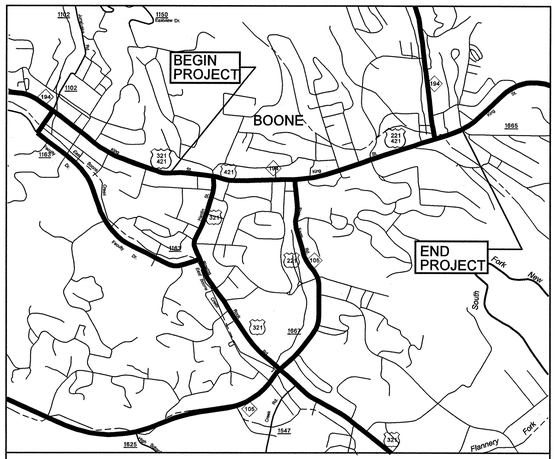
TIP PROJECT: U-4020

| T.I.P. NO. | SHEET NO. |
|---|---|
| U-4020 | UC-1 |

See Sheet 1-A For Index of Sheets



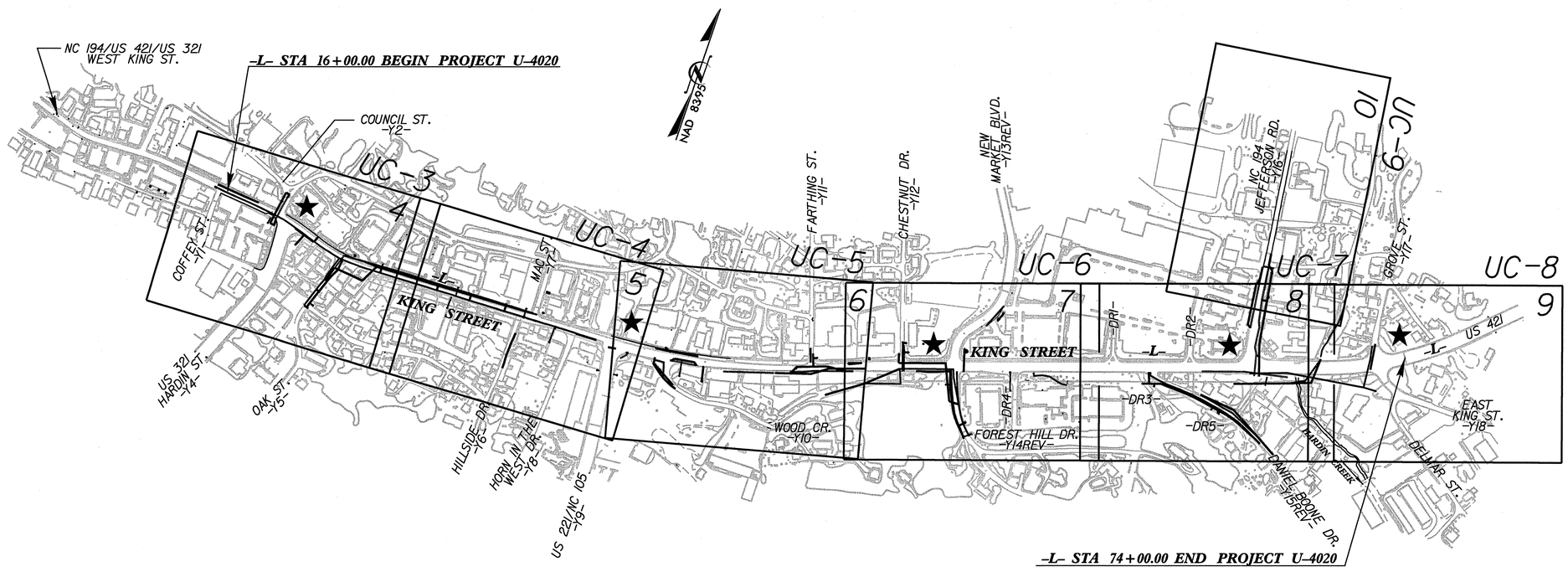

VICINITY MAP

# STATE OF NORTH CAROLINA
# DIVISION OF HIGHWAYS

# *UTILITY CONSTRUCTION PLANS*
# *WATAUGA COUNTY*

***LOCATION:*** ***US 421 (KING STREET) FROM WEST OF US 321 (HARDIN STREET) TO EAST OF NC 194 (JEFFERSON ROAD) IN BOONE***

***TYPE OF WORK:*** ***WATER LINE RELOCATION AND SEWER LINE RELOCATION***




★ *SIGNALIZED INTERSECTION*

***GRAPHIC SCALES***

40 20 0 40 80
PLANS

40 20 0 40 80
PROFILE (HORIZONTAL)

4 2 0 4 8
PROFILE (VERTICAL)

## *INDEX OF SHEETS*

| SHEET NO. | DESCRIPTION |
|---|---|
| UC-1 | TITLE SHEET |
| UC-2 | GENERAL NOTES |
| UC-3 THRU UC-9 | UTILITY CONSTRUCTION PLAN SHEETS |
| UC-10 THRU UC-11 | PROFILE SHEETS |
| UC-12 THRU UC-14 | DETAILS SHEETS |

## *WATER AND SEWER OWNERS ON PROJECT*

*(1) TOWN OF BOONE - WATER AND SEWER*

*SEAL*

NORTH CAROLINA PROFESSIONAL SEAL 038001 ENGINEER JEREMY R. IVERBARK


*DIVISION OF HIGHWAYS*
*UTILITIES ENGINEERING SECTION*

*1591 MAIL SERVICES CENTER*
*RALEIGH NC 27699-1591*
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*FAX (919) 250-4119*

PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. BOX 33068 - RALEIGH, NORTH CAROLINA 27636-3068
PHONE: (919) 677-2000 FAX: (919) 677-2050

7/2/99

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-2 |
| R/W SHEET NO. | |

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NORTH CAROLINA PROFESSIONAL SEAL 030001 ENGINEER A. RIVERA

# UTILITY CONSTRUCTION

## INDEX TO SHEETS


| SHEET NO. | DESCRIPTION |
|---|---|
| UC-1 | COVER SHEET |
| UC-2 | INDEX, PROJECT NOTES, AND LEGEND |
| UC-3 | PLAN SHEET, STA. 16+00.00 TO STA. 26+00.00 (-L-) |
| UC-4 | PLAN SHEET, STA. 26+00.00 TO STA. 37+25.00 (-L-) |
| UC-5 | PLAN SHEET, STA. 37+25.00 TO STA. 48+00.00 (-L-) |
| UC-6 | PLAN SHEET, STA. 48+00.00 TO STA. 59+00.00 (-L-) |
| UC-7 | PLAN SHEET, STA. 59+00.00 TO STA. 70+00.00 (-L-) |
| UC-8 | PLAN SHEET, STA. 70+00.00 TO STA. 74+00.00 (-L-) |
| UC-9 | PLAN SHEET, STA. 10+00.00 TO STA. 17+00.00 (-Y16-) |
| UC-10 | PROFILE SHEET |
| UC-11 | PROFILE SHEET |
| UC-12 | STANDARD DETAILS |
| UC-13 | STANDARD DETAILS |
| UC-14 | STANDARD DETAILS |


## PROJECT NOTES:

1. ELEVATIONS SHOWN ARE IN FEET ABOVE MEAN SEA LEVEL.
2. TYPICAL DEPTH OF COVER FOR BURIED PIPELINE SHALL BE 4 ft UNLESS OTHERWISE SHOWN OR SPECIFIED.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE TOWN OF BOONE FOR ANY ADDITIONAL INFORMATION ON EXISTING WATER AND SEWER UTILITIES.
4. LOCATIONS OF EXISTING SHOWN UTILITIES ARE APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING EXACT LOCATION, ORIENTATION AND ELEVATION OF EXISTING UTILITIES PRIOR TO EXCAVATION FOR THE PIPELINE.
5. COORDINATES SHOWN ON THE DRAWINGS ARE BASED ON THE NCDOT LOCALIZED PLANE COORDINATE SYSTEM FOR THIS PROJECT.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY SHOULD ANY FIELD CONDITIONS BE ENCOUNTERED THAT VARY FROM THE INFORMATION PROVIDED IN THE CONTRACT DOCUMENTS.
7. UNLESS OTHERWISE SHOWN OR SPECIFIED, ALL FORCE MAIN AND WATER PIPELINE TRENCH BEDDING SHALL BE IN ACCORDANCE WITH DETAIL 0222100. ALL GRAVITY SEWER PIPELINE TRENCH BEDDING SHALL BE TYPE BE IN ACCORDANCE WITH DETAIL 0222102.
8. THE MINIMUM TRENCH WIDTHS SHALL BE IN STRICT ACCORDANCE WITH THE "TRENCH EXCAVATION LIMITS" AS SHOWN ON DETAIL 0222110.
9. UNLESS OTHERWISE INDICATED, ALL GRADE ELEVATIONS SHOWN ARE ALONG THE PIPELINE ALIGNMENT.
10. THE CONTRACTOR SHALL PLACE 3 TO 4-INCHES OF SAND OR SCREENINGS ON ALL ASPHALT SURFACES THAT ARE AFFECTED BY THE INSTALLATION OF THE PIPELINE.
11. THE CONTRACTOR SHALL REINSTALL ALL SIGNS AS REQUIRED BY NCDOT ALONG STATE ROADWAYS AND TOWN STREETS AS REQUIRED BY THE TOWN OF BOONE.
12. THE CONTRACTOR SHALL REMOVE AND REINSTALL ALL EXISTING FENCE AS REQUIRED FOR PIPE INSTALLATION. ANY ADDITIONAL FENCE MATERIALS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
13. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL SHEETING REQUIRED FOR THE INSTALLATION OF THE PIPELINE, ALL EXCAVATIONS SHALL BE KEPT WITHIN THE DESIGNATED EASEMENT/RW WIDTHS. EXCAVATION WITHIN PAVED AREAS SHALL BE KEPT TO A MINIMUM. SHEETING SHALL BE INSTALLED AS REQUIRED TO PROTECT EXISTING UTILITIES.
14. ALL INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE TOWN OF BOONE CURRENT DESIGN GUIDELINES UNDER THE INSPECTION OF THE TOWN OF BOONE AND BY A LICENSED N.C. UTILITY CONTRACTOR.
15. PLACED RIP-RAP SHALL HAVE A MINIMUM DEPTH OF 24" AND SHALL HAVE A LAYER OF TYPE II GEOTEXTILE SEPARATOR PLACED BETWEEN THE SOIL AND STONE.
16. TOWN OF BOONE WILL FURNISH DESCRIPTION OF EASEMENTS UPON REQUEST.
17. PIPELINE ALIGNMENT SHOWN IS BASED ON STANDARD FITTINGS AVAILABLE FOR DUCTILE IRON PIPE. JOINT DEFLECTIONS SHALL NOT EXCEED 75 PERCENT OF MANUFACTURERS RECOMMENDED DEFLECTION.
18. DETECTOR TAPE IS REQUIRED FOR ALL BURIED PIPELINE.
19. THE CONTRACTOR SHALL PROVIDE A MEANS TO KEEP ALL NEW PIPING COMPLETELY ISOLATED FROM EXISTING PIPING UNTIL ALL NEW PIPING HAS BEEN TESTED, DISINFECTED AND ACCEPTED FOR SERVICE. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE MEANS FOR FLUSHING NEW PIPELINES.
20. RESTRAINED PIPE JOINTS SHALL BE INSTALLED BETWEEN THE STATIONS INDICATED ON THE DRAWINGS. IF A BEND OR FITTING IS RELOCATED BY THE CONTRACTOR FOR HIS CONVENIENCE THEN THE REQUIRED LENGTH OF RESTRAINED JOINTS SHALL BE MAINTAINED, AT-NO ADDITIONAL COST TO THE OWNER. IF ADDITIONAL BENDS OR FITTINGS ARE INSTALLED BY THE CONTRACTOR FOR HIS CONVENIENCE, THEN THE CONTRACTOR SHALL INSTALL THE REQUIRED LENGTH OF RESTRAINING JOINTS AS DETERMINED BY THE ENGINEER, AT NO ADDITIONAL COST TO THE OWNER.
21. A THRUST RESTRAINT DESIGN PRESSURE OF 350 PSI SHALL BE USED FOR THIS PROJECT.
22. ALL MANHOLE COVERS FOR WATER LINE SHALL READ "WATER" AND SEWER SHALL READ "SEWER" WITH APPROPRIATE LOGOS.
23. THE CONTRACTOR SHALL VERIFY THE LOCATION, SIZE, AND MATERIALS OF ALL EXISTING WATERLINES AND SEWERS TO BE CONNECTED TO THE PROPOSED PIPELINES PRIOR TO EXCAVATION FOR THE PIPELINE OR ORDERING MATERIALS.
24. THE CONTRACTOR SHALL ROTATE THE ECCENTRIC CONE SECTION IN LOCATIONS THAT THE MH LID CONFLICTS WITH THE PROPOSED CURB. IF THE EXISTING MH IS A BRICK CONE THEN THE BRICK SHALL BE REMOVED SUCH THAT A PRECAST ECCENTRIC CONE SECTION CAN BE ADDED.
25. THE PROPOSED WATER AND SEWER RELOCATIONS ARE BASED ON LIMITED SUE AND WATER VALVE INFORMATION FROM NCDOT. IT IS THE CONTRACTOR'S RESPONISBILITY TO LOCATE THE EXISTING WATER FOR POTENTIAL CONFLICTS PRIOR TO RELOCATING THE WATER OR THE SEWER OR INSTALLING THE STORM DRAIN SYSTEM. FIELD ADJUSTMENTS TO THE PROPOSED WATER AND SEWER ARE EXPECTED AND MUST BE APPROVED BY THE ENGINEER.
26. THE CONTRACTOR SHALL RELOCATE WATER SERVICES TO THE PROPOSED WATER MAIN AS REQUIRED TO MAINTAIN SERVICE. SECTIONS OF EXISTING MAINS TO BE ABANDONED SHALL REQUIRE RELOCATED SERVICES CONFORMING TO NCDOT STANDARD SPECIFICATIONS. ALL RELOCATIONS SHALL BE ANTICIPATED AND PERFORMED AS PART OF THE PROJECT CONSTRUCTION CONTRACTOR TO VERIFY EXISTING SERVICE LOCATION AND SIZE PRIOR TO INSTALLATION/RELOCATION.
27. THE CONTRACTOR SHALL RELOCATE SEWER SERVICES TO THE PROPOSED SEWER MAIN AS REQUIRED TO MAINTAIN SERVICE. SECTIONS OF EXISTING MAINS TO BE ABANDONED SHALL REQUIRE RELOCATED SERVICES CONFORMING TO NCDOT STANDARD SPECIFICATIONS. ALL RELOCATIONS SHALL BE ANTICIPATED AND PERFORMED AS PART OF THE PROJECT. THE CONSTRUCTION CONTRACTOR SHALL VERIFY THE EXISTING SERVICE LOCATION AND SIZE PRIOR TO INSTALLATION/RELOCATION OF THE PROPOSED UTILITIES AND/OR STORM DRAIN IMPROVEMENTS. IF THERE ARE POTENTIAL CONFLICTS WITH THE PROPOSED UTILITIES AND/OR STORM DRAIN IMPROVEMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER 72 HOURS (MIN).
28. ALL UTILITIES SHALL BE CONSTRUCTED WITH MINIMUM SEPARATION REQUIREMENTS AS SPECIFIED IN NCDOT STANDARD SPECIFICATIONS AND APPLICABLE STATE AND LOCAL GUIDELINES.
29. THE CONTRACTOR SHALL ALL WATER VALVE BOXES AND SS MH RING AND COVERS AS NECESSARY DUE TO THE ROAD IMPROVEMENTS. ANTICIPATED ADJUSTMENTS TAHT ARE GREATER THAN 2' HAVE BEEN DESIGNATED ON THE SHEETS AS UTILITY PAY ITEMS.
30. THE CONTRACTOR SHALL USE CLASS B CONCRETE/FLOWABLE FILL WHEN SUFFICIENT COVER FOR COMPACTION OR SEPERATION IS NOT POSSIBLY OBTAINED BETWEEN UTILITIES. (REFER TO DETAIL 0222118)

## LEGEND

### MATERIALS

GRADE OR EARTH
ASPHALT PAVING
SAND
GRAVEL
CONCRETE
CONC. FILL OR GROUT
CONC. MASONRY UNIT
BRICK
ROCK
STEEL
INSULATION
WATER SURFACE
GRATING
CHECKERED PLATE
GLASS
WOOD BLOCKING

### SYMBOLS

W — EXIST. WATER LINE
SS — EXIST. SANITARY SEWER
EXIST. STORM DRAIN
P — EXIST. ELECTRICAL
T — EXIST. TELEPHONE
G — EXIST. GAS
FH EXIST FIRE HYDRANT
EXIST SAN SEWER MH
EXIST. BUTTERFLY VALVE
EXIST. GATE VALVE
WM EXIST. WATER METER
PP EXIST POWER POLE
CO EXIST. SS CLEANOUT
PROPOSED PIPELINE
SANITARY SEWER MANHOLE
PROPOSED BUTTERFLY VALVE ASSEMBLY
PROPOSED GATE VALVE ASSEMBLY
PROPOSED AIR RELEASE VALVE ASSEMBLY
STORM DRAINAGE STRUCTURE
REDUCER
BLOWOFF ASSEMBLY
BACKFLOW PREVENTER
PROPOSED FIRE HYDRANT
PROPOSED WATER METER
AP SOIL BORING/AUGER PROBE
SR SEISMIC LINE

$$$$$$$$$$SYSTIME$$$$$$$$$$
$$$$$$$$$$DGN$$$$$$$$$$
$$$$$$$$$$SERNAME$$$$$$$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-3 |
| R/W SHEET NO. | |

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20 0 40

NAD 83

BEGIN TIP PROJECT U-4020
-L- POT STA. 16+00.00

PROPOSED 81 LF 8" DI SEWER PC 350

CONNECT TO EXISTING 8" CLAY SEWER WITH FLEXIBLE TRANSITION COUPLING -L- STA 15+96.32 OFFSET 9.50 FT (LT)

CONNECT PROPOSED SEWERS TO EXISTING MH MATCH EXISTING INVERTS

PROPOSED 131 LF 8" DI SEWER PC 350

END CASING STA -L- 18+97.69 OFFSET 32.00FT (LT)

70LF PROPOSED TRENCHLESS INSTALLATION OF 30" STEEL ENCASEMENT PIPE WITH 70LF OF 16" DI RJ WATER PIPE PC 350

PROPOSED 90° MJ DI BEND STA -Y2- 12+28.68 OFFSET 0FT

PROPOSED THRUST COLLARS (3)

PROPOSED 16LF 16" DI RJ WATERLINE PC 350

PROPOSED 16"x16" TAPPING SLEEVE AND VALVE STA 12+37.61 OFFSET 12.74FT (LT)

PROPOSED 16" LINE STOP

ABANDON 143LF 16" AC WATERLINE

PROPOSED 164LF 16" DI RJ WATERLINE PC 350

ABANDON 998 LF 8" DI WATER LINE

PROPOSED 110 LF 16" DI WATER LINE PC 350

REMOVE EXISTING WATER METER

RELOCATE EXISTING FIRE HYDRANT DEFLECT 6" DIP, 12" MIN. CLEARANCE UNDER PROPOSED DRAIN

REMOVE EXISTING WATER METERS (2)

CONNECT TO EXISTING 6" CONCRETE SEWER WITH FLEXIBLE TRANSITION COUPLING AND 9LF 6" DI SEWERLINE PC 350 -L- STA 24+59.11 OFFSET 41.23FT (LT)

PROPOSED MANHOLE RIM=3227.69 INV.IN=3213.21 INV.OUT=3213.01 -Y5- STA 10+67.97 OFFSET 1.08FT (LT)

RELOCATE EXISTING 3/4" WATER METER

PROPOSED 65LF 8" DI SEWER LINE PC 350

PROPOSED MANHOLE RIM=3237.44 INV.IN=3227.40 (2) INV.OUT=3227.20 -L- STA 24+59.24 OFFSET 41.45FT (LT)

REMOVE EXISTING MANHOLE

PROPOSED MANHOLE RIM=3237.44 INV.IN=3227.92 INV.OUT=3227.82 -L- STA 23+91.57 OFFSET 47.53FT (LT)

RELOCATE EXISTING FIRE HYDRANT DEFLECT 6" DIP, 12" MIN. CLEARANCE UNDER PROPOSED DRAIN

PROPOSED 94LF 6" DI SEWER LINE PC 350

CONNECT EXISTING 8" DI WATERLINE TO EXISTING 16" DI WATER LINE -L- STA 15+95.56 OFFSET 6.87FT (RT) 1-16"x8" MJ TEE 1-8" MJ 90° HORIZONTAL BEND 1-8" GATE VALVE AND VALVE BOX, 200 PSI

RECONNECT EXISTING 3/4" WATER METER

RECONNECT EXISTING 3/4" WATER METER

BEGIN CASING STA -L- 19+05.61 OFFSET 37.52FT (LT)

PROPOSED 16" LINE STOP

RELOCATE EXISTING FIRE HYDRANT

PROPOSED 16"x8" DI MJ TEE -L- STA 20+69.26 OFFSET 10.58 FT (LT) 1-8" GATE VALVE AND VALVE BOX, 200 PSI

PROPOSED 4' DIA. MH -L- STA 18+06.87 OFFSET 11.82 FT (LT) MATCH EXISTING INVERTS

PROPOSED 16" 90° DI RJ BEND STA 19+06.23 OFFSET 42.48FT (RT)

