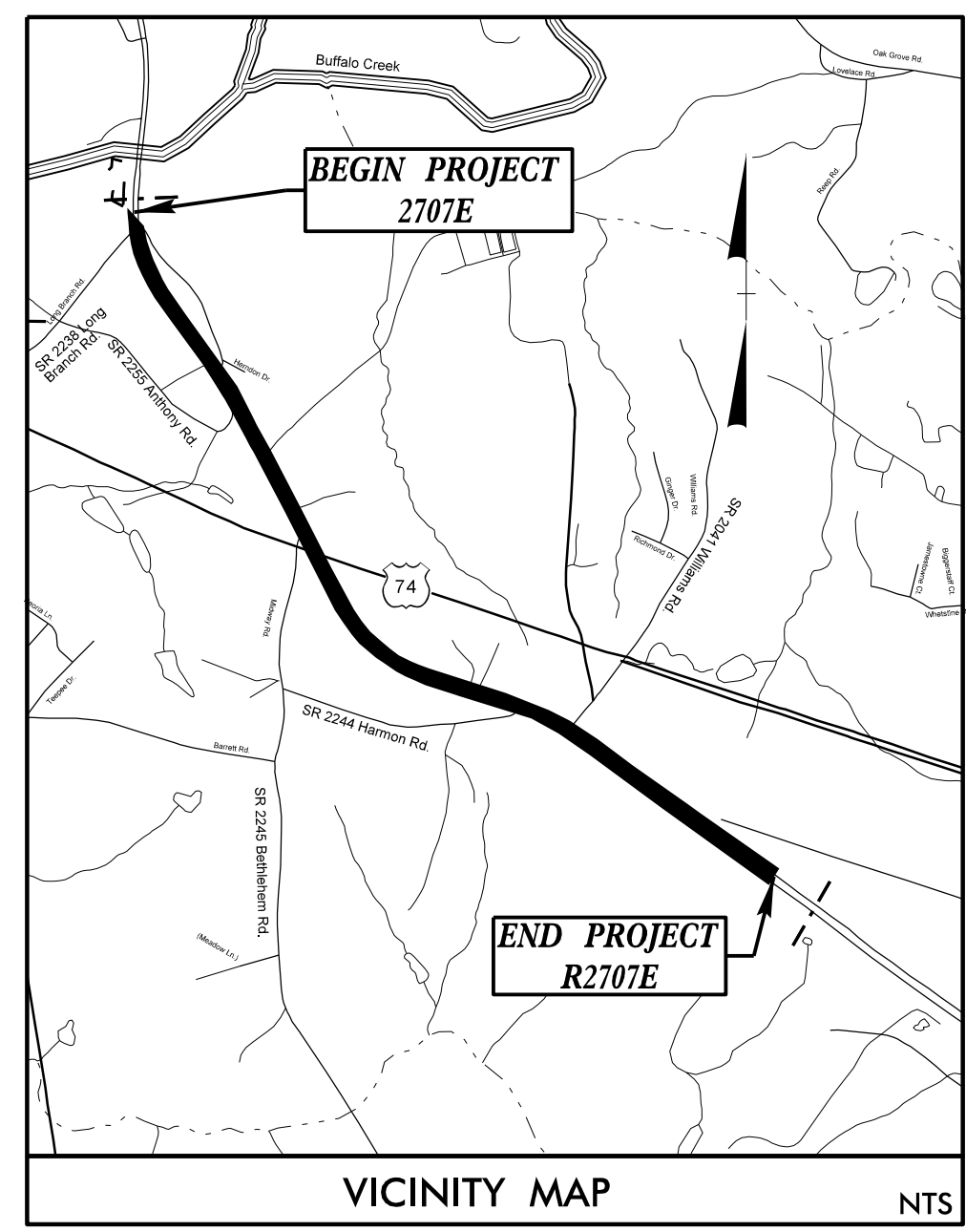


TIP PROJECT: R-2707E

T.I.P. NO.	SHEET NO.
R-2707E	UC-01

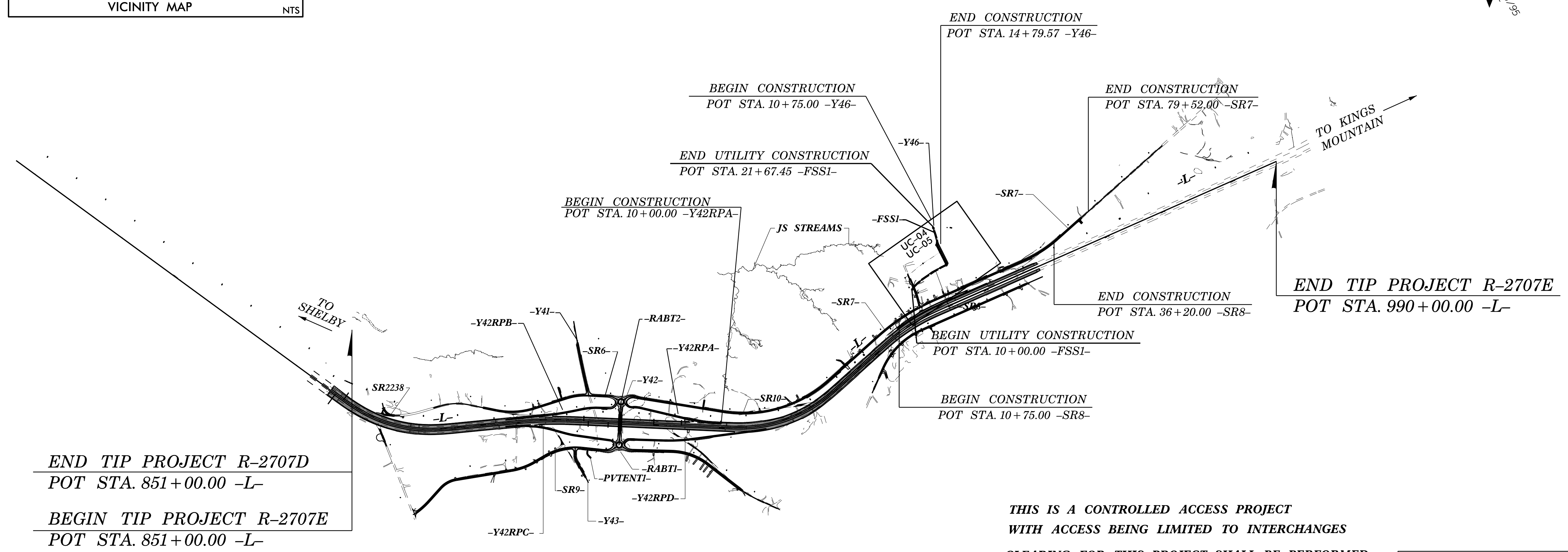
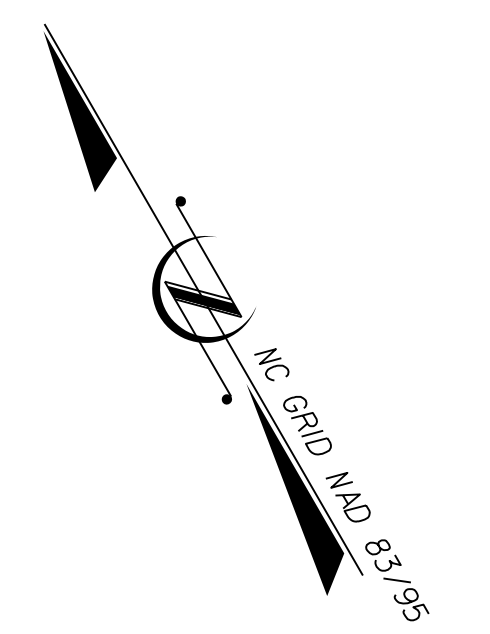


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS  
CLEVELAND COUNTY**

UTILITY LOCATION: SR 2244 (HARMON ROAD) TO SR 2041 (WILLIAMS ROAD)  
CROSSING US 74 (EAST DIXON BLVD.)

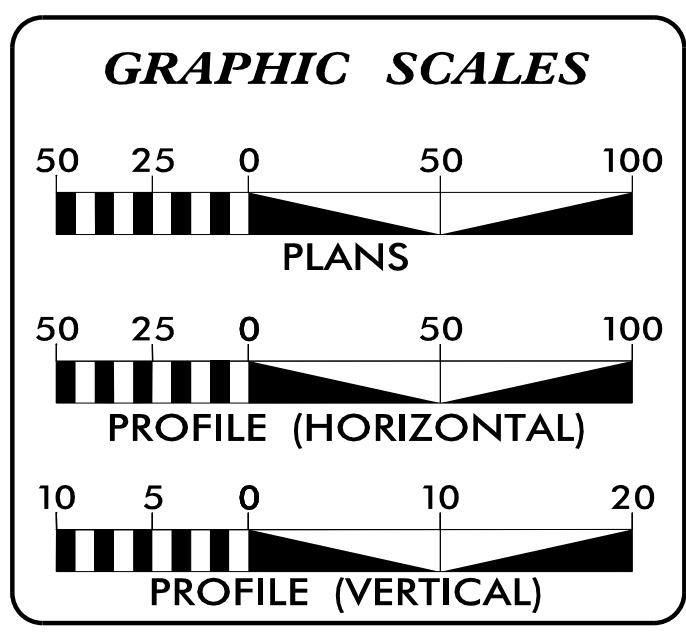
TYPE OF WORK: UTILITY RELOCATES FOR FORCED SANITARY SEWER



**THIS IS A CONTROLLED ACCESS PROJECT  
WITH ACCESS BEING LIMITED TO INTERCHANGES**

**CLEARING FOR THIS PROJECT SHALL BE PERFORMED  
TO THE LIMITS ESTABLISHED BY METHOD III.**

DOCUMENT NOT CONSIDERED FINAL  
UNTIL ALL SIGNATURES ARE COMPLETED



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION:
UC-01	TITLE SHEET
UC-02	UTILITY SYMBOLOGY
UC-03	NOTES
UC-03A-D	DETAILS
UC-04	FORCED SANITARY SEWER PLAN
UC-05	FORCED SANITARY SEWER PROFILE

**FORCED SANITARY SEWER  
OWNER ON PROJECT**

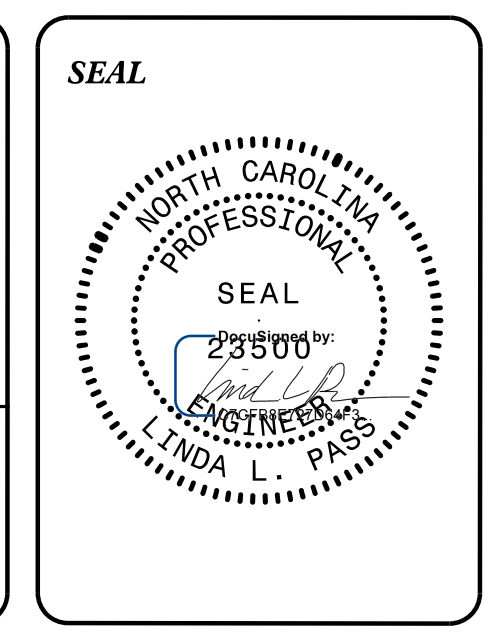
CITY OF KINGS MOUNTAIN  
101 W GOLD STREET  
KINGS MOUNTAIN, NC 28086

PREPARED IN THE OFFICE OF

**Stantec**

STANTEC CONSULTING SERVICES INC.  
ONE WEST FOURTH STREET, SUIT 820  
WINSTON-SALEM, NC 27101

JOSEPH KELVINGTON CONSULTANT CONTACT #1  
LINDA L. PASS CONSULTANT CONTACT #2  
LAURA WILSON CONSULTANT CONTACT #3



**DIVISION OF HIGHWAYS  
UTILITIES UNIT**

1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

MICHAEL BRIGHT UTILITIES REGIONAL ENGINEER  
CHAD DREWERY UTILITIES ENGINEER  
AMY DUPREE UTILITIES AREA COORDINATOR  
WARREN ANDERSON UTILITIES COORDINATOR

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## **UTILITIES PLAN SHEET SYMBOLS**

### PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	
Force Main Sewer Line (Sized as Shown)	
Manhole (Sized per Note)	
Sewer Pump Station	

### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
1 1/4 Degree Bend	
2 1/2 Degree Bend	
45 Degree Bend	
90 Degree Bend	
Plug	
Cross	
Reducer	
Gate Valve	
Butterfly Valve	
Tapping Valve	
Line Stop	
Line Stop with Bypass	
Blow Off	
Fire Hydrant	
Relocate Fire Hydrant	
Remove Fire Hydrant	
Water Meter	
Relocate Water Meter	
Remove Water Meter	
Water Pump Station	
RPZ Backflow Preventer	
DCV Backflow Preventer	
Relocate RPZ Backflow Preventer	
Relocate DCV Backflow Preventer	

### PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Telephone Pedestal	
Utility Line by Others (Type as Shown)	
Trenchless Installation	
Encasement by Open Cut	
Encasement	

Thrust Block	
Air Release Valve	
Utility Vault	
Abandon Utility (Sized as Shown)	
Concrete Pier	
Steel Pier	
Plan Note	
Pay Item Note	

### EXISTING UTILITIES SYMBOLS

Power Pole	
Telephone Pole	
Joint Use Pole	
Utility Pole	
Utility Pole with Base	
H-Frame Pole	
Power Transmission Line Tower	
Water Manhole	
Power Manhole	
Telephone Manhole	
Sanitary Sewer Manhole	
Hand Hole for Cable	
Power Transformer	
Telephone Pedestal	
CATV Pedestal	
Gas Valve	
Gas Meter	
Located Miscellaneous Utility Object	
Abandoned According to Utility Records	<b>AATUR</b>
End of Information	<b>E.O.I.</b>

*Underground Power Line	
Aboveground Power	
*Underground Telephone Conduit	
*Underground Fiber Optics Telephone Cable	
*Underground TV Cable	
*Underground Fiber Optics TV Cable	
*Underground Gas Pipeline	
Aboveground Gas Pipeline	
*Underground Water Line	
Aboveground Water Line	
*Underground Gravity Sanitary Sewer Line	
Aboveground Gravity Sanitary Sewer Line	
*Underground SS Forced Main Line	
Underground Unknown Utility Line	
SUE Test Hole	
Water Meter	
Water Valve	
Fire Hydrant	
Sanitary Sewer Cleanout	

\*For Existing Utilities  
 Utility Line Drawn from Record (Type as Shown) \_\_\_\_\_  
 Designated Utility Line (Type as Shown) \_\_\_\_\_

5/14/99

11/22/2021 I:\projects\2021\dm\43255\12707-E-ut-sym-UC02.dgn

5/14/99

# UTILITY CONSTRUCTION

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.

2. THE EXISTING SANITARY SEWER UTILITIES BELONG TO KINGS MOUNTAIN, NC.

3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION.

4. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.

5. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY.

A. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER.

B. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.

6. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

7. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.

8. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.

9. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.

10. ALL UTILITY MATERIALS WILL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE NCDOT STANDARD SPECIFICATIONS.

## STANDARD DETAIL DRAWINGS

1. STANDARD DETAILS ARE PROVIDED FOR KINGS MOUNTAIN. THESE STANDARD DETAILS ARE TO BE USED WHEN PROVIDED.

2. IF NO STANDARD DETAILS ARE PROVIDED THEN USE NCDOT STANDARD SPECIFICATIONS, DIVISION 15 STANDARD DETAILS FOR UTILITY CONSTRUCTION.

- 1515.01 WATER METER
- 1515.02 FIRE HYDRANT
- 1520.01 SEWER CLEAN OUT
- 1525.06 PRECAST CONCRETE SANITARY SEWER MANHOLE WITH CAST-IN-PLACE BOTTOM

## PROJECT SPECIFIC NOTES:

1. ALL NEW FORCED SANITARY SEWER LINES WILL BE PVC (C900, DR 18). SECTION OF STEEL ENCASMENT PIPE (MIN. THICKNESS 0.375 INCHES) CROSSING AND WHERE OTHERWISE INDICATED ON THE DRAWINGS.

2. WATER MAINS OR SEWER LINES CROSSING UNDER STORM DRAIN PIPE WILL HAVE 18" MINIMUM VERTICAL CLEARANCE UNLESS SPECIFIED ON THE PLAN/PROFILE DRAWINGS.

3. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.

4. ALL MATERIALS AND CONSTRUCTION PERTAINING TO WATER AND SEWER LINE CONSTRUCTION WILL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF KINGS MOUNTAIN AND NCDOT DIV 15 UTILITY CONSTRUCTION.

5. CONTRACTOR WILL OBTAIN THE LATEST STANDARDS, SPECIFICATIONS, AND STANDARD DETAILS DRAWINGS OF KINGS MOUNTAIN AND NCDOT.

6. THE EXISTING GRAVITY SEWER SYTEM ABANDONMENT MAY OCCUR AFTER NEW FSS LINE IS INSTALLED AND AFTER THE EXISTING HOMES HAVE BEEN VACATED WITHIN THE NEW ROW.

	PROJECT REFERENCE NO.	SHEET NO.
	R-2707-E	UC-03
Stantec Consulting Services Inc. 801 Jones Franklin Road Suite 300 Raleigh, NC 27606 Tel. (919) 851-6866 Fax. (919) 851-7024 www.stantec.com License No. F-0672	DESIGNED BY: LEW	
	DRAWN BY: GMM	
	CHECKED BY: LLP	
	APPROVED BY:	
	REVISED:	
	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY	
<b>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED</b>		

## UTILITY CONSTRUCTION

7/6/2022 1:43:25 PM R2707-E.utl.notes\_UC03.dgn

# PROJECT TYPICAL DETAILS



**Stantec**

Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27606  
Tel. (919) 851-6866  
Fax. (919) 851-7024  
www.stantec.com  
License No. F-0672

PROJECT REFERENCE NO. **R-2707E**

SHEET NO. **UC-03A**

DESIGNED BY: LEW  
DRAWN BY: GMM  
CHECKED BY: LLP  
APPROVED BY:  
REVISED:

NORTH CAROLINA  
DEPARTMENT OF  
TRANSPORTATION

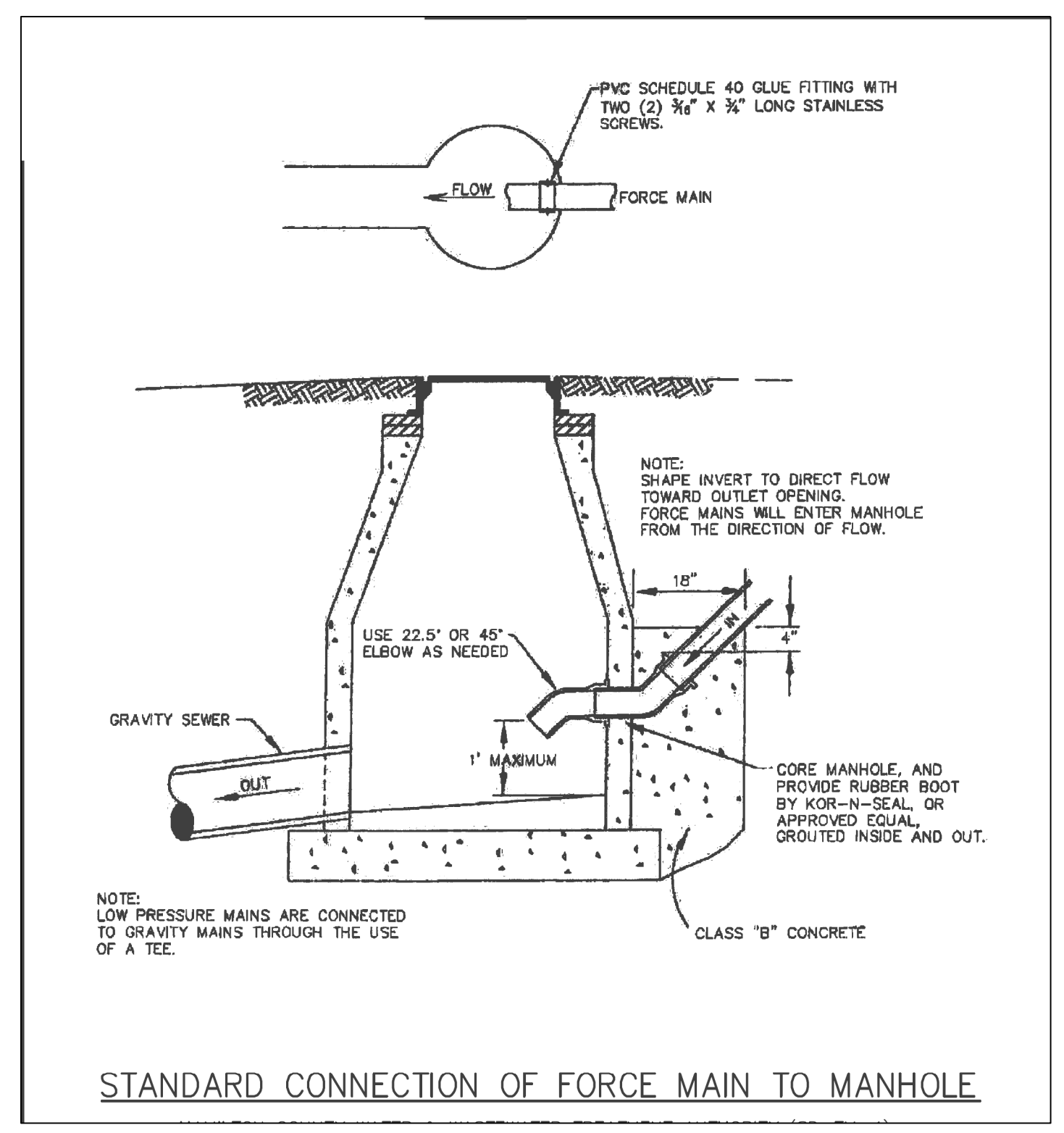
UTILITIES ENGINEERING SEC.  
PHONE: (919) 707-6690  
FAX: (919) 250-4151

