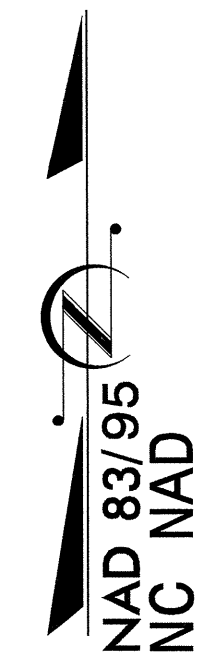
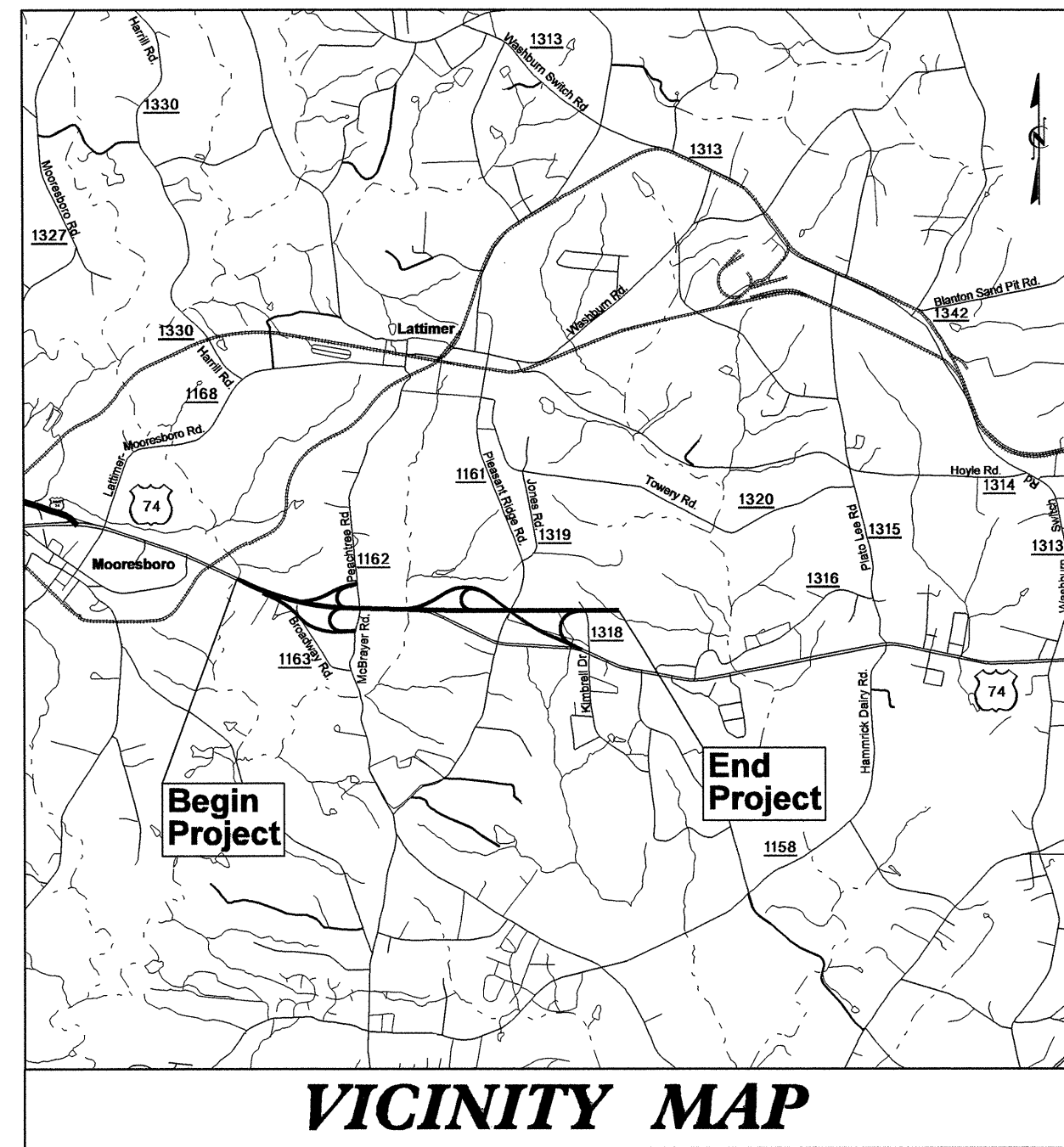