PROPOSED 22LF 16" DI RJ WATERLINE PC 350

PROPOSED 16" 11.25° DI RJ BEND STA 19+18.15 OFFSET 41.06 FT (RT)

PROPOSED 16"x16" TAPPING SLEEVE AND VALVE STA 19+27.85 OFFSET 37.85 FT (RT)

PROPOSED 65 LF 8" DI WATERLINE PC 350

CONNECT TO EXISTING 8" DI WATER LINE WITH SOLID SLEEVE -L- STA 20+65.67 OFFSET 55.46FT (RT)

DEFLECT WATER LINE (12" MIN. CLEARANCE) UNDER PROPOSED DRAIN

PROPOSED 72 LF 8" DI SEWER LINE PC 350

DEFLECT WATER LINE (12" MIN. CLEARANCE) UNDER PROPOSED DRAIN

REMOVE EXISTING WATER METERS (2)

ABANDON 378 LF 6" CLAY SEWER LINE

PROPOSED 141 LF 8" PVC DI SEWER LINE PC 350

PROPOSED 144LF 8" DI SEWER LINE PC 350

REMOVE EXISTING WATER METERS (2)

PROPOSED 16"x6" TAPPING SLEEVE AND VALVE -L- STA 22+90.67 OFFSET 12.09FT (LT)

PROPOSED 6" 11.25° MJ DI BEND -L- STA 22+93.50 OFFSET 39.72FT (RT)

PROPOSED MANHOLE RIM=3237.13 INV.IN=3223.27 INV.OUT=3223.07 -L- STA 24+13.48 OFFSET 40.69FT (RT)

PROPOSED MANHOLE RIM=3224.52 INV.IN=3205.78 INV.OUT=3205.28 -Y5- STA 11+40.28 OFFSET 0.61FT (LT)

PROPOSED 282 LF 6" DI MJ WATER LINE PC 350

RECONNECT EXISTING 3/4" WATER METERS (3)

RELOCATE EXISTING FIRE HYDRANT

6" DI WATER LINE BASED ON TOWN RECORDS

ABANDON 280 LF 6" AC WATER LINE

CONNECT TO EXISTING 6" AC WATER LINE WITH TRANSITION COUPLING

PROPOSED 6"x6" DI MJ TEE -Y5- STA 12+94.97 OFFSET 5.79 FT LT 2-6" GATE VALVE AND VALVE BOX, 200 PSI 1-6" TRANSITION SLEEVE 22 LF OF 6" DI MJ WATER LINE PC 350

SEE SHEET UC-10 FOR -S1- PROFILE
SEE SHEET UC-10 FOR -S2- PROFILE

MATCHLINE -L- STA. 26+00.00 SEE SHEET UC-4

PI Sta 11+19.39
Δ = 5° 24' 09.4" (LT)
D = 10° 00' 00.0"
L = 54.03'
T = 27.03'
R = 572.96'

PI Sta 13+04.04
Δ = 26° 29' 25.5" (RT)
D = 10° 00' 00.0"
L = 264.90'
T = 134.86'
R = 572.96'
e = 0.04

PI Sta 18+55.55
Δ = 12° 34' 10.0" (RT)
D = 7° 09' 43.1"
L = 175.50'
T = 88.10'
R = 800.00'
e = SEE PLANS

PI Sta 22+97.16
Δ = 20° 36' 57.1" (LT)
D = 7° 09' 43.1"
L = 287.85'
T = 145.50'
R = 800.00'
e = SEE PLANS

PI Sta 11+01.36
Δ = 3° 53' 24.2" (RT)
D = 5° 00' 00.0"
L = 77.80'
T = 38.92'
R = 1,145.92'

PI Sta 13+15.35
Δ = 4° 07' 50.8" (LT)
D = 25° 00' 00.0"
L = 16.52'
T = 8.27'
R = 229.18'
e = SEE PLANS

PI Sta 13+61.27
D = 20° 24' 17.7" (LT)
D = 50° 00' 00.0"
L = 40.81'
T = 20.62'
R = 114.59'

5" MONOLITHIC CONC. ISLAND

4" CONC. SIDEWALK

SEE SHEET 2-H FOR INTERSECTION TRAFFIC DATA

REVISIONS

R/W REVISION 6/10/2008 -K- UPDATED PROPERTY OWNER INFORMATION FOR PARCEL 91

8/17/99

$$$$$$SYSTIME$$$$$$
$$$$$$DGN$$$$$$
$$$$$$FILENAME$$$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
| --- | --- |
| U-4020 | UC-4 |
| R/W SHEET NO. | |

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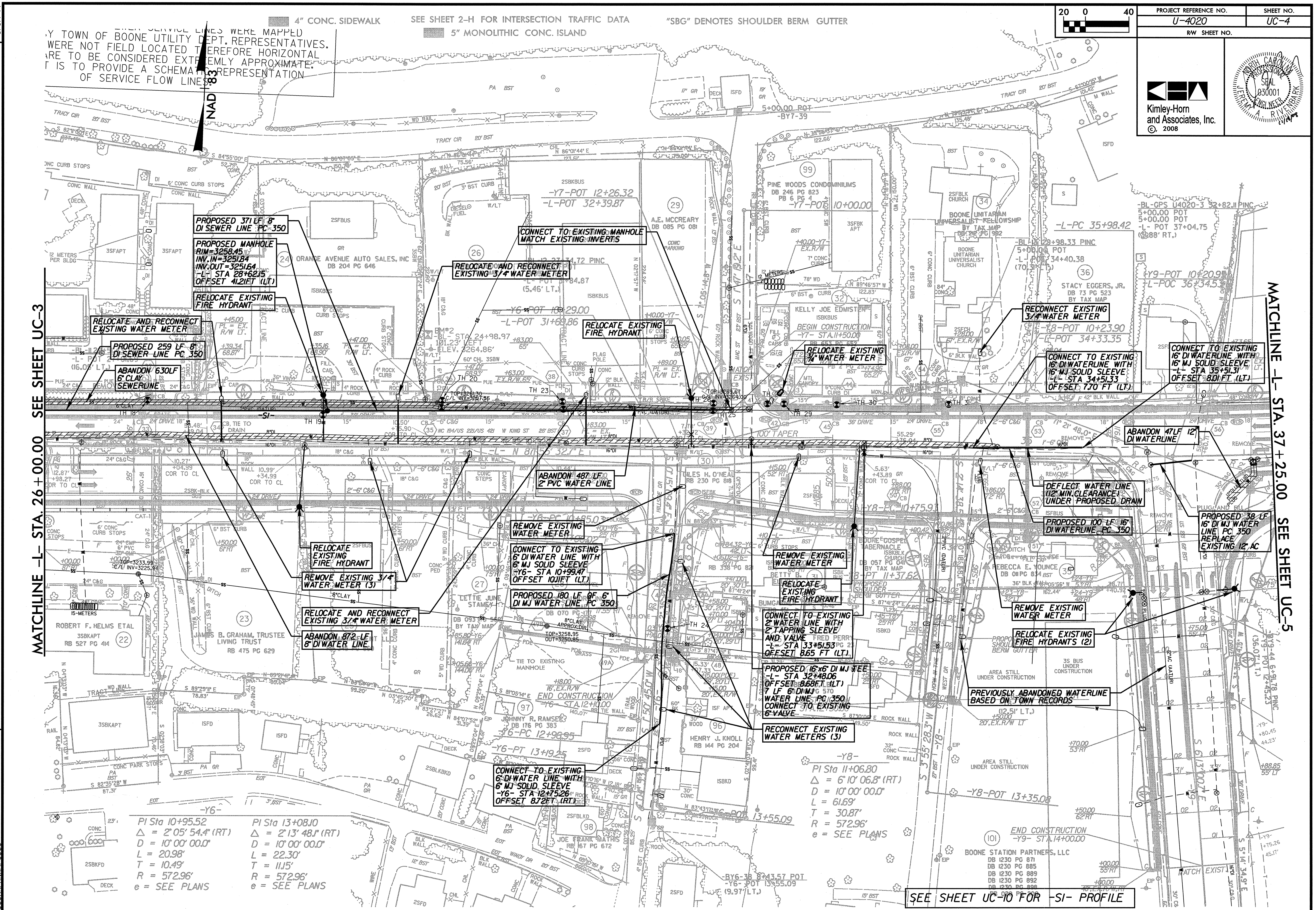
REVISIONS

R/W REVISION 6/10/2008 JL- UPDATED PL INFORMATION FOR PARCEL 32, REVISED R/W & EASEMENTS FOR PARCELS 96 & 95;
ELIMINATED CLAIM ON PARCEL 97 AND ADDED PARCEL 136.
COMBINED PARCELS 101,102,103,104 INTO PARCEL 101 AND UPDATED TOPO NEAR Y9.

8/17/99

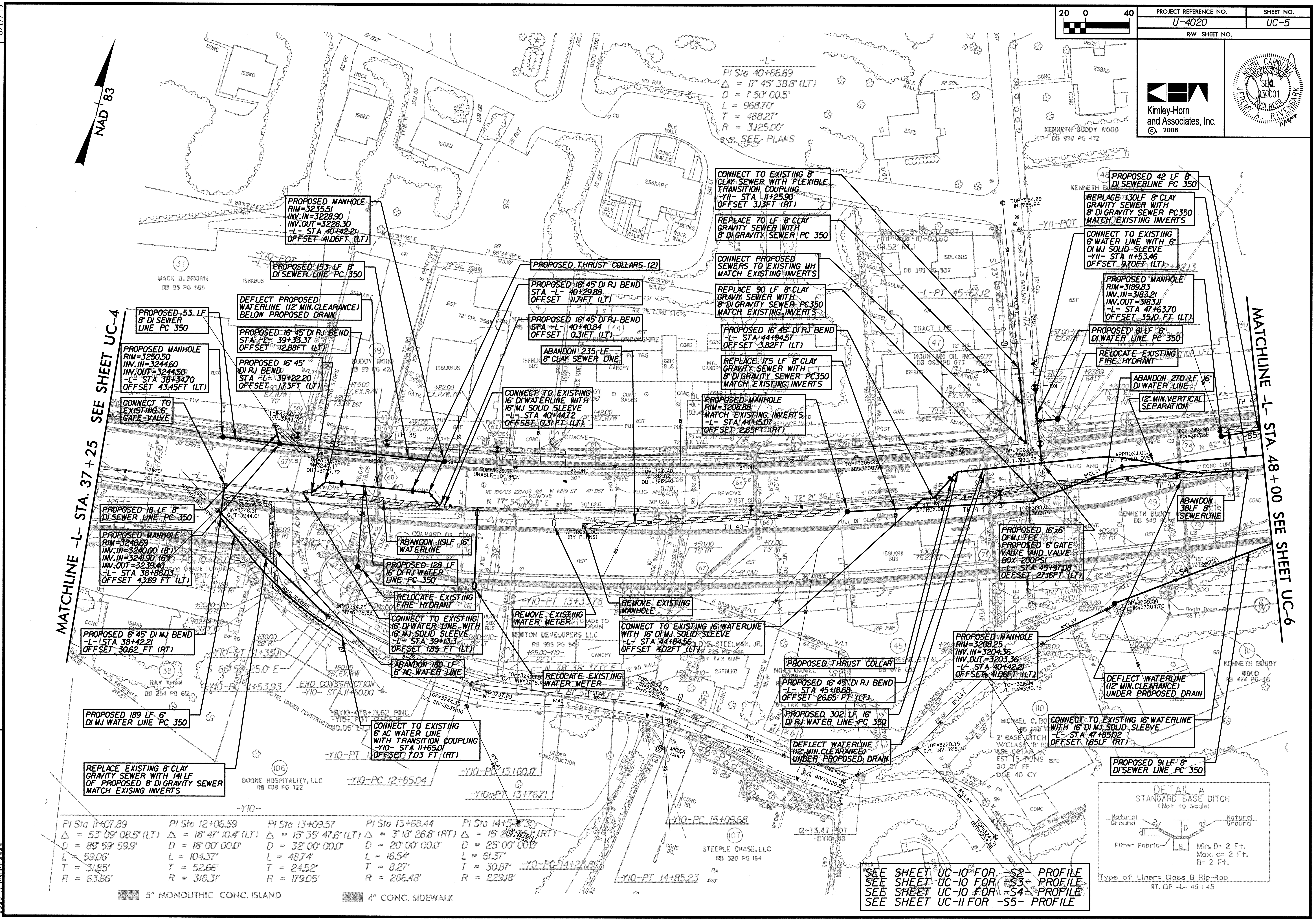



SEE SHEET UC-10 FOR -SI- PROFILE

8/17/99

REVISIONS

B/W REVISION 6/10/2008 -W- ELIMINATED PARCEL 40 AND COMBINED WITH PARCEL 39
ELIMINATED PARCEL 112 AND COMBINED WITH PARCEL 111



| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-6 |
| R/W SHEET NO. | |

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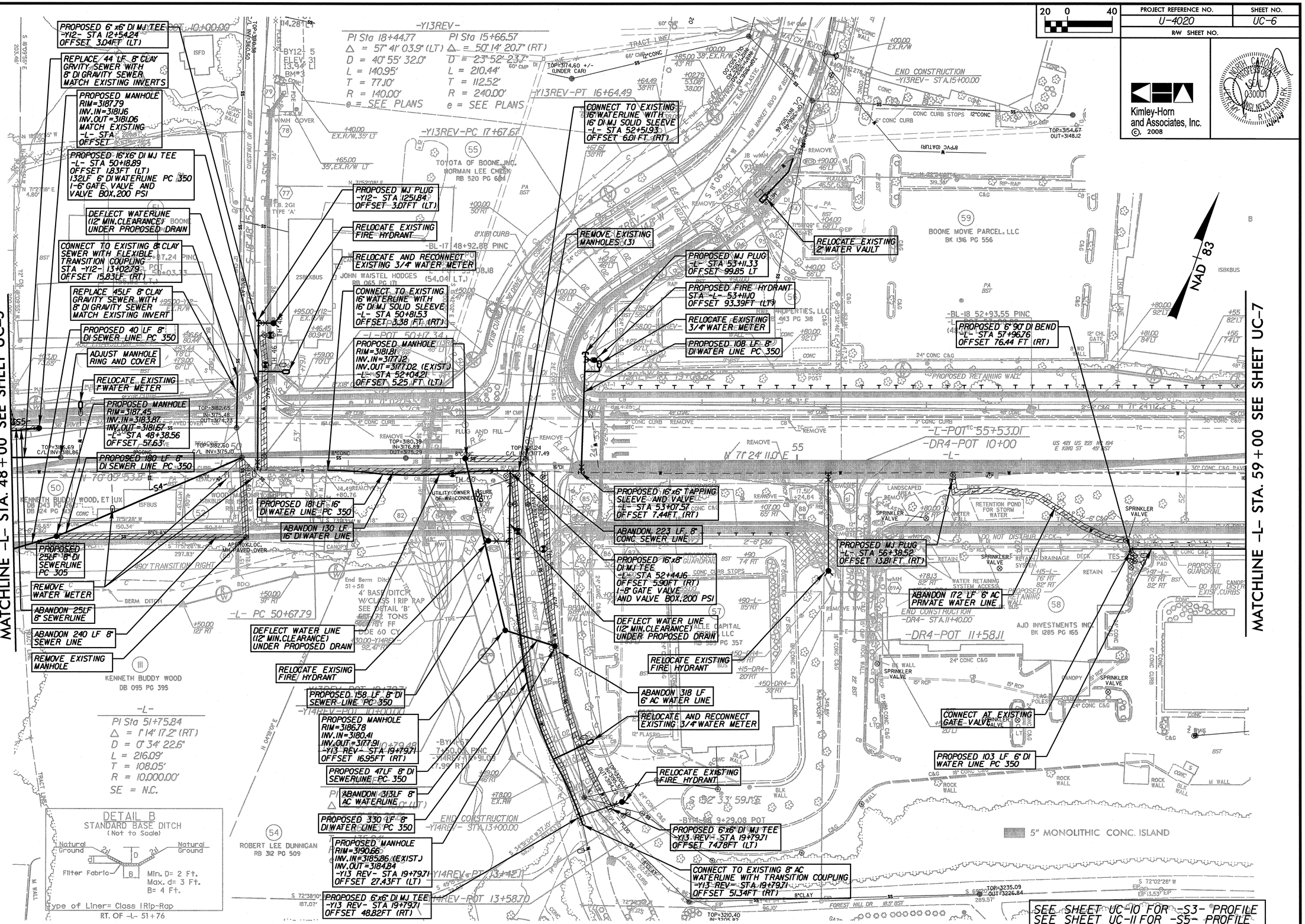


| | |
|---|---|
| 8/17/99 | R/W REVISION 6/10/2008 -N- ELIMINATED PARCEL 112 AND COMBINED WITH PARCEL 111 |
| | UPDATED PROPERTY OWNER INFORMATION FOR PARCELS 58 AND 59 |
| | R/W REVISION 6/27/2008 -N- REVISED R/W & EASEMENT ON PARCEL 58 |

REVISIONS

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

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-7 |
| R/W SHEET NO. | |

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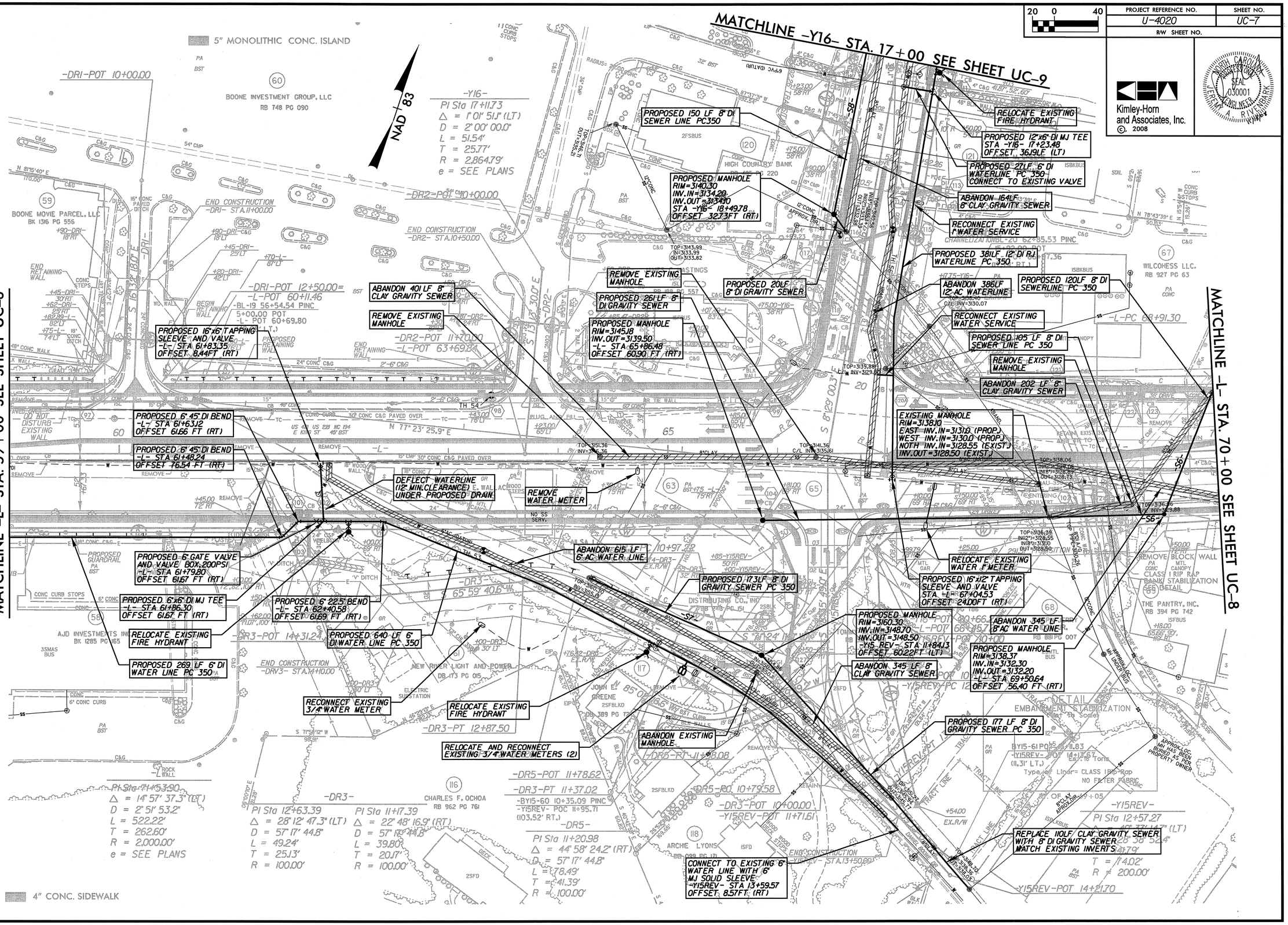
REVISIONS

