SITE CONSTRUCTION PLANS OAK GROVE FORCEMAIN





VICINITY MAP

Brunswick, Ga.

OAK GROVE FORCEMAIN

Carolina Holdings Group

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REVISIONS 08/17/21 PER JWSC COMMENTS 08/25/21 PER JWSC COMMENTS

RCE PROJECT NUMBER: 20129 6/29/21: ORIGINAL ISSUE DATE

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PREPARED FOR: CAROLINA HOLDINGS GROUP 1331 44TH AVENUE NORTH, SUITE 102 MYRTLE BEACH, SC 29577



WWW.ROBERTSCIVILENGINEERING.COM

301 SEA ISLAND ROAD, SUITE 10 ST. SIMONS ISLAND, GA 31522 912-638-9681

6001 CHATHAM CENTER DRIVE, SUITE 255 SAVANNAH, GA 31405 912-298-7006

14600 WHIRLWIND AVENUE, SUITE 119A JACKSONVILLE, FL 32218 904-741-0099 (Office)

Know what's below Call before you dig.

DIRECTIONAL DRILLING FOR PRESSURE PIPE

SUBMITTALS

1.) Work Plan

Bentonite drilling mud products information (MSDS); special precautions necessary; method of mixing and application; and method of removing spoils.

QUALITY ASSURANCE

1.) Product Options Drawings indicate size, profiles, and dimensional requirements of piping and specialties and are based on the specific system indicated.

2.) Regulatory Requirements

Comply with requirements of utility companies who have service in the project work area.

Piping materials shall bear label, stamp, or other markings of specified testing agency.

DELIVERY, STORAGE & HANDLING

- Material shall be unloaded in a manner that will avoid damage and shall be stored where it will be protected and will not be hazardous to traffic.
- The Contractor shall repair any damage caused by the storage.
- Pipe and accessories shall be handled so as to ensure delivery to the trench in sound, undamaged
- Particular care shall be taken not to injure the pipe coating or lining.

when such facilities are not shown on the Drawings.

- If the coating or lining of any pipe or fitting is damaged, the Contractor at his expense shall make the repair in a satisfactory manner.
- Material shall be examined before installation and no damaged or deteriorated material shall be used in

PROJECT CONDITIONS

1.) Existing Utilities

- All known utility facilities are shown schematically on Drawings, and not necessarily accurate in location as to plan or elevation.
- Utility, such as service lines or unknown facilities not shown on Drawings, will not relieve the Contractor of his responsibility under this requirement except as noted below.
- "Existing Utilities Facilities" means any utility that exists on the project in its original, relocated or newly installed position.
- The Contractor will be held responsible for the cost of repairs to damaged underground facilities; even
- The Contractor is to contact all utility companies prior to beginning work and request an accurate
- location of their respective utility lines.

2.) Surface Interference

Drilling operations must not interfere with, interrupt or endanger surface activity upon the surface.

COORDINATION

- The Contractor shall furnish the necessary pipe and perform all excavation, dewatering, shoring, backfilling, etc., necessary to make the directional drill, install the pipe and plug both ends.
- The Contractor shall contact the Utility System Owner a minimum of 48 hours in advance of
- Contractor shall be responsible for coordinating his construction with the Engineer or his representative.

DAMAGE TO EXISTING UTILITY SYSTEM

 Damage to any part of the existing utility systems or to the water or sewer system by the Contractor or utility Subcontractors, shall be repaired at no cost to the Owner.

RECORD DRAWINGS

Record drawings must be received and approved by the Engineer prior to final acceptance.

FUSIBLE PVC PIPE AND FITTINGS

- Fusible PVC Pipe and fittings will be used in accordance with the material specifications.
- All pipe installed by directional drilling will be joined by an approved butt fusion or electro fusion technique according to the manufacturer's specifications.
- For information only, submit manufacturer's certificate indicating that the pipe and fittings have been inspected and tested at the place of manufacture and meet the requirements on the referenced Standards and these Specifications.

DRILLING FLUID

- Drilling fluid shall be a mixture of water and bentonite clay. The fluid shall be inert. The fluid should remain in the tunnel to ensure the stability of the tunnel, reduce drag on the pulled pipe, and provide backfill within the annulus of the pipe and tunnel.
- Disposal of excess drilling fluid and spoils shall be the responsibility of the Contractor who must comply with all relevant regulations, right-of-way, and workspace and permit agreements.
- Excess drilling fluid and spoils shall be disposed at an approved location. The Contractor is responsible for transporting all excess drilling fluid and spoils to the disposal site and paying any disposal costs.
- Excess drilling fluid and spoils will be transported in a manner that prevents accidental spillage onto
- Excess drilling fluid and spoils will not be discharged into sanitary or storm drain systems, ditches or
- Drilling fluid returns (caused by fracturing of formations) at locations other than the entry and exit points
- The Contractor shall immediately clean up any drilling fluid that surfaces through fracturing.
- Mobile spoils removal equipment capable of quickly removing spoils from entry or exit pits and areas with returns caused by fracturing shall be present during drilling operations.
- The Contractor shall be responsible for making provisions for a clean water supply for the mixing of drilling fluid.

POTABLE WATER

Potable water will be provided by the Contractor as necessary to complete the project. Temporary connections to the Owner's water system must be coordinated with the Owner and meters obtained from the Owner shall be installed by the contractor.

PREPARATION

1.) Pits

Excavate required pits in accordance with the working drawings.

2.) Removal of Existing Surfaces or Features

Removal of trees, landscaping, pavement or concrete shall meet the general provisions and specifications.

3.) Existing Utilities

The Contractor shall be responsible for determining the location of all underground utilities to be crossed prior to commencing drilling operations.

DIRECTIONAL DRILLING OPERATIONS

- The drilling equipment must be capable of placing the pipe within the limits indicated on the Contract
- The system shall consist of a surface launched steerable drilling tool controlled from a mobile drilling frame, and include a field power unit, mud mixing system and mobile spoils extraction system.
- The number of access pits shall be kept to a minimum and the equipment must be capable of boring
- the following lengths in a single bore. • The directional drilling system shall have the capability of boring and installing a continuous run without
- The guidance system shall have the capability of measuring vertical (depth) position, horizontal position
- The guidance system must meet the following specifications in soft homogenous soils.
- Accuracy Vertical position: Plus or minus 1 inch Horizontal position: Plus or minus 3 inches
- The Owner's representative shall be kept informed of the drilling progress and pipe location.
- Information pertaining to the drilling and pipe location shall not be withheld from the Owner's representative.
- Equipment set-up requirements must be determined by the Contractor.

2.) Installation

- The actual location of the pipe with respect to the proposed line and grade shall be continuously
- A steering head or other suitable method shall be used to control the line and grade of the pipe to within line and grade specifications.
- A magnetic guidance system shall continually monitor down-hole probe location.
- A locating system shall be established to provide a backup and independent determination of pipeline

3.) Drilling Fluids and Excavated Material

- Drilling fluids and cuttings shall be contained within designated work/construction areas. Excess fluids, cuttings, and other related materials shall be disposed of in a legal site in accordance with governing regulations. Fluids shall not be allowed to enter any wetland area or river.
- The Contractor shall be responsible for furnishing and using, as necessary, all drilling fluids and any additives needed for saltwater or other conditions.
- The Contractor shall be responsible for the proper clean-up and disposal of drilling fluids.
- The Contractor shall be responsible to provide a suitable and approved site for the disposal of the drilling mud and cuttings.

4.) Damaged or Improperly Installed Pipe

- If the pipe is damaged before installation or does not meet the specifications, it shall be replaced at no expense to the Owner.
- If the pipe is damaged during installation by the Contractor's operations, is placed at the improper grade or line or cannot be advanced because of an unseen obstruction or any other reason, it shall be abandoned in place, and filled with concrete.
- After abandoning a pipe, an alternate installation shall be made, as directed by the Engineer. With the exception of pipe that has to be abandoned in place due to unseen obstructions, the cost for abandonment of pipe shall be at the expense of the Contractor.
- No additional payment shall be made for the pipe which is abandoned, including dewatering, excavation, drilling, etc.
- The Contractor shall continue pull back until 10 linear feet (minimum) of pipe is above ground for the purpose of pipe inspection.
- Contractor to give As-builts of piping when crossing is complete.

PILOT HOLE BORING

• The entry angle of the pilot hole and the boring process shall maintain a curvature that does not exceed the allowable bending radii of the product pipe or inhibit pullback of the pipeline.

ALIGNMENT ADJUSTMENTS AND RESTARTS

- The Contractor shall follow the pipeline alignment as shown on the Drawings, within the specifications stated. If adjustments are required, the Contractor shall notify the Project Engineer for approval prior to making the adjustments.
- In the event of difficulties at any time during boring operations requiring the complete withdrawal from the hole, the Contractor may be allowed to withdraw and abandon the hole and begin a second attempt at a location approved by the Project Engineer.

INSTALLING PRODUCT (FUSIBLE PVC) PIPE

- After the pilot hole is completed, the Contractor shall commence pullback operations.
- Once started, pipeline pullback shall be continuous.
- Pre-reaming may be necessary and is at the option of the Contractor.
- The pipe shall be continuously lubricated with bentonite slurry or other suitable techniques.
- The pipe being pulled shall be protected and supported so that it moves freely and is not damaged by stones and debris on the ground during installation.
- Pullback forces shall not exceed the allowable pulling forces for the pipe.
- The Contractor shall allow sufficient lengths of product pipe to extend pass the termination point to allow connections to adjacent pipe sections or manholes.
- Pulled pipe will be allowed 24 hours of stabilization prior to making tie-ins.

PERMITS

- The Contractor (or representative) shall obtain permits necessary for installation of the pipeline.
- The pipeline shall be installed in strict compliance with all applicable permits.

TESTING

The pipeline shall be tested twice, once before insertion into the drilled hole and once after installation. A low-pressure air test shall be conducted prior to installation of the pipe. A hydrostatic test shall be conducted following installation of the pipe. Unless otherwise specified pressure lines installed by horizontal directional drill shall have a low-pressure air test prior to installation. Test pressure is to be

conducted at 2 psi to check for joint integrity and pin holes. The test shall be maintained at full pressure for at least two hours. Unless otherwise specified pressure lines shall be hydrostatically tested to the 150% working pressure but not less than 150 PSI or greater than pressure rating of pipe based on the lowest point of the section under pressure. Before applying the test pressure, all air, dirt and foreign material shall be expelled completely from the line through air valves, flushing and other means. The test shall be maintained at full pressure for at least two hours. Pressure gauges on test apparatus shall be a minimum of 4" diameter with a minimum of 1 PSI graduations. All damaged or defective pipe, fittings, joints, valves, hydrants and appurtenances discovered after the pressure test shall be repaired or replaced with sound material, and the pressure test repeated until satisfactory to the ENGINEER.

- a.) Pressure lines shall be tested to 150% of the working pressure but not less than 150 psi. for a period of 2 hours. No leakage will be allowed. Pipeline maintain test pressure for 2 hours.
- b.) If during the test a pressure drop occurs, the CONTRACTOR shall, at his own expense, locate and repair all defects until there is no leakage or drop in pressure. All visible leaks shall be repaired regardless of the amount of leakage.
- c.) Water for testing will be furnished by the CONTRACTOR, who shall furnish the test pump, measuring devices and all necessary pipe or hose extensions or transportation to the point of use, and shall exercise care in the use of water.
- d.) If large amounts of water are needed for flushing, the CONTRACTOR must make arrangements with the Authority having jurisdiction to measure water used.
- e.) All valves within the test section shall be completely opened and closed several times during the test

CLEAN-UP

• The Contractor is required to maintain the work site in a neat and orderly condition throughout the period of work and after completing the work at each site, remove debris, surplus material and temporary structures erected by the Contractor. The site must be restored to a condition equal to the existing condition prior to being disturbed.

RECORD DATA

• Complete record data information shall be submitted by the Contractor to the Engineer, and shall include horizontal and vertical location information of the installed pipeline.

JWSC WATER & SEWER NOTES

- 1. All water and sewer construction shall conform with the requirements of the design and construction standards and specifications of the joint water & sewer commission. In the event of a discrepancy between these construction plans and the aforementioned standards and specifications, the design and construction standards and specifications shall take precedence unless the deviation has been approved in writing by the JWSC.
- 2. The minimum horizontal and vertical separation between water lines, sewer lines and storm drains shall conform to the latest Georgia EPD requirements.
- 3. A minimum distance of 20' or two times the depth of the main, whichever is greater, shall be maintained from all buildings, foundations and the top of bank of all ponds. Any deviation from this requirement must be approved in writing by the JWSC.
- 4. Pressure and leakage testing shall be performed in accordance with the design and construction standards and specifications of the JWSC.
- 5. Disinfection of water mains shall be performed in accordance with the design and construction standards and specifications of the JWSC.
- 6. At least 72 hours prior to commencement of the work, the contractor shall notify the utilities protection center (UPC) at 1-800-282-7411 to request underground utility locate service.
- 7. All gravity sewers shall be low pressure air tested in accordance with JWSC standards 3.6.9.
- 8. All sanitary sewer manholes shall be vacuum tested in accordance with JWSC standards 3.6.9.3.
- 9. All portions of new sewage Force main shall undergo a hydrostatic test per JWSC standards 4.7.7.
- 10. See JWSC standard 2.5.3.3 for minimum pipe cover requirements. 11.Record drawings must be provided to JWSC for public water and sewer lines in accordance with JWSC

record drawing standards. **GENERAL NOTES**

- 1. All construction methods and materials shall conform to all applicable federal, state, and local laws.
- 2. All permits necessary for construction shall be obtained by contractor.
- 3. Any deviations from the plans are prohibited without the written consent of the engineer.
- 4. The contractor is to immediately contact the engineer if any unforeseen complications or discrepancies
- 5. Contractor shall coordinate the construction of all utilities on site with the appropriate provider (e.g., Power, phone, cable, etc.)
- 6. The engineer shall not be held responsible for the physical construction of the site.
- 7. Contractor shall maintain a safe site and meet all appropriate regulations concerning safety. 8. Survey info from Shupe surveyors' company, p.c., 3837 Darien highway, Brunswick, GA 31523. Telephone
- 9. Existing survey information to be verified by contractor prior to construction. Contractor to notify engineer of any discrepancies in field observations versus survey data.
- 10. Contractor to locate all utilities prior to construction by calling the call before you dig hotline: 811.
- 11. Contractor responsible for all traffic control per MUTCD manual

Sewer notes

- 1. Pipe shall be manufactured from a PE 3408 resin listed with the plastic pipe institute(PPI) as TR-4. The resin material shall meet the specifications of ASTM d3350-02 with a minimum cell classification of PE 345464c. Pipe shall have a manufacturing standard of ASTM d3035. The pipe shall contain no recycled compounds except that generated in the manufactures own plant from resin of the same specification from the same raw material. The pipe shall be homogeneous throughout and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects. The pipe shall be identified for the application by a green colored stripe and, for long term identification, "low pressure sewer fm" shall be debossed (indent imprinted) in the identification line of the pipe.
- pipe & fittings for 1-1/4" service shall be SDR 9 IPS HDPE pipe & fittings for 2" & larger force main shall be SDR 11 IPS HDPE
- 2. All joints shall be made by fusion or with the use of electrofusion fittings. Use of mechanical connector, fittings or inserts is prohibited. Socket fusion, hot gas, threading, solvents, and epoxies may not be used to join HDPE pipe.
- 3. Butt fusion fittings shall be in accordance with ASTM d3261 and shall be manufactured by injection molding, a combination of extrusion and matching or fabricated HDPE pipe conforming to this specification. All fittings shall be pressure rated to provide a working pressure rating no less than that of the pipe. The use of fabricated fittings shall be limited as much as possible. The fitting shall be homogeneous throughout
- 4. Electrofusion fittings shall be pe3408 HDPE. Cell classification of 345464c as determined by ASTM d3350-02 and be the same BSE resin as the pipe. Electrofusion fittings shall have a manufacturing standard of ASTM f1055.

and free of visible cracks, holes, foreign inclusions, voids, or other injurious defects.

5. All joints shall be made by fusion or with the use of electrofusion fittings. Use of mechanical connector, fittings or inserts is prohibited.

