

09/08/99

TIP PROJECT: U-2702

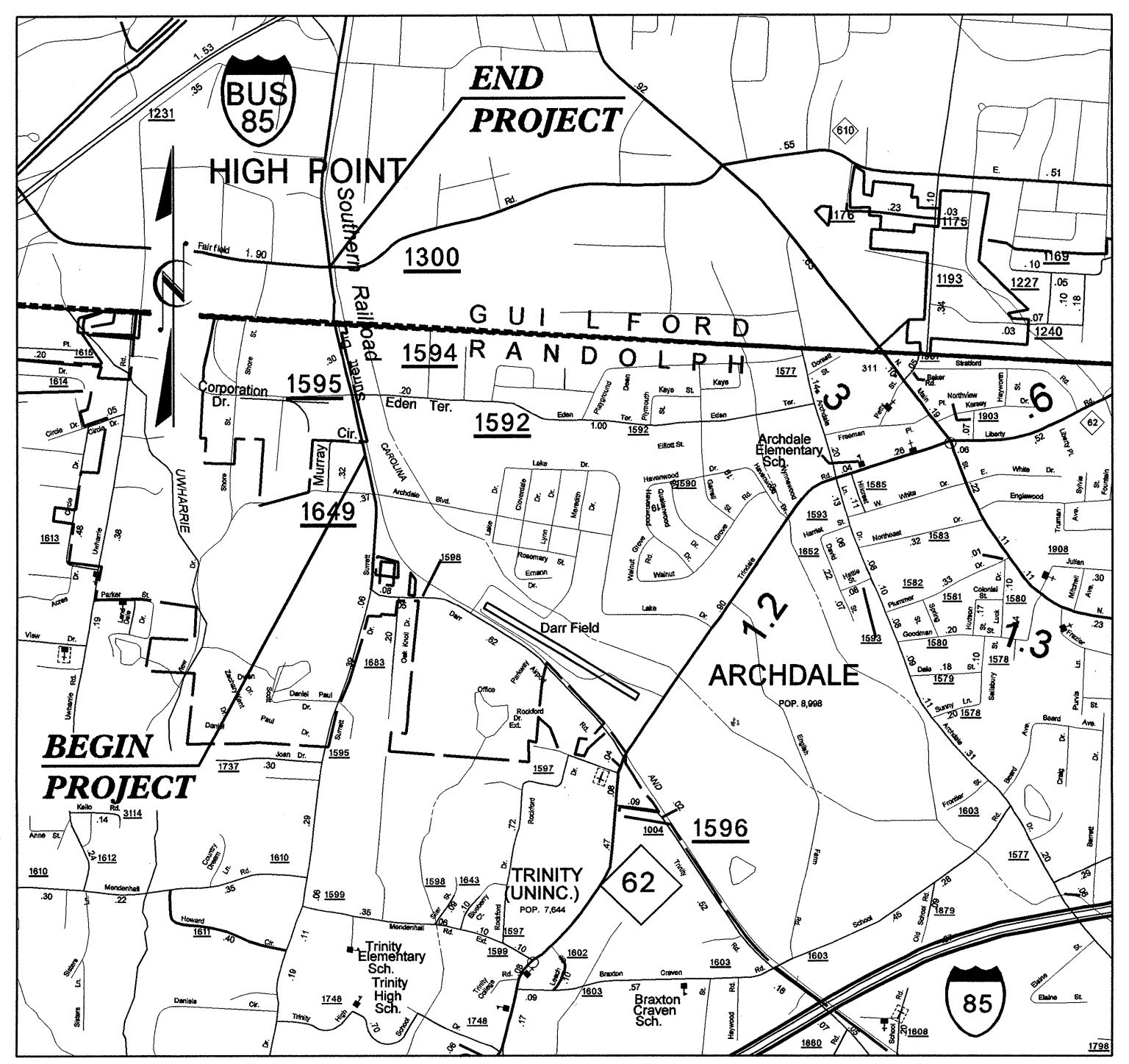
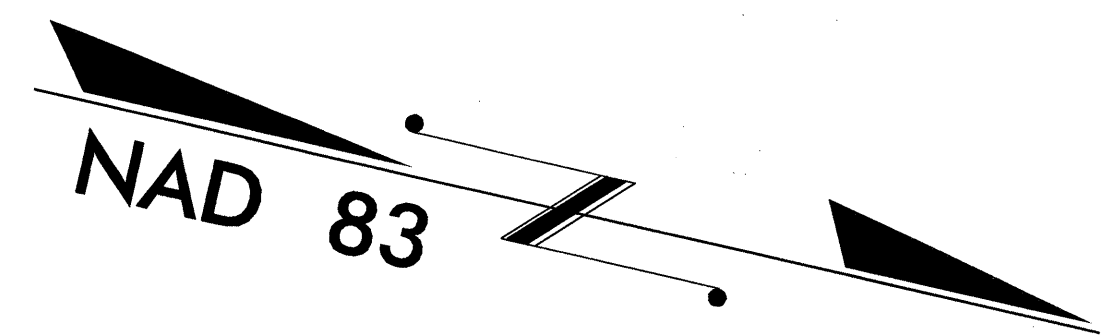
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-2702	UO-1

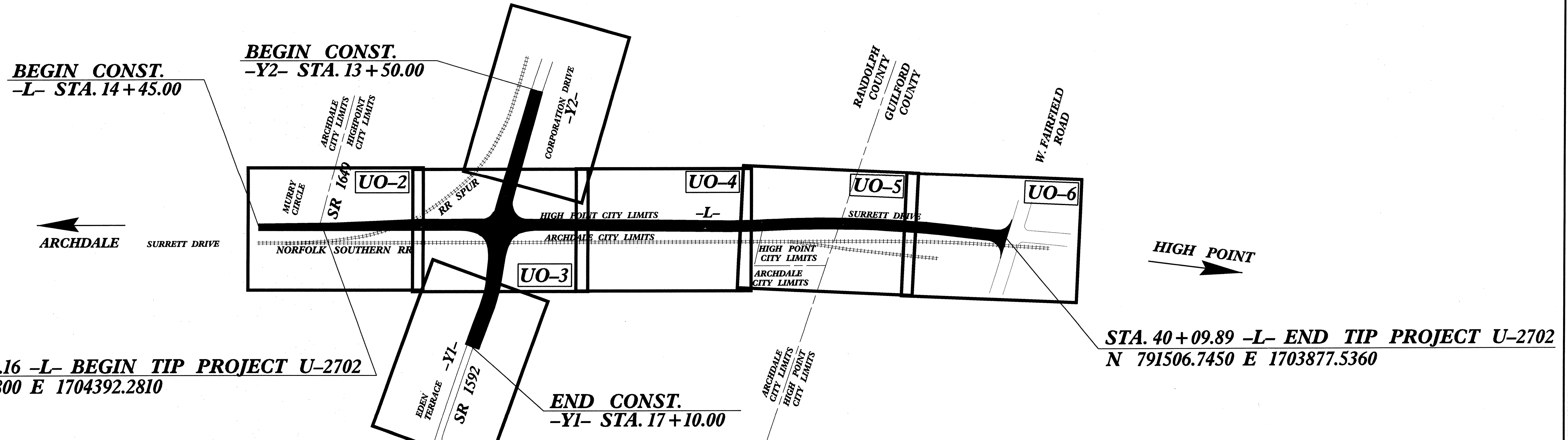
RANDOLPH/GUILFORD COUNTIES

LOCATION: ARCHDALE-HIGH POINT INTERSECTION OF  
SR 1592 (EDEN TERRACE) AND SR 1595 (SURRETT DR.)

TYPE OF WORK: UTILITIES BY OTHERS



VICINITY MAP



A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF HIGH POINT AND ARCHDALE.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-6	UTILITIES BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT

- POWER - DUKE ENERGY
- TELEPHONE - NORTH STATE COMMUNICATIONS
- CATV - TIME WARNER CABLE
- GAS - PIEDMONT NATURAL GAS
- HENPAIX PATTING, INC. - PRIVATE WATER SYSTEM



PREPARED IN THE OFFICE OF:  
DAVIS-MARTIN-POWELL  
AND ASSOCIATES, INC.  
6415 OLD PLANK ROAD  
HIGH POINT, NC 27265  
PHONE (336) 886-4821  
FAX (336) 886-4458

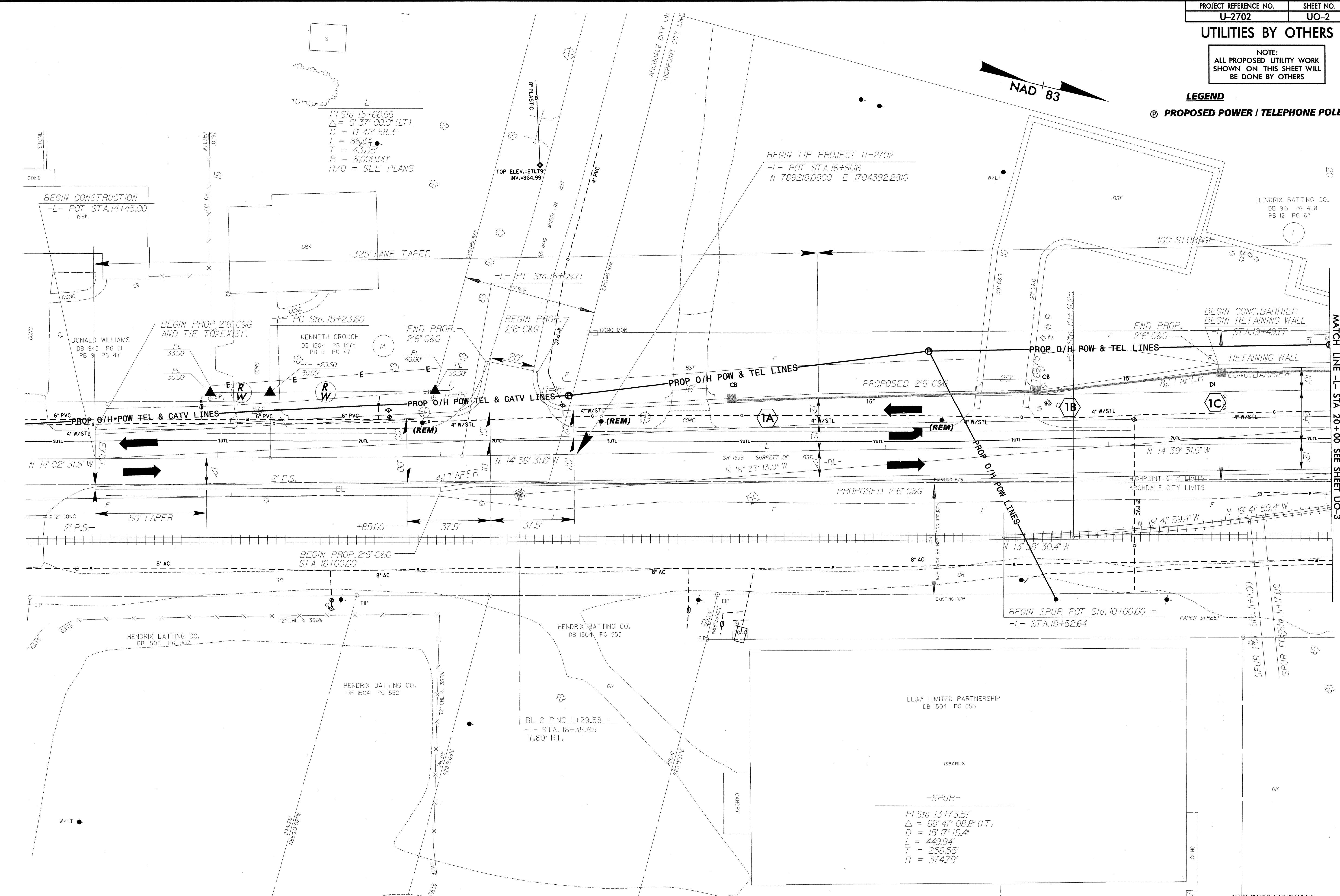
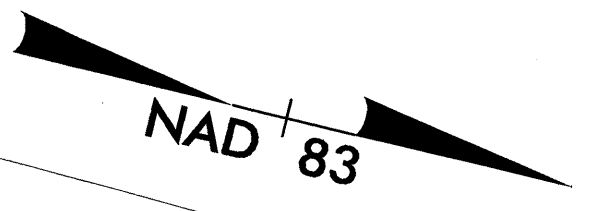
- Randy McNeill, P.E. UTILITIES PROJECT MANAGER
- Andy Larrick, P.E. UTILITIES PROJECT ENGINEER
- Andy Larrick, P.E. UTILITIES PROJECT DESIGNER

\$\$\$ SYSTEMS \$\$\$  
\$\$\$ USER NAME \$\$\$

### UTILITIES BY OTHERS

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

**LEGEND**  
⊙ PROPOSED POWER / TELEPHONE POLE



BEGIN TIP PROJECT U-2702  
-L- POT STA. 16+61.16  
N 789218.0800 E 1704392.2810

BEGIN SPUR POT Sta. 10+00.00 =  
-L- STA. 18+52.64

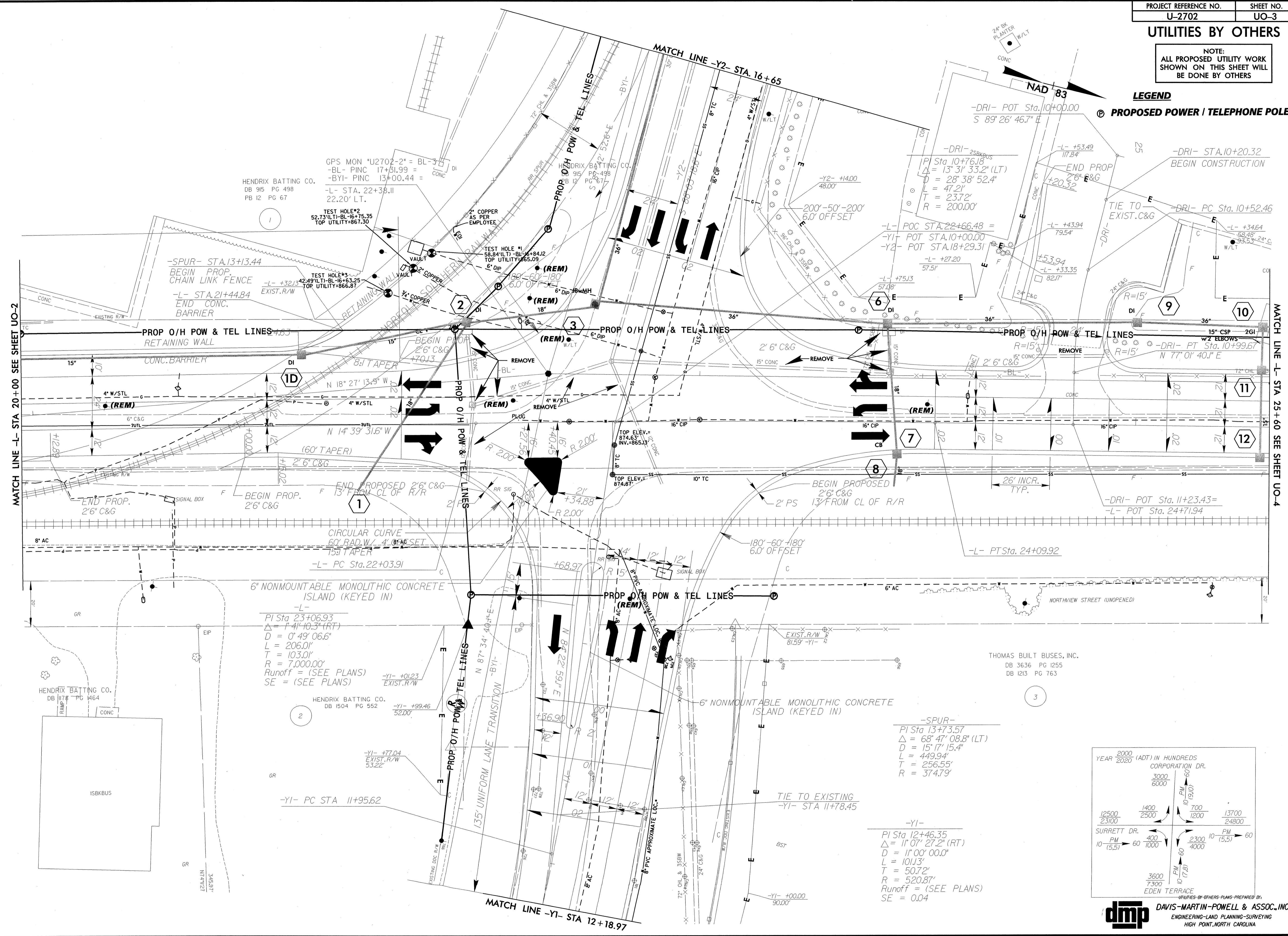
-SPUR-  
PI Sta 13+73.57  
Δ = 68° 47' 08.8" (LT)  
D = 15° 17' 15.4"  
L = 449.94'  
T = 256.55'  
R = 374.79'

MATCH LINE -L- STA. 20+00 SEE SHEET UO-3

UTILITIES BY OTHERS

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

LEGEND  
⊙ PROPOSED POWER / TELEPHONE POLE



MATCH LINE -L- STA 20+00 SEE SHEET UO-2

MATCH LINE -L- STA 25+60 SEE SHEET UO-4

HENDRIX BATTING CO.  
DB 915 PG 498  
PB 12 PG 67

GPS MON \*U2702-2\* = BL-3  
-BL- PINC 17+51.99 =  
-BYI- PINC 13+00.44 =  
-L- STA. 22+38.11  
22.20' LT.

