

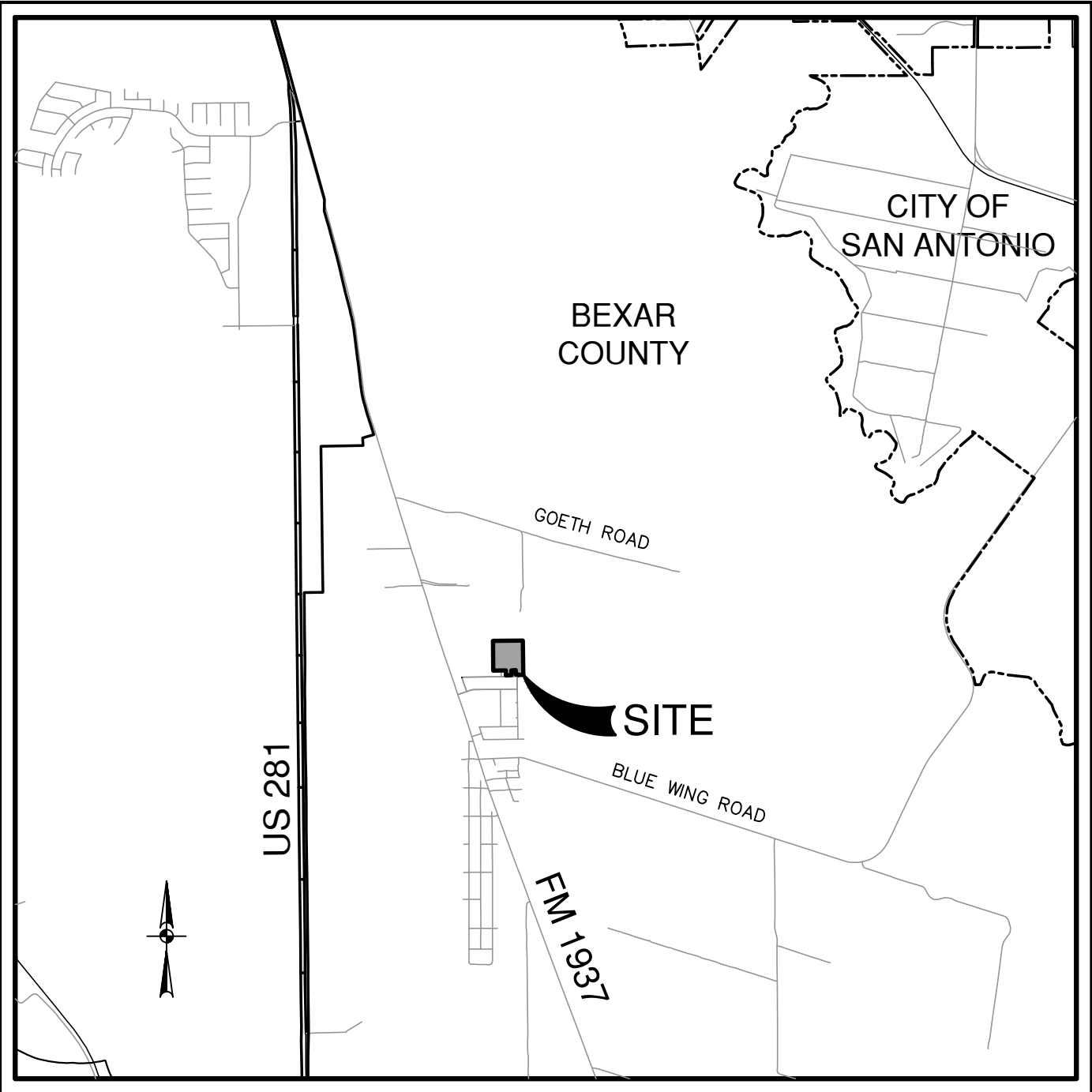
# SONORA-UNIT 3

## BEXAR COUNTY, TEXAS

# CIVIL CONSTRUCTION PLANS

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Sheet Title	Sheet Description	Sheet Number
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SIGNAGE DETAILS	(SHEET 1 OF 2)	C3.10
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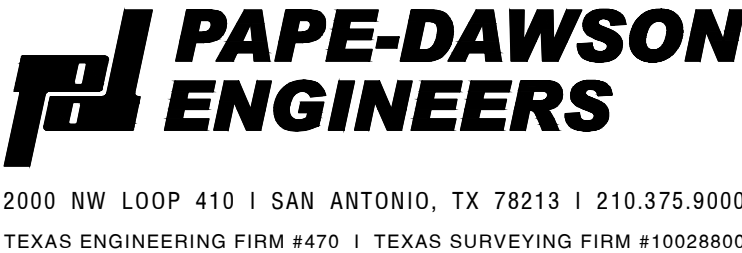


LOCATION MAP  
NOT-TO-SCALE

PREPARED FOR:

CONTINENTAL HOMES OF TEXAS. L.P.  
5419 N LOOP 1604 E SAN ANTONIO,  
TX 78247

DECEMBER 2024



12/18/24



SEWER:  
LOWER-CENTRAL SEWERSHED - DOS RIOS WRC

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668	FAX#
SAWS BLOCK MAP# 172924 TOTAL EDU'S 53 TOTAL ACREAGE 8.01	
TOTAL LINEAR FOOTAGE OF PIPE: 1,144 LF PLAT NO. 24-11800405	
NUMBER OF LOTS 53	SAWS JOB NO. 24-1628

WATER (SAWS PRESSURE ZONE 750)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.	
ADDRESS: 5419 N LOOP 1604 E	
CITY: SAN ANTONIO	STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668	FAX#
SAWS BLOCK MAP# 172924 TOTAL EDU'S 53 TOTAL ACREAGE 8.01	
TOTAL LINEAR FOOTAGE OF PIPE: 1240 ~ 8" PVC PLAT NO. 24-11800405	
NUMBER OF LOTS 53	SAWS JOB NO. 24-1158

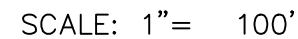
SHEET C0.00



[illegible]

**PAPE-DAWSON  
ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #100286800



----	UNIT BOUNDARY
=====	TEMPORARY DRAINAGE AREA BOUNDARY
-----	DRAINAGE AREA BOUNDARY
----- L <sub>o</sub> =100' -----	OVERLAND FLOW PATH
----- L <sub>sc</sub> =100' -----	SHALLOW CONCENTRATED FLOW PATH
----- L <sub>c</sub> =100' -----	CONCENTRATED FLOW PATH
-----550-----	EXISTING CONTOUR
⑪	DRAINAGE CALCULATION POINT
A,B,C	LOT GRADING

DRAINAGE CALCULATIONS  
PD#: 13115-00

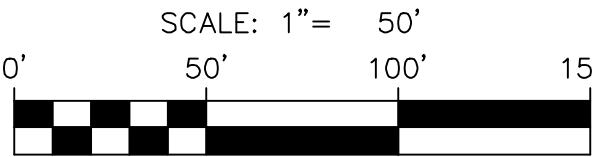
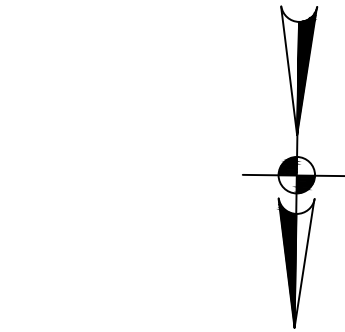
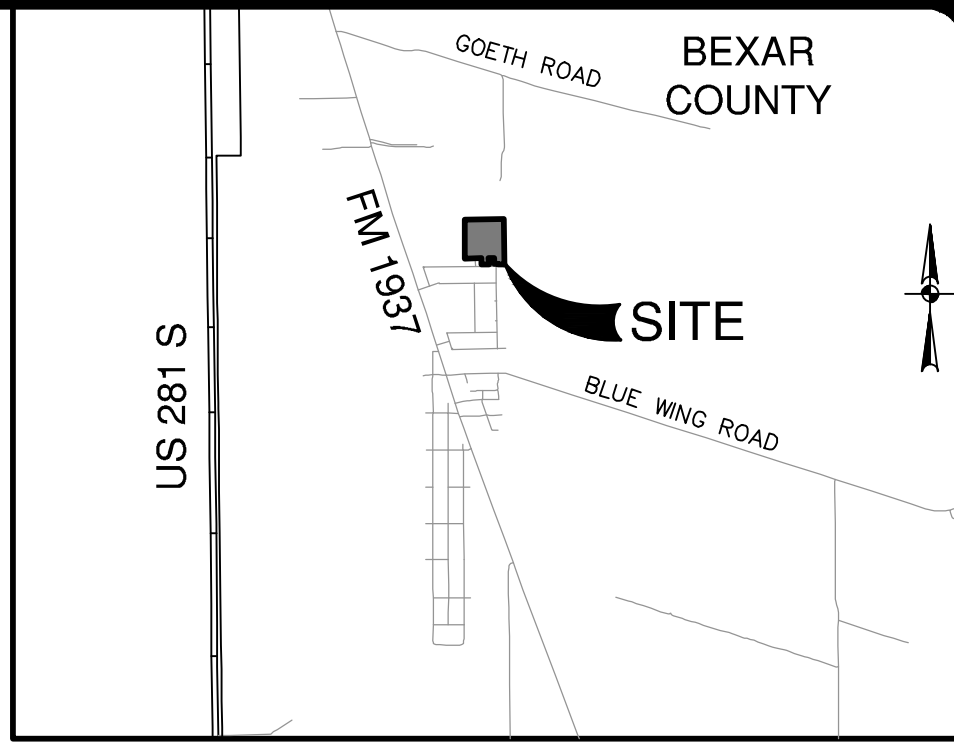
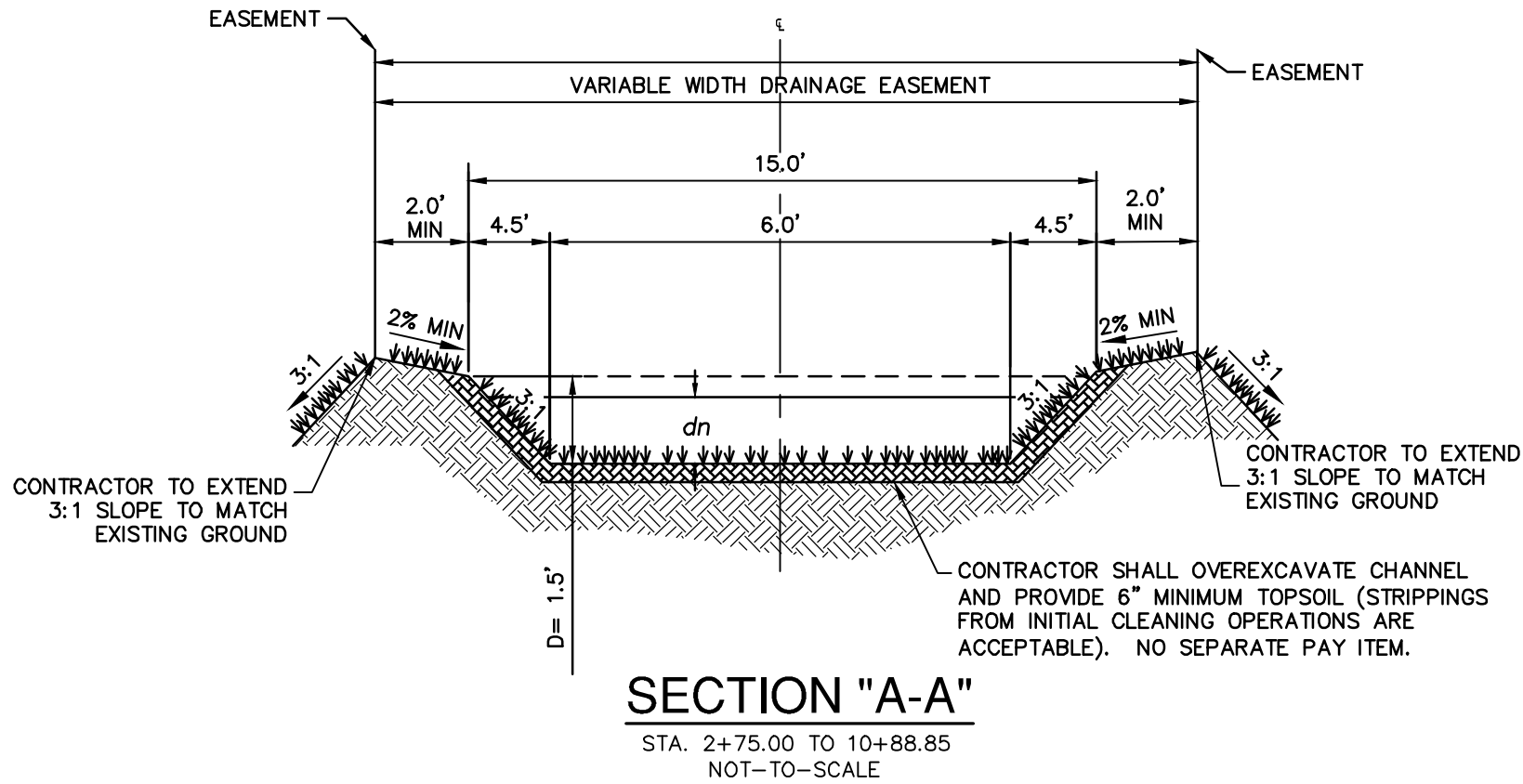
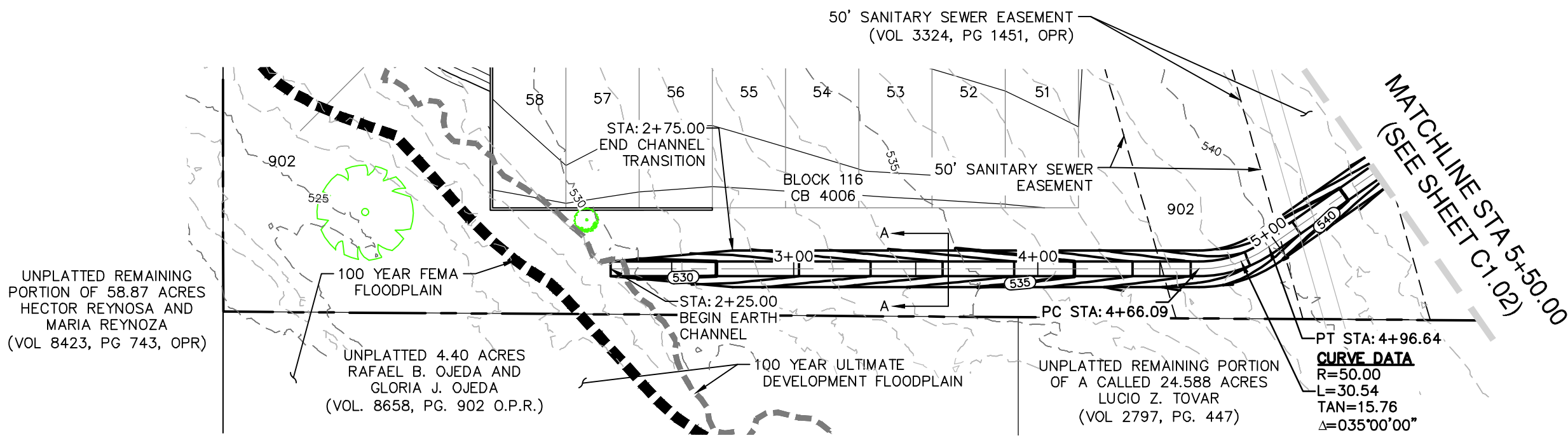
DRAINAGE CALCULATION  
PD#: 13115

**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**  
**MASTER DRAINAGE PLAN**

PLAT NO. 24-11800405  
JOB NO. 13115-04  
DATE December 2024  
DESIGNER SS  
CHECKED          DRAWN AR  
SHEET C1.00

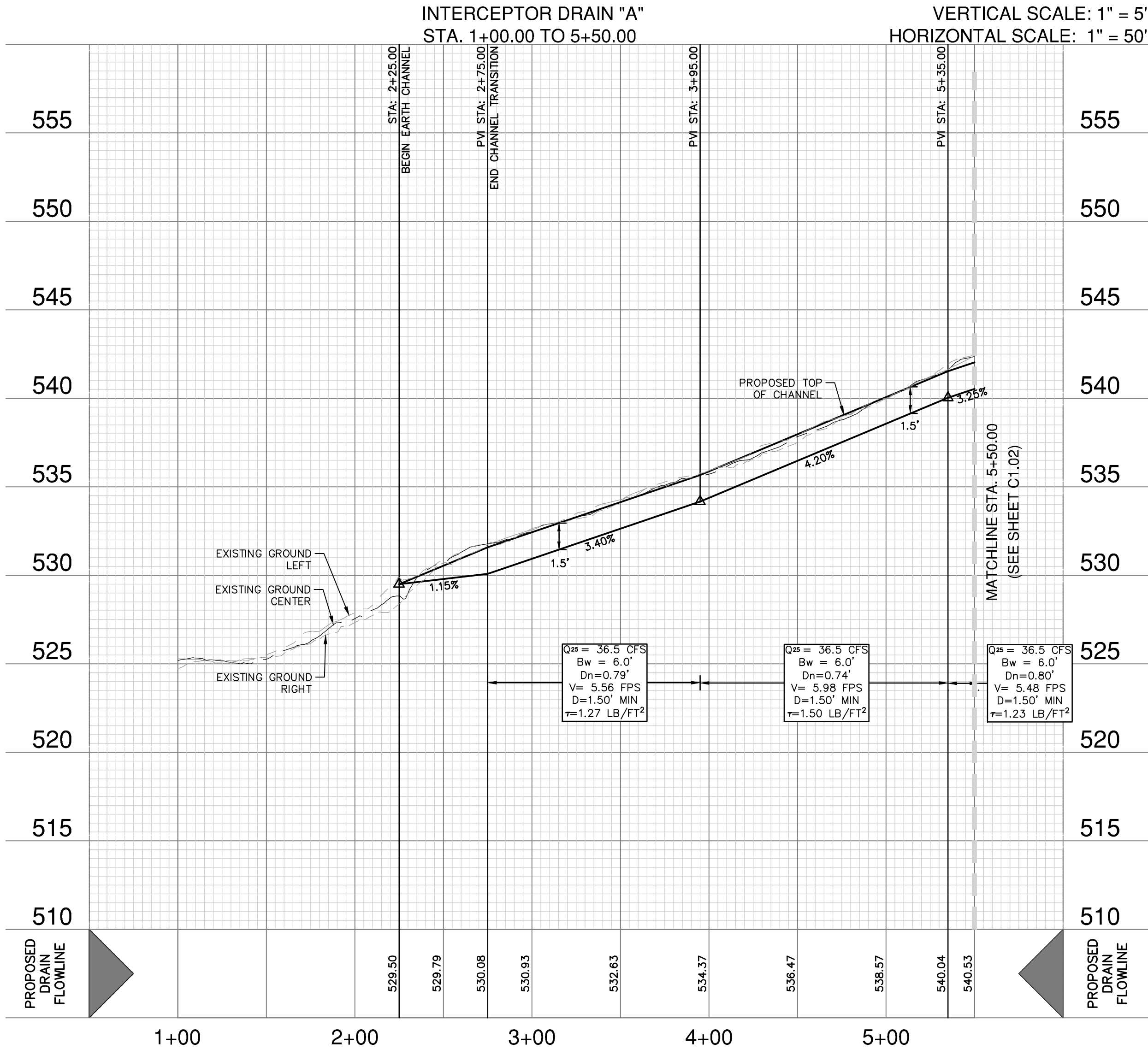
PLAT NO. 24-11800405  
JOB NO. 13115-04  
DATE December 2024  
DESIGNER SS  
CHECKED          DRAWN AR  
SHEET C1.00





#### DRAINAGE LEGEND

PROJECT LIMITS	---
EXISTING CONTOUR	--- 690 ---
PROPOSED WATER	---
PROPOSED SEWER	--- SS ---
EXISTING WATER	---
EXISTING SEWER	--- SS ---
100-YEAR (ATLAS-14) ULTIMATE DEVELOPMENT FLOODPLAIN	---



#### OPEN EARTHEN CHANNEL NOTE

CONTRACTOR SHALL REFERENCE TABLE 9.3.8.1 - "RETARDATION CLASS FOR LINING MATERIALS" PROVIDED ON SHEET C1.20 AND SUPPLIED RETARDANCE CLASS (RC) FOR CHOICE OF COVER WITHIN OPEN EARTHEN CHANNEL CROSS-SECTIONS.

#### DRAINAGE & GRADING NOTES:

- 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.
- ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
- REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
- CONTRACTOR SHALL GROUT ALL CURB INLETS AND JUNCTION BOXES TO PROVIDE FOR POSITIVE DRAINAGE.
- 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.
- 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 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.

DATE	
NO.	
REVISION	

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS

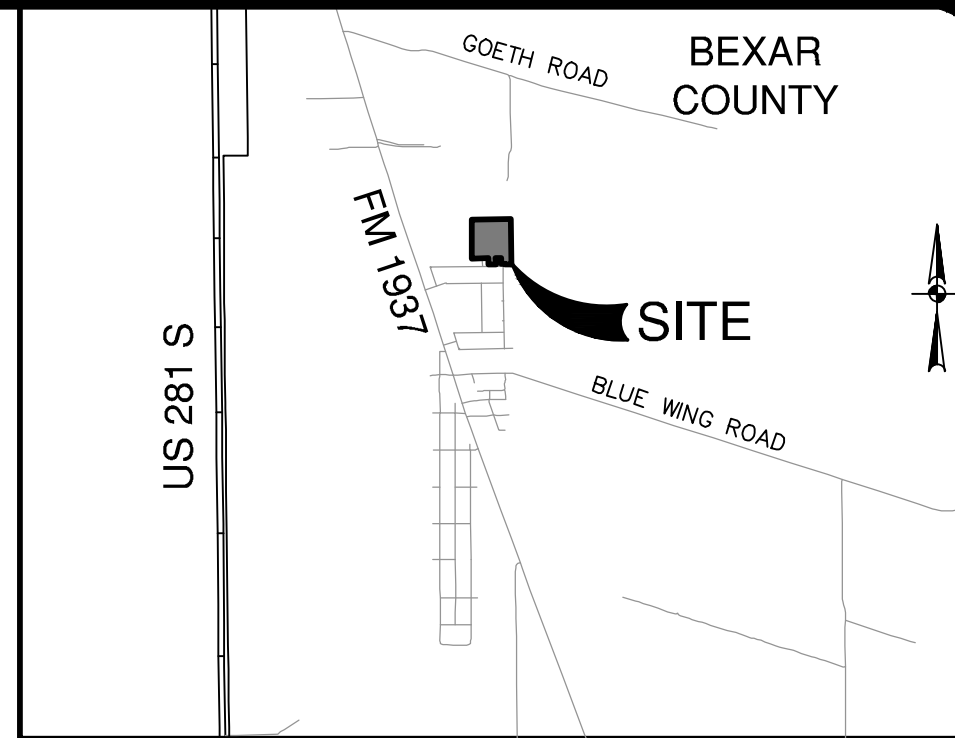
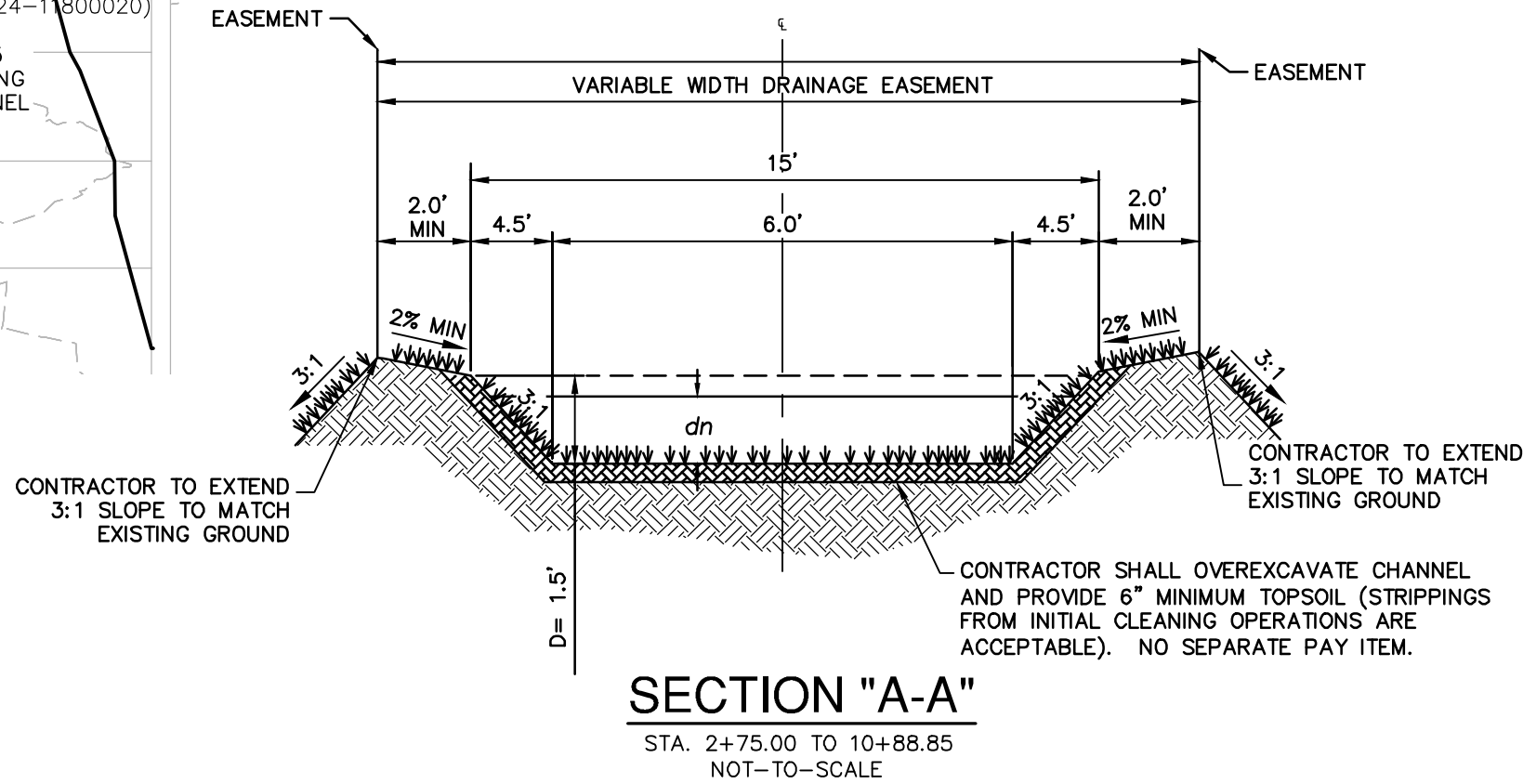
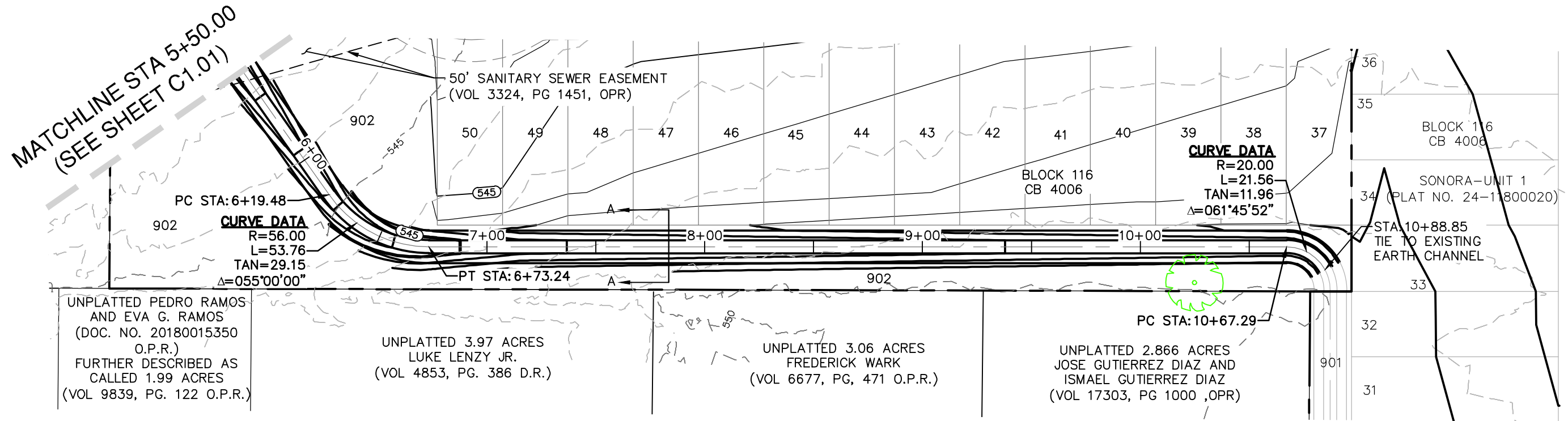
INTERCEPTOR DRAIN A  
PLAN AND PROFILE (STA. 1+00.00 TO 5+50.00)

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	December 2024
DESIGNER	SS
CHECKED	DRAWN AR
SHEET	C1.01



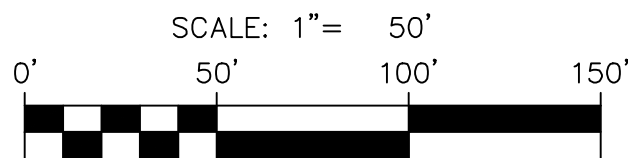
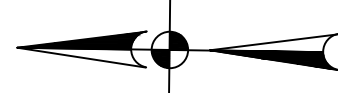
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LOCATION MAP

NOT-TO-SCALE

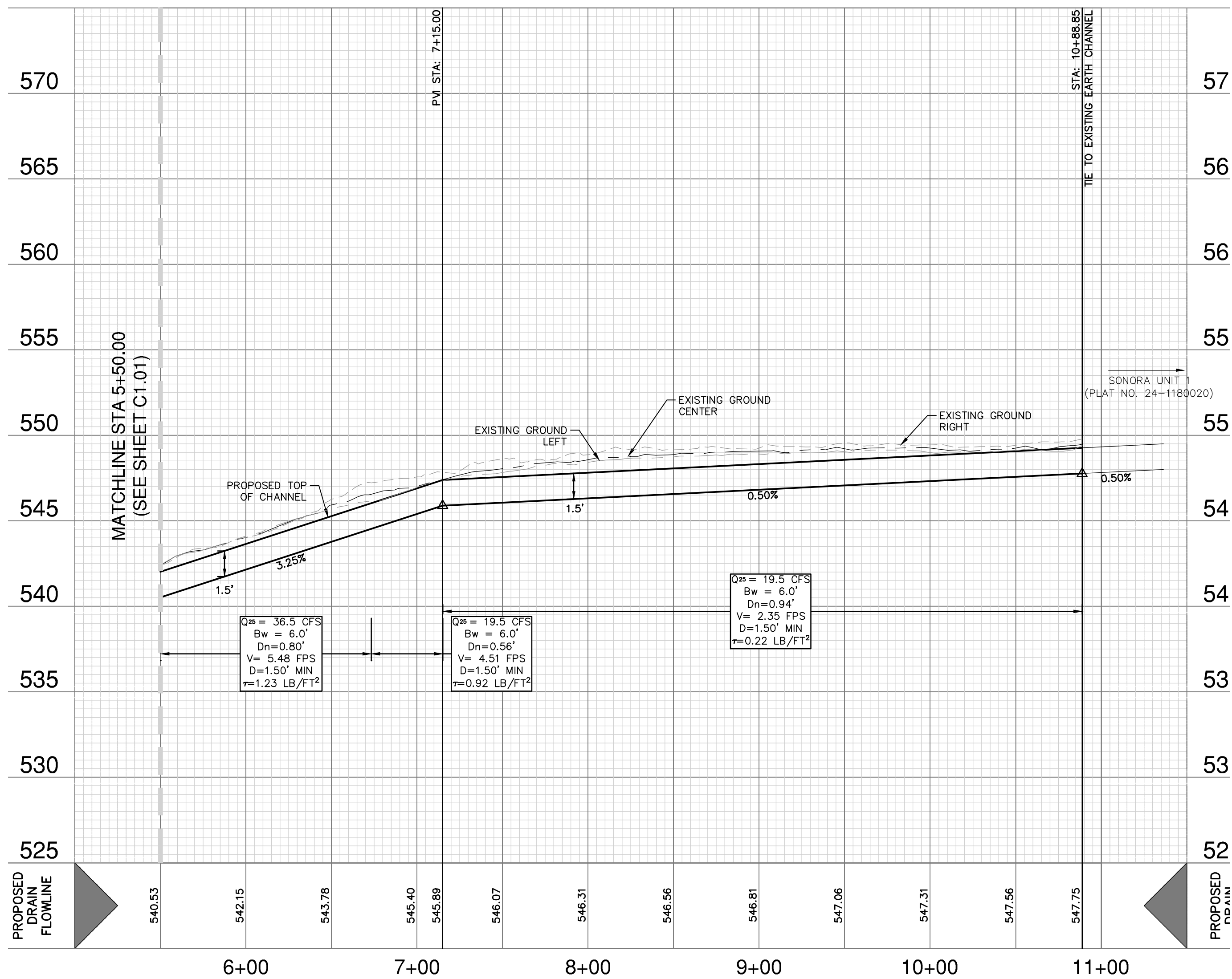


DRAINAGE LEGEND

PROJECT LIMITS	---
EXISTING CONTOUR	--- 690 ---
PROPOSED WATER	---
PROPOSED SEWER	SS ---
EXISTING WATER	W ---
EXISTING SEWER	SS ---
100-YEAR (ATLAS-14) ULTIMATE DEVELOPMENT FLOODPLAIN	---

INTERCEPTOR DRAIN "A"  
STA. 5+50.00 TO 10+86.52

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



DRAINAGE & GRADING NOTES:

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- ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
- REFERENCE DRAINAGE DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
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TRENCH EXCAVATION SAFETY PROTECTION:

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CAUTION!!

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OPEN EARTHEN CHANNEL NOTE

CONTRACTOR SHALL REFERENCE TABLE 9.3.8.1 - "RETARDATION CLASS FOR LINING MATERIALS" PROVIDED ON SHEET C1.20 AND SUPPLIED RETARDANCE CLASS (RC) FOR CHOICE OF COVER WITHIN OPEN EARTHEN CHANNEL CROSS-SECTIONS.

NO.	REVISION	DATE

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**ENGINEERS**

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

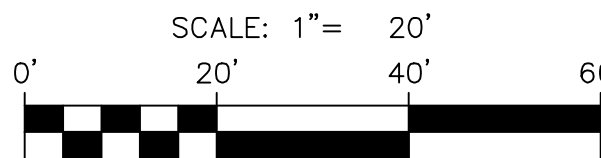
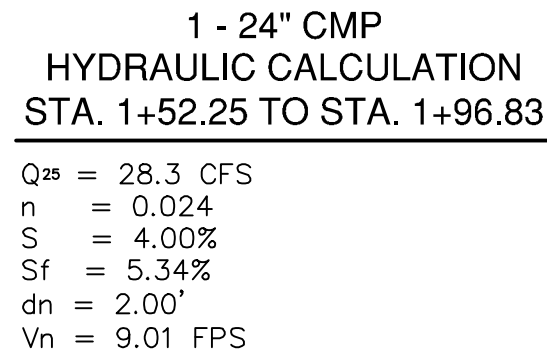
**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS

INTERCEPTOR DRAIN A

PLAN AND PROFILE (STA. 5+50.00 TO 10+88.85)

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	December 2024
DESIGNER	SS
CHECKED	DRAWN AR
SHEET	C1.02





The diagram illustrates the spatial relationship between various infrastructure elements and a floodplain. A thick dashed line at the top represents the 'PROJECT LIMITS'. Below it, horizontal lines represent different features: 'EXISTING CONTOUR' (dashed line), 'PROPOSED WATER' (solid line labeled 'W'), 'PROPOSED SEWER' (solid line labeled 'SS' with a grey circle), 'EXISTING WATER' (dashed line labeled 'W'), 'EXISTING SEWER' (dashed line labeled 'SS' with a grey circle), and '100-YEAR (ATLAS-14) ULTIMATE DEVELOPMENT FLOODPLAIN' (thick dashed line at the bottom). The 'PROPOSED SEWER' and 'EXISTING SEWER' lines are positioned between the 'EXISTING CONTOUR' and the '100-YEAR FLOODPLAIN'.

TOTAL  $Q_{25} = 28.3$  CFS

$$Q_{25} = 28.3 \text{ CFS}$$
$$Q_{25} = CA\sqrt{2gh} \text{ (ORIFICE FLOW EQN.)}$$
$$A = L(0.52), h = 0.52, g = 32.2, c = 0.70$$
$$L = \frac{28.3 \text{ CF}}{(0.70)(0.52)\sqrt{2}(3)}$$

L = 13.44 FT      USE 1 ~ 15 FT CURB INLET

[illegible]
$$h = \left( \frac{Q}{K} \right)^{2/3} = \left( \frac{28.3}{1.49} \right)^{2/3} = 0.72 \text{ FT}$$
 $(CL) \quad (3.087) (15)$ 
$$h = 0.72 < 0.79 \quad \text{OK}$$

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 DISCREPANCY BETWEEN PLANS AND ACTUAL CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR, AT HIS EXPENSE.

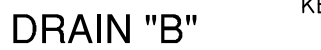
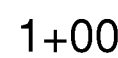
2. ALL CONCRETE FOR TxDOT DRAINAGE STRUCTURES SHALL MEET TxDOT SPECIFICATIONS. ALL OTHER CONCRETE SHALL BE CLASS "A" 3000 PSI CYLINDER STRENGTH IN 28 DAYS.
3. REFERENCE DRAWING DETAILS FOR PIPE TRENCH DETAILS, BOX CULVERT, HEADWALL, AND WINGWALL CONSTRUCTION DETAILS, AND BOX CULVERT BEDDING AND EXCAVATION LIMITS.
4. CONTRACTOR SHALL PROVIDE ALL CURB INLETS AND JUNCTION BOXES TO CONTRACTOR FOR GROUT DRAINAGE.
5. EARTHEN CHANNELS WILL BE VEGETATED BY SEEDING OR SODDING. SEEDS OF CHOICE MUST HAVE BEEN ESTABLISHED VEGETATION BEFORE THE CITY OF SAN ANTONIO WILL ACCEPT.

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 DATA AND RECORDS, AND SHALL BE RESPONSIBLE FOR THE DESIGN OF 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 BE IN ADDITION TO THE 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 THE TRENCH SHIELDING AND PROTECTIVE 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 DECKBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITIES CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE CONTRACTOR 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.



