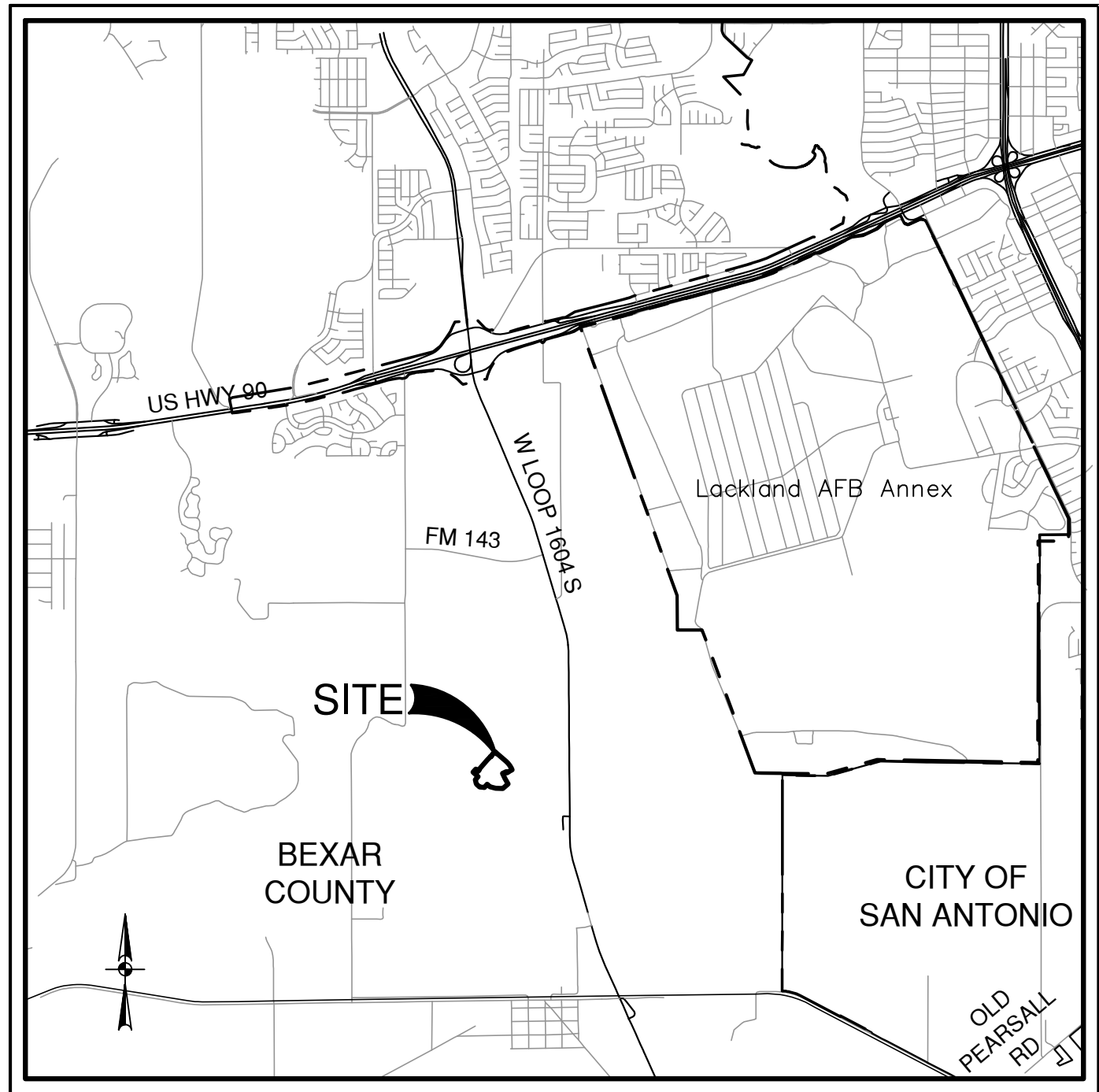


WESTLAKES UNIT 12

SAN ANTONIO, TEXAS

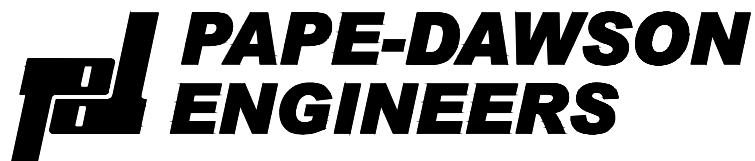
CIVIL CONSTRUCTION PLANS



LOCATION MAP
NOT-TO-SCALE

PULTE HOMES OF TEXAS, L.P.
1718 DRY CREEK WAY, SUITE 120
SAN ANTONIO, TEXAS 78259

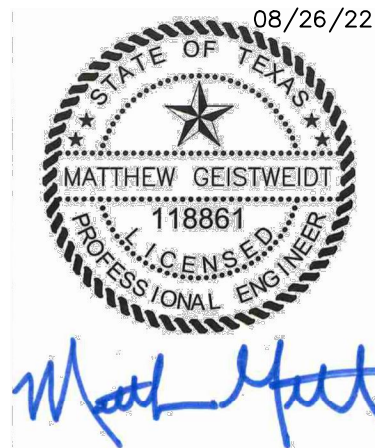
JUNE 2022



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

Sheet List Table

Sheet Title	Sheet No.
COVER SHEET	C0.00
MASTER DRAINAGE PLAN	C1.00
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DRAIN B	C1.02
DRAINAGE DETAILS	C1.10
DRAINAGE DETAILS	C1.11
HAMRICK CIRCLE	C2.00
BRANDY BRANCH	C2.01
SMITHERS AVENUE	C2.02
AQUILLA	C2.03
TYPICAL STREET DETAILS	C2.10
TYPICAL STREET DETAILS	C2.11
TYPICAL STREET DETAILS	C2.12
OVERALL SIGNAGE PLAN	C3.00
SIGNAGE DETAILS	C3.10
SIGNAGE DETAILS	C3.11
SIGNAGE DETAILS	C3.12
OVERALL SANITARY SEWER PLAN	C4.00
SANITARY SEWER LINE B	C4.01
SANITARY SEWER LINE J	C4.02
SANITARY SEWER LINE I	C4.03
SANITARY SEWER LINE L	C4.04
SANITARY SEWER LINE M	C4.05
SANITARY SEWER LINE O	C4.06
SANITARY SEWER LINE N	C4.07
SANITARY SEWER DETAILS	C4.10
SANITARY SEWER NOTES	C4.20
OVERALL WATER PLAN	C5.00
WATER DISTRIBUTION PLAN DETAILS	C5.10
WATER DISTRIBUTION PLAN NOTES	C5.20
OVERALL UTILITY PLAN	C6.00
OVERALL GRADING PLAN	C7.00
STORM WATER POLLUTION PREVENTION PLAN	C8.00
STORM WATER POLLUTION PREVENTION PLAN DETAILS	C8.10



LIVE OAK SLOUGH-MEDINA RIVER WATERSHED
SEWER: UPPER MEDINA RIVER SOUTH
SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.	
ADDRESS: 1718 DRY CREEK WAY, SUITE 120	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78259
PHONE# (210) 838-6784	FAX#
SAWS BLOCK MAP# 096548 TOTAL EDU'S 98 TOTAL ACREAGE 52.53	
TOTAL LINEAR FOOTAGE OF PIPE: 8"-1,743 LF PLAT NO. 22-11800398	
NUMBER OF LOTS 98	SAWS JOB NO. 22-1627

WATER (SAWS PRESSURE ZONE 4)

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.	
ADDRESS: 1718 DRY CREEK WAY	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78259
PHONE# (210) 496-1985	FAX#
SAWS BLOCK MAP# 096550 TOTAL EDU'S 98 TOTAL ACREAGE 52.53	
TOTAL LINEAR FOOTAGE OF PIPE: 8"-2,571 LF PLAT NO. 21-11800398	
NUMBER OF LOTS 98	SAWS JOB NO. 22-1133

Accumulated Flow Rates

Ref. Point		Contributing Flow						Reference Sub-point				
		Upstream Watershed		Upstream Surface Bypass		Upstream Pipe/System Flow		T	C	B	P	
		Return Year	#	Q _{WATERSHED} (cfs)	Surf Byp. Upstream Ref. Point	Q _{SURF-BYP} (cfs)	Pipe/System Upstream Ref. Point	Q _{PIPE} (cfs)	Q _{INLET/TOTAL} (cfs)	Q _{CAPTURED} (cfs)	Q _{BYPASS} (cfs)	Q _{PIPE/SYSTEM} (cfs)
11.50	5	11.50		14.7		0.0		0.0	14.7	8.9	5.8	8.9
	25				20.3	0.0	-	0.0	20.3	10.9	9.4	10.9
	100				25.3	0.0		0.0	25.3	12.5	12.8	12.5
11.51	5	11.51	11.50		5.8		8.9	13.4	13.4	-	22.3	
	25				9.4	10.9	19.9	-	30.8			
	100				12.8	12.5	25.9	-	38.4			
11.60	5	11.60	-		11.4		0.0	11.4	11.2	0.2	11.2	
	25				15.8	0.0	0.0	15.8	14.6	1.2	14.6	
	100				19.7	0.0	0.0	19.7	17.3	2.4	17.3	
11.61	5	11.61	11.60		6.9		0.2	0.0	7.1	-	-	
	25				9.6	1.2	0.0	10.8	-	-		
	100				11.9	2.4	0.0	14.3	-	-		
11.63	5	11.62	11.61		5.5		7.1	11.2	12.6	12.6	-	23.8
	25				7.7	10.8	14.6	18.5	18.5	-	33.1	
	100				9.6	14.3	17.3	23.9	23.9	-	41.2	

Drainage Plan Calculations

(Ultimate Development)

Ref. Point	Structure / Description	Drainage Areas			Total Flowpath (ft)	Overland/Sheet Flow (Seelye)			Shallow Concentrated Flow**				Shallow Concentrated Flow - 2"				Channelized Flow**			Tc-TOT	Rational Method Q=CIA IDF Curve: CoSA_A14_P40				
		#	Area (Ac)	C		Lo (FT)	So (ft/ft)	Tc** (MIN)	Lsc (FT)	Condition***	Slope (ft/ft)	Vsc (FPS)	Tsc** (MIN)	Lsc (FT)	Condition***	Slope (ft/ft)	Vsc (FPS)	Tsc** (MIN)	Lch (FT)		Vch (FPS)	Tch** (MIN)	Return Year	Intensity (in/hr)	Q (cfs)
11.00	Watershed // Drain C Unit 11	A	7.10	0.72	900	100	0.013	14			-	-	800	P	0.008	1.8	7.3	-	-	21	5	4.40	22.5		
11.10	Watershed // Drain B Unit 11	B	2.72	0.72	511	100	0.013	14	40	U	0.013	1.8	0.4	371	P	0.013	2.3	2.7	-	-	21	25	6.05	30.9	
																					21	100	7.52	38.4	
																					17	5	4.91	9.6	
11.20	Watershed // Drain A Unit 12	C	3.42	0.72	588	100	0.014	13	141	U	0.014	1.9	1.2	347	P	0.012	2.2	2.6	-	-	17	25	6.76	13.2	
																					17	100	8.42	16.5	
																					16	5	5.06	12.5	
11.30	Watershed // Drain B Unit 12	D	4.37	0.72	819	100	0.013	14			-	-	719	P	0.009	1.9	6.2	-	-	16	25	6.99	17.2		
																				16	100	8.71	21.4		
																				20	5	4.51	14.2		
11.50	Watershed // Street Capacity	F-1	4.04	0.72	668	100	0.034	12	61	U	0.020	2.3	0.4	507	P	0.010	2.0	4.2	-	-	16	5	5.06	14.7	
																					16	25	6.99	20.3	
																					18	100	8.71	25.3	
11.51	Curb Inlet in Sag	F-2	1.81	0.80	487	84	0.017	13			-	-	403	P	0.012	2.3	3.0	-	-	15	5	5.24	7.6		
																				15	25	7.24	10.5		
																				15	100	9.03	13.1		
11.52	Drain B Outfall // Arterial Phase 2	F-1+F-2+F-3	6.25	0.75	878	100	0.034	12	61	U	0.020	2.3	0.4	507	P	0.010	2.0	4.2	210	6.0	0.6	17	5	4.91	23.0
																						17	25	6.76	31.7
																						17	100	8.42	39.5
11.60	Watershed // Street Capacity	I-1	2.92	0.72	561	100	0.035	11	61	U	0.019	2.2	0.5	400	P	0.013	2.3	2.9	-	-	-	14	5	5.42	11.4
																						14	25	7.53	15.8
																						14	100	9.39	19.7
11.61	Watershed	I-2	1.65	0.80	484	100	0.028	12	46	U	0.025	2.6	0.3	338	P	0.006	1.6	3.6	-	-	-	15	5	5.24	6.9
																						15	25	7.24	9.6
																						15	100	9.03	11.9
11.62	Watershed // Street Capacity	I-3	1.23	0.80	398	84	0.019	12			-	-	314	P	0.018	2.7	1.9	-	-	-	13	5	5.61	5.5	
																					13	25	7.82	7.7	
																					13	100	9.76	9.6	
11.64	Drain A Outfall // Arterial Phase 2	I-1+I-2+I-3+I-4+I-5	6.20	0.76	597	100	0.028	12	46	U	0.025	2.6	0.3	338	P	0.006	1.6	3.6	113	6.0	0.3	16	5	5.06	23.8
																						16	25	6.99	32.9
																						16	100	8.71	41.0

Rational Method Time of Concentration

*Seelye Chart or TR-55 Eqn. 3-3

**As Calculated using Mannings or TR-55 Figure 3-1 or 6 ft/s

$$T_o = \frac{(0.007(n \cdot L)^{0.8})}{(Pz^{.5} \cdot S^{.4})} * 60 \text{ v} = \frac{k}{n} R^{2/3} S_o^{1/2}$$

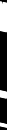
$$k = 1.486 \text{ ft}^{1/3}/\text{s}$$

S: For Streets: $n = 0.018$, $R = 0.2$ (Adapted from Mannings)

P: For Paved: $n = 0.025$, $R = 0.2$

U: For Unpaved: $n = 0.05$, $R = 0.4$

D: For Default: $v = 6$ fps



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WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

MASTER DRAINAGE PLAN

MASTER DRAINAGE PLAN

PLAT NO. 21-1180039

JOB NO. 11348-44

DATE JUNE 2022

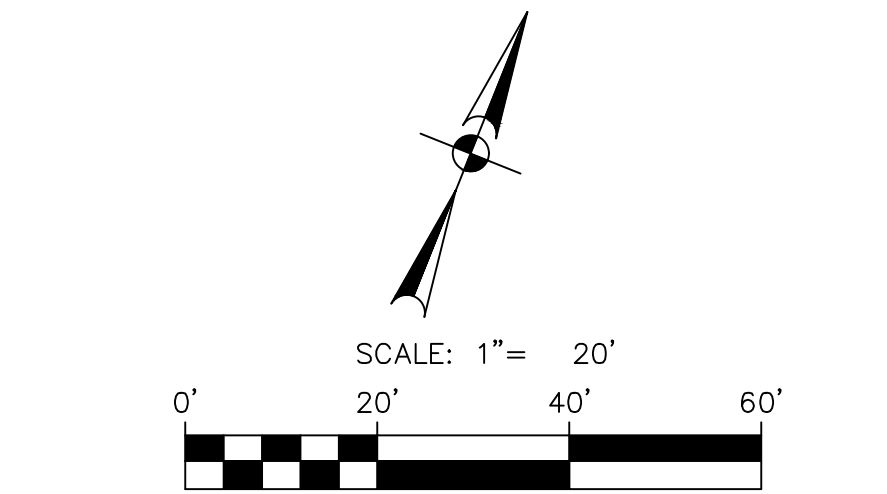
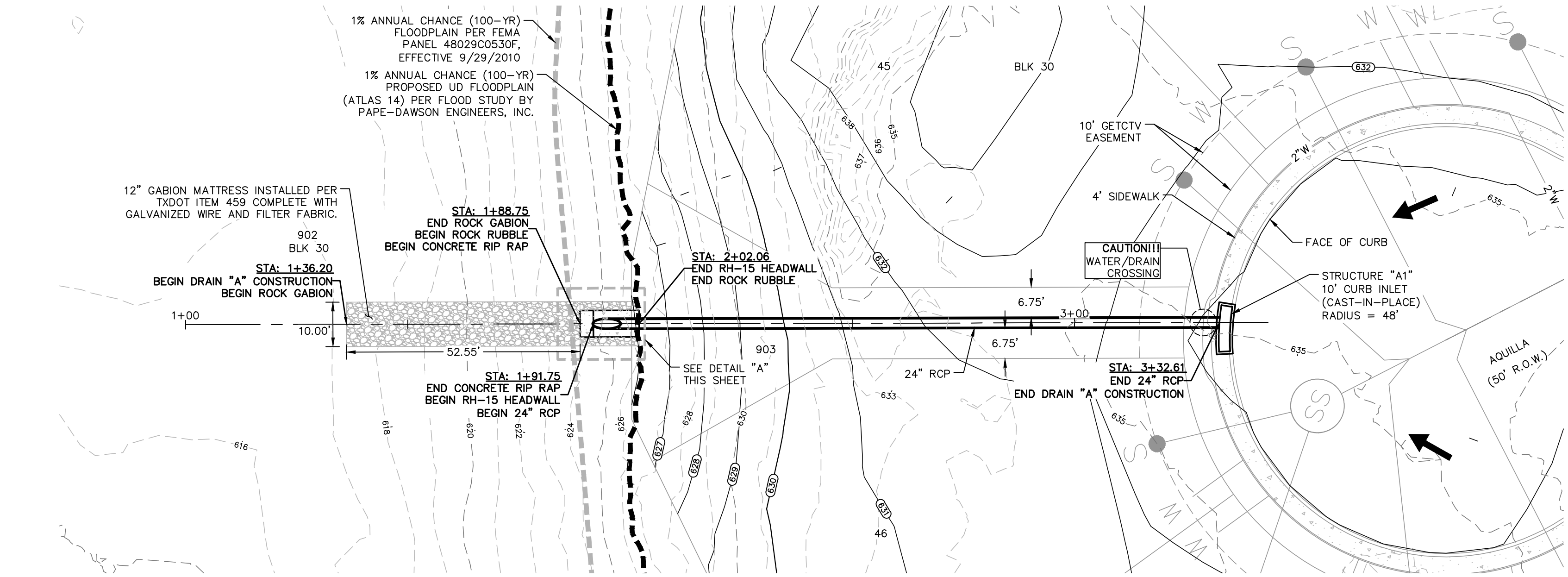
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DESIGNER	EDR		
CHECKED	MG	DRAWN	M

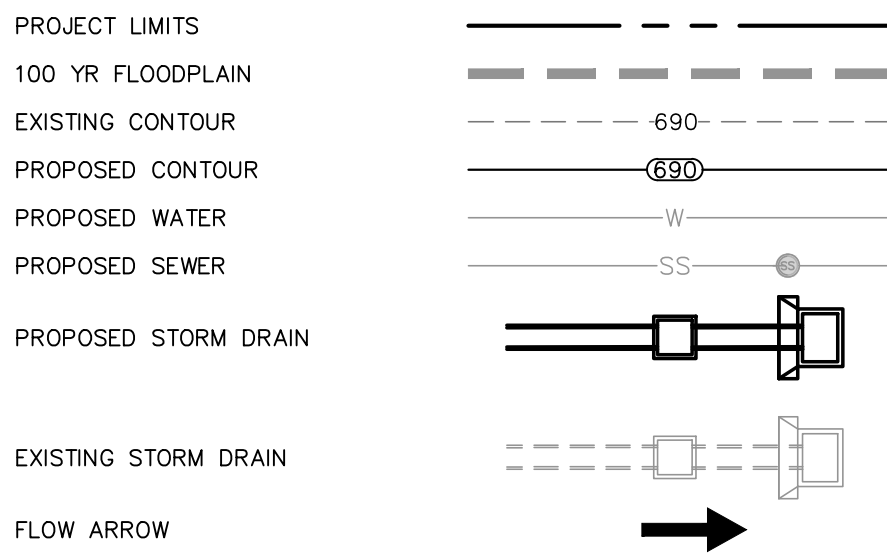
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DRAINAGE LEGEND

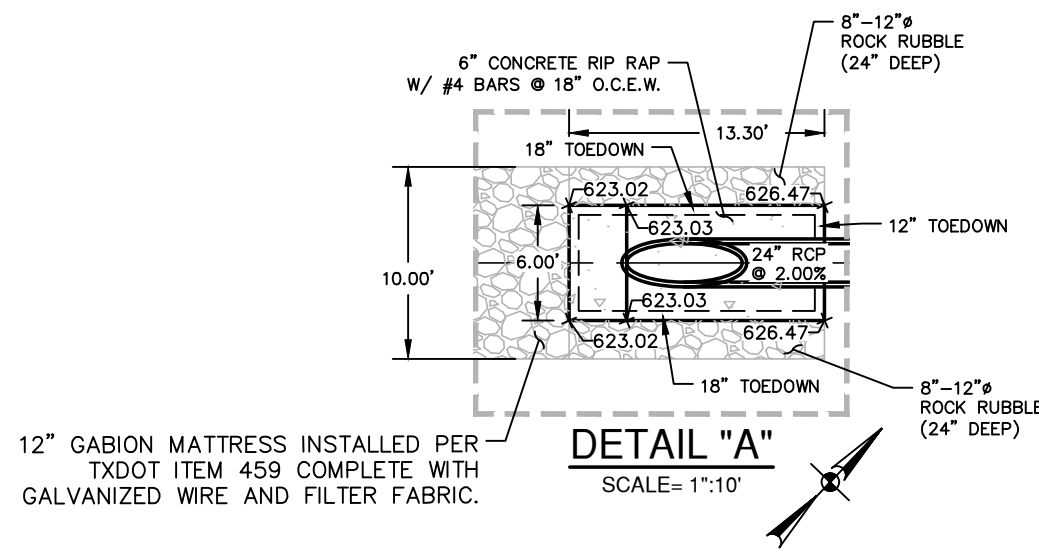


CURB INLET IN SAG

HYDRAULIC CALCULATION

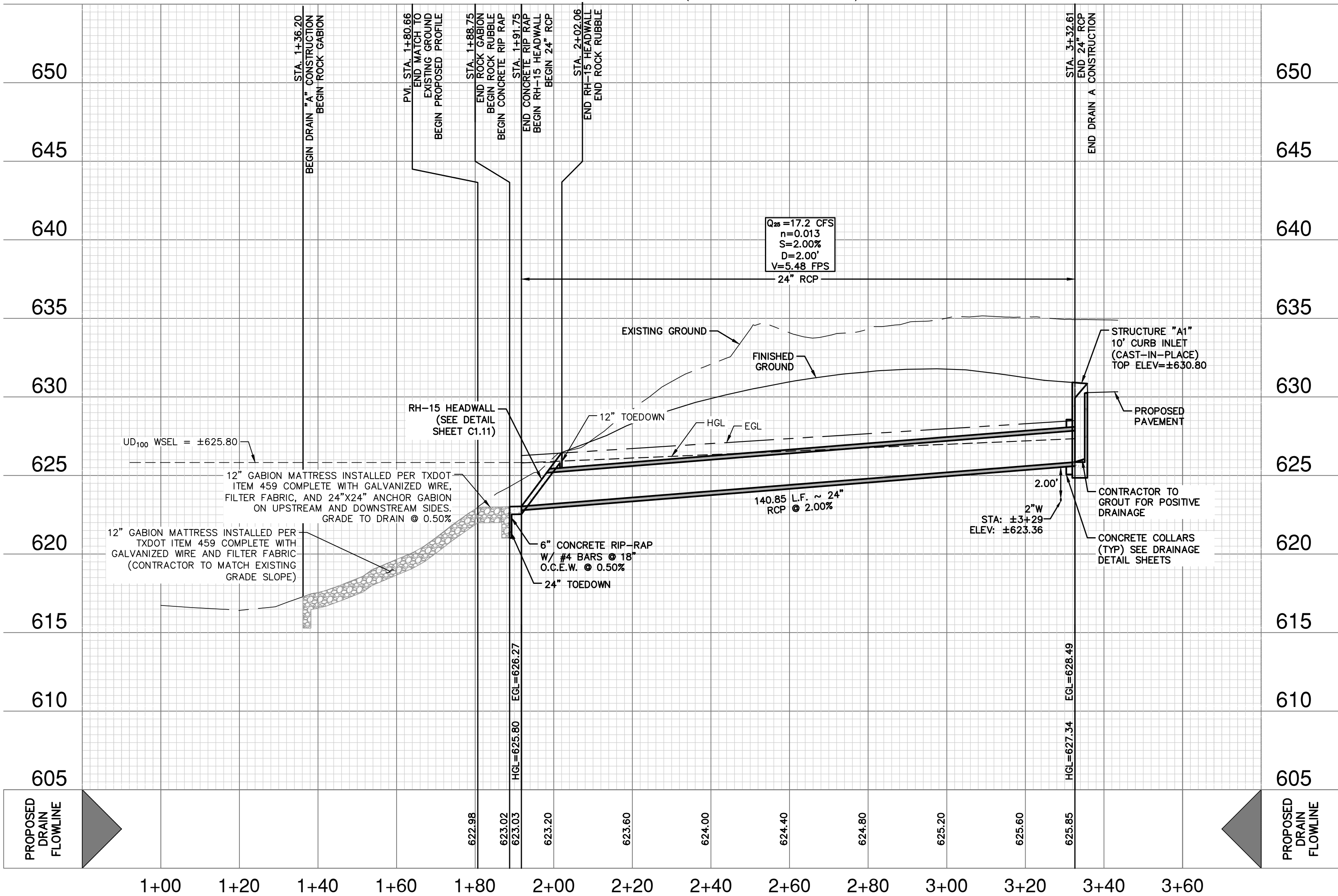
STRUCTURE "A1" (POINT 11.20)

$$Q_{26} = C_w \times L \times H^{3/2} = 17.2 \text{ CFS}$$
$$C_w = 3.087$$
$$H = 0.79'$$
$$L_{col} = 7.93'$$
$$USE L = 10'$$
$$H = 0.68'$$



DRAIN A
PLAN AND PROFILE (STA. 1+36.20 TO END)

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 20'



DRAINAGE & GRADING NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.
3. ALL CONCRETE FOR TXDOT DRAINAGE STRUCTURES SHALL MEET TXDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
4. REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
5. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
6. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 85% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
7. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CAUTION!!

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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ENGINEERS**
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WESTLAKES UNIT 12
SAN ANTONIO, TEXAS
DRAIN A
PLAN AND PROFILE (STA. 1+36.20 TO END)

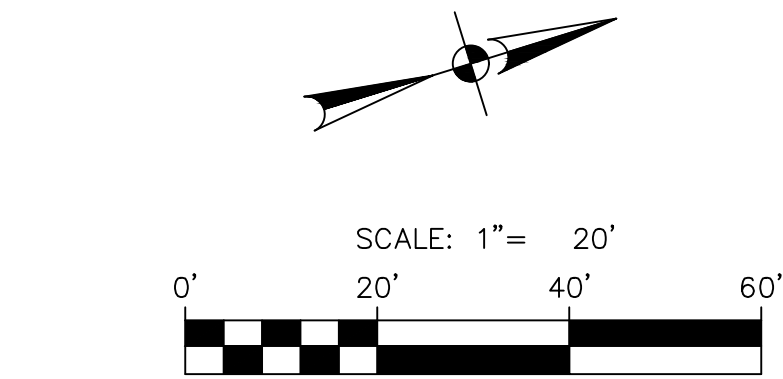
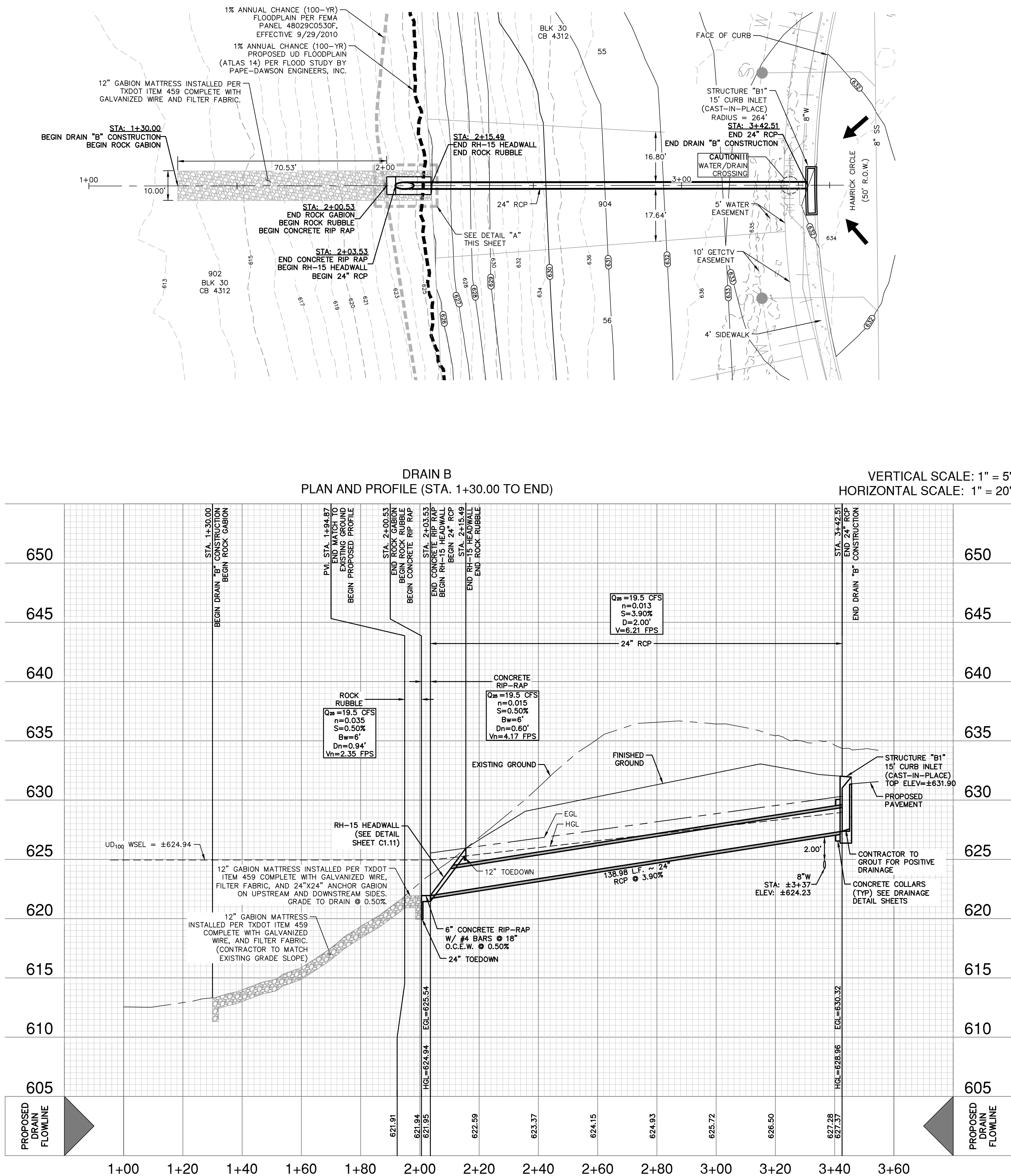
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JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGO
SHEET C1.01

NO.	REVISION	DATE

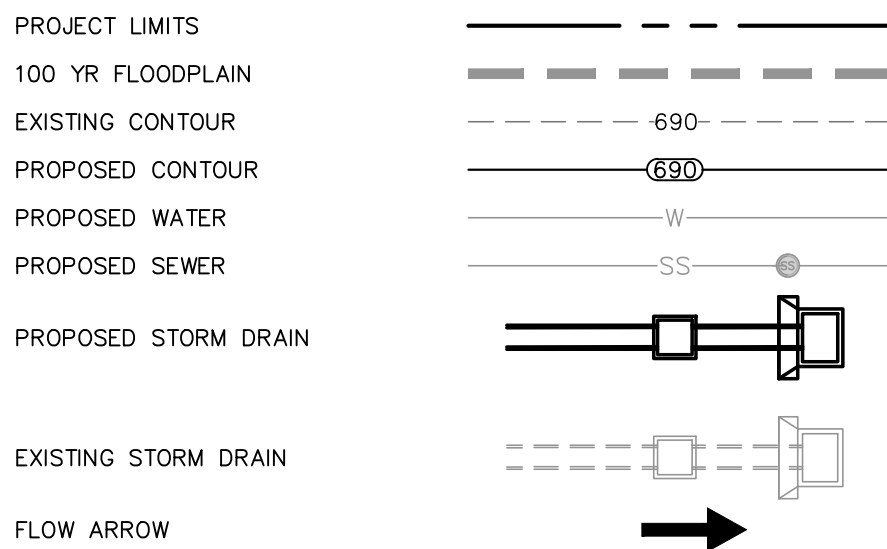


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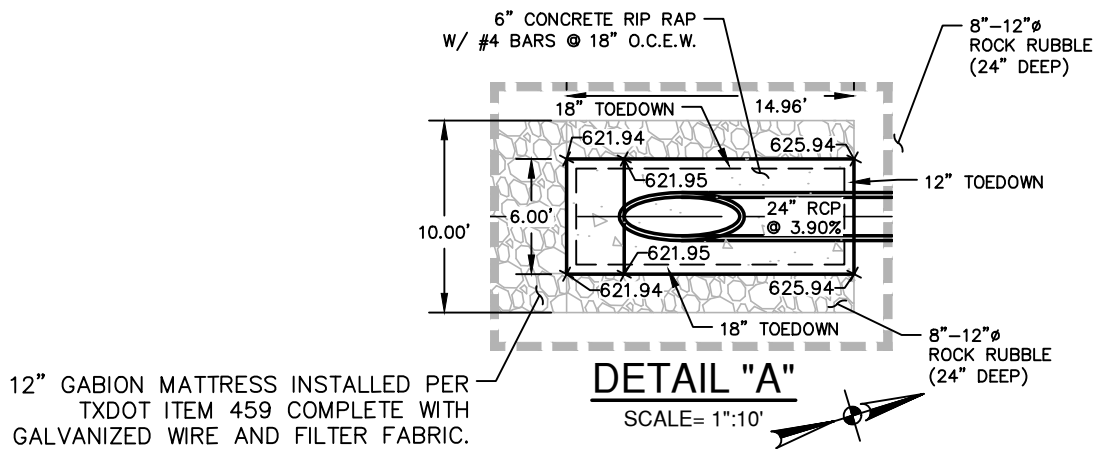
DRAINAGE LEGEND



CURB INLET IN SAG HYDRAULIC CALCULATION STRUCTURE "B1" (POINT 11.30)

$$Q_{as} = C_w \times L \times H^{3/2} = 19.5 \text{ CFS}$$

$C_w = 3.087$
 $H = 0.79'$
 $L_{col} = 8.99'$
 $USE L = 15'$
 $H = 0.56'$



DRAINAGE & GRADING NOTES:

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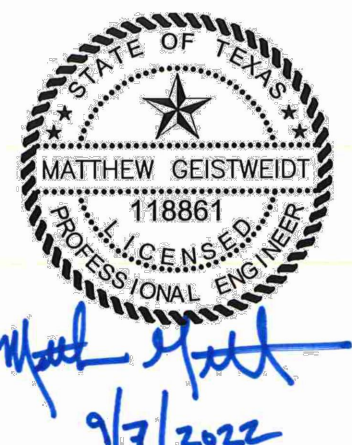
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CAUTION!!

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NO.	REVISION	DATE



**PAPE-DAWSON
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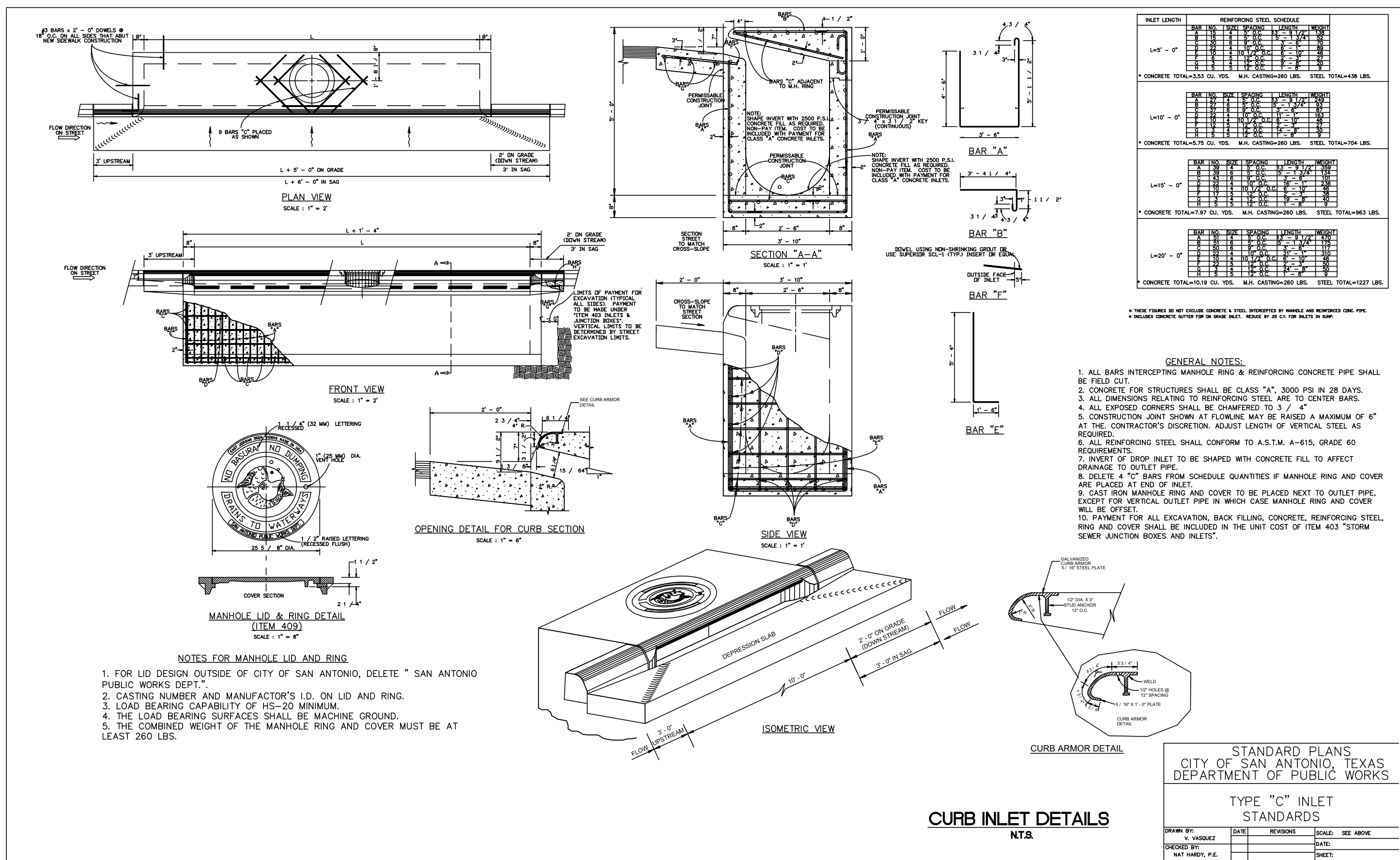
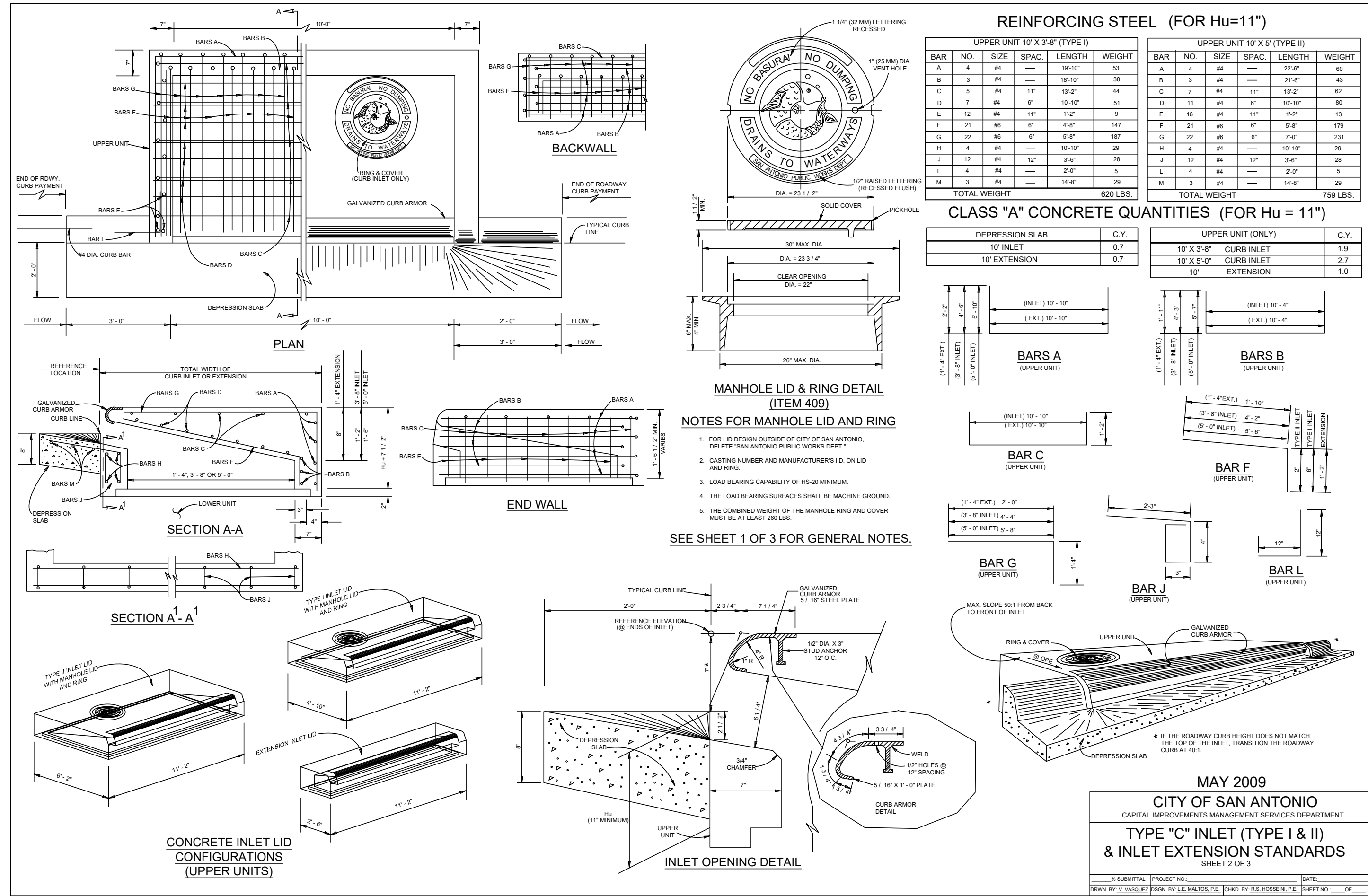
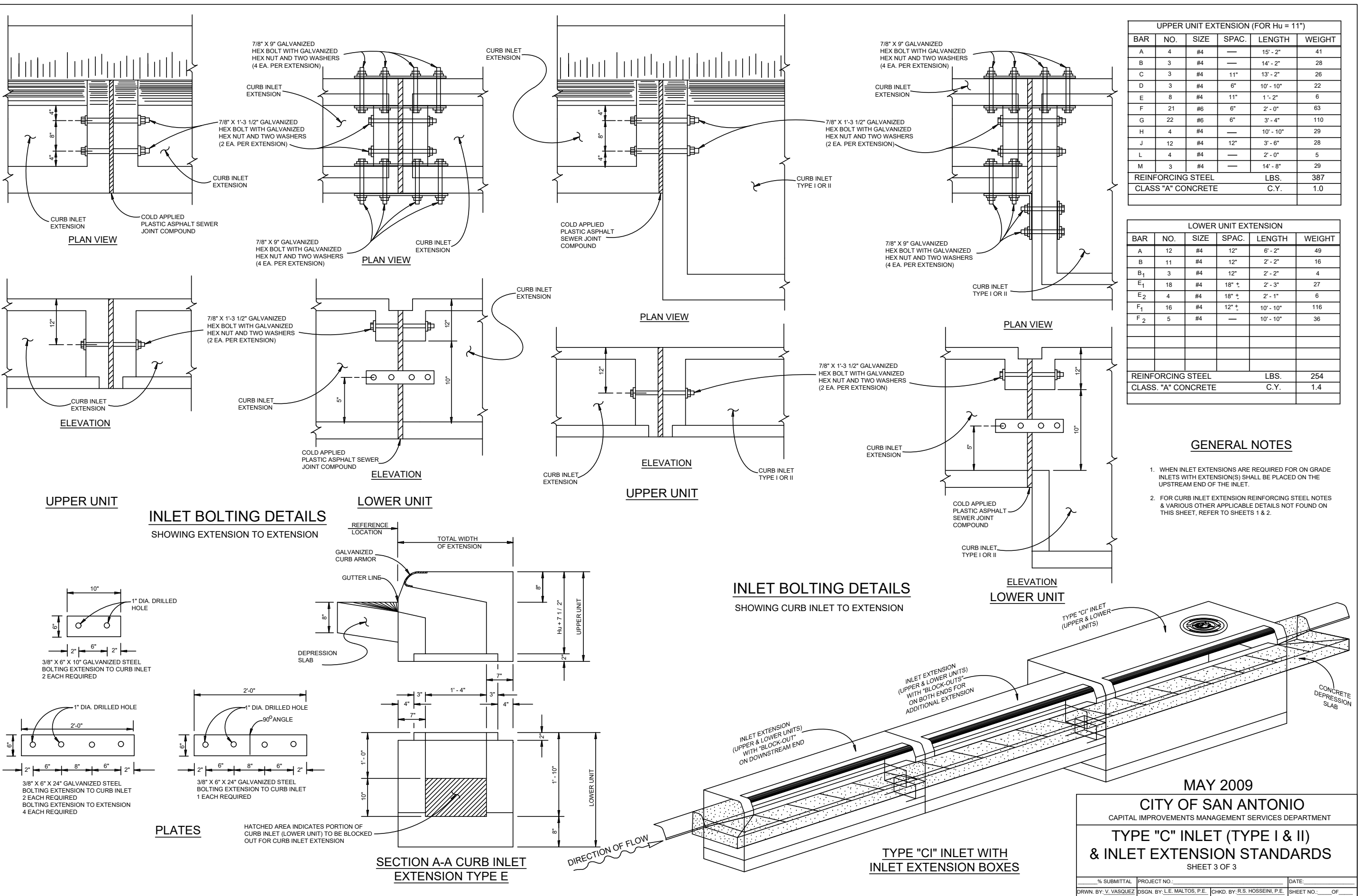
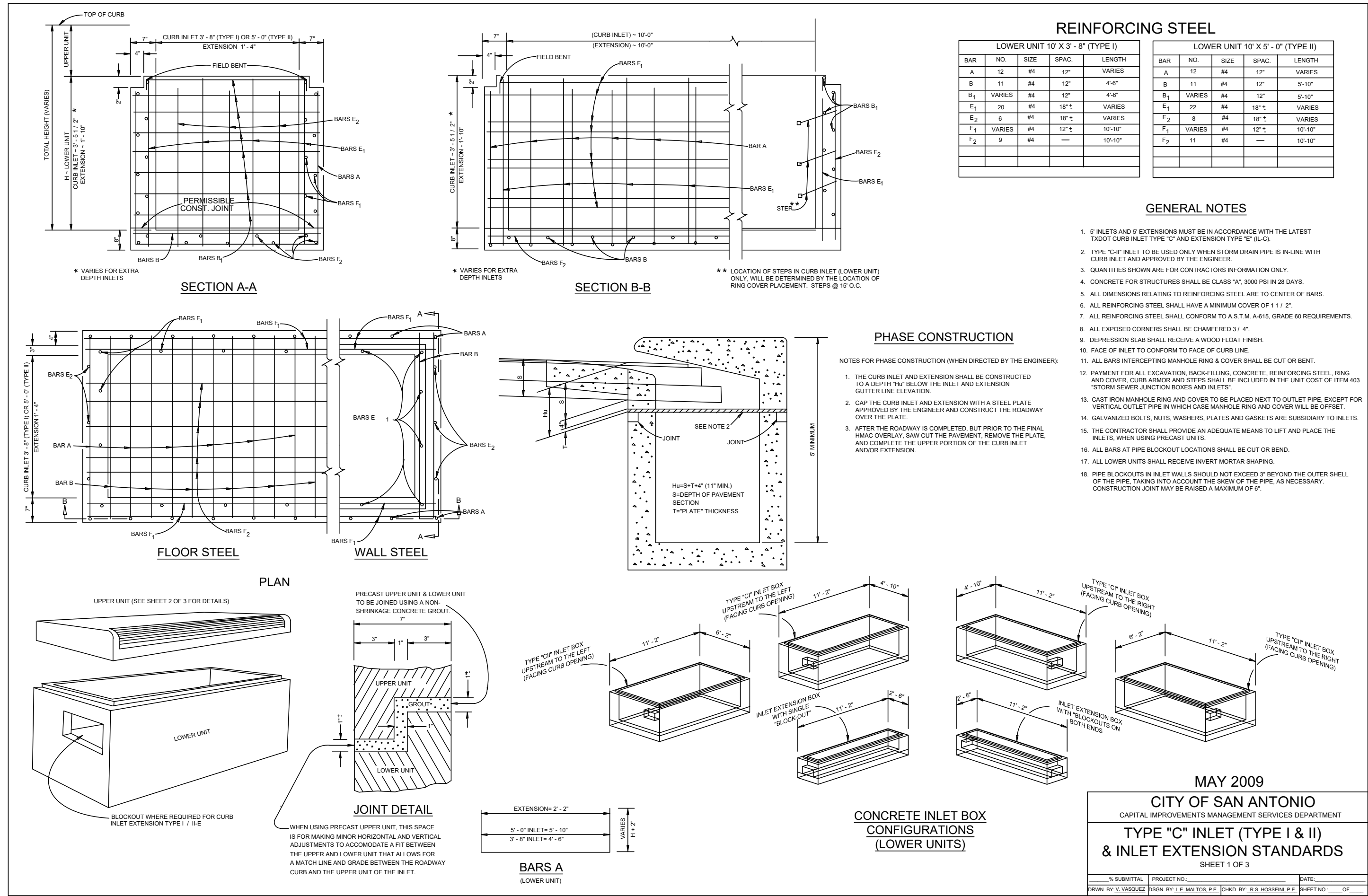
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WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

DRAIN B

PLAN AND PROFILE (STA. 1+30.00 TO END)

PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C1.02



DATE

NO. REVISION

08/26/22

MATTHEW GEISTWEIDT
118861
PROFESSIONAL ENGINEER

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78211 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

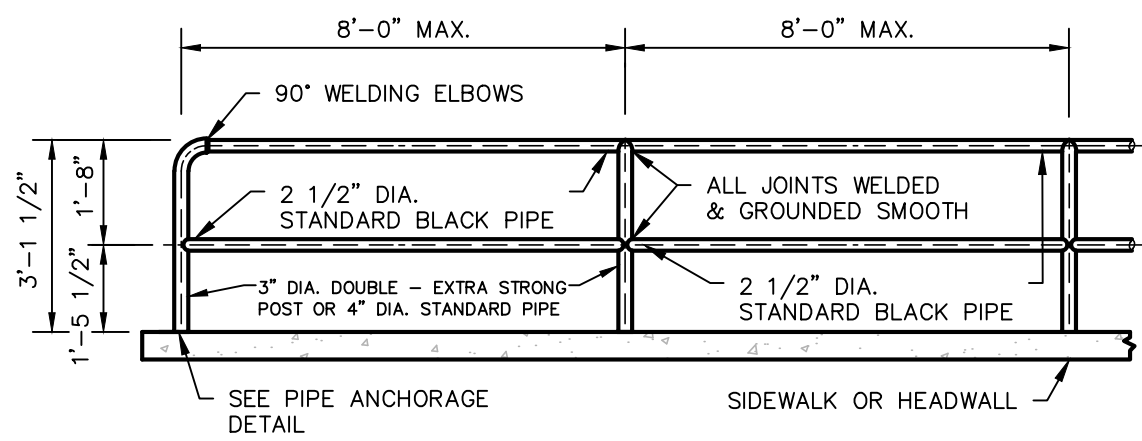
WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

DRAINAGE DETAILS
(SHEET 1 OF 2)

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE June 2022
DESIGNER EDK
CHECKED MG **DRAWN** MG
SHEET C1.10

Date: Aug 26, 2022, 9:59am, User ID: m000044
File: P:\13\48\44\Design\CH\URD\11-3484.dwg

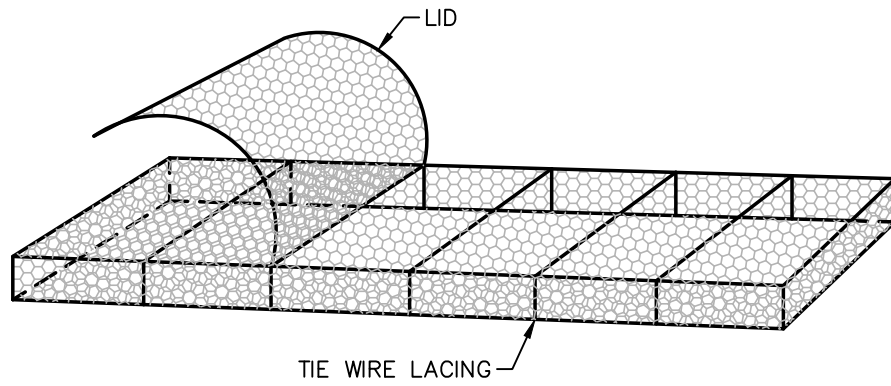
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- NOTES:
1. FOR CONSTRUCTION WITHIN THE CITY OF SAN ANTONIO ETJ AND/OR BEKAR COUNTY, PIPE SHALL BE STANDARD BLACK PIPE PAINTED WITH 1 COAT OF RED PRIMER AND 2 COATS OF ALUMINUM PAINT