UTILITY CONSTRUCTION  
PLANS ONLY

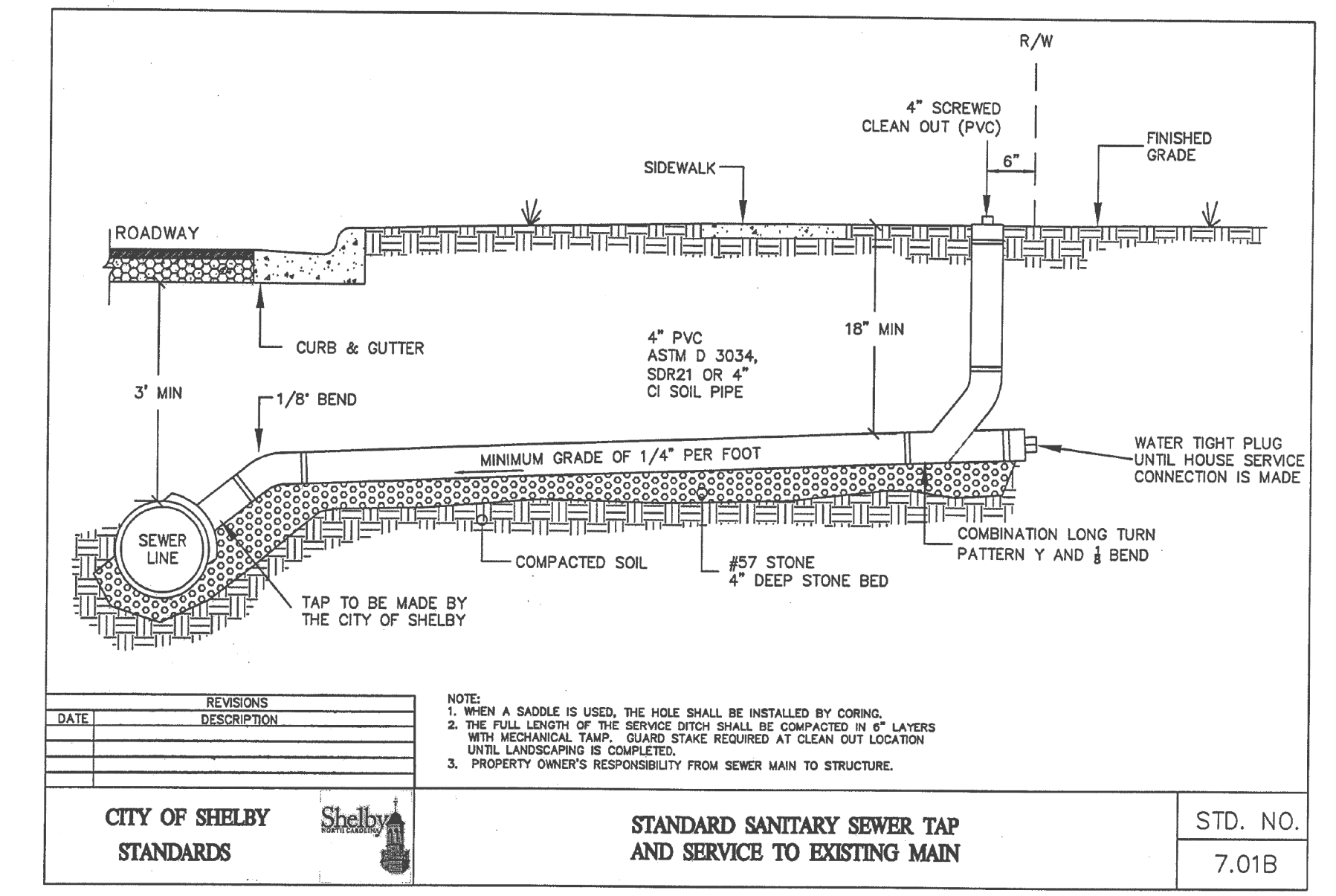
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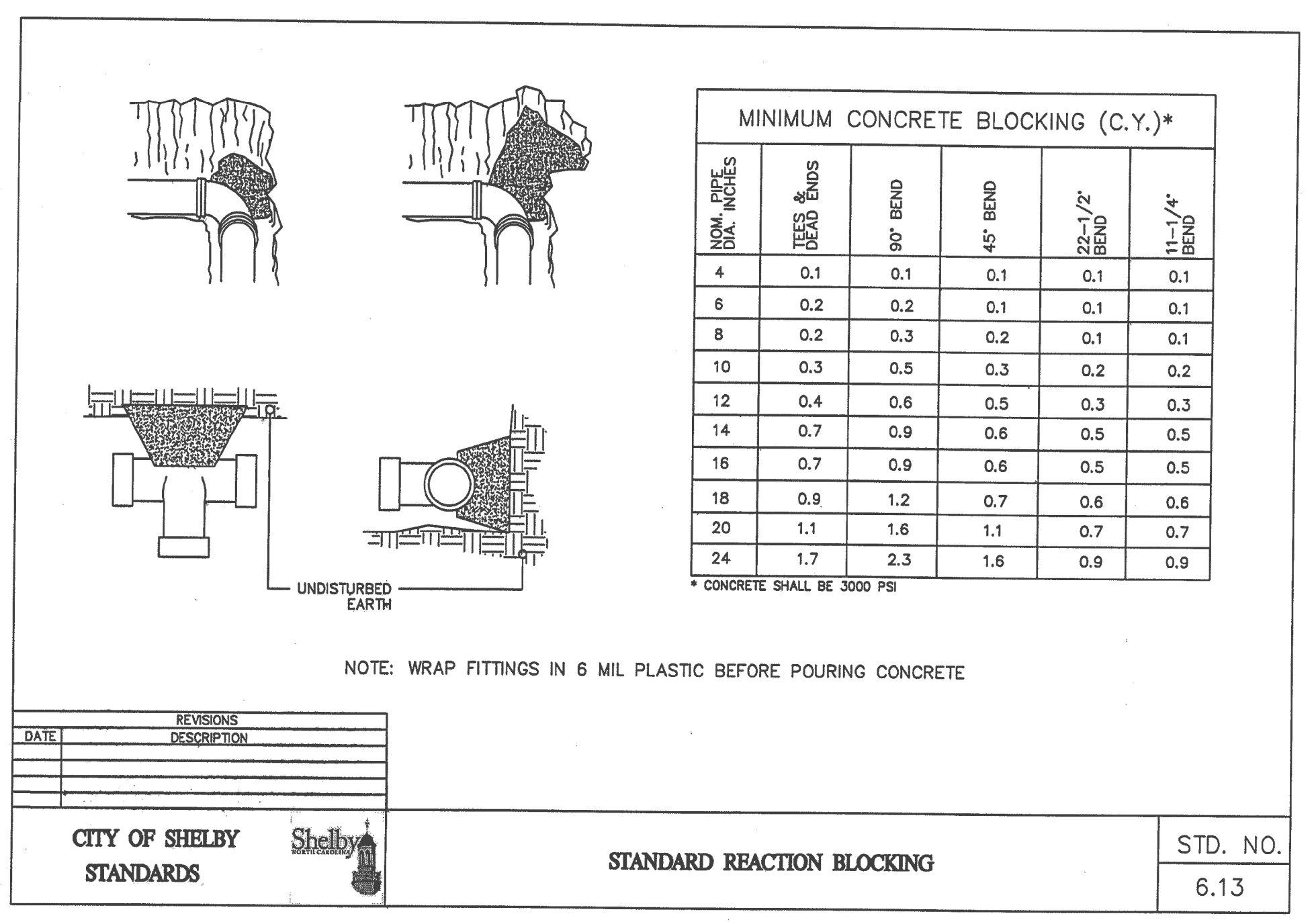
## UTILITY CONSTRUCTION



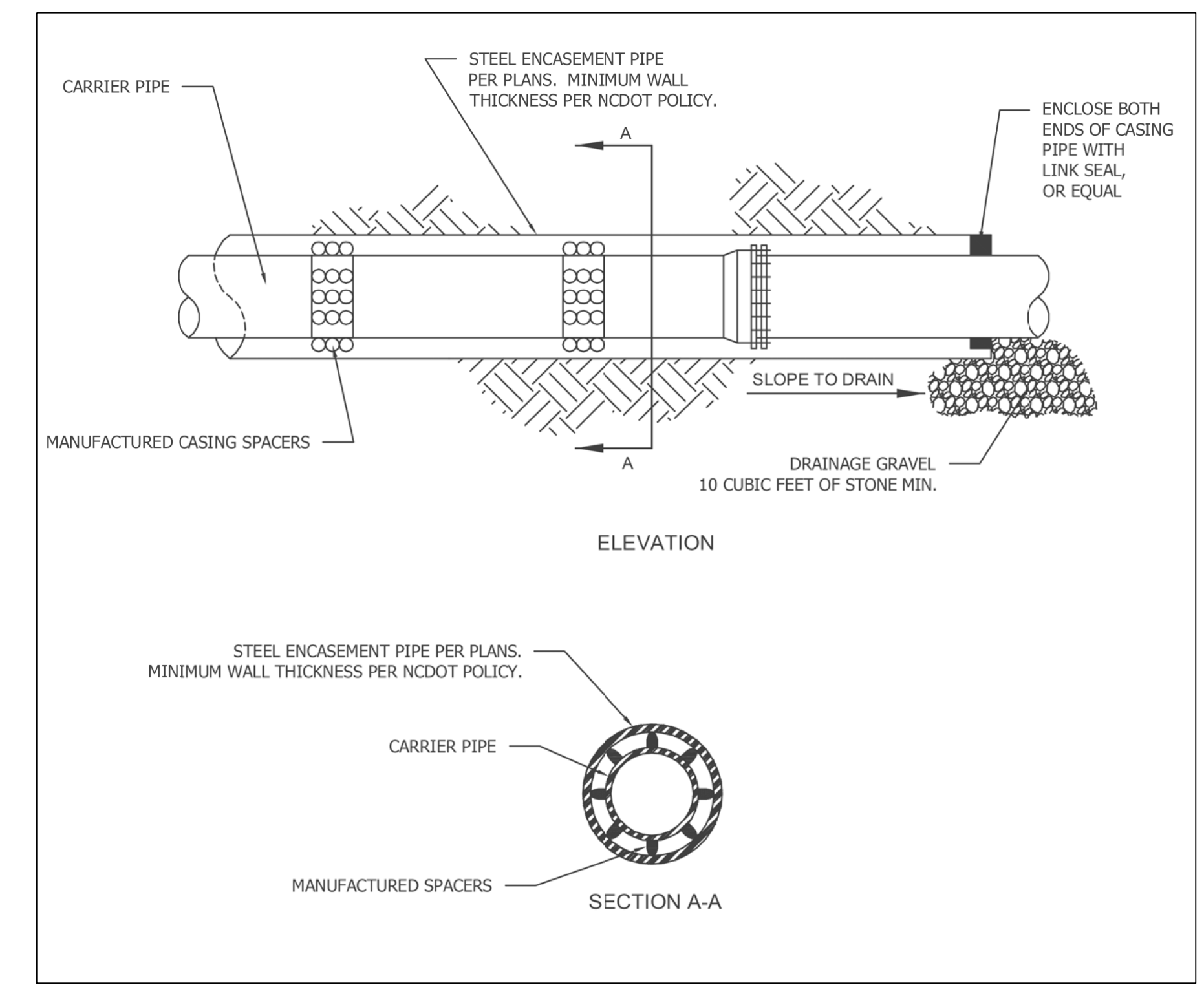
**1** STANDARD CONNECTION OF FORCE MAIN TO MANHOLE  
**03A**



**2** STANDARD SANITARY SEWER TAP AND SERVICE TO EXISTING MAIN  
**03A**



**3** STANDARD REACTION BLOCKING  
**03A**



**4** ENCASUREMENT DETAIL  
**03A**

NOTES:

1. MAINTAIN MINIMUM 36" COVER BELOW FINISHED GRADE FOR ALL SEWER LINES.
2. ALL THE LOCATIONS WHERE PROPOSED SEWER CROSSES DRAINAGE SYSTEM PROVIDE 18" MINIMUM VERTICAL CLEARANCE.
3. RELOCATE ALL SEWER SERVICES ON EXISTING SEWER (TO BE ABANDONED) TO NEW SEWER LINE WHEN APPLICABLE.
4. ABANDON SEWER LINE IN LOCATIONS SHOWN. ABANDONMENTS INCLUDES ALL FITTINGS AND APPURTENANCES. ABANDONMENT OF THE SEWER LINE TO BE IN ACCORDANCE WITH CITY OF KINGS MOUNTAIN REQUIREMENTS.
5. ABANDONMENT OF SEWER LINE MAY NOT TAKE PLACE UNTIL THE NEW 12-INCH FSS HAS BEEN PLACED INTO SERVICE.

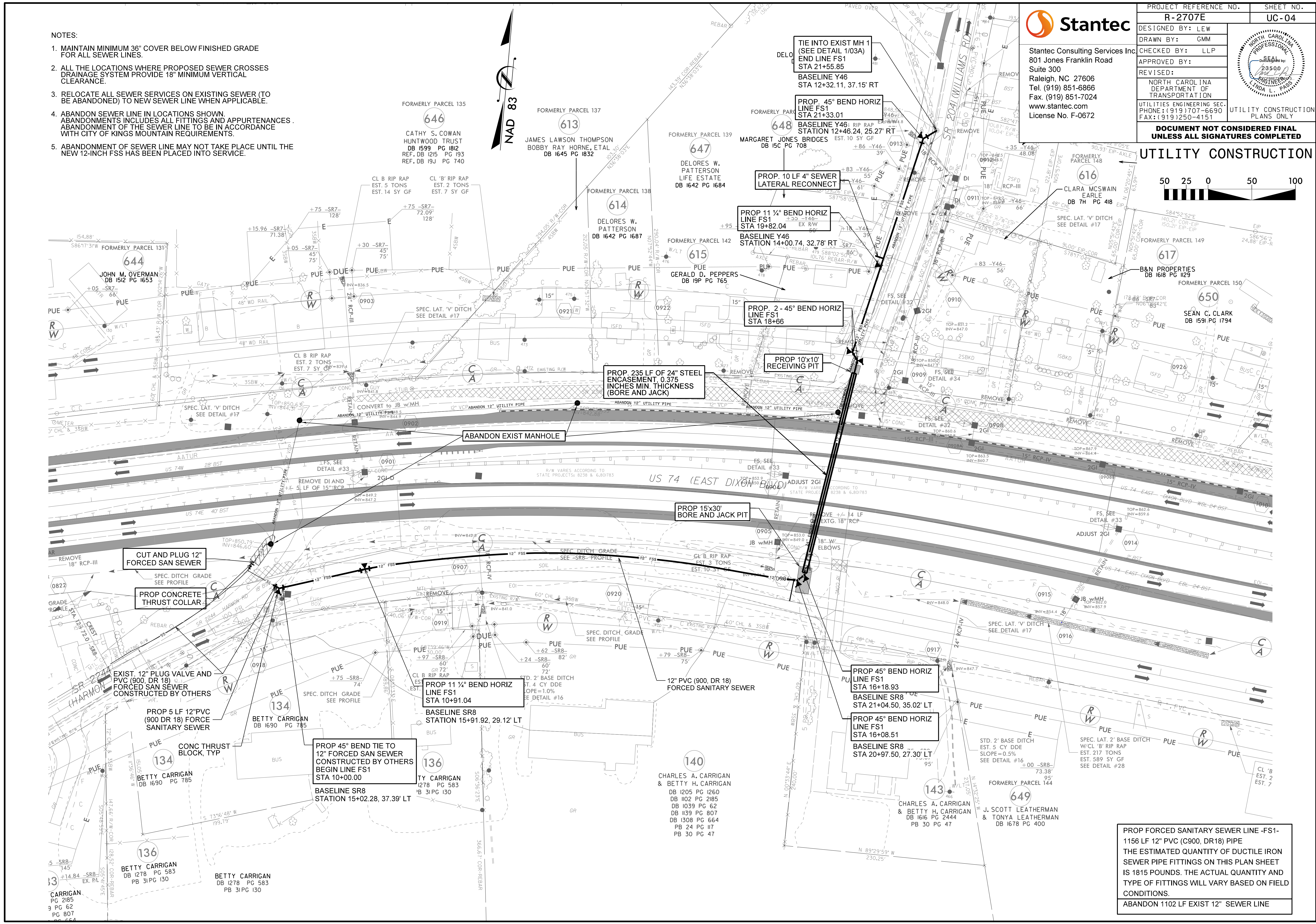


Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27606  
Tel. (919) 851-6866  
Fax. (919) 851-7024  
www.stantec.com  
License No. F-0672

PROJECT REFERENCE NO. <b>R-2707E</b>	SHEET NO. <b>UC-04</b>
DESIGNED BY: LEW	
DRAWN BY: GMM	
CHECKED BY: LLP	
APPROVED BY:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITY CONSTRUCTION PLANS ONLY
REVISED:	

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**UTILITY CONSTRUCTION**



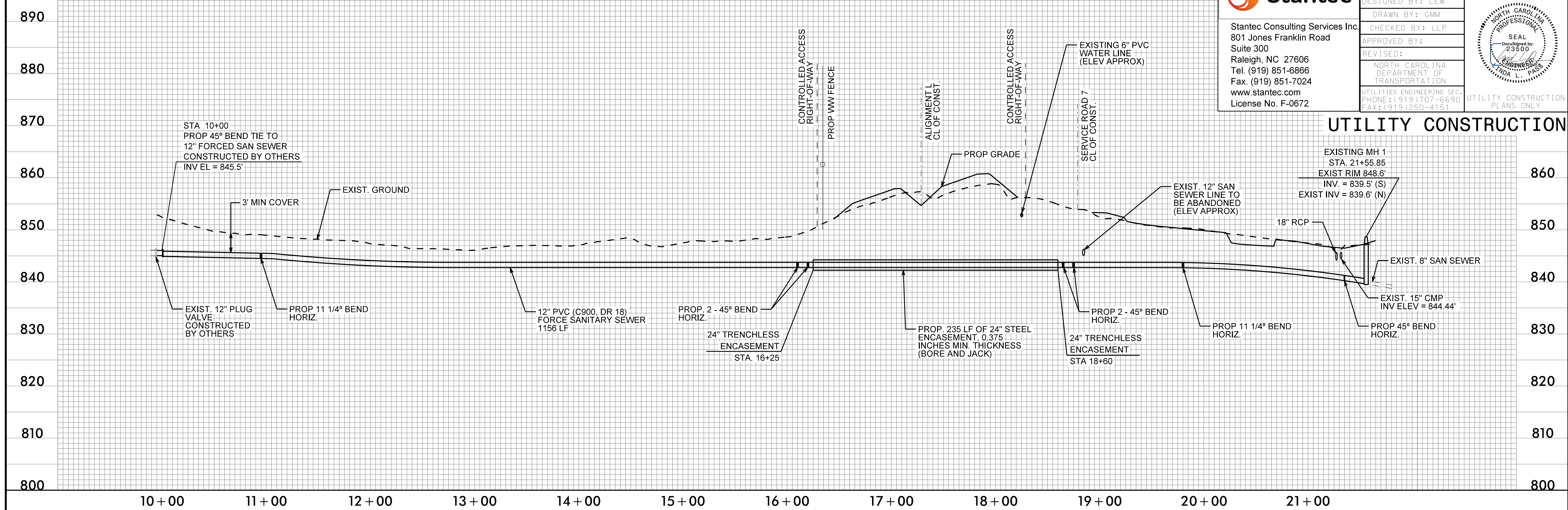
PROP FORCED SANITARY SEWER LINE -FS1- 1156 LF 12" PVC (C900, DR18) PIPE  
THE ESTIMATED QUANTITY OF DUCTILE IRON SEWER PIPE FITTINGS ON THIS PLAN SHEET IS 1815 POUNDS. THE ACTUAL QUANTITY AND TYPE OF FITTINGS WILL VARY BASED ON FIELD CONDITIONS.  
ABANDON 1102 LF EXIST 12" SEWER LINE

# 12" FORCED SANITARY SEWER LINE -FS1-



Stantec Consulting Services Inc.  
 801 Jones Franklin Road  
 Suite 300  
 Raleigh, NC 27606  
 Tel. (919) 851-6866  
 Fax. (919) 851-7024  
 www.stantec.com  
 License No. F-0672

PROJECT REFERENCE NO. <b>R-2707E</b>	SHEET NO. <b>UC-05</b>
DESIGNED BY: LEW	
DRAWN BY: GMM	
CHECKED BY: LLP	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY



## UTILITY CONSTRUCTION

09\_08/2019

**TIP PROJECT: R-2707E**

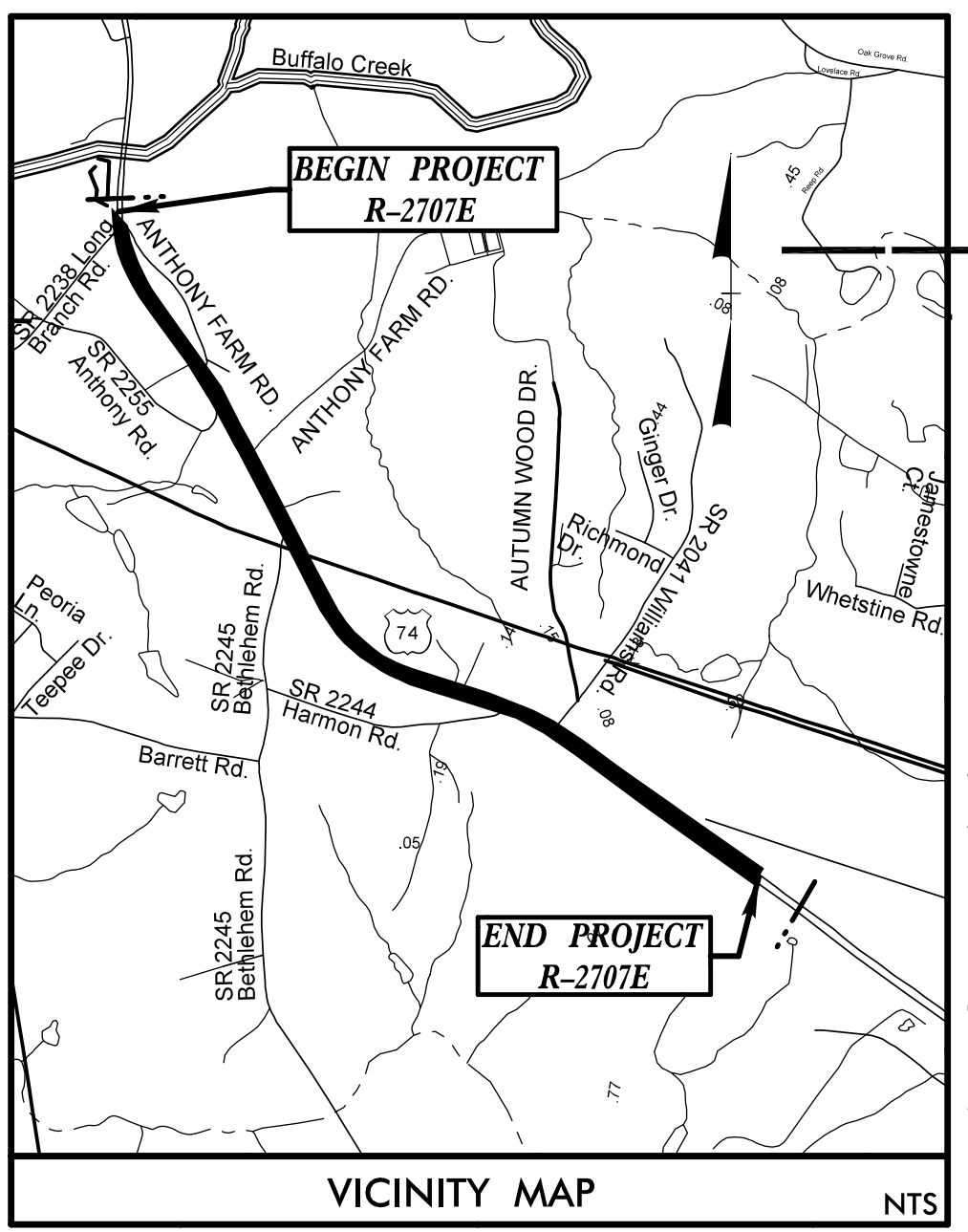
T.I.P. NO.	SHEET NO.
R-2707E	UC-1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS  
CLEVELAND COUNTY**

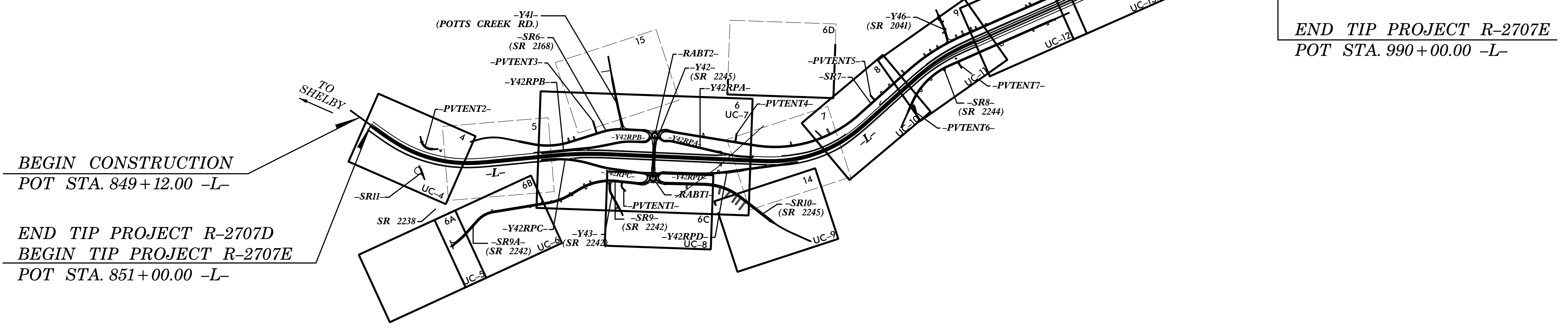
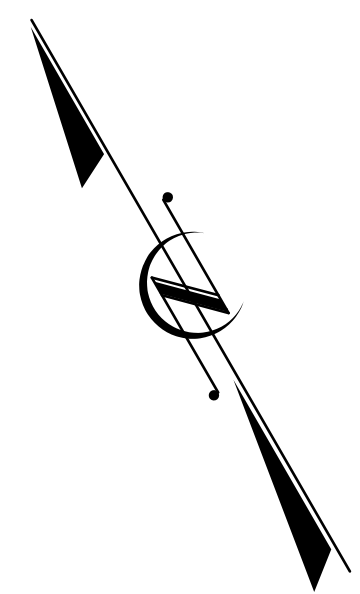
LOCATION: US 74 FROM EXISTING US 74 WEST OF SR 2238  
(LONG BRANCH RD) TO WEST OF SR 1001

