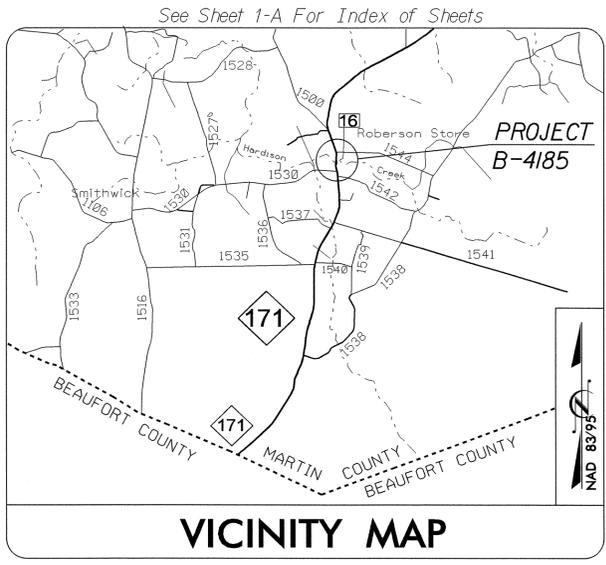


TIP PROJECT: B-4185

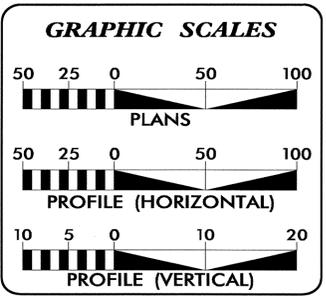
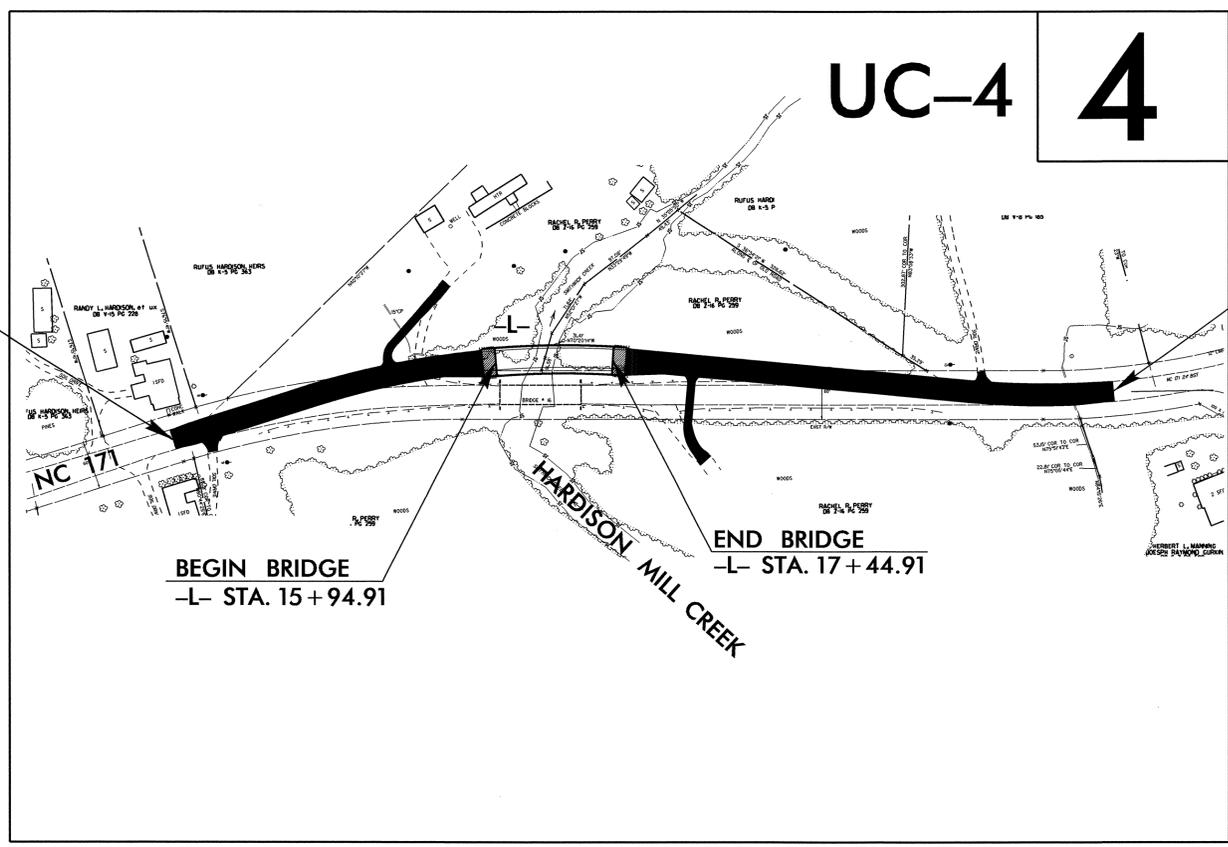


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS MARTIN COUNTY

**LOCATION: REPLACEMENT OF BRIDGE NO.16 ON NC 171
OVER HARDISON MILL CREEK**

TYPE OF WORK: RELOCATE 6" WATER LINE



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	UTILITY PROFILE SHEETS

WATER AND SEWER OWNERS ON PROJECT

(1) MARTIN COUNTY WATER DISTRICT - WATER





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

1555 MAIL SERVICES CENTER
RALEIGH NC 27699-1555
PHONE (919) 707-6690
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Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Corey Bousquet, P.E. UTILITIES PROJECT DESIGNER

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	PS(W)
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	PS(SS)

PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

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

Thrust Block	⊥
Air Release Valve	AR
Utility Vault	UV
Concrete Pier	CP
Steel Pier	SP
Plan Note	↙ NOTE
Pay Item Note	↙ PAY ITEM

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	AATUR
End of Information	E.O.I.

