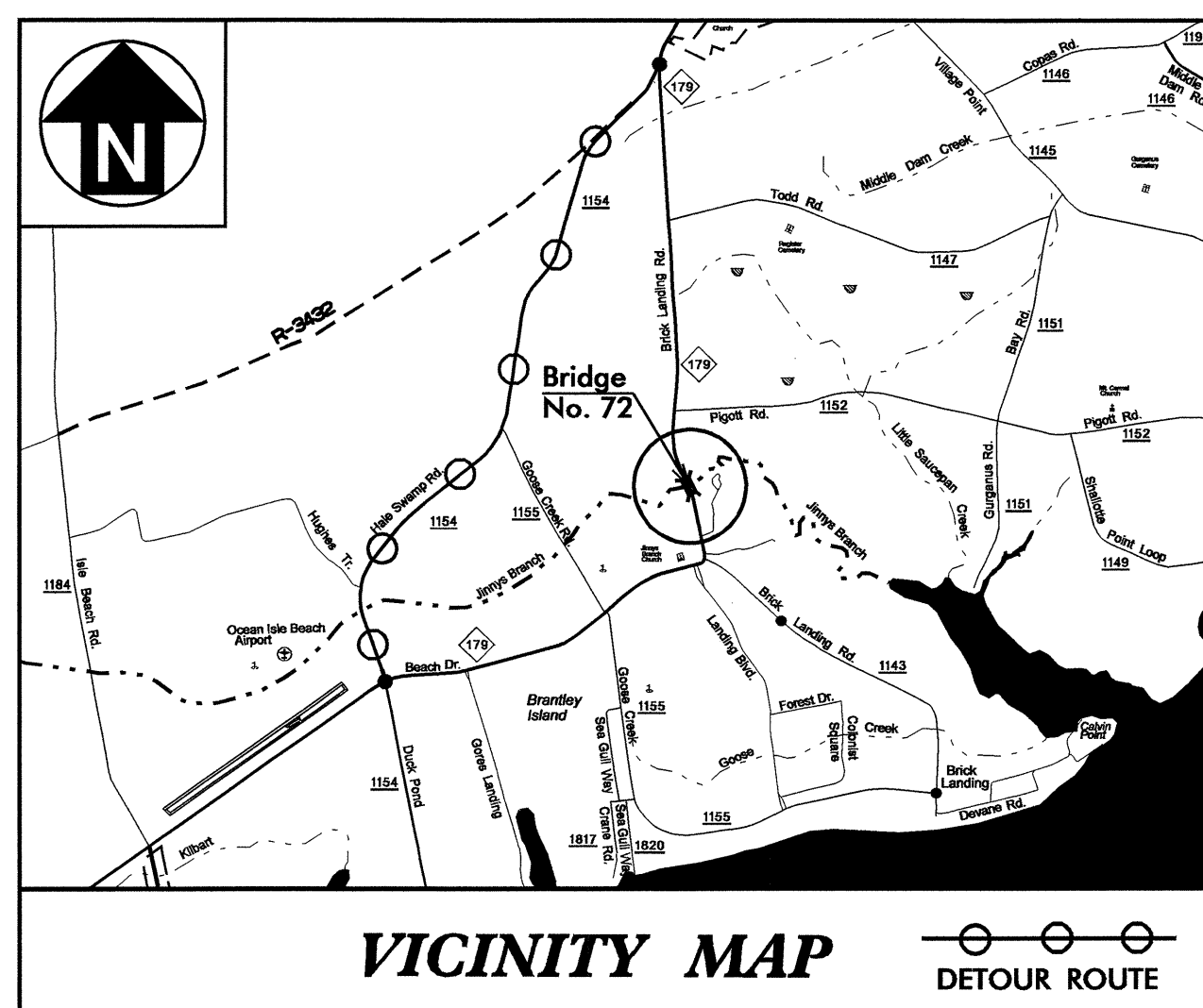


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

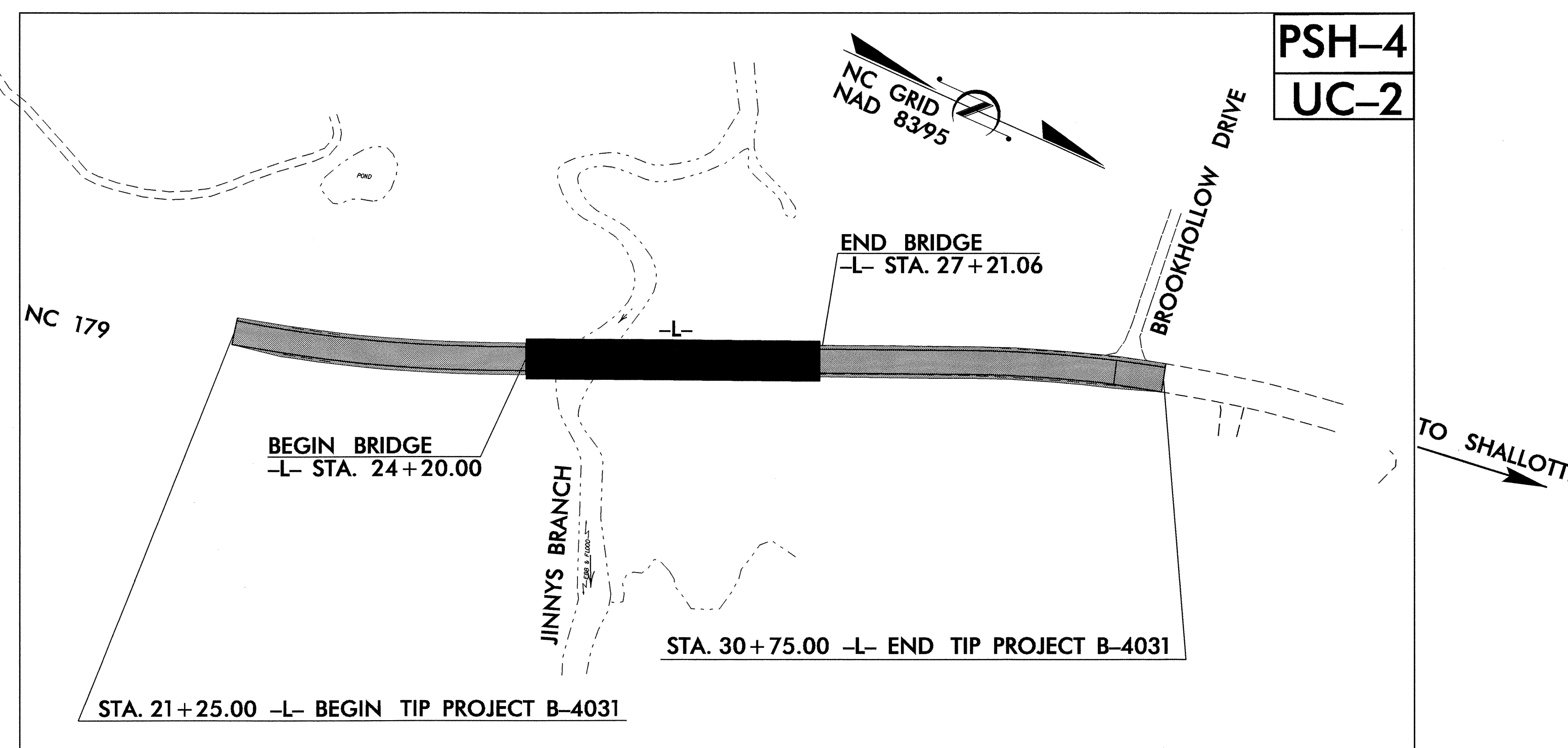
**UTILITY CONSTRUCTION PLANS  
BRUNSWICK COUNTY**