SCALE: 1" = 5'



## ≡ BLOCK

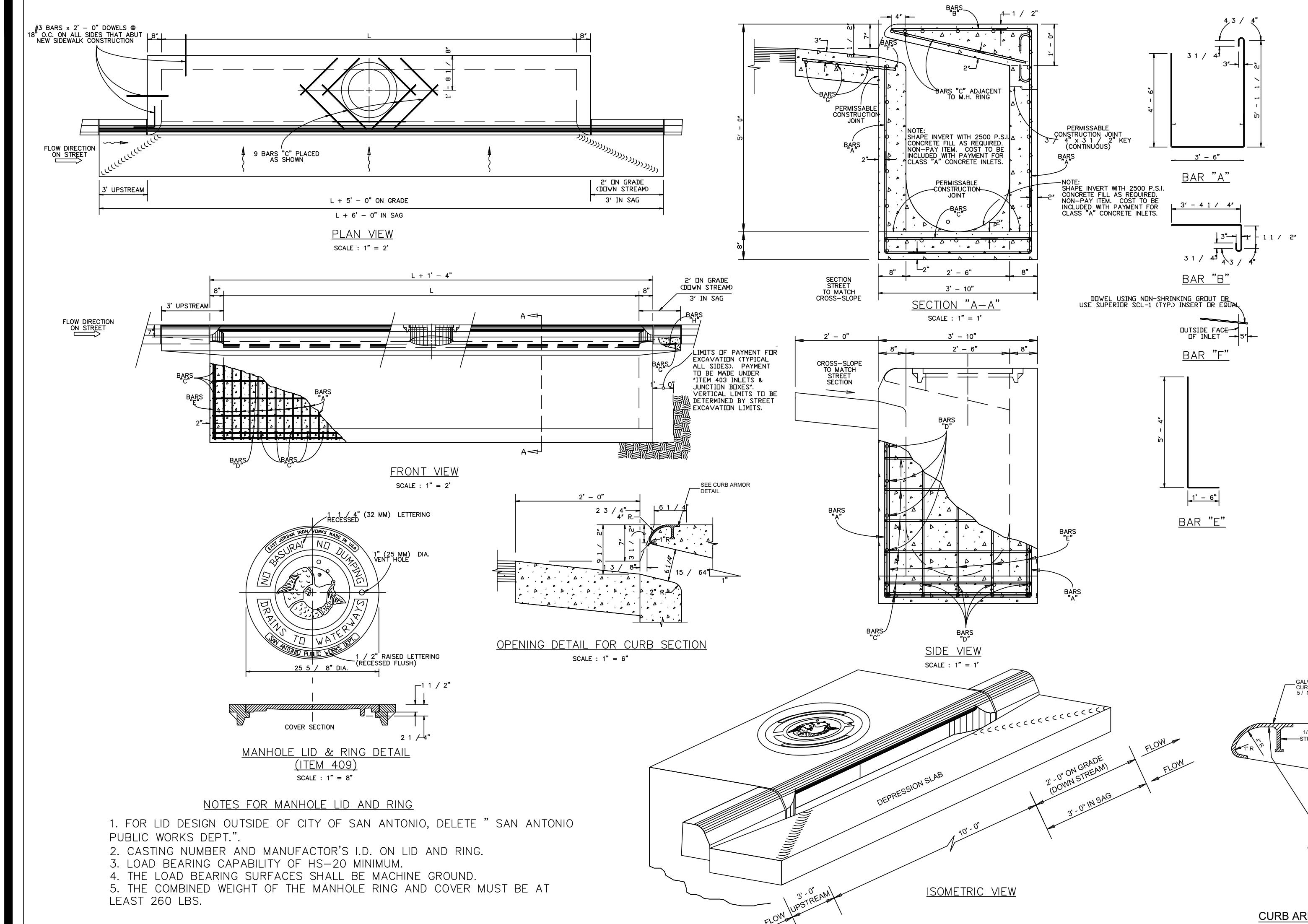
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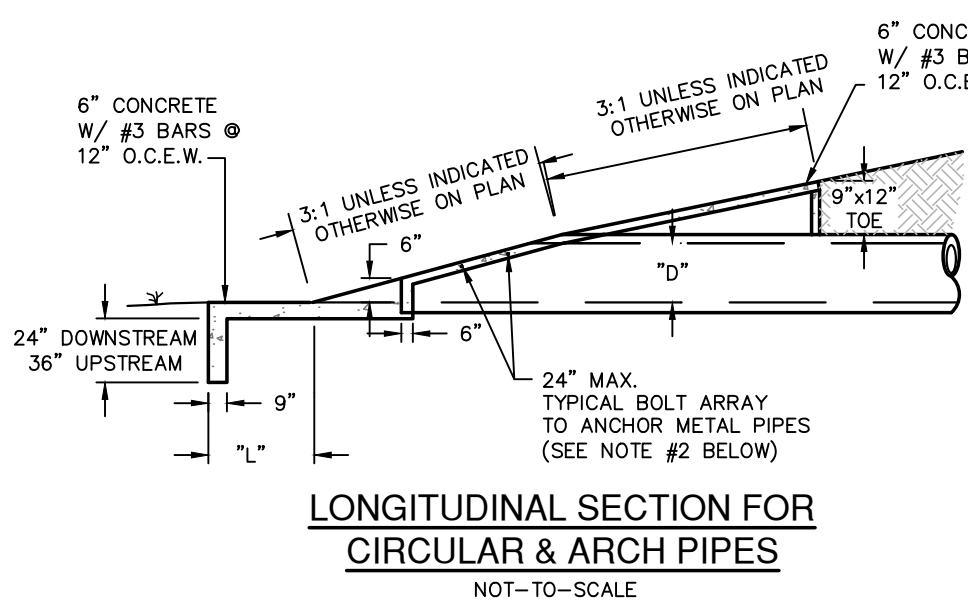
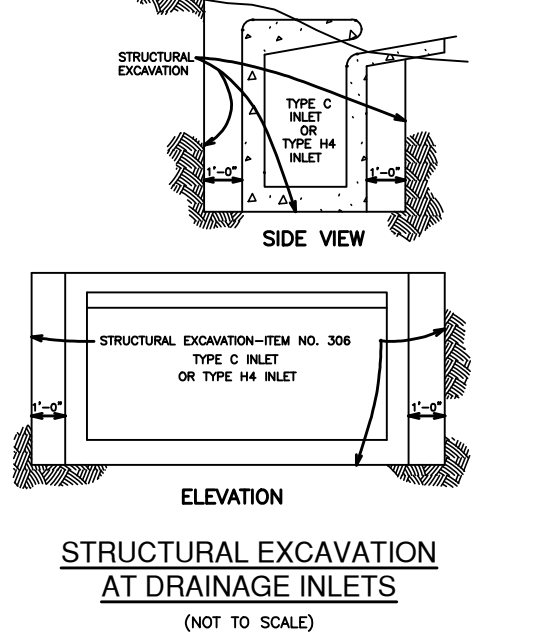
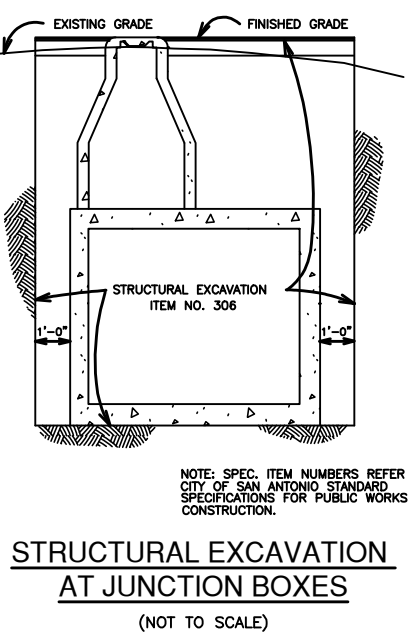
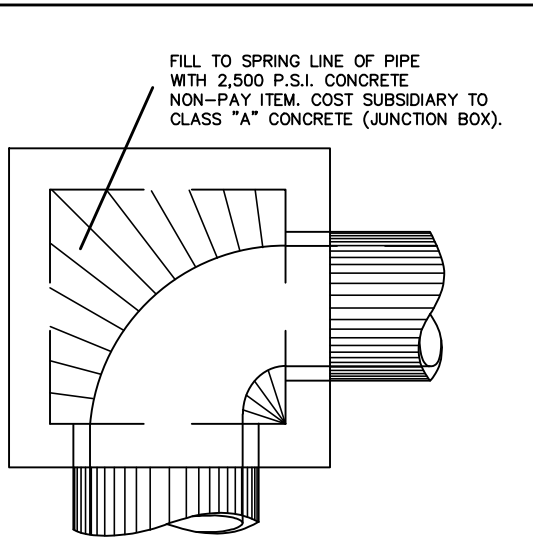
## CURB INLET DETAILS N.T.S.

## STANDARD PLANS CITY OF SAN ANTONIO, TEXAS DEPARTMENT OF PUBLIC WORKS

### TYPE "C" INLET STANDARDS

DRAWN BY: V. VASQUEZ	DATE:	REVISIONS:	SCALE:	SEE ABOVE
CHECKED BY: NAT HARDY, P.E.			DATE:	
			SHEET:	

### CURVED DEFLECTOR DETAIL (NOT TO SCALE)



### LONGITUDINAL SECTION FOR CIRCULAR & ARCH PIPES NOT-TO-SCALE

### DIMENSIONS FOR CIRCULAR (CMP AND RCP) PIPE CULVERT

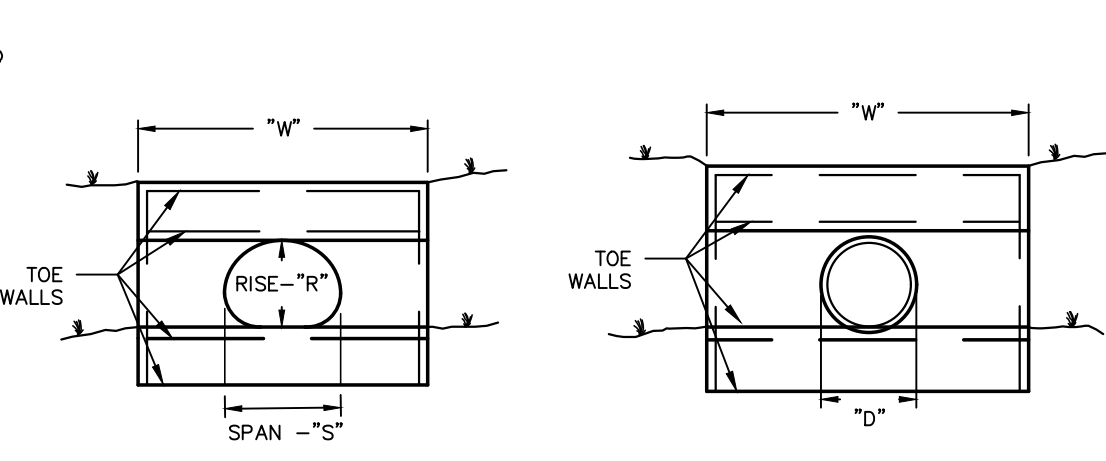
10" INSIDE DIA. OF PIPE	"G"	"L"	"W"
15"	2'-0" 1'-2"	10'-9"	4'-8"
21"	2'-6" 1'-3"	10'-10"	5'-3"
24"	3'-0" 1'-5"	10'-11"	6'-0"
30"	4'-0" 1'-8"	11'-1"	7'-8"
36"	5'-0" 1'-11"	11'-3"	9'-0"
42"	6'-0" 2'-2"	11'-5"	10'-6"
48"	7'-0" 2'-5"	11'-7"	12'-0"
54"	8'-0" 2'-8"	11'-9"	13'-6"
60"	9'-0" 3'-2"	12'-0"	15'-0"

"G" IS MEASURED BETWEEN THE OTHER SURFACES OF THE PIPES.

### DIMENSIONS FOR C.M.P. ARCH PIPE CULVERTS

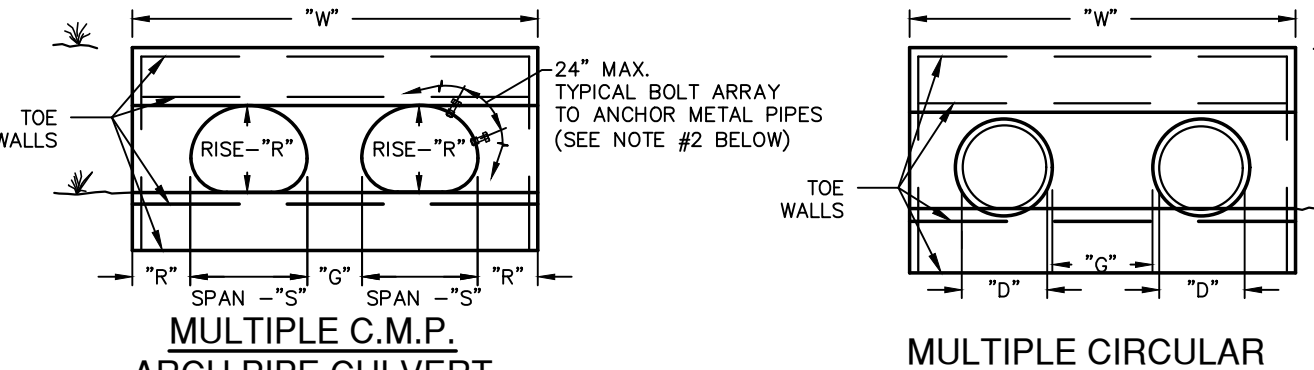
DESIGN SIZE	APPROX ARCH DIM. RISE SPAN	"L"	"G"	"W"
2	21"	15"	2'-0" 1'-2"	4'-3"
3	28"	20"	3'-0" 1'-5"	5'-8"
4	35"	24"	4'-0" 1'-8"	6'-11"
5	42"	29"	5'-0" 1'-11"	8'-4"
6	49"	33"	6'-0" 2'-2"	9'-7"
7	57"	38"	7'-0" 2'-5"	11'-1"
8	64"	43"	8'-0" 2'-10"	12'-5"
9	71"	47"	9'-0" 3'-2"	13'-9"

BASED ON 2-2/3" X 1/2" CORRUGATION  
"G" IS MEASURED BETWEEN THE OTHER SURFACES OF THE PIPES.



### SINGLE C.M.P. ARCH PIPE CULVERT NOT-TO-SCALE

### SINGLE CIRCULAR PIPE CULVERT NOT-TO-SCALE



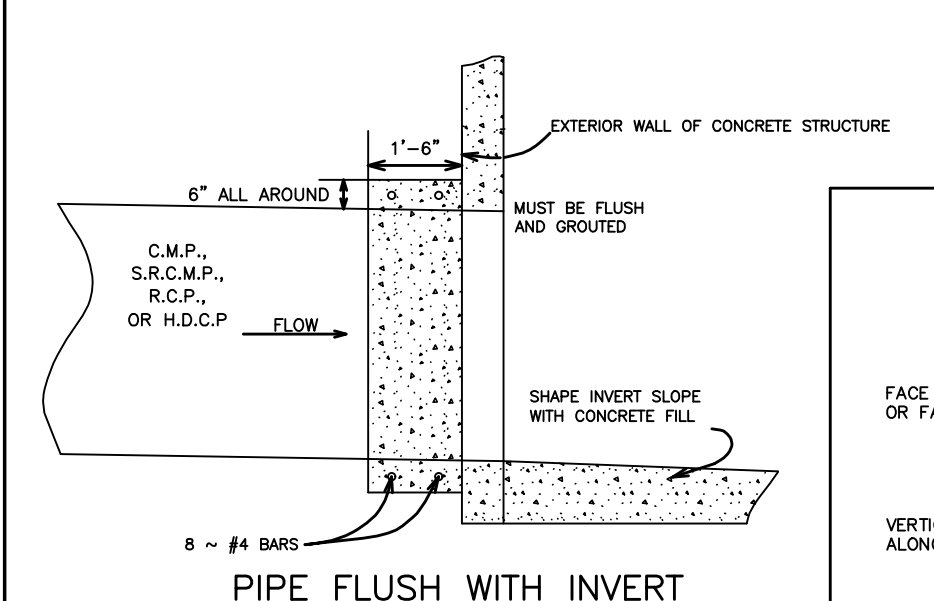
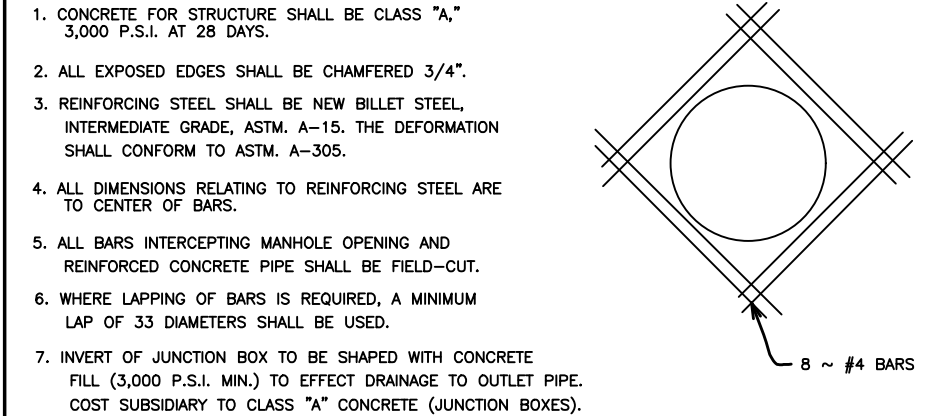
### MULTIPLE C.M.P. ARCH PIPE CULVERT NOT-TO-SCALE

### MULTIPLE CIRCULAR PIPE CULVERT NOT-TO-SCALE

- NOTES:
- CONCRETE SHALL BE CLASS "A" 3000 PSI
  - ALL METAL PIPES (CIRCULAR AND/OR ARCH) SHALL HAVE 5/8" X 6" GALVANIZED BOLTS WITH 2 HEX NUTS AT 24" CENTERS TO ANCHOR THE PIPE TO THE CONCRETE. THIS WILL BE SUBSIDIARY TO THE RIPRAP HEADWALL.
  - FOR CONCRETE ARCH PIPES THE CMP ARCH PIPE CULVERT DIMENSIONS WILL HAVE TO BE ADJUSTED FOR THE PIPE WALL THICKNESS.
  - FOR PIPES LARGER THAN SHOWN, USE THE CLEAR DISTANCE BETWEEN PIPES SHOWN IN "DOD" ITEMS 450 AND/OR 454.
  - IF THE SIDES OF THE HEADWALL IS ADJACENT TO A RIPRAP SLOPE, AND IF THE TOP OF THE HEADWALL IS ADJACENT TO THE ROADWAY FOUNDATION OR RIPRAP SLOPE, THE SIDE AND TOP TOE WALLS MAY BE ELIMINATED IF APPROVED BY THE ENGINEER.

RH-15 HEADWALL

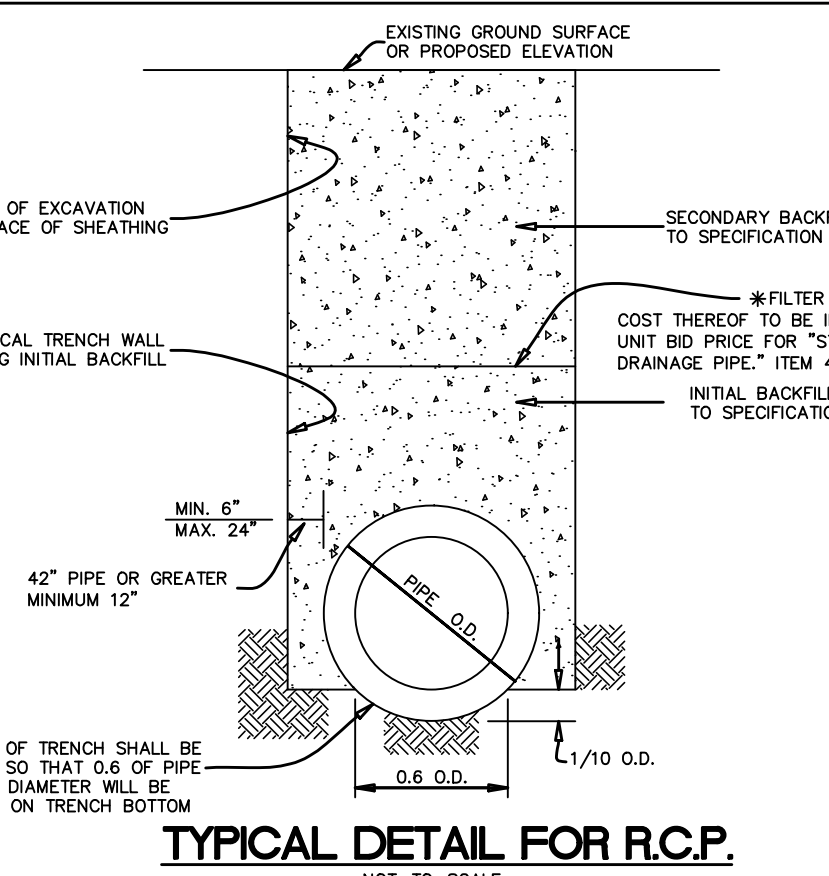
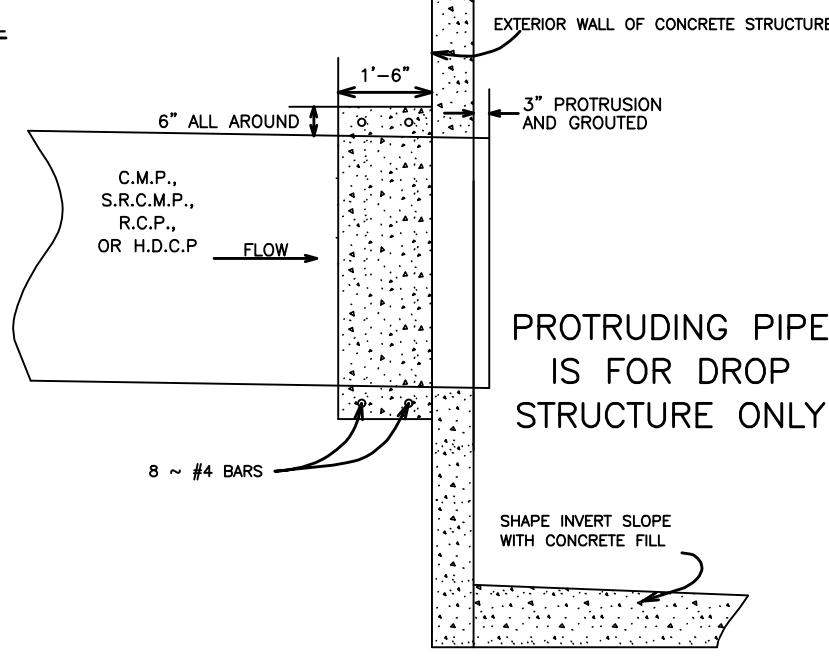
### CONCRETE COLLAR DETAIL (NOT TO SCALE)



### JANUARY 2006 STANDARD PLANS CITY OF SAN ANTONIO, TEXAS DEVELOPMENT SERVICES

### CONCRETE COLLAR DETAIL

DRAWN BY: ANDREW VENTER, P.E.	DATE: 04/15/06	REVISIONS: 04/15/06	SCALE: SEE ABOVE
CHECKED BY: GARY BENT, P.E.			SHEET: 1 OF 1



### TYPICAL DETAIL FOR C.M.P. AND S.R.C.M.P. NOT TO SCALE

## SONORA-UNIT 3 BEXAR COUNTY, TEXAS DRAINAGE DETAILS (SHEET 2 OF 2)

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	December 2024
DRAWN	AR
CHECKED	SS
SHEET	C1.20

**PAPE-DAWSON  
ENGINEERS**

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

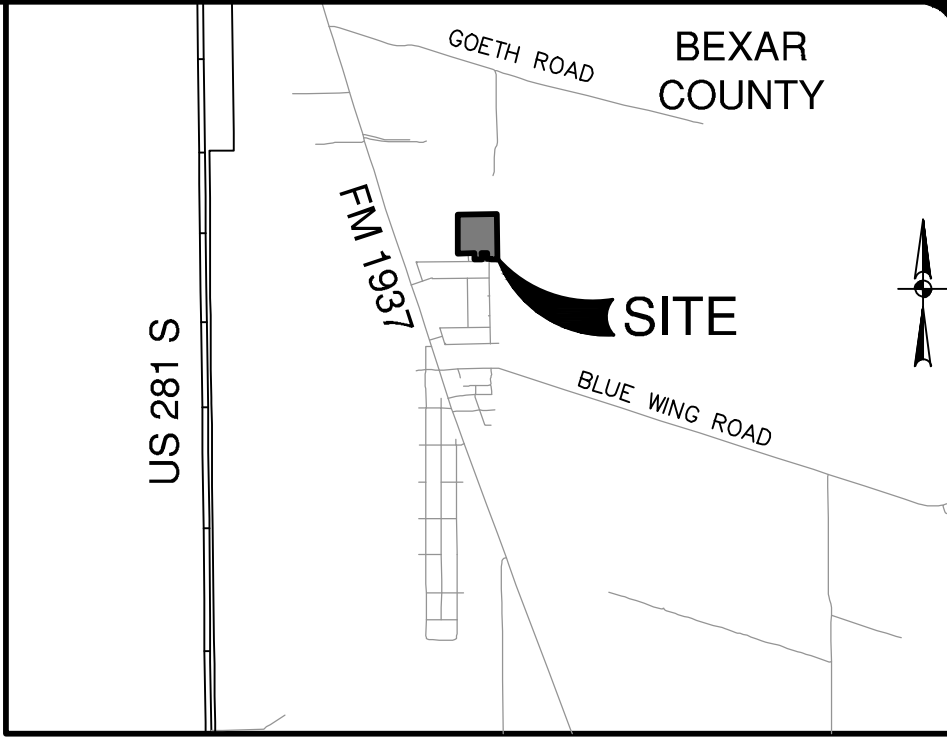
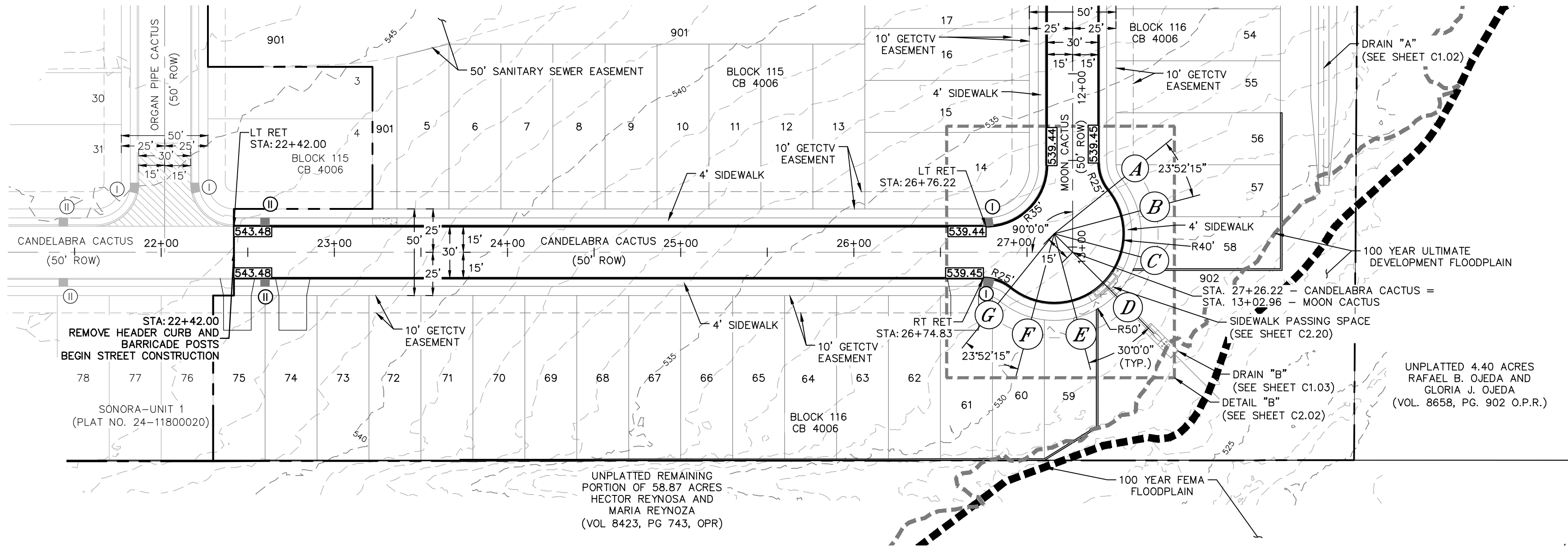
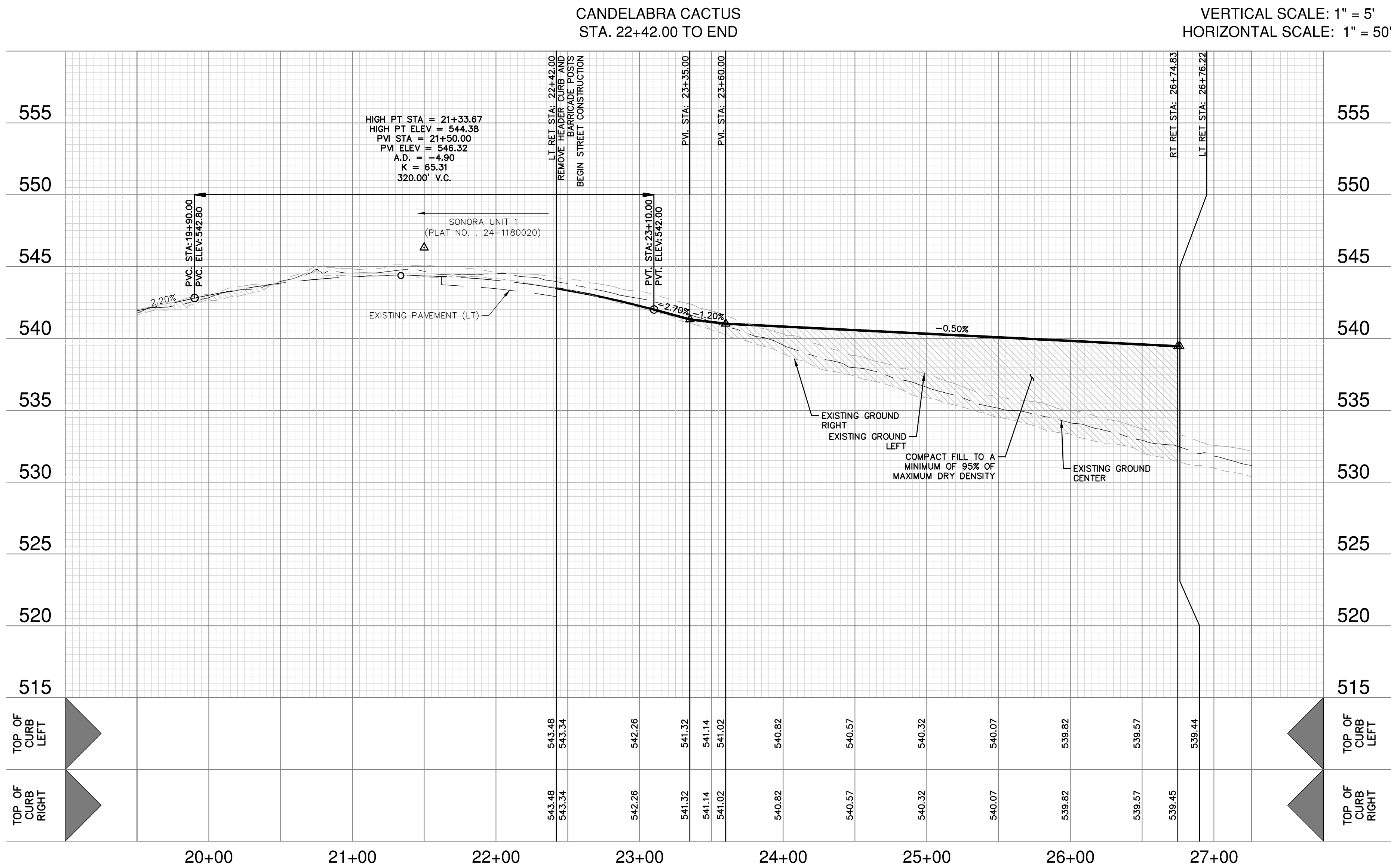
12/18/24

STATE OF TEXAS  
REBECCA ANN CARROLL  
92666  
REGISTERED PROFESSIONAL ENGINEER

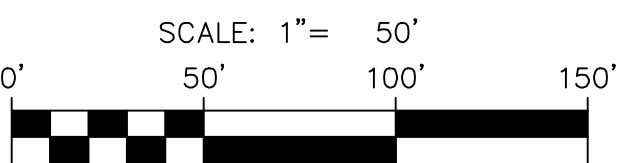
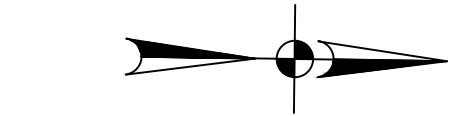


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**LOCATION MAP**  
NOT-TO-SCALE



**STREET LEGEND**

PROJECT LIMITS	---
WHEELCHAIR RAMP	①
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
TOP OF CURB SPOT ELEVATION	975.50
WASHOUT CROWN SECTION	[Pattern]
PROPOSED SIDEWALK (HOMEBUILDER'S RESPONSIBILITY)	[Pattern]
PROPOSED SIDEWALK (CONTRACTOR'S RESPONSIBILITY)	[Pattern]
DRIVEWAY	[Pattern]

**STREET NOTES:**

- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
- CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
- SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
- NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL GRADE AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
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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.

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

**SONORA-UNIT 3  
BEXAR COUNTY, TEXAS  
CANDELABRA CACTUS  
PLAN AND PROFILE**

PLAT NO. 24-118000405  
JOB NO. 13115-04  
DATE December 2024  
DESIGNER SS  
CHECKED DRAWN AR  
SHEET C2.00

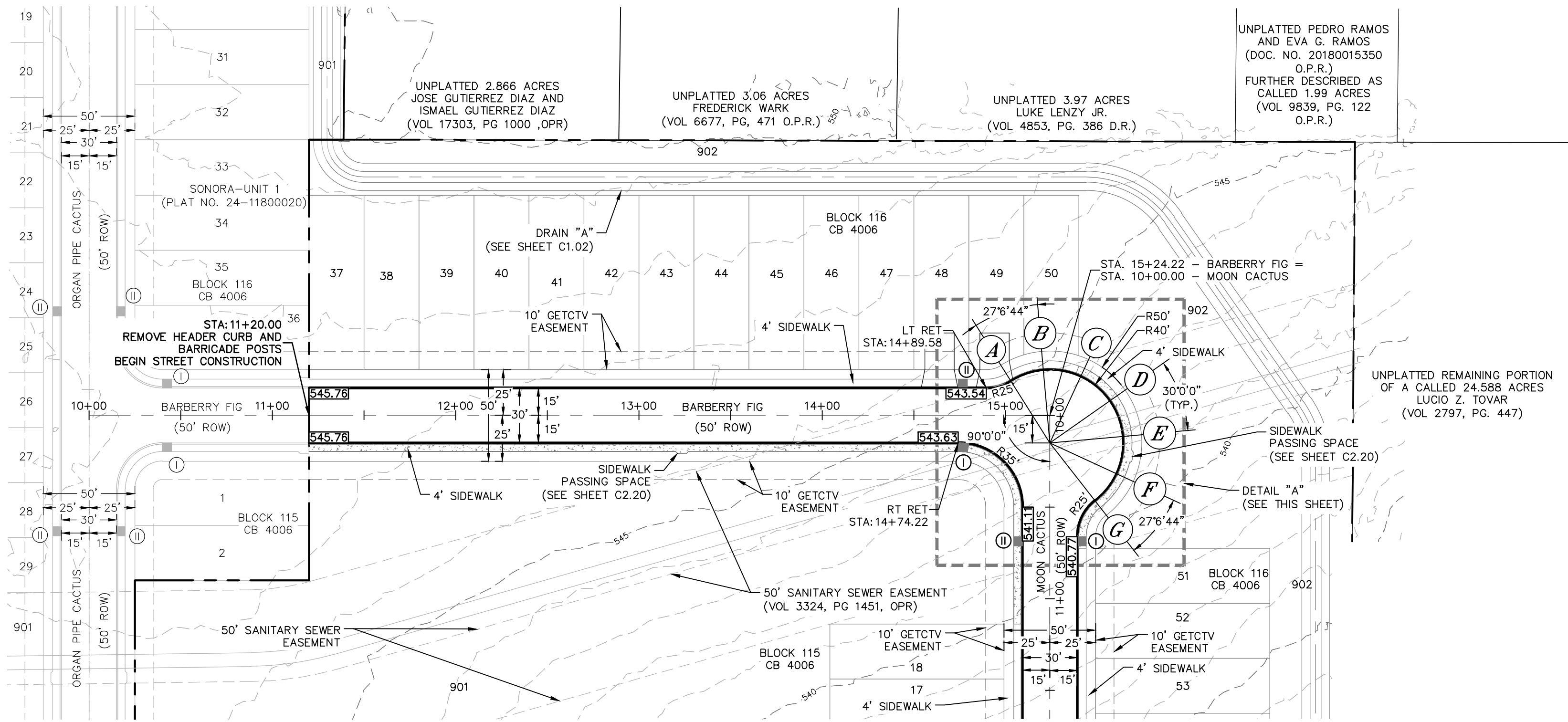
NO.	REVISION	DATE

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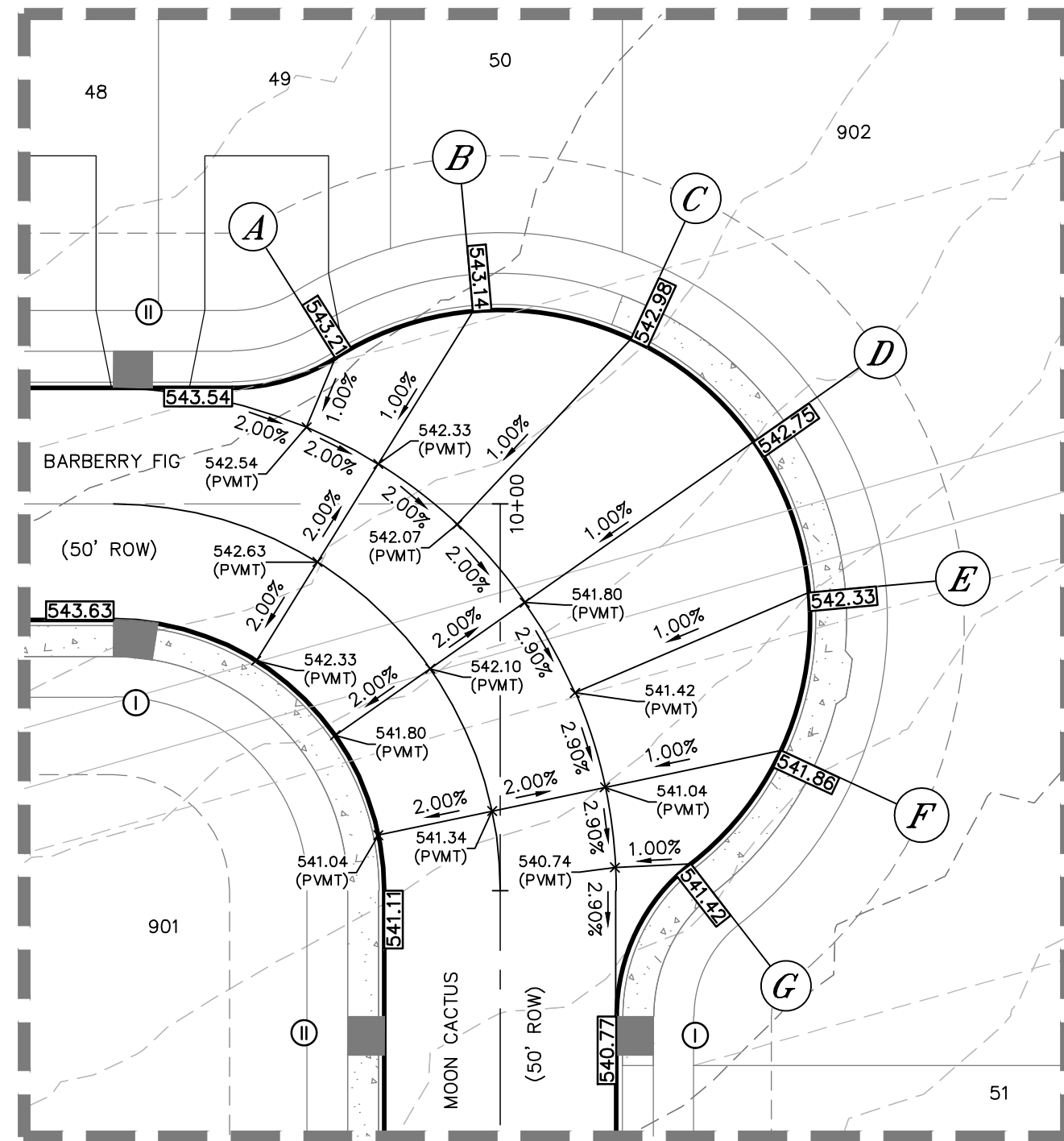
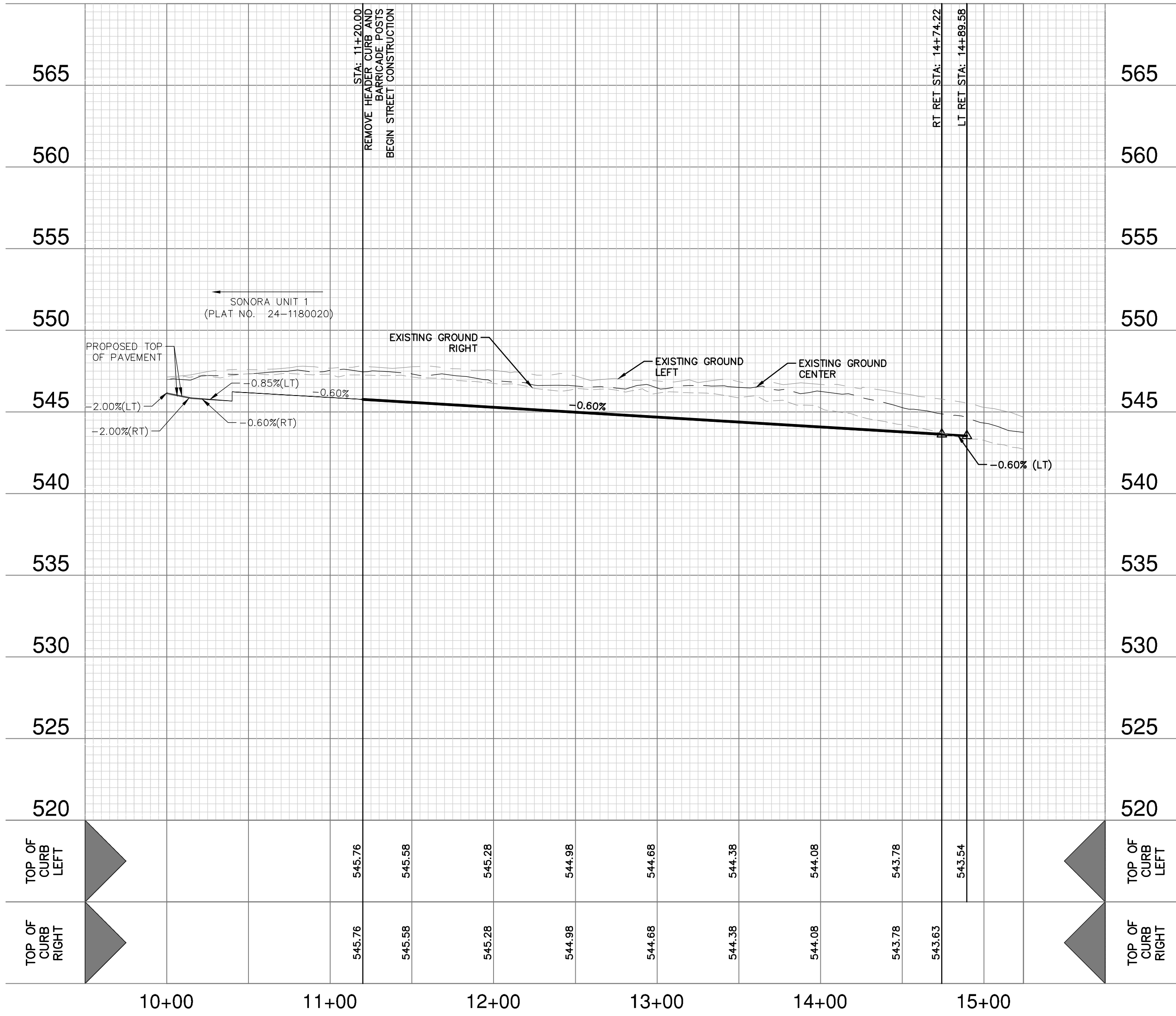