TYPE OF WORK: WATER LINE RELOCATION



75% APPROVED PLANS

VICINITY MAP NTS

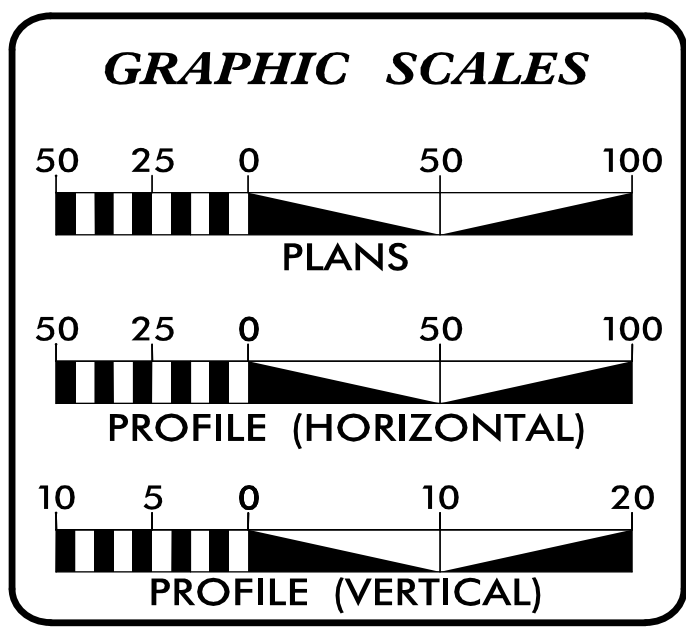


BEGIN CONSTRUCTION  
POT STA. 849+12.00 -L-

END TIP PROJECT R-2707D  
BEGIN TIP PROJECT R-2707E  
POT STA. 851+00.00 -L-

END TIP PROJECT R-2707E  
POT STA. 990+00.00 -L-

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SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY NOTES
UC-3	DETAILS
UC-3A TO UC-3B	UTILITY CONSTRUCTION SHEETS
UC-4 THRU UC-13	UTILITY CONSTRUCTION SHEETS
UC-14 THRU UC-18	PROFILE SHEETS

**WATER AND SEWER OWNERS ON PROJECT**

(A) WATER - CLEVELAND COUNTY WATER

PREPARED IN THE OFFICE OF

**TGS ENGINEERS**  
804-C N. LAFAYETTE ST  
SHELBY, NC 28150  
PH (704) 476-0003  
CORP. LICENSE NO.: C-0275

B. CHAD HOUSER, PE, PLS UTILITY DESIGN ENGINEER

SEAL

3/14/2023

**DIVISION OF HIGHWAYS  
DIVISION 12**  
1710 E. MARION ST  
SHELBY NC 28151  
PHONE (704) 552-4200

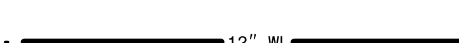





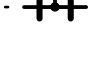

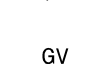


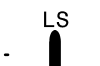












CHAD DREWERY DIVISION UTILITY ENGINEER  
WARREN ANDERSON DIVISION UTILITY COORDINATOR  
LARRY CARPENTER DIVISION CONSTR. ENGINEER

3/14/2023  
X:\NCDOT\IR-2707E\Utilities\Engineering\UC\Proj\R2707E\_U1\_tsh\_UC1.psh.dgn  
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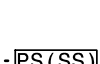
# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITIES PLAN SHEET SYMBOLS





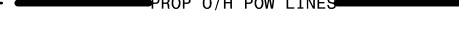
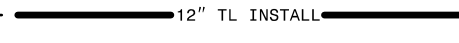
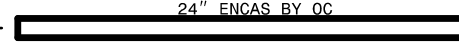
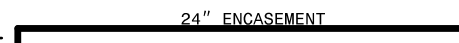
### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown) .....	
11¼ Degree Bend .....	
22½ Degree Bend .....	
45 Degree Bend .....	
90 Degree Bend .....	
Plug .....	
Tee .....	
Cross .....	
Reducer .....	
Gate Valve .....	
Butterfly Valve .....	
Tapping Valve .....	
Line Stop .....	
Line Stop with Bypass .....	
Blow Off .....	
Fire Hydrant .....	
Relocate Fire Hydrant .....	
Remove Fire Hydrant .....	REM FH
Water Meter .....	
Relocate Water Meter .....	
Remove Water Meter .....	REM WM
Water Pump Station .....	
RPZ Backflow Preventer .....	
DCV Backflow Preventer .....	
Relocate RPZ Backflow Preventer .....	
Relocate DCV Backflow Preventer .....	

### PROPOSED SEWER SYMBOLS


Gravity Sewer Line (Sized as Shown) .....	
Force Main Sewer Line (Sized as Shown) .....	
Manhole (Sized per Note) .....	
Sewer Pump Station .....	

### PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole .....	
Telephone Pole .....	
Joint Use Pole .....	
Telephone Pedestal .....	
Utility Line by Others (Type as Shown) .....	
Trenchless Installation .....	
Encasement by Open Cut .....	
Encasement .....	

Thrust Block .....	
Air Release Valve .....	
Utility Vault .....	
Concrete Pier .....	
Steel Pier .....	
Plan Note .....	
Pay Item Note .....	

### EXISTING UTILITIES SYMBOLS

Power Pole .....		*Underground Power Line .....	
Telephone Pole .....		*Underground Telephone Cable .....	
Joint Use Pole .....		*Underground Telephone Conduit .....	
Utility Pole .....		*Underground Fiber Optics Telephone Cable .....	
Utility Pole with Base .....		*Underground TV Cable .....	
H-Frame Pole .....		*Underground Fiber Optics TV Cable .....	
Power Transmission Line Tower .....		*Underground Gas Pipeline .....	
Water Manhole .....		Aboveground Gas Pipeline .....	
Power Manhole .....		*Underground Water Line .....	
Telephone Manhole .....		Aboveground Water Line .....	
Sanitary Sewer Manhole .....		*Underground Gravity Sanitary Sewer Line .....	
Hand Hole for Cable .....		Aboveground Gravity Sanitary Sewer Line .....	
Power Transformer .....		*Underground SS Forced Main Line .....	
Telephone Pedestal .....		Underground Unknown Utility Line .....	
CATV Pedestal .....		SUE Test Hole .....	
Gas Valve .....		Water Meter .....	
Gas Meter .....		Water Valve .....	
Located Miscellaneous Utility Object .....		Fire Hydrant .....	
Abandoned According to Utility Records .....	AATUR	Sanitary Sewer Cleanout .....	
End of Information .....	E.O.I.		

\*For Existing Utilities  
 Utility Line Drawn from Record .....

Designated Utility Line .....

(Type as Shown)

5/14/99

3/14/2023 Engineering\UC\Proj\N-R-2707E\_Ut\_sym\_UC2\_psh.dgn



# UTILITY CONSTRUCTION

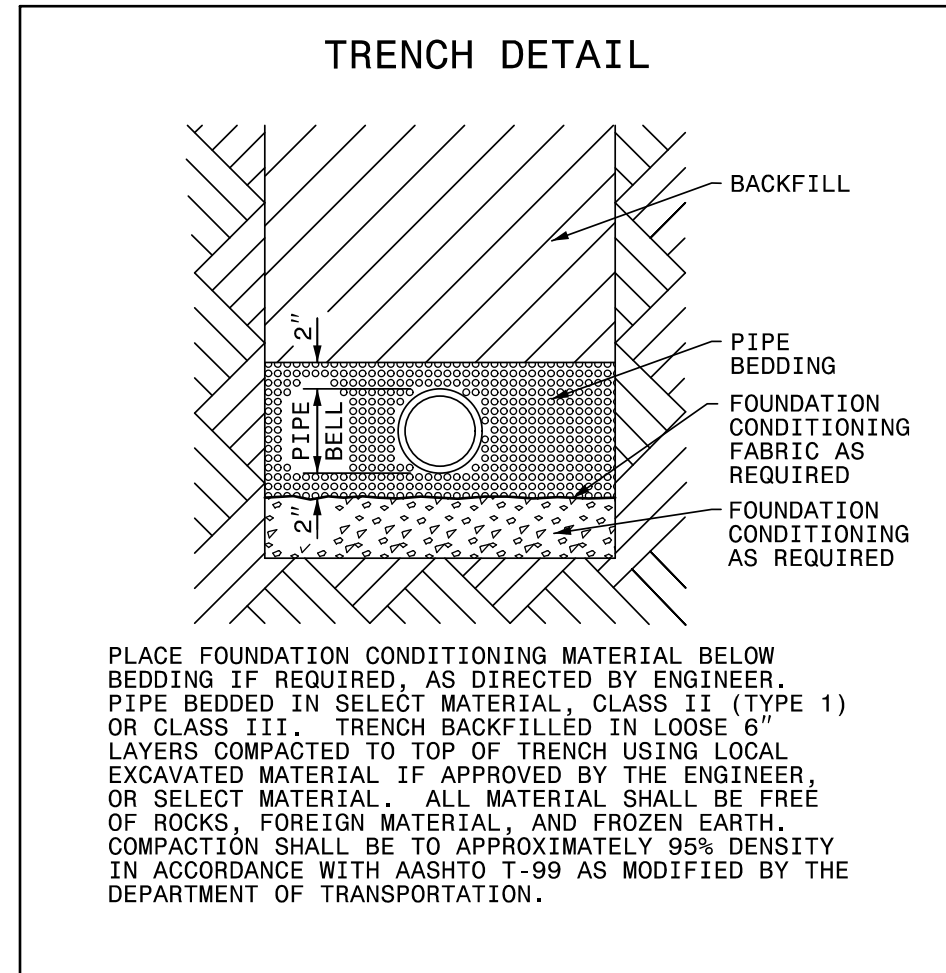
PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-3
DESIGNED BY: BCH	
DRAWN BY: KSA	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DIVISION 12 PHONE: (980)552-4200	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION  
 DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2018.
2. THE EXISTING UTILITIES BELONG TO CLEVELAND COUNTY WATER .
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY, DIVISION OF WATER RESOURCES, PUBLIC WATER SUPPLY SECTION. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT QUALITY, DIVISION OF WATER RESOURCES, WATER QUALITY SECTION. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPORTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.




## PROJECT SPECIFIC NOTES:

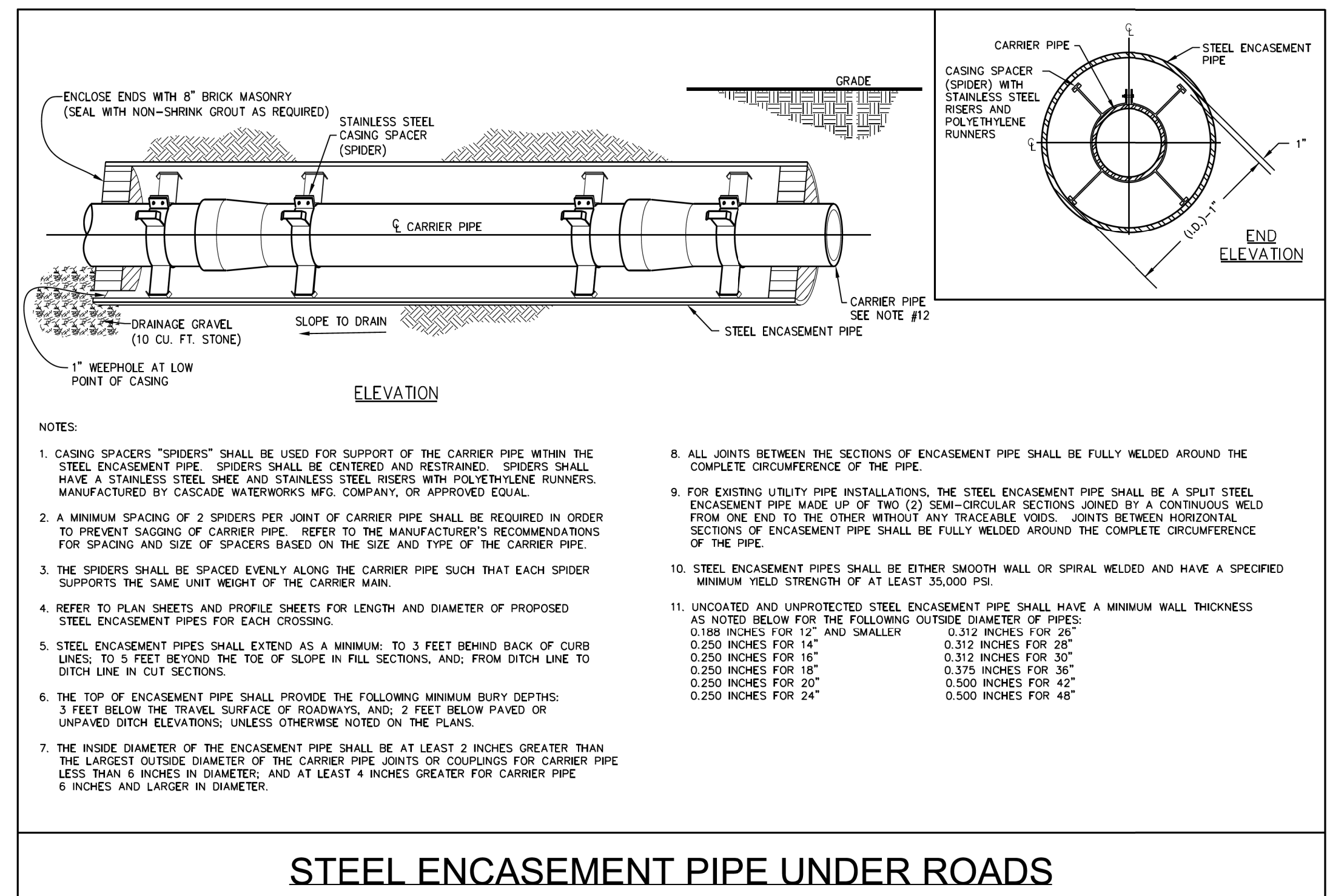
1. ALL PROPOSED WATER LINE 4 TO 12 INCHES IN DIAMETER, SHALL BE DUCTILE IRON PIPE - PRESSURE CLASS 350 AND UTILIZE FLEXIBLE PUSH-ON RESTRAINED JOINTS.
2. ALL PROPOSED STEEL ENCASEMENTS SHALL BE SMOOTH WALL WITH A MINIMUM THICKNESS OF 0.188 INCHES FOR 12" AND SMALLER OR 0.25 INCHES FOR LARGER THAN 12".
3. ALL WATER LINE FITTINGS 4 TO 12 INCHES IN DIAMETER, SHALL BE PRESSURE CLASS 350 DUCTILE IRON RESTRAINED JOINT IN ACCORDANCE WITH ANSI A21.10 / AWWA C110 AND ANSI A21.4 / AWWA C104.
4. WATER LINE UTILIZING RESTRAINED JOINTS SHALL BE TYTON JOINT, HP LOK, AMERICAN "FAST GRIP", US PIPE "FIELD-LOK" OR APPROVED EQUAL.
5. ALL WATERLINE SHALL HAVE COATED TRACER WIRE NO SMALLER THAN 14 AWG SOLID COPPER.
6. ALL VALVES - 2" THROUGH 12" SHALL BE RESILIENT WEDGE GATE, CAST IRON BODY, CONFORMING TO AWWA C509, LATEST VERSION. SEALING MECHANISM SHALL PROVIDE ZERO LEAKAGE AT THE WATER WORKING PRESSURE AGAINST THE LINE FLOW FROM EITHER DIRECTION AND BE DESIGNED SUCH THAT NO EXPOSED METAL SEAMS, EDGES, SCREWS, ETC. ARE WITHIN THE WATERWAY IN THE CLOSED POSITION. THE GATE SHALL NOT BE WEDGED INTO A POCKET NOR SLIDE ACROSS THE SEATING SURFACE TO OBTAIN TIGHT CLOSURE. ALL INTERNAL AND EXTERNAL FERROUS SURFACES OF THE VALVE, INCLUDING THE INTERIOR OF THE GATE, SHALL BE COATED WITH A PROTECTIVE COATING CONFORMING TO AWWA C550, LATEST VERSION. COATING SHALL BE APPLIED TO CASTINGS PRIOR TO ASSEMBLY TO ASSURE ALL EXPOSED AREAS WILL BE COVERED. VALVES SHALL BE RATED AT 200 PSI WORKING PRESSURE. UNLESS OTHERWISE NOTED, UNDERGROUND VALVES SHALL HAVE AN OPERATING NUT AND EXPOSED VALVES SHALL HAVE A HAND WHEEL OPERATOR. OPERATING NUT SHALL BE 2"X2", OPEN LEFT.
7. EACH VALVE BURIED IN THE GROUND SHALL BE PROVIDED WITH AN APPROVED TYPE OF VALVE BOX AND COVER. THE BOXES SHALL BE ADJUSTABLE SCREW TYPE 24-INCH OR 36-INCH.
8. ALL VALVE BOXES SHALL BE CONSTRUCTED OF CAST IRON THAT COMPLIES WITH THE REQUIREMENTS OF ASTM A48. VALVE BOXES SHALL BE THE APPROPRIATE RANGE OF ADJUSTMENT FOR THE SITE AND CONTRACTOR SHOULD MINIMIZE THE USE OF EXTENSIONS.

9. PROVIDE THRUST RESTRAINT ON THE EXISTING WATER LINE WHERE TIE-INS ARE MADE AS NECESSARY.
10. CONTRACTOR SHALL NOT OPERATE ANY VALVES ON THE EXISTING UTILITY SYSTEMS. CONTRACTOR SHALL CONTACT THE UTILITY OWNER TO CONDUCT STRATEGIC OPERATION OF VALVES FOR SERVICE INTERRUPTION IN ORDER TO PERFORM SPECIFIC WORK.
11. ANY BENDS OF PVC WATER PIPE NOT SPECIFICALLY CALLED OUT WITH A 90, 45, 22.5, OR 11.25 DEGREE BEND FITTING, SHALL BE CONSTRUCTED BY A RADIAL BEND OF THE PIPE AS NOTED ON THE PLANS OR IN ACCORDANCE WITH PIPE MANUFACTURER'S SPECIFICATIONS (WHICHEVER IS MORE STRINGENT) - OR A COMBINATION OF BEND FITTINGS AND A RADIAL BEND OF THE PIPE. DEFLECTION OF THE PIPE JOINTS ON PVC PIPE MATERIAL IS NOT AN ACCEPTABLE METHOD OF PIPE BENDING.
12. ALL MATERIALS, EQUIPMENT, LABOR, AND WORKSMANSHIP SHALL BE IN ACCORDANCE WITH NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
13. UTILITY OWNER MUST BE PRESENT FOR ANY TESTING OR CONNECTIONS TO THE EXISTING SYSTEM INCLUDING BUT NOT LIMITED TO ALL TAPS AND TEMPORARY CONSTRUCTION CONNECTIONS. A NOTICE OF 72 HOURS MUST BE PROVIDED.

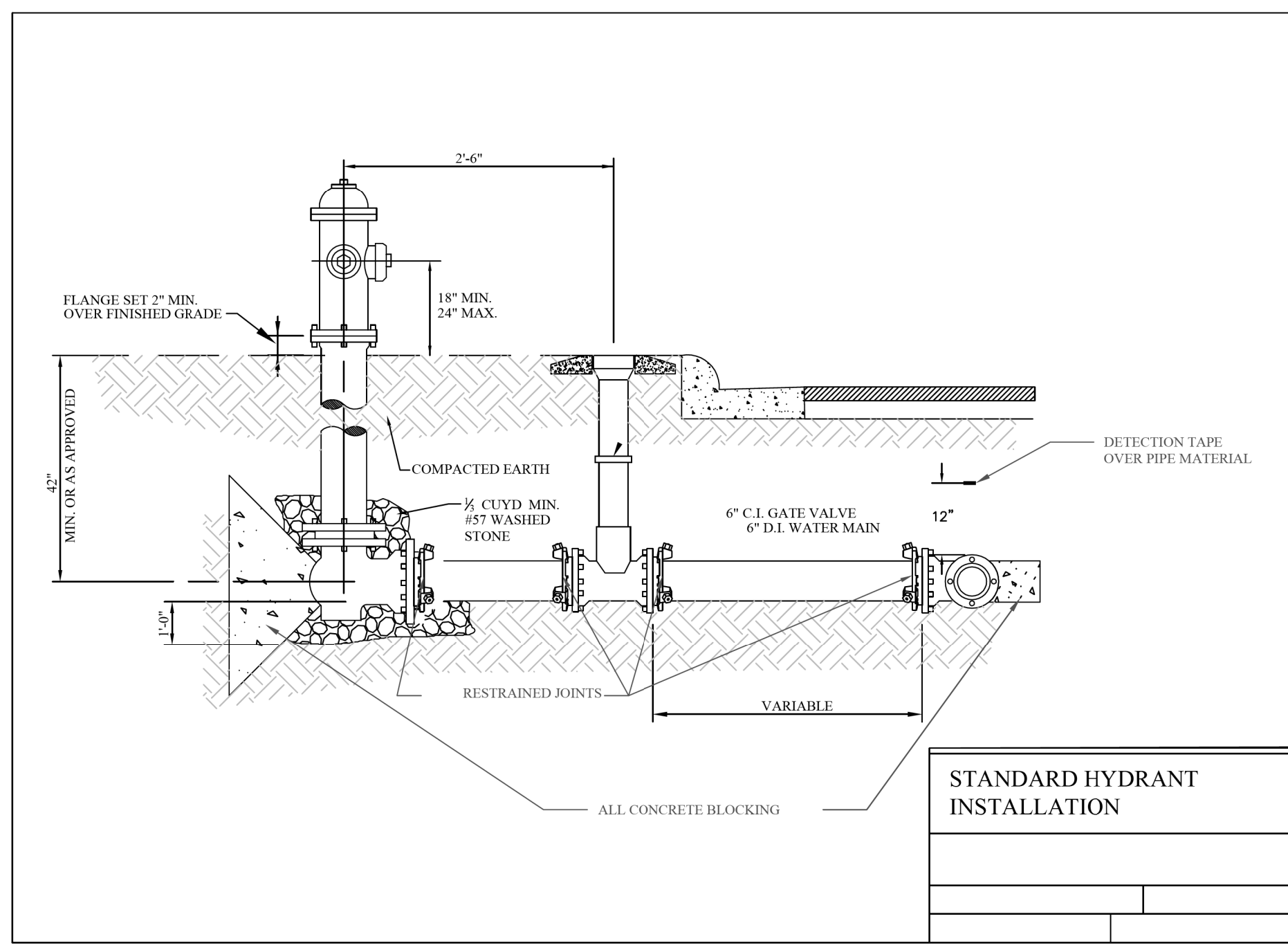
# WATER TYPICAL DETAILS

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-3A
DESIGNED BY: BCH	
DRAWN BY: KSA	
CHECKED BY:	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
DIVISION 12 PHONE: (980)552-4200	
UTILITY CONSTRUCTION PLANS ONLY	