**LOCATION: BRIDGE NO. 72 OVER JINNYS BRANCH ON NC 179**

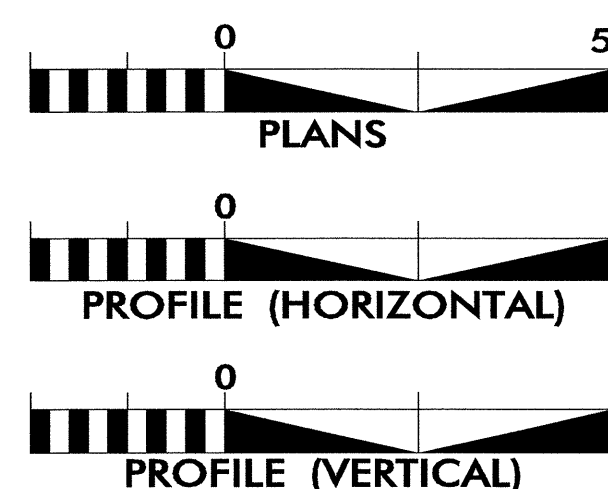
**TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE**



**TIP PROJECT: B-4031**



**GRAPHIC SCALES**



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY CONSTRUCTION PLAN SHEET
UC-3	PROFILE SHEET
UC-4	DETAILS SHEET

**WATER AND SEWER OWNERS ON PROJECT**

(1) WATER Brunswick County Public Utilities

SEAL



PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
PROJECT SERVICES  
UTILITY SECTION**

1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 250-4128  
FAX (919) 250-4119

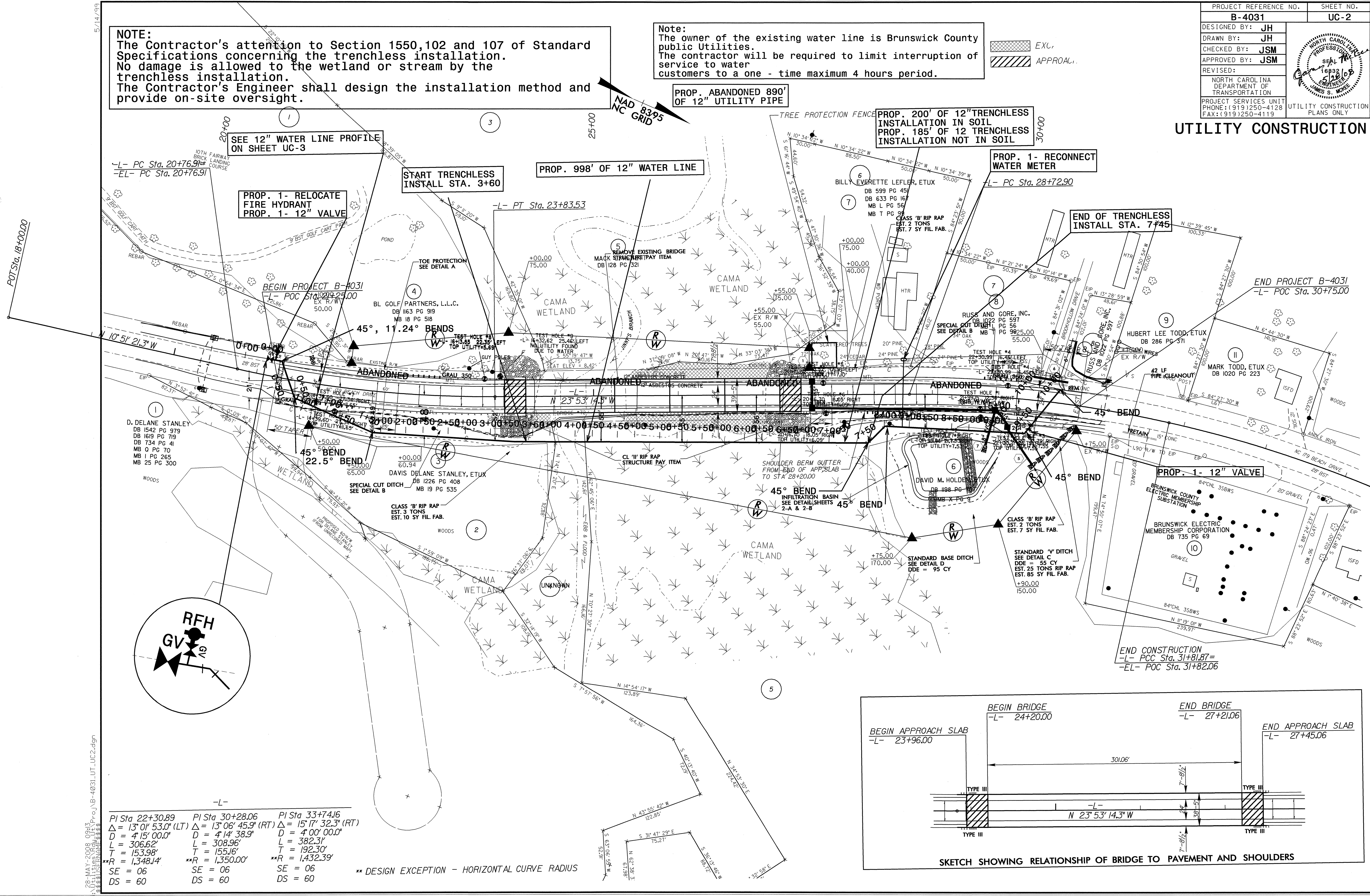
**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Steve McKee, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Jamshid Hafshejani** UTILITIES PROJECT DESIGNER

# UTILITY CONSTRUCTION

**NOTE:**  
 The Contractor's attention to Section 1550,102 and 107 of Standard Specifications concerning the trenchless installation. No damage is allowed to the wetland or stream by the trenchless installation. The Contractor's Engineer shall design the installation method and provide on-site oversight.

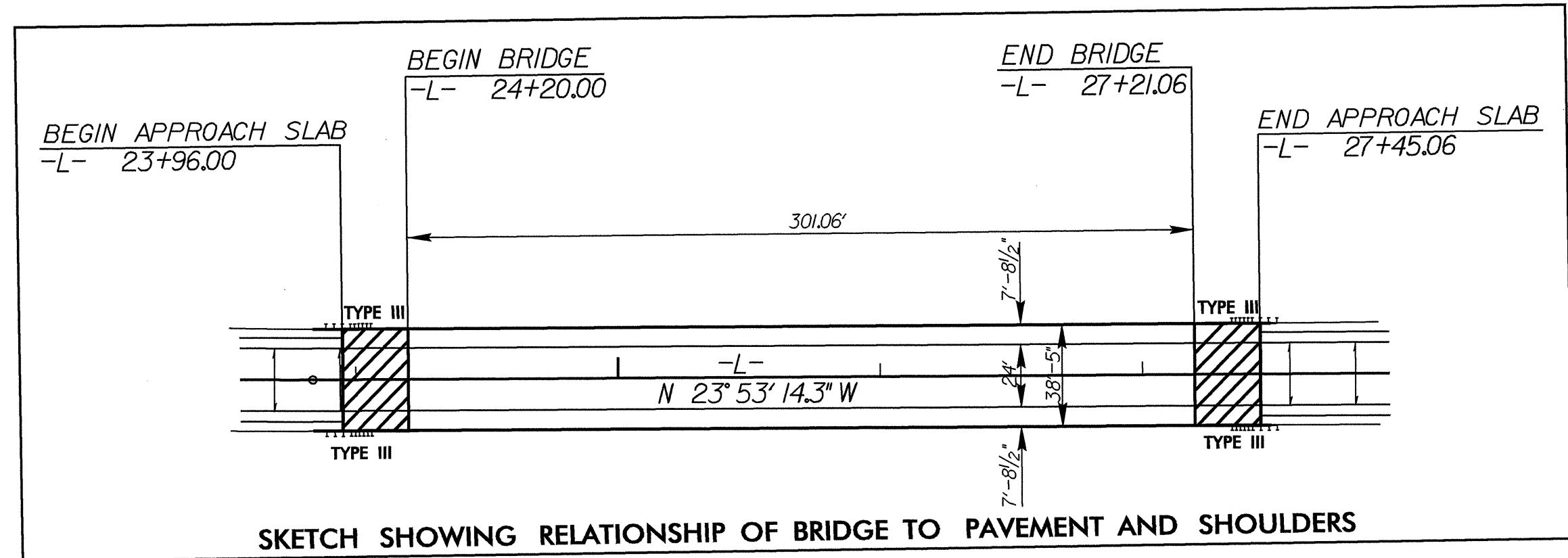
**Note:**  
 The owner of the existing water line is Brunswick County public Utilities. The contractor will be required to limit interruption of service to water customers to a one - time maximum 4 hours period.

