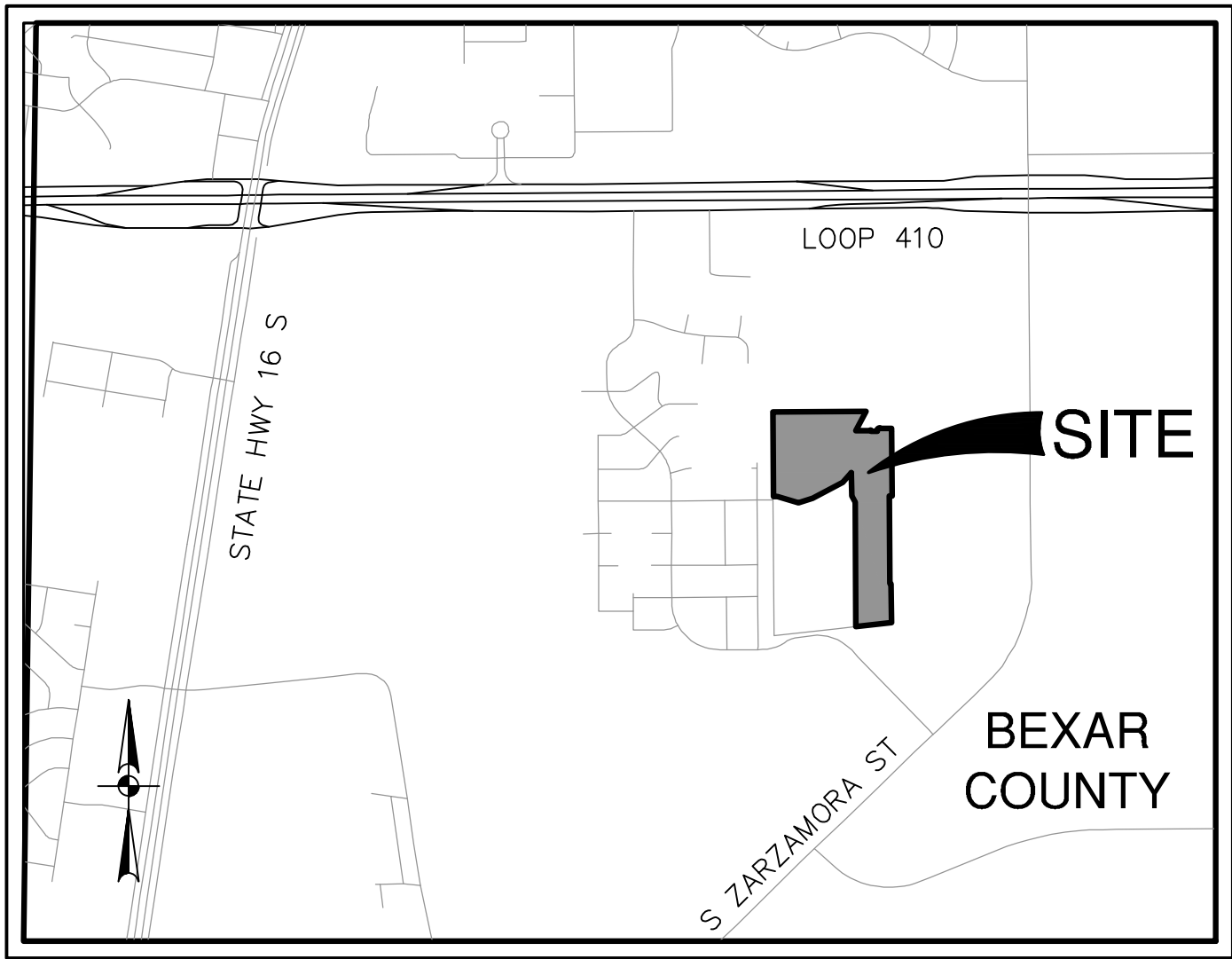


SMILEY TRACT, UNIT 2

SAN ANTONIO, TEXAS

CIVIL CONSTRUCTION PLANS



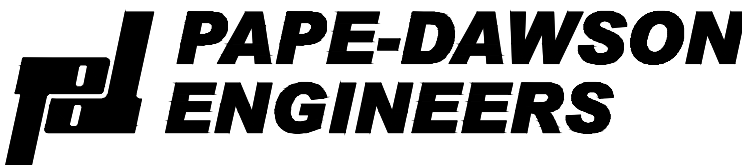
LOCATION MAP

NOT-TO-SCALE

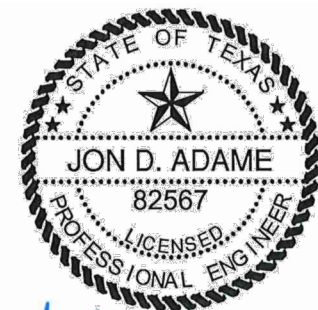
PREPARED FOR:

EL RANCHO SONRISA, LLC
8626 JODHPUR
FAIR OAKS RANCH, TEXAS 78015

DECEMBER 2023



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



Jon D. Adame
12-5-23

SHEET INDEX

| Sheet Description | Sheet No. |
|--|-----------|
| COVER SHEET | C0.00 |
| MASTER DRAINAGE PLAN | C1.00 |
| DRAIN A PLAN & PROFILE (STA. 23+99.30 TO END) | C1.01 |
| DRAIN E PLAN & PROFILE (STA. 1+00.00 TO END) | C1.02 |
| DRAINAGE DETAILS | C1.10 |
| DRAINAGE DETAILS | C1.11 |
| BLUE GILL WAY ~ STA. 10+00.00 TO STA. 21+00.00 | C2.00 |
| BLUE GILL WAY ~ STA. 21+00.00 TO STA. 23+12.12 | C2.01 |
| WHITE BASS DRIVE ~ STA. 15+06.54 TO STA. 18+06.79 | C2.02 |
| STREET DETAILS | C2.10 |
| STREET DETAILS | C2.11 |
| STREET DETAILS | C2.12 |
| OVERALL SIGNAGE PLAN | C3.00 |
| SIGNAGE DETAILS SHEET 1 OF 2 | C3.10 |
| SIGNAGE DETAILS SHEET 2 OF 2 | C3.11 |
| OVERALL WATER DISTRIBUTION PLAN | C4.00 |
| WATER DISTRIBUTION PLAN DETAILS | C4.10 |
| WATER DISTRIBUTION PLAN NOTES | C4.11 |
| OVERALL SANITARY SEWER PLAN | C5.00 |
| SEWER LINE E ~ STA. 1+00.00 TO 12+00.00 | C5.01 |
| SEWER LINE E ~ STA. 12+00.00 TO END & LINE D STA. 1+00.00 TO END | C5.02 |
| SANITARY SEWER DETAILS | C5.10 |
| SANITARY SEWER NOTES | C5.11 |
| OVERALL UTILITY PLAN | C6.00 |
| OVERALL GRADING PLAN | C7.00 |
| STORM WATER POLLUTION PREVENTION PLAN | C8.00 |
| STORM WATER POLLUTION PREVENTION PLAN DETAILS | C8.10 |

WATER (SAWS PRESSURE ZONE 790 HGL)

| | |
|---|--|
| DEVELOPER'S NAME: EL RANCHO SONRISA, LLC | |
| ADDRESS: 8626 JODHPUR | |
| CITY: FAIR OAKS RANCH | STATE: TEXAS ZIP: 78015 |
| PHONE# (210) 381-9813 | FAX# 14-6536, 14-6538, 14-8536 & 14-8538 |
| SAWS BLOCK MAP# 14-6538 TOTAL EDU'S 60 TOTAL ACREAGE 23.35 | |
| TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1766 LF PLAT NO. 22-11800792 | |
| NUMBER OF LOTS 59 | SAWS JOB NO. 23-1039 |

SEWER LOWER - WEST SEWERSHED - DOS RIOS/LEON CREEK

| | |
|---|-------------------------------|
| DEVELOPER'S NAME: EL RANCHO SONRISA, LLC | |
| ADDRESS: 8626 JODHPUR | |
| CITY: FAIR OAKS RANCH | STATE: TEXAS ZIP: 78015 |
| PHONE# (210) 381-9813 | FAX# 149538 & 143586 & 146536 |
| SAWS BLOCK MAP# 146538 TOTAL EDU'S 59 TOTAL ACREAGE 23.35 | |
| TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1500 LF PLAT NO. 22-11800792 | |
| NUMBER OF LOTS 59 | SAWS JOB NO. 23-1531 |

Date: May 12, 2023, 9:11 am User ID: esky
File: P:\11100393\Design\GWA\SD04-1110393.dwg

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

Proposed Conditions Calculations

| Ref. Point | Structure / Description | Drainage Areas | | | Total Flowpath (ft) | Overland/Sheet Flow (TR-55) | | | | | Shallow Concentrated Flow - 1** | | | | | Shallow Concentrated Flow - 2** | | | | | Channelized Flow** | | | | | T _{c-TOT} | Rational Method Q=CIA | | |
|------------|-------------------------|----------------|-----------|------|---------------------|-----------------------------|-------|----------------|------------------------|------------------------|---------------------------------|-------------|---------------|-----------------------|--------------------------|---------------------------------|-------------|---------------|-----------------------|--------------------------|----------------------|-----------------------|--------------------------|-------------|-------------------|--------------------|-----------------------|------------|----------|
| | | # | Area (Ac) | C | | L ₀ (FT) | n | P ₂ | S ₀ (ft/ft) | T ₀ * (MIN) | L _{SC} (FT) | Condition** | Slope (ft/ft) | V _{SC} (FPS) | T _{SC} ** (MIN) | L _{SC} (FT) | Condition** | Slope (ft/ft) | V _{SC} (FPS) | T _{SC} ** (MIN) | L _{CH} (FT) | V _{CH} (FPS) | T _{CH} ** (MIN) | Return Year | Intensity (in/hr) | | Q (cfs) | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | IDF Curve: | CoSA A14 |
| 1 | CURB INLET | A | 7.82 | 0.67 | 1,439 | 100 | 0.150 | 4.44 | 0.014 | 9 | 44 | U | 0.014 | 1.9 | 0.4 | 1,295 | P | 0.020 | 2.9 | 7.5 | - | - | - | 16 | 5 | 5.06 | 26.5 | | |
| | | | | | | | | | | | | | | | | | | | | | | | 16 | 25 | 6.99 | 36.6 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | 16 | 100 | 8.71 | 45.6 | | | |
| | | B | 2.00 | 0.67 | 516 | 100 | 0.150 | 4.44 | 0.039 | 6 | 133 | U | 0.029 | 2.7 | 0.8 | | | | | | | | 7 | 5 | 7.05 | 9.4 | | | |
| | | | | | | | | | | | | | | | | | | - | - | | 283 | 6.0 | 0.8 | 7 | 25 | 9.89 | 13.3 | | |
| | | | | | | | | | | | | | | | | | | | | | | | 7 | 100 | 12.37 | 16.6 | | | |
| 2 | EARTHEN CHANNEL | B+C | 9.82 | 0.67 | 1,439 | 100 | 0.150 | 4.44 | 0.014 | 9 | 44 | P | 0.014 | 2.4 | 0.3 | 1,295 | P | 0.020 | 2.9 | 7.5 | - | - | - | 16 | 5 | 5.06 | 33.3 | | |
| | | | | | | | | | | | | | | | | | | | | | | | 16 | 25 | 6.99 | 46.0 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | 16 | 100 | 8.71 | 57.3 | | | |

Rational Method Time of Concentration

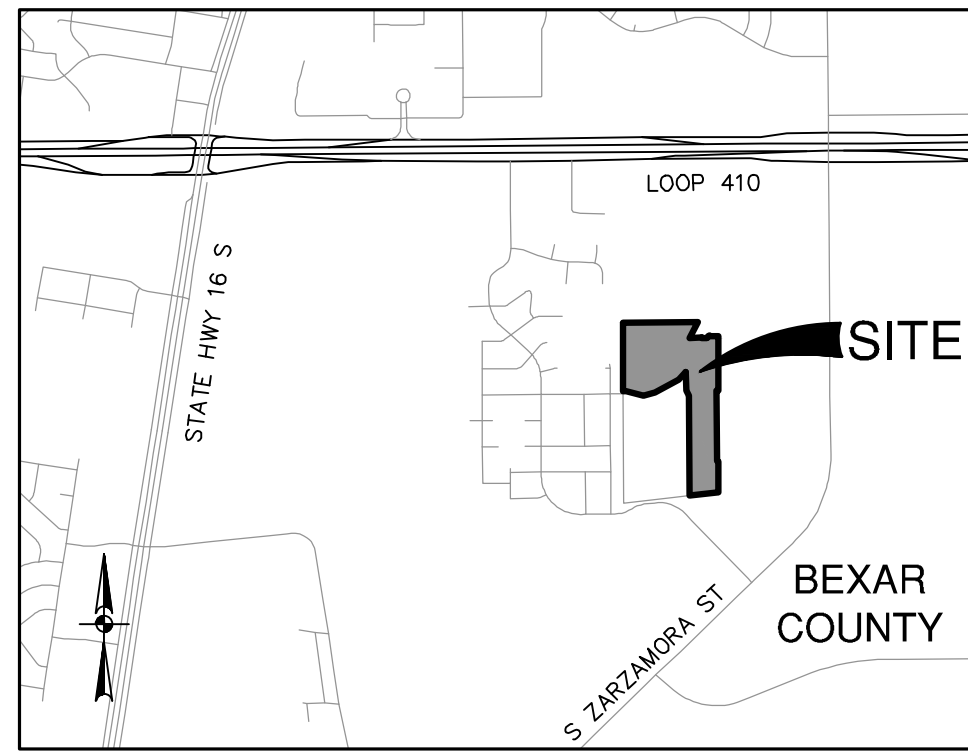
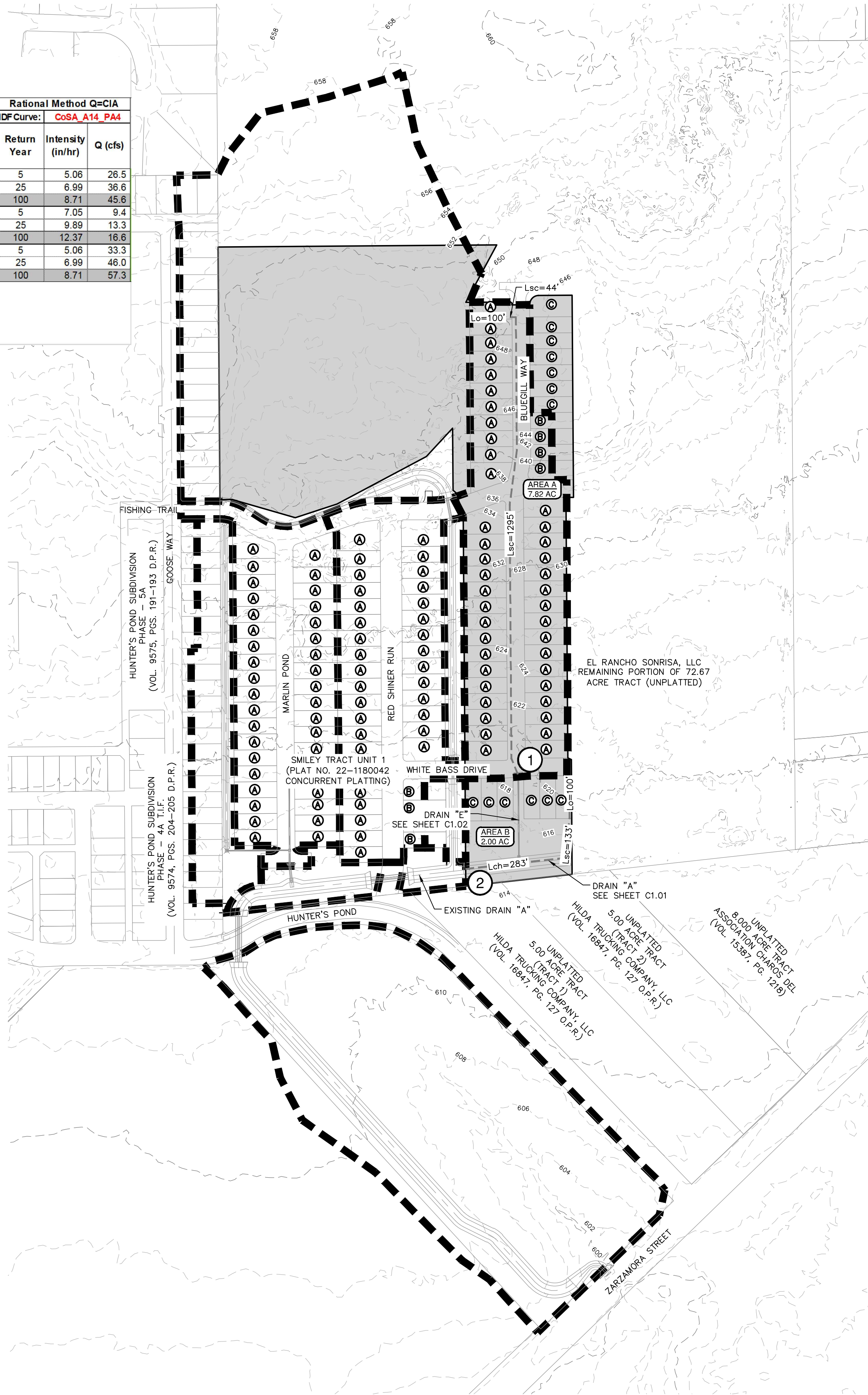
*See Ivey Chart or TR-55 Egn. 3-3

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

From TR-55 Equation 3-3*
 $T_o = \frac{(0.0077(n+L)^{0.84})}{(P^{2.485})} + 60$

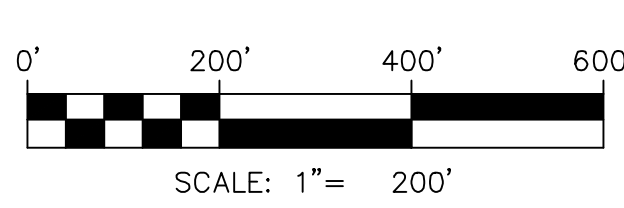
From TR-55 Figure 3-1**
 $v = \frac{k}{n} R^{2/3} S_o^{1/2}$
 $k = 1.486 \text{ ft}^{1/2} / \text{s}$

S: For Streets: n = 0.018, R = 0.2 (Adapted from Mannings)
P: For Paved: n = 0.025, R = 0.2
U: For Unpaved: n = 0.05, R = 0.4
D: For Default: v = 6 fps

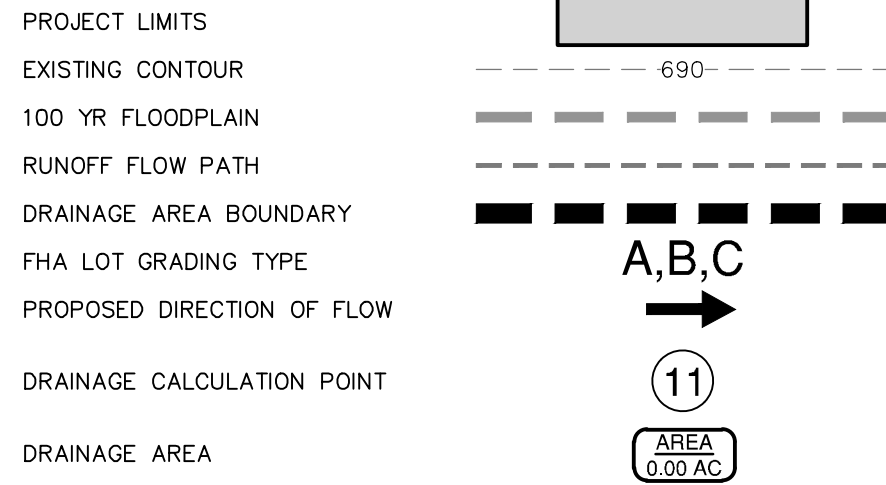


LOCATION MAP

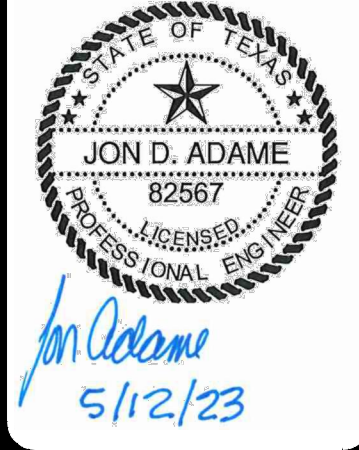
NOT-TO-SCALE



MASTER DRAINAGE LEGEND



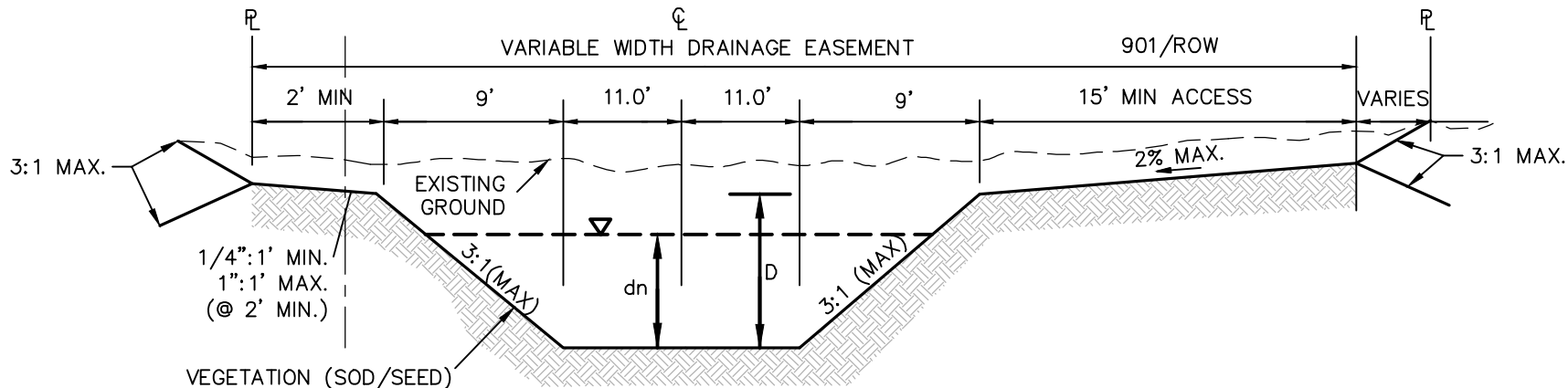
| DATE | |
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| NO. | |
| REVISION | |



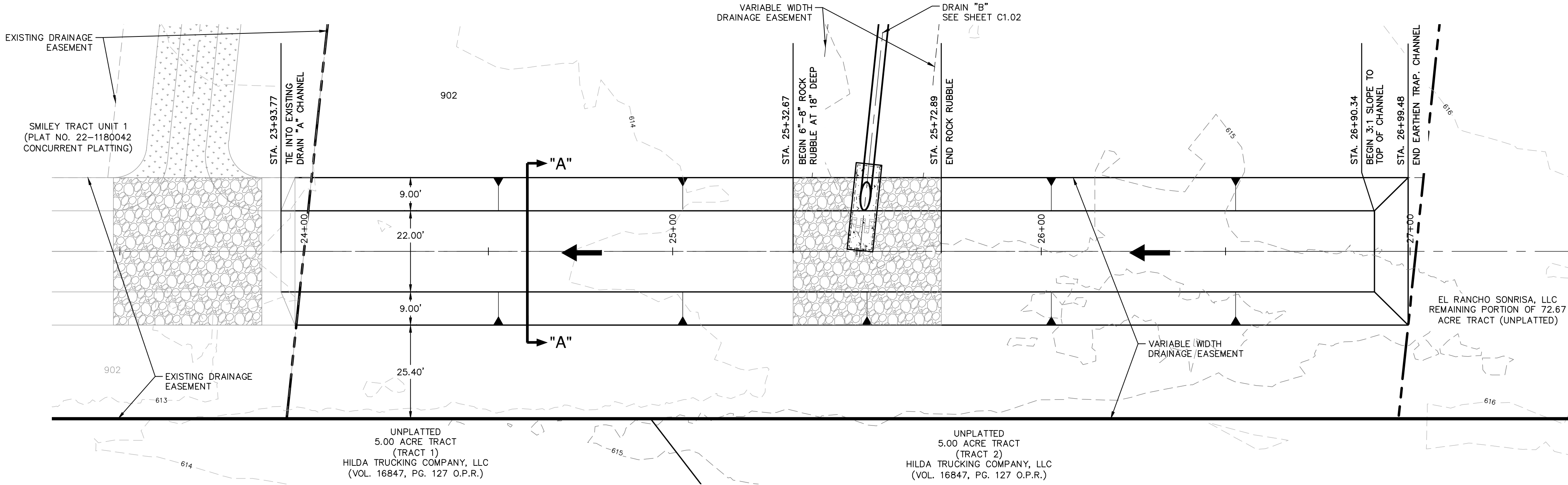
PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #170 | TEXAS SURVEYING FIRM #10028600

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
MASTER DRAINAGE PLAN

| | |
|----------|-------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | MAY 2023 |
| DESIGNER | AA |
| CHECKED | VS DRAWN AA |
| SHEET | C1.00 |

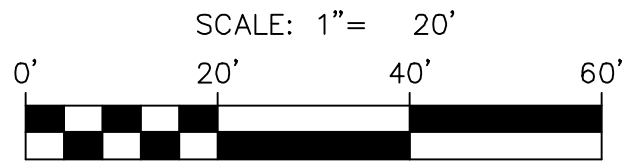
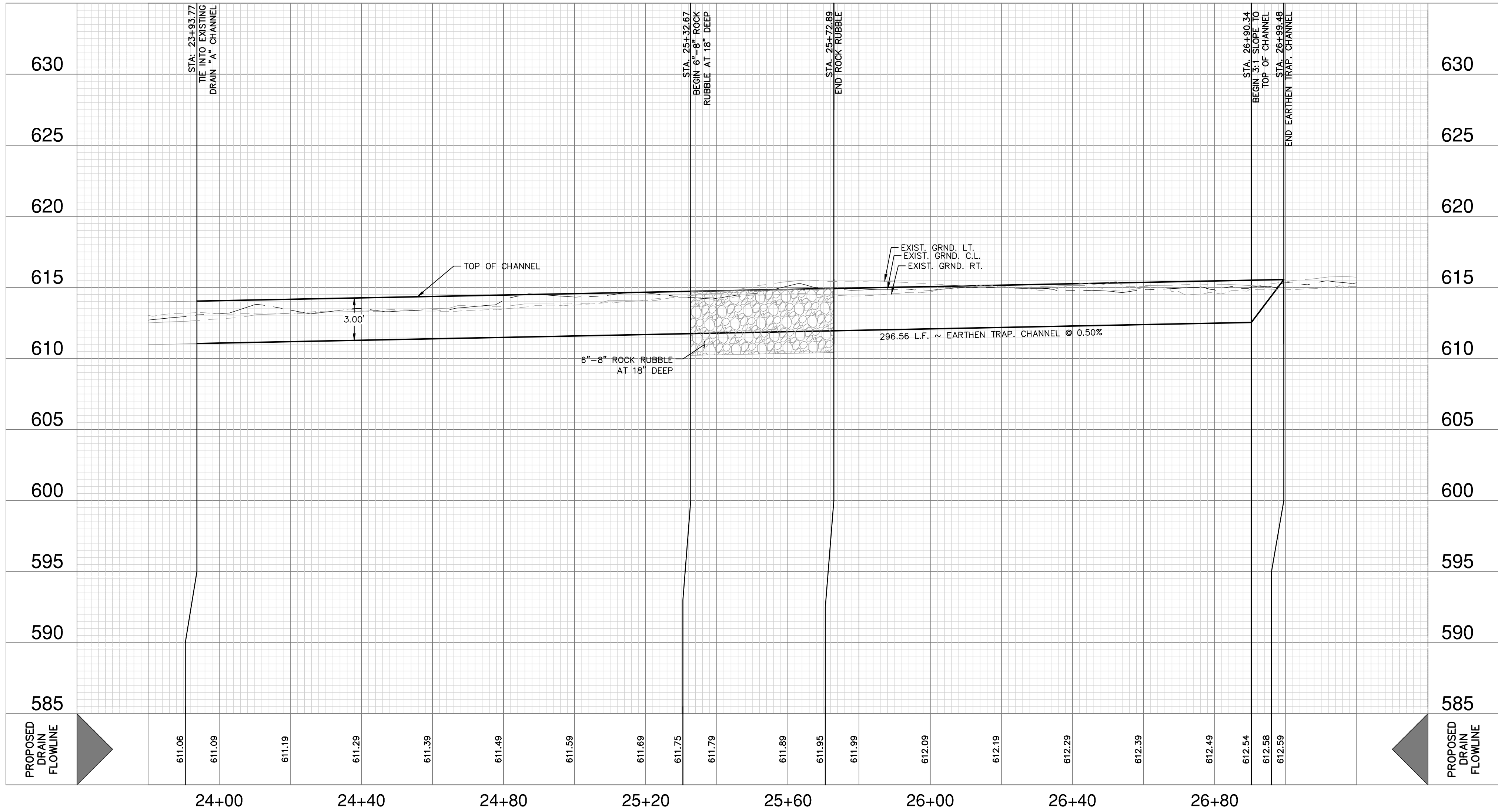


SECTION "A-A" EARTHEN TRAP. CHANNEL
NOT-TO-SCALE

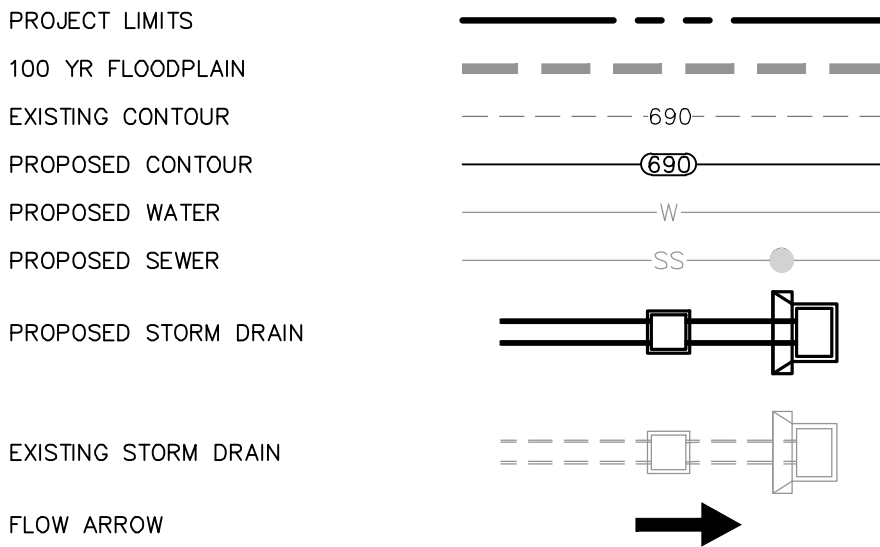


DRAIN "A"
STA. 23+99.30 TO END

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



DRAINAGE LEGEND



| HYDRAULIC CALCULATIONS EARTHEN CHANNEL STA. 23+99.30 TO 25+38.20 (SECTION A-A) | HYDRAULIC CALCULATIONS ROCK CHANNEL STA. 25+38.20 TO 25+78.41 (SECTION A-A) |
|---|--|
| Q25 = 46.00 | Q25 = 46.00 |
| Bw = 22' | Bw = 22' |
| n = 0.035 | n = 0.040 |
| S = 0.50' | S = 0.50' |
| D = 3.00' | D = 3.00' |
| dn = 0.79' | dn = 0.86' |
| V = 2.39 FPS | V = 2.18 FPS |

| HYDRAULIC CALCULATIONS EARTHEN CHANNEL STA. 25+78.41 TO 27+05.00 (SECTION A-A) |
|---|
| Q25 = 46.00 |
| Bw = 22' |
| n = 0.035 |
| S = 0.50' |
| D = 3.00' |
| dn = 0.79' |
| V = 2.39 FPS |

DRAINAGE & GRADING NOTES:

- A CITY OF SAN ANTONIO ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEKAR 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.
- 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.

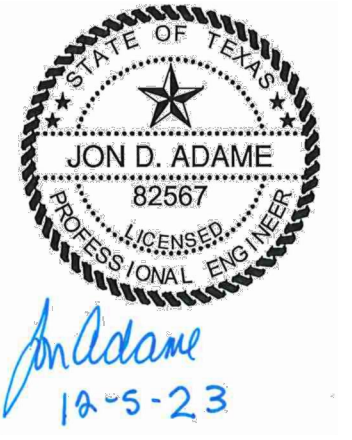
TRENCH EXCAVATION SAFETY PROTECTION:

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 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.

| DATE | |
|------|----------|
| NO. | REVISION |
| | |
| | |
| | |
| | |

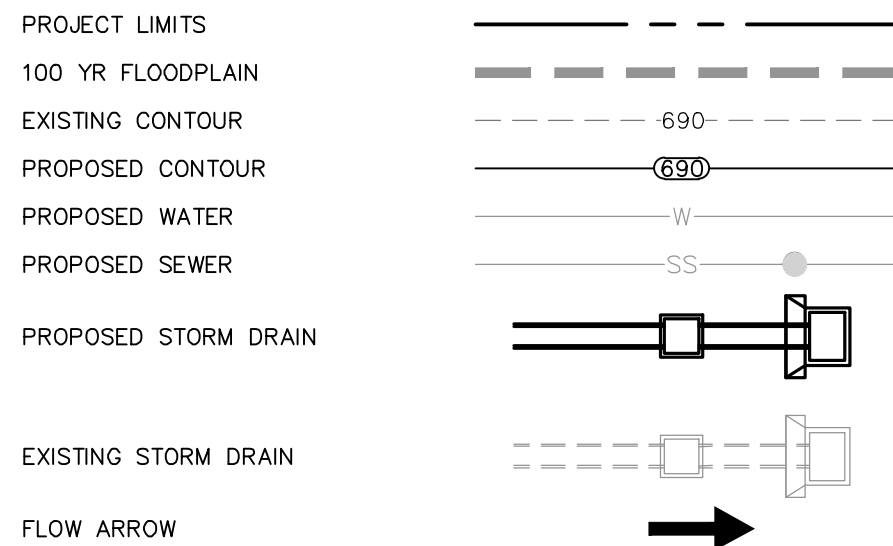
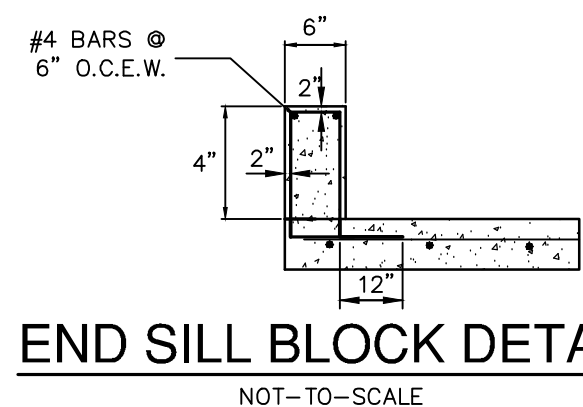
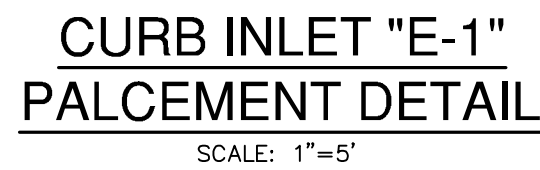


**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1008860

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
DRAIN A PLAN & PROFILE (STA. 23+99.30 TO END)

| | |
|----------|---------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | DECEMBER 2023 |
| DESIGNER | AA |
| CHECKED | VS |
| DRAWN | AA |
| SHEET | C1.01 |

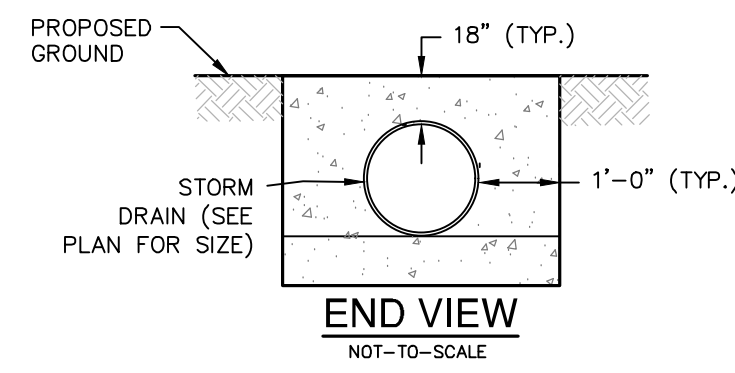
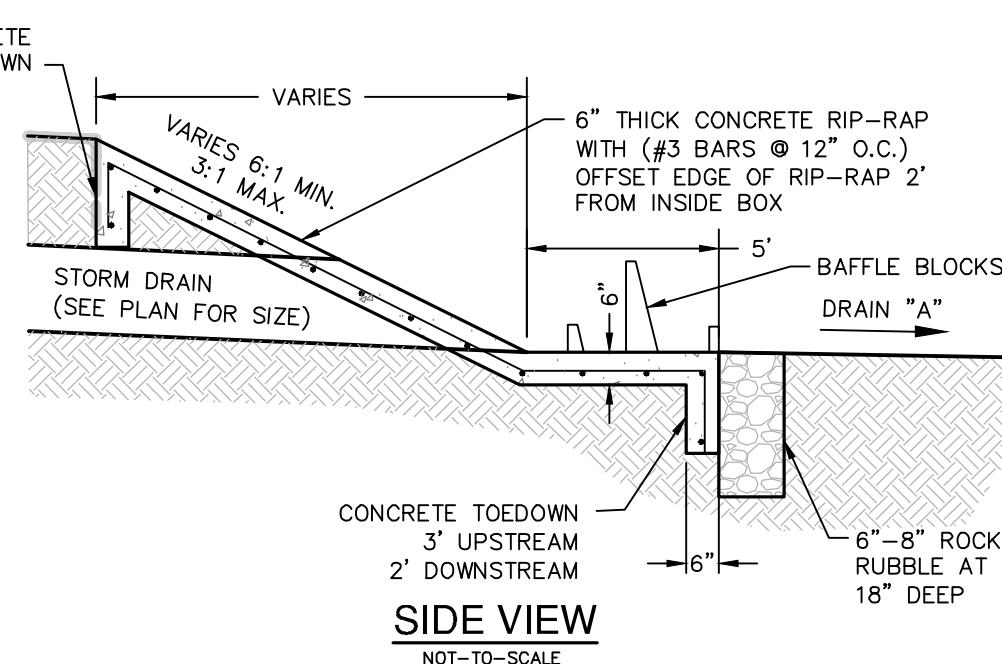
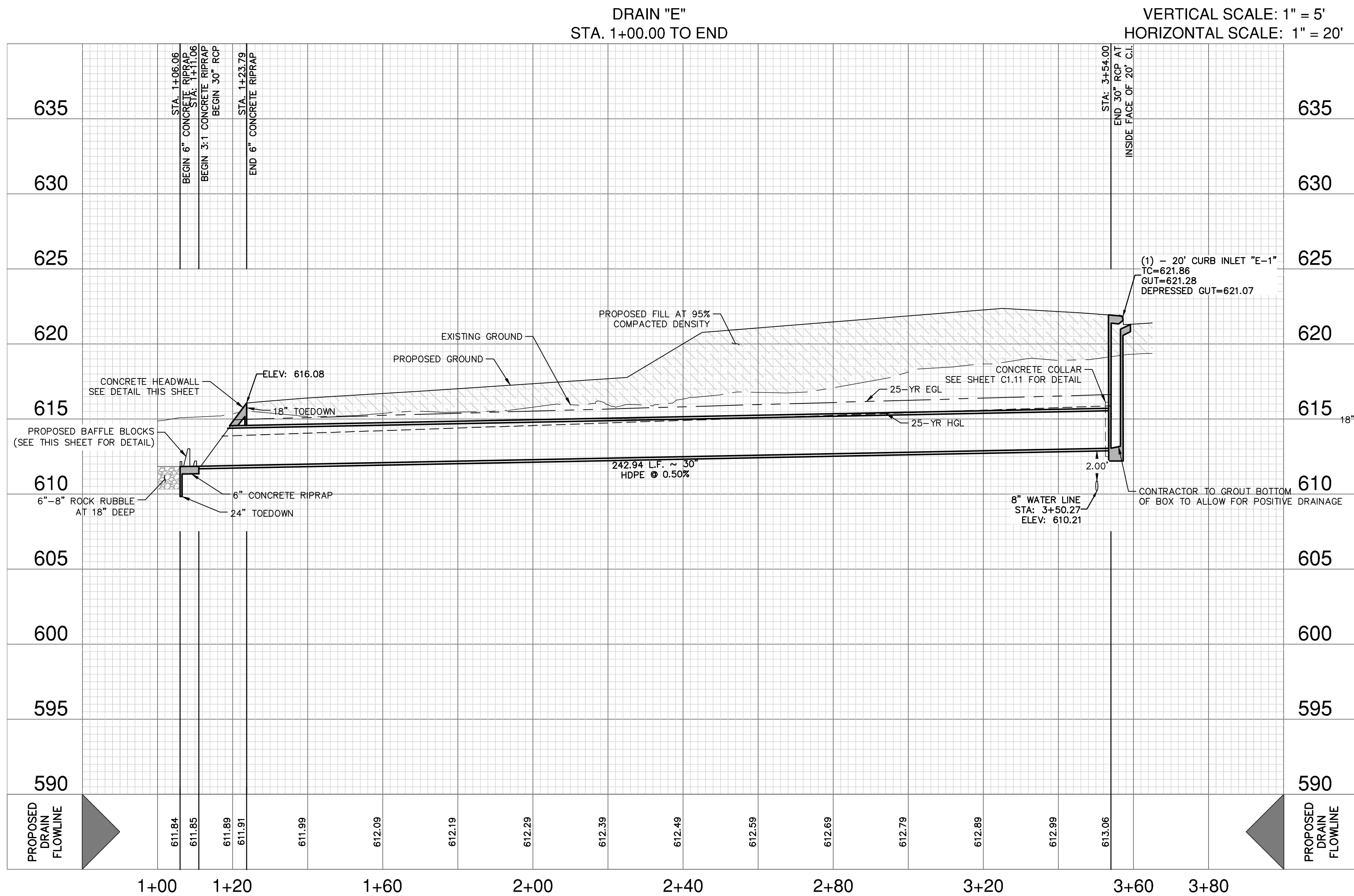
Q25 = 36.6 CFS
Bw = C X L X h^(3/2) (WER EQ.)
C = 3.087
h = 0.79 FT
C = $\frac{Q}{C \times h^{3/2}}$
Lcal = $\frac{36.6 \text{ CFS}}{(3.087)(0.79 \text{ FT})^{3/2}}$
Lcal = 16.89 FT
L = USE (1)-20 FT CURB INLET



