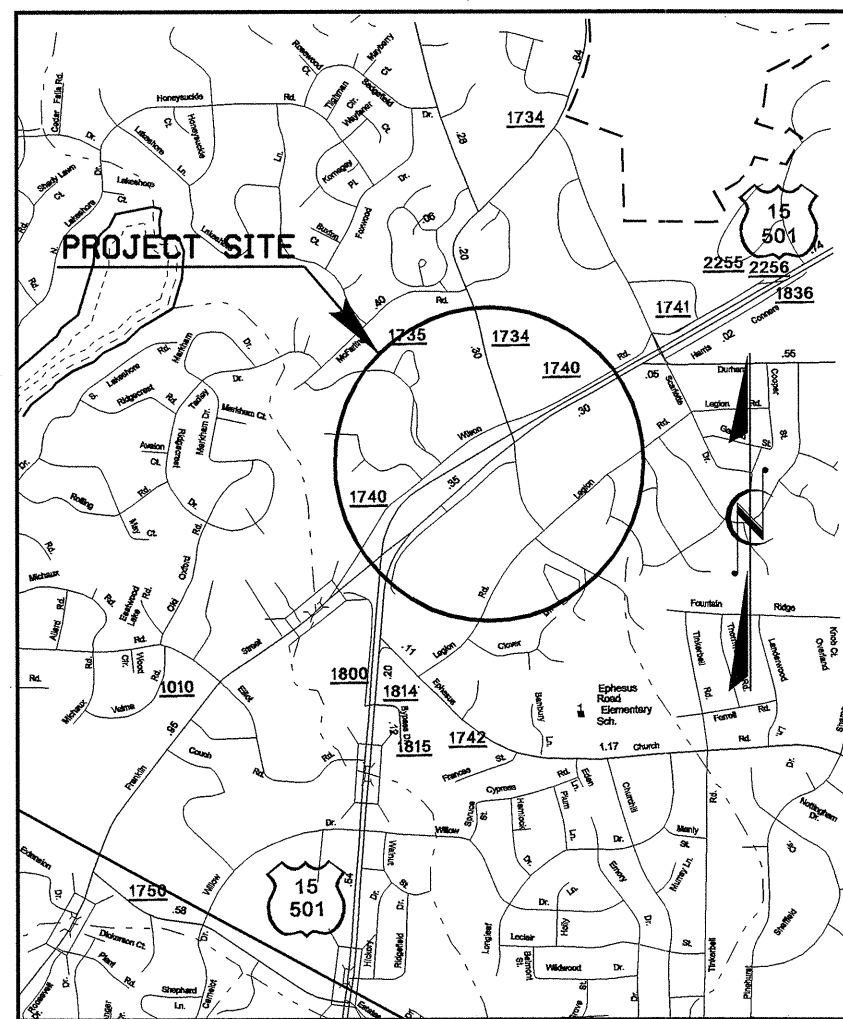


See Sheet 1-A For Index of Sheets



VICINITY MAP

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CHAPEL HILL

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-4008	UC-1

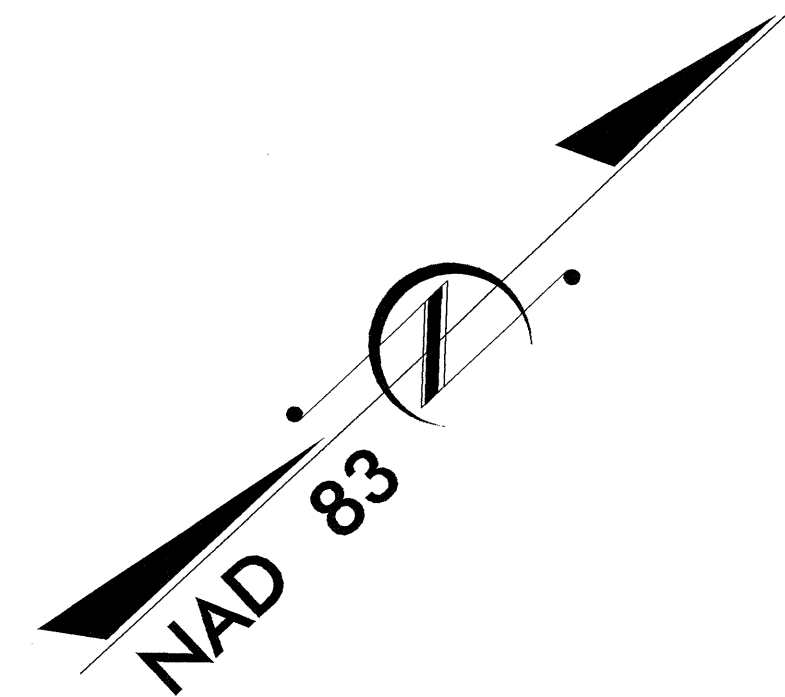
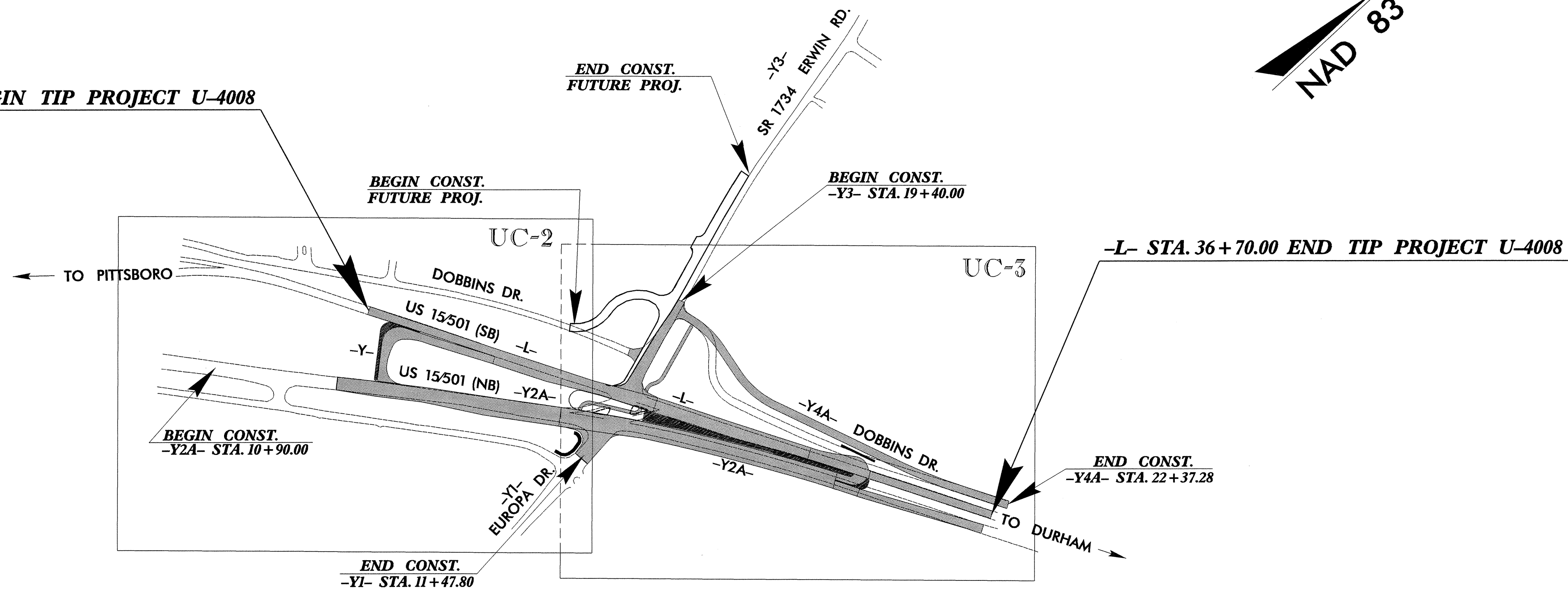
UTILITY CONSTRUCTION PLANS
ORANGE COUNTY