EXC.  
 APPROVAL



PI Sta 22+30.89	PI Sta 30+28.06	PI Sta 33+74.16
$\Delta = 13^{\circ} 01' 53.0''$ (LT)	$\Delta = 13^{\circ} 06' 45.9''$ (RT)	$\Delta = 15^{\circ} 17' 32.3''$ (RT)
D = 4' 15.00.0"	D = 4' 14' 38.9"	D = 4' 00' 00.0"
L = 306.62'	L = 308.96'	L = 382.31'
T = 153.98'	T = 155.16'	T = 192.30'
**R = 1,348.14'	**R = 1,350.00'	**R = 1,432.39'
SE = 06	SE = 06	SE = 06
DS = 60	DS = 60	DS = 60

\*\* DESIGN EXCEPTION - HORIZONTAL CURVE RADIUS

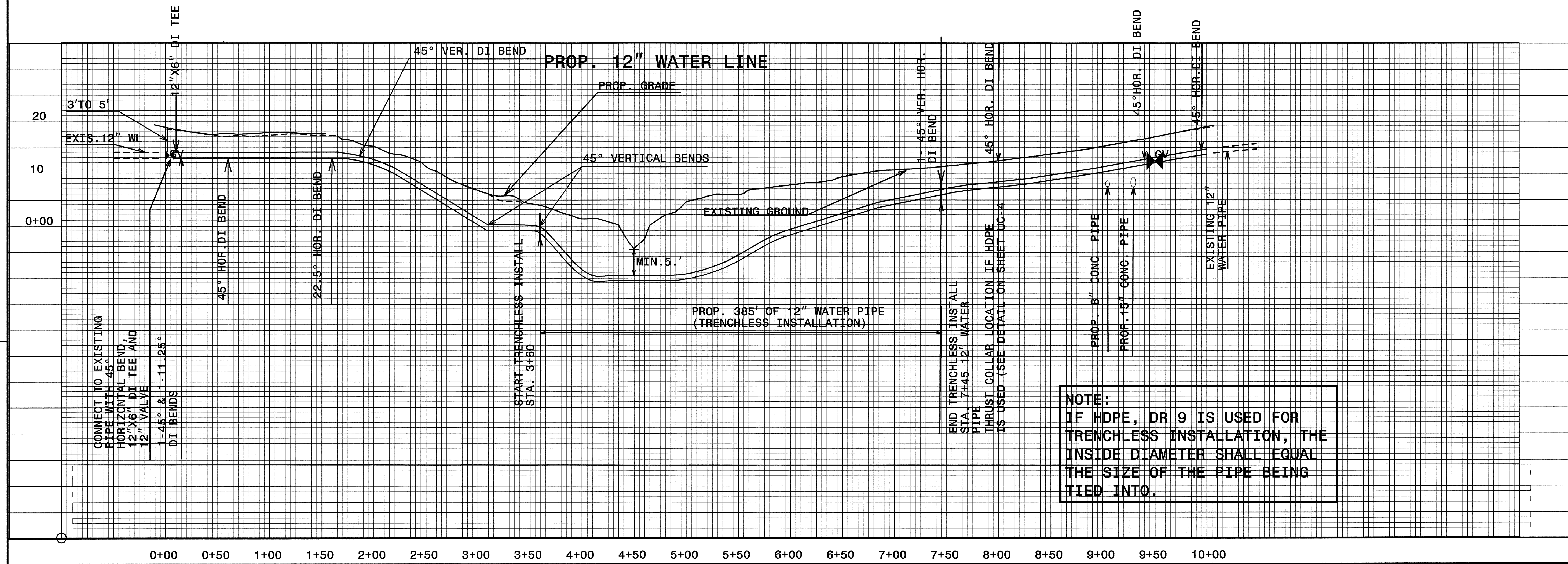
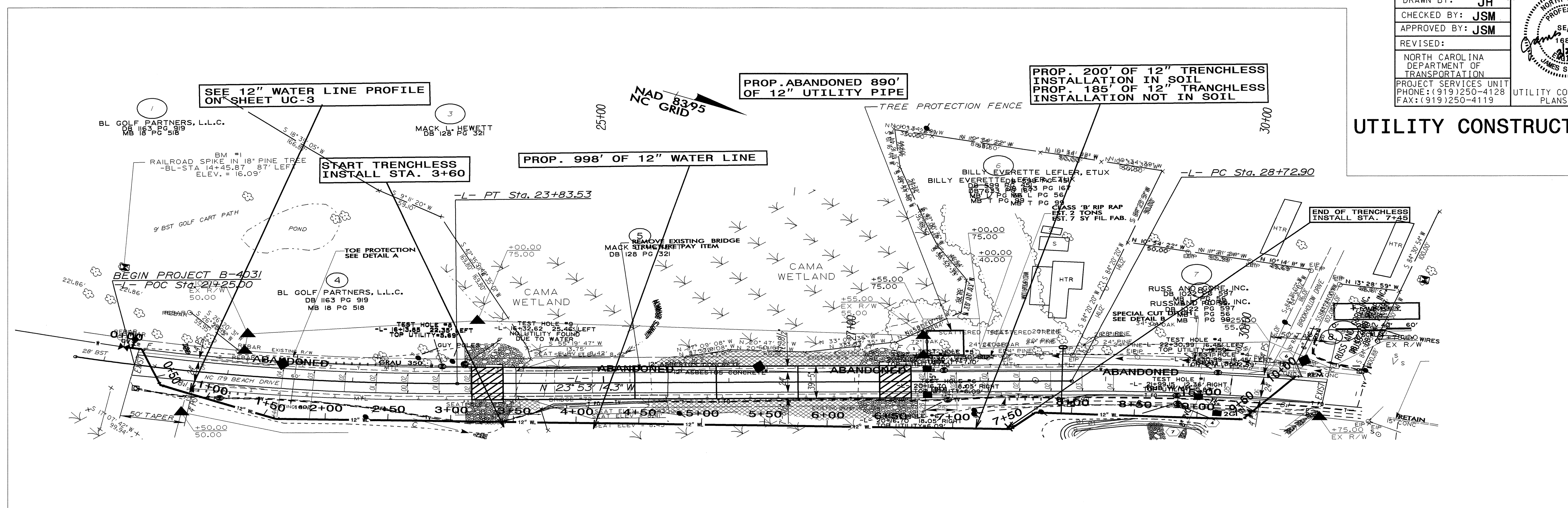