- 6. Pressure pipelines shall be tested in accordance with the specifications of the engineer, pipe manufacturers recommendations and ASTM F2164. Hydrostatic pressure testing with clean water will be the only method allowed. After allowing for temperature equalization and the initial expansion phase, a test pressure of 100 psi shall be held for a period 1 hour. If no visual leakage is observed and pressure during the test phase remains steady (within 5% of the test phase pressure) for the 1hour test phase period, a passing test is indicated.
- 7. Pipe connections shall have flexible watertight joints at the point of entry of any sewer main into the manhole. The joint shall be wedged rubber shape equivalent to "press wedge ii," or a rubber sleeve equivalent to "Kor-n-seal" or "Lock joint."
- 8. #12-gauge single strand copper tracing wire shall be used over all service lateral lines.
- 9. Sewer excavations shall adhere to the occupational and safety health administration's (OSHA) regulations. In areas of unsuitable soil conditions, the trench may be require additional excavation and backfilled with sand, gravel, or concrete.
- 10. The minimum horizontal and vertical separation between water lines, sewer lines and storm drains shall conform to the latest Georgia EPD requirements.
- 11. Pressure and leakage testing shall be performed in accordance with the design and construction standards and specifications of the JWSC.
- 12. At least 72 hours prior to commencement of the work, the contractor shall notify the utilities protection center (UPC) at 1-800-282-7411 to request underground utility locate service.

13. All portions of new sewage force main shall undergo a hydrostatic test and results reported to SIA.

4.7.1 GENERAL

Force mains shall discharge to sanitary sewer gravity system manholes at the manhole invert level in such a manner as to minimize turbulence and join the normal flow of wastewater through the manhole without disrupting or impeding other flow or flows entering or passing through the manhole. Where the discharge manhole has no other flows entering it, the force main discharge shall be directed straight through the manhole, through a properly constructed invert, into the manhole effluent line. No force main, with the exception as noted in section 4.6.2.2, system components for single family residential and single lot commercial lift station and stations discharging less than 22 GPM), shall connect to a sanitary sewer manhole that does not meet the requirements for corrosion protection as cited in the section 3 of these standards for the discharge manhole and downstream manholes. No force main shall be discharged to a sanitary sewer system unless such downstream gravity system has been verified by the JWSC to have adequate capacity to accept the discharge. Force mains shall have isolation valves installed at two-thousand (2,000) foot intervals beginning at the isolation valve installed at the lift station. Lift stations with force mains less than two-thousand (2,000) feet to the point of discharge do not require isolation valves beyond the lift station.

4.7.5 FORCE MAINS

Force mains shall be designed and constructed along the shoulder or within public rights-of-way on the opposite side from water mains. Force mains shall be designed and constructed within appropriately sized easements dedicated to the JWSC. Easements provided shall be maintenance vehicle and equipment trafficable all-weather easements. A horizontal distance of three (3) foot minimum shall be maintained from all force mains to drainage structures, telephone duct banks, electrical transformers, signal relays, power poles, and other structures in the right of-way as well as any other parallel underground utility with the exception of water mains. Where force mains cross other underground utilities, with the exception of water mains, a minimum vertical separation of six (6) inch shall be maintained. All distances shall be measured from the outside edge of the pipes. The vertical separation between force mains and other crossing utilities shall be filled with a suitable pipe bedding material and compacted or filled with flowable fill to prevent settlement, contact and potential pipe to pipe abrasion caused by the vibration of flow through the force main. Force main connections to manholes shall be cored and booted connections in accordance with paragraph 4.7.1 of this standard. Force mains shall not be constructed within or below open ditch bottoms unless crossing on a perpendicular. Where crossing open ditch bottoms, the force main shall be a minimum of sixteen (16) inches below the bottom of the ditch and encased in concrete for the full width of the ditch as measured across the top of ditch banks. Force mains shall be located outside of paved areas except at roadway crossings. Sewer force main and water main separations shall be in accordance with Georgia EPD requirements and as follows: a. At crossings, pipe joints shall be as far as possible and equidistant from the point of crossing with the water main on top. Separation shall be measured from the outside edge of the pipe to the outside edge of the pipe. A full length of pipe must be centered at the crossing. B. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least 6' from all joints in the sewer force main. Sewer force mains crossing major ditches, canals, streams, creeks and rivers shall be sub-aqueous crossings installed by horizontal directional drilling or other boring/tunneling method approved by the JWSC. Such crossings shall be provided with isolation valves on both sides of the crossing. Both sides of the crossing shall be treated as high points in the force main and have air release/vacuum valves installed. The placement of isolation valves and air valves shall be a minimum of fifteen (15) feet horizontally away from stream bank tops. The crossing pipe shall be perpendicular to the stream. Aerial crossings and bridge attachments shall not be permitted. No sewer force main shall be designed or constructed under ponds, lakes, retention ponds or other bodies of water other than in crossings as described above. No sewer force main shall be designed or constructed to lay closer than twenty (20) horizontal feet from the top of the bank of any body of water noted in this article. Tracer wire shall be provided on all installed force mains; tracer wire shall be continuous or properly spliced single strand no. 10 solid plastic coated (30 mil) copper wire from iron fitting to iron fitting. Detection tape shall be provided on all force mains; detection tape shall be two (2) inches wide mylar encased metal marking tape and shall be buried eight (8) inches - twelve (12) inches below plan-finished grades.

4.7.6.2 JOINTS

Force mains shall have mechanically restrained joints at changes in direction. The restrainer shall be manufactured of ductile iron and shall meet or exceed all the requirements of ANSI a21.11 (AWWA c111) and ASTM a536. The restrainer system shall provide anchoring ductile iron pipe and fittings, valves and PVC pipe to mechanical joint pipe or fittings, or bell to spigot PVC pipe joints. The restrainer shall accommodate the full working pressure rating of the pipe plus surge allowance. In the assembly of the restraint device, all bolts shall be tightened to the correct torque range as recommended by the restraint

4.7.6.3 FITTINGS

4.7.6.4 VALVES

Horizontal and vertical directional changes in force mains shall be accomplished with bends of 45 degrees or less and properly restrained; no 90-degree bends will be permitted. All fittings on PVC force mains shall be inside coated "Sewer safe" mechanical joint cast iron or ductile iron fittings properly restrained.

Force main isolation valves shall be interior coated plug valves. Plug valves eight (8) inch and greater shall be provided with worm gear actuators, and extension stems with operating nut no more than eight (8) inches below finish grade. Isolation valve/check valve connections by a new or replacement force main to an existing force main shall be by cutting-in a mechanical joint wye fitting to discharge in the direction of normal flow. Wet tapping with a "T" connection will not be permitted.

Casing pipe to be 10" Steel Casing.

ALTERNATIVE BID ITEM #2

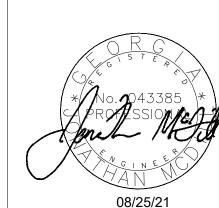
ALTERNATIVE BID ITEM #1

Carrier pipe to be 6" and match the material type as shown. Casing pipe to be 12" Steel Casing.

Carrier pipe to be 4" and match the material type as shown.

manufacturer. Concrete thrust blocking will not be permitted.





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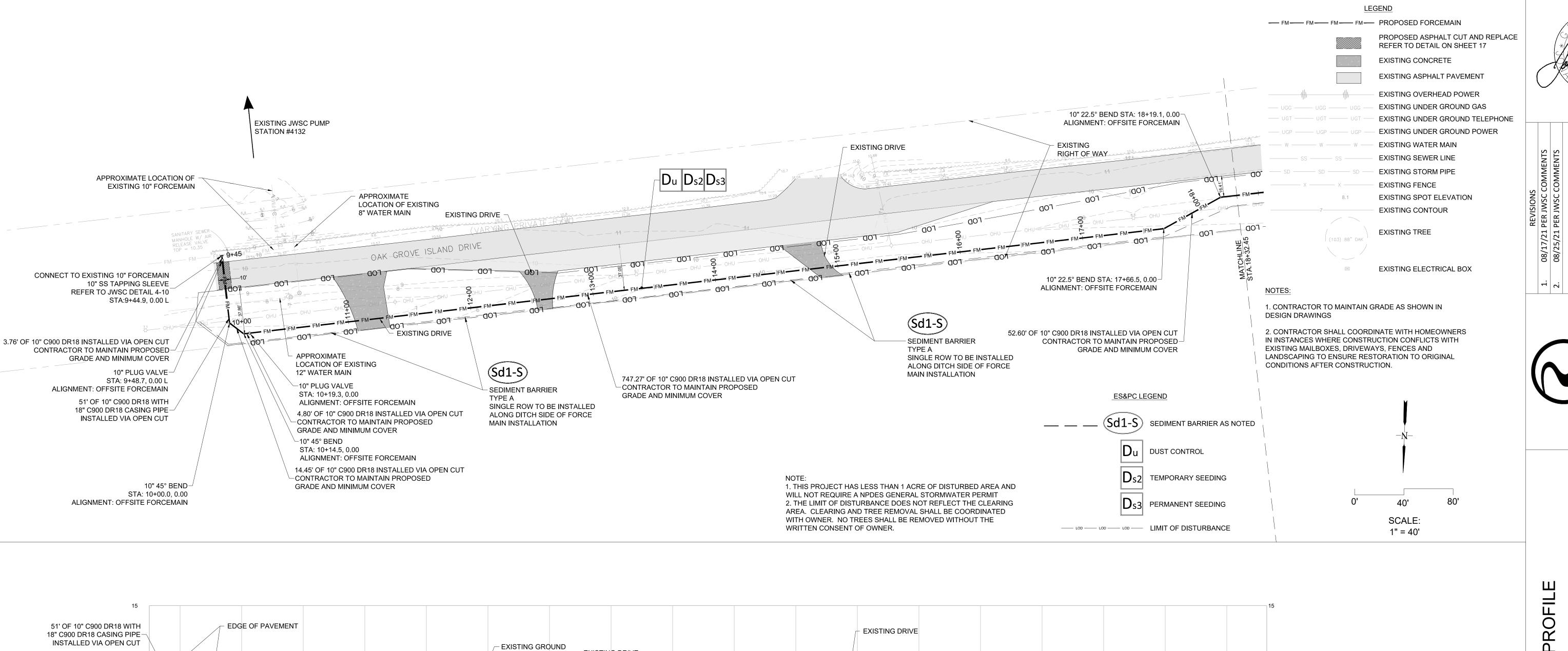
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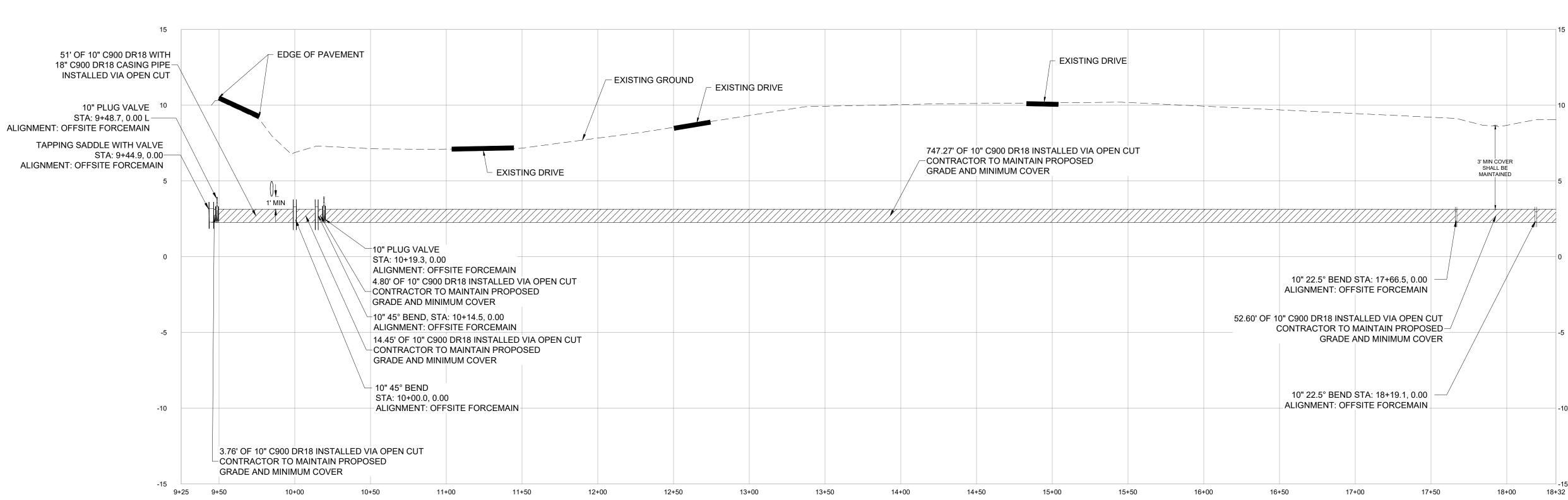
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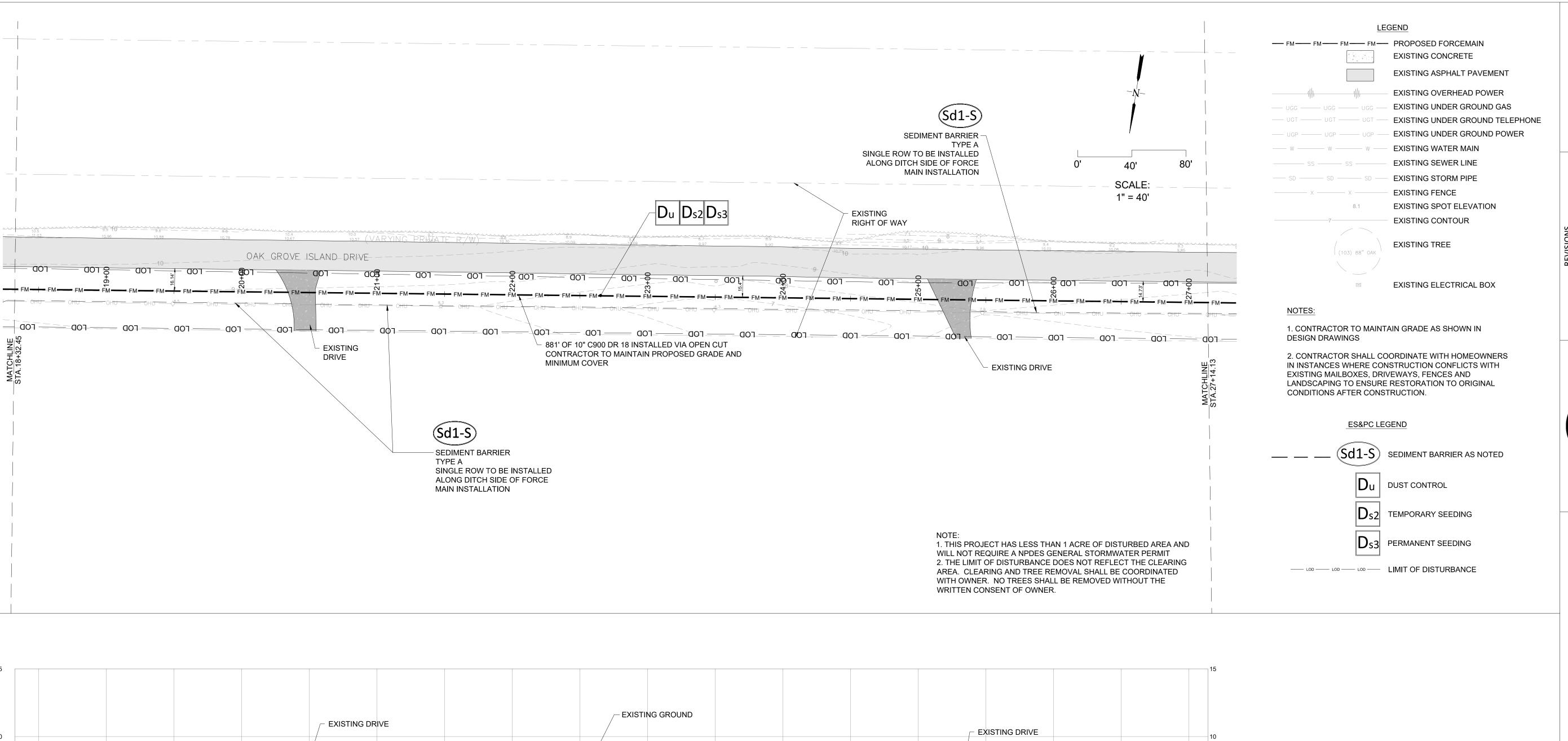