TEST HOLE #2  
52.73' (LT) - BL-16+75.35  
TOP UTILITY = 867.30

TEST HOLE #1  
58.84' (LT) - BL-16+84.12  
TOP UTILITY = 865.09

TEST HOLE #3  
42.49' (LT) - BL-16+63.25  
TOP UTILITY = 866.87

-SPUR- STA. 13+13.44  
BEGIN PROP.  
CHAIN LINK FENCE  
END CONC.  
BARRIER

-L- STA. 21+44.84  
END CONC.  
BARRIER

PROP O/H POW & TEL LINES  
RETAINING WALL  
CONC. BARRIER

CIRCULAR CURVE  
60' RAD. W/ 4' OFFSET  
15:1 TAPER

-L- PC Sta. 22+03.91

6" NONMOUNTABLE MONOLITHIC CONCRETE ISLAND (KEYED IN)

-L-  
PI Sta 23+06.93  
Δ = 74° 10.3' (RT)  
D = 0' 49' 06.6"  
L = 206.01'  
T = 103.01'  
R = 7,000.00'  
Runoff = (SEE PLANS)  
SE = (SEE PLANS)

HENDRIX BATTING CO.  
DB 1504 PG 552

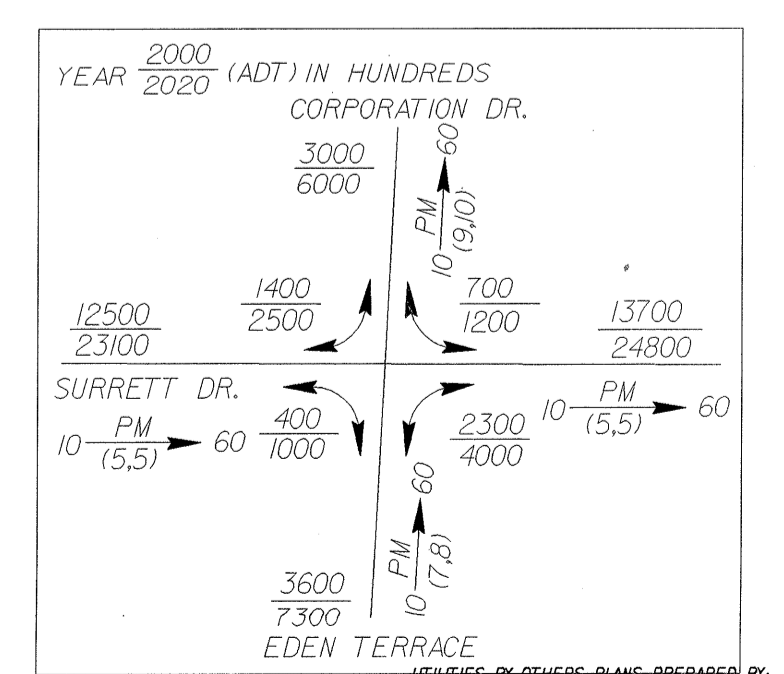
-YI- +99.46  
52.00'

-YI- +77.04  
EXIST. R/W  
53.22'

-YI- PC STA 11+95.62

-SPUR-  
PI Sta 13+73.57  
Δ = 68° 47' 08.8" (LT)  
D = 15' 17' 15.4"  
L = 449.94'  
T = 256.55'  
R = 374.79'

-YI-  
PI Sta 12+46.35  
Δ = 11° 07' 27.2" (RT)  
D = 11' 00' 00.0"  
L = 101.3'  
T = 50.72'  
R = 520.87'  
Runoff = (SEE PLANS)  
SE = 0.04

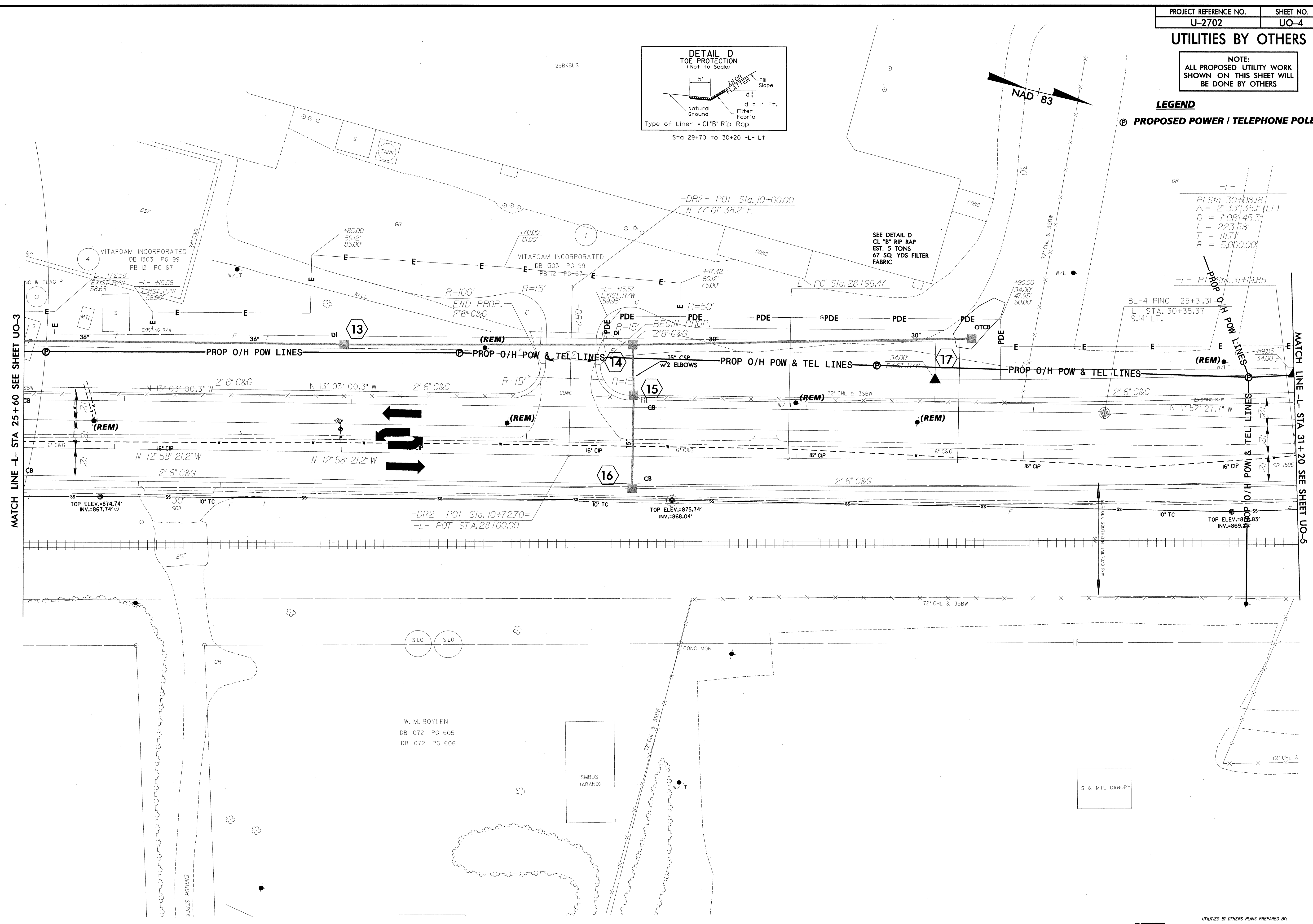
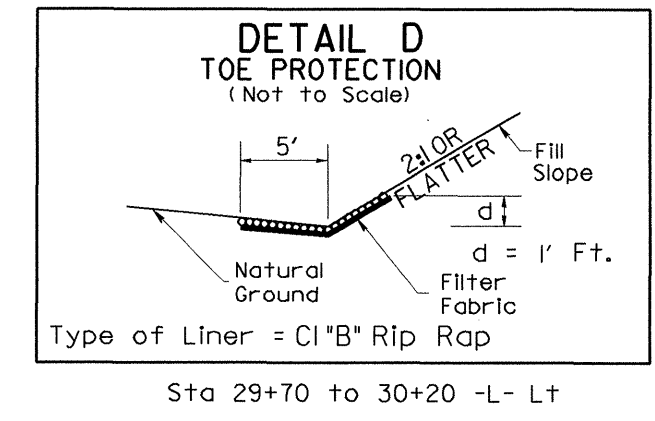


### UTILITIES BY OTHERS

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

#### LEGEND

⊕ PROPOSED POWER / TELEPHONE POLE



GR -L-  
PI Sta 30+08.18  
Δ = 2' 33' 155.1" (LT)  
D = 1' 08' 145.3"  
L = 223.58'  
T = 111.7'  
R = 5,000.00'

BL-4 PINC 25+31.31 =  
-L- STA. 30+35.37  
19.14' LT.

W. M. BOYLEN  
DB 1072 PG 605  
DB 1072 PG 606

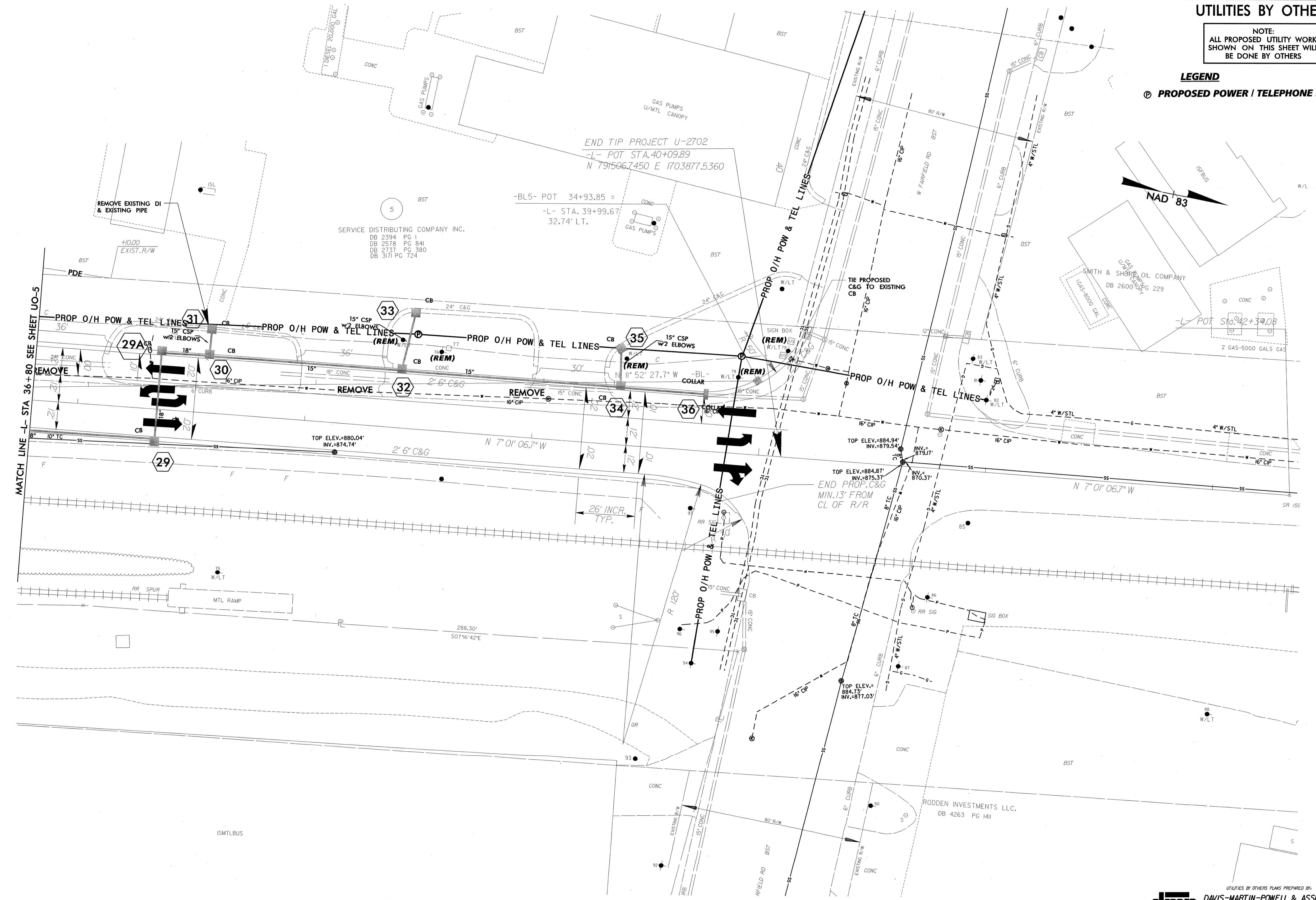


### UTILITIES BY OTHERS

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

#### LEGEND

Ⓢ PROPOSED POWER / TELEPHONE POLE



END TIP PROJECT U-2702  
-L- POT STA. 40+09.89  
N 791566.7450 E 1703877.5360

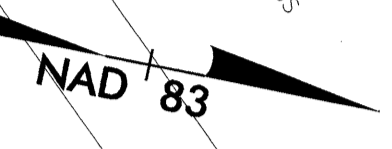
-BL5- POT 34+93.85 =  
-L- STA. 39+99.67  
32.74' LT.