SKETCH SHOWING RELATIONSHIP OF BRIDGE TO PAVEMENT AND SHOULDERS

28-MAY-2008 09:13  
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 JSM

PROJECT REFERENCE NO.	SHEET NO.
B-4031	UC-3
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

# UTILITY CONSTRUCTION

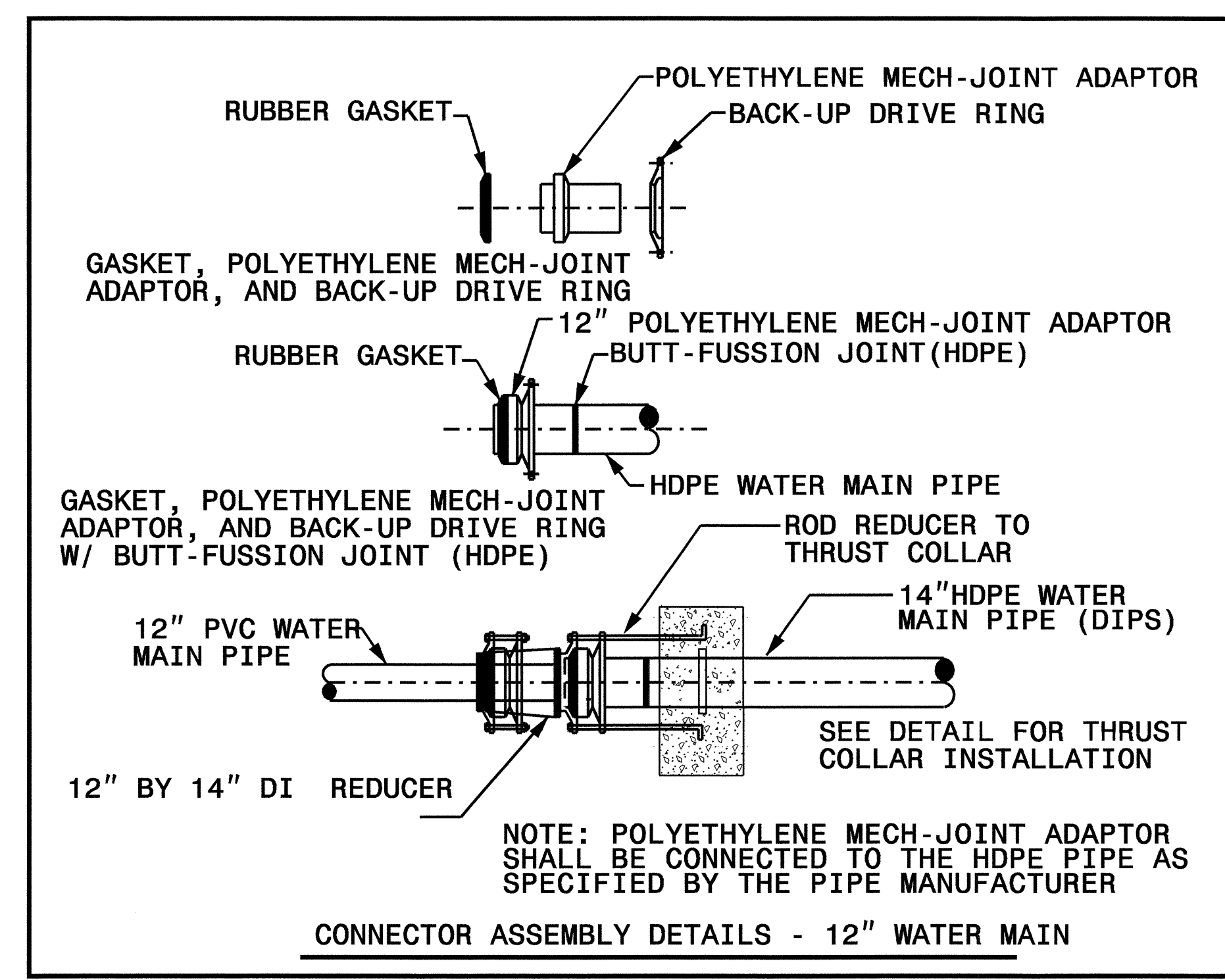


REVISIONS

8-17

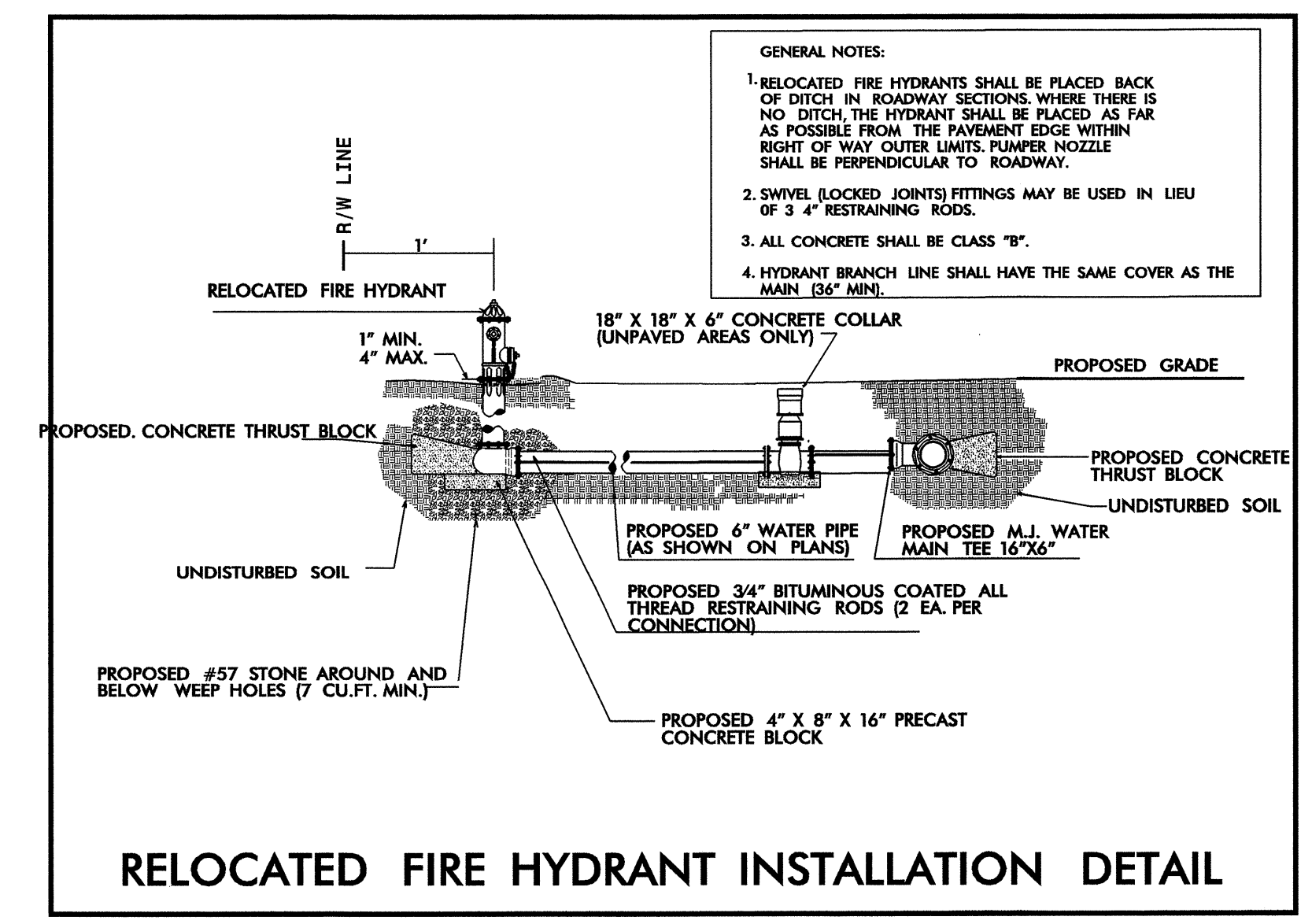
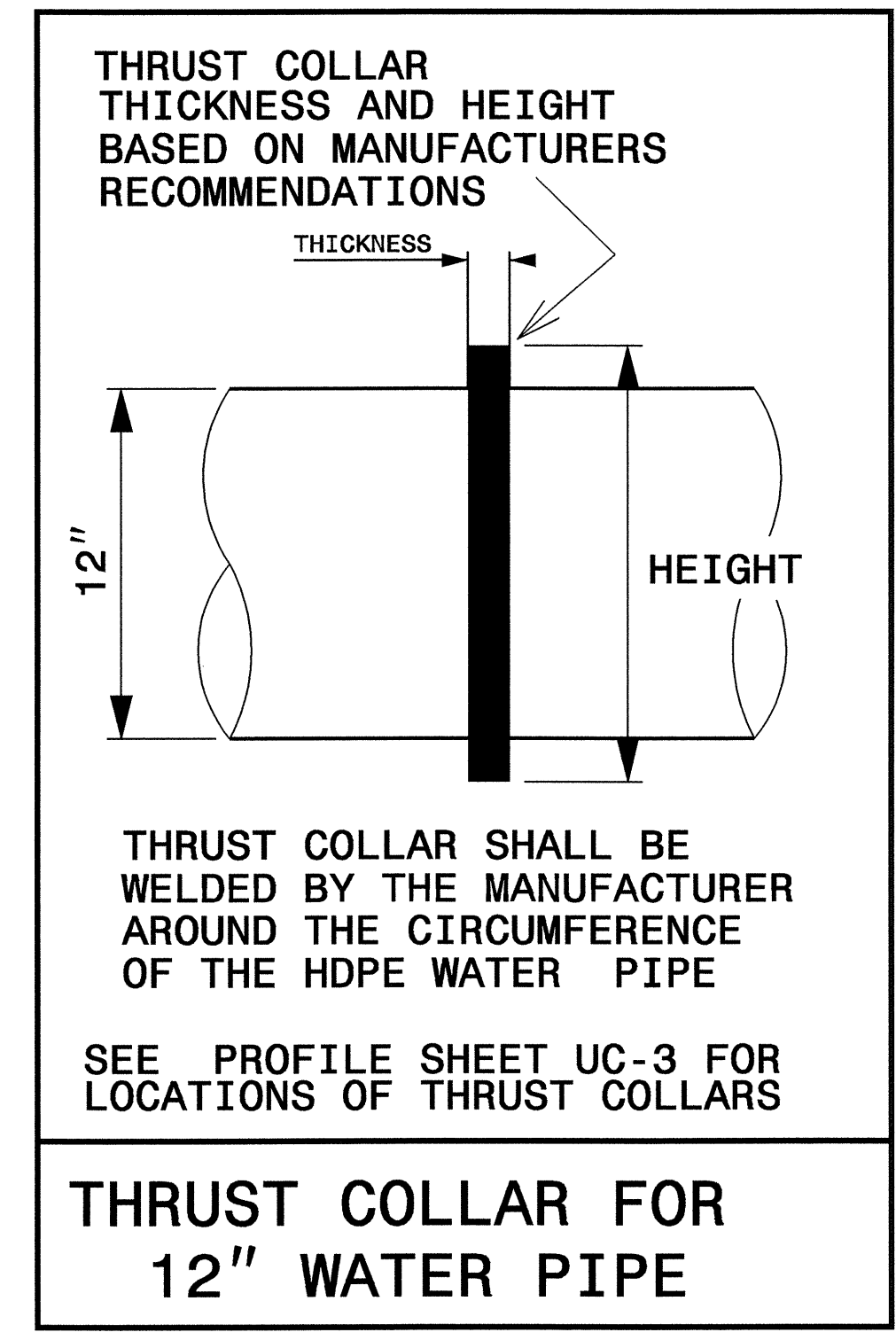