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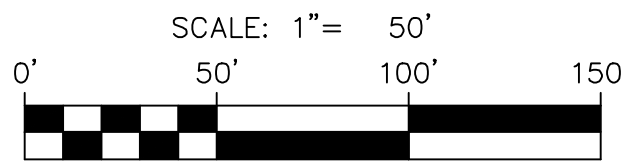
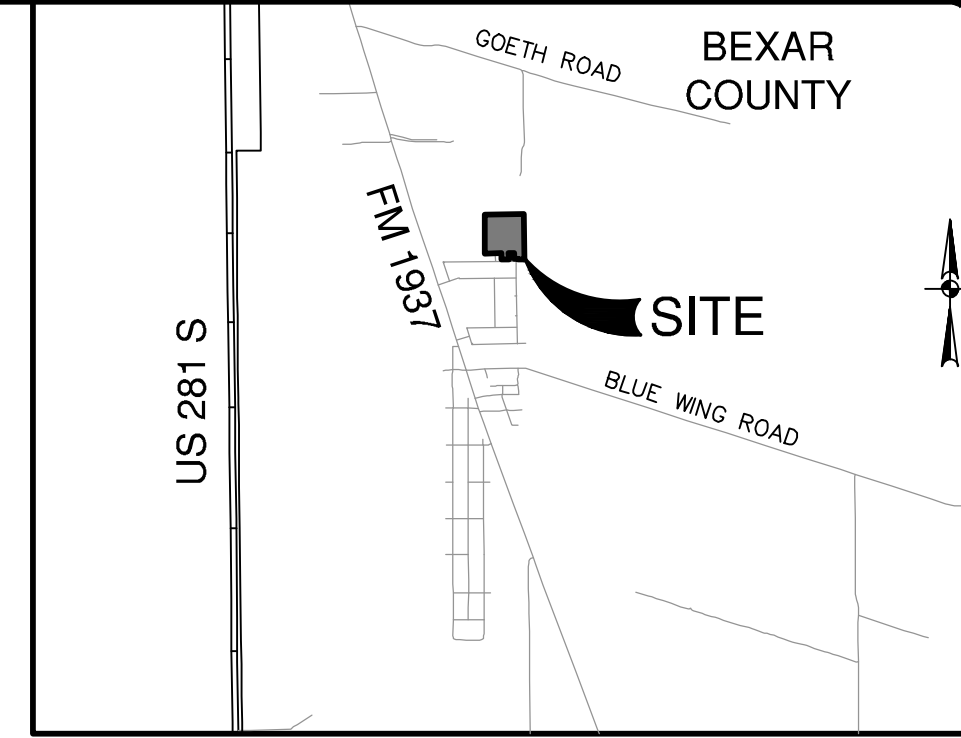
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BARBERRY FIG  
STA. 11+20.00 TO END  
VERTICAL SCALE: 1" = 5'  
HORIZONTAL SCALE: 1" = 50'



DETAIL "A"  
SCALE 1" = 20'



### STREET LEGEND

PROJECT LIMITS	---
WHEELCHAIR RAMP	①
POINT OF CURVATURE	PC
POINT OF TANGENCY	PT
RETURN	RET
TOP OF CURB SPOT ELEVATION	975.50
WASHOUT CROWN SECTION	
PROPOSED SIDEWALK (HOMEBUILDER'S RESPONSIBILITY)	
PROPOSED SIDEWALK (CONTRACTOR'S RESPONSIBILITY)	
DRIVEWAY	

### STREET NOTES:

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

**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**  
**BARBERRY FIG**  
**PLAN AND PROFILE**

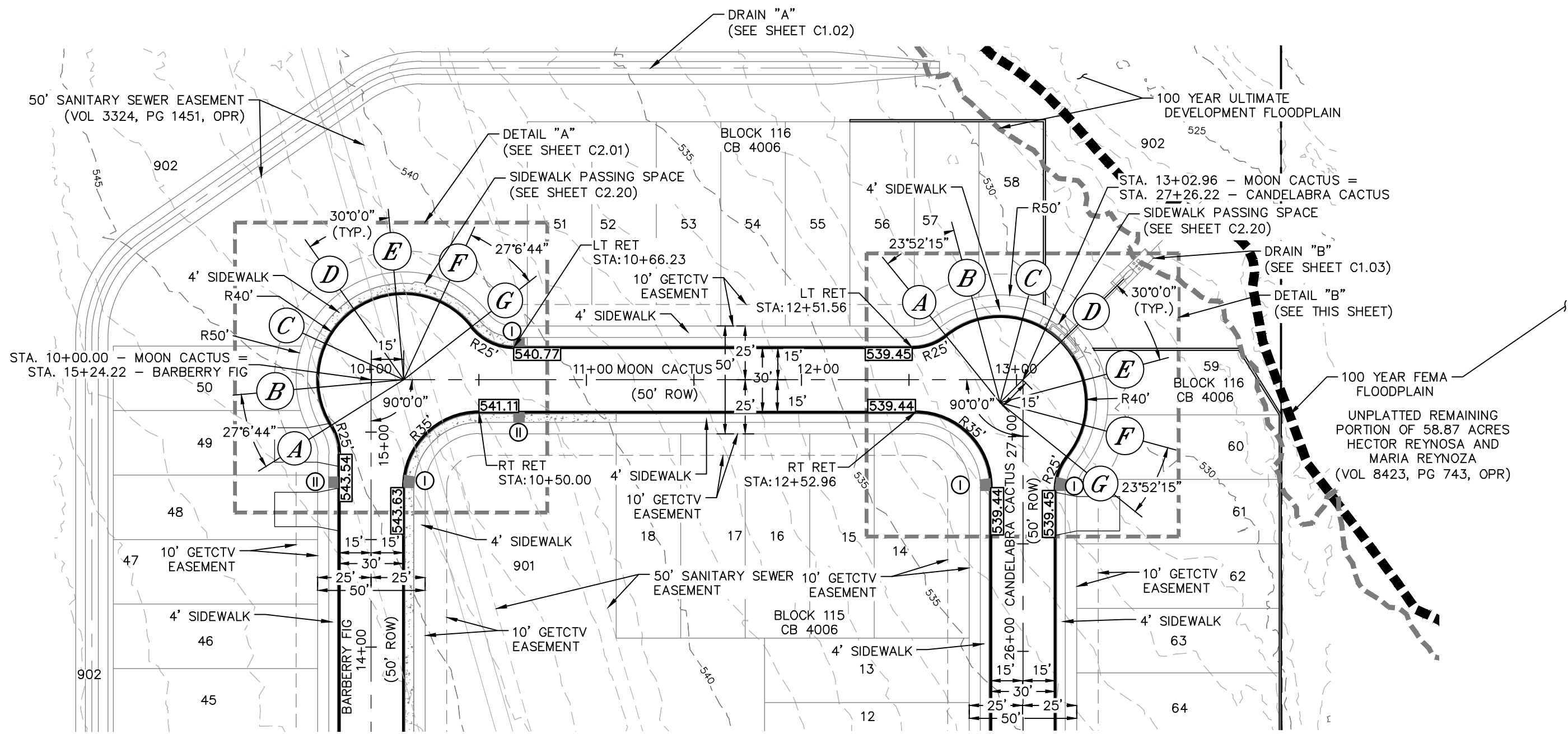
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JOB NO. 13115-04  
DATE December 2024  
DESIGNER SS  
CHECKED DRAWN AR  
SHEET C2.01

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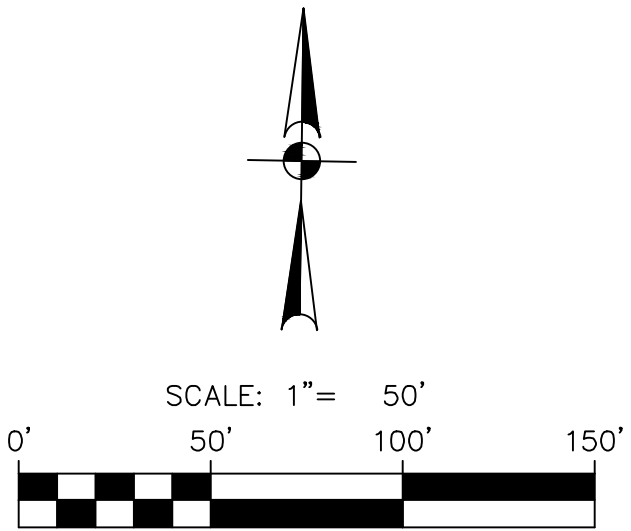
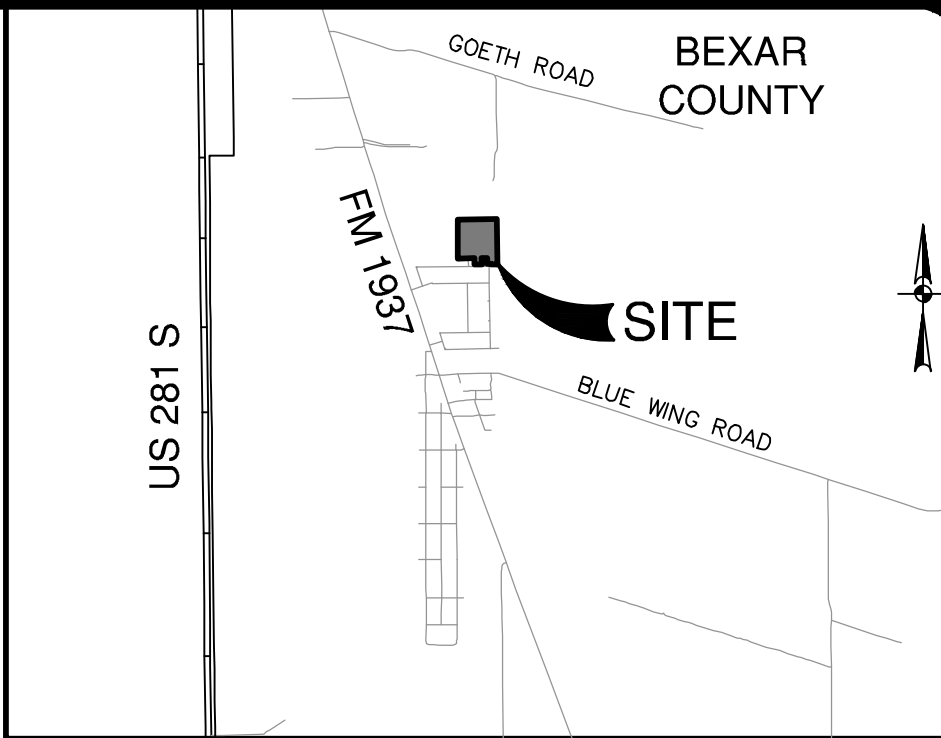
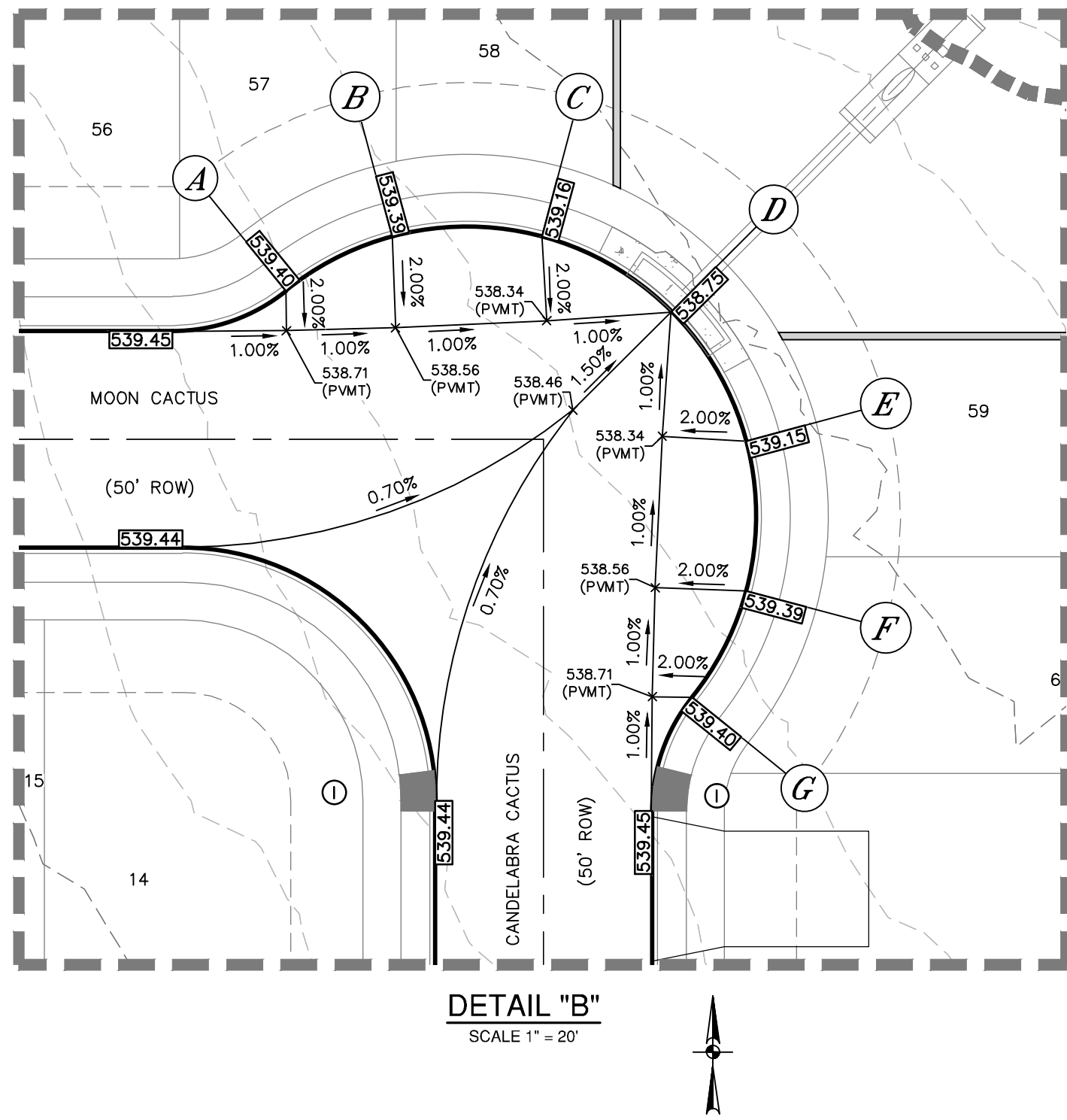
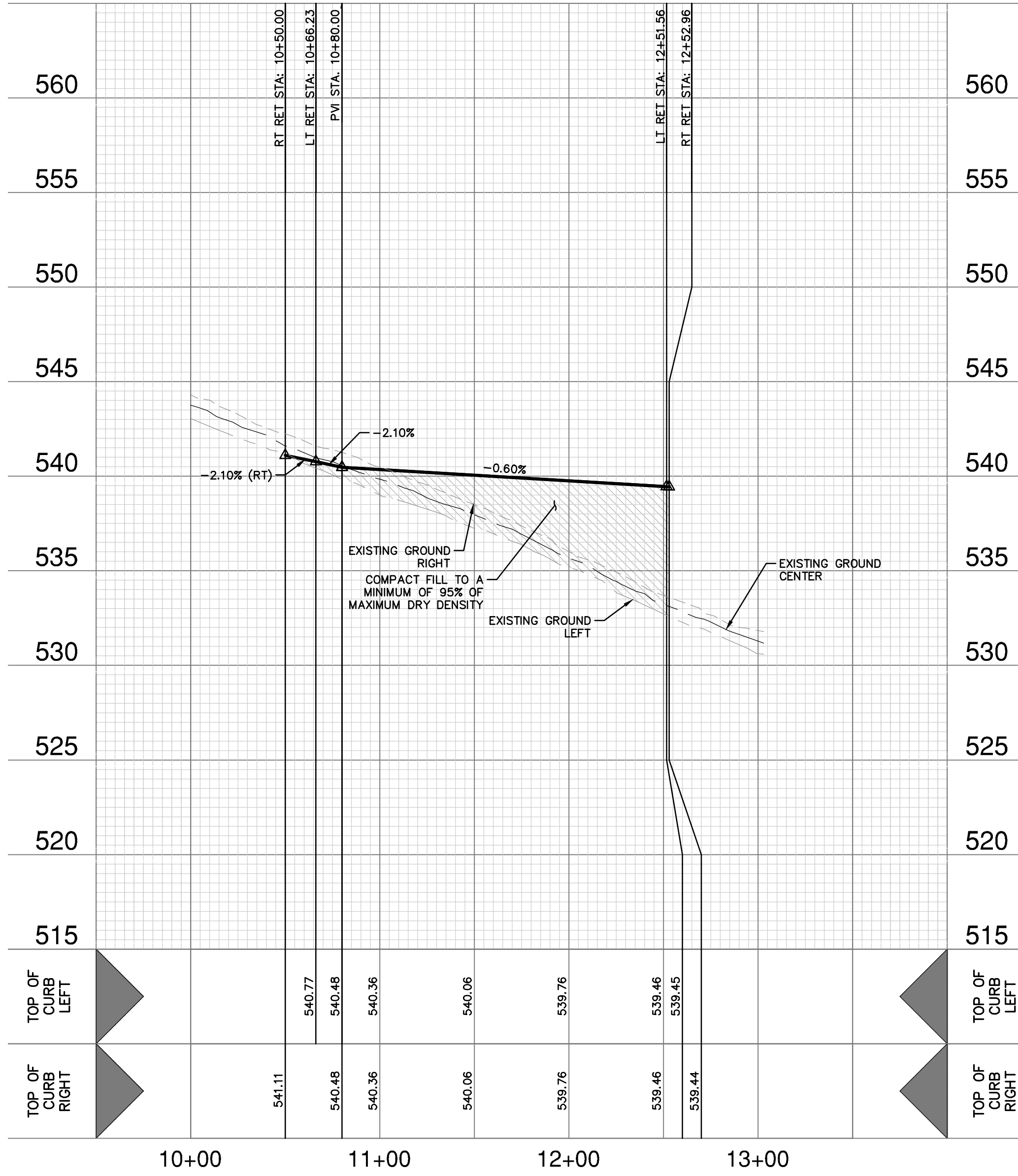
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MOON CACTUS  
STA. 10+00.00 TO END

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



### STREET LEGEND

PROJECT LIMITS	①
WHEELCHAIR RAMP	PC
POINT OF CURVATURE	PT
POINT OF TANGENCY	RET
RETURN	
TOP OF CURB SPOT ELEVATION	975.50
WASHOUT CROWN SECTION	
PROPOSED SIDEWALK (HOMEBUILDER'S RESPONSIBILITY)	
PROPOSED SIDEWALK (CONTRACTOR'S RESPONSIBILITY)	
DRIVEWAY	

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**PAPE-DAWSON  
ENGINEERS**

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

**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS

**MOON CACTUS**  
PLAN AND PROFILE

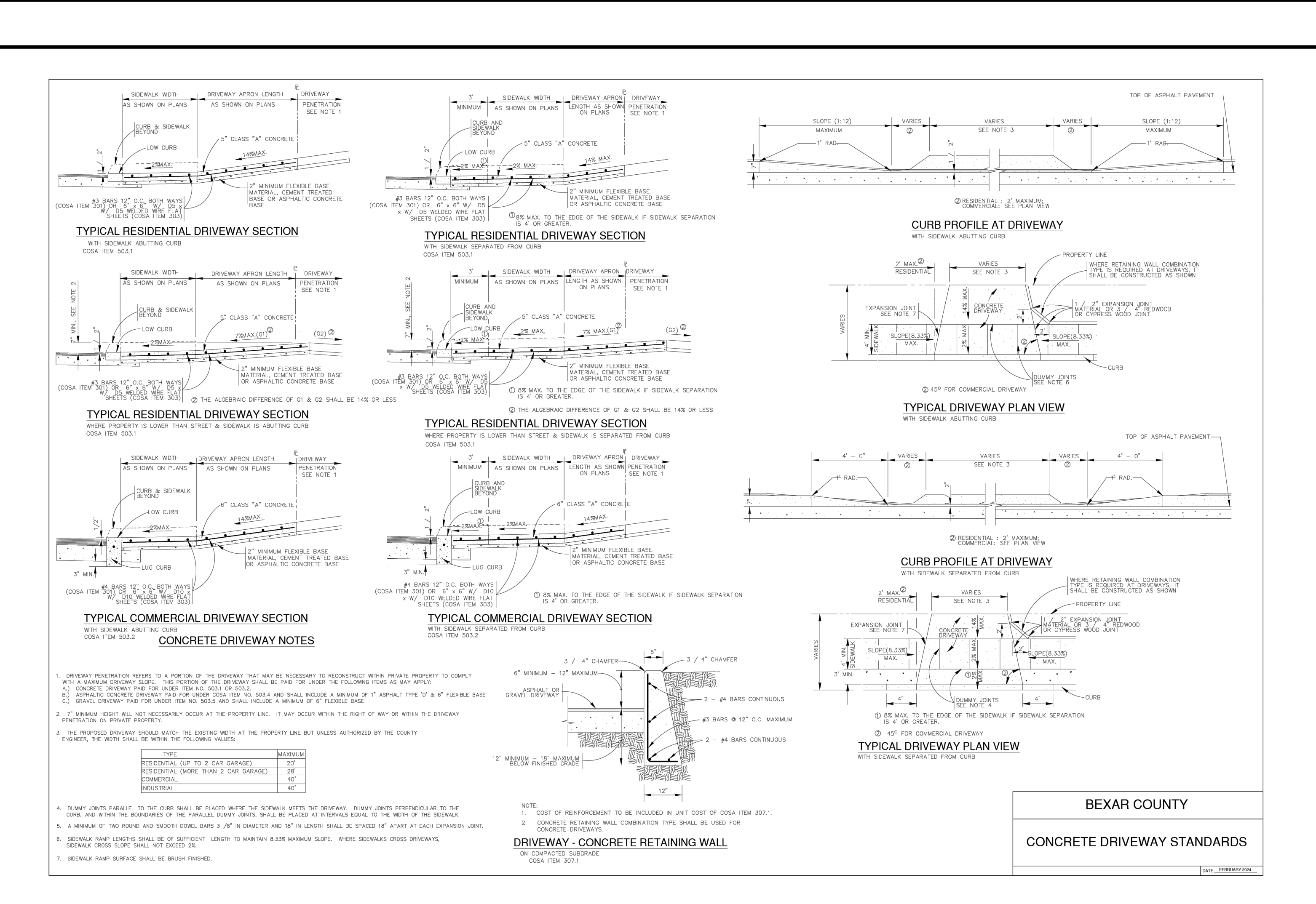
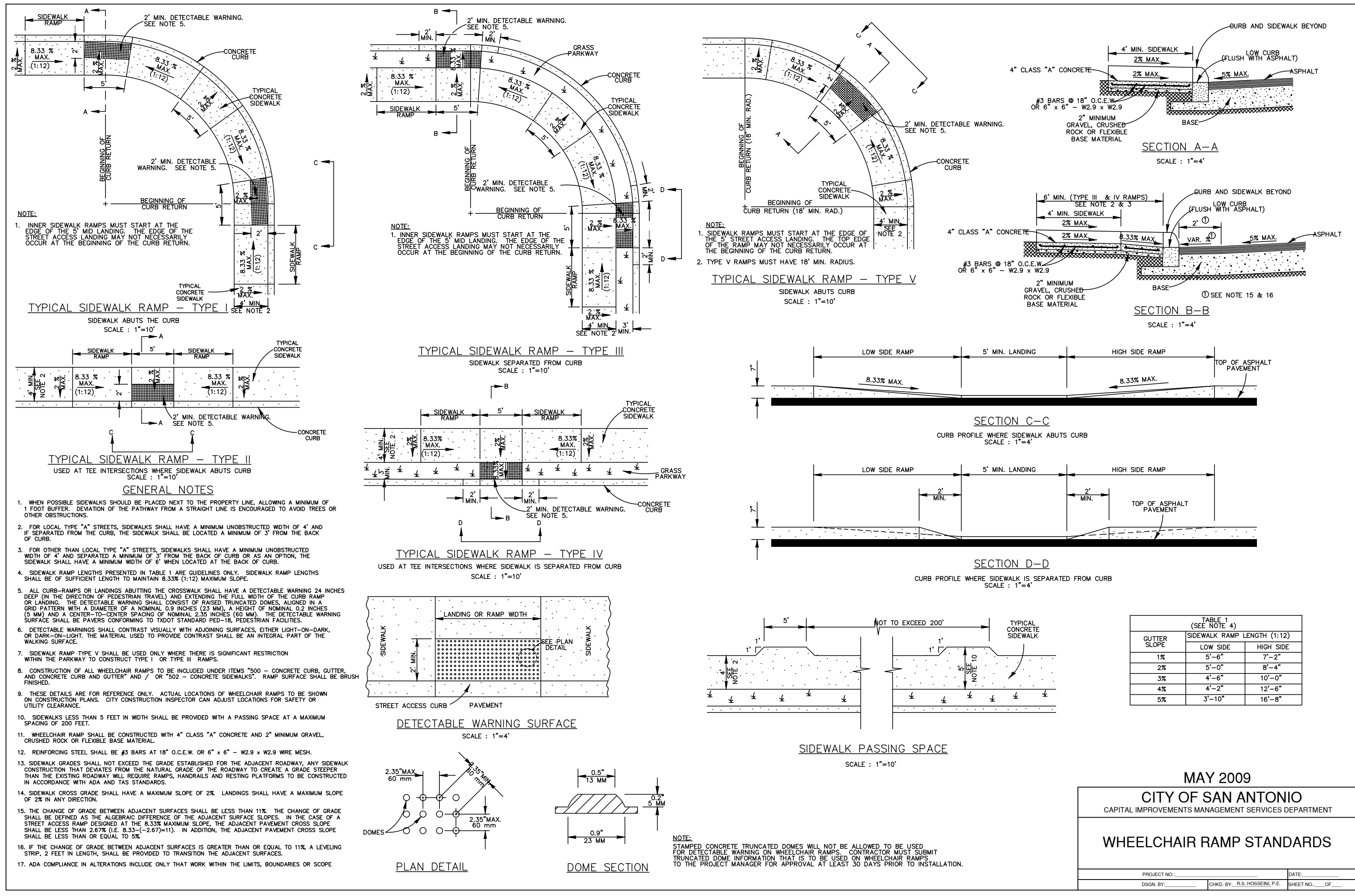
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JOB NO. 13115-04  
DATE December 2024  
DESIGNER SS  
CHECKED DRAWN AR  
SHEET C2.02

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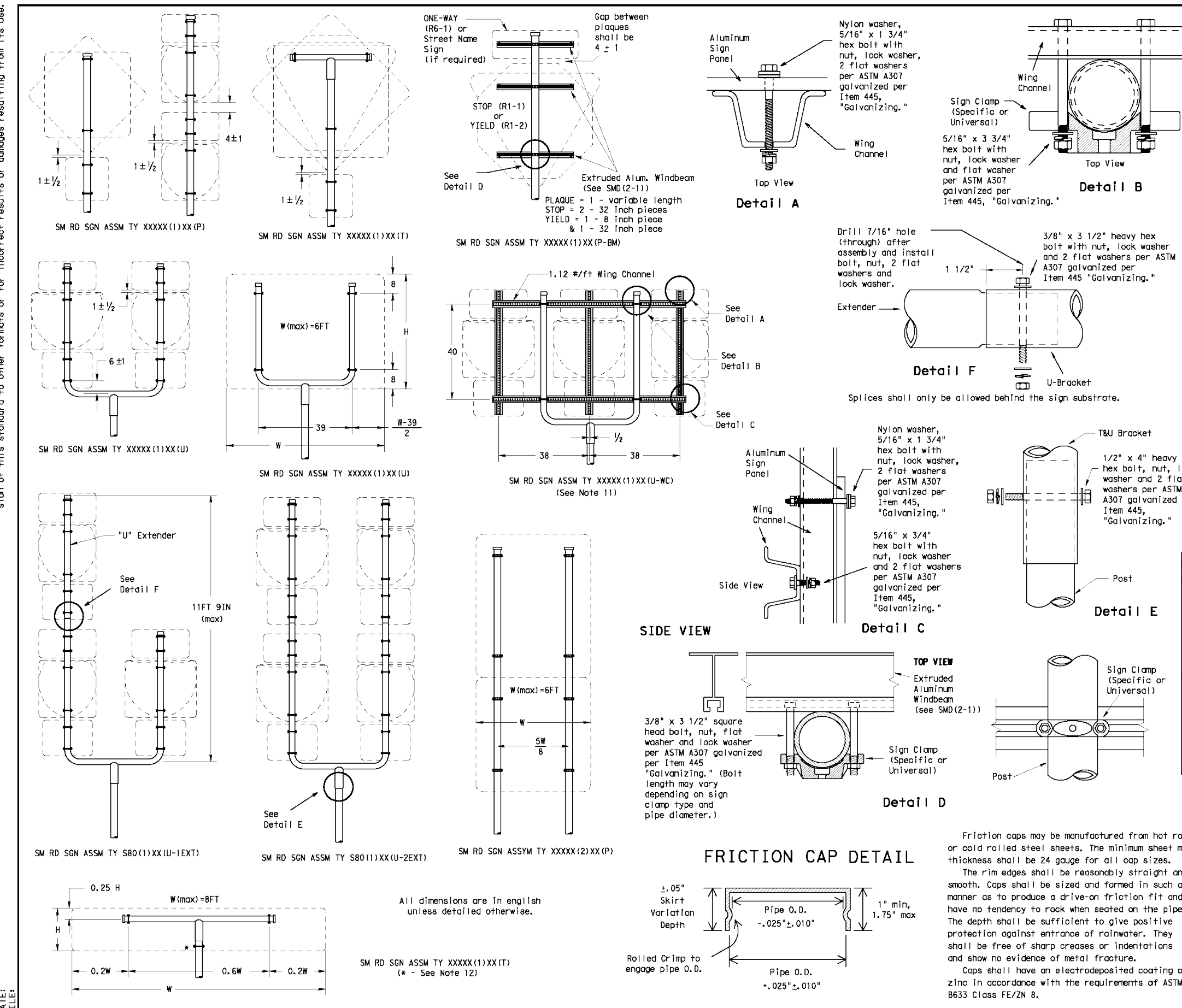






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DATE: FILE:



**Texas Department of Transportation**  
 Traffic Operations Division

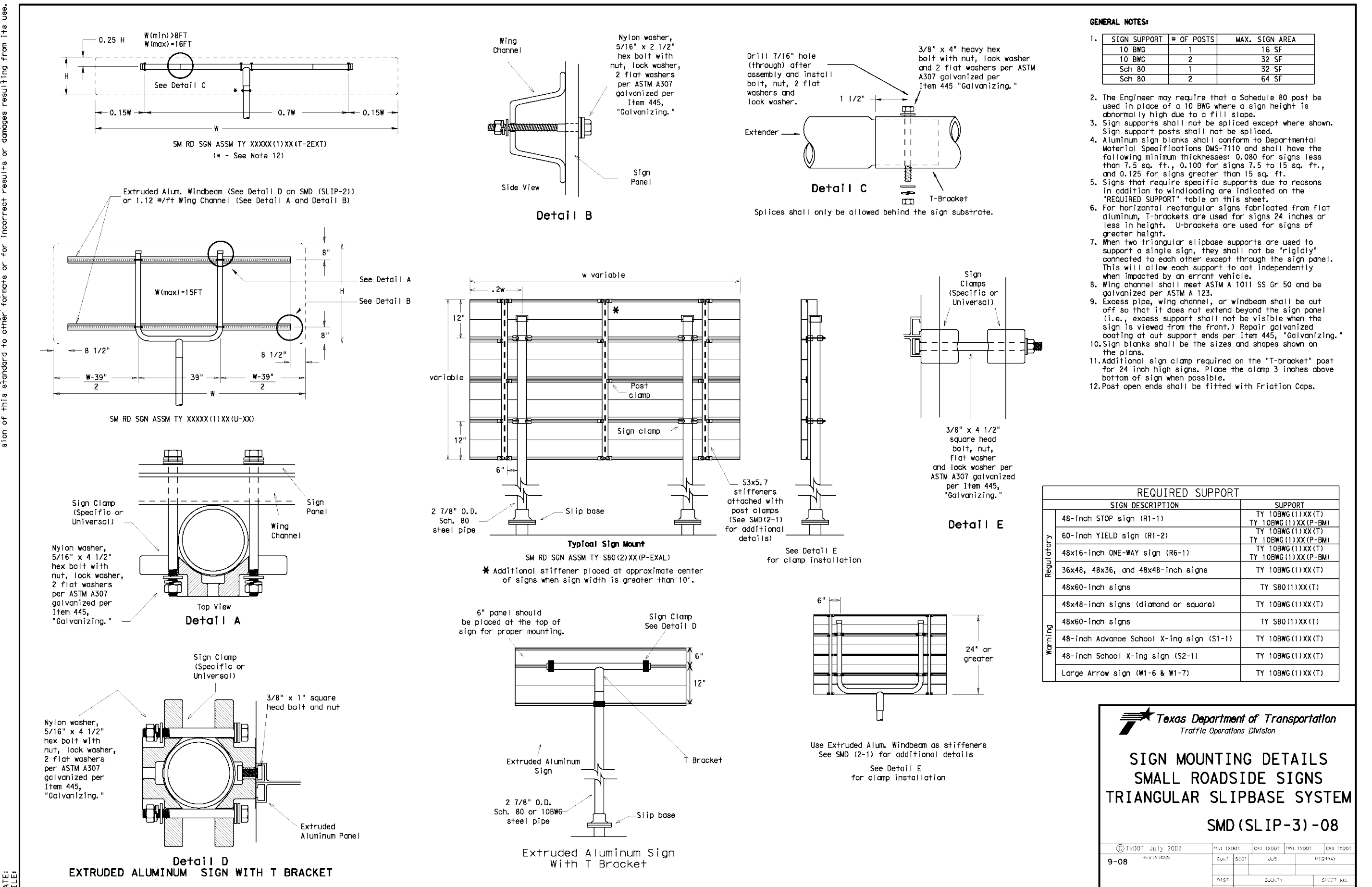
**SIGN MOUNTING DETAILS**  
 SMALL ROADSIDE SIGNS  
 TRIANGULAR SLIPBASE SYSTEM

**SMD (SLIP-2) -08**

DATE	DESCRIPTION	BY	CHKD	APPD	REV
9-08	REVISION	SM	SM	SM	SM
9-08	REVISION	SM	SM	SM	SM

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DATE: FILE:



**Texas Department of Transportation**  
 Traffic Operations Division

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

**SMD (SLIP-3) -08**

DATE	DESCRIPTION	BY	CHKD	APPD	REV
9-08	REVISION	SM	SM	SM	SM
9-08	REVISION	SM	SM	SM	SM

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

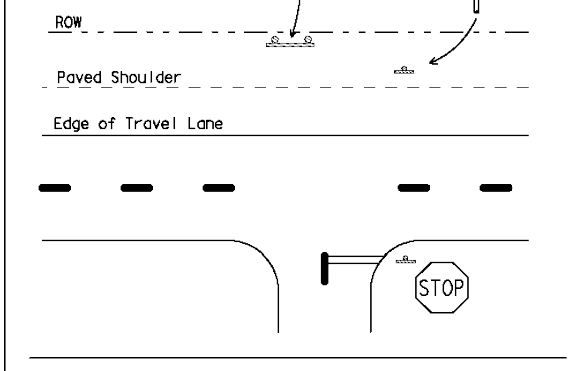
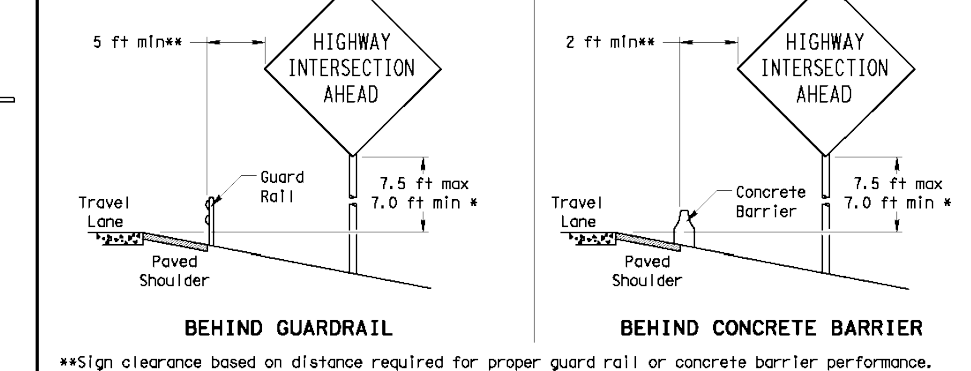
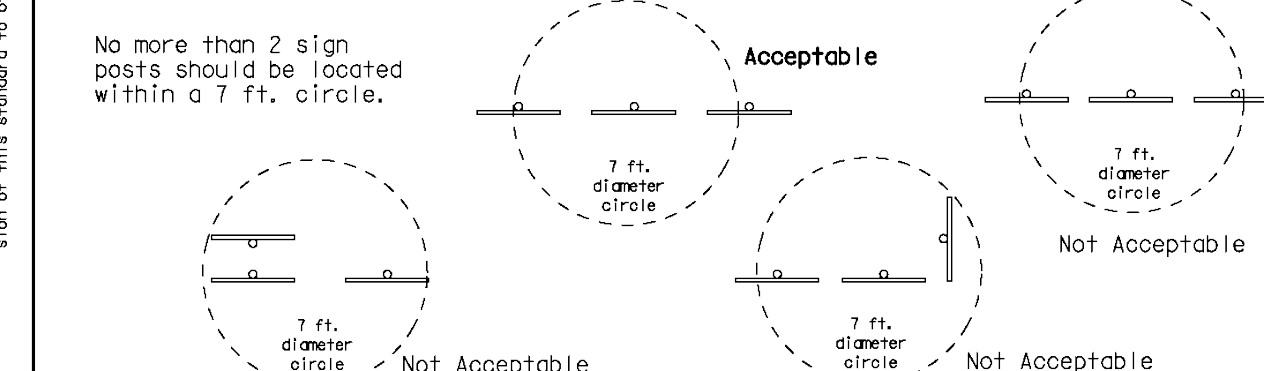
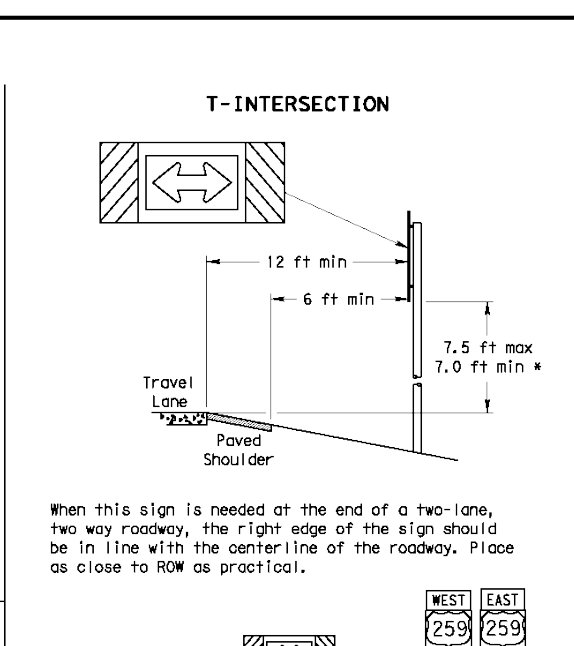
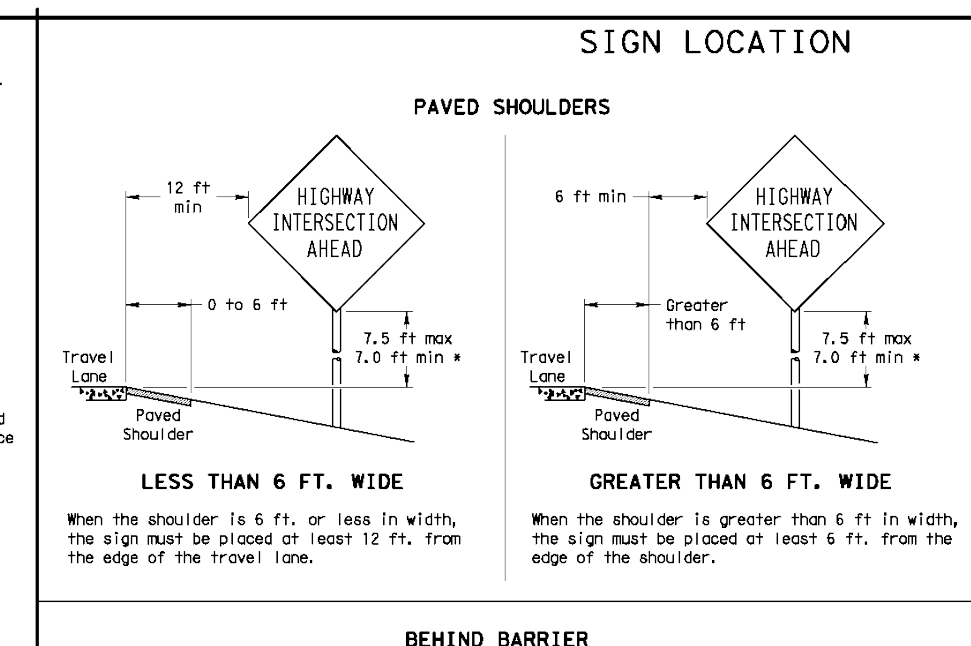
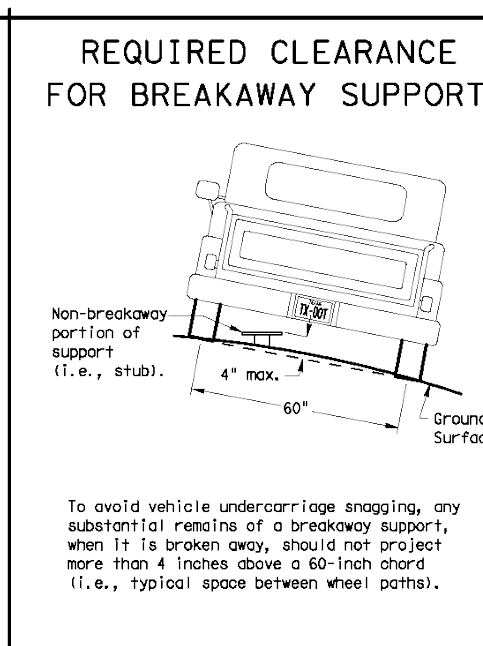
**SM RD SGN ASSM TY XXXX(X)XX(X-XXXX)**