SERVICE DISTRIBUTING COMPANY INC.  
DB 2394 PG 1  
DB 2578 PG 841  
DB 2737 PG 380  
DB 3171 PG 724

SMITH & SHORE OIL COMPANY  
DB 2600 PG 229

END PROP. C&G  
MIN. 13' FROM  
CL OF R/R

RODDEN INVESTMENTS LLC.  
DB 4263 PG 1411



TIP PROJECT: U-2702

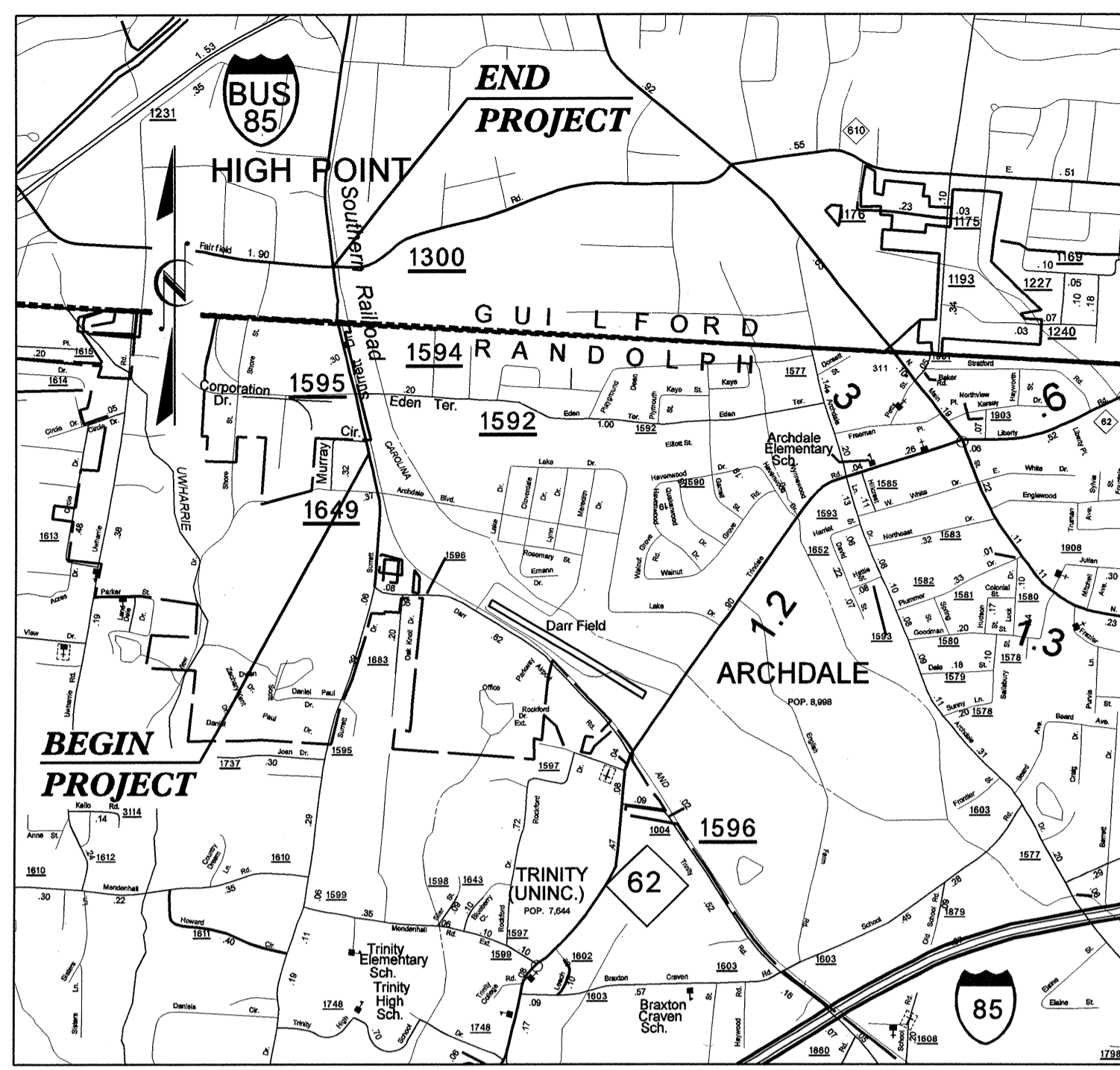
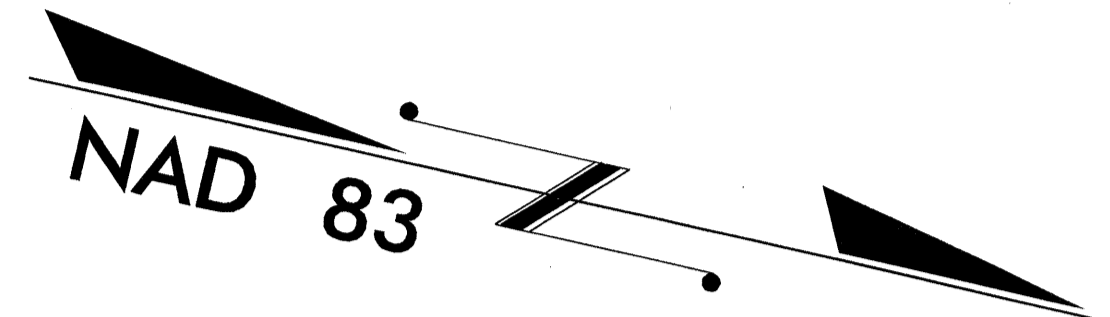
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-2702	UC-1

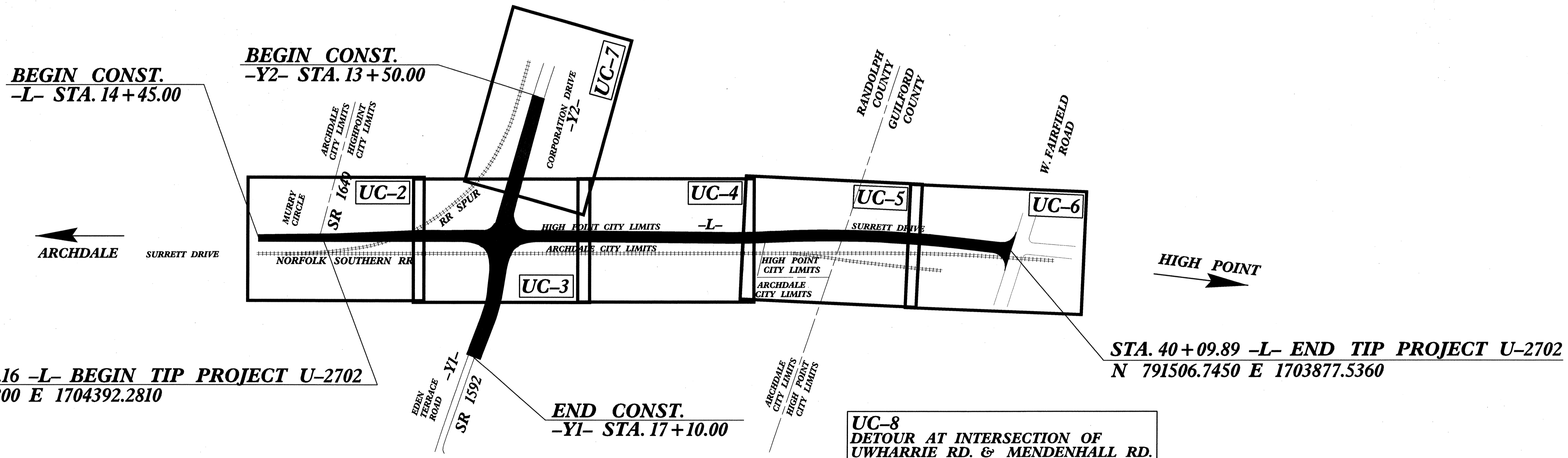
**RANDOLPH/GUILFORD COUNTIES**

LOCATION: ARCHDALE-HIGH POINT INTERSECTION OF  
SR 1592 (EDEN TERRACE) AND SR 1595 (SURRETT DR.)

TYPE OF WORK: UTILITY CONSTRUCTION



VICINITY MAP



STA. 16+61.16 -L- BEGIN TIP PROJECT U-2702  
N 789218.0800 E 1704392.2810

A PORTION OF THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF HIGH POINT AND ARCHDALE.

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-8	UTILITY CONSTRUCTION PLAN SHEETS
UC-9 THRU UC-11	UTILITY CONSTRUCTION PROFILE SHEETS
UC-12	UTILITY CONSTRUCTION DETAIL SHEET

WATER AND SEWER OWNERS ON PROJECT

WATER - CITY OF HIGH POINT,  
CITY OF ARCHDALE,  
DAVIDSON WATER, INC.  
SEWER - CITY OF HIGH POINT



PREPARED IN THE OFFICE OF:  
DAVIS-MARTIN-POWELL  
AND ASSOCIATES, INC.  
6415 OLD PLANK ROAD  
HIGH POINT, NC 27265  
PHONE (336) 886-4821  
FAX (336) 886-4458

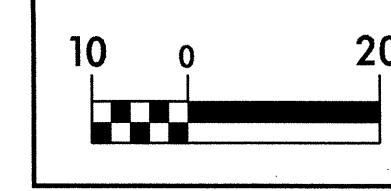
Randy McNeill, P.E. UTILITIES PROJECT MANAGER  
Andy Larrick, P.E. UTILITIES PROJECT ENGINEER  
Andy Larrick, P.E. UTILITIES PROJECT DESIGNER

SYSTEMS: 888-888-8888  
 CDON: 888-888-8888  
 CUS: 888-888-8888  
 SERNAME: 888-888-8888

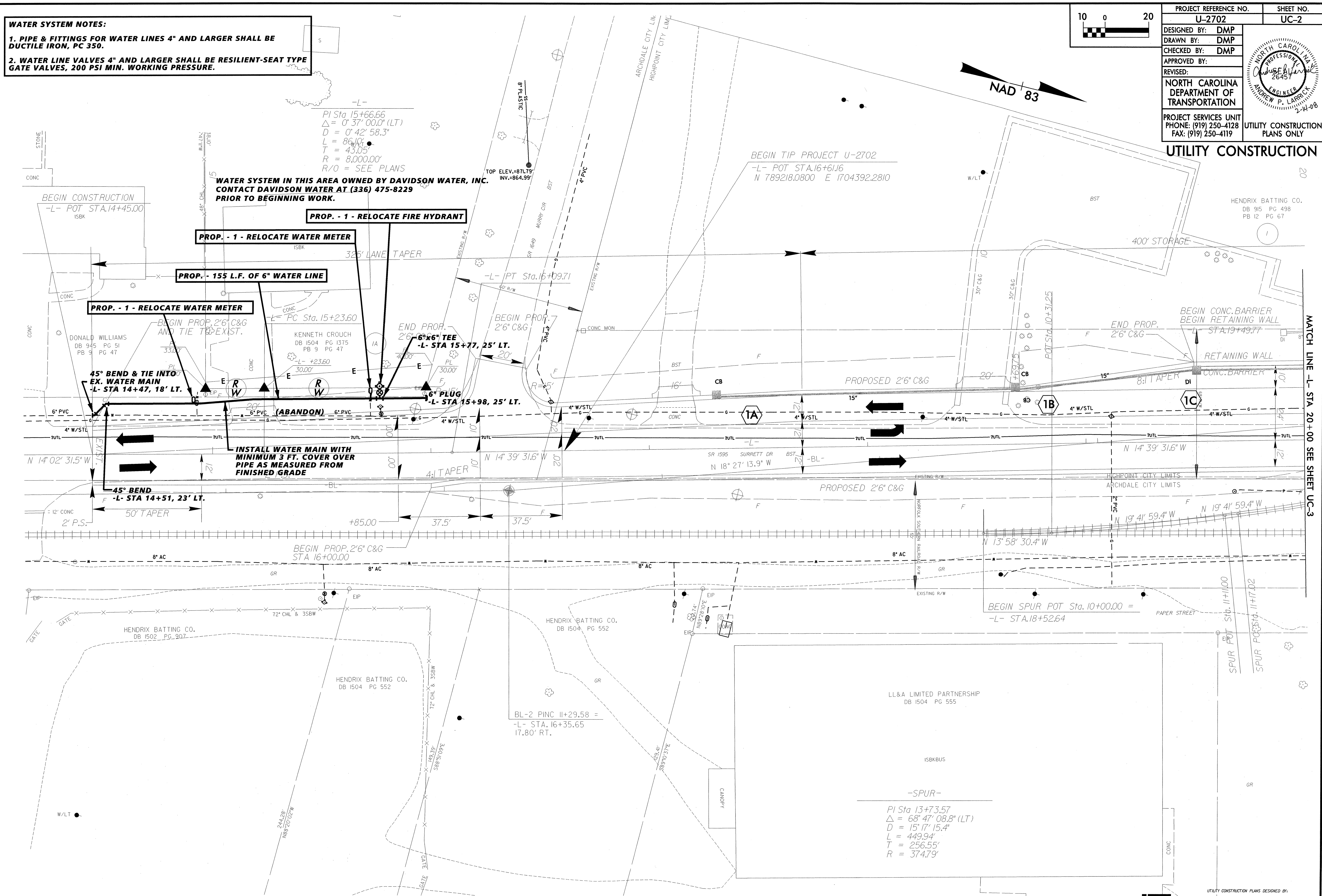
**WATER SYSTEM NOTES:**

1. PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.

2. WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.



PROJECT REFERENCE NO. U-2702	SHEET NO. UC-2
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	



$PI\ Sta. 15+66.66$   
 $\Delta = 0^\circ 37' 00.0\" (LT)$   
 $D = 0^\circ 42' 58.3\"$   
 $L = 86.10'$   
 $T = 43.05'$   
 $R = 8,000.00'$   
 R/O = SEE PLANS

**WATER SYSTEM IN THIS AREA OWNED BY DAVIDSON WATER, INC.**  
**CONTACT DAVIDSON WATER AT (336) 475-8229**  
**PRIOR TO BEGINNING WORK.**

BEGIN TIP PROJECT U-2702  
 -L- POT STA. 16+61.16  
 N 789218.0800 E 1704392.2810

BEGIN CONSTRUCTION  
 -L- POT STA. 14+45.00  
 ISBK

**PROP. - 1 - RELOCATE FIRE HYDRANT**

**PROP. - 1 - RELOCATE WATER METER**

**PROP. - 155 L.F. OF 6" WATER LINE**

**PROP. - 1 - RELOCATE WATER METER**

45° BEND & TIE INTO  
 EX. WATER MAIN  
 -L- STA 14+47, 18' LT.

6" x 6" TEE  
 -L- STA 15+77, 25' LT.

6" PLUG  
 -L- STA 15+98, 25' LT.

INSTALL WATER MAIN WITH  
 MINIMUM 3 FT. COVER OVER  
 PIPE AS MEASURED FROM  
 FINISHED GRADE

45° BEND  
 -L- STA 14+51, 23' LT.

BEGIN PROP. 2'6" C&G  
 STA 16+00.00

BEGIN SPUR POT Sta. 10+00.00 =  
 -L- STA. 18+52.64

BL-2 PINC II+29.58 =  
 -L- STA. 16+35.65  
 17.80' RT.

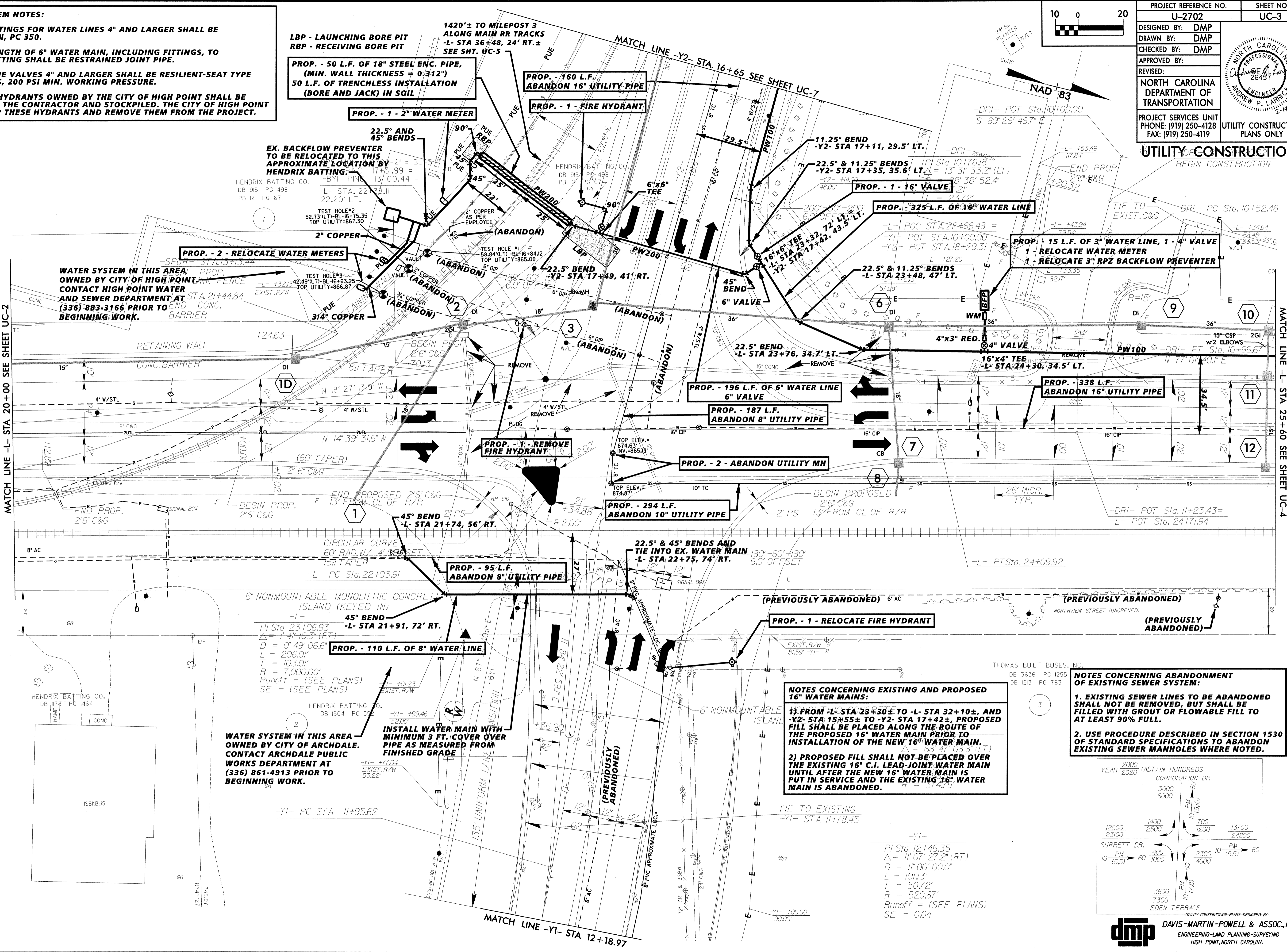
-SPUR-  
 $PI\ Sta 13+73.57$   
 $\Delta = 68^\circ 47' 08.8\" (LT)$   
 $D = 15^\circ 17' 15.4\"$   
 $L = 449.94'$   
 $T = 256.55'$   
 $R = 374.79'$



**WATER SYSTEM NOTES:**

- PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.
- ENTIRE LENGTH OF 6" WATER MAIN, INCLUDING FITTINGS, TO HENDRIX BATTING SHALL BE RESTRAINED JOINT PIPE.
- WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.
- EXISTING HYDRANTS OWNED BY THE CITY OF HIGH POINT SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED. THE CITY OF HIGH POINT WILL PICK-UP THESE HYDRANTS AND REMOVE THEM FROM THE PROJECT.