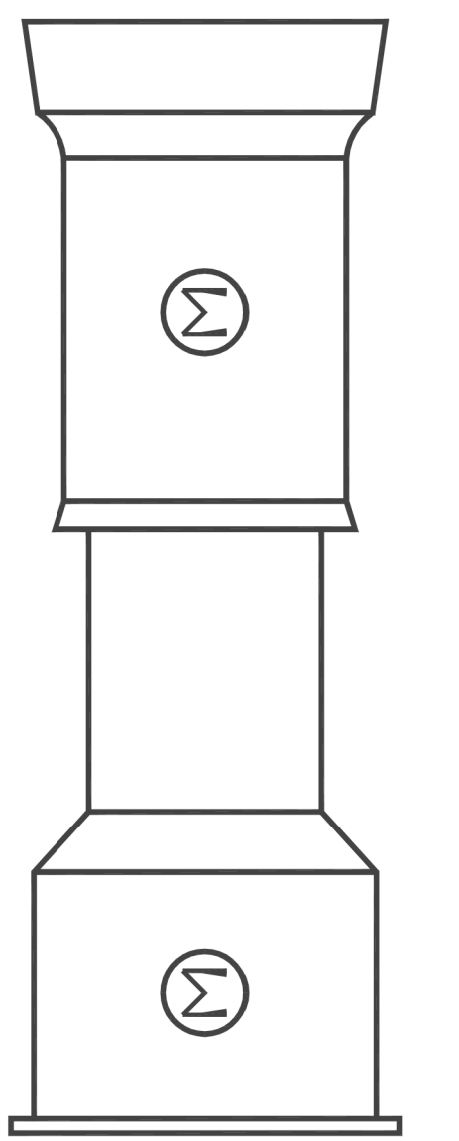
UTILITY CONSTRUCTION  
DOCUMENT NOT CONSIDERED FINAL  
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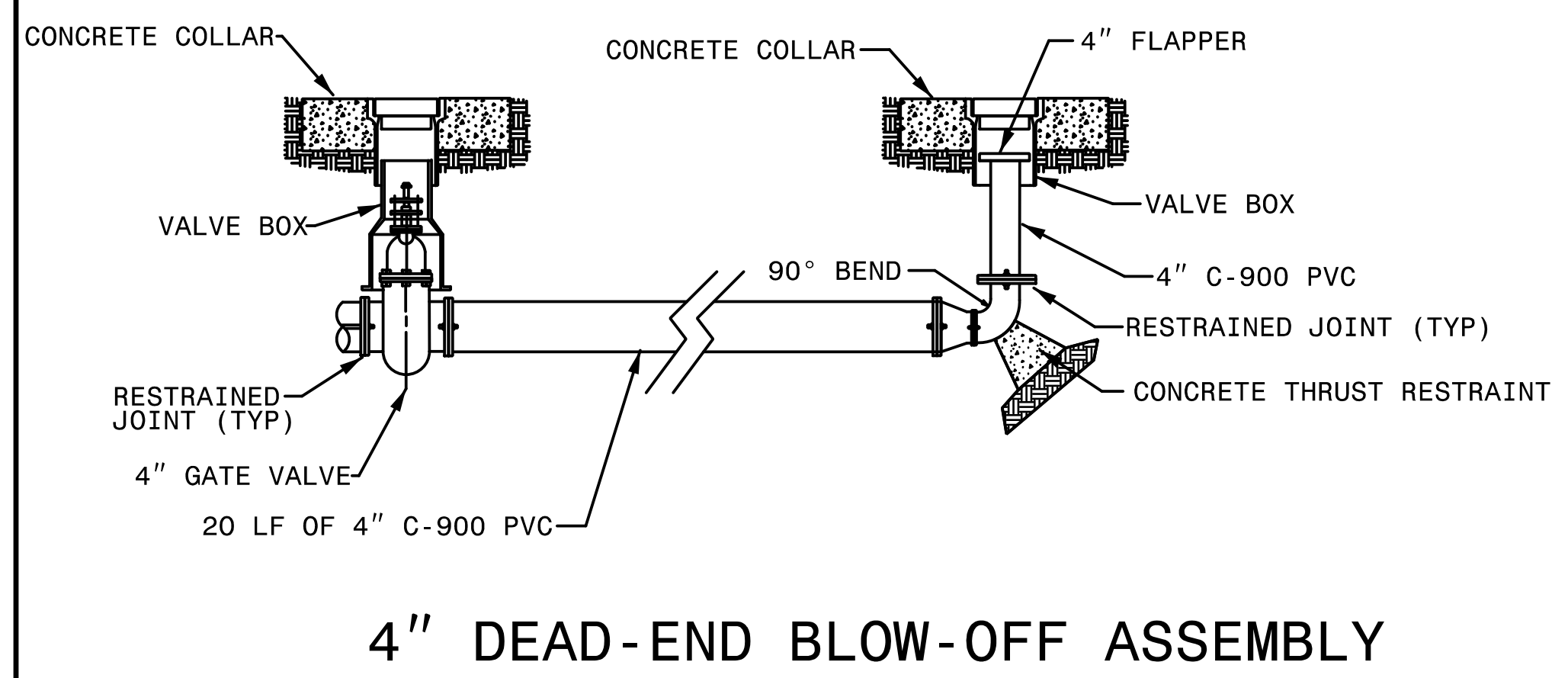
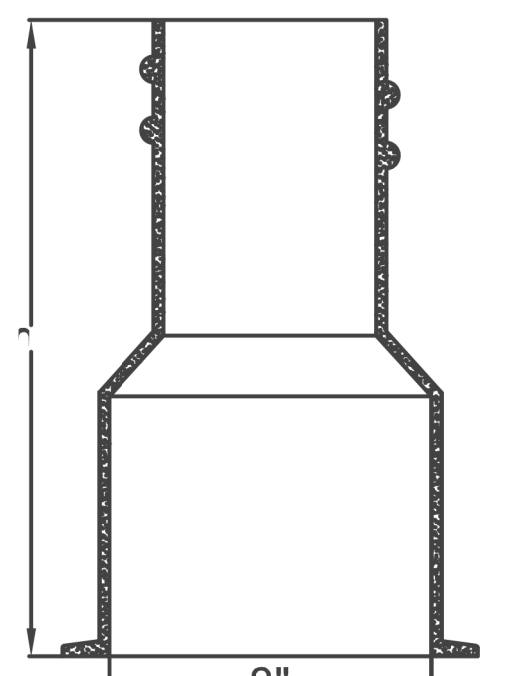
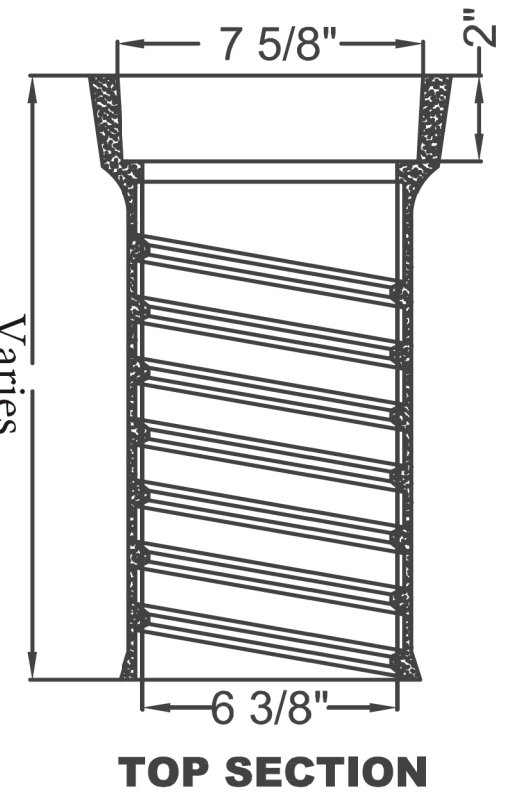
**STEEL ENCASEMENT PIPE UNDER ROADS**



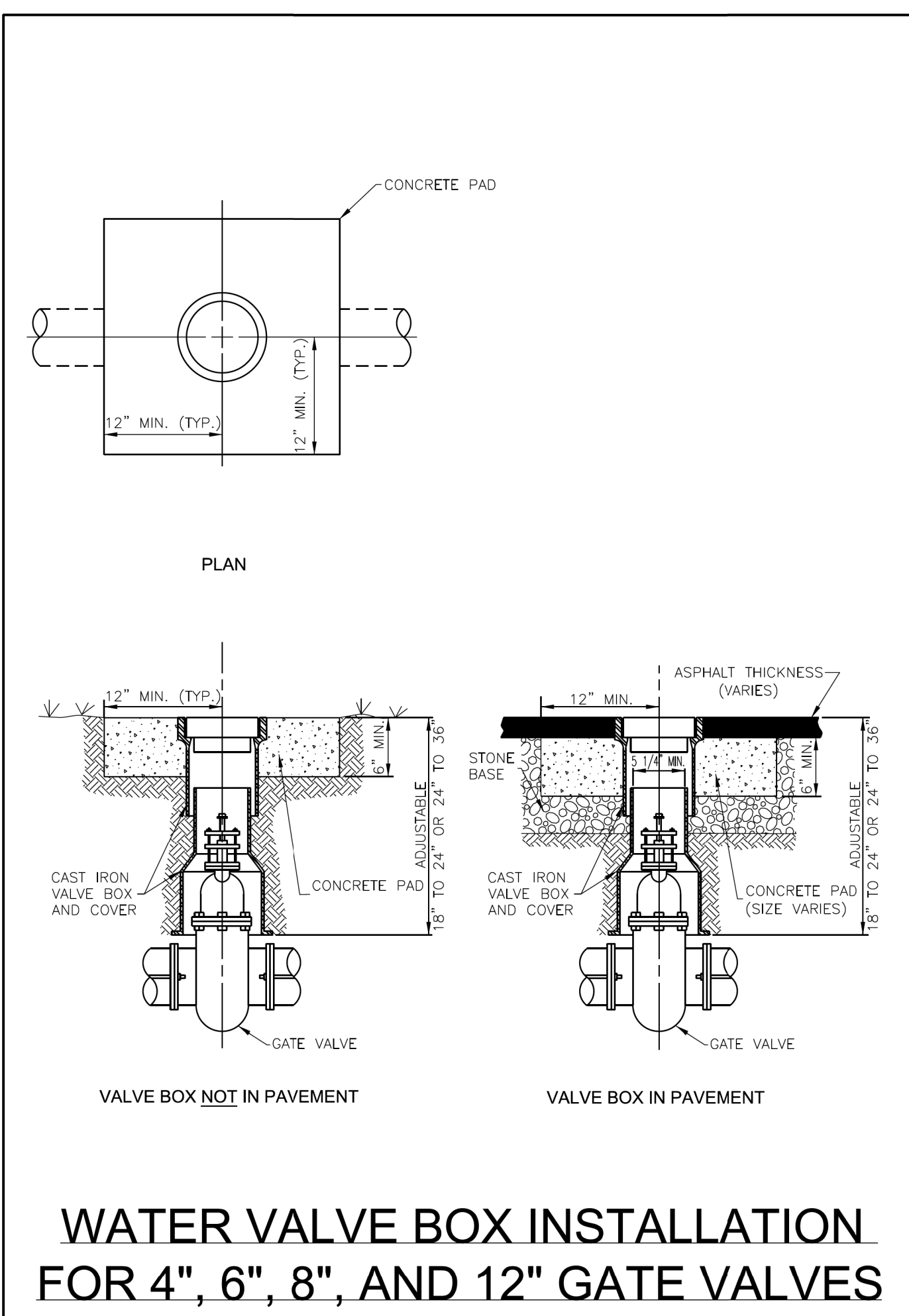
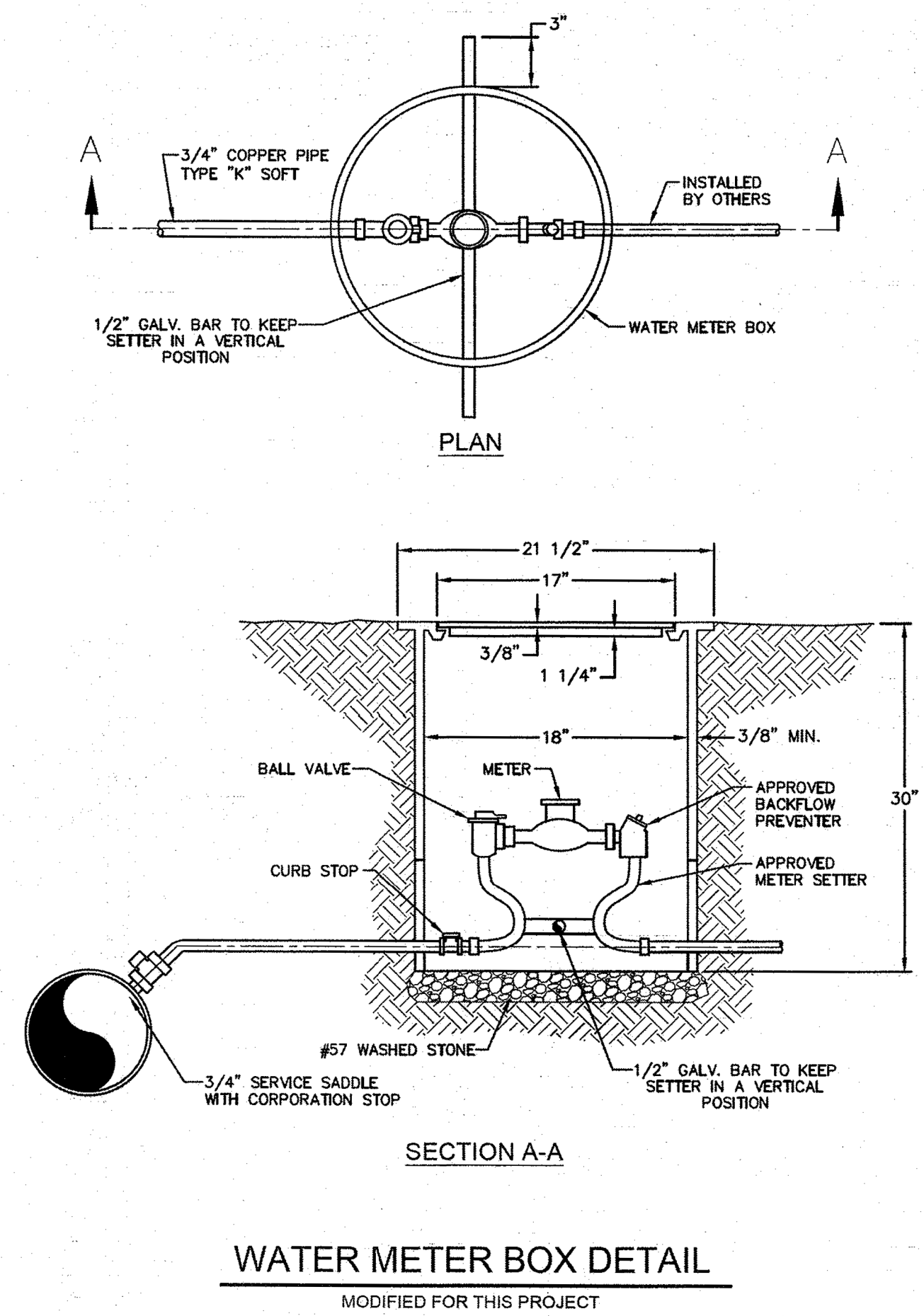
**SCREW TYPE**



**VALVE BOX COMPLETE**

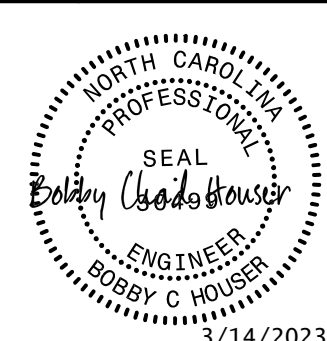


**4" DEAD-END BLOW-OFF ASSEMBLY**

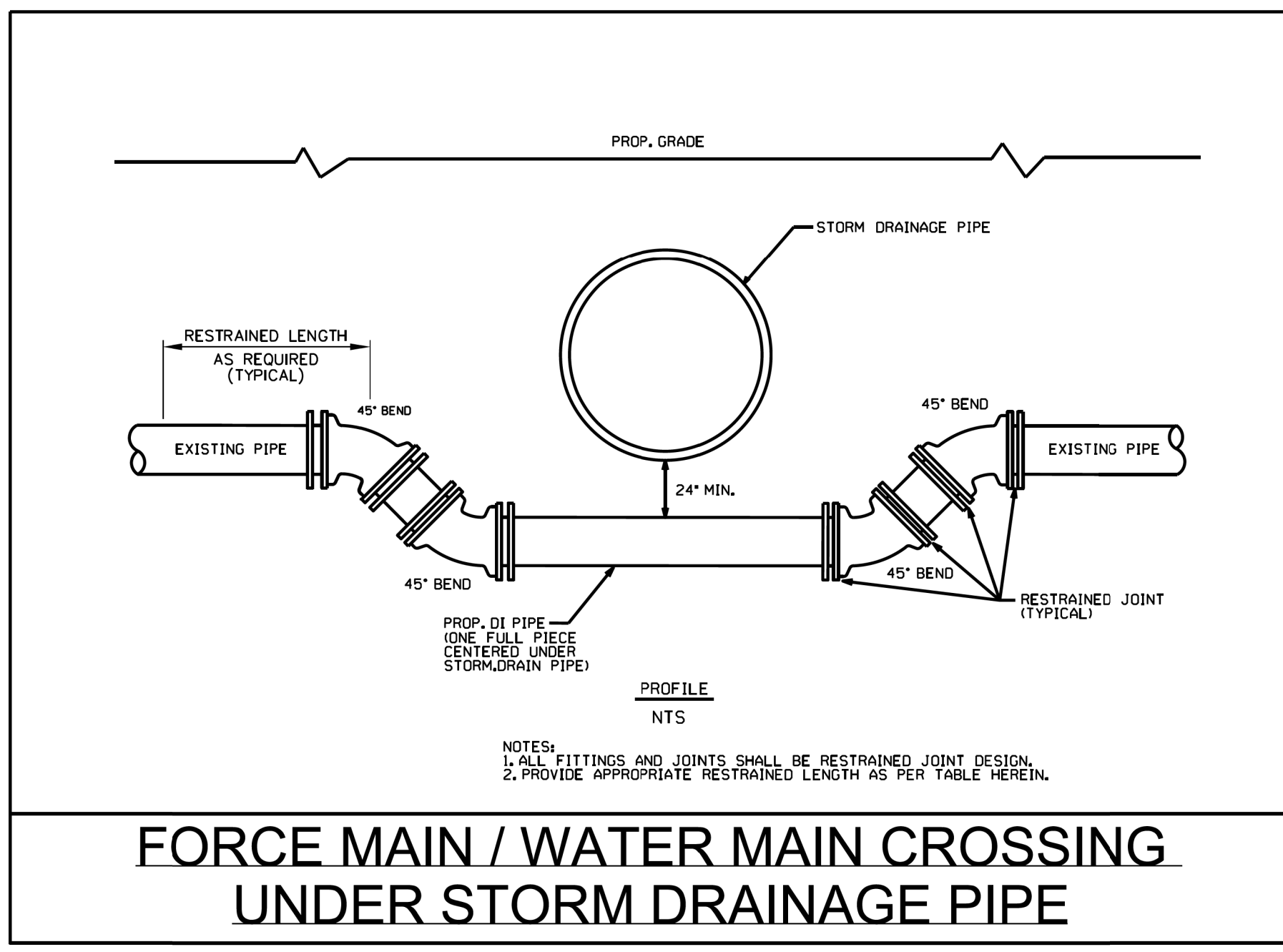
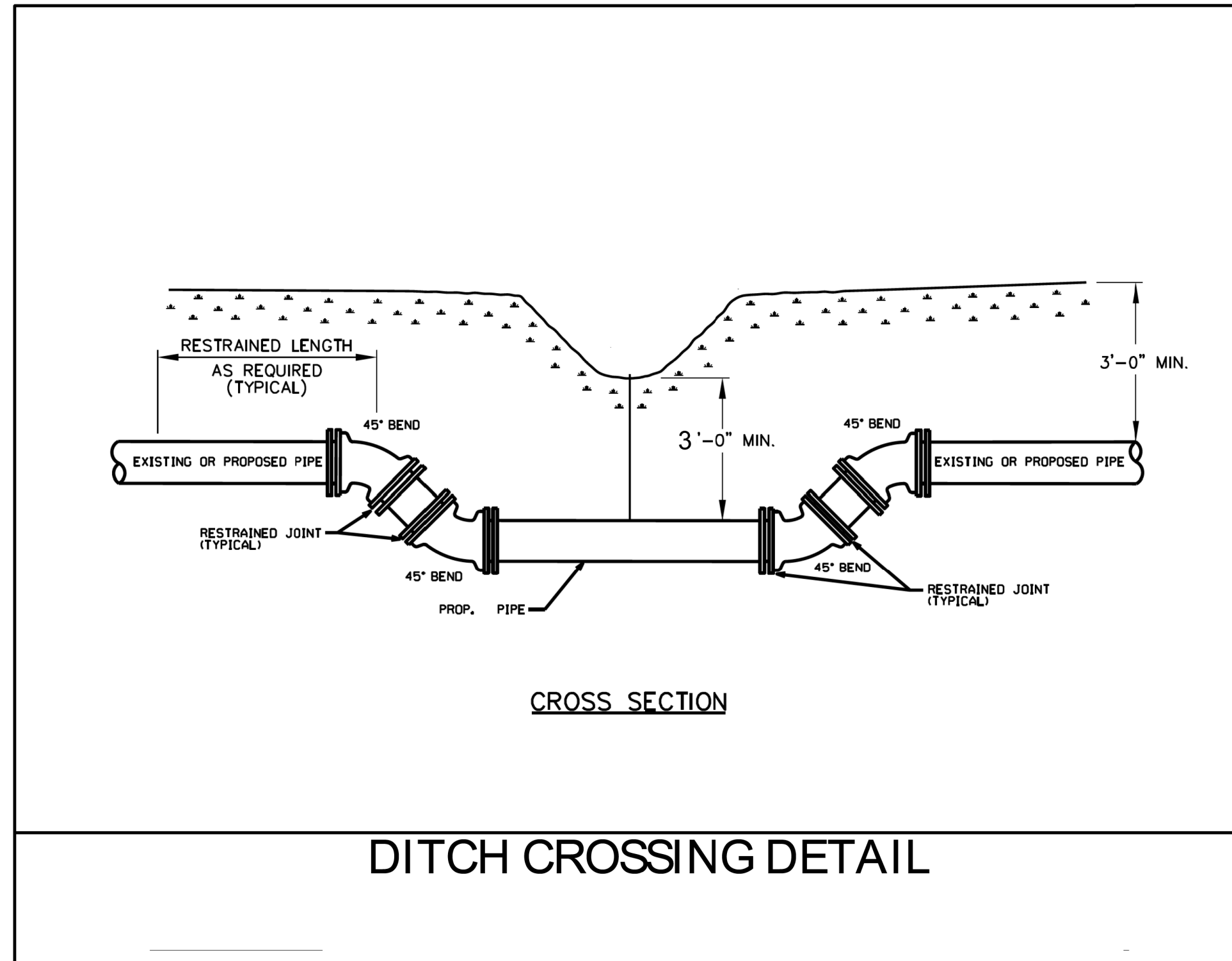


**WATER VALVE BOX INSTALLATION FOR 4", 6", 8", AND 12" GATE VALVES**

# WATER TYPICAL DETAILS

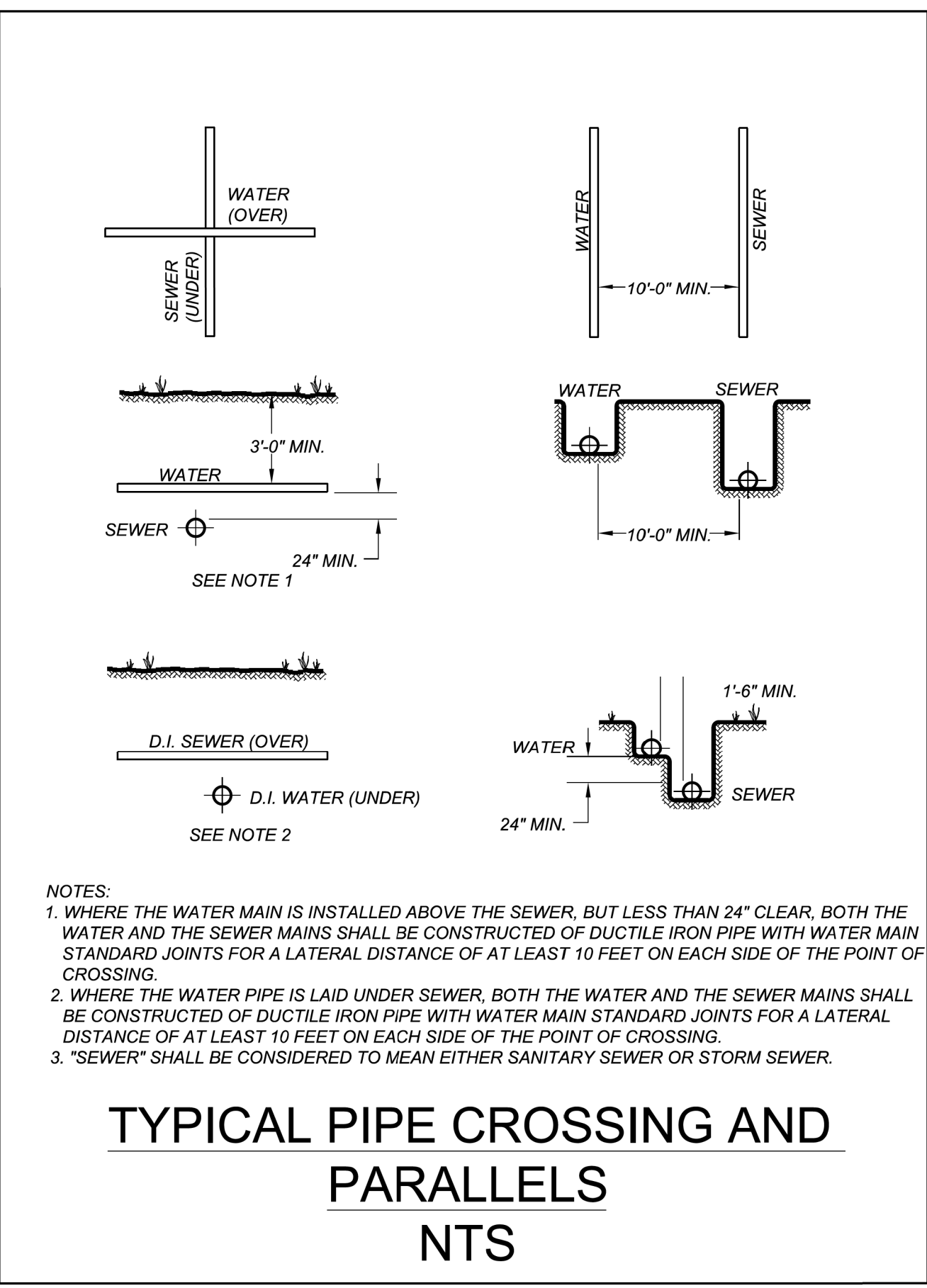
PROJECT REFERENCE NO. <b>R-2707E</b>	SHEET NO. <b>UC-3B</b>
DESIGNED BY: <b>BCH</b>	
DRAWN BY: <b>KSA</b>	
CHECKED BY:	
APPROVED BY:	
REVISED:	
	