*Underground Power Line	—P—
*Underground Telephone Cable	—T—
*Underground Telephone Conduit	—TC—
*Underground Fiber Optics Telephone Cable	—TF—
*Underground TV Cable	—TV—
*Underground Fiber Optics TV Cable	—TV FO—
*Underground Gas Pipeline	—G—
Aboveground Gas Pipeline	—A/G Gas—
*Underground Water Line	—W—
Aboveground Water Line	—A/G Water—
*Underground Gravity Sanitary Sewer Line	—SS—
Aboveground Gravity Sanitary Sewer Line	—A/G Sanitary Sewer—
*Underground SS Forced Main Line	—FSS—
Underground Unknown Utility Line	—UUL—
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) - - - - -

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 04-MAR-2013 15:54
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 REV: 2/1/2012

UTILITY CONSTRUCTION

PROJECT REFERENCE NO.	SHEET NO.
B-4185	UC-3
DESIGNED BY: REB	
DRAWN BY: REB	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

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 6" WATER LINE BELONGS TO MARTIN COUNTY WATER DISTRICT.
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:

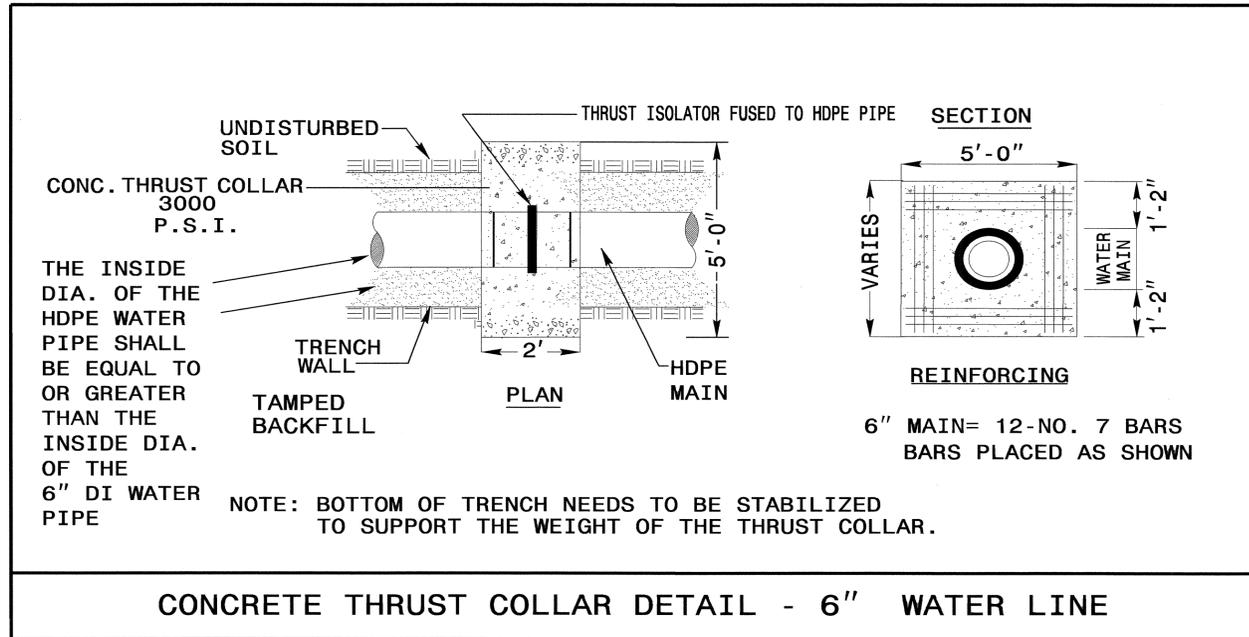
1. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
2. HDPE PIPE INSTALLED BY DIRECTIONAL DRILL SHALL BE FILLED WITH WATER AND NOT BE CONNECTED TO ANY OTHER PIPE OR FITTINGS FOR ONE WEEK FROM THE TIME OF INSTALLATION.

