

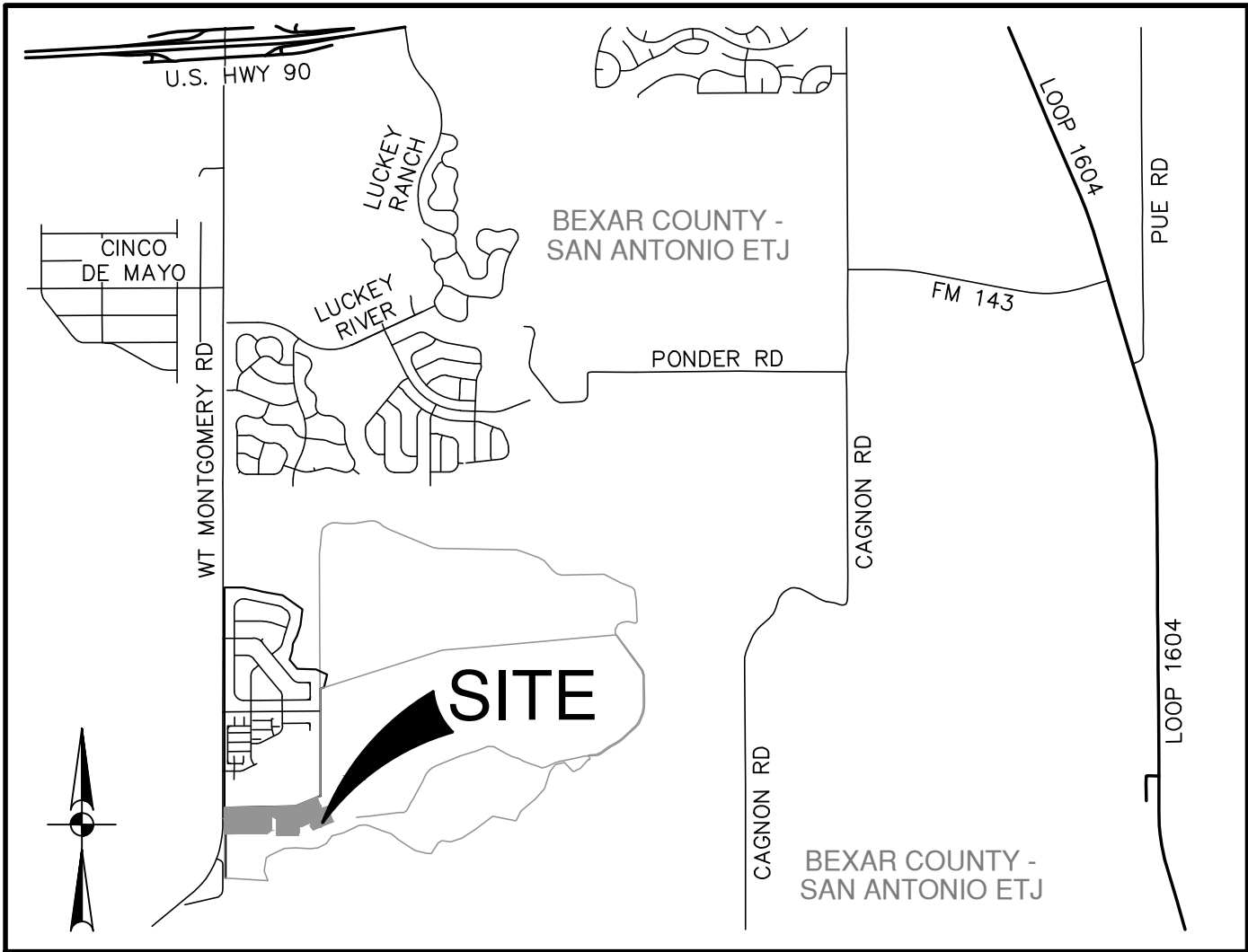
BLOSSOM RANCH UNIT 1A

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS

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OVERALL GRADING PLAN	C7.00
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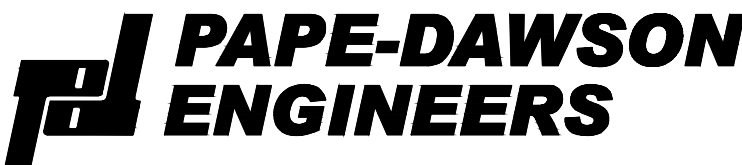
LOCATION MAP

NOT-TO-SCALE

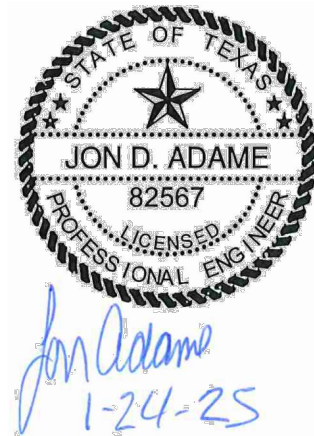
PREPARED FOR:

LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.  
100 NE LOOP 410, SUITE 1155  
SAN ANTONIO, TEXAS 78216

JANUARY 2025



2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800



SEWER UPPER MEDINA - SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME:LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.	
ADDRESS: 100 NE LOOP 410, SUITE 1155	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78216
PHONE# (210) 889-5516	E-MAIL: RICHARD.MOTT@LENNAR.COM
SAWS BLOCK MAP#_082-546 TOTAL EDU'S_80 TOTAL ACREAGE_15.89	
TOTAL LINEAR FOOTAGE OF PIPE: 18'-24" LF PLAT NO. 24-11800406	
NUMBER OF LOTS_80 SAWS JOB NO._24-1630	

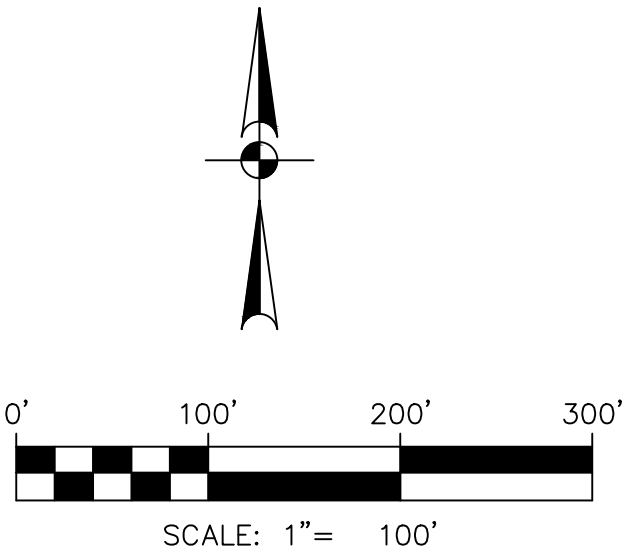
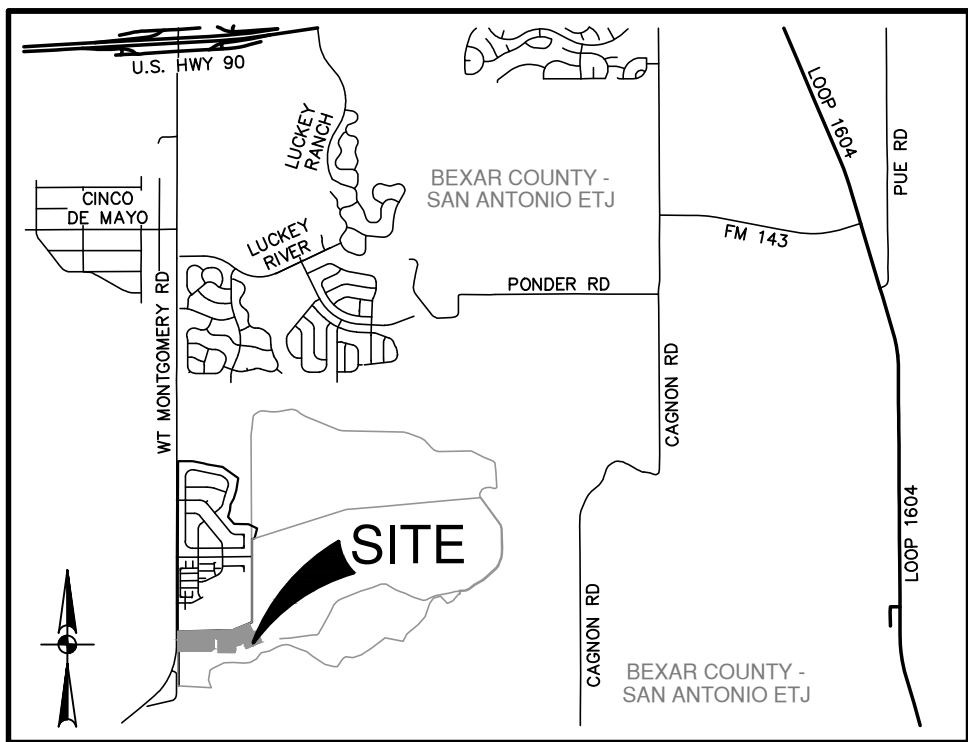
WATER (SAWS PRESSURE ZONE 4 (930 HGL))

DEVELOPER'S NAME:LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.	
ADDRESS: 100 NE LOOP 410, SUITE 1155	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78216
PHONE# (210) 889-5516	E-MAIL: RICHARD.MOTT@LENNAR.COM
SAWS BLOCK MAP#_082-546 TOTAL EDU'S_81.5 TOTAL ACREAGE_15.89	
TOTAL LINEAR FOOTAGE OF PIPE: 2'-688" LF PLAT NO. 24-11800406	
NUMBER OF LOTS_80 SAWS JOB NO._XX-XXXX	



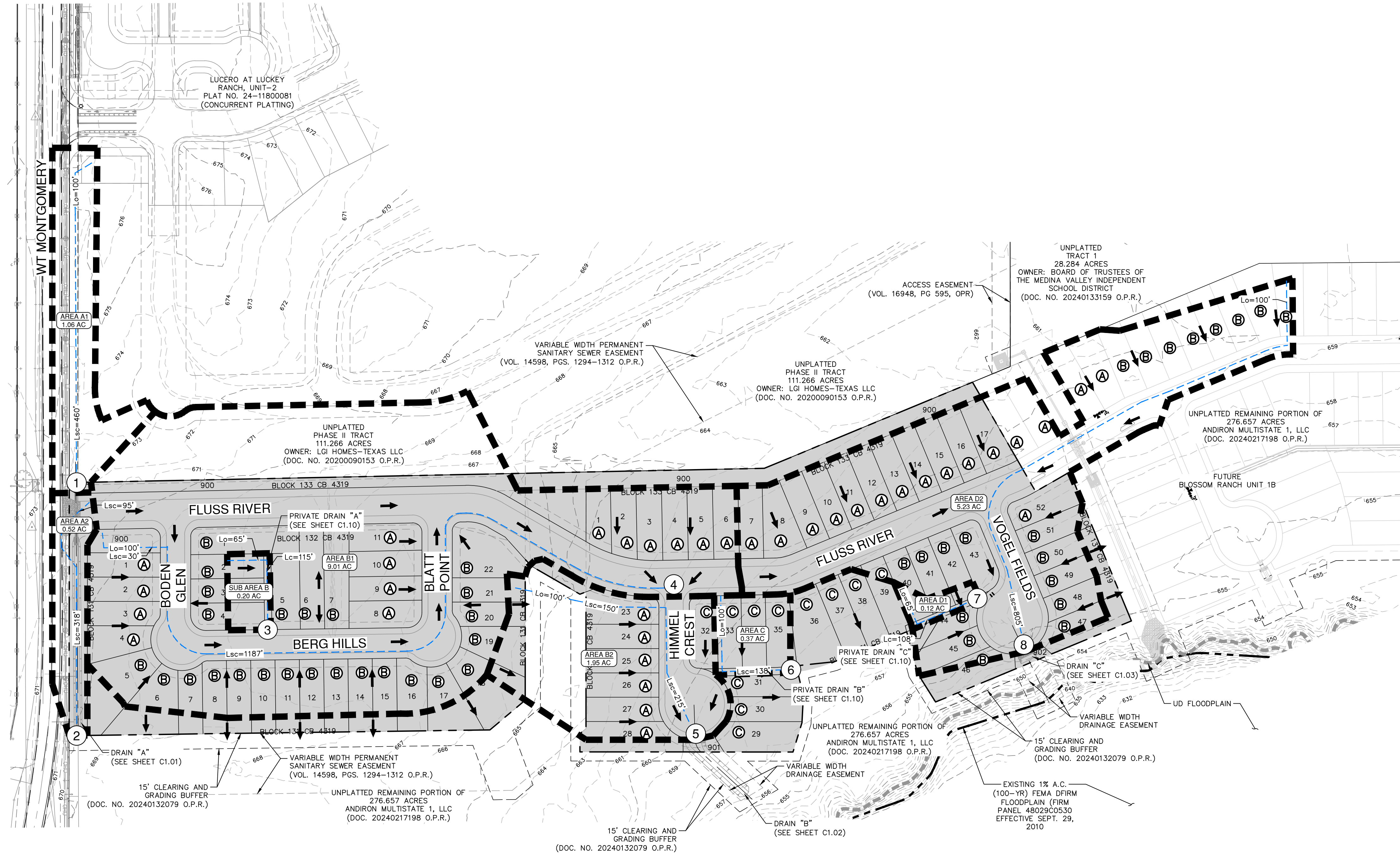
HYDROLOGY SUMMARY TABLE

POINT	STRUCTURE	WATERSHED	TOTAL AREA (ACRES)	COMPOSITE C VALUE	OVERLAND FLOW		SHALLOW		CHANNEL FLOW (6 FPS)		TIME OF CONCENTRATION	INTENSITY			FLOW			POINT	
					LENGTH	TRAVEL TIME	LENGTH	TRAVEL TIME	LENGTH	TRAVEL TIME		I <sub>5</sub>	I <sub>25</sub>	I <sub>100</sub>	Q <sub>5</sub>	Q <sub>25</sub>	Q <sub>100</sub>		
					FEET	MINUTES	FEET	MINUTES	FEET	MINUTES		IN/HR	IN/HR	IN/HR	CFS	CFS	CFS		
1	CULVERT	A1	1.06	0.71	0	0.0	413	5.0	0	0	5	4.97	6.79	8.40	3.74	5.11	6.32	1	
	CHANNEL	A2	0.52	0.78	40	5.0	305	5.0	0	0	10	7.84	10.48	13.63	3.18	4.25	5.53		
2	CHANNEL	A1 + A2	1.58	REFERENCE STORM WATER MANAGEMENT REPORT FOR HYDRAULIC CALCULATIONS												4.28	5.93	7.39	2
3	SWALE	SUB AREA B	0.20	0.65	65	1.0	115	1.0	0	0	2	9.38	13.31	16.77	1.22	1.73	2.18	3	
4	STREET	B1	9.01	0.65	100	10.0	1205	11.0	0	0	21	4.70	6.42	7.95	27.54	37.61	46.54	4	
	STREET	B2	1.95	0.65	100	10.0	215	2.0	0	0	12	5.81	7.97	9.86	7.37	10.10	12.50		
5	SIDEWALK BOX	B1 + B2	10.96	REFERENCE STORM WATER MANAGEMENT REPORT FOR HYDRAULIC CALCULATIONS												30.62	41.82	51.75	5
6	SWALE	C	0.37	0.65	100	10.0	138	1.0	0	0	11	6.32	8.65	10.73	1.52	2.08	2.58	6	
7	SWALE	D1	0.12	0.65	65	7.0	108	1.0	0	0	8	6.79	9.36	11.67	0.53	0.73	0.91	7	
	STREET	D2	5.23	0.65	100	10.0	805	7.0	0	0	17	4.97	6.79	8.40	16.89	23.07	28.54		
8	SIDEWALK BOX	D1+ D2	5.35	REFERENCE STORM WATER MANAGEMENT REPORT FOR HYDRAULIC CALCULATIONS												16.89	23.07	28.54	8

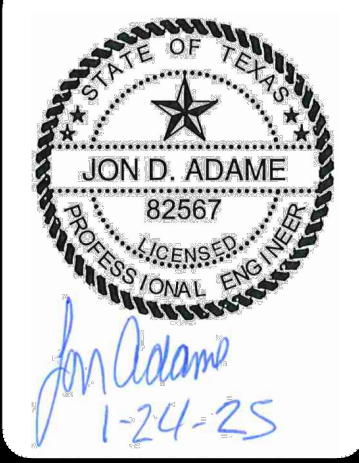


DRAINAGE LEGEND

- PROJECT LIMITS
- EXISTING CONTOUR
- 100-YR UD FLOODPLAIN
- 100-YR FEMA FLOODPLAIN
- RUNOFF FLOW PATH
- DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- DRAINAGE CALCULATION POINT
- DRAINAGE AREA
- FHA LOT GRADING TYPE



DATE	
NO.	
REVISION	



**PAPE-DAWSON ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028900

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS  
OVERALL DRAINAGE PLAN & CALCULATIONS

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	CB
CHECKED	AS
DRAWN	CB
SHEET	C1.00



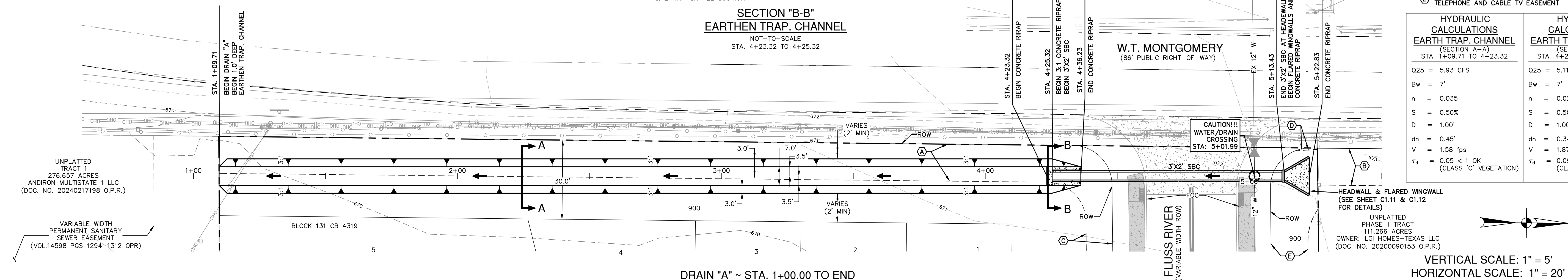
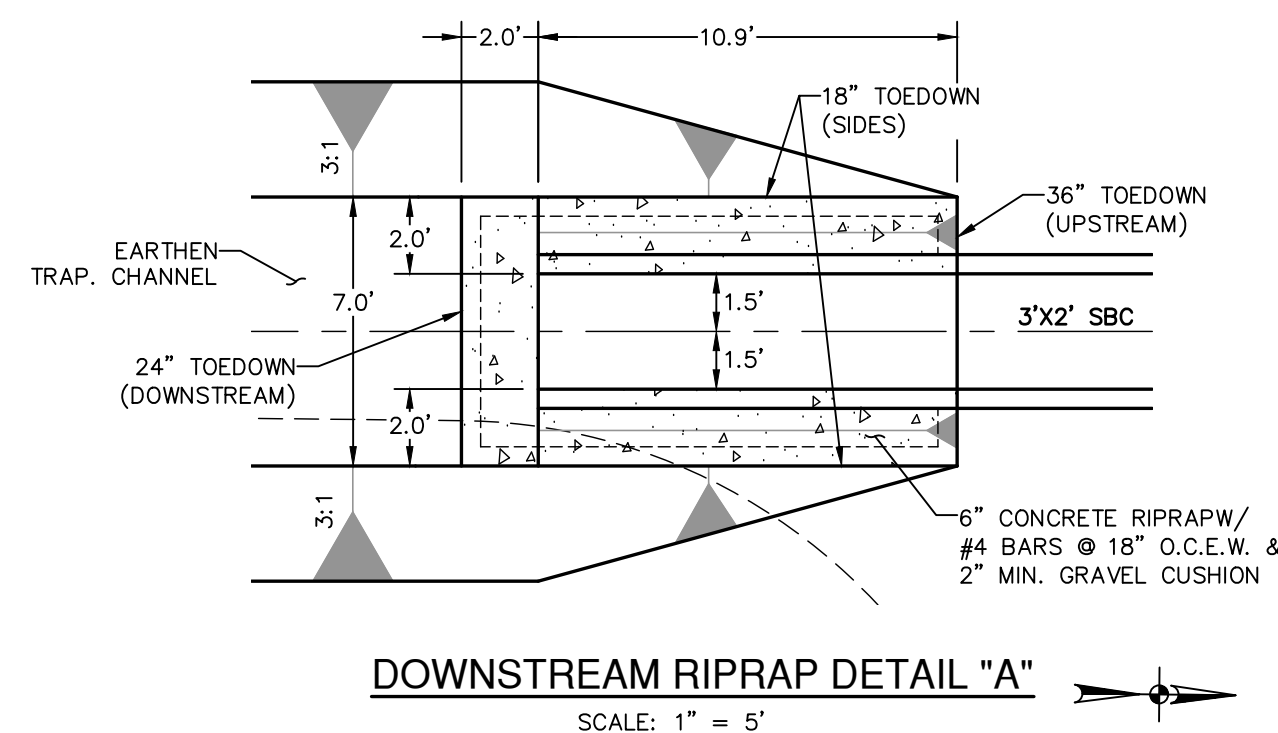
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN, GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION DATES WITHIN THE PROJECT AREA IN ORDER TO DETERMINE THAT CONTRACTOR'S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

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 BE RESPONSIBLE TO TEST A MINIMUM OF FOUR FEET 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.

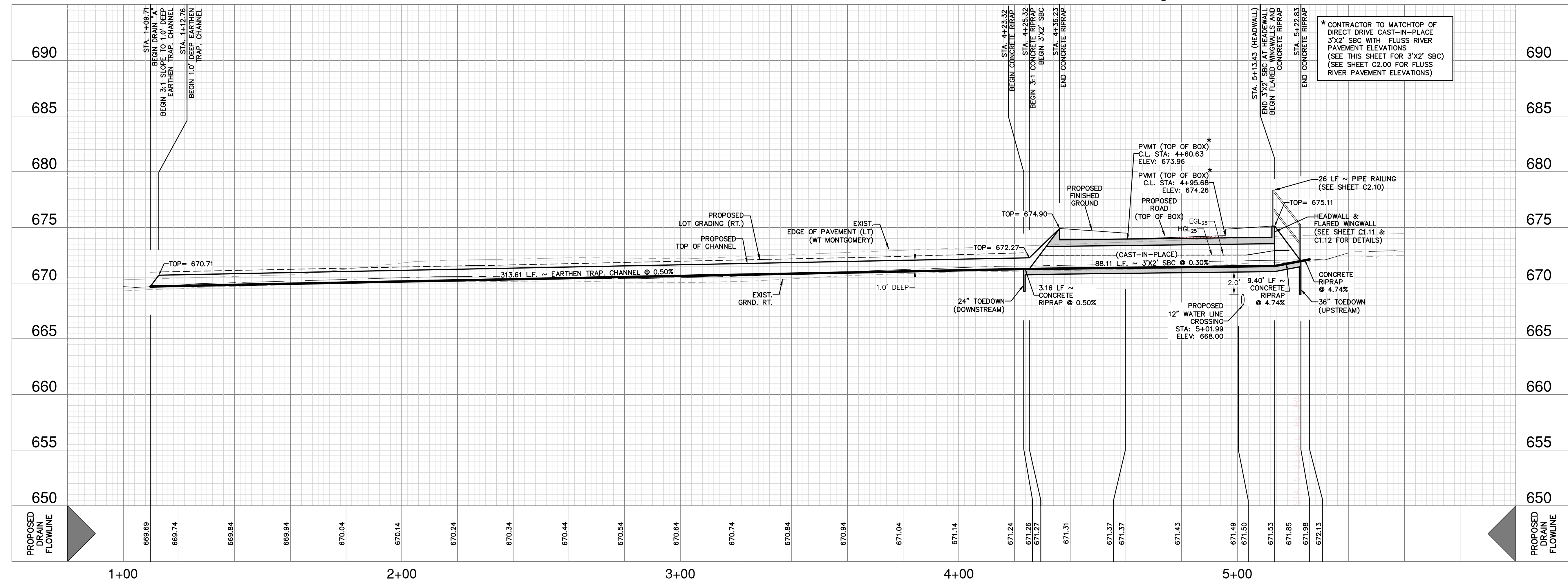
1. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER EXISTING UTILITIES PRIOR TO CONSTRUCTION TO VERIFY SIZE, GRADE, AND LOCATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY 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.

2. ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
3. REFERENCE DRAINAGE DETAILS FOR PIPE, TRENCH DETAILS, BOX CULVERT, HEADWALL, AND MINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
4. CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
5. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. 95% OF THE CHANNEL SURFACE MUST HAVE ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.
6. CONTRACTOR SHALL MATCH TOP OF CHANNEL TO NATURAL GROUND AND MAINTAIN A MINIMUM CHANNEL DEPTH OF "D" AS SHOWN IN THE PROFILE.

1. ALL SINGLE BOX CULVERTS (SBC) SHALL BE CAST-IN-PLACE CONSTRUCTION. (SEE SHEETS C1.12 FOR SBC CAST-IN-PLACE CONSTRUCTION DETAILS.)
2. ALL HEADWALL & WINGWALLS SHALL BE CAST-IN-PLACE CONSTRUCTION. (SEE SHEET C1.12 FOR HEADWALL & WINGWALL CAST-IN-PLACE CONSTRUCTION DETAILS.)



HYDRAULIC CALCULATIONS <u>EARTH TRAP, CHANNEL</u> (SECTION A-A) STA. 1+09.71 TO +23.32	HYDRAULIC CALCULATIONS <u>EARTH TRAP, CHANNEL</u> (SECTION B-B) STA. 1+23.32 TO +25.32
Q25 = 5.93 CFS	Q25 = 5.11 CFS
Bw = 7'	Bw = 7'
n = 0.035	n = 0.025
S = 0.50%	S = 0.50%
D = 1.00'	D = 1.00'
dn = 0.45'	dn = 0.34'
V = 1.58 fps	V = 1.87 fps
$\tau_d = 0.05 < 1 \text{ OK}$ (CLASS 'C' VEGETATION)	$\tau_d = 0.09 < 1 \text{ OK}$ (CLASS 'C' VEGETATION)



PROJECT LIMITS

EXISTING CONTOUR

PROPOSED WATER

PROPOSED SEWER

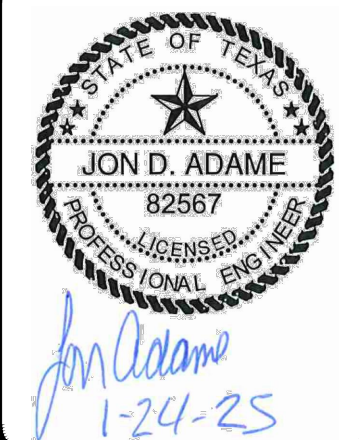
PROPOSED STORM DRAIN

EXISTING STORM DRAIN

FLOW ARROW

The diagram illustrates the proposed storm drain installation. It shows the project limits, existing contour, proposed water line, proposed sewer line, and the proposed storm drain. The proposed storm drain is shown as a new structure, while the existing storm drain is shown as a dashed line. A flow arrow indicates the direction of flow.

- (A) 14' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (B) 14' ELECTRICAL EASEMENT  
(DOC # 20130215364)
- (C) 10' GAS, ELECTRIC, TELEPHONE AND CABLE TV EASEMENT
- (D) VARIABLE WIDTH CLEAR VISION EASEMENT
- (E) VARIABLE WIDTH (MIN. 14') GAS, ELECTRIC TELEPHONE AND CABLE TV EASEMENT



**PAPE-DAWSON  
ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

**BLOSSOM RANCH UNIT 1A**  
**SAN ANTONIO, TEXAS**

DRAIN "A" ~ STA. 1+00.00 TO END  
DRAIN PLAN & PROFILE

PLAT NO. 24-11800406  
 JOB NO. 13055-20  
 DATE JANUARY 2025  
 DESIGNER CB  
 CHECKED AS DRAWN CB  
 SHEET C1.01



DRAINAGE & GRADING NOTES:

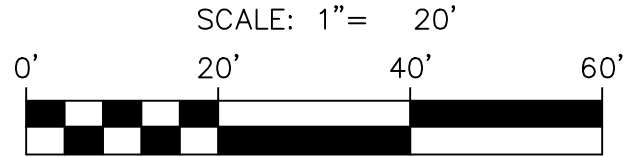
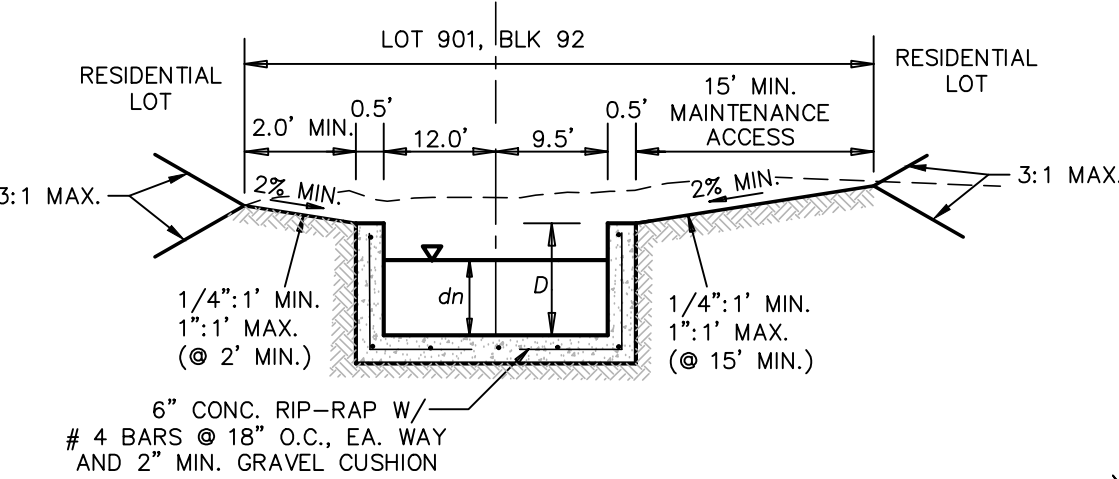
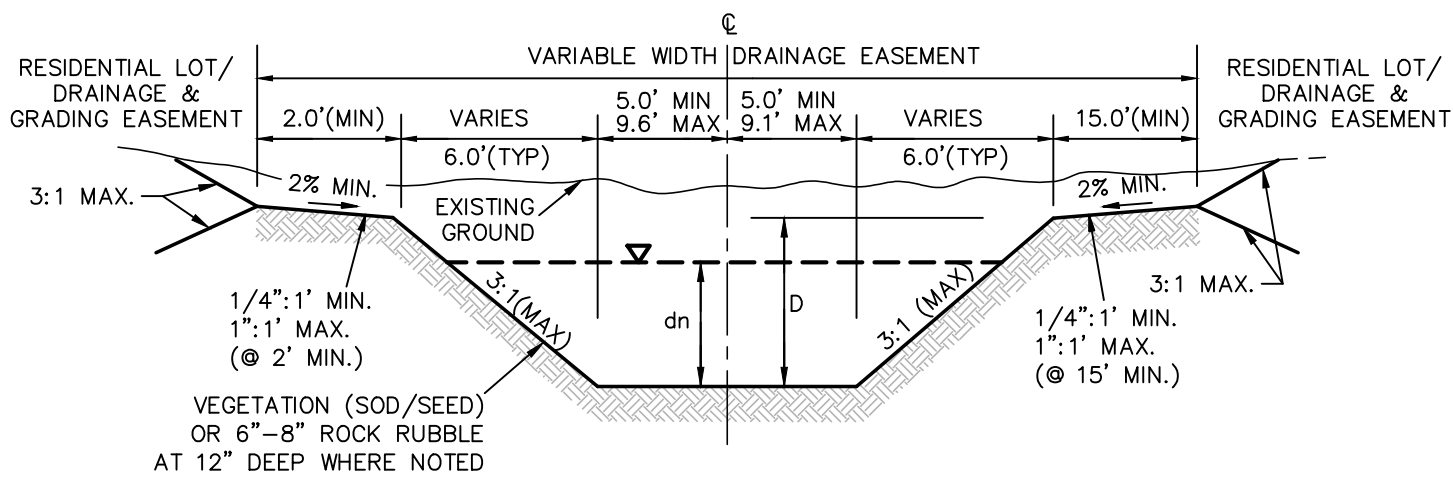
1. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING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

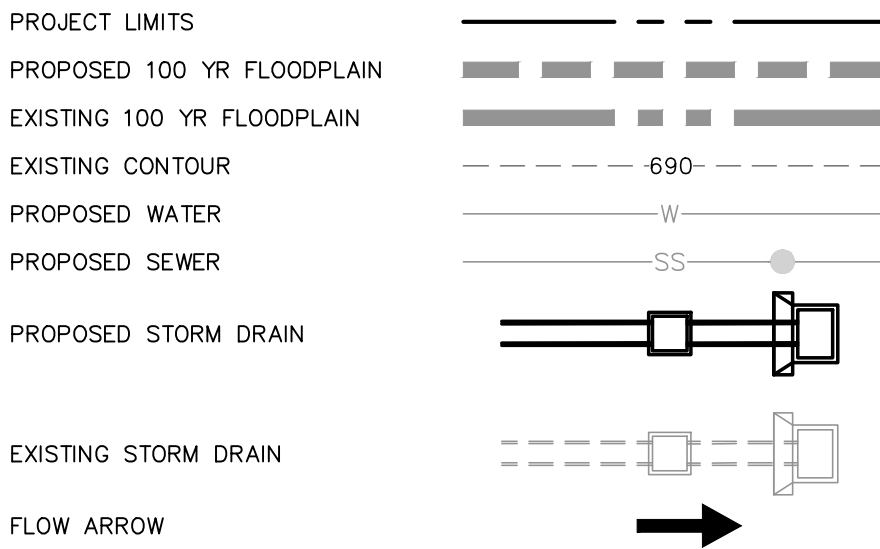
CONTRACTOR AND/ OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S 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.



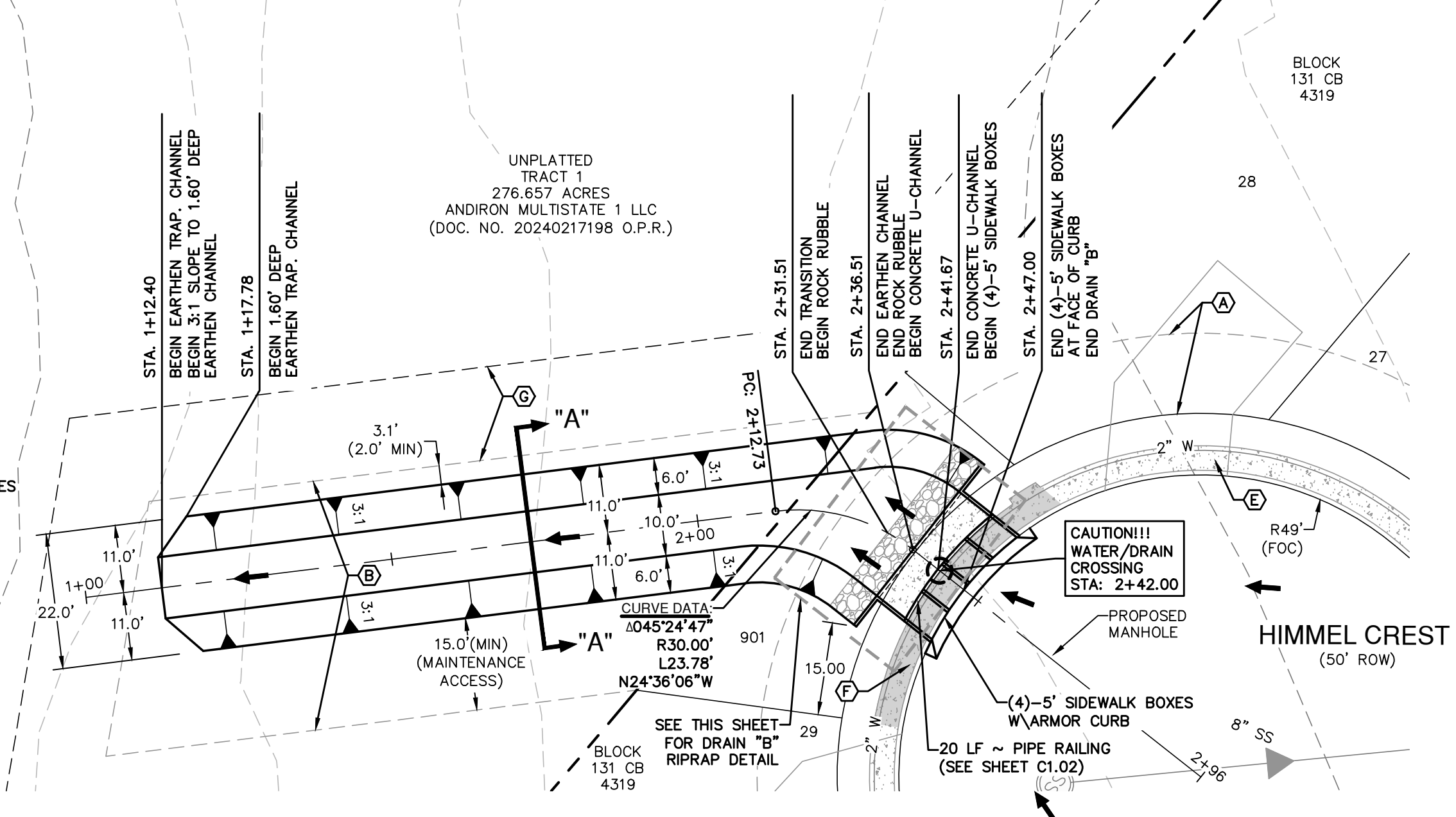
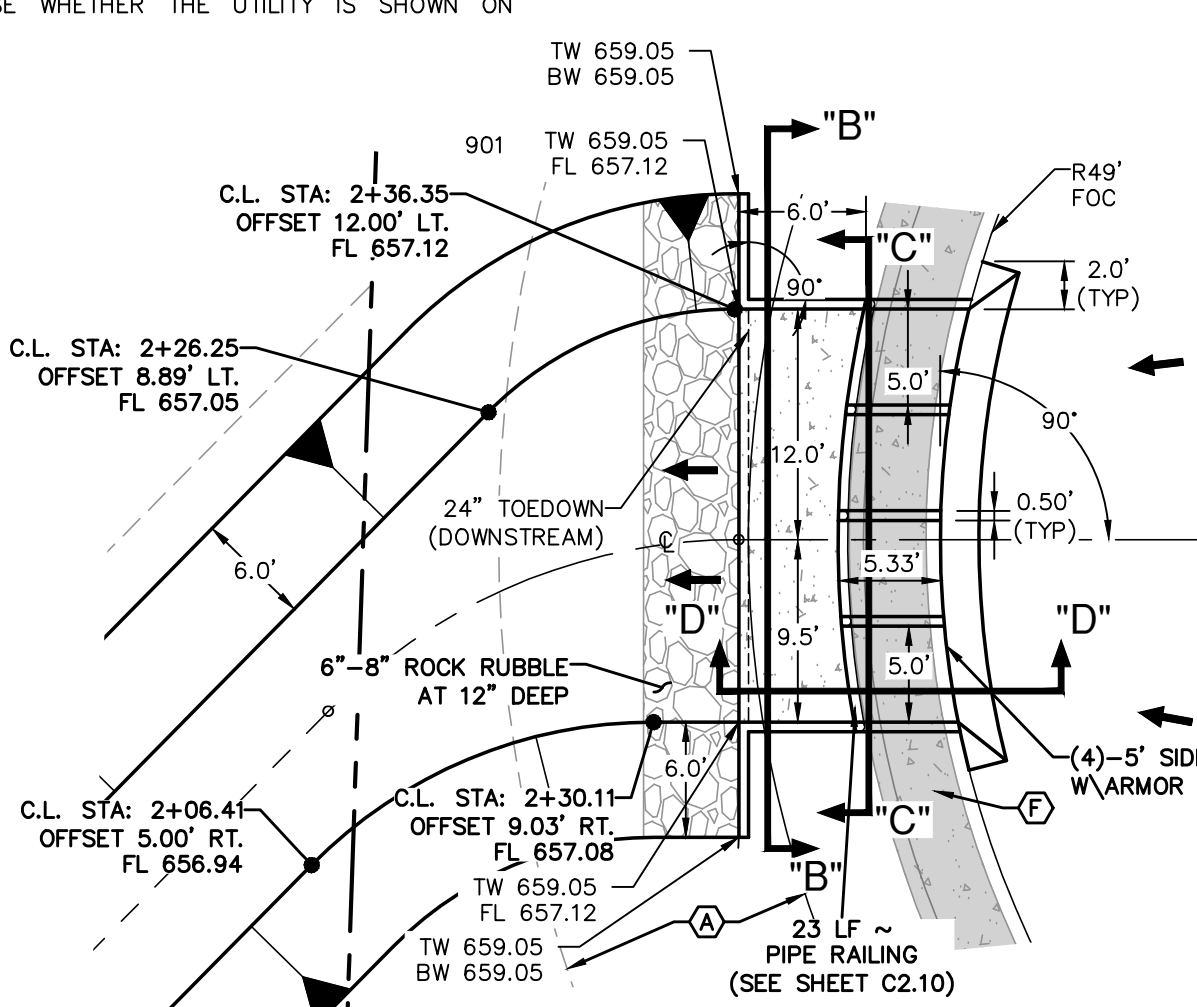
DRAINAGE LEGEND



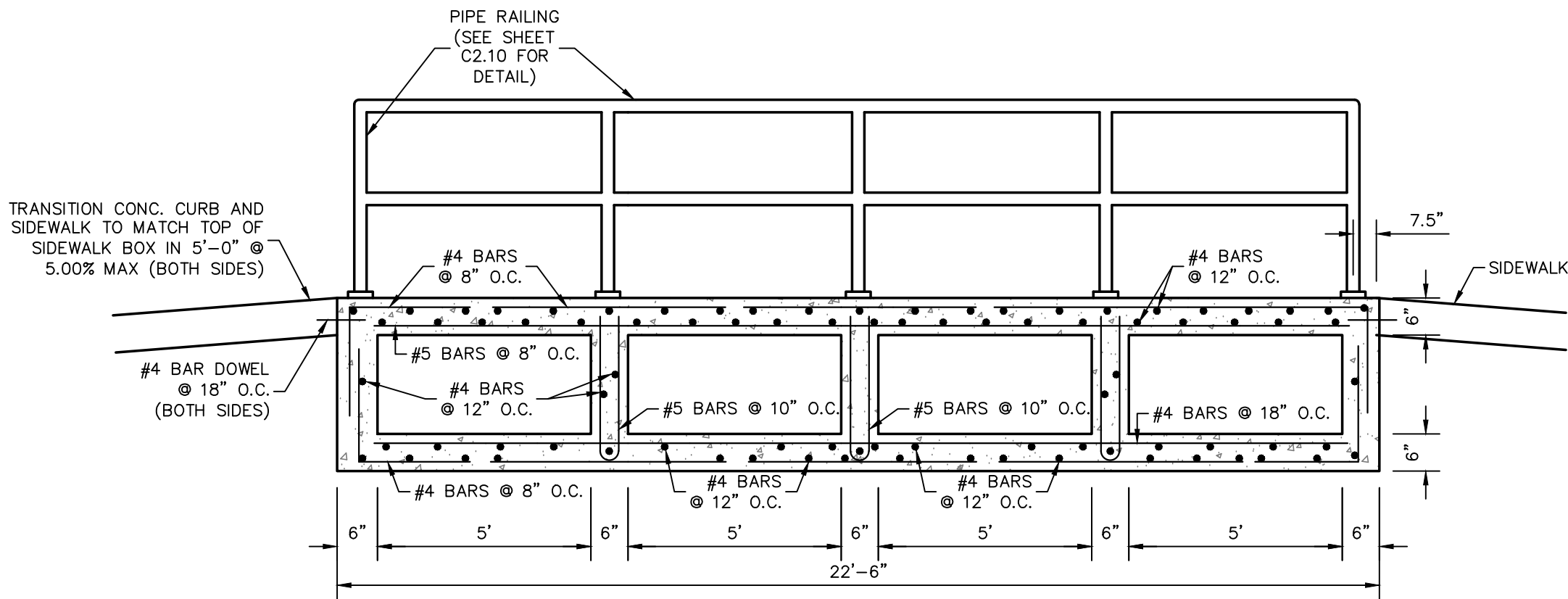
KEY LEGEND:

- (A) 13' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- (B) VARIABLE WIDTH DRAINAGE EASEMENT (BY SEPARATE INSTRUMENT)
- (E) 4' SIDEWALK
- (F) 4' DEVELOPER SIDEWALK
- (G) 15' CLEARING AND GRADING BUFFER EASEMENT (DOC. NO. 20240132079 O.P.R.)

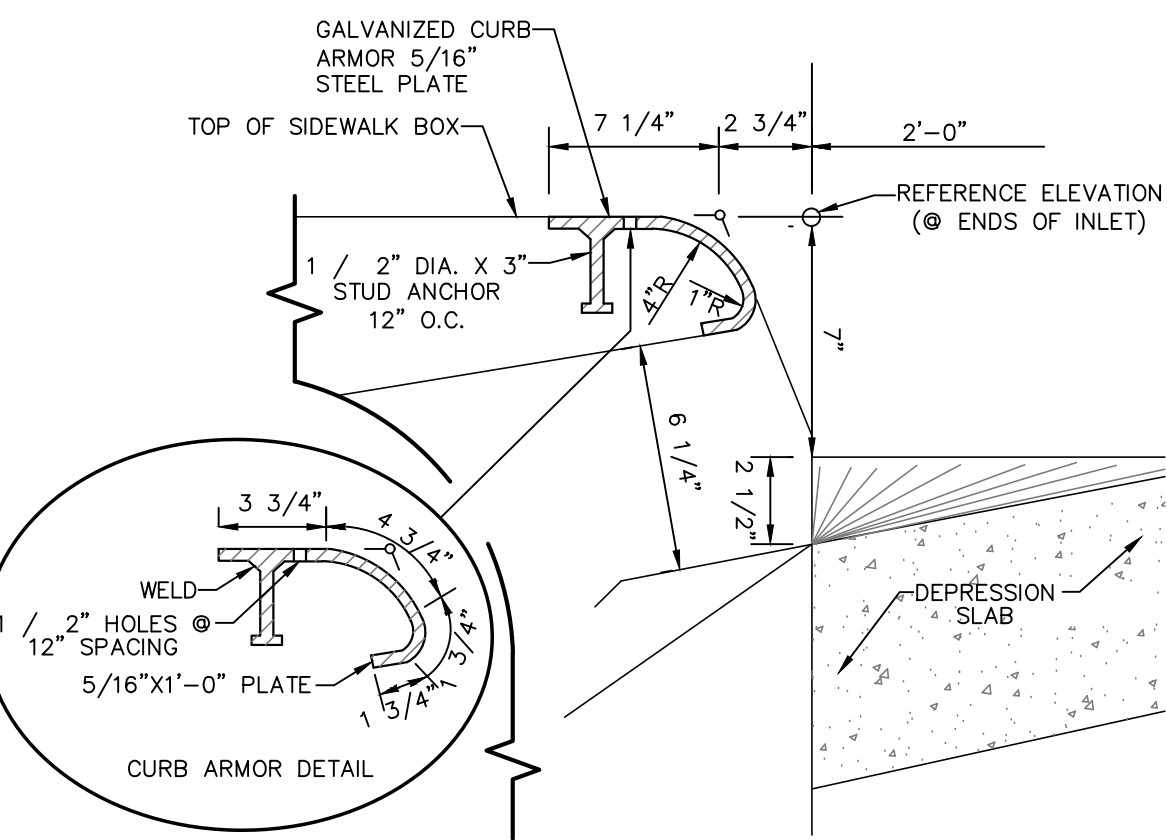
HYDRAULIC CALCULATIONS SIDEWALK BOXES DRAIN "B"	
Q25 =	41.82 CFS
Bw =	C X L X h^(3/2) (WIER EQ.)
C =	3.087
h =	0.79 FT
L =	$\frac{Q}{C \times h^{3/2}}$
L =	41.82 CFS
L =	(3.087)(0.79 FT)^(3/2)
L =	19.29 FT
Lcal =	USE (4)-5 FT SIDEWALK BOXES



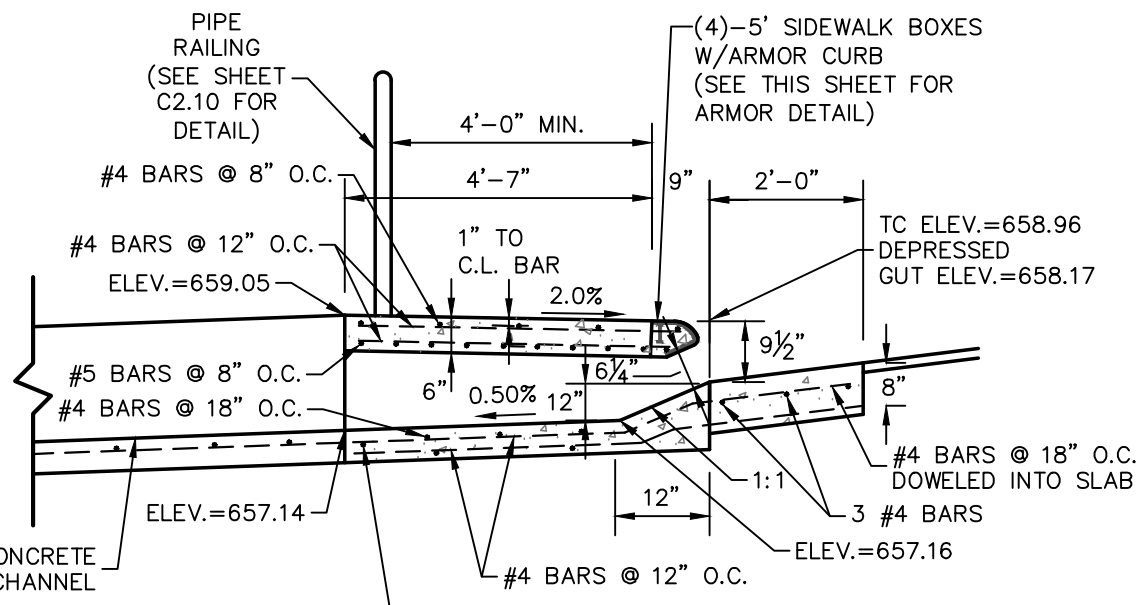
HYDRAULIC CALCULATIONS EARTHEN TRAP CHANNEL (SECTION A-A) STA. 1+12.40 TO 2+31.51		HYDRAULIC CALCULATIONS ROCK TRAP CHANNEL (SECTION A-A) STA. 2+31.51 TO 2+36.51	
Q25 =	41.82 CFS	Q25 =	41.82 CFS
Bw =	10'	Bw =	21.5'
n =	0.035	n =	0.035
S =	0.60%	S =	0.60%
D =	1.60'	D =	1.60'
dn =	1.08'	dn =	0.72'
V =	2.92 fps	V =	2.45 fps
Td =	0.32 < 1.0 OK (CLASS 'C' VEGETATION)	Td =	0.26 < 2.5 OK (ROCK, D50=6IN)



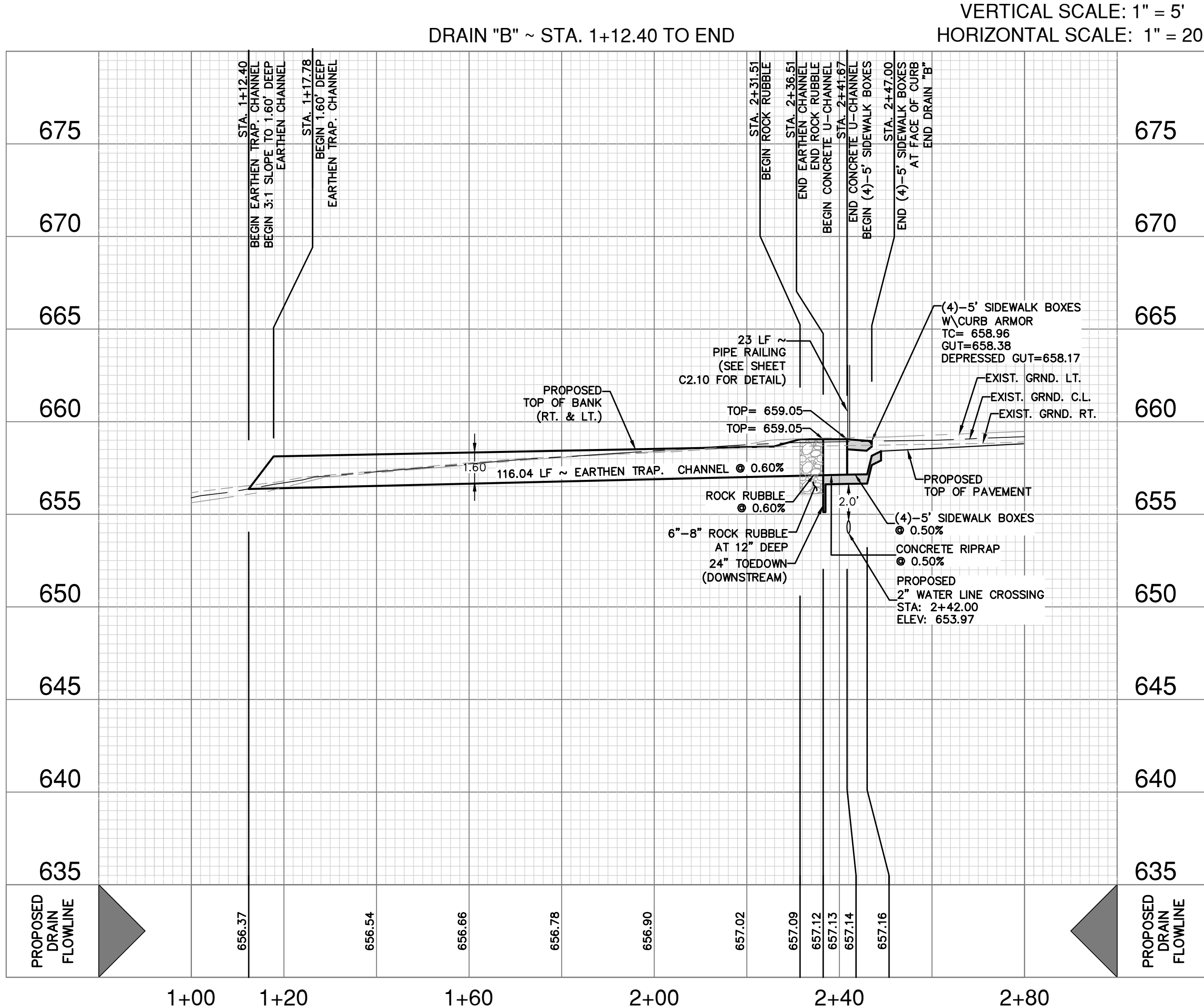
SIDEWALK BOX SECTION C-C  
NOT-TO-SCALE



CURB ARMOR DETAIL  
NOT-TO-SCALE

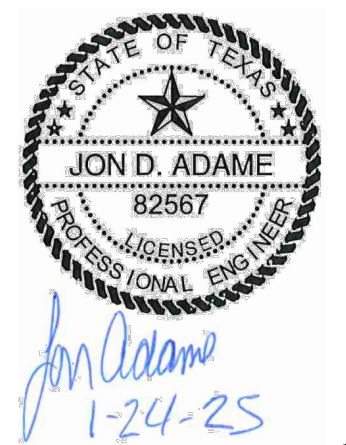


SIDEWALK BOX DETAIL SECTION "D-D"  
NOT-TO-SCALE



HYDRAULIC CALCULATIONS CONC. U-CHANNEL (SECTION B-B) STA. 2+36.51 TO 2+41.67	
Q25 =	41.82 CFS
Bw =	21.5'
n =	0.015
S =	0.50%
D =	1.60'
dn =	0.48'
V =	4.05 fps

DATE	
NO.	
REVISION	



**PAPE-DAWSON  
ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #1008900

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

**DRAIN "B" ~ STA. 1+12.40 TO END**  
**DRAIN PLAN & PROFILE**

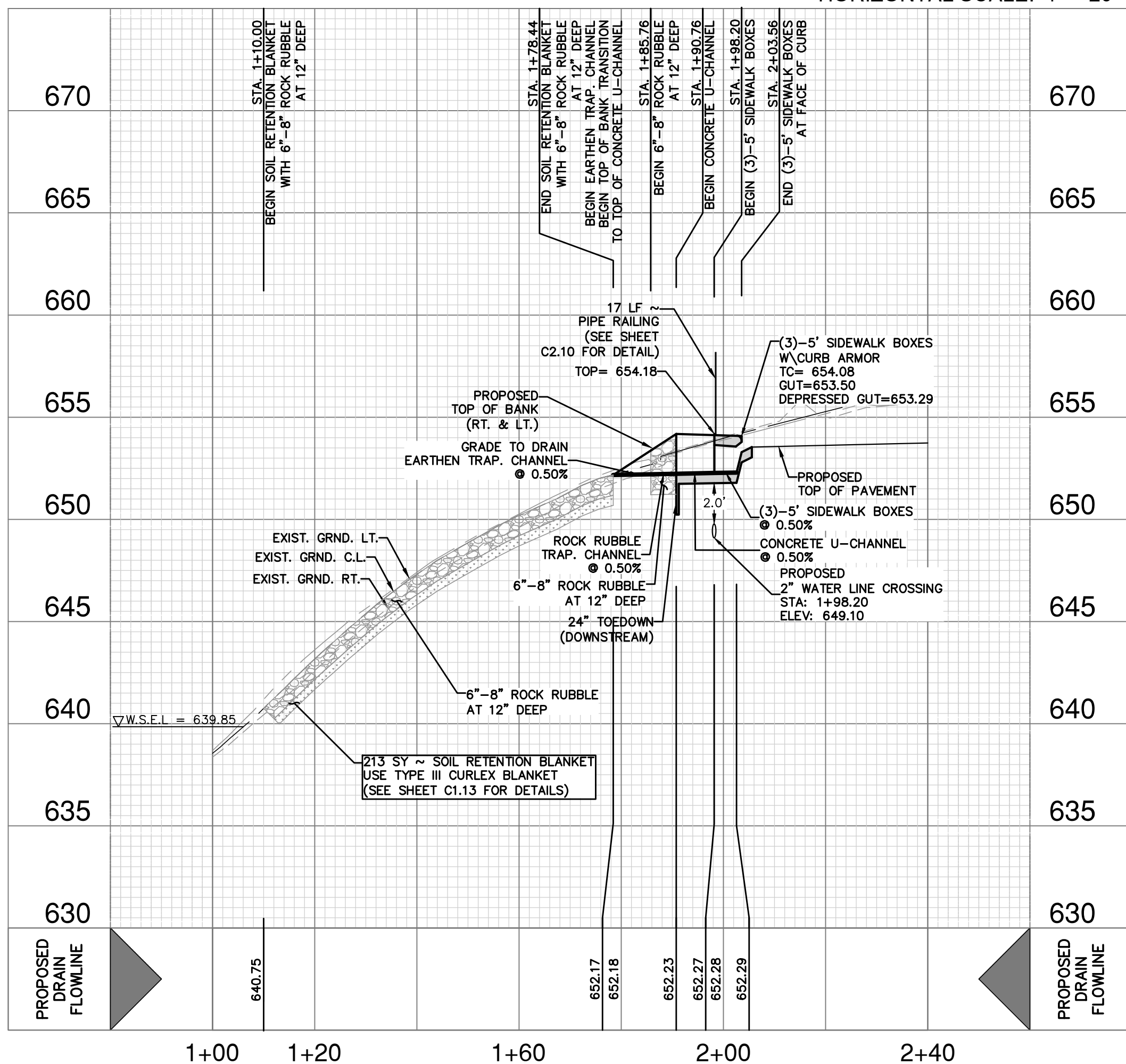
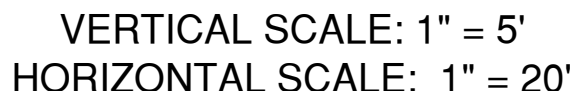
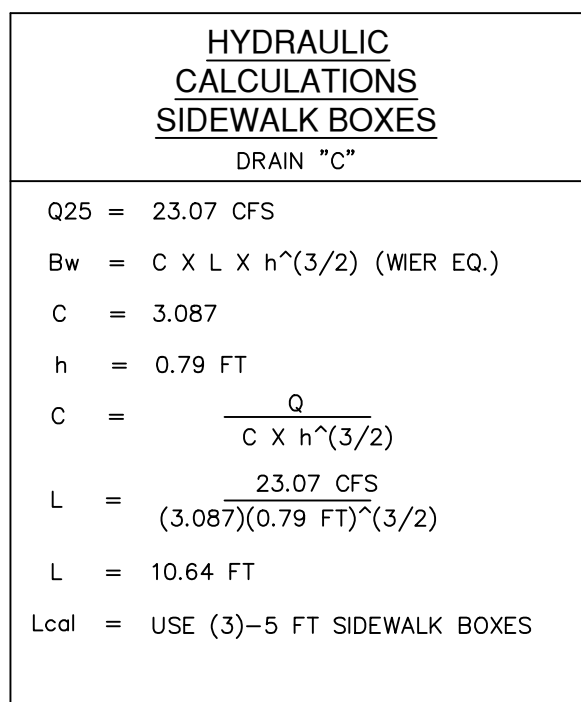
PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	CB
CHECKED	AS DRAWN CB
SHEET	C1.02



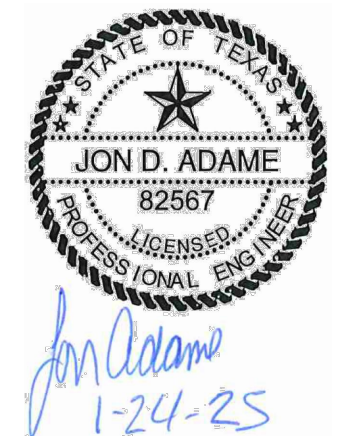
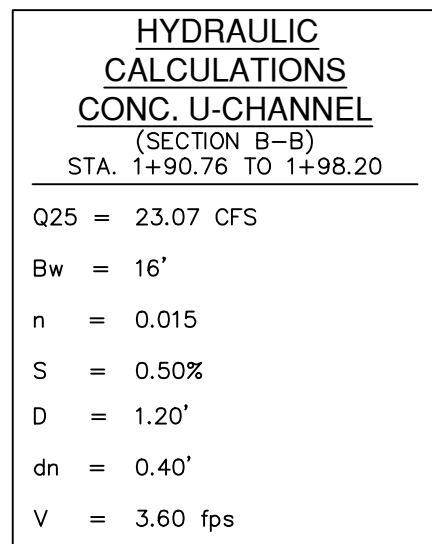
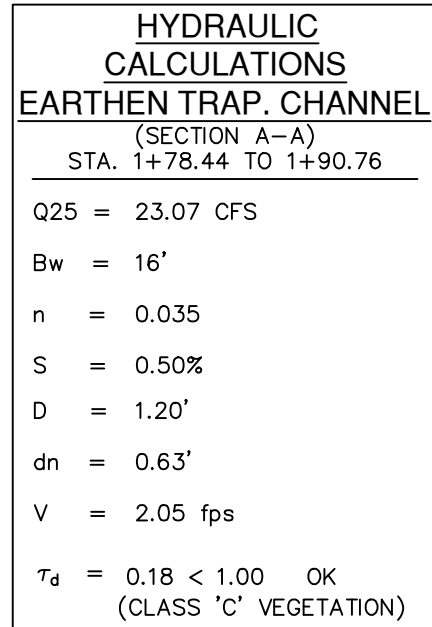
1. A BEAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN WITH THE CITY OF SAN ANTONIO. ADDITIONAL SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETERMINING EXA LOCATION OF ALL UTILITIES AND DRAINAGE STRUCTURES WHETHER SHOWN ON THE PLANS OR NOT. THE CONTRACTOR SHALL UNCOVER ALL 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. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK 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 MINGWALL 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.

