

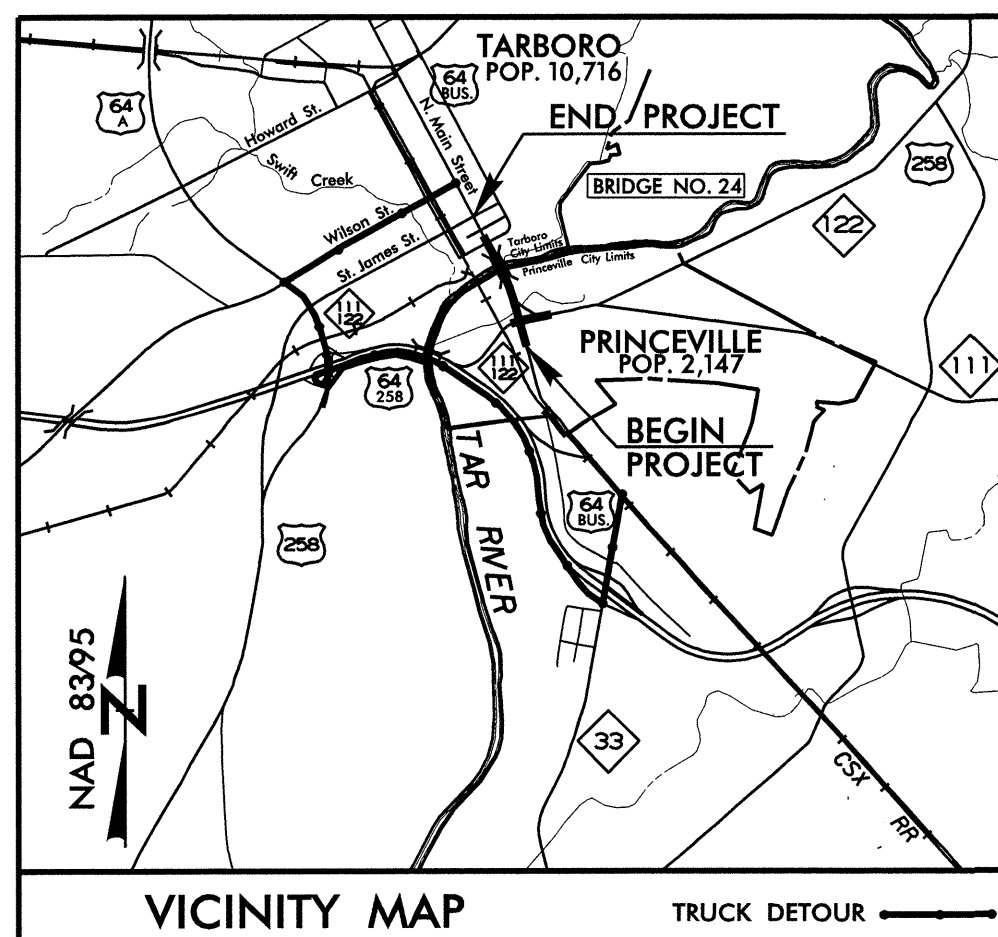
09/08/94

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

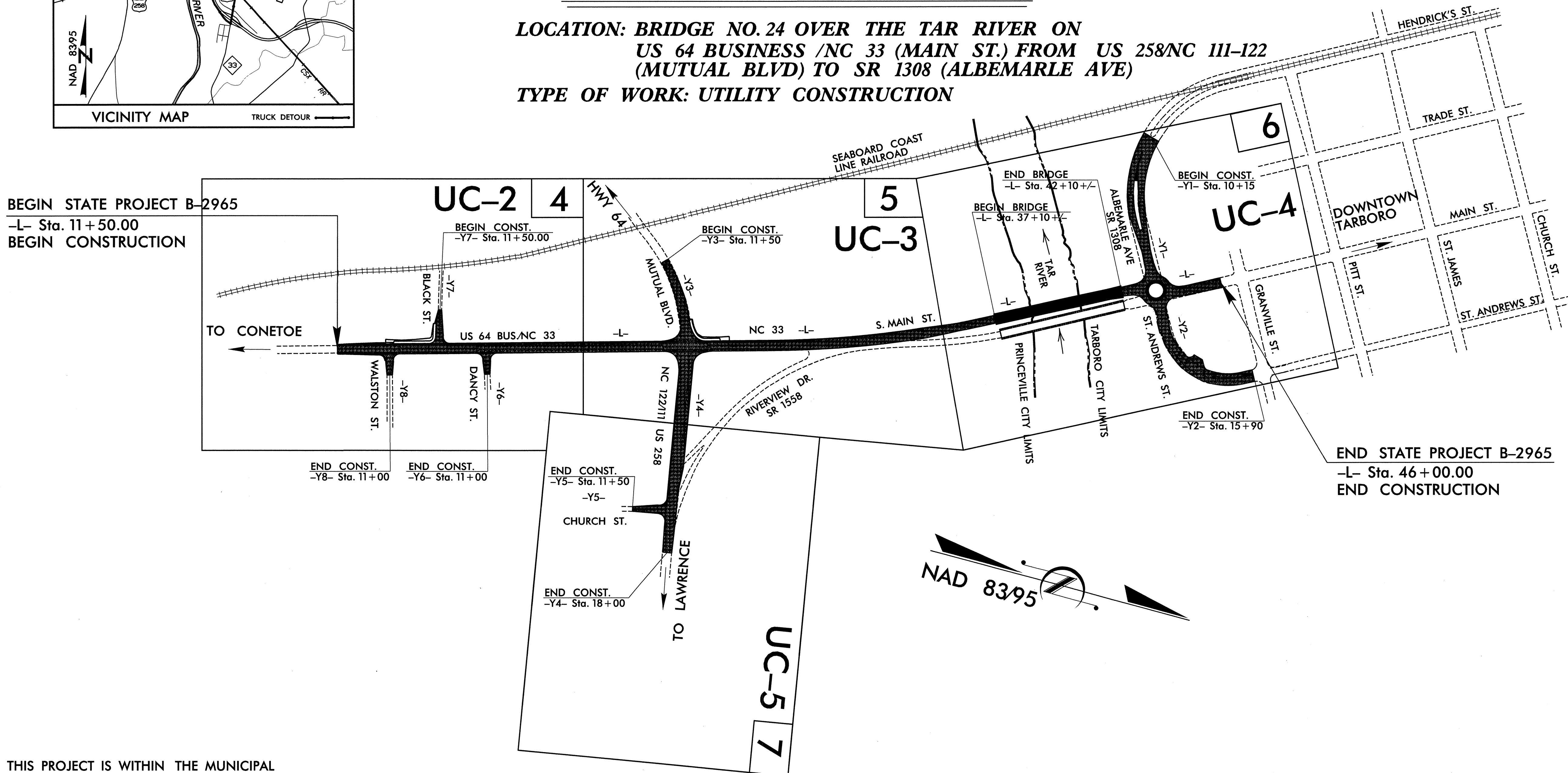
T.I.P. NO.	SHEET NO.
<b>B - 2965</b>	<b>UC-1</b>

# EDGECOMBE COUNTY UTILITY CONSTRUCTION

**LOCATION: BRIDGE NO. 24 OVER THE TAR RIVER ON  
US 64 BUSINESS /NC 33 (MAIN ST.) FROM US 258/NC III-122  
(MUTUAL BLVD) TO SR 1308 (ALBEMARLE AVE)**  
**TYPE OF WORK: UTILITY CONSTRUCTION**



**TIP: B-2965**



BEGIN STATE PROJECT B-2965  
-L- Sta. 11+50.00  
BEGIN CONSTRUCTION

END STATE PROJECT B-2965  
-L- Sta. 46+00.00  
END CONSTRUCTION

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF PRINCEVILLE AND TARBORO.

**CONTRACT: C202039**



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

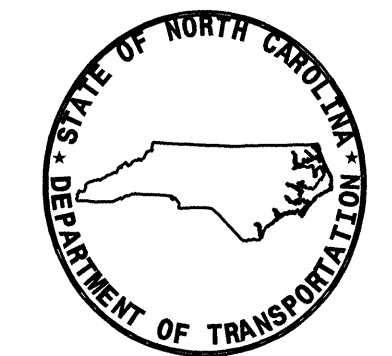
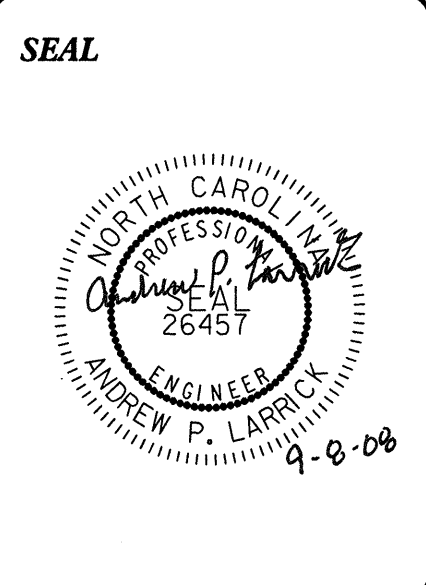
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-5	UTILITY CONSTRUCTION PLAN SHEETS
UC-6	PROFILE SHEET
UC-7 THRU UC-8	DETAILS SHEETS

**UTILITY OWNERS ON PROJECT**

WATER - TOWN OF TARBORO AND TOWN OF PRINCEVILLE

SEWER - TOWN OF TARBORO AND TOWN OF PRINCEVILLE

TELEPHONE - EMBARQ



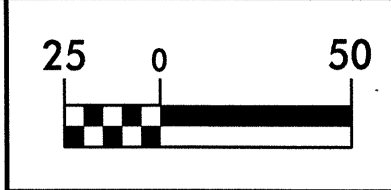
**DIVISION OF HIGHWAYS  
PROJECT SERVICES  
UTILITY SECTION**  
1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 250-4128  
FAX (919) 250-4119

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**James S. McKee, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Donald W. Proper** UTILITIES PROJECT DESIGNER

\$\$\$ SYSTEM TIME \$\$\$  
\$\$\$ DGN \$\$\$  
\$\$\$ USER NAME \$\$\$



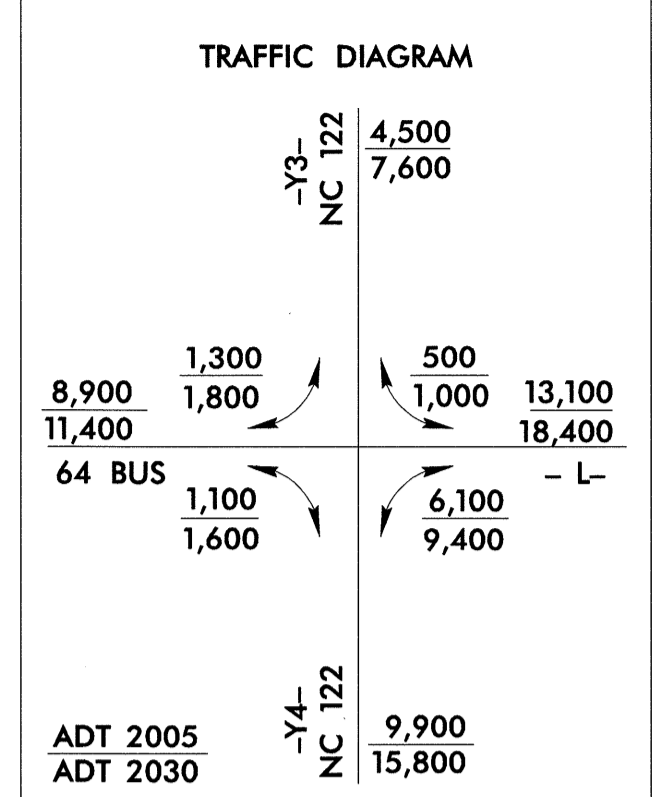
8/17/99



PROJECT REFERENCE NO.	SHEET NO.
B-2965	UC-3
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT	UTILITY CONSTRUCTION
PHONE: (919) 250-4118	PLANS ONLY
FAX: (919) 250-4119	

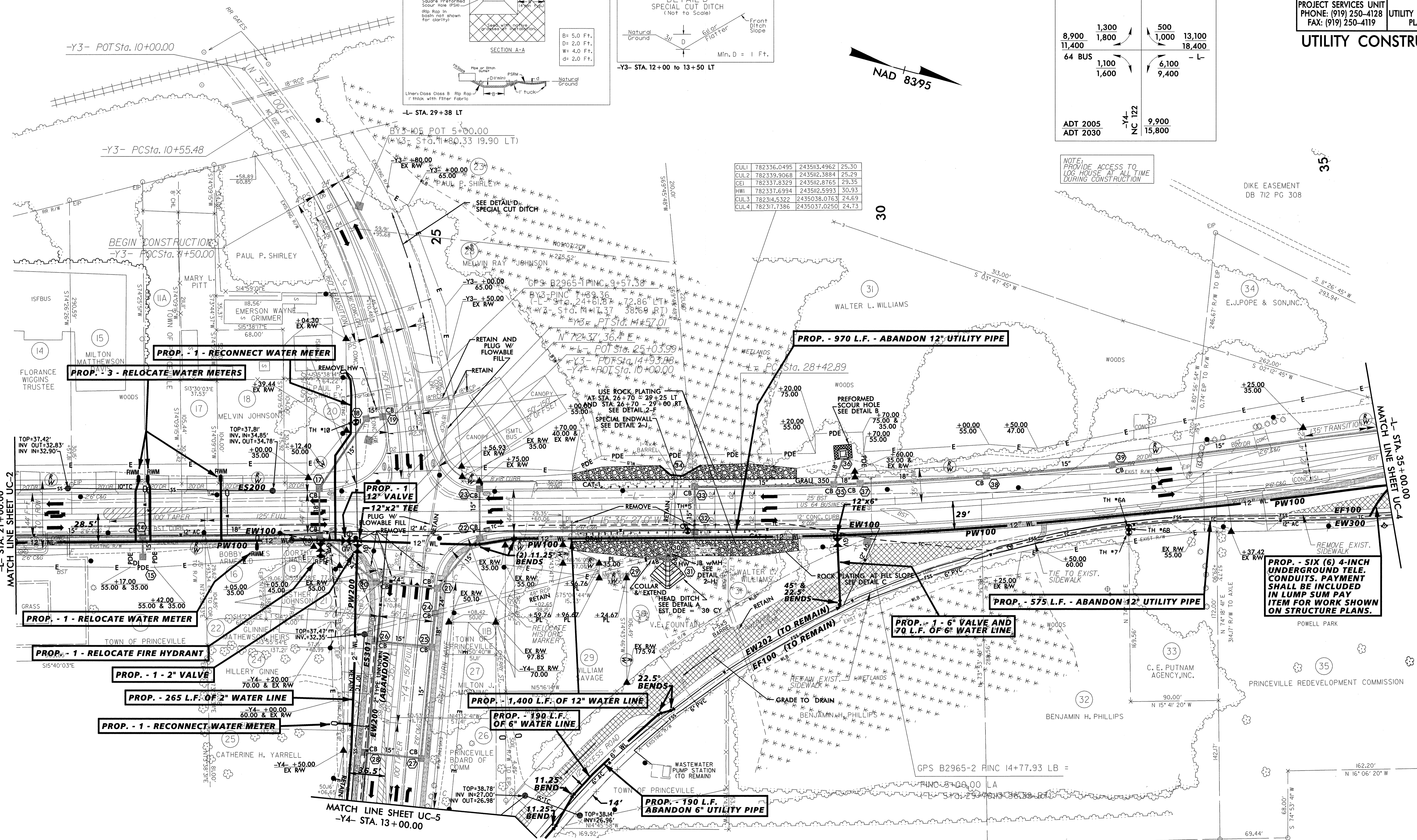
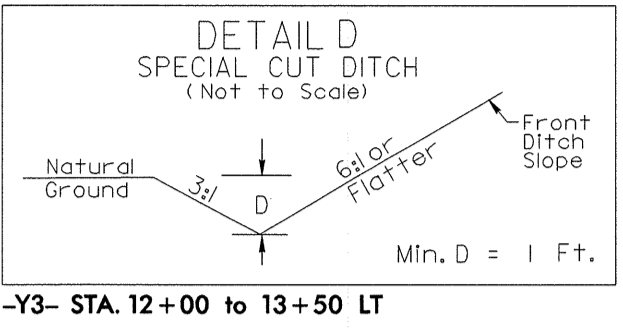
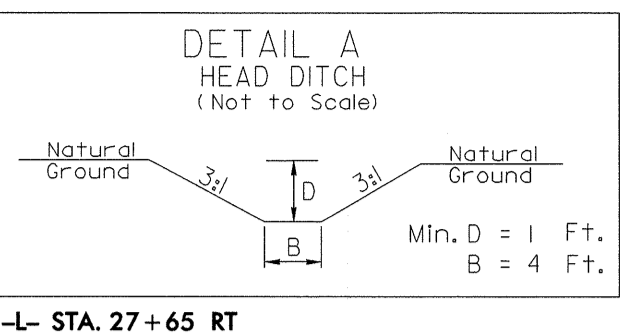
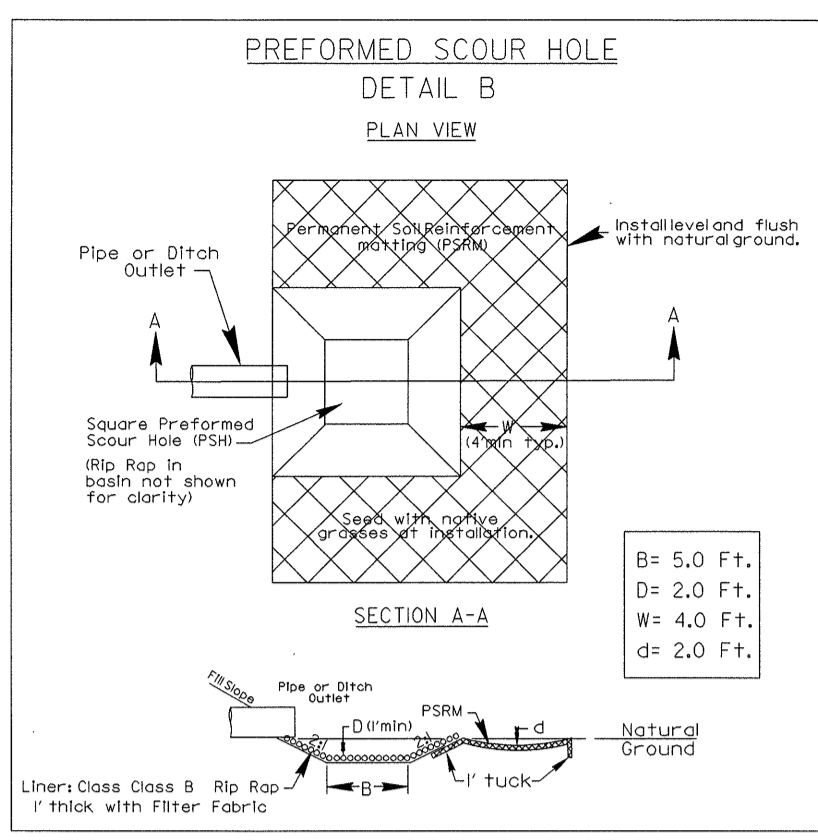
-L- PI Sta 32+52.79  
 $\Delta = 11' 42'' 06.8''$  (LT)  
 $D = 1' 25'' 56.6''$   
 $L = 816.95'$   
 $T = 409.90'$   
 $R = 4,000.00'$   
 $SE = RC$   
 $RO = 41'$

