

05/08/99

T.I.P. NO.	SHEET NO.
B-4418	UC-1

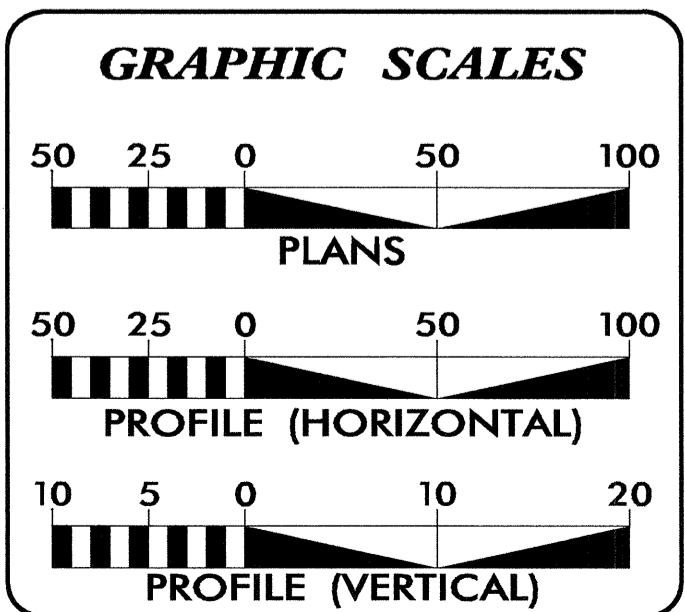
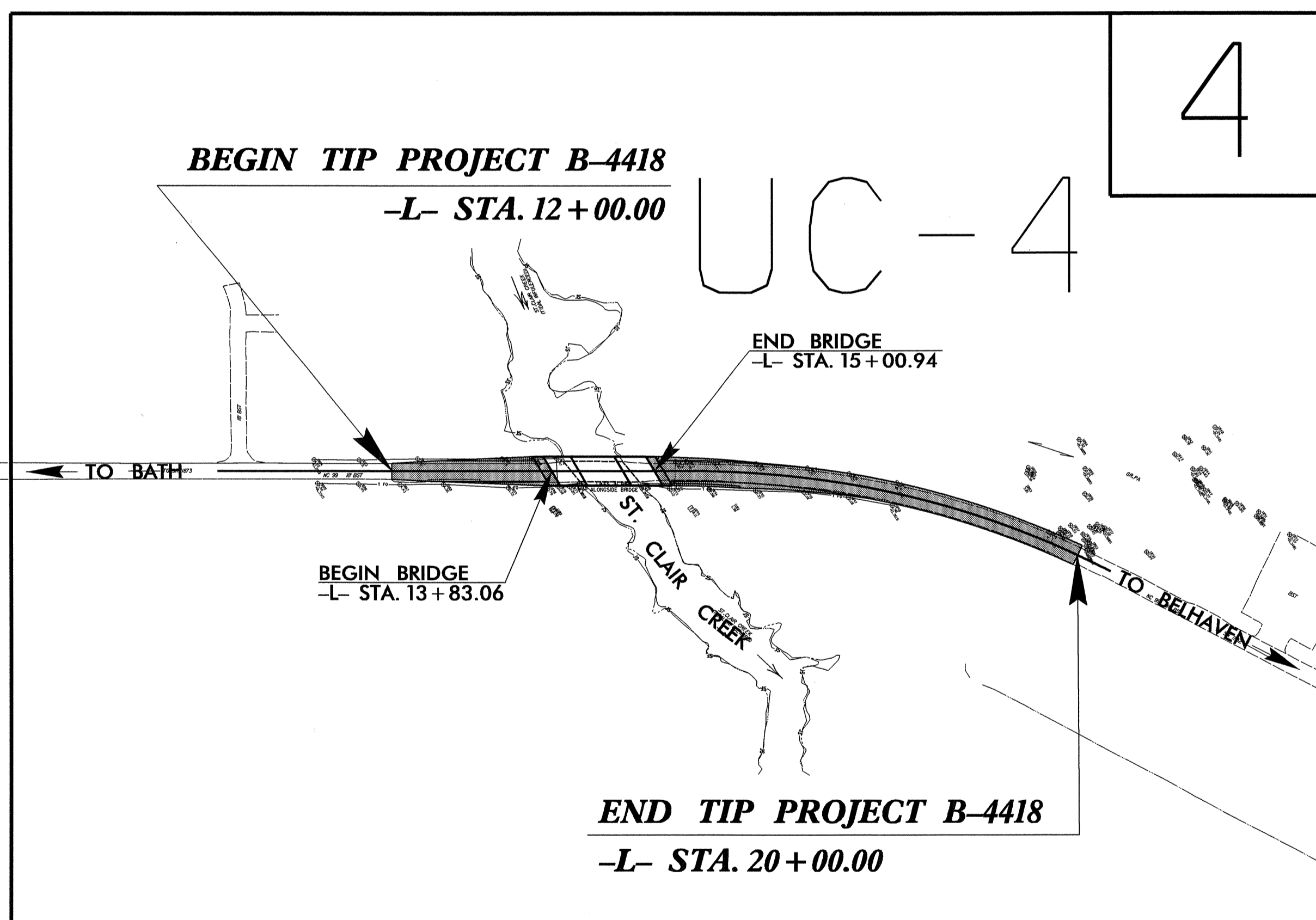
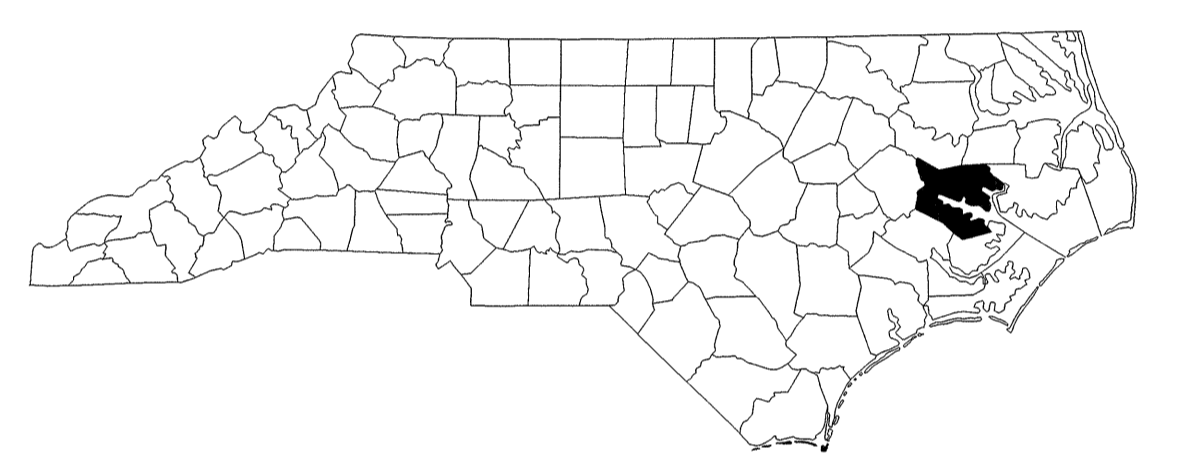
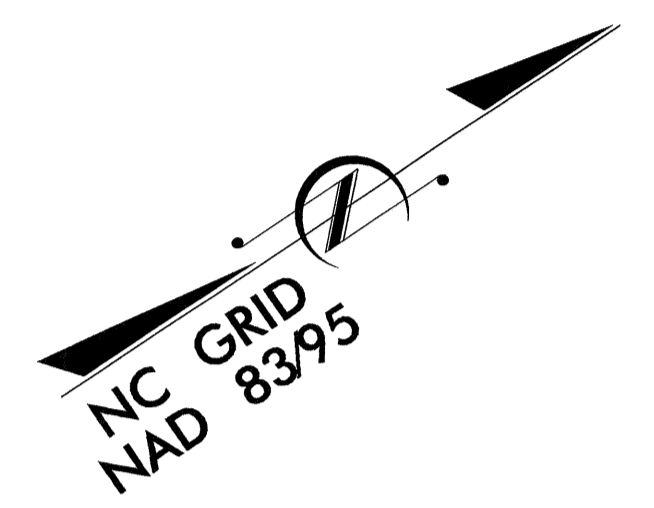
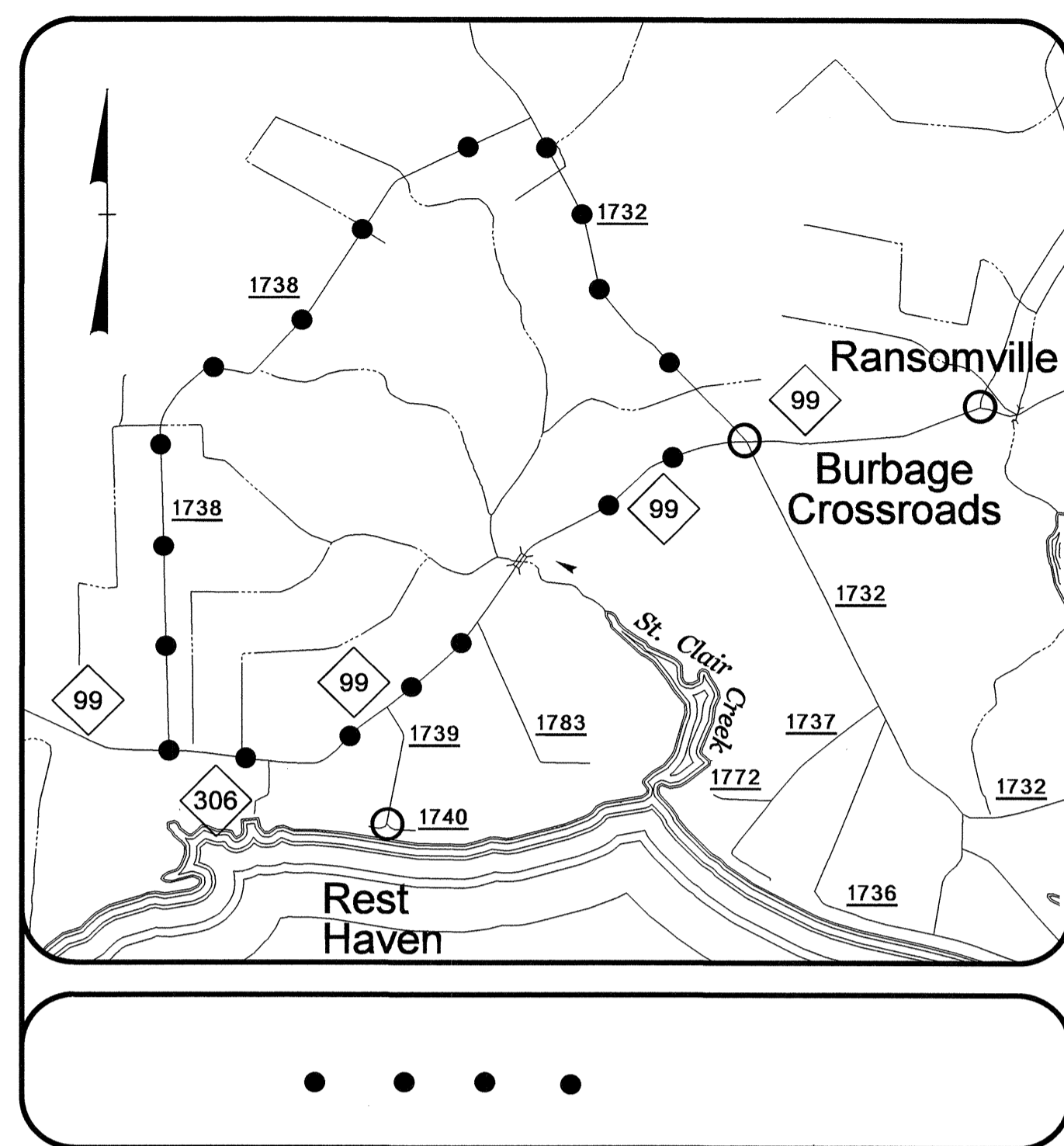
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS  
BEAUFORT COUNTY**

