



SAWS CONSTRUCTION NOTES  
COUNTER PERMIT AND GENERAL CONSTRUCTION PERMIT

General Section

- 1. All materials and construction procedures within the scope of this contract shall be approved by the San Antonio Water System (SAWS) and comply with the Plans, Specifications, General Conditions and with the following as applicable:
A. Current Texas Commission on Environmental Quality (TCEQ) "Design Criteria for Domestic Wastewater System", Texas Administrative Code (TAC) Title 30 Part 1 Chapter 217 and "Public Drinking Water", TAC Title 30 Part 1 Chapter 290.
B. Current TXDOT "Standard Specifications for Construction of Highways, Streets and Drainage".
C. Current "San Antonio Water System Standard Specifications for Water and Sanitary Sewer Construction".
D. Current City of San Antonio "Standard Specifications for Public Works Construction".
E. Current City of San Antonio "Utility Excavation Criteria Manual" (UECM).
2. The contractor shall not proceed with any pipe installation work until they obtain a copy of the approved Counter Permit or General Construction Permit (GCP) from the consultant and has been notified by SAWS Construction Inspection Division to proceed with the work and has arranged a meeting with the inspector and consultant for the work requirements.
3. The Contractor shall obtain the SAWS Standard Details from the SAWS website, http://www.saws.org/business\_center/specs.
4. The Contractor is to make arrangements with the SAWS Construction Inspection Division at (210) 233-2973, on notification procedures that will be used to notify affected home residents and/or property owners 48 hours prior to beginning any work.
5. Location and depth of existing utilities and service laterals shown on the plans are understood to be approximate.
6. The Contractor shall verify the exact location of underground utilities and drainage structures at least 1-2 weeks prior to construction whether shown on plans or not.
SAWS Utility Locates: http://www.saws.org/Service/Locates
COSA Drainage (210) 207-0724 or (210) 207-6026
COSA Traffic Signal Operations (210) 206-8480
COSA Traffic Signal Damages (210) 207-3951
Texas State Wide One Call Locator 1-800-545-6005 or 811

- 7. The Contractor shall be responsible for restoring existing fences, curbs, streets, driveways, sidewalks, landscaping and structures to its original or better condition if damages are made as a result of the project's construction.
8. All work in Texas Department of Transportation (TXDOT) and/or Bexar County right-of-way shall be done in accordance with respective construction specifications and permit requirements.
9. The Contractor shall comply with City of San Antonio or other governing municipality's tree ordinances when excavating near trees.
10. The Contractor shall not place any waste materials in the 100-year Flood Plain without first obtaining an approved Flood Plain Permit.
11. Holiday Work: Contractors will not be allowed to perform SAWS work on SAWS recognized holidays.
Weekend Work: Contractors are required to notify the SAWS Inspection Construction Department 48 hours in advance to request weekend work.
Any and all SAWS utility work installed without holiday/weekend approval will be subject to be uncovered for proper inspection.
12. Compaction note (Item 804): The contractor shall be responsible for meeting the compaction requirements on all trench backfill and for paying for the tests performed by a third party.
13. A copy of all testing reports shall be forwarded to SAWS Construction Inspection Division.

Water Section

- 1. Prior to tie-ins, any shutdowns of existing mains of any size must be coordinated with the SAWS Construction Inspection Division at least one week in advance of the shutdown.
2. Asbestos Cement (AC) pipe, also known as transite pipe which is known to contain asbestos-containing material (ACM), may be located within the project limits.
For water mains 12" or higher: SAWS Emergency Operations Center (210) 233-2014

- 3. Valve removal: Where the contractor is to abandon a water main, the control valve located on the abandoning branch will be removed and replaced with a capping.
4. Suitable anchorage/thrust blocking or joint restraint shall be provided at all of the following main locations: dead ends, plugs, caps, tees, crosses, valves, and bends, in accordance with the Standard Drawings DD-839 Series and Item No. 839, in the SAWS Standard Specifications for Construction.
5. All valves shall read "open right".
6. PRVs Required: Contractor to verify that no portion of the tract is below ground elevation of 955 feet where the static pressure will normally exceed 80 PSI.
7. Pipe Disinfection with Dry HTH for Projects less than 800 linear feet.
8. Backflow Prevention Devices:
All irrigation services within residential areas are required to have backflow prevention devices.
All commercial backflow prevention devices must be approved by SAWS prior to installation.
9. Final connection to the existing water main shall not be made until the water main has been pressure tested, chlorinated, and SAWS has released the main for tie-in and use.
10. Division Valves: Division Valves shown on plans or not shown on plans but found in the field shall only be operated by SAWS Distribution and Collection staff and only with prior written approval of the SAWS Director of Production and Operations and proper coordination with all SAWS departments.

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.

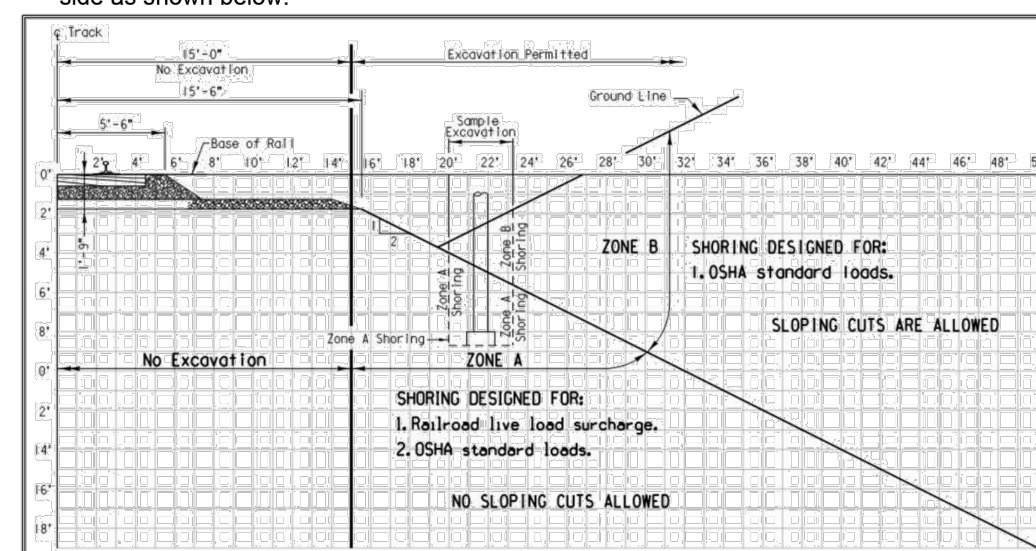
Sewer Notes

- 1. The Contractor is responsible for ensuring that no Sanitary Sewer Overflow (SSO) occurs as a result of their work.
A. Identify the source of the SSO and notify SAWS Emergency Operations Center (EOC) immediately at (210) 233-2014.
B. Attempt to eliminate the source of the SSO.
C. Contain sewage from the SSO to the extent of preventing a possible contamination of waterways.
D. Clean up spill site (return contained sewage to the collection system if possible) and properly dispose of contaminated soil/materials.
E. Clean the affected sewer mains and remove any debris.
F. Meet all post-SSO requirements as per the EPA Consent Decree, including line cleaning and televising the affected sewer mains (at SAWS direction) within 24 hours.
Should the Contractor fail to address an SSO immediately and to SAWS satisfaction, they will be responsible for all costs incurred by SAWS, including any fines from EPA, TCEQ and/or any other Federal, State or Local Agencies.
No separate measurement or payment shall be made for this work.
2. If bypass pumping is required, the Contractor shall perform such work in accordance with SAWS Standard Specification for Water and Sanitary Sewer Construction, Item No. 864, "Bypass Pumping".
3. Prior to tie-ins, any shutdowns of existing force mains of any size must be coordinated with the SAWS Construction Inspection Division at (210) 233-2973 at least one week in advance of the shutdown.
4. Sewer pipe where water line crosses shall be 160 psi and meet the requirements of ASTM D2241, TAC 217.53 and TCEQ 290.44(c)(4)(B).
5. ELEVATIONS POSTED FOR TOP OF MANHOLES ARE FOR REFERENCE ONLY.
6. Spills, Overflows, or Discharges of Wastewater: All spills, overflows, or discharges of wastewater, recycled water, petroleum products, or chemicals must be reported immediately to the SAWS Inspector assigned to the Counter Permit or General Construction Permit (GCP).

- 7. Manhole and all pipe testing (including the TV inspection) must be performed and passed prior to Final Field Acceptance by SAWS Construction Inspection Division, as per the SAWS Specifications For Water and Sanitary Sewer Construction.
8. All PVC pipe over 14 feet of cover shall be extra strength with minimum pipe stiffness of 115 psi.