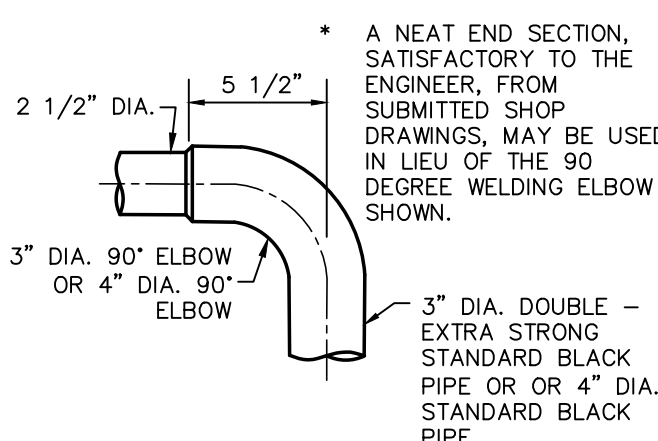
PIPE RAILING DETAIL

NOT-TO-SCALE



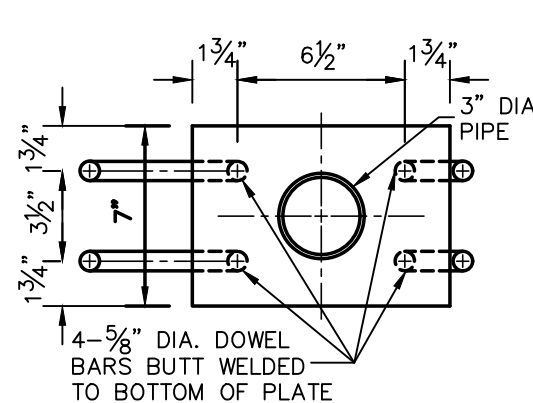
TYPICAL ASSEMBLED GABION MATTRESS DETAIL

NOT-TO-SCALE



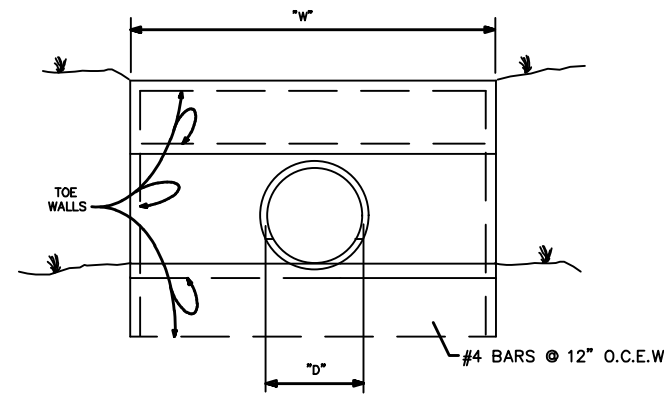
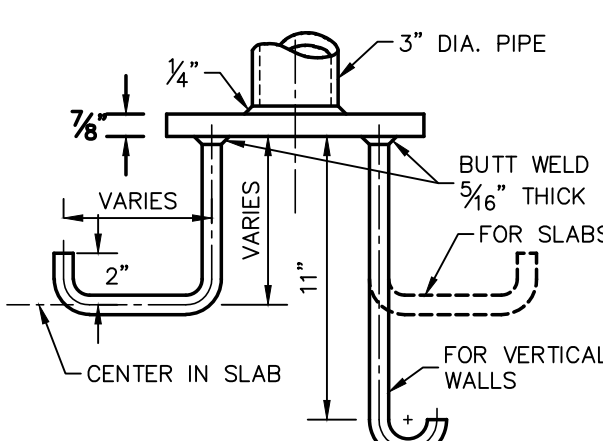
90° WELDING ELBOWS DETAIL

NOT-TO-SCALE



PIPE ANCHORAGE DETAIL

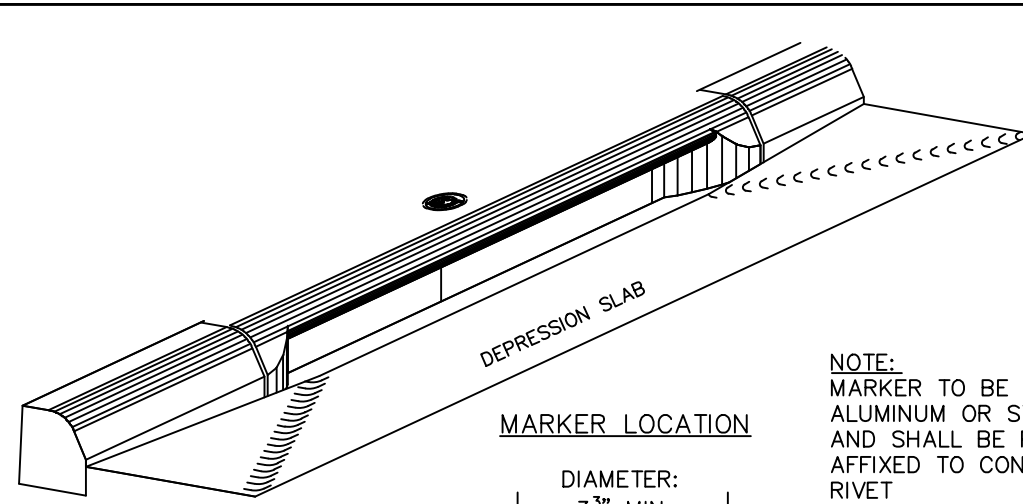
NOT-TO-SCALE



DIMENSIONS FOR CIRCULAR PIPE CULVERTS					
12" INSIDE DIA. OF PIPE	T ¹	T ²		SINGLE OR DOUBLE	
		PVC CMP	RCP	T ³	
12"	1'-6"	0'-0"	0'-7"	4'-0"	6'-0"
15"	2'-0"	0'-0"	0'-8"	4'-3"	6'-6"
18"	2'-0"	1'-2"	0'-9"	4'-6"	7'-2"
21"	2'-6"	1'-3"	0'-10"	5'-3"	8'-4"
24"	3'-0"	1'-6"	0'-11"	6'-0"	9'-5"
30"	4'-0"	1'-8"	1'-3"	7'-6"	11'-8"
36"	5'-0"	1'-11"	1'-3"	9'-0"	13'-11"
42"	6'-0"	2'-2"	1'-5"	10'-6"	16'-2"
48"	7'-0"	2'-5"	1'-7"	12'-0"	18'-6"

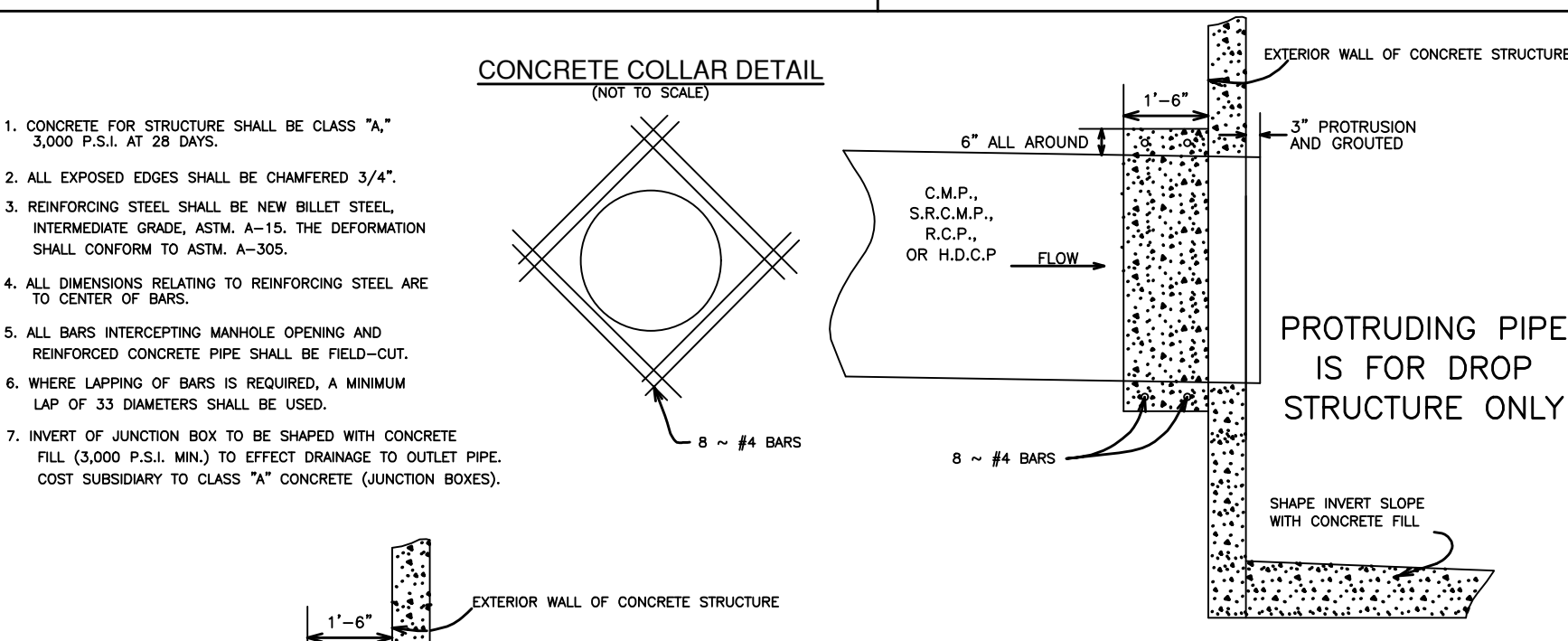
NOTES:

- 1.) FOR RIPRAP QUANTITIES AND SLOPES, SEE CULVERT LAYOUT SHEET.
- 2.) ALL METAL PIPES (CON AND/OR AROV) SHALL HAVE 5/8\"/>
- 3.) FOR CONCRETE ARCH PIPES, THE ABOVE DIMENSIONS WILL HAVE TO BE ADJUSTED FOR THE PIPE WALL THICKNESS.
- 4.) IF THE SIDES OF THE HEAD WALL IS ADJACENT TO A RIPRAP SLOPE AND IF THE TOP OF THE HEAD WALL IS ADJACENT TO THE ROADWAY FOUNDATION OR RIPRAP SLOPE, THE SIDE AND TOP OF THE WALLS MAY BE ELIMINATED IF APPROVED BY THE ENGINEER.

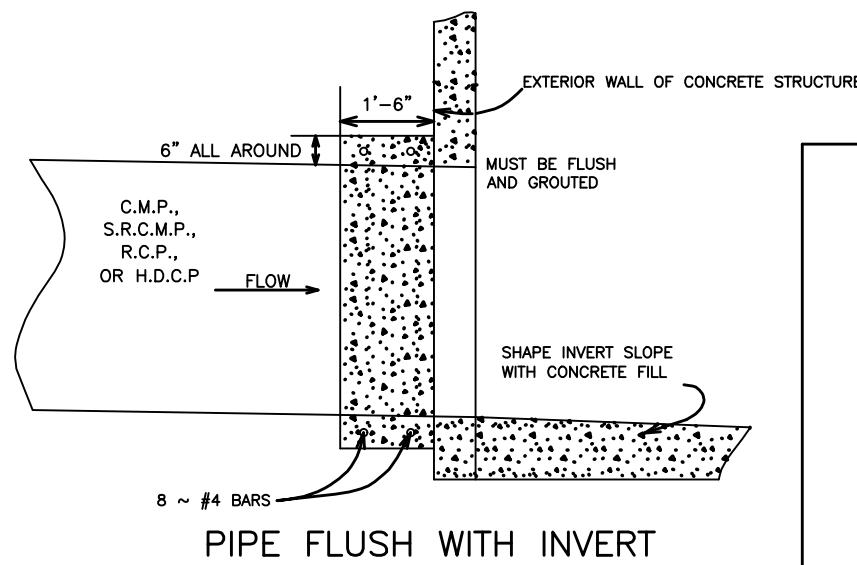


METAL MEDALLION DRAINAGE INLET MARKER

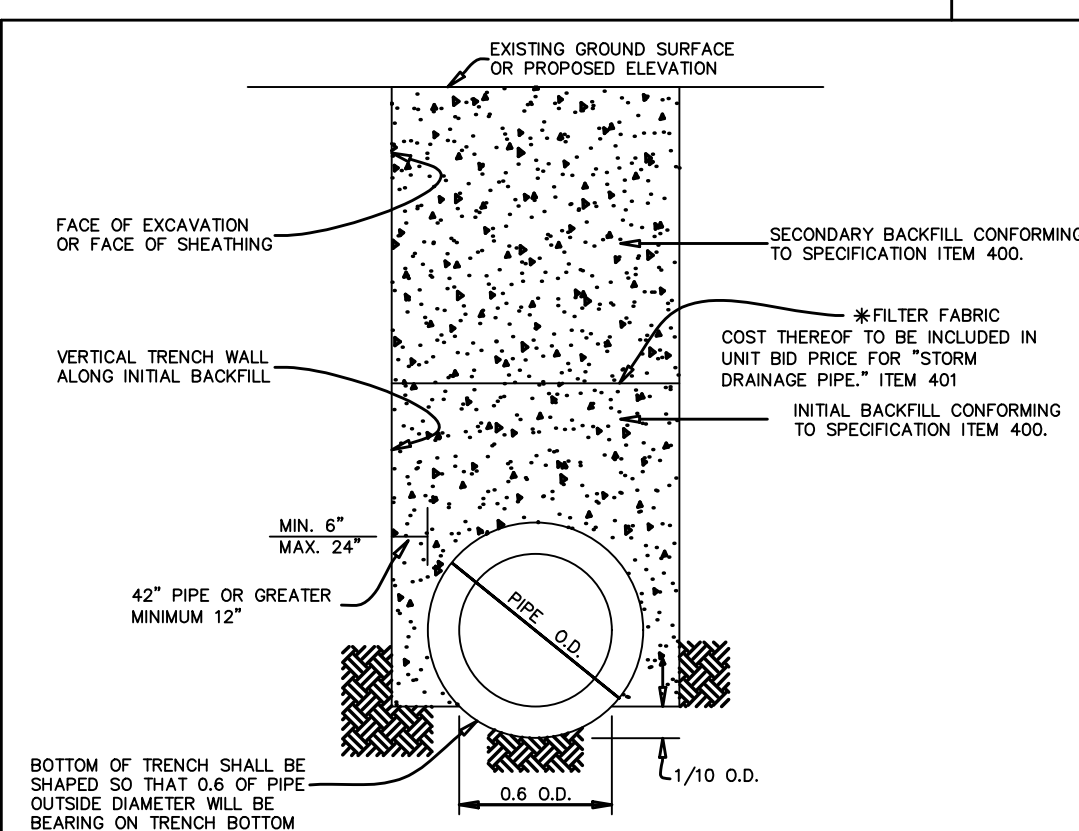
NOT-TO-SCALE



1. CONCRETE FOR STRUCTURE SHALL BE CLASS "A" 3,000 P.S.I. AT 28 DAYS.
2. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/4\"/>
3. REINFORCING STEEL SHALL BE NEW BILLET STEEL. INTERMEDIATE GRADE ASTM A-15. THE DEFORMATION SHALL CONFORM TO ASTM A-305.
4. ALL DIMENSIONS RELATING TO REINFORCING STEEL ARE TO CENTER OF BARS.
5. ALL BARS INTERCEPTING MANHOLE OPENING AND REINFORCED CONCRETE PIPE SHALL BE FIELD-CUT.
6. WHERE LAPPING OF BARS IS REQUIRED, A MINIMUM LAP OF 33 DIAMETERS SHALL BE USED.
7. INVERT OF JUNCTION BOX TO BE SHAPED WITH CONCRETE FILL (3,000 P.S.I. MIN) TO EFFECT DRAINAGE TO OUTLET PIPE. COST SUBSIDIARY TO CLASS "A" CONCRETE (JUNCTION BOXES).

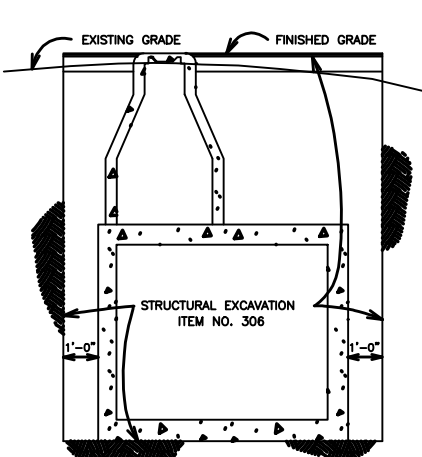


JANUARY 2006			
STANDARD PLANS			
CITY OF SAN ANTONIO, TEXAS			
DEVELOPMENT SERVICES			
CONCRETE COLLAR DETAIL			
DESIGNED BY: ANDREW VENTER, P.E.	DATE: 01/10/06	SCALE: SEE NOTE	DATE: 10 JANUARY 2006
DRAWN BY: SAM BENT, P.E.			SHEET: 1 OF 1



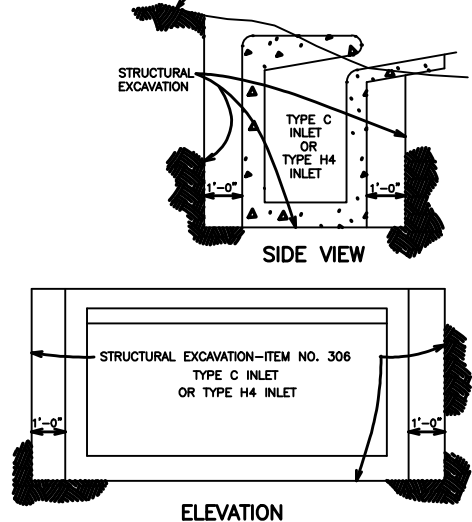
TYPICAL DETAIL FOR C.M.P. AND S.R.C.M.P.

NOT TO SCALE



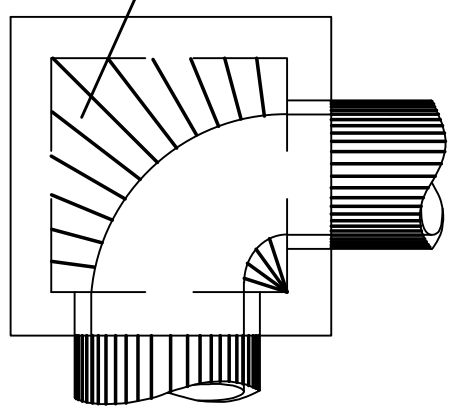
STRUCTURAL EXCAVATION AT JUNCTION BOXES

(NOT TO SCALE)



STRUCTURAL EXCAVATION AT DRAINAGE INLETS

(NOT TO SCALE)



CURVED DEFLECTOR DETAIL

(NOT TO SCALE)

PAPE-DAWSON
ENGINEERS

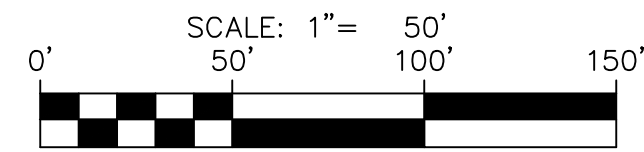
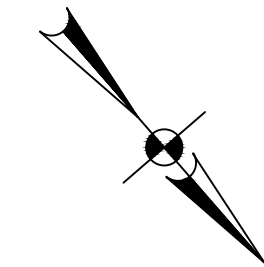
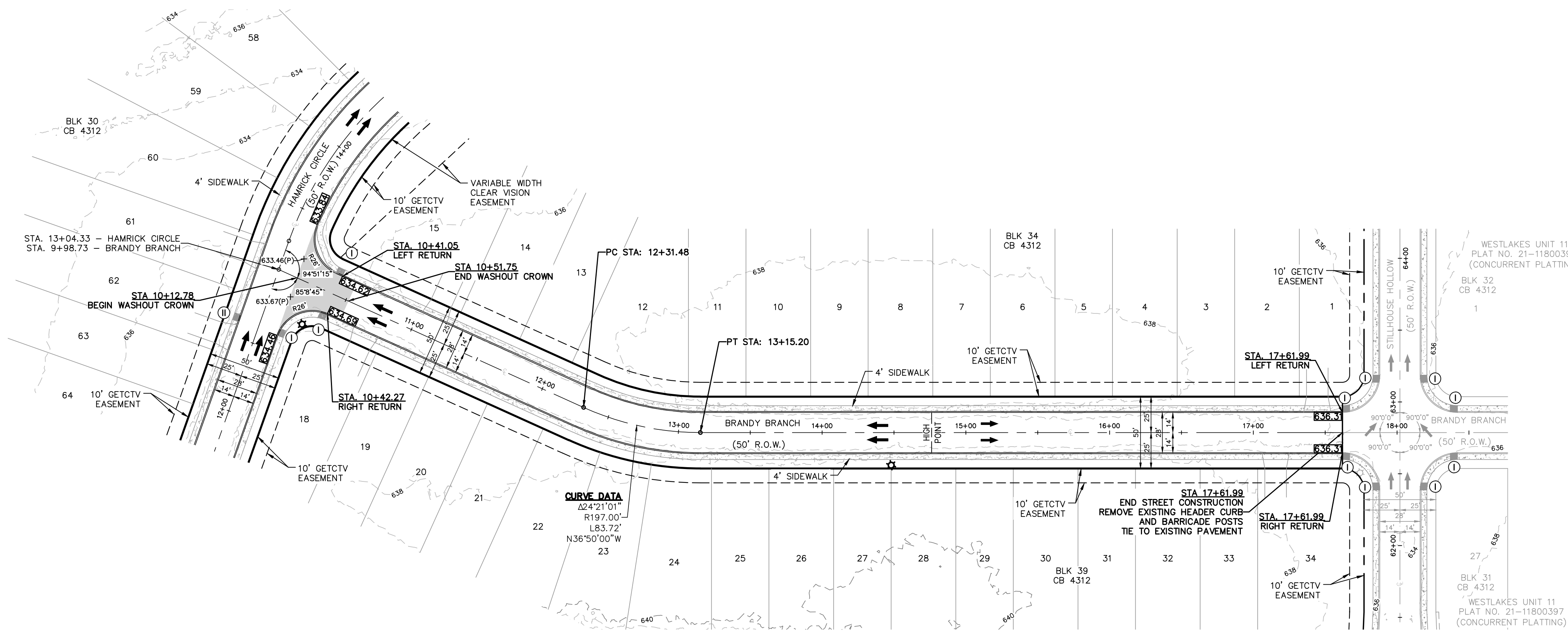
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10288600

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

DRAINAGE DETAILS
(SHEET 2 OF 2)

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGG
SHEET C1.11

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MG
SHEET **C2.00**

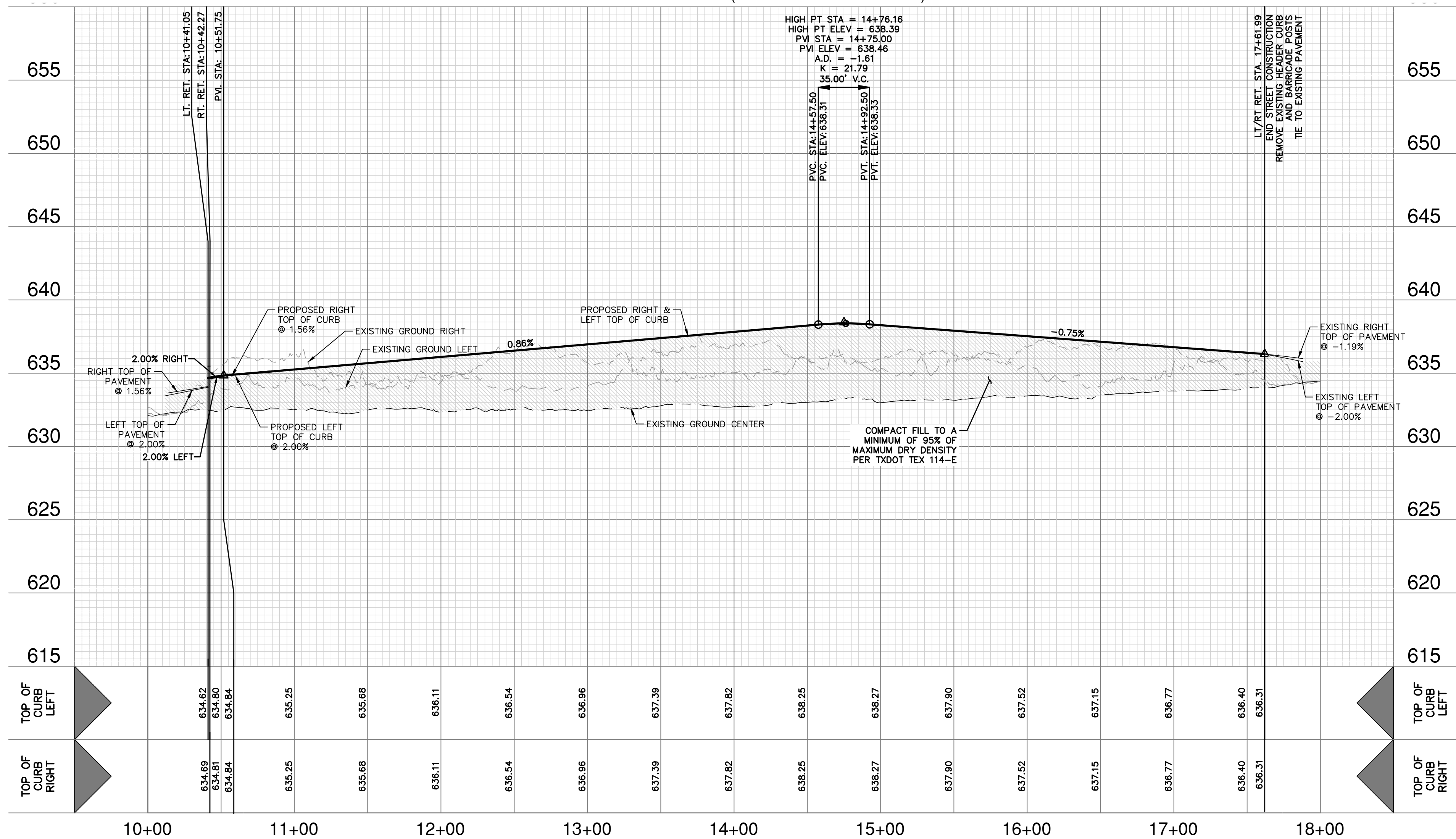


STREET LEGEND

PROJECT LIMITS	---
MAINTAIN GUTTER	--->---
EXISTING CONTOUR	--- 970 ---
WHEELCHAIR RAMP	⤵
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	[857.30]
PAVEMENT ELEVATION	857.00(P) ×
WASHOUT CROWN SECTION	[Pattern]
SIDEWALK (SEE SHEET C3.00 FOR DEVELOPER/HOMEBUILDER RESPONSIBILITY)	[Pattern]
DRIVEWAY	---
GETCTV	GAS, ELECTRIC, TELEPHONE, CABLE TV
VNA	VEHICULAR NON-ACCESS
EASEMENT	ESMT
CLEAR VISION	CVSN

BRANDY BRANCH
PLAN AND PROFILE (STA. 9+98.73 TO 17+61.99)

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
- DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB, RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
- CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
- THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.
- FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A PI MAXIMUM OF 35. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

PAPE-DAWSON
ENGINEERS

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

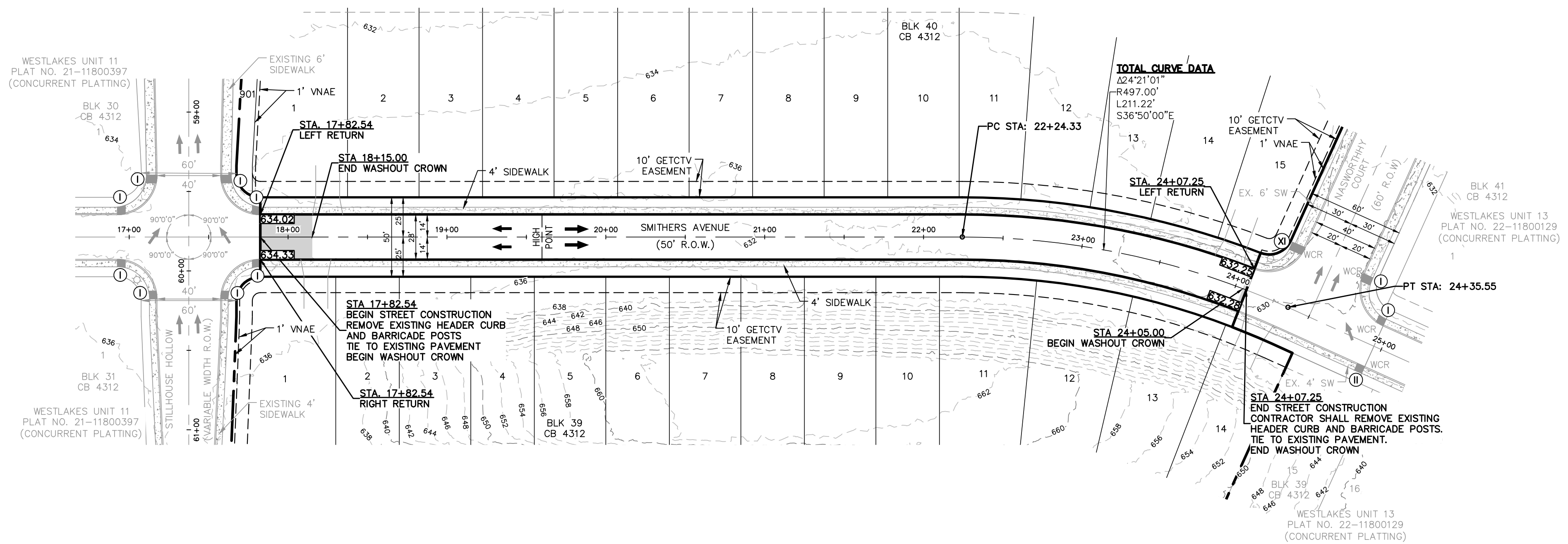
BRANDY BRANCH

PLAN AND PROFILE (STA. 9+98.73 TO 17+61.99)

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGG
SHEET C2.01

Date: Sep 07, 2022 9:49am User: d:\aspen\c12
File: E:\12\148\44\Design\CH\1213484.dwg - SMITHERS AVENUE.dwg

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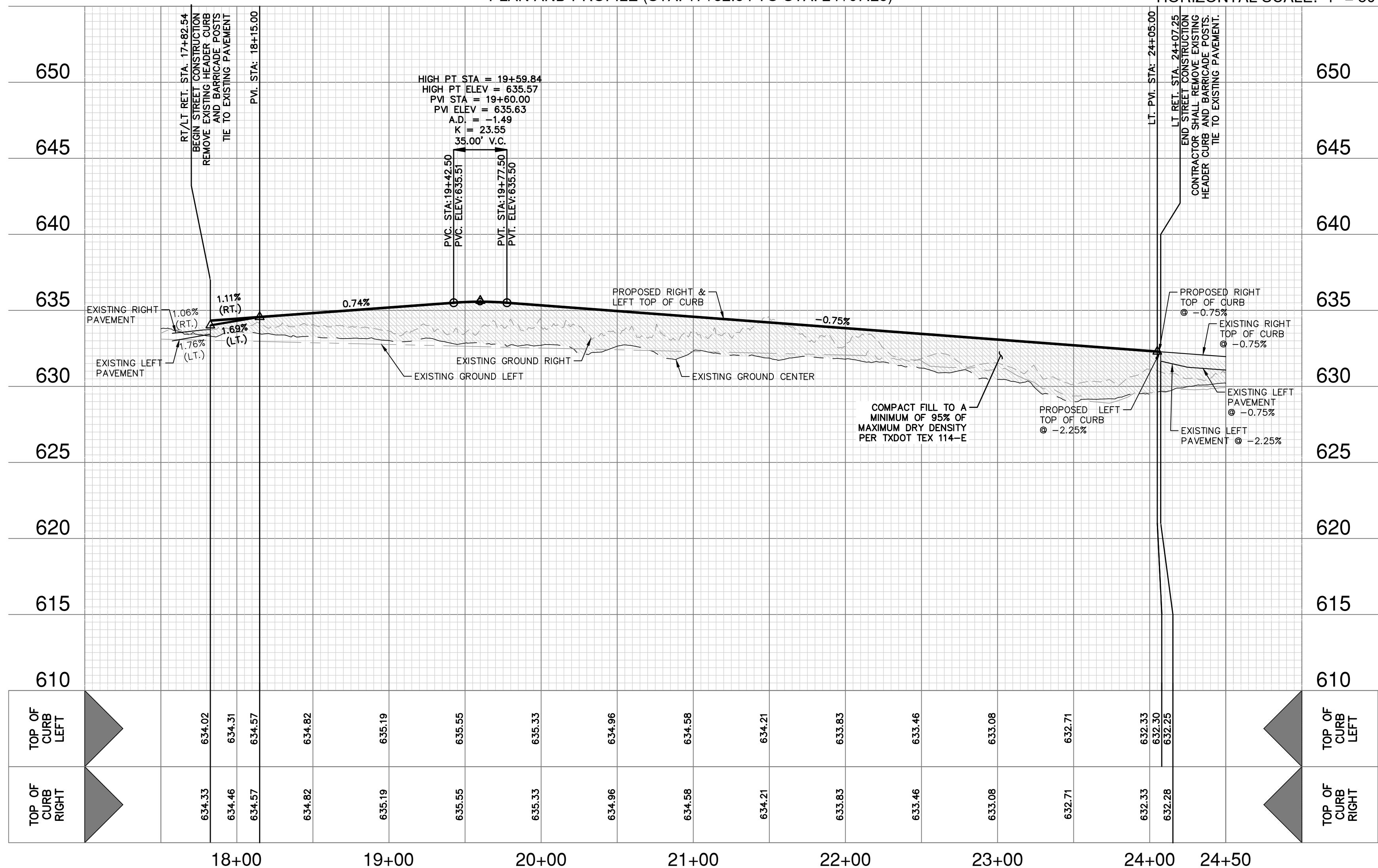


STREET LEGEND

PROJECT LIMITS	---
MAINTAIN GUTTER	---
EXISTING CONTOUR	970
WHEELCHAIR RAMP	DWCR
CENTERLINE	CL
RADIUS POINT	RP
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
DRAINAGE FLOW ARROW	→
TOP OF CURB SPOT ELEVATION	857.30
PAVEMENT ELEVATION	857.00(P) x
WASHOUT CROWN SECTION	
SIDEWALK (SEE SHEET C3.00 FOR DEVELOPER/HOMEBUILDER RESPONSIBILITY)	
DRIVEWAY	
GETCTV	GAS, ELECTRIC, TELEPHONE, CABLE TV
VNA	VEHICULAR NON-ACCESS
EASEMENT	ESMT
CLEAR VISION	CVSN

SMITHERS AVENUE
PLAN AND PROFILE (STA. 17+82.54 TO STA. 24+07.25)

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



STREET NOTES:

1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
3. SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB, RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.
8. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A PI MAXIMUM OF 35. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

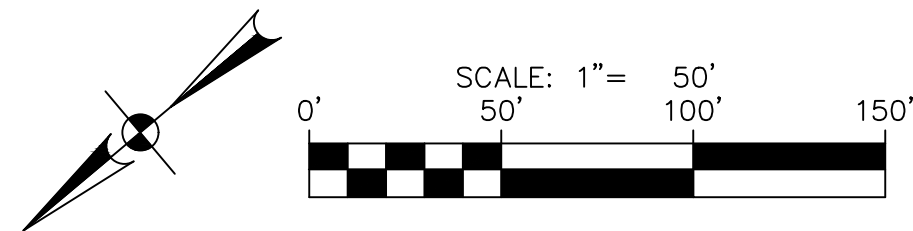
PAPE-DAWSON
ENGINEERS

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2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

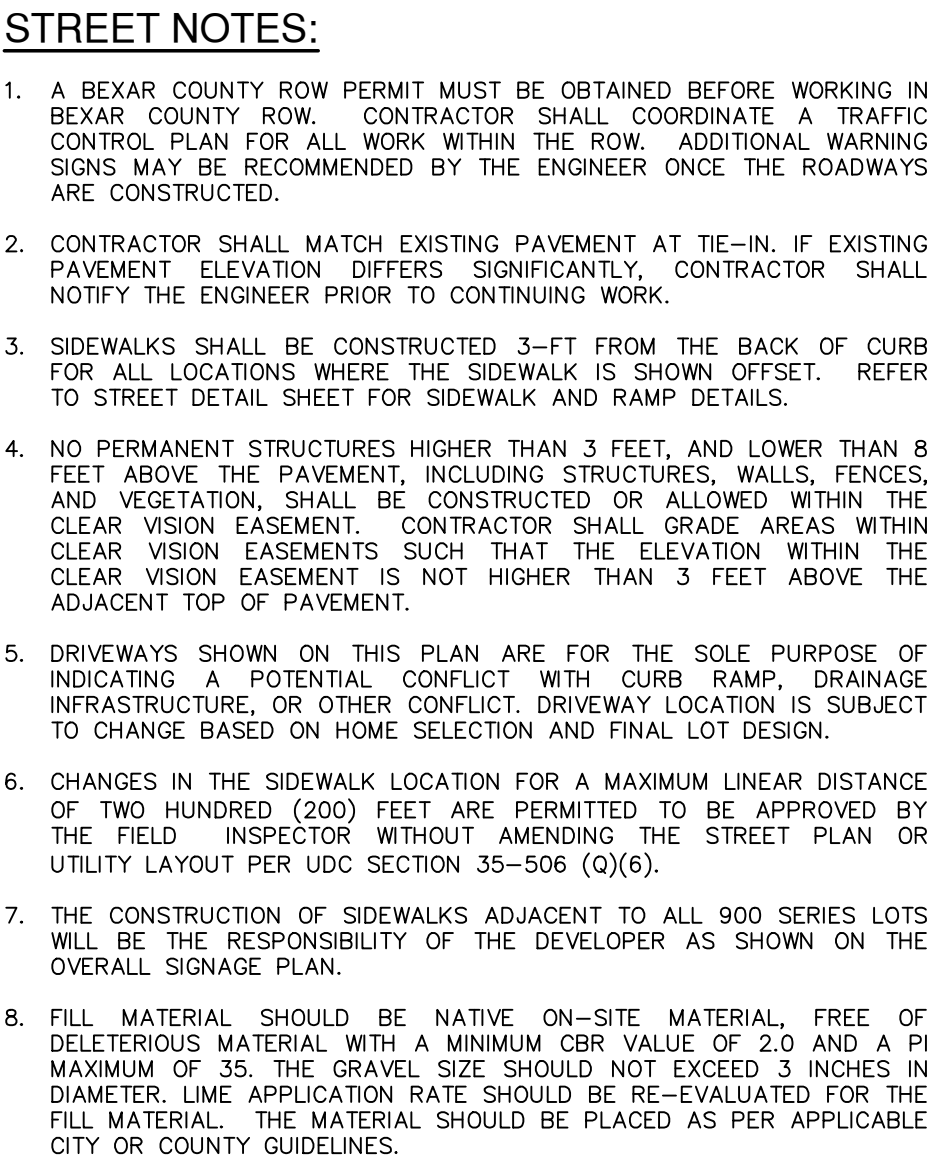
WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

SMITHERS AVENUE
PLAN AND PROFILE (STA. 17+82.54 TO STA. 24+07.25)

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGG
SHEET C2.02



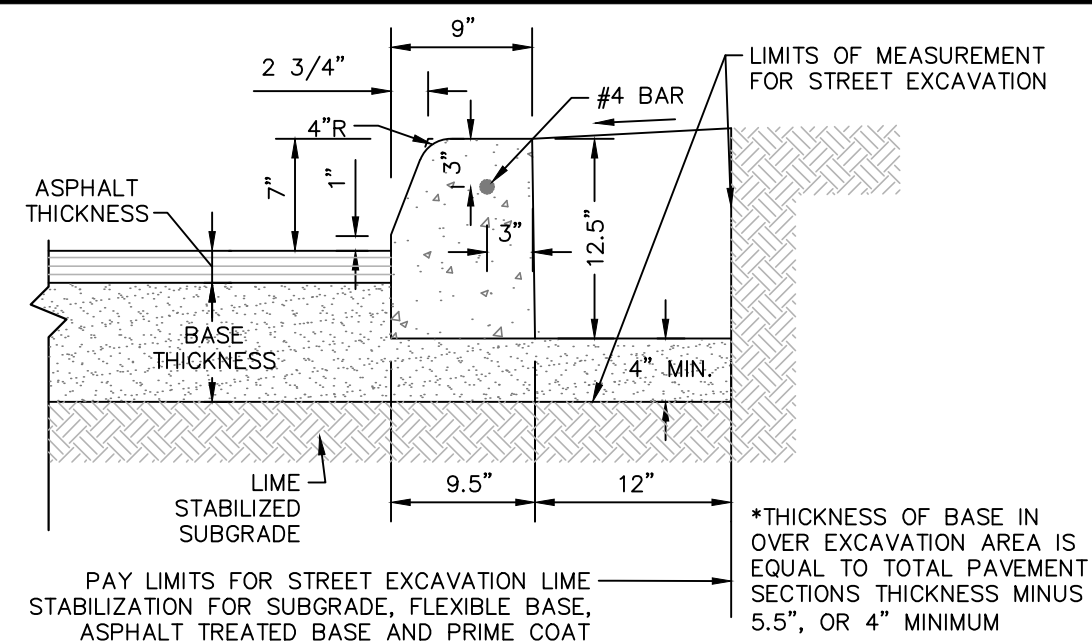
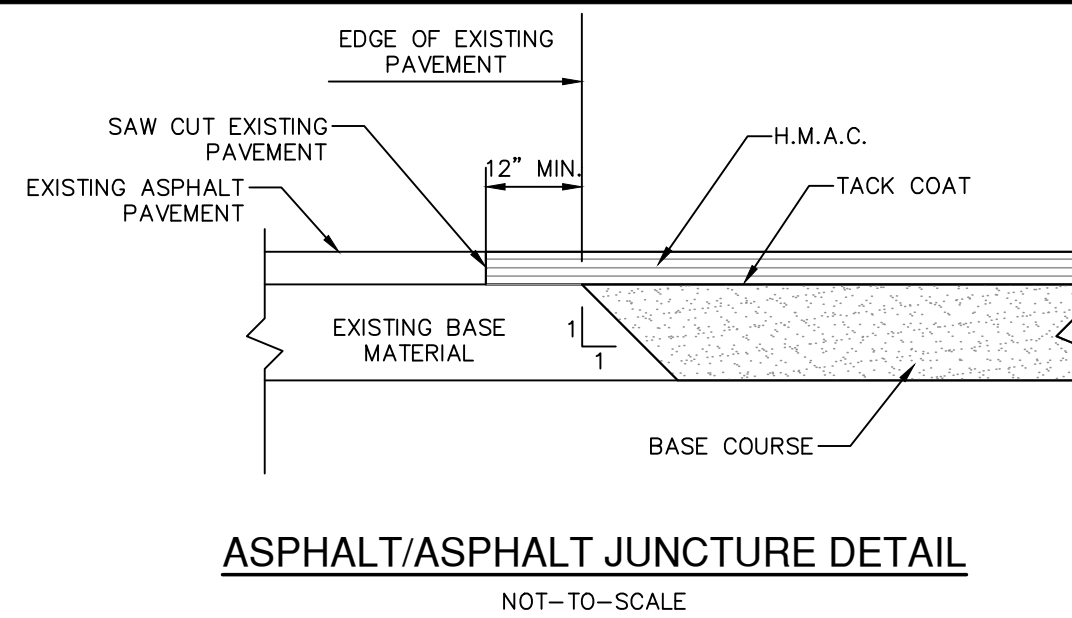
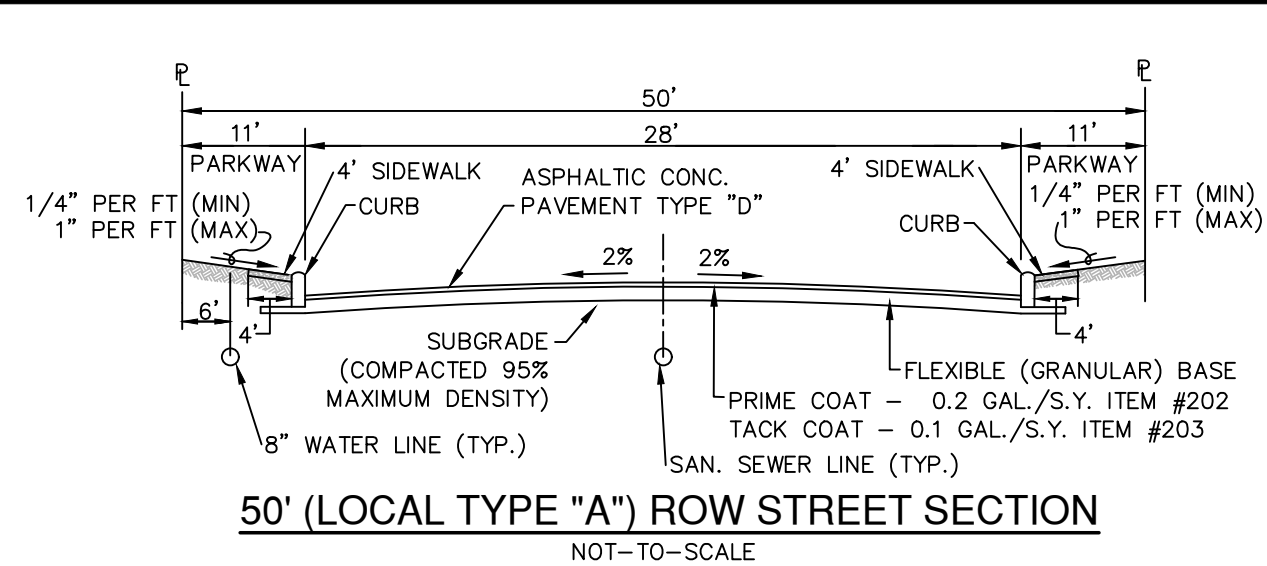
PROJECT LIMITS	
MAINTAIN GUTTER	
EXISTING CONTOUR	
WHEELCHAIR RAMP	
CENTERLINE	
RADIUS POINT	
POINT OF CURVATURE	
POINT OF TANGENCY	
RETURN	
DRAINAGE FLOW ARROW	
TOP OF CURB SPOT ELEVATION	
PAVEMENT ELEVATION	
WASHOUT CROWN SECTION	
SIDEWALK (SEE SHEET C3.00 FOR DEVELOPER/HOMEBUILDER RESPONSIBILITY)	
DRIVEWAY	
GETCTV	
VNA	
EASEMENT	
CLEAR VISION	



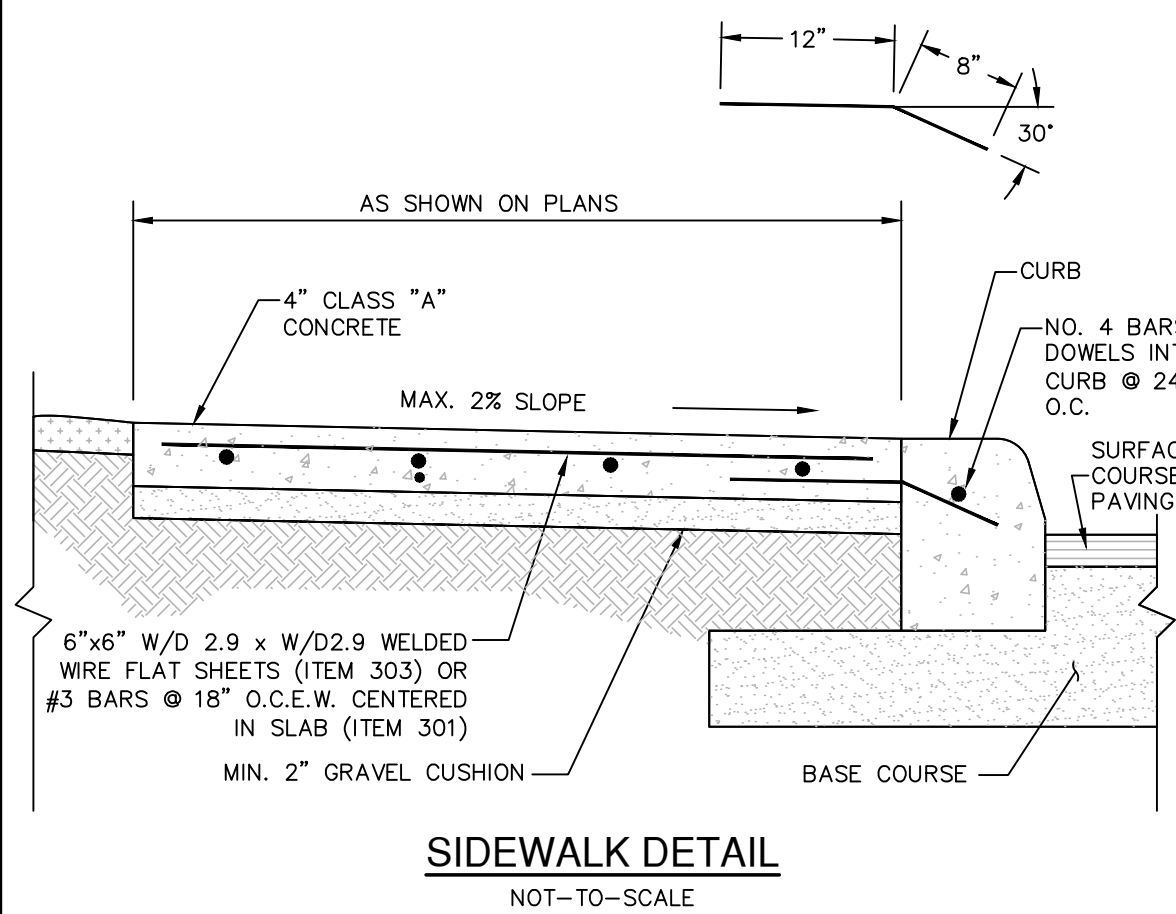
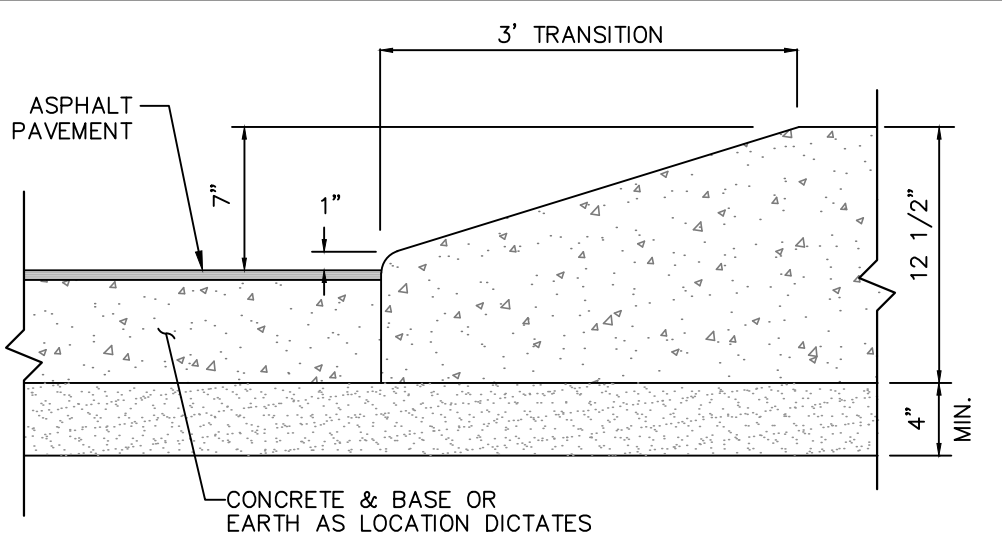
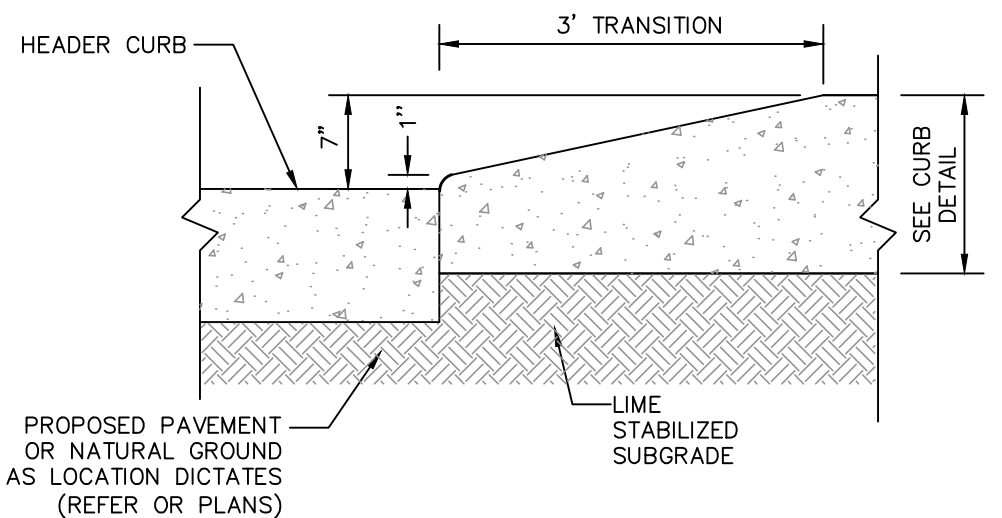
WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

AQUILLA
PLAN AND PROFILE (STA. 10+00.00 TO END)

PLAT NO. 21-11800398
 JOB NO. 11348-44
 DATE JUNE 2022
 DESIGNER EDK
 CHECKED MG DRAWN MG
 SHEET **C2.03**



PAVEMENT SECTION DETAIL							
STREET NAME	STATION	TYPE "D" HMAC	CRUSHED LIMESTONE BASE	STABILIZED SUBGRADE	GEOGRID (TENSAR TRIAX TX5)	CBR	STRUCTURAL NUMBER
SMITHERS AVENUE	17+82.54 TO 24+07.25	2"	11"	6"	NO	2.0	2.90
BRANDY BRANCH	9+98.73 TO 17+61.99	2"	11"	6"	NO	2.0	2.90
HAMRICK CIRCLE	11+51.67 TO 21+30.46	2"	11"	6"	NO	2.0	2.90
ACQUILLA	10+00.00 TO END	2"	11"	6"	NO	2.0	2.90



GENERAL NOTES:

1. CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT **S221068** PREPARED BY INTEC DATED **FEBRUARY 26, 2022**.
2. CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LINE STABILIZATION IS REQUIRED.
3. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
4. THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TxDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
5. THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED.
6. IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE REQUIRED.
7. WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2- FEET OF THE EXISTING GROUND SURFACE (STRATUM 1 CLAYS), MOISTURE CONDITIONED SUBGRADE WILL BE REQUIRED. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE TO DETERMINE WHERE THE MOISTURE CONDITIONED SUBGRADE IS NEEDED. REFERENCE GEOTECHNICAL ENGINEERING REPORT FOR MORE INFORMATION.
8. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
9. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2 AND A MAXIMUM PI OF 35. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME OR CEMENT APPLICATION RATES SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES. CONTRACTOR TO VERIFY EXACT SPECIFICATIONS WITH PROJECT GEOTECHNICAL ENGINEERING REPORT.
10. A BEAXR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN THE BEAXR COUNTY ROW. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE BEAXR COUNTY PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

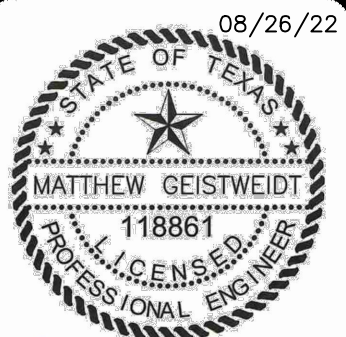
STREET SUBGRADE NOTES:

1. IF THE STREET SUBGRADE PLASTICITY INDEX VALUE IS GREATER THAN 20, SUBGRADE STABILIZATION IS NEEDED AS PER CITY OF SAN ANTONIO REQUIREMENTS.
2. IF THE SUBGRADE PLASTICITY INDEX VALUE IS 20 OR LESS, SUBGRADE STABILIZATION IS NOT NEEDED. THE SUBGRADE SHOULD BE MOISTURE CONDITIONED (COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AT A MINIMUM MOISTURE CONTENT OF OPTIMUM PLUS 2 PERCENT (TEXT114E)).
3. THE SUBGRADE SHOULD BE STABILIZED USING 6.0 PERCENT LIME TO A DEPTH OF 6 INCHES AS NOTED ABOVE.
4. THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO STABILIZATION. IF THE SOIL SULFATE CONTENT IS GREATER THAN 3000 PPM, AN ALTERNATE PROCEDURE / RECOMMENDATION WILL BE NEEDED.
5. LIME APPLICATION RATE OF 30.0 LBS PER SQ YARD FOR 6 INCH STABILIZATION DEPTH IS RECOMMENDED.
6. APPROVED FILL MATERIAL SHOULD BE USED TO RAISE THE GRADE. THE FILL SHOULD BE FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND A MAXIMUM PI OF 35. LIME APPLICATION RATES SHOULD BE RE-EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.
7. THE SUBGRADE, PRIOR TO PLACEMENT OF FILL, SHOULD BE PROOF ROLLED TO IDENTIFY WEAK AREAS. ANY IDENTIFIED WEAK AREAS SHOULD BE RECOMPACTED

LIME NOTES:

- FOR LIME STABILIZATION CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED ON THE FIELD:
 1. AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
 2. AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE $\frac{3}{4}$ INCH SIEVE FROM THE SAMPLE):

• MINIMUM PASSING 1 $\frac{1}{2}$ " SIEVE	100
• MINIMUM PASSING $\frac{3}{4}$ " SIEVE	85
• MINIMUM PASSING NO. 4 SIEVE	60
 3. SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLDING SHOWN TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY ICS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED IN THE BEAR COUNTY FLEXIBLE PAVEMENT DESIGN CRITERIA GUIDE FOR MIXTURE DESIGN.
 4. COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED).
 5. CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
 6. VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN $\pm 1/8$ - 1.0 INCH.