PROJECT REFERENCE NO.	SHEET NO.
U-2702	UC-3
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT	UTILITY CONSTRUCTION PLANS ONLY
PHONE: (919) 250-4128	FAX: (919) 250-4119



MATCH LINE -L- STA 20+00 SEE SHEET UC-2

MATCH LINE -L- STA 25+60 SEE SHEET UC-4

WATER SYSTEM IN THIS AREA OWNED BY CITY OF HIGH POINT. CONTACT HIGH POINT WATER AND SEWER DEPARTMENT AT (336) 883-3166 PRIOR TO BEGINNING WORK.

WATER SYSTEM IN THIS AREA OWNED BY CITY OF ARCHDALE. CONTACT ARCHDALE PUBLIC WORKS DEPARTMENT AT (336) 861-4913 PRIOR TO BEGINNING WORK.

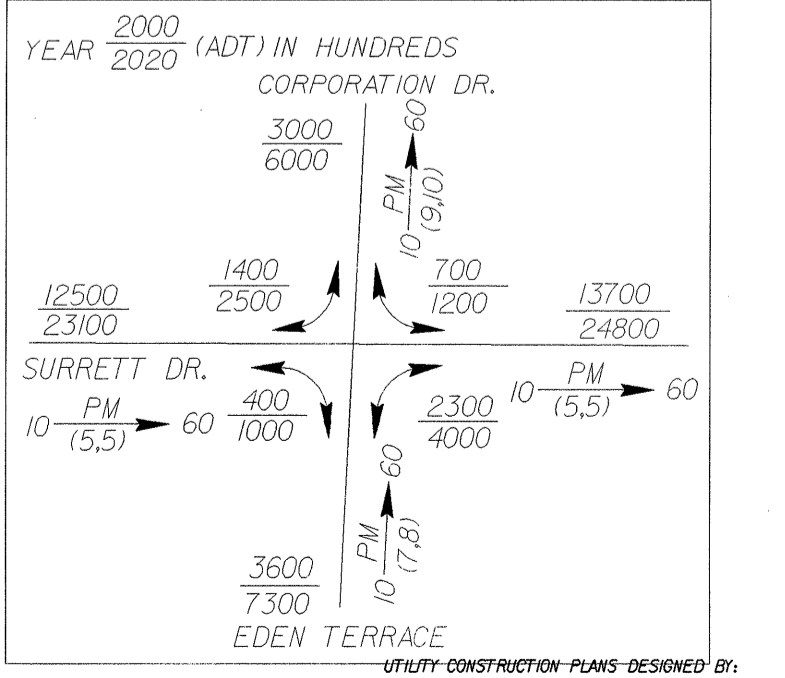
6" NONMOUNTABLE MONOLITHIC CONCRETE ISLAND (KEYED IN)  
 -L- 45° BEND -L- STA 21+91, 72' RT.  
 PI Sta 23+06.93  
 $\Delta = 1' 41" 10.3" (RT)$   
 $D = 0' 49" 06.6"$   
 $L = 206.01'$   
 $T = 103.01'$   
 $R = 7,000.00'$   
 Runoff = (SEE PLANS)  
 SE = (SEE PLANS)

**NOTES CONCERNING EXISTING AND PROPOSED 16" WATER MAINS:**

- FROM -L- STA 23+30 TO -L- STA 32+10±, AND -Y2- STA 15+55± TO -Y2- STA 17+42±, PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER MAIN.
- PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I. LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED.

**NOTES CONCERNING ABANDONMENT OF EXISTING SEWER SYSTEM:**

- EXISTING SEWER LINES TO BE ABANDONED SHALL NOT BE REMOVED, BUT SHALL BE FILLED WITH GROUT OR FLOWABLE FILL TO AT LEAST 90% FULL.
- USE PROCEDURE DESCRIBED IN SECTION 1530 OF STANDARD SPECIFICATIONS TO ABANDON EXISTING SEWER MANHOLES WHERE NOTED.

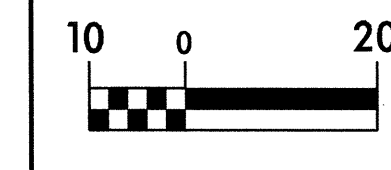
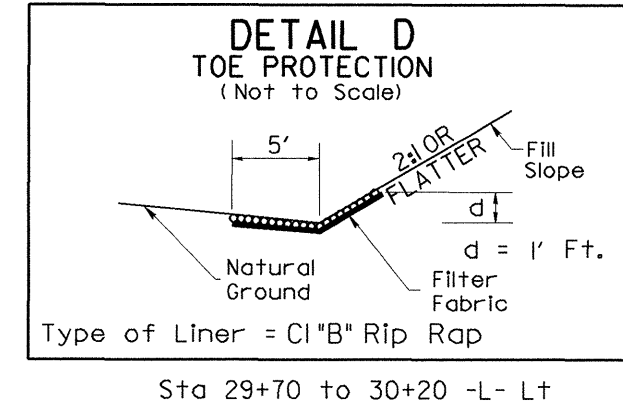


**WATER SYSTEM NOTES:**

1. PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.
2. WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.
3. EXISTING HYDRANTS OWNED BY THE CITY OF HIGH POINT SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED. THE CITY OF HIGH POINT WILL PICK-UP THESE HYDRANTS AND REMOVE THEM FROM THE PROJECT.

**NOTES CONCERNING EXISTING AND PROPOSED 16" WATER MAINS:**

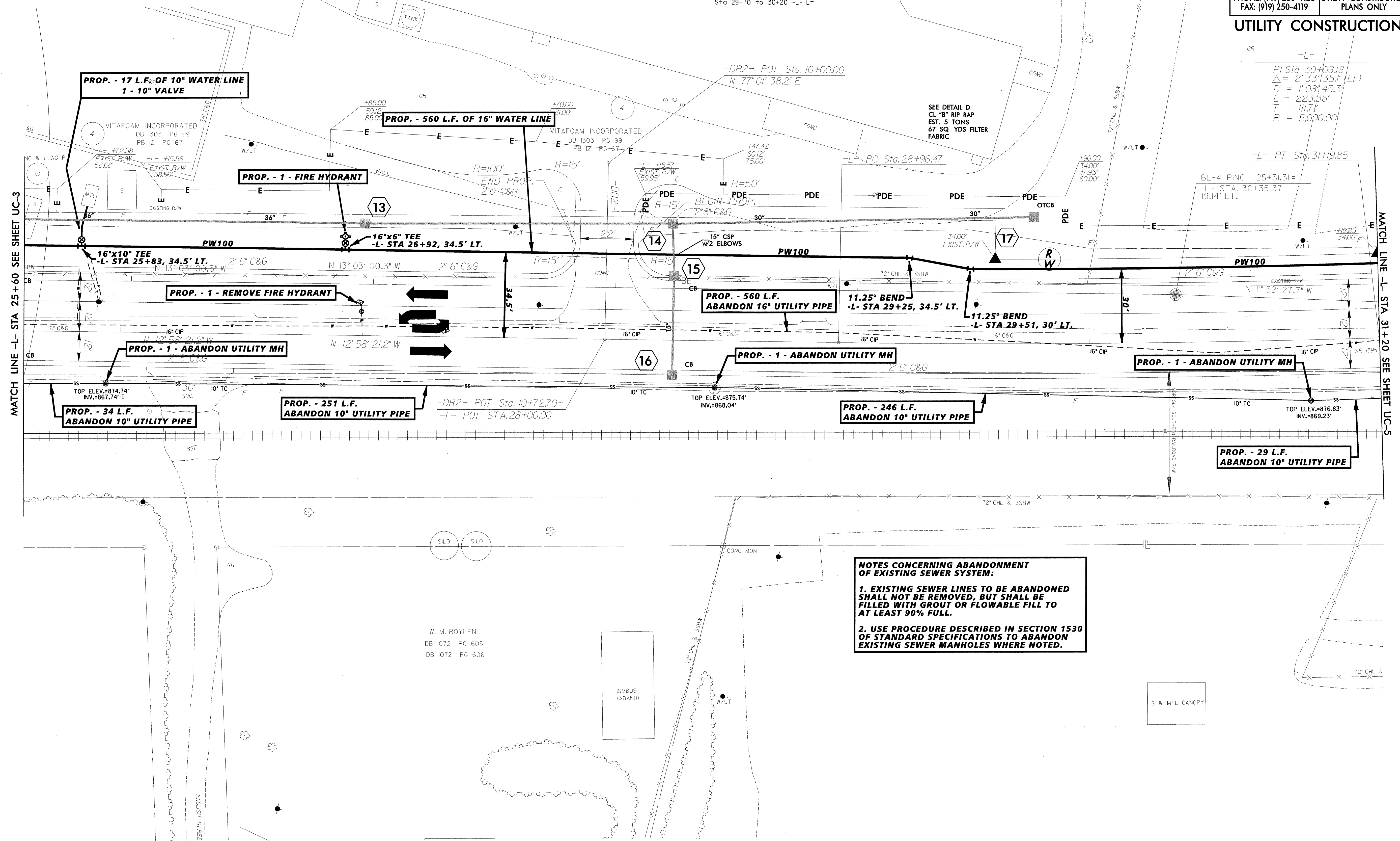
- 1) FROM -L- STA 23+30± TO -L- STA 32+10±, AND -Y2- STA 15+55± TO -Y2- STA 17+42±, PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER MAIN.
- 2) PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I. LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED.



PROJECT REFERENCE NO. U-2702	SHEET NO. UC-4
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	UTILITY CONSTRUCTION PLANS ONLY

**UTILITY CONSTRUCTION**

GR -L-  
 PI Sta 30+08.18  
 $\Delta = 2' 33' 135.1' (LT)$   
 $D = 1' 08' 45.3'$   
 $L = 223.58'$   
 $T = 111.7'$   
 $R = 5,000.00'$



MATCH LINE -L- STA 25+60 SEE SHEET UC-3

MATCH LINE -L- STA 31+20 SEE SHEET UC-5

**NOTES CONCERNING ABANDONMENT OF EXISTING SEWER SYSTEM:**

1. EXISTING SEWER LINES TO BE ABANDONED SHALL NOT BE REMOVED, BUT SHALL BE FILLED WITH GROUT OR FLOWABLE FILL TO AT LEAST 90% FULL.
2. USE PROCEDURE DESCRIBED IN SECTION 1530 OF STANDARD SPECIFICATIONS TO ABANDON EXISTING SEWER MANHOLES WHERE NOTED.

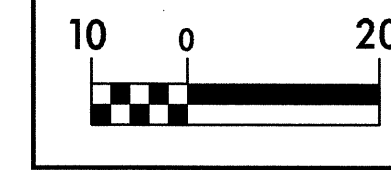
W. M. BOYLEN  
 DB 1072 PG 605  
 DB 1072 PG 606

**WATER SYSTEM NOTES:**

- PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.
- WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.
- EXISTING HYDRANTS OWNED BY THE CITY OF HIGH POINT SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED. THE CITY OF HIGH POINT WILL PICK-UP THESE HYDRANTS AND REMOVE THEM FROM THE PROJECT.

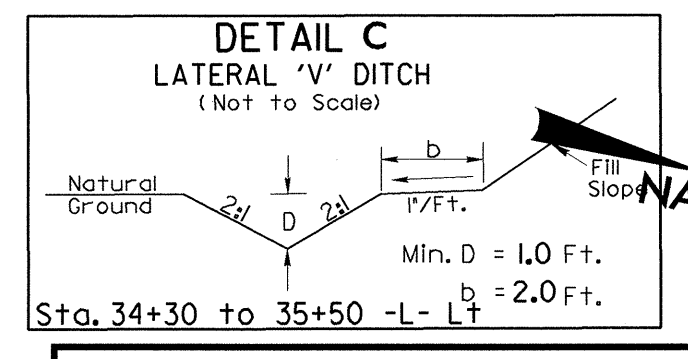
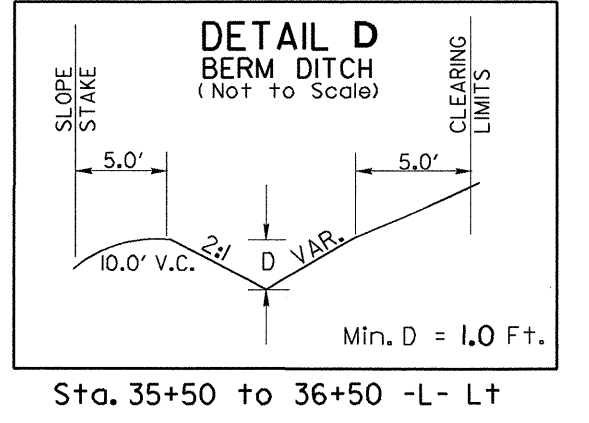
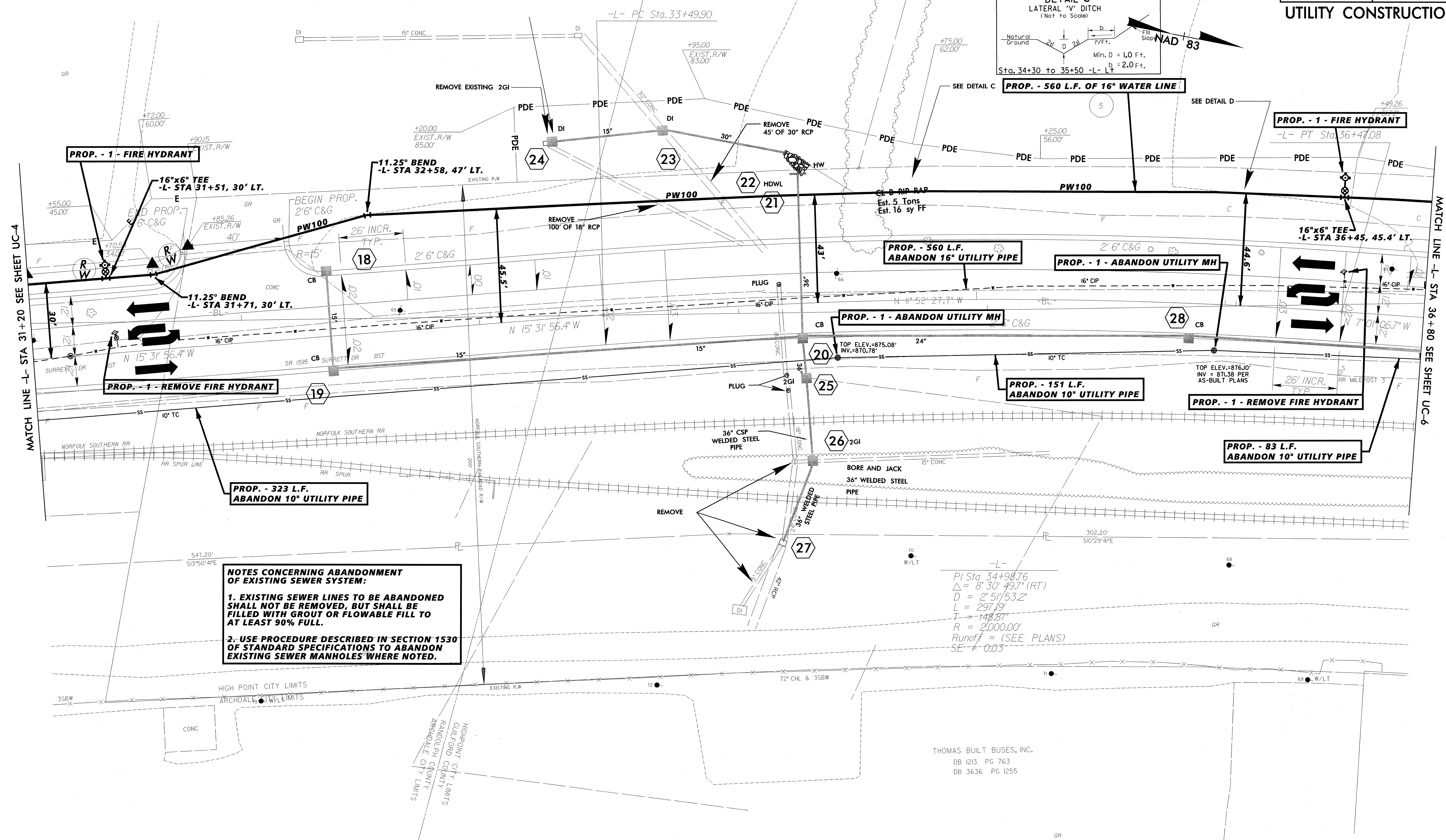
**NOTES CONCERNING EXISTING AND PROPOSED 16" WATER MAINS:**

- FROM -L- STA 23+30± TO -L- STA 32+10±, AND -Y2- STA 15+55± TO -Y2- STA 17+42±, PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER MAIN.
- PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I. LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED.



