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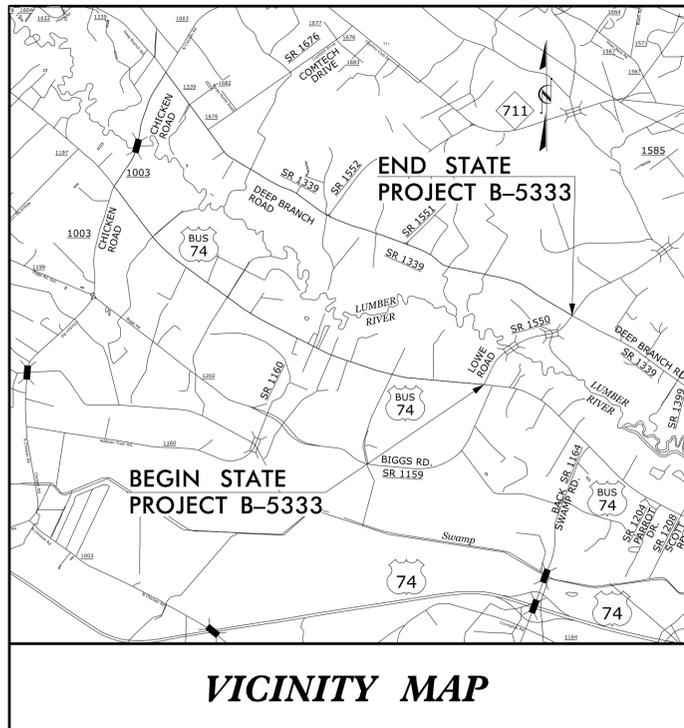
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STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

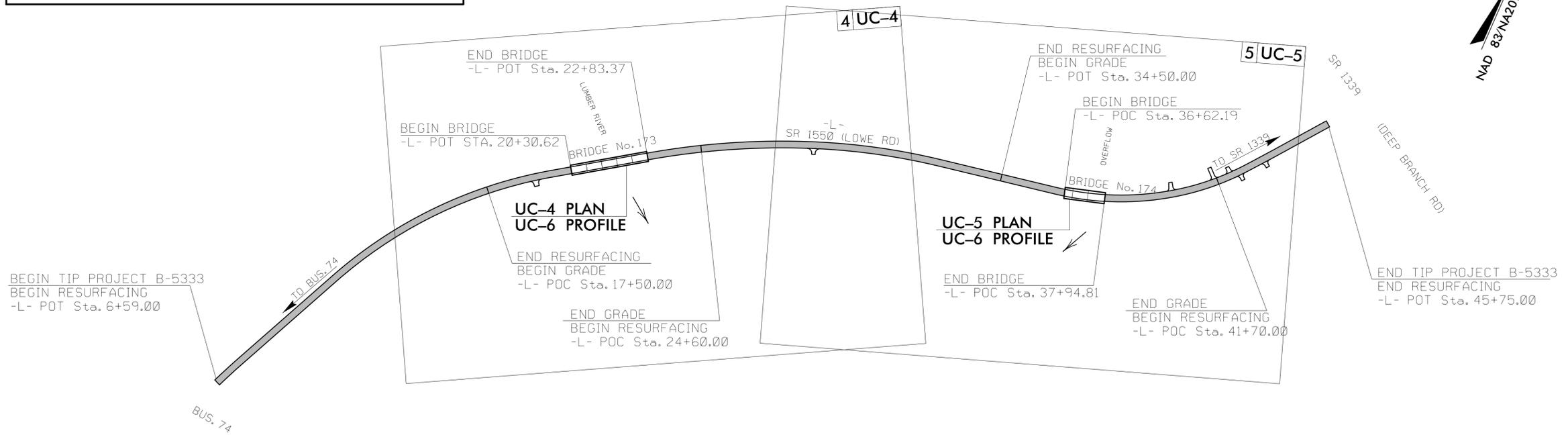
**UTILITY CONSTRUCTION PLANS  
ROBESON COUNTY**

**LOCATION: BRIDGE NO. 173 OVER LUMBER RIVER AND  
BRIDGE NO. 174 OVER OVERFLOW ON SR 1551 (LOWE ROAD)**  
**TYPE OF WORK: UTILITY RELOCATION OF WATER MAIN**

**TIP PROJECT: B-5333**

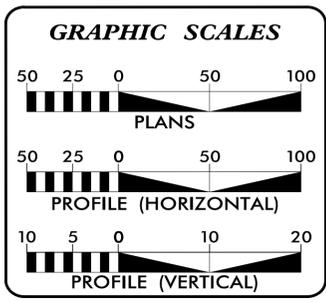


**VICINITY MAP**



THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO  
THE LIMITS ESTABLISHED BY METHOD II.