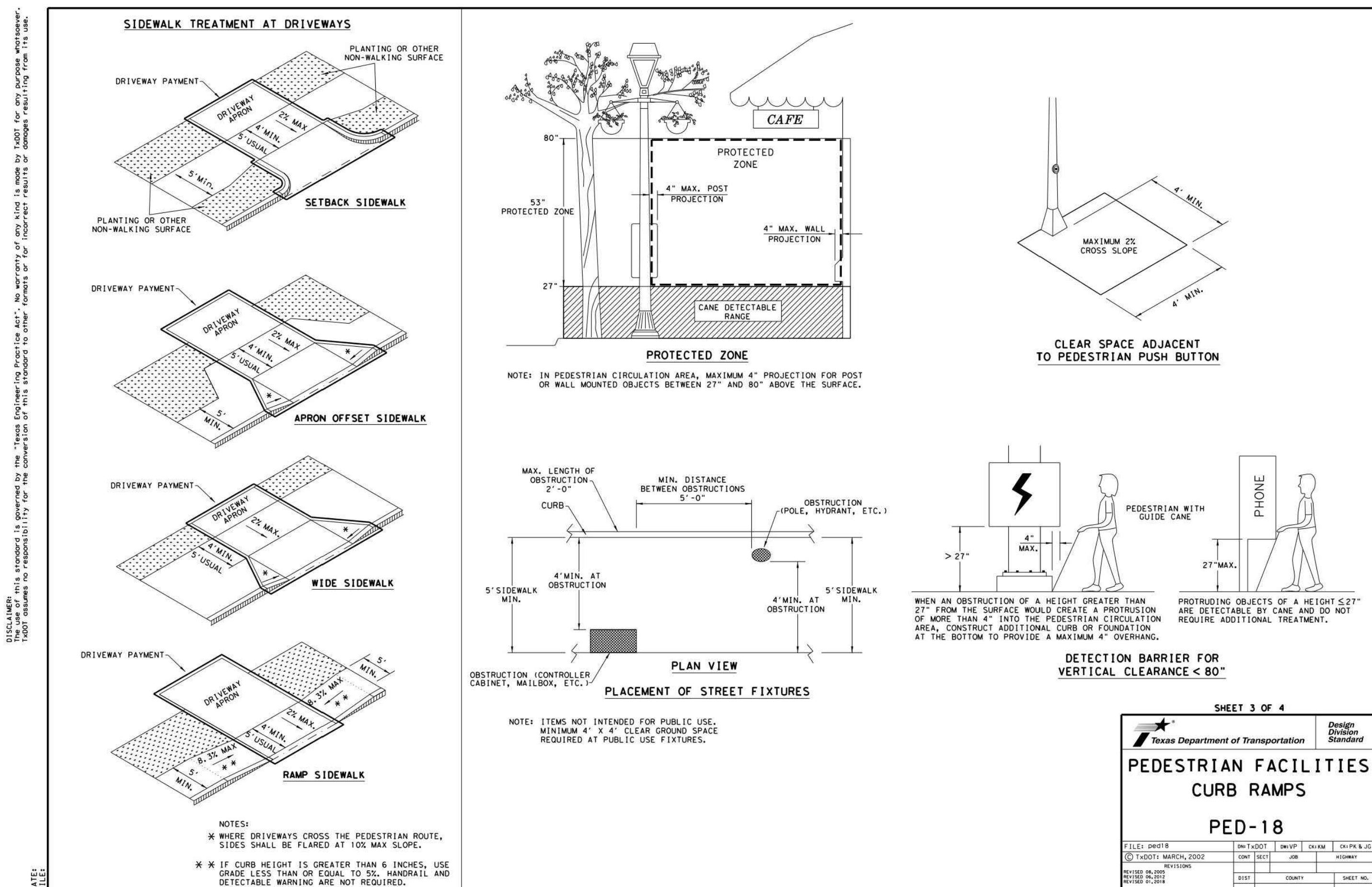
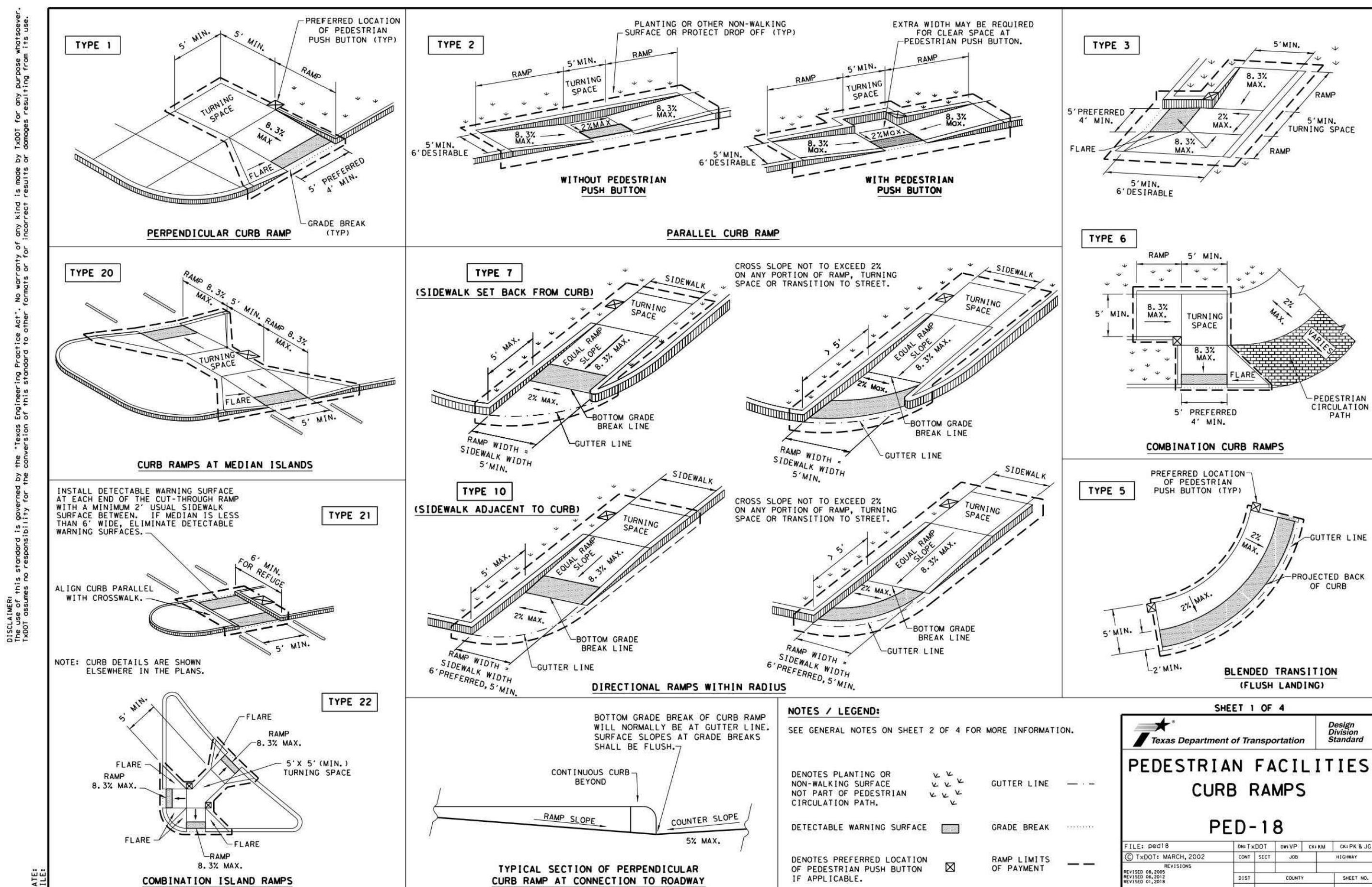
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PAPE-DAWSON
ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

TYPICAL STREET DETAILS
(SHEET 1 OF 3)

PLAT NO. 21-11800398
 JOB NO. 11348-44
 DATE JUNE 2022
 DESIGNER EDK
 CHECKED MG DRAWN MGG
 SHEET C2.10



DISCLAIMER
The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by tx00T for any purpose whatsoever. tx00T assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

GENERAL NOTES

CURB RAMPS

2. Install a curb ramp or blended transition at each pedestrian street crossing.
3. 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.
4. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
5. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of a 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.
6. Turning Spalls shall be 5' x 5' minimum. Cross slope shall be maximum 2%.
7. Clear space at the bottom of curb ramps shall be a minimum of 4' x 4' wholly contained within the crosswalk. Initially install the parallel wheelchairs' travel path.
8. Provide flared sidewalks where the pedestrian circulation path crosses the curb. Flared sidewalks shall be sloped at 10% maximum, measured parallel to the curb. Turned curbs may be used only where pedestrian is not required to walk across the street. Otherwise because the street is not a 4' parallel travel path, it is either constructed, or otherwise protected.
9. Additional information on curb ramp layout, design, sight reflective value and materials may be found in the City of Portland's Official Code of Ordinances, Chapter 15B, Pedestrian Facilities in the Public Right of Way (PROWAY) as published by the Department of Transportation and the Department of Public Works, Bureau of Street Department.
10. To serve as a pedestrian refuge area, the median shall be a minimum of 6' wide, measured from back of curbs. Medians should be designed to provide accessible passage over or through them.
11. Slope downlandings (landings, which do not provide a minimum 5' x 5' landing at the top of curb ramps, shall cut through level with the surface of the street.
12. 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 be installed at the intersection. If crosswalks are not otherwise directed.
13. Provide curb ramps to connect the pedestrian access route at each pedestrian street crossing. Handrails are not required on curb ramps.
14. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
15. Place concrete of a minimum depth of 5" for ramps, Formas and landings, unless otherwise directed.
16. Furnish and Install No. 3 reinforcing steel bars at 18" o.c. both ways, unless otherwise directed.
17. Provide a smooth transition where the curb ramps connect to the street.
18. Curb shown on sheet 1 within the limits of payment are considered part of the curb ramp. Payment, however, is for concrete curb, gutter, or combined curb and gutter.
19. Existing features not shown comply with applicable standards may remain in place unless otherwise shown on the plans.

DETECTABLE WARNING MATERIAL

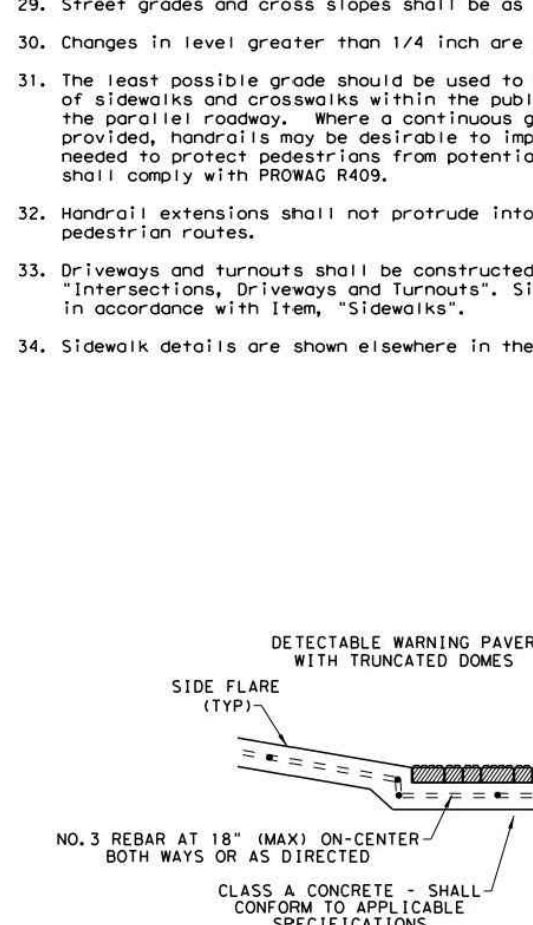
1. Curb ramps must contain a detectable warning surface that consists of raised, truncated domes complying with PROWAG. The surface must contrast visually with the surrounding surface. The surface must be made of a material that is slip-resistant, durable, and capable of withstanding the weight of vehicles. The surface must be installed in a way that it is flush with the curb and does not create a tripping hazard. The surface must be installed in a way that it is flush with the curb and does not create a tripping hazard. The surface must be installed in a way that it is flush with the curb and does not create a tripping hazard.
2. Detectable warning surfaces must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
3. Detectable warning surfaces must be firm, stable, and slip resistant.
4. 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.
5. Detectable warning surfaces shall be located so that the edge nearest the curb line is within 24 inches of the curb edge. The edge furthest from the curb shall be greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
6. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface.



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

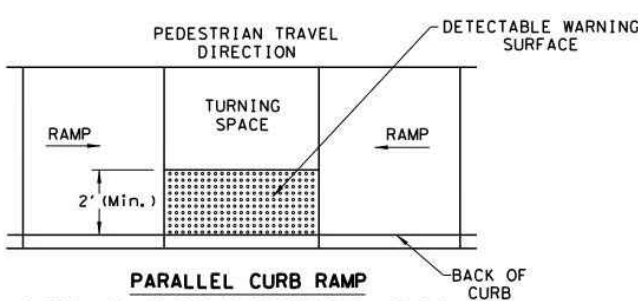
27. Provide clear ground space at operable parts, including pedestrian push buttons. Operable parts shall be placed within unobstructed reach range specified in PROWAG section R406.
28. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.



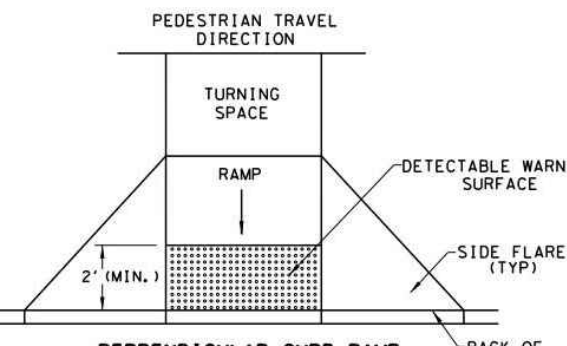
SECTION VIEW DETAIL

CURB RAMP AT DETECTIBLE WARNINGS

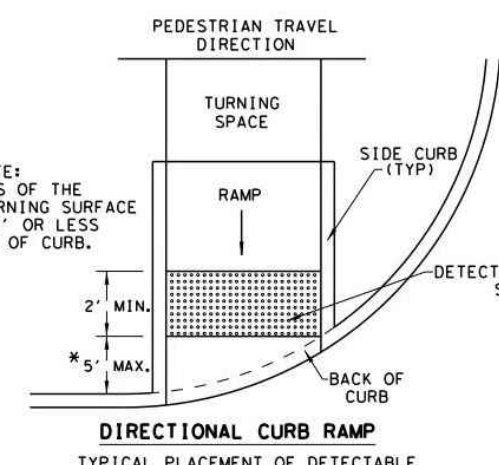
DETECTABLE WARNING SURFACE DETAILS



TYPICAL PLACEMENT OF DETECTABLE WARNING SURFACE ON LANDING AT STREET EDGE



PERPENDICULAR CURB RAMP



WARNING SURFACE ON SLOPING RAMP R

SHEET 2 OF 4

**Design
Division**

PEDESTRIAN FACILITIES

PEDESTRIAN FACILITIES
CURB RAMP

CURB RAMPS

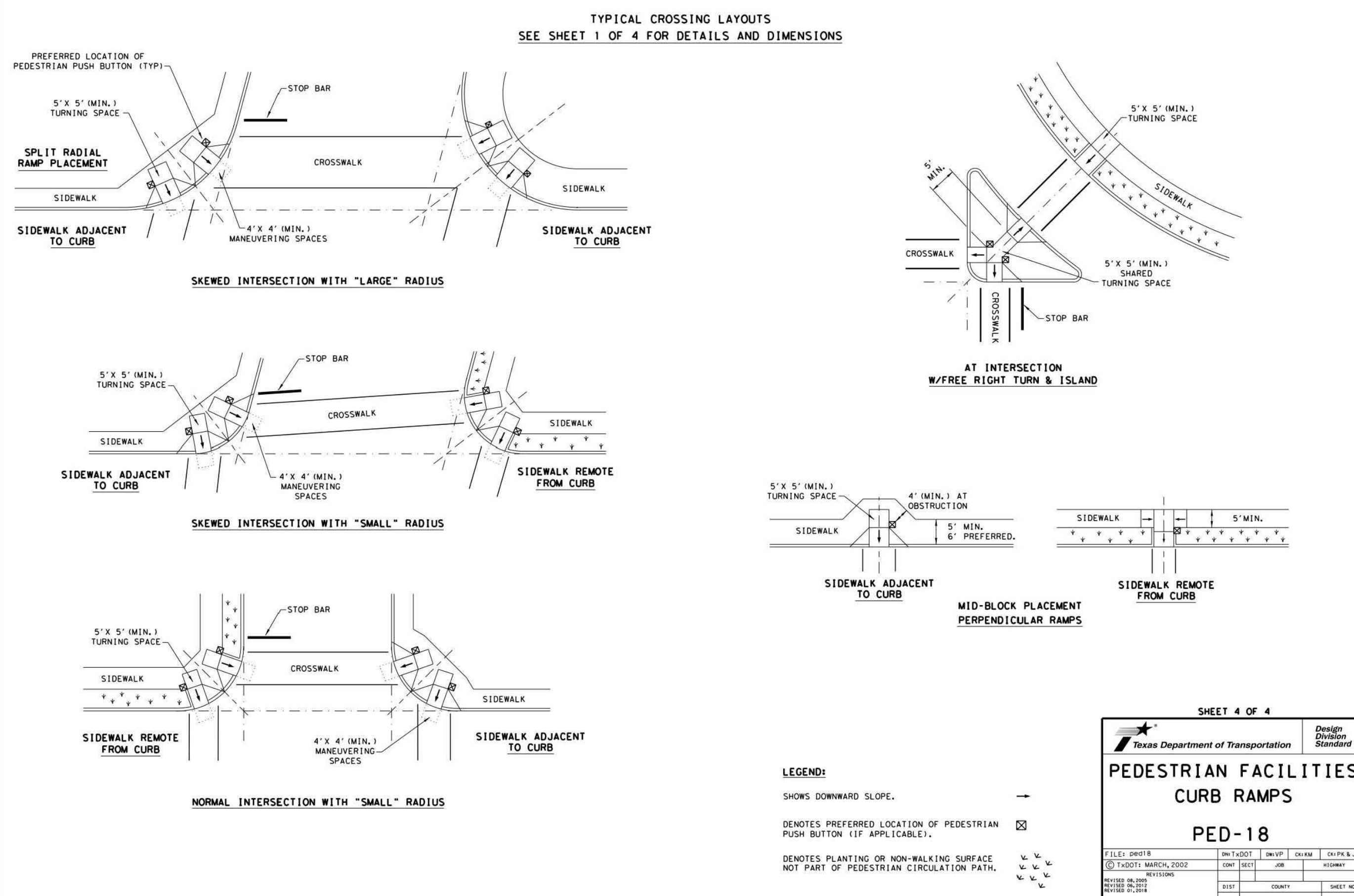
	1999	2000	2001	2002	2003
1. <i>Chlamydia trachomatis</i>	100	100	100	100	100
2. <i>Neisseria meningitidis</i>	100	100	100	100	100
3. <i>Streptococcus pneumoniae</i>	100	100	100	100	100
4. <i>Haemophilus influenzae</i>	100	100	100	100	100
5. <i>Legionella pneumophila</i>	100	100	100	100	100
6. <i>Yersinia enterocolitica</i>	100	100	100	100	100
7. <i>Salmonella enteritidis</i>	100	100	100	100	100
8. <i>Escherichia coli</i>	100	100	100	100	100
9. <i>Shigella flexneri</i>	100	100	100	100	100
10. <i>Staphylococcus aureus</i>	100	100	100	100	100
11. <i>Streptococcus pyogenes</i>	100	100	100	100	100
12. <i>Neisseria gonorrhoeae</i>	100	100	100	100	100
13. <i>Haemophilus ducreyi</i>	100	100	100	100	100
14. <i>Chlamydia pneumoniae</i>	100	100	100	100	100
15. <i>Mycoplasma hominis</i>	100	100	100	100	100
16. <i>Ureaplasma urealyticum</i>	100	100	100	100	100
17. <i>Neisseria meningitidis</i>	100	100	100	100	100
18. <i>Streptococcus pneumoniae</i>	100	100	100	100	100
19. <i>Haemophilus influenzae</i>	100	100	100	100	100
20. <i>Legionella pneumophila</i>	100	100	100	100	100
21. <i>Yersinia enterocolitica</i>	100	100	100	100	100
22. <i>Salmonella enteritidis</i>	100	100	100	100	100
23. <i>Escherichia coli</i>	100	100	100	100	100
24. <i>Shigella flexneri</i>	100	100	100	100	100
25. <i>Staphylococcus aureus</i>	100	100	100	100	100
26. <i>Streptococcus pyogenes</i>	100	100	100	100	100
27. <i>Neisseria gonorrhoeae</i>	100	100	100	100	100
28. <i>Haemophilus ducreyi</i>	100	100	100	100	100
29. <i>Chlamydia pneumoniae</i>	100	100	100	100	100
30. <i>Mycoplasma hominis</i>	100	100	100	100	100
31. <i>Ureaplasma urealyticum</i>	100	100	100	100	100
32. <i>Neisseria meningitidis</i>	100	100	100	100	100
33. <i>Streptococcus pneumoniae</i>	100	100	100	100	100
34. <i>Haemophilus influenzae</i>	100	100	100	100	100
35. <i>Legionella pneumophila</i>	100	100	100	100	100
36. <i>Yersinia enterocolitica</i>	100	100	100	100	100
37. <i>Salmonella enteritidis</i>	100	100	100	100	100
38. <i>Escherichia coli</i>	100	100	100	100	100
39. <i>Shigella flexneri</i>	100	100	100	100	100
40. <i>Staphylococcus aureus</i>	100	100	100	100	100
41. <i>Streptococcus pyogenes</i>	100	100	100	100	100
42. <i>Neisseria gonorrhoeae</i>	100	100	100	100	100
43. <i>Haemophilus ducreyi</i>	100	100	100	100	100
44. <i>Chlamydia pneumoniae</i>	100	100	100	100	100
45. <i>Mycoplasma hominis</i>	100	100	100	100	100
46. <i>Ureaplasma urealyticum</i>	100	100	100	100	100
47. <i>Neisseria meningitidis</i>	100	100	100	100	100
48. <i>Streptococcus pneumoniae</i>	100	100	100	100	100
49. <i>Haemophilus influenzae</i>	100	100	100	100	100
50. <i>Legionella pneumophila</i>	100	100	100	100	100
51. <i>Yersinia enterocolitica</i>	100	100	100	100	100
52. <i>Salmonella enteritidis</i>	100	100	100	100	100
53. <i>Escherichia coli</i>	100	100	100	100	100
54. <i>Shigella flexneri</i>	100	100	100	100	100
55. <i>Staphylococcus aureus</i>	100	100	100	100	100
56. <i>Streptococcus pyogenes</i>	100	100	100		

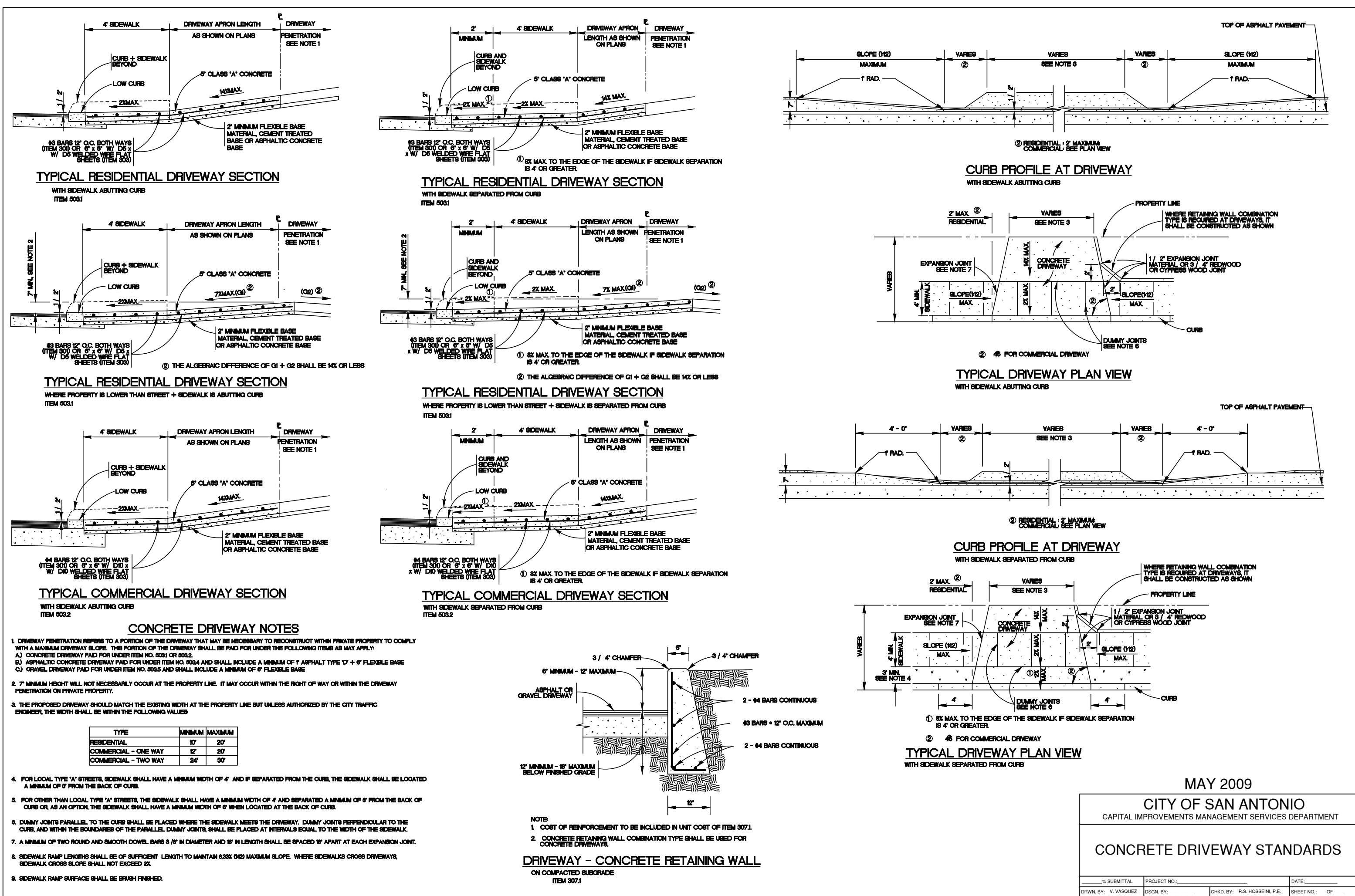
PED-18

FILE: pd018	DN: TxDOT	DN: VP	CR: XM	CR: PK & J
DN:

© TROTT MARCH, 2002	CONT	SECT	JOB	REVISION
REVISIONS				
REVISED ON 2002				

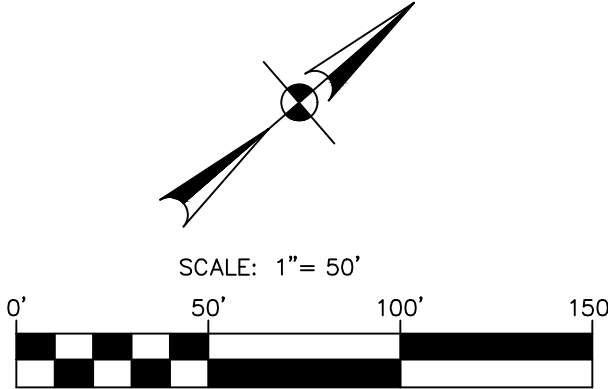
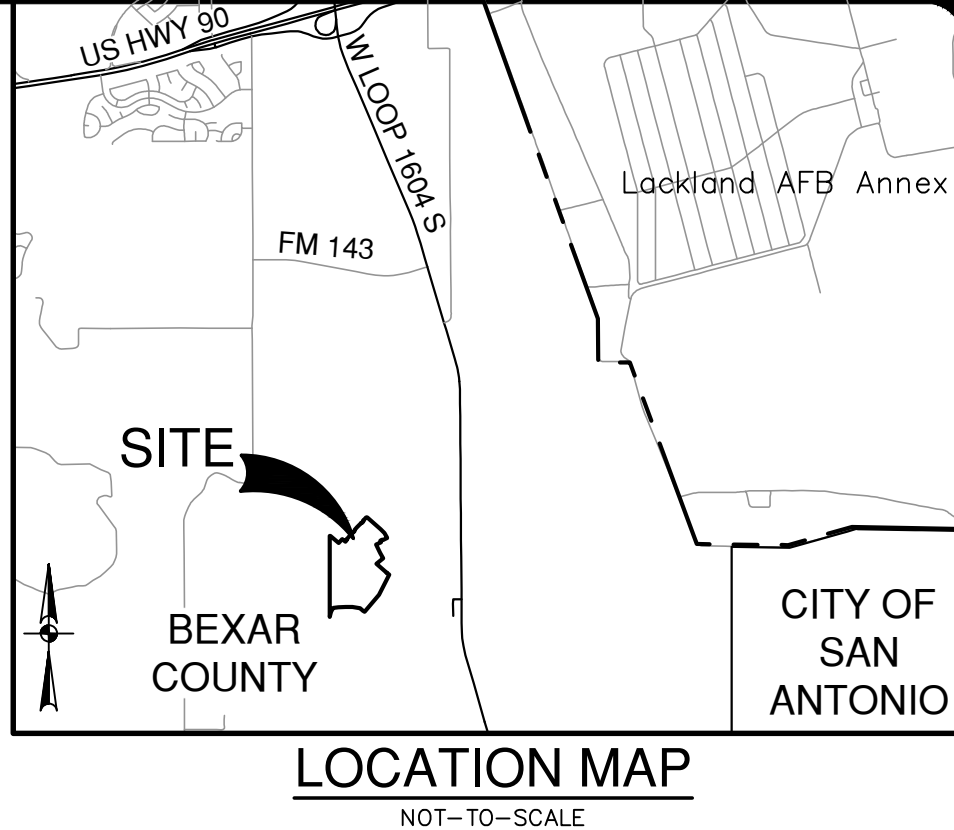
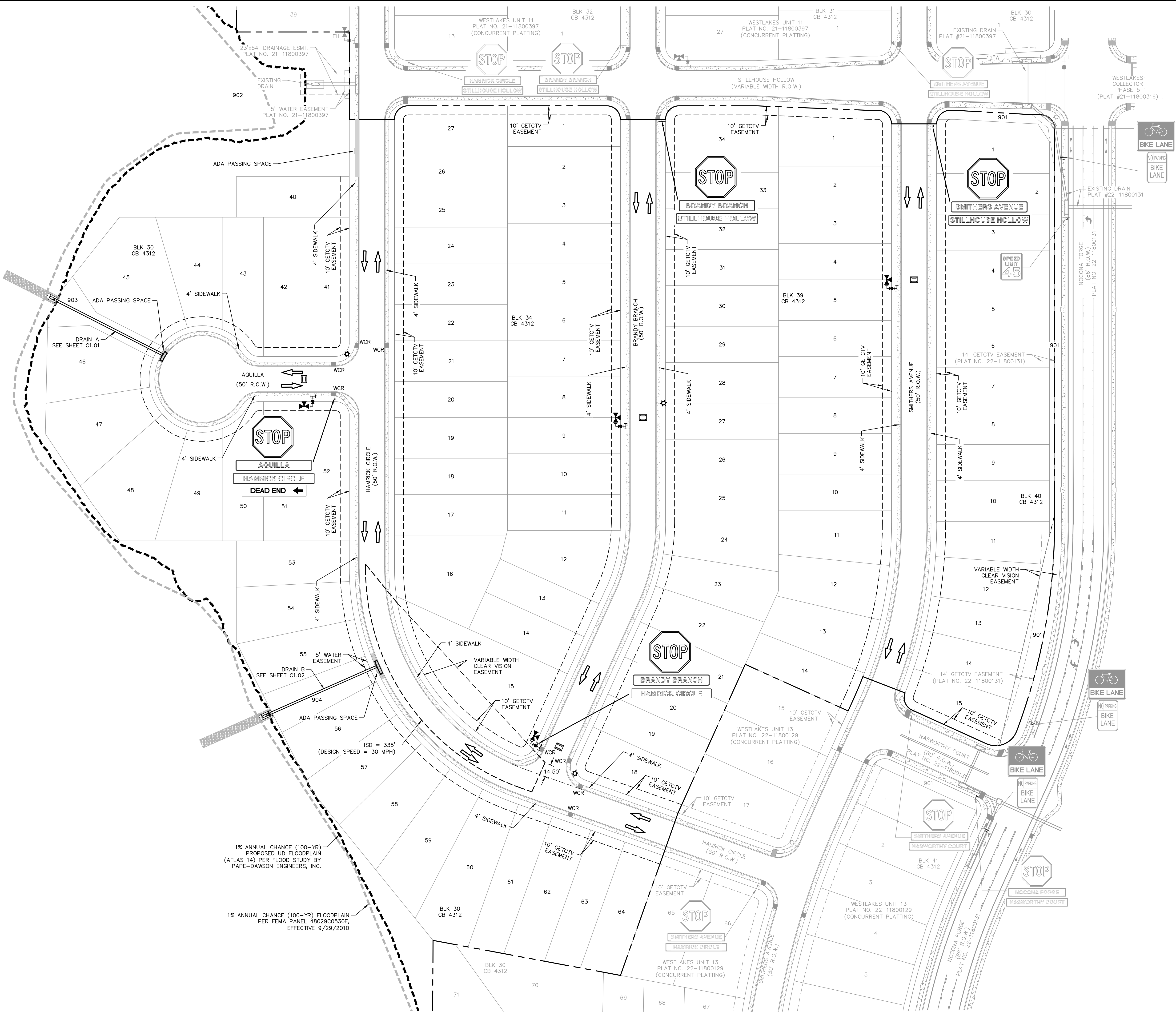
REVISED 06, 2012	BEST	COUNTY	SHEET NO.
REVISED 01, 2008			





Date: Sep 07, 2022 9:49am User ID: ehsanovicz
File: P:\13\48\44\Design\CH\SGO\13484.dwg

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SYMBOL	ITEM NUMBER
	UNIT BOUNDARY
	PROPOSED DRIVEWAY
	TRAFFIC FLOW ARROW
	SIDEWALK (DEVELOPER RESPONSIBILITY)
	SIDEWALK (HOMEBUILDER RESPONSIBILITY)
	TYPE II BLUE RAISED PAVEMENT MARKERS - NO SEPARATE PAY ITEM (N.T.S.)
	STREET SIGN
	R1-1 30"x30"
	W14-1a DEAD END STREET MARKER

BEXAR COUNTY ROW NOTE:

A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.

DRIVEWAY NOTE:

DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE INFRASTRUCTURE, OR OTHER CONFLICT. DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.

TRENCH EXCAVATION SAFETY PROTECTION:

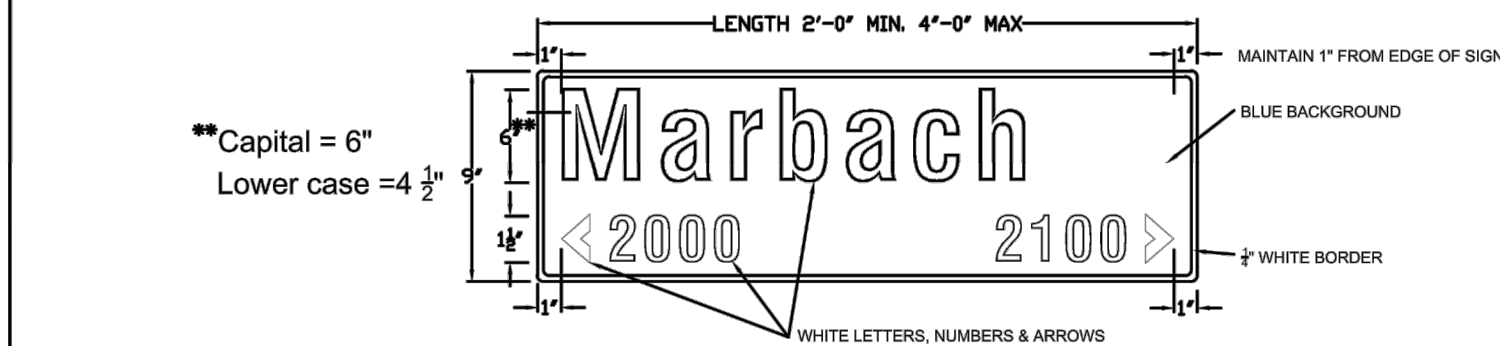
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND /OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

DATE	
NO. REVISION	
9/7/2022	

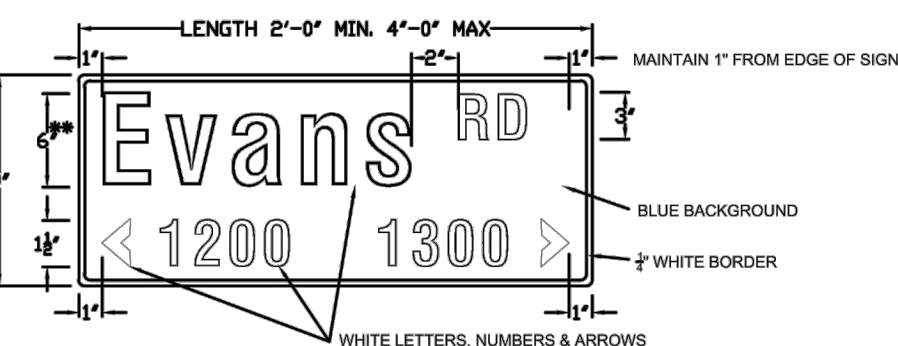
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1028860

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS
OVERALL SIGNAGE PLAN

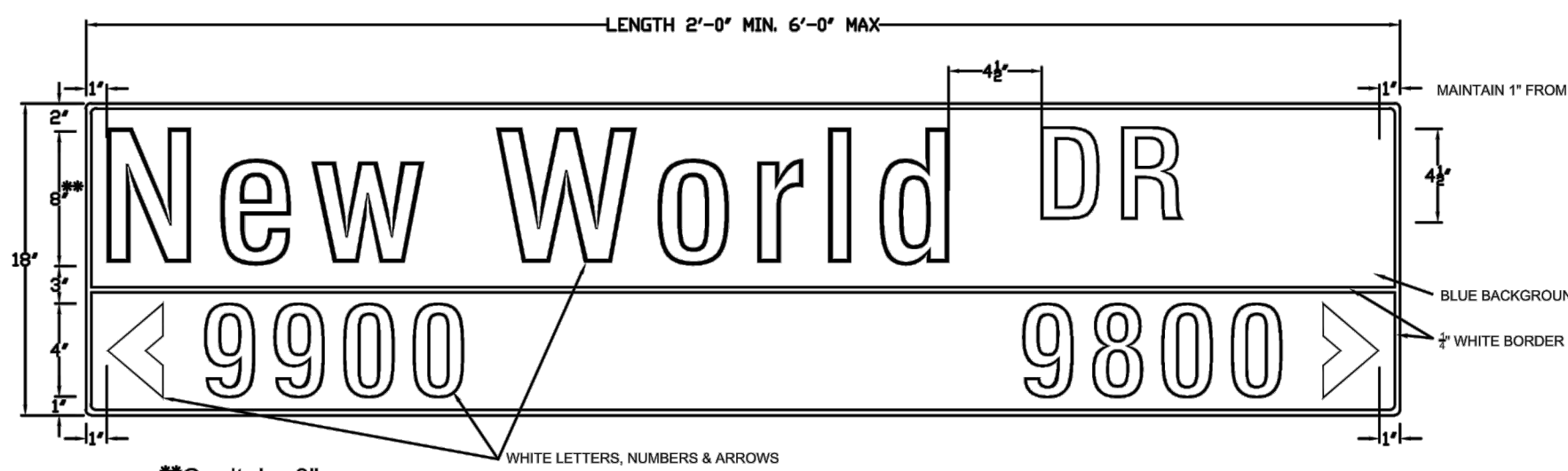
PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C3.00



9' GROUND MOUNT STREET NAME SIGNS



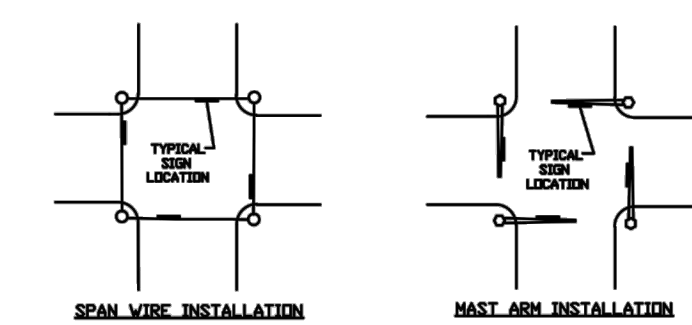
9' GROUND MOUNT STREET NAME SIGNS WITH STREET DESIGNATION



18' OVERHEAD STREET NAME SIGNS

	18" OVERHEAD SIGN	9' GROUND MOUNT SIGNS
HEIGHT	18" (381 mm)	9" (228 mm)
LENGTH	48" (1200 mm) MIN. 72" (1800 mm) MAX. (30% INCREASE IN LENGTH)	24" (600 mm) MIN. 48" (1200 mm) MAX. (30% INCREASE IN LENGTH)
THICKNESS	0.125" (3 mm)	
SUBSTRATE	ALUMINUM ALLOY, 5052-H38 (ASTM B-209) GOLD CHROMATE FINISH	
SIGN FACE MATERIALS	BLUE FILM OVER DIAMOND GRADE -ASTM Type XI Non-Fluorescent	BLUE FILM OVER HIGH INTENSITY PRISMATIC -ASTM Type IV Non-Fluorescent
LEGENDS AND SYMBOLS	IF NAME OTHERWISE EXCEEDS MAXIMUM SIGN LENGTH	
COLOR	WHITE LEGEND ON BLUE BACKGROUND	
LETTER TRACKING	17% (USUAL) 10% (MIN.)	10%

* ACRYLIC ELECTRONIC CUTTABLE FILM

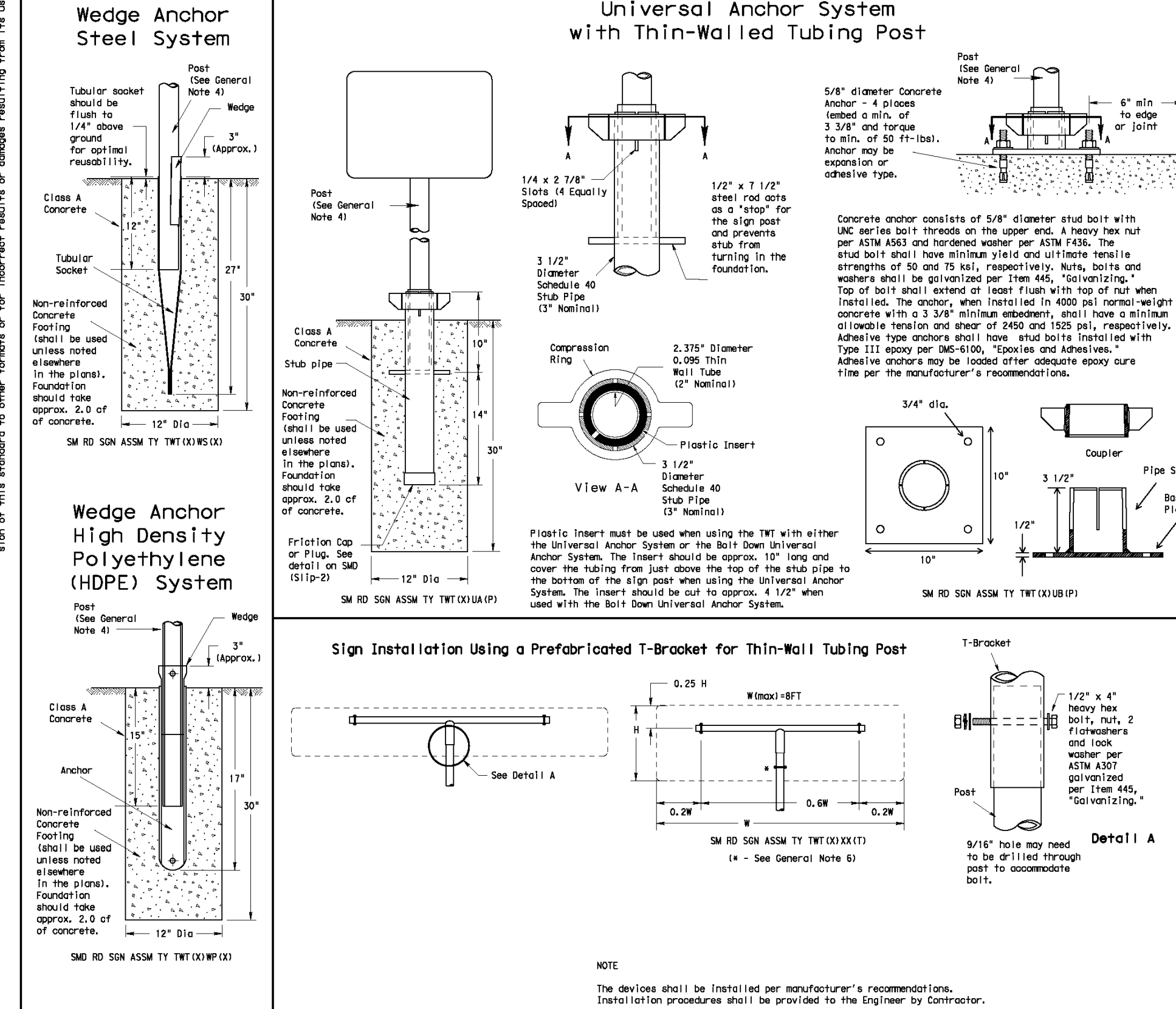


- SIGN FACE MATERIALS
SHALL CONFORM TO:
- STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS & BRIDGES ON FEDERAL HIGHWAY PROJECTS - FHWA'S CUSTOMARY UNITS SECTION 718
 - GENERAL SERVICES ADMINISTRATION FEDERAL SPECIFICATIONS L-3000C
 - ASTM D-4855 - 08F

Bexar County Public Works

Street Name Sign Details

DATE: _____	FILE: _____
SHEET _____	OF _____



- GENERAL NOTES:
- The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
 - The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturing, method, design, and location of marking are subject to the approval of the TxDOT Traffic Operations Division.
 - Design for posts 1/3 (6.18mm) diameter, nuts and bolts, all components shall be prequalified. A list of prequalified vendors may be obtained from the Material Procurement Unit web page. The website address is: <http://www.txdot.gov/business/products/11st.htm>
 - Material used shall be in accordance with the following specifications:
 - 1. 306 Tubing 12.375" outside diameter (TWT)
 - 2. 0.095 nominal wall thickness
 - 3. Steel or aluminum welded steel tubing
 - 4. Steel shall be A500 or 35 per ASTM A501 or ASTM A508
 - 5. Other steels may be used if they meet the following:
 - 55,000 PSI minimum yield strength
 - 10,000 PSI minimum tensile strength
 - 18% minimum elongation in 2"
 - 6. Wall thickness (uncoated) shall be within the range of .083" to .099"
 - 7. Outside diameter (uncoated) shall be within the range of 2.989" to 3.011"
 - 8. Galvanization per ASTM 123 or ASTM A653 D215. For precast steel tubing (ASTM A653), rebar tube outside diameter weld seam by metalizing with zinc wire per ASTM B935.
 - Sign blanks shall be the size and shape shown on the plans.
 - Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
 - Sign supports shall not be applied except where shown. Sign support posts shall not be applied.
 - See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: <http://www.txdot.gov/pub/transportation/trafficops.htm>

- WEDGE ANCHOR SYSTEM INSTALLATION PROCEDURE
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD (GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor or hand concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
 - Insert tubular socket into concrete until top of socket is approximately 1/4" above the concrete footing.
 - Place the socket. Allow a minimum 4 days for concrete to set, unless otherwise directed by Engineer.
 - Attach the sign to the sign post.
 - Insert the sign post into socket and align sign face with roadway.
 - Drive the wedge into the socket to secure post. This will leave approximately 3 inches of the wedge exposed.

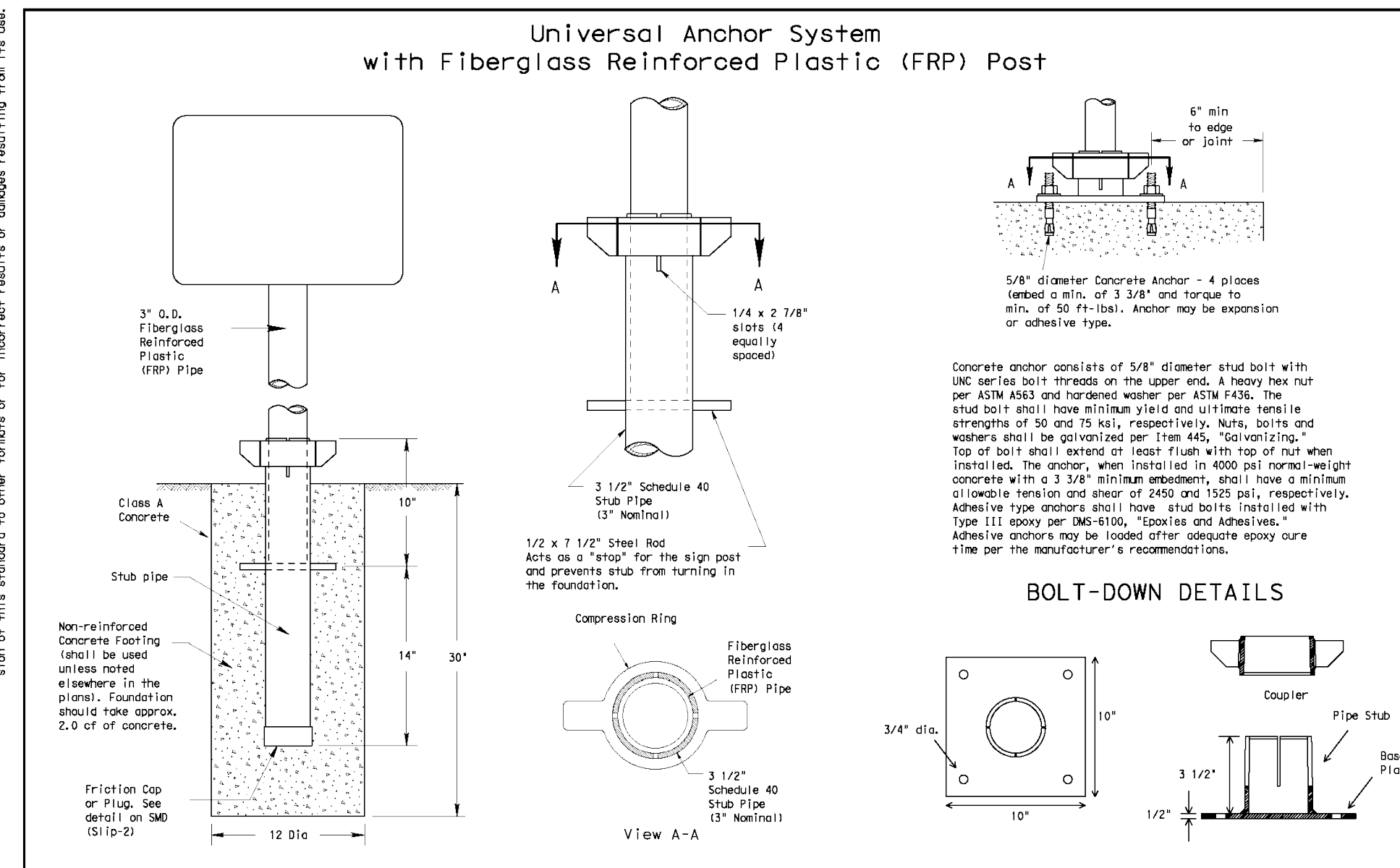
- UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD (GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor or hand concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Place concrete into hole until it is approximately flush with the ground. Concrete shall be Class A.
 - Insert base post into hole to depths shown and backfill hole with concrete. Level and plumb the base post using a torpedo level and allow concrete adequate time to set. The bottom of the plate provided in the stub pipe shall remain above the top of the concrete foundation of post.
 - Attach the sign to the sign post.
 - Insert the plastic insert into bottom of post.
 - Set compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when optimally installed.
 - Check sign post by hand to ensure it is unable to turn. If loose, increase the tightening of the compression ring.