PROJECT REFERENCE NO. U-2702	SHEET NO. UC-5
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	UTILITY CONSTRUCTION PLANS ONLY

**UTILITY CONSTRUCTION**



**NOTES CONCERNING ABANDONMENT OF EXISTING SEWER SYSTEM:**

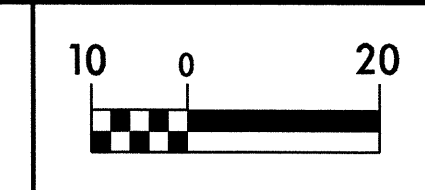
- EXISTING SEWER LINES TO BE ABANDONED SHALL NOT BE REMOVED, BUT SHALL BE FILLED WITH GROUT OR FLOWABLE FILL TO AT LEAST 90% FULL.
- USE PROCEDURE DESCRIBED IN SECTION 1530 OF STANDARD SPECIFICATIONS TO ABANDON EXISTING SEWER MANHOLES WHERE NOTED.

-L-  
 PI Sta 34+98.76  
 $\Delta = 8' 30'' 49.7''$  (RT)  
 $D = 2' 51'' 53.2''$   
 $L = 297.19'$   
 $T = 148.87'$   
 $R = 2,000.00'$   
 Runoff = (SEE PLANS)  
 $SE = 0.03$

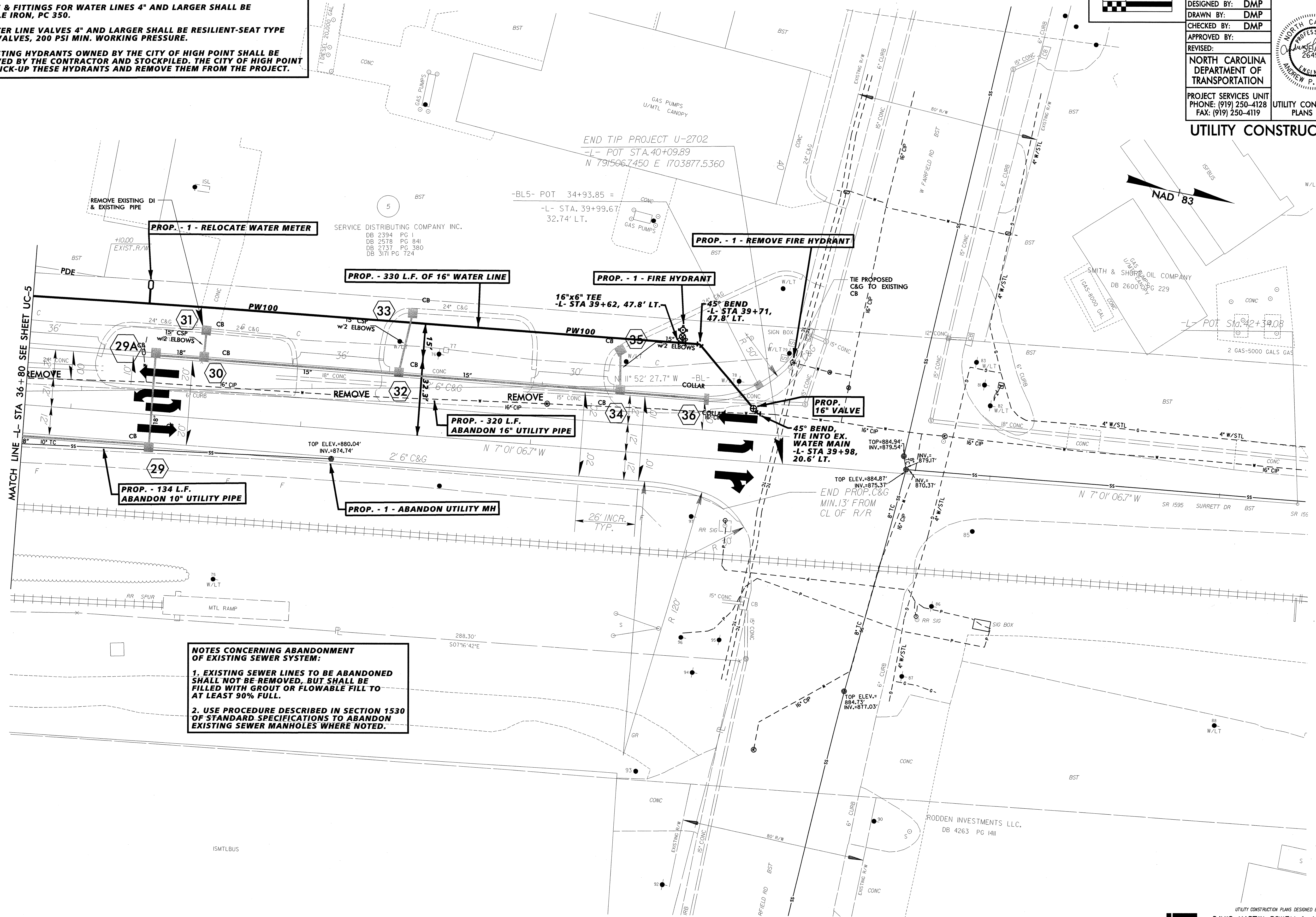
THOMAS BUILT BUSES, INC.  
 DB 1213 PG 763  
 DB 3636 PG 1255

**WATER SYSTEM NOTES:**

1. PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.
2. WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.
3. EXISTING HYDRANTS OWNED BY THE CITY OF HIGH POINT SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED. THE CITY OF HIGH POINT WILL PICK-UP THESE HYDRANTS AND REMOVE THEM FROM THE PROJECT.



PROJECT REFERENCE NO. U-2702	SHEET NO. UC-6
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	



**NOTES CONCERNING ABANDONMENT OF EXISTING SEWER SYSTEM:**

1. EXISTING SEWER LINES TO BE ABANDONED SHALL NOT BE REMOVED, BUT SHALL BE FILLED WITH GROUT OR FLOWABLE FILL TO AT LEAST 90% FULL.
2. USE PROCEDURE DESCRIBED IN SECTION 1530 OF STANDARD SPECIFICATIONS TO ABANDON EXISTING SEWER MANHOLES WHERE NOTED.



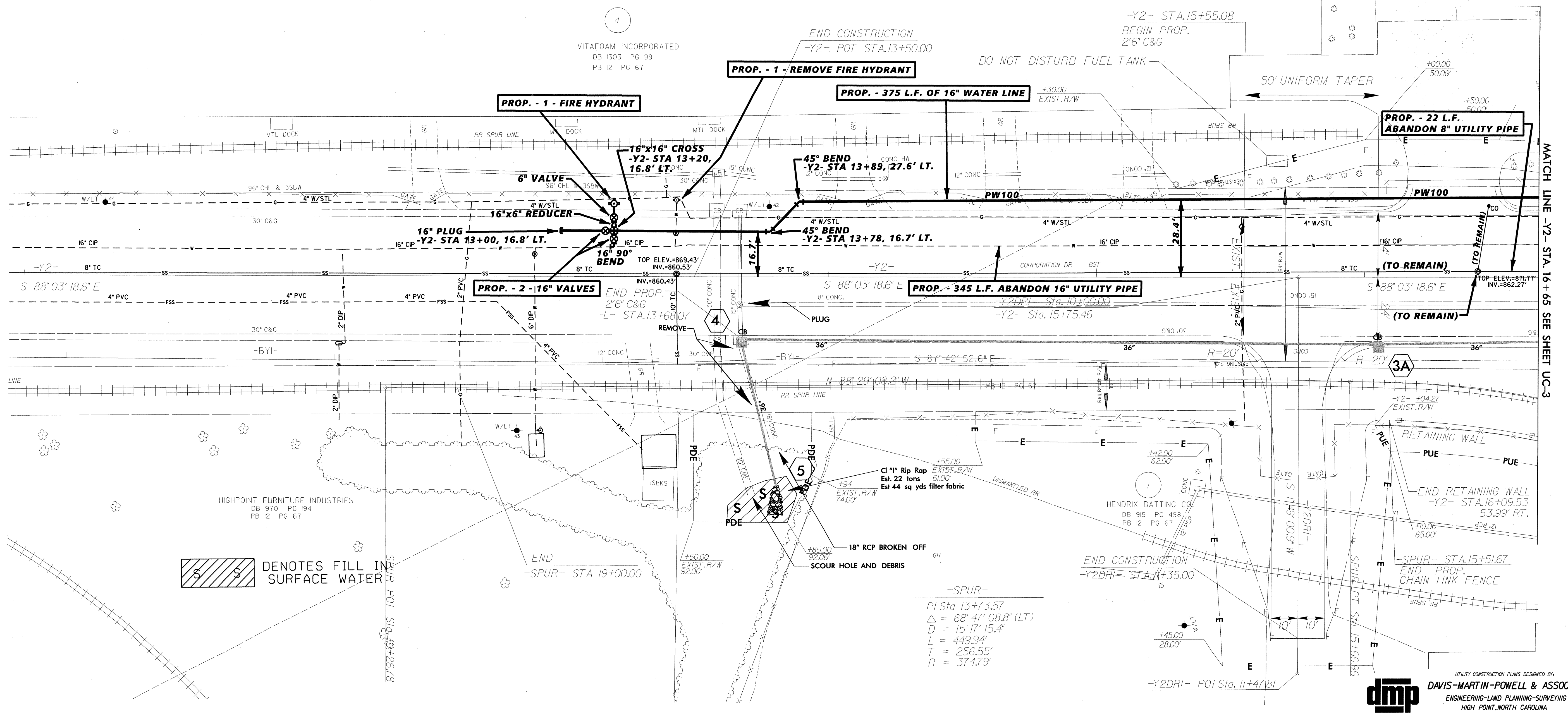
PROJECT REFERENCE NO. U-2702	SHEET NO. UC-7
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	UTILITY CONSTRUCTION PLANS ONLY

**WATER SYSTEM NOTES:**

- PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.
- WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.
- EXISTING HYDRANTS OWNED BY THE CITY OF HIGH POINT SHALL BE REMOVED BY THE CONTRACTOR AND STOCKPILED. THE CITY OF HIGH POINT WILL PICK-UP THESE HYDRANTS AND REMOVE THEM FROM THE PROJECT.

**NOTES CONCERNING EXISTING AND PROPOSED 16" WATER MAINS:**

- FROM -L- STA 23+30± TO -L- STA 32+10±, AND -Y2- STA 15+55± TO -Y2- STA 17+42±, PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER MAIN.
- PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I. LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED.



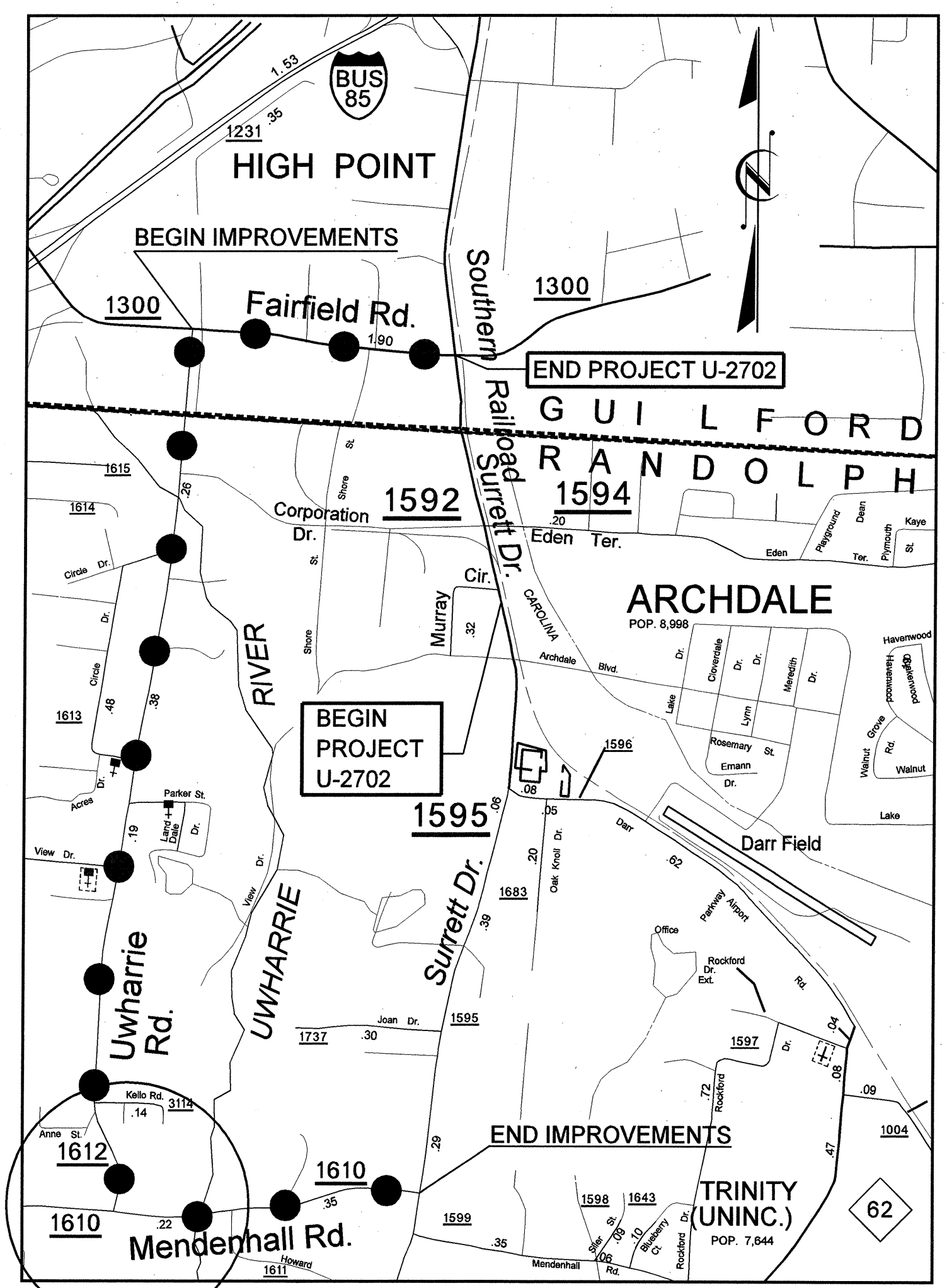
DENOTES FILL IN SURFACE WATER

-SPUR-  
 PI Sta 13+73.57  
 $\Delta = 68' 47" 08.8" (LT)$   
 $D = 15' 17" 15.4"$   
 $L = 449.94'$   
 $T = 256.55'$   
 $R = 374.79'$

PROJECT REFERENCE NO.	SHEET NO.
U-2702	UC-8
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119 UTILITY CONSTRUCTION PLANS ONLY	
UTILITY CONSTRUCTION	