LOCATION: INTERSECTION IMPROVEMENT AT US 15-501
AND ERWIN ROAD IN CHAPEL HILL

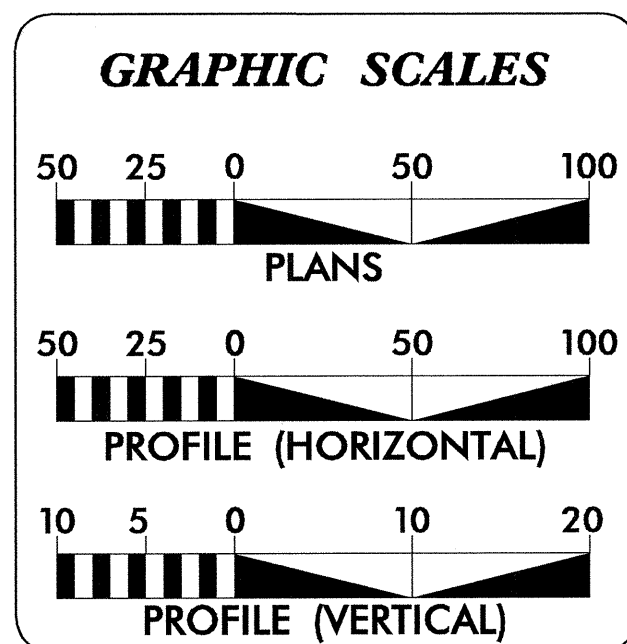
TYPE OF WORK: RELOCATION OF WATER AND SEWER LINES

TIP: U-4008

-L- STA. 16+00.00 BEGIN TIP PROJECT U-4008

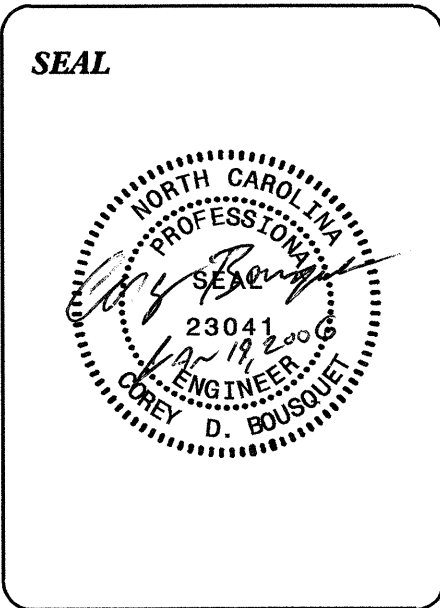


USE METHOD III CLEARING ON THIS PROJECT



INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-3	UTILITY CONSTRUCTION PLAN SHEETS
UC-4	PROFILE SHEET(S)

WATER AND SEWER OWNERS ON PROJECT	
(1) OWASA	



PREPARED IN THE OFFICE OF:

DIVISION OF HIGHWAYS
DESIGN 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
Corey Bousquet, P.E. UTILITIES SQUAD LEADER PROJECT ENGINEER
Jamshid Hafshejani UTILITIES PROJECT DESIGNER

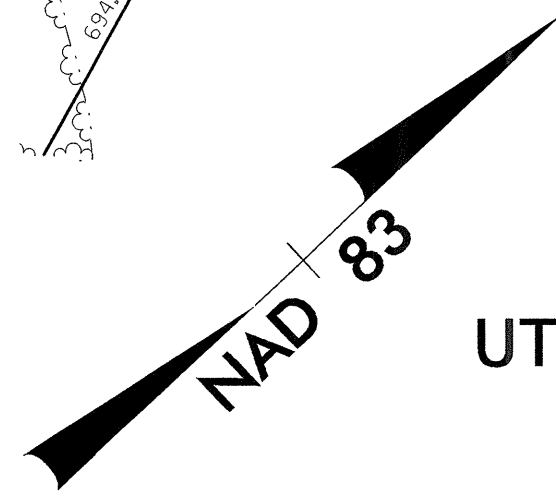
8/17/99
 19-JAN-2006 11:35
 CHARLES H. HANLEY, P.E.
 PROJECT U-4008

