

APPROVAL

APPROVED
DEPARTMENT OF PLANNING & ZONING
ISLE OF WIGHT COUNTY, VIRGINIA

SIGNATURE _____ DATE _____

APPROVED
COMMUNITY DEVELOPMENT & PLANNING
TOWN OF SMITHFIELD, VIRGINIA

SIGNATURE _____ DATE _____

QUALITY ASSURANCE STATEMENT

A Quality Control and Assurance review has been performed on this document in accordance with the TIMMONS' Quality Plan. The undersigned states that this document has been checked and reviewed in a manner commensurate with the level of detail for the type of submittal indicated below.

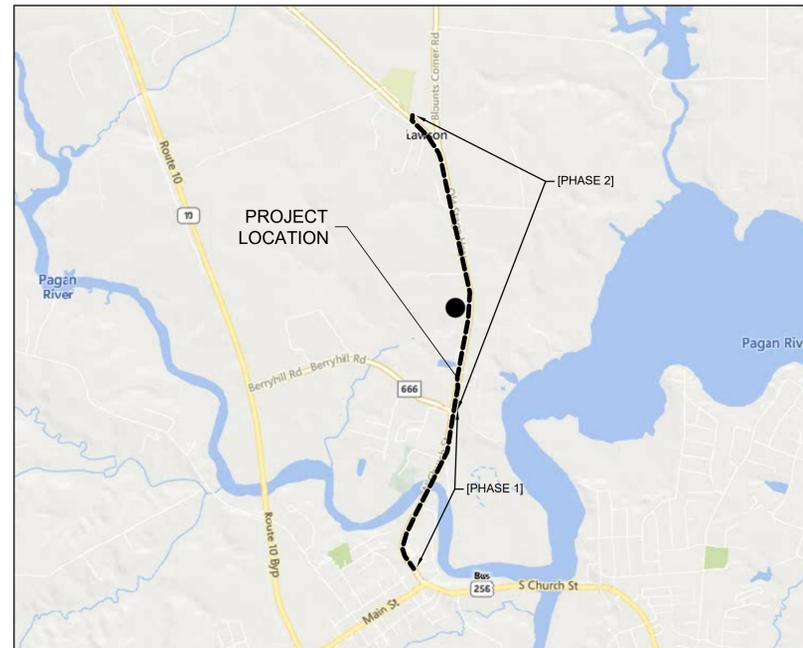
KENNETH TURNER, PE
Project Manager
8/5/2022
Date
WATERLINE SITE PLAN RESUBMITTAL
Type of Submittal



ROUTE 10 WATER MAIN EXTENSION PHASE 2 - HARDY E.S. TO BERRY HILL ROAD

TOWN OF SMITHFIELD & ISLE OF WIGHT COUNTY, VIRGINIA

AUGUST 2022



VICINITY MAP
SCALE: 1" = 2,000'

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HARDY ES TO BERRY HILL ROAD	

PROJECT AREA LIES WITHIN THE CHESAPEAKE BAY PRESERVATION AREA AND ENTRANCE CORRIDOR OVERLAY DISTRICT.

ESTIMATED CONSTRUCTION TIME IS 13 MONTHS.

CONTACTS

- EASEMENT HOLDERS**
ISLE OF WIGHT COUNTY
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CONTACT: DONALD JENNINGS, P.E.
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- TOWN OF SMITHFIELD**
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CALL BEFORE YOU DIG

ALWAYS CALL 811 BEFORE YOU DIG IN VIRGINIA

CALL 1-800-552-7001

SECTION 56-265.17 REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL OR BLAST. VIRGINIA UTILITY PROTECTION SERVICE, INC.

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EMERGENCY CONTACT:

ISLE OF WIGHT COUNTY EMERGENCY CONTACT:
 DONALD JENNINGS
 DIRECTOR OF UTILITY SERVICES
 PO BOX 80
 ISLE OF WIGHT, VIRGINIA 23397
 OFFICE: (757) 365-1655

ISLE OF WIGHT GENERAL NOTES:

1. THE DEVELOPER SHALL SUBMIT TWO (2) SETS OF AS-BUILT PLANS AND ONE (1) CD/DVD WITH AS-BUILT AUTOCAD DRAWINGS AND PDF FILES OF EACH PLAN SHEET TO THE STORMWATER DIVISION FOR ALL STORM SEWER, PUBLIC SANITARY SEWER, PUBLIC WATER AND BMPS. AS A PART OF FINAL INSPECTION, DEVELOPER SHALL HIRE AN INDEPENDENT TELEVISION INSPECTION SERVICE TO PERFORM A CLOSED-CIRCUIT TELEVISION INSPECTION OF ALL NEWLY CONSTRUCTED STORM SEWERS AND SANITARY SEWERS UNLESS OTHERWISE DIRECTED BY THE STORMWATER DIVISION. A VIDEO/DVD OF THE INSPECTION SHALL BE PRODUCED AND DELIVERED TO THE COUNTY IN COLOR FORMAT, TOGETHER WITH A TYPED LOG OF THE INSPECTION.

2. ALL WATER AND SEWER UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST VERSION OF ISLE OF WIGHT COUNTY CONSTRUCTION SPECIFICATIONS AND STANDARDS.

3. ALL CONSTRUCTION METHODS, MATERIALS, TESTING AND STERILIZATION SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE DEPARTMENT OF PUBLIC UTILITIES COUNTY OF ISLE OF WIGHT, VIRGINIA, AS WELL AS CURRENT STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF HEALTH AND THE HAMPTON ROADS SANITATION DISTRICT. TESTING SHALL INCLUDE BUT NOT BE LIMITED TO SOAKING WATERMAIN FOR A PERIOD OF 24 HOURS, HYDROSTATIC PRESSURIZATION TO 150 PSIG MAINTAINED FOR 2 HOURS WITH LEAKAGE NOT TO EXCEED WHAT IS STATED IN AWWA C600-93. FLUSHING THE MAIN SHALL INCLUDE BUT NOT BE LIMITED TO FULL FLUSHING THE MAIN WITH NO RESTRICTIONS WITH FINISHED WATER AT A VELOCITY OF NOT LESS THAN 2.5 FPS THE NDISINFECTING IN ACCORDANCE WITH AWWA C651-99 OR LATEST EDITION. EVERY 1200 FEET OF WATER MAIN SHALL UNDERGO (2) CONSECUTIVE DAYS OF NEGATIVE BACTERIOLOGICAL SAMPLING, COLLECTED NO LESS THAN 24 HOURS APART. THE ENTIRE DISINFECTION PROCESS SHALL BE IN ACCORDANCE WITH DIRECTIVES FROM THE VIRGINIA DEPARTMENT OF HEALTH. THE WATERMAIN CAN ONLY BE PUT INTO SERVICE ONCE ALL INSPECTIONS AND TESTING IS COMPLETED AND A LETTER OF CERTIFICATION WITH BACTERIOLOGICAL SAMPLES ARE SENT TO VIRGINIA DEPARTMENT OF HEALTH BY THE CONTRACTOR.

4. DUCTILE IRON PIPE SHALL BE CENTRIFUGALLY CAST PIPE MANUFACTURED IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.51. DUCTILE IRON PIPE SHALL BE CEMENT-MORTAR LINED INSIDE IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.4-90. CEMENT FOR THE MORTAR SHALL BE TYPE II PORTLAND CEMENT. THE STANDARD SEAL COAT OF BITUMINOUS MATERIAL SHALL BE APPLIED TO THE EXTERIOR OF THE PIPE. DUCTILE IRON PIPE SHALL BE CLASS 50 (MIN.).

5. JOINTS FOR DUCTILE IRON PIPE SHALL BE ONE OF THE FOLLOWING.

A. RUBBER GASKET (PUSH-ON) TYPE JOINT. RUBBER GASKET TYPE JOINTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.00 AND DESIGNED TO LOCK AGAINST DISPLACEMENT WITHOUT CAULKING. THE GASKET SHALL BE A RESILIENT RUBBER OF HEAVY SECTION, HIGH DUROMETER, AND SINGLE MOLDED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. THE GASKET LUBRICANT SHALL BE A NON-TOXIC, TASTELESS, ODDORLESS GREASE THAT WILL NOT SUPPORT BACTERIA. EACH GASKET LUBRICANT CONTAINER SHALL BE LABELED WITH THE TRADE NAME AND THE PIPE MANUFACTURER'S NAME.

B. MECHANICAL JOINT. STANDARD MECHANICAL JOINTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.00 (AWWA SPECIFICATIONS C111-9D). THE MECHANICAL JOINT BOLTS SHALL BE A U.S. STANDARD SIZE, HIGH STRENGTH, CORROSION RESISTANT STEEL ALLOY WITH HEXAGON NUTS. MECHANICAL JOINTS SHALL BE USED FOR THE CONNECTION OF ALL FITTINGS, VALVES, AND HYDRANTS FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON AND SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ANSI SPECIFICATIONS A21.10-90 (AWWA SPECIFICATIONS C110-93). FITTINGS SHALL BE COMPATIBLE WITH THE PIPE AND SHALL PROVIDE AT LEAST EQUAL RESISTANCE TO INTERNAL AND EXTERNAL LOADS ON THE PIPE. FITTINGS SHALL BE BITUMINOUS COATED ON THE OUTSIDE AND CEMENT MORTAR LINED ON THE INSIDE ACCORDING TO ANSI SPECIFICATIONS A21.4-9D (AWWA SPECIFICATIONS C104-9D). ALL BOLTS ARE TO BE TORQUED TO A MINIMUM OF 90LBS.

6. WATER MAINS AND SEWER FORCE MAINS SHALL HAVE A MINIMUM COVER OF 36" UNLESS OTHERWISE NOTED ON THE PLANS. (MEASURED FROM ESTABLISHED FINISHED GRADE TO TOP OF PIPE.)

7. ALL TEES, BENDS, PLUGS, CAPS AND FIRE HYDRANTS SHALL BE SUBSTANTIALLY ANCHORED TO PREVENT ANY MOVEMENT BY PROVIDING ADEQUATE THRUST RESTRAINT. THE CONTRACTOR SHALL INSTALL A BED OF 57 STONE UNDER ALL FITTINGS, VALVES AND HYDRANTS AND INCASE AFTER INSTALLED ALL FITTINGS, VALVES AND HYDRANTS WITH 57 STONE CHOCKED IN PLACE.

8. VALVE BOXES SHALL BE INSTALLED FOR ALL VALVES WHICH ARE BURIED BENEATH FINISHED GRADE ELEVATION. VALVE BOXES SHALL BE CAPITAL FOUNDRY NPN-15

9. ALL WATERMAIN AIR RELEASE VALVE ASSEMBLIES SHALL BE MANUAL AND INSTALLED AT HIGH POINTS IN THE LINE OR WHERE REQUIRED OTHERWISE. EACH ASSEMBLY SHALL CONSIST OF AN APPROVED TWO-INCH CORPORATION STOP, A RISER PIPE OF SUITABLE LENGTH, AND A TWO-INCH STAINLESS STEEL BALL VALVE. THE AIR RELEASE VALVE ASSEMBLY ENCLOSURE OR CHAMBER SHALL HAVE A CAST IRON FRAME AND COVER EQUAL TO DEWEY BROTHERS OF VIRGINIA, INC., MODEL B-1200.

10. BLOW-OFF ASSEMBLIES SHALL BE INSTALLED AT ALL PIPE DEAD ENDS AND LOW POINTS IN THE LINE OR WHERE OTHERWISE REQUIRED. THE BLOW-OFF ASSEMBLY PIPEWORK AND VALVING SHALL BE APPROPRIATELY SIZED AND SHALL CONFORM IN ALL RESPECTS TO THE APPLICABLE PORTIONS OF ISLE OF WIGHT COUNTY'S CONSTRUCTION SPECIFICATIONS. THE BLOW-OFF ASSEMBLY ENCLOSURE OR CHAMBER SHALL HAVE A CAST

IRON FRAME AND COVER EQUAL TO DEWEY BROTHERS OF VIRGINIA, INC., MODEL B-1200. THE TWO TYPES OF ASSEMBLY ENCLOSURES SHALL BE AS GRAPHICALLY INDICATED IN THE CONSTRUCTION STANDARDS. IN NO INSTANCE SHALL THE DRAIN OR THE OUTLET BE CONNECTED TO A SANITARY SEWER. NEITHER THE AIR RELEASE VALVE ASSEMBLY NOR THE BLOW-OFF ASSEMBLY SHALL BE INSTALLED UNDER PAVEMENT SUBJECT TO VEHICULAR TRAFFIC.

11. UNLESS OTHERWISE SPECIFIED, A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN ALL SANITARY SEWERS AND WATER LINES. THE LENGTH OF THE WATER LINE SHALL BE CENTERED ON THE CROSSING WHERE THE WATER LINE CROSSES OVER THE SANITARY SEWER. WHERE CLEARANCE IS LESS THAN 18" BUT GREATER THAN 12", THE SANITARY SEWER SHALL BE DUCTILE IRON PIPE. WHEN THE WATER LINE CROSSES UNDER THE SANITARY SEWER, 18" MINIMUM CLEARANCE MUST BE MAINTAINED, AND SANITARY SEWER SHALL BE DUCTILE IRON PIPE. HORIZONTAL SEPARATION OF SANITARY MAINS AND WATER MAINS SHALL BE 10", UNLESS OTHERWISE SPECIFIED.

12. A MINIMUM VERTICAL SEPARATION OF 12" SHALL BE MAINTAINED BETWEEN STORM SEWERS AND WATER LINES, UNLESS OTHERWISE SPECIFIED.

13. THE CONTRACTOR SHALL USE ONLY APPROVED BY ISLE OF WIGHT COUNTY MATERIAL IN THE BACKFILL OF UTILITY TRENCHES.

14. ALL CONSTRUCTION METHODS & MATERIALS SHALL CONFORM WITH THE CURRENT SPECIFICATIONS AND STANDARDS OF THE DEPARTMENT OF PUBLIC UTILITIES, COUNTY OF ISLE OF WIGHT, VIRGINIA (DPU), AS WELL AS CURRENT STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF HEALTH AND THE HAMPTON ROADS SANITATION DISTRICT. DPU'S CONSTRUCTION STANDARDS ARE SET FORTH IN THEIR CONSTRUCTION SPECIFICATIONS AND STANDARD FOR WATERWORKS AND SANITARY SEWERAGE FACILITIES. A COPY OF WHICH MUST BE PURCHASED FROM DPU AND KEPT AT THE JOB SITE AT ALL TIMES. REFERENCE TO VDOT SHALL MEAN THE CURRENT STANDARDS AND/OR SPECIFICATIONS OF VDOT.

15. SUB-SURFACE UTILITY WARNING TAPE AS MANUFACTURED BY THE GRIFFOLYN COMPANY, OR EQUAL, 4 INCHES WIDE OR WIDER SHALL BE PLACED AT AN ELEVATION NOT LESS THAN 6-INCHES NOR MORE THAN 12-INCHES BELOW THE PROPOSED FINISHED GRADE ABOVE NON-CONDUCTIVE SEWER, WATER AND SEWER FORCE MAINS IN PUBLIC RIGHTS-OF-WAY OR EASEMENTS. THE TAPE SHALL BE OF A DURABLE, METALIZED, PLASTIC FILM SIMILAR TO "TERRA-TAPE D" FOR IDENTIFICATION BY ELECTRONIC PIPE LOCATING DEVICES AS WELL AS VISUAL IDENTIFICATION. THE TAPE FOR SEWER FORCE MAIN LINE SHALL BE BRIGHT GREEN WITH THE FOLLOWING IMPRINTED LEGEND "CAUTION-SEWER LINE BELOW". THE TAPE FOR WATER LINES SHALL BE BRIGHT BLUE WITH THE FOLLOWING IMPRINTED LEGEND "CAUTION WATER LINE BELOW."

16. ALL PVC AND DUCTILE IRON WATERLINES SHALL BE AFFIXED WITH CONDUCTIVE 10 GAUGE SOLID TRACER WIRE AND TAPED TO TOP OF PIPE IN 5 FOOT INCREMENTS DURING INSTALLATION. TRACER WIRE SHALL BE BROUGHT UP IN ALL VALVE BOXES, AIR RELEASE BOXES AND HYDRANTS. WIRE SHALL BE BLUE ON WATERMANS AND SERVICE LINES AND GREEN FOR SEWER AS REQUIRED BY THE DEPARTMENT OF PUBLIC UTILITIES. 10 GAUGE COPPER WIRE SHALL BE INSTALLED ALONG THE PIPE AS DIRECT BURIAL INSULATED COVER WIRE FOR PURPOSES OR POSITIVE IDENTIFICATION AND LOCATION, AS REQUIRED BY THE DEPARTMENT OF PUBLIC UTILITIES.

17. PLUGS TO BE INSTALLED ON ALL OPEN DEAD-END SEWER LINES AT ELEVATION SHOWN ON THE PLANS.

18. CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC UTILITIES AT (757) 365-6319 AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK.

19. THE PROPOSED UTILITIES WITHIN THE RIGHT-OF-WAY WILL BE OWNED AND MAINTAINED BY ISLE OF WIGHT COUNTY. THIS INCLUDES ALL WATER LINES UP TO THE METER LOCATED AT THE RIGHT-OF-WAY LINE, ALL GRAVITY SEWER FACILITY UP TO THE CLEAN OUT AT THE RIGHT-OF-WAY LINE, AND ALL SANITARY FORCEMAIN.

20. ALL SANITARY SEWER FORCE MAIN AIR RELEASE VALVE ASSEMBLIES SHALL BE INSTALLED AS MANUAL AIR RELEASE VALVES.

21. FIRE HYDRANTS AND GATE VALVES SHALL BE MANUFACTURED BY KENNEDY VALVE COMPANY AND ALL TO OPEN LEFT. KENNEDY FIRE HYDRANTS ARE TO BE PAINTED FROM THE FACTORY KENNEDY YELLOW.

22. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH 8 MIL POLYWRAP AND SECURED WITH DUCT TAPE.

23. ALL MECHANICAL JOINT AND BELL RESTRAINT NUTS AND BOLTS SHALL BE FLUOROPYMER STAR-BLUE.

24. NO MORE THAN 4000 LF OF WATERMAIN OR SEWER FORCEMAIN MAY BE TESTED AT ANY GIVEN TIME.

25. ALL EXCAVATIONS ARE TO BE BACKFILLED AT THE END OF EACH DAY. A MECHANICAL PLUG OR TAP IS TO BE USED TO SECURE THE END OF THE PIPE. NO MORE THAN 200 LF OF DITCH CAN BE OPEN AT ANY GIVEN TIME.

26. CONTRACTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH ISLE OF WIGHT COUNTY STAFF ONLY AFTER ALL MATERIAL SUBMITTALS ARE RECEIVED AND APPROVED.

27. FIRE HYDRANTS SHALL HAVE REFLECTIVE SPRING-LOADED BARREL MOUNTED MARKER FLAG. ALL VALVES AND AIR RELEASE VALVES SHALL HAVE BLUE FIBERGLASS MARKER POST WITH REFLECTIVE TAPE IDENTIFYING WATER VALVE.