TEXAS Department of Transportation
Traffic Operations Division

**SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
WEDGE & UNIVERSAL ANCHOR
WITH THIN WALL TUBING POST
SMD (TWT) -08**

DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES
DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES
DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES
DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES

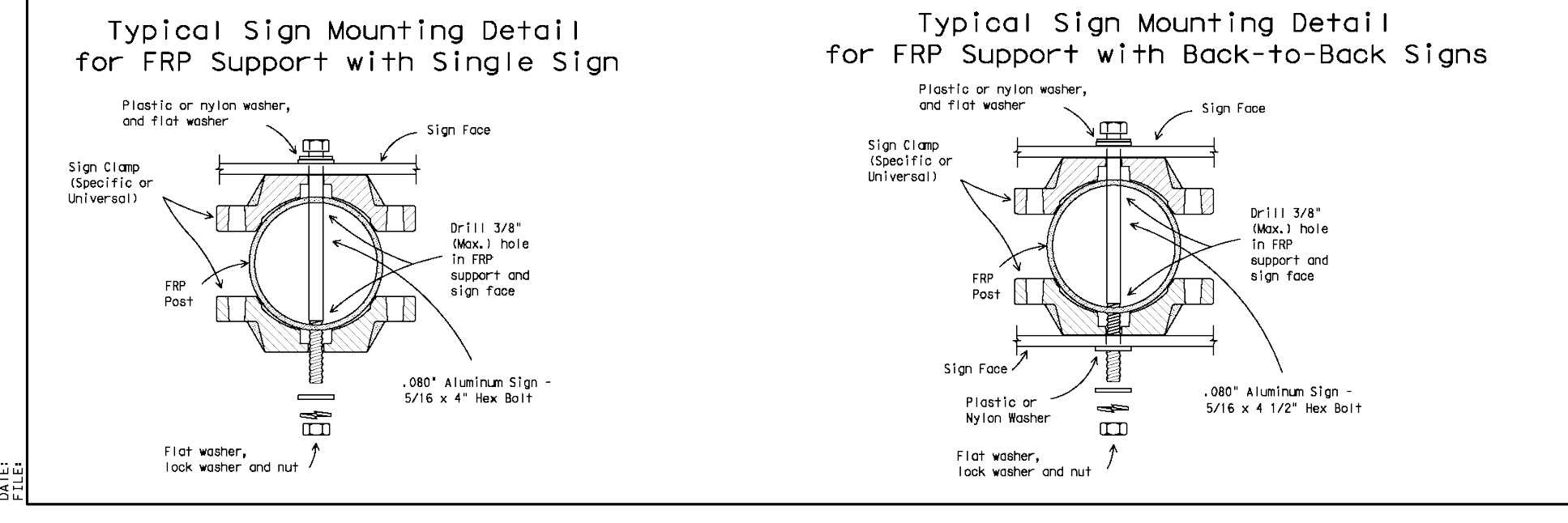
2 OF 3



- GENERAL NOTES:
- FRP sign supports for a single type sign support may be used for signs up to and including 16 square feet. Dual post installation may be used for signs up to and including 32 square feet.
 - All nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing".
 - See the Traffic Operations Division website for detailed drawings of sign clamps. The website address is: <http://www.txdot.gov/pub/transportation/trafficops.htm>
- FRP POST REQUIREMENTS
- Material shall conform to the requirements of Departmental Material Specification DMS-4410 and will be furnished in a yellow or gray color as specified elsewhere in the plans.
 - Thickness of FRP sign support is 0.125" x 0.031" x 0.01".
 - FRP sign supports are prequalified by the Traffic Operations Division. Prequalification procedures are obtained by writing: Texas Department of Transportation Traffic Operations Division 125 East 11th Street Austin, Texas 78701-2463

- UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE
- Dig foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the clearance requirements given on SMD (GEN) must be followed. The inner surfaces of the socket/stub must remain free of concrete or other debris.
 - The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor or hand 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.
 - Insert base post into foundation hole to depths shown and fill hole with concrete. Cut base post from bottom and ensure a minimum of 18" embedment if installed in solid rock.
 - Level and plumb the base post with coupler using a torpedo level and set concrete set a minimum of 4 days, unless otherwise directed by Engineer. Bottom of base post shall be above the concrete footing.
 - Attach sign to FRP post.
 - Insert sign post into base post. Lower until the post comes to rest on the steel rod.
 - Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
 - Check sign to ensure there is no twist. If loose, increase the tightening of coupler.

- BOLT-DOWN SIGN SUPPORT
- Post from base plate with coupler on existing concrete.
 - Drill hole into concrete and insert the 5/8" diameter bolts with wedge anchors, and tighten nuts.
 - Attach sign to FRP post.
 - Insert bottom of sign post into pipe stub.
 - Use hammer to ensure the coupler is firmly seated. Top of coupler should be level with top of base post in most instances.
 - Check sign to ensure there is no twist. If loose, increase the tightening of coupler.



TEXAS Department of Transportation
Traffic Operations Division

**SIGN MOUNTING DETAILS
SMALL ROADSIDE SIGNS
UNIVERSAL ANCHOR SYSTEM
WITH FRP POST
SMD (FRP) -08**

DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES
DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES
DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES
DATE: 01/07/2007	BY: J. D. JONES	CHK: J. D. JONES	APP: J. D. JONES

2 OF 3

DATE: _____

NO. _____

REVISION: _____

6/7/2022

MATTHEW GEISTWEIT
118861
PROFESSIONAL ENGINEER

Westlake Unit 12

Pape-Dawson Engineers

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78211 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #008860

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

SIGNAGE DETAILS
(SHEET 2 OF 3)

PLAT NO. 21-11800398

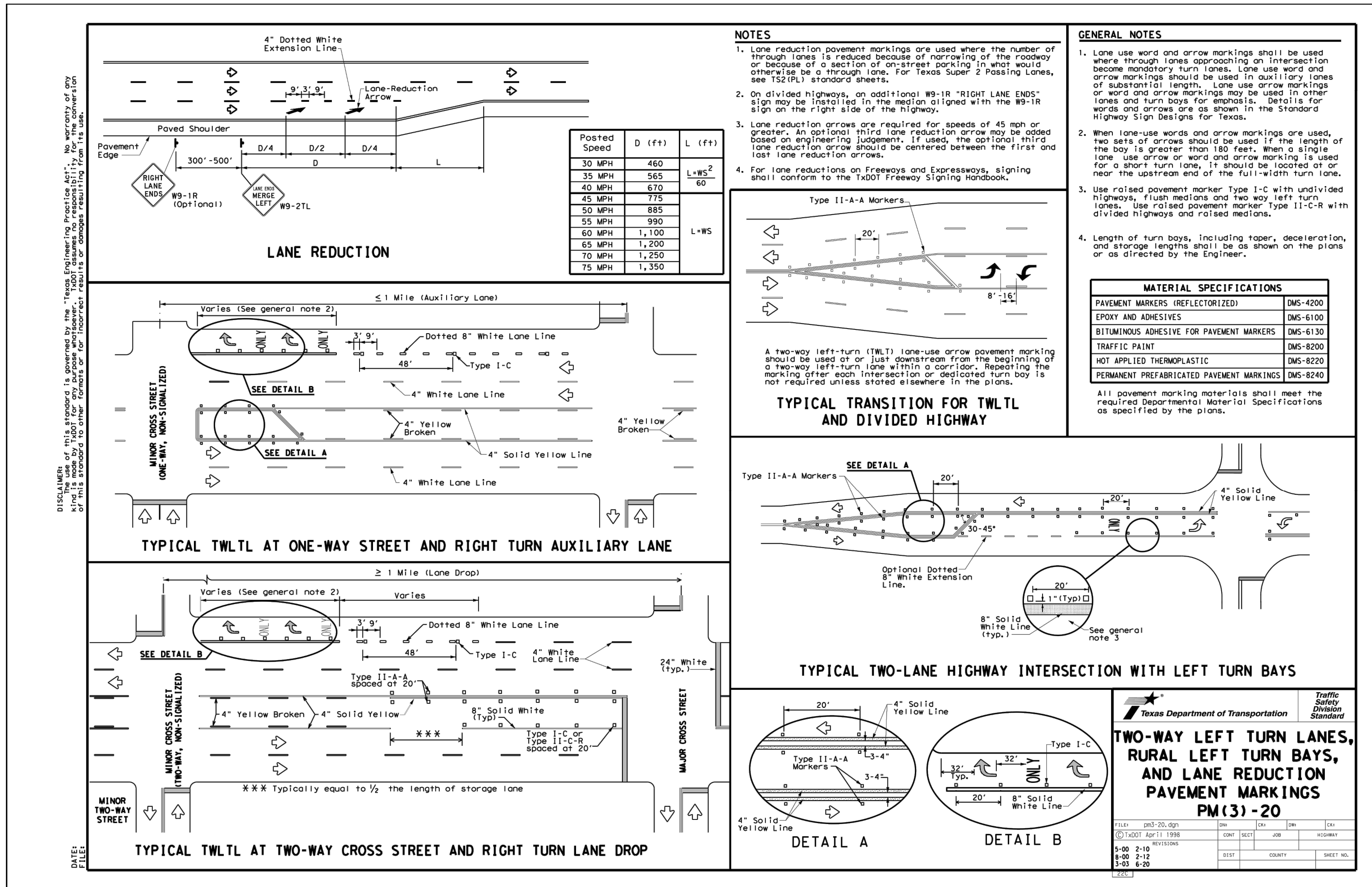
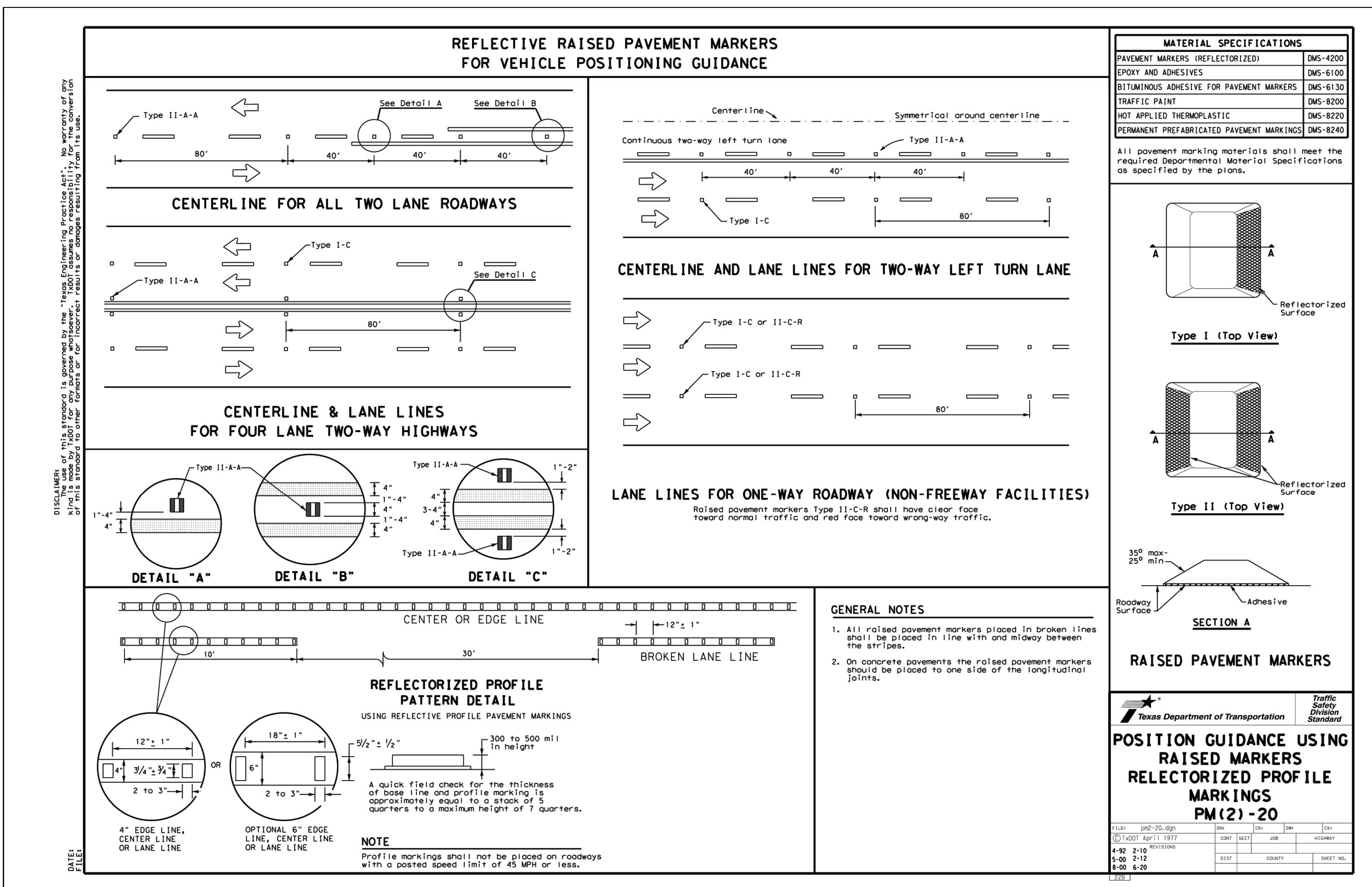
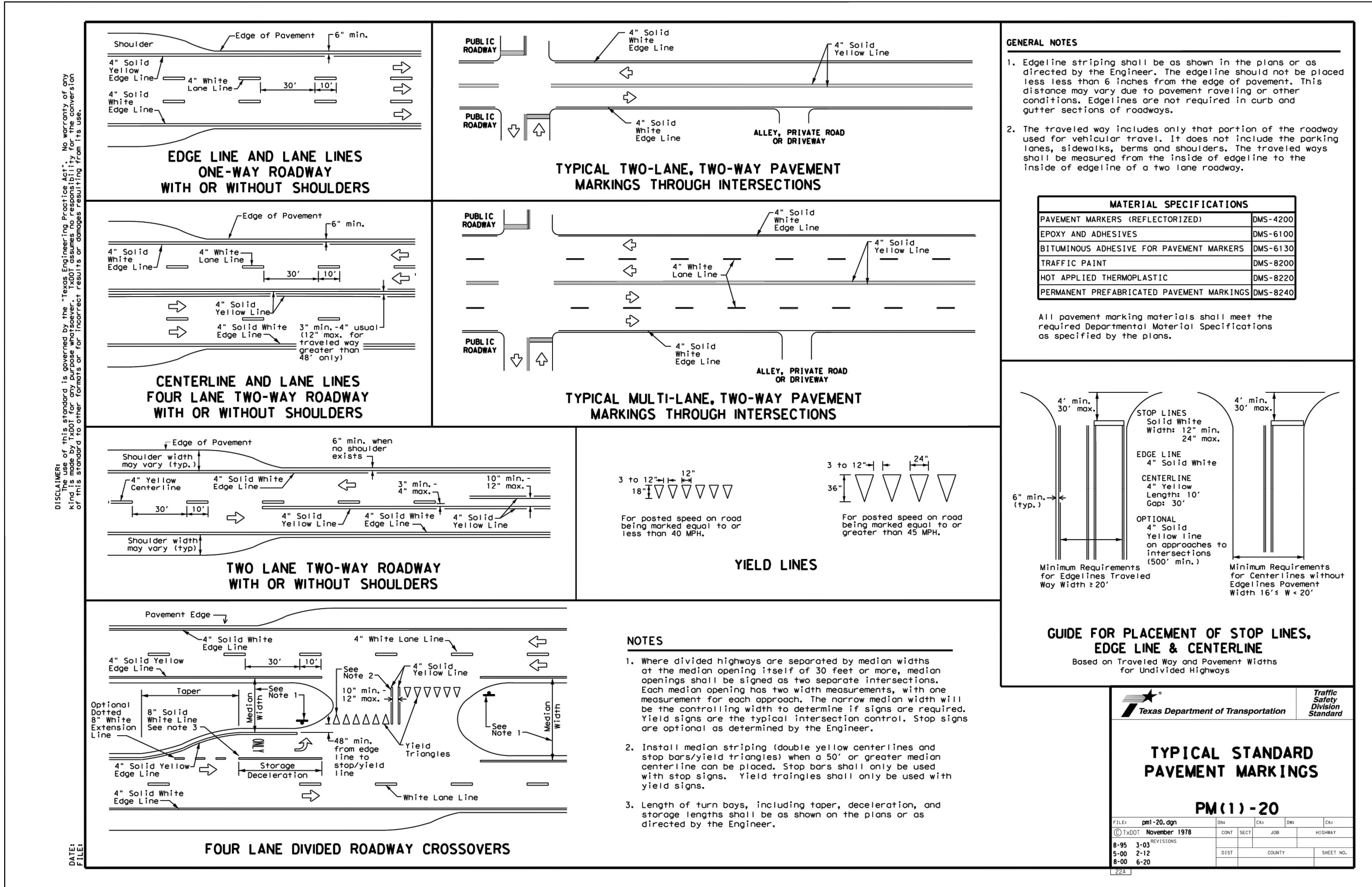
JOB NO. 11348-44

DATE: JUNE 2022

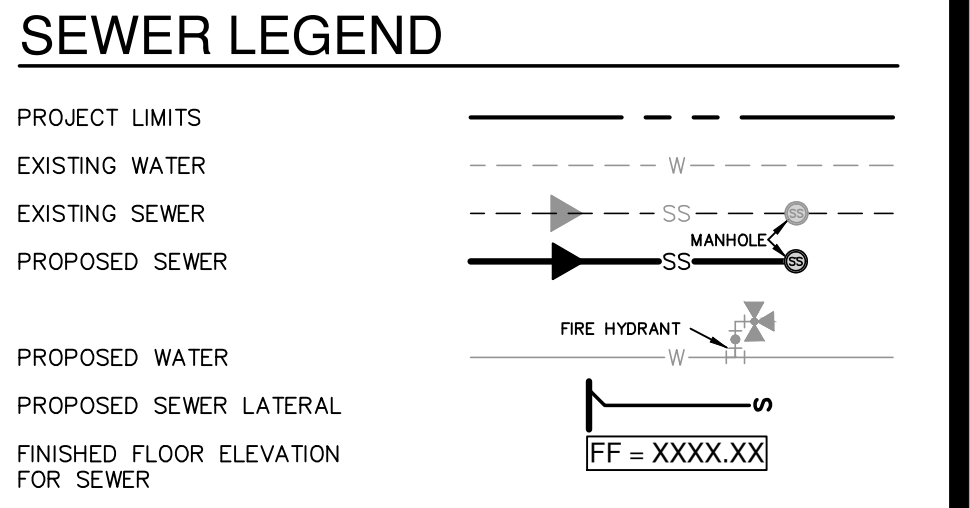
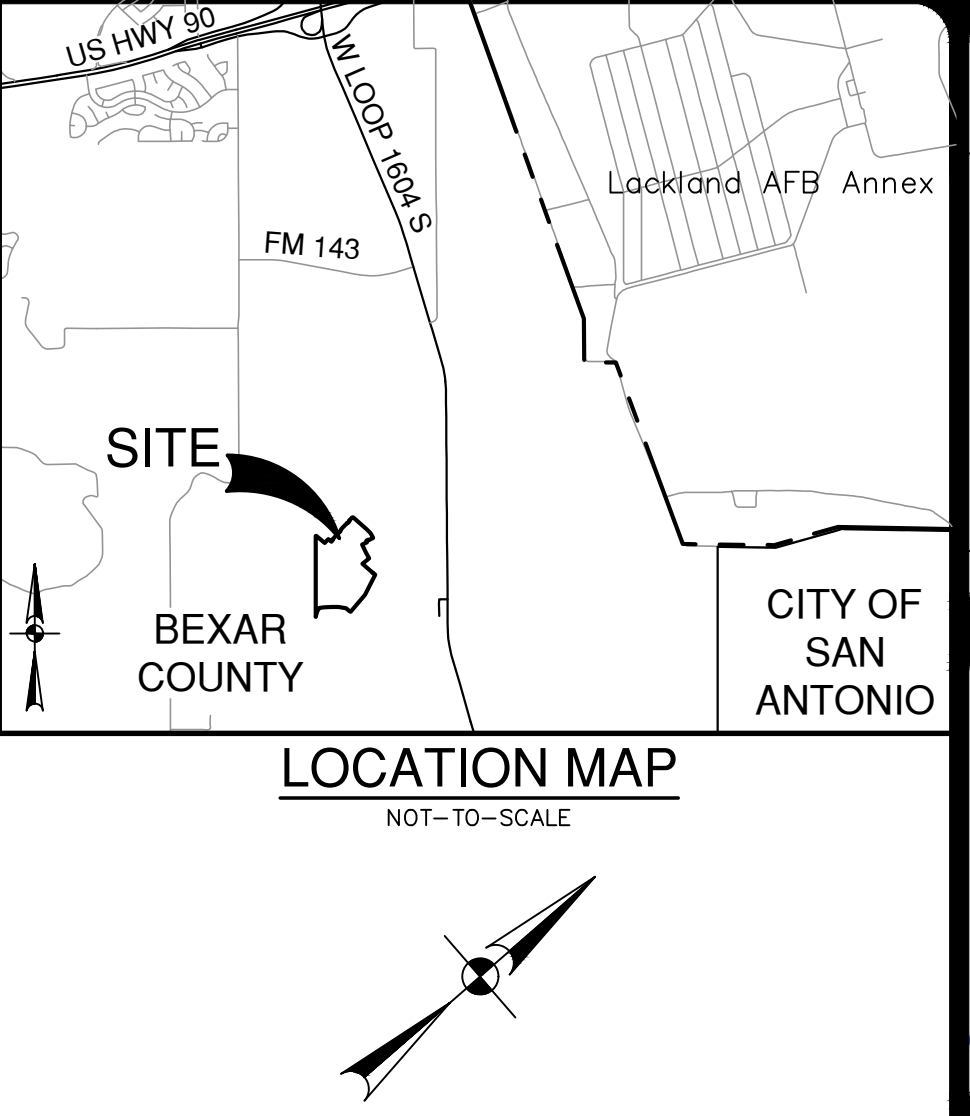
DESIGNER: EDK

CHECKED: MG DRAWN: MGC

SHEET C3.11



Date: Aug. 26, 2022, 10:40am User: ID: mrcsmt
File: P:\13\48\44\Design\CH\SS04113484.dwg



NOTE:
PROPOSED WYE & 6" LATERAL TO BE INSTALLED ON EXISTING SANITARY SEWER MAIN.

NOTE:
PROPOSED 6" LATERAL TO BE INSTALLED ON THE END OF EXISTING LATERALS INSTALLED WITH WESTLAKES ARTERIAL PHASE 2 (SAWS JOB NO. 22-1603).

CAUTION!!!
CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 1-800-DIG-TESS A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

FINISHED FLOOR NOTES:

1. THE FINISHED FLOOR ELEVATIONS (FF) REPRESENT THE MINIMUM POSSIBLE FLOOR ELEVATION TO PROVIDE SANITARY SEWER SERVICE TO EACH LOT. ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT ARE TO BE DETERMINED BY THE BUILDER AND SHALL TAKE INTO CONSIDERATION AS-BUILT CONDITIONS FOR FOUND SEWER SERVICES AND ACTUAL LATERAL PLACEMENT. IT IS THE BUILDER'S SOLE RESPONSIBILITY TO DETERMINE ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT PRIOR TO THE START OF HOME FOUNDATION CONSTRUCTION TAKING INTO CONSIDERATION SITE DRAINAGE, STREET ACCESS AND SANITARY SEWER SERVICE ELEVATIONS.

2. THE MINIMUM SANITARY SEWER LATERAL GRADES WERE BASED UPON THE MINIMUM FINISHED FLOOR ELEVATIONS FOR THE LOTS LOCATED ON THE DOWNHILL SIDES OF THE PROPOSED ROADWAYS.

ROW PERMIT NOTE:
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

TRENCH EXCAVATION SAFETY PROTECTION:
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PRESENCE AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

**LIVE OAK SLOUGH-MEDINA RIVER WATERSHED
SEWER: UPPER MEDINA RIVER SOUTH
SEWERSHED - DOS RIOS W.R.C.**

DEVELOPER'S NAME:	PULTE HOMES OF TEXAS, L.P.
ADDRESS:	1718 DRY CREEK WAY, SUITE 120
CITY:	SAN ANTONIO
STATE:	TEXAS
ZIP:	78259
PHONE#	(210) 838-6784
FAX#	
SAWS BLOCK MAP#	096548
TOTAL EDU'S	98
TOTAL ACREAGE	52.53
TOTAL LINEAR FOOTAGE OF PIPE: 8"-1.743 LF	PLAT NO. 22-11800398
NUMBER OF LOTS	98
SAWS JOB NO.	22-1627

DATE	08/26/22
NO.	
REVISION	

PAPE-DAWSON ENGINEERS

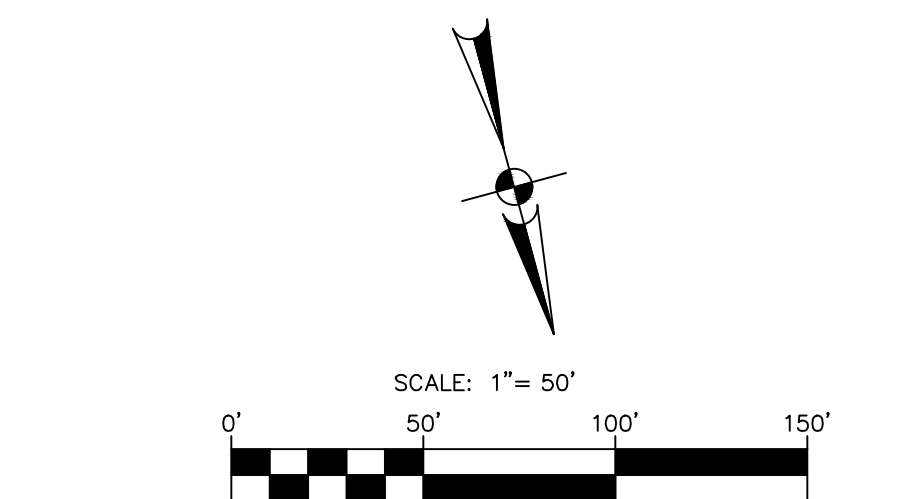
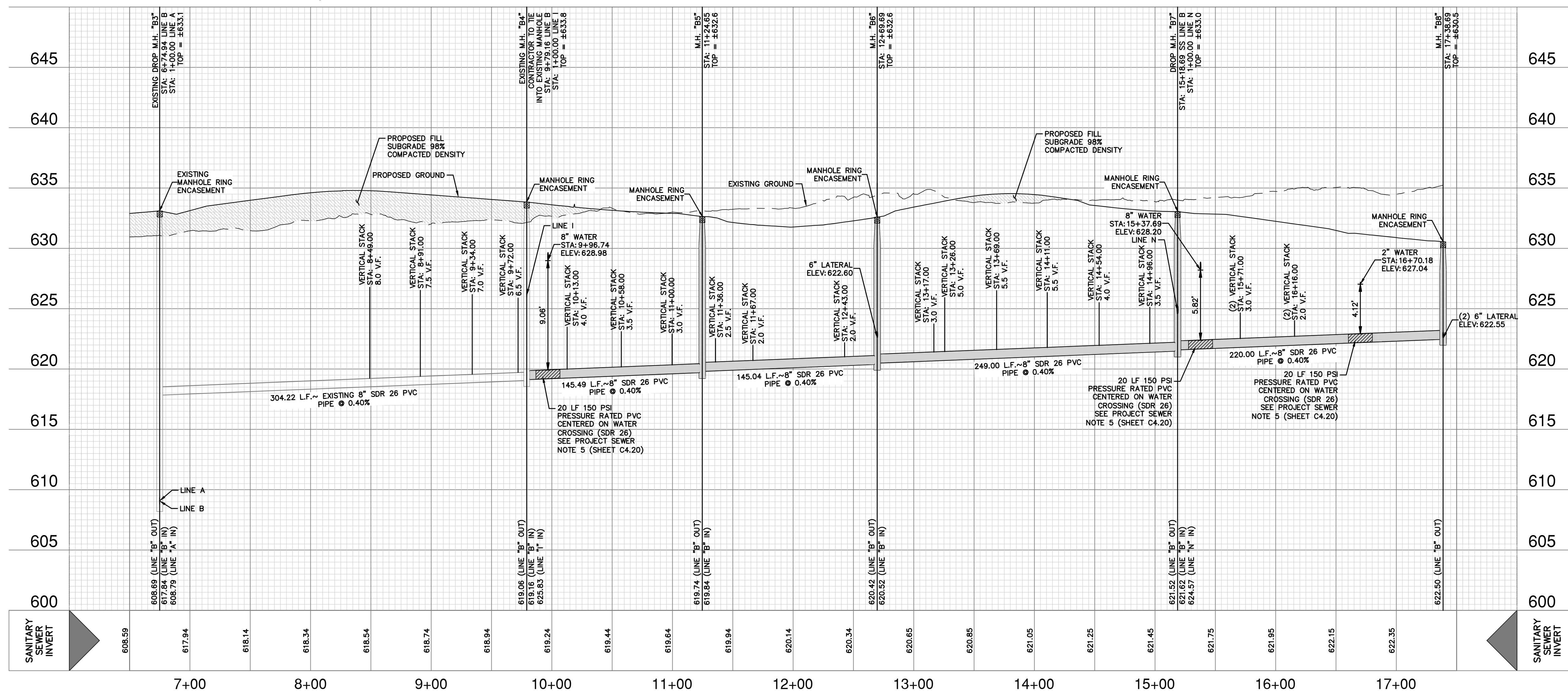
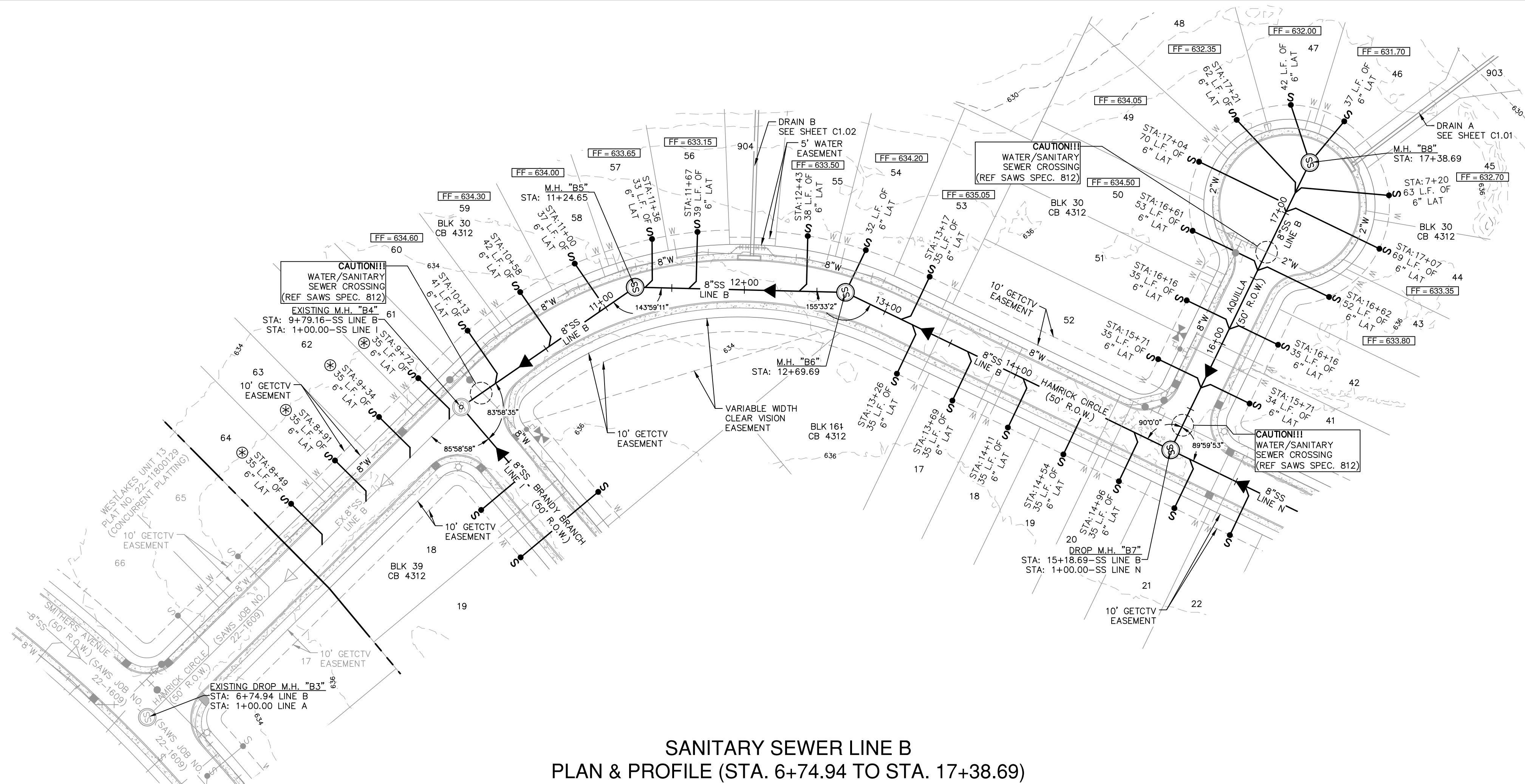
MATTHEW GEISTWEIDT
118861
PROFESSIONAL ENGINEER

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

OVERALL SANITARY SEWER PLAN

PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C4.00



SEWER LEGEND

PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

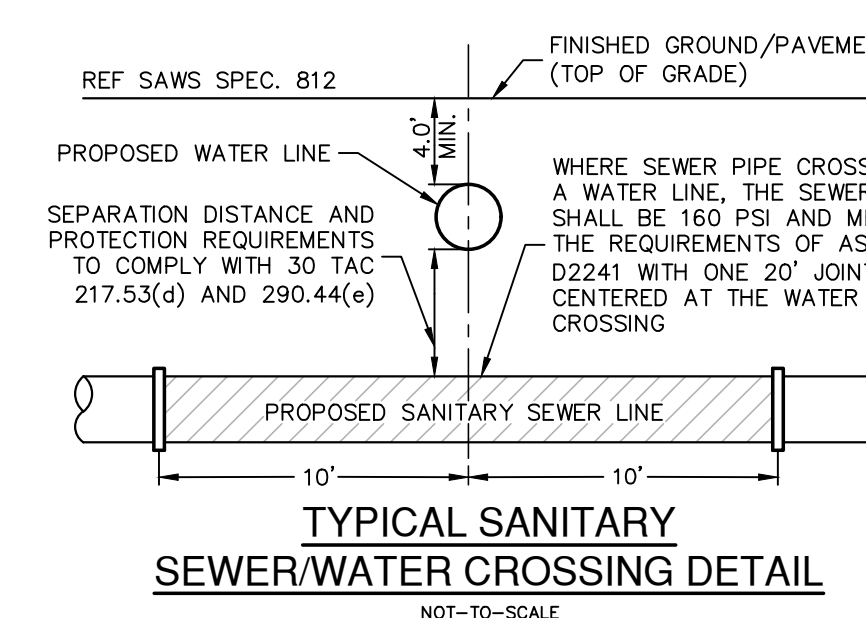
PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION
FF = XXXX.XX

Diagram details: The diagram shows a cross-section of the ground with several horizontal lines representing different utilities. From top to bottom, these are: a solid line for Project Limits, a dashed line for Existing Water, a solid line for Existing Sewer, a solid line for Proposed Sewer, a solid line for Proposed Water, and a solid line for Proposed Sewer Lateral. A manhole is shown on the Proposed Sewer line, with a vertical pipe extending upwards. A fire hydrant is shown on the Proposed Water line. The Finished Floor Elevation (FF) is indicated as XXXX.XX.

⊛ NOTE:

PROPOSED WYE & 6" LATERAL TO BE INSTALLED ON EXISTING SANITARY
SEWER MAIN.



CAUTION!!

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FINISHED FLOOR NOTES:

1. THE FINISHED FLOOR ELEVATIONS (FF) REPRESENT THE MINIMUM POSSIBLE FLOOR ELEVATION TO PROVIDE SANITARY SEWER SERVICE TO EACH LOT. ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT ARE TO BE DETERMINED BY THE BUILDER AND SHALL TAKE INTO CONSIDERATION ALL BUILT CONDITIONS FOR FOUNDATION, SEWER SERVICES, AND ACTUAL LATERAL PLACEMENT. IT IS THE BUILDER'S SOLE RESPONSIBILITY TO DETERMINE ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT PRIOR TO THE START OF HOME FOUNDATION CONSTRUCTION TAKING INTO CONSIDERATION SITE DRAINAGE, STREET ACCESS AND SANITARY SEWER SERVICE ELEVATIONS.

2. THE MINIMUM SANITARY SEWER LATERAL GRADES WERE BASED UPON THE MINIMUM FINISHED FLOOR ELEVATIONS FOR THE LOTS LOCATED ON THE DOWNHILL SIDES OF THE PROPOSED ROADWAYS.

ROW PERMIT NOTE:

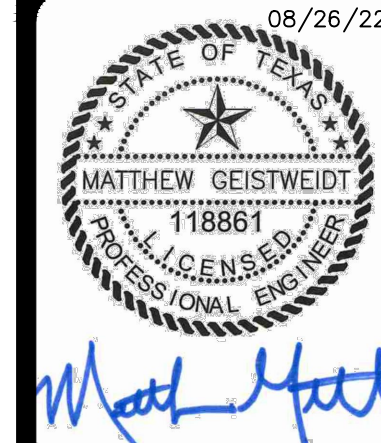
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

TRENCH EXCAVATION SAFETY PROTECTION:

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEES OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANTS, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL/GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA. THE CONSULTANT SHALL IDENTIFY AND PREPARE TRENCH EXCAVATION, SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES SHALL PROVIDE FOR ADEQUATE TRENCH EXCAVATION, TRENCH PROTECTION, AND TRENCH SAFETY WITHIN THE PROJECT WORK AREA FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN CONJUNCTION WITH THE TRENCH EXCAVATION, TRENCH PROTECTION, AND ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

LIVE OAK SLOUGH-MEDINA RIVER WATERSHED
SEWER: UPPER MEDINA RIVER SOUTH
SEWERSHED - DOS RIOS W.B.C.

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
ADDRESS: 1718 DRY CREEK WAY, SUITE 120
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
PHONE# (210) 838-6784 FAX# _____
SAWS BLOCK MAP# 096548 TOTAL EDU'S 98 TOTAL ACREAGE 52.5
TOTAL LINEAR FOOTAGE OF PIPE: 8'-1,743 LF PLAT NO. 22-1180039
NUMBER OF LOTS 98 SAWS' JOB NO. 22-1627

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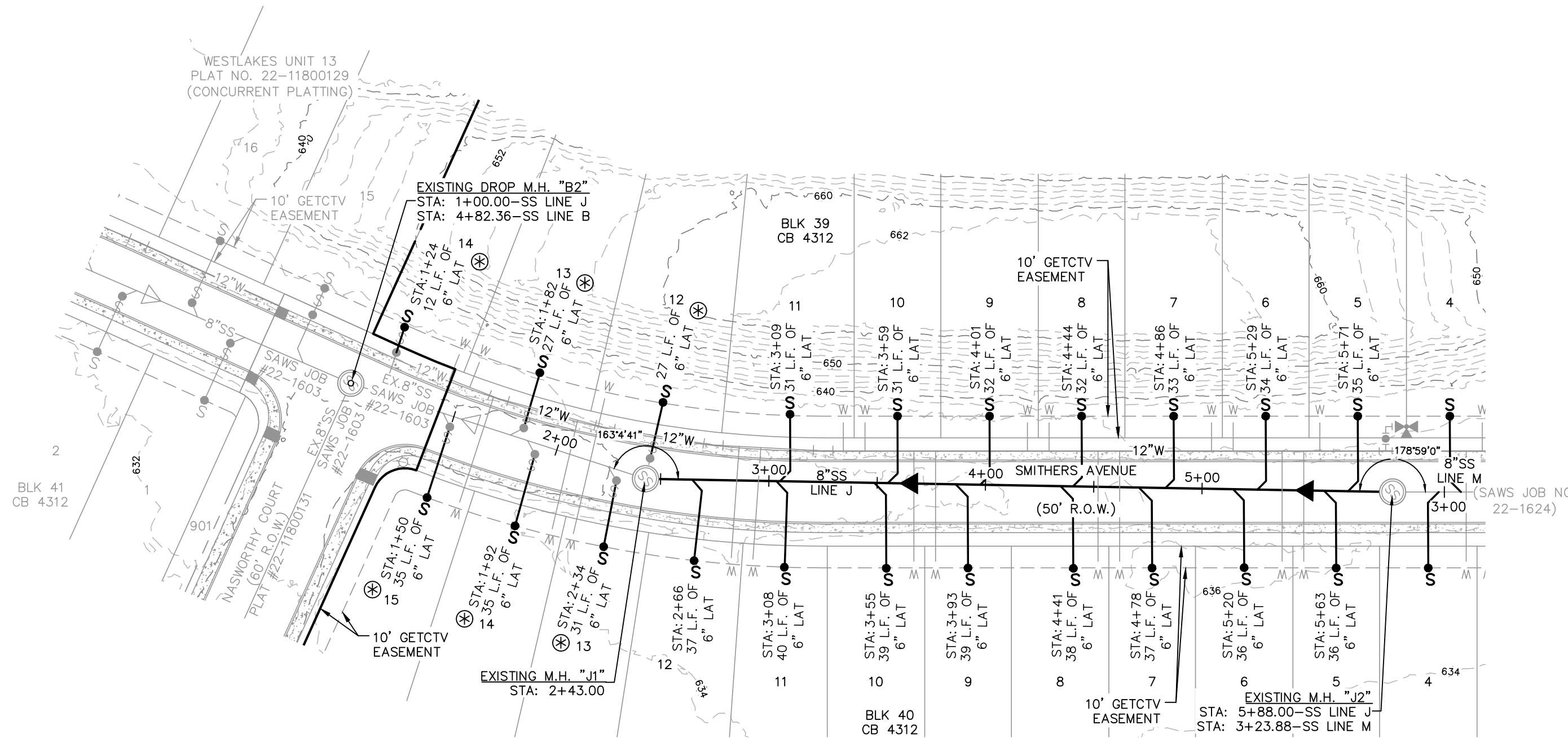
**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #440000000

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

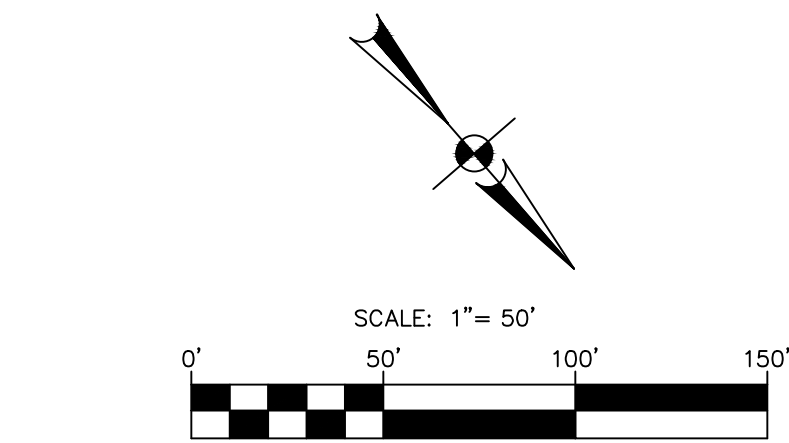
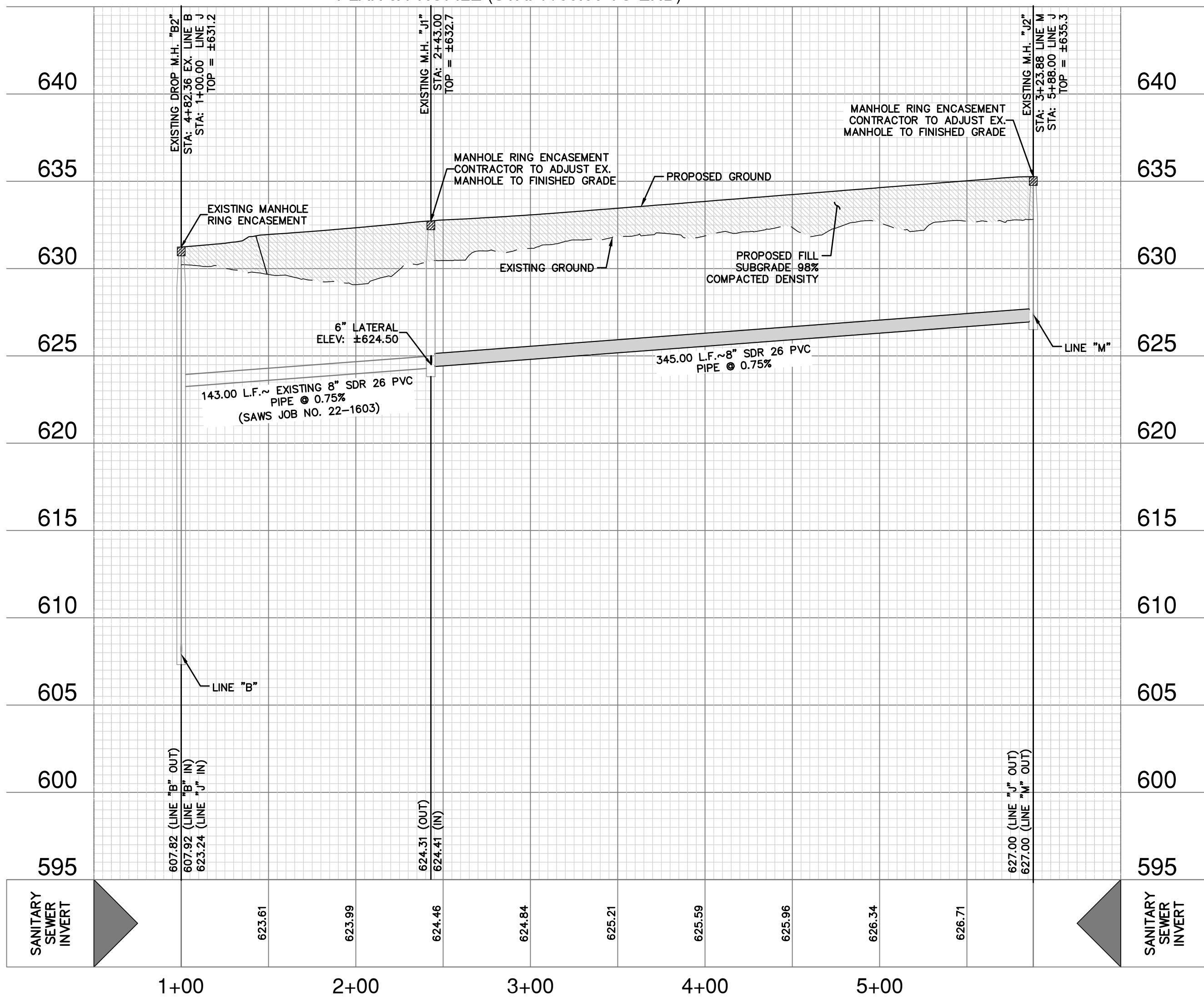
SANITARY SEWER LINE B

PLAT NO. 21-1180039
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN M
SHEET C4.01

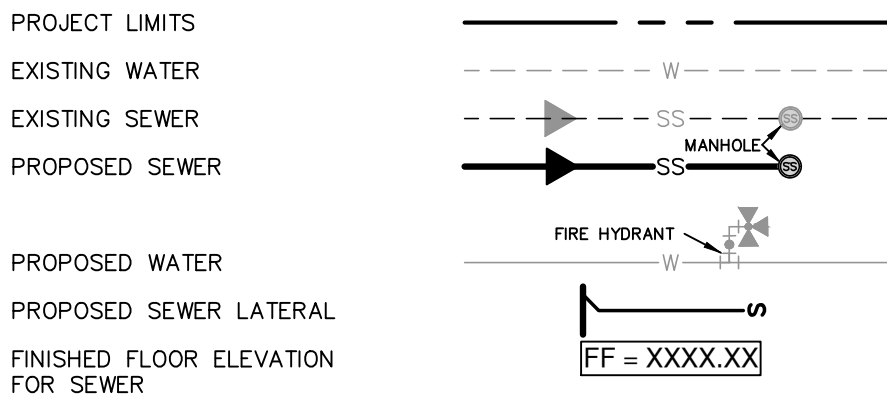


SANITARY SEWER LINE "J"
PLAN & PROFILE (STA. 1+00.00 TO END)

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

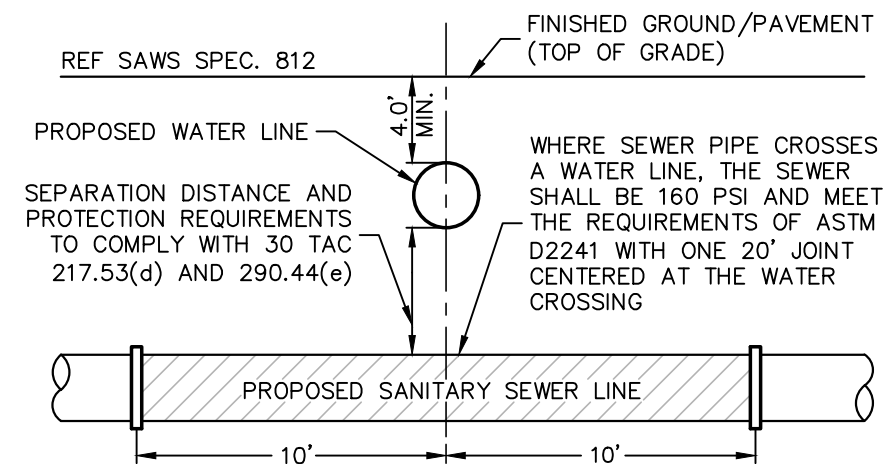


SEWER LEGEND



NOTE:

PROPOSED 6" LATERAL TO BE INSTALLED AT THE END OF AN EXISTING SANITARY SEWER LATERAL BUILT WITH SAWS JOB NO. 22-1603 (WESTLAKES ARTERIAL PHASE 2).



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL
NOT-TO-SCALE

CAUTION!!

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- THE MINIMUM SANITARY SEWER LATERAL GRADES WERE BASED UPON THE MINIMUM FINISHED FLOOR ELEVATIONS FOR THE LOTS LOCATED ON THE DOWNHILL SIDES OF THE PROPOSED ROADWAYS.