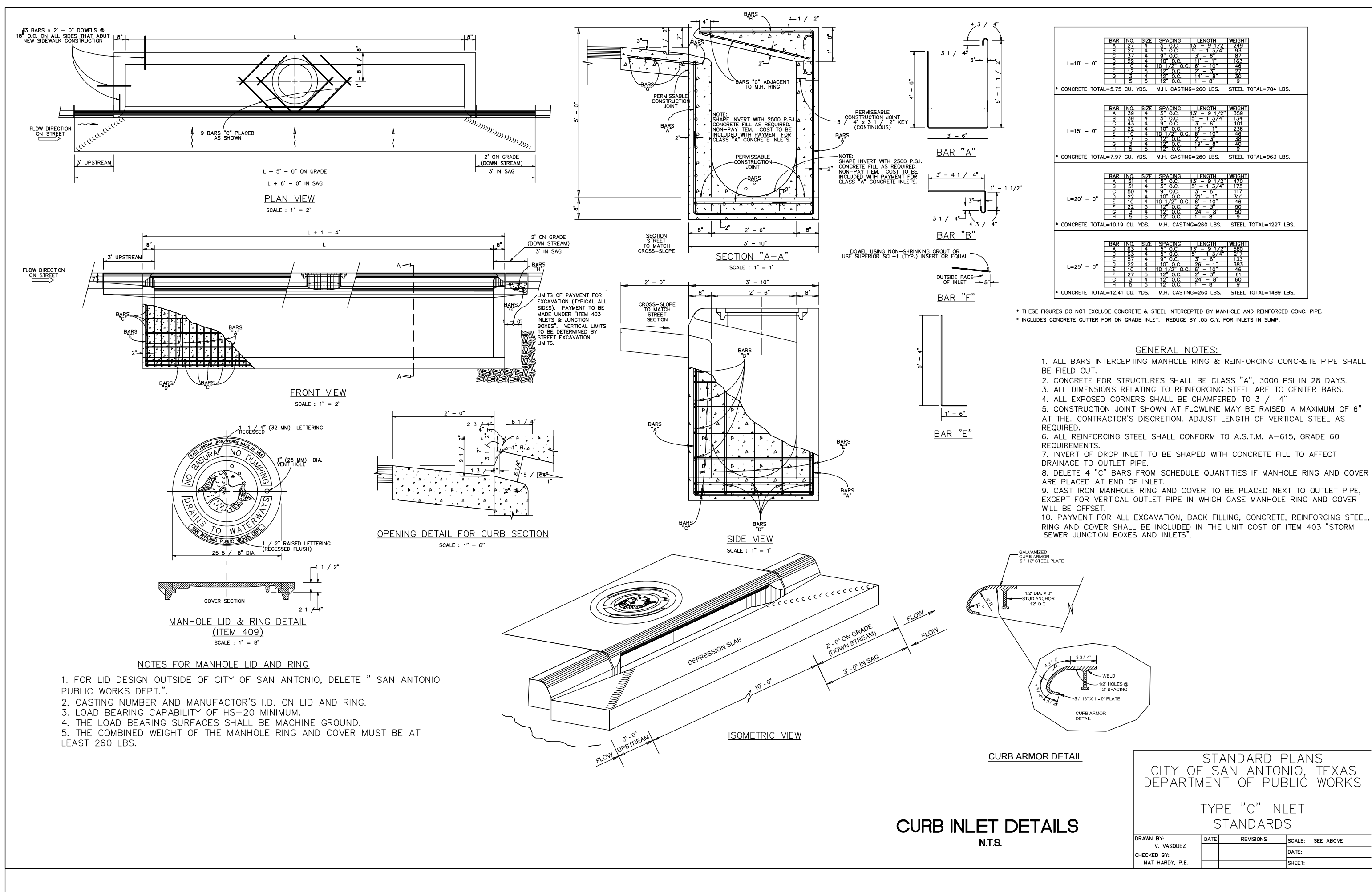
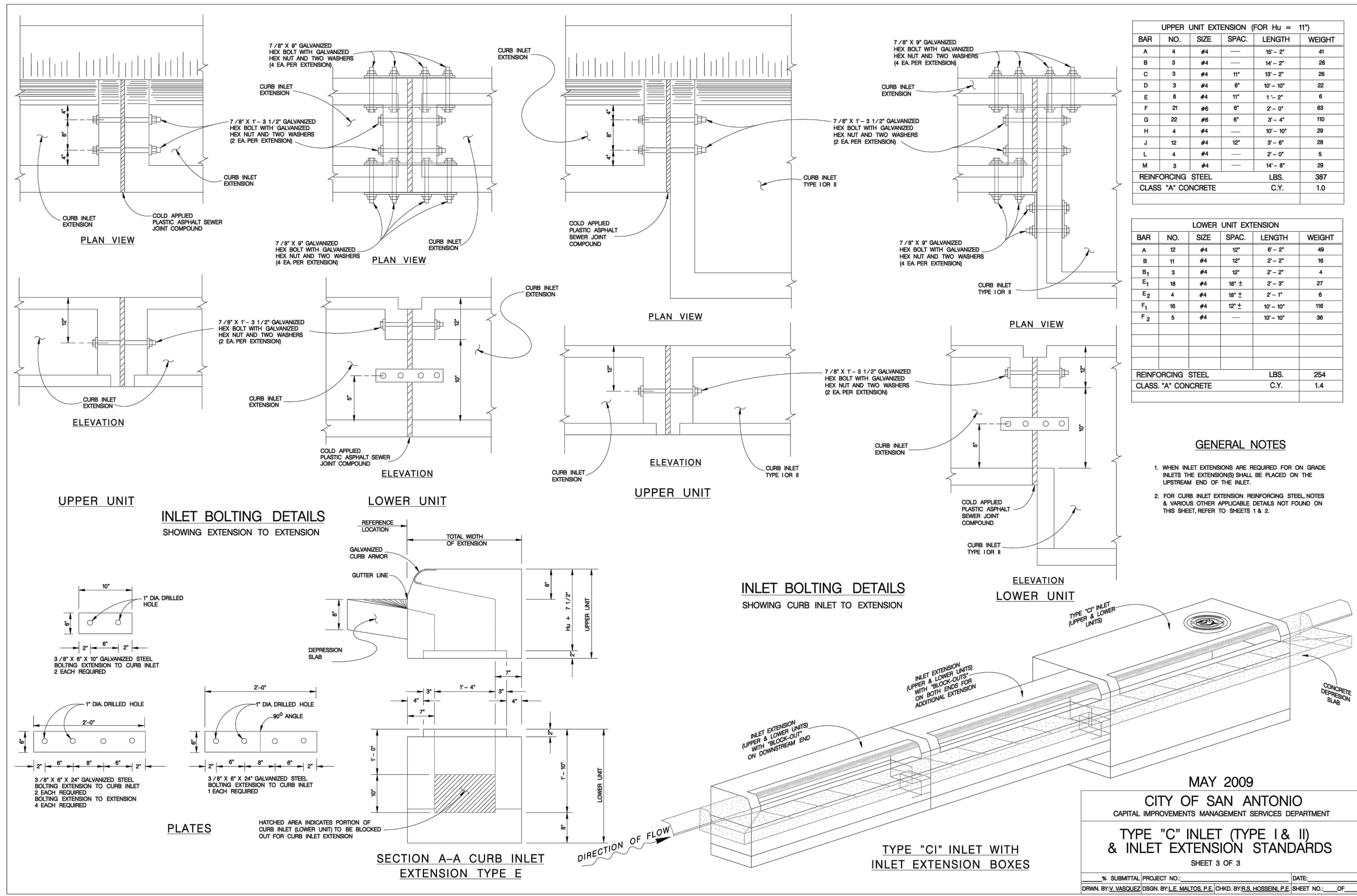
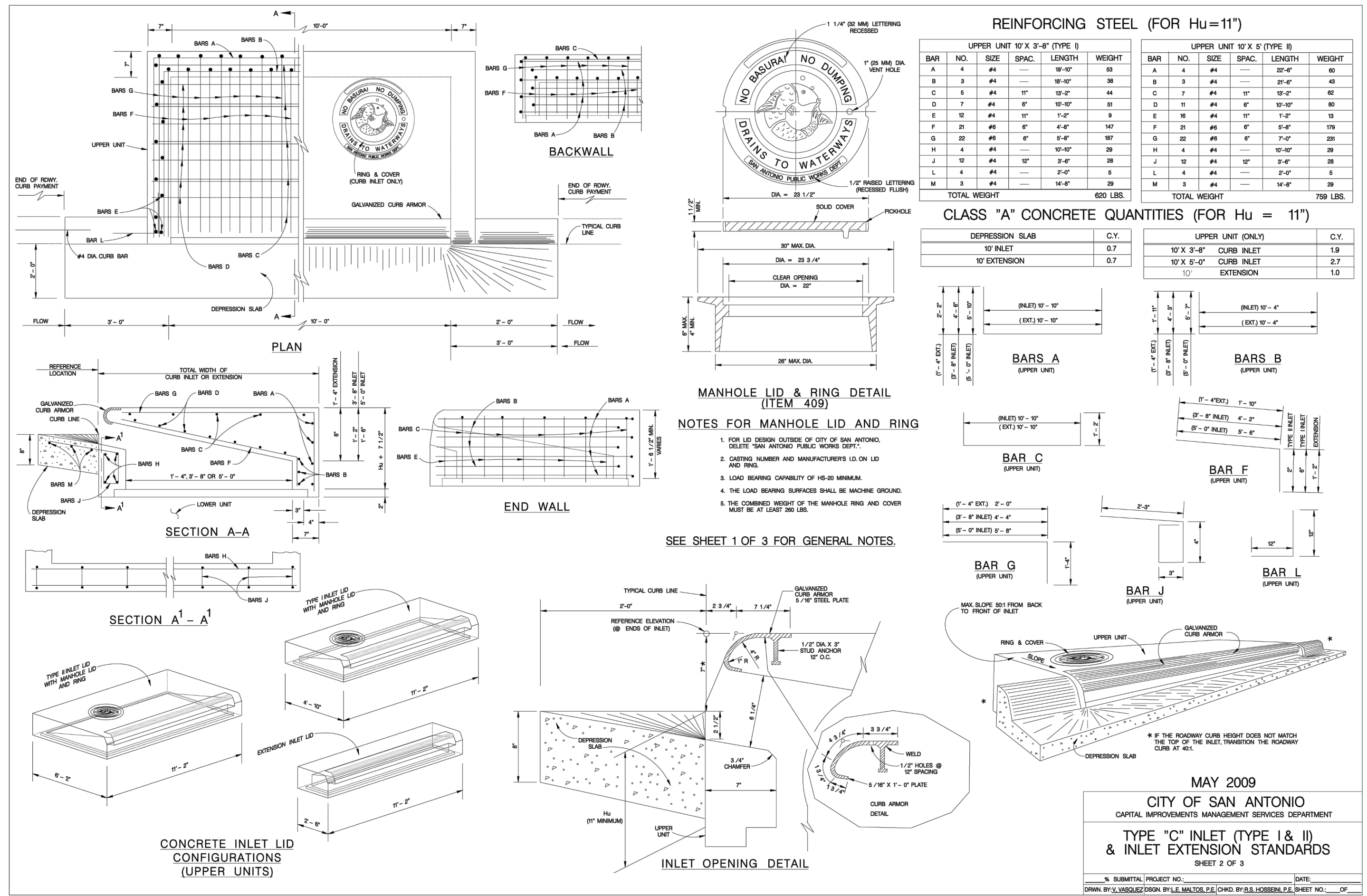
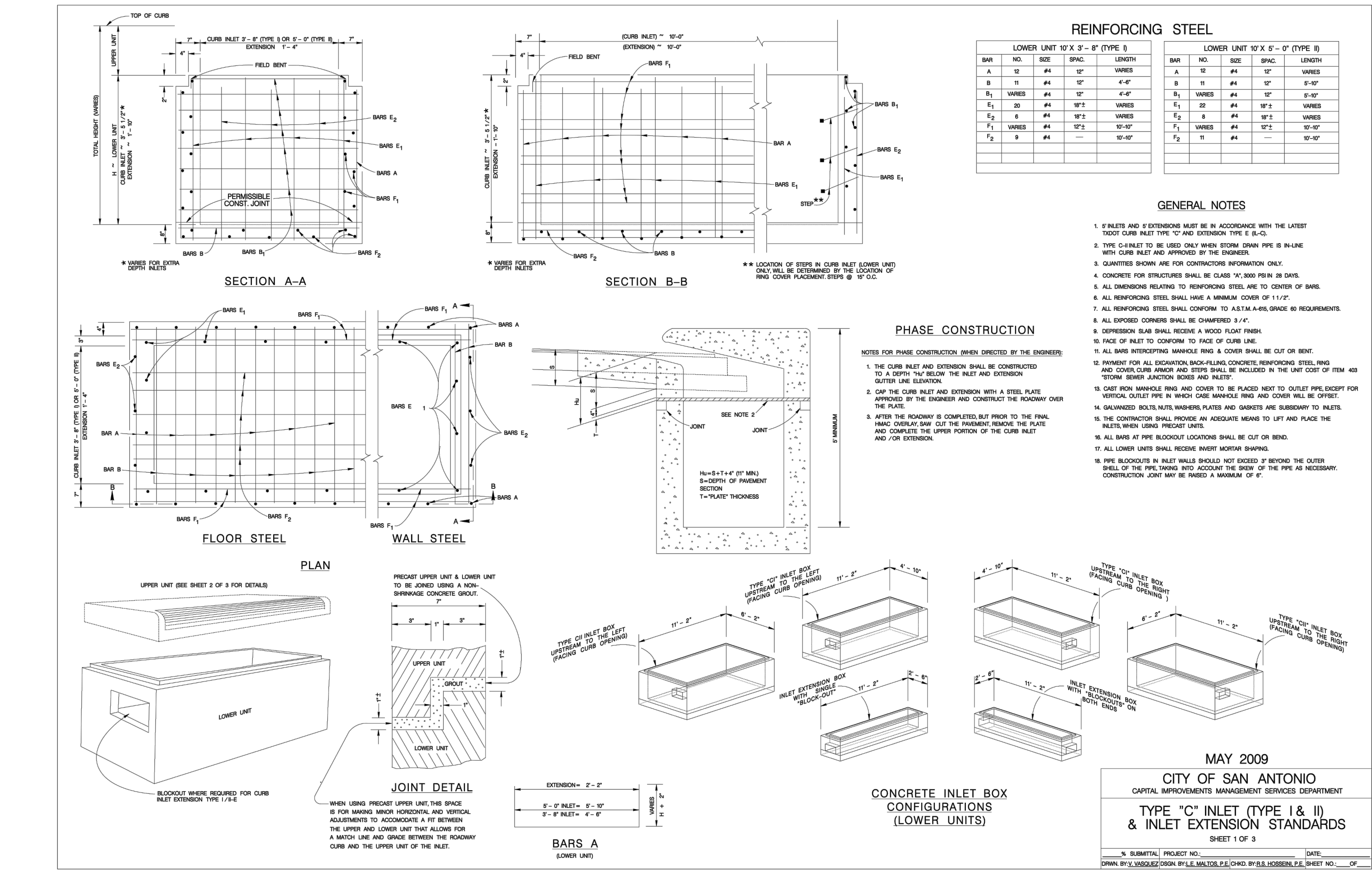
1. A CITY OF SAN ANTONIO ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY ROW. CONTRACTOR SHALL COORDINATE A TRAVEL ROUTE TO ALLOW ALL WORK WITHIN THE ROW. ADDITIONAL WARNING SIGNS MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAY ARE CONSTRUCTED.
2. THE CONTRACTOR WILL BE RESPONSIBLE FOR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

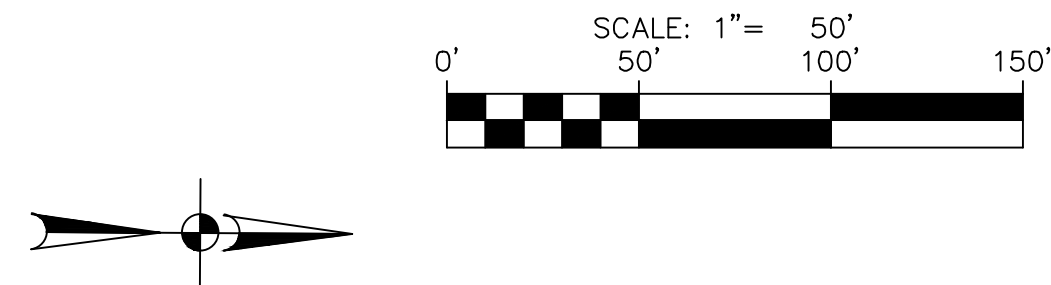
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY/EQUIPMENT CONSULTANT IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL/SAFETY/ EQUIPMENT RECORDS AND/OR DATA AND/OR INFORMATION AND/OR THIN SECTION PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S TRENCH EXCAVATION SAFETY PROTECTION SYSTEMS, PROGRAMS AND/OR PROCEDURES FOR THE PROJECT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR'S IMPLEMENTATION OF THESE SYSTEMS, PROGRAMS AND PROCEDURES SHALL BE ADEQUATE FOR ADEQUATELY PROTECTING SAFETY PROTECTION THAT COMPLY WITH AS 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 REGARDING THE SAFETY ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

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



DRAINAGE CONCRETE RIP
RAP DETAIL - DRAIN "E"





| | |
|---------------------------------------|--|
| PROJECT LIMITS | |
| MAINTAIN GUTTER | |
| EXISTING CONTOUR | |
| WHEELCHAIR RAMP | |
| CENTERLINE | |
| RADIUS POINT | |
| POINT OF CURVATURE | |
| POINT OF TANGENCY | |
| RETURN | |
| DRAINAGE FLOW ARROW | |
| TOP OF CURB SPOT ELEVATION | |
| PAVEMENT ELEVATION | |
| WASHOUT CROWN SECTION | |
| SIDEWALK (HOMEOWNER'S RESPONSIBILITY) | |
| SIDEWALK (DEVELOPER'S RESPONSIBILITY) | |
| DRIVEWAY | |

☐ A 10' ELEC., GAS, TELE., &
CA. T.V. EASEMENT

☐ B 4' SIDEWALK

☐ C 4' SIDEWALK (DEVELOPER RESPONSIBILITY)



SCALE: 1"=20'

1. A CITY OF SAN ANTONIO ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN CITY OF SAN ANTONIO ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. ADDITIONAL WARNING DEVICES MAY BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT THE-IN, IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
3. SIDEWALKS SHALL BE CONSTRUCTED 3'-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. ANY STRUCTURE OR VEGETATION AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE, OR STRUCTURE. THE LOCATION OF DRIVEWAY LOCATIONS IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (J)(6).
7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN. SIDEWALKS ARE NOT SHOWN ADJACENT TO ALL 900 SERIES STREETS. REFER TO SHEET C3.00 FOR LOCATIONS OF SIDEWALK CONSTRUCTION.
8. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.5 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LINE APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FINAL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.



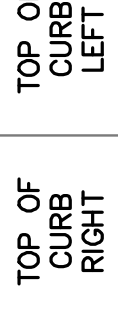
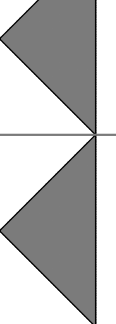
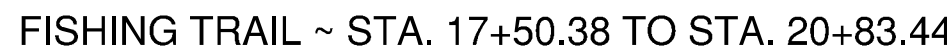
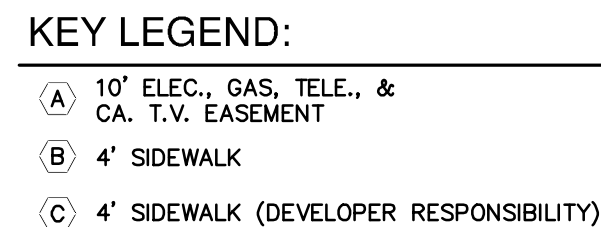
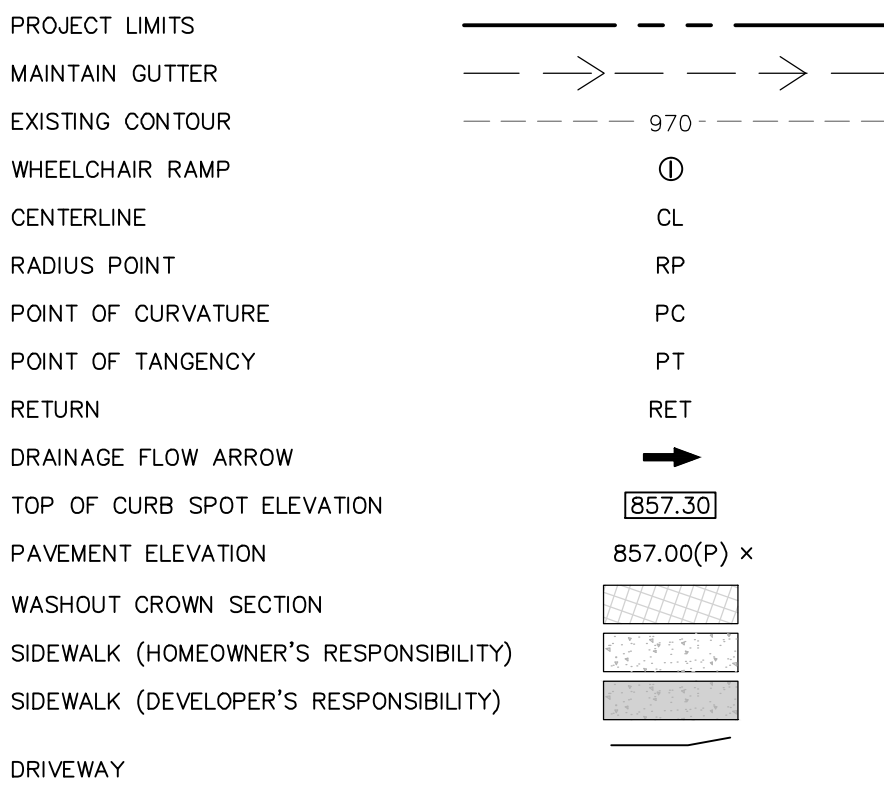
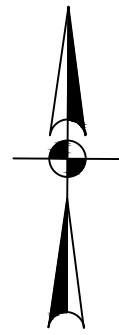
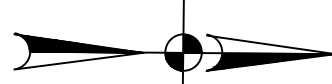
**PAPE-DAWSON
ENGINEERS**

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

BLUE GILL WAY ~ STA. 10+00.00 TO STA. 21+00.00
STREET PLAN & PROFILE

PLAT NO. 22-11800792
JOB NO. 11100-99
DATE MAY 2023
DESIGNER AA
CHECKED VS DRAWN GP
SHEET C2.00




- ## STREET NOTES:
1. A CITY OF SAN ANTONIO ROW PERMIT MUST BE OBTAINED BEFORE WORKING IN CITY OF SAN ANTONIO ROW. CONTRACTOR SHALL COORDINATE A TRAFFIC CONTROL PLAN FOR ALL WORK WITHIN THE ROW. THE TRAFFIC CONTROL PLAN SHOULD BE RECOMMENDED BY THE ENGINEER ONCE THE ROADWAYS ARE CONSTRUCTED.
 2. CONTRACTOR SHALL MATCH EXISTING PAVEMENT AT TIE-IN. IF EXISTING PAVEMENT ELEVATION DIFFERS SIGNIFICANTLY, CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONTINUING WORK.
 3. SIDEWALKS SHALL BE CONSTRUCTED 3-FT FROM THE BACK OF CURB FOR ALL LOCATIONS WHERE THE SIDEWALK IS SHOWN OFFSET. REFER TO STREET DETAIL SHEET FOR SIDEWALK AND RAMP DETAILS.
 4. NO PERMANENT STRUCTURES HIGHER THAN 3 FEET, AND LOWER THAN 8 FEET ABOVE THE PAVEMENT, INCLUDING STRUCTURES, WALLS, FENCES, AND VEGETATION, SHALL BE CONSTRUCTED OR ALLOWED WITHIN THE CLEAR VISION EASEMENT. CONTRACTOR SHALL CLEAR AREAS WITHIN CLEAR VISION EASEMENTS SUCH THAT THE ELEVATION WITHIN THE CLEAR VISION EASEMENT IS NOT HIGHER THAN 3 FEET ABOVE THE ADJACENT TOP OF PAVEMENT.
 5. DRIVEWAYS SHOWN ON THIS PLAN ARE FOR THE SOLE PURPOSE OF INDICATING A POTENTIAL CONFLICT WITH CURB RAMP, DRAINAGE, OR STRUCTURE. FOR OTHER CONFLICT, DRIVEWAY LOCATION IS SUBJECT TO CHANGE BASED ON HOME SELECTION AND FINAL LOT DESIGN.
 6. CHANGES IN THE SIDEWALK LOCATION FOR A MAXIMUM LINEAR DISTANCE OF TWO HUNDRED (200) FEET ARE PERMITTED TO BE APPROVED BY THE FIELD INSPECTOR WITHOUT AMENDING THE STREET PLAN OR UTILITY LAYOUT PER UDC SECTION 35-506 (O)(6).
 7. THE CONSTRUCTION OF SIDEWALKS ADJACENT TO ALL 900 SERIES LOTS WILL BE THE RESPONSIBILITY OF THE DEVELOPER AS SHOWN ON THE OVERALL SIGNAGE PLAN. SIDEWALKS ARE NOT SHOWN ADJACENT TO ALL PRIVATE STREETS. REFER TO SHEET C3-07 FOR LOCATIONS OF SIDEWALK CONSTRUCTION.
 8. FILL MATERIAL SHOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.5 AND A PI MAXIMUM OF 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LINE APPLICATION RATE SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. A MINIMUM OF 10% SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
 BLUE GILL WAY ~ STA. 21+00.00 TO STA. 21+50.38
 FISHING TRAIL ~ STA. 17+50.38 TO STA. 20+00.00
 STREET PLAN & PROFILE

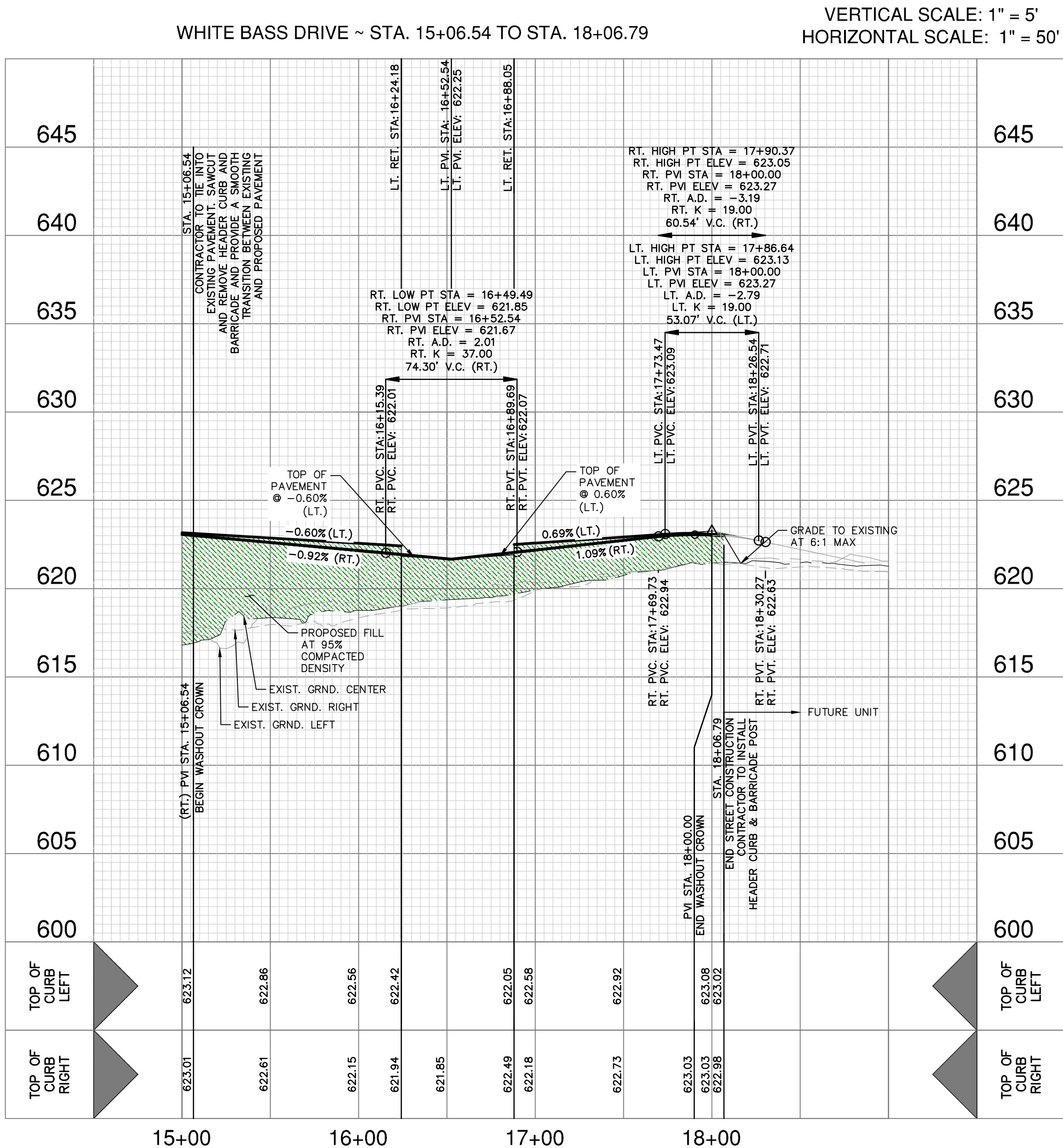
PLAT NO. 22-11800792
JOB NO. 11100-99
DATE MAY 2023
DESIGNER AA
CHECKED VS DRAWN GP
SHEET C2.01

**PAPE-DAWSON
ENGINEERS**

[illegible]

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File: P:\1100393\Design\Drawings\STA-1510039.dwg

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STREET LEGEND

| | |
|---------------------------------------|-------------|
| PROJECT LIMITS | --- |
| MAINTAIN GUTTER | → |
| EXISTING CONTOUR | --- |
| WHEELCHAIR RAMP | ① |
| CENTERLINE | CL |
| RADIUS POINT | RP |
| POINT OF CURVATURE | PC |
| POINT OF TANGENCY | PT |
| RETURN | RET |
| DRAINAGE FLOW ARROW | → |
| TOP OF CURB SPOT ELEVATION | 857.30 |
| PAVEMENT ELEVATION | 857.00(P) x |
| WASHOUT CROWN SECTION | |
| SIDEWALK (HOMEOWNER'S RESPONSIBILITY) | |
| SIDEWALK (DEVELOPER'S RESPONSIBILITY) | |
| DRIVEWAY | |

KEY LEGEND:

- ① 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT
- ② 4' SIDEWALK
- ③ 4' SIDEWALK (DEVELOPER RESPONSIBILITY)

STREET NOTES:

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PAPE-DAWSON
ENGINEERS

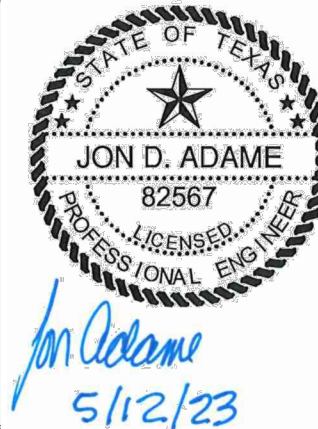
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #170 | TEXAS SURVEYING FIRM #1008800

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

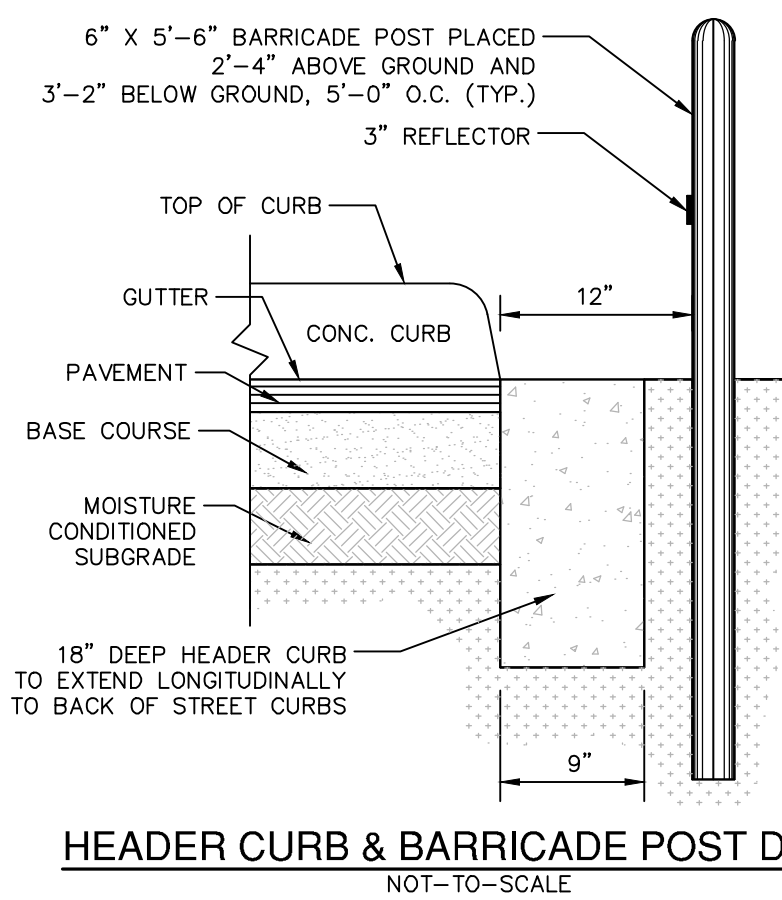
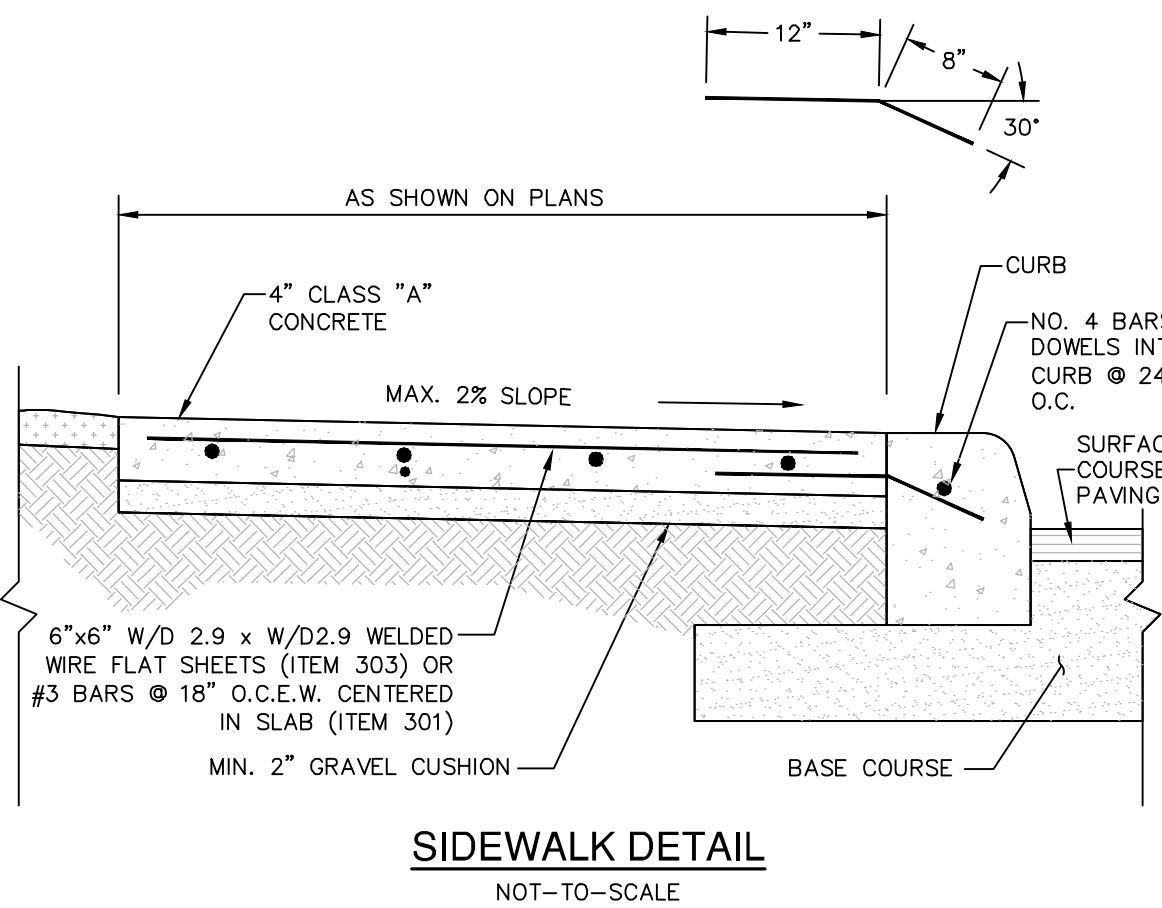
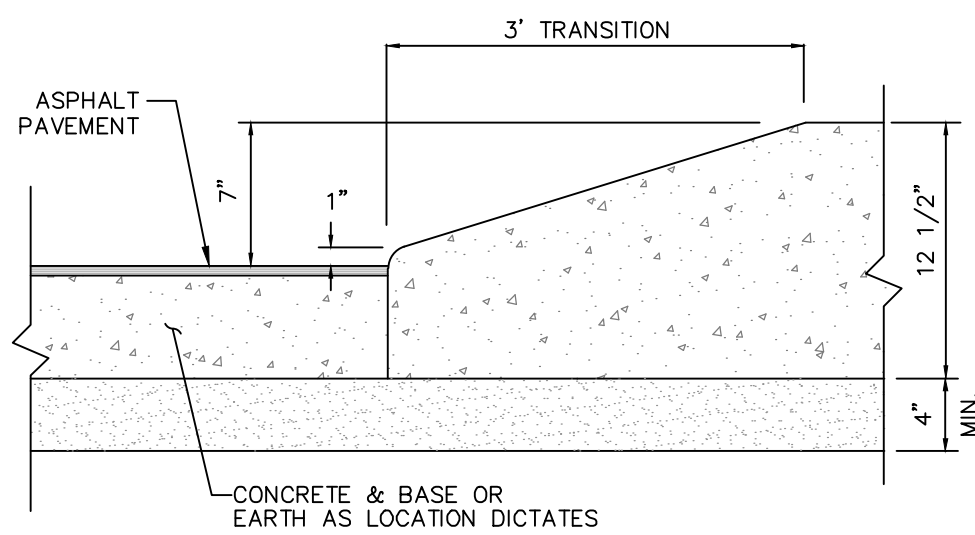
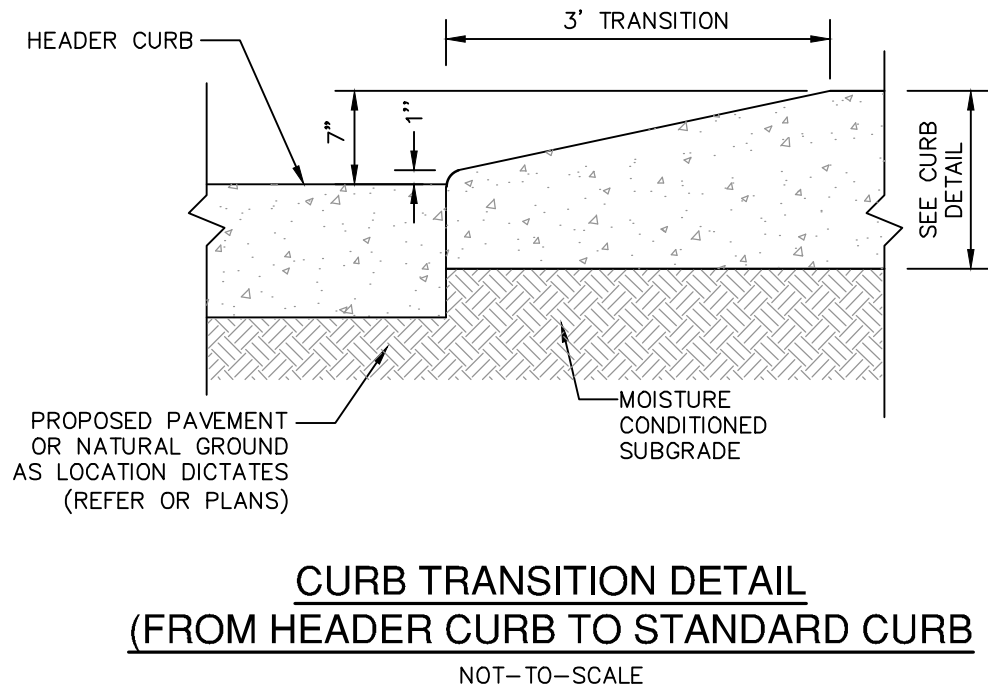
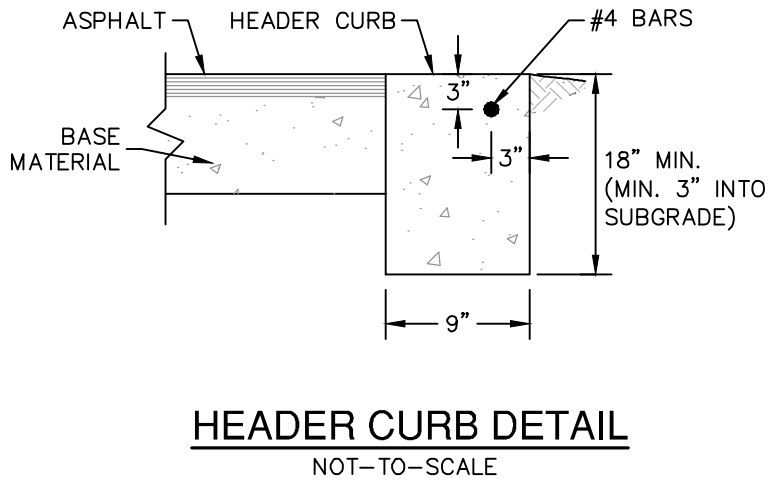
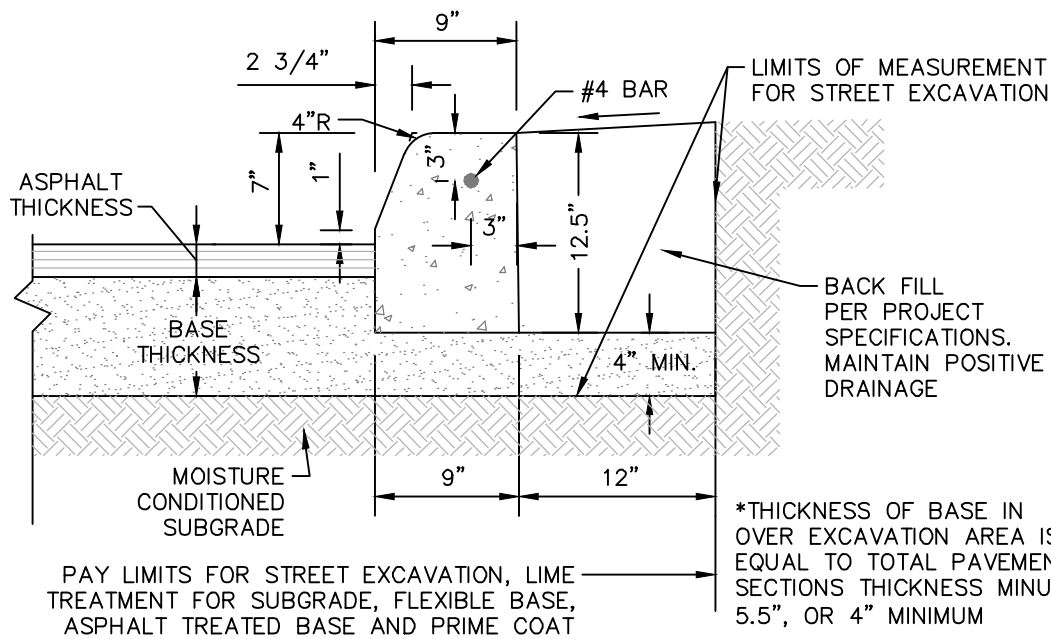
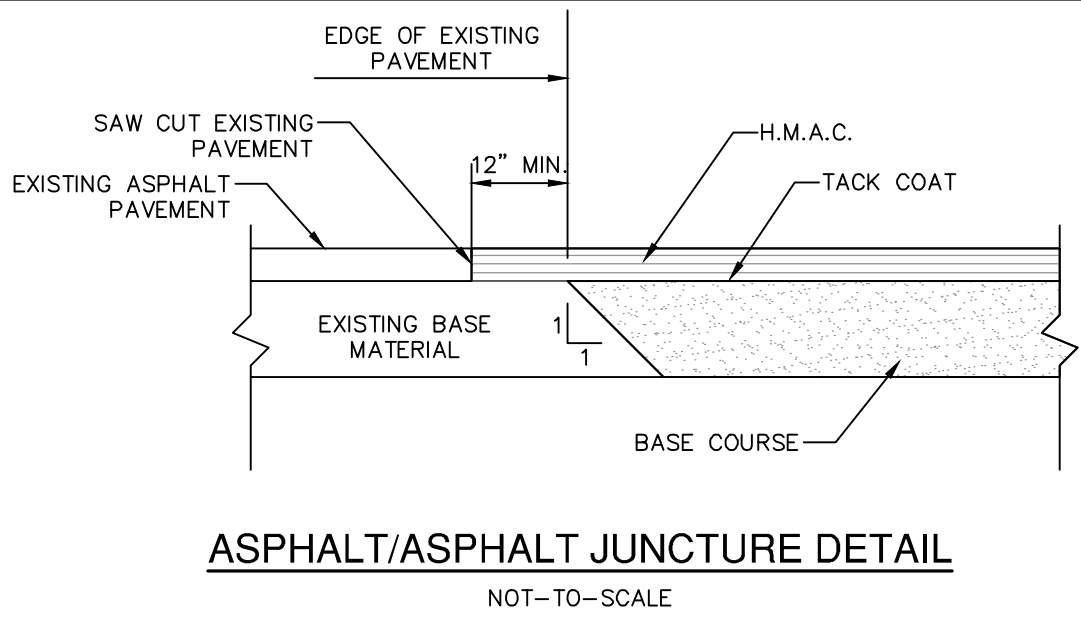
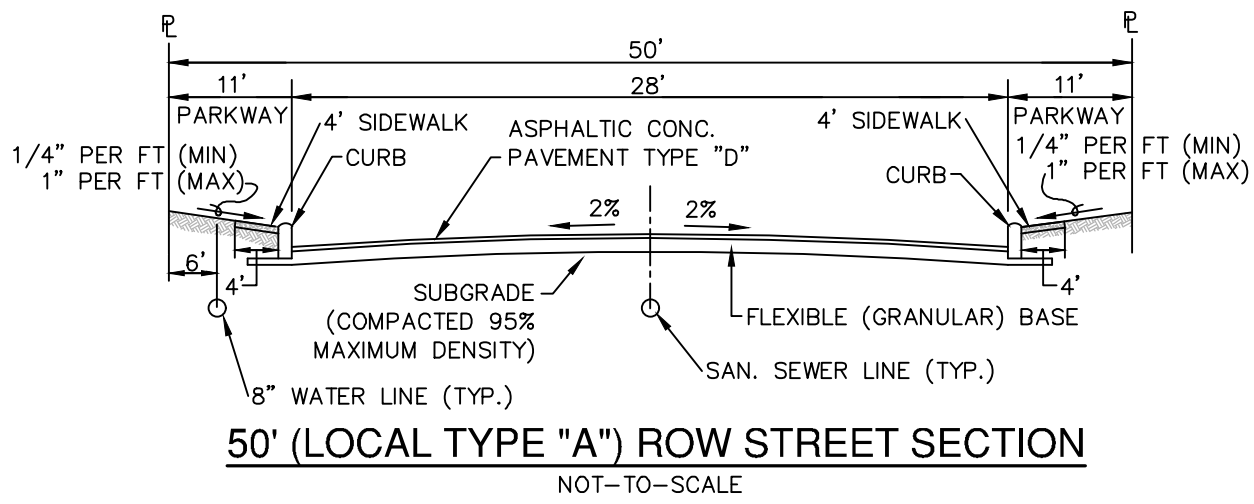
WHITE BASS DRIVE ~ STA. 15+06.54 TO STA. 18+06.79
STREET PLAN & PROFILE

