same requirements for junction boxes used with RMC systems.

7. Provide PVC junction boxes intended for outdoor use on PVC conduit systems, unless otherwise noted on the plans.

8. Provide PVC elbows in PVC conduit systems, unless otherwise shown on the plans. Use only a flat, high tensile strength polyester fiber pull tape for pulling conductors through the PVC conduit system. When galvanized steel RMC elbows are specifically called for in the plans and any portion of the RMC elbow is buried less than 18 in., ground the RMC elbow by means of a grounding bushing on a rigid metal extension. Grounding of the rigid metal elbow is not required if the entire RMC elbow is encased in a minimum of 2 in. of concrete. PVC extensions are allowed on these concrete encased rigid metal elbows. RMC or PVC elbows are subsidiary to various bid items.

9. When required, provide High-Density Polyethylene (HDPE) conduit with factory installed internal conductors according to Item 622 "Duct Cable." At the Contractor's request and with approval by the Engineer, substitute HDPE conduit with no conductors for bored schedule 40 or schedule 80 PVC conduit bid under Item 618. Ensure bored HDPE substituted for PVC is schedule 40 and of the same size PVC called for in the plans. Ensure the substituted HDPE meets the requirements of Item 622, except that the conduit is supplied without factory-installed conductors. Make the transition of the HDPE conduit to PVC (or RMC elbow when required) at the bore pit. Provide conduit of the size and schedule as shown on the plans. Do not extend substituted conduit into ground boxes or foundations. Provide PVC or galvanized steel RMC elbows as called for at all ground boxes and foundations.

10. Use two-hole straps when supporting 2 in. and larger conduits. On electrical service poles, properly sized stainless steel or hot dipped galvanized one-hole standoff straps are allowed on the service riser conduit.

B. CONSTRUCTION METHODS

1. Provide and install expansion joint conduit fittings on all structure-mounted conduits at the structure's expansion joints to allow for movement of the conduit. In addition, provide and install expansion joint fittings on all continuous runs of galvanized steel RMC conduit externally exposed on structures such as bridges at maximum intervals of 150 ft. When requested by the project Engineer, supply manufacturer's specification sheet for expansion joint conduit fittings. Repair or replace expansion joint fittings that do not allow for movement at no additional cost to the Department. Provide the method of determining the amount of expansion to the Engineer upon request. Do not use LFMC or LFNC as a substitute for the required expansion conduit fittings.

2. Space all conduit supports at maximum intervals of 5 ft. Install conduit spacers when attaching metal conduit to surface of concrete structures. See "Conduit Mounting Options" on ED(2). Install conduit support within 3 ft. of all enclosures and conduit terminations.

3. Do not attach conduit supports directly to pre-stressed concrete beams except as shown specifically in the plans or as approved by the Engineer.

4. Unless otherwise shown on the plans, jack or bore conduit placed beneath existing roadways, driveways, sidewalks, or after the base or surfacing operation has begun. Backfill and compact the bore pits below the conduit per Item 476 "Jacking, Boring, or Tunneling Pipe or Box" prior to installing conduit or duct cable to prevent bending of the connections.

5. When placing conduit in the sub-grade of new roadways, backfill all trenches with excavated material unless otherwise noted on the plans. When placing conduit in the sub-base of new roadways, backfill all trenches with cement-stabilized base as per requirements of Items 110 "Excavation", 400 "Excavation and Backfill for Structures", 401 "Flowable Backfill", 402 "Trench Excavation Protection", and 403 "Temporary Special Shoring."

6. Provide and place warning tape approximately 10 in. above all trenched conduit as per Item 618.

7. During construction, temporarily cap or plug open ends of all conduit and raceways immediately after installation to prevent entry of dirt, debris and animals. Temporary caps constructed of durable duct tape are allowed. Tightly fix the tape to the conduit opening. Clean out the conduit and prove it clear in accordance with Item 618 prior to installing any conductors.

8. Ensure conduit entry into the top of any enclosure is waterproof by installing conduit sealing hubs or using boxes with threaded bosses. This includes surface mounted safety switches, meter cans, service enclosures, auxiliary enclosures and junction boxes. Grounding bushings on water tight sealing hubs are not required.

9. Fit the ends of all PVC conduit terminations with bushings or bell end fittings. Provide and install a grounding type bushing on all metal conduit terminations.

10. Install a bonding jumper from each grounding bushing to the nearest ground rod, grounding lug, or equipment grounding conductor. Ensure all bonding jumpers are the same size as the equipment grounding conductor. Bonding of conduit used as a casing under roadways for duct cable is not required, if the duct extends the full length through the casing.

11. At all electrical services, install a 6 AWG solid copper grounding electrode conductor.

12. Place conduits entering ground boxes so that the conduit openings are between 3 in. and 6 in. from the bottom of the box. See the ground box detail on sheet ED(4).

13. Seal ends of all conduits with duct seal, expandable foam, or by other methods approved by the Engineer. Seal conduit immediately after completion of conductor installation and pull tests. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a conduit sealant.