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

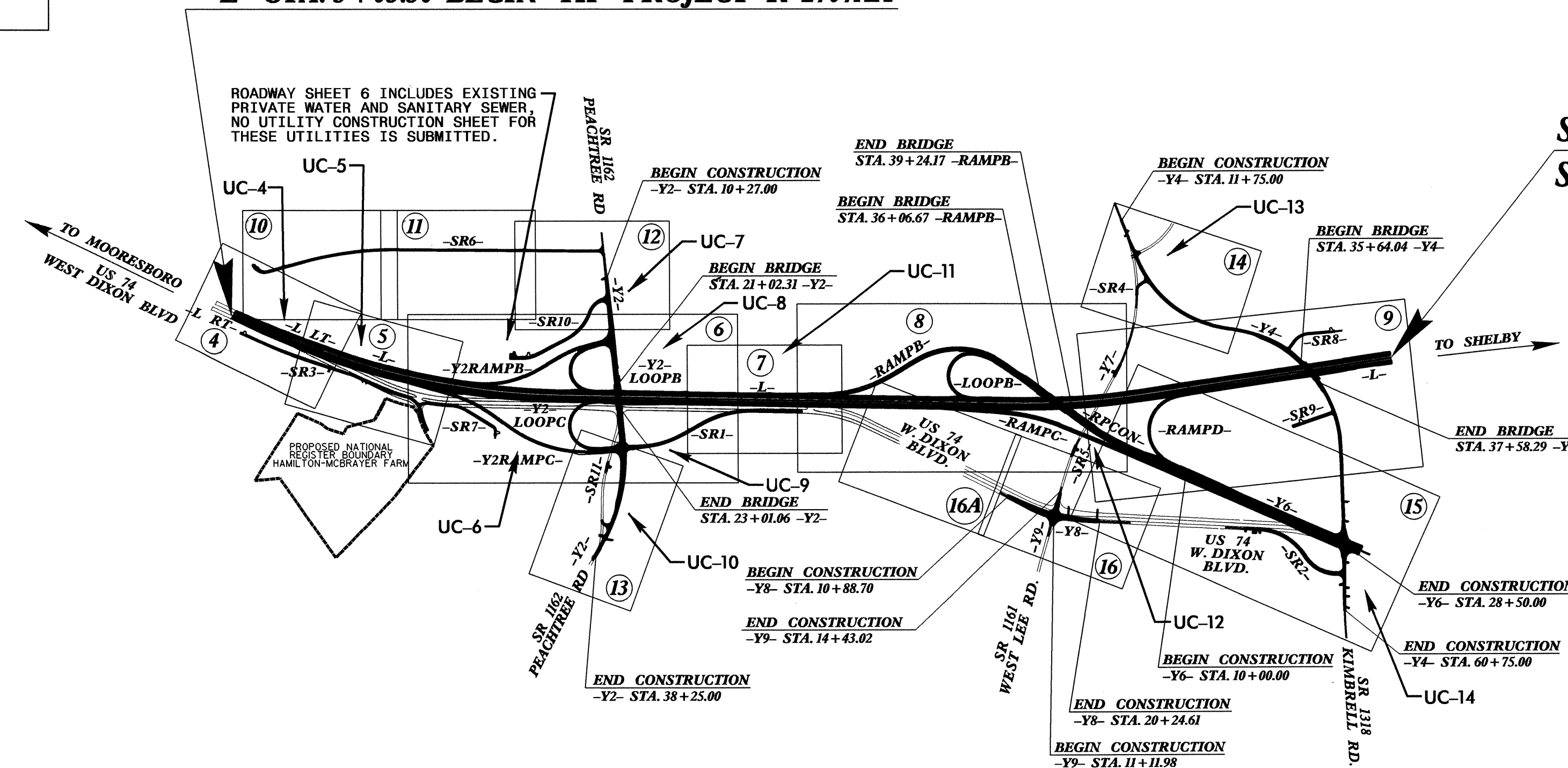
**UTILITY CONSTRUCTION PLANS  
CLEVELAND COUNTY**