PLAT NO. 22-11800792
JOB NO. 11100-99
DATE MAY 2023
DESIGNER AA
CHECKED VS DRAWN GP
SHEET C2.02

| NO. | REVISION | DATE |
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| PAVEMENT SECTION DETAIL | | | | | | | | |
|-------------------------|----------------------|---------------|---------------|------------------------|---------------------|----------------------------|-----|-------------------|
| STREET NAME | STATION | TYPE "D" HMAC | TYPE "C" HMAC | CRUSHED LIMESTONE BASE | STABILIZED SUBGRADE | GEOGRID (TENSAR TRIAX TX5) | CBR | STRUCTURAL NUMBER |
| BLUE GILL WAY | 10+00.00 TO 23+12.12 | 2" | — | 11" | 6* | NO | 4.0 | 2.42 |
| FISHING TRAIL | 17+50.38 TO 20+83.44 | 2" | — | 11" | 6* | NO | 4.0 | 2.42 |
| WHITE BASS DRIVE | 15+06.54 TO 18+06.79 | 2" | — | 11" | 6* | NO | 4.0 | 2.42 |



GENERAL NOTES:

- CONTRACTOR SHALL REFERENCE THE PROJECT PAVEMENT DESIGN REPORT PREPARED BY **ROCK ENGINEERING** DATED **AUGUST 24, 2022**.
- CONTRACTOR SHALL RETAIN A GEOTECHNICAL ENGINEER TO VERIFY THE SUB GRADE CONDITION PRIOR TO PLACING ANY BASE MATERIAL. GEOTECHNICAL ENGINEER SHALL DETERMINE THE SUB GRADE CONDITION AND IF LIME STABILIZATION IS REQUIRED.
- GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE.
- THE FLEXIBLE BASE COURSE SHOULD BE CRUSHED LIMESTONE CONFORMING TO TXDOT STANDARD SPECIFICATIONS, ITEM 247, TYPE A, GRADES 1 OR 2.
- THE MOISTURE CONTENT OF THE FILL SHOULD BE MAINTAINED WITHIN THE RANGE OF OPTIMUM WATER CONTENT TO 3 PERCENTAGE POINTS ABOVE THE OPTIMUM WATER CONTENT UNTIL PERMANENTLY COVERED.
- IN THE EVENT THAT THE CLAY FILL USED IS DIFFERENT THAN THE EXISTING SUBGRADE, THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT COULD BE INVALIDATED AND THE DESIGN ENGINEER MUST BE CONSULTED TO DETERMINE IF ADDITIONAL CBR TESTING AND THICKER PAVEMENT SECTIONS ARE REQUIRED.
- WHERE PAVEMENT SUBGRADE IS LOCATED WITHIN 2- FEET OF THE EXISTING GROUND SURFACE (STRATUM 1 CLAYS), MOISTURE CONDITIONED SUBGRADE WILL BE REQUIRED. GEOTECHNICAL ENGINEER SHOULD VERIFY THE STREET SUBGRADE AT THE TIME OF CONSTRUCTION PRIOR TO PLACEMENT OF AGGREGATE BASE TO DETERMINE WHERE THE MOISTURE CONDITIONED SUBGRADE IS NEEDED. REFERENCE GEOTECHNICAL ENGINEERING REPORT FOR MORE INFORMATION.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL MATERIAL TESTING WITH THE PROJECT GEOTECHNICAL ENGINEER. TESTING SHALL BE PAID FOR BY THE OWNER.
- FILL MATERIAL HOULD BE NATIVE ON-SITE MATERIAL, FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 4 AND A PI WITHIN RANGE OF 5 AND 20. THE GRAVEL SIZE SHOULD NOT EXCEED 3 INCHES IN DIAMETER. LIME OR CEMENT APPLICATION RATES SHOULD BE RE-EVALUATED FOR THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES. CONTRACTOR TO VERIFY EXACT SPECIFICATIONS WITH PROJECT GEOTECHNICAL ENGINEERING REPORT.
- A CITY OF SAN ANTONIO PERMIT MUST BE OBTAINED BEFORE WORKING IN THE CITY OF SAN ANTONIO 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.

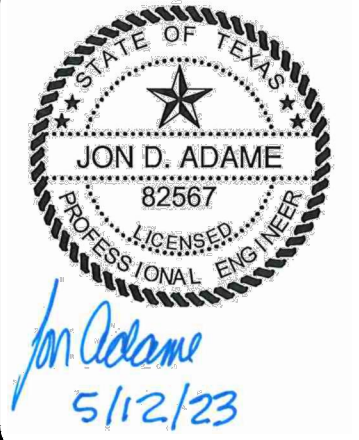
STREET SUBGRADE NOTES:

- IF THE STREET SUBGRADE PLASTICITY INDEX VALUE IS GREATER THAN 20, SUBGRADE STABILIZATION IS NEEDED AS PER CITY OF SAN ANTONIO REQUIREMENTS.
- IF THE SUBGRADE PLASTICITY INDEX VALUE IS 20 OR LESS, SUBGRADE STABILIZATION IS NOT NEEDED. THE SUBGRADE SHOULD BE MOISTURE CONDITIONED (COMPACTED TO A MINIMUM OF 95 PERCENT OF THE MAXIMUM DRY DENSITY AT A MINIMUM MOISTURE CONTENT OF OPTIMUM PLUS 2 PERCENT (TEX114E)).
- THE SUBGRADE SHOULD BE STABILIZED USING 5 PERCENT LIME TO A DEPTH OF 6 INCHES AS NOTED ABOVE.
- THE SUBGRADE SOILS SHOULD BE TESTED FOR SOIL SULFATE CONTENT PRIOR TO STABILIZATION. IF THE SOIL SULFATE CONTENT IS HIGH, AN ALTERNATE PROCEDURE / RECOMMENDATION WILL BE NEEDED.
- LIME APPLICATION RATE OF 27.0 LBS PER SQ YARD FOR 6 INCH DEPTH OF STABILIZATION IS RECOMMENDED.
- APPROVED FILL MATERIAL SHOULD BE USED TO RAISE THE GRADE. THE FILL SHOULD BE FREE OF DELETERIOUS MATERIAL WITH A MINIMUM CBR VALUE OF 2.5. LIME APPLICATION RATES SHOULD BE RE-EVALUATED AND TESTED FOR SULFATE CONTENT PRIOR TO USE OF THE FILL MATERIAL. THE MATERIAL SHOULD BE PLACED AS PER APPLICABLE CITY OR COUNTY GUIDELINES.
- THE SUBGRADE SHOULD BE PROOF ROLLED TO IDENTIFY SOFT AREAS BEFORE STABILIZATION.

LIME NOTES:

- FOR LIME STABILIZATION CONSTRUCTION VERIFICATION THE FOLLOWING SHALL BE CONDUCTED ON THE FIELD:
- AFTER INITIAL MIXING THE SOIL-LIME MIXTURE SHALL MELLOW FOR A PERIOD OF TWO TO THREE (2-3) DAYS. MAINTAIN MOISTURE DURING MELLOWING.
 - AFTER MELLOWING AND FINAL MIXING, THE PULVERIZATION SHALL BE CHECKED USING THE FOLLOWING CRITERIA (REMOVE NON-SLAKING AGGREGATES RETAINED ON THE 3/4 INCH SIEVE FROM THE SAMPLE):
 - MINIMUM PASSING 1 1/2" SIEVE 100
 - MINIMUM PASSING 3/4" SIEVE 85
 - MINIMUM PASSING NO. 4 SIEVE 60
 - SAMPLE SOIL-LIME MIXTURE FOR DETERMINATION OF MAXIMUM DRY DENSITY (MDD). IN THE LABORATORY, MOLD SPECIMENS TO 95% OF MDD AT OPTIMUM MOISTURE CONTENT AND VERIFY UCS TO BE AT LEAST 160 PSI IN ACCORDANCE WITH PROCEDURE OUTLINED IN THE BEXAR COUNTY FLEXIBLE PAVEMENT DESIGN CRITERIA GUIDE FOR MIXTURE DESIGN.
 - COMPACT AND CHECK FIELD DENSITY (MINIMUM OF 95% OF MDD REQUIRED).
 - CURE FOR AN ADDITIONAL 2 TO 5 DAYS (TOTAL MELLOWING AND CURING TIME SHOULD TOTAL AT LEAST 5 DAYS).
 - VERIFY DEPTH OF LIME STABILIZED LAYER TO DEPTH AS NOTED ON PLAN TO WITHIN +/- 1.0 INCH.

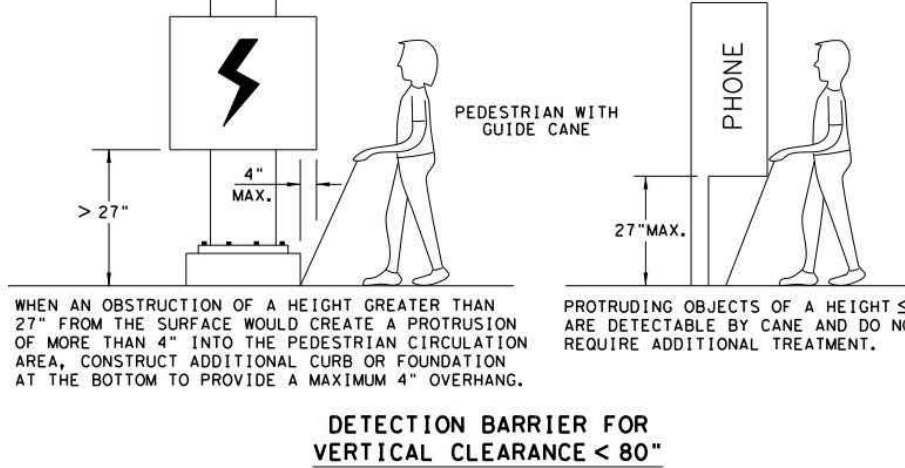
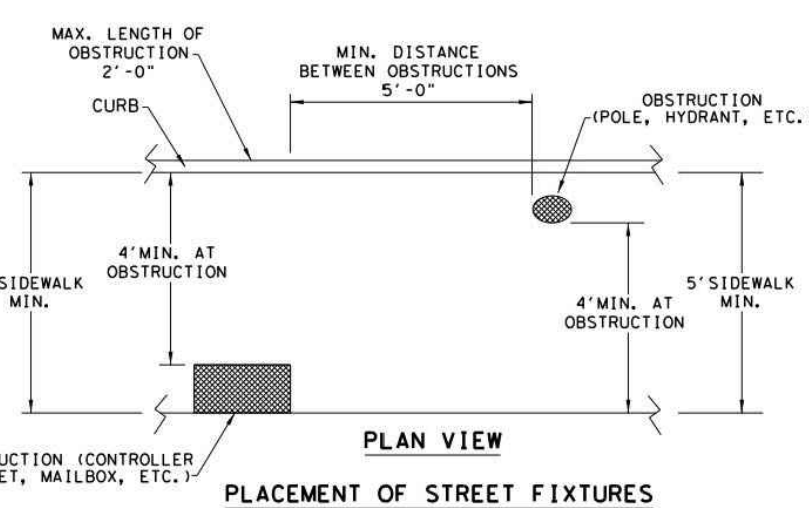
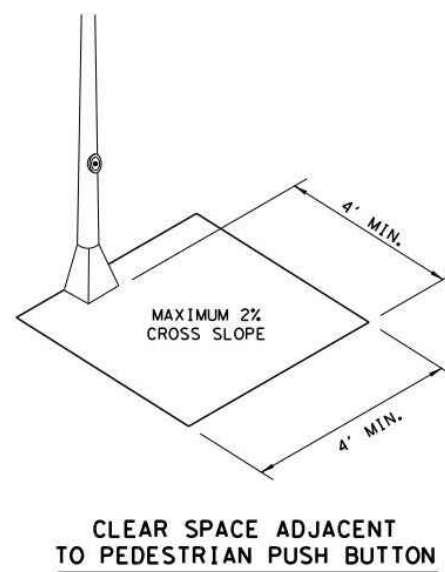
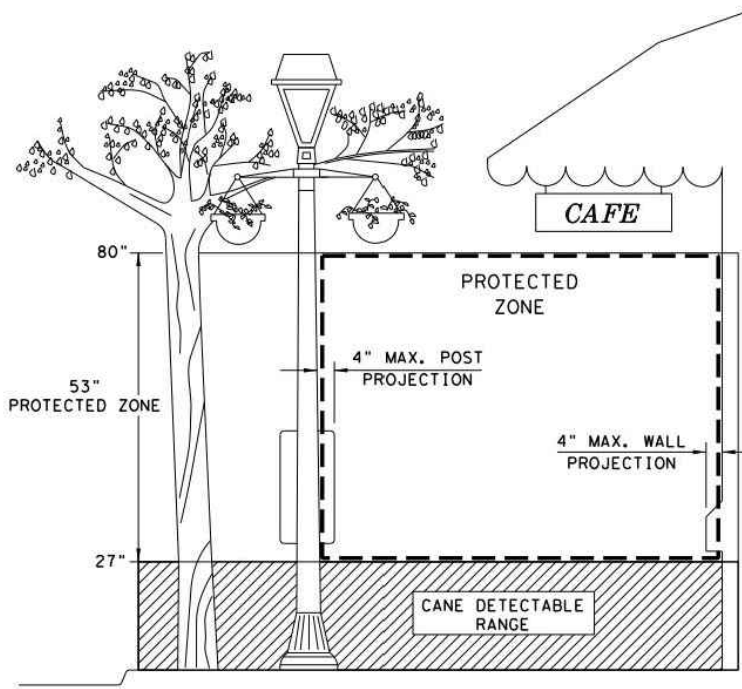
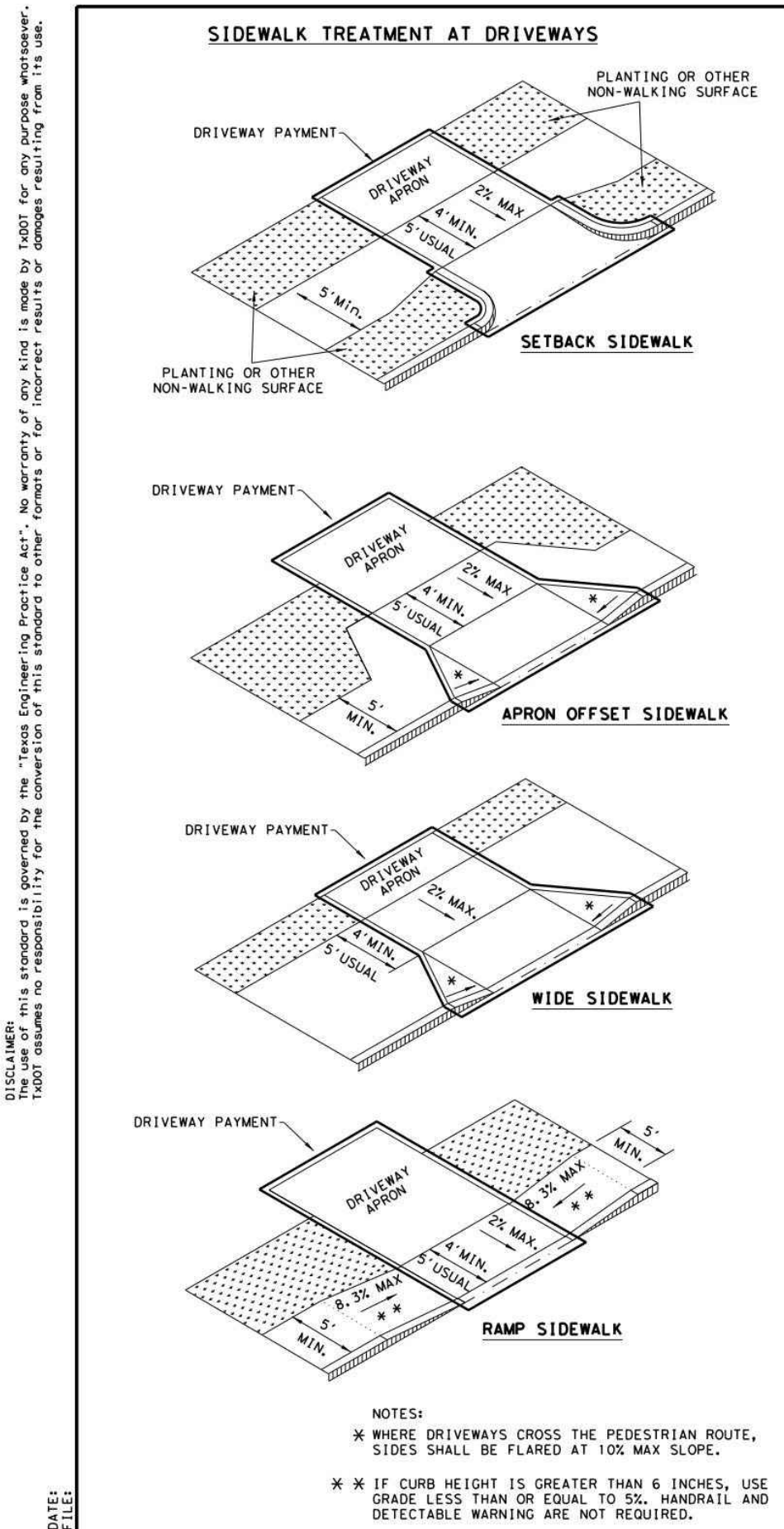
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PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #170 | TEXAS SURVEYING FIRM #10028600

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
STREET DETAILS

| | |
|----------|-------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | MAY 2023 |
| DESIGNER | AA |
| CHECKED | VS |
| DRAWN | GP |
| SHEET | C2.10 |

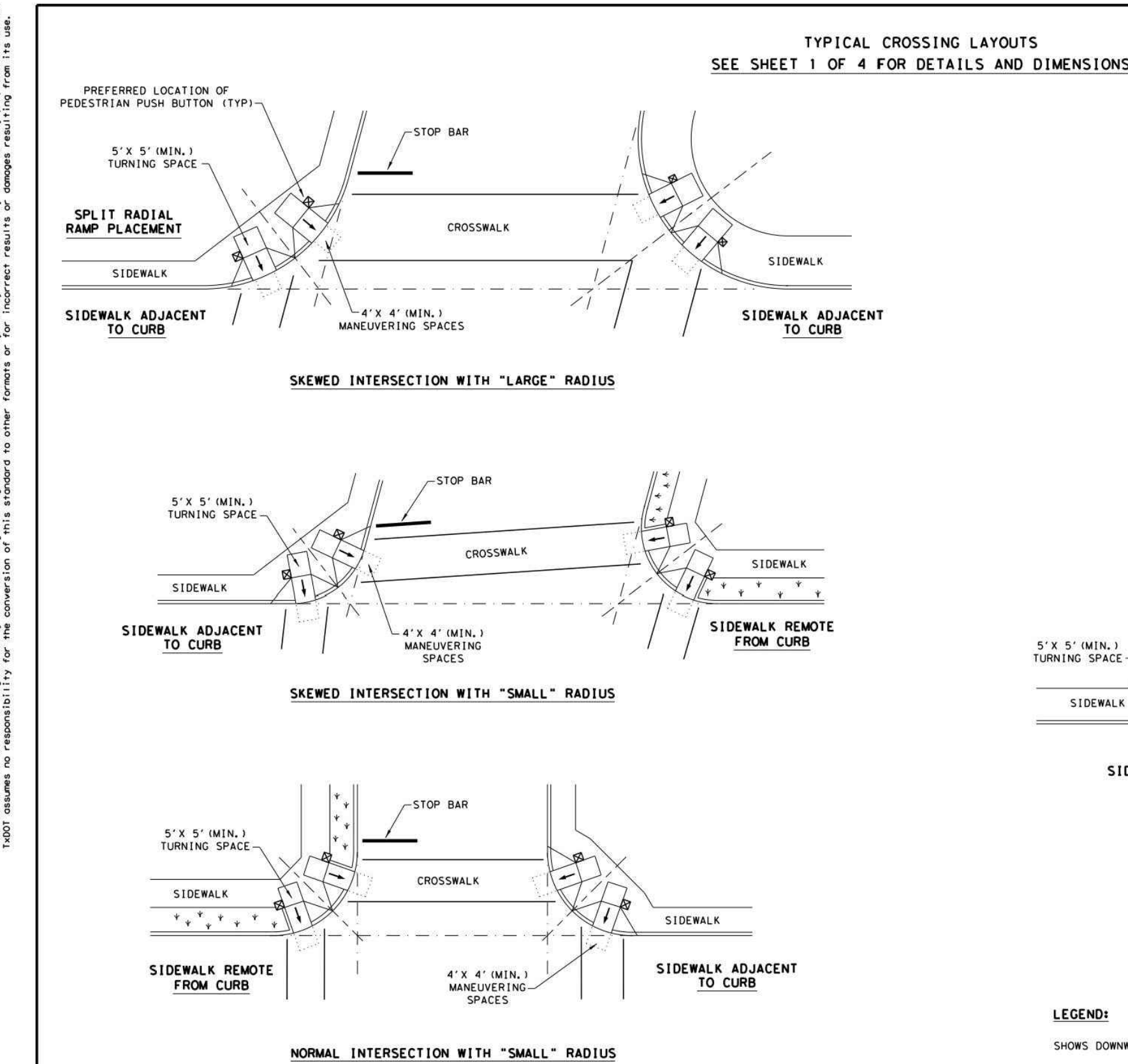


TEXAS DEPARTMENT OF TRANSPORTATION

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

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| FILE: D0018 | DATE: 03/01/2007 | BY: TAD001 | CHK: JWB | APP: JWB | DATE: 03/01/2007 |
| REVISIONS | NO. | DESCRIPTION | DATE | BY | APP |
| 1 | 1 | ISSUED FOR CONSTRUCTION | 03/01/2007 | JWB | JWB |



LEGEND:

SHOWS DOWNWARD SLOPE.

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

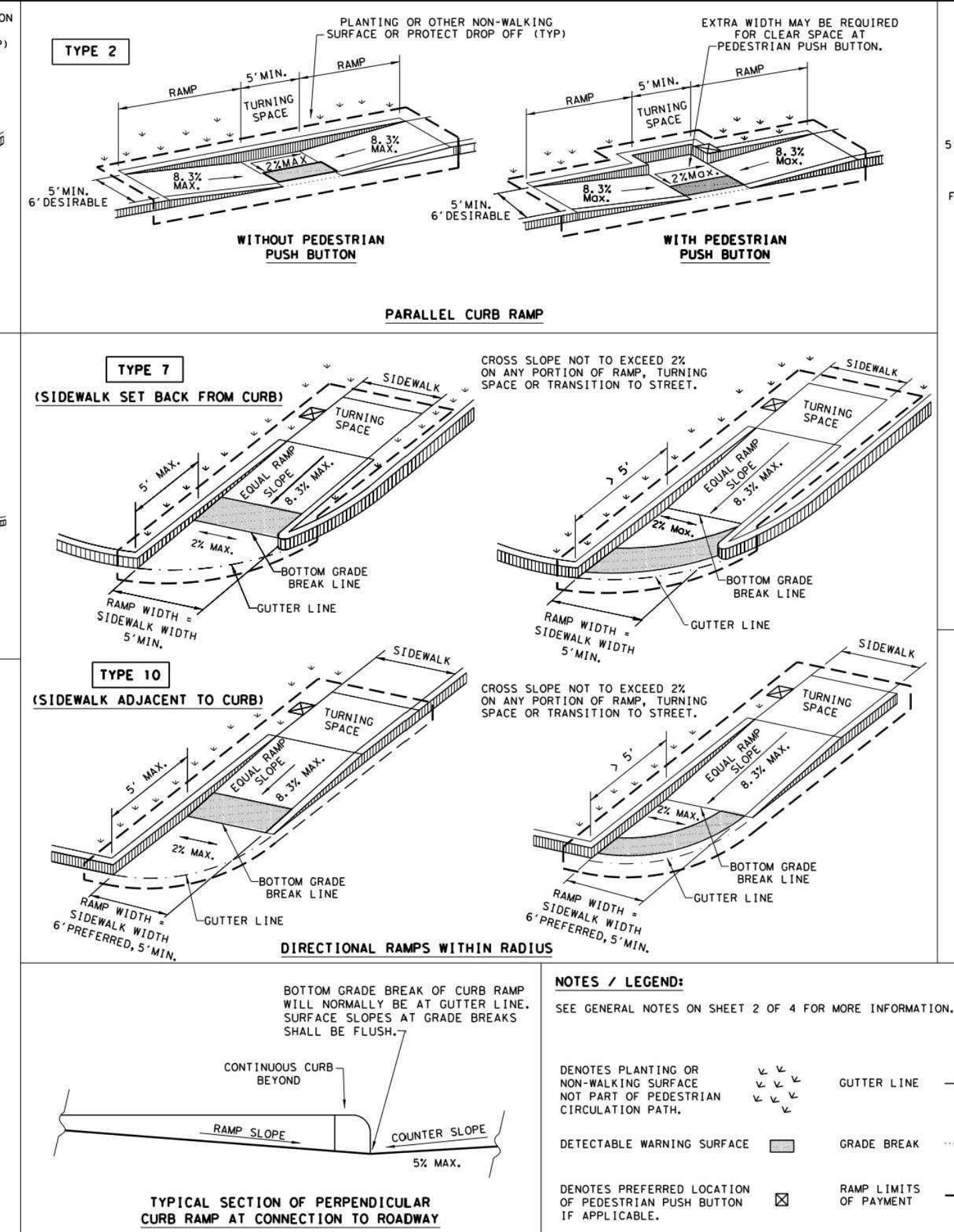
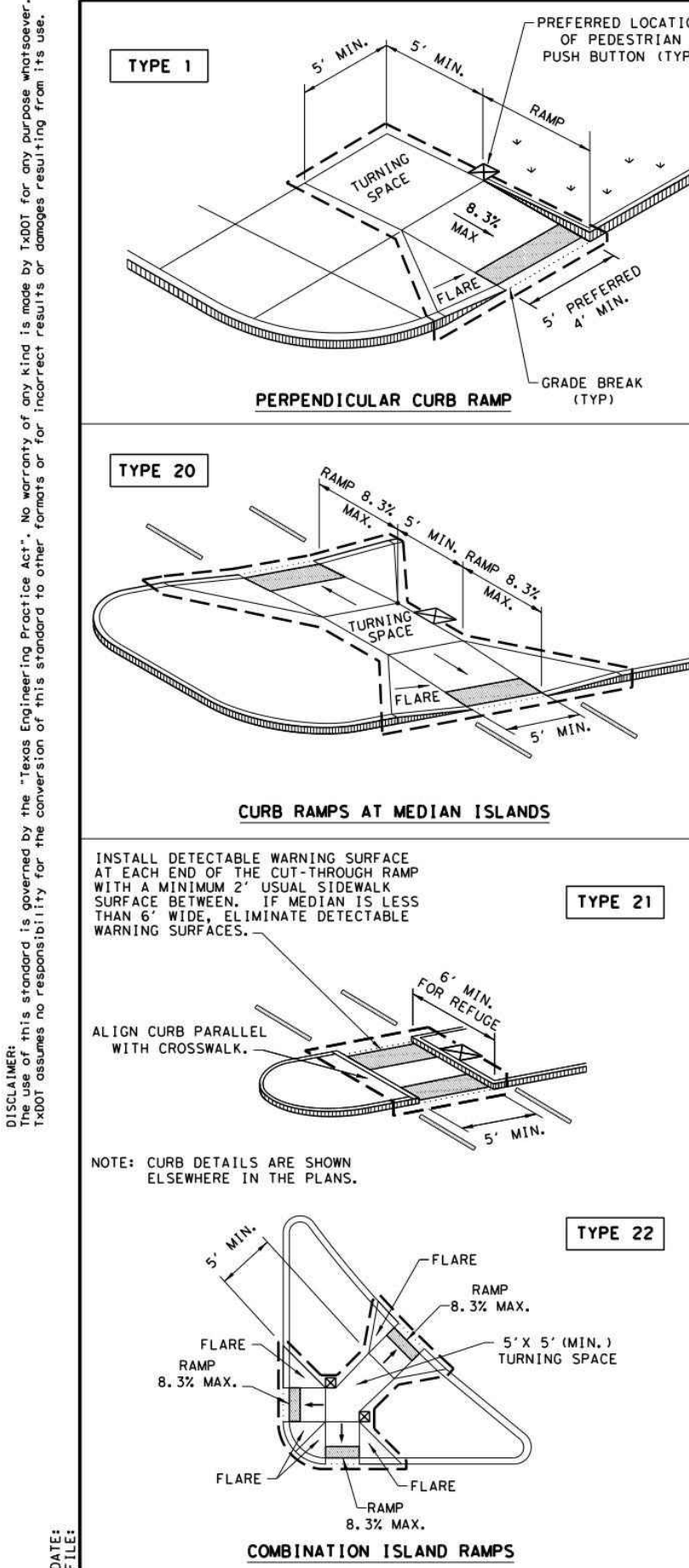
DENOTES PLANTING OR NON-WALKING SURFACE NOT PART OF PEDESTRIAN CIRCULATION PATH.

TEXAS DEPARTMENT OF TRANSPORTATION

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

| | | | | | |
|-------------|------------------|-------------------------|------------|----------|------------------|
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TEXAS DEPARTMENT OF TRANSPORTATION

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

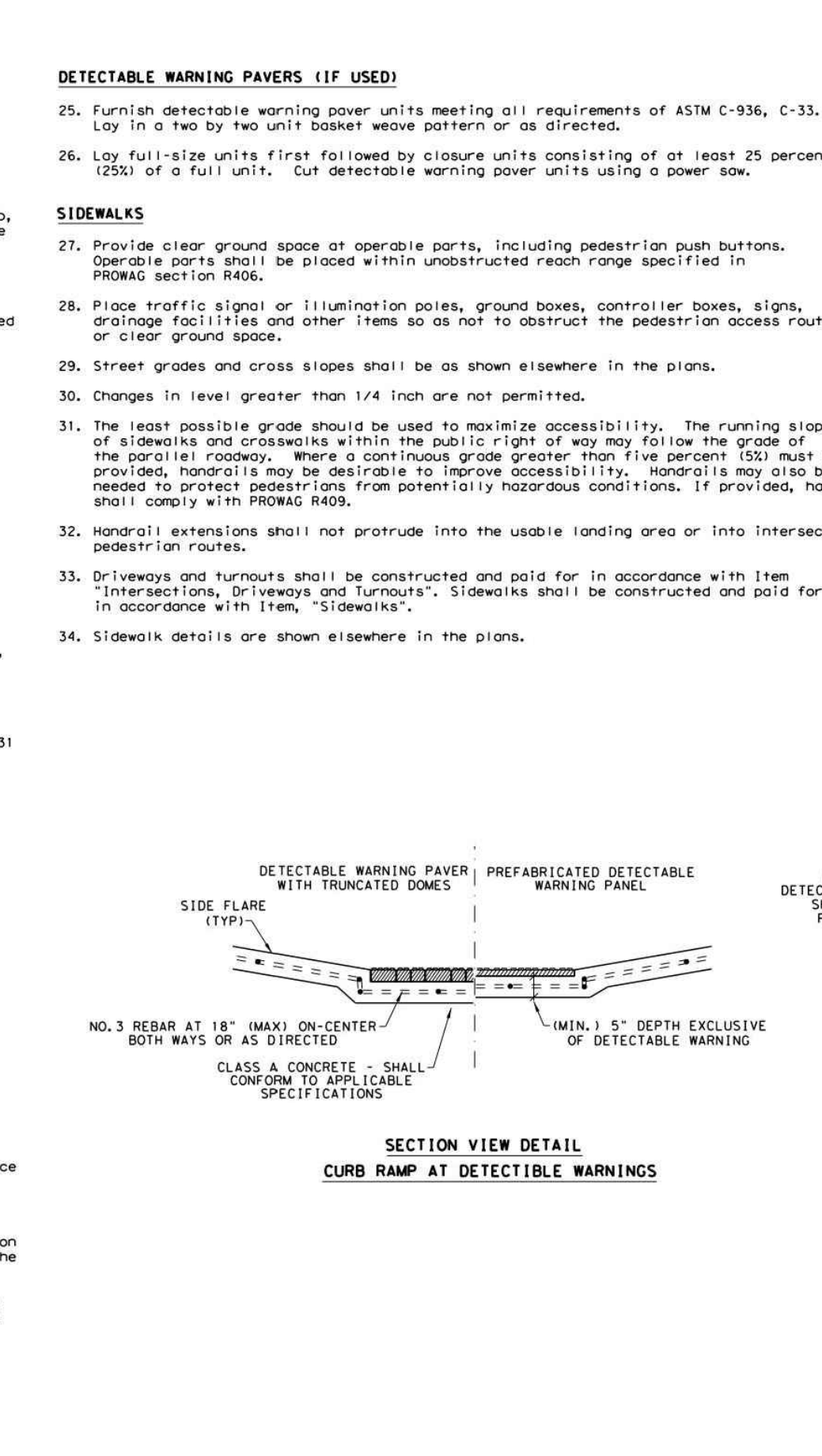
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| REVISIONS | NO. | DESCRIPTION | DATE | BY | APP |
| 1 | 1 | ISSUED FOR CONSTRUCTION | 03/01/2007 | JWB | JWB |

GENERAL NOTES

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

DETECTABLE WARNING MATERIAL

19. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with PROWAG. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install an approved cast-in-place dark brown or dark red detectable warning surface material adjacent to unobstructed concrete, unless specified elsewhere in the plans.
20. Detectable warning materials must meet TxDOT Departmental Materials Specification DMS 4550 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
21. Detectable warning surfaces must be firm, stable and slip resistant.
22. Detectable warning surfaces shall be a minimum of 24 inches in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
23. Detectable warning surfaces shall be located so that the edge nearest the curb line is at the back of curb and neither end of that edge is greater than 5 feet from the back of curb. Detectable warning surfaces may be curved along the corner radius.
24. Shaded areas on sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



TEXAS DEPARTMENT OF TRANSPORTATION

PEDESTRIAN FACILITIES CURB RAMPS

PED-18

| | | | | | |
|-------------|------------------|-------------------------|------------|----------|------------------|
| FILE: D0018 | DATE: 03/01/2007 | BY: TAD001 | CHK: JWB | APP: JWB | DATE: 03/01/2007 |
| REVISIONS | NO. | DESCRIPTION | DATE | BY | APP |
| 1 | 1 | ISSUED FOR CONSTRUCTION | 03/01/2007 | JWB | JWB |

SMILEY TRACT, UNIT 2

SAN ANTONIO, TEXAS

STREET DETAILS

PLAT NO. 22-11800792

JOB NO. 11100-99

DATE MAY 2023

DESIGNER AA

CHECKED VS DRAWN AA

SHEET C2.11

PAPE-DAWSON ENGINEERS

PROFESSIONAL ENGINEER

82567

5/12/23

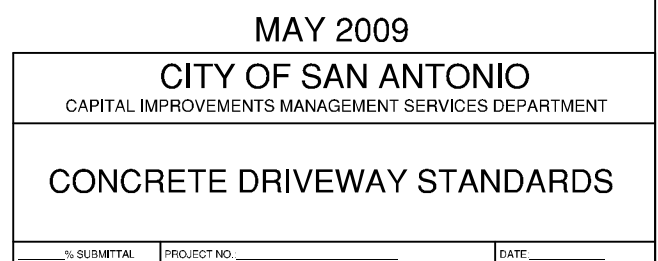
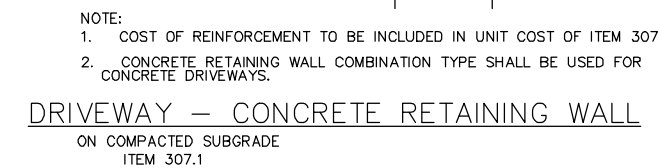
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

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

TEXAS ENGINEERING FIRM #170 | TEXAS SURVEYING FIRM #1008800

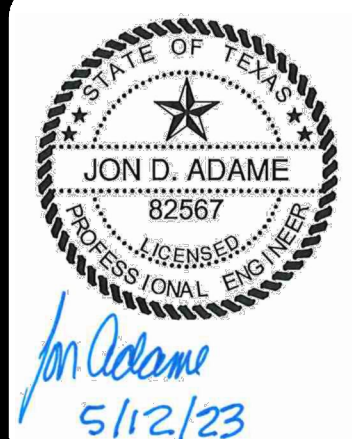
DATE

NO. REVISION



| GUTTER SLOPE | SIDEWALK RAMP LENGTH (1:12) | |
|-----------------|-----------------------------|-----------|
| | LOW SIDE | HIGH SIDE |
| 1% | 5'-6" | 7'-2" |
| 2% | 5'-0" | 8'-4" |
| 3% | 4'-6" | 10'-0" |
| 4% | 4'-2" | 12'-6" |
| 5% | 3'-10" | 16'-8" |

| | |
|---|--|
| MAY 2009 | |
| CITY OF SAN ANTONIO | |
| CAPITAL IMPROVEMENTS MANAGEMENT SERVICES DEPARTMENT | |
| WHEELCHAIR RAMP STANDARDS | |



**PAPE-DAWSON
PE ENGINEERS**

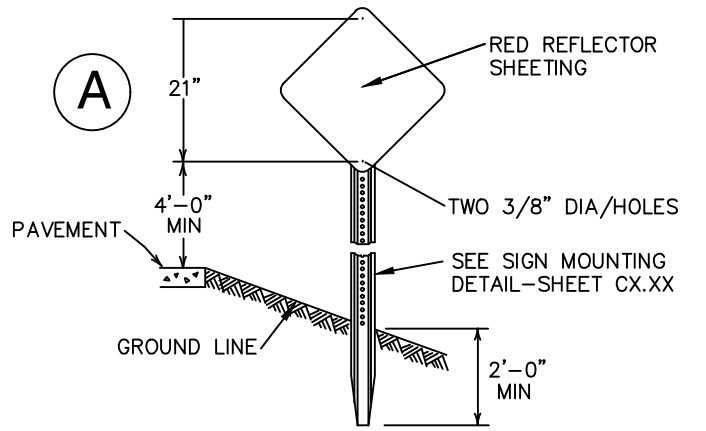
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
20200 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10238600