ROW PERMIT NOTE:

A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

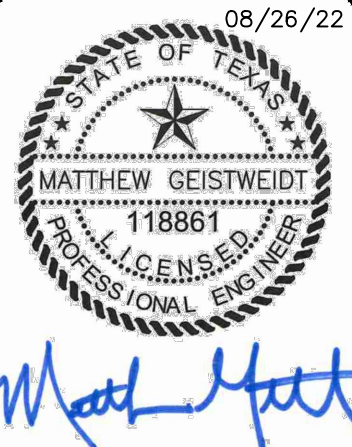
TRENCH EXCAVATION SAFETY PROTECTION:

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LIVE OAK SLOUGH-MEDINA RIVER WATERSHED
SEWER: UPPER MEDINA RIVER SOUTH
SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.			
ADDRESS: 1718 DRY CREEK WAY, SUITE 120			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78259	
PHONE# (210) 838-6784	FAX#		
SAWS BLOCK MAP# 096548 TOTAL EDU'S 98 TOTAL ACREAGE 52.53			
TOTAL LINEAR FOOTAGE OF PIPE: 8"-1,743 LF PLAT NO. 22-11800398			
NUMBER OF LOTS 98	SAWS JOB NO. 22-1627		

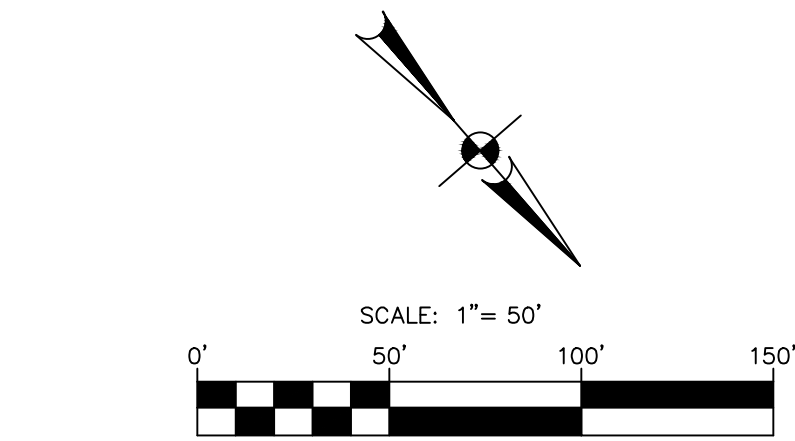
NO.	REVISION	DATE



**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS
SANITARY SEWER LINE J
PLAN & PROFILE (STA. 1+00.00 TO END)

PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C4.02



PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

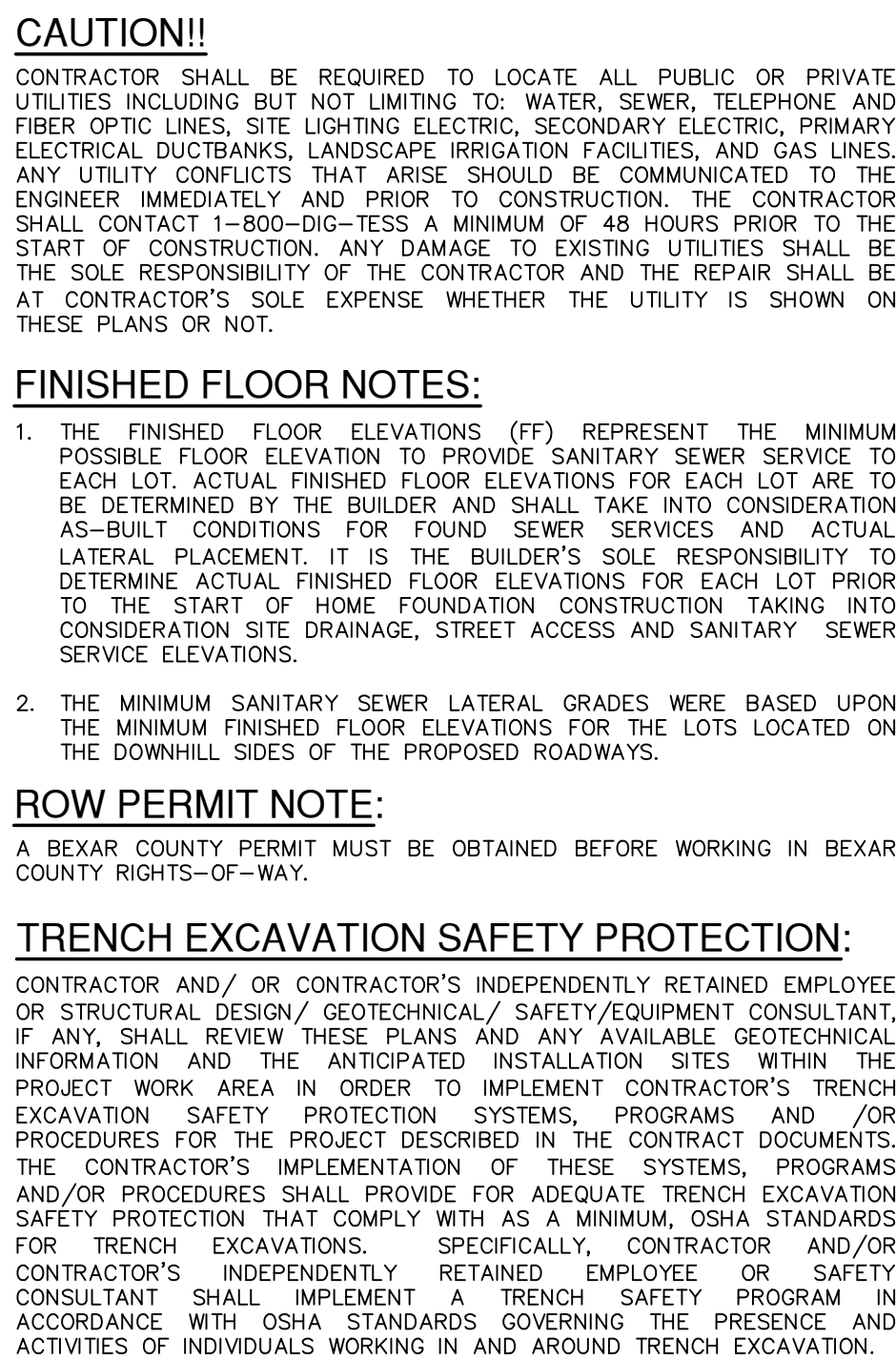
PROPOSED WATER

PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER


FF = XXXX.XX

The diagram illustrates the sewer layout with various components and symbols. It includes a legend for symbols such as 'W' for water, 'SS' for sewer, 'MANHOLE', 'FIRE HYDRANT', and 'W' for water. The layout shows the intersection of existing and proposed sewer lines, a proposed water line, and a proposed sewer lateral. The finished floor elevation for the sewer is indicated as FF = XXXX.XX.



DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
ADDRESS: 1718 DRY CREEK WAY, SUITE 120
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
PHONE# (210) 838-6784 FAX#
SAWS BLOCK MAP# 096548 TOTAL EDU'S 98 TOTAL ACREAGE 52.53
TOTAL LINEAR FOOTAGE OF PIPE: 8"-1,743 LF PLAT NO. 22-11800398
NUMBER OF LOTS 98 SAWS JOB NO. 22-1627

08/26/22

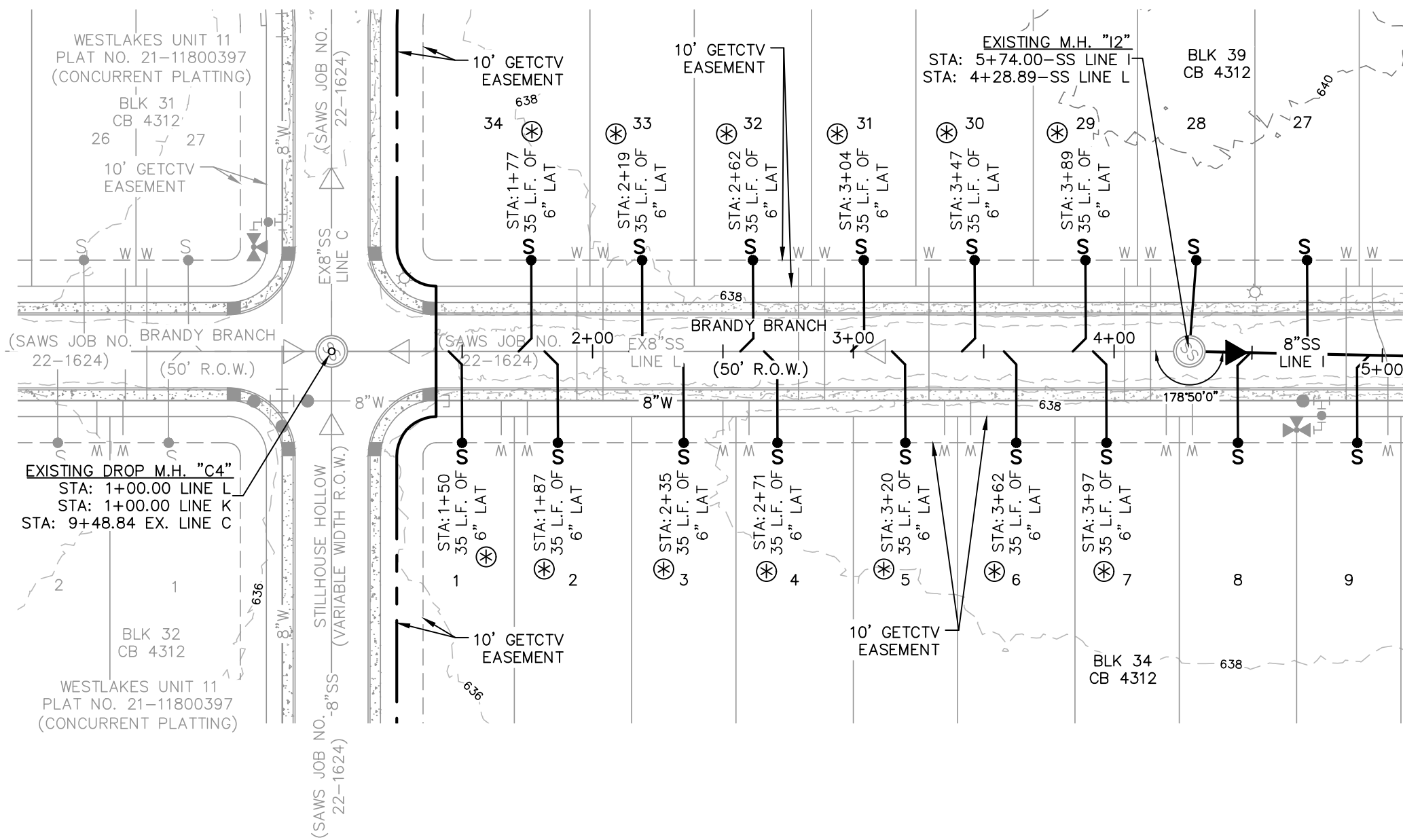


Matt Geist

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

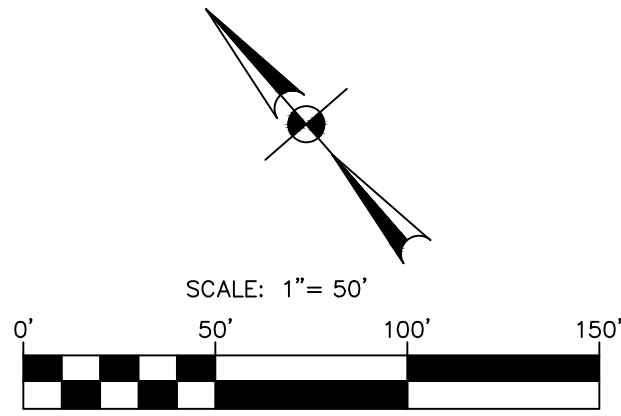
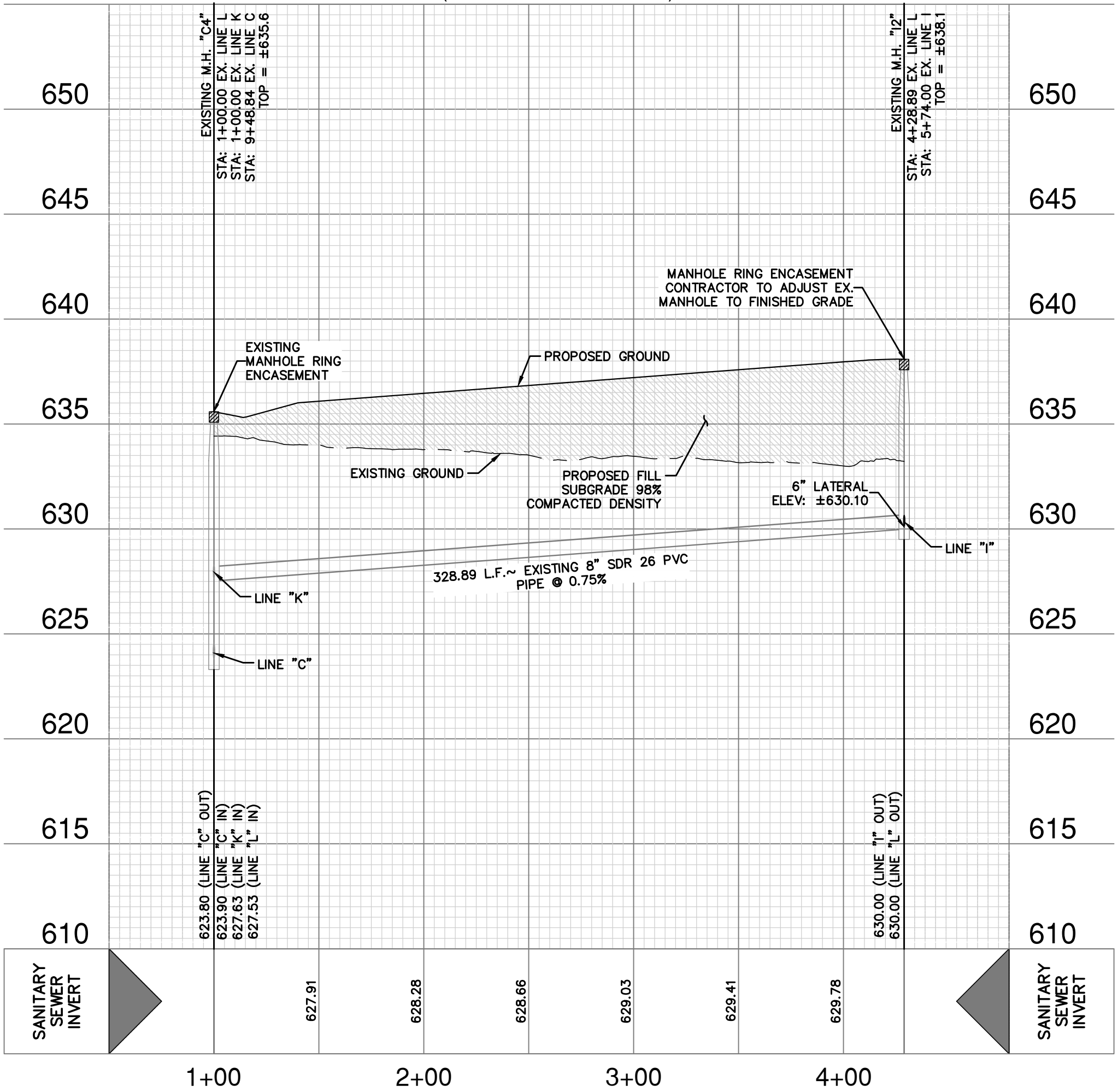
SANITARY SEWER LINE I
PLAN & PROFILE (STA. 1+00.00 TO END)

PLAT NO. 21-11800398
 JOB NO. 11348-44
 DATE JUNE 2022
 DESIGNER EDK
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 SHEET C4.03

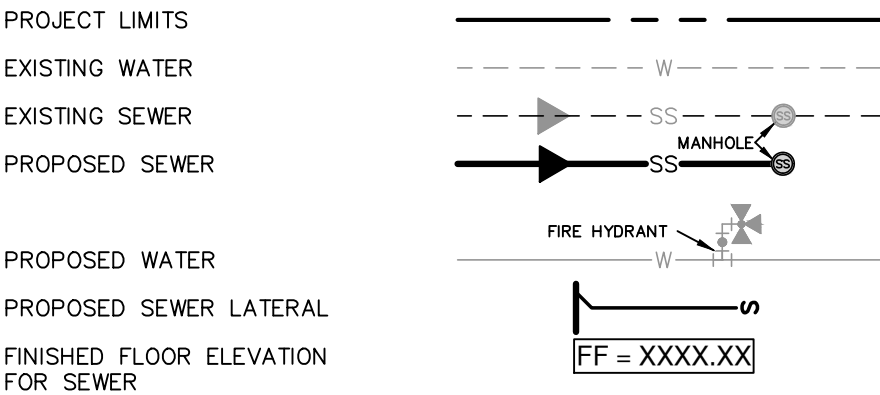


SANITARY SEWER LINE "L"
PLAN & PROFILE (STA. 1+00.00 TO END)

VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

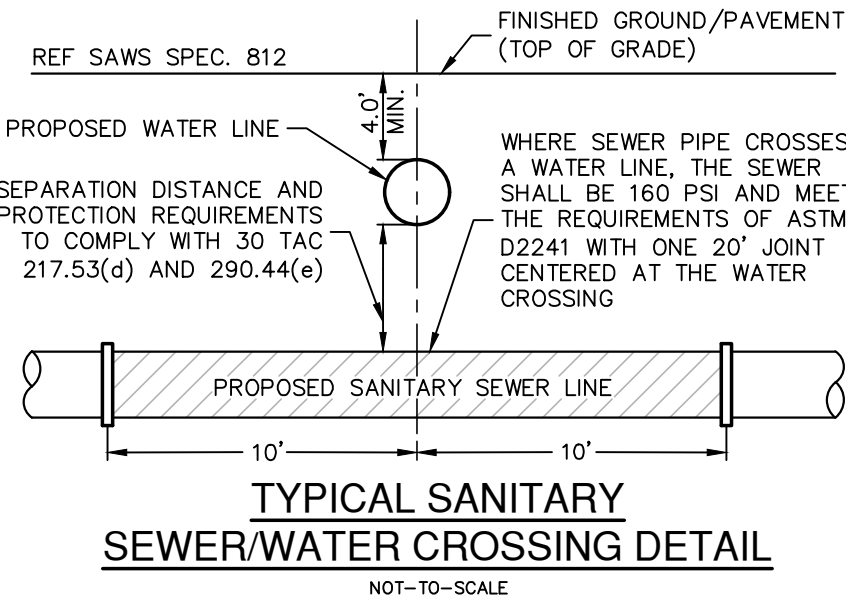


SEWER LEGEND



NOTE:

PROPOSED WYE & 6" LATERAL TO BE INSTALLED ON EXISTING SANITARY SEWER MAIN.



CAUTION!!

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FINISHED FLOOR NOTES:

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ROW PERMIT NOTE:

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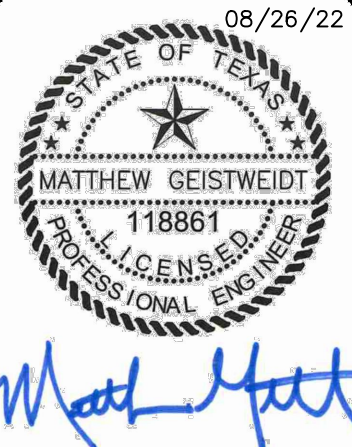
TRENCH EXCAVATION SAFETY PROTECTION:

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LIVE OAK SLOUGH-MEDINA RIVER WATERSHED
SEWER: UPPER MEDINA RIVER SOUTH
SEWERSHED - DOS RIOS W.R.C.

DEVELOPER'S NAME:	PULTE HOMES OF TEXAS, L.P.
ADDRESS:	1718 DRY CREEK WAY, SUITE 120
CITY:	SAN ANTONIO
STATE:	TEXAS
ZIP:	78259
PHONE#	(210) 838-6784
FAX#	
SAWS BLOCK MAP#	096548
TOTAL EDU'S	98
TOTAL ACREAGE	52.53
TOTAL LINEAR FOOTAGE OF PIPE: 8"-1.743 LF	PLAT NO. 22-11800398
NUMBER OF LOTS	98
SAWS JOB NO.	22-1627

NO.	REVISION	DATE



PAPE-DAWSON
ENGINEERS

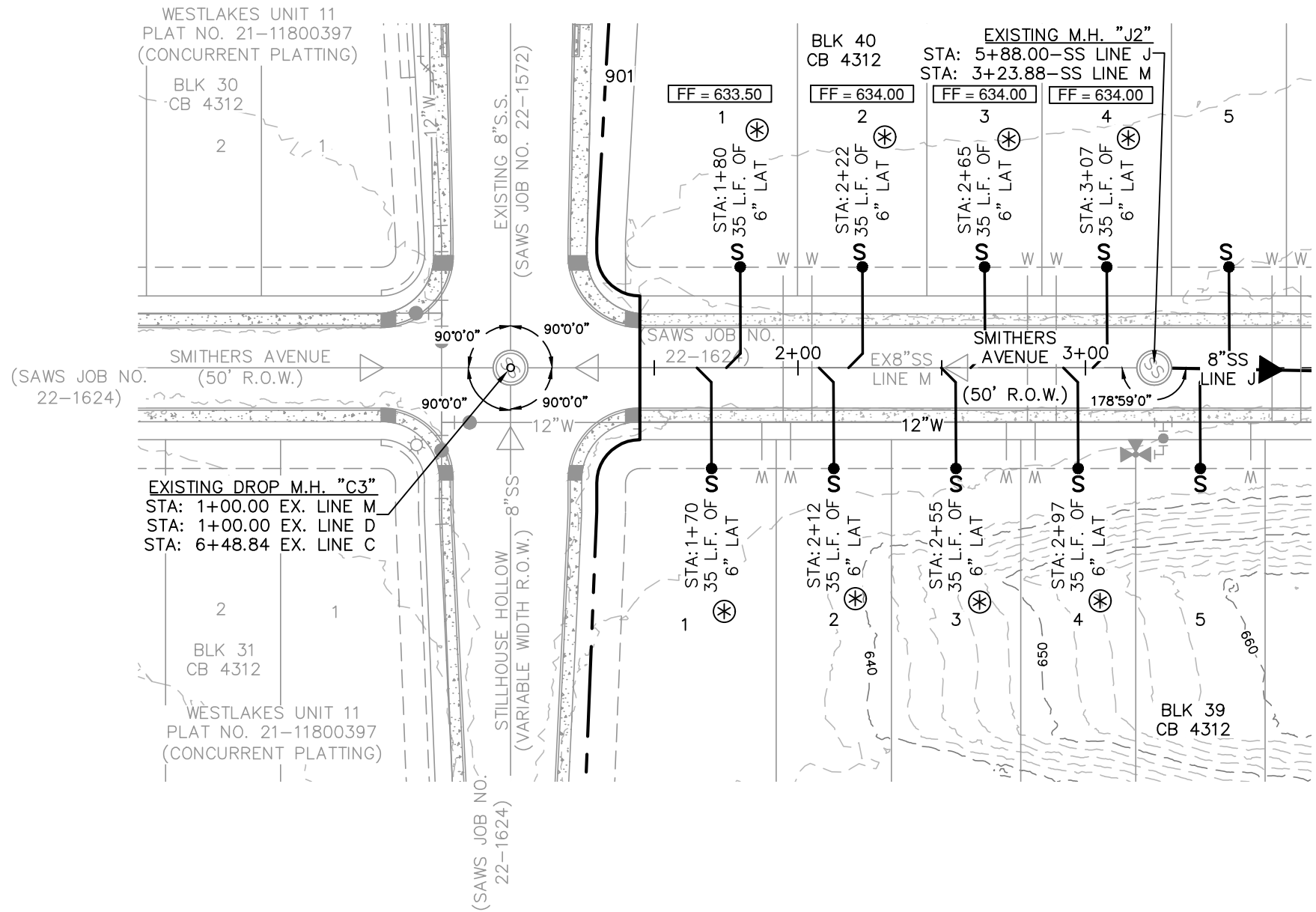
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

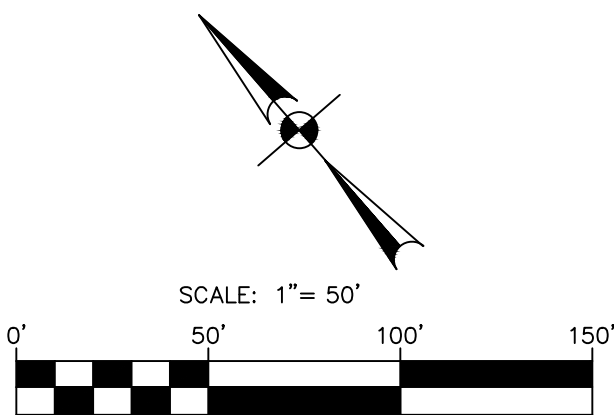
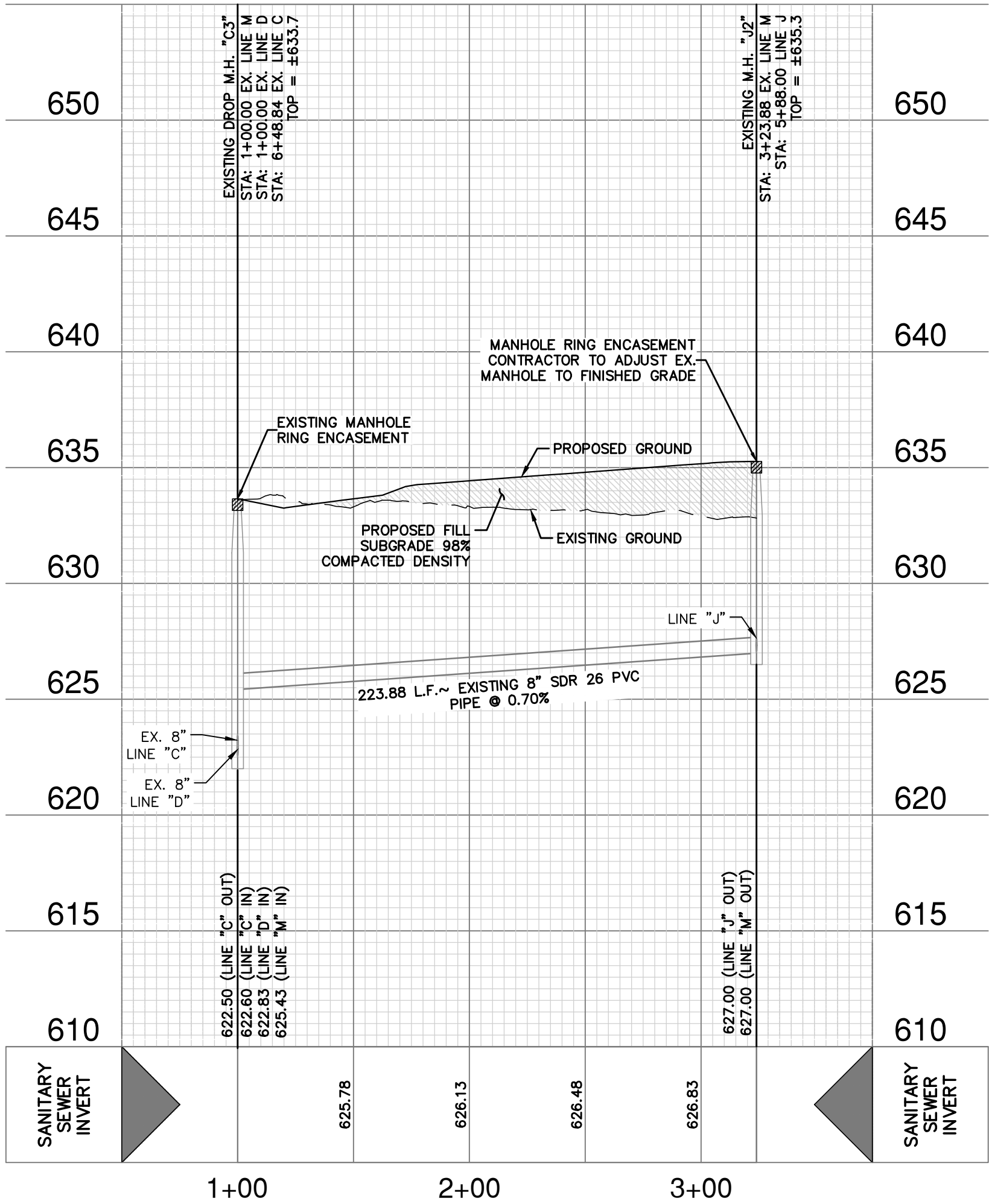
SANITARY SEWER LINE L

PLAN & PROFILE (STA. 1+00.00 TO END)

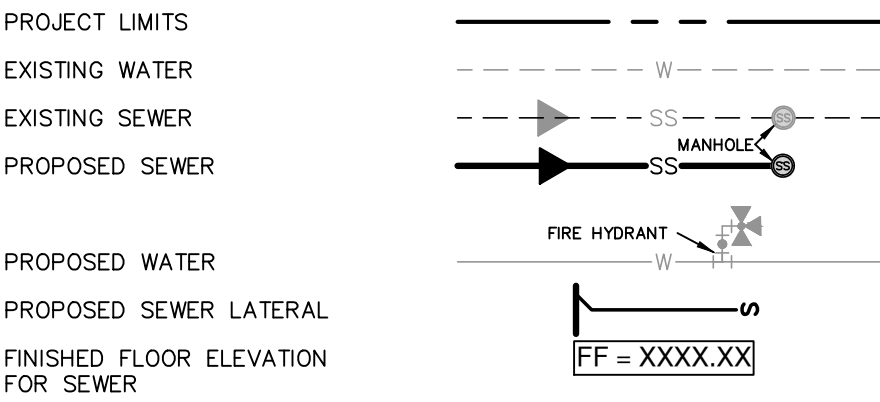
PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C4.04



SANITARY SEWER LINE M
PLAN & PROFILE (STA. 1+00.00 TO END) VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

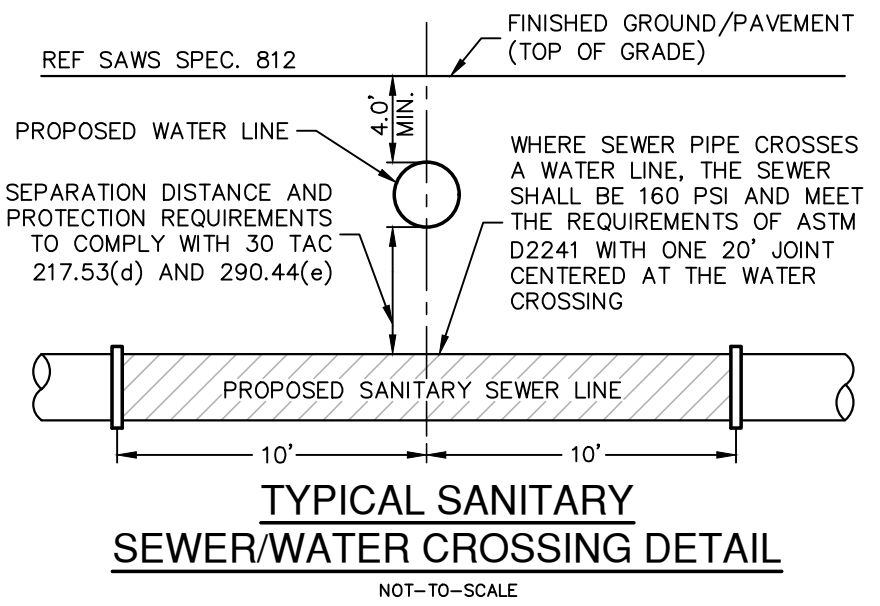


SEWER LEGEND



NOTE:

- ⊗ PROPOSED WYE & 6" LATERAL TO BE INSTALLED ON EXISTING SANITARY SEWER MAIN.



CAUTION!!

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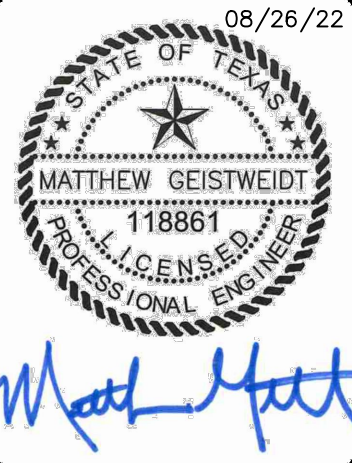
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SEWER: UPPER MEDINA RIVER SOUTH
SEWERSHED - DOS RIOS W.R.C.

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ADDRESS: 1718 DRY CREEK WAY, SUITE 120			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78259	
PHONE# (210) 838-6784	FAX#		
SAWS BLOCK MAP# 096548 TOTAL EDU'S 98 TOTAL ACREAGE 52.53			
TOTAL LINEAR FOOTAGE OF PIPE: 8"-1,743 LF PLAT NO. 22-11800398			
NUMBER OF LOTS 98		SAWS JOB NO. 22-1627	

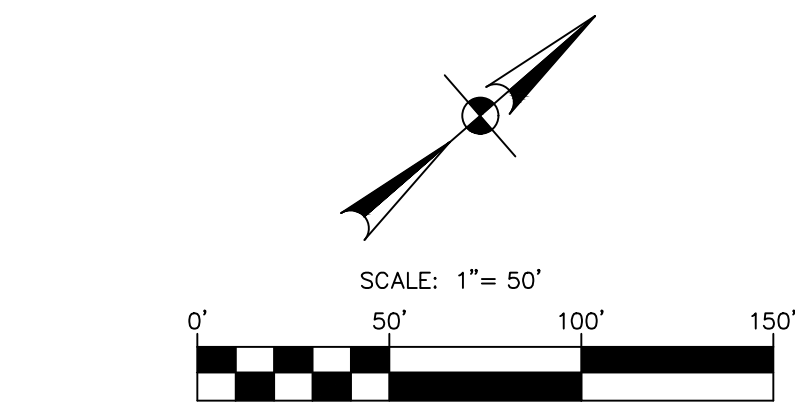
NO.	REVISION	DATE



PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1028800

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS
SANITARY SEWER LINE M
PLAN & PROFILE (STA. 1+00.00 TO END)

PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C4.05



PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL

FINISHED FLOOR ELEVATION FOR SEWER

FF = XXXX.XX

PROPOSED WYE & 6" LATERAL TO BE INSTALLED ON EXISTING SANITARY SEWER MAIN.



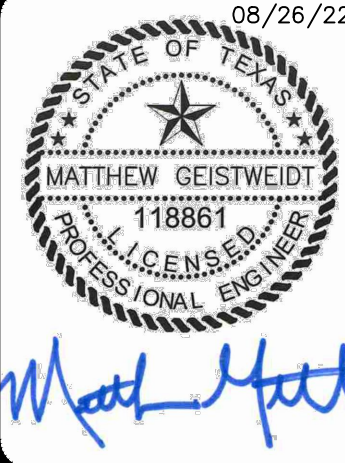
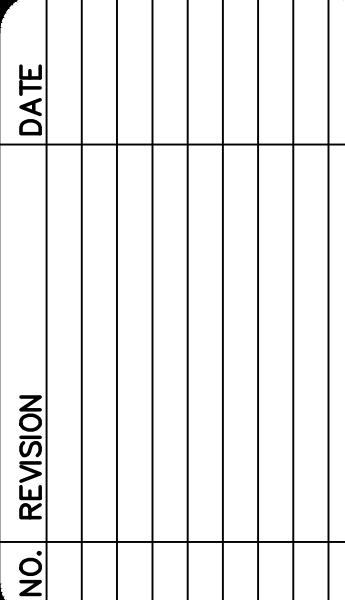
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DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
ADDRESS: 1718 DRY CREEK WAY, SUITE 120
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
PHONE# (210) 838-6784 FAX# _____
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TOTAL LINEAR FOOTAGE OF PIPE: 8'-1,743 LF PLAT NO 22-11800398
NUMBER OF LOTS 98 SAWS JOB NO. 22-1627



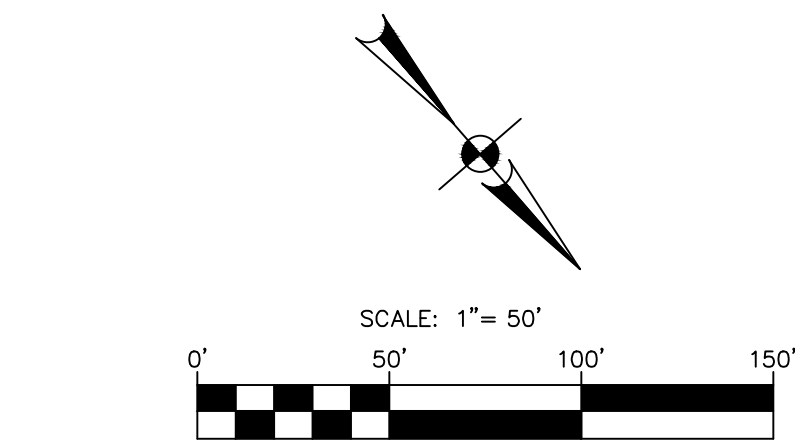
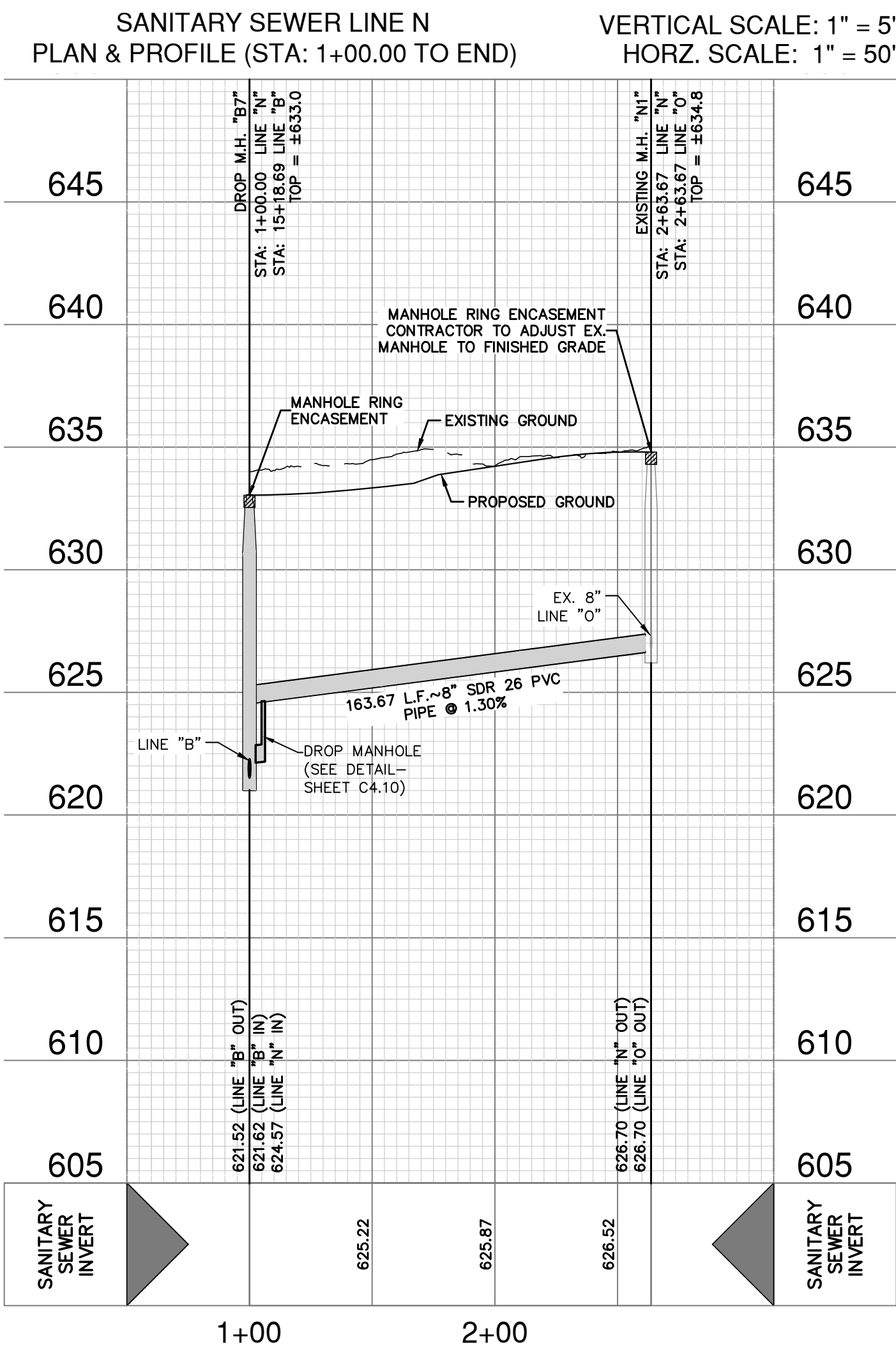
**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1023880

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

SANITARY SEWER LINE O
PLAN & PROFILE (STA. 1+00.00 TO E

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGG
SHEET **C4.06**

[illegible]