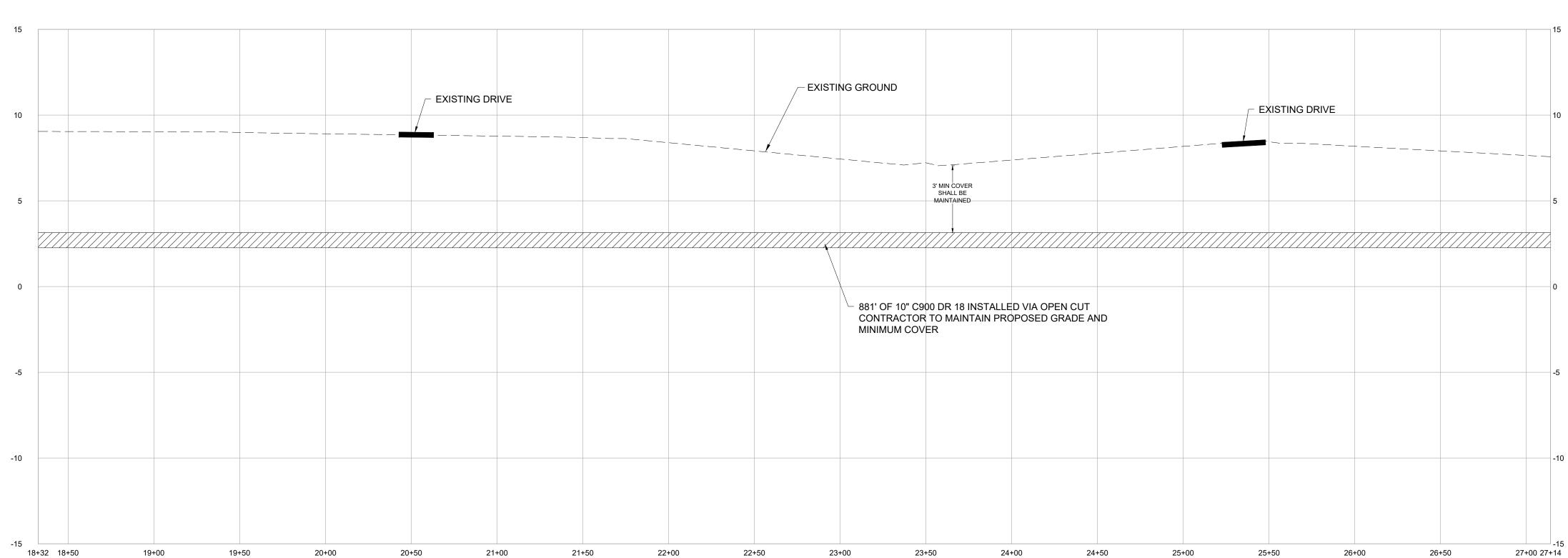
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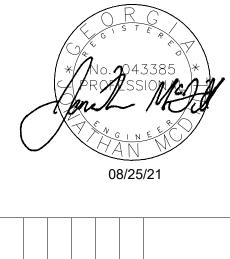
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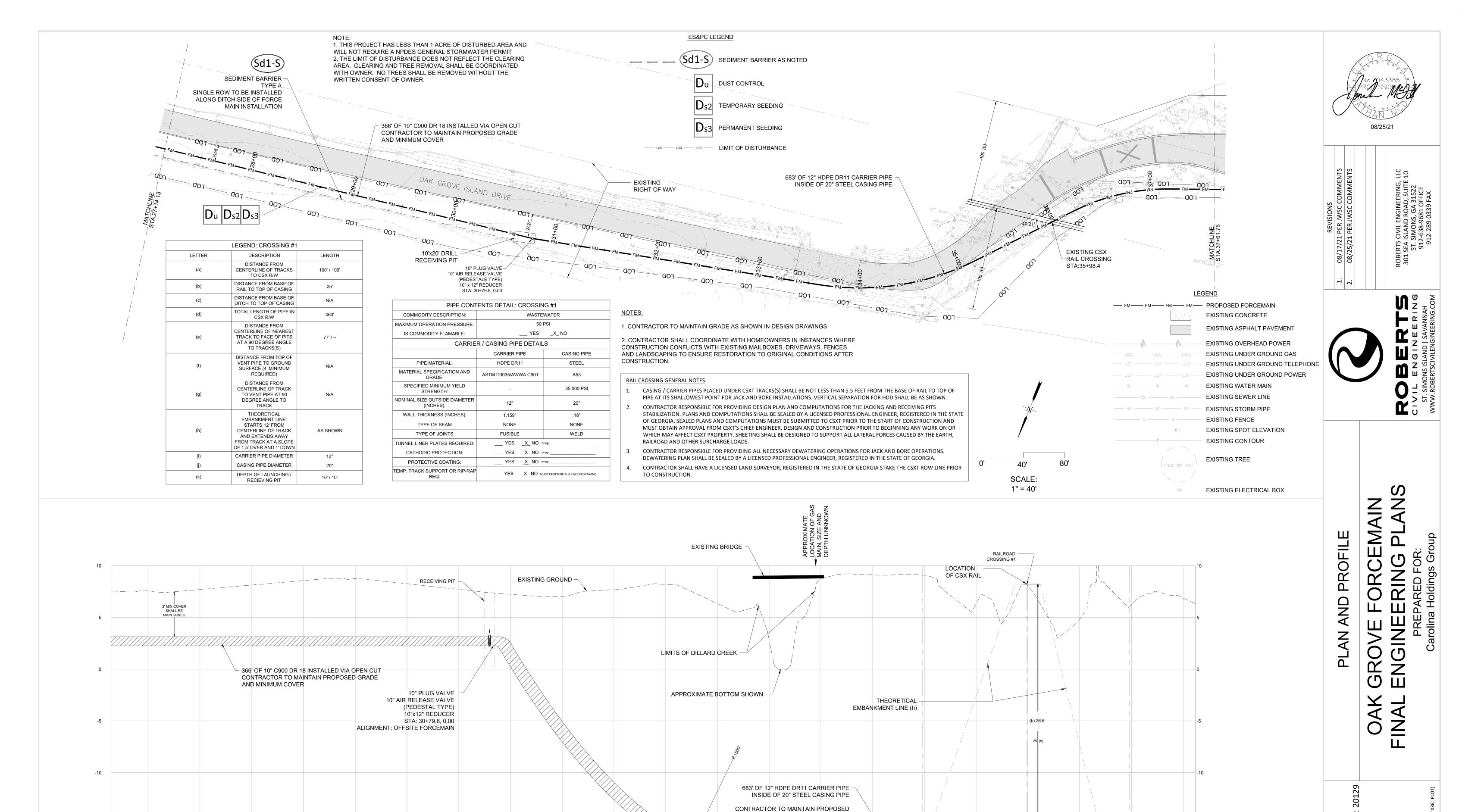




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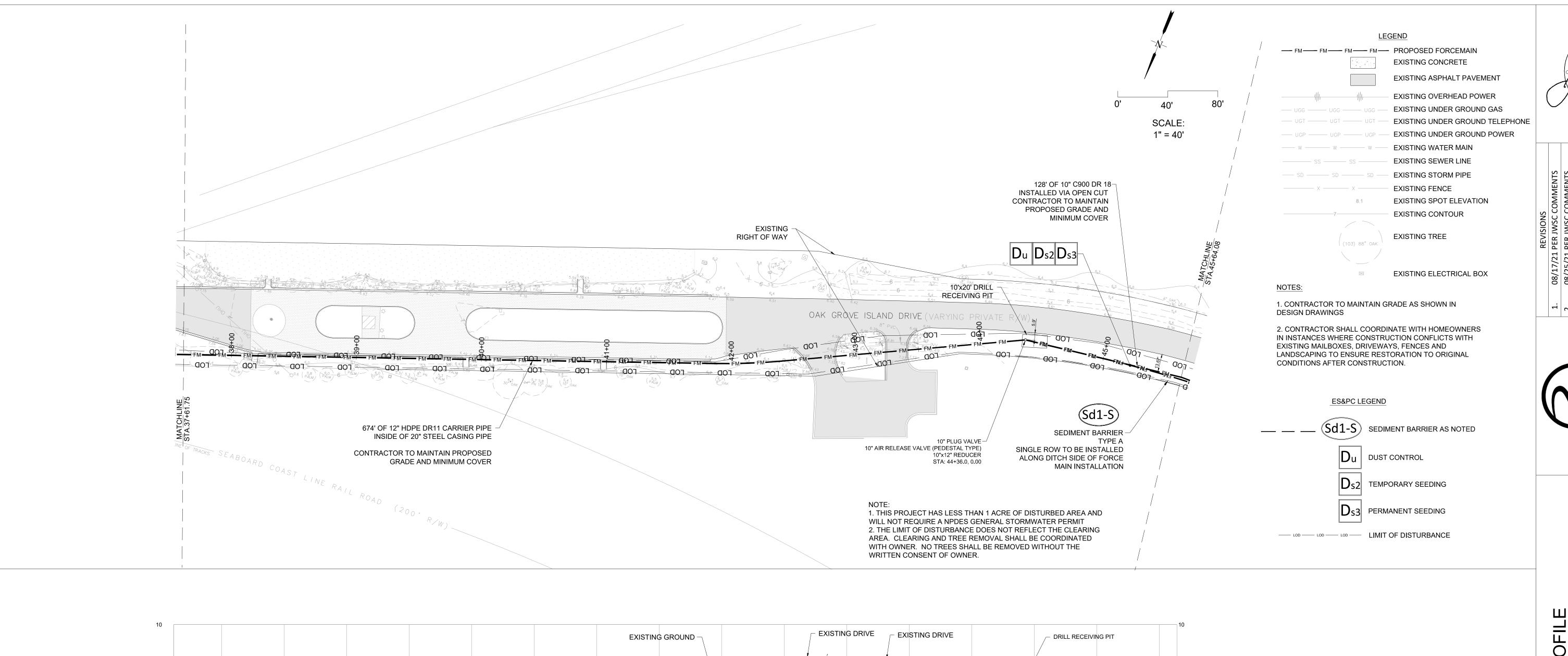
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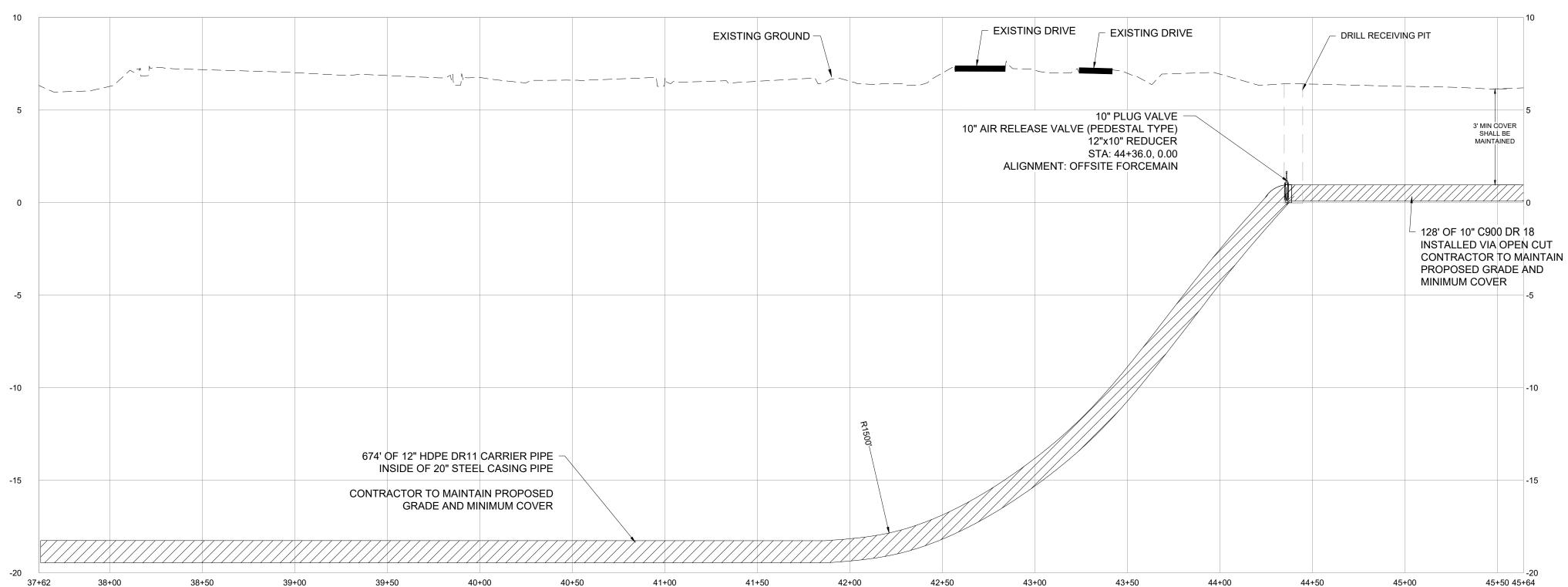
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27+50