**LOCATION: BRIDGE NO.54 OVER ST. CLAIR CREEK ON NC 99**

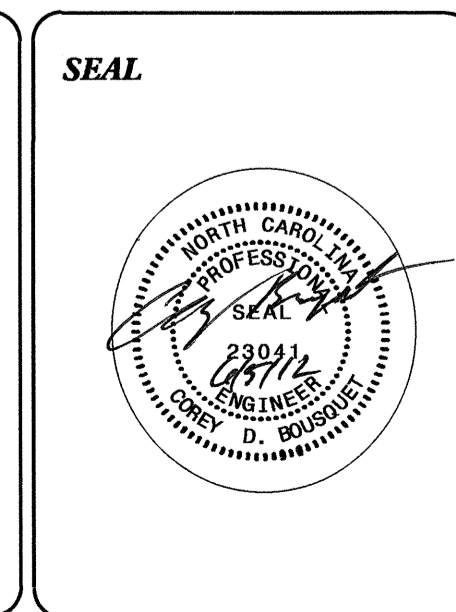
**TYPE OF WORK: RELOCATE WATER LINE**

**TIP PROJECT: B-4418**



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A	DETAILS
UC-4	UTILITY CONSTRUCTION SHEET
UC-5 THUR UC-7	PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT	
(1)	BEAUFORT COUNTY WATER



PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
UTILITIES UNIT  
UTILITIES ENGINEERING**

1591 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1591  
PHONE (919) 707-6690  
FAX (919) 250-4151

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Corey Bousquet, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Kifah Kamil** UTILITIES PROJECT DESIGNER

05-JUN-2012 15:42 UC-1\Utilities\Projects\B-4418\Ut\_Tip\Title\_UC1\_UC2\_UC3.psh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

## UTILITIES PLAN SHEET SYMBOLS

### PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	
11 1/4 Degree Bend	
22 1/2 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	
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 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		Sanitary Sewer Cleanout	
End of Information			

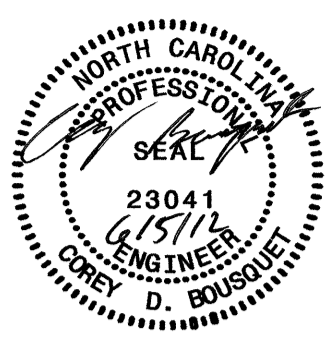
\*For Existing Utilities  
 Utility Line Drawn from Record (Type as Shown)   
 Designated Utility Line (Type as Shown)

5/14/99  
 05-JUN-2012 15:42  
 uc2.uc3.pshdgn  
 REV: 2/1/2012

5/14/09

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\$\$\$\$\$USERNAME\$\$\$\$\$

# UTILITY CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-4418	UC-3
DESIGNED BY: CLY	
DRAWN BY: CLY	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

## 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 BEAUFORT COUNTY WATER
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL HEALTH. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER QUALITY. 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 OPPROTUNITY 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. 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 PATH DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
2. IF HDPE PIPE IS INSTALLED BY DIRECTIONAL DRILL. IT SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.

