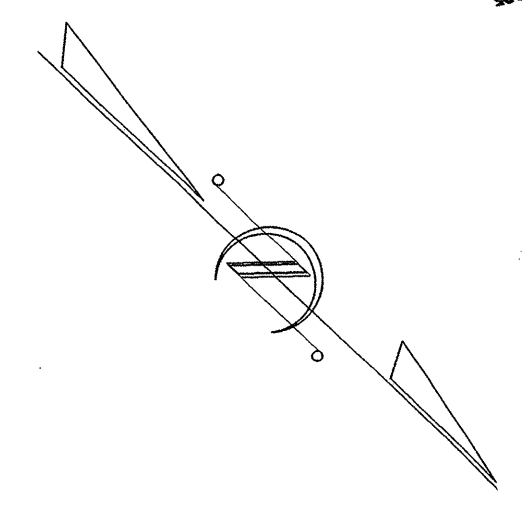
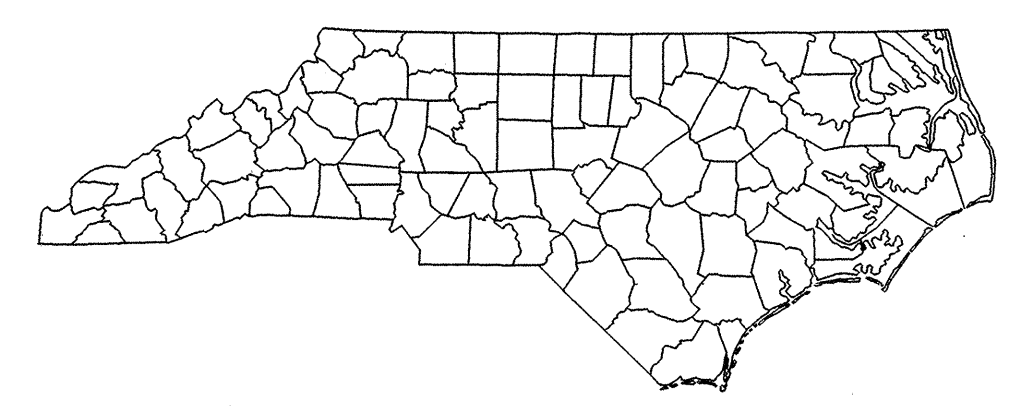


09/08/99

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

T.I.P. NO.	SHEET NO.
U-2579G	UC-1

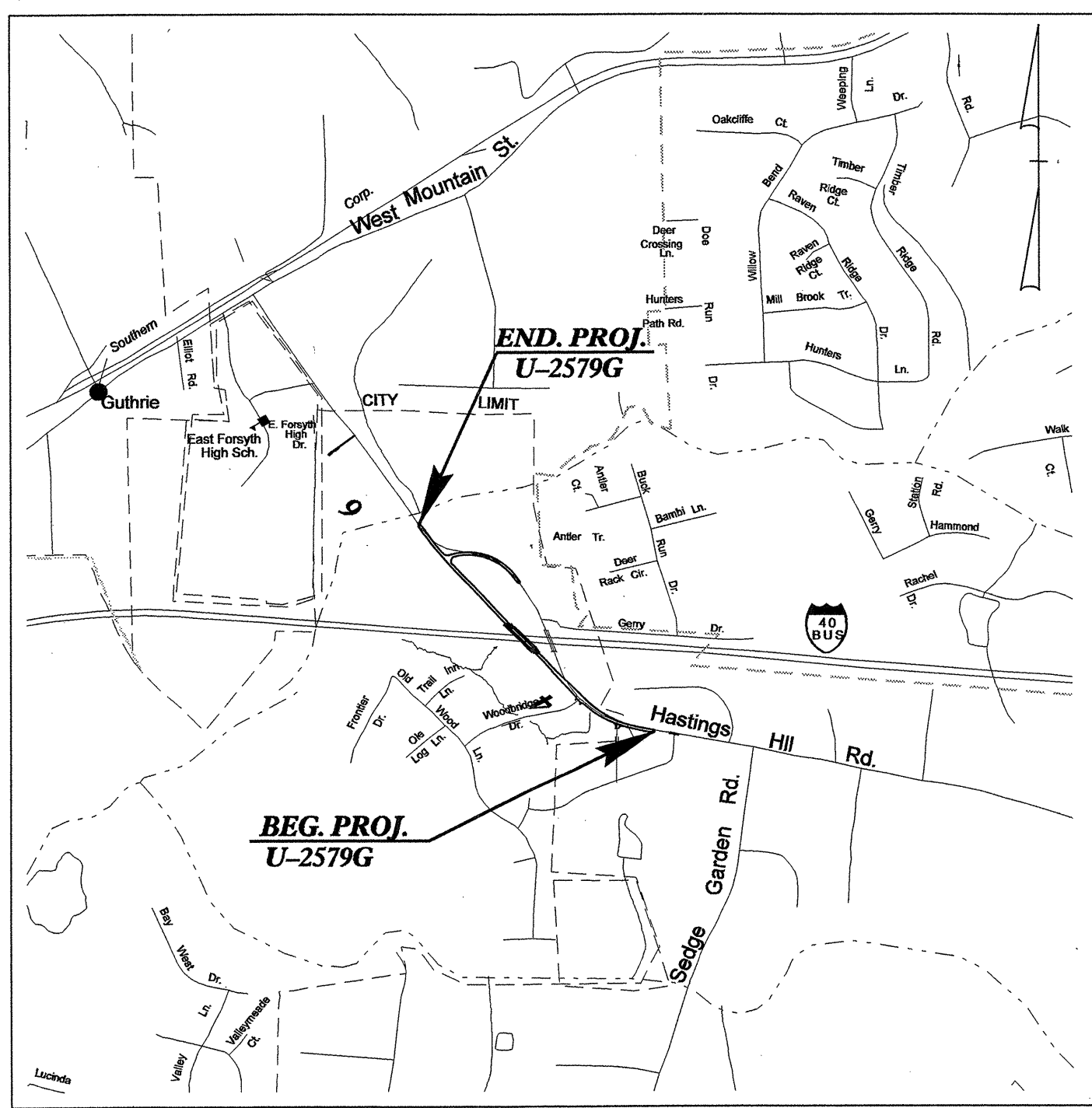


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS  
FORSYTH COUNTY**

**LOCATION: BRIDGE NO. 366 ON SR 2667 (HASTING HILL RD)  
OVER I-40 BUS/US 421**

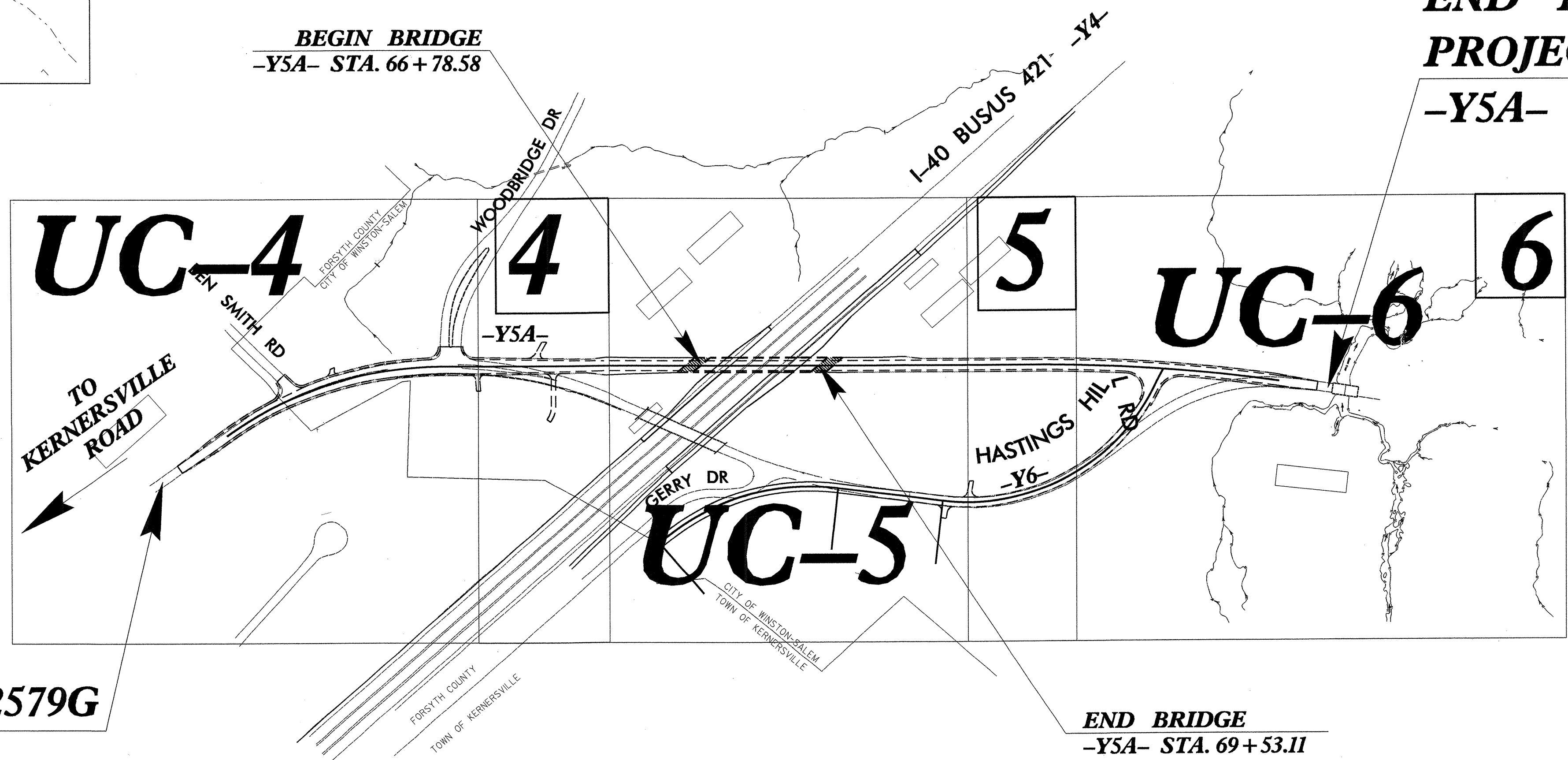
**TYPE OF WORK: UTILITY WORK**



VICINITY MAP

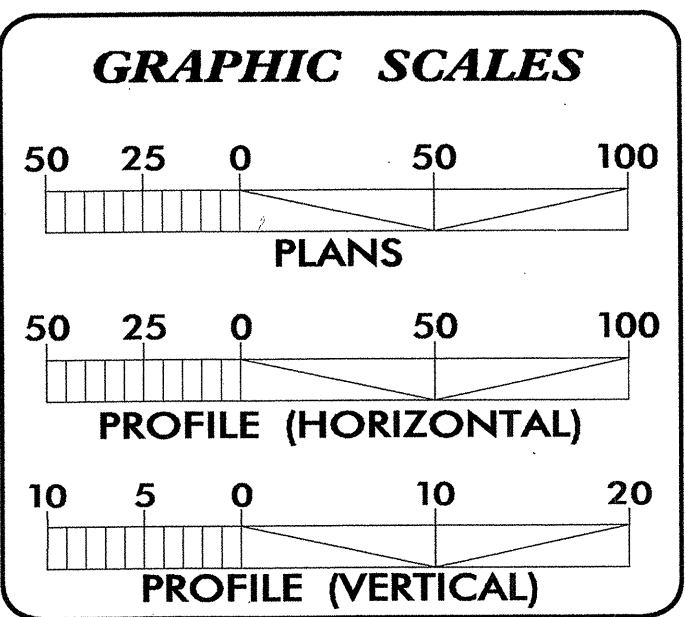
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PROJECT U-2579G  
-Y5A- STA. 81 + 50.00**