14. File smooth the cut ends of all mounting strut and conduit. Before installing, paint the field cut ends of all mounting strut and RMC (threaded or non-threaded) with zinc rich paint (94% or more zinc content) to alleviate overspray. Use zinc rich paint to touch up galvanized material as allowed under Item 445 "Galvanizing." Do not paint non-galvanized material with a zinc rich paint as an alternative for materials required to be galvanized.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS CONDUITS & NOTES

ED(1)-14

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©TxDOT	October 2014	CONT	SECT	JOB	HIGHWAY
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		PHR	CAMERON		43

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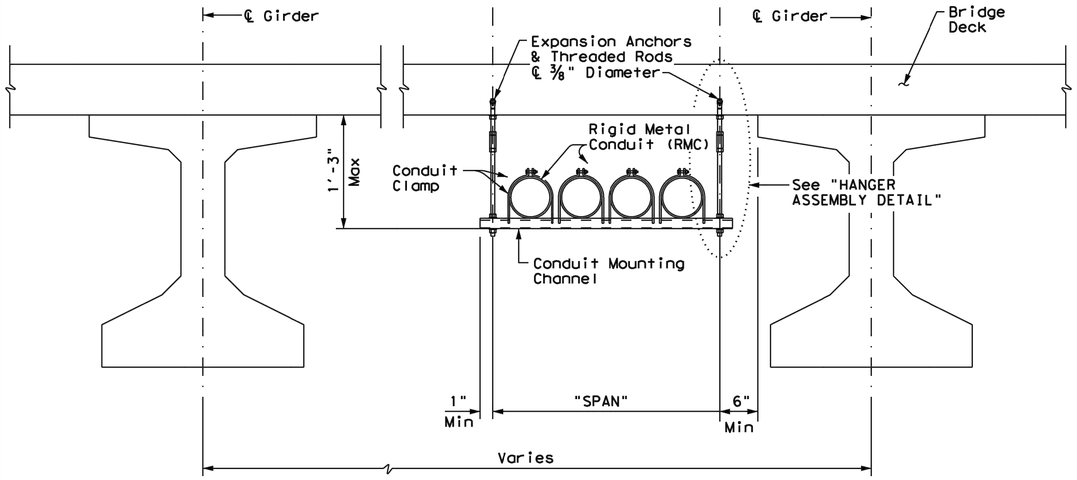
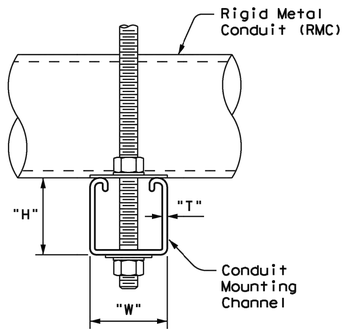
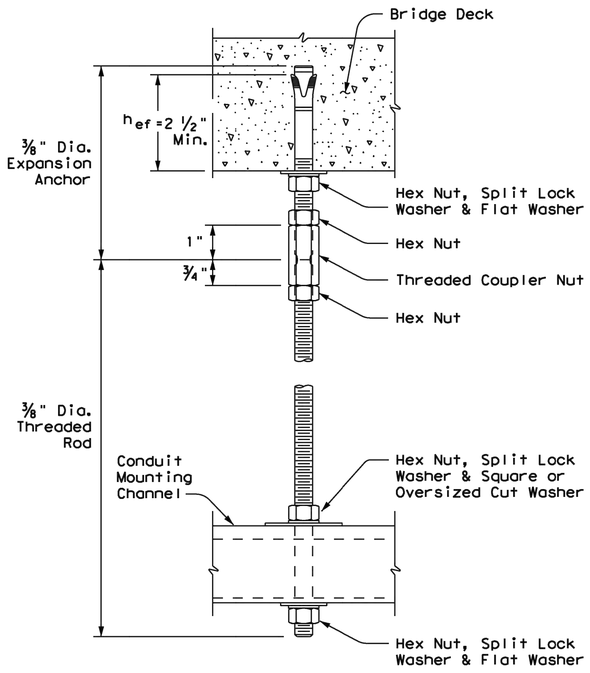


CONDUIT HANGING DETAIL

CONDUIT MOUNTING CHANNEL		
"SPAN"	"W" x "H"	"T"
less than 2'	1 5/8" x 1 3/8"	12 Ga.
2'-0" to 2'-6"	1 5/8" x 1 5/8"	12 Ga.
>2'-6" to 3'-0"	1 5/8" x 2 7/16"	12 Ga.

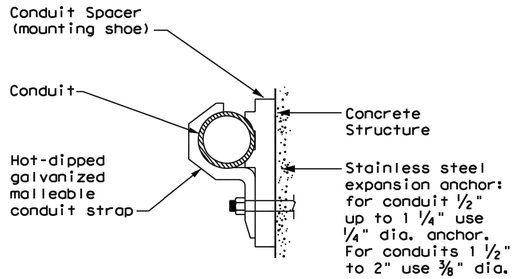
Channels with round or short slotted hole patterns are allowed, if the load carrying capacity is not reduced by more than 15%.

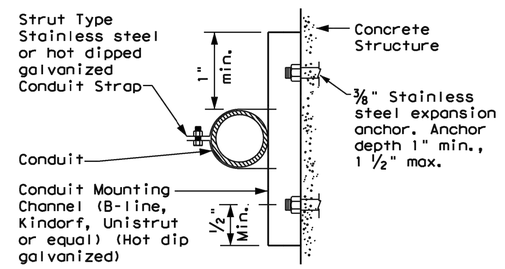




HANGER ASSEMBLY DETAIL

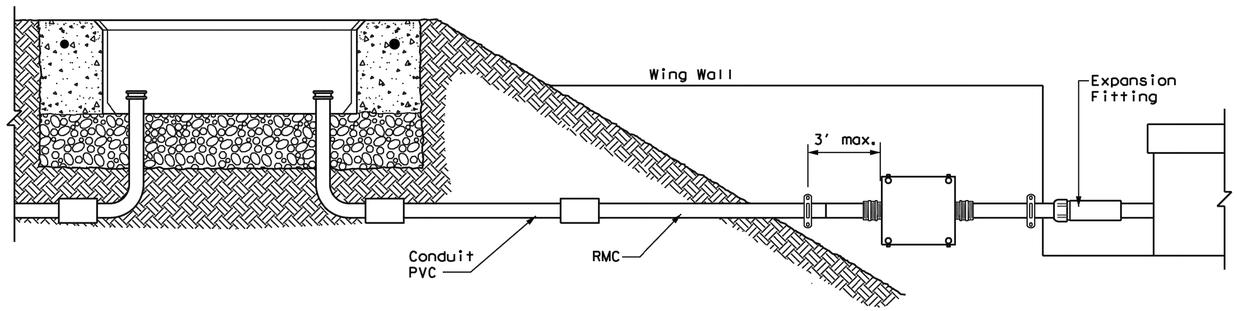
ELECTRIC CONDUIT TO BRIDGE DECK ATTACHMENT