**Post Type**  
 TSP = Fiberglass Reinforced Plastic Pipe (see SMD(SRP))  
 TWT = Thin-Walled Tubing (see SMD(TWT))  
 TOWB = 10-BMG Tubing (see SMD(SLP-1) to (SLIP-3))  
 S80 = Schedule 80 Pipe (see SMD(SLP-1) to (SLIP-3))

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

**Anchor Type**  
 UA = Universal Anchor - Bolted down (see SMD(SRP) and (TWT))  
 UB = Wedge Anchor Steel (see SMD(TWT))  
 WC = Wedge Anchor Plastic (see SMD(TWT))  
 SA = Slabbase - Bolted down (see SMD(SLP-1) to (SLIP-3))  
 SB = Slabbase - Bolted down (see SMD(SLP-1) to (SLIP-3))

**Sign Mounting Designation**  
 P = Pre-pipe (see SMD(SLP-1) to (SLIP-3), (TWT), (SRP))  
 T = Pre-pipe, "T" (see SMD(SLP-1) to (SLIP-3), (TWT))  
 U = Pre-pipe, "U" (see SMD(SLP-1) to (SLIP-3), (TWT))  
 SR = Extruded Ring Beam (see SMD(SLP-1) to (SLIP-3))  
 EXT = Number of Extensions (see SMD(SLP-1) to (SLIP-3), (TWT))  
 SW = Extruded Ring Beam (see SMD(SLP-1) to (SLIP-3))  
 SL = 1/2 x 1/2 Wing Channel (see SMD(SLP-1) to (SLIP-3))  
 EXAL = Extruded Aluminum Sign Panels (see SMD(SLP-1))



**Texas Department of Transportation**  
 Traffic Operations Division

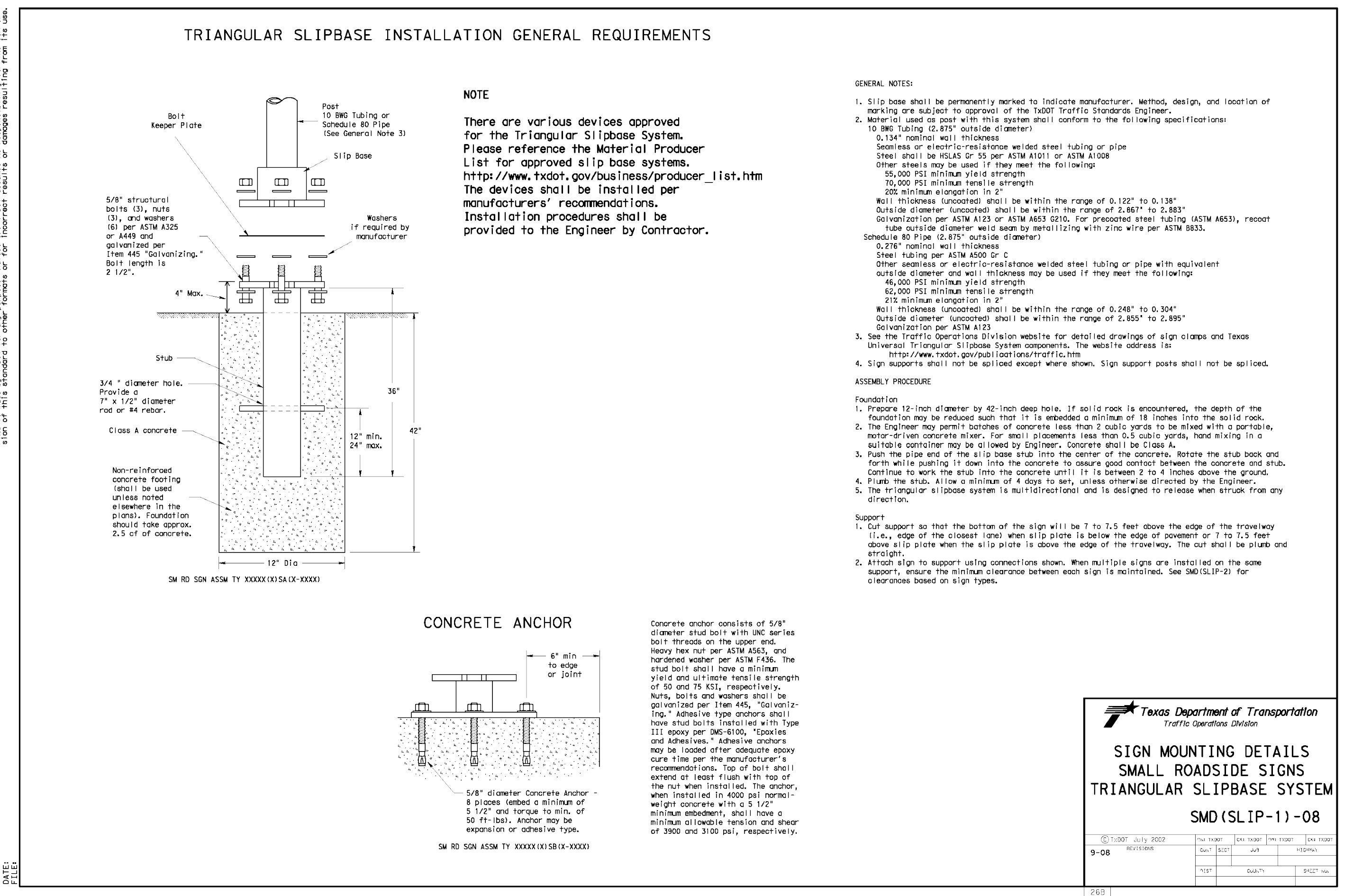
**SIGN MOUNTING DETAILS**  
 SMALL ROADSIDE SIGNS  
 GENERAL NOTES & DETAILS

**SMD (GEN) -08**

DATE	DESCRIPTION	BY	CHKD	APPD	REV
9-08	REVISION	SM	SM	SM	SM
9-08	REVISION	SM	SM	SM	SM

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DATE: FILE:



**SONORA-UNIT 3**  
 BEXAR COUNTY, TEXAS

**SIGNAGE DETAILS**  
 (SHEET 1 OF 2)

**PLAT NO. 24-11800405**

**JOB NO. 13115-04**

**DATE September 2024**

**DESIGNER SS**

**CHECKED DRAWN AR**

**SHEET C3.10**

**NO. REVISION**

**DATE**

**9/25/24**

**STATE OF TEXAS**

**REGISTERED PROFESSIONAL ENGINEER**

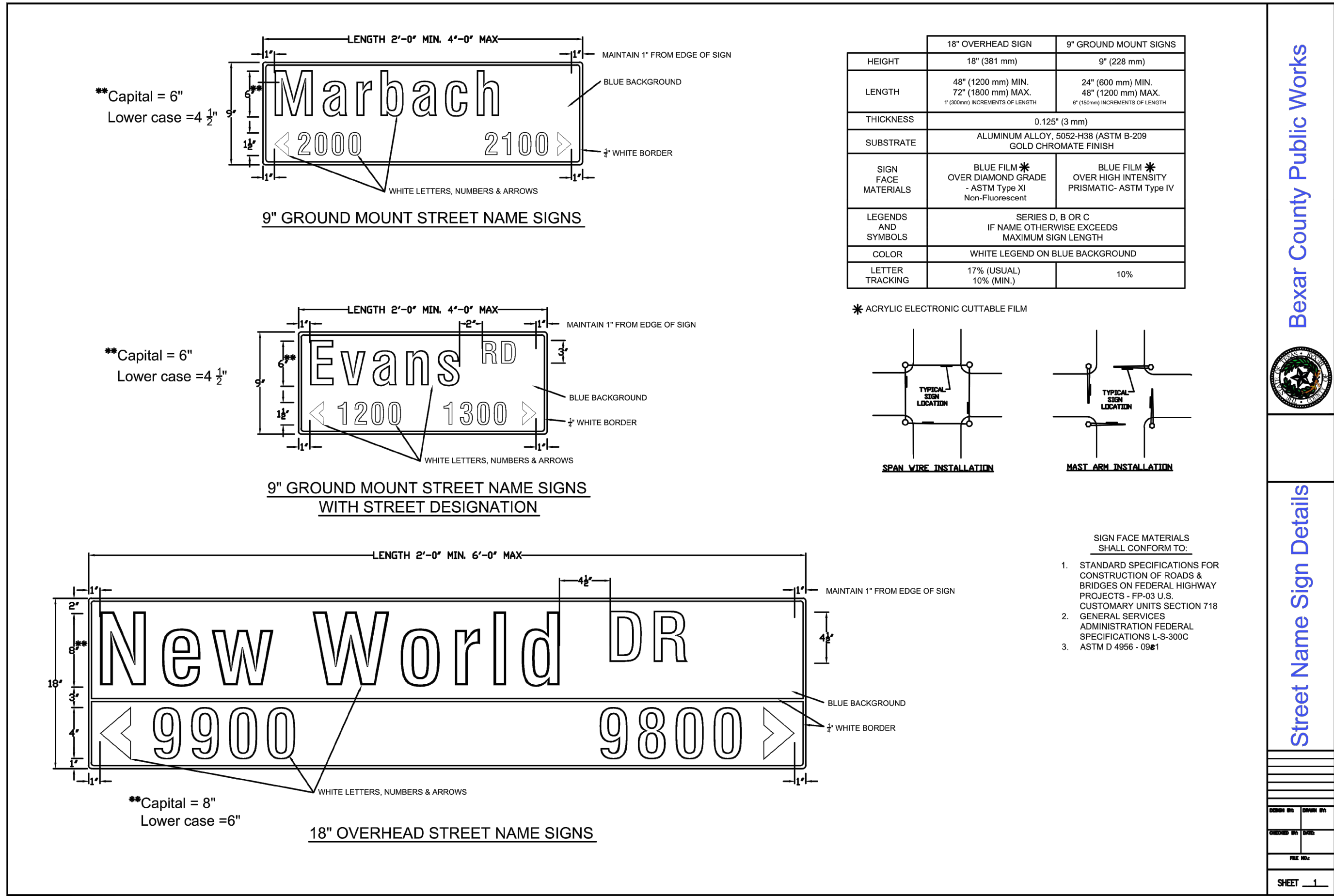
**92686**

**PAPE-DAWSON ENGINEERS**

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

**TEXAS ENGINEERING FIRM #1008800**



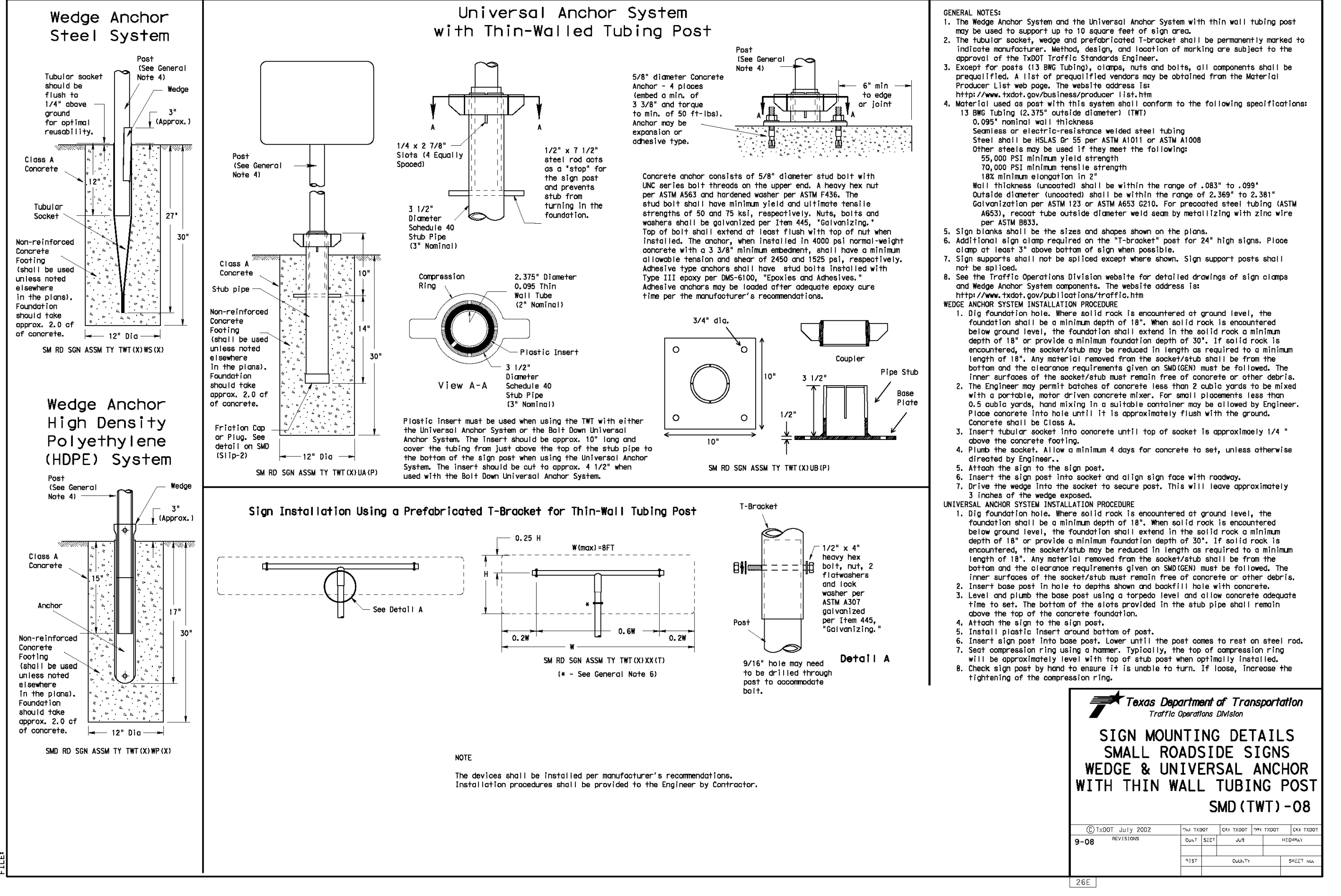


Bexar County Public Works



Street Name Sign Details

DATE	5/20/24
FILE	5/20/24
SHEET	1

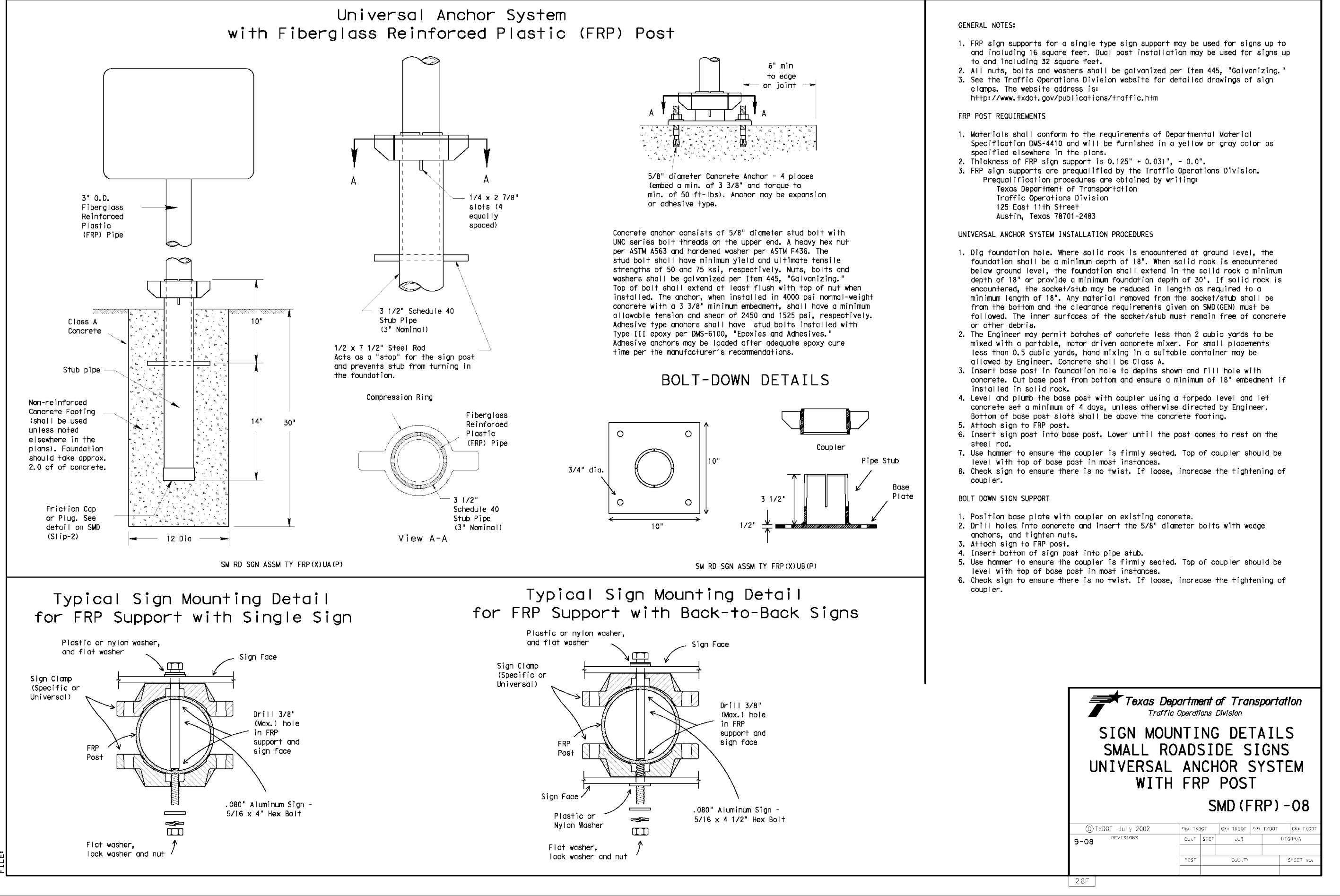


**PAPE-DAWSON ENGINEERS**

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #008890

**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS

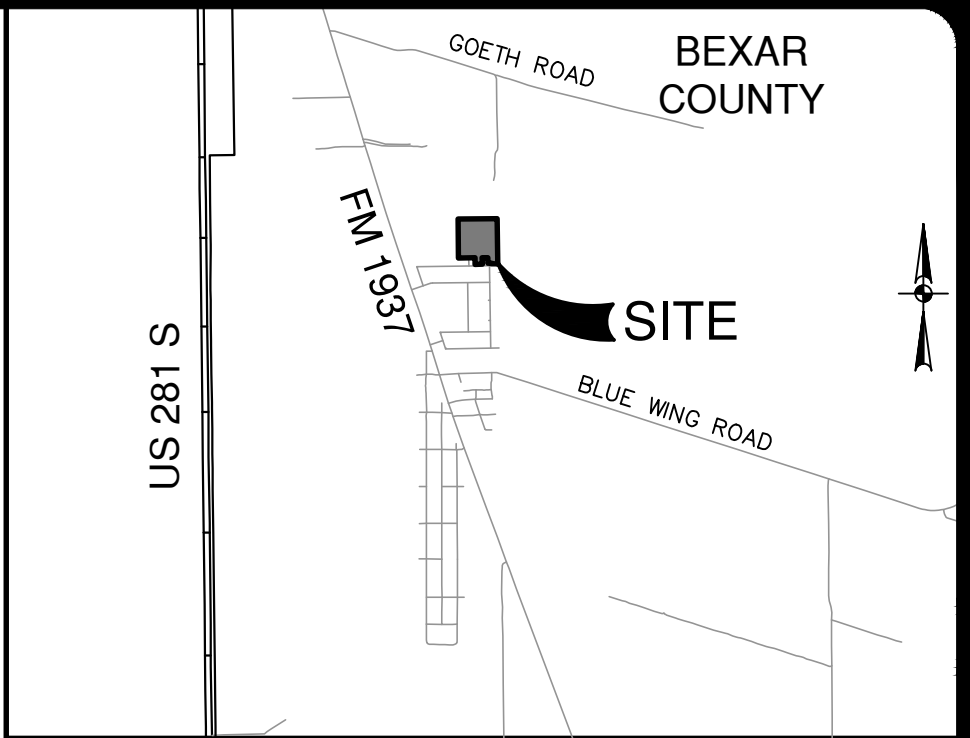
**SIGNAGE DETAILS**  
(SHEET 2 OF 2)



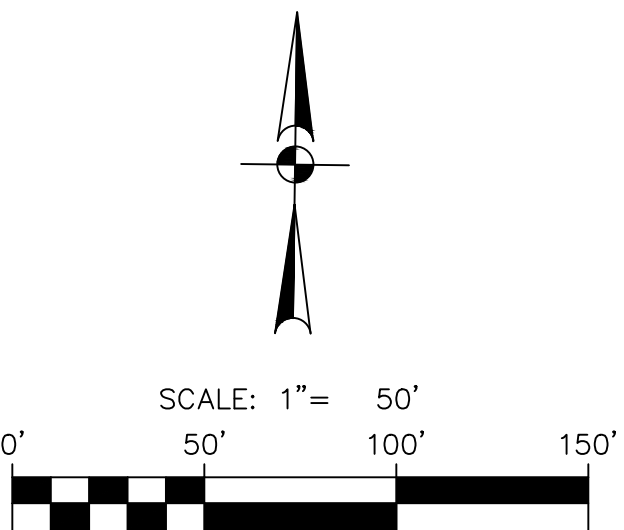
**Texas Department of Transportation**  
Traffic Operations Division  
**SIGN MOUNTING DETAILS**  
SMALL ROADSIDE SIGNS  
UNIVERSAL ANCHOR SYSTEM  
WITH FRP POST  
SMD (FRP) -08

PLAT NO. 24-11800405  
JOB NO. 13115-04  
DATE September 2024  
DESIGNER SS  
CHECKED DRAWN AR  
SHEET C3.20



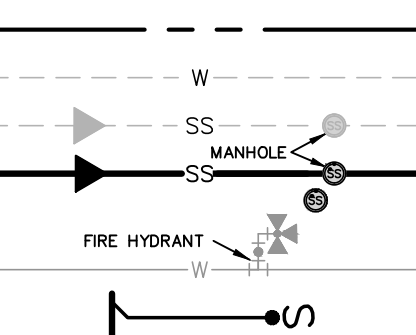


NOT-TO-SCALE



## SEWER LEGEND

PROJECT LIMITS  
EXISTING WATER  
EXISTING SEWER  
PROPOSED SEWER  
  
PROPOSED WATER  
PROPOSED SEWER



## 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/ GEOPHYSICAL/ AND/OR OTHER INFORMATION AND INVESTIGATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT THE 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 TO COMPLY WITH ALL APPLICABLE 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 THE FOLLOWING: 1. TRENCH EXCAVATION SAFETY ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATIONS.

## SANITARY SEWER NOTES

1. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT WATER MAIN.
2. NO VERTICAL STACKS SHALL BE ALLOWED
3. WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FT. OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 180 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
4. ALL SEWER PIPES SHALL BE PVC (SDR 26), UNLESS OTHERWISE NOTED.
5. PRIOR TO CONSTRUCTION CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
6. CONTOURS SHOWN ARE FOR GRAPHICAL USE ONLY.
7. MANHOLE OPENINGS ARE 30" AS PER TCEQ CHAPTER 217.55
8. CONTRACTOR TO INSTALL PERMANENT MARKERS AT THE END OF ALL SEWER LATERALS, PER SEWER LATERAL DETAIL DD-854-01.
9. ALL 6" SEWER LATERALS WILL BE SET AT A MINIMUM 2% SLOPE.
10. BACKFILL MUST COMPLY WITH SAWS SPECIFICATIONS 804.4.
11. TOPS OF EXISTING MANHOLES SHALL BE ADJUSTED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE 0.50 FEET ABOVE FINISHED GROUND ELEVATIONS IN UNPAVED AREAS WITH WATER TIGHT LIDS.

## SEWER:

LOWER-CENTRAL SEWERSHED - DOS RIOS WRO

DEVELOPER'S NAME: <u>CONTINENTAL HOMES OF TEXAS, L.P.</u>			
ADDRESS: <u>5419 N LOOP 1604 E</u>			
CITY: <u>SAN ANTONIO</u>	STATE: <u>TEXAS</u>	ZIP: <u>78247</u>	
PHONE# <u>(210) 496-2668</u>	FAX# _____		
SAWS BLOCK MAP# <u>122624</u>		TOTAL EDU'S <u>53</u>	TOTAL ACREAGE <u>8.01</u>
TOTAL LINEAR FOOTAGE OF PIPE: <u>1,144 LF</u> PLAT NO. <u>24-11800405</u>			
NUMBER OF LOTS <u>53</u>		SAWS JOB NO. <u>24-1628</u>	

[illegible]

**PAPE-DAWSON  
ENGINEERS**

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

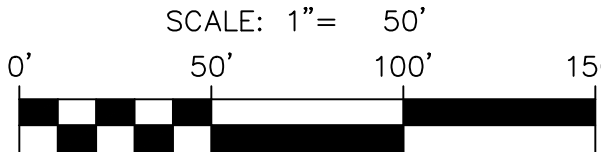
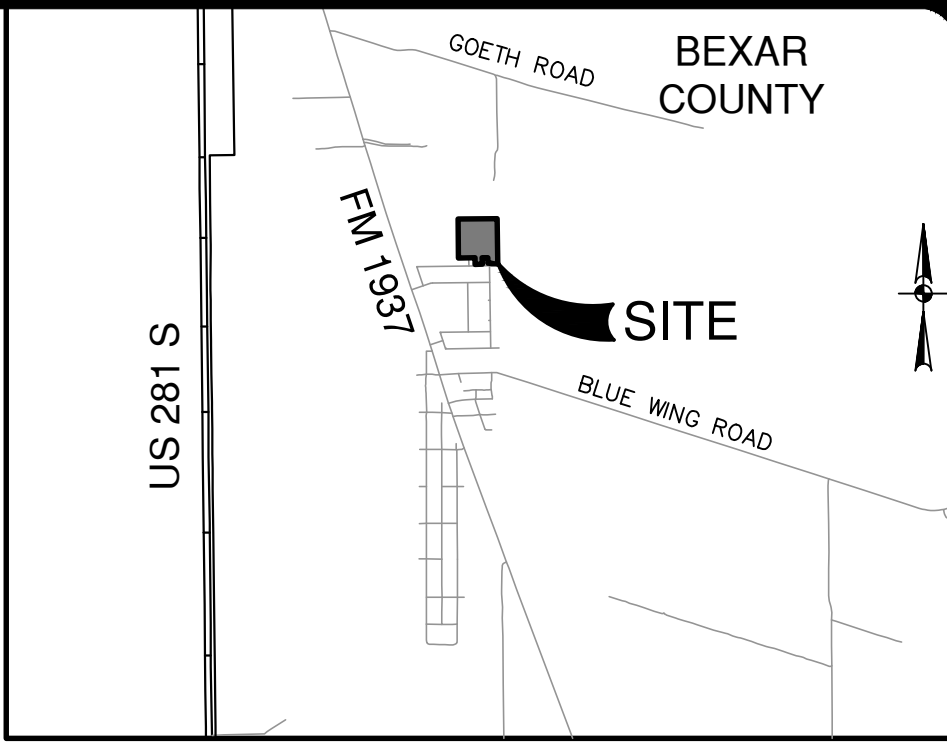
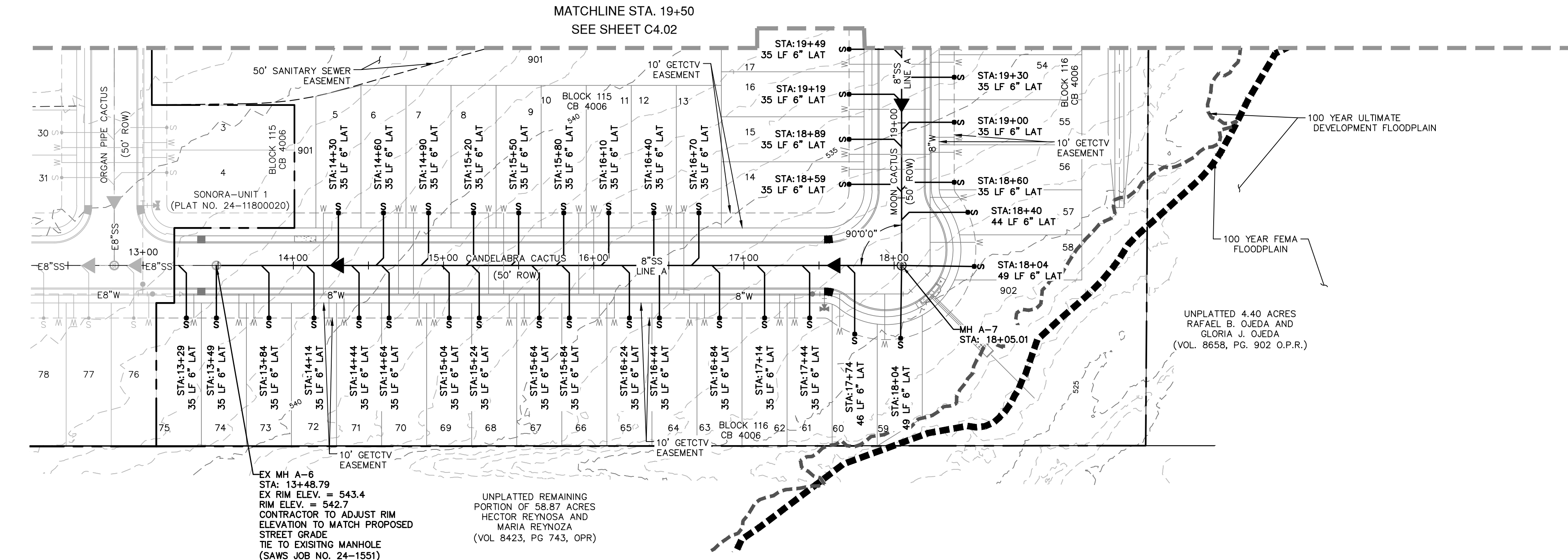
**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**

PLAT NO. 24-11800405  
 JOB NO. 13115-04  
 DATE November 2024  
 DESIGNER SS  
 CHECKED          DRAWN AR  
 SHEET C4.00

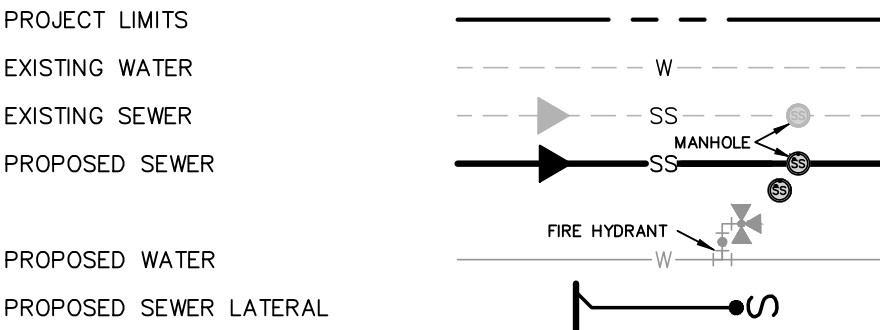


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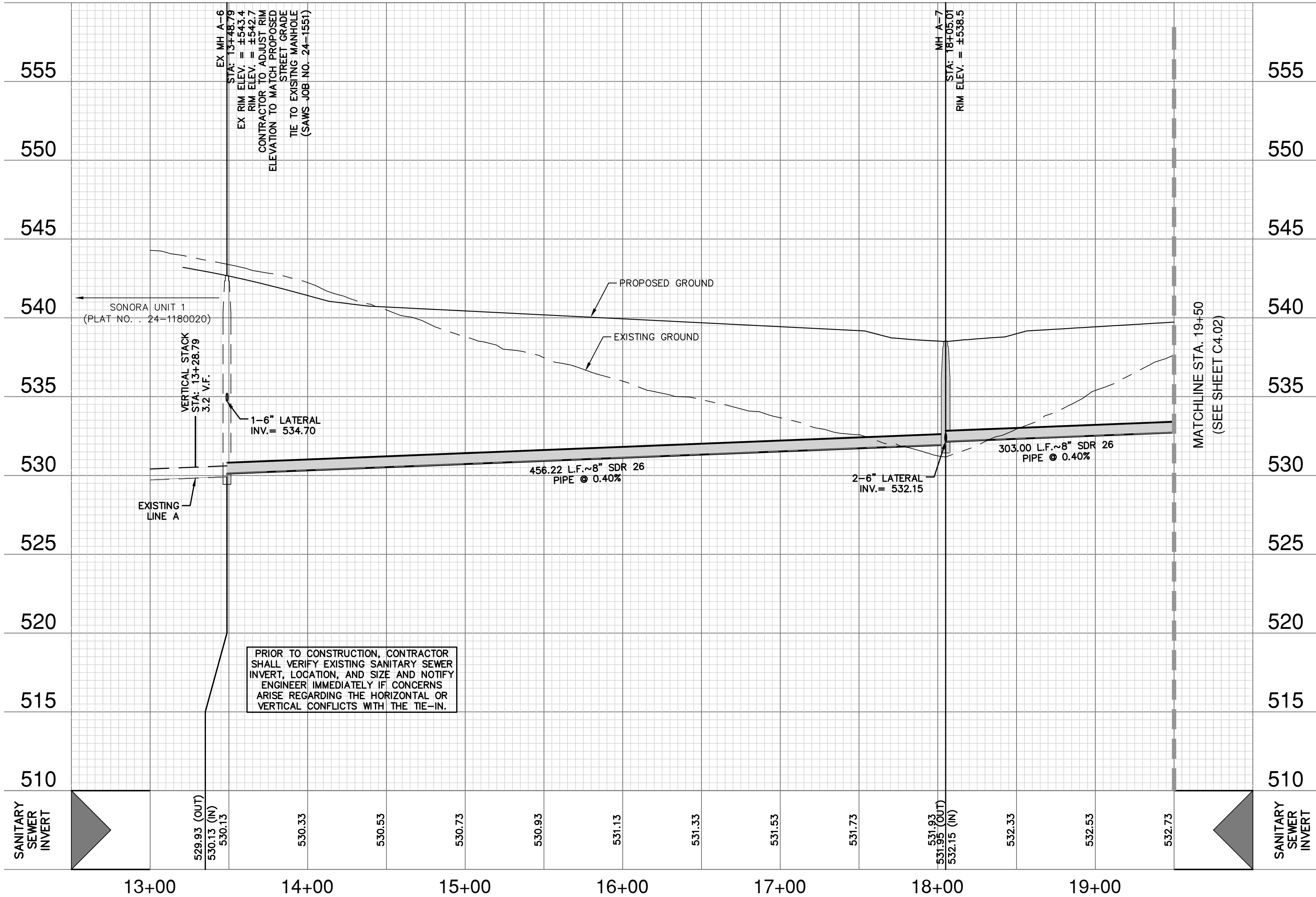


### SEWER LEGEND



SANITARY SEWER LINE "A"  
STA. 13+48.79 TO 19+50.00

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



### 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.

### SANITARY SEWER NOTES

- SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20' JOINT CENTERED AT WATER MAIN.
- NO VERTICAL STACKS SHALL BE ALLOWED
- WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FT. 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.
- ALL SEWER PIPES SHALL BE PVC (SDR 26), UNLESS OTHERWISE NOTED.
- PRIOR TO CONSTRUCTION CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
- CONTOURS SHOWN ARE FOR GRAPHICAL USE ONLY.
- MANHOLE OPENINGS ARE 30" AS PER TCEQ CHAPTER 217.55
- CONTRACTOR TO INSTALL PERMANENT MARKERS AT THE END OF ALL SEWER LATERALS, PER HOUSE LATERAL DETAIL DD-854-01.
- ALL 6" SEWER LATERALS WILL BE SET AT A MINIMUM 2% SLOPE.
- BACKFILL MUST COMPLY WITH SAWS SPECIFICATIONS B04.4.
- TOPS OF EXISTING MANHOLES SHALL BE ADJUSTED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, AND TO BE 0.50 FEET ABOVE FINISHED GROUND ELEVATIONS IN UNPAVED AREAS WITH WATER TIGHT LIDS.