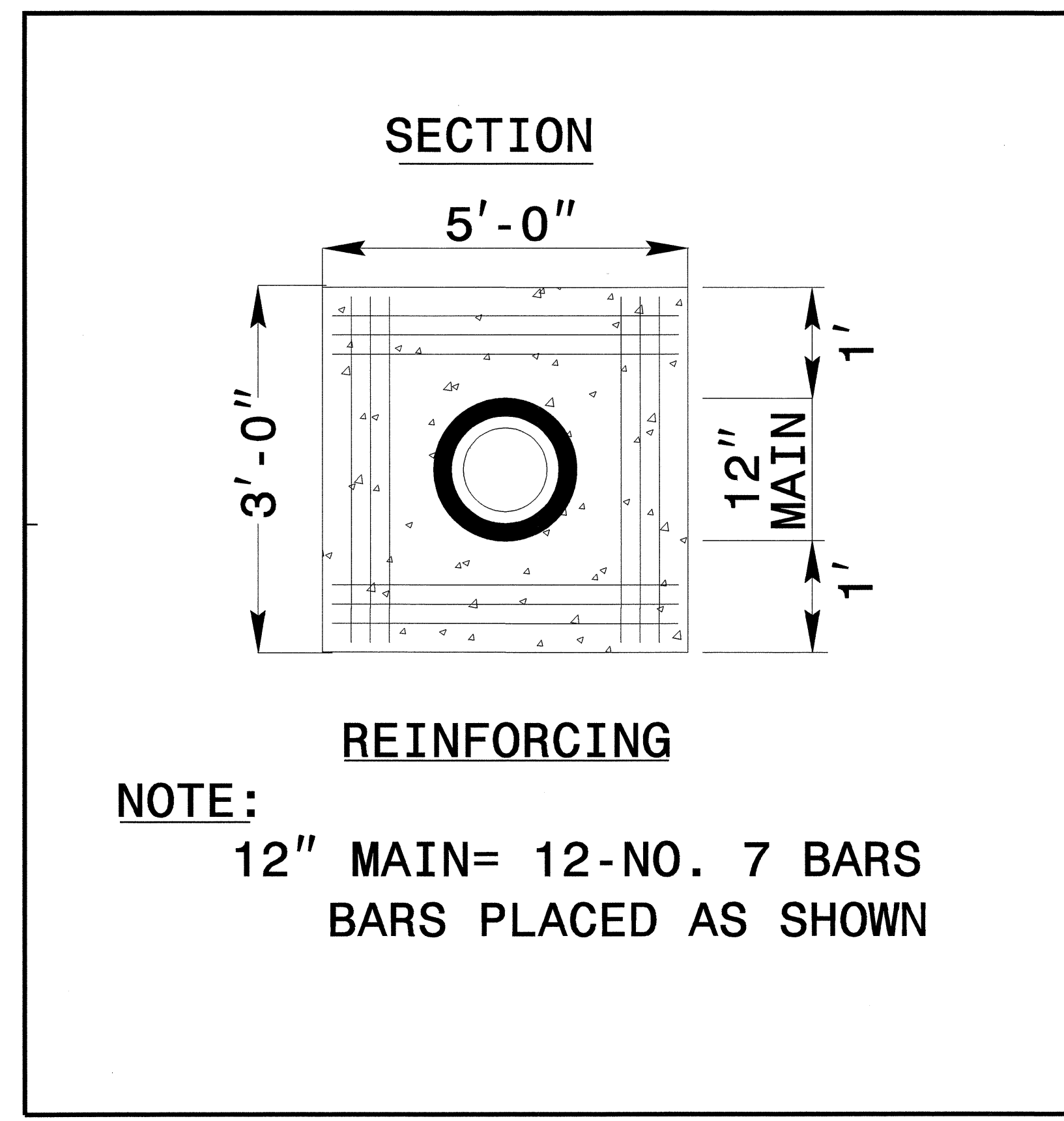
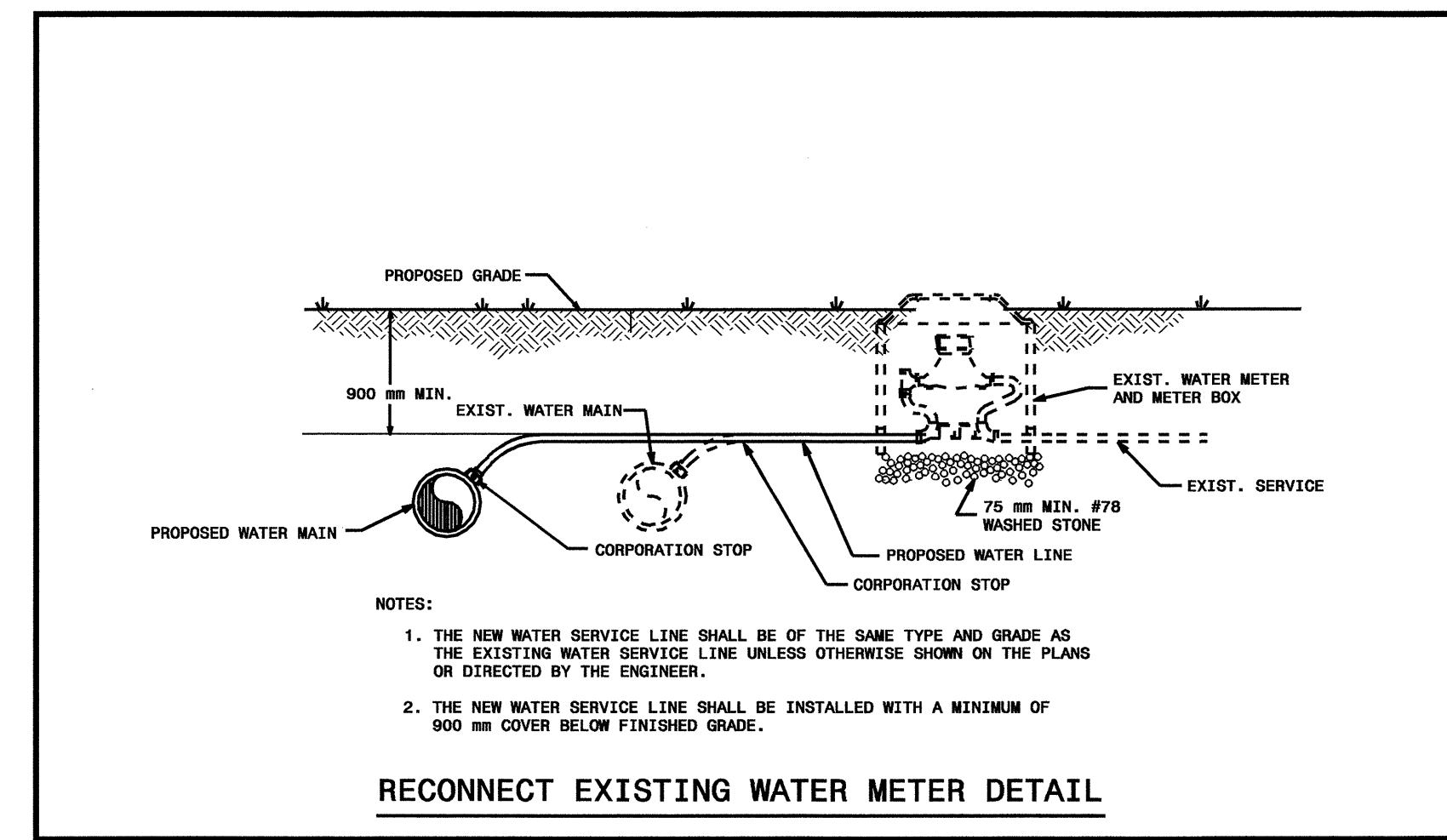
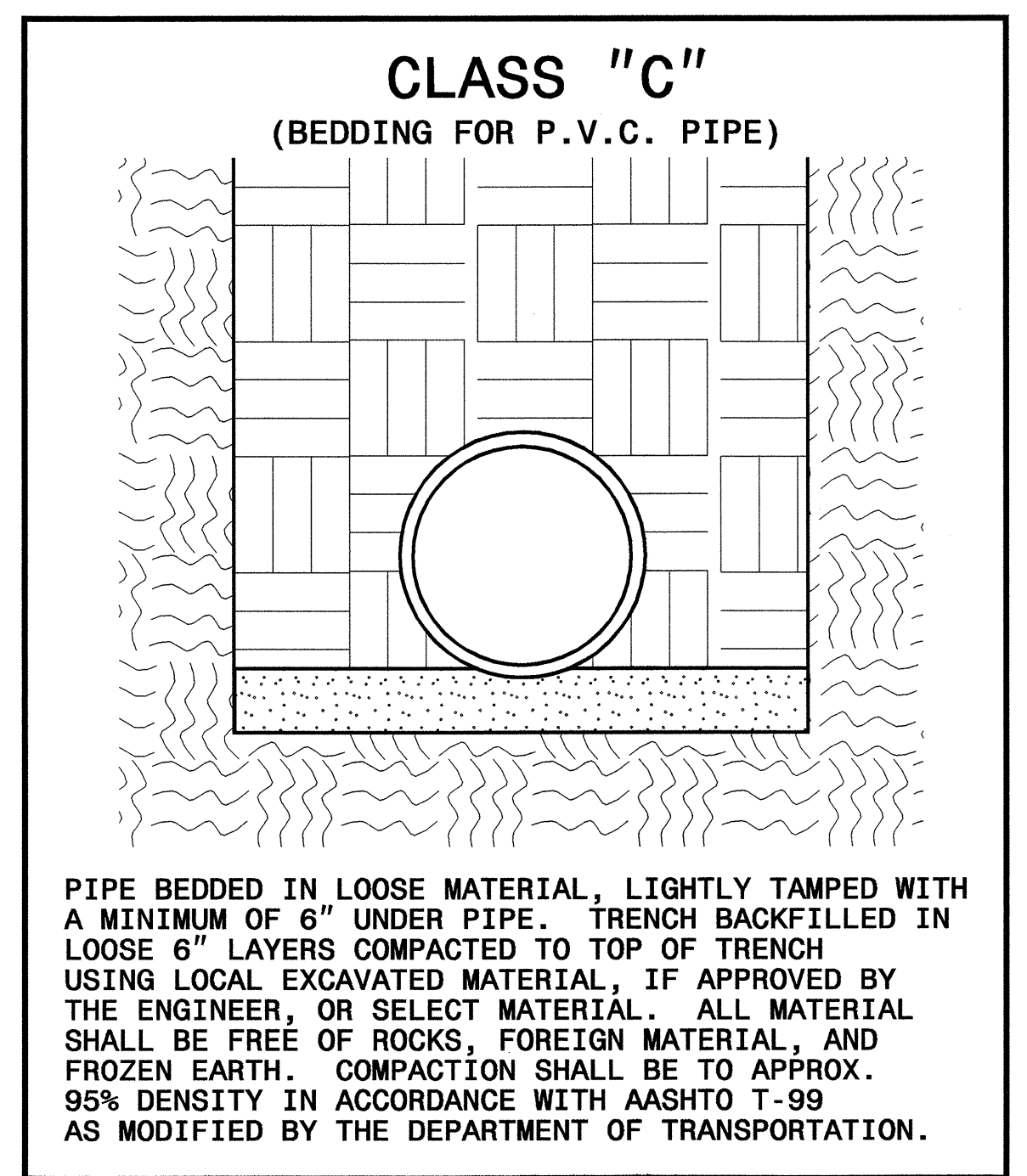
### DETAIL FOR HDPE TRENCHLESS INSTALLATION AND PVC BEDDING DETAIL