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DIVISION 12 PHONE: (980)552-4200	
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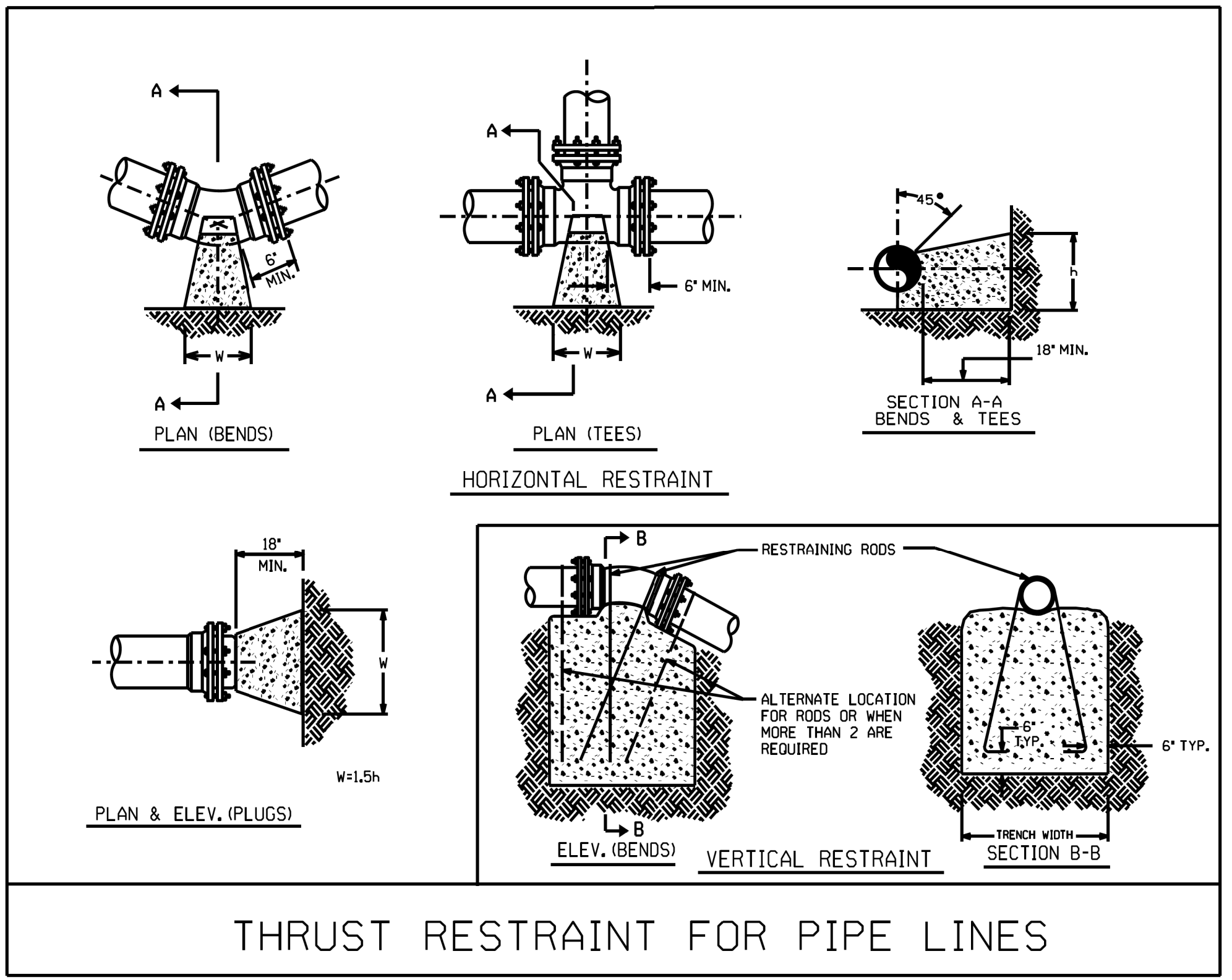


**RESTRAINED JOINT DESIGN TABLE FOR DUCTILE IRON PIPE**

FITTING	REQUIRED RESTRAINED LENGTH (FT) OF BARE D.I. PIPE BY DEPTH OF COVER							
	3 FT	4 FT	5 FT	6 FT	7 FT	8 FT	9 FT	10 FT
<b>HORIZONTAL BENDS</b>								
6 INCH DIA - 11.25 DEG	3	2	2	2	2	1	1	1
6 INCH DIA - 22.5 DEG	5	4	4	3	3	3	2	2
6 INCH DIA - 45 DEG	11	9	8	7	7	6	5	5
6 INCH DIA - 90 DEG	26	22	19	17	16	14	13	12
8 INCH DIA - 11.25 DEG	3	3	2	2	2	2	2	2
8 INCH DIA - 22.5 DEG	7	6	5	5	4	4	3	3
8 INCH DIA - 45 DEG	14	12	10	9	8	8	7	7
8 INCH DIA - 90 DEG	33	29	25	23	20	19	17	16
12 INCH DIA - 11.25 DEG	5	4	4	3	3	3	2	2
12 INCH DIA - 22.5 DEG	9	8	7	6	6	5	5	5
12 INCH DIA - 45 DEG	20	17	15	13	12	11	10	10
12 INCH DIA - 90 DEG	47	41	36	33	29	27	25	23
16 INCH DIA - 11.25 DEG	6	5	5	4	4	3	3	3
16 INCH DIA - 22.5 DEG	12	11	9	8	8	7	6	6
16 INCH DIA - 45 DEG	25	22	19	17	16	14	13	12
20 INCH DIA - 11.25 DEG	7	6	6	5	5	4	4	4
20 INCH DIA - 22.5 DEG	15	13	11	10	9	9	8	7
20 INCH DIA - 45 DEG	31	27	24	21	19	18	16	15
20 INCH DIA - 90 DEG	74	65	57	52	47	43	40	37
<b>VERTICAL BENDS - DOWN</b>								
6 INCH DIA - 11.25 DEG	7	6	6	5	4	4	4	3
6 INCH DIA - 22.5 DEG	15	13	11	10	9	8	8	7
6 INCH DIA - 45 DEG	31	27	23	21	19	17	16	15
8 INCH DIA - 11.25 DEG	10	8	7	6	6	5	5	5
8 INCH DIA - 22.5 DEG	19	17	15	13	12	11	10	9
8 INCH DIA - 45 DEG	40	35	30	27	25	22	21	19
12 INCH DIA - 11.25 DEG	14	12	10	9	8	8	7	7
12 INCH DIA - 22.5 DEG	28	24	21	19	17	16	14	13
12 INCH DIA - 45 DEG	57	50	44	39	35	32	30	28
16 INCH DIA - 11.25 DEG	18	15	14	12	11	10	9	9
16 INCH DIA - 22.5 DEG	36	31	27	25	22	20	19	17
16 INCH DIA - 45 DEG	74	65	57	51	46	42	39	36
20 INCH DIA - 11.25 DEG	22	19	17	15	14	12	11	11
20 INCH DIA - 22.5 DEG	44	38	34	30	27	25	23	21
20 INCH DIA - 45 DEG	91	79	70	63	57	52	48	44
<b>VERTICAL BENDS - UP</b>								
6 INCH DIA - 11.25 DEG	3	2	2	2	2	1	1	1
6 INCH DIA - 22.5 DEG	5	4	3	3	3	3	2	2
6 INCH DIA - 45 DEG	11	9	8	7	7	6	5	5
8 INCH DIA - 11.25 DEG	3	3	2	2	2	2	2	2
8 INCH DIA - 22.5 DEG	7	6	5	5	4	4	3	3
8 INCH DIA - 45 DEG	14	12	10	9	8	8	7	7
12 INCH DIA - 11.25 DEG	5	4	4	3	3	3	2	2
12 INCH DIA - 22.5 DEG	9	8	7	6	6	5	5	5
12 INCH DIA - 45 DEG	20	17	15	13	12	11	10	10
16 INCH DIA - 11.25 DEG	6	5	5	4	4	3	3	3
16 INCH DIA - 22.5 DEG	12	11	9	8	8	7	6	6
16 INCH DIA - 45 DEG	25	22	19	17	16	14	13	12
20 INCH DIA - 11.25 DEG	7	6	6	5	5	4	4	4
20 INCH DIA - 22.5 DEG	15	13	11	10	9	9	8	7
20 INCH DIA - 45 DEG	31	27	24	21	19	18	16	15
<b>DEAD ENDS / VALVES</b>								
6 INCH DIA	50	45	41	38	35	33	31	29
8 INCH DIA	65	59	54	50	46	43	40	38
10 INCH DIA	80	72	66	61	56	52	49	46
12 INCH DIA	94	85	78	72	66	62	58	54
16 INCH DIA	123	111	102	94	87	81	76	71
20 INCH DIA	151	137	125	115	107	100	93	88
<b>REDUCERS</b>								
3 FT	3	4	5	6	7	8	9	10
12 INCH X 8 INCH	50	45	41	38	35	33	31	29
<b>TEES</b>								
8" RUN X 8" BRANCH : RL = 1 FT	64	58	53	48	44	41	38	36
8" RUN X 8" BRANCH : RL = 5 FT	59	52	47	42	39	35	32	30
12" RUN X 12" BRANCH : RL = 1 FT	84	77	70	65	60	56	53	51
12" RUN X 12" BRANCH : RL = 5 FT	88	79	71	65	59	54	50	47

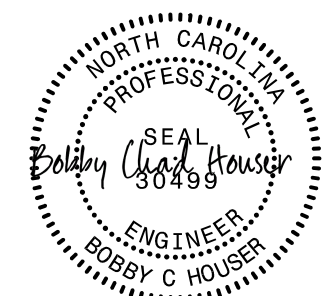


**NOTES:**  
1. WHERE THE WATER MAIN IS INSTALLED ABOVE THE SEWER, BUT LESS THAN 24" CLEAR, BOTH THE WATER AND THE SEWER MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH WATER MAIN STANDARD JOINTS FOR A LATERAL DISTANCE OF AT LEAST 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.  
2. WHERE THE WATER PIPE IS LAID UNDER SEWER, BOTH THE WATER AND THE SEWER MAINS SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH WATER MAIN STANDARD JOINTS FOR A LATERAL DISTANCE OF AT LEAST 10 FEET ON EACH SIDE OF THE POINT OF CROSSING.  
3. "SEWER" SHALL BE CONSIDERED TO MEAN EITHER SANITARY SEWER OR STORM SEWER.



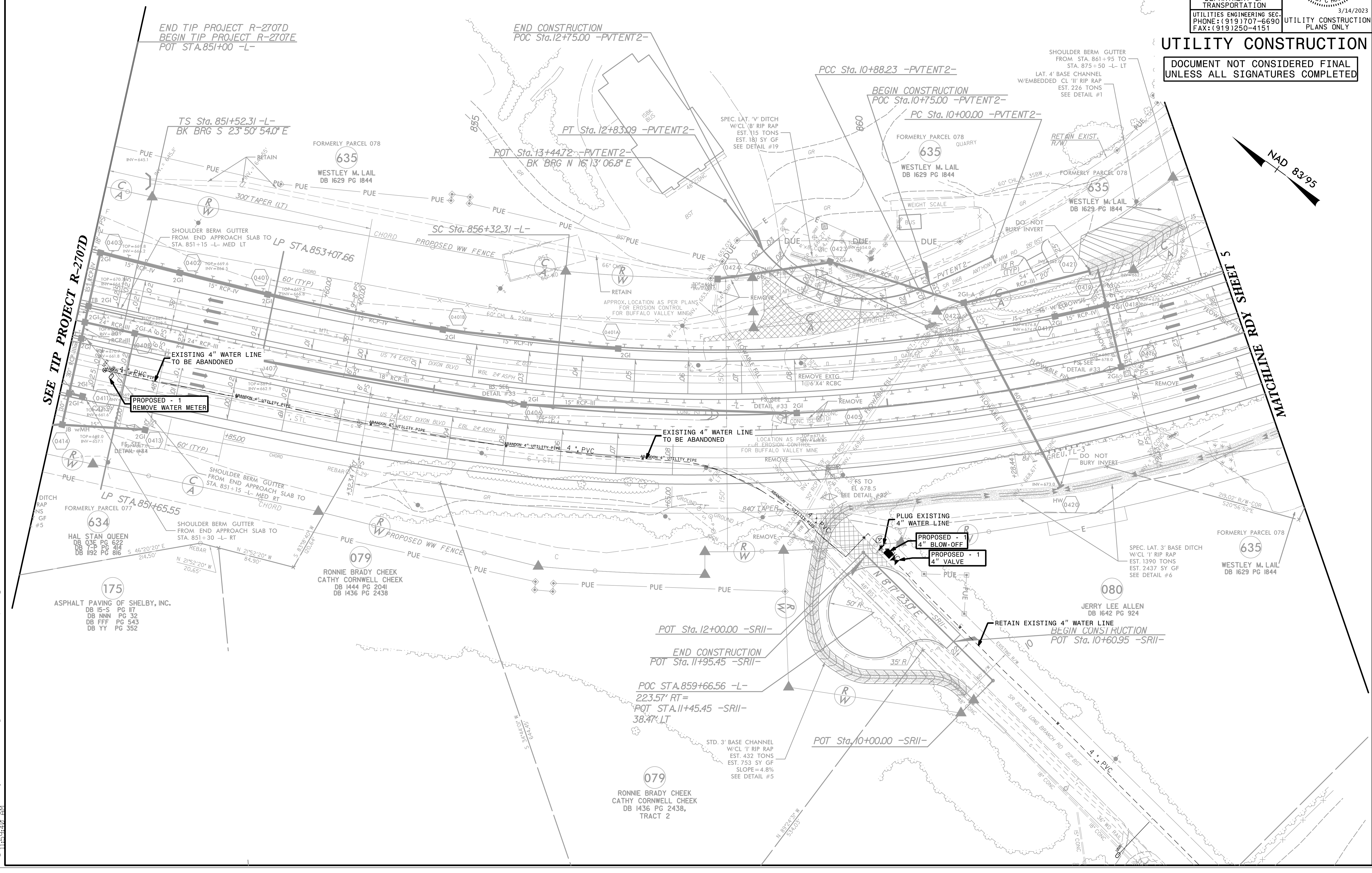
**ASSUMPTIONS**  
LAYING CONDITION = TYPE 4  
SOIL DESIGNATION = COHESIVE-GRANULAR  
DESIGN PRESSURE = 200 PSI (TEST PRESSURE)  
SAFETY FACTOR = 1.5

**NOTES**  
1. RESTRAINED LENGTH IS MEASURED AS FOLLOWS:  
A. HORIZONTAL/VERTICAL BENDS: ALONG EACH SIDE OF BEND.  
B. HORIZONTAL/VERTICAL BENDS - OFFSET: ALONG THE OUTER SIDE OF EACH BEND.  
ALL PIPE BETWEEN THE TWO BENDS SHALL BE RESTRAINED JOINT.  
2. WHEN IT IS NOT POSSIBLE TO INSTALL THE RESTRAINED LENGTHS AS NOTED BY THIS TABLE, CONTRACTOR SHALL INSTALL THE APPROPRIATE CONCRETE THRUST RESTRAINTS AS PER THE DETAILS HEREIN.

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-4/RDY-4
DESIGNED BY: BCH	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	3/14/2023
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

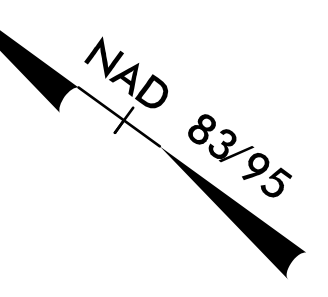
The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 300 pounds. The actual quantity and type of fittings will vary based on field conditions.

**UTILITY CONSTRUCTION**  
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

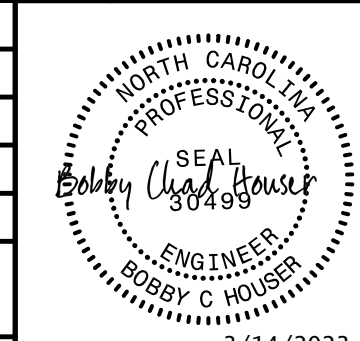


SEE TIP PROJECT R-2707D

MATCHLINE RDY SHEET 5



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PROJECT REFERENCE NO.	SHEET NO.
R-2707E	JC-5/RDY-6A
DESIGNED BY: BCH	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	3/14/2023
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
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# UTILITY CONSTRUCTION

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5/14/99

RONNIE BRADY CHEEK  
CATHY CORNWELL CHEEK  
DB 1436 PG 2438,  
TRACT I

079  
RONNIE BRADY CHEEK  
CATHY CORNWELL CHEEK  
DB 1444 PG 2041  
DB 1436 PG 2438

161  
ROBERT L. TRICE & WF.  
LISA V. TRICE  
DB 977 PG 127  
DB 1205 PG 1000

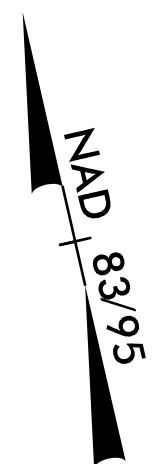
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DB 15-S PG 117  
DB NNN PG 32  
DB FFF PG 543  
DB YY PG 352

162  
ASPHALT PAVING  
OF SHELBY, INC.  
DB 15-S PG 117  
DB NNN PG 32  
DB FFF PG 543  
DB YY PG 352

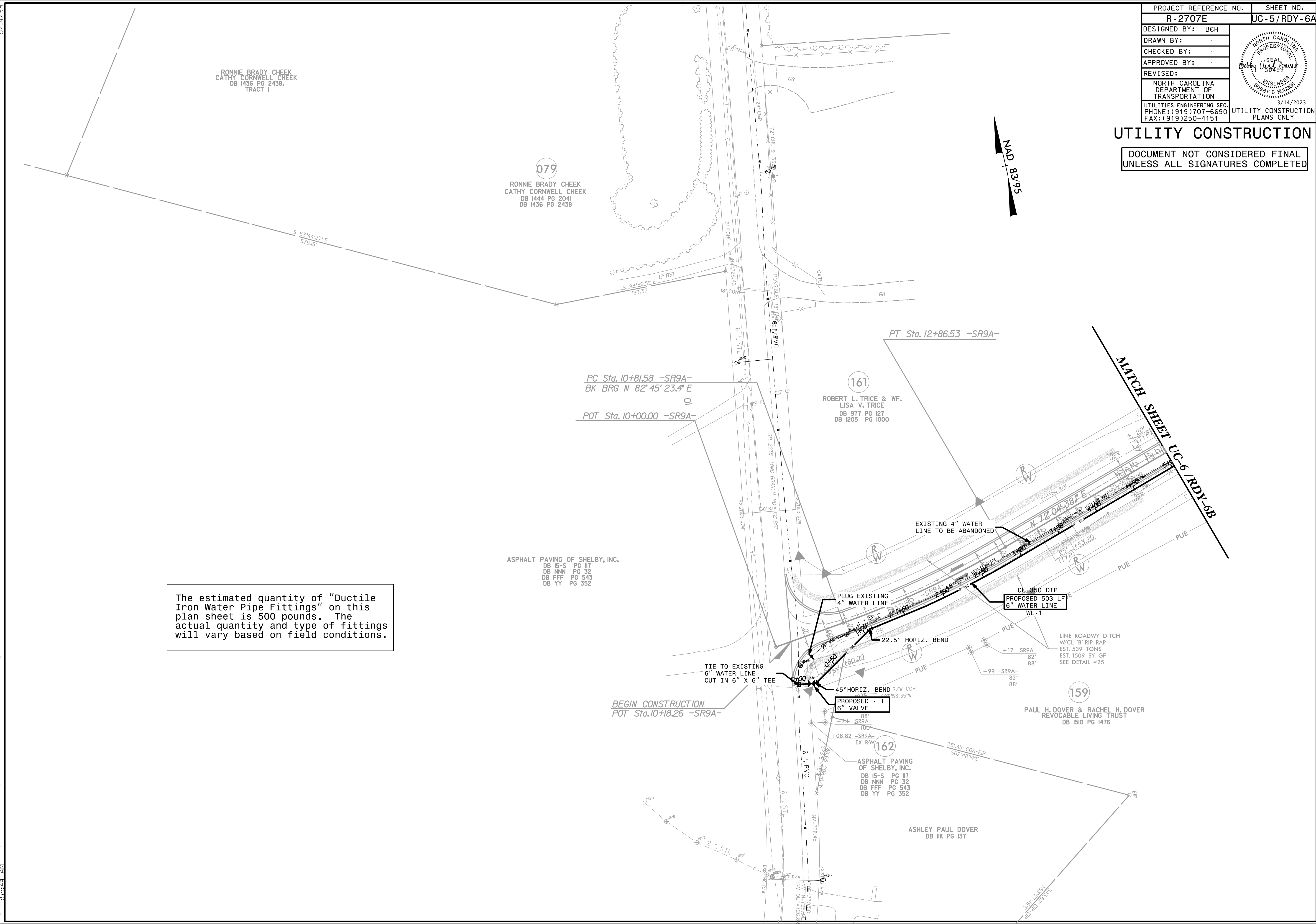
159  
PAUL H. DOVER & RACHEL H. DOVER  
REVOCABLE LIVING TRUST  
DB 1510 PG 1476

ASHLEY PAUL DOVER  
DB 11K PG 137


The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 500 pounds. The actual quantity and type of fittings will vary based on field conditions.



