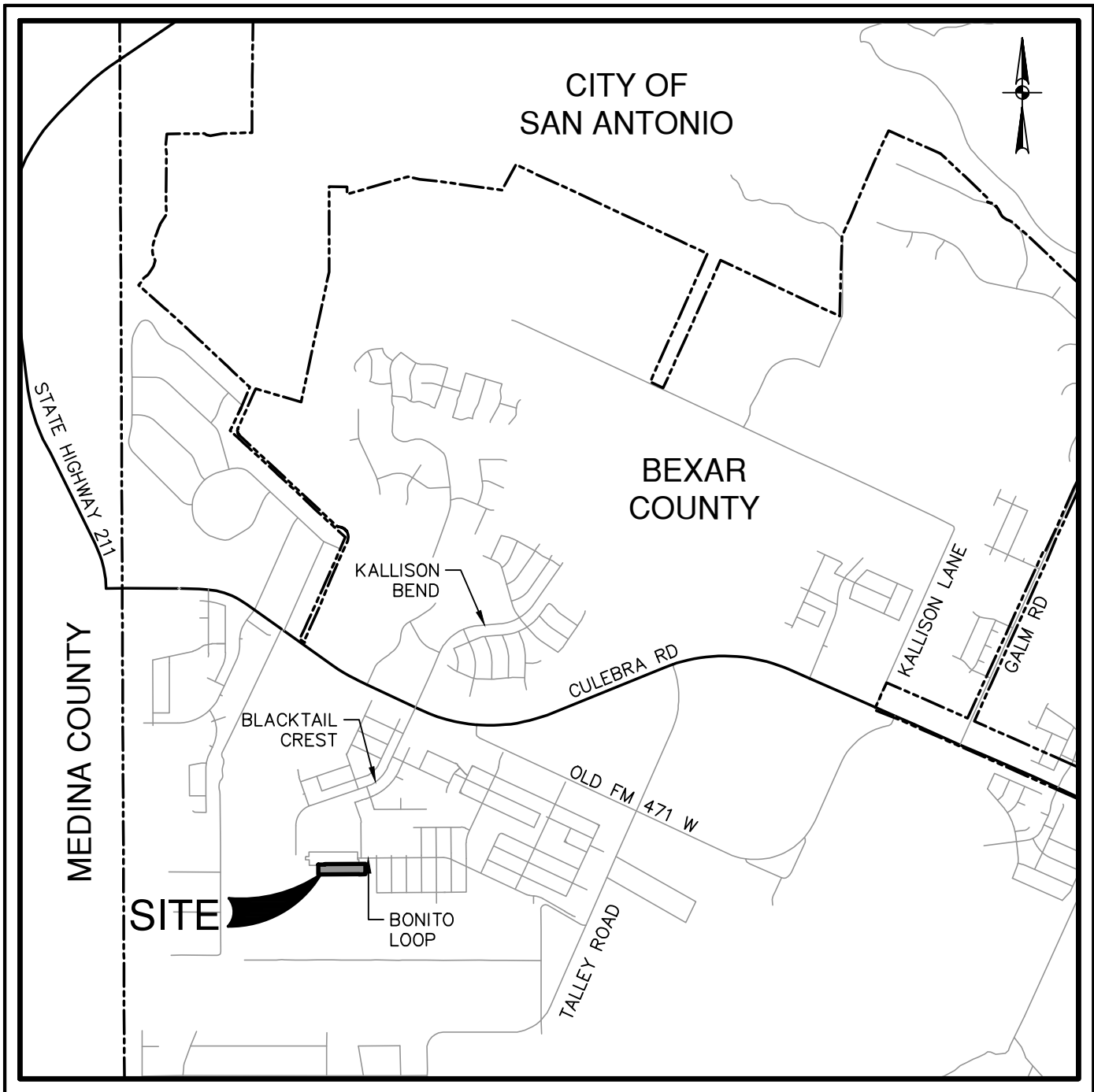


PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

CIVIL CONSTRUCTION PLANS



LOCATION MAP
NOT-TO-SCALE

PREPARED FOR:

KB HOME LONE STAR, INC.
4800 FREDERICKSBURG ROAD
SAN ANTONIO, TX 78229

MAY 2025



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



Sheet List Table		
Sheet Title	Sheet Description	Sheet Number
COVER SHEET		C0.00
MASTER DRAINAGE PLAN		C1.00
DRAIN A	PLAN AND PROFILE	C1.01
DRAINAGE DETAILS	(SHEET 1 OF 2)	C1.10
DRAINAGE DETAILS	(SHEET 2 OF 2)	C1.20
ABEJA AVE	PLAN & PROFILE	C2.00
SERPIENTE SPRINGS	PLAN & PROFILE	C2.01
CAMELLO CREST	PLAN & PROFILE	C2.02
LOBO VISTA	PLAN & PROFILE	C2.03
STREET DETAILS	(SHEET 1 OF 2)	C2.10
STREET DETAILS	(SHEET 2 OF 2)	C2.20
OVERALL SIGNAGE PLAN		C3.00
SIGNAGE DETAILS	(SHEET 1 OF 2)	C3.10
SIGNAGE DETAILS	(SHEET 2 OF 2)	C3.20
OVERALL SANITARY SEWER PLAN		C4.00
SANITARY SEWER LINE B	PLAN AND PROFILE	C4.01
SANITARY SEWER LINE C	PLAN AND PROFILE	C4.02
SANITARY SEWER LINE D	PLAN AND PROFILE	C4.03
SANITARY SEWER DETAILS		C4.10
SANITARY SEWER NOTES		C4.20
OVERALL WATER DISTRIBUTION PLAN		C5.00
WATER DISTRIBUTION DETAILS		C5.10
WATER DISTRIBUTION NOTES		C5.20
OVERALL UTILITY PLAN		C6.00
GRADING PLAN		C7.00
STORMWATER POLLUTION PREVENTION PLAN		C8.00
SWPPP DETAILS		C8.10

NO.	REVISION	DATE
1.	REVISED SEWER BLOCK	06/10/25
2.	REVISED SEWER BLOCK	07/08/25

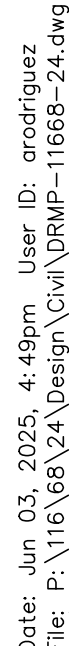
WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: KB HOME LONE STAR, INC.			
ADDRESS: 4800 FREDERICKSBURG ROAD			
CITY: CITY	STATE: STATE	ZIP: 78229	
PHONE# (210) 301-5485	FAX#		
SAWS BLOCK MAP# 064610 TOTAL EDU'S 60 TOTAL ACREAGE 9.166			
TOTAL LINEAR FOOTAGE OF PIPE: 1,659 L.F. - 8" PLAT NO. 25-11800087			
NUMBER OF LOTS 60 SAWS JOB NO. 25-1059			

SEWER-WEST SEWERSHED-LEON CREEK W.R.C.

DEVELOPER'S NAME: KB HOME LONE STAR, INC.			
ADDRESS: 4800 FREDERICKSBURG ROAD			
CITY: CITY	STATE: STATE	ZIP: 78229	
PHONE# (210) 301-5485	FAX#		
SAWS BLOCK MAP# 064610 TOTAL EDU'S 79 TOTAL ACREAGE 9.166			
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,285 L.F. PLAT NO. 25-11800087			
NUMBER OF LOTS 60 SAWS JOB NO. 25-1548			

SHEET C0.00



Pre-Development Conditions Calculations

Rational Method Time of Concentration **Seeley Chart or TR-55 Eqn. 3-3 **As Calculated using Mannings or TR-55 Figure 3-1 or 6 ft/s		From TR-55 Figure 3-1** $T_o = \frac{(0.007(n+1)^{0.8})}{(P^2 S_o^{1.49})} \times 60$ $v = \frac{k}{n} R^{2/3} S_o^{1/2}$ $k = 1.486 \text{ ft}^{1/3}/\text{s}$	S: For Streets: n = 0.018, R = 0.2 (Adapted from Mannings) P: For Paved: n = 0.025, R = 0.2 U: For Unpaved: n = 0.05, R = 0.4 D: For Default: v = 6 fps
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*Seeley Chart or TR-55 Eqn. 3-3
 **As Calculated using Mannings or TR-55 Figure 3-1 or 6 ft/s

06/03/2025



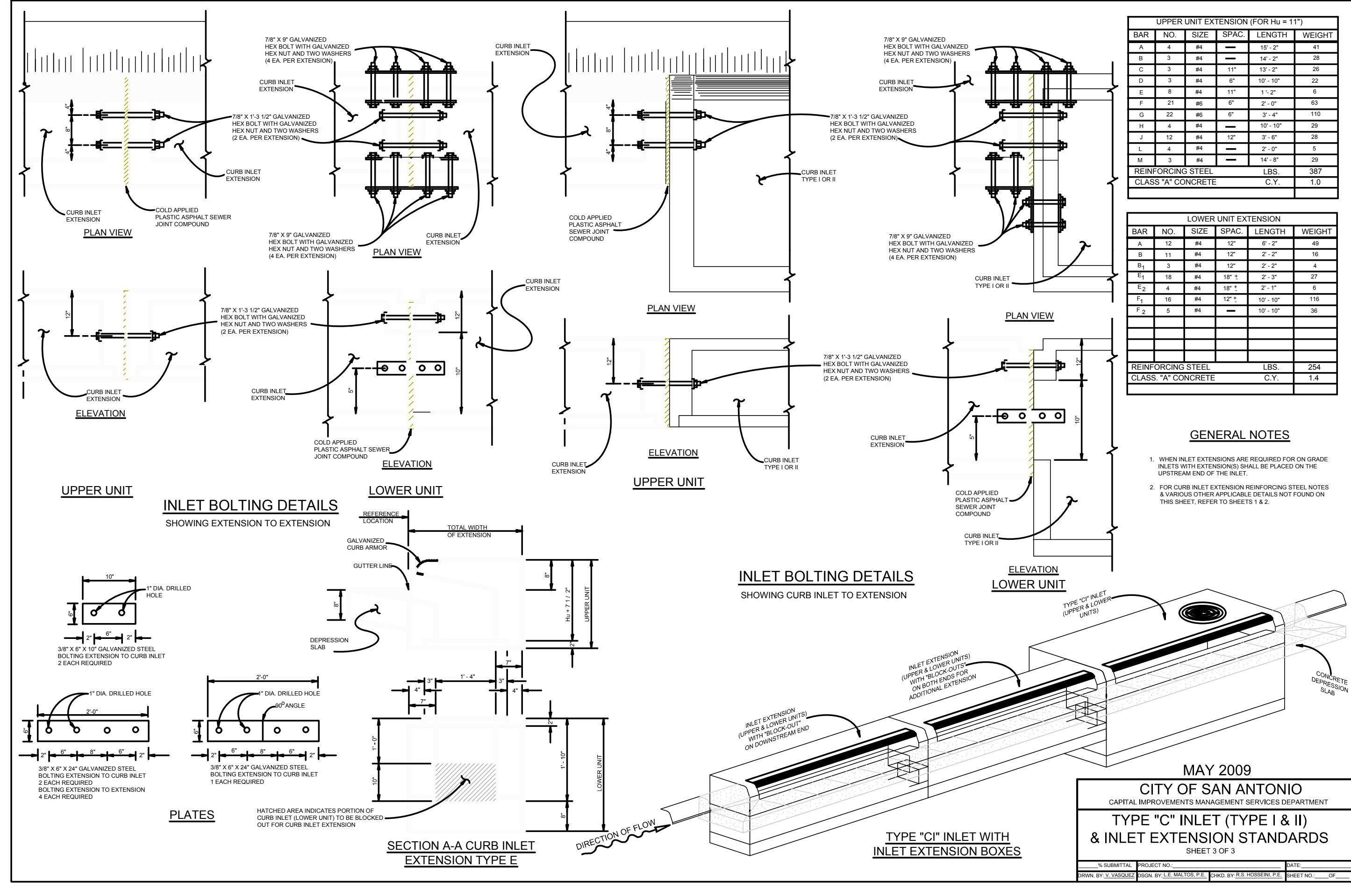
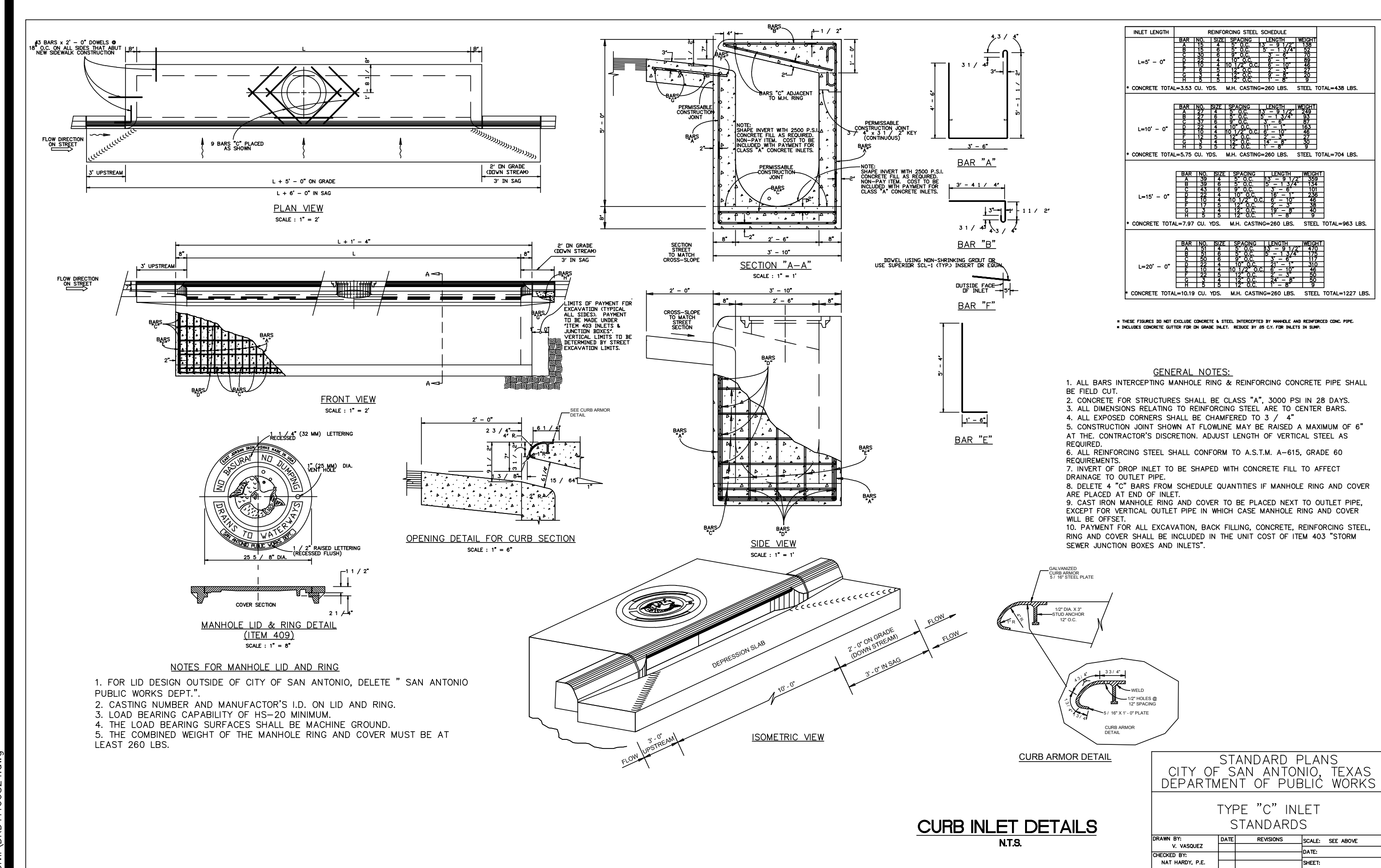
REBECCA ANN CARROLL
92666
LICENSED
PROFESSIONAL ENGINEER

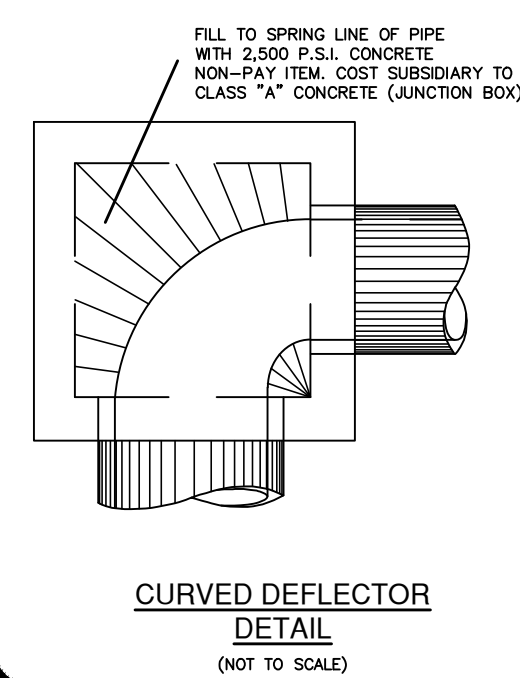
**PAPE-DAWSON
ENGINEERS**

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

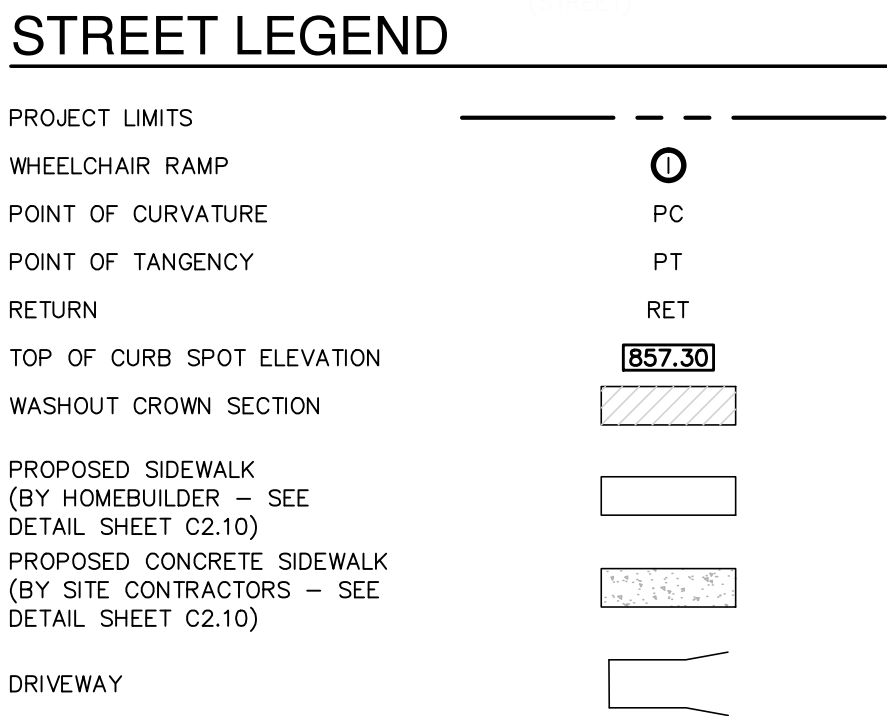
ERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
MASTER DRAINAGE PLAN

PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET C1.00



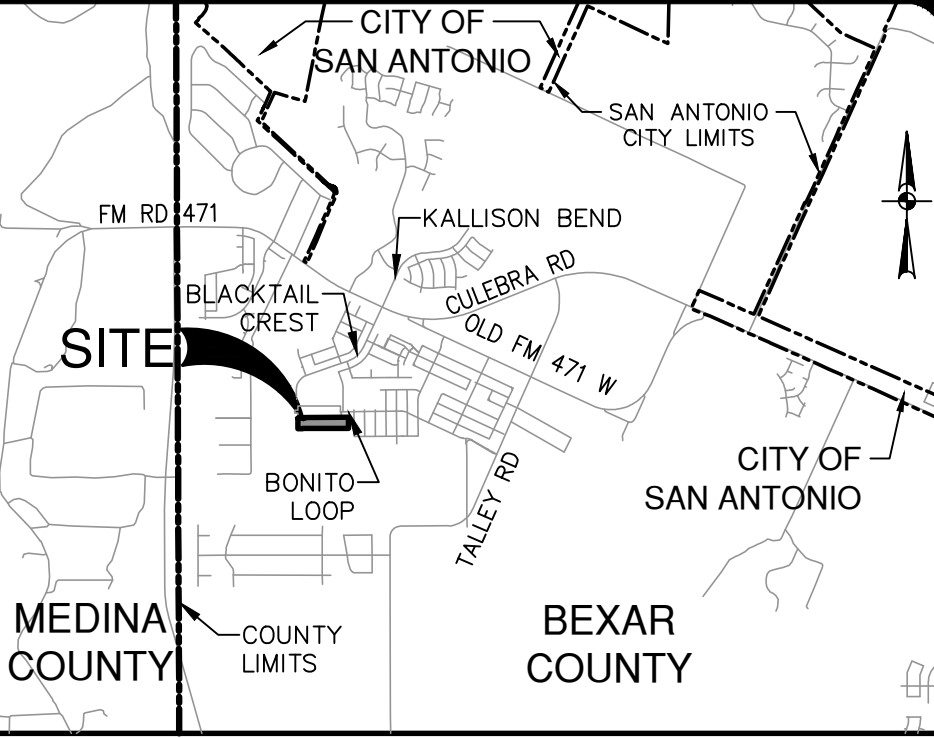


PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET **C1.20**



STREET NOTES:

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



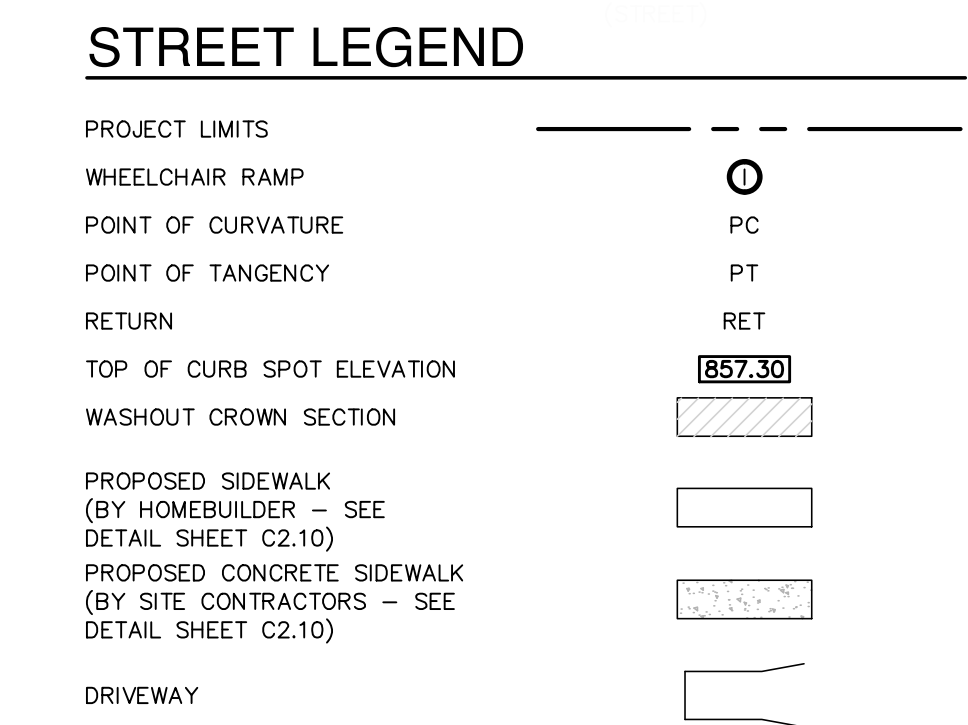
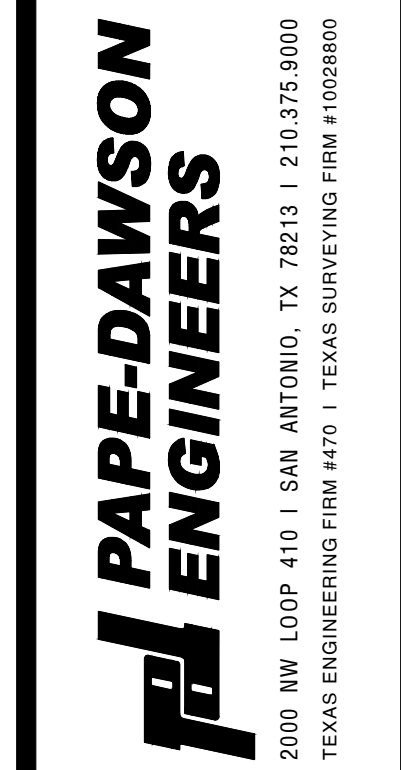
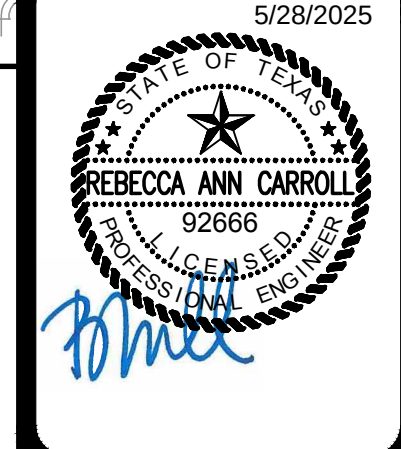
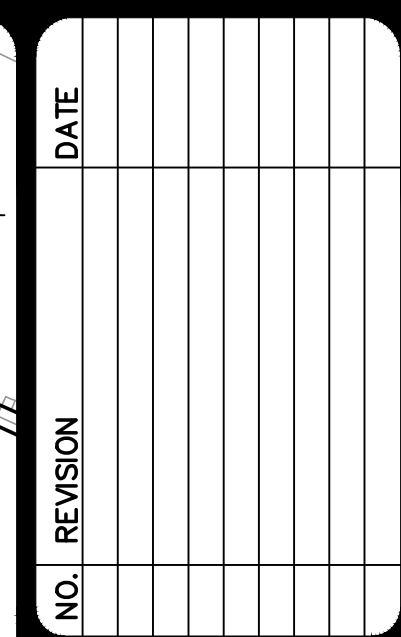
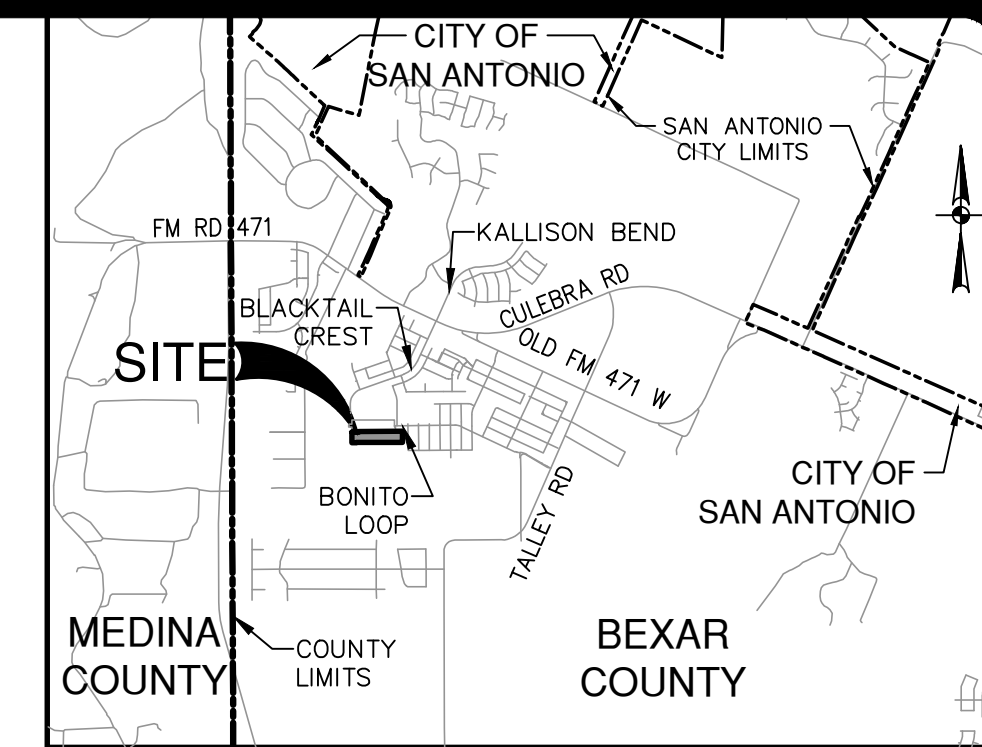
**PAPE-DAWSON
ENGINEERS**
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #4470 | TEXAS SURVEYING FIRM #10028800

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
ABEJA AVE
PI AN & PROFIL F

PLAT NO. 25-11800087
 JOB NO. 11668-24
 DATE MAY 2025
 DESIGNER AR
 CHECKED BC DRAWN RP
 SHEET **C2.00**

Date: May 28, 2025, 4:56pm User ID: arodriguez
File: P:\116\68\24\Design\Civil\ST-1166824 ABEJA AVE.dwg

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STREET NOTES:

1. A BEAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
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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 ENGINEER AND INSPECTOR WITHOUT AMENDING THE STREET LAYOUT OF UTILITY LAYOUT PER UDC SECTION 35-506 (Q)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

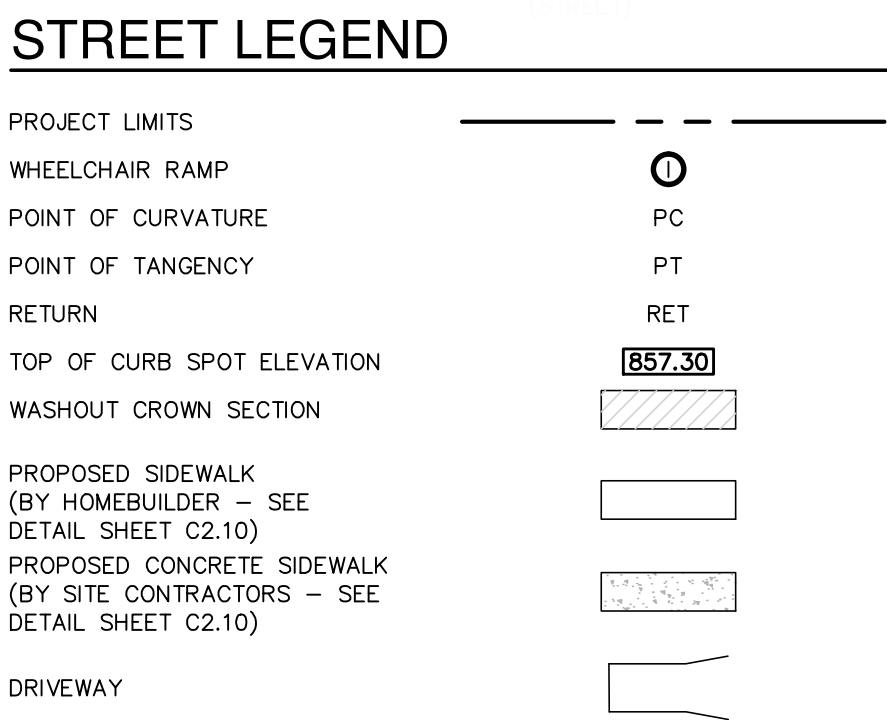
11-07 07/07/22

PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

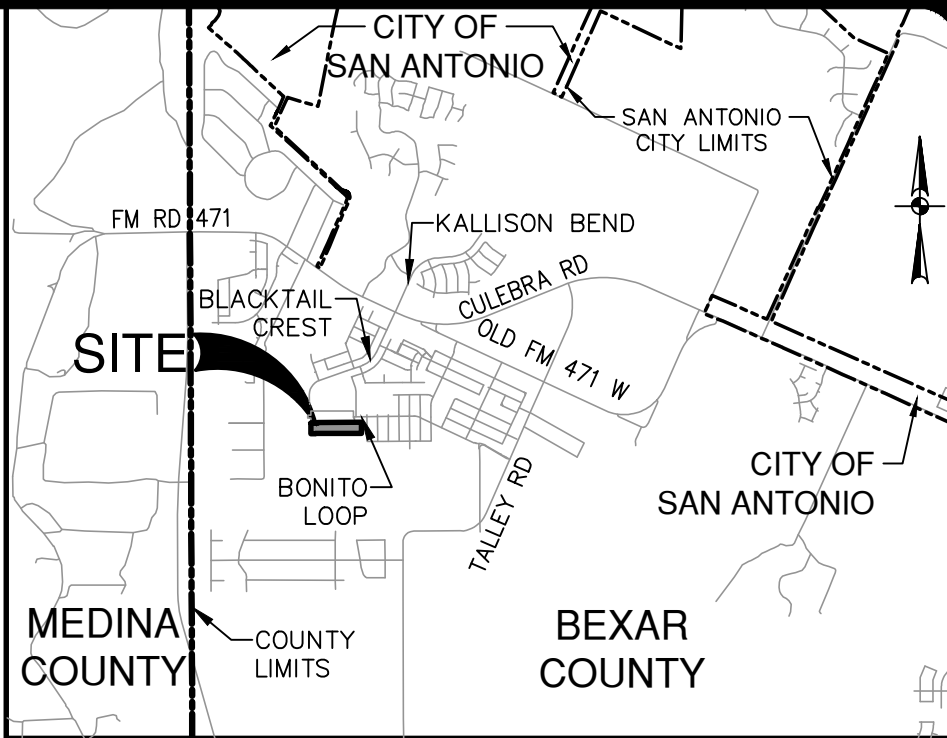
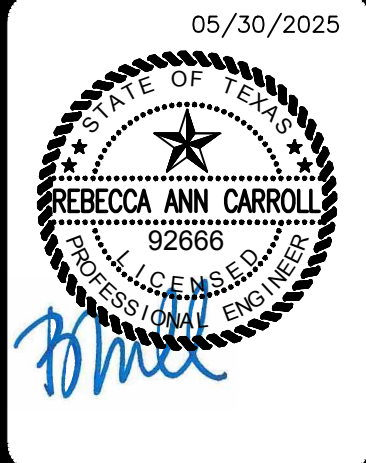
SERPIENTE SPRINGS
PLAN & PROFILE

PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET C2.01



STREET NOTES:

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6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE CITY OF BEAR. THE RESPONSIBILITY OF THE DEVELOPER TO OBTAIN THE UTILITY LAYOUT PER UDC SECTION 35-606 (O)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.

[illegible]

**PAPE-DAWSON
ENGINEERS**

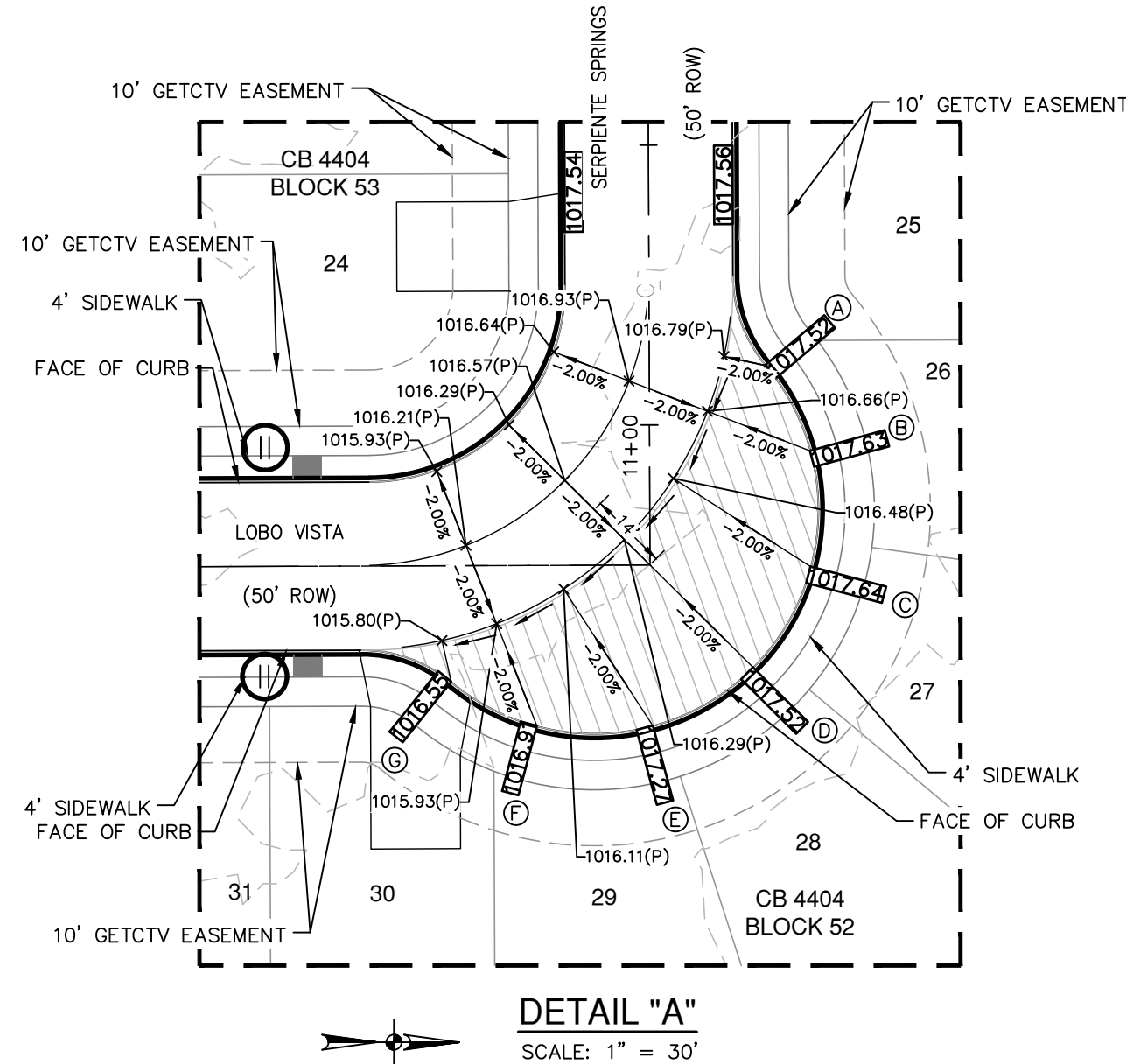
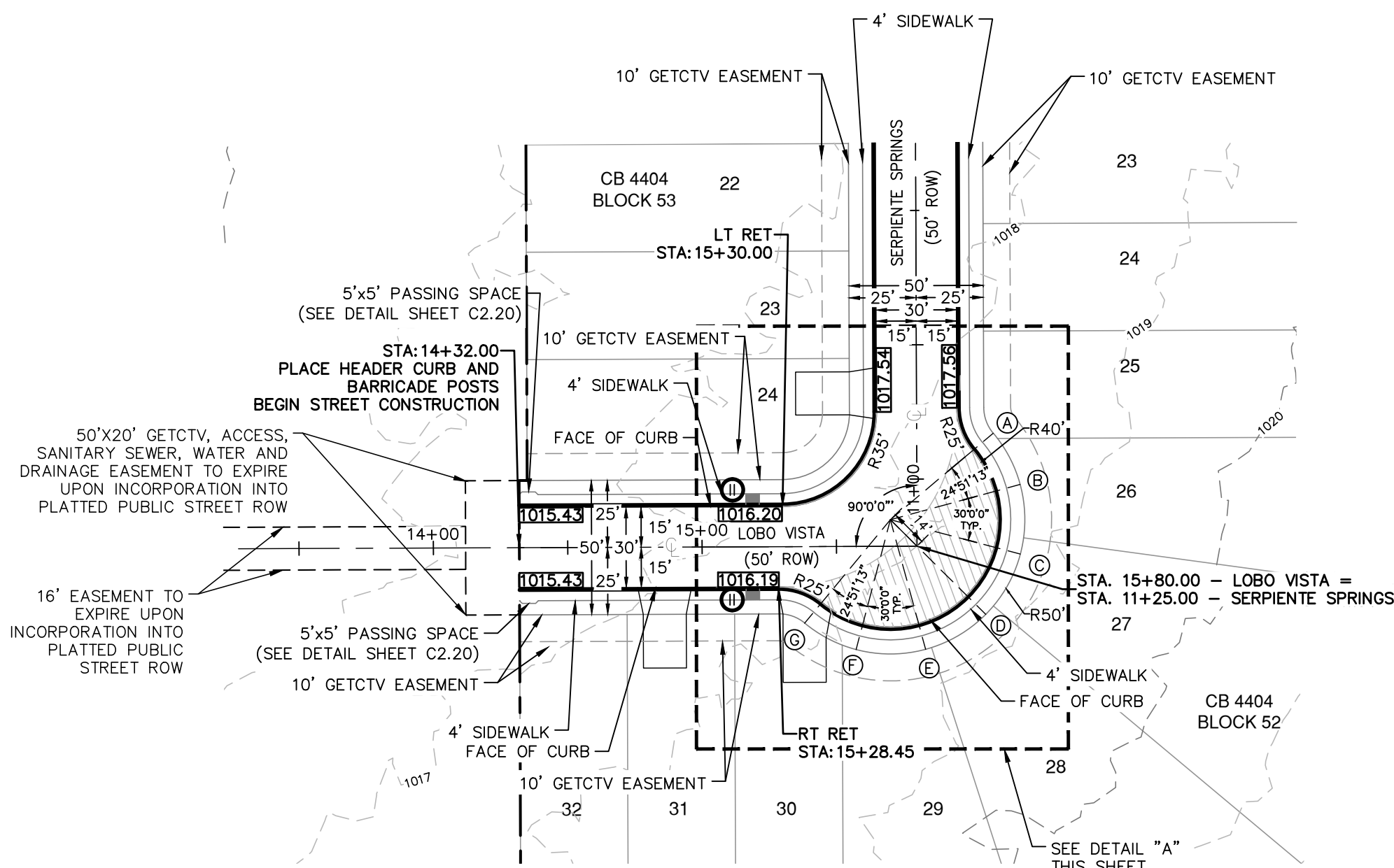
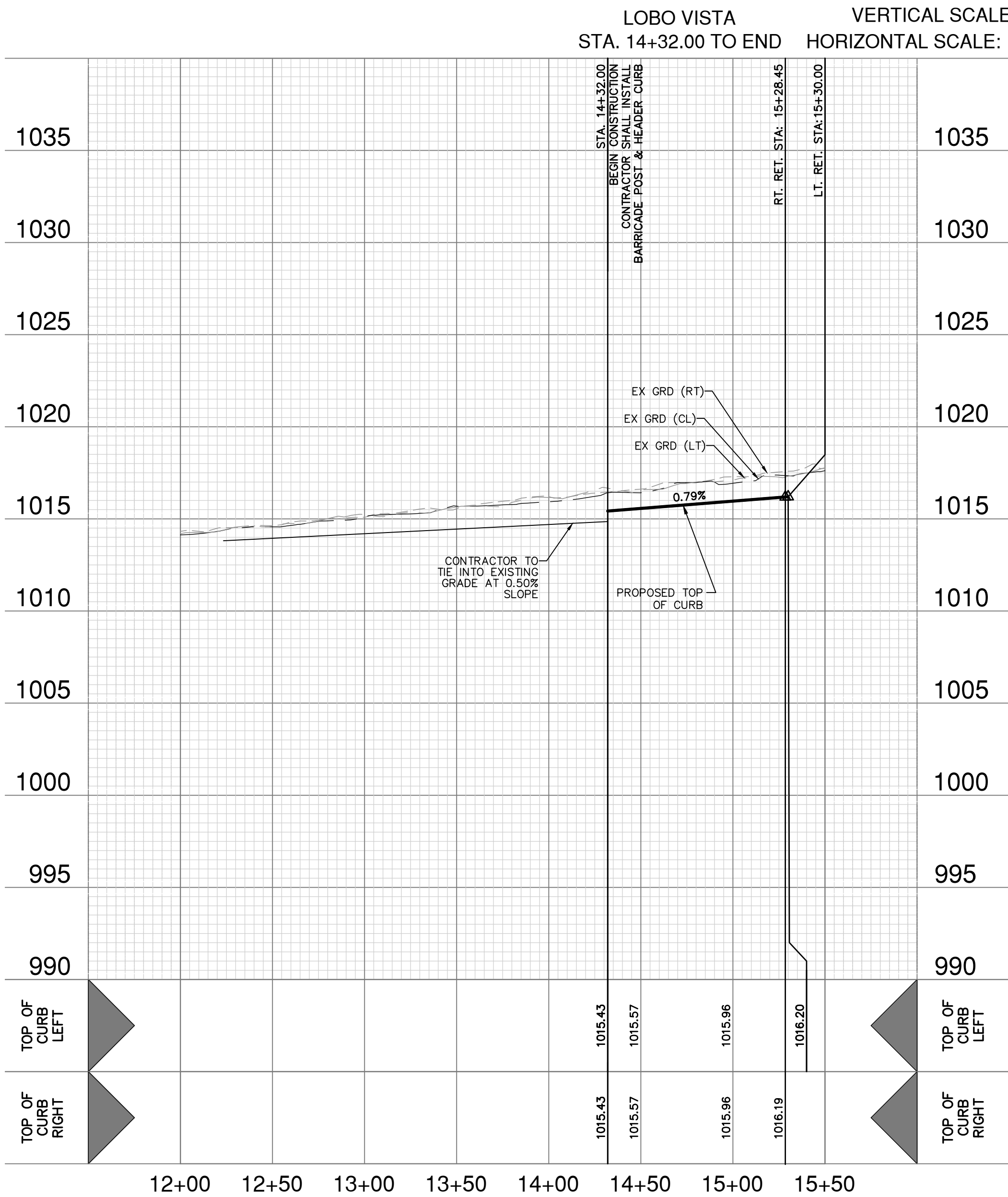
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
CAMELLO CREST

PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET C2.02

Date: May 30, 2025, 4:43pm User: D:\mrcodes
File: P:\16168\24\Design\Chal\ST-1166824_Lobo_Vista.dwg

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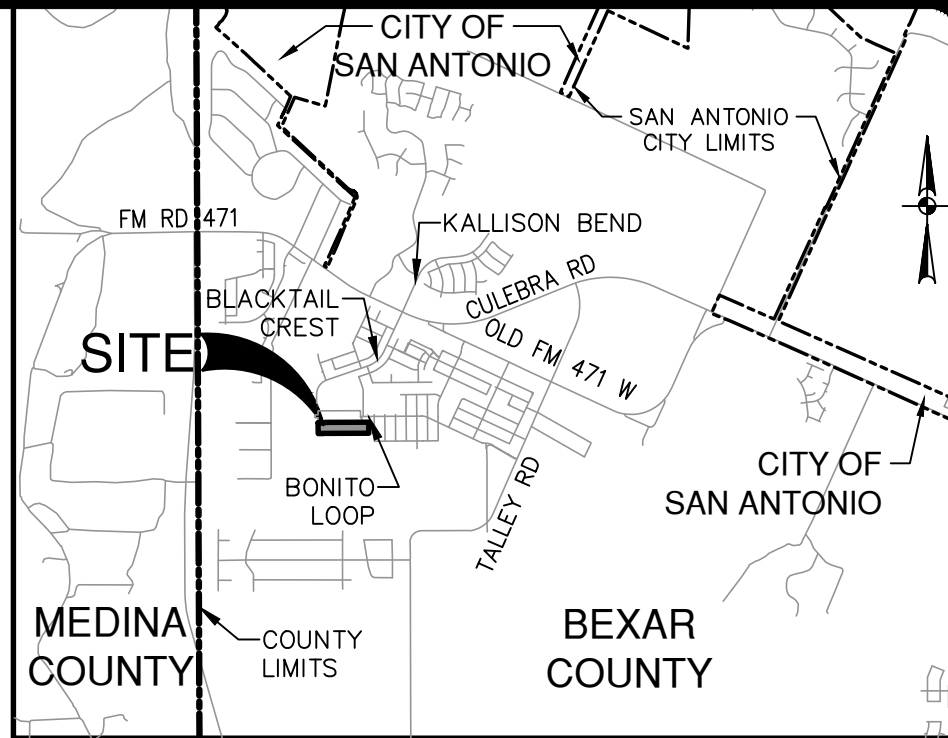


STREET LEGEND

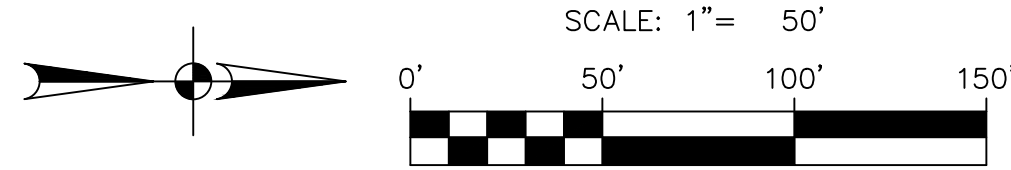
PROJECT LIMITS	—
WHEELCHAIR RAMP	○
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
TOP OF CURB SPOT ELEVATION	[857.30]
WASHOUT CROWN SECTION	[Hatched Box]
PROPOSED SIDEWALK (BY HOMEBUILDER — SEE DETAIL SHEET C2.10)	[Box]
PROPOSED CONCRETE SIDEWALK (BY SITE CONTRACTORS — SEE DETAIL SHEET C2.10)	[Box]
DRIVEWAY	[Box]

STREET NOTES:

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
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- 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 (O)(6).
- THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN.