UTILITY CONSTRUCTION

PROJECT TYPICAL DETAILS

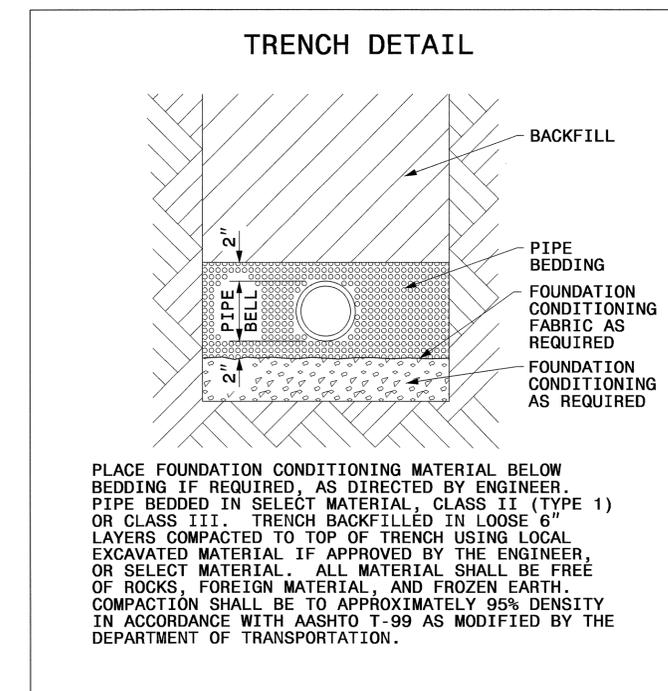
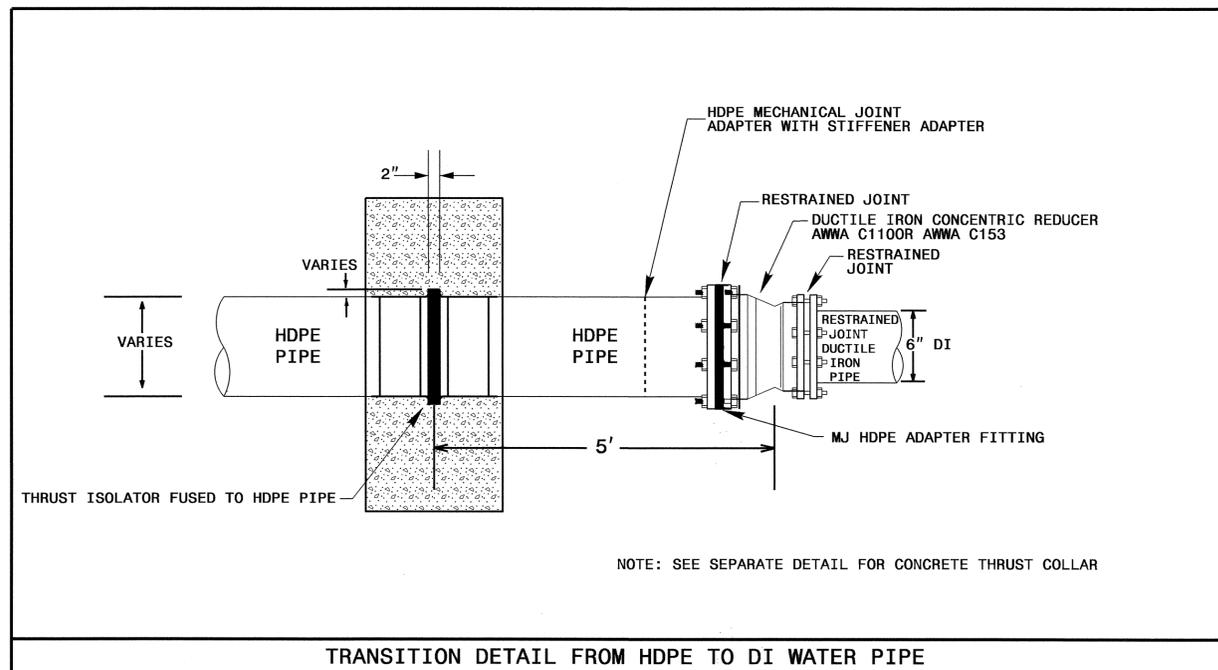
PROJECT REFERENCE NO.	SHEET NO.
B-4185	UC-3A
DESIGNED BY: REB	
DRAWN BY: REB	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