CONDUIT MOUNTING OPTIONS

Attachment to concrete surfaces
See ED(1)B.2



TYPICAL CONDUIT ENTRY TO BRIDGE STRUCTURE DETAIL

EXPANSION ANCHOR NOTES FOR BRIDGE DECK ATTACHMENT

1. Use torque controlled mechanical expansion anchors that are approved for use in cracked concrete by the International Code Council, Evaluation Service (ICC-ES). The chosen anchor product shall have a designated ICC-ES Evaluation Report number, and its approval status shall be maintained on the ICC-ES website under Division 031600 for Concrete Anchors.
2. Unless otherwise approved by the Engineer: do not use adhesive anchors; do not use expansion anchors that are not included in the ICC-ES approval list; and do not use expansion anchors that are only approved for use in uncracked concrete.
3. Use anchors manufactured with stainless steel expansion wedges. Anchors manufactured with carbon steel expansion wedges are not allowed. Anchor bodies can be either zinc-plated carbon steel or stainless steel. For application in marine environment, both the anchor body and expansion wedge shall be stainless steel.
4. Install anchors as shown on the plans and in accordance with the anchor manufacturer's published installation instructions. Arrange a field demonstration test to evaluate the procedures and tools. The test shall be witnessed and approved by the Engineer prior to furnishing anchors on the structure.
5. Prior to hole drilling, use rebar locator to ensure clearing of existing deck strands or reinforcement. Install anchors to ensure a minimum effective embedment depth, (h_{ef}), as shown. Increase (h_{ef})as needed to ensure sufficient thread length for proper torqueing and tightening of anchors.
6. Use anchors of minimum 1600 Lbs tensile capacity (minimum of steel, concrete breakout, and concrete pullout strengths as determined by ACI 318 Appendix D) at the required minimum embedment depth (h_{ef}). No lateral loads shall be introduced after conduit installation.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
CONDUIT SUPPORTS

ED(2)-14

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©TxDOT October 2014	CONT	SECT	JOB	HIGHWAY
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	PHR	CAMERON		44

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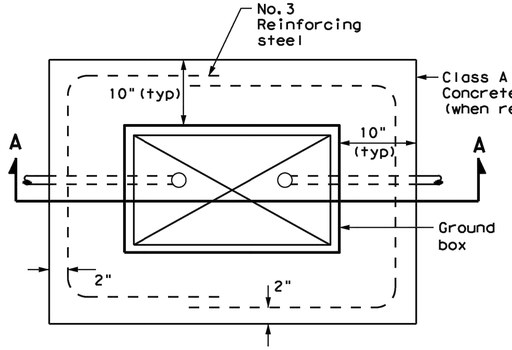
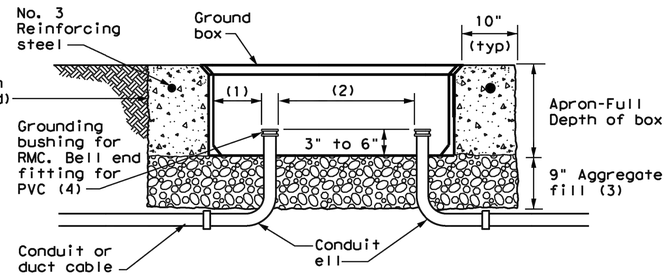


PLAN VIEW



SECTION A - A

APRON FOR GROUND BOX

(1) Uniformly space ends of conduits within the ground box. Position ends of conduits so that ground box walls do not interfere with the installation of grounding bushings or bell end fittings.

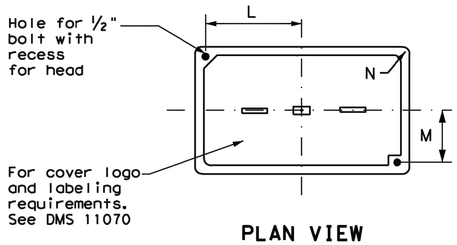
(2) Maintain sufficient space between conduits to allow for proper installation of bushing.

(3) Place aggregate under the box, not in the box. Aggregate should not encroach on the interior volume of the box.

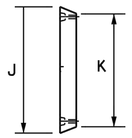
(4) Install a grounding bushing on the upper end of all RMC terminating in a ground box. Ground RMC elbows when any part of the elbow is less than 18 in. below the bottom of the ground box. Install a PVC bushing or bell end fitting on the upper end of all PVC conduits terminating in a ground box.

GROUND BOX DIMENSIONS	
TYPE	OUTSIDE DIMENSIONS (INCHES) (Width x Length X Depth)
A	12 X 23 X 11
B	12 X 23 X 22
C	16 X 29 X 11
D	16 X 29 X 22
E	12 X 23 X 17

GROUND BOX COVER DIMENSIONS								
TYPE	DIMENSIONS (INCHES)							
	H	I	J	K	L	M	N	P
A, B & E	23 1/4	23	13 3/4	13 1/2	9 7/8	5 1/8	1 3/8	2
C & D	30 1/2	30 1/4	17 1/2	17 1/4	13 1/4	6 3/4	1 3/8	2



PLAN VIEW



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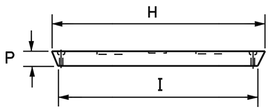

SIDE

GROUND BOX COVER

GROUND BOXES

A. MATERIALS

1. Provide polymer concrete ground boxes measuring 16x30x24 in. (WxLxD) or smaller in accordance with Departmental Material Specification (DMS) 11070 "Ground Boxes" and Item 624 "Ground Boxes."