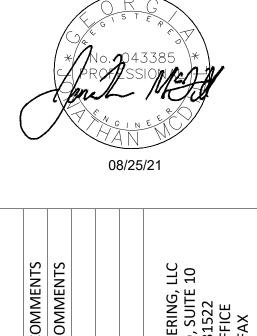
37+5037+62



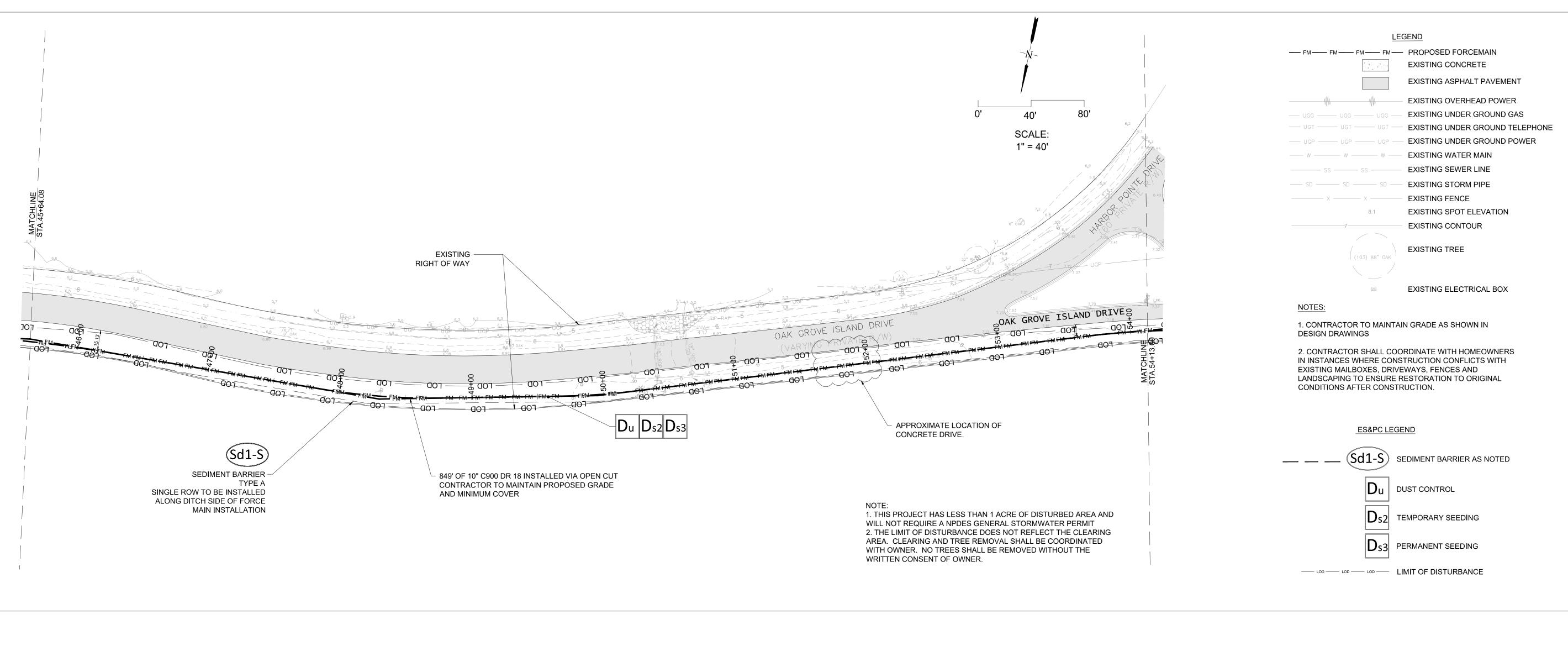


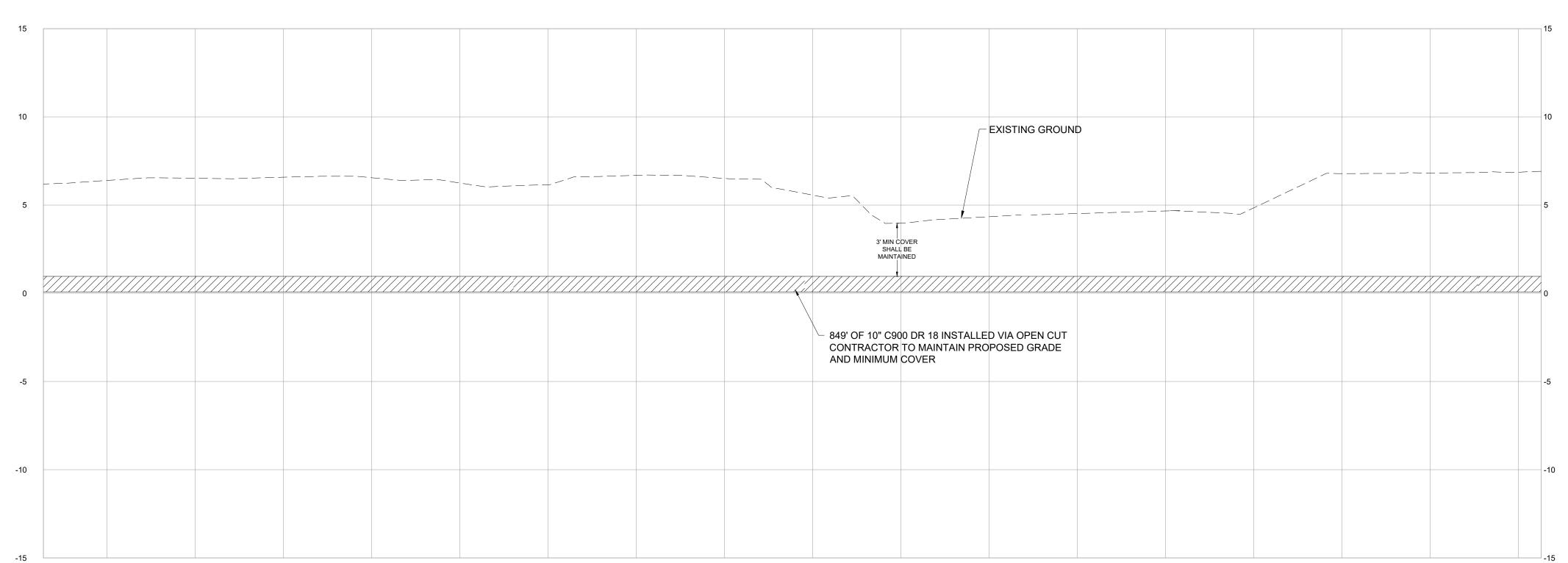
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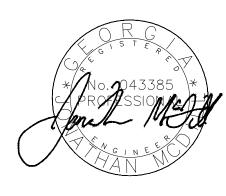
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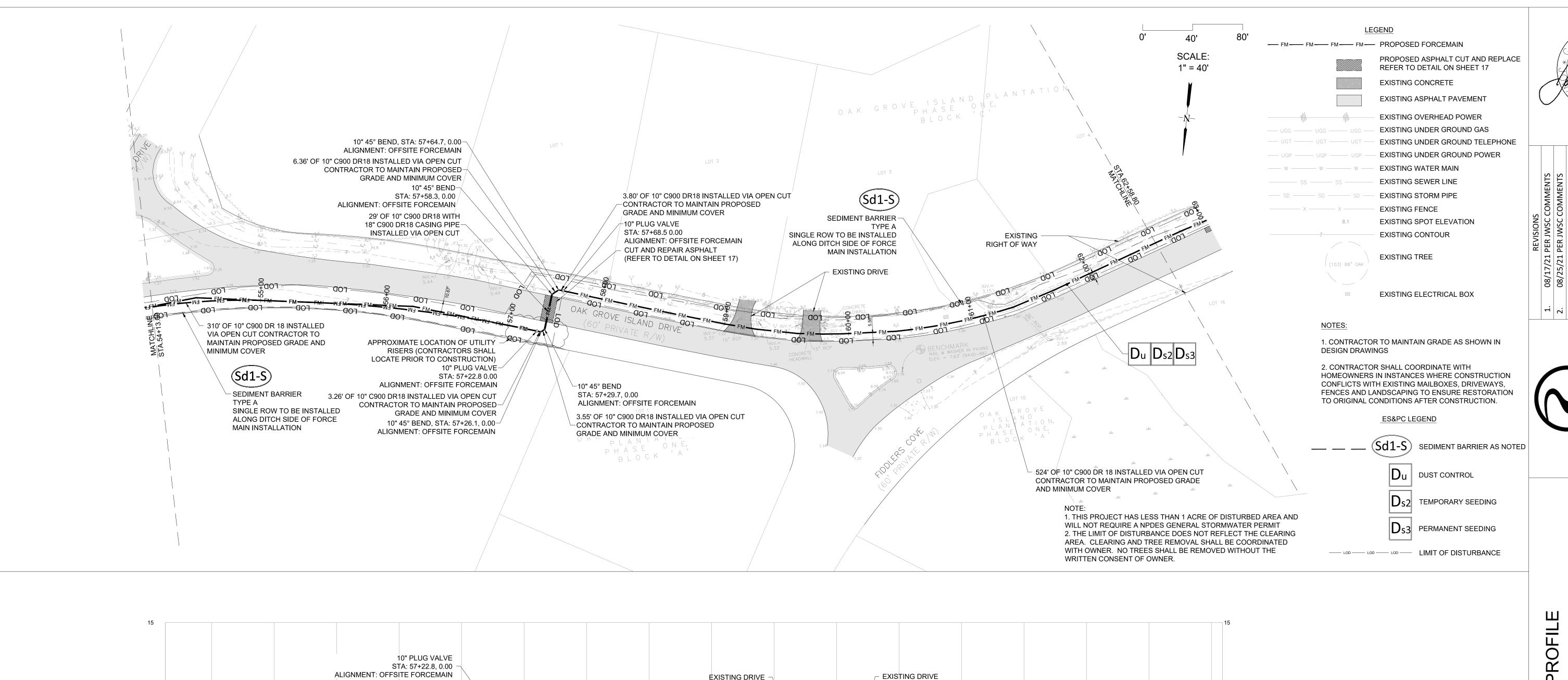


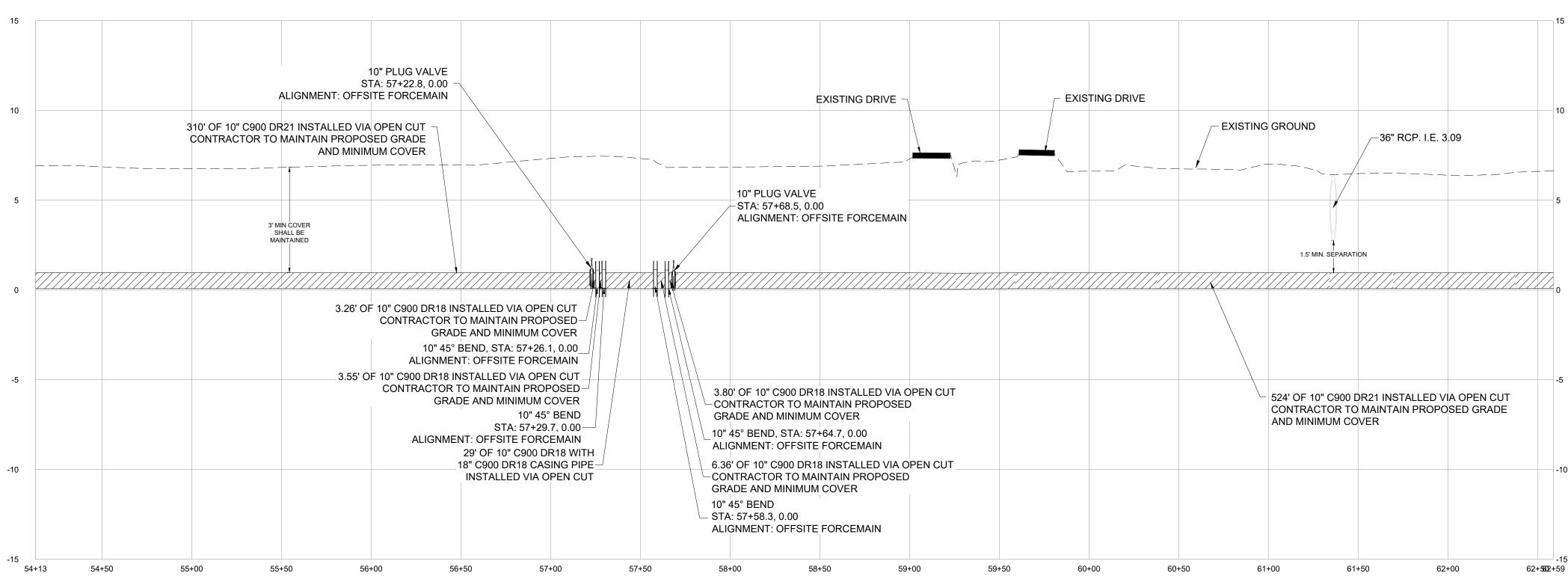
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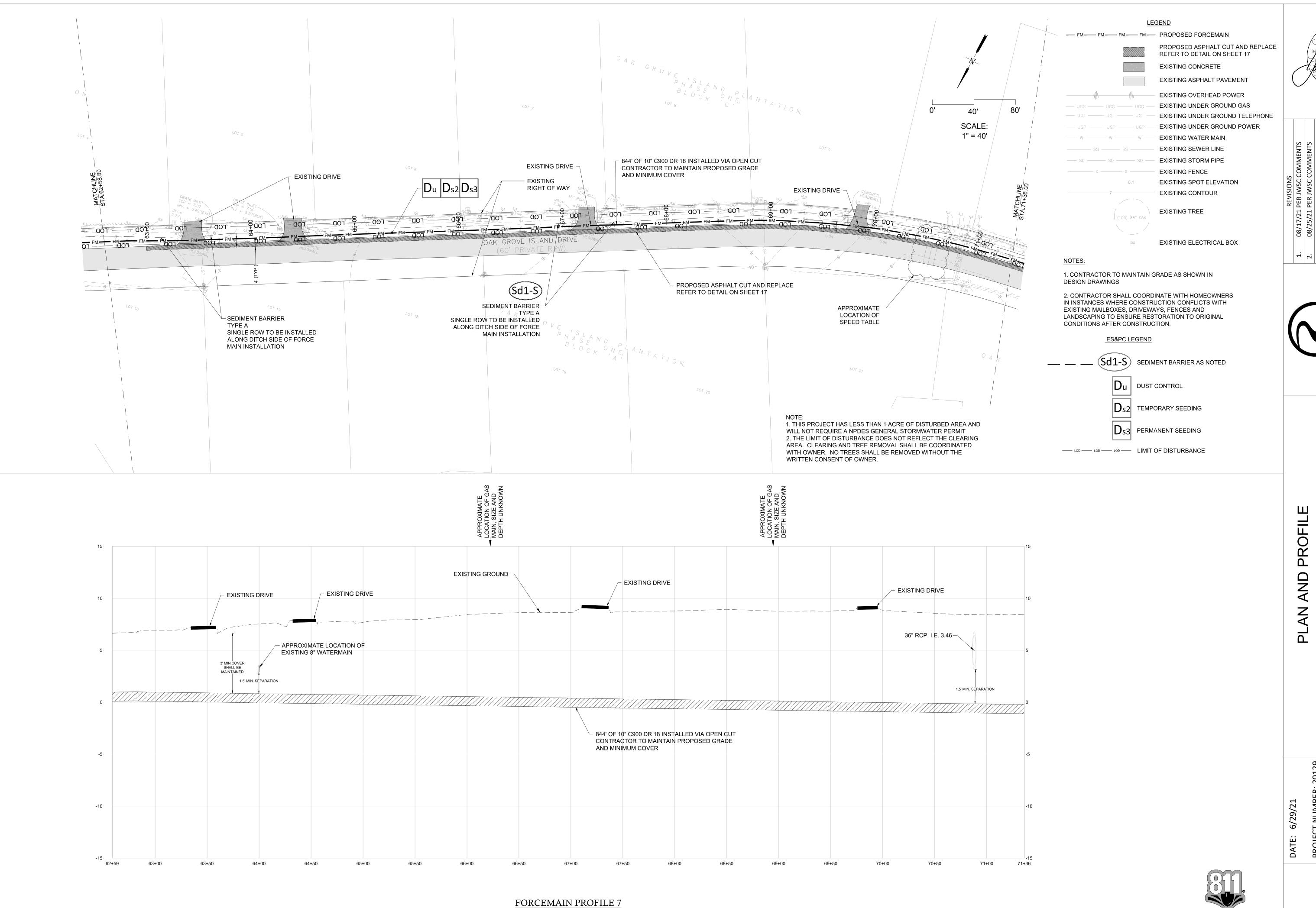
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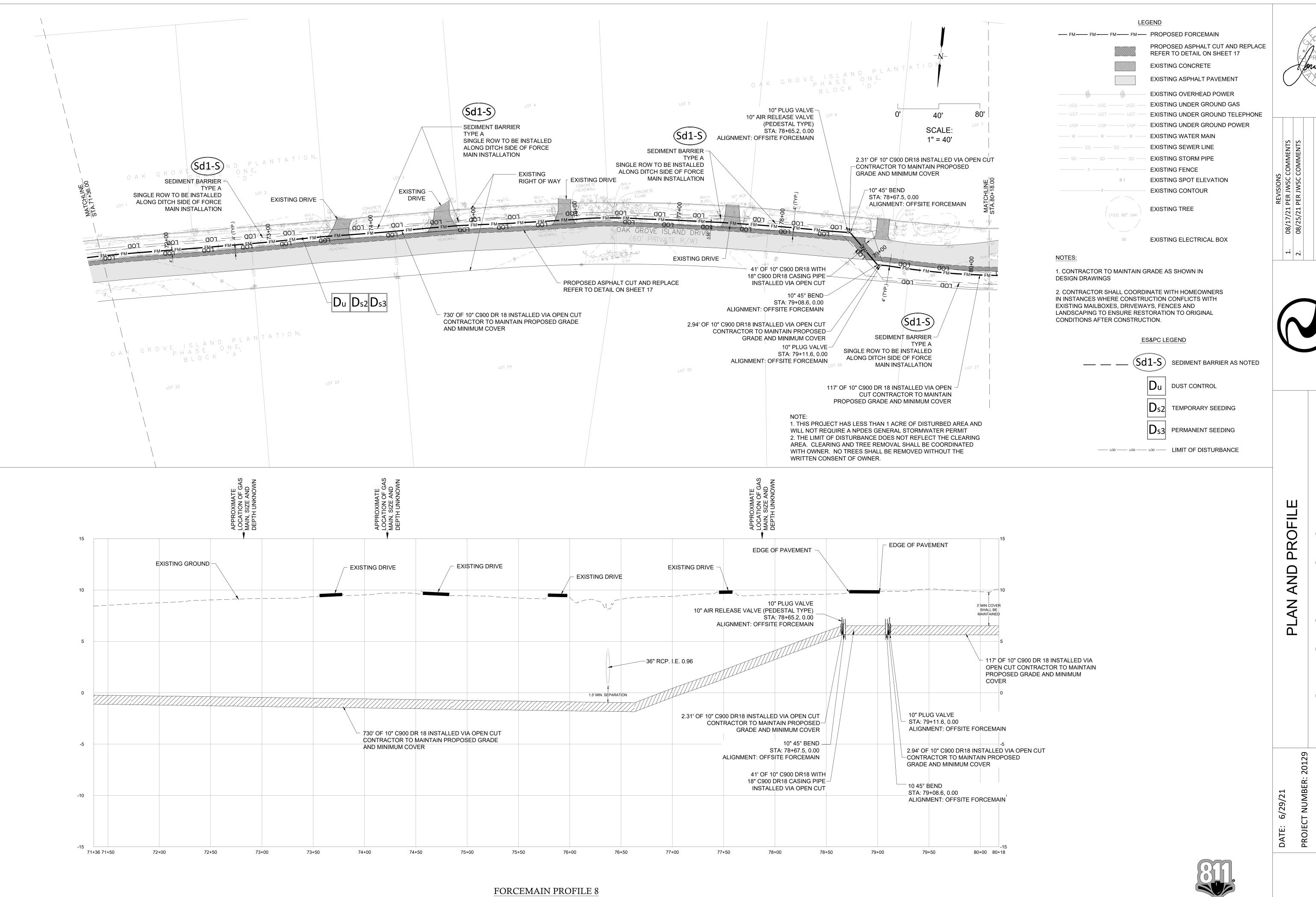
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Know what's below.