UTILITY CONSTRUCTION



MAXIMUM TRENCH WIDTH AT TOP OF PIPE

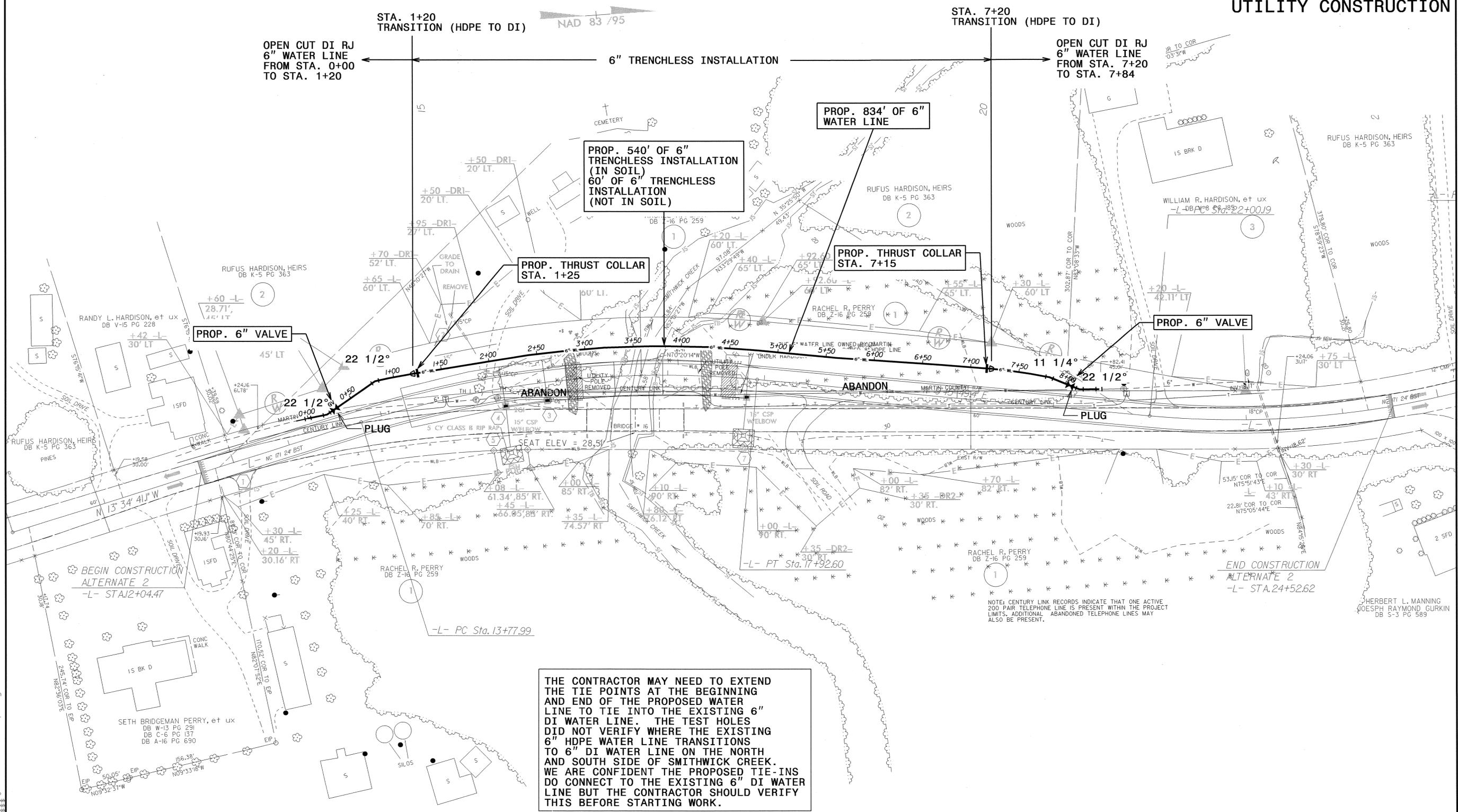
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)	NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28	20	44
6	30	24	48
8	32	30	54
10	34	36	60
12	36	42	66
14	38	48	72
16	40	54	78
18	42		



PROJECT REFERENCE NO.	SHEET NO.
B-4185	UC-4
DESIGNED BY: CDB	
DRAWN BY: CDB	
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

5/14/99



THE CONTRACTOR MAY NEED TO EXTEND THE TIE POINTS AT THE BEGINNING AND END OF THE PROPOSED WATER LINE TO TIE INTO THE EXISTING 6" DI WATER LINE. THE TEST HOLES DID NOT VERIFY WHERE THE EXISTING 6" HDPE WATER LINE TRANSITIONS TO 6" DI WATER LINE ON THE NORTH AND SOUTH SIDE OF SMITHWICK CREEK. WE ARE CONFIDENT THE PROPOSED TIE-INS DO CONNECT TO THE EXISTING 6" DI WATER LINE BUT THE CONTRACTOR SHOULD VERIFY THIS BEFORE STARTING WORK.