## LIST OF STANDARD DRAWINGS

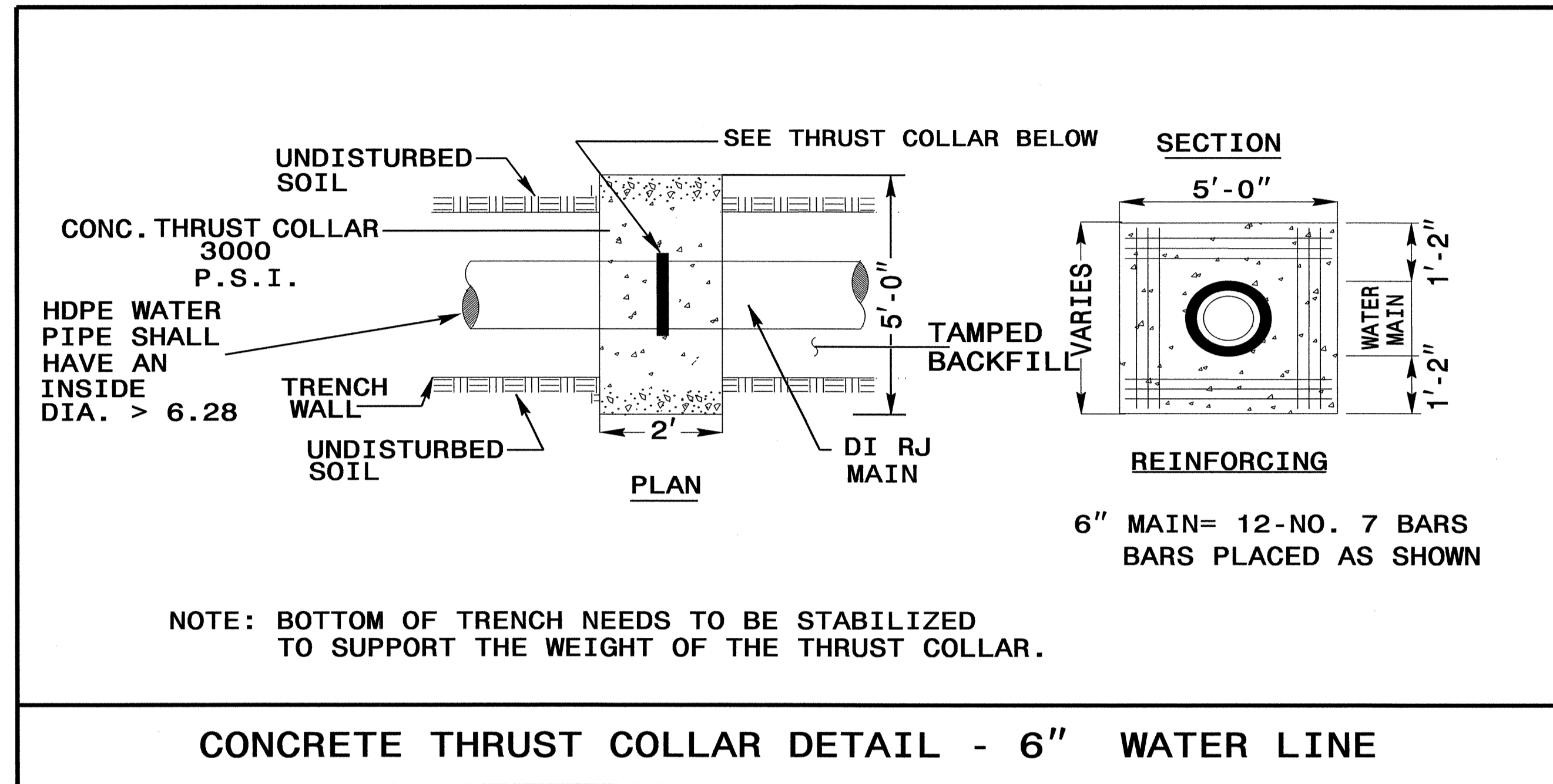
1515.01 WATER METER

## UTILITY CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-4418	UC-3A
DESIGNED BY: CLY	
DRAWN BY: CLY	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