### SEWER: LOWER-CENTRAL SEWERSHED - DOS RIOS WRC

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.			
ADDRESS: 5419 N LOOP 1604 E			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78247	
PHONE# (210) 496-2668	FAX#		
SAWS BLOCK MAP # 172824 TOTAL EDU'S 53 TOTAL ACREAGE 8.01			
TOTAL LINEAR FOOTAGE OF PIPE: 1,144 LF PLAT NO. 24-11800405			
NUMBER OF LOTS 53 SAWS JOB NO. 24-1628			

NO.	REVISION	DATE

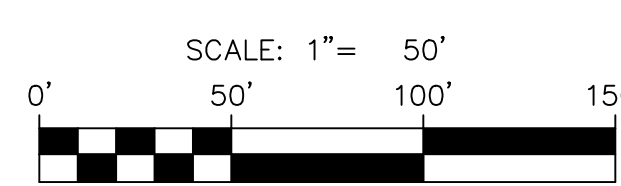
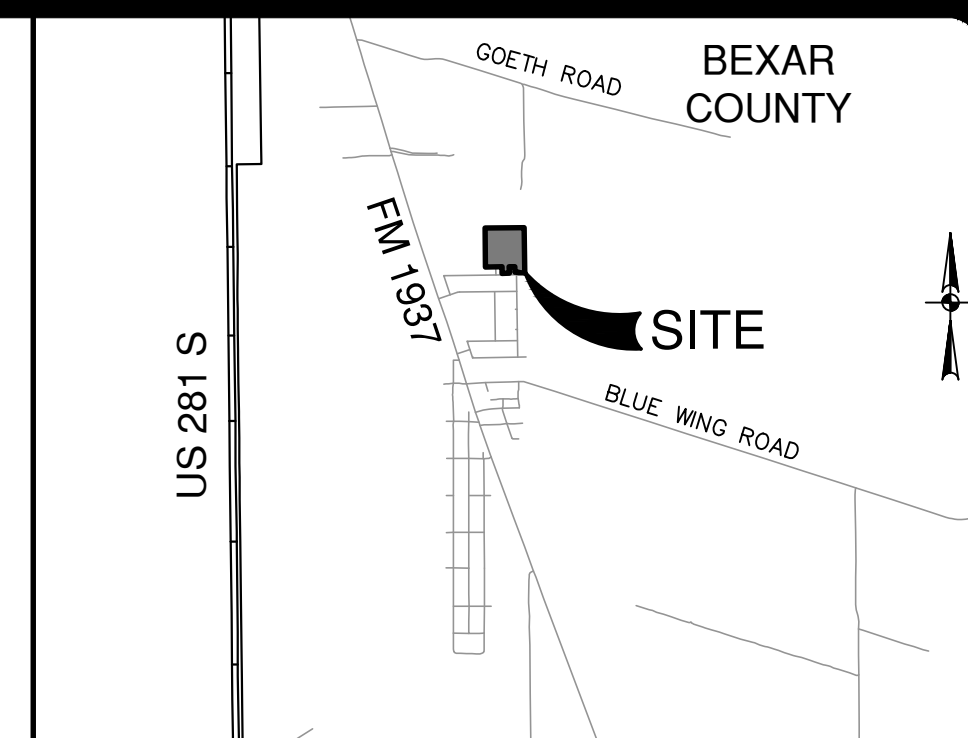


**PAPE-DAWSON  
ENGINEERS**  
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000  
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS  
SANITARY SEWER LINE A  
PLAN AND PROFILE (STA 13+00.00 TO 19+50.00)

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	November 2024
DESIGNER	SS
CHECKED	DRAWN AR
SHEET	C4.01





PROJECT LIMITS

EXISTING WATER

EXISTING SEWER

PROPOSED SEWER

PROPOSED WATER

PROPOSED SEWER LATERAL

W

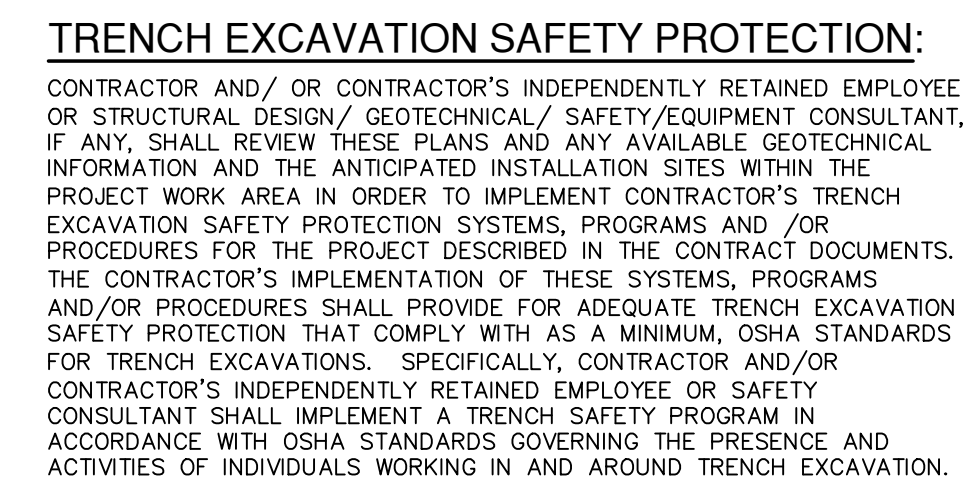
SS

SS

MANHOLE

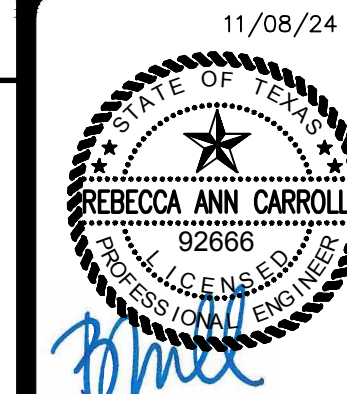
FIRE HYDRANT

W



1. SEWER PIPE WHERE WATER LINE CROSSES SHALL BE 160 P.S.I. AND MEET THE REQUIREMENTS OF ASTM D2241 WITH ONE 20" JOINT CENTERED AT WATER MAIN.
2. NO VERTICAL STACKS SHALL BE ALLOWED
3. WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 10 FT. OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 160 PSI (MIN) PRESSURE RATED PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
4. ALL SEWER PIPES SHALL BE PVC (SDR 26), UNLESS OTHERWISE NOTED.
5. PRIOR TO CONSTRUCTION CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
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DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.  
ADDRESS: 5419 N LOOP 1604 E  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247  
PHONE# (210) 496- 2668 FAX#  
SAWS BLOCK MAP# 172254 TOTAL EDU'S 53 TOTAL ACREAGE 8.01  
TOTAL LINEAR FOOTAGE OF PIPE: 1,144 LF PLAT NO. 24-11800  
NUMBER OF LOTS 53 SAWS JOB NO. 24-1628

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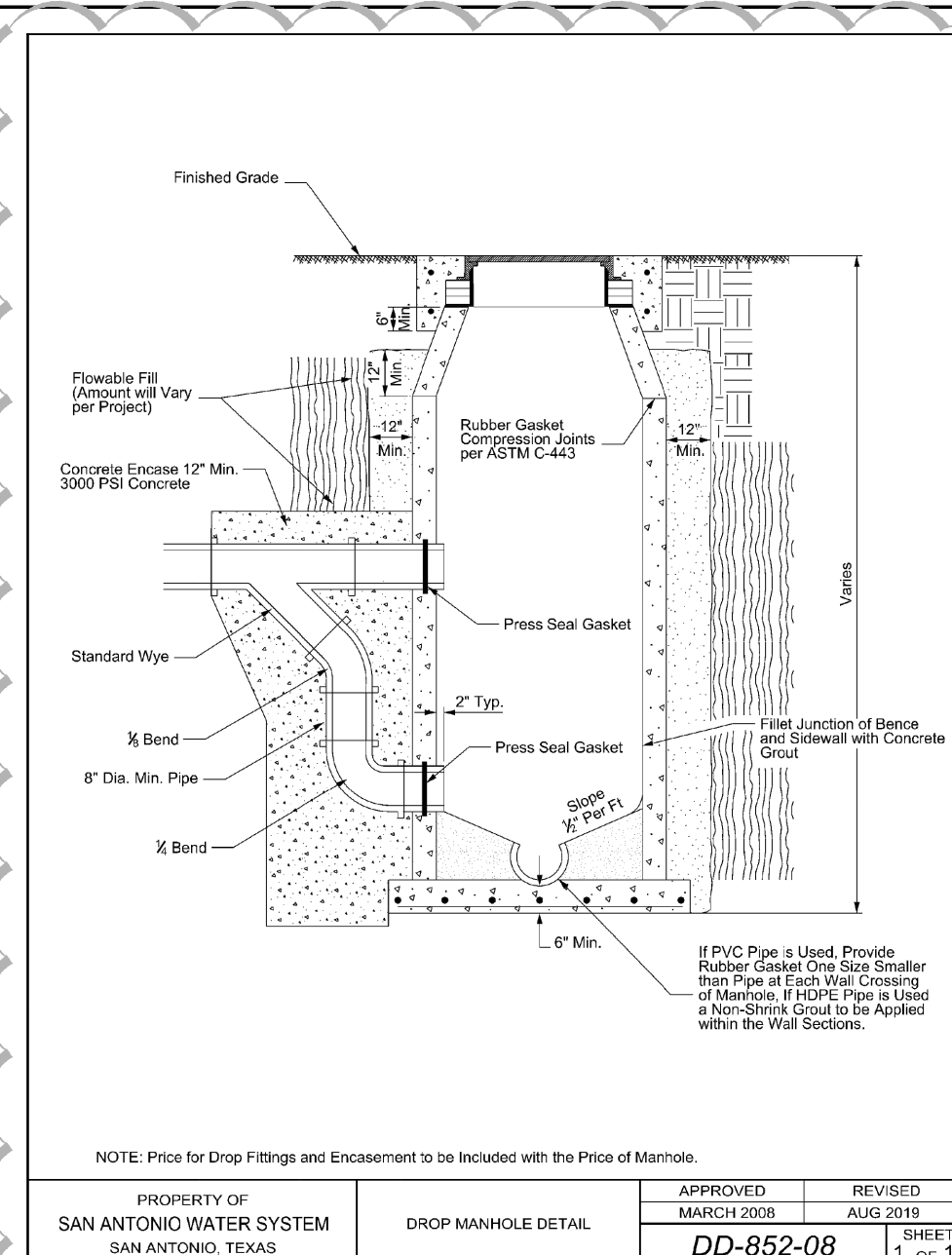
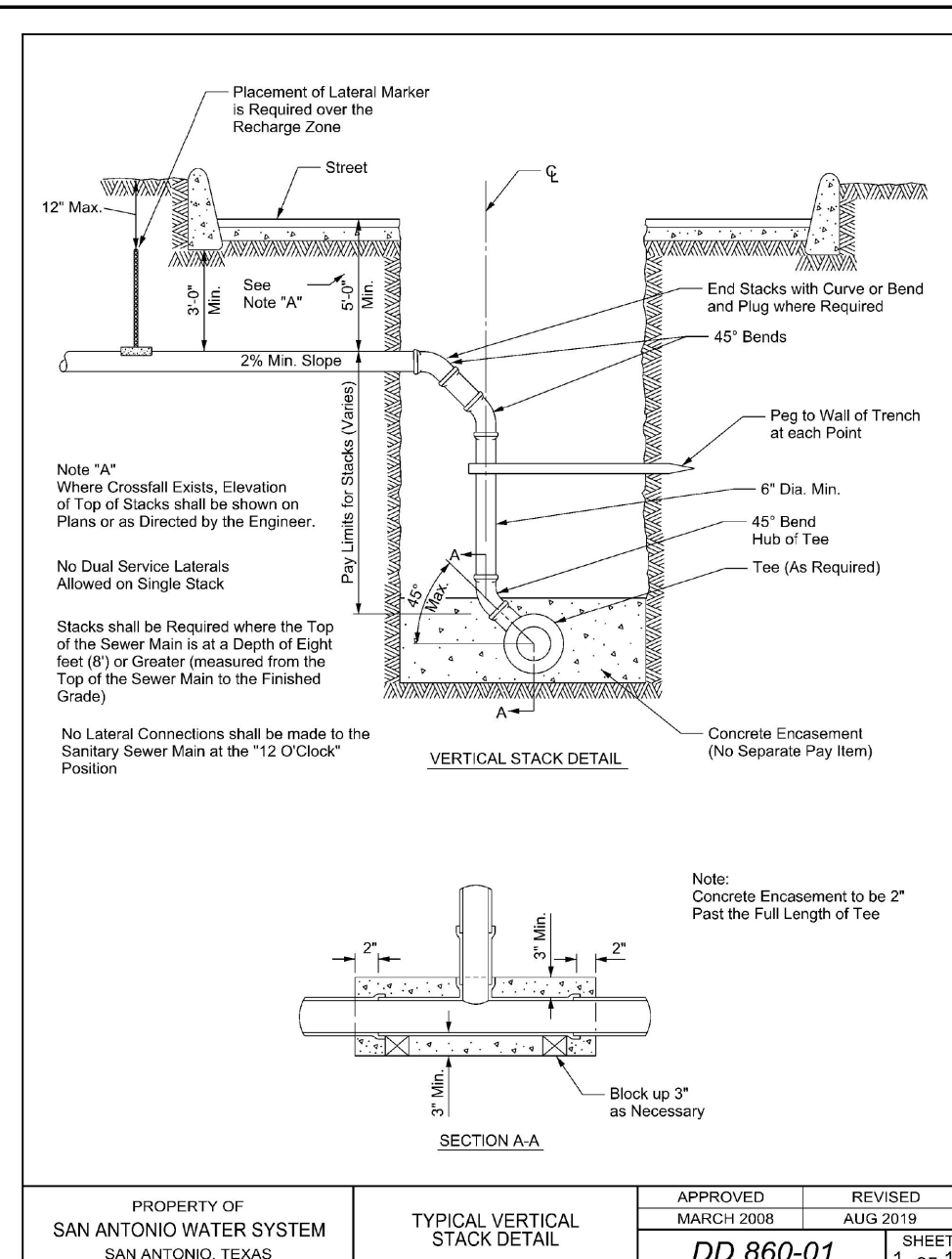
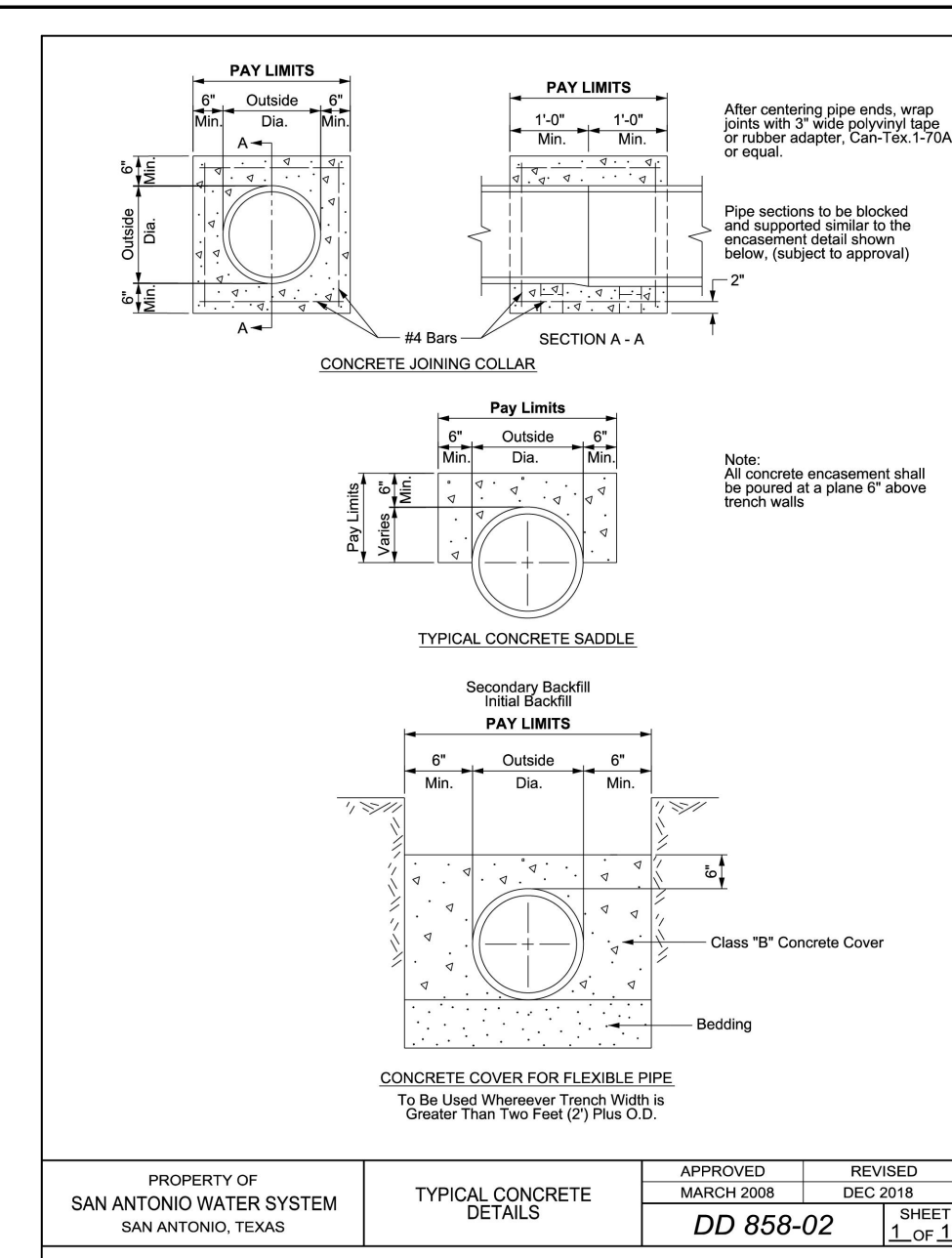
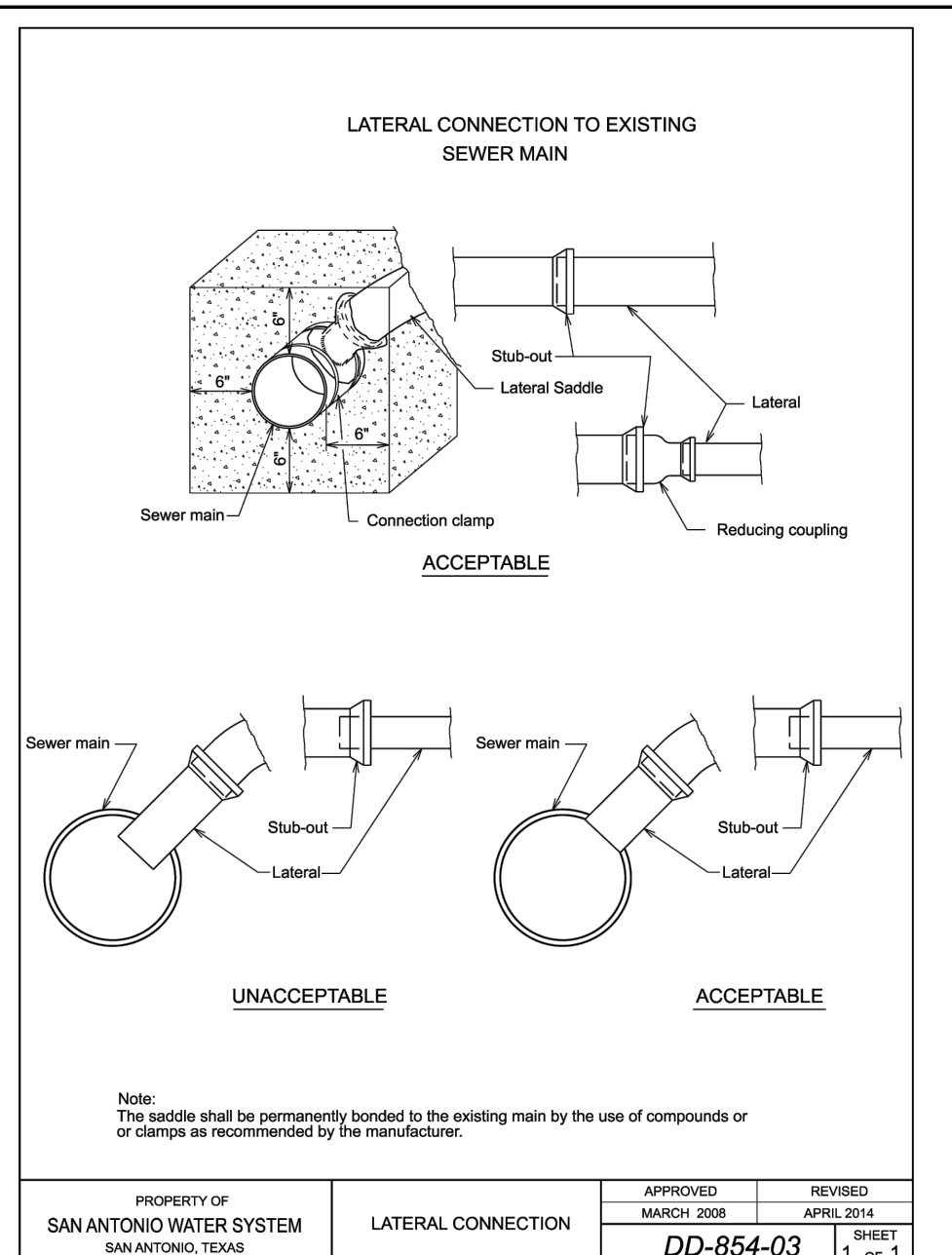
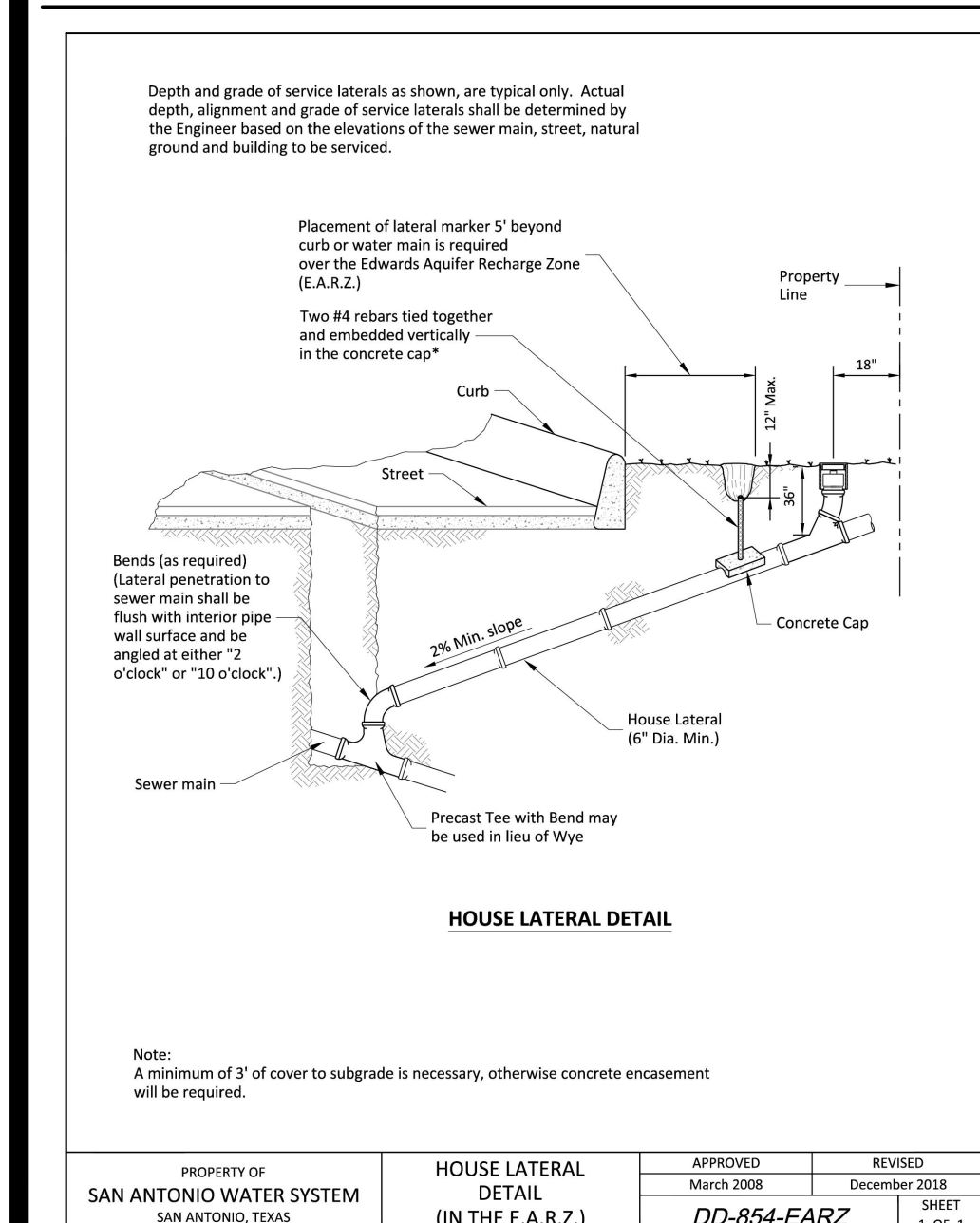
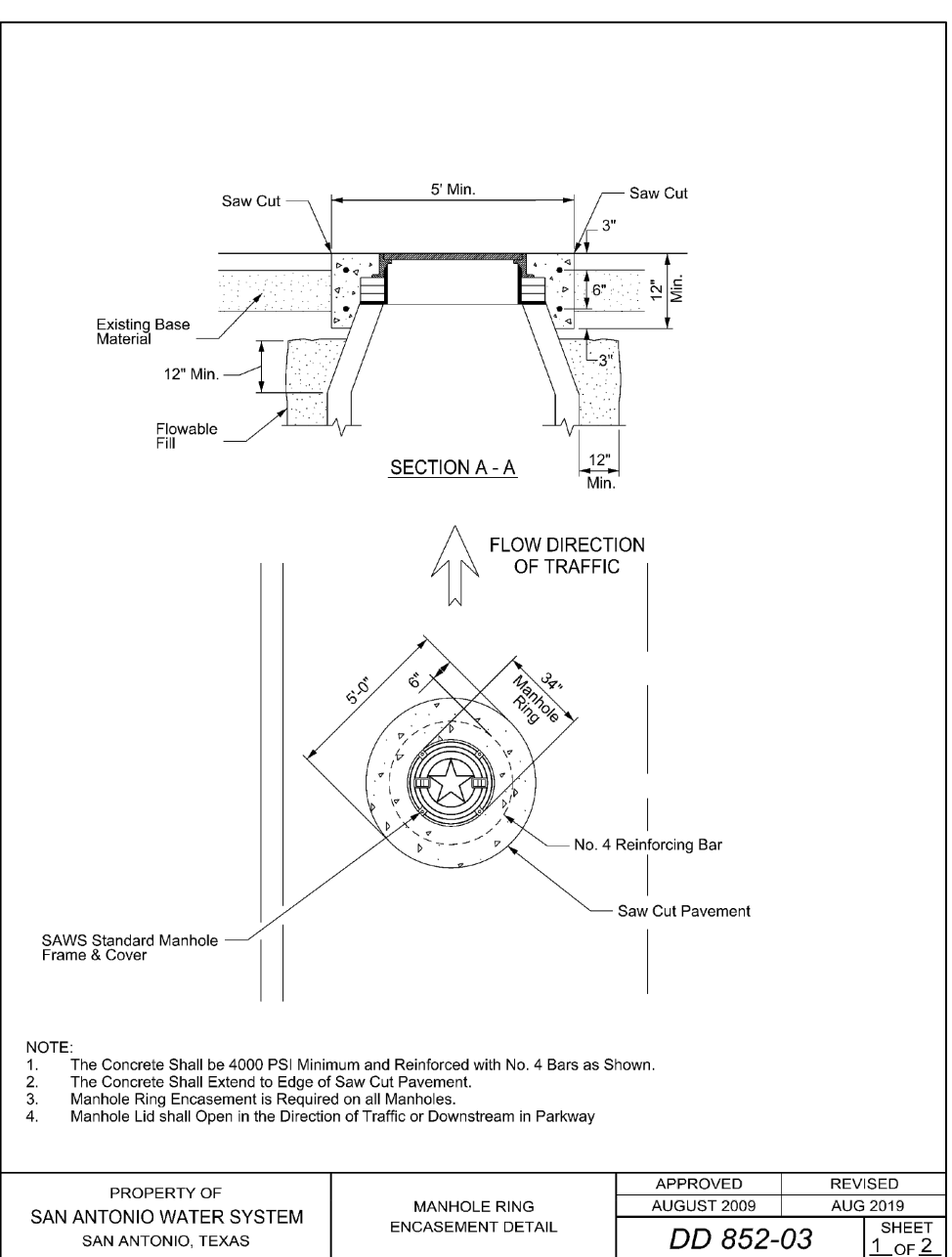
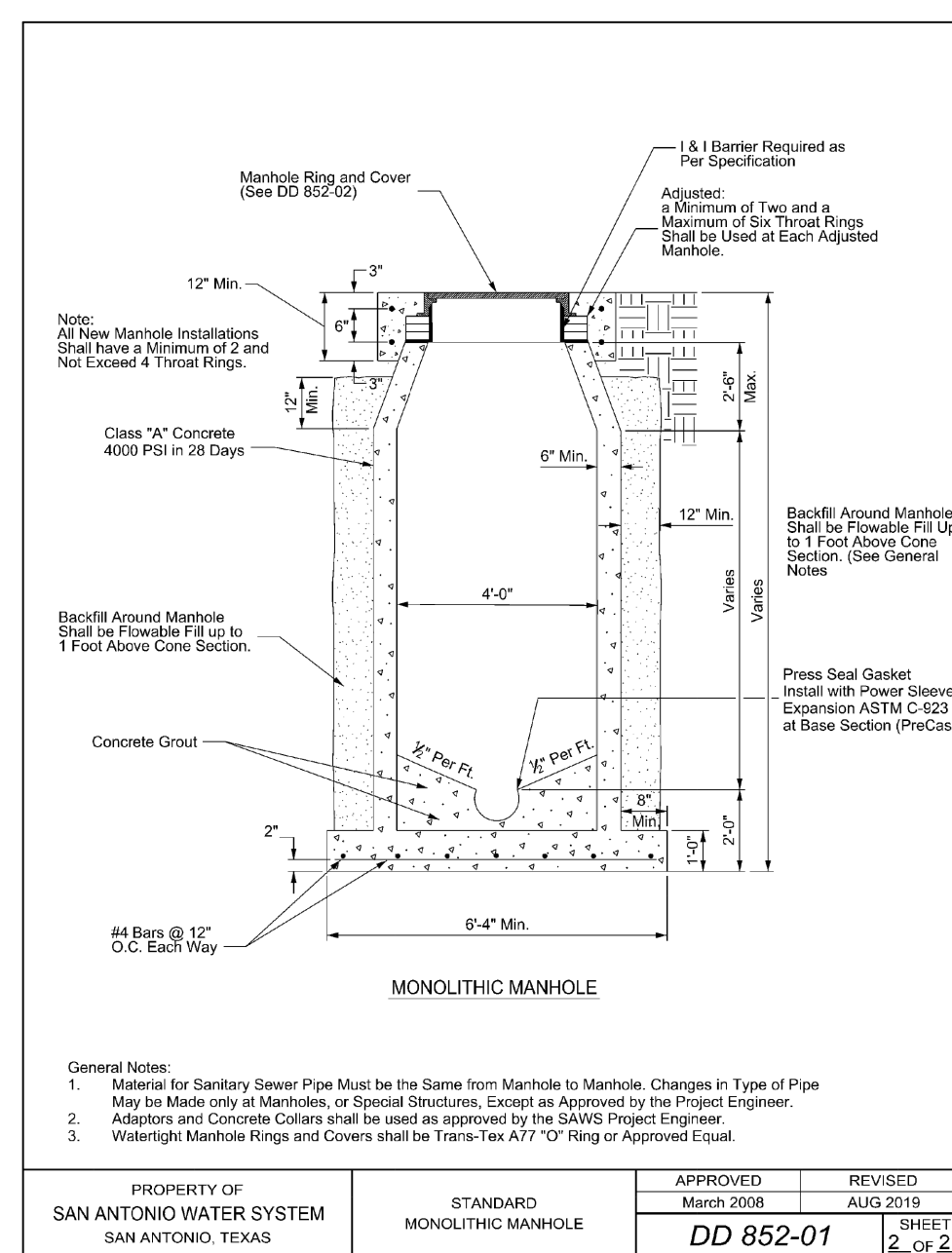
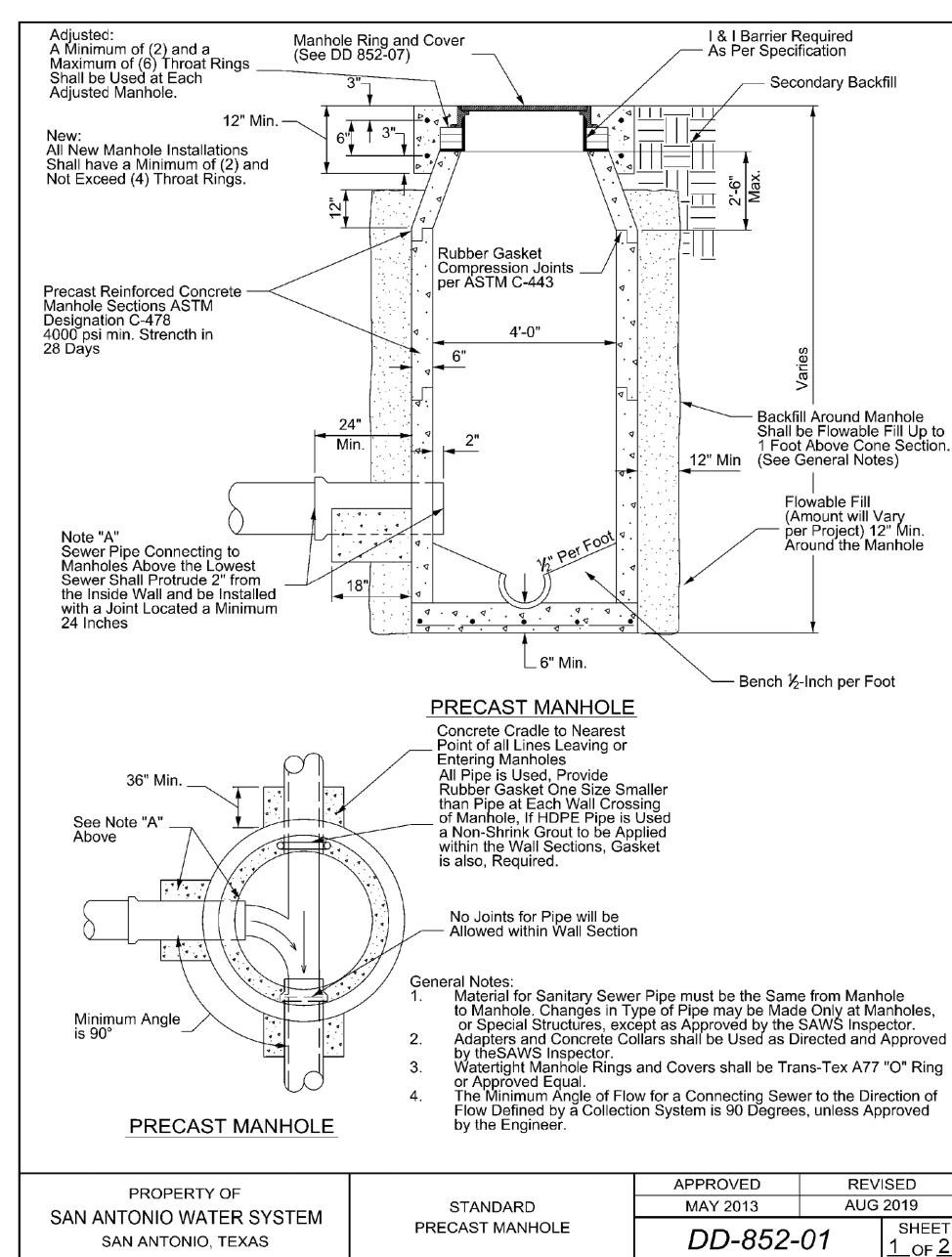
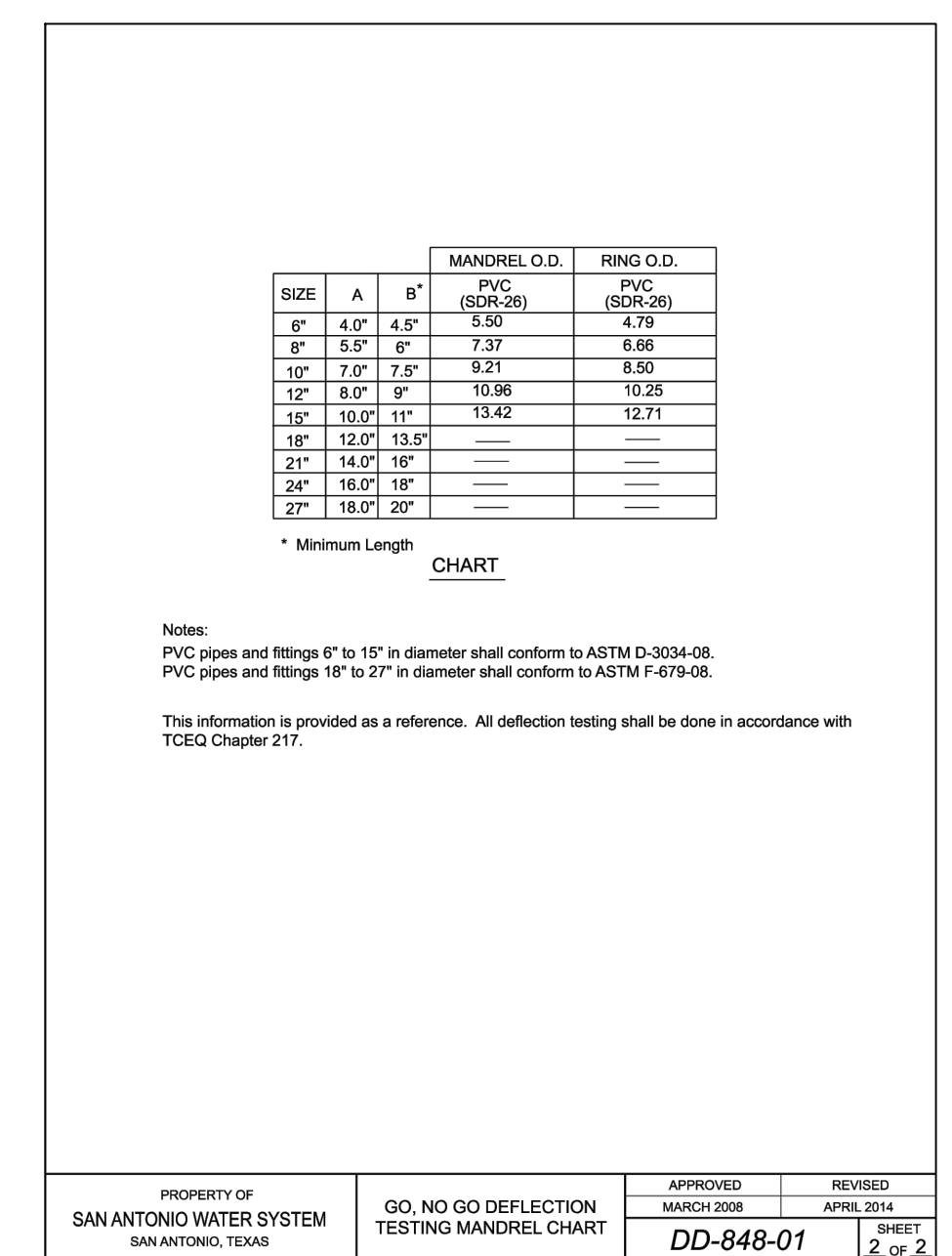
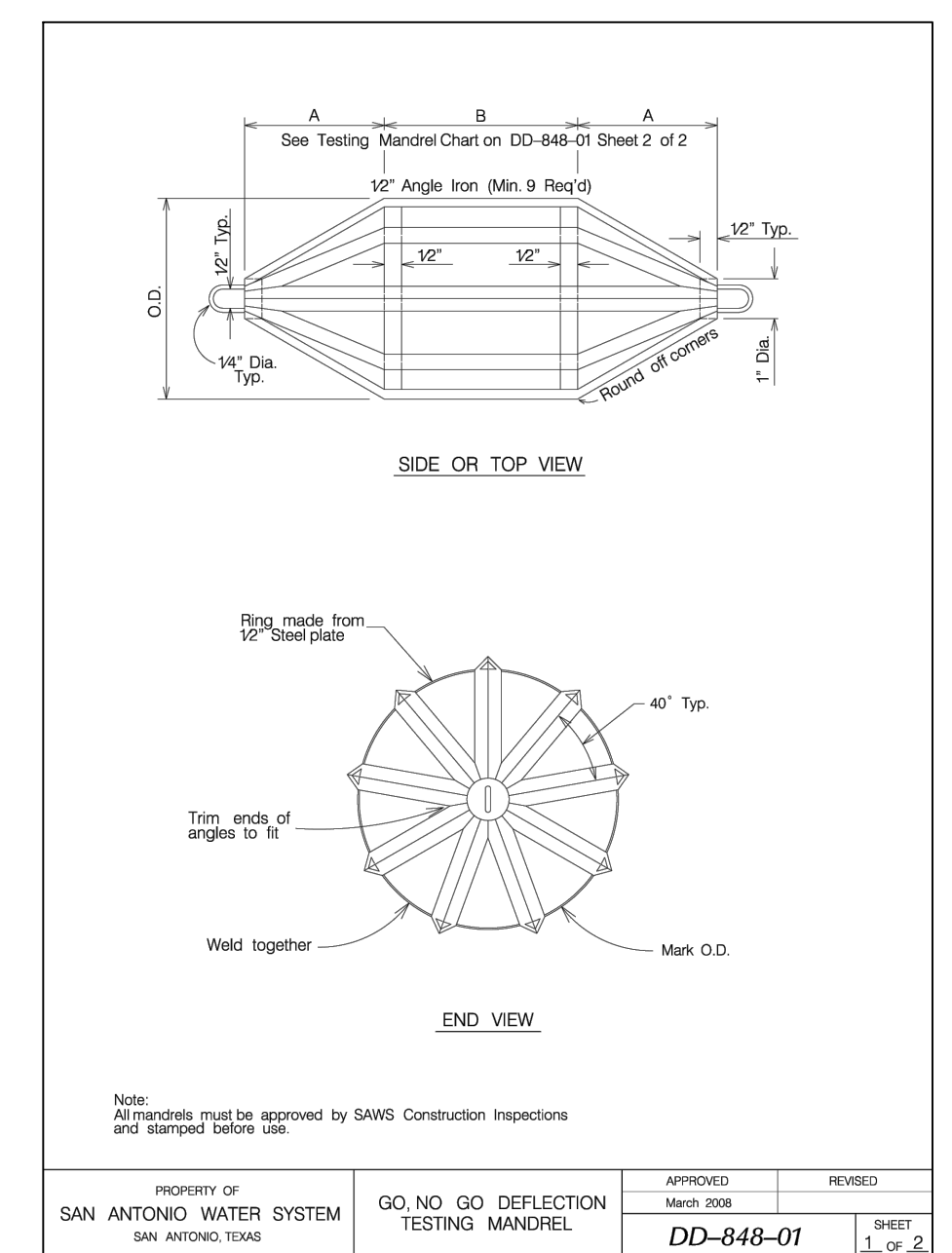
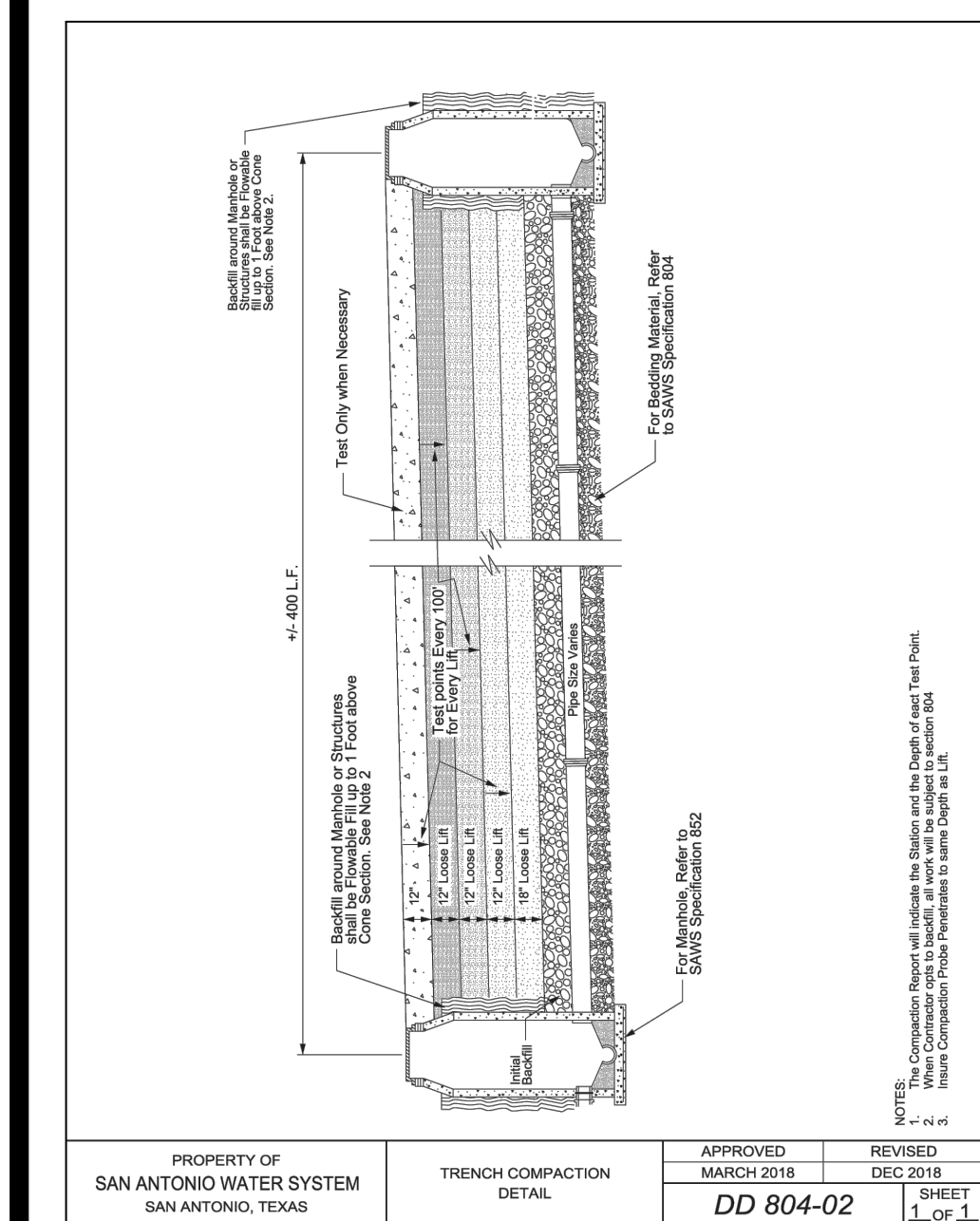
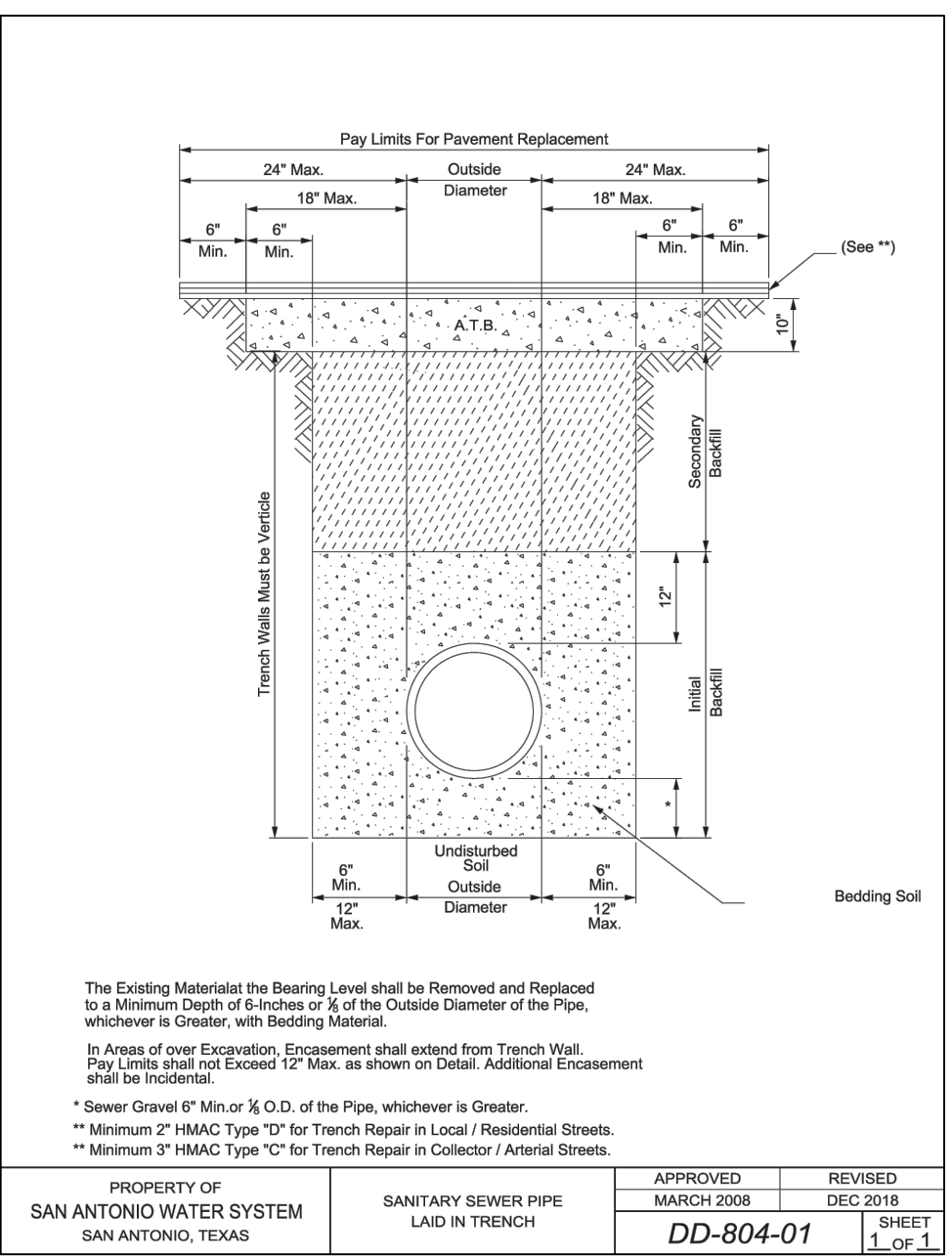
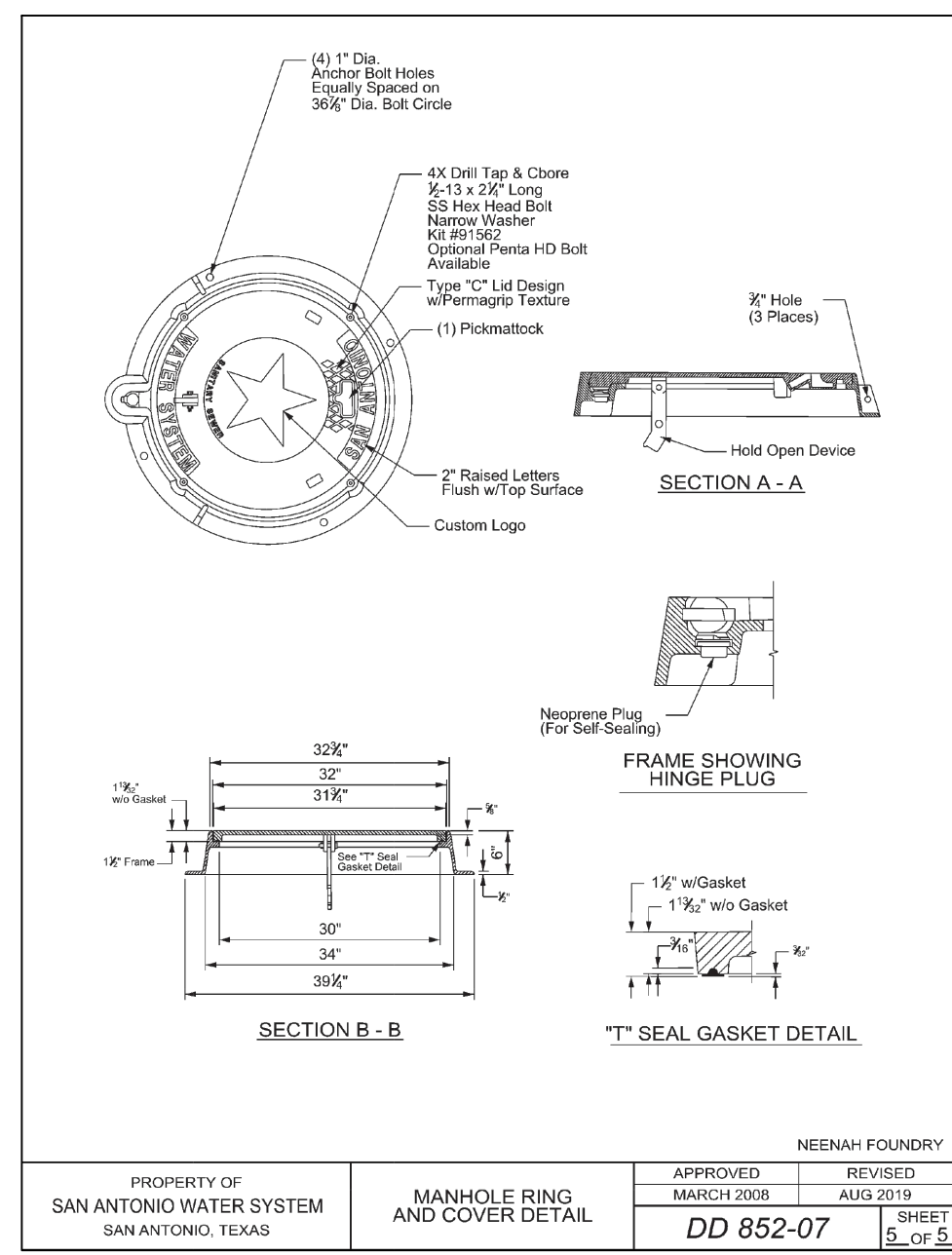
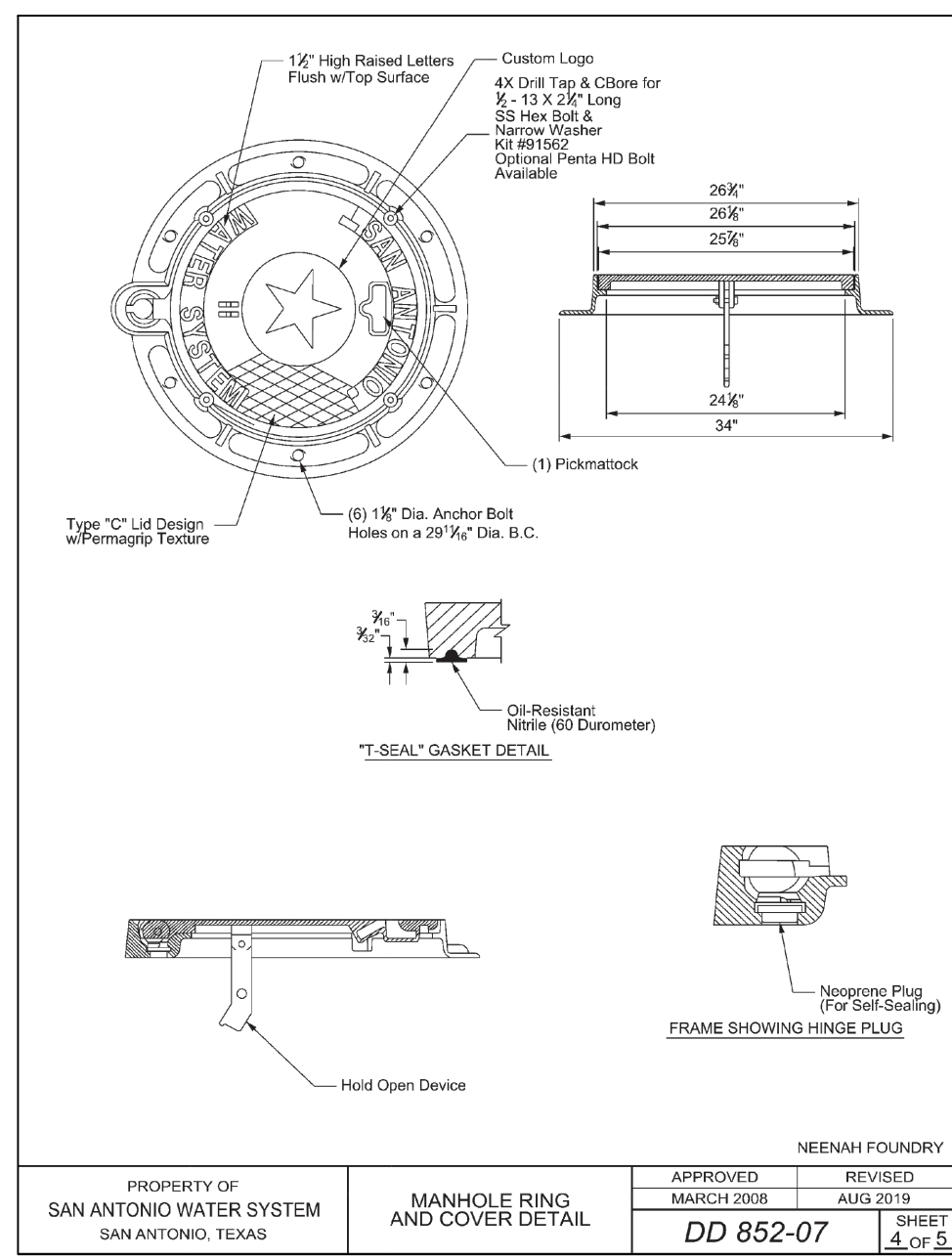
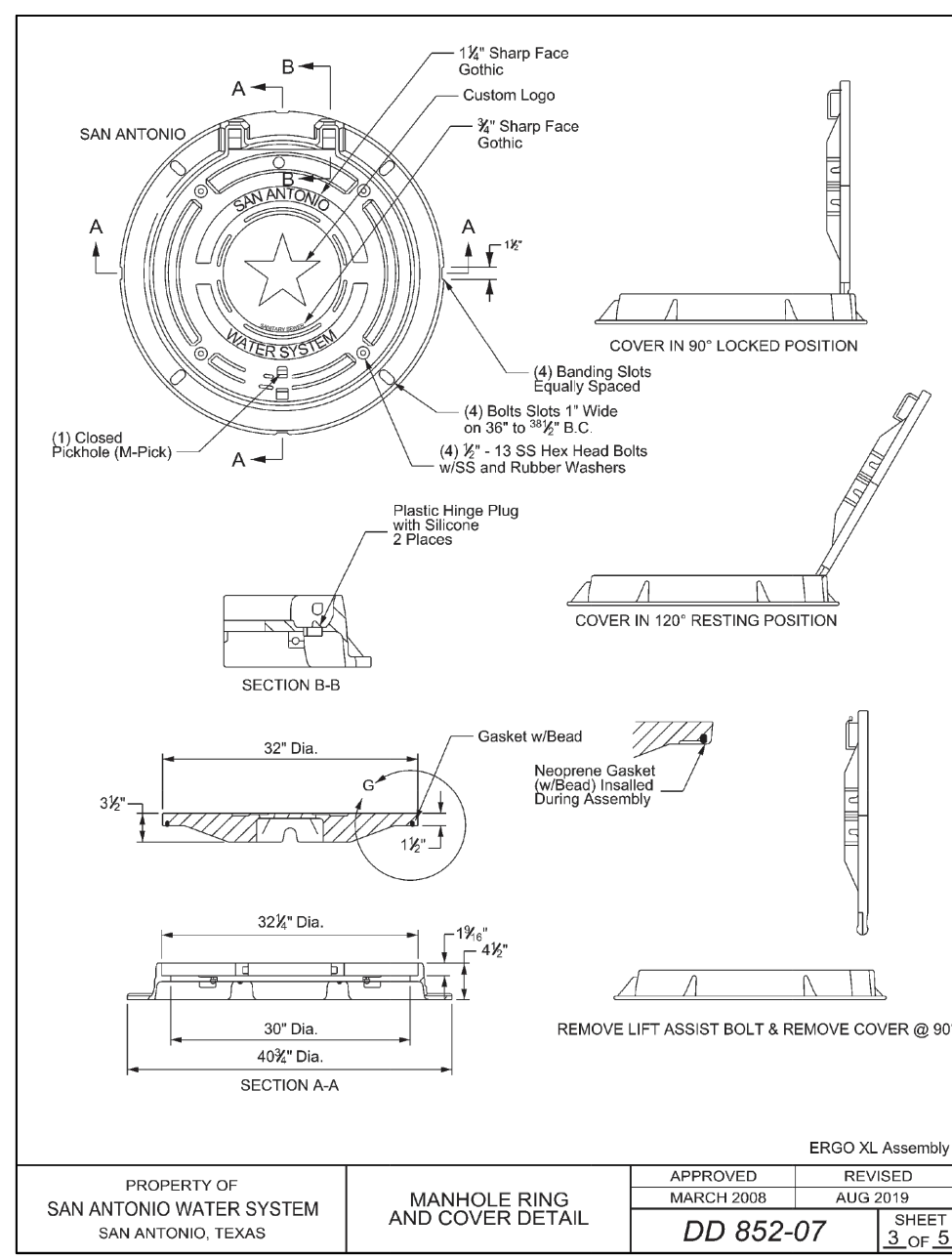
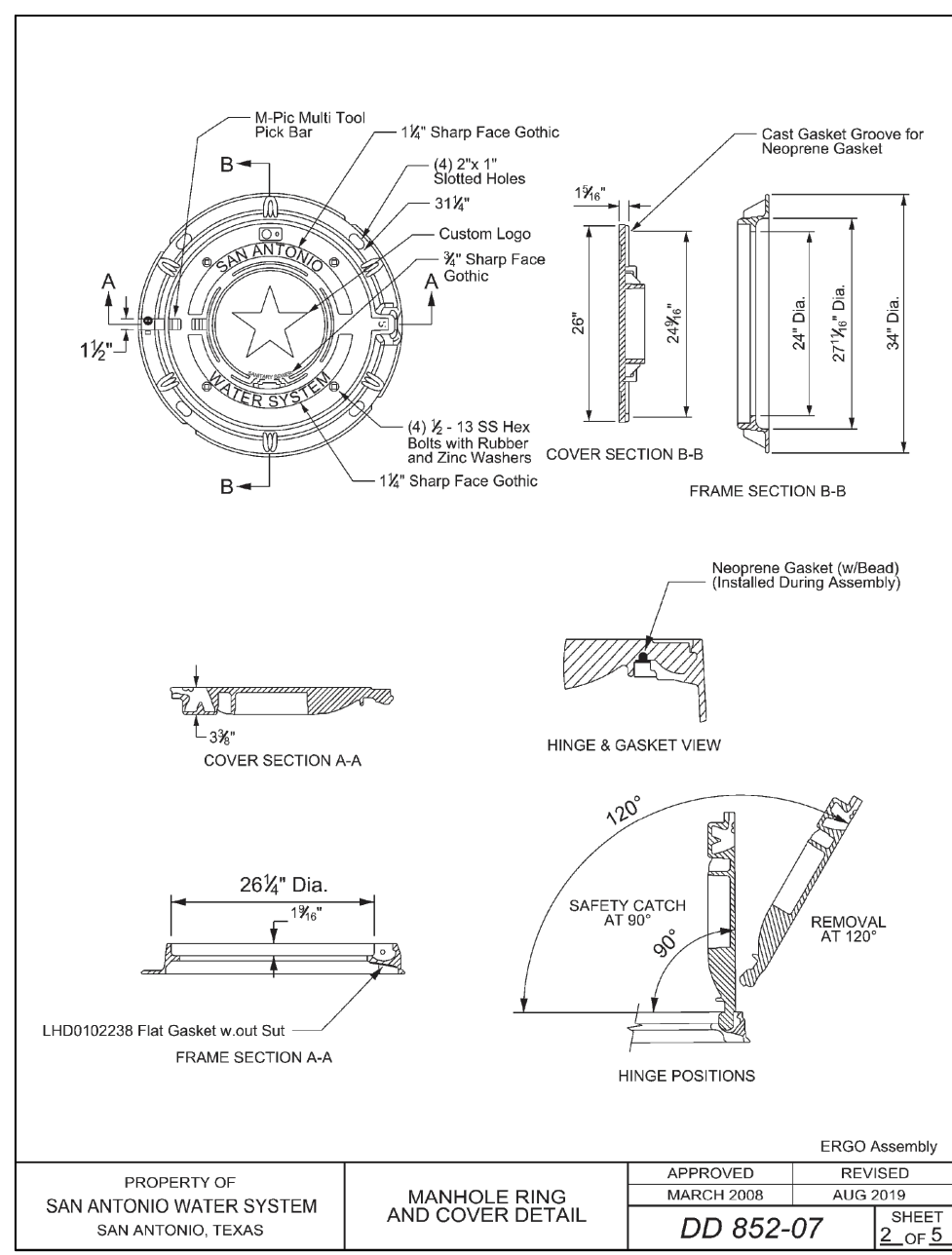
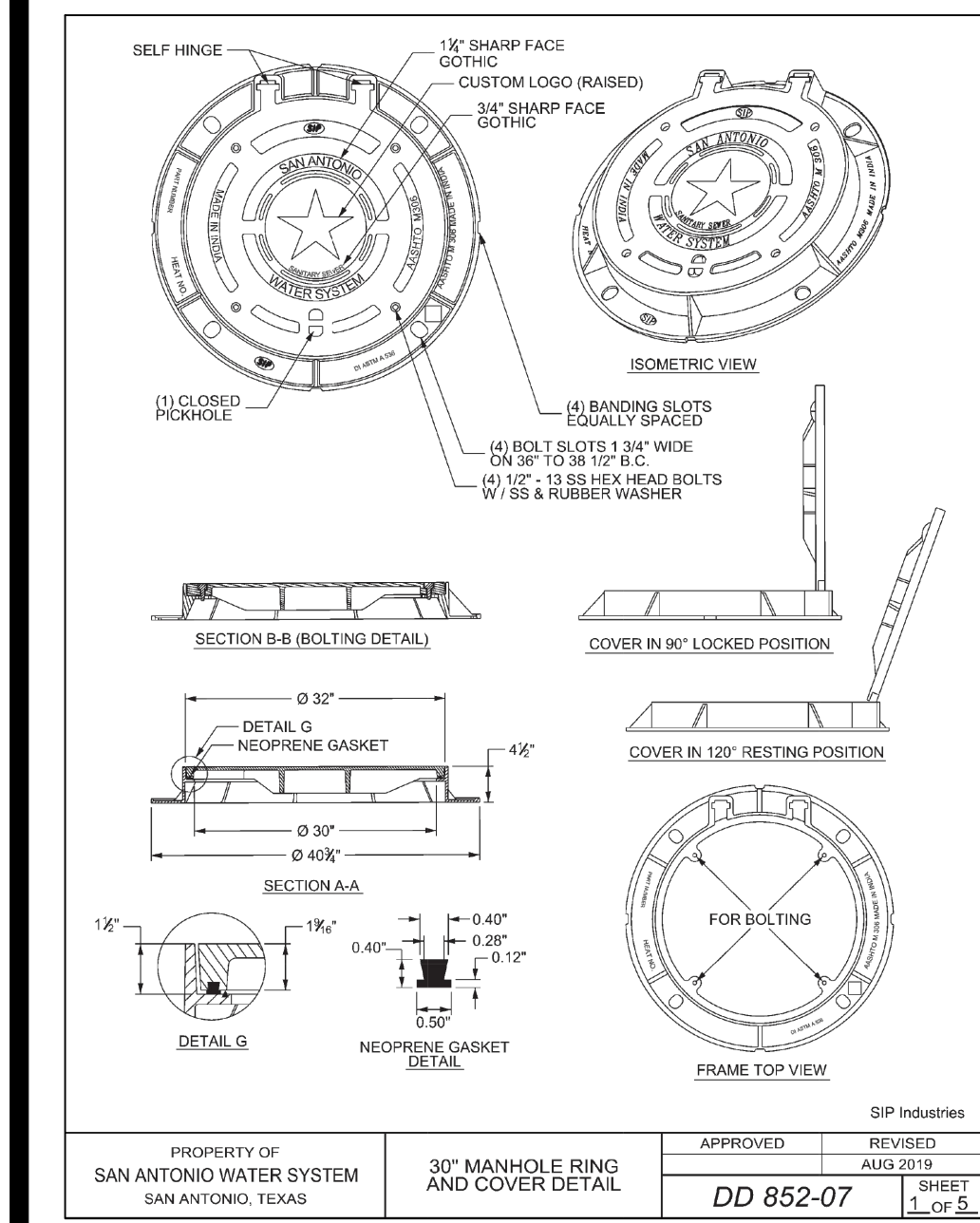
**PAPE-DAWSON  
ENGINEERS**