LOCATION MAP
NOT-TO-SCALE



PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

LOBO VISTA

PAPE-DAWSON
ENGINEERS

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



NO.	REVISION	DATE

PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DESIGNER	AR
CHECKED	BC
DRAWN	RP
SHEET	C2.03

RECOMMENDED NOTES & PAVEMENT SECTION

NOTES AND DESIGN BASED ON THE MINIMUM REQUIREMENTS OF THE UDC AND THE GEOTECH ENGINEERING REPORT PREPARED BY INTEC, PROJECT NO. S181355-P-R1 DATED NOVEMBER 16, 2020. FOR PAVEMENT MATERIAL AND CONSTRUCTION REQUIREMENTS, CONTRACTOR SHALL MEET OR EXCEED ALL PAVEMENT RECOMMENDATIONS.

PAVEMENT SECTION DETAIL CBR=2							
STREET NAME	CLASSIFICATION	STATION	TYPE "D" HMAC SURFACE TXDOT ITEM 340, in.	TYPE "C" HMAC SURFACE TXDOT ITEM 340, in.	AGGREGATE BASE, in. (TXDOT ITEM 247 TYPE A GRADE 1 OR 2)	STABILIZED SUBGRADE	STRUCTURAL NUMBER
CAMELLO CREST	LOCAL B	11+50.00 TO 12+80	1.5"	2.5"	18.5"	8"	4.99
ABEJA AVE	LOCAL B	11+65.50 TO END	1.5"	2.5"	18.5"	8"	4.99
LOBO VISTA	LOCAL A	14+32.00 TO END	2"	—	11"	6"	2.90
SERPIENTE SPRINGS	LOCAL A	1+00.00 TO END	2"	—	11"	6"	2.90

SUBGRADE NOTES (*):

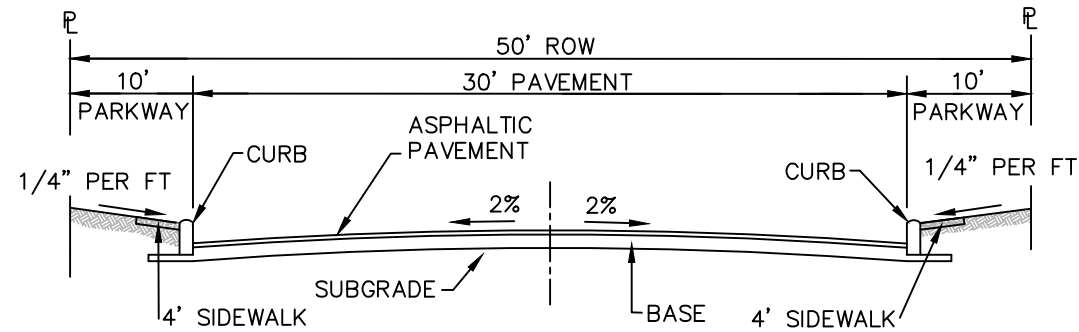
- THE SUBGRADE PLASTICITY INDEX VALUE IS EXPECTED TO BE GREATER THAN 20. SUBGRADE STABILIZATION IS NEEDED.
 - THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO STABILIZATION. IF THE SOIL SULFATE CONTENT IS HIGH, AN ALTERNATE PROCEDURE WILL BE NEEDED.
 - LIME STABILIZATION TO A DEPTH OF 6 OR 8 INCHES AS NOTED ABOVE BASED ON AN APPLICATION RATE OF 7 PERCENT OF THE DRY WEIGHT OF THE SOIL TO BE TREATED.
 - LIME APPLICATION RATE OF 30 LBS PER SQ YARD FOR 6-INCH DEPTH OF STABILIZATION IS RECOMMENDED.
 - LIME APPLICATION RATE OF 39 LBS PER SQ YARD FOR 8-INCH DEPTH OF STABILIZATION IS RECOMMENDED.
 - THE SUBGRADE SHOULD BE PROOF ROLLED TO IDENTIFY SOFT AREAS BEFORE STABILIZATION.
 - IF FILL IS USED TO RAISE THE GRADE, APPROVED FILL MATERIAL UNDERNEATH THE PAVEMENT SHOULD BE USED. THE FILL SHOULD BE FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.0 AND THE PLASTICITY INDEX VALUES OF 65 OR LESS. LIME APPLICATION RATES SHOULD BE RE-EVALUATED AND SULFATE CONTENT TESTED FOR THE MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.
- NOTES (**)
- INPUT PARAMETERS ARE SHOWN TABLE NO. 6. PLEASE CALL US TO PROVIDE PAVEMENT RECOMMENDATIONS, IF NEEDED, FOR DIFFERENT INPUT VALUES.
 - IF REPETITIVE TRUCK OR HEAVY TRUCK TRAFFIC IS ANTICIPATED, PLEASE CONTACT US FOR REVISED PAVEMENT RECOMMENDATIONS.
 - PAVEMENT SECTION RECOMMENDATIONS ARE BASED ON A CBR VALUE OF 2.0. THE PAVEMENT RECOMMENDATIONS ARE NOT BASED ON THE SHRINK / SWELL CHARACTERISTICS OF THE UNDERLYING SOILS. IF WATER IS ALLOWED TO GET UNDERNEATH THE ASPHALT / CONCRETE OR IF MOISTURE CONTENT OF THE BASE OR SUBGRADE CHANGES SIGNIFICANTLY, THEN PAVEMENT DISTRESS WILL OCCUR. MOISTURE PENETRATION UNDERNEATH THE ASPHALT PAVEMENT SURFACE MAY BE REDUCED BY USING DEEPER CURBS' CURBS EXTENDING A MINIMUM OF 6 INCHES INTO SUBGRADE.
 - THE PAVEMENT CAN EXPERIENCE CRACKING AND DEFORMATION DUE TO SHRINKAGE AND SWELLING CHARACTERISTICS OF THE SOILS AS DESCRIBED IN THE VERTICAL MOVEMENTS SECTION OF THIS REPORT. USE OF GEOGRID WILL HELP REDUCE SHRINK/SWELL RELATED CRACKING.

FOR CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED IN THE FIELD:

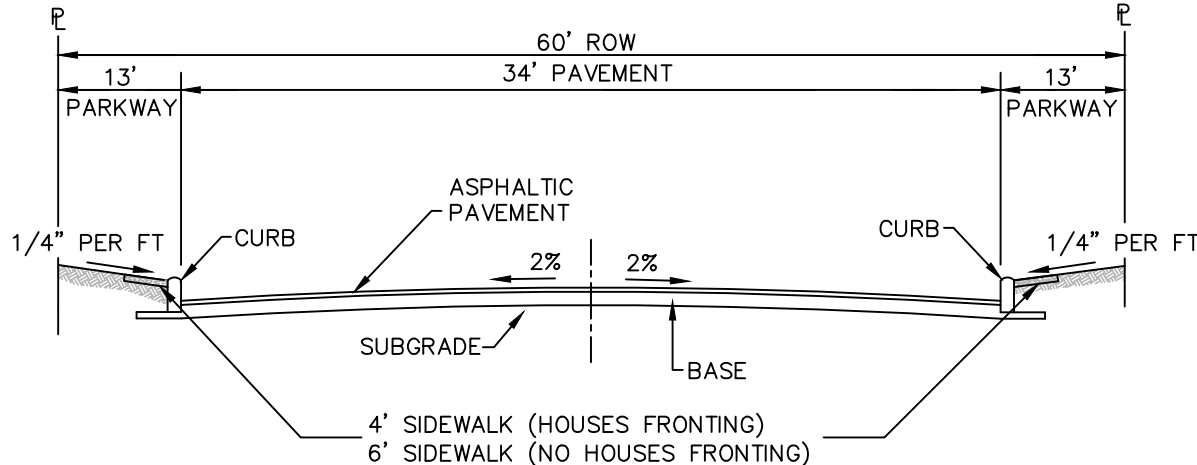
- AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING;
- AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE 1/2 INCH SIEVE FROM THE SAMPLE):

MINIMUM PASSING 1 1/2" SIEVE	100
MINIMUM PASSING 3/4" SIEVE	85
MINIMUM PASSING NO. 4 SIEVE	60
- SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED ABOVE FOR MIXTURE DESIGN.
- COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED);
- CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
- VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN ±1.0 INCH.

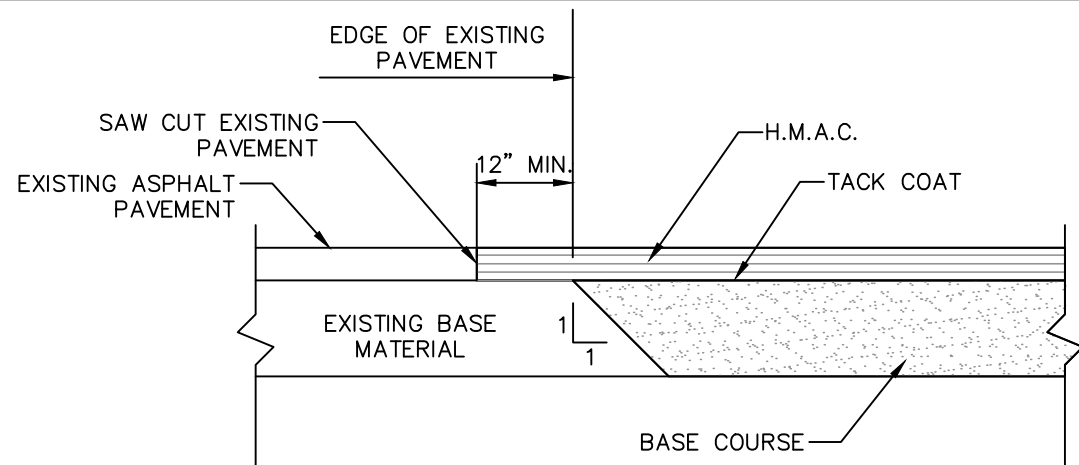
- PAVEMENT DESIGN THICKNESS BASED ON GEOTECHNICAL REPORT. SEE TABLE FOR STRUCTURAL NUMBER CALCULATION. REFERENCE PROJECT GEOTECHNICAL REPORT AND PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS AND ALTERNATE PAVEMENT SECTIONS.
- A GEOTECHNICAL ENGINEERING REPRESENTATIVE SHALL BE RETAINED TO: (1) OBSERVE THE SITE PREPARATION AND SUBGRADE OPERATIONS; (2) EVALUATE THE ACTUAL SUBGRADE MATERIAL CLASSIFICATION; AND (3) VERIFY THAT RECOMMENDATIONS ARE FOLLOWED. THE ACTUAL SUBGRADE CONDITION AT A PARTICULAR LOCATION WILL NEED TO BE EVALUATED DURING CONSTRUCTION ONCE THE SUBGRADE IS CUT/FILLED TO THE PROPER GRADE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING MATERIAL TESTING. TESTING TO BE PAID BY OWNER.
- CONTRACTOR MAY LEAVE VERTICAL CUT BANKS AT R.O.W. LINE AND MEDIANS PROVIDED PROJECT GEOTECHNICAL ENGINEER DETERMINES ROCK IS COMPETENT TO STAND ON ITS OWN.
- IF ALTERNATE PAVEMENT SECTION CHOSEN, BEXAR COUNTY SHALL BE PROVIDED WITH REVISED CONSTRUCTION PLANS INDICATING SELECTED PAVEMENT DESIGN PRIOR TO CONSTRUCTION.
- PAVEMENT SECTIONS ARE SUBJECT TO CHANGE DUE TO RETESTING OF SOIL AFTER STREET EXCAVATION HAS BEEN DONE TO TOP OF CURB.
- CONTRACTOR SHALL CONTACT ENGINEER 24 HRS IN ADVANCE FOR FIELD OBSERVATION DURING STREET CONSTRUCTION. CONTRACTOR WILL BE REQUIRED TO CONTACT ENGINEER FOR INSPECTION OF THE SUBGRADE, BASE, ASPHALT, AND CURB.



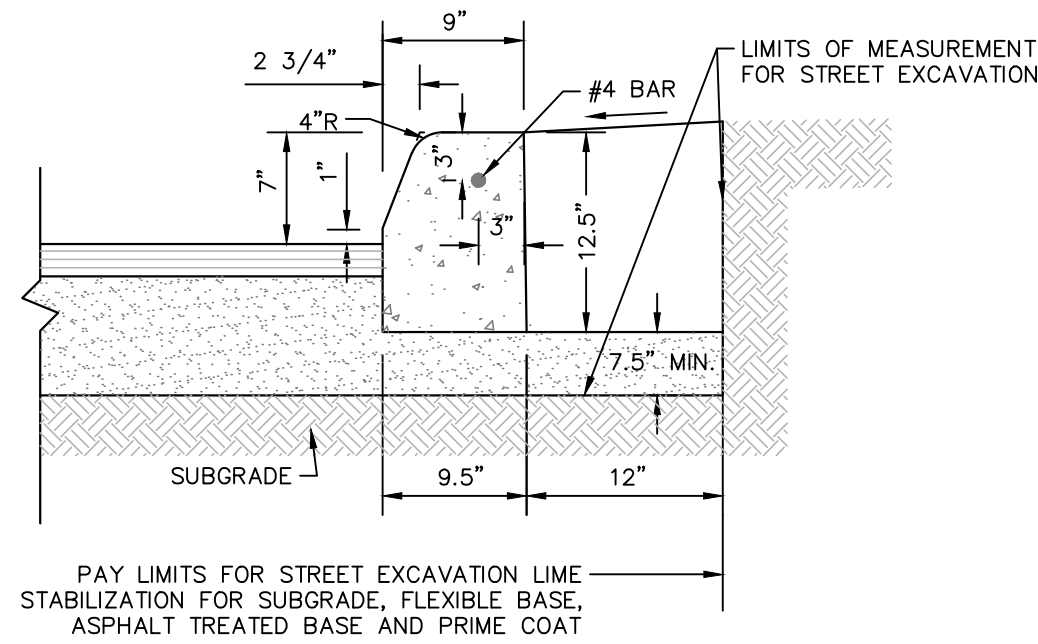
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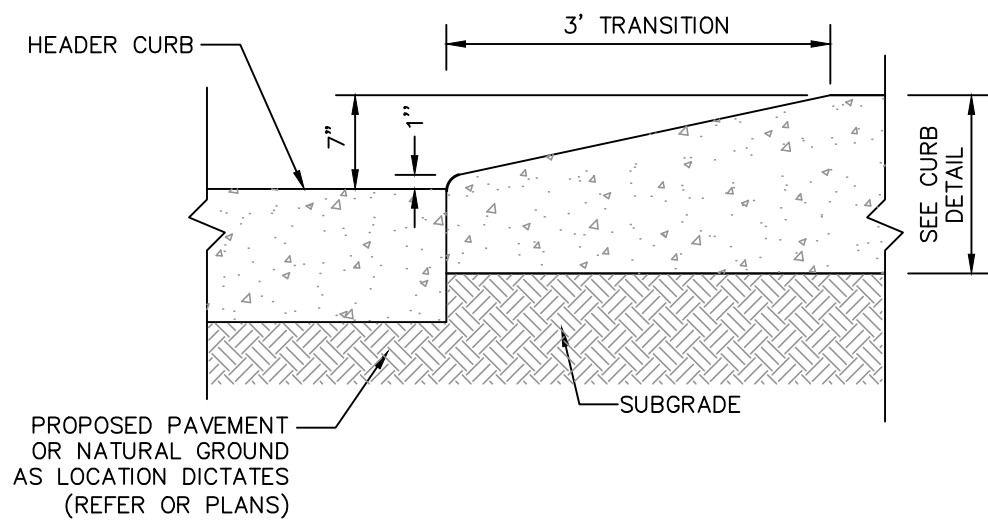
LOCAL B STREET SECTION
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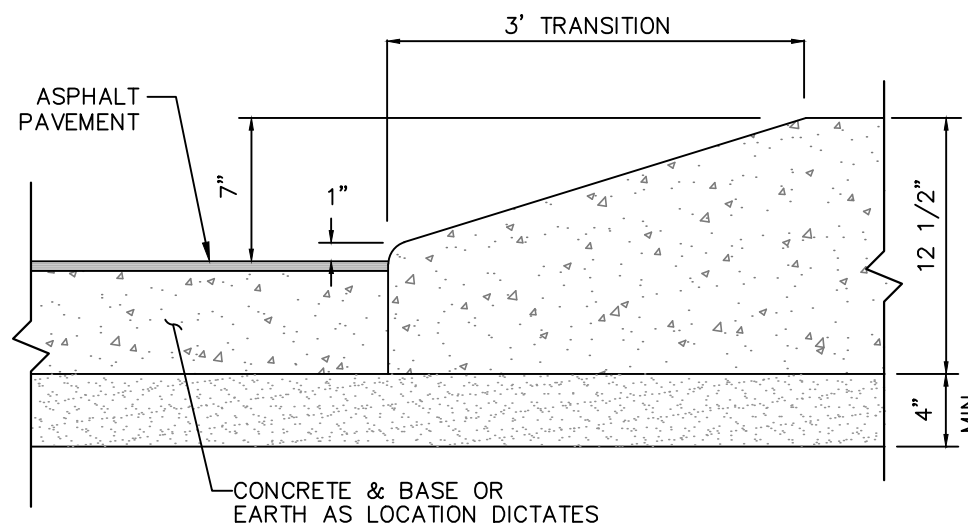
ASPHALT/ASPHALT JUNCTURE DETAIL
NOT-TO-SCALE



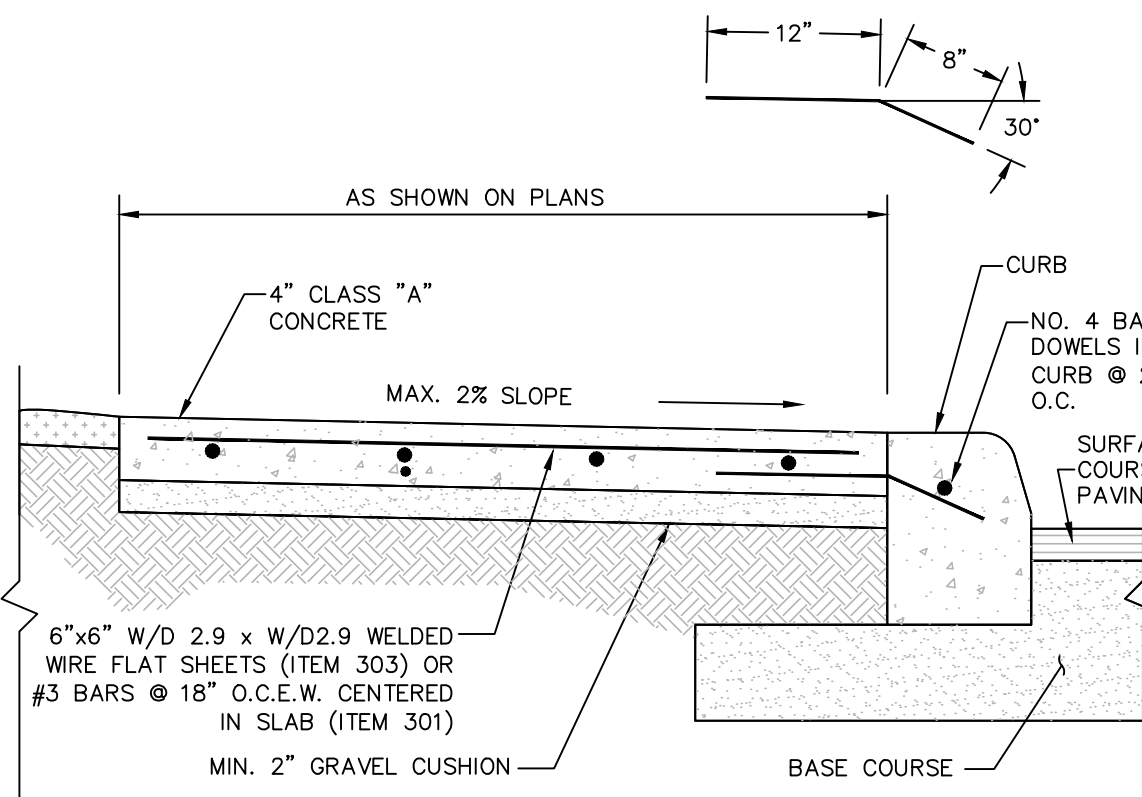
CONCRETE CURB DETAIL
NOT-TO-SCALE



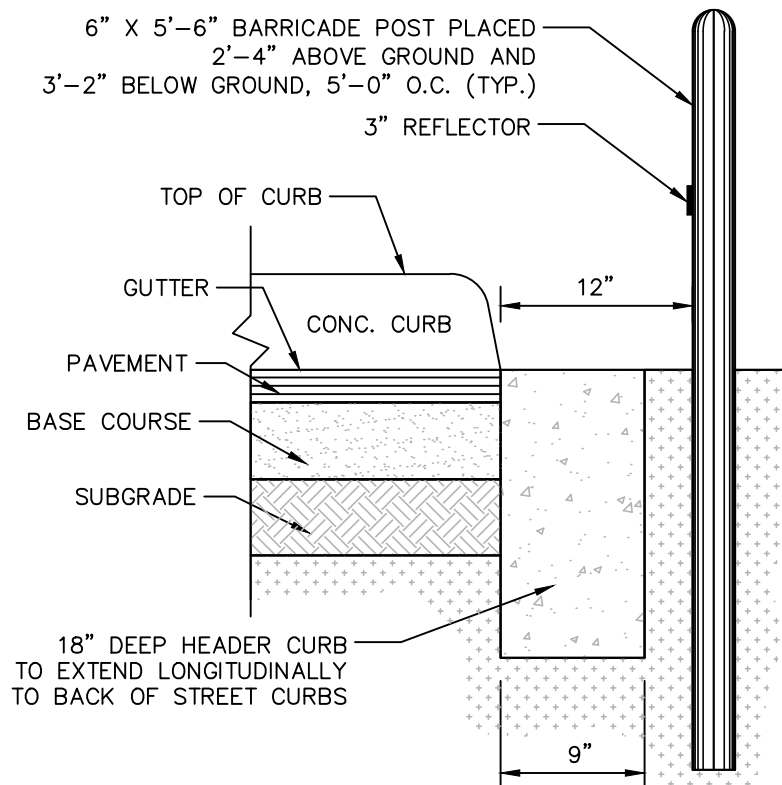
CURB TRANSITION DETAIL
(FROM HEADER CURB TO STANDARD CURB)
NOT-TO-SCALE



CURB TRANSITION DETAIL
(FROM PAVEMENT TO STANDARD CURB)
NOT-TO-SCALE

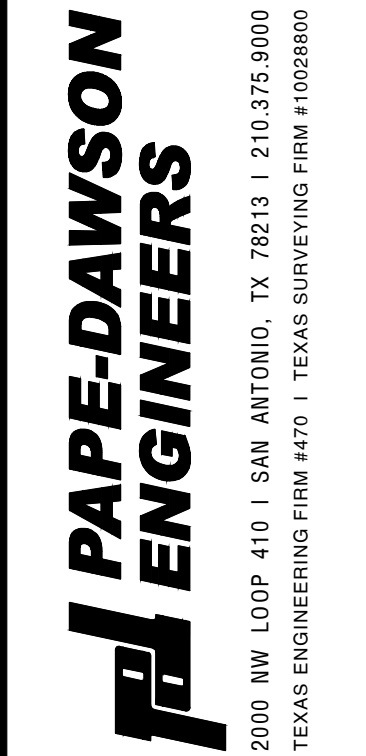


SIDEWALK DETAIL
NOT-TO-SCALE



HEADER CURB & BARRICADE POST DETAIL
NOT-TO-SCALE

DATE	
NO.	
REVISION	

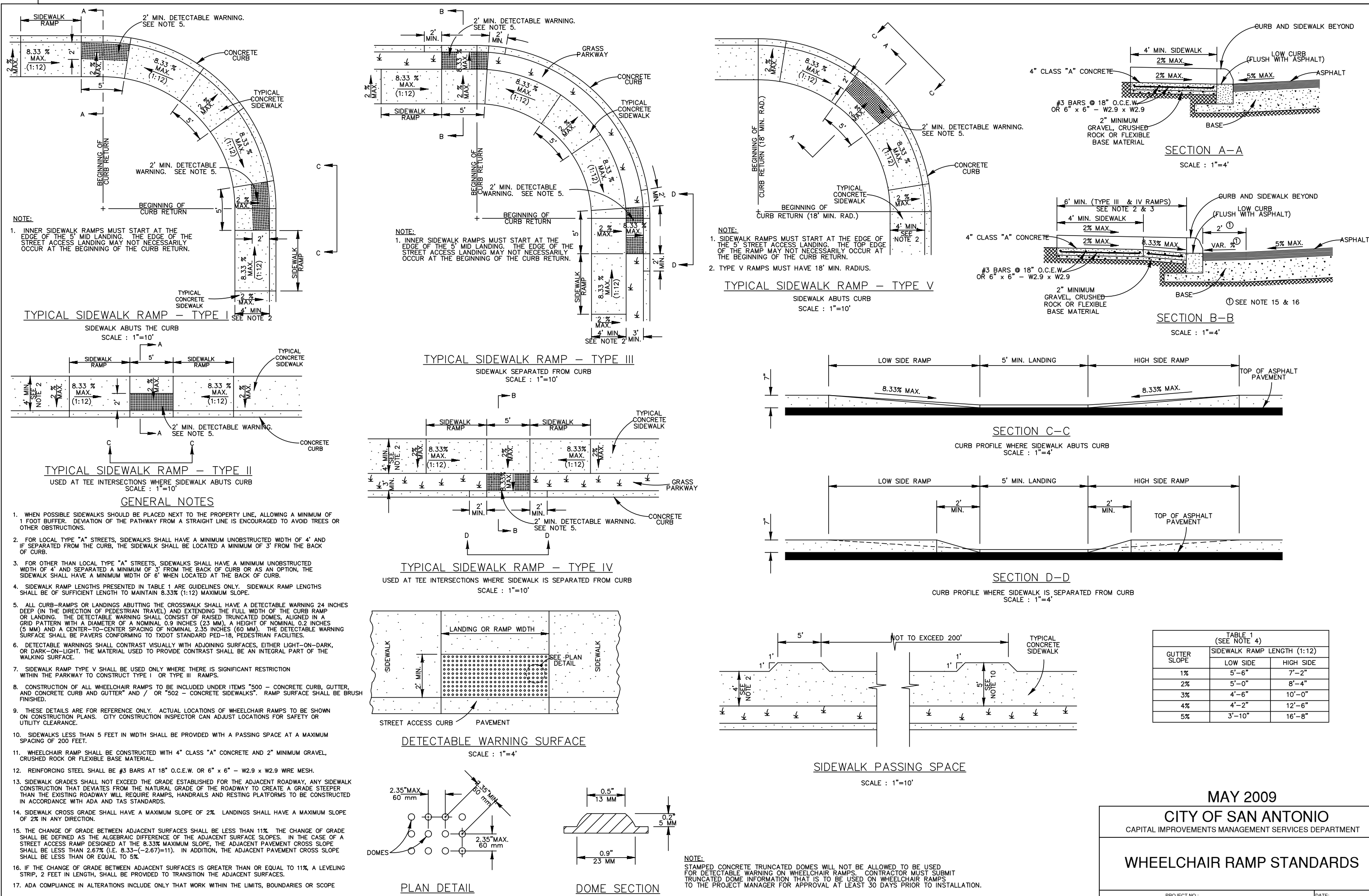
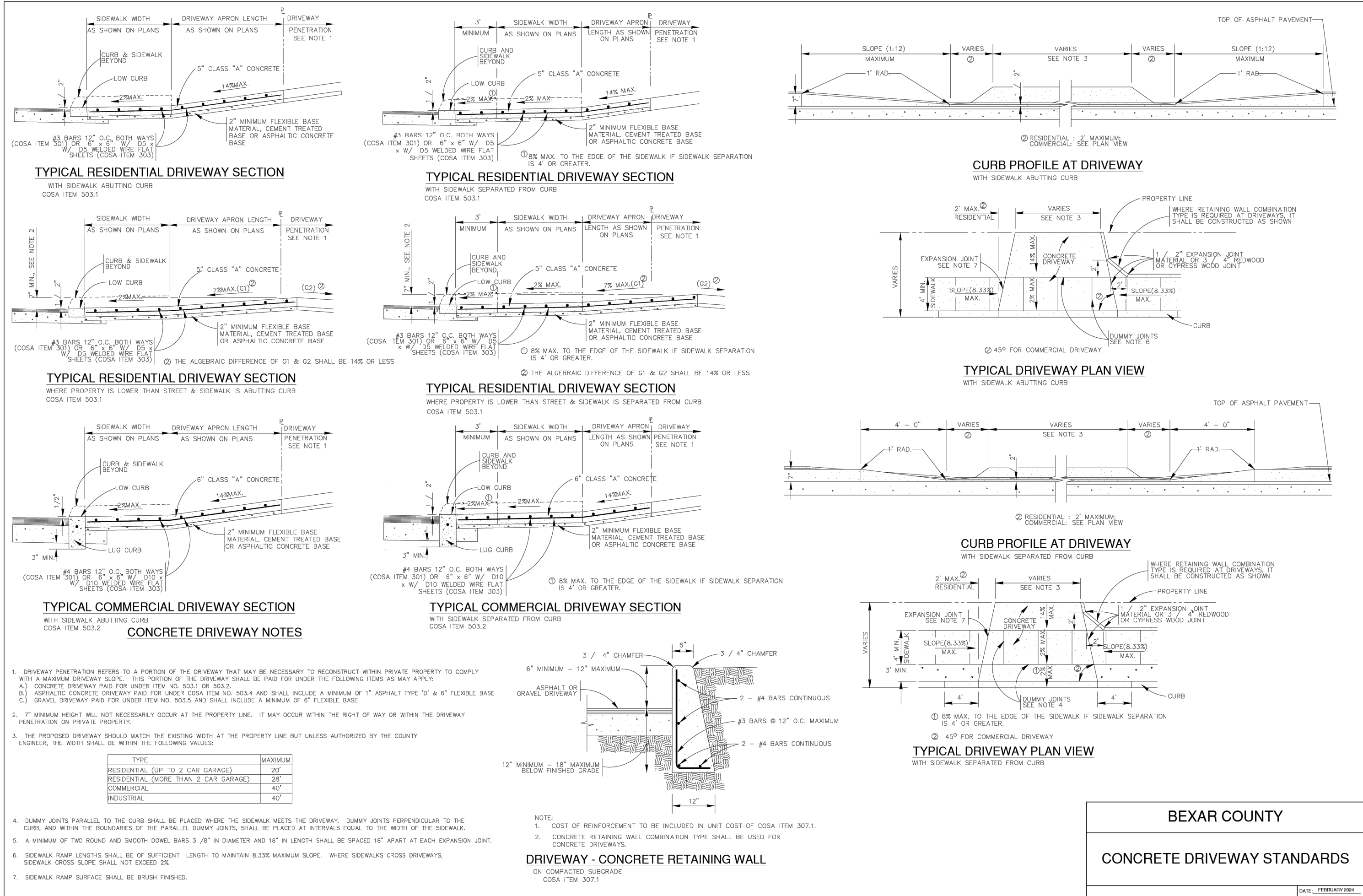


PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
STREET DETAILS
(SHEET 1 OF 2)

PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DESIGNER	AR
CHECKED	BC
DRAWN	RP
SHEET	C2.10

Date: May 21, 2025, 4:32pm User: ID: cpep@pape-dawson.com
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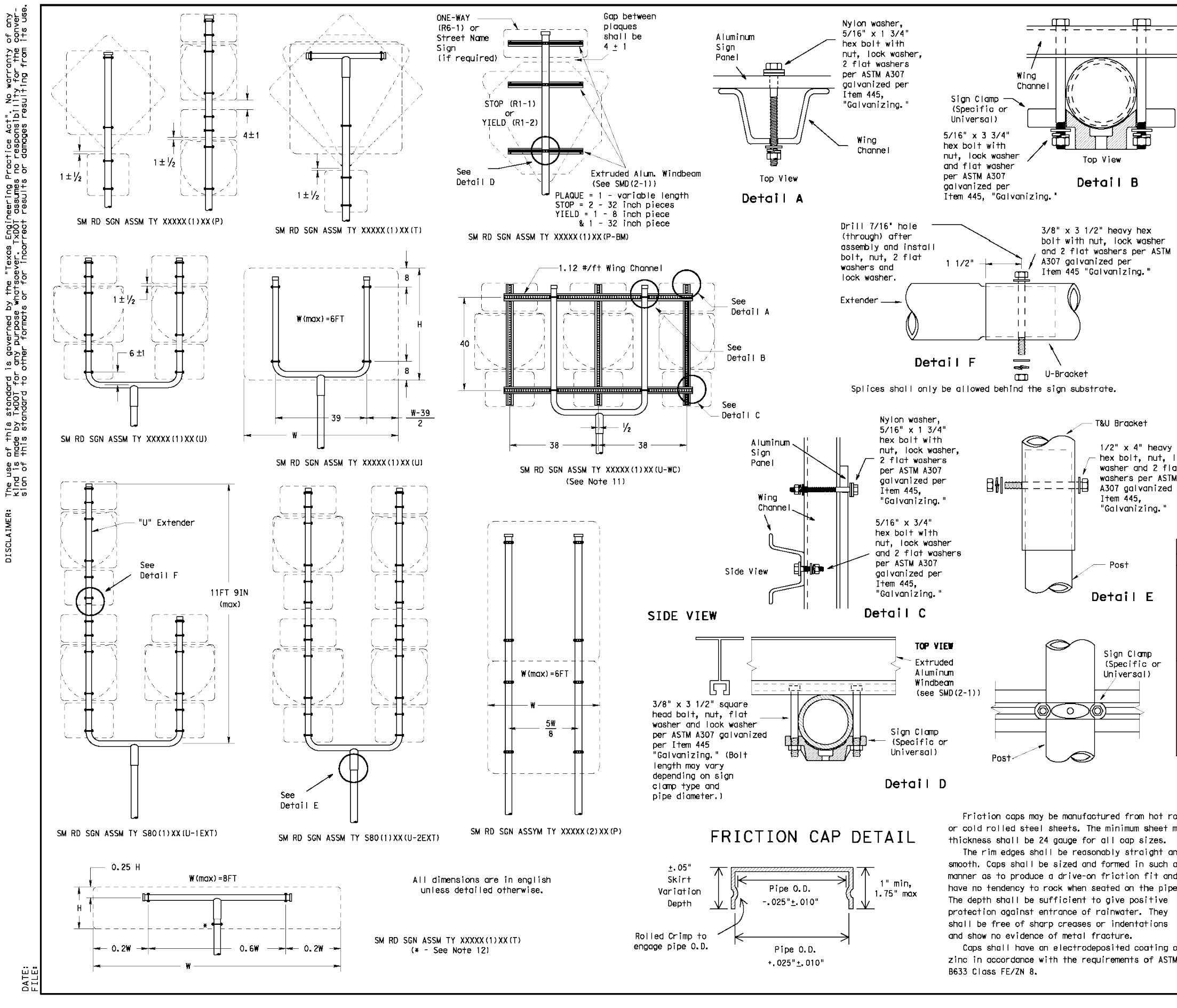
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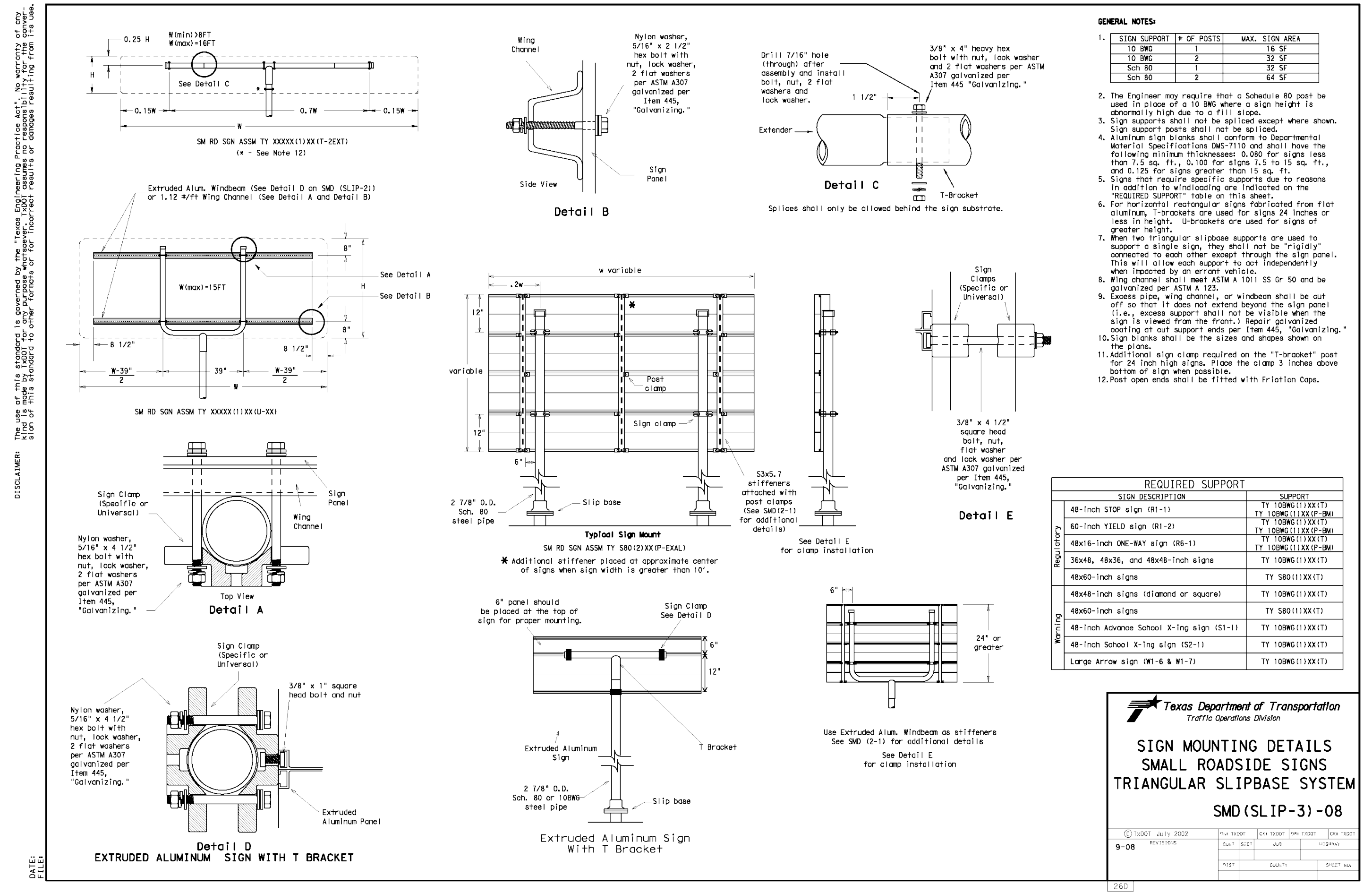
PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
STREET DETAILS
(SHEET 2 OF 2)

PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET C2.20

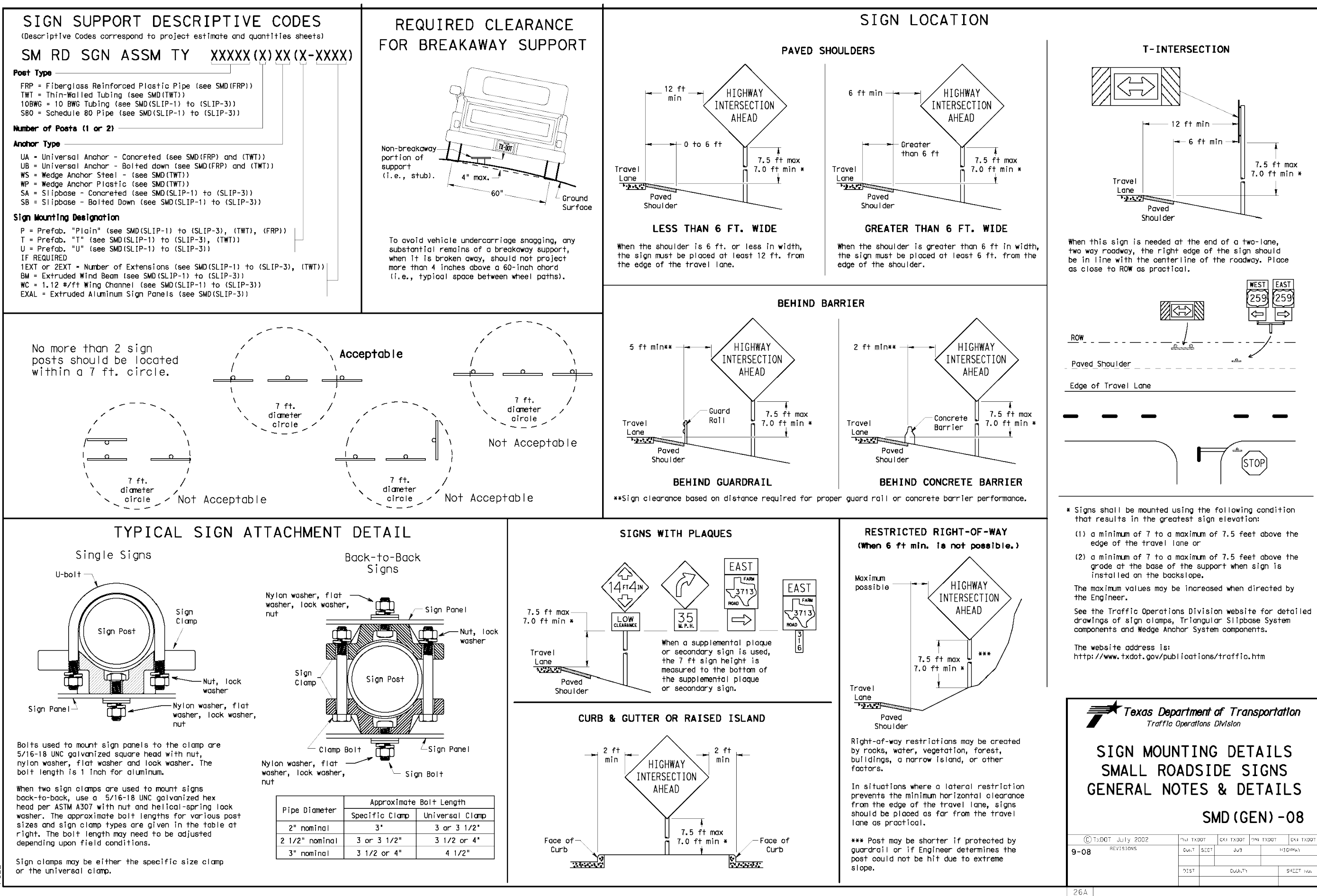
MAY 2009
CITY OF SAN ANTONIO
CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT
WHEELCHAIR RAMP STANDARDS
PROJECT NO. _____ DATE _____
DRAWN BY: B.S. HOSSEN, P.E. SHEET NO. _____ OF _____



Texas Department of Transportation Traffic Operations Division				
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM				
SMD (SLIP-2)-08				
REVISION	DATE	BY	CHK	APP
9-08	09/01/08	REVISIONS	SAF	ADP
1	TEST	QUALITY	SAF	ADP

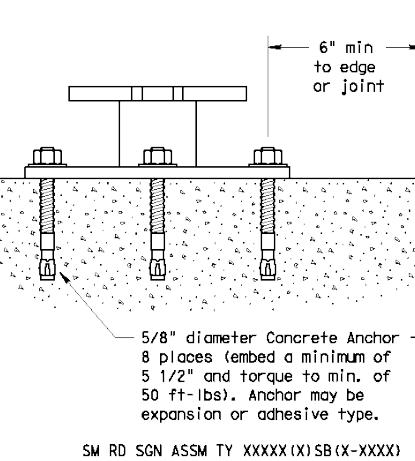


Texas Department of Transportation Traffic Operations Division				
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM				
SMD (SLIP-3)-08				
REVISION	DATE	BY	CHK	APP
9-08	09/01/08	REVISIONS	SAF	ADP
1	TEST	QUALITY	SAF	ADP

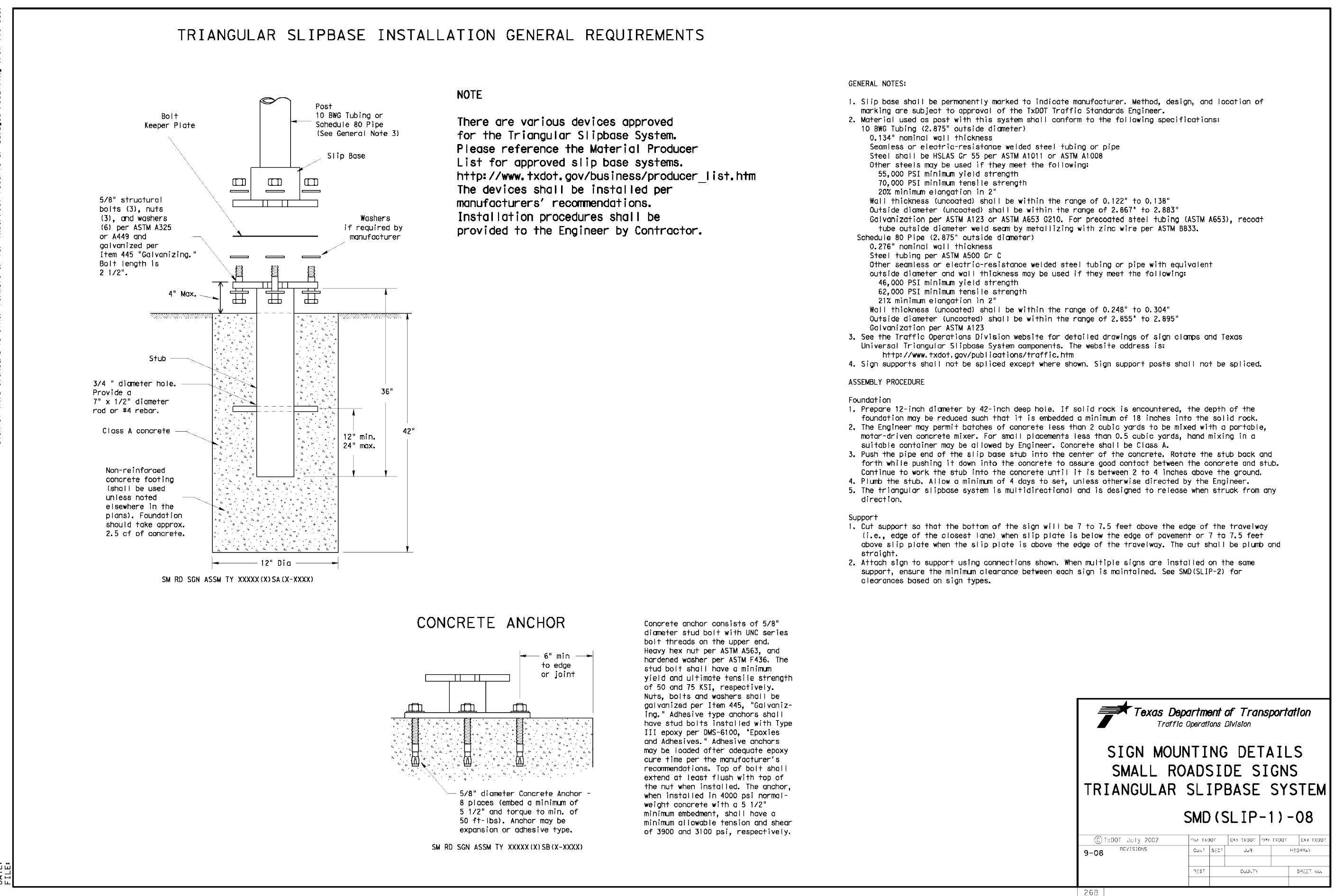


Texas Department of Transportation Traffic Operations Division				
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS				
SMD (GEN)-08				
REVISION	DATE	BY	CHK	APP
9-08	09/01/08	REVISIONS	SAF	ADP
1	TEST	QUALITY	SAF	ADP

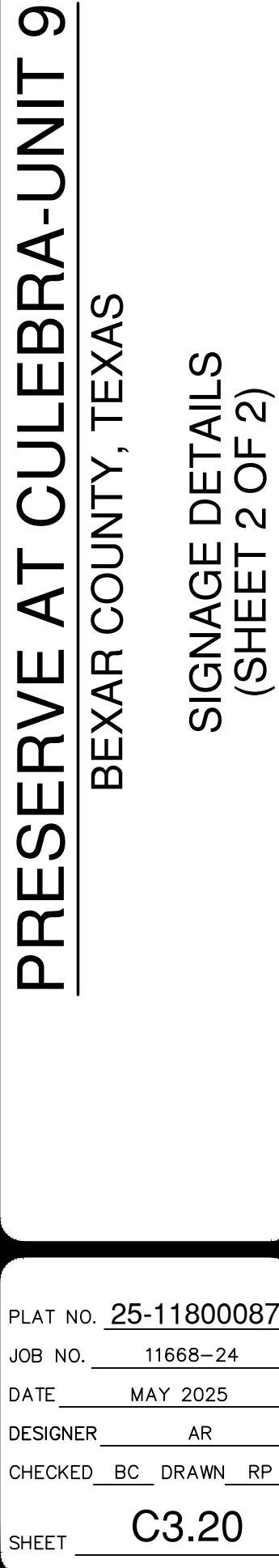
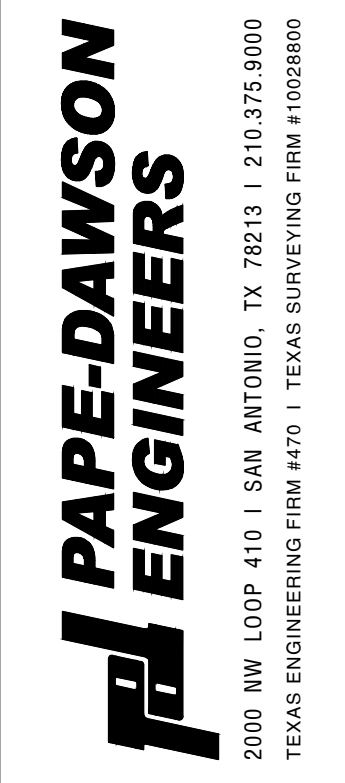
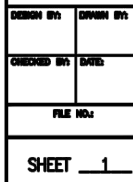
CONCRETE ANCHOR

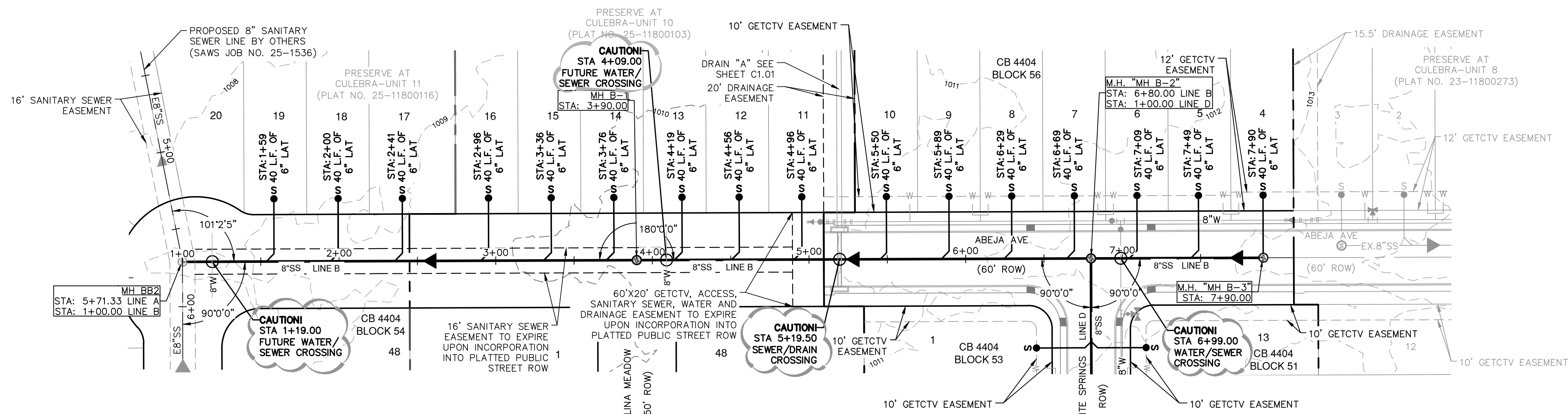


Texas Department of Transportation Traffic Operations Division				
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM				
SMD (SLIP-1)-08				
REVISION	DATE	BY	CHK	APP
9-08	09/01/08	REVISIONS	SAF	ADP
1	TEST	QUALITY	SAF	ADP



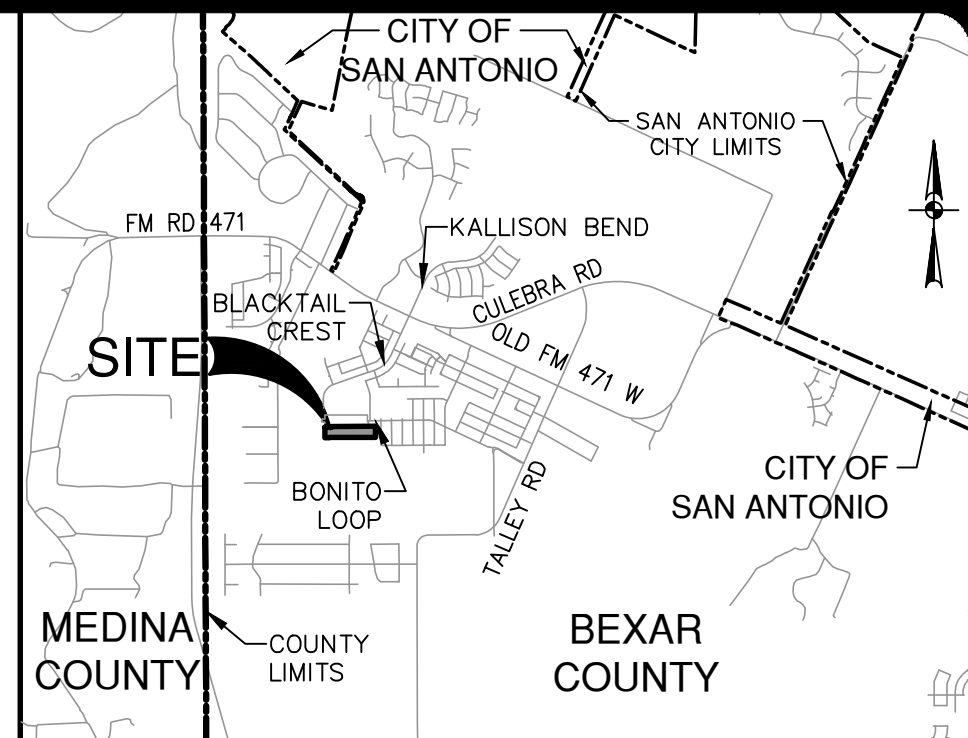
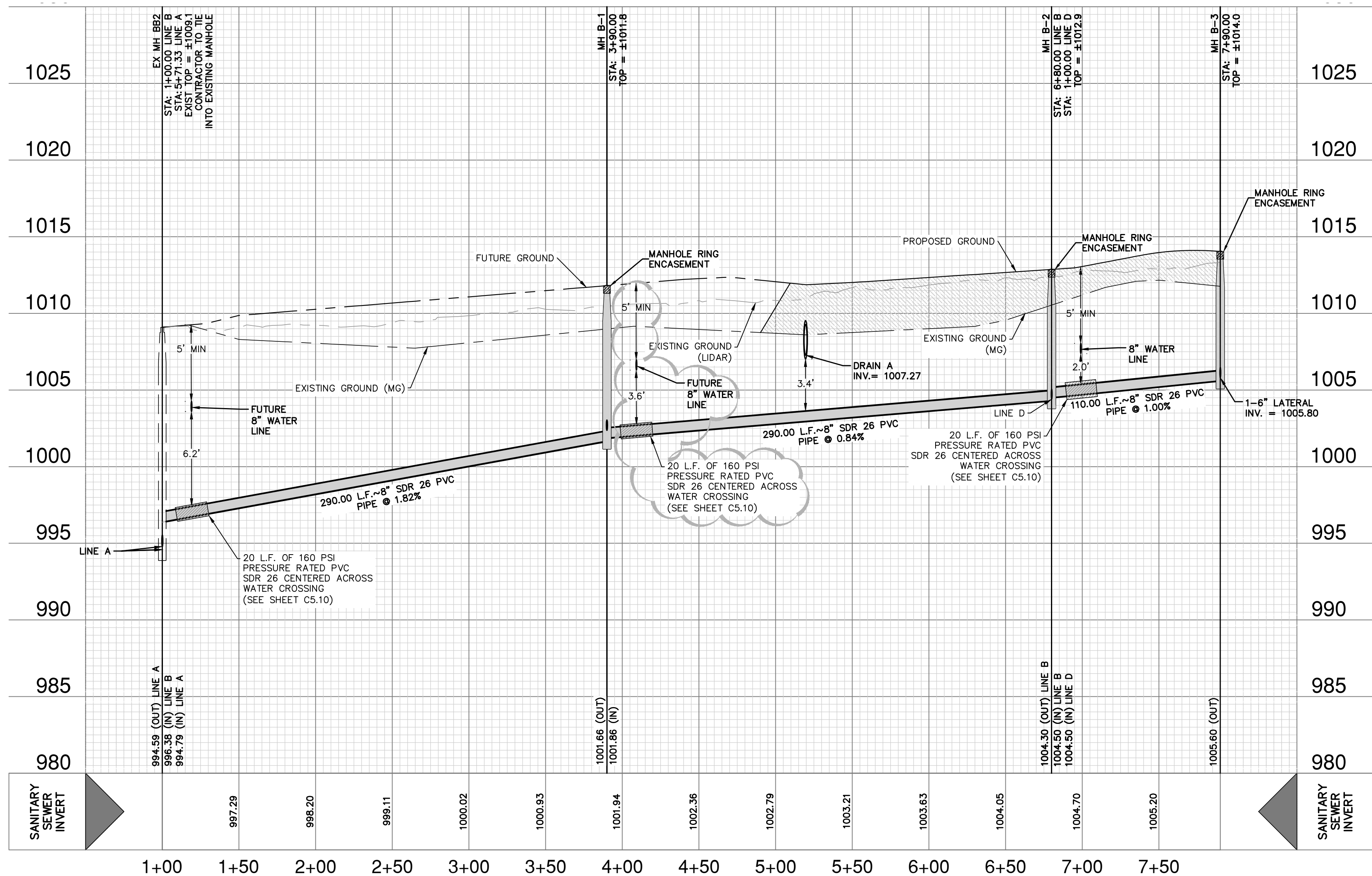
Texas Department of Transportation Traffic Operations Division				
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM				
SMD (SLIP-1)-08				
REVISION	DATE	BY	CHK	APP
9-08	09/01/08	REVISIONS	SAF	ADP
1	TEST	QUALITY	SAF	ADP





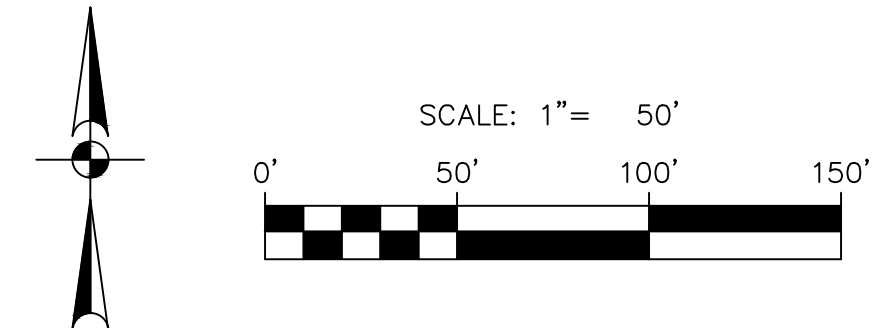
SANITARY SEWER LINE "B"
STA. 1+00.00 TO END

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

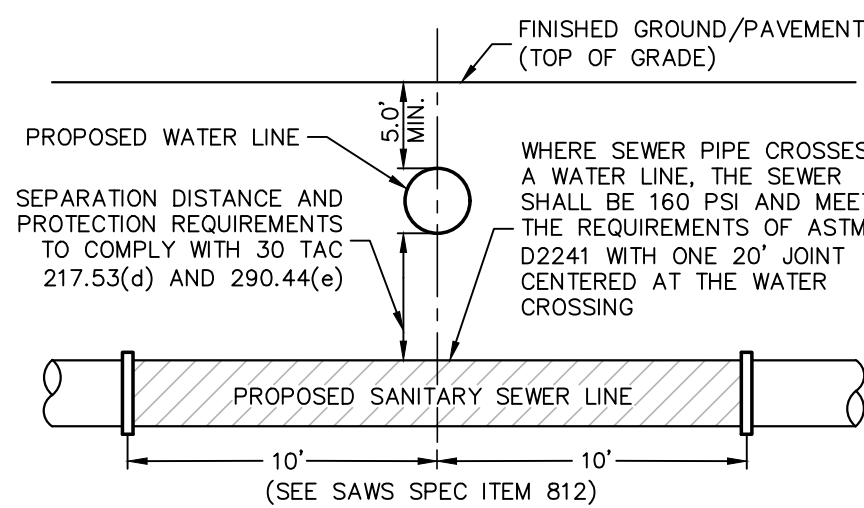
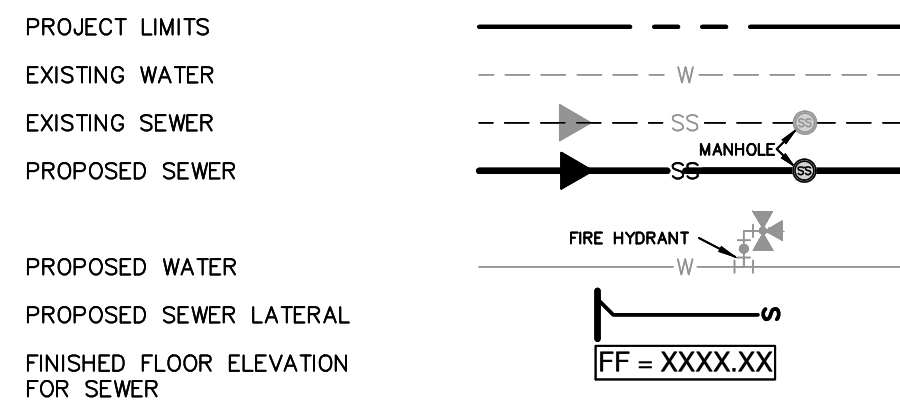


LOCATION MAP

NOT-TO-SCALE



SEWER LEGEND



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

CAUTION!!

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SEWER-WEST SEWERSHED-LEON CREEK W.R.C.

DEVELOPER'S NAME: KB HOME LONE STAR, INC.			
ADDRESS: 4800 FREDRICKSBURG ROAD			
CITY: SAN ANTONIO	STATE: TX	ZIP: 78229	
PHONE# (210) 301-5485	FAX#		
SAWS BLOCK MAP# 064610 TOTAL EDU'S 79 TOTAL ACREAGE 9.166			
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,295 LF PLAT NO. 25-11800087			
NUMBER OF LOTS 60 SAWS JOB NO. 25-1548			

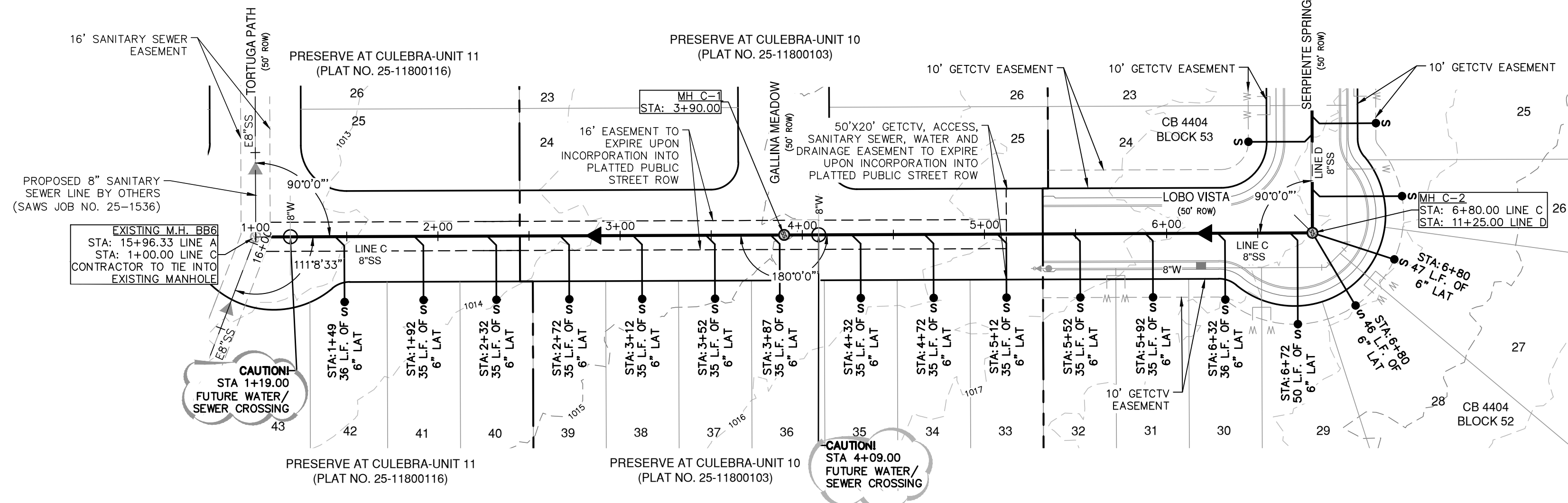
NO.	REVISION	DATE
1.	REVISED LABELS AND SAWS SEWER BLOCK	06/10/25
2.	ADDED SEWER CROSSING	06/18/25



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

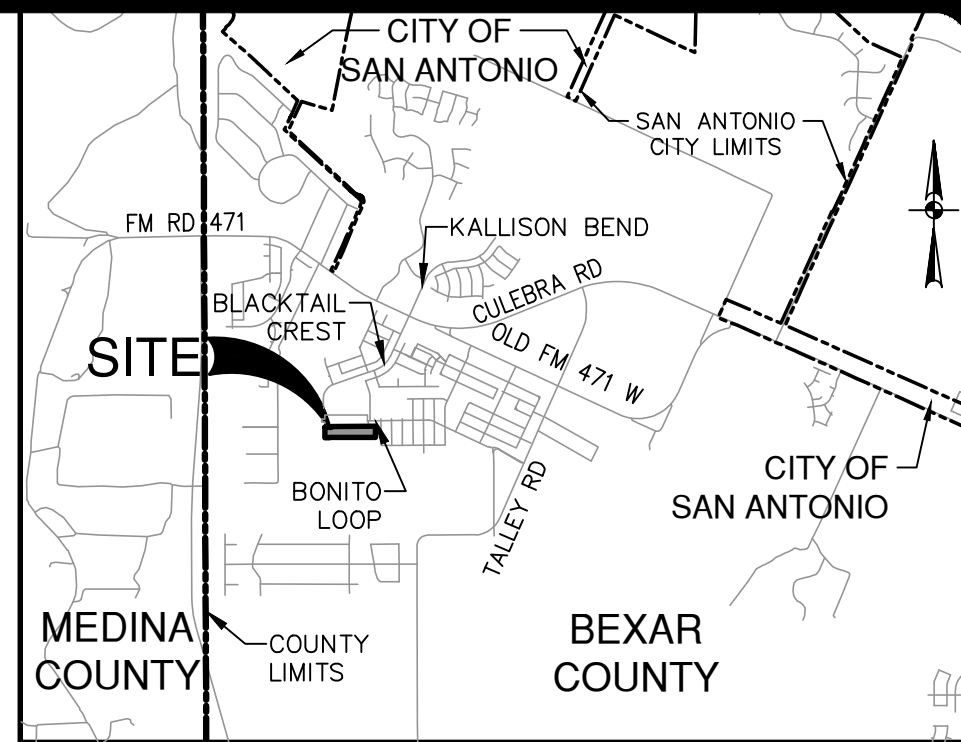
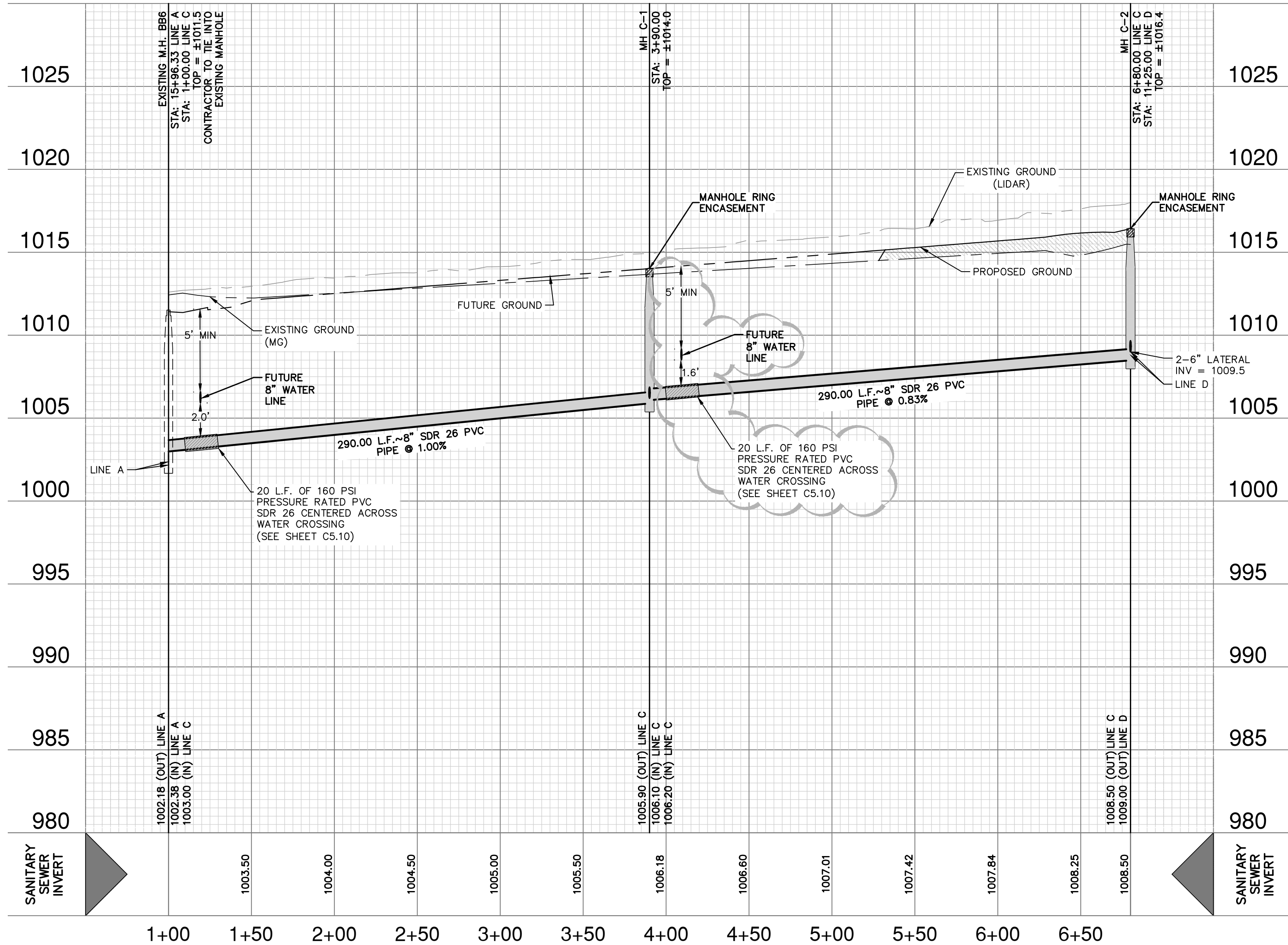
PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
SANITARY SEWERLINE B
PLAN AND PROFILE

PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DESIGNER	AR
CHECKED	BC DRAWN RP
SHEET	C4.01

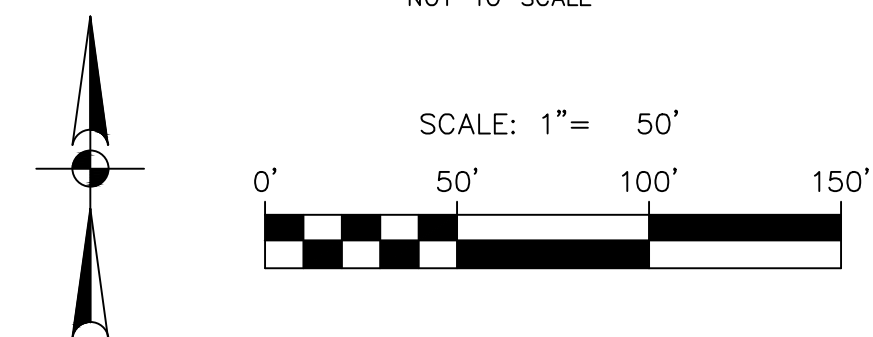


SANITARY SEWER LINE "C"
STA. 1+00.00 TO END

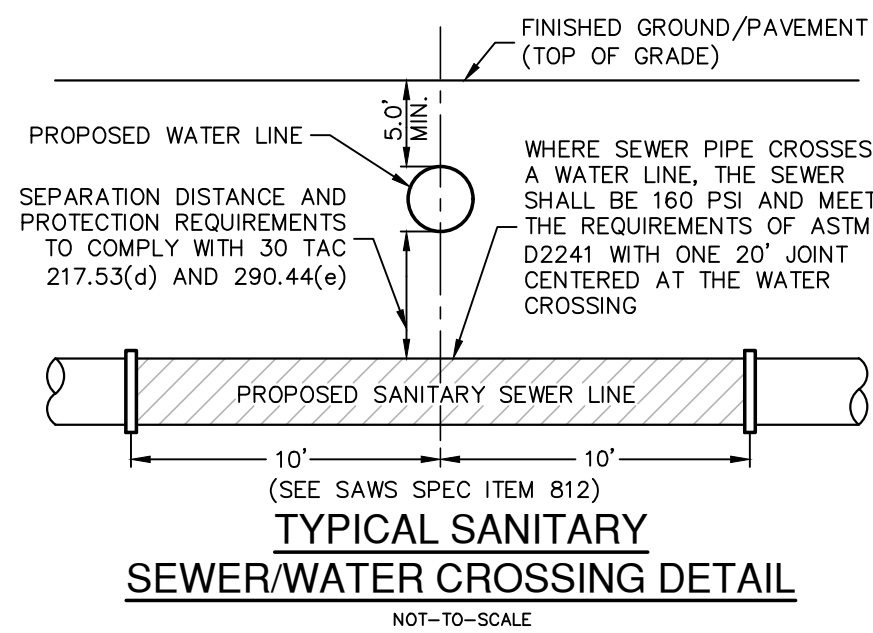
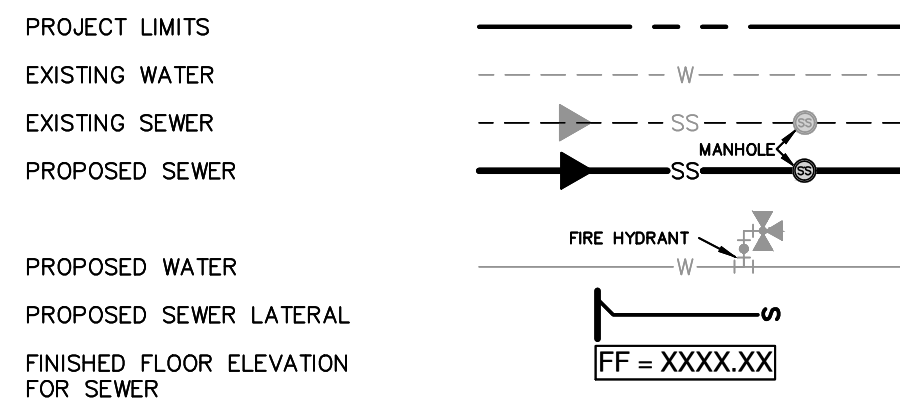
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



LOCATION MAP
NOT-TO-SCALE



SEWER LEGEND



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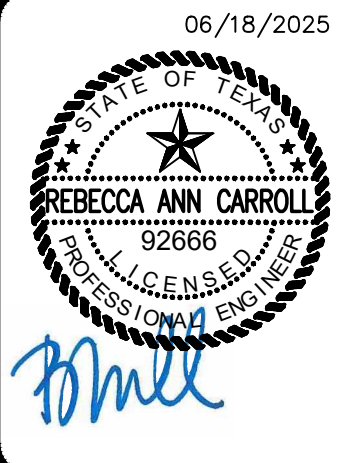
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CITY: SAN ANTONIO	STATE: TX	ZIP: 78229	
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TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,295 LF PLAT NO. 25-11800087			
NUMBER OF LOTS 60 SAWS JOB NO. 25-1548			

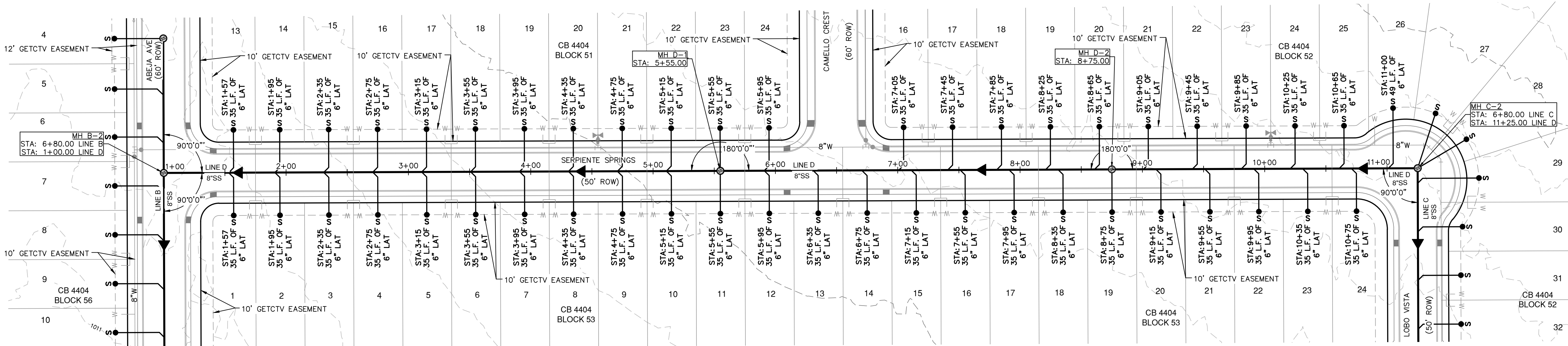
NO.	REVISION	DATE
1.	REVISED SAWS SEWER BLOCK AND LABEL	06/10/25
2.	ADDED SEWER CROSSING	06/18/25



PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
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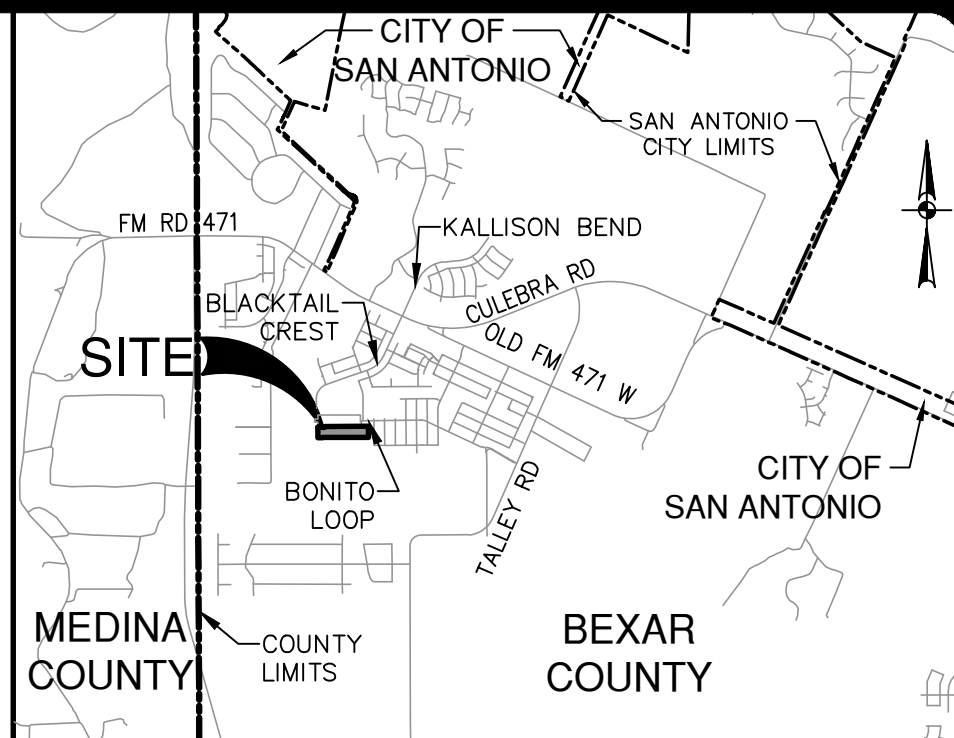
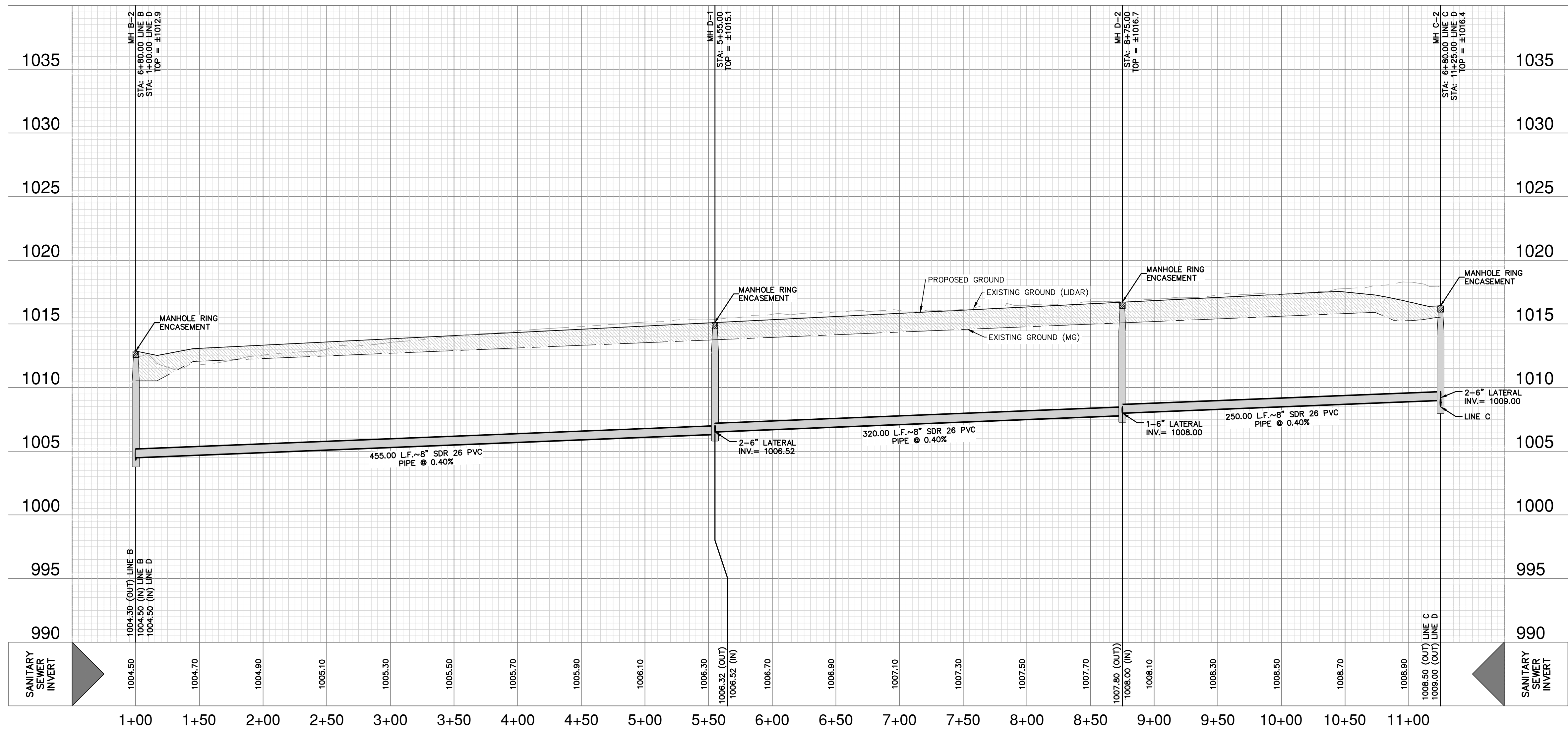
PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
SANITARY SEWERLINE C
PLAN AND PROFILE

PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DESIGNER	AR
CHECKED	BC
DRAWN	RP
SHEET	C4.02



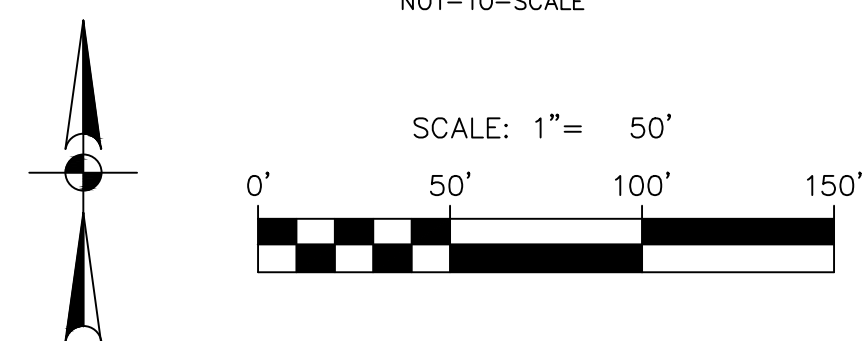
SANITARY SEWER LINE "D"
STA. 1+00.00 TO END

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

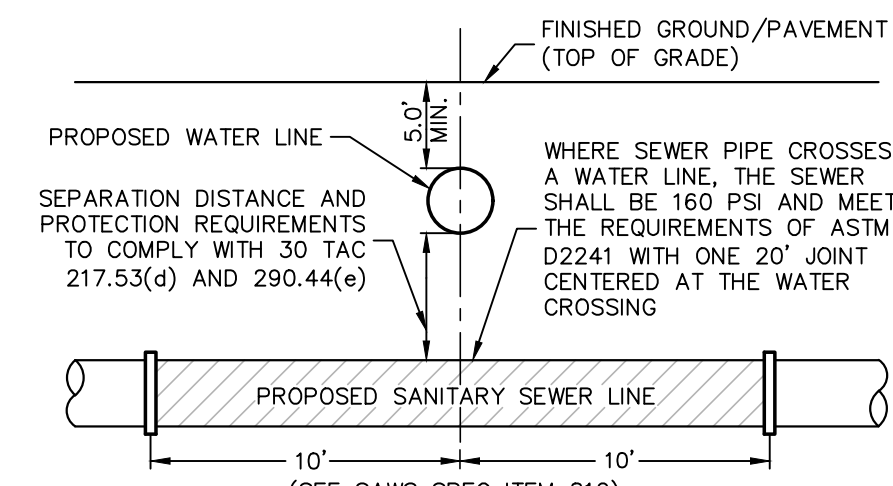
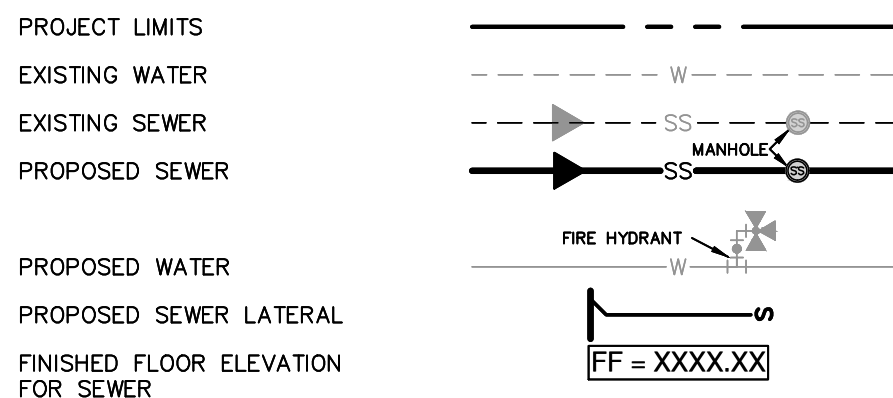


LOCATION MAP

NOT-TO-SCALE



SEWER LEGEND



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

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TRENCH EXCAVATION SAFETY PROTECTION:

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SEWER-WEST SEWERSHED-LEON CREEK W.R.C.

DEVELOPER'S NAME: KB HOME LONE STAR, INC.			
ADDRESS: 4800 FREDRICKSBURG ROAD			
CITY: SAN ANTONIO	STATE: TX	ZIP: 78229	
PHONE# (210) 301-5485	FAX#		
SAWS BLOCK MAP# 064610 TOTAL EDU'S 79 TOTAL ACREAGE 9.166			
TOTAL LINEAR FOOTAGE OF PIPE: 8" 2,285 LF PLAT NO. 25-11800087			
NUMBER OF LOTS 60 SAWS JOB NO. 25-1548			