**BEGIN BRIDGE  
-Y5A- STA. 66 + 78.58**



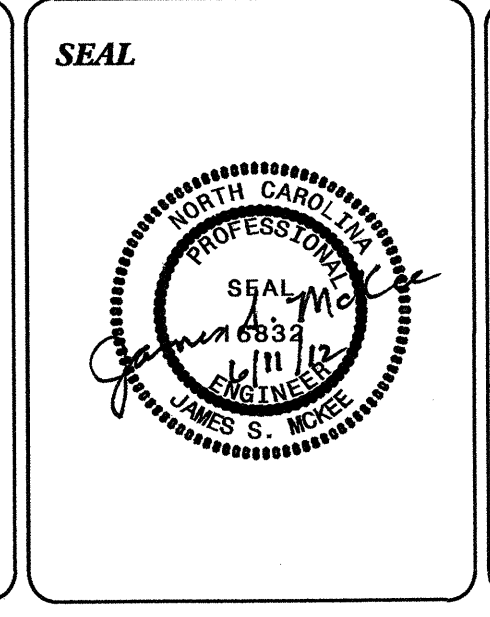
**BEG. TIP PROJECT U-2579G  
-Y5A- STA. 53 + 48.46**

**END BRIDGE  
-Y5A- STA. 69 + 53.11**



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY SYMBOLOGY
UC-3	NOTES
UC-3A & 3B	DETAILS
UC-4 THRU UC-6	UTILITY CONSTRUCTION SHEETS
UC-7	PROFILE SHEET

WATER AND SEWER OWNERS ON PROJECT	
(1)	WATER CITY OF WINSTON-SALEM
(2)	SANITARY SEWER CITY OF WINSTON-SALEM



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

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

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

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

**TIP PROJECT: U-2579G**

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

5/14/99  
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 REV: 2/1/2012



# 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 2012. AND THE CITY OF WINSTON - SALEM TECHNICAL SPECIFICATIONS AND DETAIL DRAWINGS DATED JUNE 2011.
2. THE EXISTING UTILITIES BELONG TO WINSTON - SALEM/FORSYTH COUNTY UTILITY COMMISSION.
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 ENVIRONMENTAL 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.

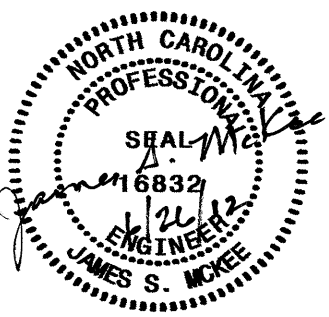
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.

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:

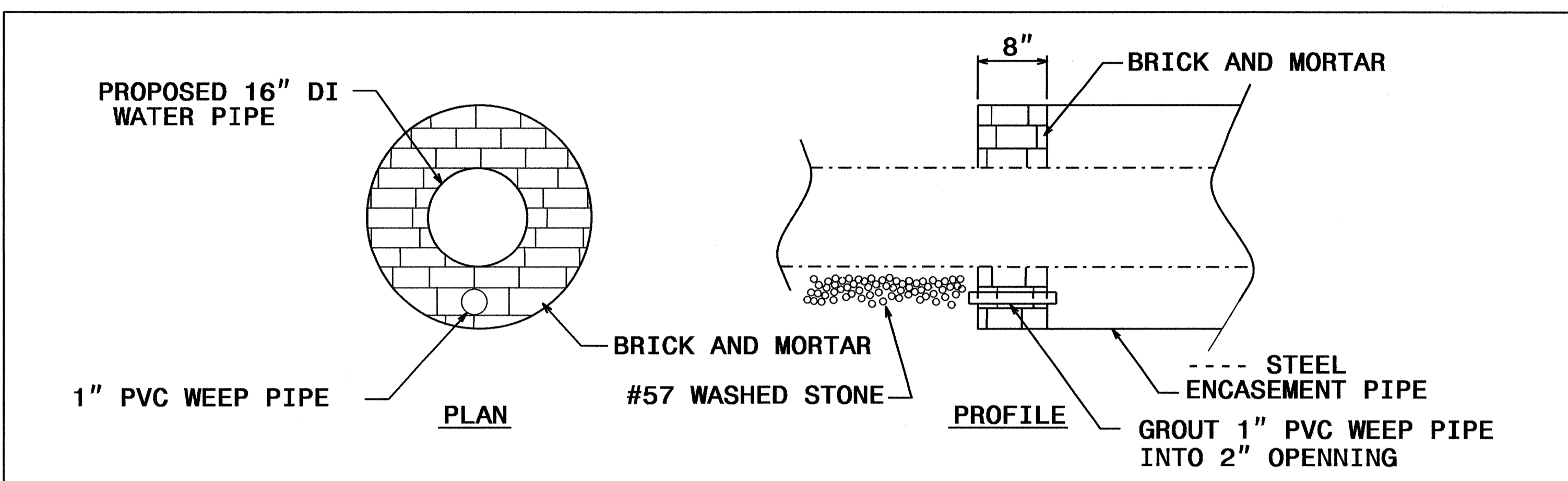
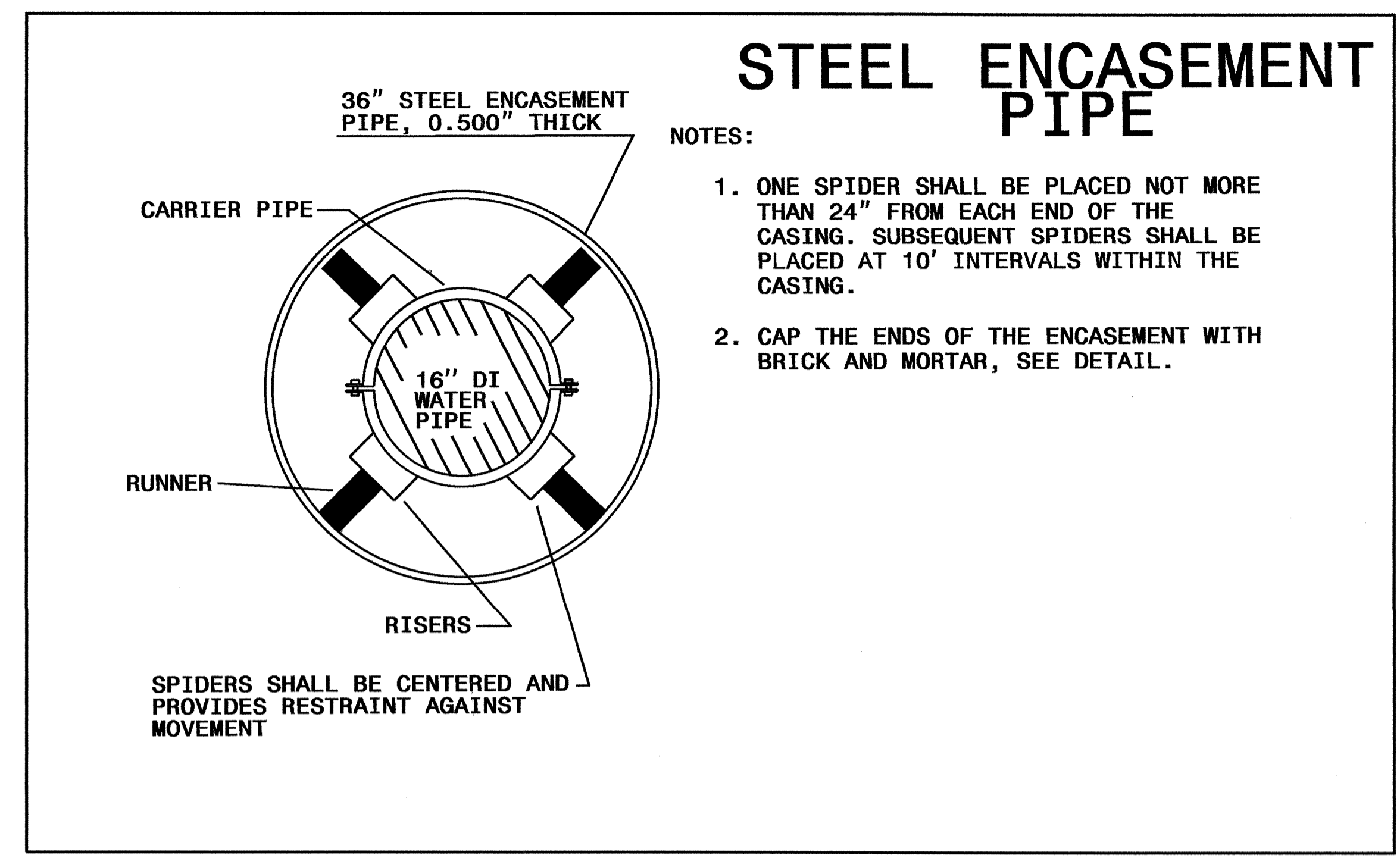
1. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS,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

PROJECT REFERENCE NO.	SHEET NO.
U-2579G	UC-3
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	