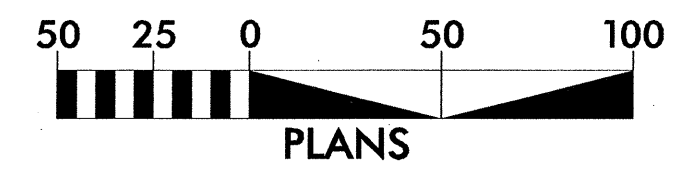
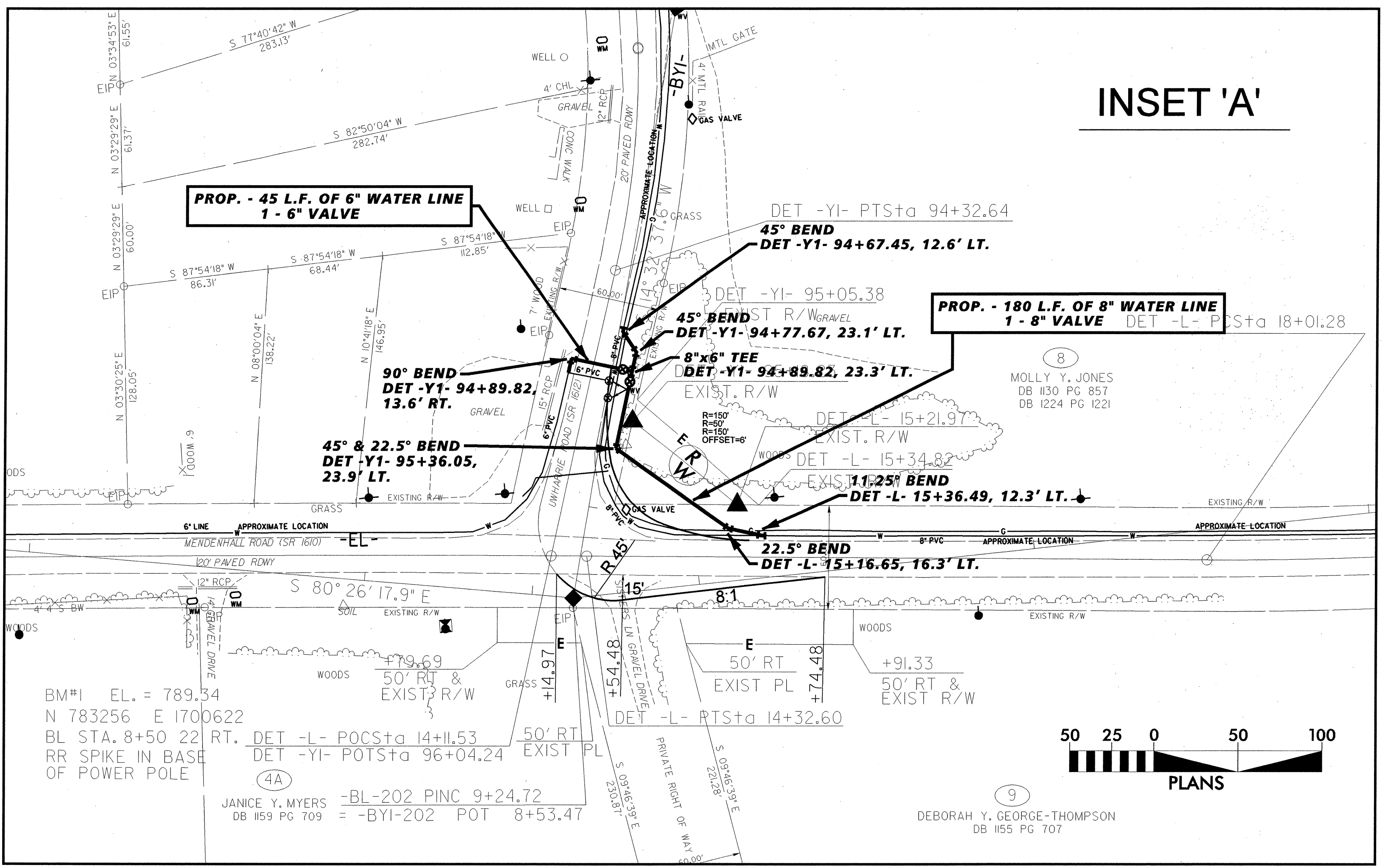
**DAVIDSON WATER NOTES:**

- PIPE & FITTINGS FOR WATER LINES 4" AND LARGER SHALL BE DUCTILE IRON, PC 350.
- USE RESTRAINED JOINT PIPE AND RESTRAIN MJ FITTINGS WITH RESTRAINED RETAINER GLANDS.
- WATER LINE VALVES 4" AND LARGER SHALL BE RESILIENT-SEAT TYPE GATE VALVES, 200 PSI MIN. WORKING PRESSURE.



●●● OFFSITE DETOUR ROUTE

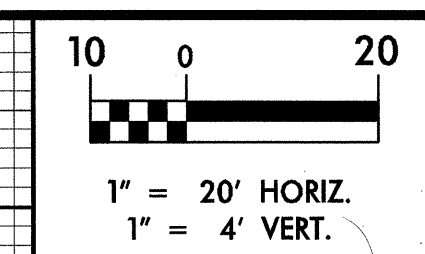
SEE INSET 'A'



5/28/99

# STATIONING FOLLOWS -L- (SURRETT DRIVE)

EX. & PROP. ELEVATIONS SHOWN IN THIS PROFILE ARE OVER CENTER OF PROP. 16" WATER LINE

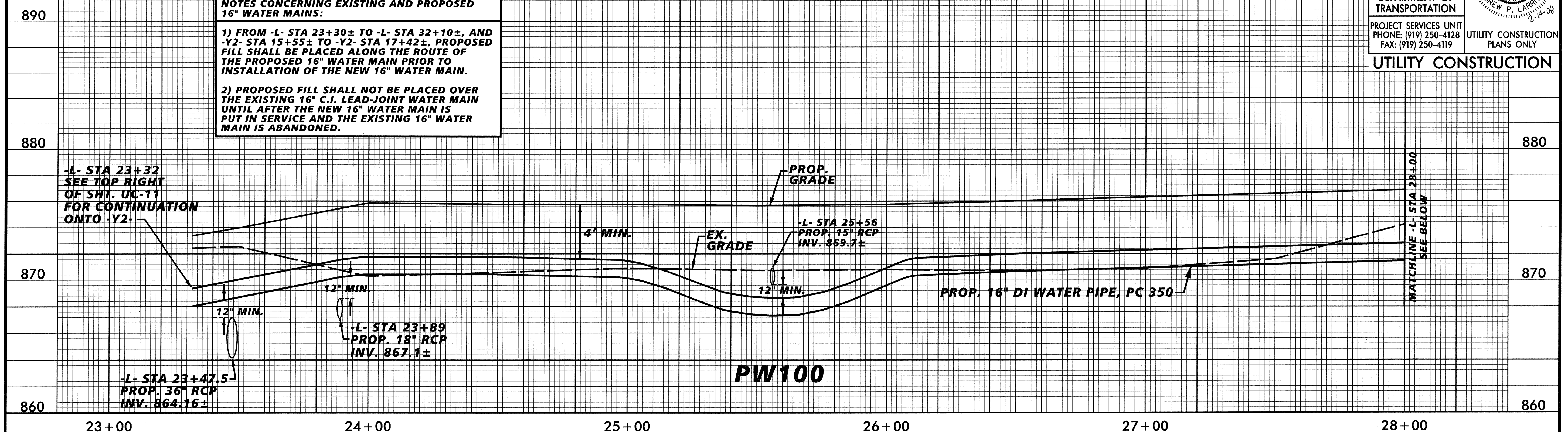


PROJECT REFERENCE NO. U-2702	SHEET NO. UC-9
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	UTILITY CONSTRUCTION PLANS ONLY

**NOTES CONCERNING EXISTING AND PROPOSED 16" WATER MAINS:**

1) FROM -L- STA 23+30± TO -L- STA 32+10±, AND -Y2- STA 15+55± TO -Y2- STA 17+42±, PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER MAIN.

2) PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I. LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED.



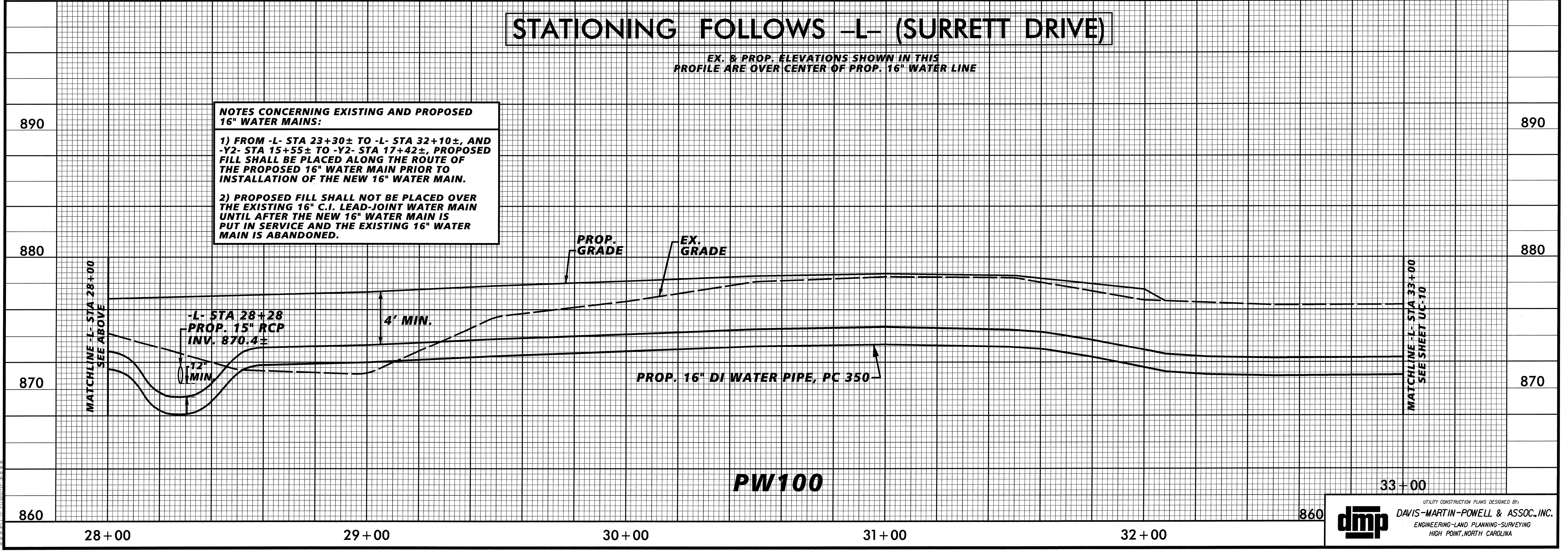
# STATIONING FOLLOWS -L- (SURRETT DRIVE)

EX. & PROP. ELEVATIONS SHOWN IN THIS PROFILE ARE OVER CENTER OF PROP. 16" WATER LINE

**NOTES CONCERNING EXISTING AND PROPOSED 16" WATER MAINS:**

1) FROM -L- STA 23+30± TO -L- STA 32+10±, AND -Y2- STA 15+55± TO -Y2- STA 17+42±, PROPOSED FILL SHALL BE PLACED ALONG THE ROUTE OF THE PROPOSED 16" WATER MAIN PRIOR TO INSTALLATION OF THE NEW 16" WATER MAIN.

2) PROPOSED FILL SHALL NOT BE PLACED OVER THE EXISTING 16" C.I. LEAD-JOINT WATER MAIN UNTIL AFTER THE NEW 16" WATER MAIN IS PUT IN SERVICE AND THE EXISTING 16" WATER MAIN IS ABANDONED.

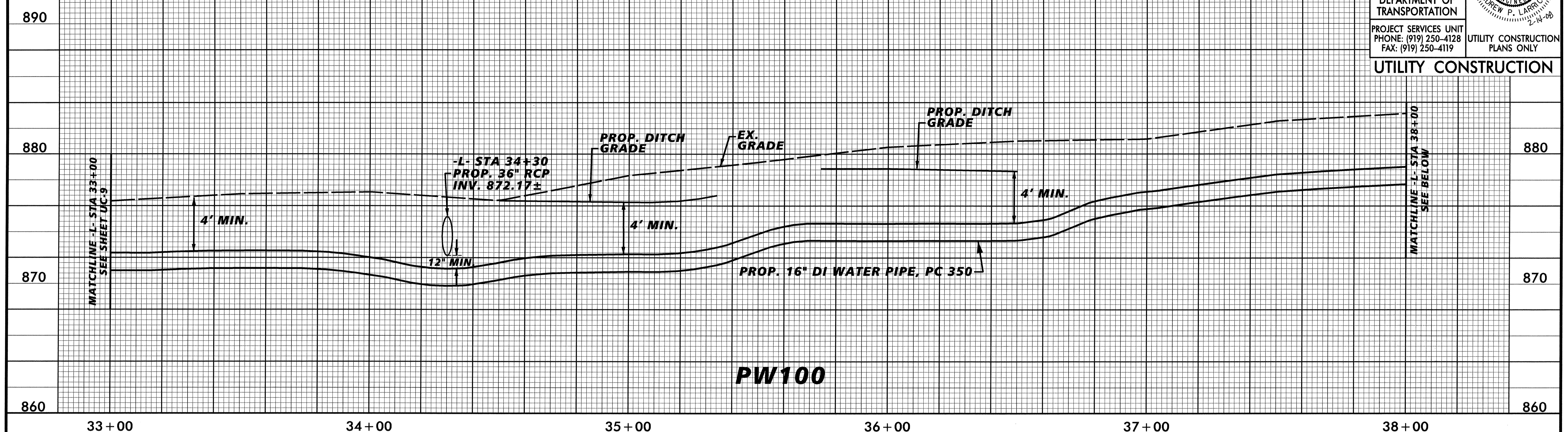


5/28/99

# STATIONING FOLLOWS -L- (SURRETT DRIVE)

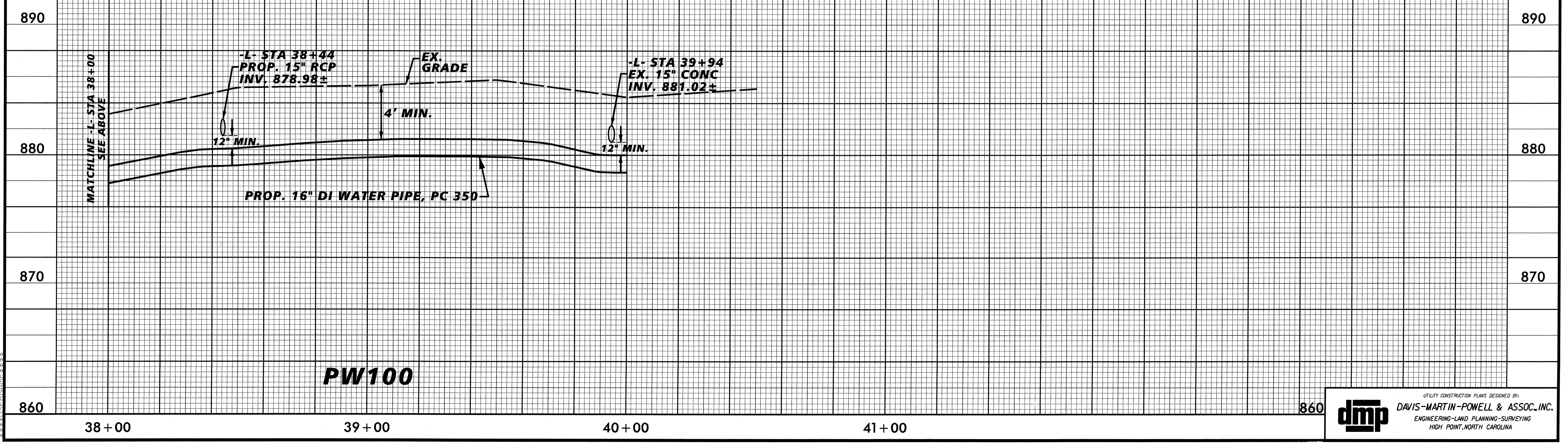
EX. & PROP. ELEVATIONS SHOWN IN THIS PROFILE ARE OVER CENTER OF PROP. 16" WATER LINE

PROJECT REFERENCE NO. U-2702	SHEET NO. UC-10
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	



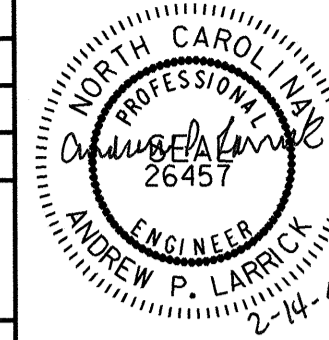
# STATIONING FOLLOWS -L- (SURRETT DRIVE)