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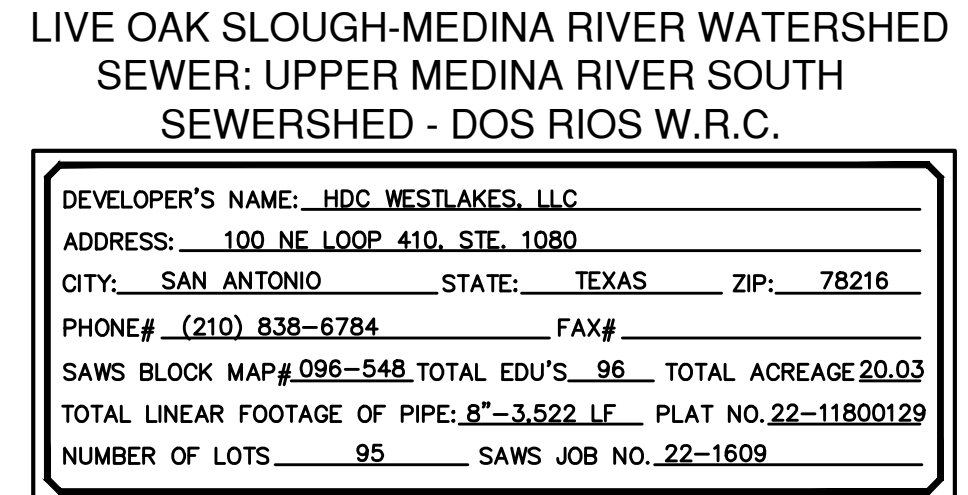
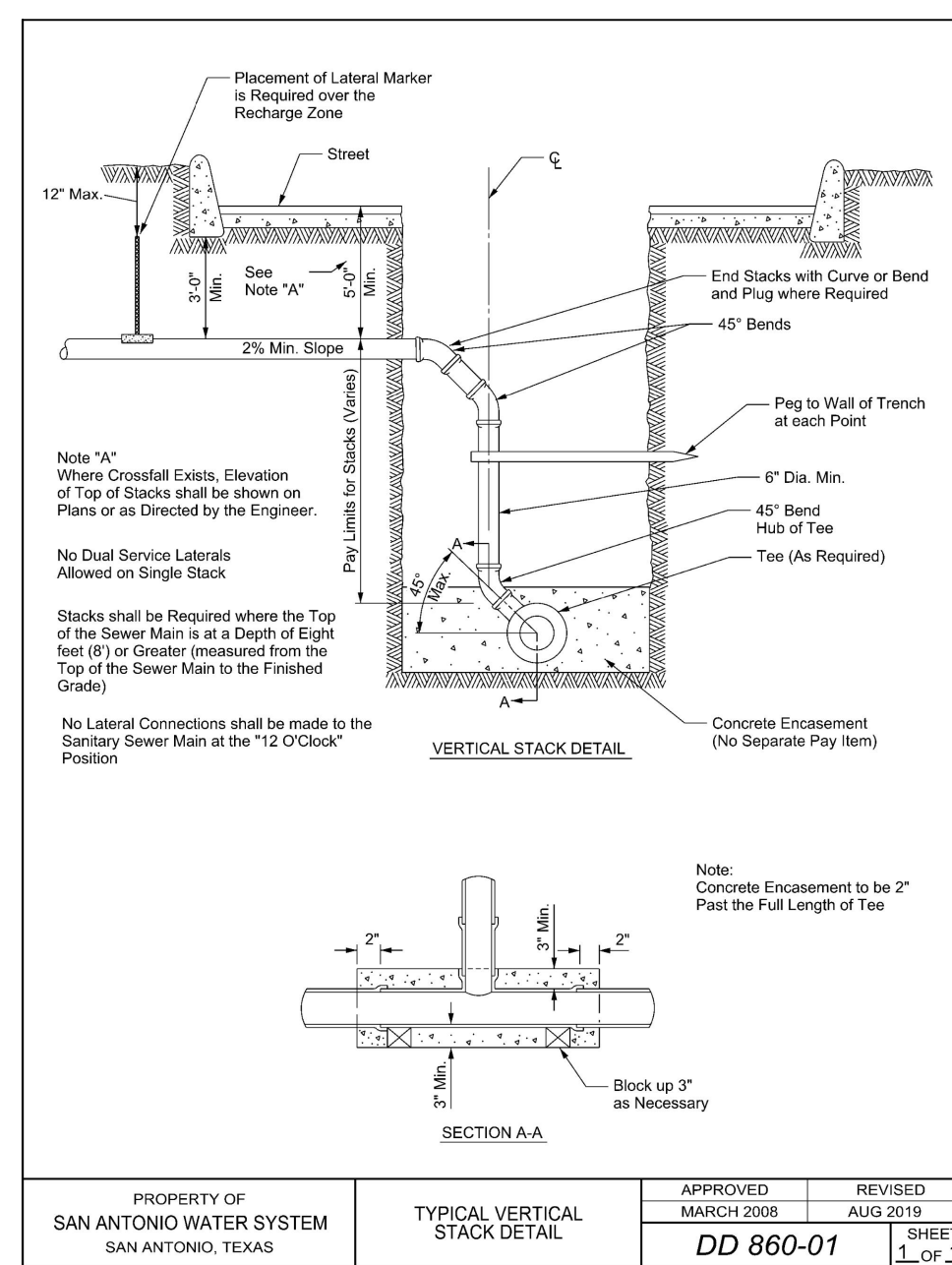
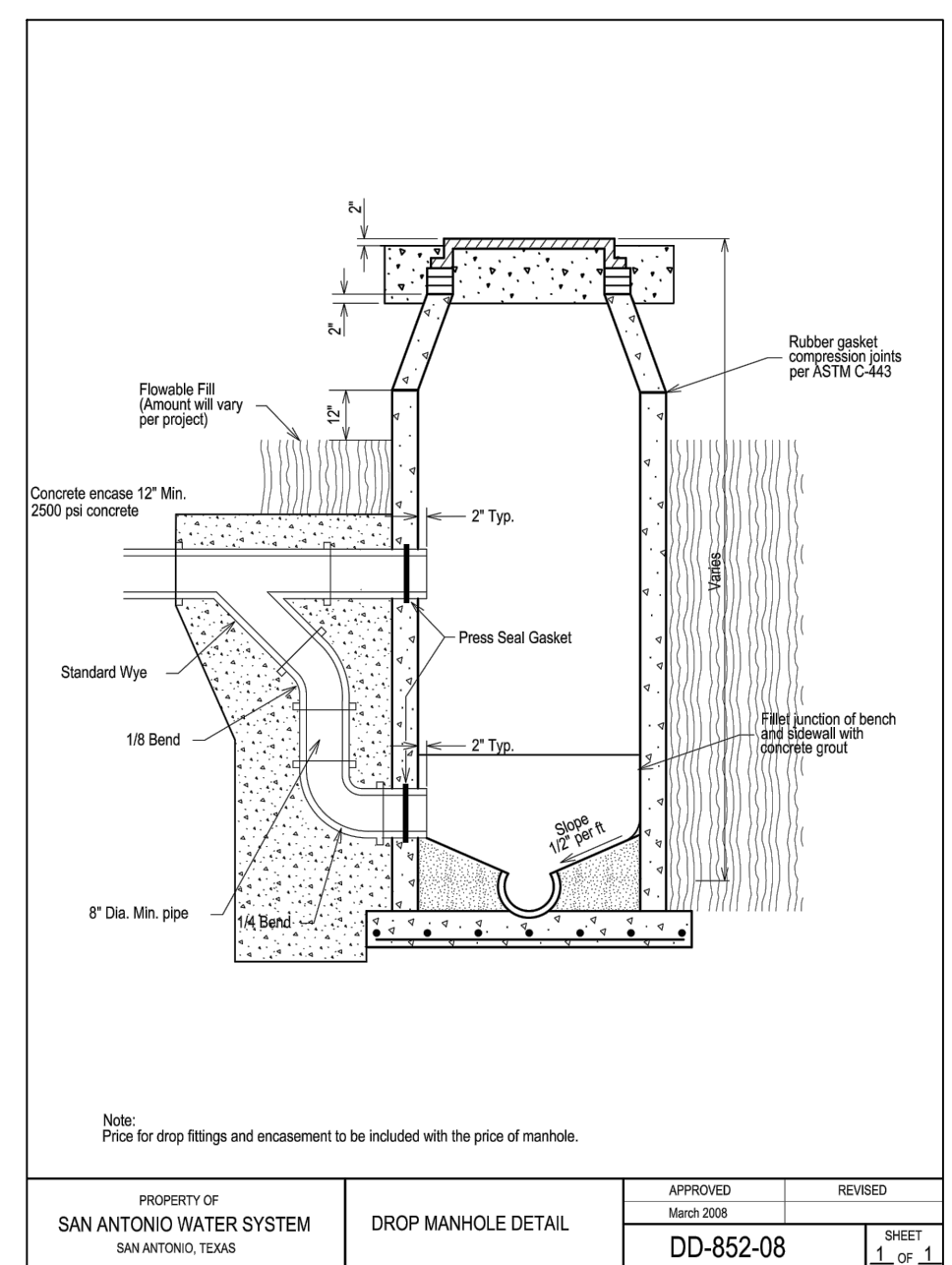
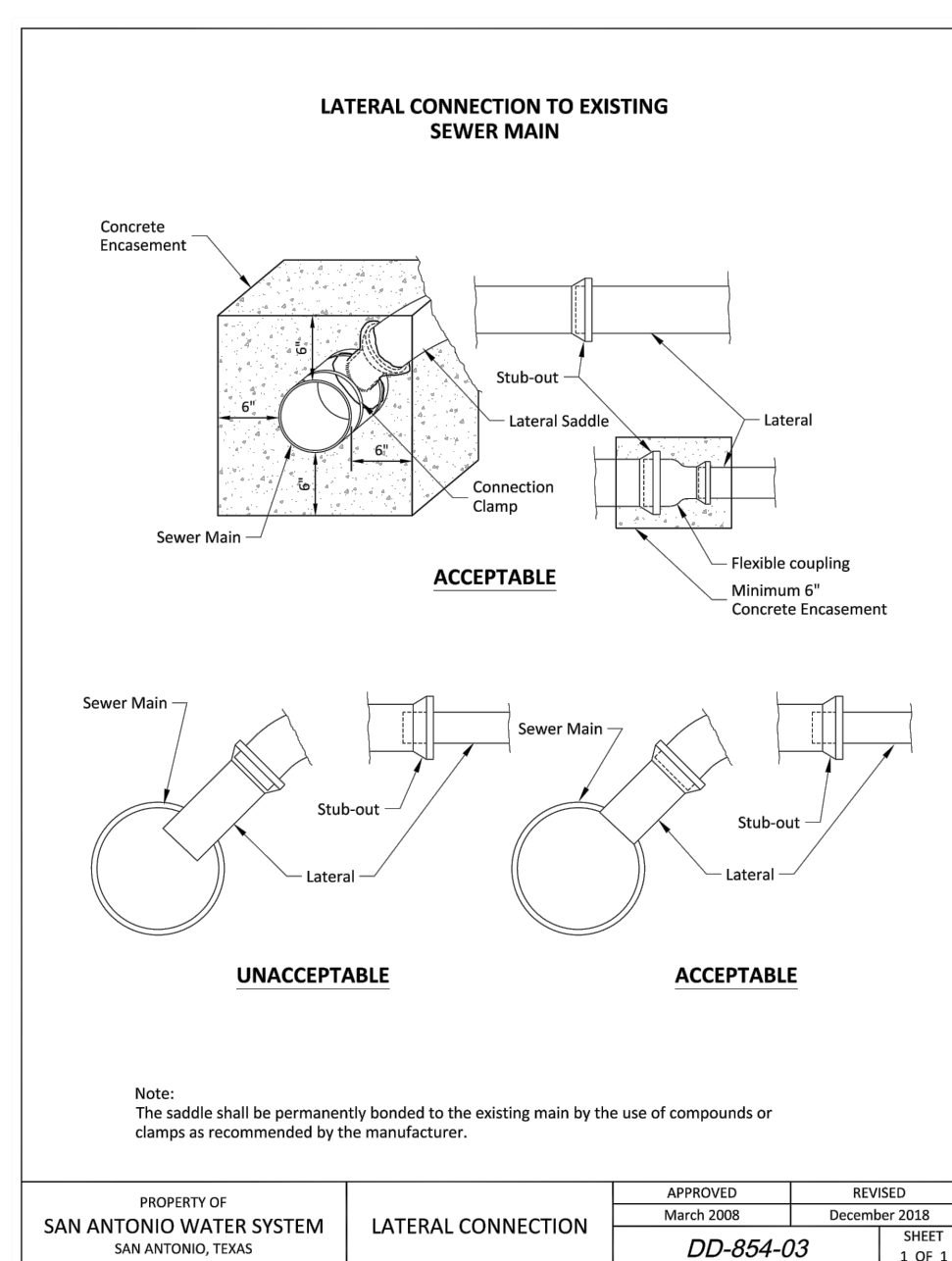
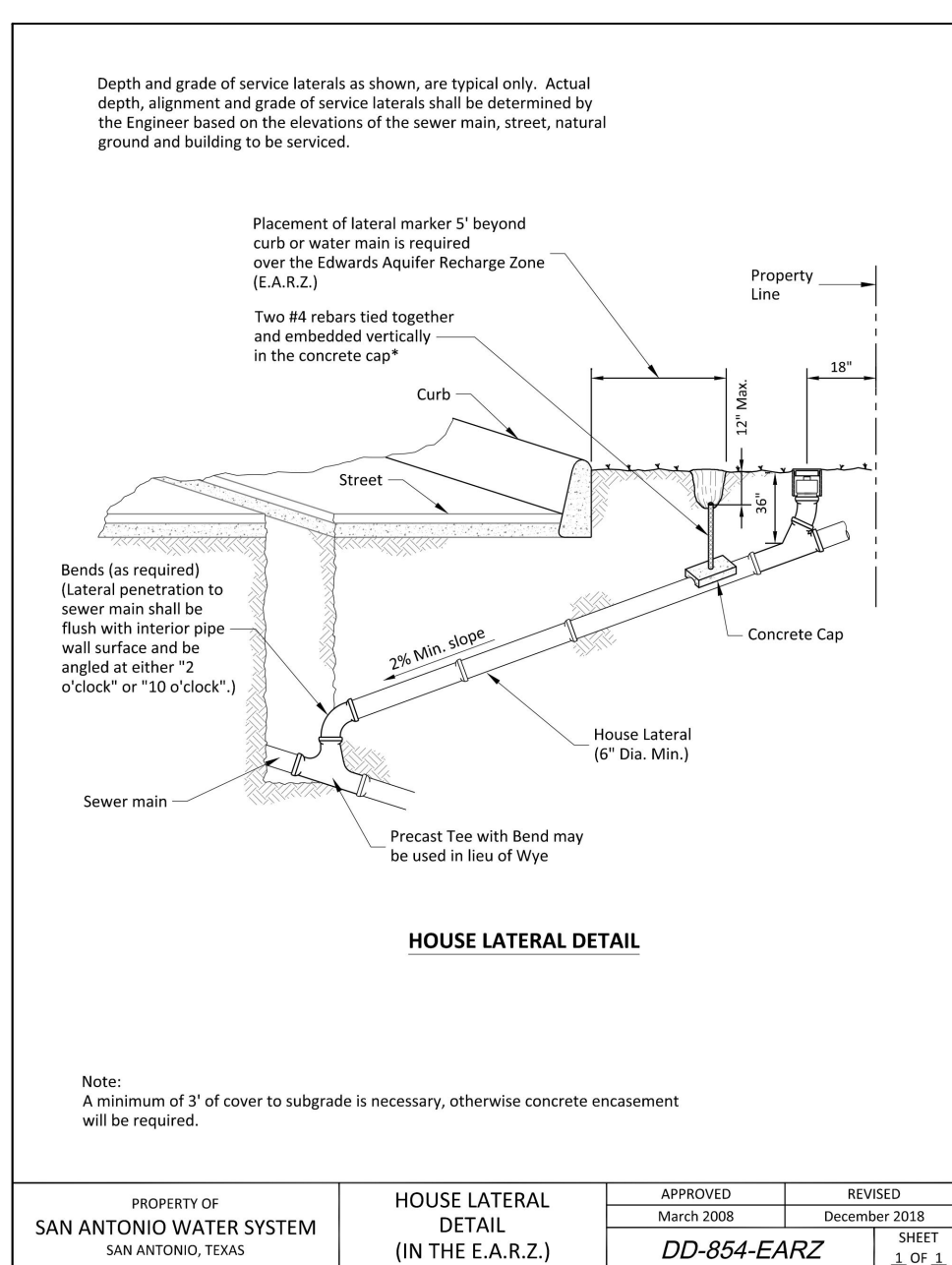
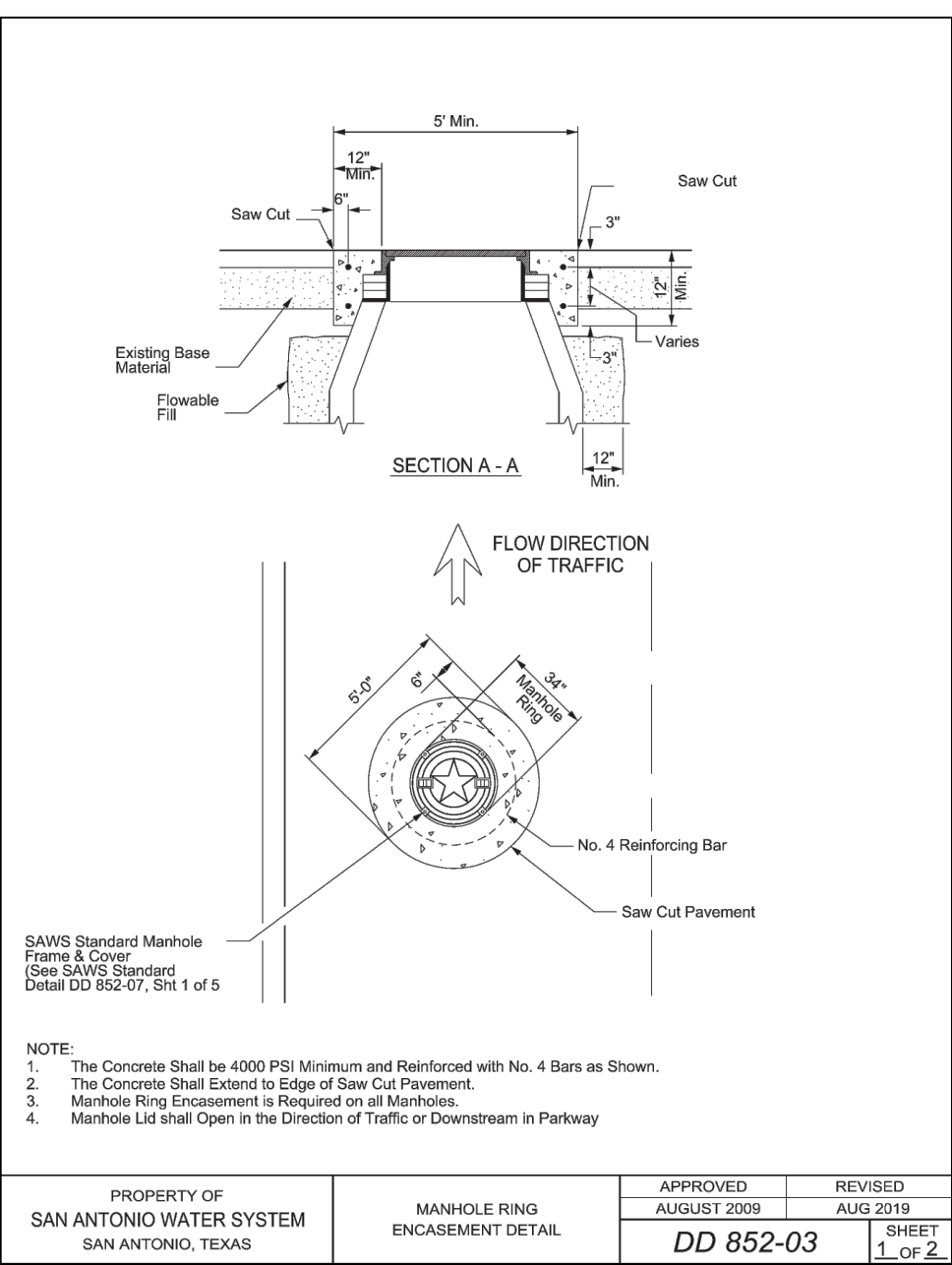
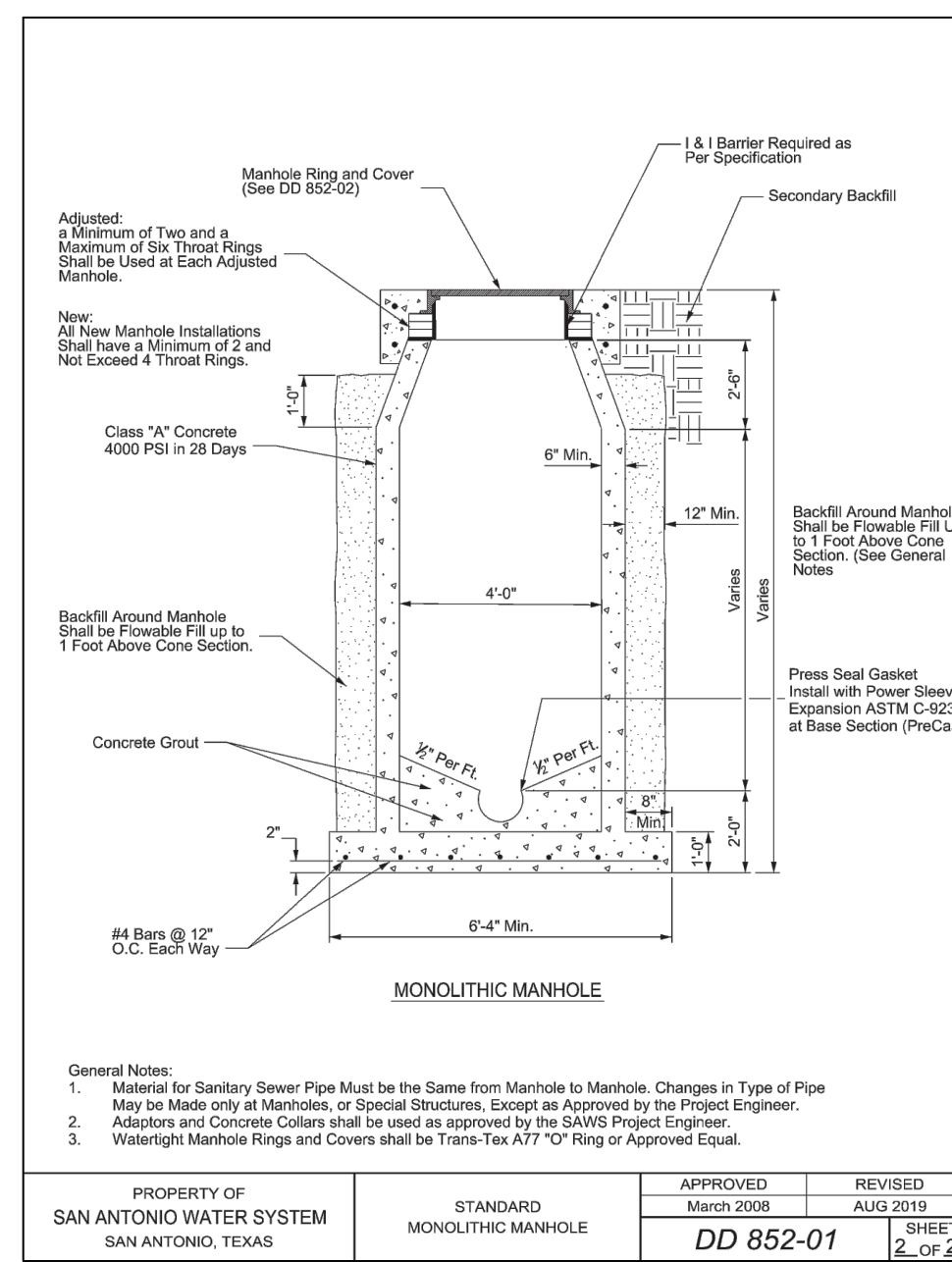
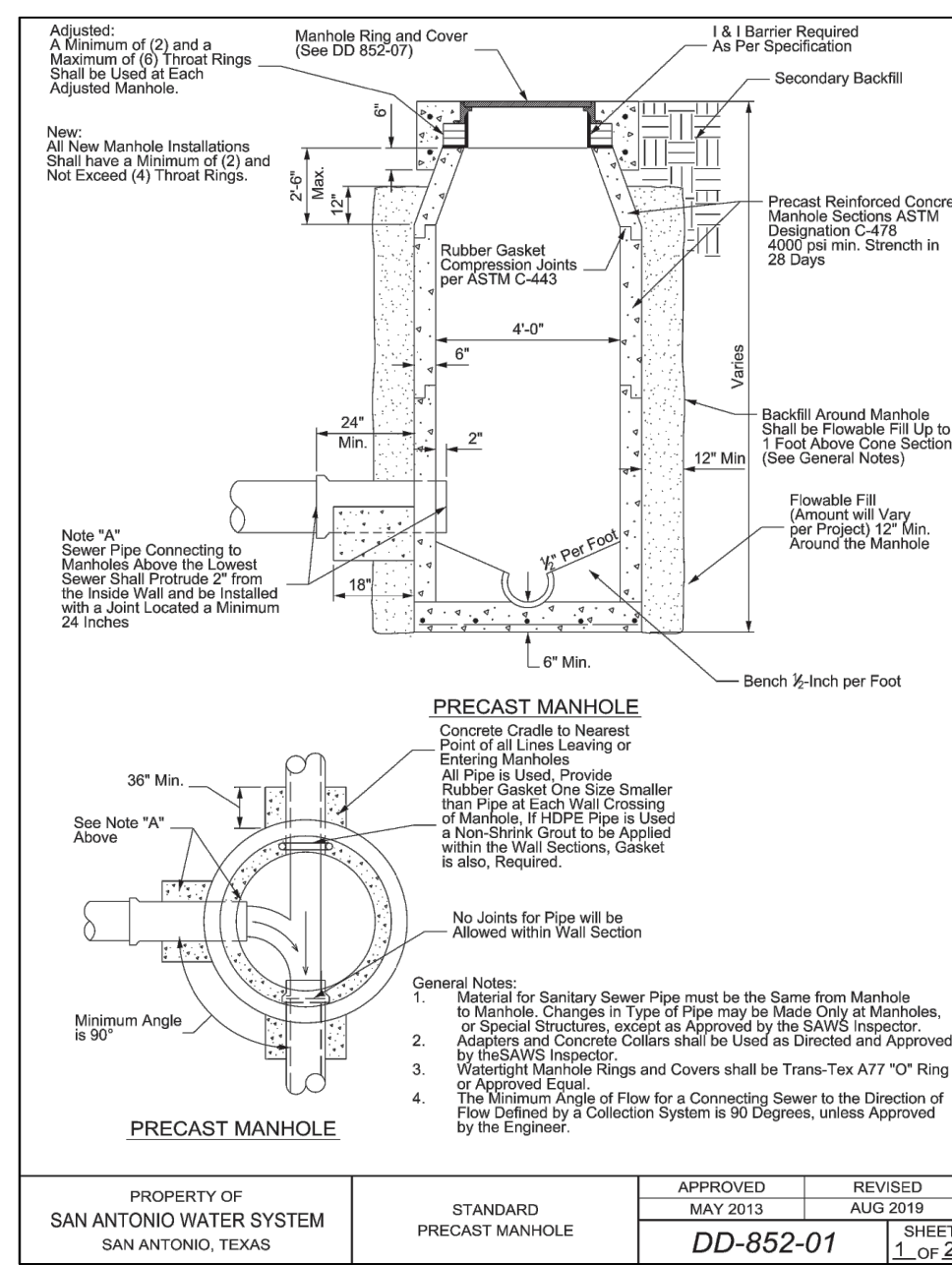
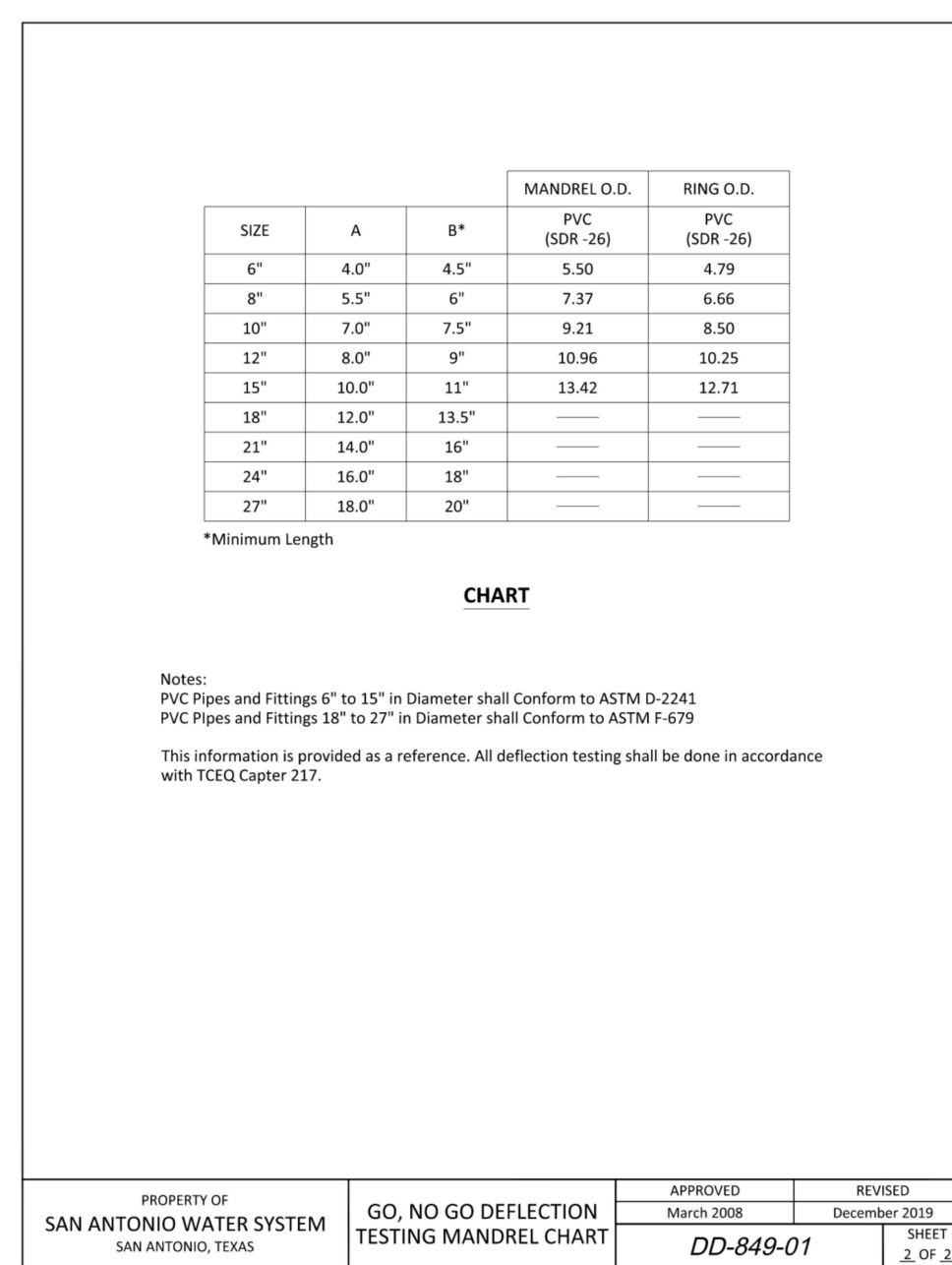
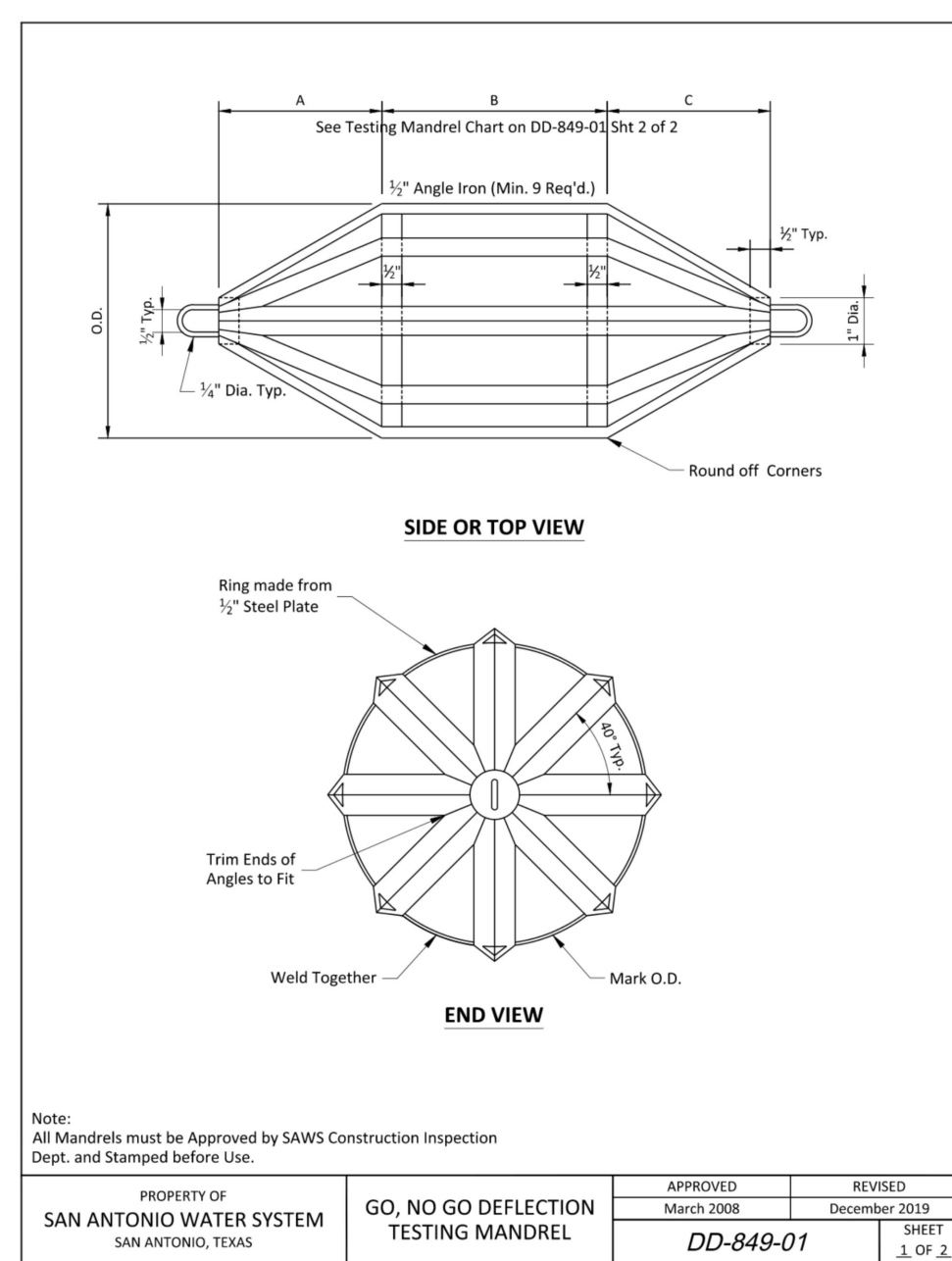
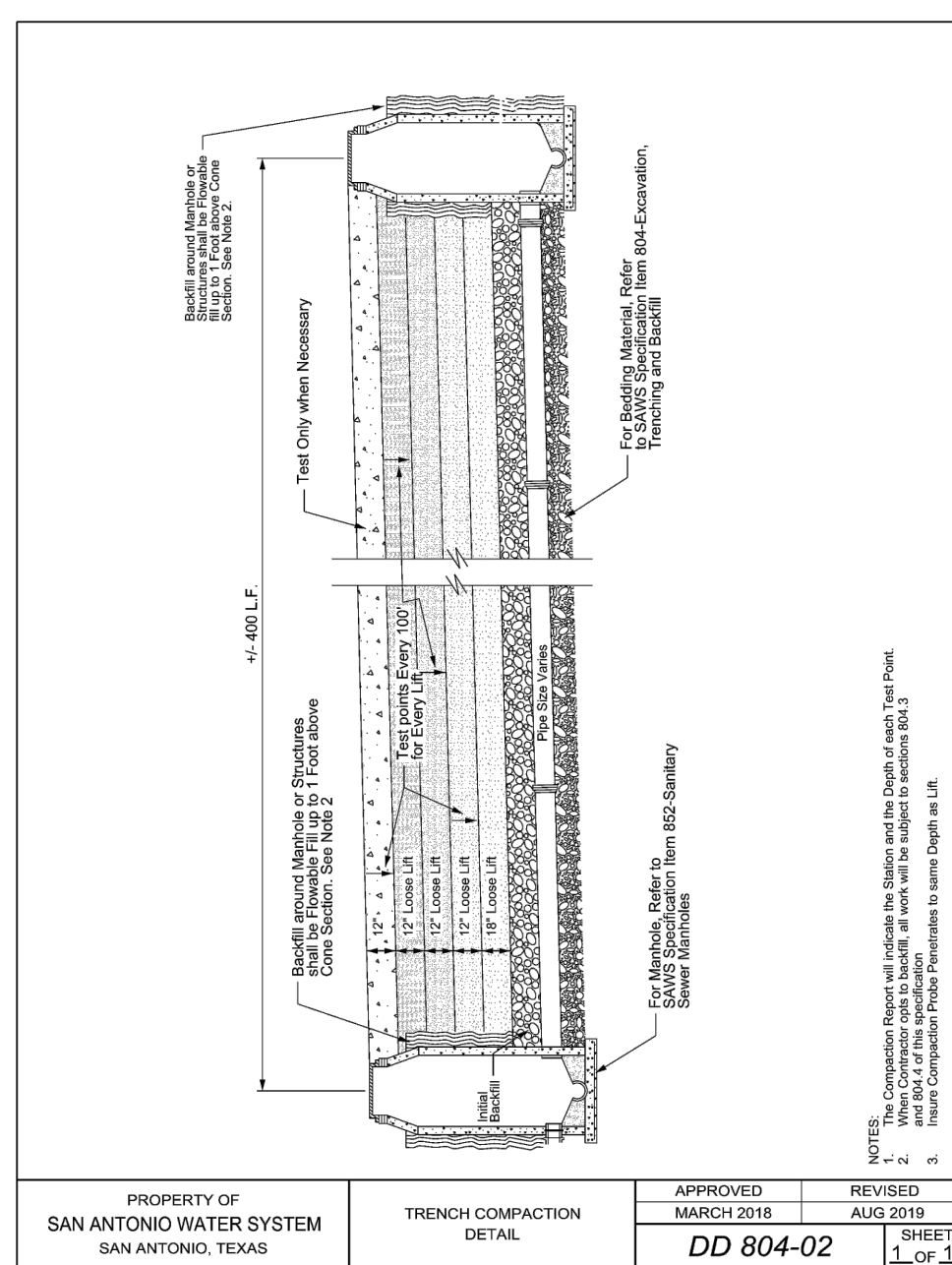
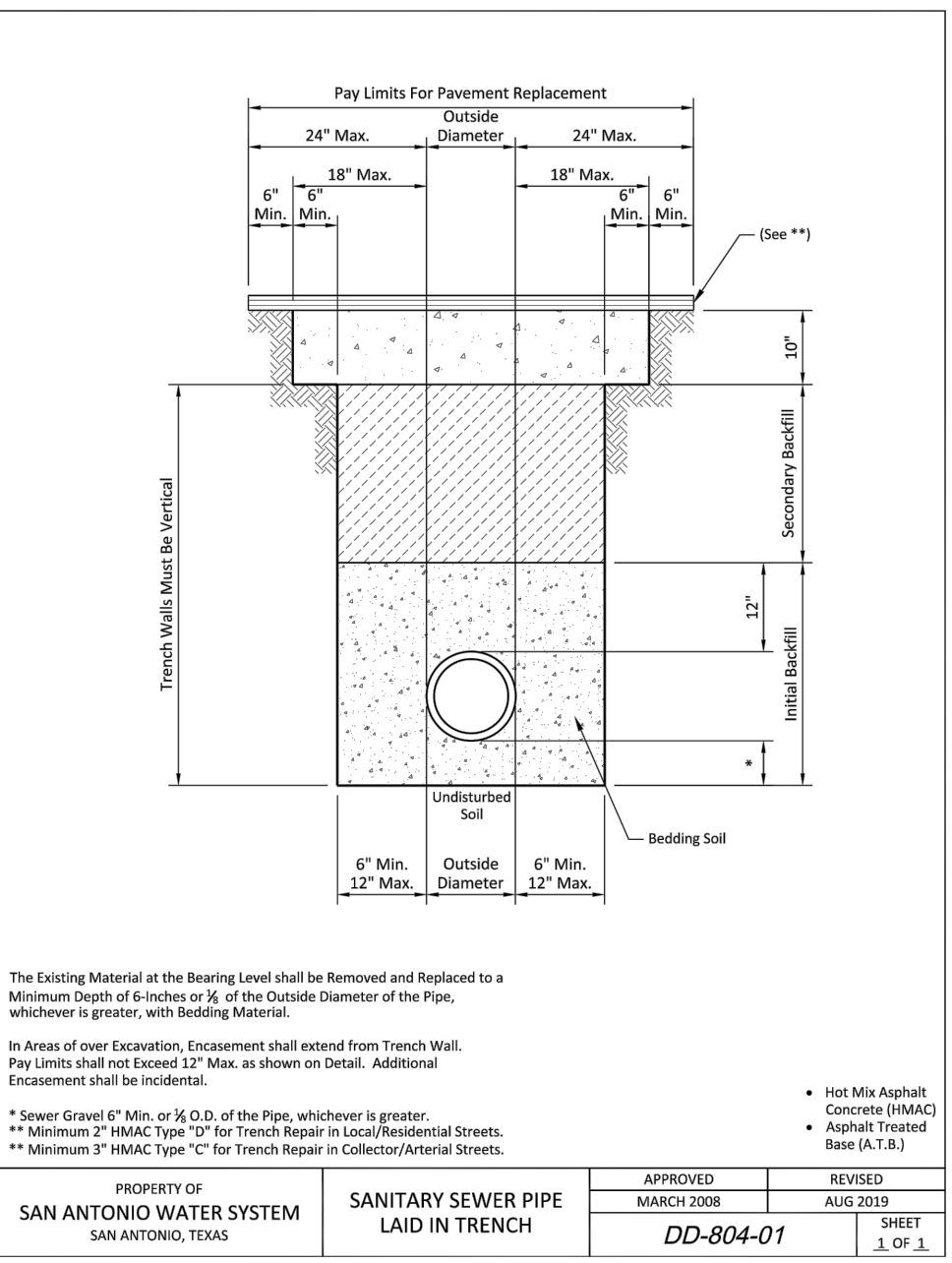
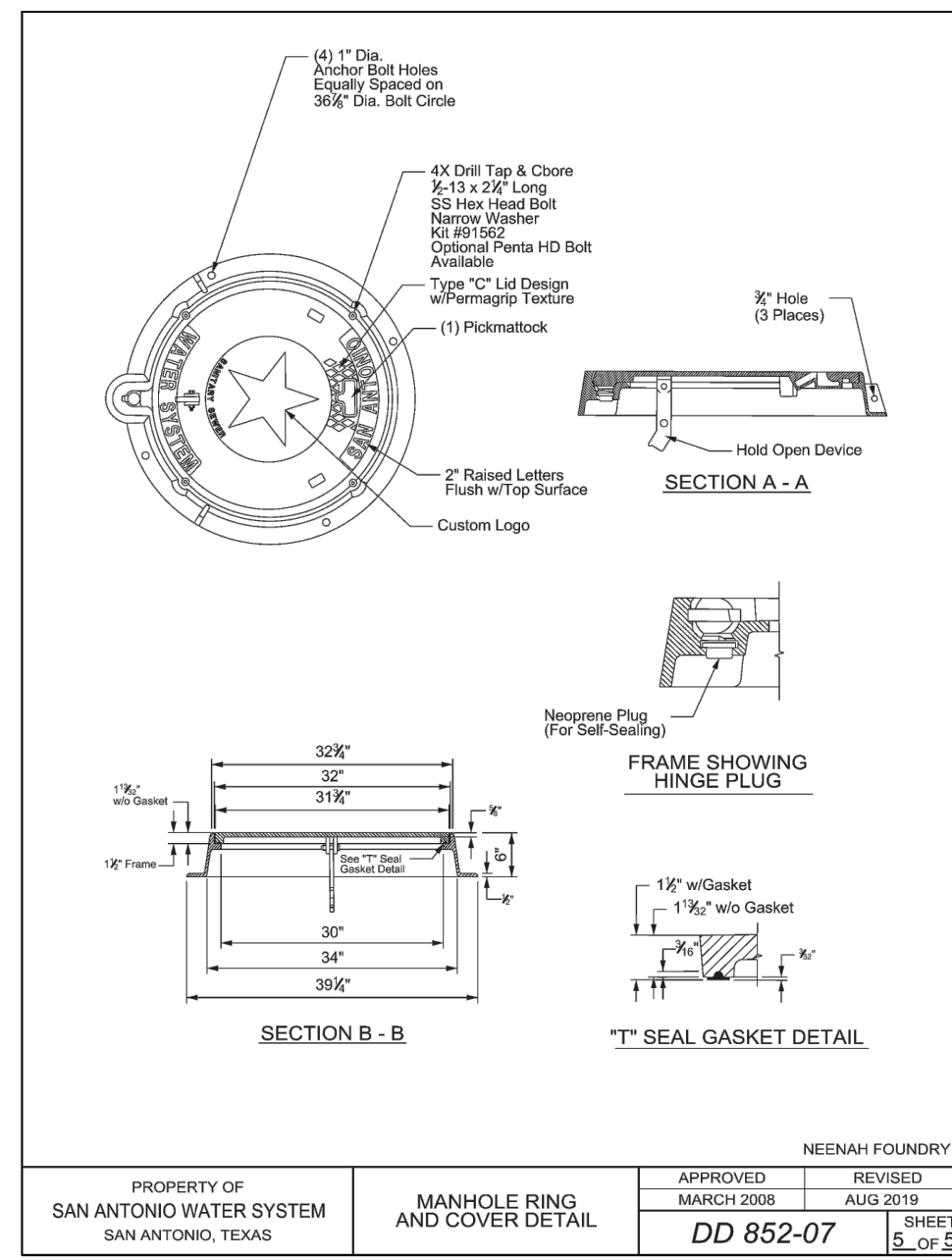
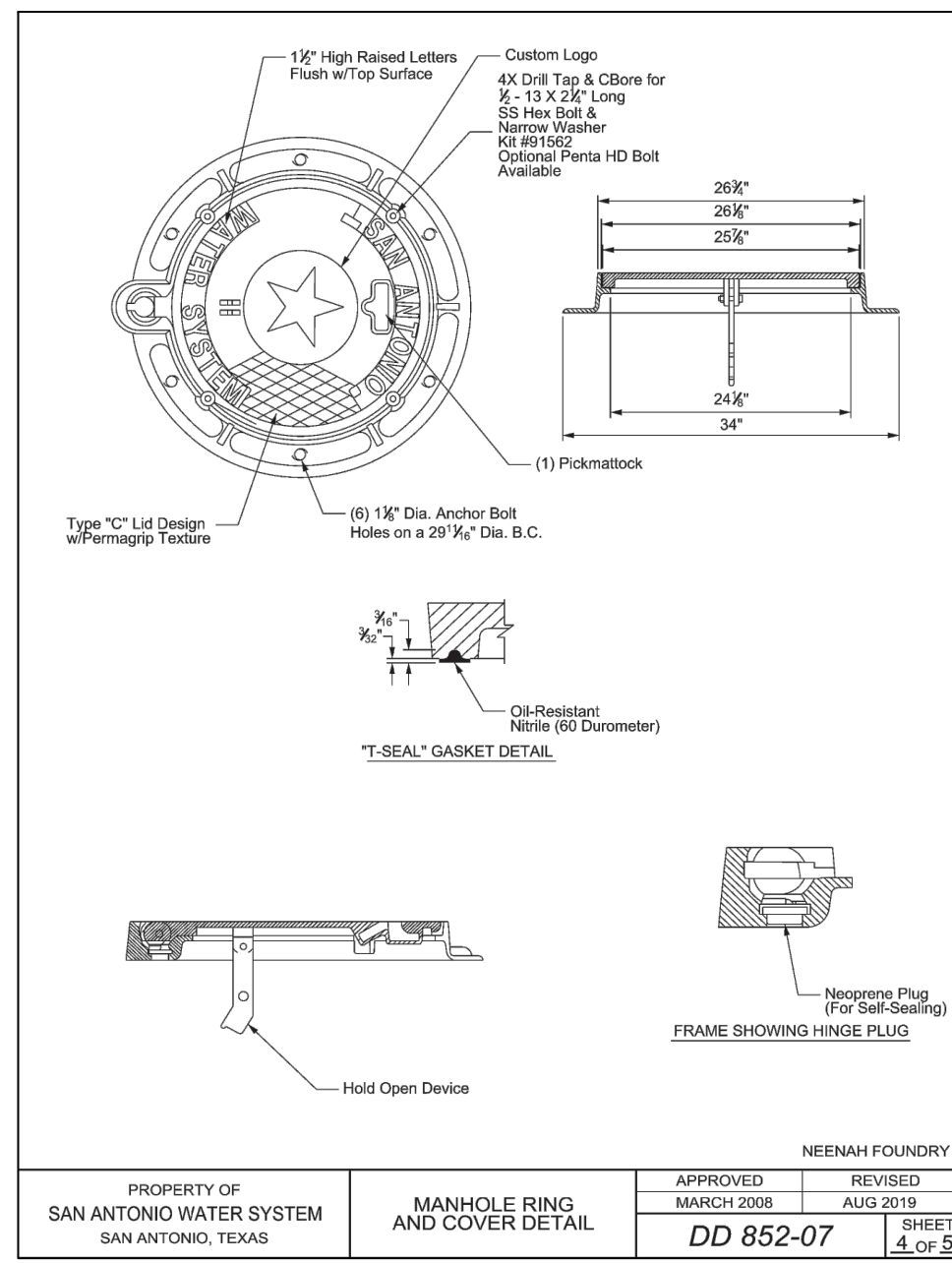
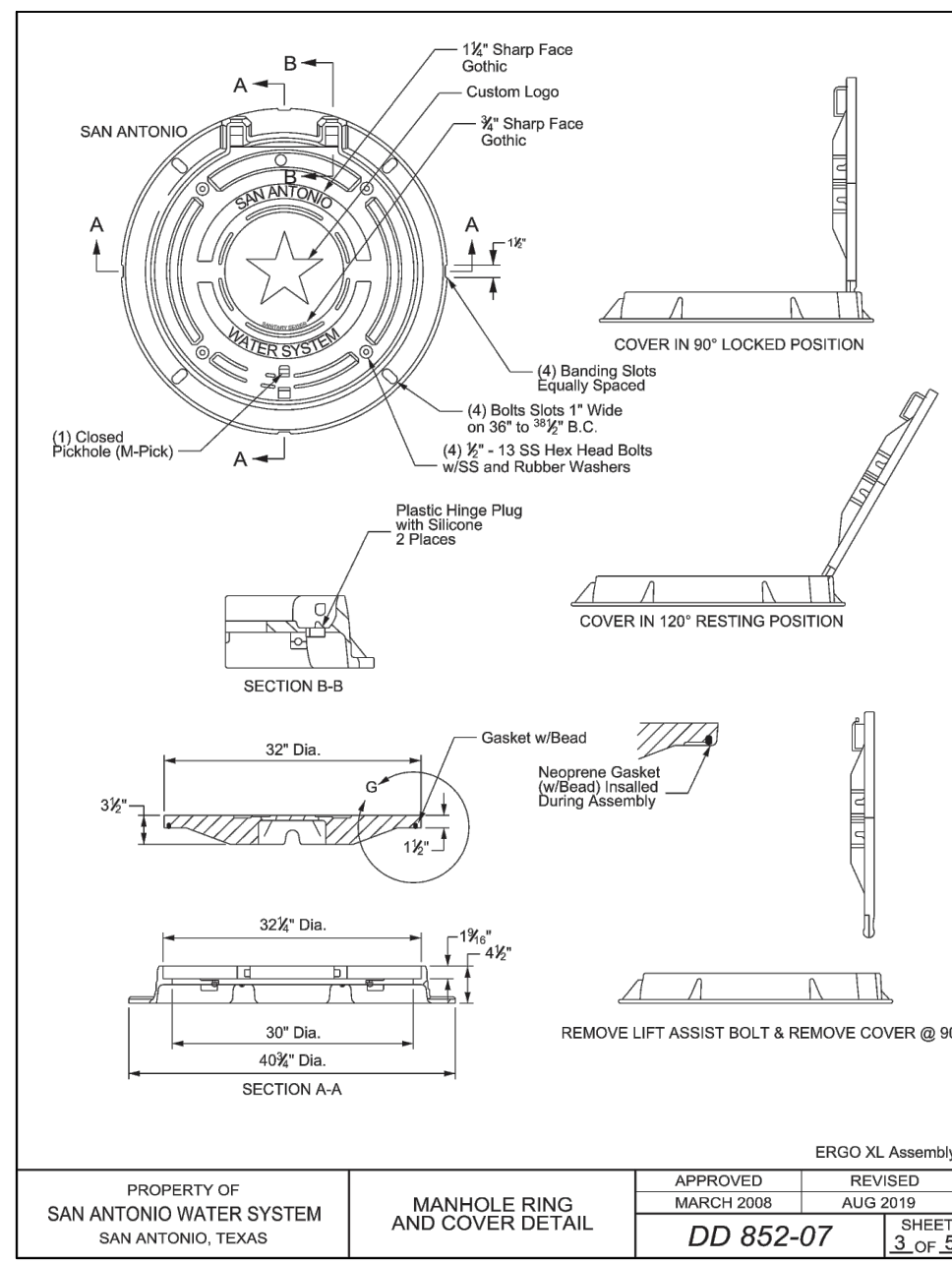
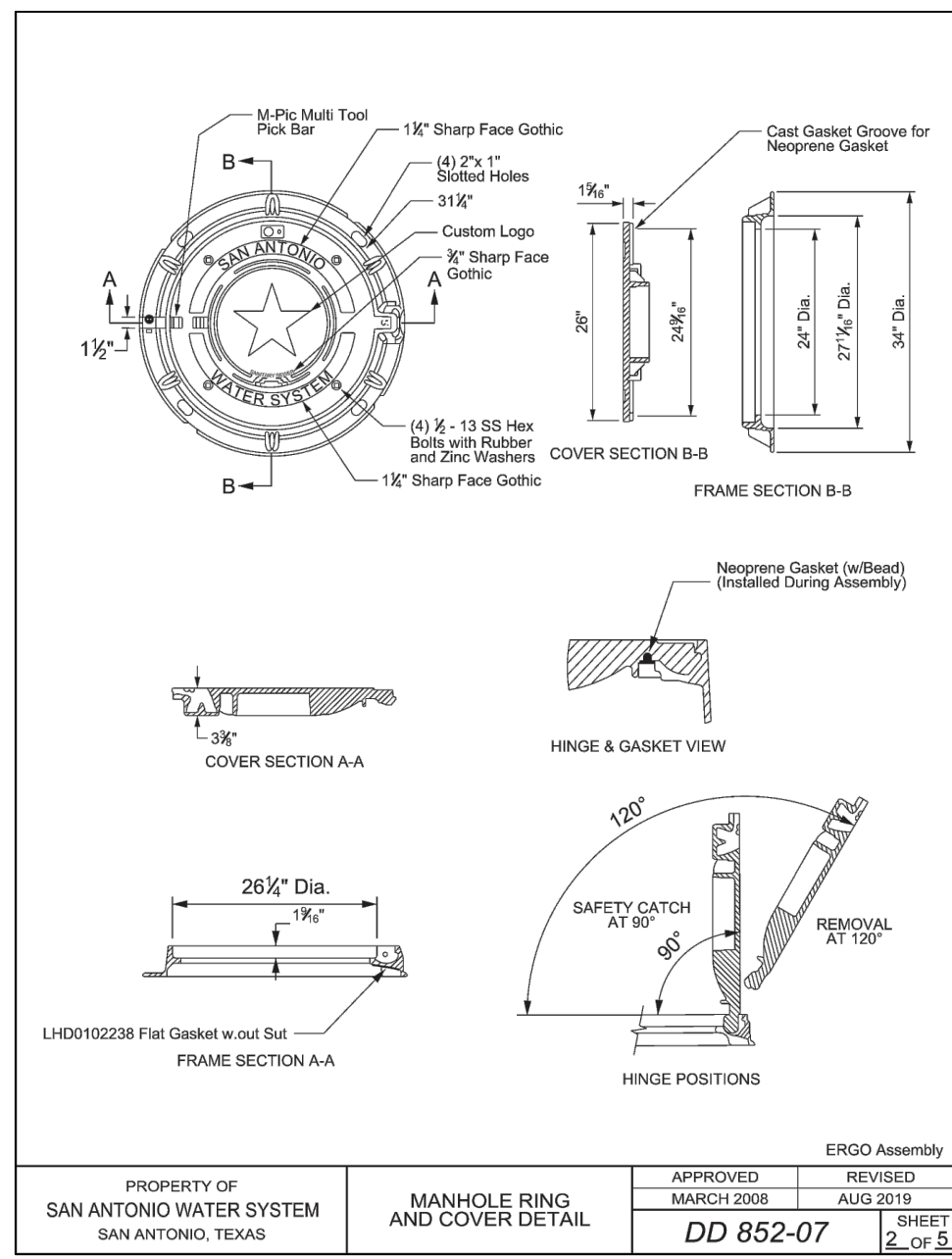
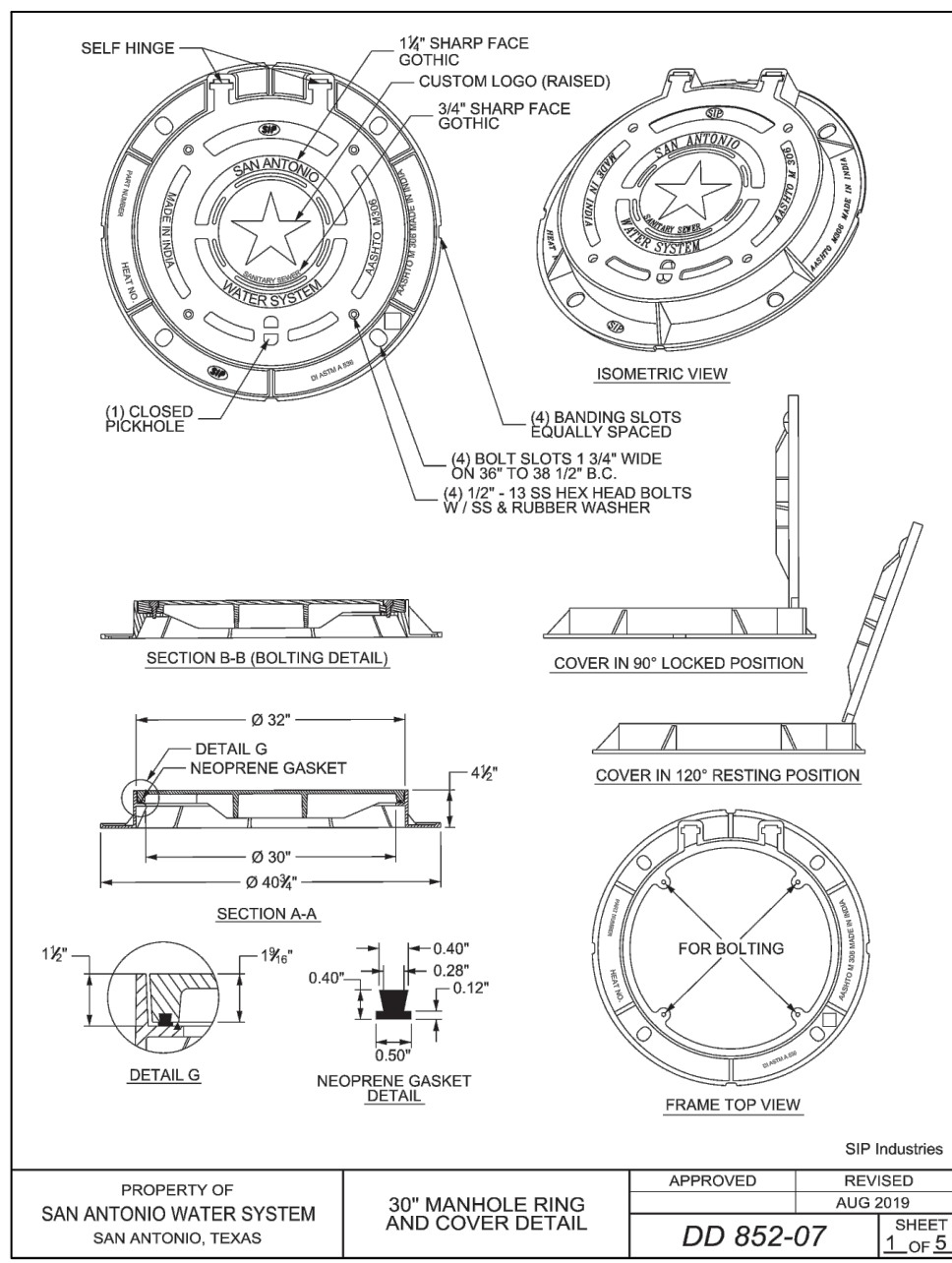
WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

SANITARY SEWER LINE N
PLAN & PROFILE (STA: 1+00.00 TO E

PLAT NO. 21-11800398
 JOB NO. 11348-44
 DATE JUNE 2022
 DESIGNER EDK
 CHECKED MG DRAWN MGG
 SHEET C4.07

Date: Aug. 26, 2023, 10:29am User: JD - represent
File: P:\1348\44\Design\DWG\SSD113484.dwg

