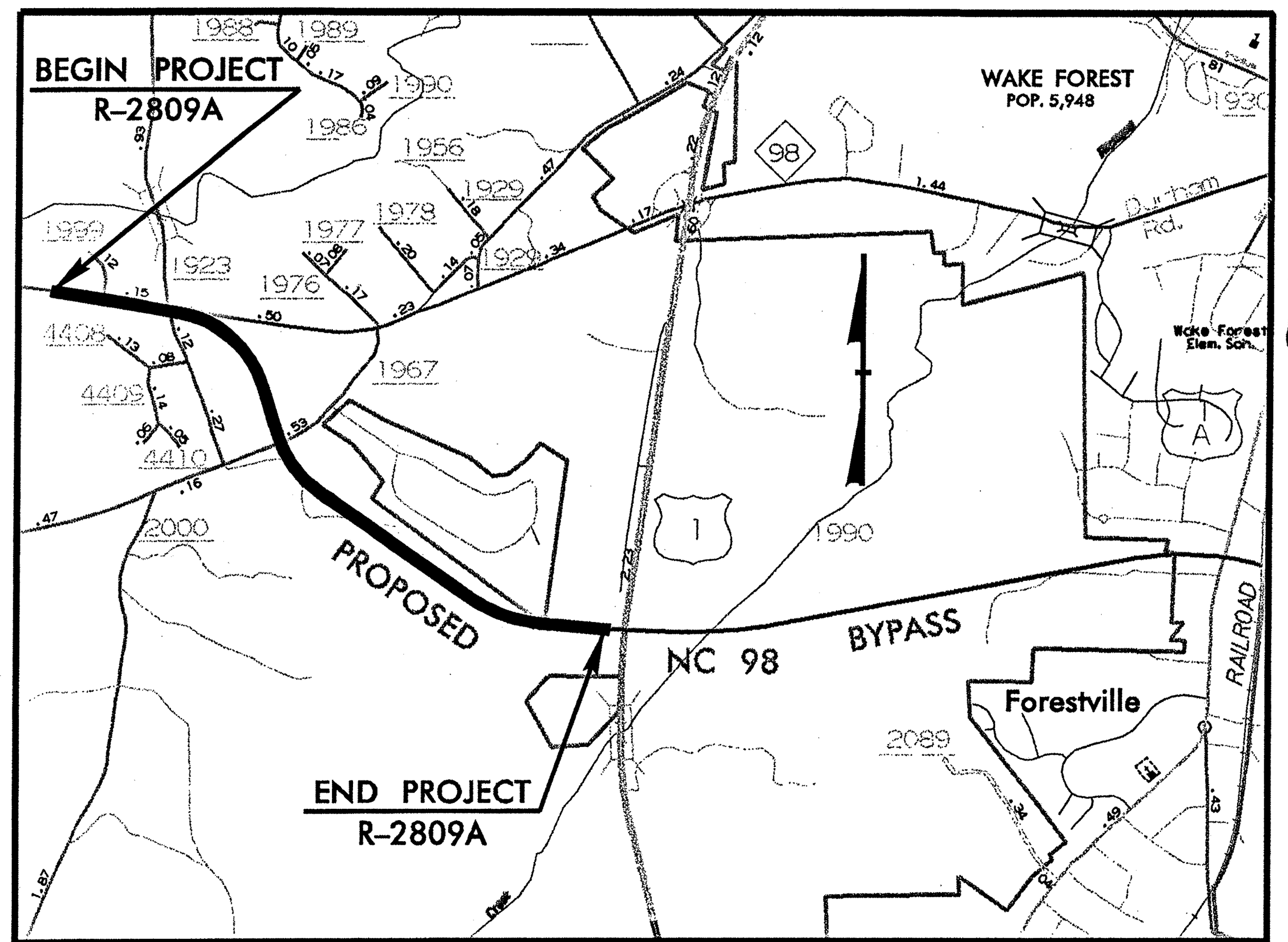
TIP PROJECT: R-2809A

CONTRACT: C201737

$$$$$$$SYSTIME$$$$
$$$$$$$$$$$$$$DGN$$$$$$$$$$$$$$$$$$$$$
$$$$$USERNAME$$$$



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2809A	UC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

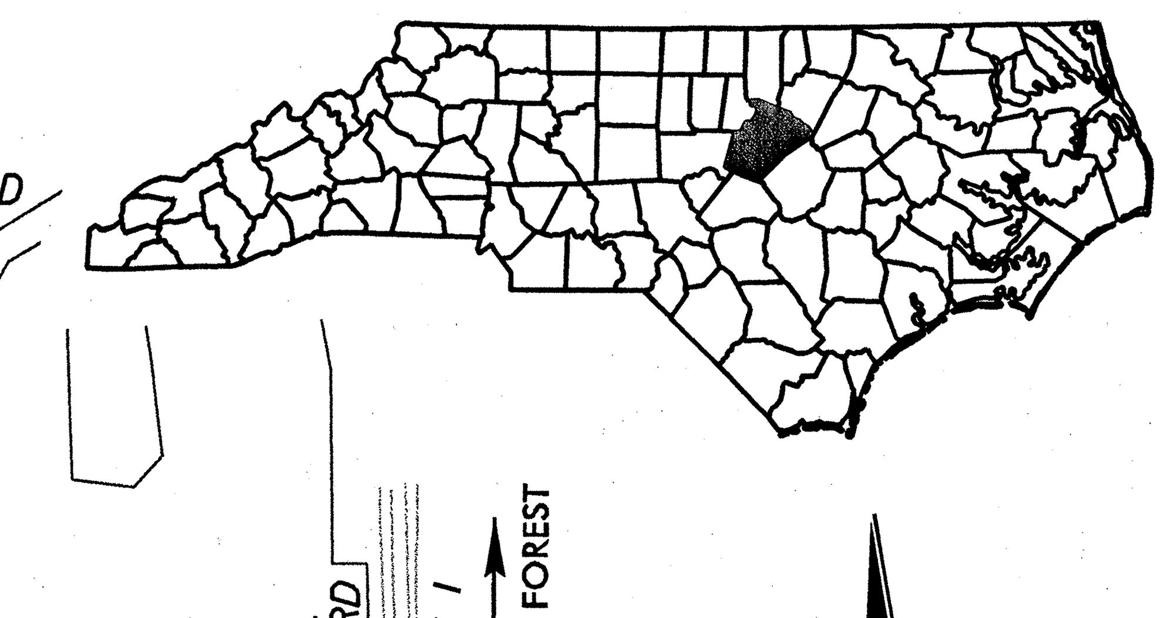
METRIC

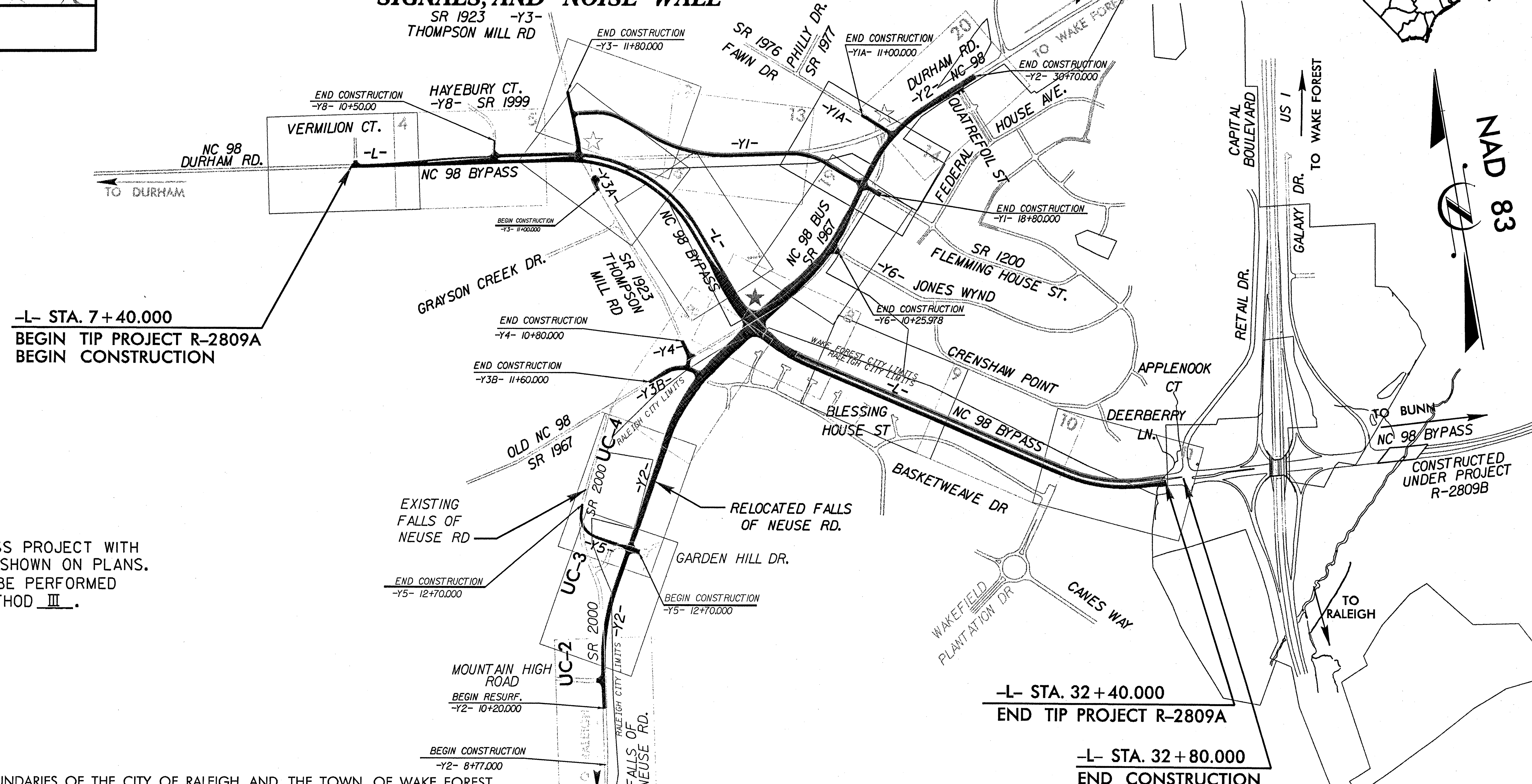
ALL DIMENSIONS IN THESE PLANS ARE IN METERS OR MILLIMETERS UNLESS OTHERWISE SHOWN

UTILITY CONSTRUCTION PLANS
WAKE COUNTY

LOCATION: ***NC 98 (WAKE FOREST BYPASS) FROM WEST OF SR 1923 (THOMPSON MILL ROAD) TO WEST OF US 1 (CAPITAL BLVD.)***

TYPE OF WORK: ***GRADING, DRAINAGE, PAVING, TRAFFIC SIGNALS, AND NOISE WALL***





THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON PLANS.
CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

☆ *DENOTES EXISTING TRAFFIC SIGNAL*

★ *DENOTES PROPOSED TRAFFIC SIGNAL*

PORTIONS OF THIS PROJECT FALLS WITHIN THE BOUNDARIES OF THE CITY OF RALEIGH AND THE TOWN OF WAKE FOREST

GRAPHIC SCALES
(METERS)

5 0 10
PLANS

5 0 10
PROFILE (HORIZONTAL)

1 0 2
PROFILE (VERTICAL)

INDEX OF SHEETS

UTILITY OWNERS ON PROJECT

(1.) CITY OF RALEIGH (WATER)
(2.) CITY OF RALEIGH (SEWER)

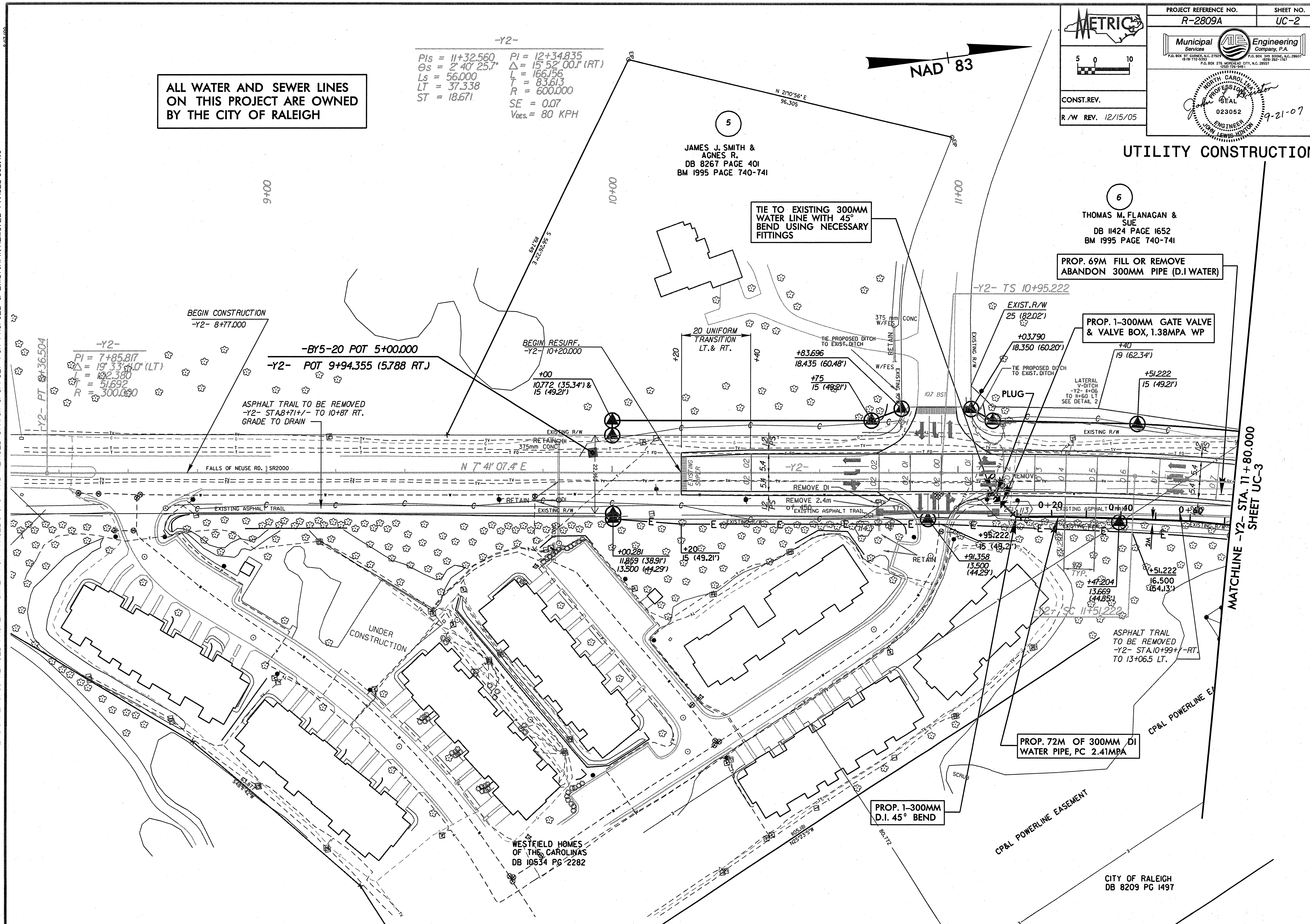
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023052 ENGINEER JOHN LEWIS HINTON
John L. Hinton 8-1-07

PREPARED BY

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

UTILITY DESIGN ENGINEER ***JOHN L. HINTON*** ***P.E.***



R/W REVISION:12/15/05 REVISED PROPERTY OWNER FOR PARCEL 5 & 6 AND REVISED STATON & OFFSET FOR PROPOED & EXIST.R/W. REMOVED PARCEL 905. hle

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	UC-3

METRIC

5 0 10

CONST.REV.

R /W REV. 12/15/05

Municipal Services Engineering Company, P.A.