-Y3- PI Sta 12+62.88  
 $\Delta = 35' 23'' 36.4''$  (RT)  
 $D = 8' 48'' 53.0''$   
 $L = 401.53'$   
 $T = 207.40'$   
 $R = 650.00'$   
 $SE = 04$   
 $RO = 41'$



NOTE: PROVIDE ACCESS TO LOG HOUSE AT ALL TIME DURING CONSTRUCTION

CUL1	782336.0495	243513.4962	25.30
CUL2	782339.9068	243512.3884	25.29
CEI	782337.8329	243512.8765	29.35
HWI	782337.6994	243512.5993	30.93
CUL3	782314.5322	243503.0763	24.69
CUL4	782317.7386	243503.0250	24.73



REVISIONS

PROP. - SIX (6) 4-INCH UNDERGROUND TELE. CONDUITS. PAYMENT SHALL BE INCLUDED IN LUMP SUM PAY ITEM FOR WORK SHOWN ON STRUCTURE PLANS.

PROP. - 1 - 6" VALVE AND 70 L.F. OF 6" WATER LINE

PROP. - 190 L.F. OF 6" WATER LINE

PROP. - 1 - RELOCATE WATER METER

PROP. - 1 - RELOCATE FIRE HYDRANT

PROP. - 1 - 2" VALVE

PROP. - 265 L.F. OF 2" WATER LINE

PROP. - 1 - RECONNECT WATER METER

PROP. - 1,400 L.F. OF 12" WATER LINE

PROP. - 190 L.F. ABANDON 6" UTILITY PIPE

PROP. - 970 L.F. - ABANDON 12" UTILITY PIPE

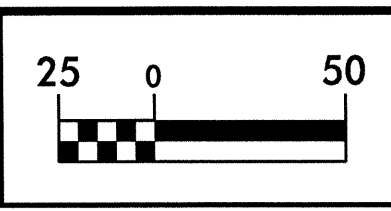
PROP. - 575 L.F. - ABANDON 12" UTILITY PIPE

8/17/99

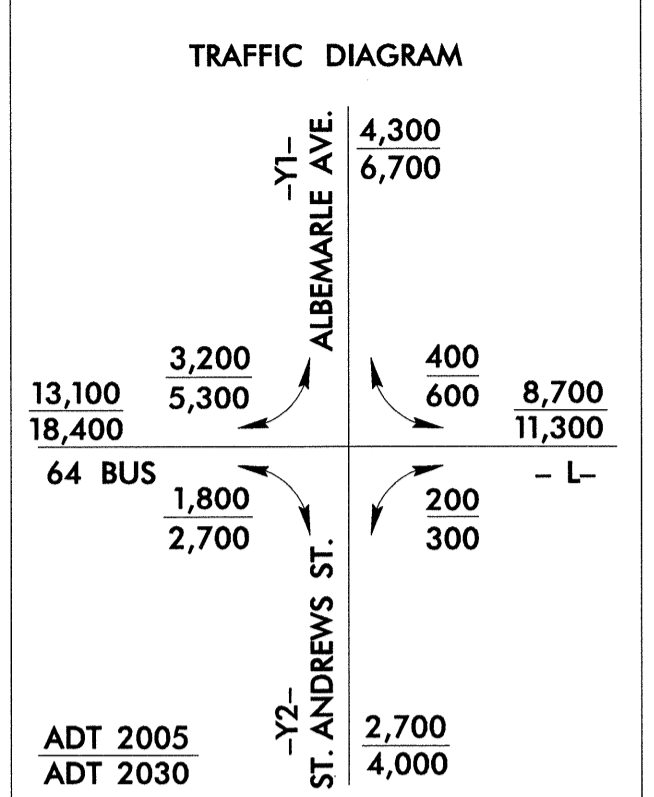
SEQUENCE OF CONSTRUCTION - WATER SYSTEM IMPROVEMENTS

- 1) INSTALL PROPOSED WATER METER VAULT AND PROPOSED PERMANENT WATER LINES AT THE NORTH SIDE OF THE BRIDGE, TEST, AND PLACE INTO SERVICE.
- 2) CORE DRILL CONCRETE END WALLS AT EACH END OF EXISTING BRIDGE, INSTALL TEMPORARY 10" WATER LINES, MAKE CONNECTIONS, AND PLACE INTO SERVICE.
- 3) THE ABOVE WORK SHALL BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION OF THE PROPOSED BRIDGE.
- 4) AFTER PROPOSED BRIDGE IS CONSTRUCTED AND PERMANENT WATER LINE IS INSTALLED ON NEW BRIDGE AND TESTED, MAKE FINAL CONNECTIONS ON EACH SIDE OF BRIDGE.

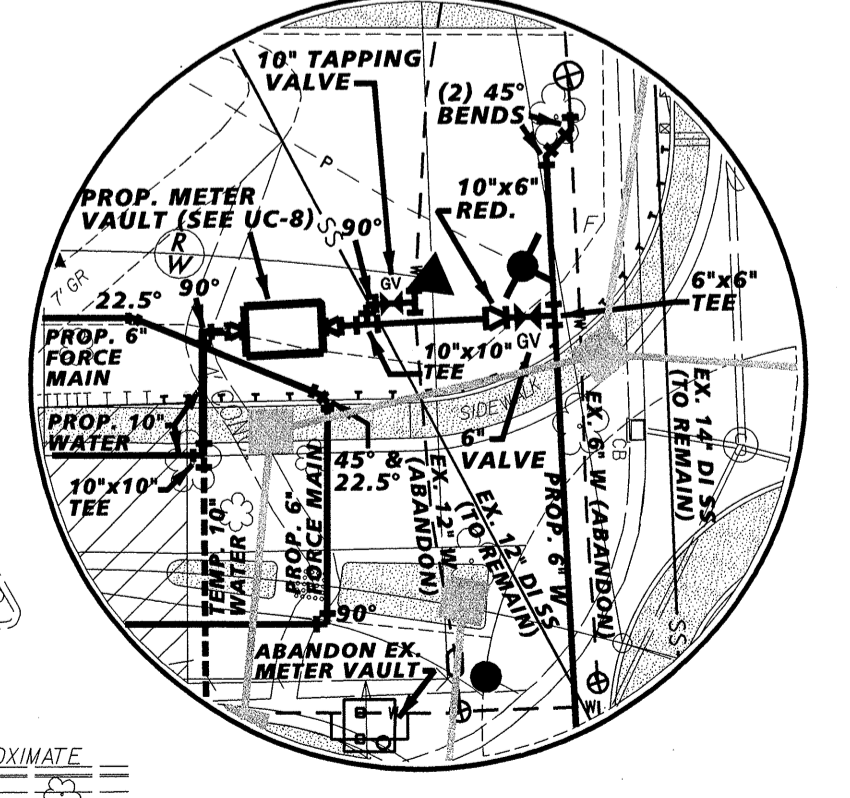
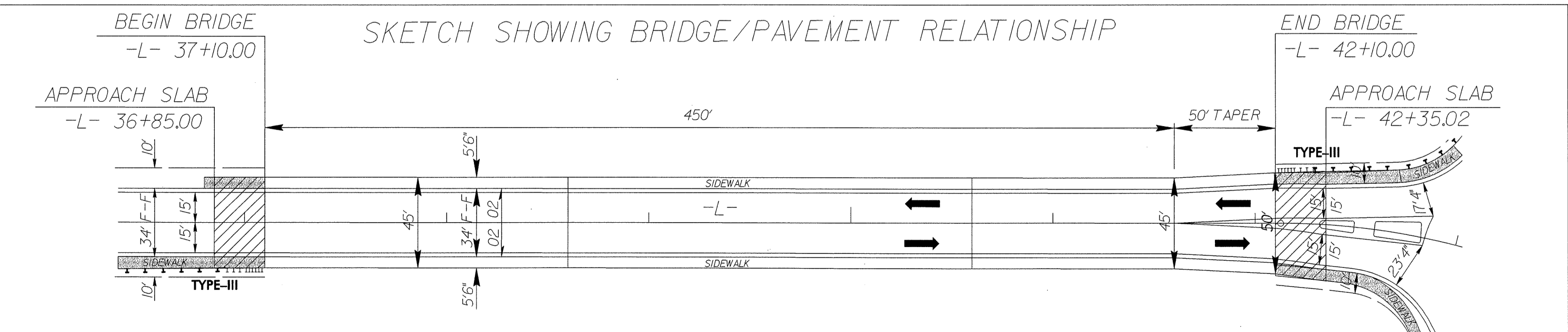
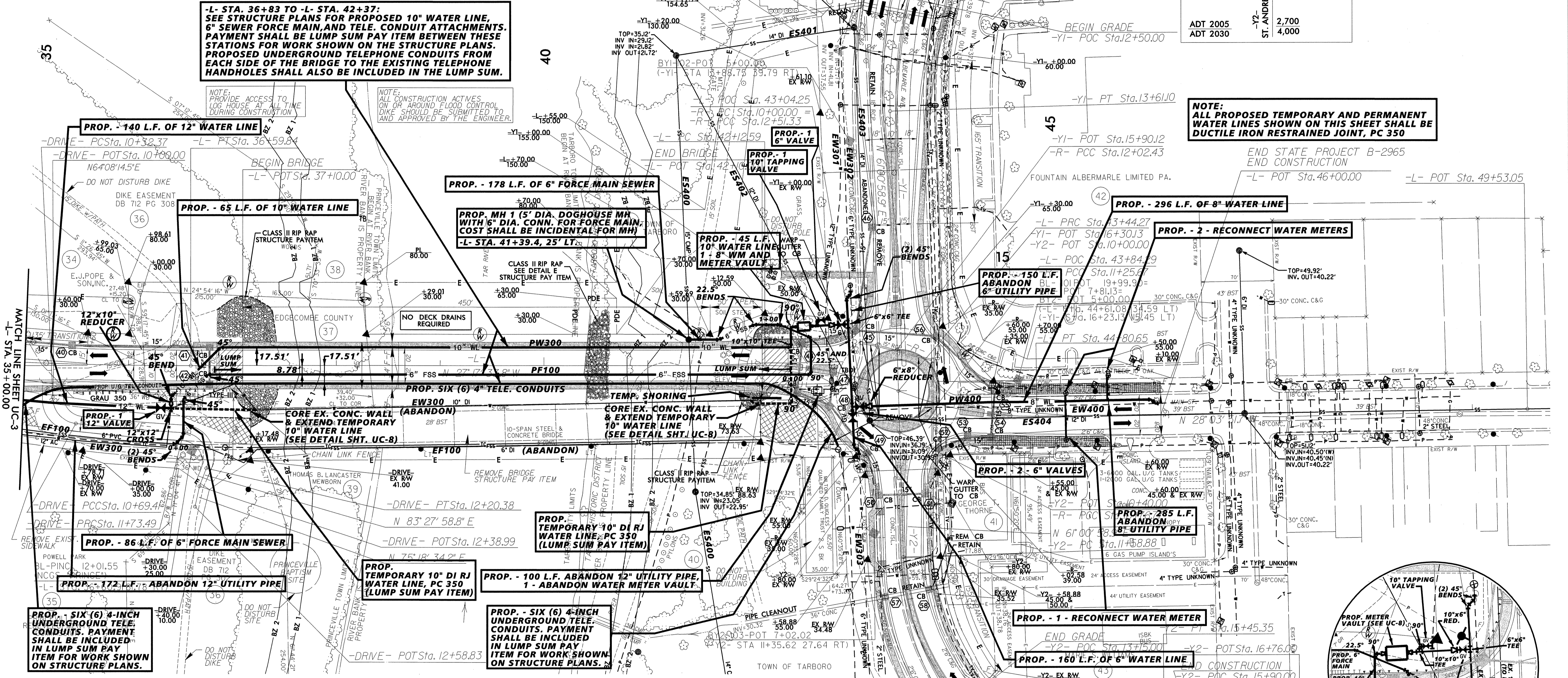
\*NOTE: A TOTAL OF THREE (3) SHUT DOWNS OF THE EXISTING WATER SYSTEM SHALL BE ALLOWED FOR THE PURPOSE OF MAKING NECESSARY TIE-INS. EACH OF THESE SHUT-DOWNS SHALL BE LIMITED TO FOUR (4) HOURS IN DURATION, AND SHALL BE PERFORMED DURING PERIODS OF LOW WATER SYSTEM DEMAND, BETWEEN THE HOURS OF 11:00 PM AND 5:00 AM. SHUT-DOWNS SHALL BE COORDINATED WITH THE TOWN OF TARBORO AND THE TOWN OF PRINCEVILLE.