Call before you dig.

08/25/21



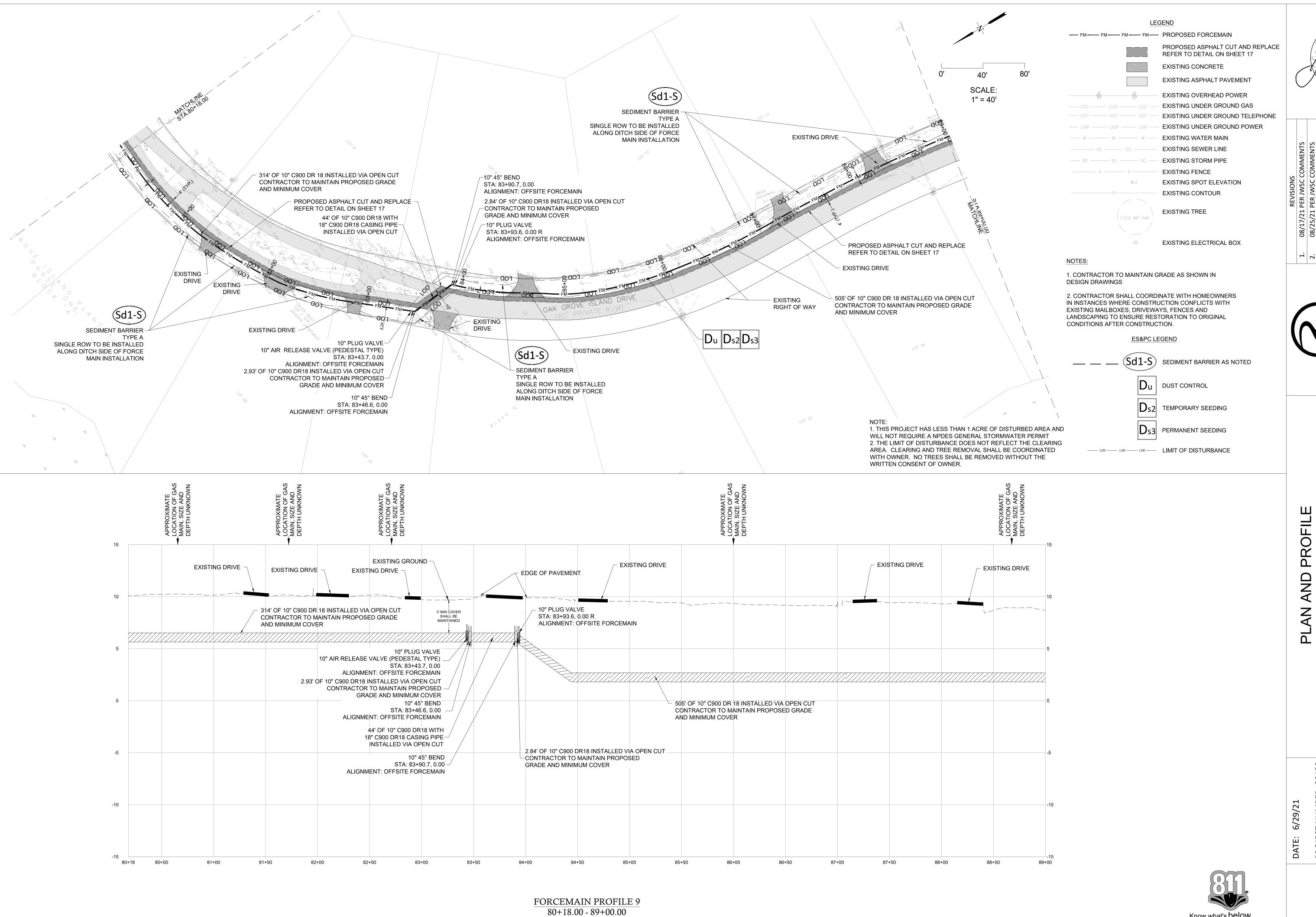
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71+36.00 - 80+18.00 Vertical Scale: 1" = 4 FT

Horizontal Scale: 1" = 40 FT

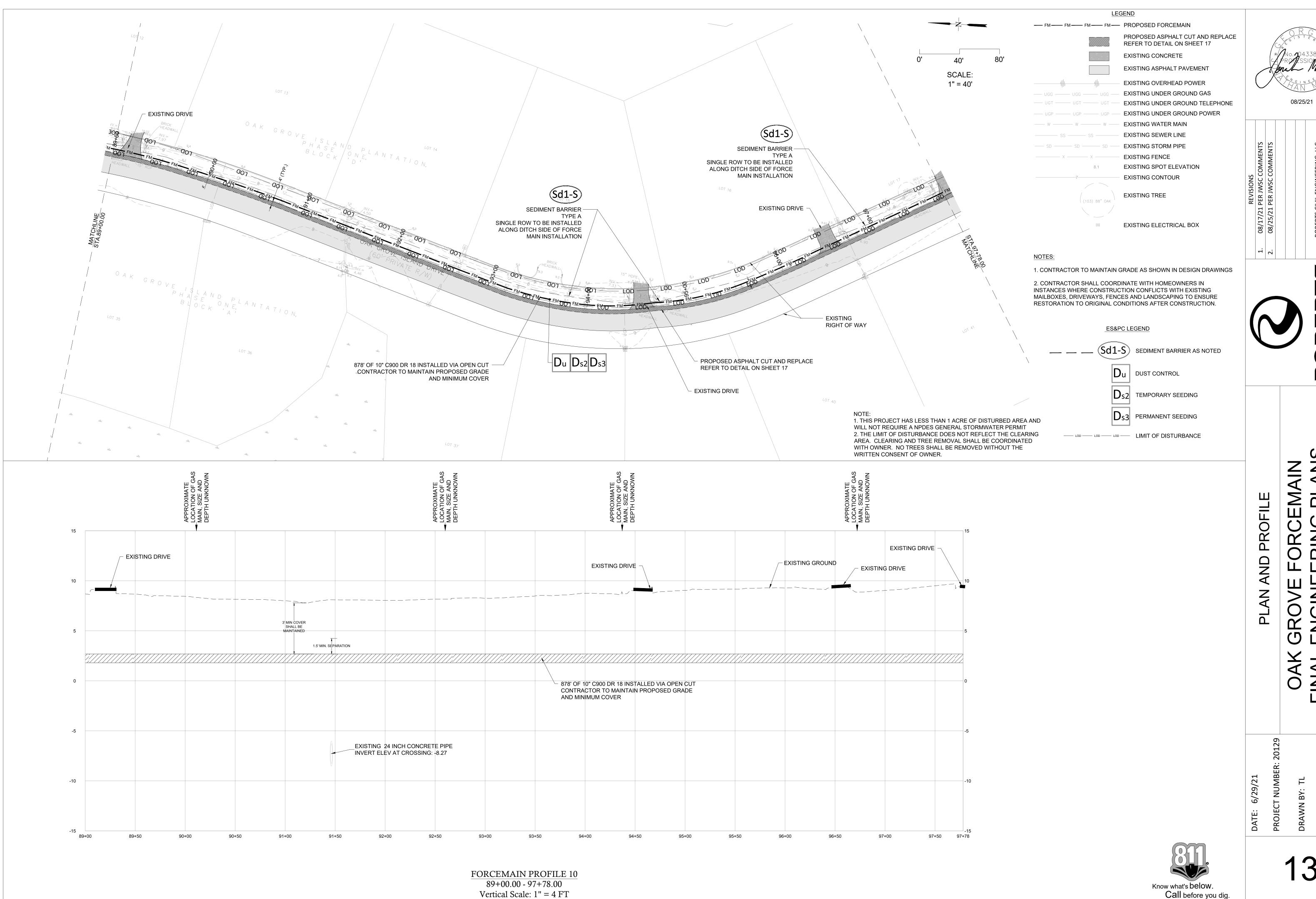


Vertical Scale: 1" = 4 FT

Horizontal Scale: 1" = 40 FT

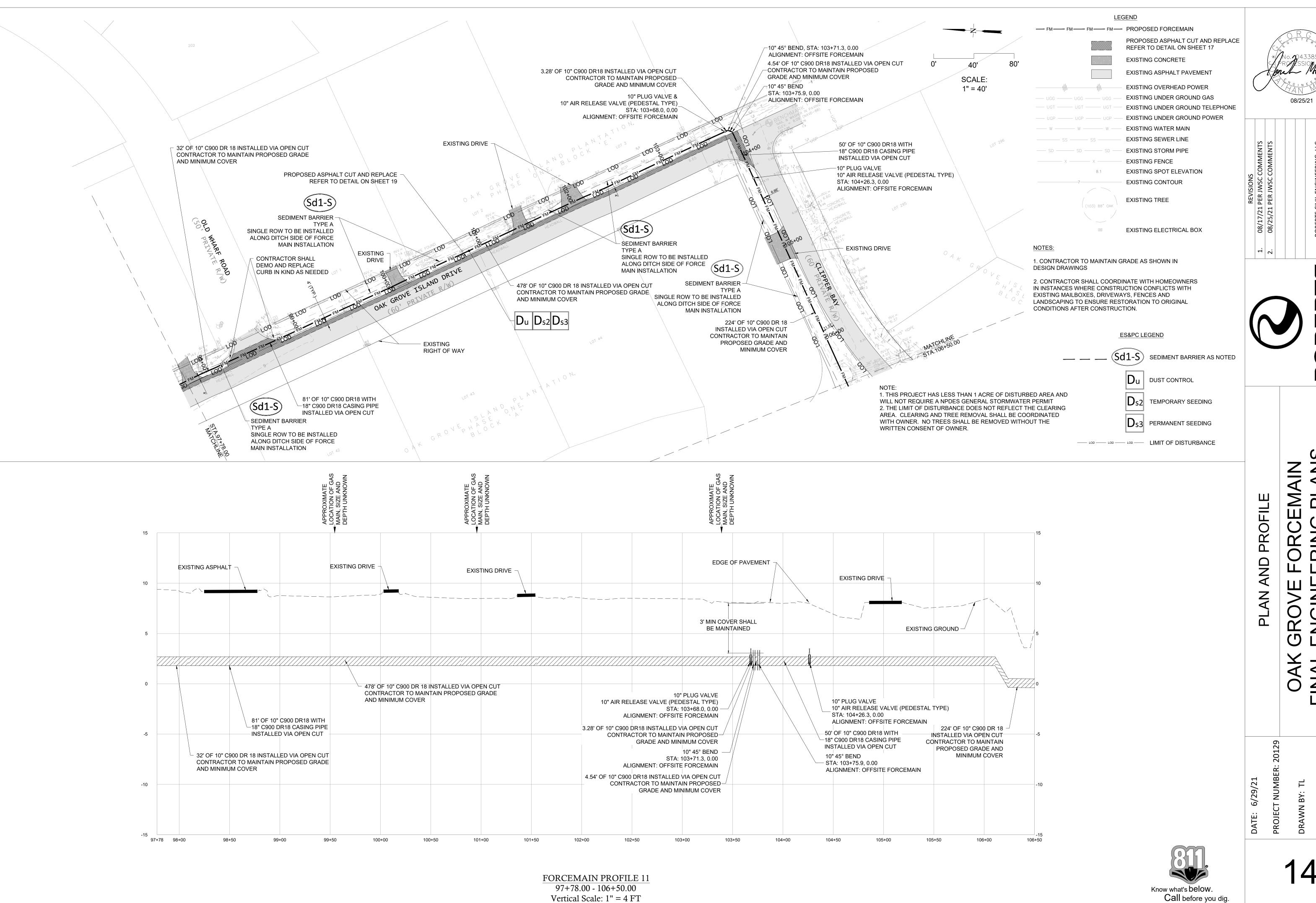
Know what's below. Call before you dig. 08/25/21

GRO Z W



Horizontal Scale: 1" = 40 FT

Call before you dig.