SUGGESTED SEQUENCE OF CONSTRUCTION:

- CONSTRUCTION OF THE ISLE OF WIGHT WATER MAIN AND BOOSTER PUMP STATION CAN OCCUR SIMULTANEOUSLY AND DO NOT HAVE TO OCCUR IN THE ORDER DISCUSSED IN THE FOLLOWING SEQUENCE.
- OBTAIN ALL PERMITS RELATED TO EACH PHASE OF THE PROJECT PRIOR TO COMMENCING WORK.
- INSTALL EROSION & SEDIMENT CONTROL MEASURES AND TRAFFIC CONTROL MEASURES RELATED TO EACH ACTIVE WORK AREA OF THE PROJECT PRIOR TO COMMENCING WORK.
- ISLE OF WIGHT WATER MAIN FROM SMITHFIELD CONNECTION TO BOOSTER PUMP STATION:
 - COMPLETE INSTALLATION OF ISLE OF WIGHT WATER MAIN TO PUMP STATION SITE.
 - CONSTRUCT HORIZONTAL DIRECTIONAL DRILL (HDD) WITH WATER MAIN.
 - TEST WATER MAIN.
 - COMPLETE RESTORATION.
- ISLE OF WIGHT WATER MAIN FROM BOOSTER PUMP STATION TO ELEVATED STORAGE TANK:
 - COMPLETE INSTALLATION OF ISLE OF WIGHT WATER MAIN TO ELEVATED TANK SITE.
 - TEST WATER MAIN.
 - COMPLETE RESTORATION.
- ISLE OF WIGHT BOOSTER PUMP STATION:
 - CONSTRUCT NEW BOOSTER PUMP STATION.
 - CONSTRUCT ONSITE UTILITIES.
 - TIE-IN TO NEW ISLE OF WIGHT WATER MAIN.
 - PERFORM PUMP STATION START-UP AND TESTING IN ACCORDANCE WITH SPECIFICATIONS. ACCEPTANCE OF START-UP TESTING IS REQUIRED PRIOR TO PROCEEDING.
 - PERFORM SITE IMPROVEMENTS, ACCESS DRIVEWAY AND RESTORATION.
 - AMERICAN WATERWORKS ASSOCIATION STANDARD
- ONCE THE PUMP STATION AND WATER MAINS ARE CONSTRUCTED AND TESTED, COMPLETE TIE-INS AND TOWN OF SMITHFIELD WATER MAIN CONNECTION.
- COMPLETE ABANDONMENT OF SMITHFIELD FOODS FIRE SERVICE AT THE EMPLOYEE PARKING LOT AND REMOVAL OF EXISTING HYDRANTS AS CALLED OUT IN PLANS.
- COMPLETE ALL FINAL SITE RESTORATION.
 - REMOVE EROSION AND SEDIMENTATION CONTROL MEASURES ONLY AFTER VEGETATIVE COVER IS ESTABLISHED.
- CLOSE OUT PERMITS.



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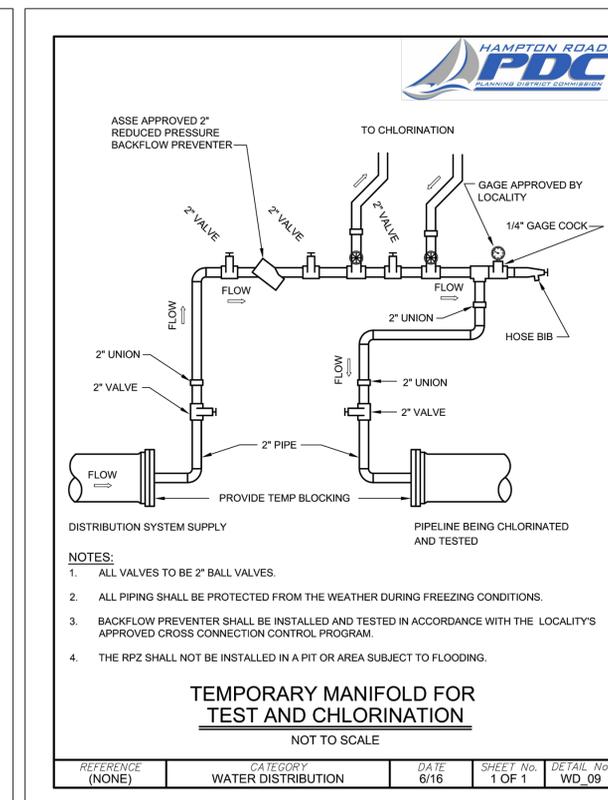
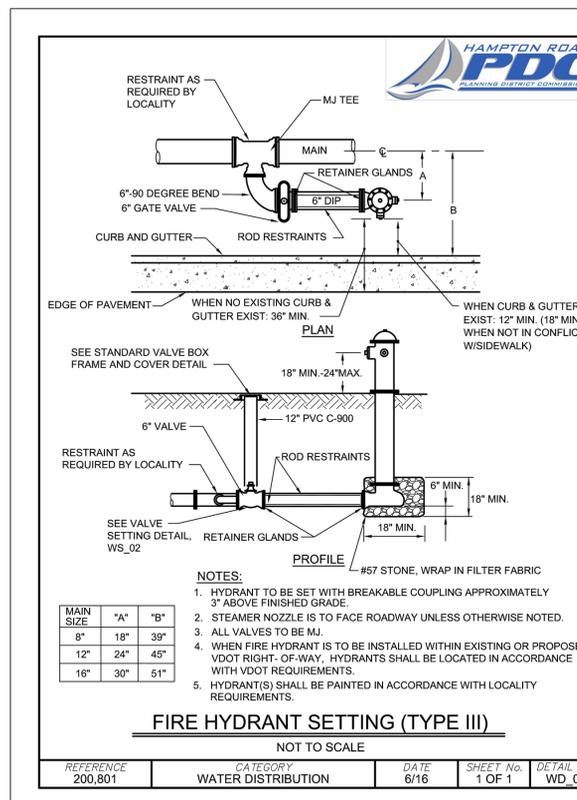
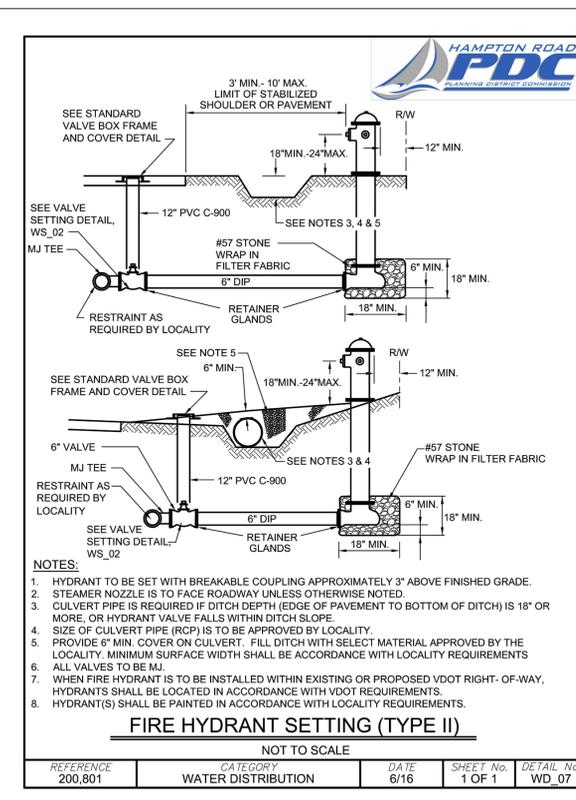
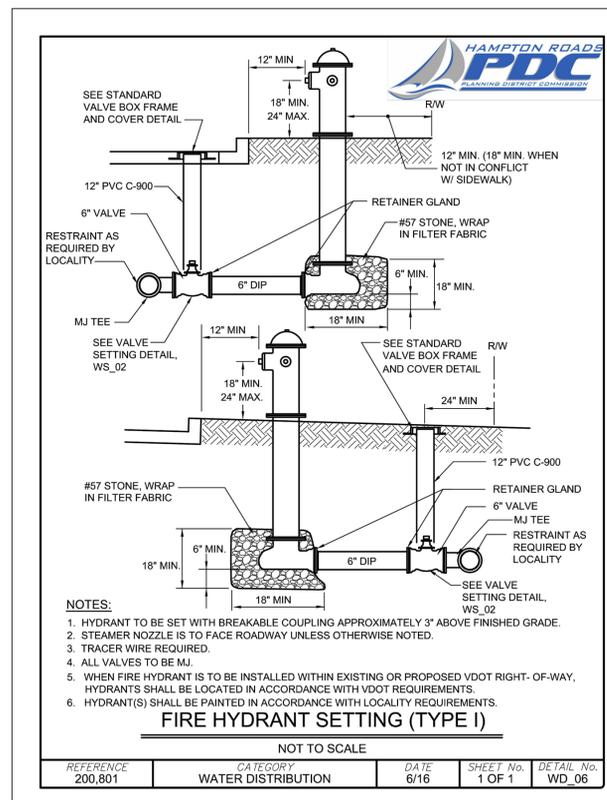
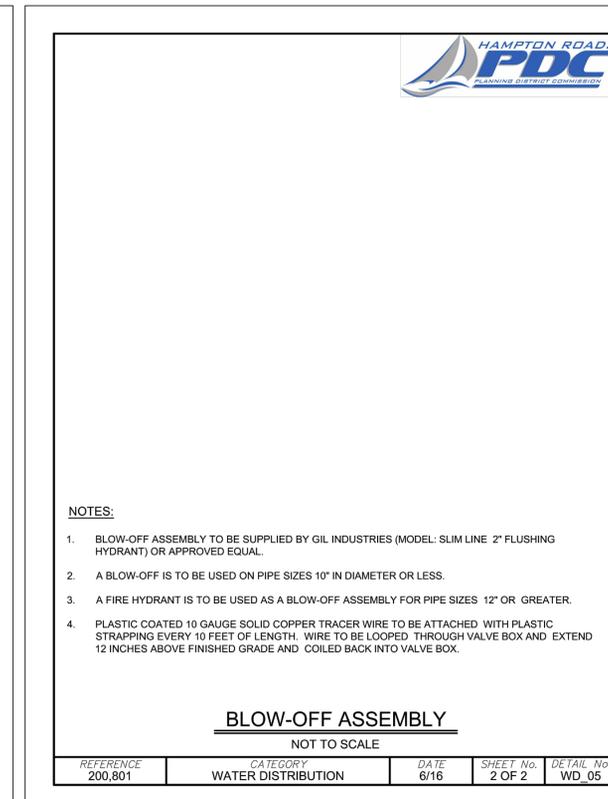
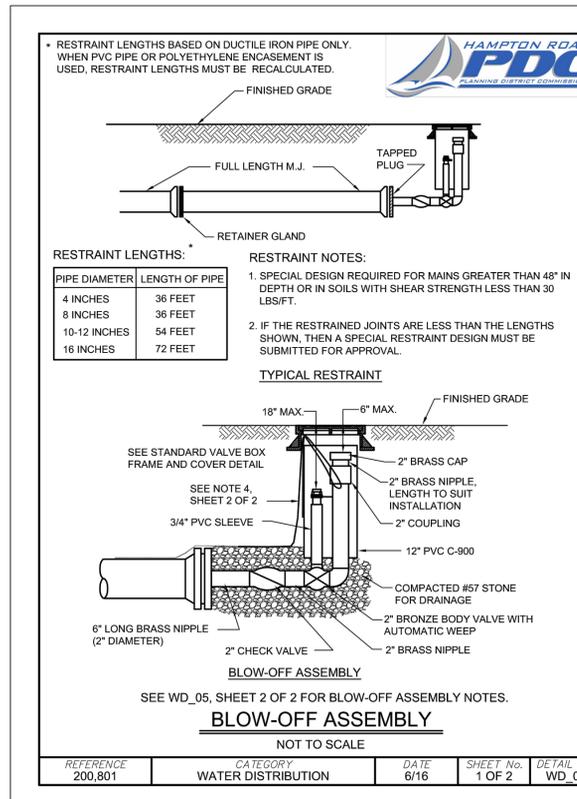
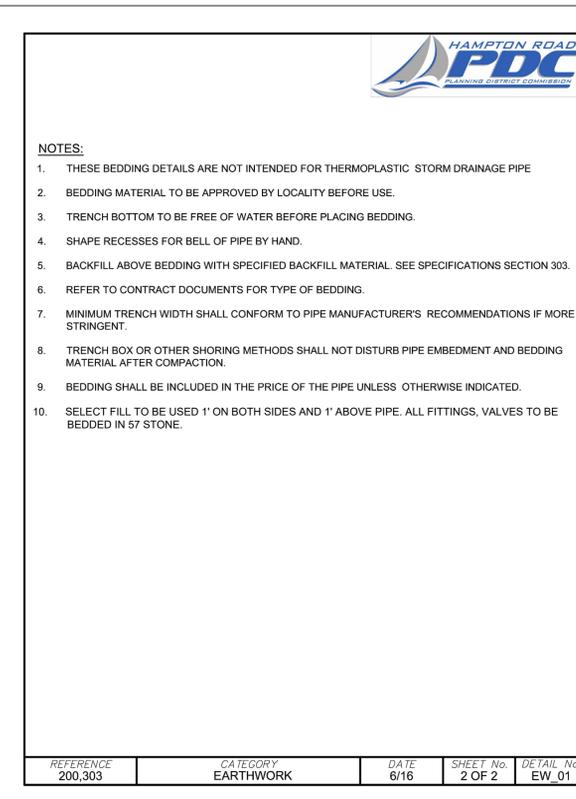
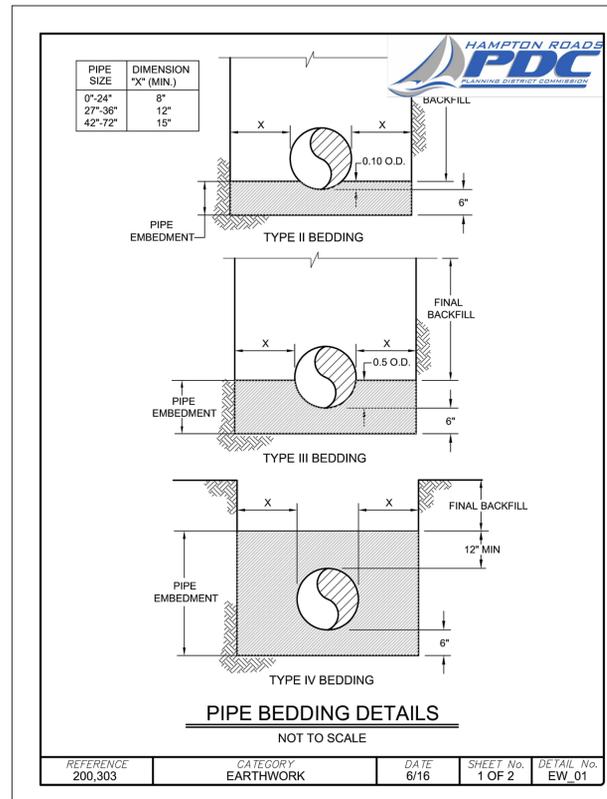
ROUTE 10 WATER MAIN EXTENSION - PH. 2
 ISLE OF WIGHT COUNTY - VIRGINIA
 ISLE OF WIGHT COUNTY NOTES

JOB NO.
48527

SHEET NO.
G-2

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THE DETAILS ENCOMPASSED WITHIN SHEETS D-1 TO D-3 SHALL BE REFERENCED FOR WORK WITHIN ISLE OF WIGHT COUNTY, OUTSIDE OF THE TOWN OF SMITHFIELD LIMITS.



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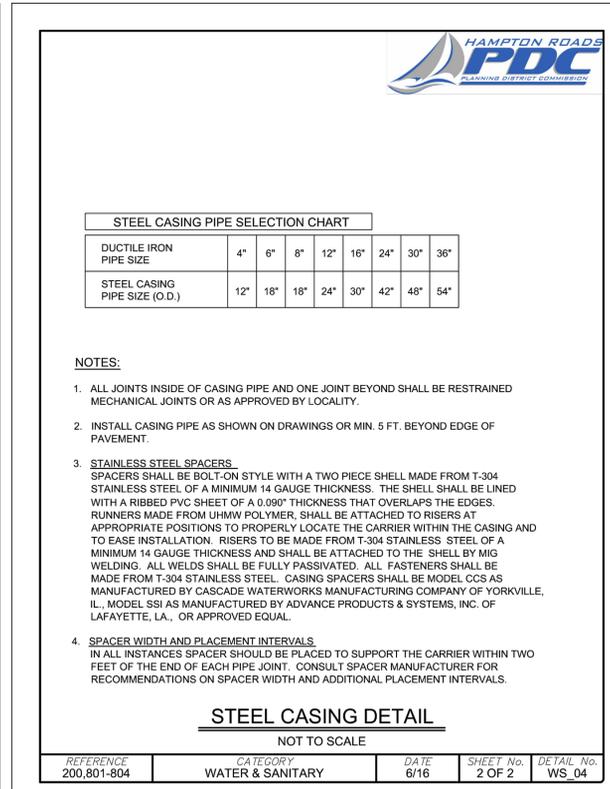
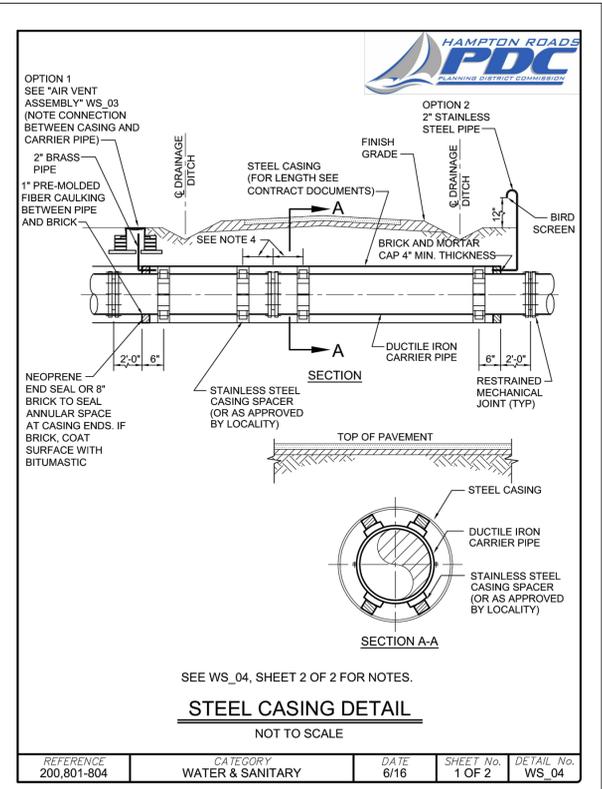
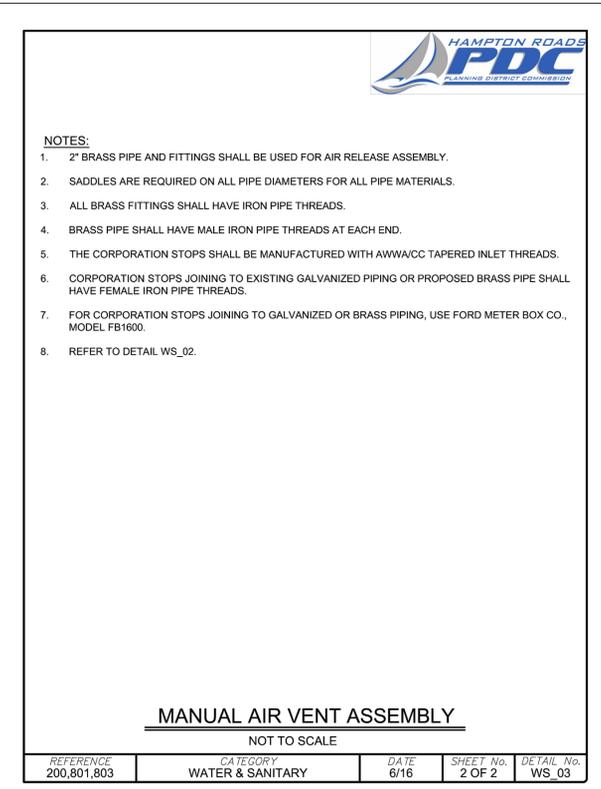
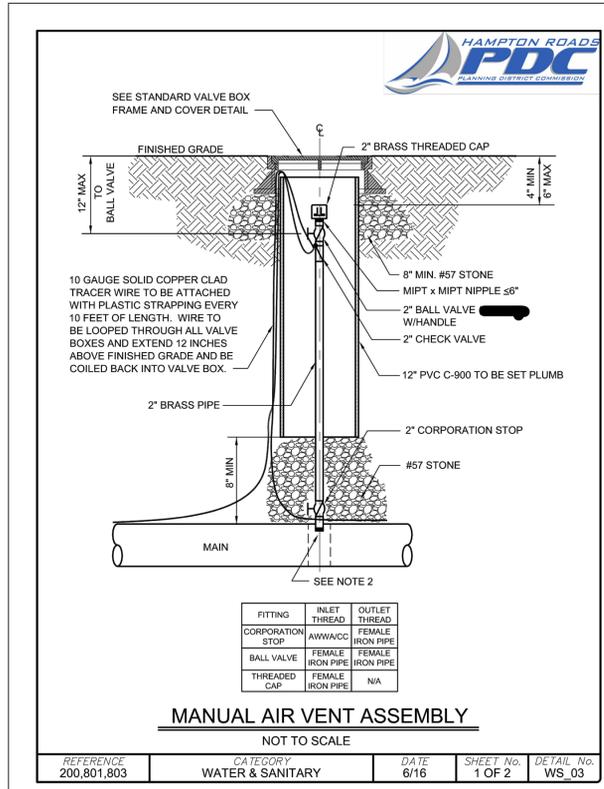
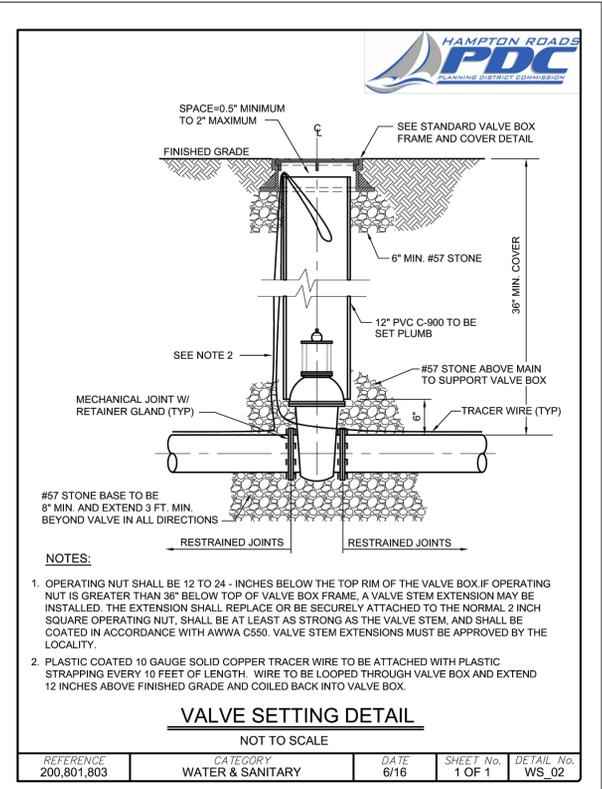
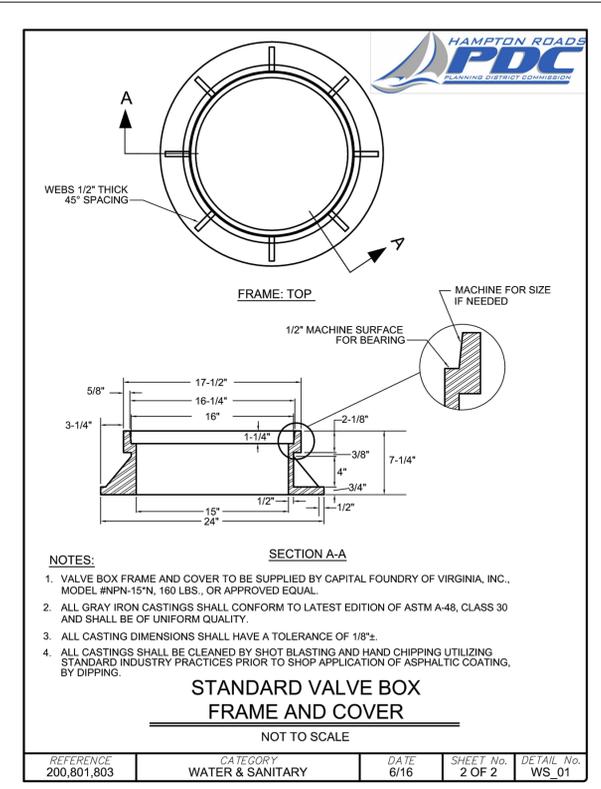
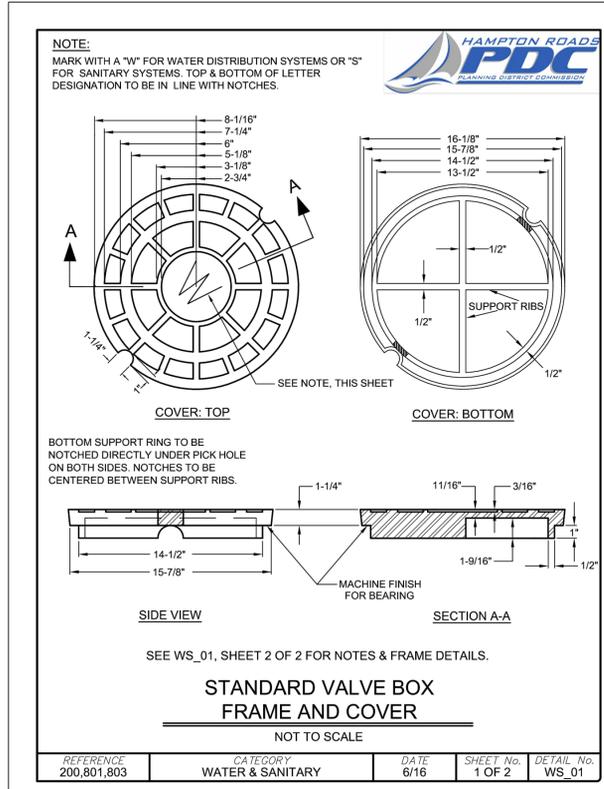
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ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA

ISLE OF WIGHT COUNTY UTILITY & SITE DETAILS

JOB NO. 48527
SHEET NO. D-1

THE DETAILS ENCOMPASSED WITHIN SHEETS D-1 TO D-3 SHALL BE REFERENCED FOR WORK WITHIN ISLE OF WIGHT COUNTY, OUTSIDE OF THE TOWN OF SMITHFIELD LIMITS.



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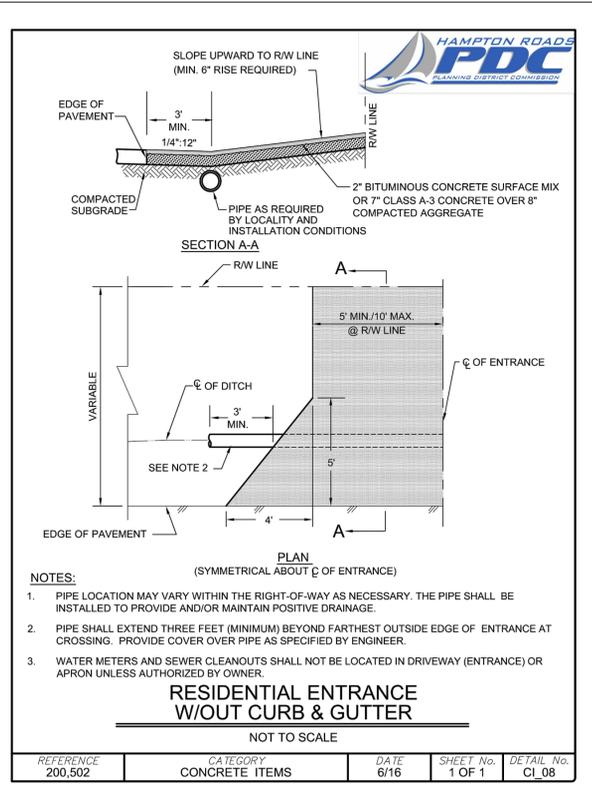
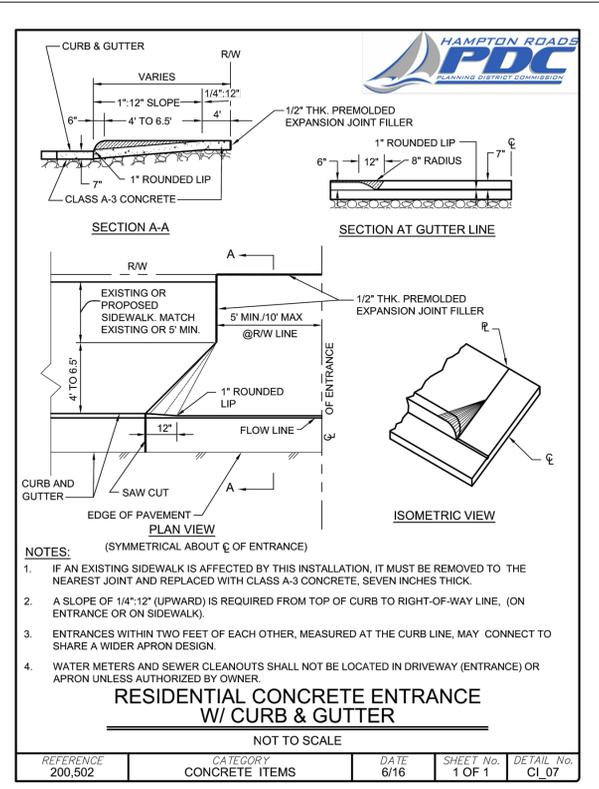
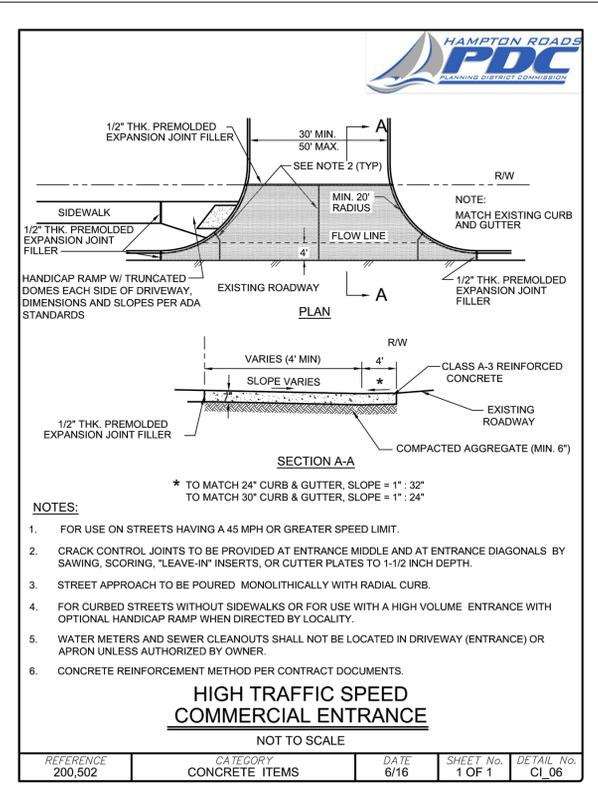
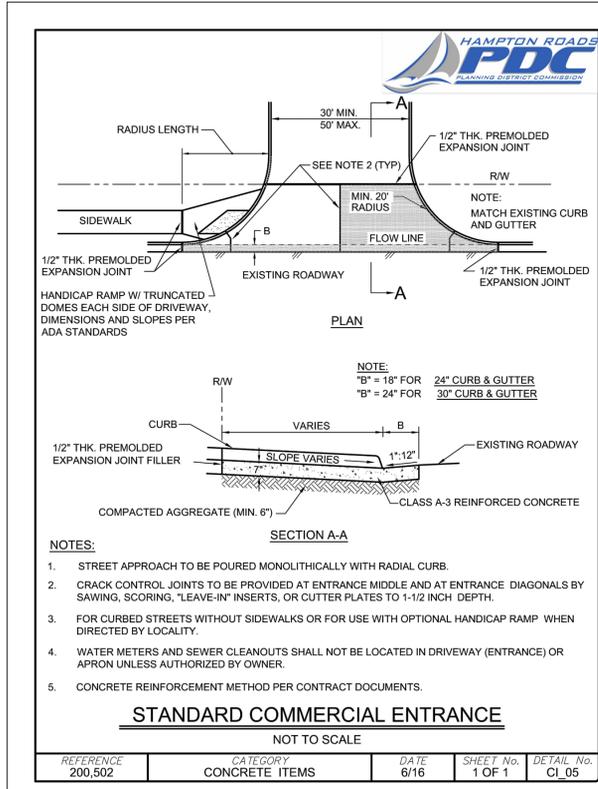
DATE: 8/5/2022
DRAWN BY: S. MAURER
DESIGNED BY: K. TURNER
CHECKED BY: K. TURNER
SCALE: AS SHOWN

TIMMONS GROUP
ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA
ISLE OF WIGHT COUNTY UTILITY & SITE DETAILS

JOB NO. 48527
SHEET NO. D-2

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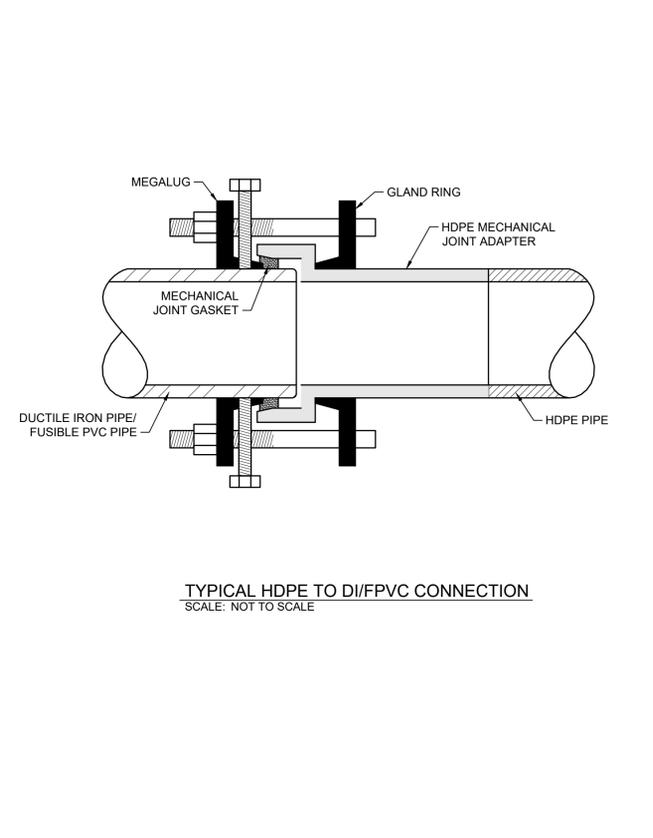
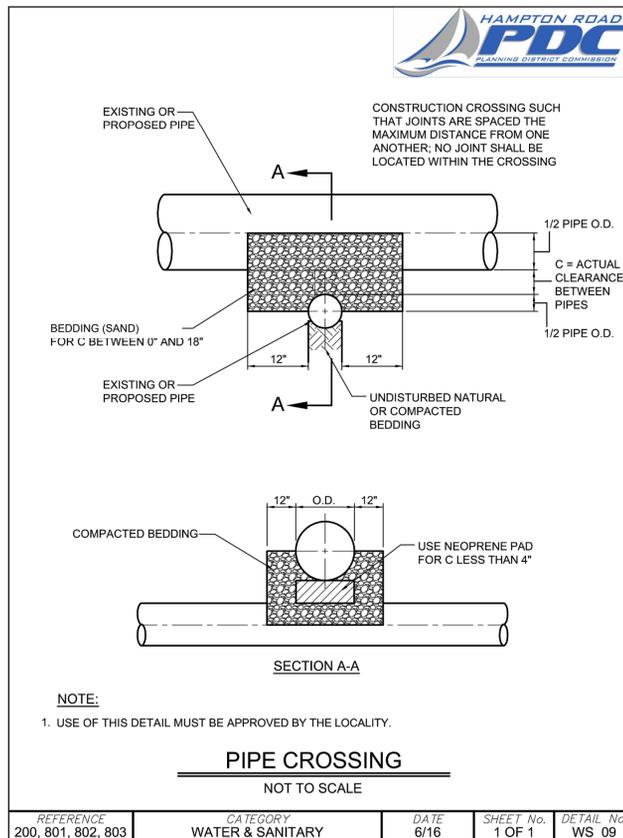
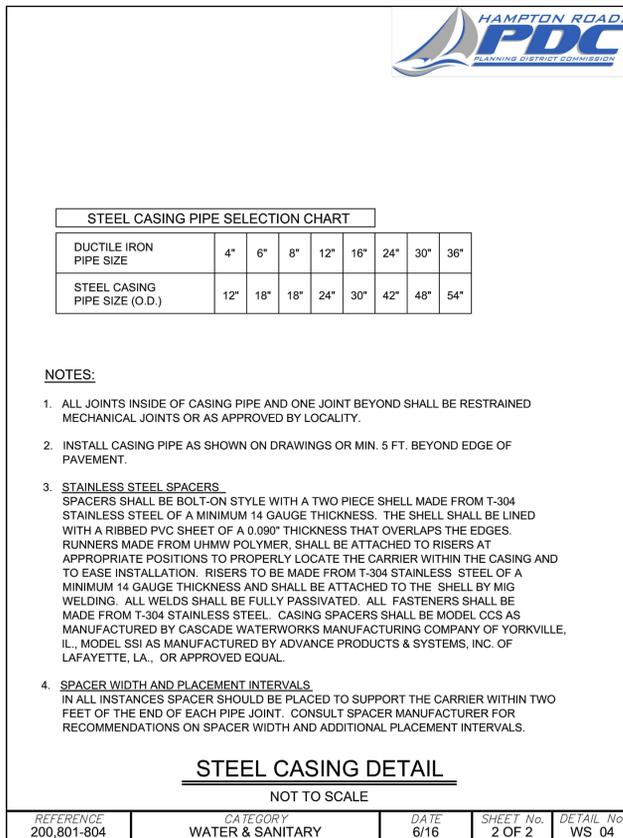
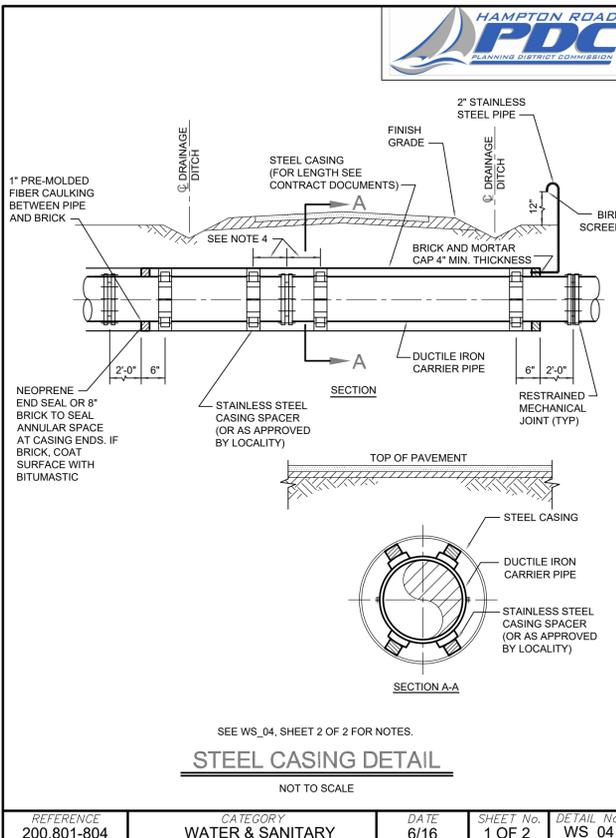
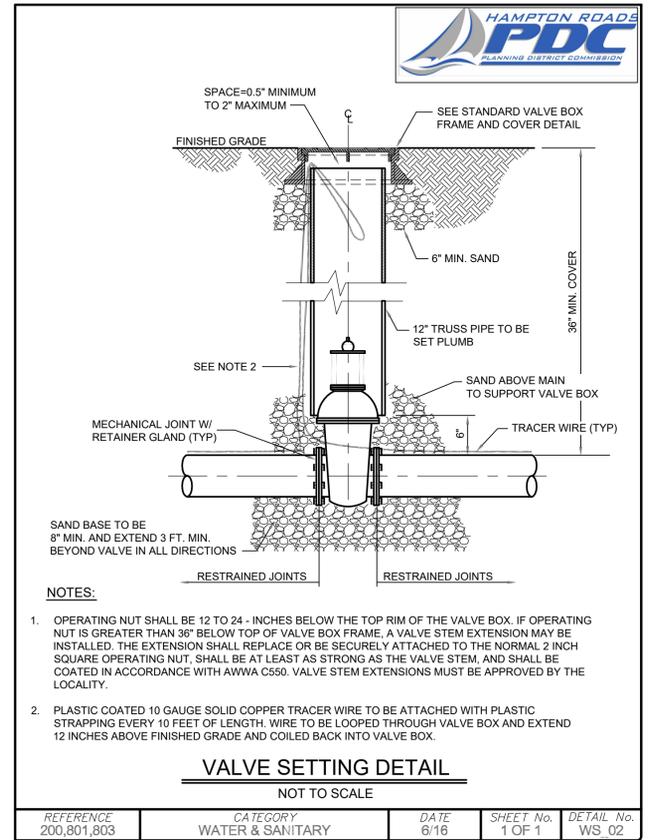
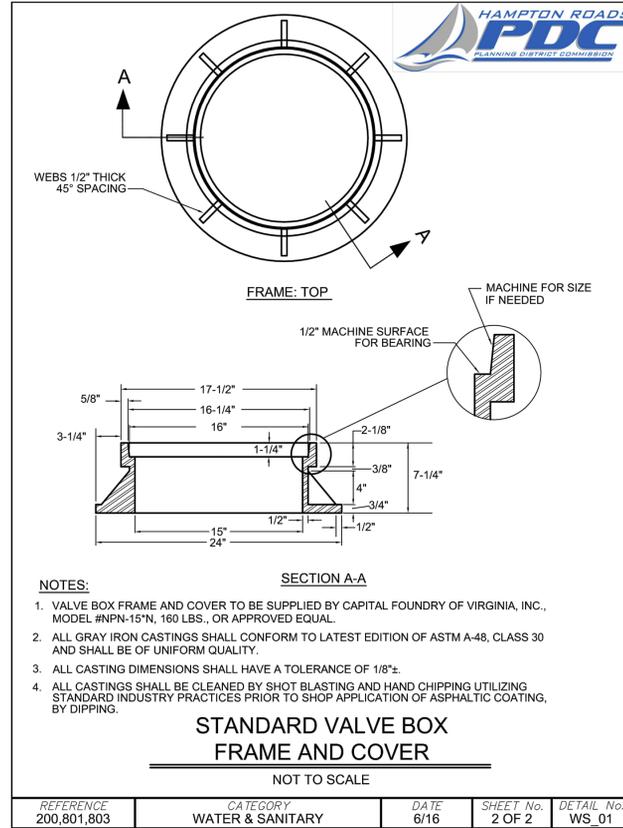
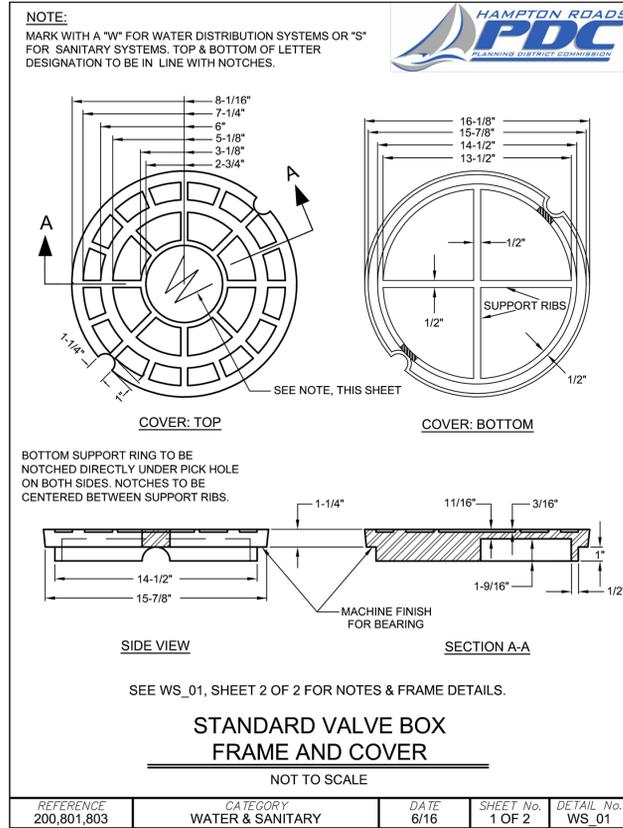
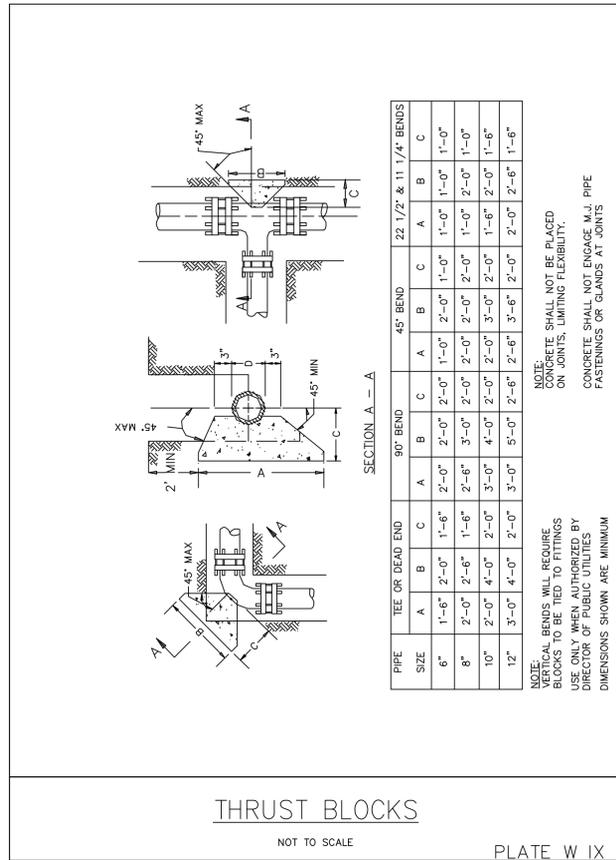
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CHECKED BY: K. TURNER