R/W-REVISION 6/10/2008 N- UPDATED PROPERTY OWNER INFORMATION FOR PARCELS 58 & 59

R/W-REVISION 6/27/2008 N- REVISED R/W & EASEMENTS ON PARCELS 58 & 61

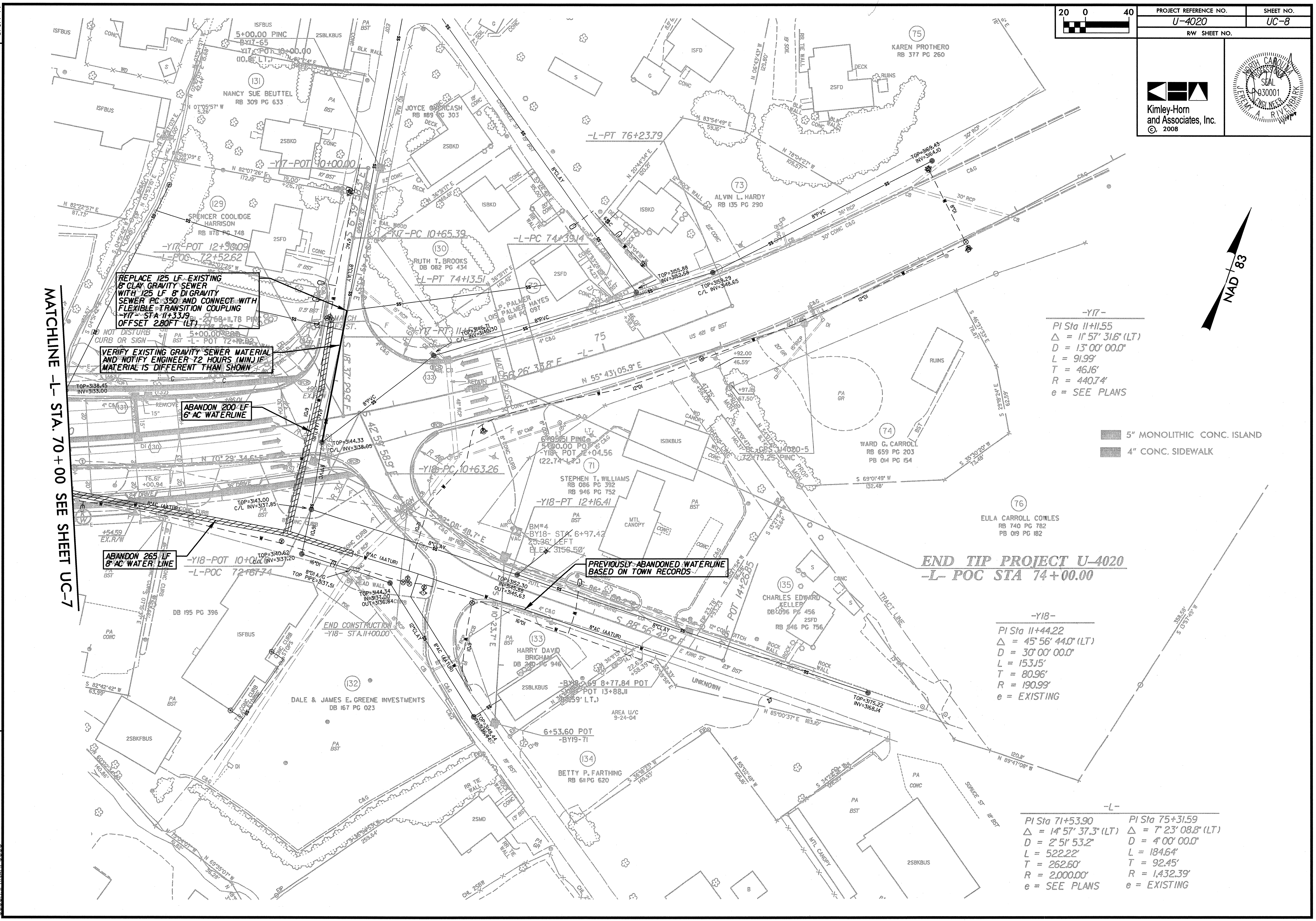
8/17/99



8/17/99

REVISIONS

R/W REVISION 6/19/2008 I - UPDATED PROPERTY OWNER INFORMATION FOR PARCEL 70



| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-9 |
| R/W SHEET NO. | |

20 0 40

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NAD 83

PERKINSVILLE BAPTIST CHURCH, INC.
RB 706 PG 269
BY TAX MAP

PERKINSVILLE BAPTIST CHURCH

-Y16-
PI Sta 17+11.73
Δ = 1°01' 51.1" (LT)
D = 2°00' 00.0"
L = 51.54'
T = 25.77'
R = 2,864.79'
e = SEE PLANS

5+00.00 POT
-BY16-62

-Y16-POT 10+00.00

PROPOSED MANHOLE
RIM=3146.20
INV.IN=3140.20
INV.OUT=3140.10
STA. -Y16- 16+24.96
OFFSET 15.96LF (LT)

ABANDON 151LF 12" AC WATER LINE

PROPOSED THRUST COLLAR

PROPOSED 210LF 12" DI RJ WATER LINE

PROPOSED 12" 45° DI RJ BEND
STA. -Y16- 15+78.14
OFFSET 32.78LF (LT)

PROPOSED 12" 45° DI RJ BEND
STA. -Y16- 15+58.70
OFFSET 12.32FT (LT)

CONNECT TO EXISTING 12" AC WATERLINE WITH TRANSITION COUPLING

BEGIN CONSTRUCTION
-Y16- STA 15+00.00

-Y16-PC 16+83.96

MATCHLINE -Y16- STA. 17+00.00 SEE SHEET UC-7

-BY16-63 11+16.35 PINC
-Y16- POT 16+04.50

REPLACE 54LF EXISTING 8" CLAY GRAVITY SEWER WITH 8" DI SEWERLINE PC 350 MATCH EXISTING INVERT

PROPOSED 36LF 8" DI SEWERLINE PC 350

RECONNECT EXISTING SEWER SERVICE

PROPOSED MANHOLE
RIM 3144.53
INV.IN 3138.53
INV.OUT 3138.43
STA. -Y16- 16+58.01
OFFSET 29.41FT (RT)

PROPOSED 42LF 8" DI GRAVITY SEWER PC 350

ABANDON 127LF 8" CLAY GRAVITY SEWER

DB 424 PG 082

DB 238 PG 336
PB 1PG 87

LAUREL INVESTMENTS
RB 101PG 680

OLD HIGHWAY PROPERTIES, LLC
RB 133PG 19

JOHN E. GREEN
RB 195 PG 200

JOSEPH C. LEMPKE
RB 400 PG 5

SOCCER FIELD

REVISIONS

R/W REVISION 6/10/2008 -K- UPDATED PL INFORMATION FOR PARCEL 122
REVISED R/W ON PARCEL 122

8/17/99

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

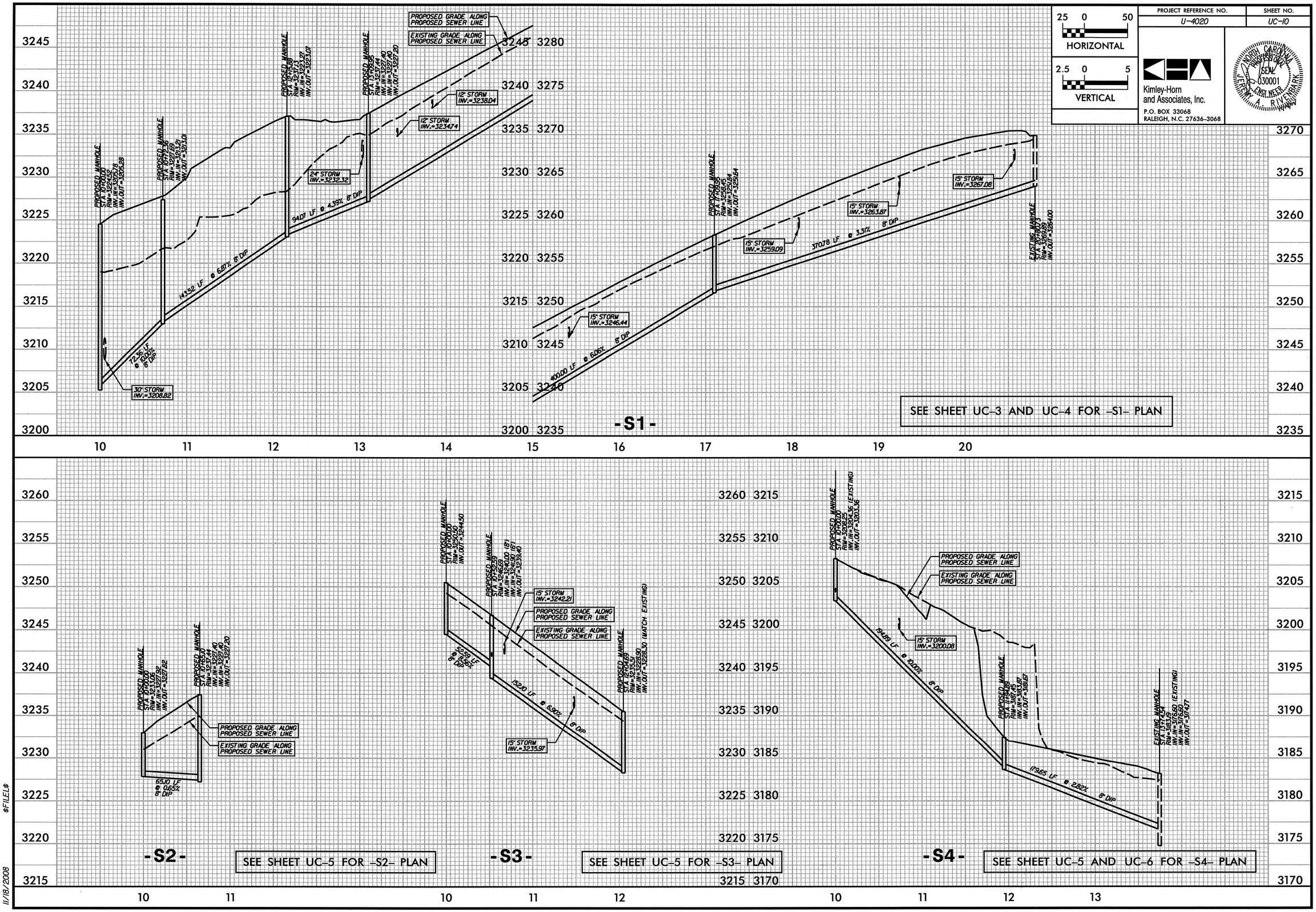
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-10 |

25 0 50 HORIZONTAL

2.5 0 5 VERTICAL

Kimley-Horn and Associates, Inc.
P.O. BOX 33068
RALEIGH, N.C. 27636-3068

NORTH CAROLINA PROFESSIONAL SEAL 030001 ENGINEER JEFFREY A. RIVENBARK




$FILEL$

11/18/2008

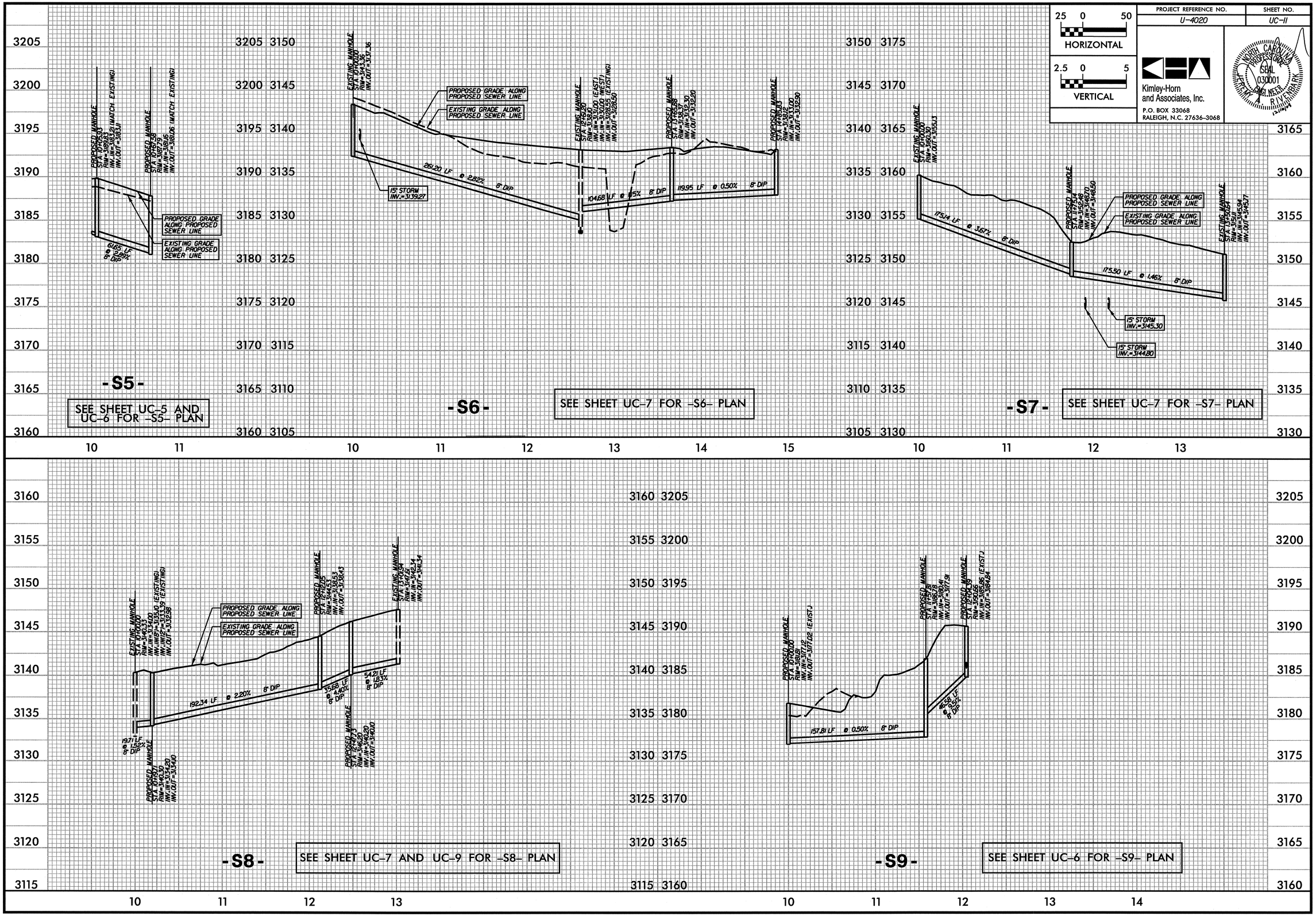
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-11 |

25 0 50 HORIZONTAL

2.5 0 5 VERTICAL

Kimley-Horn and Associates, Inc.
P.O. BOX 33068
RALEIGH, N.C. 27636-3068

NORTH CAROLINA PROFESSIONAL SEAL 030001 ENGINEER RAVENSWARK




$FILEL$

12/16/2008

7/2/99

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-12 |
| R/W SHEET NO. | |

Kimley-Horn and Associates, Inc.
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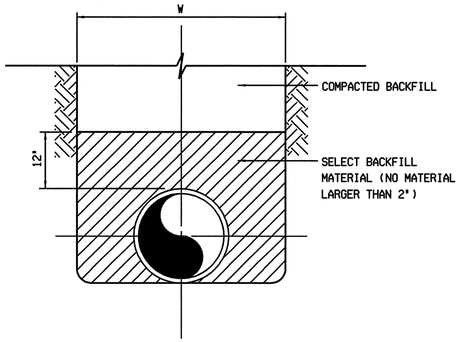
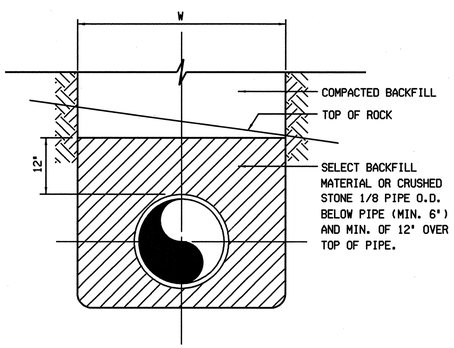
NORTH CAROLINA PROFESSIONAL SEAL 030001 ENGINEER JEREMY A. RIVENBARK

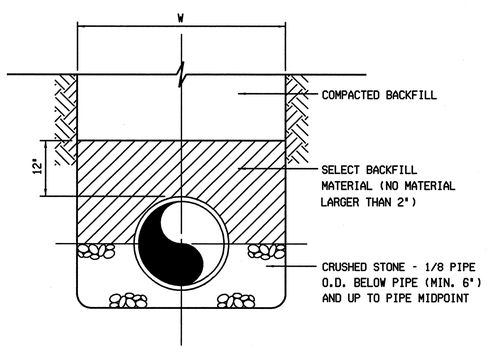
# UTILITY CONSTRUCTION



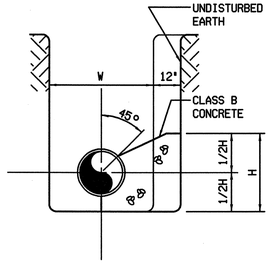

TYPE A
IN EARTH
0222100




TYPE A
IN ROCK
0222101




TYPE B
0222102

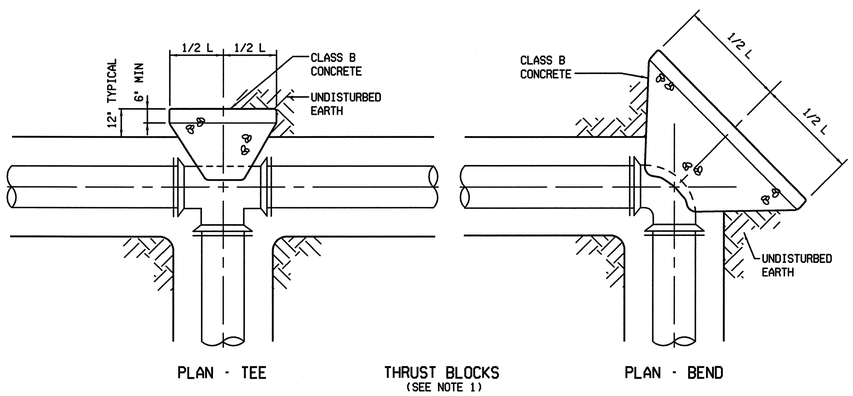



TYPICAL SECTION
TEE OR BEND

| CONCRETE THRUST BLOCK SCHEDULE* | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| PIPE SIZE (IN) | BEND 90° /TEE H | 90° /TEE L | 45° H | 45° L | 22 1/2° H | 22 1/2° L | 11 1/4° H | & 5 5/8° L | DESIGN PRESSURE (PSI) |
| 6.0 | 2.6 | 5.3 | 1.9 | 3.9 | 1.4 | 2.8 | 1.0 | 2.0 | 350 |
| 8.0 | 3.5 | 7.0 | 2.5 | 5.1 | 1.8 | 3.7 | 1.3 | 2.6 | 350 |
| 10.0 | 4.2 | 8.5 | 3.1 | 6.3 | 2.2 | 4.5 | 1.6 | 3.2 | 350 |
| 12.0 | 5.0 | 10.1 | 3.7 | 7.5 | 2.6 | 5.3 | 1.9 | 3.8 | 350 |
| 14.0 | 5.8 | 11.7 | 4.3 | 8.6 | 3.1 | 6.2 | 2.2 | 4.4 | 350 |
| 16.0 | 6.6 | 13.3 | 4.9 | 9.8 | 3.5 | 7.0 | 2.5 | 5.0 | 350 |
| 18.0 | 7.4 | 14.9 | 5.5 | 11.0 | 3.9 | 7.9 | 2.8 | 5.6 | 350 |
| 20.0 | 8.2 | 16.5 | 6.1 | 12.2 | 4.3 | 8.7 | 3.1 | 6.2 | 350 |
| 24.0 | 9.9 | 19.8 | 7.2 | 14.5 | 5.2 | 10.4 | 3.7 | 7.4 | 350 |
| 30.0 | 12.2 | 24.5 | 9.0 | 18.0 | 6.4 | 12.9 | 4.5 | 9.1 | 350 |
| 36.0 | 14.6 | 29.3 | 10.8 | 21.6 | 7.7 | 15.4 | 5.4 | 10.9 | 350 |
| 42.0 | 17.0 | 34.0 | 12.9 | 25.0 | 8.9 | 17.9 | 6.3 | 12.7 | 350 |
| 48.0 | 19.4 | 38.8 | 14.3 | 28.6 | 10.2 | 20.4 | 7.2 | 14.5 | 350 |
| 54.0 | 22.0 | 44.0 | 16.3 | 32.4 | 11.5 | 23.1 | 8.2 | 16.4 | 350 |
| 60.0 | 23.5 | 47.1 | 17.3 | 34.7 | 12.4 | 24.8 | 8.8 | 17.6 | 350 |
| 64.0 | 25.1 | 50.2 | 18.4 | 36.9 | 13.2 | 26.4 | 9.3 | 18.7 | 350 |

* BASED ON AVERAGE SOIL PASSIVE BEARING STRENGTH OF 2000 PSF USING SF OF 1.5

0222114R

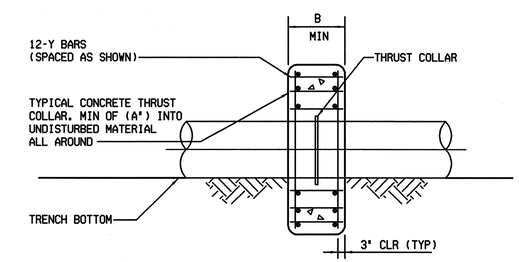



0222108

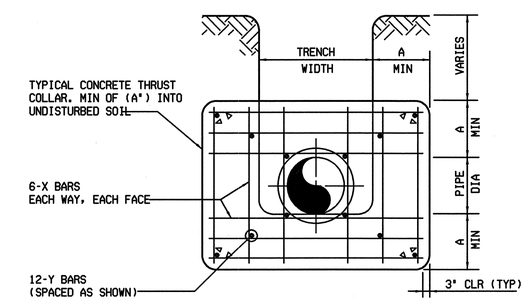
| TRENCH EXCAVATION LIMITS | | |
|---|---|---|
| INTERNAL DIAMETER OF PIPE | W WIDTH OF TRENCH MAX | W-MIN |
| 4"-6" | 3'-9" | 2'-0" |
| 8"-10" | 3'-9" | 2'-2" |
| 12" | 3'-9" | O.D.+2' |
| 14"-16" | 4'-2" | O.D.+2' |
| 18" | 4'-4" | O.D.+2' |
| 20",21" | 4'-8" | O.D.+2' |
| 24" | 4'-11" | O.D.+2' |
| 27" | 5'-9" | O.D.+2' |
| 30" | 6'-7" | O.D.+2' |
| 36" | 7'-4" | O.D.+2' |
| 42" | 8'-2" | O.D.+2' |
| 48" | 8'-9" | O.D.+2' |
| 54" | 9'-4" | O.D.+2' |
| 60" | 9'-10" | O.D.+2' |
| 72" | 11'-0" | O.D.+2' |
| 78" | 11'-8" | O.D.+2' |
| 84" | 12'-0" | O.D.+2' |
| 90" | 12'-6" | O.D.+2' |
| 96" | 13'-0" | O.D.+2' |
| 108" | 14'-0" | O.D.+2' |
| DEPTH OF CUT | S MAXIMUM PAVEMENT REPLACEMENT WIDTH | |
| 0-6' | S=W+4' | |
| >6-8' | S=W+8' | |
| >8-10' | S=W+12' | |
| >10-12' | S=W+16' | |
| >12-14' | S=W+20' | |
| >14-16' | S=W+24' | |
| >16-18' | S=W+28' | |
| >18' | S=W+32' | |

W = TRENCH WIDTH AT BOTTOM OF PIPE. TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.