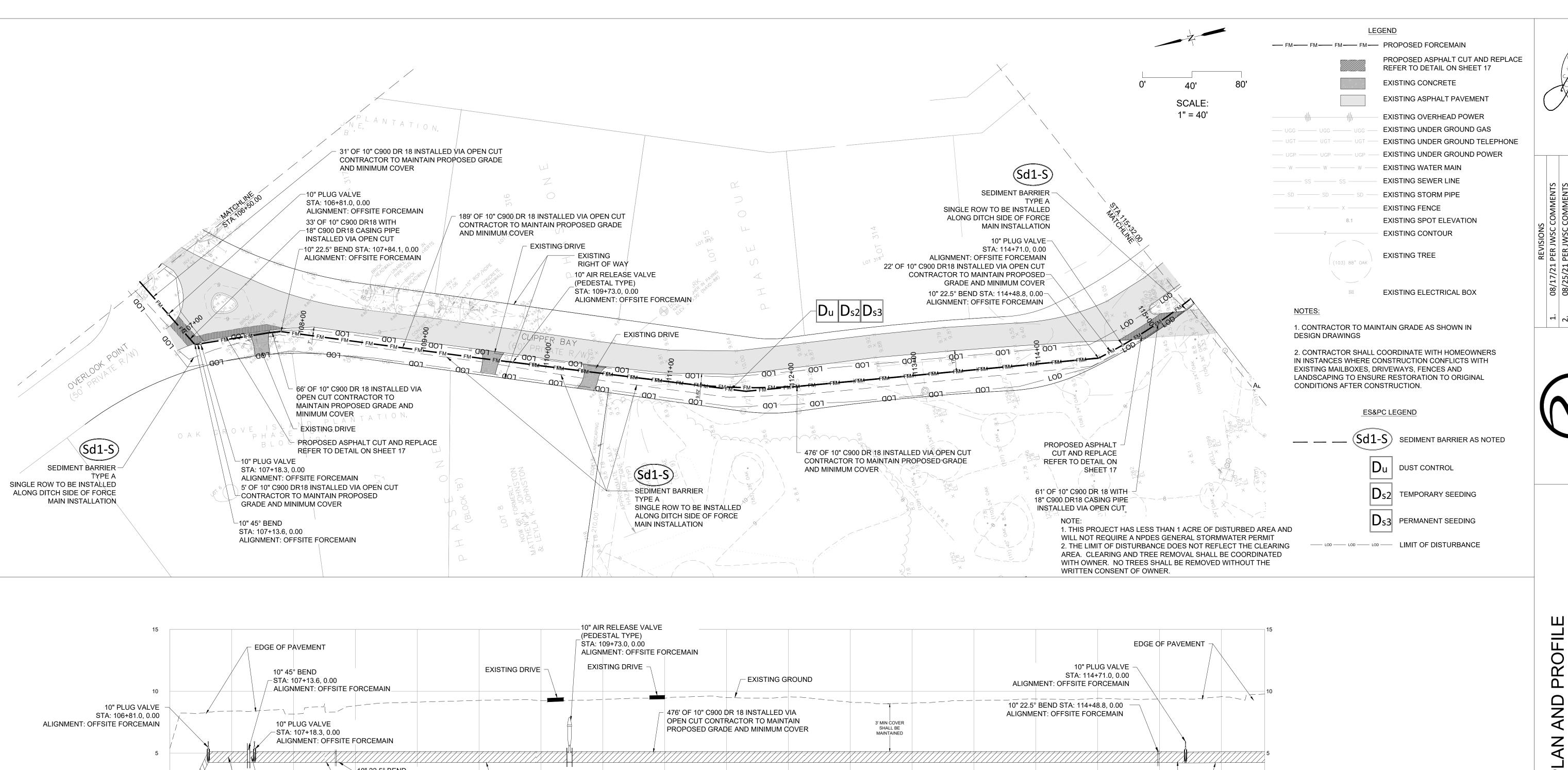


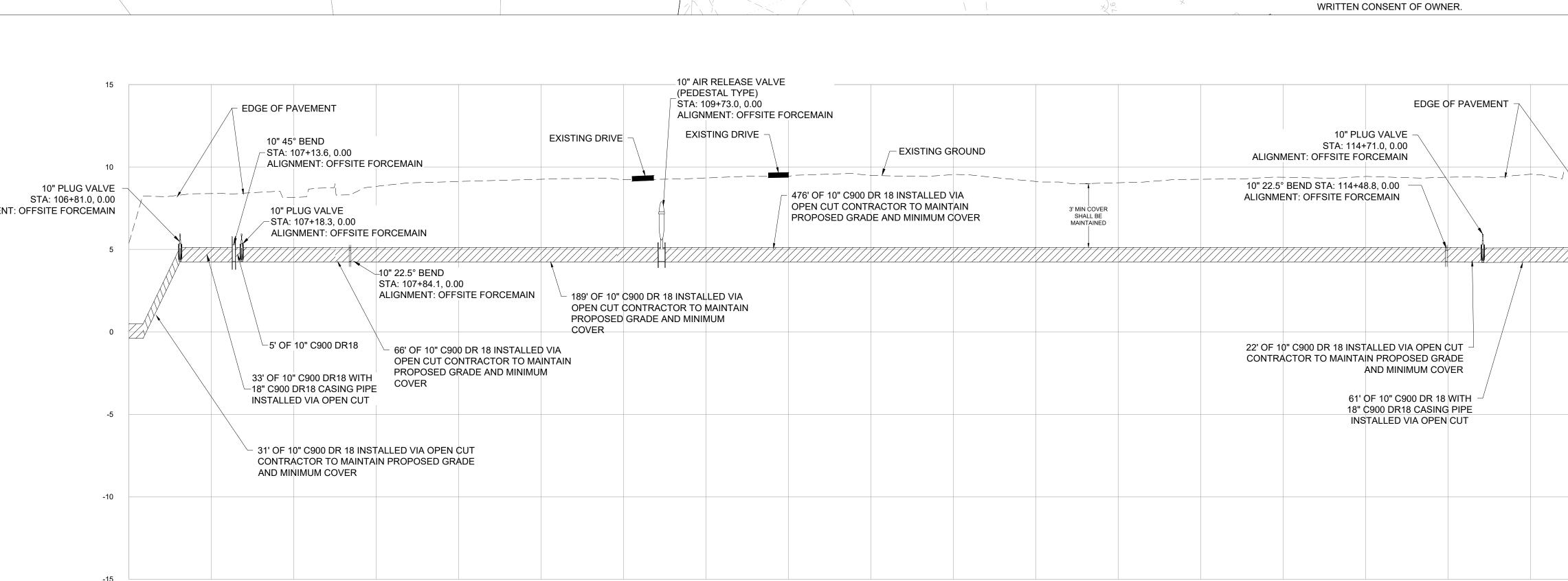
Horizontal Scale: 1" = 40 FT

Call before you dig.

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110+50

110+00

107+00

106+50

107+50

FORCEMAIN PROFILE 12 106+50.00 - 115+35.00 Vertical Scale: 1" = 4 FT Horizontal Scale: 1" = 40 FT

111+00

112+00

112+50

113+00

113+50

114+00

114+50

115+00

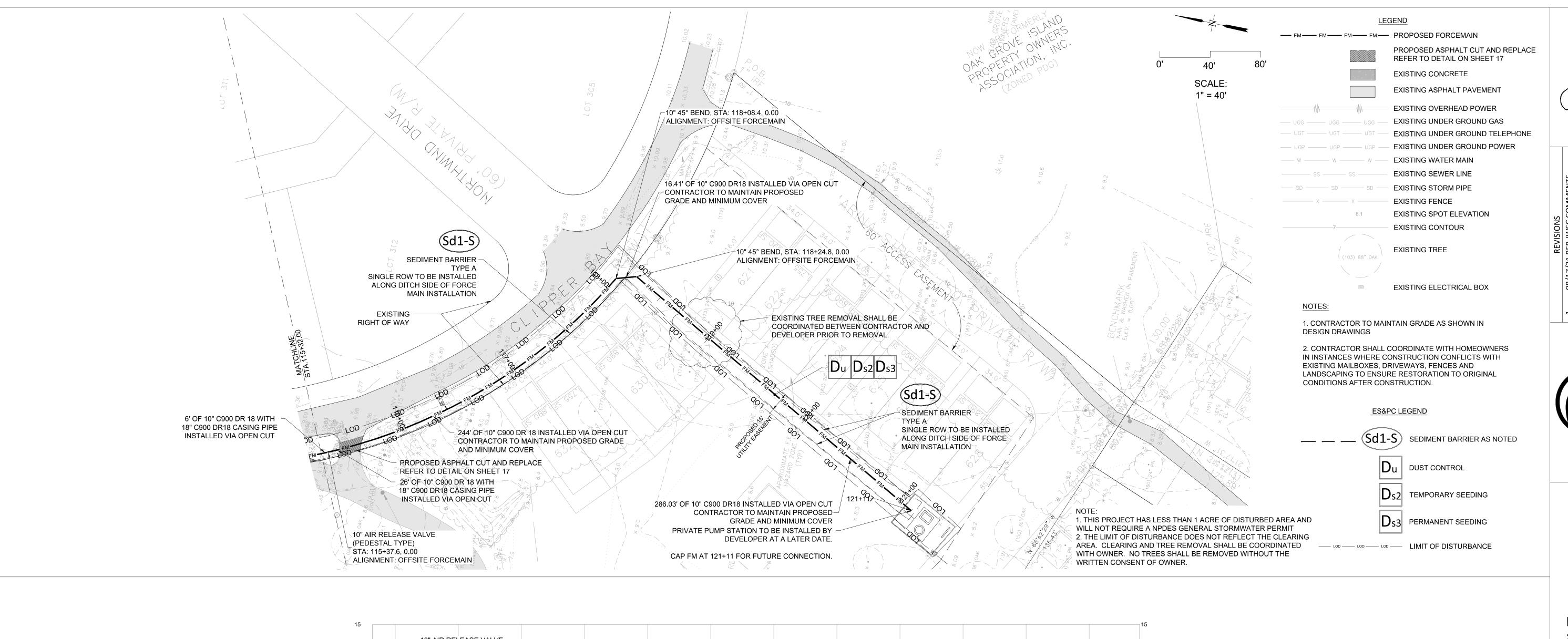


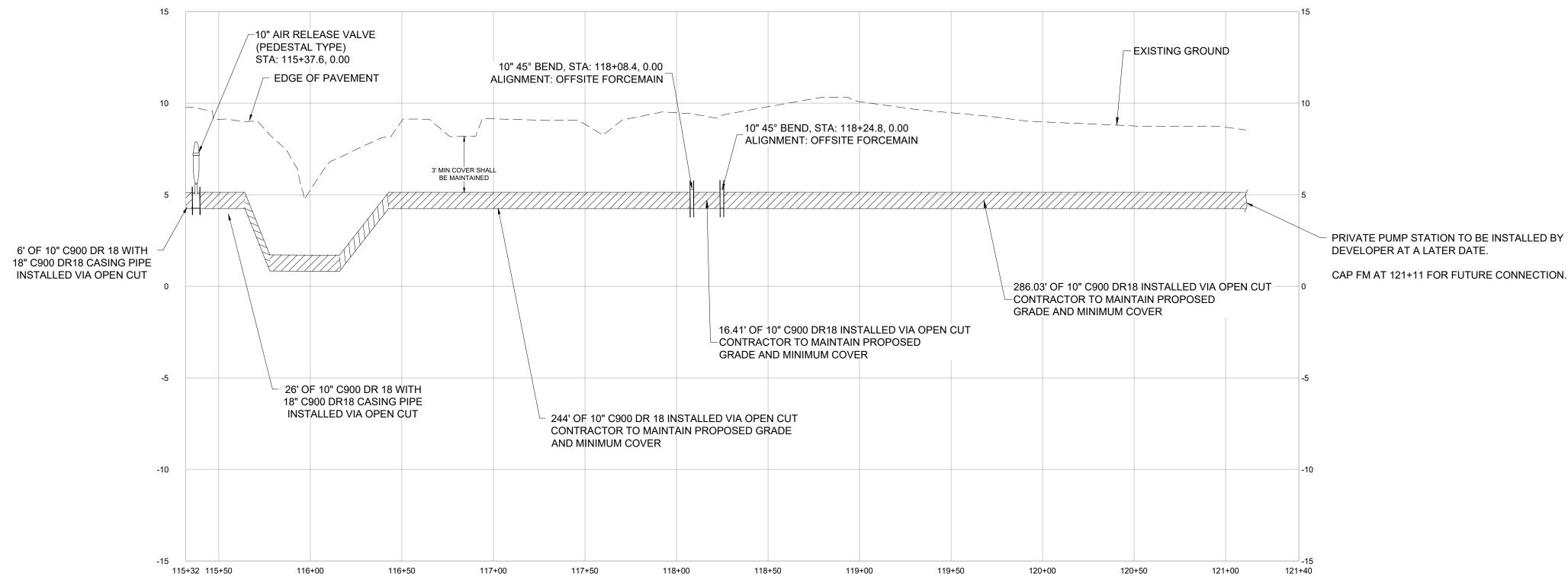


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GRO





FORCEMAIN PROFILE 13 115+32.00 - 121+40.00 Vertical Scale: 1" = 4 FT Horizontal Scale: 1" = 40 FT

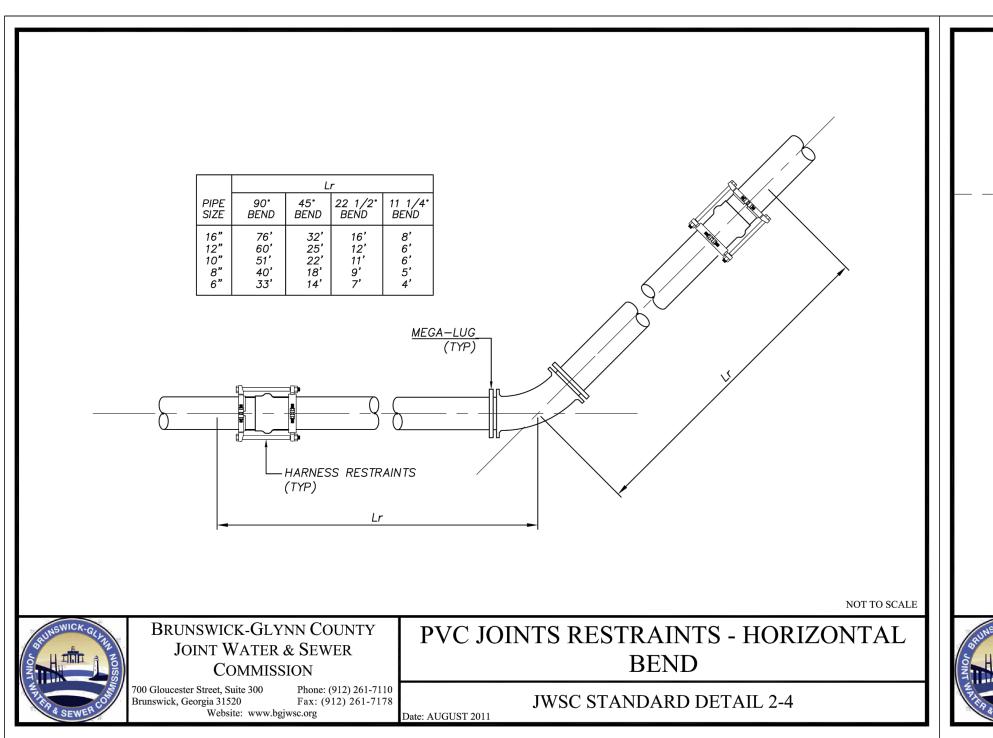


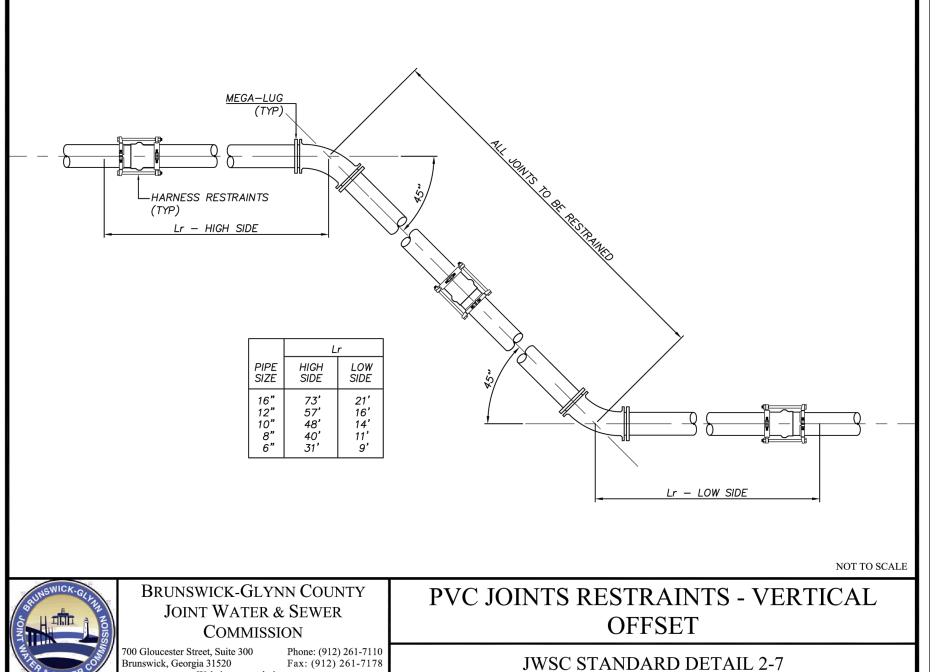
08/25/21

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GRO

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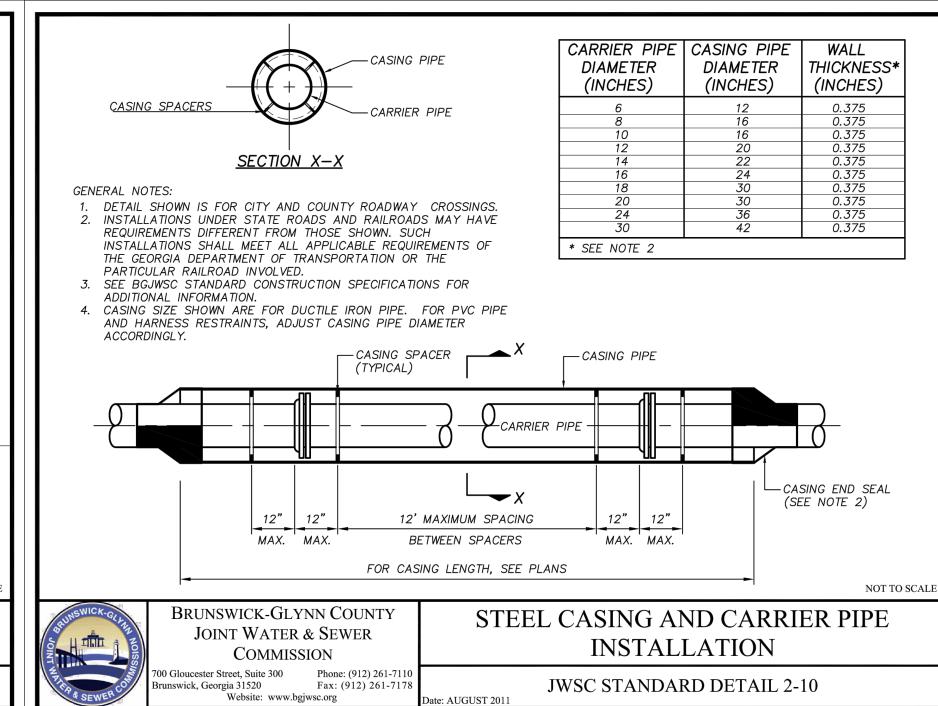