2. Provide Type A, B, C, D, and E ground boxes as shown in the plans, and as listed on the Material Producers List (MPL) on the Department web site under "Roadway Illumination and Electrical Supplies," Item 624.

3. Ensure ground box cover is correctly labeled in accordance with DMS 11070.

4. Provide larger ground boxes in accordance with Item 624 and as shown in the plans.

B. CONSTRUCTION METHODS

1. Remove all gravel and dirt from conduit. Cap all conduits prior to placing aggregate and setting ground box. Provide Grade 3 or 4 coarse aggregate as shown on Table 2 of Item 302 "Aggregates for Surface Treatments." Ensure aggregate bed is in place and at least 9 inches deep, prior to setting the ground box. Install ground box on top of aggregate.

2. Cast ground box aprons in place. Reinforcing steel may be field bent. Ensure the depth of concrete for the apron extends from finished grade to the top of the aggregate bed under the box. Ground box aprons, including concrete and reinforcing steel, are subsidiary to ground boxes when called for by descriptive code.

3. Keep bolt holes in the box clear of dirt. Bolt covers down when not working in ground boxes.

4. Install all conduits and ells in a neat and workmanlike manner. Uniformly space conduits so grounding bushings and bell end fittings can easily be installed.

5. Temporarily seal all conduits in the ground box until conductors are installed.

6. Permanently seal conduits immediately after the completion of conductor installation and pull tests. Permanently seal the ends of all conduits with duct seal, expandable foam, or other method as approved. Do not use duct tape as a permanent conduit sealant. Do not use silicone caulk as a sealant.

7. When a ground rod is present in a ground box, bond all equipment grounding conductors together and to the ground rod with listed connectors.

8. When a type B or D ground box is stacked to meet volume requirements, it is allowable to cut an appropriately sized hole for conduit entry in the side wall at least 18 inches below grade.

9. If an existing ground box in the contract has a metal cover, bond the cover to the equipment grounding conductor with a 3 ft. long stranded bonding jumper the same size as the grounding conductor. The bonding jumper is subsidiary to various bid items. Verify existing ground boxes with metal covers are shown on the plans, with notes fully describing the work required.

10. If other ground boxes with metal covers are within the project limits but are not part of the contract, the Engineer may direct the Contractor to bond the metal covers, identifying the specific boxes in writing. This work will be paid for separately.

11. Bond metal ground box covers to the grounding conductor with a tank ground type lug.

Texas Department of Transportation

Traffic Operations Division Standard

ELECTRICAL DETAILS
GROUND BOXES

ED(4)-14

FILE: ed4-14.dgn	DN: TxDOT	CK: TxDOT	DW: TxDOT	CK: TxDOT
©TxDOT October 2014	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
	DIST	COUNTY		SHEET NO.
	PHR	CAMERON		45

71D

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DATE:
FILE:

FOUNDATION DESIGN TABLE

FDN TYPE	DRILLED SHAFT DIA	REINFORCING STEEL		EMBEDDED DRILLED SHAFT LENGTH-ft ④, ⑤, ⑥			ANCHOR BOLT DESIGN ①				FOUNDATION DESIGN LOAD ②		TYPICAL APPLICATION
		VERT BARS	SPIRAL & PITCH	TEXAS CONE PENETROMETER N blows/ft 10	15	40	ANCHOR BOLT DIA	Fy (ksi)	BOLT CIR DIA	ANCHOR TYPE	MOMENT K-ft	SHEAR Kips	
24-A	24"	4- #5	#2 at 12"	5.7	5.3	4.5	¾"	36	12 ¾"	1	10	1	Pedestal pole, pedestal mounted controller.
30-A	30"	8- #9	#3 at 6"	11.3	10.3	8.0	1 ½"	55	17"	2	87	3	Mast arm assembly. (see Selection Table)
36-A	36"	10- #9	#3 at 6"	13.2	12.0	9.4	1 ¾"	55	19"	2	131	5	Mast arm assembly. (see Selection Table) 30' strain pole with or without luminaire.
36-B	36"	12- #9	#3 at 6"	15.2	13.6	10.4	2"	55	21"	2	190	7	Mast arm assembly. (see Selection Table) Strain pole taller than 30' & strain pole with mast arm
42-A	42"	14- #9	#3 at 6"	17.4	15.6	11.9	2 ¼"	55	23"	2	271	9	Mast arm assembly. (see Selection Table)

NOTES:

① Anchor bolt design develops the foundation capacity given under Foundation Design Loads.

② Foundation Design Loads are the allowable moments and shears at the base of the structure.

③ Foundations may be listed separately or grouped according to similarity of location and type. Quantities are for the Contractor's information only.

④ Field Penetrometer readings at a depth of approximately 3 to 5 feet may be used to adjust shaft lengths.

⑤ If rock is encountered, the Drilled Shaft shall extend a minimum of two diameters into solid rock.

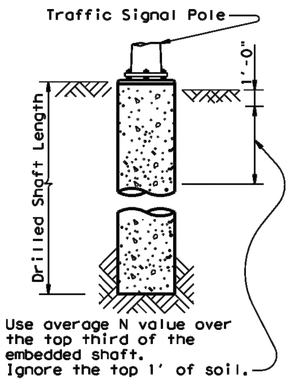
⑥ Decimal lengths in Design Table are to allow interpolation for other penetrometer values. Round to nearest foot for entry into Summary Table.