NO.	REVISION	DATE
1.	REVISED SAWS BLOCK	06/10/25



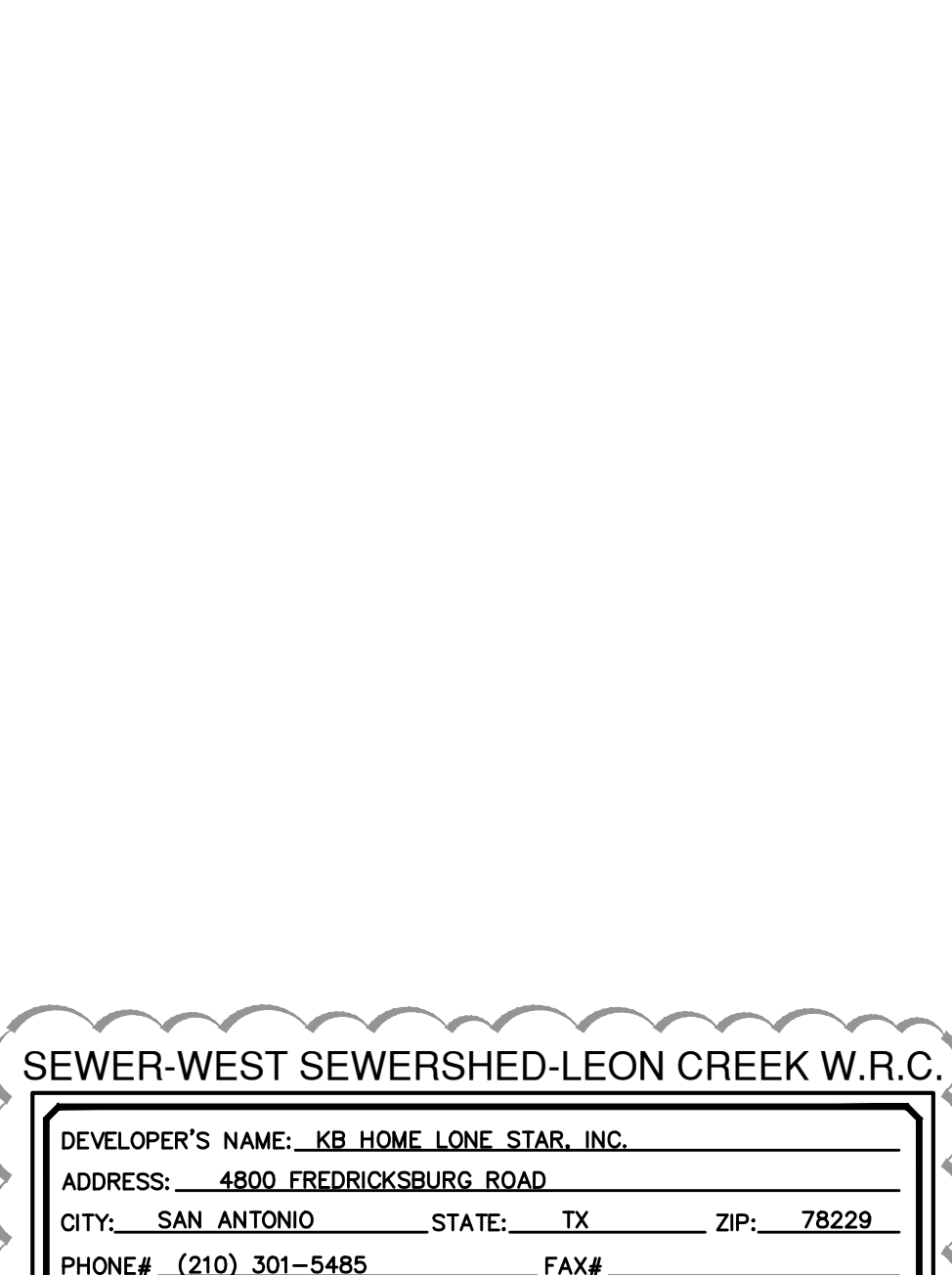
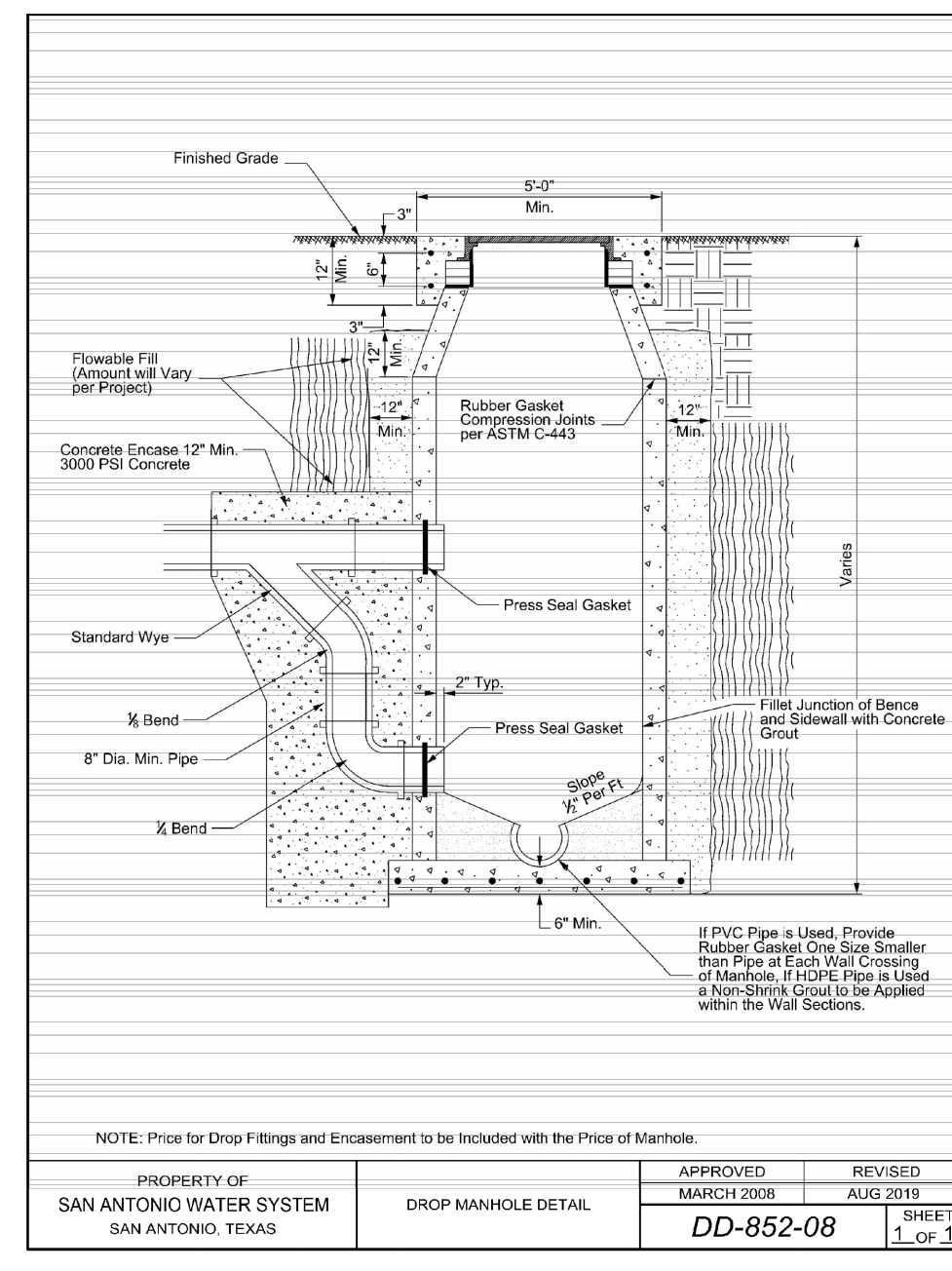
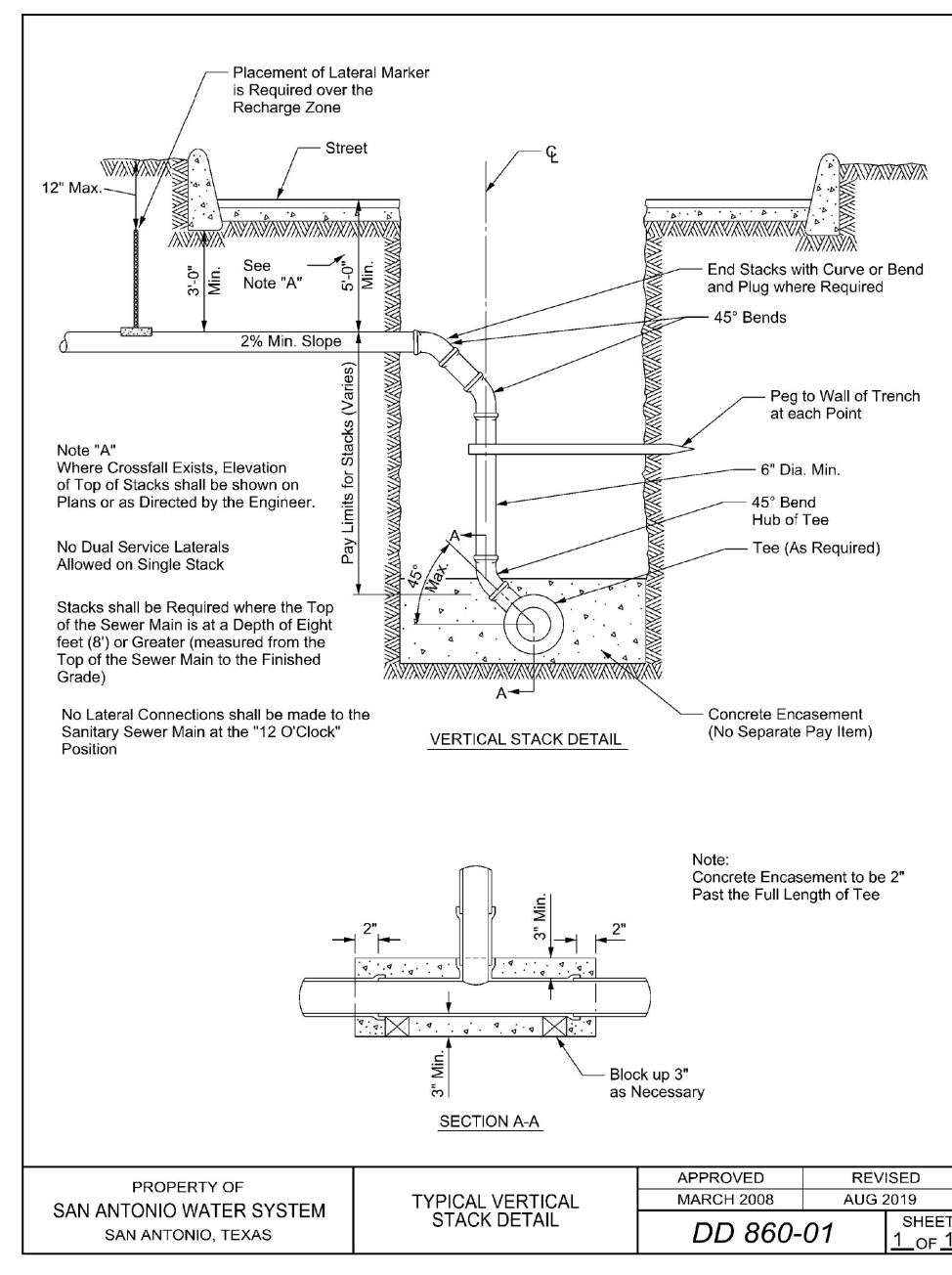
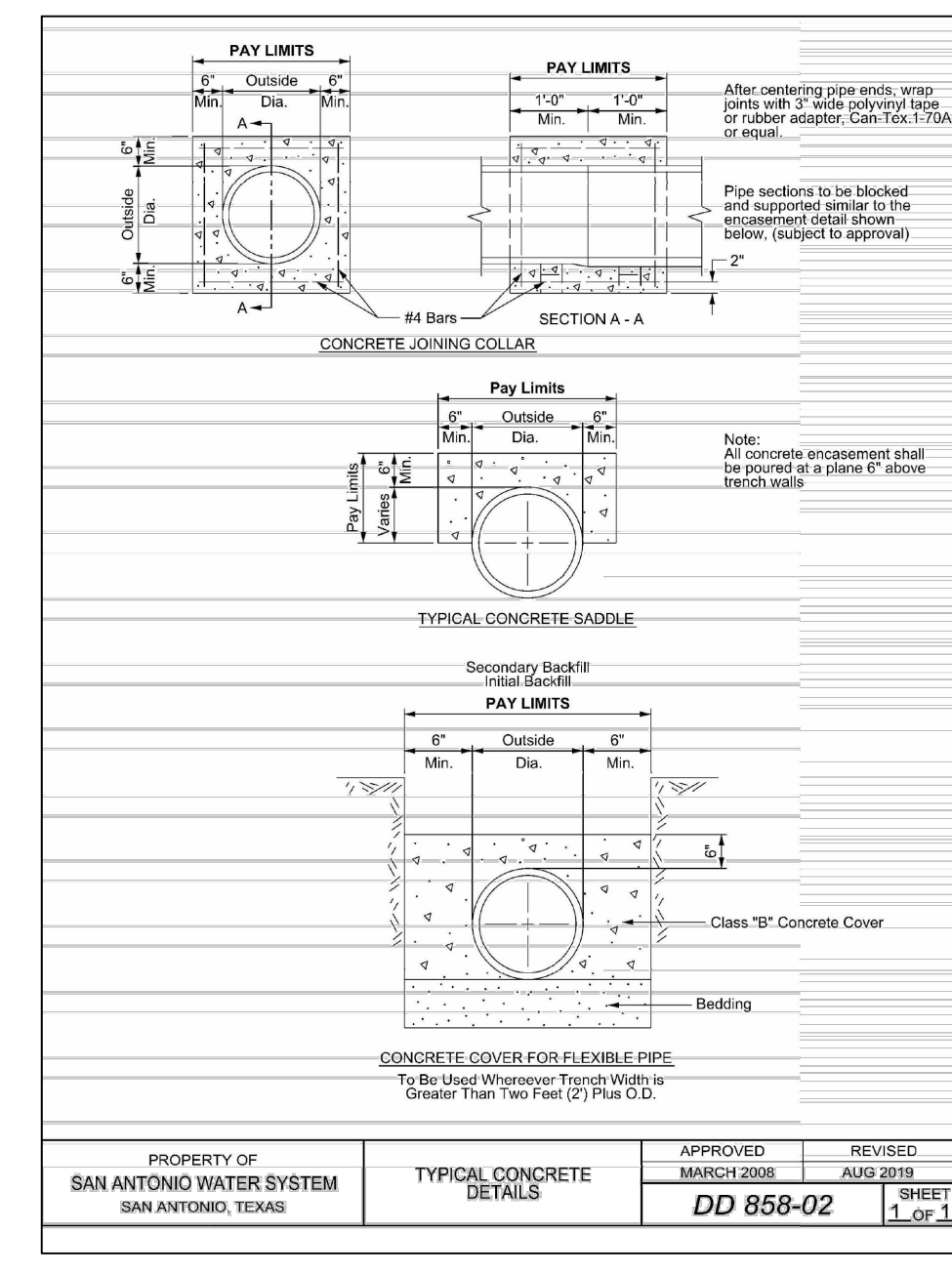
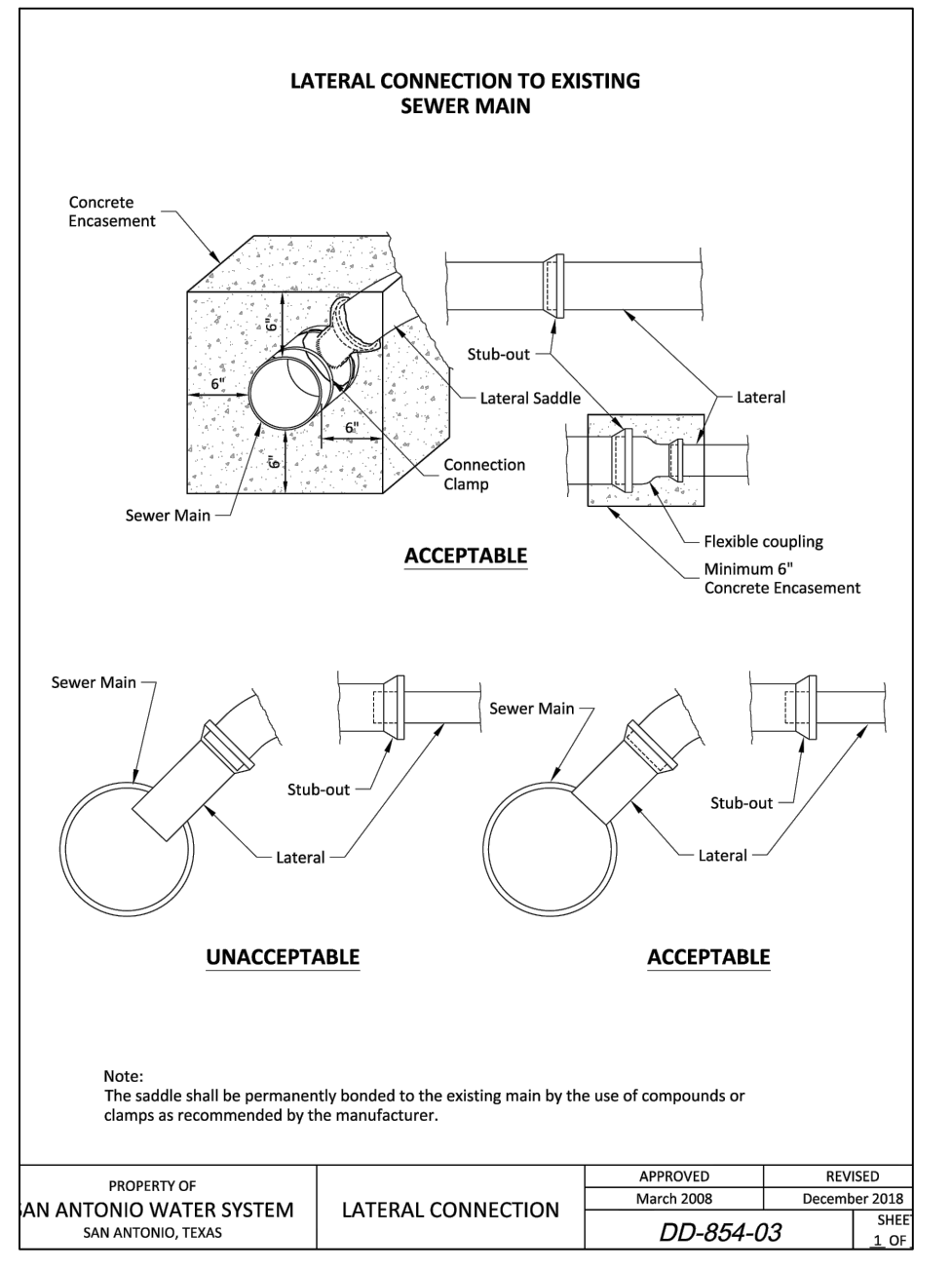
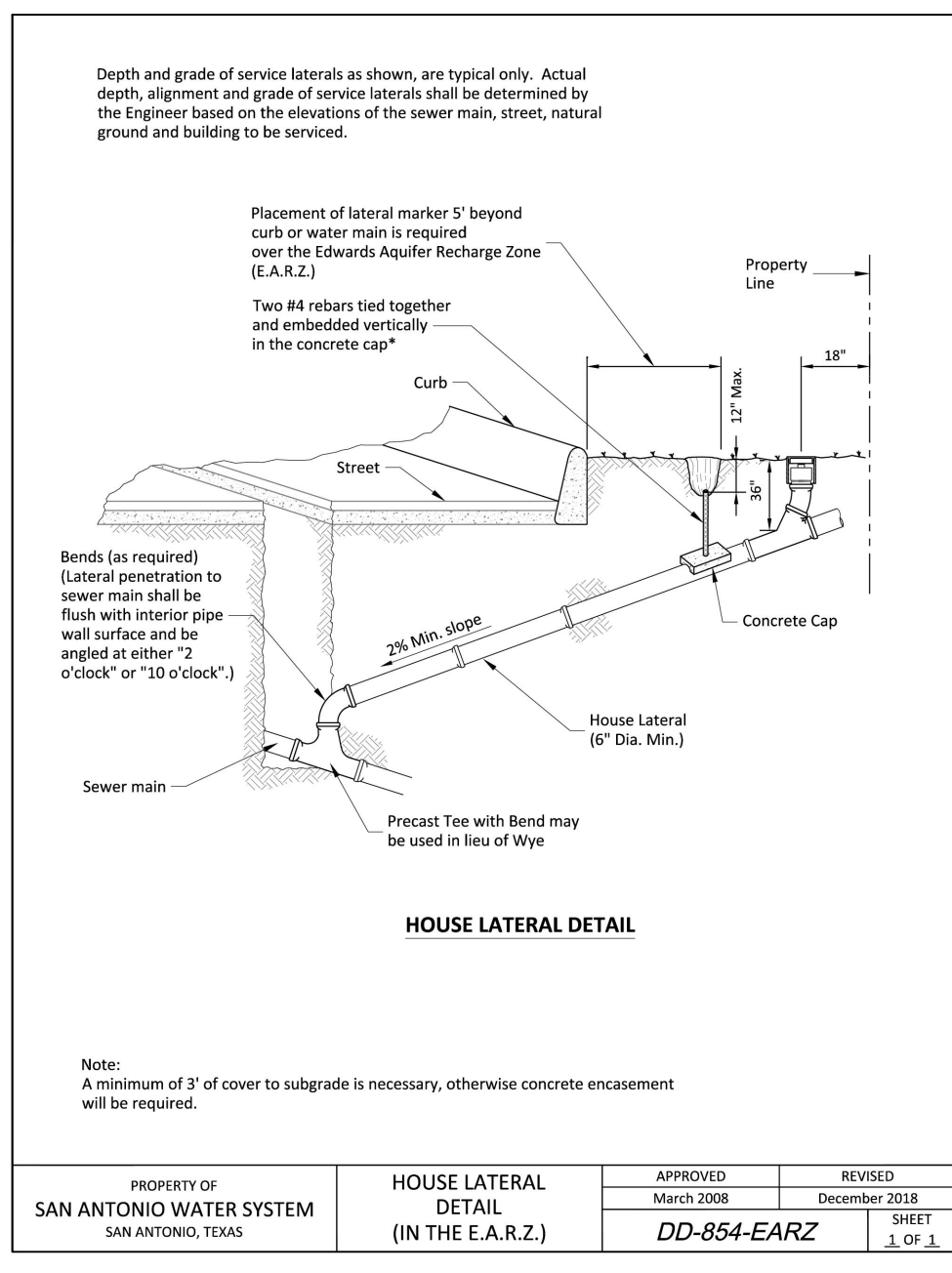
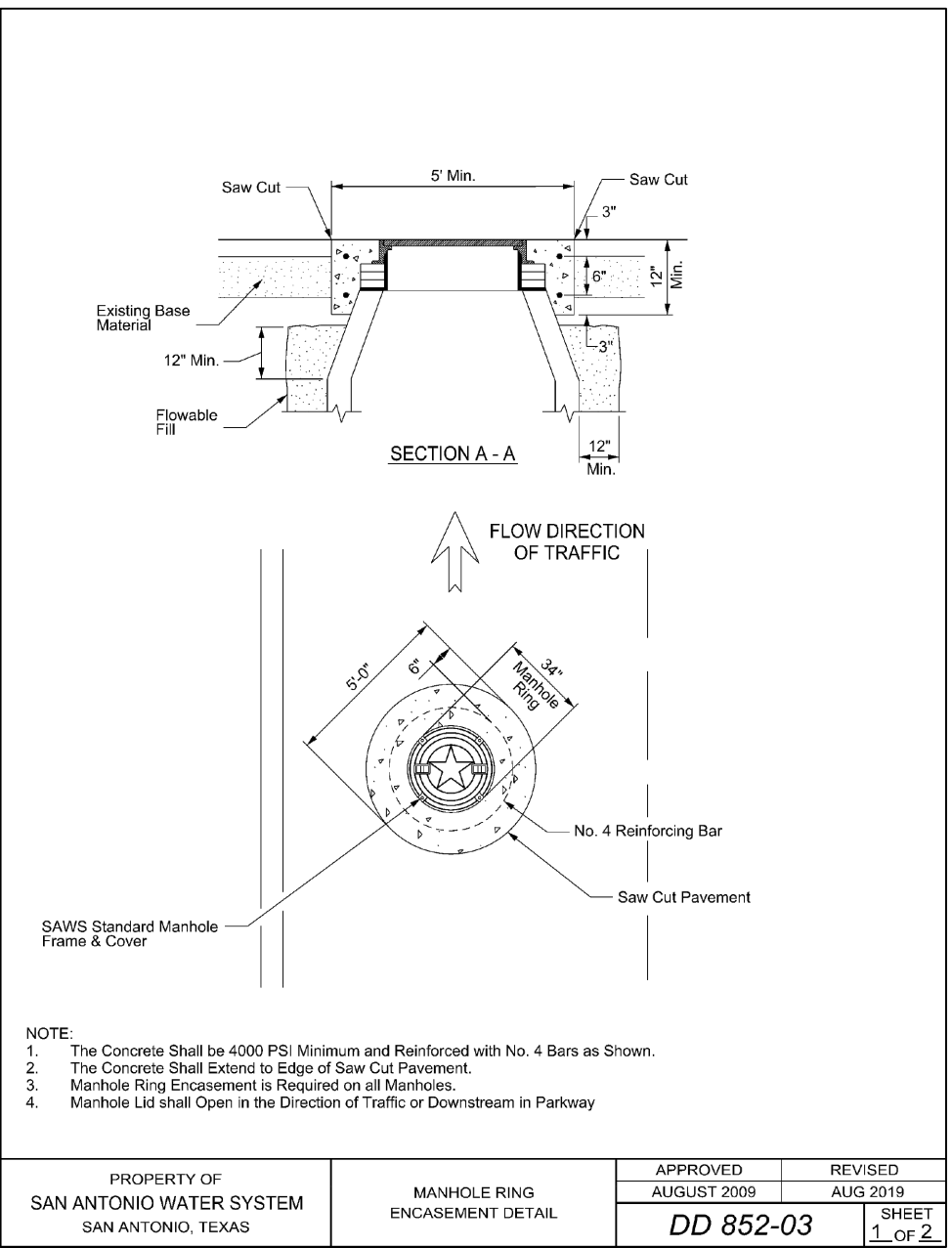
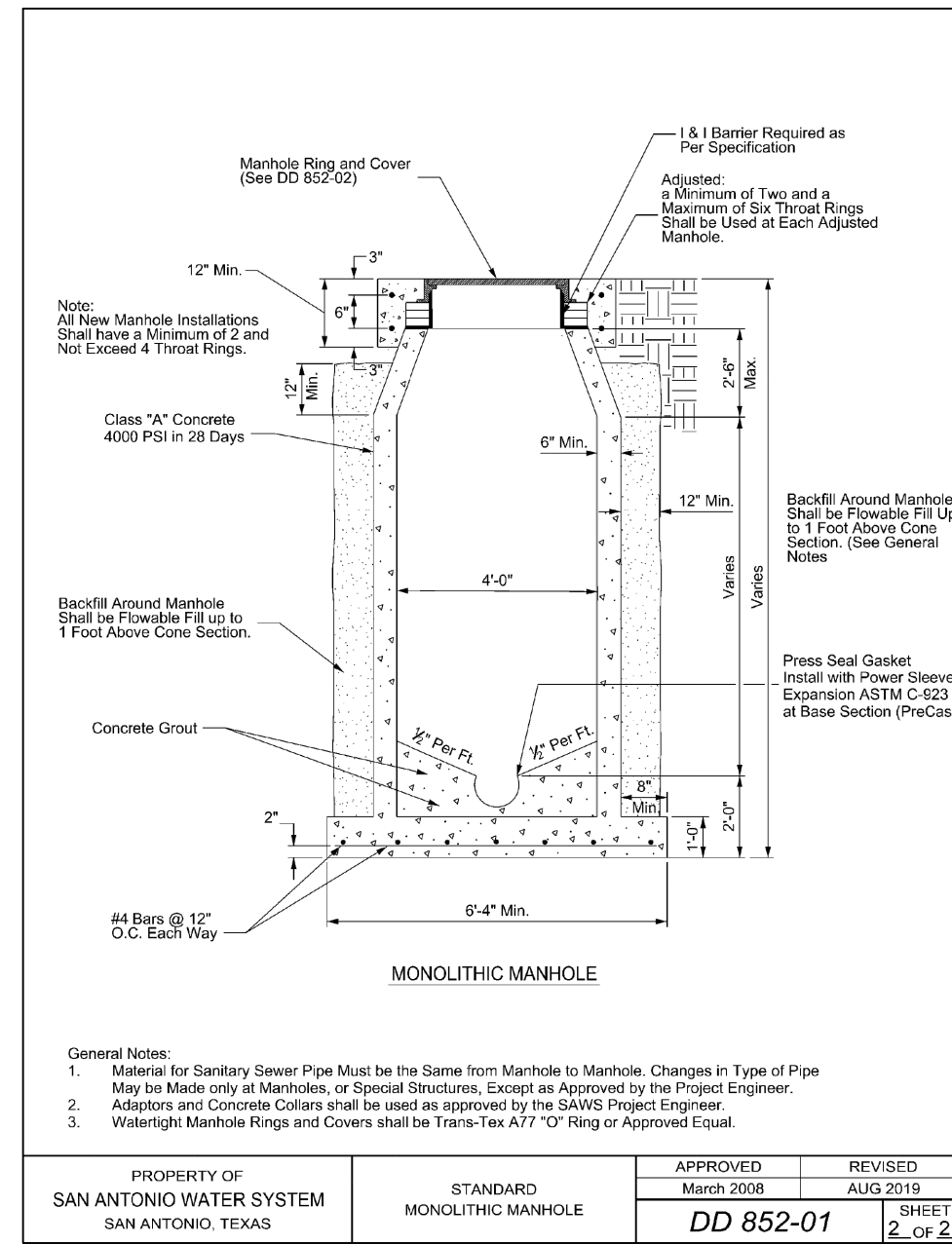
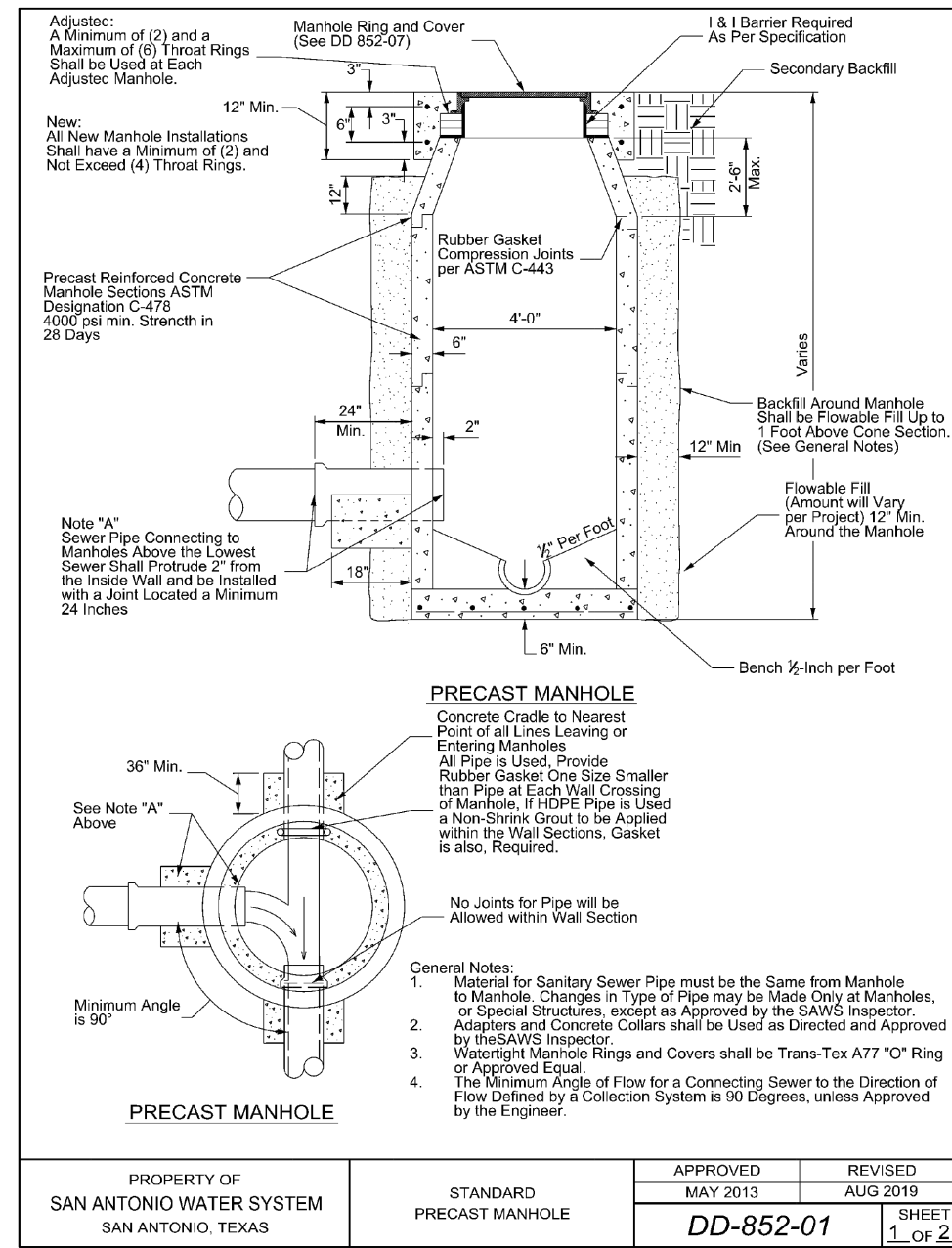
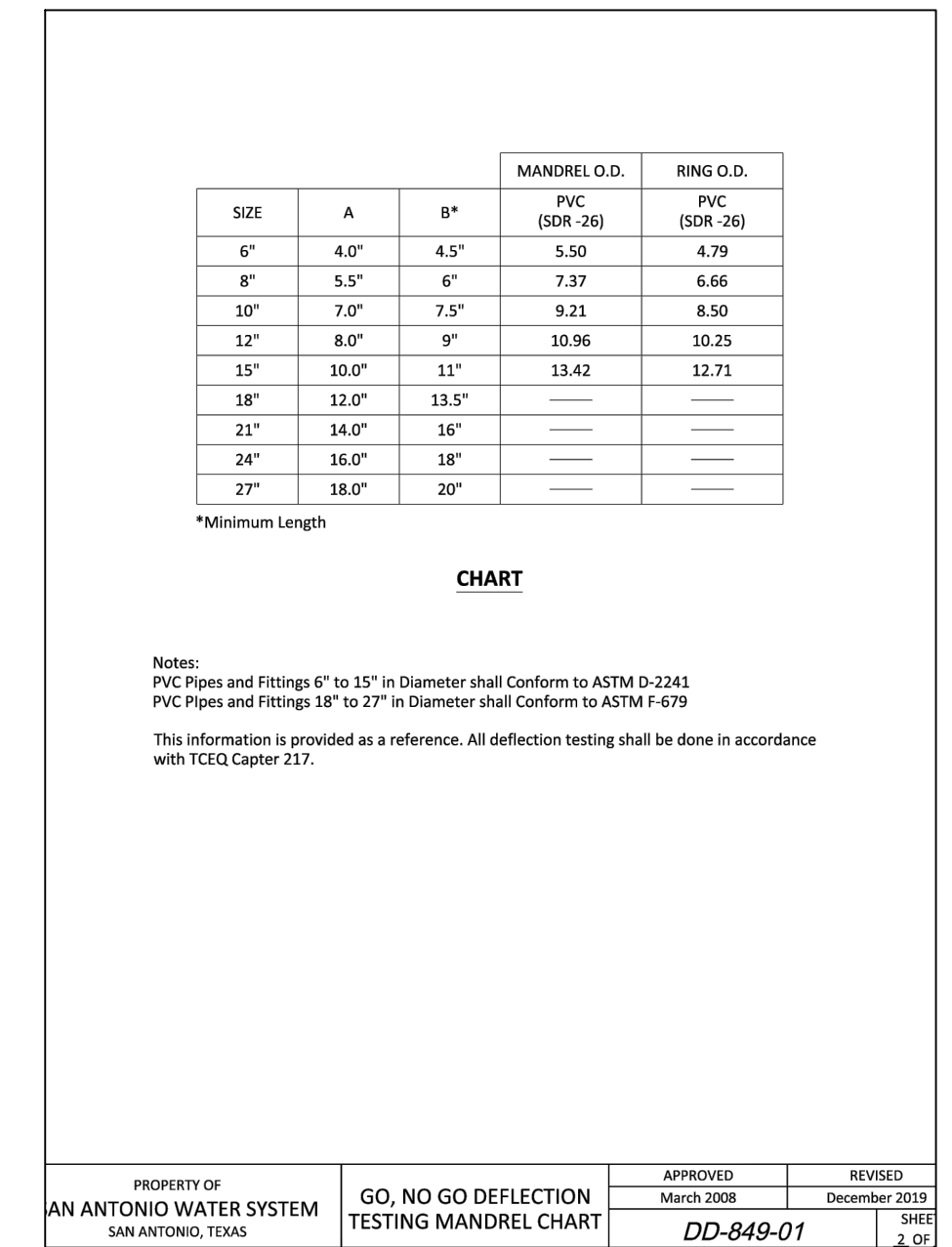
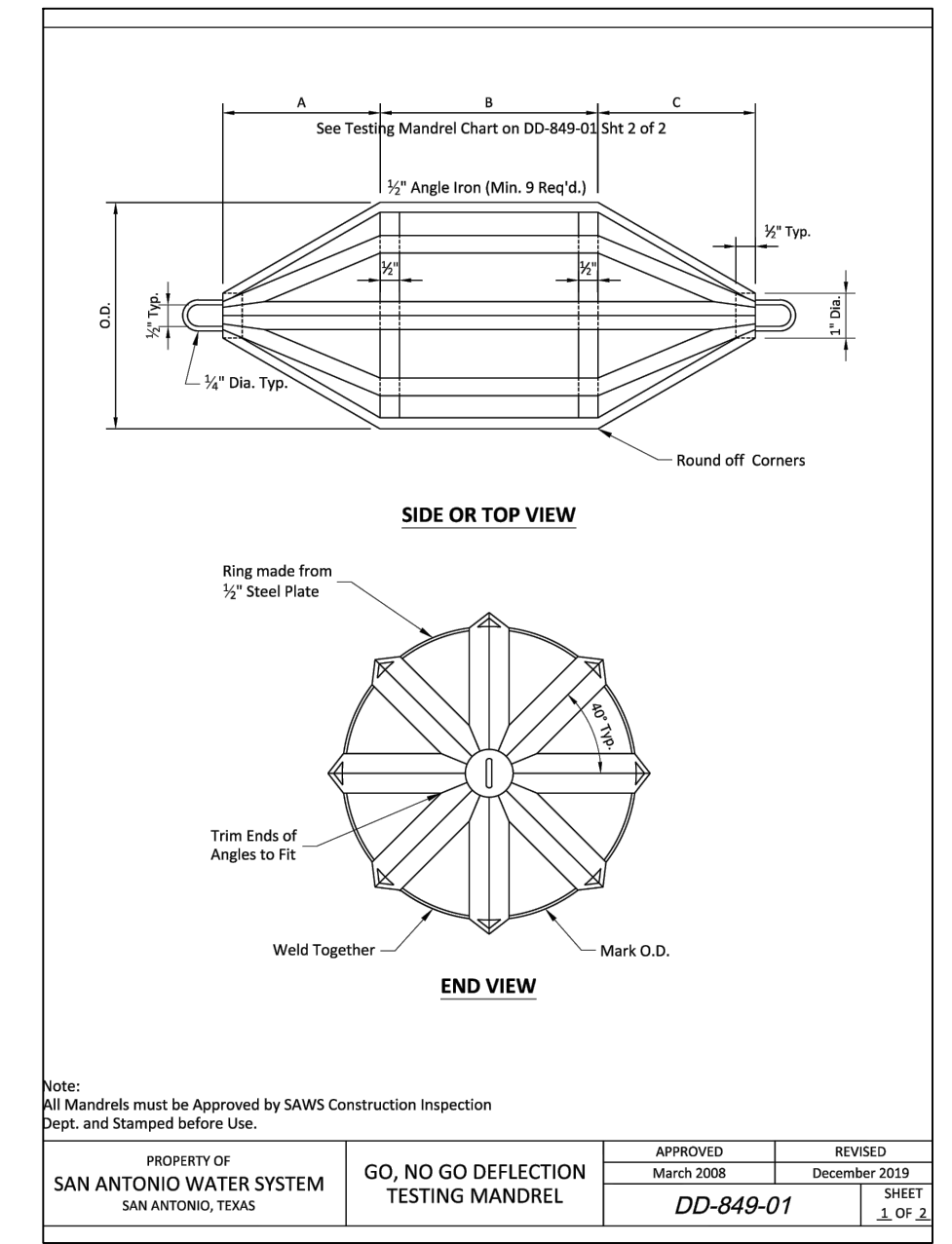
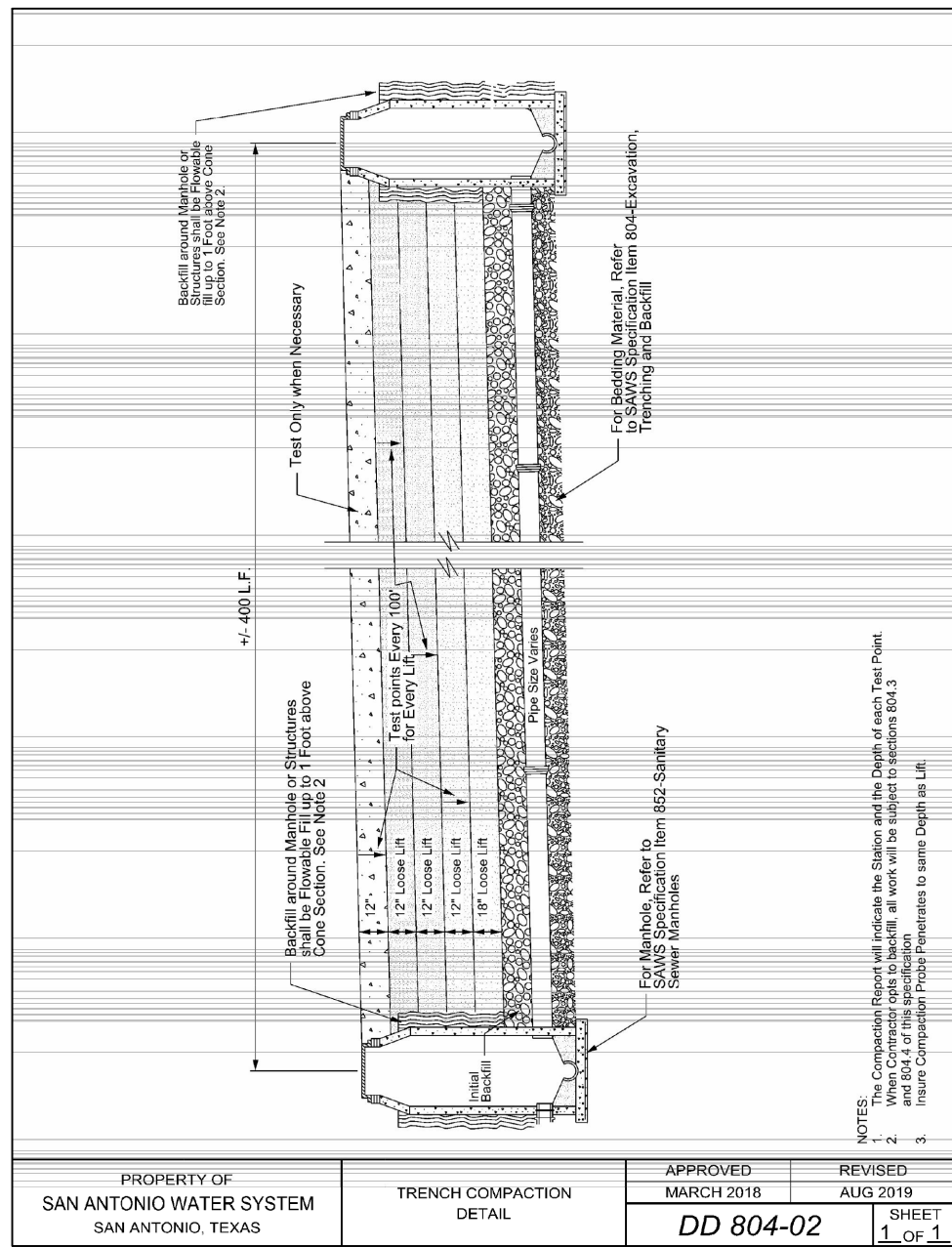
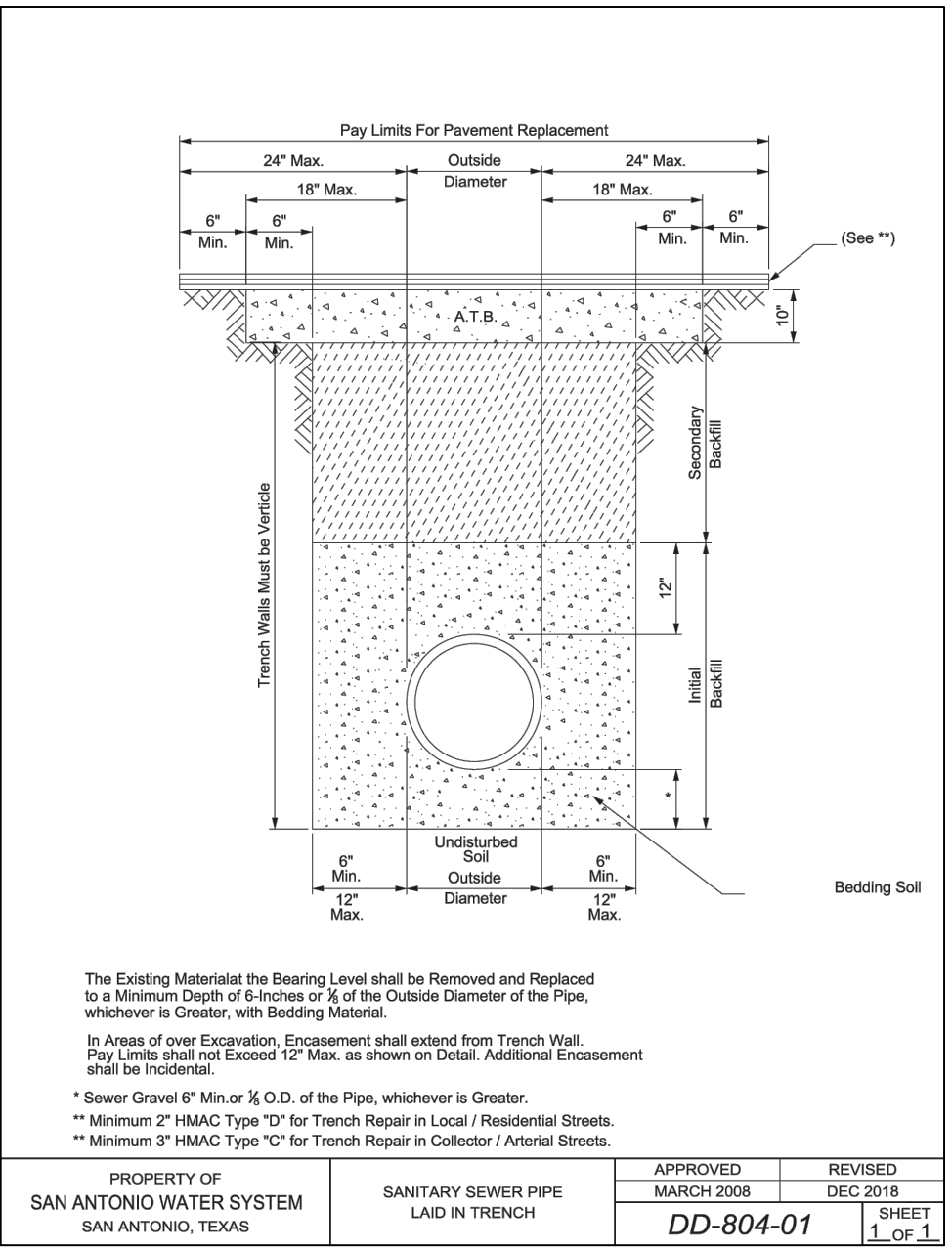
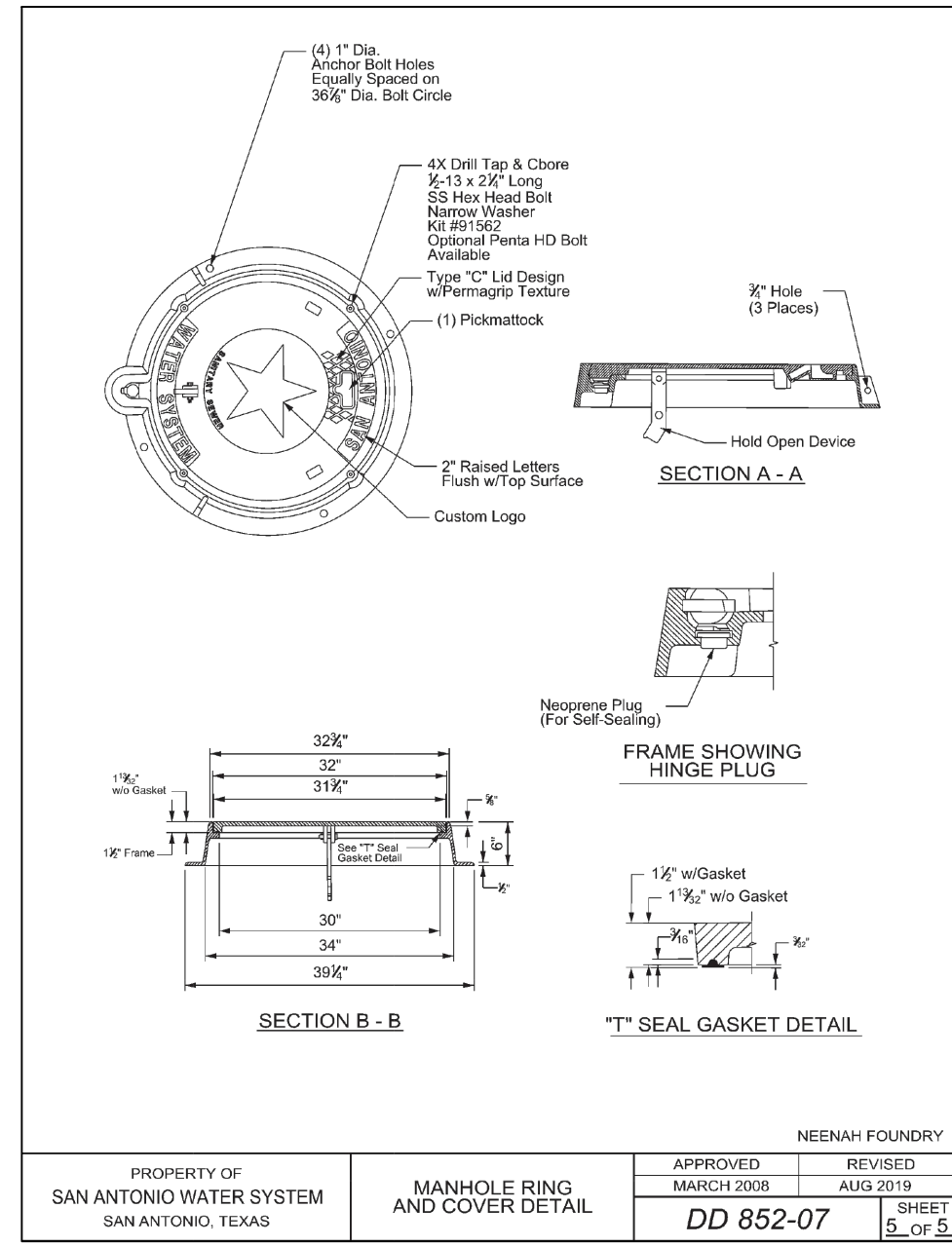
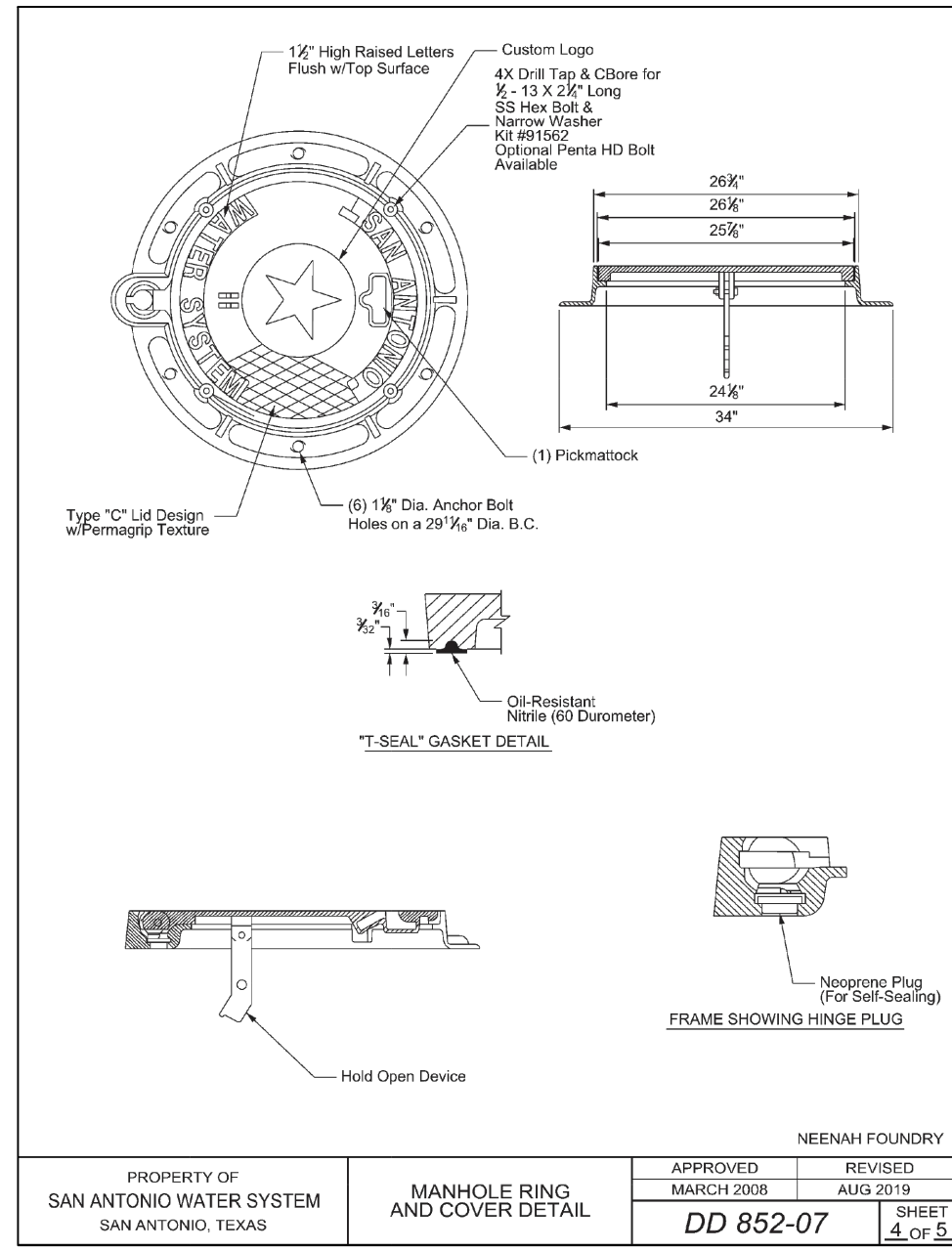
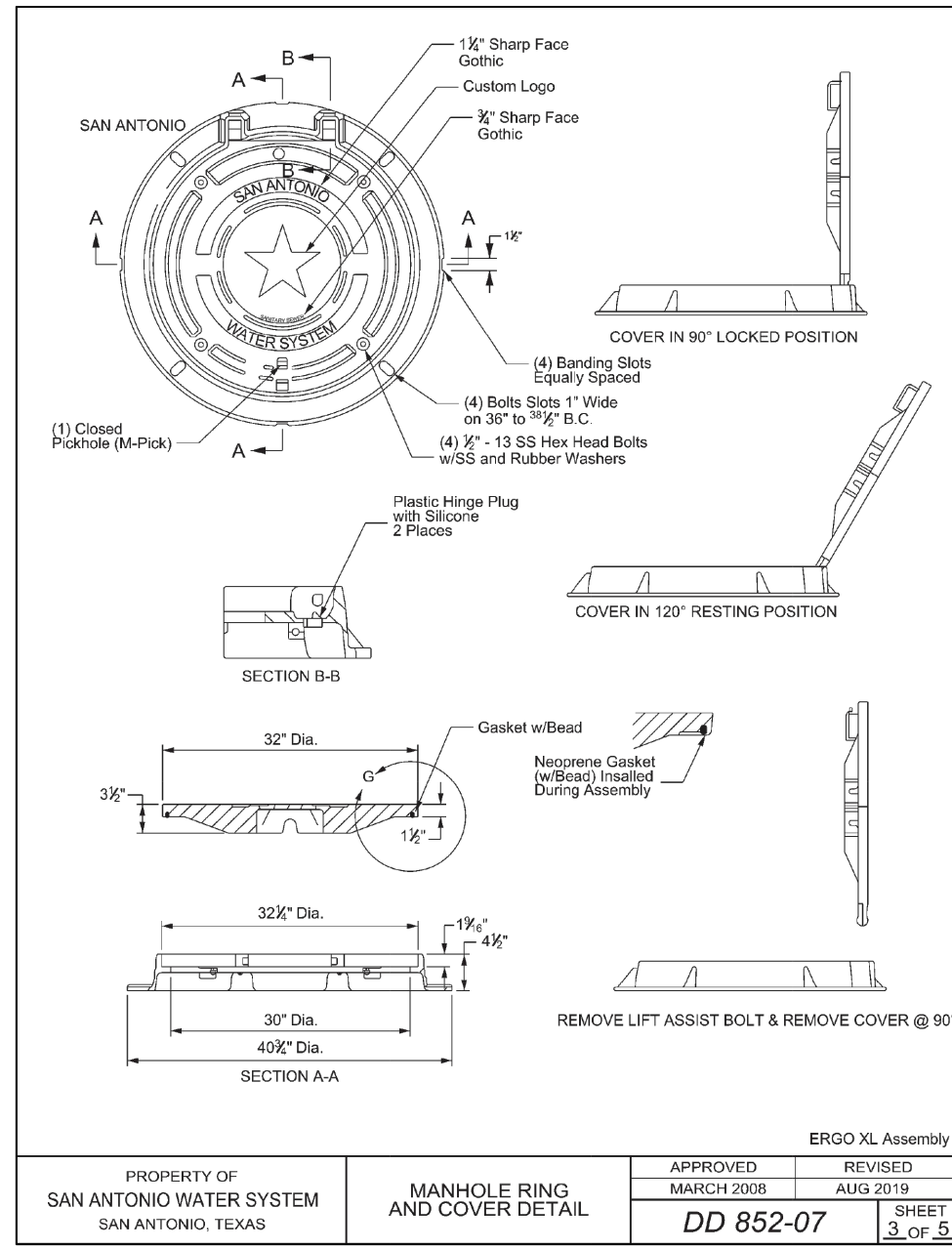
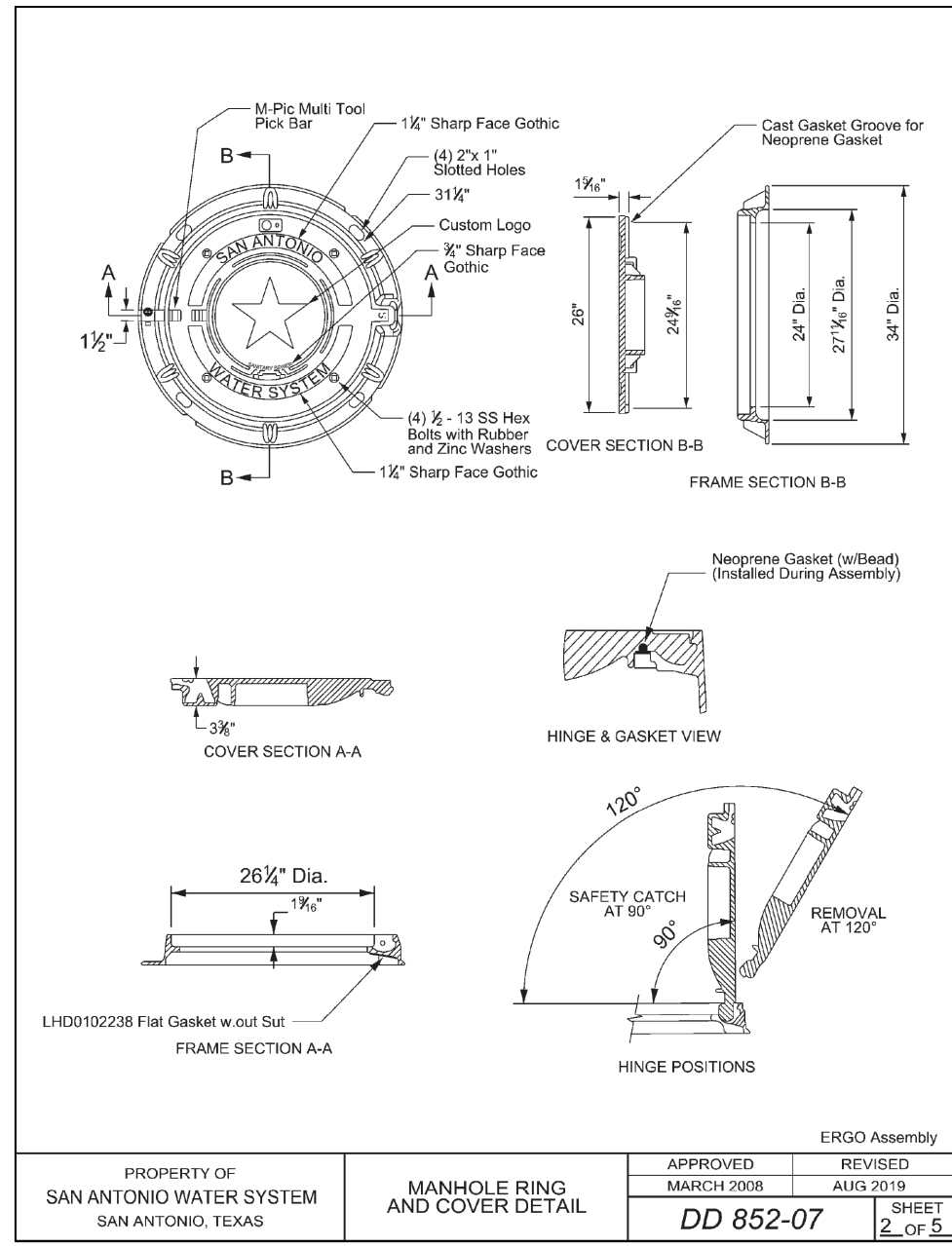
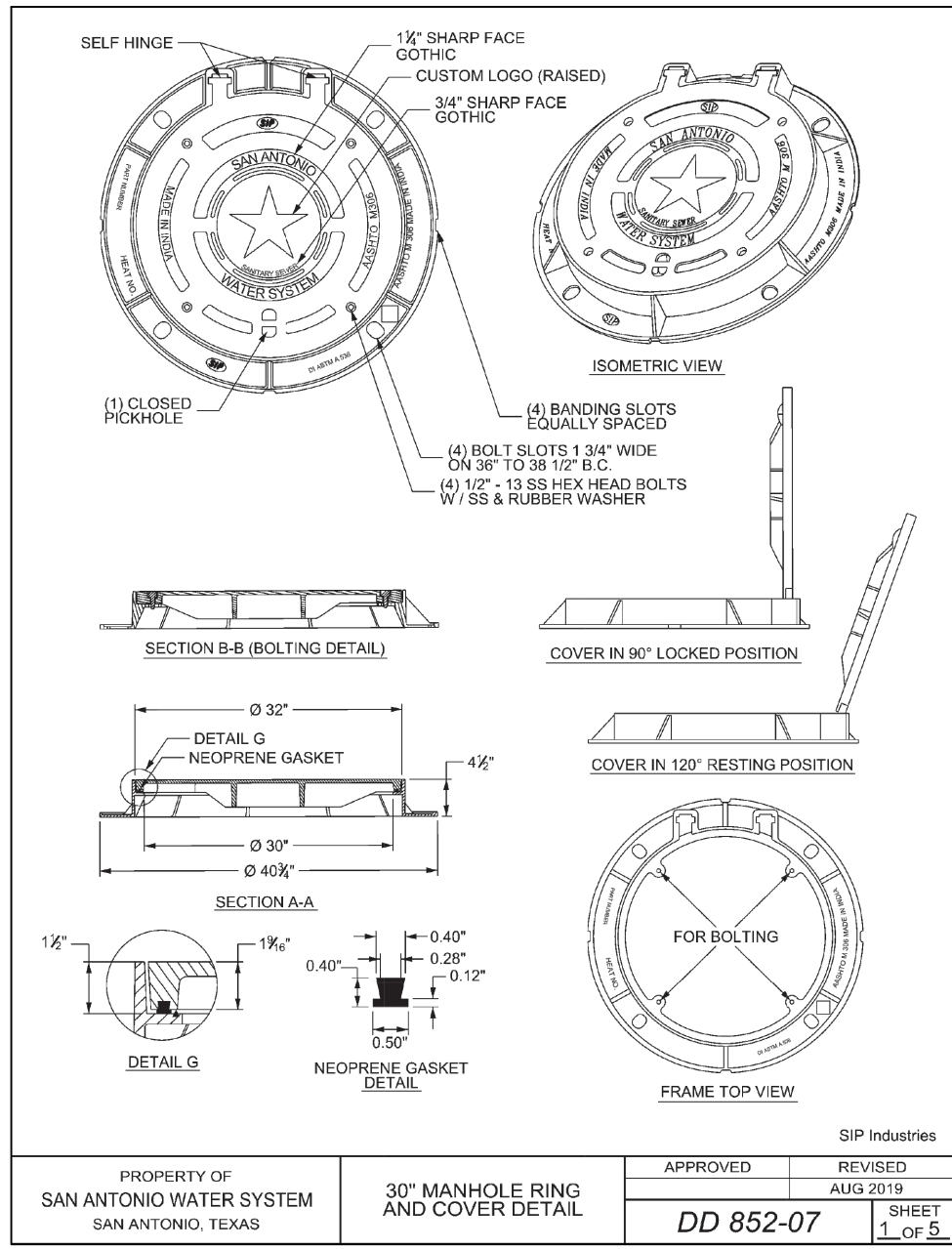
**PAPE-DAWSON
ENGINEERS**
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
**SANITARY SEWERLINE D
PLAN AND PROFILE**

PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DESIGNER	AR
CHECKED	BC
DRAWN	RP
SHEET	C4.03

Date: Jun 11, 2025, 7:40am User: ID: ercd/5922
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DATE
06/10/25

NO. REVISION
1. REVISED SAWS SEWER BLOCK

06/11/2025
STATE OF TEXAS
REBECCA ANN CARROLL
REGISTERED PROFESSIONAL ENGINEER
02666
Bmx

PAPER-DAWSON
ENGINEERS

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

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS

SANITARY SEWER DETAILS

PLAT NO. 25-11800087

JOB NO. 11668-24

DATE MAY 2025

DESIGNER AR

CHECKED BC DRAWN RP

SHEET C4.10

Date: Jun 11, 2025, 7:42am User: ID: ercd/pgrz
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SAWS CONSTRUCTION NOTES
(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:

A. CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM", TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER", TAC TITLE 30 PART 1 CHAPTER 290.

B. CURRENT TXDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE".

C. CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".

D. CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".

E. CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, [HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS](http://www.saws.org/business_center/specs). UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.
- THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION (210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
- LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING PIPE LOCATION MARKERS ON SAWS FACILITIES. THE FOLLOWING CONTACT INFORMATION ARE SUPPLIED FOR VERIFICATION PURPOSES:

- SAWS UTILITY LOCATES: [HTTP://WWW.SAWS.ORG/SERVICE/LOCATES](http://www.saws.org/service/locates)
 - COSA DRAINAGE (210) 207-0724 OR (210) 207-6026
 - COSA TRAFFIC SIGNAL OPERATIONS (210) 206-8480
 - COSA TRAFFIC SIGNAL DAMAGES (210) 207-3951
 - TEXAS STATE WIDE ONE CALL LOCATOR 1-800-545-6005 OR 811
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
- HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

WEEKEND WORK: CONTRACTORS ARE REQUIRED TO NOTIFY THE SAWS INSPECTION CONSTRUCTION DEPARTMENT 48 HOURS IN ADVANCE TO REQUEST WEEKEND WORK. REQUEST SHOULD BE SENT TO CONSTWORKREQ@SAWS.ORG.

ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
- COMPACTION NOTE (ITEM 804): THE CONTRACTOR SHALL BE RESPONSIBLE FOR MEETING THE COMPACTION REQUIREMENTS ON ALL TRENCH BACKFILL AND FOR PAYING FOR THE TESTS PERFORMED BY A THIRD PARTY. COMPACTION TESTS WILL BE DONE AT ONE LOCATION POINT RANDOMLY SELECTED, OR AS INDICATED BY THE SAWS INSPECTOR AND/OR THE TEST ADMINISTRATOR, PER EACH 12-INCH LOOSE LIFT PER 400 LINEAR FEET AT A MINIMUM. THIS PROJECT WILL NOT BE ACCEPTED AND FINALIZED BY SAWS WITHOUT THIS REQUIREMENT BEING MET AND VERIFIED BY PROVIDING ALL NECESSARY DOCUMENTED TEST RESULTS.
- A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS SEWER NOTES

- THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT NO SANITARY SEWER OVERFLOW (SSO) OCCURS AS A RESULT OF THEIR WORK. ALL CONTRACTOR PERSONNEL RESPONSIBLE FOR SSO PREVENTION AND CONTROL SHALL BE TRAINED ON PROPER RESPONSE. SHOULD AN SSO OCCUR, THE CONTRACTOR SHALL:

A. IDENTIFY THE SOURCE OF THE SSO AND NOTIFY SAWS EMERGENCY OPERATIONS CENTER (EOC) IMMEDIATELY AT (210) 233-2014. PROVIDE THE ADDRESS OF THE SPILL AND AN ESTIMATED VOLUME OR FLOW.

B. ATTEMPT TO ELIMINATE THE SOURCE OF THE SSO.

C. CONTAIN SEWAGE FROM THE SSO TO THE EXTENT OF PREVENTING A POSSIBLE CONTAMINATION OF WATERWAYS.

D. CLEAN UP SPILL SITE (RETURN CONTAINED SEWAGE TO THE COLLECTION SYSTEM IF POSSIBLE) AND PROPERLY DISPOSE OF CONTAMINATED SOIL/MATERIALS.

E. CLEAN THE AFFECTED SEWER MAINS AND REMOVE ANY DEBRIS.

F. MEET ALL POST-SSO REQUIREMENTS AS PER THE EPA CONSENT DECREE, INCLUDING LINE CLEANING AND TELEVISIONING THE AFFECTED SEWER MAINS (AT SAWS DIRECTION) WITHIN 24 HOURS.

SHOULD THE CONTRACTOR FAIL TO ADDRESS AN SSO IMMEDIATELY AND TO SAWS SATISFACTION, THEY WILL BE RESPONSIBLE FOR ALL COSTS INCURRED BY SAWS, INCLUDING ANY FINES FROM EPA, TCEQ AND/OR ANY OTHER FEDERAL, STATE OR LOCAL AGENCIES.
- NO SEPARATE MEASUREMENT OR PAYMENT SHALL BE MADE FOR THIS WORK. ALL WORK SHALL BE DONE ACCORDING TO GUIDELINES SET BY THE TCEQ AND SAWS.
- IF BYPASS PUMPING IS REQUIRED, THE CONTRACTOR SHALL PERFORM SUCH WORK IN ACCORDANCE WITH SAWS STANDARD SPECIFICATION FOR WATER AND SANITARY SEWER CONSTRUCTION, ITEM NO. 864, "BYPASS PUMPING".
- PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING FORCE MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (210) 233-2973 AT LEAST ONE WEEK IN ADVANCE OF THE SHUTDOWN. THE CONTRACTOR MUST ALSO PROVIDE A SEQUENCE OF WORK AS RELATED TO THE TIE-INS; THIS IS AT NO ADDITIONAL COST TO SAWS OR THE PROJECT AND IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SEQUENCE THE WORK ACCORDINGLY.
- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 PSI AND MEET THE REQUIREMENTS OF ASTM D2241, TAC 217.53 AND TCEQ 290.44C(4)(b). CONTRACTOR SHALL CENTER A 20" JOINT OF 160 PSI PRESSURE RATED PVC AT THE PROPOSED WATER CROSSING.
- ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALLOWANCES AND ADJUSTMENTS FOR TOP OF MANHOLES TO MATCH THE FINISHED GRADE OF THE PROJECT'S IMPROVEMENTS. (NSPI)
- SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER: ALL SPILLS, OVERFLOWS, OR DISCHARGES OF WASTEWATER, RECYCLED WATER, PETROLEUM PRODUCTS, OR CHEMICALS MUST BE REPORTED IMMEDIATELY TO THE SAWS INSPECTOR ASSIGNED TO THE COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP). THIS REQUIREMENT APPLIES TO EVERY SPILL, OVERFLOW, OR DISCHARGE REGARDLESS OF SIZE.
- MANHOLE AND ALL PIPE TESTING (INCLUDING THE TV INSPECTION) MUST BE PERFORMED AND PASSED PRIOR TO FINAL FIELD ACCEPTANCE BY SAWS CONSTRUCTION INSPECTION DIVISION, AS PER THE SAWS SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION.
- ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

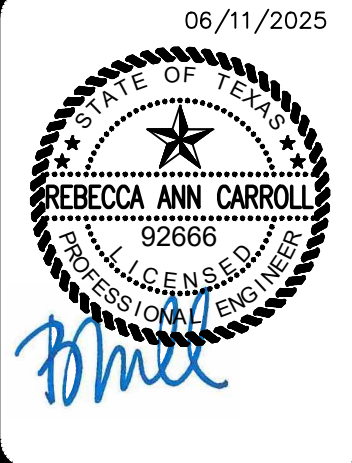
PROJECT SEWER NOTES

- ALL RESIDENTIAL SEWER SERVICE LATERALS ARE 6" DIA. AND SHALL BE EXTENDED TO 10' PAST THE PROPERTY LINE AND CAPPED AND SEALED. CONTRACTOR SHALL INSTALL A 2" X 4" STAKE, FOUR (4) FEET LONG, TWO (2) FEET DEEP INTO THE GROUND AT THE END OF EACH SERVICE. NO SEPARATE PAY ITEM.
- CONTRACTOR TO INSTALL CLEANOUTS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL SHEET C4.10.
- NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
- ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
- WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 160 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
- CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE RING ENCASEMENT.
- ALL SEWER PIPES SHALL BE 8" PVC (SDR 26), UNLESS OTHERWISE NOTED.
- CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
- CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
- 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.
- CONCRETE RING ENCASEMENT TO BE INSTALLED ON ALL MANHOLES AND, WITHIN LIMITS OF PAVEMENT, BE INSTALLED TO THE TOP OF THE BASE LAYER WITH A MINIMUM OF 2" OF ASPHALT ON TOP OF THE RING ENCASEMENT.
- MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
- ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
- IF THE GIVEN TOP OF MANHOLE ELEVATION DOES NOT AGREE ON ACTUAL GROUND SURFACE OR FINISH PAVEMENT, THE CONTRACTOR SHALL ADJUST ELEVATIONS SUCH THAT THE TOP OF MANHOLE SHALL BE 0.5' ABOVE EXISTING GROUND, OR FLUSH TO FINISH ASPHALT PAVEMENT.
- ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

SEWER-WEST SEWERSHED-LEON CREEK W.R.C.