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 ADAPTED TRENCH EXCAVATION PROGRAM FOR THE PROJECT WORK ARE 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 SHAL IMPLEMENT THESE SYSTEMS, PROGRAMS AND/OR PROCEDURES, SHALL DEVELOP AND ADAPT A TRENCH EXCAVATION PROGRAM FOR THE PROJECT THAT COMPLY WITH AS A MINIMUM, THE FOLLOWING REQUIREMENTS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL IMPLEMENT A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH THE WISCONSIN TRENCH EXCAVATION SAFETY ACT, THE ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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 CONDITIONS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CONTACT THE CITY OF DALLAS, TEXAS, MINIMUM OF 4 WEEKS 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.

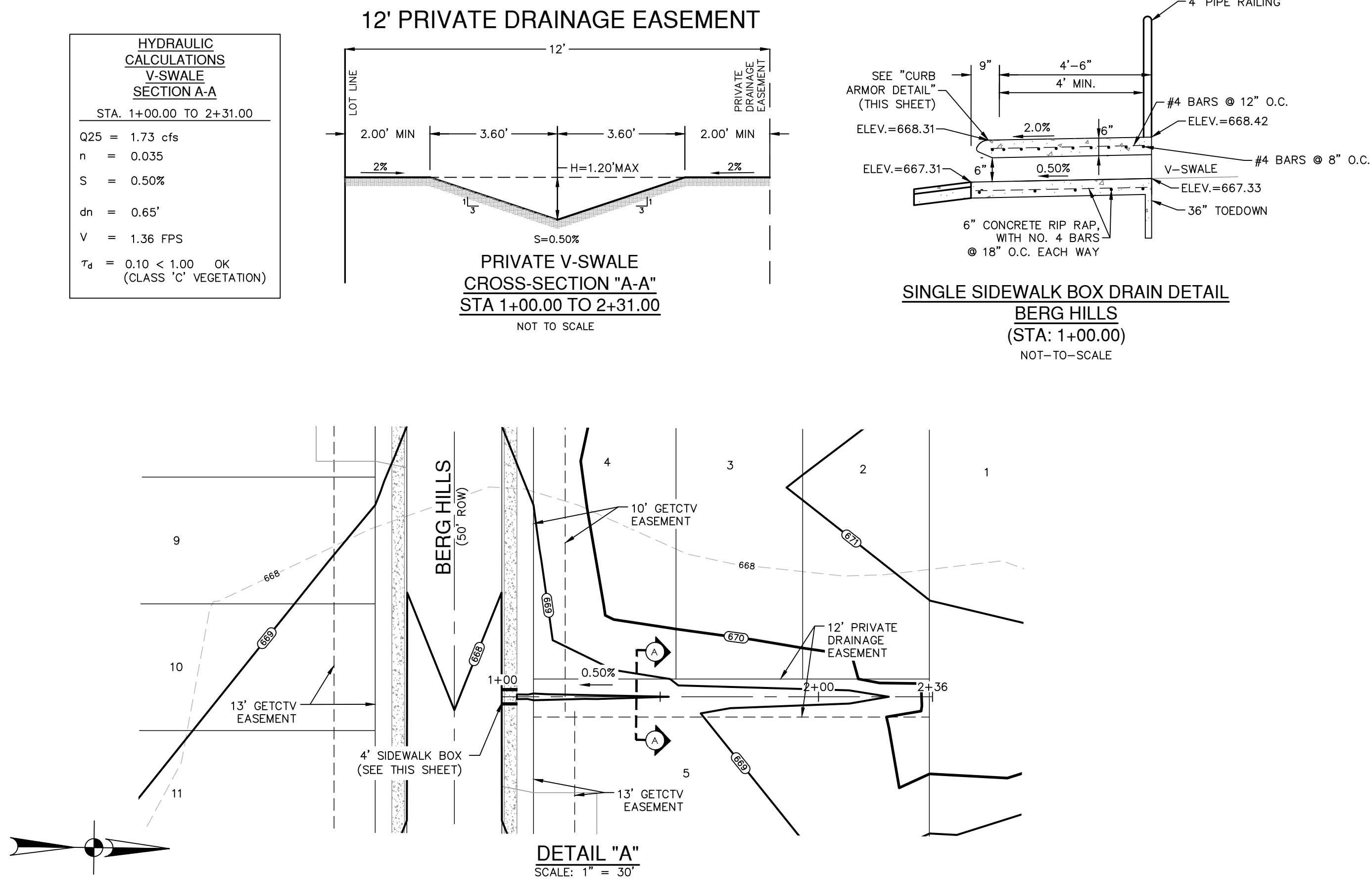


- (A) 13' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- (B) VARIABLE WIDTH DRAINAGE EASEMENT (BY SEPARATE INSTRUMENT)
- (E) 4' SIDEWALK
- (F) 4' DEVELOPER SIDEWALK
- (G) EXISTING 1% A.C. (100-YR) FEMA DFIRM FLOODPLAIN (FIRM PANEL 48029C0530 EFFECTIVE SEPT. 29, 2010)
- (H) 15' CLEARING AND GRADING BUFFER EASEMENT (DOC NO 20240132079 OPR)

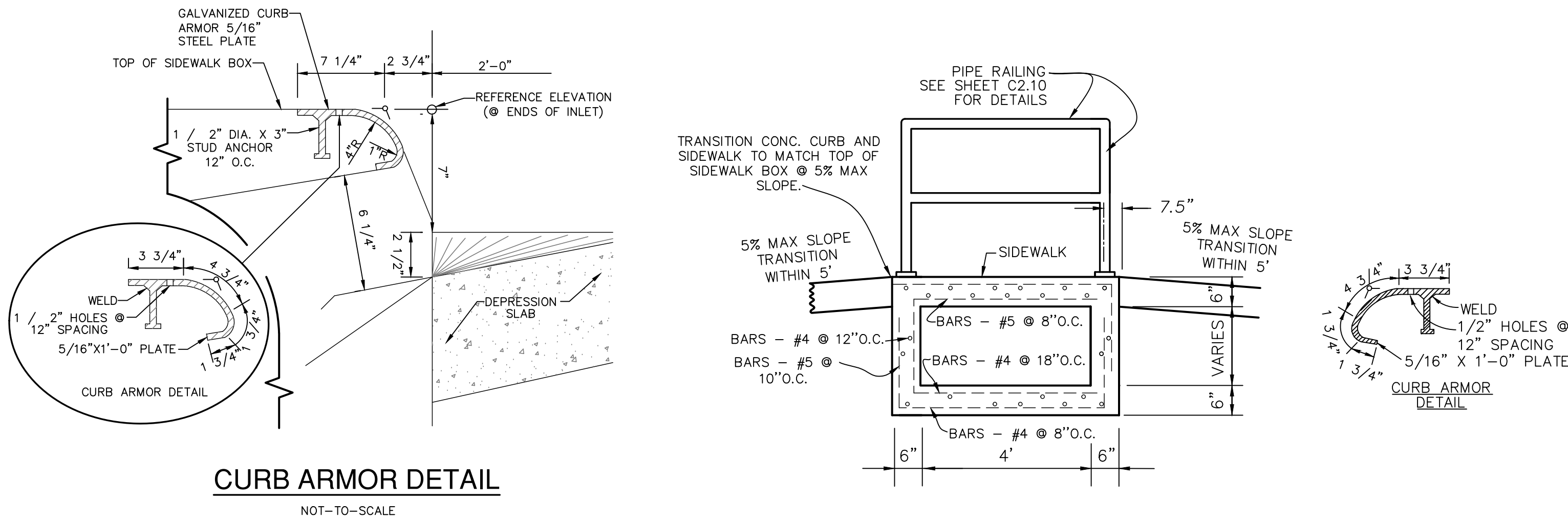
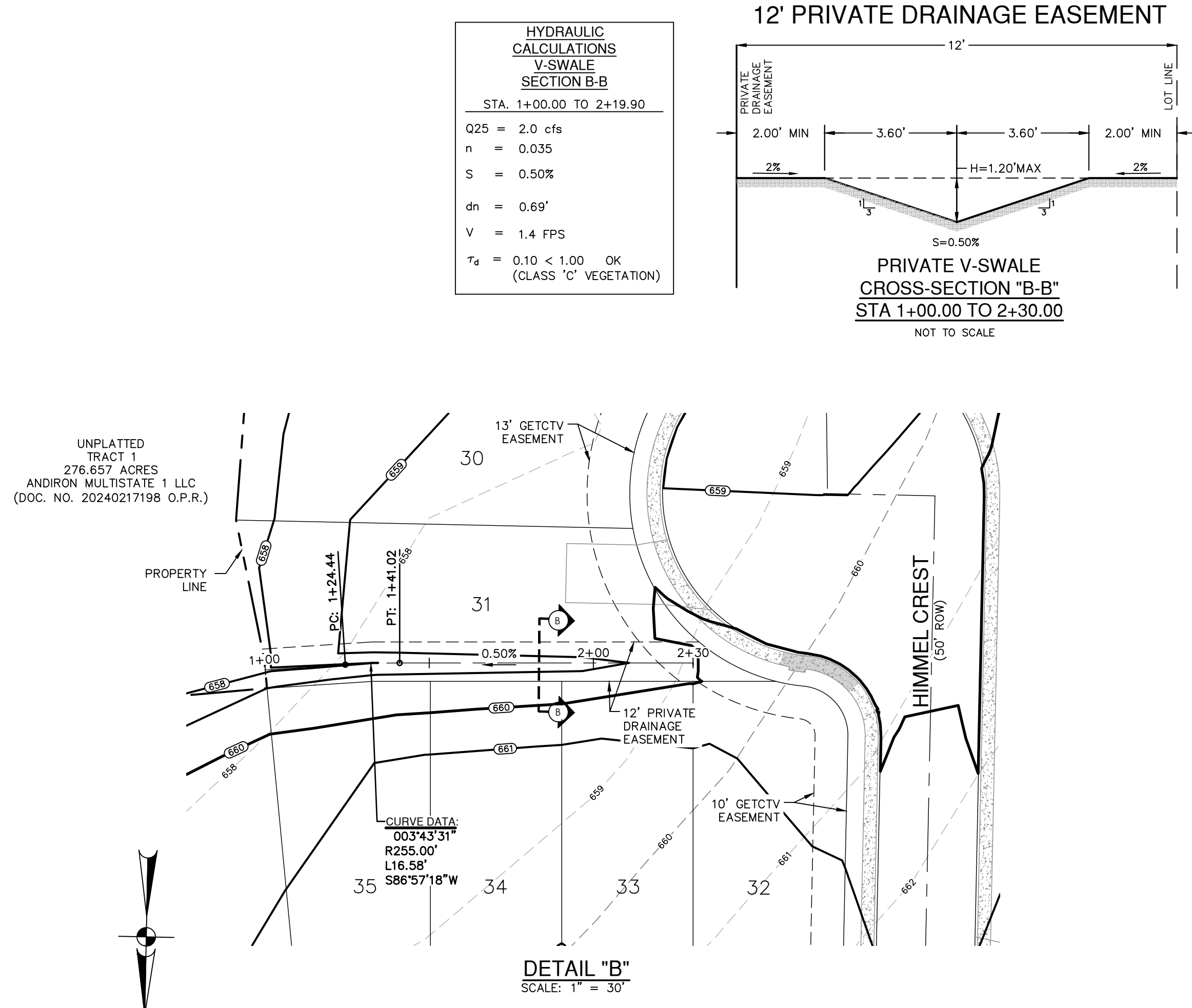




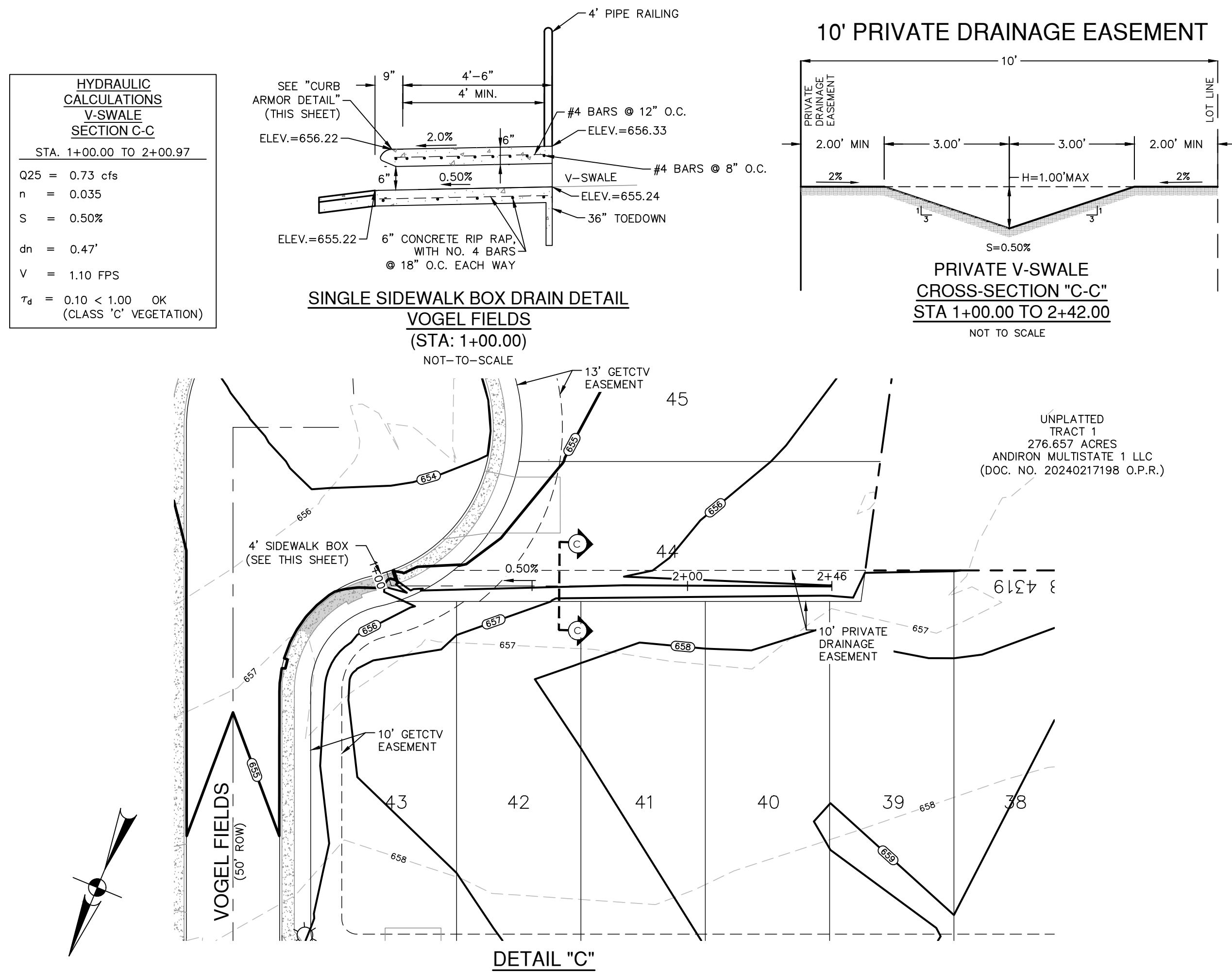
PRIVATE DRAIN "A"



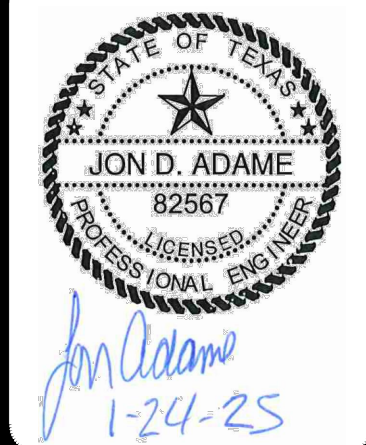
PRIVATE DRAIN "B"



PRIVATE DRAIN "C"



DATE	
NO.	
REVISION	



**PAPE-DAWSON**  
**ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1002800

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

**DRAIN DETAILS (PRIVATE DRAINS)**

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	CB
CHECKED	AS
DRAWN	CB
SHEET	C1.10

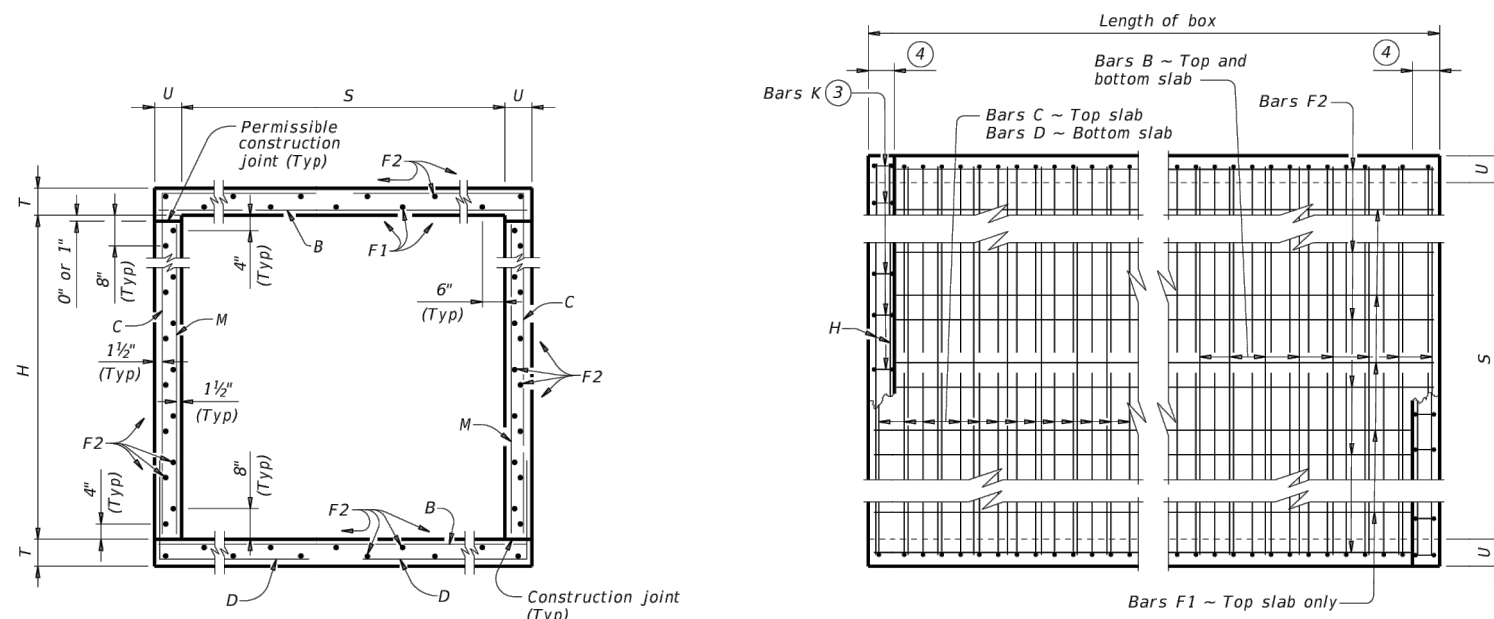






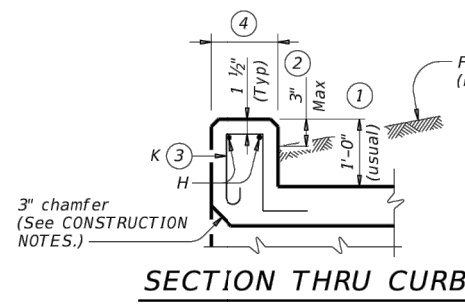
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DATE: 1/24/25

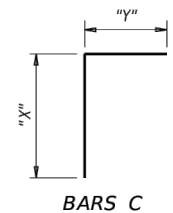


TYPICAL SECTION

PLAN OF REINF STEEL

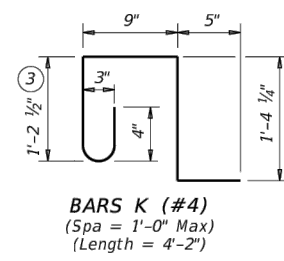


SECTION THRU CURB



BARS C

BARS D



BARS K (#4)  
(Spa = 4'-0" Max)  
(Length = 4'-0")

- 1' Min to 5'-0" Max. Estimated curb heights are shown elsewhere in the plans. For structures with pedestrian rail or curbs taller than 1'-0", refer to the Extended Curb Details (ECD) standard sheet. For structures with 1631 or 1631S bridge rail, refer to the Mounting Details for 1631 & 1631S Rails (T631-CM) standard sheet. Refer to the Rail Anchorage Curb (RAC) standard sheet for structures with bridge rail other than 1631 or 1631S.
- For vehicle safety, the following requirements must be met:
  - For structures without bridge rail, construct curbs no more than 3' above finished grade.
  - For structures with bridge rail, construct curbs flush with finished grade. Reduce curb heights, if necessary, to meet the above requirements. No changes will be made in quantities and no additional compensation will be allowed for this work.
- For curbs less than 1'-0" high, tilt Bars K or reduce bar height as necessary to maintain cover. For curbs less than 2' high, Bars K may be omitted.
- 1'-0" typical. 2'-3" when the Rail Anchorage Curb (RAC) standard sheet is referred to elsewhere in the plans.

The Contractor may replace Bars B, C, D, E, F1, F2, M, Y, and/or Z with deformed welded wire reinforcement (WWR) meeting the requirements of ASTM A1064. The area of required reinforcement may be reduced by the ratio of 60 ksi / 70 ksi. Spacing of WWR is limited to 4' Min and 18" Max. When required, provide lap splices in the WWR of the same length required for the equivalent bar size, rounded up for wire sizes between conventional bar sizes. The lap length required for WWR is never less than the lap length required for uncoated #4 bars.

Example conversion: Replacing No. 6 @ 6' with WWR.  
Required WWR = (0.44 sq. in. per 0.5 ft.) x (60 ksi / 70 ksi) = 0.75 sq. in. per ft.  
If D306 wire is used to meet the 0.75 sq. in. per ft. requirement in this example, the required spacing = (0.306 sq. in.) / (0.75 sq. in. per ft.) x (12 in. per ft.) = 4.86"  
Max spacing. Required lap length for the provided D306 wire is 2'-3" (the same minimum lap length required for uncoated #5 bars, as listed under MATERIAL NOTES).

**CONSTRUCTION NOTES:**  
Do not use permanent forms.  
Chamfer the bottom edge of the top slab 3" at the entrance.  
Optionally, raise construction joints shown at the flow line by a maximum of 6". If this option is taken, Bars M may be cut off or raised, Bars C and D may be reversed.

**MATERIAL NOTES:**  
Provide Grade 60 reinforcing steel.  
Provide galvanized reinforcing steel if required elsewhere in the plans.  
Provide Class C concrete (f'c = 3,600 psi) for culvert barrels and curbs, with the following exceptions: provide Class S concrete (f'c = 4,000 psi) for top slabs of:

- culverts with overlay;
- culverts with 1-to-2 course surface treatment; or
- culverts with the top slab as the final riding surface.

Provide bar laps, where required, as follows:

- Uncoated or galvanized - #4 = 1'-0" Min
- Uncoated or galvanized - #5 = 2'-3" Min

**GENERAL NOTES:**  
Designed according to AASHTO LRFD Bridge Design Specifications for the range of fill heights shown.  
See the Single Box Culverts Cast-In-Place Miscellaneous Detail (SCC-MD) standard sheet for details pertaining to skewed ends, angle sections, and lengthening.  
Cover dimensions are clear dimensions, unless noted otherwise.  
Reinforcing bar dimensions shown are out-to-out of bar.

HL93 LOADING SHEET 1 OF 2

Texas Department of Transportation

BRIDGE DIVISION STANDARD

**SINGLE BOX CULVERTS  
CAST-IN-PLACE  
0' TO 30' FILL**

**SCC-3 & 4**

REV.	DATE	BY	CHKD	APPD	REVISION
1	02/24/20	JDA	JDA	JDA	ISSUED

FILE: C:\Users\JDA\OneDrive\Temp\BlossomRanch\BDR-1305520.dwg

SECTION DIMENSIONS		FILL HEIGHT		BILLS OF REINFORCING STEEL (For Box Length = 40 feet)																												QUANTITIES										
				Bars B				Bars C				Bars D				Bars M - #4				Bars F1 - #4 at 18" Spa				Bars F2 - #4 at 18" Spa				Bars H - #4				Bars K				Per Foot of Barrel		Curb		Total		
S	H	T	U	No.	Size	Length	Weight	No.	Size	Length	Weight	" X "	" Y "	No.	Size	Length	Weight	" Y "	" Z "	No.	Size	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	
3'-0"	2'-0"	8"	7"	39	108	#5	9"	3'-11"	441	108	#4	9"	3'-0"	385	2'-0"	2'-10"	108	#4	9"	3'-0"	367	2'-10"	2'-3"	108	9"	2'-0"	144	3	39-9"	80	19	39-9"	505	3'-11"	10	28	0.292	48.1	0.3	38	12.0	1,960
3'-0"	3'-0"	8"	7"	30	108	#5	9"	3'-11"	441	108	#4	9"	3'-0"	457	3'-0"	2'-10"	108	#4	9"	3'-0"	367	2'-10"	2'-3"	108	9"	3'-0"	216	3	39-9"	80	23	39-9"	611	3'-11"	10	28	0.335	54.3	0.3	38	13.7	2,210
4'-0"	2'-0"	8"	7"	30	108	#5	9"	4'-11"	554	162	#4	6"	3'-0"	613	2'-0"	3'-2"	162	#4	6"	3'-0"	586	3'-2"	2'-3"	108	9"	2'-0"	144	3	39-9"	80	21	39-9"	558	4'-11"	13	33	0.442	63.4	0.4	46	14.1	2,581
4'-0"	3'-0"	8"	7"	30	108	#5	9"	4'-11"	554	162	#4	6"	3'-0"	721	3'-0"	3'-2"	162	#4	6"	3'-0"	586	3'-2"	2'-3"	108	9"	3'-0"	216	3	39-9"	80	25	39-9"	664	4'-11"	13	33	0.585	70.5	0.4	46	15.6	2,867
4'-0"	4'-0"	8"	7"	39	108	#5	9"	4'-11"	554	162	#4	6"	3'-0"	830	4'-0"	3'-2"	162	#4	6"	3'-0"	586	3'-2"	2'-3"	108	9"	4'-0"	289	3	39-9"	80	25	39-9"	664	4'-11"	13	33	0.428	75.1	0.4	46	17.5	3,049

For direct traffic culverts (fill height < 2 ft.), identify the required box size and select the option with the minimum fill height.

HL93 LOADING SHEET 2 OF 2

Texas Department of Transportation

BRIDGE DIVISION STANDARD

**SINGLE BOX CULVERTS  
CAST-IN-PLACE  
0' TO 30' FILL**

**SCC-3 & 4**

REV.	DATE	BY	CHKD	APPD	REVISION
1	02/24/20	JDA	JDA	JDA	ISSUED

FILE: C:\Users\JDA\OneDrive\Temp\BlossomRanch\BDR-1305520.dwg

**TABLE OF DIMENSIONS AND REINFORCING STEEL**  
(Wings for one structure end)

Dimensions	Variable Reinforcing	Estimated Quantities per ft of wing length (2-wings) (3)
Maximum Wingwall Height (ft)	Bars J1 Bars J2	Reinf (lb/ft) Conc (CY/ft)
3'-0" 2'-5" 1'-0" 9" 7"	#4 1'-0" #4 1'-0"	33.73 0.248
3'-0" 2'-5" 1'-0" 9" 7"	#4 1'-0" #4 1'-0"	37.07 0.261
3'-0" 2'-5" 1'-0" 9" 7"	#4 1'-0" #4 1'-0"	37.74 0.273
4'-0" 2'-5" 1'-0" 9" 7"	#4 1'-0" #4 1'-0"	38.41 0.285
4'-0" 3'-2" 1'-0" 1'-0" 7"	#4 1'-0" #4 1'-0"	41.75 0.330
5'-0" 3'-2" 1'-0" 1'-0" 7"	#4 1'-0" #4 1'-0"	45.09 0.343
5'-0" 3'-2" 1'-0" 1'-0" 7"	#4 1'-0" #4 1'-0"	45.75 0.355
6'-0" 3'-2" 1'-0" 1'-0" 7"	#4 1'-0" #4 1'-0"	46.42 0.367
11'-0" 3'-2" 1'-0" 1'-0" 7"	#4 1'-0" #4 1'-0"	52.77 0.414
12'-0" 6'-2" 2'-0" 2'-0" 8"	#5 1'-0" #4 1'-0"	60.19 0.486
9'-0" 4'-8" 2'-3" 1'-0" 7"	#4 6" #4 6"	81.49 0.535
10'-0" 5'-2" 2'-6" 2'-0" 8"	#5 6" #4 6"	97.25 0.584
11'-0" 5'-8" 2'-9" 2'-3" 8"	#6 6" #5 6"	133.65 0.634
12'-0" 6'-2" 2'-9" 2'-6" 9"	#7 6" #5 6"	162.29 0.721
13'-0" 6'-8" 3'-3" 2'-9" 11"	#7 6" #5 6"	178.80 0.856
14'-0" 7'-2" 3'-6" 3'-0" 1'-0"	#8 6" #5 6"	216.78 0.959
15'-0" 7'-8" 4'-0" 3'-0" 1'-1"	#9 6" #6 6"	283.06 1.068
16'-0" 8'-2" 4'-4" 3'-0" 1'-3"	#9 6" #6 6"	297.02 1.234

**TABLE OF WINGWALL REINFORCING**  
(2-wings)

Bar Size	No.	Spa
D #5	1	1'-0"
E #4	1	1'-0"
F #4	1	1'-0"
G #6	4	-
H #4	4	-
P #4	1	1'-0"
N #5	6	-
V #4	1	1'-0"

**TABLE OF ESTIMATED CULVERT TOEWALL QUANTITIES**

Bar Size	No.	Spa
L #4	1	1'-0"
Q #4	1	-
Reinf (lb/ft)	2.45	-
Conc (CY/ft)	0.037	-

**WING DIMENSION FORMULAS:**  
(All values are in feet.)  
 $H_w = H + T + C - 0.250$   
 $A = (H_w \times 0.333) / (SL)$   
 $B = (A) \times \cosine(30^\circ)$   
For cast-in-place culverts:  
 $Lw = (H) / (SL) + (H + U) / (SL)$   
For precast culverts:  
 $Lw = (H) / (2U + S) + (H - 1) / (0.5)$   
Total wingwall area (two wings - SF) =  $(H_w + 0.333) / (Lw)$

**INSIDE ELEVATION**  
(Showing reinforcing. Culvert and culvert toewall reinforcing not shown for clarity.)

**PLAN**  
(Showing dimensions.)

**SECTION A-A**  
(Culvert and culvert toewall reinforcing not shown for clarity.)

**SECTION B-B**

**CONCRETE WINGWALLS WITH FLARED WINGS FOR 0° SKEW BOX CULVERTS**

**FW-0**

REV.	DATE	BY	CHKD	APPD	REVISION
1	02/24/20	JDA	JDA	JDA	ISSUED

FILE: C:\Users\JDA\OneDrive\Temp\BlossomRanch\BDR-1305520.dwg

BLOSSOM RANCH UNIT 1A  
SAN ANTONIO, TEXAS  
DRAIN DETAILS (SBC)

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C1.12

PAPE-DAWSON  
ENGINEERS

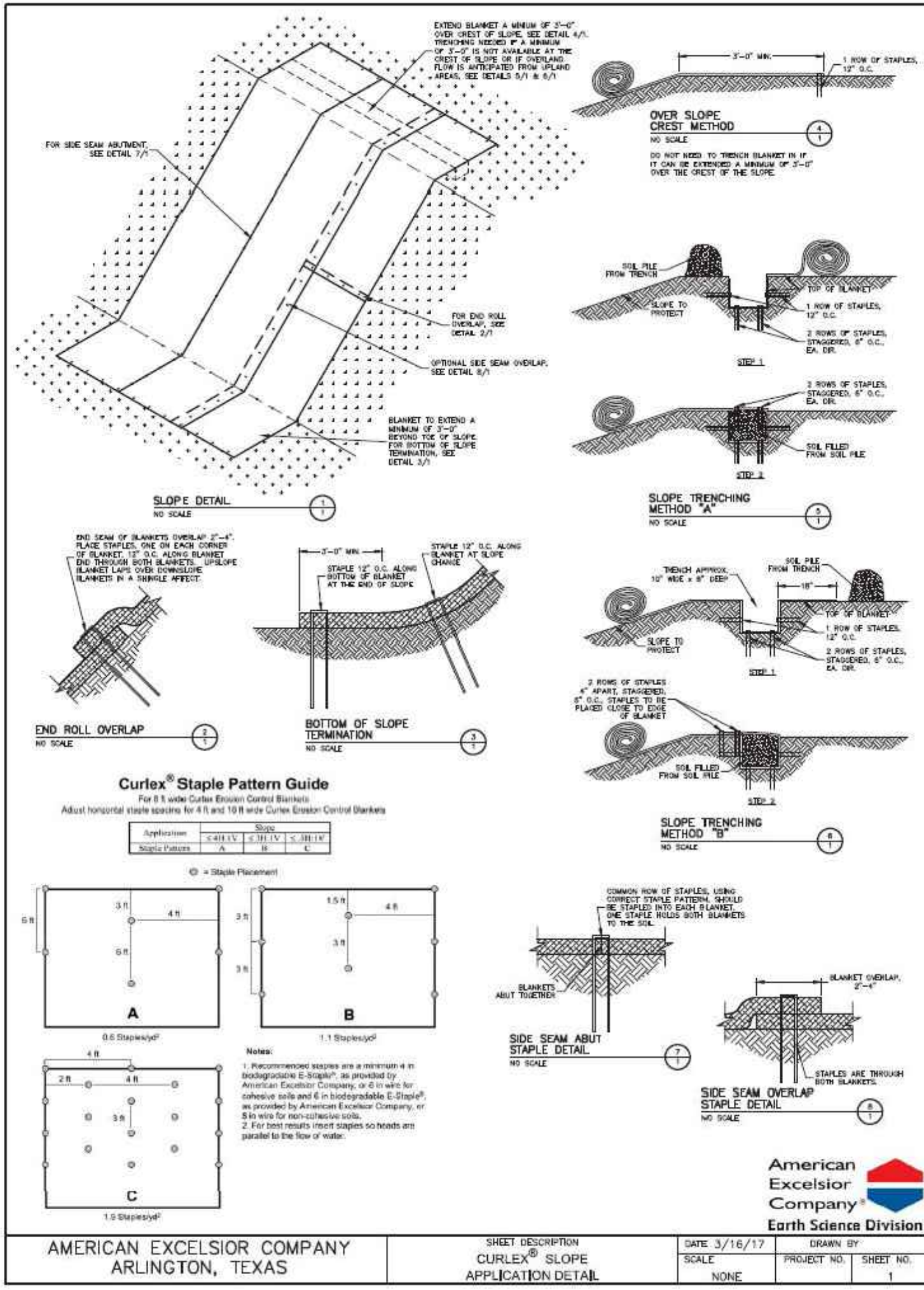
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008900

STATE OF TEXAS  
JON D. ADAME  
82567  
PROFESSIONAL ENGINEER

1-24-25

DATE  
NO. REVISION





**American Excelsior Company®**  
Earth Science Division

Proud Participant in NTPEP and Proud Member of:

**NTPEP** **IECA** **DOR**

Product Participant of:

**PRODUCT DATA SHEET**  
**CURLEX® ENFORCER®**

**DESCRIPTION**  
Curlex Enforcer a biocomposite Turf Reinforcement Mat (TRM) that consists of a specific cut of naturally seed free Great Lakes Aspen curled wood excelsior with 80% six-inch fibers or greater fiber length. It is of consistent thickness with fibers evenly distributed throughout the entire area of the blanket. The top and bottom of each blanket is covered with extra heavy duty black net. Curlex Enforcer is also available as QuickGRASS® (green pigment). Curlex Enforcer shall be manufactured in the U.S.A.

Curlex Enforcer has a design soil loss ratio (event-based RUSLE C factor) of .022 and is typically suitable for slopes up to .5H:1V. Curlex Enforcer is rated for channel flows up to 11 ft/s (3.4 m/s); 3.25 lb/ft² (156 Pa) shear stress unvegetated or 17 ft/s (5.2 m/s); 10.0 lb/ft² (480 Pa) shear stress vegetated.

**PHYSICAL PROPERTIES**  
Curlex Enforcer measurements at time of manufacturing:

Width	8.0 ft (2.4 m)
Length	67.5 ft (20.6 m)
Area	60.0 yd² (50.2 m²)
Weight*	75.0 lb (34.1 kg)
Fiber Count	≈12,000 per yd² (≈14,400 per m²)
Fiber Length (80% min.)	≥6.0 in (≥15.2 cm)
Mass per Unit Area (± 10%)	1.25 lb/yd² (0.68 kg/m²)
Net Openings	0.75 in x 1.0 in (19.1 mm x 25.4 mm)

**TYPICAL INDEX VALUES**

Index Property	Test Method	Value
Thickness	ASTM D 6555	0.419 in (10.64 mm)
Light Penetration	ASTM D 6567	12.7%
Resiliency	ASTM D 1777/ECTC	55%
Mass per Unit Area	ASTM D 6475	0.98 lb/yd² (0.532 kg/m²)
MD-Tensile Strength Max.	ASTM D 6818	612.0 lb/ft (8.93 kN/m)
TD-Tensile Strength Max.	ASTM D 6818	460.8 lb/ft (6.72 kN/m)
MD-Elongation	ASTM D 6818	19.5%
TD-Elongation	ASTM D 6818	27.3%
Swell	ECTC Procedure	33%
Water Absorption	ASTM D 1117/ECTC	170%
UV Stability	ASTM D 4355 (1,000 hr)	90% minimum
Bench-Scale Rain Splash	ASTM D 7101	SLR = 10.24 @ 2 in/hr <sup>b,c</sup>
Bench-Scale Rain Splash	ASTM D 7101	SLR = 10.51 @ 4 in/hr <sup>b,c</sup>
Bench-Scale Rain Splash	ASTM D 7101	SLR = 10.86 @ 6 in/hr <sup>b,c</sup>
Bench-Scale Shear	ASTM D 7207	3.55 lb/ft² @ 0.5 in soil loss <sup>c</sup>
Germination Improvement	ASTM D 7322	486%

\* Weight is based on a dry fiber weight basis at time of manufacture. Baseline moisture content of Great Lakes Aspen excelsior is 22%.

<sup>b</sup> SLR is the Soil Loss Ratio, as reported by NTPEP/AASHTO. <sup>c</sup> Bench-scale index values should not be used for design purposes.



850 Avenue H East | Arlington, Texas 76011  
Phone 1-800-777-SOIL | Fax 817-385-3585 | [www.Curlex.com](http://www.Curlex.com)

W0516R1116

**American Excelsior Company®**  
Earth Science Division

**Curlex® Blankets**  
Heavy Duty Excelsior Erosion Control Blankets

**SUGGESTED SPECIFICATIONS**

**Choosing the Right Heavy Duty Curlex Product**

Heavy Duty Excelsior Blankets are available in various fiber weights and netting combinations to match the appropriate job site requirements. Eighty percent of the Curlex fibers are six-inches or longer with consistent thickness and are evenly distributed over its entire area. Both the top and bottom side of the blankets are covered with black, extruded plastic mesh designed to provide strength beyond the service life of standard blankets. Curlex Excelsior blankets are naturally seed free and do not contain any chemical additives or foreign matter.

**Curlex III Specifications**

**Recommended Use:** Slopes to 1H:1V, channel bottom applications, Shear stress 120 Pa (2.5 lb/ft²) (unvegetated), 40 yd² (4' x 90'), 80 yd² (8' x 90'), 160 yd² (16' x 90')

**Roll Sizes:** 40 yd² (4' x 90'), 80 yd² (8' x 90'), 160 yd² (16' x 90')

**Weight\*:** 0.98 lb/yd²

**Netting:** Black or FibreNet™, top and bottom

**Color:** Natural Aspen or QuickGRASS Green

**Curlex Enforcer Specifications**

**Recommended Use:** Slopes to .5H:1V, channel bottom applications, Shear stress 156 Pa (3.25 lb/ft²) (unvegetated), 480 Pa (10.0 lb/ft²) (vegetated), 60 yd² (6' x 67.5')

**Roll Sizes:** 480 Pa (10.0 lb/ft²) (vegetated), 60 yd² (6' x 67.5')

**Weight\*:** 1.25 lb/yd²

**Netting:** Extra Heavy Duty Black, top and bottom

**Color:** Natural Aspen or QuickGRASS Green

**Curlex HV Specifications**

**Recommended Use:** Slopes to .75H:1V, channel bottom applications, Shear stress 156 Pa (3.25 lb/ft²) (unvegetated), 44.4 yd² (8' x 50')

**Roll Sizes:** 44.4 yd² (8' x 50')

**Weight\*:** 1.62 lb/yd²

**Netting:** Heavy Duty Black or FibreNet™, top and bottom

\*Weight is based on a dry fiber weight basis at time of manufacture. Baseline moisture content of Great Lakes Aspen Excelsior is 22%.

**Installation**

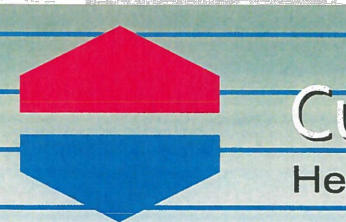
Before installing Curlex blankets, the seedbed shall be inspected by the Owner's Representative to ensure it has been properly compacted and fine graded to remove any existing rills. It shall be free of obstructions, such as tree roots, projections such as stones, and other foreign objects. Grass seed shall match soil conditions to allow for maximum germination, dense vegetation, and a structural root system. Contractor shall proceed when satisfactory conditions are present. After the area has been properly shaped, seeded, fertilized, and compacted, locate the start of the roll, making sure the roll is facing toward the area to be covered, and then roll out the blanket. Blankets shall be rolled out flat, even, and smooth without stretching the material then anchored to the subgrade. Slopes: It is recommended that the blankets be installed in the same direction as the water flow; however, on short slopes it may be more practical to install horizontally across the width of the application. If more than one width is required, simply abut the edges together and secure the blankets with a common row of biodegradable staples, steel staples, or stakes. Overlapping of Curlex excelsior blankets is not required or recommended. An exception is waterway slopes.

**Channels:** Curlex blankets shall be centered to offset a seam in the middle of the waterway. They shall be installed in the same direction as the water flow. The adjoining blankets shall be installed away from the center of channel and concentrated water flow. They shall be secured by a common row of staples. It is usually not necessary to overlap Curlex blankets; however, a 2" shingle type installation shall be used in waterway slopes applications. Curlex blanket installation should continue up the side slopes 3' above the anticipated high water elevation. Flanks exposed to runoff, or sheet flow, must be protected by a check slot or trenched. Curlex blankets shall be trenched at the start of the channel and anchored using a staggered staple pattern at end of roll overlaps and end of roll terminations.

**Disclaimer:** Curlex III, Curlex Enforcer, and Curlex HV is a system for erosion control and re-vegetation on slopes and channels. American Excelsior Company (AEC) believes that the information contained herein to be reliable and accurate for use in erosion control and re-vegetation applications. However, since physical conditions vary from job site to job site and even within a given job site, AEC makes no performance guarantees and assumes no obligation or liability for the reliability or accuracy of information contained herein for the results, safety, or suitability of using Curlex, or for damages occurring in connection with the installation of any erosion control product whether or not made by AEC or its affiliates, except as separately and specifically made in writing by AEC. These specifications are subject to change without notice.



If you would like to receive more information or consult with one of our Customer Care Center Specialists, please call us toll free at (888-352-9582) PDF download specifications available in the Technical Support Library at [www.curlex.com](http://www.curlex.com)



**Curlex® Blankets**

Heavy Duty Excelsior Erosion Control Blankets

**Product Description**

Heavy Duty Curlex Blankets, for long-term protection against wind and water erosion, are a natural choice in place of stone or riprap in swales, ditch bottoms, and on long, steep slopes.

**MATERIAL CHARACTERISTICS**

**Curlex III**

0.98 lb/yd² of Great Lakes Aspen Excelsior Wood Fibers and two layers of netting designed to provide protection for grass seed and topsoil from wind and water erosion for up to 36 months, while simultaneously promoting ideal growing conditions.

**Curlex Enforcer**

1.25 lb/yd² of Great Lakes Aspen Excelsior Wood Fibers and two layers of extra heavy duty UV stabilized netting designed to provide permanent service life and reinforcement between established vegetation and root systems on slopes and in channel bottoms. Curlex Enforcer is a biocomposite turf reinforcement mat (TRM).

**Curlex High Velocity**

1.62 lb/yd² of Great Lakes Aspen Excelsior Wood Fibers and two layers of heavy duty netting designed to provide extended protection for grass seed and topsoil from wind and water erosion for approximately 36+ months, while simultaneously promoting ideal growing conditions on steep, long slopes and/or in channel applications.

Curlex heavy duty excelsior blankets are available individually wrapped or in master packs to allow for mechanical unloading and stacking.

**PERFORMANCE CAPABILITIES**

Curlex heavy duty blankets can handle wind and water shear even on steep slopes. These heavy duty blankets provide long-term protection in critical areas where vegetation requires additional time and protection to develop.

**Curlex III**

**Channels** Shear Stress: 120 Pa (2.5 lb/ft²) (unvegetated)  
**Slopes** Grade: up to 1H:1V

**Curlex Enforcer**

**Channels** Shear Stress: 156 Pa (3.25 lb/ft²) (unvegetated)  
**Slopes** Grade: 480 Pa (10.0 lb/ft²) (vegetated) up to .50H:1V

**Curlex HV**

**Channels** Shear Stress: 156 Pa (3.25 lb/ft²) (unvegetated)  
**Slopes** Grade: up to .75H:1V

**TYPICAL APPLICATIONS**

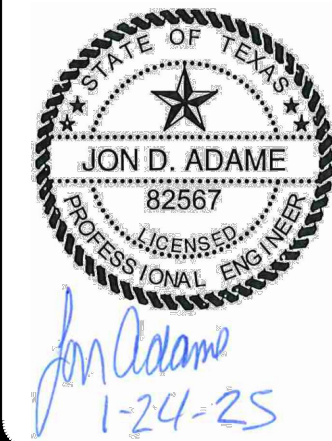
Channel bottoms, swales, steep slopes, let down structures, drop structures, and other areas associated with concentrated water flow exceeding the performance capability and service life of a standard biodegradable blanket.

**American Excelsior Company®**  
Earth Science Division  
Arlington, Texas (800) 777-SOIL • [www.curlex.com](http://www.curlex.com)



DATE

NO. REVISION



**PAPE-DAWSON ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

**DRAIN DETAILS (CURLEX)**

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C1.13

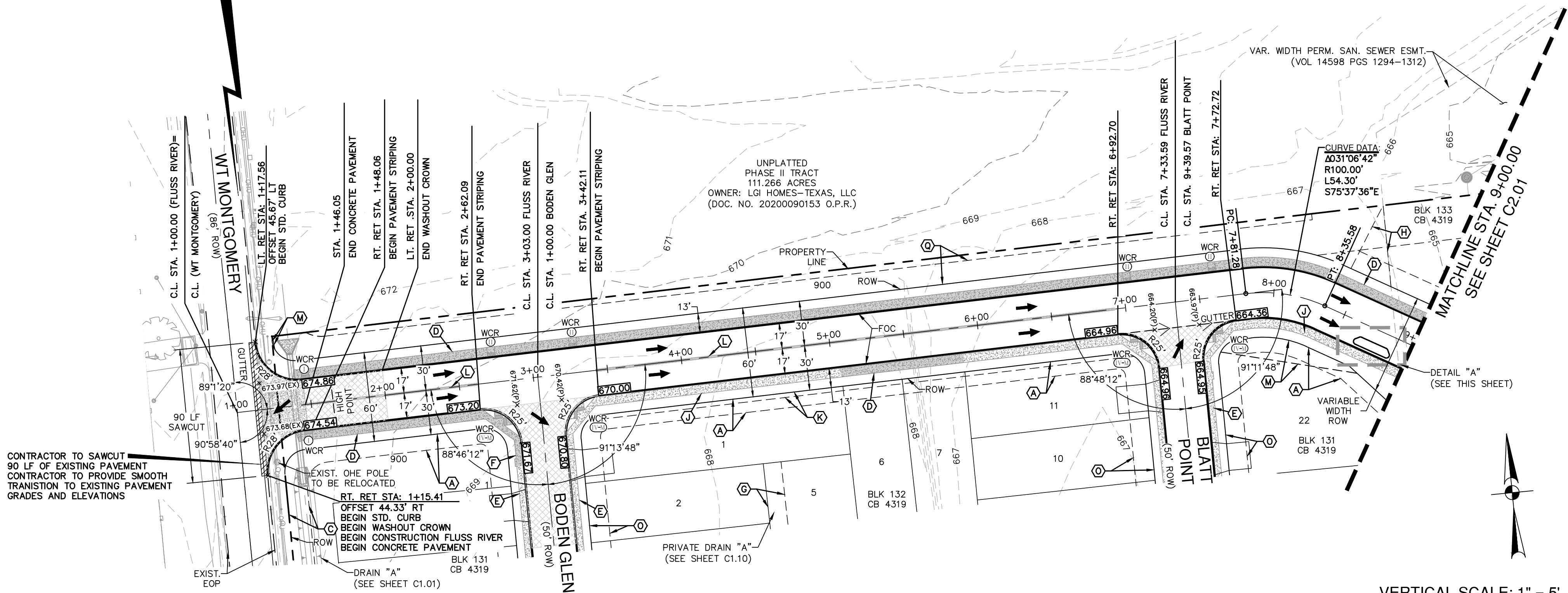


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THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE/UNLESS OTHERWISE NOTED. Imagery © 2016, CAPOCO, Digital Globe, Texas Orthometry Program, USDA Farm Service Agency.

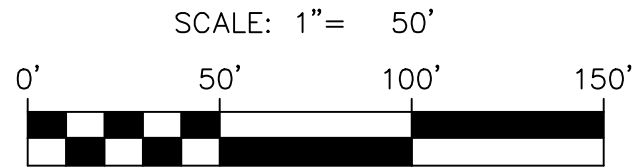
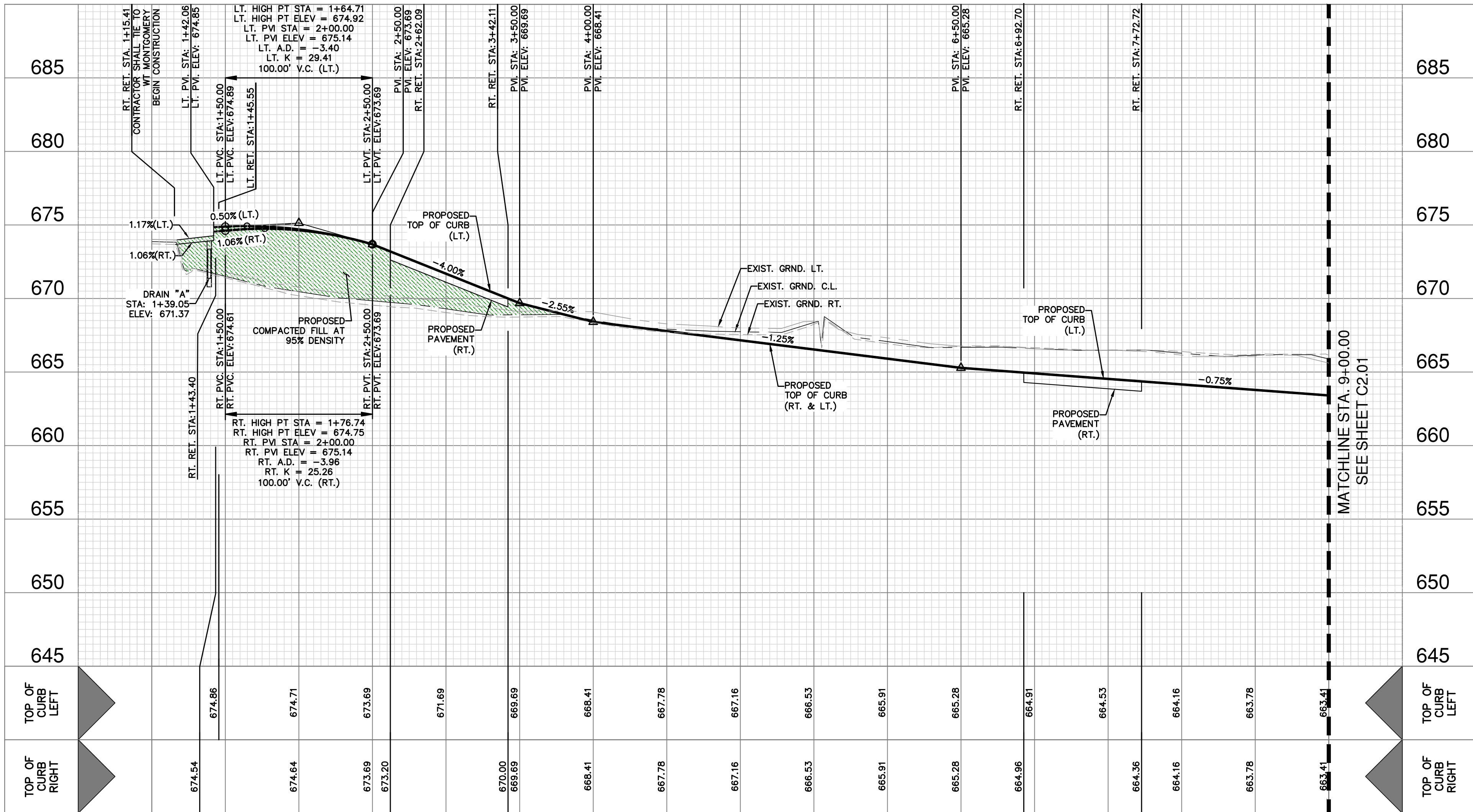
**CAUTION!!**  
EXISTING UTILITIES ARE LOCATED WITHIN THE LIMITS OF THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL EXERCISE EXTRA CARE IN DIGGING ANY TRENCH FOR PROPOSED UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING, VERIFYING THE EXACT LOCATION AND IDENTIFYING ANY AREAS OF CONFLICTS WITH EXISTING UTILITIES AND WILL NOTIFY THE ENGINEER IMMEDIATELY IF CONFLICTS ARE FOUND.