05-MAR-2013 11:21 AM J:\b4185-Ut-4-UC4-psht.dgn

5/14/99

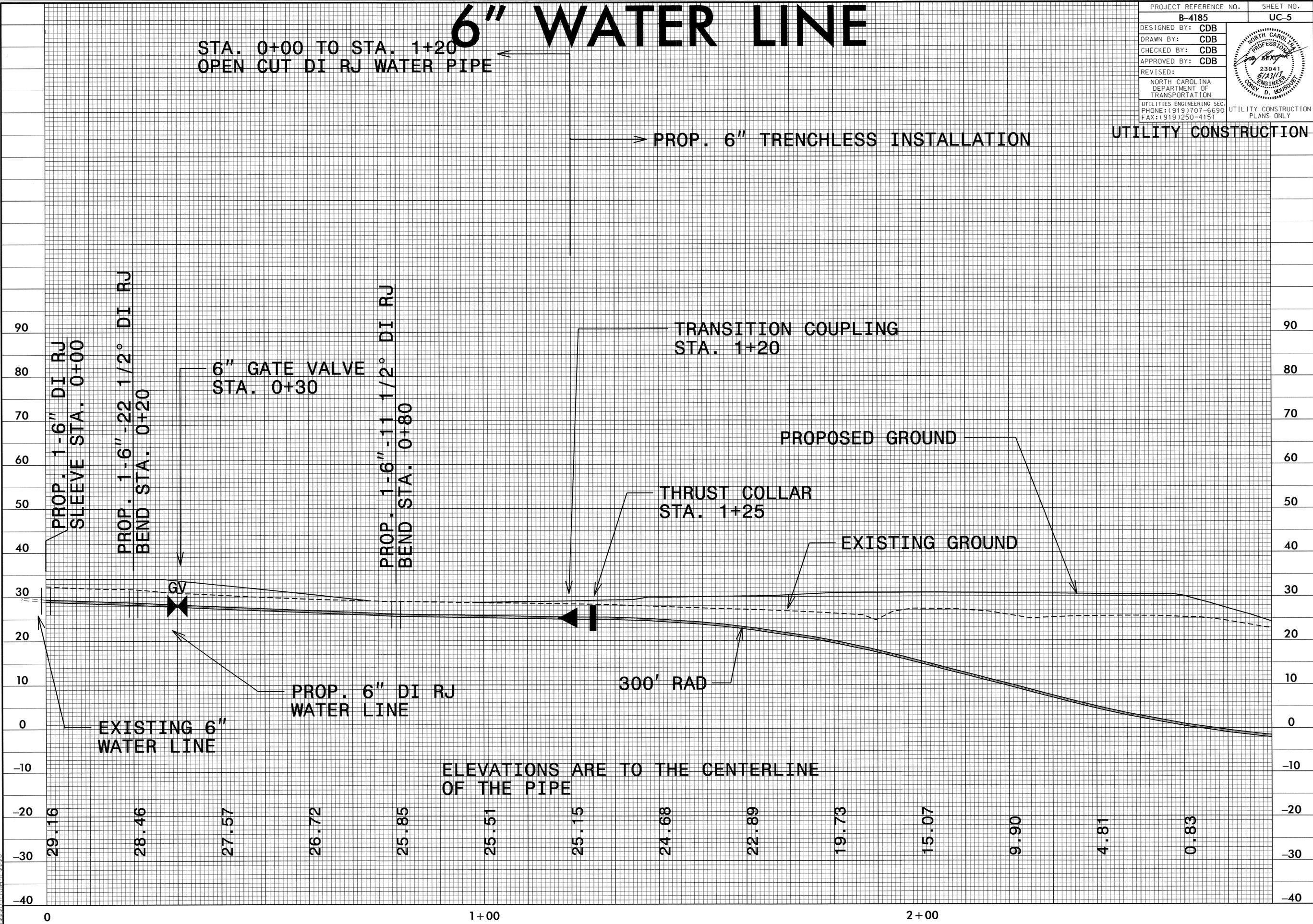
PROJECT REFERENCE NO.	SHEET NO.
B-4185	UC-5
DESIGNED BY: CDB	
DRAWN BY: CDB	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