PROJECT REFERENCE NO.	SHEET NO.
B-4031	UC-4
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DESIGN SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	



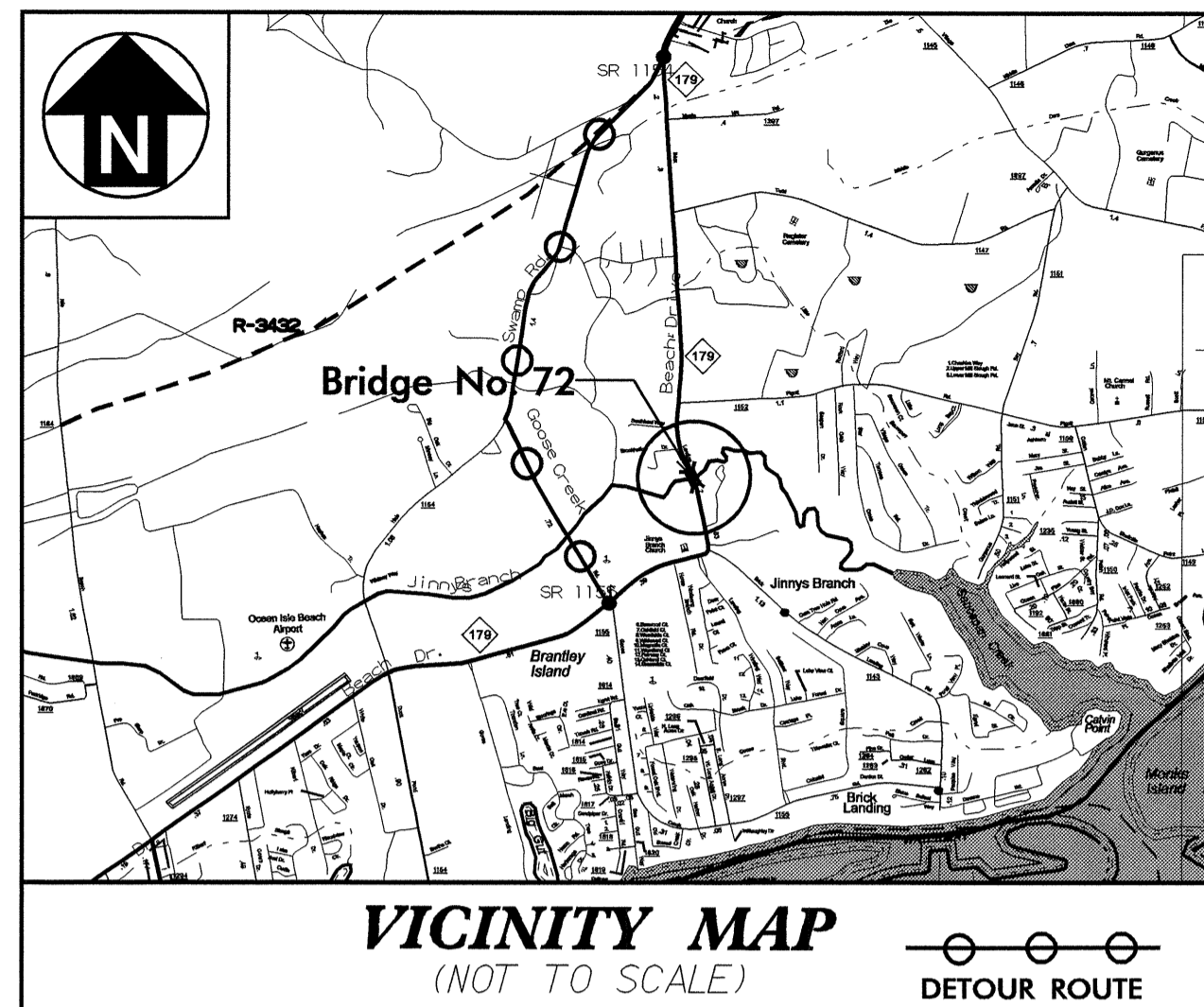
**MAXIMUM TRENCH WIDTH AT TOP OF PIPE**

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		



TIP PROJECT: B-4031

See Sheet 1-A For Index of Sheets  
See Sheet 1-B For Conventional Symbols



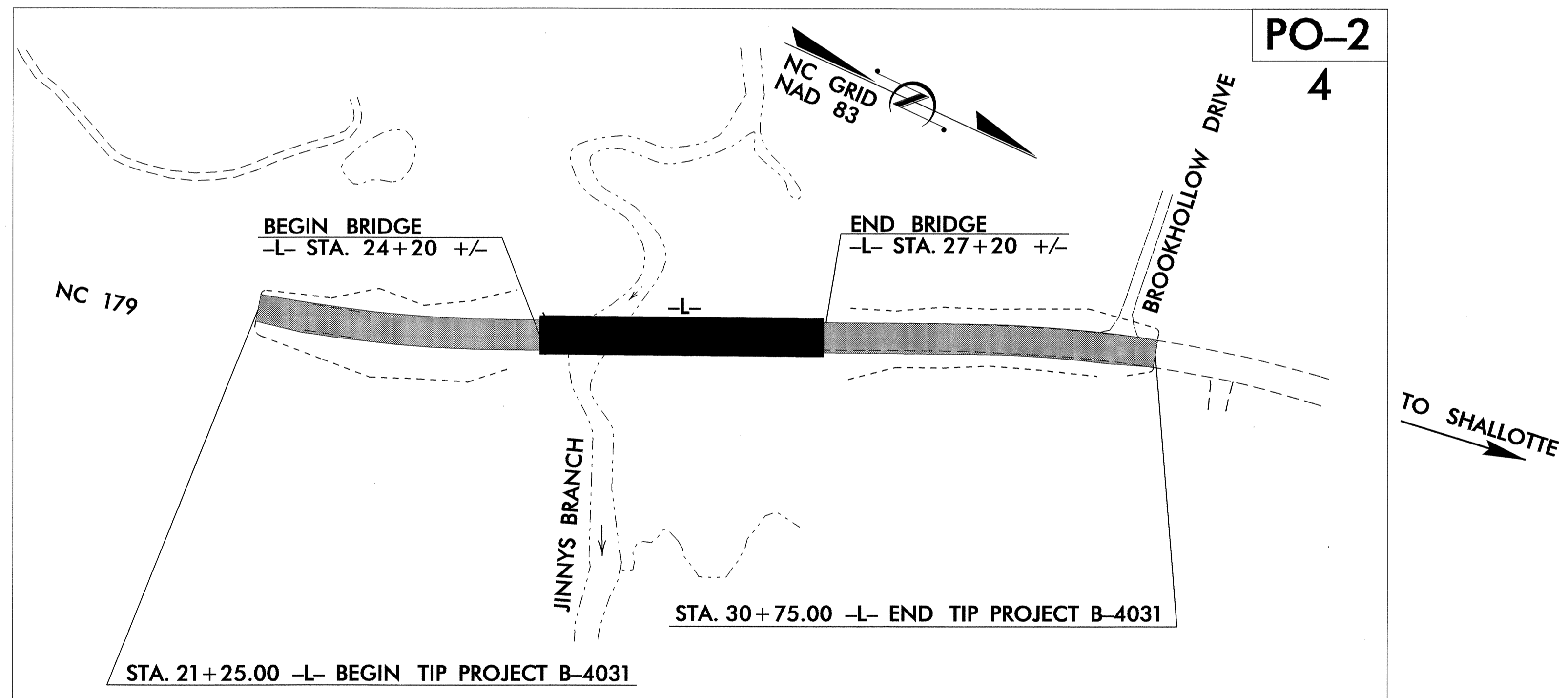
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY BY OTHERS PLANS  
BRUNSWICK COUNTY**