PROJECT REFERENCE NO.	B-2965	SHEET NO.	UC-4
DESIGNED BY:	DMP		
DRAWN BY:	DMP		
CHECKED BY:	DMP		
APPROVED BY:			
REVISIONS:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
		UTILITY CONSTRUCTION PLANS ONLY	



NOTE: ALL PROPOSED TEMPORARY AND PERMANENT WATER LINES SHOWN ON THIS SHEET SHALL BE DUCTILE IRON RESTRAINED JOINT, PC 350



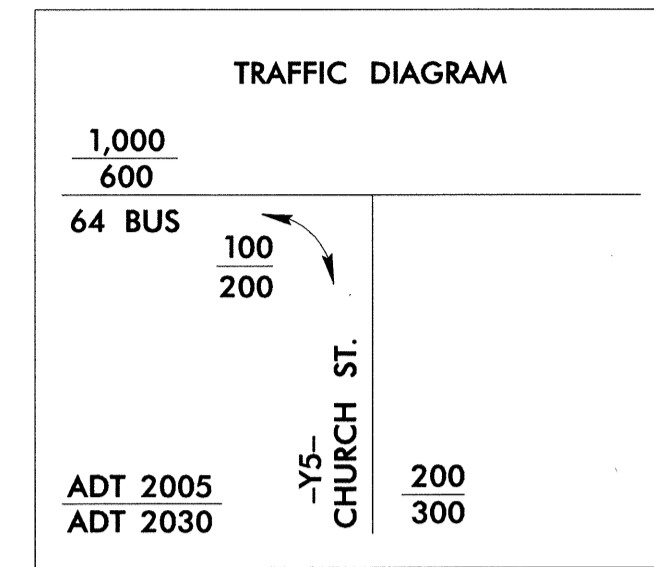
PROP. WATER METER VAULT AREA  
SCALE: 1" = 30'

UTILITY CONSTRUCTION PLANS DESIGNED BY:  
**dmp** DAVIS-MARTIN-POWELL & ASSOC., INC.  
ENGINEERING-LAND PLANNING-SURVEYING  
HIGH POINT, NORTH CAROLINA

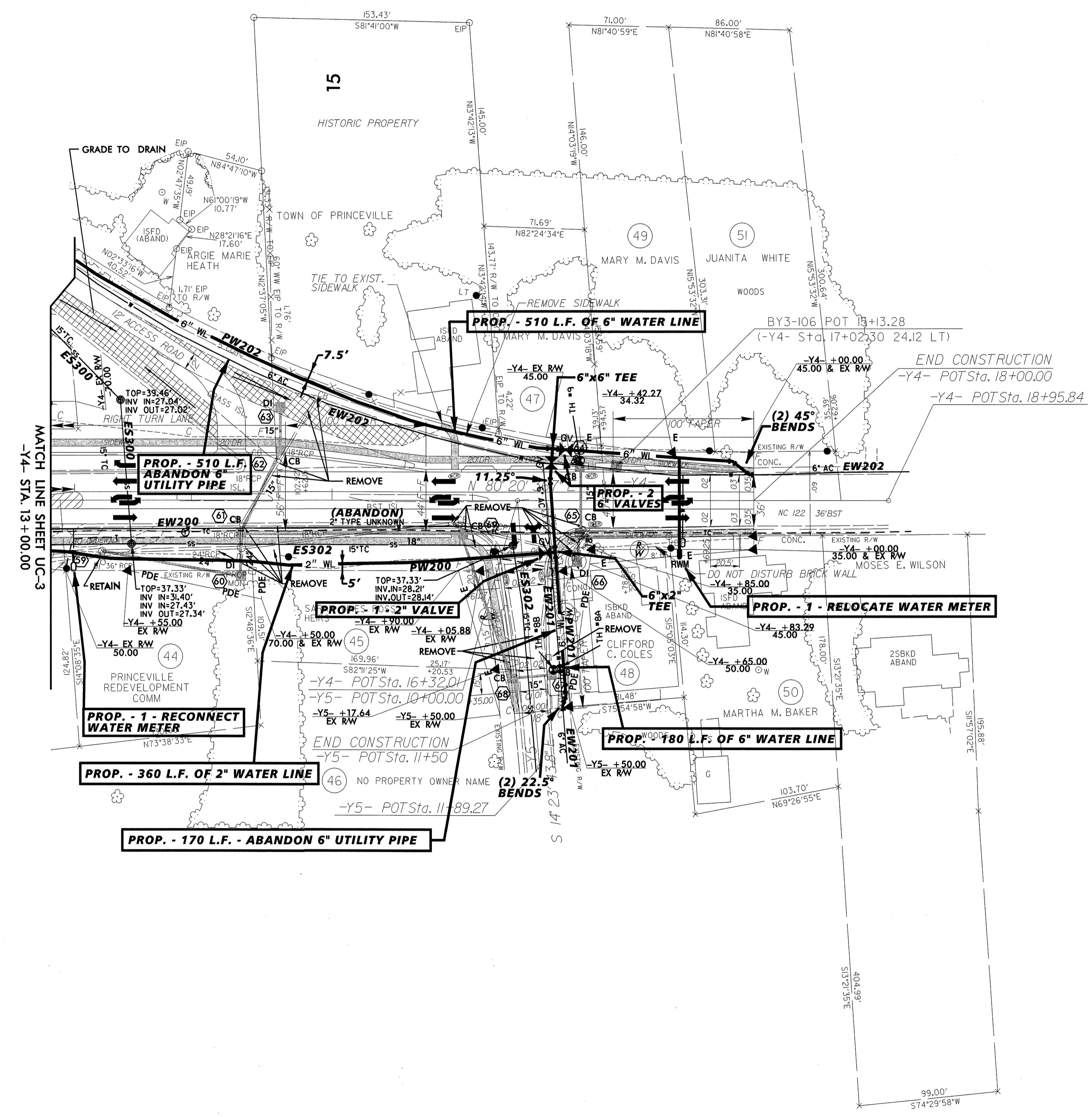
8/17/99



PROJECT REFERENCE NO.	B-2965	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	



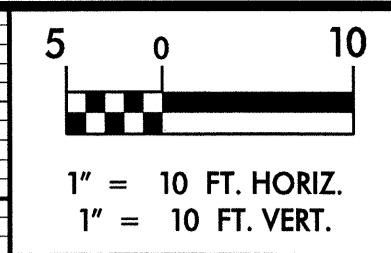
NAD 8395



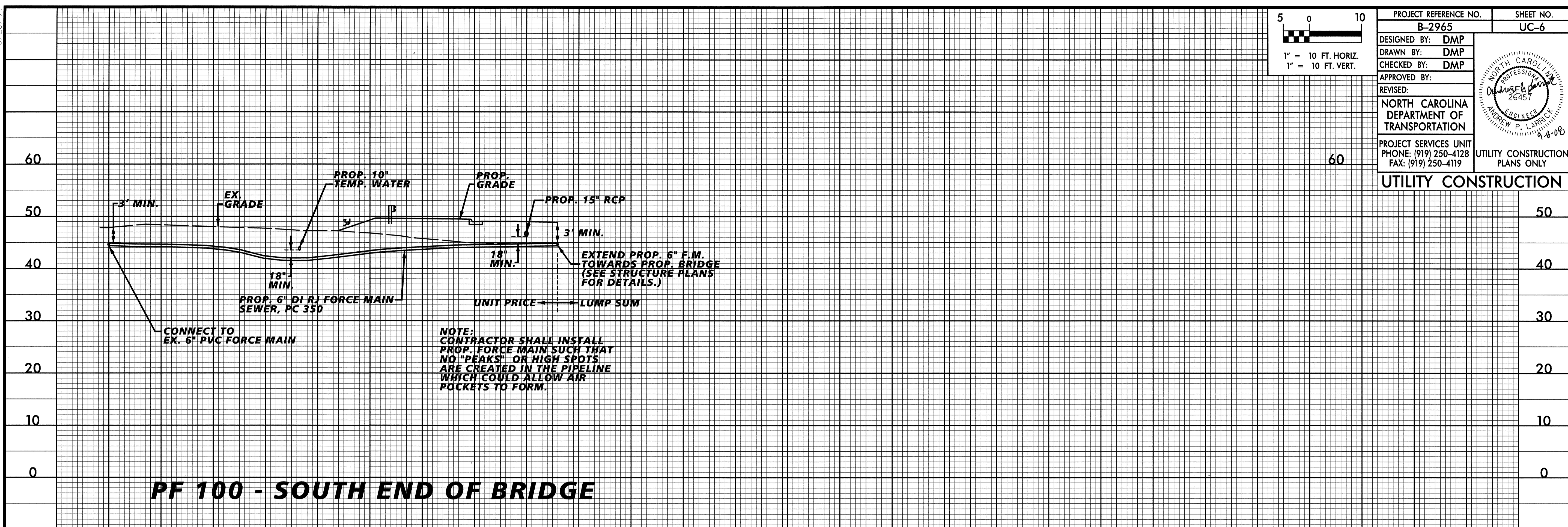
REVISIONS

SECTION CUT

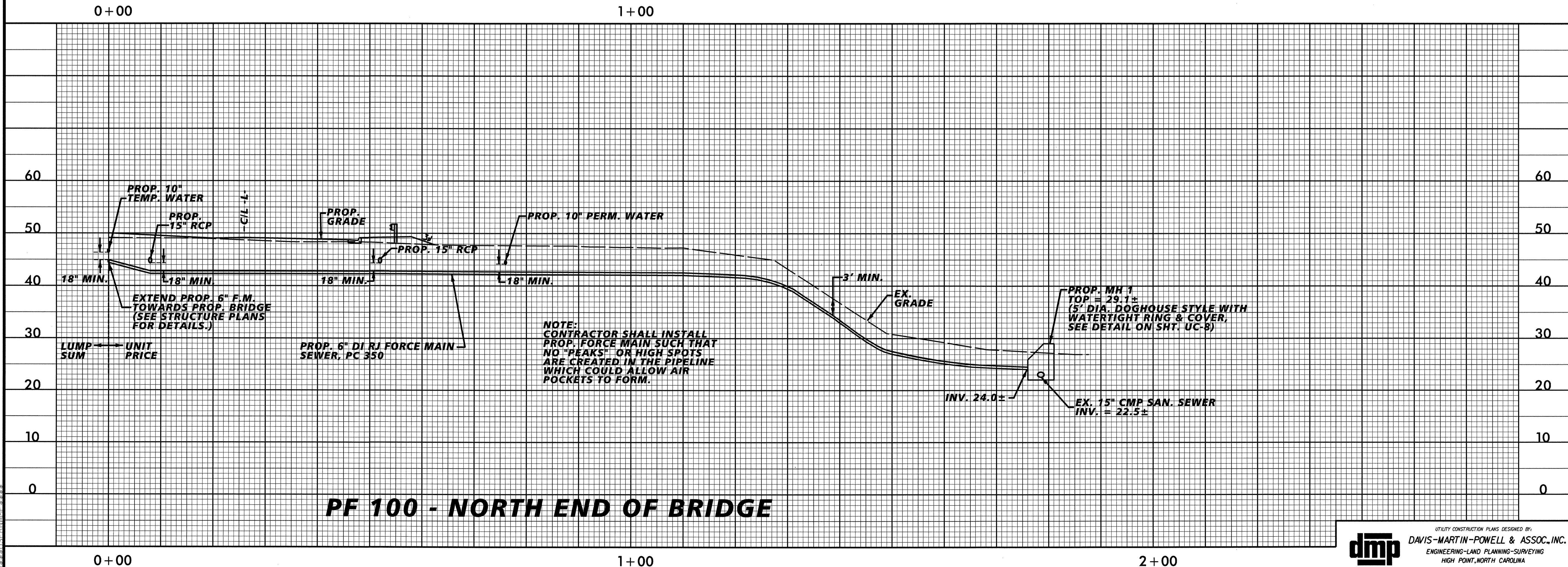
5/28/99



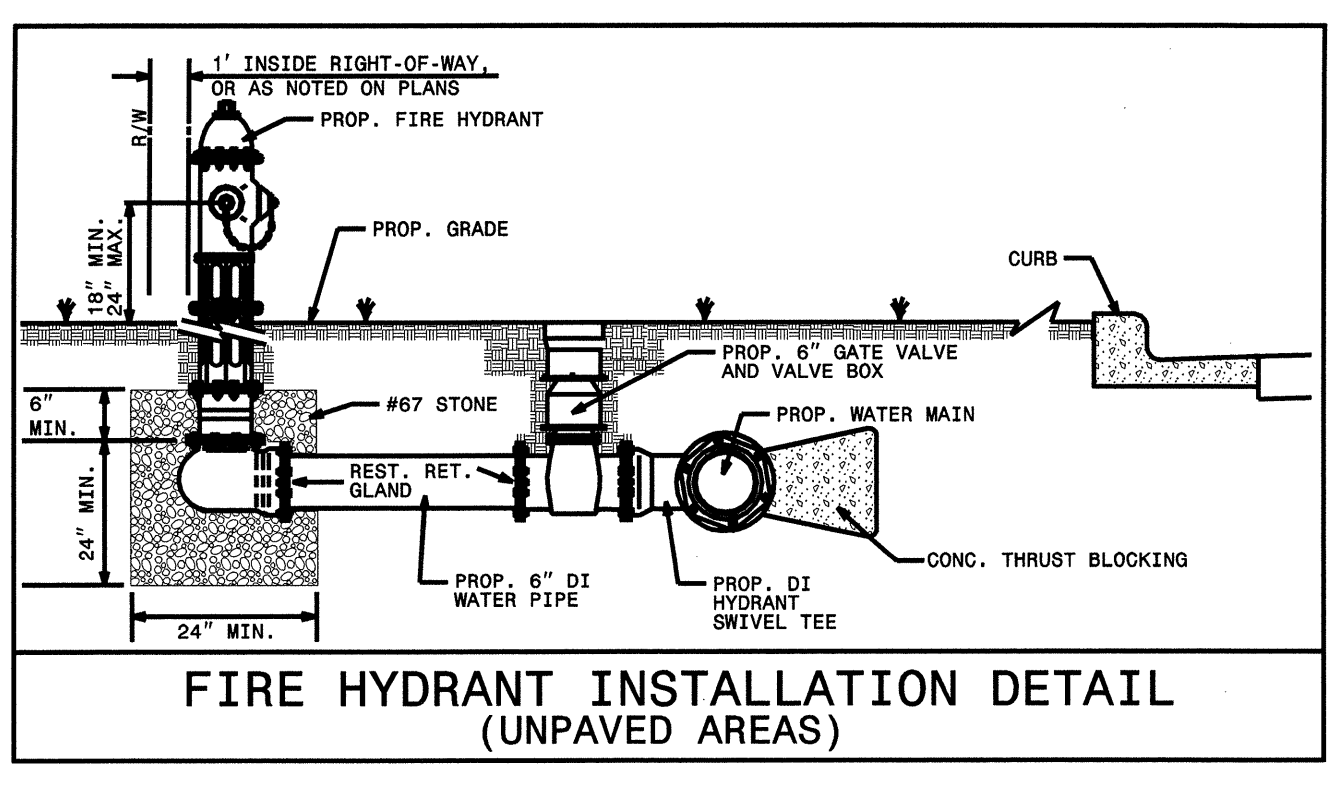
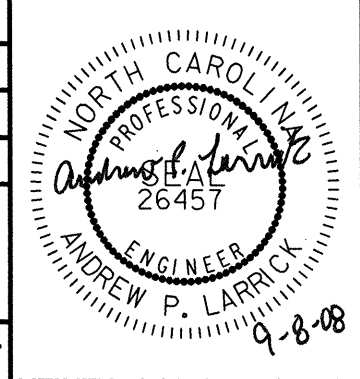
PROJECT REFERENCE NO. B-2965	SHEET NO. UC-6
DESIGNED BY: DMP	
DRAWN BY: DMP	
CHECKED BY: DMP	
APPROVED BY:	
REVIS:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	UTILITY CONSTRUCTION PLANS ONLY



