



Stonehill Offsite Water Extension Phase II
Solicitation Number: CO-00719
Job No.: 23-7003

ADDENDUM 2
November 21, 2023

To Bidder of Record:

This addendum, applicable to work referenced above, is an amendment to the bid proposal, plans and specifications and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the bid proposal.

RESPONSES TO QUESTIONS

- 1. Question: Is there a geotech report available for this project?**
Response: No, there is no geotechnical information available.
- 2. Question: Please provide a soil report.**
Response: There is no geotechnical report available for this project.
- 3. Question: On the plans, please clarify why all of the 16" gate valves and most of the 24" butterfly valves are called out as flanged when the 16" and 24" pipes are DIPS PVC.**
Response: See Changes to the Plans #2. All 16" valves have been revised to be MJ. The 24" butterfly valves will remain flanged per SAWS Materials Specifications.
- 4. Question: In the bid schedule there's only a bid item for 4" temporary blowoffs. Under what bid item does the 2" temporary blowoff go as mentioned in the disinfection notes on plan sheet C3.00 – middle left?**
Response: See Changes to the Specifications #3. The Bid Form has been revised to include a line item for 2" blowoffs.
- 5. Question: Are the 4" blowoffs just at the end of the 24" line and the 2" blowoffs just at the end of the 8" and 12" lines? If so, should a bid item be added for the 2" blowoffs?**
Response: Yes, that is correct. See Changes to the Specifications #3. The Bid Form has been revised to include a line item for 2" blowoffs. See Changes to the Plans #2. The plans have been revised accordingly.
- 6. Question: On plan sheet C4.00 please clarify the size of the air valve. Detail A states 8" in size yet its attached to the 2" pipe nipples and a 2" ball valve. Also, if this air valve is to be 8" in size, under what bid item is it to go? The bid schedule only has a bid item for the 2" air valves.**
Response: See Changes to the Plans #3. The detail on sheet C4.00 has been revised to show a 2" ARV.
- 7. Question: The RBX model listed in detail B is stainless steel. Does that mean all of the other air valves have to be stainless steel as well?**
Response: Detail B pertains to the riser detail only. All other ARVs within the plans are to meet SAWS standard specification No. 846.
- 8. Question: Would SAWS please consider pushing the job back a week or so? With this job being on a Monday, which is difficult, this job is also the week of TxDOT letting which makes getting pricing from vendors difficult as well.**

Response: See Changes to the Specifications #1. The bid opening is being moved to Thursday December 7. Extending the bid opening into the following week would not allow the project to be placed on the January Board of Trustees meeting for consideration.

- 9. Question: We are currently working on Stonehill Units 1, 3A, 3Bk 5 & 7 for DR Horton. This waterline runs along the collector street we are currently working on. With SAWS' timeline for 24" waterline install we will have utilities already installed and streets/flex base/HMAC & curb in progress. What provisions will be required to protect the work in progress & in place?**

Response: Steel casing is included in the plans for the subdivision to account for these crossings.

- 10. Question: Can ductile iron pipe be used in lieu of PVC.**

Response: See Changes to the Specifications #3. Line items for ductile iron have been added to allow bidders to submit prices for that material.

- 11. Question: Is there a geotech report for this project? Section SS 2140 104.A Design Criteria states that there was a Geotech report for this project. Can you provide that information?**

Response: There is no Geotech report available. See Changes to the Specifications #4. SS 2140 has been revised to remove the reference to a Geotech report.

- 12. Question: Can you add a bid item for hydrostatic testing?**

Response: See Changes to the Specifications #3. A line item for hydrostatic testing has been added.

- 13. Question: The shaft detail shows to backfill with flowable fill. Can you add a bid item for flowable fill?**

Response: See Changes to the Specifications #3. A line item for flowable fill has been added.

- 14. Question: Considering the amount of work and project size we feel that 240 calendar days is not sufficient to complete this work. There are a lot of bores that need to be constructed on this project and this will take more time to complete. We recommend that you give 365 days to complete this project.**

Response: See Changes to the Specifications #5. Special Condition SC21.0 has been added to allow for extra time for project closeout, provided the main has been completed, field accepted, and providing water to the Stonehill Development within 240 calendar days of the NTP.

- 15. Question: Will HDPE & Ductile Iron pipe be an option as an alternate to PVC for this project?**

Response: See response to question 10 regarding ductile iron. HDPE will not be allowed as an alternate on this project.

- 16. Question: Will ductile iron pipe PC250 (SAWS Spec 05-11) be allowed as an alternate to the 16" DR18 C905 PVC pipe?**

Response: See response to question 10.

- 17. Question: Will ductile iron pipe PC200 (SAWS Spec 05-11) be allowed as an alternate to the 24" DR18 C905 PVC pipe? If ductile is allowed may "ZINC" coating be added to the pipe requirement adding additional corrosion protection?**

Response: See response to question 10 regarding pipe material. Zinc coating is not a requirement for ductile iron pipe. For protection against corrosion of ductile iron pipe, instead of a zinc coating please reference SAWS specification 814.

- 18. Question: Do SAWS Specs on 24" butterfly valves require them to be flanged?**

Response: Yes, these valves are required to be flanged.

- 19. Question: Are 24" butterfly valves to be #250 body with #150 flanges?**

Response: Yes, #250 body and #150 flange bolt pattern is correct.

- 20. Question: Will there be alternates to the PVC piping such as ductile iron and HDPE?**

Response: See response to question 15.

CHANGES TO THE SPECIFICATIONS

1. Page IV – 1, **Invitation to Bidders**, paragraphs 6 and 7 **remove** and **replace** with the following:

Due to the COVID-19 emergency and to protect the health of the public, SAWS is implementing new procedures for the submission of bids. Bids will be received either Electronically or through Sealed bids, until 2:00 PM (CST), December 7, 2023. Electronic bids will be received via the secure SAWS FTP site. Sealed bids will be received by Contract Administration, 2800 U.S. Hwy 281 North, Tower II, Customer Center Building, via a drop box located on the left wall when walking through the first set of double glass doors of the main Tower II entry on the north side of the building, San Antonio, Texas 78212. See the Electronic Bid Opening Instructions attachment for additional information regarding an electronic bid submittal. Electronic bids shall be accompanied by a bid bond in an amount not less than five percent of the total bid price. (Or, if providing SAWS with a cashier's check or certified check in an amount not less than five percent of the total bid price, SAWS will request this within 24 hours from the apparent low bidder. Sealed bids must be accompanied by a cashier's check, certified check, or bid bond in an amount not less than five percent of the total bid price. Bids will then be publicly opened and read aloud by Contract Administration via WebEx.

If Bidders intend to submit bids electronically, Bidders will need to submit a request by **2:00 PM (CST), December 6, 2023** to receive access to the File Transfer Protocol (FTP) site via email to Stella.Manzello@saws.org. Bidder's email requesting access to the FTP site shall provide the legal name of Bidder's company and the intended recipient's email address and phone number. No requests for FTP site access will be accepted after **2:00 PM (CST), December 6, 2023**.

Bid opening WebEx meeting will be held at 2:00 PM (CST) on December 7, 2023.

Link: <https://saws.webex.com/saws/j.php?MTID=m8e4f1d83f83b82eeefb74fb8e64f5bab>
<https://saws.webex.com>

Audio Connection: (210) 233-2090

Meeting number (access code): 2497 260 4924

Meeting password: CO-00719

2. **Remove** the Electronic Proposal Opening Instructions and **replace** with the version included with this addendum.
3. **Remove the Bid Proposal in its entirety and replace with the attached revised Bid Proposal. Line items have been added for 2" Temporary Blow-off Assembly, ductile iron piping, hydrostatic testing, and flowable fill. Bidders shall use the revised bid proposal when submitting a bid for this project. Failure to use the revised version may result in the bid being found non-responsive.**
4. **Remove** SS 2140 in its entirety and **replace** with the version included with this addendum.
5. **Remove** Special Conditions in their entirety and **replace** with the version included with this addendum.

CHANGES TO THE PLANS

1. Remove sheet C1.01 and replace with the version included with this addendum. The quantities have been updated due to revisions referenced in the answers above.
2. Remove sheets C3.00 through C3.17 in their entirety and replace with the versions included with this addendum. Revisions have been made to the sizes of the blowoffs and all 16" valves have been revised to be MJ.
3. Remove sheet C4.00 and replace with the version included with this addendum. Detail A has been revised to show a 2" ARV.

END OF ADDENDUM

This Addendum, including these four (4) pages, is fifty-two (52) pages with attachments in its entirety.
Attachments:

Electronic Proposal Opening Instructions (1 page)
Bid Proposal (3 pages)
SS 2140 (11 pages)

Special Conditions (13 pages)
Sheet C1.01 (1 page)
Sheets C3.00 – C3.17 (18 pages)
Sheet C4.00 (1 page)



BID PROPOSAL

PROPOSAL OF _____, a corporation
a partnership consisting of _____
an individual doing business as _____

THE SAN ANTONIO WATER SYSTEM:

Pursuant to Instructions and Invitation to Bidders, the undersigned proposes to furnish all labor and materials as specified and perform the work required for the project as specified, in accordance with the Plans and Specifications for the following prices in the bid proposal to wit:

PLEASE SEE ATTACHED LIST OF BID ITEMS.

BIDDER'S SIGNATURE & TITLE

FIRM'S NAME (TYPE OR PRINT)

FIRM'S ADDRESS

FIRM'S PHONE NO. /FAX NO.

FIRM'S EMAIL ADDRESS

The Contractor herein acknowledges receipt of the following: **Addendum No(s)**. _____

OWNER RESERVES THE RIGHT TO ACCEPT THE OVERALL MOST RESPONSIBLE BID.

The Bidder offers to construct the Project in accordance with the Contract Documents for the contract price, and to complete the Project within **240** calendar days after the start date, as set forth in the Authorization to Proceed. **The bidder understands and accepts the provisions of the contract Documents relating to liquidated damages of the project if not completed on time.**

Complete the additional requirements of the Bid Proposal which are included on the following pages.

Statement on President's Executive Orders

Has your firm previously performed work subject to the President's Executive Orders Numbers 11246 and 11375 or any preceding similar executive orders (Numbers 10925 and 11114)? Yes No

Texas Government Code Chapter 2274 Verifications

- (1) Are you, Contractor, held or controlled by individuals who are citizens of China, Iran, North Korea, Russia or a country designated by the Governor of the State of Texas pursuant to Texas Government Code Chapter 2274? Yes No
- (2) Are you, Contractor, held or controlled by a company or other entity, including a governmental entity, that is owned or controlled by citizens of or directly controlled by the government of China, Iran, North Korea, Russia or a country designated by the Governor of the State of Texas pursuant to Texas Government Code Chapter 2274? Yes No
- (3) Are you, Contractor, headquartered in China, Iran, North Korea, Russia or a country designated by the Governor of the State of Texas pursuant to Texas Government Code Chapter 2274? Yes No

Line Items						
Line No.	Item No.	Item Description	Unit	Quantity	Unit Price	Total
1	530.1	Barricades, Signs, and Traffic Handling (COSA Spec)	LS	1		
2	540	SWPPP	LS	1		
3	550	Trench Excavation Protection	LF	19,410		
FOR ITEMS 4 THROUGH 11 BIDDERS WILL EITHER PROVIDE A BID FOR 814 OR 818, NOT BOTH						
4	818	8" PVC Pipe Class 235 (DR 18) (Open Cut) with Fittings, Bedding	LF	240		
5	818	12" PVC Pipe Class 235 (DR 18) (Open Cut) with Fittings, Bedding	LF	183		
6	818	16" PVC Pipe Class 235 (DR 18) (Open Cut) with Fittings, Bedding	LF	4,572		
7	818	24" PVC Pipe Class 235 (DR 18) (Open Cut) with Fittings, Bedding	LF	13,987		
8	814	8" Ductile Iron Pipe (Open Cut) with Fittings, Bedding	LF	240		
9	814	12" Ductile Iron Pipe (Open Cut) with Fittings, Bedding	LF	183		
10	814	16" Ductile Iron Pipe (Open Cut) with Fittings, Bedding	LF	4,572		
11	814	24" Ductile Iron Pipe (DR 18) (Open Cut) with Fittings, Bedding	LF	13,987		
12	828	8" Gate Valve, MJ, with 6" Valve Box, Complete	EA	16		
13	828	12" Gate Valve, MJ, with 6" Valve Box, Complete	EA	3		
14	828	16" Gate Valve, MJ, with 6" Valve Box, Complete	EA	7		
15	830	24" Butterfly Valve, MJ, with 6" Valve Box, Complete	EA	30		
16	834	Standard Fire Hydrant Assembly	EA	23		
17	840	16" Water Tie-In	EA	2		
18	840	24" Water Tie-In	EA	1		
19	844	4" Temporary Blow-off Assembly	EA	2		
20	844	2" Temporary Blow-off Assembly	EA	12		
21	845	Remove and Replace Fence/Gate	LF	15		
22	846	2" Air Release Valve Assembly	EA	14		
23	856	36" Pipe Jacking	LF	201		
24	856.1	36" Steel Casing	LF	201		
25	856.2	16" PVC Pipe Class 235 (DR 18) (Carrier Pipe)	LF	201		
26	856	48" Pipe Jacking	LF	1,152		
27	856.1	48" Steel Casing	LF	1,152		
28	856.2	24" PVC Pipe Class 235 (DR 18) (Carrier Pipe)	LF	1,152		
29	841	Hydrostatic Testing	LS	1		
30	299	Flowable Fill	CY	137		
31	SC 18.0	CPS Power Pole Bracing	ALW	1	\$40,000.00	\$40,000.00
32	SC 19.0	Revegetation (Drill Seeding with Native Mixture & Hydromulch)	SY	80,312		
SUBTOTAL (ITEMS 1 - 32)						

		Mobilization				
33	100	Maximum 10% of line items 1-32	LS	1		
34	102	Intermediate Mobilization and Demobilization	LS	1		
		Preparation of Right-of-Way - This item shall include preparing the right-of-way for construction operations by removing and disposing all obstructions from the right-of-way and from designated easements where removal of such obstructions is not otherwise provided for in the contract documents.				
35	101	Maximum 5% of line items 1-32	LS	1		
TOTAL BID PRICE (TO INCLUDE LINE ITEMS 1- 35)						

MOBILIZATION LUMP SUM BID SHALL BE LIMITED TO A MAXIMUM OF 10% OF THE LINE ITEM "1-32" SUB-TOTAL BASE BID AMOUNT. PREPARING RIGHT-OF-WAY LUMP SUM BID SHALL BE LIMITED TO A MAXIMUM OF 5% OF THE LINE ITEM "1-32" SUB-TOTAL BASE BID AMOUNT. THE LINE ITEM "1-32" SUB-TOTAL BASE BID IS DEFINED AS ALL BID ITEMS EXCLUDING ITEM 100, MOBILIZATION AND ITEM 101, PREPARATION OF RIGHT-OF-WAY. IN THE EVENT OF A DISCREPANCY BETWEEN THE WRITTEN PERCENTAGE AND DOLLAR AMOUNT SHOWN FOR MOBILIZATION AND PREPARATION OF ROW BID ITEMS THE WRITTEN PERCENTAGE WILL GOVERN. IF THE PERCENTAGE WRITTEN EXCEEDS THE ALLOWABLE MAXIMUM STATED FOR MOBILIZATION AND OR PREPARATION OF ROW, SAWS RESERVES THE RIGHT TO CAP THE AMOUNT AT THE PERCENTAGES SHOWN AND ADJUST THE EXTENSIONS OF THE BID ITEMS ACCORDINGLY.



**Stonehill Off-Site Water Extension Phase II Project
Solicitation Number: CO-00719**

**ELECTRONIC BID OPENING INSTRUCTIONS
December 7, 2023 – 2:00 PM (CST)**

FTP BID PROPOSAL UPLOAD

In order to receive electronic bids for this project, SAWS will utilize a SAWS secured File Transfer Protocol (FTP) site. Only Bidders bidding as Prime Contractors will need to submit their request prior to **December 6, 2023 – 2:00 PM (CST)** to receive access to the FTP site via email to Stella.Manzello@saws.org. Bidder's email shall provide the legal name of the Bidder's company and the intended recipient's email address and phone number. No requests for FTP site access will be accepted after **December 6, 2023 – 2:00 PM (CST)** (CST). Once a Bidder is approved for access, an email with a hyperlink to the FTP site and a unique password for the Bidder will be provided to the Bidder's email recipient.

Once access is received, Bidders may upload the required documents per the Bid Proposal checklist any time before **December 7, 2023 – 2:00 PM (CST)**. Please ensure to allow sufficient time should Bidder's experience technical difficulties in uploading the required documents. No changes to the Bid nor bid price can be made once the Bid has been submitted.

Bidders shall comply with the following:

- 1) Limit files to one (1) pdf file that includes all requested documents, per the Bid Packet Checklist. **ONLY ONE SUBMITTAL WILL BE ACCEPTED PER REQUEST.** Do not upload any zip files.
- 2) Ensure that the itemized List of Bid Items is (are) the first page(s) of your file.
- 3) Bidders may protect the document from editing by adding a password. However, the document must be accessible for viewing by SAWS without requiring a password.
- 4) File shall be named: **CO-00719 – Stonehill Off-Site Water Extension Phase II Project.**
- 5) **DO NOT SHARE ACCESS AND/OR PASSWORD WITH OTHER PARTIES OUTSIDE YOUR COMPANY.**
- 6) **ENSURE THE BID IS SENT NO LATER THAN THE DUE DATE AND TIME. BIDS SUBMITTED AFTER THE BID OPENING DEADLINE WILL NOT BE ACCEPTED.**

If the Bidder is in need of help, they may contact the SAWS Contract Administrator, **Stella Manzello**, at **210-233-3354** or view troubleshooting tips at <http://www.Serv-U.com/sharefiles>

WEBEX BID OPENING MEETING

The WebEx meeting details are below if you would like to view the public opening of the bids.

When it's time, start or join the WebEx meeting from [here](#).

Access Information

Meeting Number: **2497 260 4924**

Meeting Password: **CO-00719**

Audio Connection: 210-233-2090 (SAWS WebEx)

If you have any questions or concerns, please feel free to contact me.

Thank you,

Stella Manzello

Contract Administrator

2800 U.S. Highway 281 North, Ste. 171 | San Antonio, TX 78212

Office | 210-233-3854

Email | Stella.Manzello@saws.org

PART 1 - GENERAL

1.01 SUMMARY

- A. This section provides for furnishing all labor, materials, equipment, power, and incidentals for performing all operations necessary to dewater, depressurize, drain, and maintain excavations as described herein and as necessary to operate pumps, installation of pipeline and appurtenances. Included are installing, maintaining, operating and work removing dewatering systems, and all work necessary to control, handle, and dispose of groundwater and surface water during the construction of open cut trench and shaft excavations, directional drilling, pipelines and appurtenances, and protecting Work against rising waters and repair of any resulting damage at no additional cost to SAWS.
- B. Work includes reduction of hydrostatic pressure and control of groundwater and perched groundwater in open cut trench and shaft excavations to provide dry and stable subgrade for construction. The work also includes the design, procurement, and installation of facilities to satisfactorily treat water, if required, for discharge to drainage system.
- C. Protecting work against surface runoff and rising flood water.
- D. Conformance to SWPPP.

1.02 CONTRACTOR'S RESPONSIBILITY

- A. It is the sole responsibility of the Contractor to identify groundwater and surface water conditions and to provide any and all labor, material, equipment, techniques, and methods to lower, control and handle groundwater and surface water as necessary for the Contractor's construction methods and to monitor the effectiveness of this installed system and its effect on adjacent facilities.
- B. Operate, maintain, and modify the system(s) as required to conform to these Specifications. Upon completion of the construction, Contractor shall remove the system(s). The development, drilling and abandonment of all wells used in the dewatering system shall comply with Texas Commission on Environmental Quality regulations and Texas Water Well Drillers Association.
- C. Assume sole responsibility for dewatering systems and for all loss or damage resulting from partial or complete failure of protective measures and any settlement or resultant damage caused by the dewatering operations. Modify groundwater control systems or operations if they cause or threaten to cause damage to new construction, existing site improvements, adjacent property, or adjacent wells. Repair damage caused by the dewatering system or resulting from failure of the system to protect property as required.

- D. Provide an adequate number of piezometers installed at the proper locations and depths as required to provide meaningful observations of the conditions affecting the excavation adjacent structures, and wells.

1.03 DEFINITIONS

- A. Ground water control system: system used to dewater and depressurize water-bearing soil layers.
 - 1. Dewatering: lowering the water table and intercepting seepage that would otherwise emerge from slopes or bottoms of excavations, or into tunnels and shafts; and disposing of removed water. Intent of dewatering is to increase stability of tunnel excavations and excavated slopes; prevent dislocation of material from slopes or bottoms of excavations, reduce lateral loads on sheeting and bracing, improve excavating and hauling characteristics of excavated material, prevent failure or heaving of bottom of excavations, and to provide suitable conditions for placement of backfill materials and construction of structures and other installations.
 - 2. Depressurization: includes reduction in piezometric pressure within strata not controlled by dewatering alone, necessary to prevent failure or heaving of excavation bottom or instability of tunnel excavations.
- B. Excavation drainage: includes keeping excavations free of surface and seepage water.
- C. Surface drainage: includes use of temporary drainage ditches and dikes and installation of temporary culverts and sump pumps with discharge lines necessary to protect Work from any source of surface water.
- D. Monitoring facilities for groundwater control system: includes piezometers, monitoring wells and flow meters for observing and recording flow rates.

1.04 DESIGN CRITERIA

- A. The Contractor shall be responsible for dewatering design and selection of methods and equipment for the dewatering system. The design shall be performed and stamped by a professional engineer registered in the State of Texas and specialized in hydrogeology or geotechnical engineering. Design shall include the monitoring and recording system.
- B. Dewatering systems shall be designed to satisfy the following objectives:
 - 1. Effectively reduce hydrostatic pressures, lower groundwater levels, and intercept perched groundwater to provide a dry and stable subgrade for the execution of subsequent operations.

2. Not result in damage to existing adjacent properties, buildings, structures, utilities, and other work.
 3. Assure that after 12 hours of initial pumping, no soil particles will be present in the discharge water.
 4. Comply with requirements for sanitary sewer discharge as described in Paragraph 3.08 of this Section.
 5. Maintain stability of sides and bottom of excavations.
- C. Required methods may include sump pumping, single-stage or multiple-stage well point systems, eductor and ejector-type well systems, deep wells, and combinations thereof. Groundwater cutoffs are also acceptable provided groundwater inflows at hydrostatic pressures are controlled so that the Work can be performed in the dry and so that there is no seepage or loss of ground.
- D. Locate dewatering facilities within the proposed and temporary easements, JUAs, and only where they will not interfere with utilities, traffic, pedestrians, or construction work to be done by others.
- E. Contractor shall modify dewatering or groundwater control procedures that cause or threaten to cause damage to new or existing facilities, so as to prevent further damage. The Contractor shall be responsible for determining and making the modifications at no additional cost to SAWS.
- F. Dewatering facilities, monitoring wells, and piezometers shall be made accessible to the Engineer at any time for monitoring purposes.
- G. Additional monitoring wells and piezometers may be requested by the Engineer or SAWS to be installed by the Contractor, at no additional cost to SAWS. Monitoring wells and piezometers shall be accessible to SAWS at all times.
- H. Dewatering and monitoring wells shall be installed and abandoned per Texas Commission on Environmental Quality Rules and Regulations.
- I. Provide ditches, berms, pumps and other methods necessary to divert and drain surface water from excavation and other work areas.

1.05 QUALITY REQUIREMENTS

- A. Provide for the arrangement, locations and depths of the dewatering system to accomplish the Work and satisfy the requirements specified herein. Provide sumps, well points, and deep wells with suitable filters and well screens of adequate size and screen opening to prevent removal of fines from the soils. Make available equipment, machinery and piping, including standby power and pumps in good working condition and of adequate capacity to continue dewatering operations in an emergency.

- B. Provide dewatering and/or groundwater control as required and as specified until the pipe or structure under construction has been completed.
- C. Dispose of water in closed conduits, do not to damage public or private property or create a nuisance or health hazard. Contractor to shall not use existing sanitary sewer system for discharge of groundwater and/or surface water flow.

1.06 SUBMITTALS

- A. Prior to the installation of the dewatering system and any excavation where groundwater is anticipated to be encountered, submit a Groundwater and Surface Water Control Plan for review by SAWS and Engineer prior to start of any fieldwork. The Plan shall be signed by a Professional Engineer registered in the State of Texas. Submit a plan to include the following:
 - 1. Results of any subsurface investigation and description of the extent and characteristics of water bearing layers subject to groundwater control.
 - 2. Design data, and descriptions of proposed groundwater and surface water control facilities for each location where these facilities are required.
 - 3. The proposed type of dewatering or groundwater control system including a description of the methods, equipment, standby equipment and power supply, observation wells and/or piezometers, pollution control facilities, and discharge locations to be utilized.
 - 4. Arrangement, location and depth of the components of the proposed system. A complete description of the equipment to be used with associated installation, operation, and maintenance procedures.
 - 5. Location and size of wells, berms, dikes, sediment pits, and discharge lines, including their relation to existing drainage facilities.
 - 6. Excavation drainage methods including typical drainage layers, sump pump application and other means.
 - 7. Surface water control and drainage installations.
 - 8. Proposed methods and location for disposing of removed water.
 - 9. A schedule for the installation of the system.
 - 10. Working Drawings and supporting calculations demonstrating the adequacy of the proposed system and equipment prepared by a professional engineer registered in the State of Texas and specialized in hydrogeology or geotechnical engineering.
 - 11. Include QA/QC process that ensures the Contractor's management of groundwater and surface water control does not impede construction or existing infrastructure.

12. The submittal of dewatering and groundwater control systems shall be made at least 45 days from the Contractor's notice to proceed. The Contractor shall resubmit if the system is modified during installation or operation.
- B. Submit the following records upon completion of initial installation:
1. Installation and development reports for well points, eductors, and deep wells.
 2. Installation reports and baseline readings for piezometers and monitoring wells shall be provided monthly.
 3. Baseline analytical test data of water from monitoring wells.
 4. Initial flow rates.
- C. Submit the following records weekly during control of ground and surface water operations:
1. Records of flow rates and piezometric elevations obtained during monitoring of dewatering and depressurization. Refer to Paragraph 3.04, Requirements of Eductor, Well Points, or Deep Wells.
 2. Maintenance records for groundwater control installations, piezometers and monitoring wells.

1.07 SITE CONDITIONS

- A. The Contractor shall be responsible for the continuous control of water and safety of excavations at all times during the course of construction, including weekends and holidays and during periods of work stoppages, and shall provide adequate backup systems to accomplish control of water. The method of control, handling, and disposal of groundwater and surface water shall be by whatever means are necessary and in conformance with this section to obtain satisfactory working conditions and maintain the progress of the work. All applicable legislative statutes, judiciary decisions, and regulations shall be followed including those pertaining to the use of drilled wells for dewatering.
- B. All required drainage, pumping, and disposal shall be done without damage to adjacent property or structures, and without interference with the operations of other contractors, or the rights of public or private owners, or pedestrian and vehicular traffic. The Contractor shall modify the water control system at no cost to SAWS if, after installation and while in operation, it causes or threatens to cause damage to adjacent property or to existing buildings, structures, or utilities.
- C. Repair, subject to the Engineer's acceptance, any damage, disruption, or interference resulting directly or indirectly from dewatering operations at no additional cost to SAWS.
- D. Comply with requirements of agencies having jurisdiction.

- E. Comply with Texas Commission on Environmental Quality regulations and Texas Water Well Drillers Association for development, drilling, and abandonment of wells used in dewatering system.
- F. Obtain permit from TCEQ under the Texas Pollutant Discharge Elimination System (TPDES), for storm water discharge from construction sites.
- G. Obtain all necessary permits from agencies with jurisdiction over use of groundwater matters affecting well installation, water discharge, and use of existing storm drains and natural water sources. Since review and permitting process may be lengthy, take early action to obtain required approvals.
- H. All dewatering operations shall be set up and operated within the construction limits shown, or within public rights-of-way unless written approval is received by the Contractor from the private property owner.
- I. Dewatering systems shall not interfere with areas required for vehicular and pedestrian traffic.
- J. Select equipment and materials necessary to achieve desired results for dewatering. Selected equipment and materials are subject to review by SAWS and Engineer through submittals required in Paragraph 1.06, Submittals.
- K. Use experienced contractors, regularly engaged in groundwater control system design, installation, and operation, to furnish and install and operate educators, well points, or deep wells, when needed.
- L. Maintain equipment in good repair and operating condition. Ensure pumps are properly cleaned and maintained to ensure pump performance.
- M. Keep sufficient standby equipment and materials available to ensure continuous operation, as required. Pumps need to be properly cleaned and maintained to ensure pump performance.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Dewatering systems: The design of the dewatering systems, and the selection of equipment and materials for the dewatering systems shall be the Contractor's responsibility and conform to the following:
 - 1. Where vertical shoring systems are used, wells shall be used and located outside of the shoring system.
 - 2. Equipment and materials determined by the Engineer to be unsound, inadequate, or unsuitable for the intended purpose shall be removed from the site and replaced with other approved items.

3. Install observation wells and/or piezometers as required to demonstrate that dewatering system design requirements have been achieved.
- B. Pumps and dewatering wells shall be provided with totalizing flow meters to accurately determine flow rates and the quantity of water pumped. Flow meters shall be installed no closer than 4 feet from any bend in the discharge pipe.

PART 3 - EXECUTION

3.01 SURFACE DRAINAGE

- A. Surface drainage shall be intercepted and diverted away from the Work sites by the use of dikes, curbswalls, ditches, sumps (with pumps), or other means. Surface drainage systems shall be designed so that they do not cause erosion on or off the site. Surface runoff shall be controlled to prevent entry of water into excavations. Drainage systems shall be removed when no longer needed.
- B. Divert surface water and seepage water into sumps and pump it into drainage channels or storm drains, when approved by agencies having jurisdiction. Provide settling basins when required by agencies.
- C. Water collected from surface drainage system shall be managed in a manner that prevents releasing hazardous substances to surface or subsurface soil or groundwater, except as specifically authorized by any applicable discharge permit.

3.02 GROUNDWATER CONTROL IN SHAFT AND TRENCH EXCAVATIONS

- A. Perform necessary subsurface investigation to identify water bearing layers, piezometric pressures and soil parameters for design and installation of ground water control systems. Perform pump tests, if necessary to determine draw down characteristics. Present results in the Ground Water and Surface Water Control Plan submittal. Contractor shall expedite subsurface investigations in order to include information in the Ground Water and Surface Water Control Plan.
- B. Provide labor, material, equipment, techniques and methods to lower, control and handle ground water in a manner compatible with construction methods and site conditions. Monitor effectiveness of installed systems and their effect on adjacent property.
- C. Install, operate, and maintain ground water control systems in accordance with the Ground Water and Surface Water Control Plan. Notify SAWS and Engineer in writing of changes made to accommodate field conditions and changes to Work. Provided revised drawings and calculations with notification.
- D. Provide continuous system operation, including nights, weekends, and holidays, as required. Arrange appropriate backup if electrical power is primary energy source for dewatering system.

- E. Monitor operations to verify systems lower ground water piezometric levels at rate required to maintain dry excavation resulting in stable subgrade for subsequent construction operations.
- F. Continue dewater in all required areas, until the involved Work is completed, including the placing and compaction of backfill materials in dry conditions and in accordance with the Contract Documents.
- G. Depressurize zones where hydrostatic pressures in confined water bearing layers exist below excavations to eliminate risk of uplift or other instability of excavation or installed works. Define allowable piezometric elevations in the Ground Water and Surface Water Control Plan.
- H. Provide a uniform diameter for each pipe drain run constructed for dewatering. Remove the pipe drain when it has served its purpose. If removal of the pipe is impractical, provide grout connections at 50-foot intervals, and fill the pipe with cement-bentonite grout or cement and sand grout when the pipe has served its purpose.
- I. Removal of ground water control installations.
- J. Remove pumping system components and piping when ground water control is no longer required.
- K. Remove monitoring wells when directed by SAWS.
- L. Grout abandoned well and piezometer holes. Fill piping that is not removed with cement-bentonite grout or cement-sand grout.
- M. During backfilling, maintain water level a minimum of 5 feet below prevailing level of backfill. Do not allow the water level to cause uplift pressures in excess of 80 percent of downward pressure produced by weight of structure of backfill in place. Do not allow water levels to rise into cement-stabilized sand until at least 48 hours after placement.
- N. Compact backfill to not less than 98 percent of maximum dry density in accordance with SAWS Specifications.
- O. The Contractor shall monitor and record, on a daily basis, the volume of water pumped per calendar day from shaft and trench excavations, using flow measuring devices approved by the Engineer. In addition, the Contractor shall observe and record any occurrences of water in the tunnel. The record shall be provided to the Engineer on a daily basis.

3.03 DEWATERING TRENCH

- A. No pipeline shall be laid in a trench in the presence of water. All water shall be removed from the trench sufficiently ahead of the pipeline placing operation. The Contractor shall ensure dewatering of the trench to ensure a dry, firm bed on which to place the pipeline. As a minimum, water levels shall be maintained at least 2 feet below the pipe invert.

Trench shall continue to be dewatered until trench backfilling operations have been completed.

- B. Removal of water may be accomplished by pumping or pumping in connection with well point installation as the particular situation may warrant.
- C. If the soils encountered at the trench grade are suitable for the passage of water, without destroying the sides or utility foundation of the trench, sumps may be provided at intervals at the side of the main trench excavation. Pumps shall be used to lower the water level by taking their suction from said sumps.
- D. In cohesive soils where seepage is usually low, groundwater is generally managed by collection in trench bottom sumps for pumped disposal. Care should be taken to have a redundant pumping system that allows for overnight pumping. Water must not be allowed to pond in the trench bottoms.
- E. Recommend a pre-construction survey of nearby structures be performed prior to construction.

3.04 REQUIREMENTS FOR EDUCTOR, WELL POINTS, OR DEEP WELLS

- A. Install sufficient piezometers or monitoring wells to show that trench or shaft excavations in water bearing materials are pre-drained prior to excavation. Provide separate piezometers for monitoring of dewatering and for monitoring of depressurization. Install piezometers and monitoring wells for tunneling as appropriate for selected method of work.
- B. Install piezometers or monitoring wells at least one week in advance of the start of associated excavation.
- C. Dewatering may be omitted for portions of under drains or other excavations, where auger borings and piezometers or monitoring wells show that soil is pre-drained by existing systems and that ground water control plan criteria are satisfied.
- D. Replace installations that produce noticeable amounts of sediments after development.
- E. Provide additional ground water control installations, or change method of control if, ground water control plan does not provide satisfactory results based on the performance criteria defined by plan and by the Contract Documents. Submit revised plan according to Paragraph 1.06 B.

3.05 DISPOSAL OF WATER

- A. All water removed from the construction site(s) shall be discharged through pipes. The conveying of water in open ditches or trenches will not be allowed. Do not discharge pumped drainage water into the sanitary sewer system or inhibit pedestrian or vehicular traffic with the ground water control system.

- B. The Contractor shall secure all applicable permits for groundwater discharged to storm water system that drain directly to waterways.
- C. Appropriate extraction well design and construction, settling basins, filter fabric structures, or other means may be used to reduce the concentration of suspended solids to allowable limits, prior to discharge. Discharge from settling basins, if used by the Contractor, shall not cause siltation or flooding in any stream, storm sewer, or on adjacent properties. Settling basins, if used by the Contractor, shall be cleaned of solids as necessary to maintain their efficiency.
- D. Permission to use any storm sewers or drains for water disposal purpose shall be obtained from SAWS. All requirements and costs for such use shall be the responsibility of the Contractor. The Contractor shall not cause flooding by overloading or blocking the flow in the drainage facilities, and it shall leave the facilities unrestricted and as clean as originally found.
- E. Dewatering effluent shall be managed in a manner that prevents releasing hazardous substances to surface or subsurface soil or groundwater.
- F. Discharge of pumped surface water to the ground surface around the work sites is not permitted.

3.06 WELL ABANDONMENT

- A. Upon completion of the Contract, Contractor shall abandon all existing and new observation wells and piezometers in accordance with TCEQ rules and regulations. The well and piezometer vaults and well covers shall be removed completely and disposed of and the surface restored to preconstruction conditions.
- B. Surface restoration in paved areas shall match existing material types and thicknesses as necessary to restore the surface to its original condition. In other areas, restore ground surface by backfilling with topsoil, sod, or other materials as required to match original conditions.

3.07 MAINTENANCE AND OBSERVATION

- A. Maintenance and observation of piezometers or observation well is the responsibility of the Contractor and shall consist of keeping them in good condition and observing and recording the elevation of the water level daily, as long as the dewatering system is in operation, and weekly thereafter until the work is completed or the piezometers or wells are removed.
- B. Submit a record of the water level to SAWS and the Engineer weekly, as well as with monthly pay applications.

- C. Replace damaged and destroyed piezometers or observation wells, unless otherwise accepted by SAWS and the Engineer, with new piezometers or wells within 48 hours, at no additional cost to SAWS.
- D. Cut off piezometers or observation wells in excavation areas, where exposed, as excavation proceeds, and continue to maintain and make observations in other wells as specified.
- E. Remove backfill or grout piezometers or observation wells inside or outside the excavation area, following backfill of trenching or tunnel grouting as approved by SAWS and the Engineer.

3.08 REPAIR OF DAMAGE

- A. Contractor to assume full responsibility for all loss and damage due to flooding, rising water, or seepage resulting from dewatering operations in any part of the work. Contractor to repair any damage to partially completed work from these or other causes, and performance of any other work necessitated by lack of adequate dewatering or drainage facilities.

PART 4 – PAYMENT

4.01 MEASUREMENT FOR PAYMENT

- A. This item is considered subsidiary to the installation of the water main and no separate payment will be made to the Contractor for the work.

END OF SECTION

Special Conditions

SC1.0 WORK IN FLOODPLAIN

Contractor is responsible for protection of work, material, and equipment prior to rain events. The project is located within the 100-year floodplain and floodway areas of Big Sous Creek. The project site is susceptible to quickly rising water in response to rainfall events. No material shall be stored in the 100-year floodplain longer than the end of the shift in which it was generated. Contractor is solely responsible for protecting trenches, pits, materials and equipment from damage/inundation of flood waters. Roadways to the project site can be expected to be blocked off as low water crossing during storm events and for extended periods thereafter. Contractor shall coordinate with SAWS to determine whether Contractor may return to work on site after rain event.

SC2.0 GROUND AND SURFACE WATER

The Contractor shall be responsible for all necessary means and methods of construction should groundwater and surface water be encountered. Contractor shall refer to Supplementary Specifications 2140. This shall be incidental to the pipe installation.

SC3.0 STARLIGHT HOMES TEXAS, LLC PROPERTY

SC3.1 The Contractor must ensure that driveways on the property will be constructed by jack and bore methods.

SC3.2 Construction shall not prevent the property owner from having vehicular access to the property.

SC3.3 The proposed pipeline shall be installed a minimum of 48" below current ground surface.

SC3.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.

SC3.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.

SC3.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.

SC3.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.

SC3.8 The Contractor shall remove wire-gaps and replace with permanent gate.

SC3.9 The Contractor shall keep all gates closed and locked during construction.

SC3.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.

SC3.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC4.0 LINDA S. & CAROL JEAN MECHLER PROPERTY

SC4.1 The Contractor must ensure that driveways on the property will be constructed by jack and bore methods.

SC4.2 Construction shall not prevent the property owner from having vehicular access to the property.

SC4.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.

SC4.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.

SC4.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.

SC4.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.

SC4.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.

SC4.8 The Contractor shall remove wire-gaps and replace with permanent gate.

SC4.9 The Contractor shall keep all gates closed and locked during construction.

SC4.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.

SC4.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC5.0 FRANK W. MECHLER PROPERTY

SC5.1 Construction shall not prevent the property owner from having vehicular access to the property.

- SC5.2 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC5.3 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC5.4 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC5.5 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC5.6 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC5.7 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC5.8 The Contractor shall keep all gates closed and locked during construction.
- SC5.9 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC5.10 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC6.0 JAMES L. & RUTH E. PERSYN PROPERTY

- SC6.1 The Contractor must ensure that driveways on the property will be constructed by jack and bore methods.
- SC6.2 Construction shall not prevent the property owner from having vehicular access to the property.
- SC6.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC6.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC6.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC6.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC6.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC6.8 The Contractor shall remove wire-gaps and replace with permanent gate.

SC6.9 The Contractor shall keep all gates closed and locked during construction.

SC6.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.

SC6.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC7.0 MECHLER BROWN LIVING TRUST (LAURIE MECHLER) PROPERTY

SC7.1 Construction shall not prevent the property owner from having vehicular access to the property.

SC7.2 The proposed pipeline shall be installed a minimum of 48” below current ground surface.

SC7.3 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.

SC7.4 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.

SC7.5 Trees, brush and other debris present on property shall be removed to an authorized disposal site.

SC7.6 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.

SC7.7 The Contractor shall remove wire-gaps and replace with permanent gate.

SC7.8 The Contractor shall keep all gates closed and locked during construction.

SC7.9 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.

SC7.10 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC8.0 14560 W US HWY 90 LAND TRUST (SHANNON L. STEPHEN) PROPERTY

SC8.1 The Contractor must bore old Hwy 90 as part of construction.