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

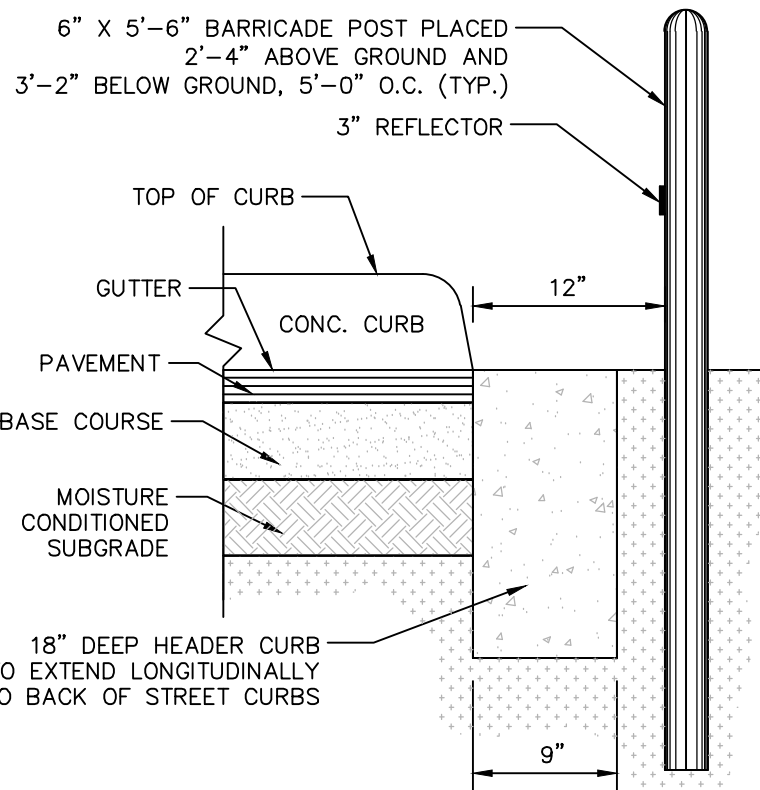
STREET DETAILS

STREET DETAILS

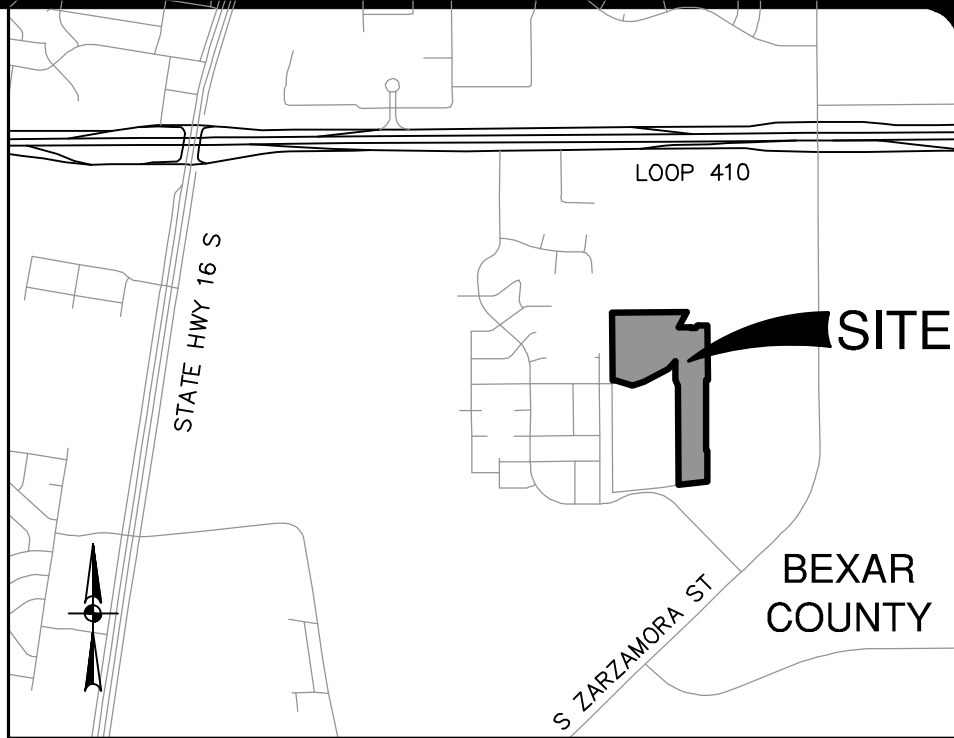
| SYMBOL | ITEM NUMBER |
|--------|--|
| | UNIT BOUNDARY |
| | CURB INLET |
| | PROPOSED DRIVEWAY |
| | TRAFFIC FLOW ARROW |
| | SIDEWALK (HOMEBUILDER RESPONSIBILITY) |
| | SIDEWALK (STEWORK CONTRACTOR RESPONSIBILITY) |
| | STREET SIGN |
| | R1-1 30"X30" |
| | END OF ROAD MARKER OM4-3 |
| | HEADER CURB W/ BARRICADE POSTS |



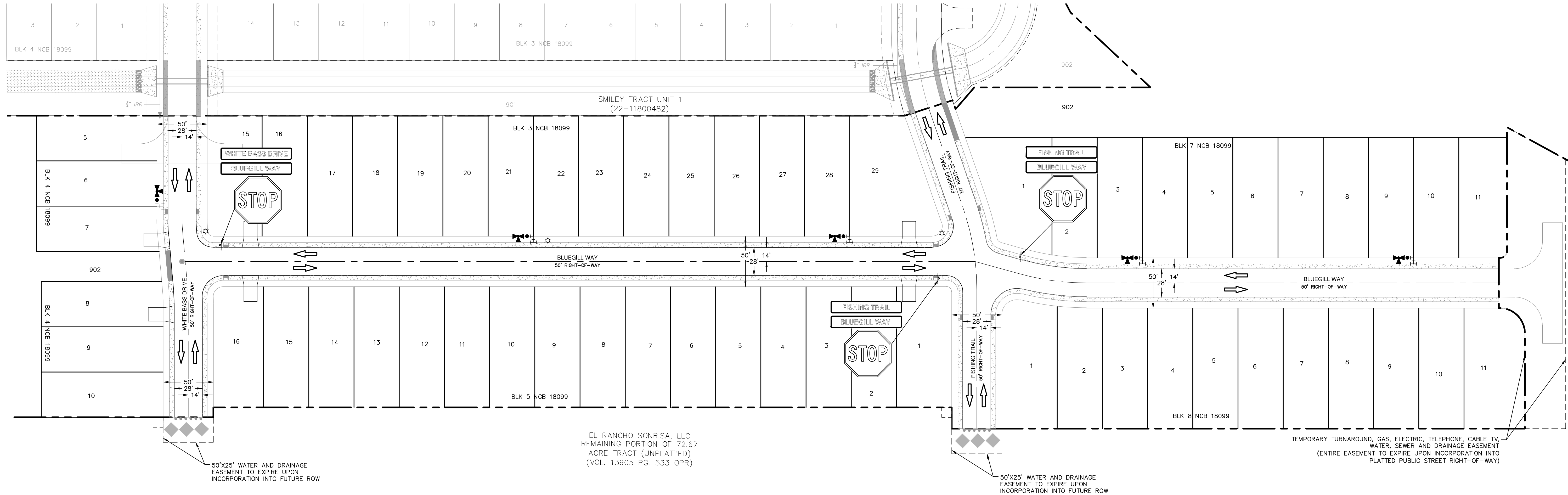
UNITS MOUNTED ON 0.080" THICK SHEET ALUMINUM CONFORMING WITH ASTM B-209 ALLOY 6061-T6.
TYPE 4 OM4-3
18" x 18"
OBJECT MARKER TYPE 4
NOT-TO-SCALE



HEADER CURB & BARRICADE POST DETAIL
NOT-TO-SCALE



LOCATION MAP
NOT-TO-SCALE



CITY OF SAN ANTONIO ROW NOTES:

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

DRIVEWAY NOTE:

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

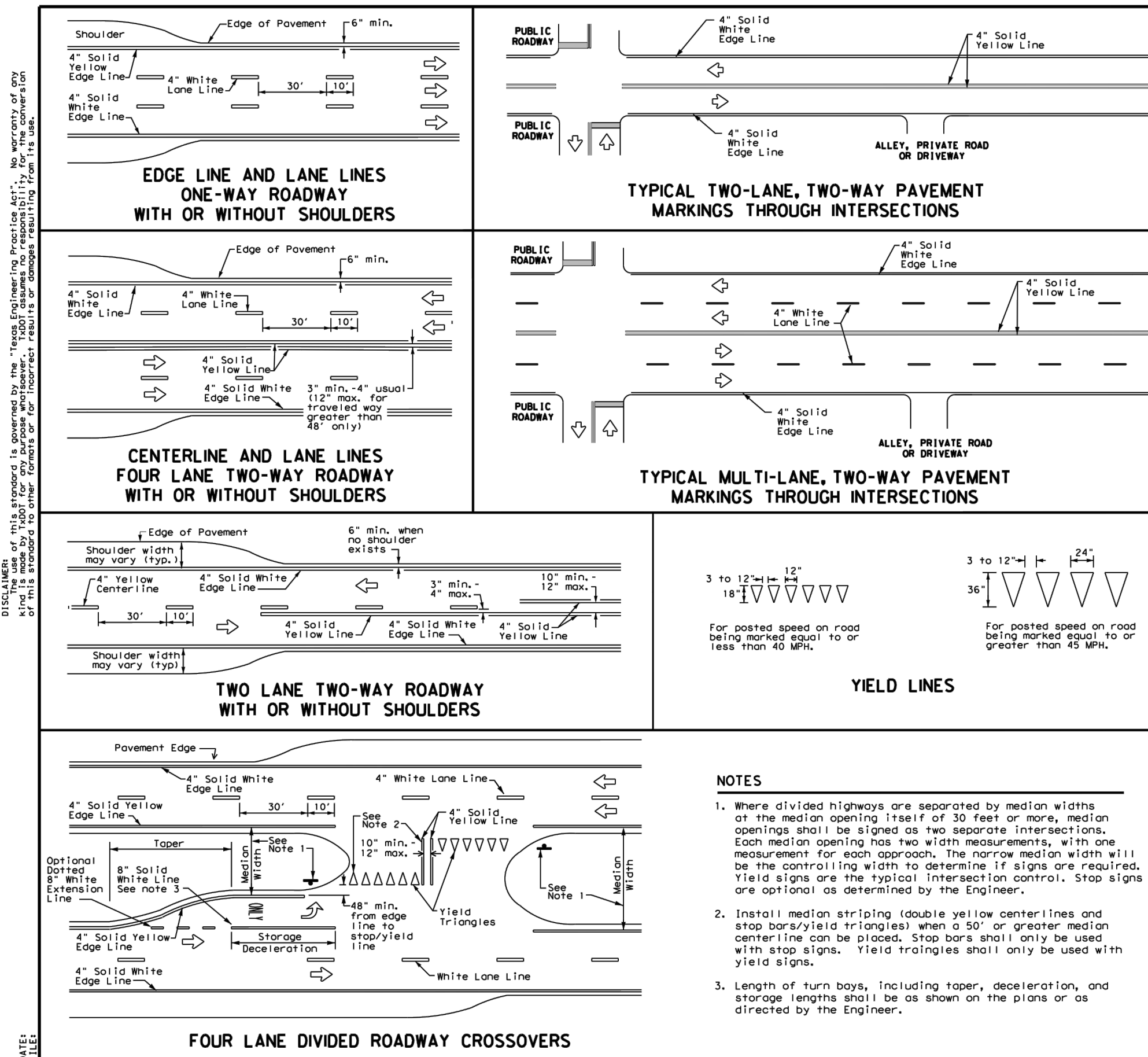
TRENCH EXCAVATION SAFETY PROTECTION:

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

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

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
OVERALL SIGNAGE PLAN

| | |
|----------|-------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | MAY 2023 |
| DESIGNER | JW |
| CHECKED | VS |
| DRAWN | JW |
| SHEET | C3.00 |



GENERAL NOTES

- 1. Edge line striping shall be as shown in the plans or as directed by the Engineer. The edge line should not be placed less than 6 inches from the edge of pavement. This distance may vary due to pavement roughing or other conditions. Edge lines are not required in curb and gutter sections of roadways.
- 2. The traveled way includes only that portion of the roadway used for vehicular travel. It does not include the parking lanes, sidewalks, berms and shoulders. The traveled way shall be measured from the inside of edge line to the inside of edge line of a two lane roadway.

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

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

STOP LINES
4' Solid White
Widths 12' min.
24' max.

EDGE LINE
4' Solid White

CENTERLINE
4' Yellow
Lengths 10' min.
30' max.

OPTIONAL
4' Solid Yellow Line on approaches to intersections (500' min.)

Minimum Requirements for Edge Lines Traveled Way Width ≥ 20'

Minimum Requirements for Centerlines for Traveled Way Width 16' ≤ W < 20'

GUIDE FOR PLACEMENT OF STOP LINES, EDGE LINE & CENTERLINE

Based on Traveled Way and Pavement Widths for Undivided Highways

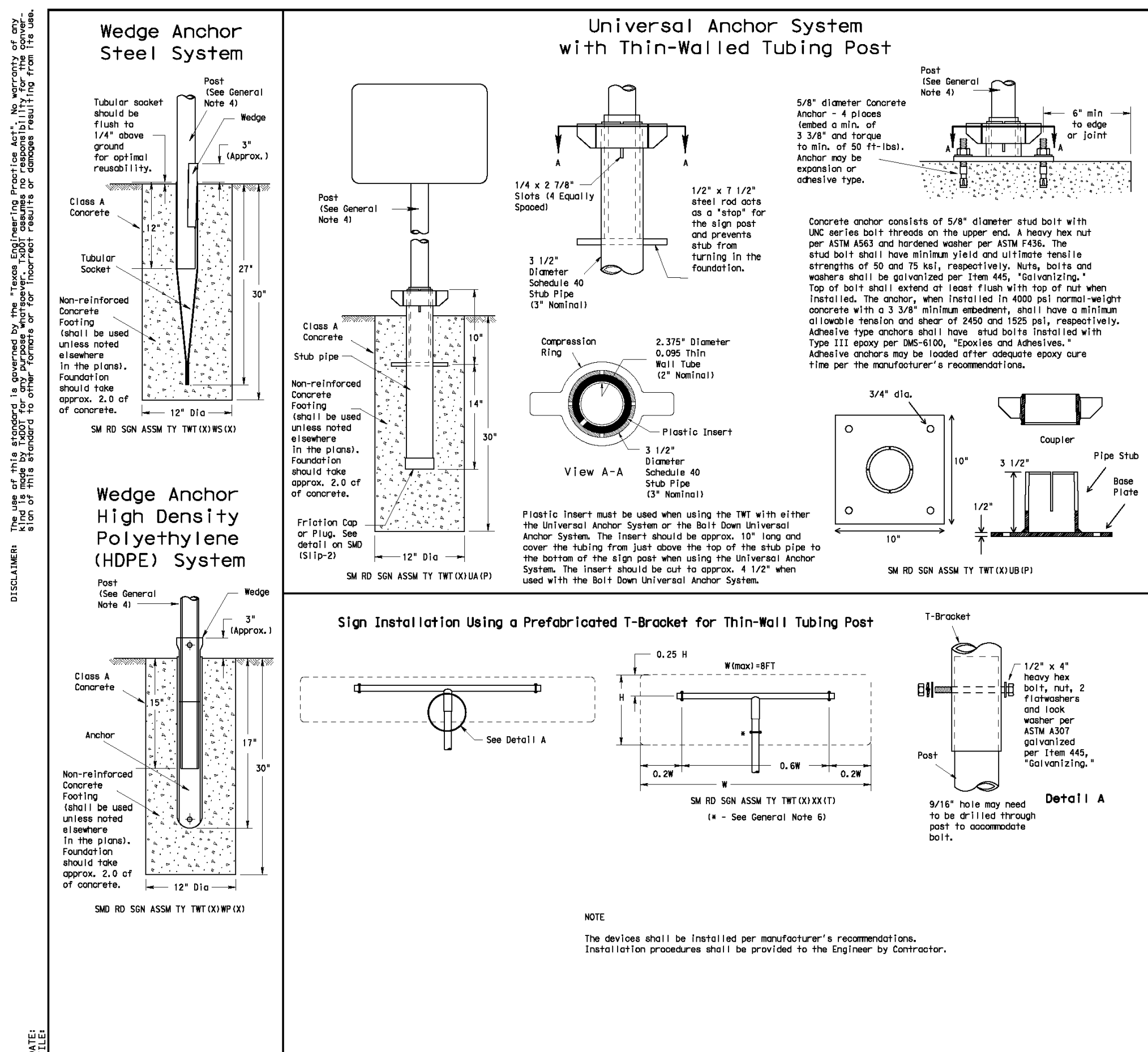
Texas Department of Transportation

Traffic Safety Division Standard

TYPICAL STANDARD PAVEMENT MARKINGS

PM(1) - 20

| CLASS | DATE | REVISION | BY | CHK | APP | DATE |
|-------|----------|----------|----------|----------|----------|----------|
| 1 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 2 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 3 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 4 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 5 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 6 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 7 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 8 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 9 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 10 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 11 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 12 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 13 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 14 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 15 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 16 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 17 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 18 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 19 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 20 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |



GENERAL NOTES:

- The Wedge Anchor System and the Universal Anchor System with thin wall tubing post may be used to support up to 10 square feet of sign area.
- The tubular socket, wedge and prefabricated T-bracket shall be permanently marked to indicate manufacturer, method, design, and location of marking are subject to the approval of the Texas Department of Transportation.
- Except for parts (1) and (2), all components shall be galvanized. A list of products and manufacturers shall be obtained from the Material Producer List web page. The website address is: <http://www.tdot.state.tx.us/traffic/signage>
- Material used as part of this system shall conform to the following specifications:
 - 1. Tubing (0.375" outside diameter (OD))
 - 0.095" nominal wall thickness
 - Seamless or hot-rolled welded steel tubing
 - Steel shall be A513 or 55 per ASTM A101 or ASTM A106
 - Other steels may be used if they meet the following:
 - 55,000 PSI minimum yield strength
 - 185 minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of .085" to .095"
 - Outside diameter (uncoated) shall be within the range of 2.389" to 2.391"
 - Galvanization per ASTM 123 or ASTM A653 D16. For pre-painted steel tubing (ASTM A663), report base outside diameter weld size by metalizing with zinc wire per ASTM B833.
 - 5. Sign plates shall be the sizes and shapes shown on the plans.
 - 6. Additional sign clamp required on the "T-bracket" post for 24" high signs. Place clamp at least 3" above bottom of sign when possible.
 - 7. Sign supports shall not be applied except where shown. Sign support posts shall not be applied.
 - 8. See the Traffic Operations Division website for detailed drawings of sign clamps and Wedge Anchor System components. The website address is: <http://www.tdot.state.tx.us/traffic/signage>

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE:

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

UNIVERSAL ANCHOR SYSTEM INSTALLATION PROCEDURE:

- Drill foundation hole. Where solid rock is encountered at ground level, the foundation shall be a minimum depth of 18". When solid rock is encountered below ground level, the foundation shall extend in the solid rock a minimum depth of 18" or provide a minimum foundation depth of 30". If solid rock is encountered, the socket/stub may be reduced in length as required to a minimum length of 18". Any material removed from the socket/stub shall be from the bottom and the inner surfaces of the socket/stub must remain free of concrete or other debris.
- The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
- Insert base post into foundation hole to depths shown and fill hole with concrete. Level and place the base post using a torpedo level and a wire concrete adequate time to set. The bottom of the sign post in the stub pipe shall remain above the top of the concrete foundation.
- Attach the sign to the sign post.
- Install plastic insert around bottom of post.
- Insert sign post into base post. Lower until the post comes to rest on steel rod.
- Set compression ring using a hammer. Typically, the top of compression ring will be approximately level with top of stub post when applied. Tightening will be approximately level with top of stub post when applied. Tightening will be approximately level with top of stub post when applied. Tightening will be approximately level with top of stub post when applied.
- Check sign post by hand to ensure it is stable to turn. If loose, increase the tightening of the compression ring.

SMOUNTING DETAILS

SMALL ROADSIDE SIGNS

WEDGE & UNIVERSAL ANCHOR WITH THIN WALL TUBING POST

SMD (TWT) - 08

| CLASS | DATE | REVISION | BY | CHK | APP | DATE |
|-------|----------|----------|----------|----------|----------|----------|
| 1 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 2 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 3 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 4 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 5 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 6 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 7 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 8 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 9 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 10 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 11 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 12 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 13 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 14 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 15 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 16 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 17 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 18 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 19 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |
| 20 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 | 01/10/01 |

SMILEY TRACT, UNIT 2

SAN ANTONIO, TEXAS

SIGNAGE DETAILS SHEET 2 OF 2

PLAT NO. 22-11800792

JOB NO. 11100-99

DATE MAY 2023

DESIGNER JW

CHECKED VS DRAWN JW

SHEET C3.11

PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS

2000 HW LOOP 410 | SAN ANTONIO, TX 78211 | 210.375.9000

TEXAS SURVEYING FIRM #1008880

STATE OF TEXAS

PROFESSIONAL ENGINEER

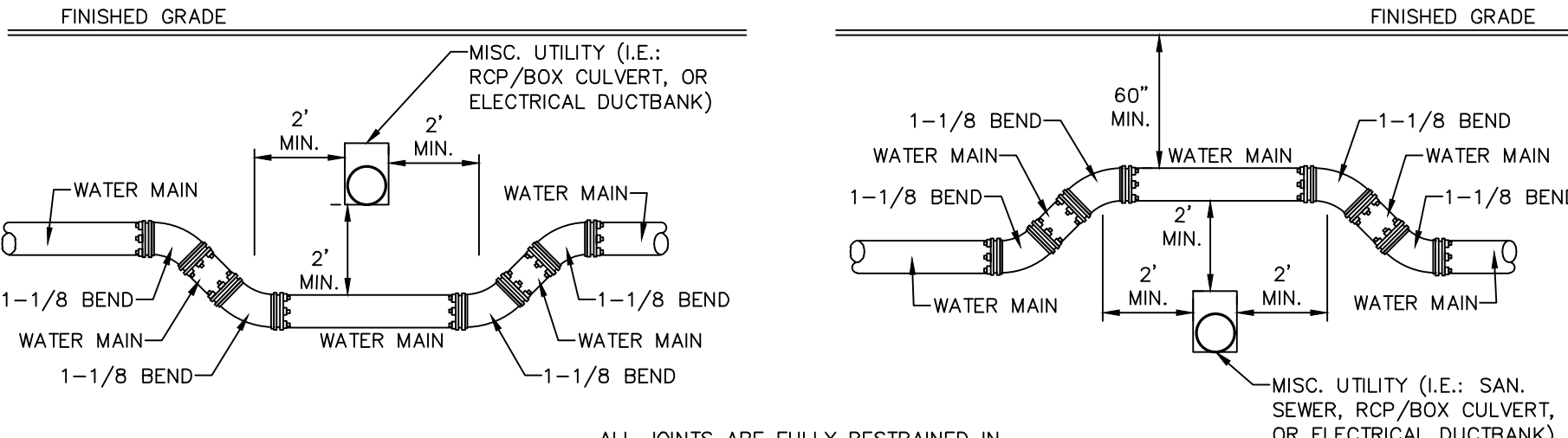
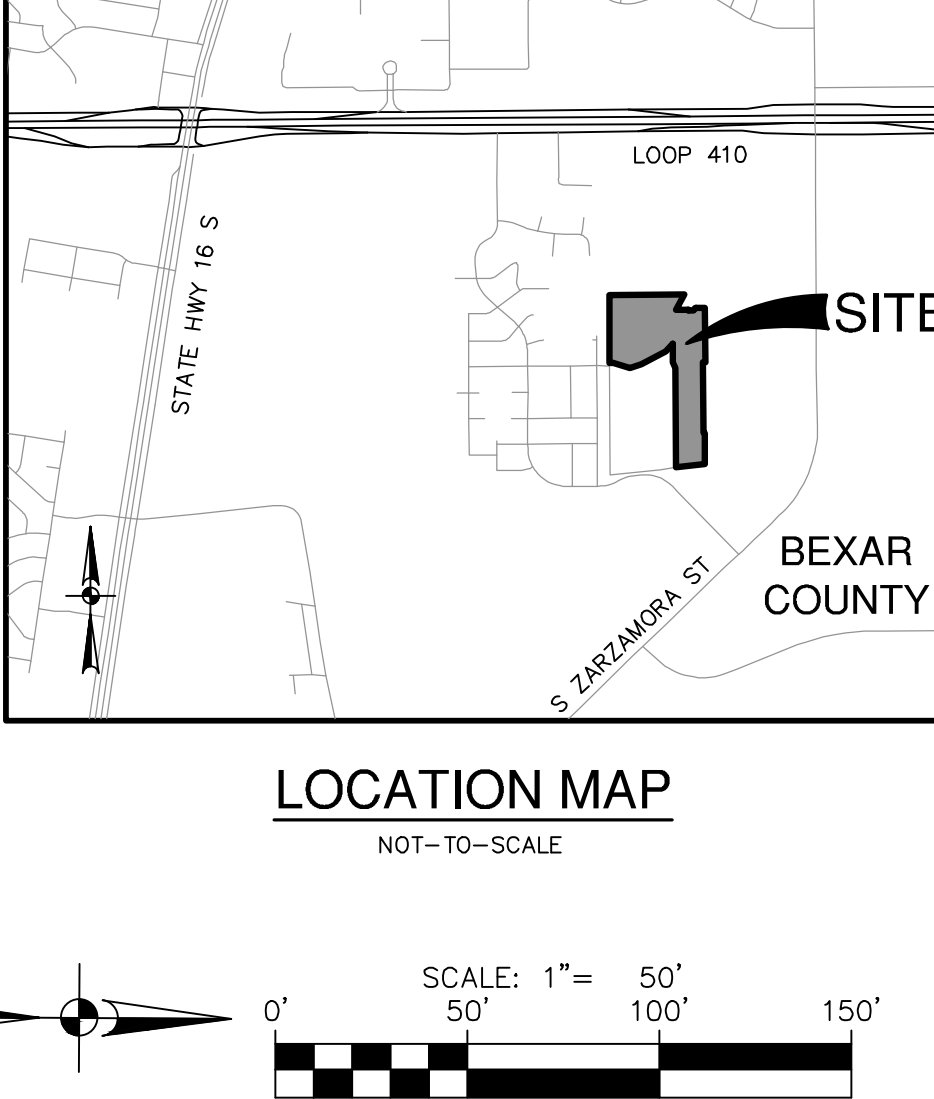
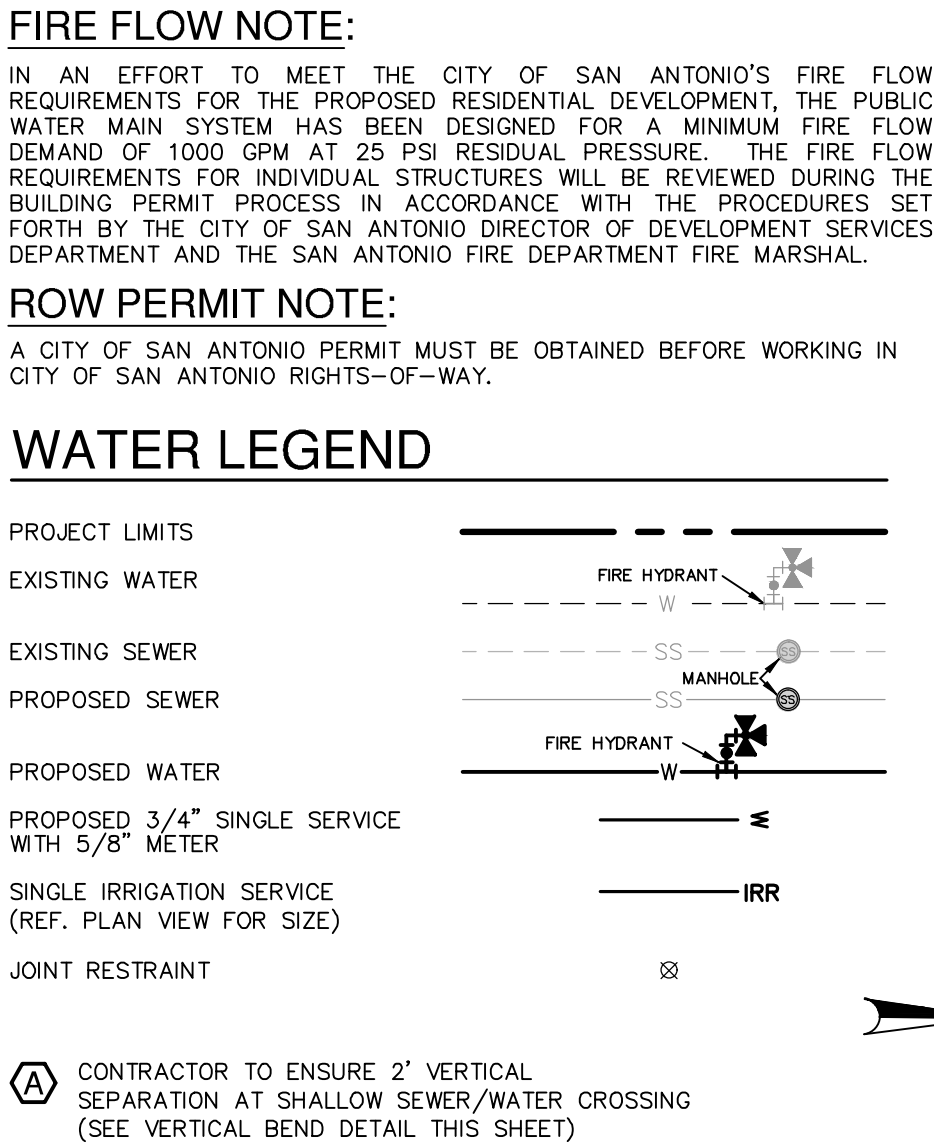
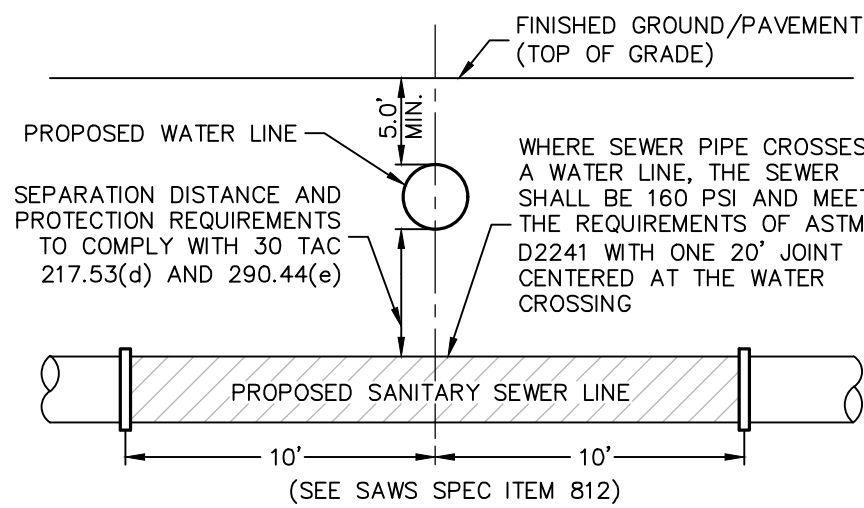
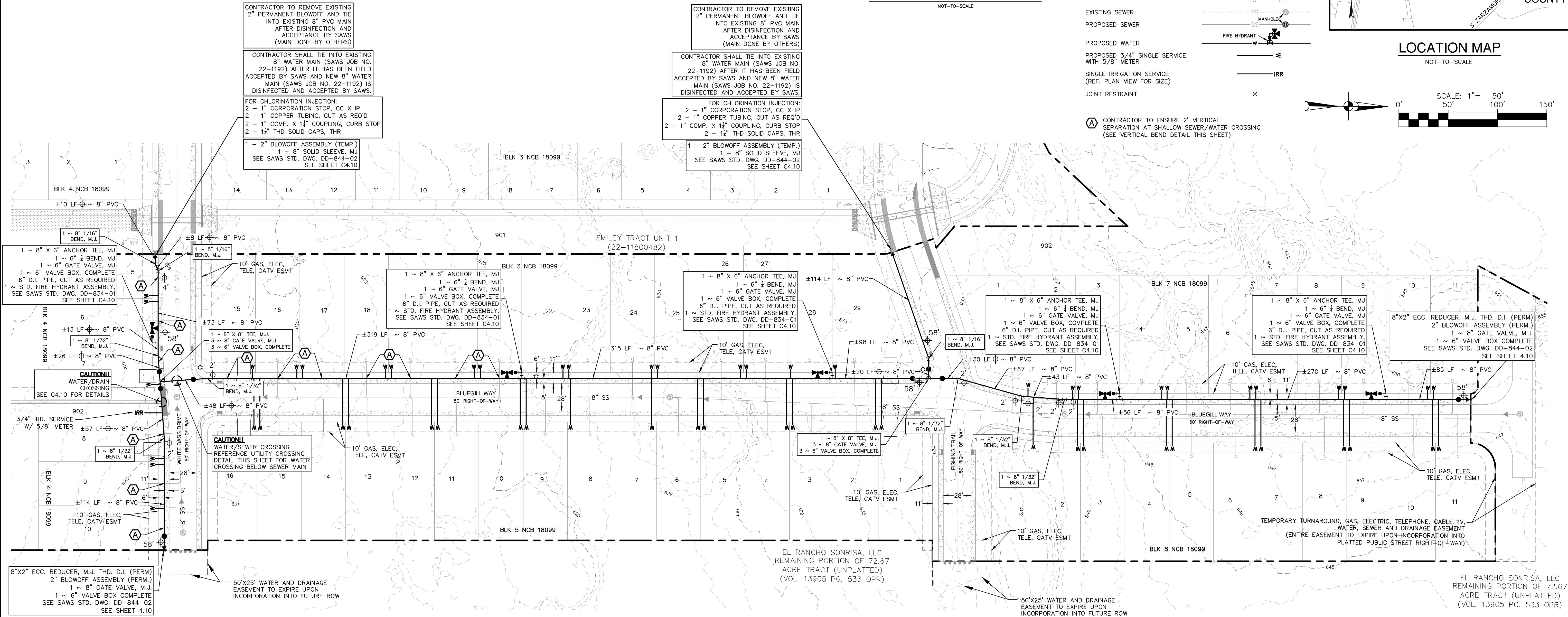
JON D. ADAME

82567

5/12/23

Date: Dec. 05, 2023, 1:17pm User ID: edw019
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ALL JOINTS ARE FULLY RESTRAINED IN ACCORDANCE WITH SAWS SPECIFICATION TABLE DD-839-06.

TYPICAL UTILITY/WATER CROSSING DETAIL

NOT-TO-SCALE

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

PRESSURE NOTE:
CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 605 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 605 FEET, THE DEVELOPER OR BUILDER SHALL INSTALL AT EACH LOT, ON THE CUSTOMER'S SIDE OF THE METER, AN APPROVED TYPE PRESSURE REGULATOR IN CONFORMANCE WITH THE PLUMBING CODE OF THE CITY OF SAN ANTONIO. NO DUAL SERVICES ALLOWED FOR ANY LOT(S) IF *PRV IS/ARE REQUIRED FOR SUCH LOT(S). ONLY SINGLE SERVICE CONNECTIONS SHALL BE ALLOWED.
*NOTE: A PRESSURE REGULATOR IS ALSO KNOWN AS A PRESSURE REDUCING VALVE (PRV).

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

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

WATER (SAWS PRESSURE ZONE 790 HGL)

| | | | |
|---|--|-------------------|--|
| DEVELOPER'S NAME: EL RANCHO SONRISA, LLC | | | |
| ADDRESS: 8626 JODHPUR | | | |
| CITY: FAIR OAKS RANCH | STATE: TEXAS | ZIP: 78015 | |
| PHONE# (210) 381-9813 | FAX# 14-8536, 14-8538, 14-8536 & 14-8538 | TOTAL ACRES 23.35 | |
| SAWS BLOCK MAP# 14-8538 TOTAL EDU'S 60 TOTAL ACREAGE 23.35 | | | |
| TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1766 LF PLAT NO. 22-11800292 | | | |
| NUMBER OF LOTS 59 | SAWS JOB NO. 23-1039 | | |

| | |
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| DATE | |
| NO. REVISION | |

Jon D. Adame
12-5-23

PAPE-DAWSON ENGINEERS

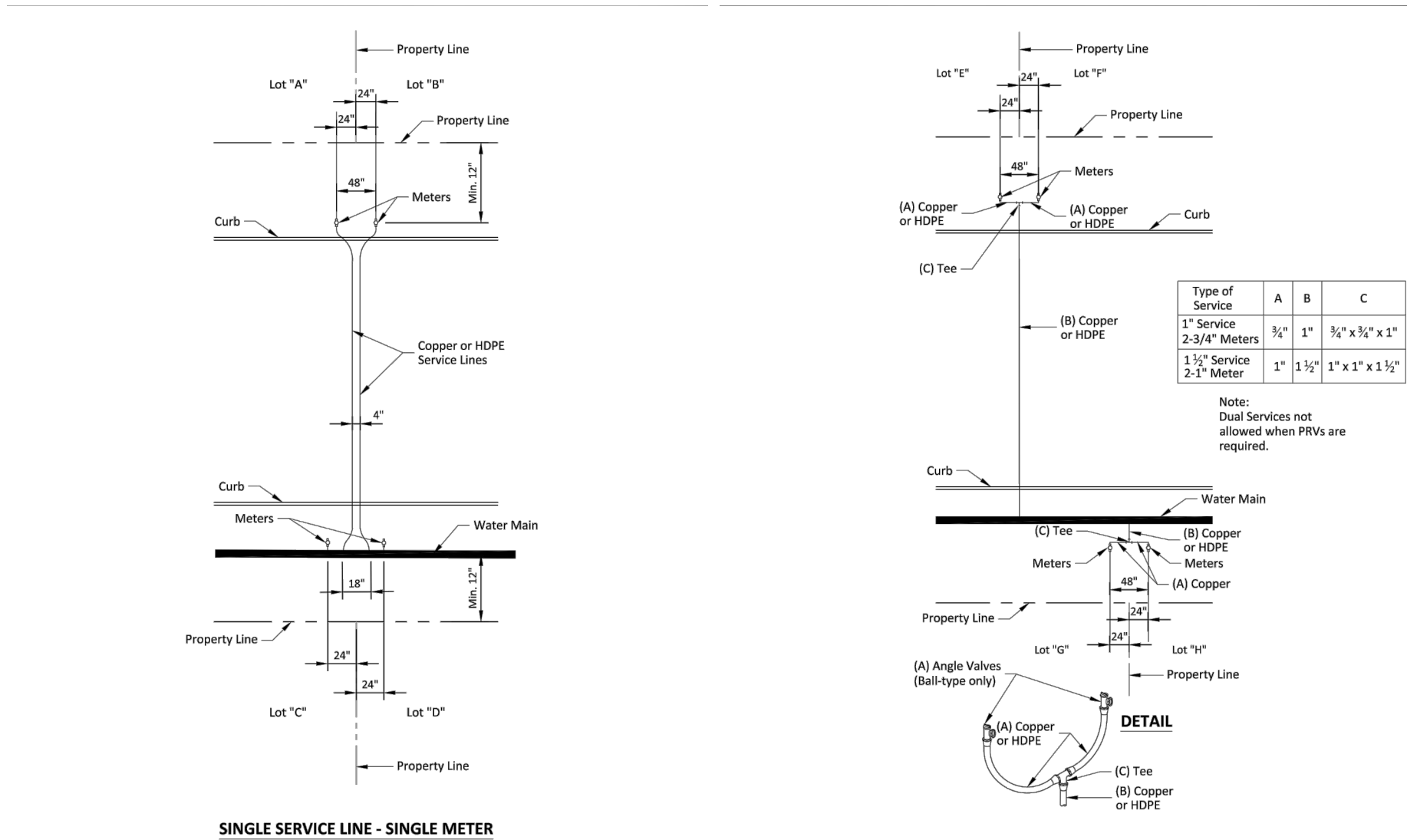
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #170 | TEXAS SURVEYING FIRM #1008800

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

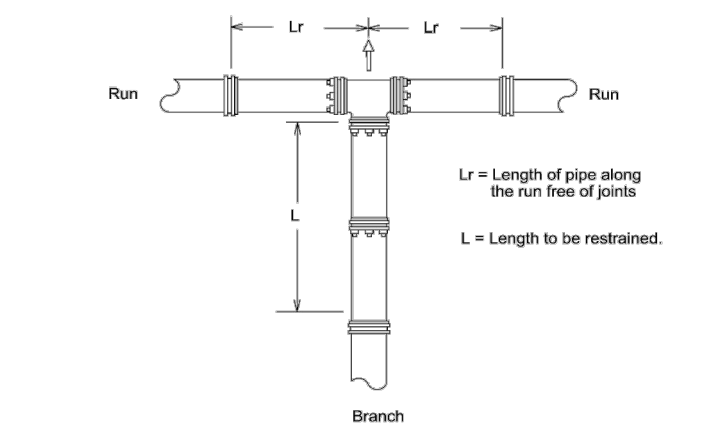
OVERALL WATER DISTRIBUTION PLAN

| | |
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| PLAT NO. | 22-11800292 |
| JOB NO. | 11100-99 |
| DATE | DECEMBER 2023 |
| DESIGNER | JW |
| CHECKED | VS |
| DRAWN | JW |
| SHEET | C4.00 |

Date: May 12, 2023, 9:14am User ID: cdcy
File Path: \\100.92.0.20\shared\CA\WFD-110289.dwg



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|---|---|-------------------------------------|---|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | TYPICAL NEW DEVELOPMENT SERVICE ARRANGEMENT | APPROVED MARCH 2008 DD-824-05 | REVISED DECEMBER 2018 SHEET 1 OF 3 |
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | TYPICAL SERVICE ARRANGEMENT | APPROVED MARCH 2008 DD-824-05 | REVISED DECEMBER 2018 SHEET 2 OF 3 |