EXISTING POWER POLES LOCATED WITHIN CONFLICT LIMITS OF PROPOSED ENTRY TO BE RE-LOCATED IN COORDINATION WITH CPS ENERGY.



FLUSS RIVER ~ STA. 1+00.00 TO STA. 9+00.00

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

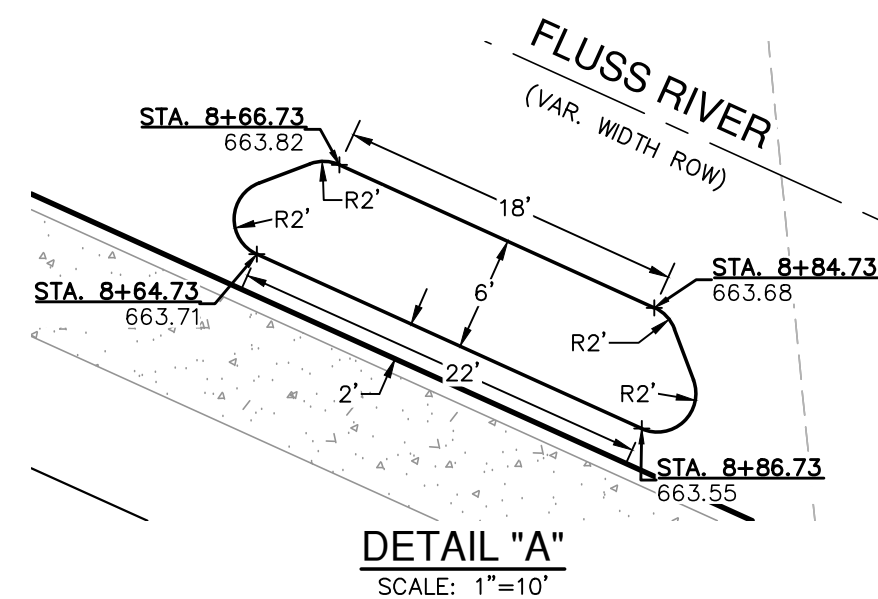


#### KEY LEGEND:

- (A) 10' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- (B) 14' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- (C) 6' DEVELOPER SIDEWALK
- (D) 4' SIDEWALK
- (E) 4' DEVELOPER SIDEWALK
- (F) 12' PRIVATE DRAINAGE EASEMENT
- (G) VARIABLE WIDTH SANITARY SEWER EASEMENT
- (H) 6' SIDEWALK
- (I) 1' VEHICLE NON-ACCESS EASEMENT
- (J) 6" DOUBLE SOLID YELLOW LINE (THERMOPLASTIC) (470 LF)
- (K) W/ TYPE II-AA REFLECTIVE PAVEMENT MARKERS
- (L) VARIABLE WIDTH CLEAR VISION EASEMENT
- (M) 13' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- (N) VARIABLE WIDTH (MIN. 14') ELEC., GAS, TELE, & CA. T.V. EASEMENT

#### STREET LEGEND

- 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 (HOMEOWNER'S RESPONSIBILITY)
- SIDEWALK (DEVELOPER'S RESPONSIBILITY)
- DRIVEWAY



#### SIDEWALK NOTE:

THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN (SHEET C3.00 - C3.01). REFER TO SHEET C3.00 - C3.01 FOR LOCATIONS OF SIDEWALK CONSTRUCTION WHERE SIDEWALKS ARE NOT SHOWN

#### STREET SELECT FILL NOTE:

FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.5 AND A PI MAXIMUM OF 40. 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.

#### WHEEL CHAIR NOTE:

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

#### STREET NOTES:

- A BEXAR COUNTY 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).

**PAPE-DAWSON**  
**ENGINEERS**

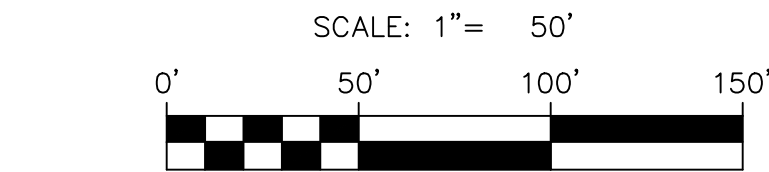
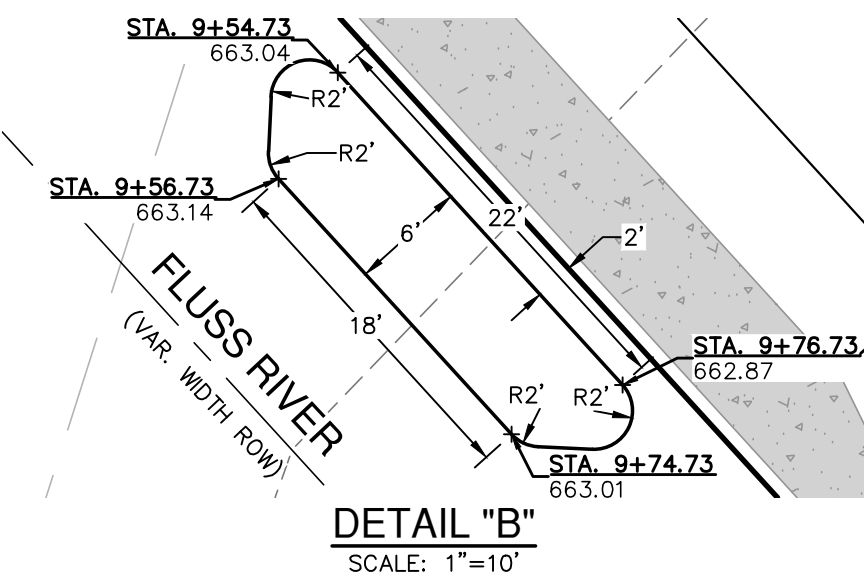
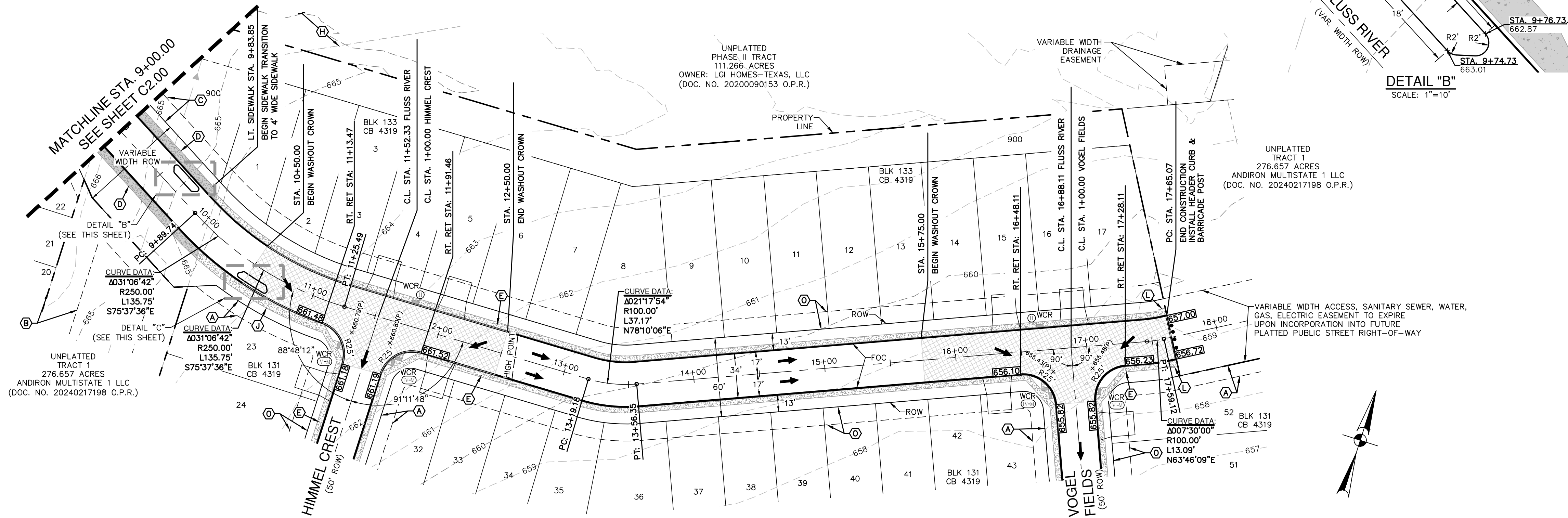
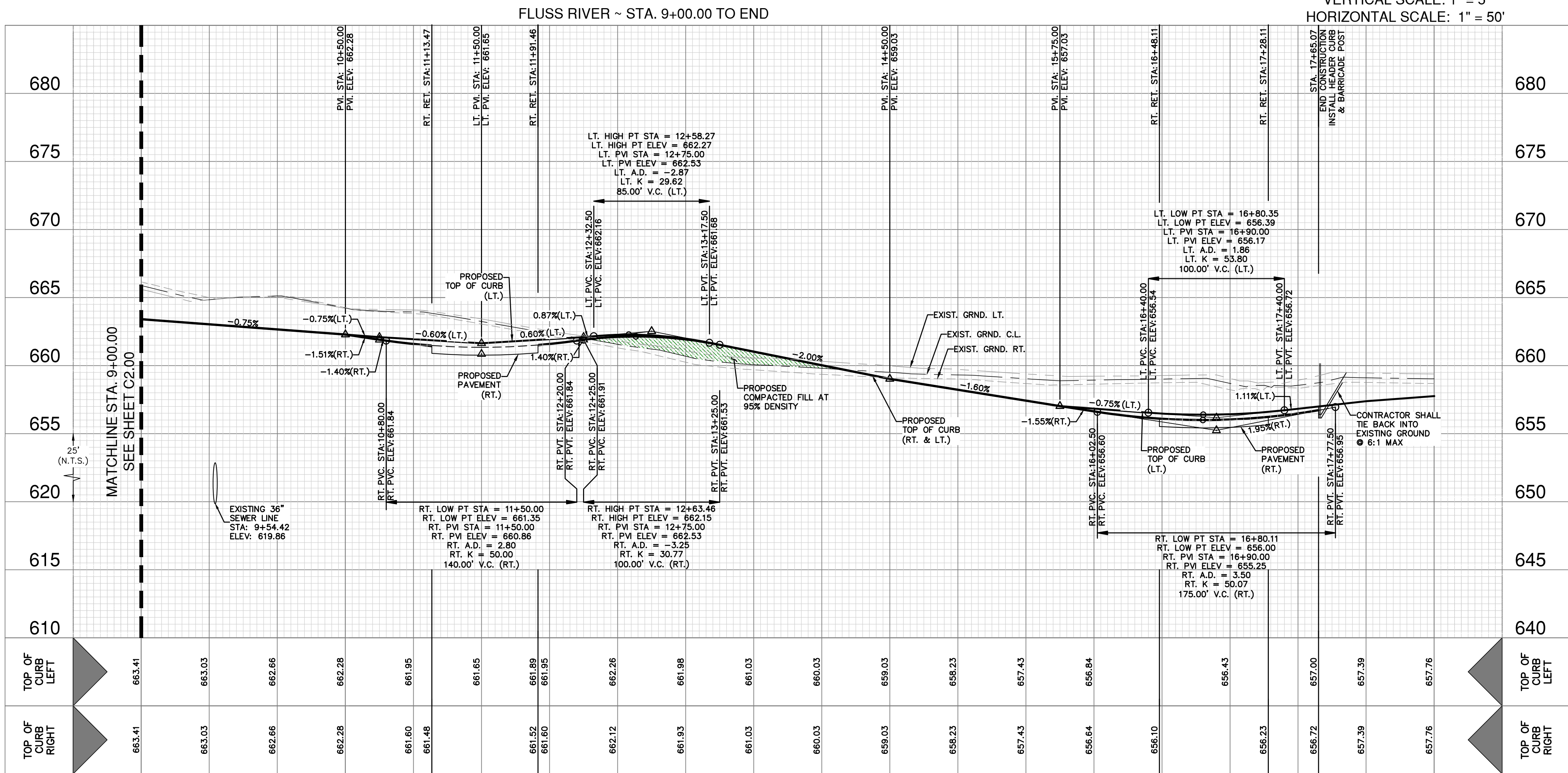
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

FLUSS RIVER ~ STA. 1+00.00 TO STA. 9+00.00  
STREET PLAN & PROFILE

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER CB  
CHECKED AS DRAWN CB  
SHEET C2.00



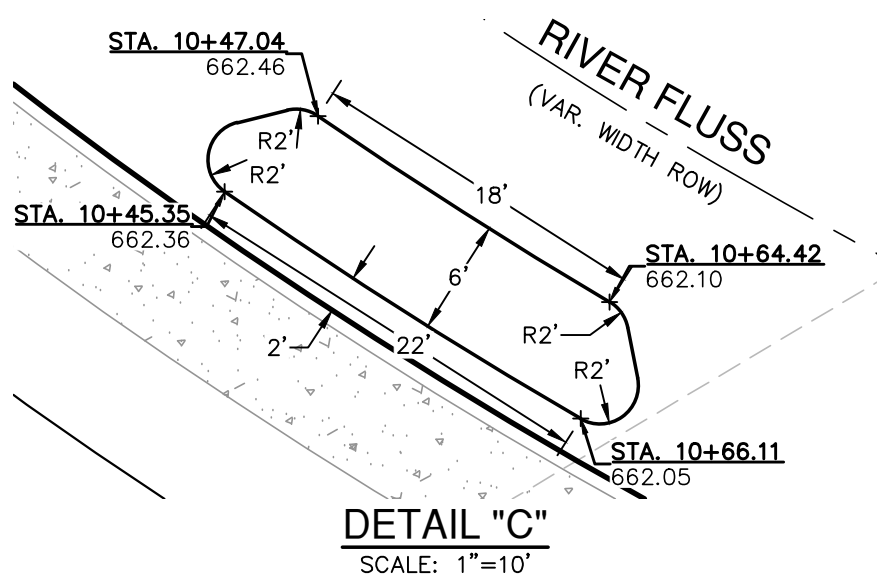


## STREET LEGEND

PROJECT LIMITS	---
MAINTAIN GUTTER	---
EXISTING CONTOUR	---
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) x
WASHOUT CROWN SECTION	---
SIDEWALK (HOMEOWNER'S RESPONSIBILITY)	---
SIDEWALK (DEVELOPER'S RESPONSIBILITY)	---
DRIVEWAY	---

## KEY LEGEND:

- 10' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- 15' CLEARING AND GRADING BUFFER EASEMENT (DOC. NO. 20240132079 O.P.R.)
- 14' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- 6' DEVELOPER SIDEWALK
- 4' SIDEWALK
- 4' DEVELOPER SIDEWALK
- 10' PRIVATE DRAINAGE EASEMENT
- EXISTING 100' SANITARY SEWER EASEMENT
- 6' SIDEWALK
- 5'X5' ADA PASSING SPACE
- 13' ELEC., GAS, TELE, & CA. T.V. EASEMENT
- 14' ELEC., GAS, TELE, & CA. T.V. EASEMENT



## SIDEWALK NOTE:

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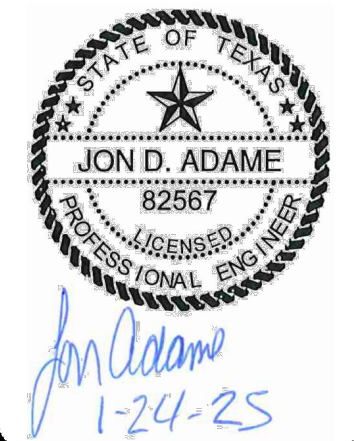
## WHEEL CHAIR NOTE:

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## STREET NOTES:

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NO.	REVISION	DATE



**PAPE-DAWSON**  
**ENGINEERS**

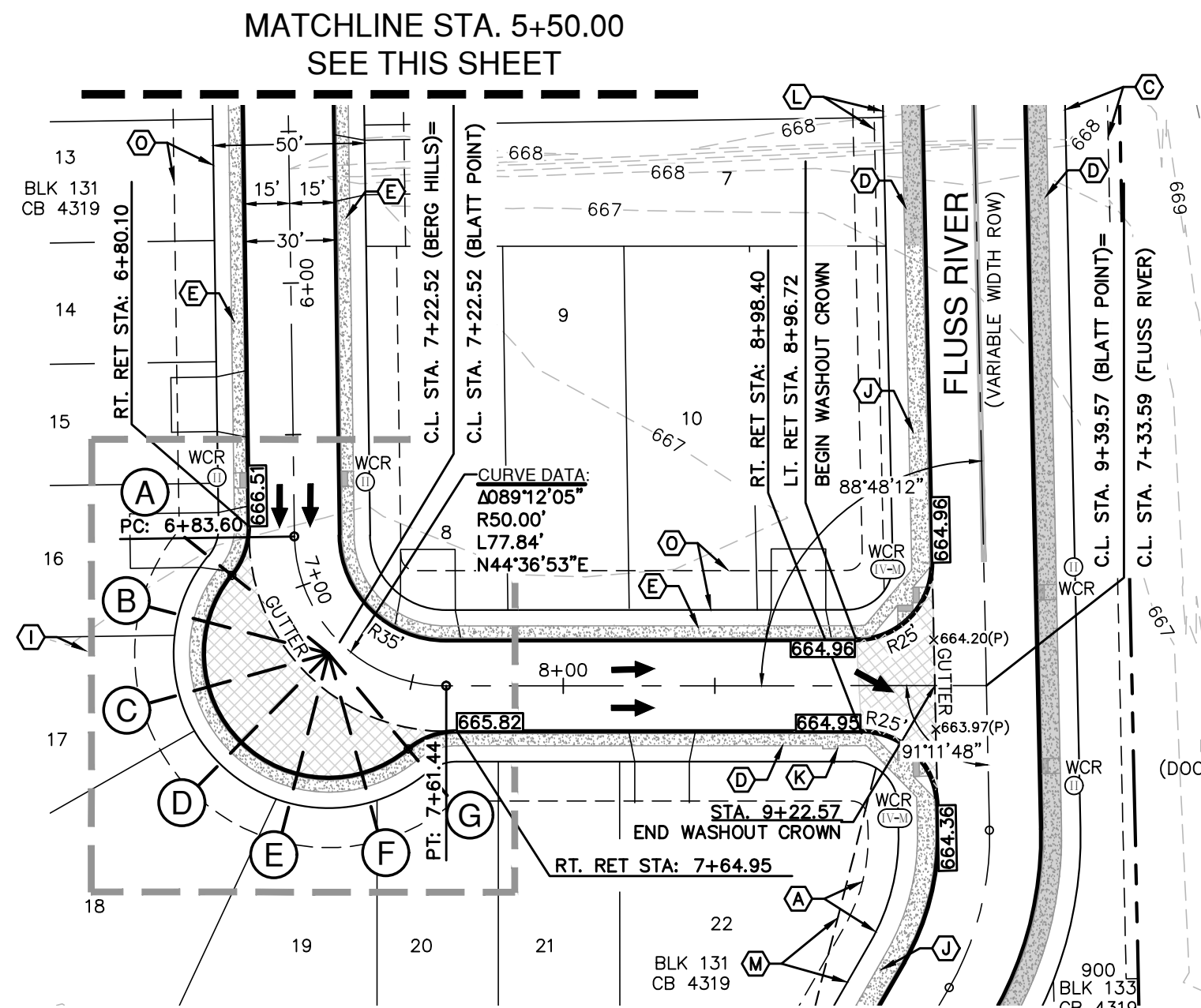
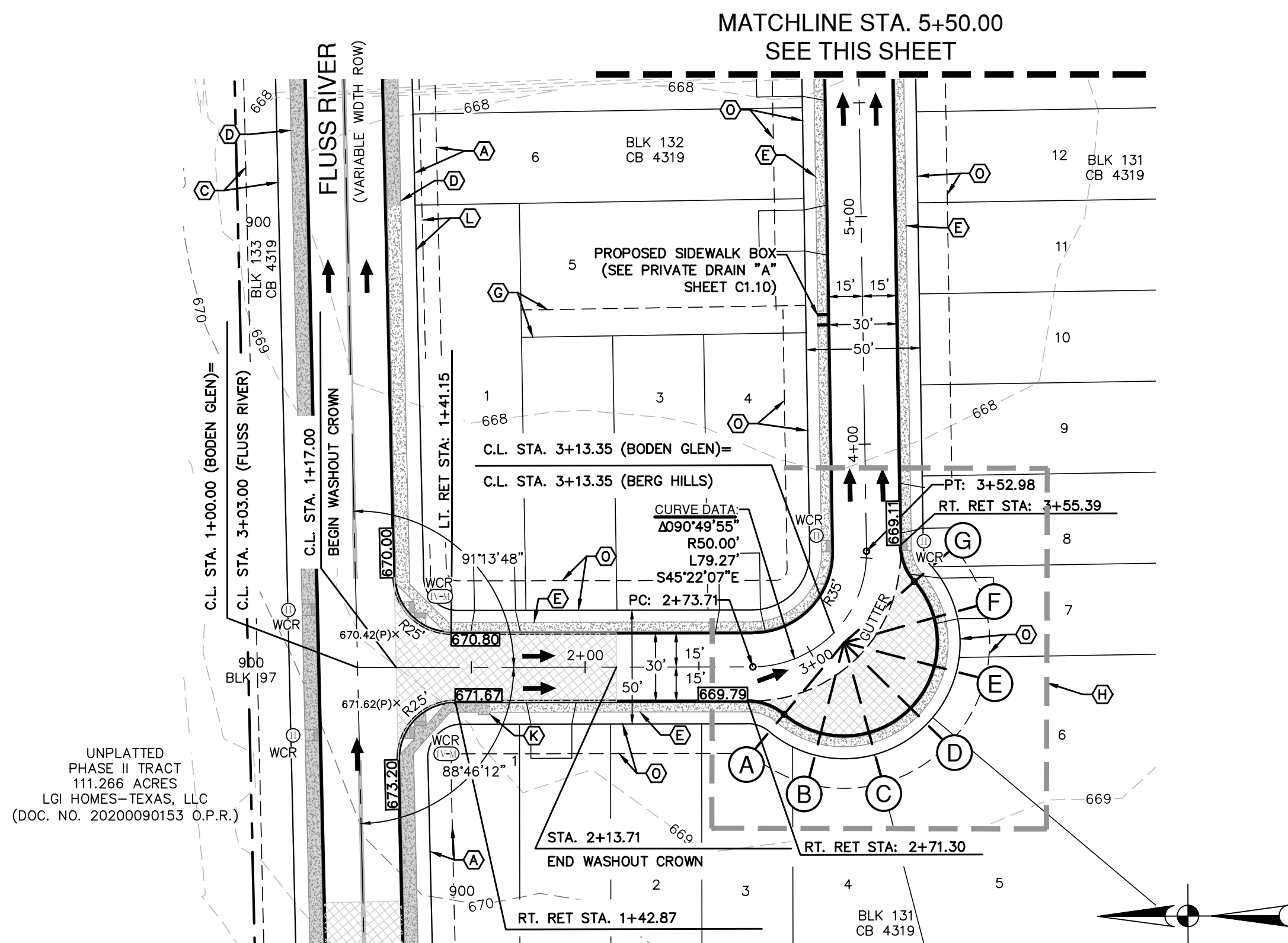
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

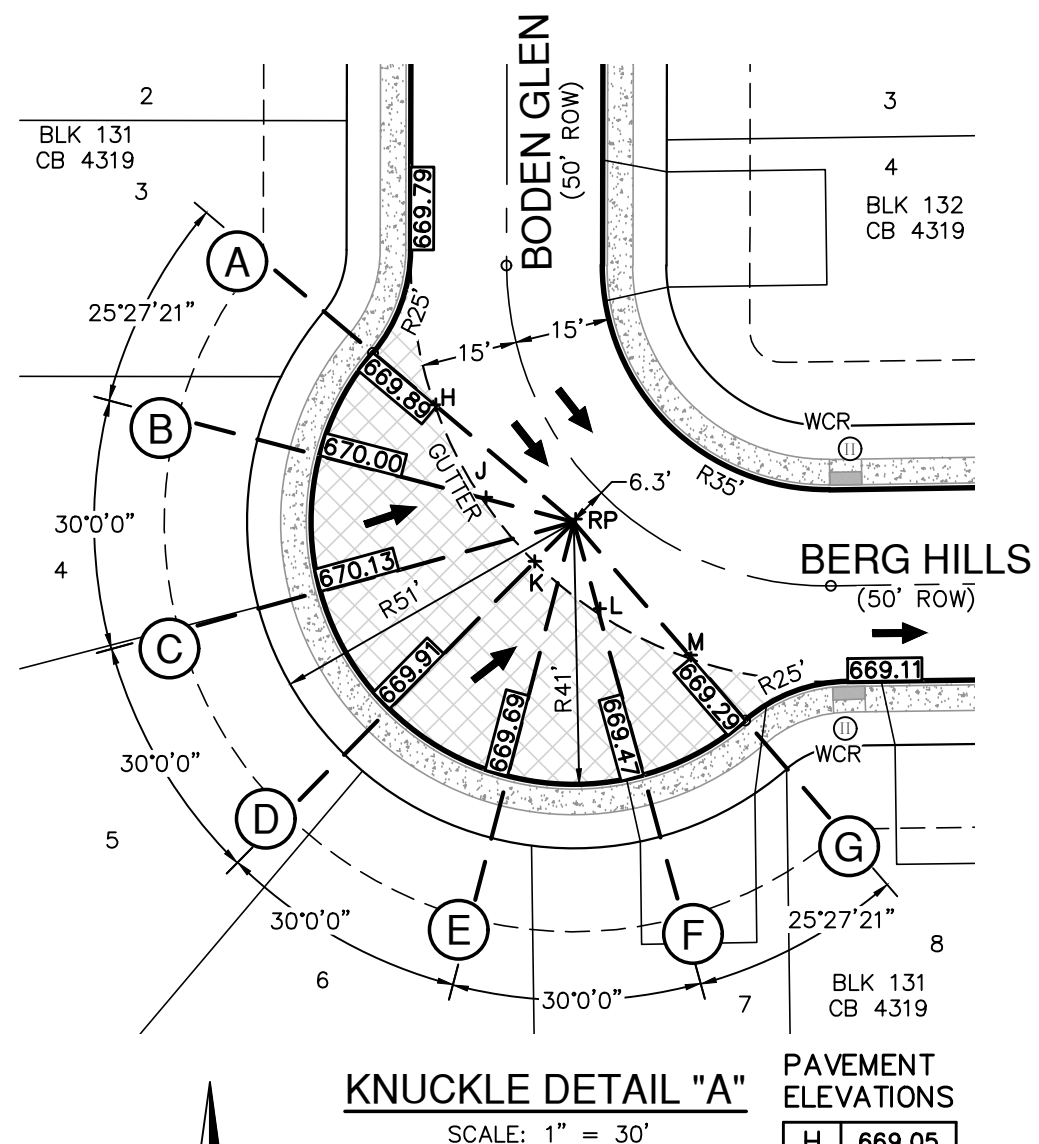
FLUSS RIVER ~ STA. 9+00.00 TO END  
STREET PLAN & PROFILE

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	CB
CHECKED AS	DRAWN CB
SHEET	C2.01



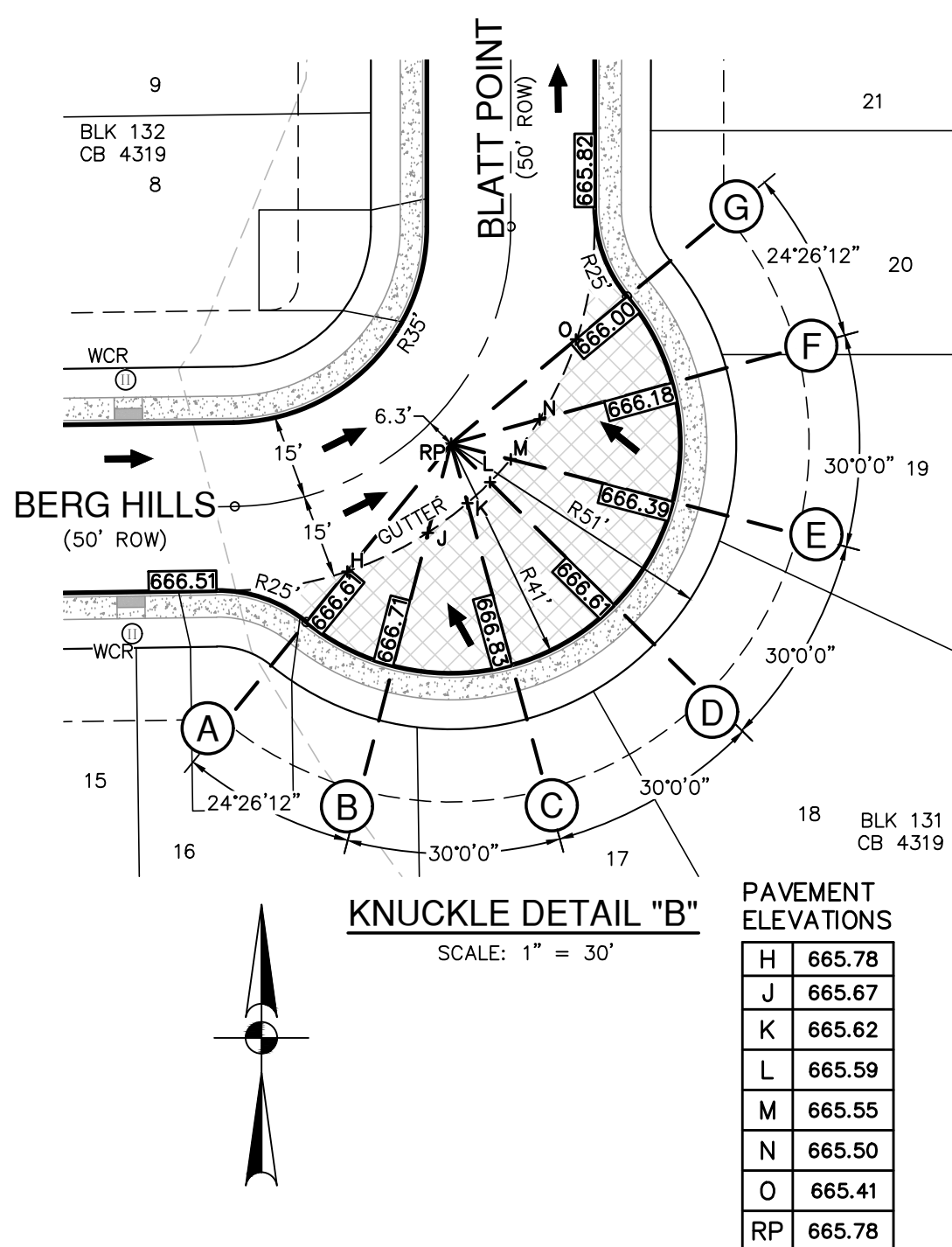


- KEY LEGEND:
- (A) 10' ELEC., GAS, TELE, & CA. T.V. EASEMENT
  - (B) 14' ELEC., GAS, TELE, & CA. T.V. EASEMENT
  - (C) 6' DEVELOPER SIDEWALK
  - (D) 4' SIDEWALK
  - (E) 4' DEVELOPER SIDEWALK
  - (F) 12' PRIVATE DRAINAGE EASEMENT
  - (H) SEE KNUCKLE DETAIL "A" (THIS SHEET)
  - (I) SEE KNUCKLE DETAIL "B" (THIS SHEET)
  - (J) 6' SIDEWALK
  - (K) 5'X5' ADA PASSING SPACE
  - (L) 1' VEHICLE NON-ACCESS EASEMENT
  - (M) VARIABLE WIDTH CLEAR VISION EASEMENT
  - (O) 13' ELEC., GAS, TELE, & CA. T.V. EASEMENT



## STREET LEGEND

- 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 (HOMEOWNER'S RESPONSIBILITY)  
SIDEWALK (DEVELOPER'S RESPONSIBILITY)  
DRIVEWAY



## SIDEWALK NOTE:

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## STREET SELECT FILL NOTE:

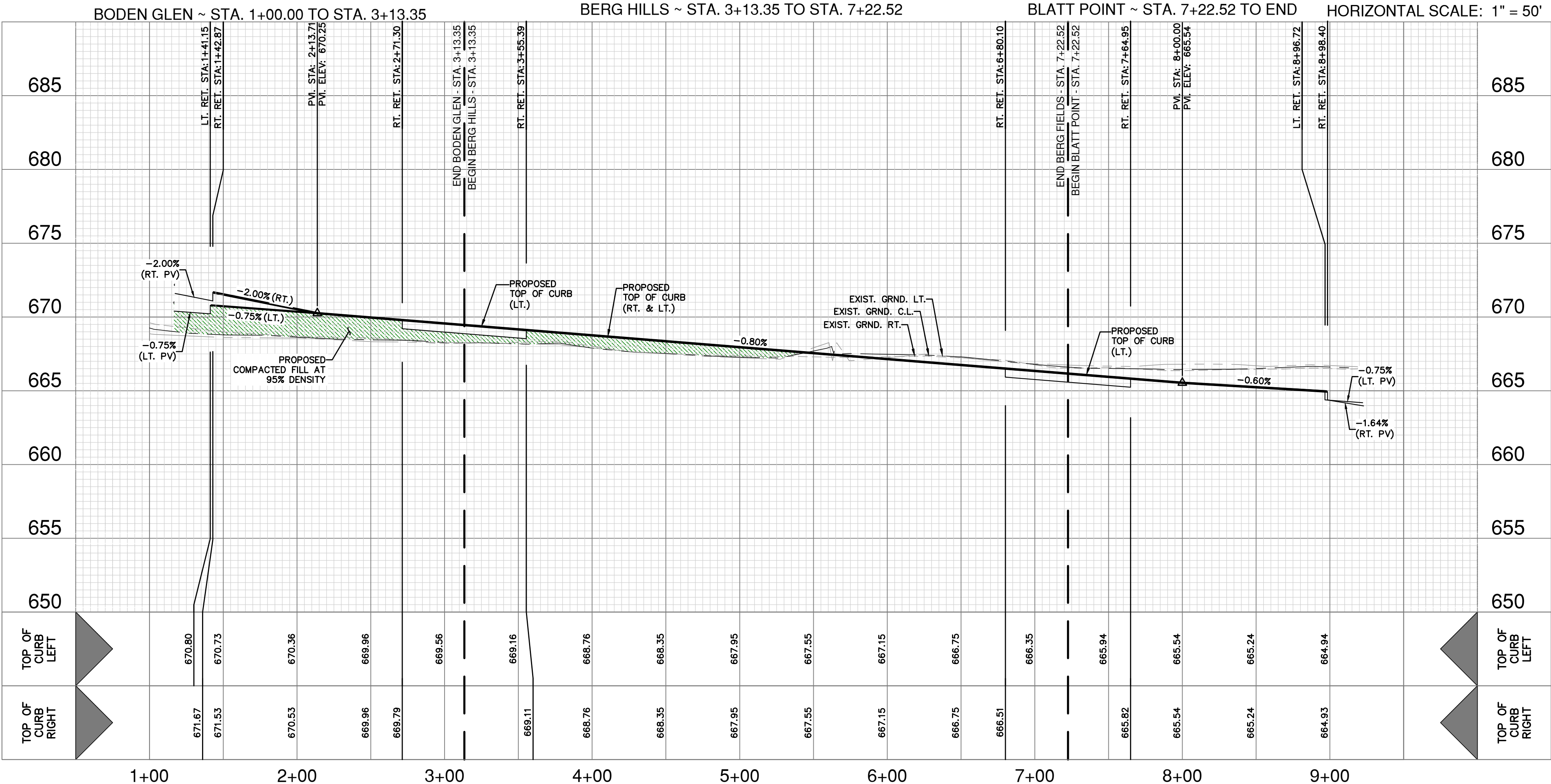
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BLOSSOM RANCH UNIT 1A

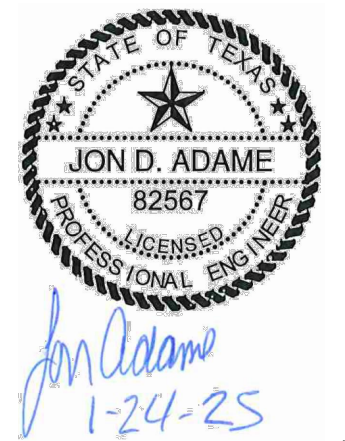
SAN ANTONIO, TEXAS

BODEN GLEN ~ STA. 1+00.00 TO STA. 3+13.35

BERG HILLS ~ STA. 3+13.35 TO STA. 7+22.52

BLATT POINT ~ STA. 7+22.52 TO END

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER CB  
CHECKED AS DRAWN CB  
SHEET C2.02

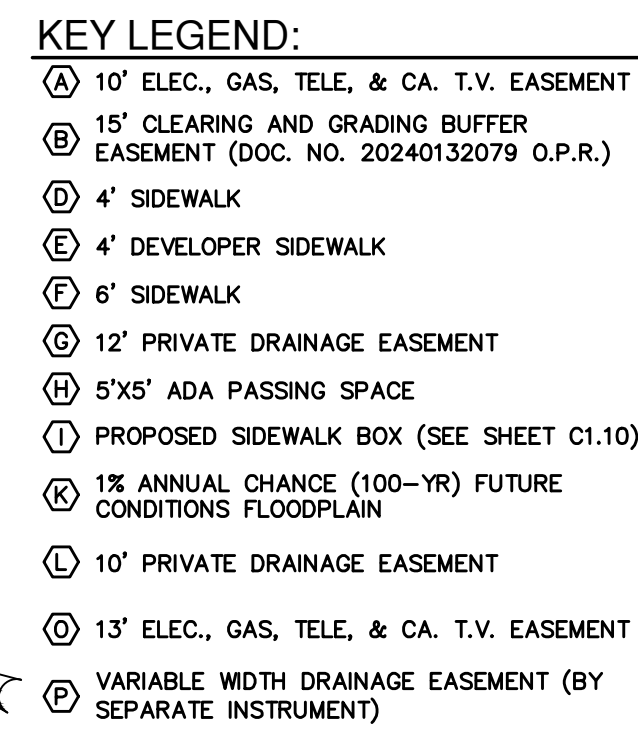
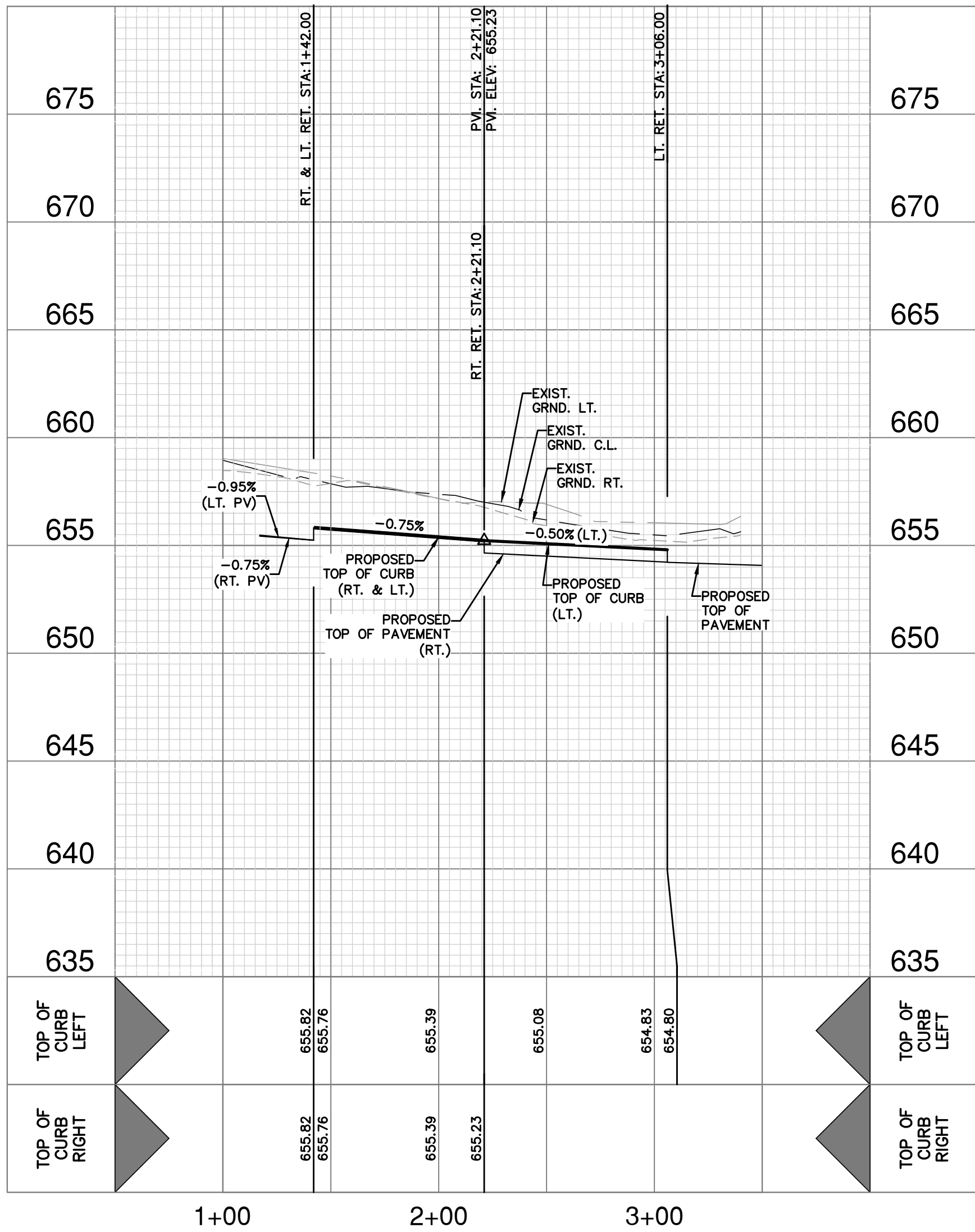
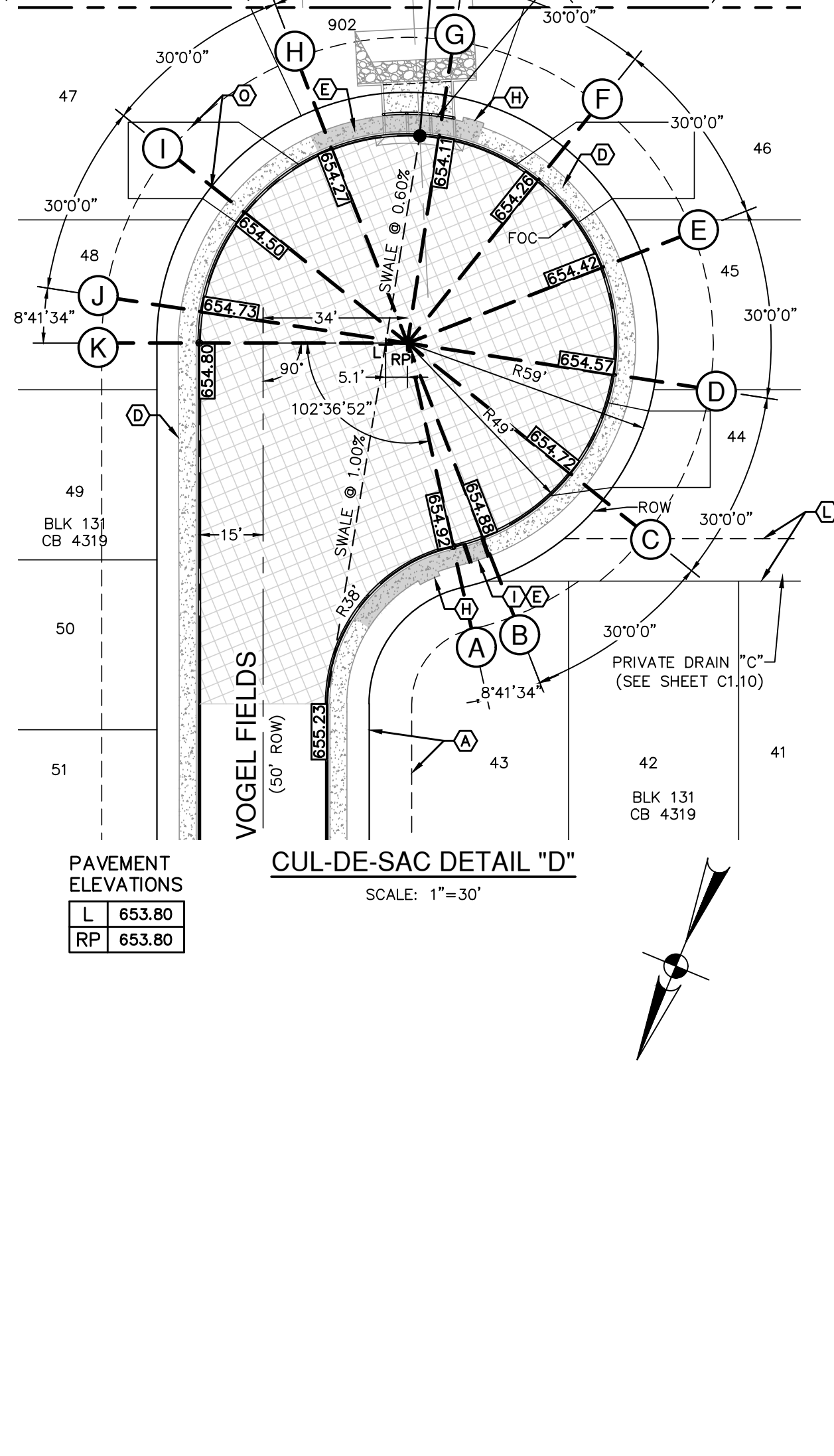
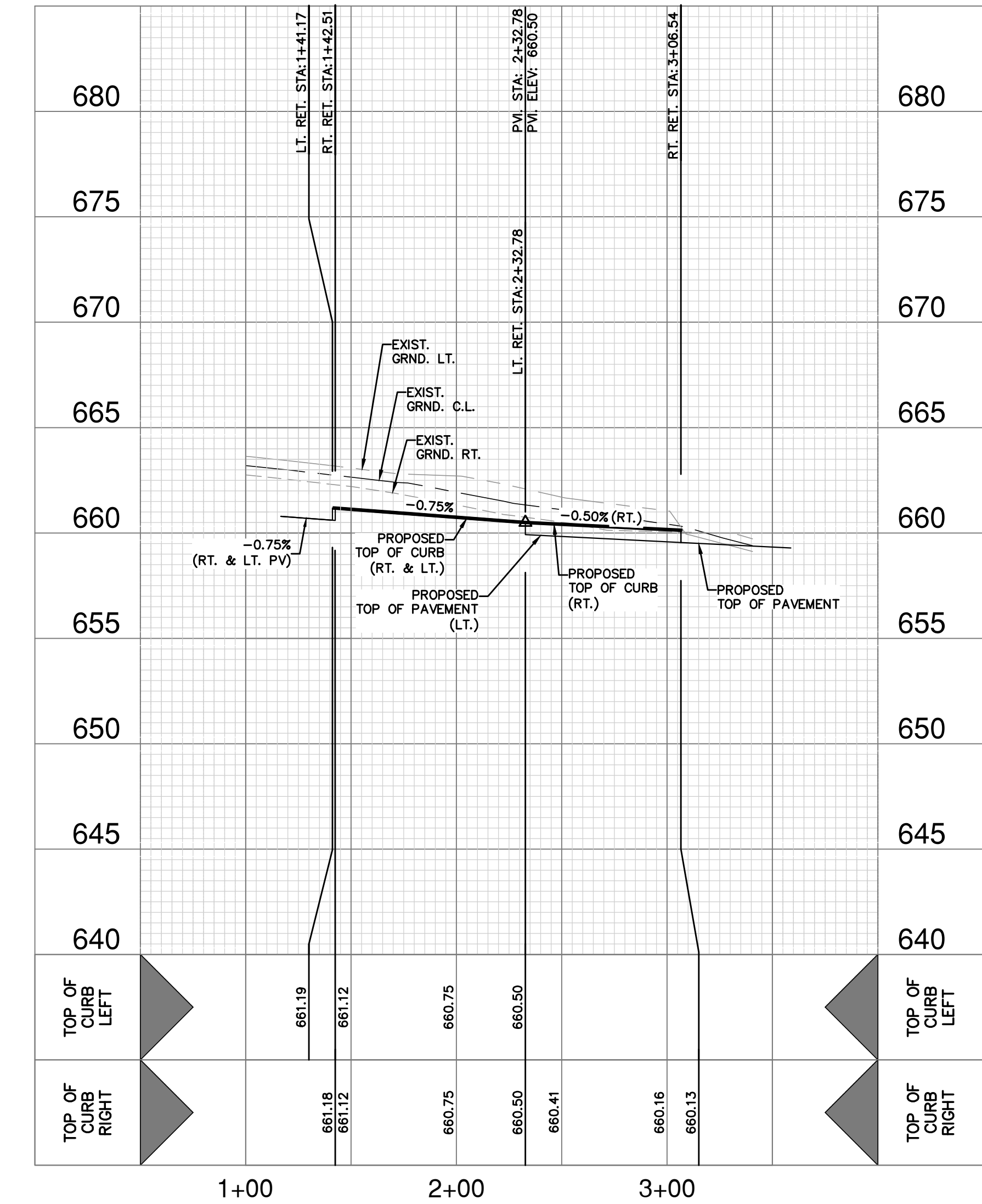


**PAPE-DAWSON**  
**ENGINEERS**

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

TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800





## **SIDEWALK NOTE:**

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## **STREET SELECT FILL NOTE:**

FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CR VALUE OF 2.5 AND A PI MAXIMUM OF 40. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LINE APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. FILL MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

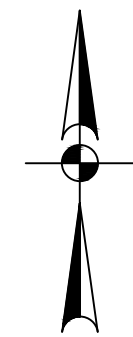
## **WHEEL CHAIR NOTE:**

WHEEL CHAIR RAMPS (WCR) TO BE CENTERED ON STATION NOTED BELOW. ELEVATION SHOWN ARE TOP OF CURB AND NOT GUTTER

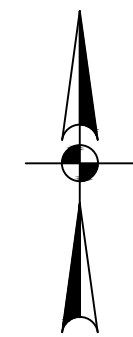
## **STREET NOTES:**

1. A BEYAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEYAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MUST BE MATCHED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TE-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 EASEMENT 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 CITY MILD INSPECTOR WITHOUT AMENDING THE STREET PLAN AND UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).

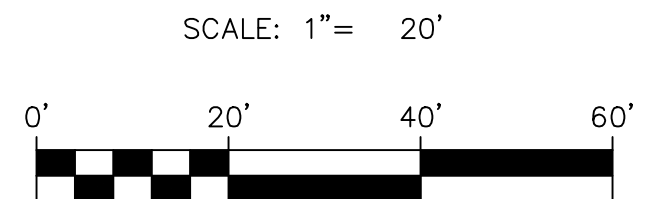
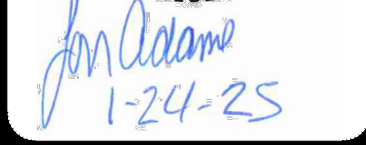




SCALE 1" = 20'



SCALE 1" = 20'

[illegible]

TURN LANE PLAN

1. ALL DISTANCES ARE MEASURED FROM FACE OF CURB.
2. ALL PAVEMENT MARKINGS SHALL BE THERMOPLASTIC MATERIAL ACCORDING TO THE COSA/TXDOT STANDARDS.
3. ALL MATERIALS AND CONSTRUCTION METHODS WITHIN THE SCOPE OF THIS CONTRACT SHALL CONFORM TO APPLICABLE TXDOT STANDARD SPECIFICATIONS AND CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.
4. CONTRACTOR SHALL COMPLY WITH ALL ORDINANCES OF BEXAR COUNTY AT LEAST 48 HOURS PRIOR TO STARTING CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL NECESSARY PERMITS BEFORE BEGINNING CONSTRUCTION.
6. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY QUESTIONS THAT MAY ARISE CONCERNING THE INTENT, ALIGNMENT, PLACEMENT, LIMITS, DIMENSIONS OR GRADES NECESSARY FOR THE CONSTRUCTION OF THIS PROJECT. CONTRACTOR SHALL REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL SPECIFICATIONS AND CONTRACT INFORMATION.
7. CONTRACTOR SHALL OBTAIN A BEXAR COUNTY PERMIT TO CONSTRUCTION IN ACCORDANCE WITH THE DRIVEWAY PERMIT.
8. REFERENCE DETAIL SHEET CS.116/C3.12 FOR STRIPING DETAILS.
9. CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE ON TURN LANE WITH MAXIMUM 2.00% CROSS SLOPE.

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

Date: Jan 24, 2025, 11:08pm User ID: adavila  
File: P:\130\55\20\Design\Civil\STTL-1305520.dwg



\*STREET TRANSITIONS FROM STREET CLASSIFICATIONS OF DIFFERING PAVEMENT WIDTHS SHALL BE CONSTRUCTED WITH PAVEMENT SECTION OF STREET CLASSIFICATION WITH WIDER PAVEMENT SECTION

1. CUT AND FILL DATA ARE NOT AVAILABLE AT THIS TIME

- GENERAL NOTES:

- LIME NOTES:

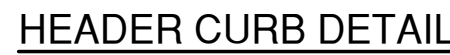
FOR LIME STABILIZATION CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED ON THE FIELD:  
1. AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.