MATCH SHEET UC-6 /RDY-6B



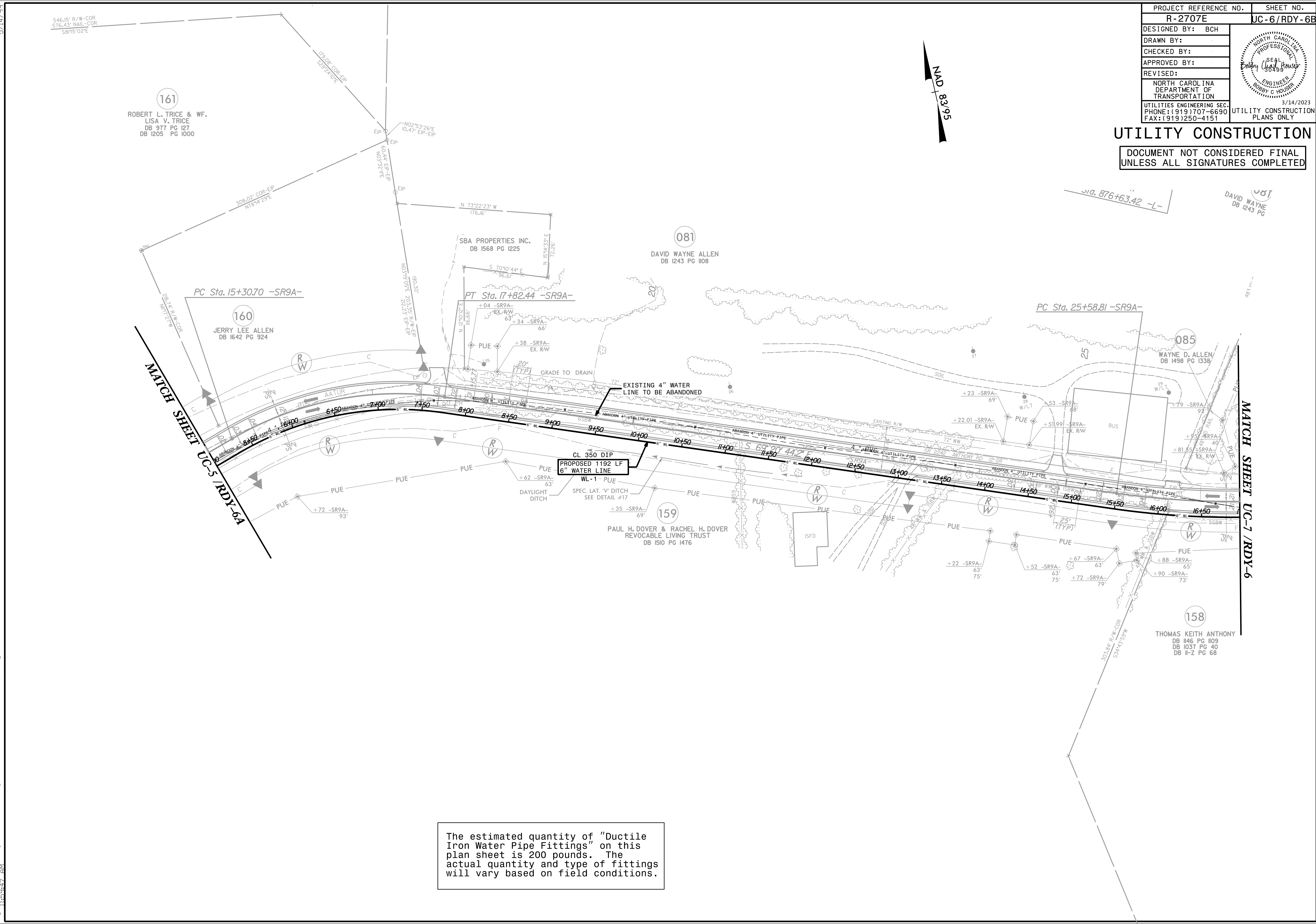
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 Bates' Engineering

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	JC-6/RDY-6B
DESIGNED BY: BCH	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	3/14/2023
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	UTILITY CONSTRUCTION PLANS ONLY
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

### UTILITY CONSTRUCTION

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UNLESS ALL SIGNATURES COMPLETED

DAVID WAYNE  
DB 1243 PG



The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 200 pounds. The actual quantity and type of fittings will vary based on field conditions.

3/14/2023 Proj: R2707E\_Ut\_(rdy\_sht6B).UC(ut)\_const\_Sht6B.psh.dgn  
 11:56:49 AM  
 Bates Engineering

5/14/2023

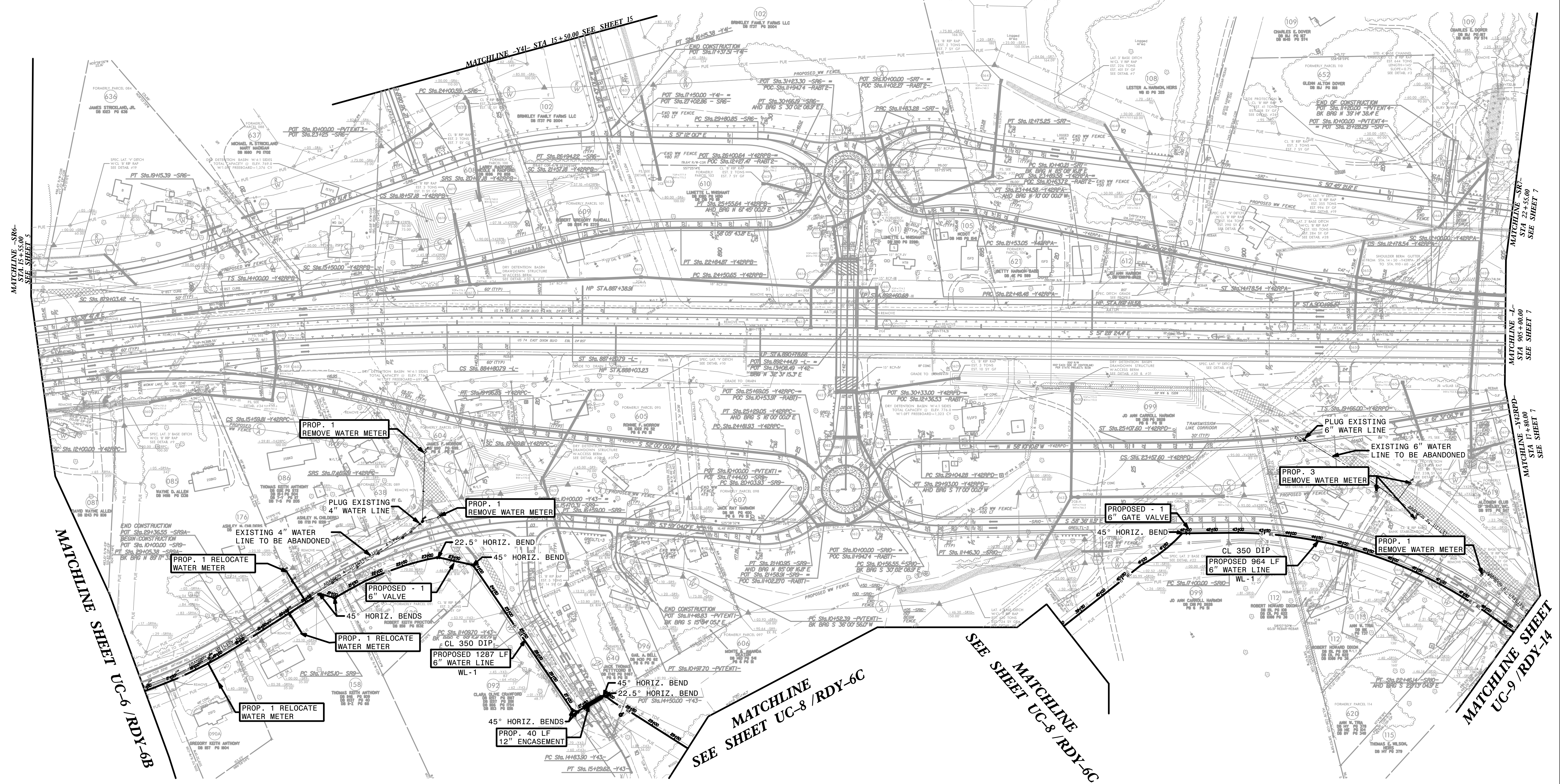
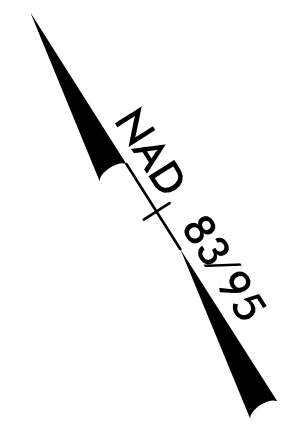
PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-7/RDY-6
DESIGNED BY: BCH	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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### UTILITY CONSTRUCTION

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The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 1500 pounds. The actual quantity and type of fittings will vary based on field conditions.

The estimated quantity of "Water Service Line" on this plan sheet is 150 linear feet. The actual quantity will vary based on field conditions and will be determined during construction.



MATCHLINE -SRG- STA 15+55.00 SEE SHEET 5

MATCHLINE SHEET UC-6 / RDY-6B

MATCHLINE SEE SHEET UC-8 / RDY-6C

MATCHLINE SEE SHEET UC-8 / RDY-6C

MATCHLINE SHEET UC-9 / RDY-14

MATCHLINE -SRG- STA 17+55.00 SEE SHEET 7

MATCHLINE -SRG- STA 905+00.00 SEE SHEET 7

MATCHLINE -SRG- STA 17+80.00 SEE SHEET 7

3/14/2023 Pro:\N2707E\Ut\_rdy\_sht61\_UC\ut.const\_sht7\psht.dgn

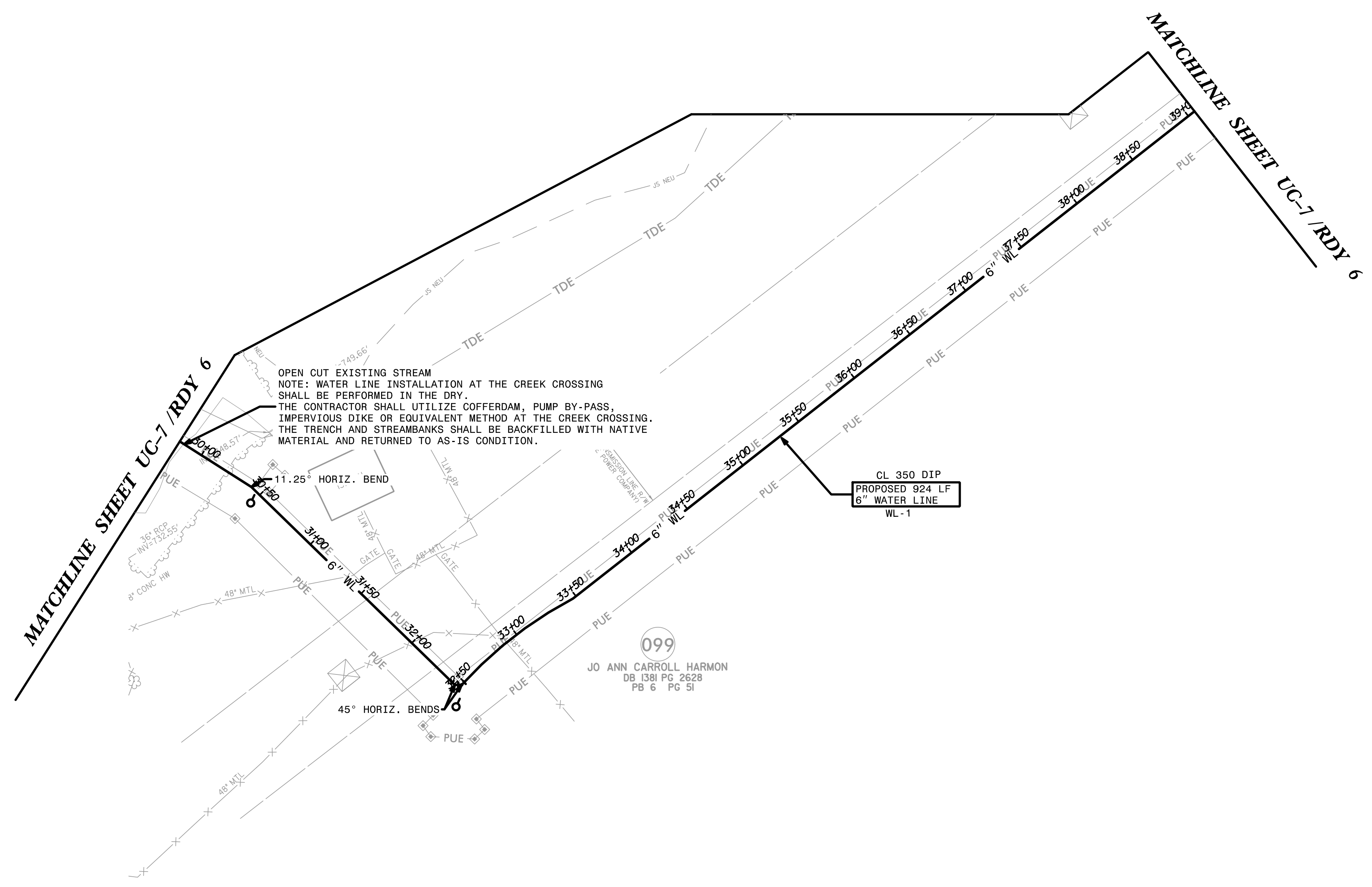
5/14/23

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	JC-8/RDY-6C
DESIGNED BY: BCH	
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CHECKED BY:	
APPROVED BY:	
REVISED:	
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The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 750 pounds. The actual quantity and type of fittings will vary based on field conditions.

**UTILITY CONSTRUCTION**

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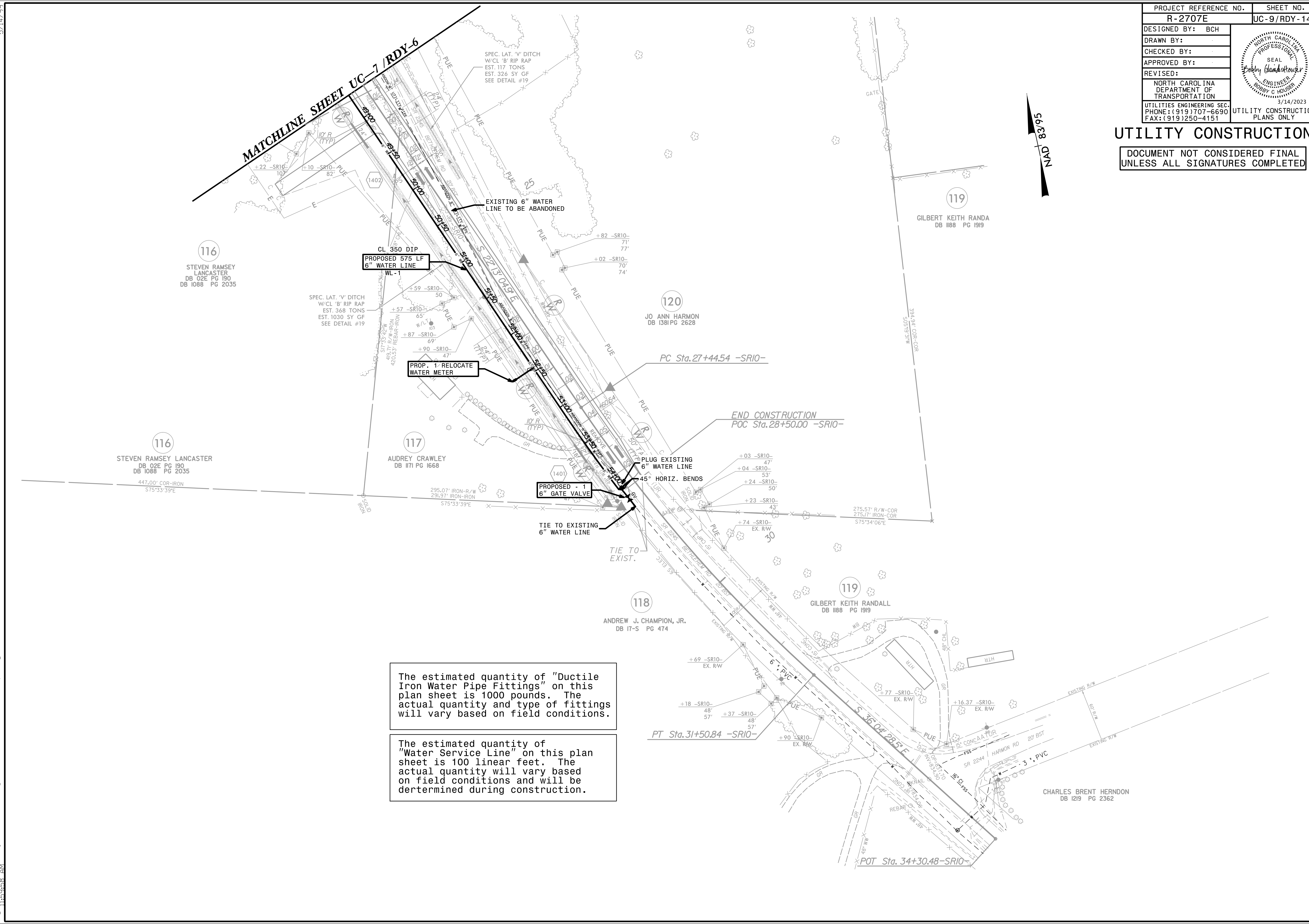


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PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-9/RDY-14
DESIGNED BY: BCH	
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# UTILITY CONSTRUCTION

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**MATCHLINE SHEET UC-7/RDY-6**

NAD 83/95

The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 1000 pounds. The actual quantity and type of fittings will vary based on field conditions.

The estimated quantity of "Water Service Line" on this plan sheet is 100 linear feet. The actual quantity will vary based on field conditions and will be determined during construction.

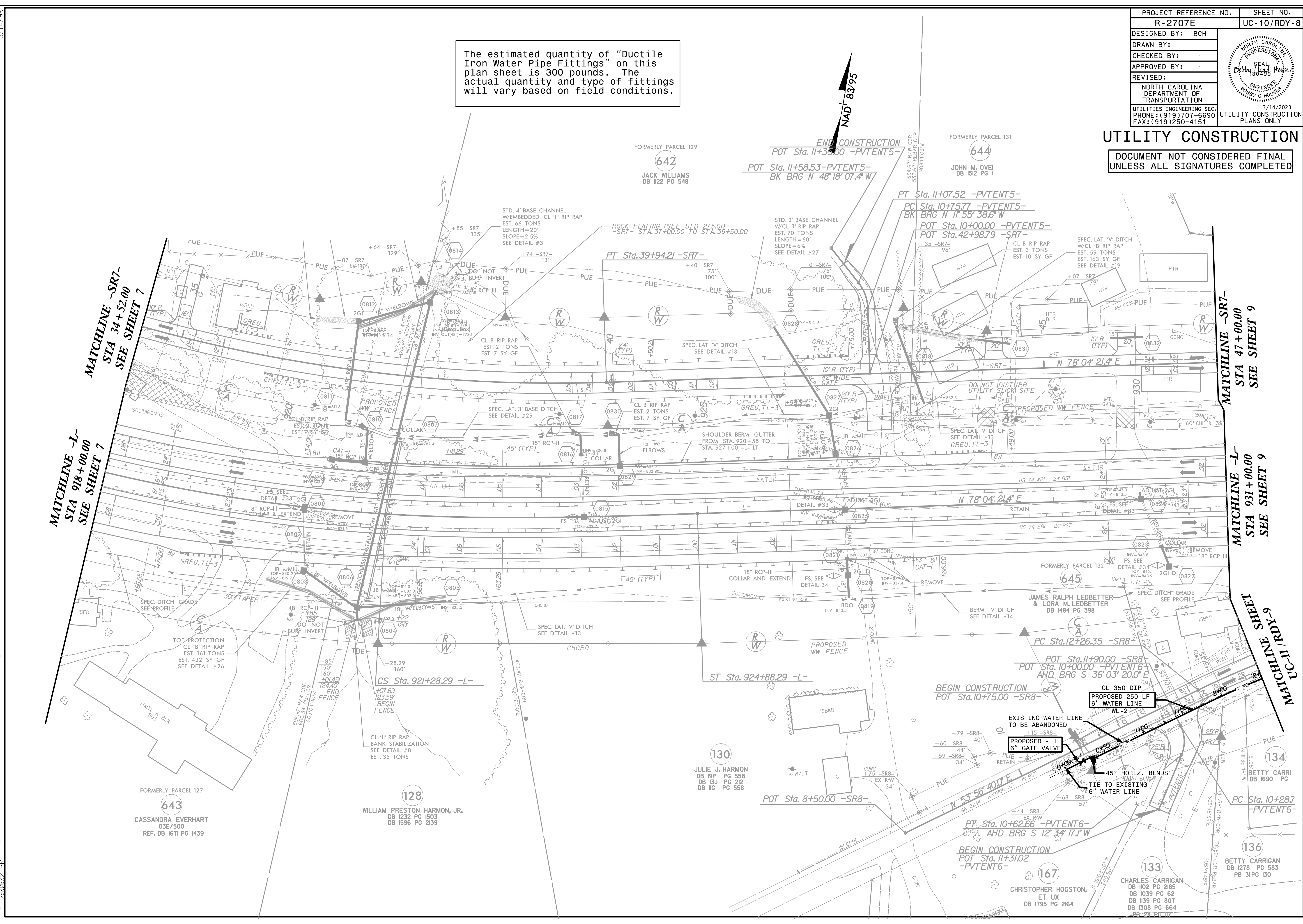
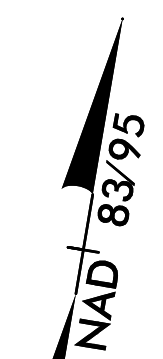
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PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-10/RDY-8
DESIGNED BY: BCH	
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APPROVED BY:	
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# UTILITY CONSTRUCTION

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The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 300 pounds. The actual quantity and type of fittings will vary based on field conditions.



MATCHLINE -SR7-  
STA 34+52.00  
SEE SHEET 7

MATCHLINE -L-  
STA 918+00.00  
SEE SHEET 7

MATCHLINE -SR7-  
STA 47+00.00  
SEE SHEET 9

MATCHLINE -L-  
STA 931+00.00  
SEE SHEET 9

MATCHLINE SHEET 9-6  
TO MATCHLINE SHEET 11-C

FORMERLY PARCEL 127  
**643**  
CASSANDRA EVERHART  
DB 03E/500  
REF. DB 1671 PG 1439

**128**  
WILLIAM PRESTON HARMON, JR.  
DB 1232 PG 1503  
DB 1596 PG 2139

FORMERLY PARCEL 129  
**642**  
JACK WILLIAMS  
DB 1122 PG 548

FORMERLY PARCEL 131  
**644**  
JOHN M. OVEI  
DB 1512 PG 1

**645**  
JAMES RALPH LEDBETTER & LORA M. LEDBETTER  
DB 1484 PG 398

**130**  
JULIE J. HARMON  
DB 19P PG 558  
DB 13J PG 212  
DB 11G PG 558

**134**  
BETTY CARRI  
DB 1690 PG

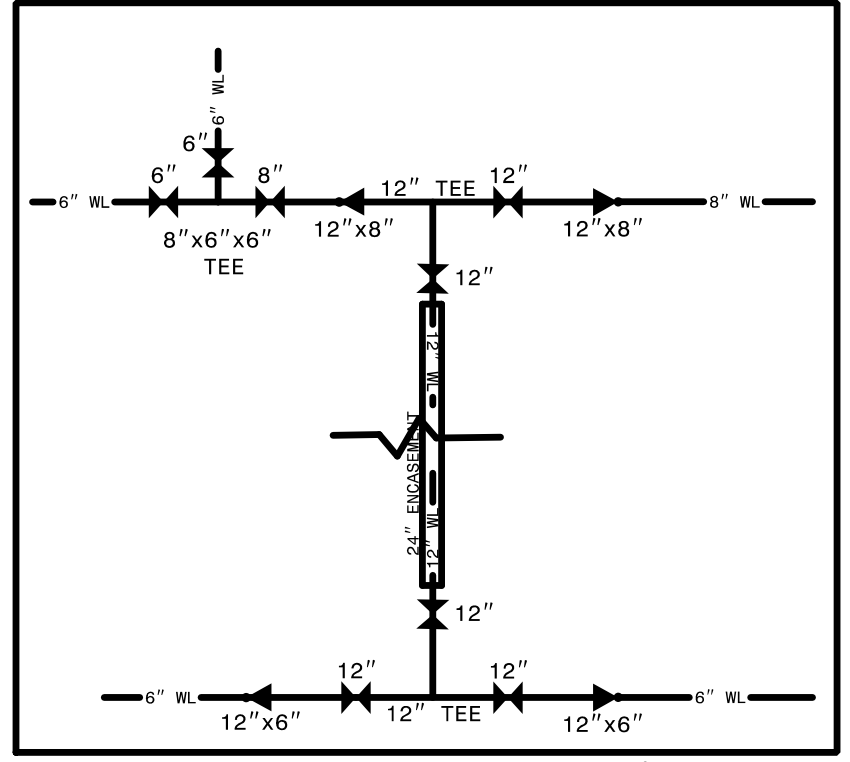
**136**  
BETTY CARRIGAN  
DB 1278 PG 583  
PB 31PG 130

**167**  
CHRISTOPHER HOGSTON,  
ET UX  
DB 1795 PG 2164

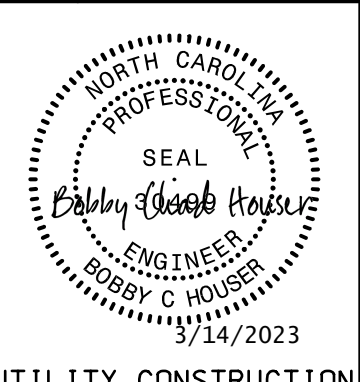
**133**  
CHARLES CARRIGAN  
DB 1102 PG 2185  
DB 1139 PG 62  
DB 1308 PG 664  
PB 24 PG 117

The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 7500 pounds. The actual quantity and type of fittings will vary based on field conditions.