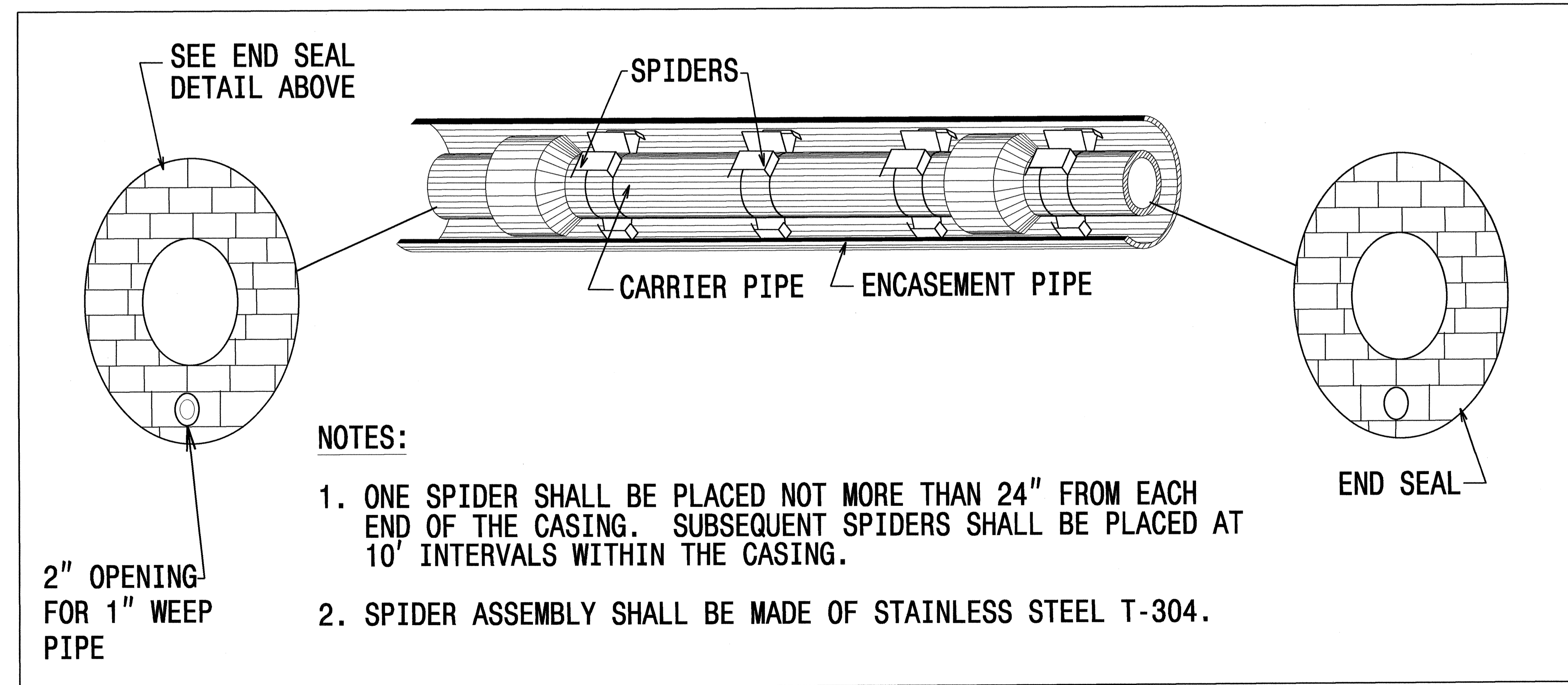
UTILITY CONSTRUCTION  
PLANS ONLY

## UTILITY CONSTRUCTION

UTILITY CONSTRUCTION PLANS ONLY



## END SEAL ENCASEMENT DETAIL



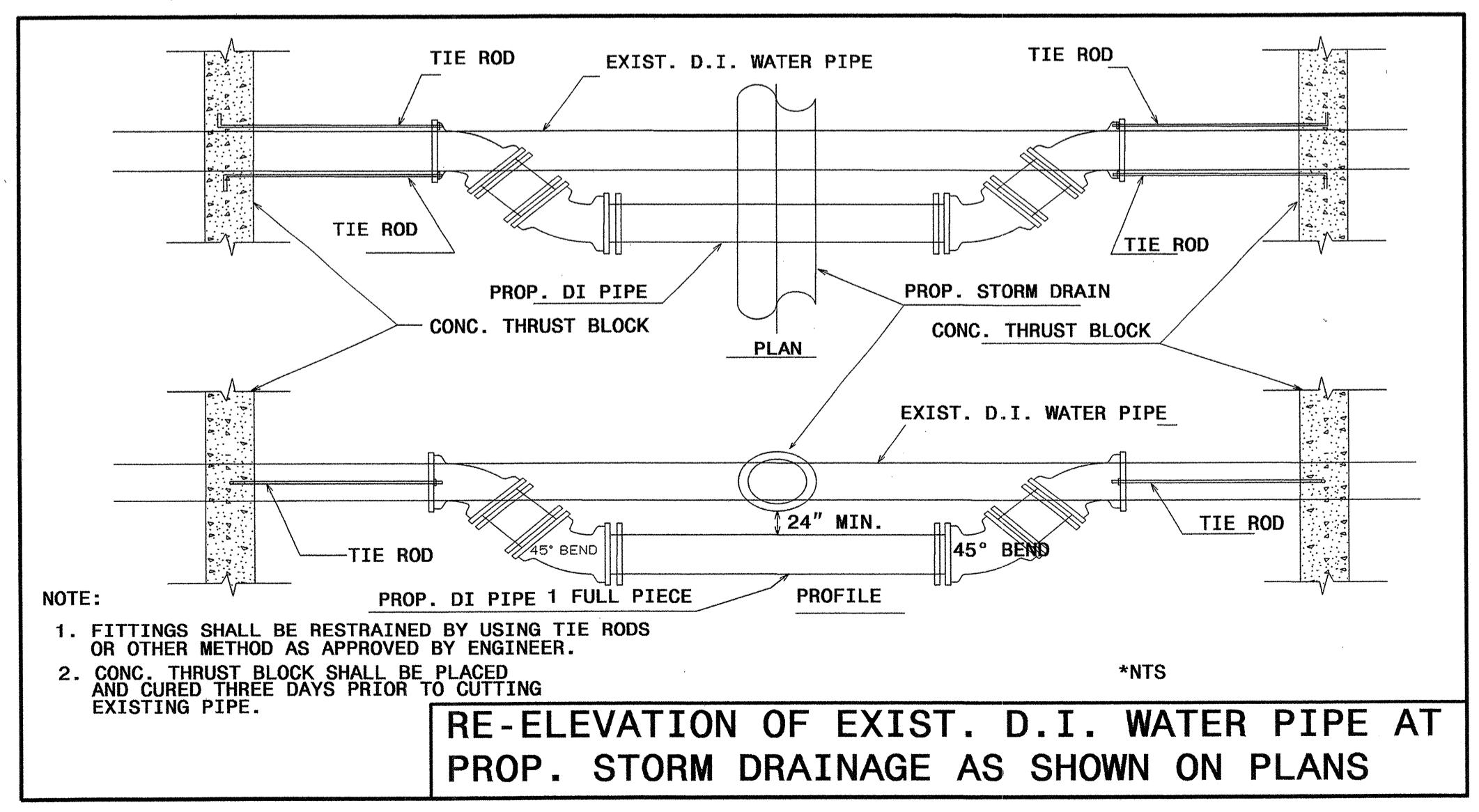