P.O. BOX 97, GARNER, N.C. 27529 (919) 772-5393 — P.O. BOX 369 BOONE, N.C. 28607 (828) 262-1767 — P.O. BOX 276, MOREHEAD CITY, N.C. 28557 (252) 726-9481

NORTH CAROLINA PROFESSIONAL SEAL 023052 ENGINEER JOHN LEWIS HINTON

9-21-07

UTILITY CONSTRUCTION

SEE SHEET UC-5 FOR WATER LINE PROFILE

CP&L POWERLINE EASEMENT

NAD 83

PROP. 78M FILL OR REMOVE ABANDON 400MM PIPE, (D.I. WATER)

THOMAS M. FLANAGAN & SUE
DB 11424 PAGE 1652
BM 1995 PAGE 740-741
6

WAKEFIELD D2 INVESTMENT, LLC
DB 8706 PG 1682
65

ASPHALT TRAIL TO BE REMOVED UP TO -Y2- STA.13+06.500 LT.

PROP. 266M FILL OR REMOVE ABANDON 300MM PIPE, (D.I. WATER)

PROP. 2-FIRE HYDRANT, 1.035 MPA WP, 4M-150MM DI WATER PIPE, PC 2.41MPA, 2-150MM GATE VALVE & VALVE BOX, 1.38MPA WP & 2-300MM x 150MM DI TEE

PROP. 238M OF 300MM DI WATER PIPE, PC 2.41MPA

PROP. 1-FIRE HYDRANT, 1.035 MPA WP, 2M-150MM DI WATER PIPE, PC 2.41MPA, 1-150MM GATE VALVE & VALVE BOX, 1.38MPA WP & 1-300MM x 150MM DI TEE

TOURNAMENT PLAYERS CLUB OF RAL, LLC
DB 9349
PG 22
BM 1998
PG 1293

WAKEFIELD GLEN, LLC
DB 8280
PG 866
BM 1998
PG 892

CITY OF RALEIGH
DB 8209 PG 1497

MATCHLINE -Y2- STA. 11+80.000 SHEET UC-2

MATCHLINE -Y2- STA. 14+20.000 SHEET UC-4

-Y2-

PI = 12+34.835
Δ = 15° 52' 00.1" (RT)
L = 166.156
T = 83.613
R = 600.000
SE = 0.07
$V_{des.}$ = 80 KPH

PIs = 13+36.048
Θs = 2° 40' 25.7"
Ls = 56.000
LT = 37.338
ST = 18.671

-Y2- CS 13+17.378

-Y2- ST 13+73.378

DENOTES PAVEMENT REMOVAL

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	UC-4

METRIC

5 0 10

Municipal Services Engineering Company, P.A.
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P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

NORTH CAROLINA PROFESSIONAL SEAL 023052 ENGINEER JOHN LEWIS HINTON
9-21-07

CONST.REV.	
R/W REV.	12/15/05

UTILITY CONSTRUCTION

NAD 83

MATCHLINE -Y2- STA. 14+20.000
SHEET UC-3

R/W REVISION: 8/31/06 ADDED PARCEL 65A hle

NORTH HILLS PROPERTIES
DB 4791 PAGE 803

CHARLES T. HOLDEN
DB 6459 PAGE 208

DB 4750 PAGE 87

0.6m BASE HEAD DITCH
SEE DETAIL 4
DDE= 25m³

REMOVE

40.0 UNIFORM TRANSITION

-Y5- PCC 12+42.852

400MM DIP WATER

EXISTING R/W

SR 2000 FALLS OF THE

N 26° 18' 34.2" E

-Y5- POT 13+68.236

-Y5-

END CONSTRUCTION
-Y5- 12+70.000

-Y5- PT 12+98.386

PI = 12+10.133
Δ = 76° 02' 45.7" (RT)
L = 79.635
T = 46.916
R = 60.000
SE = 0.04
Vdes.= 30 KPH
1.3m CURVE WIDENING

PI = 12+70.710
Δ = 11° 21' 49.7" (RT)
L = 55.534
T = 27.858
R = 280.000
SE = 0.08
Vdes.= 80 KPH

ANVIL INVESTMENTS
BM 1998 PG 892

SANDLER at WAKEFIELD
DB 8363 PG1444

-Y2-
PIs = 17+64.561
Θs = 2° 40' 25.7"
Ls = 56.0
LT = 37.3376
ST = 18.6705
SE = 0.07
Vdes.= 80 KPH

TIE TO EXISTING 400MM WATER LINE WITH 1-45° & 1-11 1/4° BEND USING NECESSARY FITTINGS

PROP. 1-400MM BUTTERFLY VALVE & MANHOLE

PROP. 48M FILL OR REMOVE ABANDON 400MM PIPE, (DI WATER)

LAWRENCE D. BRANDON, JR & NANCY H. BRANDON
DB 2106 PAGE 530
BM 1984 PAGE 538

FRANK D. BRANDON & LISA C. BRANDON
DB 3274 PAGE 700
BM 1984 PAGE 538

WAKEFIELD GLEN, LLC
DB 8280 PG 866
BM 1998 PG 892

LYNN M. LOWERY, et vir
DB 3274 PAGE 698
BM 1984 PAGE 538

WAKEFIELD D2 INVESTMENT, LLC
DB 8706 PG 1682

PROP. 139M OF 400MM DI WATER PIPE, PC 2.41 MPA

SEE SHEET UC-5 FOR WATER LINE PROFILE

PROP. 1-FIRE HYDRANT, 1.035 MPA WP, 1.5M-150MM DI WATER PIPE, PC 2.41MPA, 1-150MM GATE VALVE & VALVE BOX, 1.38MPA WP & 1-400MM x 150MM DI TEE

PROP. 52M FILL OR REMOVE ABANDON 300MM PIPE, (D.I. WATER)

PROP. 2-400MM 22 1/2° BEND

PROP. 1-400MM BUTTERFLY VALVE & MANHOLE

TIE TO EXISTING 300MM WATER LINE WITH 300MM x 300MM x 400MM DI TEE USING NECESSARY FITTINGS

PROP. 24M OF 300MM DI WATER PIPE, PC 2.41

PROP. 1- 300MM GATE VALVE & VALVE BOX, 1.38 MPA WP

FRANK D. BRANDON, et ux
(FORMERLY NANNIE B. BRANDON)
95E2183
BM 1984 PAGE 538

LATERAL V-DITCH
W/ 1.5m BERM
W/ CLASS B RIP RAP
68.7 MTN 206.2m² F.F.
EST. DDE= 72m³
-Y2- 16+20 TO 16+80 LT
SEE DETAIL 5

LATERAL V-DITCH
W/ 1.5m BERM
W/ CLASS B RIP RAP
9.6 MTN 274.9m² F.F.
EST. DDE = 252m³
-Y2- 15+20 TO 16+00 LT
SEE DETAIL 5

0.6m BASE HEAD DITCH
DDE= 25m³ SEE DETAIL 4

CLASS B RIP RAP
1.8mTN
5.9m² F.F.

CLASS I RIP RAP
6.4MTN
14.2m² F.F.

CLASS I RIP RAP
10.0mTN
18.4m² F.F.

0.6m BASE TAIL DITCH (114.83')
SEE DETAIL 11
DDE= 40m³

SANDLER at WAKEFIELD
DB 8363 PG1444

TOURNAMENT PLAYERS CLUB OF RALEIGH, LLC
DB 9349 PG 15
PB 2002 PG 113

AVERAGE DAILY TRAFFIC (IN HUNDREDS) 2000 2025

FALLS OF NEUSE RD.

SR 2000

RELOCATED FALLS OF NEUSE RD.

GARDEN HILL DR

90.0m UNIFORM TRANSITION

-Y2- TS 17+27.224

PROPOSED G/R

EXISTING R/W

R/W VARIES

N 28° 53' 58.9" E

GRAU-350

CAT-1

ISBKD

GAZEBO

WD

SHRUB

3500mm BLK WALL

1500mm CONC

1375mm CONC

375mm CONC

450mm C&G

400mm DIP WATER

SEE DETAIL 4

SEE DETAIL 5

SEE DETAIL 11

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	UC-5

METRIC

SCALE 0

Municipal Services — Engineering Company, P.A.
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P.O. BOX 349, BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276, MOREHEAD CITY, N.C. 28557 (252) 726-9931

NORTH CAROLINA PROFESSIONAL SEAL 023052 ENGINEER JOHN LEWIS HINTON — 8-1-07

UTILITY CONSTRUCTION

ELEVATION IN METERS

124 122 120 118 116 114 112 110

0+00 0+20 0+40 0+60 0+80 1+00 1+20 1+40 1+60 1+80 2+00 2+20 2+40 2+60 2+80 3+00 3+20 3+40

45° BEND (HORZ.) STA. 0+00
300MM GATE VALVE STA. 0+03
45° BEND (HORZ.) STA. 0+10
300MM X 150MM TEE STA. 0+93
300MM X 150MM TEE STA. 1+83
EXIST. GRADE
PROP. GRADE
MIN. 1M
300MM X 150MM TEE STA. 2+86
300MM X 300MM X 400MM TEE STA. 3+32
GV
BFV
EXIST. 300MM WATER LINE
PROP. 300MM D.I. WATER LINE, PC 350
300MM GATE VALVE STA. 3+28.5
400MM BUTTERFLY VALVE MANHOLE STA. 3+37.5

LINE 1

℄ -Y2- STA. 14+43.5
RELOCATED FALL OF NEUSE RD.
22½° BEND (HORZ.) STA. 3+49.5
22½° BEND (HORZ.) STA. 3+63.5
400MM X 150MM TEE STA. 3+79
EXIST. GRADE
PROP. GRADE
MIN. 1M
400MM BUTTERFLY VALVE MANHOLE STA. 4+65.5
45° & 11¼° BEND (HORZ.) STA. 4+73
BFV
EXIST. 400MM WATER LINE
Min. 0.5M
PROP. 400MM D.I. WATER LINE, PC 350
PROP. 375MM RCP

LINE 1

3+40 3+60 3+80 4+00 4+20 4+40 4+60 4+80

$$$$$$SYSTIMES$$$$$$
$$$$$$USERNAME$$$$$$

R/W REVISION: 12/15/05 REVISED PROPERTY OWNER FOR PARCEL 5 & 6 AND REVISED STATON & OFFSET FOR PROPOED & EXIST.R/W. REMOVED PARCEL 905.he

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	UC-6

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023052 JOHN LEWIS HINTON 8-1-07

CONST.REV.

R/W REV.

UTILITY CONSTRUCTION

REACTION BEARING AREAS FOR HORIZONTAL WATER PIPE BENDS

BASED ON TEST PRESSURE OF 200 P.S.I.

ALL AREAS GIVEN IN SQUARE FEET.

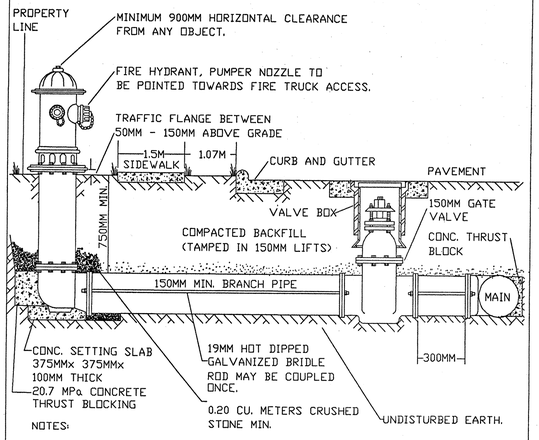
SIZE AND DEGREE OF BEND	STATIC THRUST IN POUNDS	MODERATELY DRY CLAY 4000 LBS/FT²	SOFT CLAY 2000 LBS/FT²	GRAVEL / COARSE SAND 1500 LBS/FT²	DRY CLAY - ALWAYS DRY 9000 LBS/FT²	SAND, COMPACT FIRM 8000 LBS/FT²	SAND, CLEAN DRY 4000 LBS/FT²	QUICKSAND - VERY POOR SOIL 1000 LBS/FT²	ROCK - POOR 10,000 LBS/FT²
6"									
11 1/4°	1,108	1	1	1	1	1	1	2	1
22 1/2°	2,207	1	2	2	1	1	1	3	1
45°	4,328	2	3	3	1	1	2	5	1
90°	7,996	2	4	5	1	1	2	8	1
PLUG	5,655	2	3	4	1	1	2	6	1
8"									
11 1/4°	1,970	1	1	2	1	1	1	2	1
22 1/2°	3,922	1	2	3	1	1	1	4	1
45°	7,694	2	4	5	1	1	2	8	1
90°	14,215	4	8	9	2	2	4	15	2
PLUG	10,053	3	5	6	2	2	3	10	1
12"									
11 1/4°	4,433	2	3	3	1	1	2	5	1
22 1/2°	8,826	3	5	6	2	2	3	9	1
45°	17,312	5	9	11	3	3	5	18	2
90°	31,983	8	16	19	4	4	8	32	4
PLUG	22,619	6	12	14	3	3	6	23	3
16"									
11 1/4°	7,881	2	4	5	1	1	2	8	1
22 1/2°	15,691	4	8	10	2	2	4	16	2
45°	30,779	8	16	19	4	4	8	31	4
90°	56,861	15	29	35	8	8	15	57	6
PLUG	40,213	10	21	25	5	5	10	41	5

REACTION BEARING AREAS ARE IN SQUARE FEET MEASURED IN A VERTICAL PLANE IN THE TRENCH SIDE AT AN ANGLE OF 90° TO THE THRUST VECTOR.

USE 6" - 90° BEND VALUE FOR HYDRANTS FOR ADDITIONAL SAFETY FACTOR.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
THRUST BLOCKING DESIGN QUANTITY TABLE

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-10	D.W.C.	5-23-99		



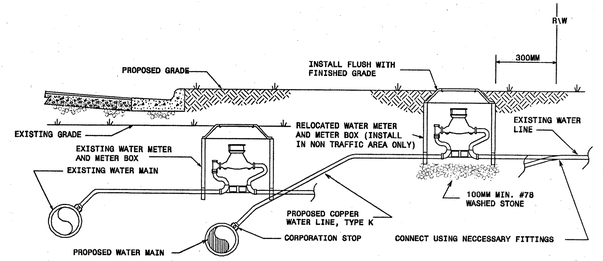
NOTES:

1. FIRE HYDRANT SHALL BE AS MANUFACTURED: MUELLER, AMERICAN DARLING, KENNEDY, M & H, WATEROUS, CLOW, EAST JORDAN IRON WORKS, OR US PIPE.
2. BRANCH PIPE SHALL BE DUCTILE IRON AWWA C150-96.
3. 150MM GATE VALVE SHALL BE AWWA C500-86 OPEN LEFT.
4. STEEL RODS AND BOLTS SHALL BE 19MM HOT DIPPED GALVANIZED.
5. FIRE HYDRANTS WILL BE INSTALLED IN TRUE VERTICAL POSTION.
6. RODS SHALL NOT BE COUPLED MORE THAN ONCE. IF THE LENGTH FROM THE VALVE TO THE HYDRANT EXCEEDS 6.1M, THEN A MECHANICAL RESTRAINING GLAND WITH A REBAR CAGE SHALL BE INSTALLED NO MORE THAN 3.1M FROM HYDRANT AND POURED IN CONCRETE.
7. FIRE HYDRANTS TO BE LOCATED IN ROW OR 600MM EASEMENT ADJACENT TO ROW.

ANYTIME SITE WORK, CONSTRUCTION, ROAD WORK, OR ANY OTHER WORK CHANGES THE GRADE OF THE FIRE HYDRANT, THE PERSON RESPONSIBLE FOR THE WORK IS RESPONSIBLE FOR ADJUSTING THE FIRE HYDRANT TO STAY WITHIN COMPLIANCE.

CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD FIRE HYDRANT INSTALLATION DETAIL

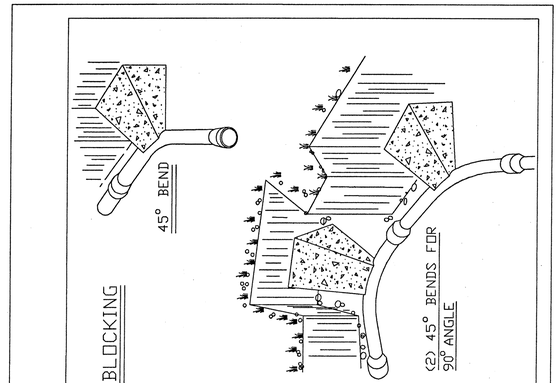
DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-4	ABB	4-6-04		



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 MINIMUN OF 900MM COVER BELOW FINISHED GRADE.

WATER METER RELOCATION DETAIL

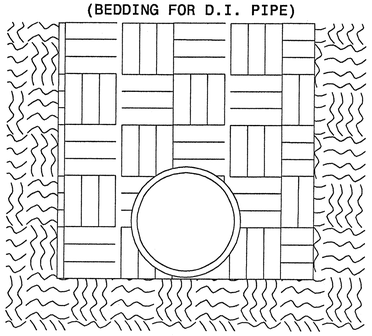


CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
STANDARD THRUST BLOCKING VIEWS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-9		3-1-87	RRH	3-31-00
	D.W.C.	9-7-99		

TYPE "2"

(BEDDING FOR D.I. PIPE)



PIPE BEDDED IN FLAT-BOTTOM TRENCH. TRENCH BACKFILLED IN LOOSE 150MM 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.

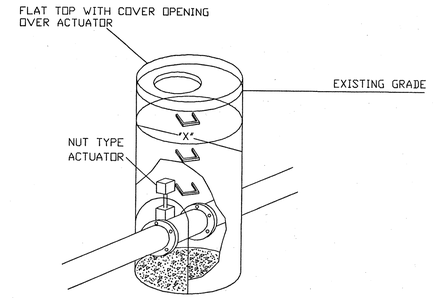
MAXIMUM TRENCH WIDTH AT TOP OF PIPE

NOMINAL PIPE SIZE (mm)	TRENCH WIDTH (meters)	NOMINAL PIPE SIZE (mm)	TRENCH WIDTH (meters)
102	0.72	508	1.12
152	0.76	610	1.22
203	0.81	762	1.37
254	0.86	914	1.57
305	0.91	1067	1.68
356	0.97	1219	1.83
406	1.02	1400	1.98
457	1.07		

VALVE SIZE	"X"
400MM	1500MM M.H.
600MM	1800MM M.H.
750MM OR GREATER	2400MM M.H.

NOTES:

1. USE STANDARD PRECAST FLAT TOP
2. BASE SECTION SHALL BE OF "DOG HOUSE" TYPE TO FIT OVER MAIN.
3. PROVIDE A MIN. OF 300MM OF #67 STONE FOR POSITIVE DRAINAGE IN BOTTOM OF MANHOLE.
4. GROUT RISER/BASE SECTION AS NECESSARY.
5. MANHOLE LID SHALL SAY "WATER". OR "REUSE WATER", AS APPROPRIATE.
6. FLAT TOP MAY BE USED IN NON-PAVED AREAS WHEN NECESSARY TO MATCH GRADE.



CITY OF RALEIGH
DEPARTMENT OF PUBLIC UTILITIES
BUTTERFLY VALVE MANHOLE DTL. FOR 400MM & LARGER MAINS

DWG. NO.	REVISIONS	DATE	REVISIONS	DATE
W-16	Y.Q.F.	12-14-88	RRH	3-31-00
	Y.C.A.	12-31-90	ABB	3-14-05

CONTRACT: C201737 TIP PROJECT: R-2809A

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-2809A	UO-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

METRIC

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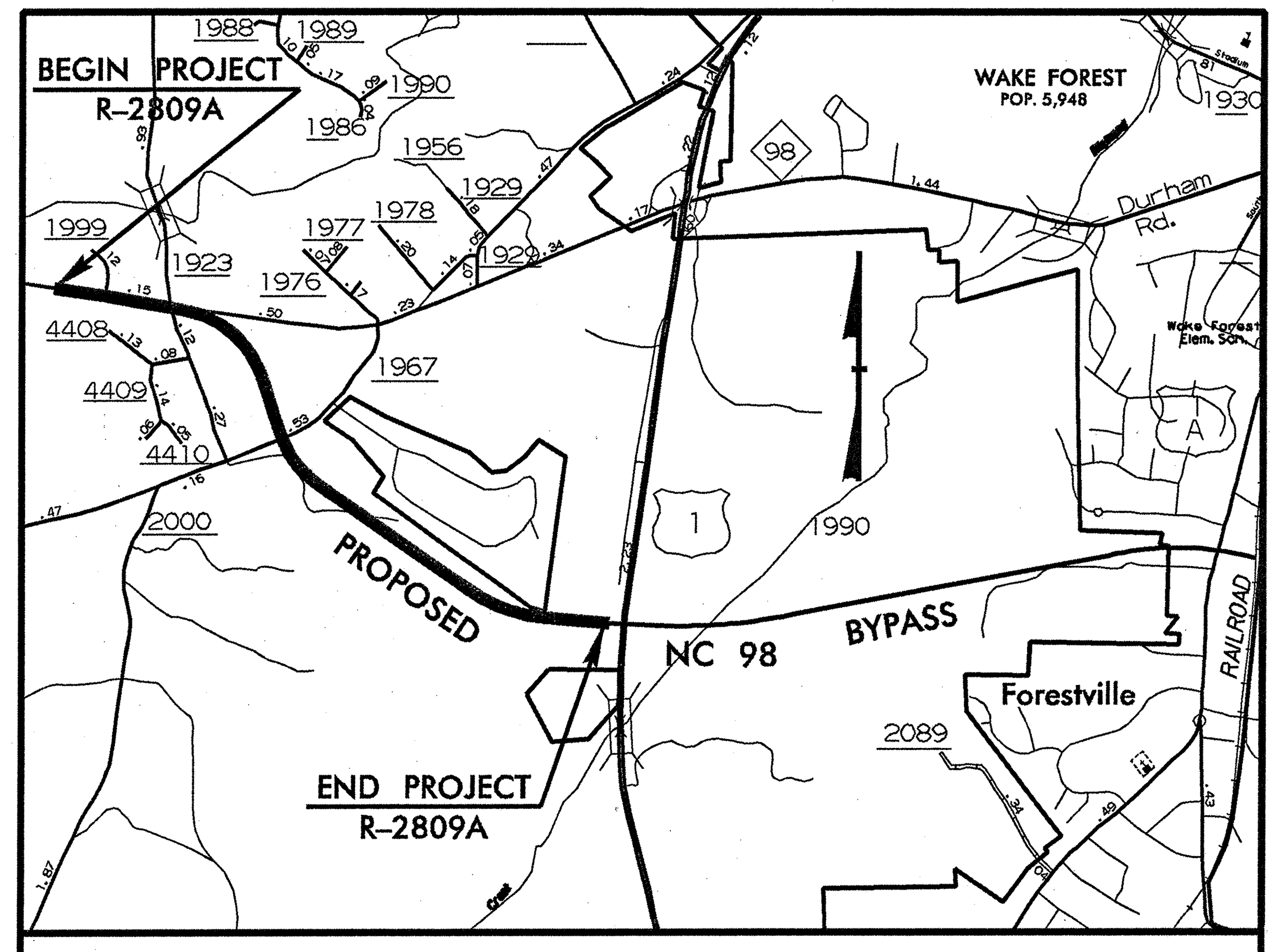
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

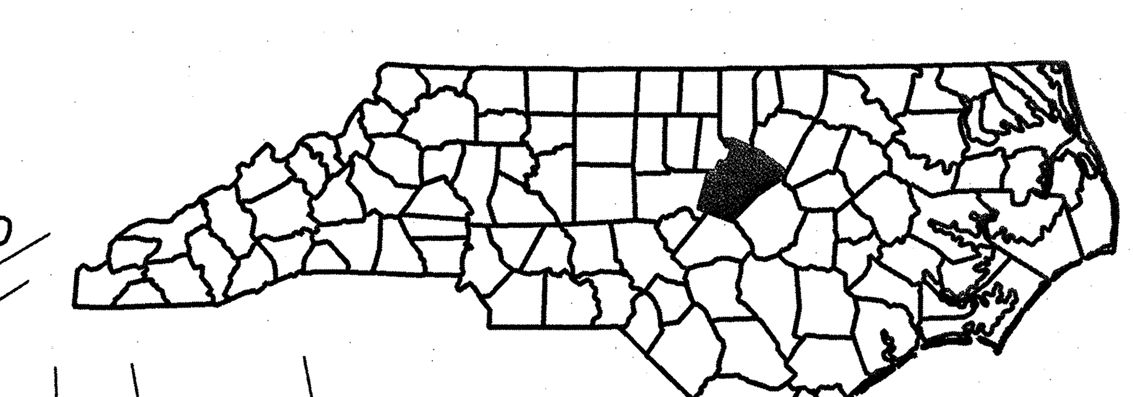
UTILITIES BY OTHERS PLANS
WAKE COUNTY

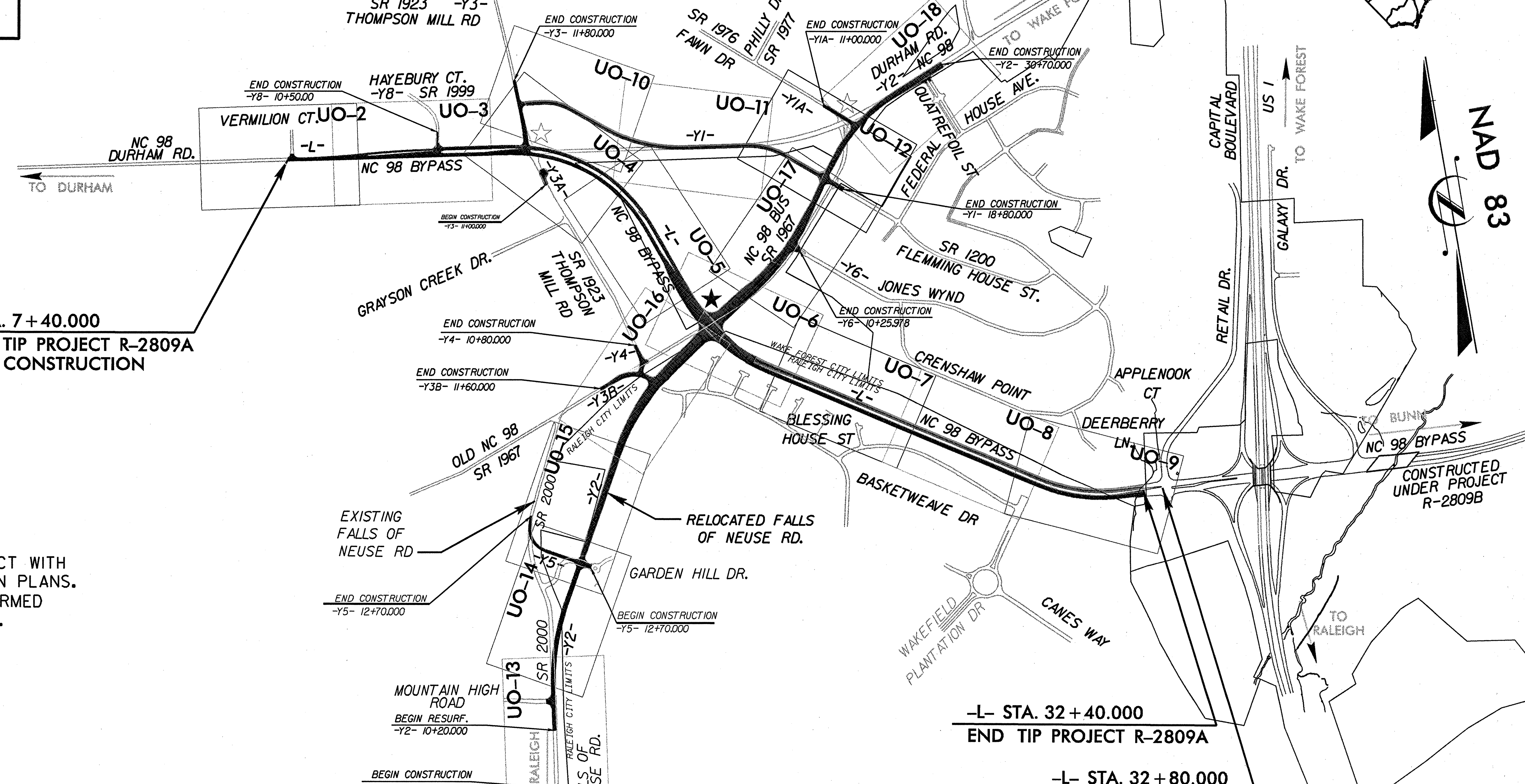
LOCATION: NC 98 (WAKE FOREST BYPASS) FROM WEST OF SR 1923 (THOMPSON MILL ROAD) TO WEST OF US 1 (CAPITAL BLVD.)

TYPE OF WORK: UTILITIES RELOCATION



VICINITY MAP





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★ *DENOTES PROPOSED TRAFFIC SIGNAL*

PORTIONS OF THIS PROJECT FALLS WITHIN THE BOUNDARIES OF THE CITY OF RALEIGH AND THE TOWN OF WAKE FOREST

GRAPHIC SCALES

5 0 10
PLANS

5 0 10
PROFILE (HORIZONTAL)

1 0 2
PROFILE (VERTICAL)

INDEX OF SHEETS

SHEET No.	DESCRIPTION
UO-1	*TITLE SHEET*
UO-2 TO UO-18	*UTILITY BY OTHERS PLAN SHEETS*

UTILITY OWNERS ON PROJECT

(1.) PROGRESS ENERGY (POWER)
(2.) WAKE ELECTRIC MEMBERSHIP CORP. (POWER)
(3.) TOWN OF WAKE FOREST (POWER)
(4.) EMBARQ (TELEPHONE)
(5.) TIME WARNER CABLE (CATV)
(6.) PSNC ENERGY (GAS)
(7.) CITY OF RALEIGH (WATER)

PREPARED BY

Municipal Services — Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

UTILITY DESIGN ENGINEER *JOHN L. HINTON* *P.E.*

$$$$SYSTIME$$$$
$$$$$$$$DGN$$$$$$$$$$$$$$$$
$$$$USERNAME$$$$

...\R_\Roadway\Proj\r2809a-uo1.dgn 8/23/2007 8:15:02 AM

REVISIONS	8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-2
UTILITIES BY OTHERS	

METRIC

5 0 10

CONST.REV.

R/W REV. 12/15/05

Municipal Services Engineering Company, P.A.
P.O. BOX 97, GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 279, MOREHEAD CITY, N.C. 28557 (252) 726-3483

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

THE DREES COMPANY
D.B. 8952 PG. 1358
BOM. 1999 PG. 2003

S 05°39'W
118.515

S 05°06'28"E
82.540

EXISTING R/W

-L- POT 7+40.000
-L-TRANS POT 7+40.000
(8.1m RT.)

7+37.497
58.647 (192.41')

-L- POT 6+20.000

-L- S 82° 02' 31.7" E

0.9 BST

1.3 BST

5.5 BST

3.0 SOIL

EXISTING R/W

-L-TRANS
PI = 8+44.939
Δ = 4° 14' 30.2" (LT)
L = 170.274
T = 85.176
R = 2,300.000
SE = 0.02
$V_{DES.}$ = 100 KPH

NAD 83

THE DREES COMPANY
D.B. 8952 PG. 1358
BOM. 1999 PG. 2003

8+00

9+00

-L-TRANS PC 7+59.763

7+66.262
58.623 (192.33')

EXISTING R/W

LATERAL 0.6m BASE DITCH W/ 1.5m BERM
W/ 28.0 MTN CLASS 1RIP RAP & 53.5m² F.F
EST. DDE = 12m³
-L- 9+00 TO 9+12 LT SEE DETAIL 21

EW

REMOVE CONC. DITCH

CONC

CONC. DITCH

JB

RETAIN

REMOVE EXIST GUARDRAIL

GRAU-350

8:1 TAPER

-L-TRANS

S 82° 02' 31.7" E

EXISTING

02 02

3.6 3.6

BEGIN SHOULDER RM GUTTER +60 RT.