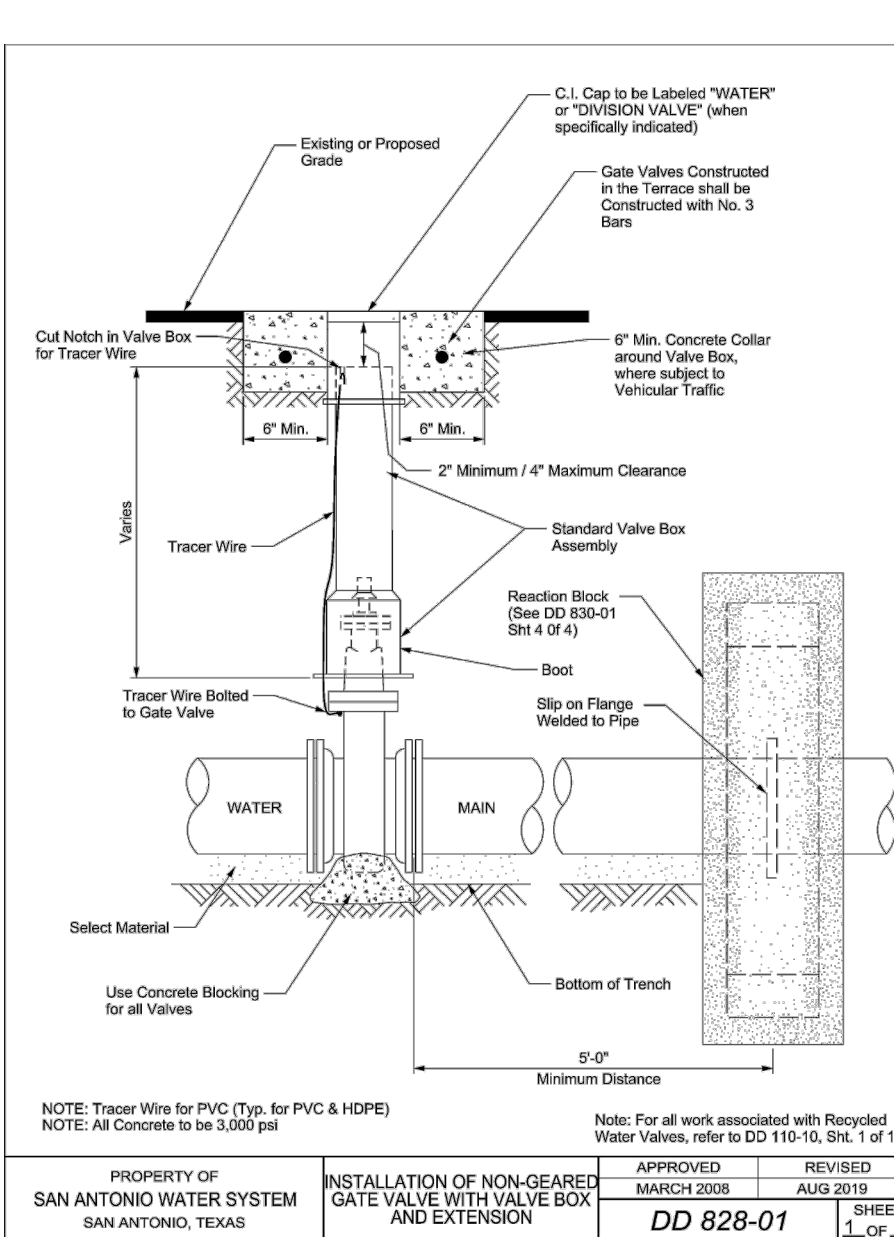
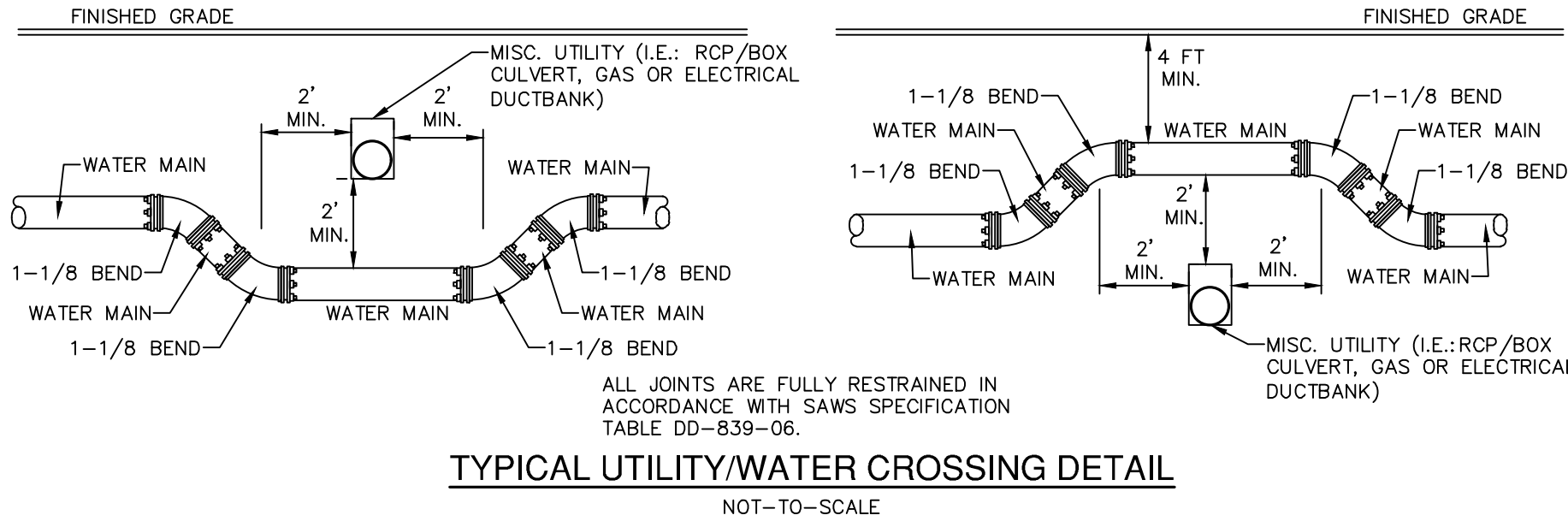
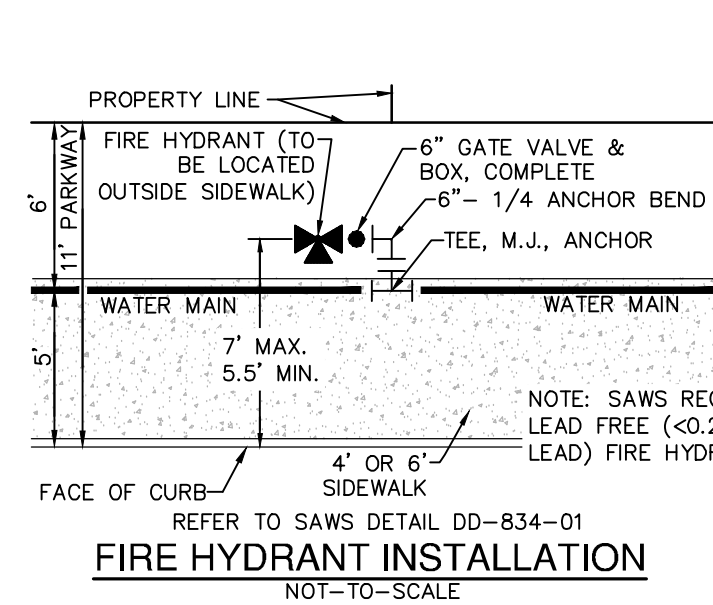


| PIPE SIZE (INCH) | RESTRAINED LENGTH (INCHES) | RESTRAINED LENGTH (FEET) |
|------------------|----------------------------|--------------------------|
| 6 | 42 | 3.5 |
| 8 | 54 | 4.5 |
| 10 | 66 | 5.5 |
| 12 | 78 | 6.5 |

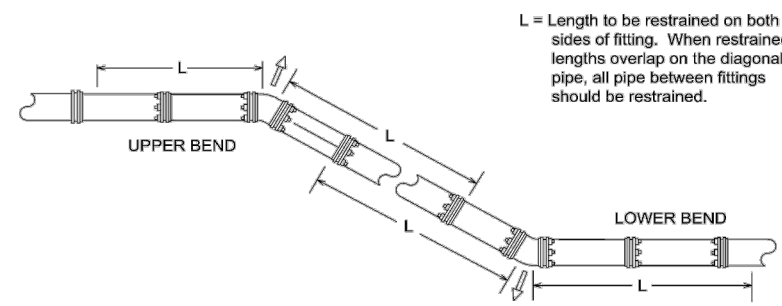
RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

| | | | |
|---|--------------------------------|-------------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | RESTRAINED LENGTHS FOR TEES | APPROVED MARCH 2008 DD-839-04 | REVISED AUG 2019 SHEET 1 OF 2 |
|---|--------------------------------|-------------------------------------|--|



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|---|--|-------------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | INSTALLATION OF NON-GEARED GATE VALVE WITH VALVE BOX AND EXTENSION | APPROVED MARCH 2008 DD-828-01 | REVISED AUG 2019 SHEET 1 OF 1 |
|---|--|-------------------------------------|--|

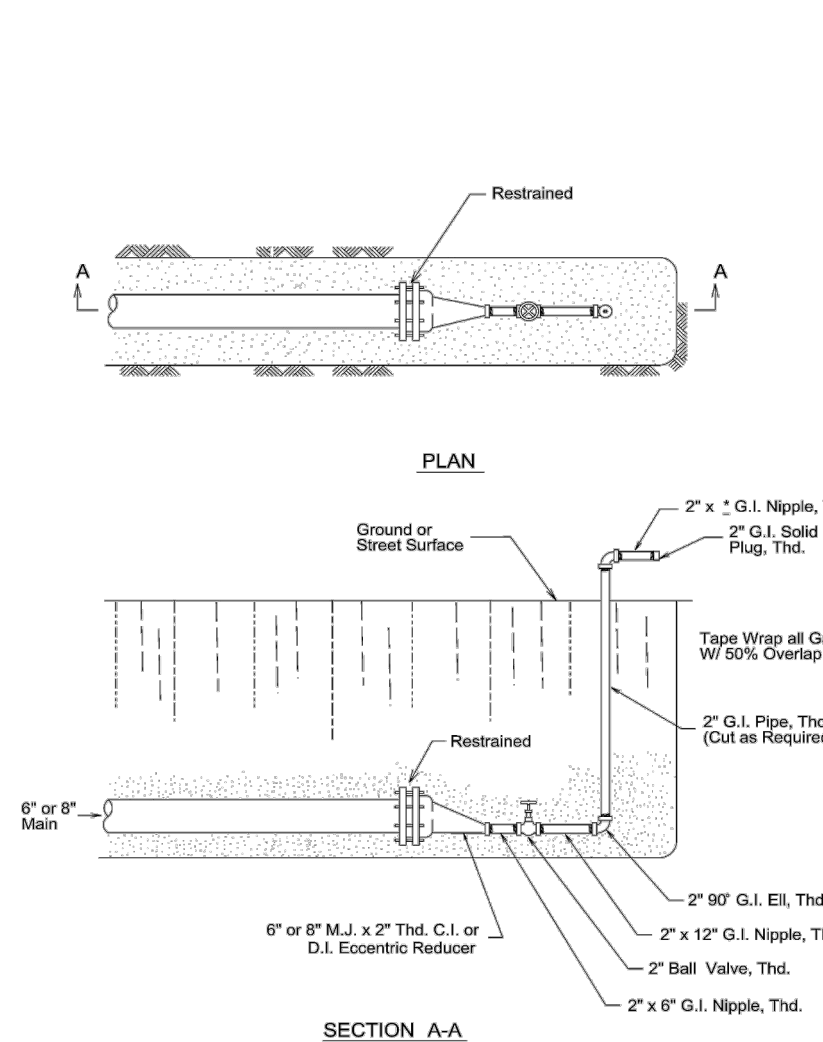


| PIPE SIZE (INCH) | RESTRAINED LENGTH (INCHES) | RESTRAINED LENGTH (FEET) |
|------------------|----------------------------|--------------------------|
| 6 | 42 | 3.5 |
| 8 | 54 | 4.5 |
| 10 | 66 | 5.5 |
| 12 | 78 | 6.5 |

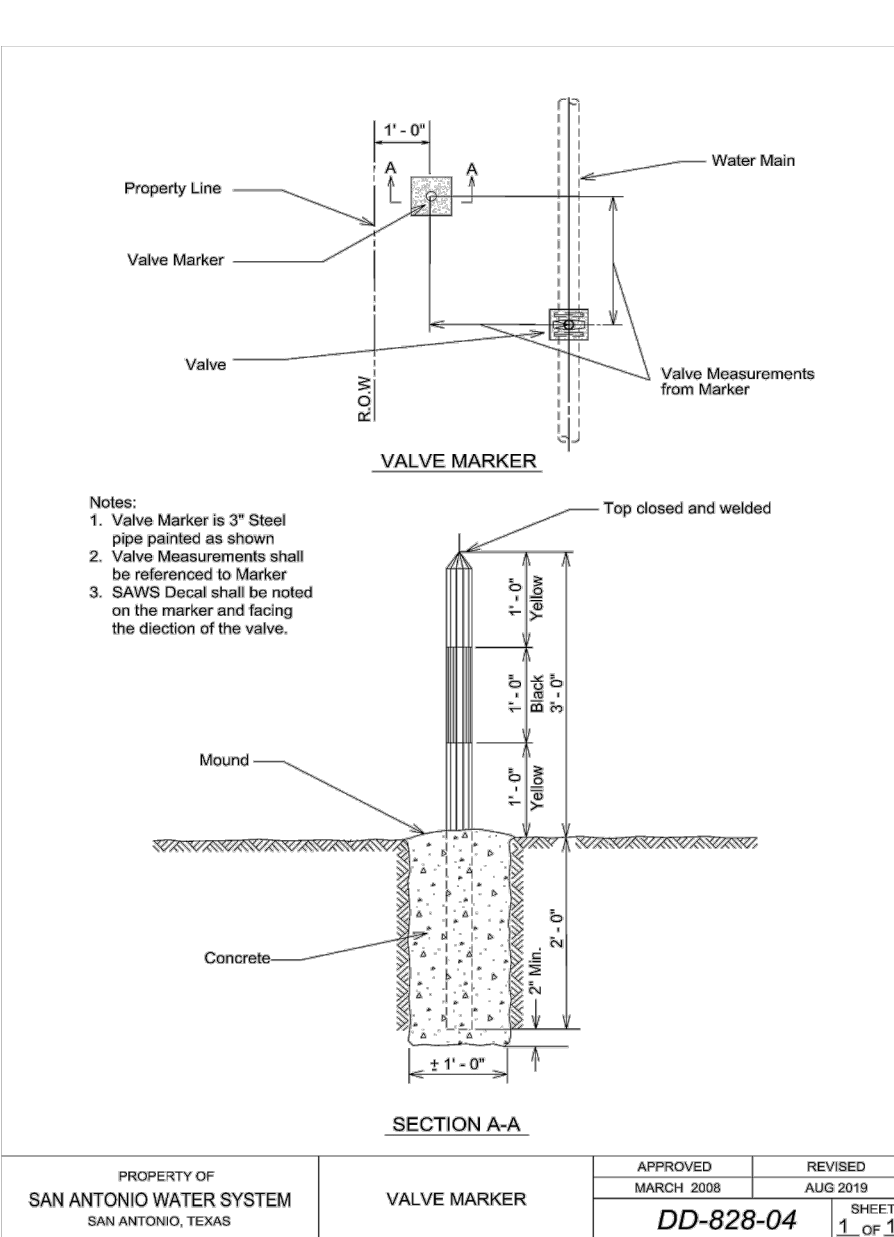
RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

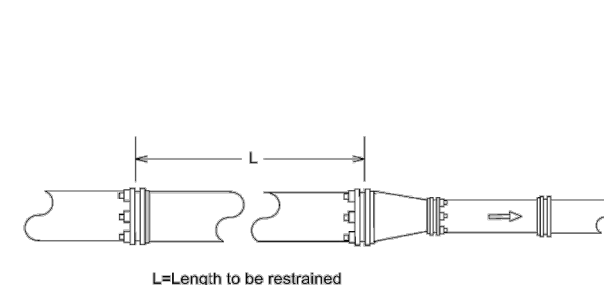
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| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | RESTRAINED LENGTHS FOR DEAD ENDS / IN LINE VALVES | APPROVED MARCH 2008 DD-839-05 | REVISED AUG 2019 SHEET 1 OF 1 |
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| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | 2" TEMPORARY BLOW-OFF ASSEMBLY ON 6" & 8" MAINS | APPROVED MARCH 2008 DD-844-01 | REVISED AUG 2019 SHEET 1 OF 4 |
|---|---|-------------------------------------|--|



| | | | |
|---|--------------|-------------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | VALVE MARKER | APPROVED MARCH 2008 DD-828-04 | REVISED AUG 2019 SHEET 1 OF 1 |
|---|--------------|-------------------------------------|--|

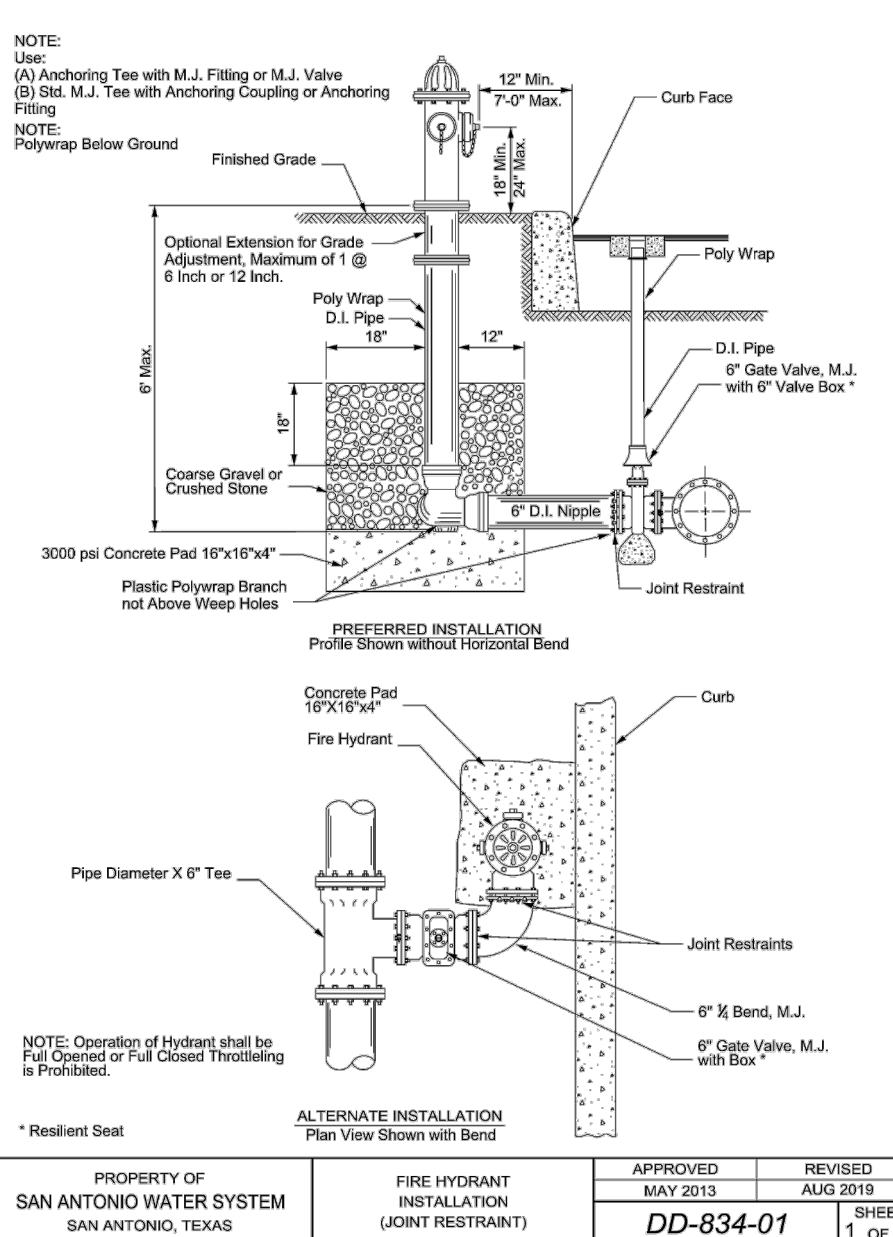


| PIPE SIZE (INCH) | RESTRAINED LENGTH (INCHES) | RESTRAINED LENGTH (FEET) |
|------------------|----------------------------|--------------------------|
| 6 | 42 | 3.5 |
| 8 | 54 | 4.5 |
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| 12 | 78 | 6.5 |

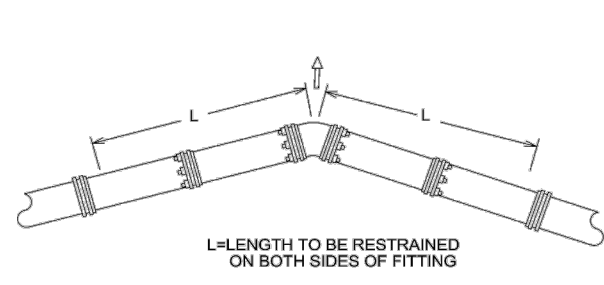
RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

| | | | |
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| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | RESTRAINED LENGTHS FOR REDUCERS | APPROVED MARCH 2008 DD-839-07 | REVISED AUG 2019 SHEET 1 OF 1 |
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|---|---|-----------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | FIRE HYDRANT INSTALLATION (JOINT RESTRAINT) | APPROVED MAY 2013 DD-834-01 | REVISED AUG 2019 SHEET 1 OF 2 |
|---|---|-----------------------------------|--|

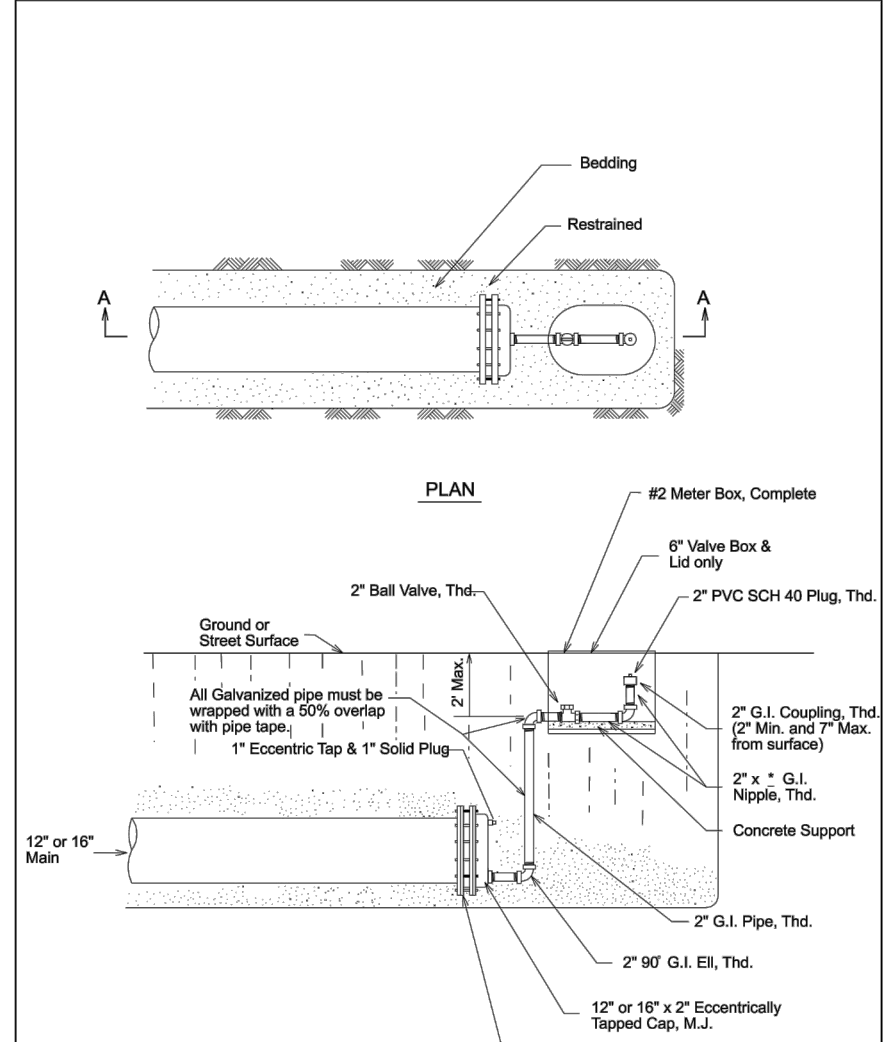


| PIPE SIZE (INCH) | RESTRAINED LENGTH (INCHES) | RESTRAINED LENGTH (FEET) |
|------------------|----------------------------|--------------------------|
| 6 | 42 | 3.5 |
| 8 | 54 | 4.5 |
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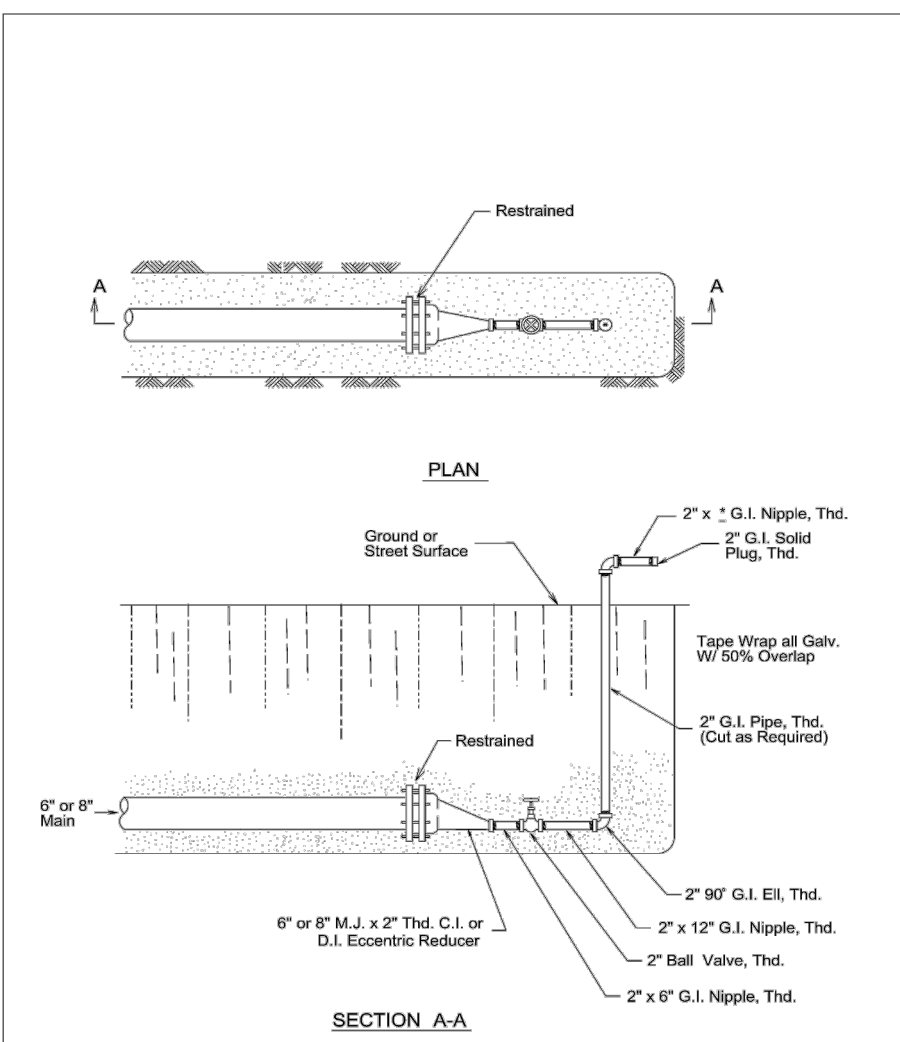
RESTRAINED LENGTH DESIGN
Restrained length calculations are for P.V.C. pipe bedded in compacted granular material extending to the top of the pipe. The native soil material is assumed to be inorganic clay of high plasticity. Depth of bury is assumed to be 4 feet.

Note:
These calculations are provided for reference. The restrained length shall be designed based upon the conditions encountered during the installation.

| | | | |
|---|--|-------------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | RESTRAINED LENGTHS FOR HORIZONTAL BENDS | APPROVED MARCH 2008 DD-839-08 | REVISED AUG 2019 SHEET 1 OF 1 |
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|---|---|-------------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | 2" TEMPORARY BLOW-OFF ASSEMBLY ON 12" & 16" MAINS | APPROVED MARCH 2008 DD-844-02 | REVISED APRIL 2014 SHEET 1 OF 5 |
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|---|---|-------------------------------------|--|
| PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS | 2" TEMPORARY BLOW-OFF ASSEMBLY ON 6" & 8" MAINS | APPROVED MARCH 2008 DD-844-01 | REVISED AUG 2019 SHEET 1 OF 4 |
|---|---|-------------------------------------|--|

WATER (SAWS PRESSURE ZONE 790 HGL)

DEVELOPER'S NAME: EL RANCHO SONRISA, LLC
ADDRESS: 8626 JODHPUR
CITY: FAIR OAKS RANCH STATE: TEXAS ZIP: 78015
PHONE: (210) 381-9813 FAX: 14-8536, 14-8538, 14-8536 &
SAWS BLOCK MAP# 14-6538B TOTAL EDU'S: 60 TOTAL ACREAGE 23.35
TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1771 LF PLAT NO. 22-11800792
NUMBER OF LOTS: 59 SAWS JOB NO. 23-1039

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

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
WATER DISTRIBUTION PLAN DETAILS

PLAT NO. 22-11800792
JOB NO. 11100-99
DATE MAY 2023
DESIGNER JW
CHECKED VS DRAWN JW
SHEET C4.10

Date: May 17, 2023, 9:14am User: D:\cody.
File: P:\1110039\Drawings\DWG\111039.dwg

SAWS CONSTRUCTION NOTES
(LAST REVISED JANUARY 2022)

SAWS GENERAL SECTION

- ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THE SCOPE OF THIS CONTRACT SHALL BE APPROVED BY THE SAN ANTONIO WATER SYSTEM (SAWS) AND COMPLY WITH THE PLANS, SPECIFICATIONS, GENERAL CONDITIONS AND WITH THE FOLLOWING AS APPLICABLE:
 - A.CURRENT TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) "DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEM," TEXAS ADMINISTRATIVE CODE (TAC) TITLE 30 PART 1 CHAPTER 217 AND "PUBLIC DRINKING WATER," TAC TITLE 30 PART 1 CHAPTER 290.
 - B.CURRENT TXDOT "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF HIGHWAYS, STREETS AND DRAINAGE."
 - C.CURRENT "SAN ANTONIO WATER SYSTEM STANDARD SPECIFICATIONS FOR WATER AND SANITARY SEWER CONSTRUCTION".
 - D.CURRENT CITY OF SAN ANTONIO "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION".
 - E.CURRENT CITY OF SAN ANTONIO "UTILITY EXCAVATION CRITERIA MANUAL" (UECM).
- THE CONTRACTOR SHALL NOT PROCEED WITH ANY PIPE INSTALLATION WORK UNTIL THEY OBTAIN A COPY OF THE APPROVED COUNTER PERMIT OR GENERAL CONSTRUCTION PERMIT (GCP) FROM THE CONSULTANT AND HAS BEEN NOTIFIED BY SAWS CONSTRUCTION INSPECTION DIVISION TO PROCEED WITH THE WORK AND HAS ARRANGED A MEETING WITH THE INSPECTOR AND CONSULTANT FOR THE WORK REQUIREMENTS. WORK COMPLETED BY THE CONTRACTOR WITHOUT AN APPROVED COUNTER PERMIT AND/OR A GCP WILL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE EXPENSE OF THE CONTRACTORS AND/OR THE DEVELOPER.
- THE CONTRACTOR SHALL OBTAIN THE SAWS STANDARD DETAILS FROM THE SAWS WEBSITE, [HTTP://WWW.SAWS.ORG/BUSINESS_CENTER/SPECS](http://www.saws.org/business_center/specs). UNLESS OTHERWISE NOTED WITHIN THE DESIGN PLANS.
- THE CONTRACTOR IS TO MAKE ARRANGEMENTS WITH THE SAWS CONSTRUCTION INSPECTION DIVISION WIT
(210) 233-2973, ON NOTIFICATION PROCEDURES THAT WILL BE USED TO NOTIFY AFFECTED HOME RESIDENTS AND/OR PROPERTY OWNERS 48 HOURS PRIOR TO BEGINNING ANY WORK.
- LOCATION AND DEPTH OF EXISTING UTILITIES AND SERVICE LATERALS SHOWN ON THE PLANS ARE UNDERSTOOD TO BE APPROXIMATE. ACTUAL LOCATIONS AND DEPTHS MUST BE FIELD VERIFIED BY THE CONTRACTOR AT LEAST 1 WEEK PRIOR TO CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO LOCATE UTILITY SERVICE LINES AS REQUIRED FOR CONSTRUCTION AND TO PROTECT THEM DURING CONSTRUCTION AT NO COST TO SAWS.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES AT LEAST 1-2 WEEKS PRIOR TO CONSTRUCTION WHETHER SHOWN ON PLANS OR NOT. PLEASE ALLOW UP TO 7 BUSINESS DAYS FOR LOCATES REQUESTING 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
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING EXISTING FENCES, CURBS, STREETS, DRIVEWAYS, SIDEWALKS, LANDSCAPING AND STRUCTURES TO ITS ORIGINAL OR BETTER CONDITION IF DAMAGES ARE MADE AS A RESULT OF THE PROJECT'S CONSTRUCTION.
- ALL WORK IN TEXAS DEPARTMENT OF TRANSPORTATION (TXDOT) AND/OR BEXAR COUNTY RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH RESPECTIVE CONSTRUCTION SPECIFICATIONS AND PERMIT REQUIREMENTS.
- THE CONTRACTOR SHALL COMPLY WITH CITY OF SAN ANTONIO OR OTHER GOVERNING MUNICIPALITY'S TREE ORDINANCES WHEN EXCAVATING NEAR TREES.
- THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIALS IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN PERMIT.

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

SAWS WATER NOTES

- 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
- 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".
- 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)
- 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.
- ALL VALVES SHALL READ "OPEN RIGHT".
- PRVS REQUIRED: CONTRACTOR TO VERIFY THAT NO PORTION OF THE TRACT IS BELOW GROUND ELEVATION OF 605 FEET WHERE THE STATIC PRESSURE WILL NORMALLY EXCEED 80 PSI. AT ALL SUCH LOCATIONS WHERE THE GROUND LEVEL IS BELOW 605 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).
- 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.
- 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.
- 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.
- 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.

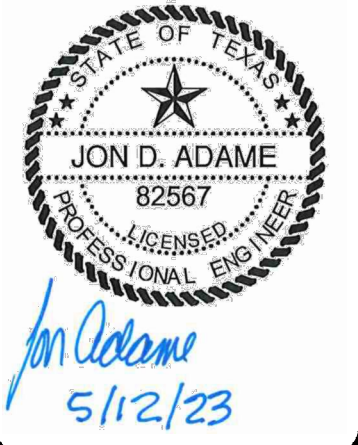
PROJECT WATER NOTES

- MACHINE CHLORINATION BY THE S.A.W.S.
- ALL 8", 12" AND 16" PIPE SHALL BE P.V.C. C-900 CLASS 235 DR 18.
- ALL MAINS SHALL BE HYDROSTATICALLY TESTED BY THE CONTRACTOR, AS PROVIDED FOR IN THE SPECIAL CONDITIONS.
- 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.
- THE CONTRACTOR SHALL FURNISH THE ENGINEER WITH ALL THE FINAL MEASUREMENTS, TAPS AND LENGTH OF SERVICE CONNECTIONS.
- 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.
- 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.
- WATER METER BOXES IF APPLICABLE SHALL BE INSTALLED NINE FEET FROM FACE OF CURB TO CENTER OF THE METER BOX.
- ALL GARBAGE OR SPOIL MATERIAL FROM THIS WORK SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR, AT HIS EXPENSE.
- 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.
- 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).
- 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).
- 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.
- SAWS REQUIRES LEAD FREE (< 0.25%) FIRE HYDRANTS.
- UNLESS OTHERWISE NOTED ALL SERVICES SHALL BE 3/4" WITH 5/8" METER.

WATER (SAWS PRESSURE ZONE 790 HGL)

| | | | |
|--|----------------------------------|------------|--|
| DEVELOPER'S NAME: EL RANCHO SONRISA, LLC | | | |
| ADDRESS: 8626 JODHPUR | | | |
| CITY: FAIR OAKS RANCH | STATE: TEXAS | ZIP: 78015 | |
| PHONE# (210) 381-9813 | FAX# 14-8538, 14-8538, 14-8538 & | | |
| SAWS BLOCK MAP#14-6538 TOTAL EDU'S. 60 TOTAL ACREAGE 23.35 | | | |
| TOTAL LINEAR FOOTAGE OF PIPE:8" - 1771 LF PLAT NO. 22-11800792 | | | |
| NUMBER OF LOTS 59 | SAWS JOB NO. 23-1039 | | |

| DATE | NO. | REVISION |
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PAPE-DAWSON ENGINEERS
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10088600

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
WATER DISTRIBUTION PLAN NOTES

| | |
|----------|-------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | MAY 2023 |
| DESIGNER | JW |
| CHECKED | VS DRAWN JW |
| SHEET | C4.11 |

Date: Dec 11, 2023, 3:35pm User ID: cdc77
File: P:\11\10039\Drawings\CD\SS04-111039.dwg

EX. (SHALLOW) M.H. "D1"
STA: 4+58.00 EX. (SS LINE D)
STA: 1+00.00(SS LINE E)

CONTRACTOR TO CUT/TIE INTO
EXISTING SANITARY SEWER
MANHOLE "EX. D1". ADJUST
MANHOLE TOP TO MATCH
FINISHED GRADE, AND RECOAT
MANHOLE PER SAWS
SPECIFICATIONS AT
STA: 4+58.00 (SS LINE D).

PROPOSED 8" FL OUT
(SS LINE E) = 617.06
(SS LINE F) = 617.06

PROPOSED SLOPE OUT
(SS LINE E) = 0.40%
(SS LINE F) = 0.40%

SAWS JOB NO. 22-1688
EXISTING 8" SS FL OUT
= 616.96
EXISTING SLOPE OUT
= 0.34%

ENGINEER TO BE NOTIFIED FOR
ANY DISCREPANCY IN
ELEVATION OR SLOPE.

EX. (SHALLOW) M.H. "D1"
STA: 4+58.00 (SS-LINE D)
STA: 1+00.00 (SS-LINE E)

NON-STANDARD (SHALLOW)
M.H. "D2"
STA: 5+95.59

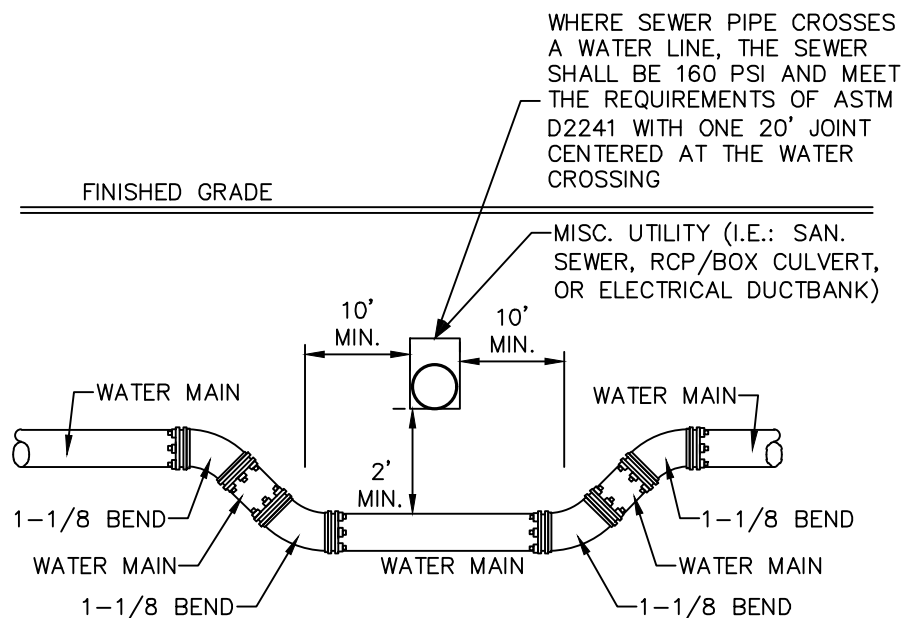
10'X10' ELEC., GAS, TELE., &
CA. T.V. EASEMENT

50'X25' WATER AND DRAINAGE
EASEMENT TO EXPIRE UPON
INCORPORATION INTO FUTURE ROW

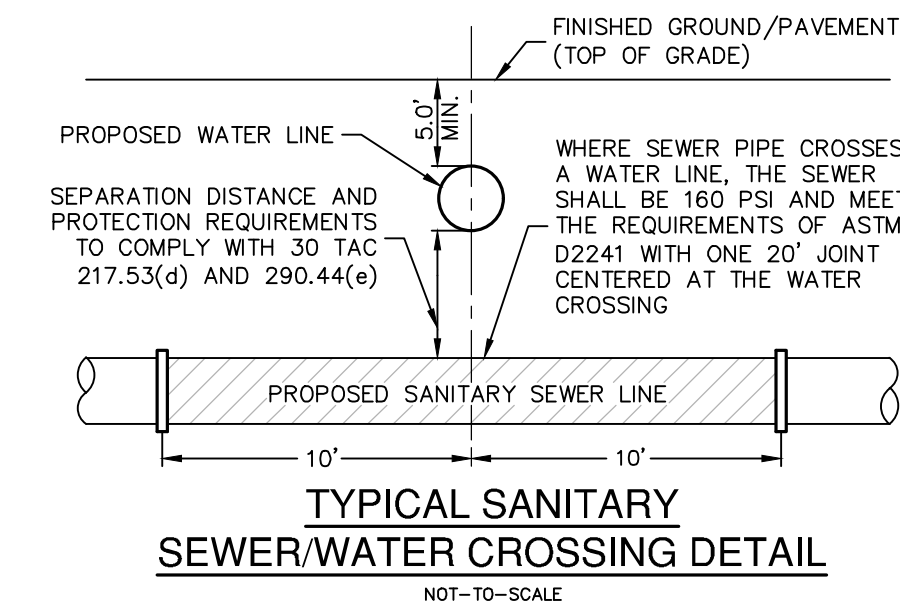
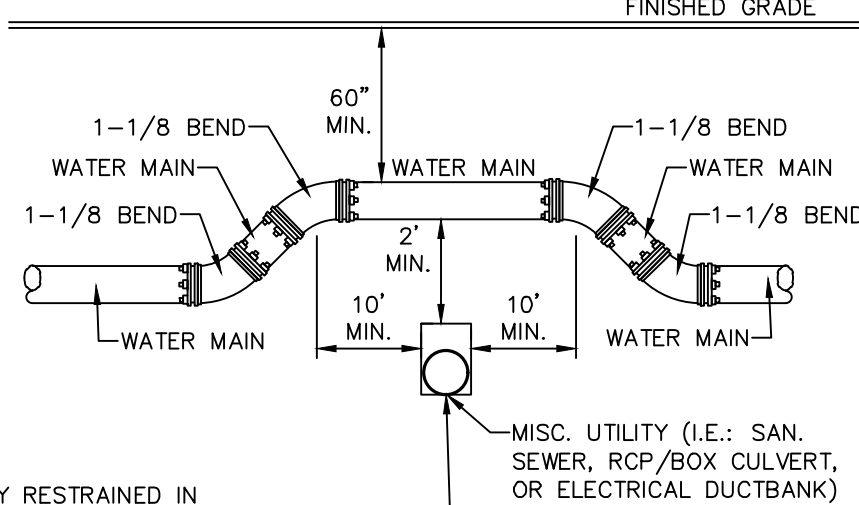
EL RANCHO SONRISA, LLC
REMAINING PORTION OF 72.67
ACRE TRACT (UNPLATTED)
(VOL. 13905 PG. 533 OPR)

10'X10' ELEC., GAS, TELE., &
CA. T.V. EASEMENT

EL RANCHO SONRISA, LLC
REMAINING PORTION OF 72.67
ACRE TRACT (UNPLATTED)
(VOL. 13905 PG. 533 OPR)



**TYPICAL UTILITY/WATER
CROSSING DETAIL**
NOT-TO-SCALE



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

- FINISHED FLOOR NOTES:**
1. THE FINISHED FLOOR ELEVATIONS (FF) REPRESENT THE MINIMUM POSSIBLE FLOOR ELEVATION TO PROVIDE SANITARY SEWER SERVICE TO EACH LOT. ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT ARE TO BE DETERMINED BY THE BUILDER AND SHALL TAKE INTO CONSIDERATION AS-BUILT CONDITIONS FOR FOUND SEWER SERVICES AND ACTUAL LATERAL PLACEMENT. IT IS THE BUILDER'S SOLE RESPONSIBILITY TO DETERMINE ACTUAL FINISHED FLOOR ELEVATIONS FOR EACH LOT PRIOR TO THE START OF HOME FOUNDATION CONSTRUCTION TAKING INTO CONSIDERATION SITE DRAINAGE, STREET ACCESS AND SANITARY SEWER SERVICE ELEVATIONS.
 2. THE MINIMUM SANITARY SEWER LATERAL GRADES WERE BASED UPON THE MINIMUM FINISHED FLOOR ELEVATIONS FOR THE LOTS LOCATED ON THE DOWNHILL SIDES OF THE PROPOSED ROADWAYS.