FOUNDATION SUMMARY TABLE ③

LOCATION IDENTIFICATION	AVG. N BLOW /ft.	FDN TYPE	NO. EA	DRILLED SHAFT LENGTH ⑥ (FEET) 24-A	30-A	36-A	36-B	42-A
RECTANGULAR RAPID FLASHING BEACON DETAIL	10	24-A	2	6				
TOTAL DRILLED SHAFT LENGTHS				12				

FOUNDATION SELECTION TABLE FOR STANDARD MAST ARM PLUS ILSN SUPPORT ASSEMBLIES (ft)

		FDN 30-A	FDN 36-A	FDN 36-B	FDN 42-A
80 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH	32'	48'		
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS	24' X 24'			
		28' X 28'			
		32' X 28'	32' X 32'		
			36' X 36'		
			40' X 36'		
			44' X 28'	44' X 36'	
100 MPH DESIGN WIND SPEED	MAX SINGLE ARM LENGTH		36'	44'	
	MAXIMUM DOUBLE ARM LENGTH COMBINATIONS		24' X 24'		
			28' X 28'		
			32' X 24'	32' X 32'	
				36' X 36'	
				40' x24'	40' X 36'
					44' x 36'



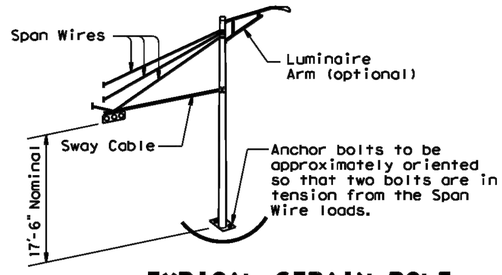
Use average N value over the top third of the embedded shaft. Ignore the top 1' of soil.

ANCHOR BOLT & TEMPLATE SIZES

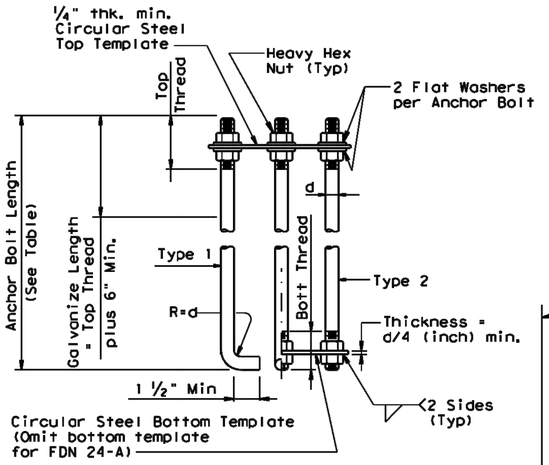
BOLT DIA IN.	⑦ BOLT LENGTH	TOP THREAD	BOTTOM THREAD	BOLT CIRCLE	R2	R1
¾"	1'-6"	3"	—	12 ¾"	7 ⅛"	5 ⅝"
1 ½"	3'-4"	6"	4"	17"	10"	7"
1 ¾"	3'-10"	7"	4 ½"	19"	11 ¼"	7 ¾"
2"	4'-3"	8"	5"	21"	12 ½"	8 ½"
2 ¼"	4'-9"	9"	5 ½"	23"	13 ¾"	9 ¼"

⑦ Min dimensions given, longer bolts are acceptable.

EXAMPLE:
1. For 80mph design wind speed, foundation 30-A can support up to a 32' arm with another arm up to 28'
2. For 100mph design wind speed, foundation 36-A can support a single 36' mast arm.



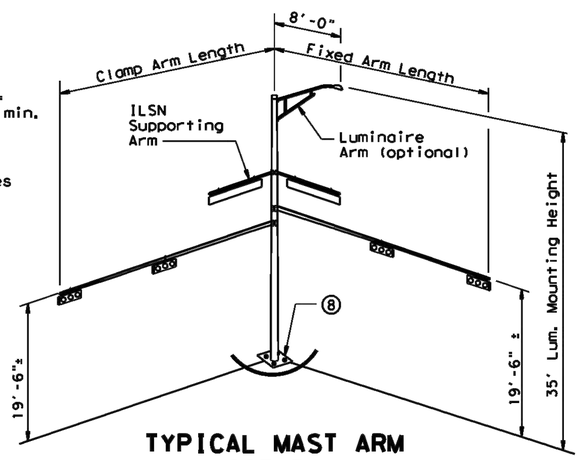
TYPICAL STRAIN POLE ASSEMBLY



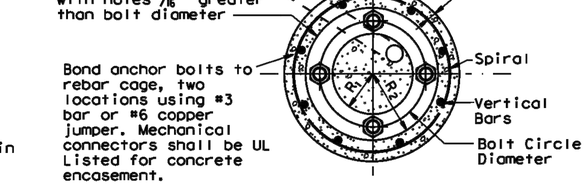
HOOKED ANCHOR (TYPE 1) NUT ANCHOR (TYPE 2)

ANCHOR BOLT ASSEMBLY

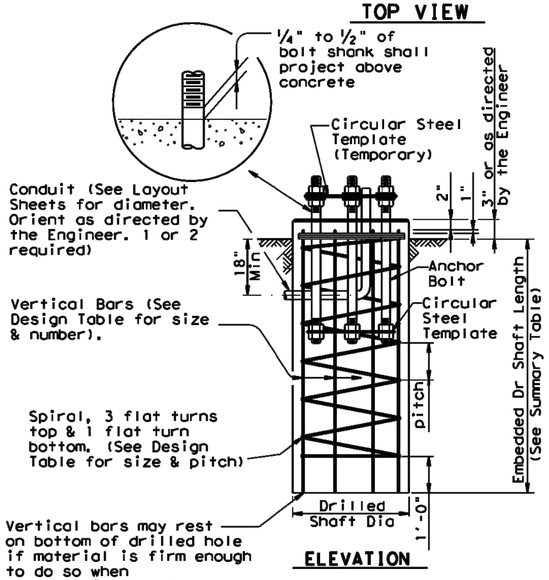
⑧ Orient anchor bolts orthogonal with the fixed arm direction to ensure that two bolts are in tension under dead load.