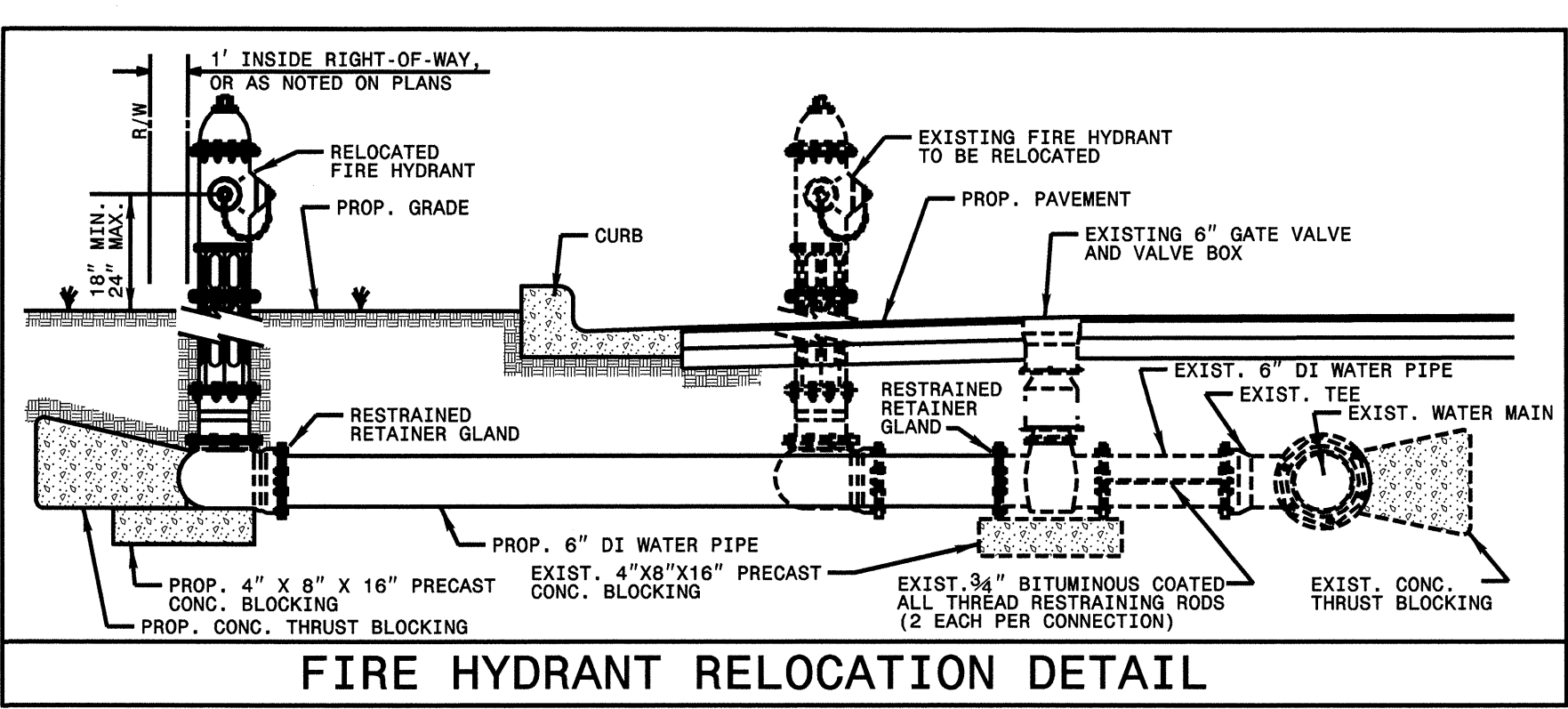
### PF 100 - SOUTH END OF BRIDGE



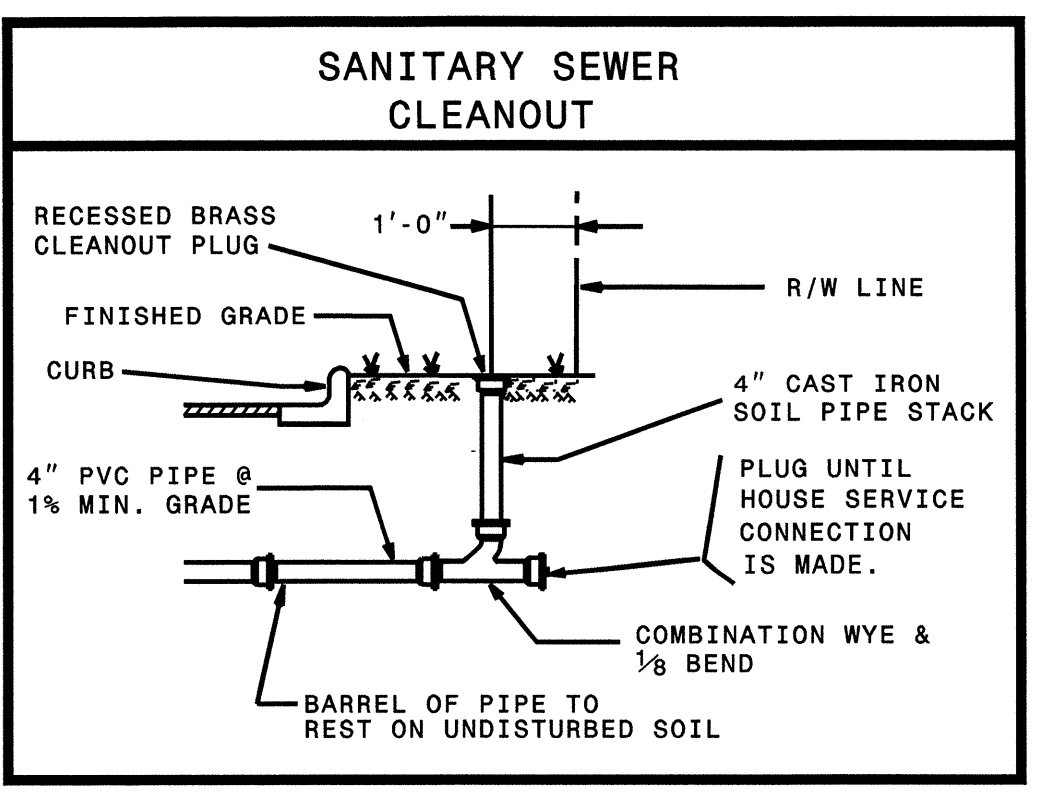
### PF 100 - NORTH END OF BRIDGE



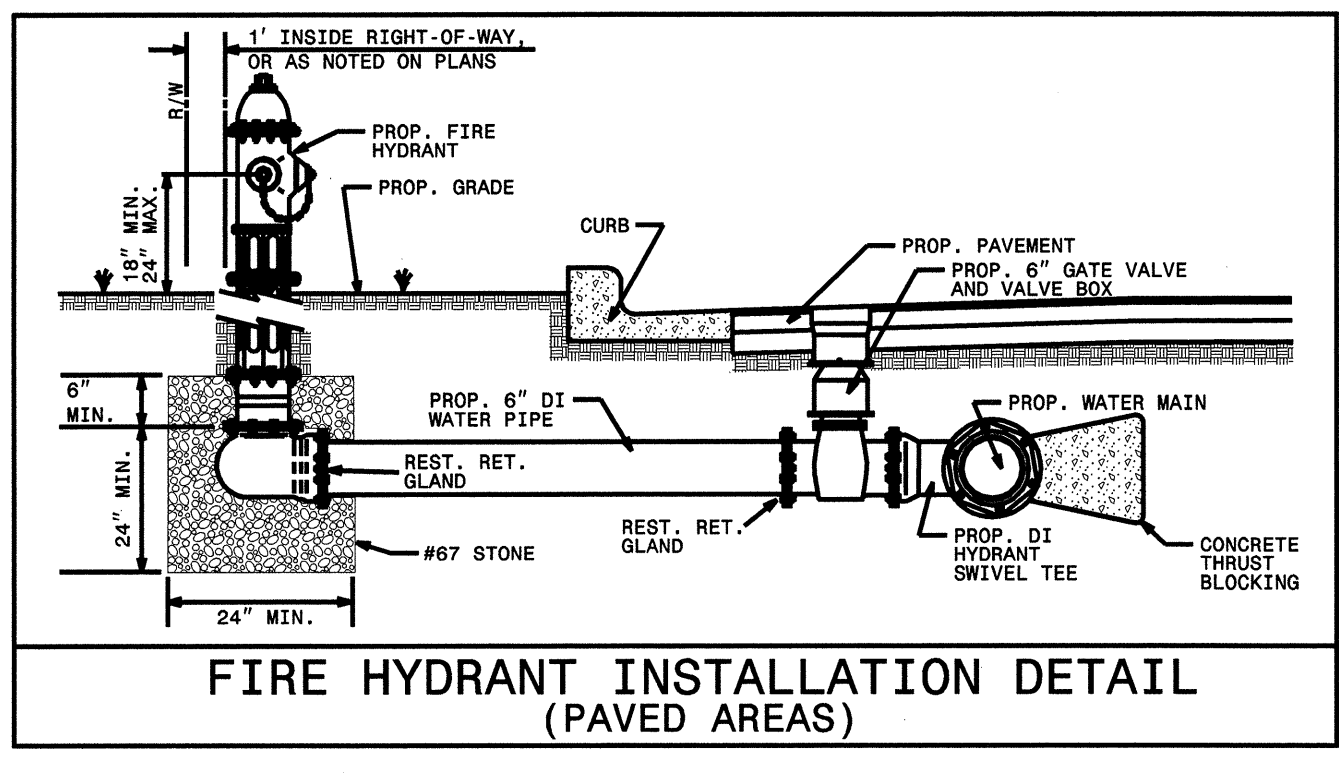
FIRE HYDRANT INSTALLATION DETAIL (UNPAVED AREAS)



FIRE HYDRANT RELOCATION DETAIL



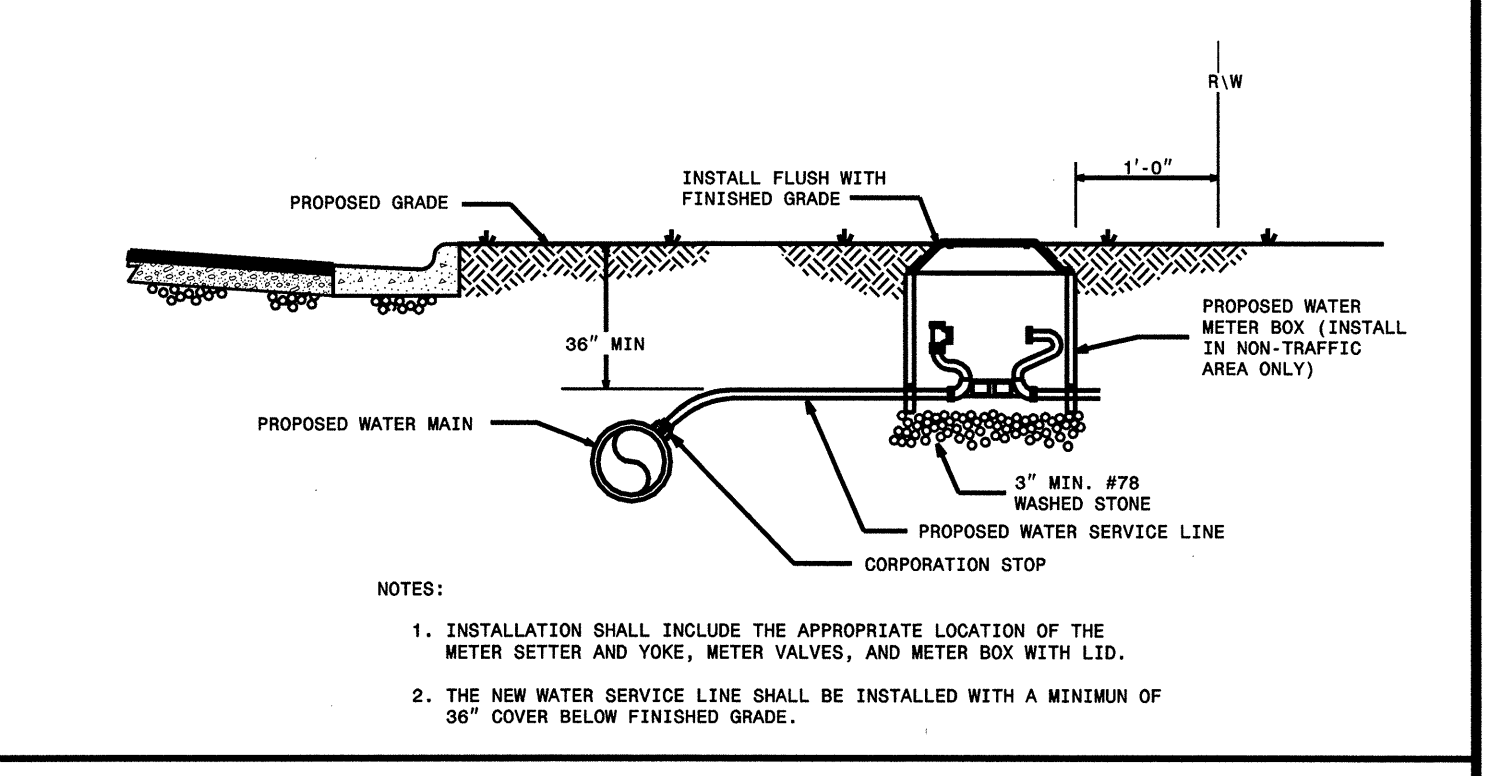
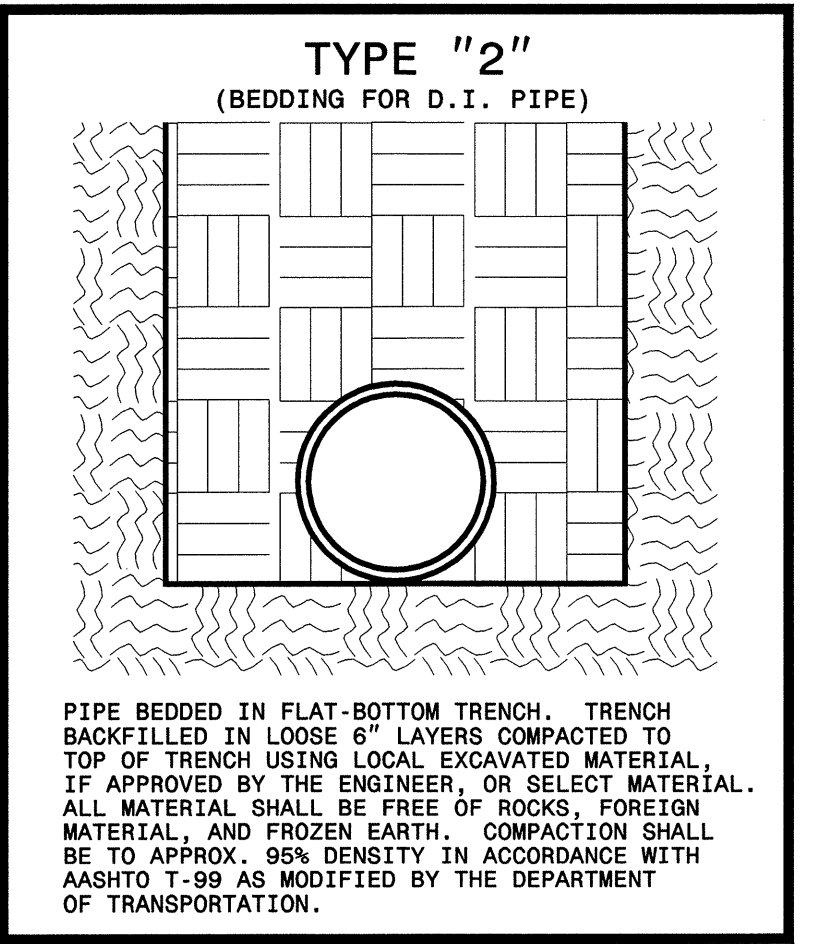
THE CONTRACTOR SHALL REPLACE ANY DAMAGED SEWER LATERALS AND/OR CLEANOUTS AS DIRECTED BY THE ENGINEER. THE NECESSARY QUANTITIES HAVE BEEN ADDED TO THE CONTRACT TO FACILITATE THIS PROCEDURE.