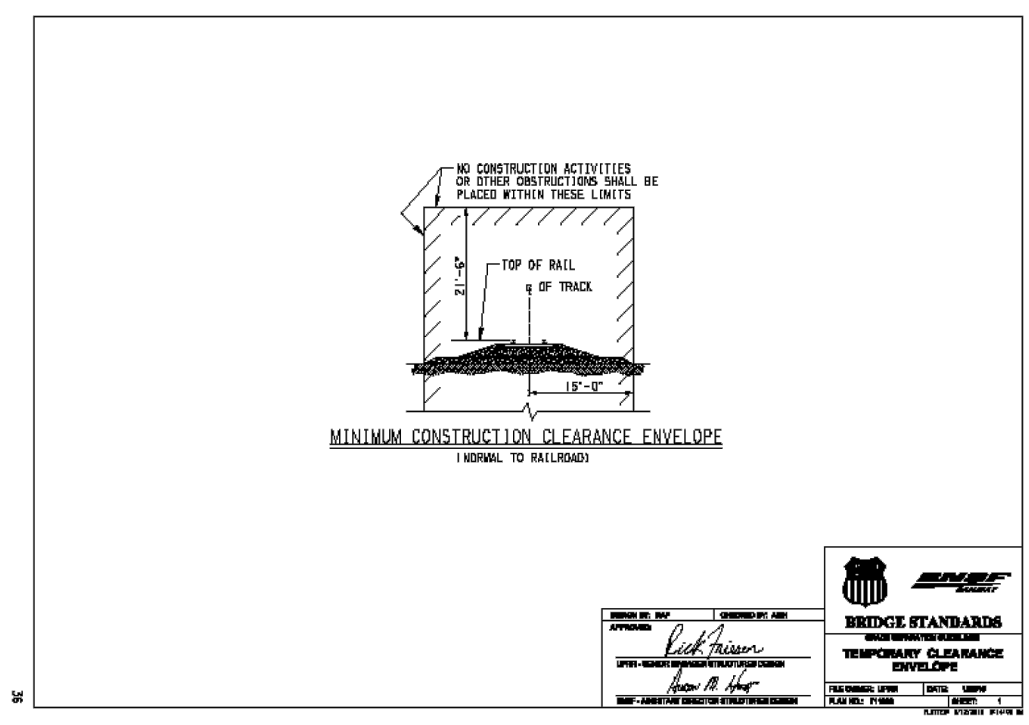
Railroad Pipeline or Culvert Accommodation Notes

- 1. The proposed project shall not increase the quantity and/or characteristics of the flow in the Railroad's ditches and/or drainage structures.
2. The contractor must submit a proposed method of erosion and sediment control and have the method approved by the Railroad.
3. Regardless of underlying land ownership, all shoring systems that impact the Railroad's operations and/or supports the Railroad's embankment shall be designed and constructed per current UPRR-BNSF Guidelines for Temporary Shoring.
4. The Contractor shall submit and provide sufficient safety measures which protect unattended excavations to the Railroad for approval.
5. All demolitions within the Railroad's right-of-way and/or demolition that may impact the Railroad's tracks or operations shall be in compliance with the Railroad's Demolition Guidelines.
6. Railroad requirements do not allow work within 50 feet of track centerline when a train passes the work site and all personnel must clear the area within 25 feet of the track centerline and secure all equipment.
7. The contractor shall adhere to the following culvert and pipeline construction requirements while within the Railroad's right-of-way.
a. The boring operation shall be progressed on a continuous (24/7) basis without stoppage until the leading edge of the pipe has completely passed under all track and through Zone A on each side as shown below.



- b. The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe while within Zone A and under the tracks.
c. The auger and cutting head arrangement shall be removable from the within the pipe in the event an obstruction is encountered and needs to be removed.
d. The over-cut by the cutting head shall not exceed the outside diameter of the pipe (plus coating) by that approximately 1/2 inch, grouting or other methods approved by the Railroad, shall be employed to fill such voids.

- e. The face of the cutting edge shall be arranged to restrict an otherwise free flow material leading to over-excavating material ahead/above the pipe.
f. Work plans and description of the equipment to be used shall be submitted to the Railroad for approval and no work shall proceed until such approval is obtained.
g. Work plans shall detail all contingency measures required to eliminate disruptions to Railroad operations.
8. The elevation of the existing top-of-rail profile shall be verified before beginning construction. All discrepancies shall be brought to the attention of the Railroad prior to construction.
9. The contractor must submit a track and ground monitoring plan for Railroad review which complies with the current UPRR Guidelines for Track and Ground Monitoring.
a. The elevation of the existing top-of-rail profile shall be verified before beginning construction and at project closing.
b. As deemed necessary by the Railroad, continuous monitoring may be required as well as monitoring for 14 days after the installation.
c. All discrepancies shall be brought to the attention of the Railroad.
10. The contractor must submit their utility abandonment plan which complies with the current UPRR Guidelines for Abandonment of Subsurface Utility Structures to the Railroad for review.
11. Email Before You Dig: Prior to excavation, disrupting, or working on the Railroad property the contractor shall locate and protect UPRR facilities sending requests to the UPRR "Call Before You Dig" (CBUD) email.
12. Construction activities are not allowed within the "Minimum Construction Clearance Envelope" as they would otherwise disrupt Railroad operations.



SAWS PRESSURE ZONE: 790

Developer's Name: DPEG ZARZAMORA, LLC
Address: 11333 FOUNTAIN LAKE DRIVE
City: STAFFORD State: TX ZIP: 77477
Phone# (866) 342-6264 FAX# -
SAWS Block Map#: 150540 Total EDU's: 0 Total Acreage: 57.75 AC.
Total Linear Footage of Pipe: 3,756 L.F. Plat no. 24-11800441
Number of Lots: 4 SAWS JOB NO. 25-1009

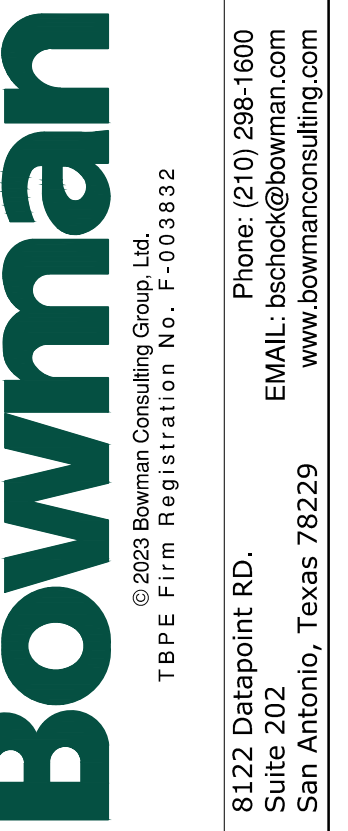


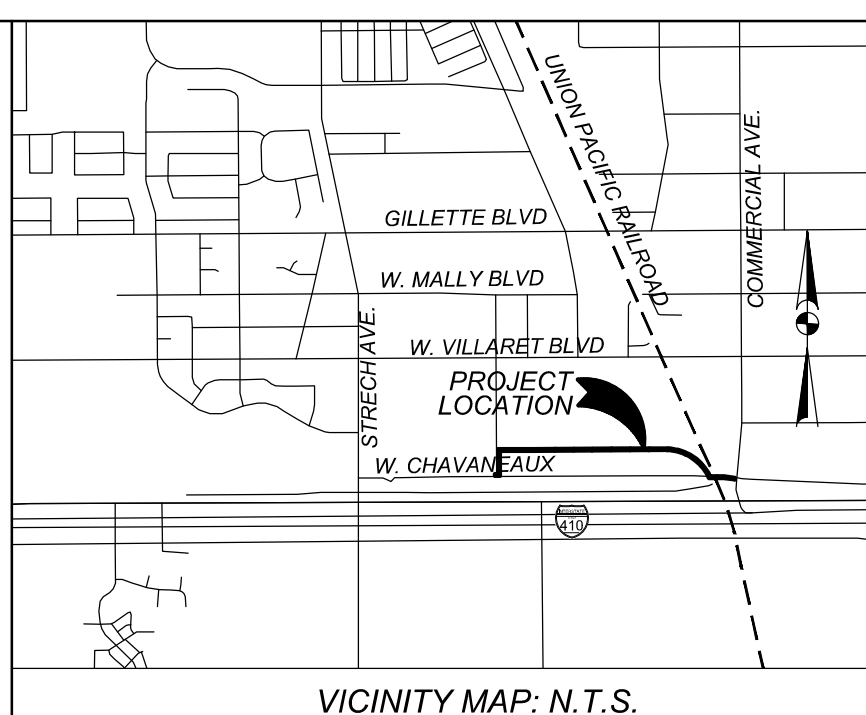
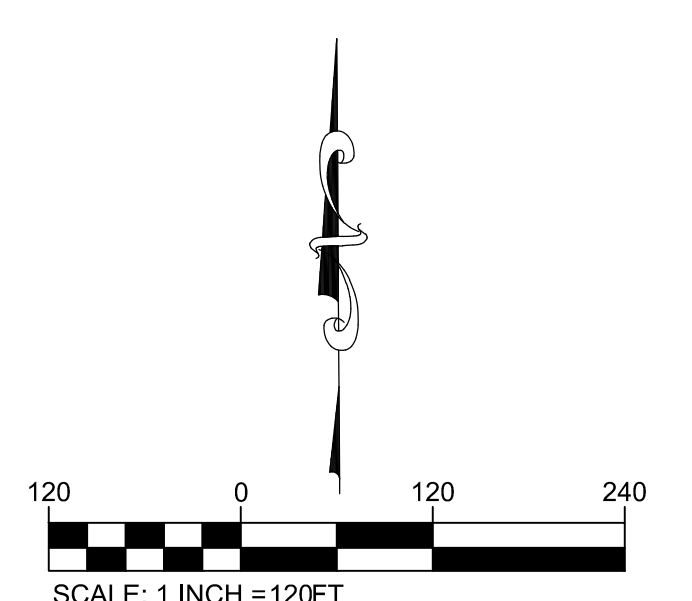
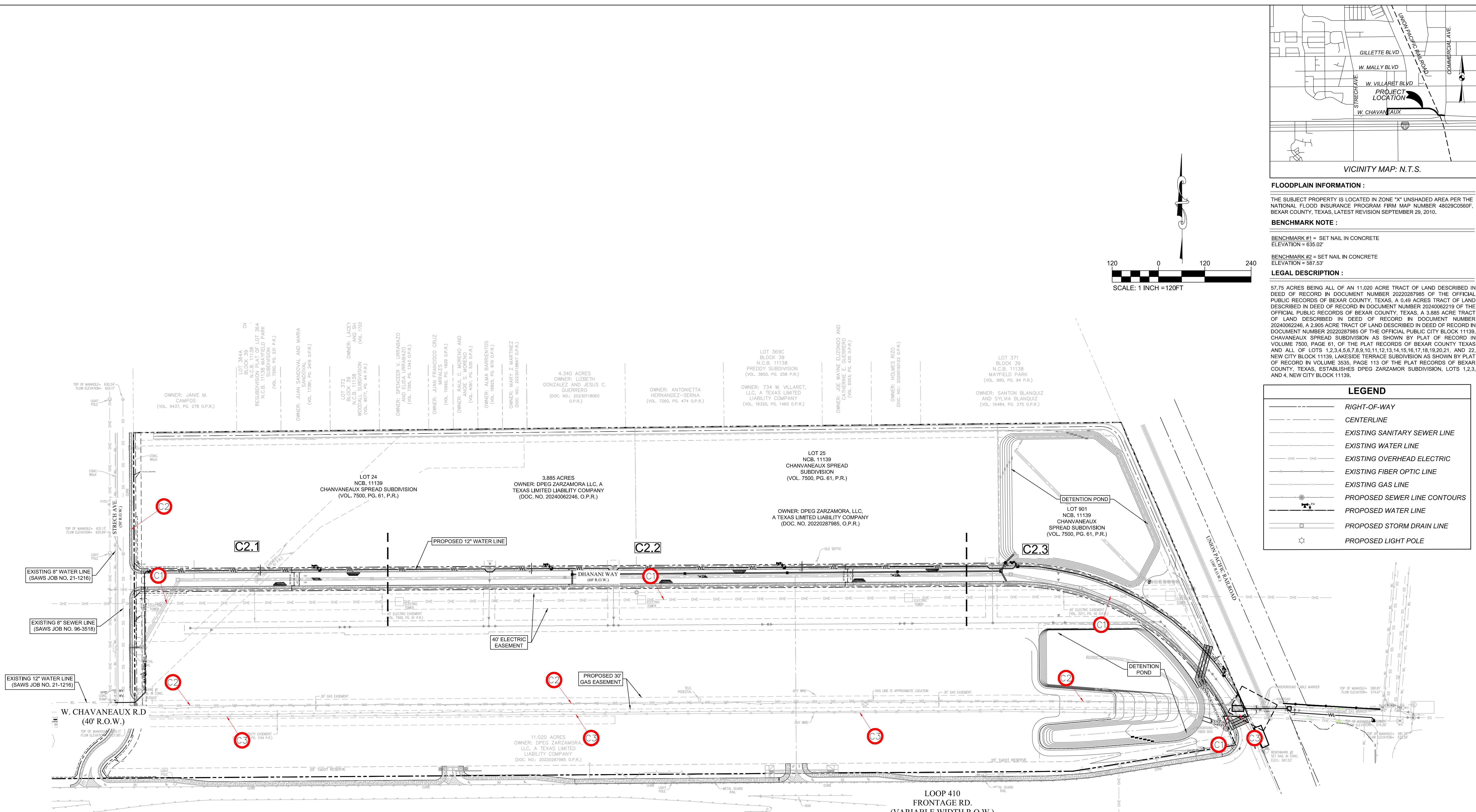
Table with columns: REVISIONS, DESCRIPTION, DATE, REVISION.