DOCUMENT NOT CONSIDERED FINAL  
UNTIL ALL SIGNATURES ARE COMPLETED



**INDEX OF SHEETS**

SHEET NO.:	DESCRIPTION:
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A	DETAILS
UC-4 THRU UC-5	UTILITY PLAN SHEETS
UC-6	UTILITY PROFILE SHEETS

**WATER AND SEWER OWNERS ON PROJECT**

(A) WATER - ROBESON COUNTY

PREPARED IN THE OFFICE OF

**THE WOOTEN COMPANY**  
120 North Boylan Avenue, Raleigh, NC 27603-1423  
919-828-0531 Fax 919-834-3589  
License Number: F-9115

James R. Gregg, P.E. PROJECT ENGINEER  
\_\_\_\_ CONSULTANT CONTACT #2  
\_\_\_\_ CONSULTANT CONTACT #3

SEAL

**DIVISION OF HIGHWAYS UTILITIES UNIT**  
1555 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

BO HEMPHILL, P.E. UTILITIES REGIONAL ENGINEER  
KELVIN MARTIN UTILITIES ENGINEER  
ED REAMS UTILITIES AREA COORDINATOR  
LARRY JAMES UTILITIES COORDINATOR

09.08/99  
 \$\$\$ SYSTEMS \$\$\$  
 \$\$\$ DESIGN \$\$\$  
 \$\$\$ USE DRAWING \$\$\$  
 \$\$\$

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 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 (Type as Shown)   
Designated Utility Line (Type as Shown)

5/14/99

REV: 2/1/2012

5/14/99

# UTILITY CONSTRUCTION

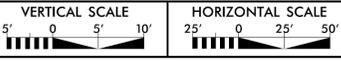
## NCDOT GENERAL NOTES:

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 2012.
2. THE EXISTING UTILITIES BELONG TO ROBESON COUNTY.
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 ENVIRONMENTAL 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.

## 1. NCDOT PROJECT SPECIFIC NOTES:

1. PROPOSED WATER LINE SHALL BE RJDI (RESTRAINED JOINT DUCTILE IRON) AS INDICATED ON THE CONSTRUCTION DRAWINGS. PROPOSED WATER LINE INSTALLED BY HORIZONTAL DIRECTIONAL DRILL SHALL BE FUSIBLE C900 PVC.
2. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS AND APPLICABLE ROBESON COUNTY STANDARDS 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.
3. EXISTING CONDITIONS SURVEY AND PROPOSED ROADWAY PLANS PROVIDED TO THE WOOTEN COMPANY BY NCDOT, NOVEMBER 17, 2016.

PREPARED IN THE OFFICE OF:  <b>THE WOOTEN COMPANY</b> <small>ENGINEERING   PLANNING   ARCHITECTURE</small> <small>120 North Bayboro Avenue Raleigh, NC 27603-1423</small> <small>919.876.0311 fax 919.876.0300</small> <small>License Number: F-0115</small>	PROJECT REFERENCE NO.	SHEET NO.
	<b>B-5333</b>	<b>UC-3</b>
DESIGNED BY: JRG		
DRAWN BY: TK		
CHECKED BY: JRG		
APPROVED BY: MDS		
REVISED:		
		
<b>ONLY WATER LINE CONSTRUCTION SHOWN ON THIS SHEET</b>		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		 37878 <small>Document Not Considered Final Unless All Signatures Completed</small> <small>UTILITY CONSTRUCTION PLANS ONLY</small>

## UTILITY CONSTRUCTION

5/14/99

# PROJECT TYPICAL DETAILS

PREPARED IN THE OFFICE OF:



**THE WOOTEN COMPANY**  
ENGINEERING | PLANNING | ARCHITECTURE  
120 North Boylan Avenue Raleigh, NC 27603-1423  
919.876.0311 fax 919.876.0309  
License Number: F-0115