6" WATER LINE

STA. 0+00 TO STA. 1+20
OPEN CUT DI RJ WATER PIPE

PROP. 6" TRENCHLESS INSTALLATION

UTILITY CONSTRUCTION



ELEVATIONS ARE TO THE CENTERLINE
OF THE PIPE

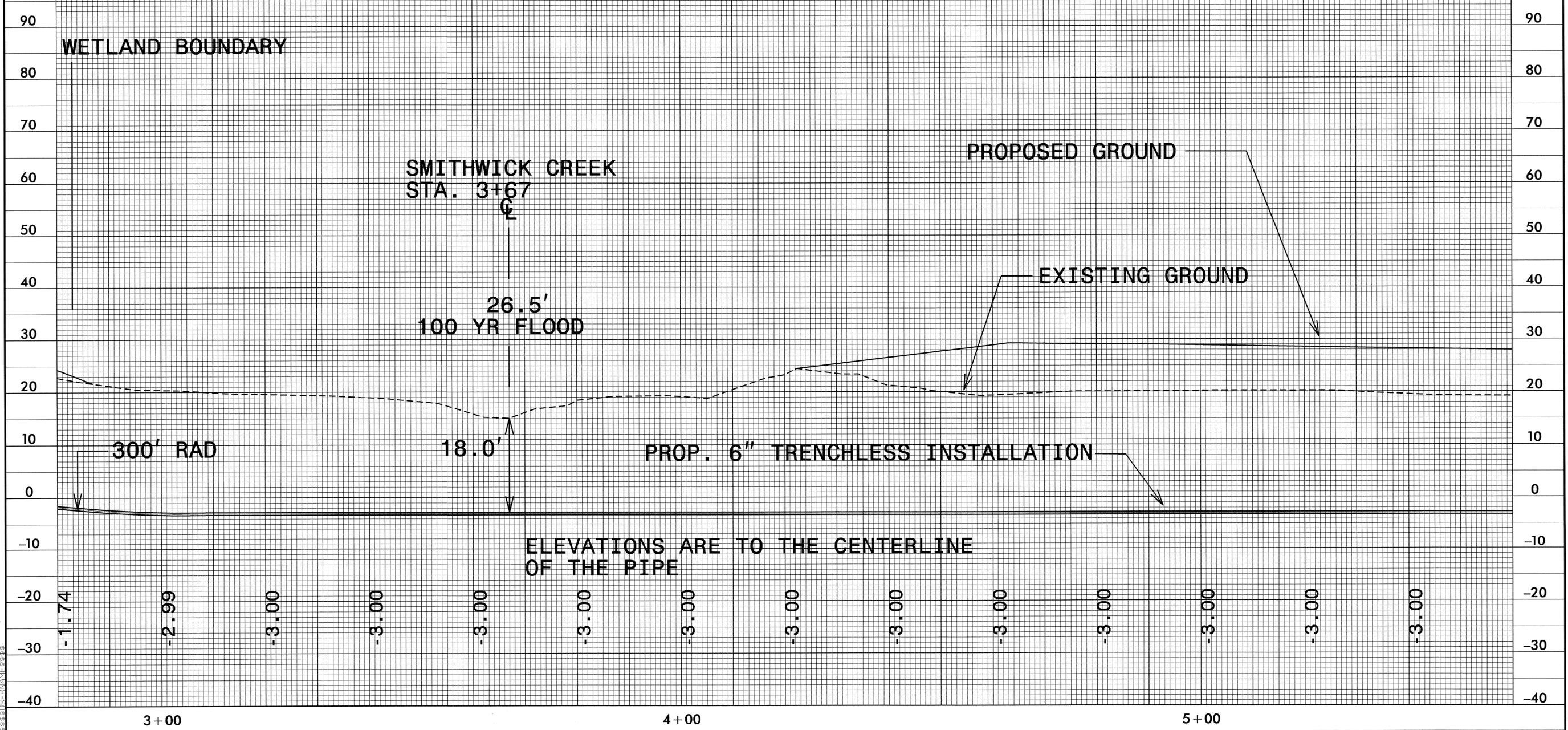
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USER:GREGORYD

5/14/99

6" WATER LINE

PROJECT REFERENCE NO.	SHEET NO.
B-4185	UC-6
DESIGNED BY: CDB	
DRAWN BY: CDB	
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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5/14/99

6" WATER LINE

PROJECT REFERENCE NO. B-4185	SHEET NO. UC-7
DESIGNED BY: CDB	
DRAWN BY: CDB	
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	

STA. 7+20 TO STA. 8+34
 OPEN CUT DI RJ WATER PIPE

UTILITY CONSTRUCTION

PROP. 6" TRENCHLESS INSTALLATION

6" GATE VALVE
 STA. 8+05

WETLAND BOUNDARY

PROPOSED GROUND

EXISTING GROUND

THRUST COLLAR
 STA. 7+15

TRANSITION COUPLING
 STA. 7+20

PROP. 1-6" -11 1/4° DI RJ
 BEND STA. 7+80

PROP. 1-6" -11 1/4° DI RJ
 BEND STA. 8+14

PROP. 1-6" -DI RJ
 SLEEVE STA. 8+34

300' RAD

300' RAD

PROP. 6" DI RJ
 WATER LINE

EXISTING 6"
 WATER LINE

ELEVATIONS ARE TO THE CENTERLINE
 OF THE PIPE

-3.00 -2.53 -0.57 2.71 7.35 11.53 14.30 15.65 16.14 16.69 17.25 17.80 18.85 19.37