SC8.2 Construction shall not prevent the property owner from having vehicular access to the property.

- SC8.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC8.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC8.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC8.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC8.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC8.8 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC8.9 The Contractor shall keep all gates closed and locked during construction.
- SC8.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC8.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.
- SC8.12A water line service loop shall be constructed within the easement on the property.

SC9.0 GARY C. & SHARON D. MUTZ PROPERTY

- SC9.1 Construction shall not prevent the property owner from having vehicular access to the property.
- SC9.2 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC9.3 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC9.4 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC9.5 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC9.6 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC9.7 The Contractor shall remove wire-gaps and replace with permanent gate.

SC9.8 The Contractor shall keep all gates closed and locked during construction.

SC9.9 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.

SC9.10 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC9.11 A water line service loop shall be constructed within the easement on the property.

SC10.0 CLIFFORD W. & SUZANNE M. MUTZ PROPERTY

SC10.1 Construction shall not prevent the property owner from having vehicular access to the property.

SC10.2 The proposed pipeline shall be installed a minimum of 48” below current ground surface.

SC10.3 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.

SC10.4 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.

SC10.5 Trees, brush and other debris present on property shall be removed to an authorized disposal site.

SC10.6 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.

SC10.7 The Contractor shall remove wire-gaps and replace with permanent gate.

SC10.8 The Contractor shall keep all gates closed and locked during construction.

SC10.9 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.

SC10.10 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC10.11 A water line service loop shall be constructed within the easement on the property.

SC11.0 DARRYL J. BIPPERT PROPERTY

- SC11.1 The Contractor shall keep gates closed for livestock.
- SC11.2 Construction shall not prevent the property owner from having vehicular access to the property.
- SC11.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC11.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC11.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC11.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC11.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC11.8 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC11.9 The Contractor shall keep all gates closed and locked during construction.
- SC11.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC11.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC12.0 CLYDE J. & JOYCE BIPPERT PROPERTY

- SC12.1 The Contractor must bore driveways on the property.
- SC12.2 Construction shall not prevent the property owner from having vehicular access to the property.
- SC12.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC12.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC12.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.

- SC12.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC12.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC12.8 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC12.9 The Contractor shall keep all gates closed and locked during construction.
- SC12.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC12.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.
- SC12.12 A water line service loop shall be installed within the easement on the property.

SC13.0 WATTS WATER QUALITY AND CONDITIONING PRODUCTS, LLC PROPERTY

- SC13.1 The Contractor must bore driveways on the property.
- SC13.2 Construction shall not prevent the property owner from having vehicular access to the property.
- SC13.3 The proposed pipeline shall be installed a minimum of 48" below current ground surface.
- SC13.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC13.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC13.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC13.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC13.8 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC13.9 The Contractor shall keep all gates closed and locked during construction.

- SC13.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC13.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.
- SC13.12 A water line service loop shall be installed within the easement on the property.
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SC14.0 ROY RUIZPROPERTY

- SC14.1 The Contractor must bore driveways on the property.
- SC14.2 Construction shall not prevent the property owner from having vehicular access to the property.
- SC14.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC14.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC14.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC14.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC14.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC14.8 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC14.9 The Contractor shall keep all gates closed and locked during construction.
- SC14.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC14.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.
- SC14.12 A water line service loop shall be installed within the easement on the property.
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SC15.0 THE SCHRAEDER FAMILY LIVING REVOCABLE TRUST PROPERTY

- SC15.1 The Contractor must bore driveways on the property.

- SC15.2 Construction shall not prevent the property owner from having vehicular access to the property.
- SC15.3 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC15.4 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC15.5 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC15.6 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC15.7 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC15.8 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC15.9 The Contractor shall keep all gates closed and locked during construction.
- SC15.10 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC15.11 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.
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SC16.0 CONTINENTAL HOMES OF TEXAS, L.P. PROPERTY

- SC16.1 Construction shall not prevent the property owner from having vehicular access to the property.
- SC16.2 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC16.3 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC16.4 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC16.5 Trees, brush and other debris present on property shall be removed to an authorized disposal site.

- SC16.6 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC16.7 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC16.8 The Contractor shall keep all gates closed and locked during construction.
- SC16.9 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC16.10 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC17.0 WHISPER FALLS HOA, INC PROPERTY

- SC17.1 Construction shall not prevent the property owner from having vehicular access to the property.
- SC17.2 The proposed pipeline shall be installed a minimum of 48” below current ground surface.
- SC17.3 The Contractor shall repair and maintain existing roads on the property in as good or better than existing condition during construction.
- SC17.4 The Contractor shall level, re-grade and reseed disturbed ground to as good or better than existing condition during construction.
- SC17.5 Trees, brush and other debris present on property shall be removed to an authorized disposal site.
- SC17.6 The Contractor shall install H-braces to prevent sagging of existing fences prior to cutting.
- SC17.7 The Contractor shall remove wire-gaps and replace with permanent gate.
- SC17.8 The Contractor shall keep all gates closed and locked during construction.
- SC17.9 The Contractor shall use the double-ditch method for removing and replacing subsoil and topsoil on the property during construction.
- SC17.10 The Contractor shall provide 48 hours advanced notice to the property owner to entry of the property.

SC18.0 CPS ENERGY POLE RELOCATE ALLOWANCE

The Contractor shall coordinate with utility company and provide all labor, supervision, tools, equipment, and materials necessary to relocate power poles as required to complete work. No contract days will be added due to delays. This allowance shall reimburse Contractor for direct fees included for relocation of power poles. Any unused portion of the allowance will be credited to SAWS by a deduct change order.

SC19.0 REVEGETATION REQUIREMENTS COSA TREE PERMIT

SC19.1 Prior to the start of construction, the contractor should document the existing vegetation within the project limits as a reference.

SC 19.2 Prior to the start of excavation/trenching, the Contractor shall strip and stockpile topsoil (NSPI). Once pipe installation is complete and prior to revegetation the Contractor shall uniformly spread the stockpiled topsoil across affected areas.

SC 19.3 The price for revegetation shall reflect both Drill Seeding and Hydromulching with a native seed mixture. Drill seeding with a native seed mixture should be assumed for the limits shown on the contract documents. If the Contractor determines areas where drill seeding is not an option, the Contractor shall notify both SAWS and the Engineer in writing of areas where Hydromulching will be better suited, so that SAWS and Engineer can coordinate with the COSA Arborist for approval.

SC20.0 PERMITS

SC20.1 The Contractor shall be responsible to prepare and file all documents and forms associated with the Texas Commission on Environmental Quality's Storm Water Management Program. This includes, but is not limited to, obtaining a Texas Commission on Environmental Quality Storm Water Permit, Notice of Intent, Notice of Completion. Contractor shall be responsible to pay all associated fees. There is a separate pay item for this permit.

SC20.2 COSA Tree Permit – The Contractor shall implement tree protection in accordance with the City of San Antonio Tree Permit, including requirements listed in the General Tree Notes, and tree protection as listed in the Heritage Tree Protection Table and Significant Tree Protection Table, and as illustrated in Tree Protection Details. There is no separate pay item for this permit.

SC20.3 Contractor to provide SAWS 60 days-notice prior to working in TxDOT right-of-way (ROW).

SC21.0 Project Duration/Schedule

It is anticipated that the Contractor will have adequate crews available to concurrently begin work on both the open-cut and trenchless installations. Project will need to be substantially complete within 240 calendar days from NTP. Substantially complete is defined as line in service. An additional 60 days may be granted to finalize the project (clean up, restoration, reseeding, fencing, etc.,)

CONTRACTOR NOTES

- ALL SHOP DRAWINGS AND SUBMITTALS REQUIRED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- ALL AREAS WITHIN THE RIGHT-OF-WAY AND THE WATER LINE EASEMENT THAT ARE NECESSARY FOR INSTALLATION OF THE PROPOSED WATER LINE ARE TO BE CLEARED EXCEPT AS OTHERWISE NOTED ON THE PLANS AND/OR AS DIRECTED IN THE CONTRACT DOCUMENTS SPECIAL CONSTRUCTION CONDITIONS. CONTRACTOR SHALL REMOVE TREES WITHIN THE RIGHT-OF-WAY AND WATER LINE EASEMENT ONLY AS NECESSARY, FOR INSTALLATION OF THE PROPOSED WATER LINE. NO HERITAGE TREES SHALL BE REMOVED. OTHERWISE ALL TREES WITHIN 15- FEET OF THE WORK SHALL BE PROTECTED, SEE TREE PROTECTION NOTES AND DETAILS.
- PI'S AND PVI'S MAY BE SHOWN FOR PIPE JOINT DEFLECTION. JOINT DEFLECTION SHALL BE AS PER THE PIPE MANUFACTURER'S RECOMMENDATIONS, AND LIMITED TO SAWS MAXIMUM ALLOWABLE DEFLECTION ANGLES.
- CONTRACTOR SHALL NOTIFY AND COORDINATE WITH LANDOWNER(S) PRIOR TO ENTERING ANY PROPERTY OUTSIDE THE COUNTY RIGHT-OF-WAY 14 DAYS IN ADVANCE AND AGAIN 72 HOURS PRIOR TO CONSTRUCTION ON PRIVATE PROPERTY.
- CONTRACTOR SHALL REMOVE AND REPLACE, TO AS GOOD OR BETTER CONDITION THAN EXISTING, ANY CROSS FENCING LOCATED WITHIN THE WATER LINE EASEMENT AS NECESSARY FOR INSTALLATION OF THE PROPOSED WATER MAIN. N.S.P.I.
- VALVE BOXES SHALL BE INSTALLED SO THAT THE VALVE OPERATING NUT IS CENTERED IN THE BOX. VALVES INSTALLED ON SLOPING TERRAIN SHALL HAVE THE VALVE BOX INSTALLED PERPENDICULAR TO THE VALVE WITH THE OPERATING NUT CENTERED IN THE BOX IN ORDER TO ALLOW THE VALVE WRENCH EASY ACCESS TO THE VALVE OPERATING NUT.
- CONTRACTOR SHALL NOT OPERATE ANY EXISTING WATER VALVES WITHIN THE SAWS SYSTEM. NOTIFYING & OBTAINING ASSISTANCE FROM THE SAWS STAFF IS REQUIRED.
- CONTRACTOR SHALL REFER TO THE CONTRACT DOCUMENTS SPECIAL CONSTRUCTION CONDITIONS FOR ADDITIONAL INFORMATION REGARDING WORK ASSOCIATED WITH THIS PROJECT.
- 16" AND 24" C900 PVC PIPE SHALL BE CLASS 235 (DR 18). ALL PIPE, FITTINGS AND VALVES SHALL MEET SAWS STANDARDS.
- CONTRACTOR SHALL BACKFILL OR COVER ALL EXCAVATED AREAS BEFORE FINISHING UP WORK FOR THE DAY. CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR LOSS OF LIVESTOCK DUE TO HIS/HER FAILURE TO COMPLY WITH THESE REQUIREMENTS. IF EXCAVATION IS OPEN OVERNIGHT CONTRACTOR SHALL UTILIZE 6' CHAIN LINK FENCING PANELS SECURED TO STEEL T-POSTS TO SECURE OPEN EXCAVATIONS.

TRAFFIC CONTROL NOTE

CONTRACTOR SHALL PREPARE AND SUBMIT A TRAFFIC CONTROL PLAN TO BEXAR COUNTY FOR REVIEW AND APPROVAL. NECESSARY TRAFFIC CONTROL, DETOUR ROUTING AROUND WORK ACTIVITIES, MAINTENANCE OF DETOUR SIGNS AND FLAGMEN ARE THE CONTRACTOR'S RESPONSIBILITY. UNLESS DIRECTED OTHERWISE, THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE OPEN TRAFFIC LANE (MINIMUM 12 FEET WIDE), CONTROLLED WITH FLAGMEN, DURING WORKING HOURS. DURING ALL NON-WORKING HOURS A MINIMUM OF TWO TRAFFIC LANES (EACH A MINIMUM 12 FEET WIDE) SHALL BE OPEN TO TRAFFIC. CONTRACTOR WILL FURNISH AND MAINTAIN ALL REQUIRED TRAFFIC CONTROL DEVICES PER TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD), TO PROPERLY WARN, GUIDE AND CONTROL TRAFFIC AT ALL TIMES THROUGHOUT CONSTRUCTION.

UNDERGROUND TELEPHONE/COMMUNICATION LINES NOTE

THE EXISTENCE AND LOCATION OF UNDERGROUND CABLE AS SHOWN ON THESE PLANS HAS BEEN TAKEN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. CONTRACTOR SHALL CONTACT THE TELEPHONE/COMMUNICATION COMPANY CABLE LOCATOR 48 HOURS PRIOR TO EXCAVATION AT 1-800-545-6005. CONTRACTOR SHALL PROTECT AND (AS NECESSARY) INSTALL SHORING FOR TELEPHONE COMPANY FACILITIES DURING CONSTRUCTION.

BEXAR COUNTY FLOODPLAIN GENERAL CONSTRUCTION

NOTE

NO CONSTRUCTION AND/OR WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING NATURAL DRAINAGE OR PLACED WITHIN THE LIMITS OF EXISTING FLOODPLAIN.

OVERALL QUANTITY TABLE			
ITEM NO	ITEM DESCRIPTION	UNIT	QUANTITY
100	MOBILIZATION (MAX 10% OF ITEMS 1-24)	LS	1
101	PREPARATION OF ROW (MAX 5% OF ITEMS 1-24)	LS	1
299	FLOWABLE FILL	CY	
530.1	BARRICADES, SIGNS AND TRAFFIC HANDLING (COSA SPEC)	LS	1
540	SWPPP	LS	1
550	TRENCH EXCAVATION PROTECTION	LF	19,410
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	240
818	12" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	183
818	16" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	4,572
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	13,987
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	16
828	12" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	3
828	16" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	6
830	24" BUTTERFLY VALVE, FLG WITH 6" VALVE BOX, COMPLETE	EA	30
834	STD. FIRE HYDRANT ASSEMBLY	EA	23
840	16" WATER TIE IN	EA	2
840	24" WATER TIE IN	EA	1
844	4" TEMPORARY BLOW-OFF ASSEMBLY	EA	2
844	2" TEMPORARY BLOW-OFF ASSEMBLY	EA	12
845	REMOVE AND REPLACE FENCE/GATE	LF	15
846	2" AIR RELEASE VALVE ASSEMBLY	EA	14
856	36" PIPE JACKING	LF	201
856	48" PIPE JACKING	LF	1,152
856.1	36" STEEL CASING	LF	201
856.1	48" STEEL CASING	LF	1,152
856.2	16" PVC CLASS 235 (DR 18) CARRIER PIPE	FL	201
856.2	24" PVC CLASS 235 (DR 18) CARRIER PIPE	LF	1,152
SC18.0	CPS POWER POLE BRACING	ALW	1
SC19.0	REVEGETATION (DRILL SEEDING WITH NATIVE MIXTURE & HYDROMULCH)	SY	80,312

NO.	REVISION	DATE
1	ADDENDUM 1	11/20/2023



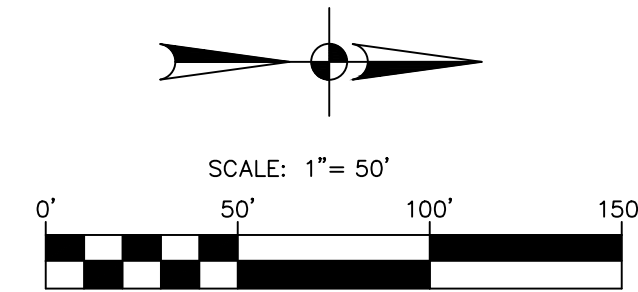
PAPE-DAWSON ENGINEERS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #270 | TEXAS SURVEYING FIRM #1002890

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS
STONEHILL OFFSITE WATER EXTENSION
 GENERAL NOTES

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C1.01

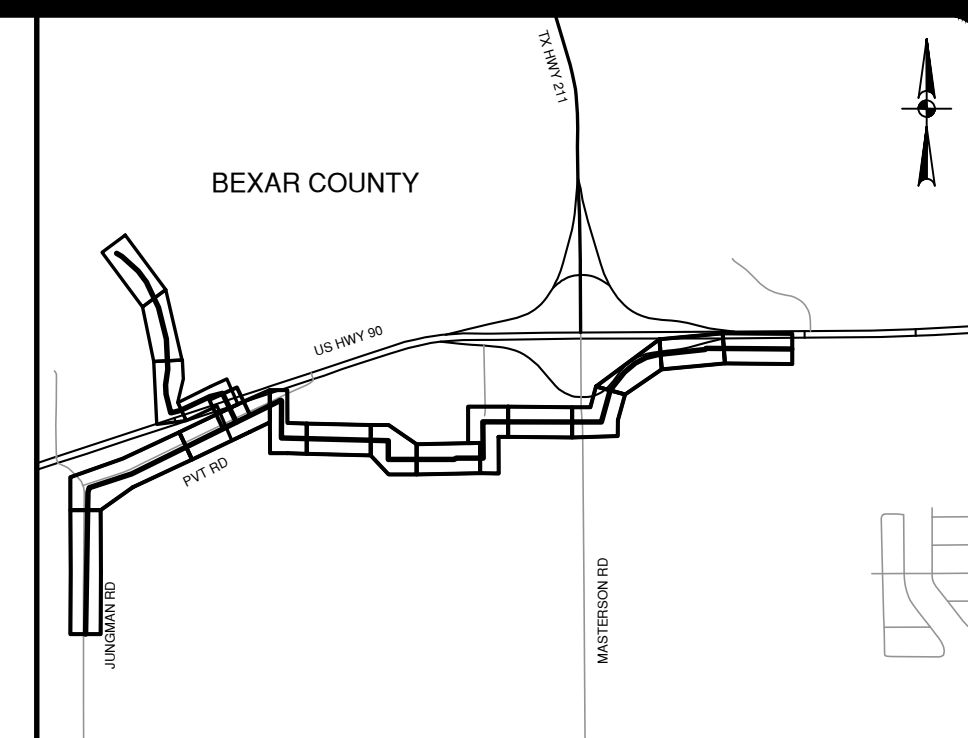
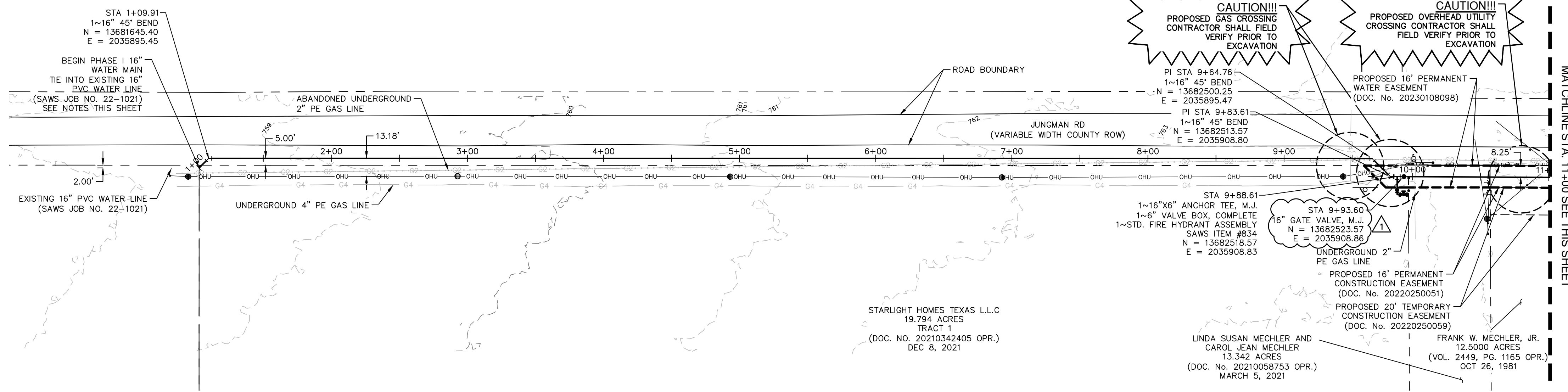
WATER: SAWS PRESSURE ZONE 930
 STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS ZIP: 78232
Phone# (210) 496-2668 FAX# N/A
SAWS Block Map# 076558-074558
Total Linear Footage of Pipe PHASE I - 4,765 LF ~ 16" PVC WATER
Total Linear Footage of Pipe PHASE II - 15,036 LF ~ 24" PVC WATER
Number of Lots: N/A TOTAL EDU'S: N/A SAWS JOB NO. 23-7003



**PROPOSED 16" WATER MAIN
STA. 1+00 TO 11+00**

FRANK W. MECHLER, JR.
113.300 ACRES



**LOCATION MAP
NOT-TO-SCALE**

QUANTITIES

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1799
818	16" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1799
828	16" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	2
844	16" WATER TIE-IN	EA	1
844	2" TEMPORARY BLOW-OFF ASSEMBLY	EA	1
856	36" PIPE JACKING	LF	201
856.1	36" STEEL CASING	LF	201
856.2	16" PVC CLASS 235 (DR 18) CARRIER PIPE	FL	201
SC18.0	CPS POWER POLE BRACING	EA	4

DISINFECTION AND CONNECTION NOTES:

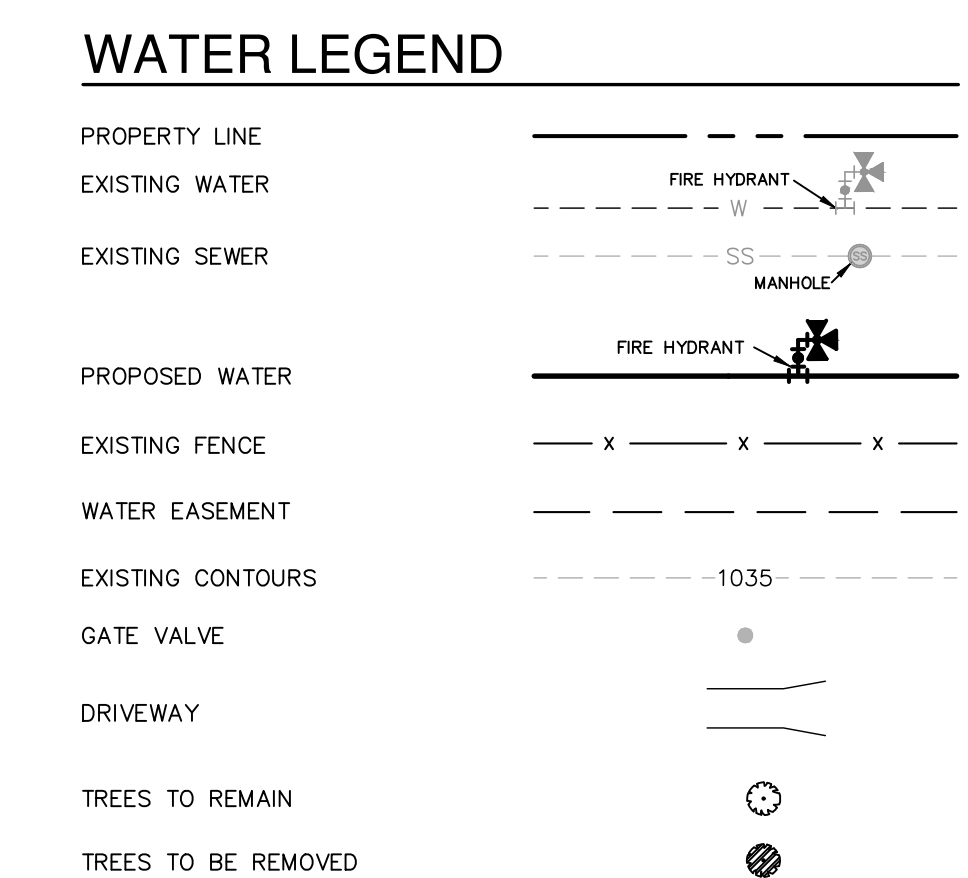
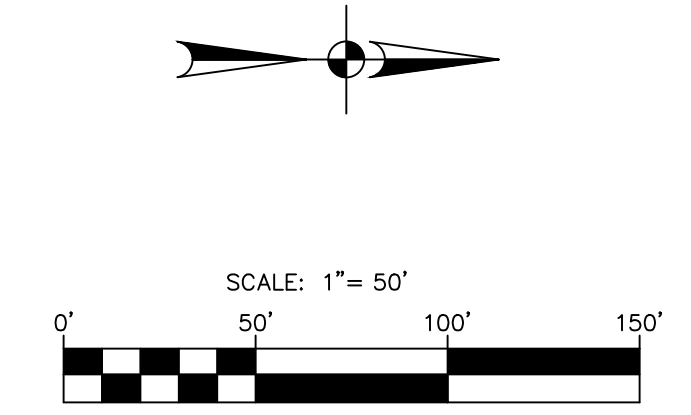
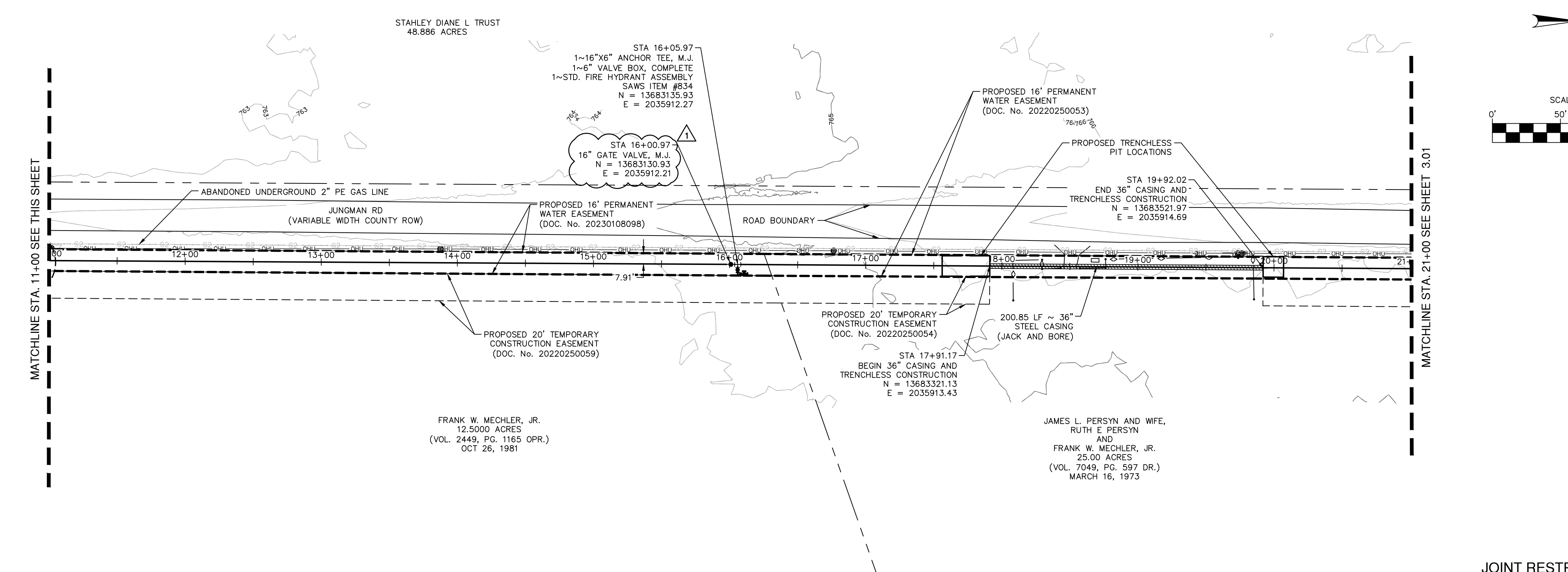
FOR CHLORINE INJECTION:
 2-1" CORPORATION STOP, C.C. X I.P.
 2-1" COPPER TUBING, CUT AS REQ'D
 2-1" THD. SOLID CAPS, THR.
 2-1" COMP X 1" COUPLING, CURB STOP
 CONTRACTOR SHALL PROVIDE A 2" JUMPER CONNECTION TO LOAD NEW MAIN

AFTER RELEASED FOR SERVICE
 TIE IN PROPOSED 16" PVC WATER MAIN INTO EXISTING 16" WATER MAIN (SAWS JOB NO. 22-1021) WITH:
 1 - 16" GATE VALVE, M.J.
 1 - 6" VALVE BOX, COMPLETE
 VALVE TO REMAIN CLOSED UNTIL AFTER DISINFECTION BY CONTRACTORS & ACCEPTANCE BY SAWS.

2" BLOWOFF ASSEMBLY (TEMPORARY)
 REF. SAWS STD. DWG DB844-01

CONTRACTOR SHALL TIE INTO EXISTING 16" WATER MAIN (SAWS JOB NO. 22-1021). AFTER DISINFECTION AND ACCEPTANCE BY SAWS.

**PROPOSED 16" WATER MAIN
STA. 11+00 TO 21+00**



CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO CONSTRUCTION. ANY DAMAGE TO EXISTING UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND THE REPAIR SHALL BE AT CONTRACTORS SOLE EXPENSE WHETHER THE UTILITY IS SHOWN ON THESE PLANS OR NOT.

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 930
STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS ZIP: 78232
 Phone# (210) 496-2668 FAX# N/A
 SAWS Block Map# 078558_074558
 SAWS Block Map# 078558_074558 Phase I - 4,765 LF ~ 16" PVC WATER
 Total Linear Footage of Pipe Phase II - 15,036 LF ~ 24" PVC WATER Plat No. N/A
 Number of Lots N/A TOTAL EUD'S N/A SAWS JOB NO. 23-7003

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 SHALL BE INCLUDED ALONG THE ENTIRE LENGTH OF THE PHASE I WATER LINE.

DATE: 11/20/23

NO. REVISION: 1
 APPENDUM 1



PAPE-DAWSON ENGINEERS

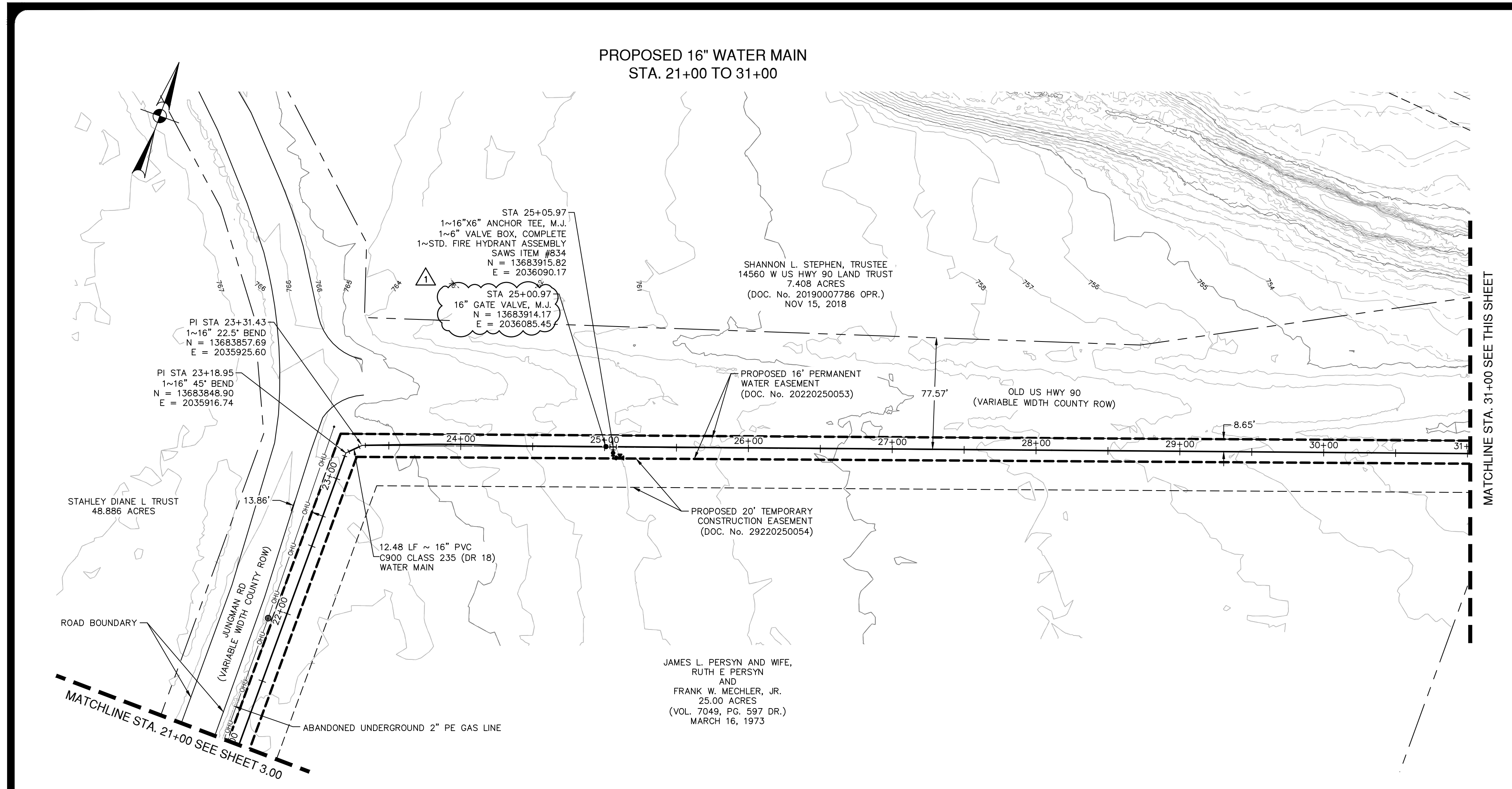
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #270 | TEXAS SURVEYING FIRM #1008800

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

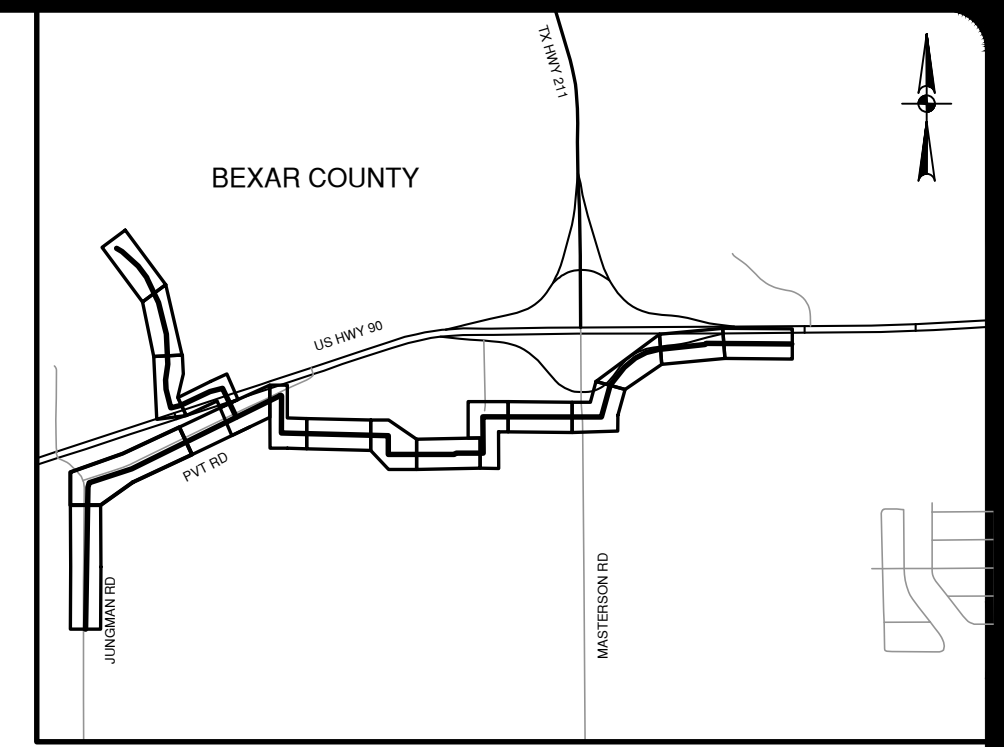
PHASE I - WATER MAIN PLAN AND PROFILE
PHASE I - WATER MAIN PLAN

PLAT NO. N/A
 JOB NO. 12747-00
 DATE NOVEMBER 2023
 DESIGNER CN
 CHECKED SG DRAWN JD
 SHEET C3.00

Date: June 1, 2023, 1:43 PM - User ID: crenning
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PROPOSED 16" WATER MAIN
 STA. 21+00 TO 31+00



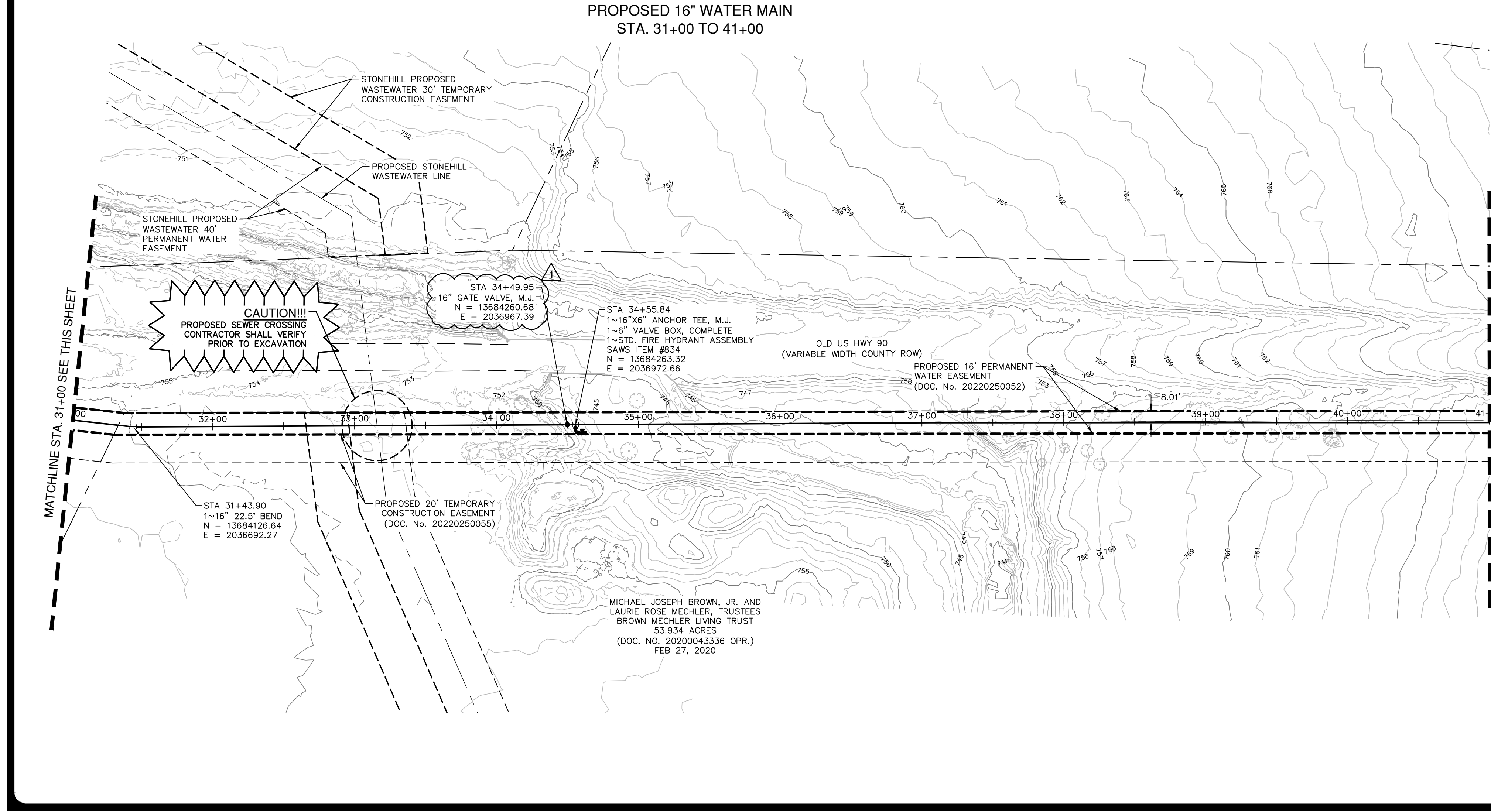
LOCATION MAP
 NOT-TO-SCALE

QUANTITIES			
ITEM	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	2000
818	16" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	2000
828	16" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	2

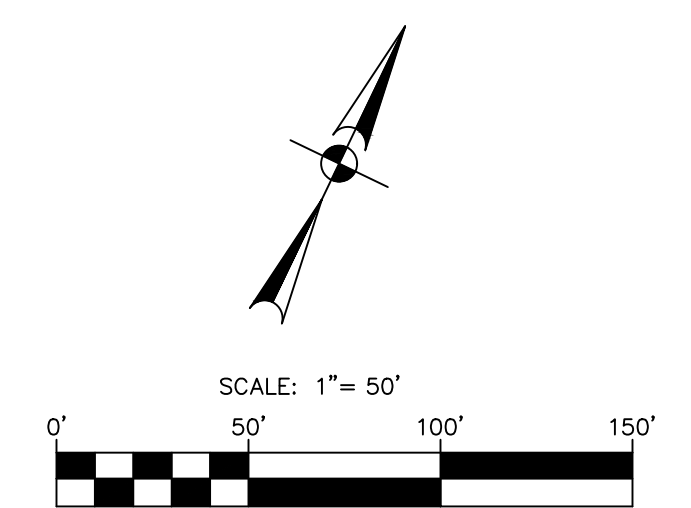
NO.	REVISION	DATE
1	ADDENDUM 1	11/20/23



PAPE-DAWSON ENGINEERS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003800



PROPOSED 16" WATER MAIN
 STA. 31+00 TO 41+00



WATER LEGEND

PROPERTY LINE	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED WATER	---
EXISTING FENCE	-x-x-x-
WATER EASEMENT	---
EXISTING CONTOURS	---1035---
GATE VALVE	○
DRIVEWAY	---
TREES TO REMAIN	○
TREES TO BE REMOVED	○

CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO 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.