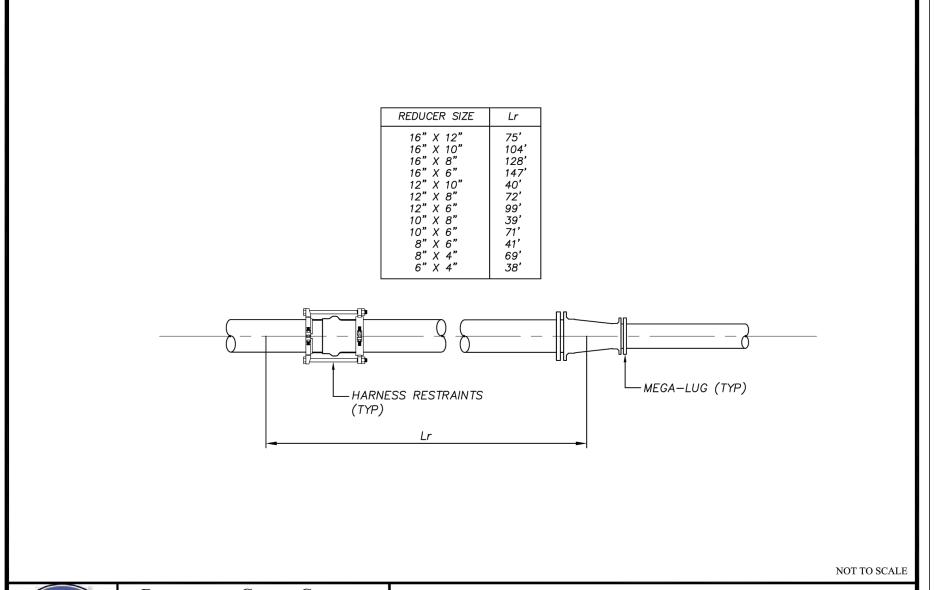
Website: www.bgjwsc.org

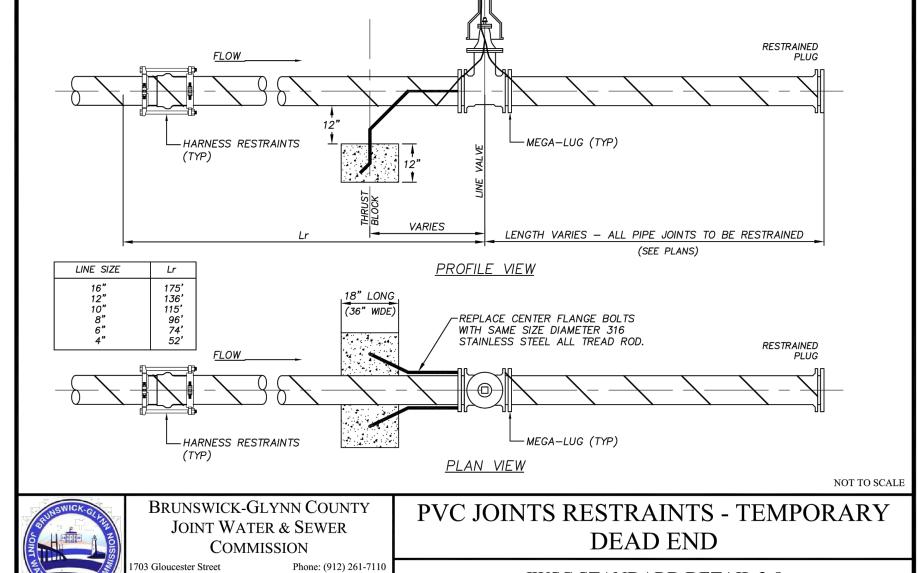
wick, Georgia 31520

Website: www.bgjwsc.org

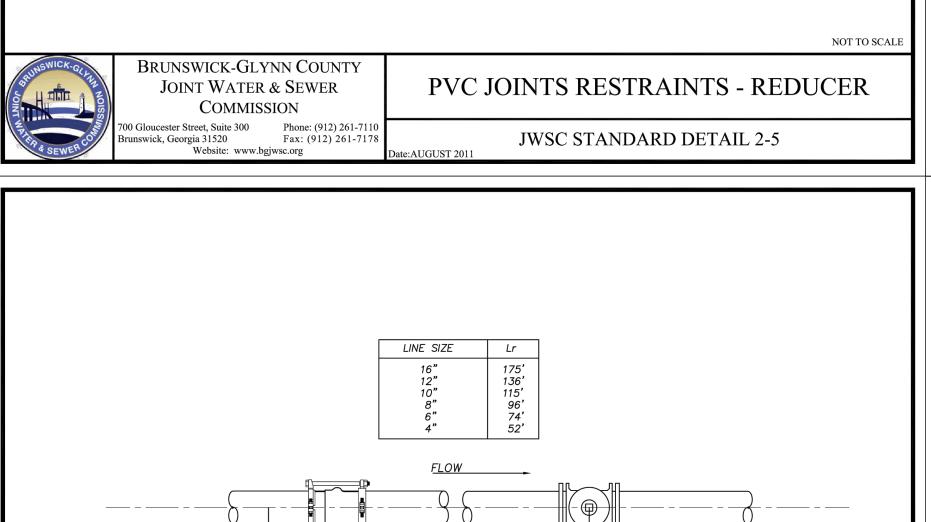
Fax: (912) 261-7178







JWSC STANDARD DETAIL 2-8



- HARNESS RESTRAINTS

FOR LOOPED SYSTEMS, JOINTS SHOULD BE RESTRAINED

(TYP)

BRUNSWICK-GLYNN COUNTY

JOINT WATER & SEWER

COMMISSION

Website: www.bgjwsc.org

Phone: (912) 261-71

Fax: (912) 261-7178

loucester Street, Suite 300

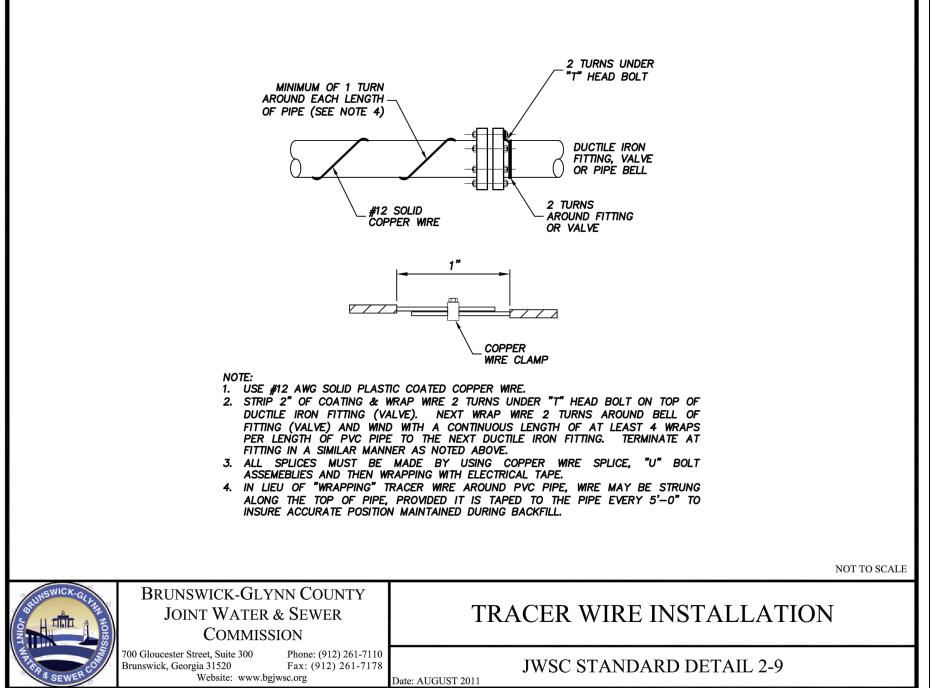
swick, Georgia 31520

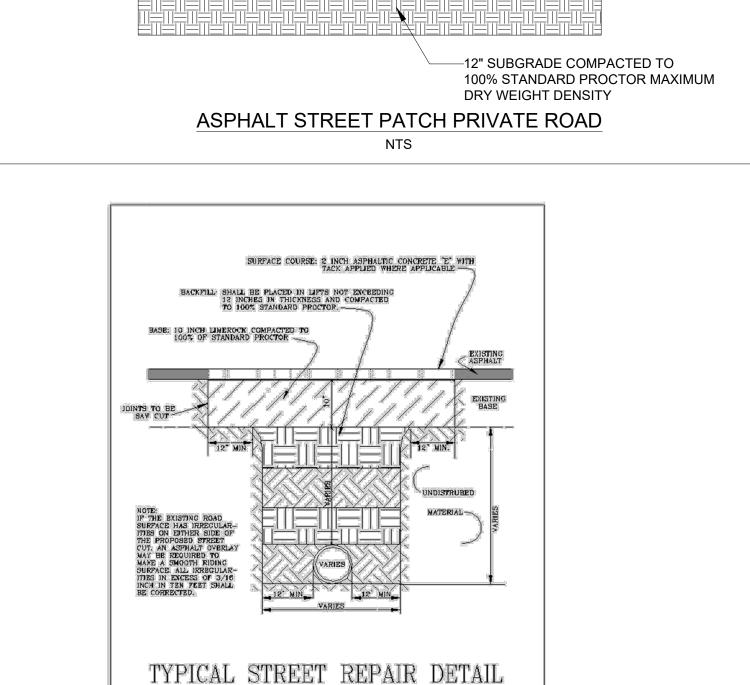
- MEGA-LUG (TYP)

PVC JOINTS RESTRAINTS - IN-LINE VALVE

JWSC STANDARD DETAIL 2-6

NOT TO SCALE





2" ASPHALT SURFACE COURSE

8" CRUSHED LIMEROCK OR AGGREGATE BASE

COMPACTED TO 100% STANDARD PROCTOR

9.5 MM SUPERPAVE PRIME COAT

- TACK COAT

(IF REQ'D)

Road repair requirements: Glynn County Right-Of-Way Coordinator must review road cut and approve final dimensions of area to be paved prior to final paving. All road cuts must be neatly square cut and perpendicular to the lines and general direction of the road way and a minimum of 12" beyond final disturbed area. Entire width of lane is to be repaved for road cuts that are up to or exceeds half the distance of the lane. Entire width of road is to be repaved for road cuts that are up to or exceeds half the distance of the road. Road must be repaired as outline below per the standard Glynn County road repair detail within 30 days after road is cut including any applicable road striping. Compaction test are required to ensure 100% compaction of backfill and base material. Compaction test results must be forwarded to Glynn County Right-Of-Way Coordinator reflecting two results of the *Cuts exceeding 150 feet in length, the base material shall be brought flush to the bottom of the existing pavement,

NOT TO SCALE

existing pavement shall be saw cut to a straight edge and the entire width of the roadway resurfaced with a minimum of 1" of type "E" asphalt topping.

**Depending on existing road condition, tie in points may require additional milling and blending as determined by Glynn County staff.

***Depending on the existing conditions and location of the road cut, flowable fill may be required as backfill material. To be determined by Glynn County Staff.

Typical Street Repair Detail requirements

(1) Existing road bed will be cut twelve (12) inches beyond the disturbed area on each side. Disturbed areas will be compacted as (2) Subgrade shall be placed in lifts not to exceed twelve (12) inches in thickness and compacted to one hundred percent (100%)

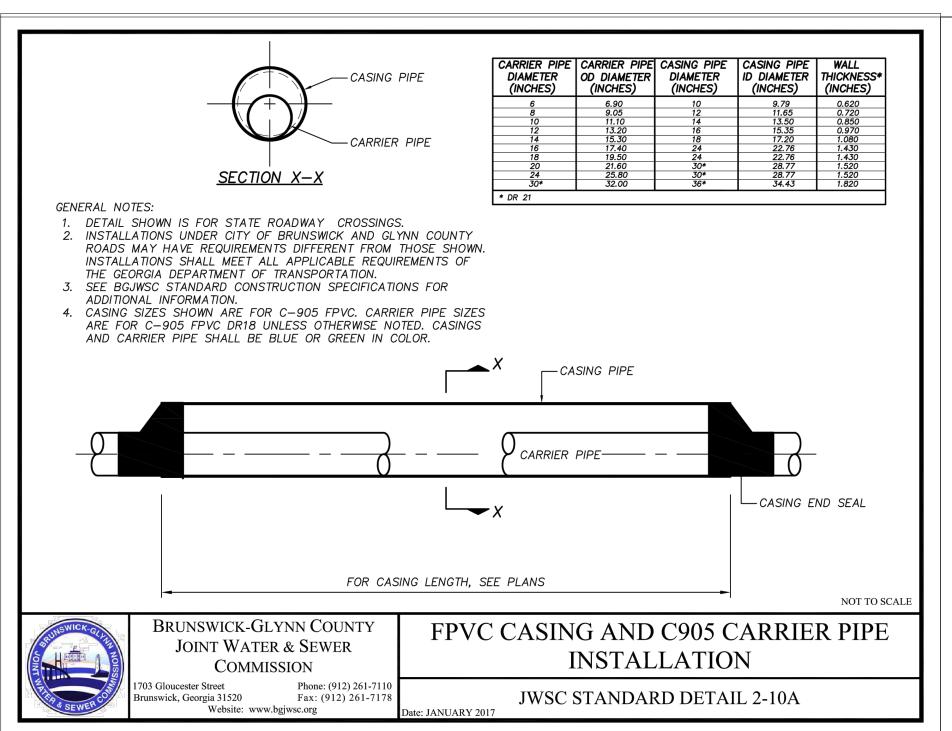
(3) A base of ten (10) inches of lime rock compacted to one hundred percent (100%) standard proctor. (4) An asphaltic concrete "E" with tack applied is required. A surface course thickness shall be determined during the permit

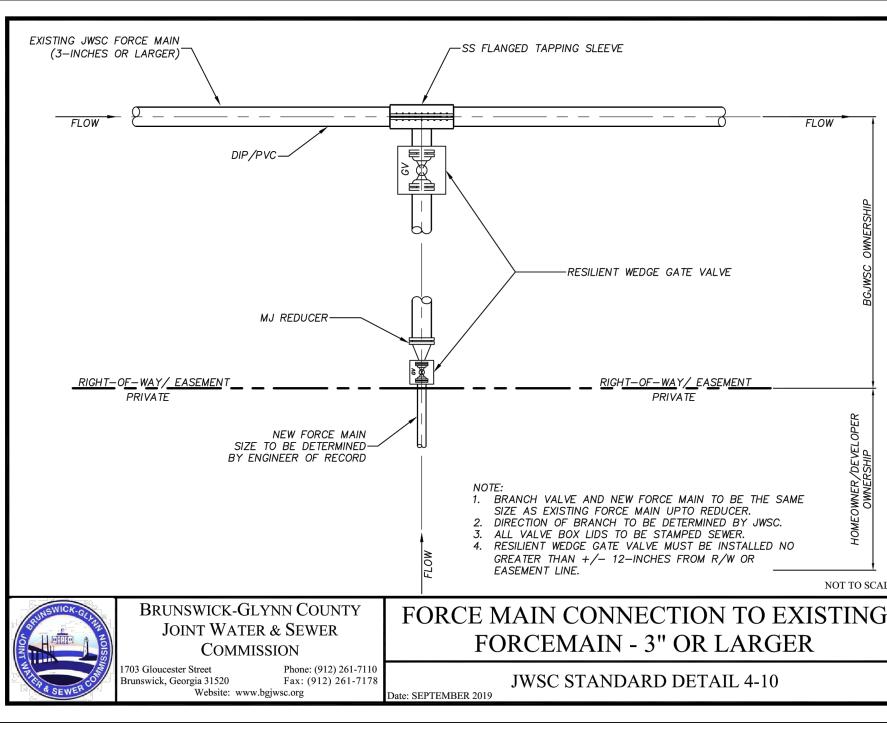
(5) Concrete materials shall not be used on asphalt roads.