The estimated quantity of "Water Service Line" on this plan sheet is 300 linear feet. The actual quantity will vary based on field conditions and will be determined during construction.

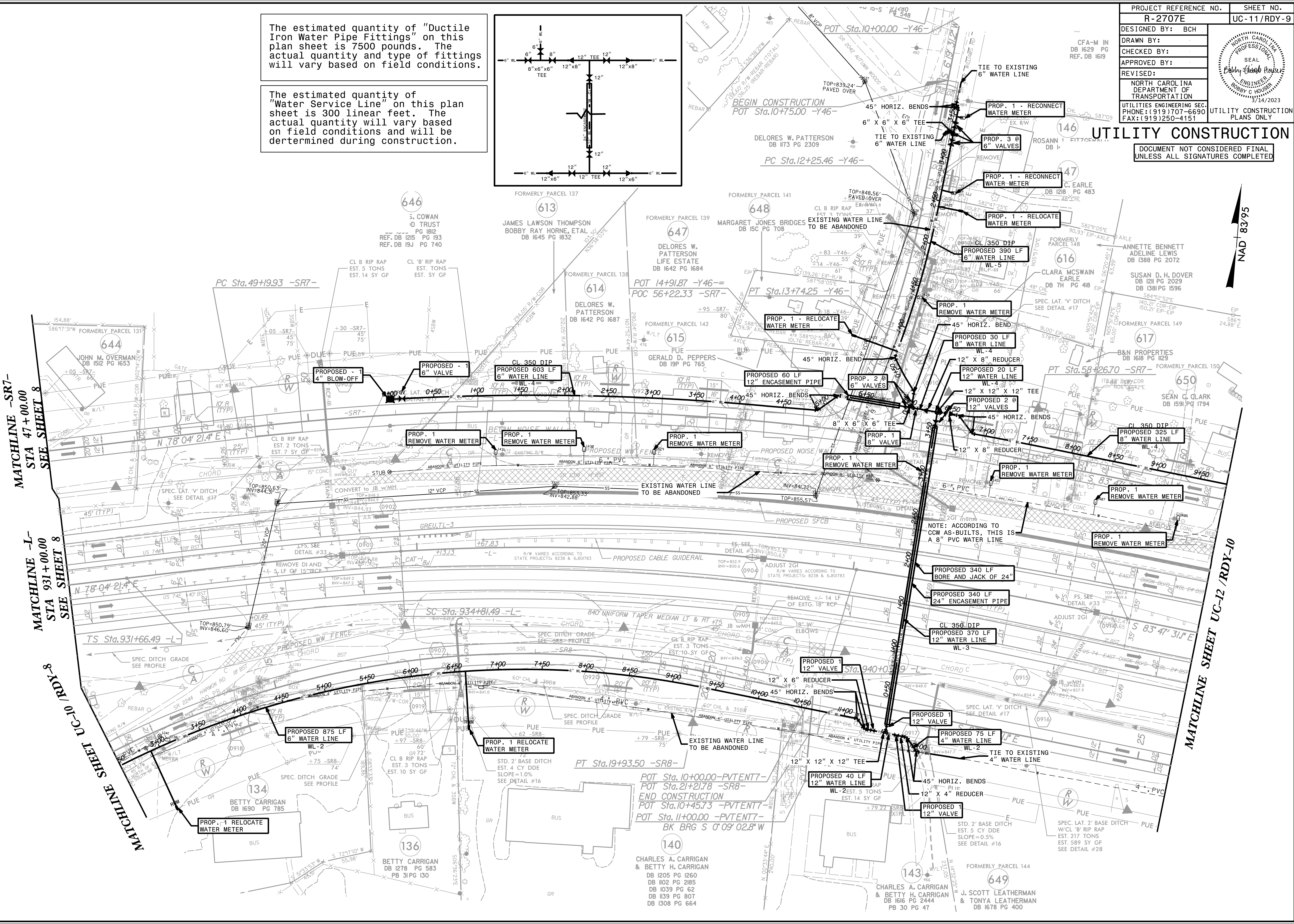


PROJECT REFERENCE NO.	R-2707E
SHEET NO.	UC-11/RDY-9
DESIGNED BY:	BCH
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	
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# UTILITY CONSTRUCTION

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NAD 83/95

MATCHLINE -SR7- STA 47+00.00 SEE SHEET 8

MATCHLINE -L- STA 931+00.00 SEE SHEET 8

MATCHLINE SHEET UC-10/RDY-8

MATCHLINE SHEET UC-12/RDY-10

POT Sta. 10+00.00 -PVENT7-  
POT Sta. 21+21.78 -SR8-  
END CONSTRUCTION  
POT Sta. 10+45.73 -PVENT7-  
POT Sta. 11+00.00 -PVENT7-  
BK BRG S 0°09'02.8\"/>

140  
CHARLES A. CARRIGAN & BETTY H. CARRIGAN  
DB 1205 PG 1260  
DB 1102 PG 285  
DB 1039 PG 62  
DB 1139 PG 807  
DB 1308 PG 664

143  
CHARLES A. CARRIGAN & BETTY H. CARRIGAN  
DB 1616 PG 2444  
PB 30 PG 47

144  
J. SCOTT LEATHERMAN & TONYA LEATHERMAN  
DB 1678 PG 400

134  
BETTY CARRIGAN  
DB 1690 PG 785

136  
BETTY CARRIGAN  
DB 1278 PG 583  
PB 31 PG 130

646  
S. COWAN D TRUST  
PG 1812  
REF. DB 1215 PG 193  
REF. DB 19J PG 740

613  
JAMES LAWSON THOMPSON  
BOBBY RAY HORNE, ETAL  
DB 1645 PG 1832

647  
DELORES W. PATTERSON  
LIFE ESTATE  
DB 1642 PG 1684

648  
MARGARET JONES BRIDGES  
DB 15C PG 708

649  
DELORES W. PATTERSON  
DB 1642 PG 1687

615  
GERALD D. PEPPERS  
DB 19P PG 765

616  
CLARA MCSWAIN EARLE  
DB 7H PG 418

617  
ANNETTE BENNETT ADELIN LEWIS  
DB 1388 PG 2072

618  
SUSAN D. H. DOVER  
DB 121 PG 2029  
DB 1381 PG 1596

619  
SEAN C. CLARK  
DB 1591 PG 1794

644  
JOHN M. OVERMAN  
DB 1512 PG 1653

645  
DELORES W. PATTERSON  
DB 1642 PG 1687

614  
DELORES W. PATTERSON  
DB 1642 PG 1687

613  
JAMES LAWSON THOMPSON  
BOBBY RAY HORNE, ETAL  
DB 1645 PG 1832

614  
DELORES W. PATTERSON  
DB 1642 PG 1687

615  
GERALD D. PEPPERS  
DB 19P PG 765

616  
CLARA MCSWAIN EARLE  
DB 7H PG 418

617  
ANNETTE BENNETT ADELIN LEWIS  
DB 1388 PG 2072

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DB 1591 PG 1794

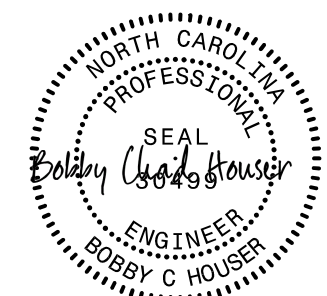
620  
SUSAN D. H. DOVER  
DB 121 PG 2029  
DB 1381 PG 1596

621  
ANNETTE BENNETT ADELIN LEWIS  
DB 1388 PG 2072

5/14/99

The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 1000 pounds. The actual quantity and type of fittings will vary based on field conditions.

The estimated quantity of "Water Service Line" on this plan sheet is 200 linear feet. The actual quantity will vary based on field conditions and will be determined during construction.

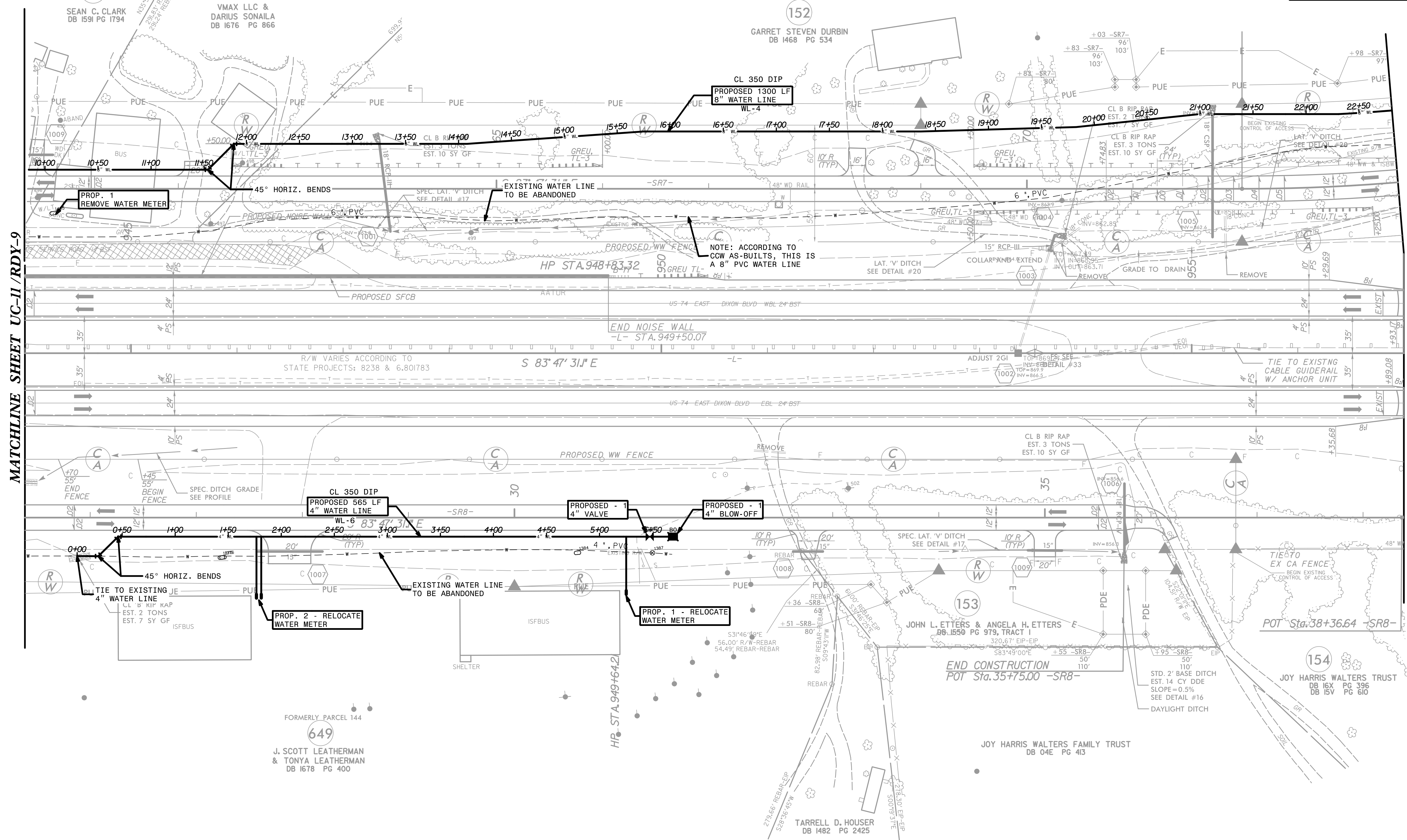
PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-12/RDY-10
DESIGNED BY: BCH	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	3/14/2023
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GARRET STEVEN DURBIN  
DB 1468 PG 534

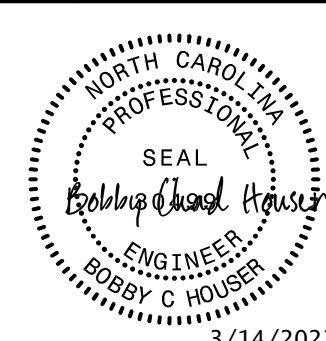


MATCHLINE SHEET UC-11/RDY-9

MATCHLINE SHEET UC-13/RDY-11

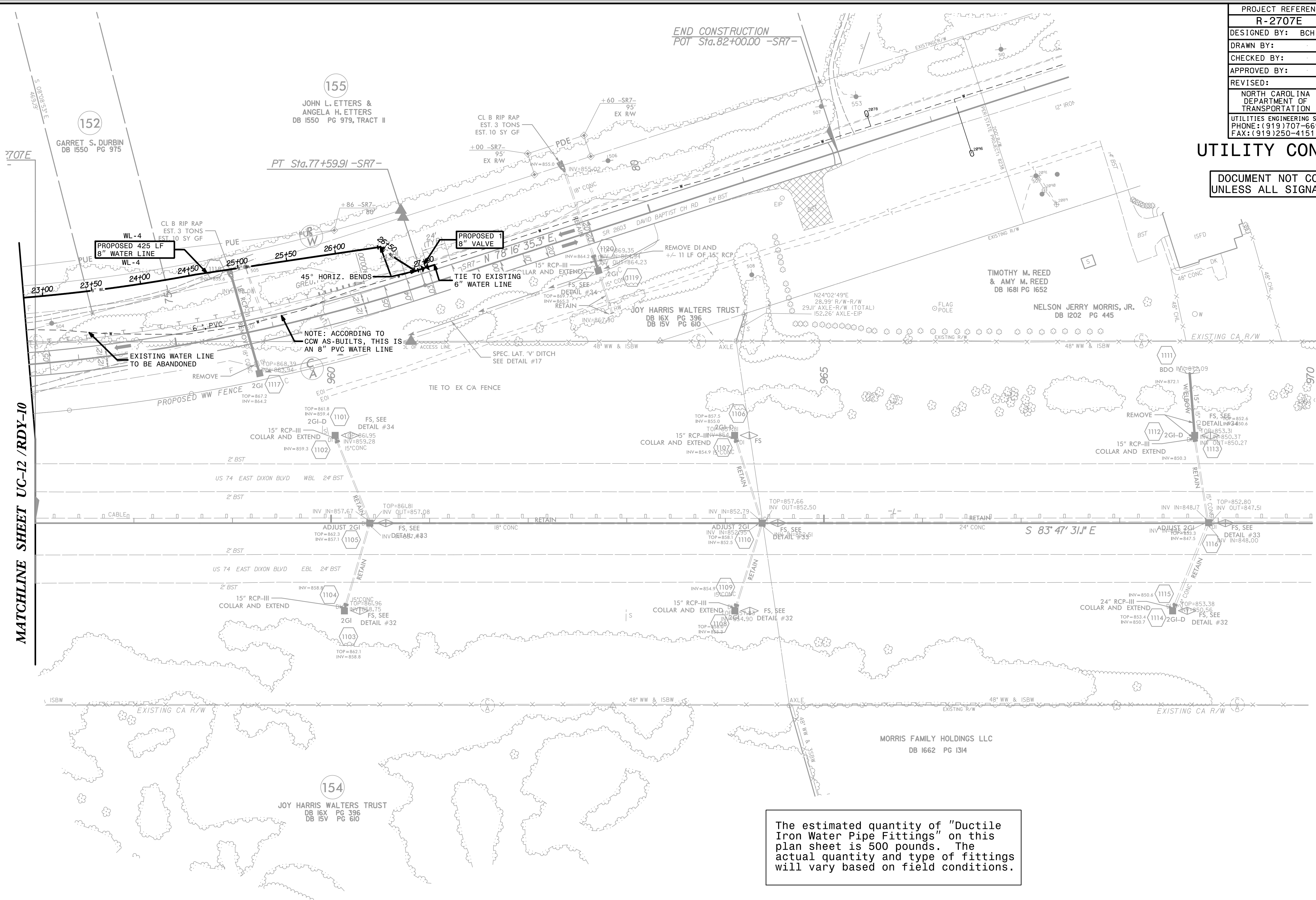
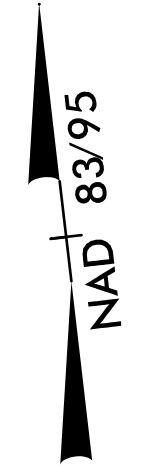
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5/14/2023

PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-13/RDY-11
DESIGNED BY: BCH	
DRAWN BY:	
CHECKED BY:	
APPROVED BY:	
REVISED:	3/14/2023
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# UTILITY CONSTRUCTION

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The estimated quantity of "Ductile Iron Water Pipe Fittings" on this plan sheet is 500 pounds. The actual quantity and type of fittings will vary based on field conditions.

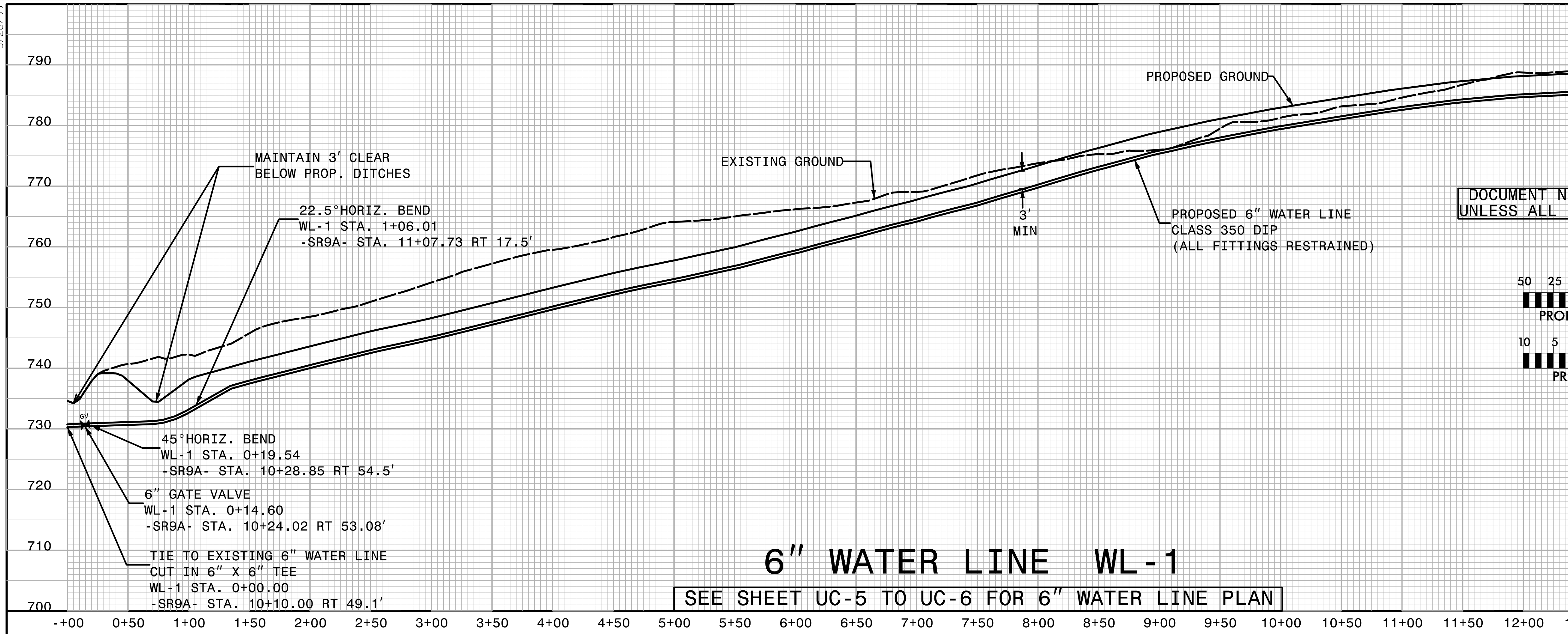
MATCHLINE SHEET UC-12 / RDY-10

MATCHLINE -I- STA 970 + 00.00 SEE SHEET 12

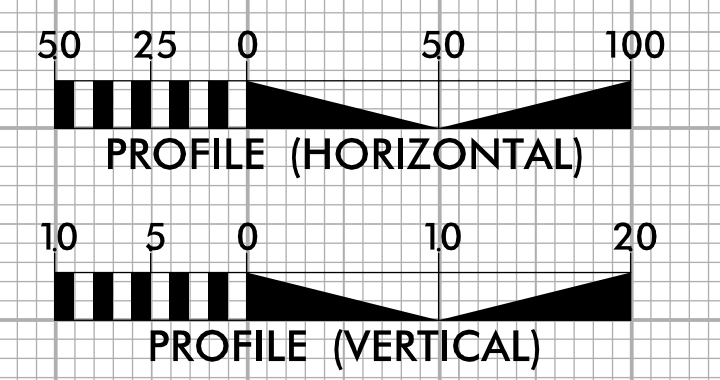
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PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-14
DESIGNED BY: BCH	
DRAWN BY: ADC	
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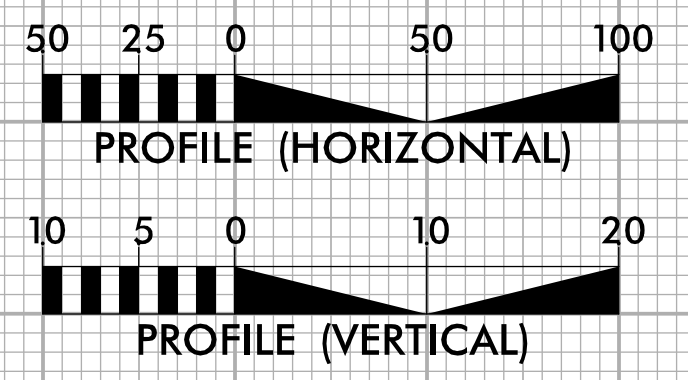
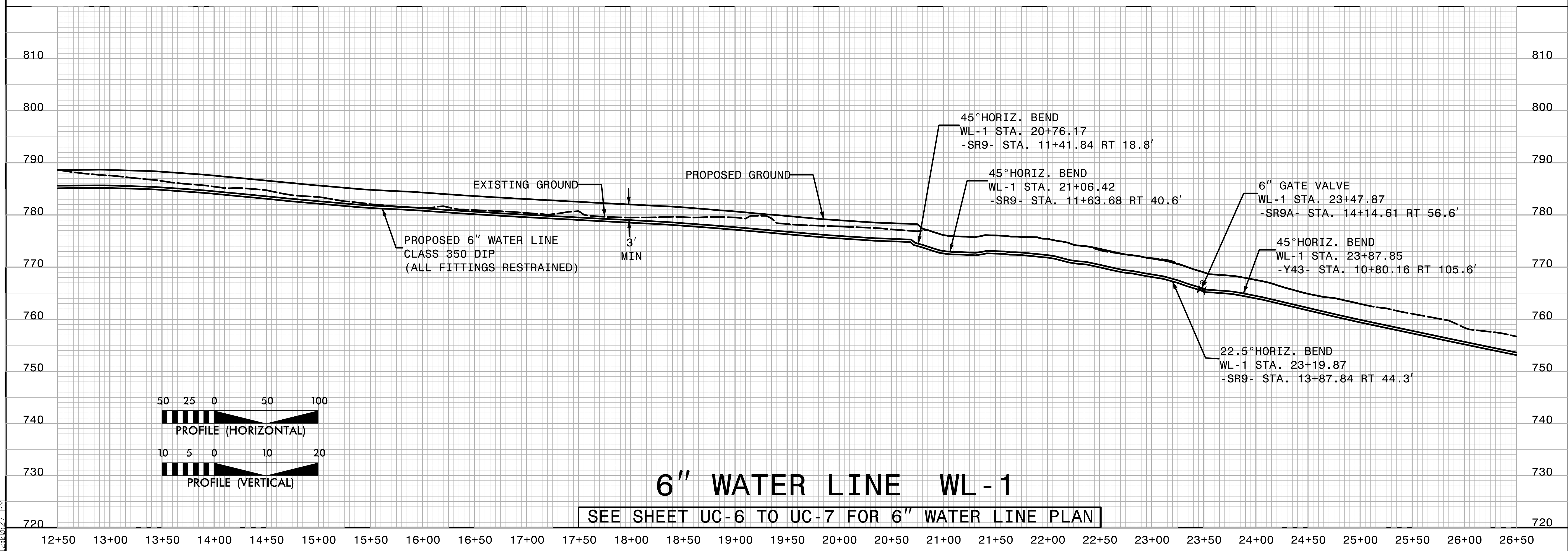
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# 6" WATER LINE WL-1