PROJECT REFERENCE NO. **B-5333** SHEET NO. **UC-3A**

DESIGNED BY: JRG  
DRAWN BY: TK  
CHECKED BY: JRG  
APPROVED BY: JRG

REVIS: **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

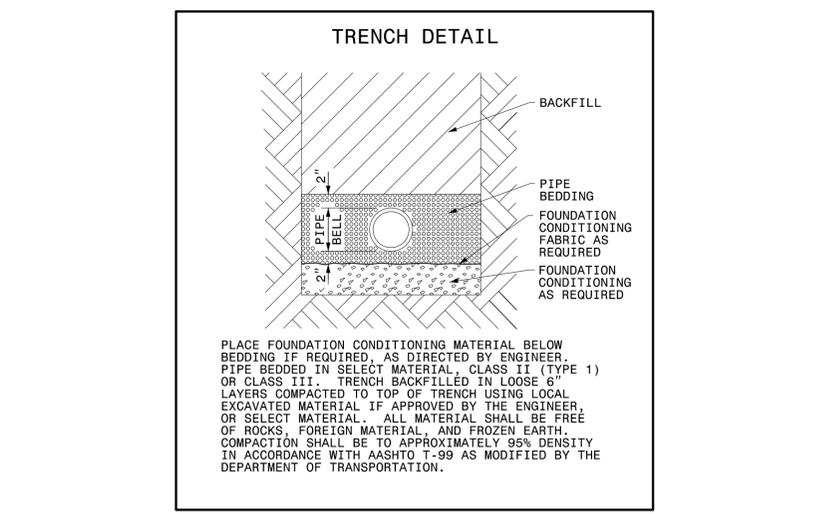
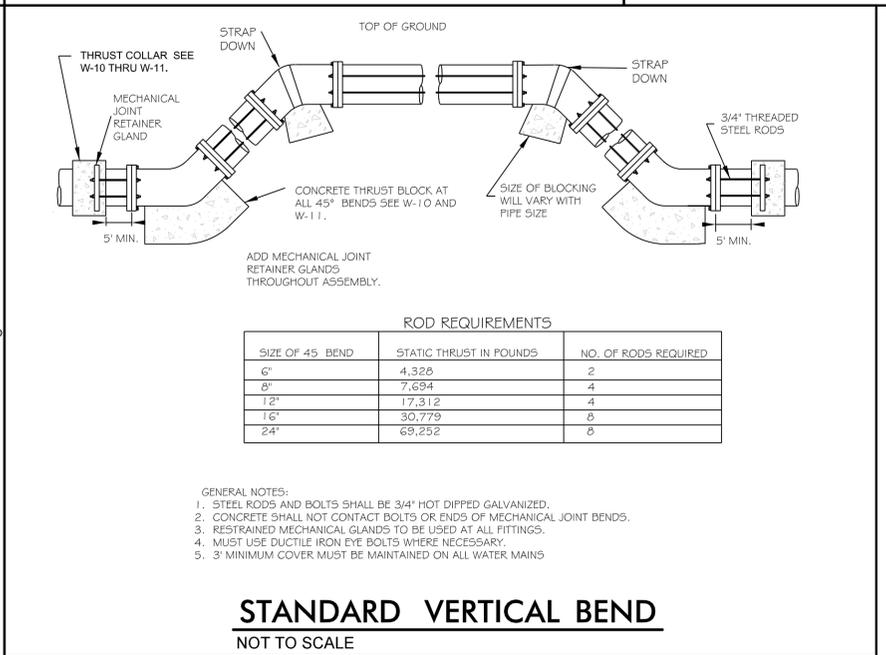