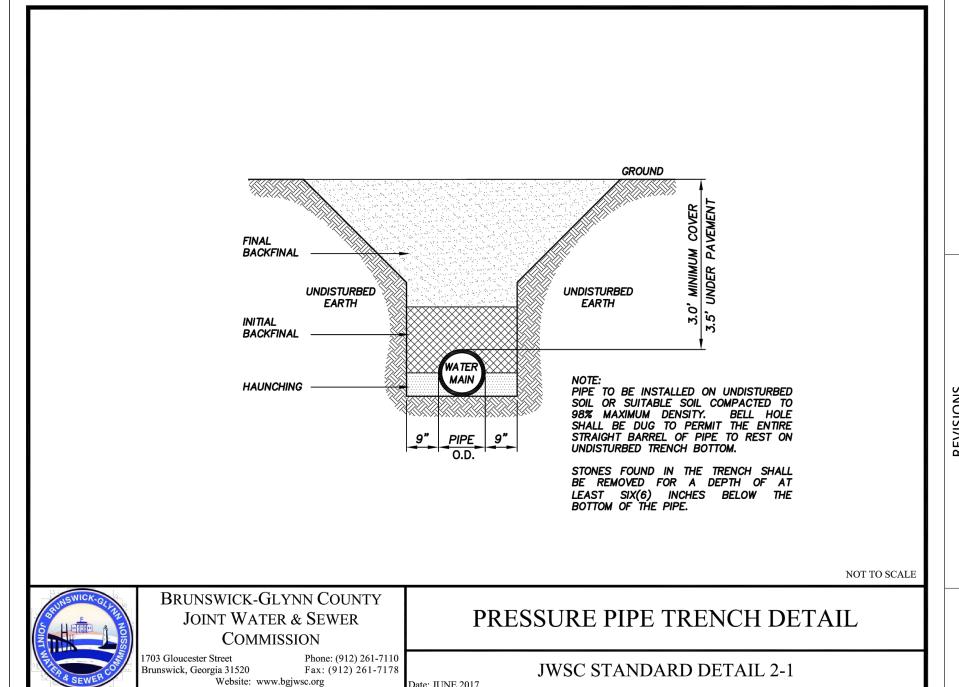
ASPHALT STREET PATCH PUBLIC ROAD & CROSSINGS

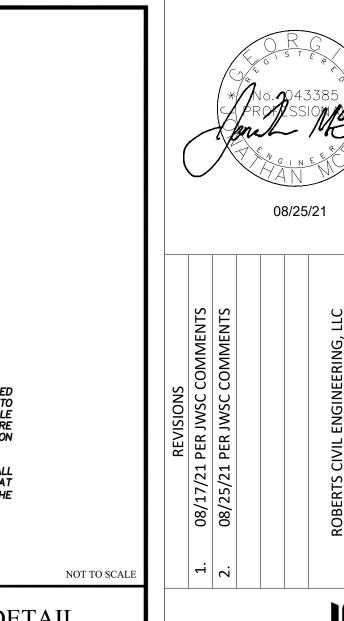


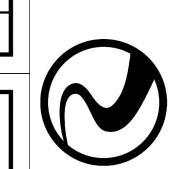
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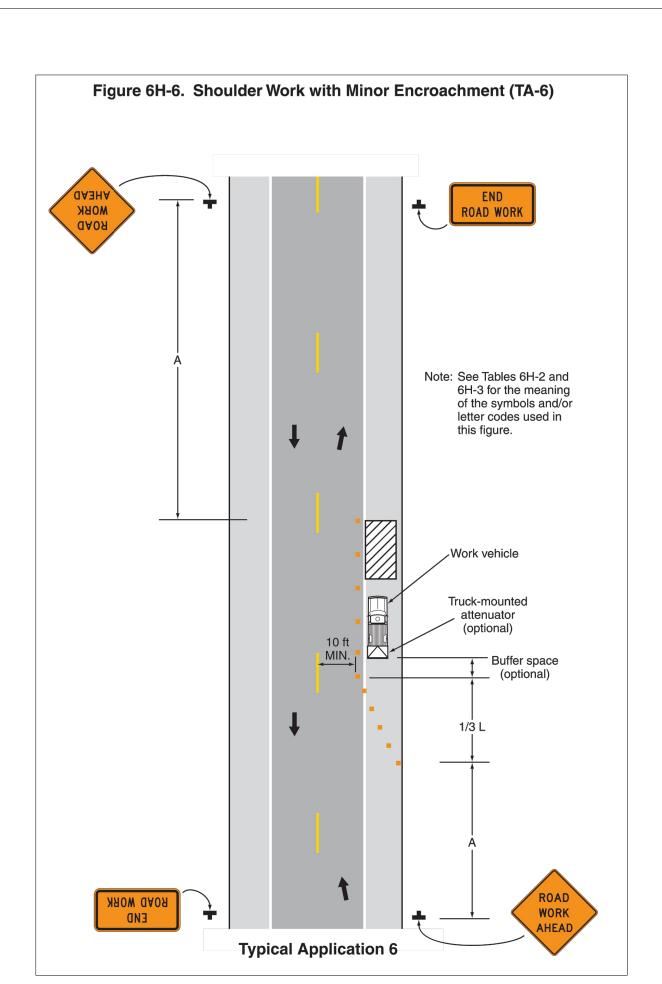
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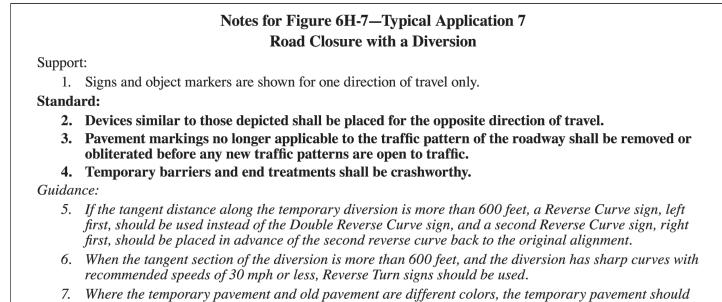
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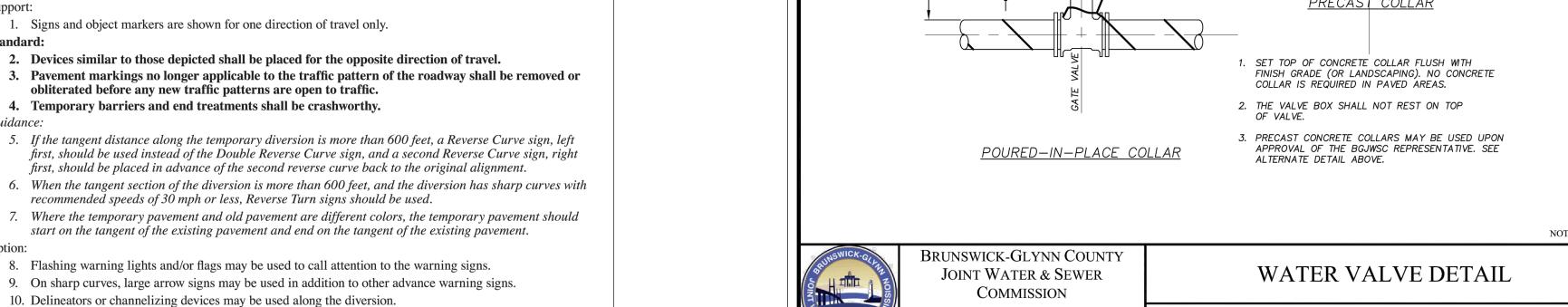
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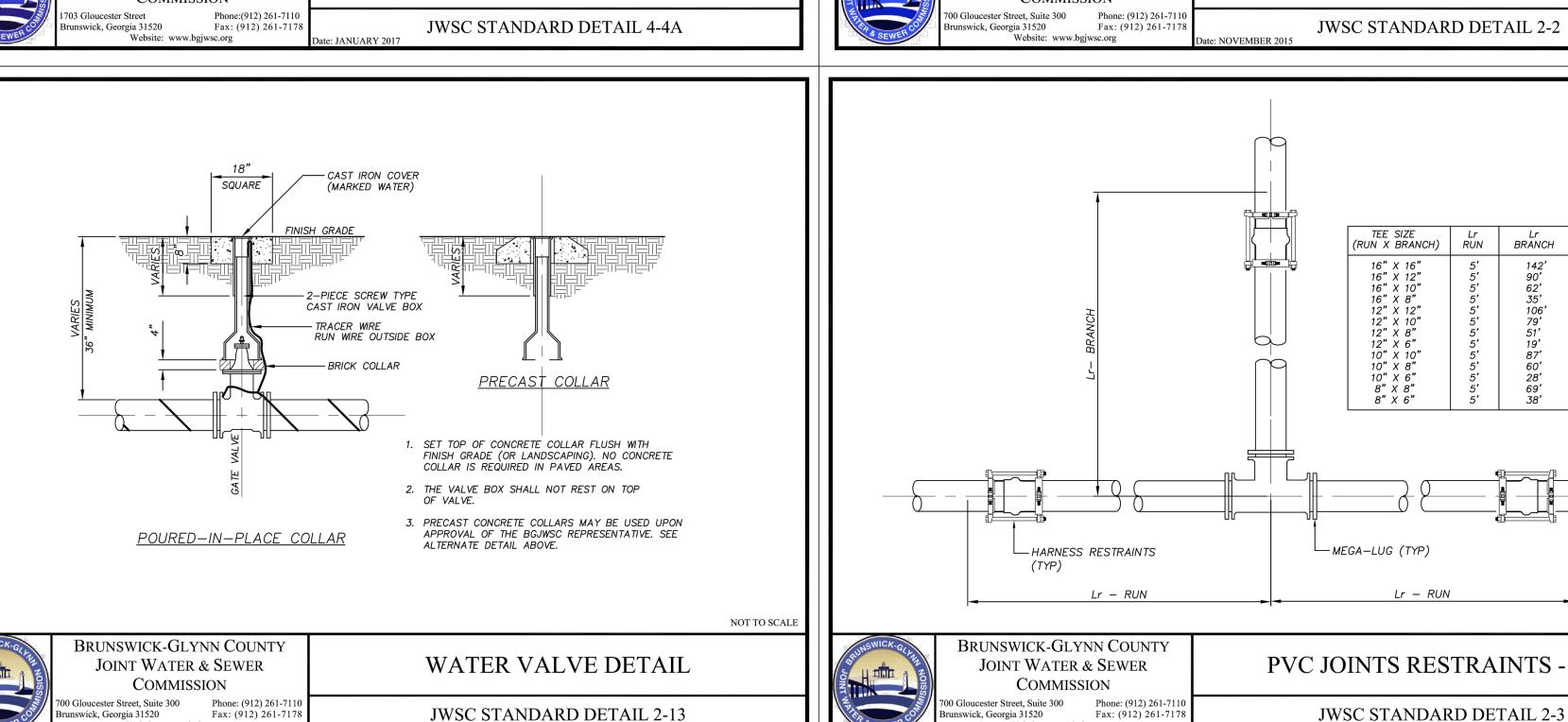
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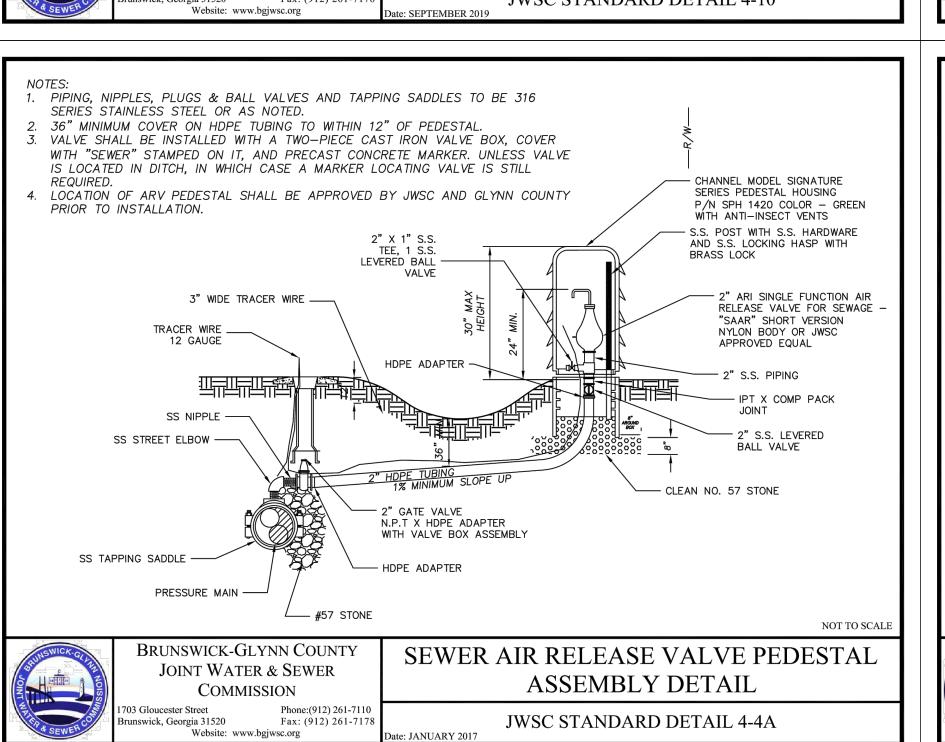


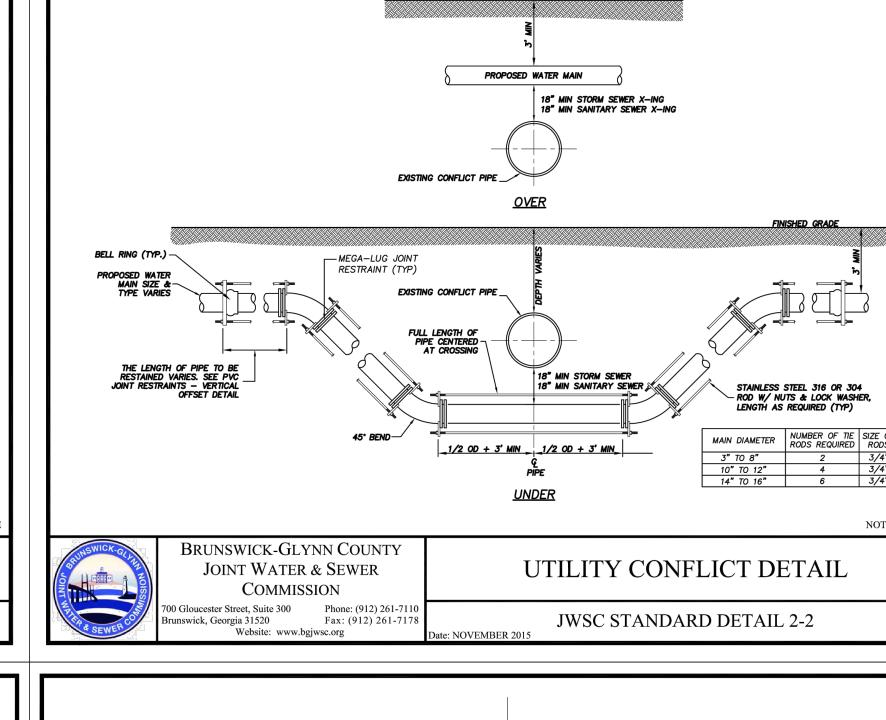


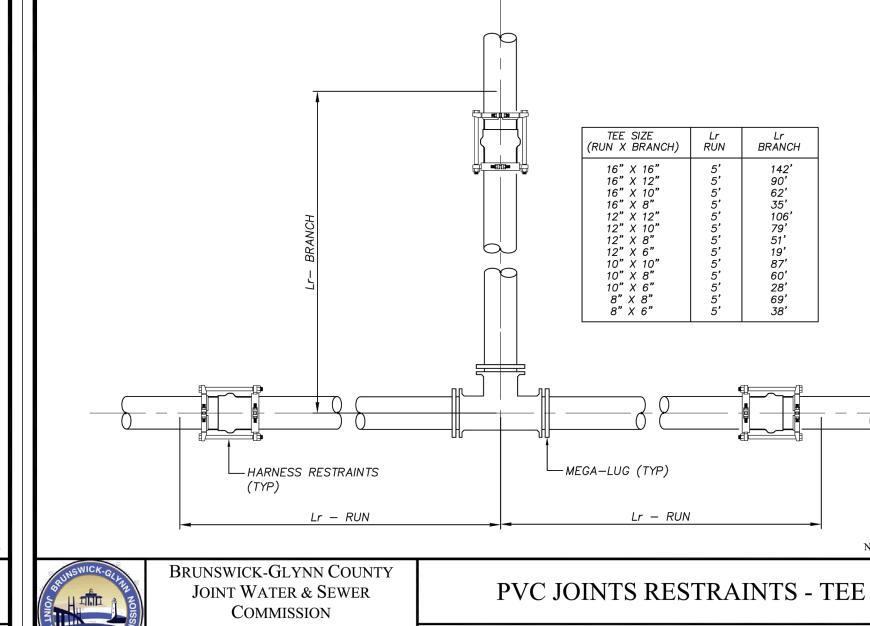


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