TRENCH EXCAVATION SAFETY PROTECTION

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WATER: SAWS PRESSURE ZONE 930
 STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS Zip: 78232
Phone# (210) 498-2658 FAX# N/A
SAWS Block Map# 076558_074558
Total Linear Footage of Pipe PHASE I = 15,036 LF = 24" PVC WATER Plat No. N/A
Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

JOINT RESTRAINT NOTE:

CONTRACTOR SHALL INSTALL RETAINER GLANDS AT ALL FITTINGS AND PROVIDE JOINT RESTRAINING HARNESSSES OR FIELD LOCK GASKETS AT ALL JOINTS WITHIN THE LENGTH SHOWN. CONTRACTOR SHALL INSURE THAT ALL TEES, BENDS, VALVES, ETC. HAVE A MINIMUM OF 5 FT OF PIPE WITH NO JOINTS ON EACH SIDE OF THE FITTING. JOINT RESTRAINTS SHALL BE INCLUDED ALONG THE ENTIRE LENGTH OF THE PHASE I WATER LINE.

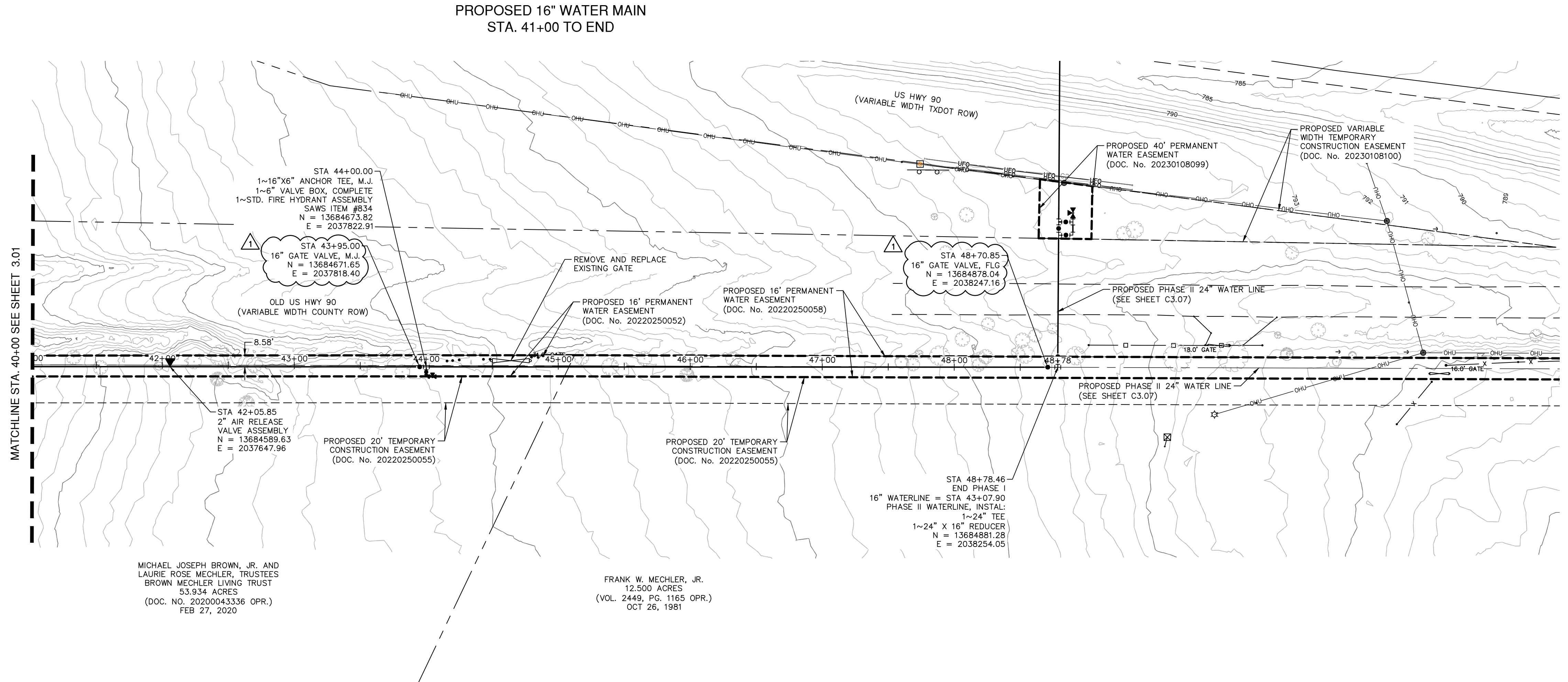
STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

PHASE I - WATER MAIN PLAN AND PROFILE
 PHASE I - WATER MAIN PLAN

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.01

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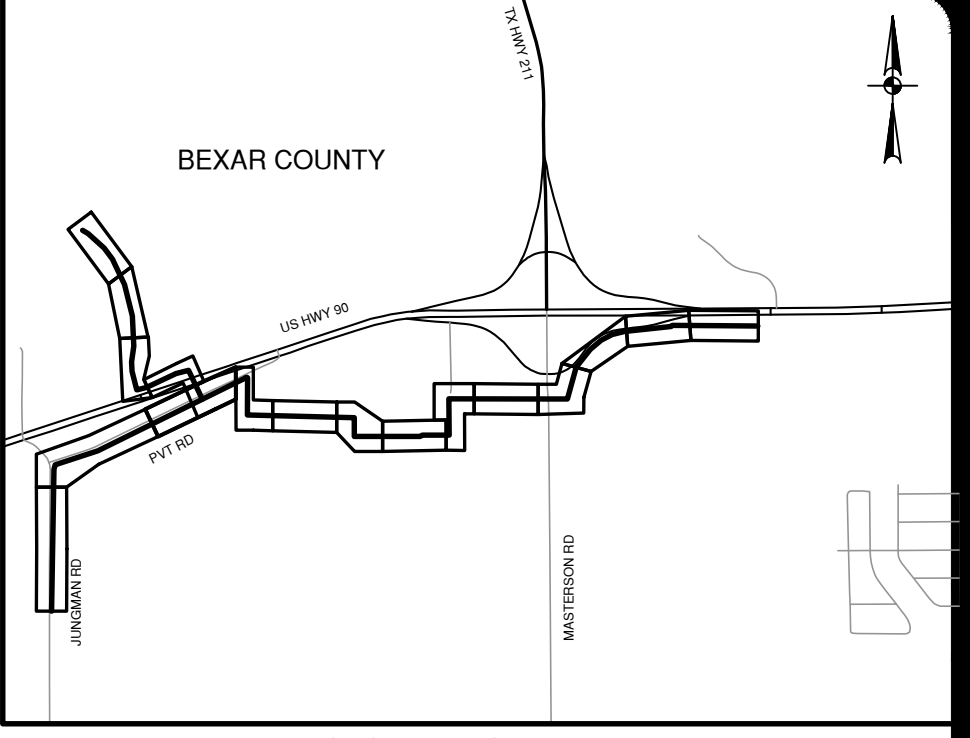
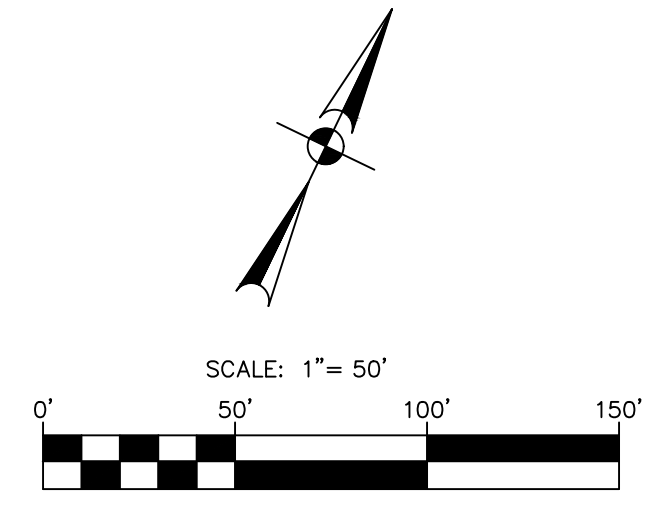
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**PROPOSED 16" WATER MAIN
 STA. 41+00 TO END**

MICHAEL JOSEPH BROWN, JR. AND
 LAURIE ROSE MECHLER, TRUSTEES
 BROWN MECHLER LIVING TRUST
 53.934 ACRES
 (DOC. NO. 2020043336 OPR.)
 FEB 27, 2020

FRANK W. MECHLER, JR.
 12.500 ACRES
 (VOL. 2449, PG. 1165 OPR.)
 OCT 26, 1981

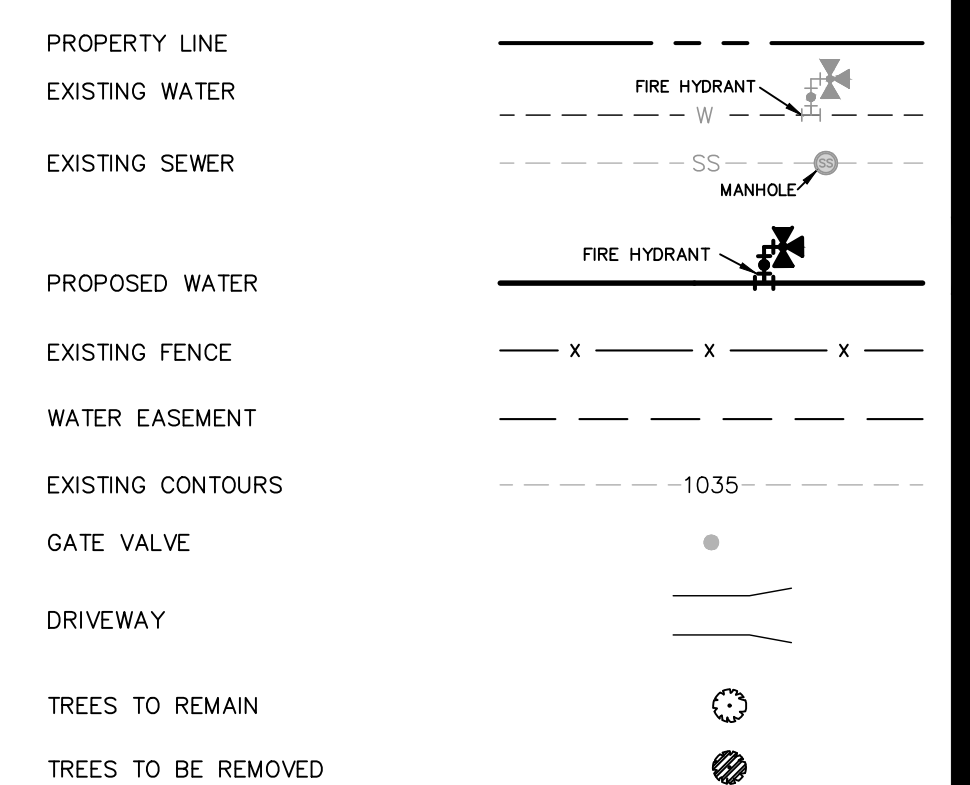


LOCATION MAP
 NOT-TO-SCALE

QUANTITIES

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	773
818	16" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	773
828	16" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
840	24" WATER TIE IN	EA	1
845	REMOVE AND REPLACE FENCE/GATE	LF	15
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

WATER LEGEND



CAUTION UNDERGROUND UTILITIES

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TRENCH EXCAVATION SAFETY PROTECTION

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**WATER: SAWS PRESSURE ZONE 930
 STONEHILL OFF-SITE WATER EXTENSION**

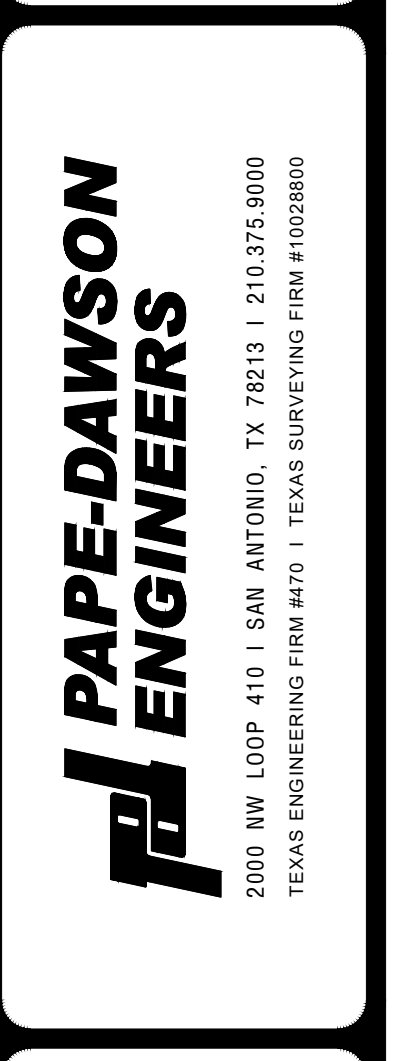
Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS Zip: 78232
 Phone# (210) 496-2668 FAX# N/A
 SAWS Block Map# 078558-074558
 Total Linear Footage of Pipe PHASE I = 4,765 LF = 16" PVC WATER PHASE II = 15,036 LF = 24" PVC WATER Plat No. N/A
 Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

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 SHALL BE INCLUDED ALONG THE ENTIRE LENGTH OF THE PHASE I WATER LINE.

DATE: 11/20/23

NO.	REVISION
1	APPENDUM 1

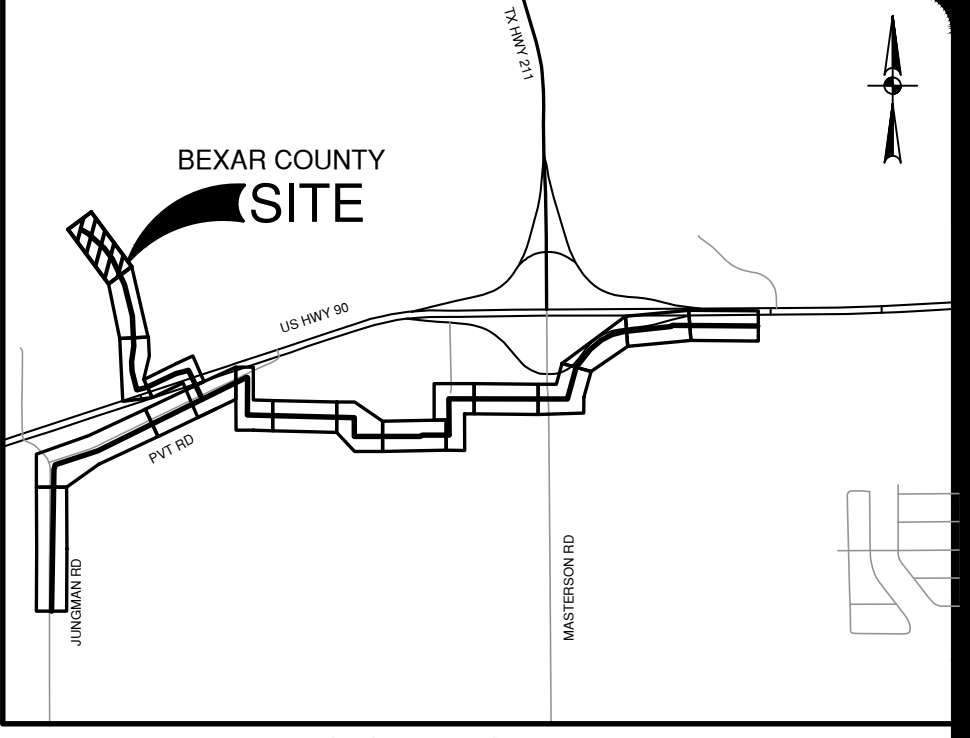
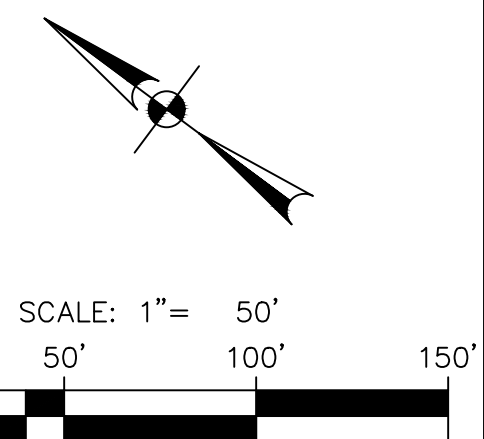
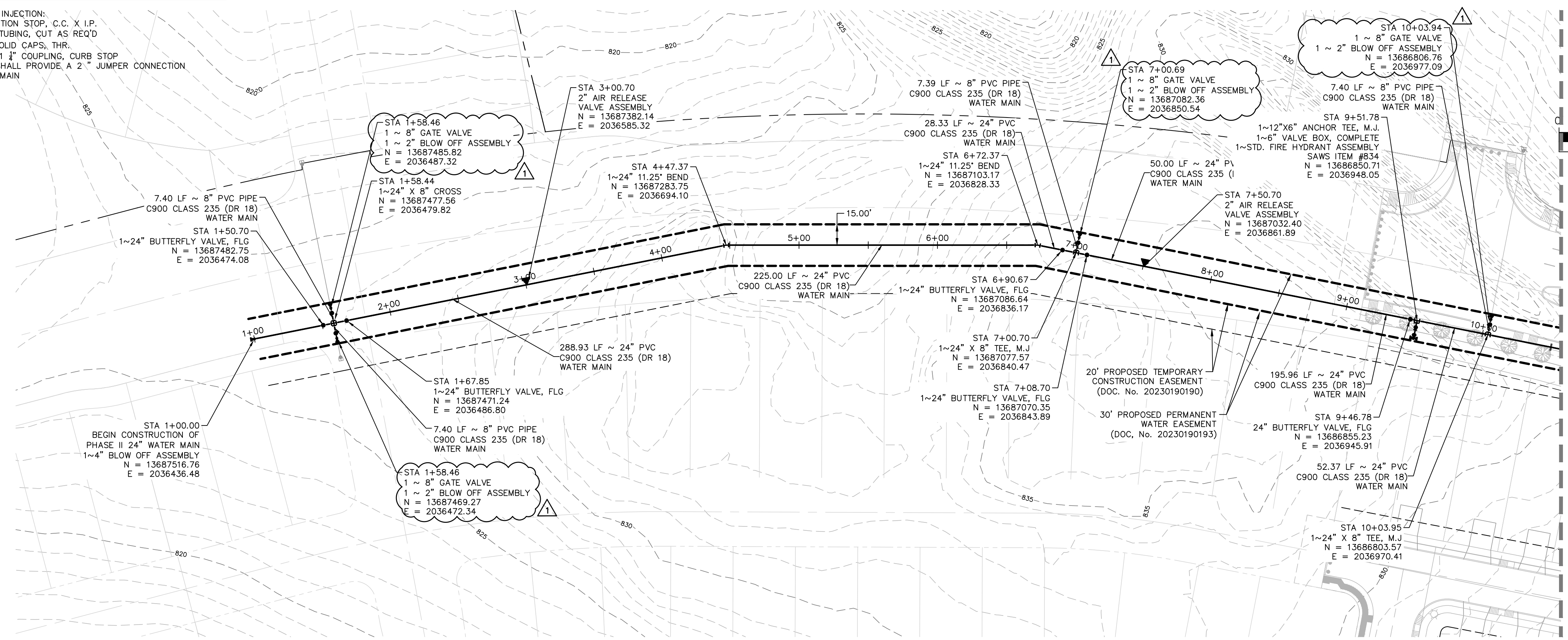


STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS
 PHASE I - WATER MAIN PLAN AND PROFILE
 PHASE I - WATER MAIN PLAN

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.02

DISINFECTION AND CONNECTION NOTES:

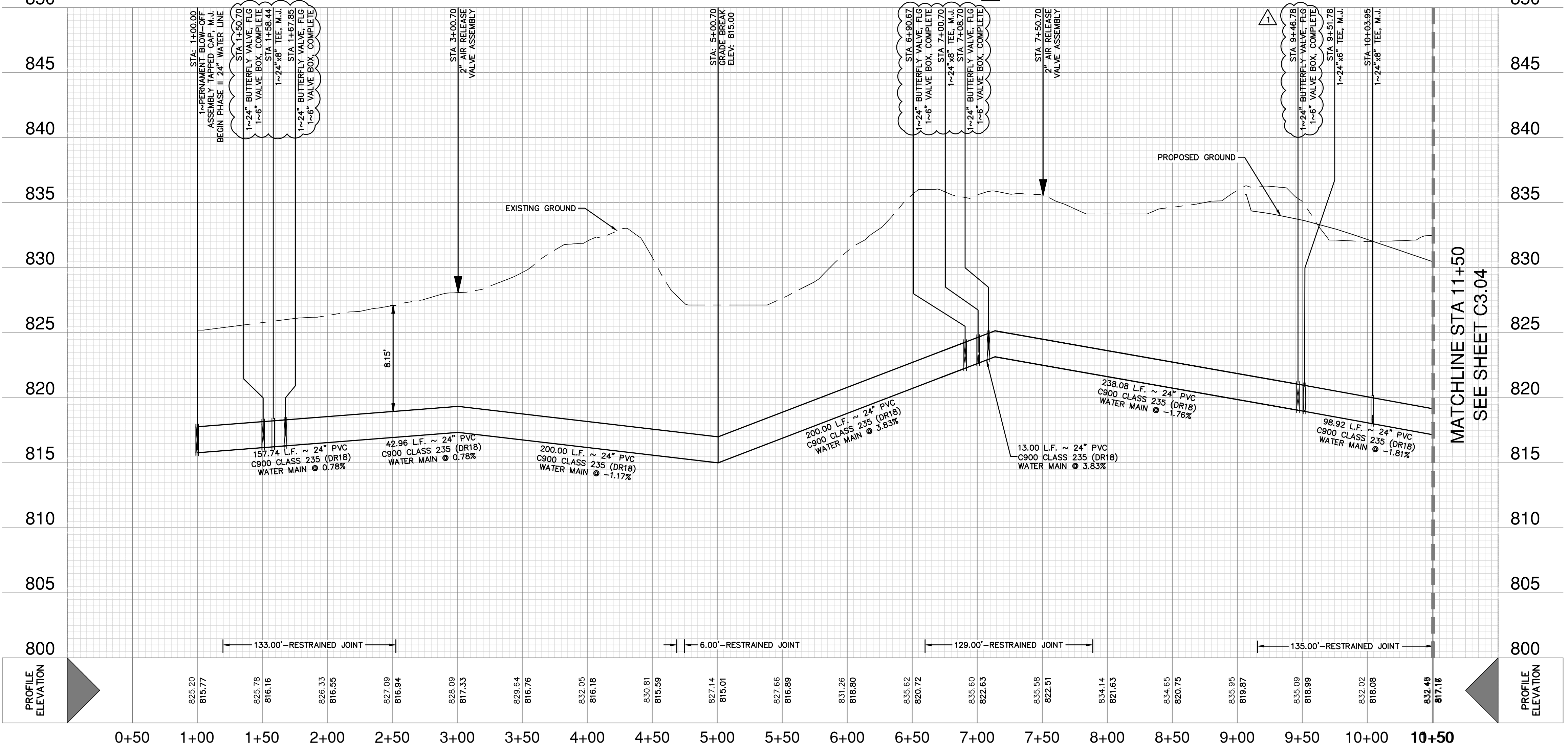
FOR CHLORINE INJECTION:
 2-1" CORPORATION STOP, C.C. X LP.
 2-1" COPPER TUBING, CUT AS REQ'D
 2-1 1/2" THD. SOLID CAPS, THR.
 2-1" COMP X 1 1/2" COUPLING, CURB STOP
 CONTRACTOR SHALL PROVIDE A 2" JUMPER CONNECTION
 TO LOAD NEW MAIN



QUANTITY TABLE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1464
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	30
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1050
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	5
844	2" FIRE HYDRANT ASSEMBLY	EA	1
844	4" TEMPORARY BLOW-OFF ASSEMBLY	EA	1
844	2" TEMPORARY BLOW-OFF ASSEMBLY	EA	4
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

PROPOSED 24" WATER MAIN STA. 1+00 TO STA. 11+50



WATER LEGEND

PROPERTY LINE	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED WATER	---
EXISTING FENCE	---
WATER EASEMENT	---
EXISTING CONTOURS	---
GATE VALVE	○
DRIVEWAY	---
TREES TO REMAIN	○
TREES TO BE REMOVED	○

CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING, BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO 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.

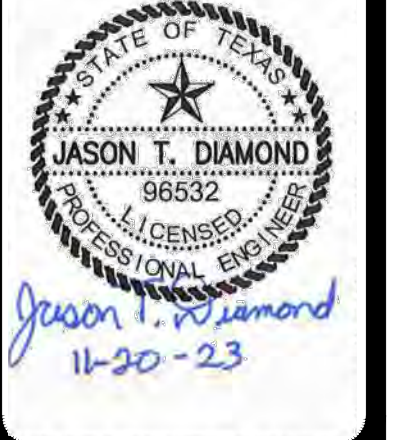
TRENCH EXCAVATION SAFETY PROTECTION

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WATER: SAWS PRESSURE ZONE 930
 STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS Zip: 78232
 Phone: (210) 498-2658 FAX: N/A
 Saws Block Map #: 076558_074558
 Total Linear Footage of Pipe PHASE II = 4,765 LF ~ 16" PVC WATER Total Acreage .814
 Total Linear Footage of Pipe PHASE II = 15,036 LF ~ 24" PVC WATER Plat No. N/A
 Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

DATE: 11/20/2023
 NO. REVISION: 1
 ADDENDUM: 1



PAPE-DAWSON ENGINEERS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003800

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

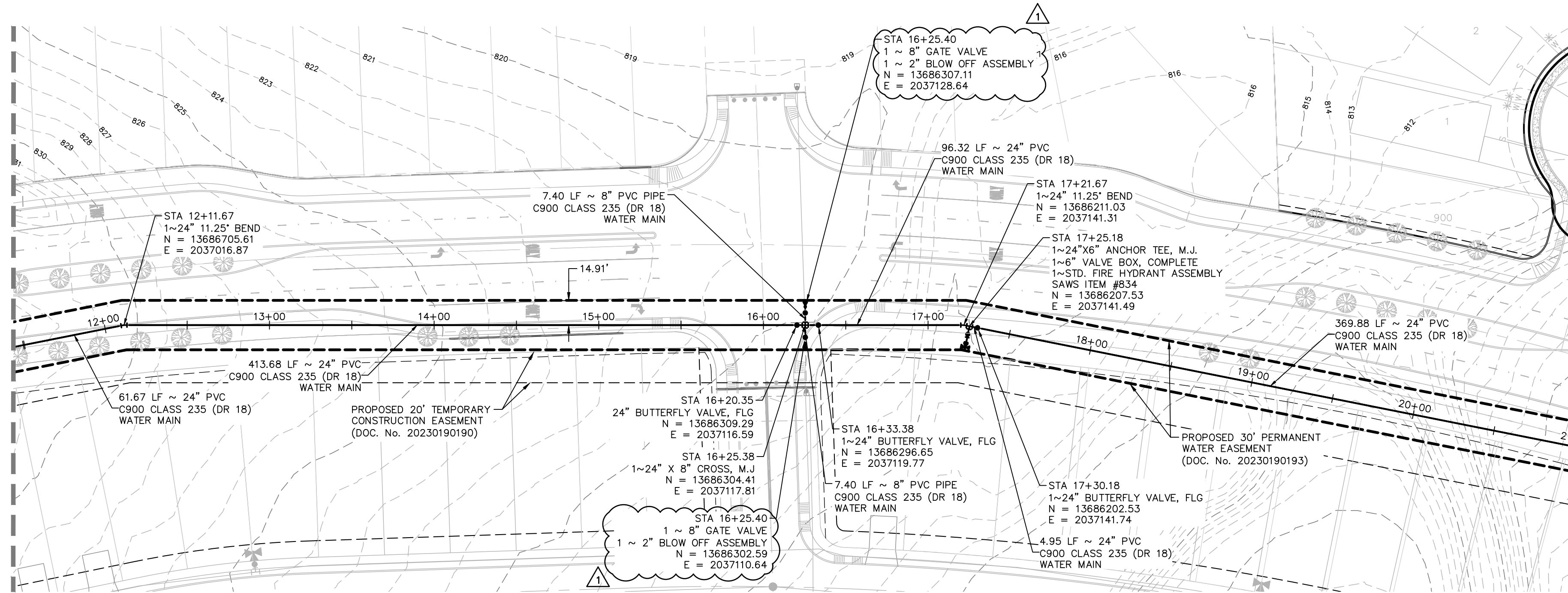
PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 1+00 TO STA. 11+00

PLAT NO. N/A
 JOB NO. 12747-00
 DATE: NOVEMBER 2023
 DESIGNER: CN
 CHECKED: SG DRAWN: JD
 SHEET: C3.03

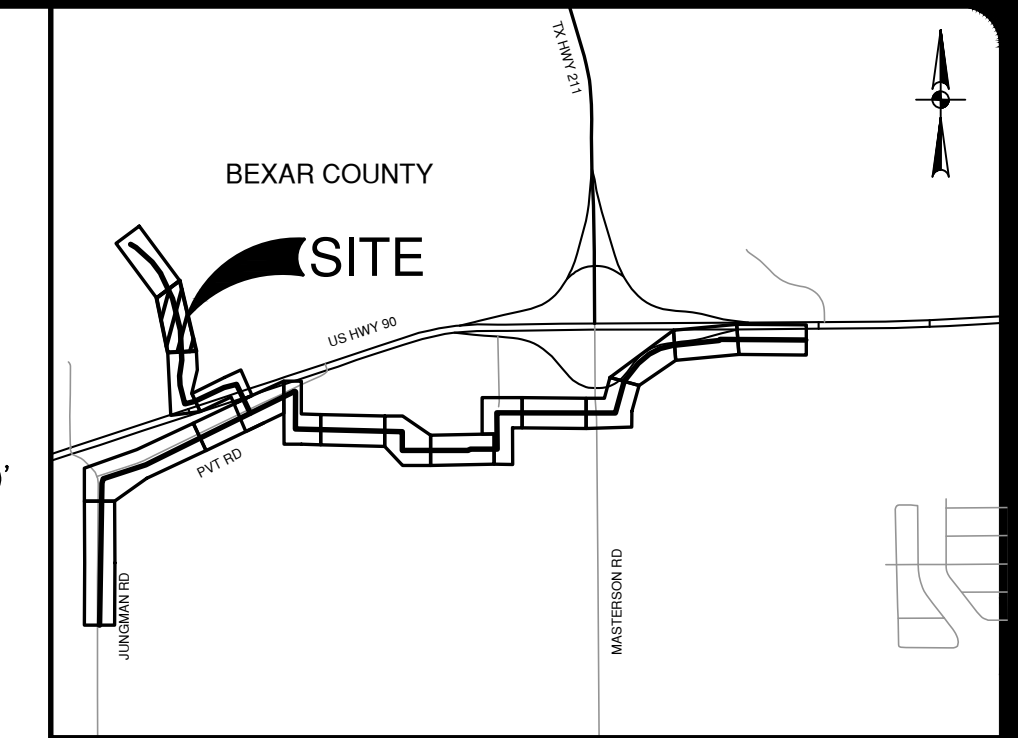
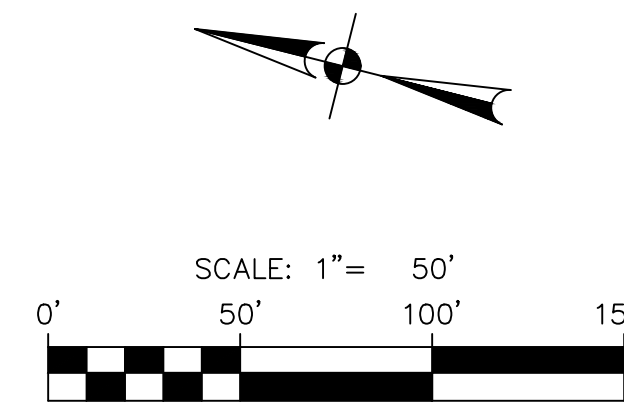
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MATCHLINE STA 11+50
SEE SHEET C3.03



MATCHLINE STA 21+00
SEE SHEET C3.05



LOCATION MAP
NOT-TO-SCALE

QUANTITY TABLE			
ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1132
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	38
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1050
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	3
834	1-2" BLOW OFF ASSEMBLY	EA	1
844	2" TEMPORARY BLOW-OFF ASSEMBLY	EA	2

DATE	11/20/2023
NO.	1
REVISION	ADDENDUM 1



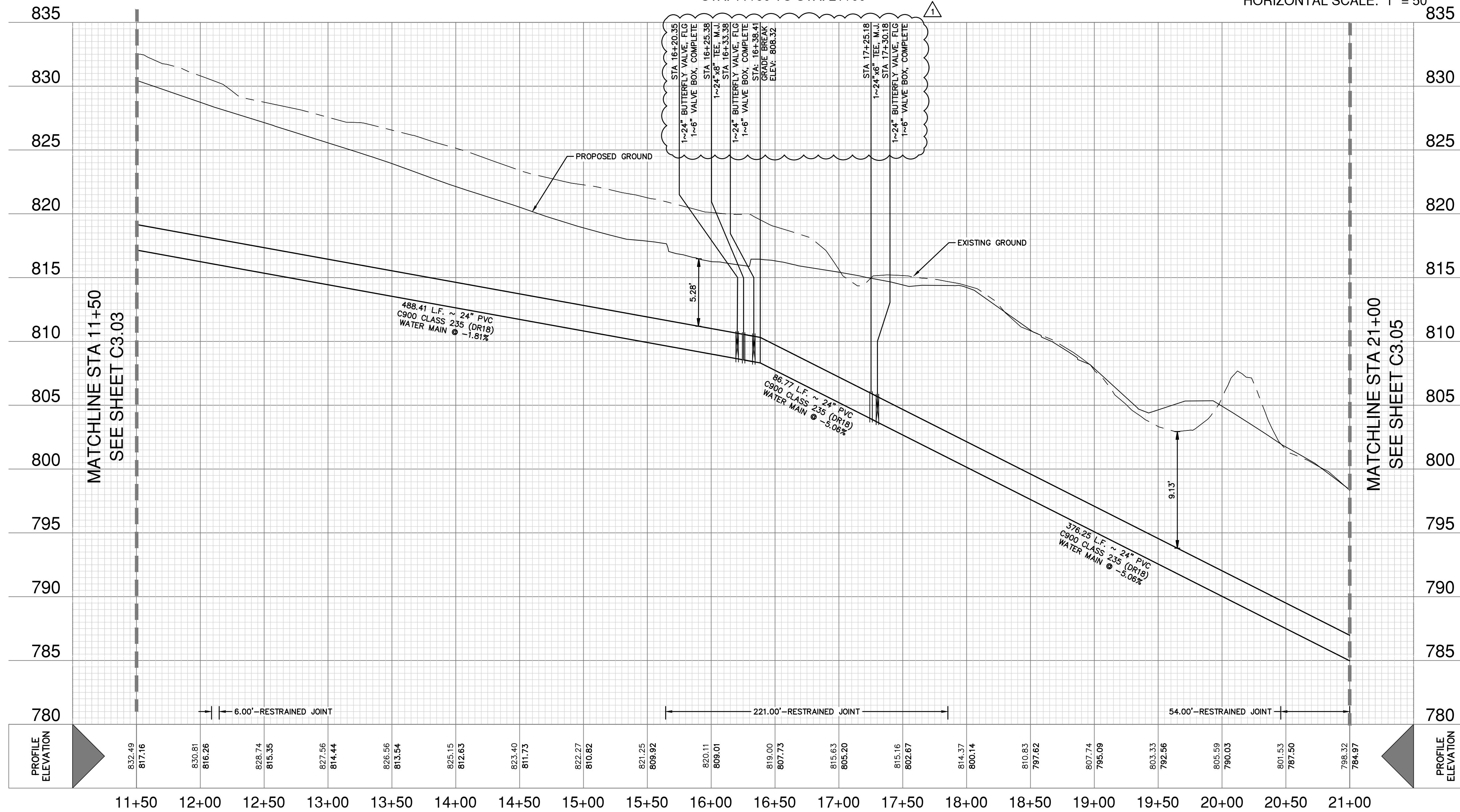
PAPE-DAWSON ENGINEERS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #270 | TEXAS SURVEYING FIRM #1003800

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS
PHASE II - WATER MAIN PLAN AND PROFILE
STA. 11+00 TO STA. 21+00

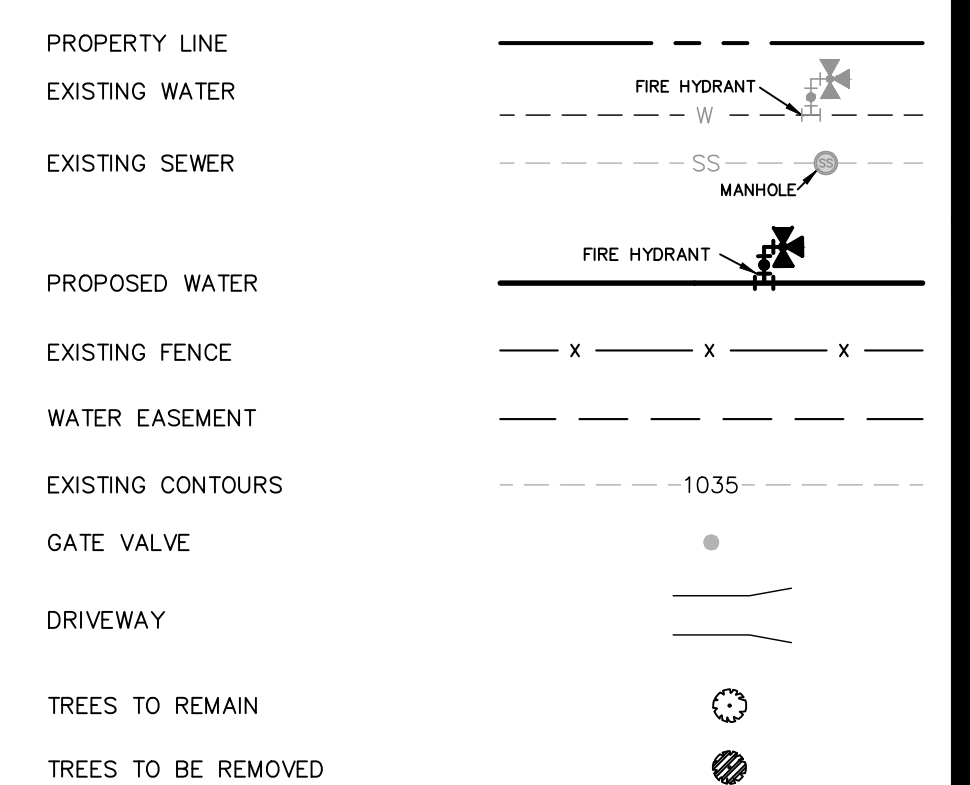
PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.04

**PROPOSED 24" WATER MAIN
STA. 11+50 TO STA. 21+00**

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



WATER LEGEND



CAUTION UNDERGROUND UTILITIES

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**WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION**