FIRE HYDRANT INSTALLATION DETAIL (PAVED AREAS)

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		

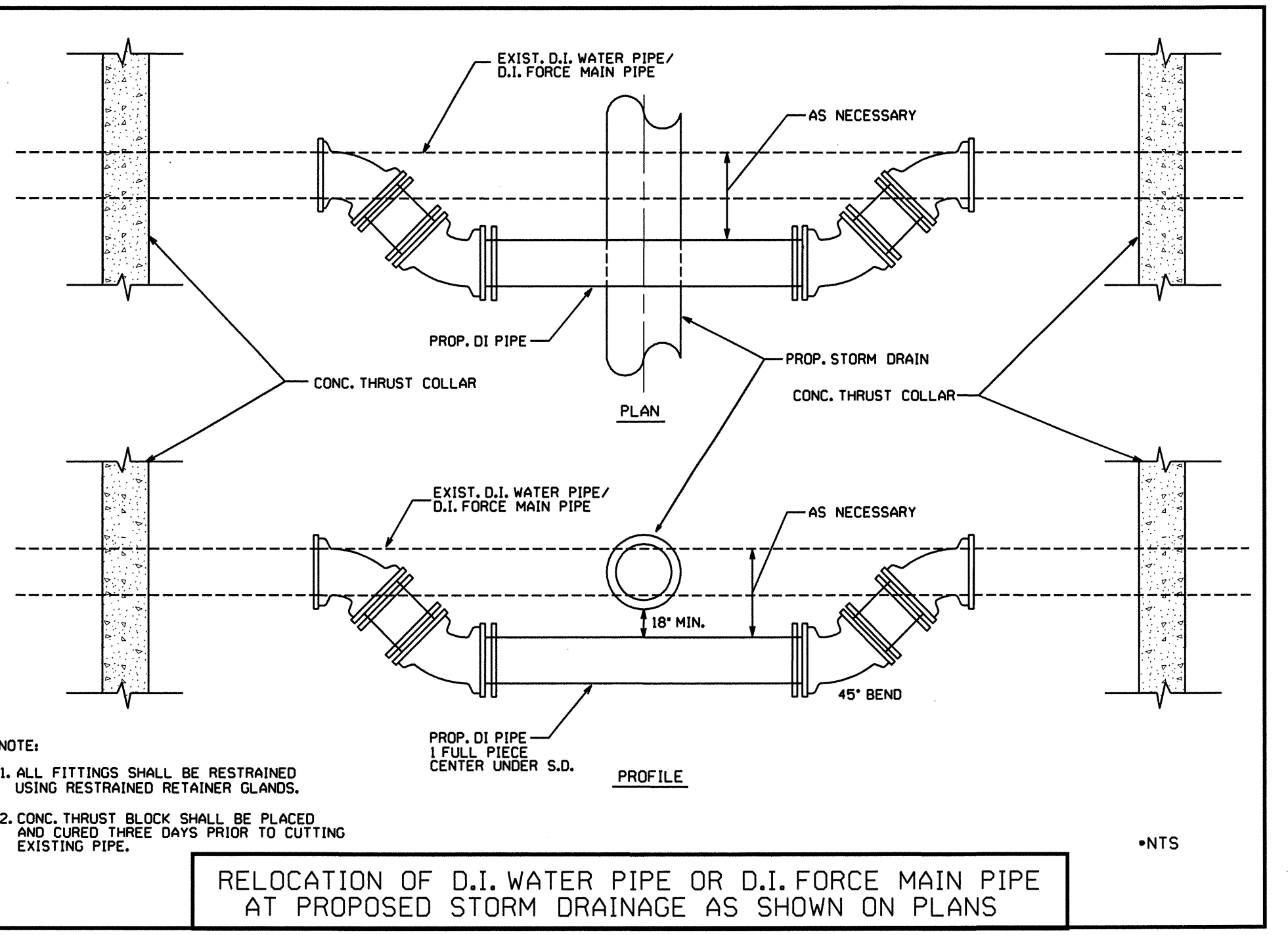
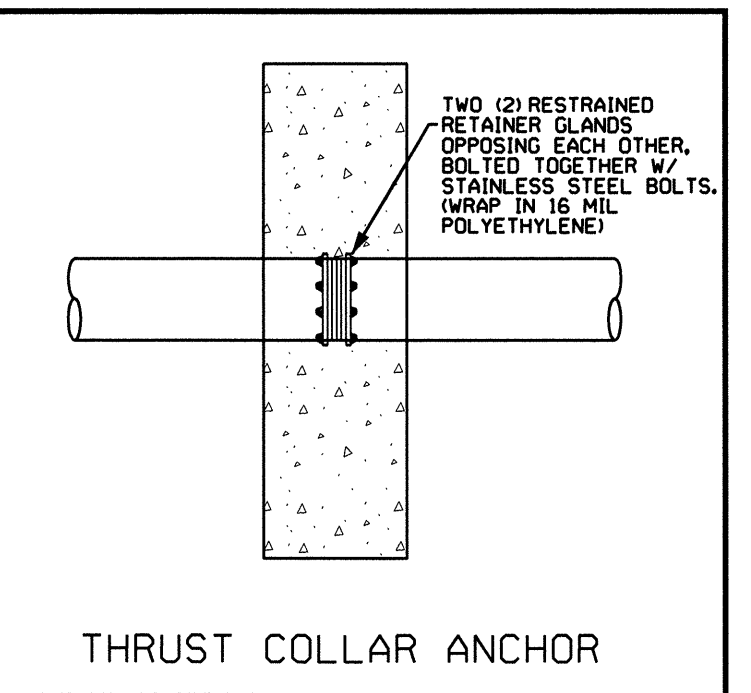


WATER METER INSTALLATION DETAIL

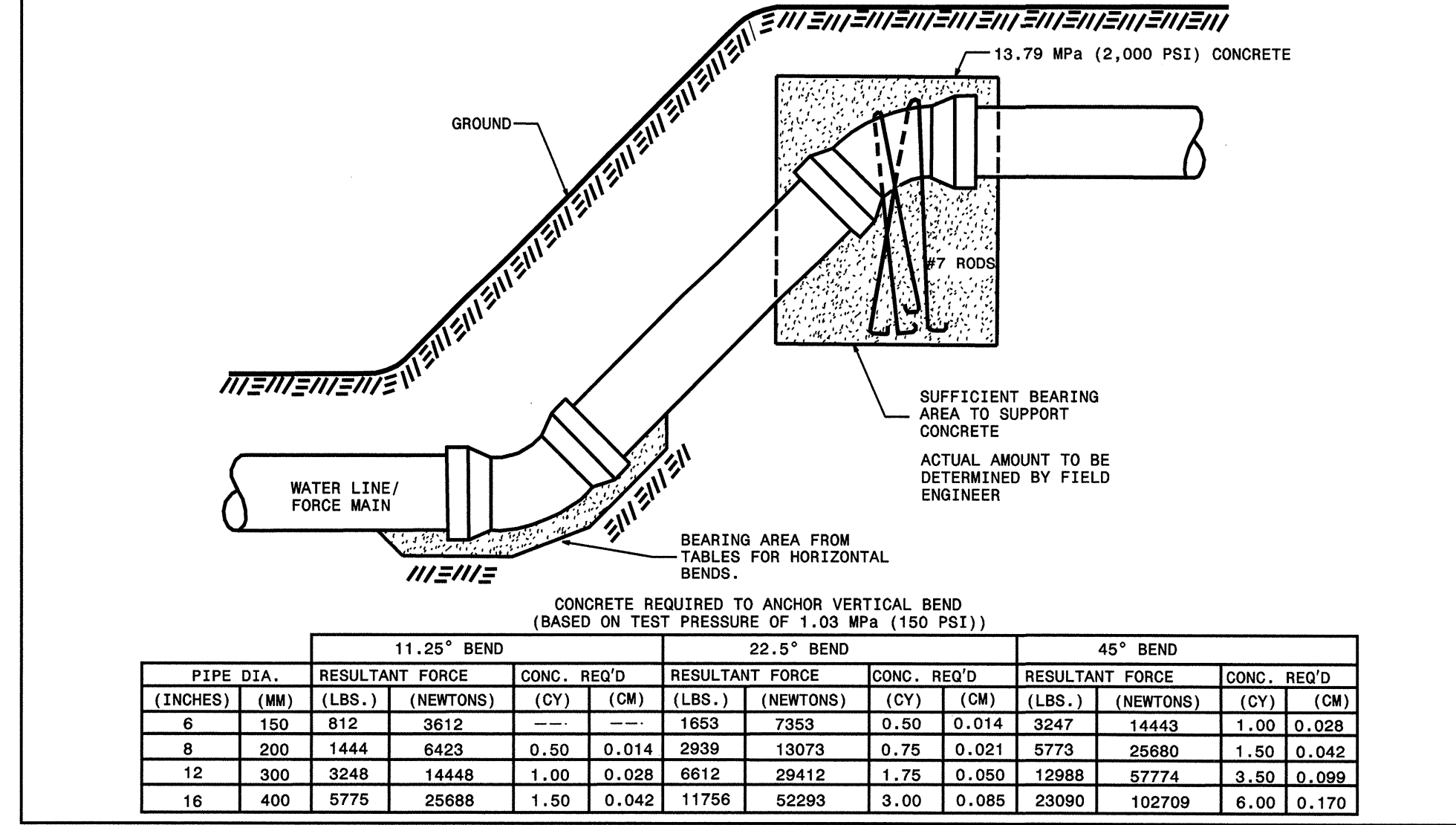
REQUIRED BEARING AREAS

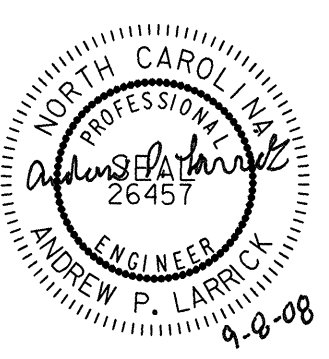
SIZE (MM) (INCHES)	DEGREE OF BEND	STATIC THRUST*		FAIRLY DRY CLAY (D. 192 Mpa (~4,000 PSF))		SOFT CLAY (D. 0.096 Mpa (~2,000 PSF))		GRAVEL, COARSE SAND (D. 796 Mpa (~15,000 PSF))		ALWAYS DRY CLAY (D. 383 Mpa (~8,000 PSF))		SAND, COMPACT, FIRM (D. 393 Mpa (~8,000 PSF))		SAND, CLEAN, DRY (D. 182 Mpa (~4,000 PSF))		QUICKSAND, VERY POOR SOIL (D. 0.048 Mpa (1,000 PSF))		ROCK, POOR (D. 179 Mpa (~10,000 PSF))			
		(NEWTONS)	(LBS)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)	(SM)	(SF)		
150	6	11.25	3612	812	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	1853	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.09	1	0.19	2	0.09	1	
		45	14443	3247	0.09	1	0.19	2	0.09	1	0.09	1	0.09	1	0.09	1	0.37	4	0.09	1	
		90	26663	5994	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	18656	4239	0.09	1	0.19	2	0.09	1	0.09	1	0.19	2	0.37	4	0.09	1		
200	8	11.25	6423	1444	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	2939	0.09	1	0.19	2	0.09	1	0.09	1	0.09	1	0.09	1	0.28	3	0.09	1	
		45	25680	5773	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	10656	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	7536	0.19	2	0.37	4	0.09	1	0.09	1	0.19	2	0.74	8	0.09	1		
300	12	11.25	14448	3248	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	29112	6612	0.19	2	0.37	4	0.09	1	0.09	1	0.09	1	0.19	2	0.56	7	0.09	1	
		45	57774	12968	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	23976	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	16956	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	5775	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	11756	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	23090	0.56	6	1.11	12	0.19	2	0.28	3	0.28	3	0.56	6	2.24	23	0.28	3	
		90	186601	42624	1.02	11	2.04	22	0.28	3	0.56	6	0.56	6	1.02	11	3.98	43	0.37	4	
			PLUG	134087	30144	0.74	8	1.39	15	0.19	2	0.37	4	0.74	8	2.79	30	0.28	3		