**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**

PLAT NO. 24-118004  
JOB NO. 13115-04  
DATE November 2024  
DESIGNER SS  
CHECKED          DRAWN           
SHEET          **C4.02**



Date: May 20, 2024, 8:50 AM - User ID: orodriguez  
File: P:\31\15\04\Design\Civil\SDT131504.dwg



SEWER:  
LOWER-CENTRAL SEWERSHED - DOS RIOS WRC

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.

ADDRESS: 5419 N LOOP 1604 F

CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247

PHONE# (210) 496-2668 FAX#

SAWS BLOCK MAP# 17294 TOTAL EDU'S .53 TOTAL ACREAGE 8.01

TOTAL LINEAR FOOTAGE OF PIPE: 1,144 LF PLAT NO. 24-11800405

NUMBER OF LOTS .53 SAWS JOB NO. 24-1628

NO. 11/08/24

REVISION

1. UPDATED MANHOLE DETAIL

11/08/24

STATE OF TEXAS

REBECCA ANN CARROLL

92666

REGISTERED PROFESSIONAL ENGINEER

Bme

24-11800405

JOB NO. 13115-04

DATE November 2024

DRAWN AR

C4.10

SONORA-UNIT 3

BEXAR COUNTY, TEXAS

SANITARY SEWER DETAILS



Date: May 20, 2024, 8:50 AM -- User ID: orodriguez  
File: P:\31\15\04\Design\Civil\SNDT1311504.dwg

SAWS CONSTRUCTION NOTES  
(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

1. 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).
2. 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.
3. 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.
4. THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION AT (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.
5. 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.
6. 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
7. 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.
8. 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.
9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO [CONSTWORKREQ@SAWS.ORG](mailto: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](mailto:CONSTWORKREQ@SAWS.ORG).  
  
ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
12. 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.
13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS SEWER NOTES

1. 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.
2. 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".
3. 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.
4. 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.
5. 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)
6. 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.
7. 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.
8. ALL PVC PIPE OVER 14 FEET OF COVER SHALL BE EXTRA STRENGTH WITH MINIMUM PIPE STIFFNESS OF 115 PSI.

PROJECT SEWER NOTES

1. 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.
2. CONTRACTOR TO INSTALL CLEANOUTS AT THE END OF ALL SEWER LATERALS, PER LATERAL DETAIL SHEET C5.10.
3. NO VERTICAL STACKS ALLOWED FOR ANY LOTS UNLESS OTHERWISE SPECIFIED BY THE ENGINEER.
4. ALL 6" SEWER LATERALS WILL BE SET AT 2% GRADE FROM THE MAIN TO THE PROPERTY LINE.
5. WHEN HORIZONTAL DISTANCE BETWEEN SEWER PIPES AND WATER MAIN IS LESS THAN 9 FOOT OF SEPARATION, SEWER MAIN SHALL BE INSTALLED WITH 150 PSI (MIN) PRESSURE PIPE AND FITTINGS IN ACCORDANCE WITH SAWS CONSTRUCTION CRITERIA FOR CONSTRUCTION OF SEWER MAINS IN THE VICINITY OF WATER MAINS.
6. CONTRACTOR SHALL ENSURE THAT MANHOLES OUTSIDE OF PAVED AREAS ARE SET WITH TOP ELEVATIONS 6" ABOVE FINISHED GRADE WITH CONCRETE RING ENCASEMENT.
7. ALL SEWER PIPES SHALL BE 8" PVC (SDR 26), UNLESS OTHERWISE NOTED.
8. CONTRACTOR IS TO VERIFY EXISTING INVERT OF EXISTING SANITARY SEWER MAINS AND ALERT ENGINEER IMMEDIATELY OF ANY DIFFERENCE FROM INVERT SHOWN ON PLANS.
9. CONTRACTOR SHALL PROTECT ALL EXISTING FENCES. ANY FENCE DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT THEIR EXPENSE.
10. 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.
11. 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.
12. MANHOLE OPENING INCREASED TO 30" AS PER TAC CHAPTER 217.55.
13. ALL SEWER PIPE LATERALS SHALL BE SDR 26 (CLASS 160) PVC PIPE.
14. 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.
15. ALL MANHOLES CONSTRUCTED OVER THE EDWARDS AQUIFER RECHARGE ZONE SHOULD BE WATERTIGHT.

SEWER:  
LOWER-CENTRAL SEWERSHED - DOS RIOS WRC


DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.			
ADDRESS: 5419 N LOOP 1604 E			
CITY: SAN ANTONIO	STATE: TEXAS	ZIP: 78247	
PHONE# (210) 496-2668	FAX#		
SAWS BLOCK MAP # 172824 TOTAL EDU'S 53 TOTAL ACREAGE 8.01			
TOTAL LINEAR FOOTAGE OF PIPE: 1,144 LF PLAT NO. 24-11800405			
NUMBER OF LOTS 53		SAWS JOB NO. 24-1628	

DATE

NO.

REVISION

11/08/24



PAPE-DAWSON  
ENGINEERS

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

SONORA-UNIT 3  
BEXAR COUNTY, TEXAS

SANITARY SEWER NOTES

PLAT NO. 24-11800405

JOB NO. 13115-04

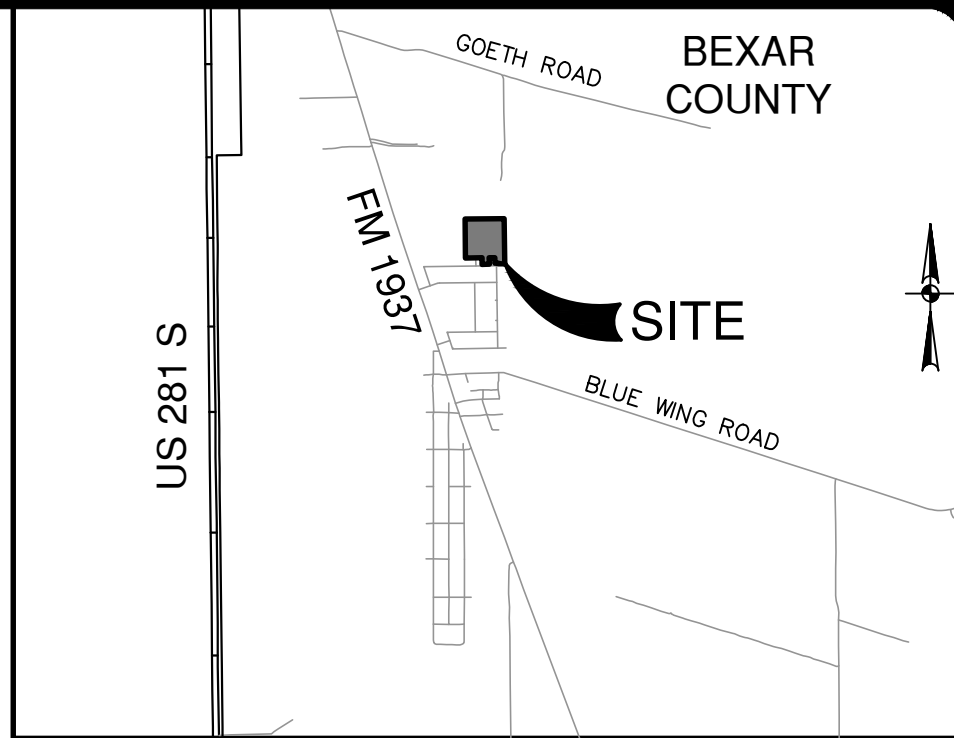
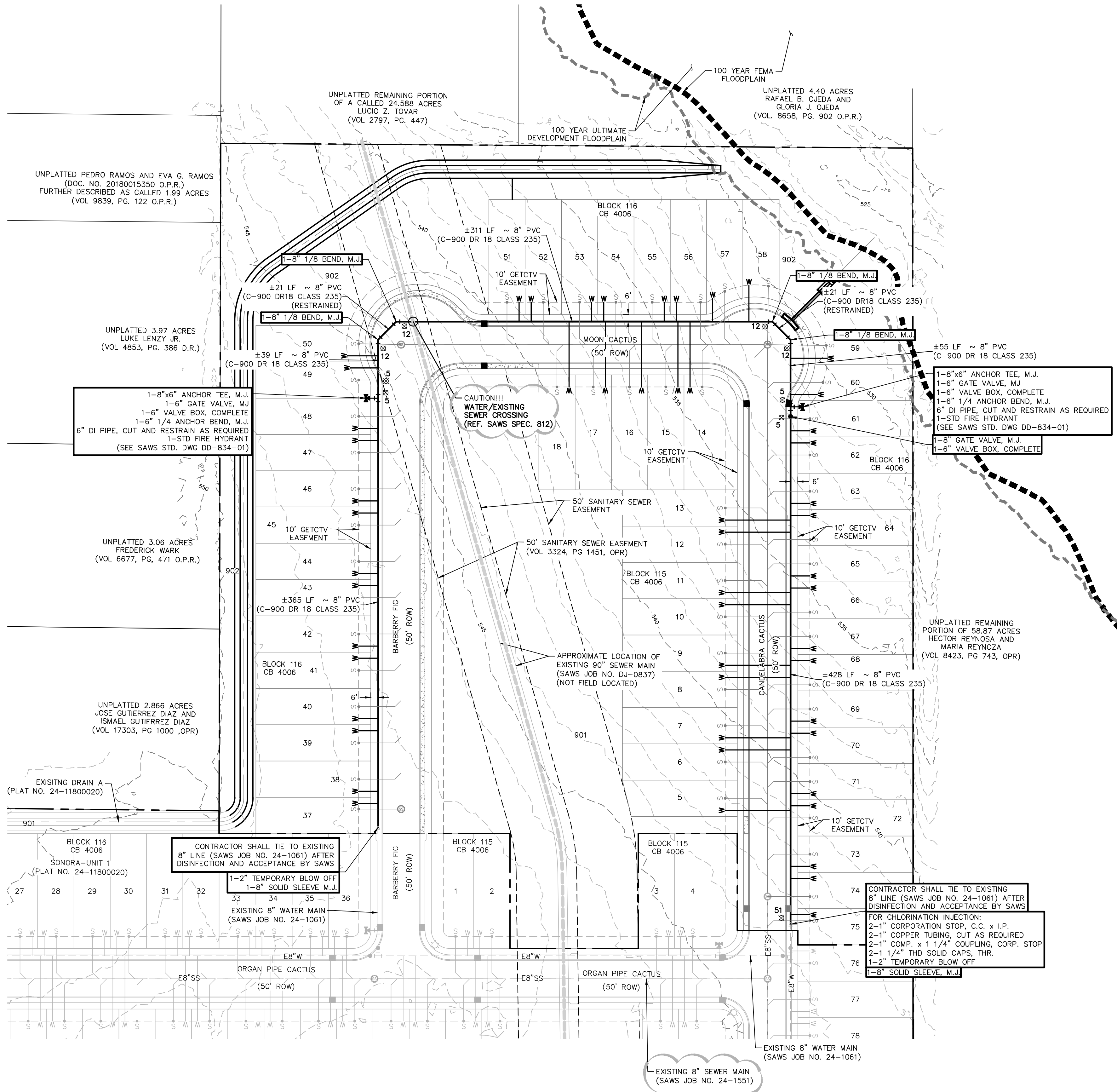
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DESIGNER SS

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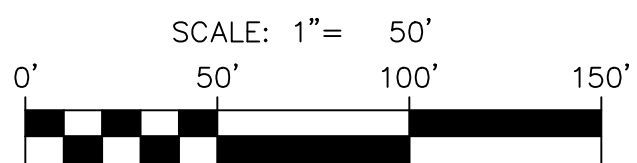
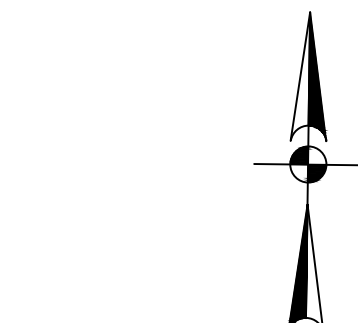
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LOCATION MAP

NOT-TO-SCALE



### WATER LEGEND

PROJECT LIMITS	
EXISTING WATER	
EXISTING SEWER	
PROPOSED SEWER	
PROPOSED WATER	
PROPOSED 3/4" SINGLE SERVICE WITH 5/8" METER	
JOINT RESTRAINT	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	

### RESIDENTIAL FIRE FLOW:

THE PUBLIC WATER MAIN SYSTEM HAS BEEN DESIGNED FOR A MINIMUM FIRE FLOW DEMAND OF **1000** GPM AT 25 PSI RESIDUAL PRESSURE TO MEET THE CITY OF SAN ANTONIO'S FIRE FLOW REQUIREMENTS FOR THE RESIDENTIAL DEVELOPMENT. THE FIRE FLOW REQUIREMENTS FOR INDIVIDUAL STRUCTURES WILL BE REVIEWED PRIOR TO BUILDING PERMIT APPROVAL IN ACCORDANCE WITH THE PROCEDURES SET FORTH BY THE CITY OF SAN ANTONIO DIRECTOR OF DEVELOPMENT SERVICES AND THE SAN ANTONIO FIRE DEPARTMENT FIRE MARSHAL.

### 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.

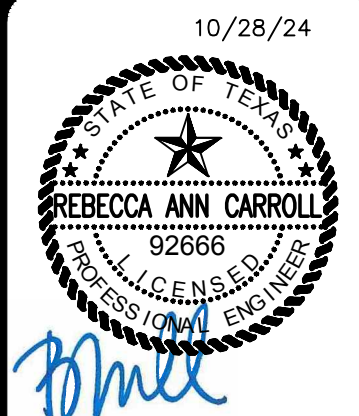
### CAUTION!!!

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.