PUBLIC WATER GENERAL CONSTRUCTION NOTES
DPEG ZARZAMORA
LOOP 410 SOUTH & STRECH AVE.
SAN ANTONIO, TEXAS 78221

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF BIDDING REVIEW UNDER THE AUTHORITY OF JEROME PERALES, P.E. ON MARCH 5, 2026. IT IS NOT TO BE USED FOR CONSTRUCTION, OR PERMIT PURPOSES.

Table with columns: DESIGN, DRAWN, CHKD, JCM, JCM, WOS. Includes DATE: 03/02/2026, SCALE: N.T.S., JOB No. 250503-01-001, SHEET NO. C0.1

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**FLOODPLAIN INFORMATION :**  
 THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" UNSHADED AREA PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP NUMBER 48029C0560F, BEAR COUNTY, TEXAS, LATEST REVISION SEPTEMBER 29, 2010.

**BENCHMARK NOTE :**  
 BENCHMARK #1 = SET NAIL IN CONCRETE ELEVATION = 635.02'  
 BENCHMARK #2 = SET NAIL IN CONCRETE ELEVATION = 587.53'

**LEGAL DESCRIPTION :**  
 57.75 ACRES BEING ALL OF AN 11,020 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20220287985 OF THE OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS, A 0.49 ACRES TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20240062219 OF THE OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS, A 3.885 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20240062246, A 2.995 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20220287985 OF THE OFFICIAL PUBLIC CITY BLOCK 11139, CHAVANEAUX SPREAD SUBDIVISION AS SHOWN BY PLAT OF RECORD IN VOLUME 7500, PAGE 61, OF THE PLAT RECORDS OF BEAR COUNTY TEXAS AND ALL OF LOTS 1,2,3,4,5,6,7,8,10,11,12,13,14,15,16,17,18,19,20,21, AND 22, NEW CITY BLOCK 11139, LAKESIDE TERRACE SUBDIVISION AS SHOWN BY PLAT OF RECORD IN VOLUME 3535, PAGE 113 OF THE PLAT RECORDS OF BEAR COUNTY, TEXAS, ESTABLISHES DPEG ZARZAMOR SUBDIVISION, LOTS 1,2,3, AND 4 NEW CITY BLOCK 11139.

**LEGEND**

	RIGHT-OF-WAY
	CENTERLINE
	EXISTING SANITARY SEWER LINE
	EXISTING WATER LINE
	EXISTING OVERHEAD ELECTRIC
	EXISTING FIBER OPTIC LINE
	EXISTING GAS LINE
	PROPOSED SEWER LINE CONTOURS
	PROPOSED WATER LINE
	PROPOSED STORM DRAIN LINE
	PROPOSED LIGHT POLE

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

ALL EXISTING CONDITIONS INFORMATION DEPICTED IN THESE PLANS INCLUDING PROPERTY BOUNDARIES, EASEMENTS, GRADE ELEVATIONS, PAVING LIMITS, AND UTILITIES ARE BASED ON THE CONSTRUCTION PLANS FOR THE DHANANI WAY PUBLIC ROAD IMPROVEMENTS INFRASTRUCTURE, IN THE CITY OF SAN ANTONIO, BEAR COUNTY, TEXAS, CITY PROJECT NO. CIVIL-250503-01, PREPARED BY BOWMAN CONSULTING (8122 DATAPoint RD., SUITE 202, SAN ANTONIO, TEXAS 78229 (TEL. NO. 210-298-1600), CONTRACTOR TO INSPECT THE SITE PRIOR TO BIDDING AND CONSTRUCTION TO VERIFY EXISTING SITE CONDITIONS AND BENCHMARK INFORMATION AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

**CAUTION NOTES:**

- CAUTION!!! OVERHEAD ELECTRIC LINES. USE EXTREME CAUTION DURING CONSTRUCTION.
- CAUTION!!! UNDERGROUND NATURAL GAS LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
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**SAWS PRESSURE ZONE: 790**

Developer's Name:	DPEG ZARZAMORA, LLC		
Address:	11333 FOUNTAIN LAKE DRIVE		
City:	STAFFORD	State:	TX
		ZIP:	77477
Phone# (866) 342-6264	FAX#	---	
SAWS Block Map#:	150540	Total EDUs:	0
Total Linear Footage of Pipe:	3,756 L.F.	Total Acreage:	57.75 AC.
Number of Lots:	4	SAWS JOB NO.:	25-1009
		Plat no.:	24-11800441



**Bowman**  
 © 2023 Bowman Consulting Group, Ltd.  
 TBPE Firm Registration No. F-003832  
 Phone: (210) 298-1600  
 8122 Datapoint Rd.  
 Suite 202  
 San Antonio, Texas 78229  
 EMAIL: bchook@bowman.com  
 www.bowmanconsulting.com