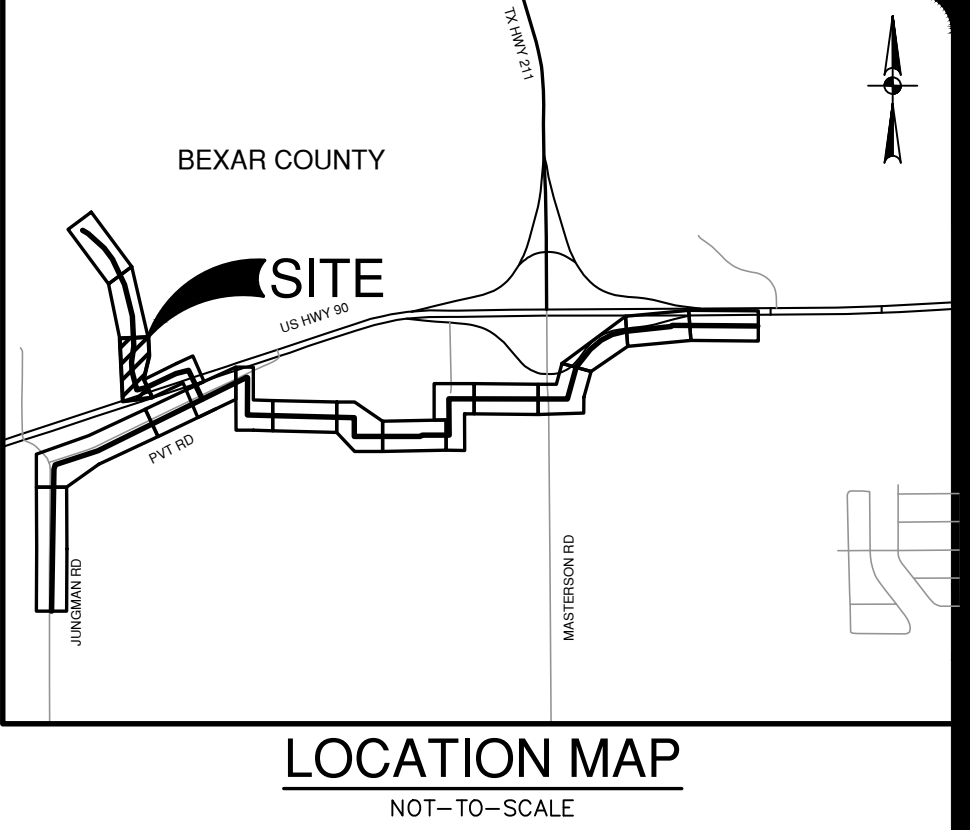
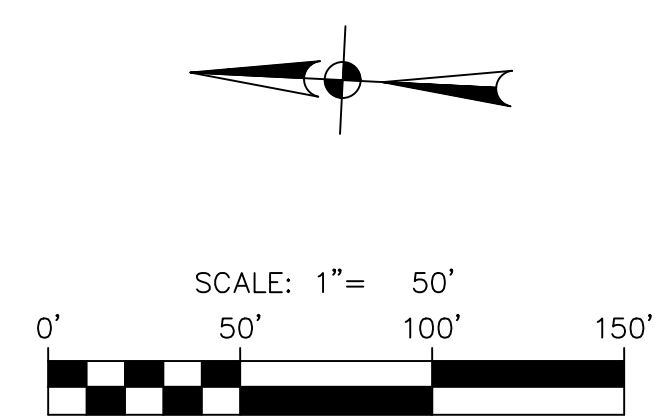
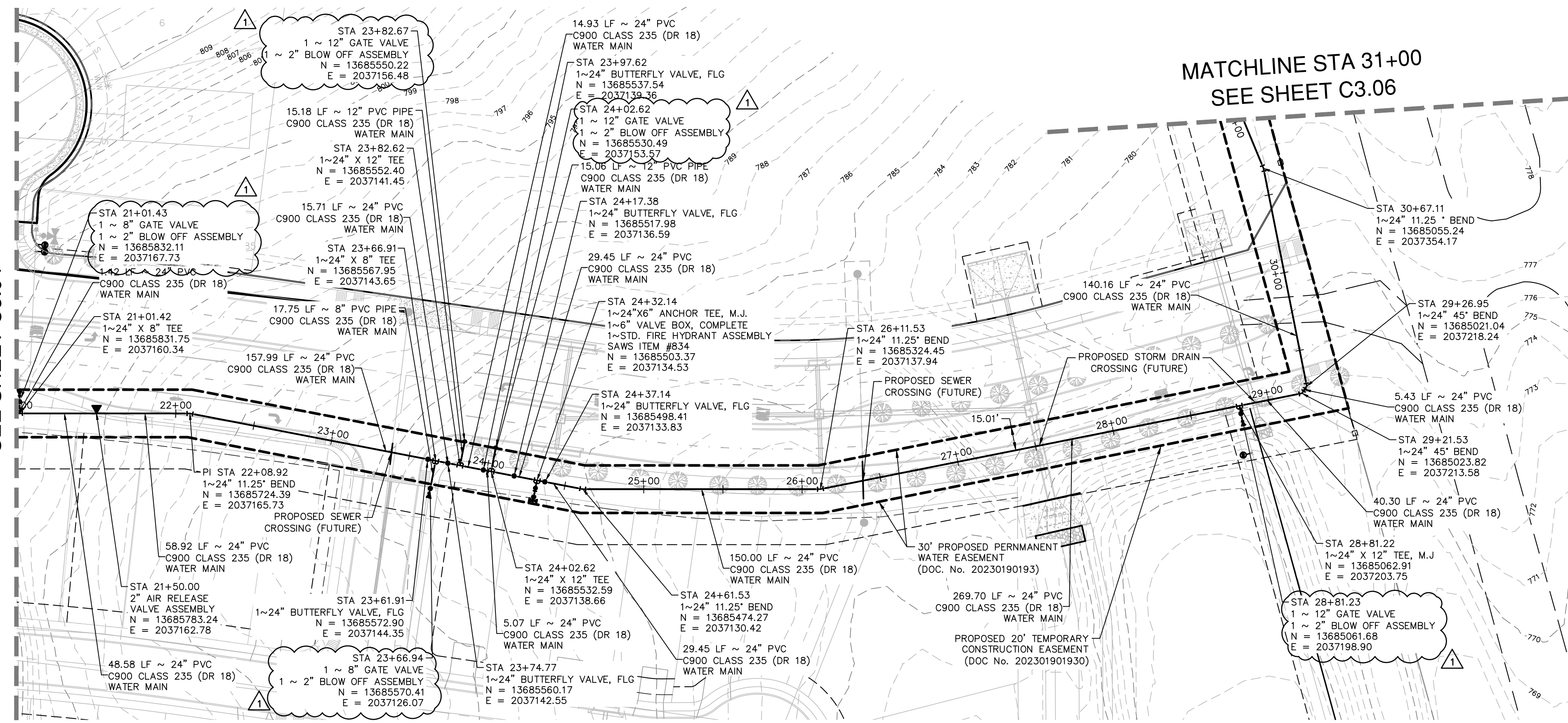
Developer's Name: DR HORTON	Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO	State: TEXAS ZIP: 78232
Phone: (210) 498-2668	FAX: N/A
Saws Block Map #: 078558_074558	Phase I - 4.765 LF ~ 16" PVC WATER Total Acreage .814
Total Linear Footage of Pipe PHASE II - 15,036 LF ~ 24" PVC WATER	Plat No. N/A
Number of Lots: N/A	TOTAL EDU'S: N/A SAWS JOB NO. 23-7003

Date: June 1, 2023, 1:47 PM - User ID: crenning
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MATCHLINE STA 21+00
SEE SHEET C3.04

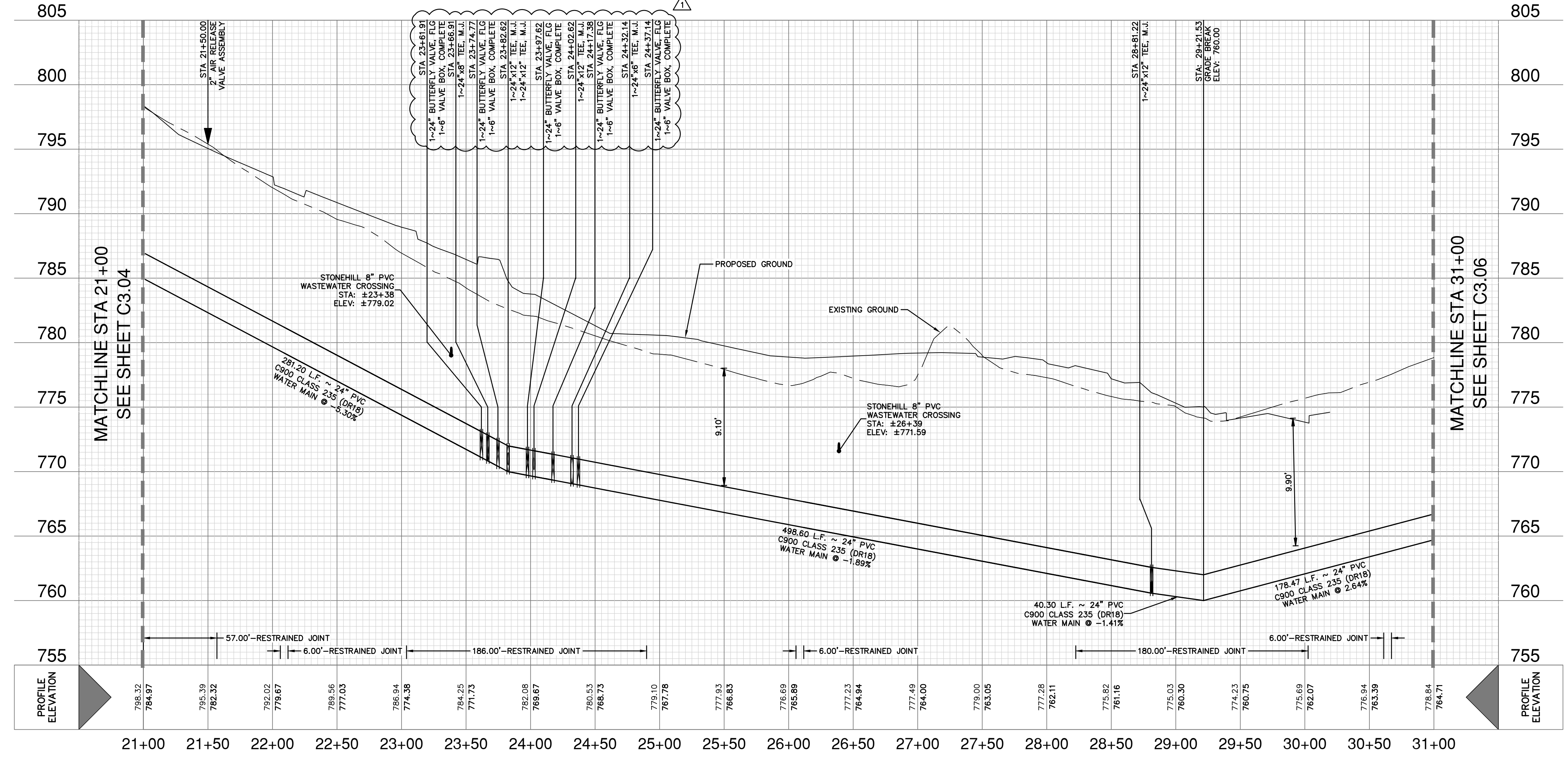
MATCHLINE STA 31+00
SEE SHEET C3.06



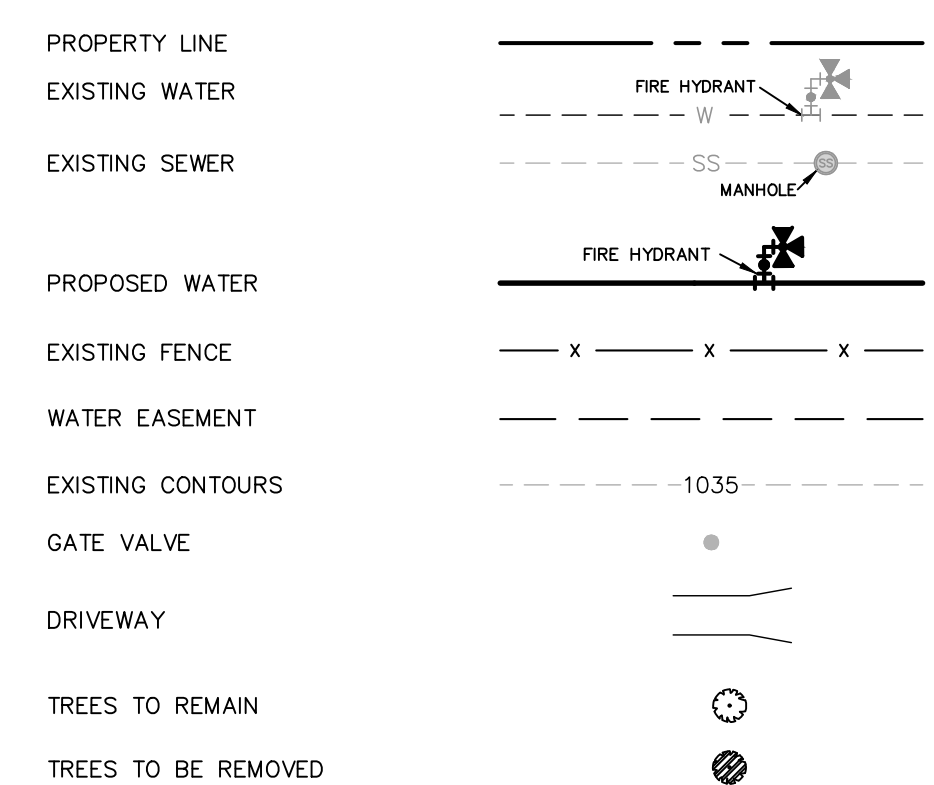
QUANTITY TABLE			
ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1203
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	20
818	12" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	183
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1000
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
828	12" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	6
844	2" AIR RELEASE VALVE ASSEMBLY	EA	5
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

PROPOSED 24" WATER MAIN
STA. 21+00 TO STA. 31+00

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



WATER LEGEND



CAUTION UNDERGROUND UTILITIES

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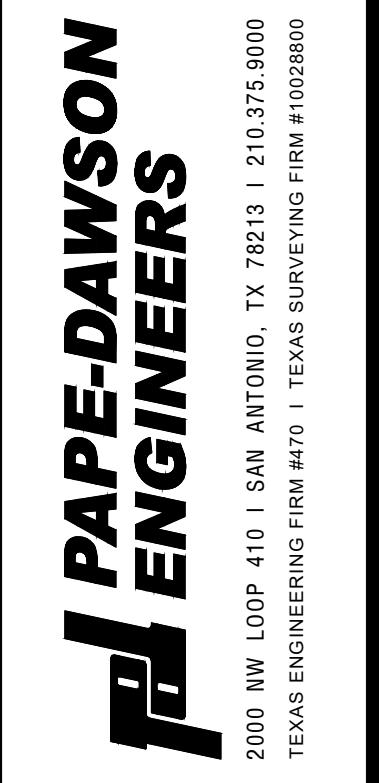
TRENCH EXCAVATION SAFETY PROTECTION

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**WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS Zip: 78232
 Phone# (210) 498-2668 FAX# N/A
 SAWS Block Map# 076558_074558
 Total Linear Footage of Pipe PHASE II = 4,765 LF ~ 16" PVC WATER
 Total Linear Footage of Pipe PHASE II = 15,036 LF ~ 24" PVC WATER Plot No. N/A
 Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

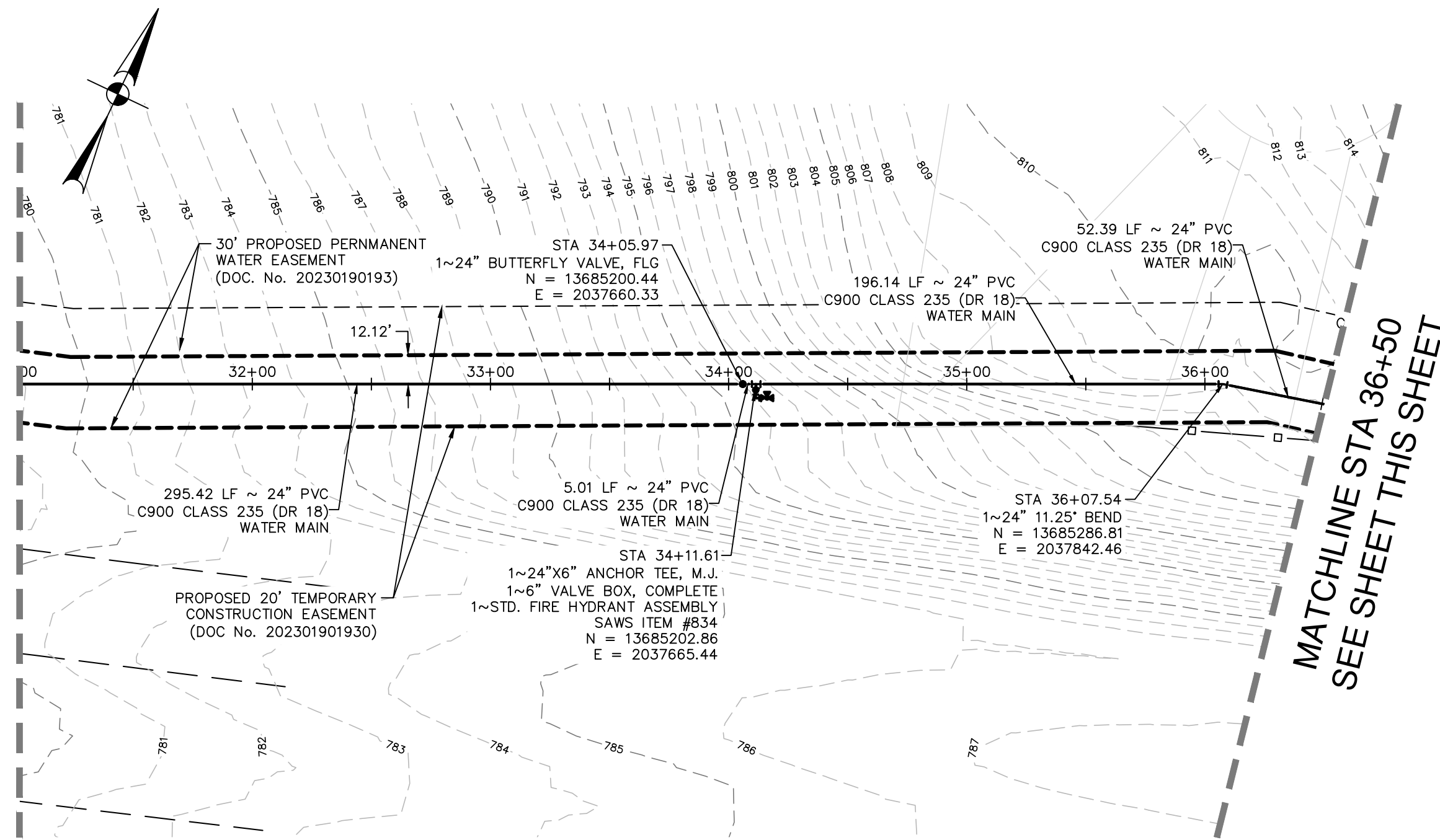
DATE	11/20/2023
NO.	1
REVISION	ADDENDUM 1



STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS
 PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 21+00 TO STA. 31+00

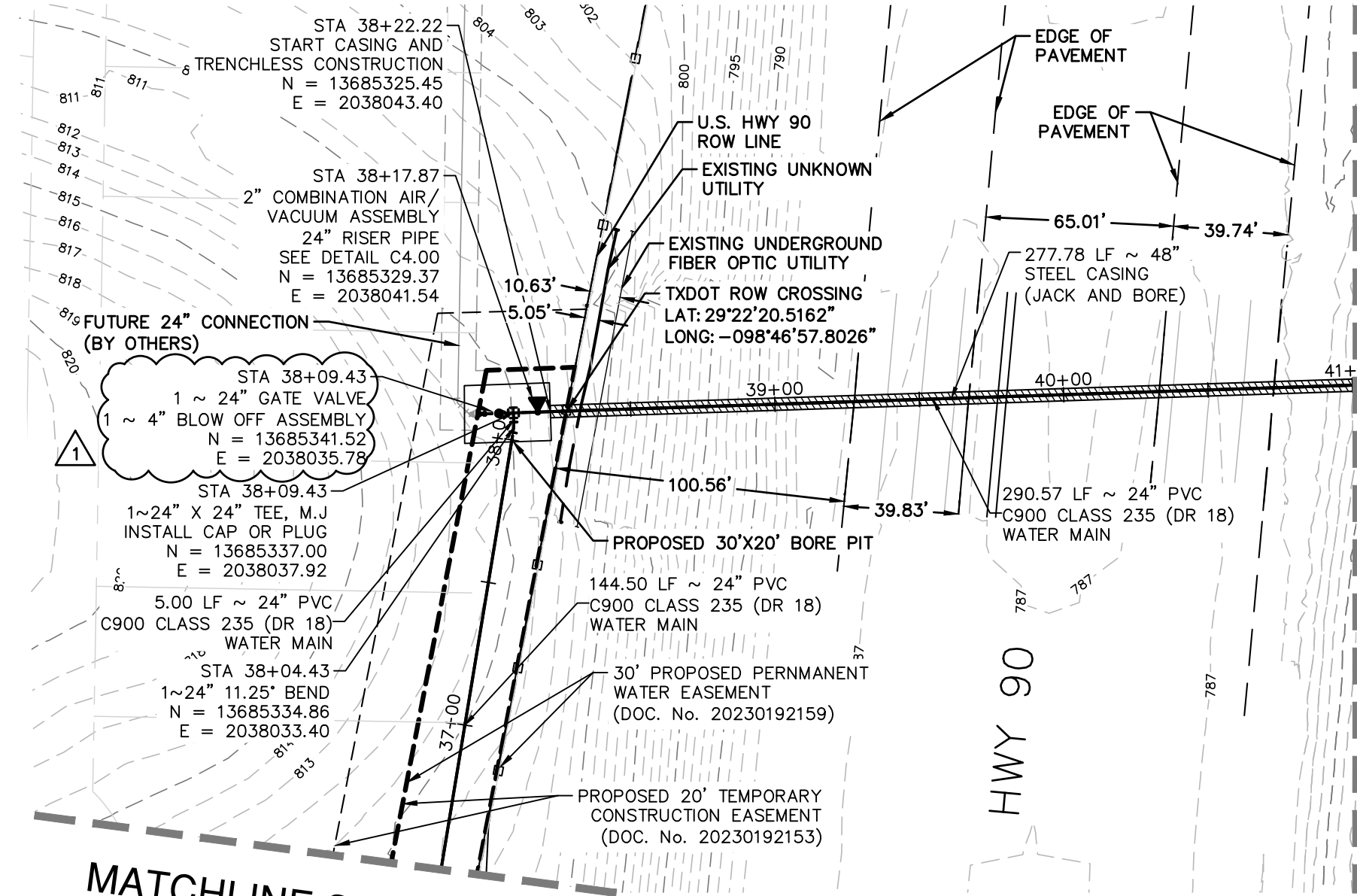
PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.05

MATCHLINE STA 31+00
SEE SHEET C3.05



MATCHLINE STA 36+50
SEE SHEET THIS SHEET

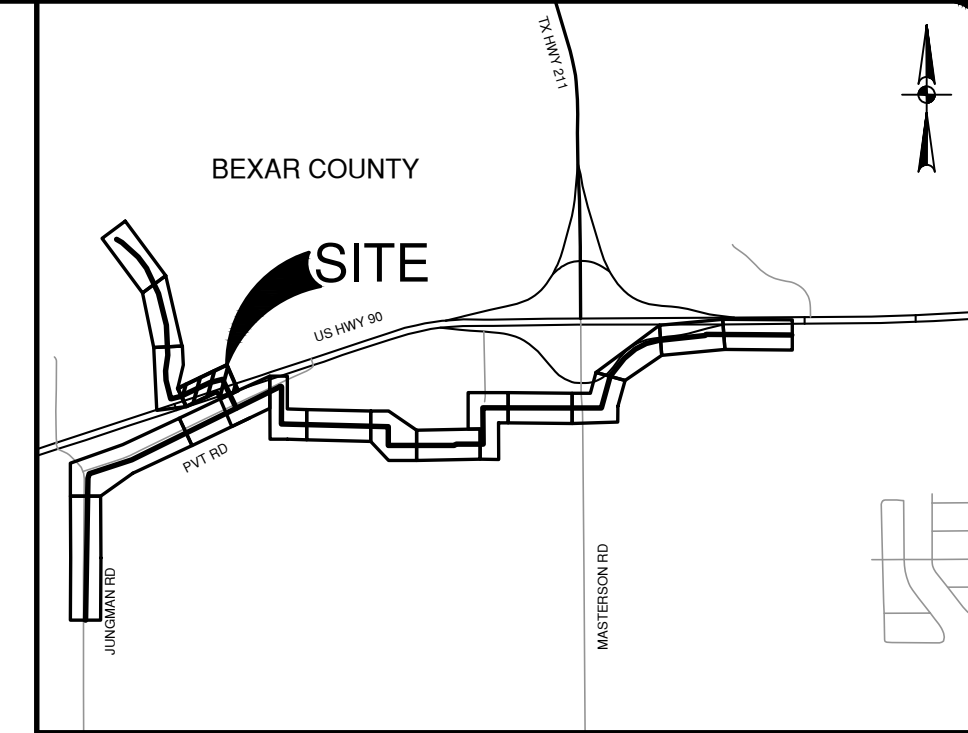
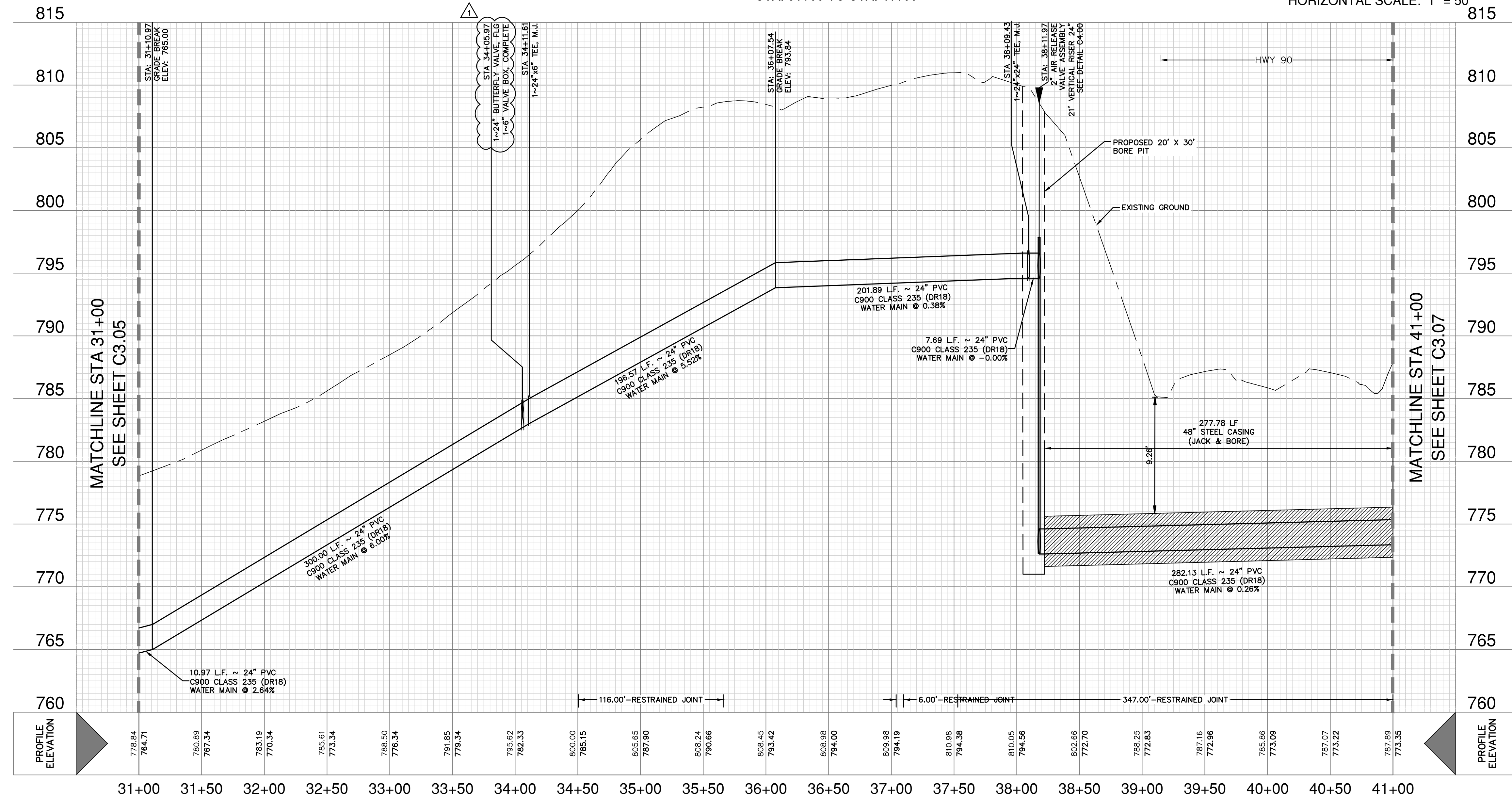
MATCHLINE STA 36+50
SEE SHEET THIS SHEET



MATCHLINE STA 41+00
SEE SHEET C3.07

PROPOSED 24" WATER MAIN
STA. 31+00 TO STA. 41+00

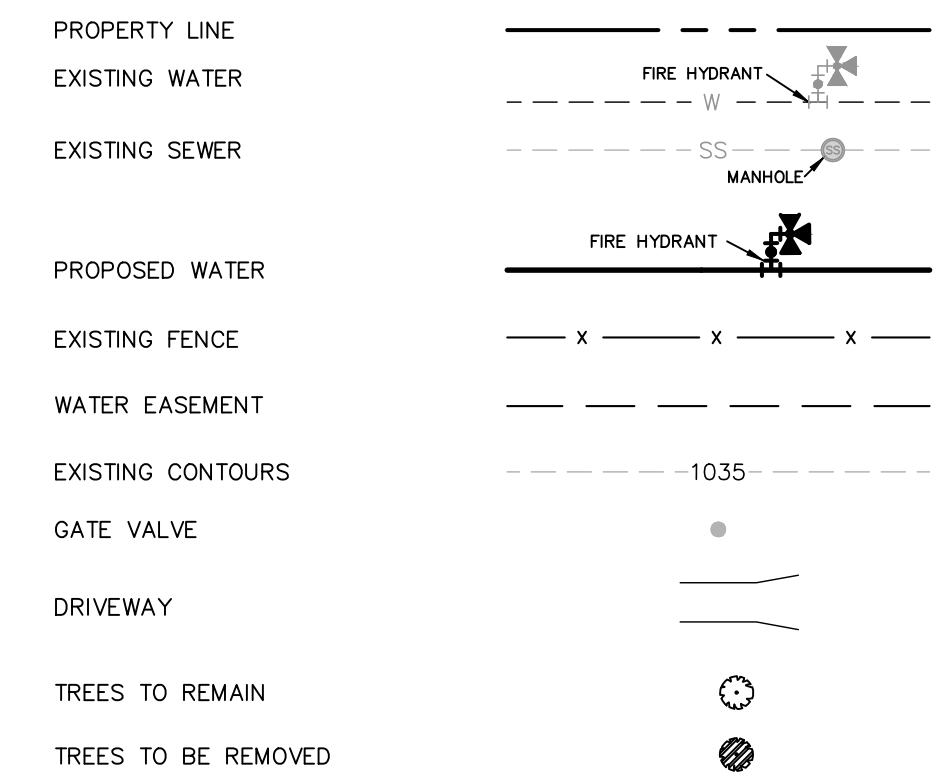
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



LOCATION MAP
NOT-TO-SCALE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
299	FLOWABLE FILL	CY	137
550	TRENCH EXCAVATION PROTECTION	LF	722
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	722
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	570-FIBRE HYDRANT ASSEMBLY	EA	1
844	4" BLOW OFF ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1
856	48" PIPE JACKING	LF	278
856.1	48" STEEL CASING	LF	278
856.2	24" PVC CLASS 235 (DR 18) CARRIER PIPE	LF	278

WATER LEGEND



CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO 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.

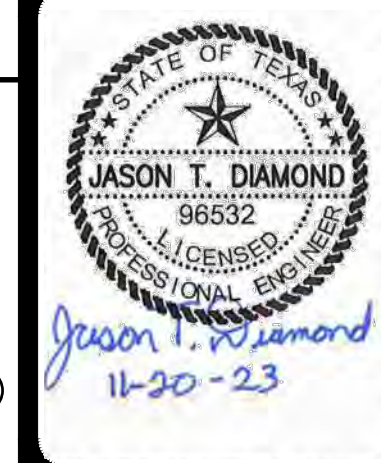
TRENCH EXCAVATION SAFETY PROTECTION

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**WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON	Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO	State: TEXAS ZIP: 78232
Phone: (210) 498-2668	FAX: N/A
SAWS Block Map #: 076558_074558	Phase: 1 - 4,765 LF ~ 16" PVC WATER Total Acreage: 8.14
Total Linear Footage of Pipe: 15,036 LF ~ 24" PVC WATER	Plot No.: N/A
Number of Lots: N/A	TOTAL EDU'S: N/A SAWS JOB NO: 23-7003

DATE	11/20/2023
NO.	1
REVISION	ADDENDUM 1



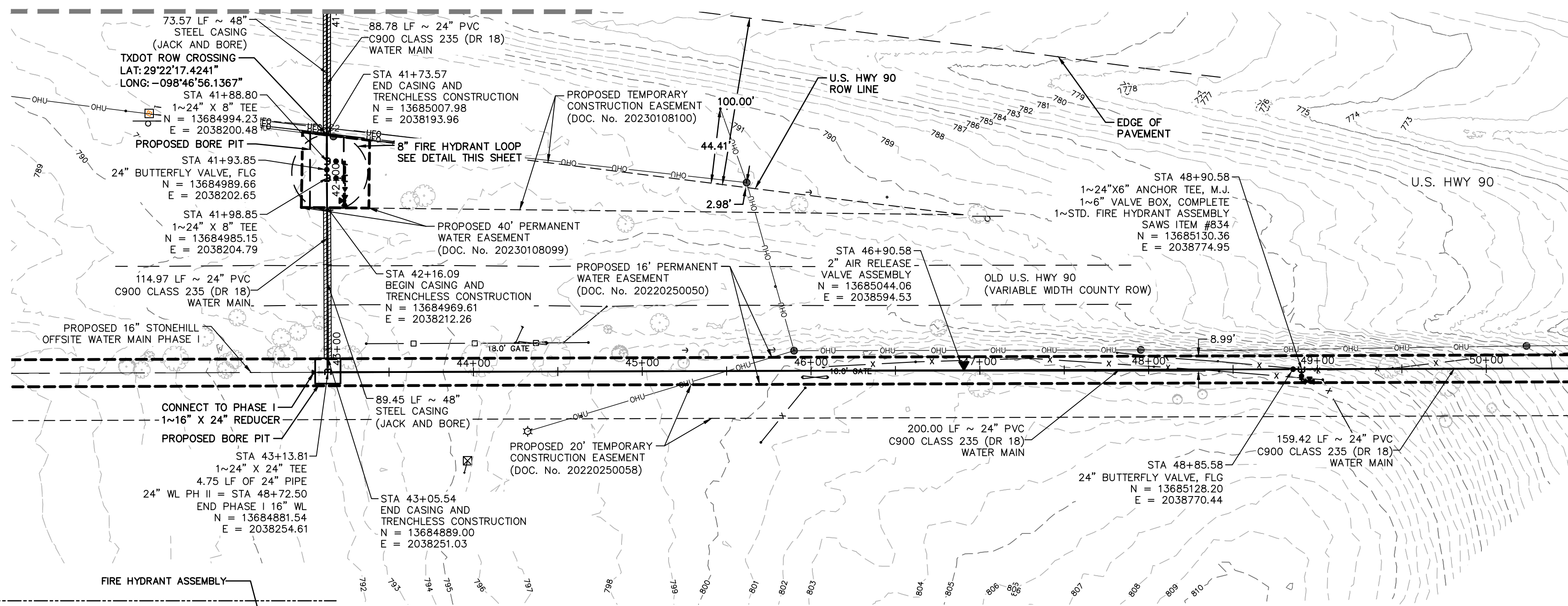
PAPE-DAWSON ENGINEERS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003800

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

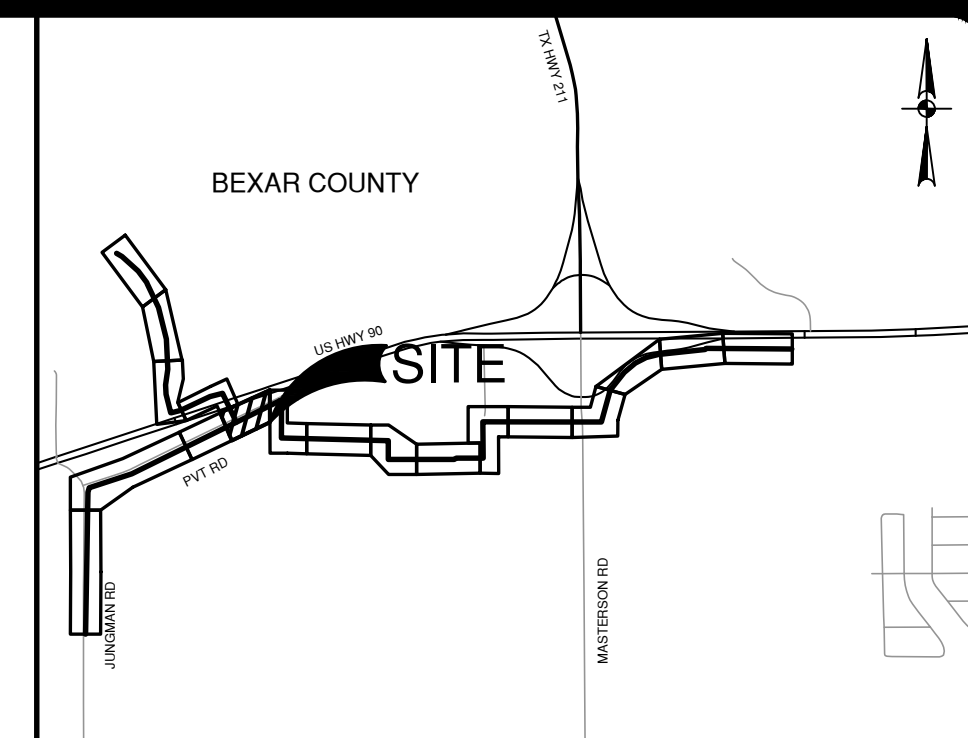
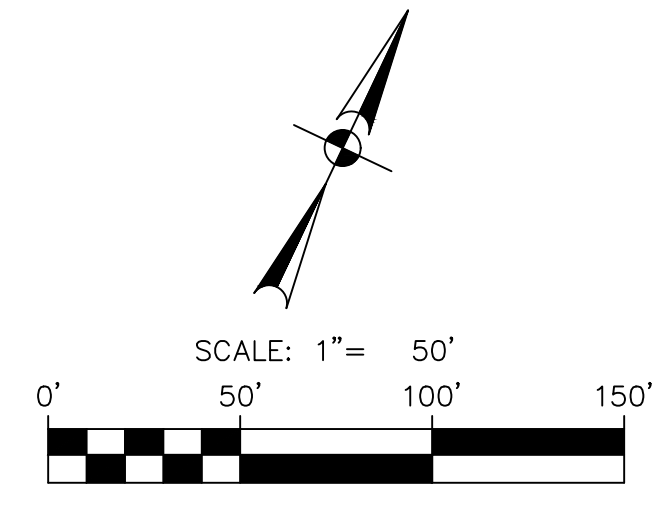
PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 31+00 TO STA. 41+00