### WATER (SAWS PRESSURE ZONE 750)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.
ADDRESS: 5419 N LOOP 1604 E
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247
PHONE# (210) 496-2668 FAX#
SAWS BLOCK MAP# 172924 TOTAL EDU'S 53 TOTAL ACREAGE 8.01
TOTAL LINEAR FOOTAGE OF PIPE: 1240 ~ 8\"/>
NUMBER OF LOTS 53 SAWS JOB NO. 24-1158

NO.	REVISION	DATE
1.	REVISED LABELS	10/28/24



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

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

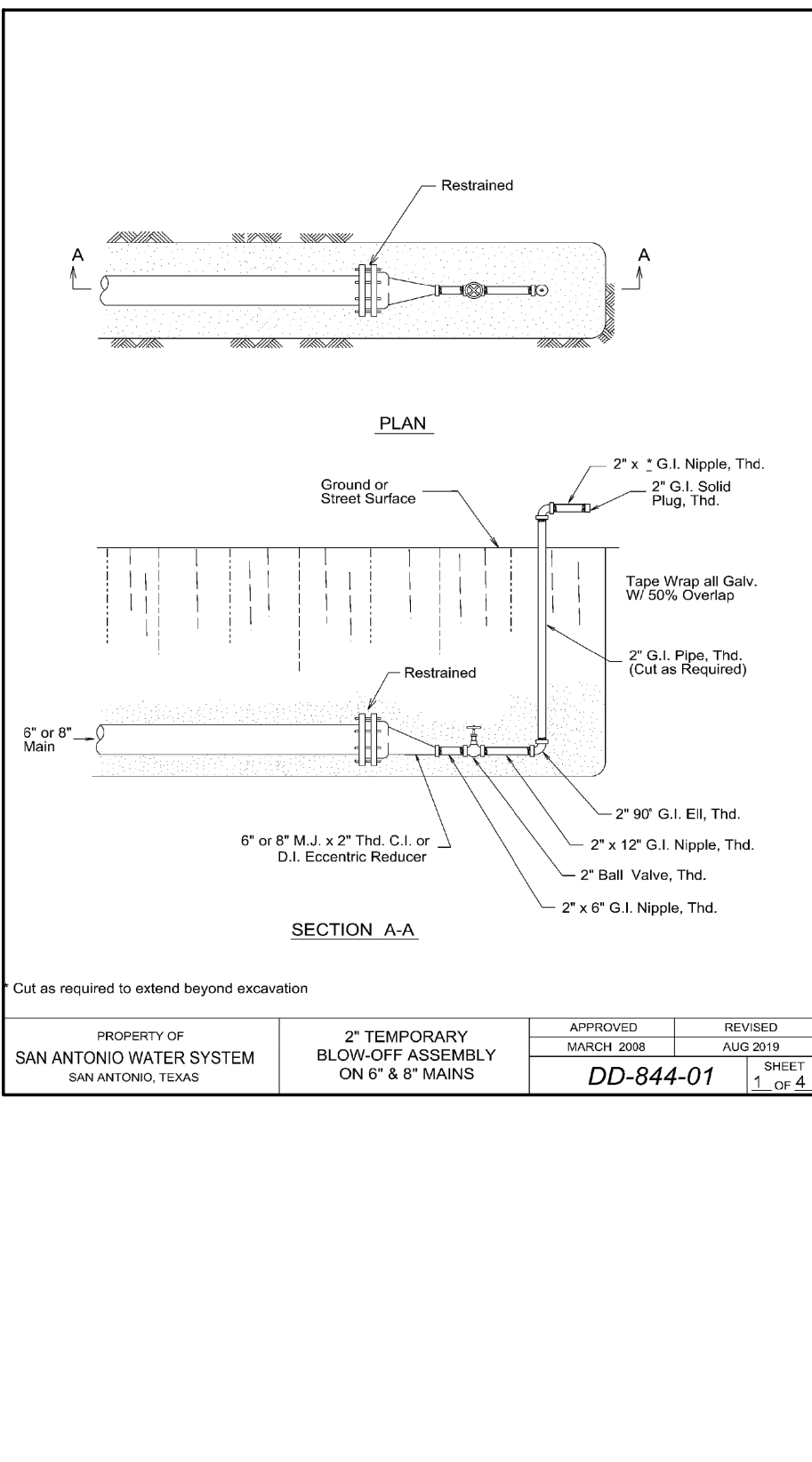
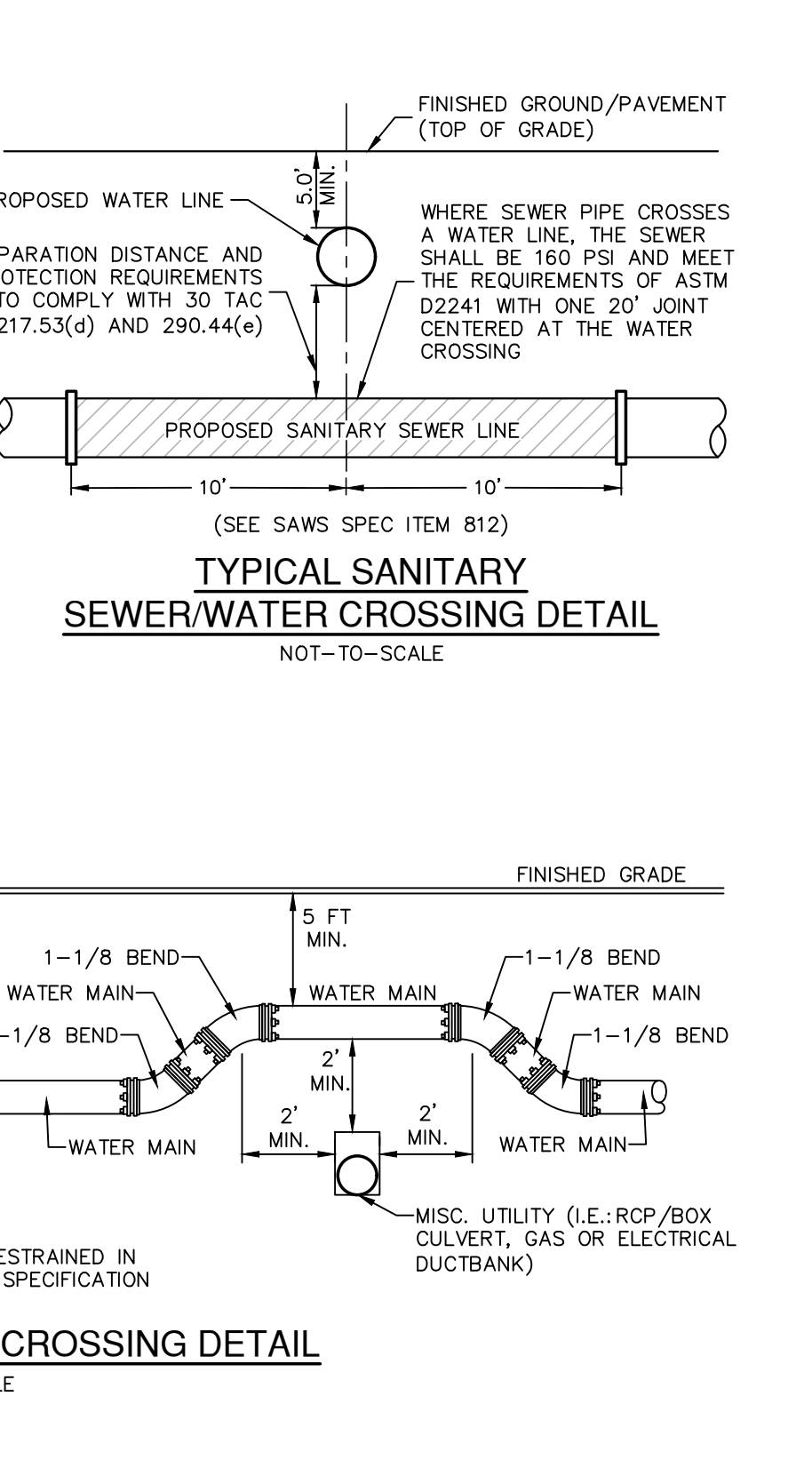
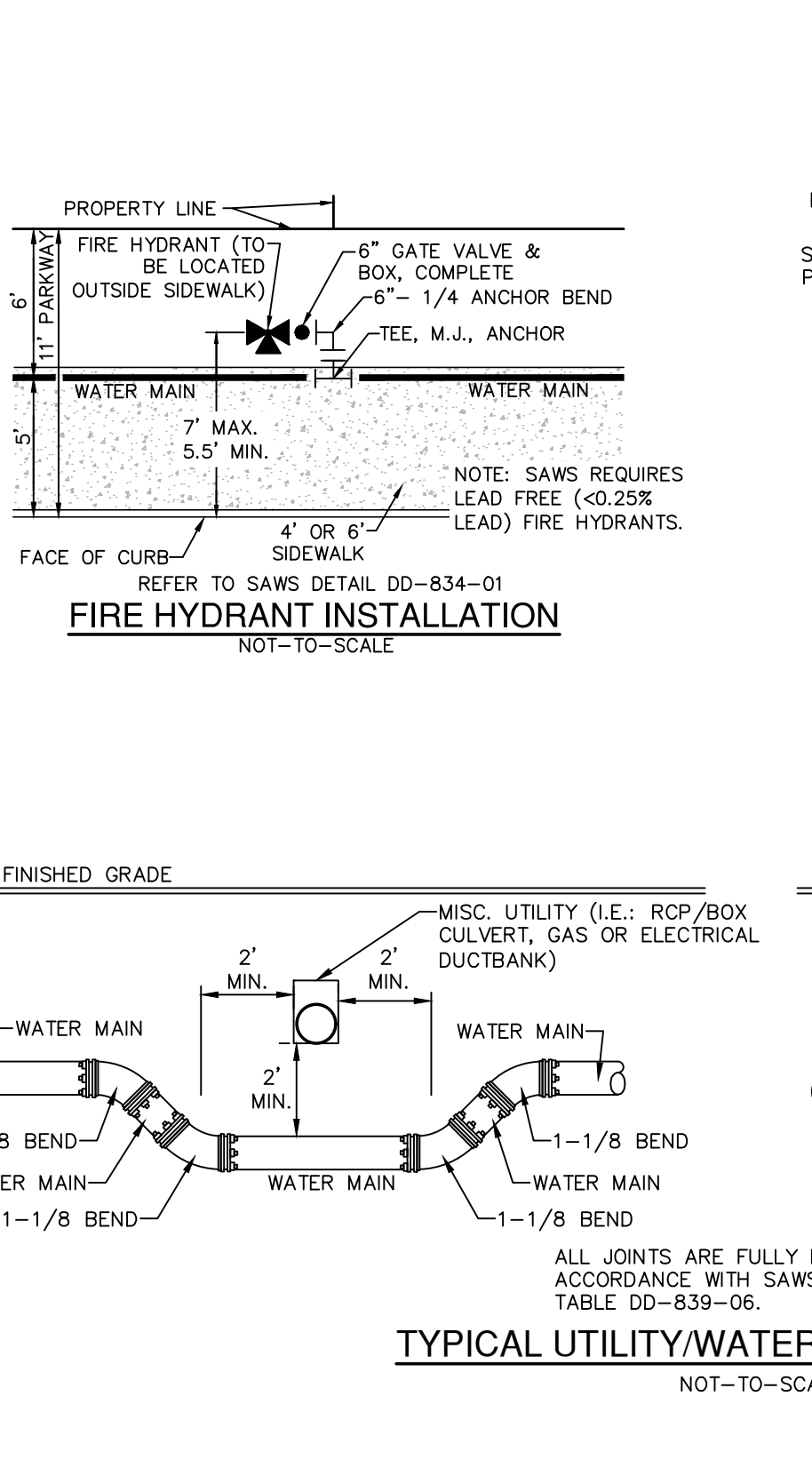
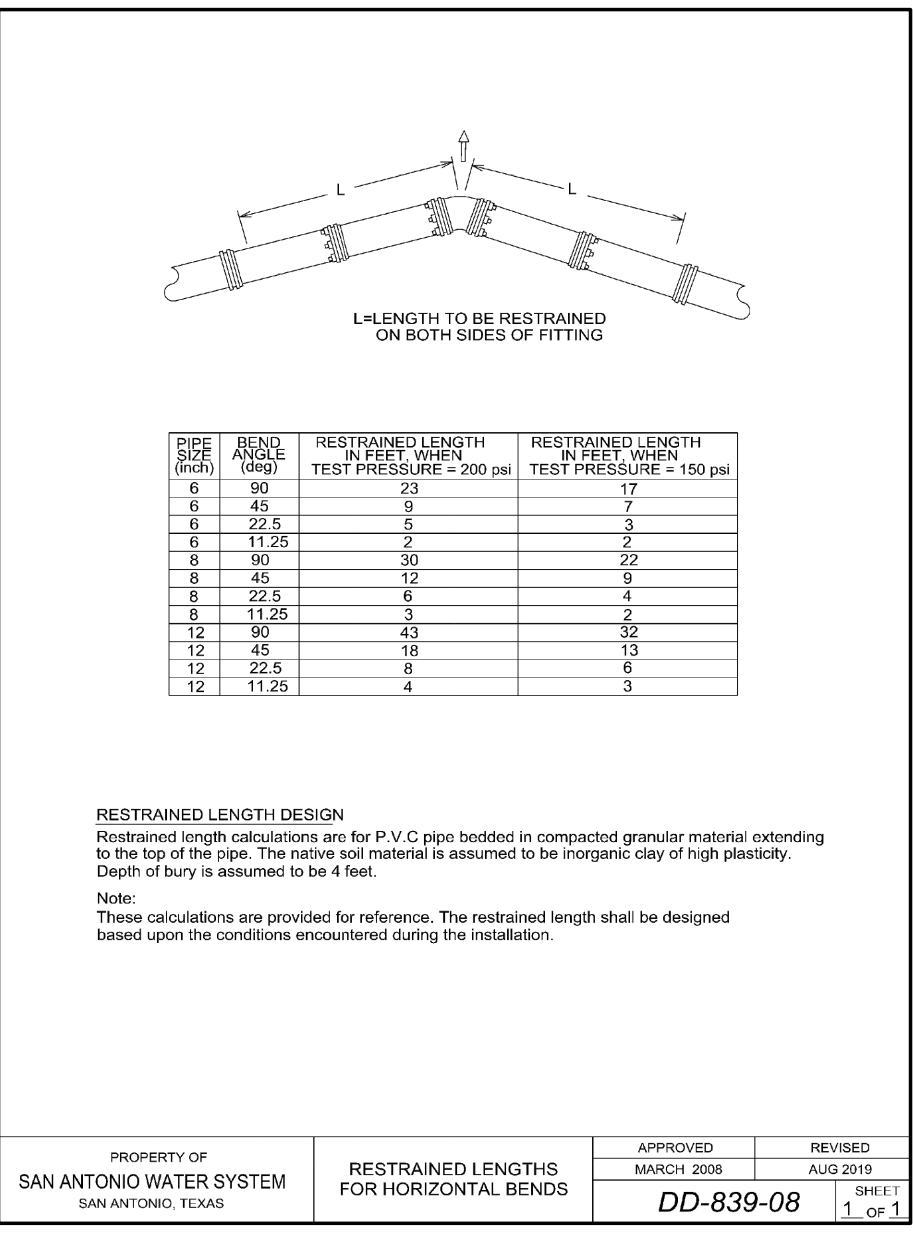
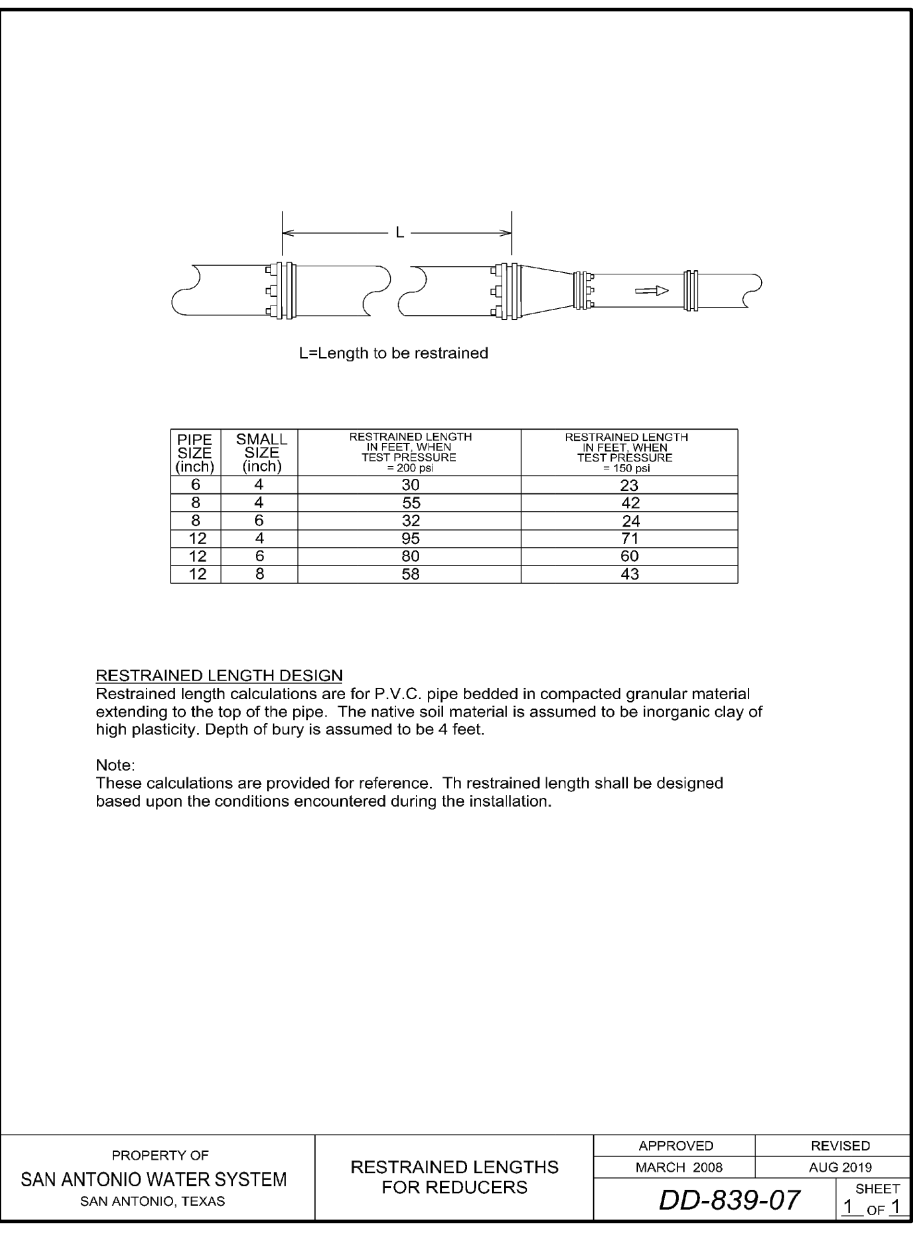
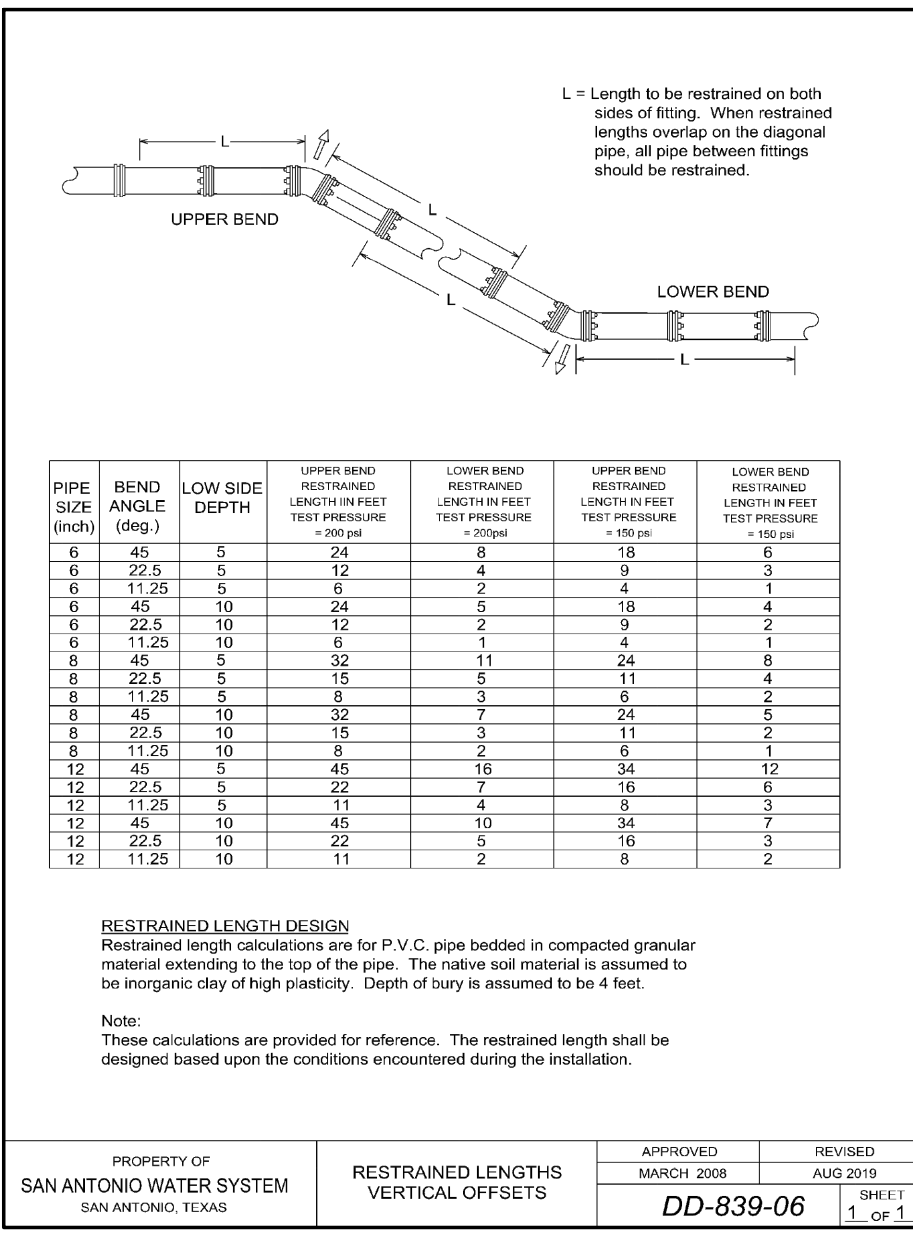
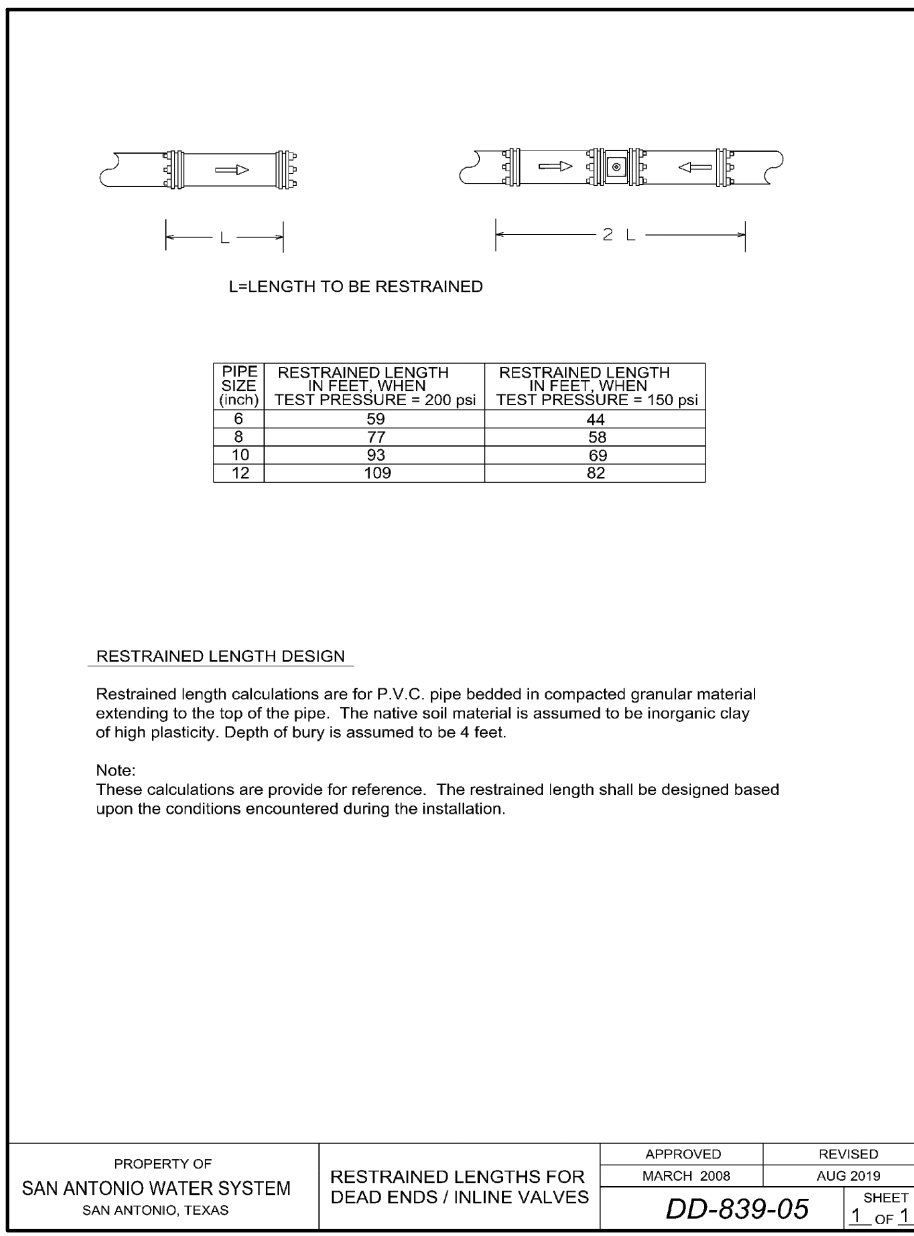
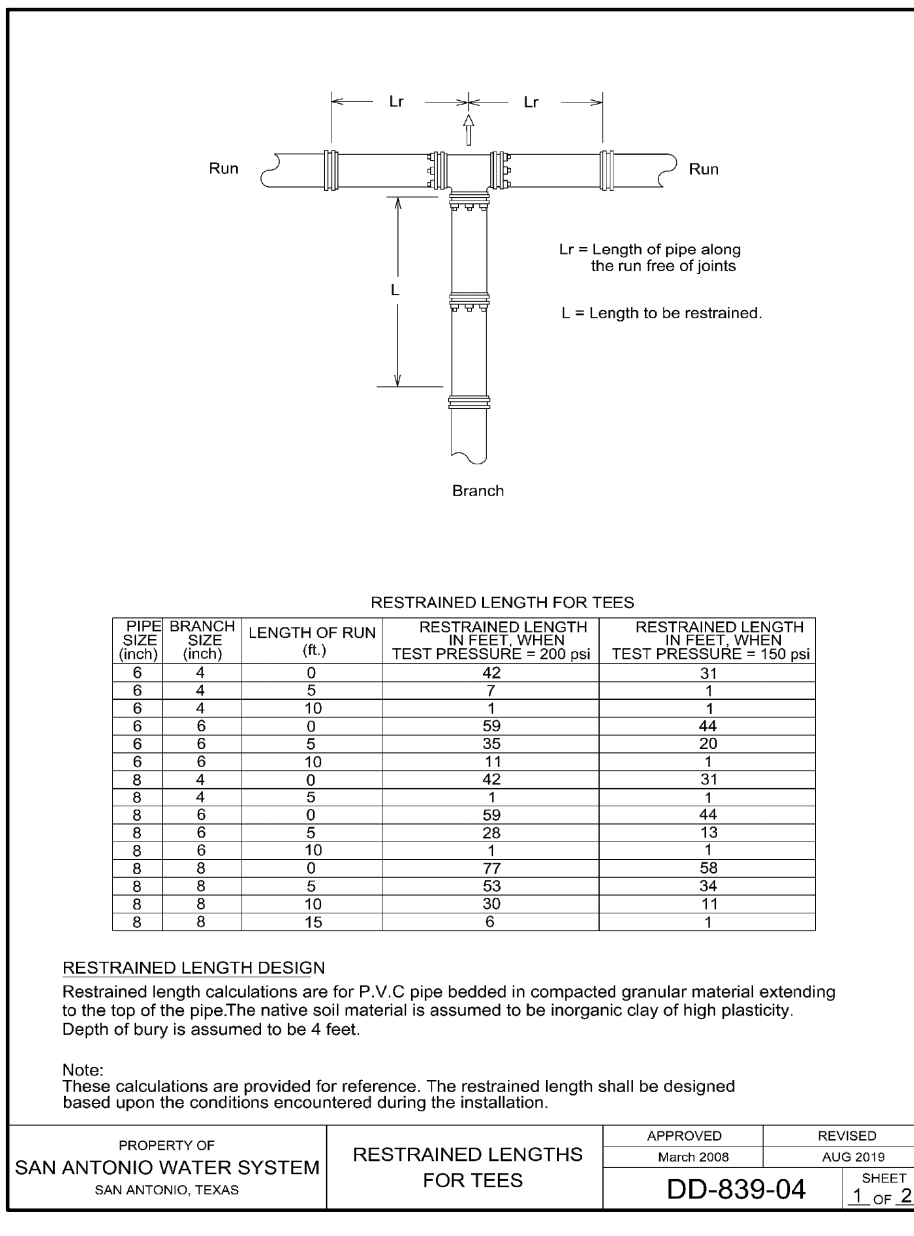
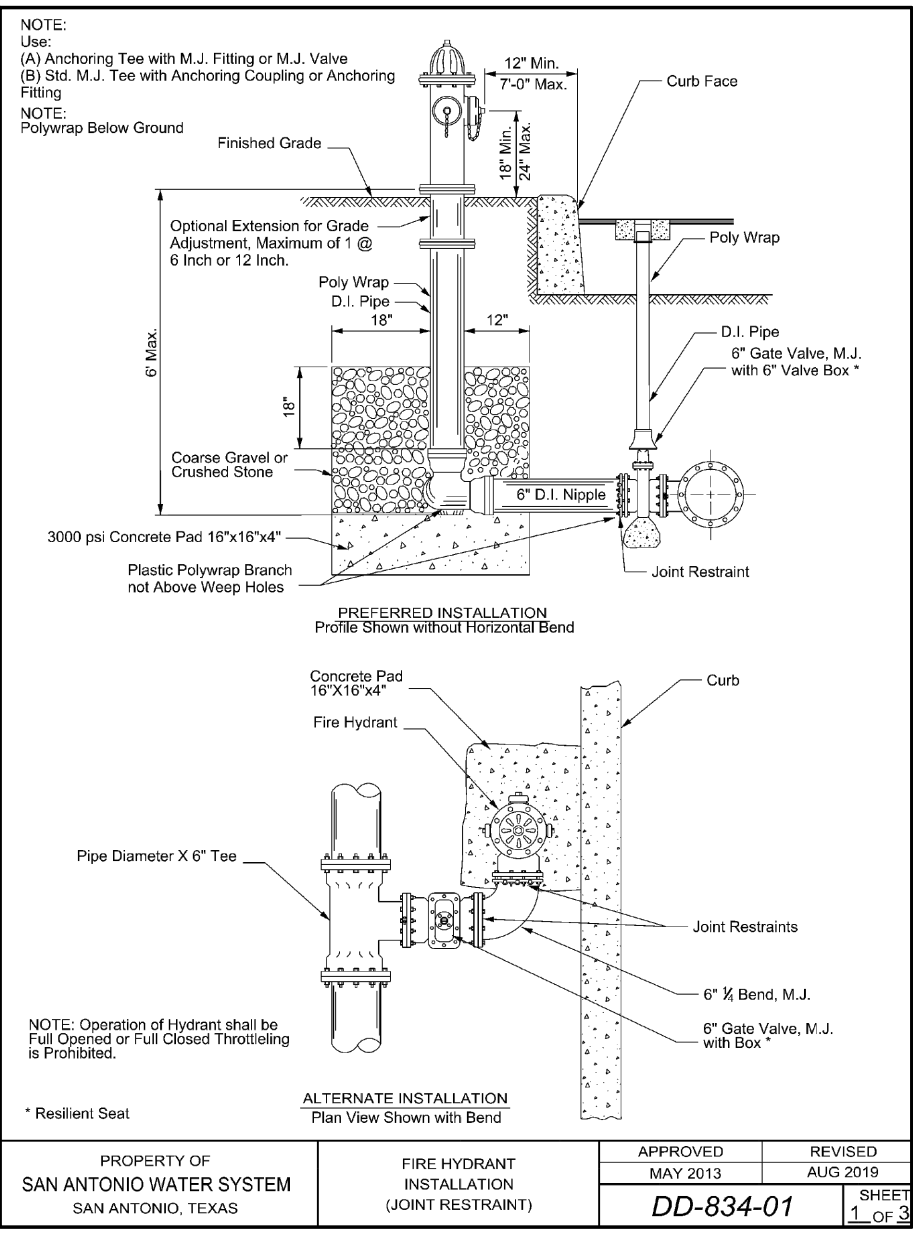
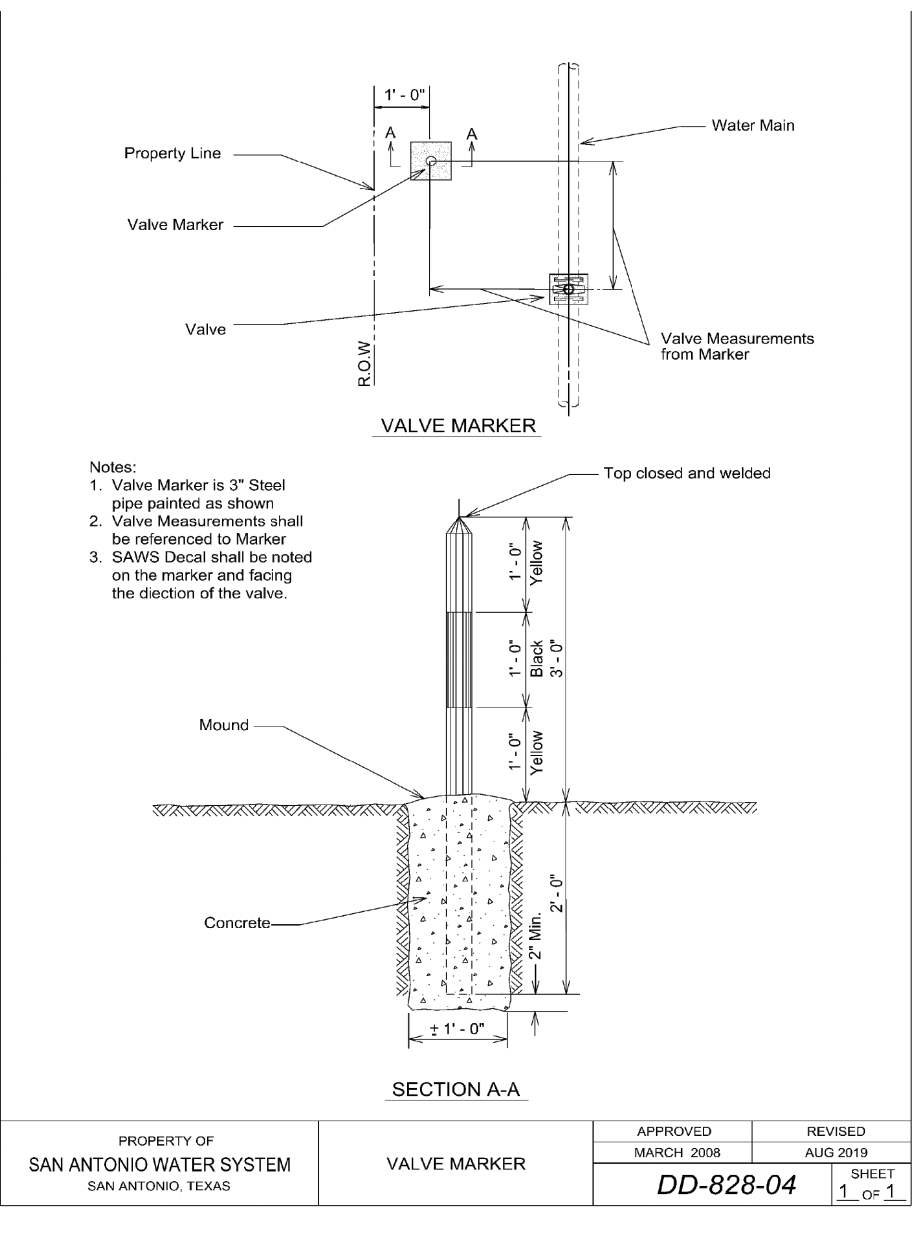
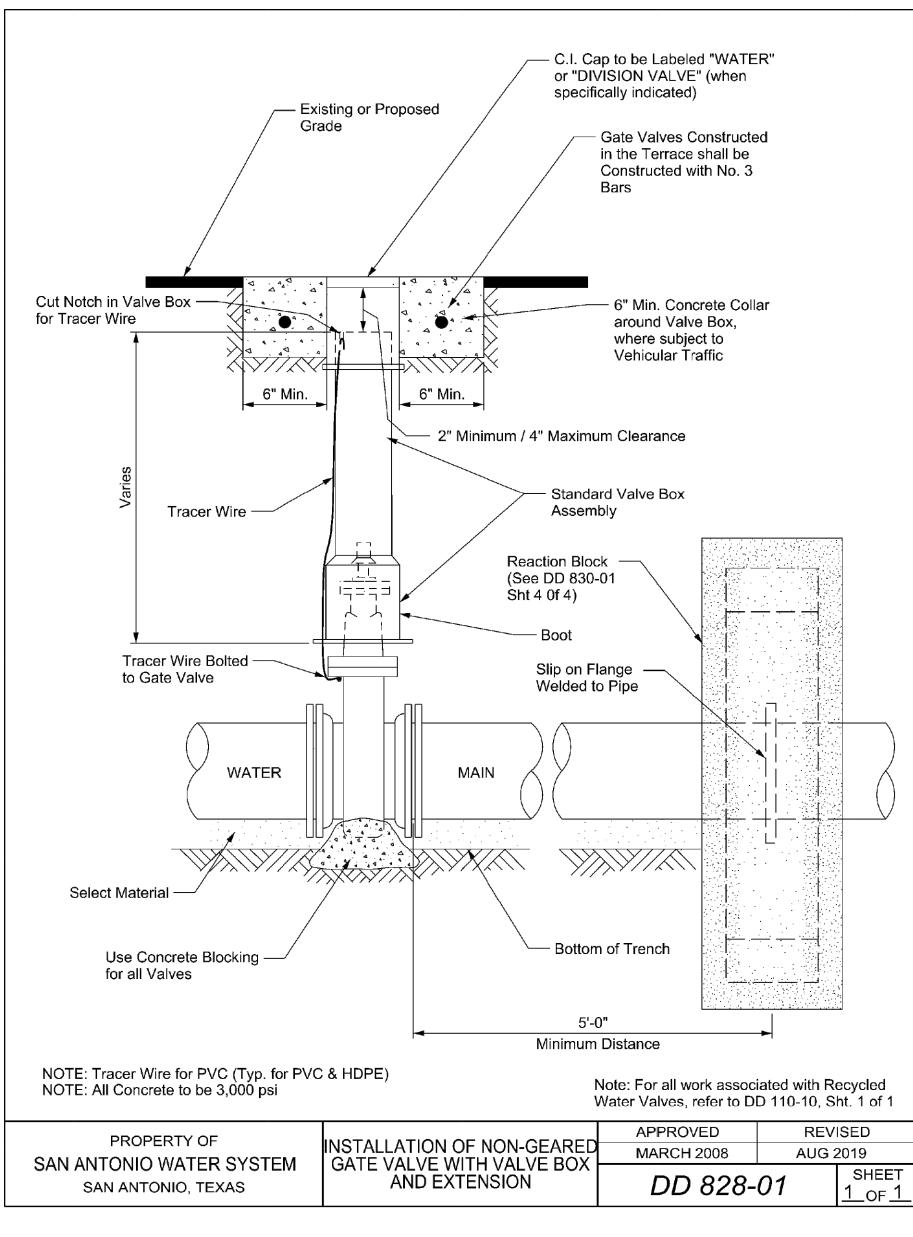
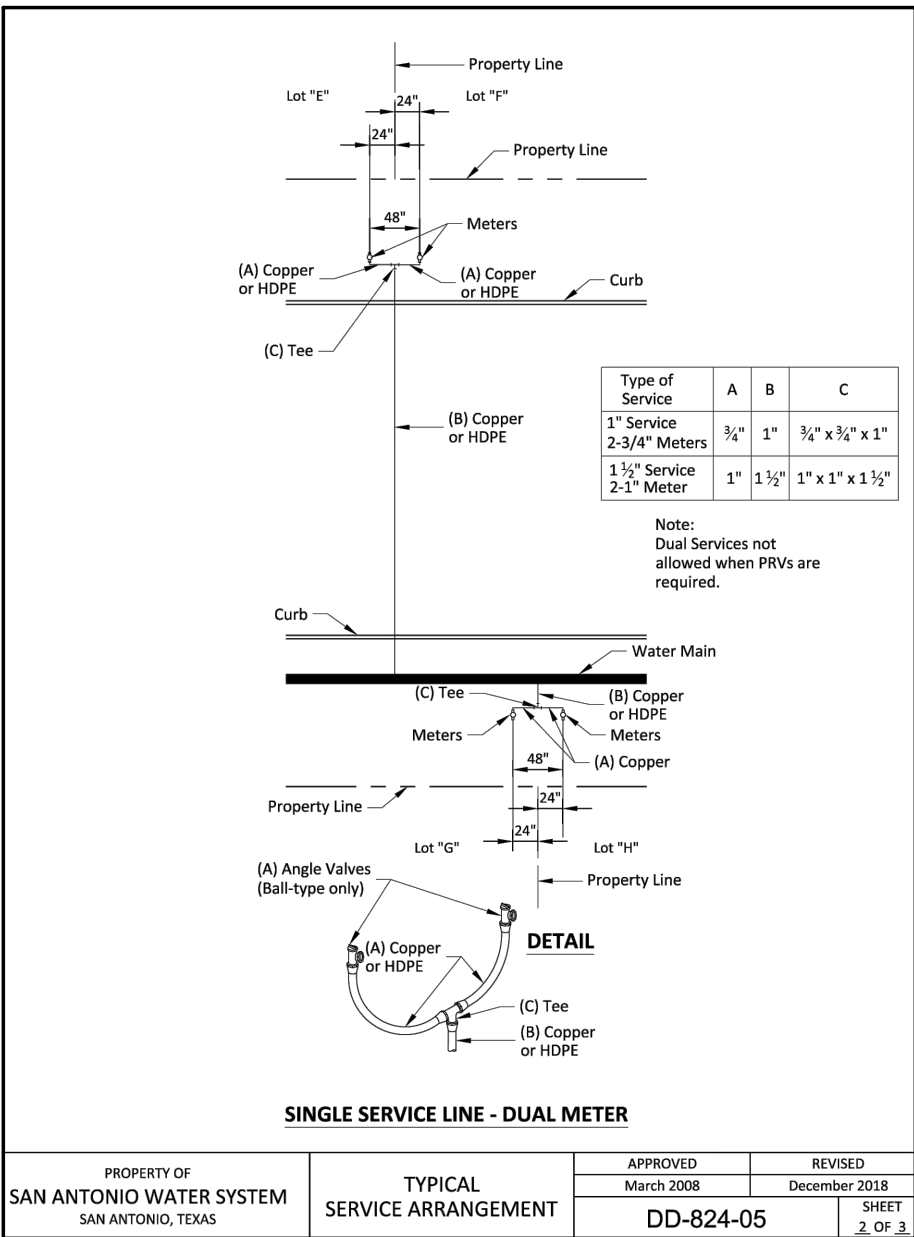
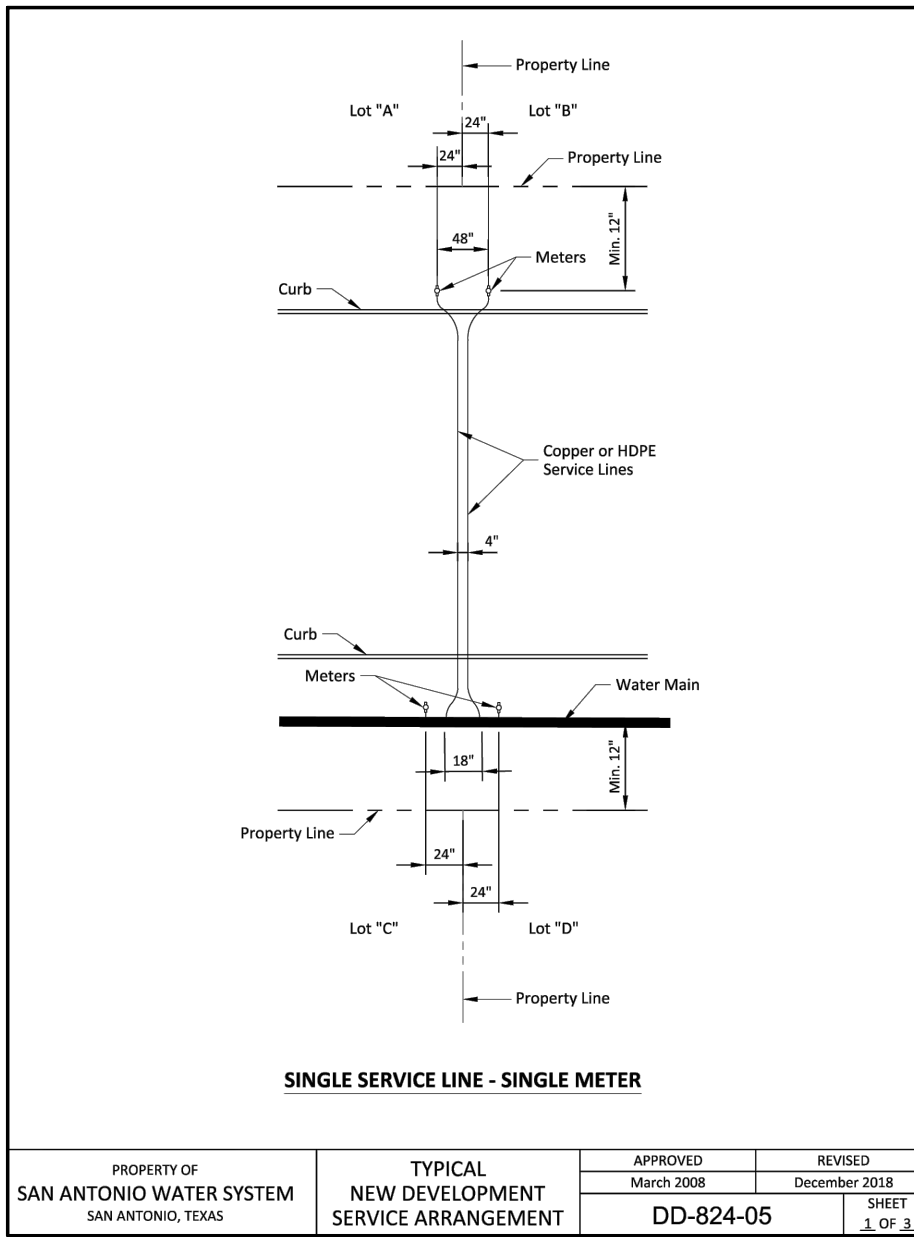
**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**  
**OVERALL WATER PLAN**