NOT-TO-SCALE



NOT-TO-SCALE



NOT-TO-SCALE



NOT-TO-SCALE

NOT-TO-SCALE



NOT-TO-SCALE



NOT-TO-SCALE



## (FROM HEADER CURB TO STANDARD CURB



NOT-TO-SCALE



NOT-TO-SCALE



NOT-TO-SCALE



NOT-TO-SCALE



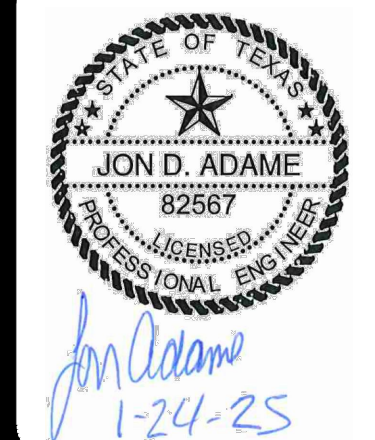
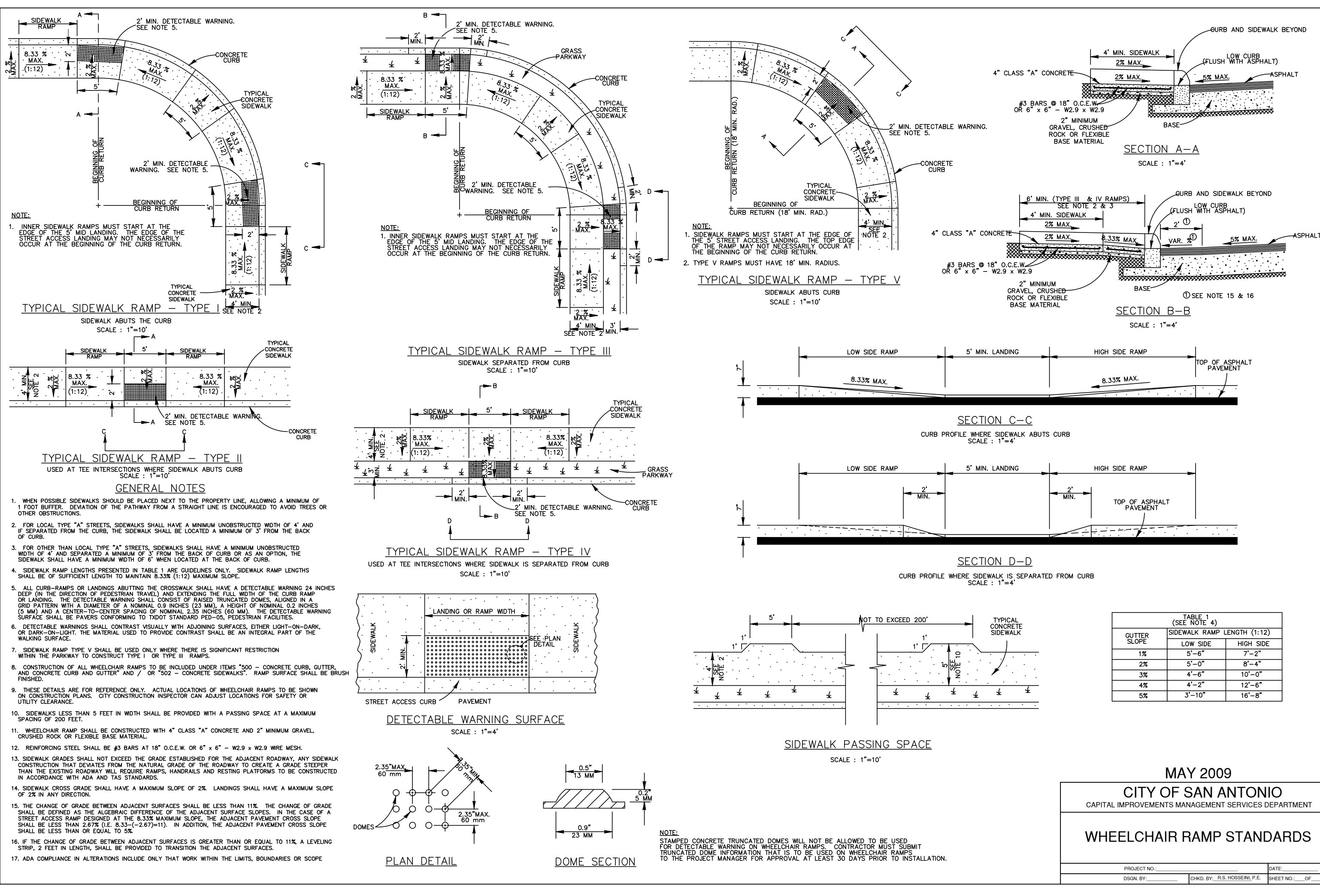
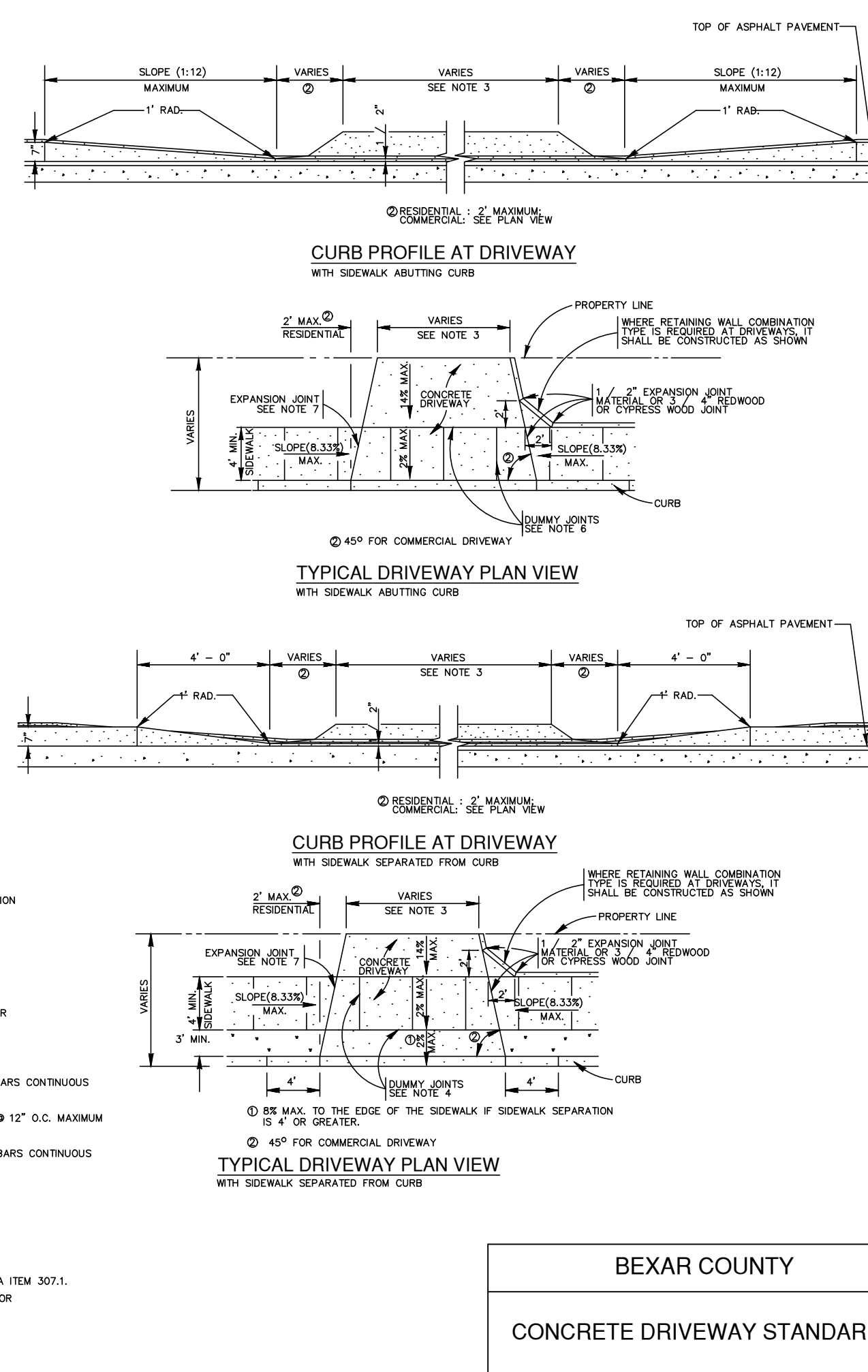
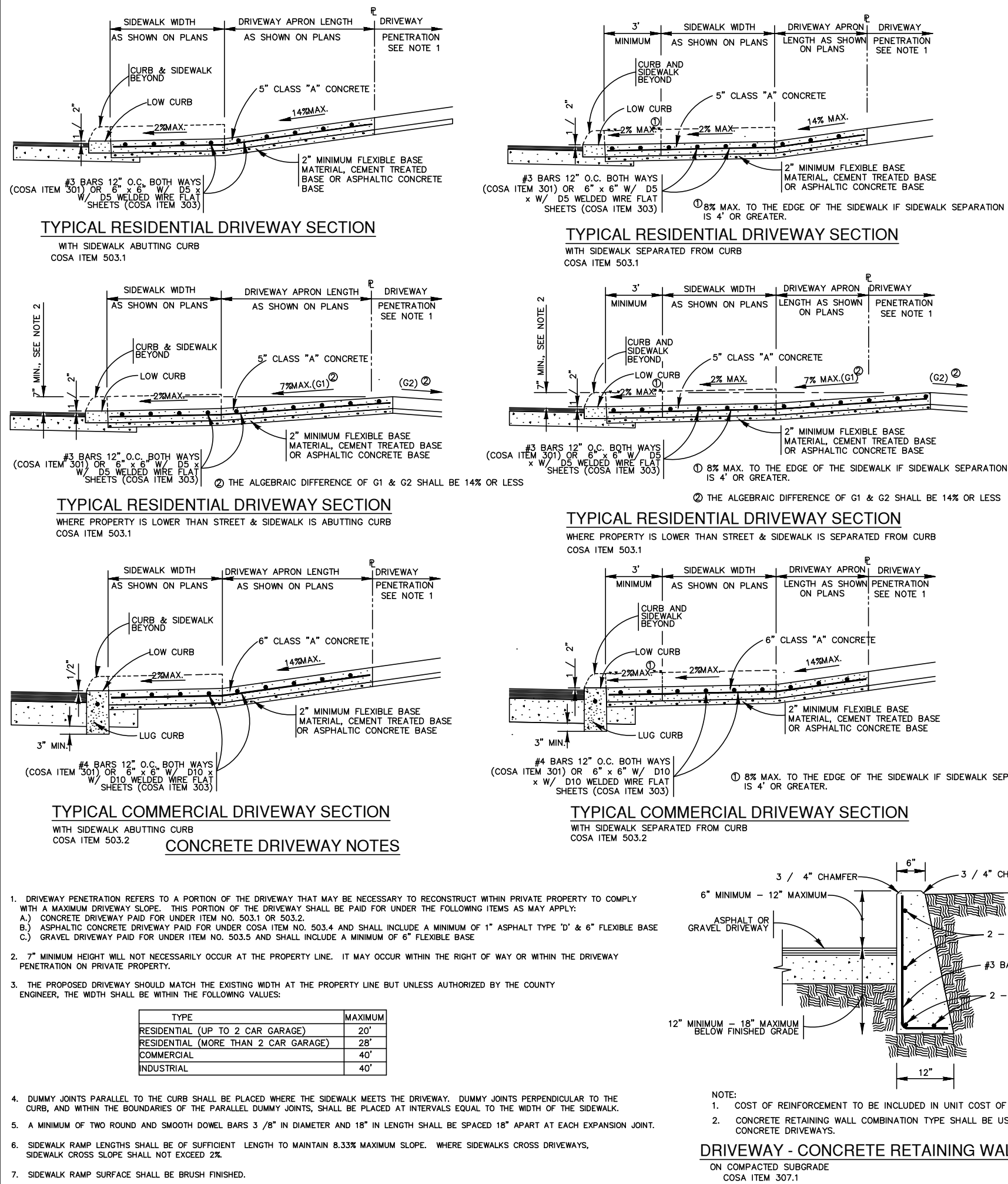
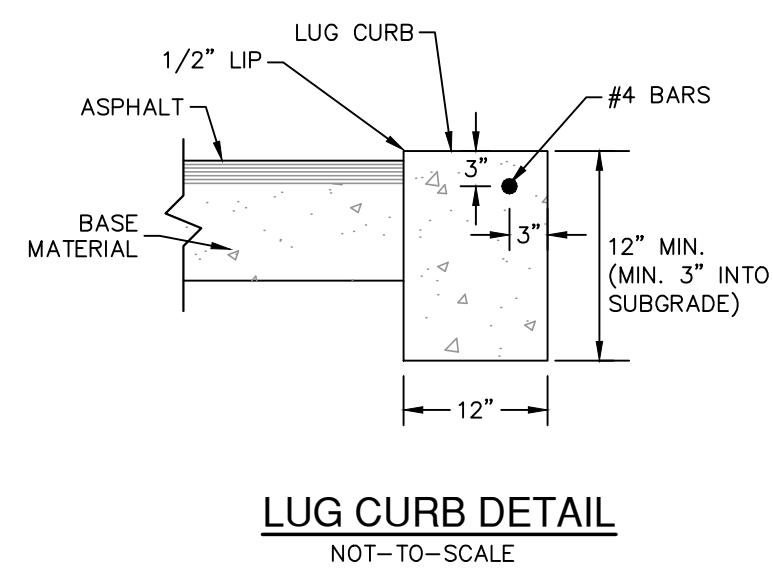
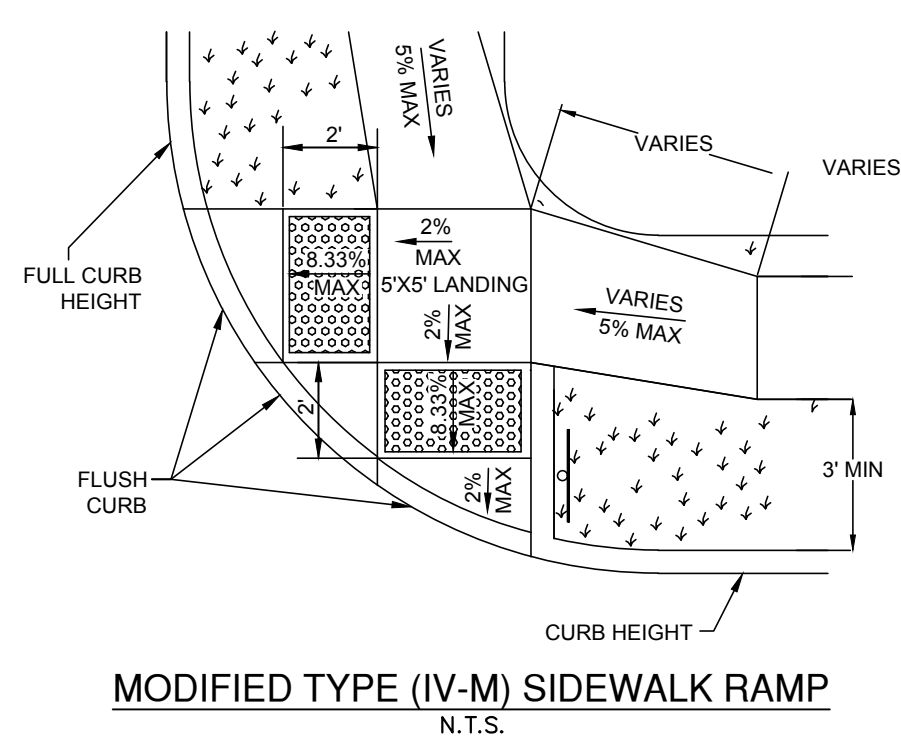
NOT-TO-SCALE

\*\*SEE SHEET C2.00  
(FLUSS RIVER)  
FOR STREET DESIGN









**PAPE-DAWSON  
ENGINEERS**

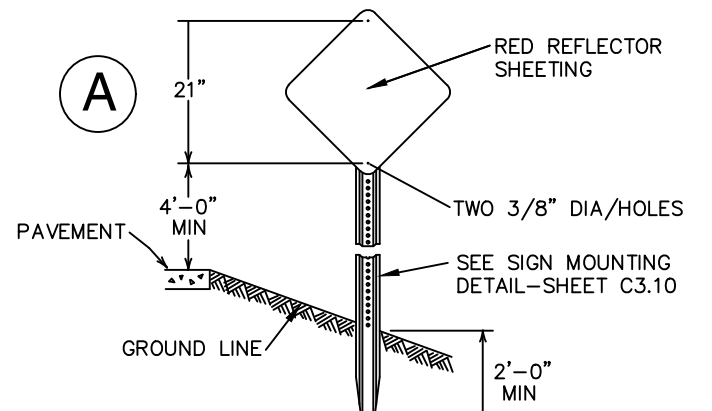
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1028800

**BLOSSOM RANCH UNIT 1A**  
**SAN ANTONIO, TEXAS**  
**STREET DETAILS**

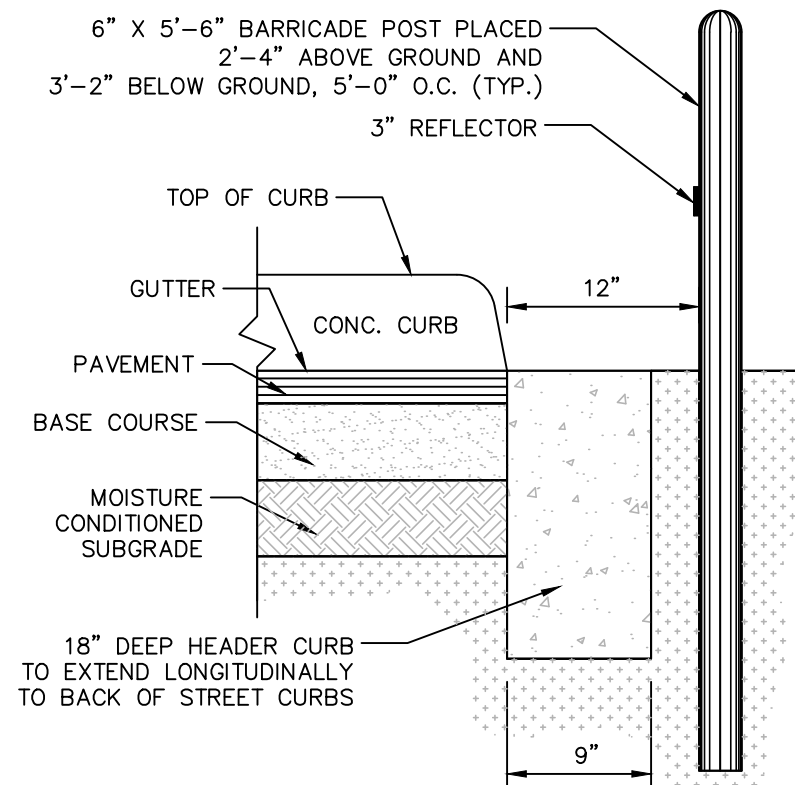
## STREET DETAILS



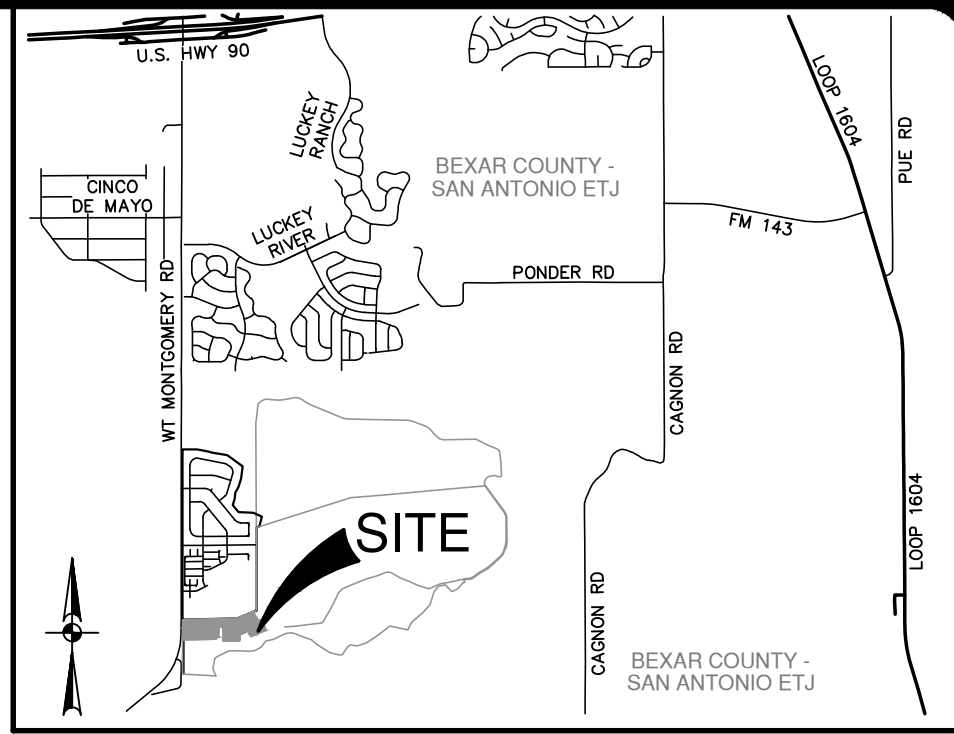
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			531.57
			531.6
			531.55



UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM CONFORMING WITH ASTM B-209 ALLOY 6061-T6.  
TYPE 4 OM4-3  
18" x 18"  
**OBJECT MARKER TYPE 4**  
NOT-TO-SCALE

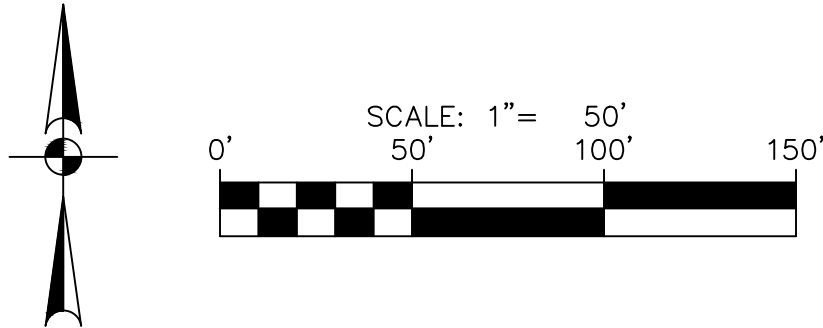


**HEADER CURB & BARRICADE POST DETAIL**  
NOT-TO-SCALE

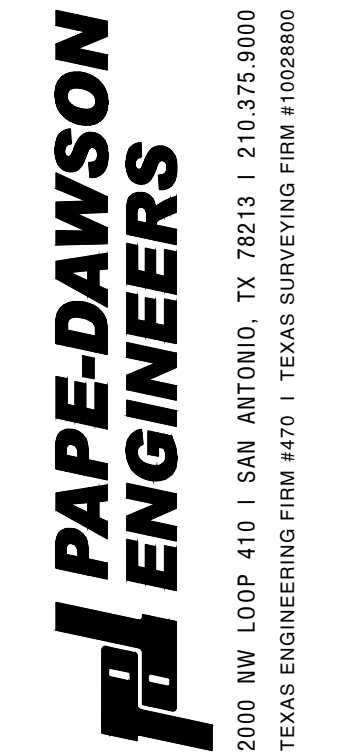
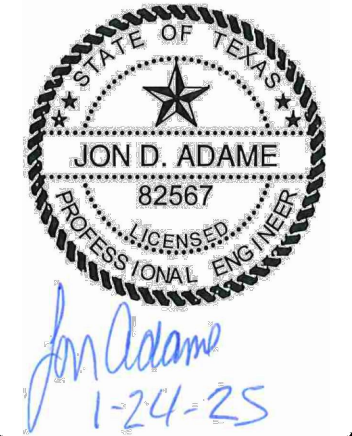


**LOCATION MAP**

NOT-TO-SCALE

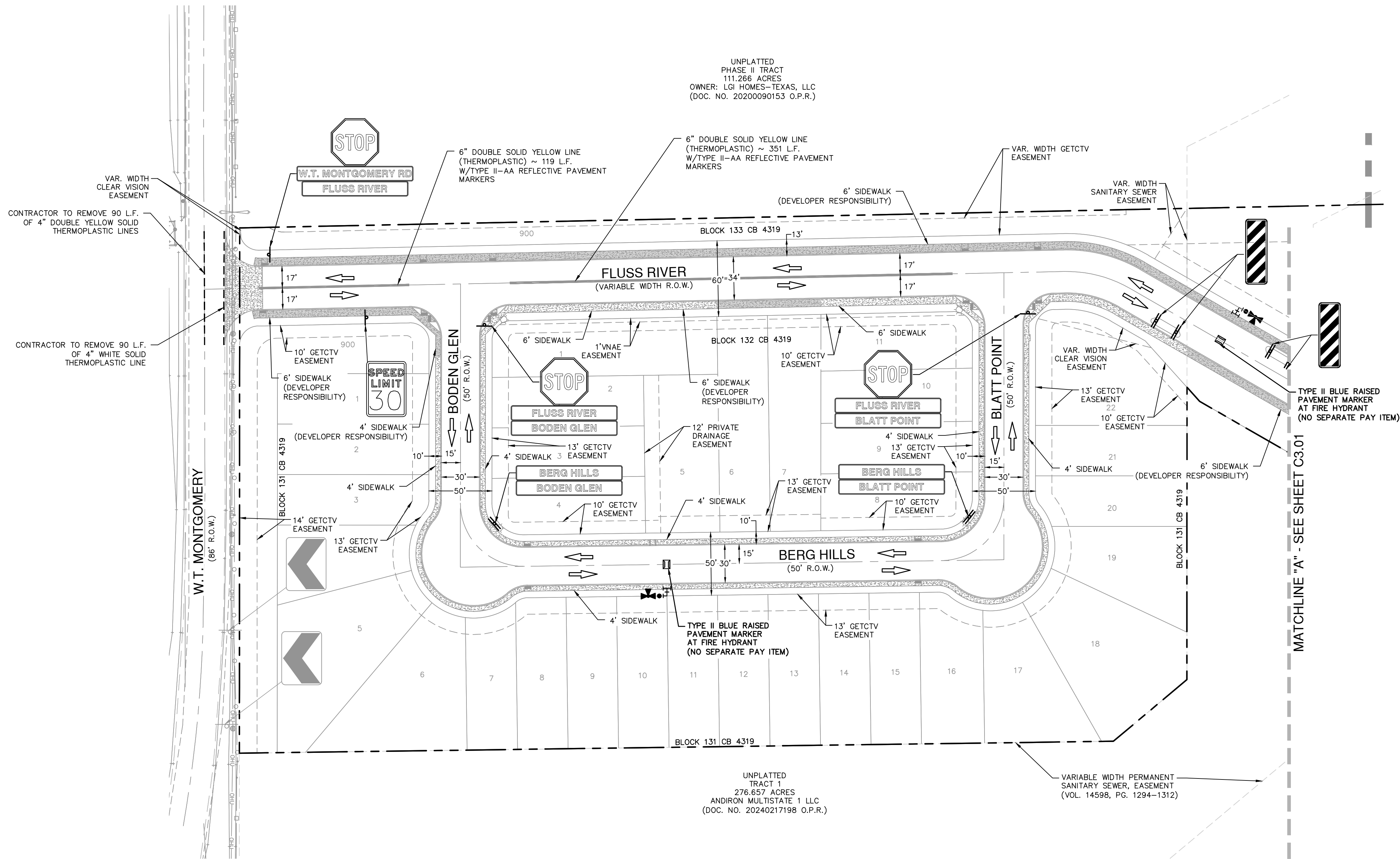


DATE	
NO.	
REVISION	



**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

**OVERALL SIGNAGE PLAN**



**BEXAR COUNTY ROW 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.

**DRIVEWAY NOTE:**

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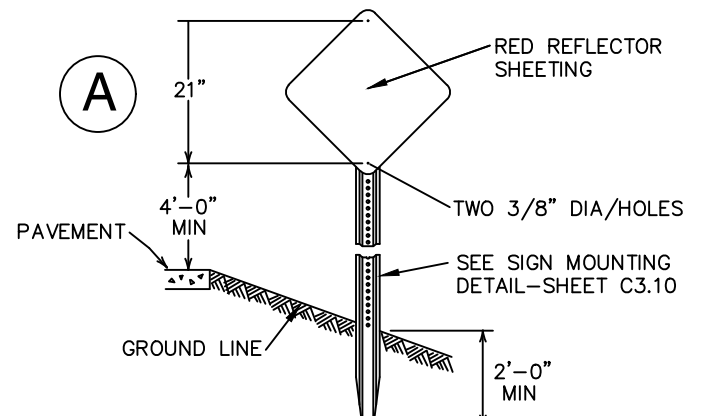
**TRENCH EXCAVATION SAFETY PROTECTION:**

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.

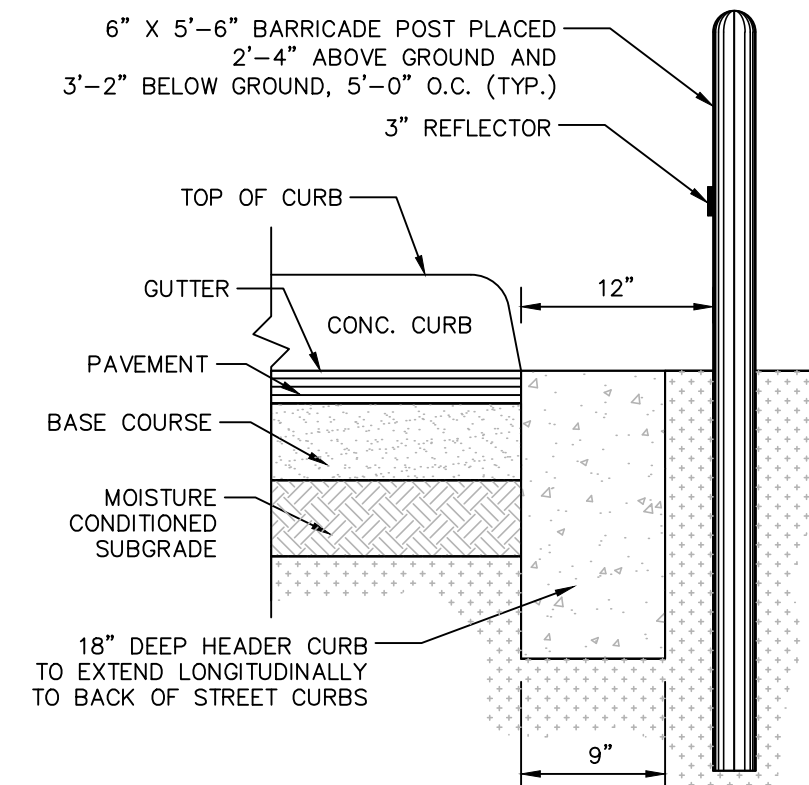
PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DRAWN	AA
CHECKED	AS
DRAWN	GP
SHEET	C3.00



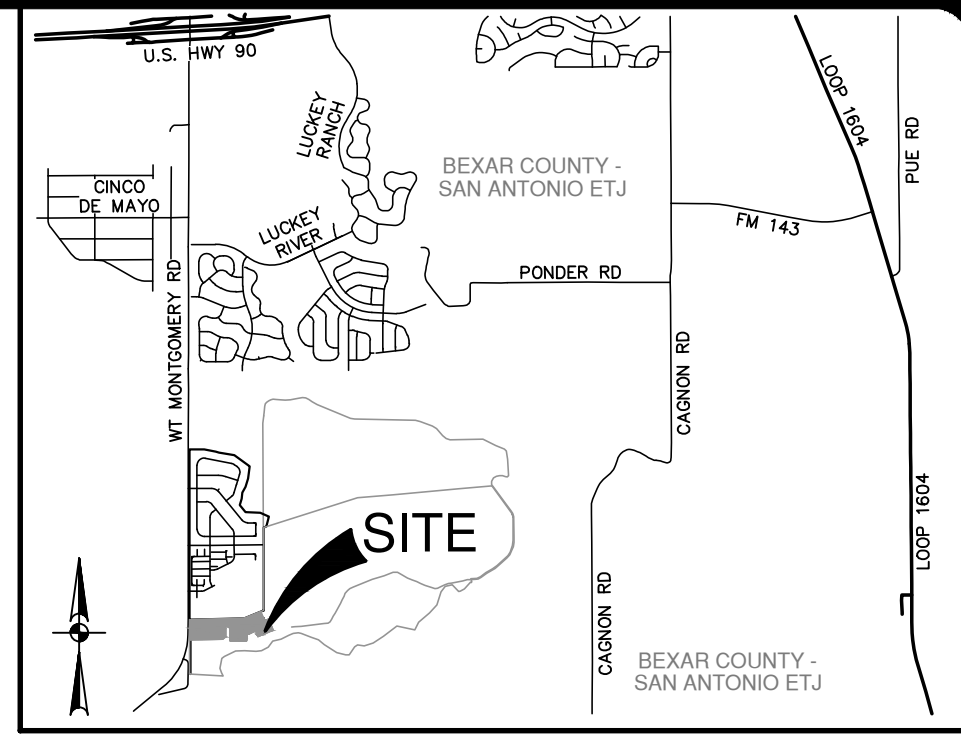
SYMBOL	ITEM NUMBER	SYMBOL	ITEM NUMBER
			R1-1 30"x30"
			531.57
			W14-1A 36"x8"
			OM-3R 12"x36"
			531.55



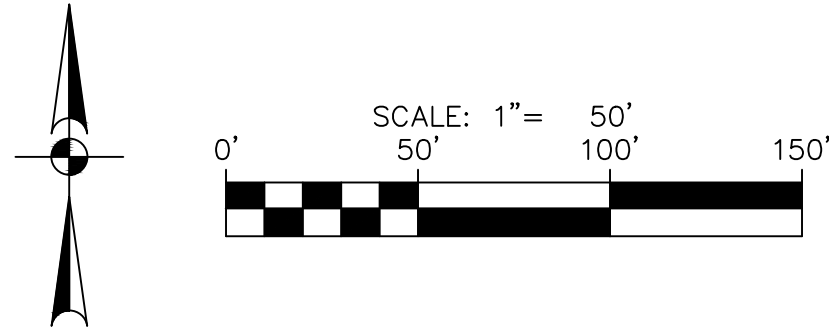
UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM  
CONFORMING WITH ASTM B-209 ALLOY  
6061-T6.  
TYPE 4 OM4-3  
18" x 18"  
**OBJECT MARKER TYPE 4**  
NOT-TO-SCALE



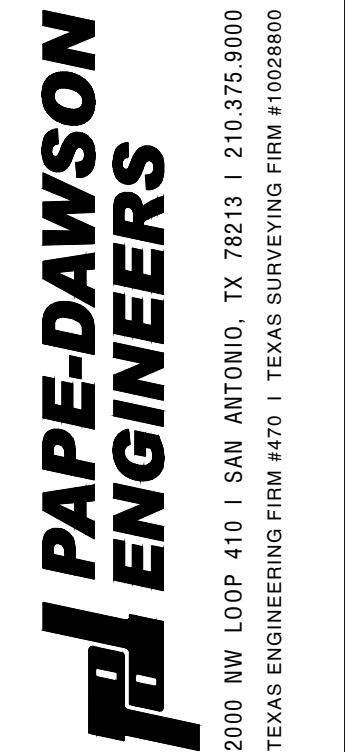
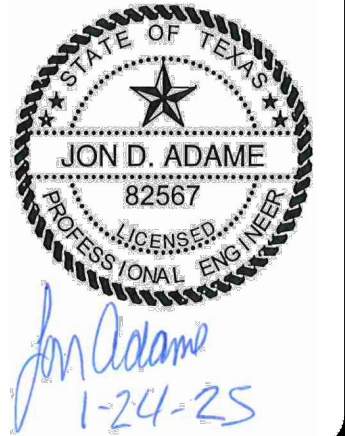
**HEADER CURB & BARRICADE POST DETAIL**  
NOT-TO-SCALE



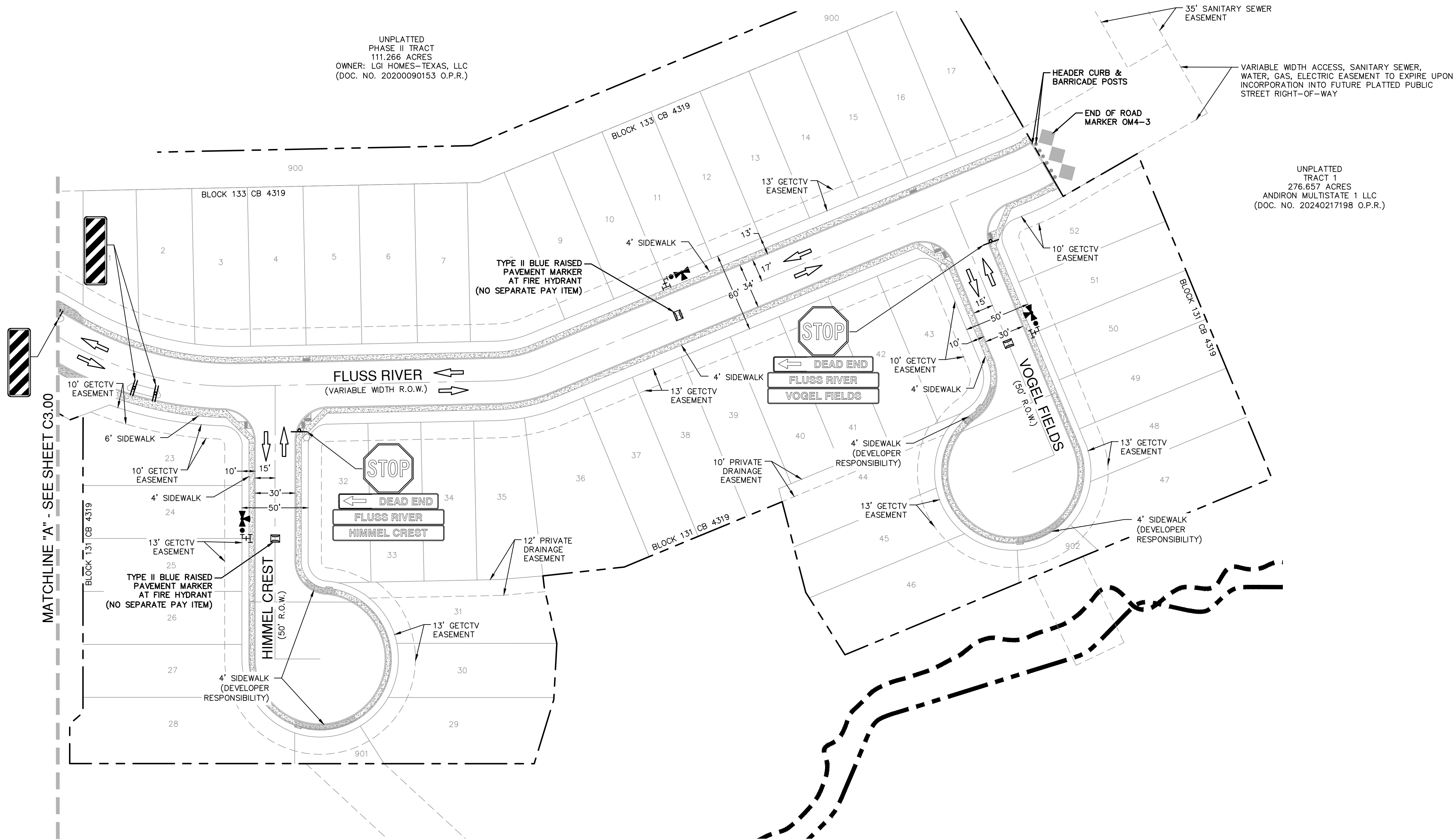
**LOCATION MAP**  
NOT-TO-SCALE



DATE	
NO.	
REVISION	



**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS  
OVERALL SIGNAGE PLAN



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PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	AA
CHECKED	AS
DRAWN	AD
SHEET	C3.01



**SIGN SUPPORT DESCRIPTIVE CODES**  
(Quantities listed correspond to project estimate and quantities listed in notes)

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

**Post Type**  
FSP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))  
TWT = Thin-Walled Tubing (see SMD(TWT))  
TOWB = 10 Wlb Tubing (see SMD(SLP-1) to SLP-3)  
SBO = Schedule 80 Pipe (see SMD(SLP-1) to SLP-3)

**Number of Posts (1 or 2)**

**Anchor Type**  
UA = Universal Anchor - Concrete (see SMD(FRP) and (TWT))  
UB = Universal Anchor - Bolted Down (see SMD(FRP) and (TWT))  
WB = Wedge Anchor Steel (see SMD(TWT))  
WA = Wedge Anchor Plastic (see SMD(TWT))  
SA = Slab Anchor - Concrete (see SMD(SLP-1) to SLP-3)  
SB = Slab Anchor - Bolted Down (see SMD(SLP-1) to SLP-3)

**Sign Mounting Designation**  
P = Pre-Assembled (see SMD(SLP-1) to SLP-3), (TWT), (FRP)  
T = Pre-Assembled (see SMD(SLP-1) to SLP-3), (TWT)  
U = Pre-Assembled (see SMD(SLP-1) to SLP-3)  
SW = Extruded Wing Beam (see SMD(SLP-1) to SLP-3)  
LX = 12" x 12" x 1/2" Wing Channel (see SMD(SLP-1) to SLP-3)  
EXAL = Extruded Aluminum Sign Panels (see SMD(SLP-1) to SLP-3)

**REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT**

**PAVED SHOULDERS**

**T-INTERSECTION**

**LESS THAN 6 FT. WIDE**

**GREATER THAN 6 FT. WIDE**

**BEHIND BARRIER**

**BEHIND GUARDRAIL**

**BEHIND CONCRETE BARRIER**

**SIGNS WITH PLAQUES**

**CURB & GUTTER OR RAISED ISLAND**

**RESTRICTED RIGHT-OF-WAY (When 5 ft min. is not possible.)**

**TYPICAL SIGN ATTACHMENT DETAIL**

**Single Signs**

**Back-to-Back Signs**

**Sign Mounting Details**

**SM(D GEN) -08**

**TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS**

**NOTE**

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. The devices shall be installed per manufacturer's recommendations. Installation procedures shall be provided to the Engineer by Contractor.

**CONCRETE ANCHOR**

**GENERAL NOTES:**

- Slip base shall be permanently marked to indicate manufacturer, method, design, and location of marking or subject to approval of the TxDOT Traffic Standards Engineer.
- Material used as post with this system shall conform to the following specifications:
  - 10 Wlb Tubing (2.875" outside diameter)
  - 0.144" wall thickness
  - Seamless or electric-resistance welded steel tubing or pipe
  - Steel shall be A513 or 50 per ASTM A513 or ASTM A513
  - Other steel may be used if they meet the following:
    - 50,000 PSI minimum yield strength
    - 70,000 PSI minimum tensile strength
    - 21X minimum elongation in 2"
  - Wall thickness (uncoated) shall be within the range of 0.125" to 0.138"
  - Outside diameter (uncoated) shall be within the range of 2.867" to 2.887"
  - Seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
    - 45,000 PSI minimum yield strength
    - 62,000 PSI minimum tensile strength
    - 21X minimum elongation in 2"
  - Wall thickness (uncoated) shall be within the range of 0.248" to 0.264"
  - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
- See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: <http://www.tdot.gov/publications/traffic.htm>
- Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

**ASSEMBLY PROCEDURE**

**Foundation**

- Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
- The Engineer may permit location of concrete use in a public road to be placed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class 6.
- Push the pipe and of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to ensure good contact between the concrete and stub.
- Place the slab. Allow a minimum of 4 days to set. The concrete shall be directed by the Engineer.
- The triangular slipbase system is multifunctional and is designed to release when struck from any direction.

**Support**

- Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be clean and straight.
- Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLP-2) for clearances based on sign types.

**STATE OF TEXAS**

**PROFESSIONAL ENGINEER**

**ION D. ADAME**

**82567**

**1-24-25**

**PAPE-DAWSON ENGINEERS**

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

TEXAS ENGINEERING FIRM #008890

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**REQUIRED SUPPORT**

Sign Description	Support
48-inch STOP sign (R1-1)	TY 10WLB(1)(XX)(X)
48-inch YIELD sign (R1-2)	TY 10WLB(1)(XX)(X)
48-inch ONE-WAY sign (R6-1)	TY 10WLB(1)(XX)(X)
36x48, 48x36, and 48x48-inch signs	TY 10WLB(1)(XX)(X)
48x60-inch signs	TY 10WLB(1)(XX)(X)
48x48-inch signs (diamond or square)	TY 10WLB(1)(XX)(X)
48x60-inch signs	TY 10WLB(1)(XX)(X)
48-inch Advance School X-ing sign (S1-1)	TY 10WLB(1)(XX)(X)
48-inch School X-ing sign (S2-1)	TY 10WLB(1)(XX)(X)
Large Arrow sign (W1-6 & W1-7)	TY 10WLB(1)(XX)(X)

**FRICION CAP DETAIL**

**SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM**

**SMD(SLP-2)-08**

**GENERAL NOTES:**

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48x60-inch signs	TY 10WLB(1)(XX)(X)
48x48-inch signs (diamond or square)	TY 10WLB(1)(XX)(X)
48x60-inch signs	TY 10WLB(1)(XX)(X)
48-inch Advance School X-ing sign (S1-1)	TY 10WLB(1)(XX)(X)
48-inch School X-ing sign (S2-1)	TY 10WLB(1)(XX)(X)
Large Arrow sign (W1-6 & W1-7)	TY 10WLB(1)(XX)(X)

**SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM**

**SMD(SLP-3)-08**

**BLOSSOM RANCH UNIT 1A**

**SAN ANTONIO, TEXAS**

**SIGNAGE DETAILS SHEET 1 OF 3**

**PLAT NO. 24-11800406**

**JOB NO. 13055-20**

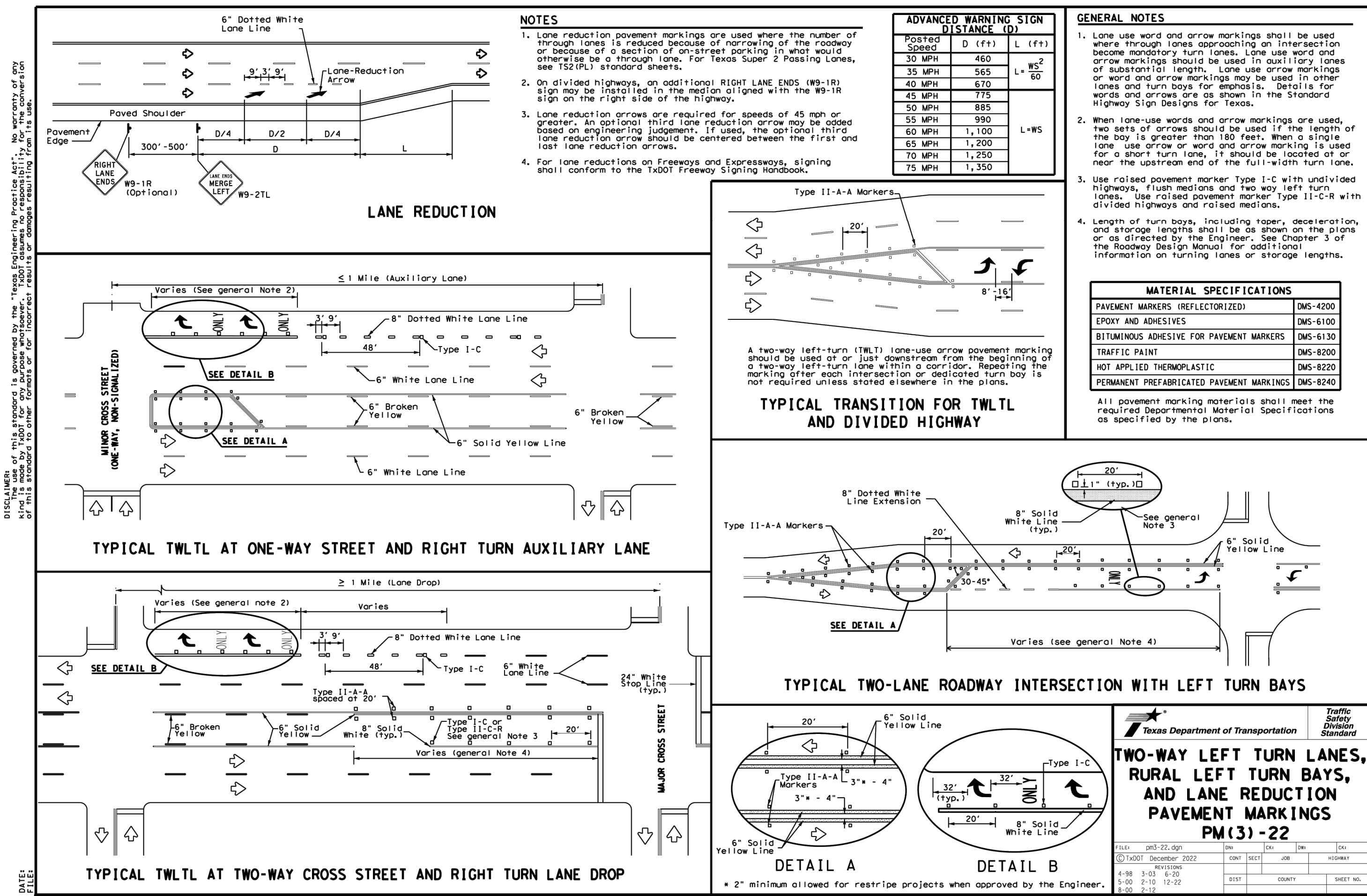
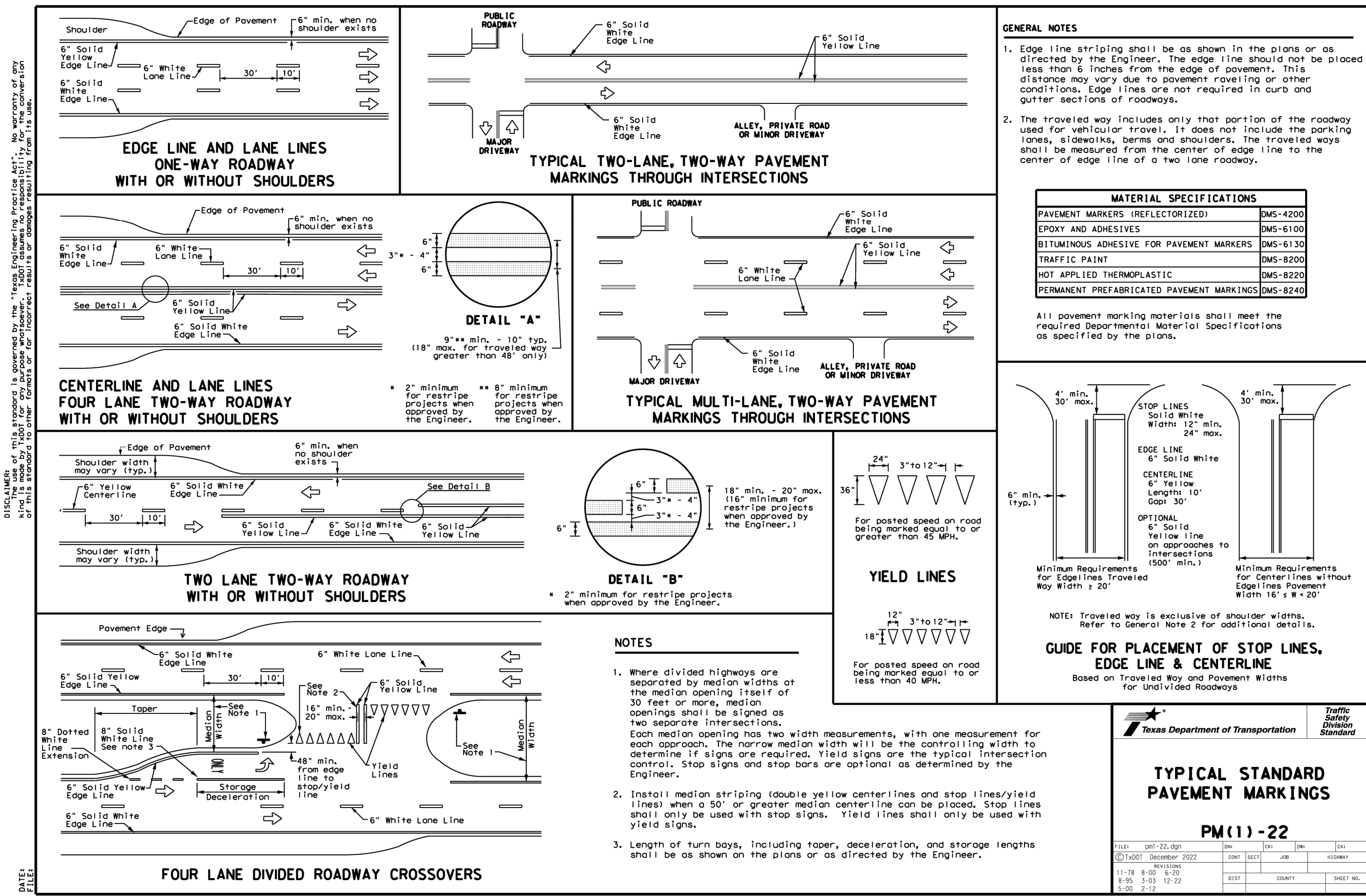
**DATE JANUARY 2025**

**DRAWN AD**

**CHECKED AS**

**SHEET C3.10**









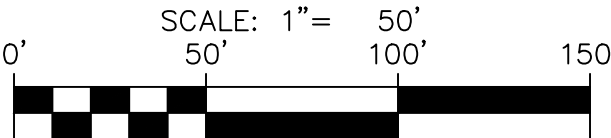


IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

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



NOT-TO-SCALE



PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF  
METER BY HOMEBUILDER.

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW  
GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE W  
NORMALLY EXCEED 80 PSIL. AT ALL SUCH LOCATIONS WHERE THE GROUND  
LEVEL IS BELOW 745 FEET, THE DEVELOPER OR BUILDER SHALL INSTA  
AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROV  
TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CO  
OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR A  
LOT(S) IF \*PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SING  
SERVICE CONNECTIONS SHALL BE ALLOWED.

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH JOINT ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS, BENDS, BALL VALVES AND WELDS APPROVED PROGRAMS. WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYER OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT SHALL BE RESPONSIBLE FOR THE DESIGN OF THE TRENCH, THE INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS AND PROGRAMS AND THE CONTRACTOR'S RESPONSIBILITY FOR THE DESIGN OF THE TRENCH DOME. 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 STANDARD 1926.650, 1926.651, 1926.652, 1926.653, 1926.654, 1926.655, 1926.656, 1926.657, 1926.658, 1926.659, 1926.660, 1926.661, 1926.662, 1926.663, 1926.664, 1926.665, 1926.666, 1926.667, 1926.668, 1926.669, 1926.670, 1926.671, 1926.672, 1926.673, 1926.674, 1926.675, 1926.676, 1926.677, 1926.678, 1926.679, 1926.680, 1926.681, 1926.682, 1926.683, 1926.684, 1926.685, 1926.686, 1926.687, 1926.688, 1926.689, 1926.690, 1926.691, 1926.692, 1926.693, 1926.694, 1926.695, 1926.696, 1926.697, 1926.698, 1926.699, 1926.700, 1926.701, 1926.702, 1926.703, 1926.704, 1926.705, 1926.706, 1926.707, 1926.708, 1926.709, 1926.710, 1926.711, 1926.712, 1926.713, 1926.714, 1926.715, 1926.716, 1926.717, 1926.718, 1926.719, 1926.720, 1926.721, 1926.722, 1926.723, 1926.724, 1926.725, 1926.726, 1926.727, 1926.728, 1926.729, 1926.730, 1926.731, 1926.732, 1926.733, 1926.734, 1926.735, 1926.736, 1926.737, 1926.738, 1926.739, 1926.740, 1926.741, 1926.742, 1926.743, 1926.744, 1926.745, 1926.746, 1926.747, 1926.748, 1926.749, 1926.750, 1926.751, 1926.752, 1926.753, 1926.754, 1926.755, 1926.756, 1926.757, 1926.758, 1926.759, 1926.760, 1926.761, 1926.762, 1926.763, 1926.764, 1926.765, 1926.766, 1926.767, 1926.768, 1926.769, 1926.770, 1926.771, 1926.772, 1926.773, 1926.774, 1926.775, 1926.776, 1926.777, 1926.778, 1926.779, 1926.780, 1926.781, 1926.782, 1926.783, 1926.784, 1926.785, 1926.786, 1926.787, 1926.788, 1926.789, 1926.790, 1926.791, 1926.792, 1926.793, 1926.794, 1926.795, 1926.796, 1926.797, 1926.798, 1926.799, 1926.800, 1926.801, 1926.802, 1926.803, 1926.804, 1926.805, 1926.806, 1926.807, 1926.808, 1926.809, 1926.810, 1926.811, 1926.812, 1926.813, 1926.814, 1926.815, 1926.816, 1926.817, 1926.818, 1926.819, 1926.820, 1926.821, 1926.822, 1926.823, 1926.824, 1926.825, 1926.826, 1926.827, 1926.828, 1926.829, 1926.830, 1926.831, 1926.832, 1926.833, 1926.834, 1926.835, 1926.836, 1926.837, 1926.838, 1926.839, 1926.840, 1926.841, 1926.842, 1926.843, 1926.844, 1926.845, 1926.846, 1926.847, 1926.848, 1926.849, 1926.850, 1926.851, 1926.852, 1926.853, 1926.854, 1926.855, 1926.856, 1926.857, 1926.858, 1926.859, 1926.860, 1926.861, 1926.862, 1926.863, 1926.864, 1926.865, 1926.866, 1926.867, 1926.868, 1926.869, 1926.870, 1926.871, 1926.872, 1926.873, 1926.874, 1926.875, 1926.876, 1926.877, 1926.878, 1926.879, 1926.880, 1926.881, 1926.882, 1926.883, 1926.884, 1926.885, 1926.886, 1926.887, 1926.888, 1926.889, 1926.890, 1926.891, 1926.892, 1926.893, 1926.894, 1926.895, 1926.896, 1926.897, 1926.898, 1926.899, 1926.900, 1926.901, 1926.902, 1926.903, 1926.904, 1926.905, 1926.906, 1926.907, 1926.908, 1926.909, 1926.910, 1926.911, 1926.912, 1926.913, 1926.914, 1926.915, 1926.916, 1926.917, 1926.918, 1926.919, 1926.920, 1926.921, 1926.922, 1926.923, 1926.924, 1926.925, 1926.926, 1926.927, 1926.928, 1926.929, 1926.930, 1926.931, 1926.932, 1926.933, 1926.934, 1926.935, 1926.936, 1926.937, 1926.938, 1926.939, 1926.940, 1926.941, 1926.942, 1926.943, 1926.944, 1926.945, 1926.946, 1926.947, 1926.948, 1926.949, 1926.950, 1926.951, 1926.952, 1926.953, 1926.954, 1926.955, 1926.956, 1926.957, 1926.958, 1926.959, 1926.960, 1926.961, 1926.962, 1926.963, 1926.964, 1926.965, 1926.966, 1926.967, 1926.968, 1926.969, 1926.970, 1926.971, 1926.972, 1926.973, 1926.974, 1926.975, 1926.976, 1926.977, 1926.978, 1926.979, 1926.980, 1926.981, 1926.982, 1926.983, 1926.984, 1926.985, 1926.986, 1926.987, 1926.988, 1926.989, 1926.990, 1926.991, 1926.992, 1926.993, 1926.994, 1926.995, 1926.996, 1926.997, 1926.998, 1926.999, 1927.000, 1927.001, 1927.002, 1927.003, 1927.004, 1927.005, 1927.006, 1927.007, 1927.008, 1927.009, 1927.010, 1927.011, 1927.012, 1927.013, 1927.014, 1927.015, 1927.016, 1927.017, 1927.018, 1927.019, 1927.020, 1927.021, 1927.022, 1927.023, 1927.024, 1927.025, 1927.026, 1927.027, 1927.028, 1927.029, 1927.030, 1927.031, 1927.032, 1927.033, 1927.034, 1927.035, 1927.036, 1927.037, 1927.038, 1927.039, 1927.040, 1927.041, 1927.042, 1927.043,

**PAPE-DAWSON  
ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

---

**OVERALL WATER DISTRIBUTION PLAN**

PLAT NO. 24-11800406  
 JOB NO. 13055-20  
 DATE JANUARY 2025  
 DESIGNER AS  
 CHECKED AS DRAWN AD  
 SHEET C4.00

Date: Jan 24, 2025, 11:26pm User ID: adavila  
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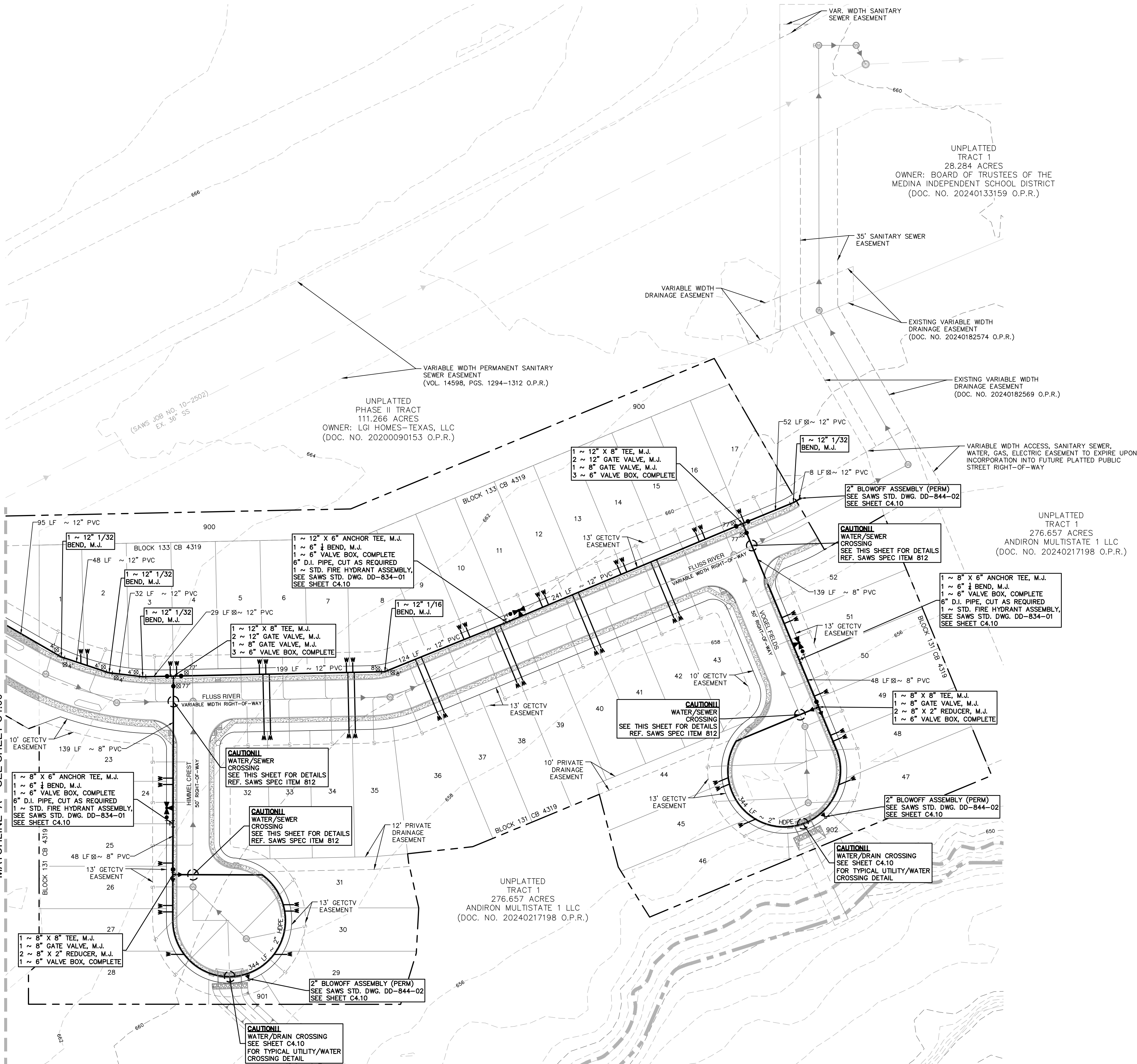
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MATCHLINE "A" - SEE SHEET C4.00

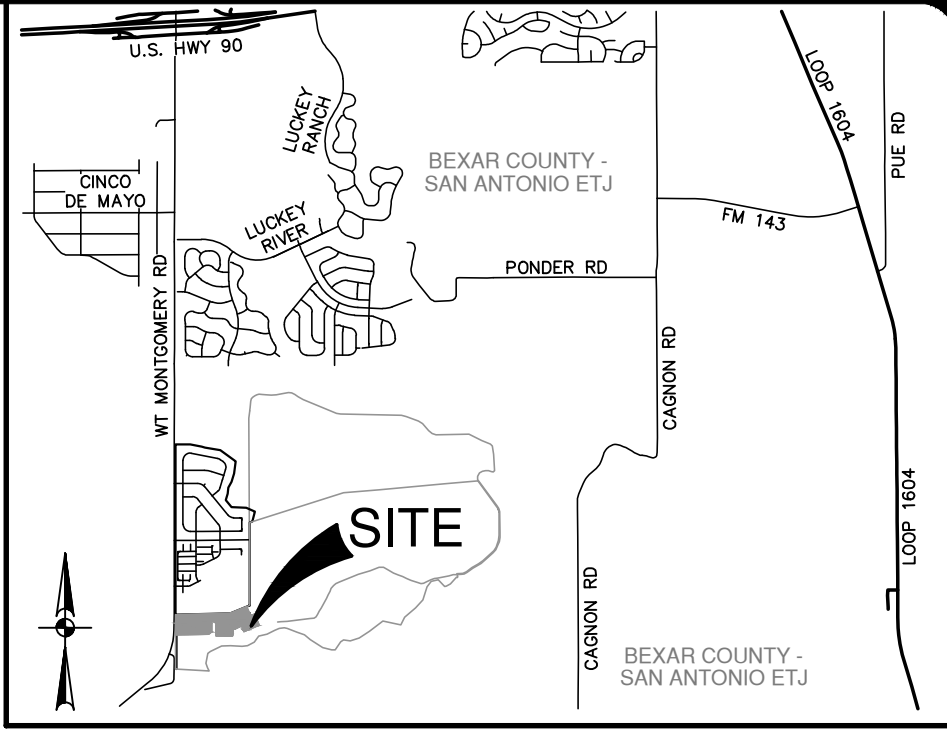


#### FIRE FLOW NOTE:

IN AN EFFORT TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE PROPOSED RESIDENTIAL DEVELOPMENT, THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF 1500 GPM AT 25 PSI RESIDUAL PRESSURE. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED DURING THE BUILDING PERMIT PROCESS IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES DEPARTMENT AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

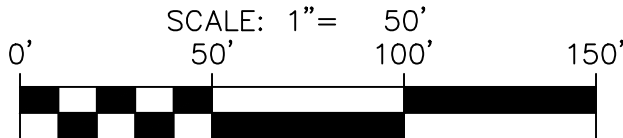
#### ROW PERMIT NOTE:

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



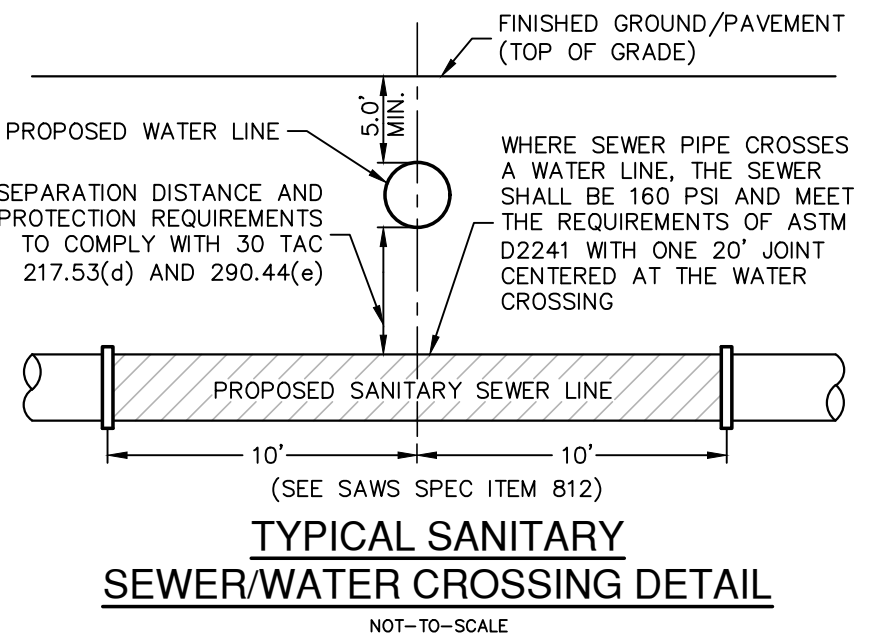
#### LOCATION MAP

NOT-TO-SCALE



#### WATER LEGEND

PROJECT LIMITS	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED SEWER	---
PROPOSED WATER	---
PROPOSED 3/4" SINGLE SERVICE WITH 3/4" METER	---
SINGLE IRRIGATION SERVICE (REF. PLAN VIEW FOR SIZE)	---
JOINT RESTRAINT	---



#### PRESSURE REDUCING VALVE NOTE:

PRESSURE REDUCING VALVE TO BE INSTALLED ON CUSTOMER'S SIDE OF METER BY HOMEOWNER.