DEVELOPER'S NAME: <u>KB HOME LONE STAR, INC.</u>			
ADDRESS: <u>4800 FREDRICKSBURG ROAD</u>			
CITY: <u>SAN ANTONIO</u>	STATE: <u>TX</u>	ZIP: <u>78229</u>	
PHONE# <u>(210) 301-5485</u>	FAX# _____		
SAWS BLOCK MAP# <u>064610</u> TOTAL EDU'S <u>79</u> TOTAL ACREAGE <u>9.166</u>			
TOTAL LINEAR FOOTAGE OF PIPE: <u>8" 2,295 LF</u> PLAT NO. <u>25-11800087</u>			
NUMBER OF LOTS <u>60</u>		SAWS JOB NO. <u>25-1548</u>	

NO.	REVISION	DATE
1.	REVISED SAWS SEWER BLOCK	06/10/25



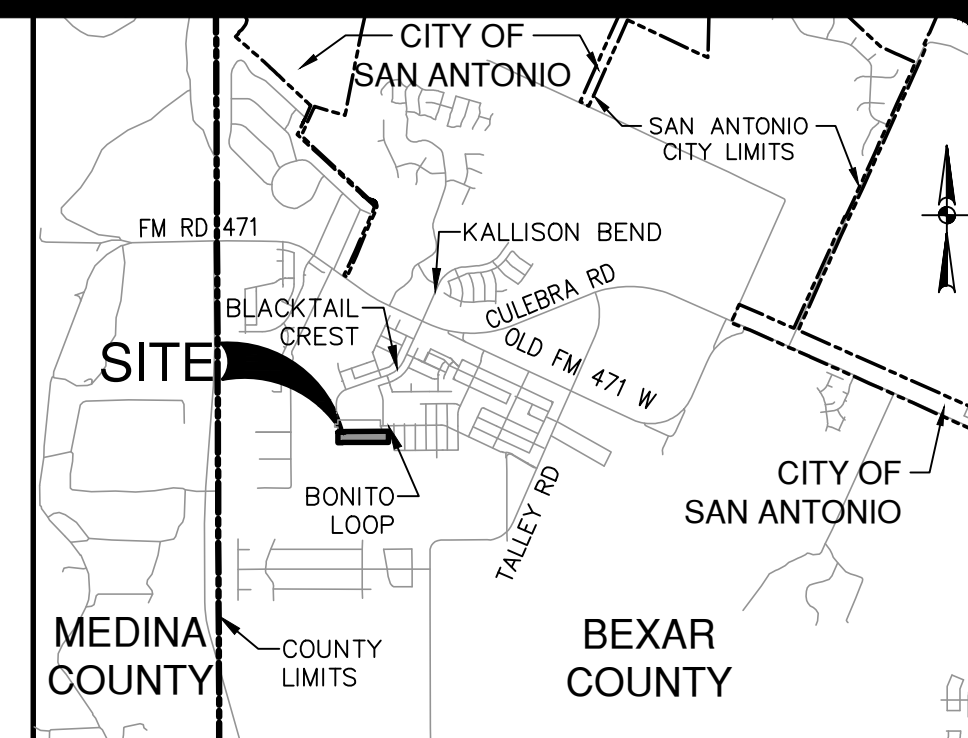
PAPE-DAWSON
ENGINEERS

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

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS

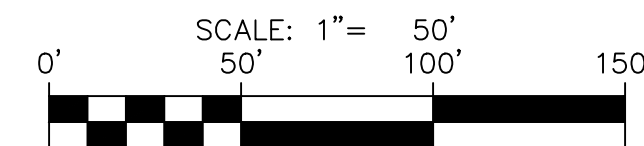
SANITARY SEWER NOTES

PLAT NO.	<u>25-11800087</u>
JOB NO.	<u>11688-24</u>
DATE	<u>MAY 2025</u>
DESIGNER	<u>AR</u>
CHECKED	<u>BC</u> DRAWN <u>RP</u>
SHEET	<u>C4.20</u>



LOCATION MAP

NOT-TO-SCALE



WATER LEGEND

PROJECT LIMITS

EXISTING WATER

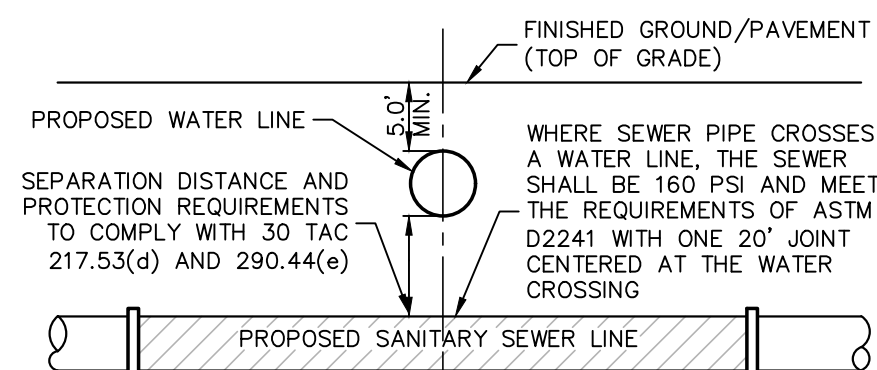
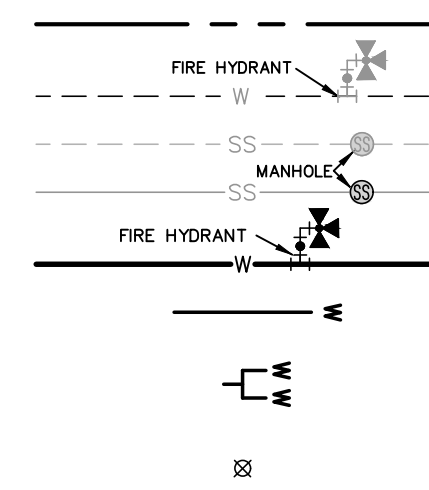
PROPOSED SEW

PROPOSED WATER

PROPOSED 3/4" SINGLE SERVICE
WITH 5/8" METER

PROPOSED 1" DUAL SERVICE
WITH 5/8" METER

JOINT RESTRAINT



TYPICAL SANITARY
SEWER/WATER CROSSING DETAIL

NOT-TO-SCALE

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 1000 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 ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

PRESSURE REDUCING VALVE NOTE:

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

PRESSURE NOTE:

CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 985 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 985 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.

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSSES 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 HARNESSSES AND GASKETS, BUT SHALL BE SUBSIDIARY TO THE UNIT COST PER LINEAL FOOT OF PIPE INSTALLED.

TRENCH EXCAVATION SAFETY PROTECTION:

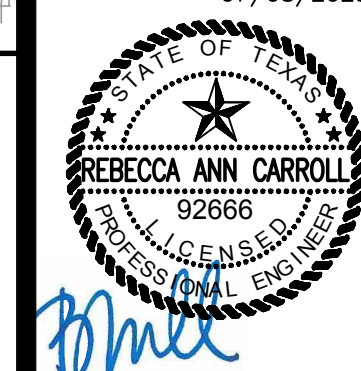
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT AREA TO DETERMINE WHETHER ANY OF THE FOLLOWING ARE NEARBY OR WITHIN THE 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 BE IN ACCORDANCE WITH THE OSHA STANDARDS FOR TRENCHES THAT COMPLY WITH AS A MINIMUM, OSHA STANDARDS FOR TRENCH EXCAVATIONS. SPECIFICALLY, CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR SAFETY CONSULTANT SHALL MAINTAIN A TRENCH SAFETY PROGRAM IN ACCORDANCE WITH OSHA STANDARDS GOVERNING TRENCH SAFETY AND SHIELDING AND PROVIDE THE FOLLOWING INFORMATION TO THE PROJECT:

WATER (SAWS PRESSURE ZONE 8)

DEVELOPER'S NAME: KB HOME LONE STAR, INC
ADDRESS: 4800 FREDRICKSBURG ROAD
CITY: CITY STATE: STATE ZIP: 78229
PHONE# (210) 301-5485 FAX#
SAWS BLOCK MAP# 064610 TOTAL UDE# 60 TOTAL ACREAGE 9.166
TOTAL LINEAR FOOTAGE OF PIPE: 1,659 L.F. - 8" PLAT NO. 25-11800087
NUMBER OF LOTS 60 SAWS JOB NO. 25-1059

[illegible]

07/08/2025



**PAPE-DAWSON
ENGINEERS**

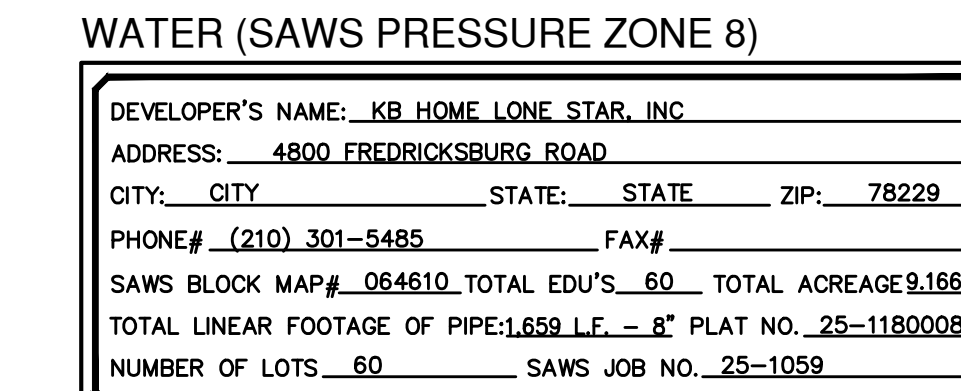
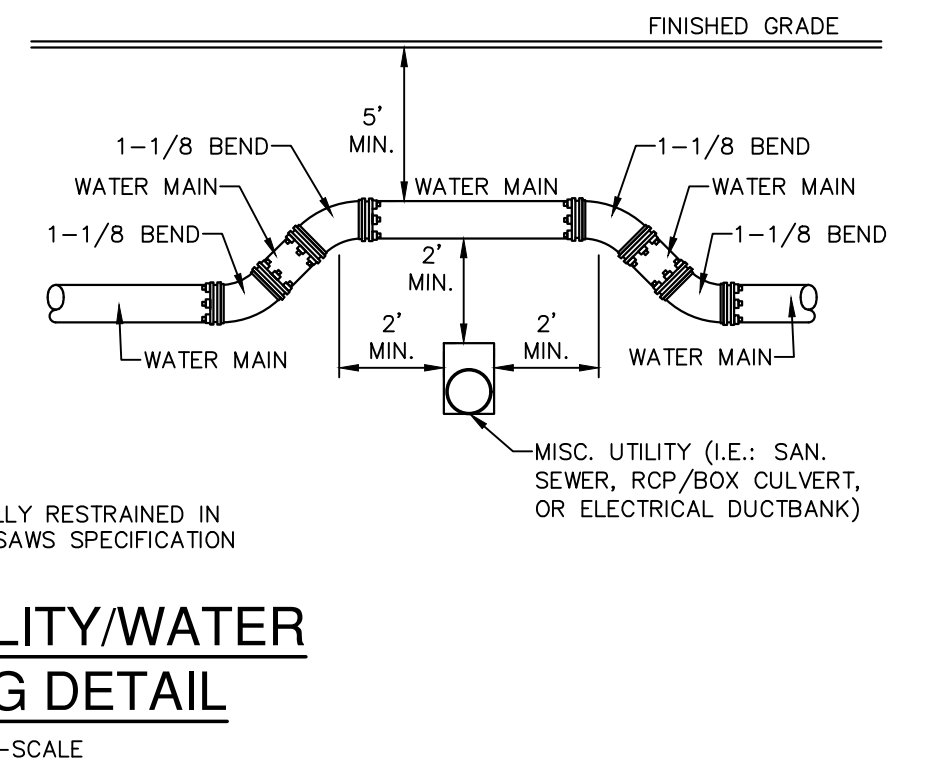
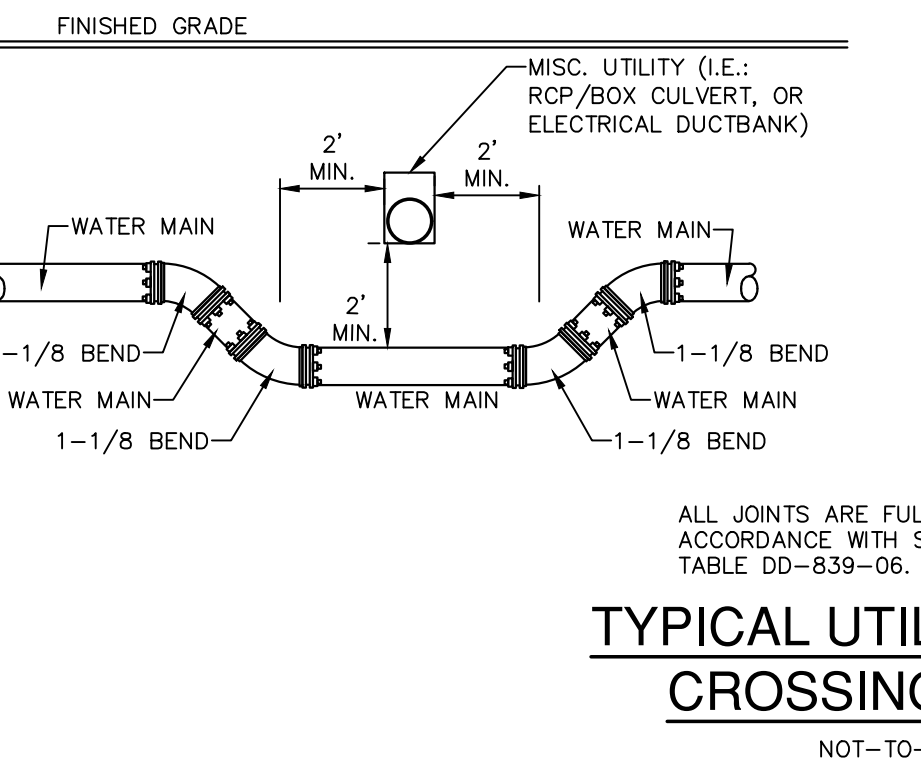
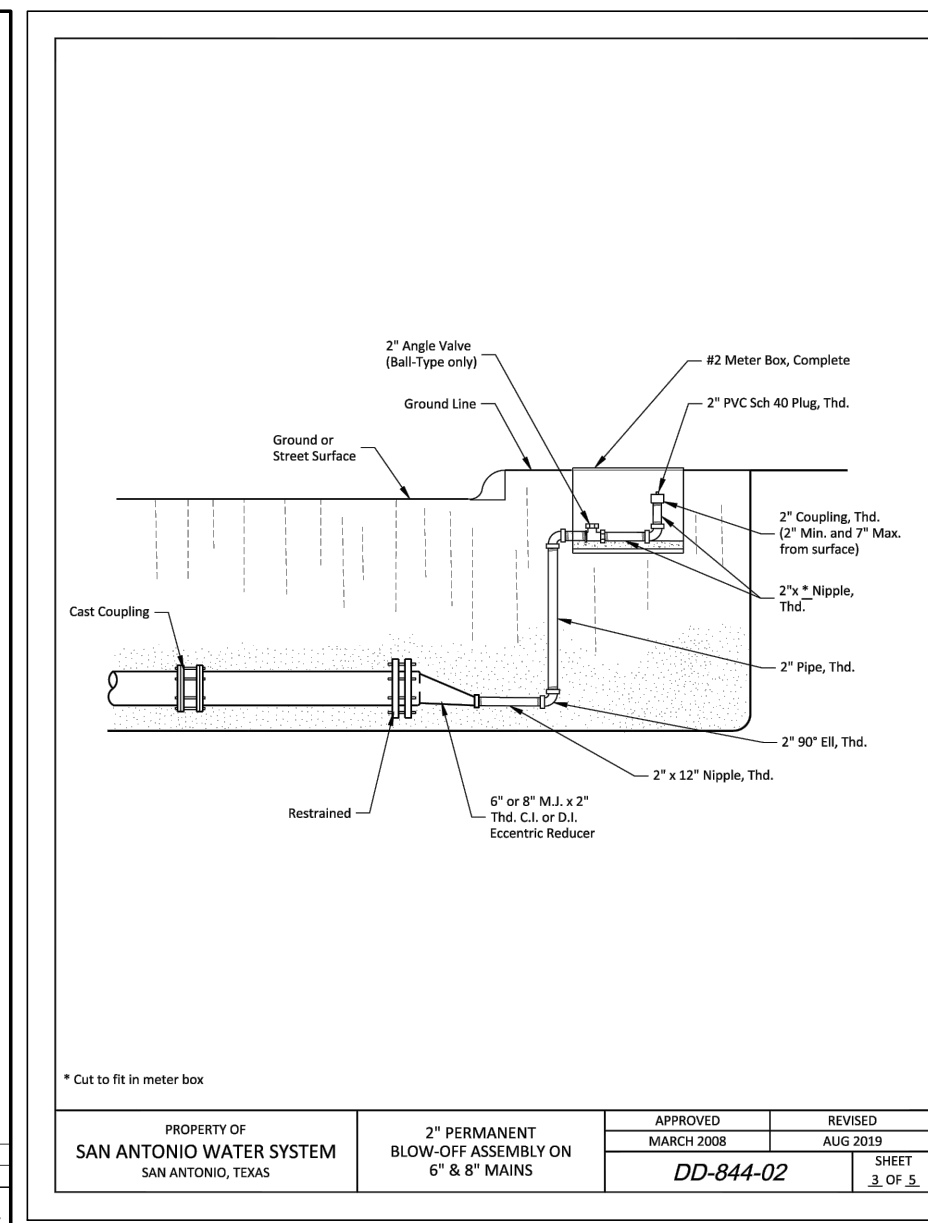
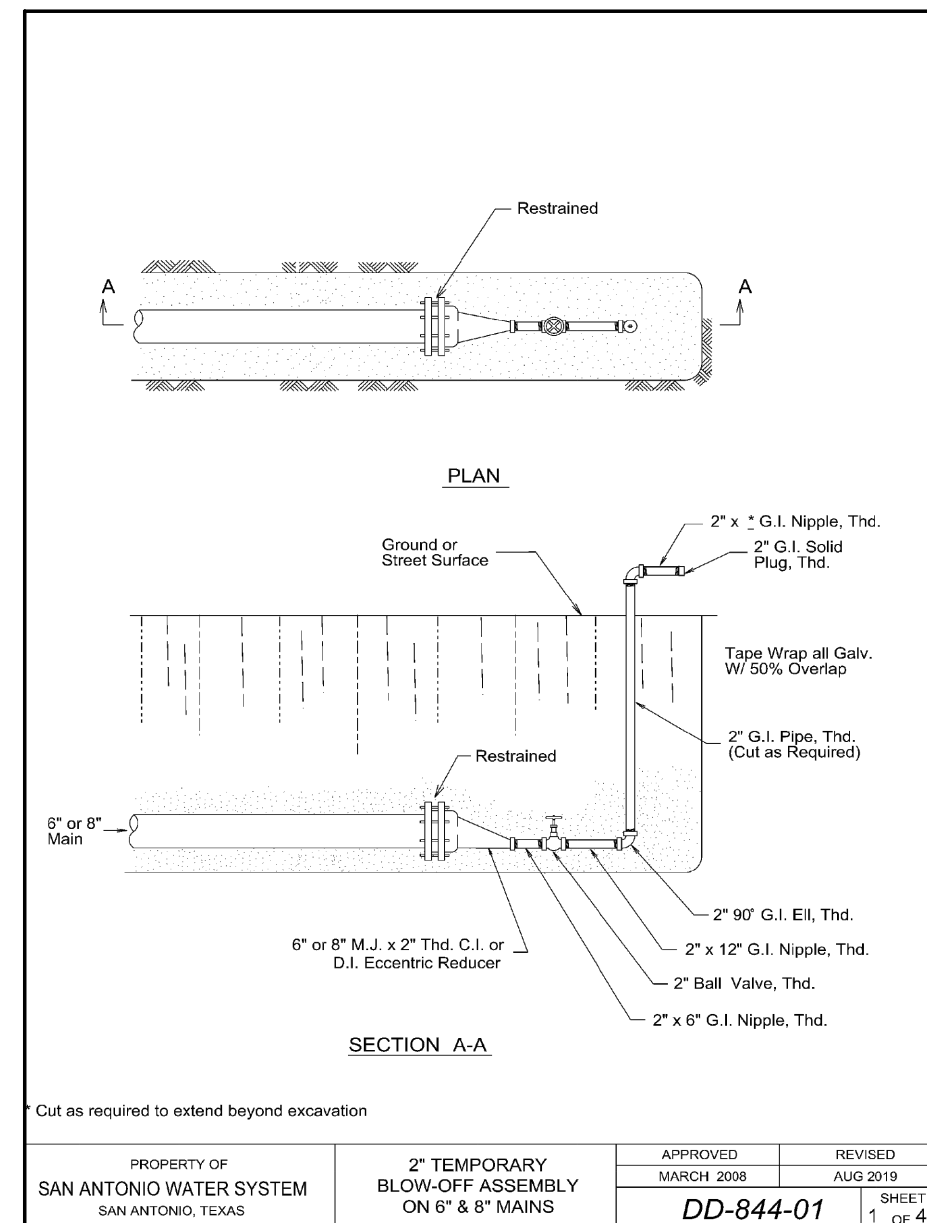
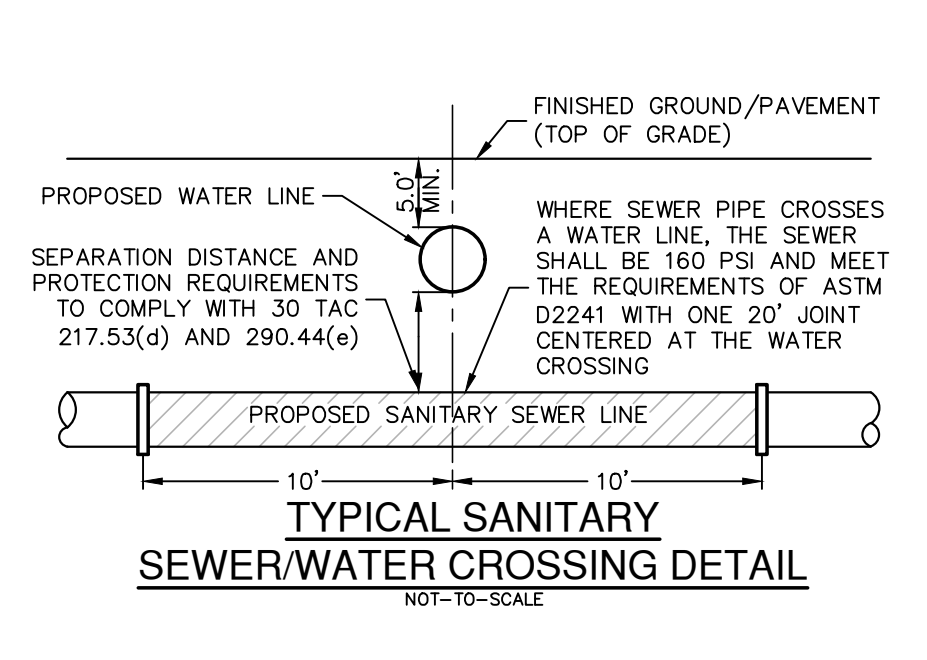
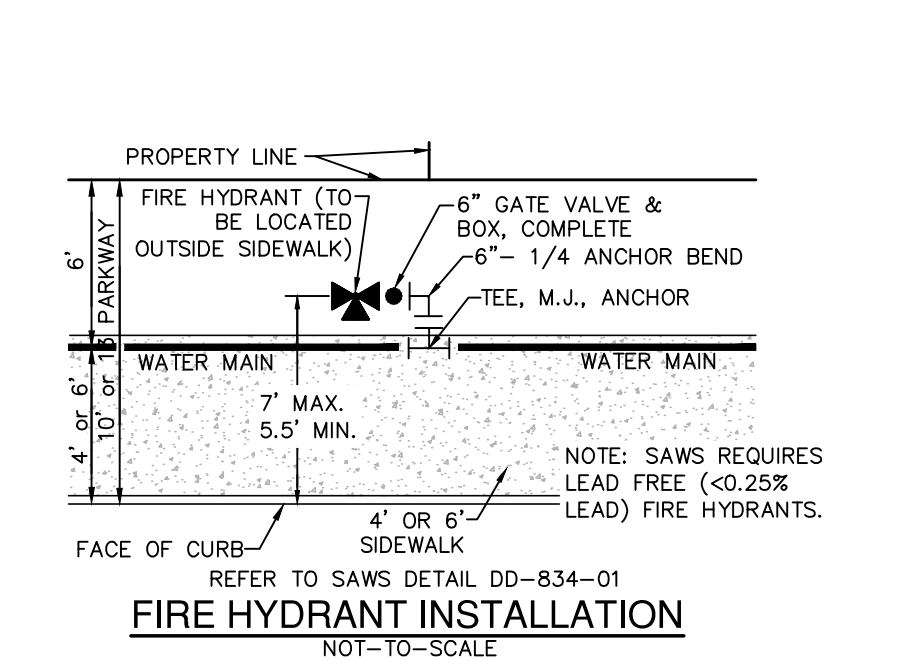
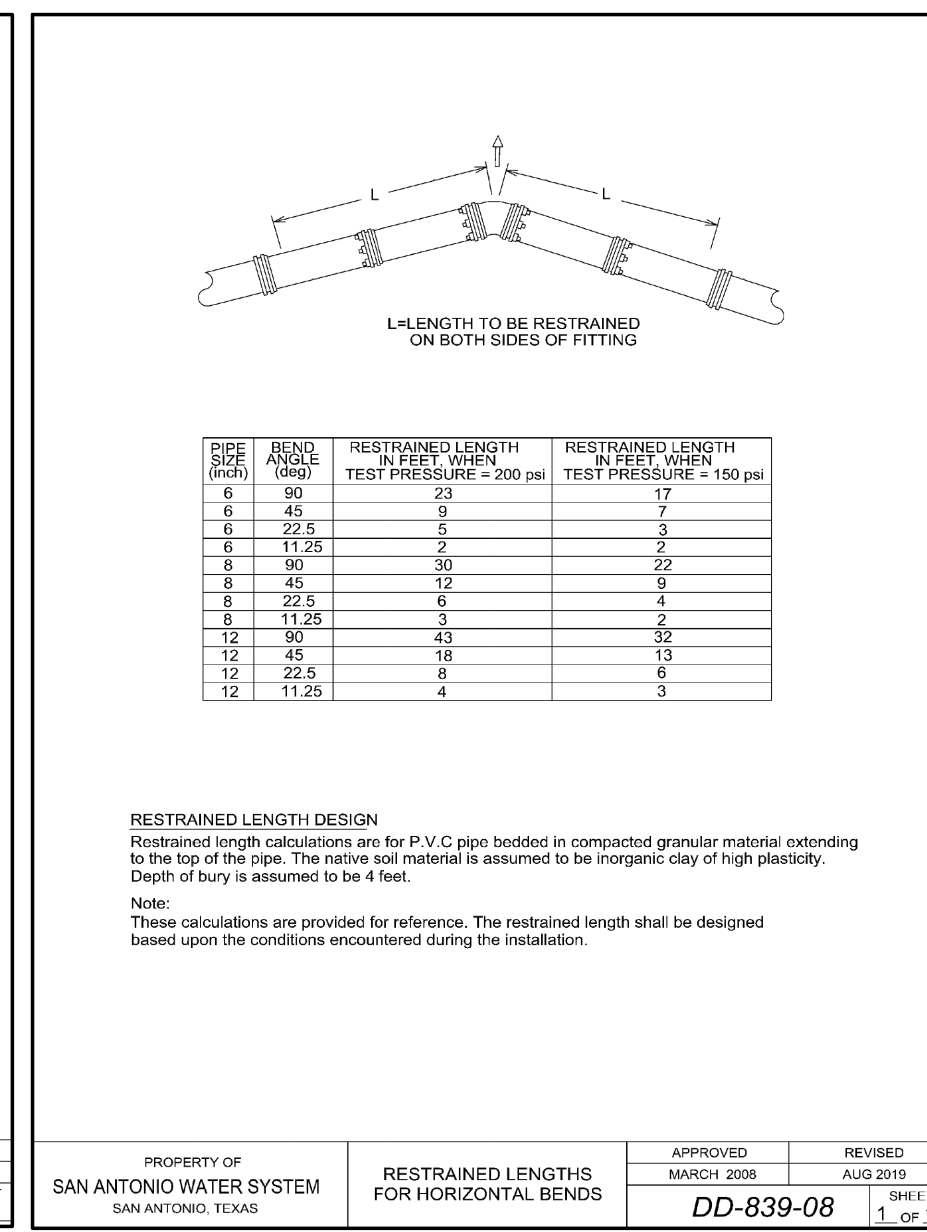
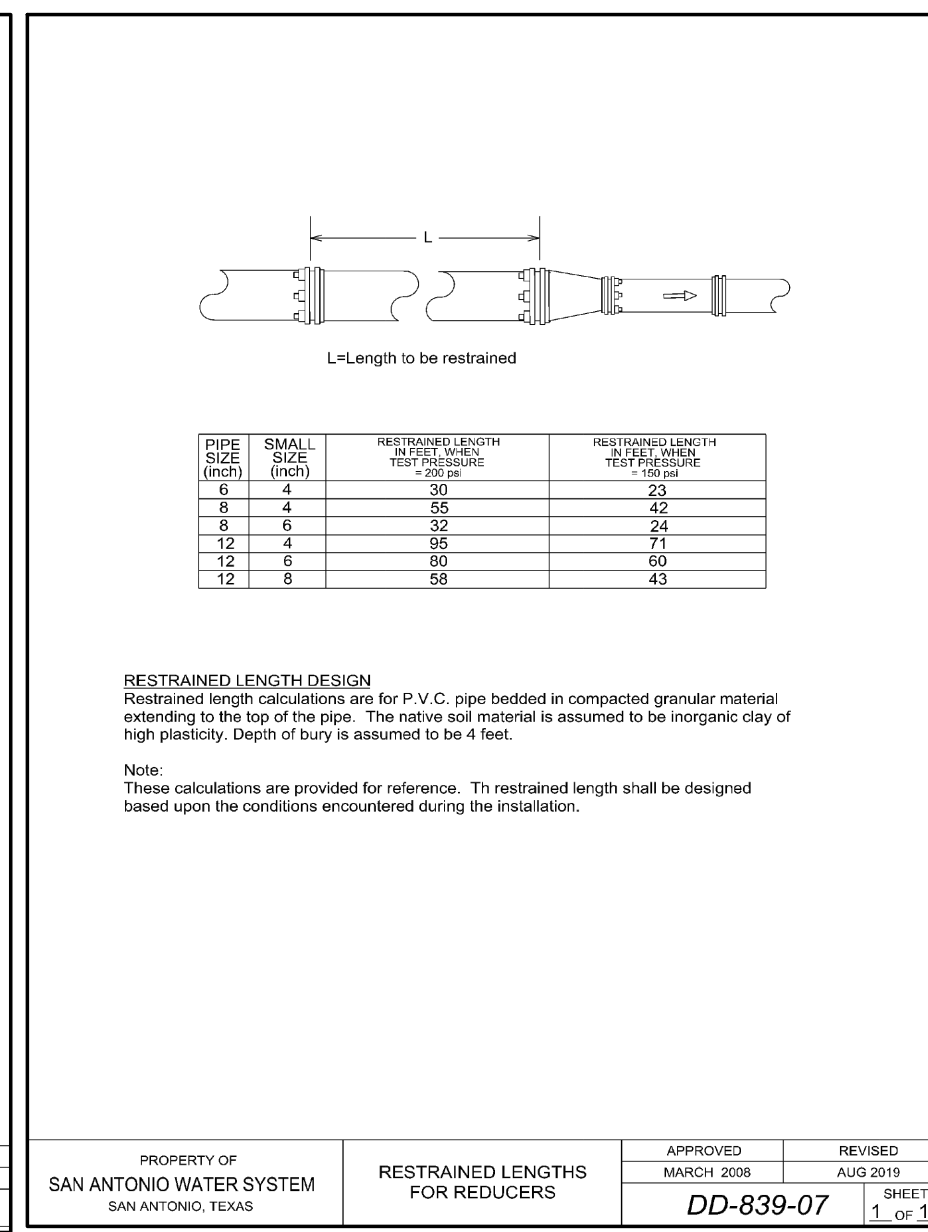
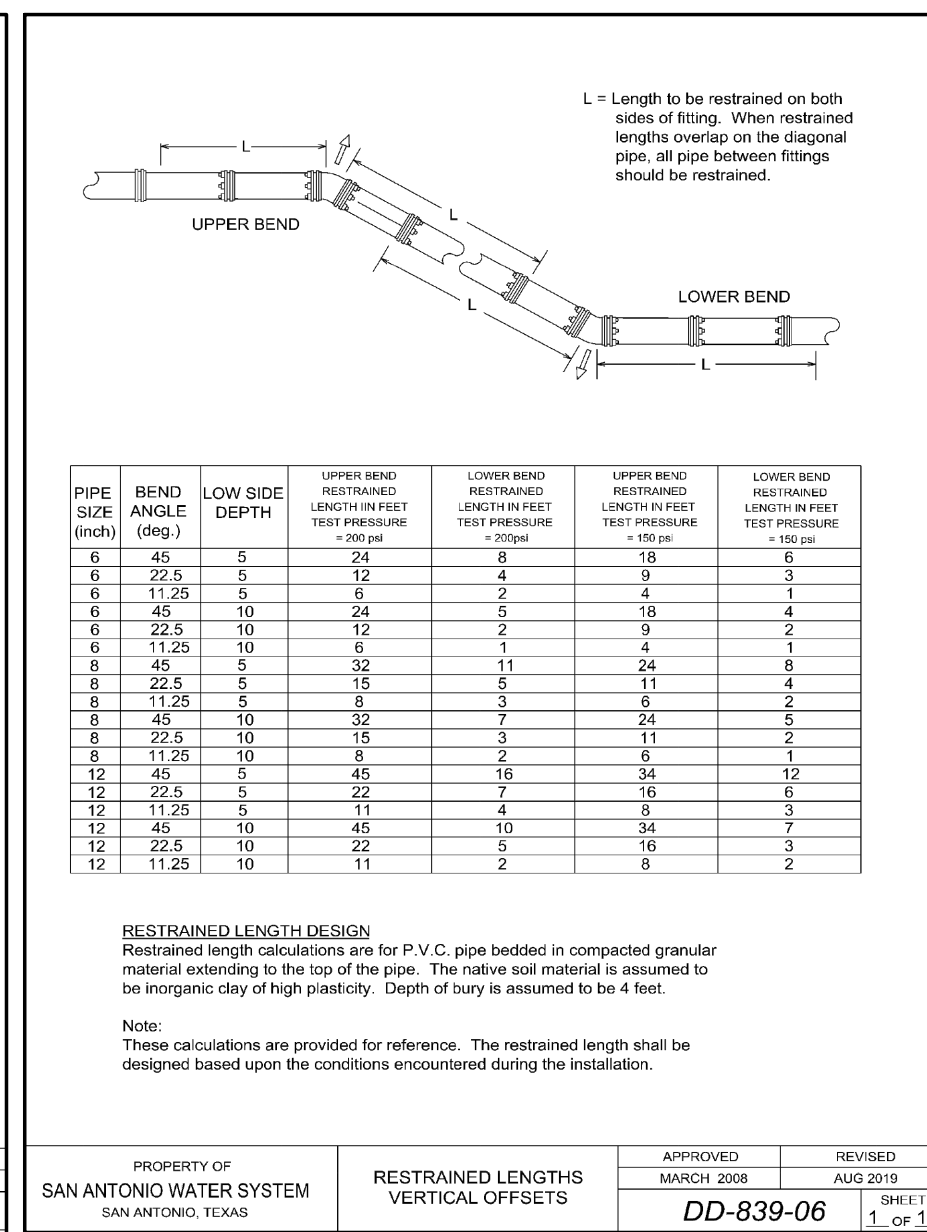
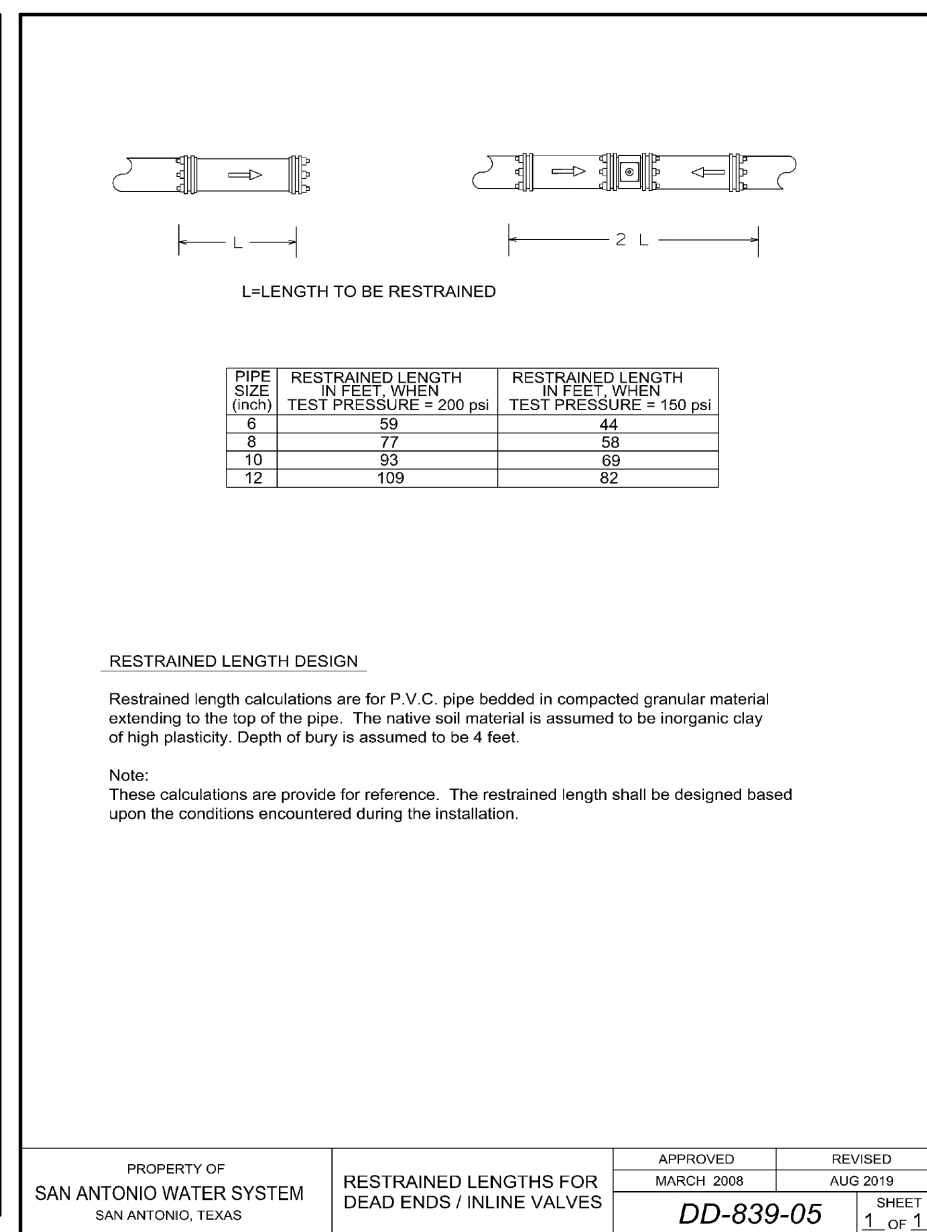
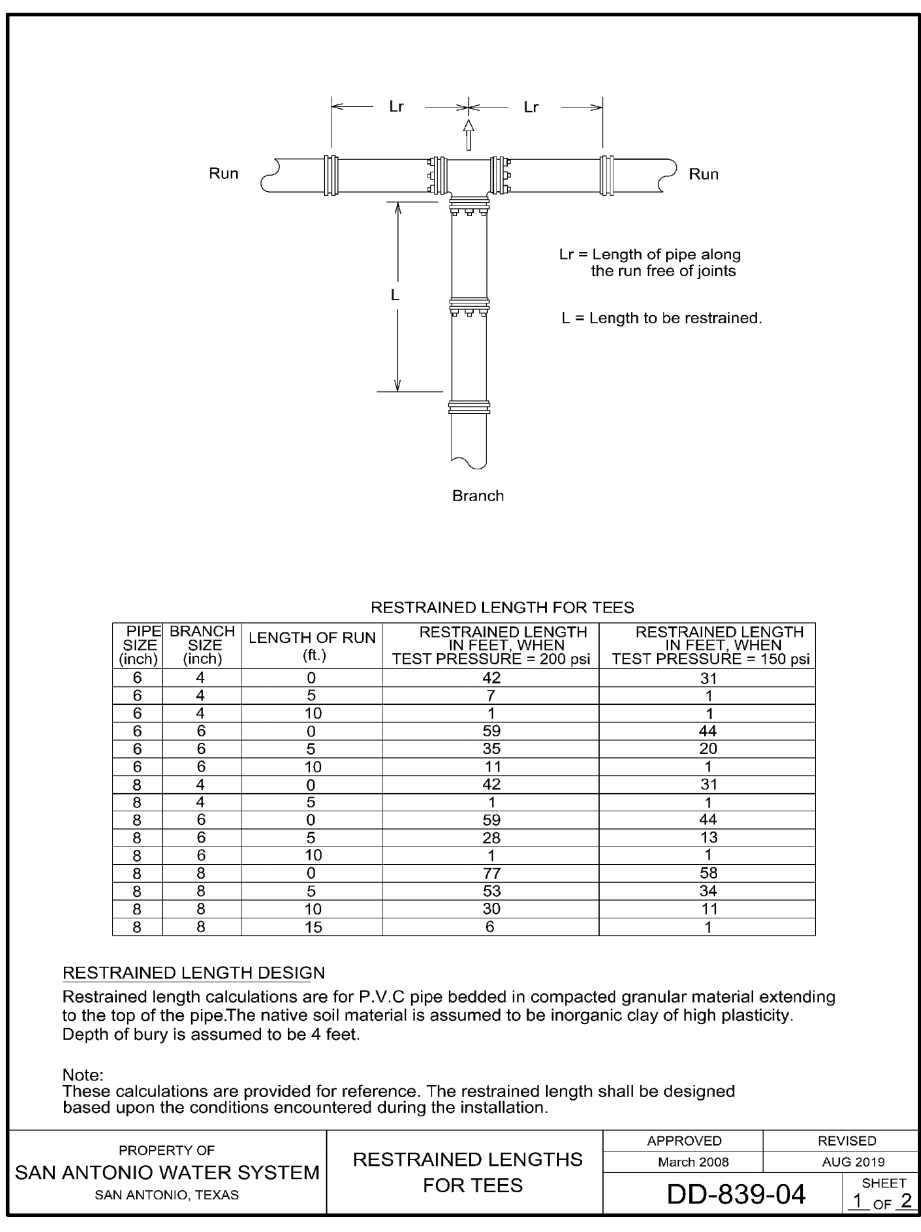
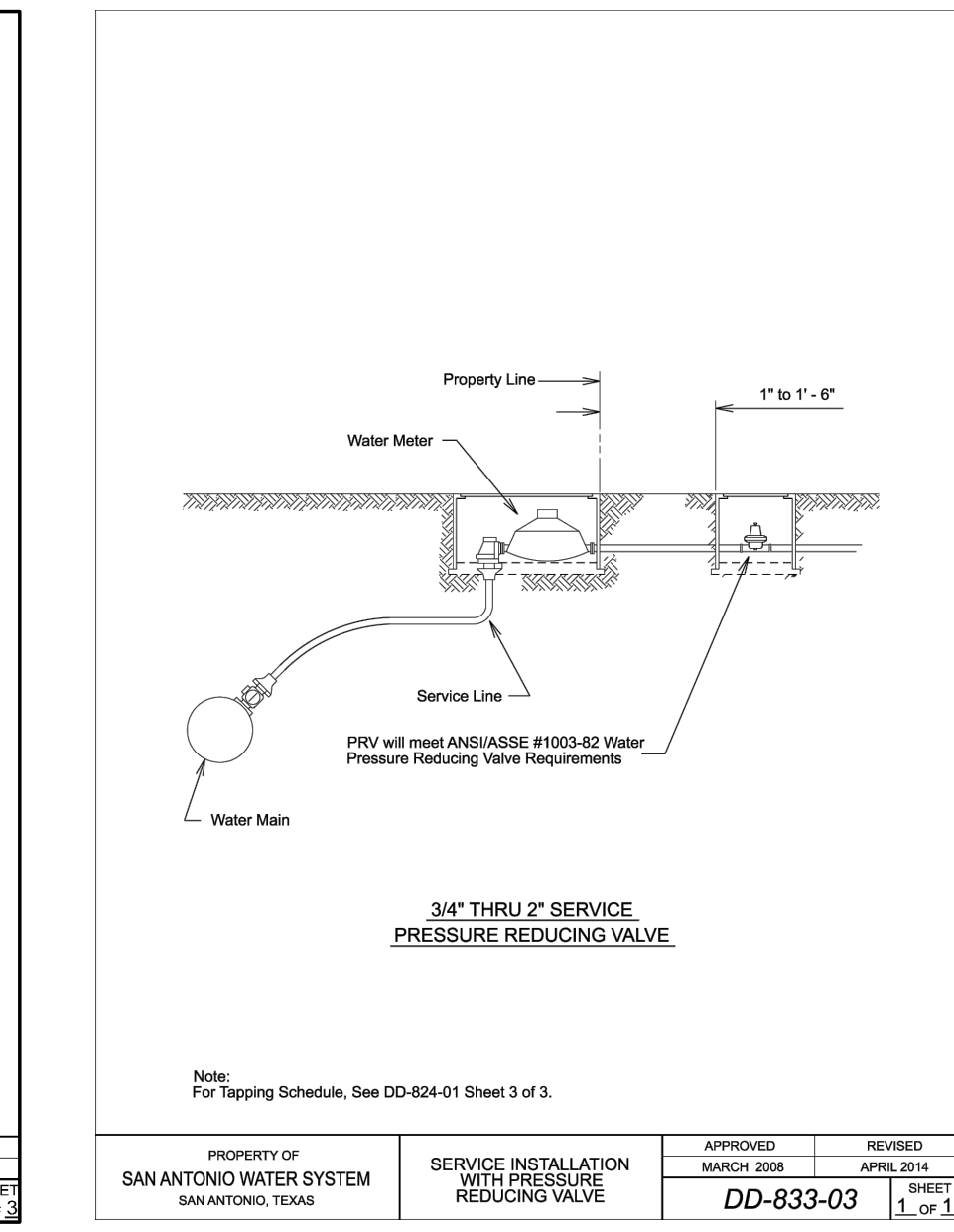
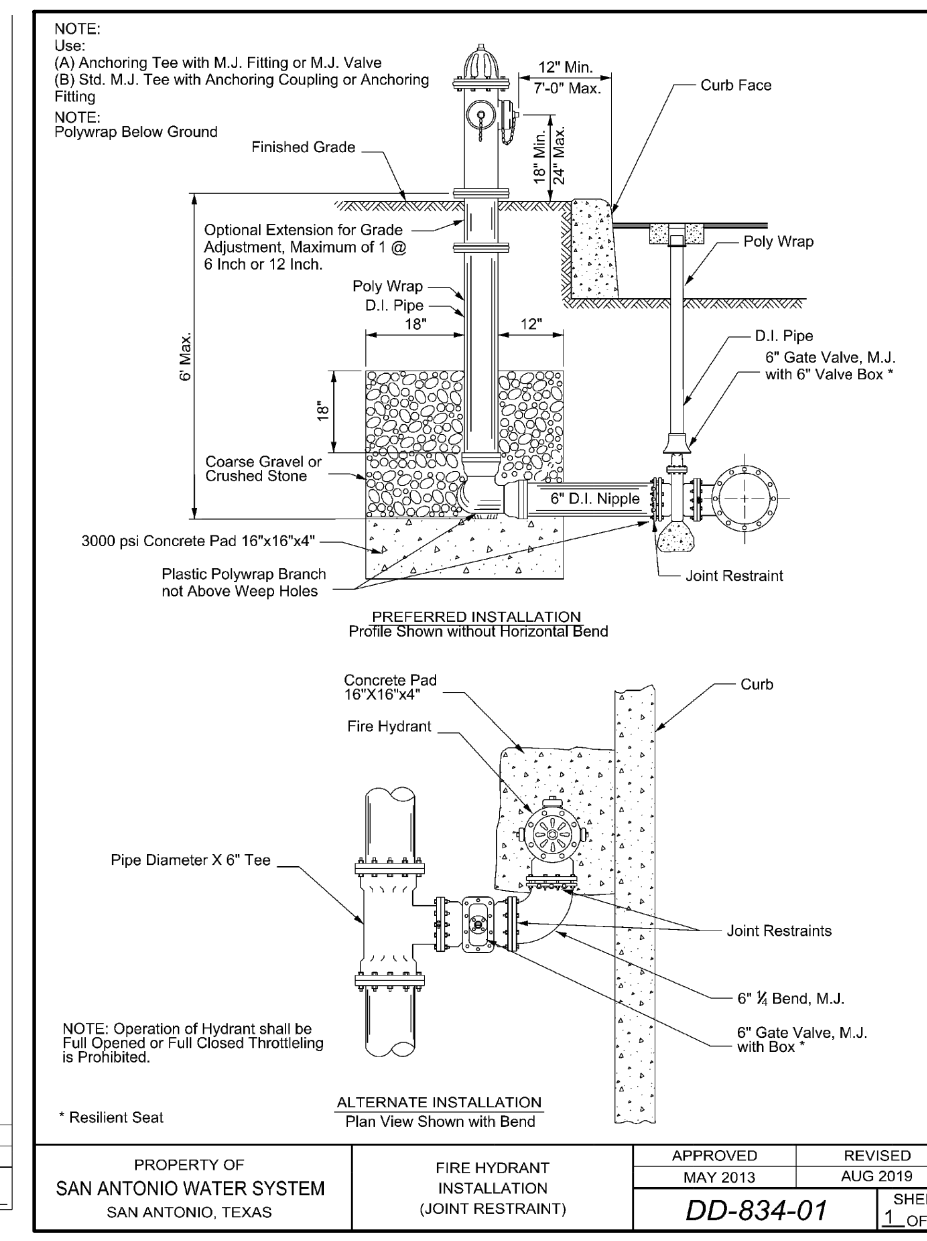
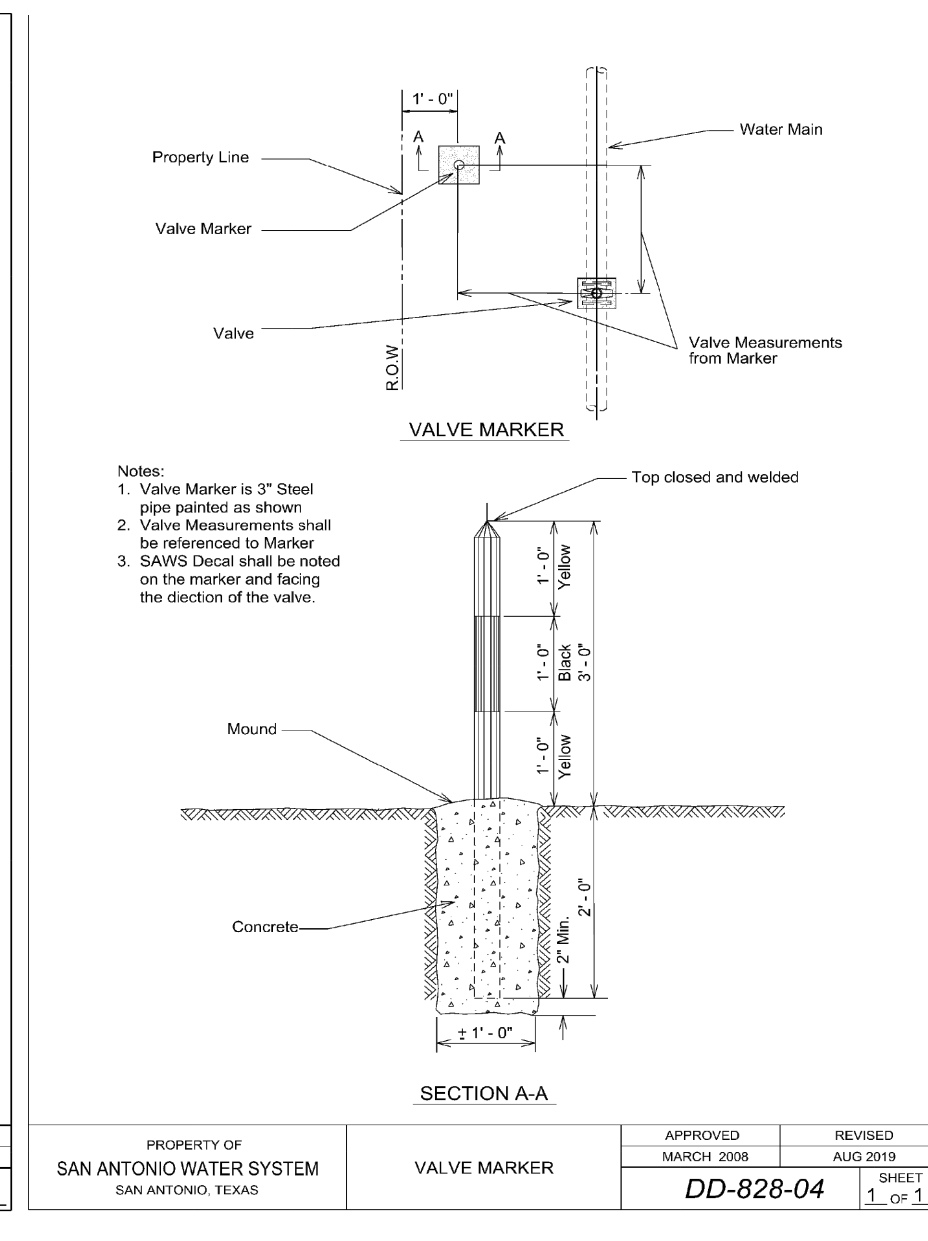
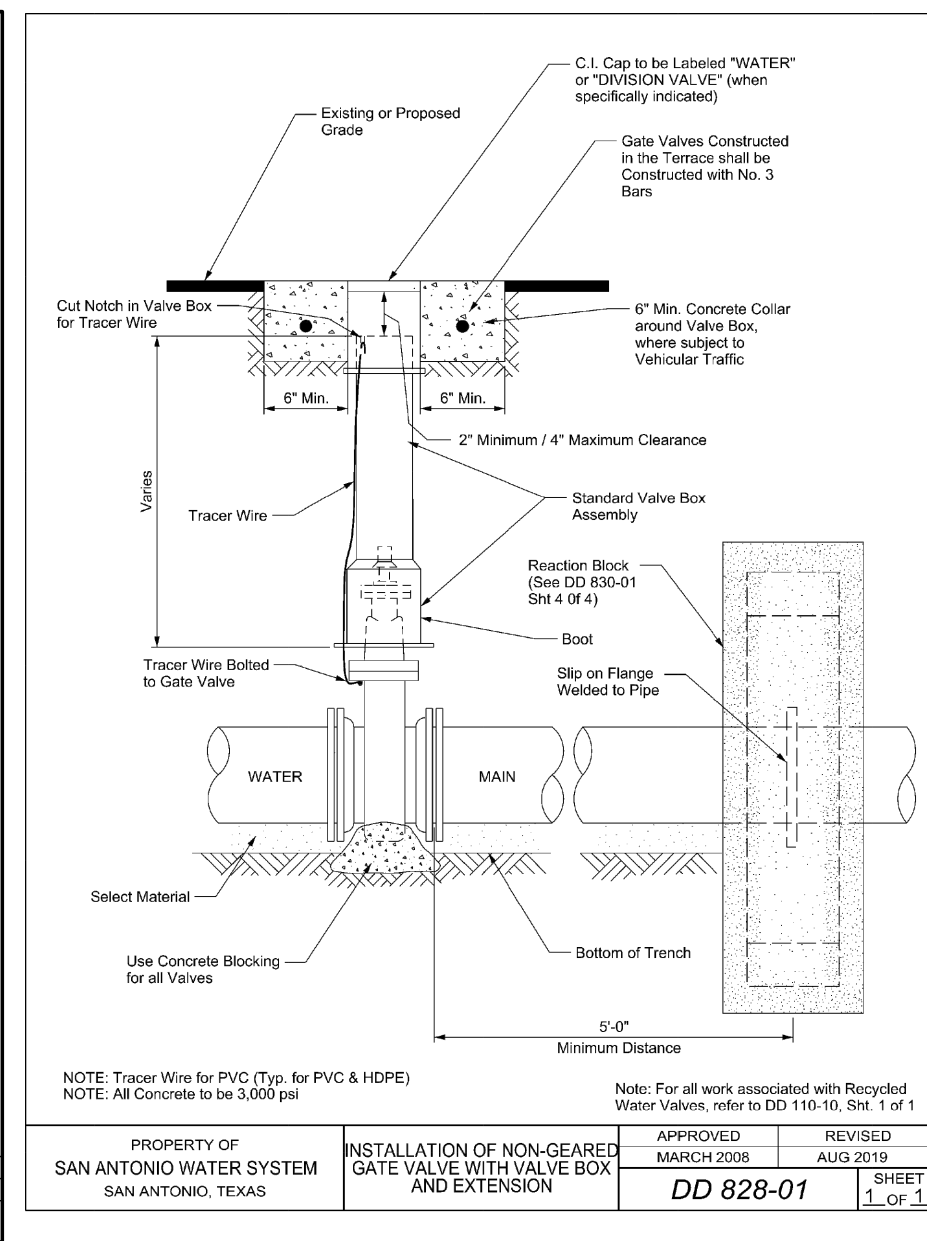
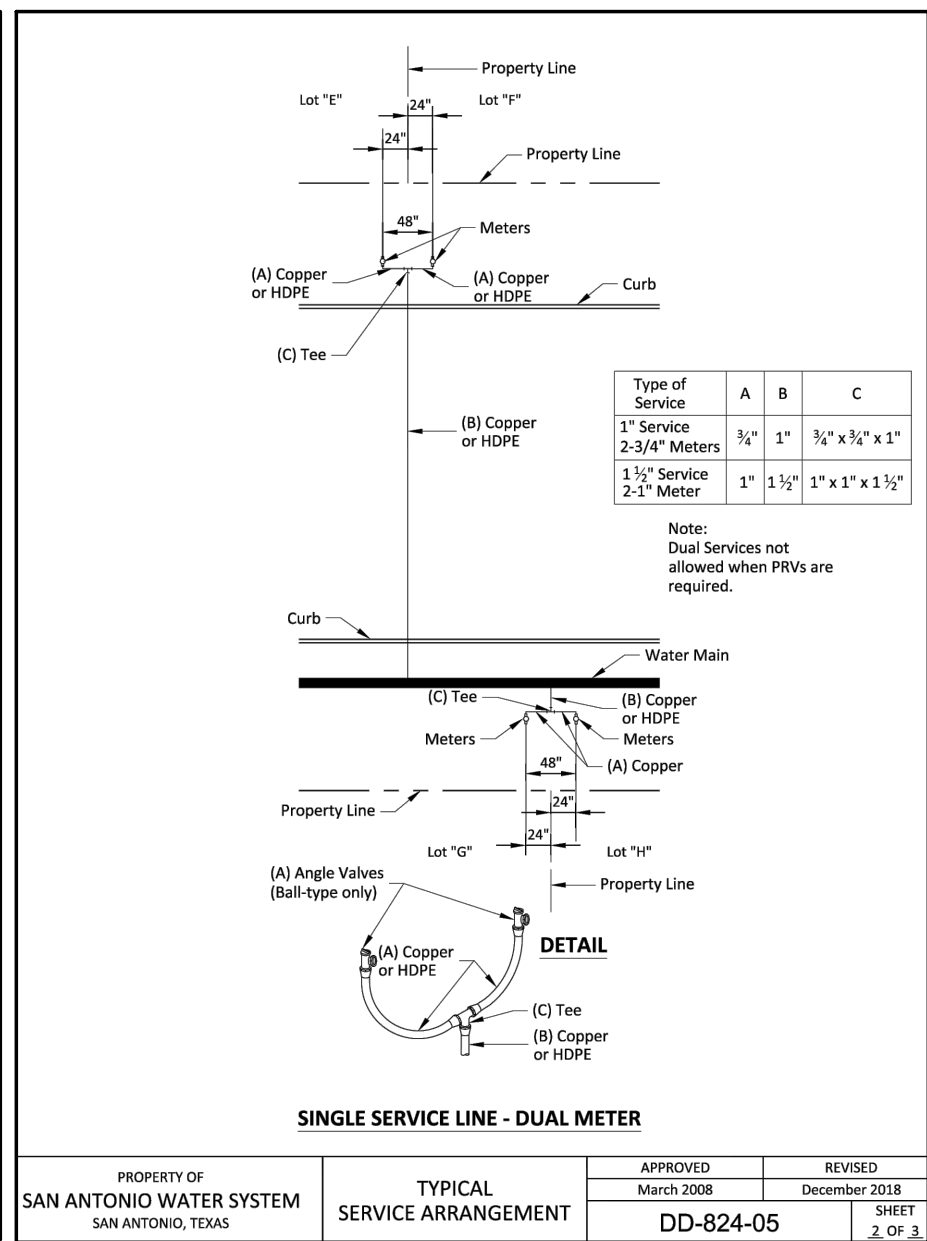
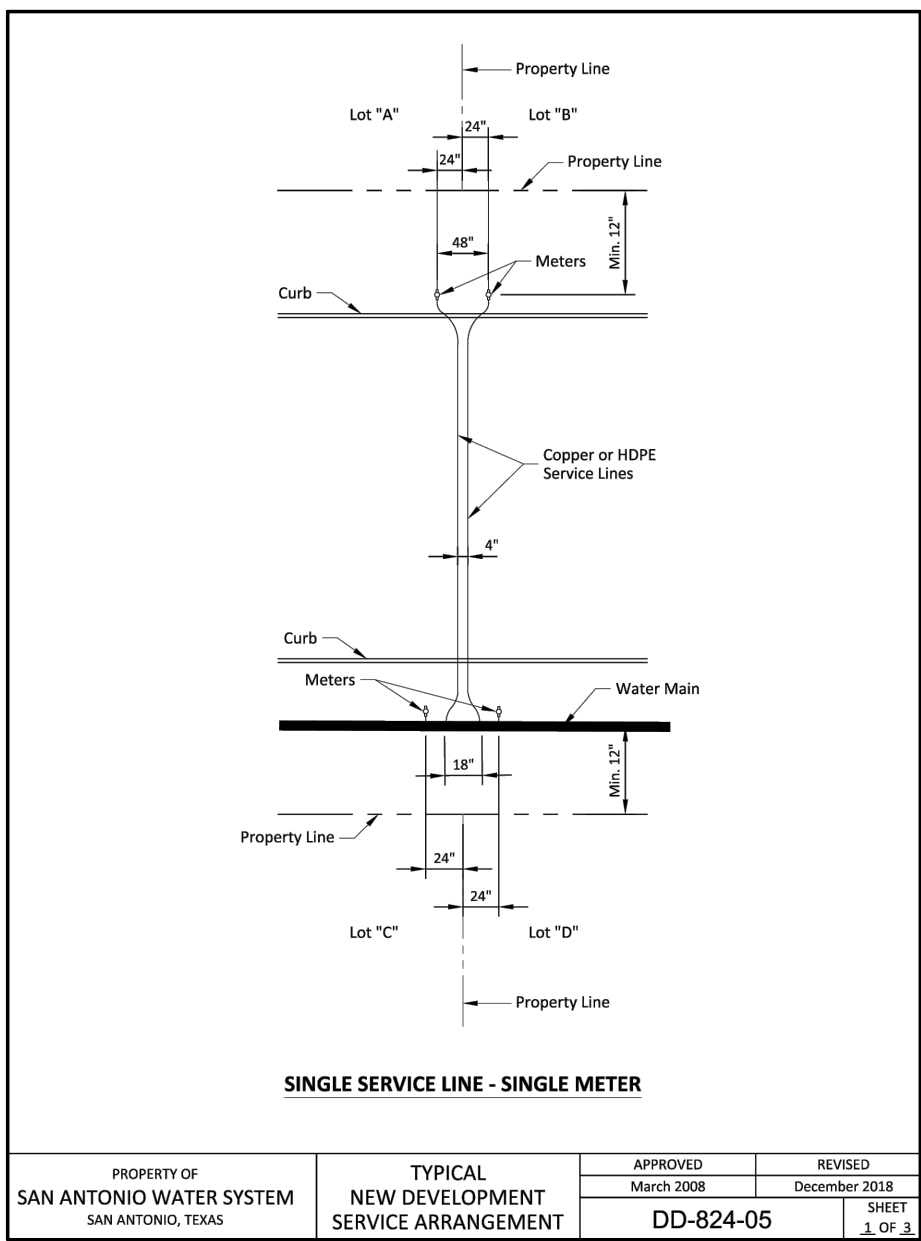
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10026800

PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

OVERALL WATER DISTRIBUTION PLAN

PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET C5.00



PAPE-DAWSON ENGINEERS

2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088900

PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

WATER DISTRIBUTION DETAILS

DEVELOPER'S NAME: KB HOME LONE STAR, INC
ADDRESS: 4800 FREDRICKSBURG ROAD
CITY: CITY STATE: STATE ZIP: 78229
PHONE# (210) 301-5485 FAX#
SAWS BLOCK MAP# 064610 TOTAL EDU'S 60 TOTAL ACREAGE 9.166
TOTAL LINEAR FOOTAGE OF PIPE 1,659 LF - 8" PLAT NO. 25-11800087
NUMBER OF LOTS 60 SAWS JOB NO. 25-1059

PLAT NO. 25-11800087
JOB NO. 11668-24
DATE MAY 2025
DESIGNER AR
CHECKED BC DRAWN RP
SHEET C5.10

CONDUIT NOTES:

- CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURB WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
- CONDUITS SHALL BE PVC WITH MINIMUM BURY OF 36 INCHES BELOW PROPOSED FINISHED GRADE. SCHEDULE 80 TO BE USED FOR CPS CONDUITS, ALL OTHER CONDUITS ARE SCHEDULE 40.
- ALL CONDUITS SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.
- ALL CONDUIT SLEEVES TO BE USED FOR ELECTRIC, GAS, OR TELECOMMUNICATION UTILITY CROSSINGS SHALL BE INSTALLED TO MEET OR EXCEED DESIGN REQUIREMENTS FOR THE UTILITY AGENCY WHICH THEY ARE SERVING, INCLUDING BUT NOT LIMITED TO THE DEPTH, TRENCH PLACEMENT, AND PROXIMITY TO OTHER UTILITIES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR VERIFYING AND INSTALLING THE CONDUIT SLEEVES TO MEET THESE SPECIFICATIONS INCLUDING COORDINATING WITH THE UTILITY AGENCY FOR ANY REQUIRED INSPECTIONS

TRENCH EXCAVATION SAFETY PROTECTION:

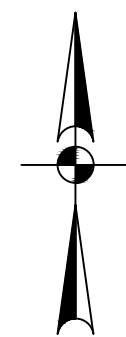
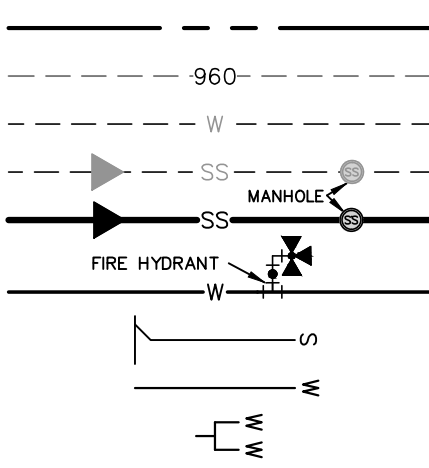
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

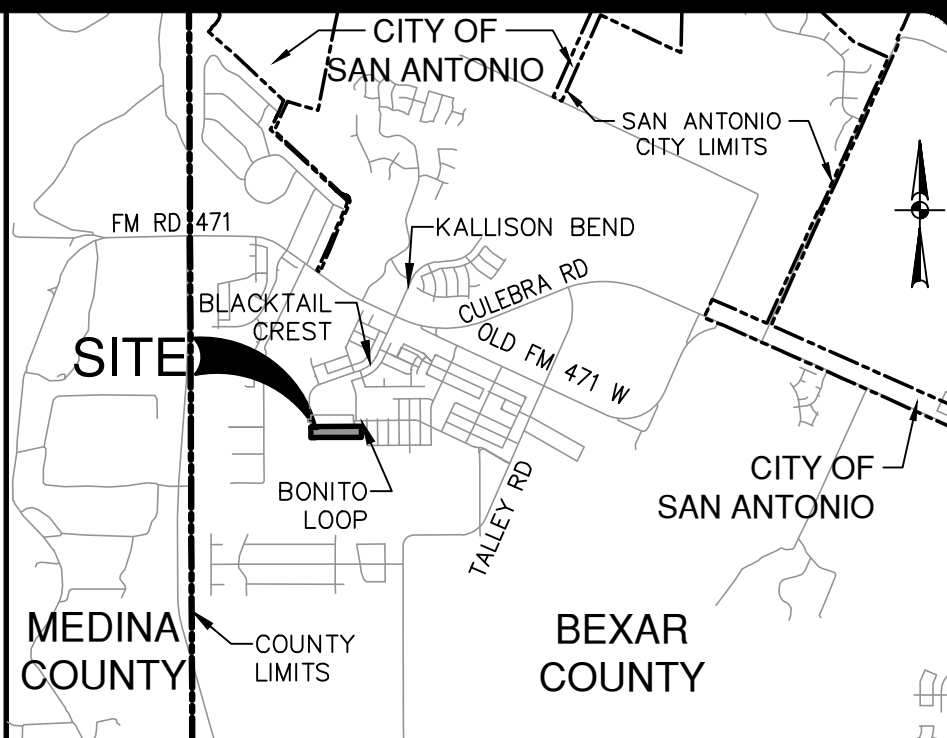
CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE 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.

UTILITY LEGEND

PROJECT LIMITS
EXISTING CONTOURS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER
PROPOSED WATER
PROPOSED WYE & LATERAL
SINGLE WATER SERVICE
DUAL WATER SERVICE
STREET LIGHTS

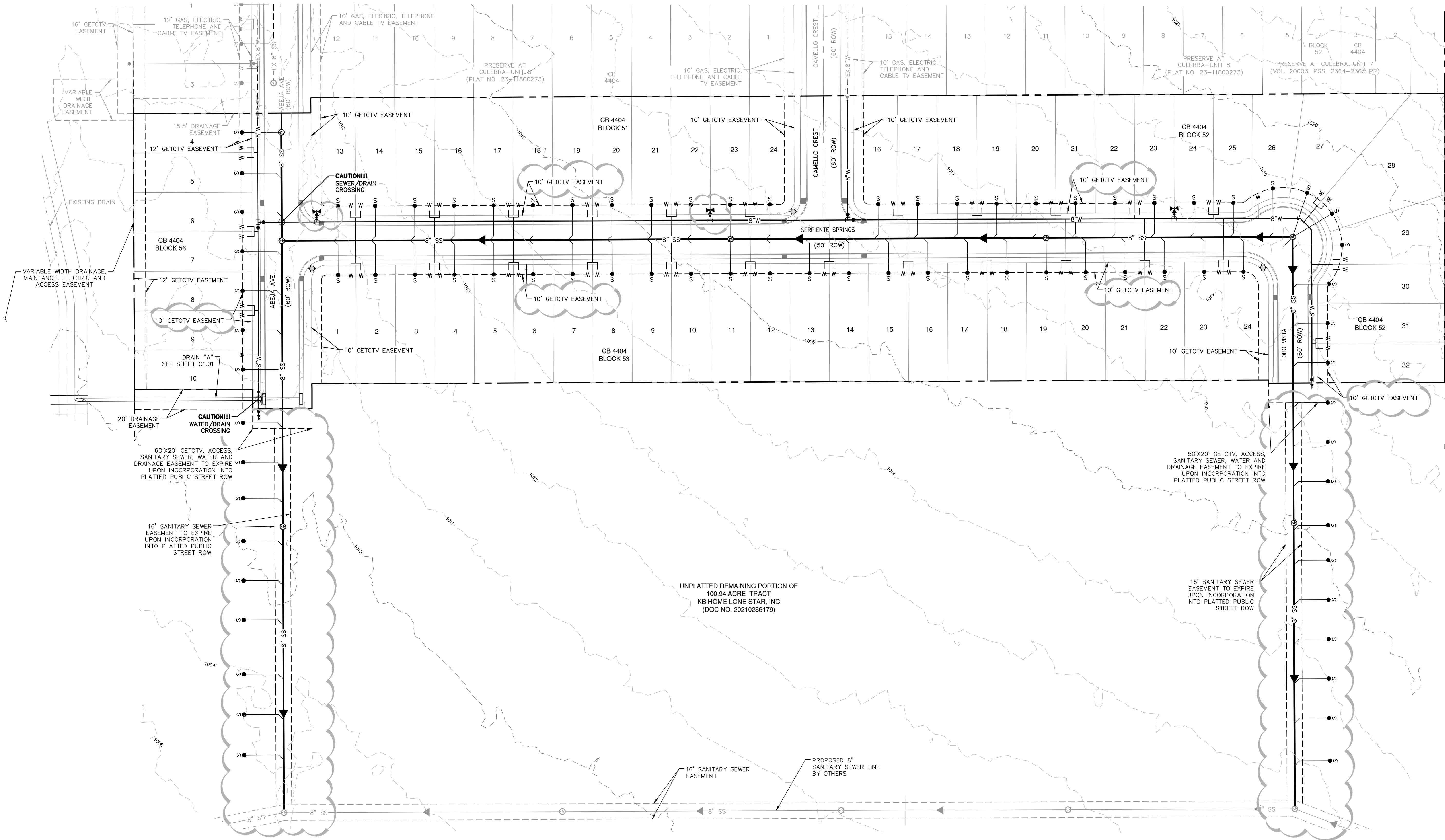


SCALE: 1"= 50'
0' 50' 100' 150'



LOCATION MAP

NOT-TO-SCALE



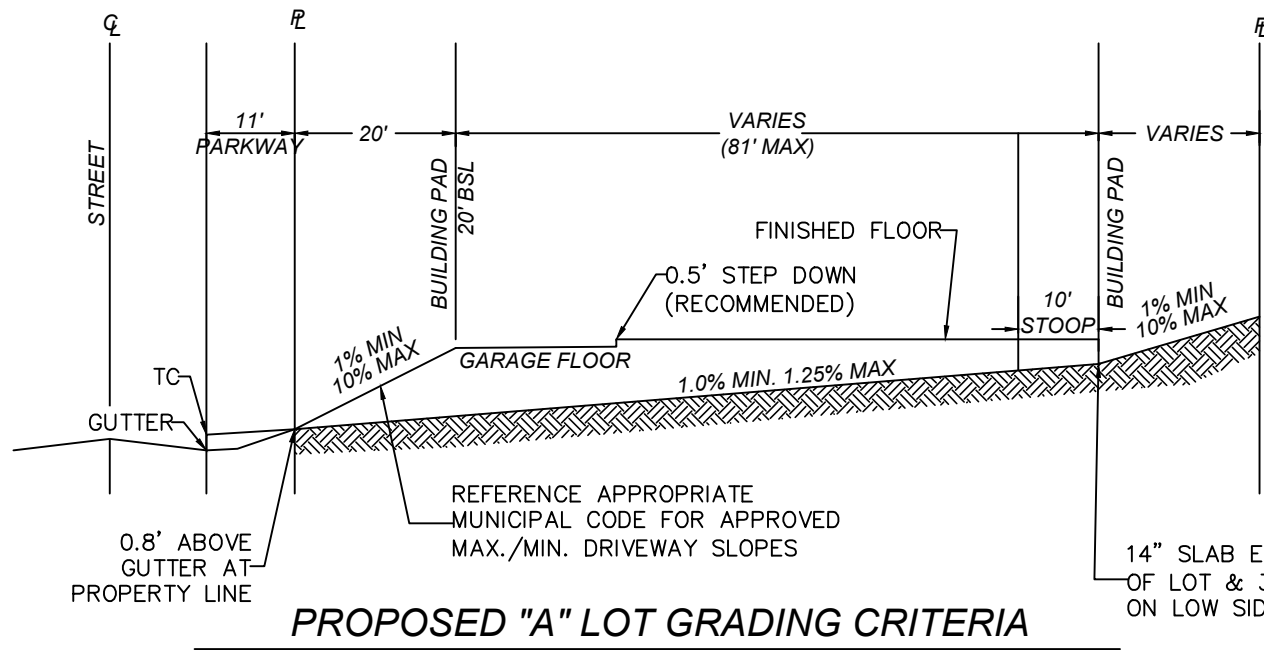
NO.	REVISION	DATE
1.	SS LATERALS & 10' EASEMENT	06/18/25
	FIRE HYDRANT	



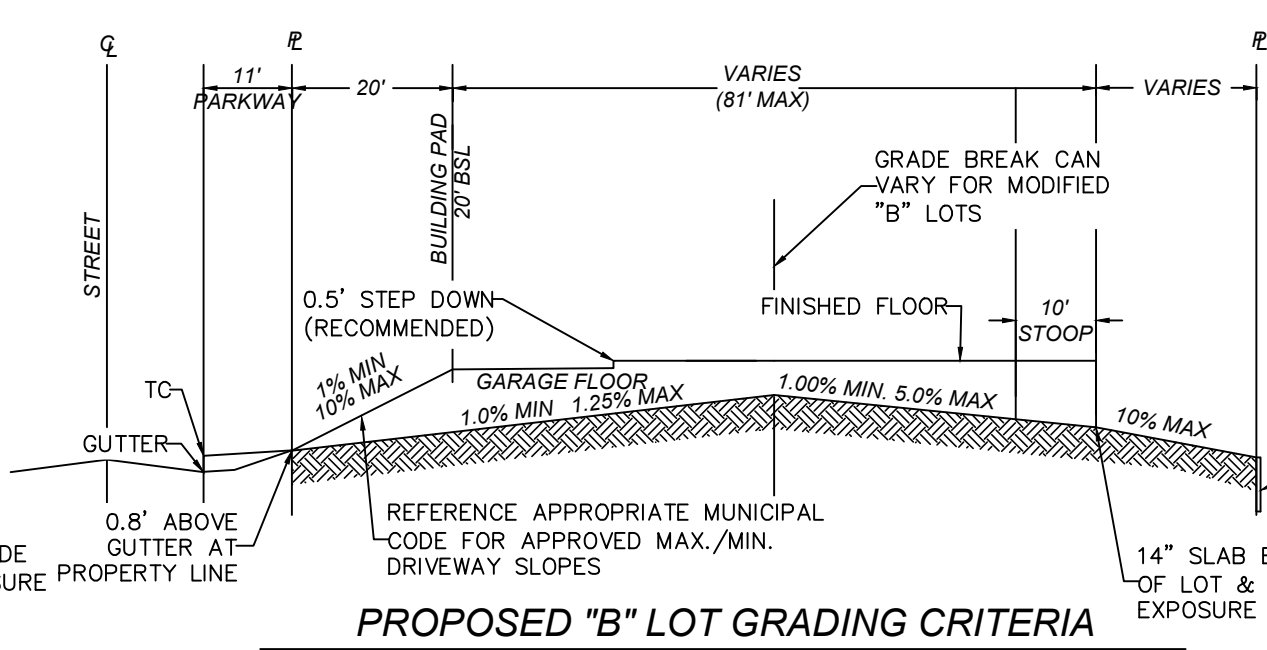
PAPE-DAWSON
ENGINEERS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS
OVERALL UTILITY PLAN

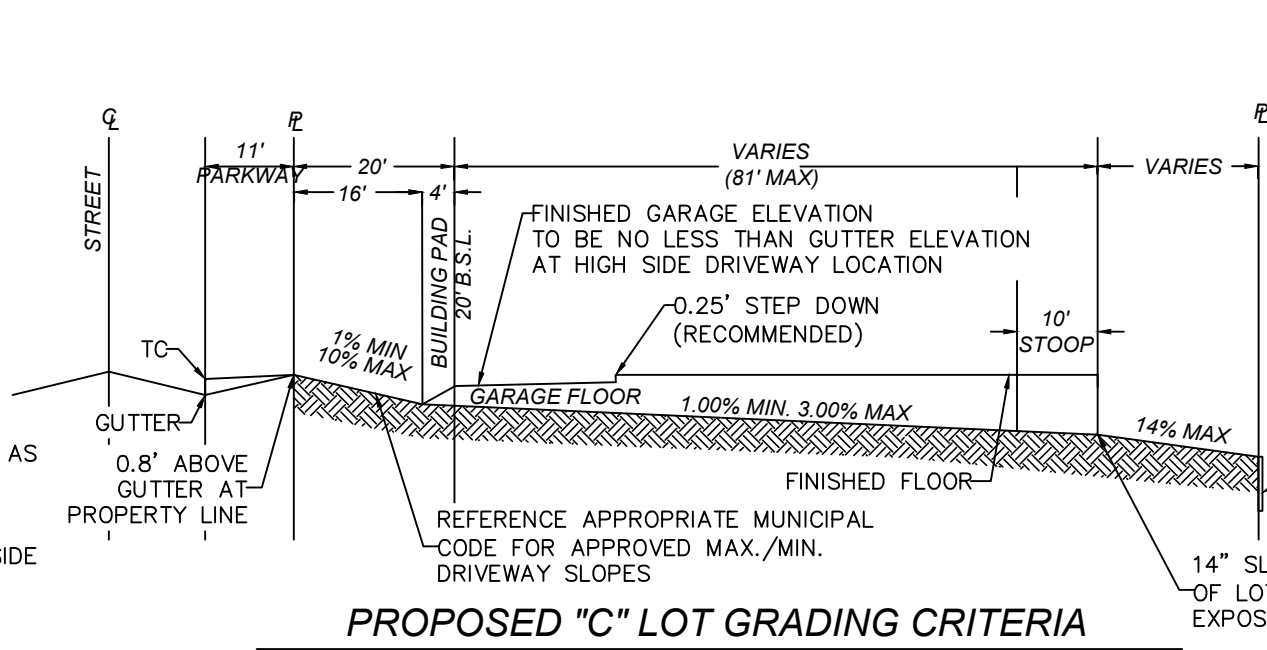
PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DESIGNER	AR
CHECKED	BC
DRAWN	RP
SHEET	C6.00



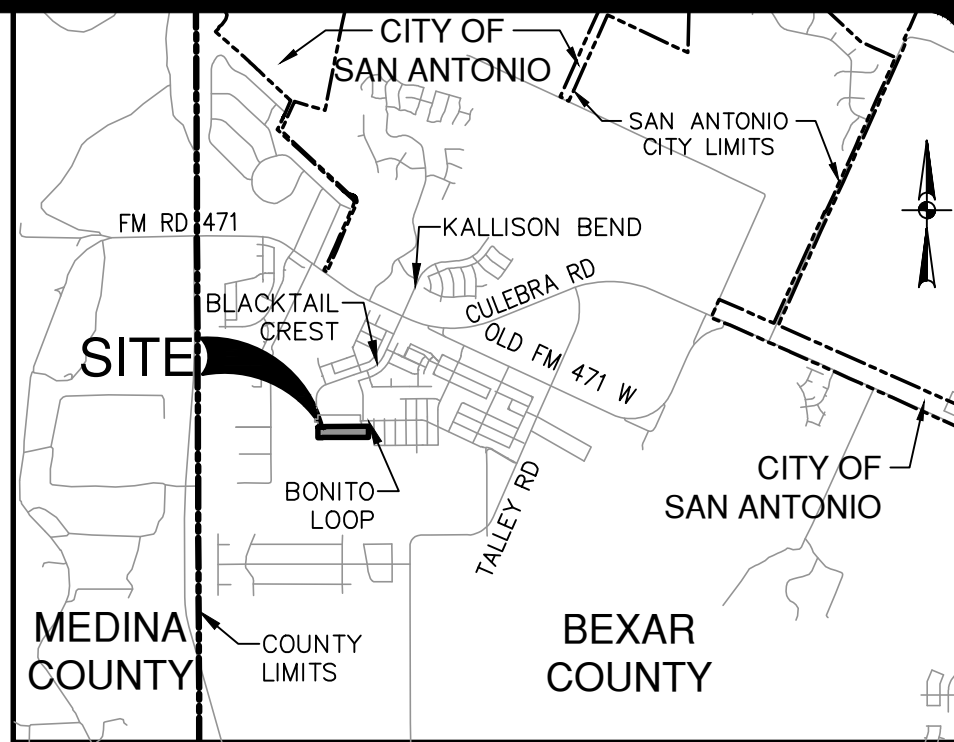
1. SHOW RETAINING WALLS GREATER THAN 1 FT. ON GRADING PLAN.
2. FINISHED GRADE AT FRONT BUILDING SETBACK NO LESS THAN 1% SLOPE BACK TO RIGHT-OF-WAY.
3. MAXIMUM GRADE ACROSS BUILDING PAD SHALL BE 1.25%; MINIMUM GRADE ACROSS BUILDING PAD SHALL BE 1%.
4. BUILDING PAD GRADE SHALL EXTEND 10' BEYOND THE ESTIMATED PAD LENGTH.
5. MAXIMUM GRADE ON REAR YARD SHALL BE 10%; MINIMUM GRADE ON REAR YARD SHALL BE 1%.
6. CROSSFALL ACROSS BUILDING PAD TO CREATE NO MORE THAN 36 IN. SLAB EXPOSURE.