ABANDON TELEPHONE

3.0 PS

MTL

02 02

3.6

7.2

8:1 TAPER

GRAU-350

PROP. U/G TEL CABLES

3.1 PL

2.2 PS

2CIW/FLAT GRATE

EXTEND 600 CSP

CONC RETAIN CONC. DITCH

REMOVE EXISTING GUARDRAIL

REMOVE HW

HW

BEGIN SHLD BERM GUTTER +60.000

400 CSP W/ELBOWS W/ROD & LUG CONNECTORS W/SLEEVES

PSH
B = 1.2 m

TOE PROTECTION
10.8 MTN CLASS B
RIP RAP & 38.3m² F.F.
STA 8+35 -L- RT.
TO STA 8+50 -L- RT.
SEE DETAIL 9

MATCHLINE -L- STA. 9+00.000
SEE SHEET UO-3

BEGIN STATE PROJECT R-2809A

STA. 7+40.000 -L-
BEGIN CONSTRUCTION

EXISTING R/W

EIP

R/W MON.

7+73.547
58.647 (187.27')

JEFFREY C. VOET &
KATHERINE P. VOET
D.B. 8610 PG. 1209
BOM 1995 PG. 1846

S 05°47'26"E
76.325

N 78°16'16"E
13.362

N 52°35'44"E
30.268

N 09°29'04"E
12.384'

EIP

JEFFREY C. VOET &
KATHERINE P. VOET
D.B. 8182 PG. 133
BOM 1995 PG. 1846

S 17°47'02"W
36.238

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 21 FOR PROFILES

$$$$USERNAME$$$$
$$$$SYSTIME$$$$

REVISIONS	
8/17/99	
10/26/98	

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-3
UTILITIES BY OTHERS	

METRIC

5 0 10

CONST.REV.

R/W REV. 12/15/05

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

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

SEE SHEET U0-2 MATCHLINE -L- STA. 9+00.000

SEE SHEET U0-4 MATCHLINE -L- STA. 12+40.000

-L-TRANS
PI = 8+44.939
Δ = 4° 14' 30.2" (LT)
L = 170.274
T = 85.176
R = 2,300.000
SE = 0.02
VDES. = 100 KPH

-L-TRANS
PI = 10+15.213
Δ = 4° 14' 30.2" (RT)
L = 170.274
T = 85.176
R = 2,300.000
SE = 0.02
VDES. = 100 KPH

-Y8-
PI = 10+67.525
Δ = 19° 25' 57.4" (LT)
L = 30.525
T = 15.410
R = 90.000

DENOTES FILL IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES MITIGABLE IMPACT BUFFER ZONE 1
DENOTES MITIGABLE IMPACT BUFFER ZONE 2

PAUL J. TERRICCIANO & PATRICIA M. TERRICCIANO
DB 4821 PAGE 357
BM 1988 PAGE 970

DAVID E. SARTORE & COLLEEN R. SARTORE
DB 6091 PAGE 738
BM 1988 PAGE 970

CHARLES B. SMITH & STEPHANIE M. SMITH
DB 5441 PAGE 187
BM 1988 PAGE 970

THOMAS C. BOBBITT & SALLY W. BOBBITT
DB 6399 PAGE 38
BM 1988 PAGE 970

DONALD WINSTEAD & KAREN K.
DB 9365 PAGE 275

MICHAEL K. SHEPPARD & JENNIFER L. SHEPPARD
D.B. 8644 PG. 196
BOM 1995 PG. 1846

ROBERT G. WEAVER & TERRI L. WEAVER
DB 6143 PAGE 445
BM 1988 PAGE 971

RONNIE G. VAUGHT & DORIS D. VAUGHT
DB 4815 PAGE 282
BM 1988 PAGE 971

MICHAEL K. PERRY
DB 4798 PAGE 008
BM 1988 PAGE 971

-L-TRANS PT 11+00.311
-L- POT 11+00.000
(4.500 LT.)

-Y8- PT 10+82.639

-Y8- PC 10+52.114

-L-TRANS PRC 9+30.037

-L- POT 11+21.529
-Y8- POT 10+00.000

-BL-100 POT 5+00.000 =
-L- POT 9+96.756 (14.35 RT.)

9+42.505
58.647 (191.41')

9+43.402
58.812 (192.95')

10+32.238
41.790 (137.11')

9+71.293
57.055 (187.19')

11+11.097
48.394 (158.77')

11+37.973
46.725 (153.30')

LATERAL 0.6m BASE DITCH W/ 1.5m BERM W/ CLASS 'I' RIP RAP -L- 9+00 TO 9+12 LT SEE DETAIL 21

CLASS 'I' RIP RAP 14.5 MTN & 39.4m² F.F. (ON BANKS ONLY) SEE DETAIL #12

TOE PROTECTION 43.3 MTN CLASS B RIP RAP & 153.1m² F.F. STA 9+20 -L- LT. TO STA 9+80 -L- LT. SEE DETAIL 9

LATERAL 0.6m BASE DITCH W/1.5m BERM 18.3 MTN CLASS B RIP RAP 161.7m² F.F. EST. DDE = 220m³ -L- 9+80 TO 10+70 LT SEE DETAIL # 20

END DITCH +80

PSH B = 1.2 m

BDO

SPECIAL LATERAL V-DITCH W/ 64.7 MTN CLASS 'B' RIP RAP & 176.4m² F.F -L- 10+70 TO 11+11 LT SEE DETAIL #1

REMOVE CONC. DITCH

400 CSP W/ELBOWS W/ROD & LUG CONNECTORS W/SLEEVES

1800 mm CMP

PROPOSED G/R

CLASS 'B' RIP RAP 0.9 MTN CLASS B RIPRAP 4.2m² F.F.

GRAU-350

1800 mm CONC

6500 mm RIPRAP

REMOVE 1800 mm CONC

ABANDON TELEPHONE

REMOVE EXIST GUARDRAIL

2GI W/FLAT GRATE

PROP U/G TEL CABLES

PROP U/G CATV CABLES

ABANDON TELEPHONE

END CONSTRUCTION -Y8- 10+50.00

ELIMINATE PROPOSED DITCH 10+40 RT. -Y8-

450mm CMP

REMOVE 375 mm CONC

FS

2-GI

CLASS B RIP RAP 1.8m MTN 5.9m² F.F.

STANDARD BERM DITCH -L- 11+66 TO 13+18 RT

END SHLD BERM GUTTER +00.000

END SHOULDER BERM GUTTER +00 -L- RT.

TIE TO EXISTING LATERAL DITCH

SPECIAL LATERAL V-DITCH W/ CLASS B RIP RAP 80.5mTN 210.0m² F.F. -L- 11+20 TO 11+60 RT SEE DETAIL 1

90 UNIFORM TRANSITION LT.TURN LANE

400 CSP W/ELBOWS

1050 mm CMP

EXIST. INLET INV. 87.48

4.5 HW

EXISTING R/W (VARIABLE)

R/W MON.

EIP

NC 98 SR 1923 DURHAM RD 7.3 BST 1.0 BST 1.4 BST

MTL

CAT-1

NAD 83

* When B is < 1.8 m

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 21 FOR -L- PROFILES
SEE SHEET 21 FOR -L-TRANS & -Y8- PROFILES

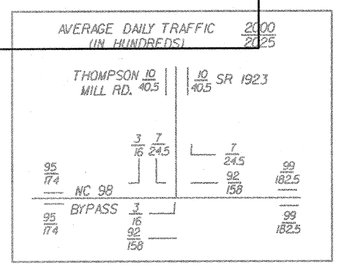
10/26/98

REVISIONS	8/17/99

-L-	-L-TRANS	-Y3-	-Y3A-
Pis Sta 13+24.573	PI Sta 13+22.390	PI Sta 10+52.324	PI Sta 10+82.160
Θs = 6°57' 45.1"	Δ = 10°02' 47.2" (RT)	Δ = 5°51' 39.5" (LT)	Δ = 8°09' 41.4" (RT)
Ls = 96.0	L = 70.0497	L = 40.9174	L = 71.2225
LT = 64.0496	T = 35.1149	T = 20.4765	T = 35.6716
ST = 32.0451	R = 399.5000	R = 400.0000	R = 500.0000
	SE = 0.08	SE = SEE PLANS	SE = SEE PLANS
PI Sta 15+42.601	$V_{DES.}$ = 100 KPH	$V_{DES.}$ = 30 KPH	$V_{DES.}$ = 30 KPH
Δ = 50°26' 54.7" (RT)			
L = 347.7947			
T = 186.0773			
R = 395.0000			
SE = 0.08			
$V_{DES.}$ = 100 KPH			

NAD 83

AVERAGE DAILY TRAFFIC (IN HUNDREDS) 2000 / 2025



METRIC

5 0 10

CONST.REV.

R/W REV. 5/3/06

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-4

UTILITIES BY OTHERS

Municipal Services Engineering Company, P.A.
P.O. BOX 97, CARNEY, N.C. 27529 (919) 772-5393
P.O. BOX 369 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-3481

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

MATCHLINE SEE SHEET U0-10

MATCHLINE SEE SHEET U0-10

DENOTES FILL IN SURFACE WATER

DENOTES MITIGABLE IMPACT BUFFER ZONE 1

DENOTES MITIGABLE IMPACT BUFFER ZONE 2

SITE 2

PRISCILLA B. ROLLS, VIRGINIA ROLLS
DB 09231 PAGE 1049
BM 2005 PAGE 333

-Y1- +40
27 (88.58')

-L- +98.324
64.306 (210.98')

-Y3- +72.765
31 (101.71')

-Y3- PT 10+72.765

-Y1- +43.5
27 (88.58')

-Y3- +45.303 (EX.R/W)
12.304 (40.37')

0.9m BASE TAIL DITCH SEE DETAIL 3 EST. DDE= 18m³

-L- +86.585
60.999 (200.13')

-L- +87.950
54.176 (177.74')

-Y3- +44.425
23 (75.46')

-L- +99.858
57.532 (188.75')

CLASS 'I' RIPRAP 15.4 MTN & 41.7m² F.F. (ON BANKS ONLY) SEE DETAIL #12

-BY1-PINC 5+30.700
-L- POC 13+90.958 (7.187 RT.)

FILL WITH PERMEABLE MATERIAL 6.2m² MIN.

PSH B = 1.2 m

-L- +23.692 (EXIST. R/W) 23 (75.46')

90.0 UNIFORM TRANSITION LT. & RT.

ABANDON TELEPHONE

REMOVE

+30 40 (131.23')

+48.000 (EX. R/W) 40 (131.23')

+65 40 (131.23')

+80 40 (131.23')

S 82° 22' 54.8" E

CAROLINA PRINCESS LLC
DB 08693 PAGE 1799

0.6m BASE TAIL DITCH SEE DETAIL 4 EST DDE=8m³

CLASS B RIP RAP 2.7 MTN 0.4m² F.F.

PROP. G/R

CAT-1

8d TAPER

PROPOSED 450mm C&G

PROP O/H POW LINES

CLM ASSOCIATES LLC
DB 8050 PAGE 875

SPECIAL LATERAL V-DITCH -L- 15+40 TO 15+76 RT SEE DETAIL 2

+40 23 (75.46')

MATCHLINE -L- STA. 15+80.000 SEE SHEET U0-5

MATCH -Y3- STA. 10+80.000 SEE SHEET U0-10

-BY3-43 PINC 8+02.027
-Y3- POC 10+67.216 (3.091 LT.)

PROP U/G GAS LINE

ABANDON TELEPHONE

EXISTING R/W

REMOVE

+55

PROP. R/W

DONALD WINSTEAD & KAREN K.
DB 9365 PAGE 975

CLASS 'B' RIP RAP 0.9 MTN 4.2m² F.F.

+25 -L- EXIST. R/W

PROP U/G CATV CABLES

-L- +48.133 (EX. R/W) 16 (52.49')

S 73°37'37" W 30.175

S 35°07'55" E

DONALD WINSTEAD & KAREN K.
DB 9365 PAGE 975

4J36

BEGIN WW FENCE +76.535 42.708 (140.12') BEGIN C/A

PROPOSED 450mm C&G

ABANDON TELEPHONE

90° UNIFORM TRANSITION LT. TURN LANE

STANDARD BERM DITCH -L- 11+60 TO 13+40 RT

-L- TS 12+60.524

MATCHLINE -L- STA. 12+40.000 SEE SHEET U0-3

DONALD WINSTEAD & KAREN K.
DB 9365 PAGE 975

BEGIN WW FENCE +76.535 43.999 (144.35') BEGIN C/A

-L- POS 13+51.932
-Y3- POT 10+00.000

CHARLES B. SHEARON & JULIA O
DB 10591 PAGE 843
BM 1988, PAGE 971

NEIL A. FLYOD & MELANIE A.
DB 6729 PAGE 525
BM 1988 PAGE 971

PROP U/G TEL CABLES

PROP O/H POW & CTV LINES

EXISTING R/W (VARIABLE)

PROPOSED U/G POWER

REMOVE CONC. DITCH

1800 mm CONC. RETAIN CONC. DITCH

ADJUST FILL SLOPE TO RETAIN CONC. DITCH

13+58.772 411.0007 (134.54')

-Y3A- PT 11+17.711

-BL-101 PINC 8+61.386 =
-BY1- POT 5+00.000 =
-BY3- PINC 7+18.112
-L- POC 13+60.253 (15.146 RT.)

-L- POC 13+64.155
-Y3A- POT 11+88.630

-L- SC 13+56.524

-BY3-41 PINC 6+41.702
-Y3A- POC 11+01.372 (5.289 LT.)

BEGIN CONSTRUCTION -Y3A- 11+00.00

-Y3A- PC 10+46.489

-BY3-42 POT 5+00.000

-BL-103 PINC 10+12.143
-L- POC 15+20.053 (27.428 RT.)

-BL-102 PINC 9+73.244
-L- POC 14+78.226 (27.521 RT.)

+56.300 31 (101.71') CLASS B RIP RAP 1.8m MTN 5.9m² F.F.

+40 30 (98.42')

CLASS B RIP RAP 1.8m MTN 5.9m² F.F.

+70 37 (121.39') & 49 (160.76')

JOHN WALTER ROLLS, JR & IRIS DALTON
DB 8238 PAGE 1571
BM 1997 PAGE 1427

0.6m BASE HEAD DITCH EST DDE=15m³ SEE DETAIL 4

+00 23 (75.46') & 35 (114.83')

STANDARD BERM DITCH -L- 14+20 TO 15+00 RT

-L- +60 30 (98.43')

-L- +30 30 (98.43')

-L- +18.774 (EX.R/W) 23 (75.46') & 30 (98.43')

-L- 14+08.642 25.585 (83.94')

+18.199 (-Y3A-) EXIST. R/W

10+02.046 10.682 (35.05')

-Y3A- POT 10+00.000

+72.951 10.143 (33.28')

DENOTES PAINT STRIPING

DENOTES PAVEMENT REMOVAL

DENOTES UPGRADING EXIST. TRAFFIC SIGNAL

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 22, 25 & 26 FOR PROFILES

REVISIONS	8/17/98

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-5
UTILITIES BY OTHERS	

METRIC

5 0 10

CONST.REV.