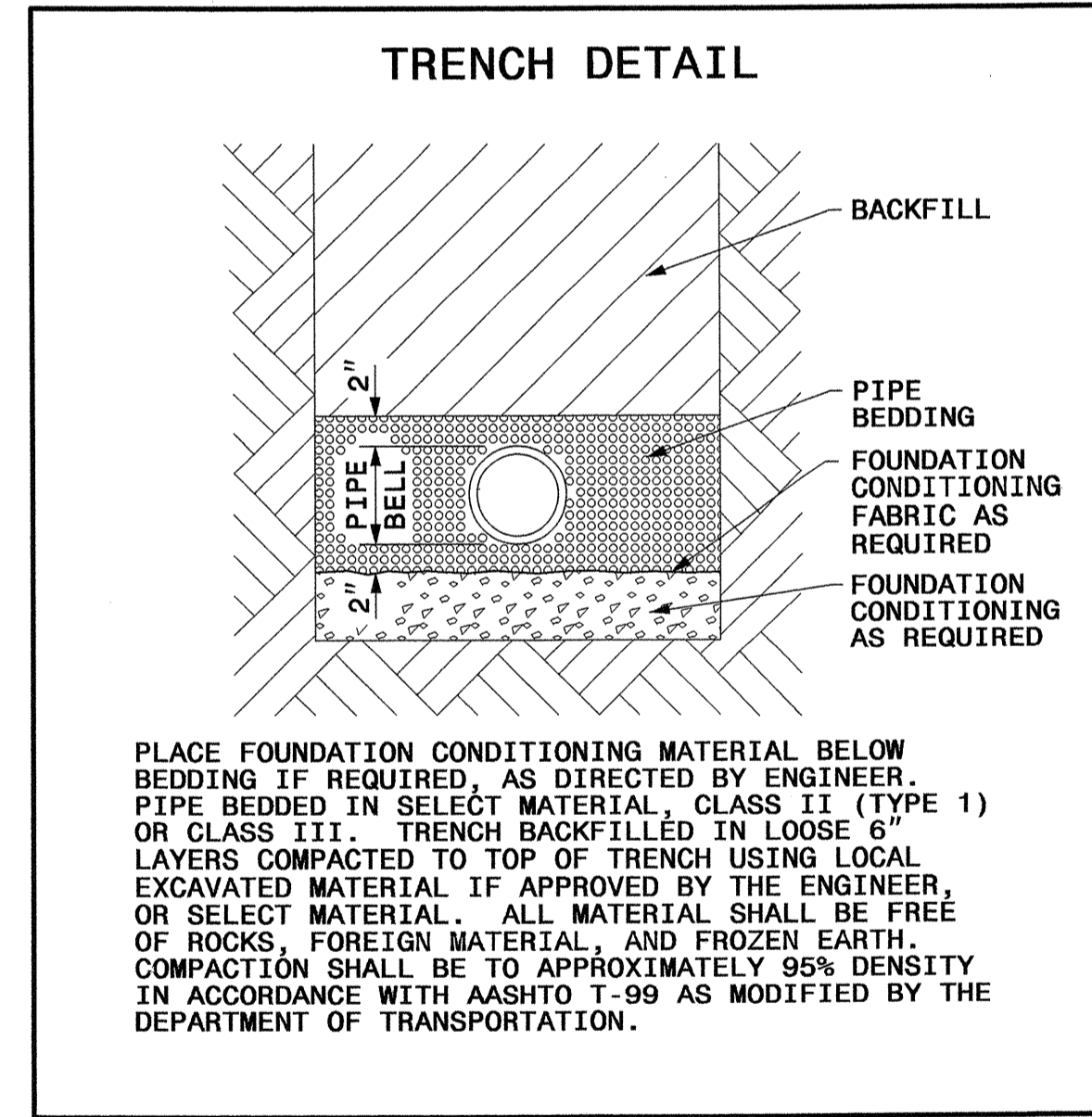
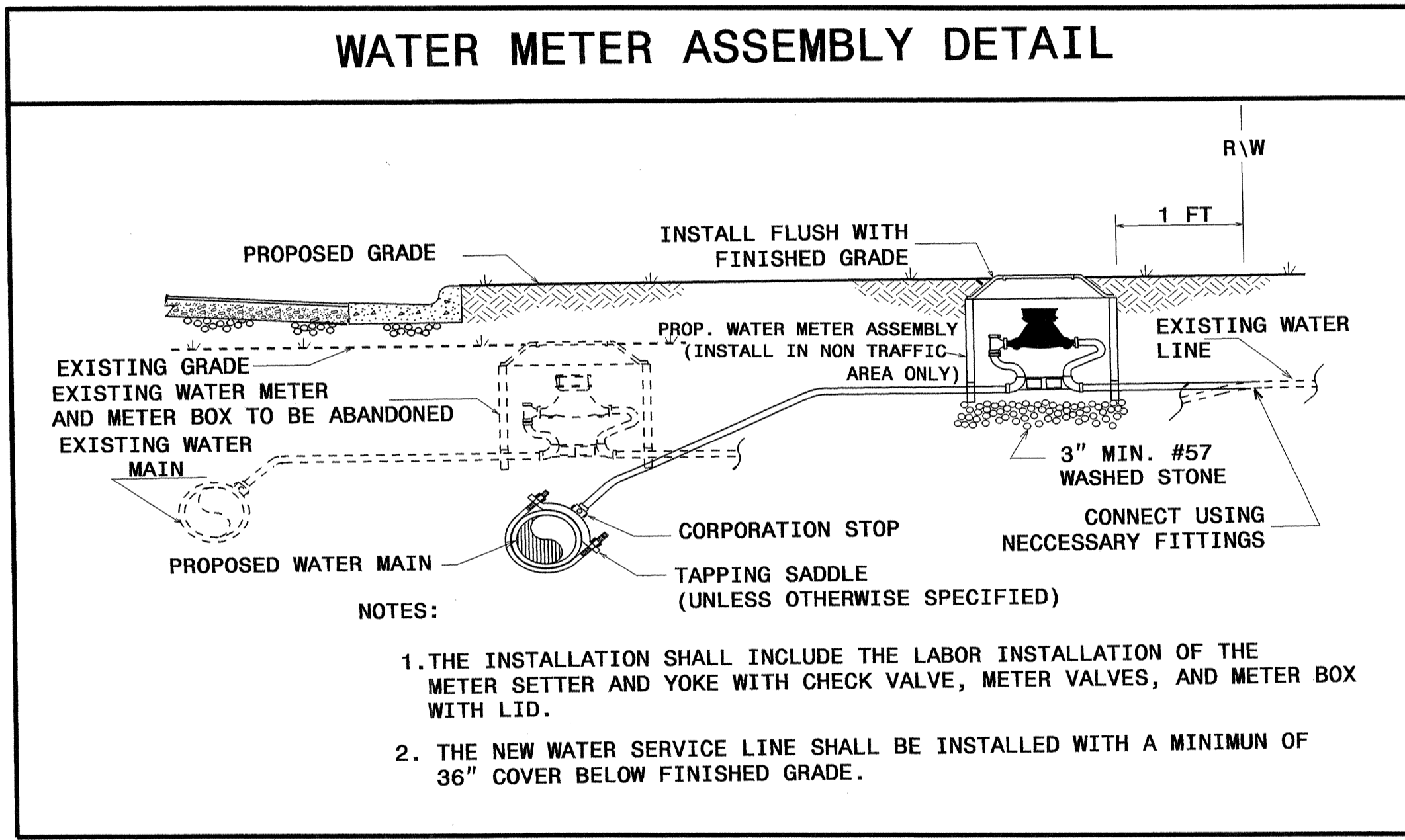
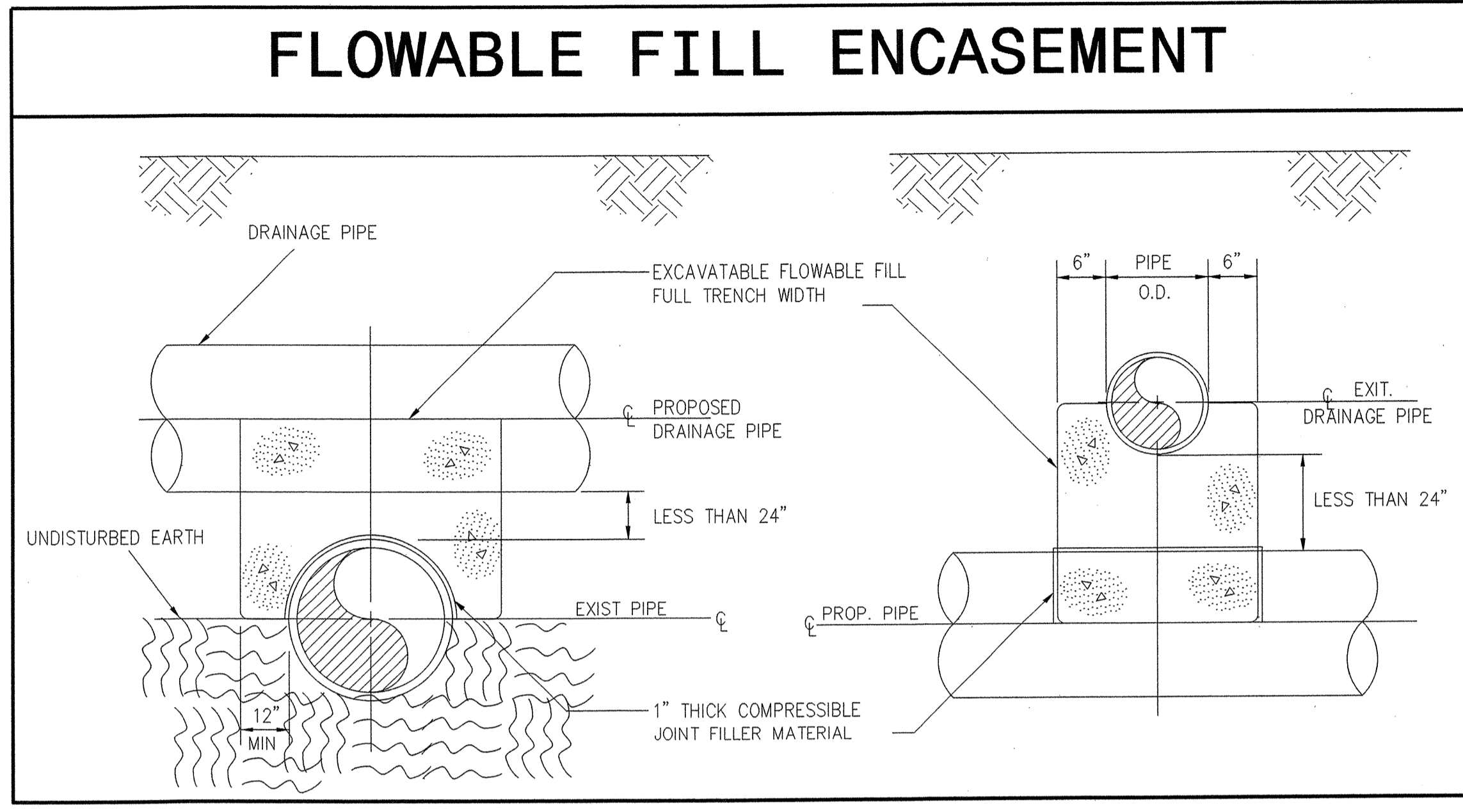
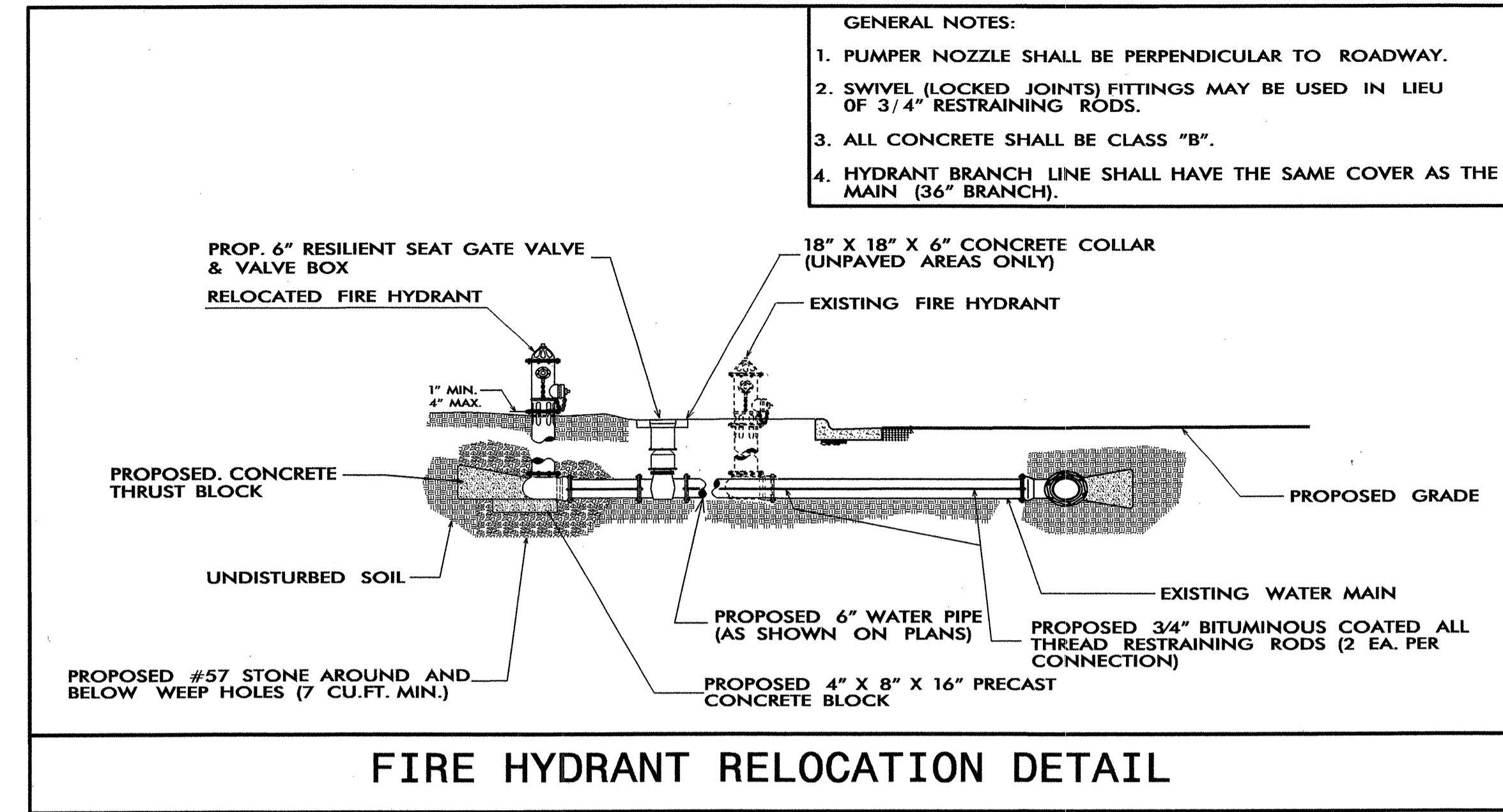
## PROPOSED PIPE ENCASEMENT DETAIL