0222110




ELEVATION

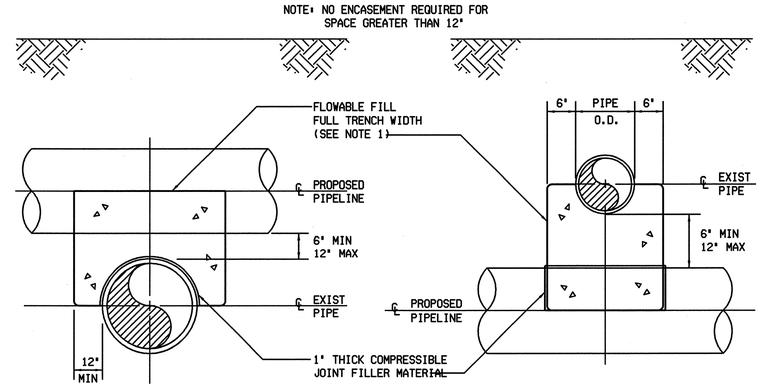



THRUST COLLAR

| PIPE SIZE | X BARS | Y BARS | A | B |
|---|---|---|---|---|
| 6"-36" | #5 | #5 | 1'-4" | 1'-7" |
| 42"& > | #6 | #6 | 1'-8" | 1'-9" |

0222119

NOTE: NO ENCASEMENT REQUIRED FOR SPACE GREATER THAN 12"




PROPOSED PIPELINE OVER EXIST PIPE

PROPOSED PIPELINE UNDER EXIST PIPE

0222118

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$DLENAME$$$$

7/2/99

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-13 |
| R/W SHEET NO. | |

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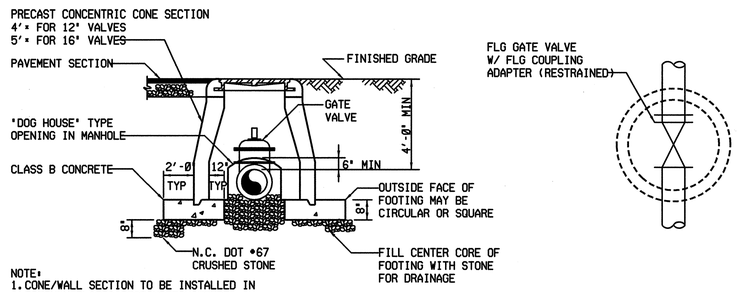
NORTH CAROLINA PROFESSIONAL SEAL 030001 ENGINEER

# UTILITY CONSTRUCTION



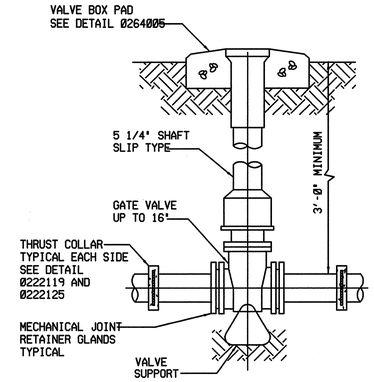

NOTE:
1. CONE/WALL SECTION TO BE INSTALLED IN FRESHLY PLACED FOOTING TO INSURE UNIFORM BEARING.
2. ADD BARREL SECTIONS TO MANHOLE AS NECESSARY.
3. ELIMINATE FOOTING AT OPENING.
4. 2'-0" MAXIMUM DISTANCE FROM OUTSIDE OF MANHOLE TO FIRST PIPE JOINT. (EACH SIDE OF MANHOLE)

SECTION

PLAN

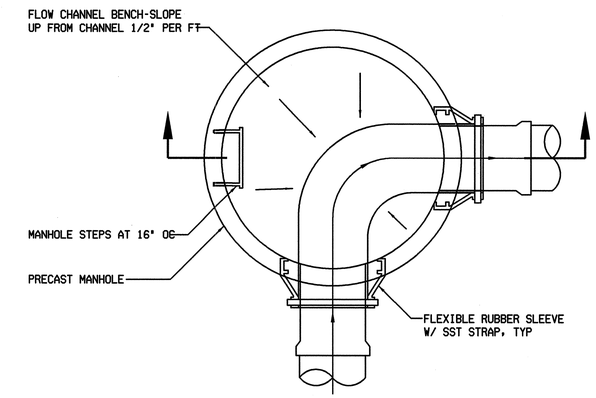
GATE VALVE ASSEMBLY
(WITHIN RESTRAINED JOINT SEGMENT)

0264001R




GATE VALVE AND VALVE BOX
(OUTSIDE RESTRAINED JOINT SEGMENT)

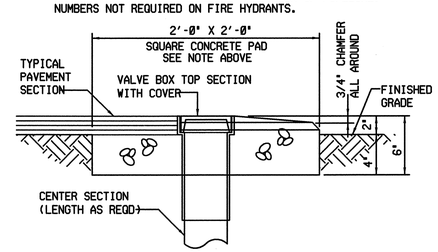
0264000




PLAN

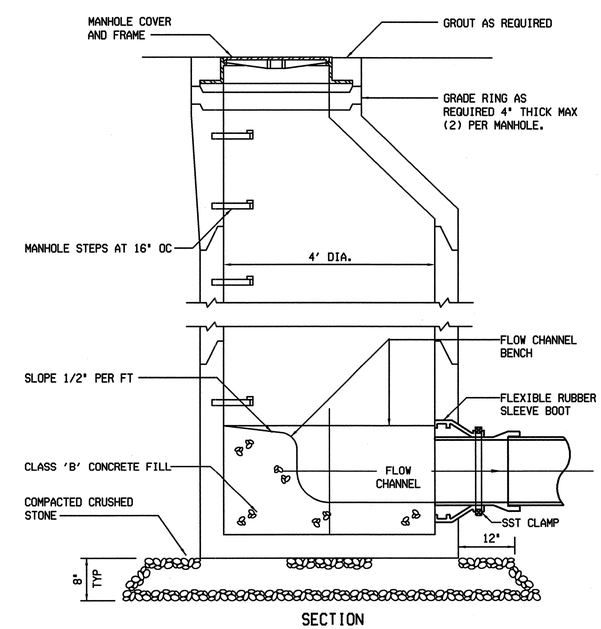
0260100

NOTE: EMBED INTO CONC PAD, 2-INCH AL NUMBERS AND TICK-MARK INDICATING SIZE OF VALVE AND DIRECTION OF PIPELINE. NUMBERS NOT REQUIRED ON FIRE HYDRANTS.




VALVE BOX PAD

0264005




SECTION

0260101

$$$$SYSTIME$$$$
$$$$DGN$$$$
$$$$DLENAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
| --- | --- |
| U-4020 | UC-14 |
| R/W SHEET NO. | |

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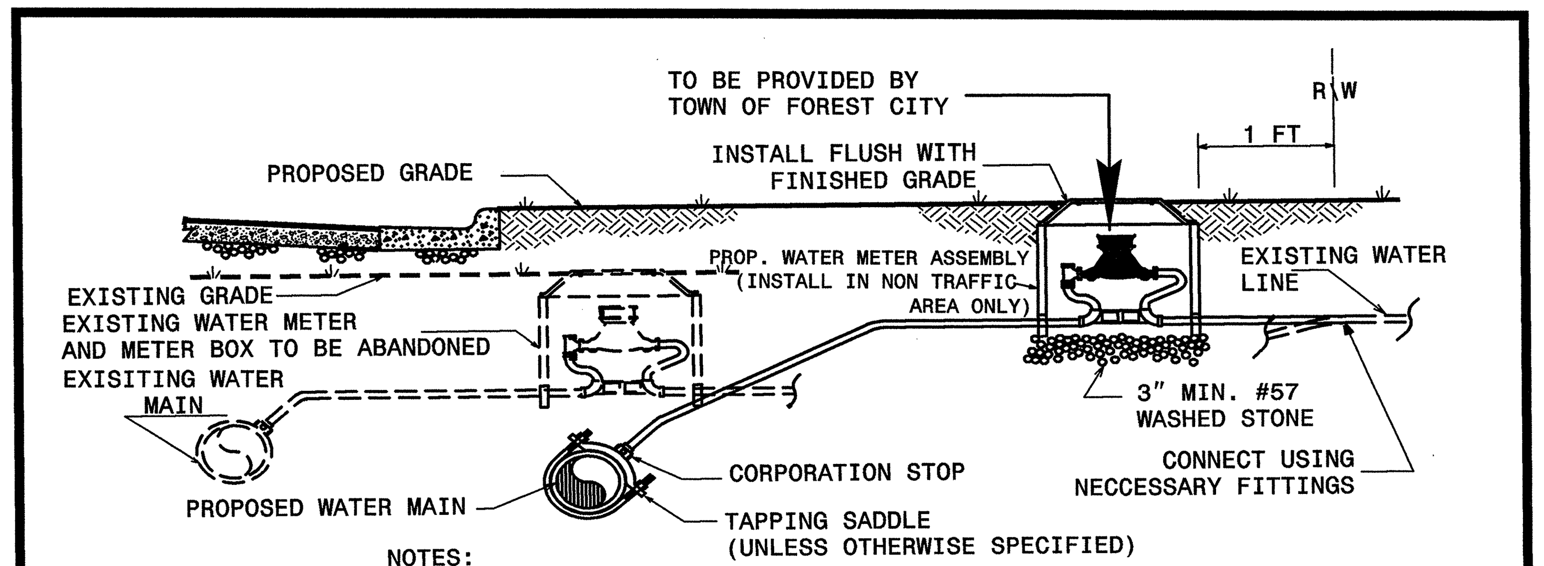
NORTH CAROLINA PROFESSIONAL SEAL 030001 ENGINEER JEREMY A. RIVENBARK

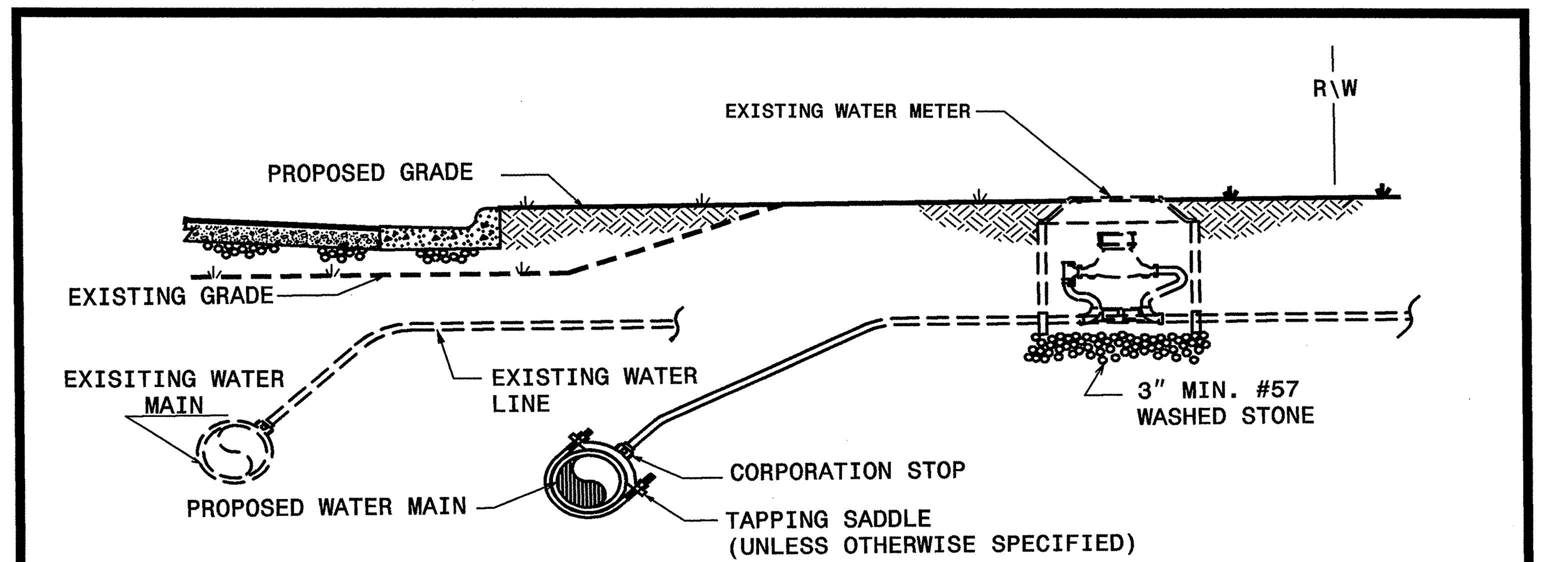
# UTILITY CONSTRUCTION




NOTES:

1. THE INSTALLATION SHALL INCLUDE THE LABOR INSTALLATION OF THE METER SETTER AND YOKE WITH CHECK VALVE, METER VALVES, AND METER BOX WITH LID.
2. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUN OF 36" COVER BELOW FINISHED GRADE.

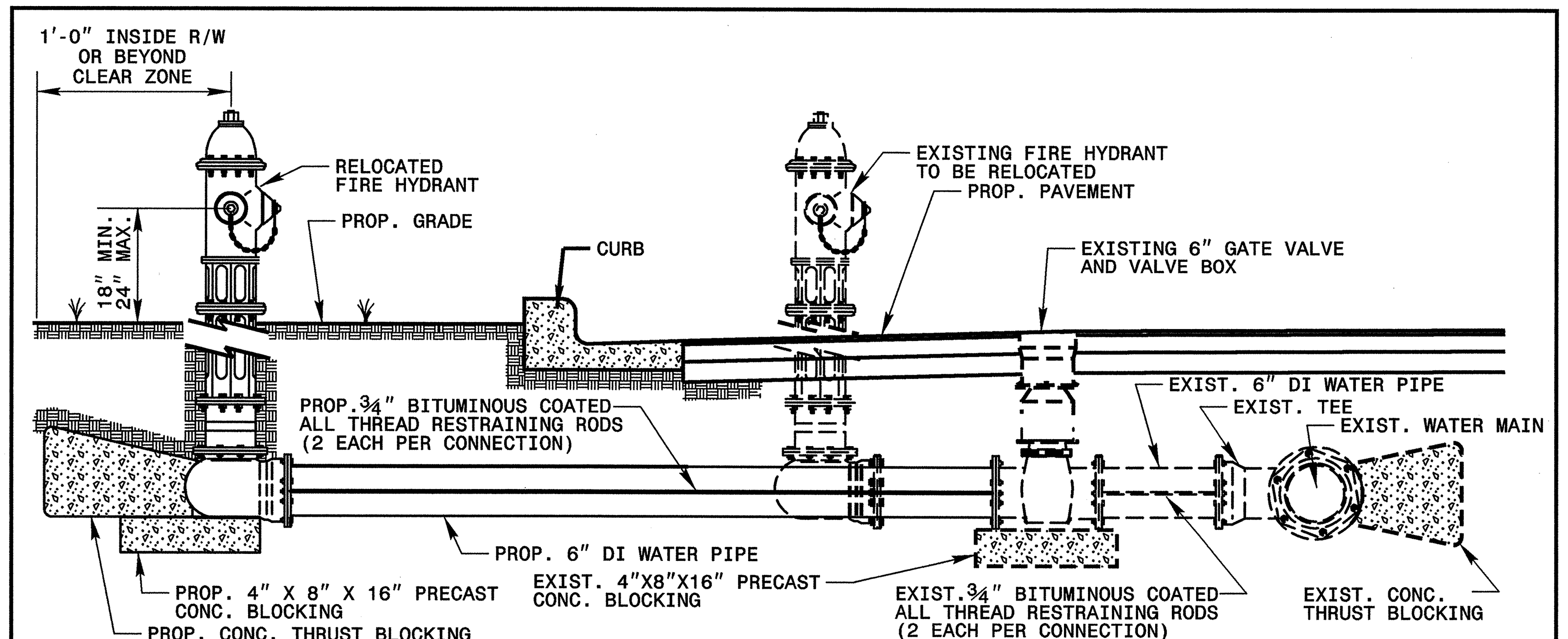
## WATER METER ASSEMBLY DETAIL



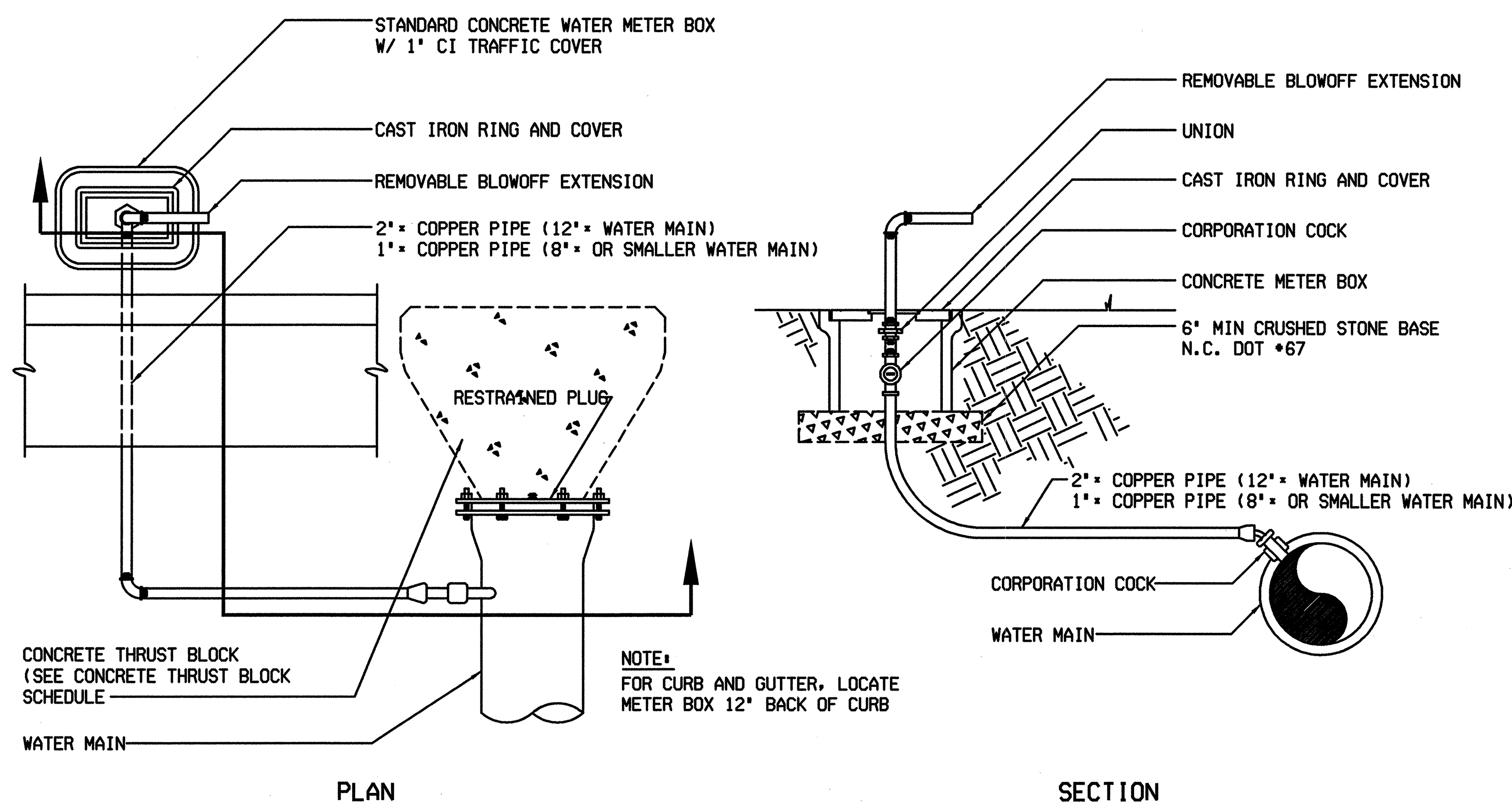

NOTES:

1. THE INSTALLATION SHALL INCLUDE CORPORATION, STOP TAPPING SADDLE, AND TYPE K COPPER SERVICE.
2. THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUN OF 36" COVER BELOW FINISHED GRADE.