R /W REV. 3/01/06

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

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

NO UTILITY RELOCATION ON THIS SHEET

NAD 83

MATCHLINE SEE SHEET U0-11

MATCHLINE SEE SHEET U0-11

MATCHLINE -L- STA. 15+80.000 SEE SHEET U0-4

MATCHLINE -L- 19+20.000 SEE SHEET U0-6

2 CAROLINA PRINCESS LLC DB 08693 PAGE 1799

2 CAROLINA PRINCESS LLC DB 08693 PAGE 1799

73 CLM ASSOCIATES LLC DB 8050 PAGE 875

73 CLM ASSOCIATES LLC DB 8050 PAGE 875

72 JOHN W. ROLLS, SR & PRISCILLA BENNETT ROLLS DB 10310 PAGE 897 BM 1997 PAGE 1427

4 PAUL C. GOLDSMITH & JILL F. GOLDSMITH DB 4991 PAGE 938 BM 1991 PAGE 796

BRENDA L. HIGGINS DB 5575 PAGE 446 BM 1991 PAGE 796

ROY E. BENNETT & WALTRAUD BENNETT DB 6304 PAGE 756 BM 1991 PAGE 796

ROBERT G. LARRISON, JR & KATRINA LARRISON DB 5516 PAGE 269 BM 1991 PAGE 796

-L- CS 17+04.318

-L- ST 17+68.318

-L- TS 19+02.549

16+00 17+00 18+00 19+00

+00 30 (98.42')

+80 40 (131.23')

+00 48 (157.48')

+40 50 (164.04')

+90 23 (75.46') & 32 (104.99')

+60 25 (82.02')

+40 25 (82.02')

+69 23 (75.46') & 28 (91.86')

+69 26 (85.30')

+77 23 (75.46') & 28 (91.86')

+77 27 (88.58')

+20 33 (108.27')

30m UNIFORM TRANSITION LT.TURN LANE

18+40.000 18+70.000

PSH B = 1.2 m

LATERAL 0.9m BASE DITCH W/ 1.5m BERM W/ CLASS B RIP RAP 91.2m MTN 250.5m² F.F EST. DDE= 553m³ -L- 16+42 TO 17+00 LT SEE DETAIL 7

LATERAL V DITCH W/ 1.5m BERM W/ CLASS B RIP RAP 91.6 MTN 274.9m² F.F. EST. DDE= 362m³ -L- 17+00 TO 17+80 LT SEE DETAIL 5

CLASS B RIP RAP 7.3mTN 17.6m F.F 46

Woods

N 21°33'29" W 65.84

N 19°59'21" W 134.23

PROPOSED G/R

GRAU-350 8:1 TAPER

PROP. R/W

48

375

-L- S 19°59'21.8" E

PROP. 450mm C&G

49 DI

47

CB

375

2GIW/ FLAT GRADE

43

400 CSP W/ ELBOWS CHORD

750 CLASS IV W/ METHOD B INSTALLATION

PROPOSED G/R

GRAU-350 8:1 TAPER

+70 BEGIN PROPOSED SHOULDER BERM GUTTER

CAT-1 8:1 TAPER

12.0m TYP.

+92.36

+00 END PROPOSED SHOULDER BERM GUTTER +00

END SHOULDER BERM GUTTER +00

S 15°49'53" E 83.309

S 15°49'44" E 61.056

S 15°53'54" E 55.730

S 15°48' 39.623

SPECIAL DITCH -L- 18+80 TO 19+20 RT SEE PROFILE FOR GRADE SEE DETAIL 2

2GI

50

12.0 TYP.

PROP. R/W

PL CORNER

PL CORNER

PL CORNER

18+38.000

18+68.000

30m UNIFORM TRANSITION RT.TURN LANE

2200 mm WD

40 2GI FS

PROP. R/W

N 36°41'26" W 55.33

+40 25 (82.02') BEGIN SHOULDER BERM GUTTER +70

+00 23 (75.46') 25 (82.02')

41

CLASS B RIP RAP 1.8mTN 5.9m² F.F.

0.6m BASE HEAD DITCH EST DDE=15m³ SEE DETAIL 4

+85 38 (124.67') & 49 (160.76')

S 45°55'53" W 102.23

42

44

CLASS B RIP RAP 2.7 MTN 8.4m² F.F.

+65 23 (75.46') & 30 (98.42')

+20 35 (114.83')

LATERAL V DITCH W/ 1.5m BERM EST. DDE=170m3 -L- 16+70 TO 17+33 RT SEE DETAIL 6

16+96.488 21.989 (72.14')

45

INV. 10.65

+40 40 (131.23')

CLASS 'B' RIP RAP EST +/-7 MTN 30.0m² F.F

0.6m BASE HEAD DITCH-CLEANOUT SEE DETAIL 4 EST DDE= 39m³

+60 PL R/W & 40 (131.23')

16+80.000 17+70.000

90.0m UNIFORM TRANSITION (LT LN)

N 68°18'54" E 135.996 TOTAL

N 68°06'33" E 121.226

N 71°18'09" E 123.178

N 73°09'34" E 123.628

-BL-104 PINC 10+85.053
-L- POC 15+98.595 (28.044 RT.)

-BL-105 PINC 11+40.303
-L- POC 16+57.958 (26.347 RT.)

-BL-106 PINC 12+00.080
-L- POS 17+21.859 (25.826 RT.)

-BL-107 PINC 12+60.068
-L- POT 17+82.882 (23.453 RT.)

-BL-108 PINC 13+23.038
-L- POT 18+45.692 (27.924 RT.)

-BL-109 PINC 13+83.446
-L- POS 19+06.062 (29.944 RT.)

-L-

PIs = 13+24.573	PI = 15+42.601	PIs = 17+25.665
Θs = 6° 57' 45.1"	Δ = 50° 26' 54.7" (RT)	Θs = 4° 38' 30.1"
Ls = 96.0	L = 347.7947	Ls = 64.0
LT = 64.0496	T = 186.0773	LT = 42.6813
ST = 32.0451	R = 395.000	ST = 21.3467
	SE = 0.08	
	$V_{DES.}$ = 100 KPH	

-L-

PIs = 19+66.599	PI = 20+80.202	
Θs = 6° 57' 45.1"	Δ = 23° 21' 32.3" (LT)	
Ls = 96.0	L = 161.0380	
LT = 64.0496	T = 81.6531	
ST = 32.0451	R = 395.000	
	SE = 0.08	
	$V_{DES.}$ = 100 KPH	

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 22 FOR PROFILE

10/25/98

$$USERNAME$$

REVISIONS	8/17/99

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-6
UTILITIES BY OTHERS	

METRIC

5 0 10

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9461

CONST.REV.

R/W REV. 5/3/06

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

10/26/98

MATCHLINE -L- STA. 19+20.000 SEE SHEET U0-5

MATCHLINE -Y2- 23+00.000 SEE SHEET U0-17

MATCHLINE -Y2- 21+00.000 SEE SHEET U0-16

MATCHLINE -L- STA. 22+60.000 SEE SHEET U0-7

NAD 83

CLM ASSOCIATES LLC
DB 8050 PAGE 875

JUDITH U. GOULD
DB 8489 PAGE 2429

CAROLINA PRINCESS LLC
DB 08748 PAGE 2595

SANDLER at WAKEFIELD, LLC.
CEDAR GROVE, PHASE I
DB 11700, PG0005
BM 2005, PG0858

ROBERT G. LARRISON JR & KATRINA LARRISON
DB 5516 PAGE 269
BM 1991 PAGE 796

JUDITH M. POWERY
DB 5274 PAGE 543
BM 1991 PAGE 796

-BL-110 PINC
Sta.14+43.921
-L- POS
Sta.19+64.932
(31.650 RT.)
-BL-111 PINC 15+08.886 =
-BY2- PINC 7+59.241
-BY2A- PINC 13+74.270
-L- POC 20+25.594 (31.206 RT.)

-BY2-29 PINC 7+39.116
-Y2- POT Sta.21+07.995 (14.847 LT.)

-BY2-30 PINC 9+00.305
-Y2- POT 22+66.662 (10.961 RT.)

-BL-112 PINC 16+10.618
-L- POC 21+17.699
(5.834 LT.)

-BL-113 PINC 17+10.155
-L- POS 22+18.747 (6.889 LT.)

-L- POC 20+40.313
-Y2- POT 21+58.692

-L- CS 21+59.587
PL 36.823 (120.81')

-L- ST 22+55.587
PL 47.451 (155.68')

-Y2-
PIs = 20+25.072
Θs = 4° 00' 38.5"
Ls = 84.0
LT = 56.0144
ST = 28.0131

PIs = 19+66.599
Θs = 6° 57' 45.1"
Ls = 96.0
LT = 64.0496
ST = 32.0451

-L-
PI = 20+80.202
Δ = 23° 21' 32.3" (LT)
L = 161.0380
T = 81.6531
R = 395.000
SE = 0.08
$V_{DES.}$ = 100 KPH

PIs = 21+91.632
Θs = 6° 57' 45.1"
Ls = 96.0
LT = 64.0496
ST = 32.0451

DENOTES 125mm MONOLITHIC CONC. ISLANDS

DENOTES PAINT STRIPING

DENOTES PAVEMENT REMOVAL

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEETS 23 & 30 FOR PROFILES

*****SYSTIME*****
*****PROJECT*****
*****DESIGN*****
*****DRAWN*****
*****CHECK*****
*****QUANTITY*****
*****REVISION*****
*****SEAL*****
*****SUBMITTED*****
*****DATE*****
*****SIGNATURE*****
*****DOCUMENT*****
*****NOTES*****

REVISIONS	
8/17/99	
10/26/98	

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-7
UTILITIES BY OTHERS	

METRIC

5 0 10

CONST.REV.

R /W REV. 5/3/06

Municipal Services Engineering Company, P.A.
P.O. BOX 37 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-5481

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

NAD 83

MATCHLINE -L-STA. 22+60.000 SHEET U0-6

MATCHLINE -L-STA. 26+00.000 SHEET U0-8

NORTH HILLS PROPERTIES & NORTH HILLS PROPERTIES DB 3021 PAGE 304 DB 3021 PAGE 304

CHUNG HYUN YOO & OK JA YOO DB 5552 PAGE 830 BM 1988 PAGE 842

RONALD O. WILLIAMS & GRACE E. WILLIAMS DB 6422 PAGE 807 BM 1988 PAGE 842

RANDOLPH S. GUARD & ERIN O. GUARD DB 7010 PAGE 448 BM 1989 PAGE 633

ALTON V. SHEFFIELD & IRIS M. SHEFFIELD DB 4552 PAGE 508 BM 1989 PAGE 633

CAROLINA PRINCESS LLC DB 08748 PAGE 2595

JUDITH U. GOULD DB 8489 PAGE 2429

-BL-114 PINC 18+21.985 -L- POT 23+30.686 (8.9953 LT.)

-BL-115 PINC 18+78.071 -L- POT 23+86.728 (6.764 LT.)

-BL-116 PINC 19+53.227 -L- POT 24+61.845 (4.347 LT.)

-BL-117 PINC 20+65.653 -L- POT 25+74.271 (4.320 LT.)

24+57.498 62.949 (206.53')

PROP O/H POW LINES

CLASS B RIP RAP 2.7 MTN 8.4m² F.F. INV. 106.8

LATERAL 0.9m BASE DITCH W/ CLASS B RIP RAP 120.6 MTN 311.7m² F.F. -L- 23+00 TO 23+60 LT SEE DETAIL 8

LATERAL V DITCH W/ CLASS B RIP RAP 47.4 MTN 129.1m² F.F. -L- 23+60 TO 23+90 LT SEE DETAIL 1

0.6m BASE HEAD DITCH SEE DETAIL 4 EST DDE= 8m³

LATERAL V-DITCH W/ 1.5m BERM W/ CLASS B RIP RAP 84.7 MTN 206.2m² F.F. EST. DDE= 15m³ -L- 24+60 TO 25+20 LT SEE DETAIL 5

LATERAL V-DITCH W/ 1.5m BERM -L- 25+80 TO 28+20 LT SEE DETAIL 6

PROPOSED EARTH BERM SLOPE STAKES LIMITS

90.0m UNIFORM TRANSITION (LT LN'S)

HEADWALL INV. 104.9

900

2GI FS 1.2 PS

TOP 104.5 INV. 103.43

R/W VARIES

PROP. 450mm C&G

-L- S 57° 16' 24.3" E

8:1 TAPER GRAU-350

PROPOSED G/R

BEGIN PROPOSED +40 SHOULDER BERM GUTTER

CLASS B RIP RAP EST +/- 2.7 MTN 8.4m² F.F.

SANDLER at WAKEFIELD, LLC. CEDAR GROVE, PHASE I DB 11700, PG0005 BM 2005, PG0858

SANDLER at WAKEFIELD LLC DB 8363 PG1444 BM 2005 PG0858

Woods

SOIL

28I 400 CSP W/ 2 ELB.S CAT-1

CLASS I RIP RAP 13.6 MTN 25.1m² F.F.

TOE PROTECTION CLASS B RIP RAP 36.1MTN 127.6m² F.F. -L- 23+60 TO 24+10 RT SEE DETAIL 9

CLASS B RIP RAP 1.8mTN 5.9m² F.F.

LATERAL V-DITCH W/ 1.5m BERM W/ CLASS B RIP RAP 22.9 MTN 68.7m² F.F. EST. DDE= 44m³ -L- 24+20 TO 24+40 RT SEE DETAIL 5

+40 END PROPOSED SHOULDER BERM GUTTER

EXISTING POE

EXISTING TCE

EXISTING R/W

CLASS B RIP RAP 2.7MTN 9.2m² F.F.

BLESSING HOUSE ST.

BASKETWEAVE DR.

AREA UNDER CONSTRUCTION

SEE SHEET 2-F FOR DITCH DETAILS

SEE SHEET 23 FOR PROFILE

REVISIONS	8/17/98

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-8

UTILITIES BY OTHERS

METRIC

5 0 10

CONST.REV.

R/W REV. 5/3/06

Municipal Engineering Services Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-3481

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

NAD 83

JAMES S. WRIGHT & LISA L. WRIGHT
DB 4943 PAGE 293
BM 1989 PAGE 633

JOHN I. WELDON III & PHYLLIS M. WELDON
DB 5847 PAGE 77
BM 1989 PAGE 633

BRETT P. ANDERSON & FLORENCE P. ANDERSON
DB 4837 PAGE 121
BM 1989 PAGE 633

STEPHEN C. GOULD & JUDITH M. GOULD
DB 4552 PAGE 514
BM 1990 PAGE 1192

LARRY D. BOAN & BEVERLY M. BOAN
DB 5213 PAGE 134
BM 1990 PAGE 1192

JEFFREY D. SHULTZ & NANCY M. SHULTZ
DB 5467 PAGE 676
BM 1990 PAGE 1192

SANDRA T. DUPONT & DANIEL G. DUPONT
DB 5488 PAGE 838
BM 1990 PAGE 1192

ROBERT L. PADGETT & MARTHA R. PADGETT
DB 5283 PAGE 721
BM 1990 PAGE 1192

LENWOOD V. LONG, SR & BARBARA H. LONG
DB 5089 PAGE 777
BM 1990 PAGE 1192

CURTIS M. PROUT & SHERI G. BURNAUGH
DB 5892 PAGE 669
BM 1990 PAGE 1192

-BL-118 PINC 21+23.102
-L- POT 26+31.720 (4.365 LT.)

-BL-119 PINC 22+27.555
-L- POT 27+36.162 (2.825 LT.)

-BL-120 PINC 23+65.251
-L- POT 28+73.806 (6.609 LT.)