1. SHOW RETAINING WALLS GREATER THAN 1 FT. ON GRADING PLAN.
2. FINISHED GRADE AT FRONT BUILDING SETBACK LINE SHALL BE NO LESS THAN 1% SLOPE BACK TO RIGHT-OF-WAY.
3. MAXIMUM GRADE ACROSS BUILDING PAD SHALL BE 1.25% TO THE FRONT AND 3.0% TO THE BACK.
4. BUILDING PAD GRADE SHALL EXTEND 10' BEYOND THE ESTIMATED PAD LENGTH.
5. MAXIMUM GRADE ON REAR YARD SHALL BE 14%; MINIMUM GRADE ON REAR YARD SHALL BE 1%.
6. CROSSFALL ACROSS BUILDING PAD TO CREATE NO MORE THAN 36 IN. SLAB EXPOSURE.

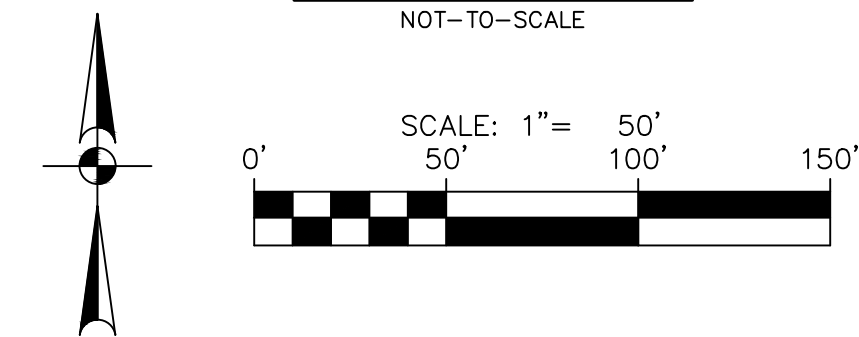


1. SHOW RETAINING WALLS GREATER THAN 1 FT. ON GRADING PLAN.
2. FINISHED GRADE AT FRONT BUILDING SETBACK LINE SHALL BE NO LESS THAN 1% SLOPE.
3. MAXIMUM GRADE THROUGH BUILDING PAD SHALL BE 3.0%; MINIMUM GRADE THROUGH BUILDING PAD SHALL BE 1%.
4. BUILDING PAD GRADE SHALL EXTEND 10' BEYOND THE ESTIMATED PAD LENGTH.
5. MAXIMUM GRADE ON REAR YARD SHALL BE 14%; MINIMUM GRADE ON REAR YARD SHALL BE 1%.
6. CROSSFALL ACROSS BUILDING PAD TO CREATE NO MORE THAN 36 IN. SLAB EXPOSURE.

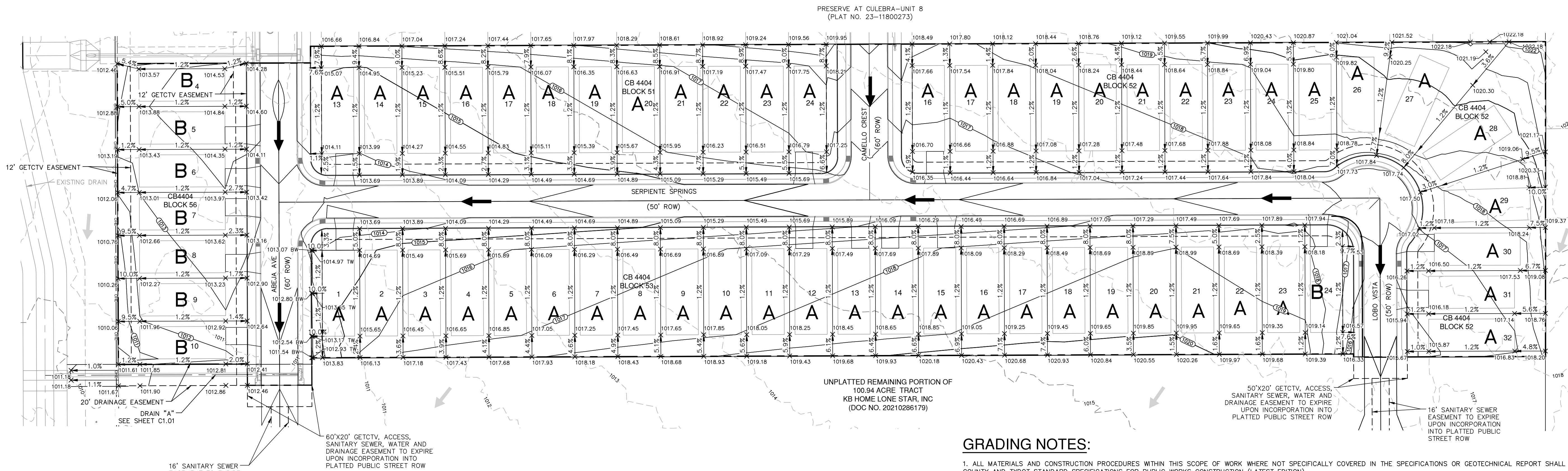


LOCATION MAP

NOT-TO-SCALE



This document is released
ONLY under the authorization
of Rebecca Carroll, P.E.
#92666 on 6/7/2025
This document is not to be
used for CONSTRUCTION.



GRADING LEGEND

PROJECT LIMITS	---
100 YR FLOODPLAIN	---
EXISTING CONTOUR	---976---
PROPOSED CONTOUR	---970---
FLOW ARROW (EXISTING)	→
FLOW ARROW (PROPOSED)	→
MINIMUM FINISHED FLOOR ELEVATION	FF = XXXX.XX
PROPOSED DRIVEWAY	□

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.

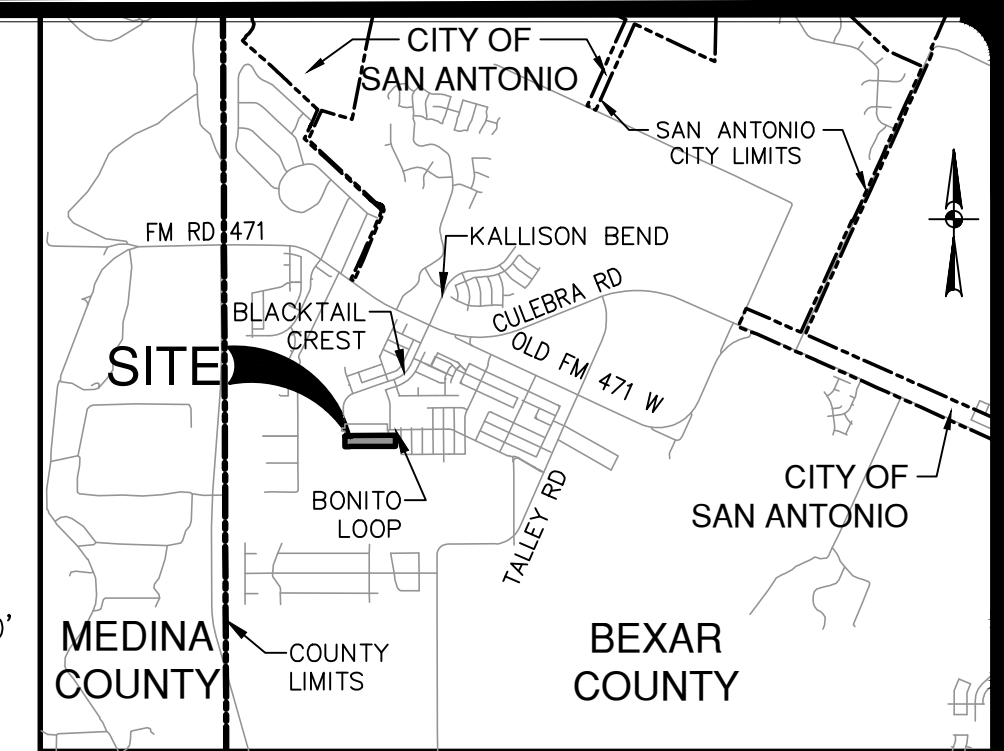
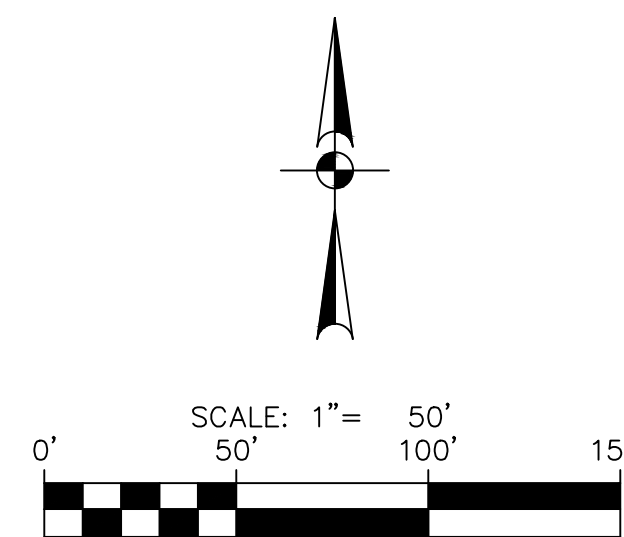
PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

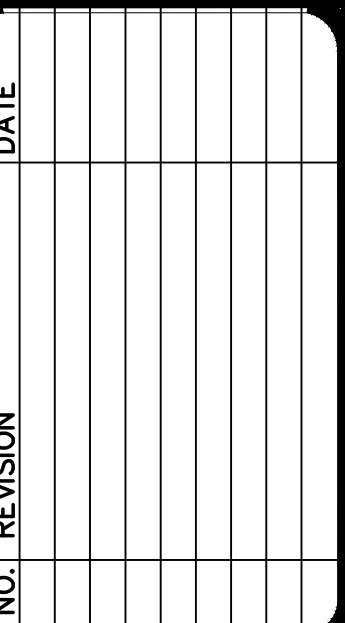
GRADING PLAN

PLAT NO.	25-11800087
JOB NO.	11688-24
DATE	MAY 2025
DRAWN	AR
CHECKED	BC
DRAWN	RP
SHEET	C7.00

3. 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. CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR THE PROJECT.

[illegible]

LOCATION MAP
NOT-TO-SCALE



05/29/202



**PAPE-DAWSON
ENGINEERS**

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

PRESERVE AT CULEBRA-UNIT 9
BEXAR COUNTY, TEXAS

BEAVER COUNTY, ILLAS

STORMWATER POLLUTION PREVENTION PLAN

LAT NO. 25-11800087

DB NO. 11668-24

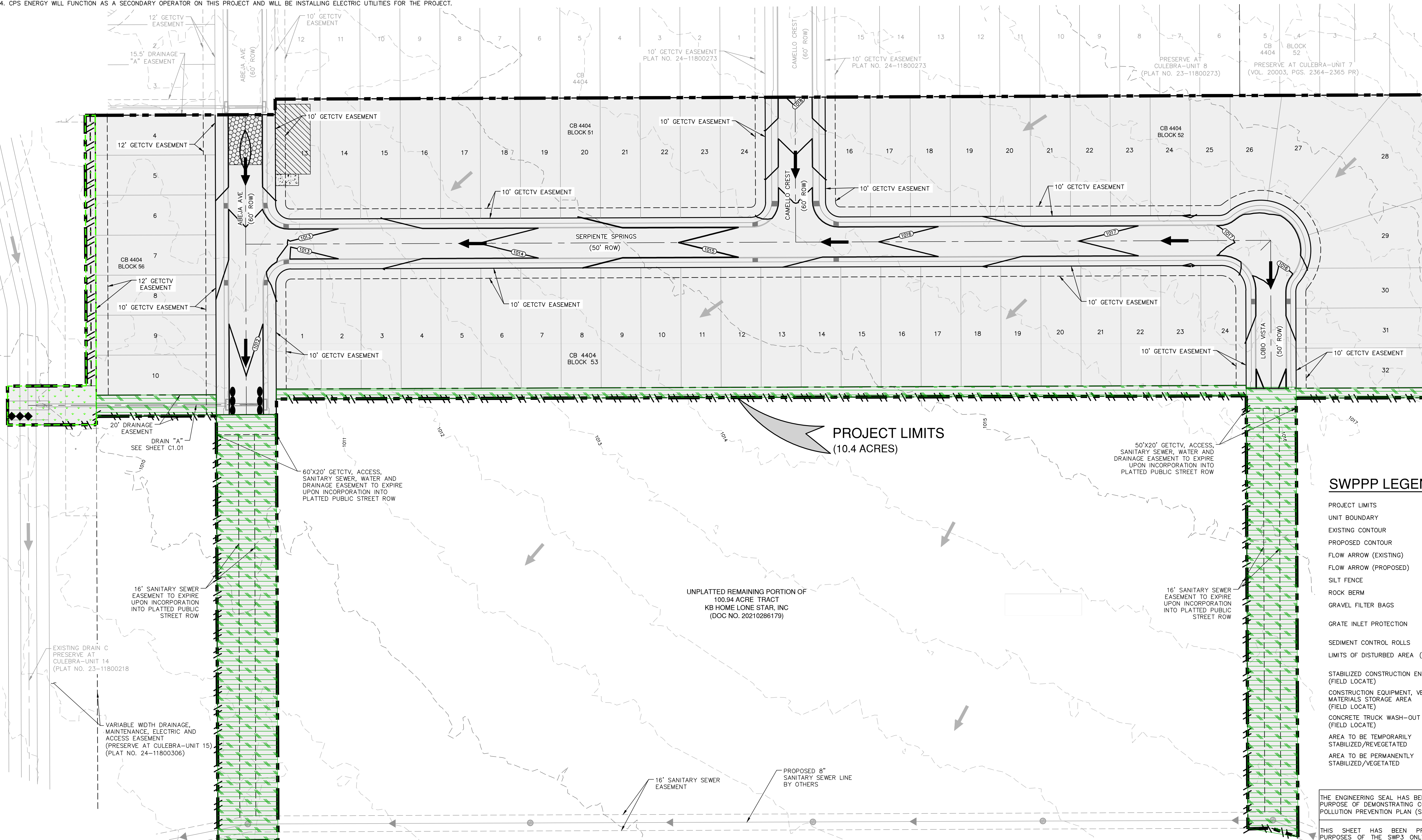
MAY 2025

DESIGNER AR

DESIGNER	_____ RN		
CHECKED	BC	DRAWN	RP

HEATED DO DRAIN RI

C8.00

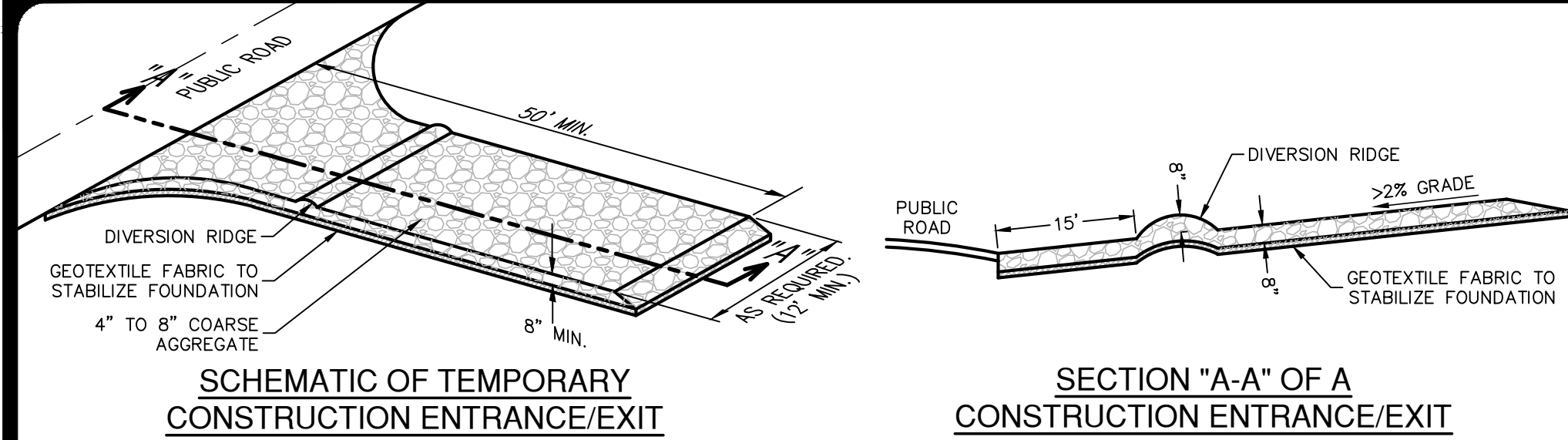


The diagram illustrates the layout of a construction site, showing various features and their locations relative to a project boundary and unit boundary. The features are listed on the left, and their corresponding symbols or locations are shown on the right.

- PROJECT LIMITS**: Indicated by a solid black line at the top.
- UNIT BOUNDARY**: Indicated by a dashed black line below the project limits.
- EXISTING CONTOUR**: Represented by a dashed line with the elevation 976.
- PROPOSED CONTOUR**: Represented by a solid line with the elevation 970.
- FLOW ARROW (EXISTING)**: Represented by a light gray arrow pointing right.
- FLOW ARROW (PROPOSED)**: Represented by a black arrow pointing right.
- SILT FENCE**: Represented by a line with diagonal hatching.
- ROCK BERM**: Represented by a line with diamond shapes.
- GRAVEL FILTER BAGS**: Represented by a line with oval shapes.
- GRATE INLET PROTECTION**: Represented by a line with circular shapes.
- SEDIMENT CONTROL ROLLS**: Represented by a line with a wavy pattern.
- LIMITS OF DISTURBED AREA (± 10.4 AC)**: Represented by a solid gray rectangle.
- STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE)**: Represented by a rectangle with a brick pattern.
- CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)**: Represented by a rectangle with diagonal hatching.
- CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)**: Represented by a rectangle with a dotted pattern.
- AREA TO BE TEMPORARILY STABILIZED/REVEGETATED**: Represented by a rectangle with green diagonal hatching.
- AREA TO BE PERMANENTLY STABILIZED/VEGETATED**: Represented by a rectangle with green dots.

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.

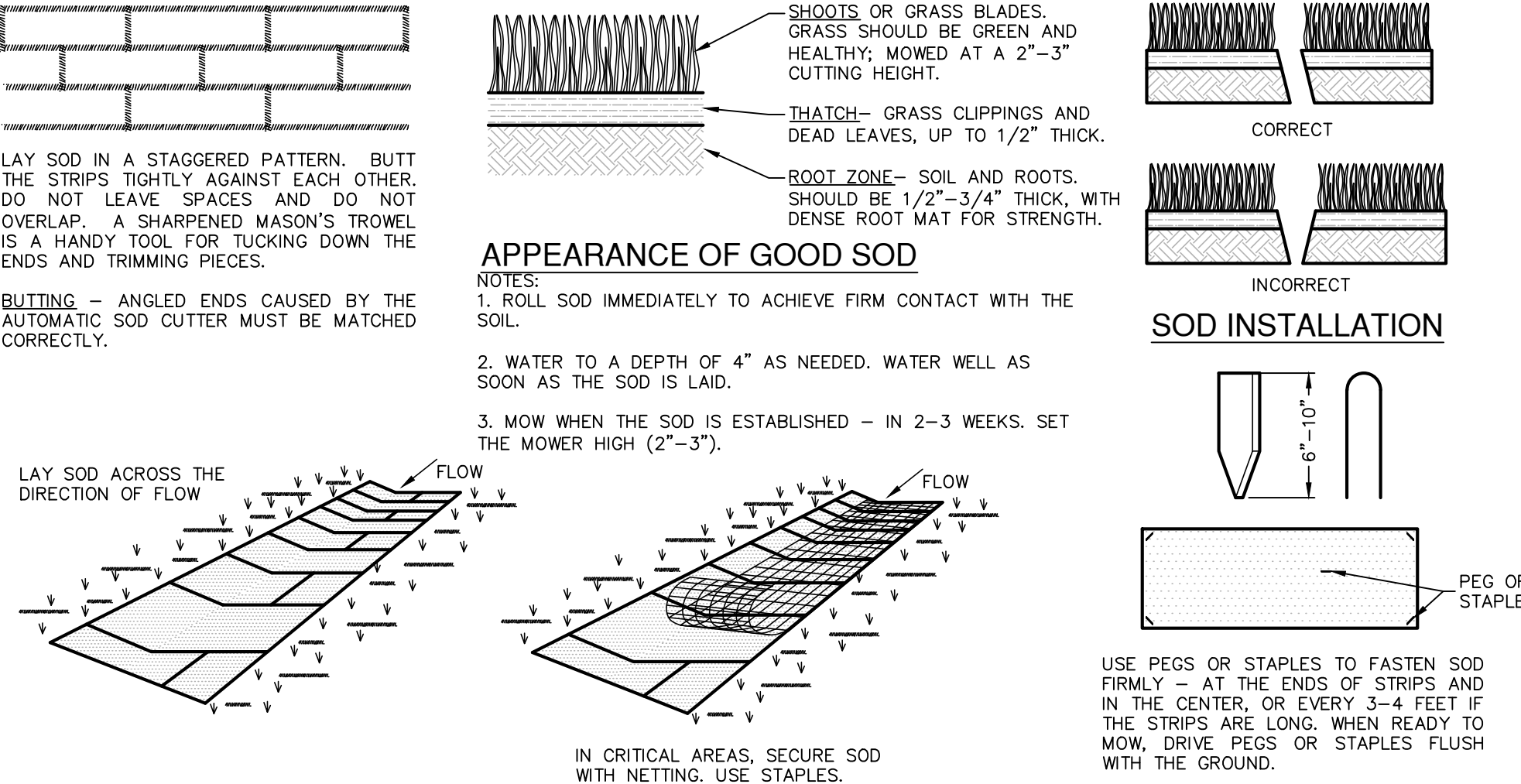


- MATERIALS**
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
 2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
 3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH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

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

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



MATERIALS

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

SITE PREPARATION

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

INSTALLATION IN CHANNELS

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

SOD INSTALLATION DETAIL

NOT-TO-SCALE

COMMON TROUBLE POINTS

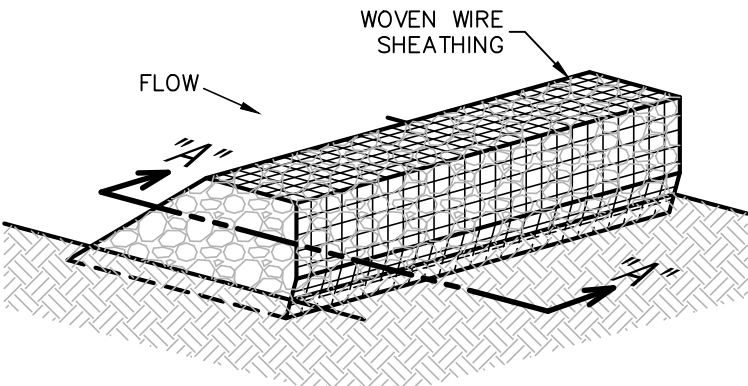
1. INADEQUATE RUNOFF CONTROL-SEDIMENT WASHES ONTO PUBLIC ROAD.
2. STONE TOO SMALL OR GEOTEXTILE FABRIC ABSENT, RESULTS IN MUDDY CONDITION AS STONE IS PRESSED INTO SOIL.
3. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC-EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.
4. PAD NOT FLARED SUFFICIENTLY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

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

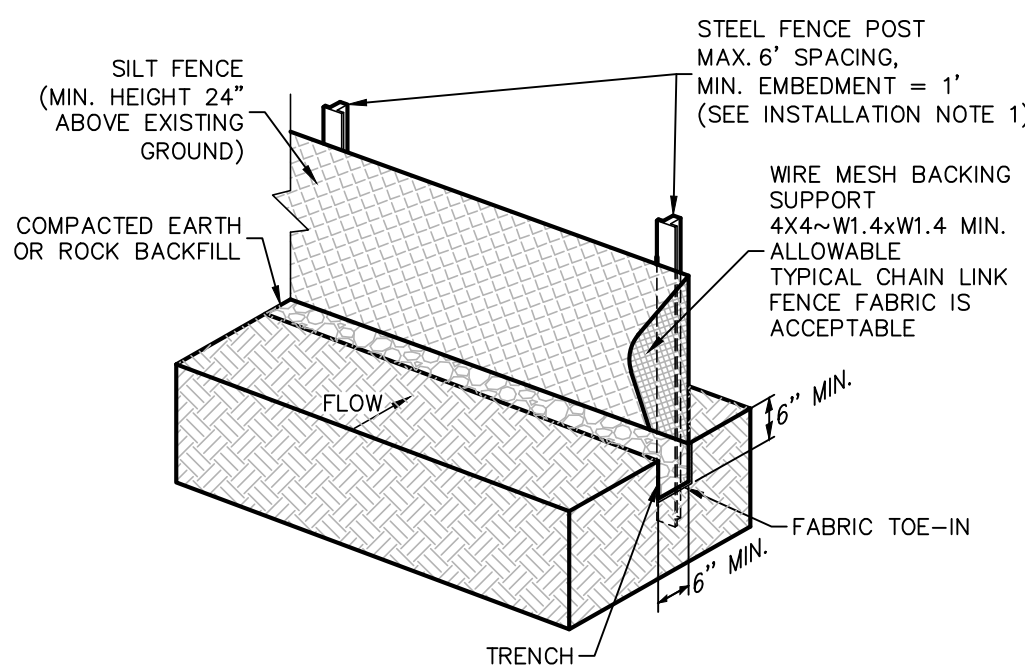
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE 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 AND AFTER EACH RAINFALL BY THE RESPONSIBLE PARTY. FOR INSTALLATIONS IN STREAMBEDS, ADDITIONAL DAILY INSPECTIONS SHOULD BE MADE.
2. REMOVE SEDIMENT AND OTHER DEBRIS WHEN BUILDUP REACHES 6 INCHES AND DISPOSE OF THE ACCUMULATED SILT IN AN APPROVED MANNER THAT WILL NOT CAUSE ANY ADDITIONAL SILTATION.
3. REPAIR ANY LOOSE WIRE SHEATHING.
4. THE BERM SHOULD BE RESHAPED AS NEEDED DURING INSPECTION.
5. THE BERM SHOULD BE REPLACED WHEN THE STRUCTURE CEASES TO FUNCTION AS INTENDED DUE TO SILT ACCUMULATION AMONG THE ROCKS, WASHOUT, CONSTRUCTION TRAFFIC DAMAGE, ETC.
6. THE ROCK BERM SHOULD BE LEFT IN PLACE UNTIL ALL UPSTREAM AREAS ARE STABILIZED AND ACCUMULATED SILT REMOVED.

ROCK BERM DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

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

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

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

MATERIALS

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

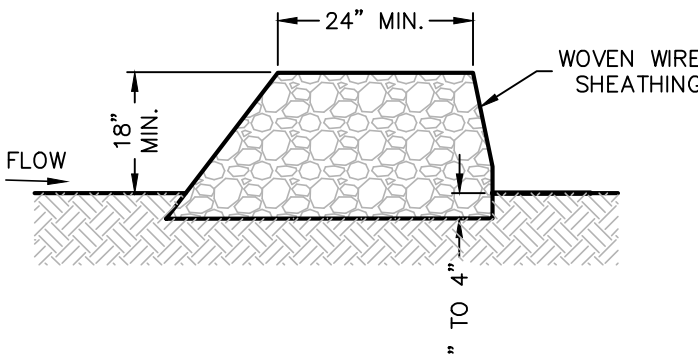
INSTALLATION

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

SILT FENCE DETAIL

NOT-TO-SCALE

SECTION "A-A"



MATERIALS

1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.

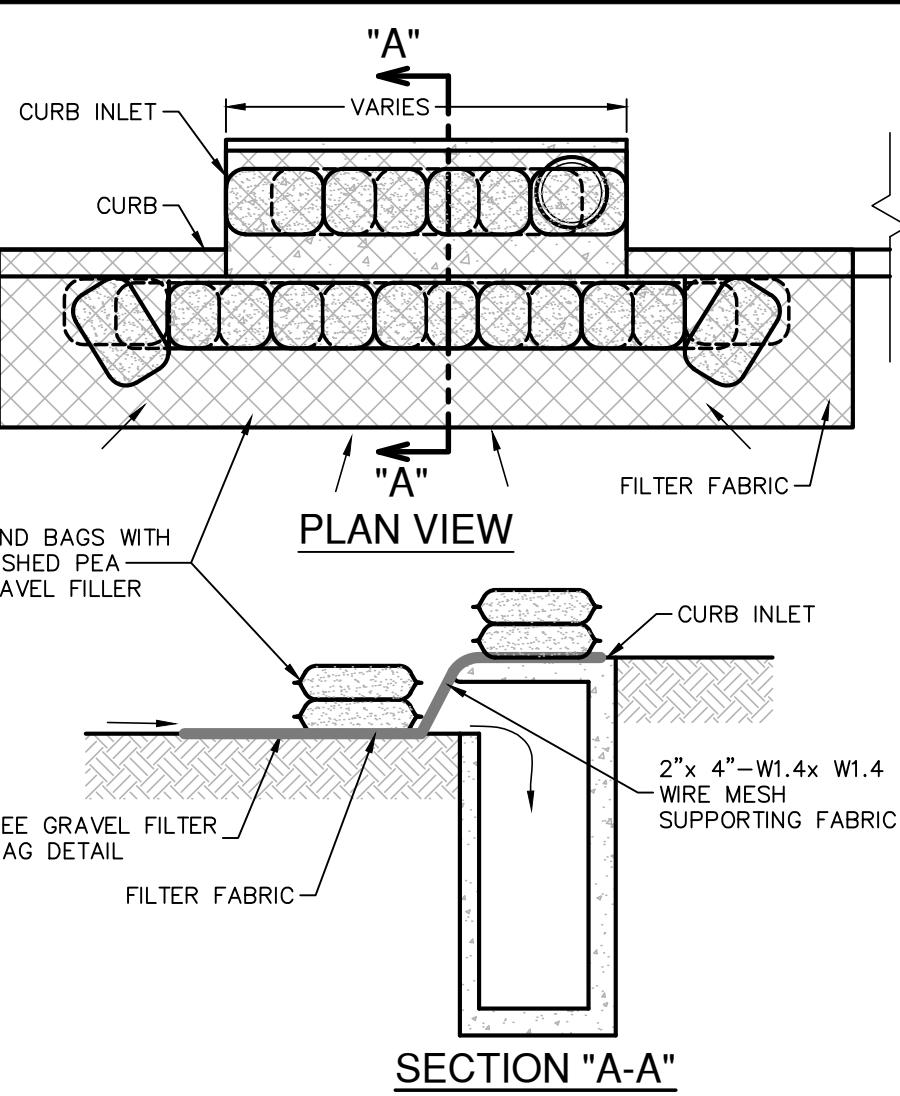
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR LARGE VOLUMES OF FLOW ARE EXPECTED, WHERE 5-INCH TO 8-INCH DIAMETER ROCKS MAY BE USED.

INSTALLATION

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

COMMON TROUBLE POINTS

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



GENERAL NOTES

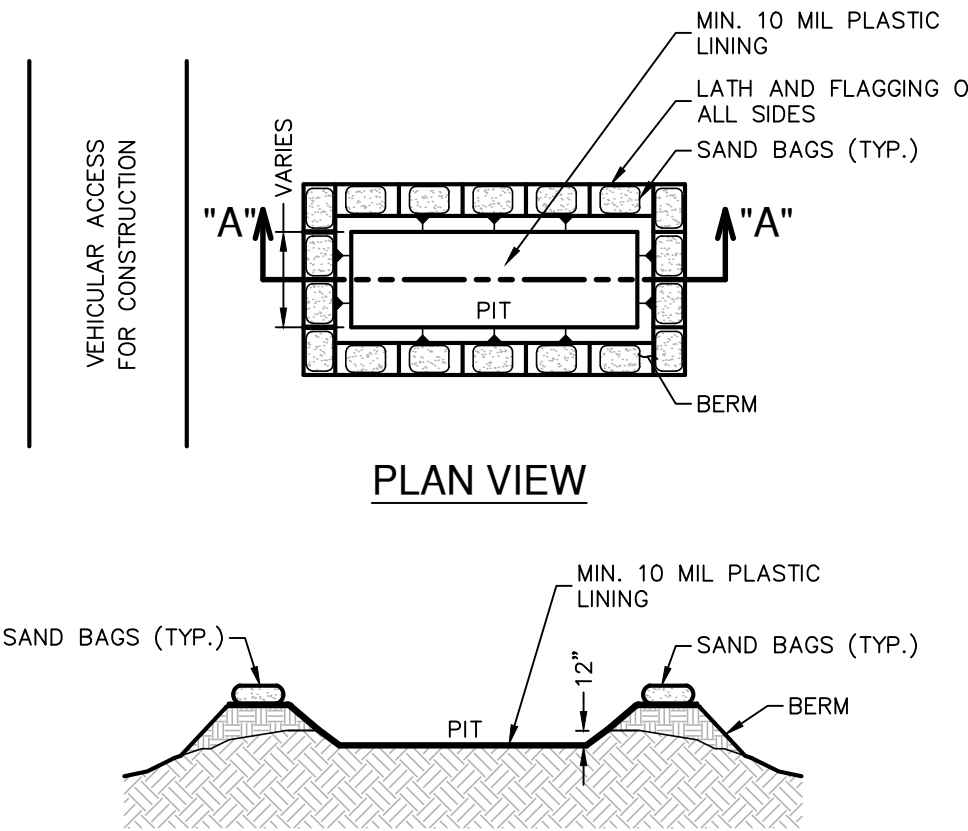
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CUPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL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

INSPECTION AND MAINTENANCE GUIDELINES

1. INSPECTION SHOULD BE MADE WEEKLY AND AFTER EACH RAINFALL. 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



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.

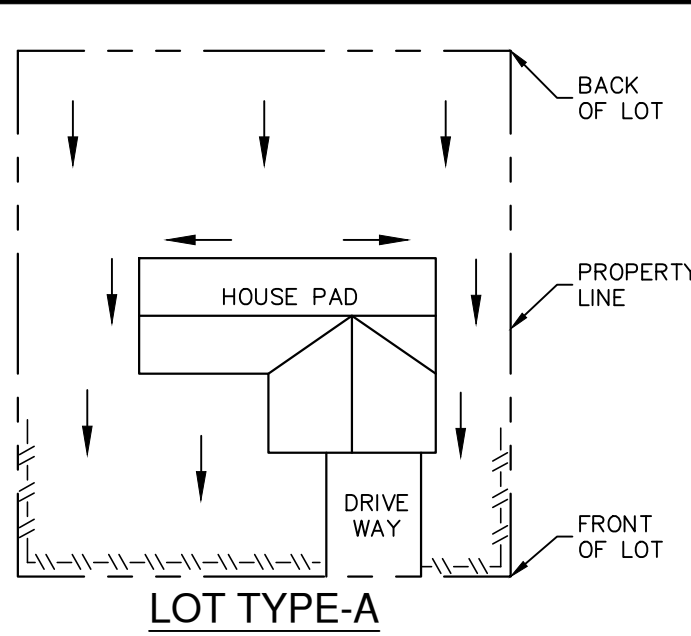
MAINTENANCE

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.

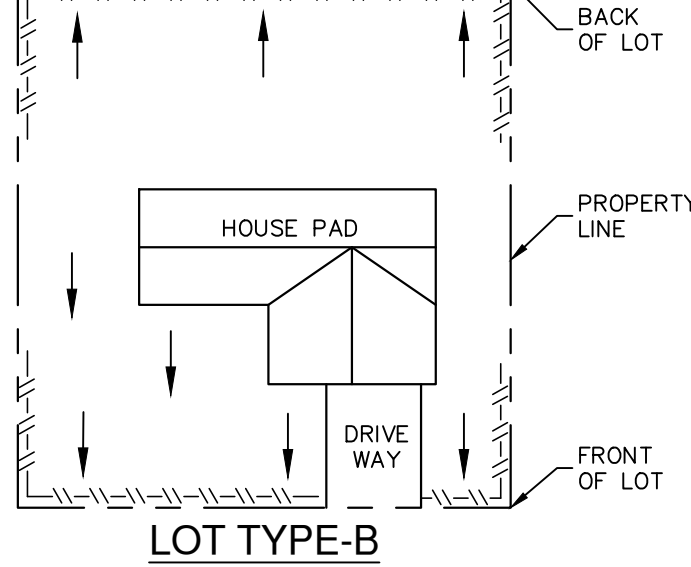
CONCRETE TRUCK WASHOUT

PIT DETAIL

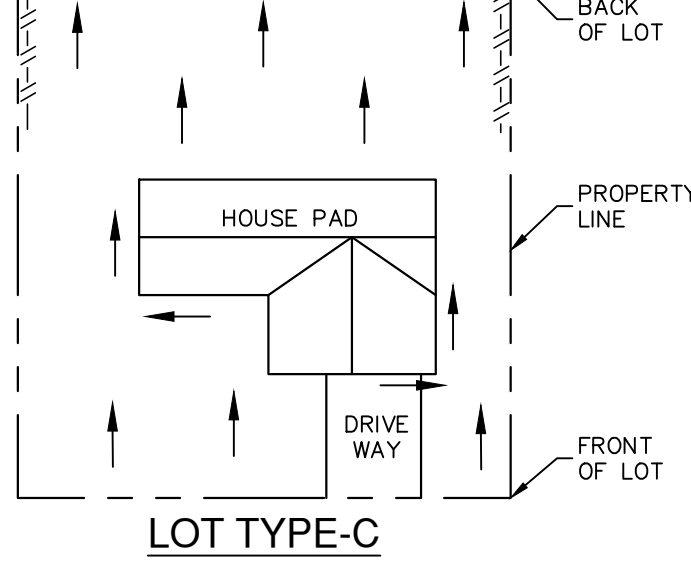
NOT-TO-SCALE



LOT TYPE-A



LOT TYPE-B



LOT TYPE-C

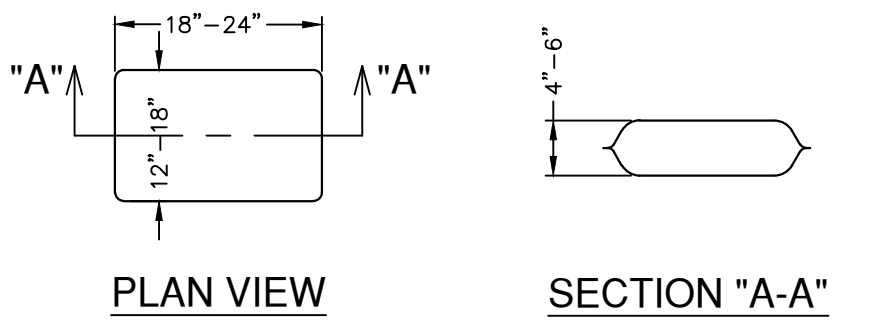
NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADED SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND

--- SILT FENCE DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT-TO-SCALE



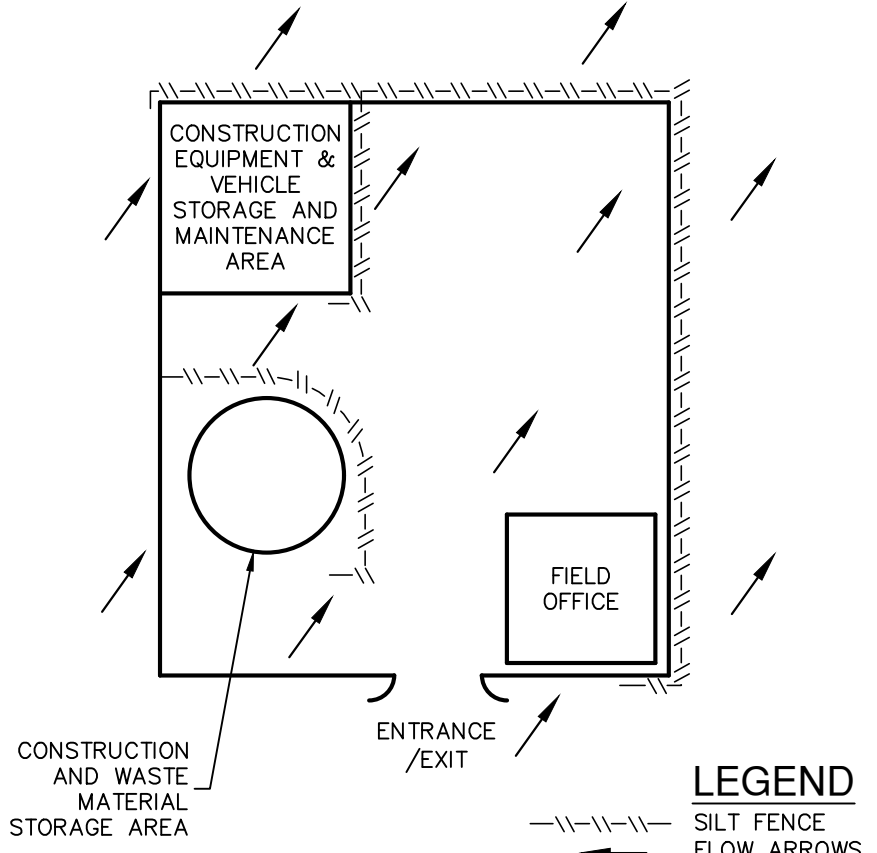
PLAN VIEW

SECTION "A-A"

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

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



LEGEND

--- SILT FENCE FLOW ARROWS

CONSTRUCTION STAGING AREA

NOT-TO-SCALE

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DATE	
NO.	
REVISION	



PAPE-DAWSON ENGINEERS

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

PRESERVE AT CULEBRA-UNIT 9

BEXAR COUNTY, TEXAS

SWPPP DETAILS

PLAT NO.	25-11800087
JOB NO.	11668-24
DATE	MAY 2025
DRAWN	AR
CHECKED	BC
DRAWN	RP
SHEET	C8.10