DAY CARE SERVICES ASSOCIATION, INC.
 DB 176 PG 122
 PR 43 PG 110

MULTIPLE OWNERS (SEE LIST ABOVE)
 (SEE RESTRICTIVE COVENANTS FOR COMMON AREAS)
 DB 593 PG 377

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

WATER AND SEWER LINES ARE OWNED BY ORANGE WATER AND SEWER AUTHORITY

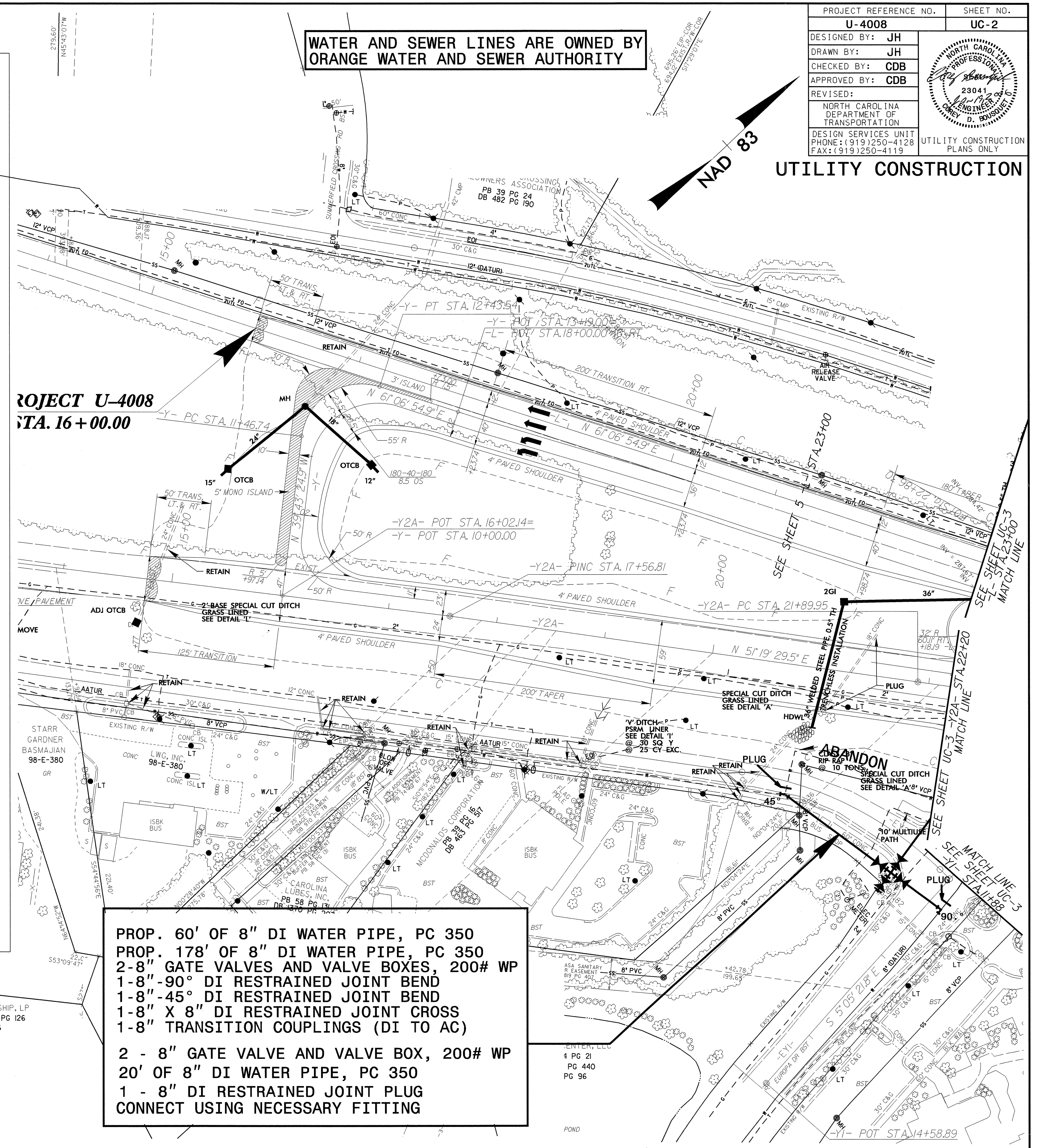


UTILITY CONSTRUCTION

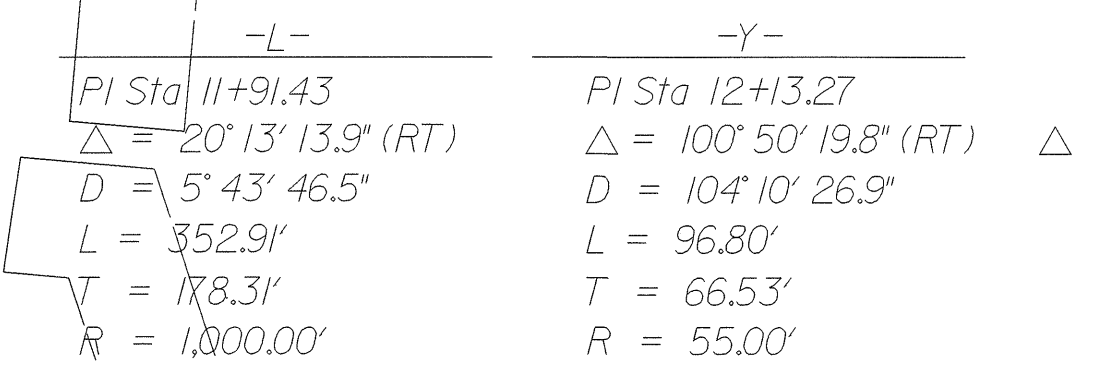
PROPOSED 16" WATER LINE

Point 2001	N	797,884.80 E	1,994,303.17 Sta	0+00.00
Course from 2001 to 2002 N 65° 10' 59.08" E Dist 73.17				
Point 2002	N	797,915.51 E	1,994,369.59 Sta	0+73.17
Course from 2002 to 2003 N 67° 35' 06.49" E Dist 149.45				
Point 2003	N	797,972.50 E	1,994,507.75 Sta	2+22.63
Course from 2003 to 2004 N 67° 42' 49.38" E Dist 282.08				
Point 2004	N	798,079.47 E	1,994,768.76 Sta	5+04.71
Course from 2004 to 2005 N 68° 02' 45.01" E Dist 124.96				
Point 2005	N	798,126.19 E	1,994,884.65 Sta	6+29.66
Course from 2005 to 2006 N 68° 02' 44.78" E Dist 109.34				
Point 2006	N	798,167.07 E	1,994,986.06 Sta	7+39.01
Course from 2006 to 2007 N 66° 41' 18.92" E Dist 90.06				
Point 2007	N	798,202.70 E	1,995,068.77 Sta	8+29.06
Course from 2007 to 2008 N 65° 59' 48.73" E Dist 86.64				
Point 2008	N	798,237.95 E	1,995,147.91 Sta	9+15.70
Course from 2008 to 2009 N 65° 59' 47.74" E Dist 27.48				
Point 2009	N	798,249.12 E	1,995,173.01 Sta	9+43.18
Course from 2009 to 2010 N 65° 59' 49.85" E Dist 26.51				
Point 2010	N	798,259.91 E	1,995,197.23 Sta	9+69.68
Course from 2010 to 2011 N 65° 59' 48.11" E Dist 33.85				
Point 2011	N	798,273.68 E	1,995,228.15 Sta	10+03.53
Course from 2011 to 2012 N 65° 57' 39.18" E Dist 22.55				
Point 2012	N	798,282.86 E	1,995,248.74 Sta	10+26.08
Course from 2012 to 2013 N 62° 36' 26.54" E Dist 27.29				
Point 2013	N	798,295.42 E	1,995,272.97 Sta	10+53.37
Course from 2013 to 2014 N 62° 36' 27.70" E Dist 24.98				
Point 2014	N	798,306.91 E	1,995,295.15 Sta	10+78.35
Course from 2014 to 2015 N 62° 36' 26.08" E Dist 29.11				
Point 2015	N	798,320.30 E	1,995,321.00 Sta	11+07.46
Course from 2015 to 2016 N 62° 36' 27.71" E Dist 38.39				
Point 2016	N	798,337.97 E	1,995,355.08 Sta	11+45.85
Course from 2016 to 2017 N 62° 33' 31.59" E Dist 14.53				
Point 2017	N	798,344.66 E	1,995,367.98 Sta	11+60.38
Course from 2017 to 2018 N 61° 05' 38.44" E Dist 26.59				
Point 2018	N	798,357.51 E	1,995,391.25 Sta	11+86.96
Course from 2018 to 2019 N 61° 05' 38.79" E Dist 35.70				
Point 2019	N	798,374.77 E	1,995,422.50 Sta	12+22.66
Course from 2019 to 2020 N 61° 05' 39.04" E Dist 51.72				
Point 2020	N	798,399.77 E	1,995,467.78 Sta	12+74.38
Course from 2020 to 2021 N 61° 14' 32.14" E Dist 35.20				
Point 2021	N	798,416.70 E	1,995,498.64 Sta	13+09.59
Course from 2021 to 2022 N 61° 26' 40.94" E Dist 29.26				
Point 2022	N	798,430.69 E	1,995,524.34 Sta	13+38.85
Course from 2022 to 2023 N 61° 26' 41.18" E Dist 126.57				
Point 2023	N	798,491.19 E	1,995,635.51 Sta	14+65.41

**PROJECT U-4008
 STA. 16+00.00**



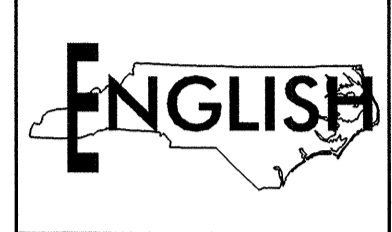
PROP. 60' OF 8" DI WATER PIPE, PC 350
 PROP. 178' OF 8" DI WATER PIPE, PC 350
 2-8" GATE VALVES AND VALVE BOXES, 200# WP
 1-8"-90° DI RESTRAINED JOINT BEND
 1-8"-45° DI RESTRAINED JOINT BEND
 1-8" X 8" DI RESTRAINED JOINT CROSS
 1-8" TRANSITION COUPLINGS (DI TO AC)
 2 - 8" GATE VALVE AND VALVE BOX, 200# WP
 20' OF 8" DI WATER PIPE, PC 350
 1 - 8" DI RESTRAINED JOINT PLUG
 CONNECT USING NECESSARY FITTING



EQUITY INNS PARTNERSHIP, LP
 PB 44 PG 32 PB 42 PG 126
 DB 1603 PG 556

PROJECT REFERENCE NO.	SHEET NO.
U-4008	UC-3
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISOR:	UTILITY CONSTRUCTION PLANS ONLY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	

UTILITY CONSTRUCTION



PROP. 137' OF 16" DI WATER PIPE, PC 350
 1- 16" DI RESTRAINED JOINT PLUG
 1-16" BUTTERFLY VALVE AND MANHOLE, 250#WP
 1-16" X 12" DI RESTRAINED JOINT TEE
 1-12" GATE VALVE AND VALVE BOX, 200#WP
 7' OF 12" DI WATER PIPE, PC 350
 2-12"-45° DI RESTRAINED JOINT BENDS
 1-12" TRANSITION COUPLING (DI TO AC)
 CONNECT USING NECESSARY FITTING

PROP. 1-16" X 1" TAPPING SADDLE
 1-1" CORP. STOP
 25' OF 1" COPPER WATER PIPE, TYPE K
 CONNECT USING NECESSARY FITTING

PROP. 1-16" X 12" DI RESTRAINED JOINT TEE
 1- 12" GATE VALVE AND VALVE BOX, 200# WP
 10' OF 12" DI WATER PIPE, PC 350
 CONNECT USING NECESSARY FITTING