#### PRESSURE NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 745 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 745 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S). IF \*PRV IS/ARE REQUIRED FOR SUCH LOT(S), ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED. \*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

#### JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS AND RETAINER GLANDS SHALL BE CALCULATED BY SAWS APPROVED PROGRAMS. THERE WILL BE NO SEPARATE PAY ITEM FOR RETAINER GLANDS AND OTHER JOINT RESTRAINING HARNESSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

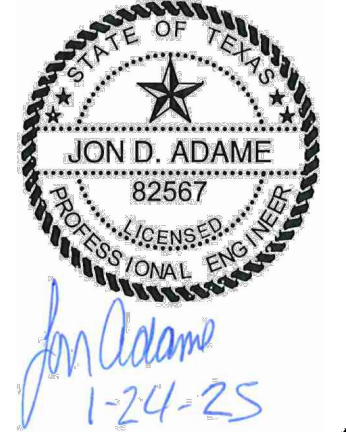
#### TRENCH EXCAVATION SAFETY PROTECTION:

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.

WATER (SAWS PRESSURE ZONE 4 (930 HGL))

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.	
ADDRESS: 100 NE LOOP 410, SUITE 1155	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78216
PHONE# (210) 889-5516	E-MAIL: RICHARD.MOTT@LENNAR.COM
SAWS BLOCK MAP# 082-546	TOTAL EDU'S 81.5 TOTAL ACREAGE 15.89
TOTAL LINEAR FOOTAGE OF PIPE# 1,347 LF	PLAT NO. 24-11800406
NUMBER OF LOTS 80	SAWS JOB NO. XX-XXXX

NO.	REVISION	DATE



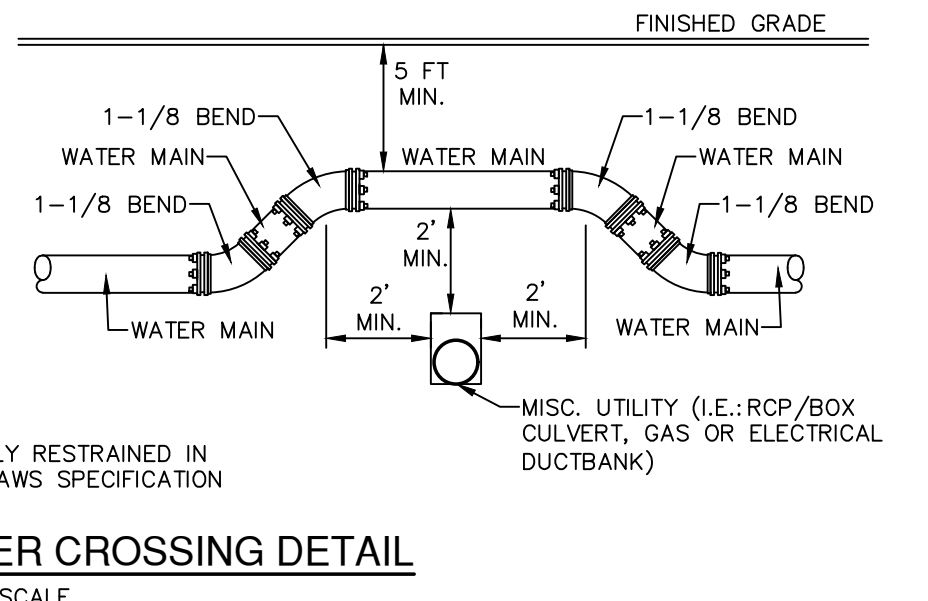
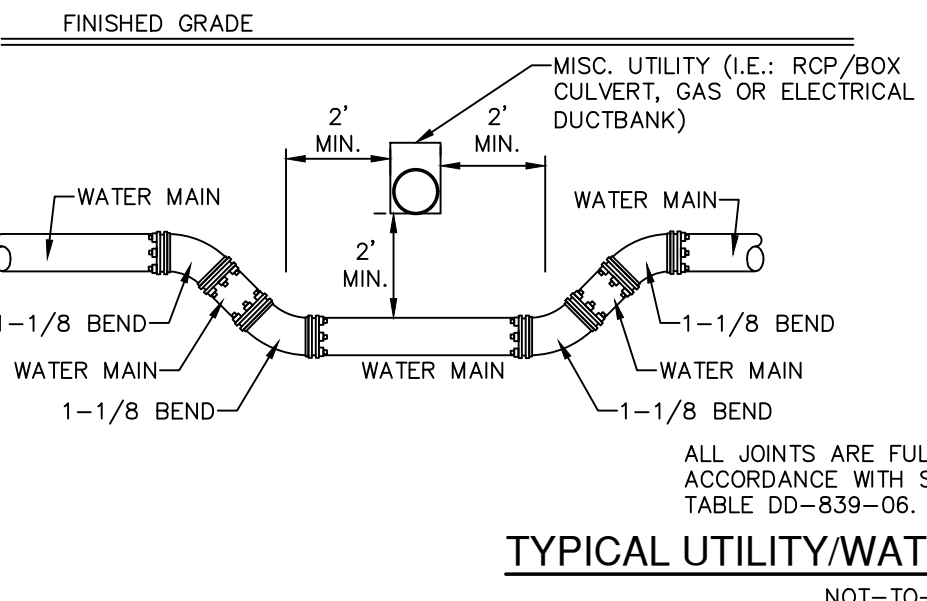
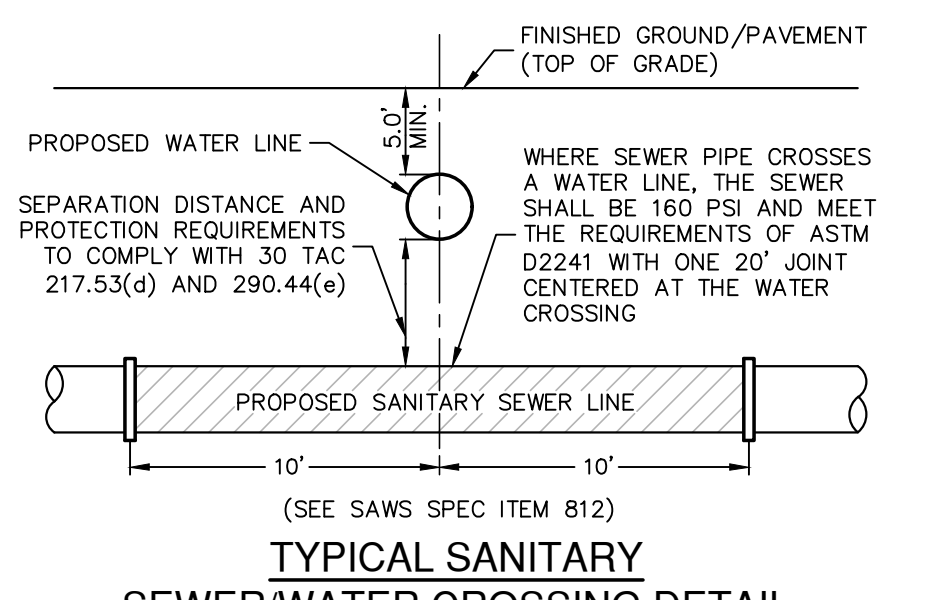
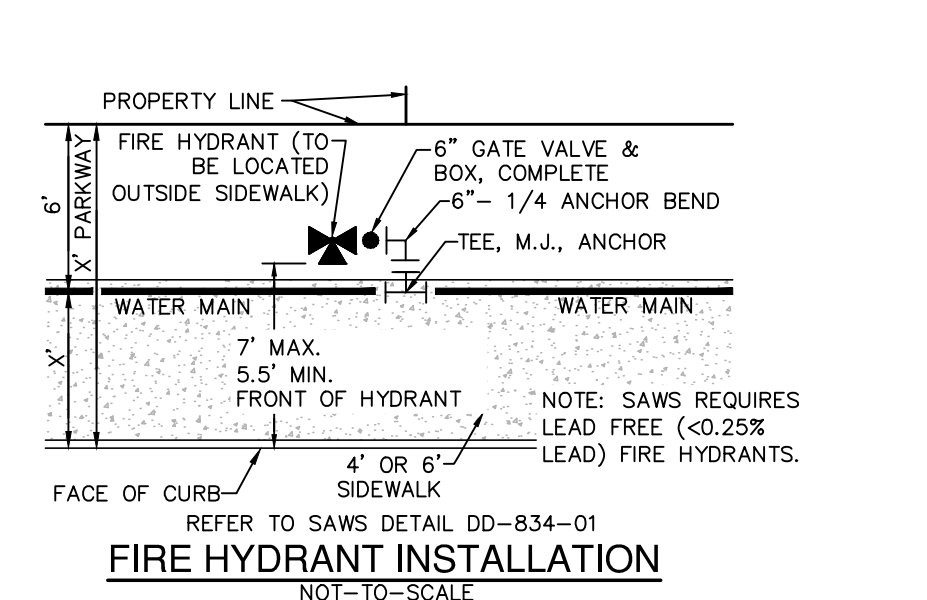
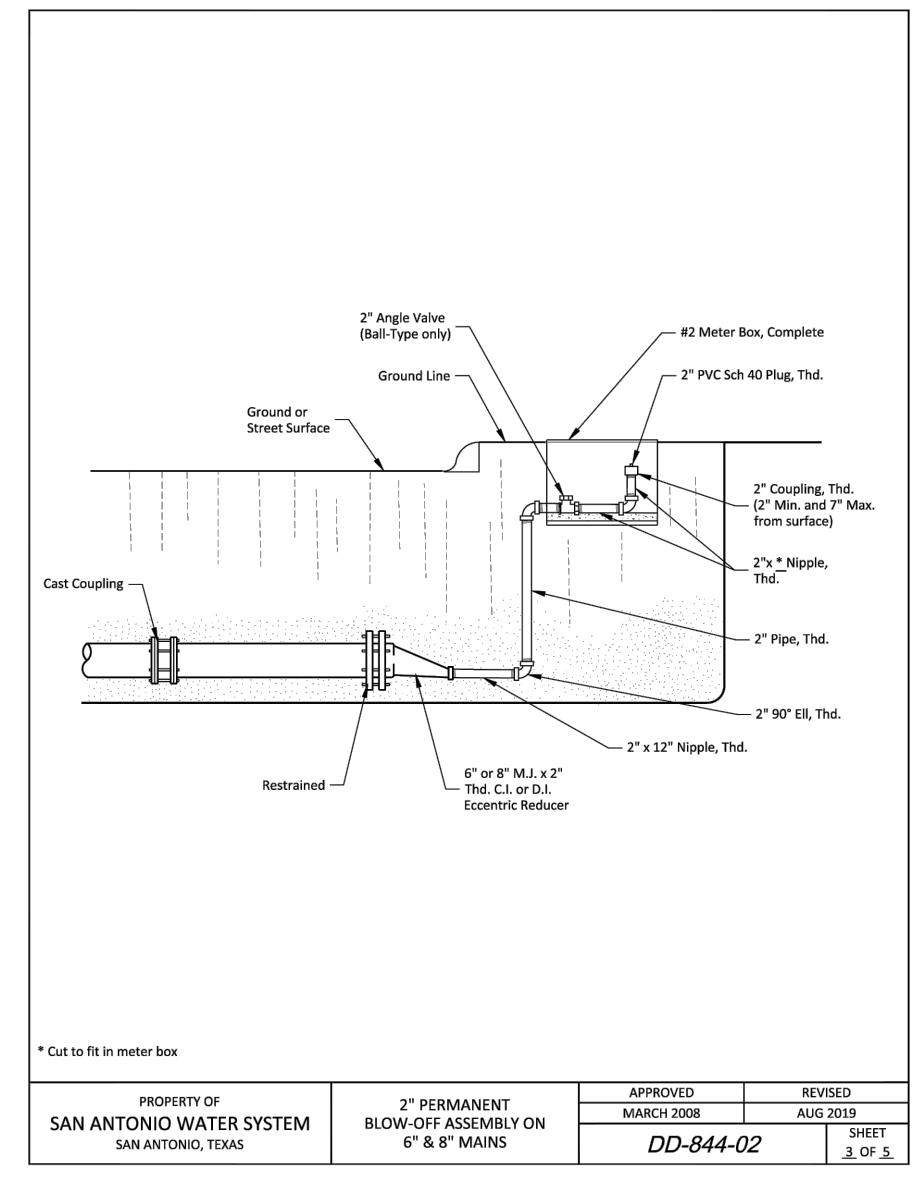
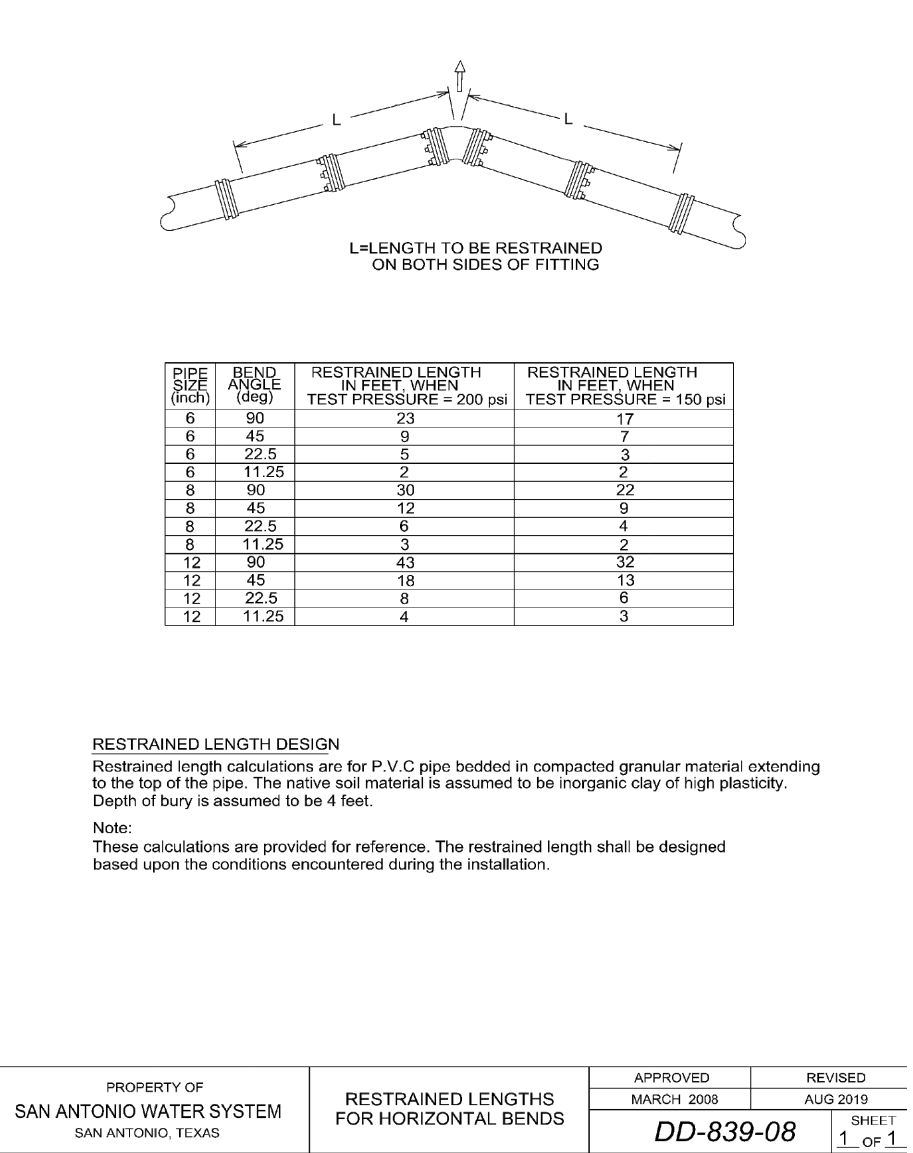
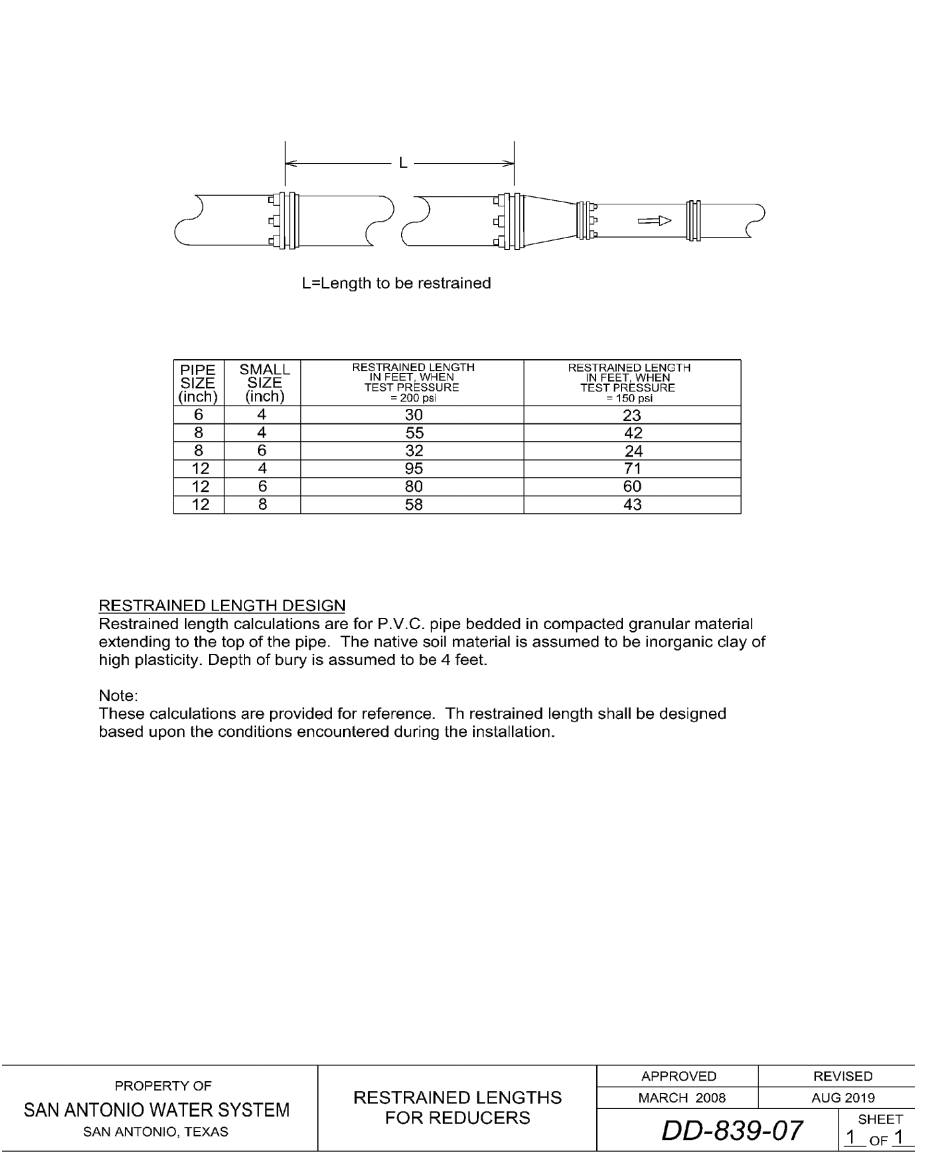
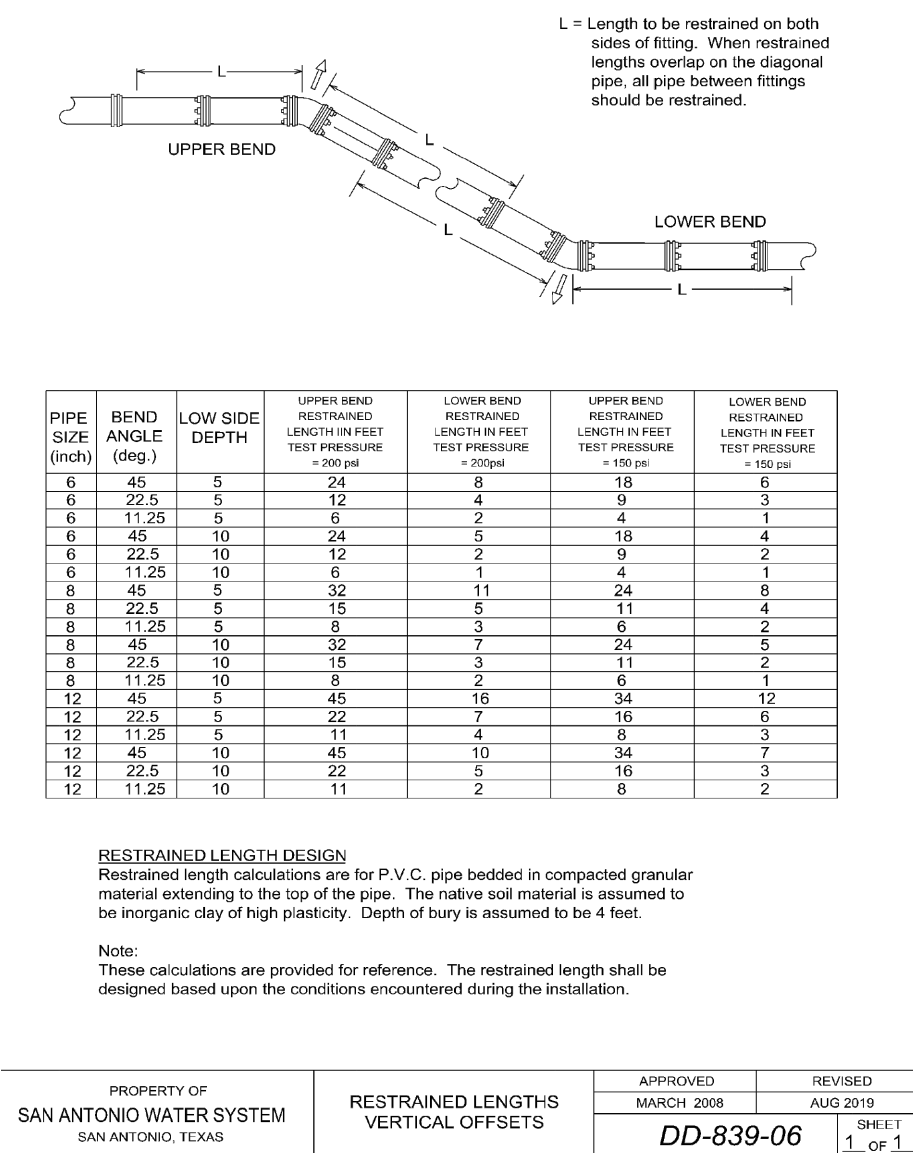
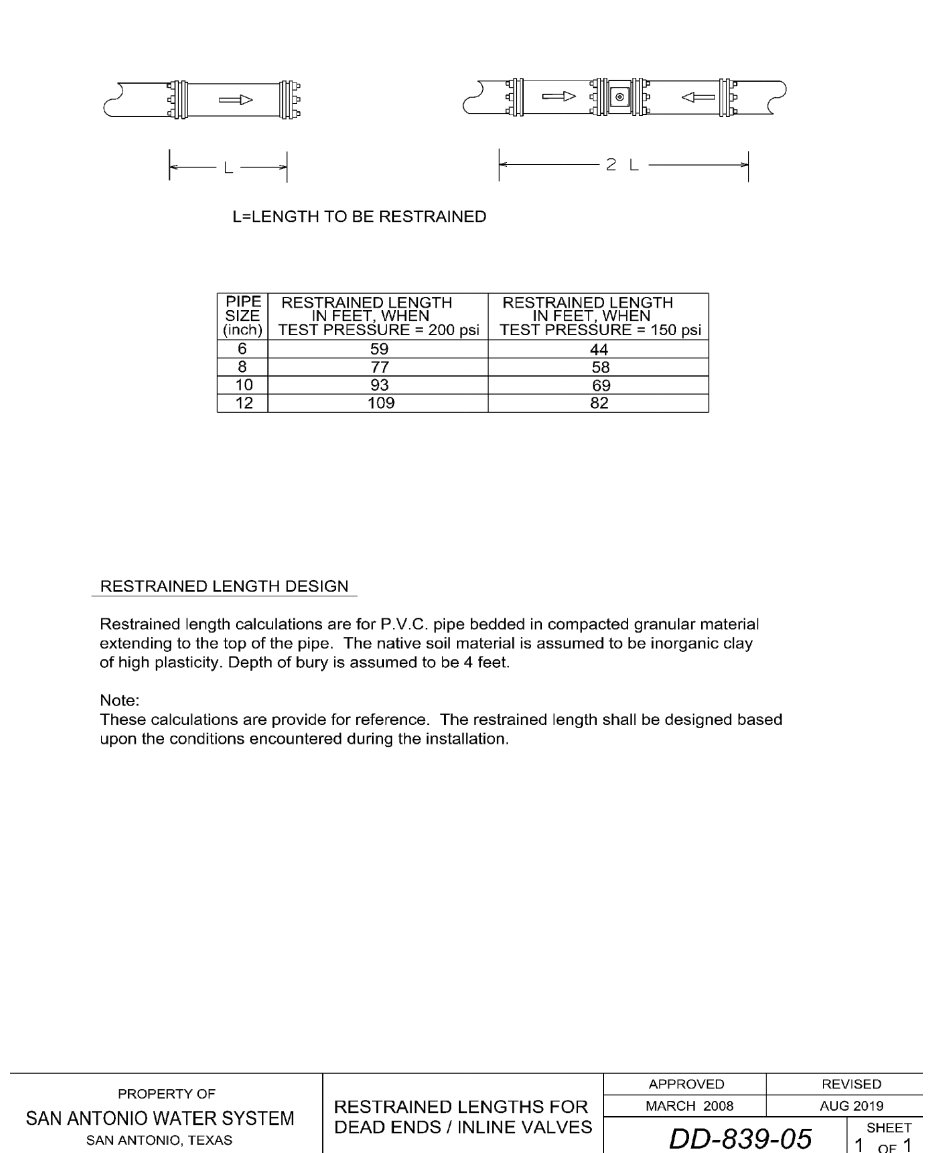
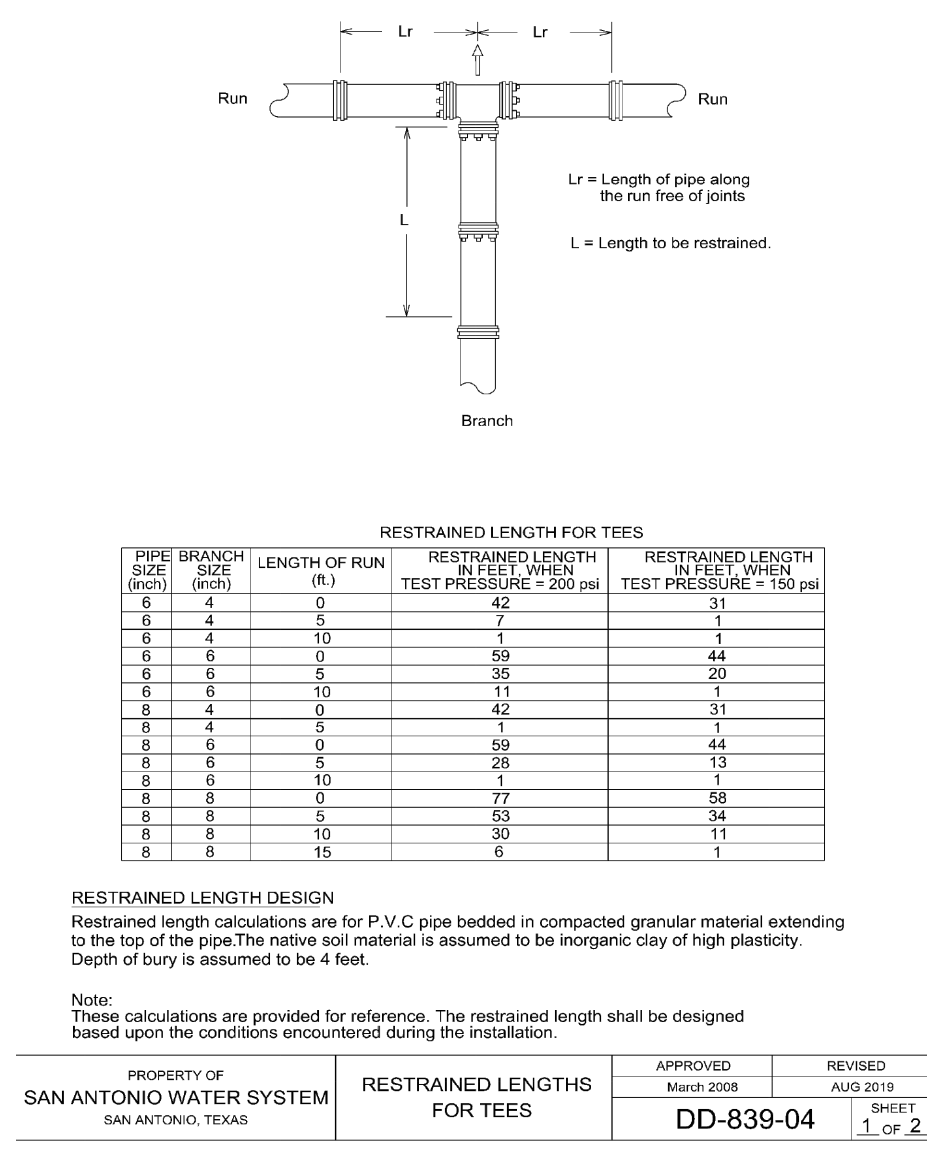
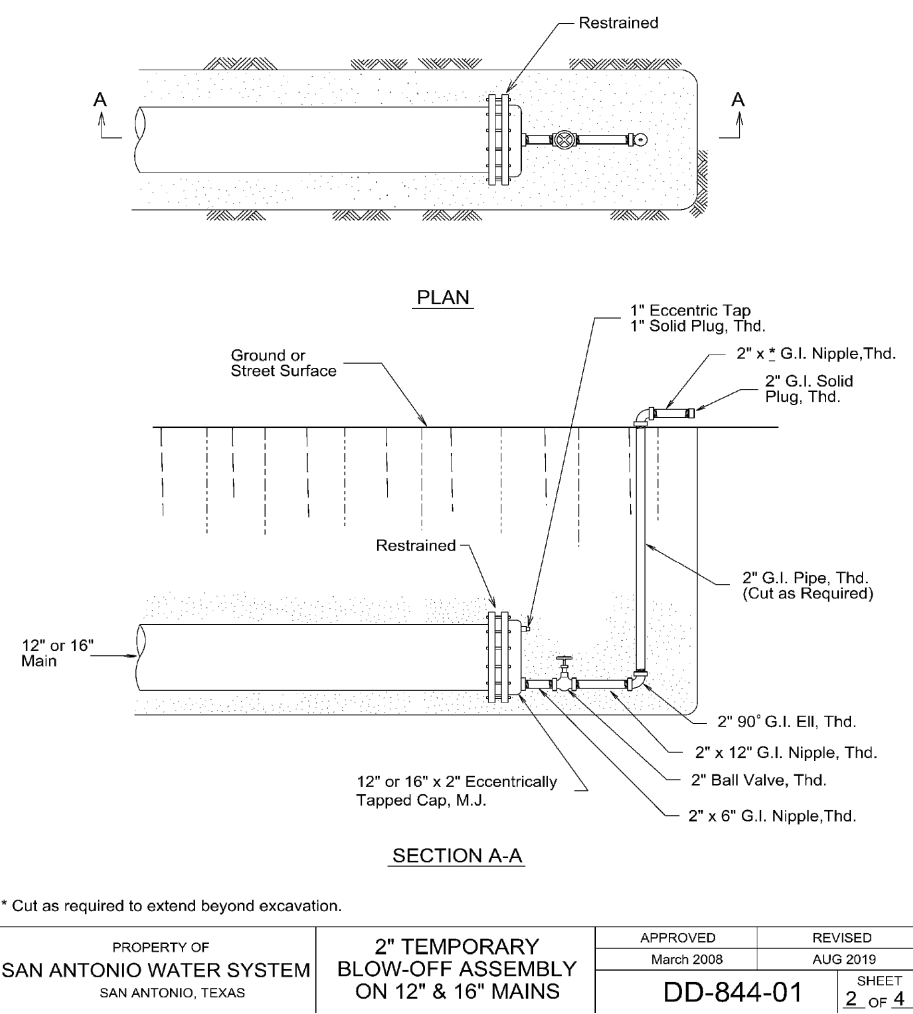
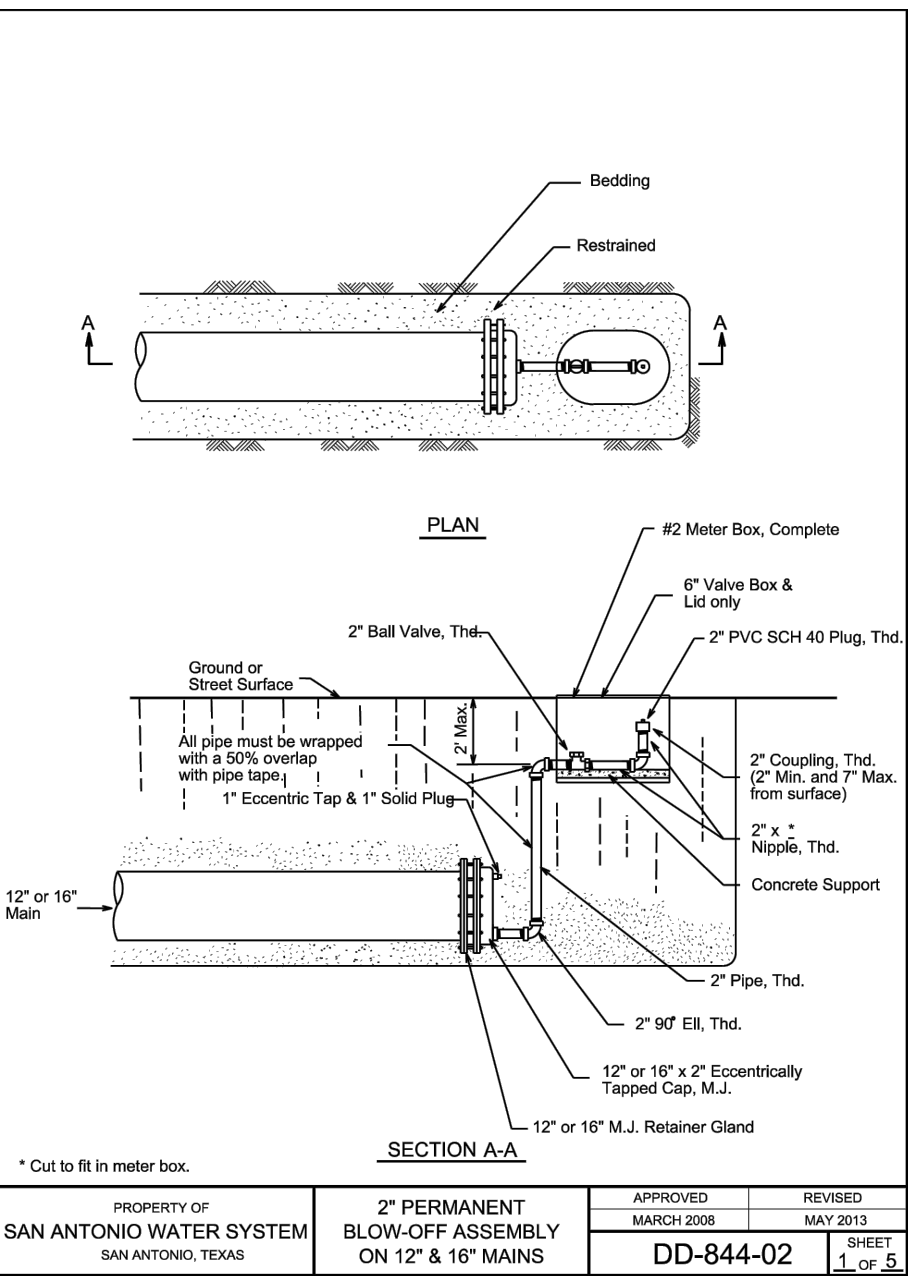
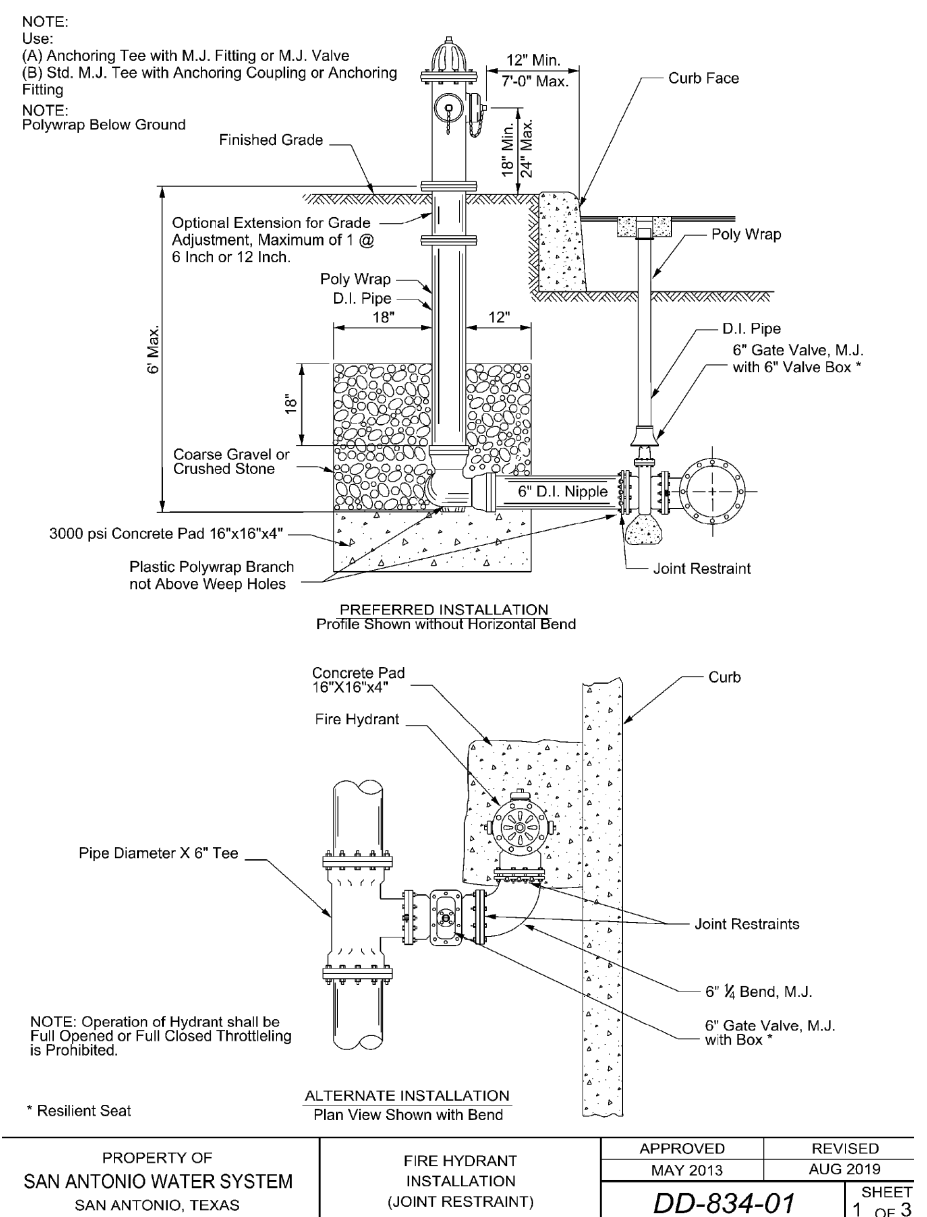
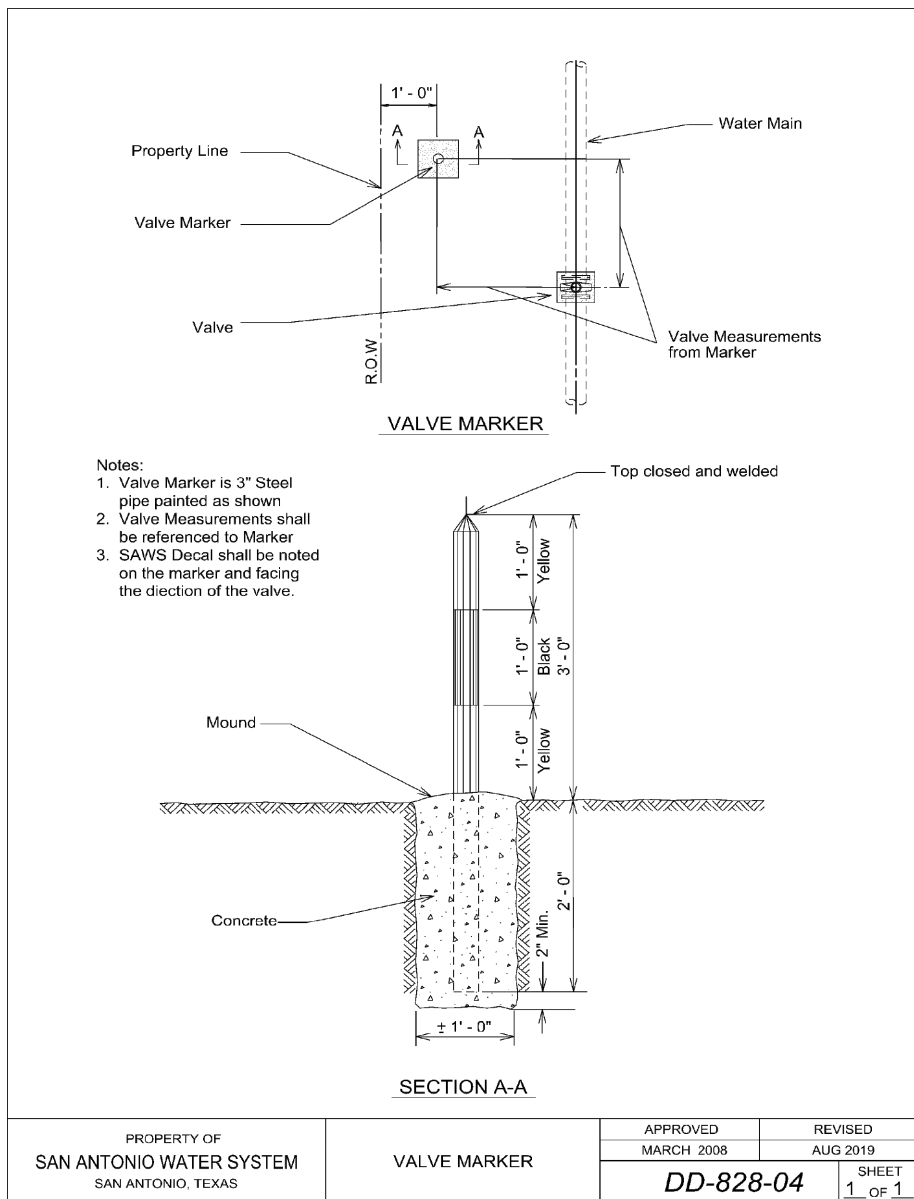
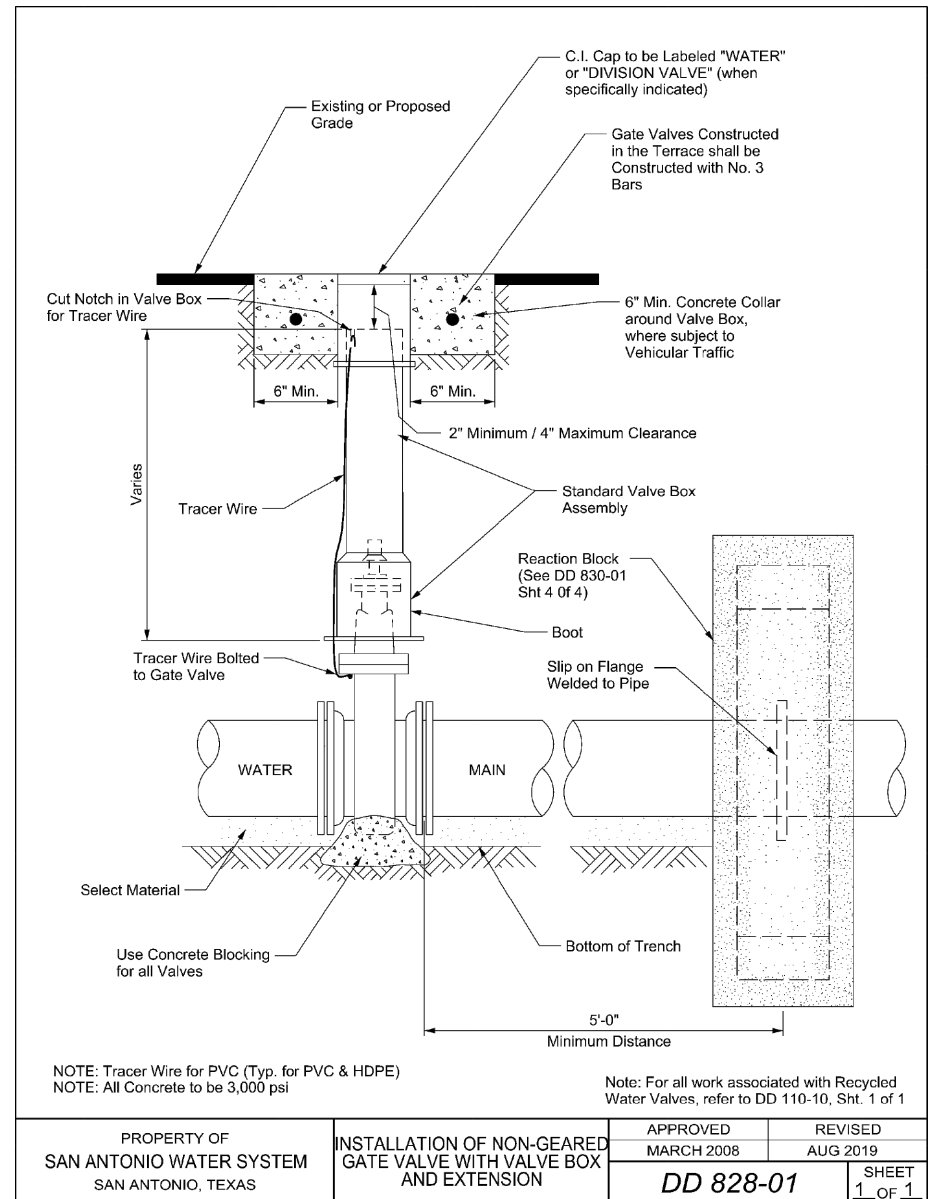
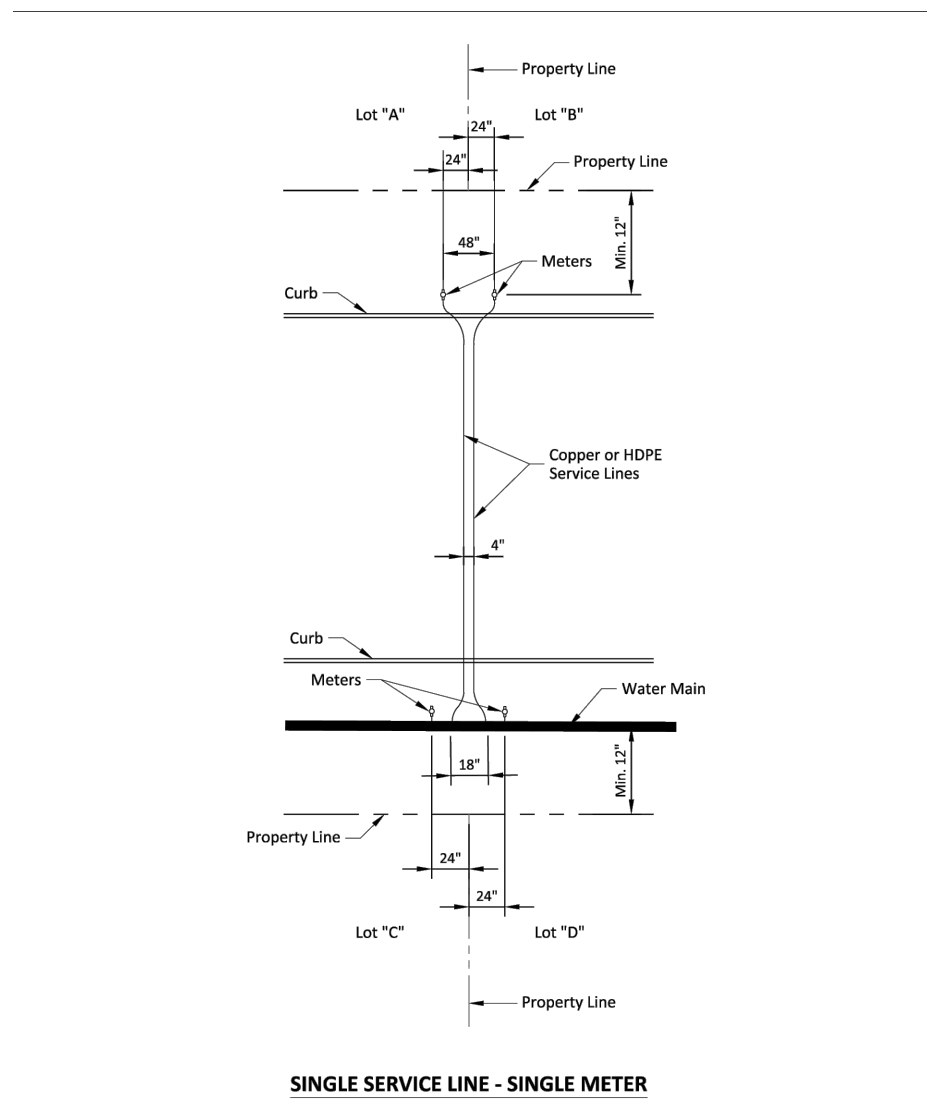
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2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

OVERALL WATER DISTRIBUTION PLAN

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	AS
CHECKED	AS DRAWN AD
SHEET	C4.01





**WATER (SAWS PRESSURE ZONE 4 (930 HGL))**

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.	ADDRESS: 100 NE LOOP 410, SUITE 1155
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78216
PHONE# (210) 889-5516	E-MAIL: RICHARD.MOTT@LENNAR.COM
SAWS BLOCK MAP# 082-546	TOTAL EDU'S: 81.5 TOTAL ACREAGE 15.89
TOTAL LINEAR FOOTAGE OF PIPE: 1,357 LF	PLAT NO. 24-11800406
NUMBER OF LOTS: 80	SAWS JOB NO. XX-XXXX

DATE

NO.