TYPICAL MAST ARM ASSEMBLY



TOP VIEW



ELEVATION

FOUNDATION DETAILS

GENERAL NOTES:

Design conforms to 1994 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals and interim revisions thereto.

Reinforcing steel shall conform to Item 440, "Reinforcing Steel".

Concrete shall be Class "C".

Threads for anchor bolts and nuts shall be rolled or cut threads of 8UN series up to 2" in diameter or UNC series for all sizes. Bolts and nuts shall have Class 2A and 2B fit tolerances. Galvanized nuts shall be tapped after galvanizing.

Anchor bolts that are larger than 1" in diameter shall conform to "alloy steel" or "medium-strength mild steel" per Item 449, "Anchor Bolts". Anchor bolts that are 1" in diameter or less shall conform to ASTM A36. Galvanize a minimum of the top end thread length plus 6" for all anchor bolts unless otherwise noted. Exposed washers and exposed nuts shall be galvanized. All galvanizing shall be in accordance with Item 445, "Galvanizing".

Templates and embedded nuts need not be galvanized. Lubricate and tighten anchor bolts when erecting the structure in accordance with Item 449, "Anchor Bolts".

5/27/2025
STATE OF TEXAS
JOHN W. RYAN
141023
LICENSED
PROFESSIONAL ENGINEER

Texas Department of Transportation
Traffic Operations Division

TRAFFIC SIGNAL POLE FOUNDATION

TS-FD-12

REVISIONS	DN: MS	CK: JSY	DW: MAO/MMF	CK: JSY/TEB
5-96 11-98 1-12	CONT	SECT	JOB	HIGHWAY
	N\A	N\A	N\A	PR100
	DIST	COUNTY		SHEET NO.
	PHR	CAMERON		46

ROADWAY ILLUMINATION ASSEMBLY NOTES

1. Details apply to roadway lighting installations bid or referenced under Item 610, "Roadway Illumination Assemblies." Provide, furnish, and install all other materials not shown on the plans which may be necessary for complete and proper construction. Where manufacturers provide warranties or guarantees as a customary trade practice, furnish to the State such warranties or guarantees.

2. The locations of poles and fixtures may be shifted by the Engineer to accommodate local conditions. Install or remove poles and luminaires located near overhead electrical lines using established industry and utility safety practices and in accordance with laws governing such work. Consult with the appropriate utility company prior to beginning such work.

3. Provide new and unused materials. Ensure that all materials and installations comply with the applicable articles of the National Electrical Code (NEC),TxDOT standards and specifications, National Electrical Manufacturers Association (NEMA),and are listed by Underwriters Laboratories (UL) or a Nationally Recognized Testing Lab (NRTL). NRTLs such as Canadian Standard Association, Intertek Testing Services NA Inc., or FM Approvals LLC can be considered equivalent to UL. Faulty fabrication or poor workmanship in any material, equipment, or installation is justification for rejection.

4. Provide Roadway Illumination Light Fixtures as per TxDOT Departmental Material Specification (DMS) 11010, Item 610, and as shown on the Material Producers List (MPL) for Roadway Illumination and Electrical Supplies.

5. Fabricate steel roadway illumination poles in accordance with Roadway Illumination Poles (RIP) standards and Item 610. Poles fabricated according to RIP standards do not require shop drawing submittals.

   a. Alternate designs to RIP standards or the use of aluminum to fabricate poles will require the submission of shop drawings electronically. For instructions on submitting shop drawings electronically see "Guide to Electronic Shop Drawing Submittal" on the TxDOT web site.

   b. Limitations on use of the RIP standard: The RIP standard details were developed for installations in locations where the 3-second gust basic maximum wind speed is 110 mph, and where the elevation of the base of the pole is less than (i.e. not more than) 25' above the elevation of the surrounding terrain, in accordance with the "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals," 6th Edition (2013) of the AASHTO Design Specifications. For poles to be installed in regions where the maximum basic wind speed exceeds 110 mph or to be mounted more than 25' above the surrounding terrain, provide poles meeting the following requirements:

      i. Submittals. Following the electronic shop drawing submittal process (see Guide to Electronic Shop Drawing Submittal on the TxDOT web site), submit to the Engineer for approval fabrication drawings and calculations for the poles, sealed by a Texas licensed professional engineer (P.E.).

      ii. Luminaire Structural Support Requirements. Provide light poles, arms, and anchor bolt assemblies with a 25 year design life to safely resist dead loads, ice loads and the required basic wind speeds at the location of installation in accordance with the 6th edition (2013) of the AASHTO Design Specifications. For transformer base poles, include transformer base and connecting hardware in calculations and shop drawing submittals. Structurally test all transformer bases to resist the theoretical plastic moment capacity of the pole. Submit certification of the plastic moment load test and FHWA breakaway requirement test of the model of base being furnished with the shop drawings. Show breakaway base model number, manufacturer's name, and logo on shop drawings. Include on manufacturer's shop drawings the ASTM designations for all materials to be used.

6. For both transformer and shoe-base type illumination poles, provide and install double-pole breakaway fuse holders as specified by DMS-11040. Breakaway fuse holders are listed on the MPL for Roadway Illumination and Electrical Supplies under Items 610 & 620. Provide 10 amp time delay fuses for breakaway connectors in light poles, or inside the light fixture for underpass luminaires. In each pole, connect luminaires to the breakaway connector with continuous stranded 12 AWG copper conductors as listed on the MPL. Bond all equipment grounding conductors together and to the ground lug in the transformer base or hand hole.