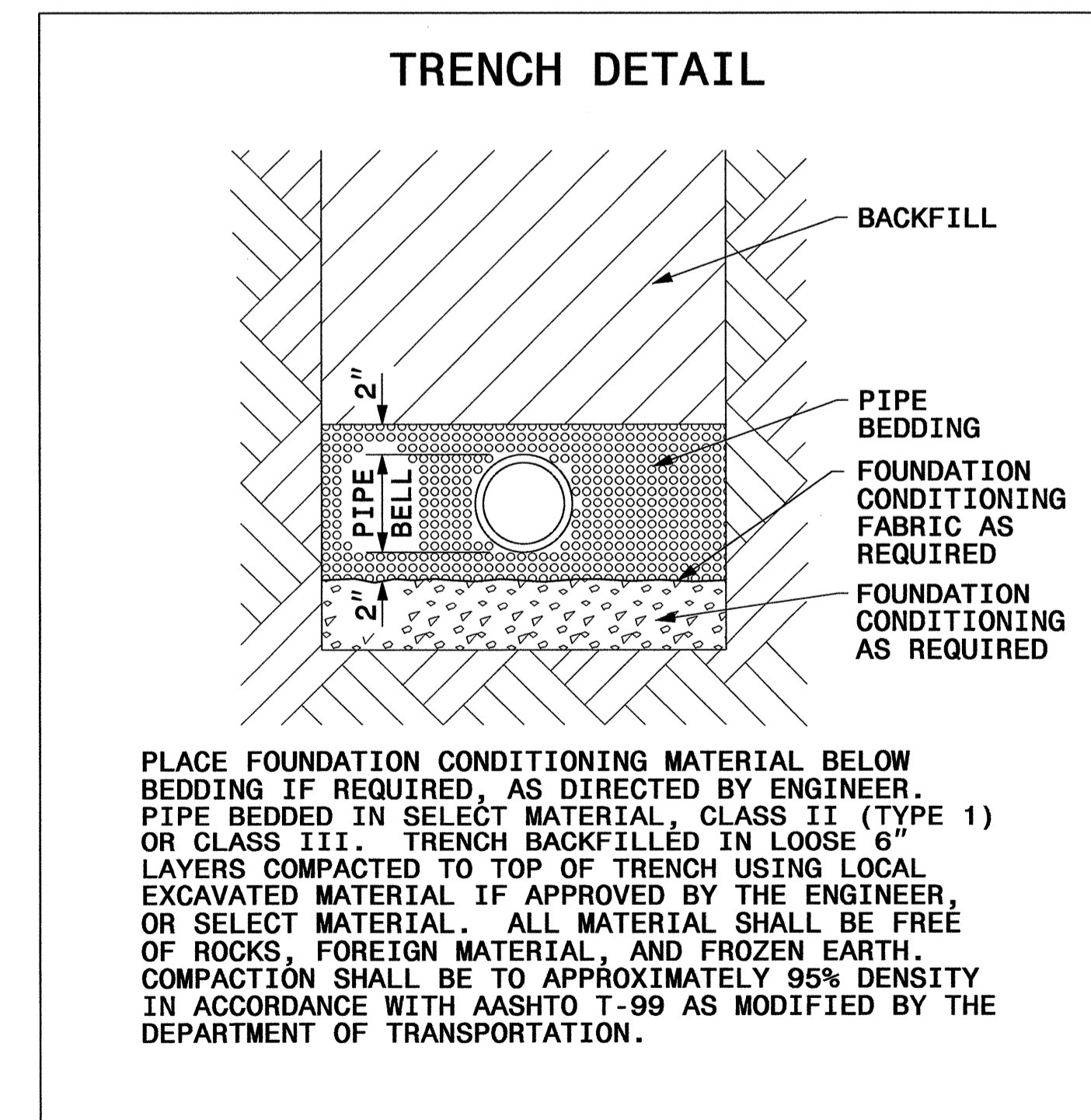
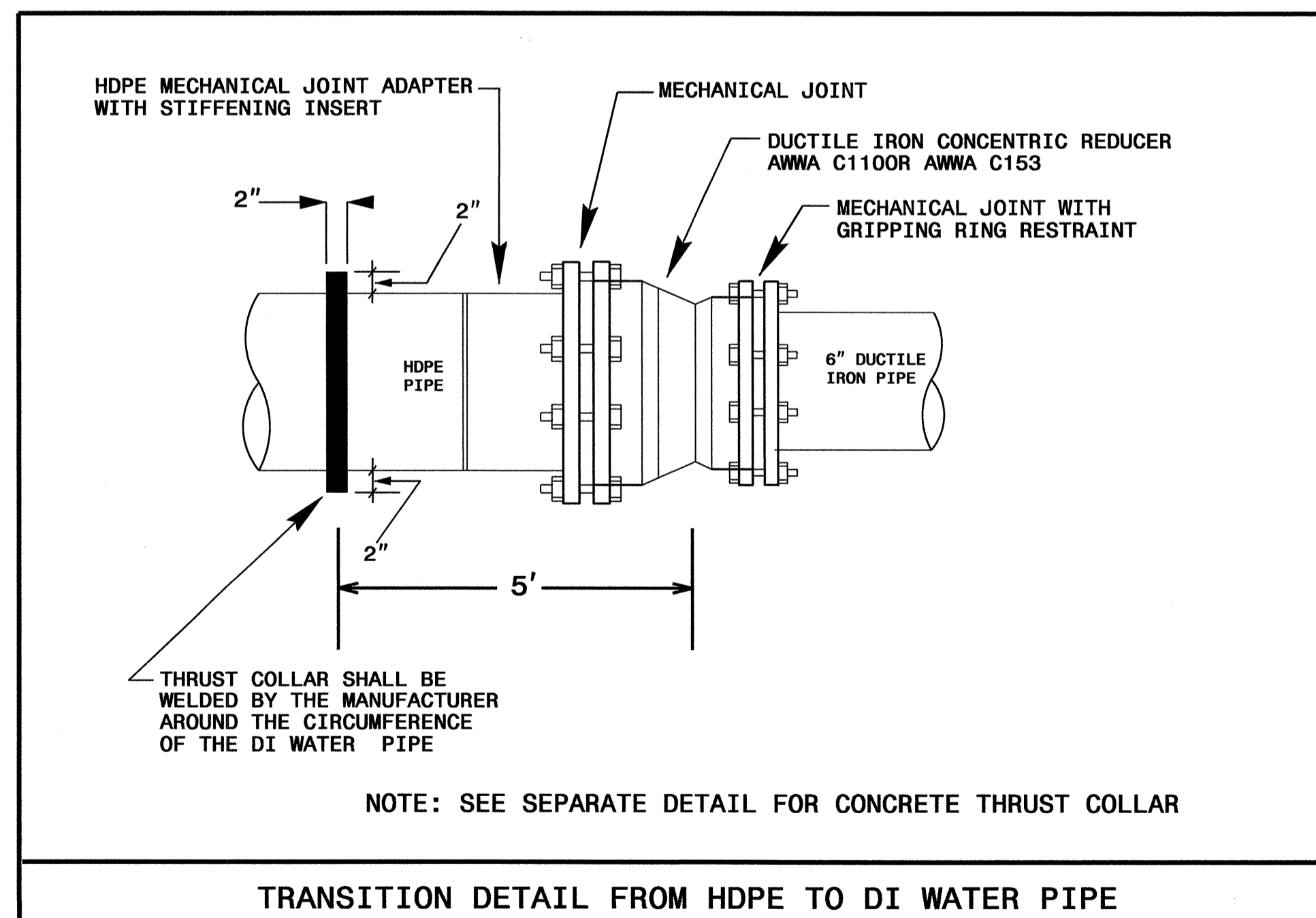
# PROJECT TYPICAL DETAILS