## WATER METER RECONNECTION DETAIL




## FIRE HYDRANT RELOCATION DETAIL




BLOW OFF ASSEMBLY

0271301

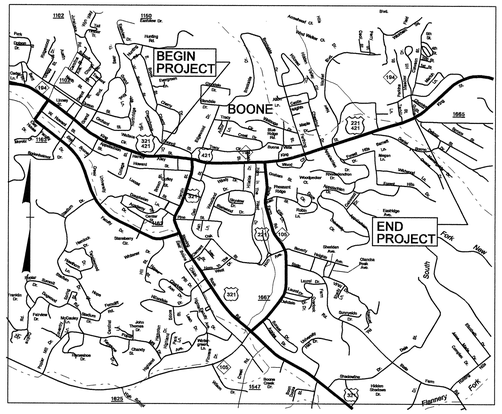
7/2/99

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

| T.I.P. NO. | SHEET NO. |
|---|---|
| U-4020 | UC-1A |

# STATE OF NORTH CAROLINA
# DIVISION OF HIGHWAYS

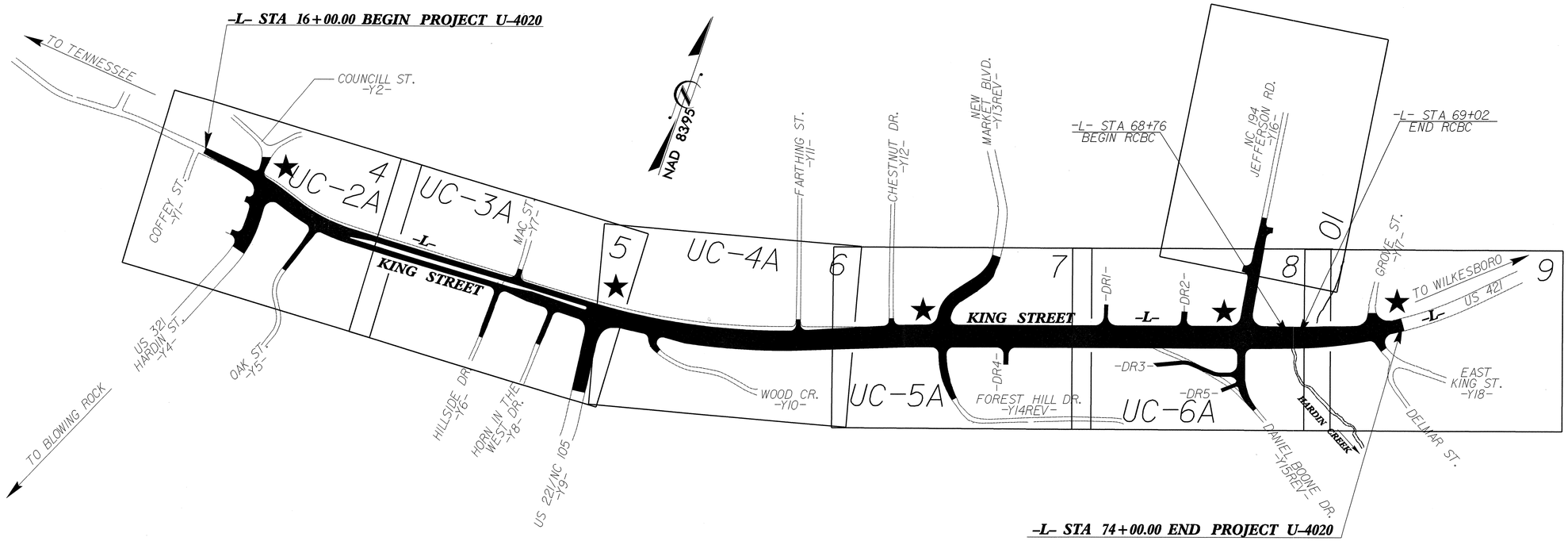
# UTILITY CONSTRUCTION PLANS
# WATAUGA COUNTY




VICINITY MAP

**LOCATION: US 421 (KING STREET) FROM US 321 (HARDIN STREET) TO EAST OF NC 194 (JEFFERSON ROAD) IN BOONE**

**TYPE OF WORK: INSTALL U/G CONDUITS**




TIP PROJECT: U-4020

**GRAPHIC SCALES**

PLANS: 40 20 0 40 80

PROFILE (HORIZONTAL): 20 10 0 20 40

PROFILE (VERTICAL): 20 10 0 20 40

## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| UC-1A | TITLE SHEET |
| UC-2A THRU UC-6A | UTILITY CONSTRUCTION SHEETS |
| UC-7A THRU UC-10A | PROFILE SHEET(S) |

## U/G UTILITIES OWNERS ON PROJECT

(1) TOWN OF BOONE

SEAL

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 COREY D. BOUSQUET 5/19/09


PREPARED IN THE OFFICE OF:

DIVISION OF HIGHWAYS
UTILITIES ENGINEERING 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
Kamil kifah — UTILITIES PROJECT DESIGNER



09/08/99
14-MAY-2009 12:10
r:\utilities\rdy_ut\proj\u4020_ut_ucla_tsh.dgn
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-2A |
| DESIGNED BY: CDB | |
| DRAWN BY: CDB | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 11/14/09 COREY D. BOUSQUET

# UTILITY CONSTRUCTION

NAD 83/95

20 0 40

-BL-8 11+84.18 PINC
5+00.00 POT
-L- POT 16+28.62
(20.68' RT.)

## BEGIN TIP PROJECT U-4020
## -L- POT STA. 16+00.00

TURNHART ACQUISITION CORPORATION
RB 1111 PG 038

DALE S. WHISENANT
DB 242 PG 822

WESTMINSTER PRESBYTERIAN CHURCH
RB 099 PG 219
RB 1111 PG 308

-Y2-
PI Sta 12+29.23
Δ = 69° 48' 33.0" (RT)
D = 49° 59' 59.9"
L = 139.62'
T = 79.95'
R = 114.59'

5+00.00 POT
-BY3-29

-BY2- 7+13.01 PINC
-BY3- 6+67.46 POT
-Y2- POT 12+00.19
(26.88' LT.)

BEGIN CONSTRUCTION
-Y2- STA.12+50.00

222' OF 6" PVC CONDUIT, SCH 60
666' OF 4" PVC CONDUIT, SCH 60
DUCT BANK - 1

1312' OF 4" PVC
CONDUIT, SCH 60
DUCT BANK - 2

896' OF 4" PVC
CONDUIT, SCH 60
DUCT BANK - 3

BELLSOUTH TELECOMMUNICATIONS
DB 113 PG 041
DB 134 PG 665

GRACE EVANGELICAL LUTHERN CHURCH
RB 093 PG 123
DB 147 PG 090

KINGSWOOD CONDOMINIUMS
DB 249 PG 523
PB 006 PG 008

NOBLETT, LLC
RB 1036 PG 506

APPALACHIAN SOUTH INC.
RB 470 PG 630
TRACT VIII

DAN'L BOONE INN OF BOONE, INC
DB 010 PG 827
DB 021 PG 435
DB 183 PG 742
DB 186 PG 325
DB 222 PG 628

2 GAS VALVES

-BY1-25
6+41.60 POT
-Y1- POT 11+56.43
(19.95' RT.)

-Y1-
PI Sta 11+19.39
Δ = 5° 24' 09.4" (LT)
D = 10° 00' 00.0"
L = 54.03'
T = 27.03'
R = 572.96'

-Y4-
PI Sta 13+04.04
Δ = 26° 29' 25.5" (RT)
D = 10° 00' 00.0"
L = 264.90'
T = 134.86'
R = 572.96'
e = 0.04

STATE OF NORTH CAROLINA
STATE PROPERTY OFFICE
NORTH CAROLINA DEPARTMENT OF ADMINISTRATION
RB 252 PG 365

THE HALBEDEL'S CORPORATION
RB 912 PG 177

STATE OF NORTH CAROLINA
DB 229 PG 567

-L-
PI Sta 18+55.55
Δ = 12° 34' 10.0" (RT)
D = 7° 09' 43.1"
L = 175.50'
T = 88.10'
R = 800.00'
e = SEE PLANS

PI Sta 22+97.16
Δ = 20° 36' 57.1" (LT)
D = 7° 09' 43.1"
L = 287.85'
T = 145.50'
R = 800.00'
e = SEE PLANS

END CONSTRUCTION
-Y4- POC 13+50.00

DALE S. WHISENANT
RB 060 PG 147

-BY4- 32 7+95.42 PINC
-Y4- POT 12+80.48
(44.27' LT.)

END CONSTRUCTION
-Y5- STA.13+00.00

DALE S. WHISENANT
DB 604 PG 087

HUITT INVESTMENTS, LLC
RB 1064 PG 592

ERIC WOOLRIDGE
RB 1103 PG 325

-BY5- 9+45.03 POT

-BY5- 35 7+73.78 PINC
-Y5- POT 12+88.10
(15.95' RT.)

-Y5-
PI Sta 11+01.36
Δ = 3° 53' 24.2" (RT)
D = 5° 00' 00.0"
L = 77.80'
T = 38.92'
R = 1,145.92'

PI Sta 13+15.35
Δ = 4° 07' 50.8" (LT)
D = 25° 00' 00.0"
L = 16.52'
T = 8.27'
R = 229.18'
e = SEE PLANS

PI Sta 13+61.27
D = 20° 24' 17.7" (LT)
D = 50° 00' 00.0"
L = 40.81'
T = 20.62'
R = 114.59'

5" MONOLITHIC CONC. ISLAND
4" CONC. SIDEWALK

SEE SHEET 2-J FOR TRAFFIC DIAGRAM
SEE SHEET 2-J FOR INTERSECTION DETAIL

MATCHLINE -L- STA. 26+00.00 SEE SHEET UC-3A

REVISIONS

8/17/2009

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-3A |

DESIGNED BY: CDB
DRAWN BY: CDB
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 5/14/09 CHRIS D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

20 0 40

4" CONC. SIDEWALK

5" MONOLITHIC CONC. ISLAND

SEE SHEET 2-I FOR TRAFFIC DIAGRAM

SEE SHEET 2-K FOR INTERSECTION DETAIL

NAD 83/95

MATCHLINE -L- STA. 26+00.00 SEE SHEET UC-2A

MATCHLINE -L- STA. 37+25 SEE SHEET UC-4A

648' OF 4" PVC CONDUIT, SCH 60 DUCT BANK - 4

636' OF 4" PVC CONDUIT, SCH 60 DUCT BANK - 5

1128' OF 4" PVC CONDUIT, SCH 60 DUCT BANK - 6

1424' OF 4" PVC CONDUIT, SCH 60 DUCT BANK - 7

776' OF 6" PVC CONDUIT, SCH 60
2328' OF 4" PVC CONDUIT, SCH 60
DUCT BANK - 8

-BL-11 22+51.43 PINC
-L- POT 27+01.69
(16.05' LT.)
REMOVE

-BL-GPS U4020-3 32+82.11 PINC
-BY9- 5+00.00 POT
-BY10- 5+00.00 POT
-L- POT 37+04.75
(31.88' RT.)

-BL-13 29+98.33 PINC
-BY8- 5+00.00 POT
-L- POT 34+40.38
(70.31' LT.)

-L-PC 35+98.42

-BL-12 27+34.72 PINC
-BY6- 5+00 POT
-BY7- 8+15.15 POT
-L- POT
(5.46' LT

-Y7-POT 12+26.32
-L-POT 32+39.87

-Y7-POT 10+00.00

-Y6-POT 10
-L-POT 31+69.86

-Y9-POT 10+20.95

-Y8-POT 10
-L-POT 34+[illegible]

-L- N 87°55'32.7" E

-Y6-PC 10+85.03
-Y6-PT 11+06.02

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y6-PC 12+96.95
-Y6-PT 13+19.25

-Y6-POT 13+55.09

-BY6-38 8+43.57 POT
-Y6- POT 13+55.09
(9.97' LT.)

-Y8-POT 13+35.08

-BY8-42 7+94.43 POT
-Y8- POT 12+47.29
(12.51' LT.)

-BY9-44 6+91.78 PINC
-BY9- POT 12+45.23
(36.07' LT.)

PI Sta 10+95.52
Δ = 2° 05' 54.4" (RT)
D = 10° 00' 00.0"
L = 20.98'
T = 10.49'
R = 572.96'
e = SEE PLANS

PI Sta 13+08.10
Δ = 2° 13' 48.1" (RT)
D = 10° 00' 00.0"
L = 22.30'
T = 11.15'
R = 572.96'
e = SEE PLANS

PI Sta 11+06.80
Δ = 6° 10' 06.8" (RT)
D = 10° 00' 00.0"
L = 61.69'
T = 30.87'
R = 572.96'
e = SEE PLANS

BM#2
-BL- STA. 24+98.97
101.23' LEFT
ELEV. 3264.86'

5+00.00 POT
-BY7-39

PINE WOODS CONDOMINIUMS
DB 246 PG 823
PB 6 PG 4

A.E. MCCREARY
DB 085 PG 081

TOWN OF BOONE
DB 203 PG 399

ORANGE AVENUE AUTO SALES, INC
DB 204 PG 646

TOWN OF BOONE
BY TAX MAP

BOONE UNITARIAN UNIVERSALIST FELLOWSHIP
BY TAX MAP
DB 212 PG 992

KELLY JOE EDMISTEN

BEGIN CONSTRUCTION
-Y7- STA.11+50.00
RB 553 PG 652
PB 2 PG 25

END CONSTRUCTION
-Y8- STA.12+50.00

END CONSTRUCTION
-Y6- STA.12+10.00

END CONSTRUCTION
-Y9- STA.14+00.00

BOONE STATION PARTNERS, LLC
DB 1230 PG 871
DB 1230 PG 885
DB 1230 PG 889
DB 1230 PG 892
DB 1230 PG 898
PB 020 PG 200

ROBERT F. HELMS ETAL
3SBKAPT
RB 527 PG 414

JAMES B. GRAHAM, TRUSTEE LIVING TRUST
RB 475 PG 629

RENO MANAGEMENT LLC
RB 345 PG 660

LESLIE H. O'NEAL
RB 180 PG 818

LETTIE JUNE STAMEY
DB 093 PG 568
BY TAX MAP

TRAILWAY LAUNDRY INC.
BY TAX MAP
DB 070 PG 177

TIE TO EXISTING MANHOLE

BOONE GOSPEL TABERNACLE
DB 057 PG 041
BY TAX MAP

BETTY B. ELLIOTT
RB 338 PG 821

HILL BUMGARNER
DB 78 PG 451

FRED PERRY
DB 76 PG 23

ROBERT D. LEE
DB 710 PG 570

REBECCA E. YOUNCE
DB 011 PG 834

JOHNNY R. RAMSEY
DB 176 PG 383

HENRY J. KNOLL
RB 144 PG 204

JOE FRANK MATHIS
RB 167 PG 672

PROPOSED GUARDRAIL CAT-1

PROPOSED SHOULDER BERM GUTTER

BERM DITCH

AREA STILL UNDER CONSTRUCTION

3S BUS UNDER CONSTRUCTION

100' TAPER

REVISIONS

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-4A |

DESIGNED BY: KAK
DRAWN BY: KAK
CHECKED BY: CDB
APPROVED BY: CDB
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
UTILITIES ENGINEERING SEC.
PHONE:(919)250-4128
FAX:(919)250-4119

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 3/14/19 COREY D. BOUSQUET

UTILITY CONSTRUCTION PLANS ONLY

# UTILITY CONSTRUCTION

20 0 40

NAD 83/95

SEE SHEET UC-3A

MATCHLINE -L- STA. 37+25

MATCHLINE -L- STA. 48+00

SEE SHEET UC-5A

-L-
PI Sta 40+86.69
Δ = 17° 45' 38.8" (LT)
D = 1° 50' 00.5"
L = 968.70'
T = 488.27'
R = 3,125.00'
e = SEE PLANS

298'OF 6" PVC CONDUIT, SCH 60
894' OF 4" PVC CONDUIT, SCH 60
DUCT BANK - 9

1088' OF 4" PVC CONDUIT, SCH 60
DUCT BANK - 10

-Y10-POT 10+18.89
-L-POC 39+05.07

-Y11-POT 10+00.00

BEGIN CONSTRUCTION
-Y11- STA.11+57.00
-Y11-POT 12+42.13
-L-POT 45+84.37

-L-PT 45+67.12

-BL-15 41+71.47 PINC
-BYII-7+37.80 POT
-L- POT 45+91.40
(2.47' LT.)

-BYII-49.5+00.00 POT
-YII-POT 10+02.60
(14.52' RT.)

-BL-14 38+49.86 PINC
-L- POT 42+65.52
(0.40' LT.)

-Y10-PC 10+76.05

-Y10-PT 13+33.78

-Y10-PT 11+35.11

S 66° 58' 25.0" E

-Y10-PC 11+53.93

END CONSTRUCTION
-Y10- STA.11+50.00

-BYI0-478+71.62 PINC
-Y10- POT 12+56.91
(10.05' LT.)

-Y10-PT 12+58.30

-Y10-PC 12+85.04

-Y10-PC 13+60.17

-Y10-PT 13+76.71

-Y10-PC 15+09.68

12+73.47 POT
-BYI0-48

-Y10-PT 14+85.23

-Y0-PC 14+23.86

N 78° 38' 37.0" E

N 81° 57' 09.8" E

S 82° 42' 21" E

S 66° 45' 35" E

2' BASE DITCH
W/CLASS "B" RIP RAP
SEE DETAIL "A"
EST. 15 TONS
30 SY FF
DDE 40 CY

480' TRANSITION LEFT

490' TRANSITION RIGHT

DO NOT DISTURB BLK WALL

REMOVE AND REPLACE W/DI

GRADE TO DRAIN

BERM DITCH

MACK D. BROWN
DB 93 PG 585

WALTER OTTO
RB 461PG 144

BARNEY L. BROOKSHIRE
RB 318 PG 766

MARY ANN COLE
RB 270 PG 351

DB 395 PG 537

KENNETH BUDDY WOOD
DB 990 PG 472

KENNETH BUDDY WOOD
DB 178 PG 675

KENNETH BUDDY WOOD
DB 549 PG 127

COLVARD OIL CO.INC.
DB 080 PG 076

NEWTON DEVELOPERS
RB 995 PG 549

HAROLD E. STEELMAN, JR.
DB 225 PG 835
BY TAX MAP

NOAH DANIEL ROBBINS
RB 715 PG 491
BY TAX MAP

TODD R. GREENE, ET AL
DB 076 032

KENNETH BUDDY WOOD
RB 474 PG 315

MICHAEL C. BOONE, ET AL
RB 535 PG 170

RAY KHAN
DB 254 PG 612

BOONE HOSPITALITY, LLC
RB 1108 PG 722

STEEPLE CHASE, LLC
RB 320 PG 164

| PI Sta 11+07.89 | PI Sta 12+06.59 | PI Sta 13+09.57 | PI Sta 13+68.44 | PI Sta 14+54.73 |
|---|---|---|---|---|
| Δ = 53° 09' 08.5" (LT) | Δ = 18° 47' 10.4" (LT) | Δ = 15° 35' 47.6" (LT) | Δ = 3° 18' 26.8" (RT) | Δ = 15° 20' 35.1" (RT) |
| D = 89° 59' 59.9" | D = 18° 00' 00.0" | D = 32° 00' 00.0" | D = 20° 00' 00.0" | D = 25° 00' 00.0" |
| L = 59.06' | L = 104.37' | L = 48.74' | L = 16.54' | L = 61.37' |
| T = 31.85' | T = 52.66' | T = 24.52' | T = 8.27' | T = 30.87' |
| R = 63.66' | R = 318.31' | R = 179.05' | R = 286.48' | R = 229.18' |

5" MONOLITHIC CONC. ISLAND

4" CONC. SIDEWALK

REVISIONS

08/14/2018

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-5A |
| DESIGNED BY: CDB | |
| DRAWN BY: CDB | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 23041 5/14/09 CHRISTOPHER D. BOUSQUET

# UTILITY CONSTRUCTION

REVISIONS

MATCHLINE -L- STA. 48+00 SEE SHEET UC-4A

MATCHLINE -L- STA. 59+00 SEE SHEET-UC-6A

-Y12-POT 10+00.00

-Y13REV-
PI Sta 18+44.77
Δ = 57° 41' 03.9" (LT)
D = 40° 55' 32.0"
L = 140.95'
T = 77.10'
R = 140.00'
e = SEE PLANS

PI Sta 15+66.57
Δ = 50° 14' 20.7" (RT)
D = 23° 52' 23.7"
L = 210.44'
T = 112.52'
R = 240.00'
e = SEE PLANS

-Y13REV-PT 16+64.49

-Y13REV-PC 17+67.67

1112' OF 4" PVC CONDUIT, SCH 60 DUCT BANK - 11

1544' OF 4" PVC CONDUIT, SCH 60 DUCT BANK - 12

-BL-16 45+87.24 PINC
-BY12- 8+63.15 POT
-L- POT 50+03.73
(55.82' LT.)