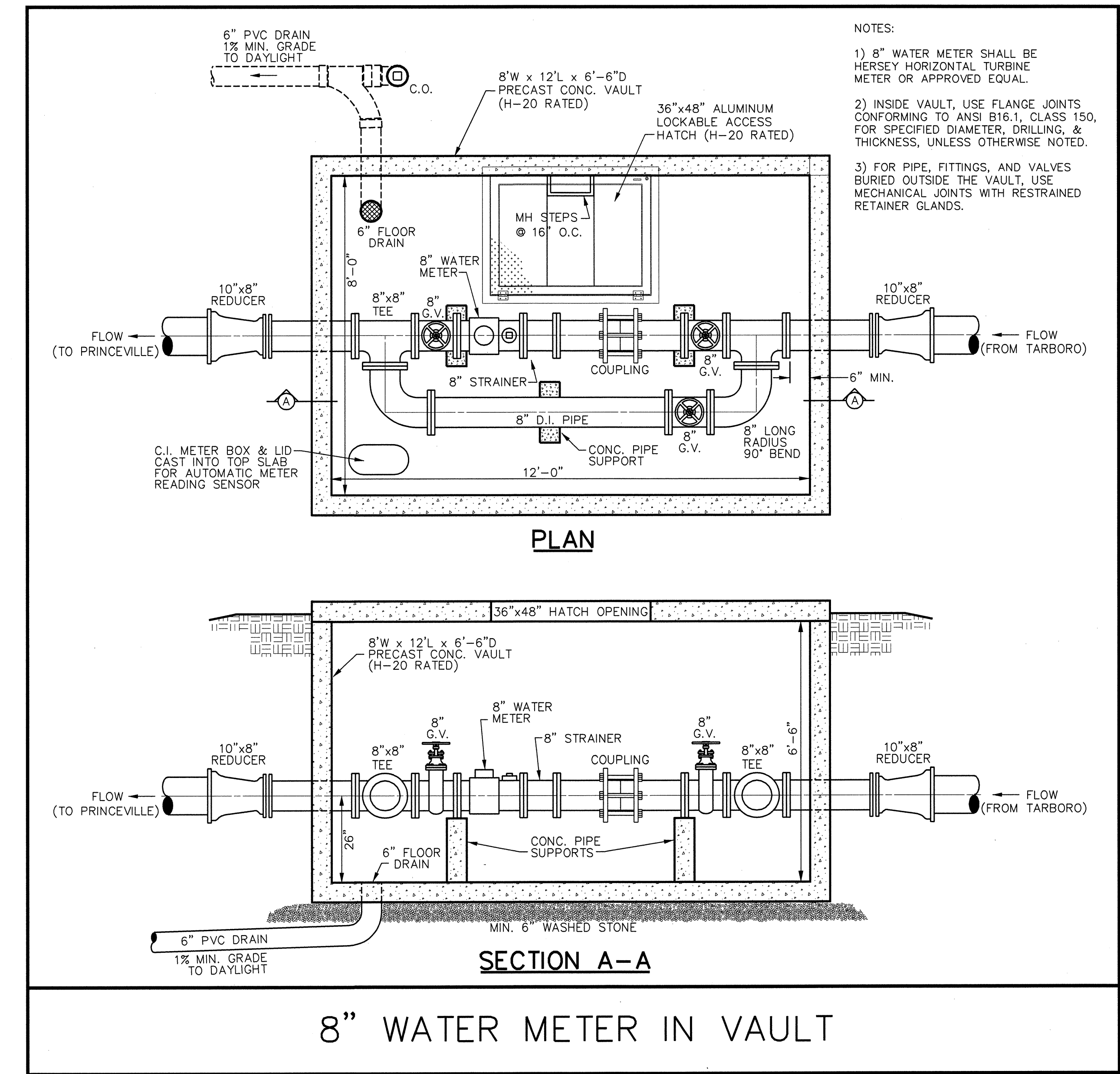
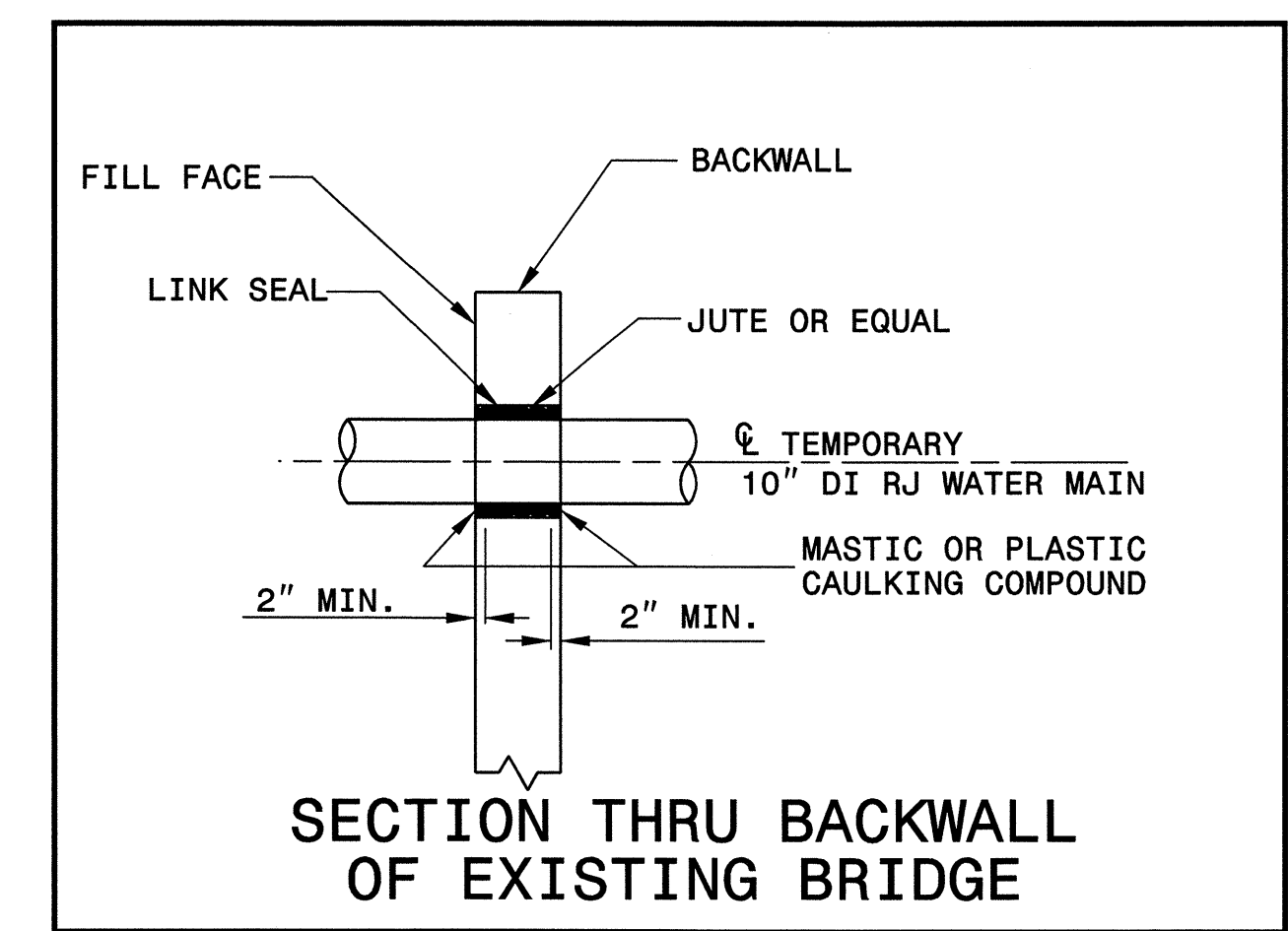
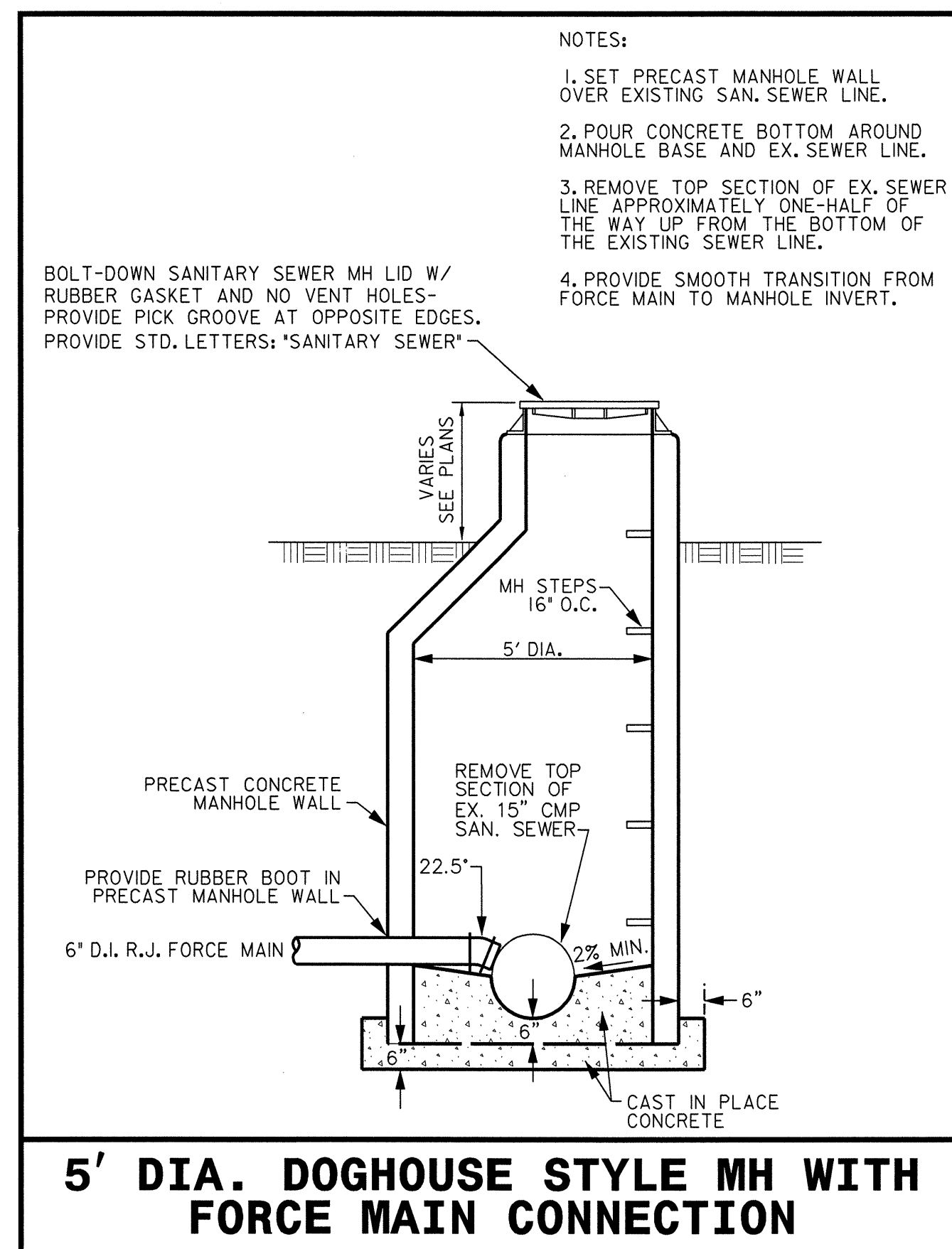
\*BASED ON TEST PRESSURE OF 1.03 Mpa (150 PSI)



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



PROJECT REFERENCE NO.	SHEET NO.
B-2965	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



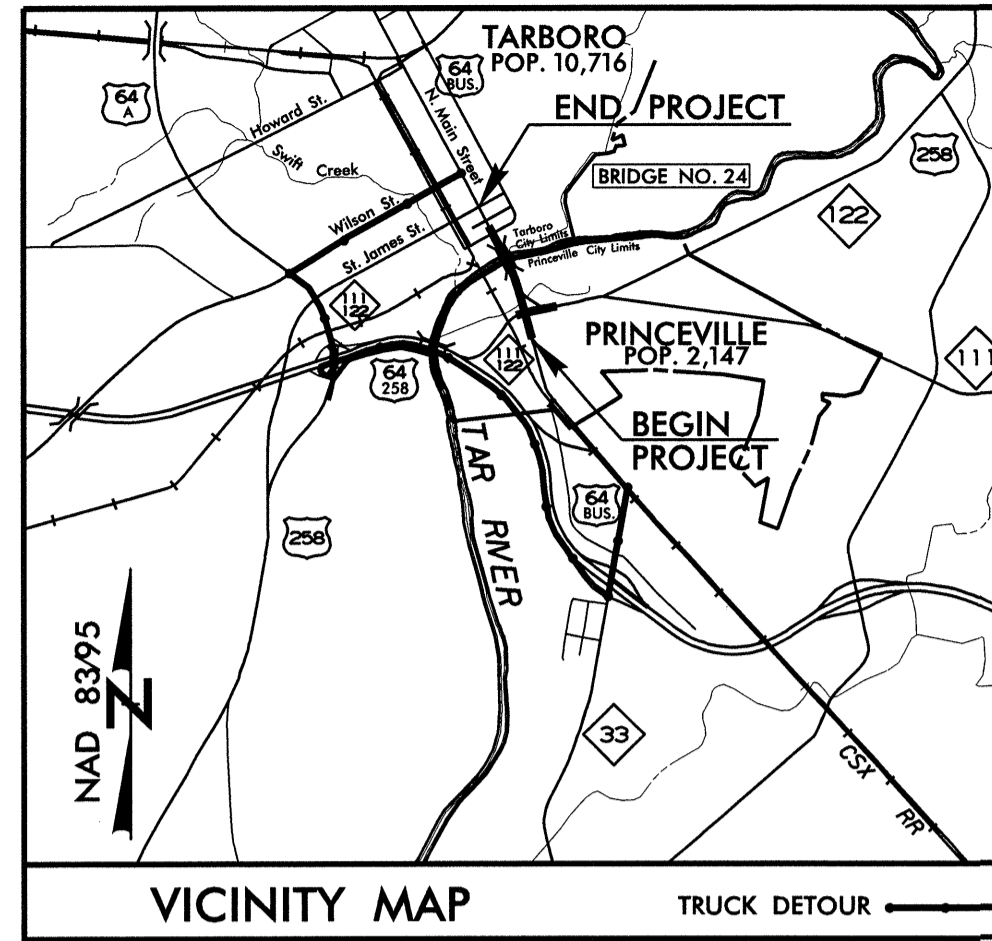


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
<b>B - 2965</b>	<b>UO-1</b>

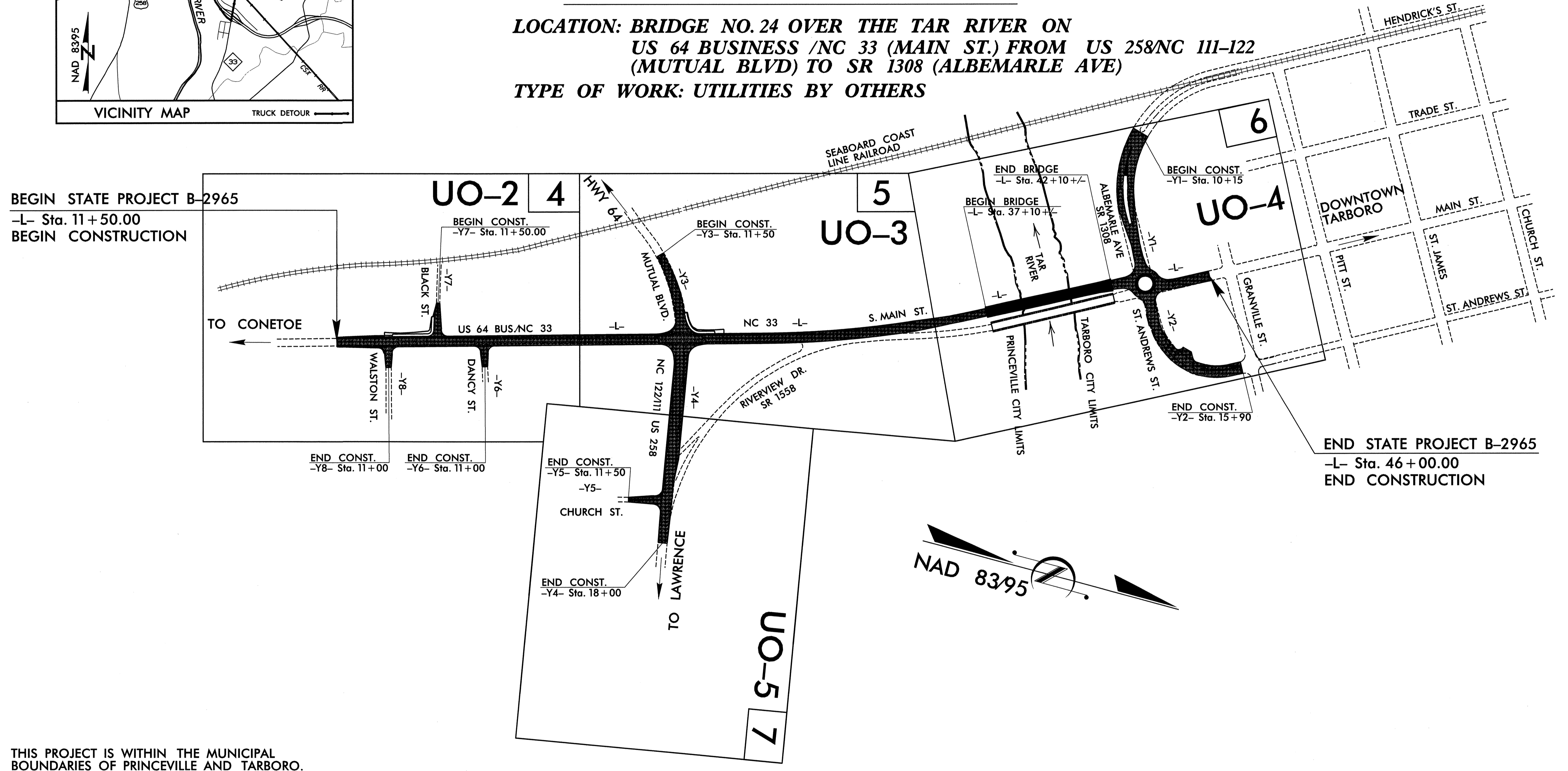
# EDGECOMBE COUNTY UTILITIES BY OTHERS

LOCATION: BRIDGE NO. 24 OVER THE TAR RIVER ON  
US 64 BUSINESS /NC 33 (MAIN ST.) FROM US 258/NC 111-122  
(MUTUAL BLVD) TO SR 1308 (ALBEMARLE AVE)  
TYPE OF WORK: UTILITIES BY OTHERS



TIP: B-2965

CONTRACT: C202039



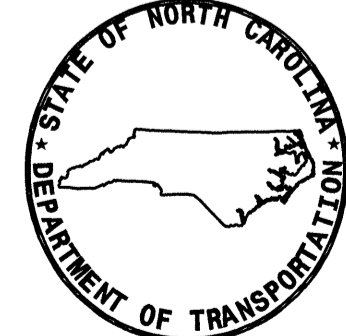
THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF PRINCEVILLE AND TARBORO.

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

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-5	UTILITIES BY OTHERS PLAN SHEETS

UTILITY OWNERS ON PROJECT
1) EDGECOMBE-MARTIN EMC (POWER)
2) TOWN OF TARBORO (POWER)
3) EMBARQ (TELEPHONE)
4) SUDDENLINK CABLE (CATV)
5) PIEDMONT NATURAL GAS (GAS)



**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  
**James S. McKee, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Donald W. Proper** UTILITIES PROJECT DESIGNER