7. Tighten anchor bolts for shoe base, concrete traffic barrier base, and bridge mount roadway illumination poles, in accordance with Item 449.

8. Install T-Base with following procedure:

   a. Anchor Bolt Tightening.

      i. Coat the threads of the anchor bolts with electrically conductive lubricant.

      ii. Place the T-base over the anchor bolts. Foundation must be level and flat. The maximum permissible gap under any one corner of the t-base is 1/8" before nuts are tightened.

      iii. Coat the bearing surfaces of the nuts and washers with electrically conductive lubricant. Install (1) 1/2" hold down washer, (1) lock washer, and (1) nut on each anchor bolt. Turn the nuts onto the bolts so that each is hand-tight against the washer.

      iv. Using a torque wrench, tighten each nut to 150 ft-lb. Uniform contact is required between the foundation and the T-base in the corner regions of the T-base, and all corner gaps must be closed after applying torque. If a gap still exists after torquing to 150 ft-lbs, continue torquing each bolt incrementally until gap is closed or maximum allowable torque of 250 ft. pound is reached, whichever comes first. If 250 ft-lbs is not enough to close the gap the foundation must be leveled. Gaps along the straight sides of the T-bases and the foundation are permissible. Ensure that no high point of contact occurs between the straight sides of the T-base and the foundation.

      v. Check top of T-base for level. If not level then foundation must be leveled.

   b. Top Bolt Procedure

      i. Erect pole over T-base with crane. Coat bolts, nuts, washers, and lock washers with electrically conductive lubricant.

      ii. Install bolts and 1/2" connecting washers from the inside of the T-base, thread up through the pole base. Install flat washers, lock washers and nuts snug tight according to Item 447, "Structural Bolting."

      iii. Tighten each nut to 150 ft-lb. using a torque wrench.

   c. Level and Plumb

      i. Ensure pole is plumb and mast arm is perpendicular to the roadway according to plans to within 5 degrees.

9. Construct luminaire pole foundations in accordance with Item 416, "Drilled Shaft Foundations," and TxDOT standard sheet RID(2).

10. Provide and install underpass luminaires in accordance with Item 610, DMS-11010, and TxDOT standard sheet RID(3). Typical luminaire size for underpass luminaires is 150W HPS or 150W EQ LED.

11. Mount luminaires on arms level as shown by the luminaire level indicator.

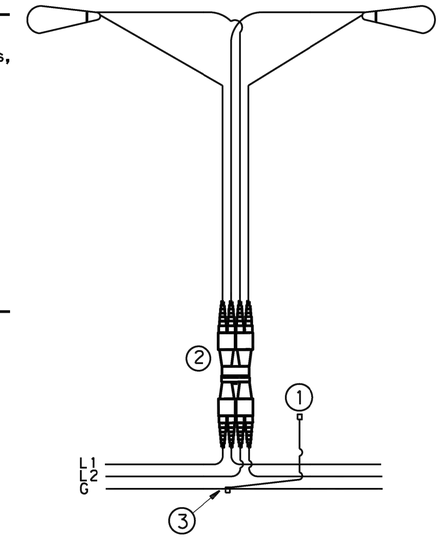
12. Orient luminaires perpendicular to the roadway intended to be lit unless otherwise shown on the plans.

Wiring Diagram Notes:

(1) Use 1/2 in.-13 UNC threaded, copper or tin-plated copper, pole bonding connector, sized appropriately for conductors, bonded to T-base, or use ground lug in handhole as available.

(2) Use pre-qualified two-pole breakaway connectors for all luminaire pole installations. For luminaires fed by a circuit with a neutral conductor, use double pole breakaway connectors with the neutral side unfused and marked white.

(3) Split Bolt or other connector.



L1,L2 = Hot Conductors
G = Grounding Conductor

TYPICAL WIRING DIAGRAM

LUMINAIRES SERVED AT 480V ON 240/480 VOLT SERVICE OR LUMINAIRES SERVED AT 240V FOR 120/240 VOLT SERVICE.

Decorative LED Lighting Notes:

1. LED Drivers in Remote Outdoor enclosures (for drivers that do not include an enclosure as part of a factory assembly):

   a. Provide NEMA 3R outdoor enclosure or as approved.

   b. Install enclosure at least 12" above ground or other horizontal surface. Mount vertically or on ceiling, and avoid direct sun where possible.

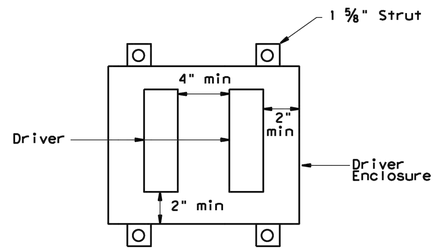
   c. Install drivers with at least 2 inches of space from enclosure walls.

   d. For multiple drivers in an enclosure, provide at least 4 inches side to side and 1 inch end to end from other drivers or electronic equipment

   e. For drivers mounted on back wall of enclosure, mount enclosure on 1 5/8" strut or other standoff to dissipate heat, or mount driver to side of the enclosure or to the metal cover.

   f. Provide remote drivers with a maximum of 100 watts

   g. Provide drivers with documentation of 100,000 hr lifetime at Tcase of 65C or higher.