SCALE: AS SHOWN

TIMMONS GROUP
ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA
ISLE OF WIGHT COUNTY UTILITY & SITE DETAILS

JOB NO. 48527
SHEET NO. D-3

THE DETAILS ENCOMPASSED WITHIN SHEETS D-4 TO D-6 SHALL BE REFERENCED FOR WORK WITHIN THE TOWN OF SMITHFIELD LIMITS, ON THE DUCTILE IRON WATER MAIN.



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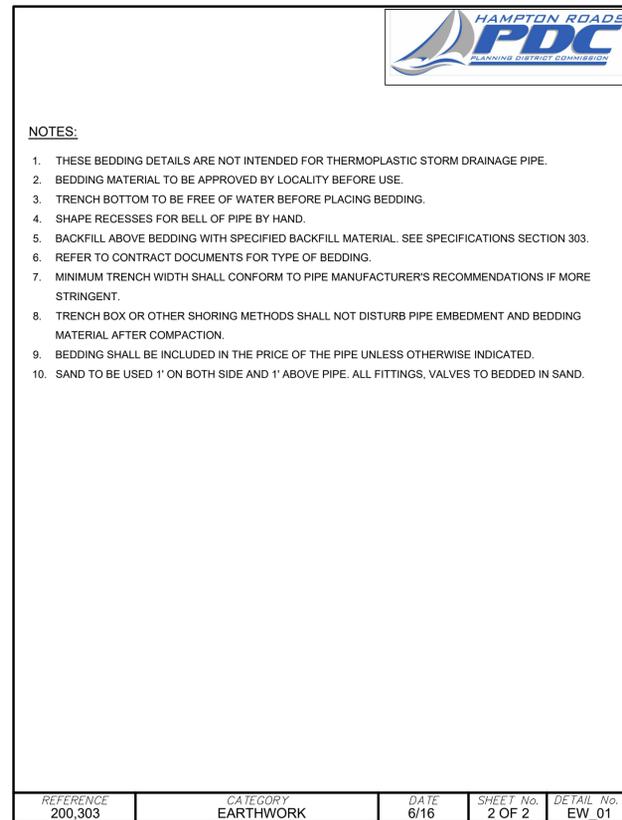
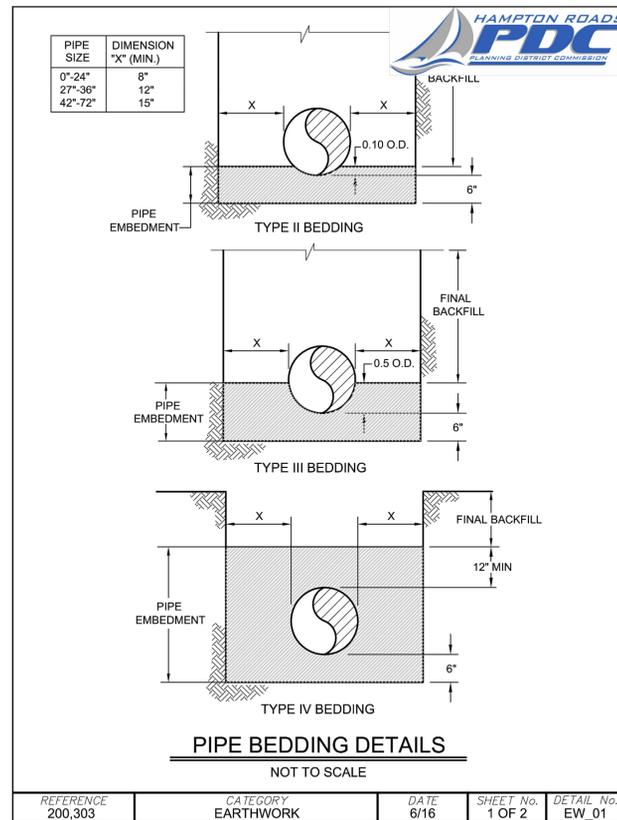
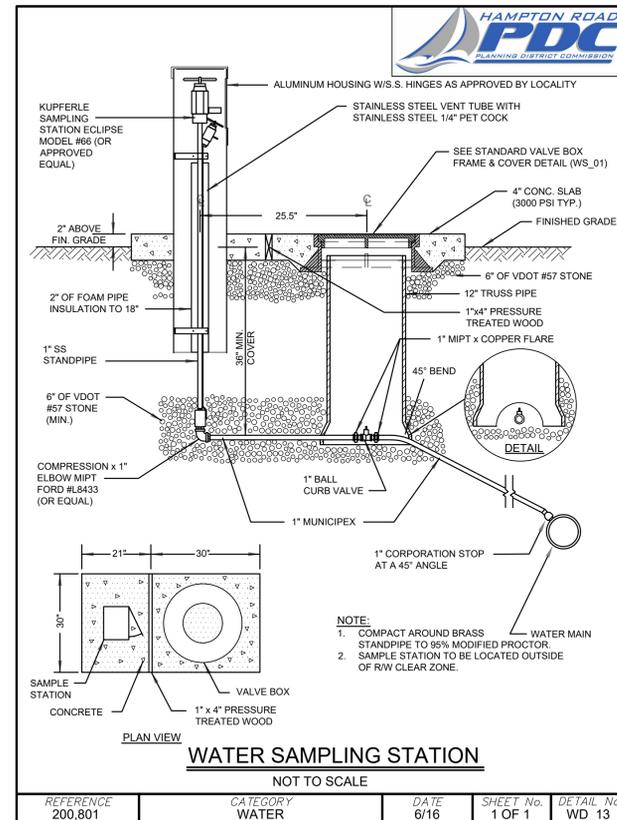
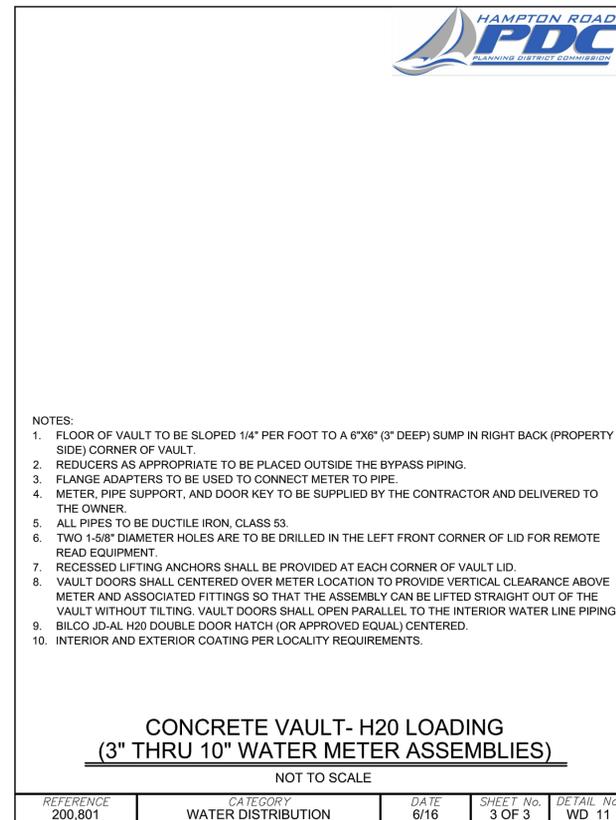
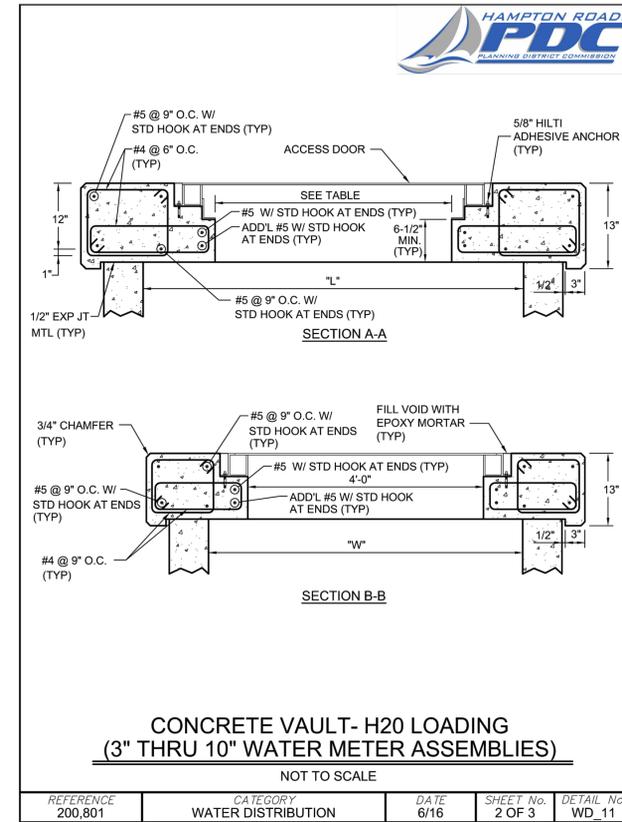
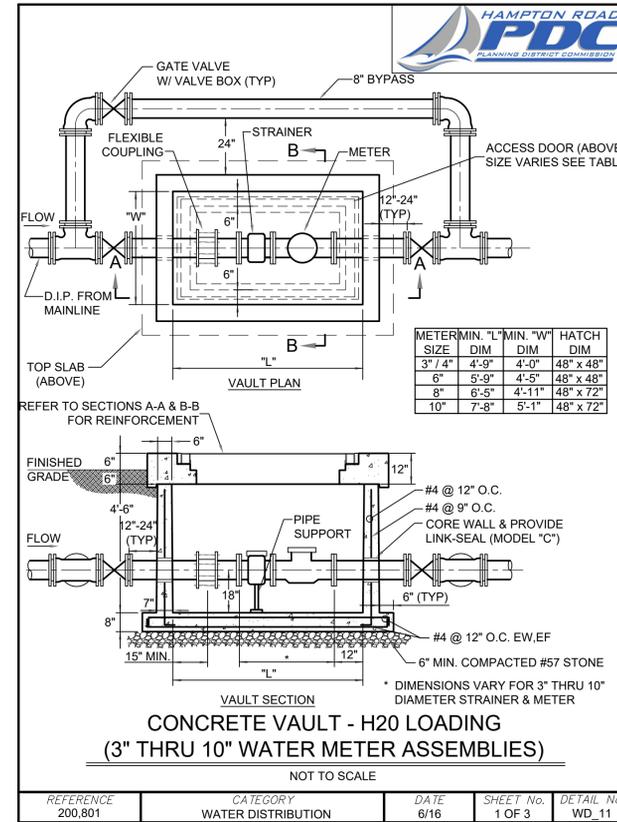
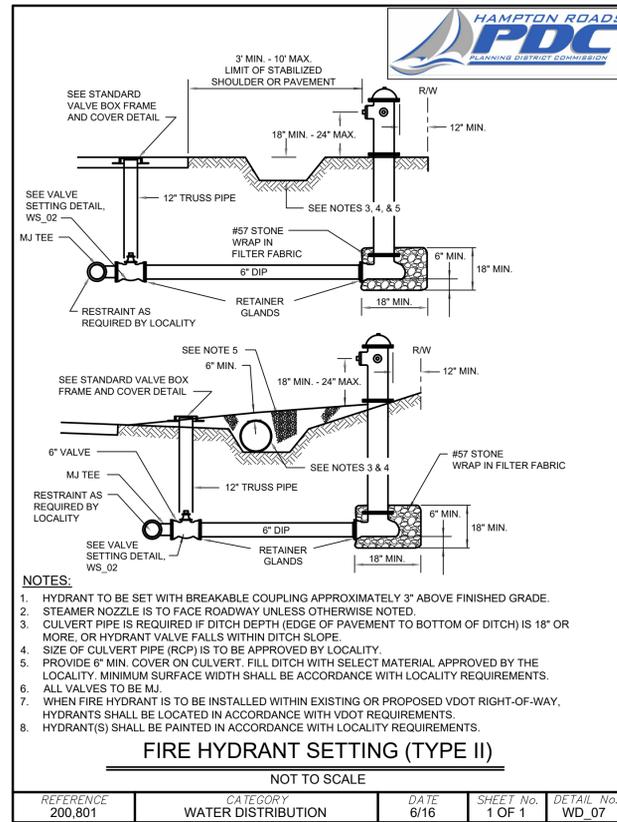
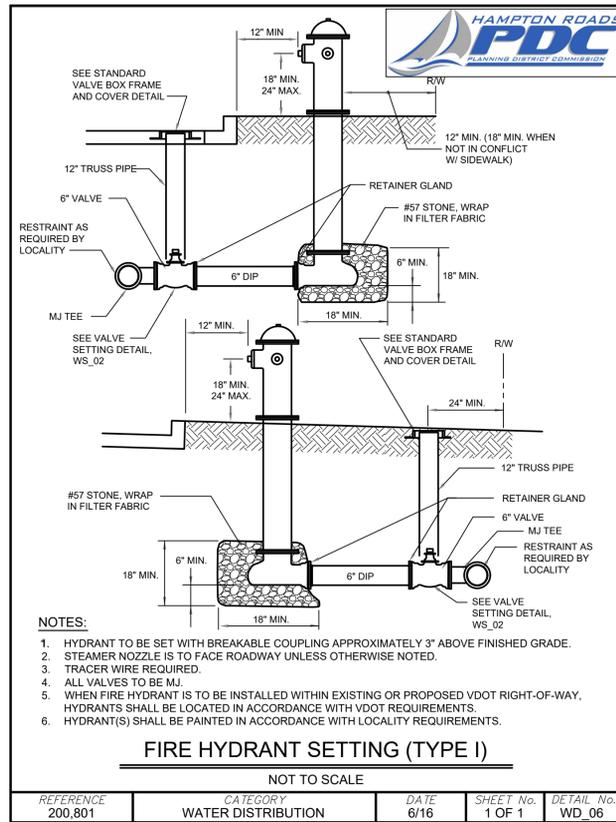
ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA

TOWN OF SMITHFIELD UTILITY & SITE DETAILS

JOB NO. 48527
SHEET NO. D-4

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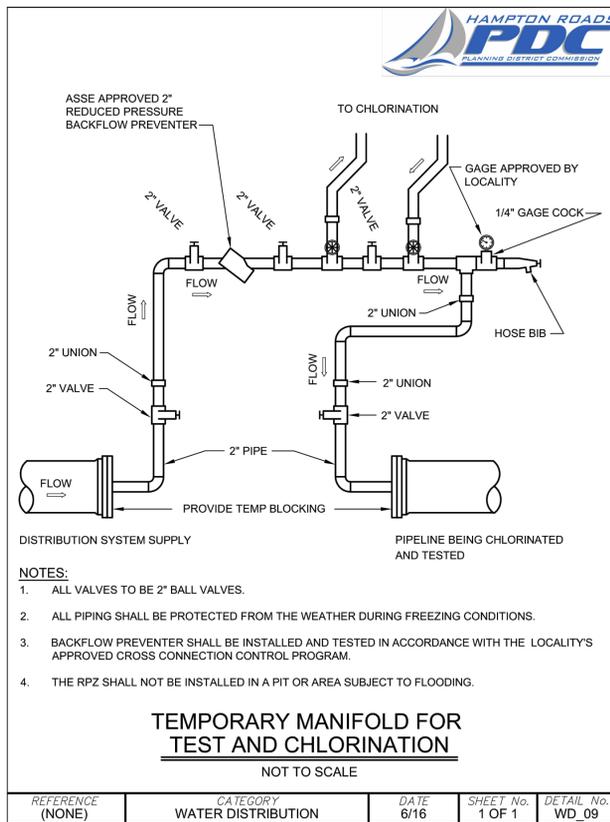
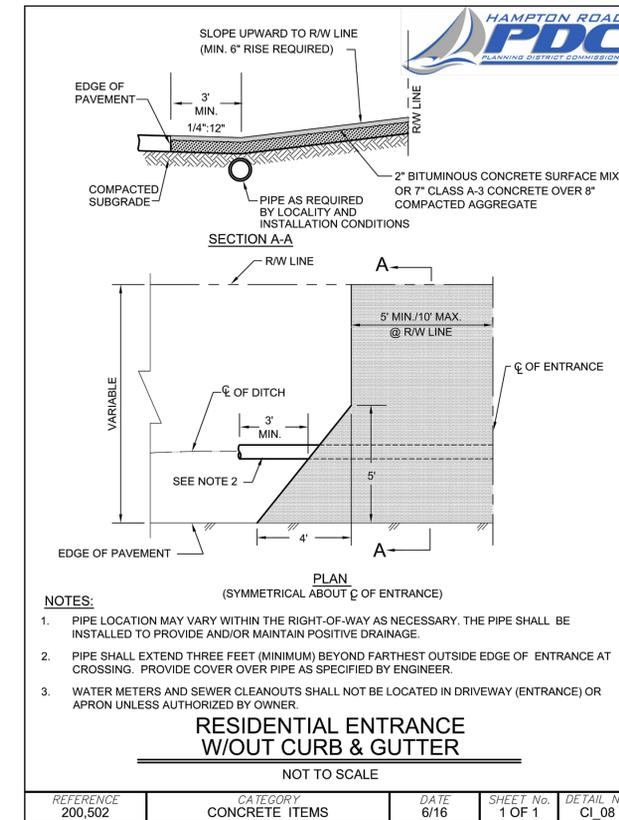
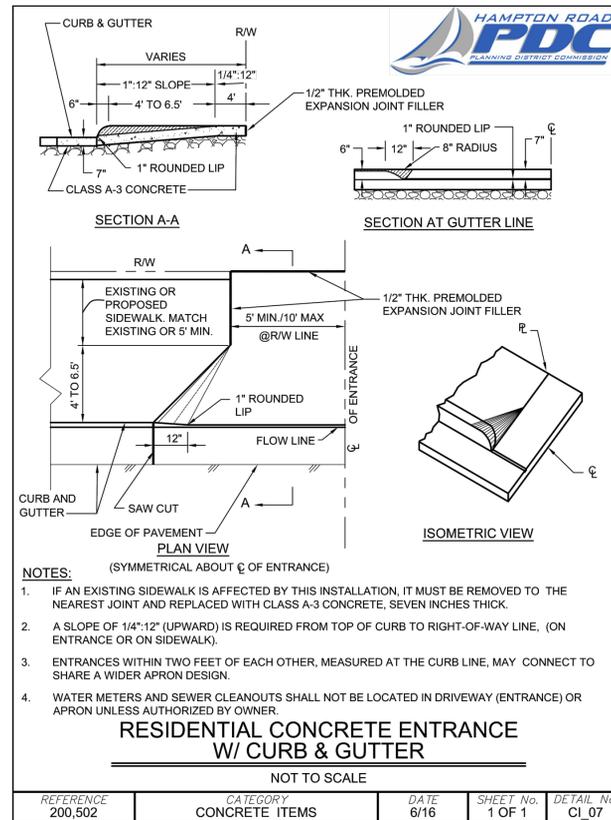
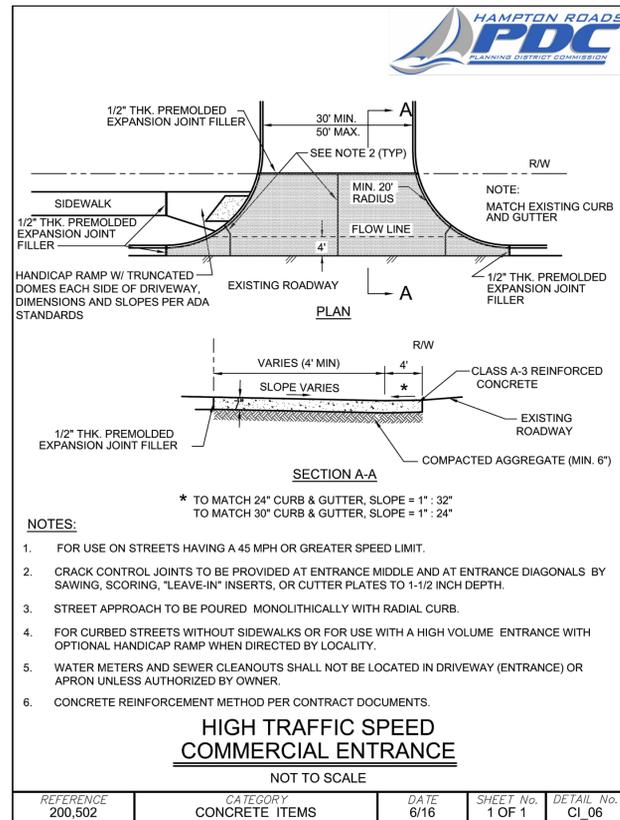
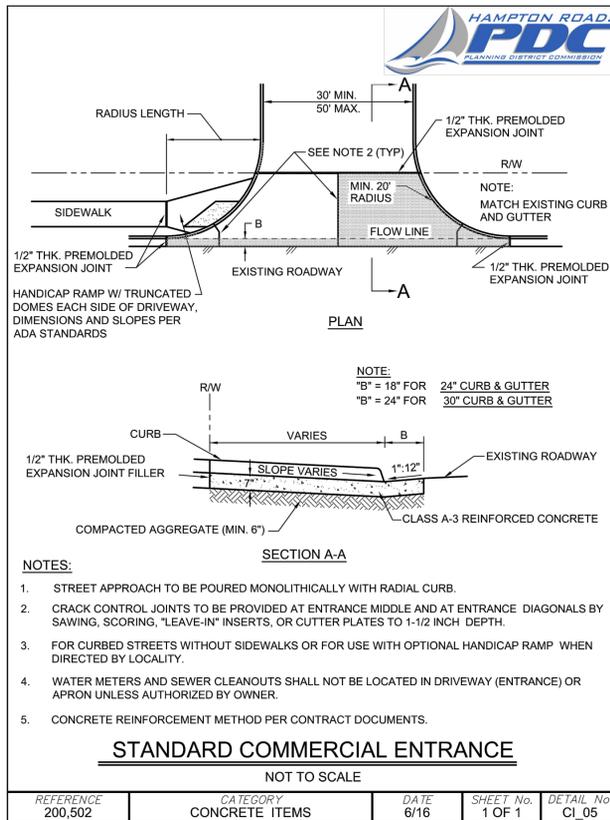
ROUTE 10 WATER MAIN EXTENSION - PH. 2
 ISLE OF WIGHT COUNTY - VIRGINIA

TOWN OF SMITHFIELD UTILITY & SITE DETAILS

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FORD Blow-off Ball Valves
Product Release 05/2016

Ball Valves for Clearing Lines

Features:

- Vertical inlet and outlet with easy access to tee-head
- 300 psi working pressure
- Available with a variety of inlet and outlet connections
- Composed of waterworks brass compliant with AWWA C800's latest revisions
- Full 360° tee-head rotation

Ordering Information:

Catalog Number	Valve Size	Inlet	Outlet	Overall Height	Approx. Wt. Lbs.
BLA28-443-TA-NL	1"	1" Flare Copper	3/4" Male Iron Pipe	4-9/32"	3.0
BLA18-677-TA-NL	1-1/2"	2" Female Iron Pipe	2" Male Iron Pipe	6-1/4"	5.9
BLA28-677-TA-AWT-NL	1-1/2"	2" Flare Copper	2" Male Iron Pipe	9-25/32"	9.3
BLA18-777-TA-NL	2"	2" Female Iron Pipe	2" Male Iron Pipe	6-31/64"	9.3

The Ford Meter Box Co., Inc. 775 Manchester Avenue, P.O. Box 443, Wabash, Indiana, USA 46992-0443
Telephone: 260-563-3171 • FAX: 800-826-3487 • Overseas FAX: 260-563-0167 • www.fordmeterbox.com

SUBMITTAL INFORMATION
Ballcorp Corporation Stops - (FB600-x-NL style)

AWWA/C TAPER THREAD INLET BY FLARE COPPER OUTLET

VALVE SIZE	INLET SIZE	OUTLET SIZE	VALVE LENGTH	BODY THREADS	APPROX. WT. LBS.	PART NUMBER	✓ SUBMITTED ITEM(S)
3/4"	3/4"	3/4"	4-19/64"	3/4" Flare Copper	1.8	FB600-3-NL	
3/4"	3/4"	1"	4-9/16"	1" Flare Copper	1.9	FB600-34-NL	
1"	1"	1"	4-13/64"	1" Flare Copper	2.8	FB600-4-NL	
1"	1"	1-1/4"	4-29/32"	1-1/4" Flare Copper	2.7	FB600-45-NL	
1-1/4"	1-1/4"	1-1/4"	6-1/64"	1-1/4" Flare Copper	4.5	FB600-5-NL	
1-1/2"	1-1/2"	1-1/2"	6-31/32"	1-1/2" Flare Copper	6.1	FB600-6-NL	
2"	2"	2"	7-47/64"	2" Flare Copper	10.1	FB600-7-NL	

Features:

- All brass that comes in contact with potable water conforms to AWWA Standard C800 (ASTM B584, UNS C89833)
- The product has the letters "NL" cast into the main body for lead-free identification
- Certified to NSF/ANSI Standard 61 and NSF/ANSI Standard 372 where applicable
- Brass components that do not come in contact with potable water conform to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS C83600, 85-5-5-5)
- Ends are integral or secured with adhesive to prevent unintentional disassembly
- 300 PSI working pressure

The Ford Meter Box Company considers the information in this submittal form to be correct at the time of publication. Item and option availability, including specifications, are subject to change without notice. Please verify that your product information is current.

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Overseas Fax: 260-563-0167
www.fordmeterbox.com

SUBMITTAL INFORMATION
Swivel Eighth Bend - (LA04-xxS-NL style)

FEMALE COPPER THREAD SWIVEL NUT INLET BY PACK JOINT FOR COPPER OR PLASTIC TUBING (CTS) OUTLET

DESCRIPTION	LENGTH	HEIGHT	APPROX. WT. LBS.	PART NUMBER	✓ SUBMITTED ITEM(S)
SWIVEL NUT P.J. FOR CTS					
3/4"	3/4"	1-13/16"	3/4"	0.9	LA04-33S-NL
1"	1"	2-5/16"	1"	1.2	LA04-44S-NL
1-1/2"	1-1/2"	4-3/8"	1-1/2"	4.1	LA04-66S-NL
2"	2"	4-23/32"	1-19/32"	6.6	LA04-77S-NL

Features:

- All brass that comes in contact with potable water conforms to AWWA Standard C800 (ASTM B584, UNS C89833)
- The product has the letters "NL" cast into the main body for lead-free identification
- Certified to NSF/ANSI Standard 61 and NSF/ANSI Standard 372 where applicable
- Brass components that do not come in contact with potable water conform to AWWA Standard C800 (ASTM B62 and ASTM B584, UNS C83600, 85-5-5-5)
- Swivel nut inlet allows proper outlet positioning without compromising installation torque
- Copper gasket included to ensure proper inlet seal

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TIMMONS GROUP

ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA
TOWN OF SMITHFIELD UTILITY & SITE DETAILS

PROFESSIONAL ENGINEER
KENNETH TURNER
Lic. No. 021280
8/5/2022

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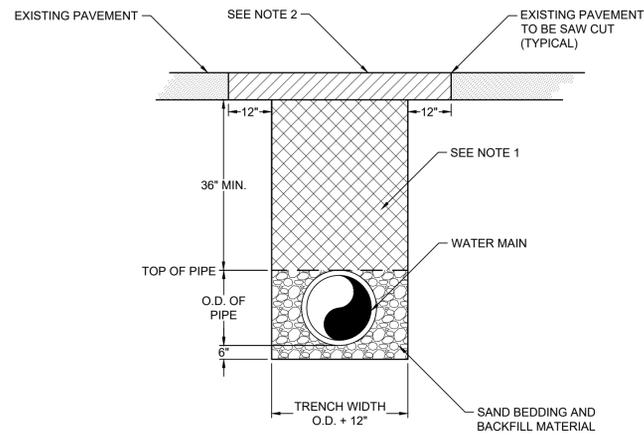
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DATE	DESCRIPTION
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DESIGNED BY: K. TURNER
CHECKED BY: K. TURNER
SCALE: AS SHOWN

JOB NO. 48527
SHEET NO. D-6

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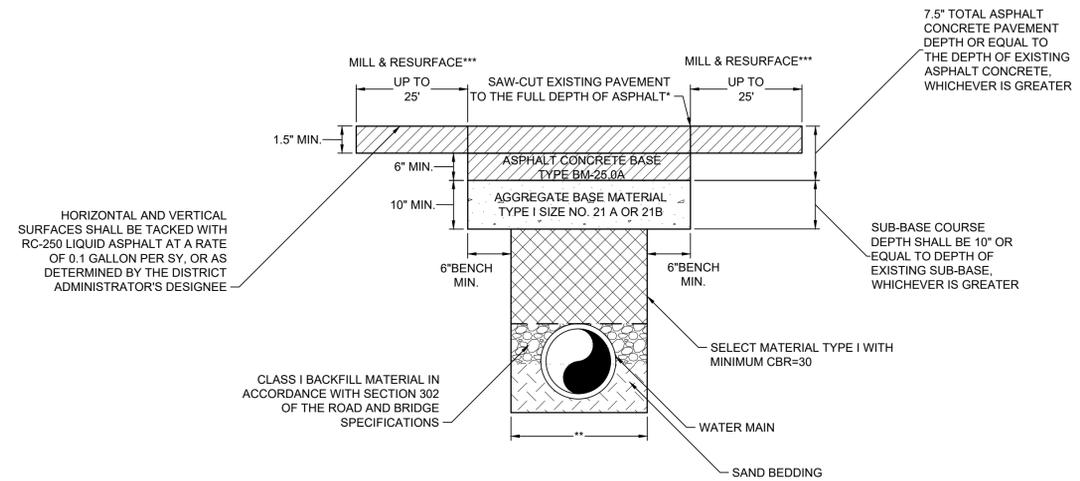


NOTES:

1. WHERE PIPE IS NOT INSTALLED UNDER ROADWAY, DRIVEWAY OR COMMERCIAL BUSINESS ENTRANCE, TRENCH SHALL BE BACKFILLED WITH SUITABLE MATERIAL WHICH HAS BEEN EXCAVATED FROM THE TRENCH. SUITABLE MATERIAL IS CLASSIFIED AS SC OR SM MATERIAL AS DEFINED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM. TRENCH BACKFILL SHALL BE AT OPTIMUM MOISTURE AND COMPACTED TO 85% OF THEORETICAL MAXIMUM DENSITY. STANDARD PROCTOR.
2. PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE INITIAL AND FINAL PAVEMENT DETAILS SHOWN ON THIS SHEET.
3. AT TRENCH SECTIONS AS SHOWN ON THE PAVEMENT SCHEDULE, TRENCH BACKFILL SHALL BE SELECT FILL OR SUITABLE FILL EXCAVATED FROM THE TRENCH CLASSIFIED AS SC OR SM AS APPROVED BY THE INSPECTOR. TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF THEORETICAL MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. STANDARD PROCTOR.
4. ALL PIPE SHALL BE BEDDED WITH 6" OF SAND AND SAND SHALL BE PLACED TO THE TOP OF THE PIPE.

PIPE BEDDING WITHIN ISLE OF WIGHT COUNTY TO FOLLOW DETAIL EW_01 ON SHEET D-1.

1 TRENCH DETAIL IN PAVEMENT OR IN ROADWAY PRISM NOT IN VDOT ROW
SCALE: NOT TO SCALE



NOTES:

- * ASPHALT CONCRETE SURFACE MATERIAL:
SM-9.5A FOR ADT < 10,000
SM-9.5D FOR ADT > 10,000

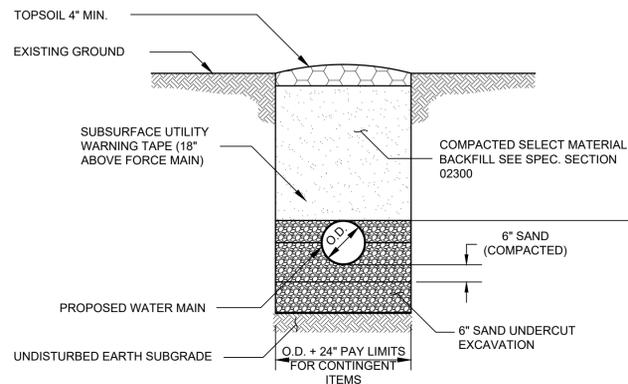
THE DISTRICT ADMINISTRATOR'S DESIGNEE SHALL DETERMINE THE RESTORATION REQUIREMENTS FOR OTHER PAVEMENT TYPES

** TRENCH WIDTH AND PIPE BEDDING SHALL BE IN ACCORDANCE WITH CDOT STD. PB-1

*** 12 INCHES MINIMUM BEYOND THE EDGE OF THE TRENCH ON LONGITUDINAL OPEN CUTS, OR 25 FEET MINIMUM BEYOND THE TRENCH CENTERLINE ON PERPENDICULAR OPEN CUTS, OR AS DETERMINED BY THE DISTRICT ADMINISTRATOR'S DESIGNEE.

PIPE BEDDING WITHIN ISLE OF WIGHT COUNTY TO FOLLOW DETAIL EW_01 ON SHEET D-1.

2 TRENCH DETAIL IN VDOT RIGHT-OF-WAY
SCALE: NOT TO SCALE

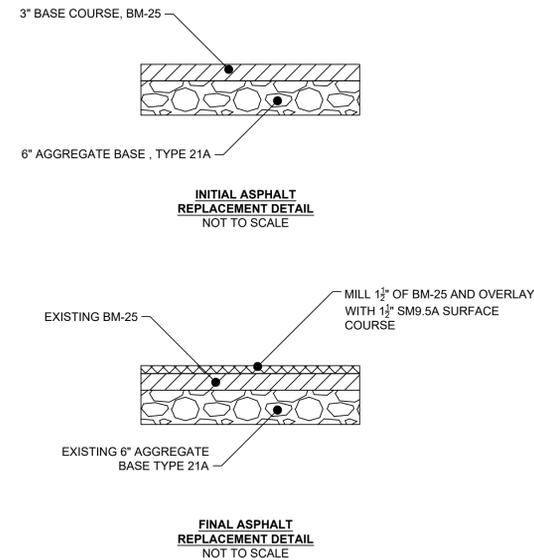


TRENCH DETAIL NOTES:

1. THE TRENCH WIDTH SHOWN IS STRICTLY FOR MEASUREMENT AND PAYMENT OF CONTINGENT ITEMS. THE CONTRACTOR SHALL ADJUST THE UNIT BID PRICE(S) BASED ON THE METHOD OF CONSTRUCTION EMPLOYED FOR THE PIPELINE INSTALLATION.