PLAT NO. N/A
 JOB NO. 12747-00
 DATE NOVEMBER 2023
 DESIGNER CN
 CHECKED SG DRAWN JD
 SHEET C3.06

MATCHLINE STA 41+00
SEE SHEET C3.06

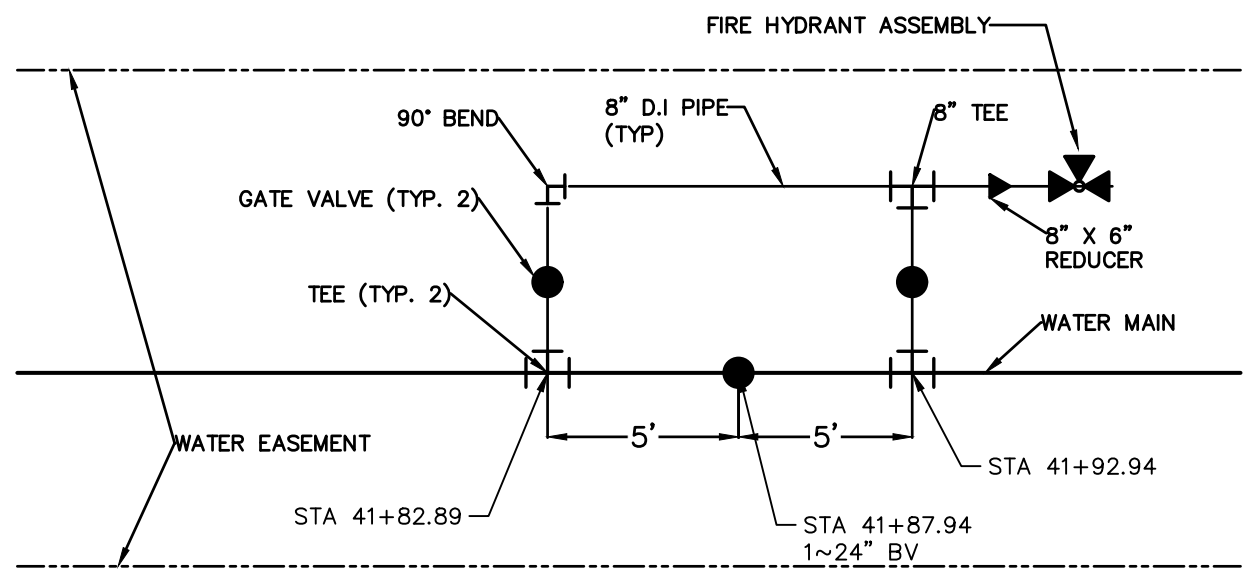


MATCHLINE STA 50+50
SEE SHEET C3.08



LOCATION MAP
NOT-TO-SCALE

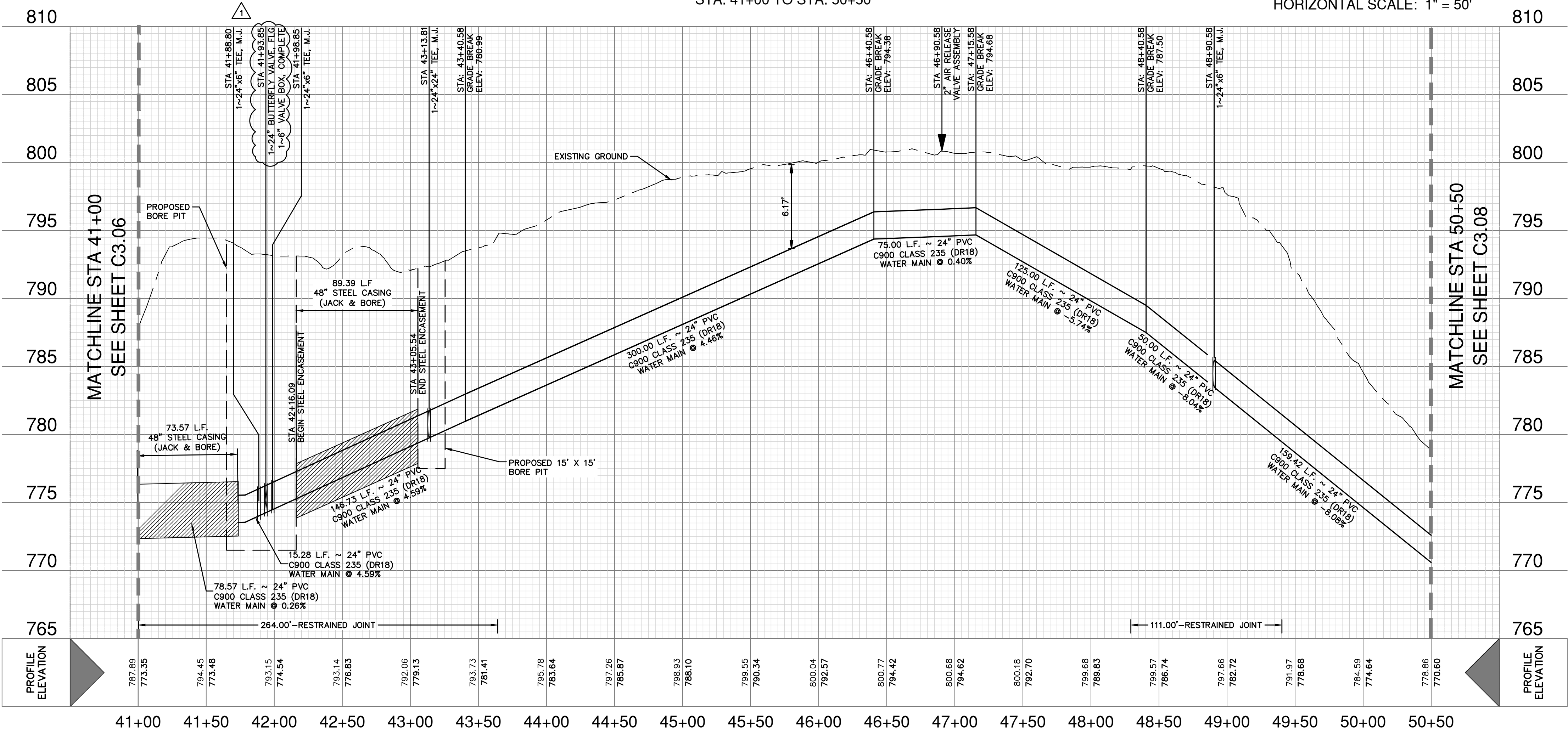
QUANTITY TABLE			
ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	826
818	8\"/>		



DETAIL "A"

PROPOSED 24" WATER MAIN
STA. 41+00 TO STA. 50+50

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



WATER LEGEND	
PROPERTY LINE	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED WATER	---
EXISTING FENCE	x x x
WATER EASEMENT	---
EXISTING CONTOURS	1035
GATE VALVE	○
DRIVEWAY	---
TREES TO REMAIN	○
TREES TO BE REMOVED	⊗

CAUTION UNDERGROUND UTILITIES

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WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS Zip: 78232
Phone# (210) 498-2668 FAX# N/A
SAWS Block Map# 076558_074558
Total Acreage 8.14
Total Linear Footage of Pipe PHASE I = 4,765 LF ~ 16" PVC WATER
Total Linear Footage of Pipe PHASE II = 15,036 LF ~ 24" PVC WATER Plot No. N/A
Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

DATE	NO.	REVISION
11/20/2023	1	ADDENDUM 1



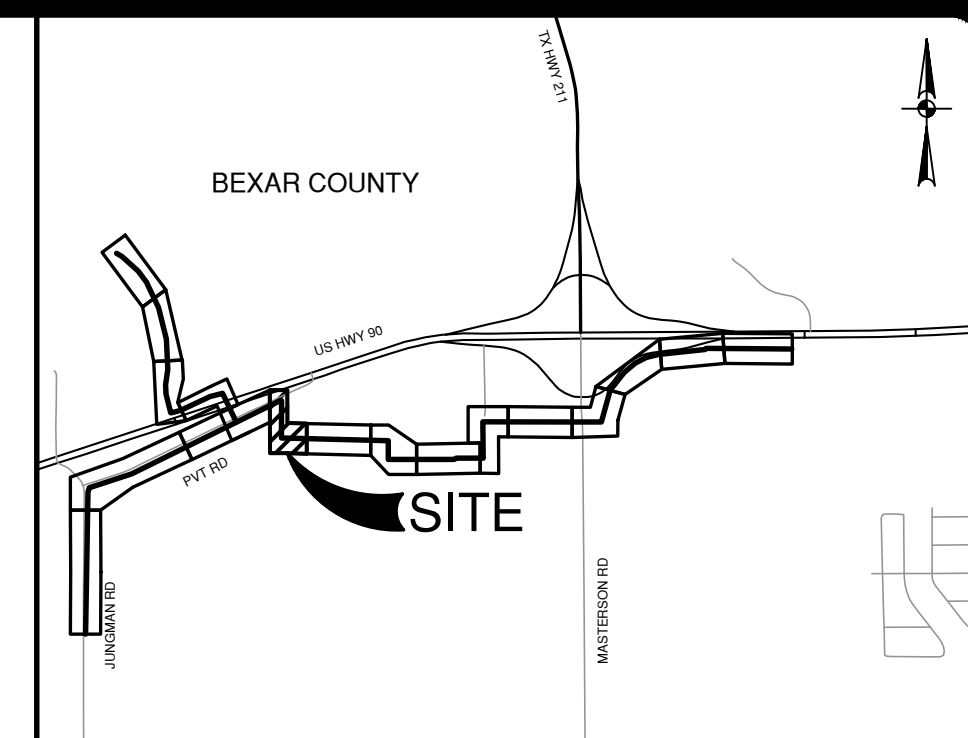
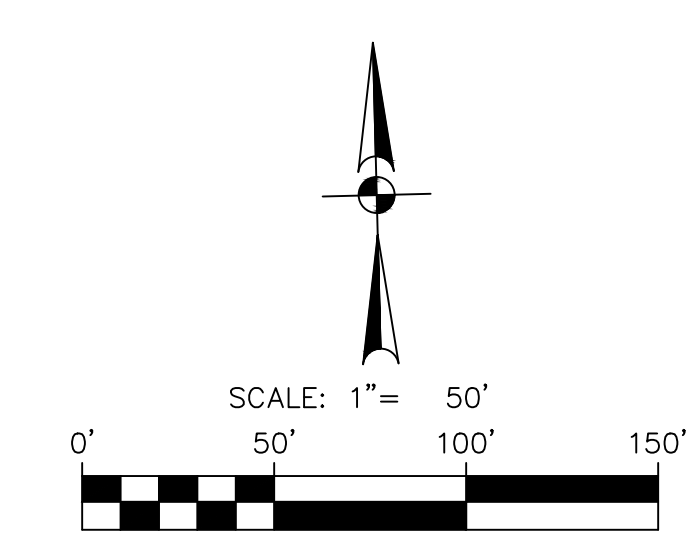
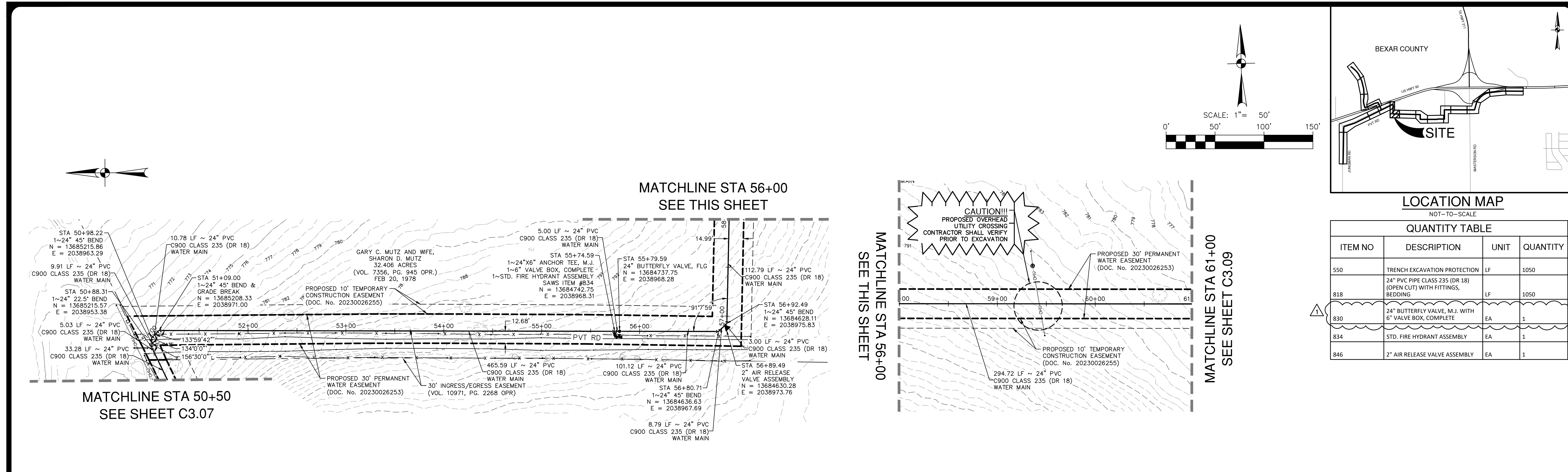
PAPE-DAWSON ENGINEERS
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #479 | TEXAS SURVEYING FIRM #1003890

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS

PHASE II - WATER MAIN PLAN AND PROFILE
STA. 41+00 TO STA. 50+50

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.07

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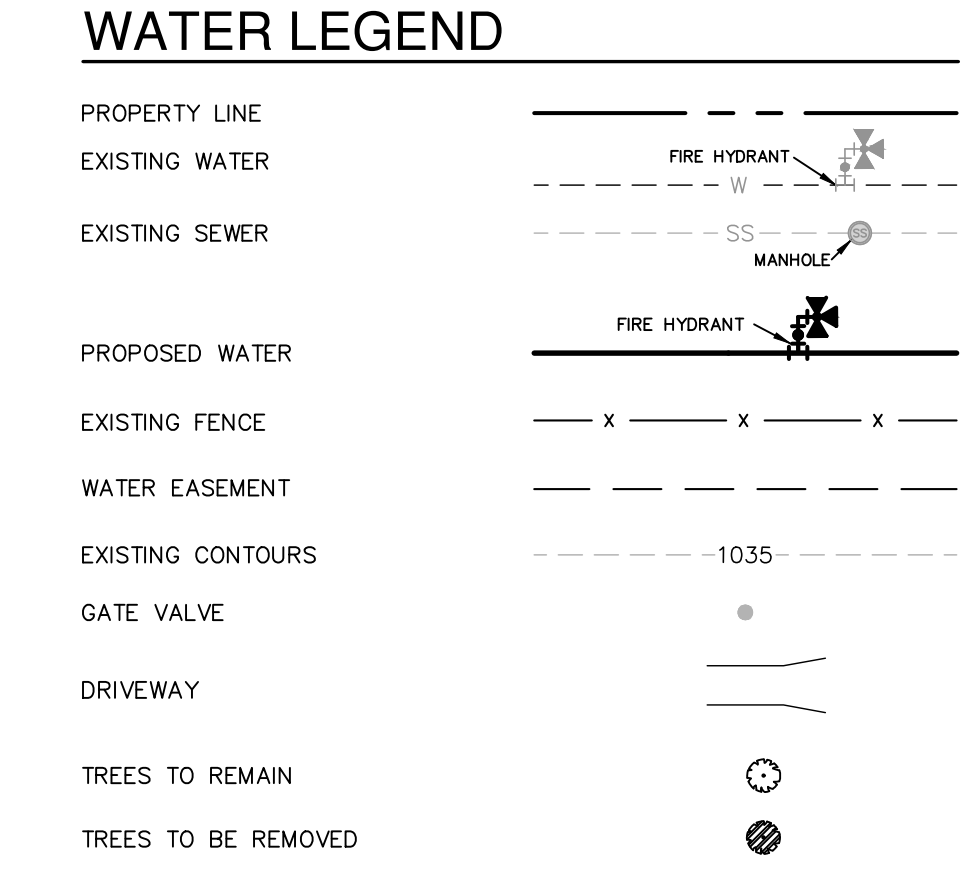
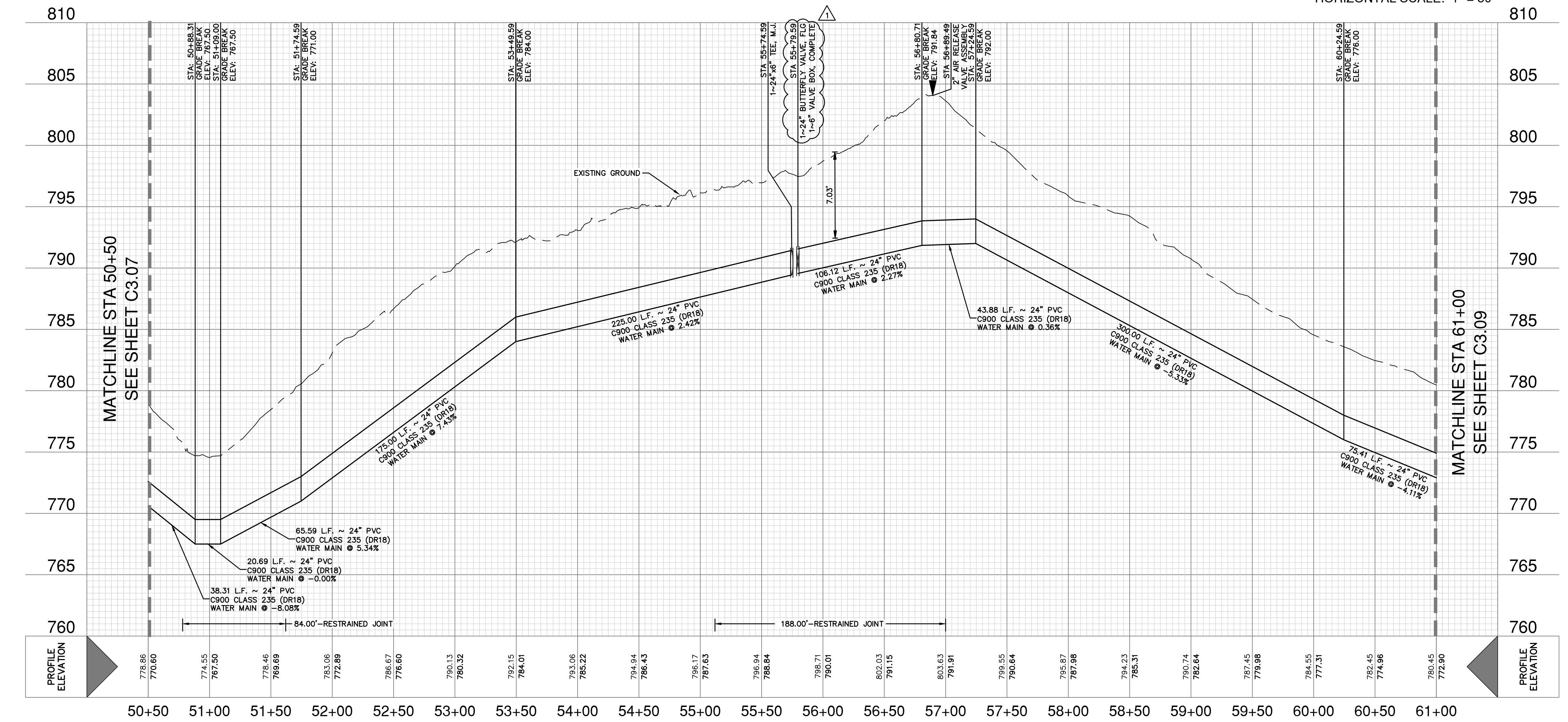


QUANTITY TABLE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1050
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1050
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

**PROPOSED 24" WATER MAIN
 STA. 50+50 TO 61+00**

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



CAUTION UNDERGROUND UTILITIES

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**WATER: SAWS PRESSURE ZONE 930
 STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS Zip: 78232
 Phone: (210) 496-2668 FAX: N/A
 SAWS Block Map: 076558, 074558
 Total Linear Footage of Pipe PHASE II = 15,036 LF ~ 24" PVC WATER Plat No. N/A
 Number of Lots: N/A TOTAL EDU'S: N/A SAWS JOB NO: 23-7003

DATE: 11/20/2023
 NO. REVISION: 1
 ADDENDUM: 1

STATE OF TEXAS
JASON T. DIAMOND
 96532
 PROFESSIONAL ENGINEER

Jason T. Diamond
 11-20-23

PAPE-DAWSON
ENGINEERS

2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #270 | TEXAS SURVEYING FIRM #1038800

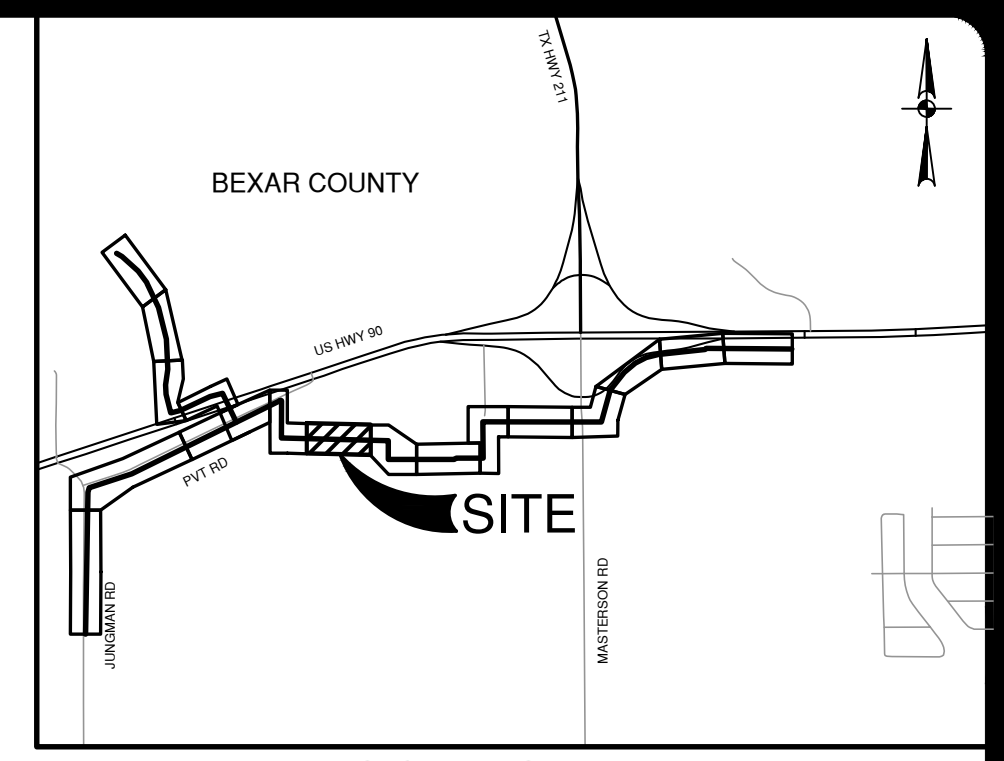
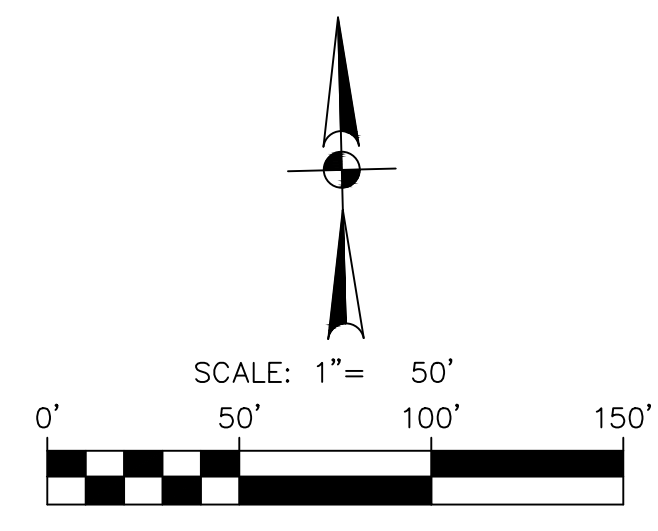
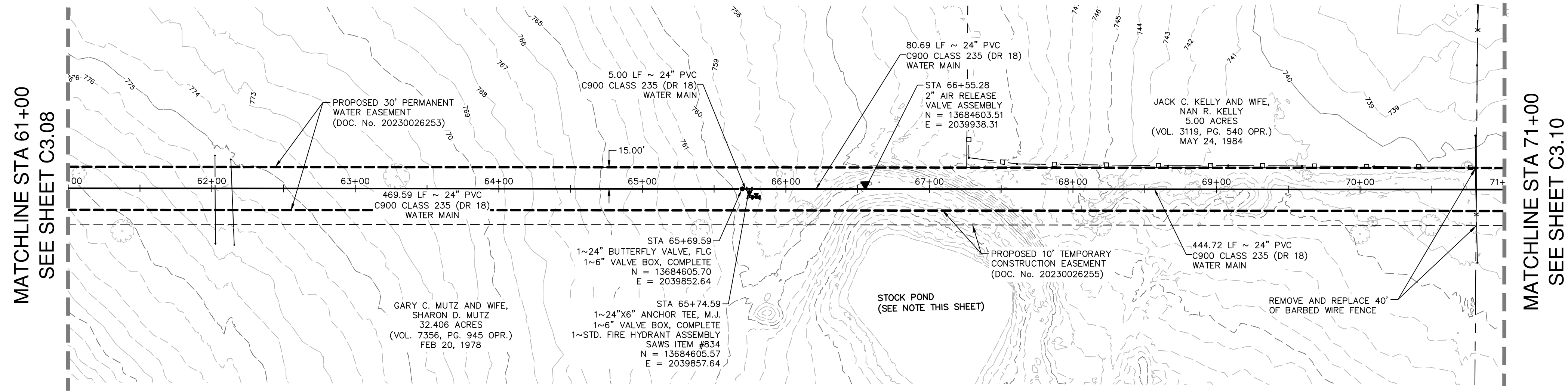
STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 50+50 TO STA. 61+00

PLAT NO. N/A
 JOB NO. 12747-00
 DATE: NOVEMBER 2023
 DESIGNER: CN
 CHECKED: SG DRAWN: JD
 SHEET: C3.08

NOTE:

IF STOCK POND IS HOLDING WATER AT TIME OF CONSTRUCTION, CONTRACTOR SHALL PUMP POND DRY AND IRRIGATE POND WATER DOWNSTREAM SIDE OF POND AWAY FROM CONSTRUCTION AREA. THE COST SHALL BE INCIDENTAL TO PIPE INSTALLATION.



QUANTITY TABLE
NOT-TO-SCALE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1000
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1000
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

DATE: 11/20/2023
NO. REVISION: 1
ADDENDUM: 1

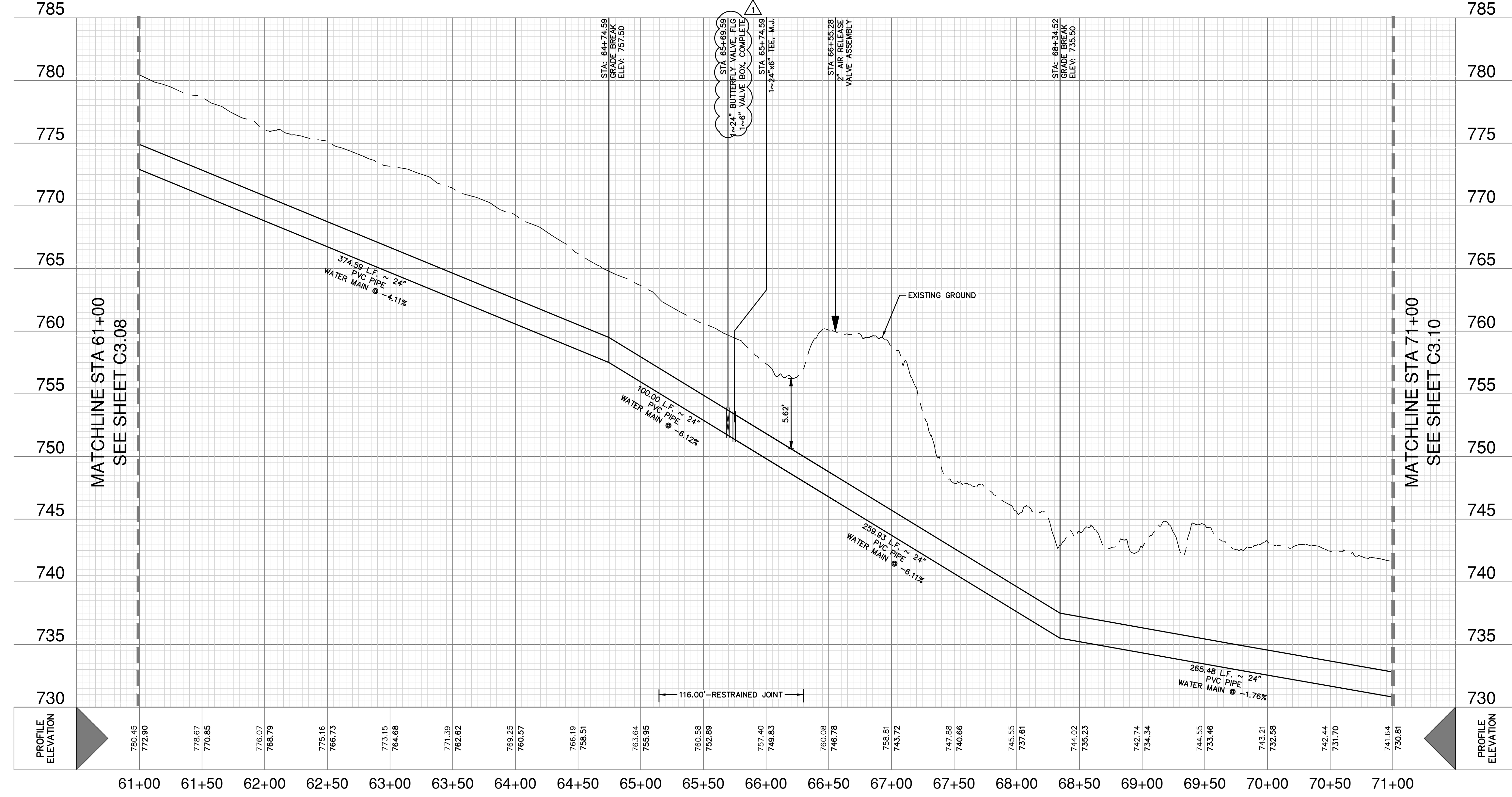


PAPE-DAWSON ENGINEERS

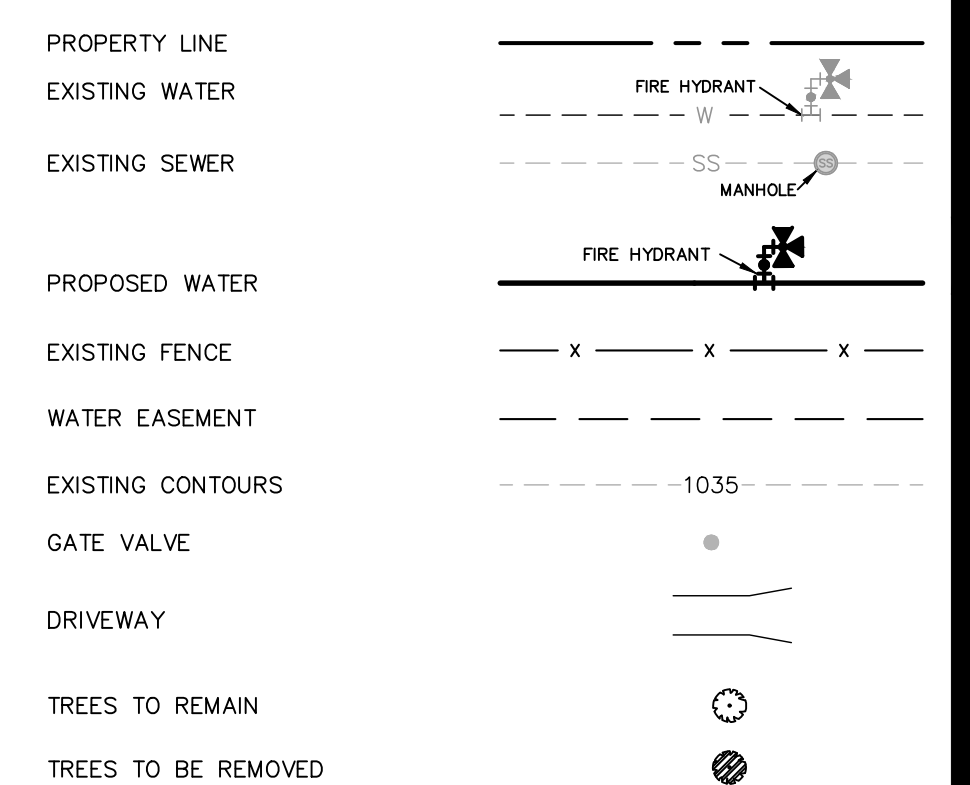
2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003890

**PROPOSED 24" WATER MAIN
STA. 61+00 TO 71+00**

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



WATER LEGEND



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TRENCH EXCAVATION SAFETY PROTECTION

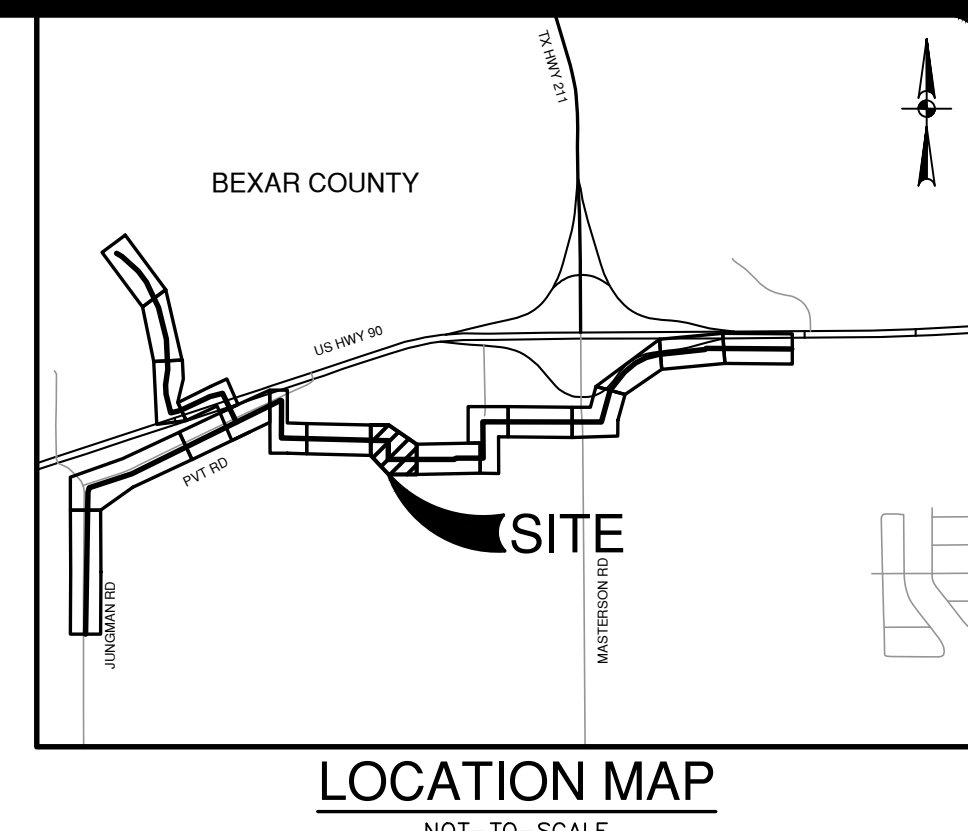
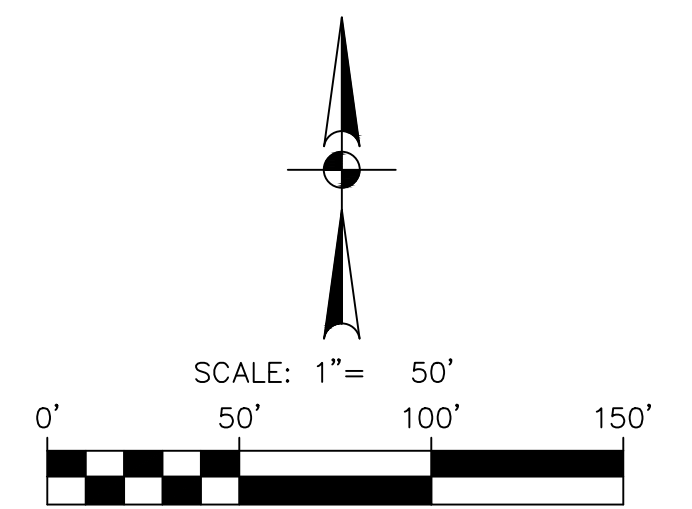
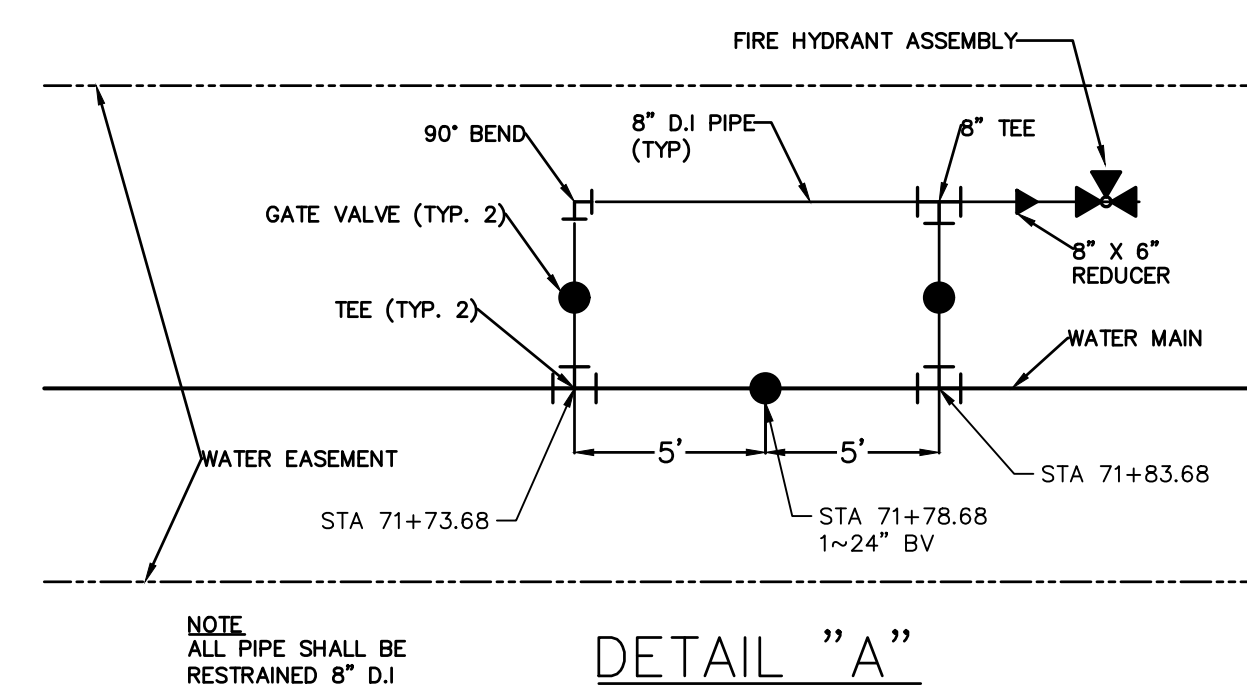
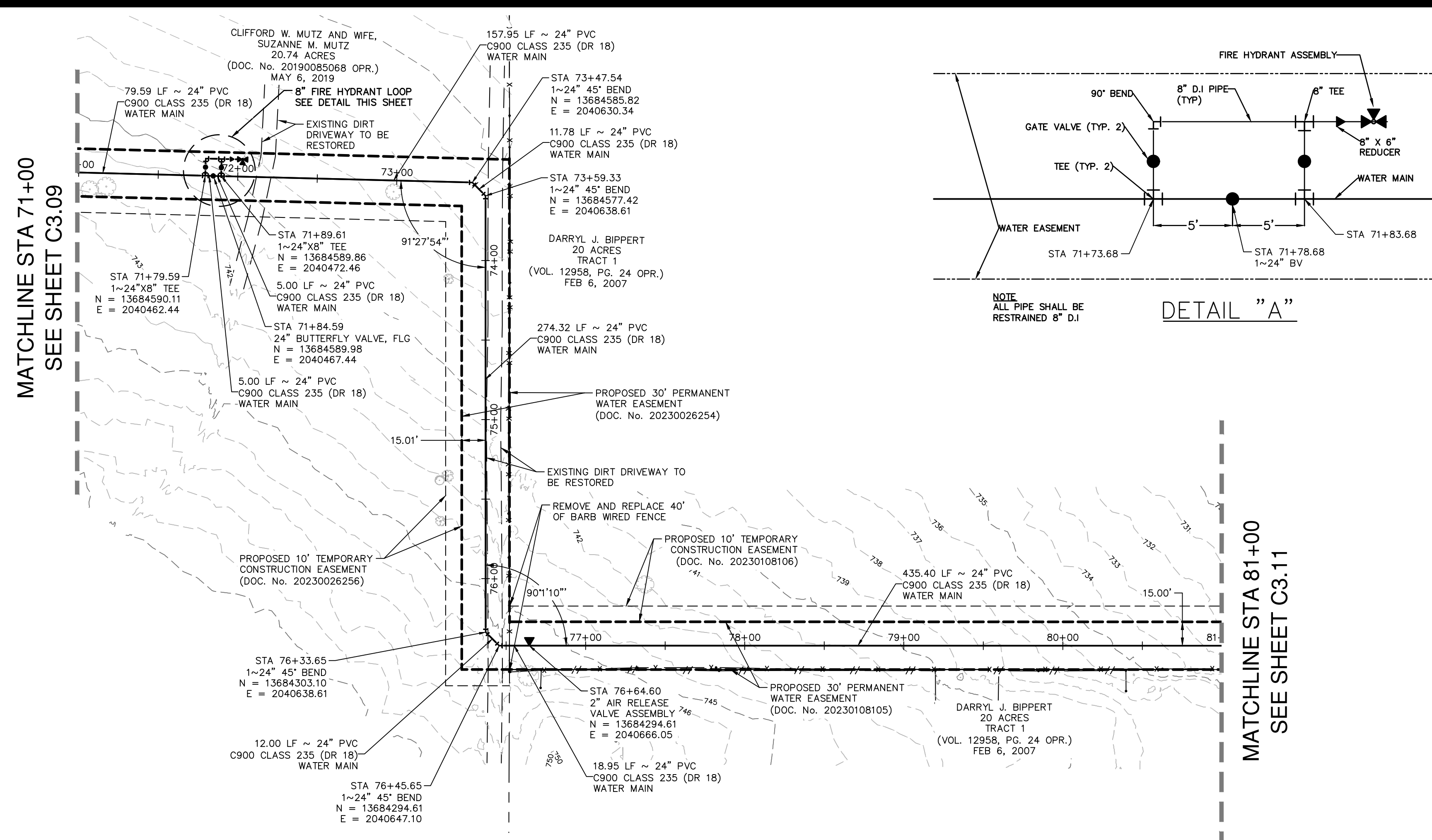
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**WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
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Phone: (210) 496-2668 FAX: N/A
SAWS Block Map# 076558_074558
Phase I - 4,765 LF ~ 16" PVC WATER Total Acreage .814
Total Linear Footage of Pipe Phase II - 15,036 LF ~ 24" PVC WATER Plot No. N/A
Number of Lots N/A TOTAL DUD'S N/A SAWS JOB NO. 23-7003

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS
PHASE II - WATER MAIN PLAN AND PROFILE
STA. 61+00 TO STA. 71+00

PLAT NO. N/A
JOB NO. 12747-00
DATE NOVEMBER 2023
DESIGNER CN
CHECKED SG DRAWN JD
SHEET C3.09



ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1038
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	38
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1000
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

WATER LEGEND	
PROPERTY LINE	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED WATER	---
EXISTING FENCE	x x x
WATER EASEMENT	---
EXISTING CONTOURS	1035
GATE VALVE	●
DRIVEWAY	---
TREES TO REMAIN	○
TREES TO BE REMOVED	⊗