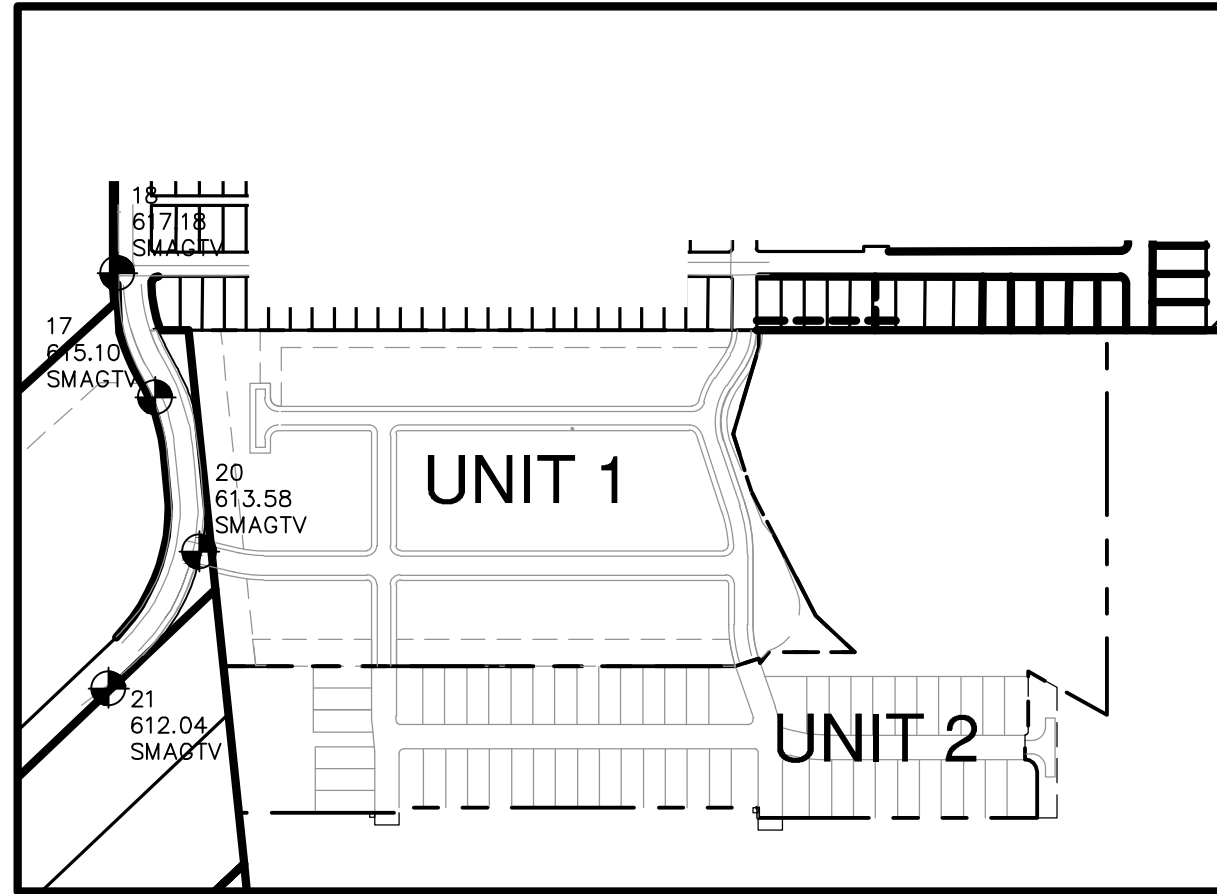
ROW PERMIT NOTE:
A BEXAR COUNTY PERMIT MUST BE OBTAINED BEFORE WORKING IN BEXAR COUNTY RIGHTS-OF-WAY.

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

SEWER LOWER - WEST SEWERSHED - DOS RIOS/LEON CREEK

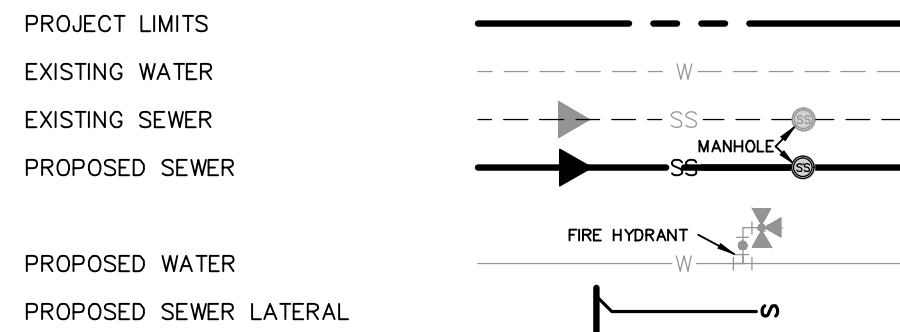
| | |
|--|--------------------------|
| DEVELOPER'S NAME: | EL RANCHO SONRISA, LLC |
| ADDRESS: | 8626 JODHPUR |
| CITY: | FAIR OAKS RANCH |
| STATE: | TEXAS |
| ZIP: | 78015 |
| PHONE# | (210) 381-9813 |
| FAX# | 148538 & 143586 & 148536 |
| SAWS BLOCK MAP# | 146538 |
| TOTAL EDU'S | 59 |
| TOTAL ACREAGE | 23.35 |
| TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1500 LF | PLAT NO. 22-11800792 |
| NUMBER OF LOTS | 59 |
| SAWS JOB NO. | 23-1531 |

PLAT NO. 22-11800792
JOB NO. 11100-99
DATE DECEMBER 2023
DESIGNER AA
CHECKED VS DRAWN AA
SHEET C5.00



BENCHMARK & INDEX MAP
NOT TO SCALE

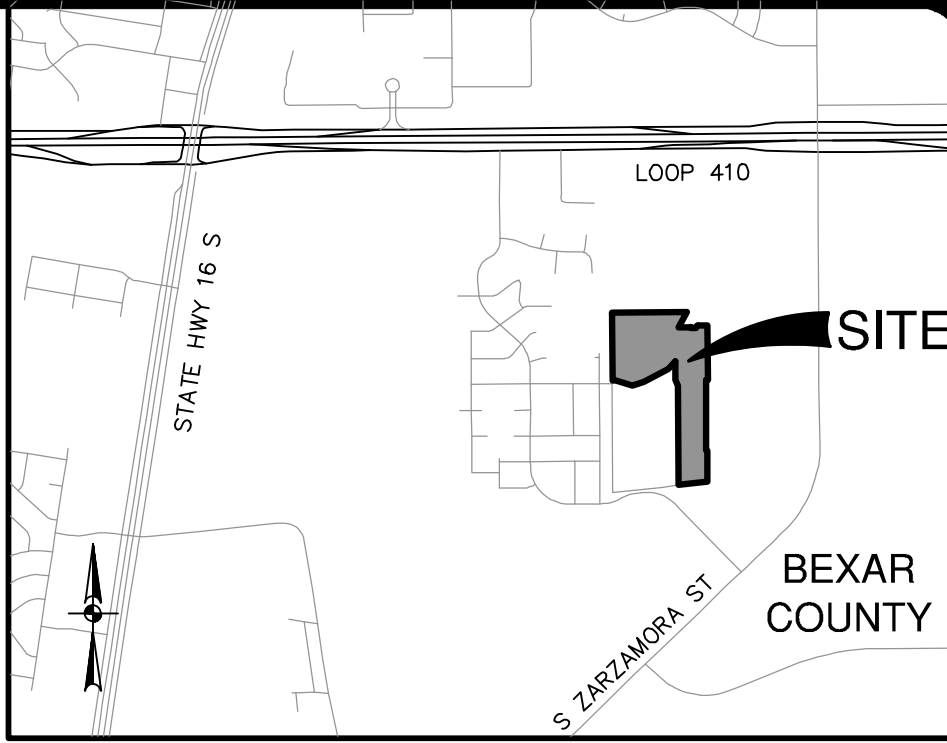
SEWER LEGEND



KEY LEGEND

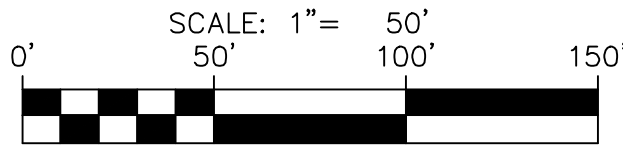
A 10' ELEC., GAS, TELE., &
CA. T.V. EASEMENT

- 1 CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SAWS JOB NO. 22-1688)
- 2 CONTRACTOR TO ENSURE 2' VERTICAL SEPARATION AT SHALLOW SEWER/WATER CROSSING (SEE VERTICAL BEND DETAIL THIS SHEET)



LOCATION MAP

NOT-TO-SCALE

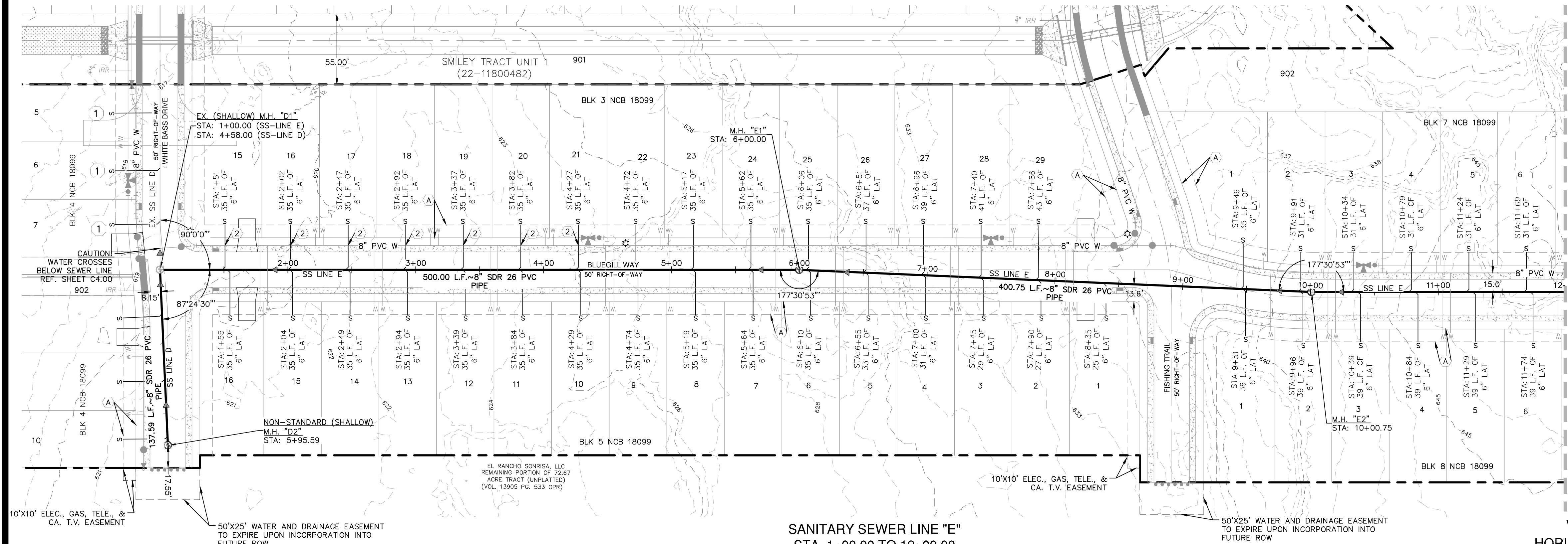


**PAPE-DAWSON
ENGINEERS**
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #10028800

**SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS**
OVERALL SANITARY SEWER PLAN

Date: Dec 11, 2023, 3:39pm User ID: acb7
File Path: \\100393\Design\CHAS\22-11800482.dwg

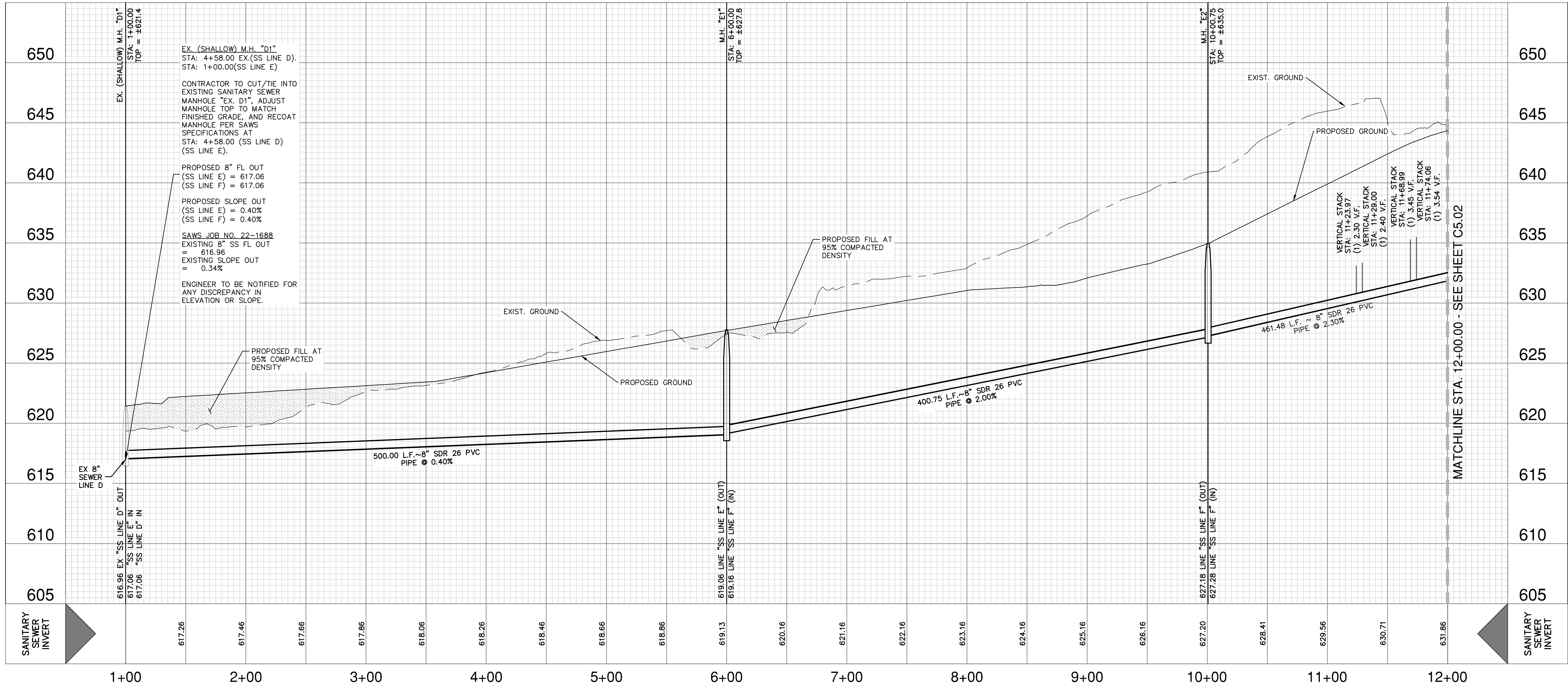
THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANT'S ORIGINAL SIGNATURE AND SEAL. AERIAL IMAGERY PROVIDED BY GOOGLE/UNLESS OTHERWISE NOTED. Imagery © 2016,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



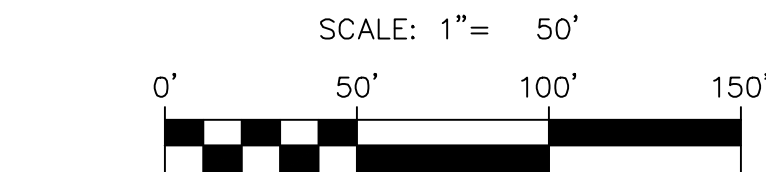
MATCHLINE STA. 12+00.00 - SEE SHEET C5.02

SANITARY SEWER LINE "E"
STA. 1+00.00 TO 12+00.00

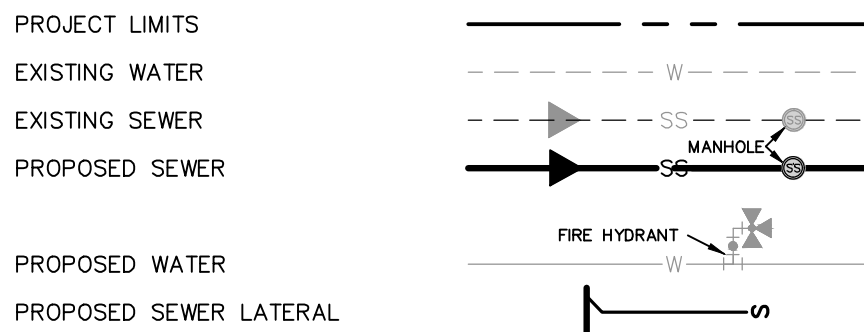
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



MATCHLINE STA. 12+00.00 - SEE SHEET C5.02



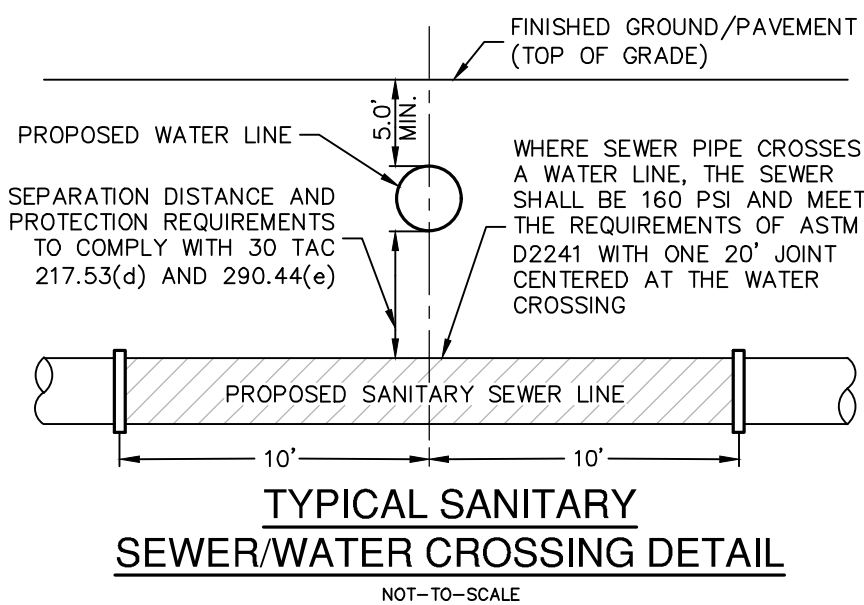
SEWER LEGEND



KEY LEGEND

- (A) 10' ELEC., GAS, TELE., & CA. T.V. EASEMENT

- 1 CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SAWS JOB NO. 22-1688)
- 2 CONTRACTOR TO ENSURE 2' VERTICAL SEPARATION AT SHALLOW SEWER/WATER CROSSING (SEE VERTICAL BEND DETAIL SHEET C5.02)



CAUTION!!

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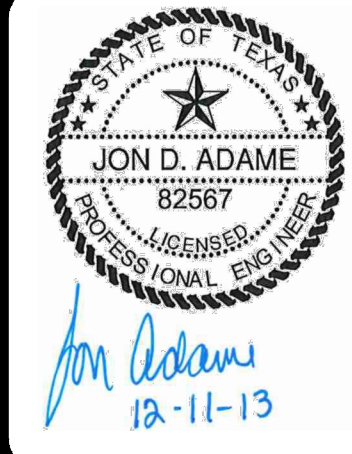
TRENCH EXCAVATION SAFETY PROTECTION:

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

SEWER LOWER - WEST SEWERSHED - DOS RIOS/LEON CREEK

| | | | |
|---|--------------|------------|--|
| DEVELOPER'S NAME: EL RANCHO SONRISA, LLC | | | |
| ADDRESS: 8626 JODHPUR | | | |
| CITY: FAIR OAKS RANCH | STATE: TEXAS | ZIP: 78015 | |
| PHONE# (210) 381-9813 | FAX# | | |
| SAWS BLOCK MAP# 145538 & 145539 TOTAL ACRES 23.35 | | | |
| TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1500 LF PLAT NO. 22-11800792 | | | |
| NUMBER OF LOTS 59 SAWS JOB NO. 23-1531 | | | |

| NO. | REVISION | DATE |
|-----|----------|------|
| | | |
| | | |
| | | |
| | | |



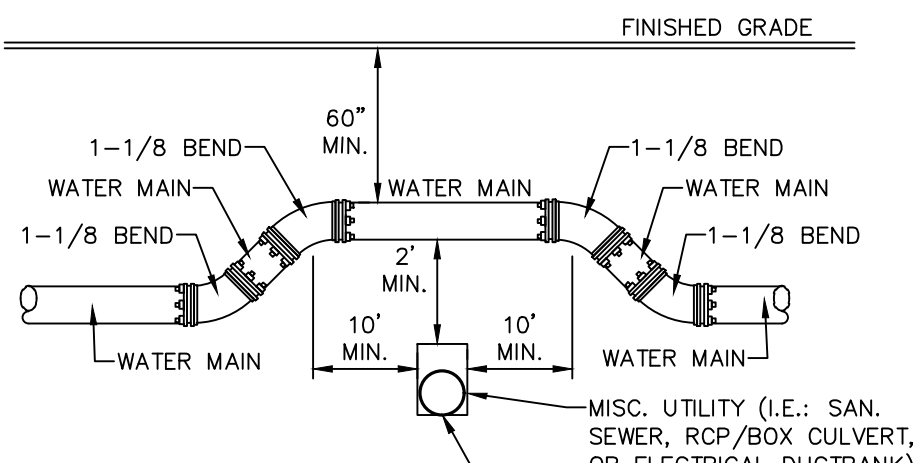
PAPE-DAWSON ENGINEERS

SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028800

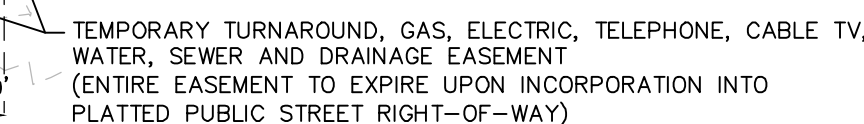
SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

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

| | |
|----------|---------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | DECEMBER 2023 |
| DESIGNER | JW |
| CHECKED | VS |
| DRAWN | JW |
| SHEET | C5.01 |



NOT-TO-SCALE

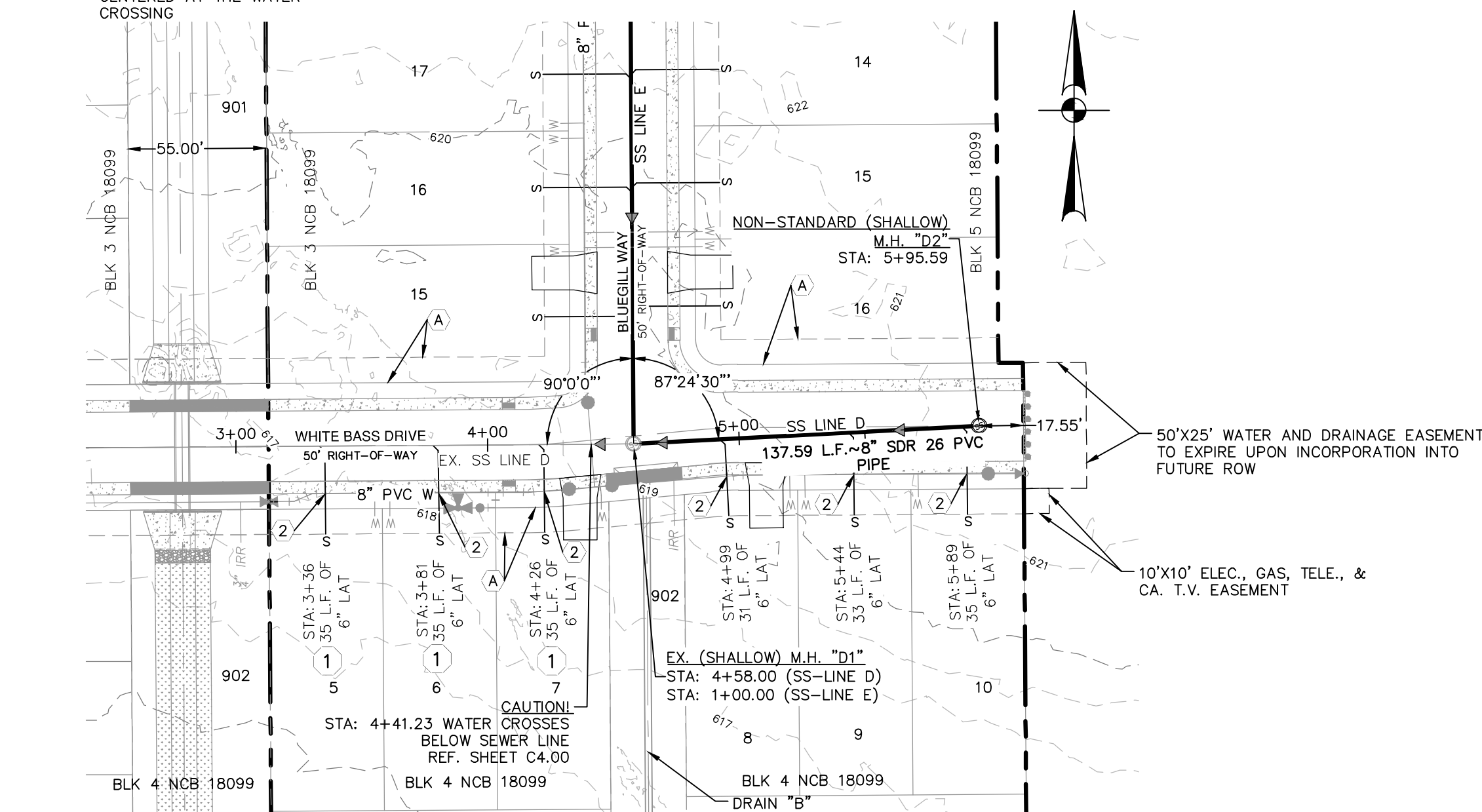


EL RANCHO SONRISA, LLC
REMAINING PORTION OF 72.67
ACRE TRACT (UNPLATTED)
(VOL. 13905 PG. 533 OPR)

MATCHLINE STA. 12+00.00 - SEE SHEET C5.01

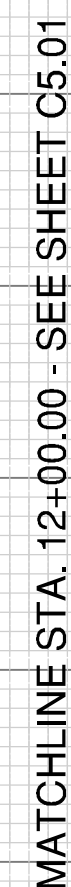
SANITARY SEWER LINE "E"
STA. 12+00.00 TO END

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



SEE SHEET 10
SANITARY SEWER LINE "D"
STA. 4+58.00 TO END

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

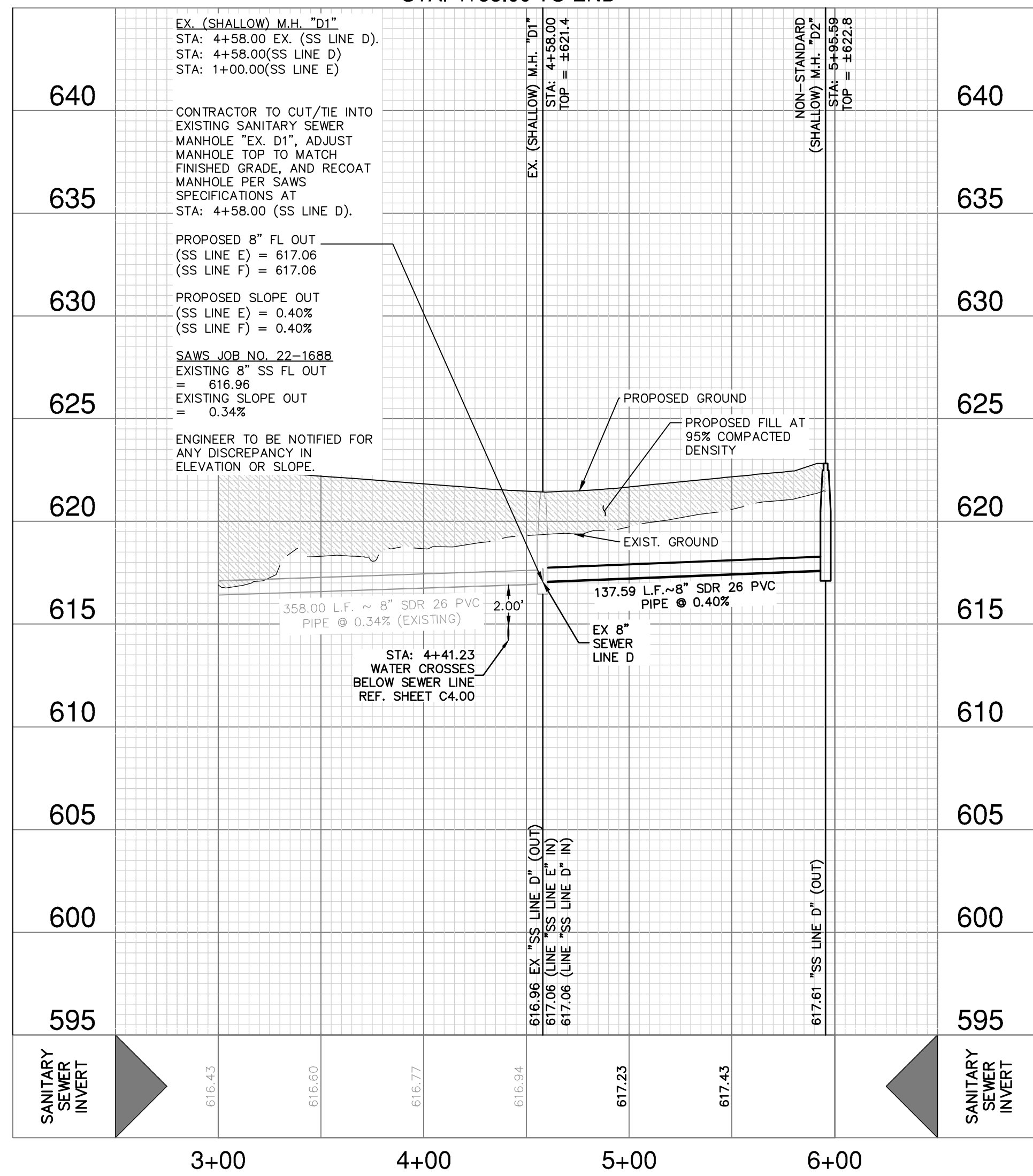


12+00

13+00

14+00

15+00



3+00

4+00

5+00

6+00



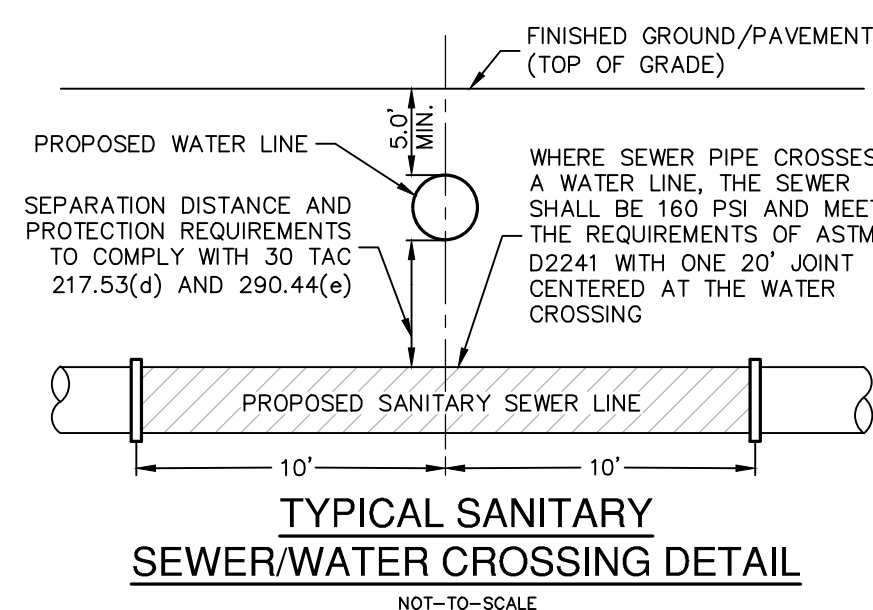
PROJECT LIMITS
EXISTING WATER
EXISTING SEWER
PROPOSED SEWER

PROPOSED WATER
PROPOSED SEWER LATERAL

KEY LEGEND

A 10' ELEC., GAS, TELE., &
CA. T.V. EASEMENT

- | | |
|---|---|
| ① | CONTRACTOR TO INSTALL SERVICE LATERAL USING LATERAL SADDLE ONTO EXISTING MAIN (SAWS JOB NO. 22-1688) |
| ② | CONTRACTOR TO ENSURE 2' VERTICAL SEPARATION AT SHALLOW SEWER/WATER CROSSING (SEE VERTICAL BEND DETAIL THIS SHEET) |



CAUTION!!

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TRENCH EXCAVATION SAFETY PROTECTION:

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SEWER LOWER - WEST SEWERSHED - DOS RIOS/LEON CREEK

DEVELOPER'S NAME: EL RANCHO SONRISA, LLC
ADDRESS: 8526 JODHPUR
CITY: FAIR OAKS RANCH STATE: TEXAS ZIP: 78015
PHONE# (210) 381-9813 FAX#
148538 148538 & 148538
SAWS BLOCK MAP# 148538 TOTAL EDU'S 59 TOTAL ACRES 23.35
TOTAL LINEAR FOOTAGE OF PIPE: 8" - 1500 LF PLAT NO. 22-1180079
NUMBER OF LOTS 59 SAWS JOB NO. 23-1531

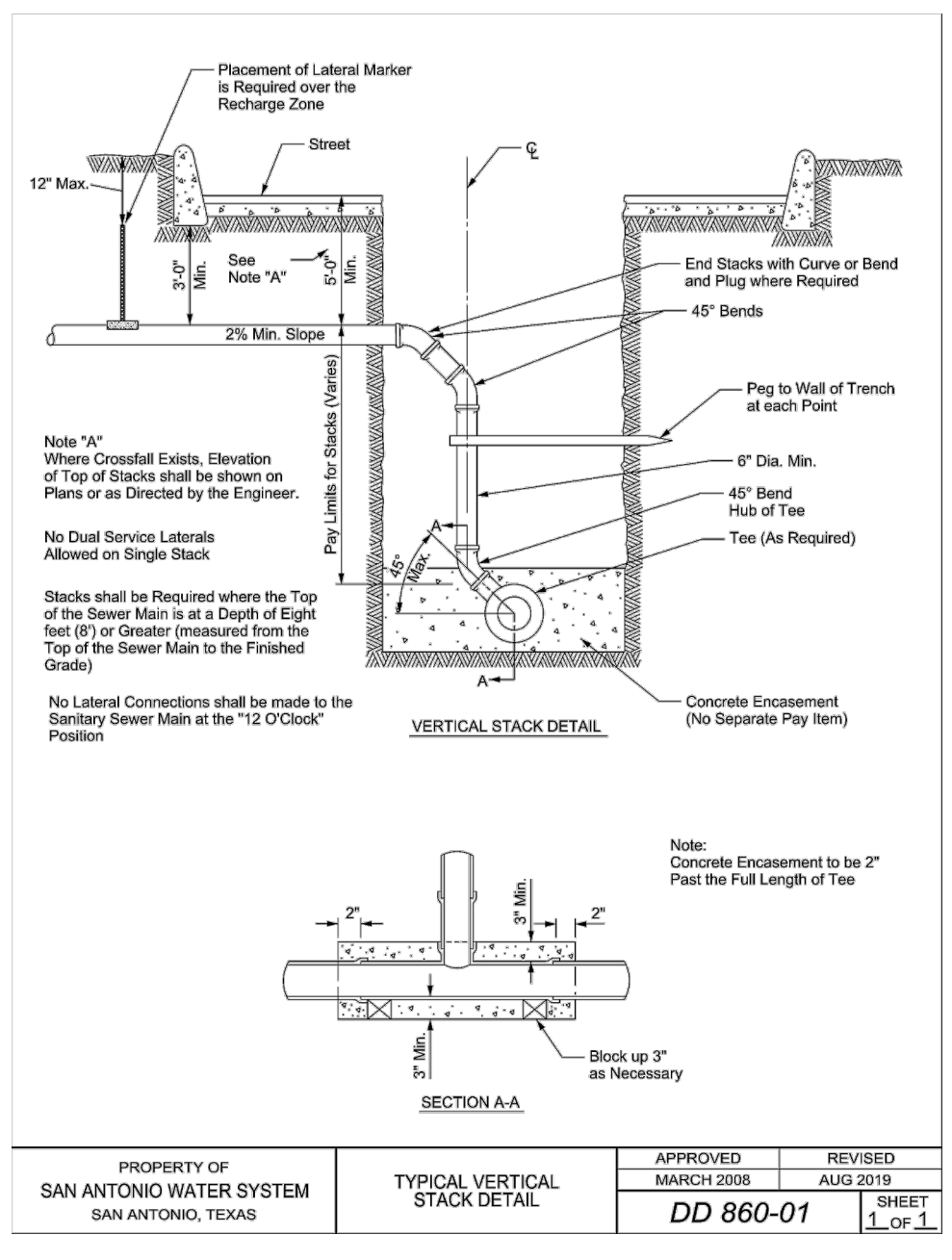
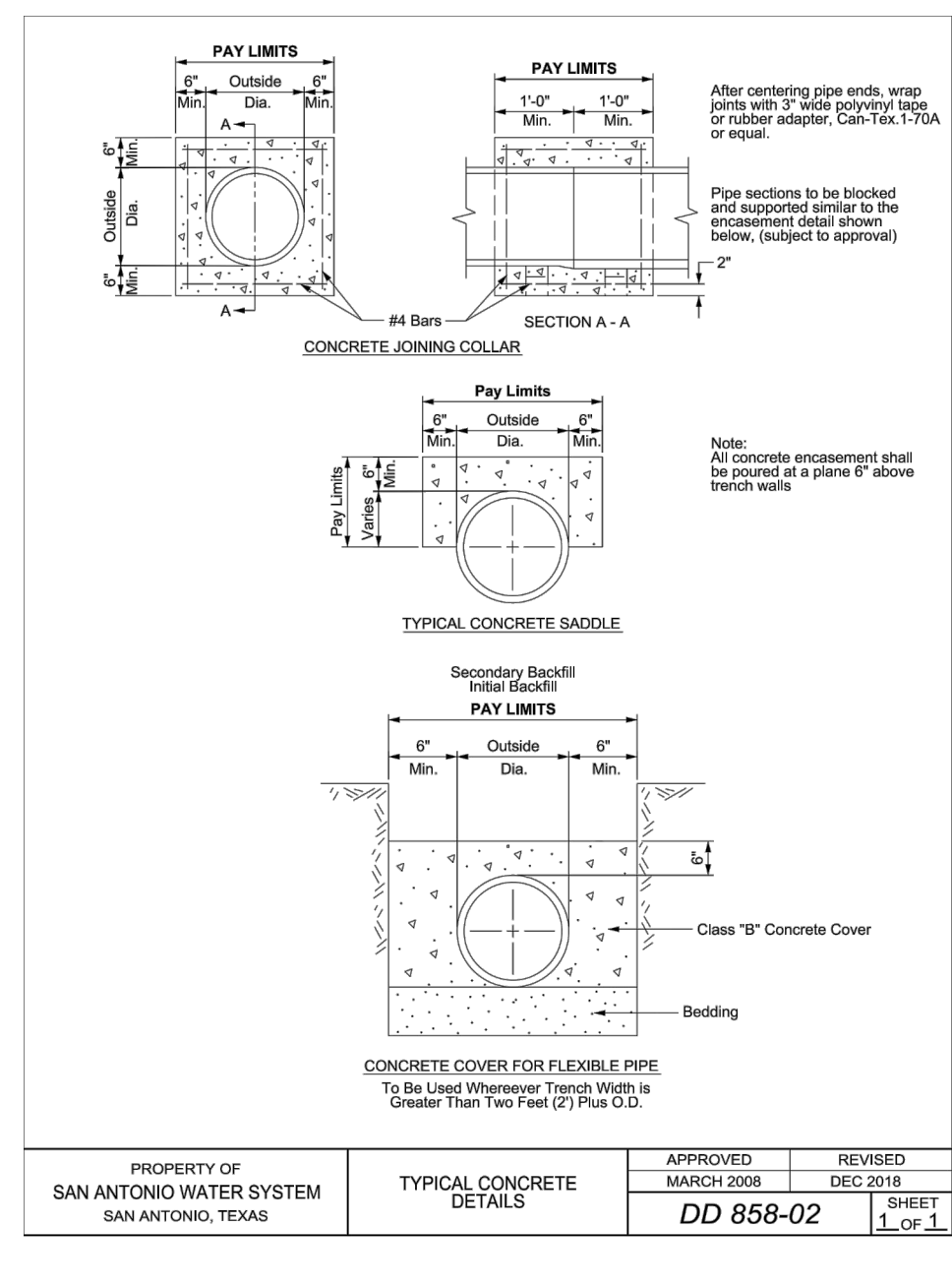
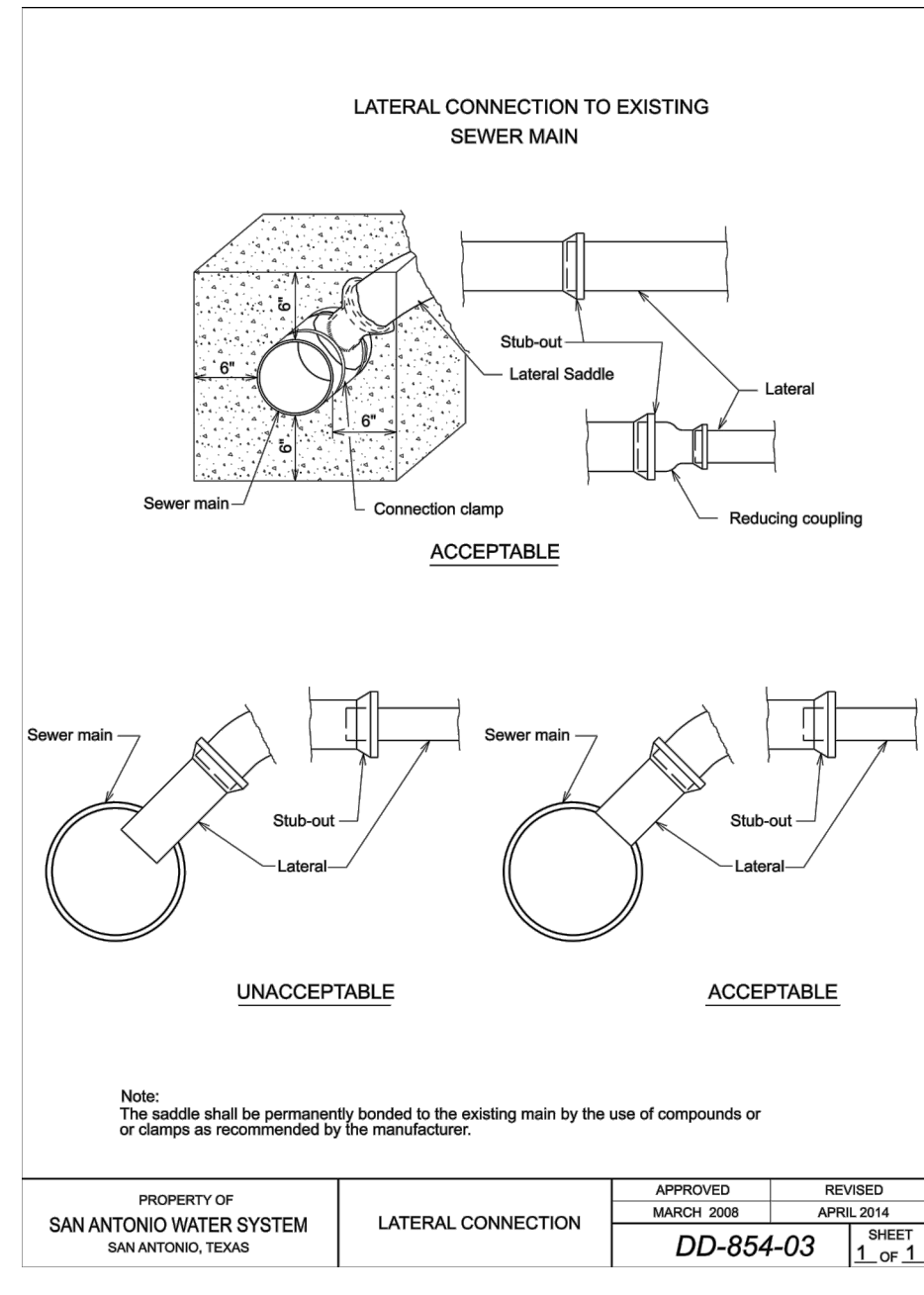
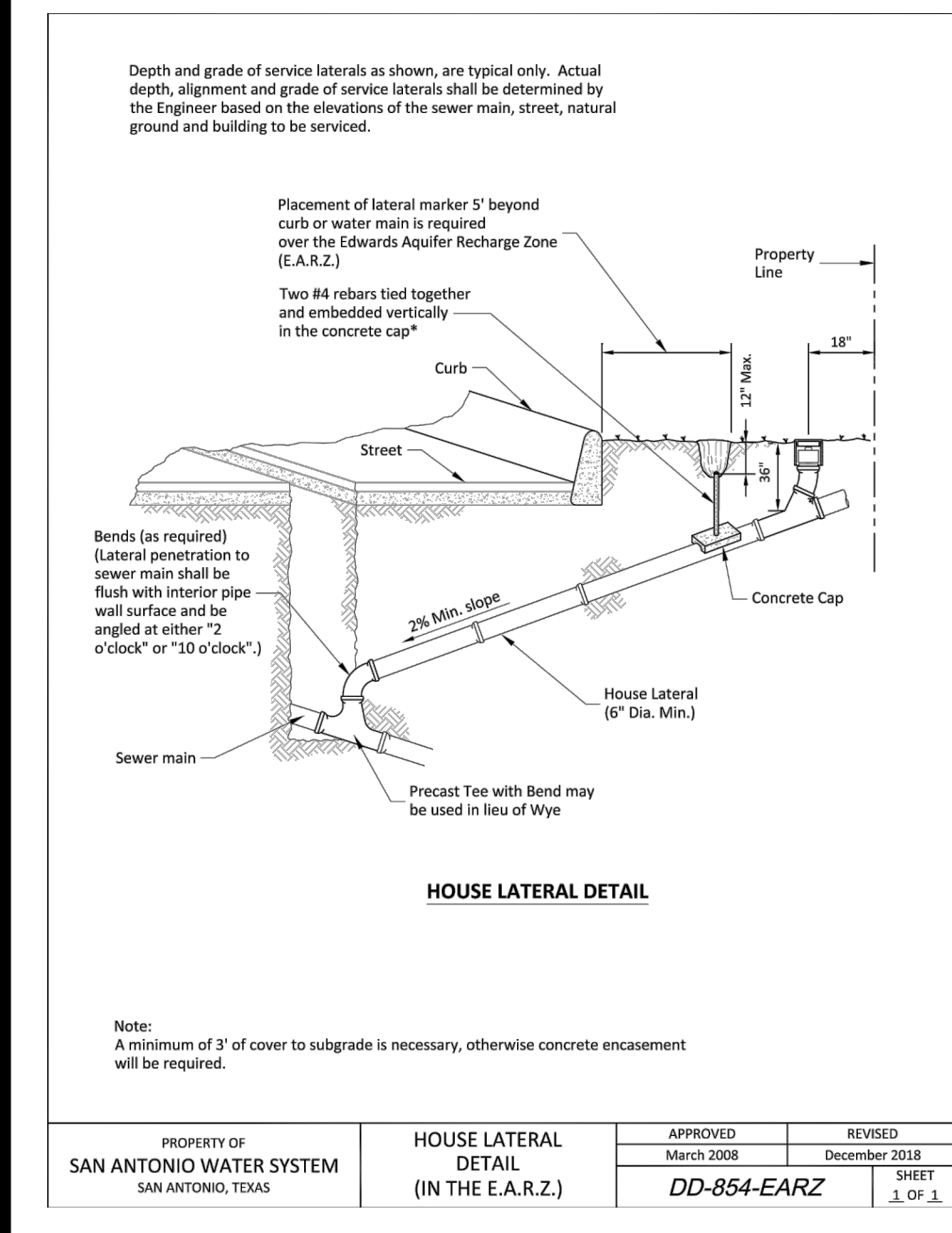