EX. & PROP. ELEVATIONS SHOWN IN THIS PROFILE ARE OVER CENTER OF PROP. 16" WATER LINE

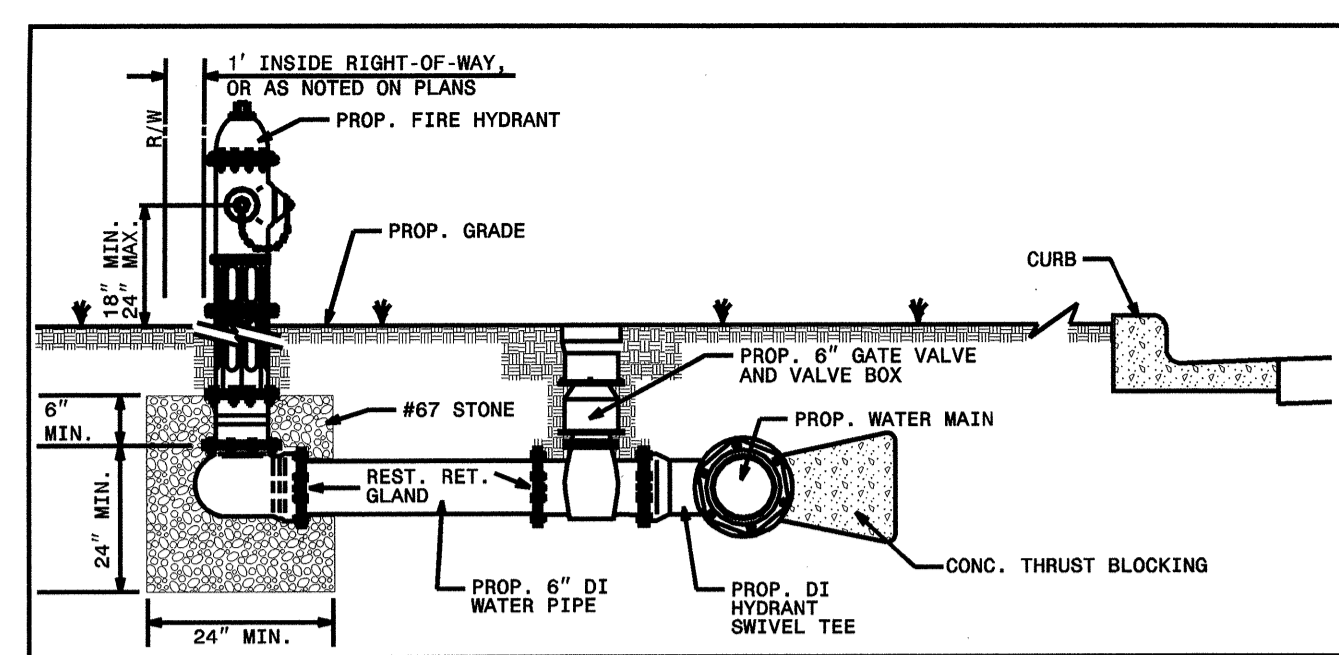




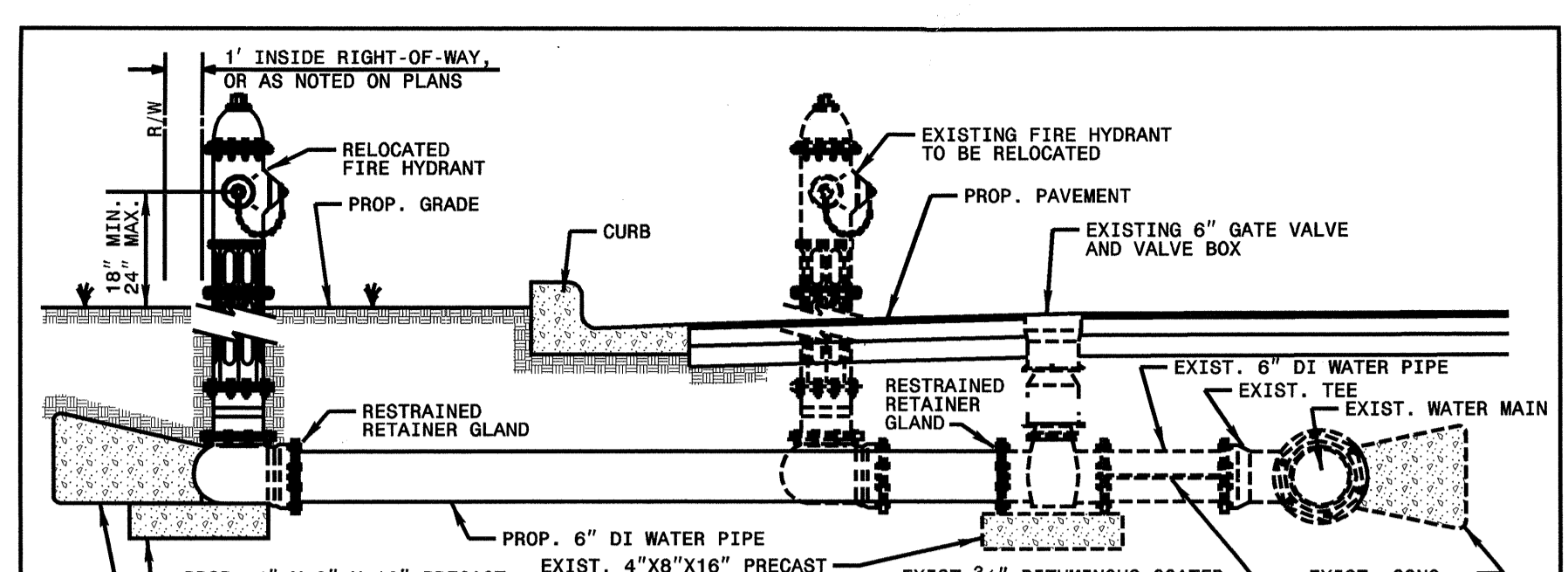




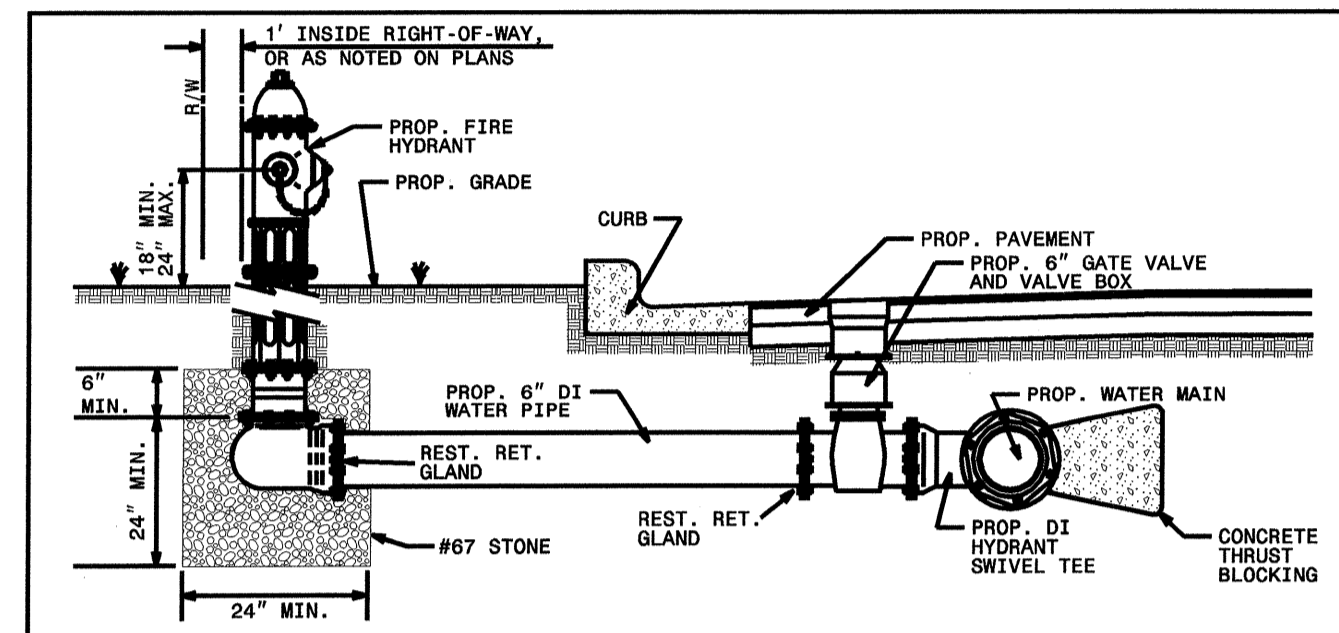
UTILITY CONSTRUCTION



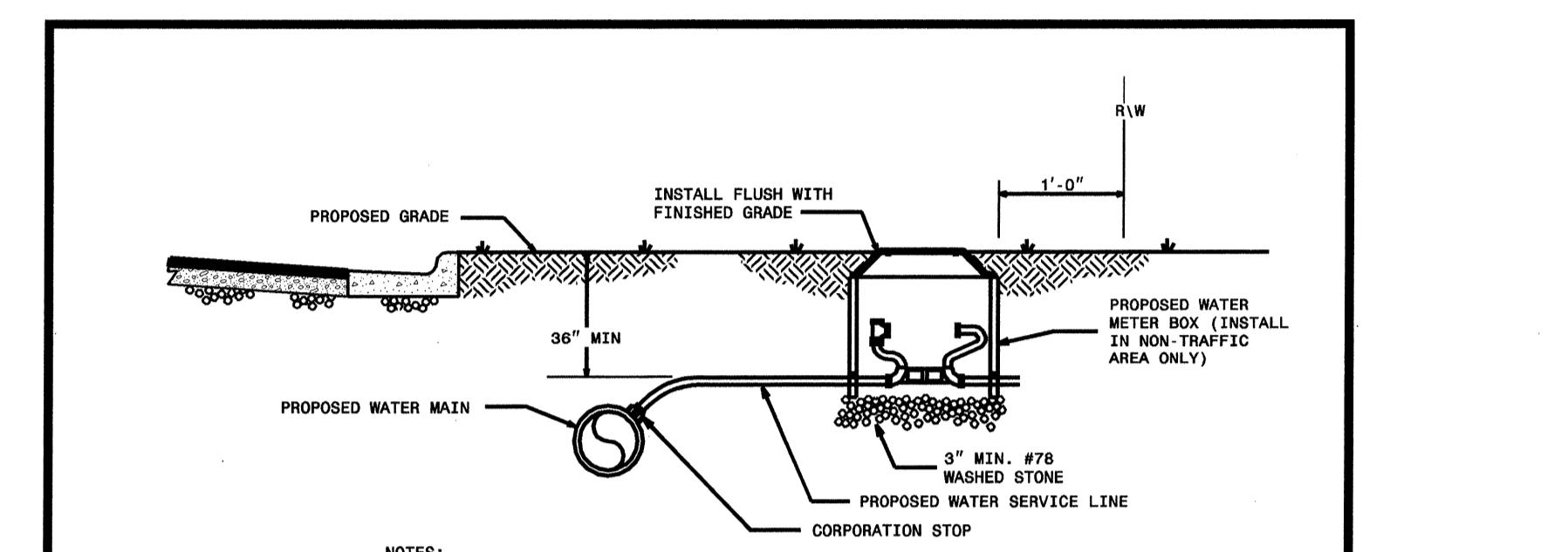
FIRE HYDRANT INSTALLATION DETAIL (UNPAVED AREAS)



FIRE HYDRANT RELOCATION DETAIL

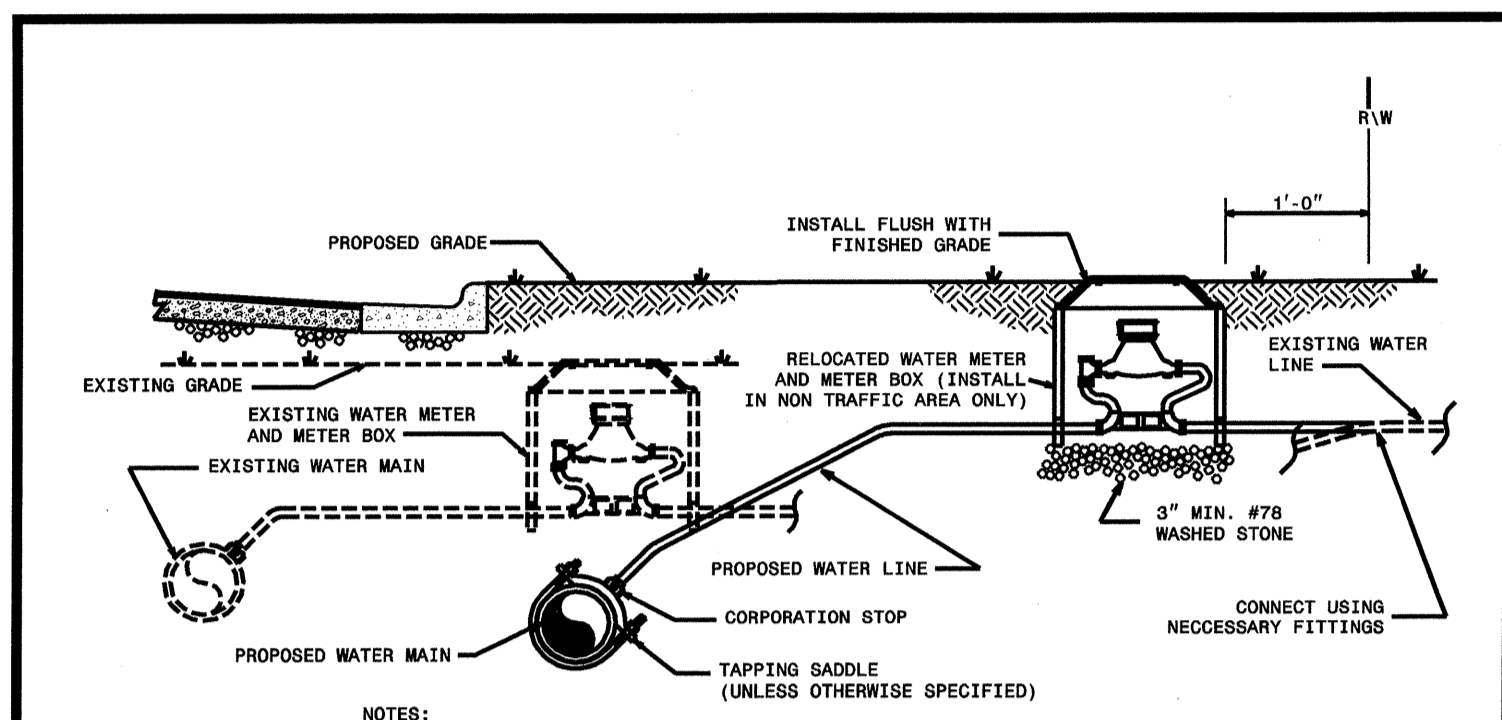


FIRE HYDRANT INSTALLATION DETAIL (PAVED AREAS)



- NOTES:  
 1. INSTALLATION SHALL INCLUDE THE APPROPRIATE LOCATION OF THE METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.  
 2. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

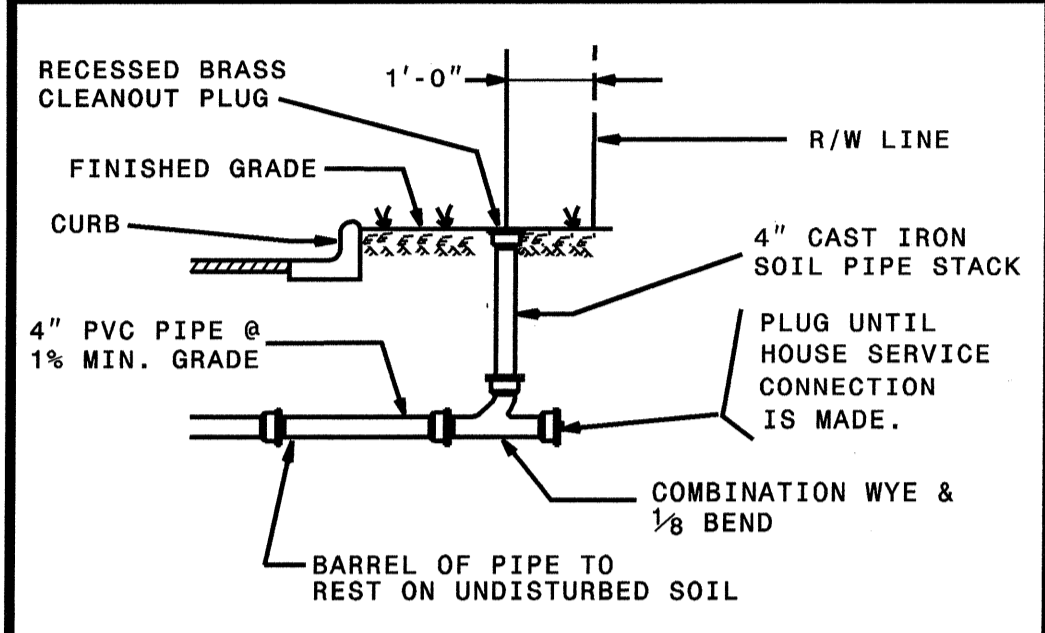
WATER METER INSTALLATION DETAIL



- NOTES:  
 1. RELOCATION SHALL INCLUDE THE REMOVAL AND INSTALLATION AT THE APPROPRIATE LOCATION OF THE WATER METER, METER SETTER AND YOKE, METER VALVES, AND METER BOX WITH LID.  
 2. THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.  
 3. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.