CAUTION UNDERGROUND UTILITIES

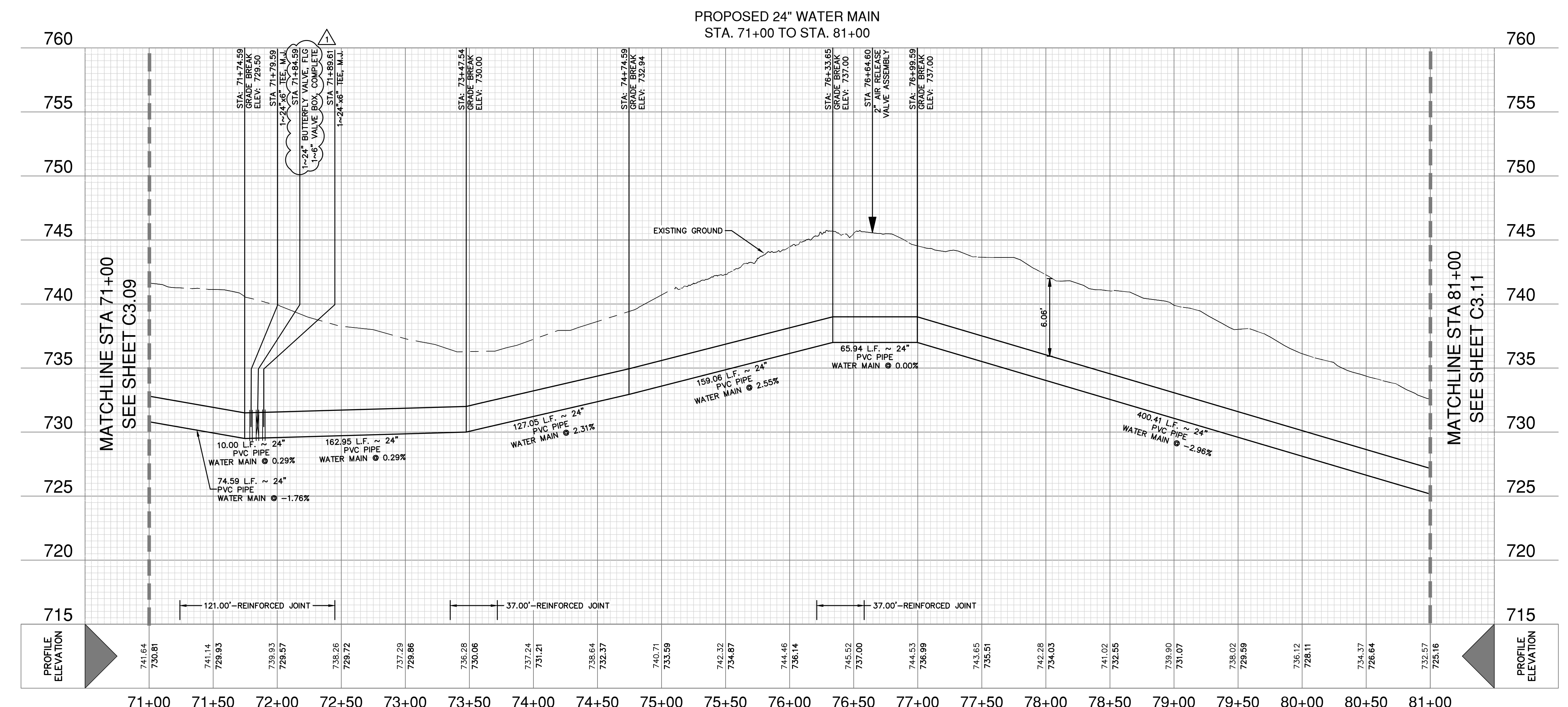
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WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS ZIP: 78232
Phone# (210) 498-2658 FAX# N/A
SAWS Block Map# 076558, 074558
Total Acreage .814
Phase I - 4.765 LF ~ 16" PVC WATER
Total Linear Footage of Pipe PHASE II - 15,036 LF ~ 24" PVC WATER Plat No. N/A
Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003



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

DATE: 11/20/2023
NO. REVISION: 1
ADDENDUM: 1

STATE OF TEXAS
JASON T. DIAMOND
PROFESSIONAL ENGINEER
96532
Jason T. Diamond
11-20-23

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #479 | TEXAS SURVEYING FIRM #1002890

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS

PHASE II - WATER MAIN PLAN AND PROFILE
STA. 71+00 TO STA. 81+00

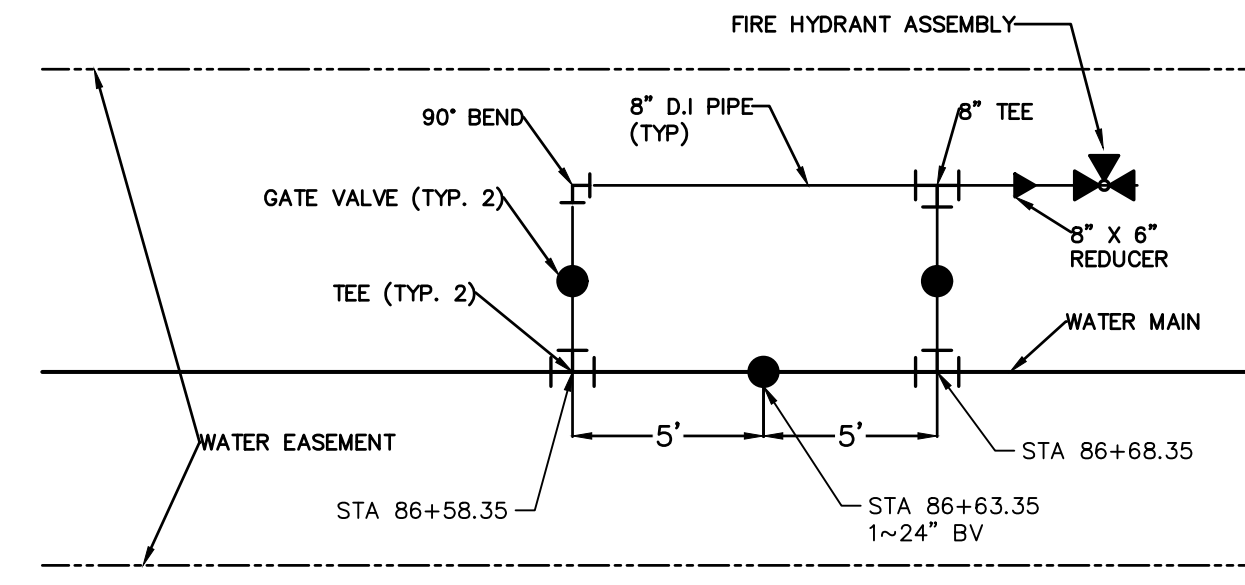
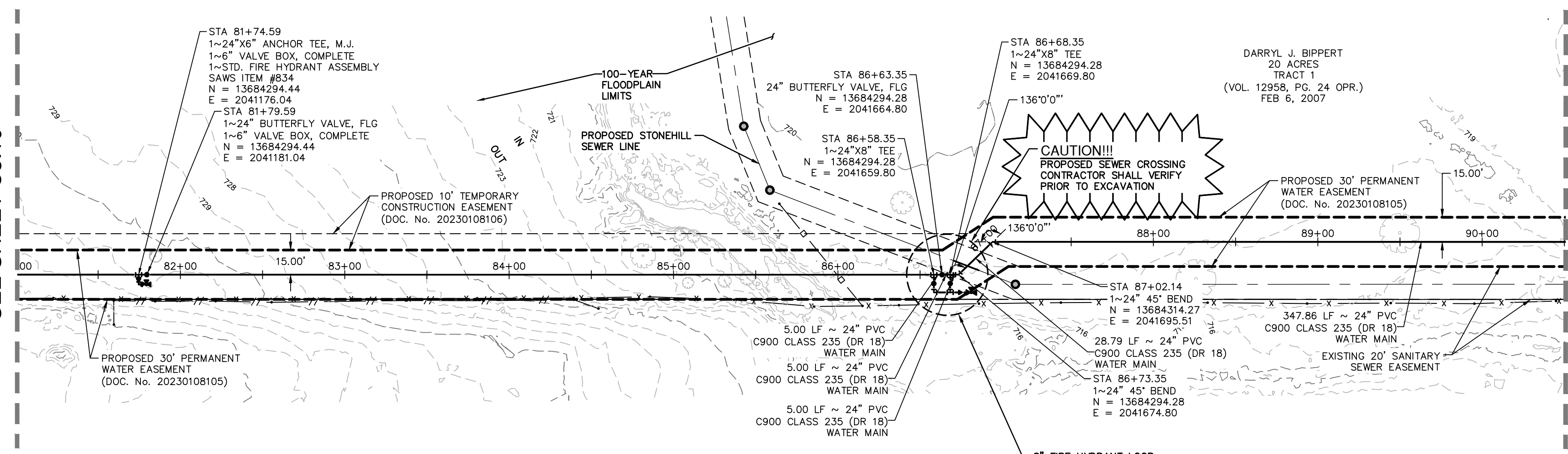
PLAT NO. N/A
JOB NO. 12747-00
DATE: NOVEMBER 2023
DESIGNER: CN
CHECKED: SG DRAWN: JD
SHEET: C3.10

Date: June 1, 2023, 1:52 PM - User ID: crenning
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MATCHLINE STA 81+00
SEE SHEET C3.10

MATCHLINE STA 90+50
SEE SHEET C3.12

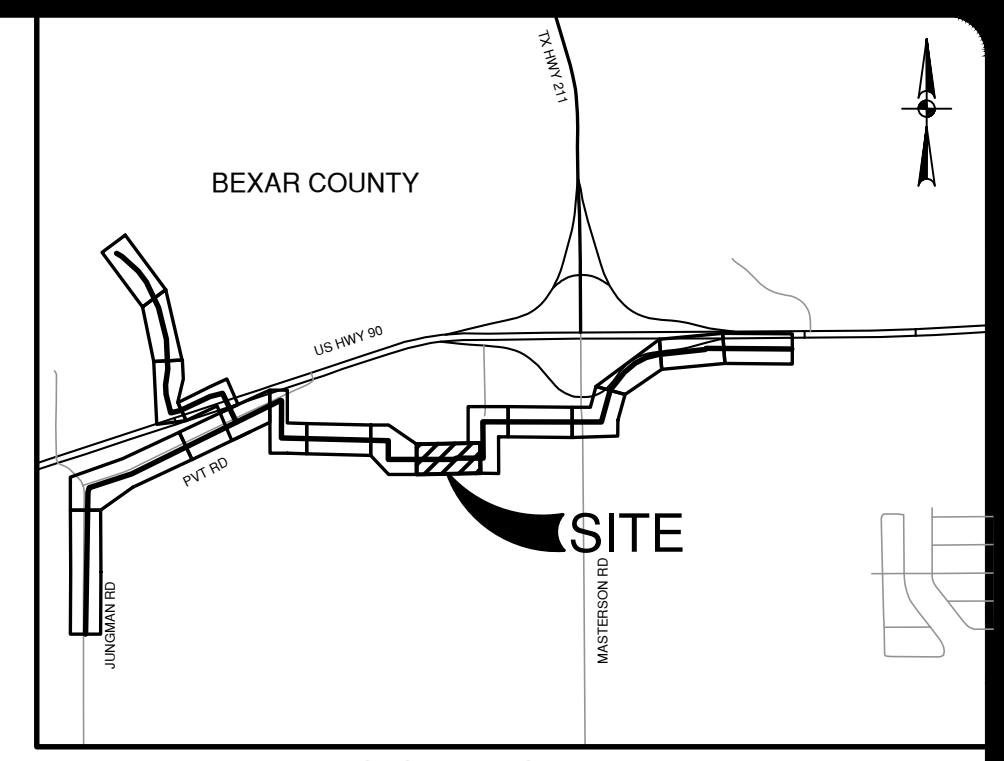
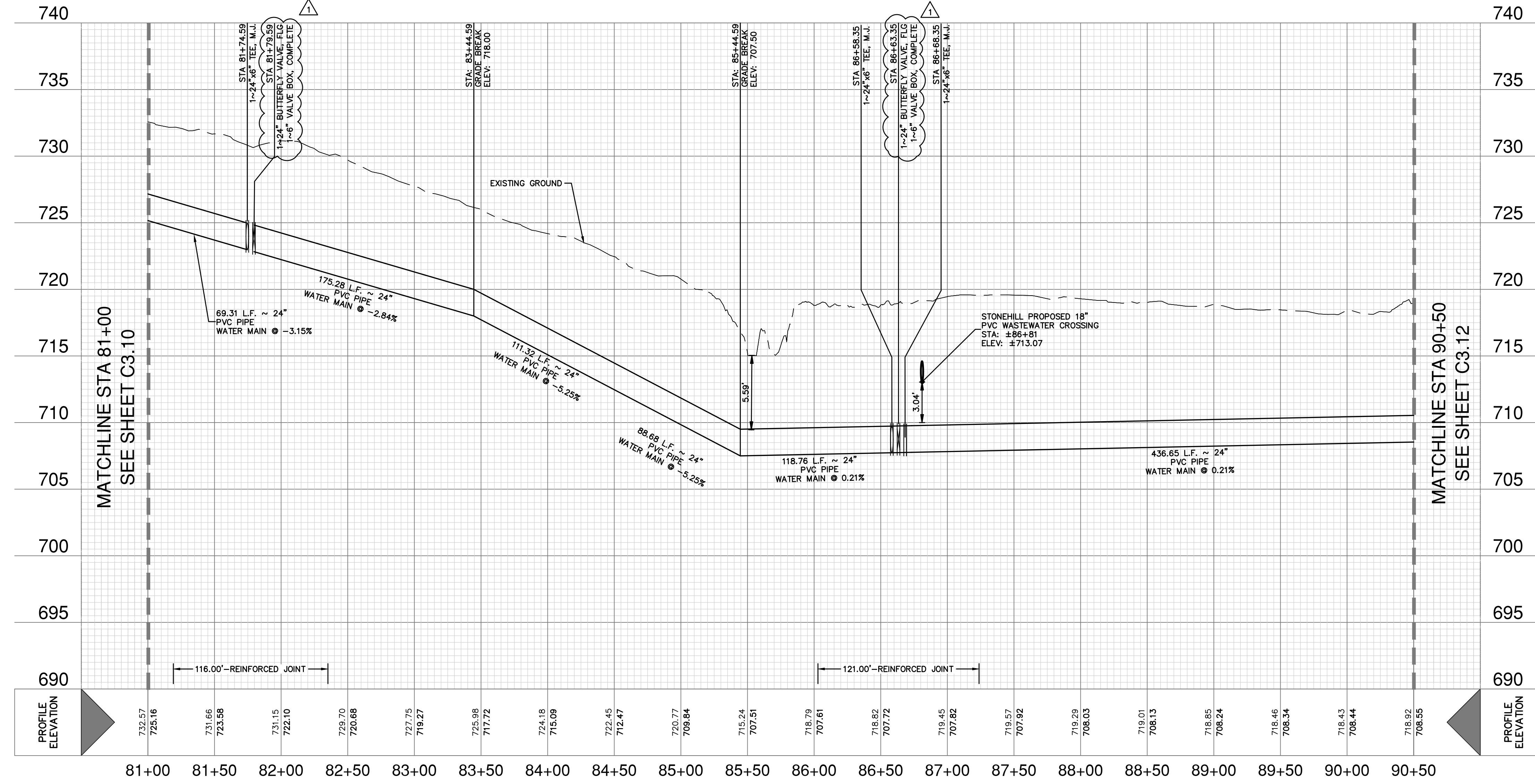


NOTE
ALL PIPE SHALL BE RESTRAINED 8" D.I.

DETAIL "A"

PROPOSED 24" WATER MAIN
STA. 81+00 TO STA. 90+50

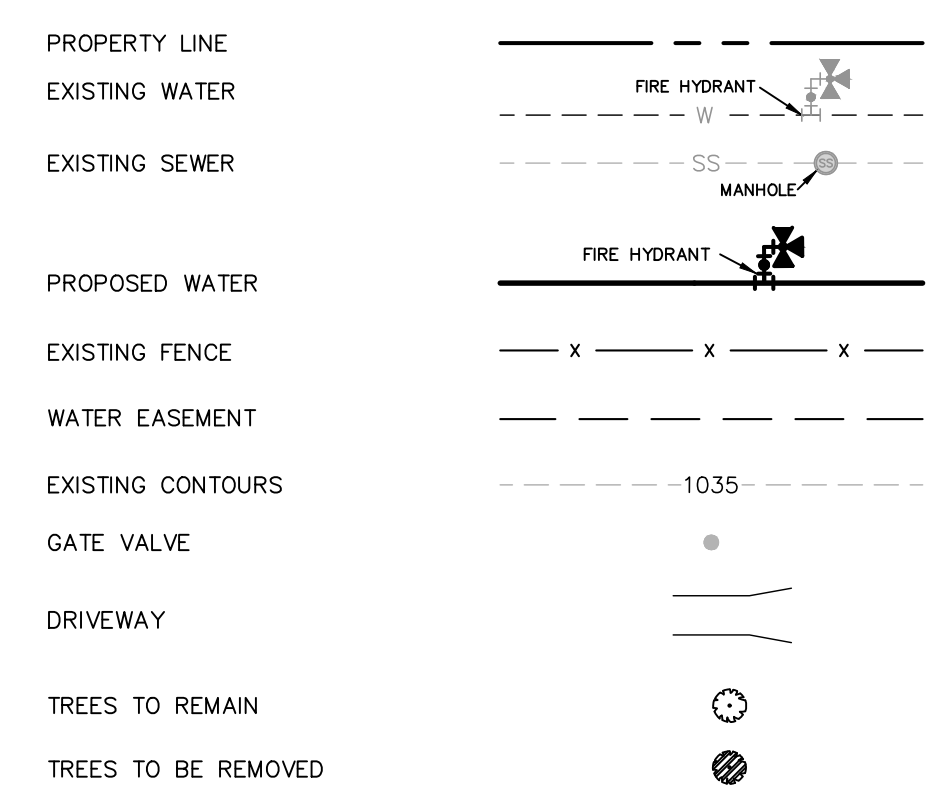
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'



LOCATION MAP
NOT-TO-SCALE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	988
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	38
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	950
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	2

WATER LEGEND



CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO 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.

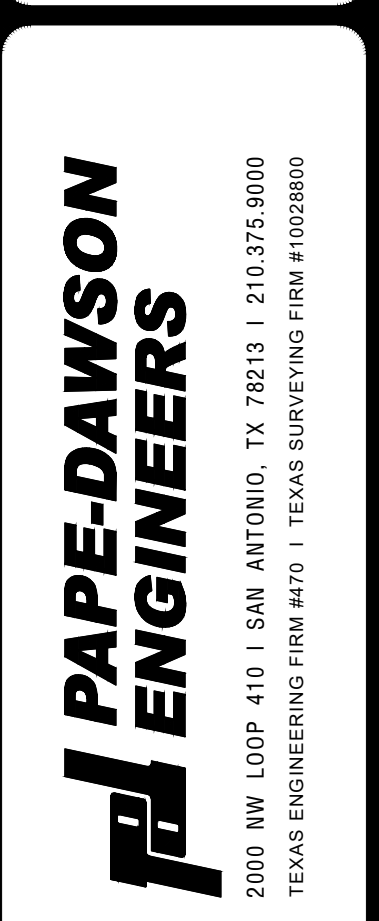
TRENCH EXCAVATION SAFETY PROTECTION

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WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS ZIP: 78232
 Phone: (210) 496-2668 FAX: N/A
 Saws Block Map: 078558, 074558
 Phase I - 4,765 LF ~ 16" PVC WATER Total Acreage: 8.14
 Total Linear Footage of Pipe Phase II - 15,036 LF ~ 24" PVC WATER Plot No. N/A
 Number of Lots: N/A TOTAL EDU'S: N/A SAWS JOB NO. 23-7003

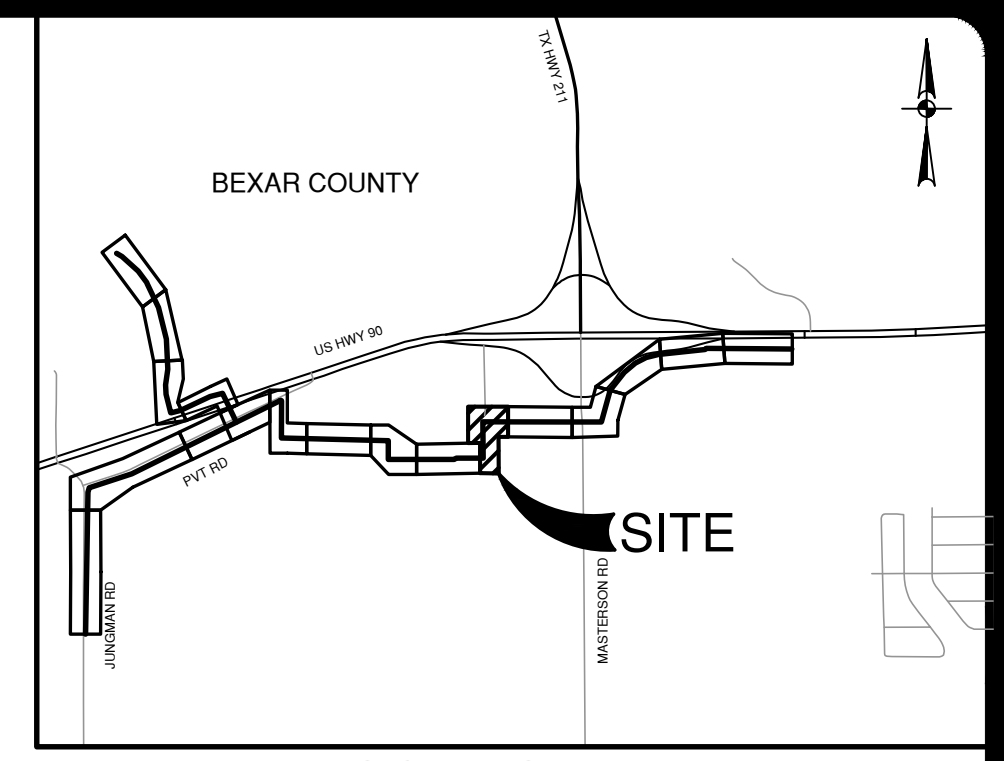
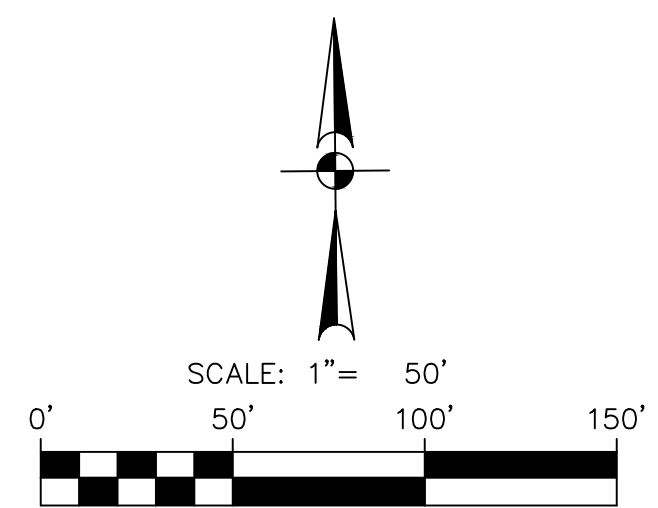
DATE	11/20/2023
NO.	1
REVISION	ADDENDUM 1



STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS
 PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 81+00 TO STA. 90+50

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.11

Date: June 1, 2023, 1:53 PM - User ID: crenning
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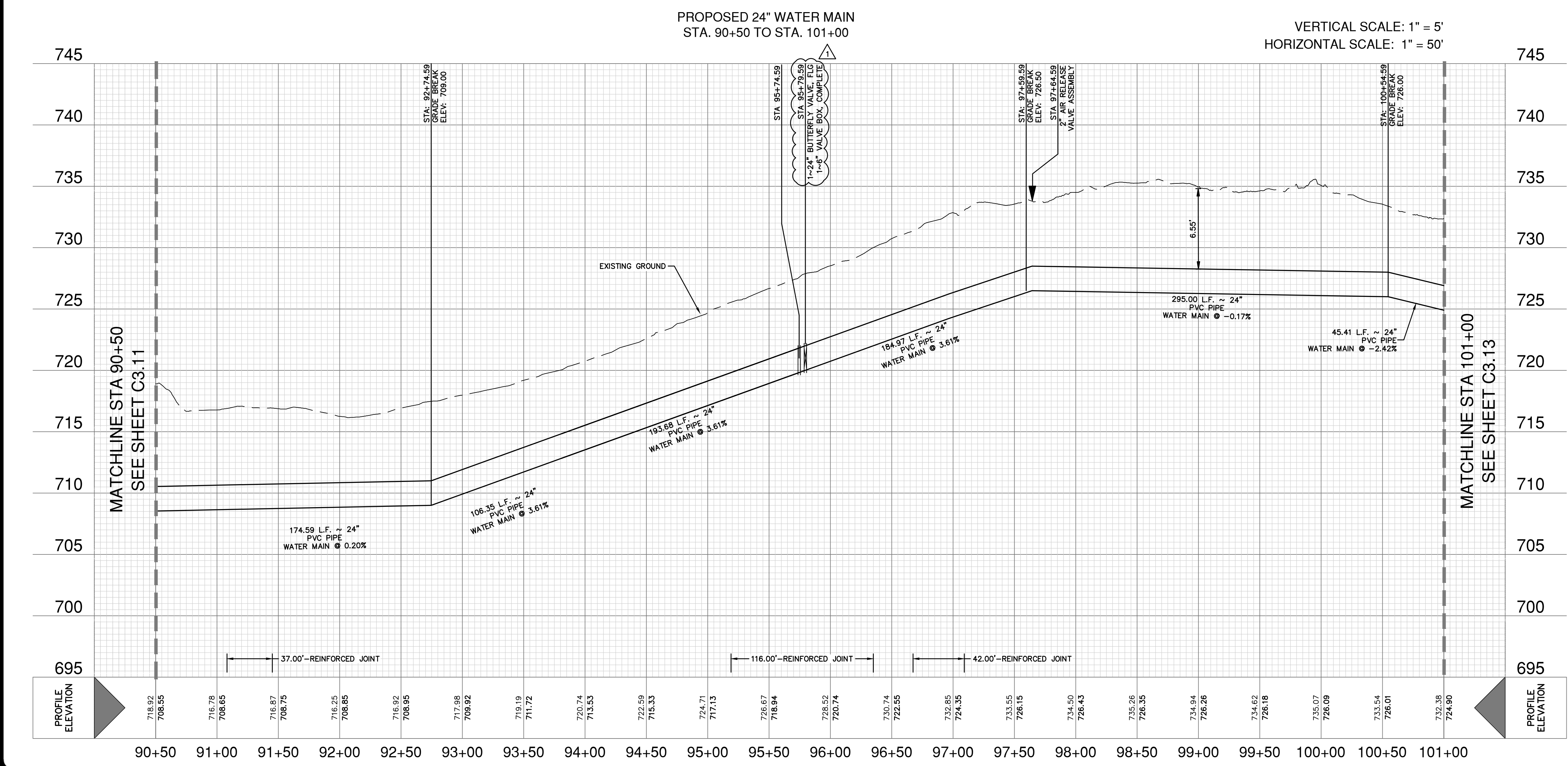
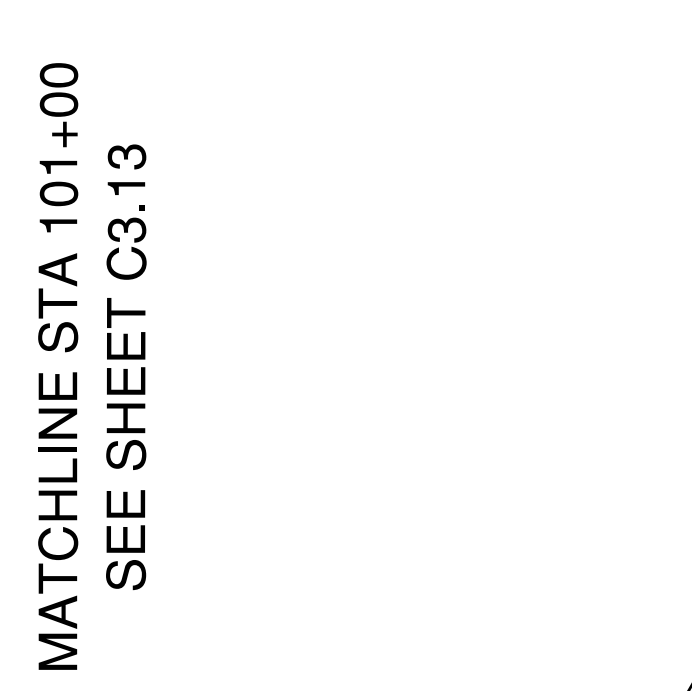
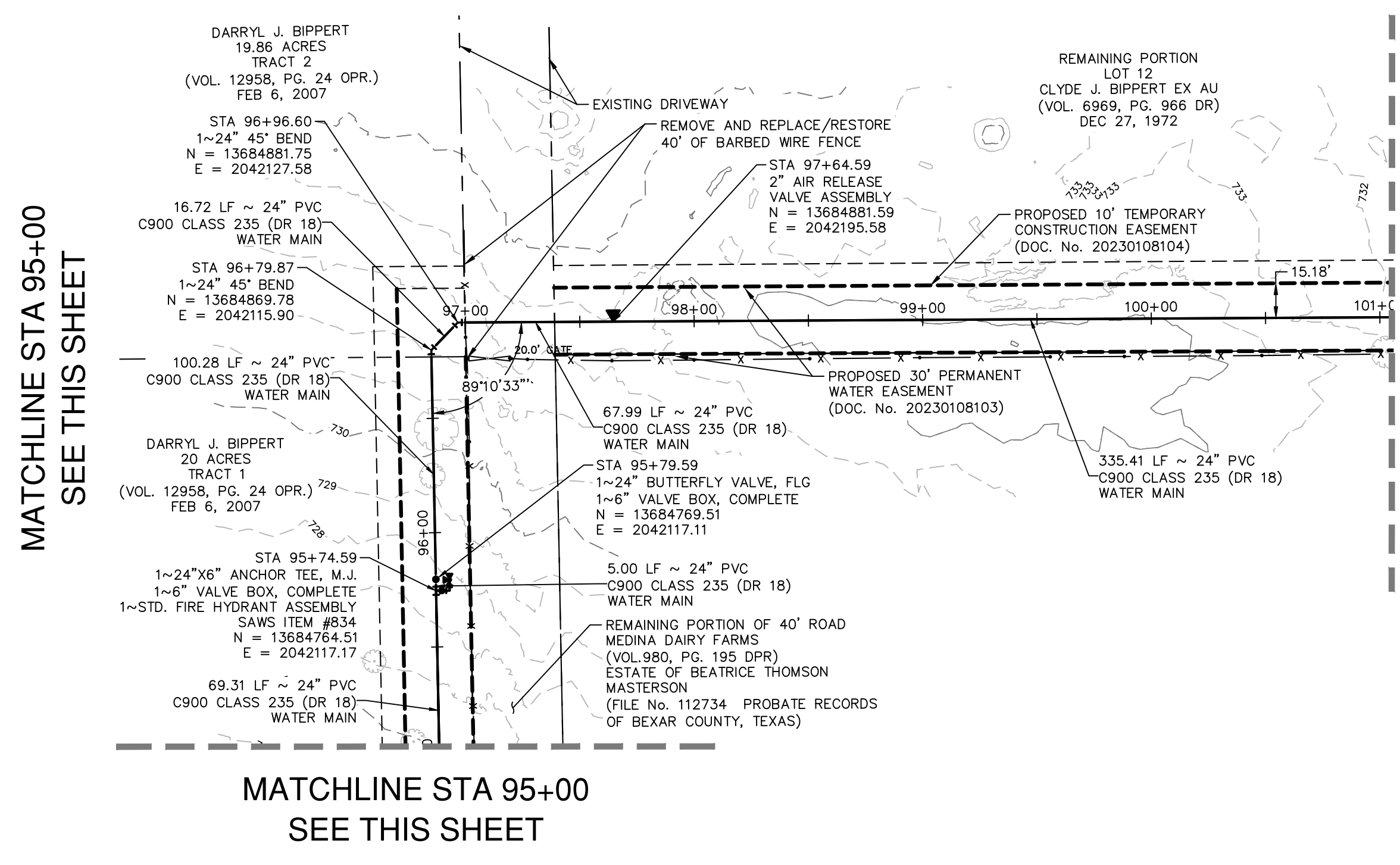
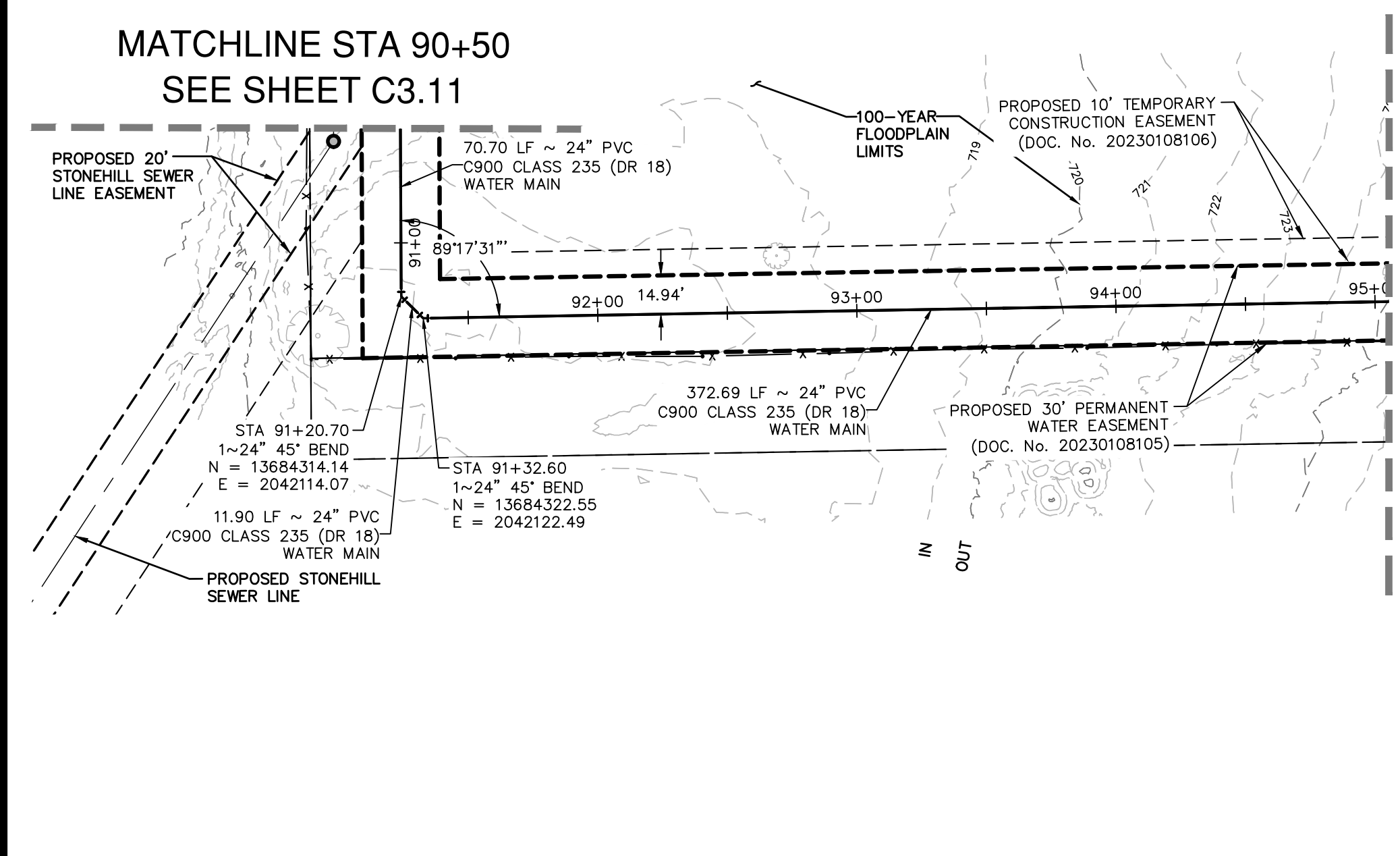
DATE	11/20/2023
NO.	1
REVISION	ADDENDUM 1



PAPE-DAWSON ENGINEERS
 2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #479 | TEXAS SURVEYING FIRM #1003890

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS
 PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 90+50 TO STA. 101+00

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.12



ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1050
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1050
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1

WATER LEGEND

PROPERTY LINE	---
EXISTING WATER	---
EXISTING SEWER	---
PROPOSED WATER	---
EXISTING FENCE	x x x
WATER EASEMENT	---
EXISTING CONTOURS	1035
GATE VALVE	○
DRIVEWAY	---
TREES TO REMAIN	○
TREES TO BE REMOVED	⊗

CAUTION UNDERGROUND UTILITIES

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TRENCH EXCAVATION SAFETY PROTECTION

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WATER: SAWS PRESSURE ZONE 930
 STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS ZIP: 78232
Phone: (210) 498-2658 FAX: N/A
SAWS Block Map: 078558, 074558
Phase I - 4,765 LF ~ 16" PVC WATER Total Acreage: 8.14
Total Linear Footage of Pipe Phase II - 15,036 LF ~ 24" PVC WATER Plat No. N/A
Number of Lots: N/A TOTAL EDU'S: N/A SAWS JOB NO. 23-7003

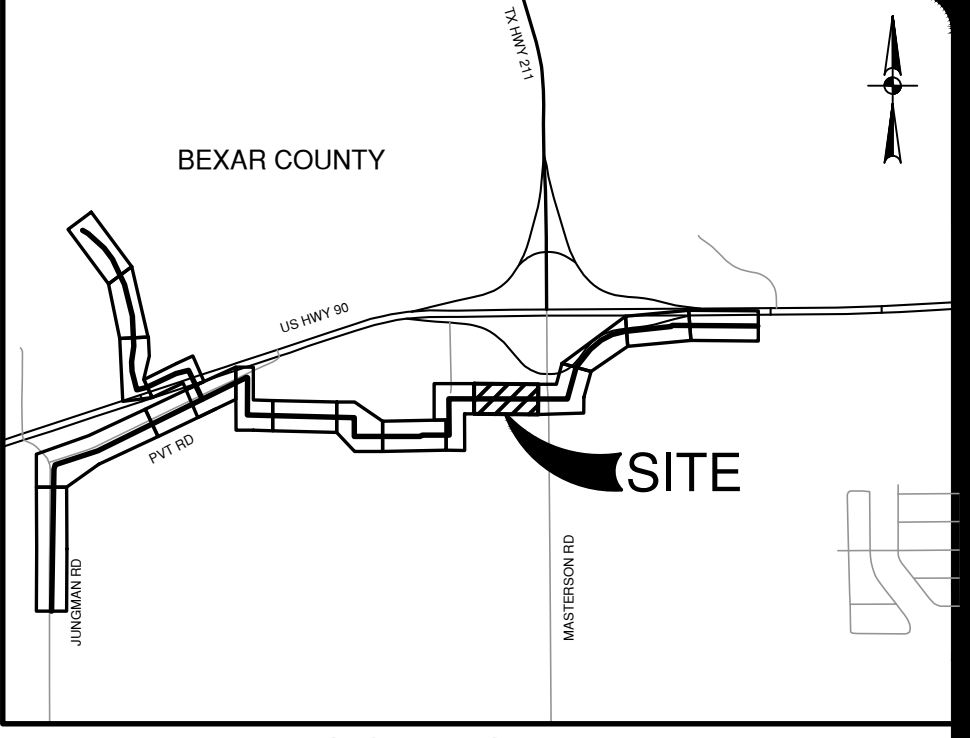
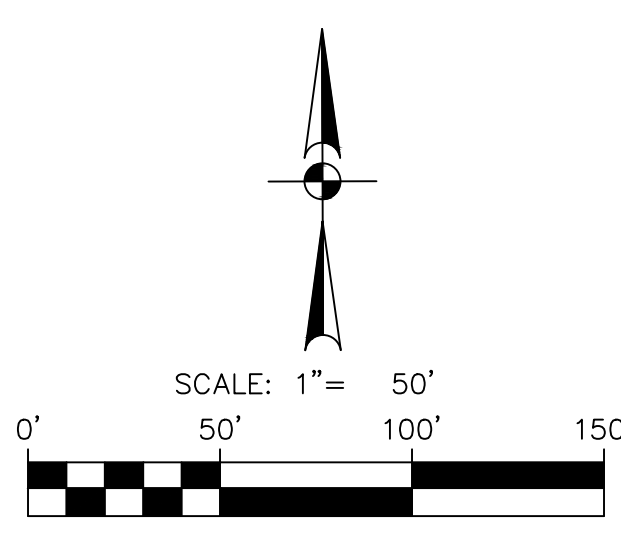
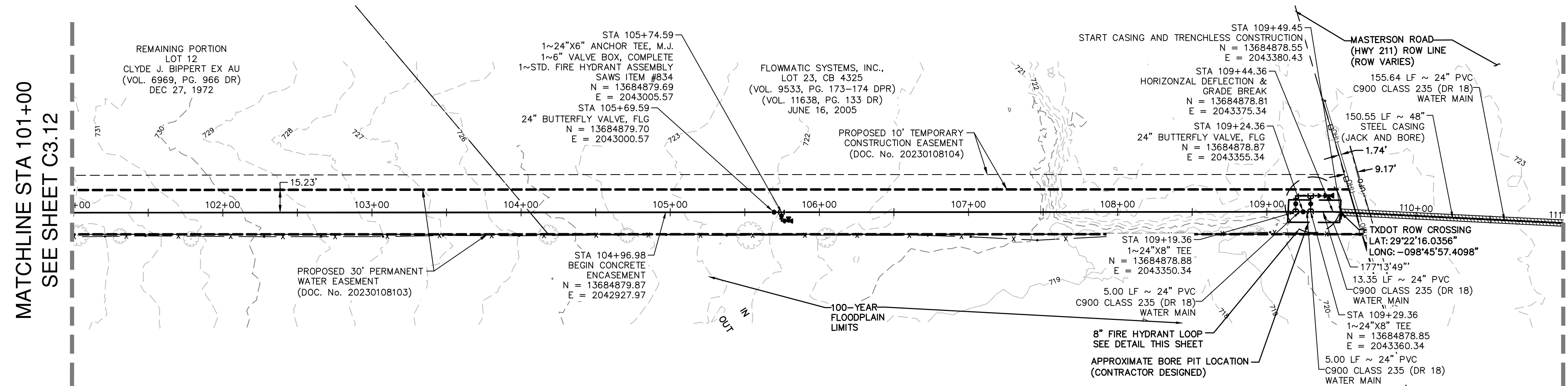
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NOTE:

THE CONTRACTOR IS NOT PERMITTED TO UTILIZE TxDOT ROW TO ACCESS THE PROJECT AREA. ACCESS WILL ONLY BE ALLOWED VIA APPROVED CONSTRUCTION ENTRANCES AS SHOWN ON PLANS.