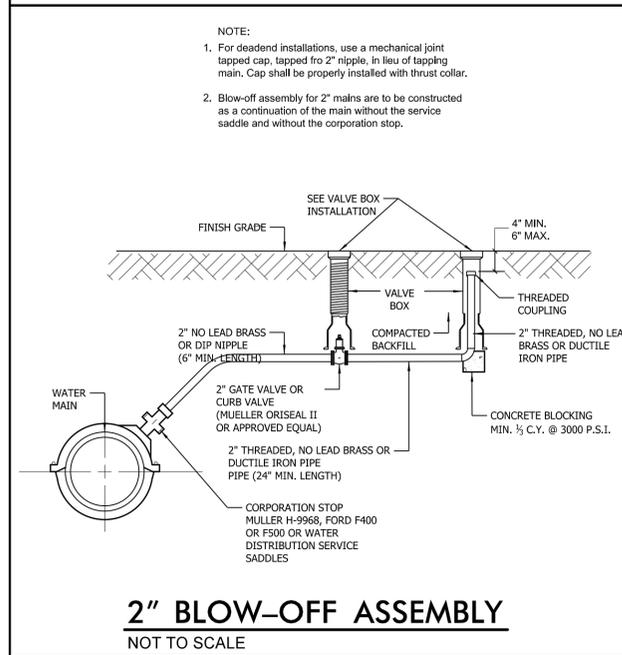
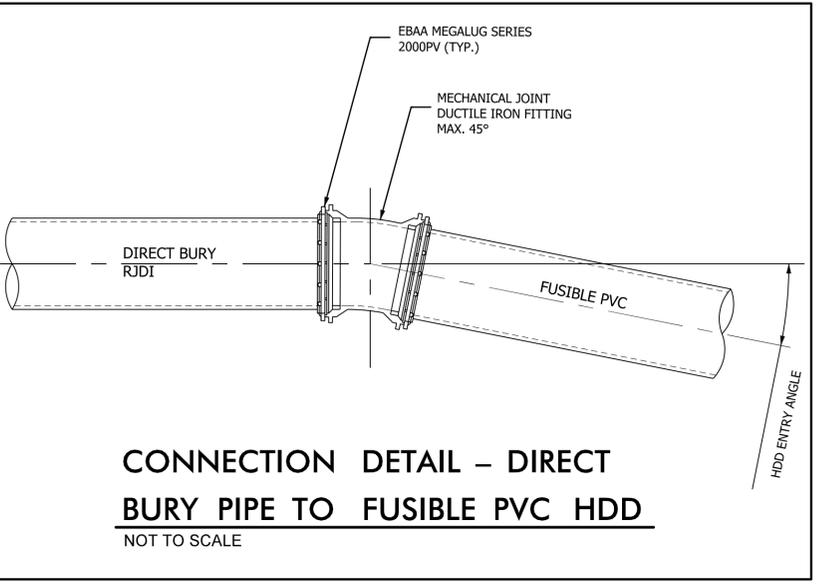
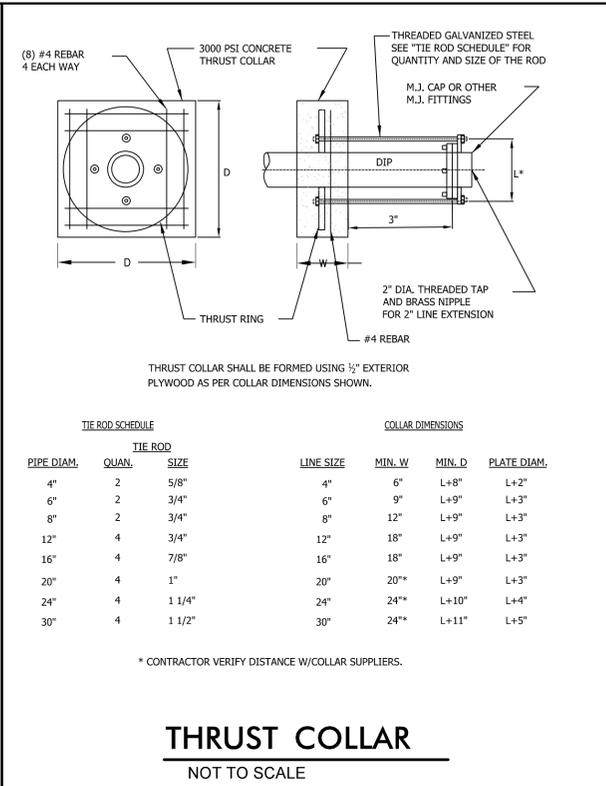
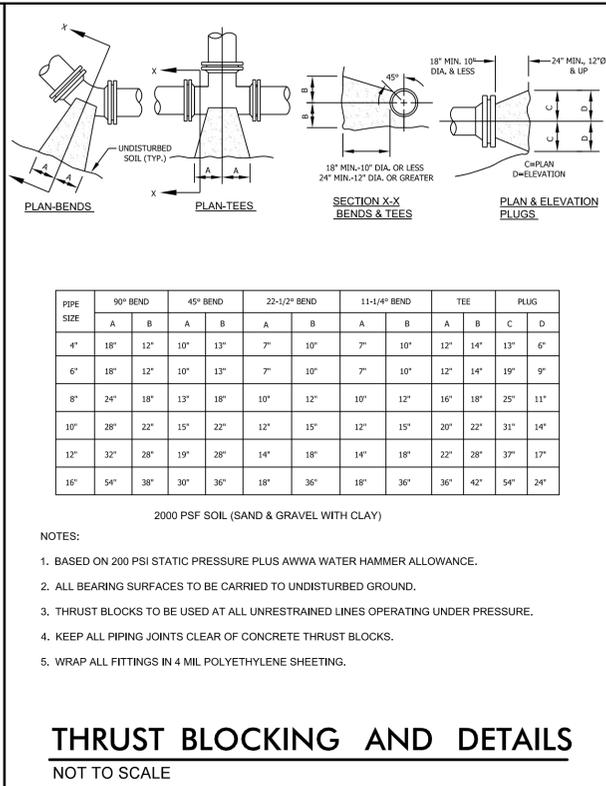
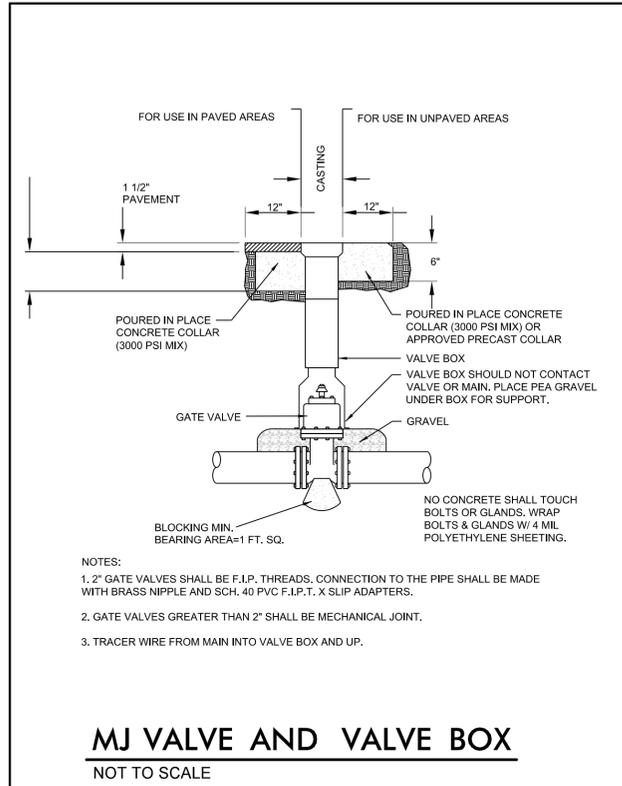
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PHONE: (919) 707-6690  
FAX: (919) 250-4151