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**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		

5/14/99

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PROJECT REFERENCE NO.	SHEET NO.
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DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISI:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

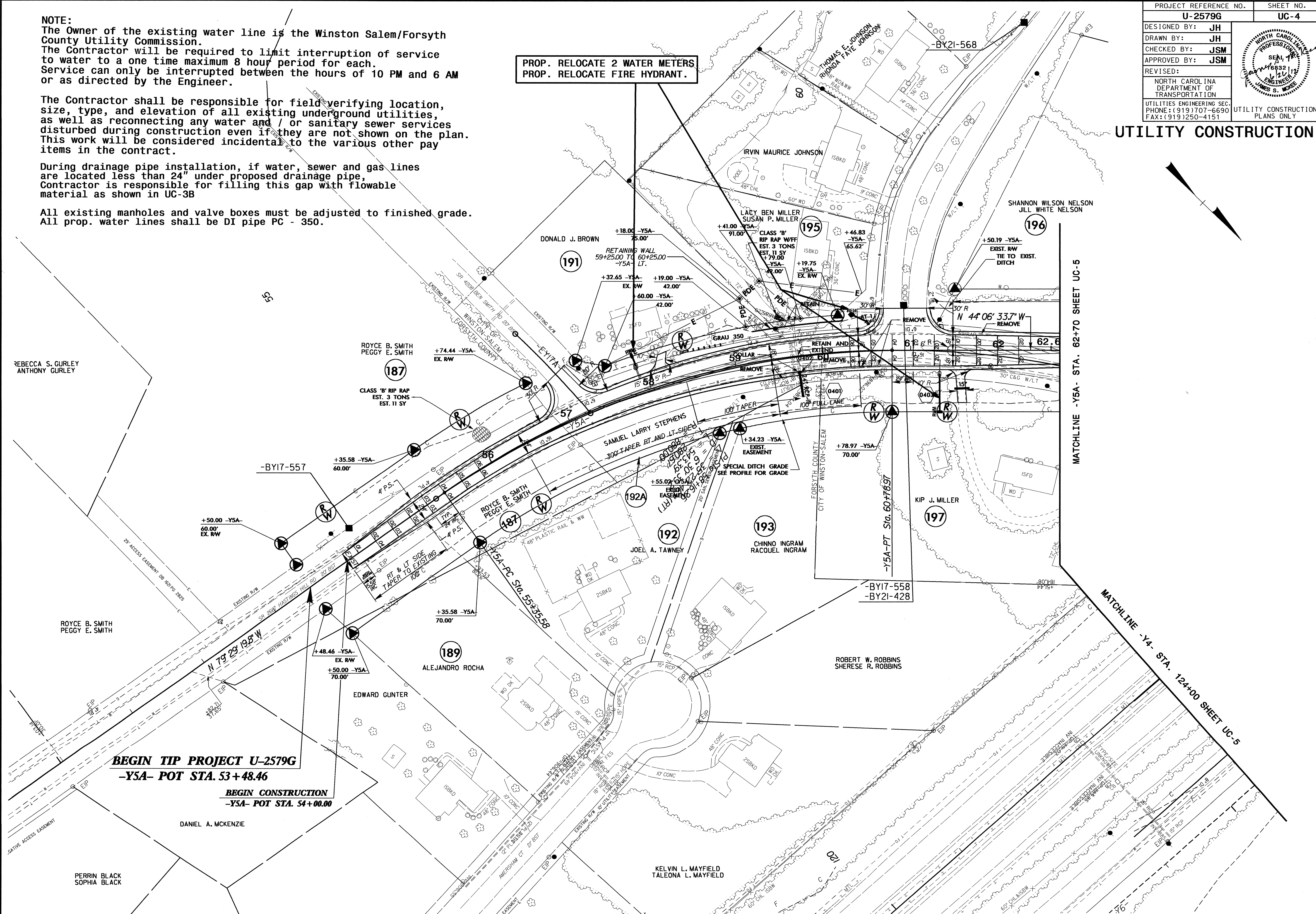
**NOTE:**  
 The Owner of the existing water line is the Winston Salem/Forsyth County Utility Commission.  
 The Contractor will be required to limit interruption of service to water to a one time maximum 8 hour period for each.  
 Service can only be interrupted between the hours of 10 PM and 6 AM or as directed by the Engineer.

The Contractor shall be responsible for field verifying location, size, type, and elevation of all existing underground utilities, as well as reconnecting any water and / or sanitary sewer services disturbed during construction even if they are not shown on the plan. This work will be considered incidental to the various other pay items in the contract.

During drainage pipe installation, if water, sewer and gas lines are located less than 24" under proposed drainage pipe, Contractor is responsible for filling this gap with flowable material as shown in UC-3B

All existing manholes and valve boxes must be adjusted to finished grade.  
 All prop. water lines shall be DI pipe PC - 350.

**PROP. RELOCATE 2 WATER METERS  
 PROP. RELOCATE FIRE HYDRANT.**



**BEGIN TIP PROJECT U-2579G  
 -YSA- POT STA. 53+48.46  
 BEGIN CONSTRUCTION  
 -YSA- POT STA. 54+00.00**

MATCHLINE -Y5A- STA. 62+70 SHEET UC-5

MATCHLINE -Y4- STA. 124+00 SHEET UC-5

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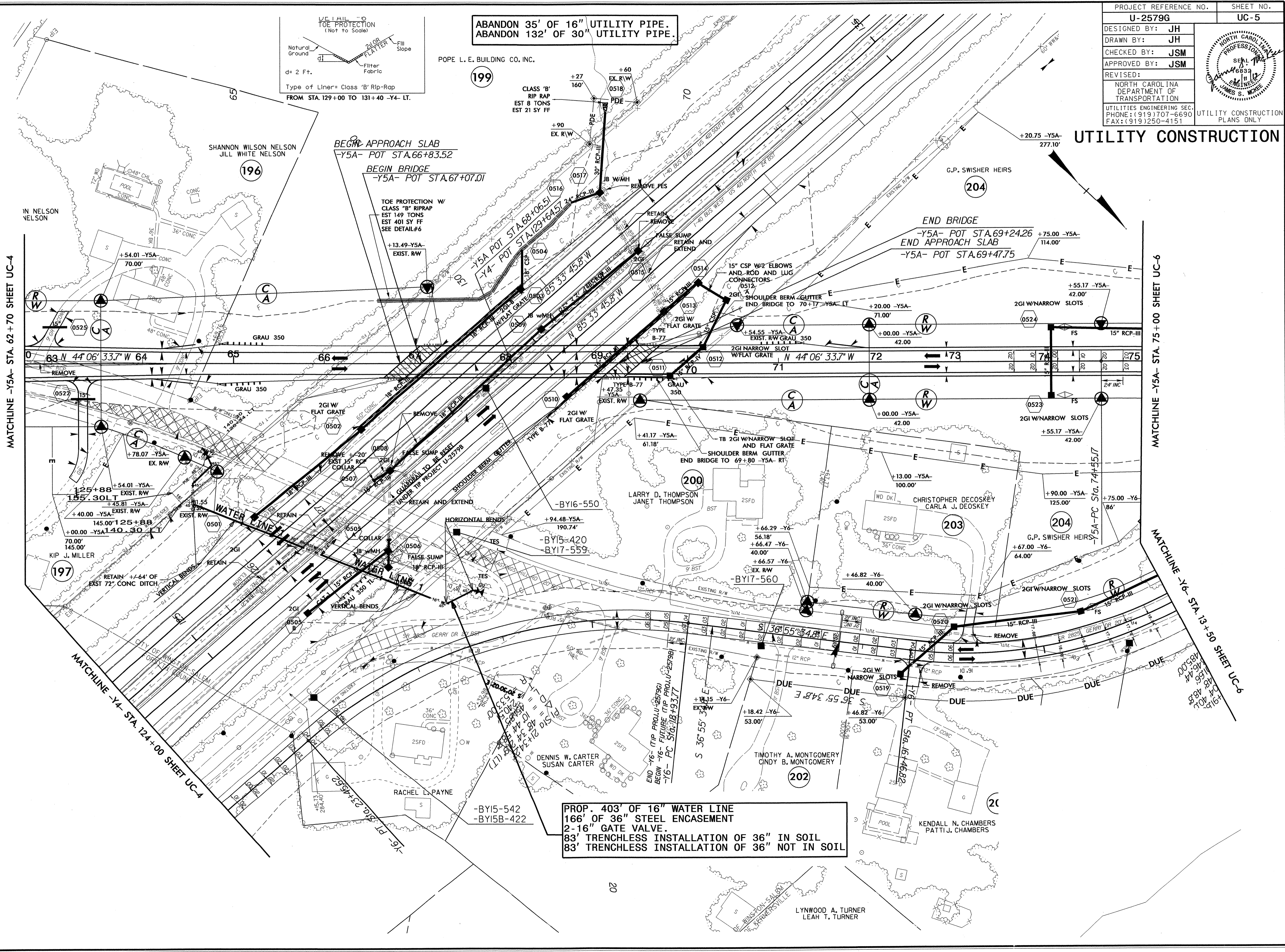
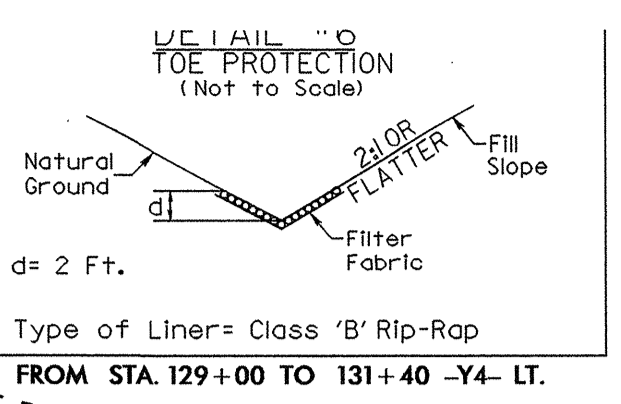


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U-2579G	UC-5
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISID:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

**ABANDON 35' OF 16" UTILITY PIPE.  
ABANDON 132' OF 30" UTILITY PIPE.**

POPE L. E. BUILDING CO., INC.