## UTILITY CONSTRUCTION

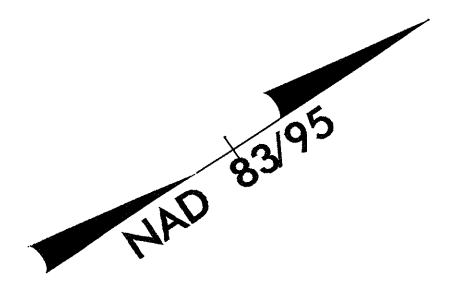


MAXIMUM TRENCH WIDTH AT TOP OF PIPE

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		

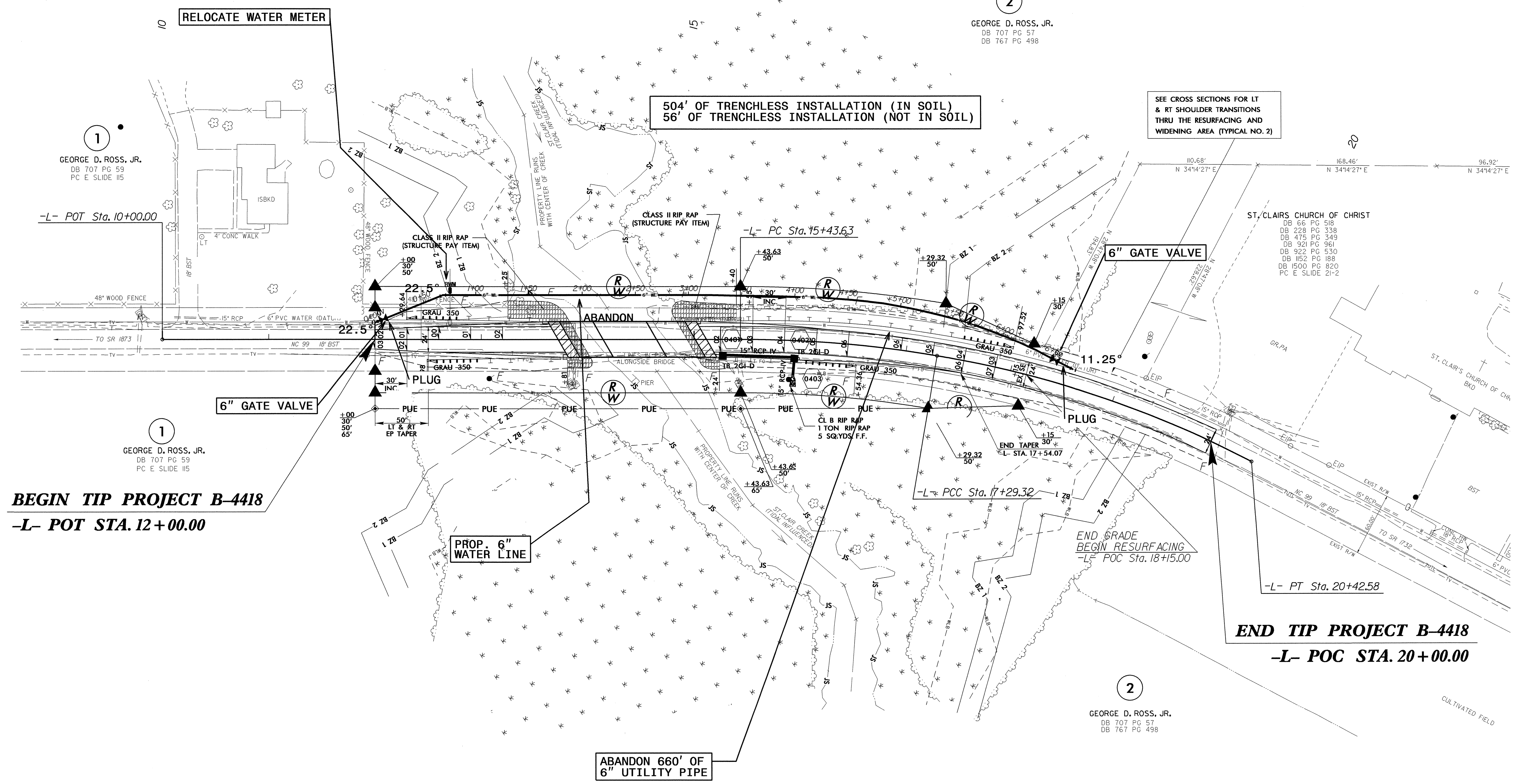


PROJECT REFERENCE NO. B-4418	SHEET NO. UC-4
DESIGNED BY: CLY	
DRAWN BY: CLY	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISER:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



**UTILITY CONSTRUCTION**

560'  
TRENCHLESS INSTALLATION  
BEGIN TRENCHLESS AT STA. 0+80      END TRENCHLESS AT STA. 6+40



1  
GEORGE D. ROSS, JR.  
DB 707 PG 59  
PC E SLIDE 115

1  
GEORGE D. ROSS, JR.  
DB 707 PG 59  
PC E SLIDE 115

2  
GEORGE D. ROSS, JR.  
DB 707 PG 57  
DB 767 PG 498

**BEGIN TIP PROJECT B-4418**  
-L- POT STA. 12+00.00

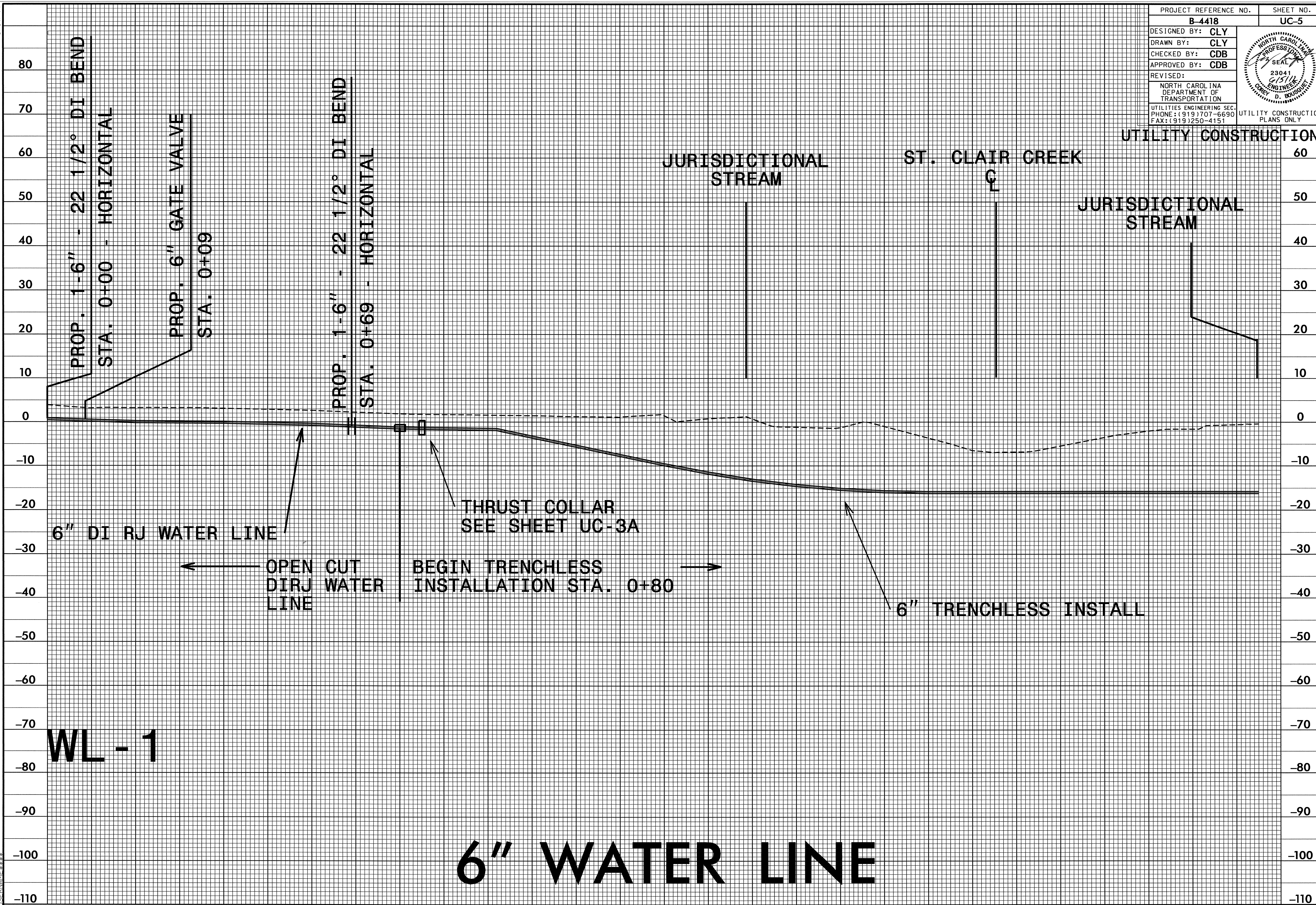
**END TIP PROJECT B-4418**  
-L- POC STA. 20+00.00