SEE SHEET UC-5 TO UC-6 FOR 6" WATER LINE PLAN

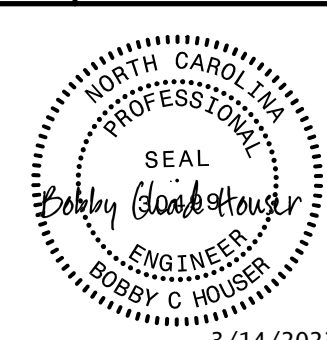
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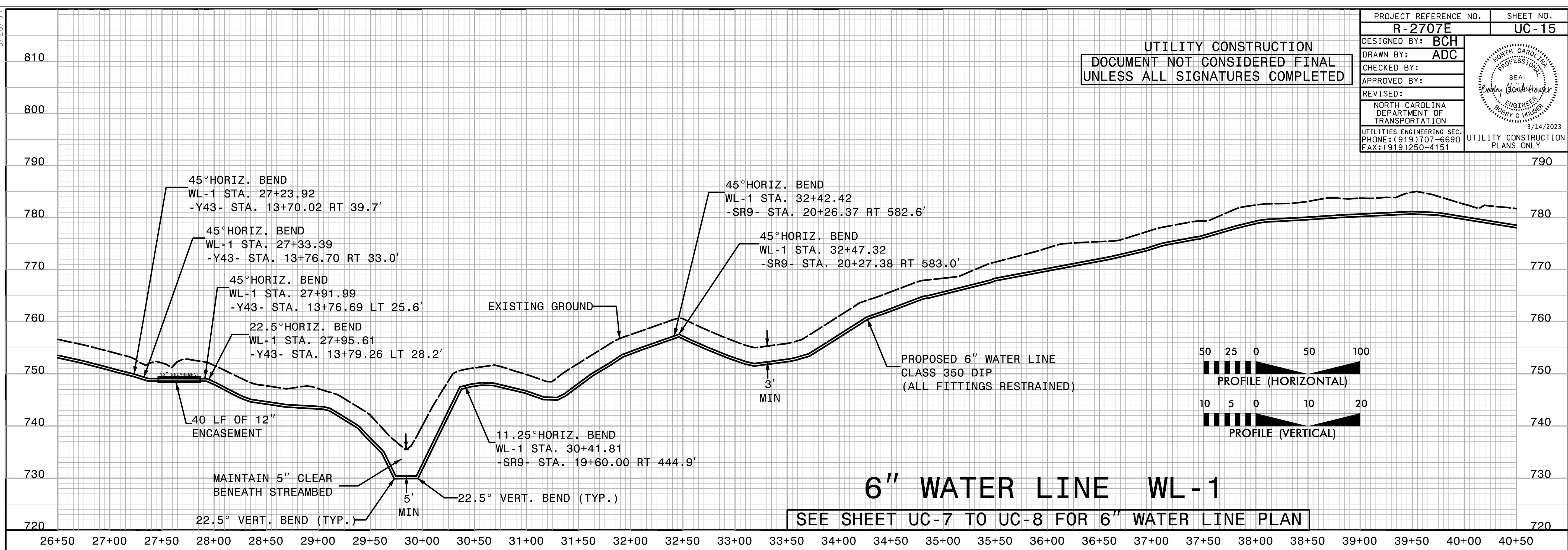
# 6" WATER LINE WL-1

SEE SHEET UC-6 TO UC-7 FOR 6" WATER LINE PLAN

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PROJECT REFERENCE NO.	SHEET NO.
R-2707E	UC-15
DESIGNED BY: BCH	
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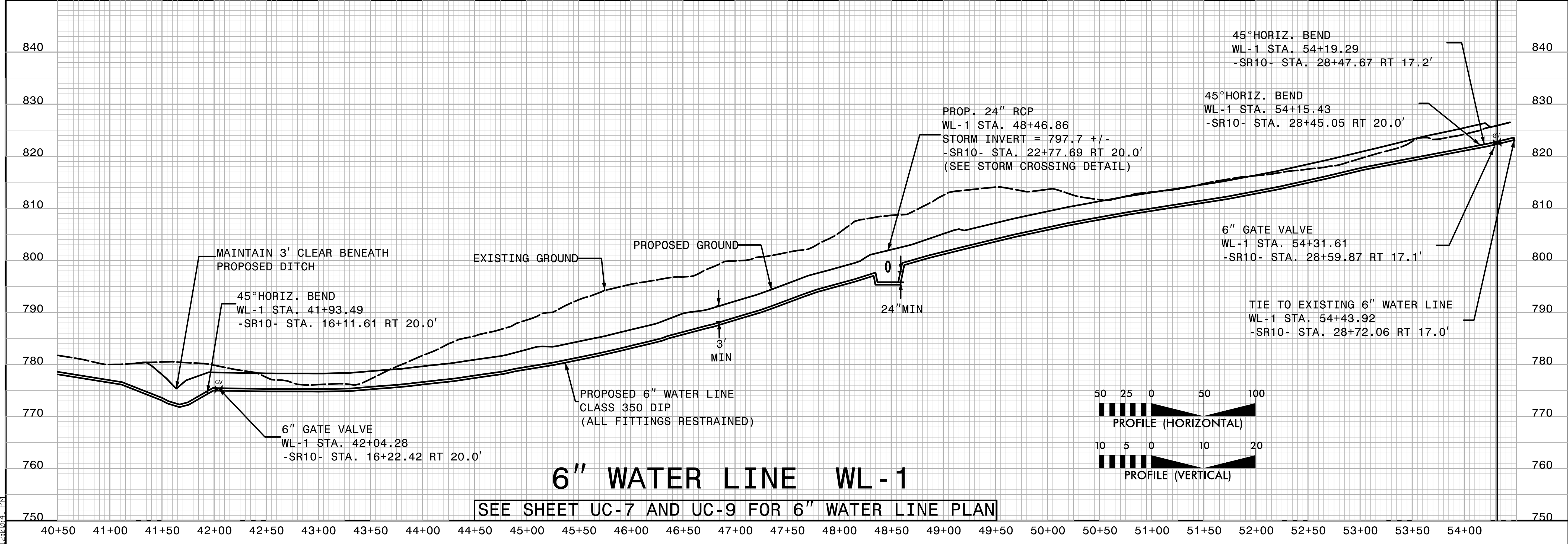
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### 6" WATER LINE WL-1

SEE SHEET UC-7 TO UC-8 FOR 6" WATER LINE PLAN

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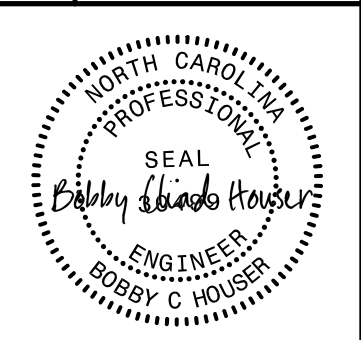


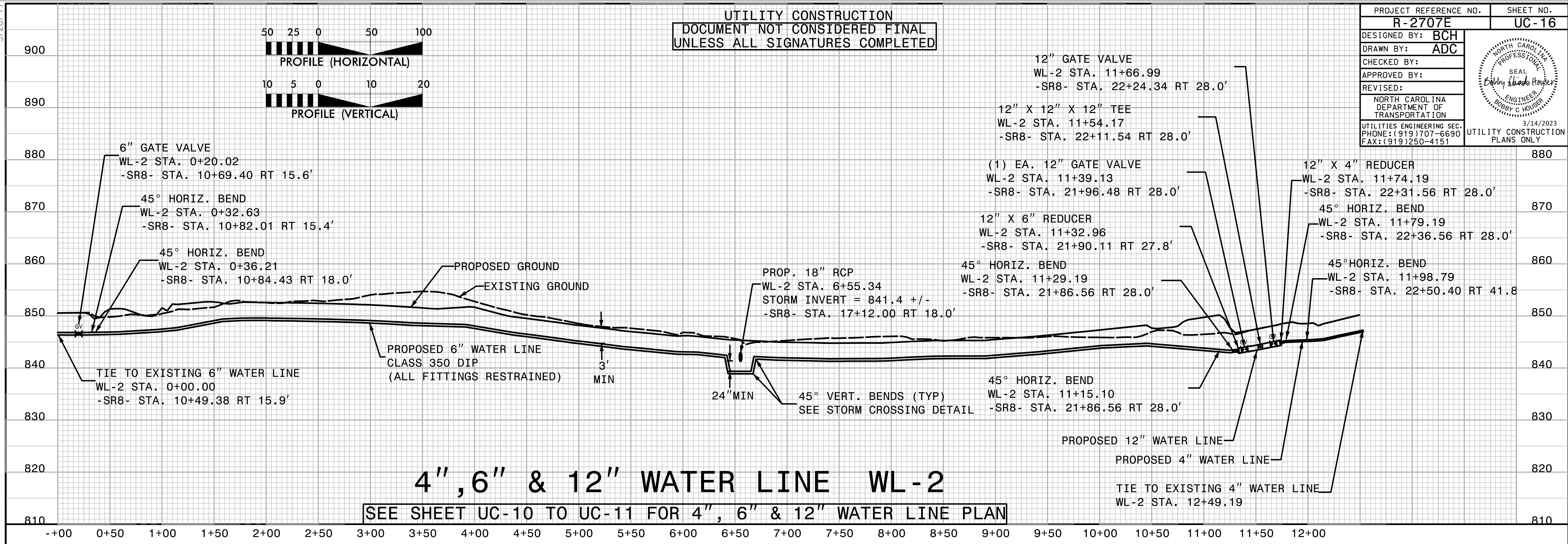
### 6" WATER LINE WL-1

SEE SHEET UC-7 AND UC-9 FOR 6" WATER LINE PLAN

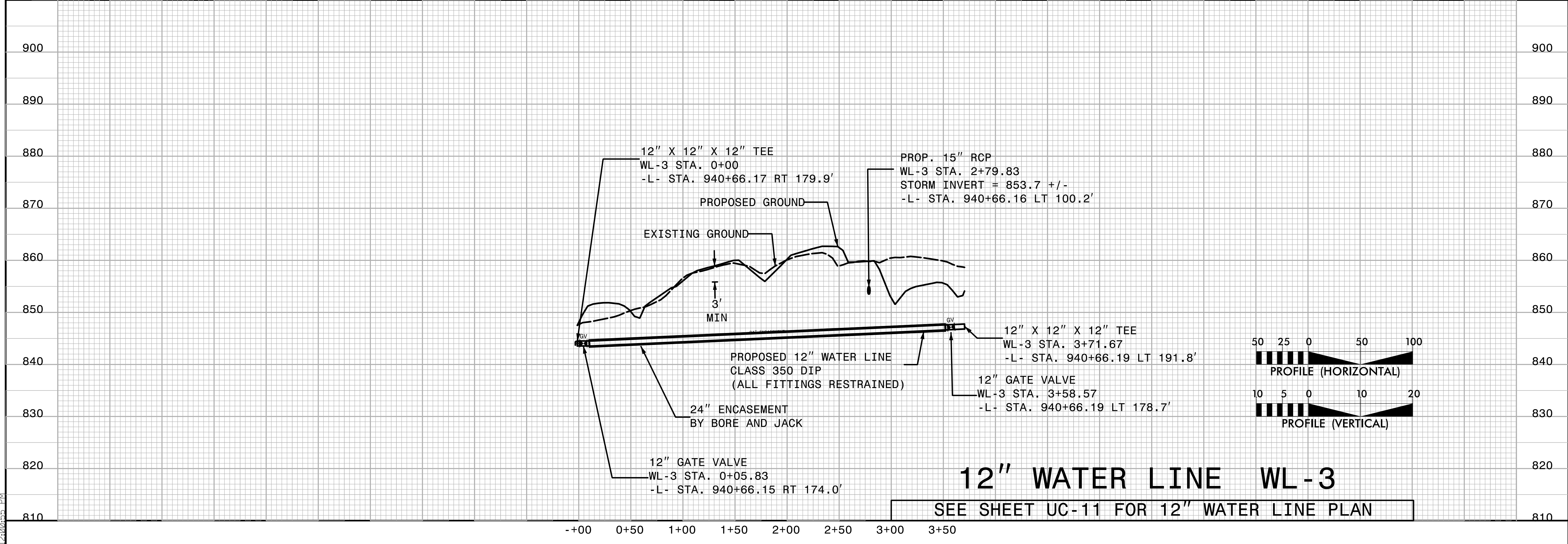
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DESIGNED BY: BCH	
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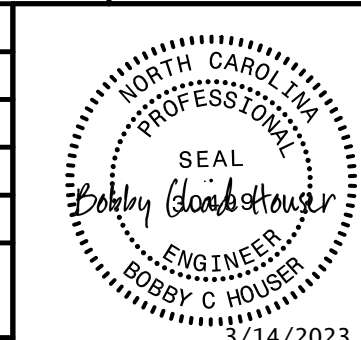


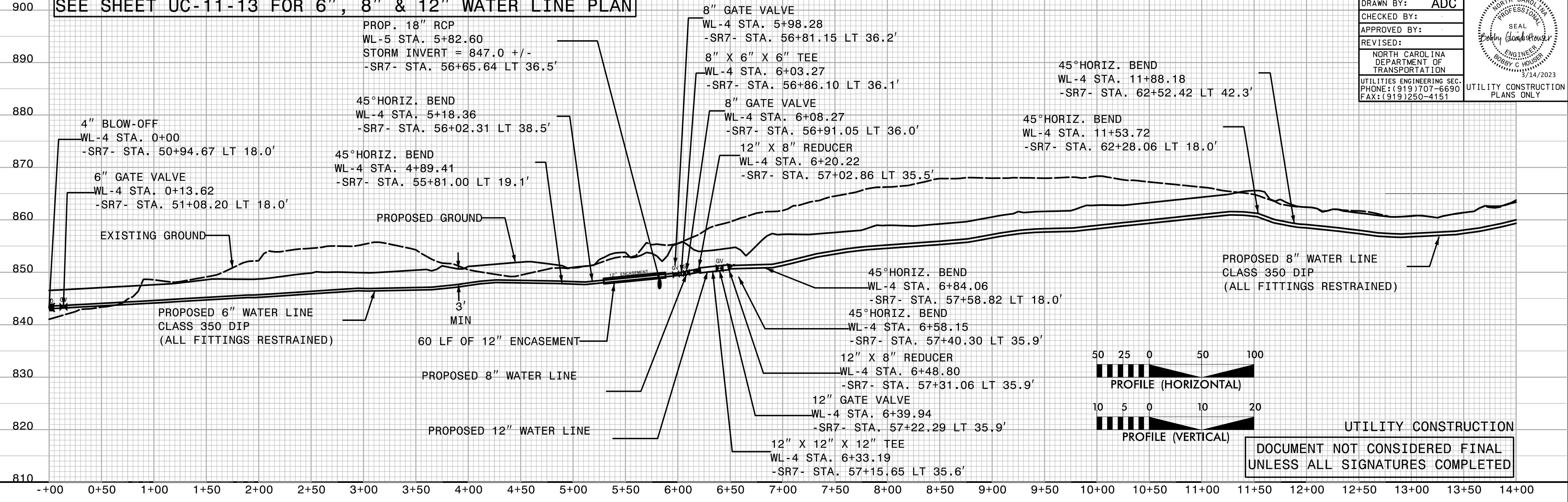


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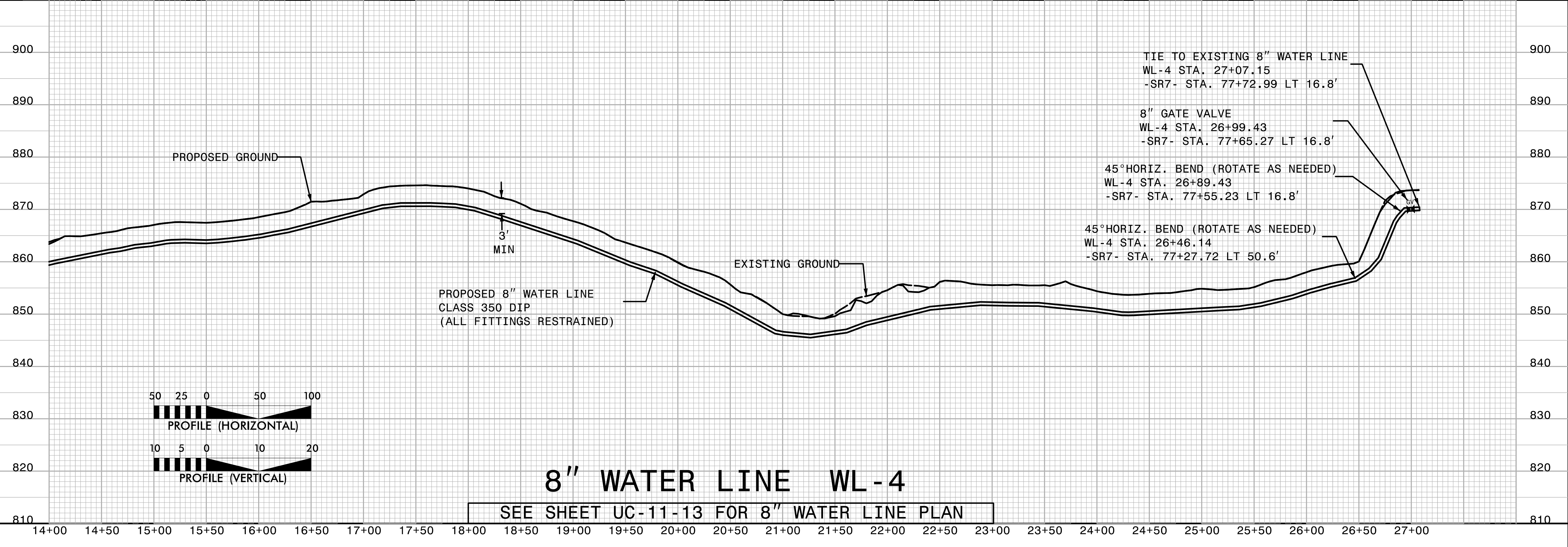
# 6", 8" & 12" WATER LINE WL-4

SEE SHEET UC-11-13 FOR 6", 8" & 12" WATER LINE PLAN

PROJECT REFERENCE NO. <b>R-2707E</b>	SHEET NO. <b>UC-17</b>
DESIGNED BY: <b>BCH</b>	
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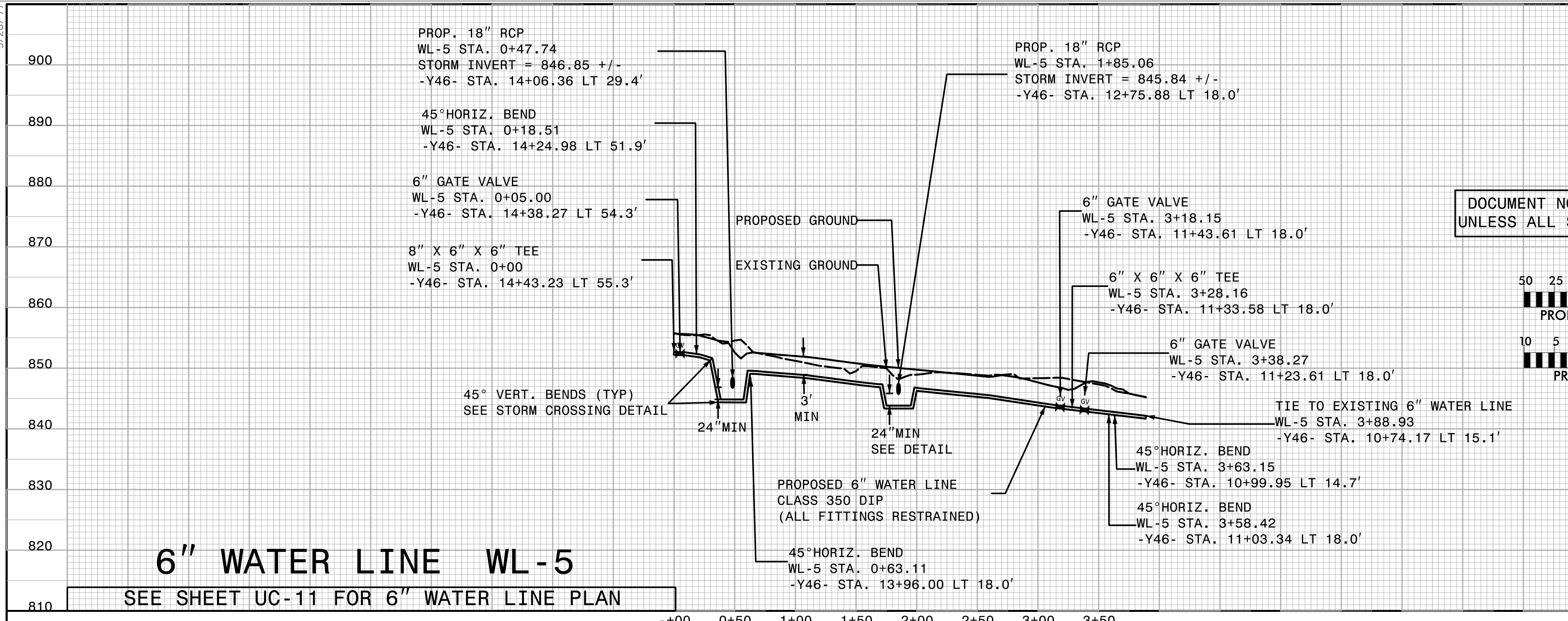
# 8" WATER LINE WL-4

SEE SHEET UC-11-13 FOR 8" WATER LINE PLAN

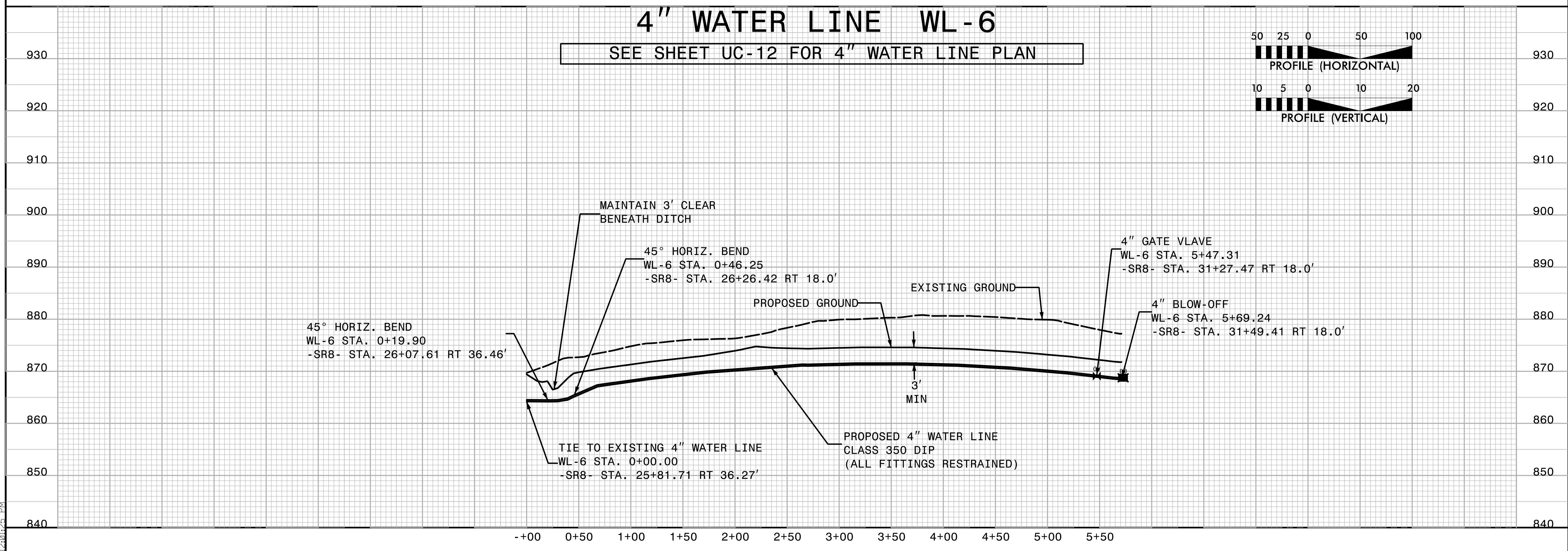
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5/28/99

PROJECT REFERENCE NO. <b>R-2707E</b>	SHEET NO. <b>UC-18</b>
DESIGNED BY: <b>BCH</b>	
DRAWN BY: <b>ADC</b>	
CHECKED BY:	
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