PIPE BEDDING WITHIN ISLE OF WIGHT COUNTY TO FOLLOW DETAIL EW_01 ON SHEET D-1.

TYPICAL PIPE TRENCH DETAIL (NON-PAVED AREAS)
SCALE: NOT TO SCALE



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CHECKED BY	K. TURNER
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TIMMONS GROUP

ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA
VDOT PAVING DETAILS

JOB NO.	48527
SHEET NO.	D-7

EROSION CONTROL LEGEND			
LABEL	SYMBOL	STANDARD NAME	SPEC.#
(SAF)		SAFETY FENCE	3.01
(CE)		CONSTRUCTION ENTRANCE	3.02
(WSF)		SILT FENCE (WIRE SUPPORT)	3.05-1
(SF)		SILT FENCE	3.05-2
(IP)		INLET PROTECTION	3.07
(CIP)		CULVERT INLET PROTECTION	3.08
(OP)		OUTLET PROTECTION	3.18
(CD)		CHECK DAM	3.20
(TS)		TEMPORARY SEEDING	3.31
(PS)		PERMANENT SEEDING	3.32
(MU)		MULCHING	3.35

*NOTE: (PS) AS LABELED ON PLAN SHEETS IS INTENDED TO INCLUDE (TO) AND (MU)

MULCH	MULCHING RATES		NOTES
	PER ACRE	PER 1000 SQ FT	
STRAW AND HAY	1.5 - 2 TONS (MIN 2 TONS FOR WINTER COVER)	70-90 LBS	FREE FROM WEEDS AND COARSE MATTER. MUST BE ANCHORED. SPREAD WITH MULCH BLOWER OR BY HAND.
(MU) ORGANIC MULCH MATERIALS AND APPLICATION RATES	No Scale		

PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

LAND USE	SEED*	APPLICATION PER ACRE
MINIMUM CARE LAWN (COMMERCIAL OR RESIDENTIAL)	TALL FESCUE* or BERMUDAGRASS*	175 - 200 LBS.
HIGH-MAINTENANCE LAWN	TALL FESCUE*	75 LBS.
	BERMUDAGRASS* (SEED) or BERMUDAGRASS* (BY OTHER VEGETATIVE ESTABLISHMENT METHOD, SEE STD. & SPEC. 3.34)	200-250 LBS.
GENERAL SLOPE (3:1 OR LESS)	40 LBS. (UNHULLED) or 30 LBS. (HULLED)	40 LBS. (UNHULLED) 30 LBS. (HULLED)
	TALL FESCUE* or RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP*	128 LBS. 2 LBS. 20 LBS. TOTAL: 150 LBS.
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)	TALL FESCUE* or BERMUDAGRASS* or RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP* or SERICEA LESPEDEZA*	93 - 108 LBS. 0 - 15 LBS. 2 LBS. 20 LBS. 20 LBS. TOTAL: 150 LBS.

NOTE: * WHEN SELECTING VARIETIES OF TURFGRASS, USE THE VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCI) RECOMMENDED TURFGRASS VARIETY LIST. QUALITY SEED WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY VCI. A CURRENT TURFGRASS VARIETY LIST IS AVAILABLE AT THE LOCAL COUNTY EXTENSION OFFICE OR THROUGH VCI AT 804-748-4884 OR AT [HTTP://SUDAN.CSES.VT.EDU/HTML/TURF/TURF/PUBLICATIONS/PUBLICATIONS2.HTML](http://sudan.cses.vt.edu/html/turf/turf/publications/publications2.html)

2 - USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW:
 FEBRUARY, MARCH - APRIL ANNUAL RYE
 MAY 1ST - AUGUST FOXTAIL MILLET
 SEPTEMBER, OCTOBER - NOVEMBER 15TH ANNUAL RYE
 NOVEMBER 16TH - JANUARY WINTER RYE

3 - MAY THROUGH OCTOBER, USE HULLED SEED. ALL OTHER PERIODS, USE UNHULLED SEED. IF WEEPING LOVEGRASS IS USED, INCLUDE IN ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS, INCREASE TO 30 - 40 LBS/ACRE.

FERTILIZER & LIME

- APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS. / ACRE (OR 12 LBS. / 1,000 SQ. FT.)
- APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (90 LBS. / 1,000 SQ. FT.)

NOTE:
 - A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL PH OF SITE.
 - INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4 - 6 INCHES OF THE SOIL BY DISKING OR BY OTHER MEANS.
 - WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN EROSION & SEDIMENT CONTROL TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES AT [HTTP://WWW.DCR.STATE.VA.US/SW/E&S/HTM/PUBS](http://www.dcr.state.va.us/SW/E&S/HTM/PUBS)

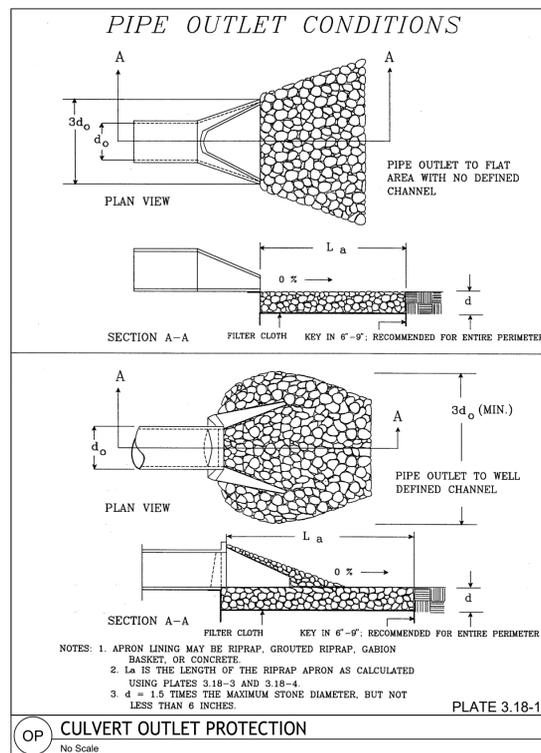
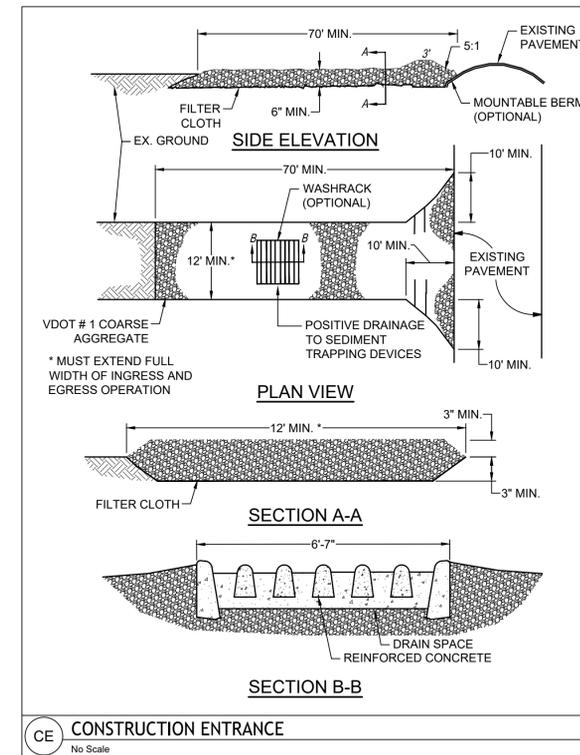
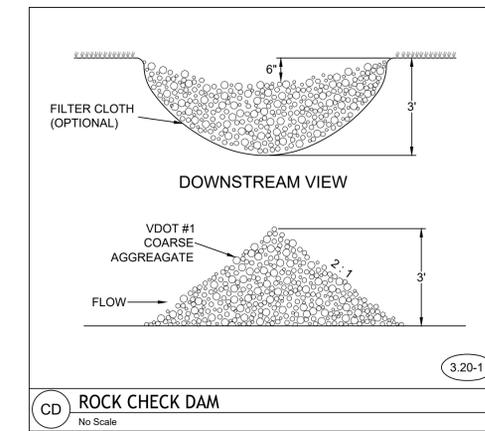
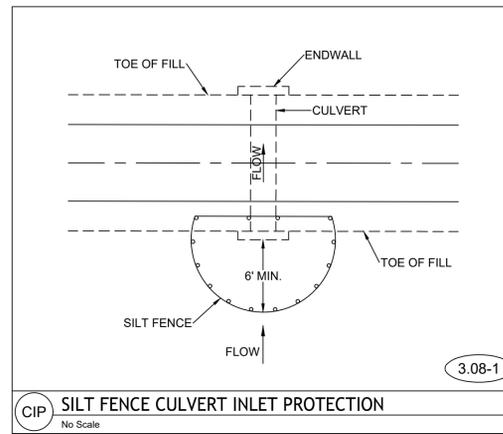
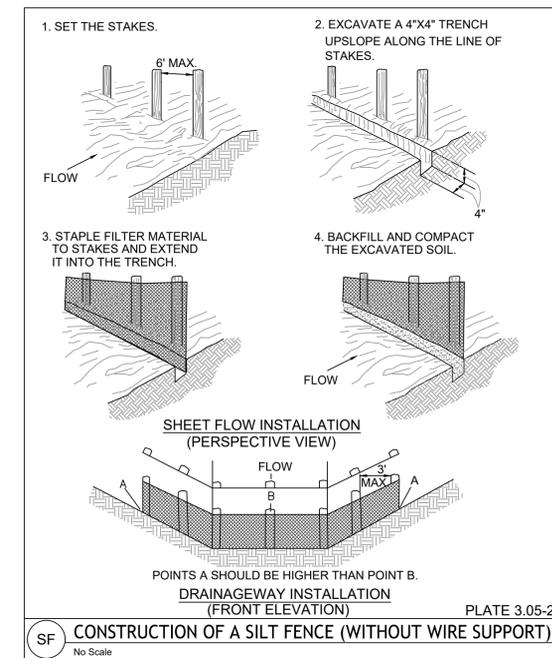


TABLE 3.31-B
ACCEPTABLE TEMPORARY SEEDING PLANT MATERIALS
"QUICK REFERENCE FOR ALL REGIONS"

PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPT. 1 - FEB. 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50-100
FEB. 16 - APR. 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60-100
MAY 1 - AUG. 31	GERMAN MILLET (SETARIA ITALICA)	50

(TS) TEMPORARY SEEDING
No Scale



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 CHECKED BY: K. TURNER
 SCALE: N/A

TIMMONS GROUP

ROUTE 10 WATER MAIN EXTENSION - PH. 2
 ISLE OF WIGHT COUNTY - VIRGINIA

EROSION AND SEDIMENT CONTROL DETAILS

JOB NO. 48527
 SHEET NO. ESC-2



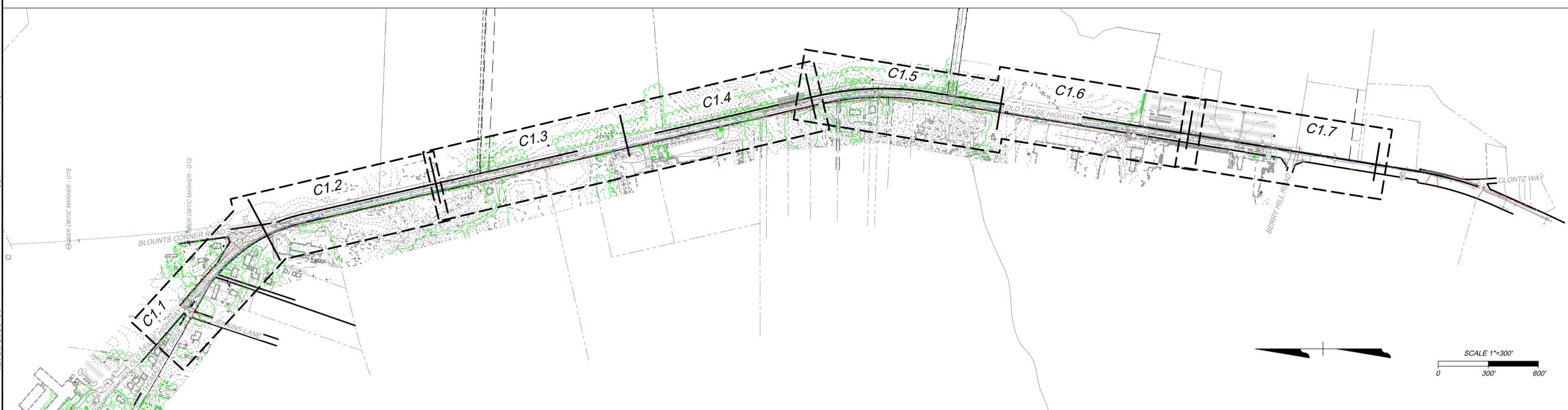
SURVEY NOTES

1. THE MERIDIAN SOURCE OF THIS SURVEY IS BASED ON THE VIRGINIA STATE PLANE COORDINATE SYSTEM, SOUTH ZONE, NORTH AMERICAN DATUM 1983(2011)
2. THE ELEVATIONS SHOWN HEREON ARE IN FEET AND ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88). ISLE OF WIGHT SURVEY CONTROL USED: STATION #1, CORRECTED ELEVATION = 38.6'
3. THIS SURVEY DOES NOT GUARANTEE THE EXISTENCE, SIZE OR HORIZONTAL LOCATION OF ANY UNDERGROUND UTILITIES.
4. LAST DATE OF FIELD SURVEY: JUNE 23, 2021 (F.B. 1448, P. 38).
5. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT AND THEREFORE MAY NOT SHOW ALL EASEMENTS AND MATTERS THAT AFFECT THE PROPERTY.
6. THIS SURVEY DOES NOT GUARANTEE THE EXISTENCE, SIZE OR HORIZONTAL LOCATION OF ANY UNDERGROUND UTILITIES. THE UNDERGROUND UTILITIES SHOWN ON THIS SURVEY WERE ESTABLISHED BY MISS UTILITY MARKINGS AND USING RECORD DATA, ABOVE GROUND STRUCTURES (VALVES, MANHOLES, ETC.) AND ASCE QUALITY LEVEL "B" DESIGNATION. PLASTIC AND OTHER LINES WITHOUT TRACER WIRES ARE NOT LOCATABLE. ABOVE GROUND UTILITY STRUCTURES AND UNDERGROUND LINES LABELED "PRD" ARE PER RECORD DATA AND WERE NOT CONFIRMED DURING THE CURRENT FIELD SURVEY. NO GUARANTEE IS MADE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. ACCURACY OF THE UTILITY INFORMATION SHOWN CANNOT BE GUARANTEED, AND ALL UNDERGROUND UTILITY LOCATIONS SHOWN HEREON SHOULD BE CONSIDERED APPROXIMATE. CONTRACTOR TO VERIFY ALL UTILITIES PRIOR TO CONSTRUCTION.

ABBREVIATIONS

CLS	CENTERLINE OF SWALE
CONC	CONCRETE
CPP	CORRUGATED PLASTIC PIPE
ELEV	ELEVATION
(F)	FOUND
FOD	FULL OF DEBRIS / DIRT
FOMKR	FIBER OPTIC MARKER
INV	INVERT
MH	MANHOLE
PP	POWER POLE
RCP	REINFORCED CONCRETE PIPE
SCO	SANITARY CLEAN OUT
TC	TOP OF CURB ELEVATION
UTO	UNABLE TO OPEN
WM	WATER METER
WP	WITNESS POST
WV	WATER VALVE

EXISTING	LEGEND	PROPOSED
	PROPERTY LINE	
	RIGHT-OF-WAY LINE	
	EASEMENT	
	LIMITS OF DISTURBANCE	
	SILT FENCE	
	FENCE	
	CONCRETE	
	ASPHALT	
	GRAVEL	
	SPOT ELEVATION	
	LIGHT	
	SIGN	
	CONTOUR	
	WATER LINE	
	STORM SEWER	
	OVERHEAD ELECTRIC	
	UNDERGROUND ELECTRIC	
	UNDERGROUND TELECOM	
	ELECTRICAL MANHOLE	
	ELECTRICAL PEDESTAL	
	TELECOM HANDHOLE	
	TELECOM MANHOLE	
	TELECOM PEDESTAL	
	MAILBOX	
	UTILITY POLE	
	FIRE HYDRANT	
	WATER STUB OUT	
	WATER VALVE	
	WATER METER	
	BUSH	
	CONIFEROUS TREE	
	DECIDUOUS TREE	
	TREE LINE	
	BUILDING/STRUCTURES	



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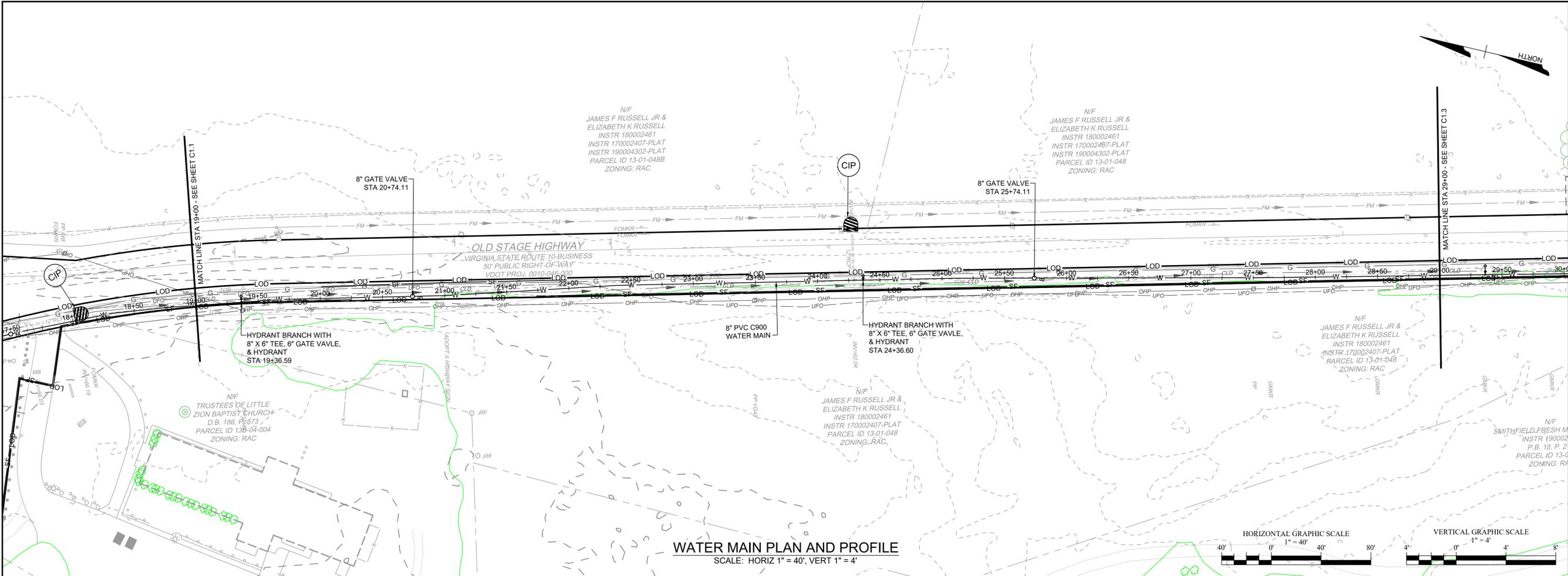
REVISION DESCRIPTION	DATE

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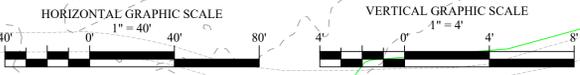
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 ROUTE 10 WATER MAIN EXTENSION - PH. 2
 SMITHFIELD & HARDY DISTRICTS, ISLE OF WIGHT COUNTY, VIRGINIA
 WATER MAIN - KEY PLAN & LEGEND