**PAPE-DAWSON
ENGINEERS**

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
SEWER LINE D ~ STA. 12+00.00 TO END
SEWER LINE E ~ STA. 1+00.00 TO END
SANITARY SEWER PLAN & PROFILE

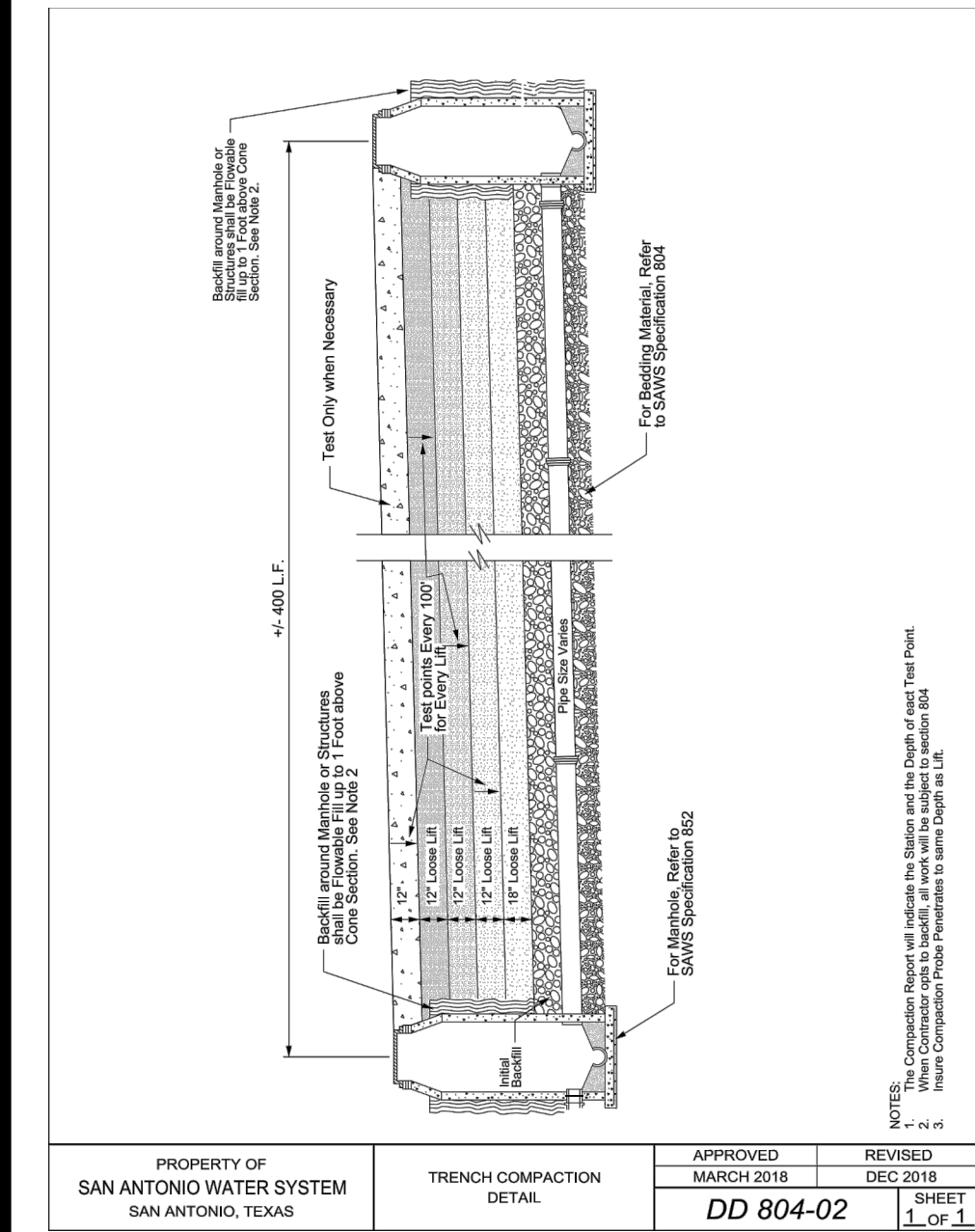
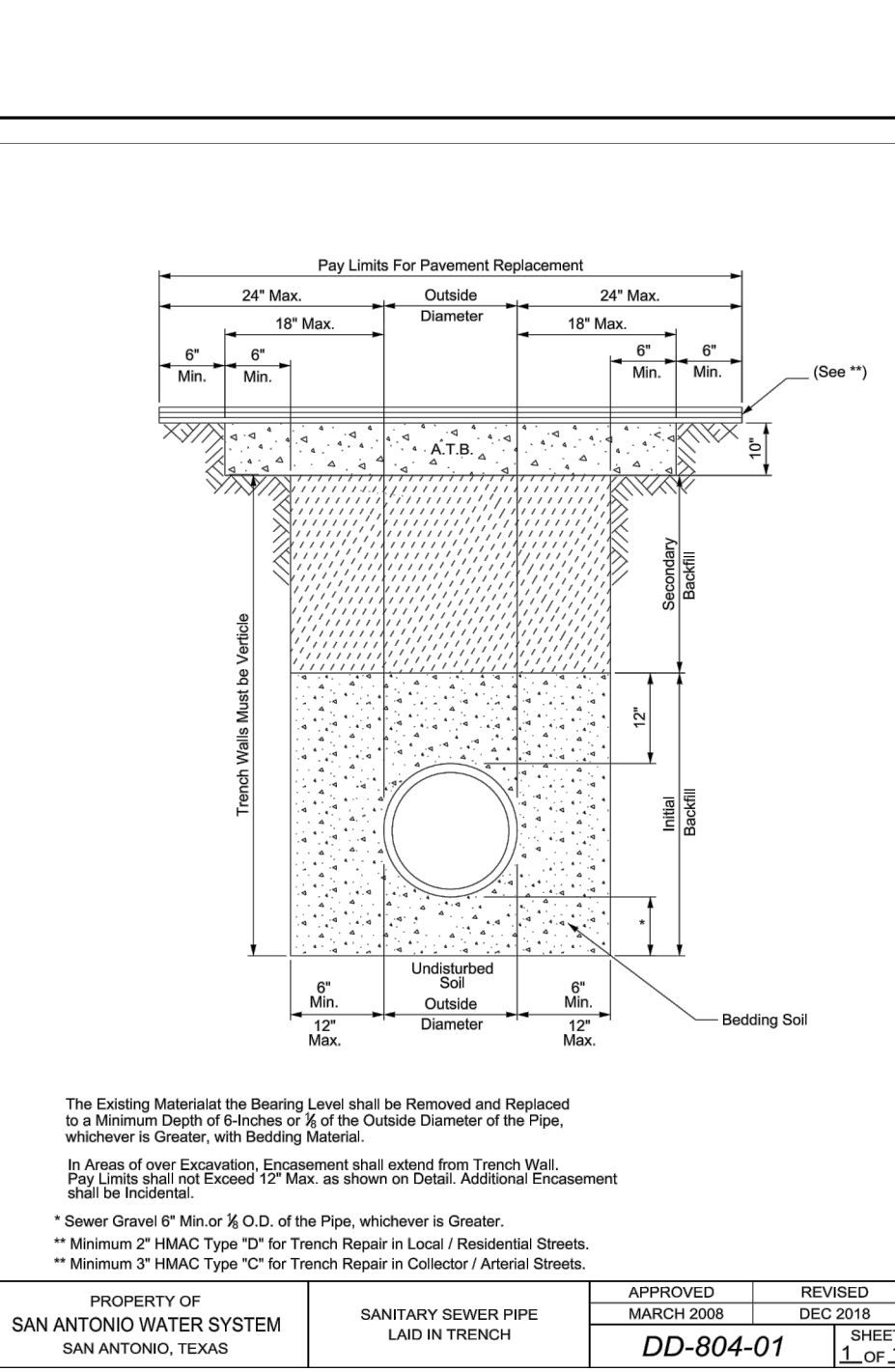
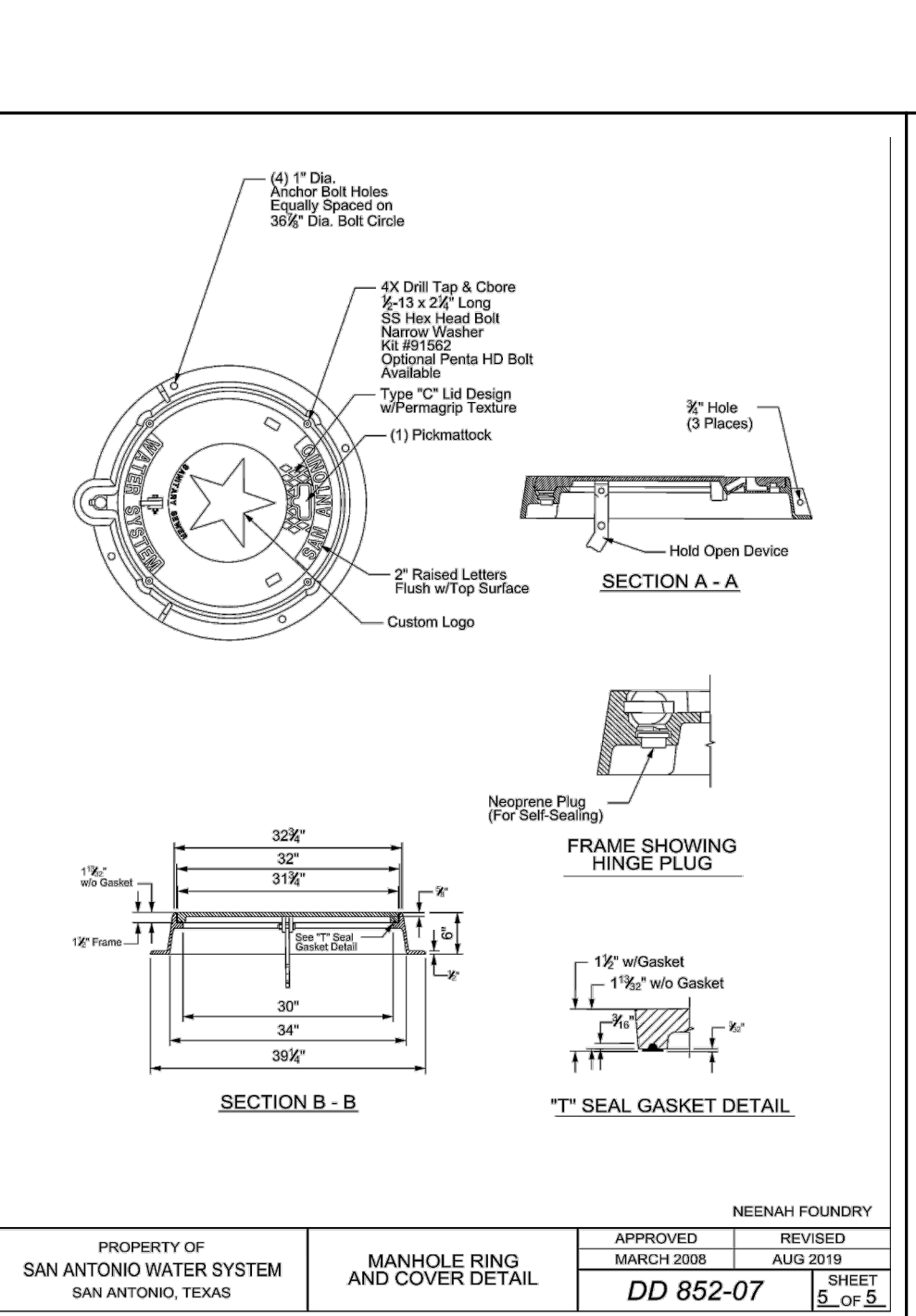
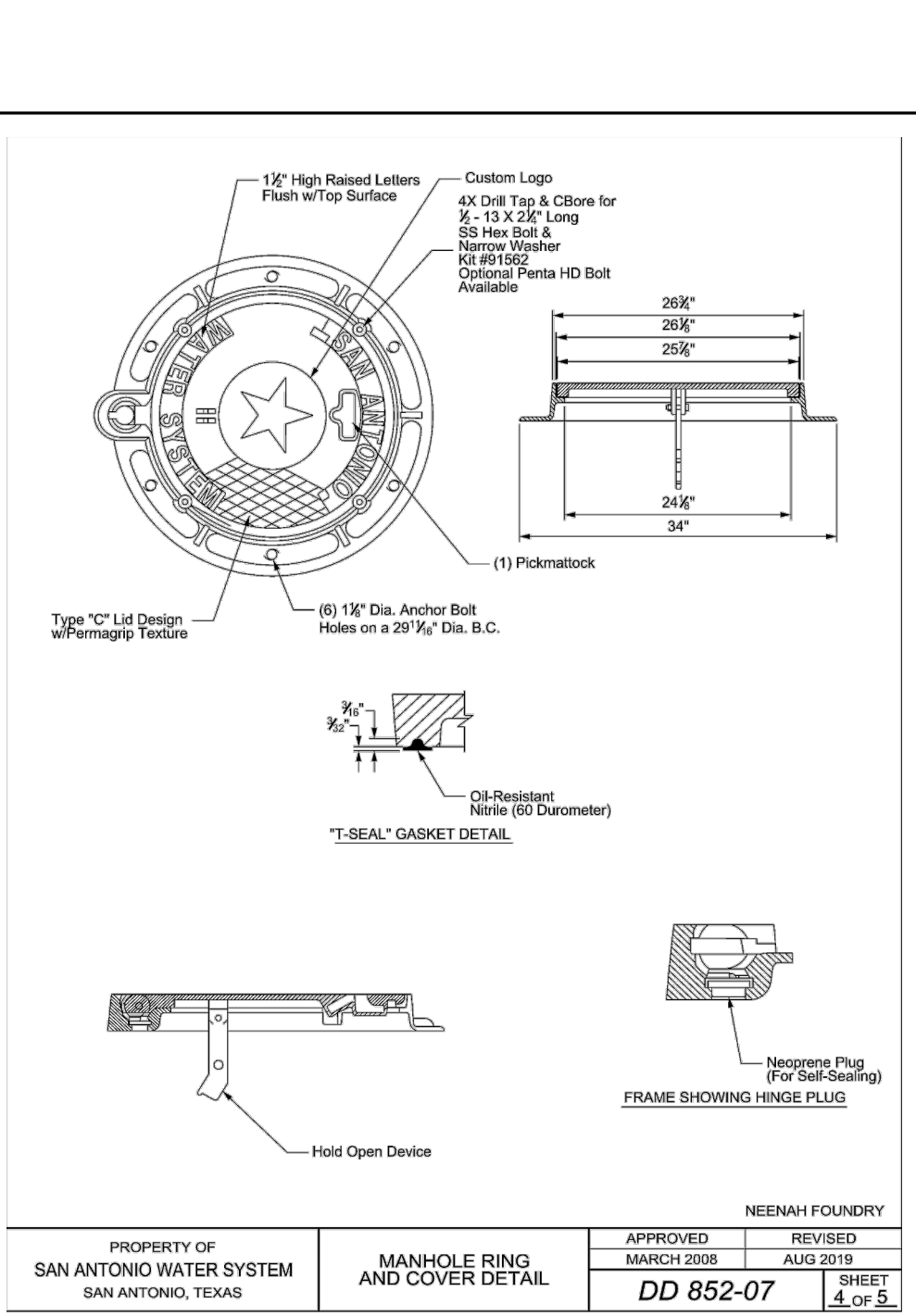
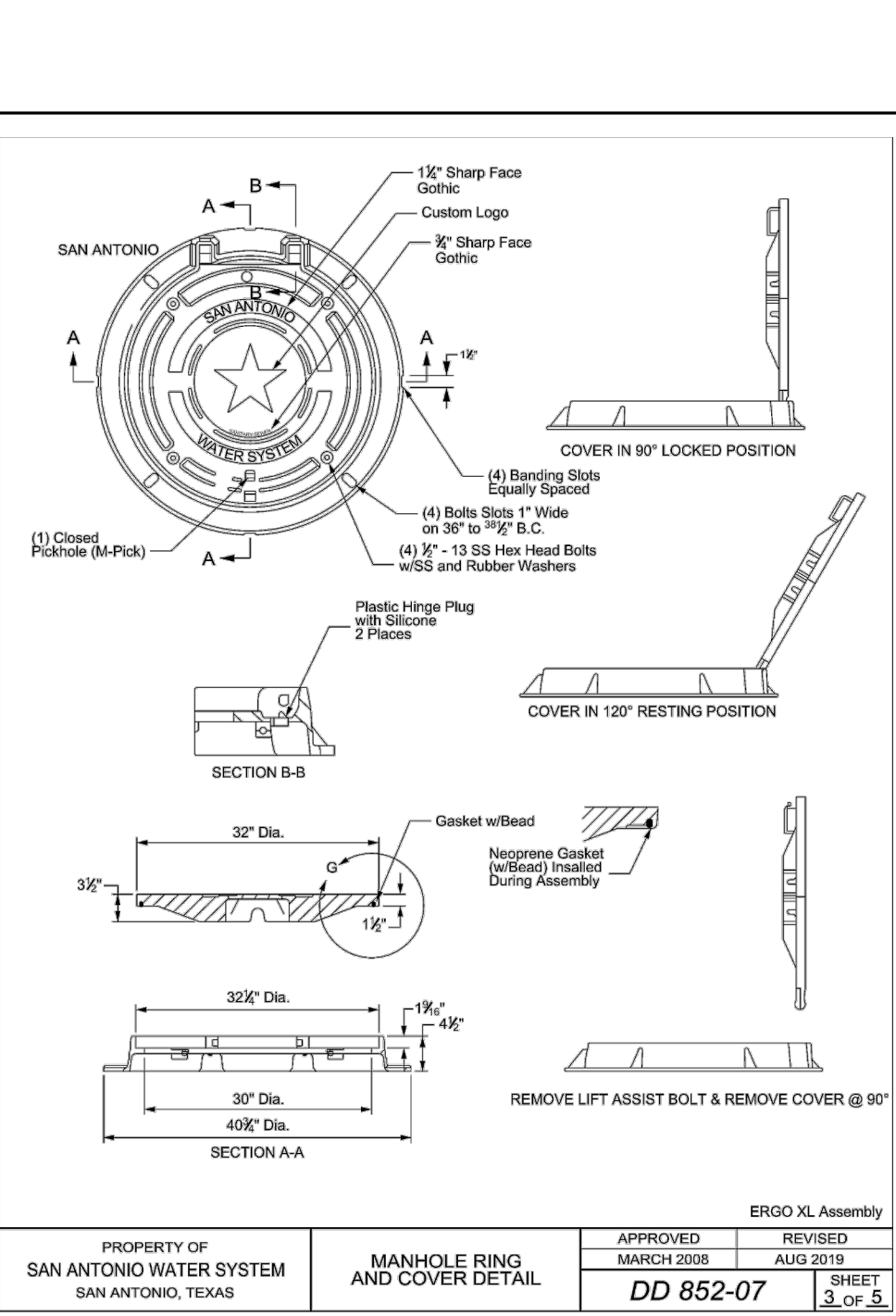
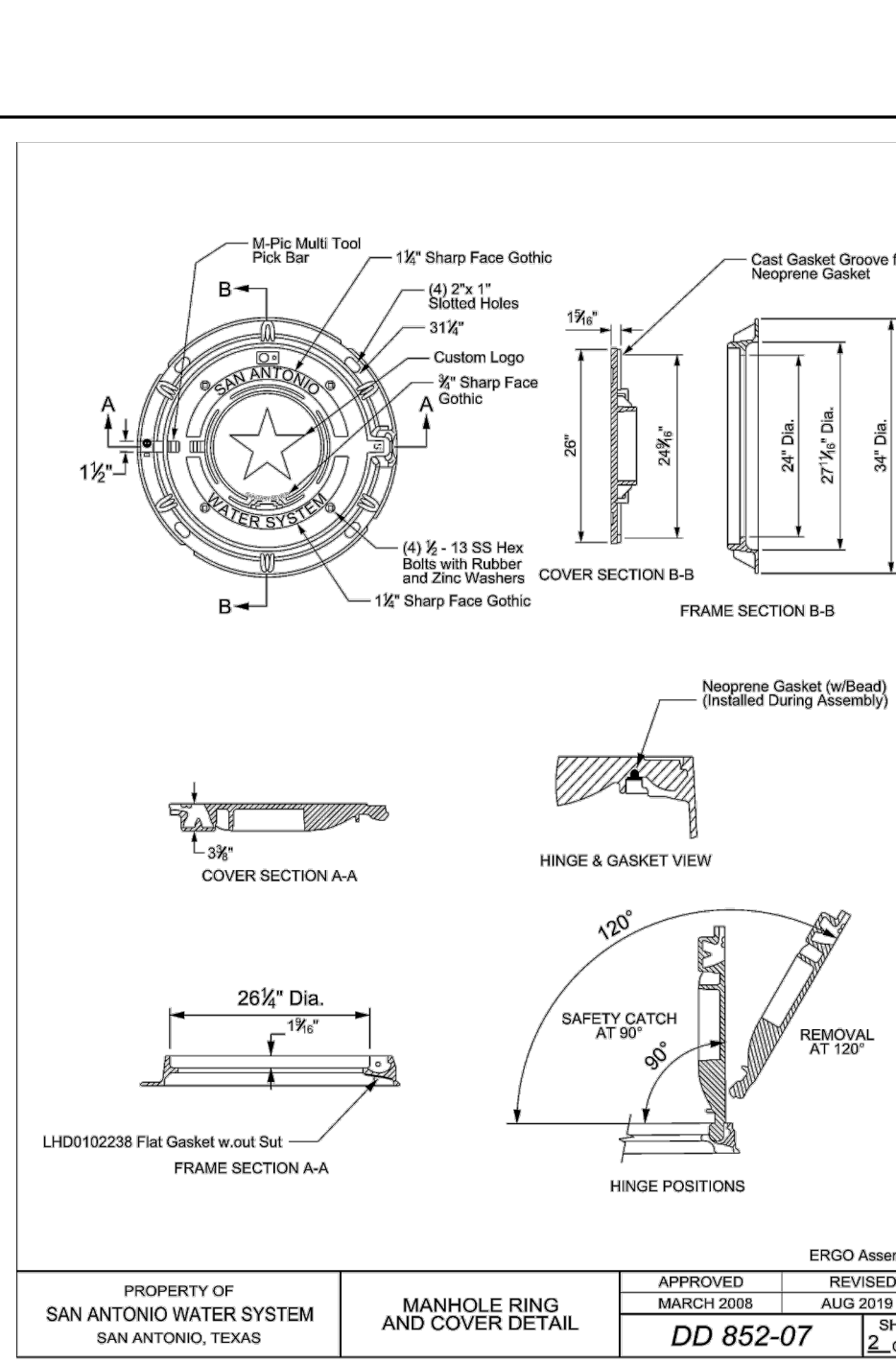
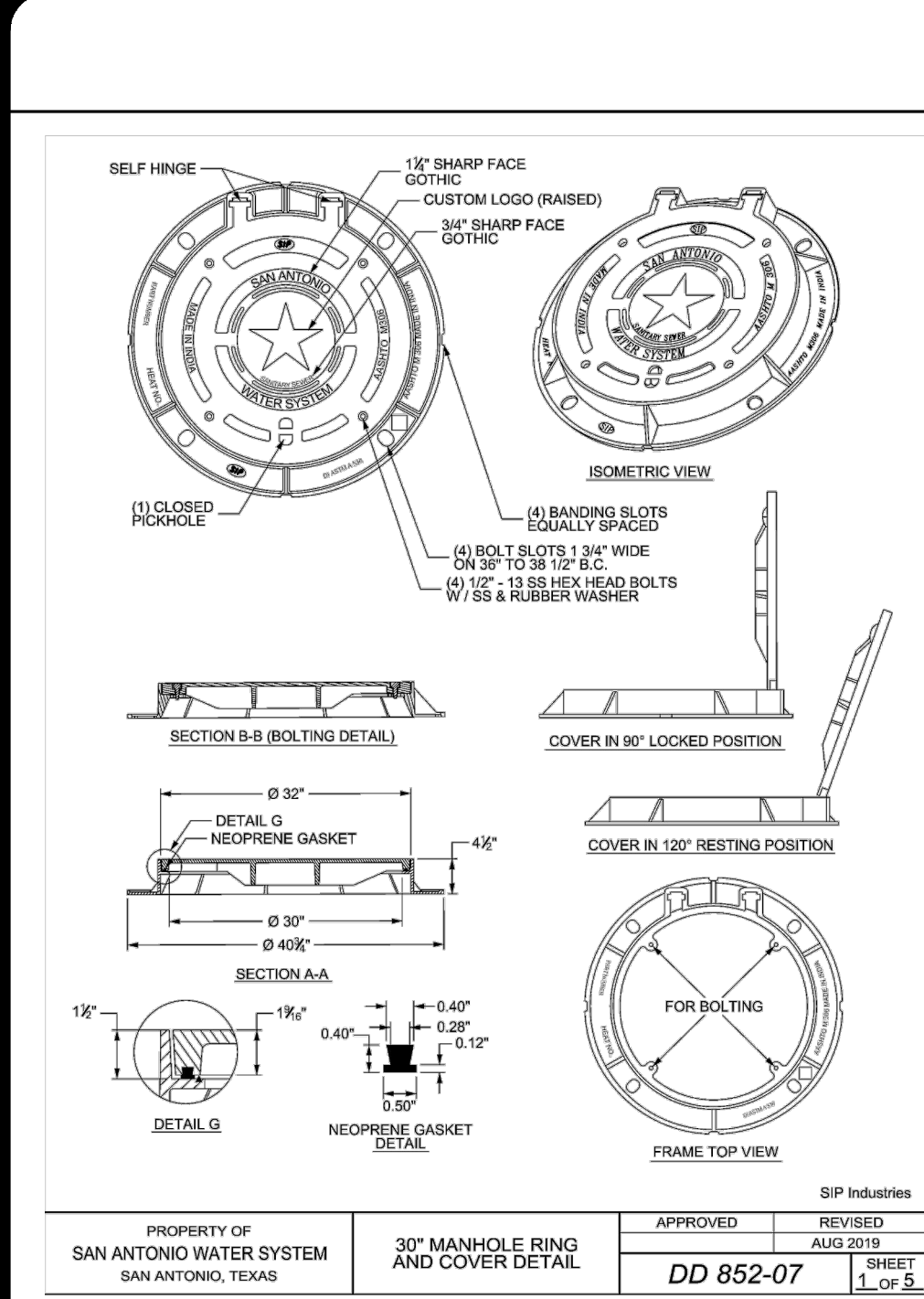
PLAT NO. 22-11800792
JOB NO. 11100-99
DATE DECEMBER 2023
DESIGNER AA
CHECKED VS DRAWN AA
SHEET C5.02

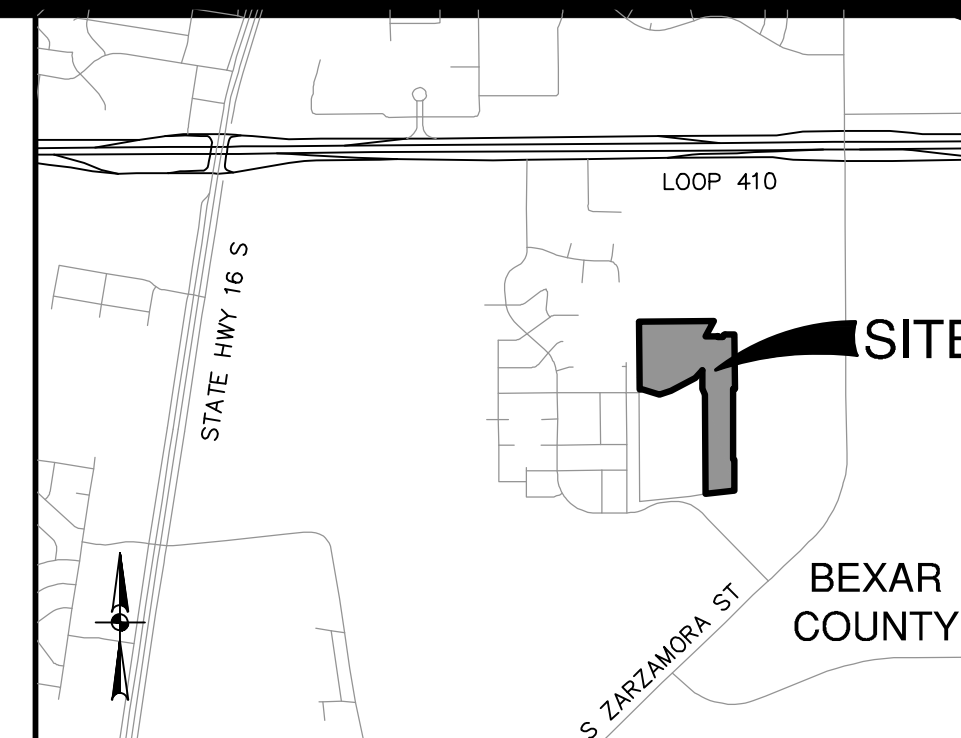
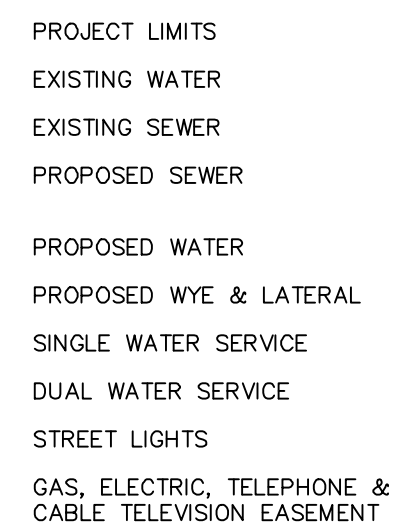
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Plot: SAN1110039.dwg User: C:\Users\acchy



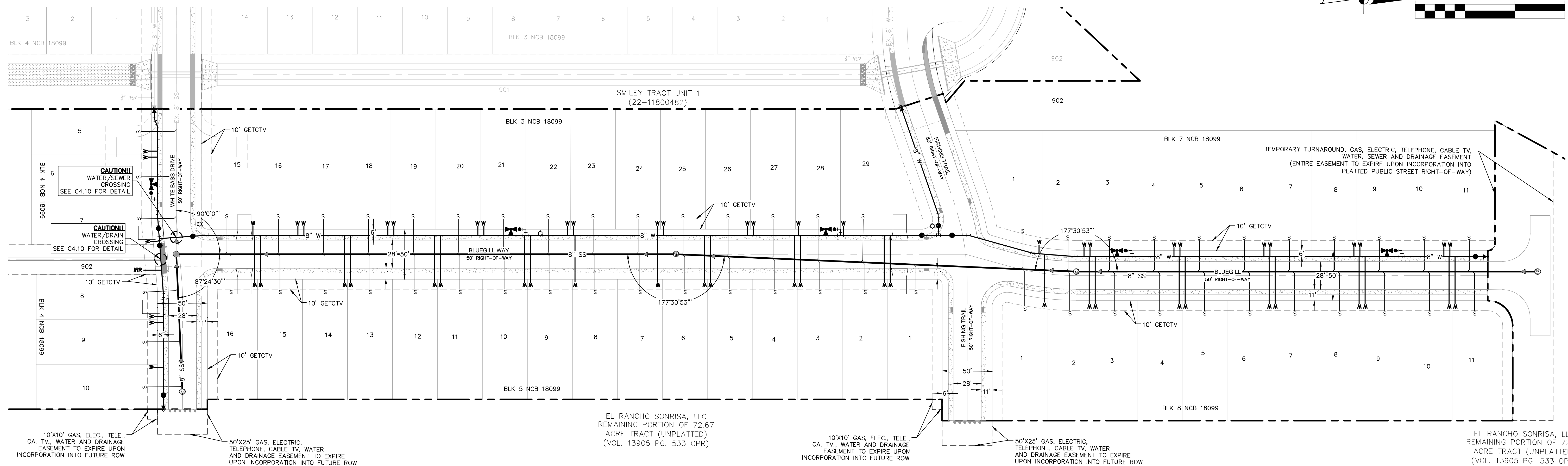
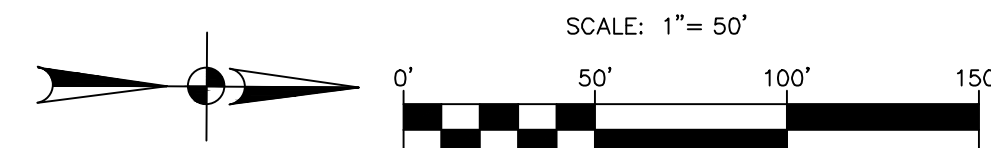
| | | | |
|--|------------------------------|--------------|---------|
| SEWER LOWER - WEST SEWERSHED - DOS RIOS/LEON CREEK | | | |
| DEVELOPER'S NAME: | EL RANCHO SONRISA, LLC | | |
| ADDRESS: | 8626 JODHPUR | | |
| CITY: | FAIR OAKS RANCH | STATE: | TEXAS |
| ZIP: | 78015 | | |
| PHONE: | (210) 381-9813 | FAX: | |
| SAWS BLOCK MAP# | 145538 & 145586 & 146536 | TOTAL EDU'S | 59 |
| TOTAL ACREAGE | 23.35 | | |
| TOTAL LINEAR FOOTAGE OF PIPE: 8" | 1500 LF PLAT NO. 22-11800792 | | |
| NUMBER OF LOTS | 59 | SAWS JOB NO. | 23-1531 |

| | |
|----------|-------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | MAY 2023 |
| DESIGNER | JW |
| CHECKED | VS |
| DRAWN | JW |
| SHEET | C5.10 |





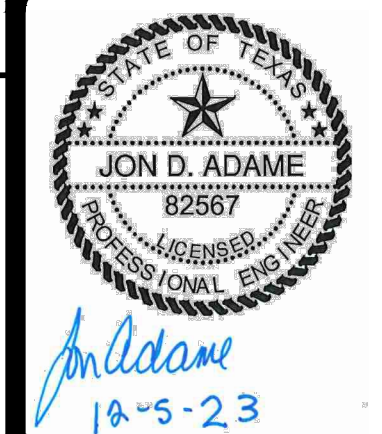
NOT-TO-SCALE



1. CONTRACTOR SHALL INSTALL PERMANENT MARKERS IN PROPOSED CURBS WHERE CONDUITS CROSS THE ROADWAY (BOTH SIDES).
2. CONDUITS SHALL BE PVC WITH MINIMUM BURY OF 36 INCHES BELOW PROPOSED FINISHED GRADE. SCHEDULE 40 TO BE USED FOR CPVS CONDUIT. ALL OTHER CONDUITS ARE SCHEDULE 40.
3. ALL CONDUITS SHALL BE EXTENDED BEHIND CURBS OR PROPOSED SIDEWALKS A MINIMUM OF 3 FEET AND CAPPED FOR FUTURE USE.
4. ALL 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 DEPT. OF TRANSPORTATION. THE RESPONSIBILITY 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.

CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGNER/ 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 TO DETERMINE TO IMPLEMENT CONTRACTOR'S TRENCHING AND SAFETY PROTECTION SYSTEMS AND PROGRAMS AND 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 PROTECTION AND SAFETY TO EMPLOYEES AND THE PUBLIC. THE CONTRACTOR SHALL PROVIDE 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 REGULATIONS TO PROTECT THE HEALTH AND SAFETY ACTIVITIES OF INDIVIDUALS WORKING IN AND AROUND TRENCH EXCAVATION.

CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC PRIVATE UTILITIES INCLUDING BUT NOT LIMITING TO WATER, SEWER, TELEPHONE AND FIBER OPTIC LINE, SITE LIGHTING ELECTRICAL, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCTBANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE A MINIMUM OF 48 HOURS PRIOR TO THE START OF ANY CONSTRUCTION AND DAMAGE TO EXISTING UTILITIES. 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.

[illegible]

PAPE-DAWSON
ENGINEERS

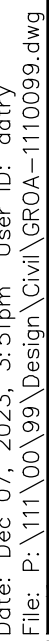
SAN ANTONIO | AUSTIN | HOUSTON | FORT WORTH | DALLAS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #10028600

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS
OVERALL UTILITY PLAN

OVERALL UTILITY PLAN

OVERALL UTILITY PLAN

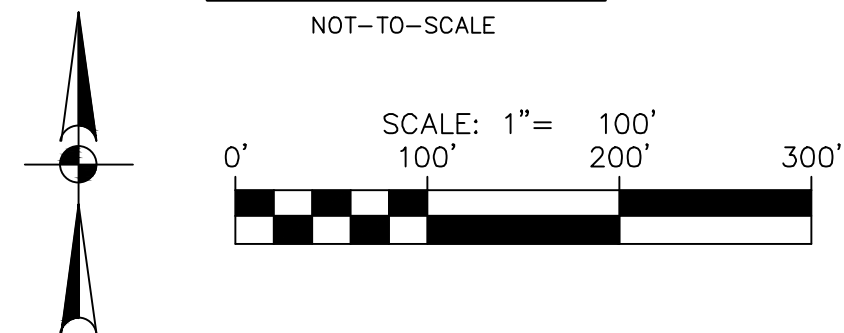
PLAT NO. 22-11800792
 JOB NO. 11100-99
 DATE DECEMBER 2023
 DESIGNER AA
 CHECKED VS DRAWN AA
 SHEET C6.00



Map of the project location in Bexar County, Texas. The map shows the intersection of State Hwy 16 S and Loop 410. A red arrow points to the project site, which is located on S Zarzamora St. A north arrow is also present.