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DATE

NO. REVISION

08/26/22

STATE OF TEXAS
MATTHEW GEISTWEID
118861
PROFESSIONAL ENGINEER

West Lakes

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

SAWYER SEWER DETAILS

PLAT NO. 21-11800398

JOB NO. 11348-44

DATE JUNE 2022

DRAWN EDK

CHECKED MG

DRAWN MGO

SHEET C4.10

PLANT NO. 21-11800398

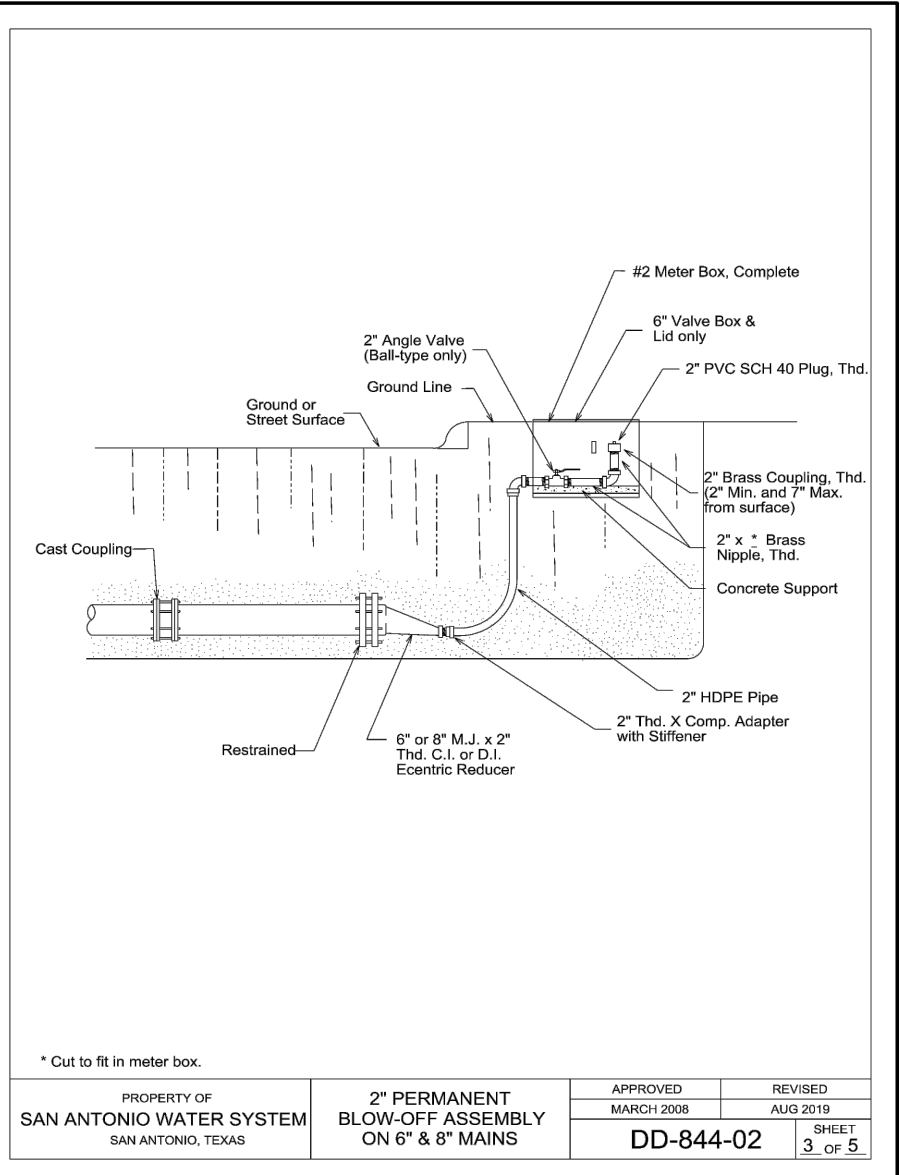
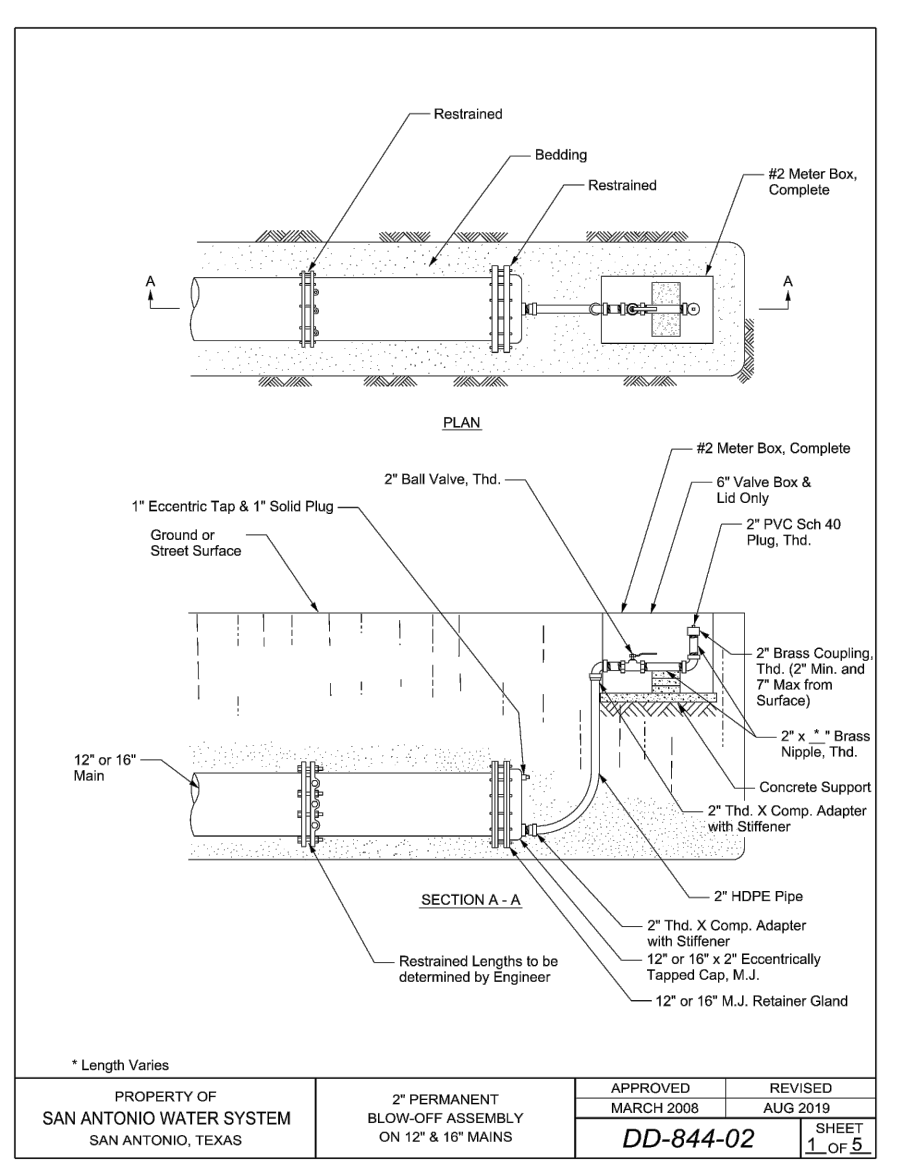
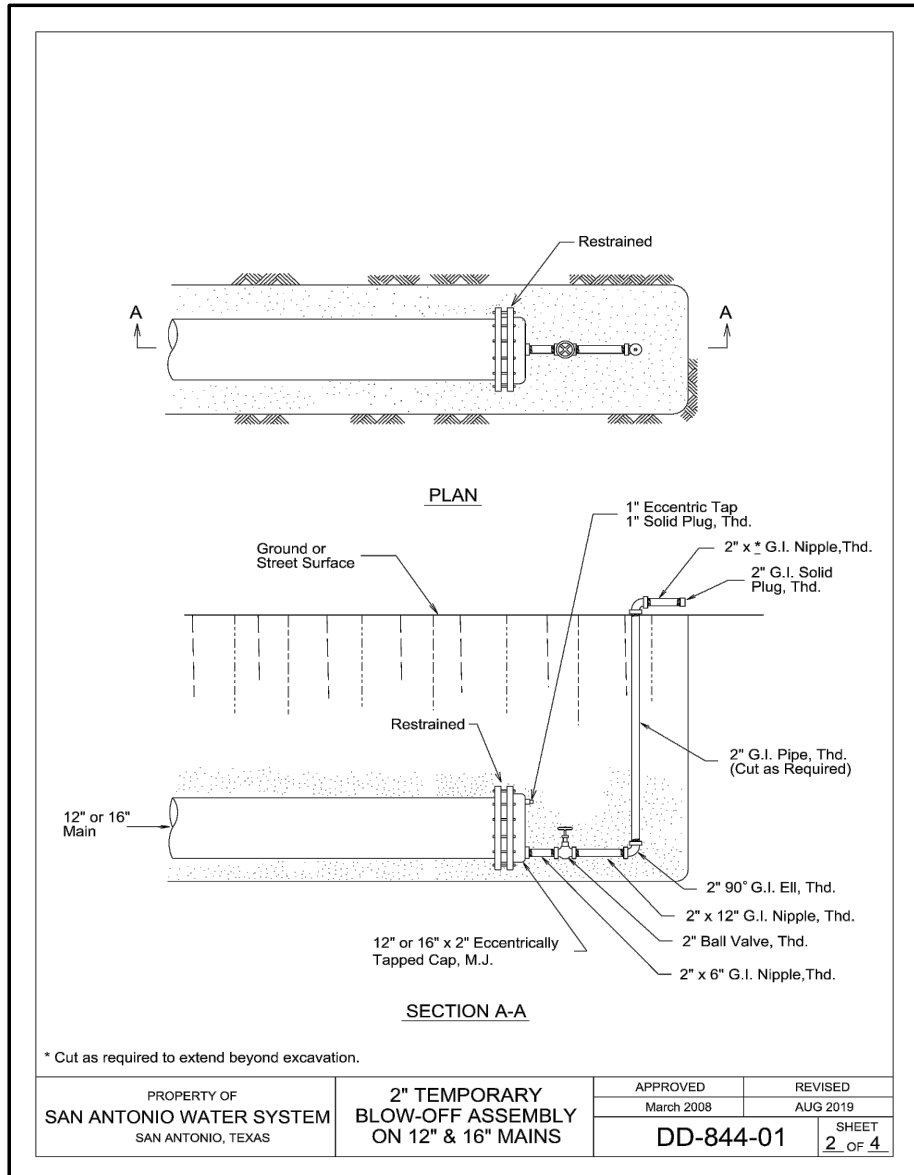
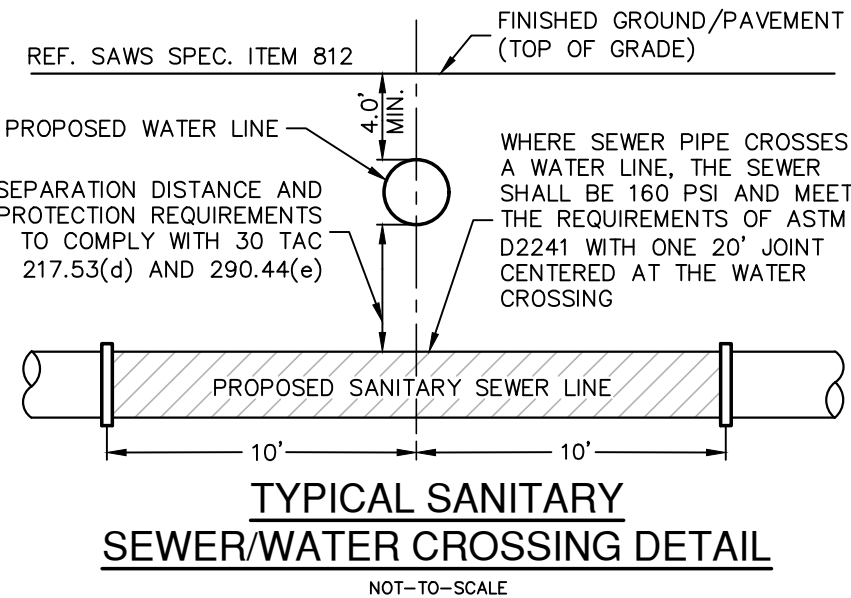
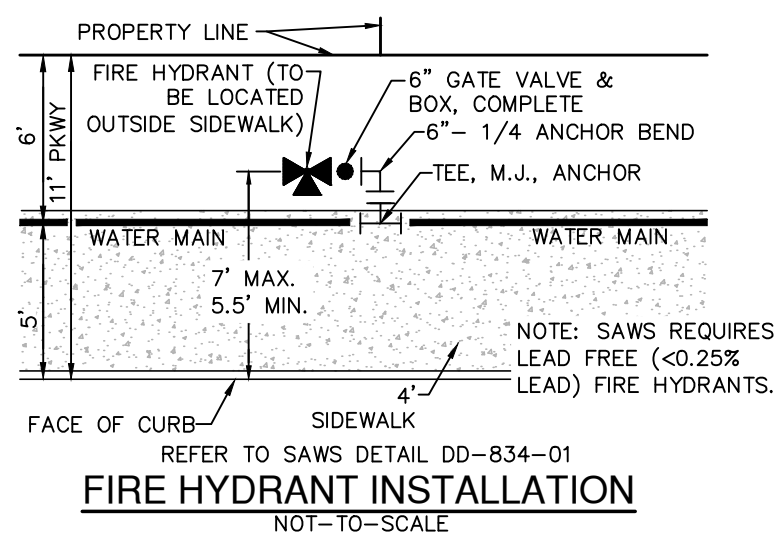
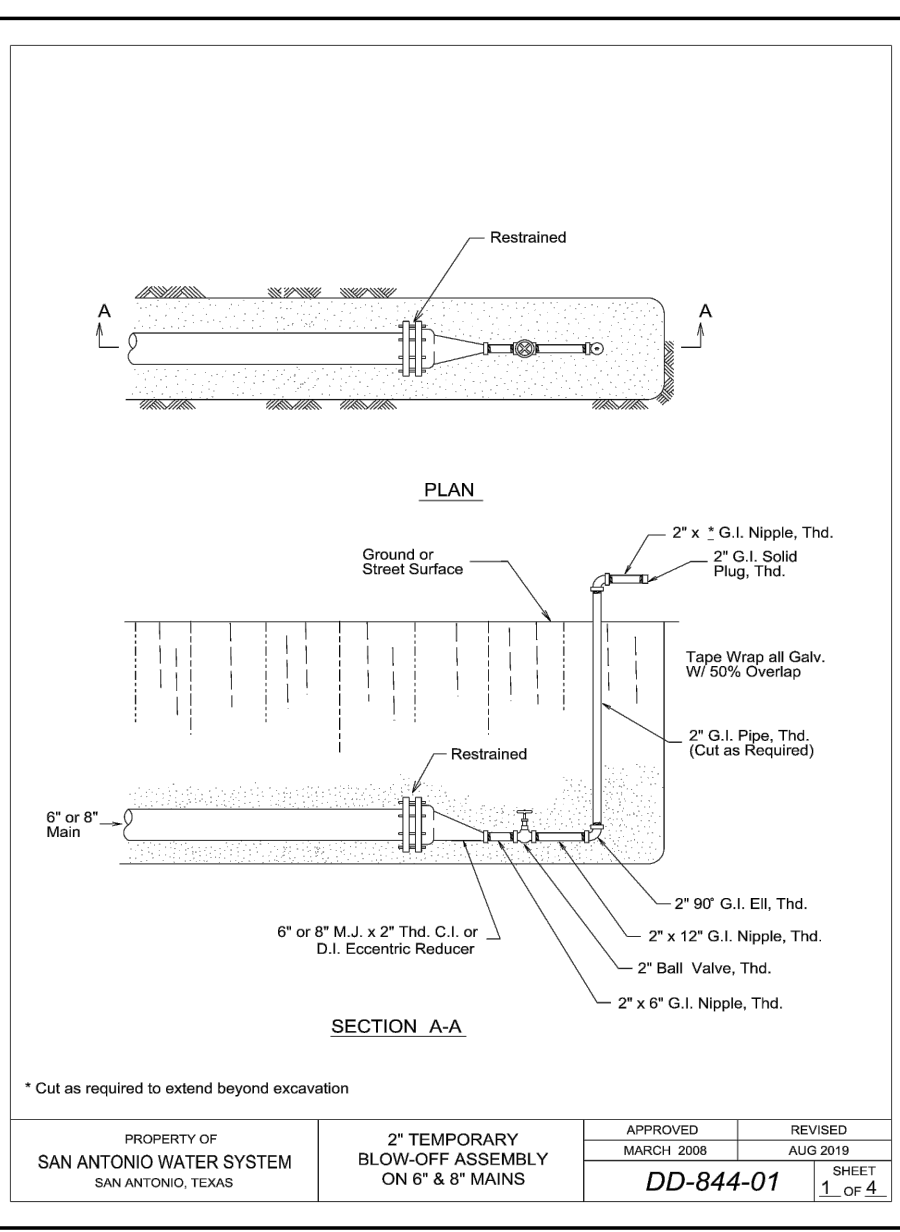
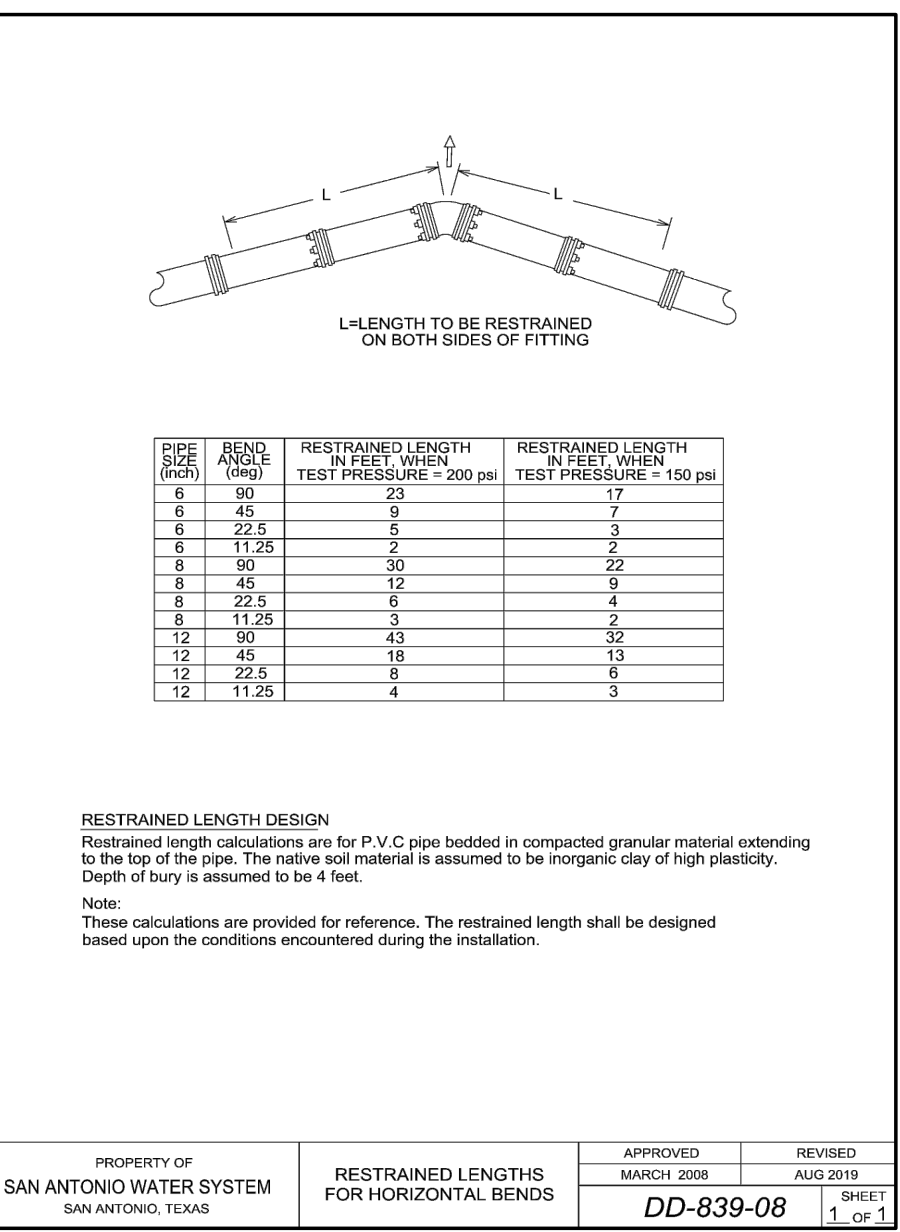
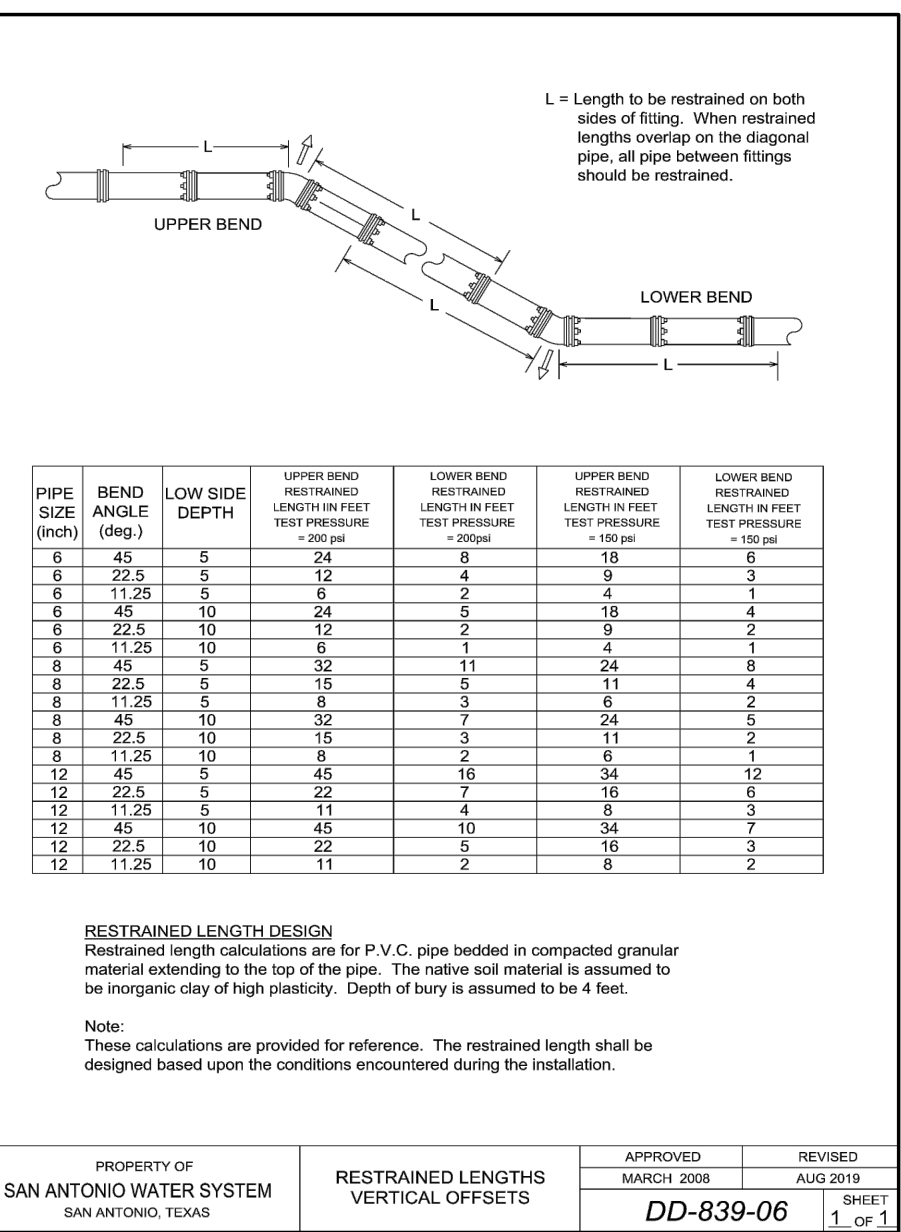
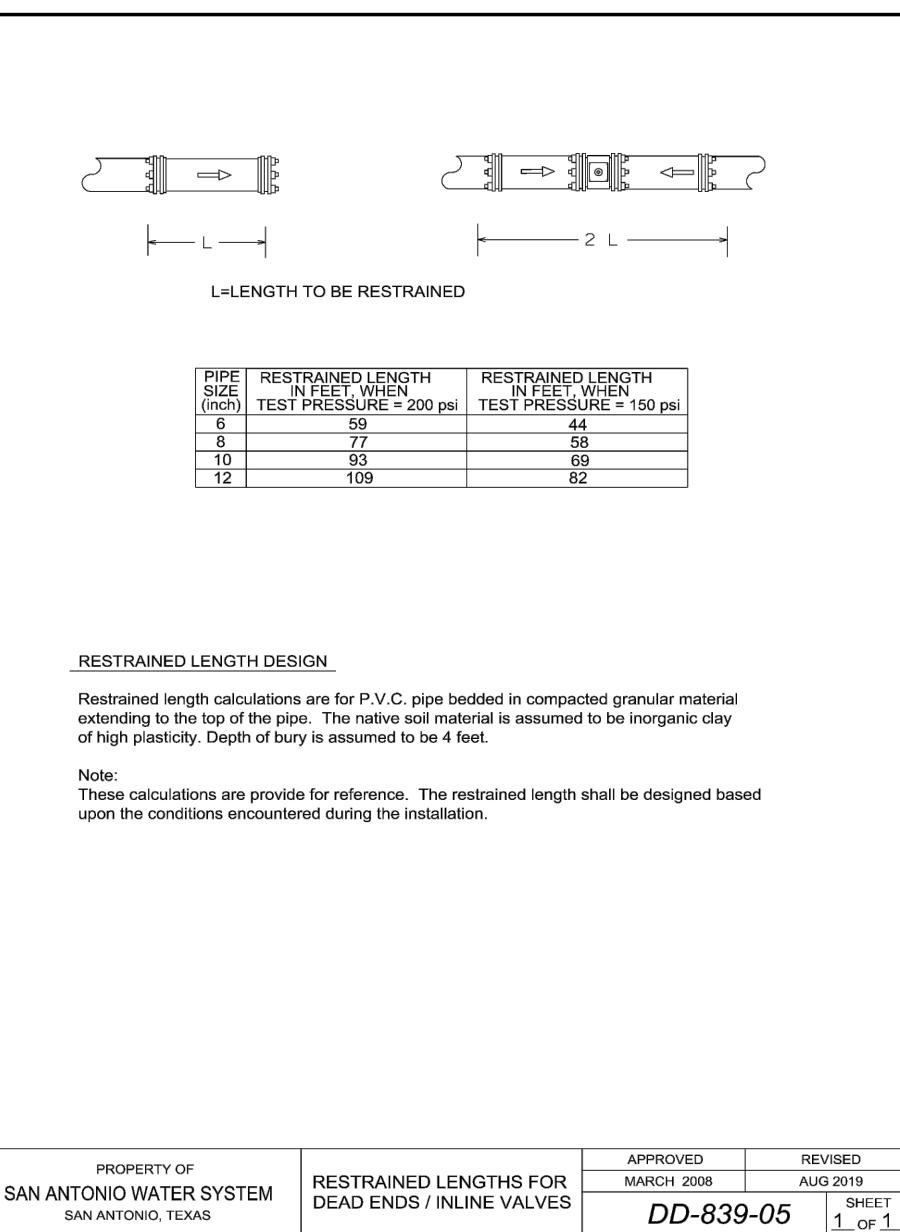
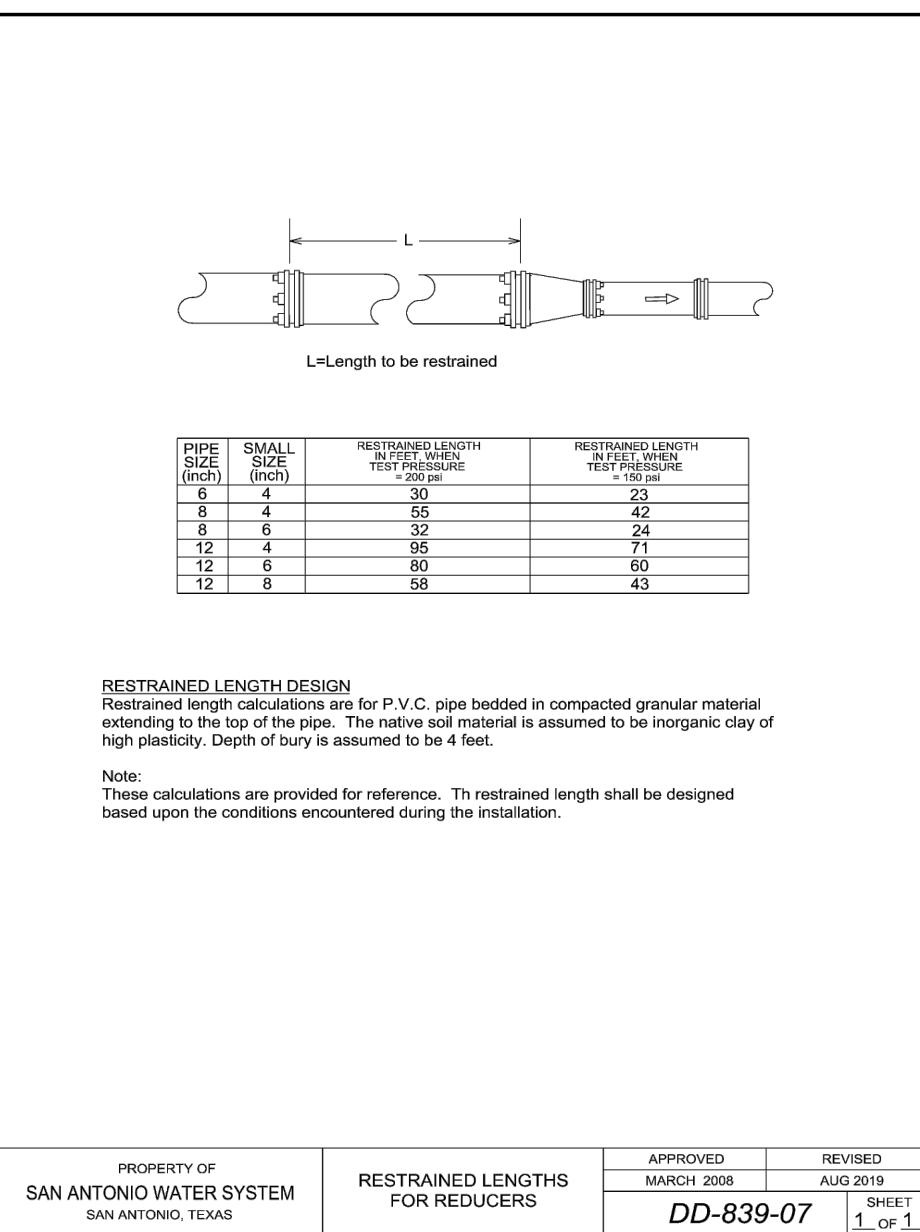
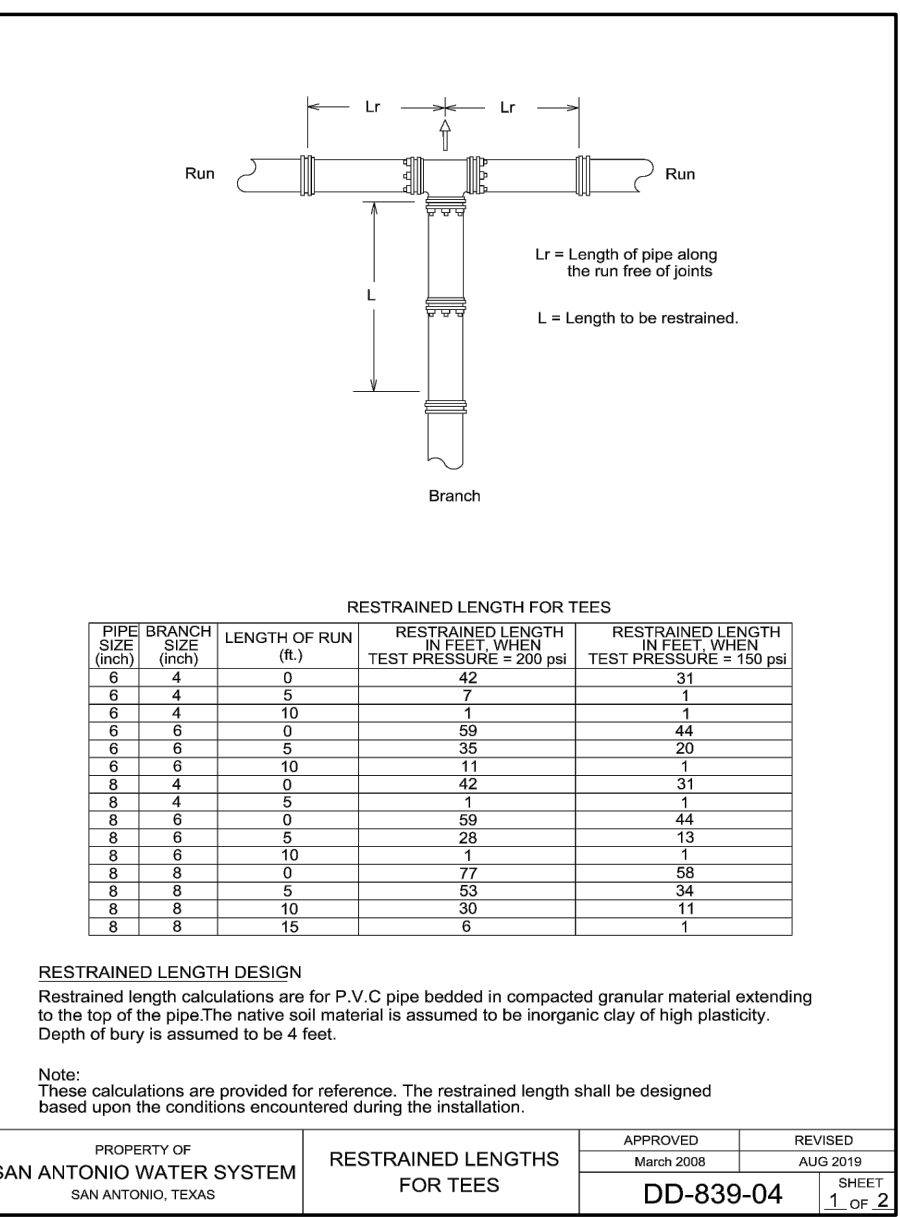
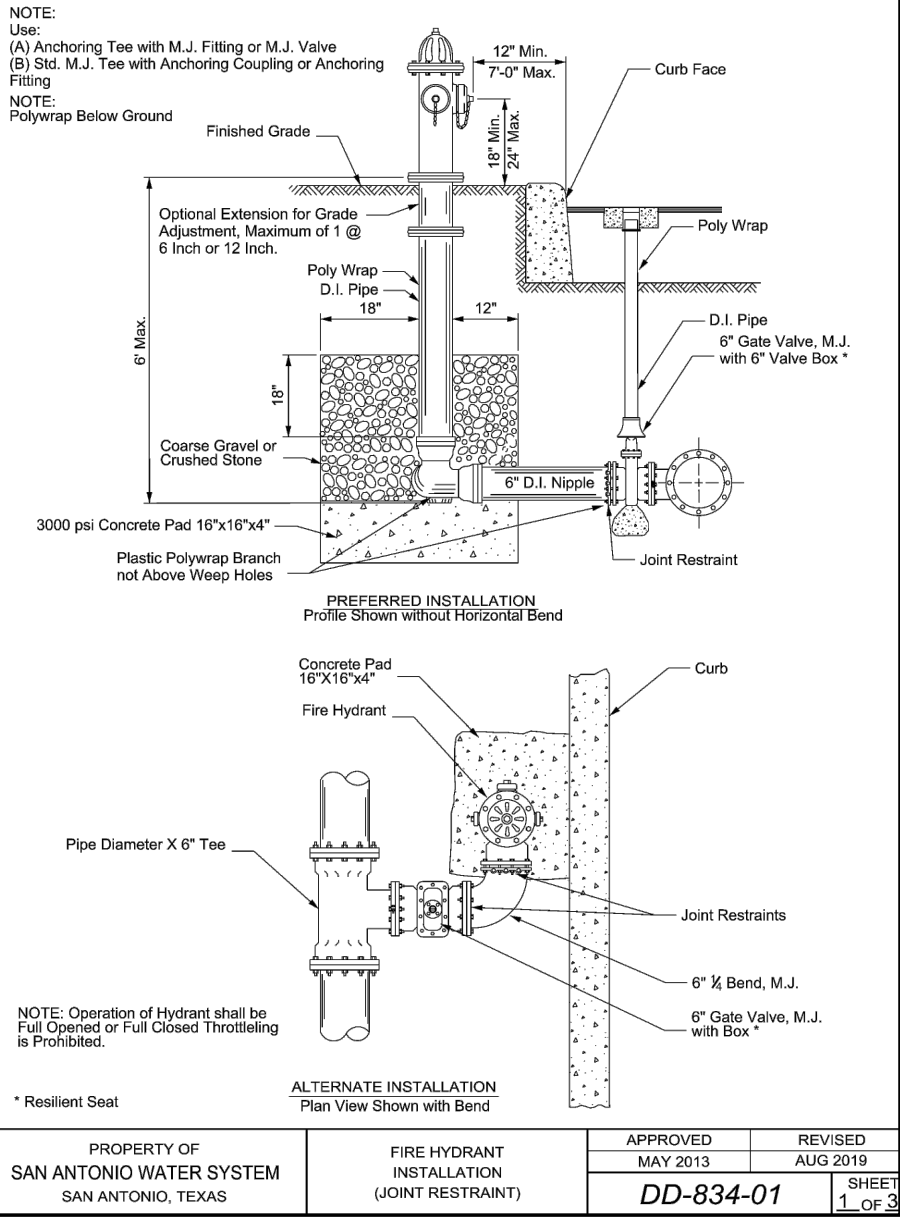
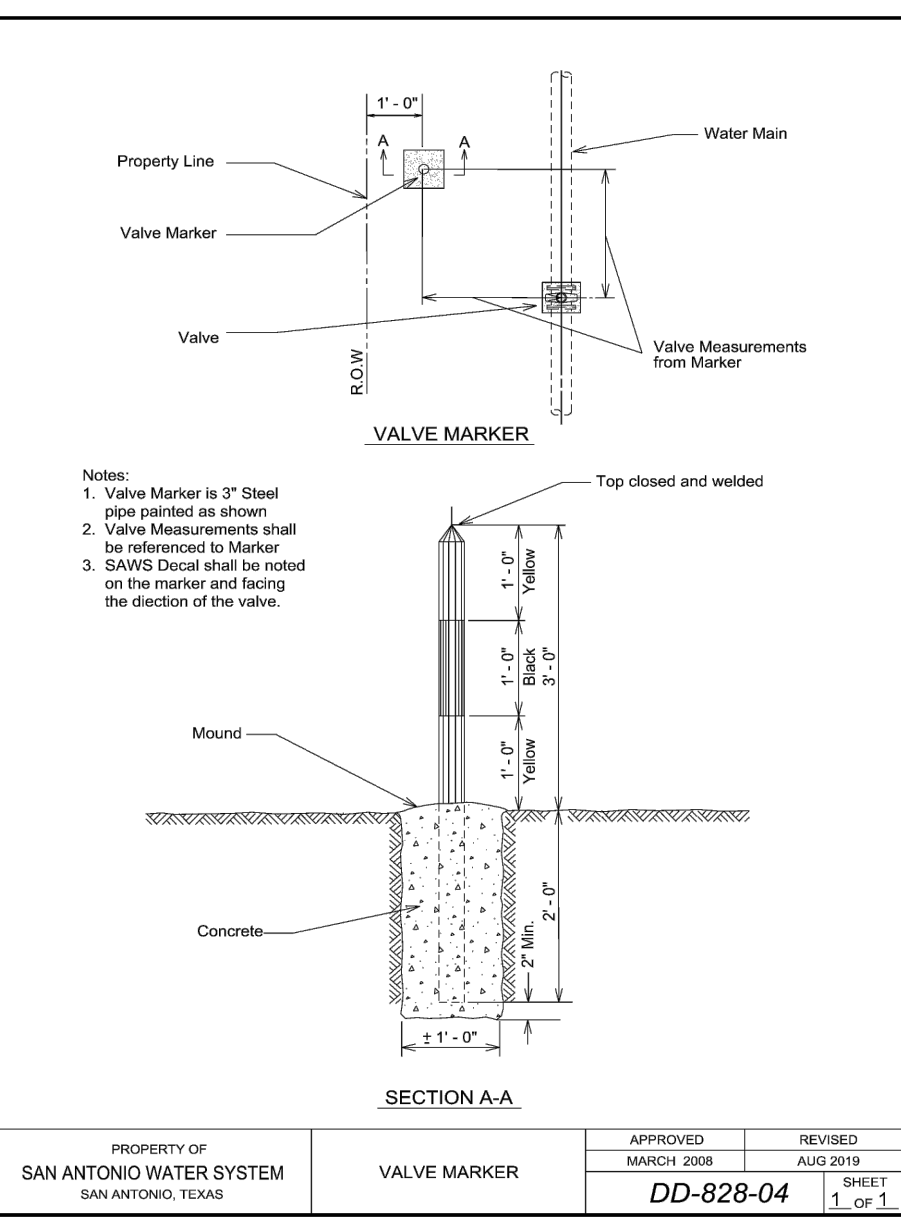
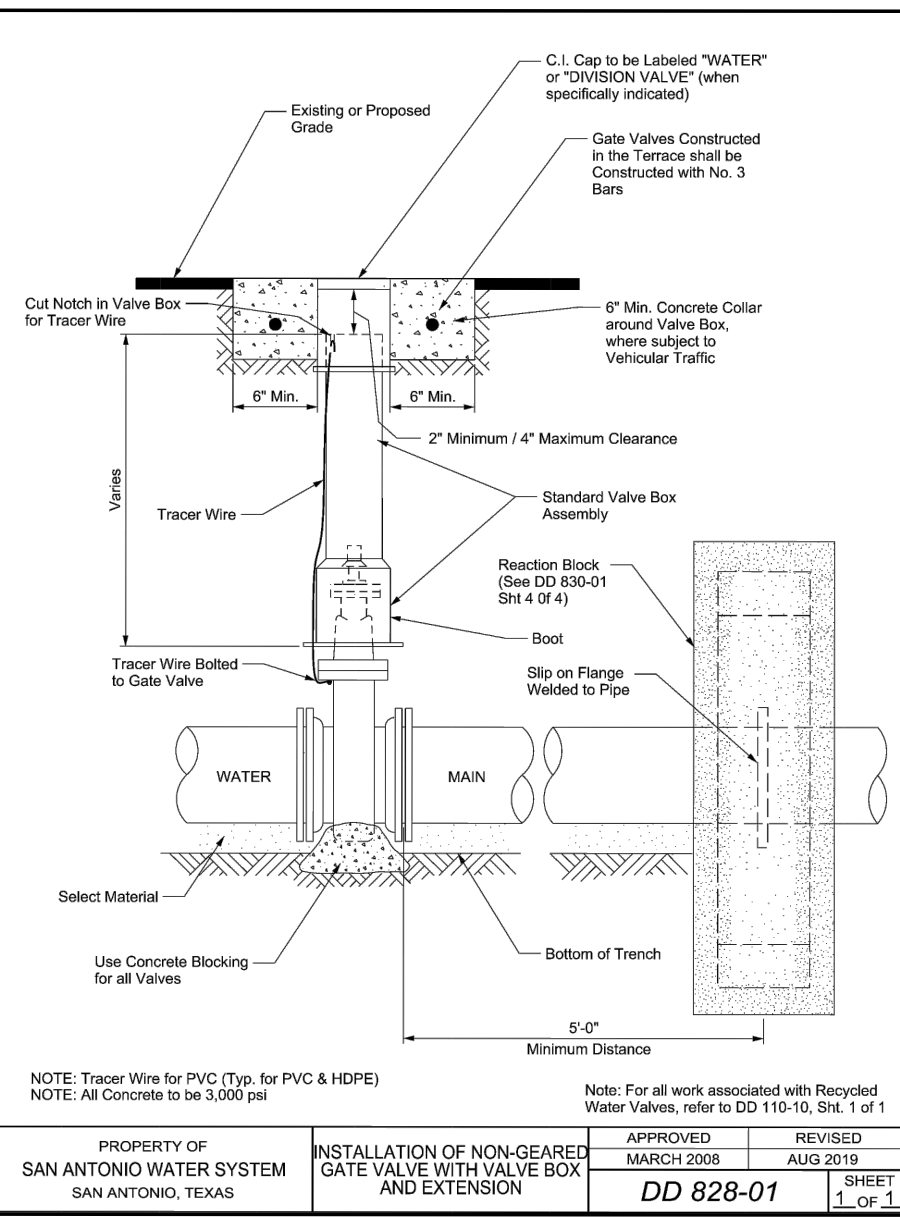
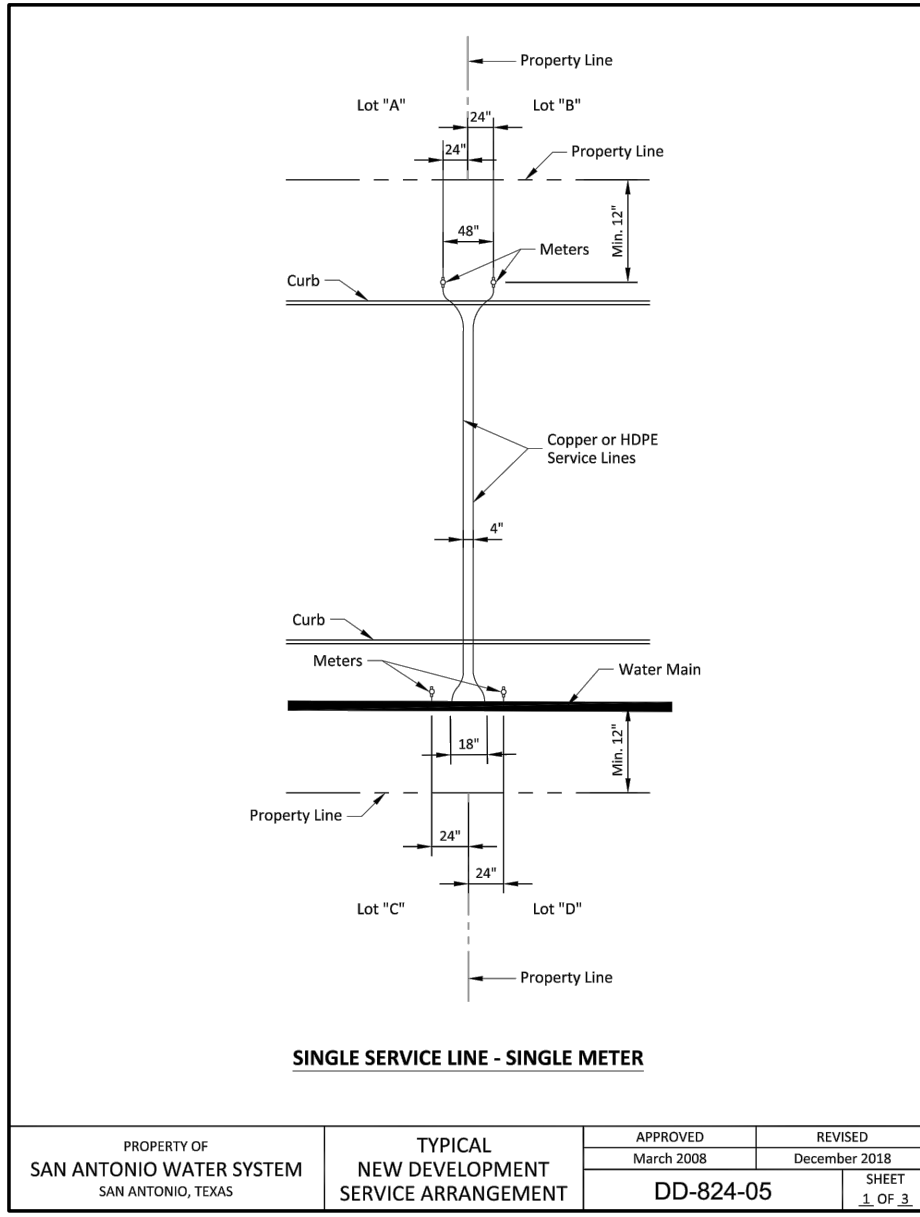
JOB NO. 11348-44

DATE JUNE 2022

DESIGNER EDK

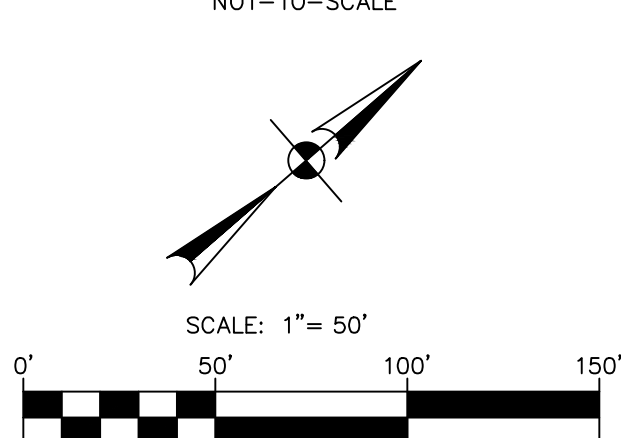
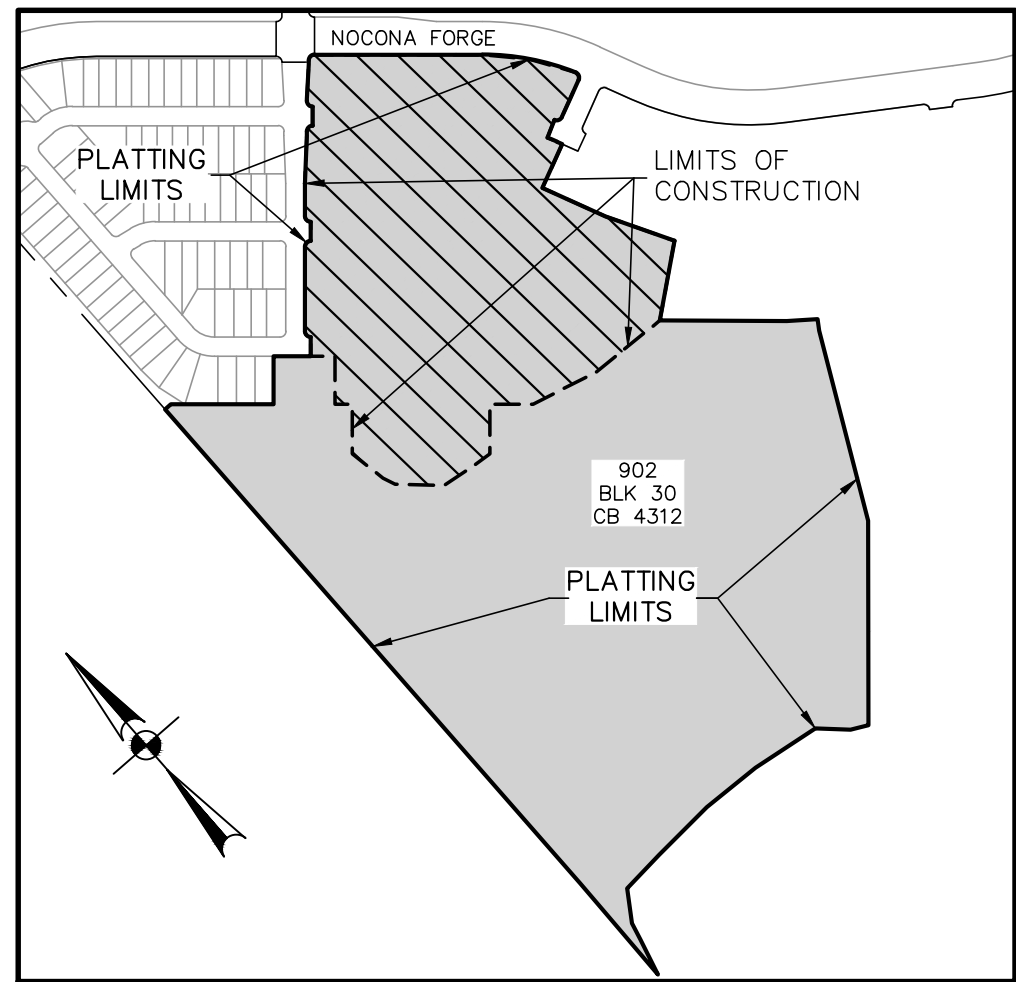
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SHEET C5.00



WATER (SAWS PRESSURE ZONE 4)

DEVELOPER'S NAME: PULTE HOMES OF TEXAS, L.P.
ADDRESS: 1718 DRY CREEK WAY
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78259
PHONE# (210) 496-1985 FAX#
SAWS BLOCK MAP# 096550 TOTAL EDU'S .98 TOTAL ACREAGE 52.53
TOTAL LINEAR FOOTAGE OF PIPE: 2-330 LF PLAT NO. 21-11800398
NUMBER OF LOTS .98 SAWS JOB NO. 22-1133



PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED WYE & LATERAL

EXISTING WYE & LATERAL

EXISTING WYE & PROPOSED LATERAL

SINGLE WATER SERVICE

STREET LIGHTS

GAS, ELECTRIC, TELEPHONE & CABLE TELEVISION EASEMENT

SS

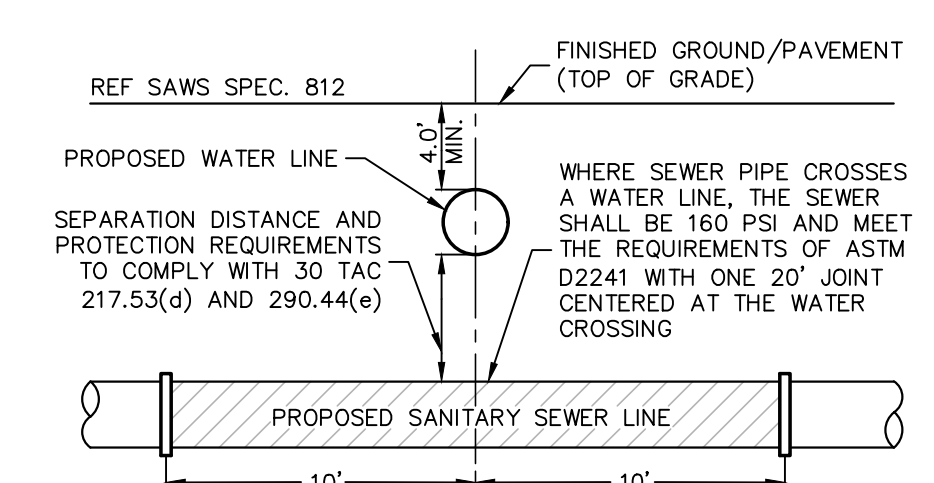
MANHOLE

FIRE HYDRANT

W

GETCTV

⊗⊗ **NOTE:**
PROPOSED 6" LATERAL TO BE INSTALLED ON THE END OF AN EXISTING
SANITARY SEWER LATERAL.



CONDUIT NOTES:

1. CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURB WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
2. CONDUITS SHALL BE PVC WITH MINIMUM BURY OF 30 INCHES. SCHEDULE 80 TO BE USED FOR GPS CONDUITS, ALL OTHER CONDUITS ARE SCHEDULE 40.
3. ALL CONDUITS SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.
4. ALL CONDUITS TO BE USED FOR ELECTRIC OR GAS UTILITY CROSSINGS SHALL BE INSTALLED TO MEET OR EXCEED DESIGN REQUIREMENTS FOR THE UTILITY WHICH THEY ARE BEING INSTALLED, BUT NOT LIMITED TO THE DEPTH, TRENCH PLACEMENT, AND PROXIMITY TO OTHER UTILITIES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING AND INSTALLING THE CONDUITS TO MEET THESE SPECIFICATIONS.

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE AND FIBER OPTIC LINES, SITE LIGHTING ELECTRICAL, SECONDARY ELECTRIC, PRIMARY ELECTRICAL, DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT 800-DIG-TESS A MINIMUM OF FOUR (4) HOURS PRIOR TO START OF CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTOR'S SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND MAKE ANY RECOMMENDATIONS TO THE CONTRACTOR FOR THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND PROCEDURES SHALL BE IN ACCORDANCE WITH ALL APPLICABLE OSHA SAFETY PROTECTION THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING THE PREVENTION OF ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

STATE OF TEXAS
 MATTHEW GEISTWEIDT
 118861
 LICENSED
 PROFESSIONAL ENGINEER
 [Signature]
 9/7/2022

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

OVERALL UTILITY PLAN

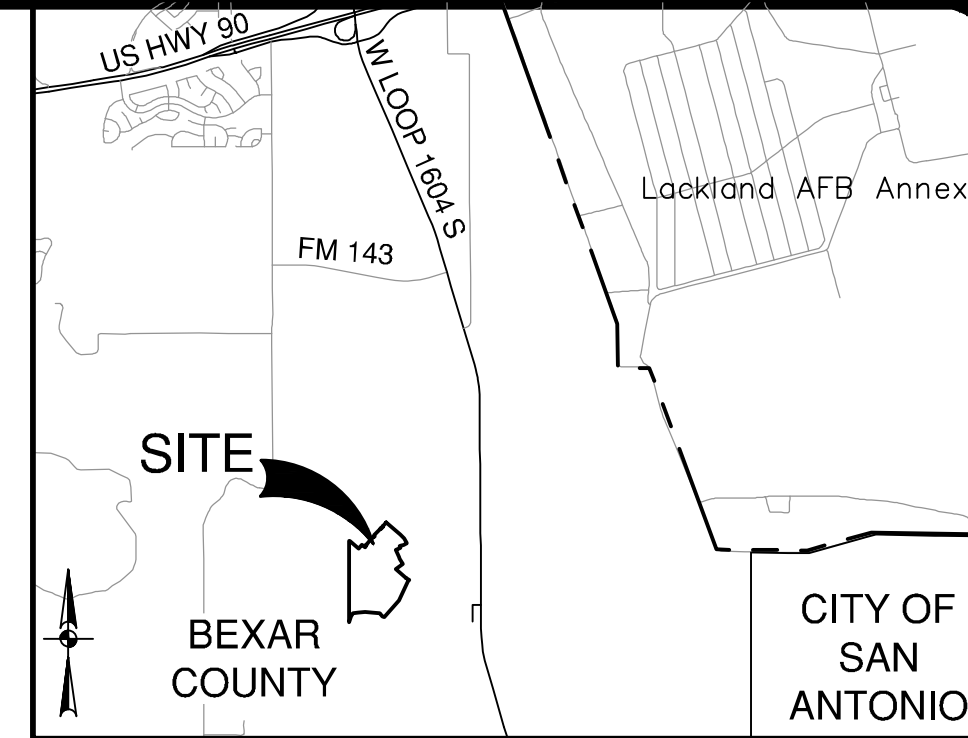
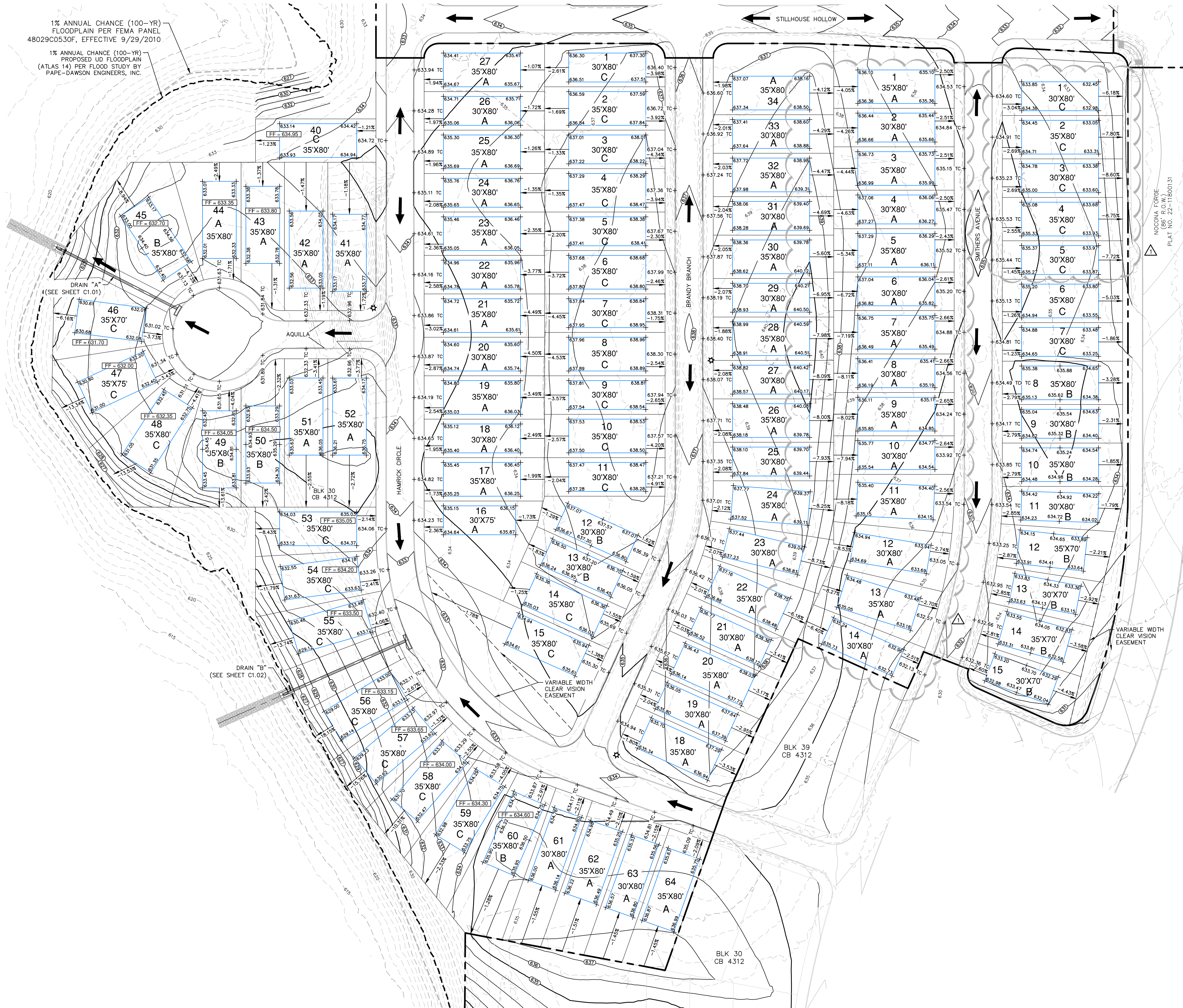
PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGG
SHEET C6.00

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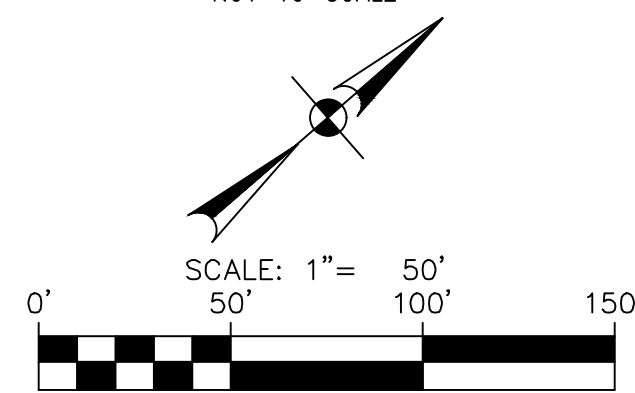
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1% ANNUAL CHANCE (100-YR)
FLOODPLAIN PER FEMA PANEL
48029C0530F, EFFECTIVE 9/29/2010

1% ANNUAL CHANCE (100-YR)
PROPOSED UD FLOODPLAIN
(ATLAS 14) PER FLOOD STUDY BY
PAPE-DAWSON ENGINEERS, INC.