**PROP. 403' OF 16" WATER LINE  
166' OF 36" STEEL ENCASMENT  
2-16" GATE VALVE.  
83' TRENCHLESS INSTALLATION OF 36" IN SOIL  
83' TRENCHLESS INSTALLATION OF 36" NOT IN SOIL**

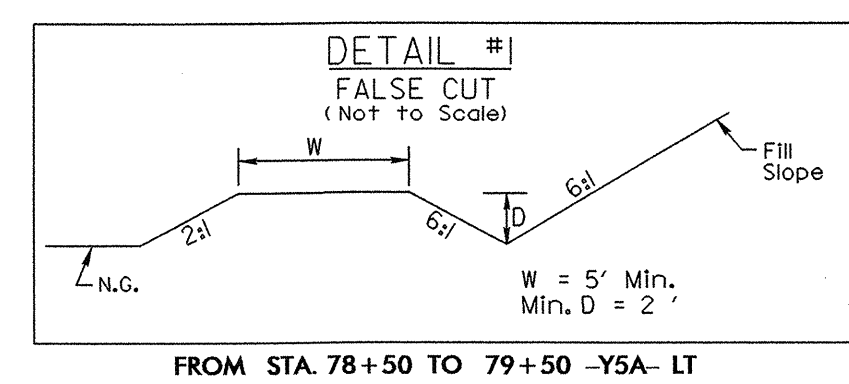
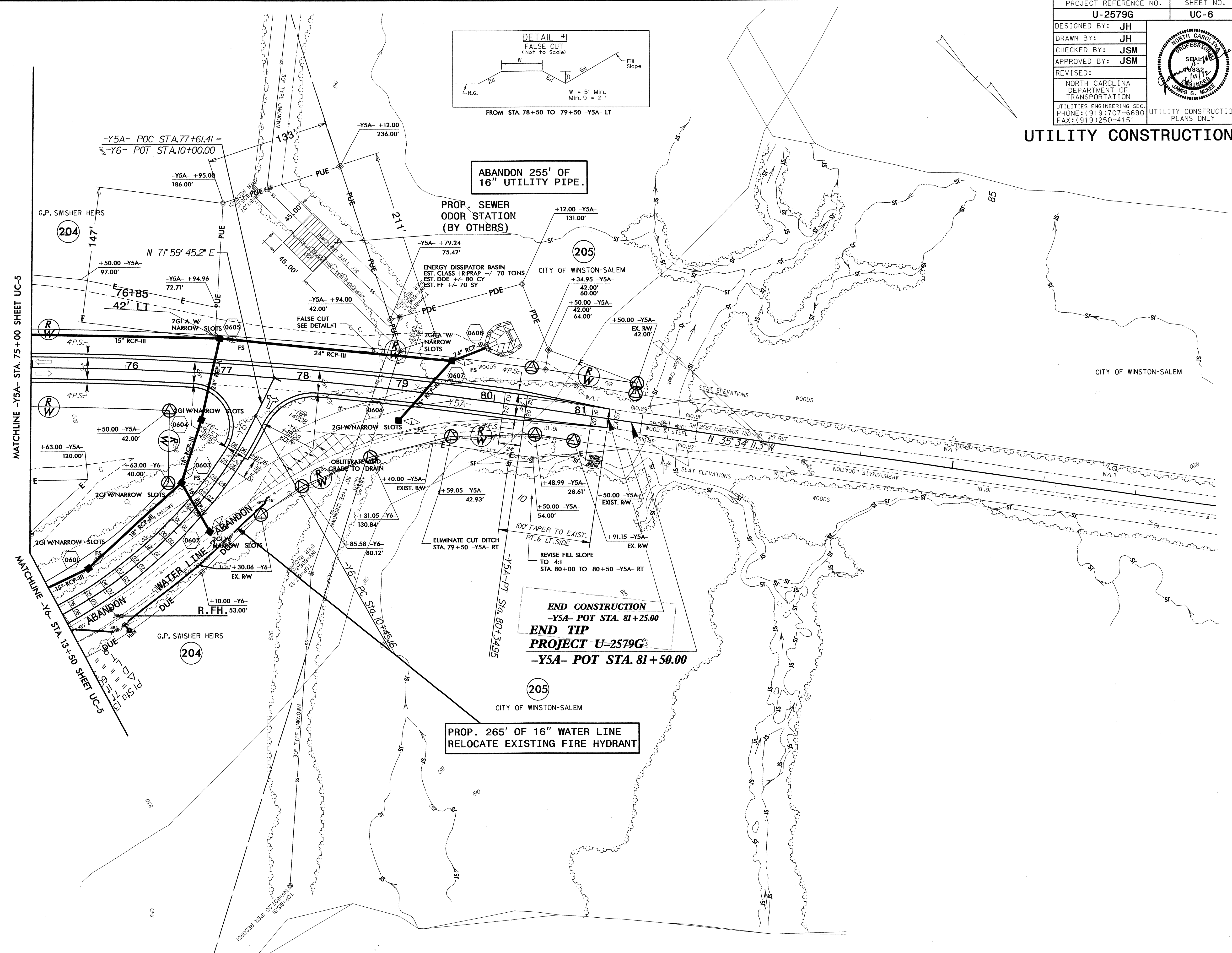
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PROJECT REFERENCE NO.	SHEET NO.
U-2579G	UC-6
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DRAWN BY: JH	
CHECKED BY: JSM	
APPROVED BY: JSM	
REVISER:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151
UTILITY CONSTRUCTION PLANS ONLY	

# UTILITY CONSTRUCTION



ABANDON 255' OF 16" UTILITY PIPE.

PROP. SEWER ODOR STATION (BY OTHERS)

ENERGY DISSIPATOR BASIN EST. CLASS I RIPRAP +/- 70 TONS EST. DDE +/- 80 CY EST. FF +/- 70 SY

END CONSTRUCTION -Y5A- POT STA. 81+25.00  
END TIP PROJECT U-2579G  
-Y5A- POT STA. 81+50.00

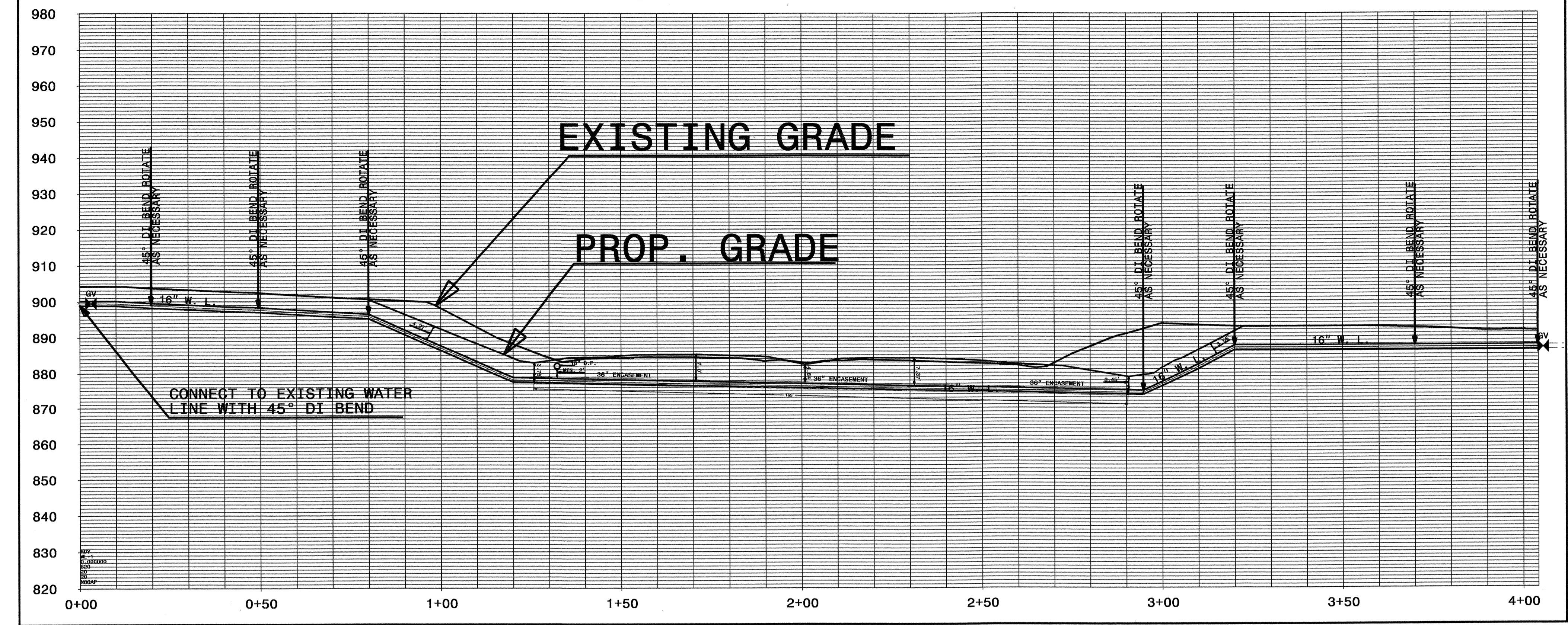
PROP. 265' OF 16" WATER LINE RELOCATE EXISTING FIRE HYDRANT



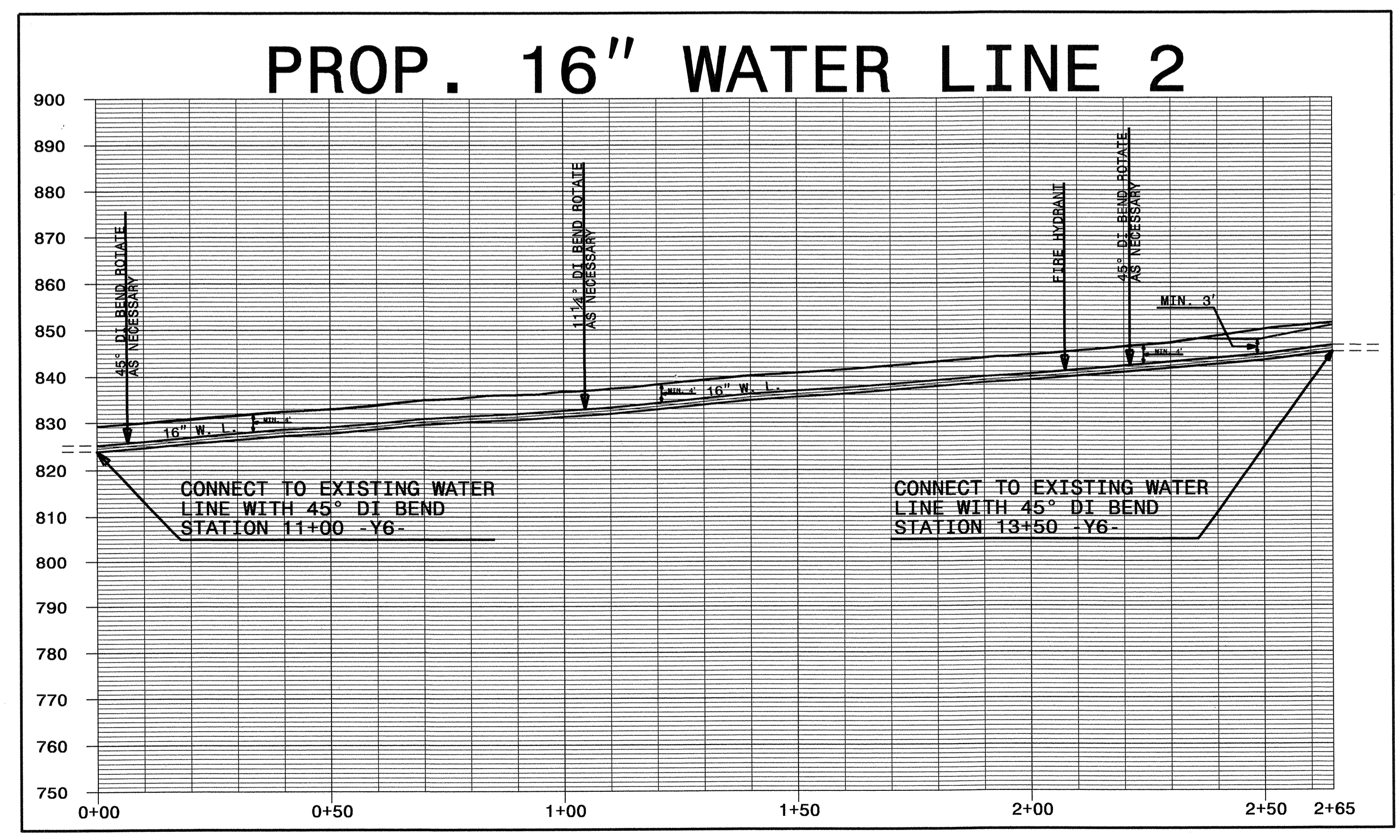
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DESIGNED BY: <b>JH</b>	
DRAWN BY: <b>JH</b>	
CHECKED BY: <b>JSM</b>	
APPROVED BY: <b>JSM</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