LOCATION MAP

NOT-TO-SCALE



GRADING LEGEND

PROJECT LIMITS
EXISTING CONTOUR
PROPOSED CONTOUR
FLOW ARROW (EXISTING)
FLOW ARROW (PROPOSED)
MINIMUM FINISHED FLOOR ELEVATION

GRADING NOTES:

1. ALL MATERIALS AND CONSTRUCTION PROCEDURES WITHIN THIS SCOPE OF WORK WHERE NOT SPECIFICALLY COVERED IN THE SPECIFICATIONS OR GEOTECHNICAL REPORT SHALL CONFORM TO ALL APPLICABLE CITY, COUNTY AND TPODOT 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 TPODOT DIMENSIONS OR GRADES NECESSARY FOR CONSTRUCTION OF THIS PROJECT.
6. THE CONTRACTOR SHALL VERIFY THE SUITABILITY OF ALL EXISTING AND PROPOSED SITE CONDITIONS INCLUDING GRADES AND DIMENSIONS BEFORE COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS, TESTS, APPROVALS AND ACCEPTANCES REQUIRED TO COMPLETE CONSTRUCTION OF THIS PROJECT.
8. THE CONTRACTOR SHALL REMOVE TOP SOIL, GRASS, ROOTS, DEBRIS, ETC. AND DISPOSE OFF SITE THOSE MATERIALS NOT SUITABLE FOR EMBANKMENT AND TOPSOIL. CLEAN SILT/CLAYES 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 AVOID ANY EROSION OR DAMAGE TO ANY EXISTING OFF-OR INTO EXISTING STORM DRAIN SYSTEMS. (SEE SWPPP PLANS & TPODES 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. AS NOTED, PAVING SHALL BE A MAXIMUM OF 3:1 AND A MINIMUM OF 1:0.5 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 BETTER CONDITION ANY DAMAGE DUE 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 THEMSELVES THAT ALL UTILITIES HAVE BEEN ACCURATELY LOCATED. IF ANY UTILITIES ARE NOT IDENTIFIED, THE ENGINEER SHALL BE NOTIFIED. IF ANY UTILITY CONFLICTS ARE DISCOVERED.
16. UTILITIES SHOWN ON THE PLANS ARE FROM INFORMATION SOURCES AVAILABLE AT THE TIME OF DESIGN BUT MAY NOT REPRESENT ALL EXISTING UTILITIES ON SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR IDENTIFYING THE 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 THE INFORMATION PROVIDED. ANY DAMAGE TO EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR, AT HIS OWN EXPENSE.
17. POSITIVE DRAINAGE SHALL BE MAINTAINED THROUGHOUT THE SCOPE OF THE PROJECT. DRAINAGE SHALL BE DIRECTED AWAY FROM ALL BUILDING FOUNDATIONS. CONTRACTOR SHOULD TAKE PRECAUTIONS NOT TO ALLOW ANY PONDING OF WATER.
18. FOR FILL PLACEMENT ON HILL SIDES OR STEEP SLOPE AREAS, THE CONTRACTOR SHALL REFERENCE THE PROJECT SPECIFICATIONS AND GEOTECHNICAL REPORT FOR SPECIAL INSTRUCTIONS REGARDING BENCHING.
19. NO WORK SHALL BE PERFORMED IN PUBLIC RIGHT-OF-WAY WITHOUT A PERMIT.

[illegible]

"THIS DOCUMENT IS
RELEASED FOR REVIEW
PURPOSES" UNDER THE
AUTHORIZATION OF
JON D. ADAME,
P.E. #82567.



**PAPE-DAWSON
ENGINEERS**

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

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

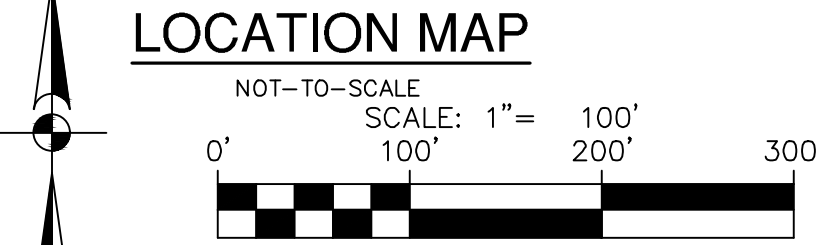
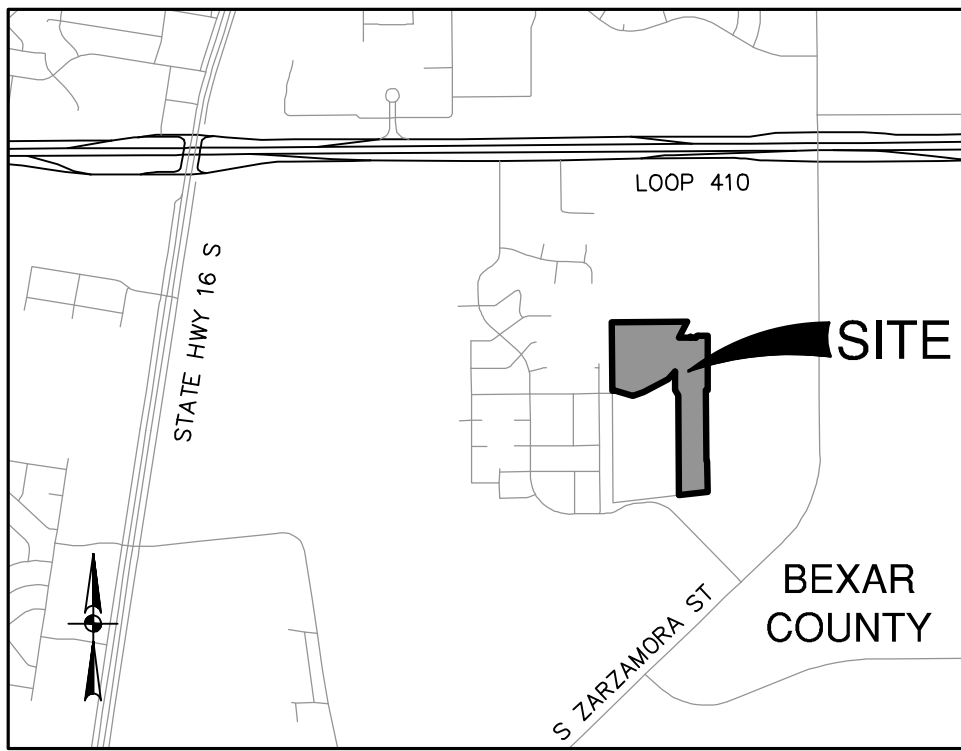
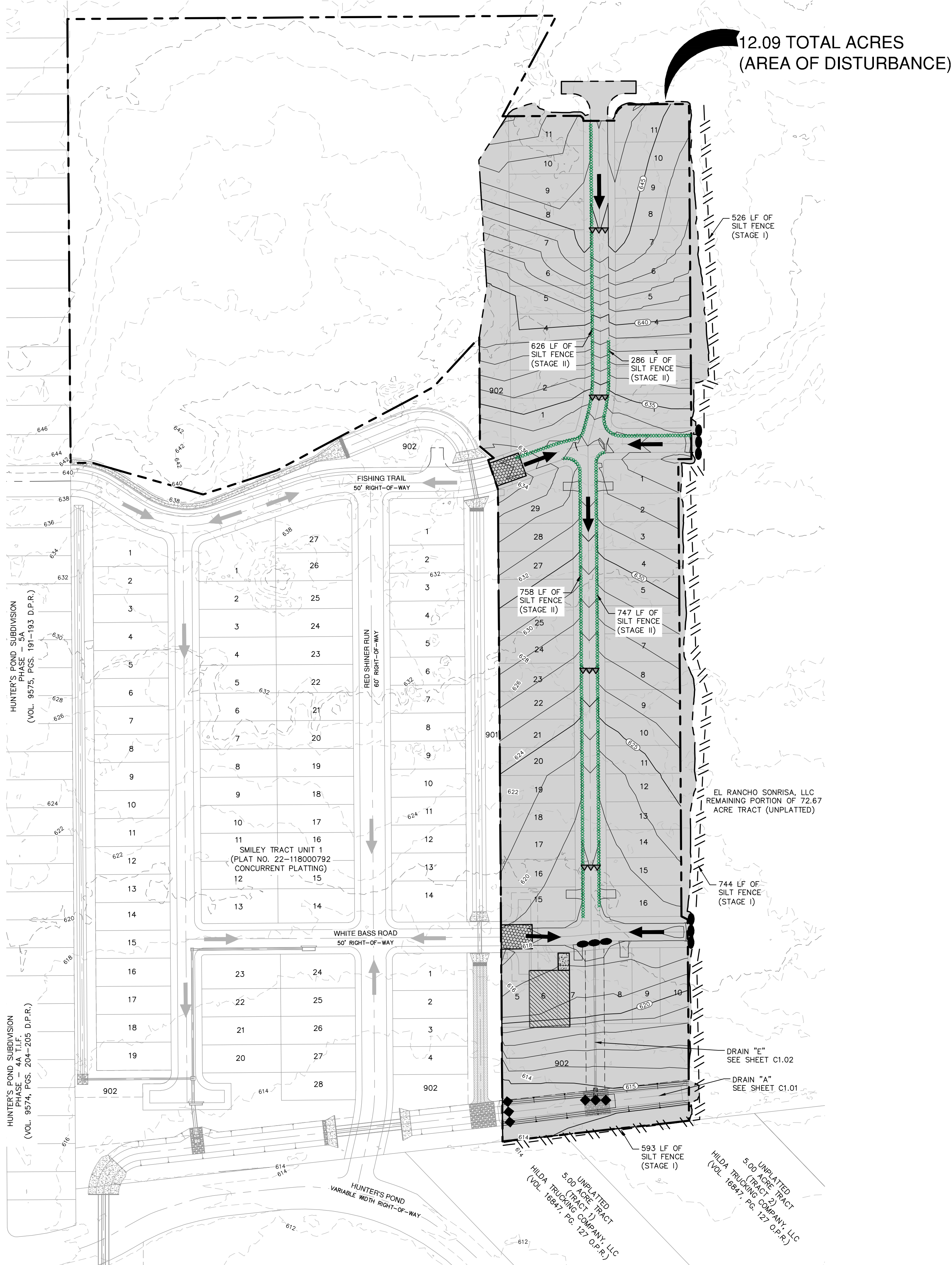
OVERALL GRADING PLAN

PLAT NO. 22-11800792
 JOB NO. 11100-99
 DATE DECEMBER 2023
 DESIGNER AA
 CHECKED VS DRAWN AA
 SHEET C7.00

Date: Dec 11, 2023, 5:49pm User ID: cccr
File Path: \\1100393\Drawings\Civil\SWP3\1100393.dwg

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| SWP3 MODIFICATIONS | | |
|--------------------|-----------|-------------|
| DATE | SIGNATURE | DESCRIPTION |
| | | |
| | | |
| | | |
| | | |
| | | |



SWPPP LEGEND

| | |
|--|-------|
| PROJECT LIMITS | --- |
| EXISTING CONTOUR | -976- |
| PROPOSED CONTOUR | -970- |
| FLOW ARROW (EXISTING) | → |
| FLOW ARROW (PROPOSED) | → |
| SILT FENCE (STAGE I) | |
| SILT FENCE (STAGE II) | |
| ROCK BERM (TO BE REMOVED POST CONSTRUCTION) | ◆◆◆ |
| ROCK DAM | ◆◆◆ |
| GRAVEL FILTER BAGS | ◆◆◆ |
| EARTHEN BERM W/POLYLINER AND SPILLWAY (BERMS ARE TO SPAN ACROSS PROPOSED STREET SECTION APPROX. 28-40 FEET WIDE FROM CURB TO CURB) | ◆◆◆ |
| GRATE INLET PROTECTION | ●●● |
| LIMITS OF DISTURBED AREA | ■ |
| STABILIZED CONSTRUCTION ENTRANCE/EXIT (FIELD LOCATE) | ■ |
| CONSTRUCTION EQUIPMENT, VEHICLE & MATERIALS STORAGE AREA (FIELD LOCATE) | ■ |
| CONCRETE TRUCK WASH-OUT PIT (FIELD LOCATE) | ■ |

GENERAL NOTES

- DO NOT DISTURB VEGETATED AREAS (TREES, GRASS, WEEDS, BRUSH, ETC.) ANY MORE THAN NECESSARY FOR CONSTRUCTION.
- CONSTRUCTION ENTRANCE/EXIT LOCATION, CONCRETE WASH-OUT PIT, AND CONSTRUCTION EQUIPMENT AND MATERIAL STORAGE YARD TO BE DETERMINED IN THE FIELD.
- STORM WATER POLLUTION PREVENTION CONTROLS MAY NEED TO BE MODIFIED IN THE FIELD TO ACCOMPLISH THE DESIRED EFFECT. ALL MODIFICATIONS ARE TO BE NOTED ON THIS EXHIBIT AND SIGNED AND DATED BY THE RESPONSIBLE PARTY.
- RESTRICT ENTRY/EXIT TO THE PROJECT SITE TO DESIGNATED LOCATIONS BY USE OF ADEQUATE FENCING, IF NECESSARY.
- ALL STORM WATER POLLUTION PREVENTION CONTROLS ARE TO BE MAINTAINED AND IN WORKING CONDITIONS AT ALL TIMES.
- FOR A COMPLETE LISTING OF TEMPORARY STORM WATER POLLUTION PREVENTION CONTROLS REFER TO THE TPDES STORM WATER POLLUTION PREVENTION PLAN.
- STORM WATER POLLUTION PREVENTION STRUCTURES SHOULD BE CONSTRUCTED WITHIN THE SITE BOUNDARIES. SOME OF THESE FEATURES MAY BE SHOWN OUTSIDE THE SITE BOUNDARIES ON THIS PLAN FOR VISUAL CLARITY.
- AS SOON AS PRACTICAL, ALL DISTURBED SOIL THAT WILL NOT BE COVERED BY IMPERVIOUS COVER SUCH AS PARKWAY AREAS, EASEMENT AREAS, EMBANKMENT SLOPES, ETC. WILL BE STABILIZED PER APPLICABLE PROJECT SPECIFICATIONS.
- BEST MANAGEMENT PRACTICES MAY BE INSTALLED IN STAGES TO COINCIDE WITH THE DISTURBANCE OF UPGRADIENT 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. HOUSE CONSTRUCTION ACTIVITIES WILL REQUIRE A SEPARATE STORM WATER POLLUTION PREVENTION PLAN.
- PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR SHALL COORDINATE PLACEMENT OF TEMPORARY BEST MANAGEMENT PRACTICES WITHIN TXDOT RIGHT-OF-WAY WITH TXDOT.
- CPS ENERGY WILL FUNCTION AS A SECONDARY OPERATOR ON THIS PROJECT AND WILL BE INSTALLING ELECTRIC UTILITIES FOR ON-SITE CONSTRUCTION AND OFF-SITE FEED TO THE PROJECT.

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

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

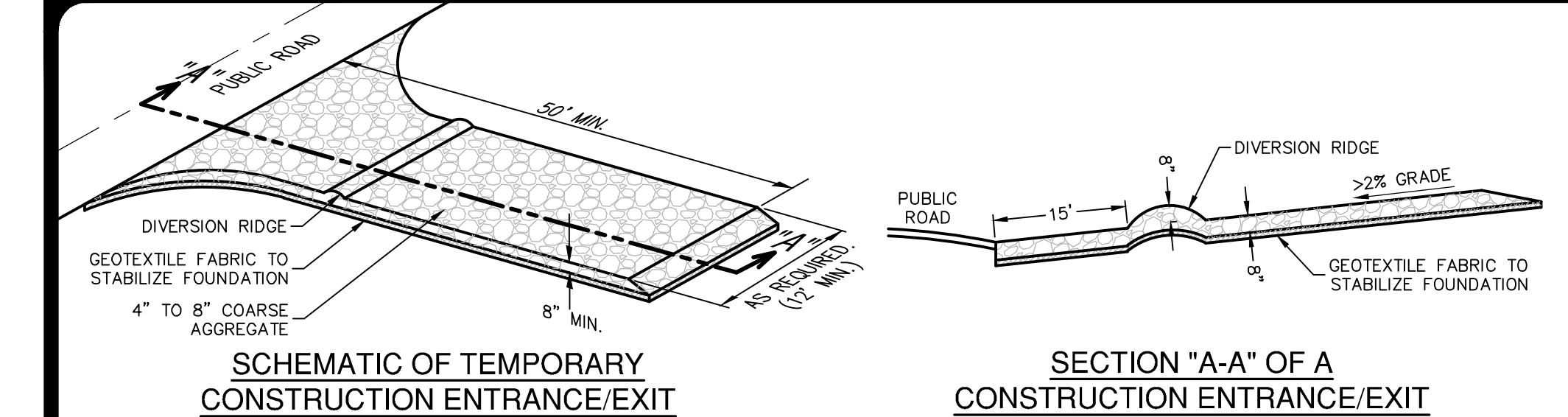
EXHIBIT 2

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

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN

| | |
|----------|---------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | DECEMBER 2023 |
| DESIGNER | AA |
| CHECKED | VS |
| DRAWN | AA |
| SHEET | C8.00 |



MATERIALS

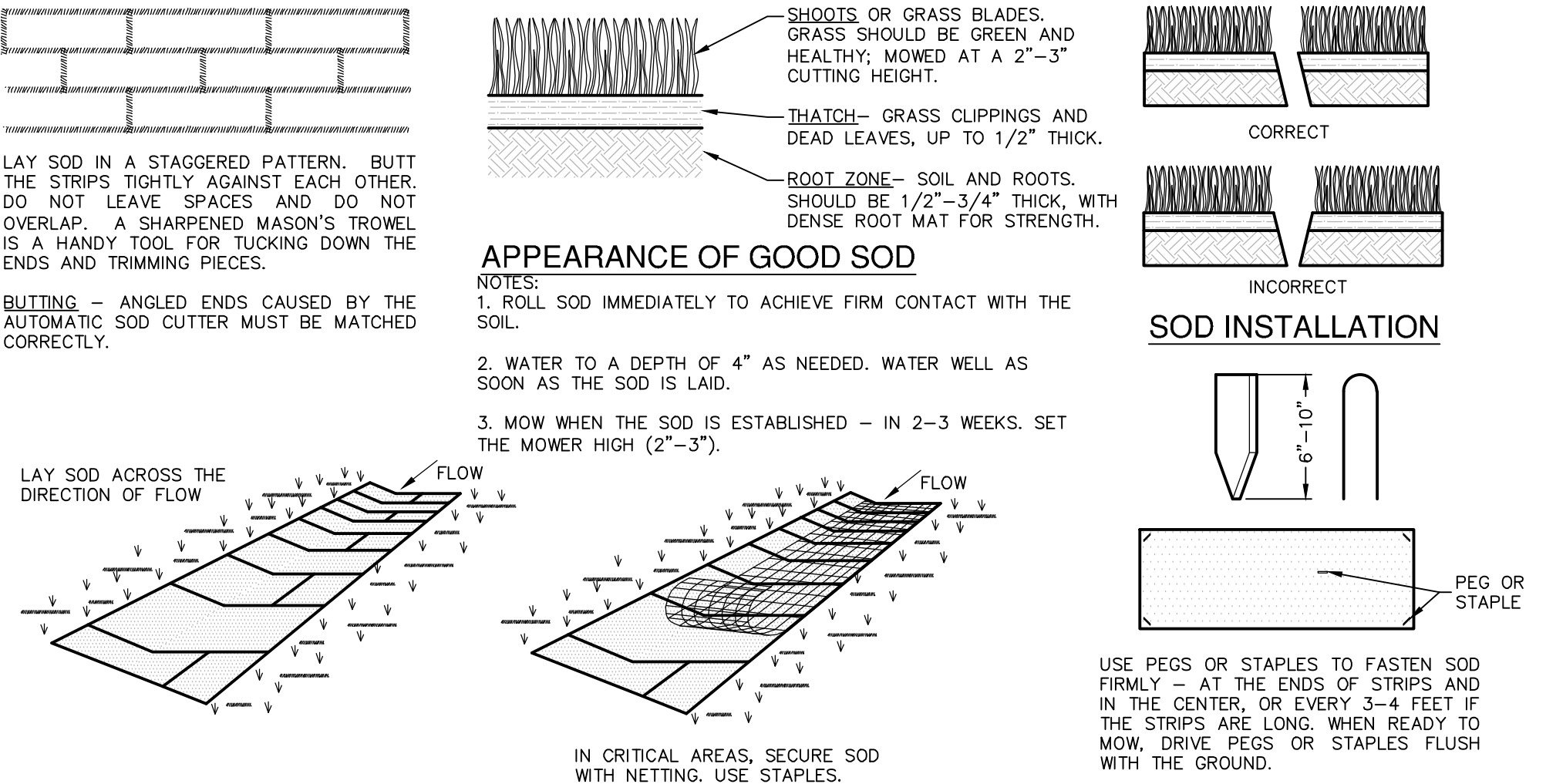
1. THE AGGREGATE SHOULD CONSIST OF 4-INCH TO 8-INCH WASHED STONE OVER A STABLE FOUNDATION AS SPECIFIED IN THE PLAN.
2. THE AGGREGATE SHOULD BE PLACED WITH A MINIMUM THICKNESS OF 8-INCHES.
3. THE GEOTEXTILE FABRIC SHOULD BE DESIGNED SPECIFICALLY FOR USE AS A SOIL FILTRATION MEDIA WITH AN APPROXIMATE WEIGHT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

INSTALLATION

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

STABILIZED CONSTRUCTION ENTRANCE/EXIT DETAIL

NOT-TO-SCALE



MATERIALS

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

SITE PREPARATION

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

INSTALLATION IN CHANNELS

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

SOD INSTALLATION DETAIL

NOT-TO-SCALE

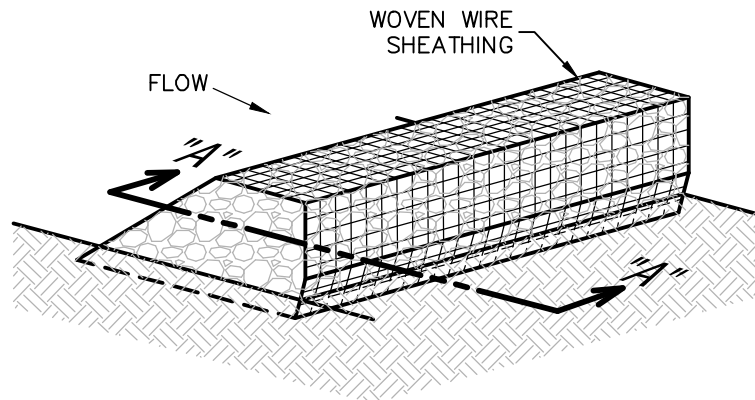
COMMON TROUBLE POINTS

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

INSPECTION AND MAINTENANCE GUIDELINES

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

ISOMETRIC PLAN VIEW



ROCK BERMS

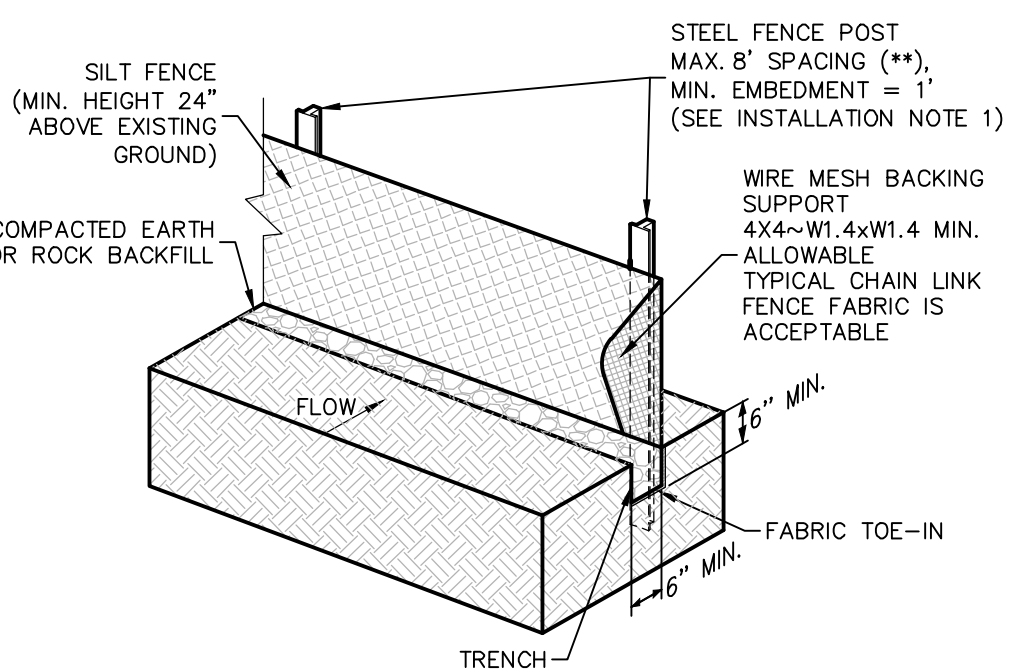
THE PURPOSE OF A ROCK BERM IS TO SERVE AS A CHECK DAM IN AREAS OF CONCENTRATED FLOW, TO INTERCEPT SEDIMENT-LADEN RUNOFF, DETAIN THE SEDIMENT AND RELEASE THE WATER IN SHEET FLOW. THE ROCK BERM SHOULD BE USED WHEN THE CONTRIBUTING DRAINAGE AREA IS LESS THAN 5 ACRES. ROCK BERMS ARE USED IN AREAS WHERE THE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

INSPECTION AND MAINTENANCE GUIDELINES

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

ROCK BERM DETAIL

NOT-TO-SCALE



ISOMETRIC PLAN VIEW

SILT FENCE

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

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

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

MATERIALS

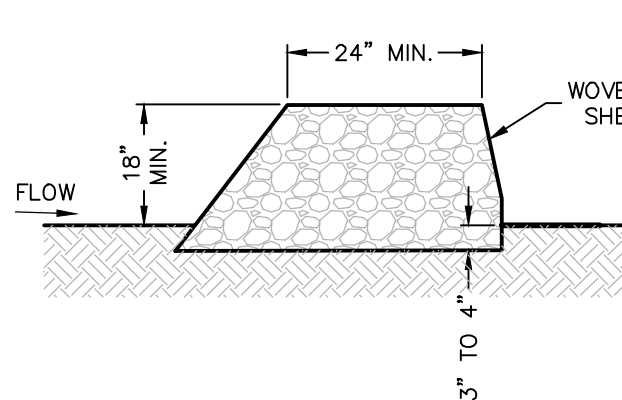
1. SILT FENCE MATERIAL SHOULD BE POLYPROPYLENE, POLYETHYLENE, OR POLYAMIDE WOVEN OR NONWOVEN FABRIC. THE FABRIC SHOULD BE 36 INCHES, WITH A MINIMUM UNIT WEIGHT OF 4.5 OZ/YD, MULLEN BURST STRENGTH EXCEEDING 190 LB/IN², ULTRAVIOLET STABILITY EXCEEDING 70%, AND MINIMUM APPARENT OPENING SIZE OF U.S. SIEVE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

INSTALLATION

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

SILT FENCE DETAIL

NOT-TO-SCALE



SECTION "A-A"

MATERIALS

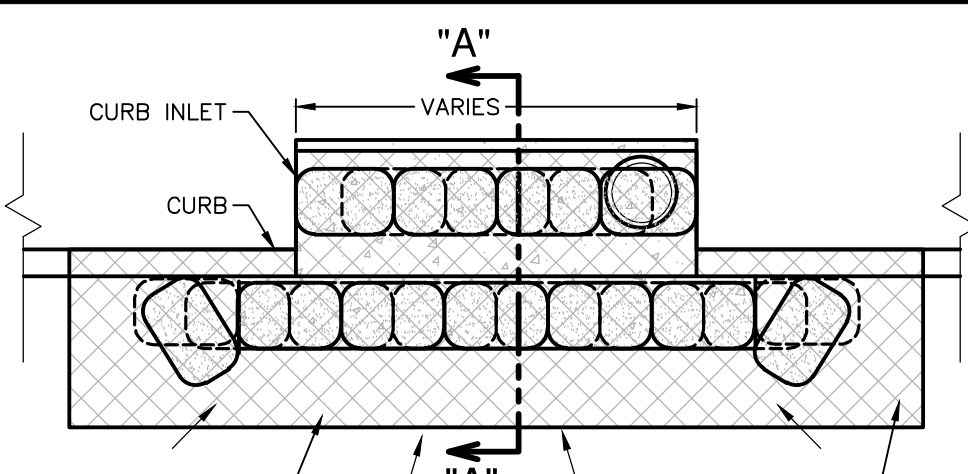
1. THE BERM STRUCTURE SHOULD BE SECURED WITH A WOVEN WIRE SHEATHING HAVING MAXIMUM OPENING OF 1 INCH AND A MINIMUM WIRE DIAMETER OF 20 GAUGE GALVANIZED AND SHOULD BE SECURED WITH SHOAT RINGS.
2. CLEAN, OPEN GRADED 3-INCH TO 5-INCH DIAMETER ROCK SHOULD BE USED, EXCEPT IN AREAS WHERE HIGH VELOCITIES OR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

INSTALLATION

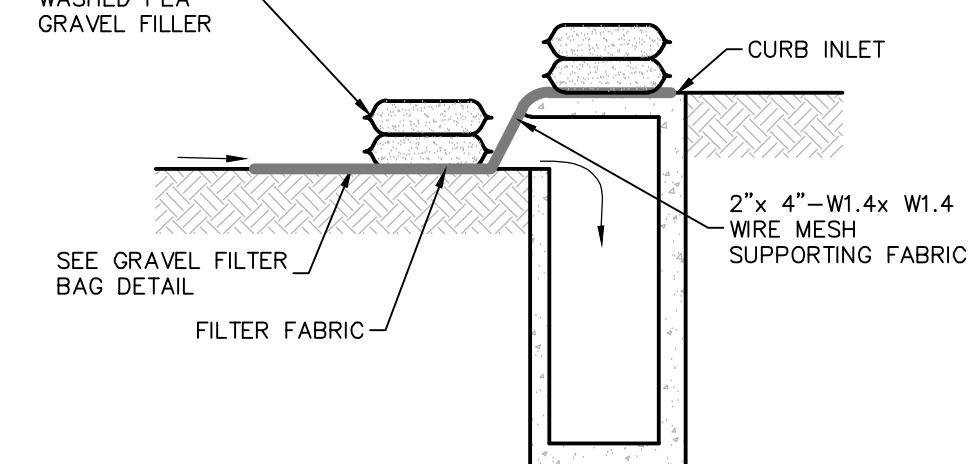
1. LAY OUT THE WOVEN WIRE SHEATHING PERPENDICULAR TO THE FLOW LINE. THE SHEATHING SHOULD BE 20 GAUGE WOVEN WIRE MESH WITH 1 INCH OPENINGS.
2. BERM SHOULD HAVE A TOP WIDTH OF 2 FEET MINIMUM WITH SIDE SLOPES BEING 2:1 (H:V) OR FLATTER.
3. PLACE THE ROCK ALONG THE SHEATHING AS SHOWN IN THE DIAGRAM TO A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

COMMON TROUBLE POINTS

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



PLAN VIEW



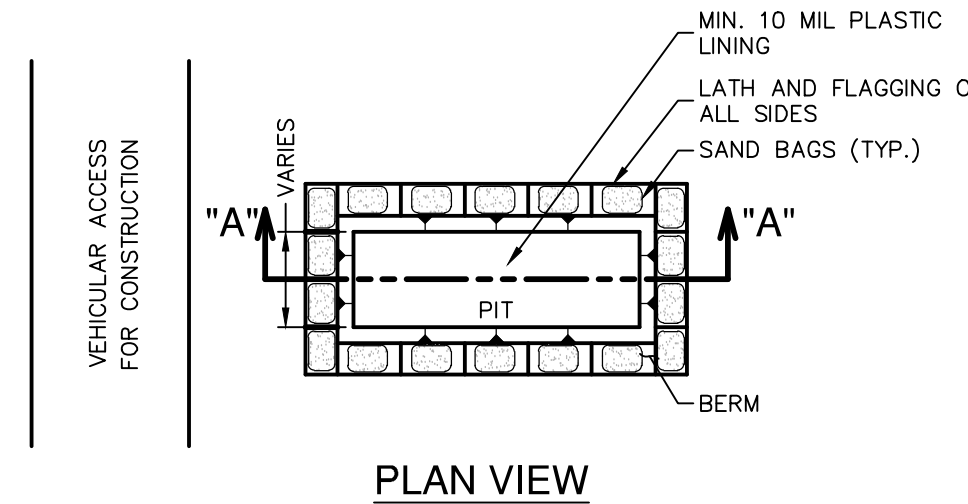
SECTION "A-A"

GENERAL NOTES

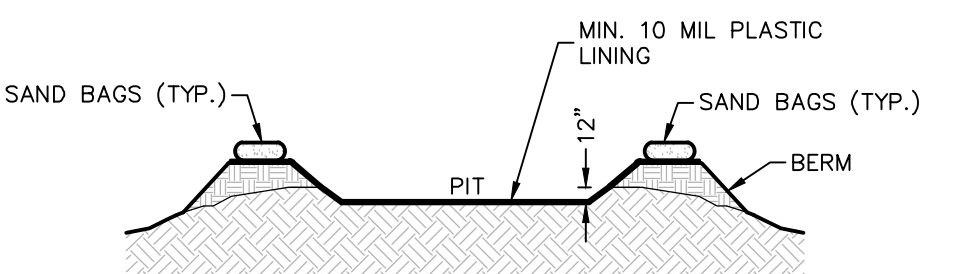
1. CONTRACTOR TO INSTALL 2"x4"-W1.4xW1.4 WIRE MESH SUPPORTING FILTER FABRIC OVER THE INLET OPENING. FABRIC MUST BE SECURED TO WIRE BACKING WITH CLIPS OR WIRE TIES AT THIS LOCATION. SAND BAGS FILLED WITH WASHED PEA GRAVEL SHOULD BE PLACED ON TOP OF WIRE MESH ON TOP OF THE INLET AS SHOWN ON THIS DETAIL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

BAGGED GRAVEL CURB INLET PROTECTION DETAIL

NOT-TO-SCALE



PLAN VIEW



SECTION "A-A"

GENERAL NOTES

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

MATERIALS

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

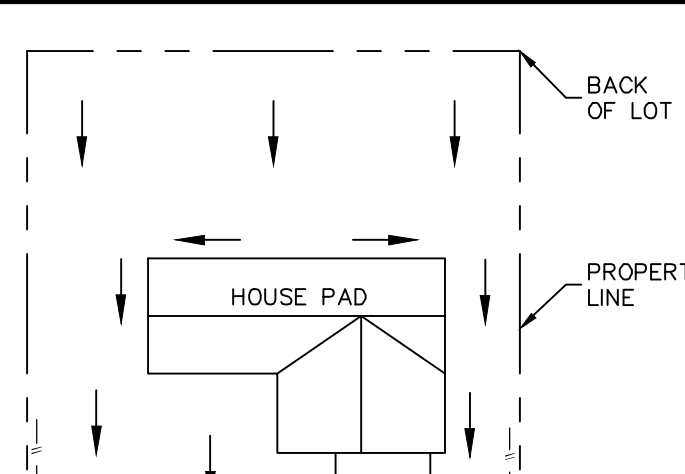
MAINTENANCE

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

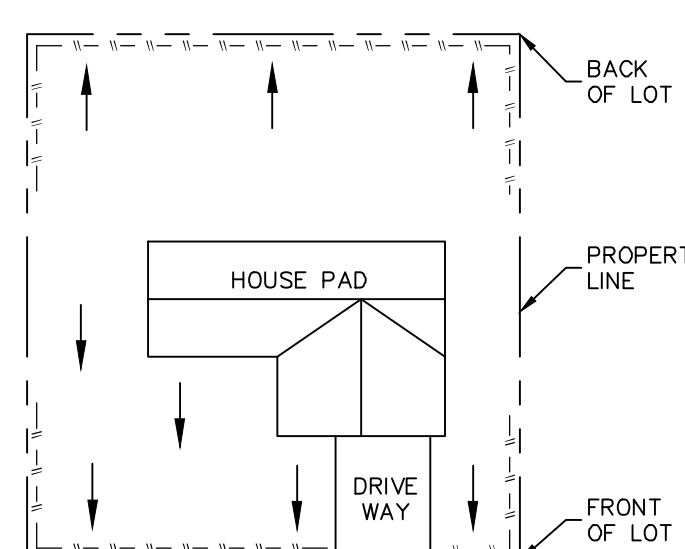
CONCRETE TRUCK WASHOUT

PIT DETAIL

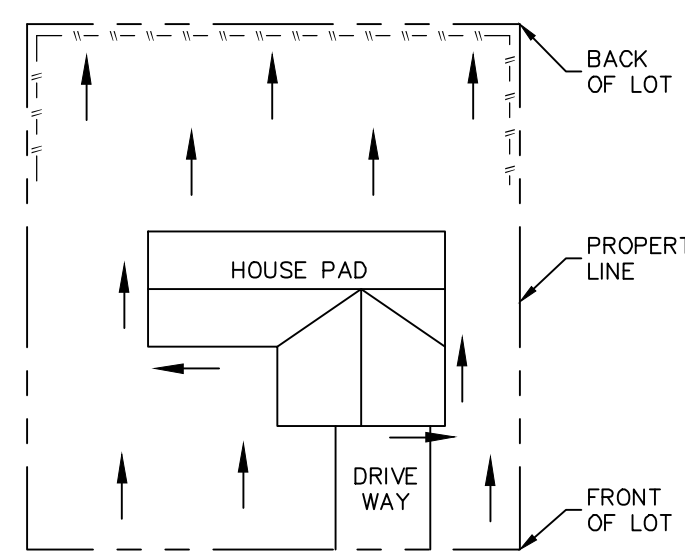
NOT-TO-SCALE



LOT TYPE-A



LOT TYPE-B



LOT TYPE-C

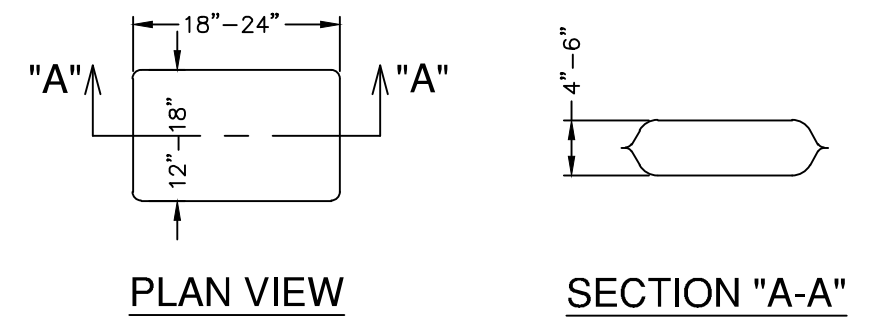
NOTE: SILT FENCE TO BE INSTALLED PER THESE DETAILS AND LOCATED ON THE DOWNGRADIENT SIDE OF EACH LOT LINE OR LIMITS OF CLEARING AS GENERALLY SHOWN ON THE OVERALL SITE PLAN.

LEGEND

SILT FENCE DRAINAGE FLOW

TYPICAL HOUSE LOT LAYOUTS

NOT-TO-SCALE



PLAN VIEW

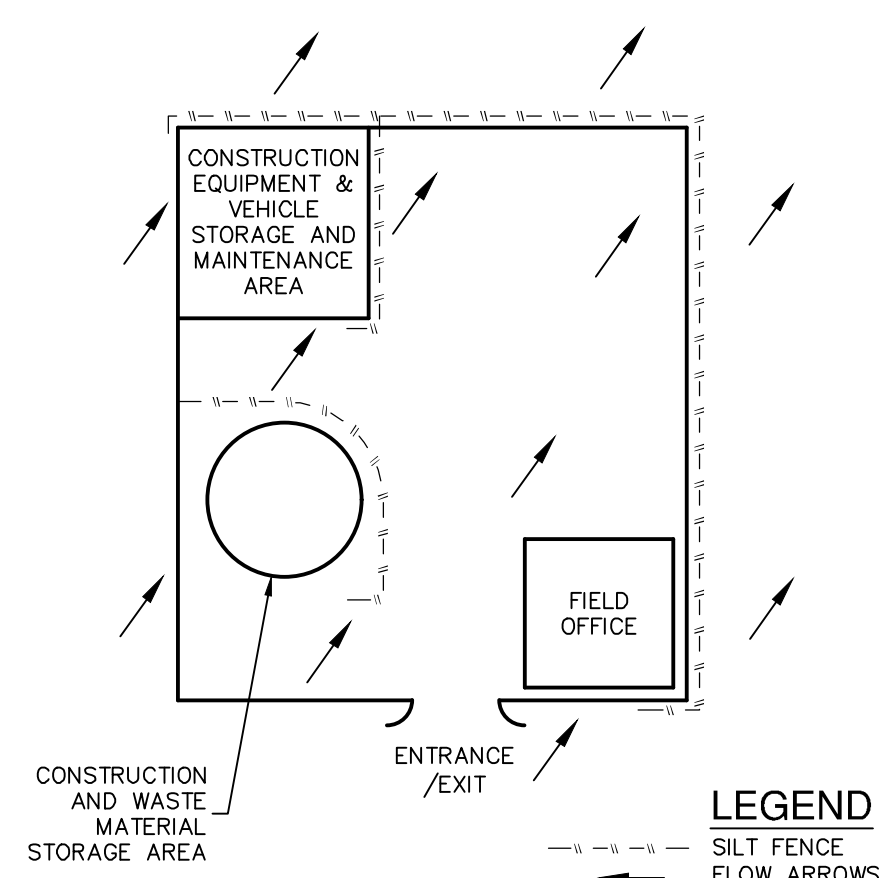
SECTION "A-A"

NOTES:

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

GRAVEL FILTER BAG DETAIL

NOT-TO-SCALE



LEGEND

SILT FENCE FLOW ARROWS

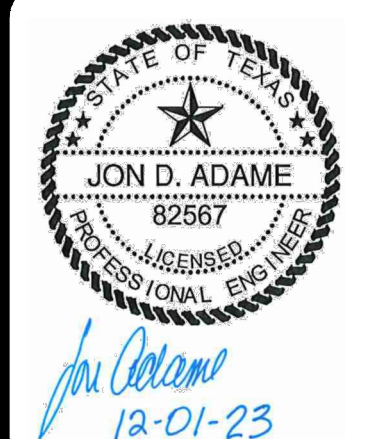
CONSTRUCTION STAGING AREA

NOT-TO-SCALE

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

EXHIBIT 3

| DATE | |
|----------|--|
| NO. | |
| REVISION | |



PAPE-DAWSON ENGINEERS

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

SMILEY TRACT, UNIT 2
SAN ANTONIO, TEXAS

STORM WATER POLLUTION PREVENTION PLAN DETAILS

| | |
|----------|----------------|
| PLAT NO. | 22-11800792 |
| JOB NO. | 11100-99 |
| DATE | SEPTEMBER 2023 |
| DRAWN | AA |
| CHECKED | VS |
| SHEET | C8.10 |