REVISION

STATE OF TEXAS

JON D. ADAME

82567

PROFESSIONAL ENGINEER

1-24-25

BLOSSOM RANCH UNIT 1A

SAN ANTONIO, TEXAS

WATER DISTRIBUTION PLAN DETAILS

24-11800406

13055-20

JANUARY 2025

AD

AS DRAWN AD

C4.10

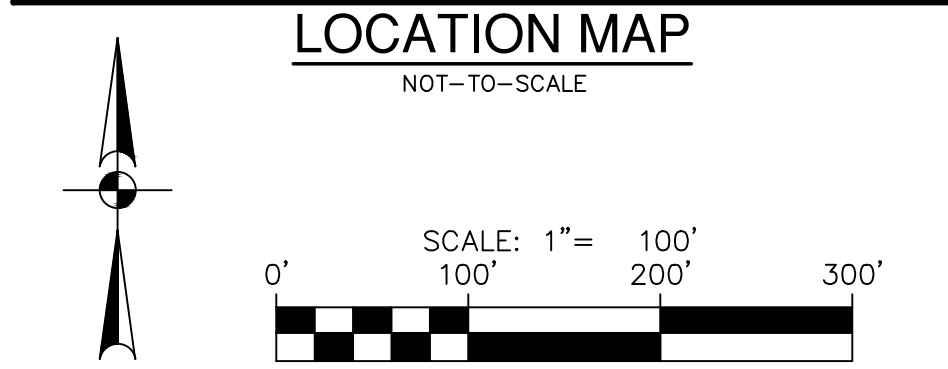
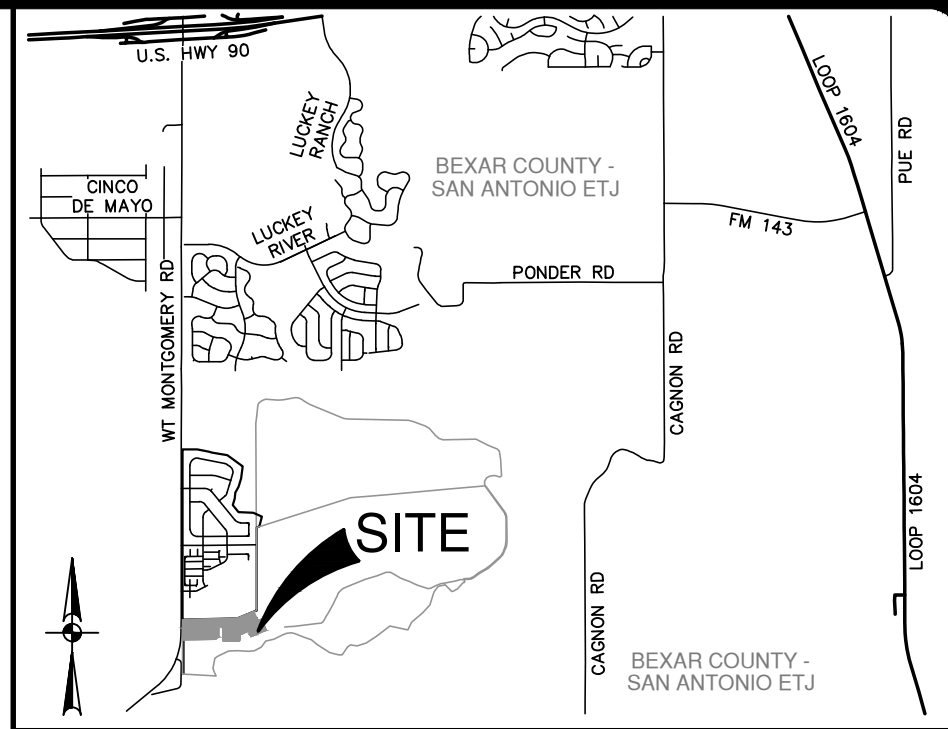
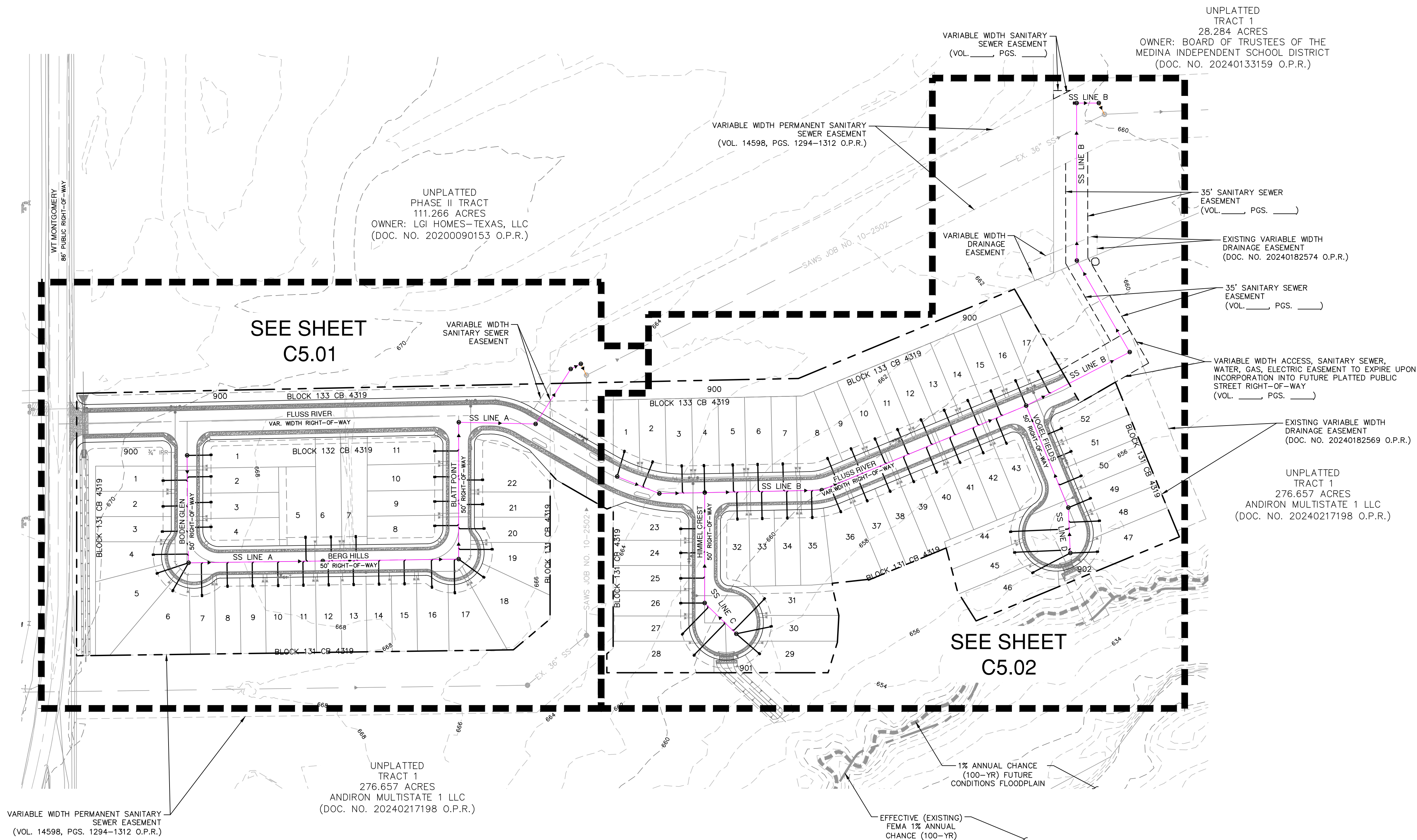




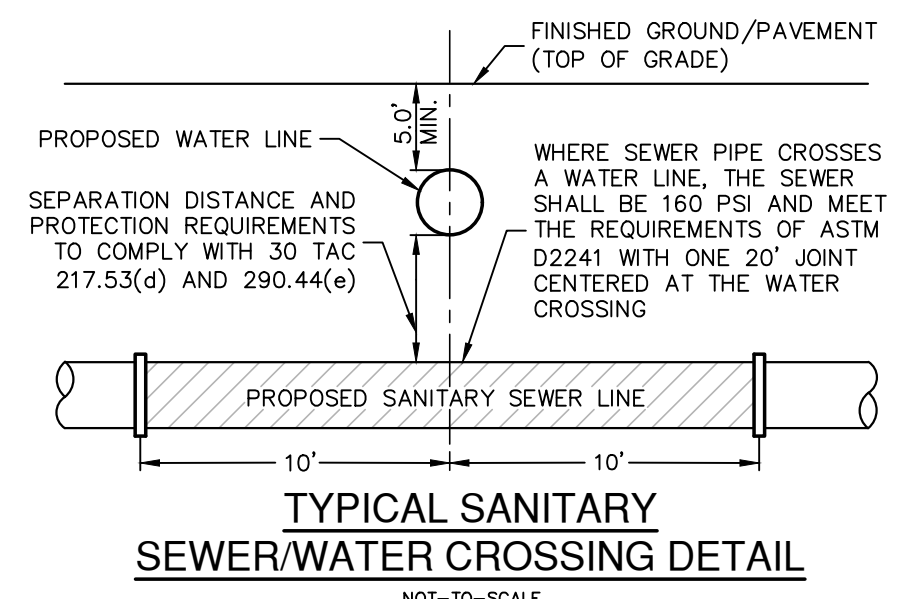
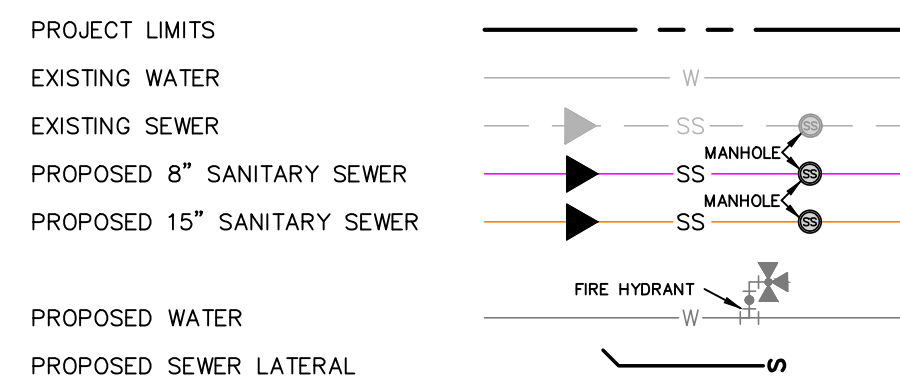


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### SEWER LEGEND



### 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.

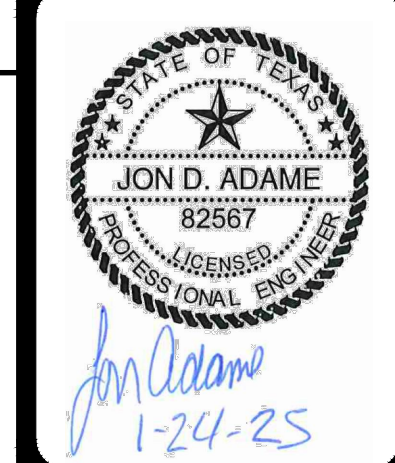
### TRENCH EXCAVATION SAFETY PROTECTION:

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### SEWER UPPER MEDINA - SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.			
ADDRESS: 100 NE LOOP 410, SUITE 1155			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78216	
PHONE#: (210) 889-5516	E-MAIL: RICHARD.MOTT@LENNAR.COM		
SAWS BLOCK MAP# 082-546 TOTAL EDU'S: 80 TOTAL ACREAGE: 15.89			
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,873 LF PLAT NO. 24-11800406			
NUMBER OF LOTS: 80		SAWS JOB NO. 24-1630	

NO.	REVISION	DATE



**PAPE-DAWSON ENGINEERS**  
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028900

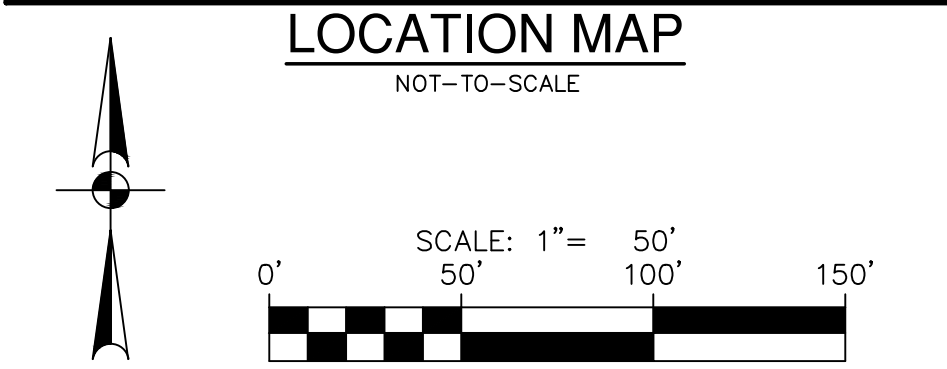
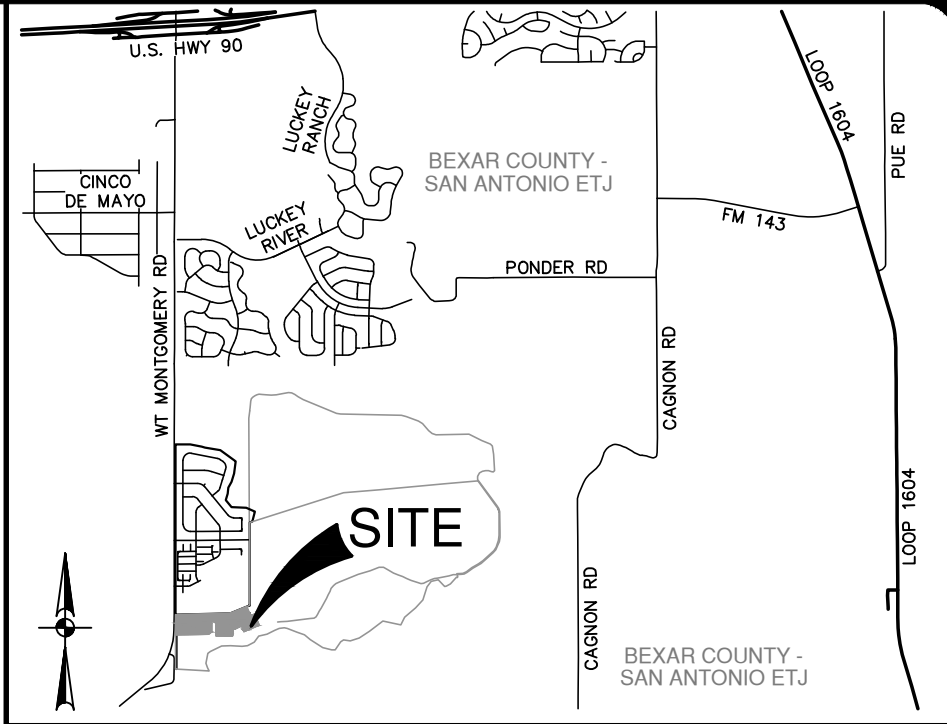
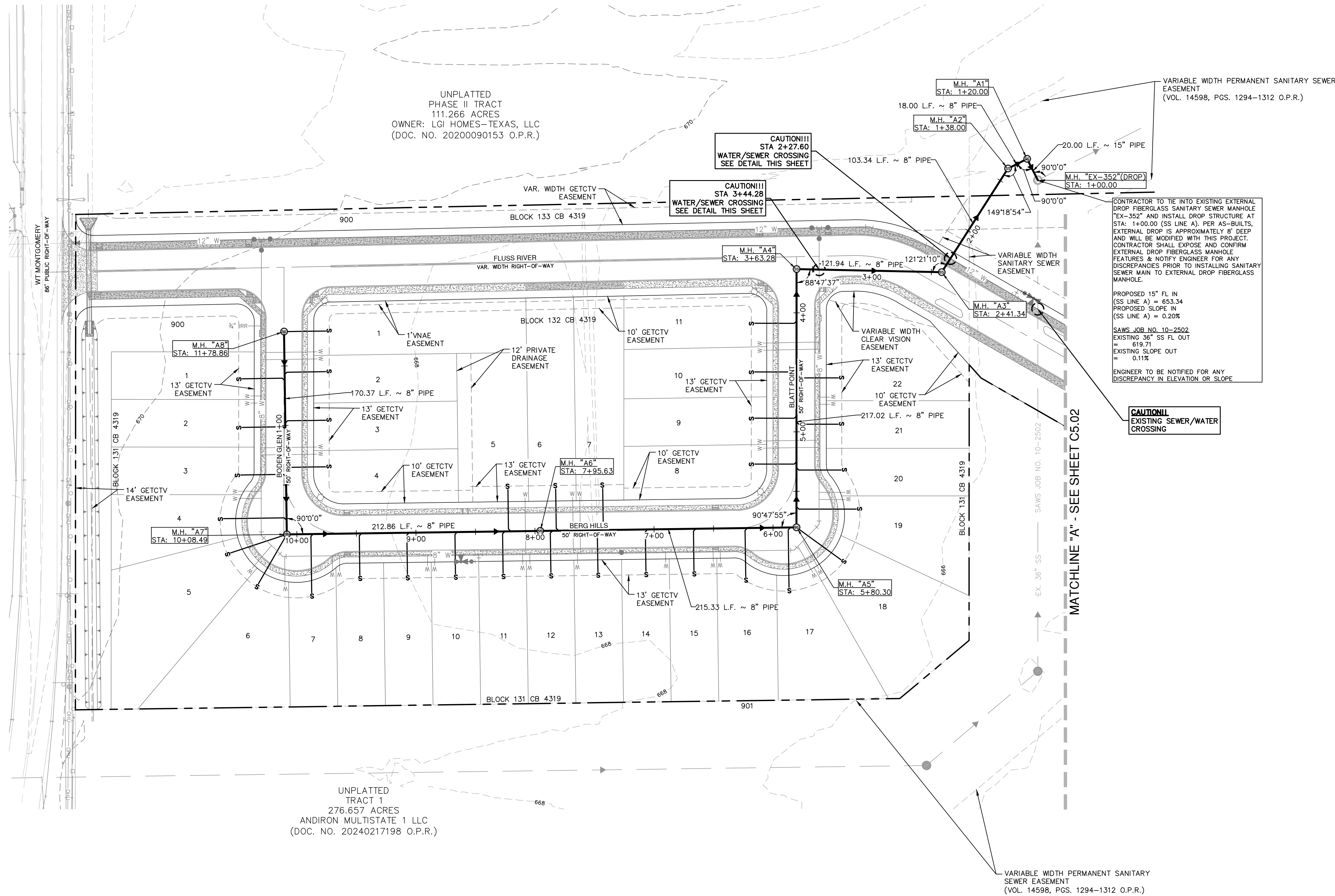
**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS  
OVERALL SANITARY SEWER

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	AD
CHECKED	AS DRAWN AD
SHEET	C5.00

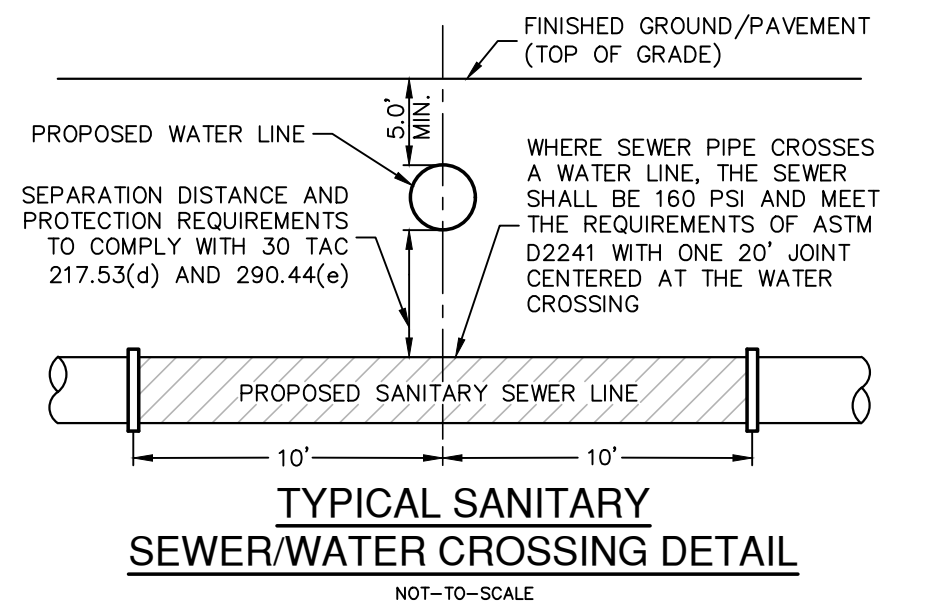
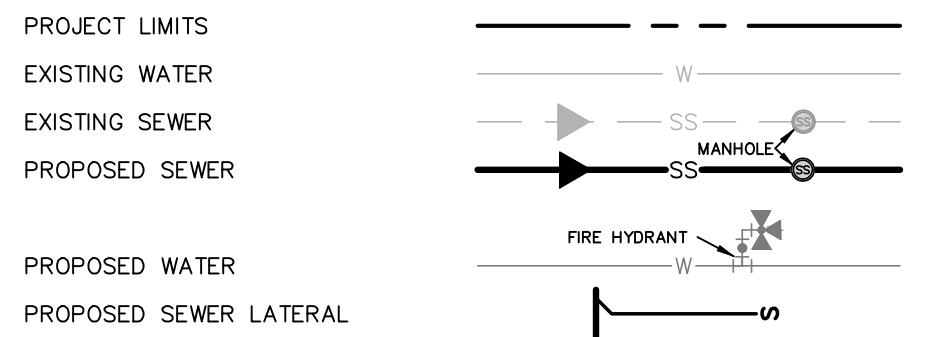


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### SEWER LEGEND



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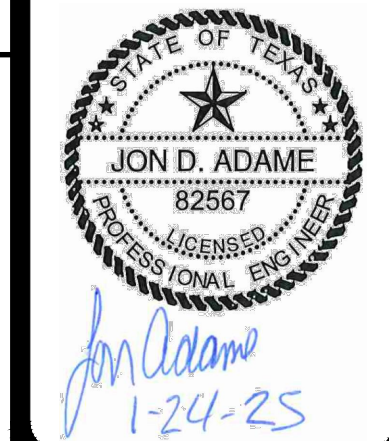
**FINISHED FLOOR NOTES:**  
1. THE FINISHED FLOOR ELEVATIONS (FF) REPRESENT THE MINIMUM POSSIBLE FLOOR ELEVATION TO PROVIDE SANITARY SEWER SERVICE TO EACH LOT. ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT ARE TO BE DETERMINED BY THE BUILDER AND SHALL TAKE INTO CONSIDERATION AS-BUILT CONDITIONS FOR FOUND, 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.

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<b>SEWER</b> UPPER MEDINA - SOUTH SEWERSHED - DOS RIOS/LEON CREEK	
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NUMBER OF LOTS: 80 SAWS JOB NO. 24-1630	

NO.	REVISION	DATE



**PAPE-DAWSON ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028900

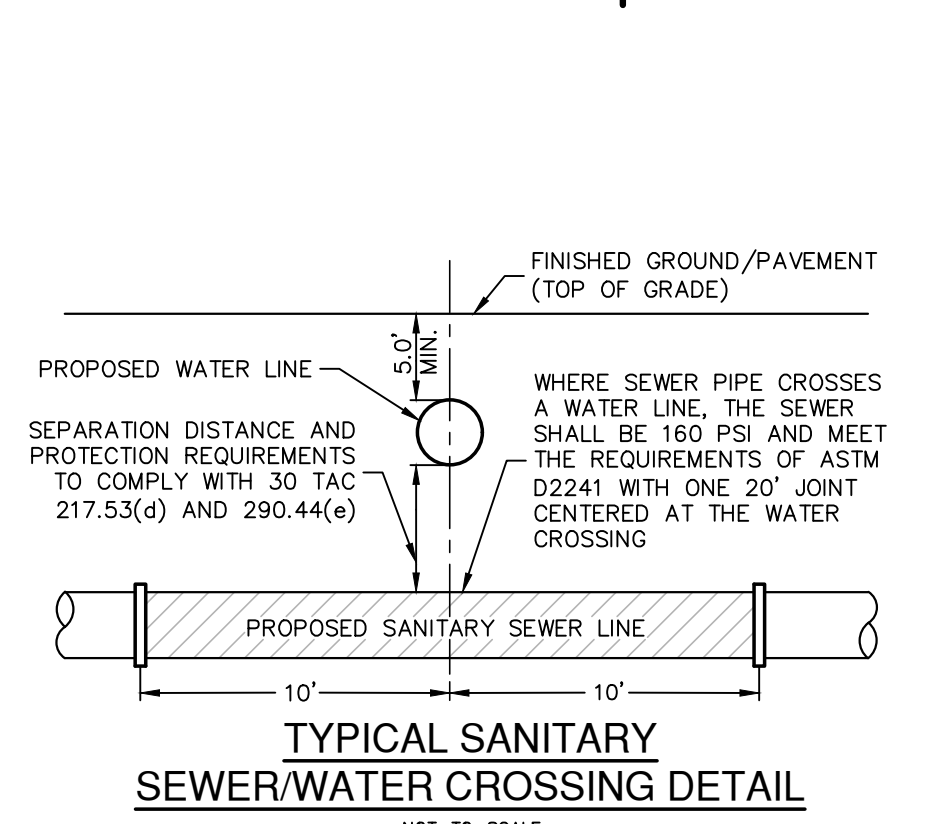
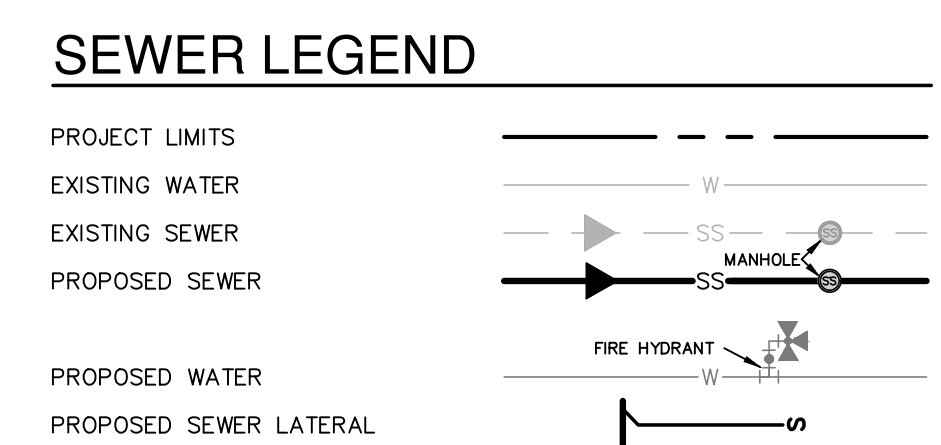
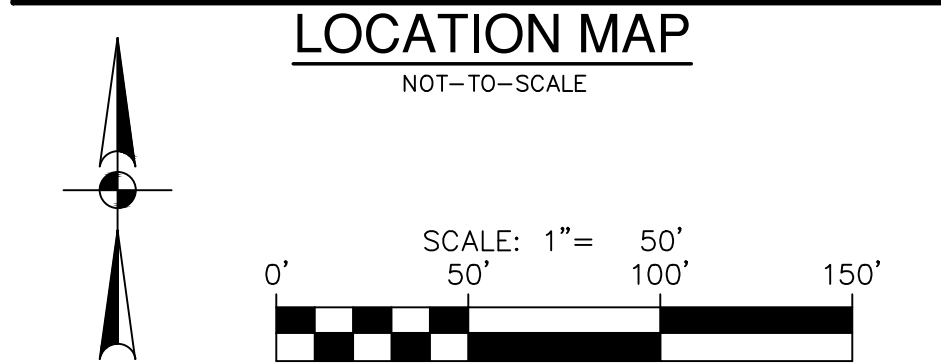
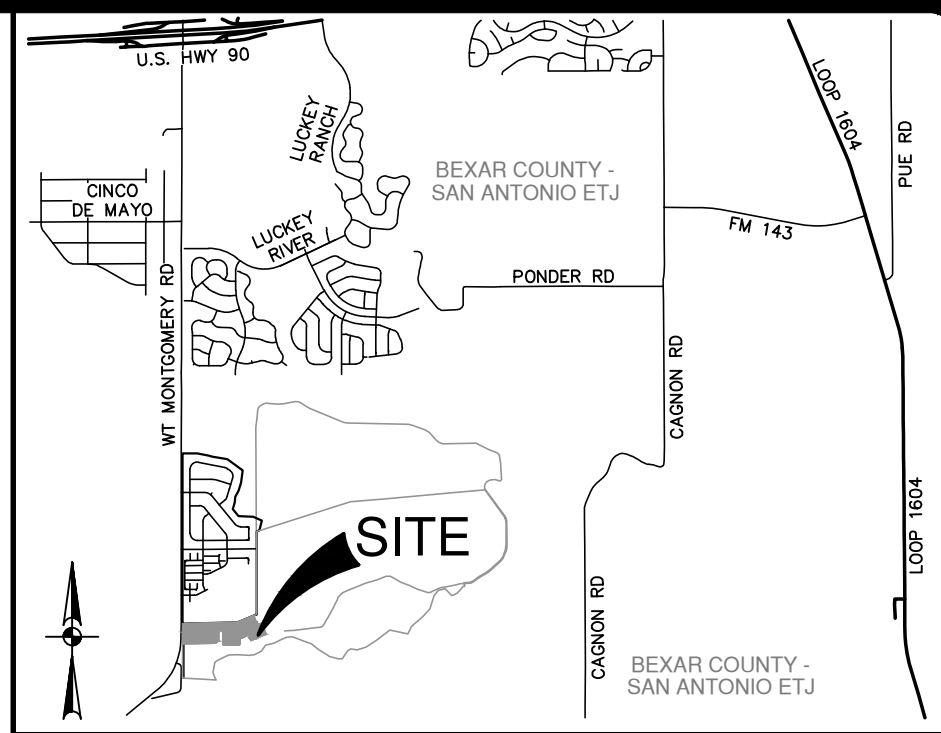
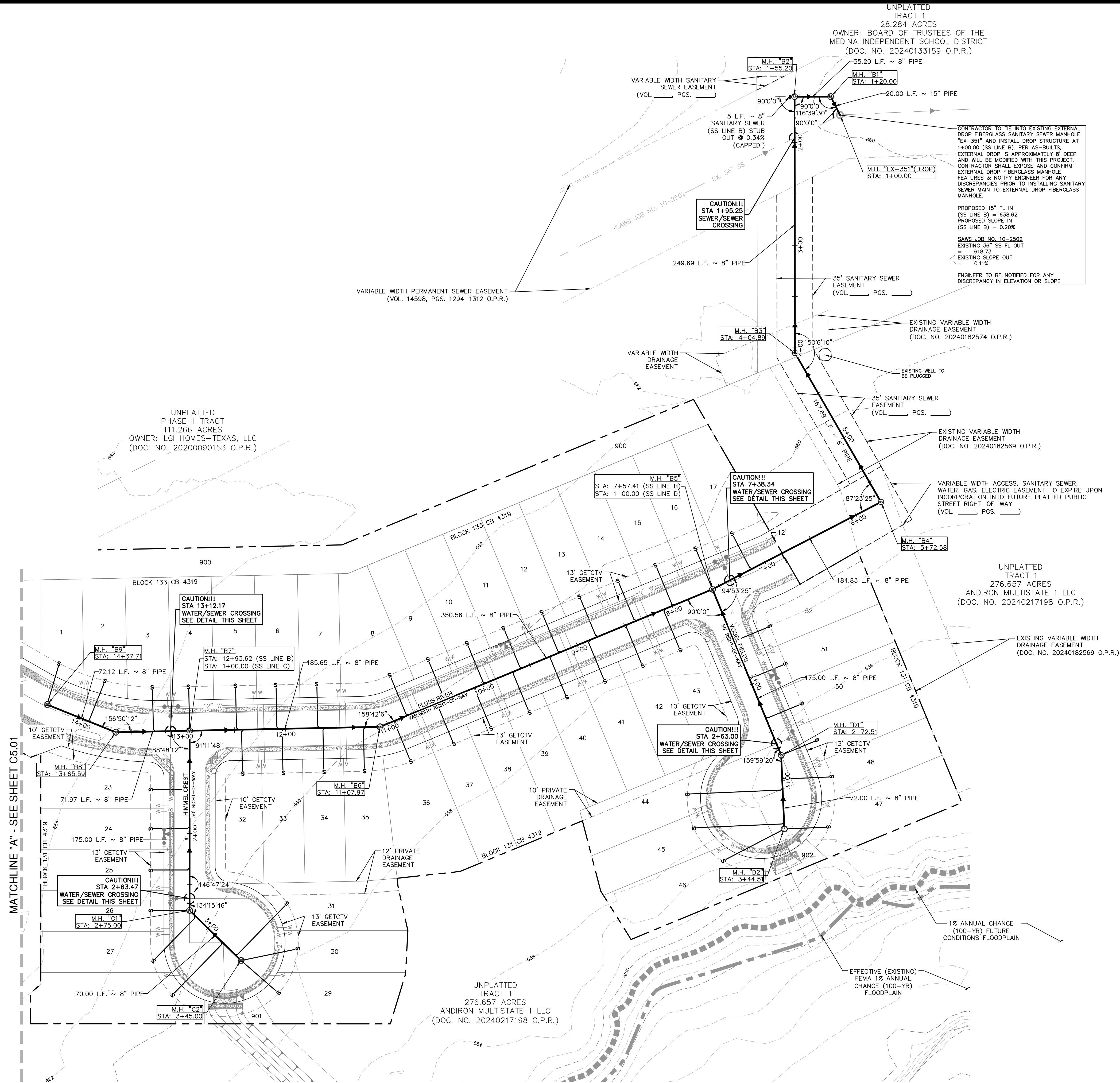
**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS  
OVERALL SANITARY SEWER PLAN

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DESIGNER	AD
CHECKED	AS DRAWN AD
SHEET	C5.01



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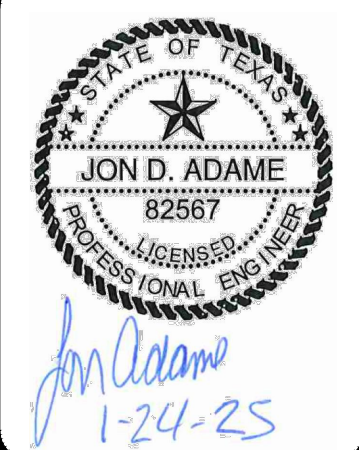
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**SEWER** UPPER MEDINA - SOUTH SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.			
ADDRESS: 100 NE LOOP 410, SUITE 1155			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78216	
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TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,873 L.F. PLAT NO. 24-11800406			
NUMBER OF LOTS: 80		SAWS JOB NO. 24-1630	

NO.	REVISION	DATE



**PAPE-DAWSON ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028900

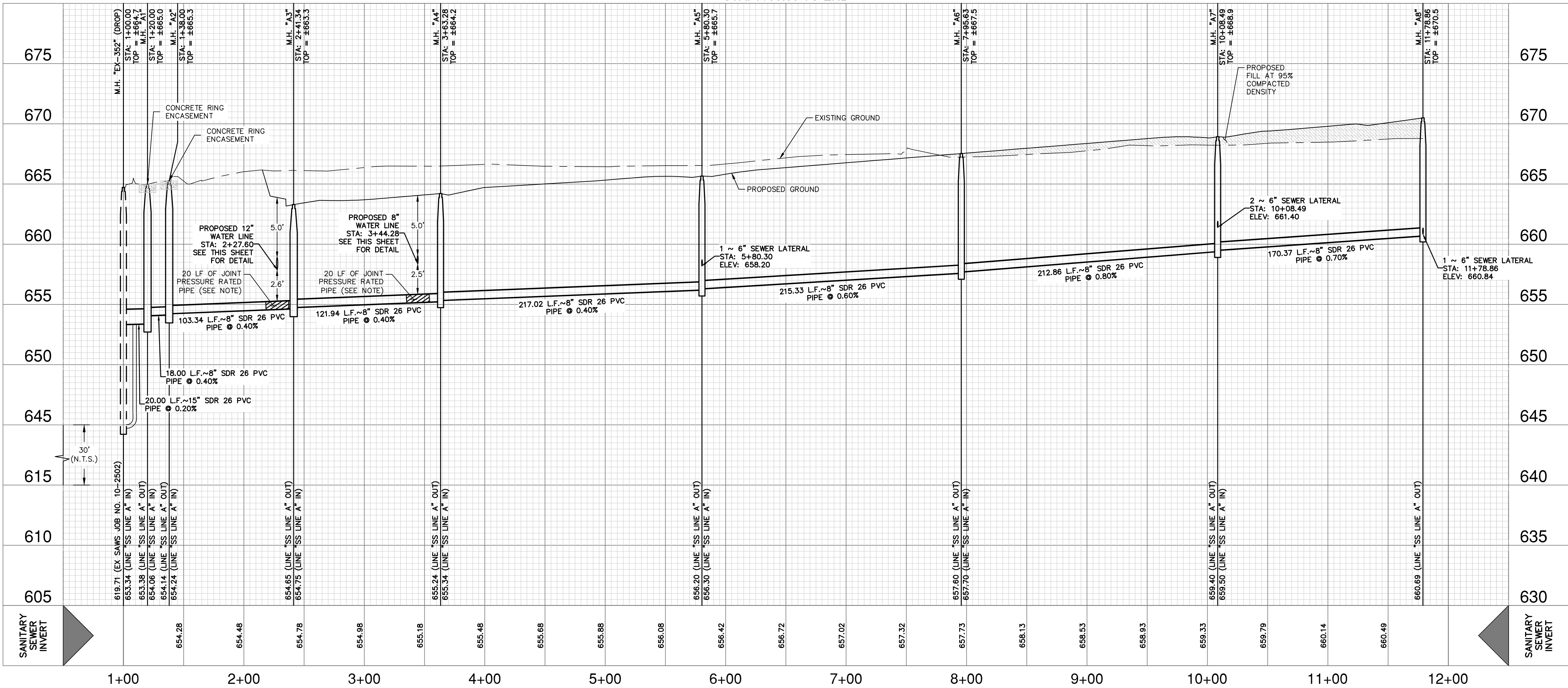
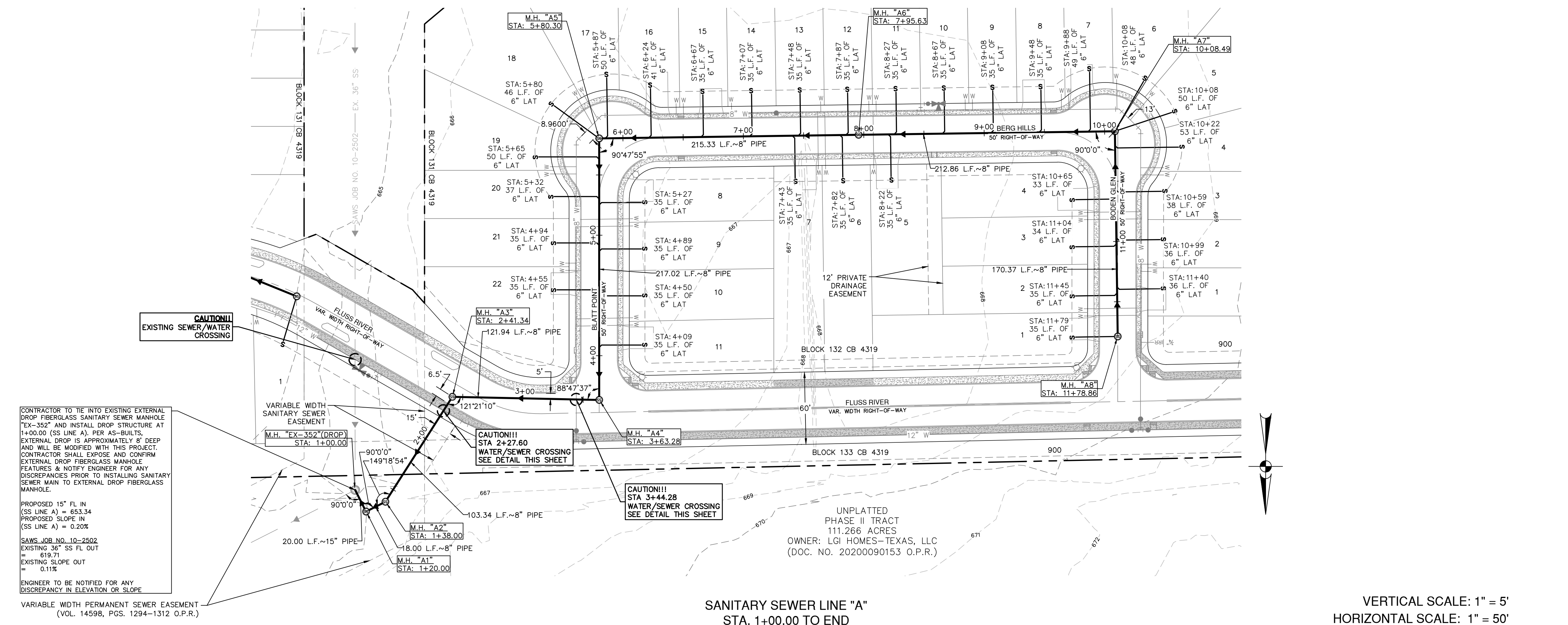
**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS  
OVERALL SANITARY SEWER PLAN

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C5.02

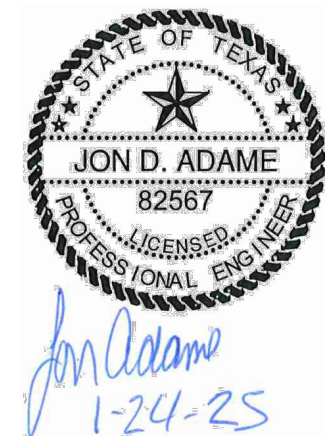
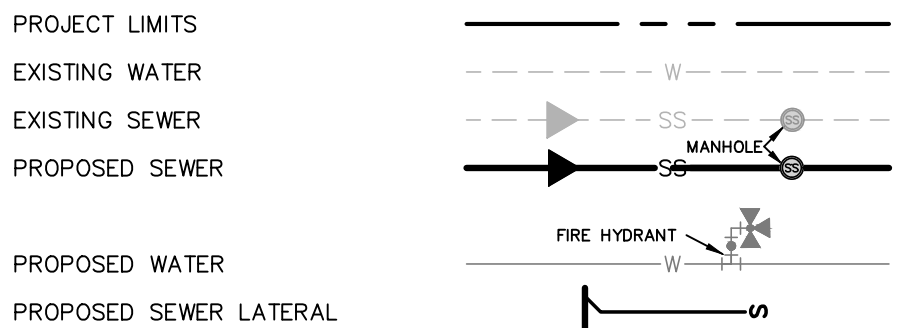


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## SEWER LEGEND

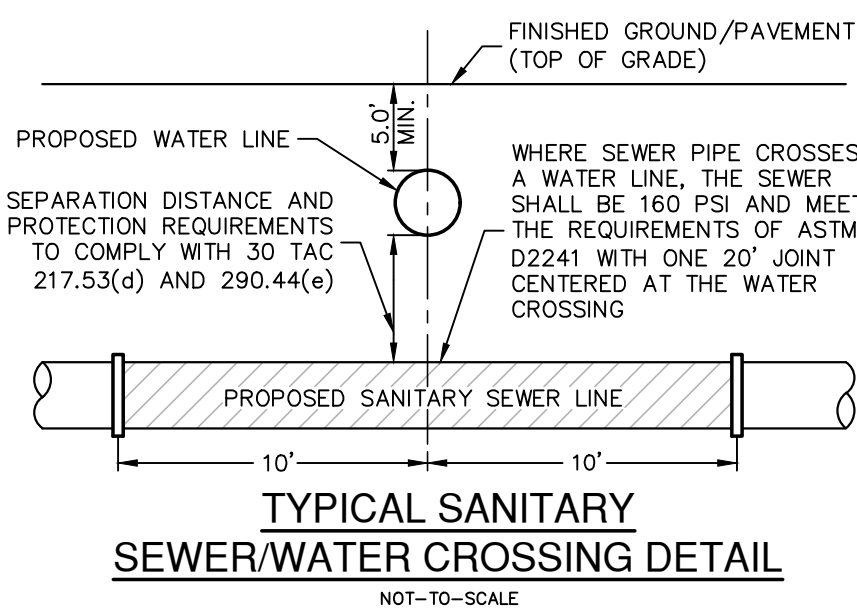


**PAPE-DAWSON ENGINEERS**

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

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS

SANITARY SEWER LINE A ~ STA. 1+00.00 TO END  
SANITARY SEWER PLAN & PROFILE



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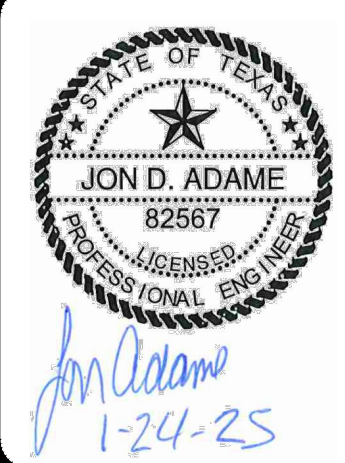
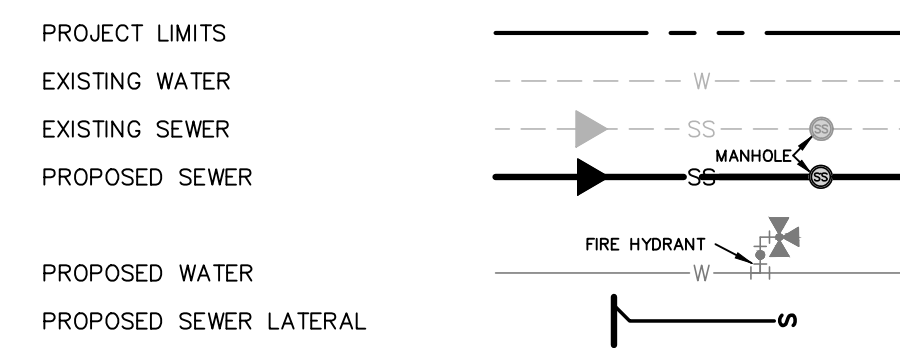
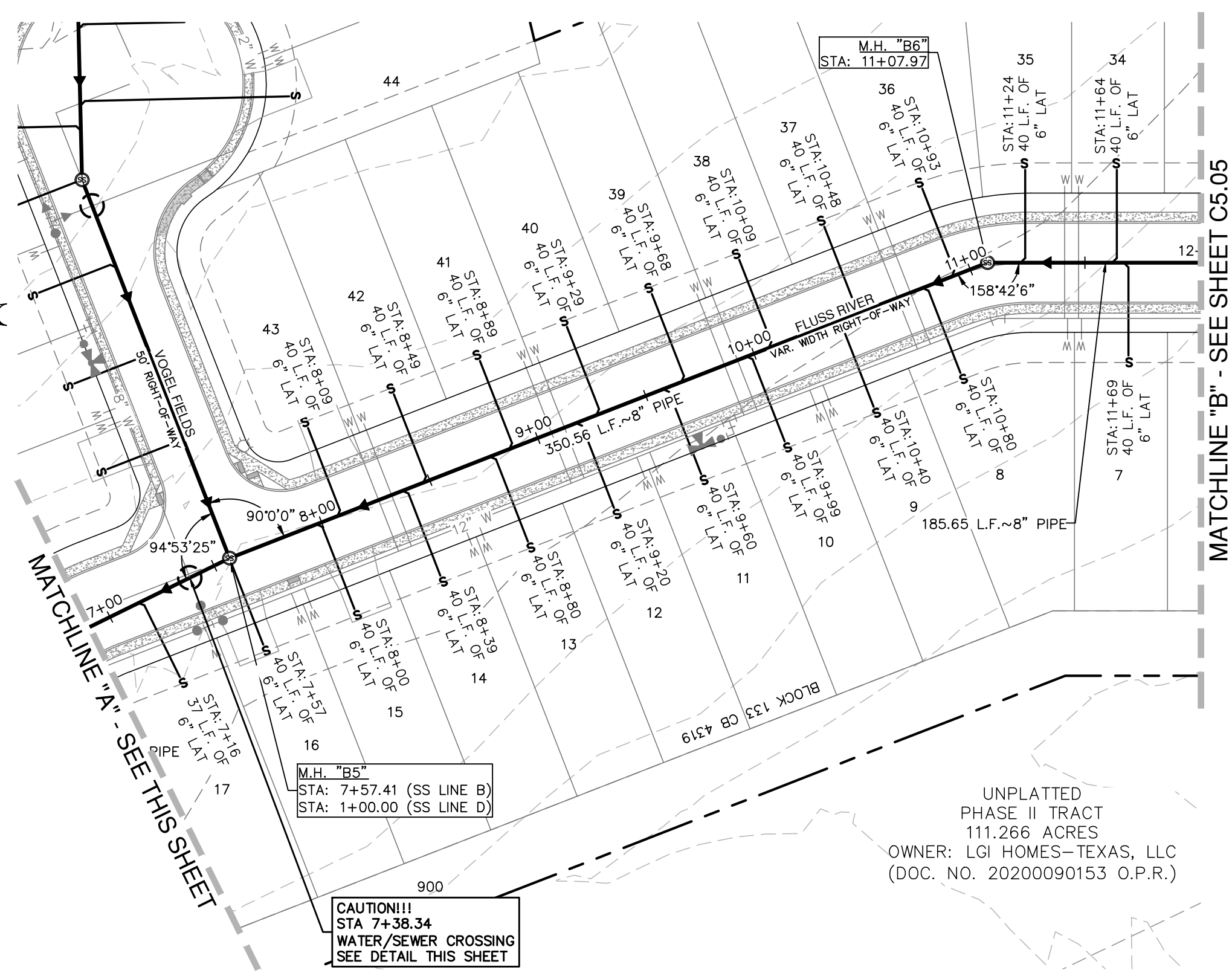
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SEWER UPPER MEDINA - SOUTH SEWERSHED - DOS ROS/LEON CREEK

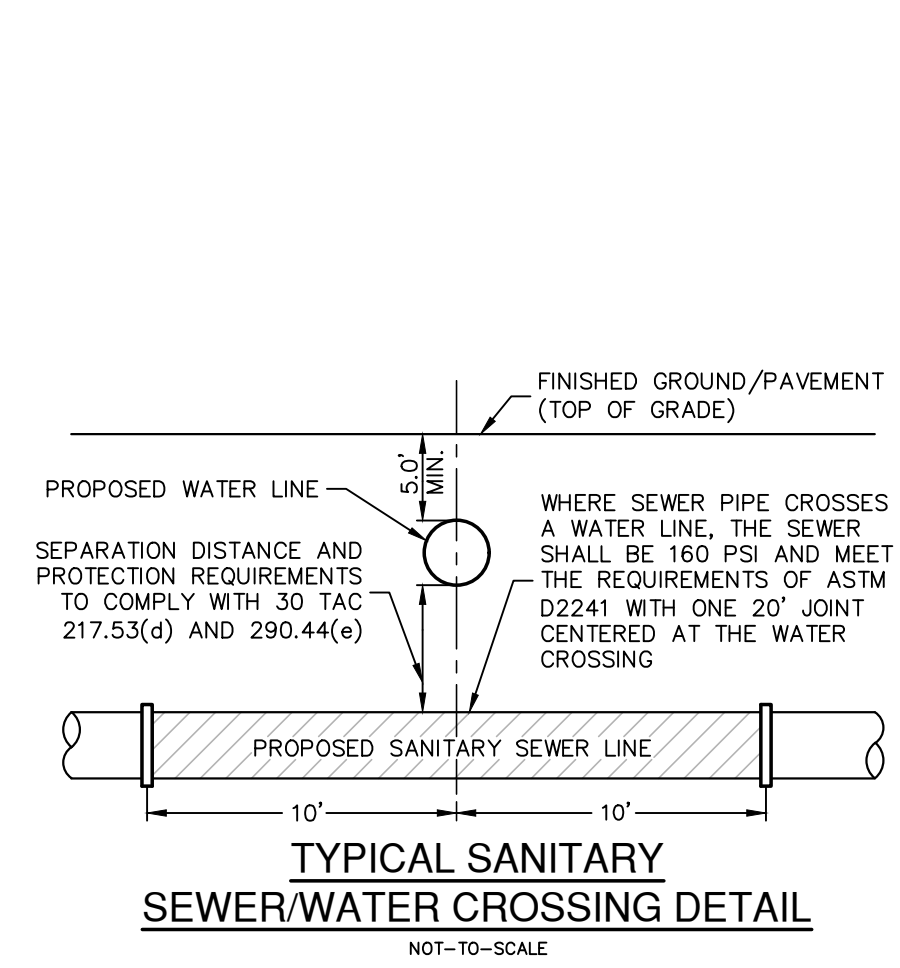
DEVELOPER'S NAME: LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.  
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CITY: SAN ANTONIO STATE: TEXAS ZIP: 78216  
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TOTAL LINEAR FOOTAGE OF PIPE: 8' 2.873 L.F. PLAT NO. 24-11800406  
NUMBER OF LOTS: 80 SAWS JOB NO. 24-1630

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C5.03





2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800



SEWER UPPER MEDINA - SOUTH SEWERSHEDS - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: <u>LENNAR HOMES OF TEXAS LAND AND CONSTRUCTION, LTD.</u>		
ADDRESS: <u>100 NE LOOP 410, SUITE 1155</u>		
CITY: <u>SAN ANTONIO</u>	STATE: <u>TEXAS</u>	ZIP: <u>78216</u>
PHONE# <u>(210) 889-5516</u> E-MAIL: <u>RICHARD.MOTT@LENNAR.COM</u>		
SAWS BLOCK MAP# <u>082-546</u> TOTAL LOT# <u>EDU'S 80</u> TOTAL ACREAGE <u>15.89</u>		
TOTAL LINEAR FOOTAGE OF PIPE: <u>18' 2-875 LF</u> PLAT NO <u>24-11800406</u>		
NUMBER OF LOTS <u>80</u> SAWS JOB NO. <u>24-1630</u>		

SANITARY SEWER LINE B ~ STA. 1+00.00 TO 12+00.00  
SANITARY SEWER PLAN & PROFILE

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C5.04

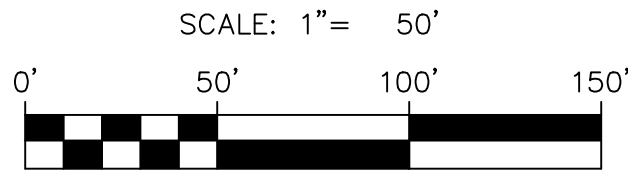
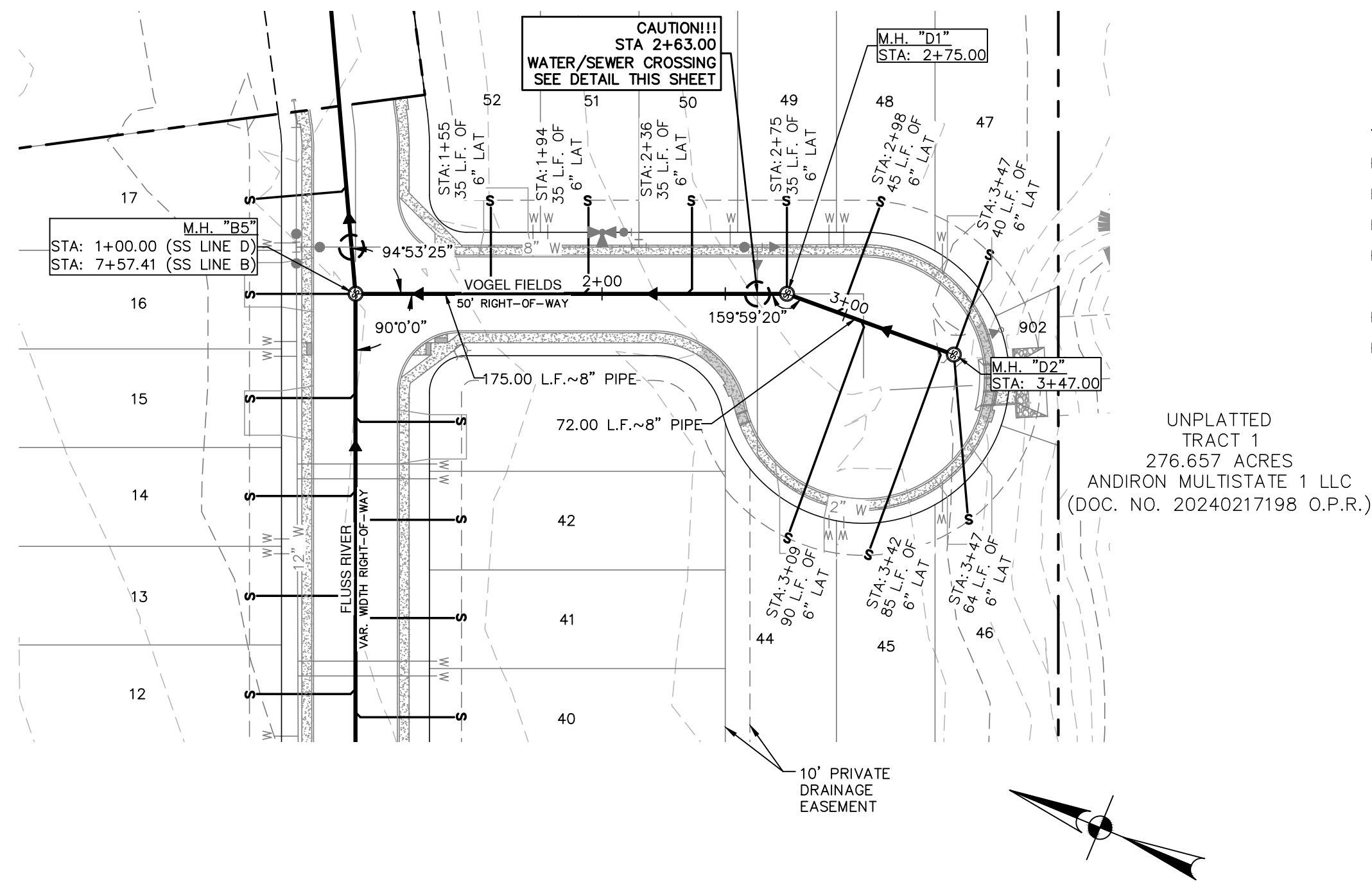
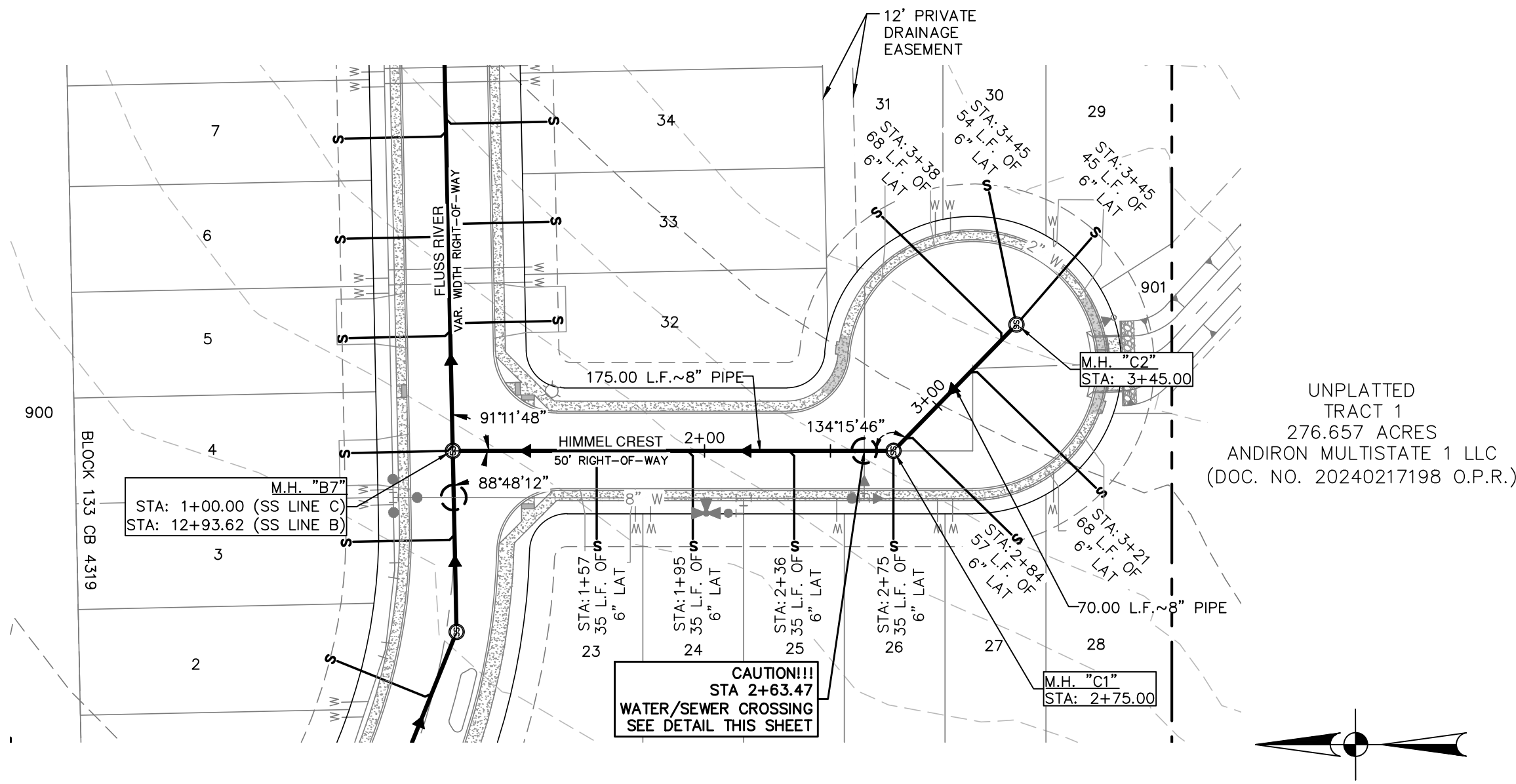