JOB NO. 48527
 SHEET NO. C1.0

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WATER MAIN PLAN AND PROFILE
SCALE: HORIZ 1" = 40', VERT 1" = 4'



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ISLE OF WIGHT COUNTY - VIRGINIA
PLAN & PROFILE - WATER MAIN - STA 19+00 TO STA 29+00

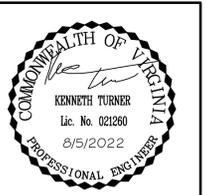
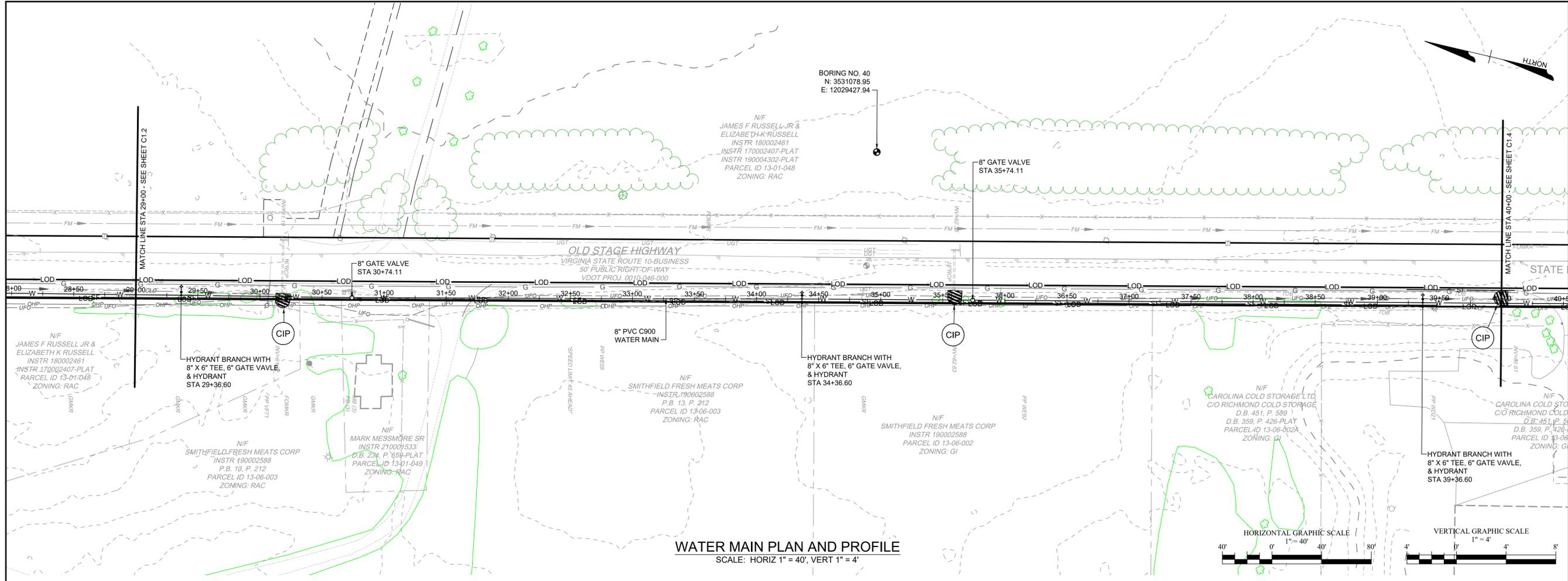
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SHEET NO.
C-1.2

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STA. 19+00, SEE SHEET C-1.1

STA. 29+00, SEE SHEET C-1.3



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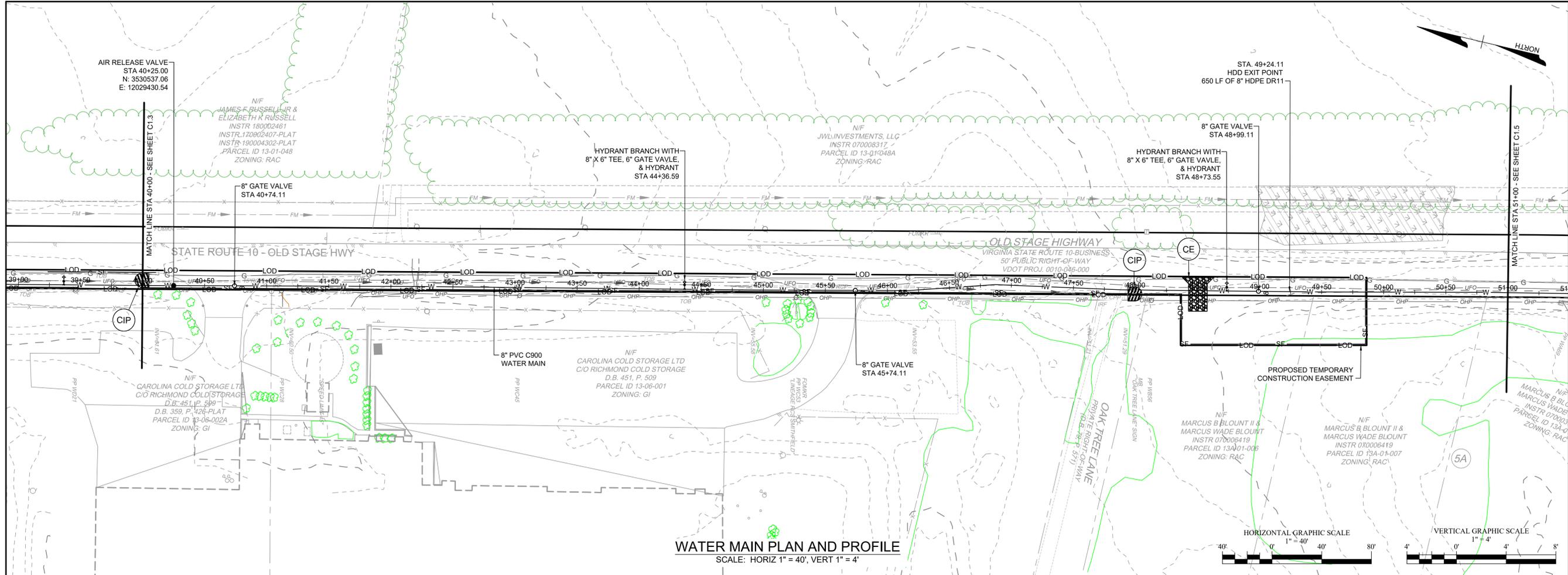
ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA

PLAN & PROFILE - WATER MAIN - STA 29+00 TO STA 40+00

JOB NO.	48527
SHEET NO.	C-1.3

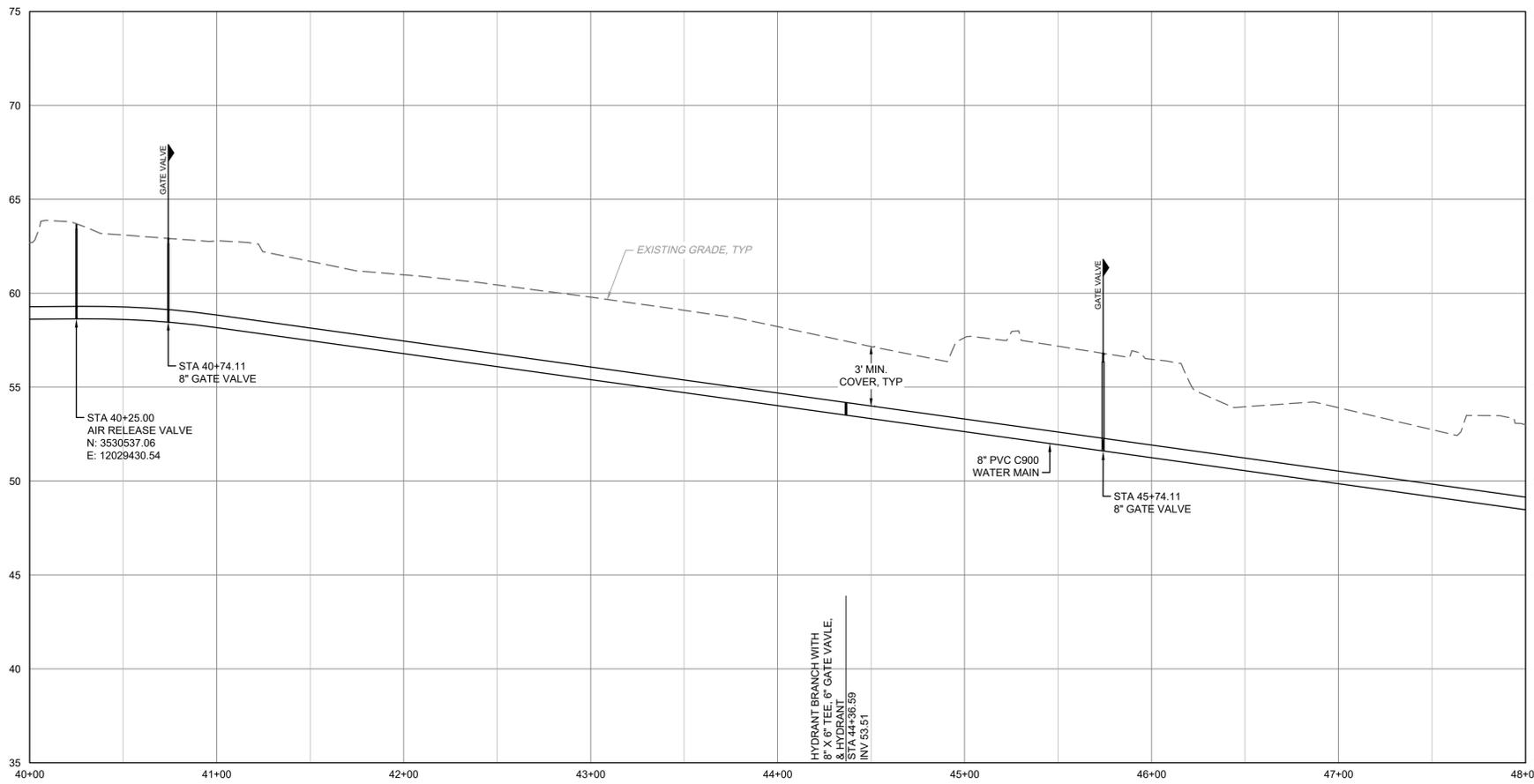
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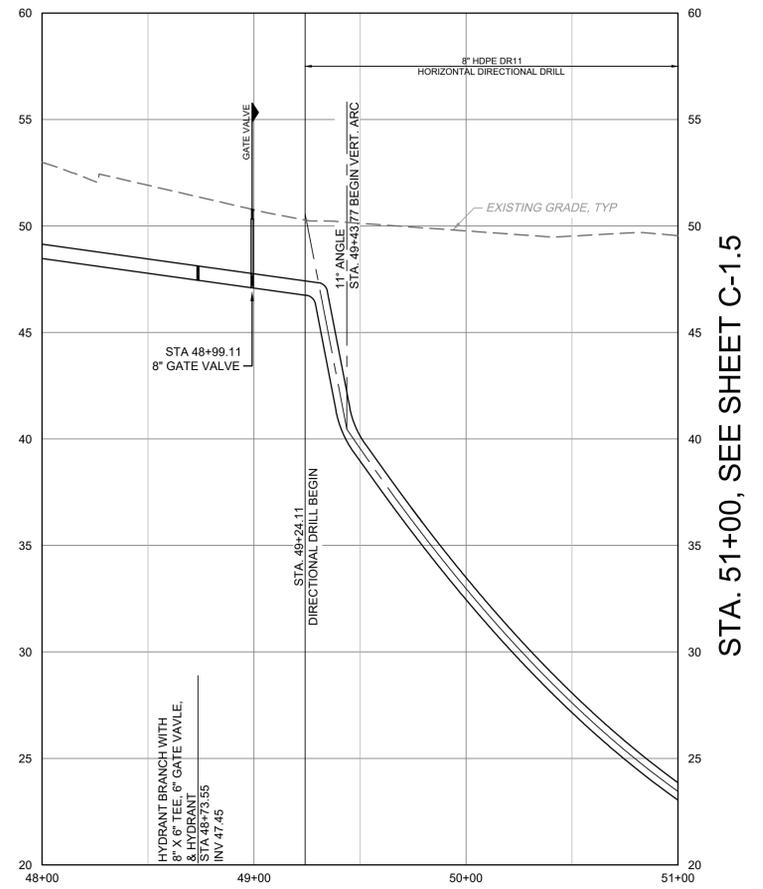


WATER MAIN PLAN AND PROFILE
SCALE: HORIZ 1" = 40', VERT 1" = 4'

STA. 40+00, SEE SHEET C-1.3



STA. 48+00, PROFILE GRID ELEVATION CHANGE



STA. 51+00, SEE SHEET C-1.5



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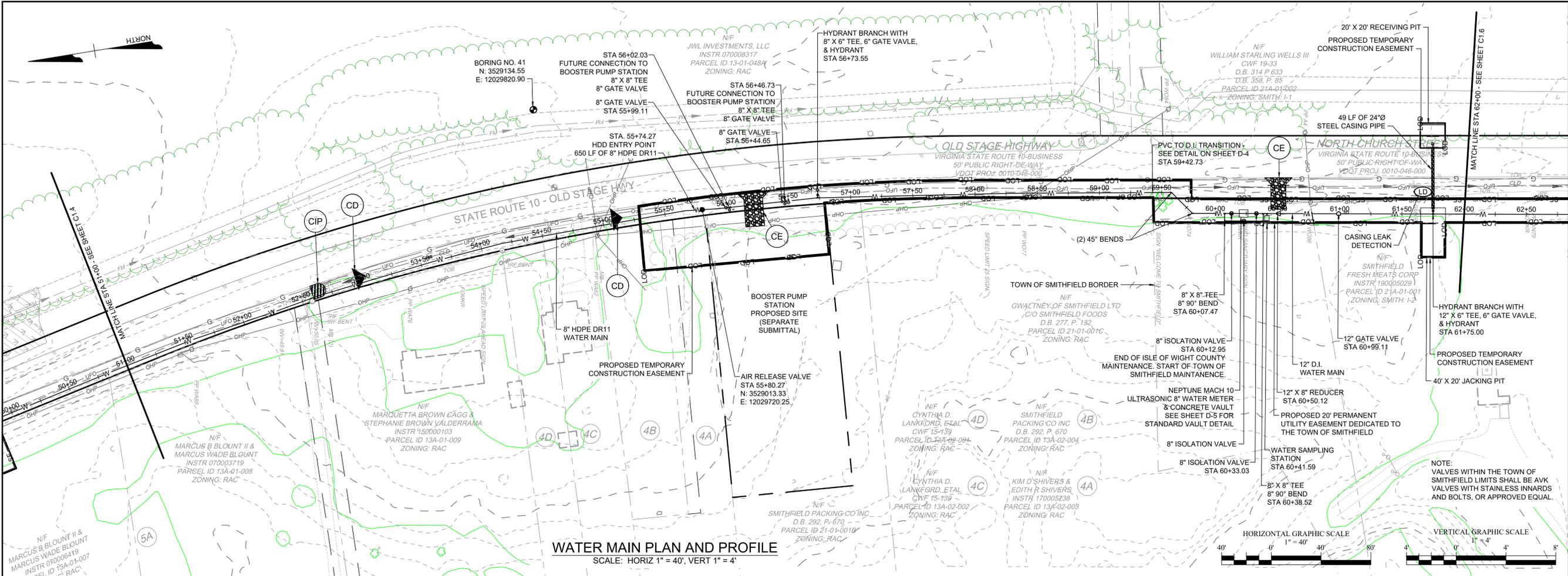
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ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA

PLAN & PROFILE - WATER MAIN - STA 40+00 TO STA 51+00

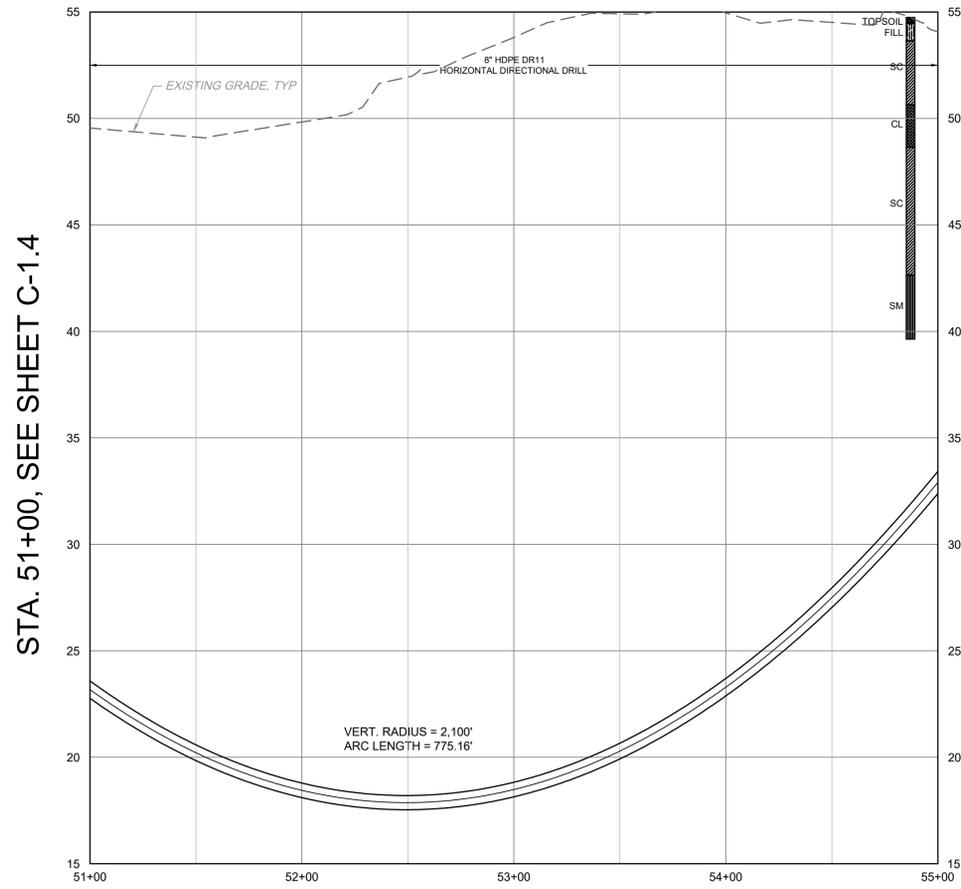
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SHEET NO. C-1.4