-Y12-POT 13+83.79
-L-POT 50+17.34

-Y13REV-PT 19+08.62

END CONSTRUCTION
-Y13REV- STA.15+00.00

-L-POT 55+53.01
-DR4-POT 10+00
-L-

-L-PT 52+83.88

-L- PC 50+67.79

END CONSTRUCTION
-DR4- STA.11+40.00

-DR4-POT 11+58.11

-BL-18 52+93.55 PINC
-L- POT 57+08.82
(48.08' LT.)

-Y13REV-POT 19+79.71
-L-PC 52+56.05
-Y14REV-POT 10+00.00

-Y14REV-PC 10+79.48

-BY14-67
7+50.07 PINC
-Y14REV-PI 11+91.09
(7.99' RT.)

-Y14REV-
PI Sta 12+14.89
Δ = 33° 43' 10.0" (LT)
D = 12° 50' 20.8"
L = 262.63'
T = 135.24'
R = 446.26'
e = SEE PLANS

END CONSTRUCTION
-Y14REV- STA.13+00.00

-Y14REV-PT 13+42.11

-Y14REV-POT 13+58.70

-BY14-58 9+29.08 POT
-Y14REV- 13+58.70
(14.67' RT.)

-L-
PI Sta 51+75.84
Δ = 1° 14' 17.2" (RT)
D = 0° 34' 22.6"
L = 216.09'
T = 108.05'
R = 10,000.00'
SE = N.C.

4" BASE DITCH
W/CLASS 1 RIP RAP
SEE DETAIL 'B'
EST. 72 TONS
100 SY FF
DDE 60 CY

NAD 83/95

51 TOYOTA OF BOONE
DB 216 PG 483

55 TOYOTA OF BOONE, INC.
NORMAN LEE CHEEK
RB 520 PG 604

56 RWE PROPERTIES, LLC
RB 443 PG 318

57 VALLE CAPITAL GROUP, LLC
RB 989 PG 357

58 AJD INVESTMENTS INC.
BK 1285 PG 165

59 BOONE MOVIE PARCEL, LLC
BK 1316 PG 556

50 KENNETH BUDDY WOOD, ET UX
DB 043 PG 267
DB 124 PG 513

52 WOOD MASONRY SUPPLY
RB 1515 PG 407
RB 1515 PG 409

54 ROBERT LEE DUNNIGAN
RB 312 PG 509

111 KENNETH BUDDY WOOD
DB 095 PG 395

4" CONC. SIDEWALK
FOR INTERSECTION DETAIL SEE SHEET 2-L

5" MONOLITHIC CONC. ISLAND
FOR RETAINING WALL PLANS SEE SHEET W-1 THRU W-19

14-MAY-2009 12:06
r:\utilities\projects\u4020_UT_UC5A_psh07.dgn

SEE SHEET 17 FOR PROFILE OF -DR1-
SEE SHEET 17 FOR PROFILE OF -DR2-
SEE SHEET 17 FOR PROFILE OF -DR3-

SEE SHEET 2-I FOR TRAFFIC DIAGRAM

5" MONOLITHIC CONC. ISLAND

4" CONC. SIDEWALK

FOR RETAINING WALL PLANS SEE SHEET W-1 THRU W-19

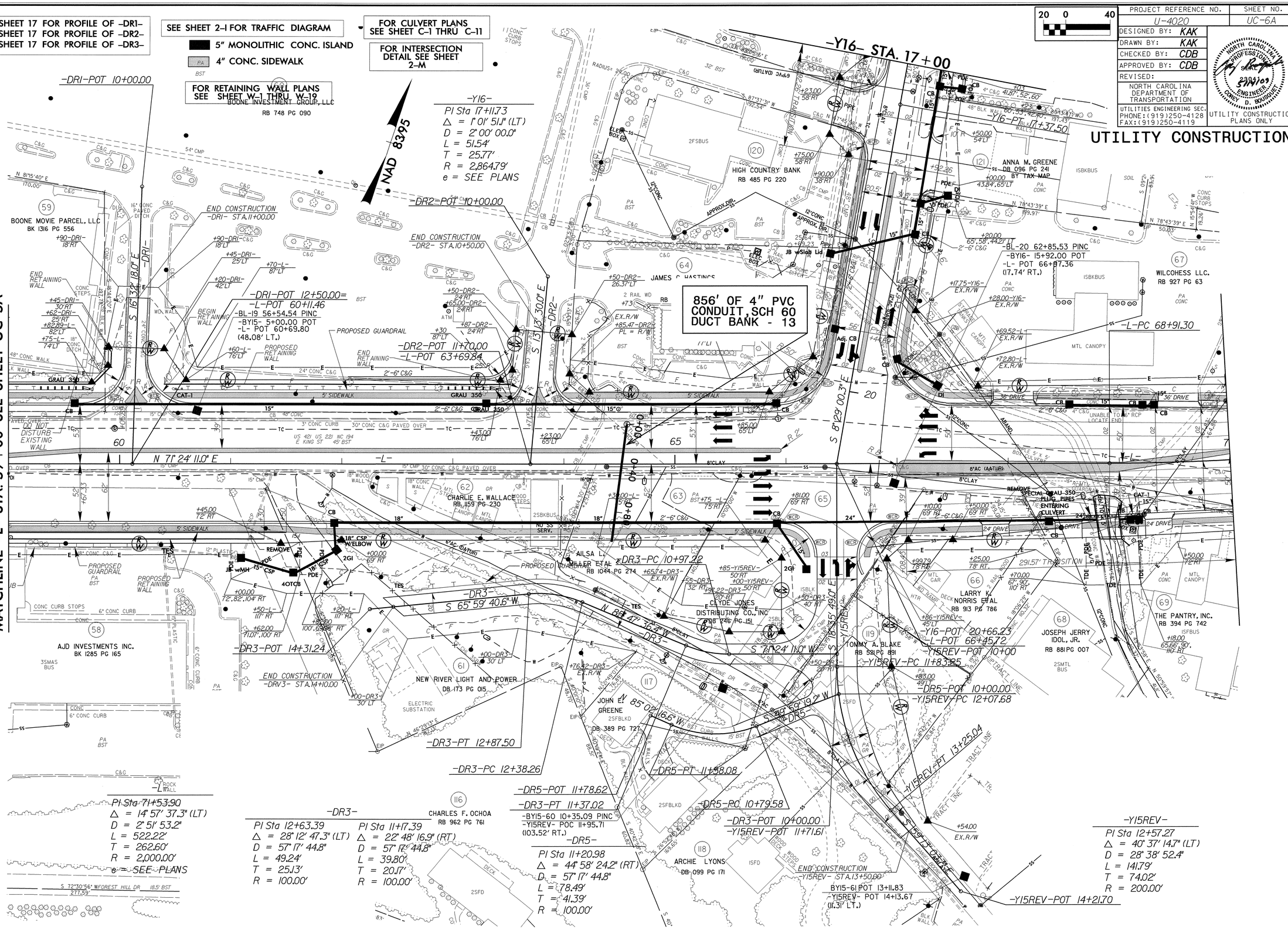
FOR CULVERT PLANS SEE SHEET C-1 THRU C-11

FOR INTERSECTION DETAIL SEE SHEET 2-M

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-6A |
| DESIGNED BY: KAK | |
| DRAWN BY: KAK | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL ENGINEER COREY D. BOUSQUET 23391 5/14/09

# UTILITY CONSTRUCTION




REVISIONS

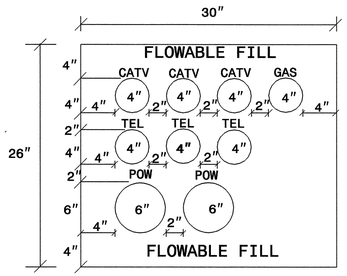
5/14/2009

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-7A |
| DESIGNED BY: CDB | |
| DRAWN BY: CDB | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 5/14/09

# UTILITY CONSTRUCTION

THE PROFILES SHOWN DO NOT SHOW ALL THE EXIST. UTILIIES THAT THE CONDUITS WILL CROSS, VERTICAL ADJUSTMENTS WILL NEED TO BE MADE IN THE FIELD TO CLEAR ALL UTILITIES.

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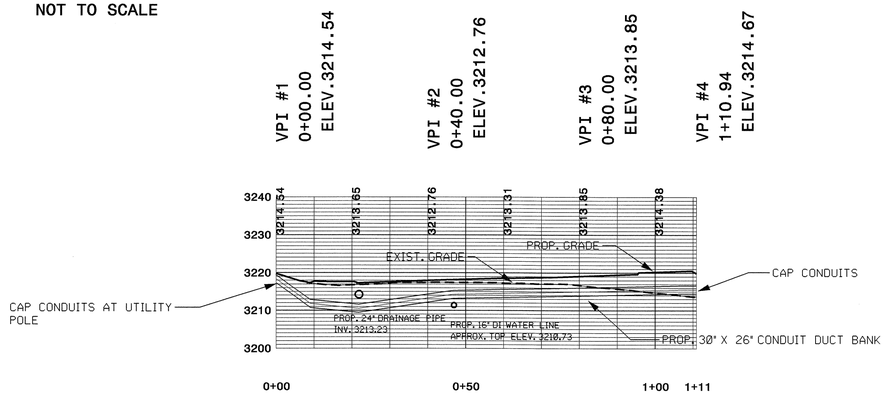


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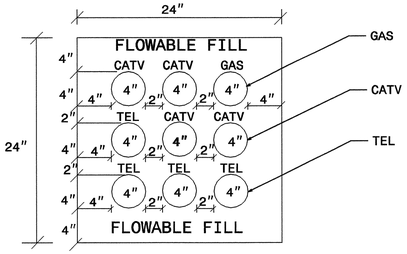
VERTICAL SCALE =20

## DUCT BANK 1

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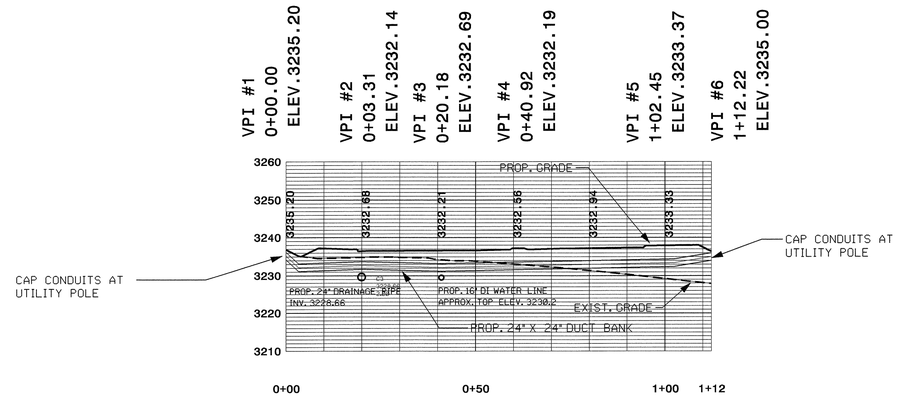


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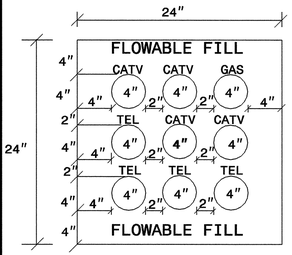


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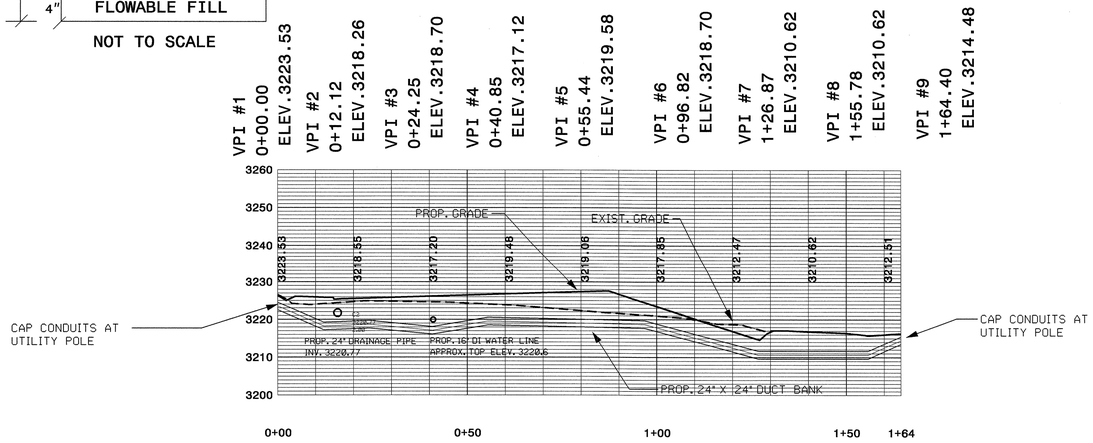


HORZITAL SCALE =20
VERTICAL SCALE =20

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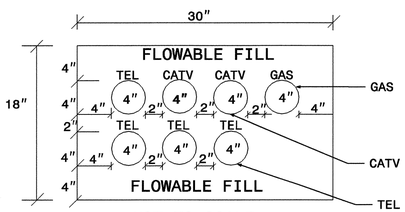


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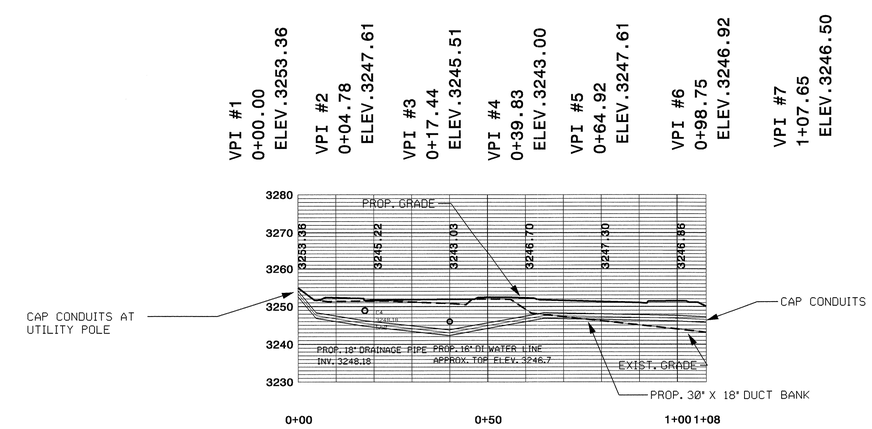


HORZITAL SCALE =20
VERTICAL SCALE =20

## DUCT BANK 4

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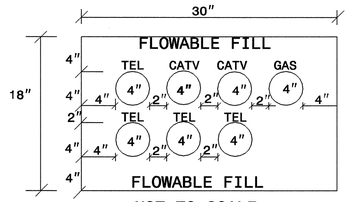
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-8A |
| DESIGNED BY: CDB | |
| DRAWN BY: CDB | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER CHRISTOPHER D. BOURQUET

# UTILITY CONSTRUCTION

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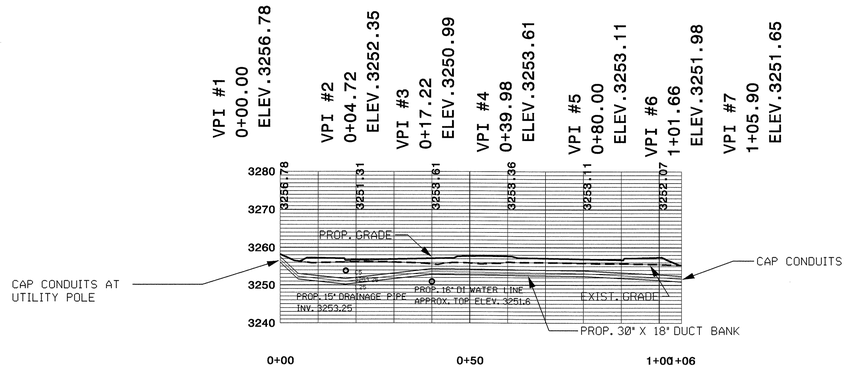


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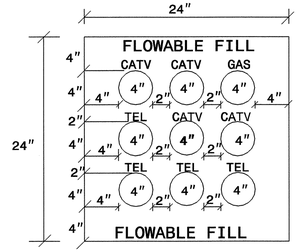
VERTICAL SCALE =20

# DUCT BANK 5

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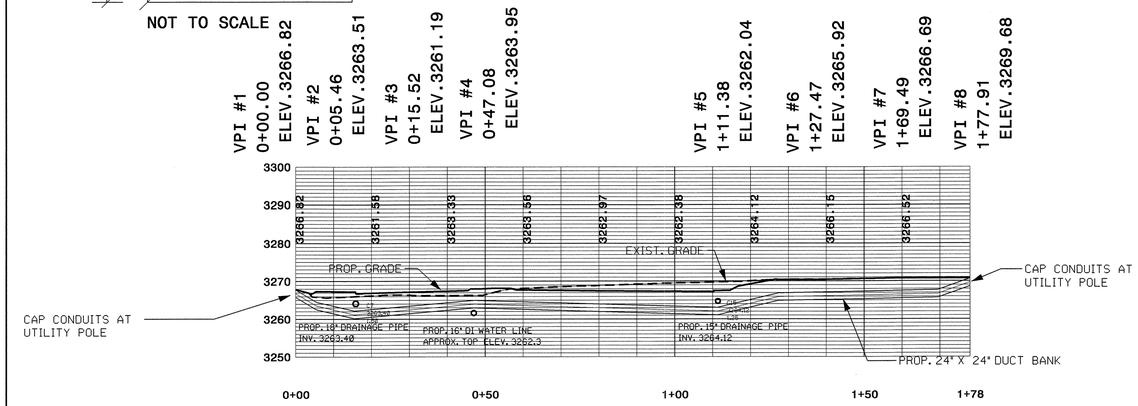


HORZITAL SCALE =20
VERTICAL SCALE =20

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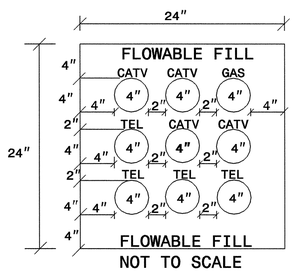


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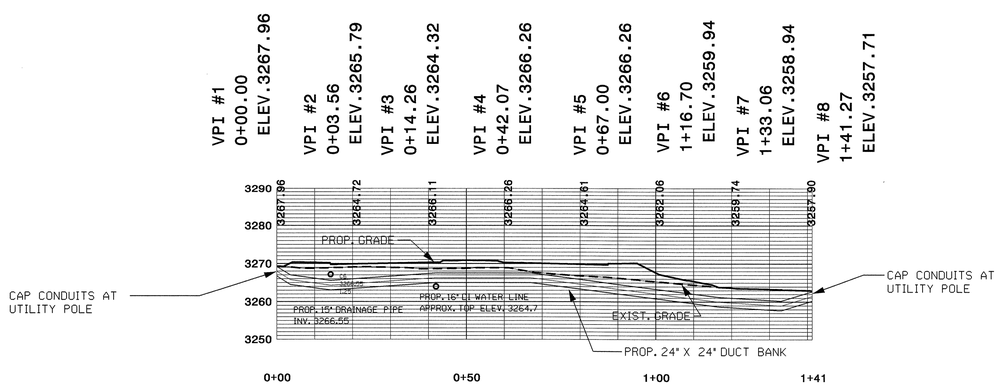


HORZITAL SCALE =20
VERTICAL SCALE =20

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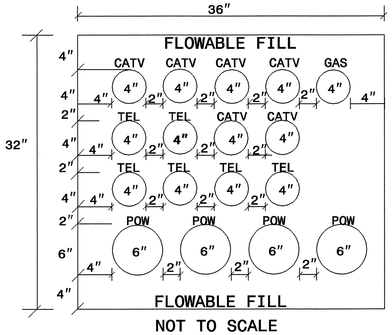
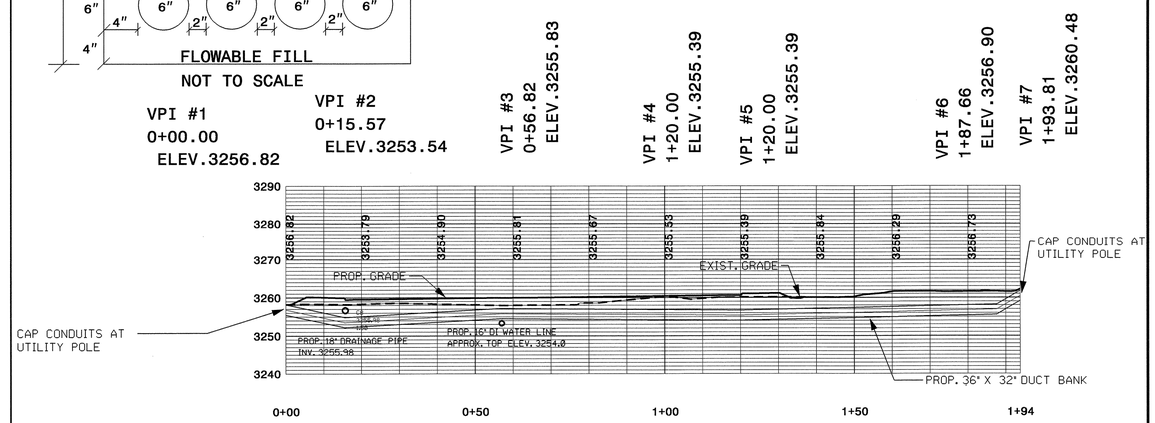