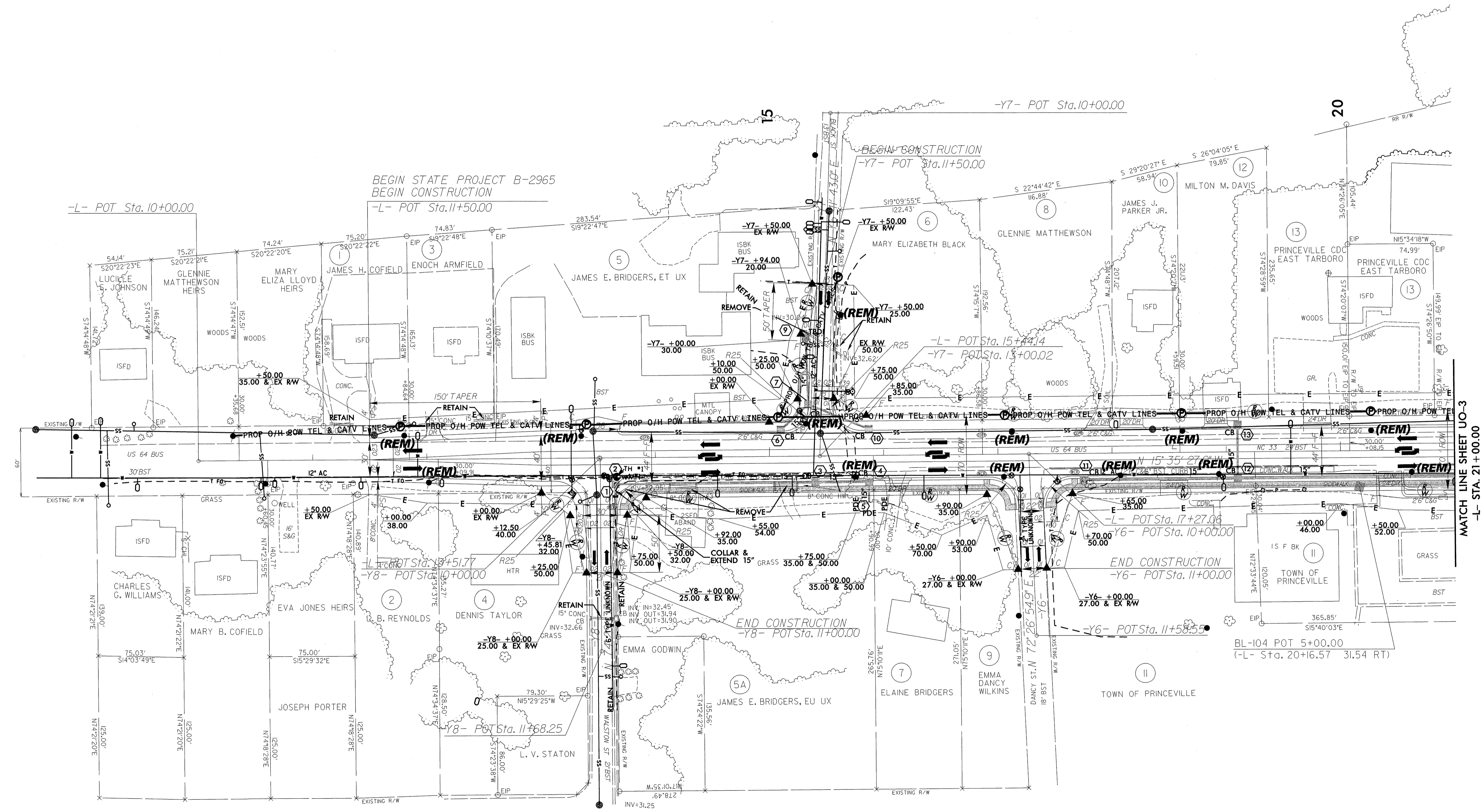
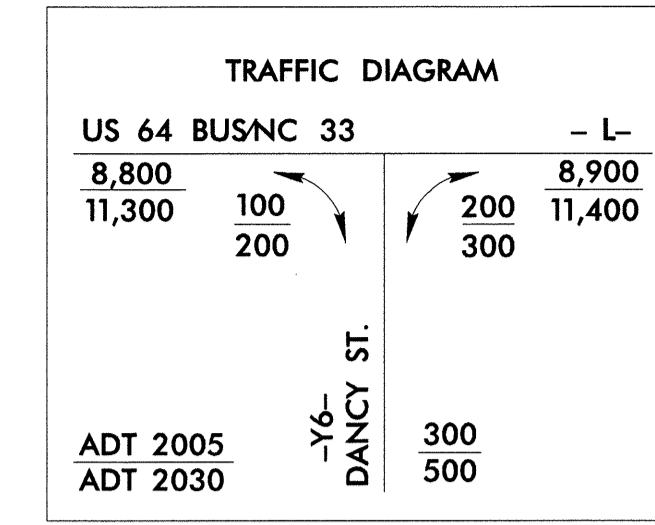
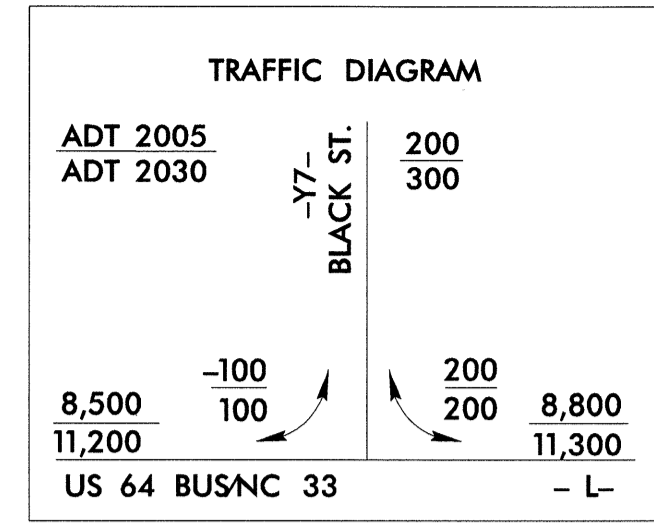
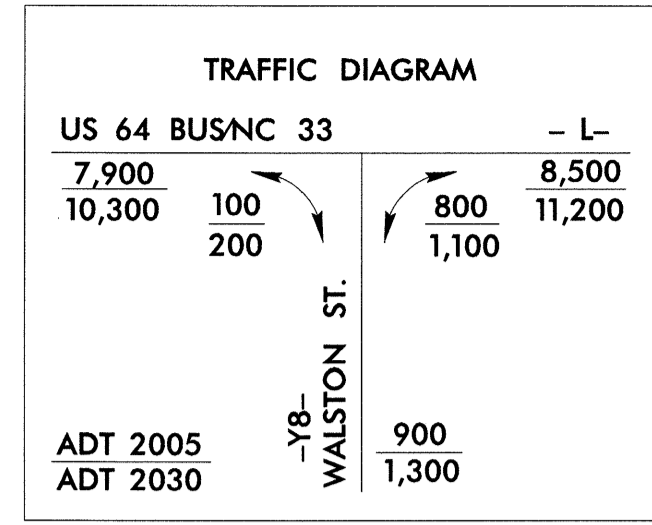
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\$\$\$\$\$DCN\$\$\$\$\$  
\$\$\$\$\$SERNAME\$\$\$\$\$

UTILITIES BY OTHERS

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

LEGEND

⊙ PROPOSED POWER / TELEPHONE POLE



REVISIONS

8/17/99

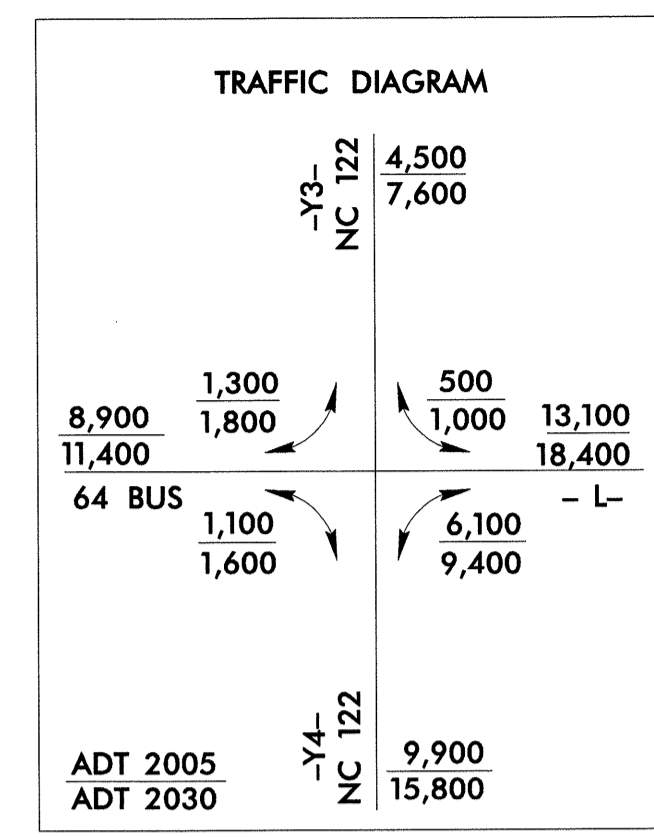
SYSTEMS DESIGN CONSULTANTS, INC. 1100 W. HARRIS ST. SUITE 1000 RICHMOND, VA 23220-4000

UTILITIES BY OTHERS

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LEGEND

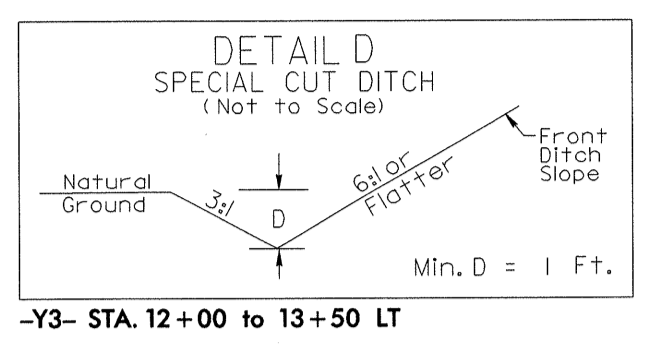
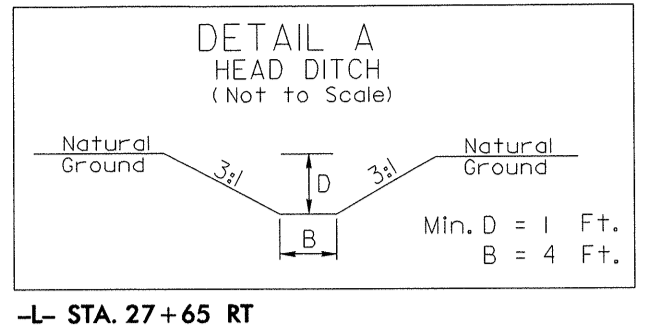
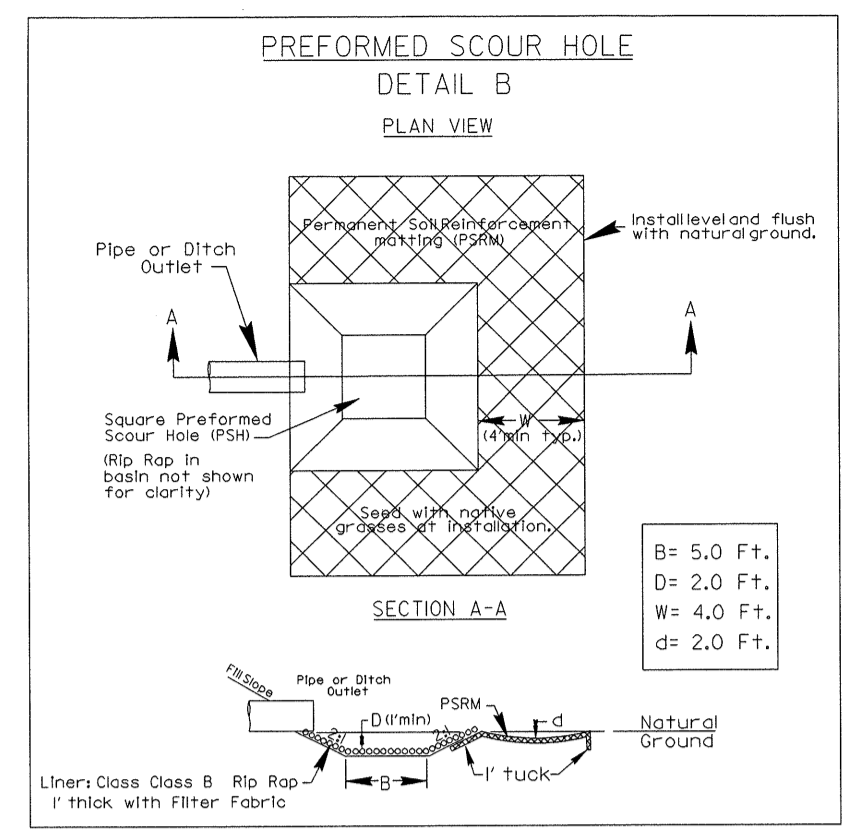
PROPOSED POWER / TELEPHONE POLE



NOTE: PROVIDE ACCESS TO LOG HOUSE AT ALL TIME DURING CONSTRUCTION

-L-  
PI Sta 32+52.79  
Δ = 1' 42' 06.8" (LT)  
D = 1' 25' 56.6"  
L = 816.95'  
T = 409.90'  
R = 4,000.00'  
SE = RC  
RO = 41'

-Y3-  
PI Sta 12+62.88  
Δ = 35' 23' 36.4" (RT)  
D = 8' 48' 53.0"  
L = 401.53'  
T = 207.40'  
R = 650.00'  
SE = 04  
RO = 41'

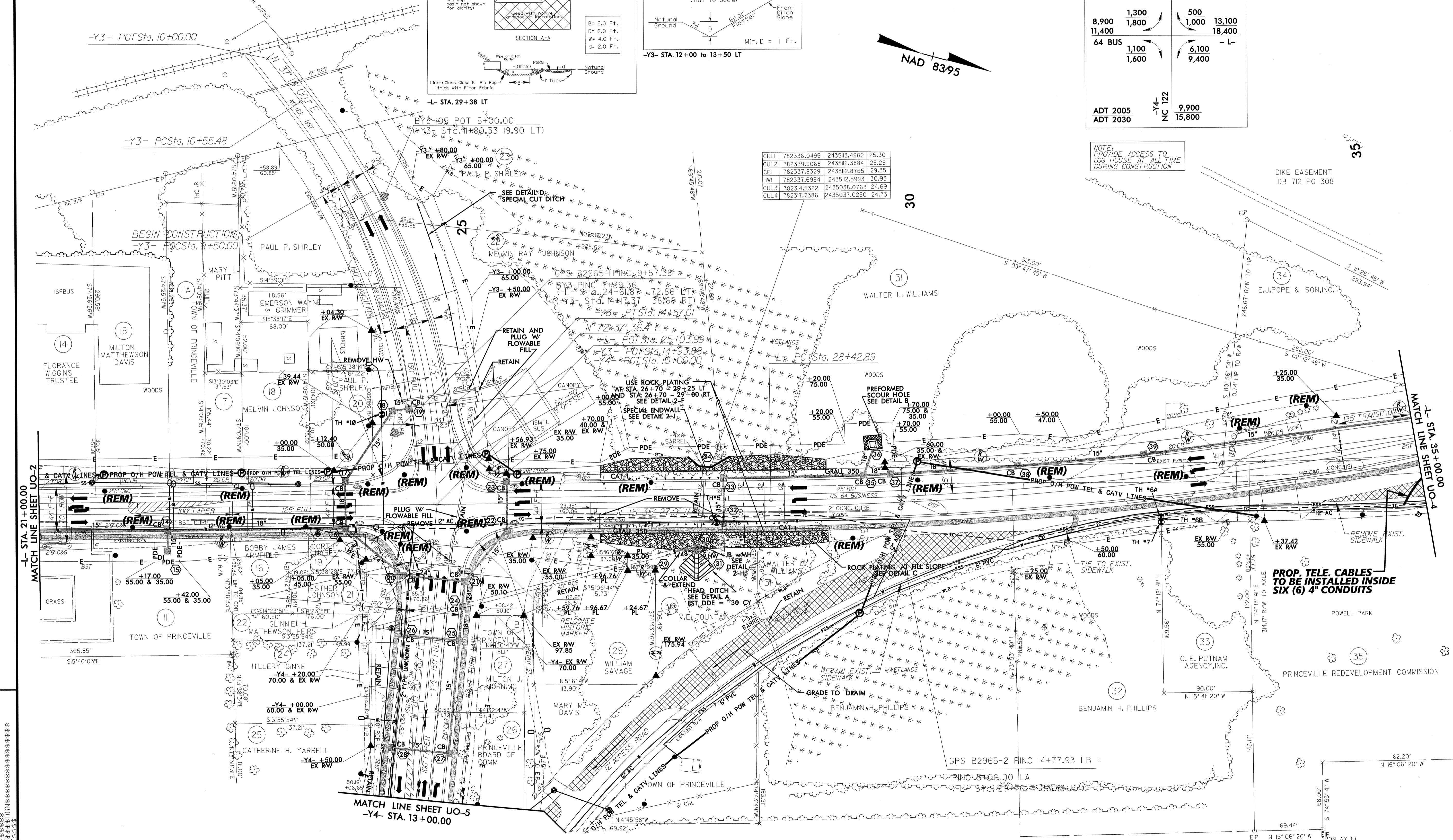


CUL	782336.0495	243503.4962	25.30
CUL2	782339.9068	243512.3884	25.29
CEI	782337.8329	243512.8765	29.35
HWI	782337.6994	243512.5993	30.93
CUL3	782314.5322	2435038.0763	24.69
CUL4	782317.7386	2435037.0250	24.73



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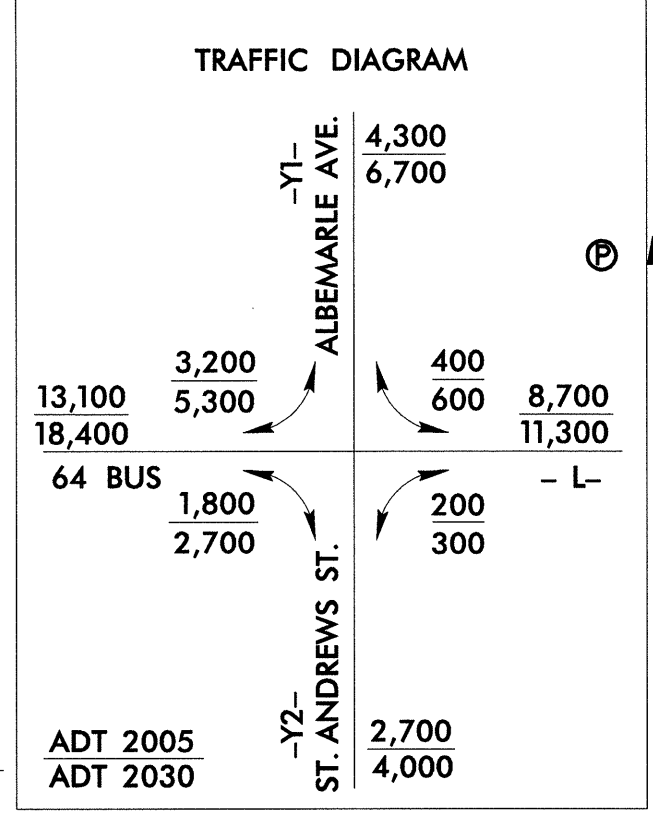


SYSTEMS  
DESIGN  
INC.