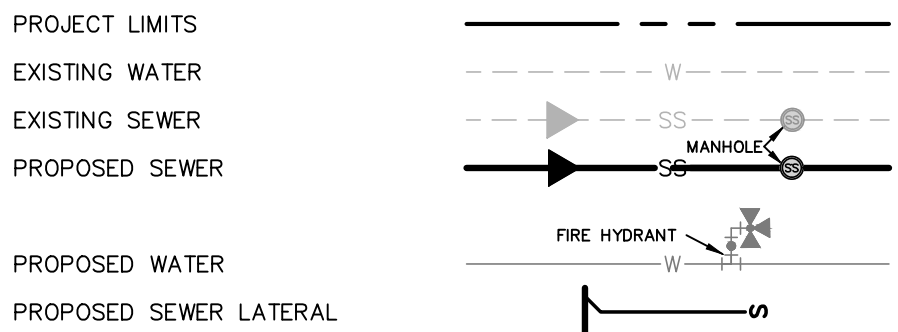


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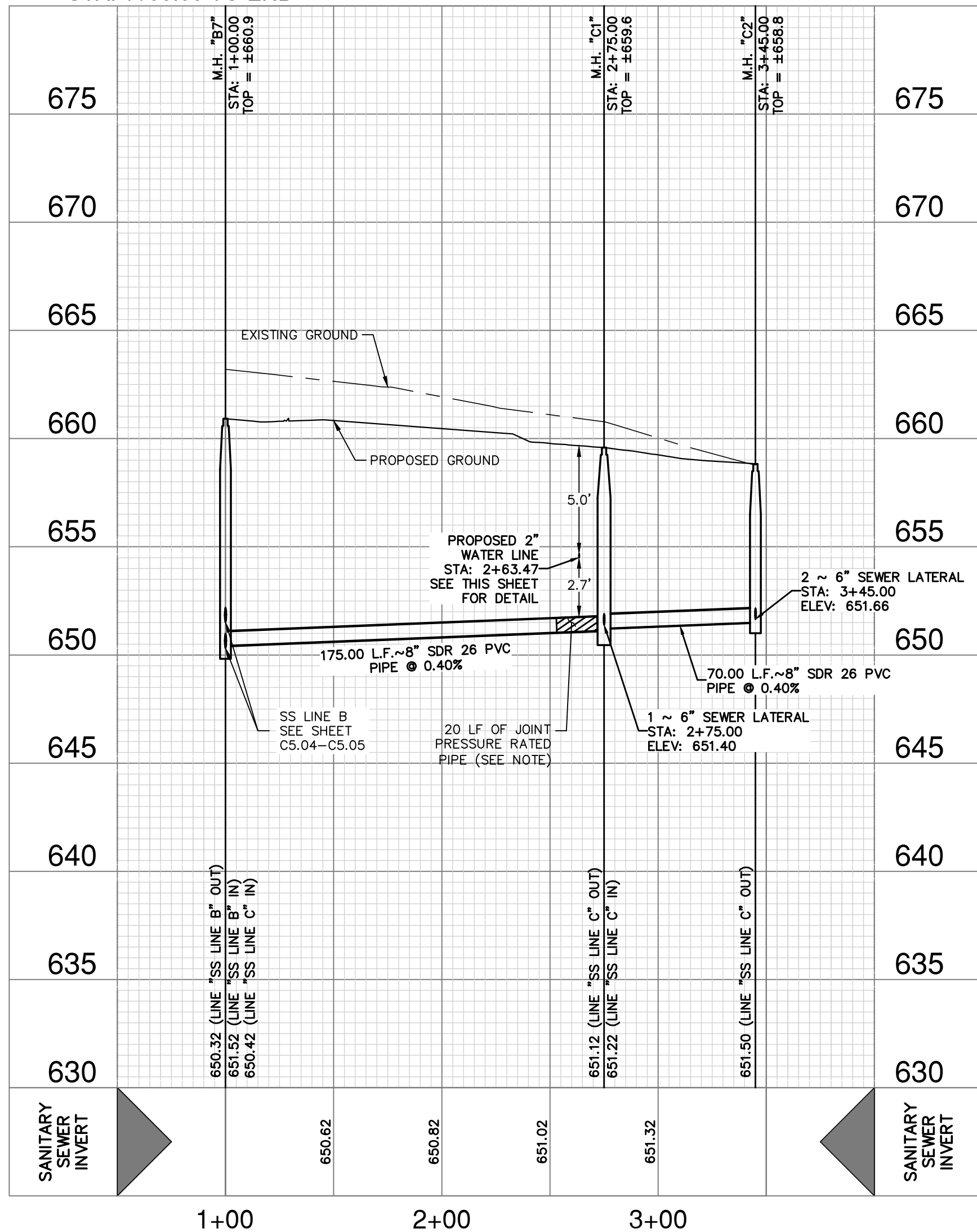


### SEWER LEGEND



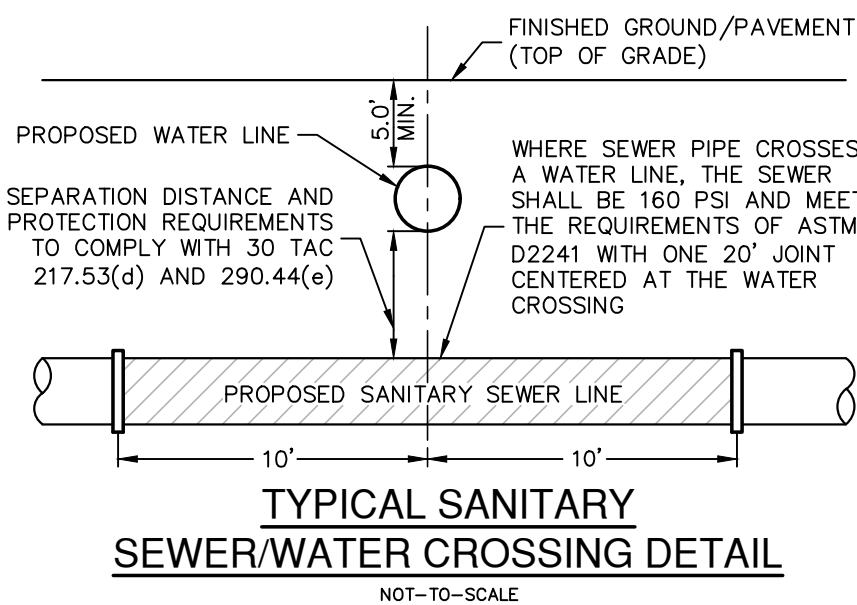
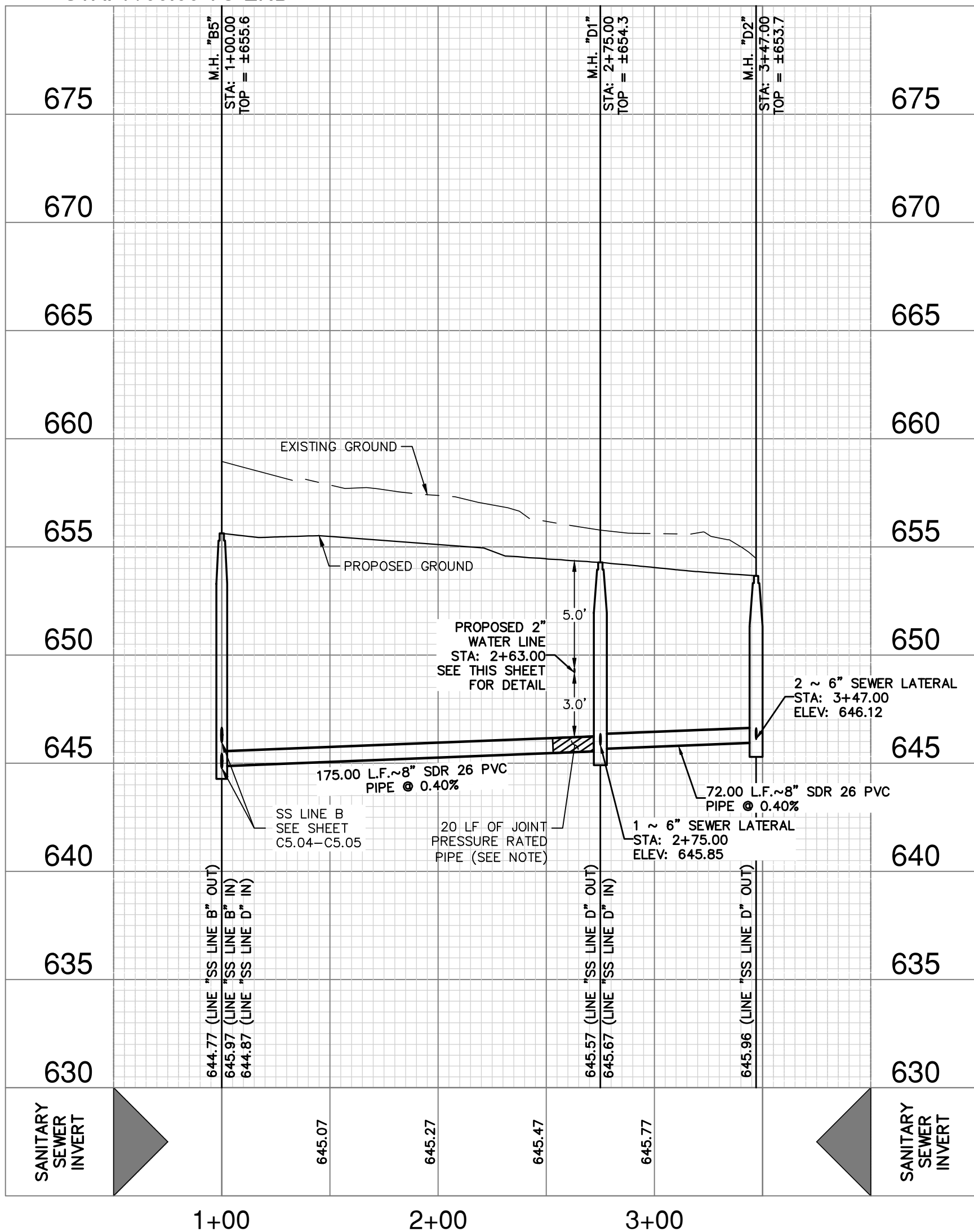
SANITARY SEWER LINE "C"  
STA. 1+00.00 TO END

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



SANITARY SEWER LINE "D"  
STA. 1+00.00 TO END

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



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**PAPE-DAWSON**  
**ENGINEERS**

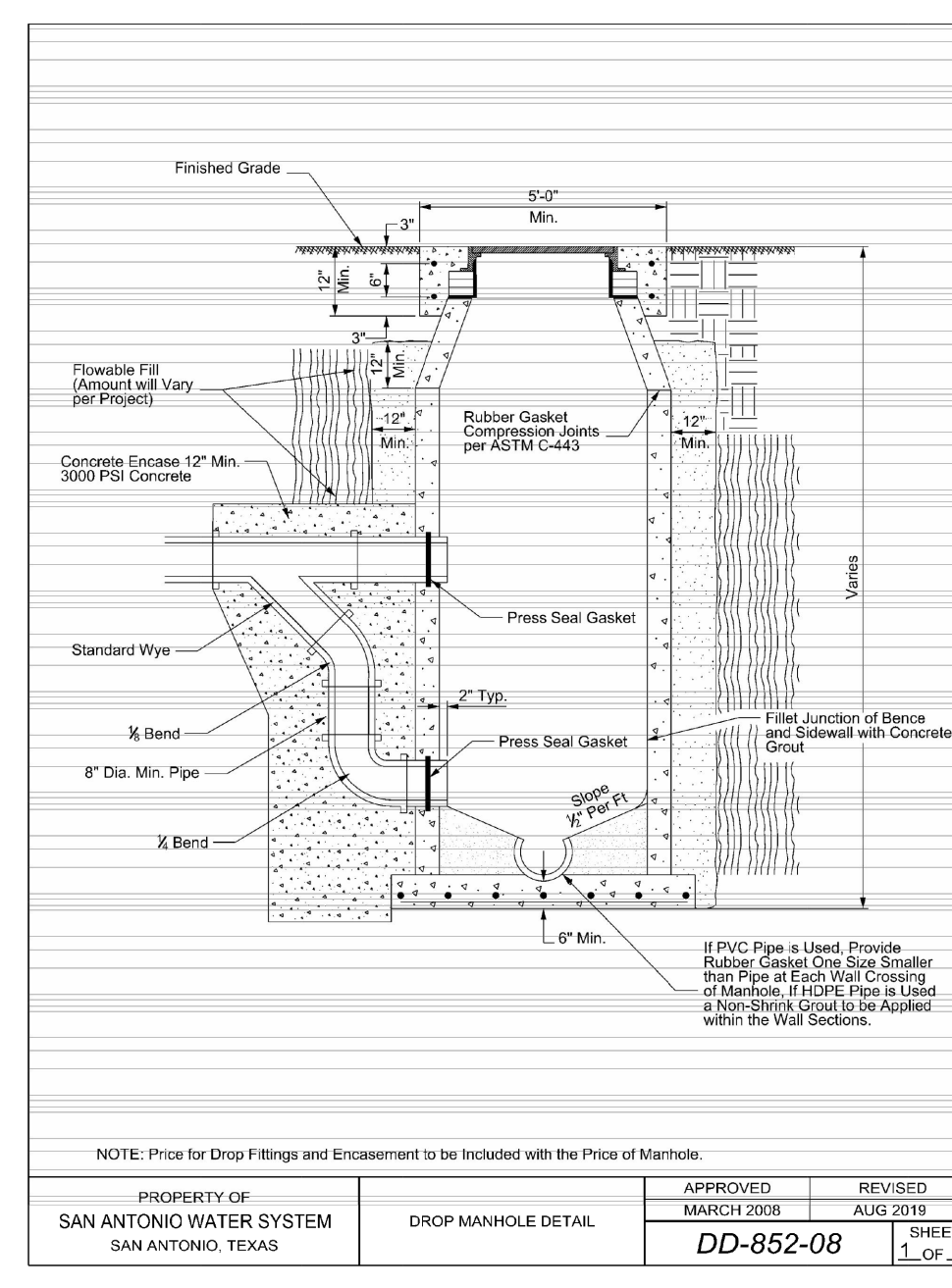
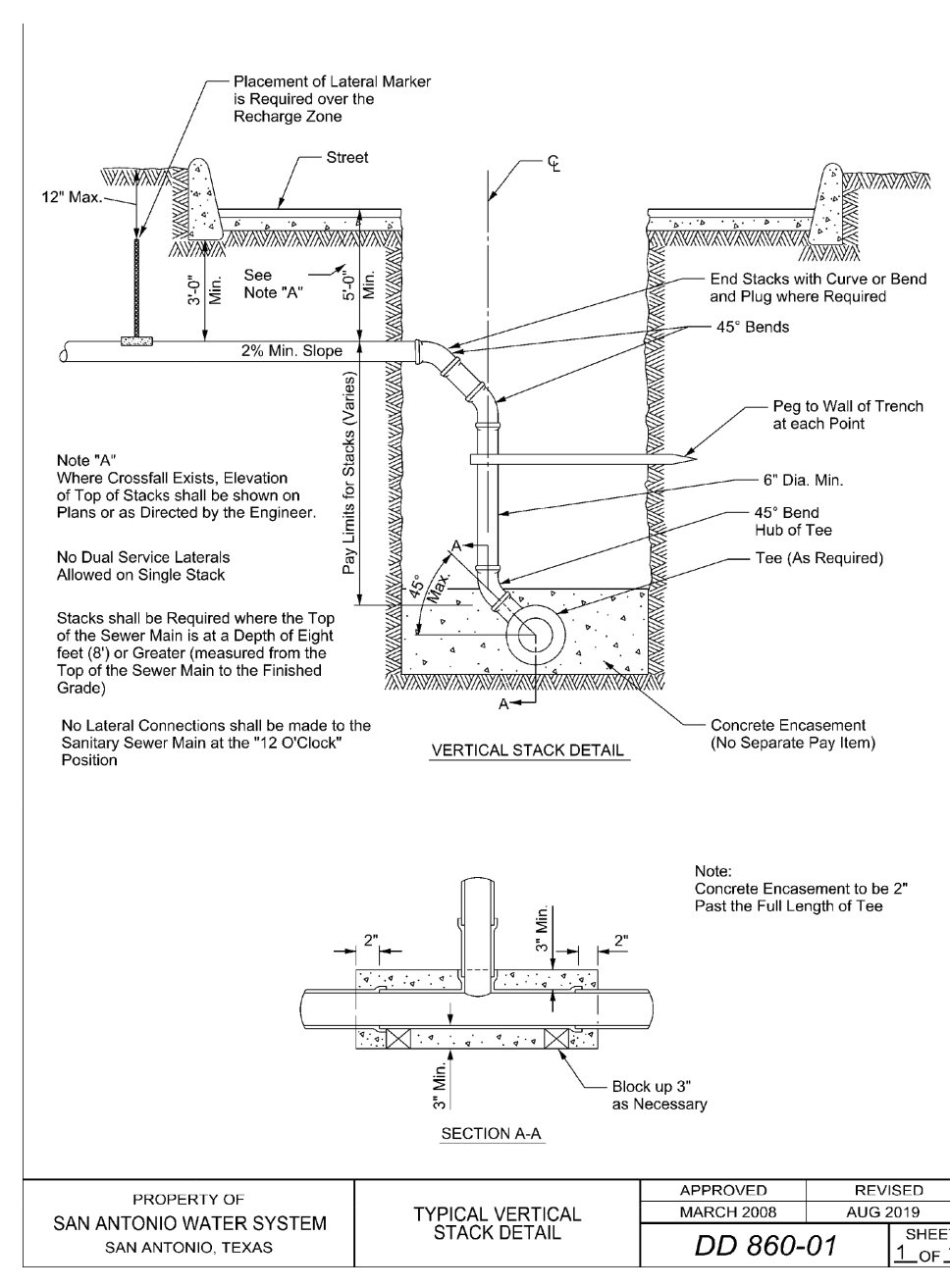
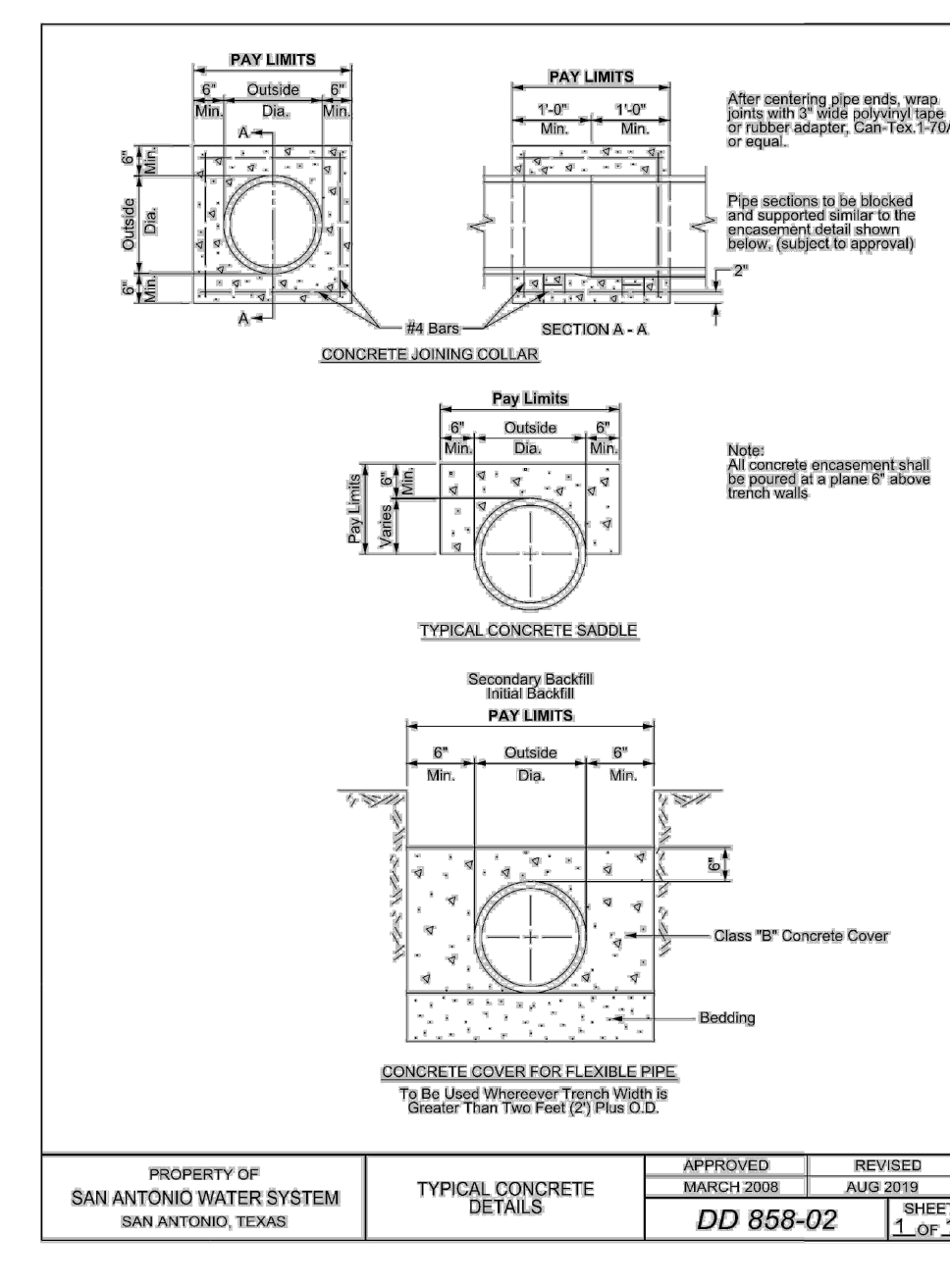
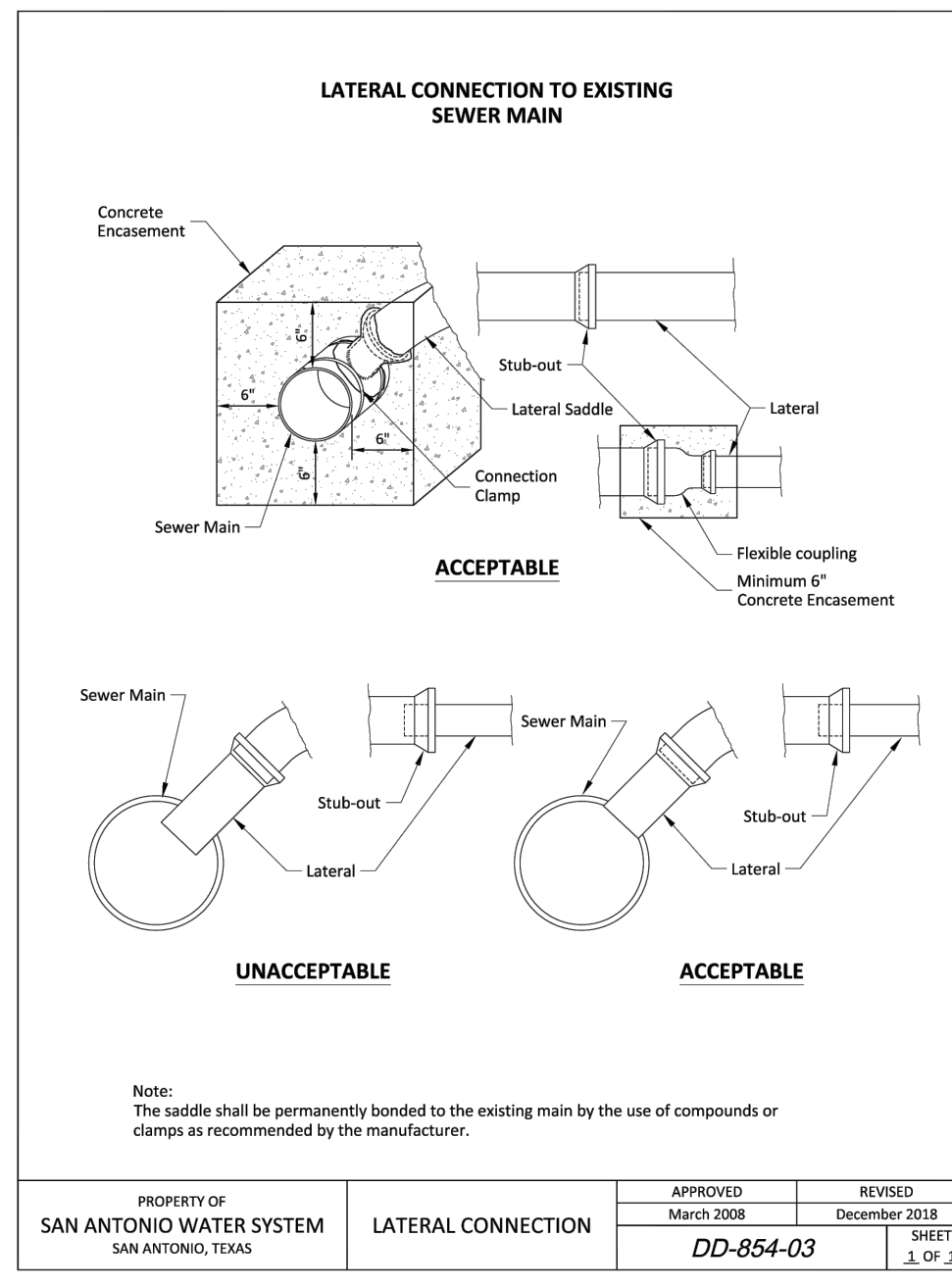
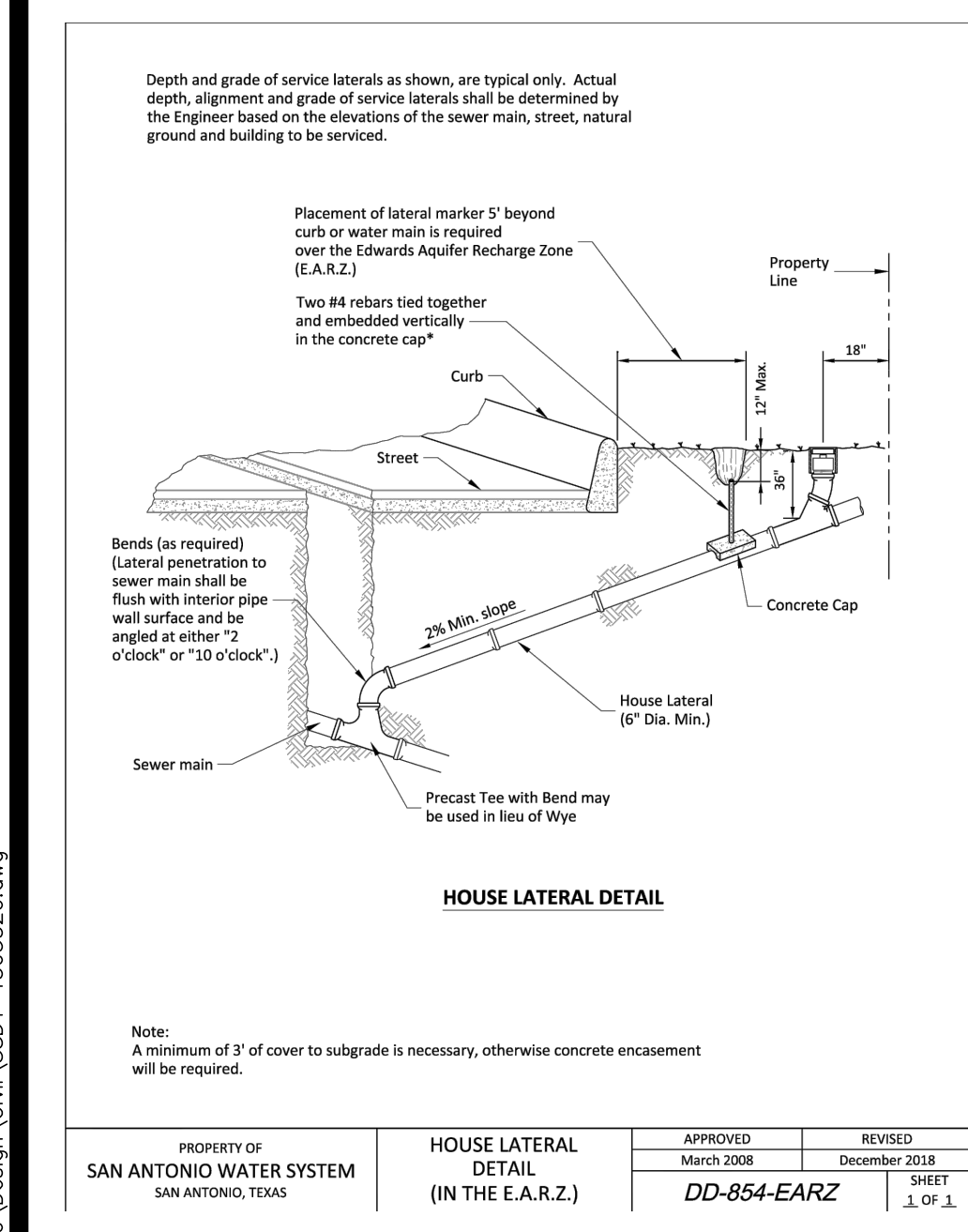
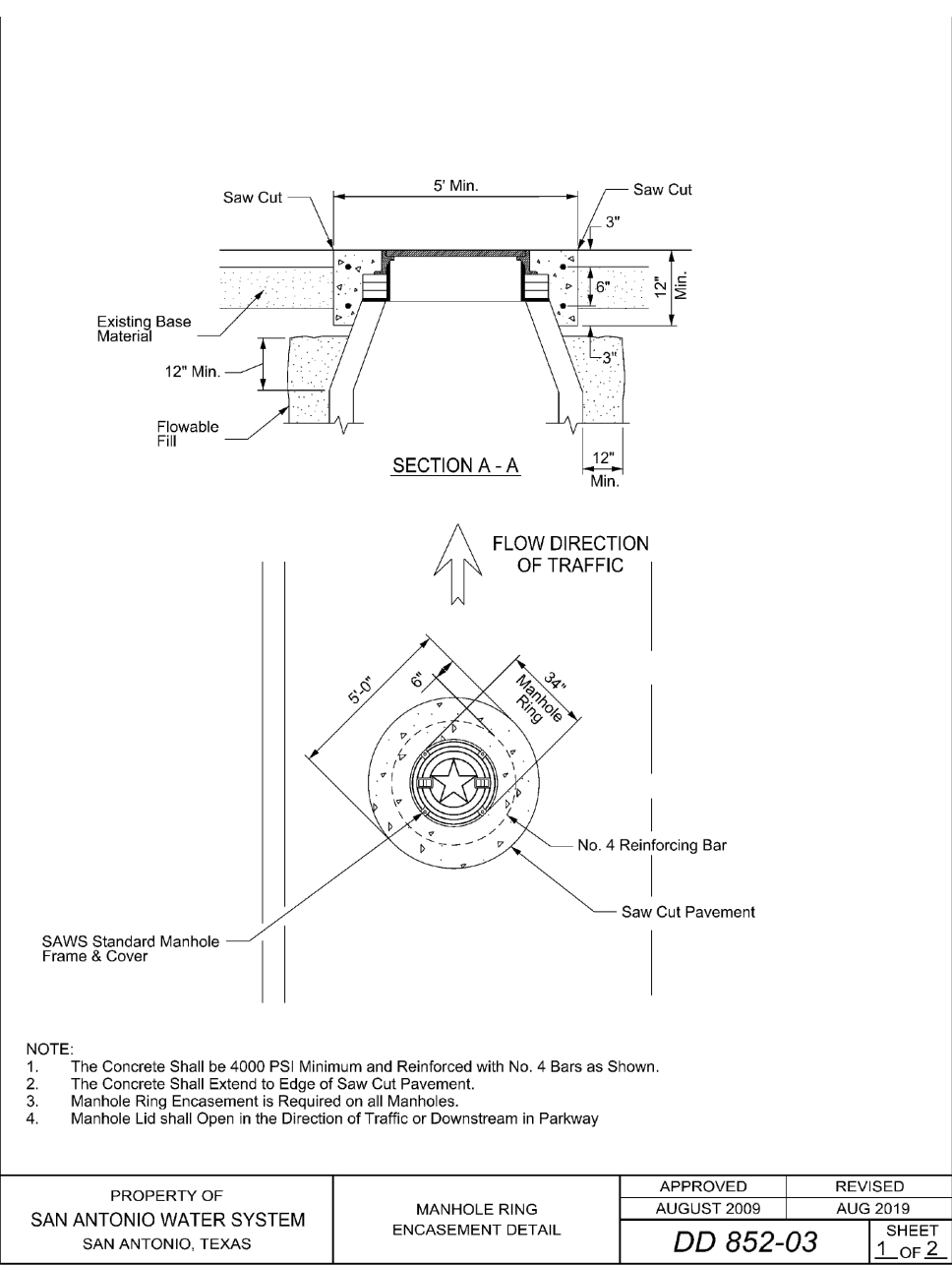
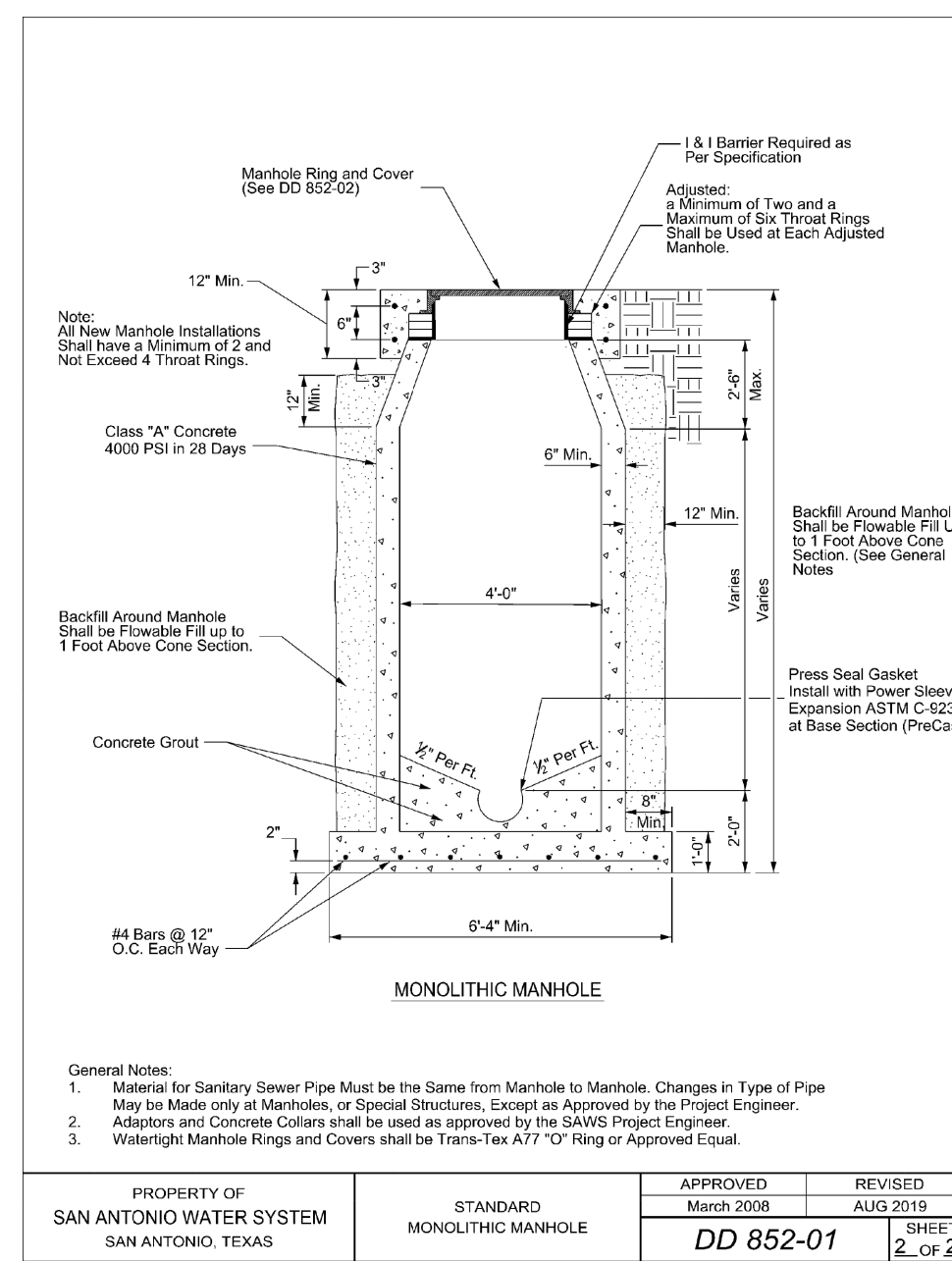
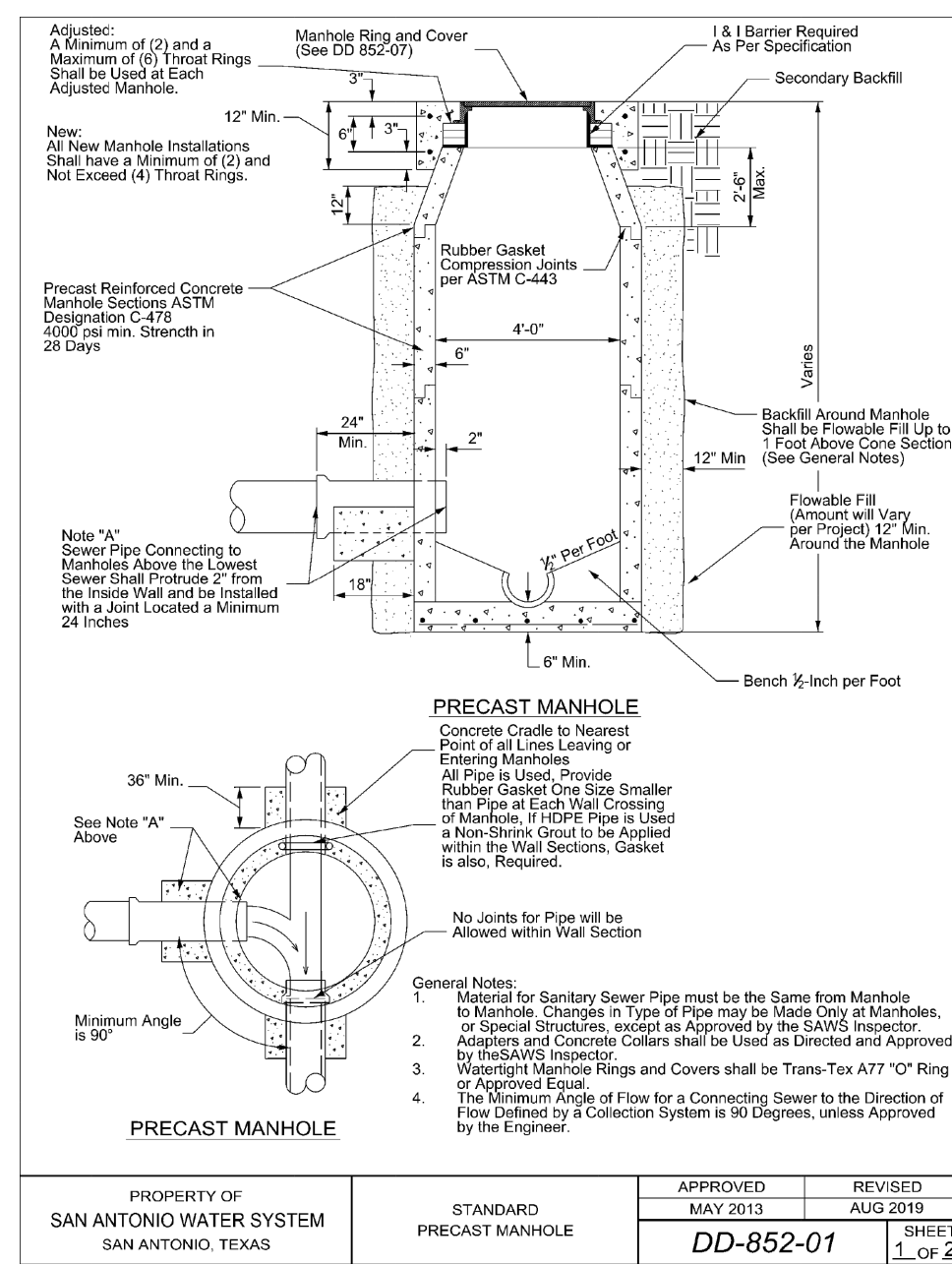
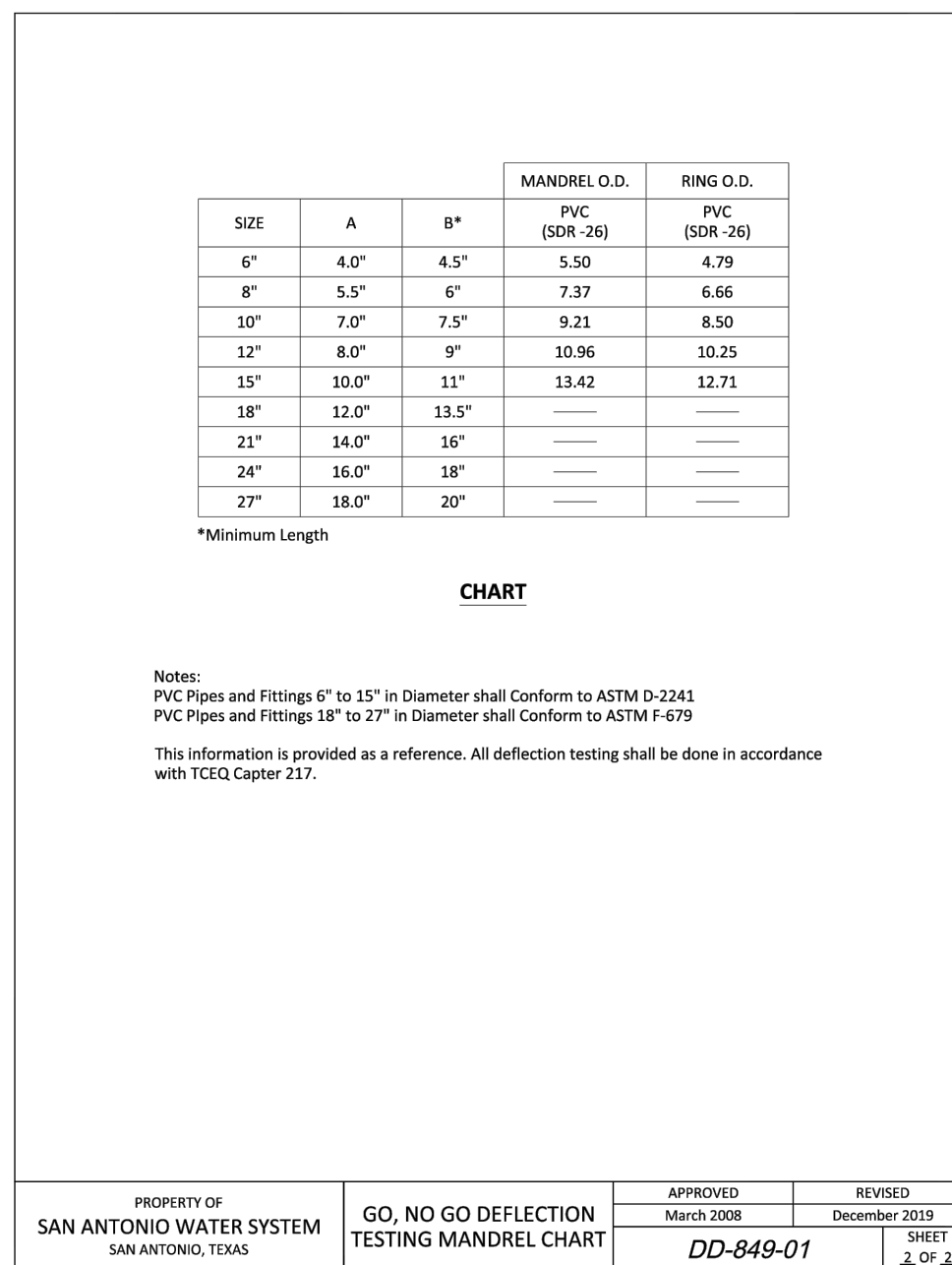
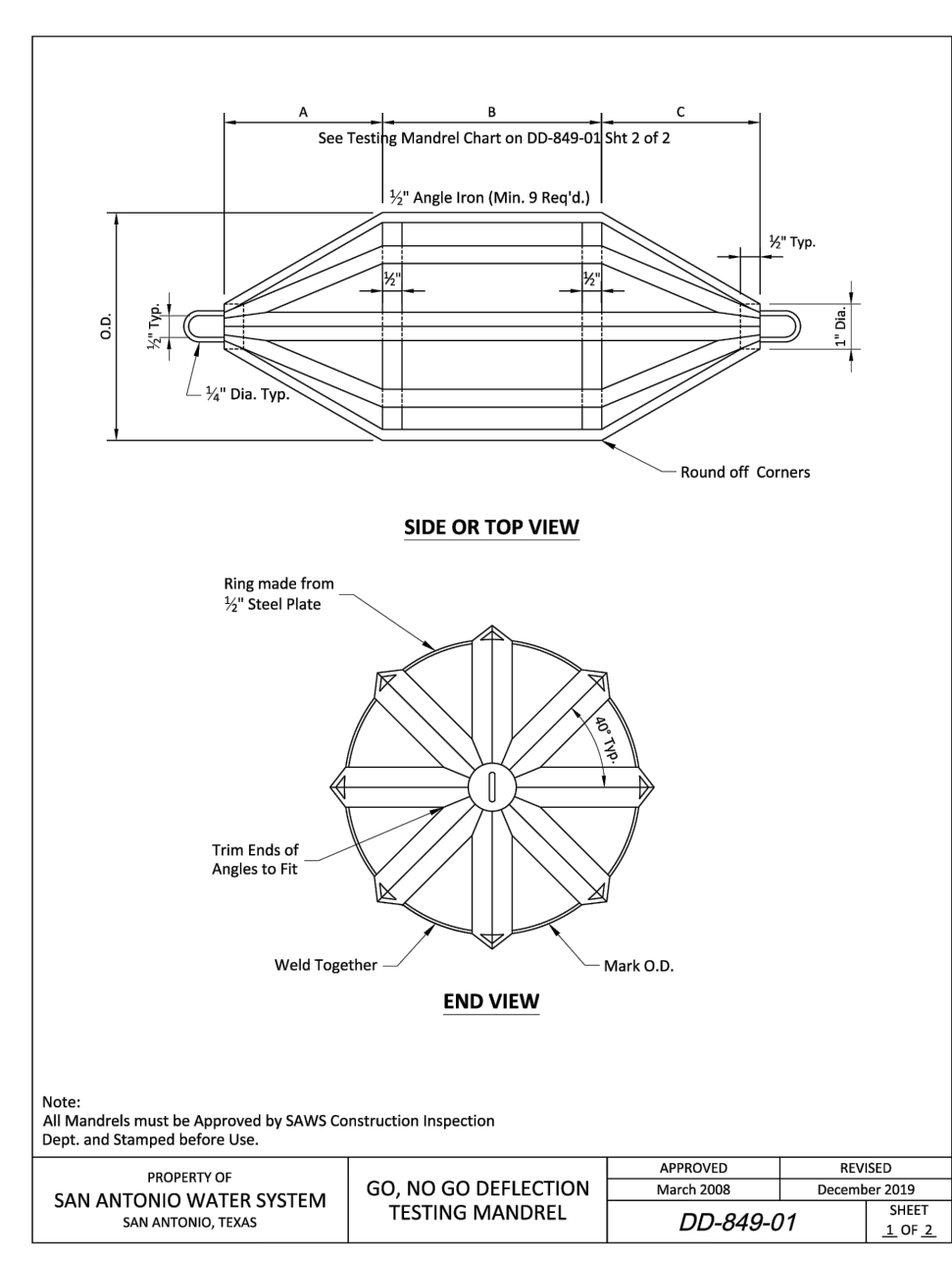
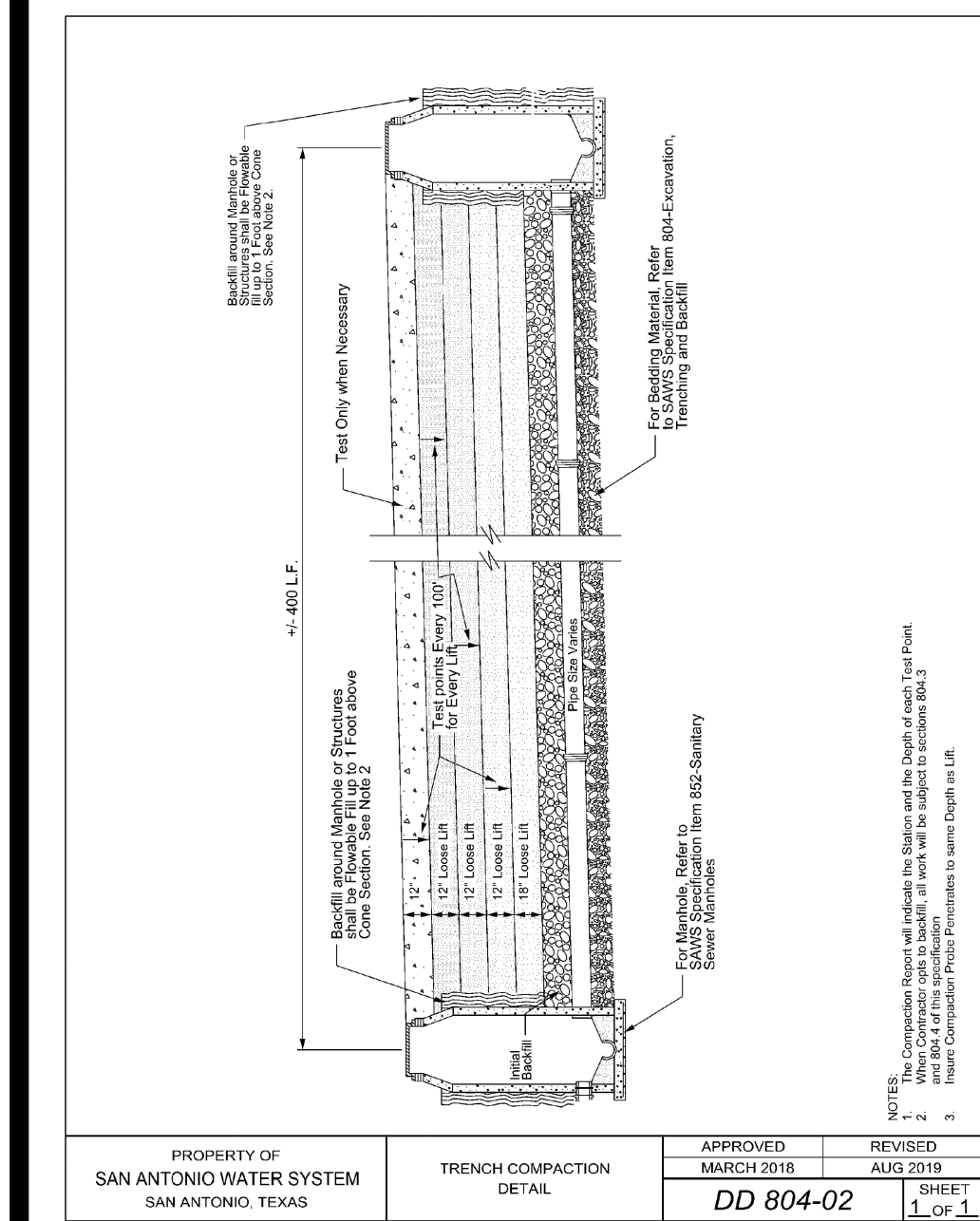
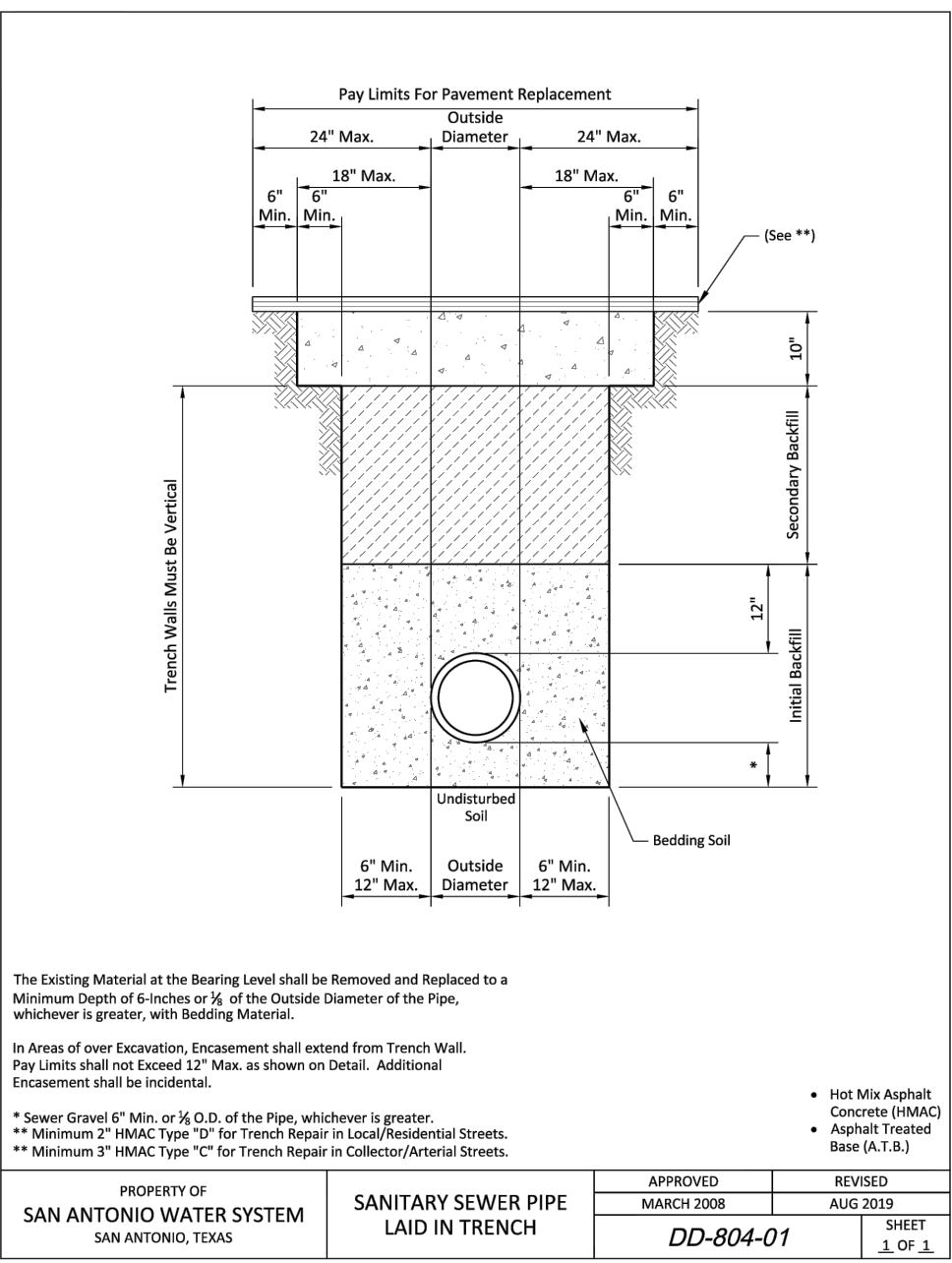
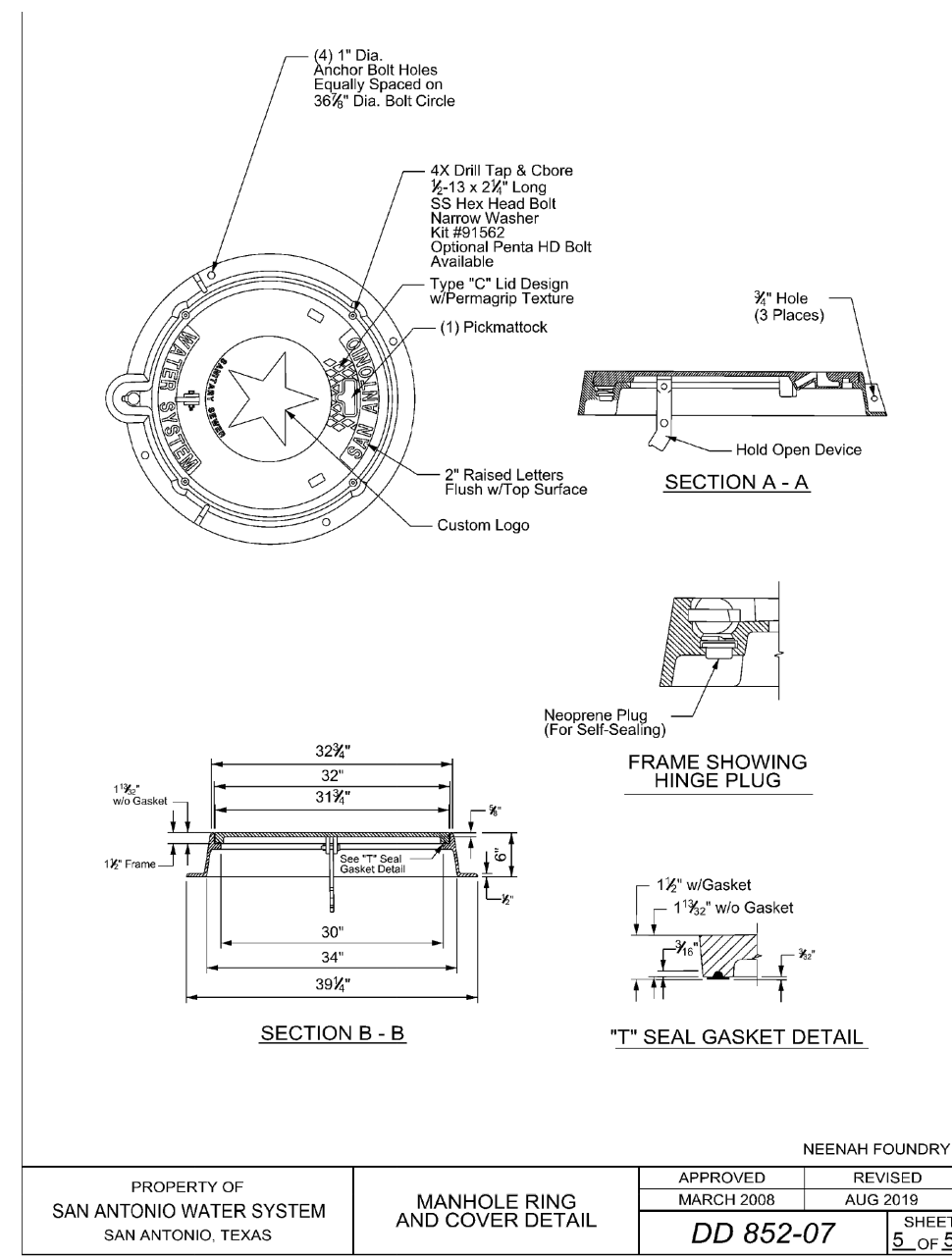
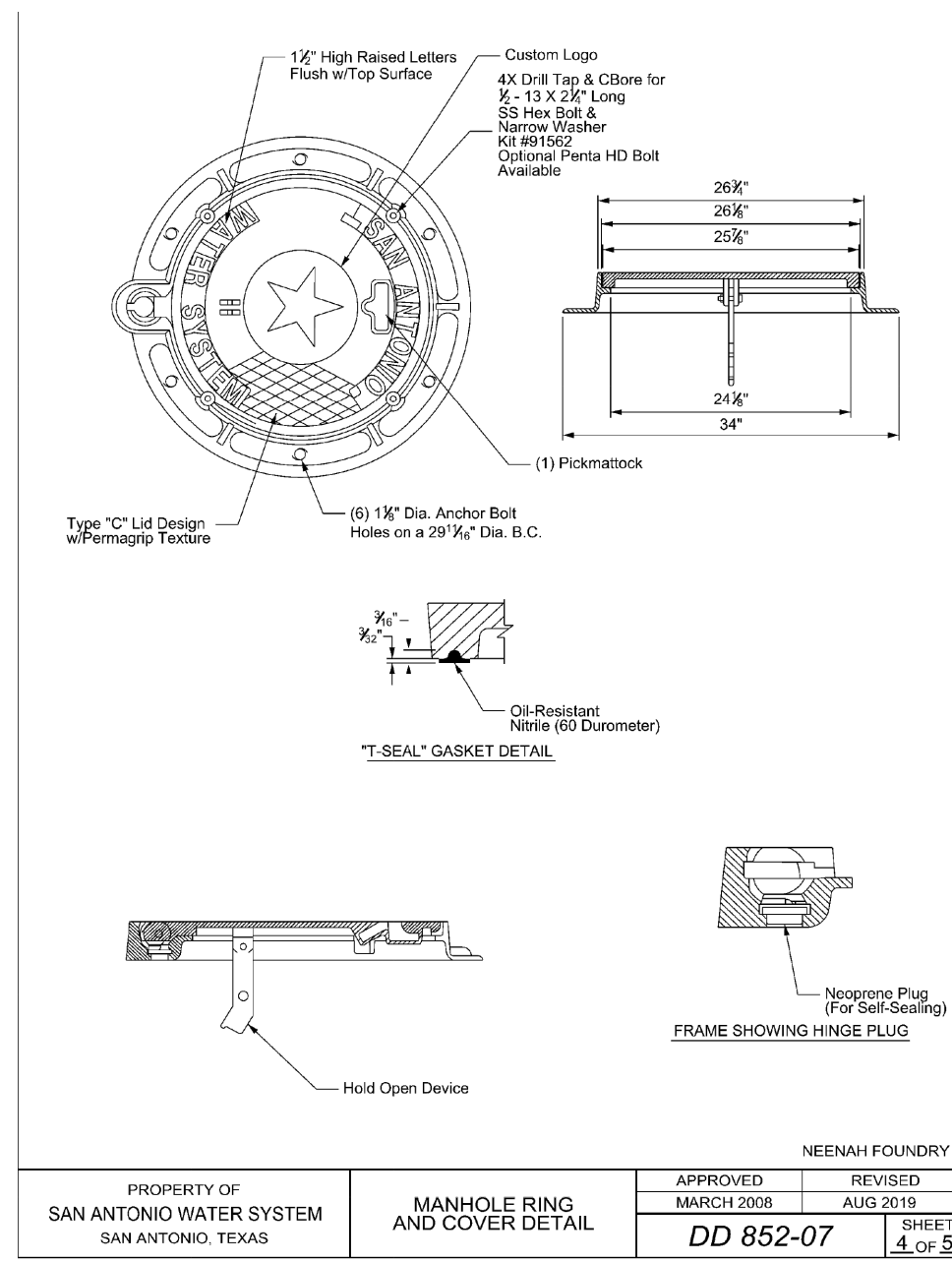
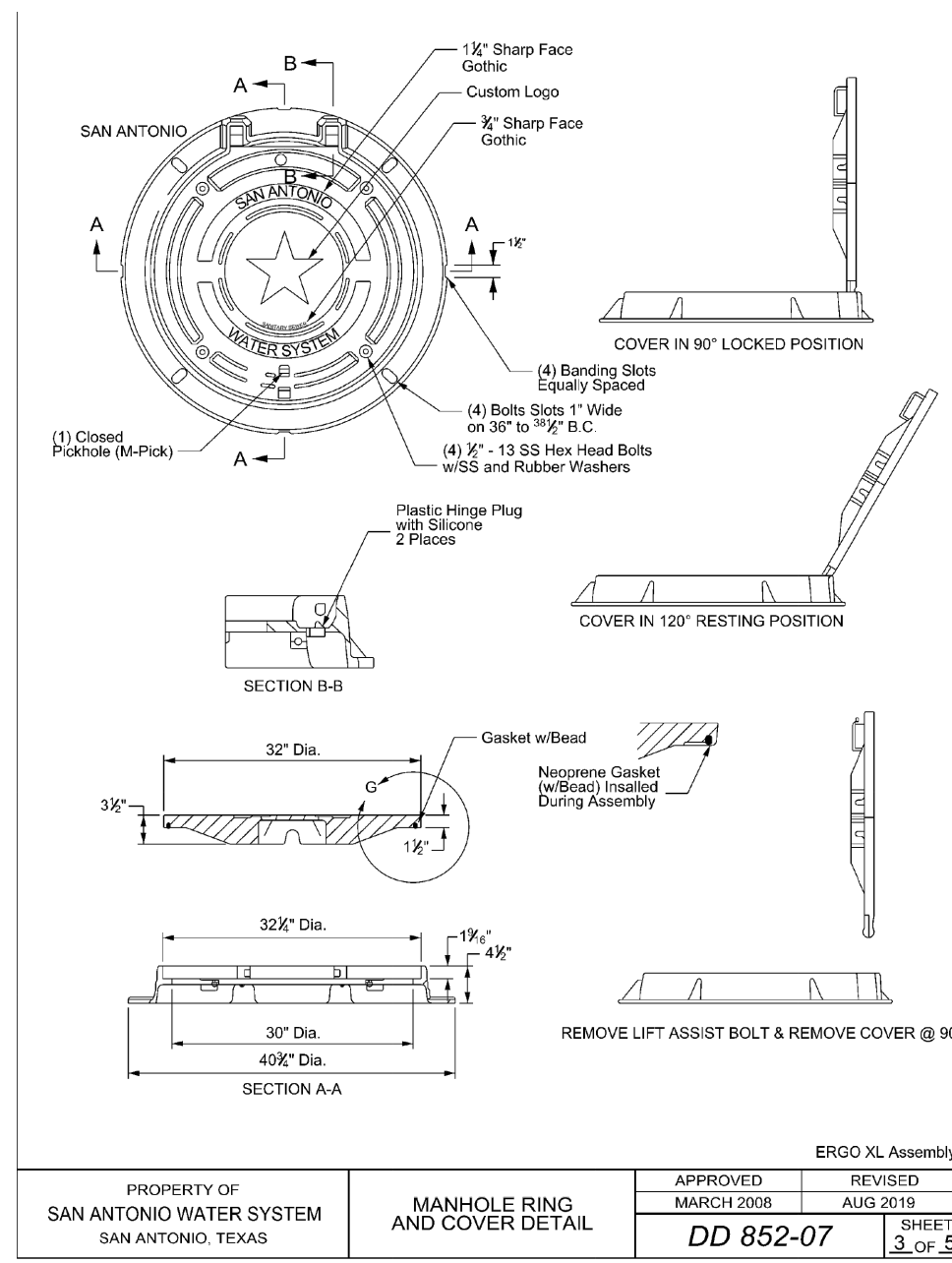
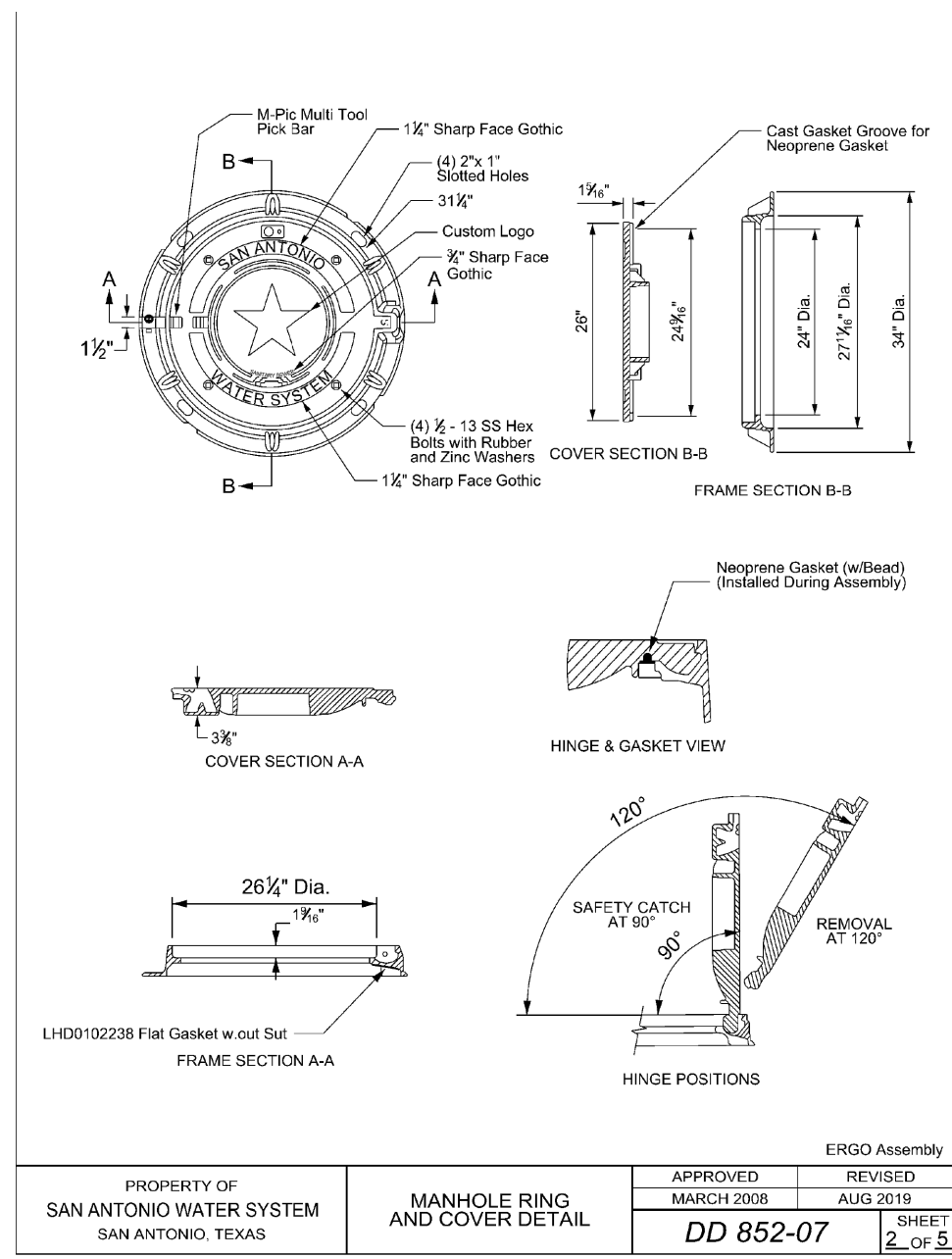
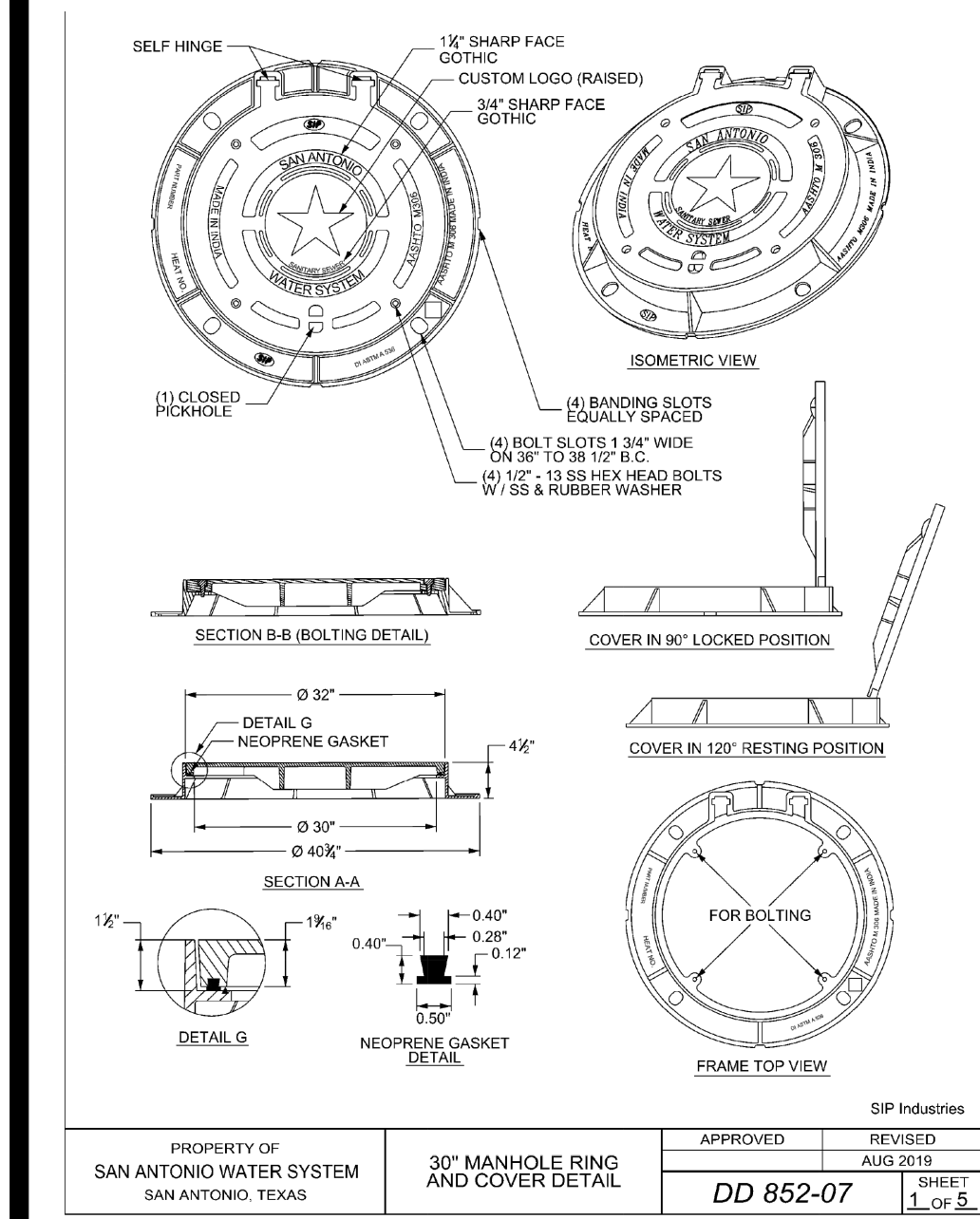
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