**LOCATION: US 74 (SHELBY BYPASS) FROM WEST OF  
SR 1162 (PEACHTREE ROAD) TO EAST OF  
SR 1318 (KIMBRELL ROAD)**

**TYPE OF WORK: UTILITY CONSTRUCTION (WATER / SEWER)**

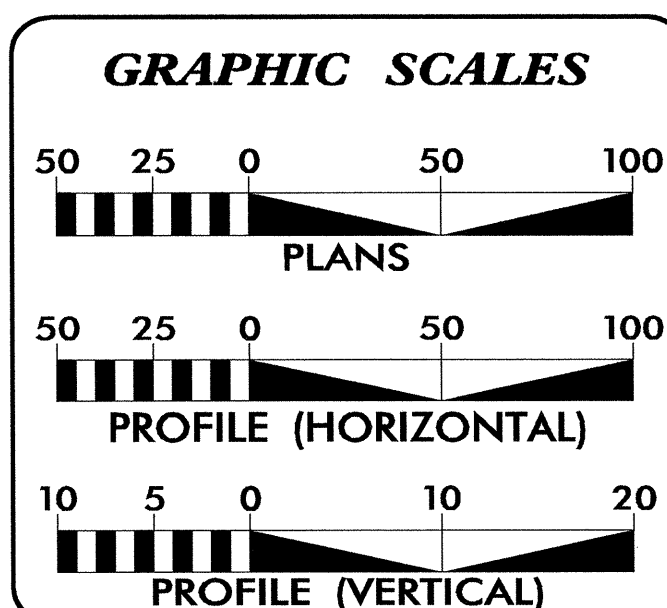


**-L- STA. 5+03.30 BEGIN TIP PROJECT R-2707AA**



**STA. 119+00.00 -L- END TIP PROJECT R-2707AA**  
**STA. 119+00.00 -L- BEG. TIP PROJECT R-2707AB**

**TIP PROJECT: R-2707AA**

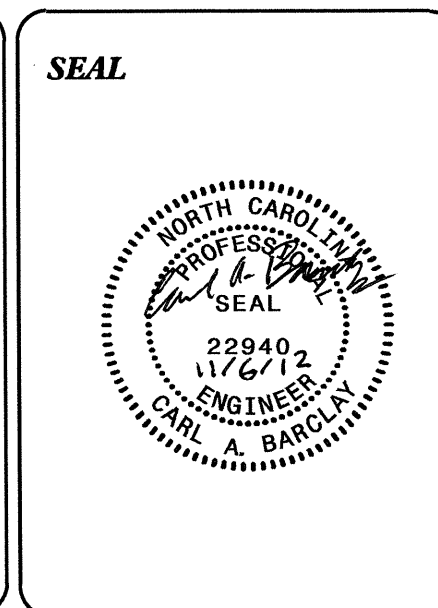


**INDEX OF SHEETS**

| SHEET NO.        | DESCRIPTION                                  |
|------------------|--|
| UC-1             | TITLE SHEET                                  |
| UC-2             | SYMBOLGY SHEET                               |
| UC-3             | NOTES AND DETAILS SHEET                      |
| UC-4 THRU UC-14  | UTILITY CONSTRUCTION PLAN SHEETS             |
| UC-15 THRU UC-21 | UTILITY CONSTRUCTION PLAN AND PROFILE SHEETS |