NOT TO SCALE




HORZITAL SCALE =20
VERTICAL SCALE =20

# DUCT BANK 8

5/14/99

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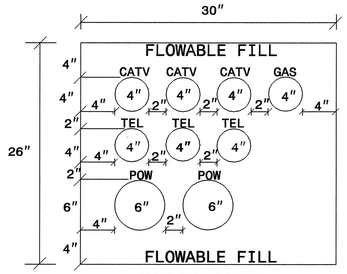
14-MAY-2009 11:31
$$$$USERNAME$$$$

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-9A |
| DESIGNED BY: CDB | |
| DRAWN BY: CDB | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER CAREY D. BOUSQUET 5/14/09

# UTILITY CONSTRUCTION

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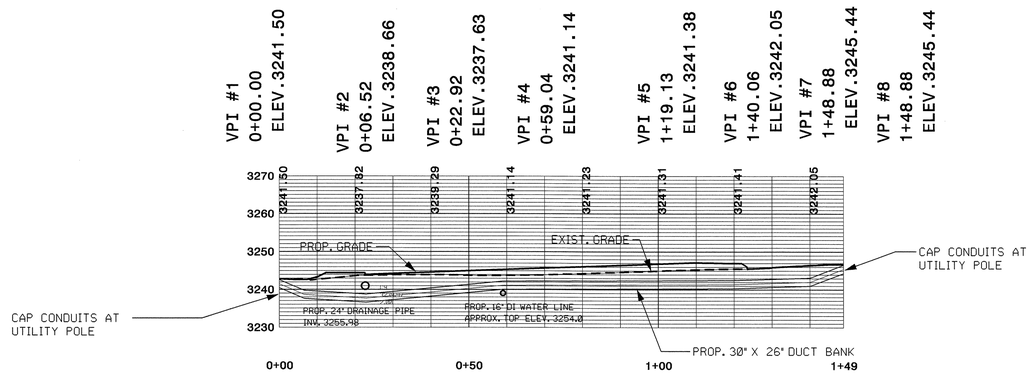
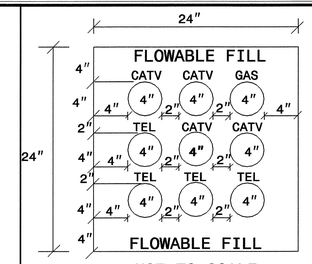
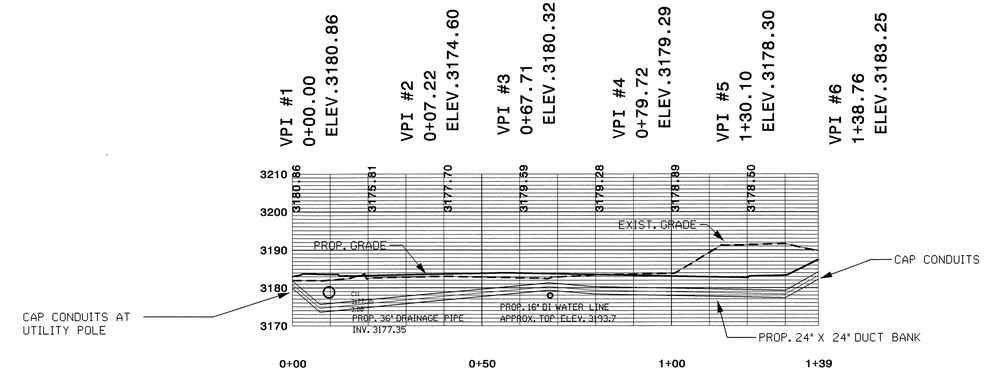



HORZITAL SCALE =20
VERTICAL SCALE =20

# DUCT BANK 9

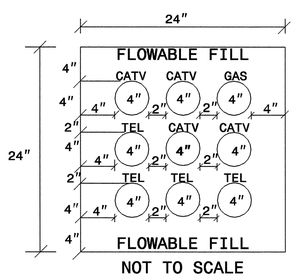



NOT TO SCALE

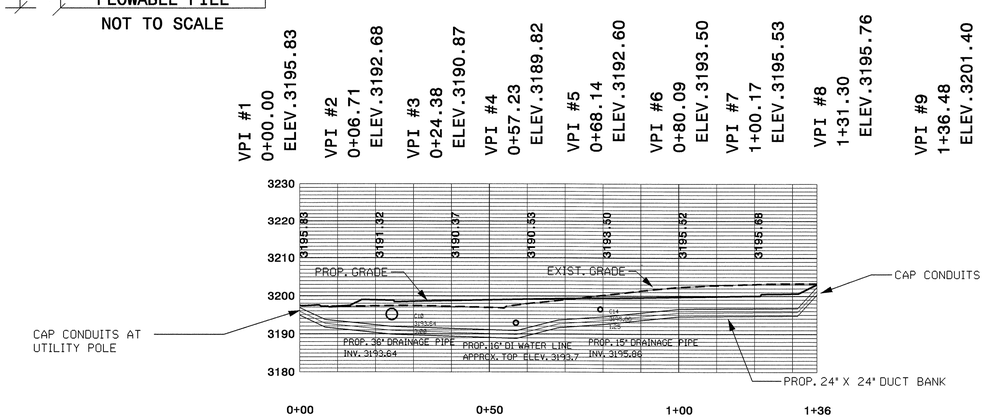



HORZITAL SCALE =20
VERTICAL SCALE =20

# DUCT BANK 11

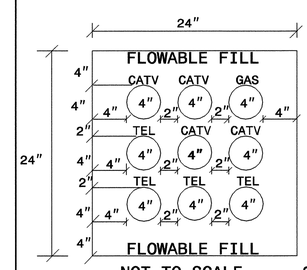



NOT TO SCALE




HORZITAL SCALE =20
VERTICAL SCALE =20

# DUCT BANK 10

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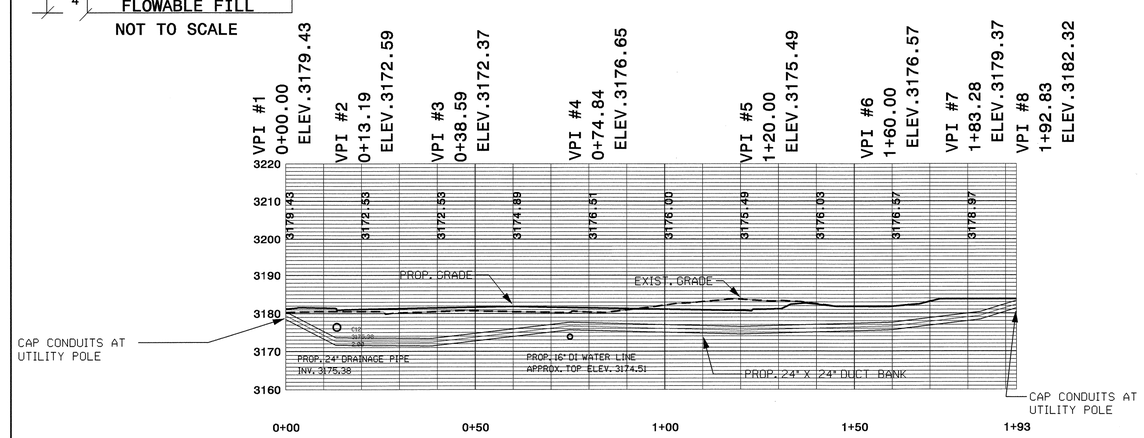


HORZITAL SCALE =20
VERTICAL SCALE =20

# DUCT BANK 12

5/14/99

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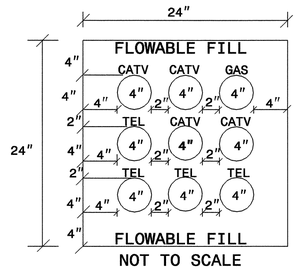
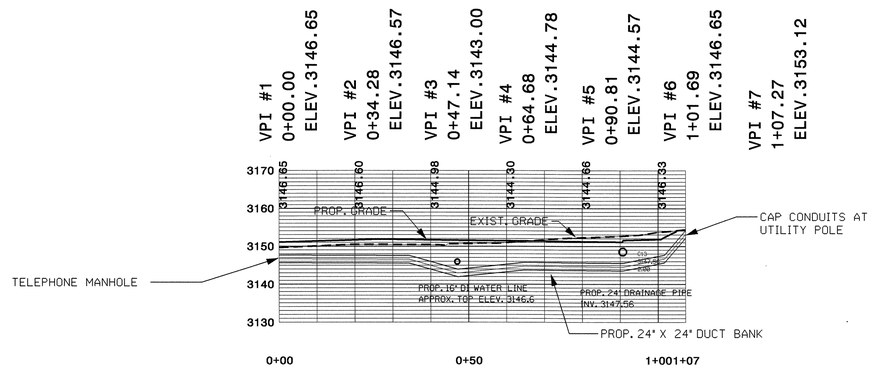



NOT TO SCALE




HORZITAL SCALE =20
VERTICAL SCALE =20

# DUCT BANK 13

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UC-10A |
| DESIGNED BY: CDB | |
| DRAWN BY: CDB | |
| CHECKED BY: CDB | |
| APPROVED BY: CDB | |
| REVISED: | |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION | |
| UTILITIES ENGINEERING SEC. PHONE:(919)250-4128 FAX:(919)250-4119 | UTILITY CONSTRUCTION PLANS ONLY |

NORTH CAROLINA PROFESSIONAL SEAL 23041 ENGINEER COREY D. BOUSQUET 5/14/09

# UTILITY CONSTRUCTION

5/14/99

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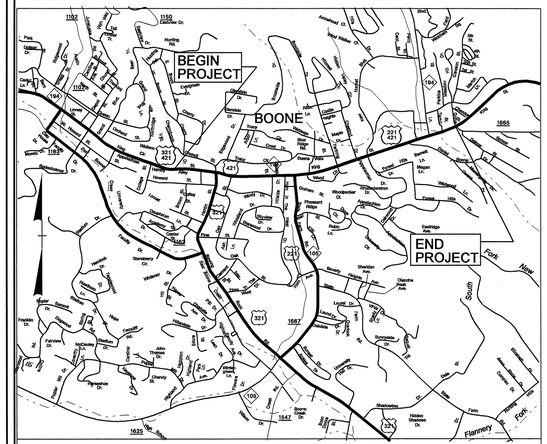
09/08/99

TIP PROJECT: U-4020

See Sheet 1-A For Index of Sheets




VICINITY MAP

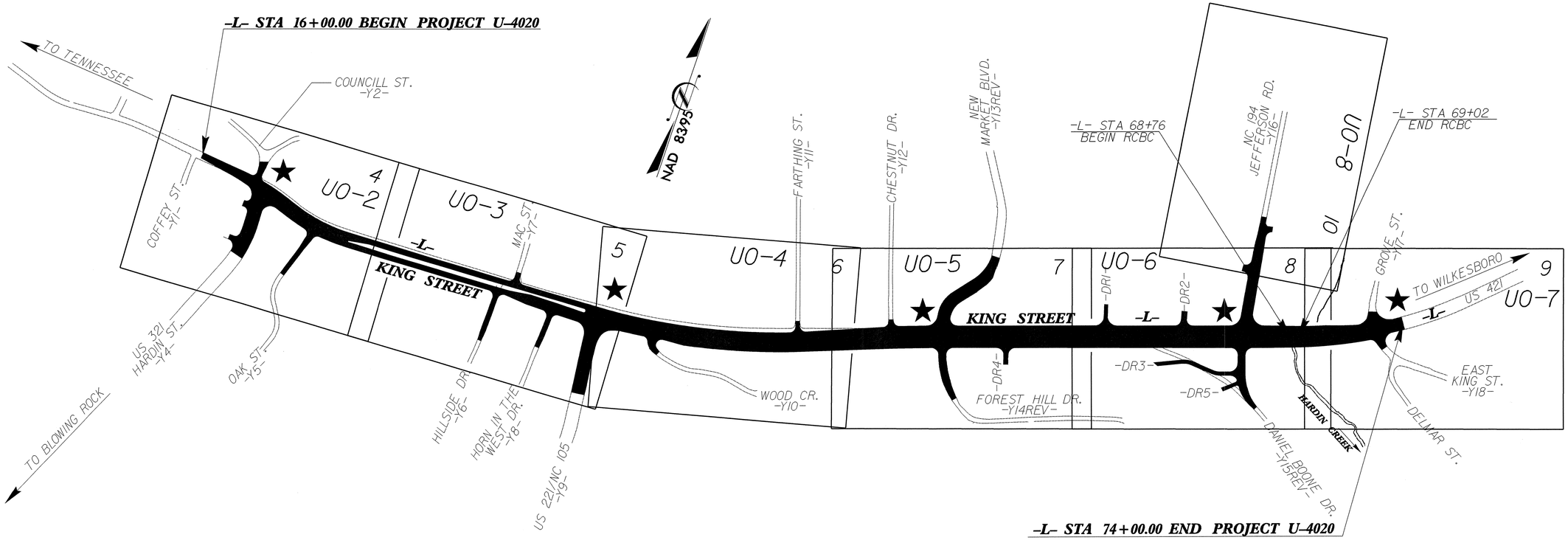
| T.I.P. NO. | SHEET NO. |
|---|---|
| U-4020 | UO-1 |

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

# UTILITY BY OTHERS PLANS
# WATAUGA COUNTY

**LOCATION: US 421 (KING STREET) FROM US 321 (HARDIN STREET) TO EAST OF NC 194 (JEFFERSON ROAD) IN BOONE**

**TYPE OF WORK: UTILITY RELOCATION**




**GRAPHIC SCALES**

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| UO-1 | TITLE SHEET |
| UO-2 THRU UO-8 | UTILITY BY OTHERS PLAN SHEETS |

## UTILITY OWNERS ON PROJECT

(1) New River Light and Power
(2) AT&T of NC
(3) Frontier Energy (Gas)
(4) Blue Ridge EMC
(5) Charter Communication CATV


PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING 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 |
| Kifah Kamil | UTILITIES PROJECT DESIGNER |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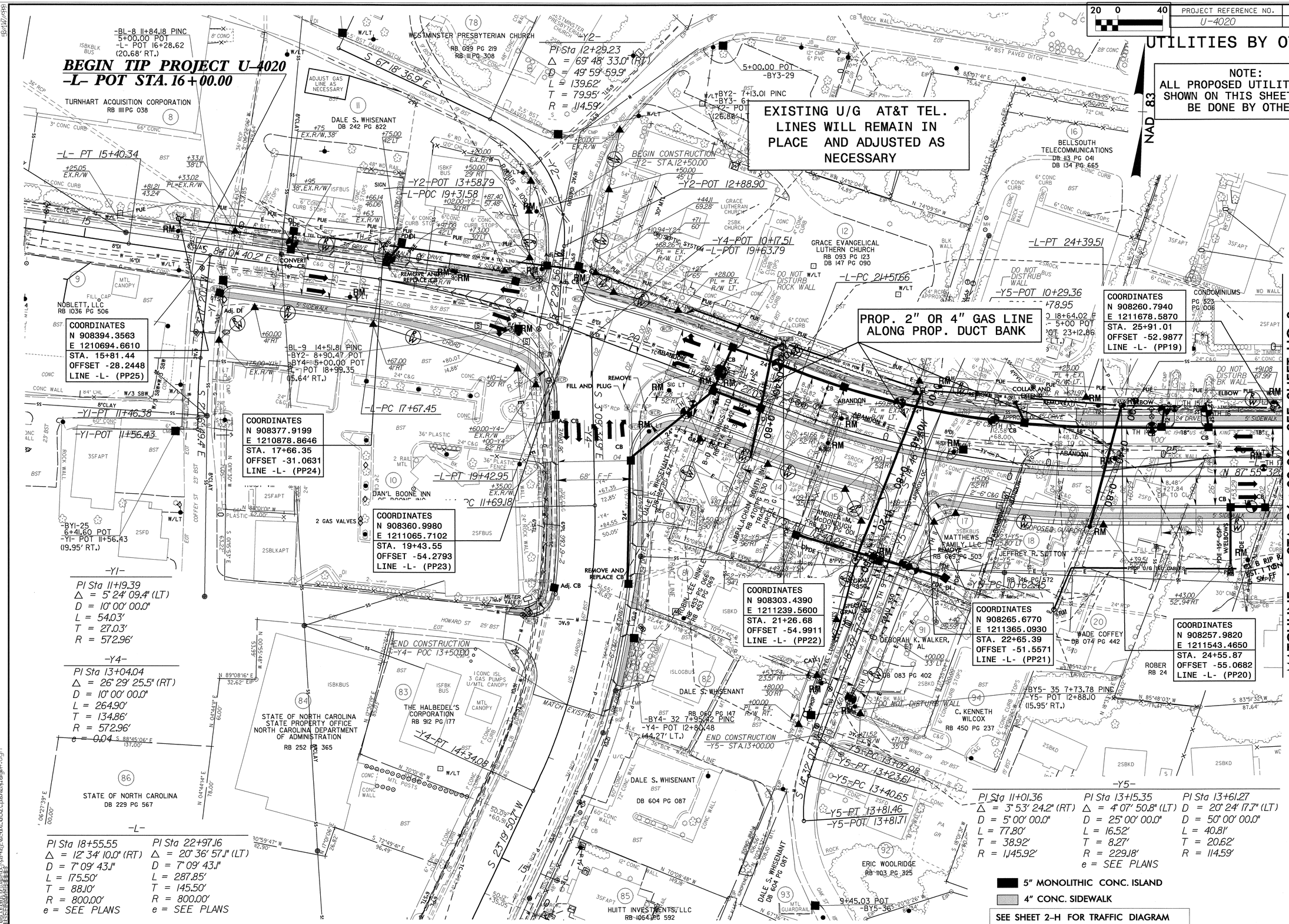
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UO-2 |

20 0 40

# UTILITIES BY OTHERS

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

NAD 83




REVISIONS

8/17/99

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | U0-3 |

20 0 40

# UTILITIES BY OTHERS

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

4" CONC. SIDEWALK

5" MONOLITHIC CONC. ISLAND

SEE SHEET 2-H FOR TRAFFIC DIAGRAM

"SBG" DENOTES SHOULDER BERM GUTTER

SEE SHEET 2-K FOR INTERSECTION DETAIL

NAD 83

EXISTING U/G AT&T TEL. LINES WILL REMAIN IN PLACE AND ADJUSTED AS NECESSARY

MATCHLINE -L- STA. 26+00.00 SEE SHEET UO-2

MATCHLINE -L- STA. 37+25 SEE SHEET UO-4

PROP. 2" OR 4" GAS LINE ALONG PROP. DUCT BANK

PROP. 2" OR 4" GAS LINE ALONG PROP. DUCT BANK

PROP. 2" OR 4" GAS LINE ALONG PROP. DUCT BANK

COORDINATES
N 908270.5432
E 1211922.5506
STA. 28+35.17
OFFSET -53.9003
LINE -L- (PP17)

COORDINATES
N 908267.0460
E 1211826.7310
STA. 27+39.28
OFFSET -53.8736
LINE -L- (PP18)

COORDINATES
N 908274.6222
E 1212034.3110
STA. 29+47.00
OFFSET -53.9316
LINE -L- (PP16)

COORDINATES
N 908280.5771
E 1212280.4433
STA. 31+93.19
OFFSET -50.9738
LINE -L- (PP15)

COORDINATES
N 908286.4540
E 1212462.2050
STA. 33+75.04
OFFSET -50.2681
LINE -L- (PP14)

COORDINATES
N 908292.7860
E 1212585.2180
STA. 34+98.21
OFFSET -52.1435
LINE -L- (PP13)

COORDINATES
N 908300.1490
E 1212759.6430
STA. 36+74.06
OFFSET -52.2885
LINE -L- (PP11)

-Y7-POT 12+26.32
-L-POT 32+39.87

-Y7-POT 10+00.00

-L-PC 35+98.42

-BL-GPS U4020-3 32+82.11 PINC
-BY9- 5+00.00 POT
-BY10- 5+00.00 POT
-L- POT 37+04.75
(31.88' RT.)

-BL-3 29+98.33 PINC
-BY8- 5+00.00 POT
-L- POT 34+40.38
(70.31' LT.)

-Y9-POT 10+20.95
-L-POC 36+34.53

-BL-11 22+51.43 PINC
-L- POT 27+01.69
(16.06' LT.)

-Y6-PC 10+85.03

-Y6-PT 11+06.02

-Y8-PC 10+75.93

-Y8-PT 11+37.62

-Y6-PC 12+96.95

-Y6-PT 13+19.25

-Y6-POT 13+55.09

-Y8-POT 13+35.08

-BY8-42 7+94.43 POT
-Y8- POT 12+47.29
(2.51' LT.)

-BY6-38 8+43.57 POT
-Y6- POT 13+55.09
(9.97' LT.)