REVISIONS	DATE	DESCRIPTION

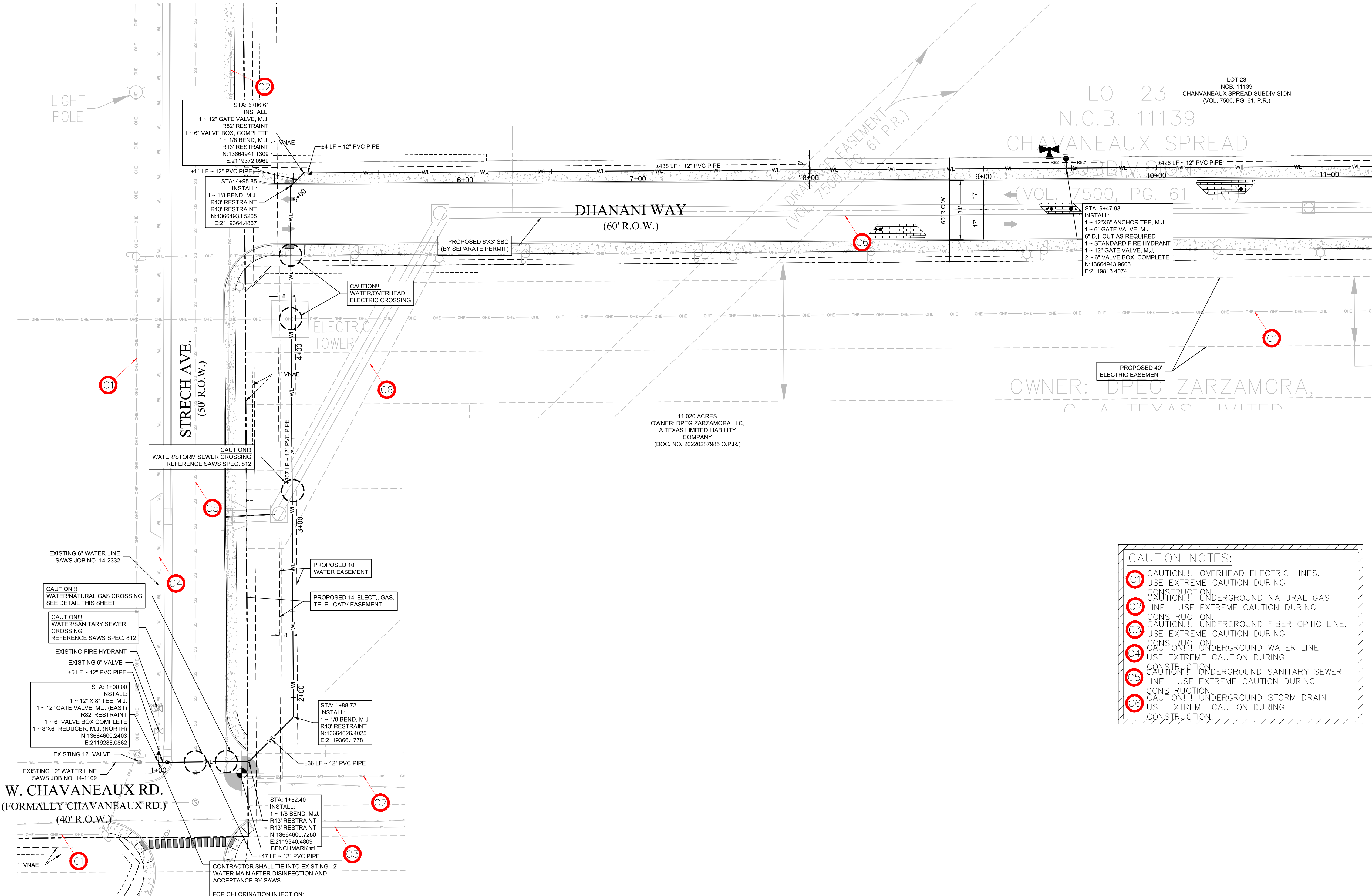
**OVERALL PUBLIC WATER PLAN**  
**DPEG ZARZAMORA**  
**LOOP 410 SOUTH & STRECH AVE.**  
**SAN ANTONIO, TEXAS 78221**

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DESIGN	DRAWN	CHKD
JCM	JCM	WOS
DATE:	03/02/2026	
SCALE:	1" = 120'	
JOB No.	250503-01-001	
SHEET NO.	<b>C2.0</b>	

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LIGHT POLE

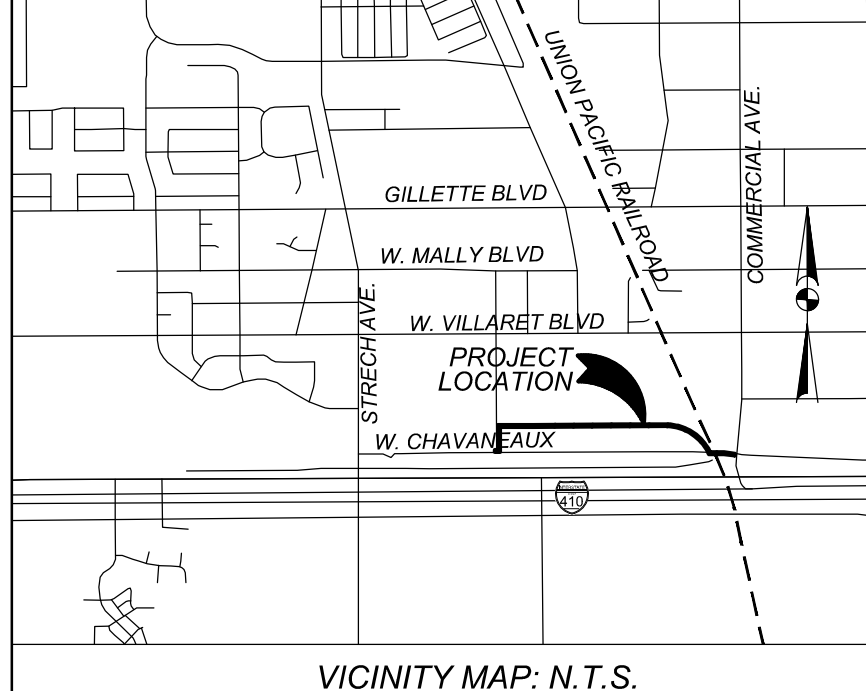


LOT 23  
N.C.B. 11139  
CHANVANEUX SPREAD SUBDIVISION  
(VOL. 7500, PG. 61, P.R.)

LOT 23  
N.C.B. 11139  
CHANVANEUX SPREAD  
(VOL. 7500, PG. 61, P.R.)

OWNER: DPEG ZARZAMORA,  
LLC A TEXAS LIMITED LIABILITY COMPANY  
(DOC. NO. 20220287985 O.P.R.)

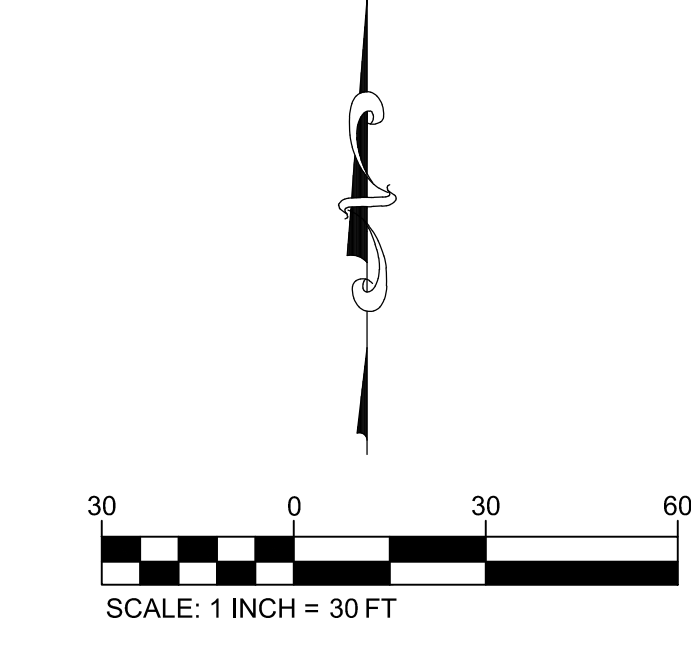
11.020 ACRES  
OWNER: DPEG ZARZAMORA LLC,  
A TEXAS LIMITED LIABILITY COMPANY  
(DOC. NO. 20220287985 O.P.R.)



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BENCHMARK #1 = SET NAIL IN CONCRETE  
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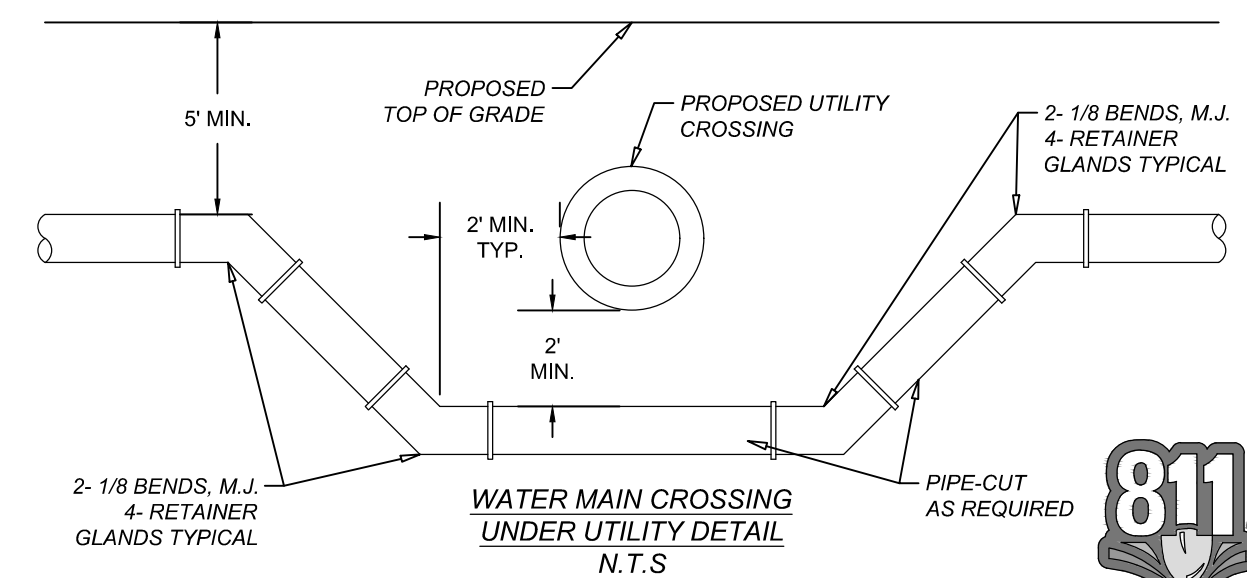


- CAUTION NOTES:**
- C1** CAUTION!!! OVERHEAD ELECTRIC LINES. USE EXTREME CAUTION DURING CONSTRUCTION.
  - C2** CAUTION!!! UNDERGROUND NATURAL GAS LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
  - C3** CAUTION!!! UNDERGROUND FIBER OPTIC LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
  - C4** CAUTION!!! UNDERGROUND WATER LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
  - C5** CAUTION!!! UNDERGROUND SANITARY SEWER LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
  - C6** CAUTION!!! UNDERGROUND STORM DRAIN. USE EXTREME CAUTION DURING CONSTRUCTION.