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UTILITY CONSTRUCTION  
PLANS ONLY

VERTICAL SCALE: 5' 0 5' 10'  
HORIZONTAL SCALE: 25' 0 25' 50'

**ONLY WATER LINE CONSTRUCTION SHOWN ON THIS SHEET**

## UTILITY CONSTRUCTION



MAXIMUM TRENCH WIDTH AT TOP OF PIPE			
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		

# WATER LINES OWNED BY ROBESON COUNTY

PREPARED IN THE OFFICE OF:



**THE WOOTEN COMPANY**  
ENGINEERING | PLANNING | ARCHITECTURE  
120 North Robeson Avenue, Raleigh, NC 27603-1423  
919.876.0311 | 919.876.0309  
License Number: F-0115

PROJECT REFERENCE NO.

**B-5333**

SHEET NO.

**UC-4**

DESIGNED BY: JRG

DRAWN BY: TK

CHECKED BY: JRG

APPROVED BY: JRG

REVISED:

**NORTH CAROLINA  
DEPARTMENT OF  
TRANSPORTATION**

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

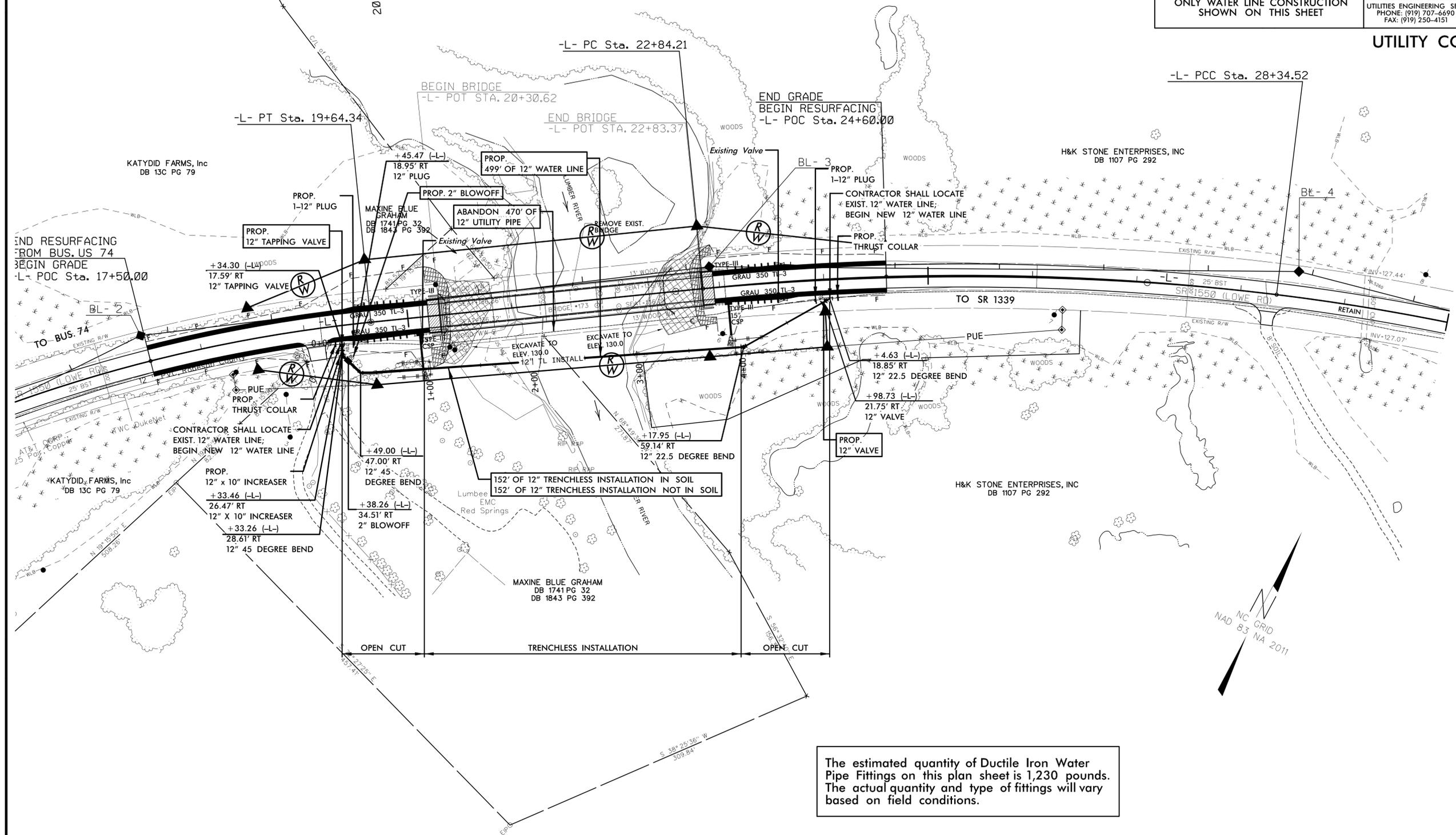


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**ONLY WATER LINE CONSTRUCTION  
SHOWN ON THIS SHEET**

## UTILITY CONSTRUCTION



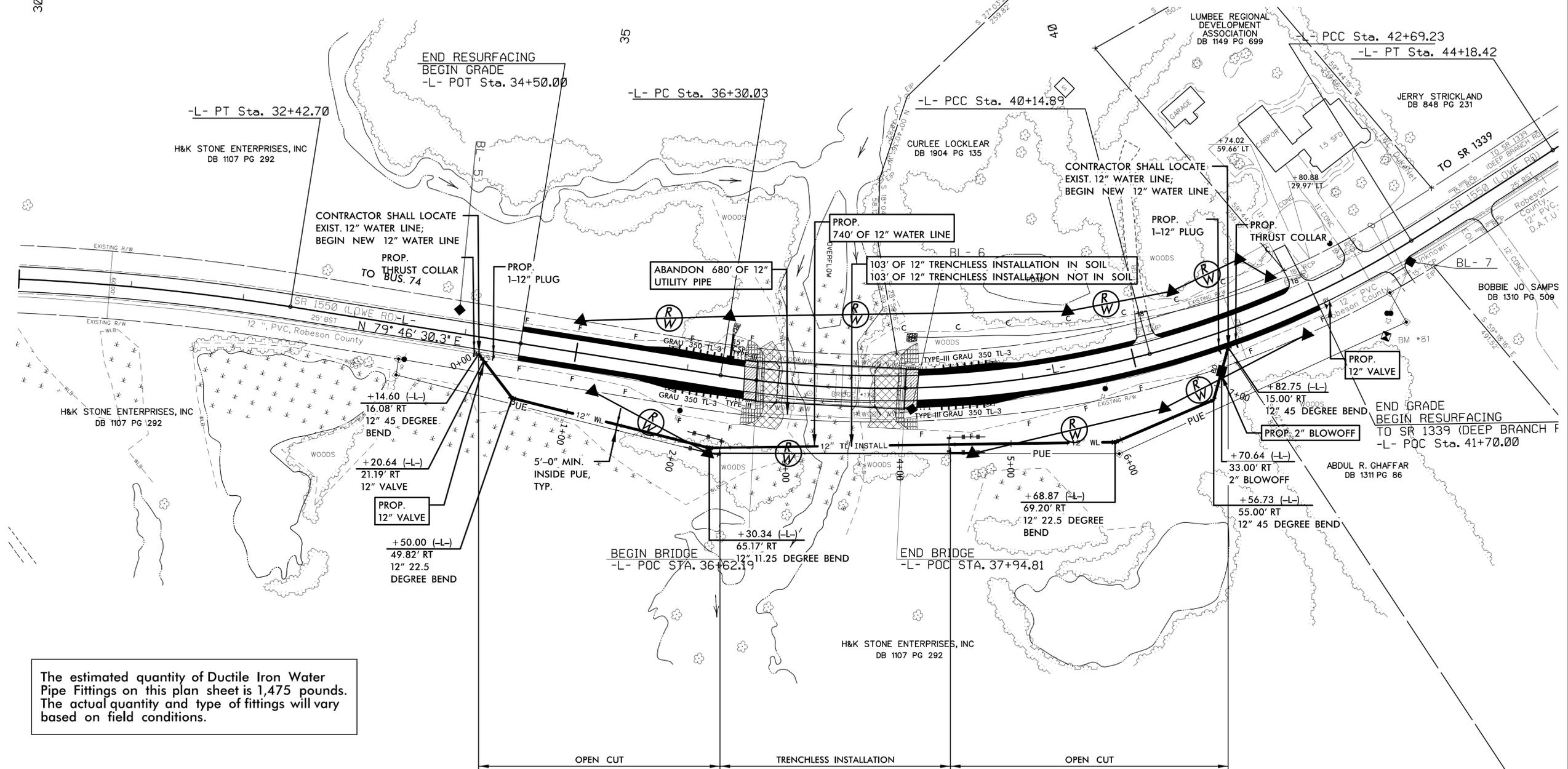
The estimated quantity of Ductile Iron Water Pipe Fittings on this plan sheet is 1,230 pounds. The actual quantity and type of fittings will vary based on field conditions.