6+00

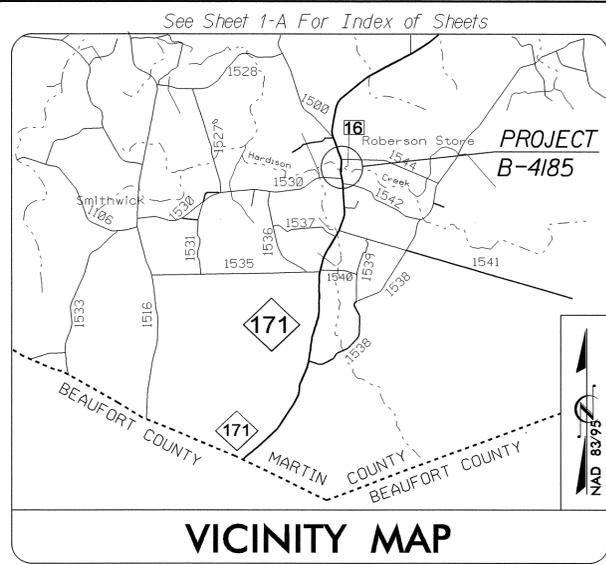
7+00

8+00

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TIP PROJECT: B-4185

T.I.P. NO.	SHEET NO.
B-4185	UO-1

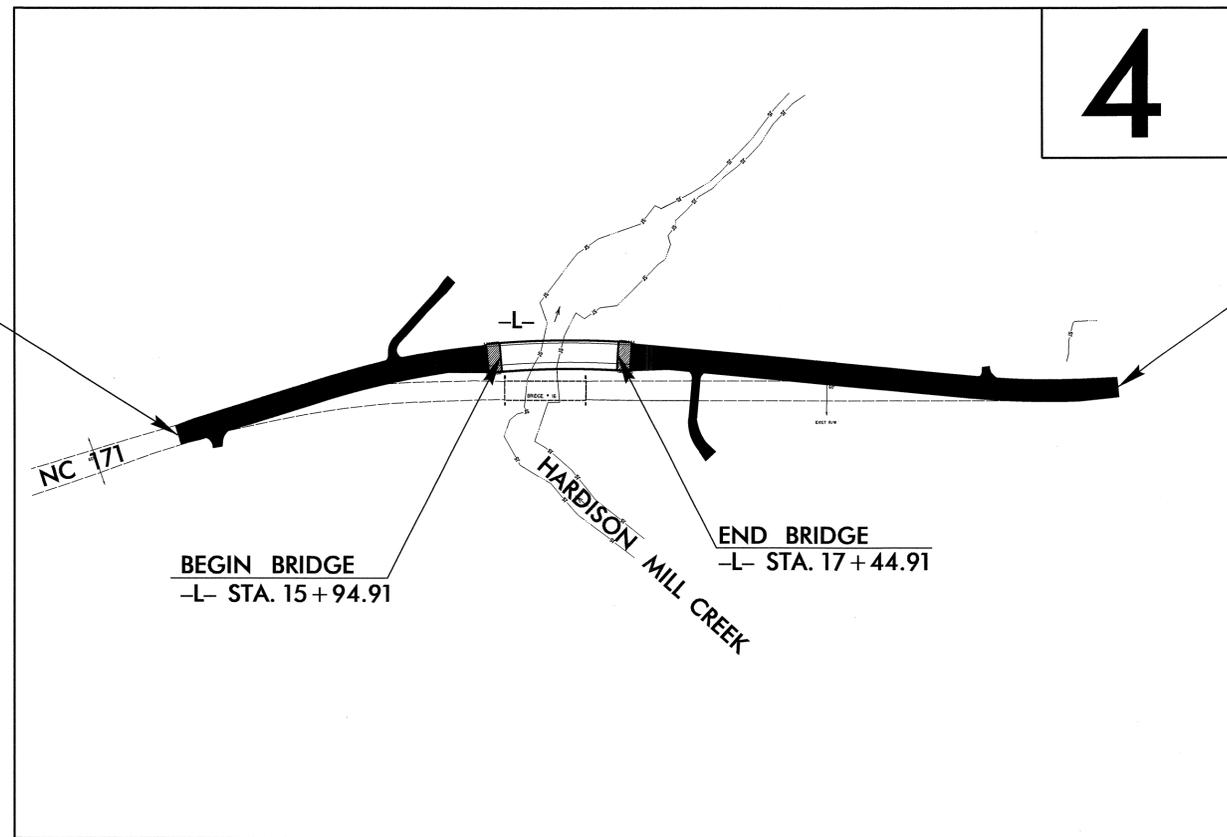
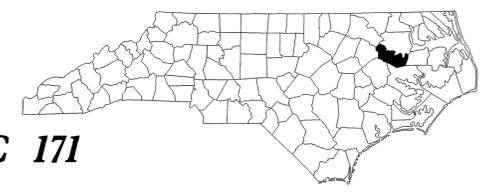


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS
MARTIN COUNTY**

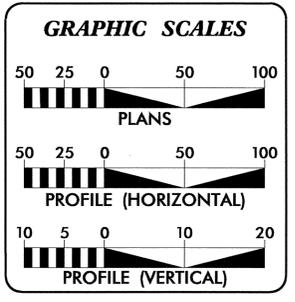
LOCATION: BRIDGE NO.16 OVER HARDISON MILL CREEK ON NC 171

TYPE OF WORK: RELOCATION OF POWER AND TELEPHONE LINES



STATEWIDE TIER DESIGN GUIDELINES WERE USED ON THIS PROJECT
THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD (II)
THERE IS NO CONTROL OF ACCESS ON THIS PROJECT