FILL OR REMOVE 466.0' OF ABANDONED 8" AC WATER PIPE
 FILL OR REMOVE 1444.0' OF ABANDONED 12" AC WATER PIPE

PROP. 135' OF 12" DI SEWER PIPE, PC 350
 INSTALL IN PLACE
 CONNECT USING NECESSARY FITTING

PROP. 1- 16" X 3/4" TAPPING SADDLE
 1-3/4" CORP. STOP
 124' OF 3/4" COPPER WATER PIPE, TYPE K
 CONNECT USING NECESSARY FITTING

PROP. 1327' OF 16" DI WATER PIPE, PC 350
 1 - 16" BUTTERFLY VALVE AND MANHOLE, 250# WP
 2- 16" BUTTERFLY VALVES AND MANHOLS, 250# WP
 1-16" DI RESTRAINED JOINT PLUG
 CONNECT USING NECESSARY FITTING

END PROJECT U-4008
-L- POT STA. 36+70.00

PROP. 1 - 16" X 6" DI RESTRAINED JOINT TEE
 13' OF 6" RJ DI WATER PIPE, PC 350
 1 - 6" GATE VALVE AND VALVE BOX, 200# WP
 CONNECT USING NECESSARY FITTING

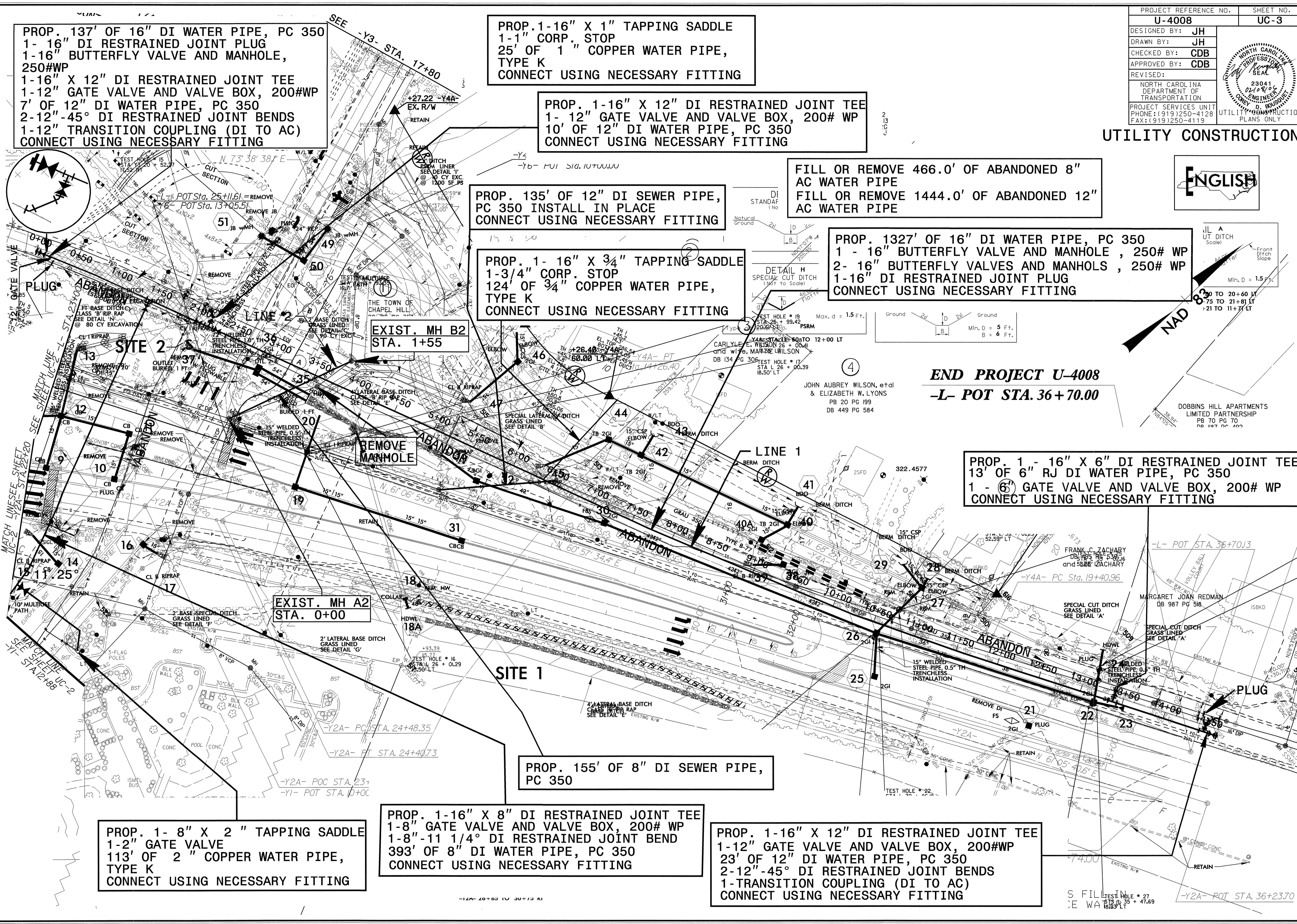
PROP. 155' OF 8" DI SEWER PIPE, PC 350

PROP. 1-16" X 8" DI RESTRAINED JOINT TEE
 1-8" GATE VALVE AND VALVE BOX, 200# WP
 1-8"-11 1/4° DI RESTRAINED JOINT BEND
 393' OF 8" DI WATER PIPE, PC 350
 CONNECT USING NECESSARY FITTING

PROP. 1-16" X 12" DI RESTRAINED JOINT TEE
 1-12" GATE VALVE AND VALVE BOX, 200#WP
 23' OF 12" DI WATER PIPE, PC 350
 2-12"-45° DI RESTRAINED JOINT BENDS
 1-TRANSITION COUPLING (DI TO AC)
 CONNECT USING NECESSARY FITTING

PROP. 1- 8" X 2" TAPPING SADDLE
 1-2" GATE VALVE
 113' OF 2" COPPER WATER PIPE, TYPE K
 CONNECT USING NECESSARY FITTING

5/14/09
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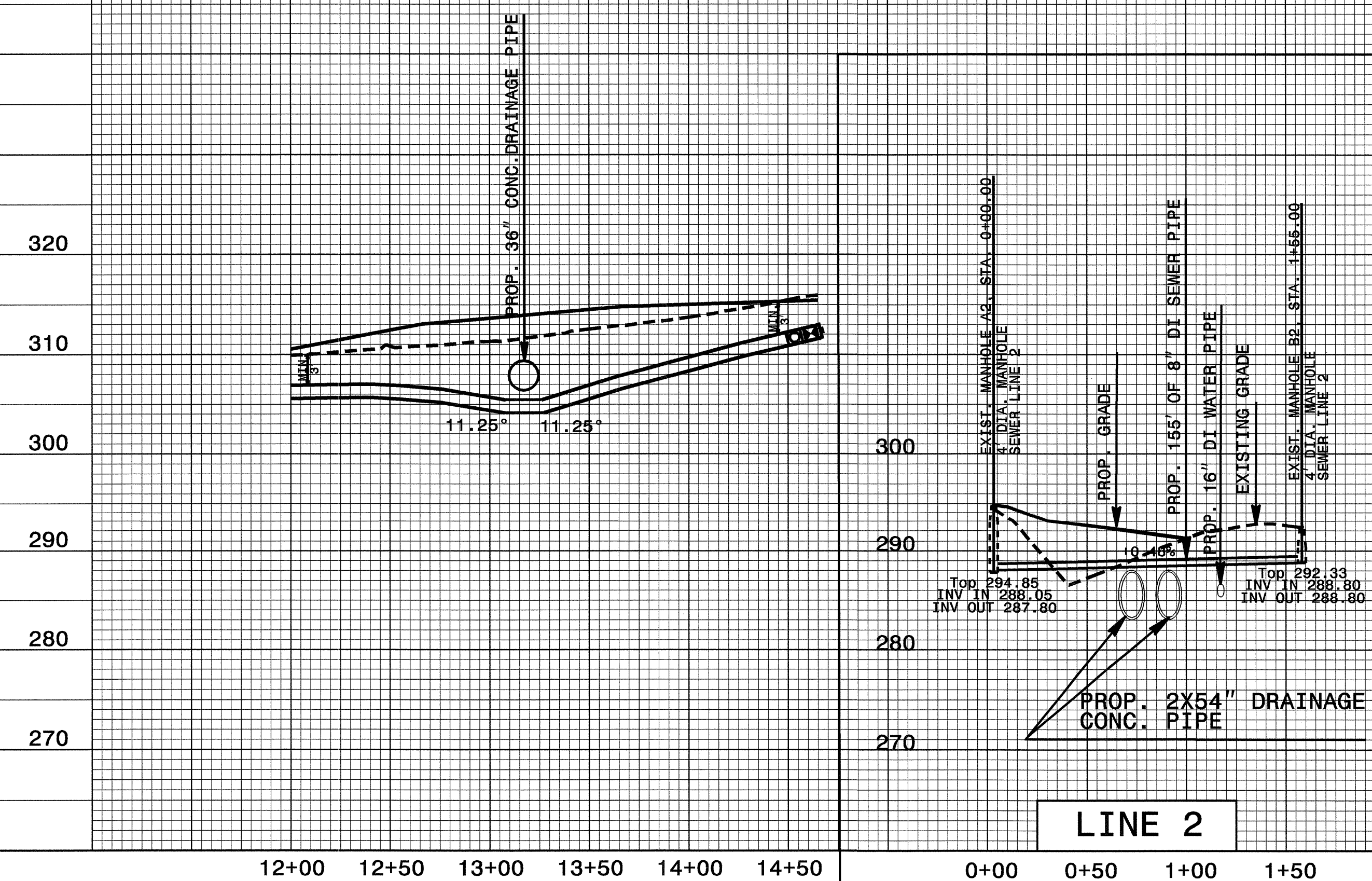
5/14/99