ABANDON 660' OF  
6" UTILITY PIPE

5/14/99  
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P:\Users\jerry.ross\My Documents\Projects\B-4418-UC-4\_PSH.dgn

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4418	UC-5
DESIGNED BY: CLY	
DRAWN BY: CLY	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



PROP. 1-6" - 22 1/2° DI BEND  
 STA. 0+00 - HORIZONTAL

PROP. 6" GATE VALVE  
 STA. 0+09

PROP. 1-6" - 22 1/2° DI BEND  
 STA. 0+69 - HORIZONTAL

6" DI RJ WATER LINE

OPEN CUT  
 DIRJ WATER  
 LINE

BEGIN TRENCHLESS  
 INSTALLATION STA. 0+80

THRUST COLLAR  
 SEE SHEET UC-3A

JURISDICTIONAL  
 STREAM

ST. CLAIR CREEK

JURISDICTIONAL  
 STREAM

UTILITY CONSTRUCTION

WL-1

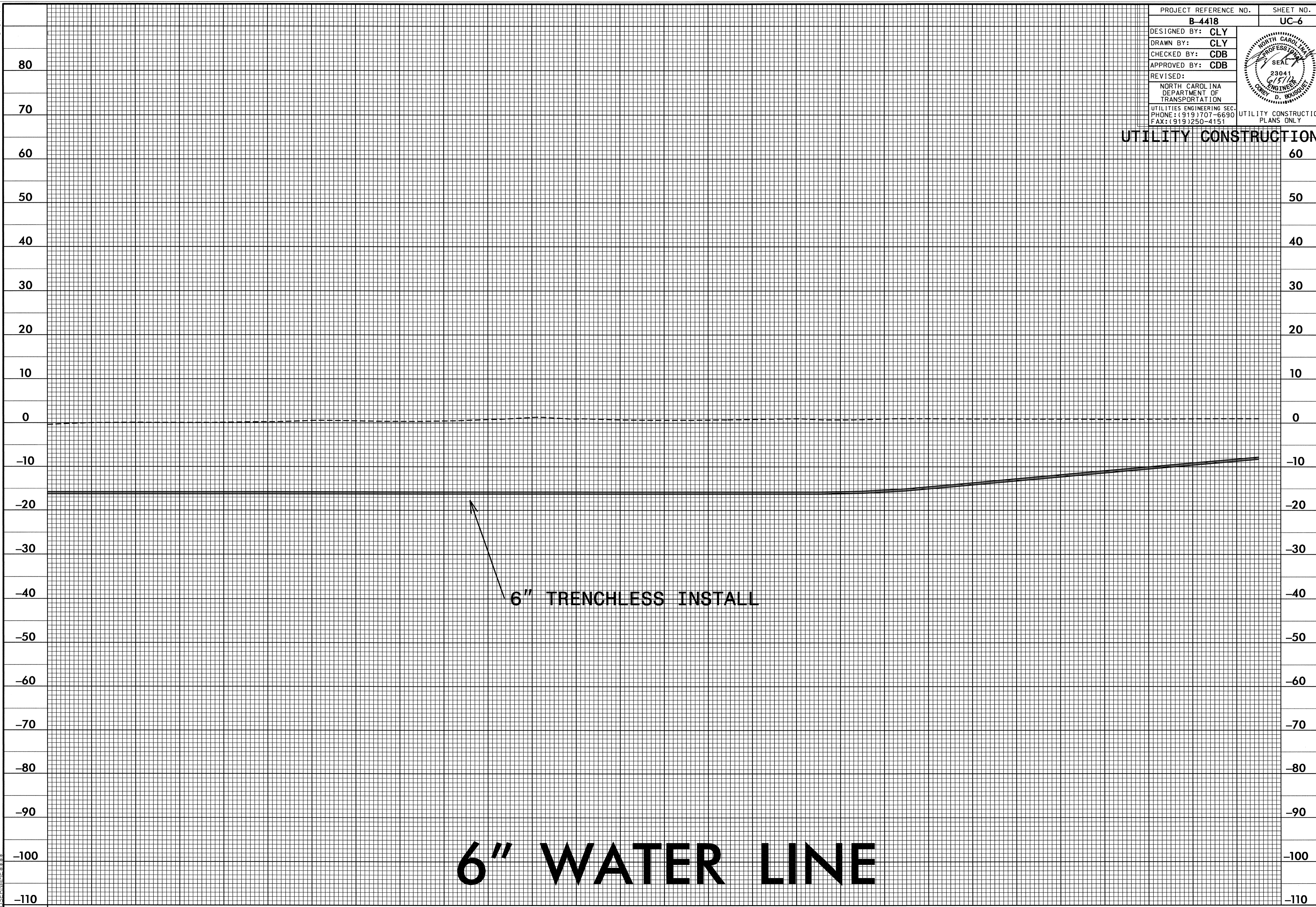
6" WATER LINE

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 \$\$\$SERIAL\$\$\$

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
<b>B-4418</b>	<b>UC-6</b>
DESIGNED BY: <b>CLY</b>	
DRAWN BY: <b>CLY</b>	
CHECKED BY: <b>CDB</b>	
APPROVED BY: <b>CDB</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6590 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