- LEGEND**
- RIGHT-OF-WAY
  - - - CENTERLINE
  - - - EXISTING SANITARY SEWER LINE
  - EXISTING WATER LINE
  - - - EXISTING OVERHEAD ELECTRIC
  - - - EXISTING FIBER OPTIC LINE
  - EXISTING GAS LINE
  - PROPOSED SEWER LINE CONTOURS
  - PROPOSED WATER LINE
  - PROPOSED STORM DRAIN LINE
  - ☆ PROPOSED LIGHT POLE
  - R XX' PROPOSED RESTRAINT

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**SAWS PRESSURE ZONE: 790**

Developer's Name:	DPEG ZARZAMORA, LLC		
Address:	11333 FOUNTAIN LAKE DRIVE		
City:	STAFFORD	State:	TX
		Zip:	77477
Phone#:	(866) 342-6264	FAX#:	--
SAWS Block Map#:	150540	Total EDUs:	0
Total Linear Footage of Pipe:	3,756 L.F.	Total Acreage:	57.75 AC.
Number of Lots:	4	SAWS JOB NO.:	25-1009

**Bowman**  
© 2023 Bowman Consulting Group, Ltd.  
TBP Firm Registration No. F-003832  
Phone: (210) 298-1600  
8122 Datapoint Rd.  
Suite 202  
San Antonio, Texas 78229  
EMAIL: bsc@boc@bowman.com  
www.bowmanconsulting.com

REVISION	DESCRIPTION	DATE

**PUBLIC WATER PLAN**  
DPEG ZARZAMORA  
LOOP 410 SOUTH & STRECH AVE.  
SAN ANTONIO, TEXAS 78221

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DATE:	03/02/2026	
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SHEET NO.	<b>C2.1</b>	

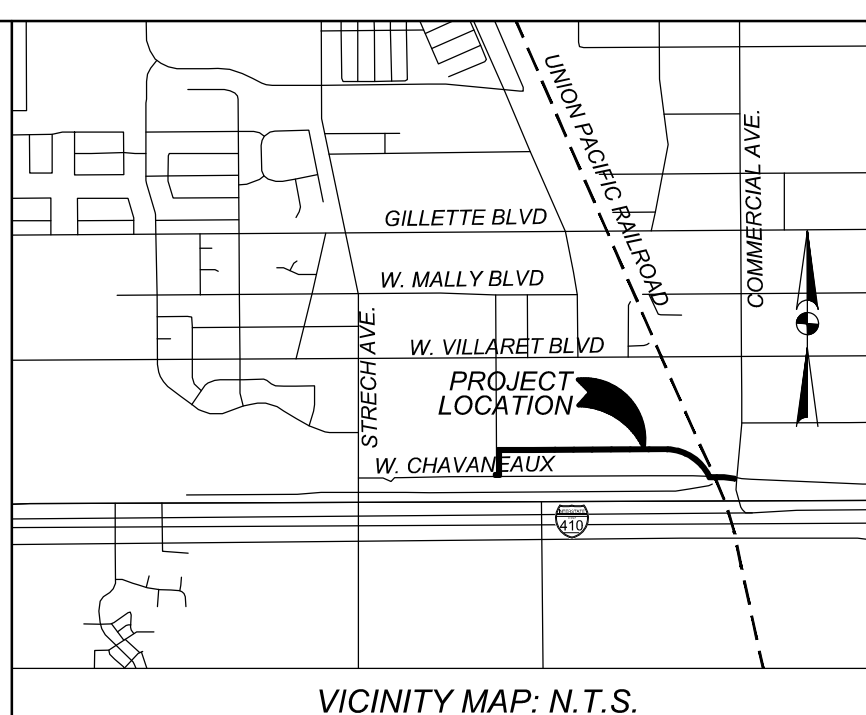
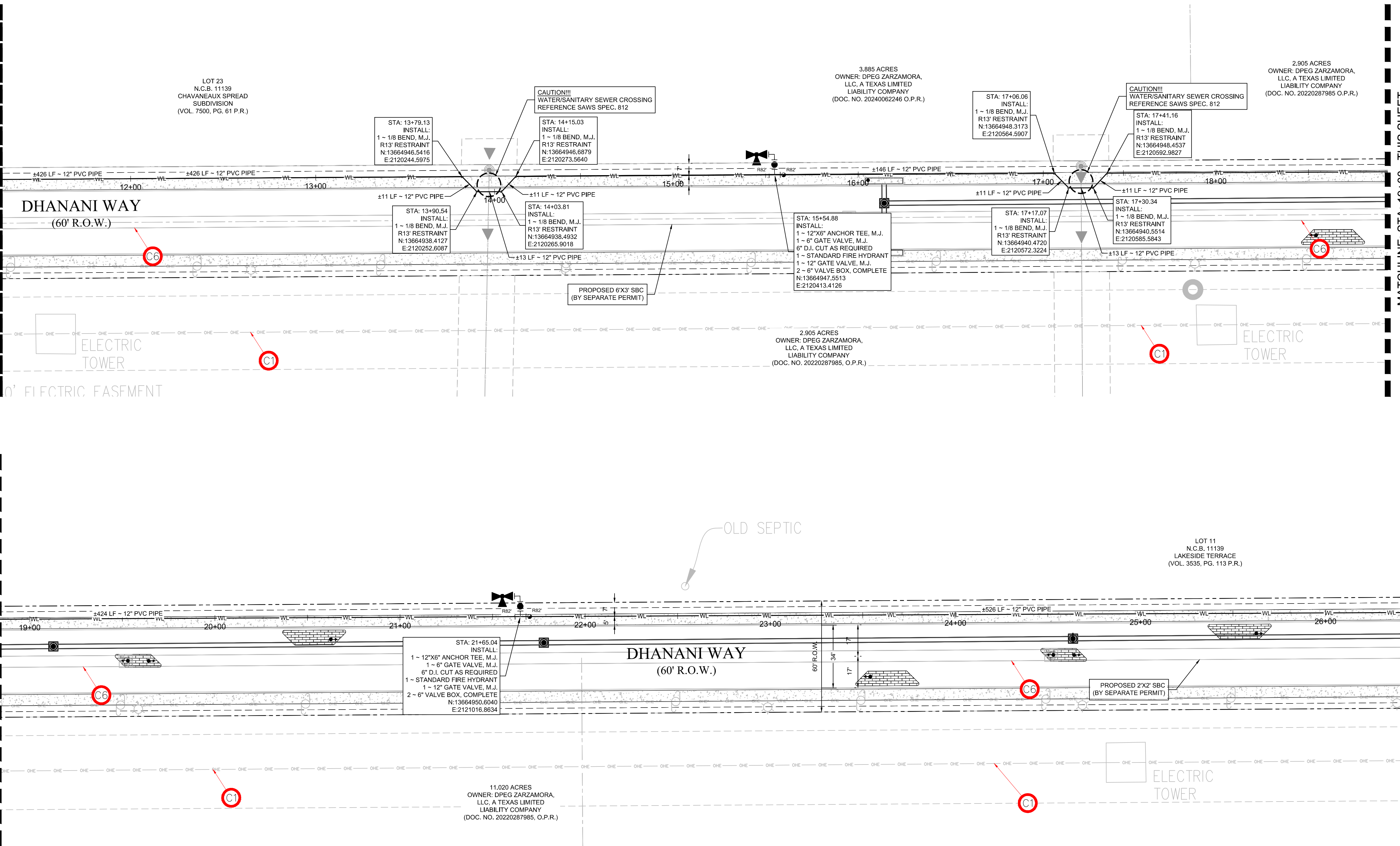
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MATCHLINE: STA: 11+50 - C2.1

MATCHLINE: STA: 19+00 - THIS SHEET

MATCHLINE: STA: 19+00 - THIS SHEET

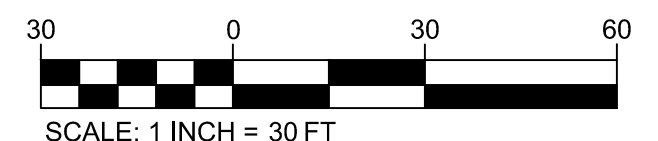
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**FLOODPLAIN INFORMATION:**  
THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" UNSHADED AREA PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP NUMBER 48029C0560F, BEAR COUNTY, TEXAS, LATEST REVISION SEPTEMBER 29, 2010.

**BENCHMARK NOTE:**  
BENCHMARK #1 = SET NAIL IN CONCRETE ELEVATION = 635.02'  
BENCHMARK #2 = SET NAIL IN CONCRETE ELEVATION = 587.53'

**LEGAL DESCRIPTION:**  
57.75 ACRES BEING ALL OF AN 11,020 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20220287985 OF THE OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS, A 0.49 ACRES TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20240062219 OF THE OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS, A 3.885 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20240062246, A 2.905 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20220287985 OF THE OFFICIAL PUBLIC CITY BLOCK 11139, CHAVANEAUX SPREAD SUBDIVISION AS SHOWN BY PLAT OF RECORD IN VOLUME 7500, PAGE 51, OF THE PLAT RECORDS OF BEAR COUNTY TEXAS AND ALL OF LOTS 12, 21, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, AND 22, NEW CITY BLOCK 11139, LAKESIDE TERRACE SUBDIVISION AS SHOWN BY PLAT OF RECORD IN VOLUME 3535, PAGE 113 OF THE PLAT RECORDS OF BEAR COUNTY, TEXAS, ESTABLISHES DPEG ZARZAMORA SUBDIVISION, LOTS 1, 2, 3, AND 4, NEW CITY BLOCK 11139.