PROJECT REFERENCE NO. U-4008	SHEET NO. UC-4
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION DESIGN SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



LINE 1




LINE 2

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		

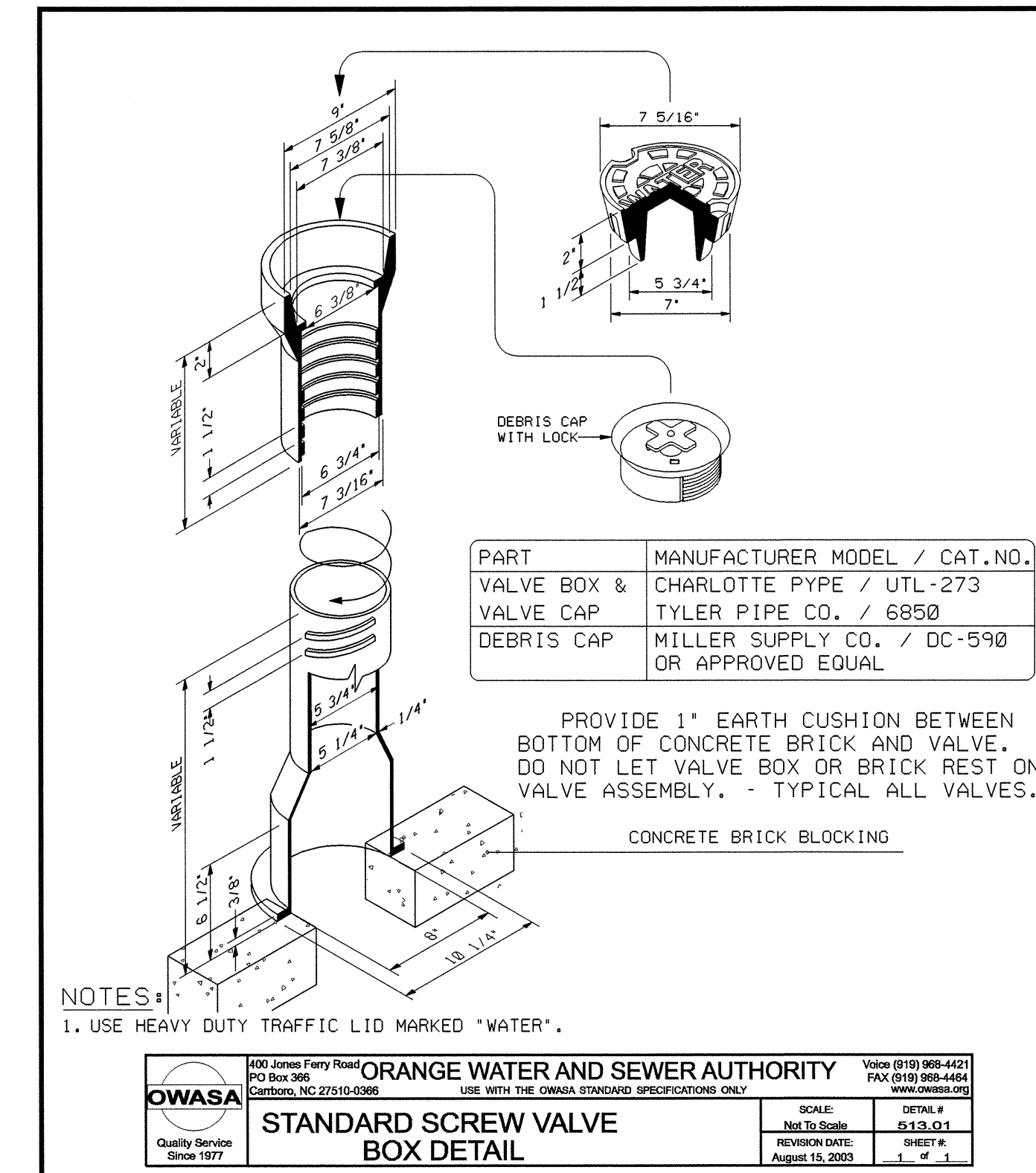
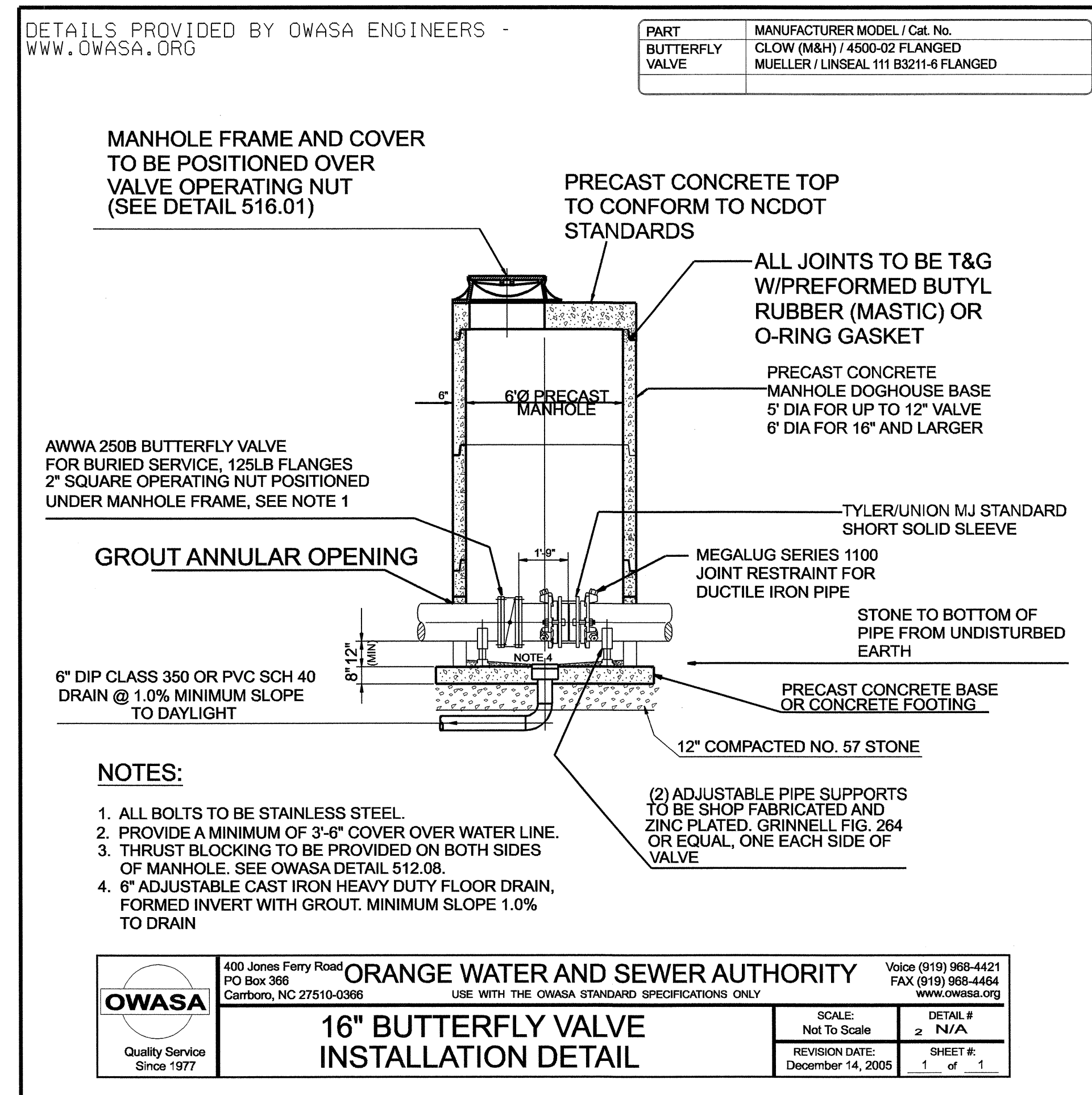
TYPE "2"
(BEDDING FOR D.I. PIPE)