-L- TS 29+37.468

26+00 | 27+00 | 28+00 | 29+00

26+03.668
74.149
(243.27')

LATERAL V-DITCH
W/ 1.5m BERM
-L- 25+80 TO 28+20 LT
EST. DDE= 343m³
SEE DETAIL 6

PROP O/H POW LINES

APPROXIMATE

PROPOSED EARTH BERM SLOPE STAKES LIMITS

PL CORNER

EXISTING R/W

PROP. R/W

INV. 105.5

W/ ELBOWS

R/W VARIES

TOP 98.0 INV. 97.07

TOP 95.67 INV. 94.74

TOP 98.0 INV. 97J9

TOP 95.67 INV. 94.86

2GI-ED FS

2GI FS

EXISTING TCE

-L- S 57° 16' 24.3" E

PROP. 450mm C&G

+20 33 (108.27')

+60 33 (108.27')

+00 31 (101.71')

+40 28 (91.86')

+80 28 (91.86')

+40 34 (111.55')

+80 36 (118.11')

90 UNIFORM TRANSITION RT. TURN LANE

AREA UNDER CONSTRUCTION

BASKETWEAVE DR.

END WW FENCE

SANDLER at WAKEFIELD LLC
DB 8363 PG1444

NORMAN K. LEVEILLE & ANA MARIA
DB 11245 PAGE 255

MYRA G. BONNER
DB 11442 PAGE 150

SONYA S. BANKSTON
DB 11206 PAGE 291

NELIDA CORDOVA
DB 11323 PAGE 2287

DARRELL E. WILLIAMS, ET AL
DB 11196 PAGE 1613

SANDLER WAKEFIELD

23 (75.36')
END CURB
29.5cm ACCESS LOCATION

ENTRANCE SIGN

14A

-L-
PIs = 29+80.149
Θs = 4° 38' 30.1"
Ls = 64.0
LT = 42.6813
ST = 21.3467

PI = 30+72.330
Δ = 20° 20' 27.8" (LT)
L = 140.2322
T = 70.8619
R = 395.000
SE = 0.08
VDES. = 100 KPH

MATCHLINE -L- STA. 26+00.00
SHEET U0-7

MATCHLINE -L- STA. 29+40.00
SHEET U0-9

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 24 FOR PROFILE

10/25/06

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-9
UTILITIES BY OTHERS	

METRIC 5 0 10

CONST.REV.

R /W REV. 5/3/06

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 369 BOONE, N.C. 28607 (828) 262-1761
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9811

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

NAD 83

THOMAS R. AYRES & BROOK AYRES DB 5849 PAGE 162 BM 1990 PAGE 1192

DAVID G. STUERWALD & CAROL A. STUERWALD DB 5068 PAGE 442 BM 1990 PAGE 1192

STEPHEN C. GOULD & JUDITH M. GOULD DB 4552 PAGE 514 BM 1990 PAGE 1192

PADDY B. SHETLEY & PAMELA S. MICHAEL DB 6021 PAGE 835 BM 1990 PAGE 1192

MICHAEL PUSZCZYNSKI & ANN V. PUSZCZYNSKI BM 1990 PAGE 1192

RONALD ZOPPO & VALERIE ZOPPO DB 4552 PAGE 514 BM 1990 PAGE 1192

NC DOT DB 1913 PAGE 1192 BM 1990 PAGE 1192

TOURNAMENT PLAYERS CLUB OF RALEIGH, LLC DB 9349 PG 10 BM 2000 PG 2220

NORTH HILLS PROPERTIES DB 3021 PAGE 304 BM 1994 PAGE 1621

20' TOWN OF WAKE FOREST SEWER EASEMENT BM 1990 PAGE 1103 BM 1994 PAGE 1621

MATCHLINE -L- STA. 29+40.00 SHEET U0-8

-BL-121 PINC 24+65.750
-L- POS 29+74.402 (4.262 LT.)
-L- POS Sta. 29+51.580
-Y9- POT Sta. 10+00.000
-L- SC 30+01.468
-BL-122 PINC 25+63.431
-L- POC 30+73.694 (7.568 LT.)
-BL-123 PINC 26+23.499
-L- POC 31+35.001 (7.637 LT.)
-L- ST 32+05.700
-BL-124 PINC 27+33.948
-L- POT 32+45.928 (1.286 LT.)
-L- 32+80.000 END CONSTRUCTION END RESUF.

PL CORNER
PROP O/H POW. LINES
PROP. 450mm C&G
PROPOSED EARTH BERM SLOPE STAKES LIMITS
PROPOSED NOISE WALL
SEE DETAIL SHT.2-H
60.0 UNIFORM TRANSITION LT.TURN LN.
TO 90.37 INV. 89.80
SPECIAL DITCH -L- 30+80 TO 31+20 LT SEE PROFILE FOR GRADE SEE DETAIL 2
-L- POC 31+00.000 END GRADING BEGIN FINE GRADING
+42.000 END PROP. 450mm C&G BEGIN 125mm MONO. ISLAND
TOP 92.28 INV. 89.66
TOP 91.85 INV. 91.00
BEGIN WW FENCE
29.53m ACCESS LOCATION
BEG. PROP. 750mm C&G -Y9- 10+60.000 LT & RT
END PROP. 750mm C&G -Y9- 10+70.000 LT & RT
END CONSTRUCTION -Y1A- 10+80.000
(R-2809B) 30+87.423 34.191 (112.17') END FULL C/A (R-2809A) END WW FENCE (R-2809A)
(R-2809B) +82.845 (-Y2-) 72.754 (238.70')
(R-2809B) +00 48 (157.48')
(R-2809B) +80 41 (134.51')
(R-2809B) +30.000 57.000 (187.01')
(R-2809B) +17.151 PL 48.750 (159.94')
(R-2809B) +50.849 PL 51.975 (170.52')
(R-2809B) +83.089 PL 34.288 (112.49')
(R-2809B) +90.389 40.207 (131.91')
36.506 (119.77') (R-2809B) +47.375 PL CORNER
36.506 (119.77') PROPOSED NOISE WALL SEE DETAIL SHT.2-H
TIE TO GUARDRAIL PLACED UNDER R-2809B (LT.& RT.)
GUARDRAIL PLACED UNDER PROJECT R-2809B
CONSTRUCTED UNDER PROJECT R-2809B
EXISTING GUARDRAIL
EXISTING ISLAND
EXISTING 450 CURB & GUTTER
SHLD. BERM GUTTER
EXISTING R/W
EXISTING POE
EXISTING TDE
R-2809B GRADING LIMITS
BEGIN SHOULDER BERM GUTTER +30 CAT-1
-L- CS 31+41.700
-L- 31+90 BEGIN SHOULDER BERM GUTTER
TOP 90.85 INV. 89.24
TOP 90.65 INV. 89.31
2' FLAT GRATE
ABANDON U/G TELEPHONE
REMOVE EXISTING GUARDRAIL BARRICADE
CONNECT TO EXISTING O/H POWER POLE
JB W/ MH
2SBKD
G
CONC
3 CHECK DAMS SEE DETAIL SHT.#2-G
CLASS B RIP RAP 1.8 MTN 5.9m² F.F.
CLASS B RIP RAP 7.3m MTN 17.6m² F.F.
CLASS I RIP RAP 9.1 MTN 19.1m F.F.
LATERAL 0.9m BASE DITCH w/ CLASS B RIP RAP 62.9 MTN 172.8m² F.F. EST DDE = 385m³ -L- 31+00TO 31+40 LT SEE DETAIL 7
60.0 UNIFORM TRANSITION LT.TURN LANE
140.0 UNIFORM TRANSITION
30:1 UNIFORM TRANSITION LT.TURN LN.
8:1 TAPER
GRAU-350
400-CS
2@ 2.1 x 1.8 RCBC
200 mm P.V.C.
(R-2809B) +73 25 (82.02') (R-2809B) +40 24.985 PL (81.20')
(R-2809B) +76 37 (121.39') (R-2809B) +94 54.000 (177.17')
(R-2809B) +40.000 47.000 (154.20') (R-2809B) +40 61 (200.13')
(R-2809B) +24 61 (200.13')
(R-2809B) +02 64 (209.97') +20 71 (232.94')
(R-2809B) +80 41 (134.51')
(R-2809B) +98.323 PL 60.922 (199.88')
(R-2809B) +03 61 (200.13')
(R-2809B) +80 23.000 (75.46') +45 32 (104.99') (R-2809B) +80 38 (124.67')
(R-2809B) +41.700 23 (75.46') END FULL C/A (R-2809A) END WW FENCE (R-2809A)
+93 23 (75.46') & 30 (98.42')
+80 25 (82.02')
+30 32 (104.98')
+00 34 (111.55')
+20 35 (114.83')
(R-2809B) +07 23 (75.46') & 27 (88.58')
(R-2809B) +97 23 (75.46') & 27 (88.58')
(R-2809B) +40 26 (85.30')
(R-2809B) +20 30 (98.42')
+67 23 (75.46') BEGIN C/A
+90 37 (121.39')
+60 37 (121.39')
+01.468 23 (75.46')
+30.000
Pls = 29+80.149 Øs = 4° 38' 30.1" Ls = 64.0 LT = 42.6813 ST = 21.3467
PI = 30+72.330 Δ = 20° 20' 27.8" (LT) L = 140.2322 T = 70.8619 R = 395.000 SE = 0.08 VDES. = 100 KPH
Pls = 31+63.047 Øs = 4° 38' 30.1" Ls = 64.0 LT = 42.6813 ST = 21.3467

PERMITTED UNDER R-2809B
END STATE PROJECT R-2809A
STA. 32+40.00

DENOTES IMPACT BUFFER ZONE 1
DENOTES IMPACT BUFFER ZONE 2
DENOTES PAINT STRIPING

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 2-G FOR CHECK DAM DETAIL
SEE SHEET 24 FOR PROFILE

10/25/2006
USERNAME

10/26/98

REVISIONS	8/17/99

-Y3-
PI = 10+52.324
Δ = 5° 51' 39.5" (LT)
L = 40.9174
T = 20.4765
R = 400.000
SE = RC
$V_{DES.}$ = 30 KPH

-Y1-
PI = 10+96.735
Δ = 32° 23' 19.6" (RT)
L = 76.3143
T = 39.2068
R = 135.000
SE = 0.03
$V_{DES.}$ = 30 KPH

PI = 13+43.392
Δ = 30° 33' 24.3" (LT)
L = 213.3264
T = 109.2654
R = 400.000
SE = 0.08
$V_{DES.}$ = 80 KPH

PRISCILLA B. ROLLS,
VIRGINIA ROLLS
DB 09231 PAGE 1049
BM 1997 PAGE 62

AVERAGE DAILY TRAFFIC (IN HUNDREDS) 2000 2025
SR 1923 THOMPSON MILL RD.
DURHAM RD.
CONNECTOR

NAD 83

METRIC

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-10
UTILITIES BY OTHERS	

Municipal Services / Engineering Company, P.A.
P.O. BOX 97, GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 348 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

CONST.REV.
R /W REV. 5/3/06

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

DENOTES MITIGABLE IMPACT BUFFER ZONE 1
DENOTES MITIGABLE IMPACT BUFFER ZONE 2
DENOTES FILL IN SURFACE WATER

-Y3- POT 12+48.733
-BY3-44 POT 9+59.876
-Y3- POT 12+25.098 (4.978 LT.)

BEGIN CONSTRUCTION -Y3- 11+80.00
EXISTING R/W
N 2° 25' 30.2" W
N 85°32'02" W EIP 96.732
CAMILLE E. WINSTON
DB 4829 PAGE 83
BM 1989 PAGE 1241
CLASS B RIP RAP EST 2.7 MTN 8.4m² F.F.
RETAIN
PROP. UTG PEDESTAL
PROP. UTG TEL CABLE
PROP. UTG POWER
PROPOSED O/H POWER
ABANDON UTG TEL CABLE
ABANDON UTG POWER
ABANDON TELEPHONE
TRANSFORMER
COLLAR & EXT. W/ 750
LATERAL V-DITCH W/1.5m BERM W/ CLASS B RIP RAP 33.2 MTN 99.6m² F.F EST. DDE = 14m³ -Y3- 11+40 TO 11+69 LT SEE DETAIL 5
20 TAPER LT & RT.
-Y3- POT 11+19.931
-Y1- POT 10+00.000
END WW FENCE +00 12.471 (40.92') END C/A
DONALD WINSTEAD & KAREN K. DB 9365 PAGE 975
30
N 86°39'29" W 62.148
S 26°15'39" W 271.21
S 20°19'45" W 14.920
S 26°15'39" W 240.36
S 2°38'15" W 26.390
S 26°53'18" W 34.622
S 25°53'37" W 882.41m
-Y3- +78.628 22 (72.18')
-Y3- +86 8.127 (126.66')
-Y3- +81 22 (72.18')
-Y3- +75.869 8.357 (27.42')
-Y3- +72.507 22 (72.18')
-Y1- +19.666 34.953 (114.68')
-Y1- +27.419 36.925 (121.15')
CLASS I RIP RAP 8.6 MTN 23.2m² F.F. (ON BANKS ONLY) SEE DETAIL #13
-Y1- +29.944 21 (68.58')
-Y1- +40 28 (91.86')
+69.776 8.495 (27.87') (EX R/W)
+40 9.169 (30.08')
+20 9 (29.53')
-Y1- +26.268 (5+29.53')
-Y1- +34.523 9 (29.53')
+53.020 60 TYP.
+45 20 (65.62')
+00 40.000 (131.23') 11.000 (36.09ft.)
+20 9 (29.53')
+99.432 8.0 TYP.
+00.000 (EXIST.R/W) 10.075 (33.05ft.) END C/A END WW FENCE
CLASS B RIP RAP 4.5 MTN 13.4m² F.F.
+30.000 9.000 (29.53ft.)
+20.000 9.000 (29.53')
+00 16 (52.49')
+80 12 (39.37')
-Y1- PC 10+57.529 9 (29.53')
-Y1- PT 11+33.843 9 (29.53') 16 (52.49')
+00 17 (55.77')
+33.843 9 (29.53')
+57.529 9.000 (29.53')
+80 PROP. PDE
+95 9 (29.53') & 12 (39.37')
+50 20 (65.62')
+05.629 12 (39.37')
-Y3- +40 (EX.R/W) 9.124 (29.93')
-Y3- +36.095 12 (39.37')
-Y3- +70 18 (59.055')
-Y3- +70 18 (59.06')
-Y3- +60 20 (65.62')
-Y3- +80 10.029 (32.91')
INV. 93.16
SITE
11+00
12+00
13+00
PRISCILLA B. ROLLS, VIRGINIA ROLLS DB 09231 PAGE 1049 BM 2005 PAGE 333
IA
IB
IC
ID
IE
PRISCILLA B. ROLLS, VIRGINIA ROLLS DB 09231 PAGE 1049 BM 1997 PAGE 62 (NO CLAIM)
I
S 56°37'21" E 86.868m
W 22°25'25" S 28.497m
EIP
S 11°03'51" W 26.903m
S 25°41'25" E 17.861m
S 13°38'49" E 35.518m
465.843
+75.469
8.0 TYP.
PROPOSED DURHAM ROAD ACCESS
S 51° 27' 09.8" E
+59.210 15.244 (50.01')
+47.738 (EXIST R/W) 9 (29.53')
0.188 EIP TO R/W
0.044 EIP TO R/W
ARC
CLASS I RIP RAP 3.6 MTN 10.0m F.F.
EXISTING R/W (VARIABLE)
PROPOSED GUARDRAIL
GRAU-350
INV. 100.29
ECM
+08.772 15 (49.21')
+18.346 (EXIST R/W) 9 (29.53')
TOE PROTECTION CLASS B RIP RAP 28.9 MTN 102.1m² F.F. STA. 12+60 TO 13+00 -Y1- RT SEE DETAIL 9
ABANDON TELEPHONE
RETAIN
CONC
14 BST
12 BST
MATCHLINE SEE SHEET UO-4
MATCHLINE -Y3- STA. 10+90.000 SHEET UO-4
MATCHLINE -Y1- STA. 13+00.000 SHEET UO-11