**LOCATION: BRIDGE NO. 72 OVER JINNYS  
BRANCH ON NC 179**

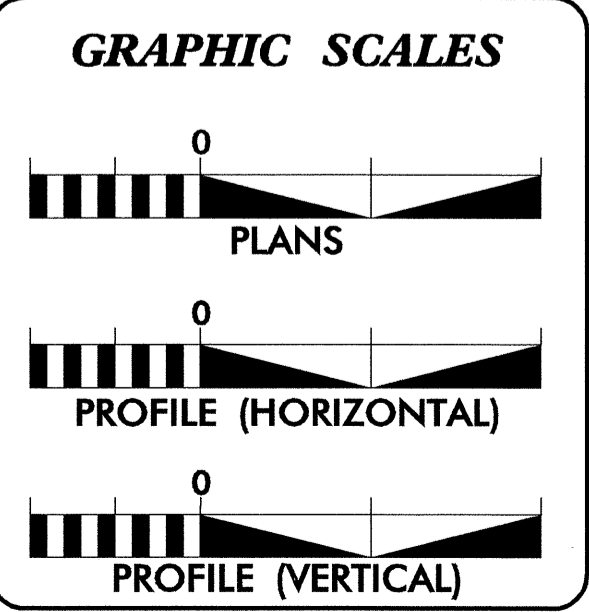
**TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE CELL**

T.I.P. NO.	SHEET NO.
B-4031	UO-1



INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS  
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) BRUNSWICK EMC, POWER

(2) BRUNSWICK ATLANTIC TELEPHONE MEMBERSHIP CORP.  
PHONE AND CATV

PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
DESIGN SERVICES  
UTILITY SECTION**

1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 250-4128  
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<b>Roger Worthington, P.E.</b>	UTILITIES SECTION ENGINEER
<b>Steve Mckee, P.E.</b>	UTILITIES SQUAD LEADER PROJECT ENGINEER
<b>Jamshid Hafshejani</b>	UTILITIES PROJECT DESIGNER

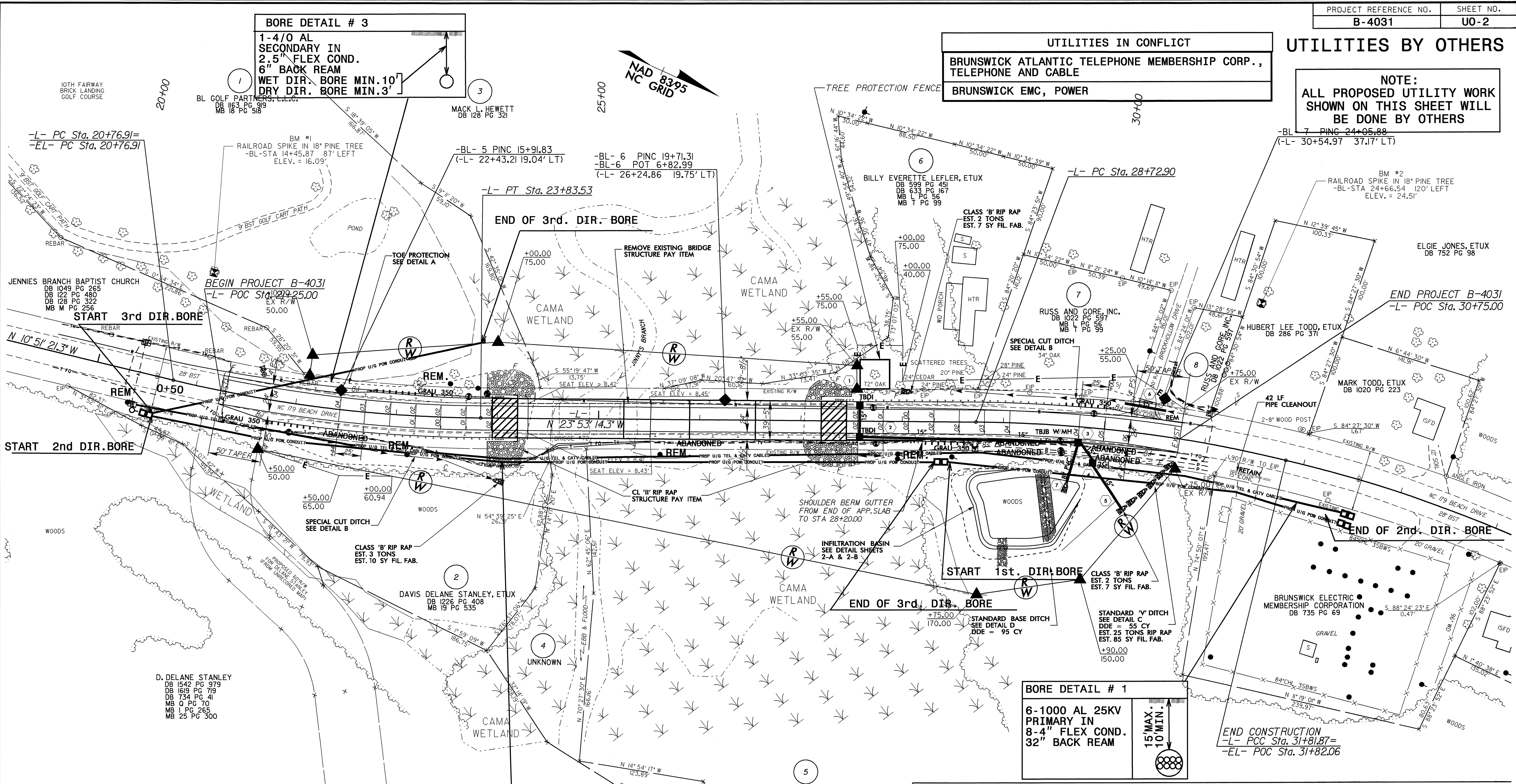
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5/14/99

**BORE DETAIL # 3**  
 1-4/0 AL SECONDARY IN 2.5" FLEX COND. 6" BACK REAM  
 WET DIR. BORE MIN. 10' DRY DIR. BORE MIN. 3'

**UTILITIES IN CONFLICT**  
 BRUNSWICK ATLANTIC TELEPHONE MEMBERSHIP CORP., TELEPHONE AND CABLE  
 BRUNSWICK EMC, POWER

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



**BORE DETAIL # 2**  
 6-1000 AL 25KV PRIMARY IN 8-4" FLEX COND. 32" BACK REAM  
 30' MAX. 15' MIN.

**BORE DETAIL # 1**  
 6-1000 AL 25KV PRIMARY IN 8-4" FLEX COND. 32" BACK REAM  
 15' MAX. 10' MIN.

-L-	PI Sta 22+30.89	PI Sta 30+28.06	PI Sta 33+74.16
	$\Delta = 13^{\circ} 01' 53.0"$ (LT)	$\Delta = 13^{\circ} 06' 45.9"$ (RT)	$\Delta = 15^{\circ} 17' 32.3"$ (RT)
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\*\* DESIGN EXCEPTION - HORIZONTAL CURVE RADIUS

03-MAR-2008 14:30  
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