**LEGEND**

	RIGHT-OF-WAY
	CENTERLINE
	EXISTING SANITARY SEWER LINE
	EXISTING WATER LINE
	EXISTING OVERHEAD ELECTRIC
	EXISTING FIBER OPTIC LINE
	EXISTING GAS LINE
	PROPOSED SEWER LINE CONTOURS
	PROPOSED WATER LINE
	PROPOSED STORM DRAIN LINE
	PROPOSED LIGHT POLE
	PROPOSED RESTRAINT

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

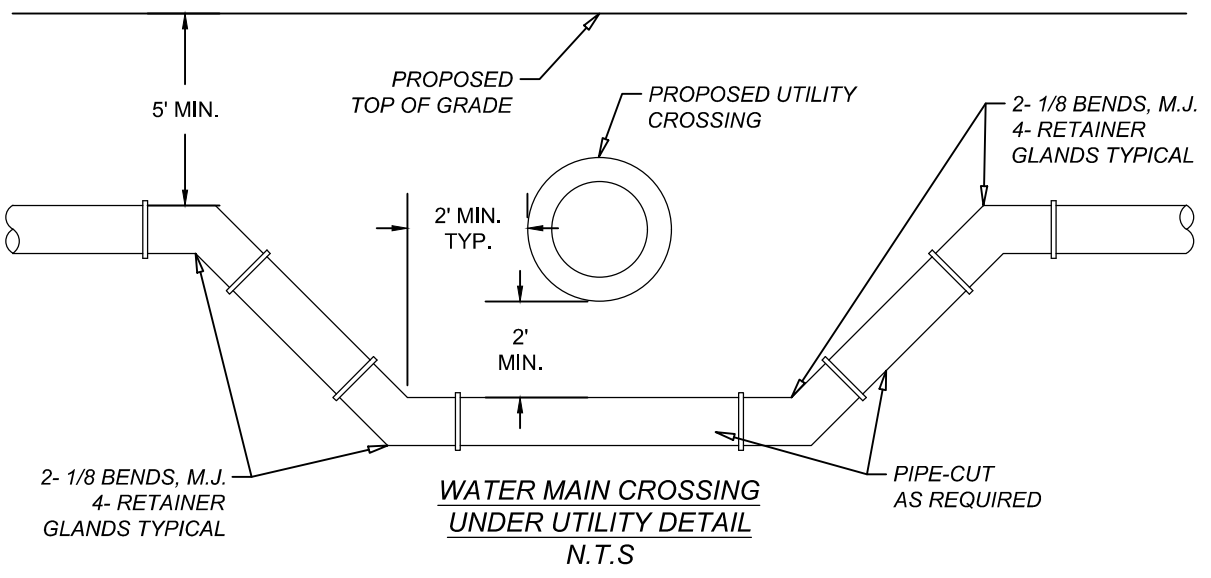
ALL EXISTING CONDITIONS INFORMATION DEPICTED IN THESE PLANS INCLUDING PROPERTY BOUNDARIES, EASEMENTS, GRADE ELEVATIONS, PAVING LIMITS, AND UTILITIES ARE BASED ON THE CONSTRUCTION PLANS FOR THE DHANANI WAY PUBLIC ROAD IMPROVEMENTS INFRASTRUCTURE, IN THE CITY OF SAN ANTONIO, BEAR COUNTY, TEXAS, CITY PROJECT NO. CIVIL-250503-01, PREPARED BY BOWMAN CONSULTING (8122 DATAPoint RD., SUITE 202, SAN ANTONIO, TEXAS 78229 (TEL NO. 210-298-1600), CONTRACTOR TO INSPECT THE SITE PRIOR TO BIDDING AND CONSTRUCTION TO VERIFY EXISTING SITE CONDITIONS AND BENCHMARK INFORMATION AND REPORT ANY DISCREPANCIES TO THE ENGINEER IMMEDIATELY.

**SAWS PRESSURE ZONE: 790**

Developer's Name:	DPEG ZARZAMORA, LLC
Address:	11333 FOUNTAIN LAKE DRIVE
City:	STAFFORD
State:	TX
ZIP:	77477
Phone# (866) 342-6264	FAX# -
SAWS Block Map#:	150540
Total EDUs:	0
Total Acreage:	57.75 AC.
Total Linear Footage of Pipe:	3,756 L.F.
Plat no.:	24-11800441
Number of Lots:	4
SAWS JOB NO.:	25-1009

**CAUTION NOTES:**

- CAUTION!!! OVERHEAD ELECTRIC LINES. USE EXTREME CAUTION DURING CONSTRUCTION.
- CAUTION!!! UNDERGROUND NATURAL GAS LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
- CAUTION!!! UNDERGROUND FIBER OPTIC LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
- CAUTION!!! UNDERGROUND WATER LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
- CAUTION!!! UNDERGROUND SANITARY SEWER LINE. USE EXTREME CAUTION DURING CONSTRUCTION.
- CAUTION!!! UNDERGROUND STORM DRAIN. USE EXTREME CAUTION DURING CONSTRUCTION.



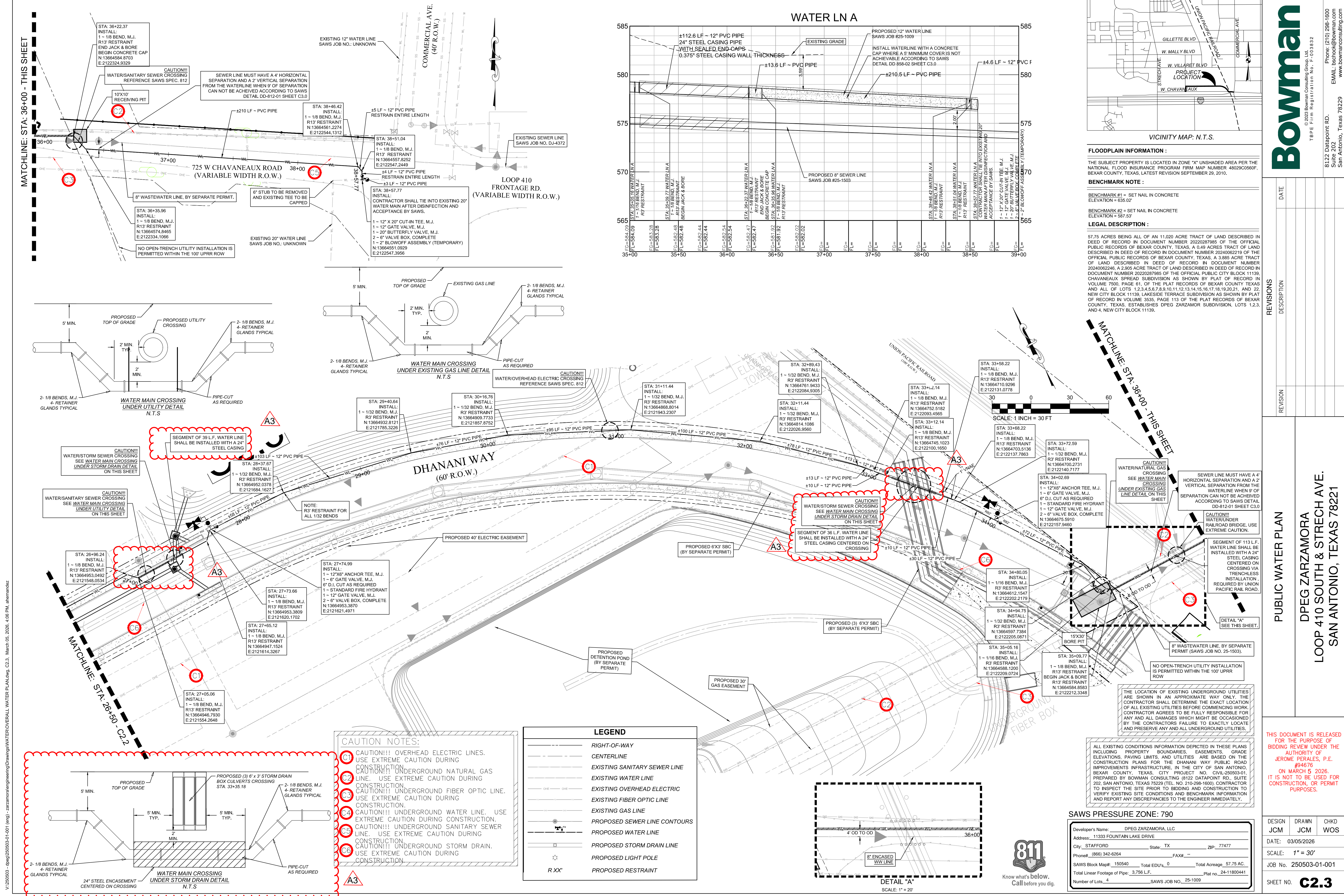
**Bowman**  
© 2023 Bowman Consulting Group, Ltd.  
TBP Firm Registration No. F-003832  
Phone: (210) 298-1600  
8122 Datapoint Rd.  
Suite 202  
San Antonio, Texas 78229  
EMAIL: bsc@bcz.com  
www.bowmanconsulting.com