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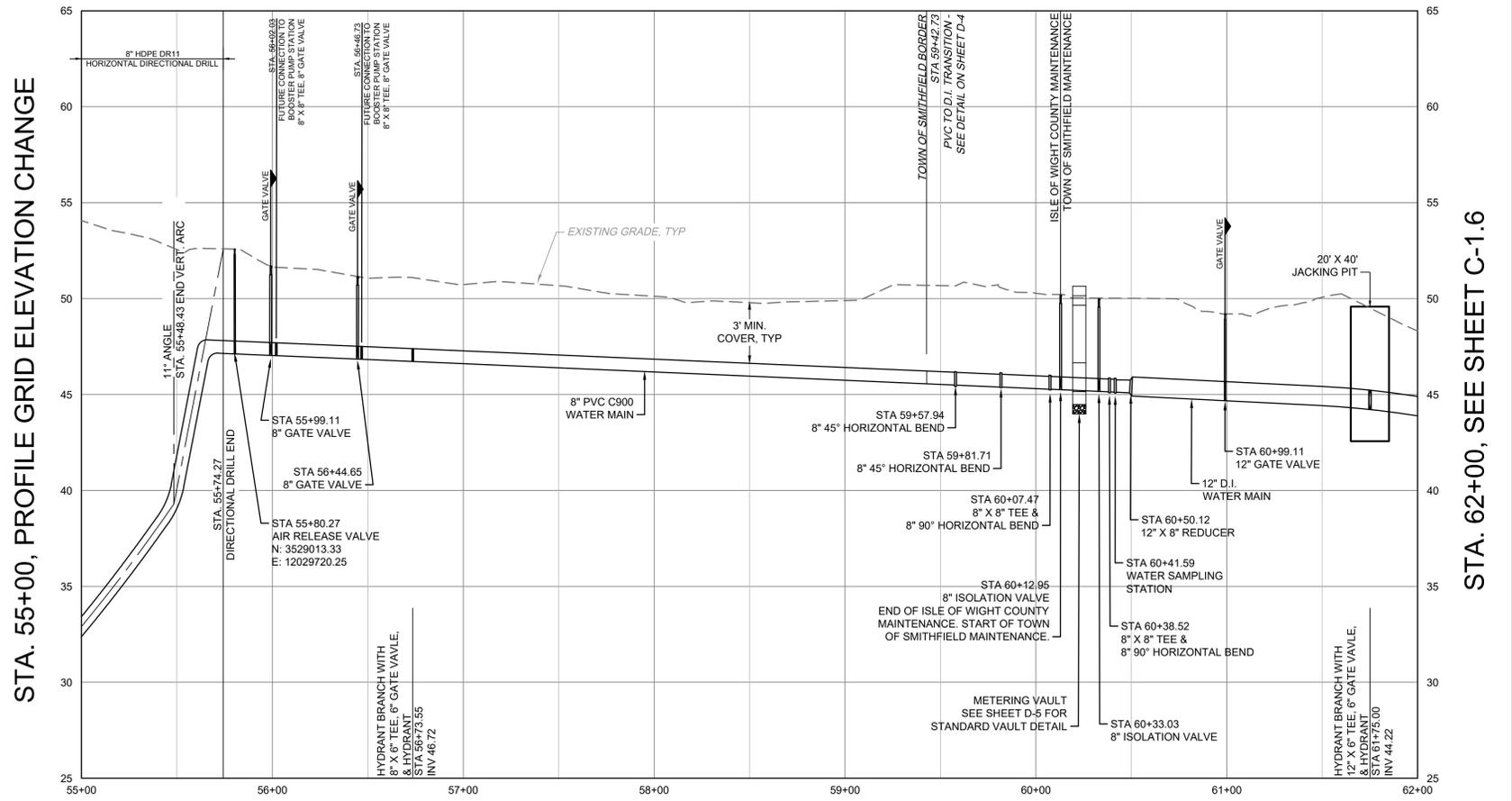


WATER MAIN PLAN AND PROFILE
SCALE: HORIZ 1" = 40', VERT 1" = 4'

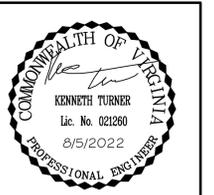
STA. 51+00, SEE SHEET C-1.4



STA. 55+00, PROFILE GRID ELEVATION CHANGE



STA. 62+00, SEE SHEET C-1.6



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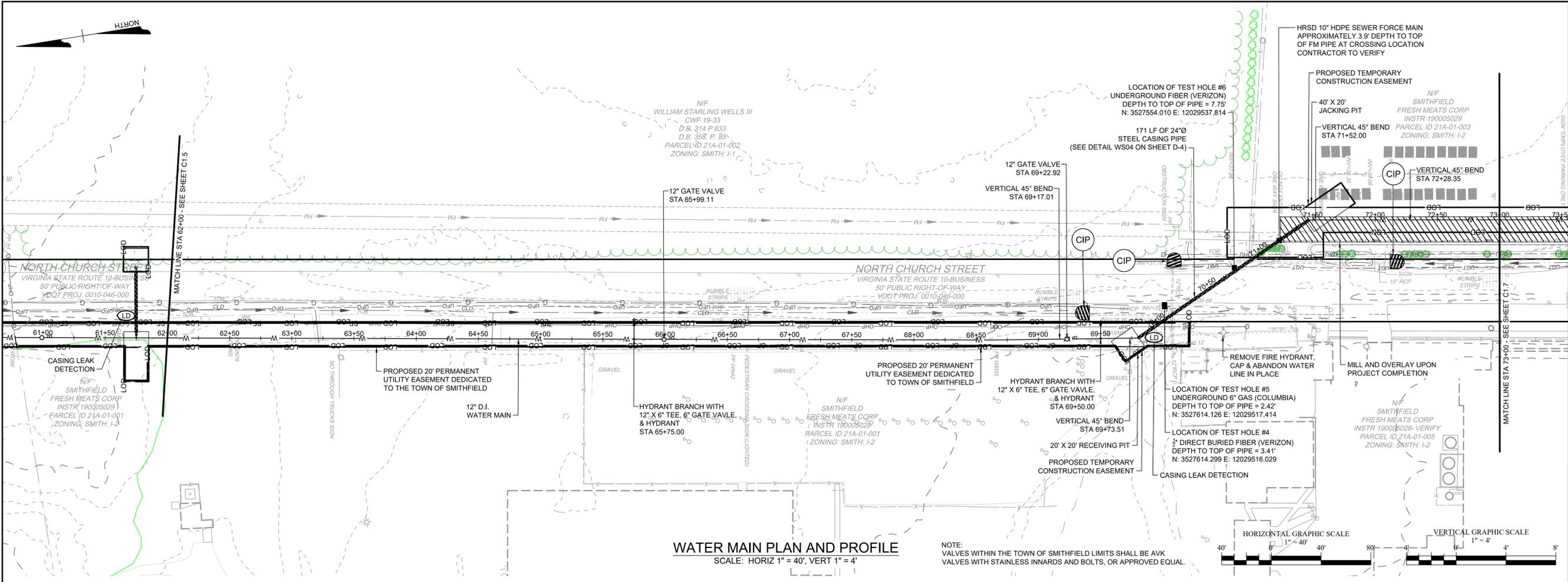
ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA

PLAN & PROFILE - WATER MAIN - STA 51+00 TO STA 62+00

JOB NO. 48527
SHEET NO. C-1.5

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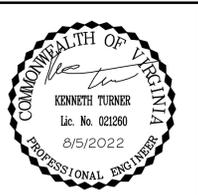
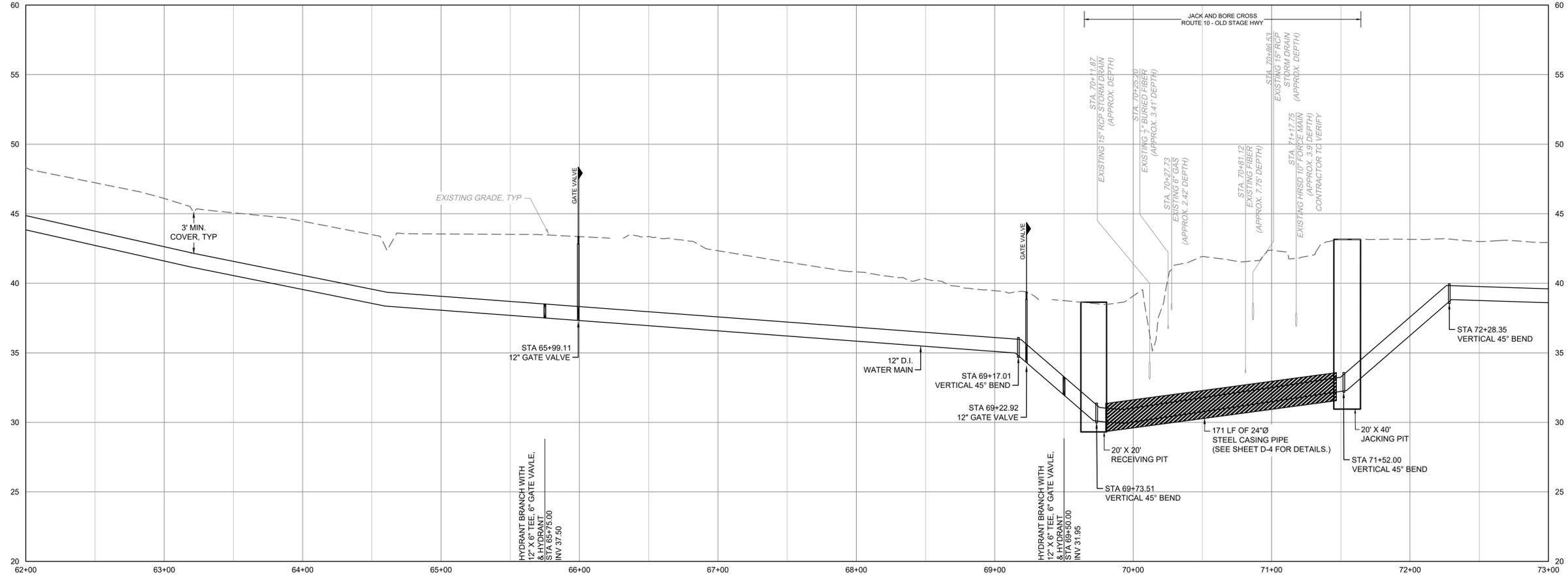
WATER MAIN PLAN AND PROFILE
SCALE: HORIZ 1" = 40', VERT 1" = 4'

NOTE:
VALVES WITHIN THE TOWN OF SMITHFIELD LIMITS SHALL BE AVK
VALVES WITH STAINLESS INNARDS AND BOLTS, OR APPROVED EQUAL.



STA. 62+00, SEE SHEET C-1.5

STA. 73+00, SEE SHEET C-1.7



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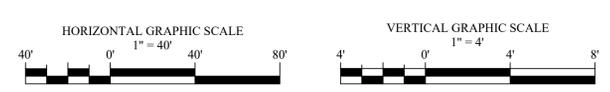
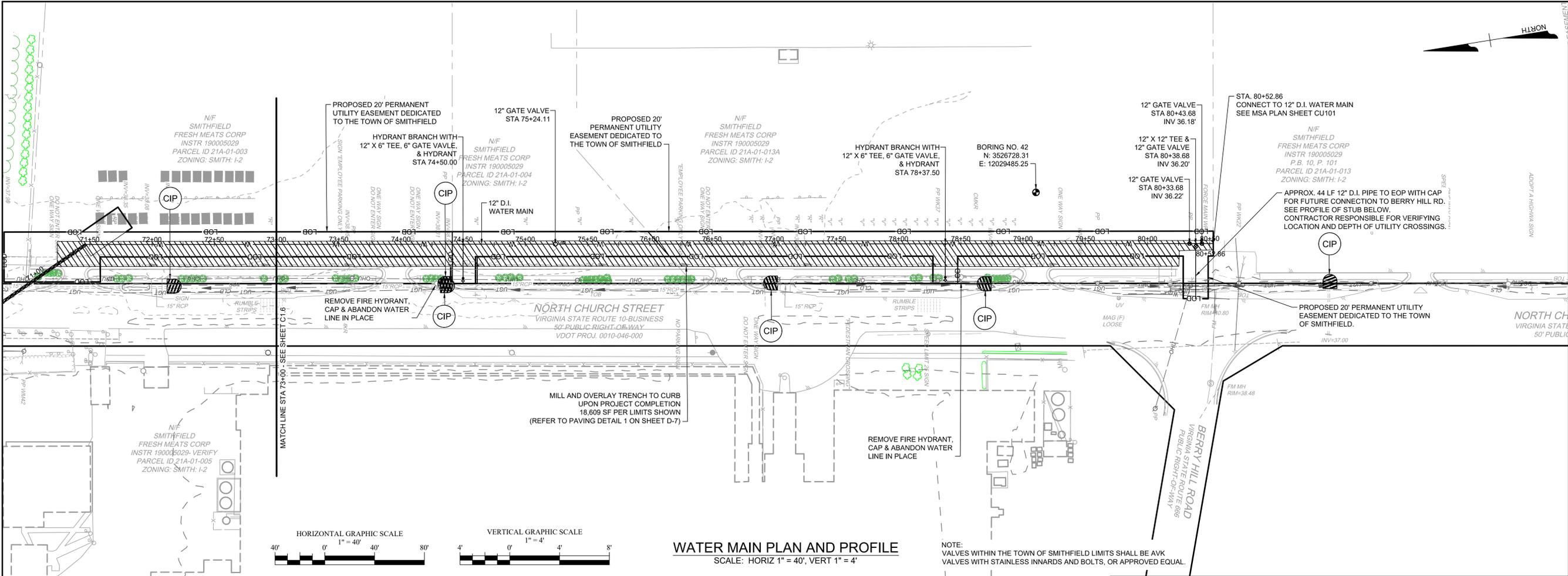
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PLAN & PROFILE - WATER MAIN - STA 62+00 TO STA 73+00

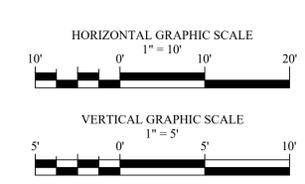
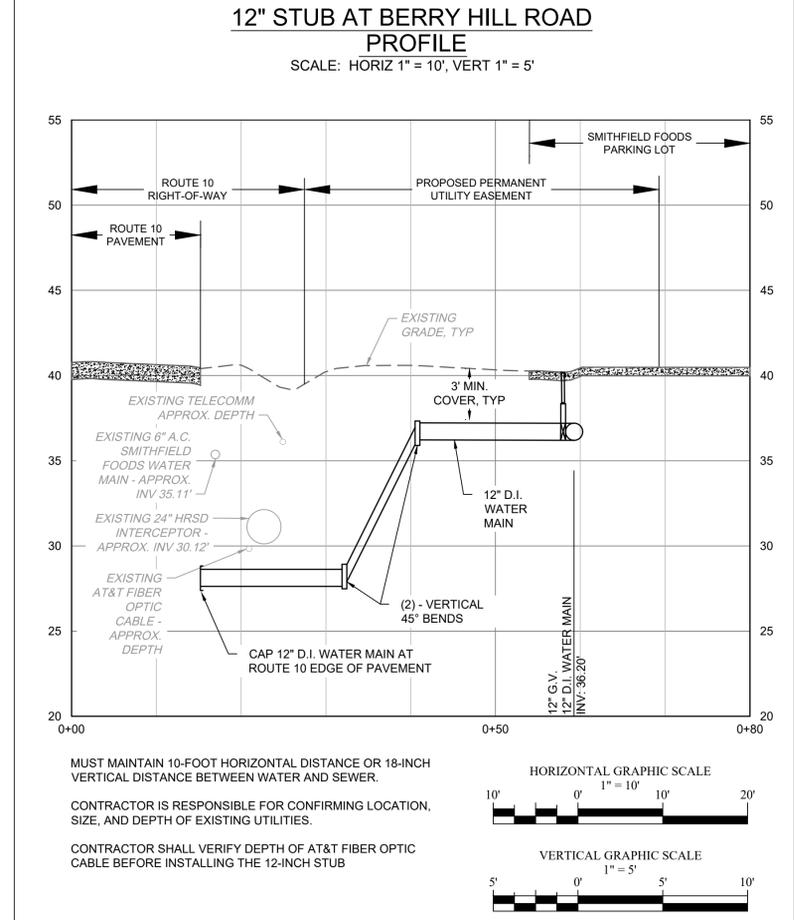
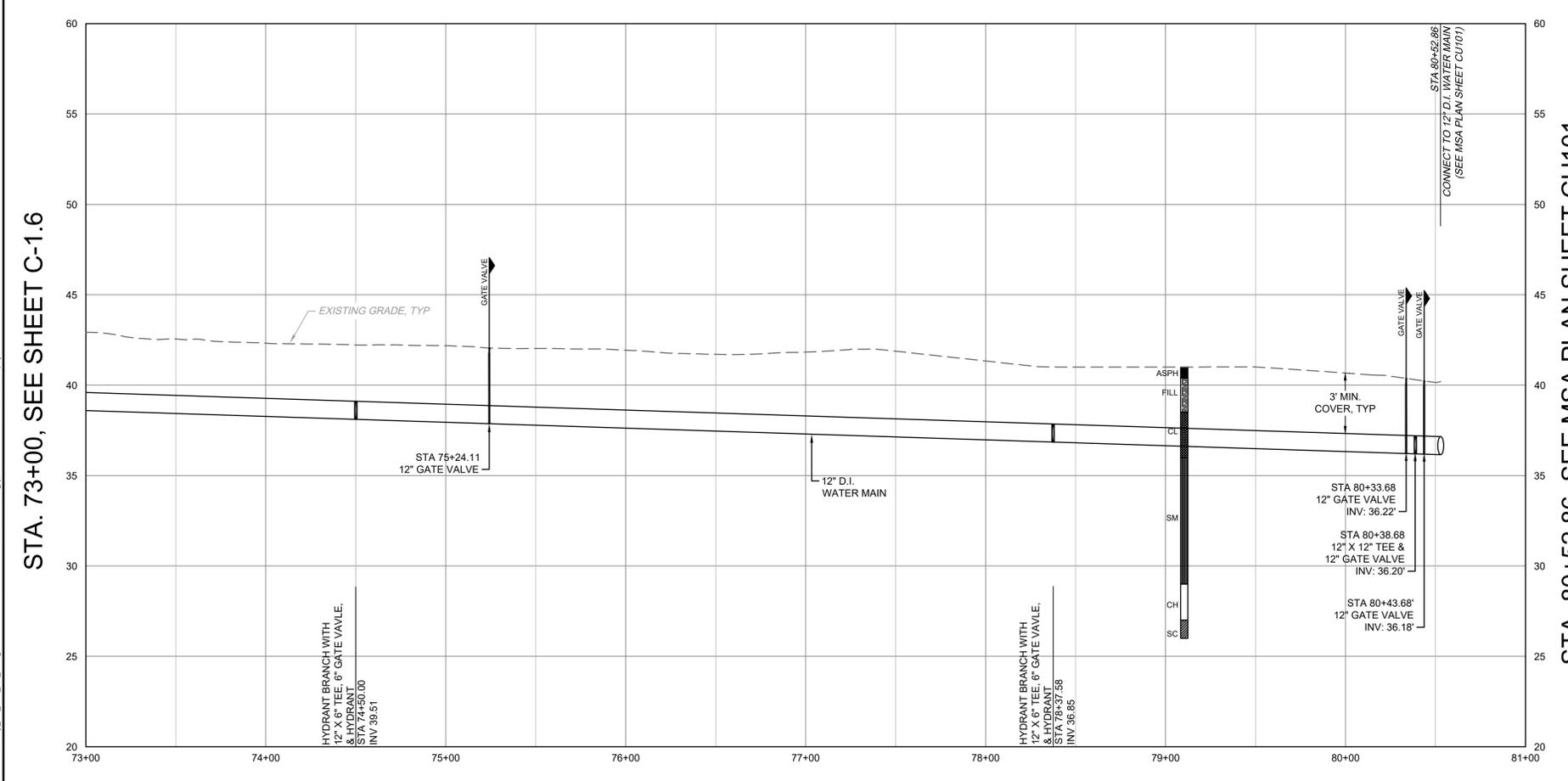
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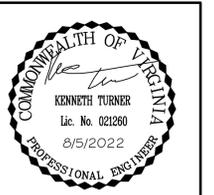


WATER MAIN PLAN AND PROFILE
SCALE: HORIZ 1" = 40', VERT 1" = 4'

NOTE: VALVES WITHIN THE TOWN OF SMITHFIELD LIMITS SHALL BE AVK VALVES WITH STAINLESS INNARDS AND BOLTS, OR APPROVED EQUAL.



MUST MAINTAIN 10-FOOT HORIZONTAL DISTANCE OR 18-INCH VERTICAL DISTANCE BETWEEN WATER AND SEWER.
CONTRACTOR IS RESPONSIBLE FOR CONFIRMING LOCATION, SIZE, AND DEPTH OF EXISTING UTILITIES.
CONTRACTOR SHALL VERIFY DEPTH OF AT&T FIBER OPTIC CABLE BEFORE INSTALLING THE 12-INCH STUB



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ROUTE 10 WATER MAIN EXTENSION - PH. 2
ISLE OF WIGHT COUNTY - VIRGINIA

PLAN & PROFILE - WATER MAIN - STA 73+00 TO STA 80+52.86

JOB NO.	48527
SHEET NO.	C-1.7

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