**PROPOSED BRIDGE REPLACEMENT SHOWN IN  
BACKGROUND FOR REFERENCE PURPOSES ONLY**

# WATER LINES OWNED BY ROBESON COUNTY

PREPARED IN THE OFFICE OF:  <b>THE WOOTEN COMPANY</b> <small>ENGINEERING   PLANNING   ARCHITECTURE</small> <small>120 North Robeson Avenue Raleigh, NC 27603-1423</small> <small>919.876.0311 fax 919.876.0309</small> <small>License Number: F-0115</small>	PROJECT REFERENCE NO. <b>B-5333</b>	SHEET NO. <b>UC-5</b>
DESIGNED BY: JRG DRAWN BY: TK CHECKED BY: JRG APPROVED BY: JRG REVISED:		
VERTICAL SCALE 	HORIZONTAL SCALE 	
<b>ONLY WATER LINE CONSTRUCTION SHOWN ON THIS SHEET</b>		
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151		

## UTILITY CONSTRUCTION



The estimated quantity of Ductile Iron Water Pipe Fittings on this plan sheet is 1,475 pounds. The actual quantity and type of fittings will vary based on field conditions.

**PROPOSED BRIDGE REPLACEMENT SHOWN IN BACKGROUND FOR REFERENCE PURPOSES ONLY**

5/28/19

### WATER LINES OWNED BY ROBESON COUNTY

PROFILE SHOWN IS BASED ON STATIONING ALONG  
PROPOSED WATER LINE ALIGNMENT ALONG  
ROADWAY ALIGNMENT -L-  
(SEE SHEET UC-4)

PREPARED IN THE OFFICE OF:



**THE WOOTEN COMPANY**  
ENGINEERING | PLANNING | ARCHITECTURE  
120 North Bayshore Avenue, Raleigh, NC 27603-1423  
919.878.0511 | 919.878.2188  
License Number: F-0113

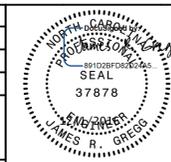
PROJECT REFERENCE NO. **B-5333** SHEET NO. **UC-6**