DENOTES PAVEMENT REMOVAL

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 26 FOR PROFILES

PROJECT REFERENCE NO.
SHEET NO.
R-2809A
UO-11
UTILITIES BY OTHERS
METRIC
Municipal Services
Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481
NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS
CONST. REV.
R/W REV. 5/3/06
REVISIONS
-Y1-
PI = 13+43.392
Δ = 30° 33' 24.3" (LT)
L = 213.3264
T = 109.2654
R = 400.000
SE = 0.08
VDES. = 80 KPH
PI = 16+60.181
Δ = 32° 21' 33.9" (RT)
L = 110.132
T = 56.578
R = 195.000
SE = 0.06
VDES. = 65 KPH
S 56°37'21" E 86.868m
S 75°28'22" E 126.492m
N 65°33'34" E 62.301m
S 48°39 41.111m
EIP
EIR
NAD 83
PRISCILLA B. ROLLS, VIRGINIA ROLLS
DB 09231 PAGE 1049
BM 1997 PAGE 62
(NO CLAIM)
1
13+00
14+00
15+00
16+00
+85.947
57.961 (190.16')
+58.493
51.347 (168.46')
ECM
0.256
ECM TO EIP
EXISTING R/W (VARIABLE)
-Y1- PC 16+03.603
-Y1- PT 14+47.453
EXISTING GUARDRAIL TO BE REMOVED
INV. 92.74
900 mm CMP
CLASS I RIP RAP
6.4 MTN 14.2m² F.F
103
INV. 96.30
800 CS W/ELB.
INV. 97.21
750 mm CMP
102
PROPOSED G/R
ABANDON TELEPHONE
PROPOSED G/R
RETAIN 1800 mm CONC
MTL
GRAU-350
-Y1- S 82° 00' 34.1" E
S 82° 25' 00.4" E
1.0 BST
1.4 BST
7.3 BST
DURHAM RD
1800 mm CONC
RETAIN
EXIST. HW
INV. 95.28
TOE PROTECTION
-Y1- 16+30 TO 17+20
RT SEE DETAIL 9
MATCHLINE -Y1- STA. 16+40.000
SHEET UO-12
MATCHLINE -Y3- STA. 13+00.000
SHEET UO-10
INV. 101.65
1.8 HW
RETAIN
+58.242
30.441 (99.87'
-BY1-2- PINC 8+45.990
-Y1- POC 13+97.032 (10.305 RT.)
2
CAROLINA PRINCESS LLC
DB 08693 PAGE 1799
MATCHLINE SEE SHEET UO-5
DENOTES PAVEMENT REMOVAL
SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 27 FOR PROFILE

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-12
UTILITIES BY OTHERS	

METRIC

5 0 10

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 369 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

CONST.REV.

R /W REV. 5/3/06

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

NAD 83

PATRICK W. CHAMBERLAIN & LESLIE L. CHAMBERLAIN

MATCHLINE -Y2- STA 28+20.000
SHEET U0-18

BRYAN T. KENNEDY
CAROLYN B. KENNEDY
DB 3159 PAGE 607
BM 1980 PAGE 588

PAUL H. GRUVER
& JUDY H. GRUVER
DB 5712 PAGE 635
BM 1980 PAGE 588

WESLEY BROWN &
PATRICIA
DB 7483 PAGE 889
BM 1980 PAGE 588

JOHN R. BENNETT III
DB 7419 PG 732
BM 1998 PG 219

CLM ASSOCIATES LLC
DB 8050 PAGE 875

CAROLINA PRINCESS LLC
DB 08693 PAGE 1799

-Y1-
PI = 16+60.181
Δ = 32° 21' 33.9" (RT)
L = 110.132
T = 56.578
R = 195.000
SE = 0.06

-Y1- POT 11+65.572
-BY1-38 PINC 13+25.384
-Y2- POC 27+90.594
(14.885 LT.)
-BY1-39 PINC 11+86.686
-Y1- POT 17+17.880
(45.598 LT.)
-Y1- 16+16.961
68.533 (224.85')
-BY1-40 PINC 10+92.089
-Y1- POC 16+42.519
(1.459 RT.)
-Y1- PT 17+13.735
-Y2- POS 26+44.719
-Y1- POT 18+25.802
-Y2- POC 28+02.522
-Y1A- POT 10+00.000
-Y2- SC 27+31.947
-BY2-33 POT 13+41.950
-Y2- POS 27+02.815 (32.947 RT)
-Y1- POT 19+07.423
-Y2- TS 26+35.947

-Y2-
PIs = 26+99.995
Θs = 6° 52' 31.8"
Ls = 96.0
LT = 64.0483
ST = 32.0440
PI = 28+00.467
Δ = 19° 26' 27.6" (RT)
L = 135.7238
T = 68.5206
R = 400.000
SE = 0.04
Vdes.= 80 KPH
PIs = 28+99.714
Θs = 6° 52' 31.8"
Ls = 96.0
LT = 64.0483
ST = 32.0440

-Y1A-
SR 1916 FAWN DR
60 BST

-Y1-
STA 16+00
STA 17+00
STA 18+00
STA 19+00

-Y2-
STA 27+00
STA 26+00

-BY1-38 PINC 13+25.384
-Y2- POC 27+90.594
(14.885 LT.)

-BY1-39 PINC 11+86.686
-Y1- POT 17+17.880
(45.598 LT.)

-BY1-40 PINC 10+92.089
-Y1- POC 16+42.519
(1.459 RT.)

-BY2-33 POT 13+41.950
-Y2- POS 27+02.815 (32.947 RT)

MATCHLINE -Y1- STA 16+40.000
SHEET U0-11

MATCHLINE -Y2- STA 26+00.000
SHEET U0-17

END CONSTRUCTION
-Y1A- 11+00.000

END CONSTRUCTION
-Y1- 18+80.000

ABANDON TELEPHONE

RETAIN COLLAR

REMOVE

RETAIN 450 mm CONC

RETAIN 600 mm CMP
INV. 100.9

RETAIN 600 mm CONC

RETAIN
INV. 98.2

CLASS B RIP RAP
2.7 MTN
8.4m² F.F.

CLASS B RIP RAP
2.7MTN
8.4 m² F.F.

CLASS B RIP RAP
1.8 MTN
5.9m² F.F.

CLASS B RIP RAP
2.7mTN 18.6m² F.F.

V-DITCH
W/ CLASS B
RIP RAP 78.6 MTN
235.7m² F.F.
EST. DDE= 38m³
SEE DETAIL 23

V-DITCH W/ CLASS B
RIP RAP 43.1MTN
129.2m² F.F
EST. DDE= 18m³
SEE DETAIL 23

0.6m BASE
HEAD DITCH
EST DDE= 15m³
SEE DETAIL 4

TOE PROTECTION
CLASS B RIP RAP
64.9 MTN 229.7m F.F
-Y1- 16+30 TO 17+20 LT
SEE DETAIL 9

TOE PROTECTION
STA 26+80 TO 27+20 -Y2- RT
CLASS B RIP RAP
28.9 MTN 102.1 m2 F.F.
SEE DETAIL 9

TURF REINFORCEMENT
MAT EST. 105.8m²
GRAU-350

DO NOT DISTURB

FILL HOLE
TO ELEV 173.85

GRADE EXISTING ROAD TO DRAIN

GRADE TO 28+40 @ 2% FOR WATERLINE PROFILE

COLLAR EXTENSION

ABANDON TELEPHONE

ABANDON DIP WATER

PROP U/G TEL CABLES

PROP O/H POWER LINES

PROPOSED G/R

EXISTING R/W (VARIABLE)

EXISTING R/W

PROPOSED R/W

S 49°39'00.2" E

S 48°45'56" E 411.48

S 48°45'56" E 110.870

N 48°44'28.9" W

S 48°44'28" E

N 41°06'39" E

S 49°38'59" E 82.26

N 48°45'28" W

S49°40'44"E 43.891

N40°19'53"E 26.371

AVERAGE DAILY TRAFFIC (IN HUNDREDS)

	2000	2025
DURHAM RD. NC 98 BUS	64	133
DURHAM RD.	4/20	4/19 60/114
CONNECTOR	4/20	4/19 L/l 60/114
FALL OF NEUSE RD. SR 2000	60/114	60/114

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEETS 27, 28 & 31 FOR PROFILES

DENOTES PAVEMENT REMOVAL

10/25/06
SYSTIME
DGN

REVISIONS	DATE

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-13

UTILITIES BY OTHERS

METRIC 5 0 10

CONST.REV.

R/W REV. 12/15/05

Municipal Services Engineering Company, P.A.
P.O. BOX 97, GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-3481

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

NAD 83

-Y2-
PIs = 11+32.560
Θs = 2° 40' 25.7"
Ls = 56.000
LT = 37.338
ST = 18.671
PI = 12+34.835
Δ = 15° 52' 00.1" (RT)
L = 166.156
T = 83.613
R = 600.000
SE = 0.07
$V_{DES.}$ = 80 KPH

N 21°10'56" E
96.305

5
JAMES J. SMITH & AGNES R.
DB 8267 PAGE 401
BM 1995 PAGE 740-741

6
THOMAS M. FLANAGAN & SUE
DB 11424 PAGE 1652
BM 1995 PAGE 740-741

9+00 | 10+00 | 11+00

BEGIN CONSTRUCTION
-Y2- 8+77.000

-Y2-
PI = 7+85.817
Δ = 19° 33' 16.0" (LT)
L = 92.380
T = 51.692
R = 300.000

-Y2- PT 9+36.504

-BY5-20 POT 5+00.000
-Y2- POT 9+94.355 (5.788 RT.)

BEGIN RESURF.
-Y2- 10+20.000

+00
10.772 (35.34') &
15 (49.21')

20 UNIFORM TRANSITION LT.& RT.
+20 | +40

+83.696
18.435 (60.48')
+75
15 (49.21')

375 mm CONC W/FES
TIE PROPOSED DITCH TO EXIST. DITCH
RETAIN
W/FES
EXIST. R/W
EXIST. 4" U/G GAS
10.7 BST

-Y2- TS 10+95.222
EXIST. R/W
25 (82.02')
+03.790
18.350 (60.20')
TIE PROPOSED DITCH TO EXIST. DITCH
+40
19 (62.34')
LATERAL V-DITCH -Y2- 11+06 TO 11+60 LT SEE DETAIL 2
+51.222
15 (49.21')

ASPHALT TRAIL TO BE REMOVED
-Y2- STA.8+71+/- TO 10+87 RT.
GRADE TO DRAIN

FALLS OF NEUSE RD. | SR2000
N 7° 41' 07.4" E

EXISTING R/W
RETAIN
375mm CONC
PROP. U/G GAS LINE
EXISTING SEWER
ABANDON GAS
REMOVE DI
REMOVE 2.4m
EXISTING ASPHALT TRAIL
EXIST. 2" U/G GAS
REMOVE
PROP. U/G TEL CABLES

REM.
PROP O/H POW LINES
EXISTING ASPHALT TRAIL
RETAIN DI
PROP. O/H POW LINES
PROP. O/H POW LINES
PROP. O/H POW LINES
PROP. O/H POW LINES
PROP. O/H POW LINES

+00.281
11.859 (38.91')
13.500 (44.29')
+20
15 (49.21')
+95.222
15 (49.21')
+91.358
13.500
(44.29')
+47.204
13.669
(44.85')
+51.222
16.500
(54.13')
TYP.

MATCHLINE -Y2- STA. 11+80.000
SHEET U0-14

-Y2- SC 11+51.222

ASPHALT TRAIL TO BE REMOVED -Y2- STA.10+99+/-RT. TO 13+06.5 LT.

UNDER CONSTRUCTION

CP&L POWERLINE EASEMENT

SCRUB

WESTFIELD HOMES OF THE CAROLINAS
DB 10534 PG 2282

CITY OF RALEIGH
DB 8209 PG 1497

S16°47'W 65.87
N25°23'5"W 105.481
80.772

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEET 28 FOR PROFILE

$$SYSTIME$$
$$DGN$$
$$USERNAME$$

REVISIONS	8/17/99

10/26/98

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-14
UTILITIES BY OTHERS	

METRIC

5 0 10

CONST.REV.

R /W REV. 12/15/05

Municipal Services Engineering Company, P.A.
P.O. BOX 97, GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 369, BOONE, N.C. 28607 (828) 262-1761
P.O. BOX 276, MOREHEAD CITY, N.C. 28557 (252) 726-9481

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

-BY5-23 PINC 9+62.369
-Y5- POC 11+79.693
(45.176 LT.)

NAD 83

CP&L POWERLINE EASEMENT

-BY5-22 PINC 8+61.419
-Y2- POS 13+40.084 (57.124 LT.)

-BY5-21 PINC 7+94.886
-Y2- POC 12+83.612 (28.507 LT.)

13+00

14+00

12+00

THOMAS M. FLANAGAN & SUE
DB 11424 PAGE 1652
BM 1995 PAGE 740-741
6

65
WAKEFIELD D2 INVESTMENT, LLC
DB 8706 PG 1682

ASPHALT TRAIL TO BE REMOVED UP TO -Y2- STA.13+06.500 LT.

PROP O/H POW LINES

1500 mm WD RAIL

EXISTING R/W

EXISTING ASPHALT TRAIL

GARDEN HILL DR

1500mm CONC

450mm C&G

ABANDON U/G ELECTRIC

ABANDON TELEPHONE

PROPOSED U/G TELEPHONE

+69.236
15 (49.21')

+00
25 (82.02')

+50
25 (82.02')

+13.340
15.207 (49.898')

+00
19.448 (63.80')

+87.821 (EX.R/W)
15.383 (50.47')

+93.653 (EX.R/W)
15 (49.21')

+36.378
9.0 TYP.

S 70°56'27" E
65.670 TO EP
65.899 TO R/W

R/W VARIES

REM.

-Y2-

-Y2- CS 13+17.378

-Y2- ST 13+73.378

+40
16.500 (54.13')

+80
18 (59.05')

+13.133
14.792 (48.53')

+69.229
15 (49.21')

+73.378
24 (78.74')

+00
24 (78.74')

+20
18 (59.05')

450mm C&G

1800mm BLK WALL

152.387
S68°26'39"E

MATCHLINE -Y2- STA. 11+80.000
SHEET UO-13

MATCHLINE -Y2- STA. 14+20.000
SHEET UO-15

PROPOSED U/G TELEPHONE

MTL

2.4 CONC

-BY2A-202 PINC 6+07.034
-L- POS 13+65.447 (9.761 RT.)

-BY2A-201 PINC 5+28.175
-L- POC 12+86.886 (10.532 LT.)

-BY2A-203 PINC 6+48.908
-L- POT 14+05.521 (2.410 LT.)

GOLF COURSE

TOURNAMENT PLAYERS CLUB OF RAL, LLC
DB 9349
PG 22
BM 1998
PG 1293

WAKEFIELD GLEN, LLC
DB 8280
PG 866
BM 1998
PG 892

CITY OF RALEIGH
DB 8209 PG 1497

270.085
S62°23'5"E

SEMENT

-Y2-

PI = 12+34.835
Δ = 15° 52' 00.1" (RT)
L = 166.156
T = 83.613
R = 600.000
SE = 0.07
$V_{DES.}$ = 80 KPH

PIs = 13+36.048
Θs = 2° 40' 25.7"
Ls = 56.000
LT = 37.338
ST = 18.671

DENOTES PAVEMENT REMOVAL

SEE SHEETS 28 & 29 FOR PROFILE

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-15

UTILITIES BY OTHERS

METRIC 5 0 10

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 369 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

CONST.REV.