LOCATION MAP
NOT-TO-SCALE



GRADING LEGEND

PROJECT LIMITS	---
100 YR FLOODPLAIN	---
EXISTING CONTOUR	---
PROPOSED CONTOUR	---
FLOW ARROW (EXISTING)	→
FLOW ARROW (PROPOSED)	→
MINIMUM FINISHED FLOOR ELEVATION	FF = XXX.XX

GRADING NOTES:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TxDOT STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION).
2. SITE PREPARATION, GRADING, EXCAVATION AND FILL SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT GEOTECHNICAL REPORT AND SPECIFICATIONS.
3. ALL SELECT FILL MATERIAL PROVIDED SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACING AND COMPACTING.
4. ALL ELEVATIONS AND PROPOSED CONTOURS SHOWN ON THIS GRADING PLAN REFLECT FINISHED GRADES. THE THICKNESS OF PAVING, BASE, GRASS, TOPSOIL, AND MULCH MUST BE SUBTRACTED TO OBTAIN SUBGRADE ELEVATIONS.
5. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, PLACEMENT, OR LIMITS OF DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN STRIPPINGS AND TOPSOIL MAY BE STOCKPILED ON SITE FOR REUSE IN A LOCATION SPECIFIED BY THE OWNER.
9. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE STABILIZATION, ALL DISTURBED AREAS SHALL BE REVEGETATED IN ACCORDANCE WITH PROJECT SPECIFICATIONS AND TPDES/SWPPP REQUIREMENTS. REFERENCE THE LANDSCAPE ARCHITECT'S PLAN, IF APPLICABLE.
10. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS (USE OF SILT FENCES, ETC.) TO KEEP DRAINAGE AND SILT FROM WASHING ONTO ADJACENT PROPERTY, STREETS, OR DRAINAGE WAYS. CONTRACTOR SHALL IMMEDIATELY REMOVE SILT/DEBRIS WHICH WASHES OFFSITE OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPDES BOOK).
11. THE CONTRACTOR SHALL OBTAIN GRADES SHOWN HEREON WITHIN +/- ONE-TENTH (0.10) FOOT.
12. IN PROPOSED PAVING AREAS, STREET DESIGN PLANS SHALL CONTROL. ALL EARTHEN SLOPES SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1.0% UNLESS OTHERWISE SHOWN.
13. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING SITE AND PROPOSED IMPROVEMENTS.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL, OR BETTER, CONDITION ANY DAMAGE DONE TO EXISTING TREES, BUILDINGS, UTILITIES, FENCES, PAVEMENT, CURBS, OR DRIVEWAYS (NO SEPARATE PAY ITEMS).
15. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN WORKING NEAR UTILITIES, GAS LINES, SEWER, OR EXISTING APPURTENANCES. PRIOR TO PERFORMING ANY EXCAVATION, CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND ASSURE HIMSELF THAT ALL UTILITIES HAVE BEEN ADEQUATELY LOCATED AND IDENTIFIED. THE ENGINEER SHALL BE NOTIFIED IF ANY UTILITY CONFLICTS ARE DISCOVERED.
16. UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION AND VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DEVIATIONS FROM PLANS PRIOR TO BEGINNING CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
17. POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
18. FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
19. NO WORK SHALL BE PERFORMED IN A PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.

NO.	REVISION	DATE
1	REVISED LOT GRADING	06/12/24



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78211 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

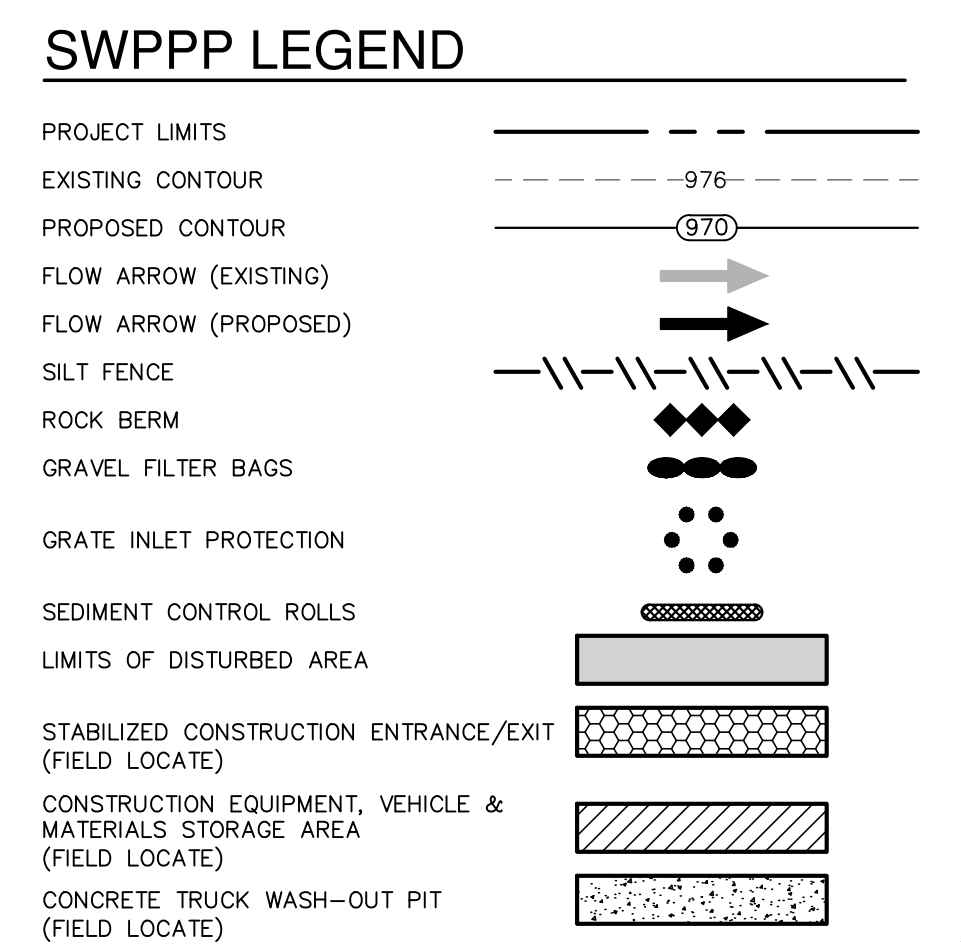
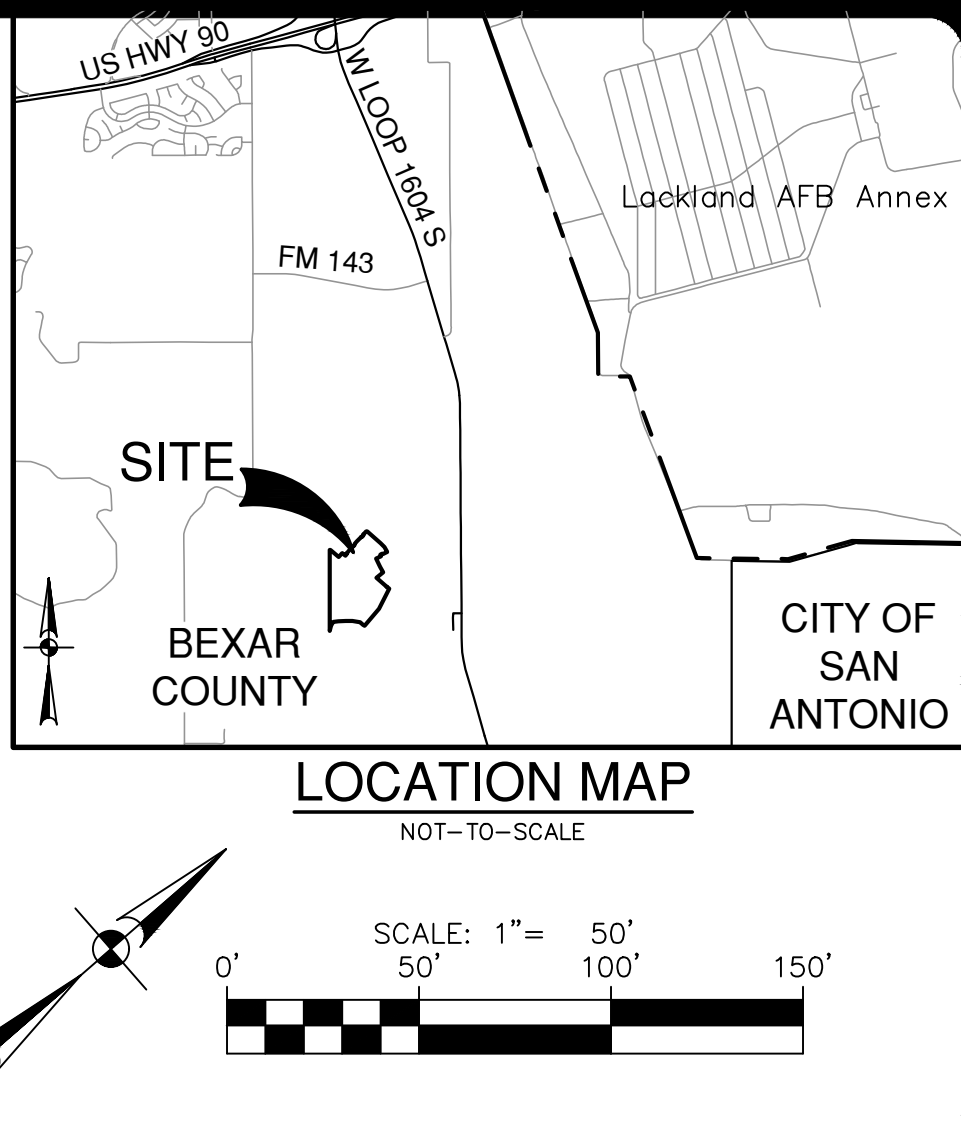
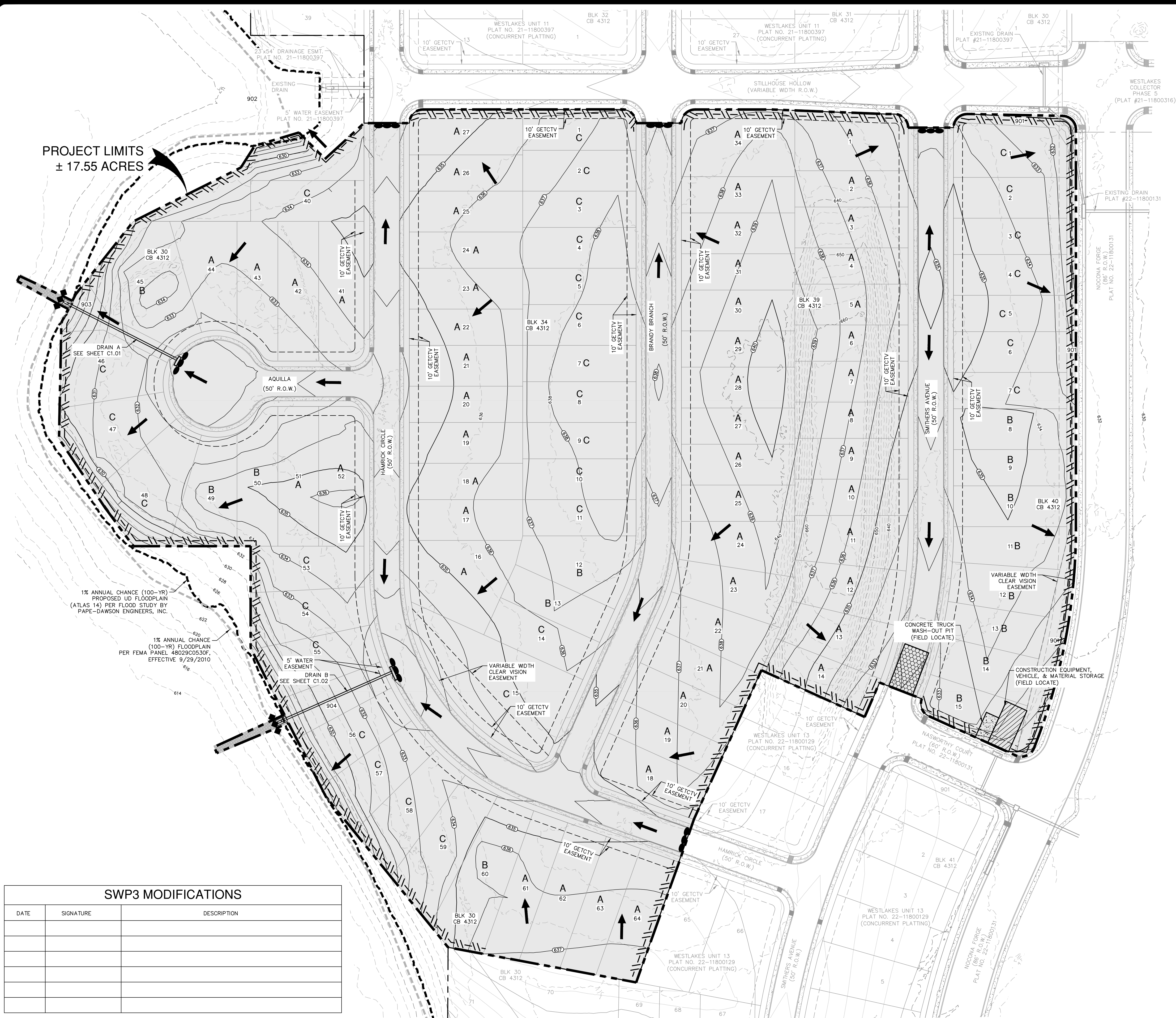
WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

OVERALL GRADING PLAN

PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C7.00

Date: Sep 07, 2022 9:49am User ID: dkeane@pape-dawson.com
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- GENERAL NOTES**
- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
 - CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
 - STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
 - RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
 - ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
 - FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
 - STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
 - AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
 - BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADE AREAS.
 - BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
 - UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
 - WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.
 - SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWPP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.
 - PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TxDOT RIGHT-OF-WAY WITH TxDOT.
 - CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWPP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWPP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

SWP3 MODIFICATIONS		
DATE	SIGNATURE	DESCRIPTION

DATE

NO. REVISION

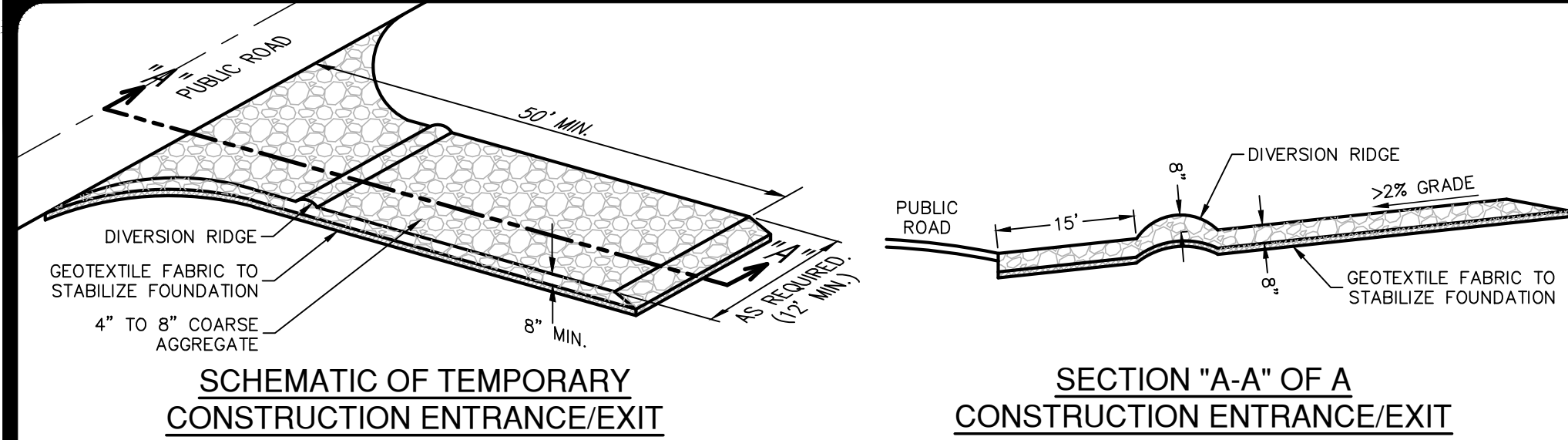
STATE OF TEXAS
MATTHEW GEISTWEIDT
118861
PROFESSIONAL ENGINEER
9/7/2022

PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN

PLAT NO. 21-11800398
JOB NO. 11348-44
DATE JUNE 2022
DESIGNER EDK
CHECKED MG DRAWN MGO
SHEET C8.00



MATERIALS

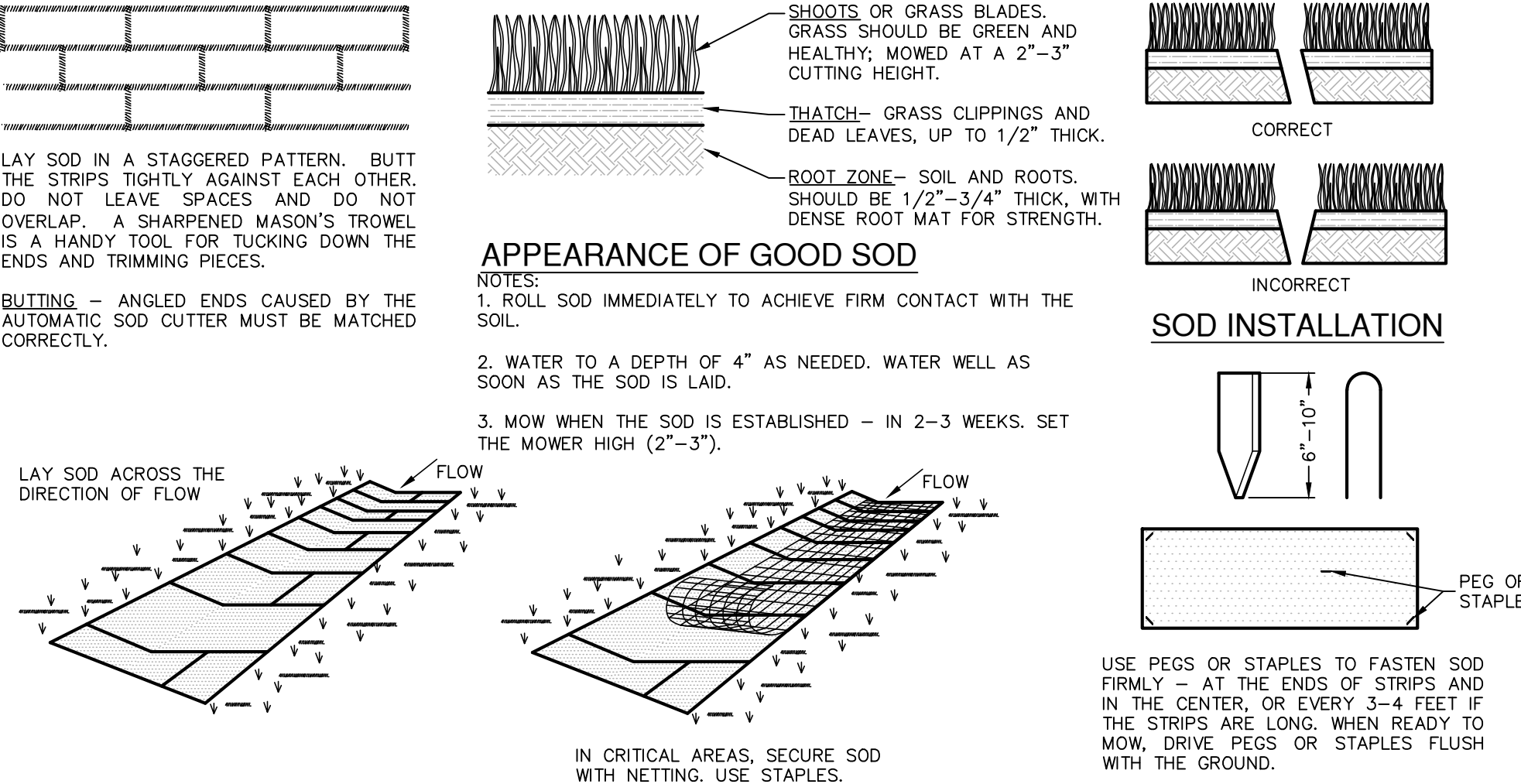
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD², A MULLEN BURST RATING OF 140 LB/IN², AND AN EQUIVALENT OPENING SIZE GREATER THAN A NUMBER 50 SIEVE.
4. IF A WASHING FACILITY IS REQUIRED, A LEVEL AREA WITH A MINIMUM OF 4-INCH DIAMETER WASHED STONE OR COMMERCIAL ROCK SHOULD BE INCLUDED IN THE PLANS. DIVERT WASTEWATER TO A SEDIMENT TRAP OR BASIN.

INSTALLATION

1. AVOID CURVES ON PUBLIC ROADS AND STEEP SLOPES. REMOVE VEGETATION AND OTHER OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA. GRADE CROWN FOUNDATION FOR POSITIVE DRAINAGE.
2. THE MINIMUM WIDTH OF THE ENTRANCE/EXIT SHOULD BE 12 FEET OR THE FULL WIDTH OF EXIT ROADWAY, WHICHEVER IS GREATER.
3. THE CONSTRUCTION ENTRANCE SHOULD BE AT LEAST 50 FEET LONG.
4. IF THE SLOPE TOWARD THE ROAD EXCEEDS 2%, CONSTRUCT A RIDGE, 6-INCHES TO 8-INCHES HIGH WITH 3:1 (H:V) SIDE SLOPES, ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE ENTRANCE TO DIVERT RUNOFF AWAY FROM THE PUBLIC ROAD.
5. PLACE GEOTEXTILE FABRIC AND GRADE FOUNDATION TO IMPROVE STABILITY, ESPECIALLY WHERE WET CONDITIONS ARE ANTICIPATED.
6. PLACE STONE TO DIMENSIONS AND GRADE SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPE FOR DRAINAGE.
7. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE STONE PAD TO A SEDIMENT TRAP OR BASIN.
8. INSTALL PIPE UNDER PAD AS NEEDED TO MAINTAIN PROPER PUBLIC ROAD DRAINAGE.

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



MATERIALS

1. SOD SHOULD BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4" INCH (± 1/4" INCH) AT THE TIME OF CUTTING. THIS THICKNESS SHOULD EXCLUDE SHOOT GROWTH AND THATCH.
2. PIECES OF SOD SHOULD BE CUT TO THE SUPPLIER'S STANDARD WIDTH AND LENGTH, WITH A MAXIMUM ALLOWABLE DEVIATION IN ANY DIMENSION OF 5%. TORN OR UNEVEN PADS SHOULD NOT BE ACCEPTABLE.
3. STANDARD SIZE SECTIONS OF SOD SHOULD BE SIZED AND SHAPE TO SUPPORT THEIR OWN WEIGHT AND THEIR SIZE AND SHAPE WHEN SUSPENDED FROM A FIRM GRASP ON ONE END OF THE SECTION.
4. SOD SHOULD BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS.

SITE PREPARATION

1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHOULD BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. THE SURFACE SHOULD BE CLEARED OF ALL TRASH, DEBRIS AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.
3. FERTILIZE ACCORDING TO SOIL TESTS. FERTILIZER NEEDS CAN BE DETERMINED BY A SOIL TESTING LABORATORY OR REGIONAL RECOMMENDATIONS CAN BE MADE BY COUNTY AGRICULTURAL EXTENSION AGENTS. FERTILIZER SHOULD BE WORKED INTO THE SOIL TO A DEPTH OF 3 INCHES WITH A DISC, SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. ON SLOPING LAND, THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE CONTOUR.

INSTALLATION IN CHANNELS

1. SOD STRIPS IN WATERWAYS SHOULD BE LAID PERPENDICULAR TO THE DIRECTION OF FLOW. CARE SHOULD BE TAKEN TO BUTT ENDS OF STRIPS TIGHTLY (SEE FIGURE ABOVE).
2. AFTER ROLLING OR TAMPING, SOD SHOULD BE PEGGED OR STAPLED TO RESIST WASHOUT DURING THE ESTABLISHMENT PERIOD. MESH OR OTHER NETTING MAY BE PEGGED OVER THE SOD FOR EXTRA PROTECTION IN CRITICAL AREAS.

SOD INSTALLATION DETAIL

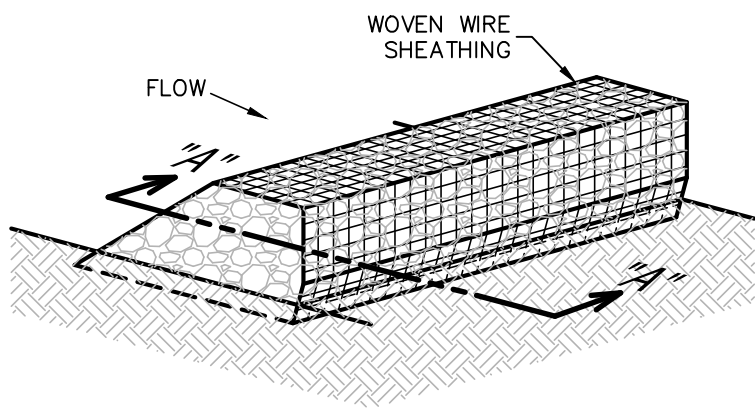
NOT-TO-SCALE

COMMON TROUBLE POINTS

1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT FLARED SUFFICIENTLY AT ROAD SURFACE, RESULTS IN MUD BEING TRACKED ON TO ROAD AND POSSIBLE DAMAGE TO ROAD.

INSPECTION AND MAINTENANCE GUIDELINES

1. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION, WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY SHOULD BE REMOVED IMMEDIATELY BY CONTRACTOR.
3. WHEN NECESSARY, WHEELS SHOULD BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
4. WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING ANY STORM DRAIN, DITCH OR WATER COURSE BY USING APPROVED METHODS.



ISOMETRIC PLAN VIEW

ROCK BERMS

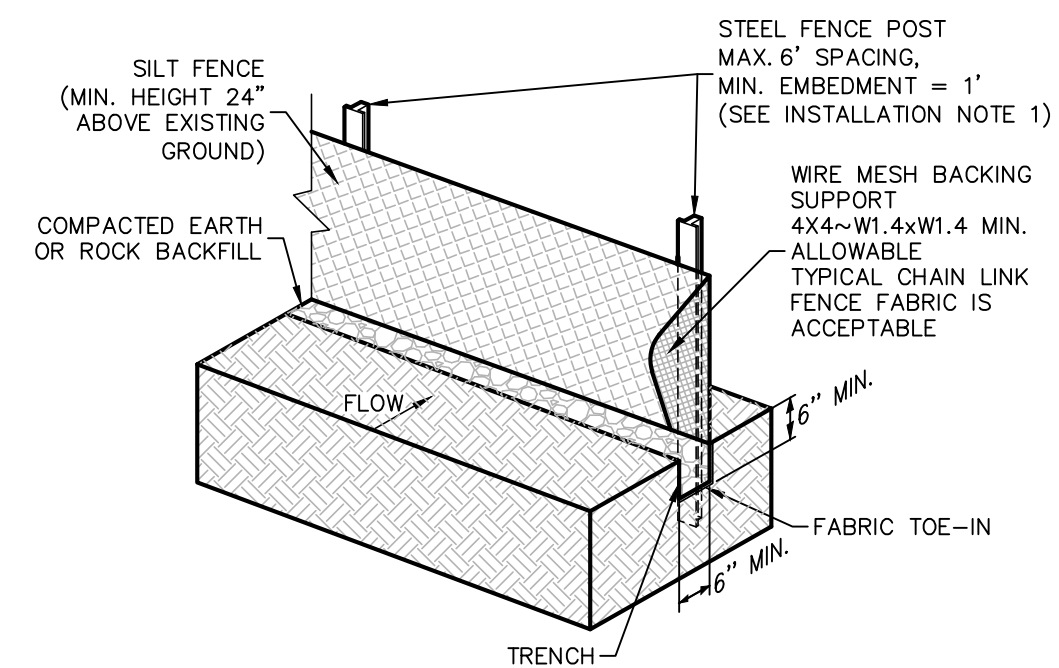
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE VOLUME OF RUNOFF IS TOO GREAT FOR A SILT FENCE TO CONTAIN. THEY ARE LESS EFFECTIVE FOR SEDIMENT REMOVAL THAN SILT FENCES, PARTICULARLY FOR FINE PARTICLES, BUT ARE ABLE TO WITHSTAND HIGHER FLOWS THAN A SILT FENCE. AS SUCH, ROCK BERMS ARE OFTEN USED IN AREAS OF CHANNEL FLOWS (DITCHES, GULLIES, ETC.). ROCK BERMS ARE MOST EFFECTIVE AT REDUCING BED LOAD IN CHANNELS AND SHOULD NOT BE SUBSTITUTED FOR OTHER EROSION AND SEDIMENT CONTROL MEASURES FARTHER UP THE WATERSHED.

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
3. REPAIR ANY LOOSE WIRE SHEATHING.
4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

ROCK BERM DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

A SILT FENCE IS A BARRIER CONSISTING OF GEOTEXTILE FABRIC SUPPORTED BY METAL POSTS TO PREVENT SOIL AND SEDIMENT LOSS FROM A SITE. WHEN PROPERLY USED, SILT FENCES CAN BE HIGHLY EFFECTIVE AT CONTROLLING SEDIMENT FROM DISTURBED AREAS. THEY CAUSE RUNOFF TO POND, ALLOWING HEAVIER SOLIDS TO SETTLE OUT. IF NOT PROPERLY INSTALLED, SILT FENCES ARE NOT LIKELY TO BE EFFECTIVE.

THE PURPOSE OF A SILT FENCE IS TO INTERCEPT AND DETAIN WATER-BORN SEDIMENT FROM UNPROTECTED AREAS OF A LIMITED EXTENT. SILT FENCE IS USED DURING THE PERIOD OF CONSTRUCTION NEAR THE PERIMETER OF A DISTURBED AREA TO INTERCEPT SEDIMENT WHILE ALLOWING WATER TO PERCOLATE THROUGH. THIS FENCE SHOULD REMAIN IN PLACE UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. SILT FENCE SHOULD NOT BE USED WHERE THERE IS A CONCENTRATION OF WATER IN A CHANNEL OR DRAINAGE WAY. IF CONCENTRATED FLOW OCCURS AFTER INSTALLATION, CORRECTIVE ACTION MUST BE TAKEN SUCH AS PLACING A ROCK BERM IN THE AREAS OF CONCENTRATED FLOW.

SILT FENCING WITHIN THE SITE MAY BE TEMPORARILY MOVED DURING THE DAY TO ALLOW CONSTRUCTION ACTIVITY PROVIDED IT IS REPLACED AND PROPERLY ANCHORED TO THE GROUND AT THE END OF THE DAY. SILT FENCES ON THE PERIMETER OF THE SITE OR AROUND DRAINAGE WAYS SHOULD NOT BE MOVED AT ANY TIME.

MATERIALS

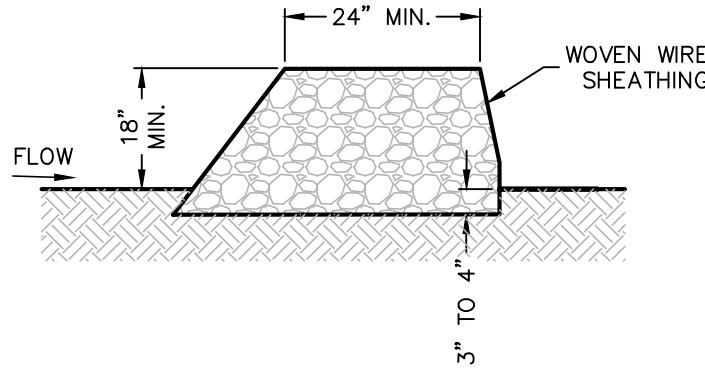
1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE NUMBER 30.
2. FENCE POSTS SHOULD BE MADE OF HOT ROLLED STEEL, AT LEAST 4 FEET LONG WITH TEE OR Y-BAR CROSS SECTION, SURFACE PAINTED OR GALVANIZED, MINIMUM WEIGHT 1.25 LB/FT, AND BRINELL HARDNESS EXCEEDING 140.
3. WOVEN WIRE BACKING TO SUPPORT THE FABRIC SHOULD BE GALVANIZED 2" X 4" WELDED WIRE, 12 GAUGE MINIMUM.

INSTALLATION

1. STEEL POSTS, WHICH SUPPORT THE SILT FENCE, SHOULD BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POSTS MUST BE EMBEDDED A MINIMUM OF 1-FOOT DEEP AND SPACED NOT MORE THAN 8 FEET ON CENTER, WHERE WATER CONCENTRATES, THE MAXIMUM SPACING SHOULD BE 6 FEET.
2. LAY OUT FENCING DOWN-SLOPE OF DISTURBED AREA, FOLLOWING THE CONTOUR AS CLOSELY AS POSSIBLE. THE FENCE SHOULD BE SITED SO THAT THE MAXIMUM DRAINAGE AREA IS ¼ ACRE/100 FEET OF FENCE.

SILT FENCE DETAIL

NOT-TO-SCALE



SECTION "A-A"

MATERIALS

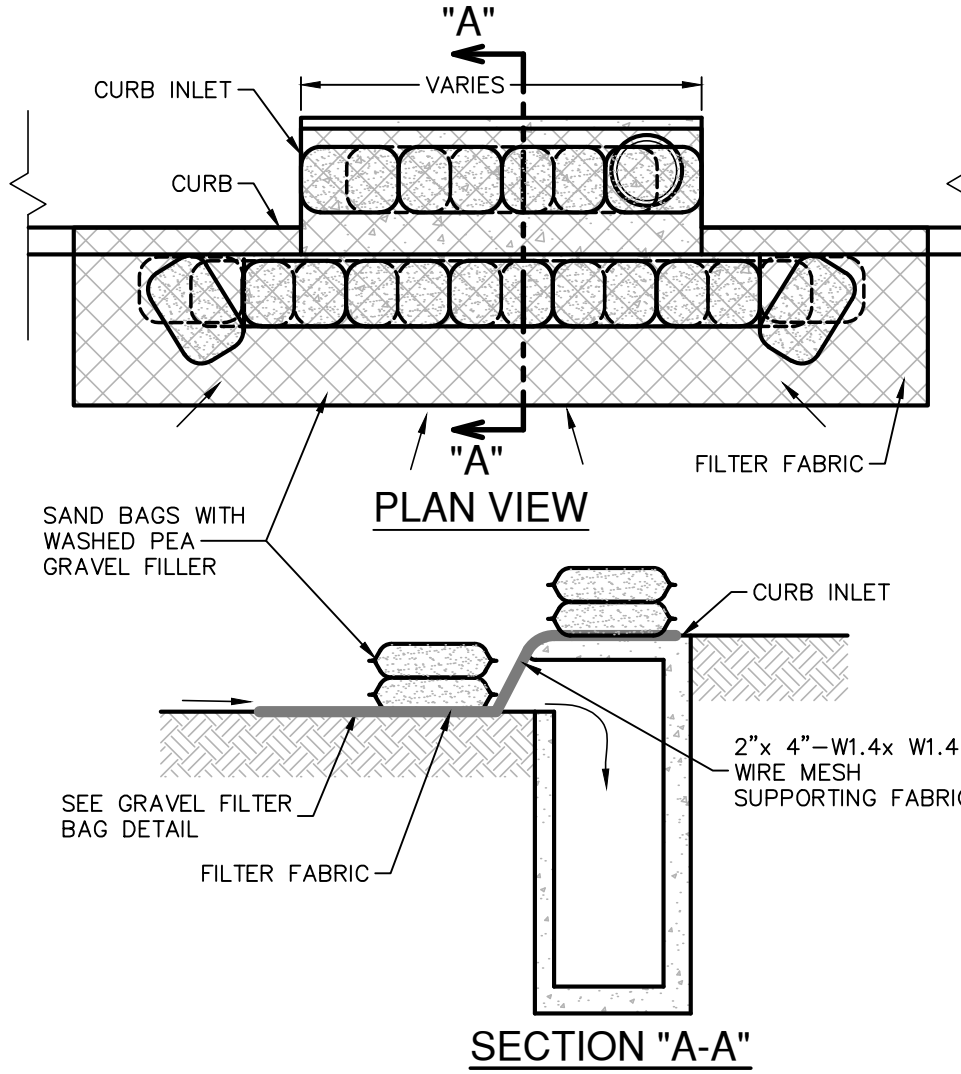
1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A HEIGHT NOT LESS THAN 18".
4. WRAP THE WIRE SHEATHING AROUND THE ROCK AND SECURE WITH TIE WIRE SO THAT THE ENDS OF THE SHEATHING OVERLAP AT LEAST 2 INCHES, AND THE BERM RETAINS ITS SHAPE WHEN WALKED UPON.
5. BERM SHOULD BE BUILT ALONG THE CONTOUR AT ZERO PERCENT GRADE OR AS NEAR AS POSSIBLE.
6. THE ENDS OF THE BERM SHOULD BE TIED INTO EXISTING UPSLOPE GRADE AND THE BERM SHOULD BE BURIED IN A TRENCH APPROXIMATELY 3 TO 4 INCHES DEEP TO PREVENT FAILURE OF THE CONTROL.

COMMON TROUBLE POINTS

1. INSUFFICIENT BERM HEIGHT OR LENGTH (RUNOFF QUICKLY ESCAPES OVER THE TOP OR AROUND THE SIDES OF BERM).
2. BERM NOT INSTALLED PERPENDICULAR TO FLOW LINE (RUNOFF ESCAPING AROUND ONE SIDE).

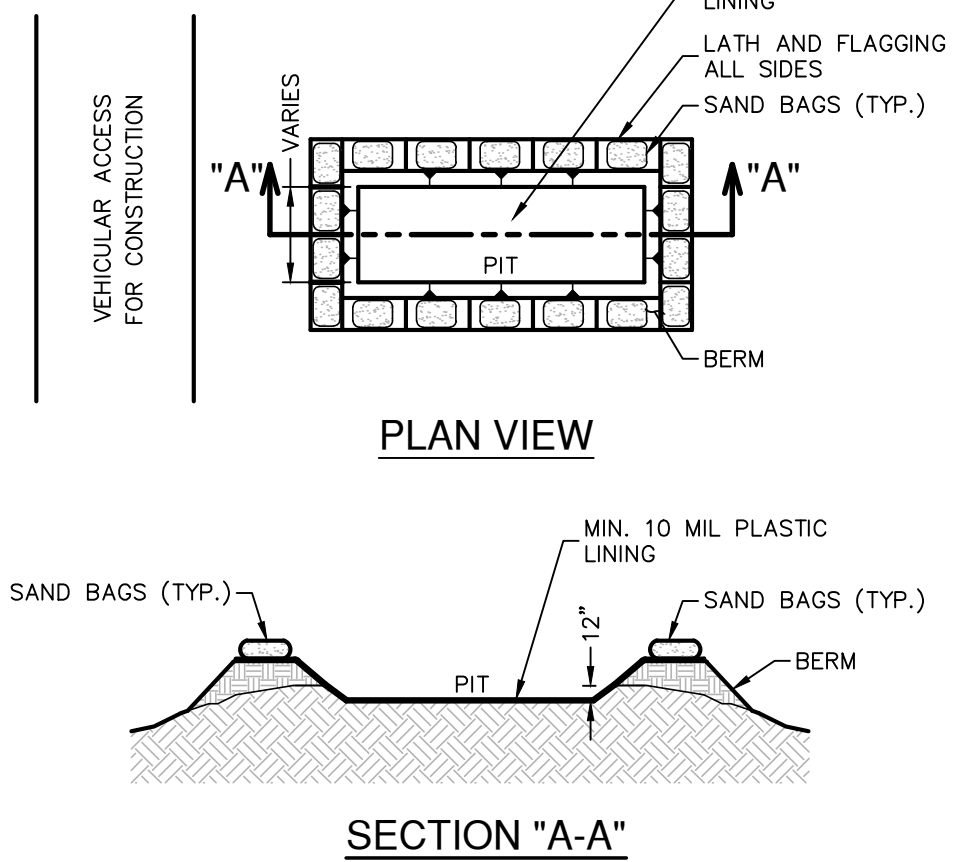


GENERAL NOTES

1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CUPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE GUTTER AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SAND BAGS TO BE STACKED TO FORM A CONTINUOUS BARRIER AROUND INLETS.
2. THE BAGS SHOULD BE TIGHTLY ABUTTED AGAINST EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.
3. CHECK PLACEMENT OF DEVICE TO PREVENT GAPS BETWEEN DEVICE AND CURB.
4. INSPECT FILTER FABRIC AND PATCH OR REPLACE IF TORN OR MISSING.
5. STRUCTURES SHOULD BE REMOVED AND THE AREA STABILIZED ONLY AFTER THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



GENERAL NOTES

1. DETAIL ABOVE ILLUSTRATES MINIMUM DIMENSIONS. PIT CAN BE INCREASED IN SIZE DEPENDING ON EXPECTED FREQUENCY OF USE.
2. WASHOUT PIT SHALL BE LOCATED IN AN AREA EASILY ACCESSIBLE TO CONSTRUCTION TRAFFIC.
3. WASHOUT PIT SHALL NOT BE LOCATED IN AREAS SUBJECT TO INUNDATION FROM STORM WATER RUNOFF.
4. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE FEATURES, STORM DRAINS, OPEN DITCHES OR WATER BODIES.
5. TEMPORARY CONCRETE WASHOUT FACILITY SHOULD BE CONSTRUCTED WITH SUFFICIENT QUANTITY AND VOLUME TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED BY WASHOUT OPERATIONS.

MATERIALS

PLASTIC LINING MATERIAL SHOULD BE A MINIMUM OF 10 MIL IN POLYETHYLENE SHEETING AND SHOULD BE FREE OF HOLES, TEARS, OR OTHER DEFECTS THAT COMPROMISE THE IMPERMEABILITY OF THE MATERIAL.

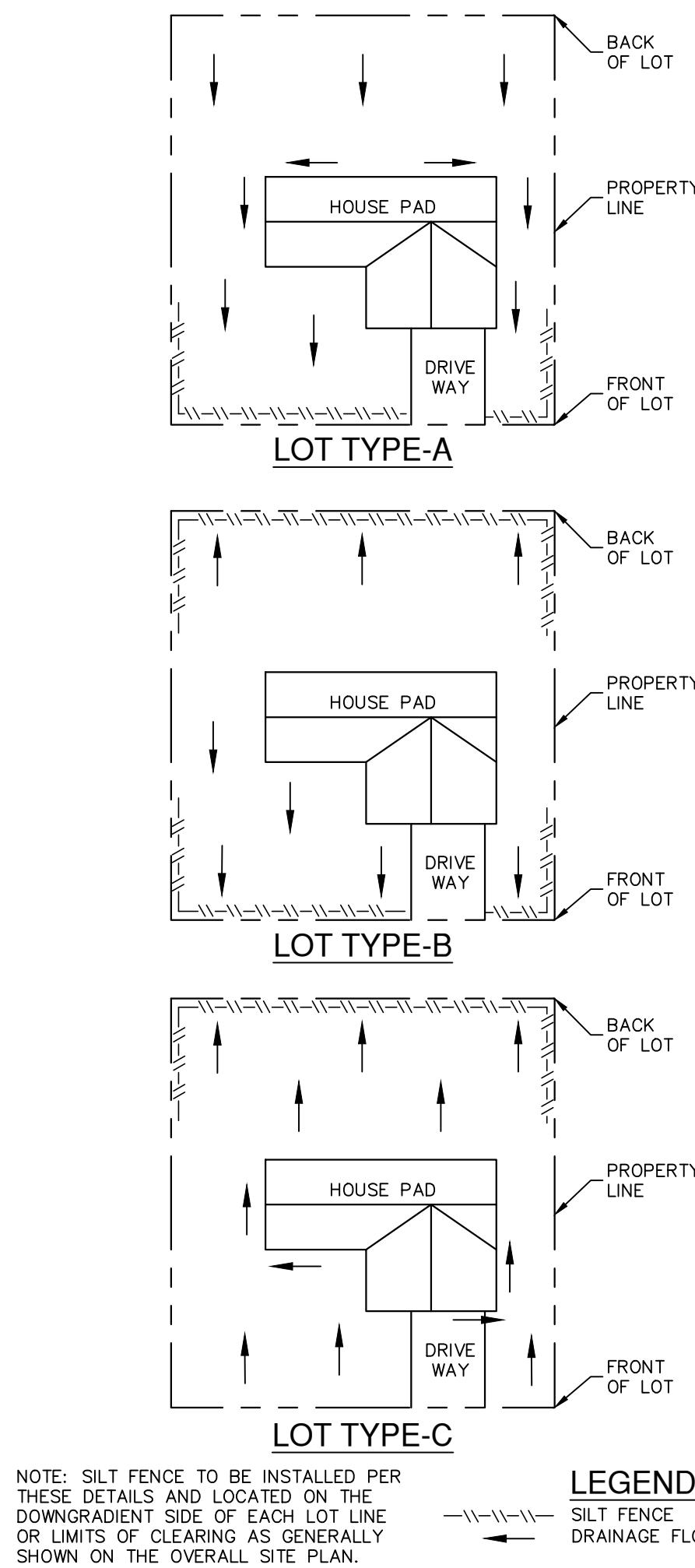
MAINTENANCE

1. WHEN TEMPORARY CONCRETE WASHOUT FACILITIES ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE SHOULD BE REMOVED AND DISPOSED OF.
2. MATERIALS USED TO CONSTRUCT TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE REMOVED FROM THE SITE OF THE WORK AND DISPOSED OF.
3. HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCES CAUSED BY THE REMOVAL OF THE TEMPORARY CONCRETE WASHOUT FACILITIES SHOULD BE BACKFILLED AND REPAIRED.

CONCRETE TRUCK WASHOUT

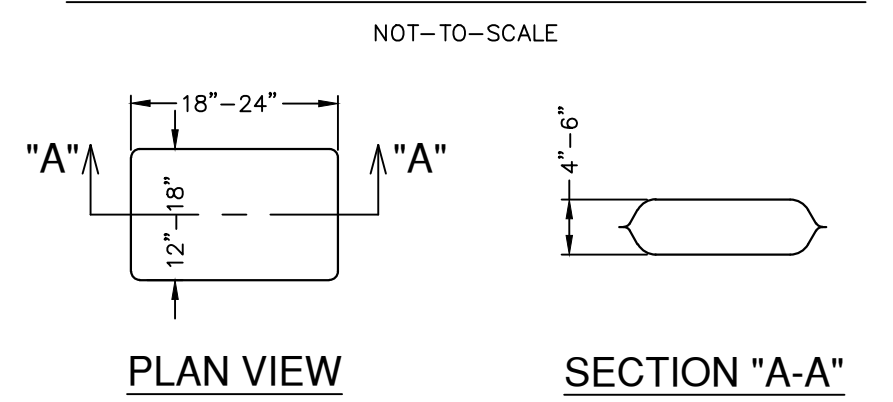
PIT DETAIL

NOT-TO-SCALE



NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADIENT SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

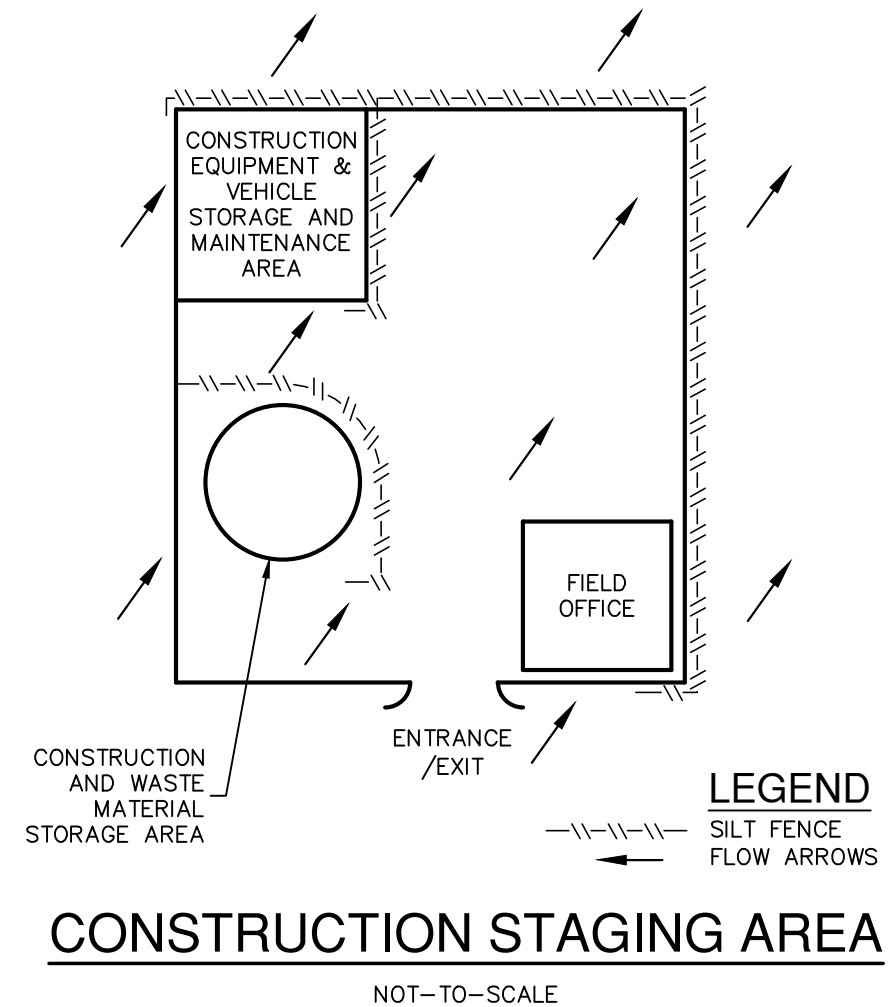
TYPICAL HOUSE LOT LAYOUTS



1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE WOVEN FABRIC, MIN. UNIT WIGHT OF 4 OUNCES/SY, HAVE A MULLEN BURST STRENGTH EXCEEDING 300 PSI AND ULTRAVIOLET STABILITY EXCEEDING 70%.
2. THE FILTER BAG SHALL BE FILLED WITH CLEAN, MEDIUM WASHED PEA GRAVEL TO COARSE GRAVEL (0.31 TO 0.75 INCH DIAMETER).
3. SAND SHALL NOT BE USED TO FILL THE FILTER BAGS.

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



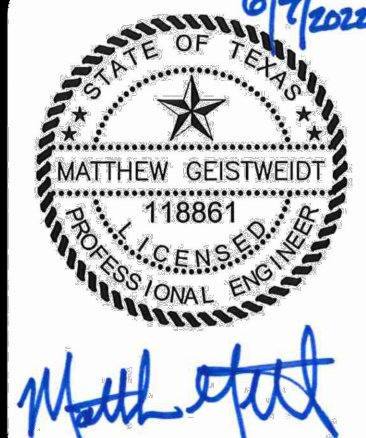
CONSTRUCTION STAGING AREA

THE ENGINEERING SEAL HAS BEEN AFFIXED TO THIS SHEET ONLY FOR THE PURPOSE OF DEMONSTRATING COMPLIANCE WITH THE TPDES-STORM WATER POLLUTION PREVENTION PLAN (SWP3) REGULATIONS.

THIS SHEET HAS BEEN PREPARED FOR PURPOSES OF THE SWP3 ONLY. ALL OTHER CIVIL ENGINEERING RELATED INFORMATION SHOULD BE ACQUIRED FROM THE APPROPRIATE SHEET IN THE CIVIL IMPROVEMENT PLANS.

EXHIBIT 3

DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

WESTLAKES UNIT 12
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN DETAILS

PLAT NO.	21-11800398
JOB NO.	11348-44
DATE	JUNE 2022
DESIGNER	EDK
CHECKED	MG
DRAWN	MG
SHEET	C8.10