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.

18-JAN-2006 14:18
 F:\utility\ucs\rd\18_06_uc4\uc5_ut_upr.dgn
 P:\shelton

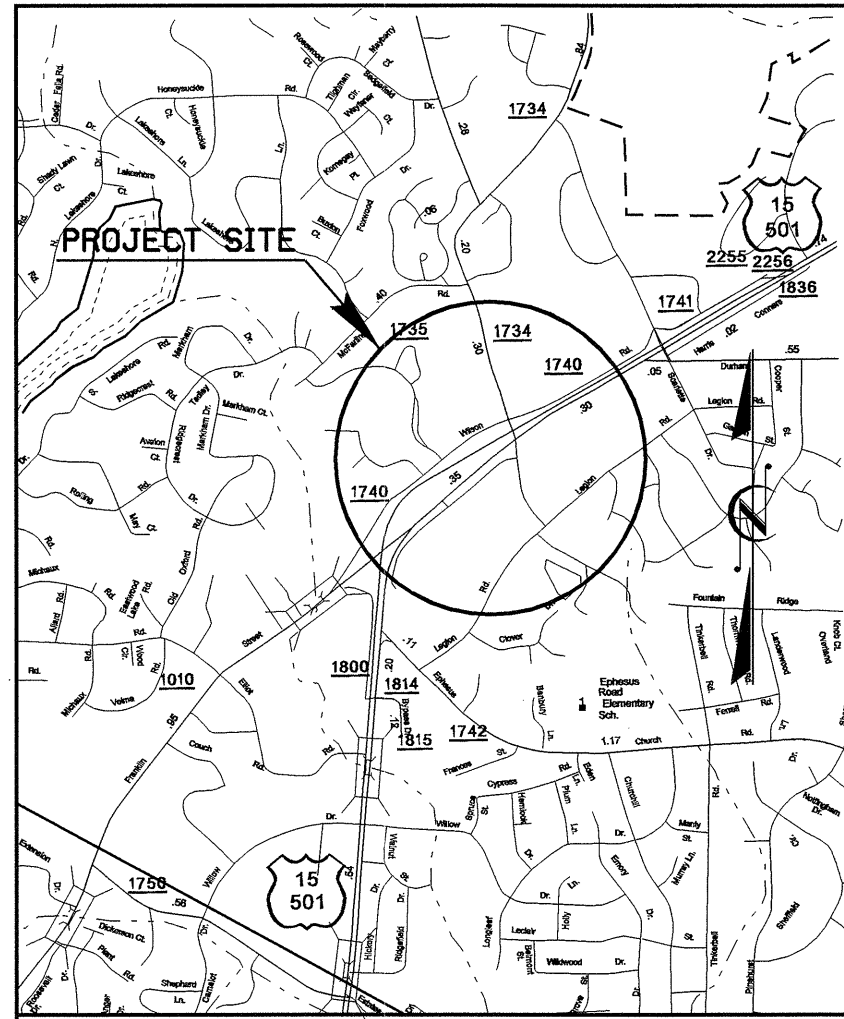
PROJECT REFERENCE NO.	SHEET NO.
U-4008	UC-5
DESIGNED BY: JH	
DRAWN BY: JH	
CHECKED BY: CDB	
APPROVED BY: CDB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
DESIGN SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



08/08/99

See Sheet 1-A For Index of Sheets



VICINITY MAP

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF CHAPEL HILL

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
U-4008	UO-1

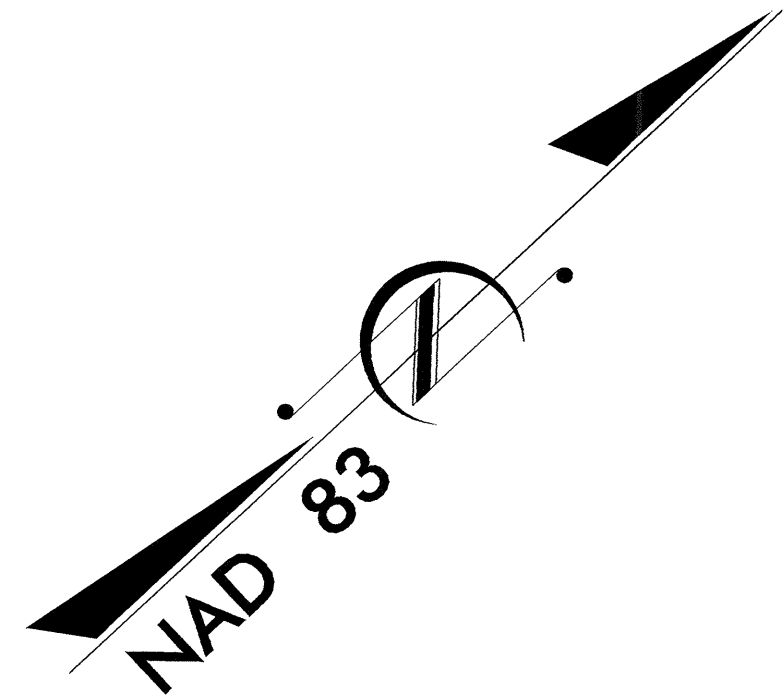
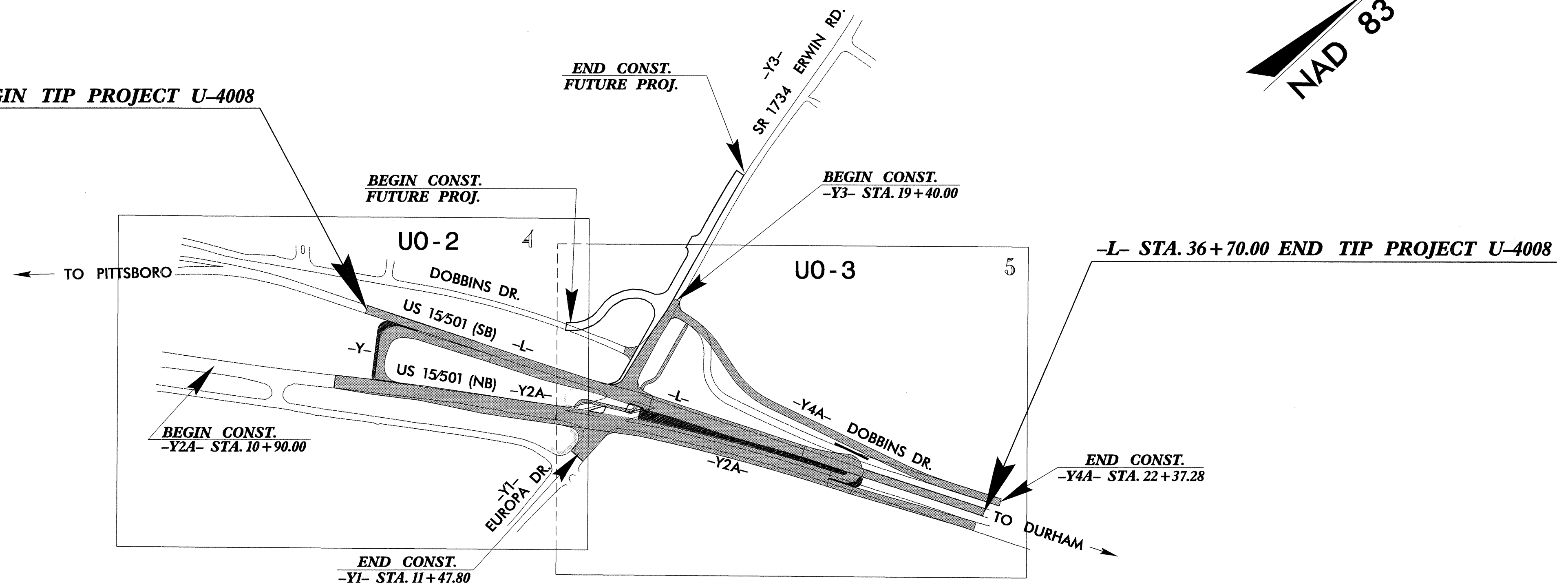
UTILITIES BY OTHERS PLAN ORANGE COUNTY