### UTILITY CONSTRUCTION



6" TRENCHLESS INSTALL

# 6" WATER LINE

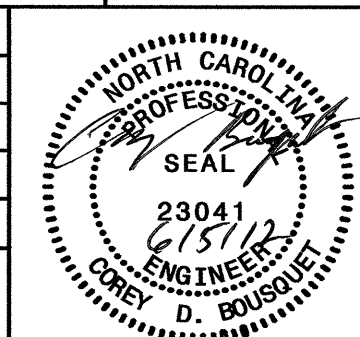
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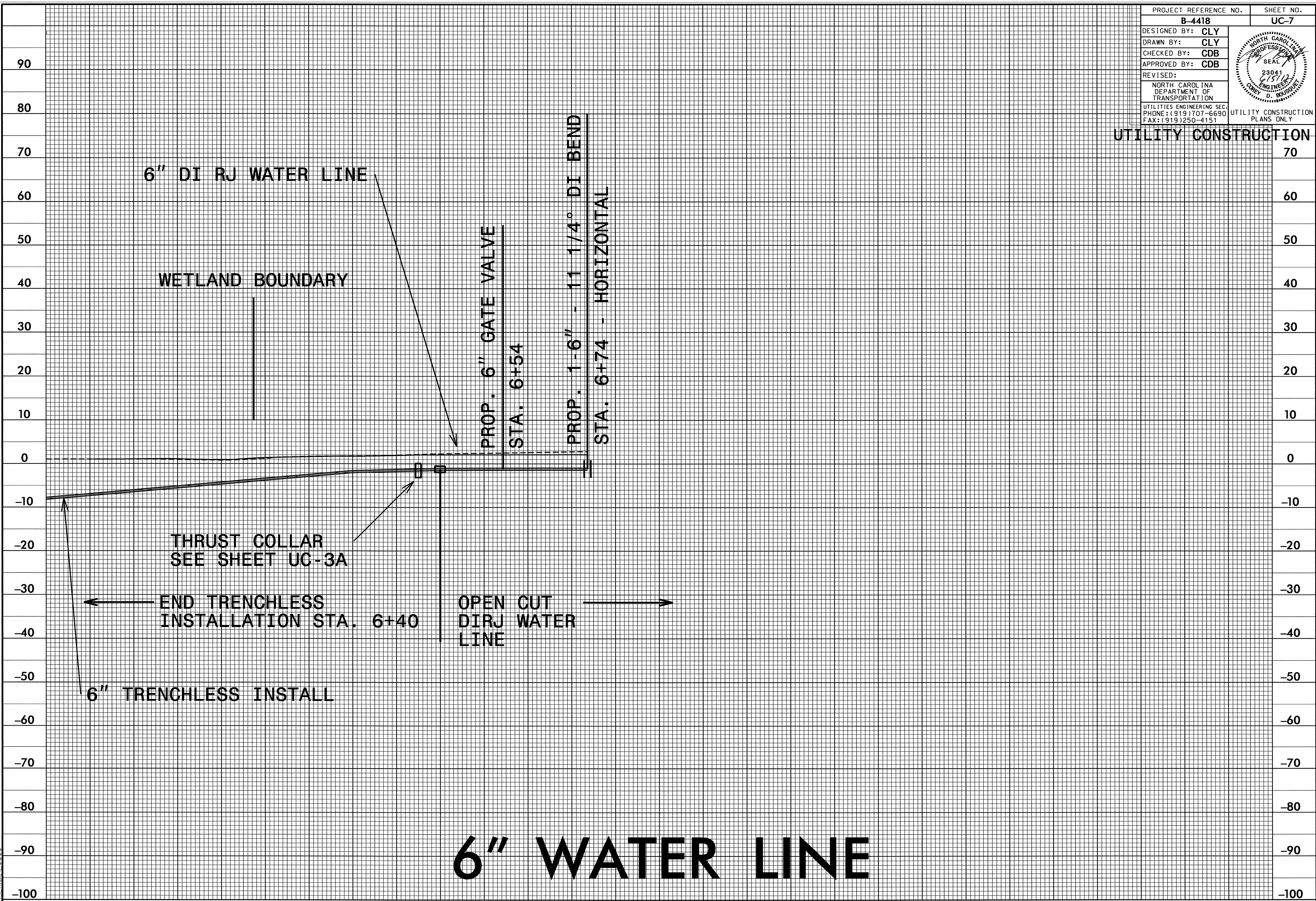
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4418	UC-7
DESIGNED BY: CLY	
DRAWN BY: CLY	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