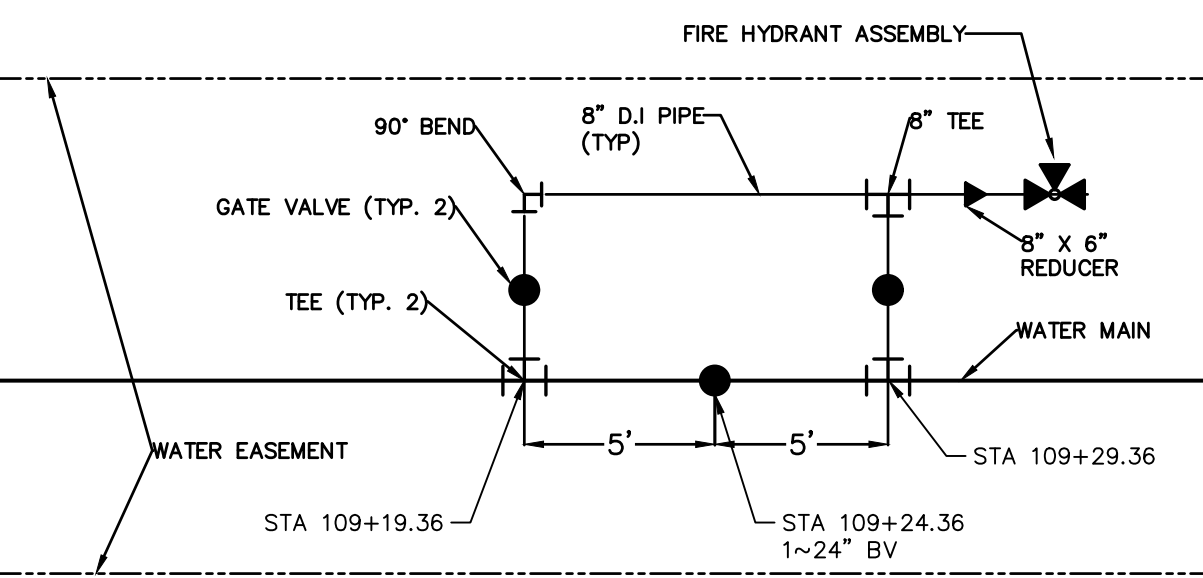
MATCHLINE STA 101+00
SEE SHEET C3.12

MATCHLINE STA 111+00
SEE SHEET C3.14



QUANTITY TABLE

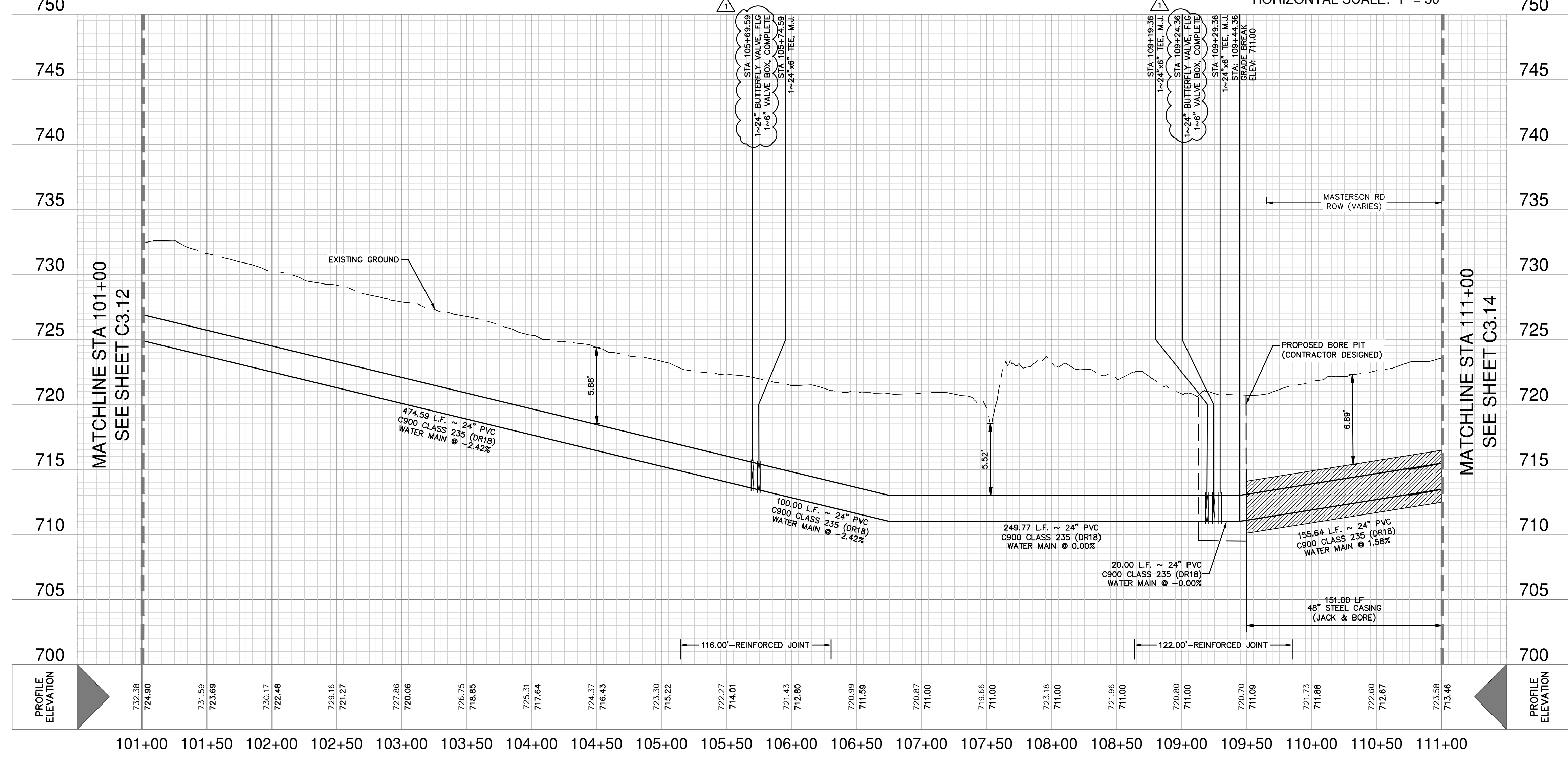
ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	887
818	8" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	38
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	849
828	8" GATE VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	2
856	48" PIPE JACKING	LF	151
856.1	48" STEEL CASING	LF	151
856.2	24" PVC CLASS 235 (DR 18) CARRIER PIPE	LF	151



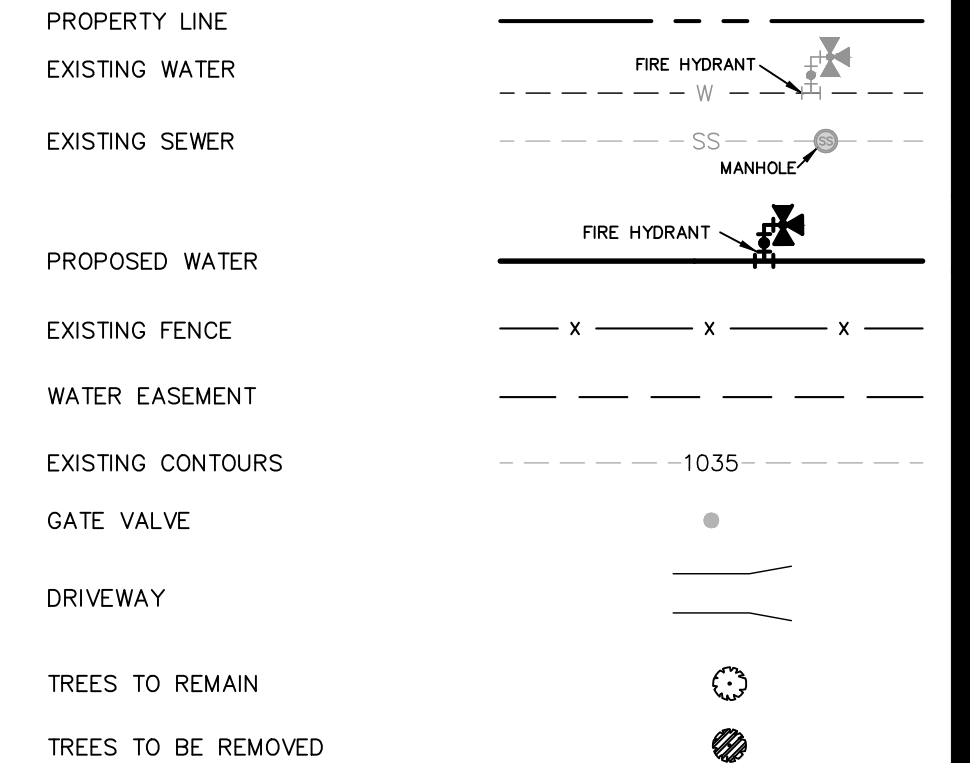
DETAIL "A"

**PROPOSED 24" WATER MAIN
STA. 101+00 TO STA. 111+00**

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



WATER LEGEND



CAUTION UNDERGROUND UTILITIES

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL BE REQUIRED TO LOCATE ALL PUBLIC OR PRIVATE UTILITIES INCLUDING BUT NOT LIMITED TO: WATER, SEWER, TELEPHONE, AND FIBER OPTIC LINES, SITE LIGHTING ELECTRIC, SECONDARY ELECTRIC, PRIMARY ELECTRICAL DUCT BANKS, LANDSCAPE IRRIGATION FACILITIES, AND GAS LINES. THE CONTRACTOR MUST CONTACT 1-800-DIG-TESS AND CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION AND/OR START OF CONSTRUCTION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES (WHETHER SHOWN ON PLANS OR NOT) WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. ANY UTILITY CONFLICTS THAT ARISE SHOULD BE COMMUNICATED TO THE ENGINEER IMMEDIATELY AND PRIOR TO 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.

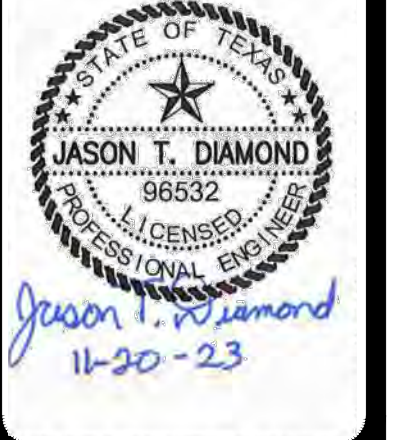
TRENCH EXCAVATION SAFETY PROTECTION

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**WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS Zip: 78232
Phone: (210) 498-2658 FAX: N/A
SAWS Block Map# 076558, 074558
SAWS Block Map# 076558, 074558 PHASE I - 4,765 LF ~ 16" PVC WATER Total Acreage 8.14
Total Linear Footage of Pipe PHASE II - 15,036 LF ~ 24" PVC WATER Plat No. N/A
Number of Lots N/A TOTAL DUS' N/A SAWS JOB NO. 23-7003

DATE: 11/20/2023
NO. REVISION: 1
APPENDIX: 1



PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003800

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS
PHASE II - WATER MAIN PLAN AND PROFILE
STA. 101+00 TO STA. 111+00

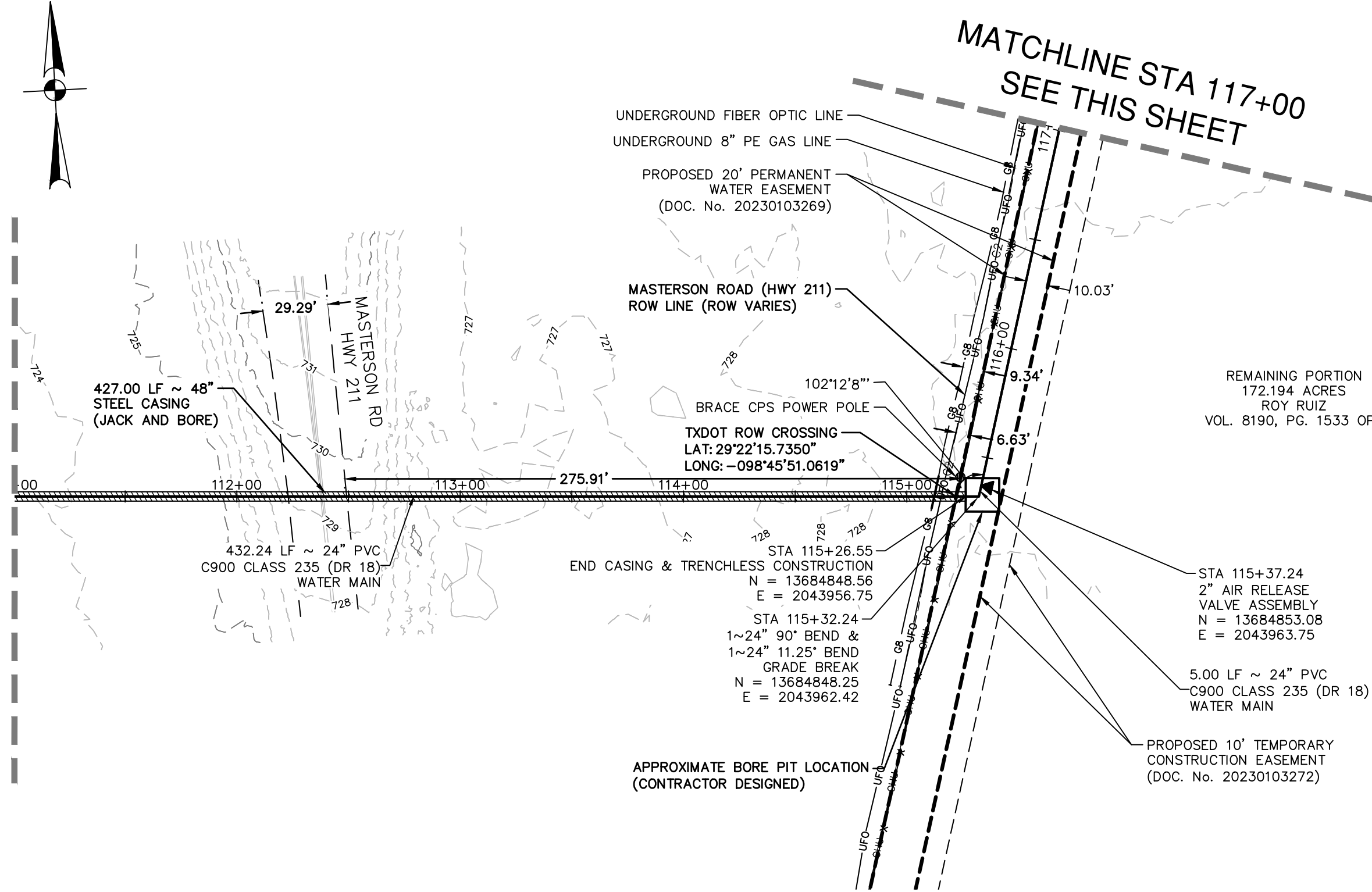
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JOB NO. 12747-00
DATE NOVEMBER 2023
DESIGNER CN
CHECKED SG DRAWN JD
SHEET C3.13

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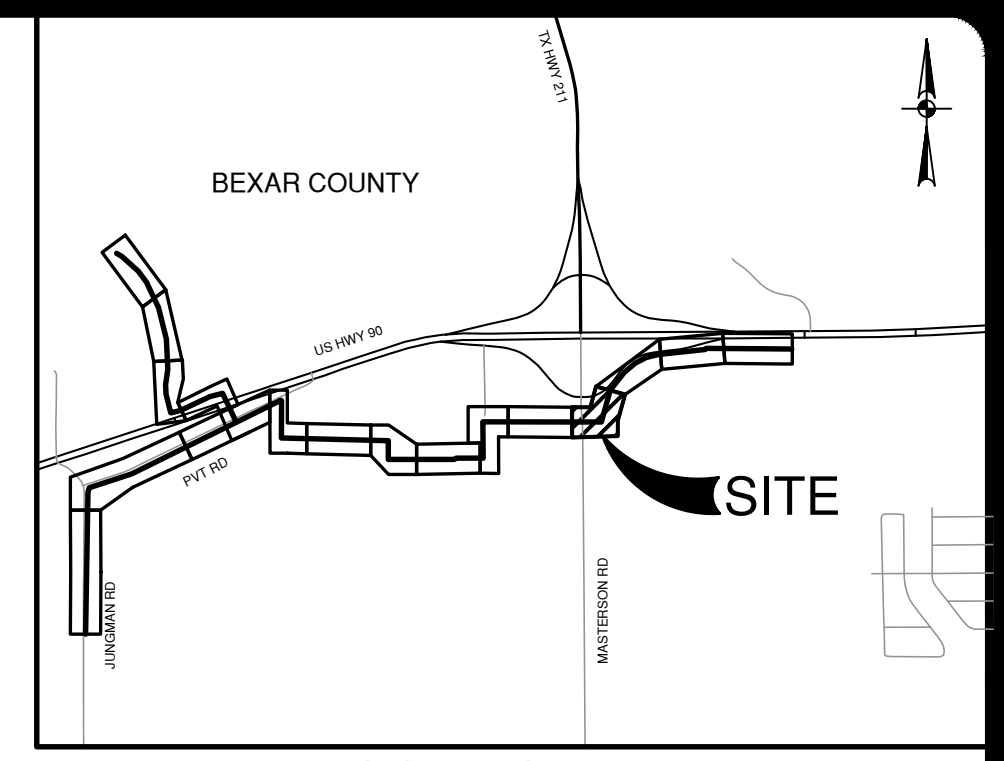
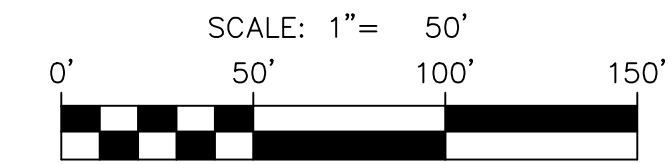
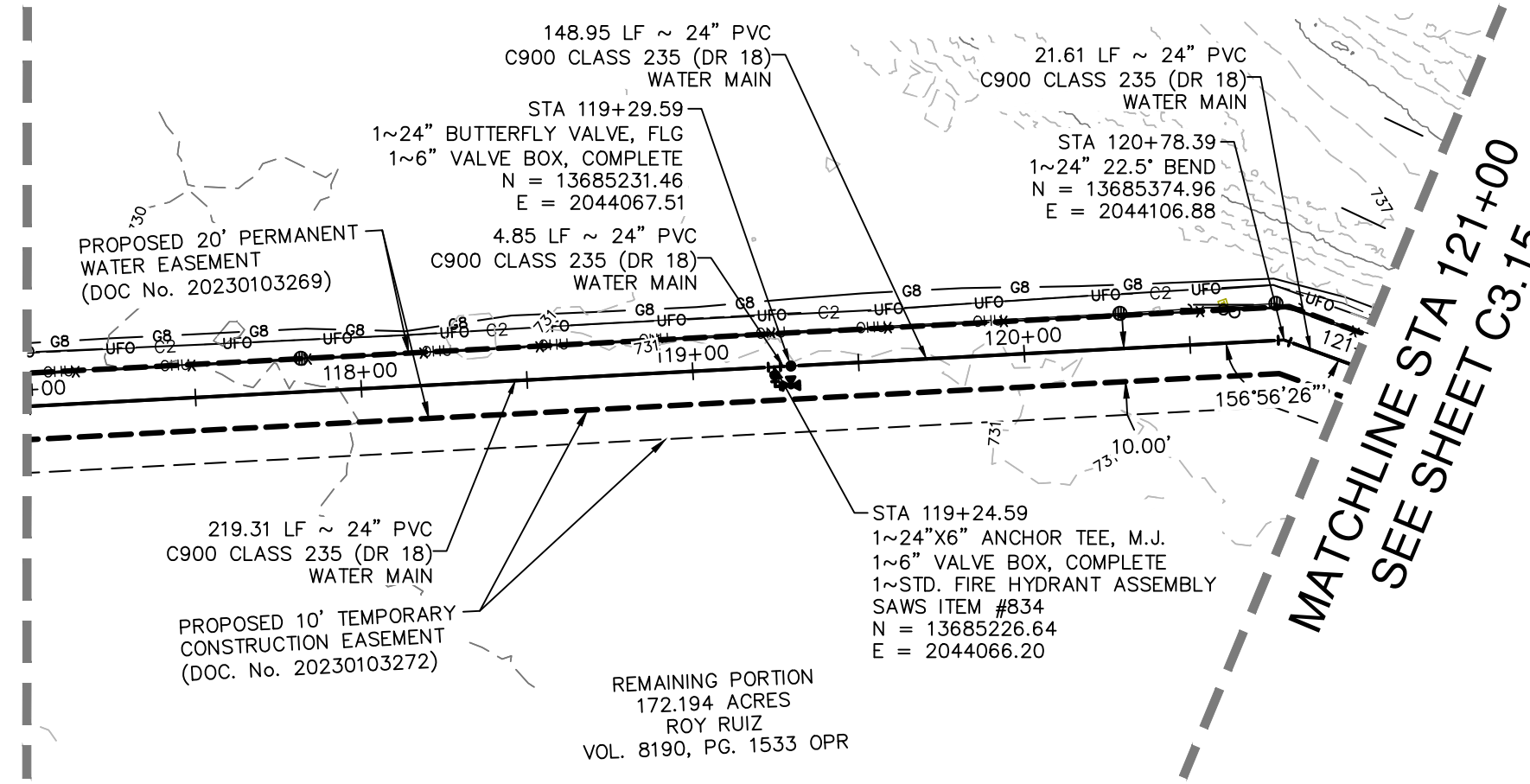
THE CONTRACTOR IS NOT PERMITTED TO UTILIZE TxDOT ROW TO ACCESS THE PROJECT AREA. ACCESS WILL ONLY BE ALLOWED VIA APPROVED CONSTRUCTION ENTRANCES AS SHOWN ON PLANS.



MATCHLINE STA 111+00
SEE SHEET C3.13



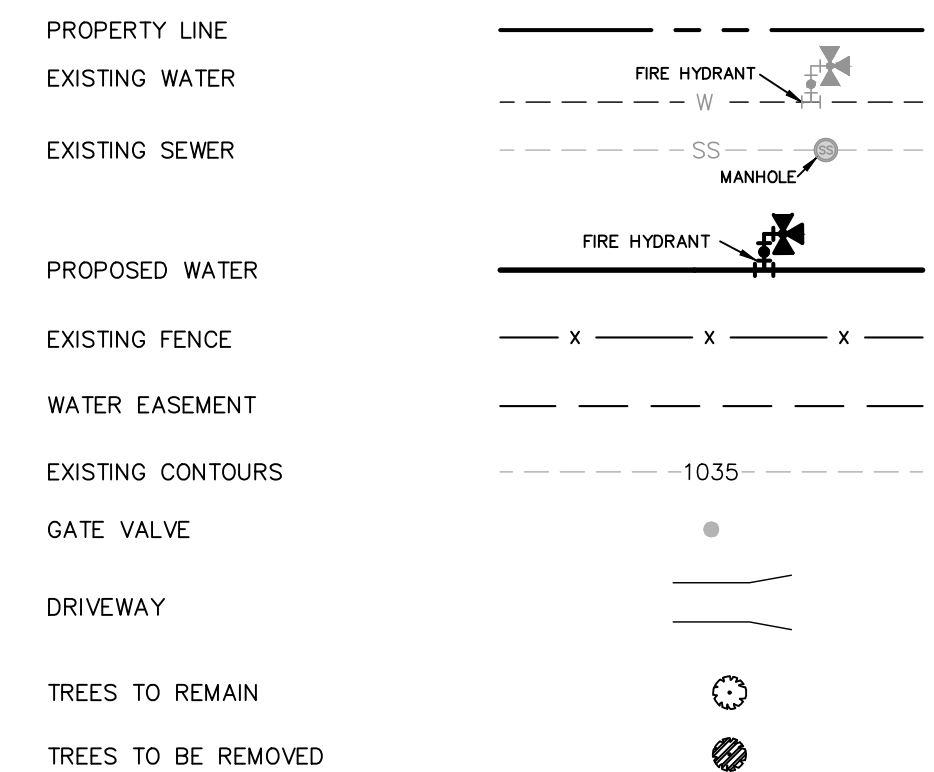
MATCHLINE STA 117+00
SEE THIS SHEET



LOCATION MAP
NOT-TO-SCALE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	573
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	573
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1
856	PIPE JACKING	LF	427
856.1	48" STEEL CASING	LF	427
856.2	24" PVC CLASS 235 (DR 18) CARRIER PIPE	LF	427

WATER LEGEND



CAUTION UNDERGROUND UTILITIES

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TRENCH EXCAVATION SAFETY PROTECTION

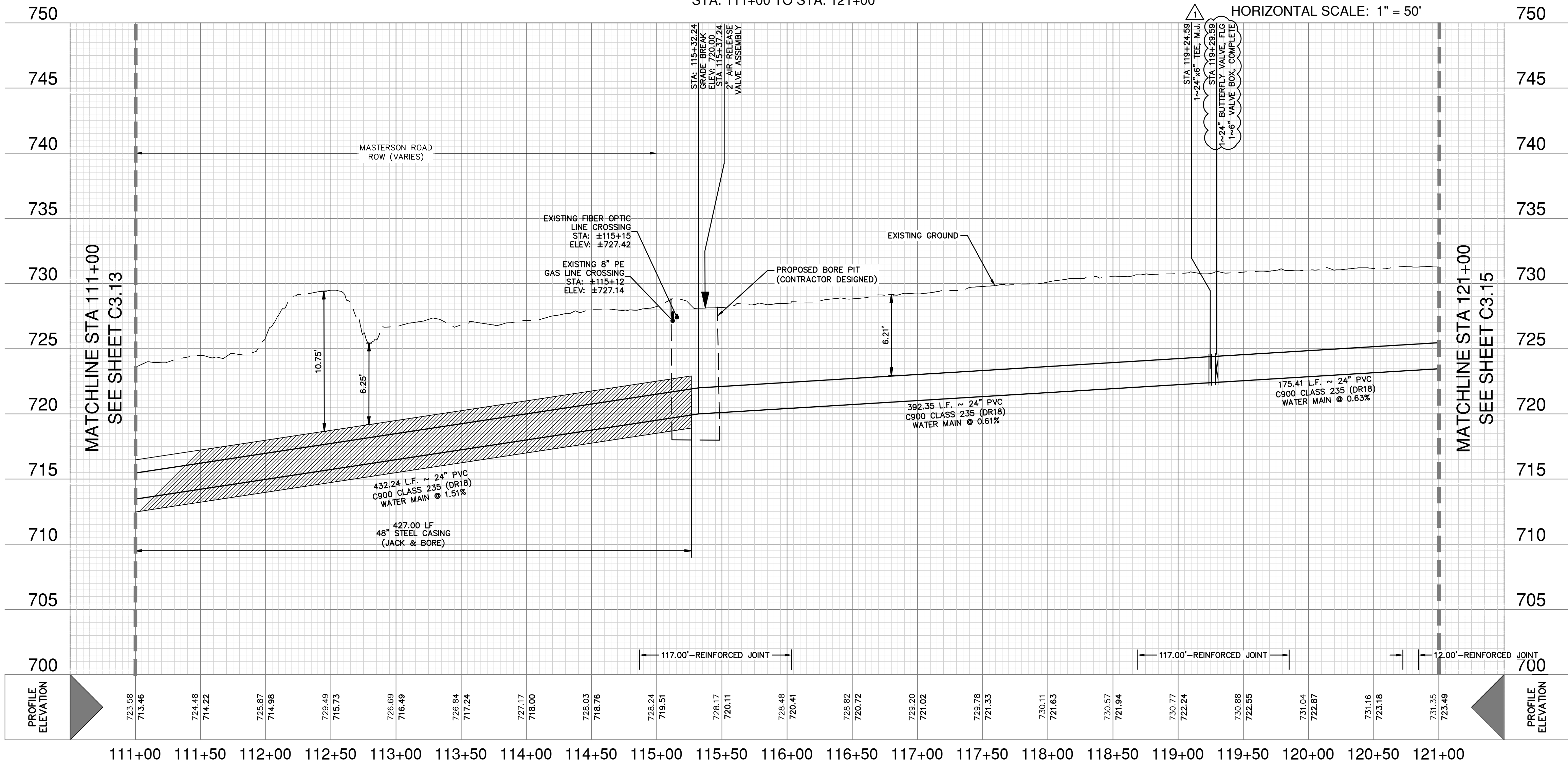
CONTRACTOR AND/OR CONTRACTOR'S INDEPENDENTLY RETAINED EMPLOYEE OR STRUCTURAL DESIGN/ GEOTECHNICAL/ SAFETY EQUIPMENT CONSULTANT, IF ANY, SHALL REVIEW THESE PLANS AND ANY AVAILABLE GEOTECHNICAL INFORMATION AND THE ANTICIPATED INSTALLATION SITES WITHIN THE PROJECT WORK AREA IN ORDER TO IMPLEMENT CONTRACTOR'S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

**WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION**

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS ZIP: 78232
Phone# (210) 496-2668 FAX# N/A
SAWS Block Map# 078558_074558
Phase I - 4.765 LF - 16" PVC WATER Total Acreage .814
Total Linear Footage of Pipe PHASE II - 15,036 LF - 24" PVC WATER Plot No. N/A
Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

PROPOSED 24" WATER MAIN
STA. 111+00 TO STA. 121+00

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



Date: June 1, 2023, 1:54 PM - User ID: crenning
File: P:\1747\Design\Civil\Water\W...-12747-00-PH...J.dwg

DATE: 11/20/2023
NO. REVISION: 1
ADDENDUM: 1

STATE OF TEXAS
JASON T. DIAMOND
96532
PROFESSIONAL ENGINEER

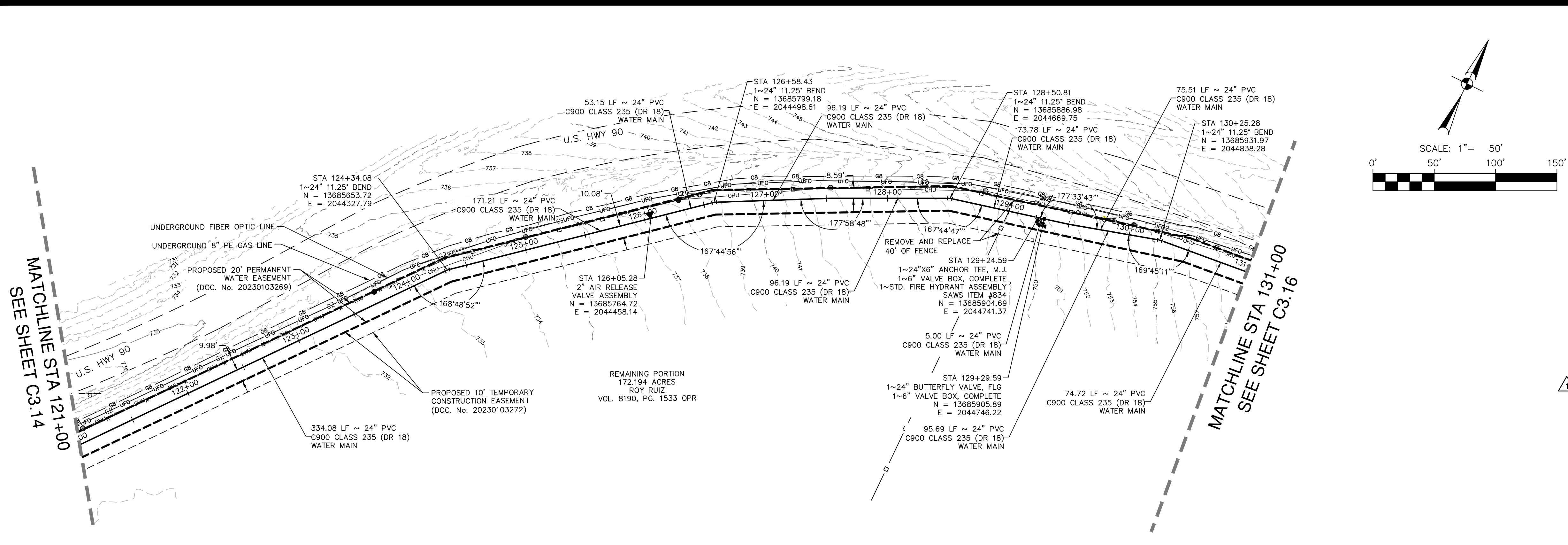
Jason T. Diamond
11-20-23

PAPE-DAWSON ENGINEERS
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003800

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS

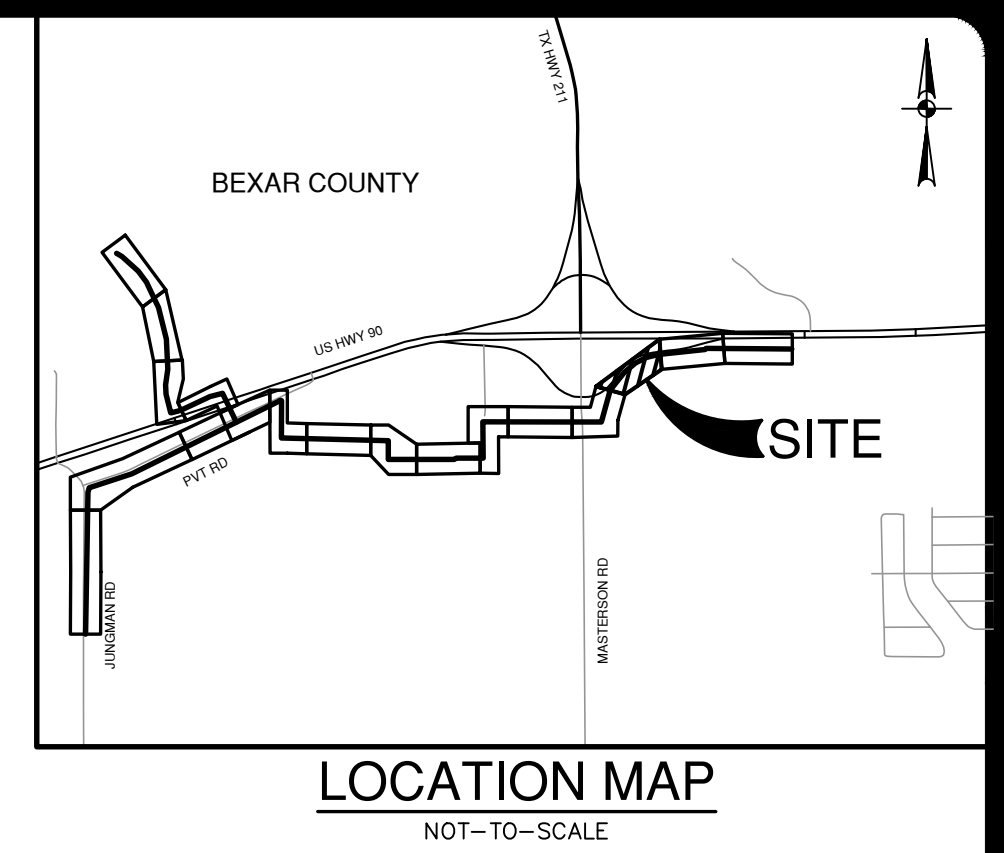
PHASE II - WATER MAIN PLAN AND PROFILE
STA. 111+00 TO STA. 121+00

PLAT NO. N/A
JOB NO. 12747-00
DATE: NOVEMBER 2023
DESIGNER: CN
CHECKED: SG DRAWN: JD
SHEET: C3.14

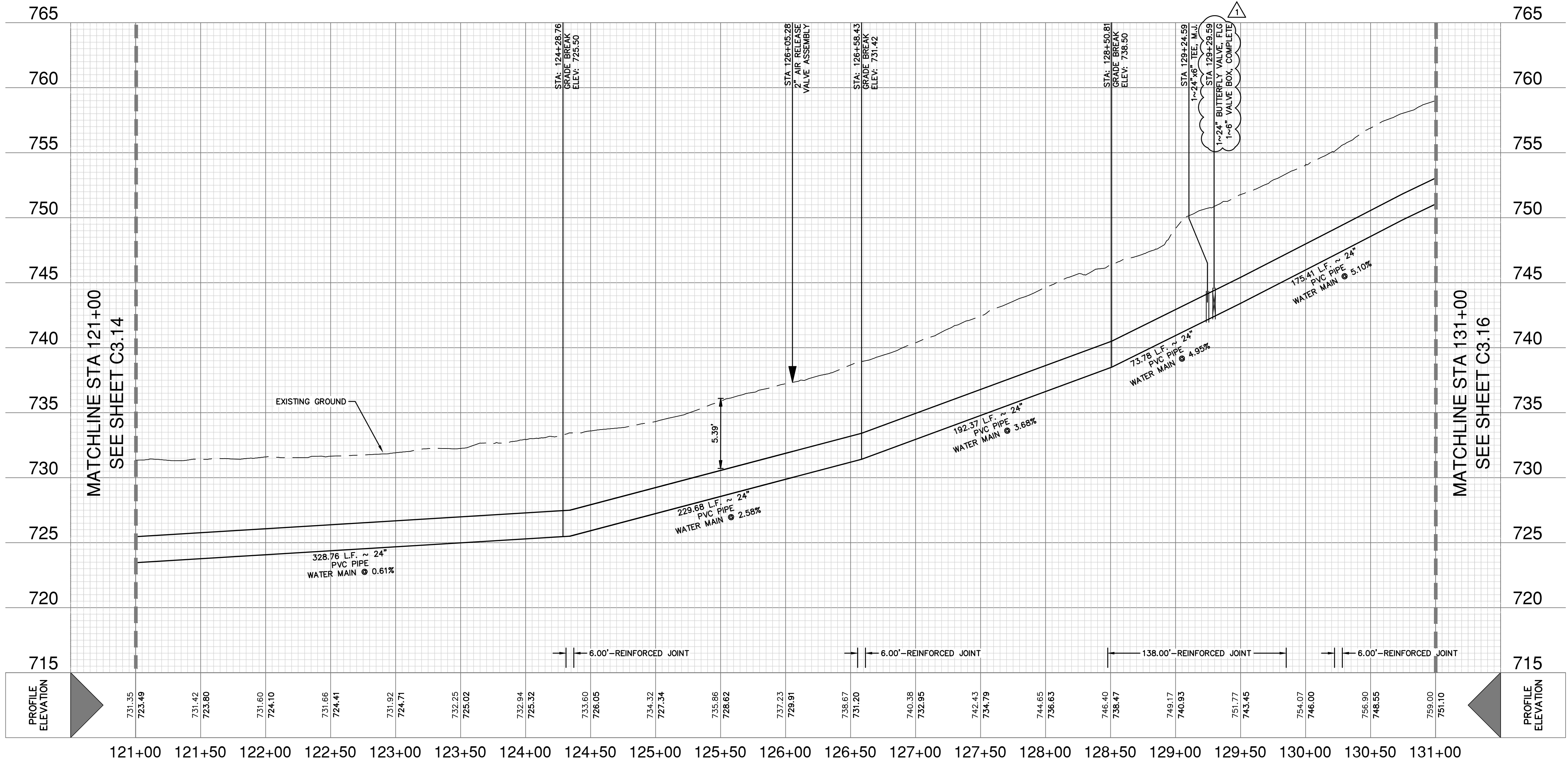
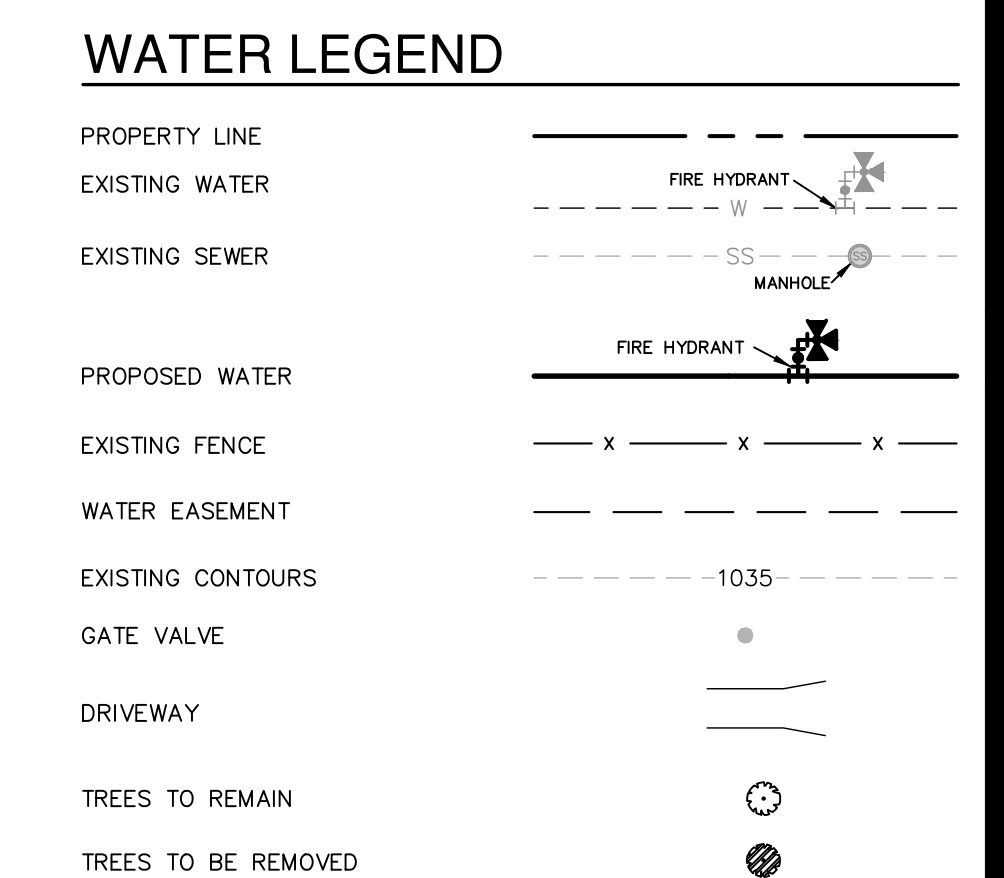