REVISION	DESCRIPTION	DATE

**PUBLIC WATER PLAN**  
DPEG ZARZAMORA  
LOOP 410 SOUTH & STRECH AVE.  
SAN ANTONIO, TEXAS 78221

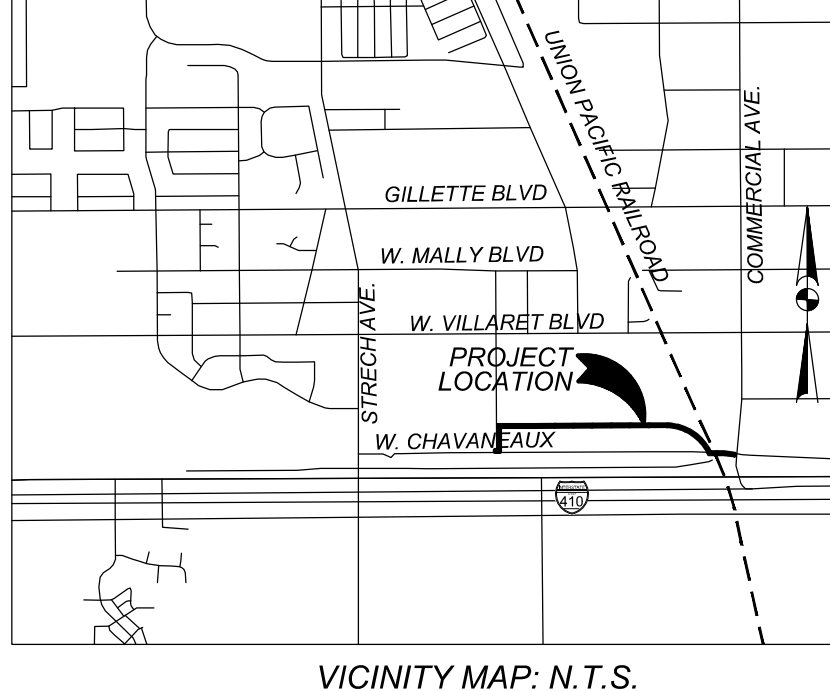
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DESIGN	DRAWN	CHKD
JCM	JCM	WOS
DATE:	03/02/2026	
SCALE:	1" = 30'	
JOB No.:	250503-01-001	
SHEET NO.:	<b>C2.2</b>	



MATCHLINE: STA. 36+00 - THIS SHEET

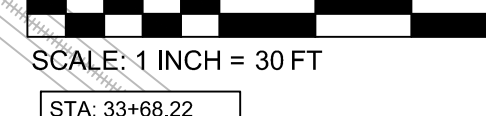
MATCHLINE: STA. 36+40 - THIS SHEET



**FLOODPLAIN INFORMATION:**  
 THE SUBJECT PROPERTY IS LOCATED IN ZONE "X" UNSHADED AREA PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP NUMBER 48029C0660, BEAR COUNTY, TEXAS, LATEST REVISION SEPTEMBER 29, 2010.

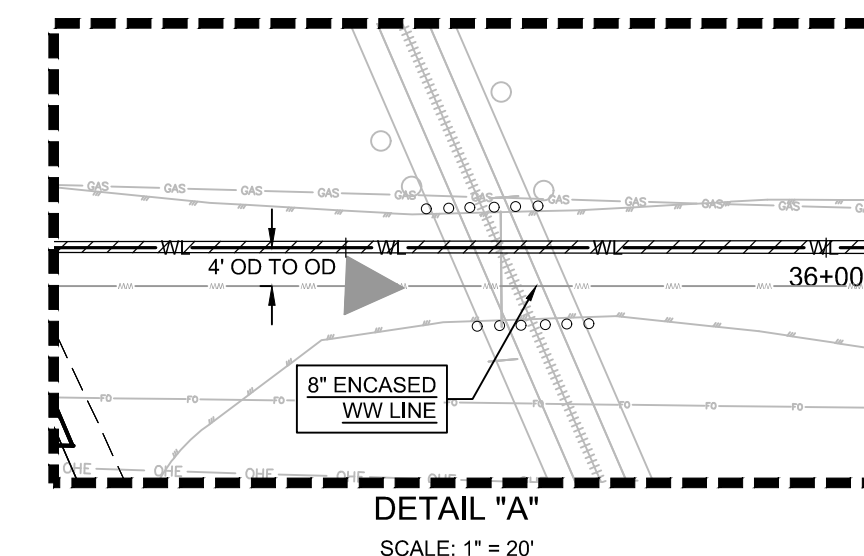
**BENCHMARK NOTE:**  
 BENCHMARK #1 = SET NAIL IN CONCRETE ELEVATION = 635.02'  
 BENCHMARK #2 = SET NAIL IN CONCRETE ELEVATION = 587.53'

**LEGAL DESCRIPTION:**  
 57.75 ACRES BEING ALL OF AN 11,020 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20220287985 OF THE OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS, A 0.49 ACRES TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20240062219 OF THE OFFICIAL PUBLIC RECORDS OF BEAR COUNTY, TEXAS, A 3.885 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20240062246, A 2.905 ACRE TRACT OF LAND DESCRIBED IN DEED OF RECORD IN DOCUMENT NUMBER 20220287985 OF THE OFFICIAL PUBLIC CITY BLOCK 11139, CHAVANEAU SPREAD SUBDIVISION AS SHOWN BY PLAT OF RECORD IN VOLUME 750, PAGE 51, OF THE PLAT RECORDS OF BEAR COUNTY TEXAS AND ALL OF LOTS 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, AND 22 NEW CITY BLOCK 11139, LAKESIDE TERRACE SUBDIVISION AS SHOWN BY PLAT OF RECORD IN VOLUME 353, PAGE 113 OF THE PLAT RECORDS OF BEAR COUNTY, TEXAS, ESTABLISHES DREG ZARZAMOR SUBDIVISION, LOTS 1, 2, 3, AND 4 NEW CITY BLOCK 11139.



**SAWS PRESSURE ZONE: 790**

Developer's Name: DREG ZARZAMORA, LLC  
 Address: 11333 FOUNTAIN LAKE DRIVE  
 City: STAFFORD State: TX ZIP: 77477  
 Phone# (866) 342-6264 FAX# ---  
 SAWS Block Map#: 150540 Total EDUs: 0 Total Acreage: 57.75 AC.  
 Total Linear Footage of Pipe: 3,756 L.F. Plat No. 24-1180041  
 Number of Lots: 4 SAWS JOB NO. 25-1009



**LEGEND**

---	RIGHT-OF-WAY
---	CENTERLINE
---	EXISTING SANITARY SEWER LINE
---	EXISTING WATER LINE
---	EXISTING OVERHEAD ELECTRIC
---	EXISTING FIBER OPTIC LINE
---	EXISTING GAS LINE
---	PROPOSED SEWER LINE CONTOURS
---	PROPOSED WATER LINE
---	PROPOSED STORM DRAIN LINE
---	PROPOSED LIGHT POLE
---	PROPOSED RESTRAINT

**CAUTION NOTES:**

C1 CAUTION!!! OVERHEAD ELECTRIC LINES. USE EXTREME CAUTION DURING CONSTRUCTION.

C2 CAUTION!!! UNDERGROUND NATURAL GAS LINE. USE EXTREME CAUTION DURING CONSTRUCTION.

C3 CAUTION!!! UNDERGROUND FIBER OPTIC LINE. USE EXTREME CAUTION DURING CONSTRUCTION.

C4 CAUTION!!! UNDERGROUND WATER LINE. USE EXTREME CAUTION DURING CONSTRUCTION.

C5 CAUTION!!! UNDERGROUND SANITARY SEWER LINE. USE EXTREME CAUTION DURING CONSTRUCTION.

C6 CAUTION!!! UNDERGROUND STORM DRAIN. USE EXTREME CAUTION DURING CONSTRUCTION.

**THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF BIDDING REVIEW UNDER THE AUTHORITY OF JEROME PERALES, P.E.**

#94876  
 ON MARCH 5, 2026, IT IS NOT TO BE USED FOR CONSTRUCTION, OR PERMIT PURPOSES.

DESIGN: JCM  
 DRAWN: JCM  
 CHKD: WOS

DATE: 03/05/2026  
 SCALE: 1" = 30'  
 JOB NO. 250503-01-001  
 SHEET NO. **C2.3**

V:\250503-01-001 (eng) - zarzamoradegan\Drawings\WATER\OVERALL WATER PLAN.dwg, C2.3, March 05, 2026, 4:08 PM, ahernandobz

**VALVE MARKER**

Notes:  
 1. Valve Marker is 3" Steel pipe painted as shown  
 2. Valve Measurements shall be referenced to Marker  
 3. SAWS Decal shall be nailed on the marker and facing the direction of the valve

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-828-04**

SHEET 1 OF 1

**INSTALLATION OF GEARED HORIZONTAL GATE VALVE WITH VALVE BOX COMPLETE**

Notes: All Concrete to be 3,000 psi.