R/W REV. 8/31/06

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

NORTH HILLS PROPERTIES
DB 4791 PAGE 803

CHARLES T. HOLDEN
DB 6459 PAGE 208

0.6m BASE HEAD DITCH
SEE DETAIL 4
DDE= 25m³

REMOVE

400 UNIFORM TRANSITION

-Y5- PCC 12+42.852

16" WL

PROPOSED 16" WATERLINE BY CITY OF RALEIGH

END CONSTRUCTION
-Y5- 12+70.000

-Y5- PT 12+98.386

-Y5- POT 13+68.236

-Y5-
PI = 13+10.133
Δ = 76° 02' 45.7" (RT)
L = 79.635
T = 46.916
R = 60.000
SE = 0.04
Vdes. = 30 KPH
1.3m CURVE WIDENING

PI = 12+70.710
Δ = 11° 21' 49.7" (RT)
L = 55.534
T = 27.858
R = 280.000
SE = 0.08
Vdes. = 80 KPH

FRANK D. BRANDON & LISA C. BRANDON
DB 3274 PAGE 700
BM 1984 PAGE 538

LAWRENCE D. BRANDON, JR & NANCY H. BRANDON
DB 2106 PAGE 630
BM 1984 PAGE 538

ANVIL INVESTMENTS
BM 1998 PG 892

SANDLER at WAKEFIELD
DB 8363 PG1444

NAD 83

-Y2-
Pis = 17+64.561
Θs = 2° 40' 25.7"
Ls = 56.0
LT = 37.3376
ST = 18.6705
SE = 0.07
Vdes. = 80 KPH

-Y2- TS 17+27.224

-Y5- PC 11+63.217

9 (29.53') & 13 (42.65')

WAKEFIELD GLEN, LLC
DB 8280 PG 866
BM 1998 PG 892

LYNN M. LOWERY, et vir
DB 3274 PAGE 698
BM 1984 PAGE 538

FRANK D. BRANDON, et ux
(FORMERLY NANNIE B. BRANDON)
95E2183
BM 1984 PAGE 538

LATERAL V-DITCH
W/ 1.5m BERM
W/ CLASS B RIP RAP
68.7 MTN 206.2m² F.F.
EST. DDE= 72m³
-Y2- 16+20 TO 16+80 LT
SEE DETAIL 5

LATERAL V-DITCH
W/ 1.5m BERM
W/ CLASS B RIP RAP
96 MTN 274.9m² F.F.
EST. DDE = 252m³
-Y2- 15+20 TO 16+00 LT
SEE DETAIL 5

CLASS B RIP RAP
1.8mTN
5.9m² F.F.

0.6m BASE HEAD DITCH
DDE= 25m³ SEE DETAIL 4

PROP. U/G POW LINES

ABANDON U/G CATV CABLE

ABANDON U/G TELEPHONE

PROPOSED U/G TELEPHONE

ABANDON ELECTRIC

PROPOSED G/R

CLASS I RIP RAP
6.4MTN
14.2m² F.F.

CLASS I RIP RAP
10.0mTN
18.4m² F.F.

0.6m BASE TAIL DITCH
SEE DETAIL II
DDE= 40m³

SANDLER at WAKEFIELD
DB 8363 PG1444

TOURNAMENT PLAYERS CLUB OF RALEIGH, LLC
DB 9349 PG 15
PB 2002 PG 113

AVERAGE DAILY TRAFFIC (IN HUNDREDS) 2000 / 2025

FALLS OF NEUSE RD.

SR 2000

RELOCATED FALLS OF NEUSE RD.

GARDEN HILL DR

90.0m UNIFORM TRANSITION

MATCHLINE -Y2- STA. 14+20.000
SHEET UO-14

MATCHLINE -Y2- STA. 17+60.000
SHEET UO-16

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEETS 29 & 32 FOR PROFILES

DENOTES PAVEMENT REMOVAL

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-16

UTILITIES BY OTHERS

METRIC

5 0 10

CONST.REV.

R/W REV. 8/31/06

Municipal Services Engineering Company, P.A.
P.O. BOX 97 GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 369 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-9481

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

REVISIONS

10/26/98
8/17/99

16" WL
PROP U/G GAS LINE
PROP U/G TEL CABLES
PROP O/H POW LINES

LEON G. KEITH
DB 707 PAGE 0-E-
BM 1989 PAGE 476

ANDREW DUKE LYONS
DB 9455 PAGE 190

AREA IN DISPUTE
BETWEEN PROPERTY OWNERS
DB 9455, PG 190 TRACT 3
BM 1980, PG 170

SANDLER at WAKEFIELD
DB 8363 PG1444

DB 10018 PAGE 126

DB 8098 PAGE 590
BM 1991 PAGE 796

JUDITH M. LOWERY
DB 5274 PAGE 543
BM 1991 PAGE 796

NAD 83

AVERAGE DAILY TRAFFIC (IN HUNDREDS) 2000 2025
THOMPSON MILL RD. SR 1923
OLD NC 98 SR 1967

AVERAGE DAILY TRAFFIC (IN HUNDREDS) 2000 2025
OLD NC 98 SR 1967
FALLS OF NEUSE RD. SR 2000

-BY2-27 POT 5+00.000
-Y3B- POT 11+29.677 (4.643 LT.)

-BY2-28 PINC 6+09.060
-Y2- POC 19+87.162 (52.604 LT.)

-BY2A-212 PINC 10+46.585
-L- POC 18+02.861 (0.232 LT.)

-BY2A-213 PINC 10+93.358
-L- POC 18+49.663 (1.579 RT.)

-BY2A-214 PINC 11+33.591
-L- POC 18+89.939 (0.195 RT.)

-BY2A-215 PINC 11+86.953
-L- POC 19+43.107 (2.926 LT.)

-BY2A-216 PINC 12+56.372
-L- POS 20+12.331 (0.218 LT.)

-BY2A-217 PINC 12+84.760
-L- POS 20+40.616 (2.558 RT.)

-BY2A-218 PINC 13+13.274
-Y2- POS 20+68.718 (2.320 LTJ)

MATCHLINE -Y2- STA. 17+60.000 SHEET UO-15

MATCHLINE -Y2- 21+00.000 SEE SHEET UO-17

DENOTES 125mm MONOLITHIC CONC. ISLANDS

DENOTES PAVEMENT REMOVAL

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEETS 29,30 & 32 FOR PROFILES

10/26/98

REVISIONS

-Y2-

PIs = 23+36.283	PI = 24+34.747	PIs = 25+32.595	PIs = 26+99.995
Θs = 4° 00' 38.5"	Δ = 13° 23' 56.2" (LT)	Θs = 4° 00' 38.5"	Θs = 6° 52' 31.8"
Ls = 84.0	L = 140.3136	Ls = 84.0	Ls = 96.0
LT = 56.0144	T = 70.4783	LT = 56.0144	LT = 64.0483
ST = 28.0131	R = 600.000	ST = 28.0131	ST = 32.0440
	SE = 0.05		SE = 0.04
	Vdes.= 80 KPH		Vdes.= 80 KPH

NAD 83

METRIC

5 0 10

CONST.REV.

R/W REV. 8/31/06

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-17
UTILITIES BY OTHERS	

Municipal Services — P.O. BOX 97, GARNER, N.C. 27529, (919) 772-5393 — P.O. BOX 349 BOONE, N.C. 28607, (828) 262-1767 — P.O. BOX 276 MOREHEAD CITY, N.C. 28557, (252) 726-5481

Engineering Company, P.A.

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

CAROLINA PRINCESS LLC
DB 08693 PAGE 1799
2

23+00 24+00 25+00 26+00

220.0m UNIFORM TRANSITION (LT LN'S)

30.0 UNIFORM TRANSITION RT. LN

-Y2- SC 23+64.269

25 (82.02')

+10 R/W

+55 R/W & 30 (98.43')

+40 R/W

+47.469

16.8 TYP.

+90 35 (114.83')

30.0 UNIFORM TRANSITION RT. LN

+00 R/W & 33 108.27')

+20.000

+40.000

CLASS B RIP RAP 0.9 MTN 4.2m² F.F.

0.6m BASE HEAD DITCH SEE DETAIL 4 3 EST DDE= 20m

CLASS B RIP RAP 2.7 MTN 9.2m² F.F.

+40 20 (65.62')

+40 15 (49.21')

-Y2- POC 24+53.099

-Y6- POT 10+00.000

+00 20 (65.62')

-Y2- CS 25+04.582

15 (49.21')

+04.582

90.0m TRANSITION (LT)

+94.582

+40 31 (101.71')

N 34° 35' 01.0" E

-Y2- CS 25+88.582

CLASS B RIP RAP EST +/- 2.7mTN 9.2m² F.F.

15 (49.21')

16.8 TYP. CS TO ST

47.282

CLM ASSOCIATES LLC
DB 8050 PAGE 875
73

MATCHLINE -Y2- 23+00.000
SEE SHEET U0-16

MATCHLINE -Y2- STA 26+00.000
SHEET U0-12

TOP 110.59
INV. 109.78

2CI

FS

150 151 154

INV. 107.0

+67 R/W.20m

CLASS B RIP RAP EST +/- 2.7mTN 9.4m² F.F.

PROP O/H POW LINES

S 54°28'43" W 88.86

S 35°54'45" W 82.93

153 DI

13.694

9.438

U/G POWER

U/G POWER

PROPOSED 16" WATERLINE BY CITY OF RALEIGH

ABANDON GAS

152 149 2GI FS

PROP O/H POW LINES

REM.

ABANDON TELEPHONE

COLLAR AND EXTEND

U/G TEL CABLES

PROP U/G TEL CABLES

INV. 110.45

16" WL

156 INV. 114.33

155

REMOVE

EXISTING R/W

SR 1967 OLD NC 98 17.3 BST

EXISTING 12" WATERLINE BY CITY OF RALEIGH

24.0mm WATER

9J44 STREET YARD BUFFER

1400mm WD

+20 19.030 (62.43')

+00 22 (72.18')

+00.000 19.442 (63.79') & 27.000 (88.58')

+60 21 (68.90')

+75 EX.R/W & 25 (82.02')

LATERAL V-DITCH W/ CLASS B RIP RAP 46.3mTN 81.5m² F.F. -Y2- 23+80 TO 24+00 RT SEE DETAIL 1

PL EXIST.R/W 25 (82.02')

+00 EX.R/W

+35 EX.R/W

+40.014 21.127 (69.31')

+27.795 EX.R/W

45.354 TO BP

47.384 TO R/W

S 54°39'40" E

46

JUDITH U. GOULD
DB 8489 PAGE 2429

47

NORA R. BARNHILL
DB 425 PAGE 0-E-
BM 1988 PAGE 842

2SFD

WD

600 mm CONC

CONC

3.0 CONC

S 40°30'36" W 60.363

S 54°39'44" E 38.38

S 54°39'4 39.26'

-Y6-

EXIST. 12" WATER

600 mm C&G

METER PIT

THOMAS J. PUSATERI & PAMELA R. PUSATERI
DB 7147 PAGE 709
BM 1992 PAGE 147

1800mm WD

600 mm WALL

+69.941 21.408 (70.24')

BEGIN 750mm C&G TIE TO EXISTING 600mm C&G

1500mm WD

1500mm CMP

S 40°27'04" W 62.108

END CONSTRUCTION -Y6- 10+25.978

3.2 CONC

1200 mm CONC

1200 mm BRICK

WD 1½SBK&FD

S 49°55'47.4" E

-Y6- POT 11+00.000

EXISTING R/W

N40°05'31"E 3.587 3.587

50.767 N40°07'34"E

21.647 N40°11'53"E

GOULD CONSTRUCTION BM 1999 PG 831

56.367 S85°32'01"W

36.210 S49°45'

N54°42'12"W 50.822

S 54°40'42" E

36.093 TO R/W

36.035 TO BP

6.096 UNDISTURBED BUFFER

S 54°39'44" E 101.78

68.349 S54°42'28"E

34.756 S41°00'58"W

DENOTES PAVEMENT REMOVAL

SEE SHEET 2-F FOR DITCH DETAILS
SEE SHEETS 30 & 31 FOR PROFILE

SYSTIME=
CONFIG=
USERNAME=

REVISIONS

PROJECT REFERENCE NO.	SHEET NO.
R-2809A	U0-18
UTILITIES BY OTHERS	

METRIC

5 0 10

Municipal Services Engineering Company, P.A.
P.O. BOX 97, GARNER, N.C. 27529 (919) 772-5393
P.O. BOX 349 BOONE, N.C. 28607 (828) 262-1767
P.O. BOX 276 MOREHEAD CITY, N.C. 28557 (252) 726-3481

CONST.REV.

R /W REV. 8/31/06

NOTE:
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-Y2-
PI = 28+00.467
Δ = 19° 26' 27.6" (RT)
L = 135.7238
T = 68.5206
R = 400.000
SE = 0.04
V = 80 KPH

PIs = 28+99.714
θs = 6° 52' 31.8"
Ls = 96.0
LT = 64.0483
ST = 32.0440

MATCHLINE -Y2- STA 28+20.000
SHEET UO-12

BRYAN T. KENNEDY & CAROLYN B. KENNEDY
DB 3159 PAGE 607
BM 1980 PAGE 588
9

CRAIG J. ROOTH & MICHAEL K. ALLEN
DB 4582 PAGE 638
BM 1987 PAGE 549

HECTOR H. HERNANDEZ & MARIA L.
DB 10445 PAGE 1500
BM 1980 PAGE 588
10

RET WALL
G
ISFD
ISBKD
100 mm CONC
1200 mm WW
S 41°16'31" W 91.014
S 41°31'31" W 92.209
N 48°44'25" W 21.921
S 48°40'55" E 65.941
+48.618
29.897 (98.091)
+00.000
29+00
30+00
40.0m UNIFORM TRANSITION RT.
S 42°16'50" E 50.326
S 47°57'25" W 2.286
S 42°17'03" E 64.468
1100 mm WD RAIL
BST
NAD 83
S 45°09'37" W 40.509
13.0 TYP.
+89.670
ABANDON TELEPHONE
PROP U/G TEL CABLES
12" WL
REM.
EXISTING R/W (VARIABLE)
NC 98 R/W VARIABLE
U BST
122 BST
N 67° 45' 32.2" E
PROPOSED 12" WATERLINE BY CITY OF RALEIGH
7UTL
EOS
DI
CRENSHAW HALL ASSOCIATES INC
DB 9279 PAGE 387
BM 2004 PAGE 1160
1400mm WD
+98.750
18.629 (61U2')
ELTON HARRIOTT & BERNICE WRIGHT
DB 11223 PAGE 854
BM 2004 PAGE 1160
NATISHA SLOLEY & MICHAEL A. BHAMILTON
DB 11281 PAGE 426
BM 2004 PAGE 1160
96.0m UNIFORM TRANSITION RT.
RONNIE G. DETTMER & MAUREEN H.
DB 11169 PAGE 1909
BM 2004 PAGE 1160
ST LAWRENCE HOMES INC
DB 11518 PAGE 542
BM 2004 PAGE 1160
-Y2- CS 28+67.670
-BY1-37 PINC 14+98.694
-Y2- POS 29+61.347 (9.317 RT.)
-Y2- ST 29+63.670
62.914
S67°32'45"W
EIP
TAPER
1200mm BK WALL
AND PROP 750mm C&G TIE TO EXIST 150mm C&G
RODNEY GLASS & ANNETTE M
DB 11236 PAGE 1361
BM 2004 PAGE 1160
TOP=110.960
INV=106.120
150mm CONC
450mm CONC
ALLISTER-HILL STREET
RABBIT RUN BST
WOODS
N 45°13'54" E 109.829
N 45°13'54" E 64.006
2400 CHL
CONC
750 CONC
JARRELL PARTNERS, LLC
DB 8243 PAGE 2531
BM 1996 PAGE 1809
1800 MTL
WV
LANDSCAPE AREA
EXISTING R/W (VARIABLE)
-Y2- POT 30+73.920
JONES HEIRS
DB 3001 PAGE 428
BM 1996 PAGE 1809
-BY2-36 POT 16+80.799
S 45°13'54" E 55.616
PROP U/G TEL CABLES
450 mm CONC
300MM DIP WATER
300 mm CMP
1200mm BK WALL
1400mm WD
END CONSTRUCTION
-Y2- 30+70.000
JOHN R. BENNETT III
BM 1998 PG 219
106.468
S56°03'13"E

SEE SHEET 31 FOR PROFILE