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	October 2024
DESIGNER	SS
CHECKED	DRAWN AR
SHEET	C5.00



Date: May 20, 2024, 8:45 AM - User ID: orodriguez  
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**WATER (SAWS PRESSURE ZONE 750)**

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.  
ADDRESS: 5419 N LOOP 1604 E  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247  
PHONE# (210) 496-2668 FAX#  
SAWS BLOCK MAP# 172924 TOTAL EDU'S .53 TOTAL ACREAGE 8.01  
TOTAL LINEAR FOOTAGE OF PIPE: 1240 ~ 8" PVC PLAT NO. 24-11800405  
NUMBER OF LOTS 53 SAWS JOB NO. 24-1158

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

**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS  
WATER DISTRIBUTION PLAN DETAILS

PLAT NO. 24-11800405  
JOB NO. 13115-04  
DATE October 2024  
DESIGNER SS  
CHECKED DRAWN AR  
SHEET C5.10

NO.	REVISION	DATE
1.	REMOVED DETAIL DD-833-03	10/28/24





SAWS CONSTRUCTION NOTES  
(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

1. 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).
2. 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.
3. 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.
4. 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.
5. 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.
6. 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 MARKERS 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
7. 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.
8. 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.
9. THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
10. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.
11. HOLIDAY WORK: CONTRACTORS WILL NOT BE ALLOWED TO PERFORM SAWS WORK ON SAWS RECOGNIZED HOLIDAYS. REQUEST SHOULD BE SENT TO [CONSTWORKREQ@SAWS.ORG](mailto: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](mailto:CONSTWORKREQ@SAWS.ORG).
- ANY AND ALL SAWS UTILITY WORK INSTALLED WITHOUT HOLIDAY/WEEKEND APPROVAL WILL BE SUBJECT TO BE UNCOVERED FOR PROPER INSPECTION.
12. 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.
13. A COPY OF ALL TESTING REPORTS SHALL BE FORWARDED TO SAWS CONSTRUCTION INSPECTION DIVISION.

SAWS WATER NOTES

1. PRIOR TO TIE-INS, ANY SHUTDOWNS OF EXISTING MAINS OF ANY SIZE MUST BE COORDINATED WITH THE SAWS CONSTRUCTION INSPECTION DIVISION 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.
- FOR WATER MAINS 12" OR HIGHER: SAWS EMERGENCY OPERATIONS CENTER (210) 233-2014
2. ASBESTOS CEMENT (AC) PIPE, ALSO KNOWN AS TRANSITE PIPE WHICH IS KNOWN TO CONTAIN ASBESTOS- CONTAINING MATERIAL (ACM), MAY BE LOCATED WITHIN THE PROJECT LIMITS. SPECIAL WASTE MANAGEMENT PROCEDURES AND HEALTH AND SAFETY REQUIREMENTS WILL BE APPLICABLE WHEN REMOVAL AND/OR DISTURBANCE OF THIS PIPE OCCURS. SUCH WORK IS TO BE MADE UNDER SPECIAL SPECIFICATION ITEM NO. 3000, "SPECIAL SPECIFICATION FOR HANDLING ASBESTOS CEMENT PIPE".
3. VALVE REMOVAL: WHERE THE CONTRACTOR IS TO ABANDON A WATER MAIN, THE CONTROL VALVE LOCATED ON THE ABANDONING BRANCH WILL BE REMOVED AND REPLACED WITH A CAP/PLUG. (NSP)
4. SUITABLE ANCHORAGE/THRUST BLOCKING OR JOINT RESTRAINT SHALL BE PROVIDED AT ALL OF THE FOLLOWING MAIN LOCATIONS: DEAD ENDS, PLUGS, CAPS, TEES, CROSSES, VALVES, AND BENDS, IN ACCORDANCE WITH THE STANDARD DRAWINGS DD-839 SERIES AND ITEM NO. 839, IN THE SAWS STANDARD SPECIFICATIONS FOR CONSTRUCTION.
5. ALL VALVES SHALL READ "OPEN RIGHT".
6. PRVS REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 565 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 565 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).
7. PIPE DISINFECTION WITH DRY HTH FOR PROJECTS LESS THAN 800 LINEAR FEET. (ITEM NO. 847.3): MAINS SHALL BE DISINFECTED WITH DRY HTH WHERE SHOWN IN THE CONTRACT DOCUMENTS OR AS DIRECTED BY THE INSPECTOR, AND SHALL NOT EXCEED A TOTAL LENGTH OF 800 FEET. THIS METHOD OF DISINFECTION WILL ALSO BE FOLLOWED FOR MAIN REPAIRS. THE CONTRACTOR SHALL UTILIZE ALL APPROPRIATE SAFETY MEASURE TO PROTECT HIS PERSONNEL DURING DISINFECTION OPERATIONS.
8. BACKFLOW PREVENTION DEVICES:
- ALL IRRIGATION SERVICES WITHIN RESIDENTIAL AREAS ARE REQUIRED TO HAVE BACKFLOW PREVENTION DEVICES.
  - ALL COMMERCIAL BACKFLOW PREVENTION DEVICES MUST BE APPROVED BY SAWS PRIOR TO INSTALLATION.
9. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL THE WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED, AND SAWS HAS RELEASED THE MAIN FOR TIE-IN AND USE.
10. DIVISION VALVES: DIVISION VALVES SHOWN ON PLANS OR NOT SHOWN ON PLANS BUT FOUND IN THE FIELD SHALL ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF AND ONLY WITH PRIOR WRITTEN APPROVAL OF THE SAWS DIRECTOR OF PRODUCTION AND OPERATIONS AND PROPER COORDINATION WITH ALL SAWS DEPARTMENTS. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE INSPECTOR A MINIMUM OF TWO WEEKS IN ADVANCE TO START THE COORDINATION PROCESS AND WILL BE INFORMED BY THE INSPECTOR WHEN THE DIVISION VALVE WILL BE OPERATED BY THE SAWS DISTRIBUTION AND COLLECTION STAFF. THE DIVISION VALVE CAN ONLY BE OPERATED BY SAWS DISTRIBUTION AND COLLECTION STAFF MEMBER NOT THE INSPECTOR OR THE CONTRACTOR. OPERATION OF A DIVISION VALVE WITHOUT THE EXPRESS PRIOR WRITTEN APPROVAL OF THE SAWS DISTRIBUTION AND COLLECTION STAFF WILL CONSTITUTE A MATERIAL BREACH OF ANY WRITTEN SAWS CONTRACT OR PERMIT IN ADDITION TO SUBJECTING THE CONTRACTOR TO LIABILITY FOR ANY AND ALL FINES, FEES, OR OTHER DAMAGES, DIRECT OR CONSEQUENTIAL, THAT MAY ARISE FROM OR BE CAUSED BY THE OPERATION OF THE VALVE WITHOUT PRIOR WRITTEN PERMISSION. PLEASE BE INFORMED THAT THE APPROVAL OF THE OPERATION OR OPENING OR CLOSING OF A DIVISION VALVE CAN TAKE SEVERAL WEEKS FOR APPROVAL. DIVISION VALVES WILL ALSO HAVE A VALVE LID LABELED DIVISION VALVE AND A LOCKING MECHANISM INSTALLED WITH A KEY. THE LOCK AND KEY MECHANISM WILL BE PAID FOR BY THE CONTRACTOR BUT WILL BE INSTALLED BY SAWS DISTRIBUTION AND COLLECTION STAFF.

PROJECT WATER NOTES

1. MACHINE CHLORINATION BY THE S.A.W.S.
2. ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
3. ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
4. THE WATER LINES WILL BE SET FROM THE STREET HUBS BEFORE THIS CONTRACT BEGINS. STREET CUT SHEETS WILL BE SUPPLIED TO THE CONTRACTOR. THERE SHOULD BE NO ADDITIONAL STAKES REQUIRED, AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSPECT THE SITE AND VERIFY THAT ALL STAKES REQUIRED FOR HIS WORK ARE IN PLACE AT THE TIME THE CONSTRUCTION BEGINS. IF ANY STAKES ARE MISSING THE ENGINEER SHOULD BE NOTIFIED IMMEDIATELY. AFTER CONSTRUCTION BEGINS, ALL CONSTRUCTION STAKES, MARKS, ETC., SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR, AND IN CASE OF DESTRUCTION OR REMOVAL BY THE CONTRACTOR, HIS EMPLOYEE OR ANY OTHER MEANS, SUCH STAKES, MARKS, ETC., SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
5. THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
6. THE LOT CORNERS WILL BE SET BY THE ENGINEER FOR INSTALLATION OF ALL WATER SERVICES. THESE LOT CORNERS SHALL BE CAREFULLY PRESERVED BY THE CONTRACTOR SO THE METER BOXES CAN BE SET IN PHASE II. ANY LOT CORNER DESTROYED OR REMOVED BY THE CONTRACTOR, HIS EMPLOYEES, OR BY ANY OTHER MEANS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
7. STREETS WILL HAVE BEEN EXCAVATED DOWN TO SUBGRADE AND THE PARKWAY WILL BE CUT DOWN TO TOP OF CURB BY THE STREET CONTRACTOR, PRIOR TO CONSTRUCTION OF THE WATER MAINS. IT WILL BE THE UTILITY CONTRACTOR'S RESPONSIBILITY TO PROVIDE A PAD FOR HIS EQUIPMENT.
8. WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
9. ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
10. FINAL CONNECTION TO THE EXISTING WATER MAIN SHALL NOT BE MADE UNTIL WATER MAIN HAS BEEN PRESSURE TESTED, CHLORINATED AND THE S.A.W.S. RELEASES THE MAIN FOR TIE-IN AND USE.
11. UNIT PRICE BID FOR "STANDARD FIRE HYDRANT ASSEMBLY" SHALL INCLUDE FIRE HYDRANT, 6-INCH GATE VALVE AND 6-INCH VALVE BOX COMPLETE, ANCHOR BEND, AND ALL 6-INCH DI PIPE REQUIRED (DI PIPE REQUIRED SHALL INCLUDE ALL PIPE FROM THE TEE ON THE MAIN LINE TO THE FIRE HYDRANT).
12. WHEN SEWER LINES ARE INSTALLED IN THE VICINITY OF WATER MAINS, SUCH INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE TEXAS NATURAL RESOURCE CONSERVATION COMMISSION "RULES AND REGULATIONS FOR PUBLIC WATER SYSTEMS" (1988 OR ANY REVISIONS THERETO).
13. A CLEAR SPACE SHALL BE PROVIDED AROUND ALL FIRE HYDRANTS. THIS AREA SHOULD HAVE A MINIMUM DIAMETER OF 3.0' AND BE CLEAN OF VERTICAL OBSTRUCTIONS, VALVES, AND METER BOXES.
14. SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS.
15. UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

WATER (SAWS PRESSURE ZONE 750)

DEVELOPER'S NAME: CONTINENTAL HOMES OF TEXAS, L.P.  
ADDRESS: 5419 N LOOP 1604 E  
CITY: SAN ANTONIO STATE: TEXAS ZIP: 78247  
PHONE# (210) 496-2668 FAX# \_\_\_\_\_  
SAWS BLOCK MAP# 172924 TOTAL EDU'S 53 TOTAL ACREAGE 8.01  
TOTAL LINEAR FOOTAGE OF PIPE: 1240 ~ 8" PVC PLAT NO. 24-11800405  
NUMBER OF LOTS 53 SAWS JOB NO. 24-1158

NO.	REVISION	DATE
1.	REVISED SAWS BLOCK	10/28/24



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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028900

**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS

WATER DISTRIBUTION PLAN NOTES

PLAT NO. **24-11800405**

JOB NO. 13115-04

DATE **October 2024**

DESIGNER **SS**

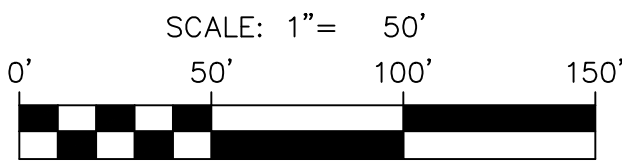
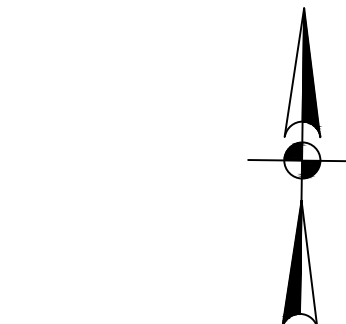
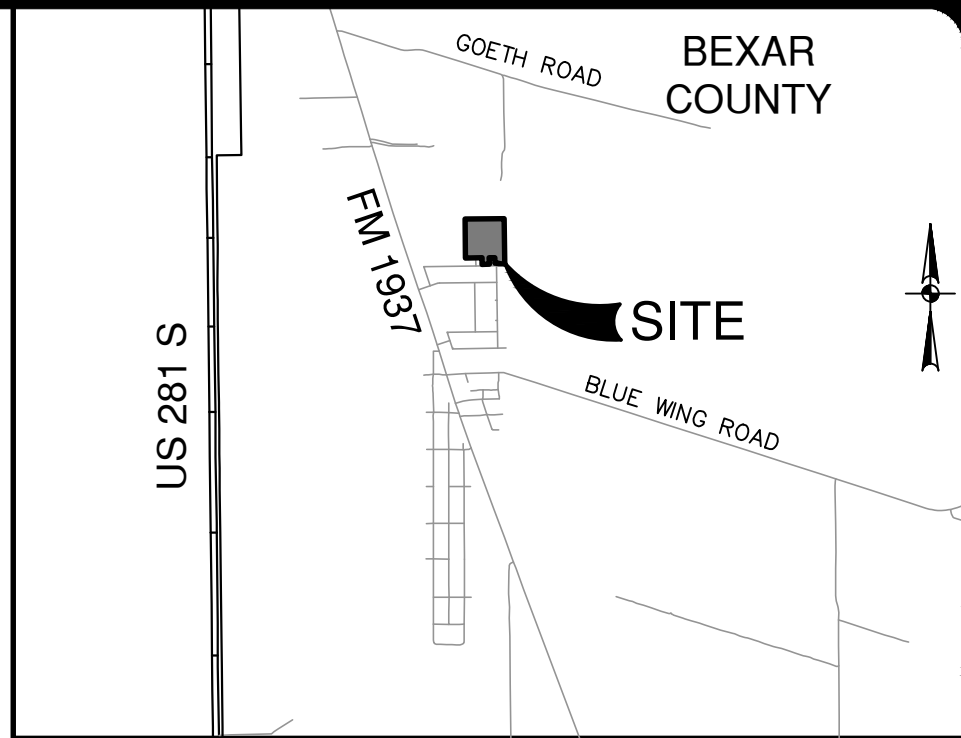
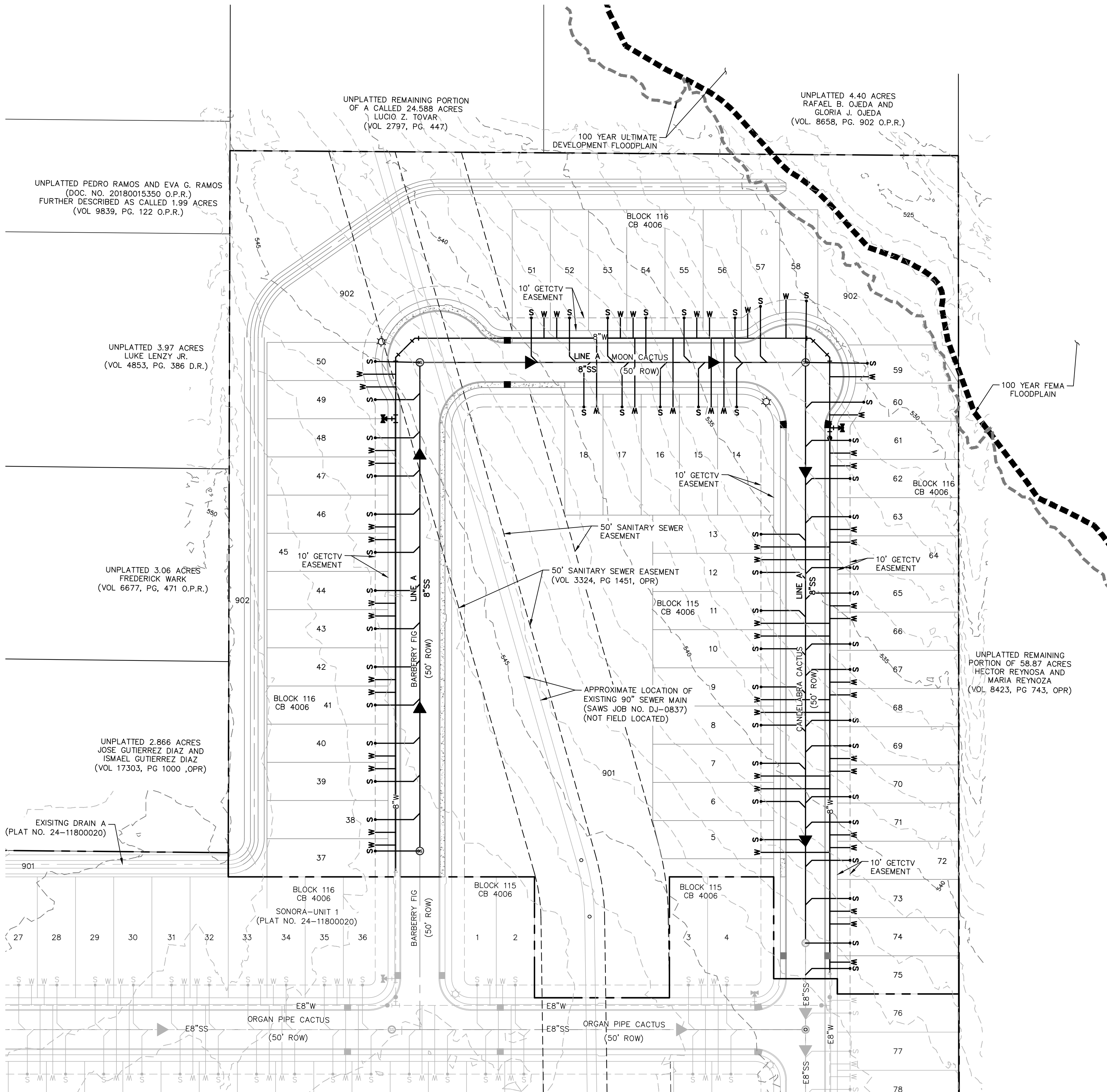
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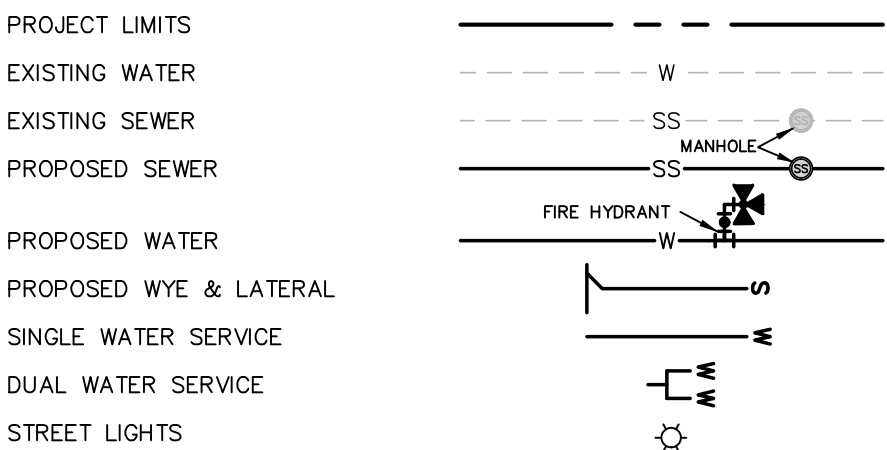


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### UTILITY LEGEND



### 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 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.

NO.	REVISION	DATE

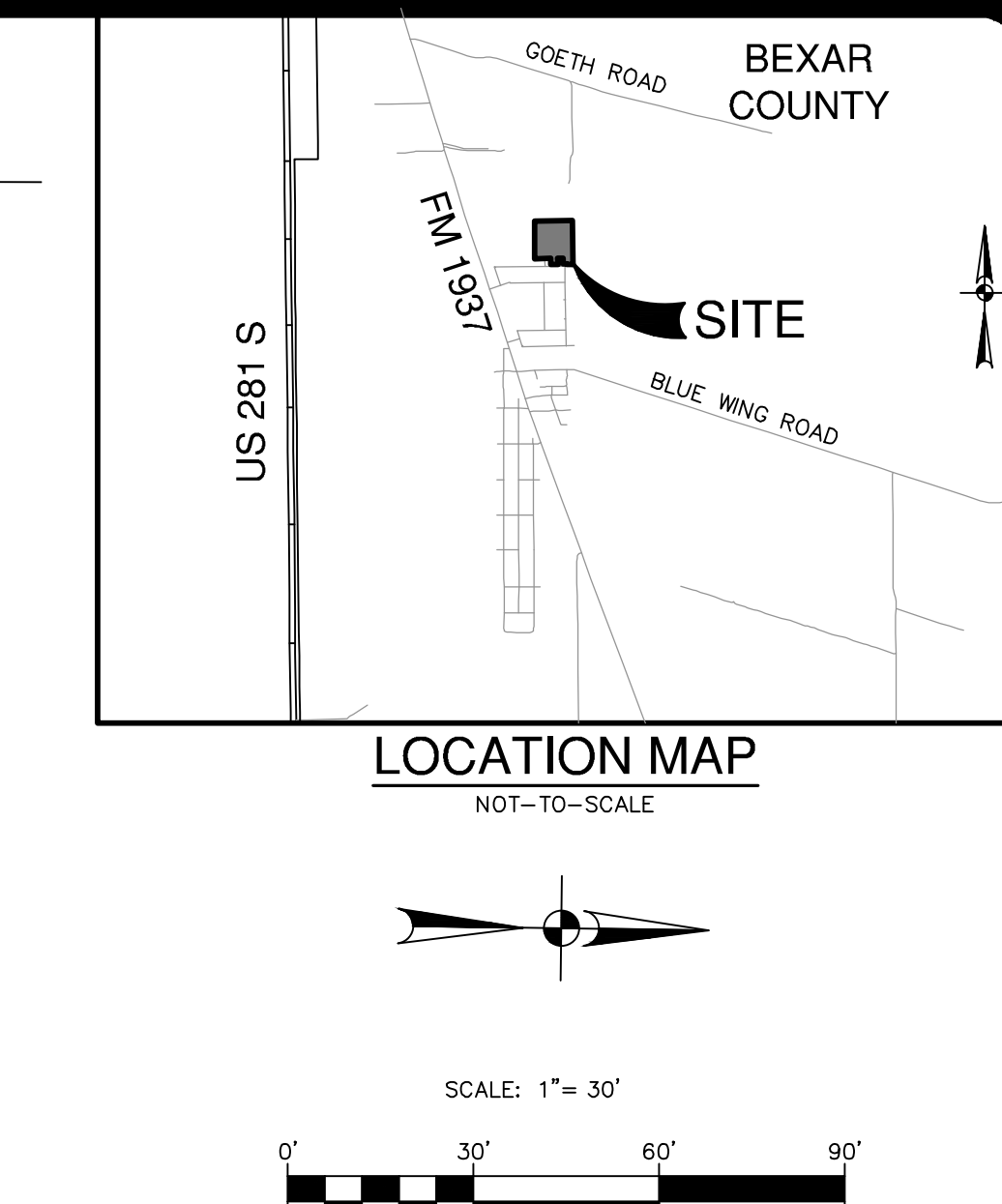


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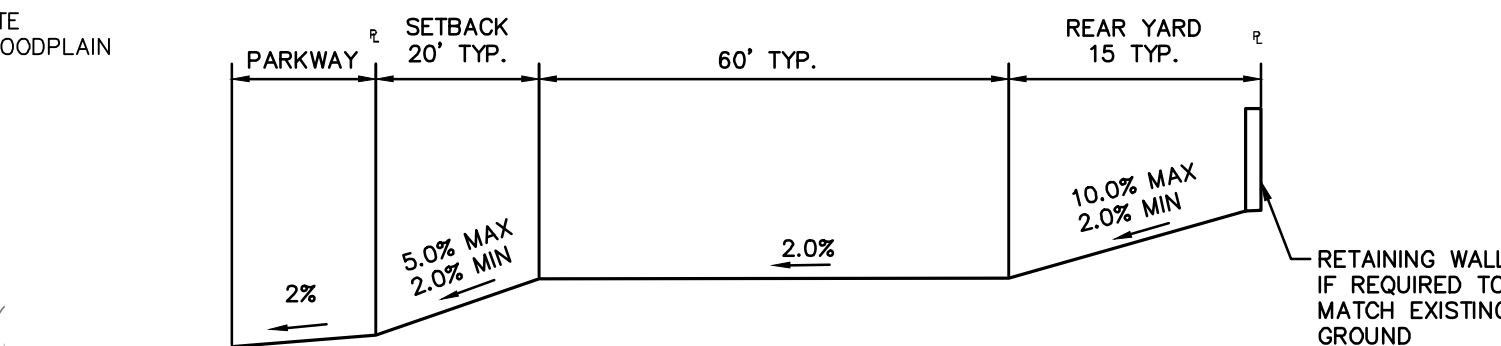
**SONORA-UNIT 3**  
BEXAR COUNTY, TEXAS  
OVERALL UTILITY PLAN

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	September 2024
DESIGNER	SS
CHECKED	DRAWN AR
SHEET	C6.00





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 NOT 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 DRAINAGEWAYS. 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 1.0X 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 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.
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 SLOPES 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 plan for the rear portion of the site. The plan shows a 2% slope from the Parkway to a 5.0% MAX / 2.0% MIN slope. A 60' TYP. setback is indicated. The rear yard has a 10.0% MAX / 2.0% MIN slope. A 2.0% slope is shown for the driveway area. The rear yard is 15' TYP. wide. The plan is labeled 'GRADE 3:1 TO MATCH'.

TYPICAL "C" LOT GRADING DETAIL  
NOT TO SCALE

[illegible]

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#92666 on 12/20/2024  
This document is not to be  
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ENGINEERS**

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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

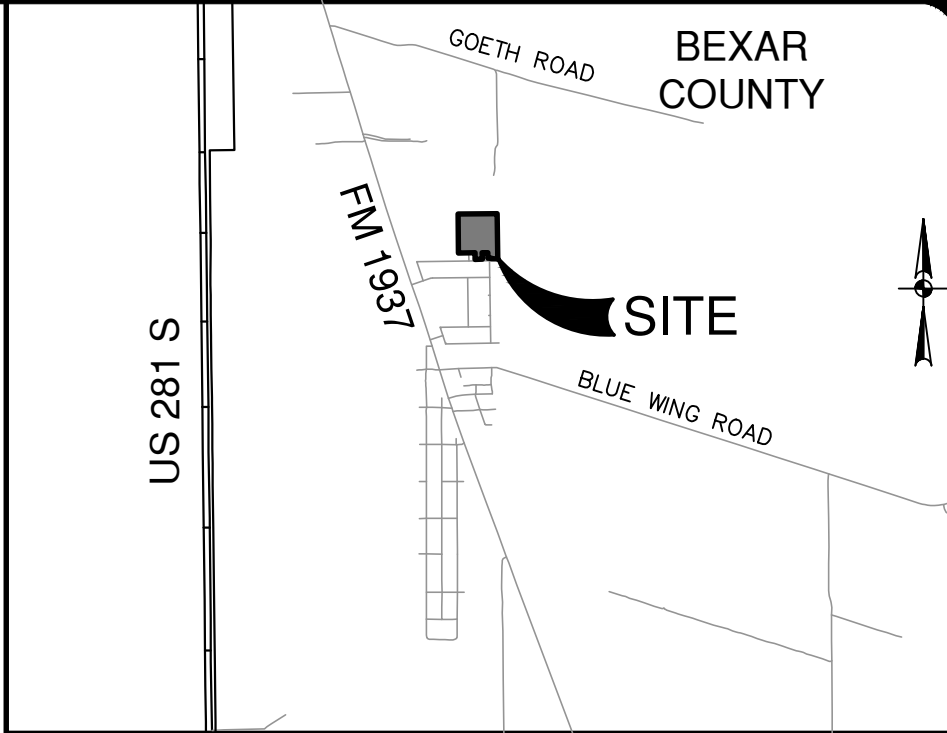
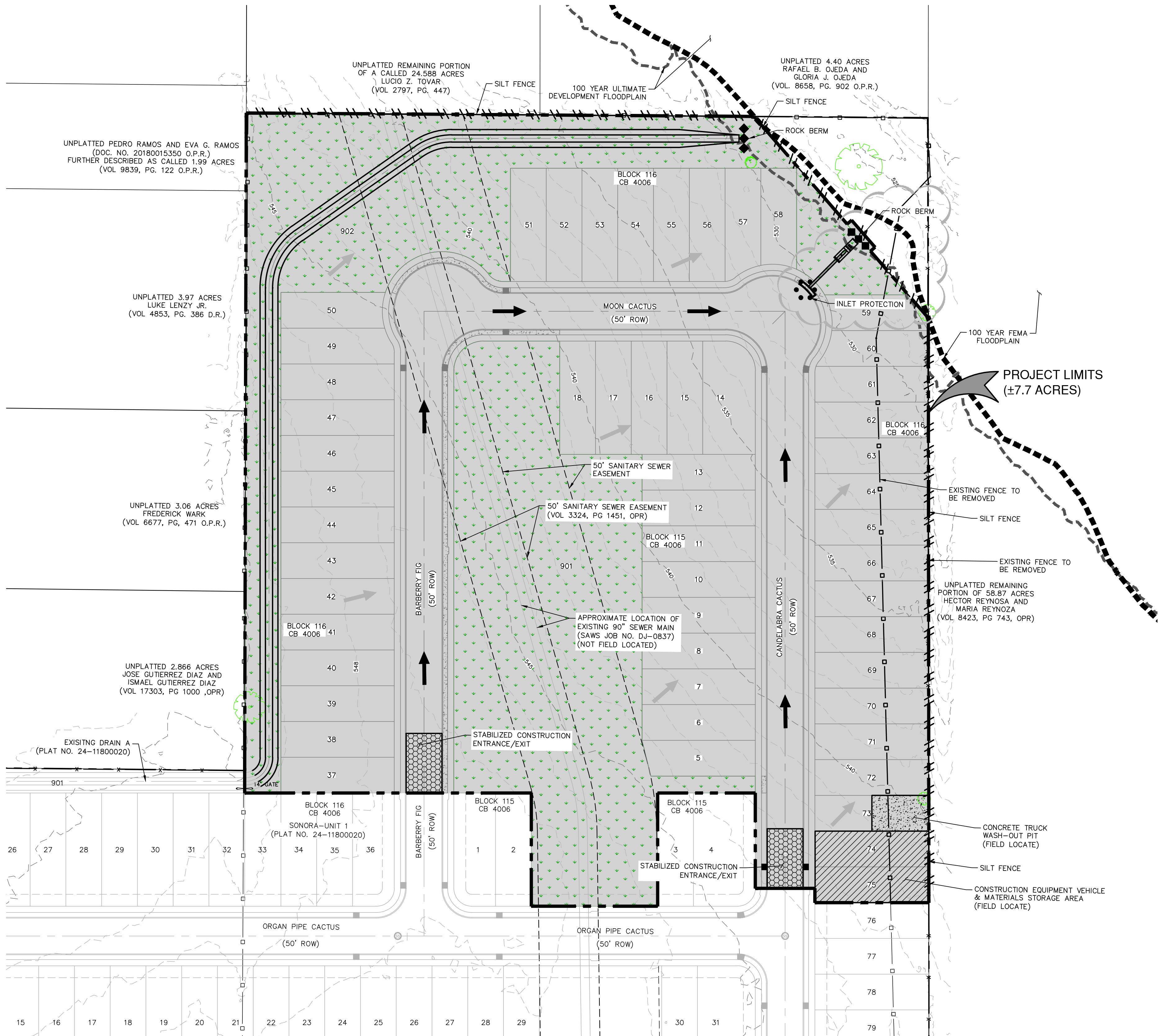
**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**  
**GRADING PLAN**

PLAT NO. 24-11800405  
JOB NO. 13115-04  
DATE December 2024  
DESIGNER SS  
CHECKED          DRAWN AR  
SHEET C7.00

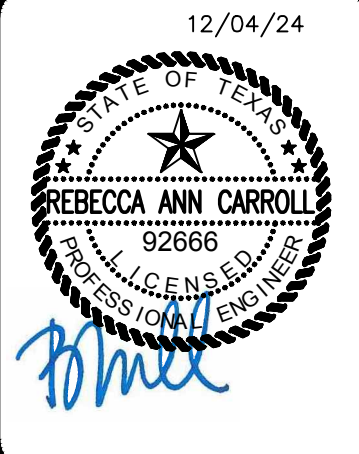


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NO.	REVISION	DATE
1.	ADDED BMP'S	12/04/24



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**ENGINEERS**  
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TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008800

**SONORA-UNIT 3**  
**BEXAR COUNTY, TEXAS**  
**STORMWATER POLLUTION PREVENTION PLAN**

**SWPPP LEGEND**

PROJECT LIMITS	
UNIT BOUNDARY	
EXISTING CONTOUR	
PROPOSED CONTOUR	
FLOW ARROW (EXISTING)	
FLOW ARROW (PROPOSED)	
SILT FENCE	
ROCK BERM	
GRAVEL FILTER BAGS	
GRATE INLET PROTECTION	
SEDIMENT CONTROL ROLLS	
LIMITS OF DISTURBED AREA	
STABILIZED CONSTRUCTION ENTRANCE/EXIT	
CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE)	
CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE)	
STOCKPILE	
AREA TO BE REVEGETATED PER TPDES PERMIT REQUIREMENTS (PERMANENT)	
AREA TO BE REVEGETATED PER TPDES PERMIT REQUIREMENTS (TEMPORARY)	

**GENERAL NOTES**

- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
- CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
- STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
- RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
- ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
- FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
- STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
- AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
- BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADEMENT AREAS.
- BEST MANAGEMENT PRACTICES MAY BE REMOVED IN STAGES ONCE THE WATERSHED FOR THAT PORTION CONTROLLED BY THE BEST MANAGEMENT PRACTICES HAS BEEN STABILIZED IN ACCORDANCE WITH TPDES REQUIREMENTS.
- UPON COMPLETION OF THE PROJECT, INCLUDING SITE STABILIZATION, AND BEFORE FINAL PAYMENT IS ISSUED, CONTRACTOR SHALL REMOVE ALL SEDIMENT AND EROSION CONTROL MEASURES, PAYING SPECIAL ATTENTION TO ROCK BERMS IN DRAINAGE FEATURES.
- WHERE VEGETATED FILTER STRIPS ARE INDICATED, CONTRACTOR SHALL VERIFY THAT SUFFICIENT VEGETATION EXISTS, OTHERWISE CONTRACTOR SHALL PLACE SILT FENCING IN LIEU OF VEGETATED FILTER STRIP.
- SHADED AREA DENOTES LIMITS OF DISTURBED AREAS. OTHER AREAS WITHIN THE PROJECT LIMITS, WITH THE EXCEPTION OF A CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD, ARE NOT A PART OF THIS TPDES STORM WATER POLLUTION PREVENTION PLAN (SWP3) AND WILL NOT BE DISTURBED BY CIVIL CONSTRUCTION ACTIVITIES.
- GPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES TO SERVE THE PROJECT.
- A BEXAR COUNTY ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN ANY BEXAR COUNTY ROW.
- THE 100-YEAR FEMA FLOODPLAIN IS REQUIRED TO BE STAKED.

**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.

**TPDES**  
**EXHIBIT 2**

PLAT NO.	24-11800405
JOB NO.	13115-04
DATE	December 2024
DESIGNER	SS
CHECKED	DRAWN AR
SHEET	C8.00