WATER METER RELOCATION DETAIL

SANITARY SEWER CLEANOUT

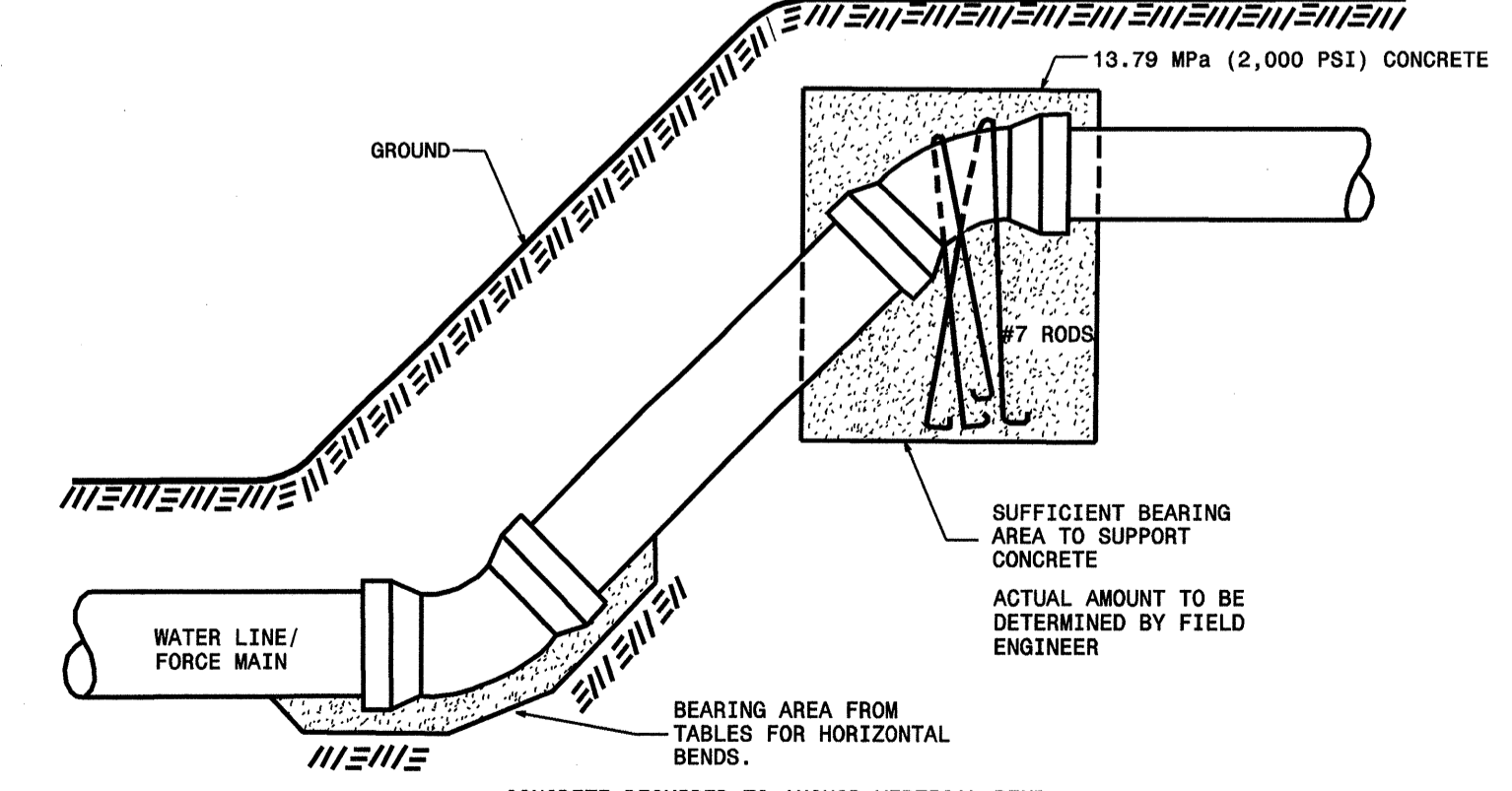


THE CONTRACTOR SHALL REPLACE ANY DAMAGED SEWER LATERALS AND/OR CLEANOUTS AS DIRECTED BY THE ENGINEER. THE NECESSARY QUANTITIES HAVE BEEN ADDED TO THE CONTRACT TO FACILITATE THIS PROCEDURE.

REQUIRED BEARING AREAS

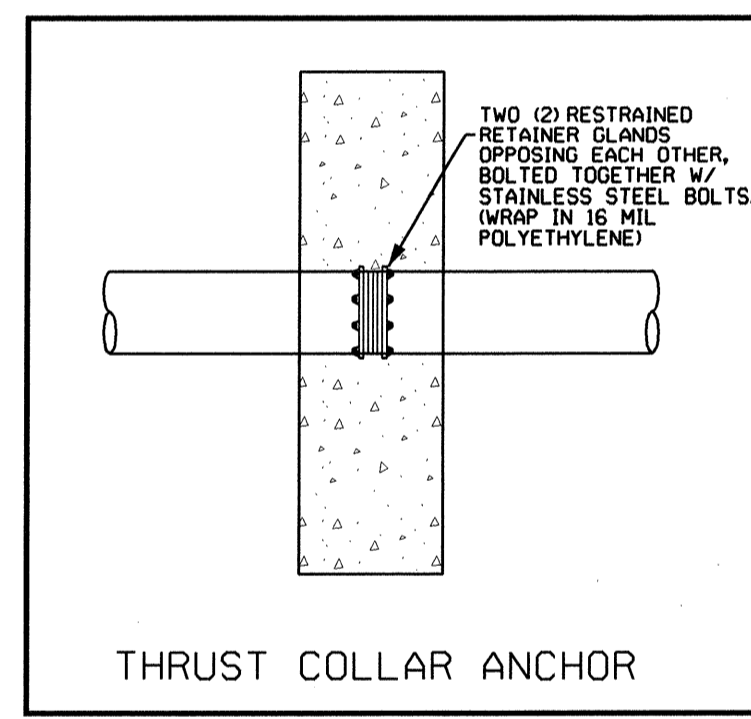
SIZE (MM)	DEGREE OF BEND	STATIC THRUST*		FAIRLY DRY CLAY		SOFT CLAY		GRAVEL, COARSE SAND		ALWAYS DRY CLAY		SAND, COMPACT, FTIRM		SAND, CLEAN, DRY		SAND, SAND, VERY POOR		ROCK, POOR	
		(NEWTONS)	(LBS)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)
150	6	11.25	3612	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1
		22.5	7353	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1
		45	14443	0.09	1	0.09	2	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1
		90	26663	0.19	2	0.28	3	0.09	1	0.09	1	0.09	1	0.19	2	0.56	6	0.09	1
		PLUG	18856	0.09	1	0.19	2	0.09	1	0.09	1	0.19	1	0.09	1	0.37	4	0.09	1
200	8	11.25	6423	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.19	2	0.09	1
		22.5	13073	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.28	3	0.09	1
		45	25680	0.19	2	0.28	3	0.09	1	0.09	1	0.09	1	0.19	2	0.56	6	0.09	1
		90	47400	0.28	3	0.56	6	0.09	1	0.19	2	0.19	2	0.28	3	1.02	11	0.19	2
		PLUG	33522	0.19	2	0.37	4	0.09	1	0.09	1	0.09	1	0.19	2	0.74	8	0.09	1
300	12	11.25	14448	0.09	1	0.19	2	0.09	1	0.09	1	0.09	1	0.09	1	0.28	3	0.09	1
		22.5	29412	0.19	2	0.37	4	0.09	1	0.09	1	0.09	1	0.19	2	0.66	7	0.09	1
		45	57774	0.28	3	0.65	7	0.09	1	0.19	2	0.19	2	0.28	3	1.21	13	0.19	2
		90	106651	0.56	6	1.11	12	0.19	2	0.28	3	0.28	3	0.56	6	2.23	24	0.28	3
		PLUG	75424	0.37	4	0.84	9	0.09	1	0.19	2	0.19	2	0.37	4	1.58	17	0.19	2
400	16	11.25	25688	0.19	2	0.28	3	0.09	1	0.09	1	0.09	1	0.19	2	0.56	6	0.09	1
		22.5	52293	0.28	3	0.56	6	0.09	1	0.19	2	0.19	2	0.28	3	1.11	12	0.09	1
		45	102709	0.56	6	1.11	12	0.19	2	0.28	3	0.28	3	0.56	6	2.14	23	0.28	3
		90	189601	1.02	11	2.04	22	0.28	3	0.56	6	0.56	6	1.02	11	3.99	43	0.37	4
		PLUG	134087	0.74	8	1.39	15	0.19	2	0.37	4	0.37	4	0.74	8	2.79	30	0.28	3

\*BASED ON TEST PRESSURE OF 1.03 MPa (150 PSI)

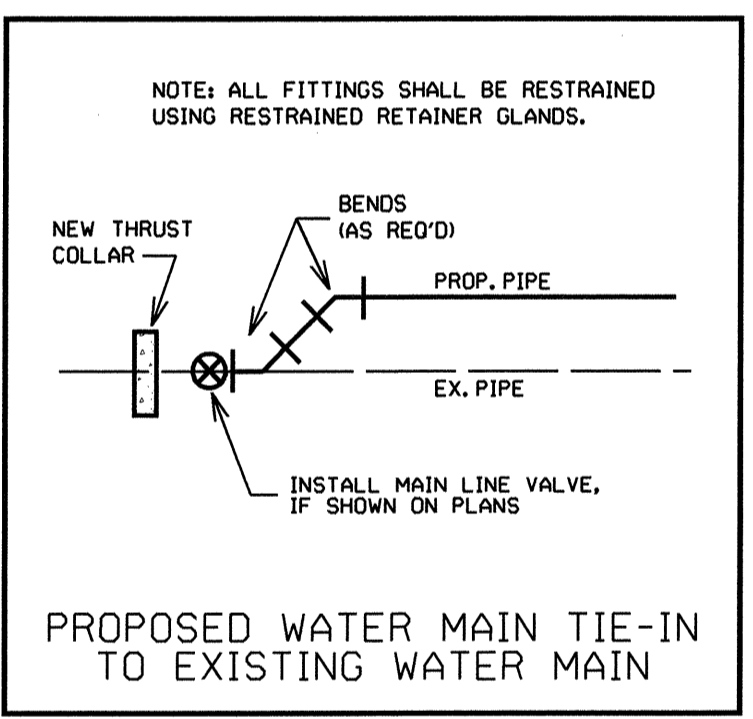


CONCRETE REQUIRED TO ANCHOR VERTICAL BEND (BASED ON TEST PRESSURE OF 1.03 MPa (150 PSI))

PIPE DIA. (INCHES)	11.25° BEND		22.5° BEND		45° BEND	
	RESULTANT FORCE (LBS.)	CONC. REQ'D (CY)	RESULTANT FORCE (LBS.)	CONC. REQ'D (CY)	RESULTANT FORCE (LBS.)	CONC. REQ'D (CY)
6	150	812	3612	---	1653	7353
8	200	1444	6423	0.50	2939	13073
12	300	3248	14448	1.00	6612	29412
16	400	5775	25688	1.50	11756	52293



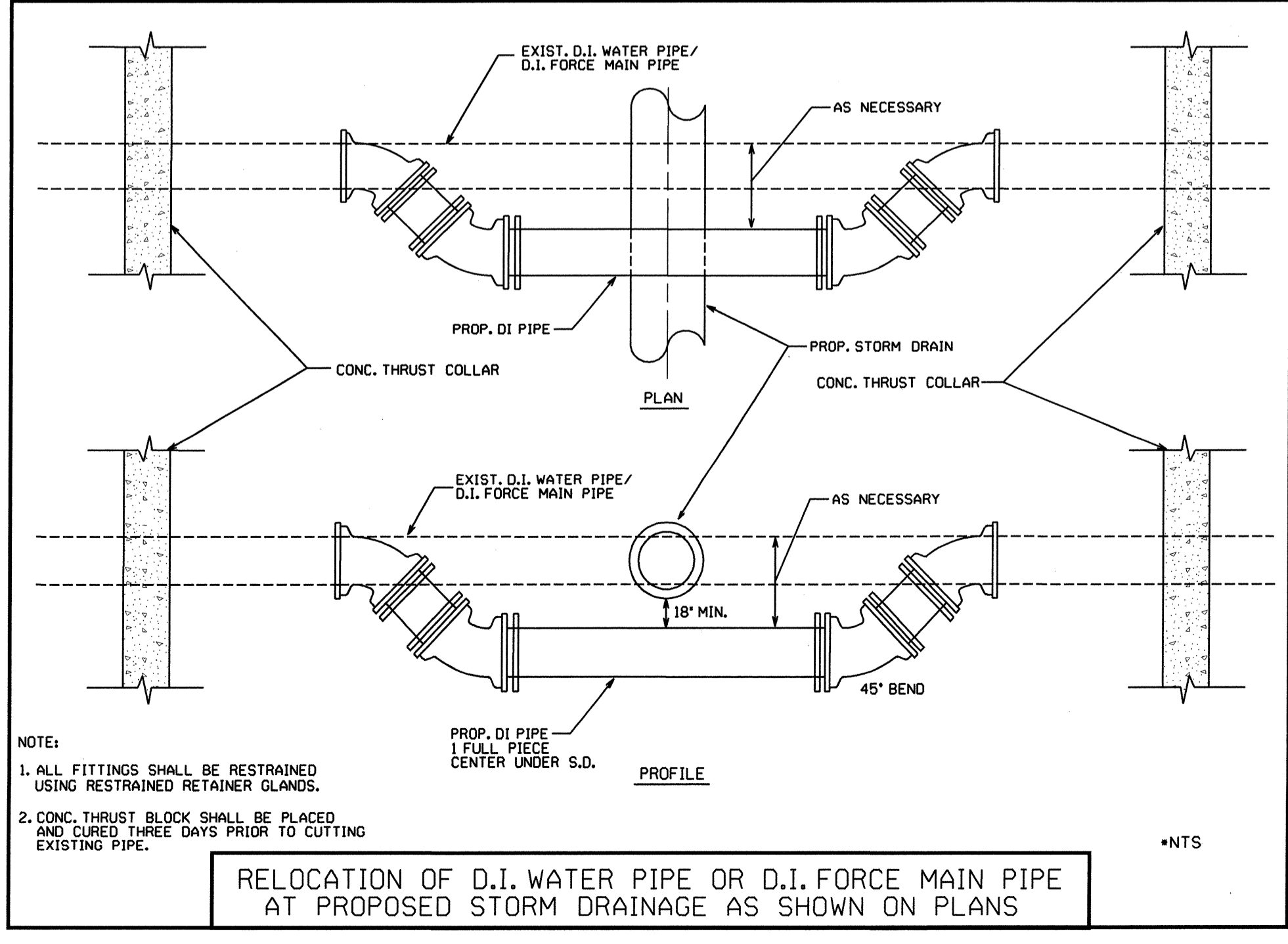
THRUST COLLAR ANCHOR



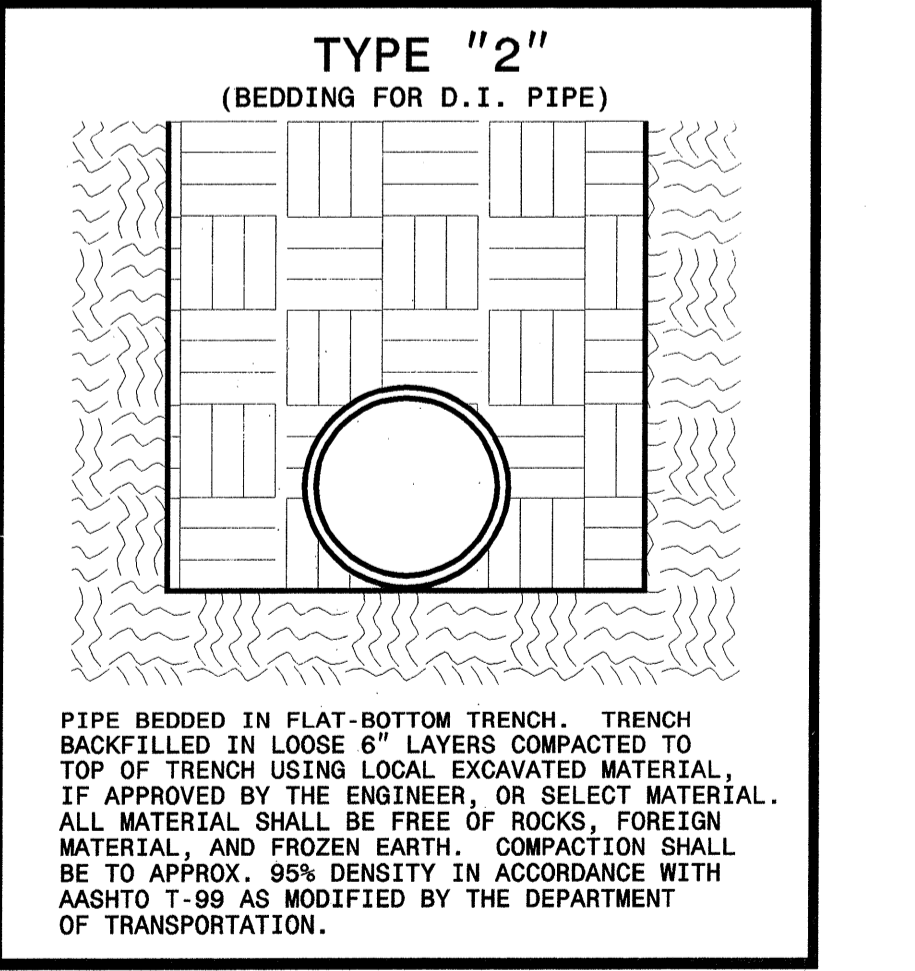
PROPOSED WATER MAIN TIE-IN TO EXISTING WATER MAIN

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		



RELOCATION OF D.I. WATER PIPE OR D.I. FORCE MAIN PIPE AT PROPOSED STORM DRAINAGE AS SHOWN ON PLANS



PIPE BEDDED IN FLAT-BOTTOM TRENCH. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL. IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROX. 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.