DO NOT USE FOR CONSTRUCTION



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

UTILITY OWNERS ON PROJECT
(1) DOMINION POWER
(2) CENTURYLINK



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

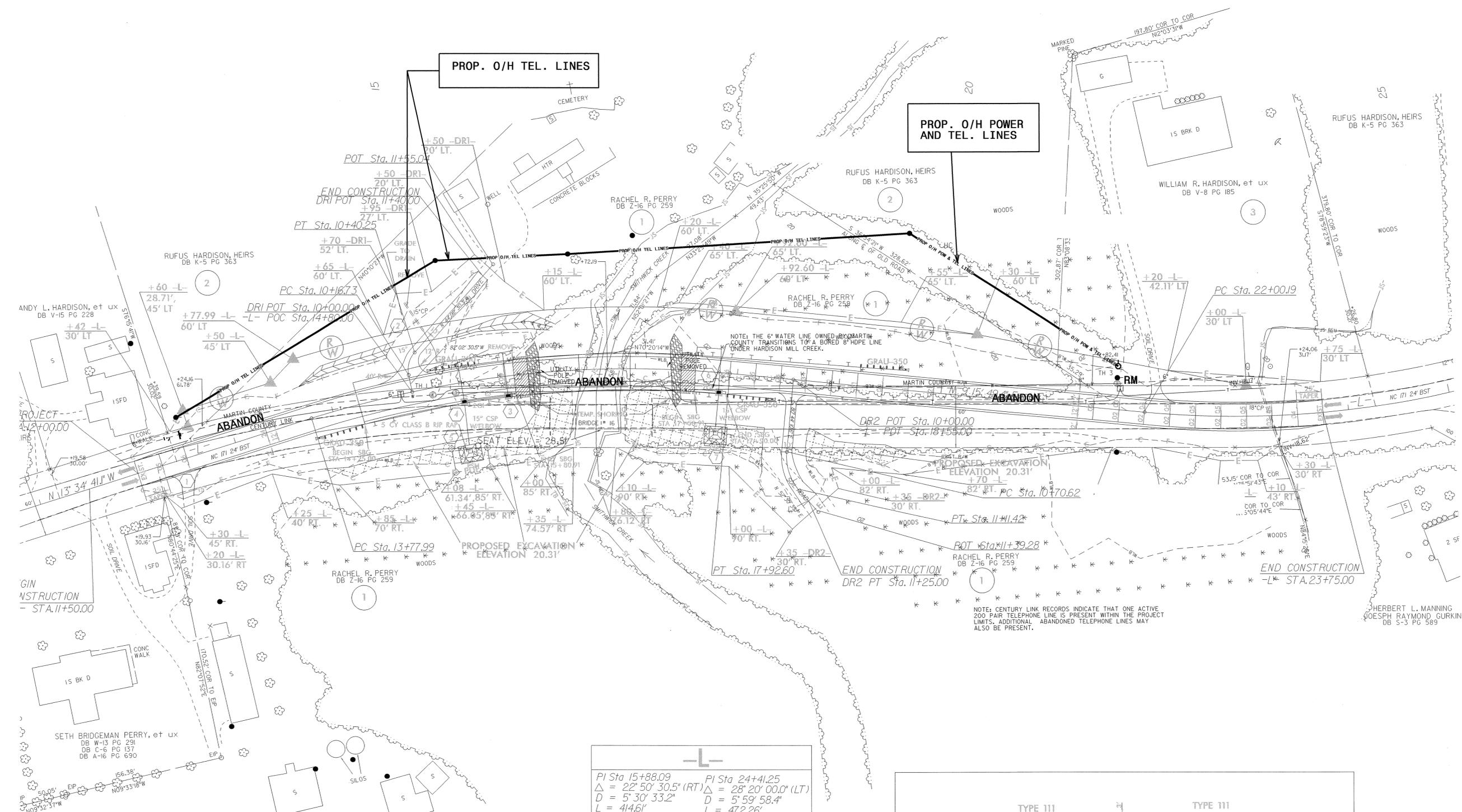
1591 MAIL SERVICES CENTER
RALEIGH, NC 27699-1555
PHONE (919) 707-6690
FAX (919) 250-4151

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

05-MAR-2013 14:52
R:\Utilities\RGY\UT\Proj\B4185_UT_Title_U01.psh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$

UTILITIES BY OTHERS

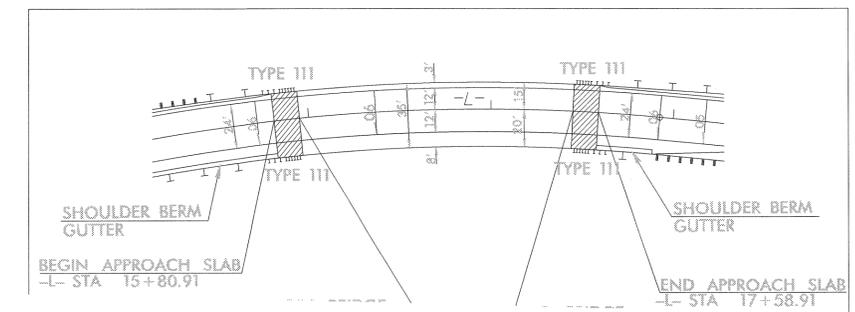
NOTE:
 ALL PROPOSED UTILITY WORK
 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS



-L-

PI Sta 15+88.09	PI Sta 24+41.25
Δ = 22° 50' 30.5" (RT)	Δ = 28° 20' 00.0" (LT)
D = 5' 30' 33.2"	D = 5' 59' 58.4"
L = 414.61'	L = 472.26'
T = 210.10'	T = 241.06'
R = 1,040.00'	R = 955.00'
SE = 06	
RO = 150'	

-DR1-	-DR2-
PI Sta 10+29.44	PI Sta 10+92.24
Δ = 53° 54' 59.2" (RT)	Δ = 46° 45' 09.7" (LT)
D = 228.10' 00.0"	D = 114' 35' 29.6"



NOTE: CENTURY LINK RECORDS INDICATE THAT ONE ACTIVE 200 PAIR TELEPHONE LINE IS PRESENT WITHIN THE PROJECT LIMITS. ADDITIONAL ABANDONED TELEPHONE LINES MAY ALSO BE PRESENT.

5/14/99
 05-MAR-2013 09:45
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