LOCATION: INTERSECTION IMPROVEMENT AT US 15-501 AND ERWIN ROAD IN CHAPEL HILL

TYPE OF WORK: UTILITIES

TIP: U-4008

-L- STA. 16+00.00 BEGIN TIP PROJECT U-4008

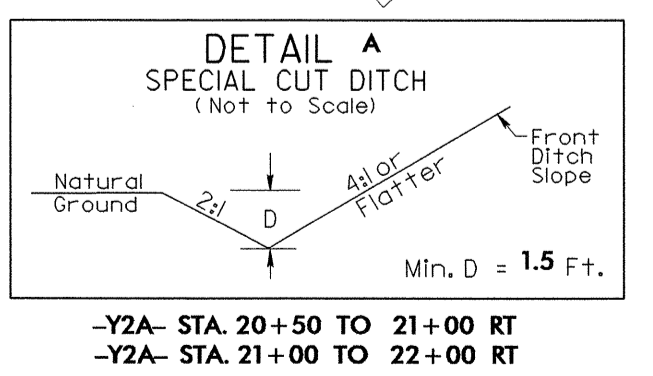
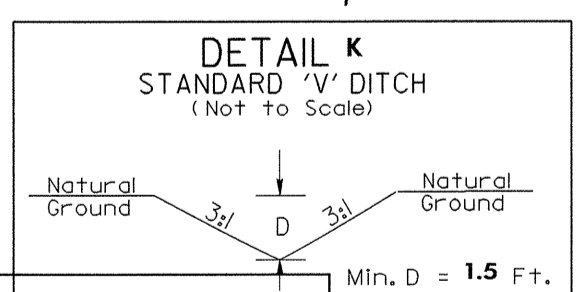
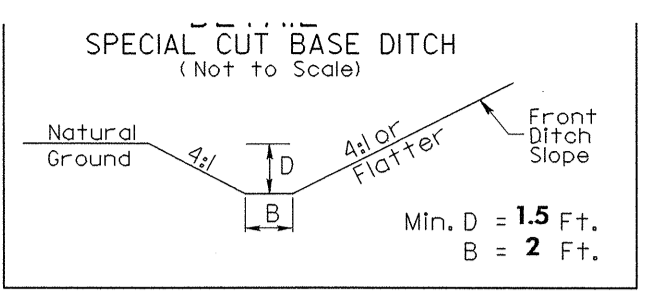
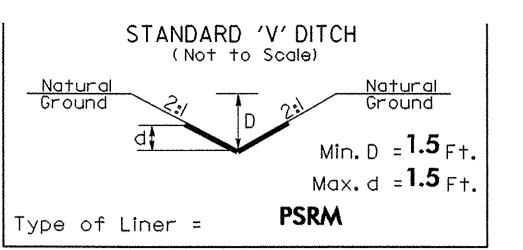
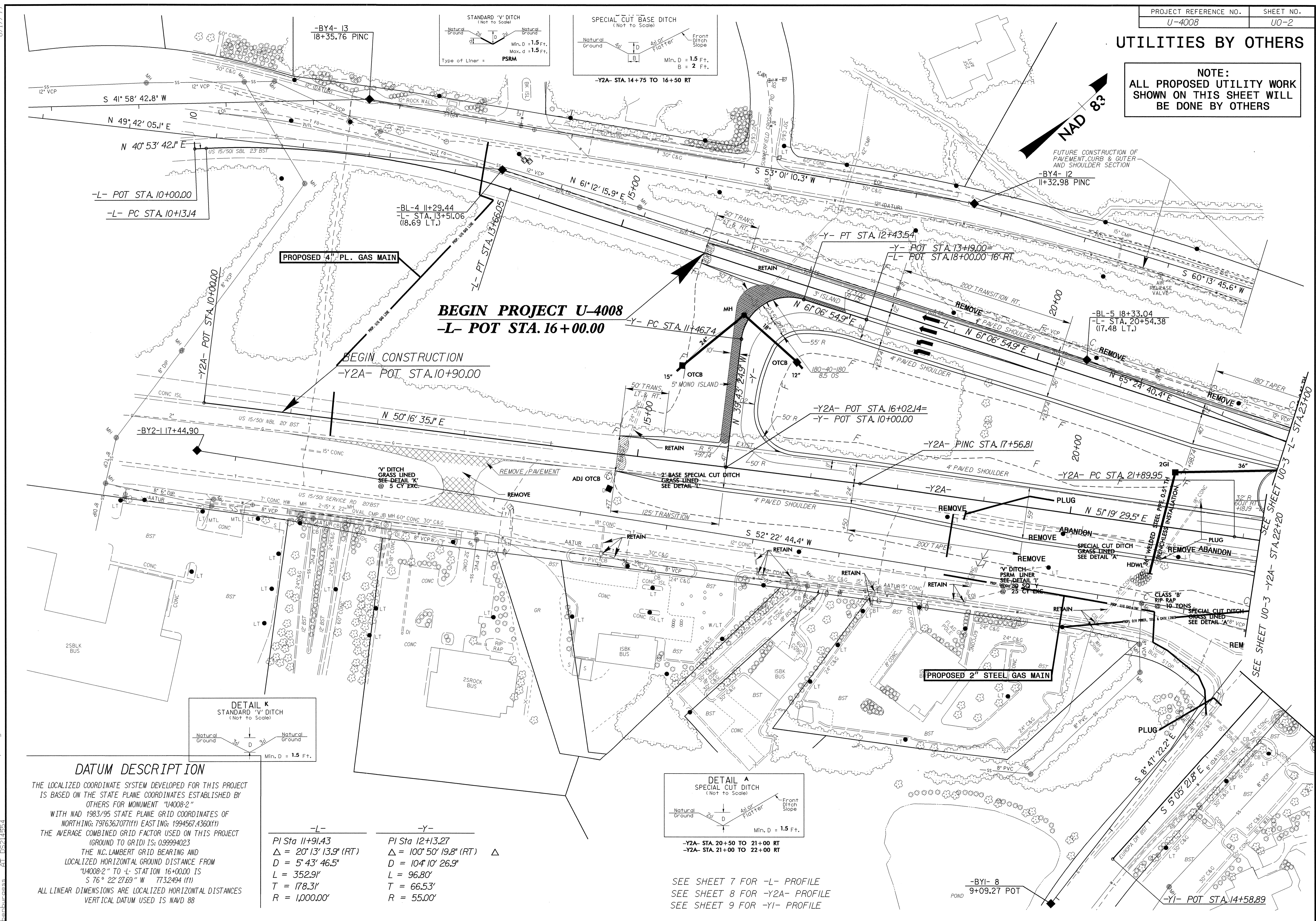


INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2-3	UTILITIES BY OTHERS PLAN SHEET

UTILITIES BY OTHERS ON PROJECT
(1) PSNC ENERGY
(2) DUKE POWER
(3) BELLSOUTH
(4) TIME WARNER CABLE
(5) PROGRESS TELECOM

UTILITIES BY OTHERS

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



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "U4008-2" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 7976367077(F1) EASTING: 1994567.4360(F1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99994023 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "U4008-2" TO -L- STATION 16+00.00 IS S 76° 22' 27.69" W 773.2494 (F1) ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

-L-	-Y-
PI Sta 11+91.43	PI Sta 12+13.27
Δ = 20° 13' 13.9" (RT)	Δ = 100° 50' 19.8" (RT)
D = 5' 43' 46.5"	D = 104' 10' 26.9"
L = 352.91'	L = 96.80'
T = 178.31'	T = 66.53'
R = 1,000.00'	R = 55.00'

SEE SHEET 7 FOR -L- PROFILE
SEE SHEET 8 FOR -Y2A- PROFILE
SEE SHEET 9 FOR -YI- PROFILE

8/17/99
99-SEP-2004 15:36
AtUtilities\Projects\U4008\ut_s4_U02_psh.dgn

UTILITIES BY OTHERS

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



Underground power cannot be abandoned until May 1st therefore no grading is allowed on Y4A around stations 11+70 to 12+80

Y4A- POT STA. 11+77.30 =	Y4A- POT STA. 12+22.70 =	Y4A- POT STA. 13+63.65 =	Y4A- POT STA. 19+86.96 =	Y4A- POT STA. 23+15.40 =	Y4A- POT STA. 27+99.13 =
$\Delta = 25^\circ 30' 33.5" (RT)$	$\Delta = 30^\circ 42' 07.3" (LT)$	$\Delta = 7^\circ 47' 55.0" (LT)$	$\Delta = 3^\circ 35' 33.1" (RT)$	$\Delta = 6^\circ 10' 37.9" (RT)$	$\Delta = 0^\circ 52' 53.3" (RT)$
$D = 19^\circ 05' 54.9"$	$D = 19^\circ 05' 54.9"$	$D = 3^\circ 49' 11.0"$	$D = 1^\circ 25' 56.6"$	$D = 0^\circ 52' 53.3"$	$D = 0^\circ 52' 53.3"$
$L = 133.57'$	$L = 160.76'$	$L = 204.17'$	$L = 250.81'$	$L = 250.81'$	$L = 700.78'$
$T = 67.41'$	$T = 82.36'$	$T = 102.24'$	$T = 125.44'$	$T = 125.44'$	$T = 350.73'$
$R = 300.00'$	$R = 300.00'$	$R = 1500.00'$	$R = 4000.00'$	$R = 4000.00'$	$R = 6500.00'$
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS

BEGIN CONSTRUCTION
-Y3- STA. 18+50.00

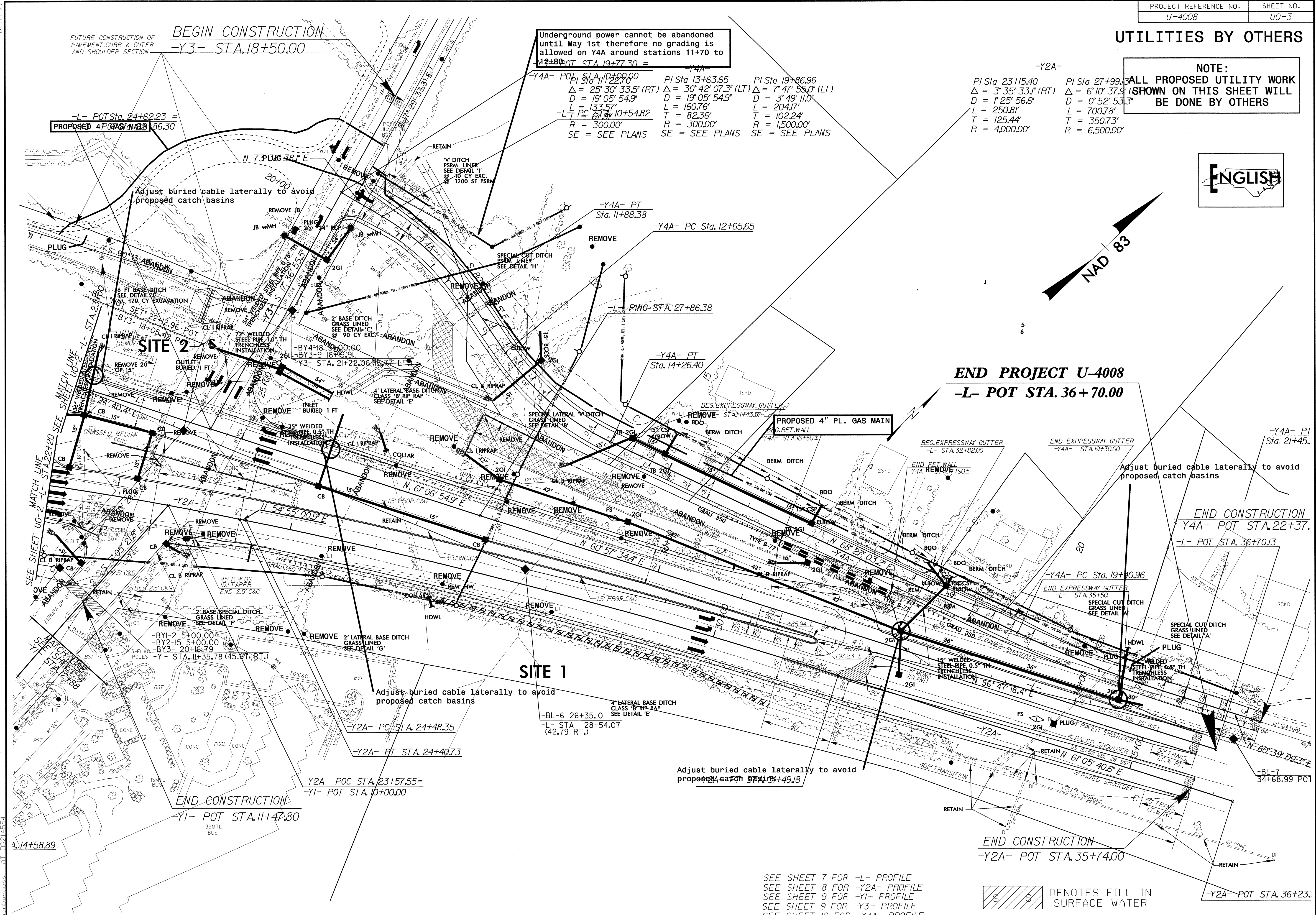
END PROJECT U-4008
-L- POT STA. 36+70.00

END CONSTRUCTION
-Y4A- POT STA. 22+37.00
-L- POT STA. 36+70.13

END CONSTRUCTION
-Y1- POT STA. 11+47.80

END CONSTRUCTION
-Y2A- POT STA. 35+74.00

-Y2A- POT STA. 36+23.00



SEE SHEET 7 FOR -L- PROFILE
SEE SHEET 8 FOR -Y2A- PROFILE
SEE SHEET 9 FOR -Y1- PROFILE
SEE SHEET 9 FOR -Y3- PROFILE
SEE SHEET 10 FOR -Y4A- PROFILE

■ DENOTES FILL IN SURFACE WATER

REVISIONS

8/17/99
03-SEP-2004 15:37 I:\S:\P\CA\U008-ut-s5-U03.psh.dgn