**UTILITY CONSTRUCTION**

# PROP. 16" WATER LINE 1



# PROP. 16" WATER LINE 2



5/14/99

20-JUN-2002 14:45  
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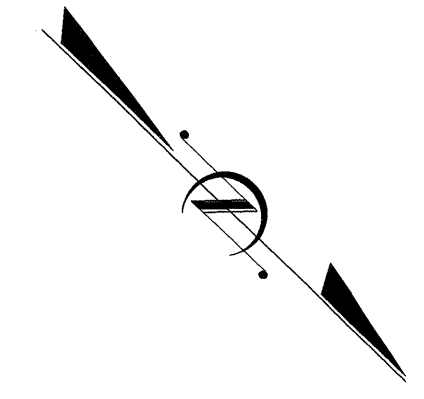
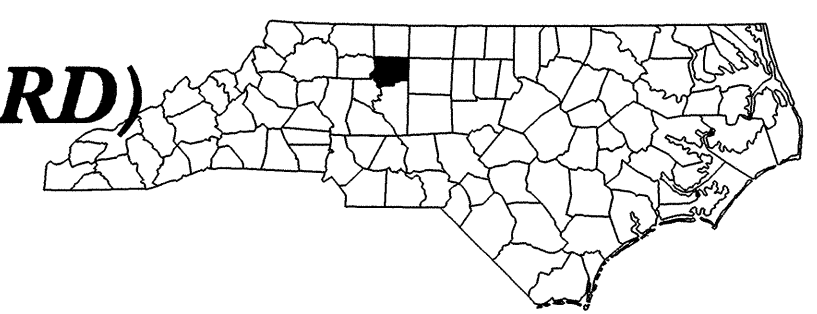
T.I.P. NO.	SHEET NO.
U-2579G	UO-1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

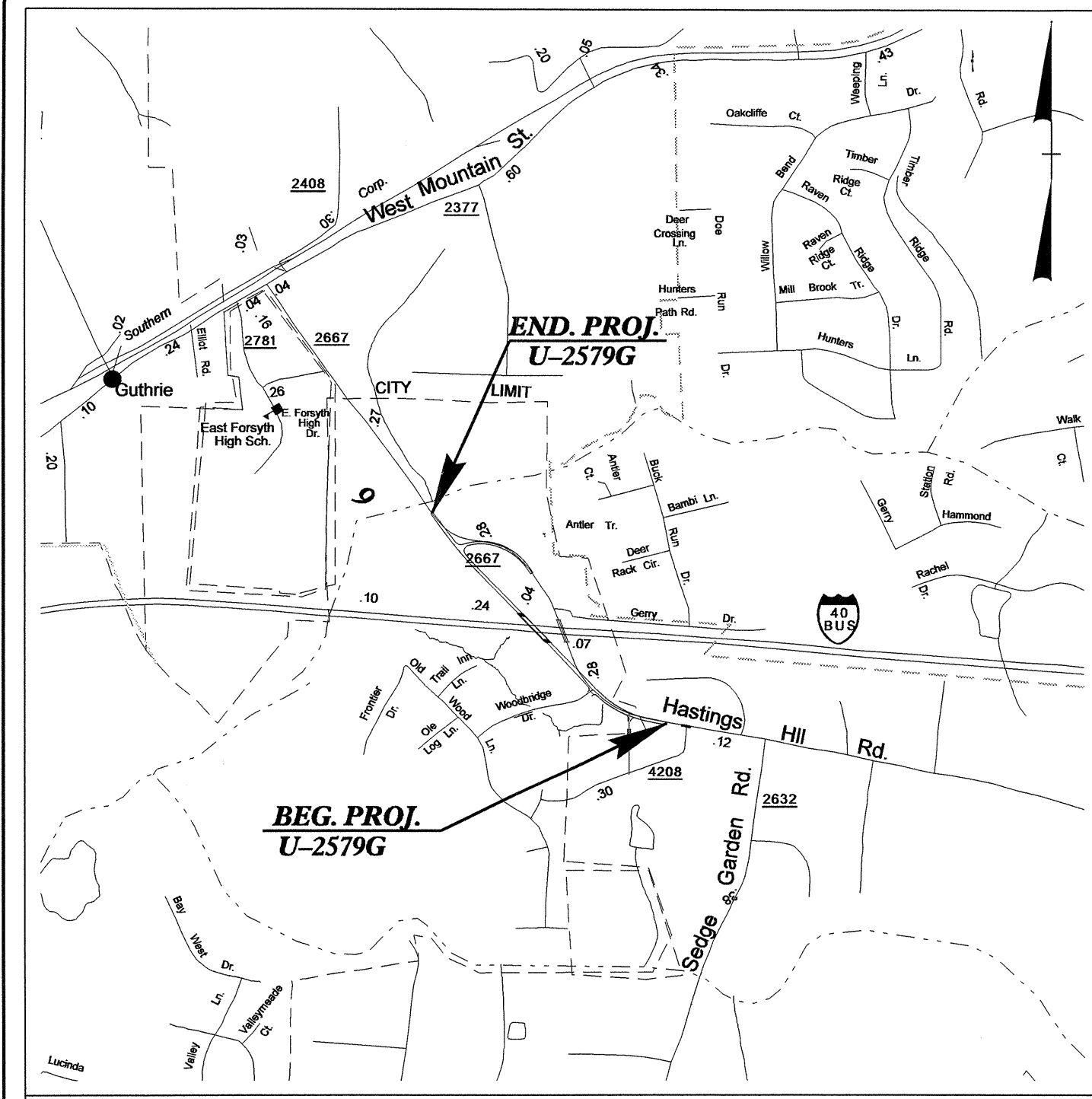
**UTILITIES BY OTHERS PLANS  
FORSYTH COUNTY**

**LOCATION: BRIDGE NO. 336 ON SR 2667 (HASTINGS HILL RD)  
OVER I-40 BUS/US 421**

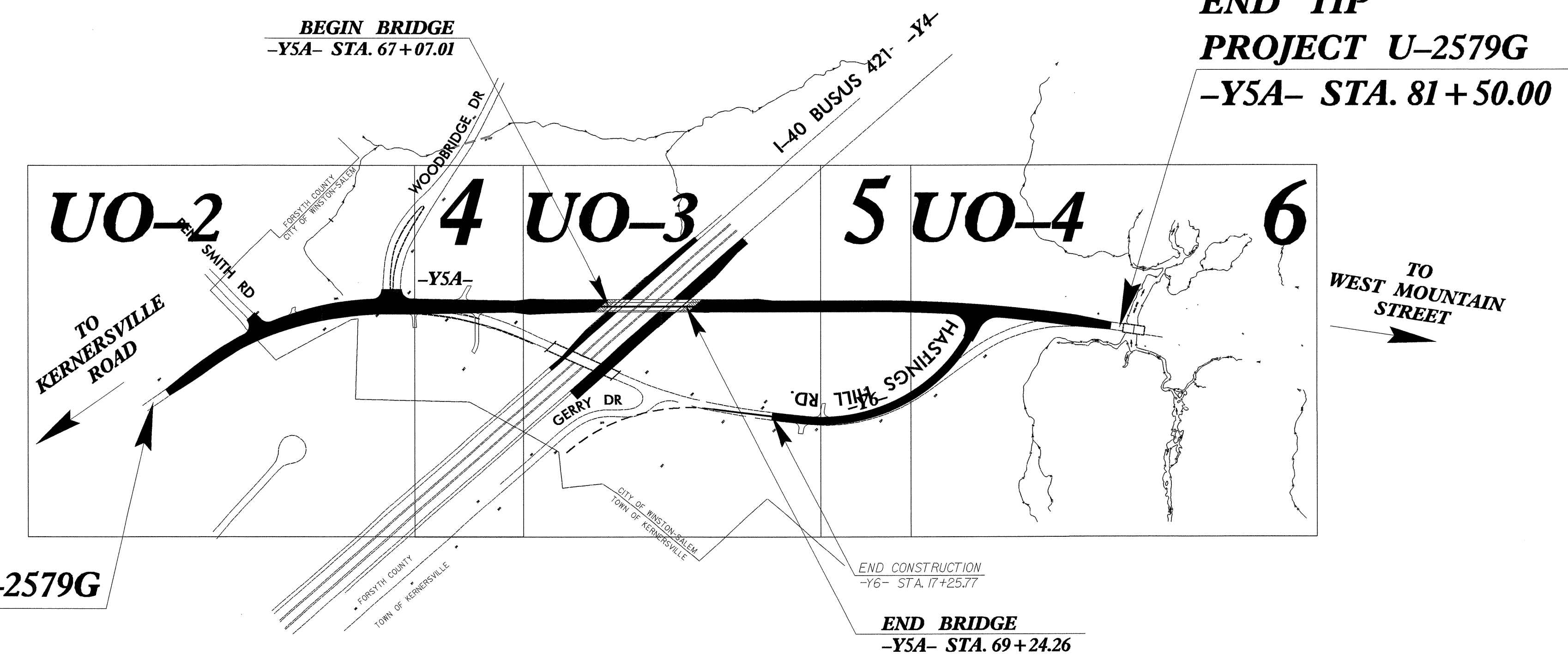
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**TIP PROJECT:**