DESIGNED BY: JRG  
DRAWN BY: TK  
CHECKED BY: JRG  
APPROVED BY: JRG

REVIS: **NORTH CAROLINA DEPARTMENT OF TRANSPORTATION**

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

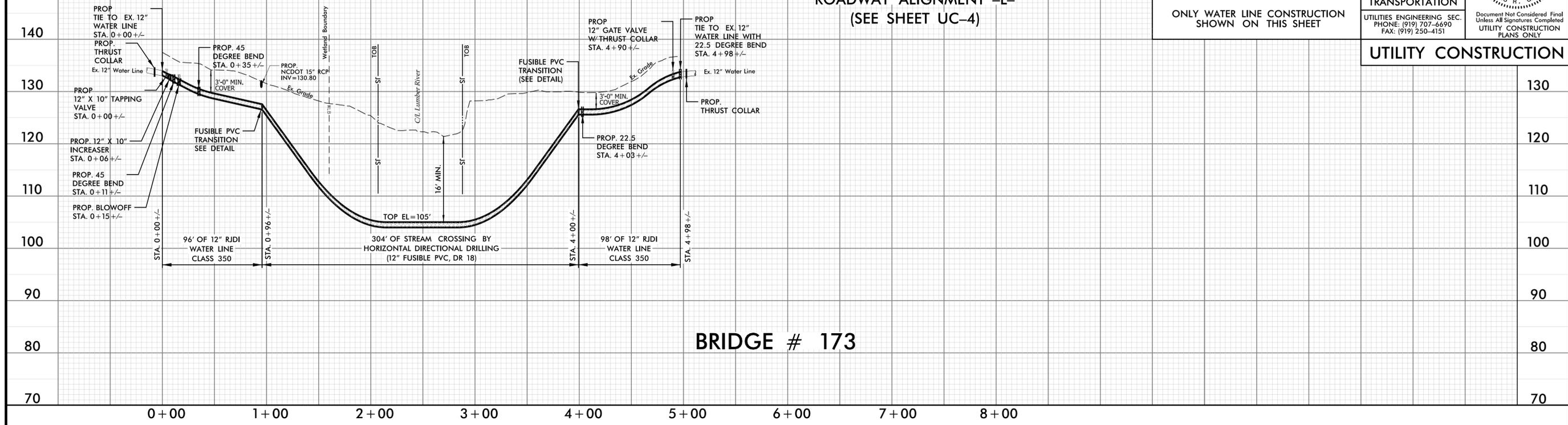
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UTILITY CONSTRUCTION  
PLANS ONLY



VERTICAL SCALE: 5' 0 5' 10'  
HORIZONTAL SCALE: 25' 0 25' 50'

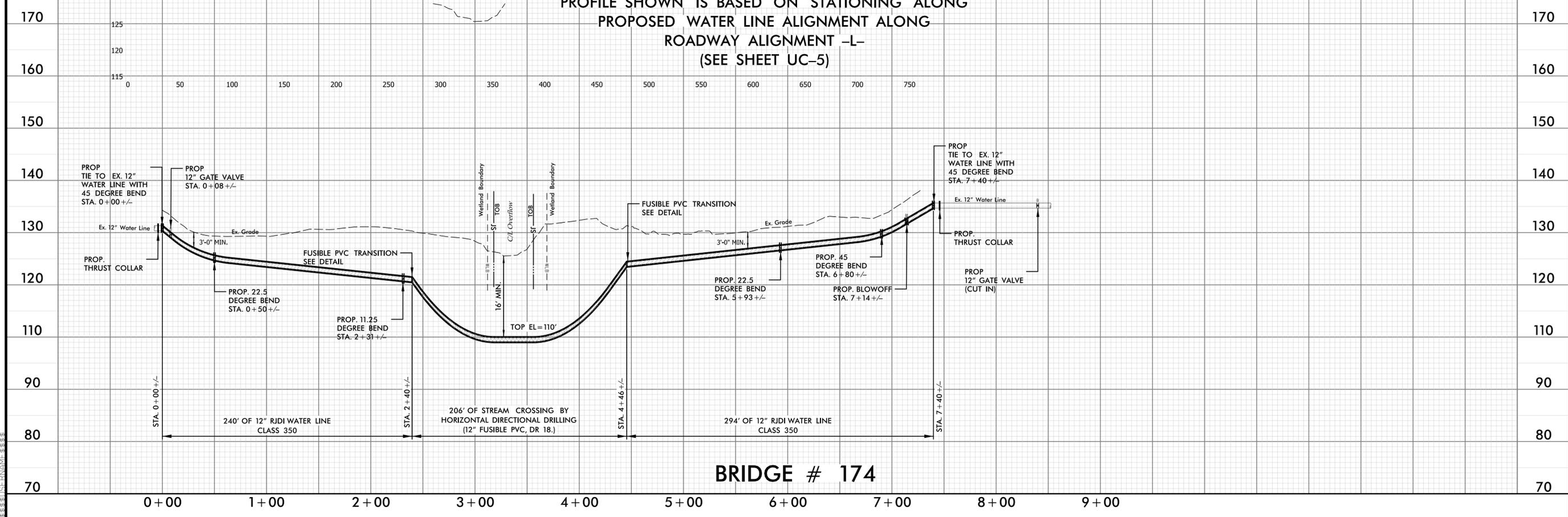
ONLY WATER LINE CONSTRUCTION SHOWN ON THIS SHEET

### UTILITY CONSTRUCTION



### BRIDGE # 173

PROFILE SHOWN IS BASED ON STATIONING ALONG  
PROPOSED WATER LINE ALIGNMENT ALONG  
ROADWAY ALIGNMENT -L-  
(SEE SHEET UC-5)



### BRIDGE # 174

5/28/19