PROPOSED 24" WATER MAIN
 STA. 121+00 TO STA. 131+00

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



QUANTITY TABLE			
ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1000
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1000
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
844	2" TEMPORARY BLOW-OFF ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1



DATE: 11/20/2023
 NO. REVISION: 1
 ADDENDUM: 1

STATE OF TEXAS
 JASON T. DIAMOND
 PROFESSIONAL ENGINEER
 96532
 Jason T. Diamond
 11-20-23

PAPE-DAWSON ENGINEERS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1002800

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 121+00 TO STA. 131+00

PLAT NO. N/A
 JOB NO. 12747-00
 DATE NOVEMBER 2023
 DESIGNER CN
 CHECKED SG DRAWN JD
 SHEET C3.15

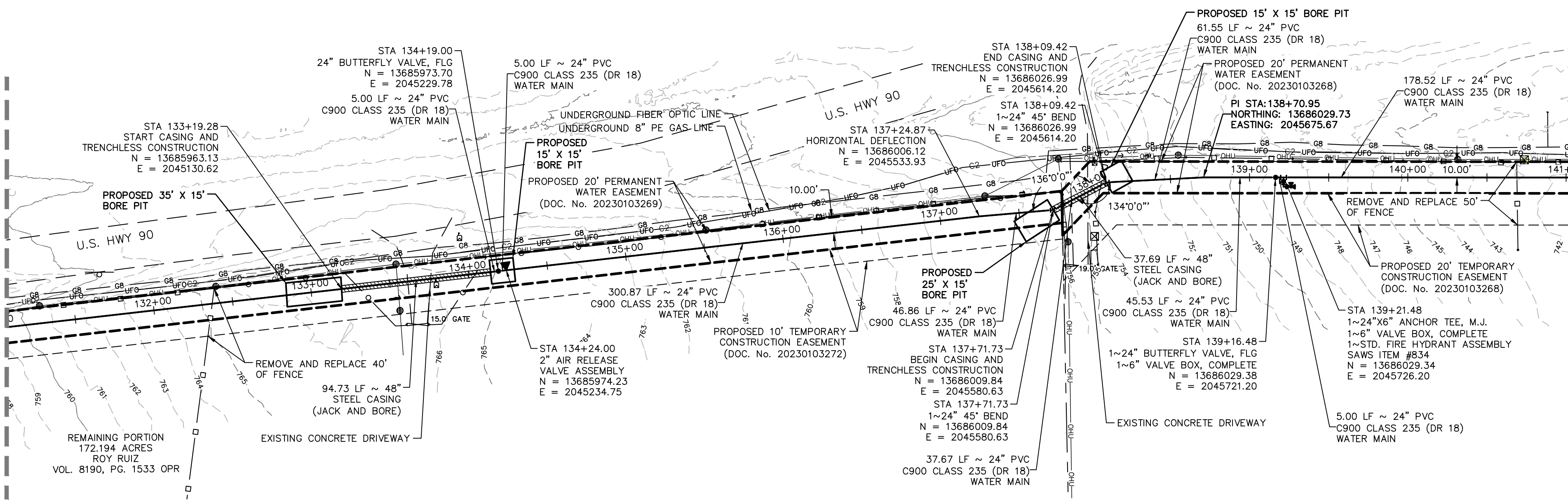
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THIS DOCUMENT HAS BEEN PRODUCED FROM MATERIAL THAT WAS STORED AND/OR TRANSMITTED ELECTRONICALLY AND MAY HAVE BEEN INADVERTENTLY ALTERED. RELY ONLY ON FINAL HARDCOPY MATERIALS BEARING THE CONSULTANTS ORIGINAL SIGNATURE AND SEAL. IMAGERY PROVIDED BY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

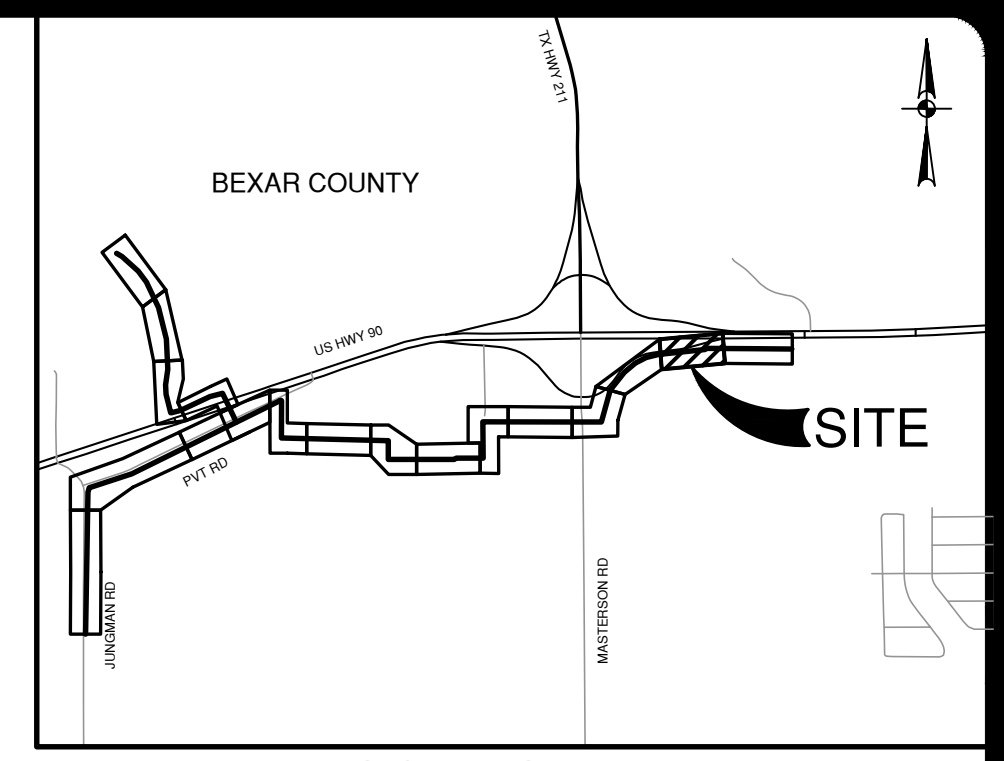
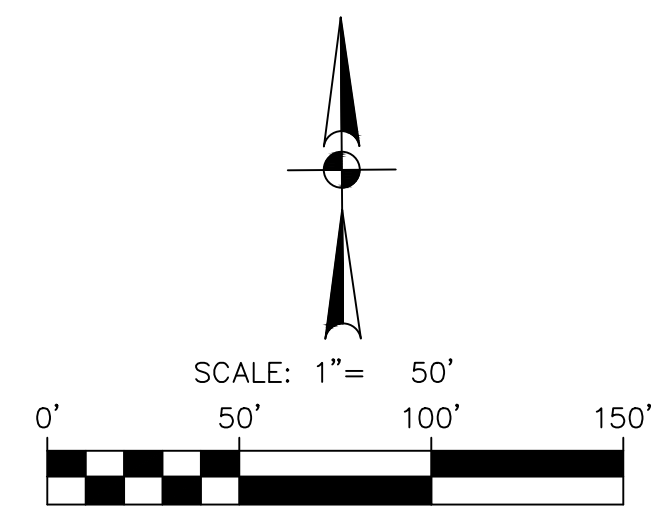
MATCHLINE STA 131+00
SEE SHEET C3.15

MATCHLINE STA 131+00
SEE SHEET C3.15

MATCHLINE STA 141+00
SEE SHEET C3.17

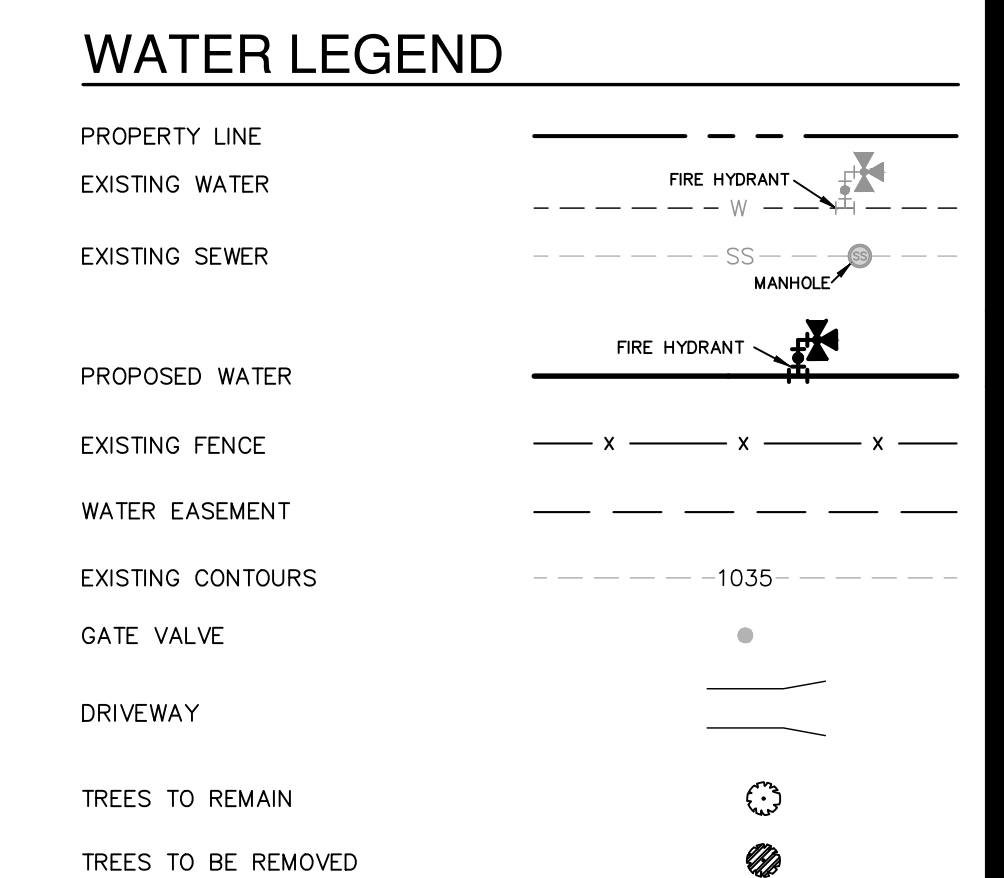


MATCHLINE STA 141+00
SEE SHEET C3.17



QUANTITY TABLE
NOT-TO-SCALE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	867
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	867
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	2
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	2" AIR RELEASE VALVE ASSEMBLY	EA	1
846	3" AIR RELEASE VALVE ASSEMBLY	EA	0
856	48" PIPE JACKING	LF	133
856.1	48" STEEL CASING	LF	133
856.2	24" PVC CLASS 235 (DR 18) CARRIER PIPE	LF	133



CAUTION UNDERGROUND UTILITIES

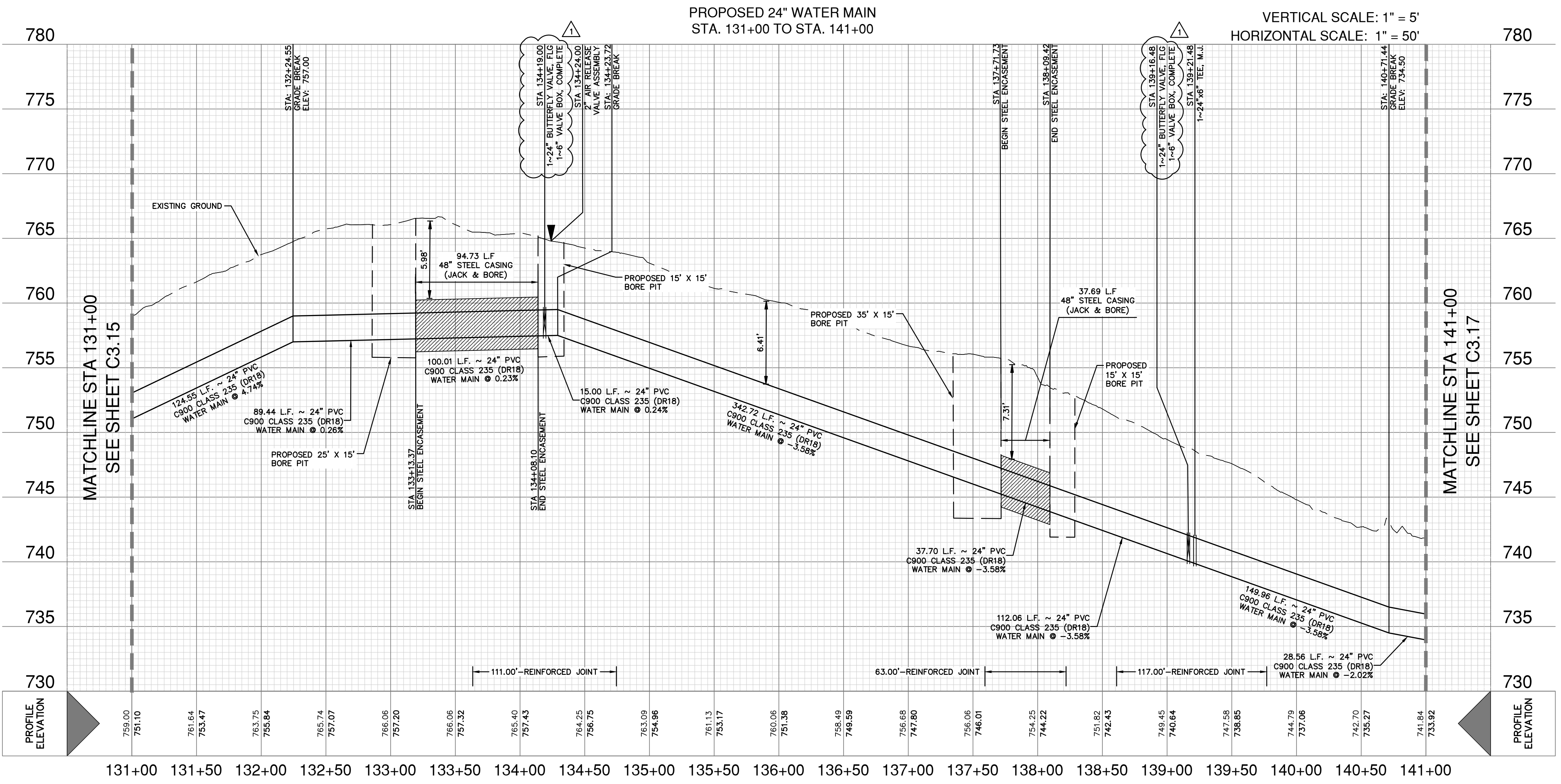
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TRENCH EXCAVATION SAFETY PROTECTION

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.

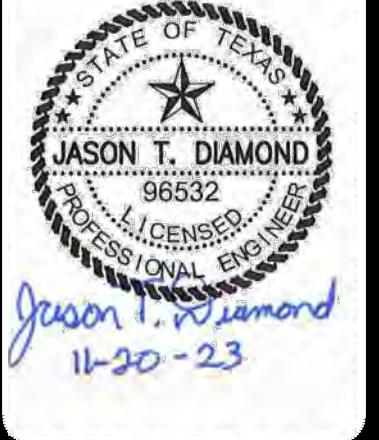
WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS Zip: 78232
 Phone: (210) 496-2668 FAX: N/A
 SAWS Block Map #: 076558, 074558
 Phase I - 4,765 LF ~ 16" PVC WATER Total Acreage: 8.14
 Total Linear Footage of Pipe: PHASE II - 15,036 LF ~ 24" PVC WATER Plot No. N/A
 Number of Lots: N/A TOTAL EDU'S: N/A SAWS JOB NO. 23-7003



DATE: 11/20/2023

NO.	REVISION
1	ADDENDUM 1



PAPE-DAWSON ENGINEERS
 2000 HW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #470 | TEXAS SURVEYING FIRM #1003800

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS

PHASE II - WATER MAIN PLAN AND PROFILE
STA. 131+00 TO STA. 141+00

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN JD
SHEET	C3.16

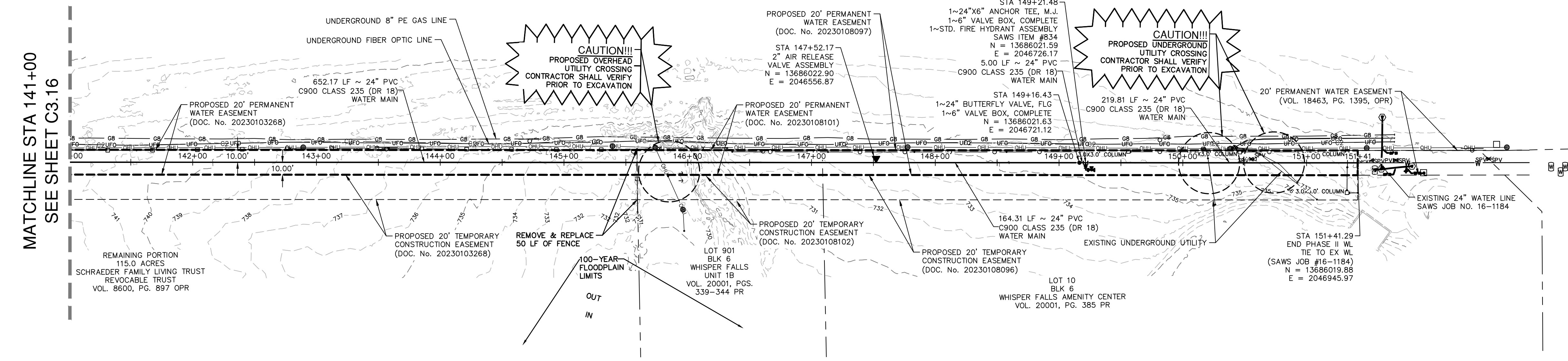
DISINFECTION AND CONNECTION NOTES:

FOR CHLORINE INJECTION:
 2-1" CORPORATION STOP, C.C. X LP.
 2-1" COPPER TUBING, CUT AS REQ'D
 2-1 1/2" THD. SOLID CAPS, THR.
 2-1" COMP. X 1 1/2" COUPLING, CURB STOP
 CONTRACTOR SHALL PROVIDE A 2" JUMPER CONNECTION TO LOAD NEW MAIN

AFTER RELEASED FOR SERVICE,
 TIE IN PROPOSED 16" PVC WATER MAIN INTO EXISTING 24" WATER MAIN (SAWS JOB NO. 16-1184) WITH:
 1- 24" GATE VALVE, M.J.
 1- 6" VALVE BOX, COMPLETE
 VALVE TO REMAIN CLOSED UNTIL AFTER DISINFECTION BY CONTRACTORS & ACCEPTANCE BY SAWS.

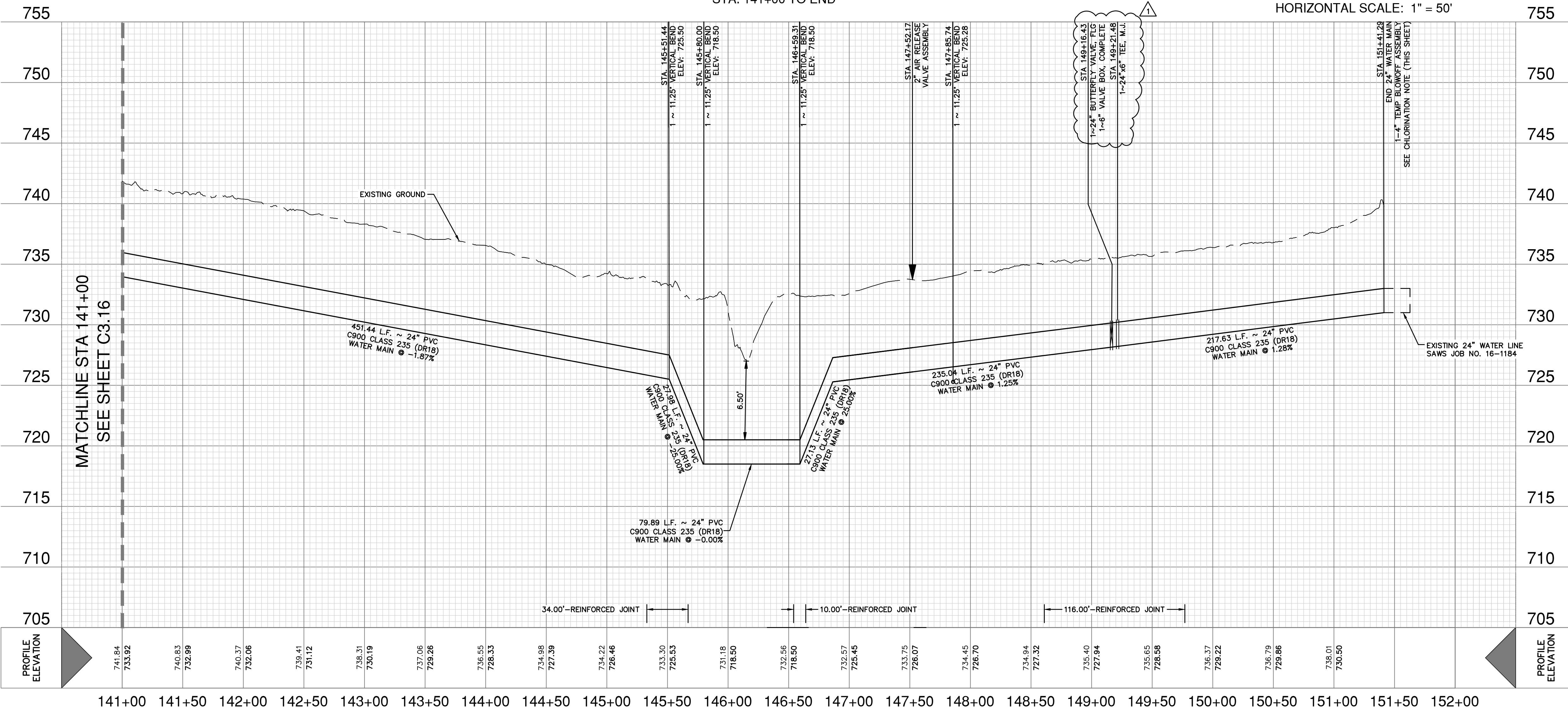
2" BLOWOFF ASSEMBLY (TEMPORARY)
 REF. SAWS STD. DWG DD844-01

CONTRACTOR SHALL TIE INTO EXISTING 16" WATER MAIN (SAWS JOB NO. 16-1184). AFTER DISINFECTION AND ACCEPTANCE BY SAWS.

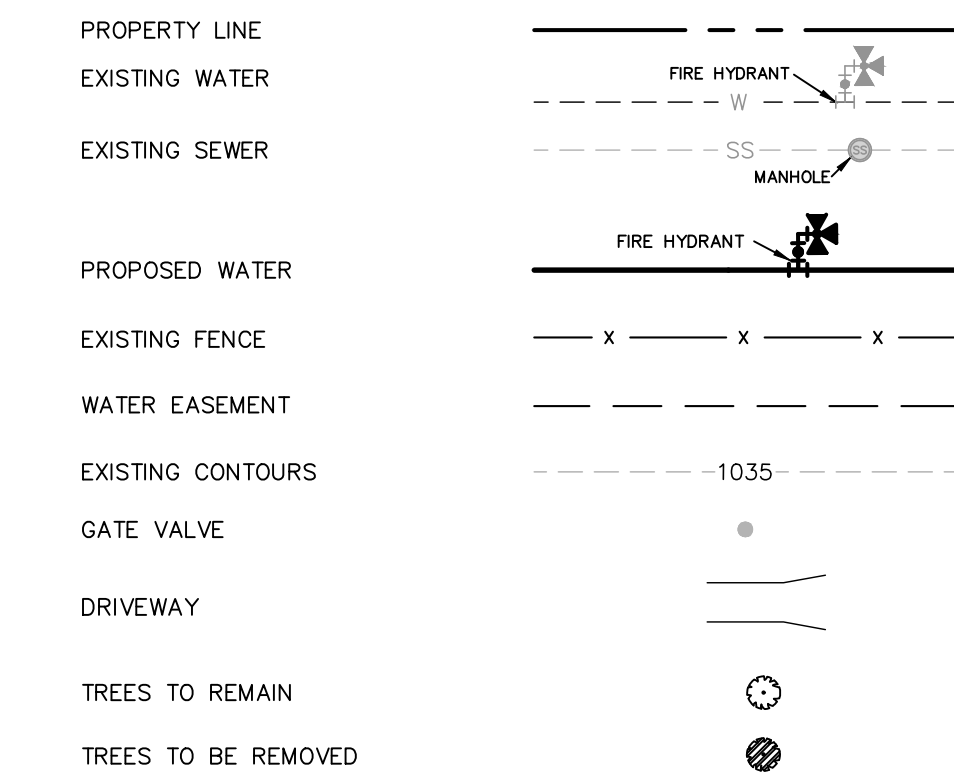


PROPOSED 24" WATER MAIN
 STA. 141+00 TO END

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



WATER LEGEND



CAUTION UNDERGROUND UTILITIES

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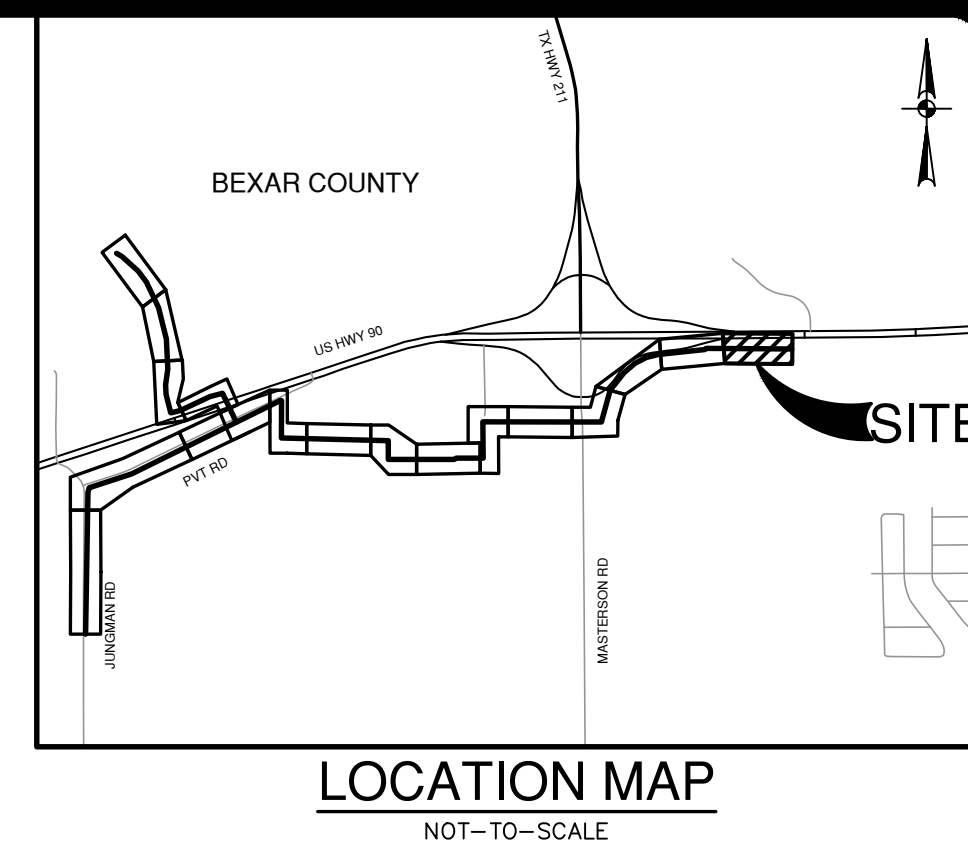
TRENCH EXCAVATION SAFETY PROTECTION

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.

WATER: SAWS PRESSURE ZONE 930

STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
 Address: 211 NORTH LOOP 1604, SUITE 130
 City: SAN ANTONIO State: TEXAS ZIP: 78232
 Phone: (210) 498-2658 FAX: N/A
 SAWS Block Map# 078558-074558
 Phase I - 4,765 LF ~ 16" PVC WATER Total Acreage 8.14
 Total Linear Footage of Pipe Phase II - 15,036 LF ~ 24" PVC WATER Plat No. N/A
 Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003



QUANTITY TABLE

ITEM NO	DESCRIPTION	UNIT	QUANTITY
550	TRENCH EXCAVATION PROTECTION	LF	1038
818	24" PVC PIPE CLASS 235 (DR 18) (OPEN CUT) WITH FITTINGS, BEDDING	LF	1038
830	24" BUTTERFLY VALVE, M.J. WITH 6" VALVE BOX, COMPLETE	EA	1
834	STD. FIRE HYDRANT ASSEMBLY	EA	1
846	8" AIR RELEASE VALVE ASSEMBLY	EA	1

DATE: 11/20/2023
 NO. REVISION: 1
 APPENDIUM: 1

STATE OF TEXAS
 JASON T. DIAMOND
 96532
 PROFESSIONAL ENGINEER
 11-20-23

PAPE-DAWSON ENGINEERS

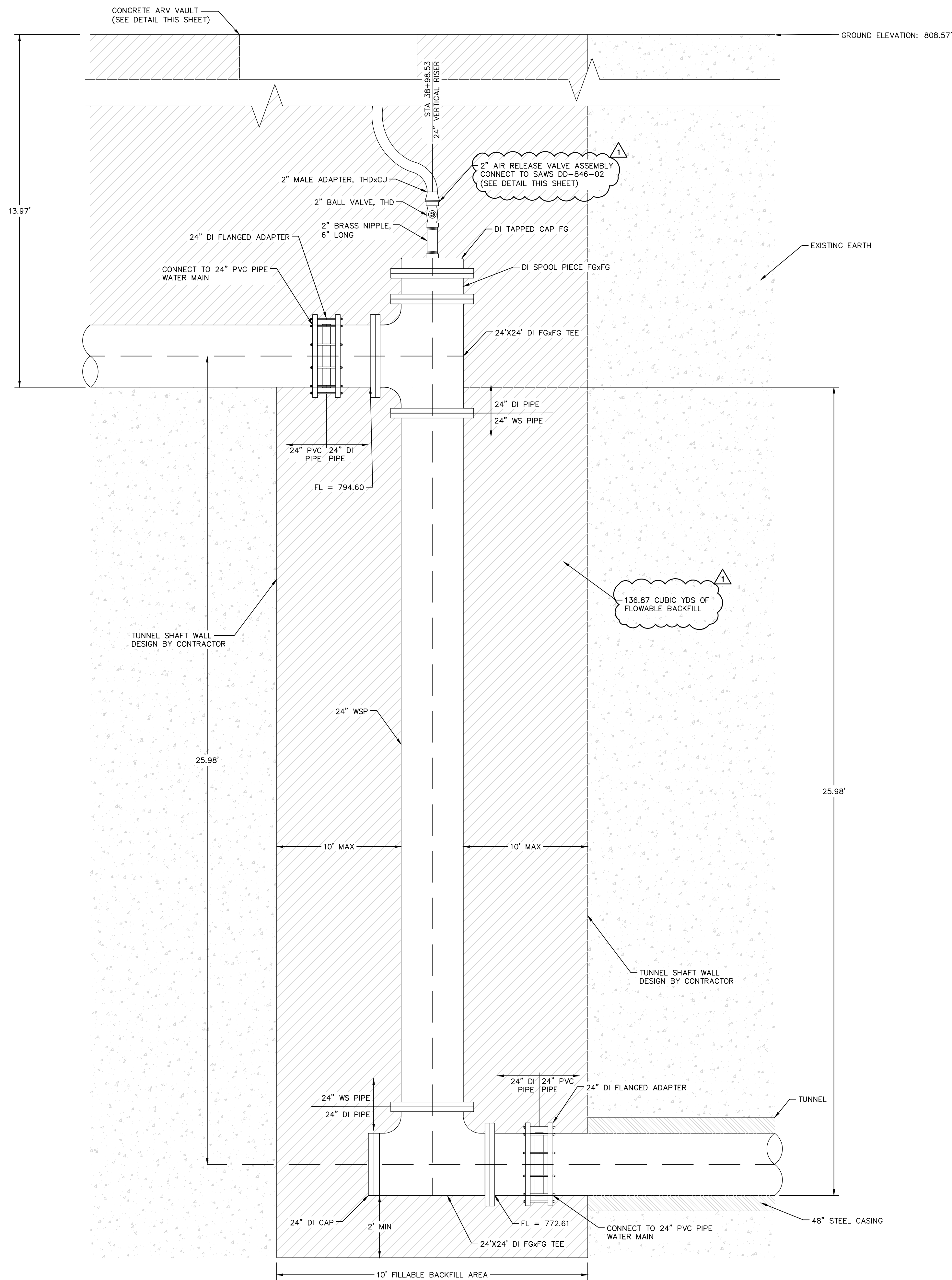
2000 NW LOOP 410 | SAN ANTONIO, TX 78213 | 210.375.9000
 TEXAS ENGINEERING FIRM #270 | TEXAS SURVEYING FIRM #1002890

STONEHILL OFF-SITE WATER EXTENSION
 BEXAR COUNTY, TEXAS

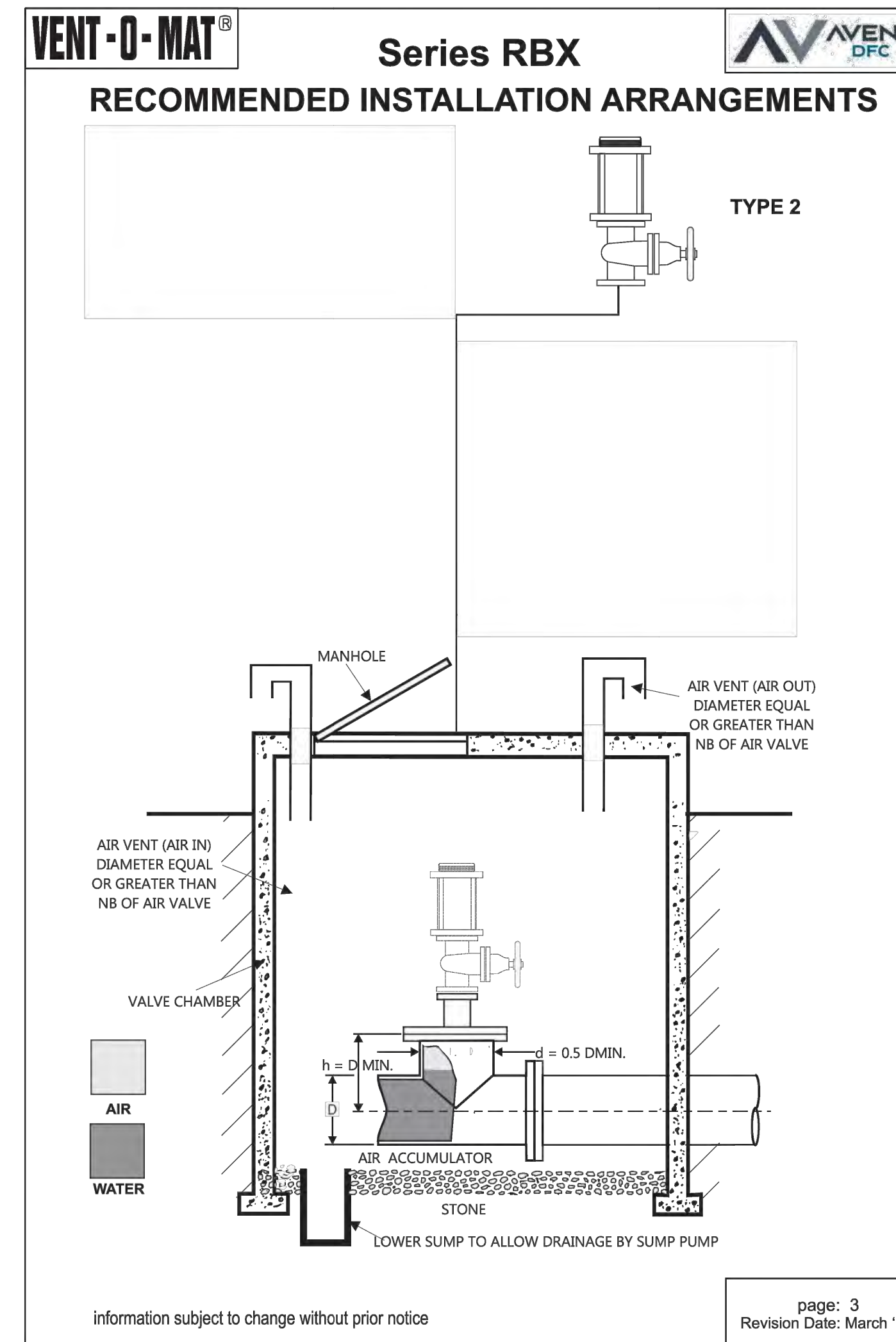
PHASE II - WATER MAIN PLAN AND PROFILE
 STA. 141+00 TO END

PLAT NO. N/A
 JOB NO. 12747-00
 DATE: NOVEMBER 2023
 DESIGNER: CN
 CHECKED: SG DRAWN: JD
 SHEET: C3.17

Date: June 1, 2023, 1:56 PM - User ID: crenning
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C4.00 24" VERTICAL RISER DETAIL
A N.T.S.



C4.00 AIR RELEASE VALVE ASSEMBLY
B N.T.S.

- NOTES:
- BACKFILL OF SHAFTS SHALL BE FLOWABLE
 - DETERMINE BEST SUITED CONNECTION POINT TO EXISTING 24" WATER TRANSMISSION MAIN PER FIELD CONDITIONS
 - INSULATION KIT SHALL BE PROVIDED BY PIPE SUPPLIER OR FITTING SUPPLIER, FOR ALL LOCATIONS WHERE DISSIMILAR MATERIALS COME INTO CONTACT WITH EACH OTHER

WATER: SAWS PRESSURE ZONE 930
STONEHILL OFF-SITE WATER EXTENSION

Developer's Name: DR HORTON
Address: 211 NORTH LOOP 1604, SUITE 130
City: SAN ANTONIO State: TEXAS ZIP: 78232
Phone# (210) 496-2668 FAX# N/A
SAWS Block Map# 076558 074558
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Phase I - 4,765 LF ~ 16" PVC WATER
Phase II - 15,036 LF ~ 24" PVC WATER
Plot No. N/A
Number of Lots N/A TOTAL EDU'S N/A SAWS JOB NO. 23-7003

DATE	11/20/23
NO.	1
REVISION	ADDENDUM 1



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

STONEHILL OFF-SITE WATER EXTENSION
BEXAR COUNTY, TEXAS
DETAIL SHEET

PLAT NO.	N/A
JOB NO.	12747-00
DATE	NOVEMBER 2023
DESIGNER	CN
CHECKED	SG DRAWN NB
SHEET	C4.00