UTILITIES BY OTHERS

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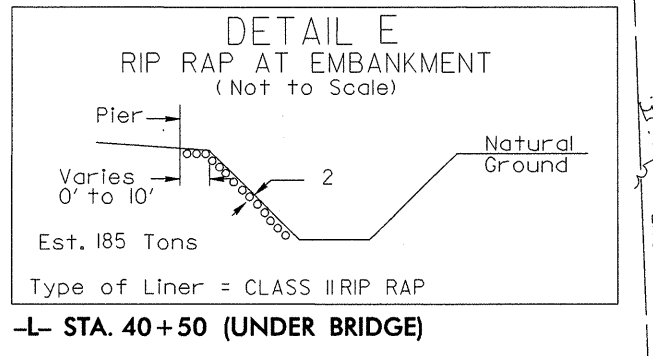
LEGEND  
PROPOSED POWER / TELEPHONE POLE



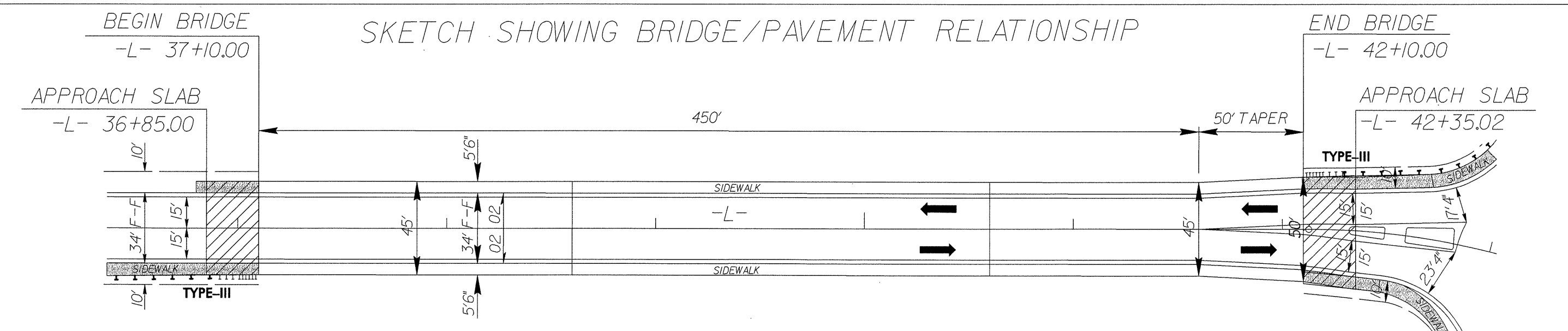
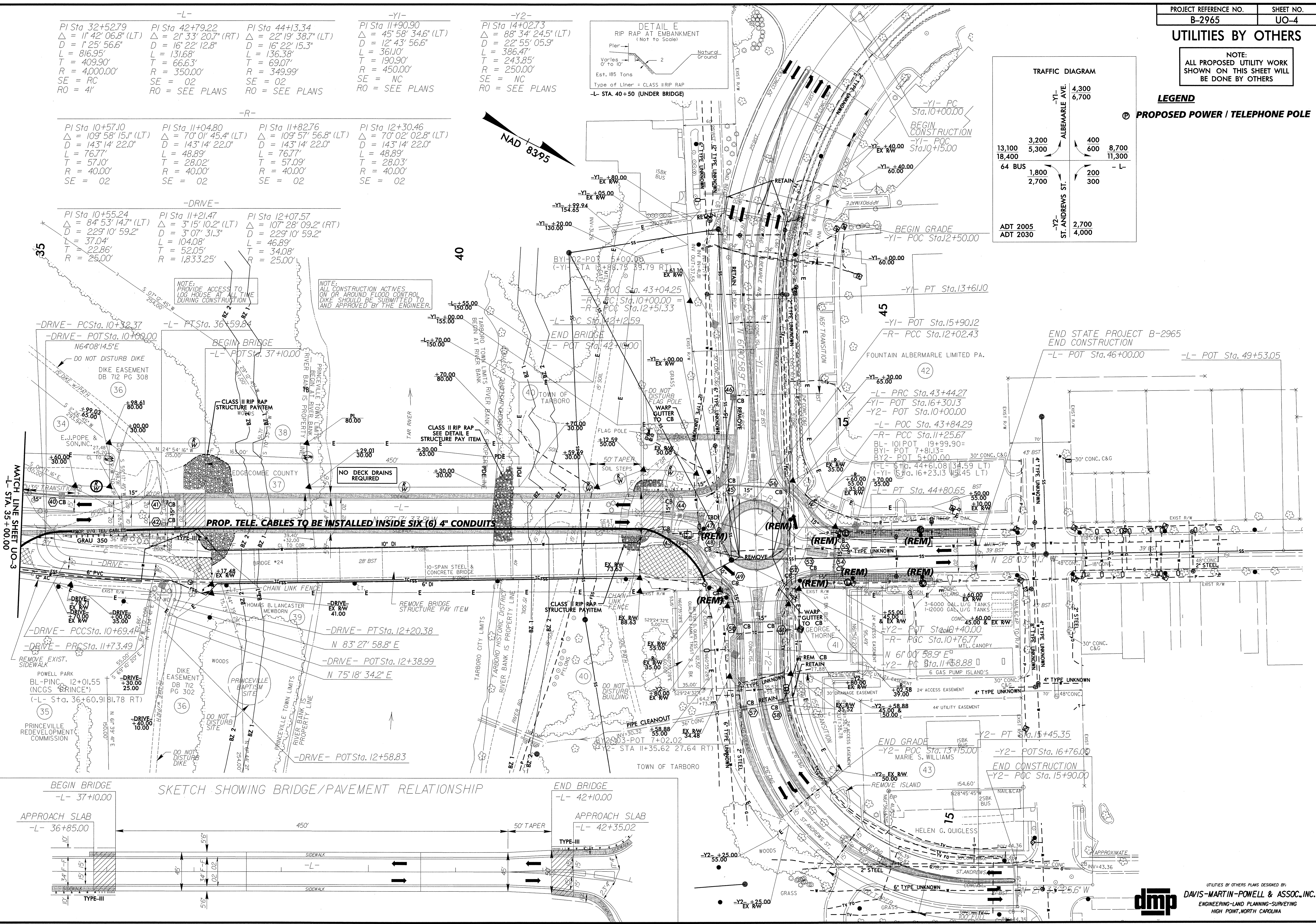
-L-	-Y1-	-Y2-
PI Sta 32+52.79 Δ = 1° 42' 06.8" (LT) D = 1' 25' 56.6" L = 816.95' T = 409.90' R = 4000.00' SE = RC RO = 41'	PI Sta 42+79.22 Δ = 2° 33' 20.7" (RT) D = 16' 22' 12.8" L = 131.68' T = 66.63' R = 350.00' SE = O2 RO = SEE PLANS	PI Sta 44+13.34 Δ = 22° 19' 38.7" (LT) D = 16' 22' 15.3" L = 136.38' T = 69.07' R = 349.99' SE = O2 RO = SEE PLANS
PI Sta 10+57.10 Δ = 109° 58' 15.1" (LT) D = 143° 14' 22.0" L = 76.77' T = 57.10' R = 40.00' SE = O2	PI Sta 11+04.80 Δ = 70° 01' 45.4" (LT) D = 143° 14' 22.0" L = 48.89' T = 28.02' R = 40.00' SE = O2	PI Sta 11+82.76 Δ = 109° 57' 56.8" (LT) D = 143° 14' 22.0" L = 76.77' T = 57.09' R = 40.00' SE = O2
PI Sta 10+55.24 Δ = 84° 53' 14.7" (LT) D = 229° 10' 59.2" L = 37.04' T = 22.86' R = 25.00'	PI Sta 11+21.47 Δ = 3° 15' 10.2" (LT) D = 3° 07' 31.3" L = 104.08' T = 52.05' R = 1,833.25'	PI Sta 12+07.57 Δ = 107° 28' 09.2" (RT) D = 229° 10' 59.2" L = 104.08' T = 46.89' R = 25.00'

-L-	-Y1-	-Y2-
PI Sta 10+55.24 Δ = 84° 53' 14.7" (LT) D = 229° 10' 59.2" L = 37.04' T = 22.86' R = 25.00'	PI Sta 11+21.47 Δ = 3° 15' 10.2" (LT) D = 3° 07' 31.3" L = 104.08' T = 52.05' R = 1,833.25'	PI Sta 12+07.57 Δ = 107° 28' 09.2" (RT) D = 229° 10' 59.2" L = 104.08' T = 46.89' R = 25.00'

-DRIVE-	-L-	-Y1-	-Y2-
PI Sta 10+55.24 Δ = 84° 53' 14.7" (LT) D = 229° 10' 59.2" L = 37.04' T = 22.86' R = 25.00'	PI Sta 11+21.47 Δ = 3° 15' 10.2" (LT) D = 3° 07' 31.3" L = 104.08' T = 52.05' R = 1,833.25'	PI Sta 12+07.57 Δ = 107° 28' 09.2" (RT) D = 229° 10' 59.2" L = 104.08' T = 46.89' R = 25.00'	PI Sta 11+90.90 Δ = 45° 58' 34.6" (LT) D = 12' 43' 56.6" L = 361.10' T = 190.90' R = 450.00' SE = NC RO = SEE PLANS
PI Sta 10+57.10 Δ = 109° 58' 15.1" (LT) D = 143° 14' 22.0" L = 76.77' T = 57.10' R = 40.00' SE = O2	PI Sta 11+04.80 Δ = 70° 01' 45.4" (LT) D = 143° 14' 22.0" L = 48.89' T = 28.02' R = 40.00' SE = O2	PI Sta 11+82.76 Δ = 109° 57' 56.8" (LT) D = 143° 14' 22.0" L = 76.77' T = 57.09' R = 40.00' SE = O2	PI Sta 14+02.73 Δ = 83° 34' 24.5" (LT) D = 22° 55' 05.9" L = 386.47' T = 243.85' R = 250.00' SE = NC RO = SEE PLANS



NAD 8395

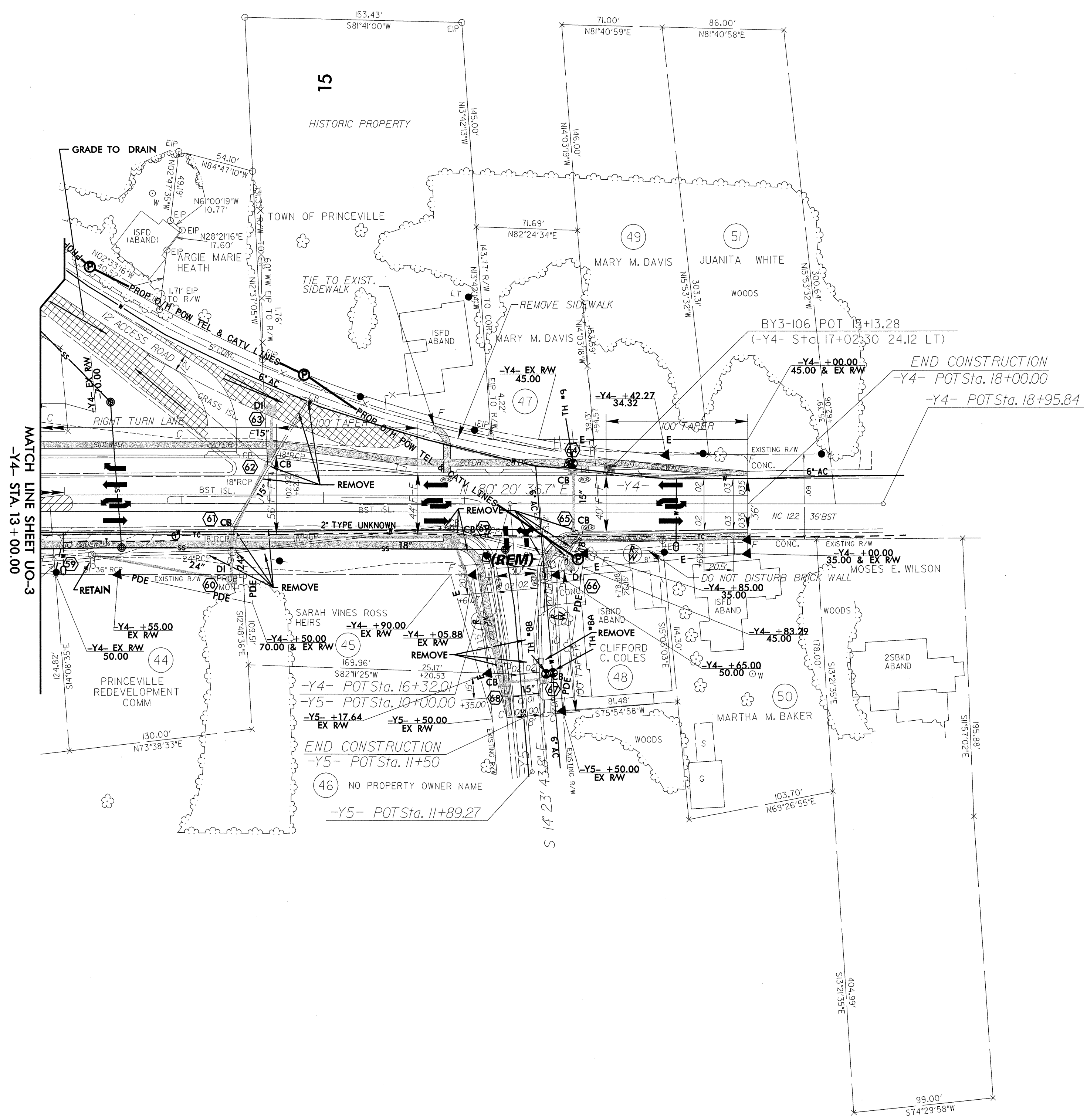
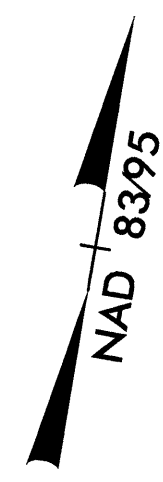
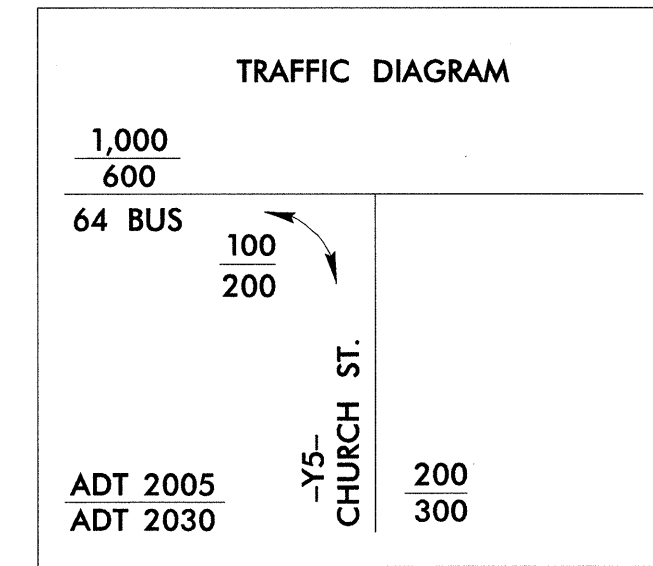


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#### LEGEND

Ⓢ PROPOSED POWER / TELEPHONE POLE



REVISIONS

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