-Y6-
PI Sta 10+95.52
Δ = 2° 05' 54.4" (RT)
D = 10° 00' 00.0"
L = 20.98'
T = 10.49'
R = 572.96'
e = SEE PLANS

PI Sta 13+08.10
Δ = 2° 13' 48.1" (RT)
D = 10° 00' 00.0"
L = 22.30'
T = 11.15'
R = 572.96'
e = SEE PLANS

-Y8-
PI Sta 11+06.80
Δ = 6° 10' 06.8" (RT)
D = 10° 00' 00.0"
L = 61.69'
T = 30.87'
R = 572.96'
e = SEE PLANS

END CONSTRUCTION
-Y6- STA.12+10.00

END CONSTRUCTION
-Y8- STA.12+50.00

END CONSTRUCTION
-Y9- STA.14+00.00

ROBERT F. HELMS ETAL
3SBKAPT
RB 527 PG 414

JAMES B. GRAHAM, TRUS
LIVING TRUST
RB 475 PG 62

LETTIE JUNE STAMEY
DB 093 PG 568
BY TAX MAP

JOHNNY R. RAMSEY
DB 176 PG 383

JOE FRANK MATHIS
RB 167 PG 672

HENRY J. KNOLL
RB 144 PG 204

ROBERT D. LEE
DB 710 PG 570

BETTY B. ELLIOTT

HILL BUMGARNER
DB 78 PG 451

BOONE GOSPEL TABERNACLE
DB 057 PG 041
BY TAX MAP

REBECCA E. YOUNCE
DB 011 PG 834

BOONE STATION PARTNERS, LLC
DB 1230 PG 871
DB 1230 PG 885
DB 1230 PG 889
DB 1230 PG 892
DB 1230 PG 898
PB 020 PG 200

ORANGE AVENUE AUTO SALES, INC
DB 204 PG 646

TOWN OF BOONE
DB 203 PG 399

A.E. MCCREARY
DB 085 PG 081

PINE WOODS CONDOMINIUMS
DB 246 PG 823
PB 6 PG 4

BOONE UNITARIAN UNIVERSALIST FELLOWSHIP
BY TAX MAP
DB 212 PG 992

KELLY JOE EDMISTEN
BEGIN CONSTRUCTION
-Y7- STA.11+50.00
RB 653 PG 652

CHARLES H. O'NEAL
DB 280 PG 818
RB 338 PG 821

TIE TO EXISTING MANHOLE

REVISIONS

14:MAY 2009 3:30P

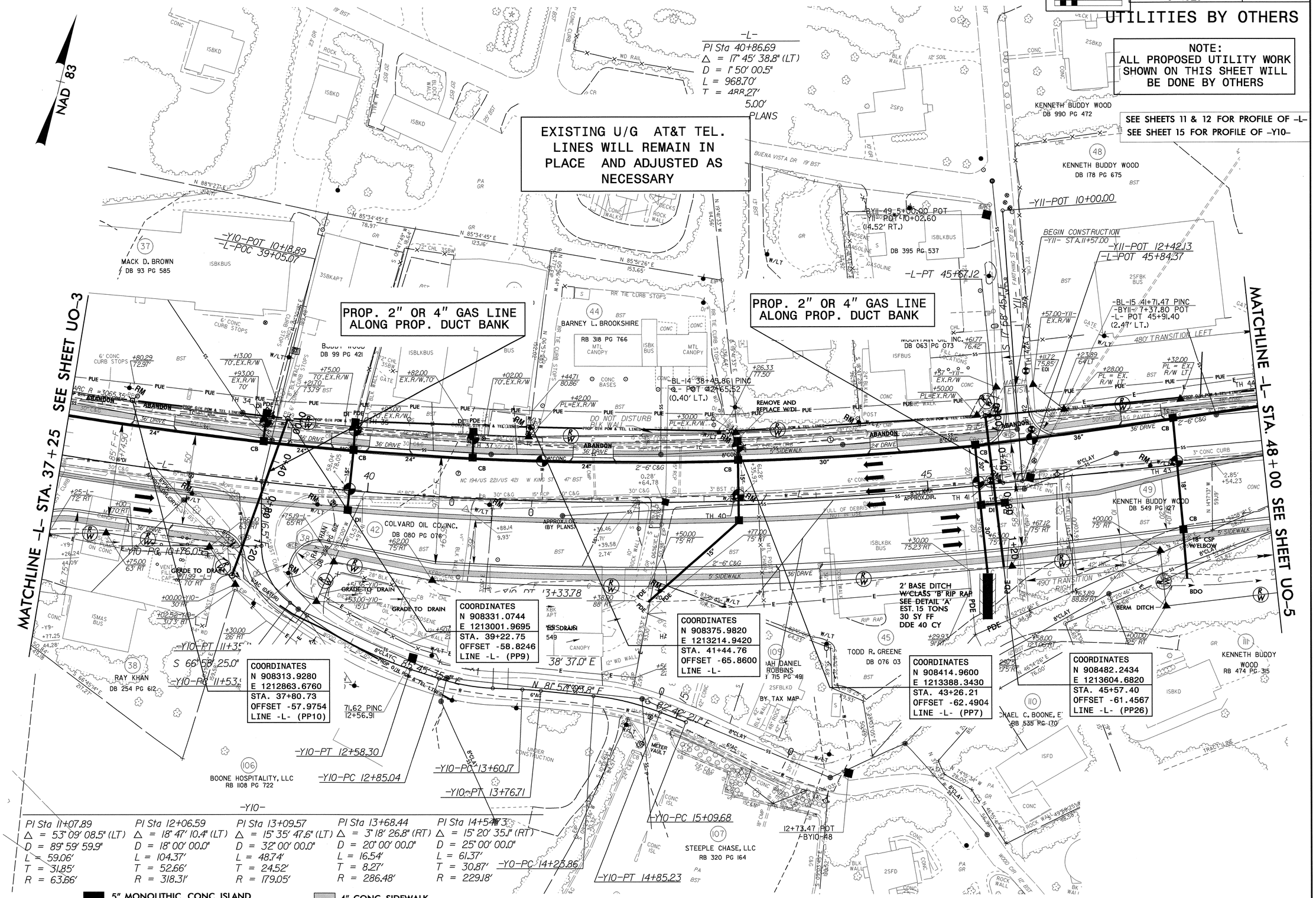
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | U0-4 |

20 0 40

# UTILITIES BY OTHERS

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

SEE SHEETS 11 & 12 FOR PROFILE OF -L-
SEE SHEET 15 FOR PROFILE OF -Y10-



| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | U0-5 |

20 0 40

# UTILITIES BY OTHERS

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

SEE SHEET 12 FOR PROFILE OF -L-
SEE SHEET 16 FOR PROFILE OF -Y13REV-
SEE SHEET 16 FOR PROFILE OF -Y14REV-
SEE SHEET 15 FOR PROFILE OF -DR4-
SEE SHEET 2-H FOR TRAFFIC DIAGRAM

EXISTING U/G AT&T TEL. LINES WILL REMAIN IN PLACE AND ADJUSTED AS NECESSARY

PROP. 2" OR 4" GAS LINE ALONG PROP. DUCT BANK

EXISTING U/G GAS LINE WILL REMAIN IN PLACE AND ADJUSTED AS NECESSARY

MATCHLINE -L- STA. 48+00 SEE SHEET UO-4

MATCHLINE -L- STA. 59+00 SEE SHEET UO-6

-Y13REV-
PI Sta 18+44.77
Δ = 57° 41' 03.9" (LT)
D = 40° 55' 32.0"
L = 140.95'
T = 77.10'
R = 140.00'
e = SEE PLANS

PI Sta 15+66.57
Δ = 50° 14' 20.7"
D = 23° 52' 23.7"
L = 210.44'
T = 112.52'
R = 240.00'
e = SEE PLANS

COORDINATES
N 908994.3610
E 1214340.5232
STA. 16+20.47
OFFSET 36.5001
Y13REV (PP1)

COORDINATES
N 908850.0050
E 1214338.1450
STA. 17+41.31
OFFSET -48.7610
Y13REV (PP2)

COORDINATES
N 908749.1990
E 1214328.3420
STA. 53+27.41
OFFSET -70.3338
LINE -L- (PP3)

COORDINATES
N 908632.3075
E 1214009.2351
STA. 49+89.07
OFFSET -65.3627
LINE -L- (PP6)

COORDINATES
N 908703.7172
E 1214201.1015
STA. 51+92.93
OFFSET -68.2213
LINE -L- (PP5)

COORDINATES
N 908562.9521
E 1213836.7581
STA. 48+03.29
OFFSET -58.6456
LINE -L- (PP27)

COORDINATES
N 908532.2166
E 1214289.2535
STA. 19+79.71
OFFSET 35.4230
Y13REV (PP4)

-L-
PI Sta 51+75.84
Δ = 1° 14' 17.2" (RT)
D = 0° 34' 22.6"
L = 216.09'
T = 108.05'
R = 10,000.00'
SE = N.C.

-Y14REV-
PI Sta 12+14.89
Δ = 33° 43' 10.0" (LT)
D = 12° 50' 20.8"
L = 262.63'
T = 135.24'
R = 446.26'
e = SEE PLANS

-BL-I6 45+87.24 PINC
-BY12- 8+63.15 POT
-L- POT 50+03.73
(55.82' LT.)

-BL-I8 52+93.55 PINC
-L- POT 57+08.82
(48.08' LT.)

-BY14-57
7+50.01 PINC
-Y14REV+ 11+91.09
(7.99' RT.)

-BY14-58 9+29.08 POT
-Y14REV- 13+58.70
(14.67' RT.)

-Y12-POT 10+00.00
-L-POT 50+17.34
-L-POT 55+53.01
-DR4-POT 10+00
-L-
-L- PC 50+67.79
-L- PT 52+83.88
-Y13REV-PC 17+67.67
-Y13REV-PT 19+08.62
-Y14REV-PC 10+79.48
-Y14REV-PT 13+42.11
-Y14REV-POT 13+58.70
-DR4-POT 11+58.11

END CONSTRUCTION
-Y13REV- STA.15+00.00

END CONSTRUCTION
-Y14REV- STA.13+00.00

END CONSTRUCTION
-DR4- STA.11+40.00

480' TRANSITION LEFT

N 70° 09' 53.8" E

N 71° 24' 11.0" E

S 52° 33' 59.1" E

S 18° 50' 49.1" E

S 18° 48' 52.2" E

NAD 83

TOYOTA OF BOONE, INC.
NORMAN LEE CHEEK
RB 520 PG 604

BOONE MOVIE PARCEL, LLC
BK 1316 PG 556

KENNETH BUDDY WOOD, ET UX
DB 043 PG 267
DB 124 PG 513

WOOD MASONRY SUPPLY
RB 151 PG 407
RB 151 PG 409

VALLE CAPITAL GROUP, LLC
RB 989 PG 357

AJD INVESTMENTS INC.
BK 1285 PG 165

ROBERT LEE DUNNIGAN
RB 312 PG 509

DB 216 PG 483

I-60

US 421 US 221 NC 194
E KING ST 45' BST

FOREST HILL DR 18.5' BST

4" CONC. SIDEWALK

5" MONOLITHIC CONC. ISLAND

FOR INTERSECTION DETAIL SEE SHEET 2-L

08/07/08
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U-4020_UO_Sheet1.dgn

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | U0-6 |

20 0 40

# UTILITIES BY OTHERS

SEE SHEET 17 FOR PROFILE OF -DR1-
SEE SHEET 17 FOR PROFILE OF -DR2-
SEE SHEET 17 FOR PROFILE OF -DR3-

SEE SHEET 2-H FOR TRAFFIC DIAGRAM

5" MONOLITHIC CONC. ISLAND

4" CONC. SIDEWALK

FOR CULVERT PLANS SEE SHEET C-1 THRU C-

FOR INTERSECTION DETAIL SEE SHEET 2-M

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

SEE SHEETS 12 & 13 FOR PROFILE OF -L-
SEE SHEET 16 FOR PROFILE OF -Y15REV-
SEE SHEET 16 FOR PROFILE OF -Y16-

EXISTING U/G AT&T TEL. LINES WILL REMAIN IN PLACE AND ADJUSTED AS NECESSARY

PROP. 2" OR 4" GAS LINE ALONG PROP. DUCT BANK

MATCHLINE -Y16- STA. 17+00 SEE SHEET U0-8

MATCHLINE -L- STA. 59+00 SEE SHEET UO-5

MATCHLINE -L- STA. 70+00 SEE SHEET UO-7

NAD 83

-Y16-
PI Sta 17+11.73

-L-
PI Sta 71+53.90
Δ = 14° 57' 37.3" (LT)
D = 2° 51' 53.2"
L = 522.22'
T = 262.60'
R = 2,000.00'
e = SEE PLANS

-DR3-
PI Sta 12+63.39
Δ = 28° 12' 47.3" (LT)
D = 57° 17' 44.8"
L = 49.24'
T = 25.13'
R = 100.00'

PI Sta 11+17.39
Δ = 22° 48' 16.9" (RT)
D = 57° 17' 44.8"
L = 39.80'
T = 20.17'
R = 100.00'

-DR5-
PI Sta 11+20.98
Δ = 44° 58' 24.2" (RT)
D = 57° 17' 44.8"
L = 78.49'
T = 41.39'
R = 100.00'

-Y15REV-
PI Sta 12+57.27
Δ = 40° 37' 14.7" (LT)
D = 28° 38' 52.4"
L = 141.79'
T = 74.02'
R = 200.00'

14-MAY-2009 12:14
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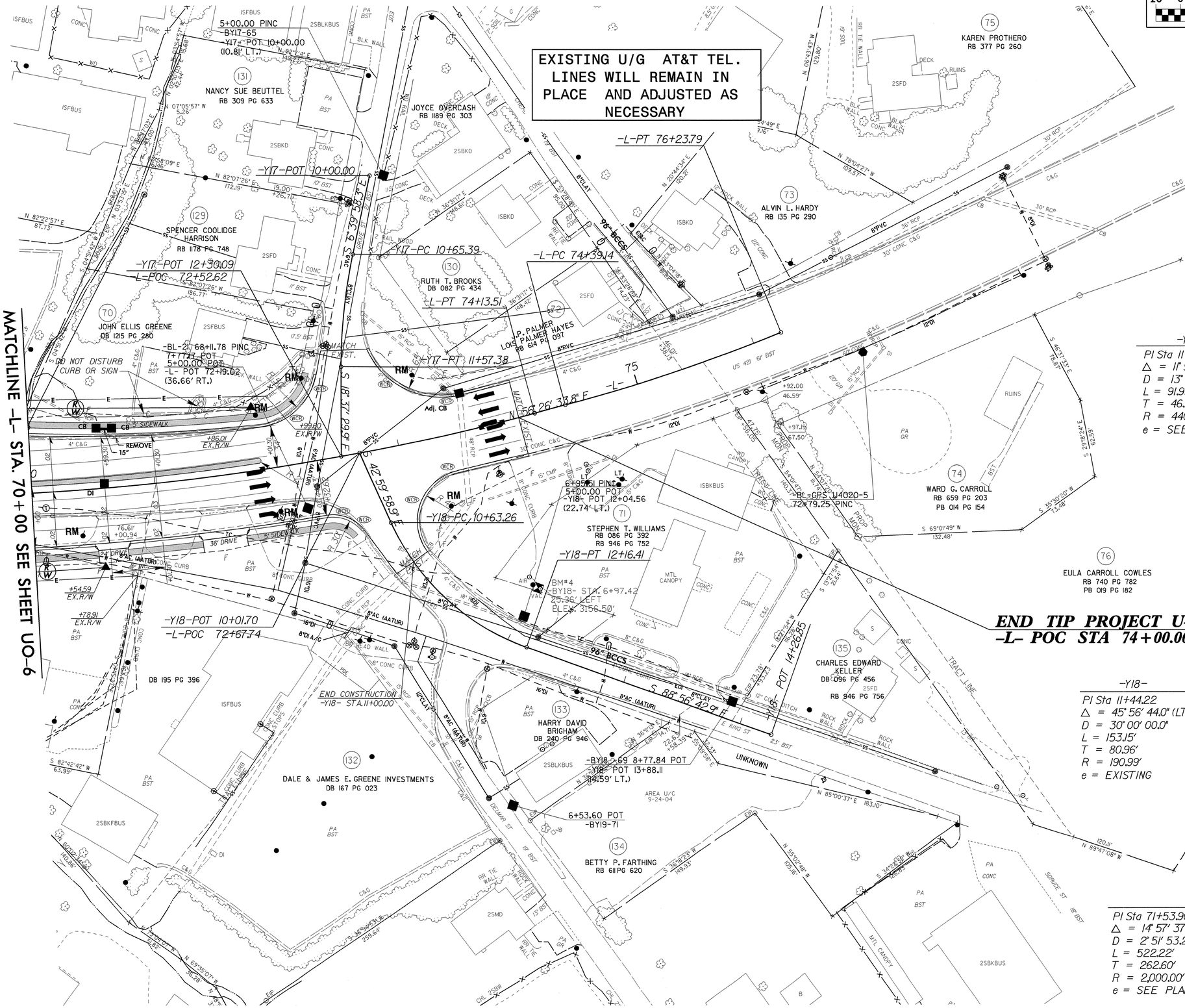
| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | UO-7 |

20 0 40

# UTILITIES BY OTHERS

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


SEE SHEET 13 FOR PROFILE –L–
SEE SHEET 17 FOR PROFILE –Y17–
SEE SHEET 17 FOR PROFILE –Y18–
SEE SHEET 2–H FOR INTERSECTION TRAFFIC DIAGRAM


–Y17–
PI Sta 11+11.55
Δ = 11° 57′ 31.6″ (LT)
D = 13° 00′ 00.0″
L = 91.99′
T = 46.16′
R = 440.74′
e = SEE PLANS

–Y18–
PI Sta 11+44.22
Δ = 45° 56′ 44.0″ (LT)
D = 30° 00′ 00.0″
L = 153.15′
T = 80.96′
R = 190.99′
e = EXISTING

–L–

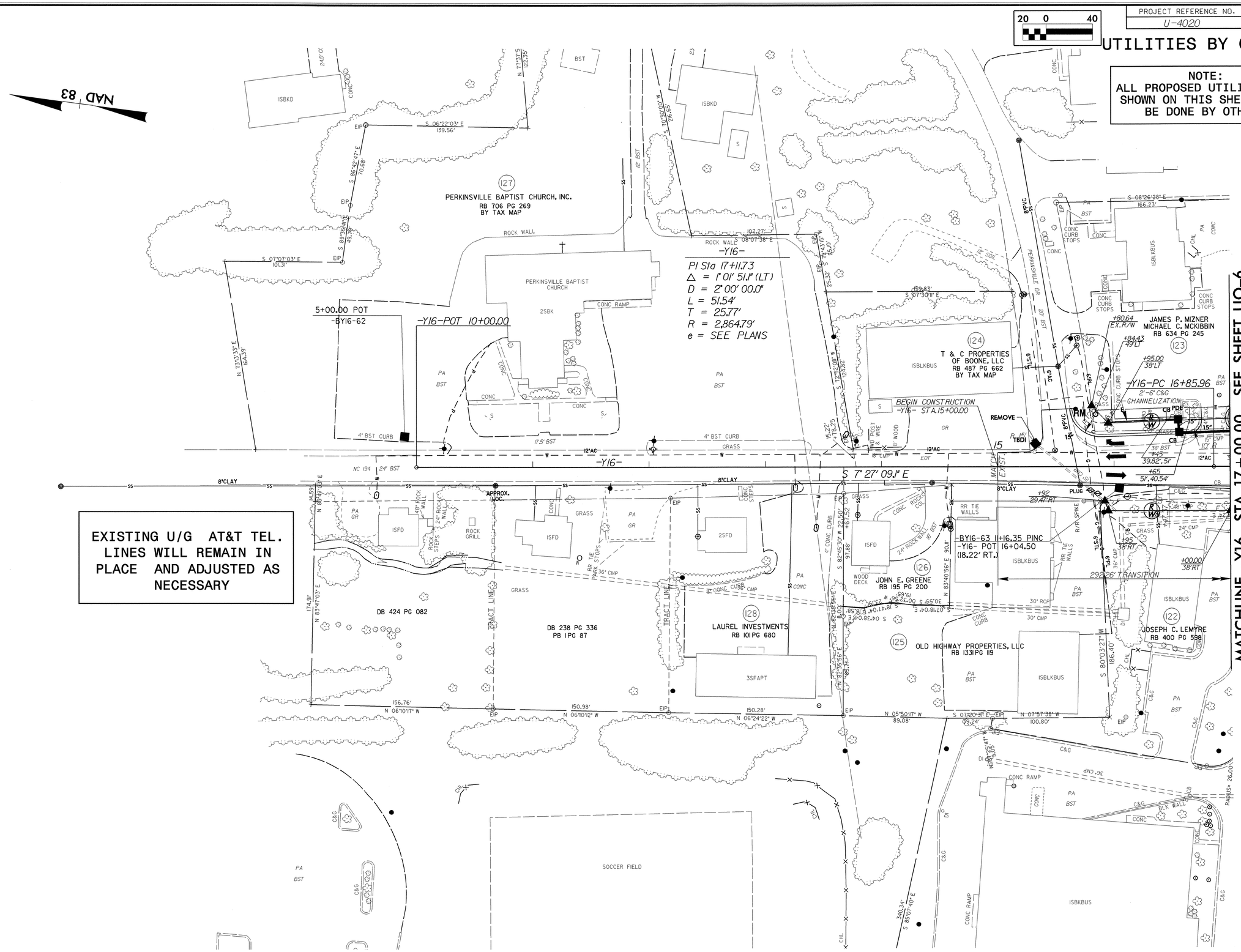
| PI Sta 71+53.90 | PI Sta 75+31.59 |
|---|---|
| Δ = 14° 57′ 37.3″ (LT) | Δ = 7° 23′ 08.8″ (LT) |
| D = 2° 51′ 53.2″ | D = 4° 00′ 00.0″ |
| L = 522.22′ | L = 184.64′ |
| T = 262.60′ | T = 92.45′ |
| R = 2,000.00′ | R = 1,432.39′ |
| e = SEE PLANS | e = EXISTING |

REVISIONS

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| U-4020 | U0-8 |

# UTILITIES BY OTHERS

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




REVISIONS

5/11/1999

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