**BLOSSOM RANCH UNIT 1A**  
SAN ANTONIO, TEXAS  
SANITARY SEWER LINE C ~ STA. 1+00.00 TO END  
SANITARY SEWER LINE D ~ STA. 1+00.00 TO END  
SANITARY SEWER PLAN & PROFILE

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C5.06



Date: Jan 24, 2025 11:34am User: jdcadvis  
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DATE

NO. REVISION

Jon Adame  
1-24-25

BLOSSOM RANCH UNIT 1A

SAN ANTONIO, TEXAS

SANITARY SEWER DETAILS

PLAT NO. 24-11800406

JOB NO. 13055-20

DATE JANUARY 2025

DESIGNER AD

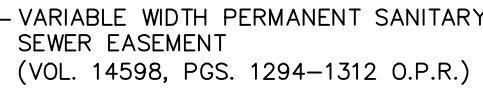
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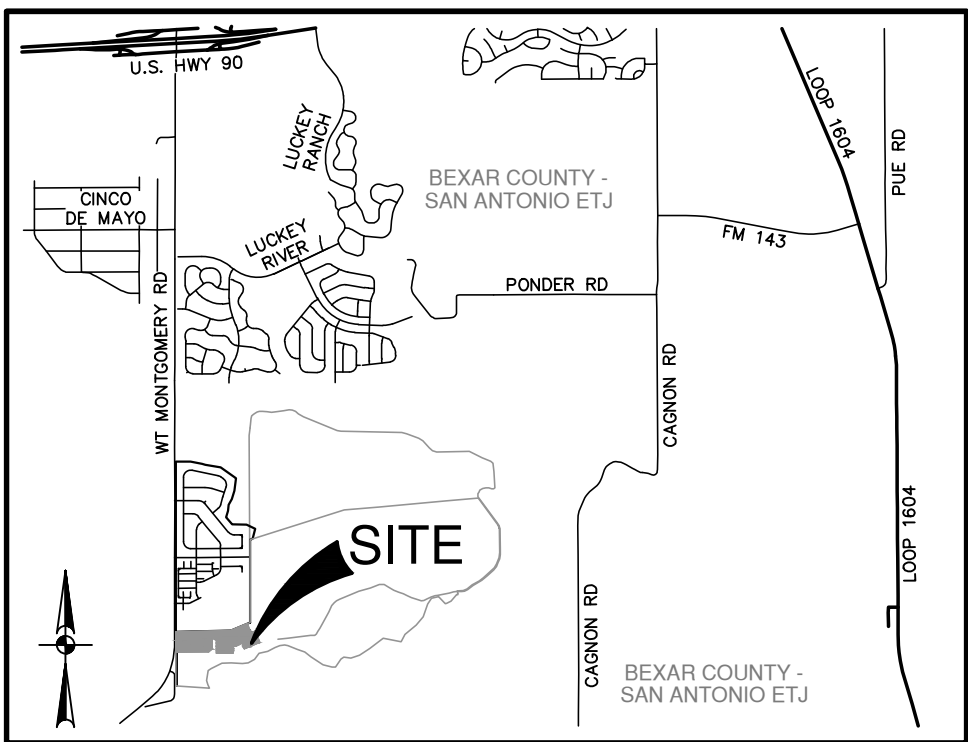


GRADING NOTES:

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.

GRADING LEGEND

- PROJECT LIMITS  
100 YR FLOODPLAIN  
EXISTING CONTOUR  
PROPOSED CONTOUR  
100 YR FLOODPLAIN  
FLOW ARROW (EXISTING)  
FLOW ARROW (PROPOSED)  
MINIMUM FINISHED FLOOR ELEVATION  
TREES TO REMAIN

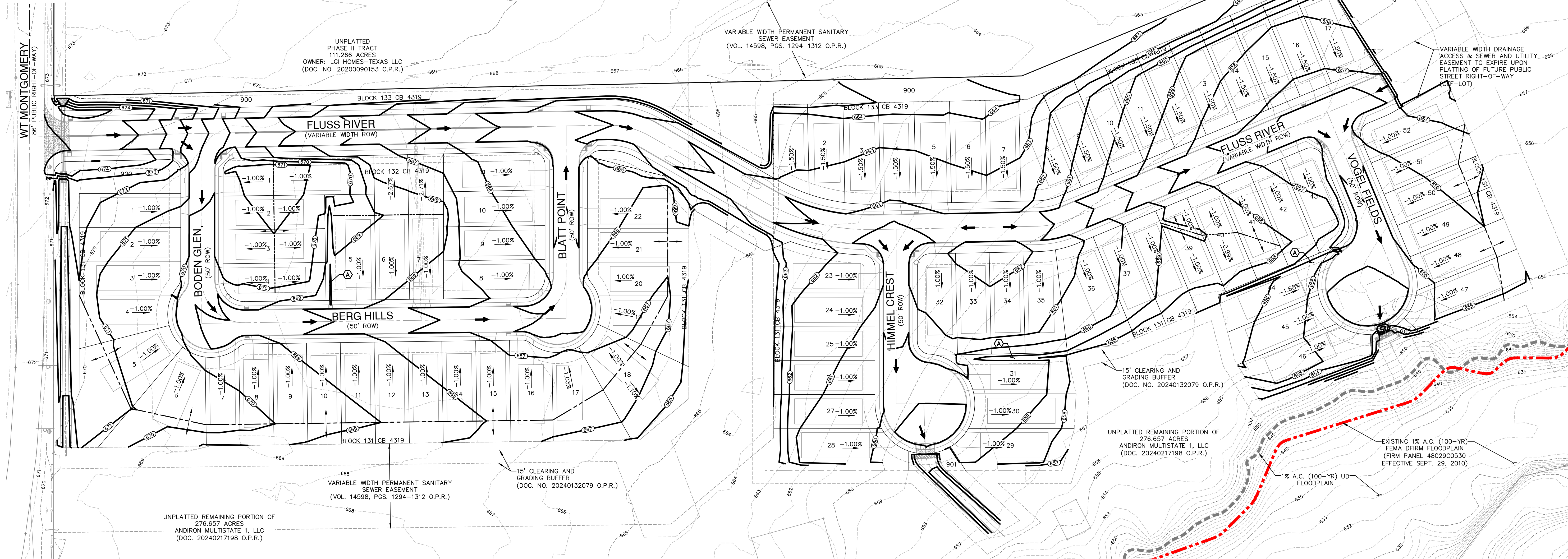


- KEY LEGEND:  
SIDE LOT SWALE PRIVATE DRAIN  
(REFERENCE CONSTRUCTION PLAN SET FOR BLOSSOM RANCH UNIT-1A, SHEET C1.10 FOR SWALE DETAILS)

LOCATION MAP

NOT-TO-SCALE

SCALE: 1" = 60'  
0' 60' 120' 180'



**PAPE-DAWSON**  
**ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028900

**BLOSSOM RANCH UNIT 1A**  
**SAN ANTONIO, TEXAS**

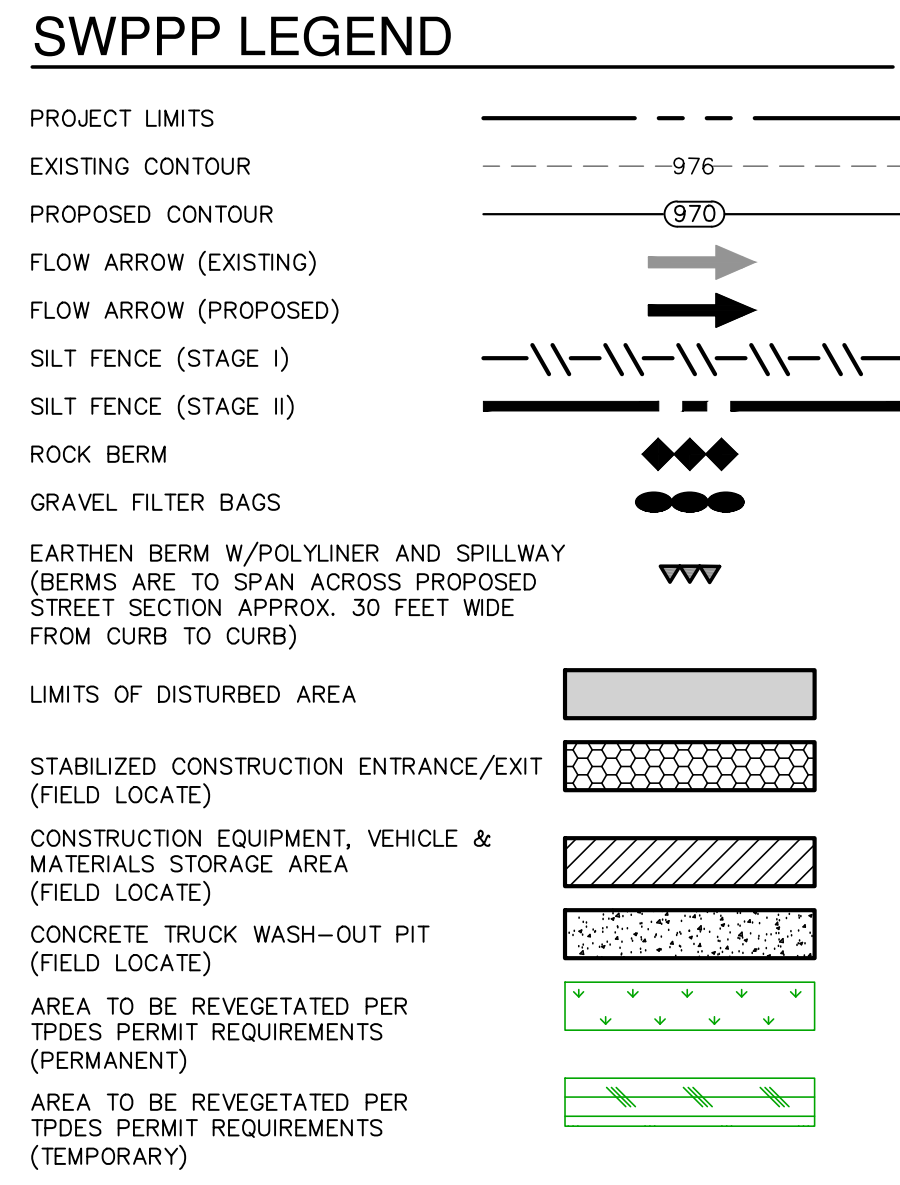
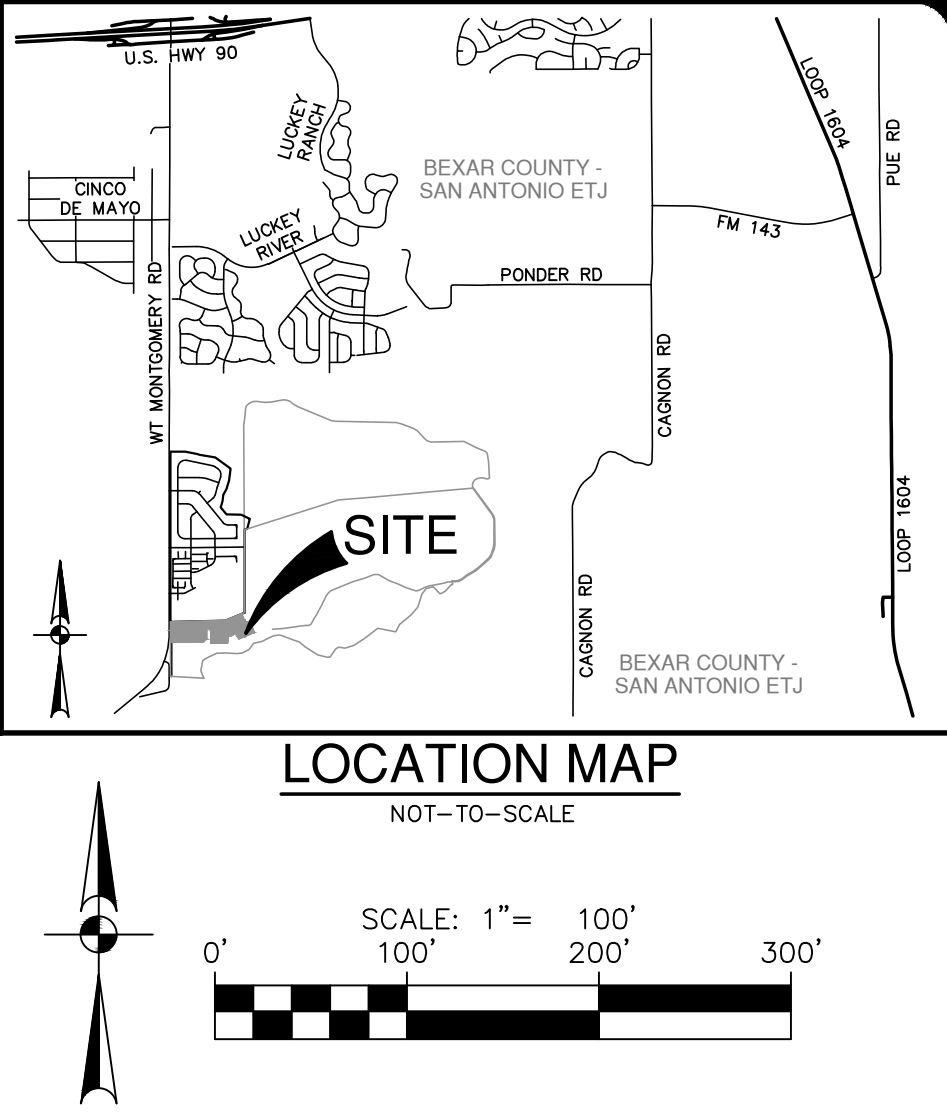
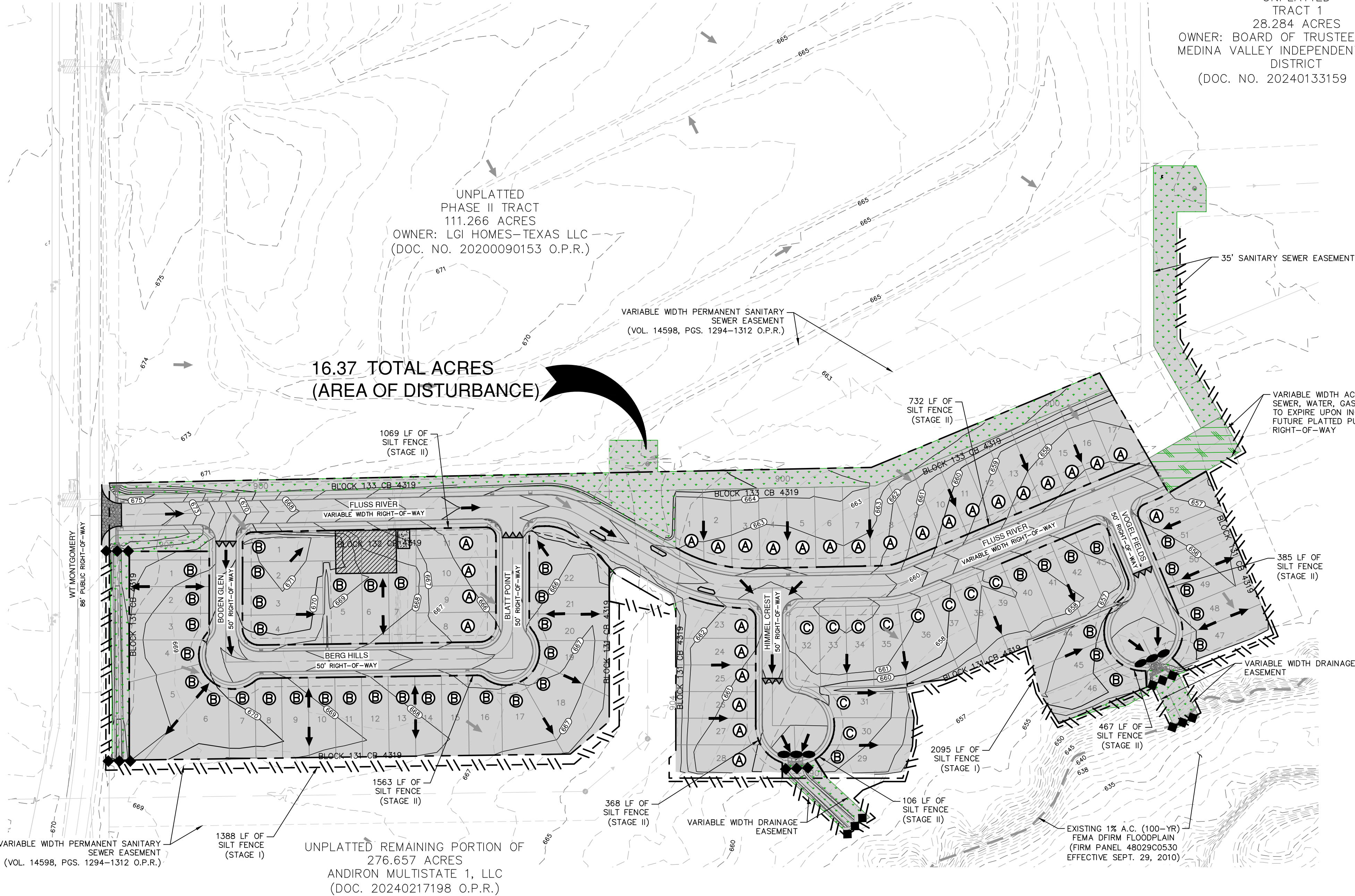
**SHEET TITLE - LINE 1**

PLAT NO. 24-11800406  
JOB NO. 13055-20  
DATE JANUARY 2025  
DESIGNER AD  
CHECKED AS DRAWN AD  
SHEET C7.00



GENERAL NOTES

1. DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
2. CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
3. 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.
4. RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
5. ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
6. FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
7. 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.
8. 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.
9. BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADE AREAS.
10. 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.
11. 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.
12. 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.
13. 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 (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.
14. PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TxDOT RIGHT-OF-WAY WITH TxDOT.
15. 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.
16. A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN ANY BEXAR COUNTY ROW.



SWP3 MODIFICATIONS		
DATE	SIGNATURE	DESCRIPTION

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 2

NO. REVISION

DATE

**PAPE-DAWSON**  
ENGINEERS

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

BLOSSOM RANCH UNIT 1A  
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN

PLAT NO. 24-11800406

JOB NO. 13055-20

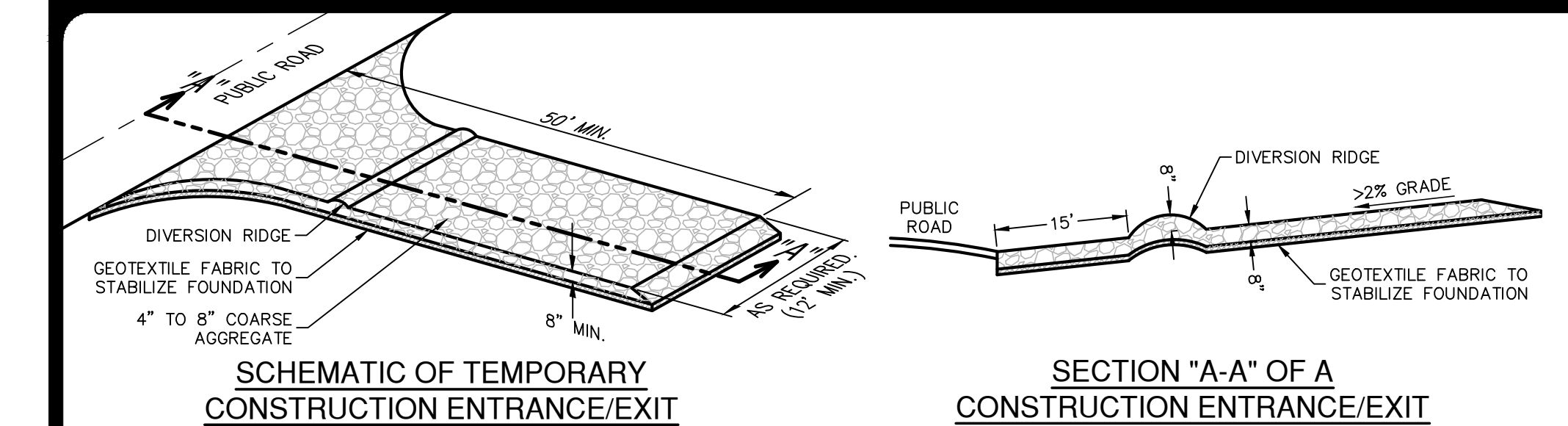
DATE JANUARY 2025

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SHEET C8.00





SCHEMATIC OF TEMPORARY CONSTRUCTION ENTRANCE/EXIT

MATERIALS

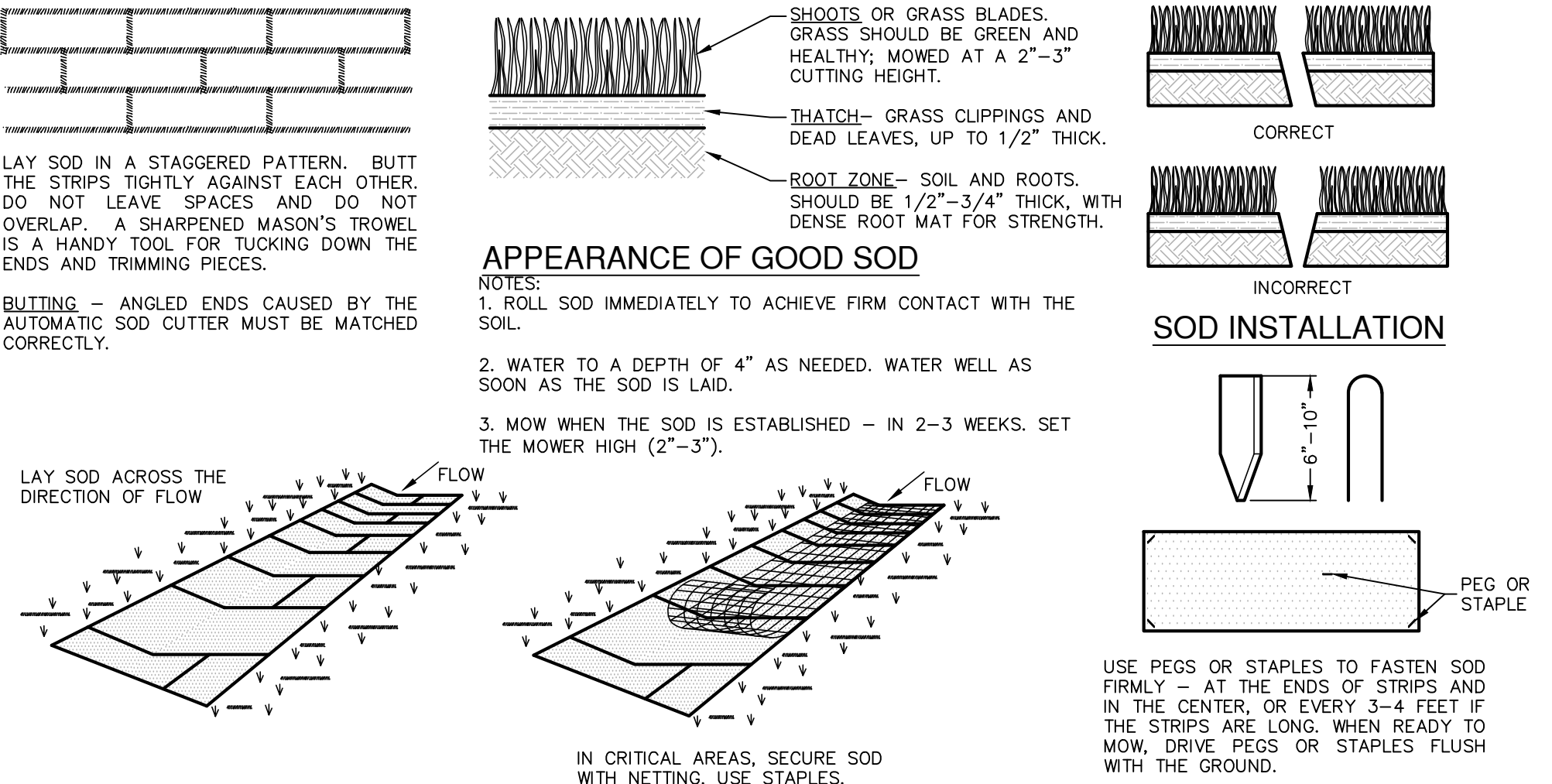
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT OF 6 OZ/YD<sup>2</sup>, A MULLEN BURST RATING OF 140 LB/IN<sup>2</sup>, 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 STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN 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 SOD 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

SECTION "A-A" OF A CONSTRUCTION ENTRANCE/EXIT

COMMON TROUBLE POINTS

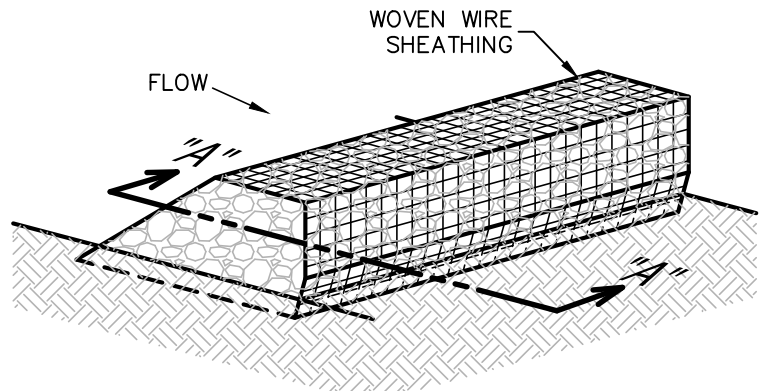
1. INADEQUATE RUNOFF CONTROL—SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC—EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT FLARED SUFFICIENTLY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

5. UNSTABLE FOUNDATION — USE GEOTEXTILE FABRIC UNDER PAD AND/OR IMPROVE FOUNDATION DRAINAGE.

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

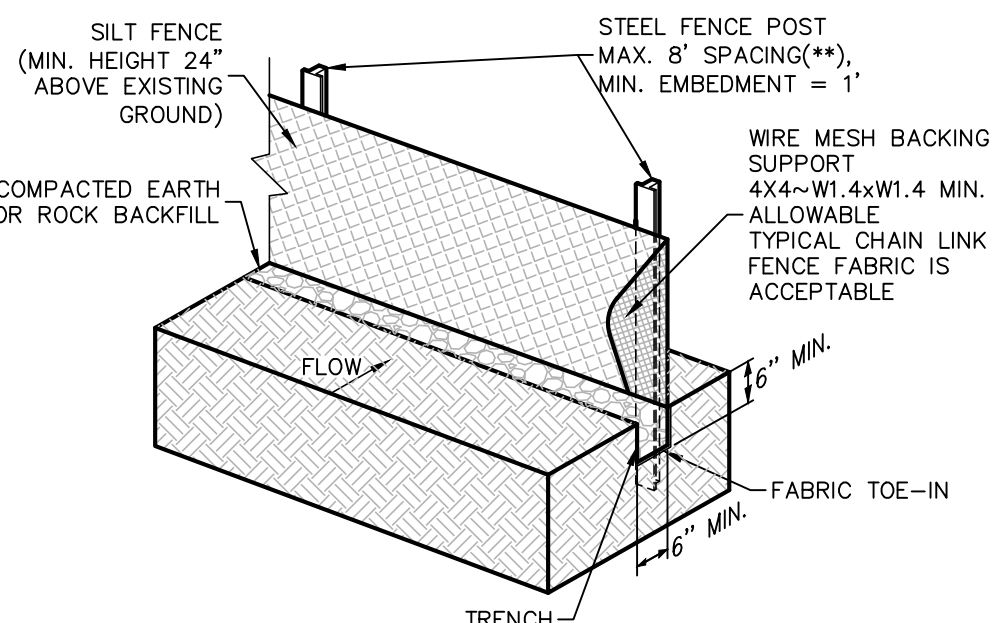
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE 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 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

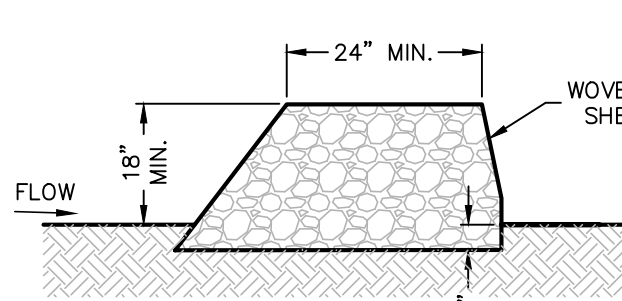
1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN<sup>2</sup>, ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF 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 BRINDELL 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 SHOOT RINGS.

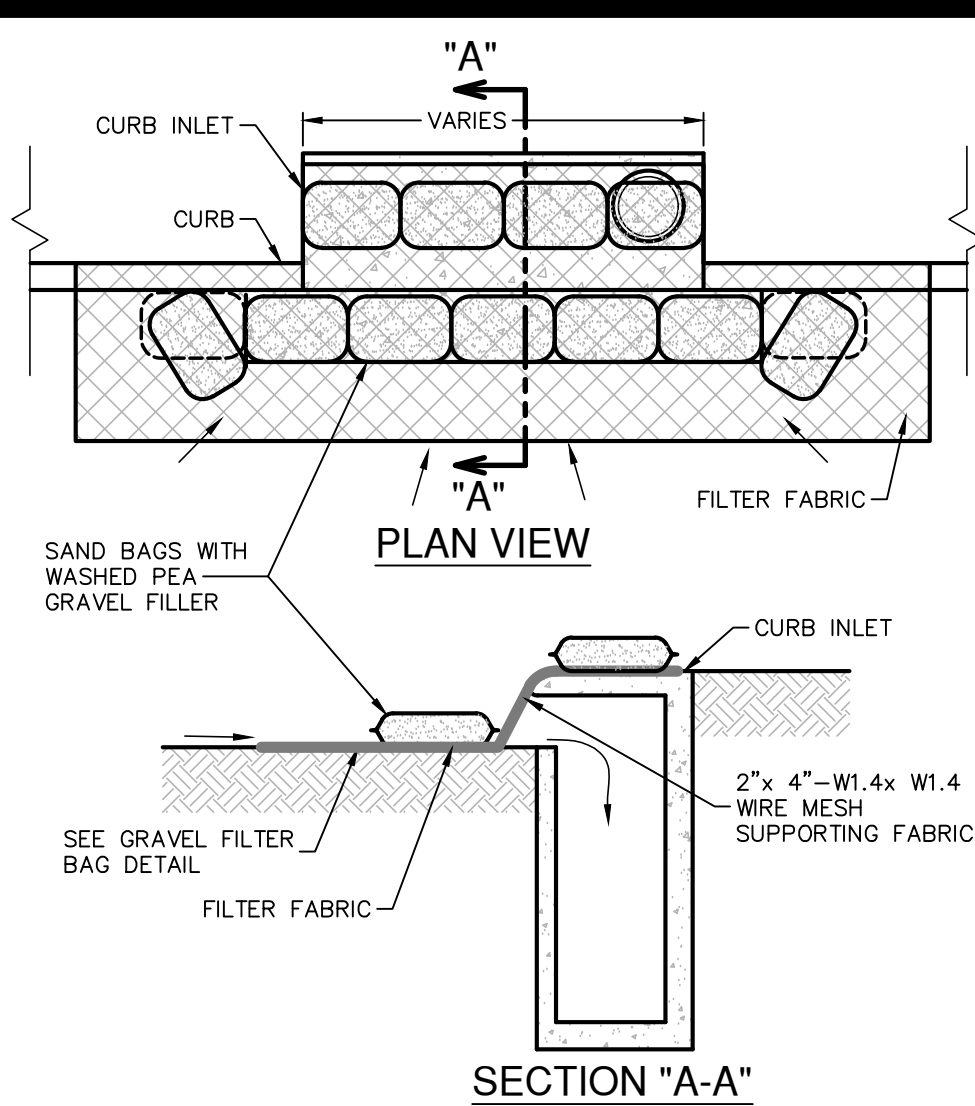
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

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

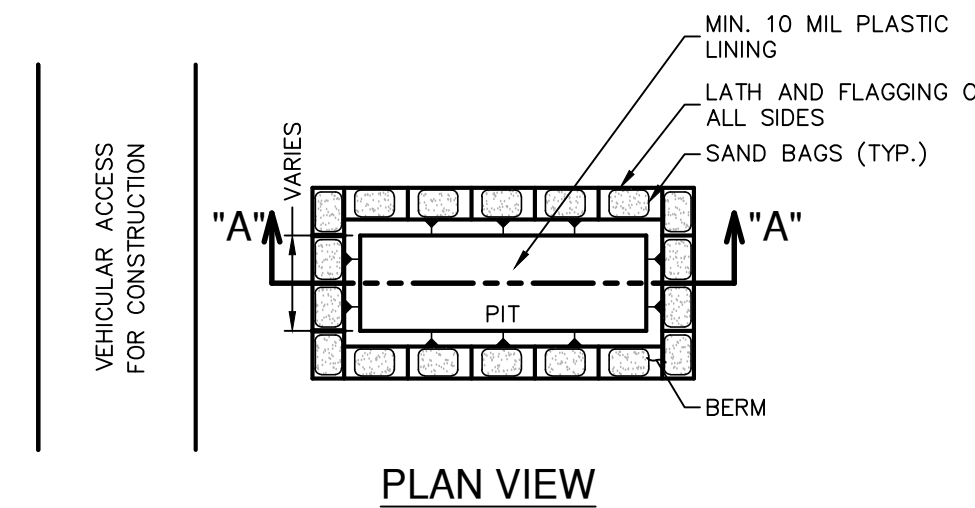
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CUPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL TO HOLD WIRE MESH IN PLACE. SANDBAGS FILLED WITH WASHED PEA GRAVEL SHOULD ALSO BE PLACED ALONG THE CUTTER 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 AROUND EACH OTHER TO PREVENT RUNOFF FROM FLOWING BETWEEN THE BAGS.

INSPECTION AND MAINTENANCE GUIDELINES

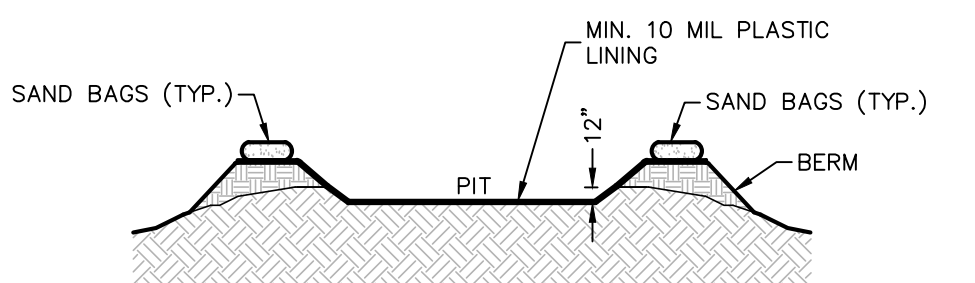
1. INSPECTION SHOULD BE MADE WEEKLY. REPAIR OR REPLACEMENT SHOULD BE MADE PROMPTLY AS NEEDED BY THE CONTRACTOR.
2. REMOVE SEDIMENT WHEN BUILDUP REACHES A DEPTH OF 3 INCHES. REMOVED SEDIMENT SHOULD BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.
3. CHECK PLACEMENT OF DEVICE 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



PLAN VIEW



SECTION "A-A"

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.

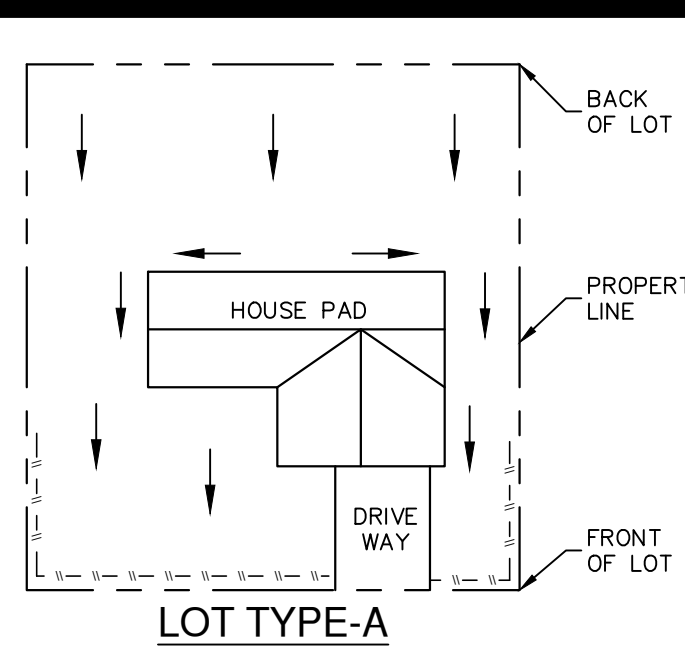
MAINTENANCE

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.

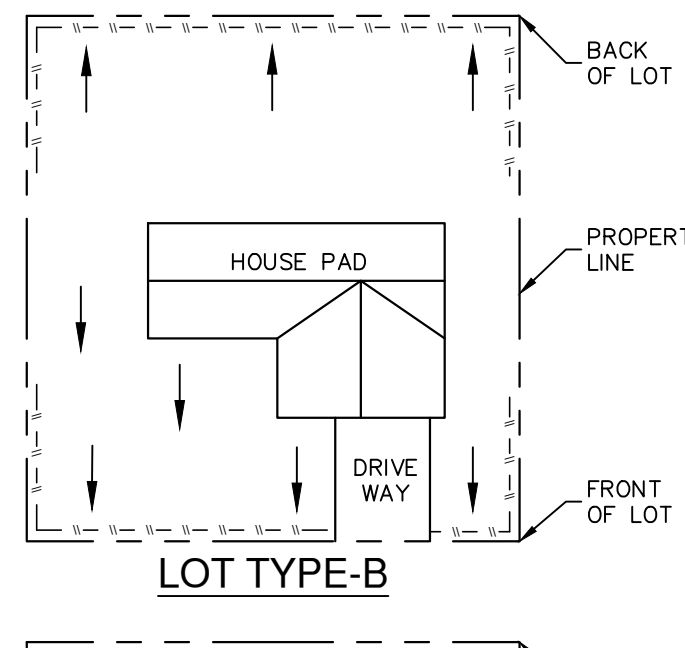
CONCRETE TRUCK WASHOUT

PIT DETAIL

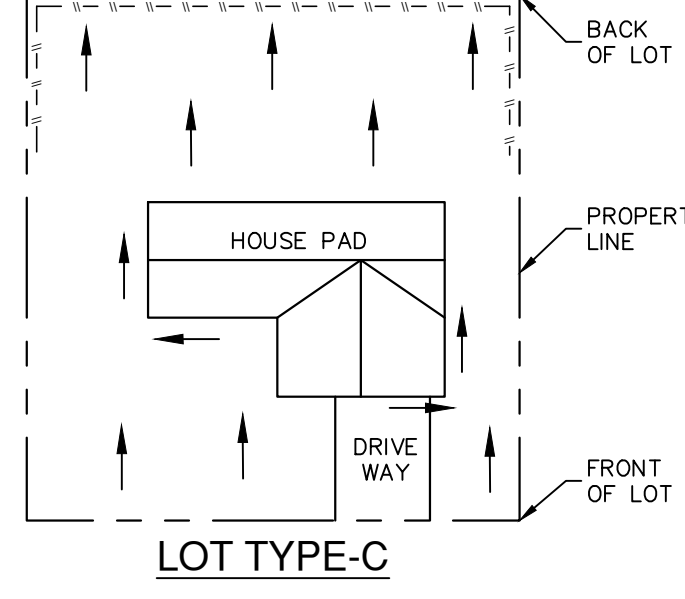
NOT-TO-SCALE



LOT TYPE-A



LOT TYPE-B



LOT TYPE-C

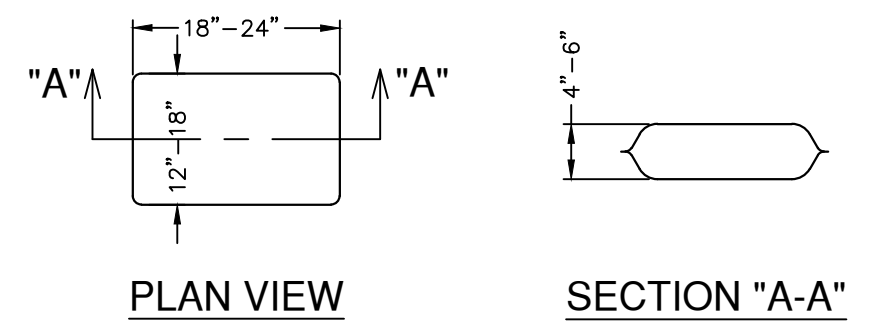
NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADIENT SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND

SILT FENCE DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT-TO-SCALE



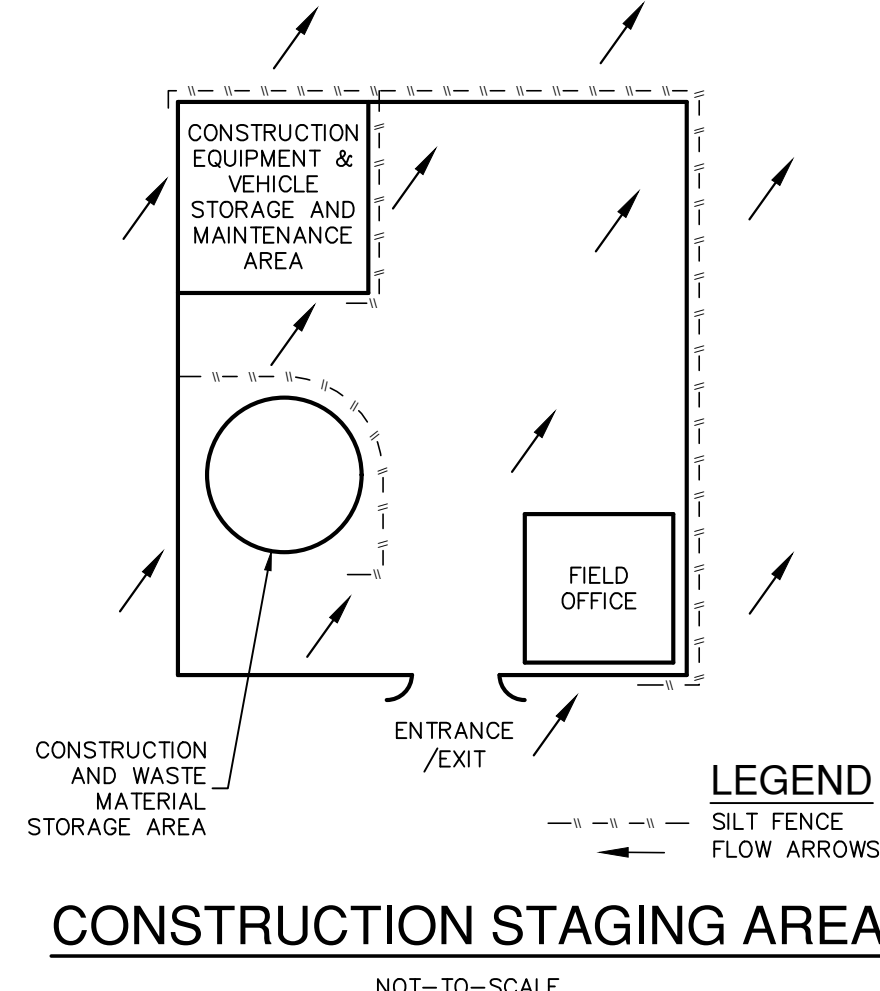
PLAN VIEW

SECTION "A-A"

1. THE FILTER BAG MATERIAL SHALL BE MADE OF POLYPROPYLENE, POLYETHYLENE OR POLYAMIDE WOVEN FABRIC, MIN. UNIT WEIGHT 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



LEGEND

SILT FENCE FLOW ARROWS

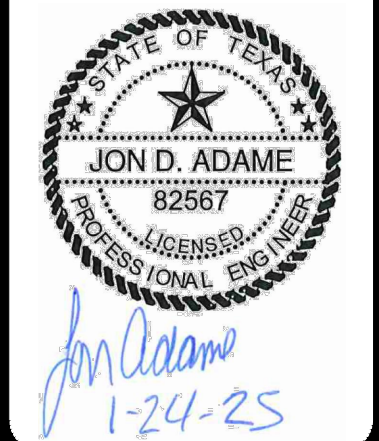
CONSTRUCTION STAGING AREA

NOT-TO-SCALE

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  
1 OF 2

DATE	
NO.	
REVISION	



**PAPE-DAWSON**  
**ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008890

BLOSSOM RANCH UNIT 1A  
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN DETAILS

PLAT NO.	24-11800406
JOB NO.	13055-20
DATE	JANUARY 2025
DRAWN BY	AS
CHECKED BY	AS
SHEET	C8.10