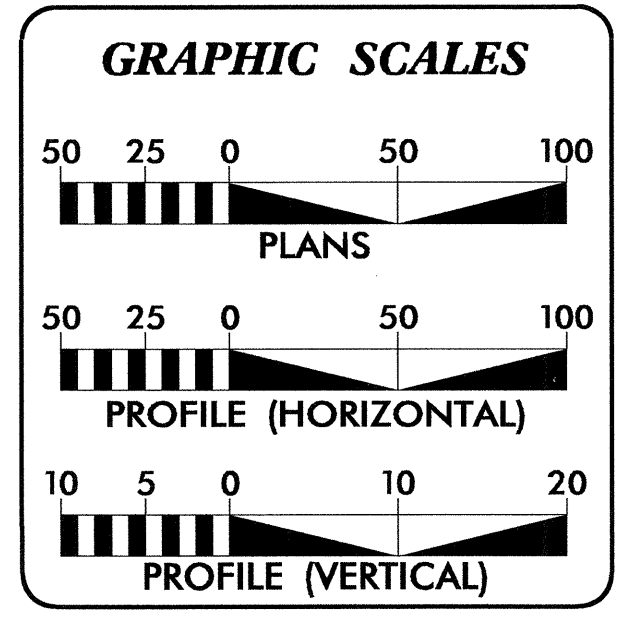


VICINITY MAP SHOWING LOCATION OF PROJECT U-2579G



**BEG. TIP PROJECT U-2579G  
-Y5A- STA. 53 + 48.46**

**END TIP  
PROJECT U-2579G  
-Y5A- STA. 81 + 50.00**



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-4	UTILITY BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
(1) Duke Energy - Power
(2) AT&T Long Distance - Telephone
(3) AT&T Distribution - Telephone
(4) Piedmont Natural Gas - Gas
(5) Time Warner Cable - TV Cable

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

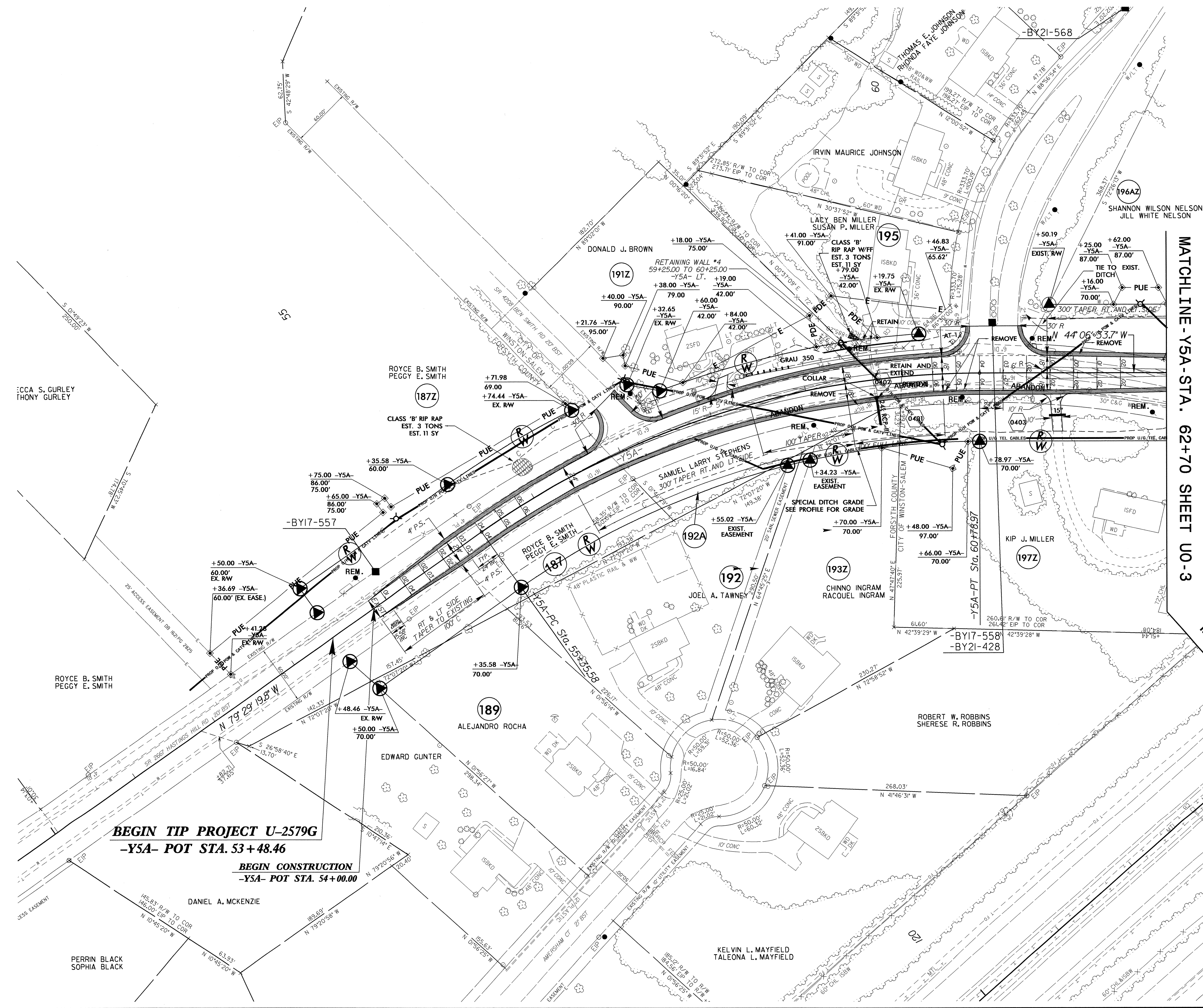
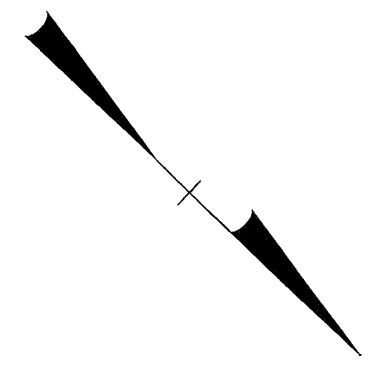
<u>Roger Worthington, P.E.</u>	UTILITIES SECTION ENGINEER
<u>Steve McKee, P.E.</u>	UTILITIES SQUAD LEADER PROJECT ENGINEER
<u>Jamshid Hafshejani</u>	UTILITIES PROJECT DESIGNER

02-JUL-2012 11:29 R:\Utilities\rdy\_uf\Proj\U-2579G\_U1\_Title.UO1.psh.dgn \$\$\$USERNAME\$\$\$



### UTILITIES BY OTHERS

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



**BEGIN TIP PROJECT U-2579G**  
**-Y5A- POT STA. 53+48.46**

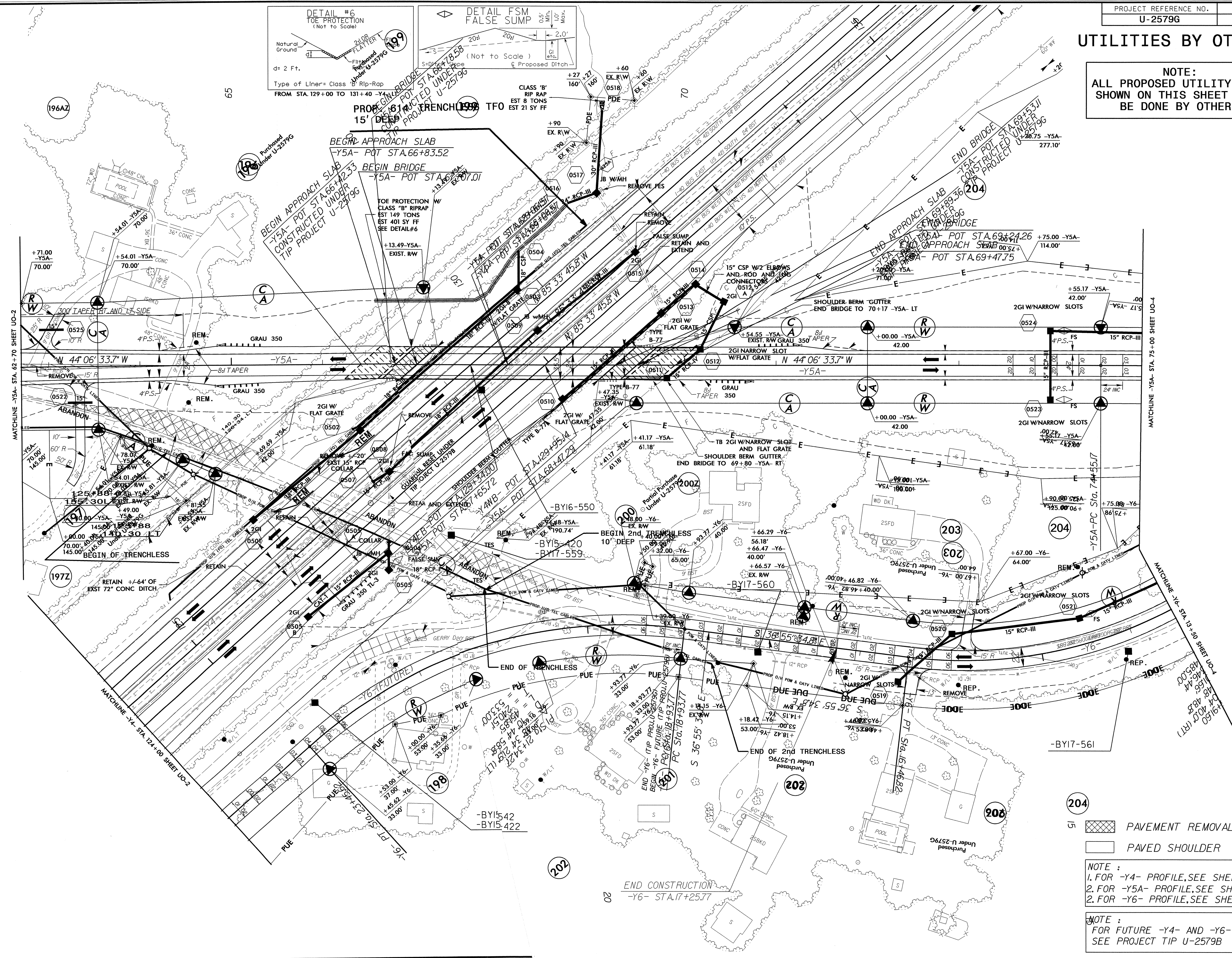
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**-Y5A- POT STA. 54+00.00**

5/14/09  
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UTILITIES BY OTHERS

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



**204**

PAVEMENT REMOVAL  
 PAVED SHOULDER

NOTE:  
1. FOR -Y4- PROFILE, SEE SHEET 7  
2. FOR -Y5A- PROFILE, SEE SHEET 7  
2. FOR -Y6- PROFILE, SEE SHEET 11

NOTE:  
FOR FUTURE -Y4- AND -Y6- DESIG  
SEE PROJECT TIP U-2579B

5/14/99

24-AUG-2012 10:01  
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