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-828-02**

SHEET 1 OF 1

**FIRE HYDRANT INSTALLATION (JOINT RESTRAINT)**

Notes:  
 (A) Anchoring Tee with M.J. Fitting or M.J. Valve  
 (B) Std. M.J. Tee with Anchoring Coupling or Anchoring Fitting  
 NOTE: Polywrap Below Ground

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MAY 2013  
 REVISED AUG 2019  
**DD-834-01**

SHEET 1 OF 3

**JOINT RESTRAINTS FOR FITTINGS (WATER ONLY)**

R.L. = RESTRAINED LENGTHS TO BE DETERMINED BY DESIGN ENGINEER

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED DECEMBER 2019  
**DD-839-01**

SHEET 2 OF 2

**RESTRAINED LENGTHS FOR TEES**

PIPE SIZE (Inch)	BRANCH SIZE (Inch)	LENGTH OF RUN (ft)	RESTRAINED LENGTH IN FEET WHEN TEST PRESSURE = 200 psi	RESTRAINED LENGTH IN FEET WHEN TEST PRESSURE = 150 psi
12	4	0	92	31
12	4	5	1	1
12	6	0	59	44
12	6	5	13	1
12	8	0	1	1
12	8	5	77	58
12	8	10	42	23
12	8	15	7	1
12	12	0	109	82
12	12	5	88	59
12	12	10	63	35
12	12	15	39	12

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

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-839-04**

SHEET 2 OF 2

**RESTRAINED LENGTH DESIGN FOR HORIZONTAL BENDS**

PIPE SIZE (Inch)	BEND ANGLE (Deg.)	LOW SIDE DEPTH (ft)	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 200 psi	UPPER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi	LOWER BEND RESTRAINED LENGTH IN FEET TEST PRESSURE = 150 psi
6	30	5	23	17	3	3
6	45	5	9	7	1	1
6	22.5	5	2	2	0	0
8	30	5	22	17	2	2
8	45	5	9	7	1	1
8	22.5	5	2	2	0	0
8	11.25	5	1	1	0	0
8	45	5	32	11	4	4
8	22.5	5	15	5	11	4
8	11.25	5	6	3	6	2
8	45	10	32	7	24	5
8	22.5	10	15	3	11	2
8	11.25	10	6	2	6	1
12	30	5	45	16	14	12
12	45	5	22	7	16	6
12	22.5	5	7	4	8	2
12	11.25	5	45	10	34	2
12	22.5	10	22	5	16	3
12	11.25	10	11	2	9	2

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

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-839-06**

SHEET 1 OF 1

**RESTRAINED LENGTH DESIGN FOR HORIZONTAL BENDS**

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

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-839-08**

SHEET 1 OF 1

**2" TEMPORARY BLOW-OFF ASSEMBLY ON 12" & 16" MAINS**

Notes:  
 \* Out as required to extend beyond excavation.

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-844-01**

SHEET 2 OF 4

**STANDARD CHLORINATION INSTALLATION**

Notes:  
 2 - 1 1/4" Solid Cap, Tpd. to be installed on Corporation Stop after construction

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-847-01**

SHEET 1 OF 3

**TYPICAL CONCRETE DETAILS**

Notes:  
 1) All concrete encasement shall be poured at a plane 1" above the pipe between excavated trench walls.  
 2) All sewer pipe with less than 3" of cover to subgrade shall be concrete encased.  
 3) All Force Mains shall be provided with thrust blocks, where changes in direction occur, at Tees, Bends, Crosses, changes in size, stops, or as directed by SAWS.

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD 858-02**

SHEET 1 OF 1

**TYPICAL CONCRETE ENCASEMENT DETAILS**

Notes:  
 1) All concrete encasement shall be poured at a plane 1" above the pipe between excavated trench walls.  
 2) All sewer pipe with less than 3" of cover to subgrade shall be concrete encased.  
 3) All Force Mains shall be provided with thrust blocks, where changes in direction occur, at Tees, Bends, Crosses, changes in size, stops, or as directed by SAWS.

PROPERTY OF SAN ANTONIO WATER SYSTEM  
 SAN ANTONIO, TEXAS

APPROVED MARCH 2008  
 REVISED AUG 2019  
**DD-858-01**

SHEET 1 OF 1

**SAWS PRESSURE ZONE: 790**

Developer's Name: DPEG ZARZAMORA, LLC  
 Address: 11333 FOUNTAIN LAKE DRIVE  
 City: STAFFORD State: TX ZIP: 77477  
 Phone#: (866) 342-6264 FAX#: --  
 SAWS Block Map#: 150540 Total EDU's: 0 Total Acreage: 57.75 AC.  
 Total Linear Footage of Pipe: 3,756 L.F. Plat no. 24-1180041  
 Number of Lots: 4 SAWS JOB NO. 25-1009

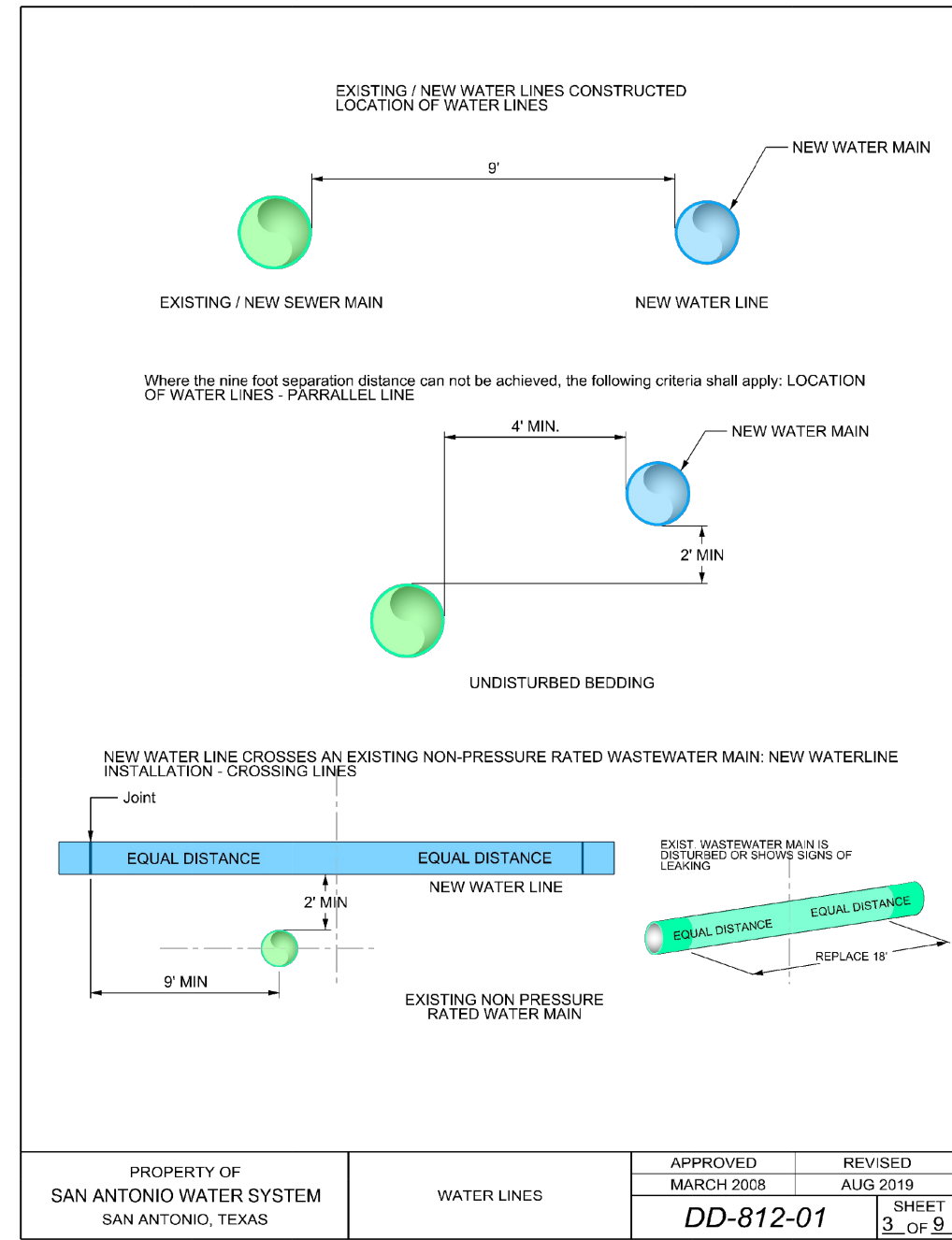
REVISION	DESCRIPTION	DATE

PUBLIC WATER DETAIL SHEET

DPEG ZARZAMORA  
 LOOP 410 SOUTH & STRECH AVE.  
 SAN ANTONIO, TEXAS 78221

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DESIGN	DRAWN	CHKD
JCM	JCM	WOS
DATE:	03/02/2026	
SCALE:	N.T.S.	
JOB No.	250503-01-001	
SHEET NO.	<b>C3.0</b>	



PROPERTY OF SAN ANTONIO WATER SYSTEM SAN ANTONIO, TEXAS	WATER LINES	APPROVED MARCH 2026	REVISED AUG 2018
		DD-812-01	SHEET 3 of 9

SAWS PRESSURE ZONE: 790

Developer's Name:	DPEG ZARZAMORA, LLC		
Address:	11333 FOUNTAIN LAKE DRIVE		
City:	STAFFORD	State:	TX, ZIP: 77477
Phone#:	(866) 342-6264	FAX#:	--
SAWS Block Map#:	150540	Total EDUs:	0
Total Linear Footage of Pipe:	3,756 L.F.	Total Acreage:	57.75 AC.
Number of Lots:	4	Plat no.:	24-11800441
	SAWS JOB NO.	25-1009	

DESIGN	DRAWN	CHKD
JCM	JCM	WOS
DATE: 03/02/2026		
SCALE: N.T.S.		
JOB No. 250503-01-001		
SHEET NO. <b>C3.1</b>		

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PUBLIC WATER DETAIL SHEET  
DPEG ZARZAMORA  
LOOP 410 SOUTH & STRECH AVE.  
SAN ANTONIO, TEXAS 78221

REVISION	DESCRIPTION	DATE

**Bowman**  
© 2023 Bowman Consulting Group, Ltd.  
TBP Firm Registration No. F-003832  
8122 Datapoint RD.  
Suite 202  
San Antonio, Texas 78229  
Phone: (210) 298-1600  
EMAIL: bsc@bowman.com  
www.bowmanconsulting.com