Driver Spacing In Remote Enclosure

Texas Department of Transportation

Traffic Safety Division Standard

ROADWAY ILLUMINATION DETAILS

RID(1)-20

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©TxDOT January 2007	CONT	SECT	JOB	HIGHWAY
REVISIONS	N\A	N\A	N\A	PR100
7-17	DIST	COUNTY		SHEET NO.
12-20	PHR	CAMERON		47

72A

DATE:
FILE:

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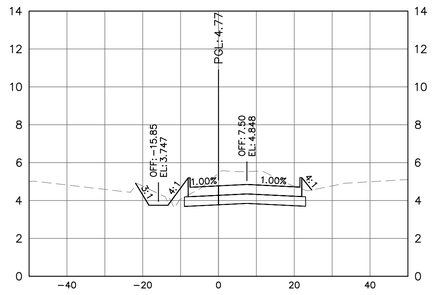

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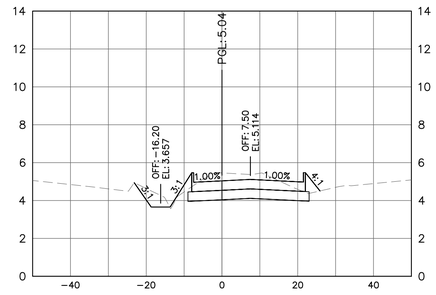

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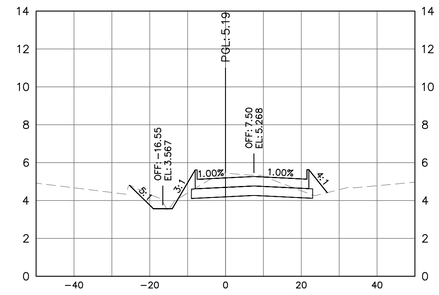

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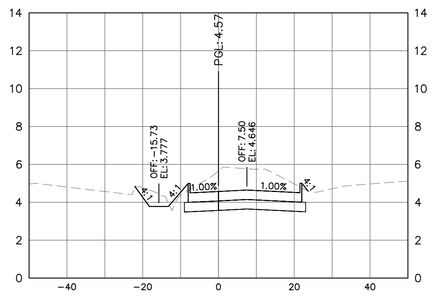

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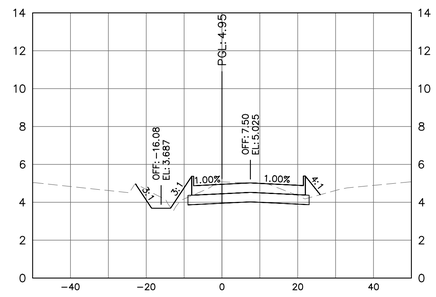

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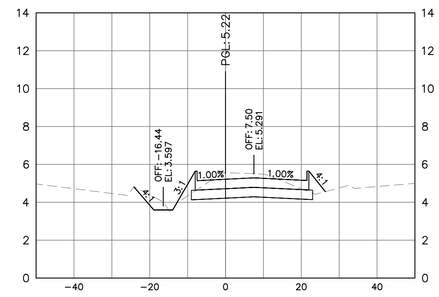

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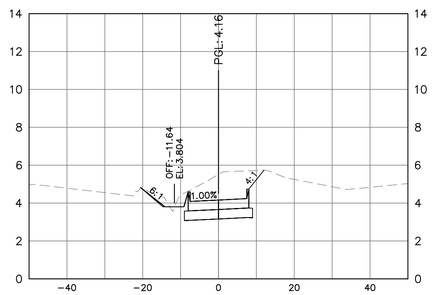

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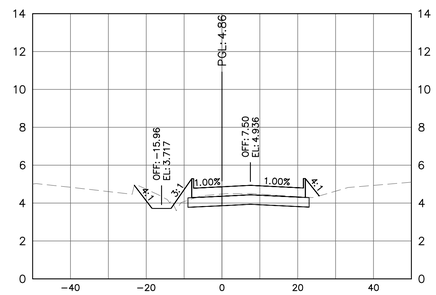

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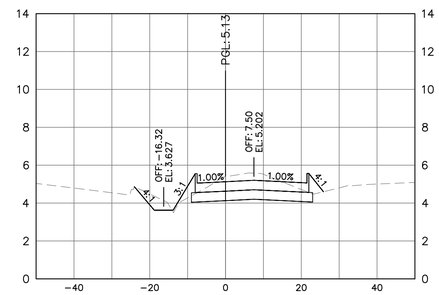

No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

CROSS SECTIONS

SHEET 1 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	48
CONTROL	SECTION	JOB	
N/A	N/A	N/A	

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HORIZONTAL

0 2.5 5 10
VERTICAL

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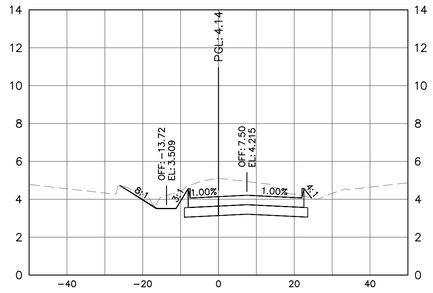

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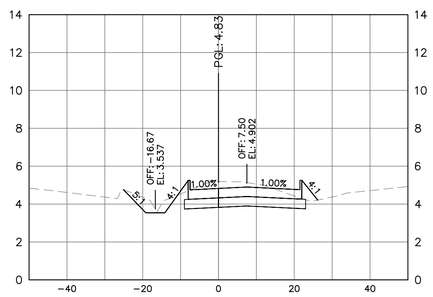

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No.	Revision	By	Date

5/27/2025
STATE OF TEXAS
BRIAN J. LEE
142043
LICENSED
PROFESSIONAL ENGINEER

Kimley»Horn
TBPE REGISTERED ENGINEERING FIRM F-928

South Padre ISLAND

Texas Department of Transportation

PR 100 OVERFLOW PARKING FACILITY

CROSS SECTIONS

SHEET 2 OF 2

FED. RD. DIV. NO.	FEDERAL AID PROJECT NO.	HIGHWAY NO.
6	N/A	PR 100

STATE	DISTRICT	COUNTY	SHEET NO.
TEXAS	PHR	CAMERON	49
CONTROL	SECTION	JOB	
N/A	N/A	N/A	