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6+00

7+00

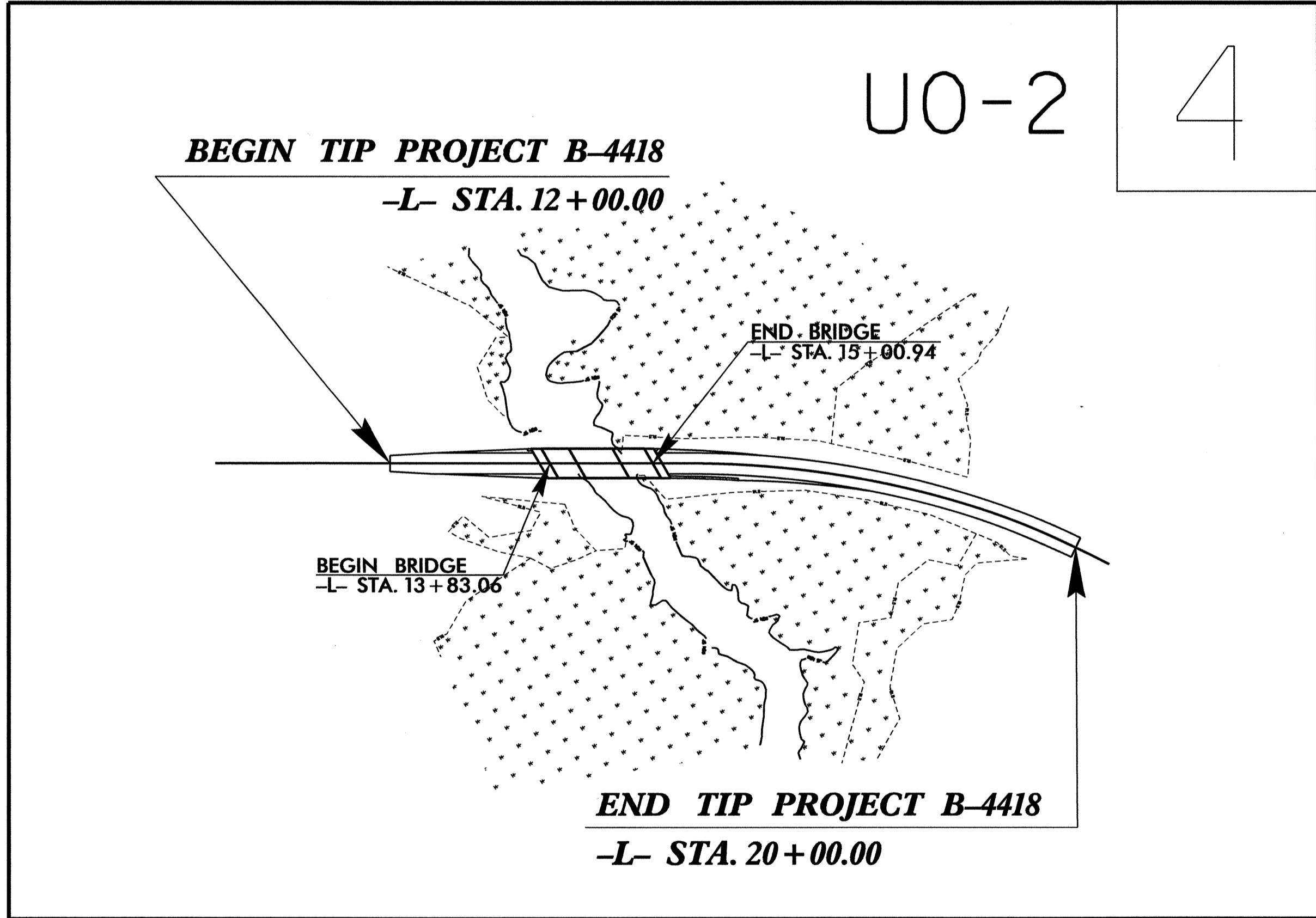
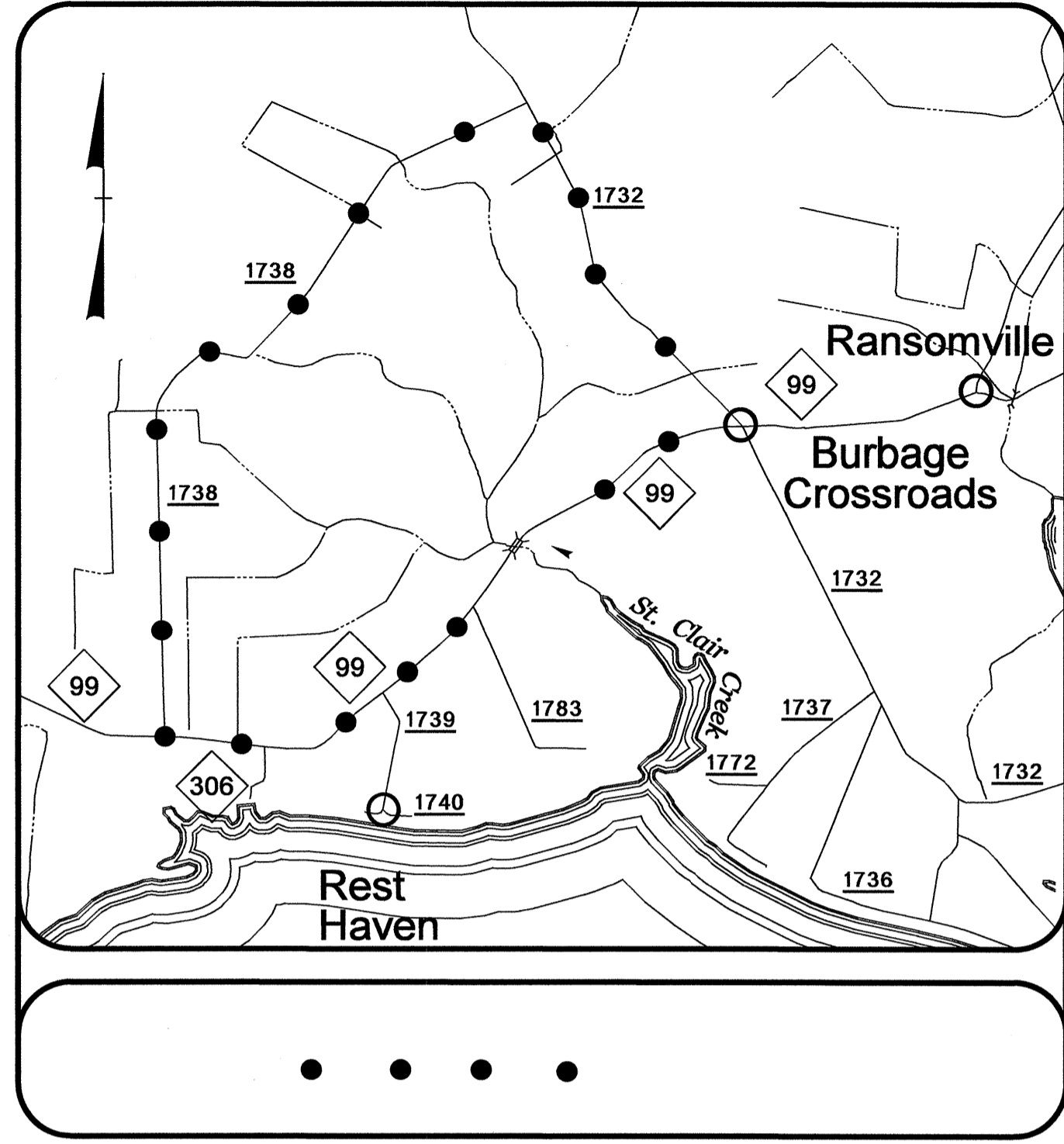
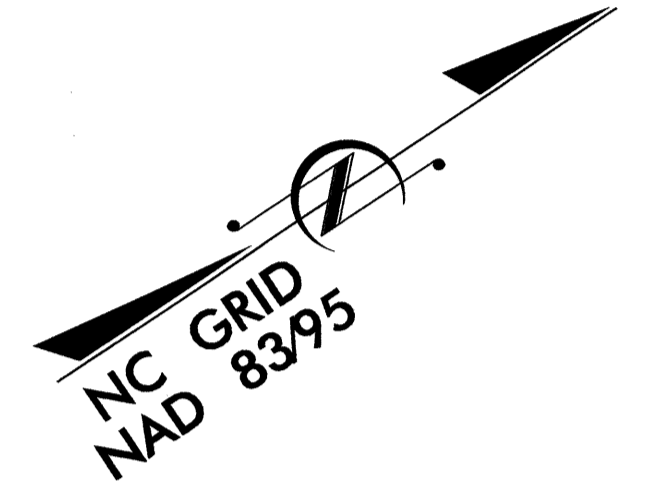


T.I.P. NO.	SHEET NO.
B-4418	UO-1

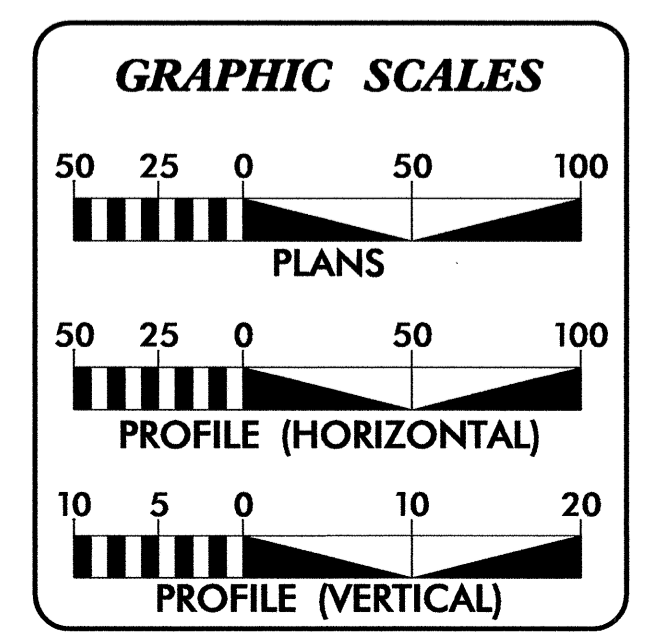
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS  
BEAUFORT COUNTY**

**LOCATION: BRIDGE NO.54 OVER ST. CLAIR CREEK ON NC 99**  
**TYPE OF WORK: RELOCATE TELEPHONE AND POWER**



**TIP PROJECT: B-4418**



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITY BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT
(1) TIDELAND EMC
(2) TRI-COUNTY TELECOM

PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
UTILITIES UNIT  
UTILITIES ENGINEERING**

1591 MAIL SERVICES CENTER  
RALEIGH, NC 27699-1591  
PHONE (919) 707-6690  
FAX (919) 250-4151

<b>Roger Worthington, P.E.</b>	UTILITIES SECTION ENGINEER
<b>Corey Bousquet, P.E.</b>	UTILITIES SQUAD LEADER PROJECT ENGINEER
<b>Kifah Kamil</b>	UTILITIES PROJECT DESIGNER

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