**WATER AND SEWER OWNERS ON PROJECT**

(1) WATER - CLEVELAND COUNTY  
(2) SEWER - TOWN OF LATTIMORE



PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
UTILITIES ENGINEERING  
SECTION**

1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6987  
FAX (919) 250-4151

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Carl A. Barclay, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**James E. Swinson** UTILITIES PROJECT DESIGNER

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITIES PLAN SHEET SYMBOLS**

**PROPOSED WATER SYMBOLS**

|                                 |        |
|---------------------------------|--------|
| Water Line (Sized as Shown)     |        |
| 11 1/4 Degree Bend              |        |
| 22 1/2 Degree Bend              |        |
| 45 Degree Bend                  |        |
| 90 Degree Bend                  |        |
| Plug                            |        |
| Tee                             |        |
| Cross                           |        |
| Reducer                         |        |
| Gate Valve                      |        |
| Butterfly Valve                 |        |
| Tapping Valve                   |        |
| Line Stop                       |        |
| Line Stop with Bypass           |        |
| Blow Off                        |        |
| Fire Hydrant                    |        |
| Relocate Fire Hydrant           |        |
| Remove Fire Hydrant             | REM FH |
| Water Meter                     |        |
| Relocate Water Meter            |        |
| Remove Water Meter              | REM WM |
| Water Pump Station              |        |
| RPZ Backflow Preventer          |        |
| DCV Backflow Preventer          |        |
| Relocate RPZ Backflow Preventer |        |
| Relocate DCV Backflow Preventer |        |

**PROPOSED SEWER SYMBOLS**

|  |  |
|--|--|
| Gravity Sewer Line (Sized as Shown)    |  |
| Force Main Sewer Line (Sized as Shown) |  |
| Manhole (Sized per Note)               |  |
| Sewer Pump Station                     |  |

**PROPOSED MISCELLANEOUS UTILITIES SYMBOLS**

|  |  |
|--|--|
| Power Pole                             |  |
| Telephone Pole                         |  |
| Joint Use Pole                         |  |
| Telephone Pedestal                     |  |
| Utility Line by Others (Type as Shown) |  |
| Trenchless Installation                |  |
| Encasement by Open Cut                 |  |
| Encasement                             |  |

|                   |  |
|-------------------|--|
| Thrust Block      |  |
| Air Release Valve |  |
| Utility Vault     |  |
| Concrete Pier     |  |
| Steel Pier        |  |
| Plan Note         |  |
| Pay Item Note     |  |

NOTE  
PAY ITEM

**EXISTING UTILITIES SYMBOLS**

|  |        |   |  |
|--|--------|---|--|
| Power Pole                             |        | *Underground Power Line                   |  |
| Telephone Pole                         |        | *Underground Telephone Cable              |  |
| Joint Use Pole                         |        | *Underground Telephone Conduit            |  |
| Utility Pole                           |        | *Underground Fiber Optics Telephone Cable |  |
| Utility Pole with Base                 |        | *Underground TV Cable                     |  |
| H-Frame Pole                           |        | *Underground Fiber Optics TV Cable        |  |
| Power Transmission Line Tower          |        | *Underground Gas Pipeline                 |  |
| Water Manhole                          |        | Aboveground Gas Pipeline                  |  |
| Power Manhole                          |        | *Underground Water Line                   |  |
| Telephone Manhole                      |        | Aboveground Water Line                    |  |
| Sanitary Sewer Manhole                 |        | *Underground Gravity Sanitary Sewer Line  |  |
| Hand Hole for Cable                    |        | Aboveground Gravity Sanitary Sewer Line   |  |
| Power Transformer                      |        | *Underground SS Forced Main Line          |  |
| Telephone Pedestal                     |        | Underground Unknown Utility Line          |  |
| CATV Pedestal                          |        | SUE Test Hole                             |  |
| Gas Valve                              |        | Water Meter                               |  |
| Gas Meter                              |        | Water Valve                               |  |
| Located Miscellaneous Utility Object   |        | Fire Hydrant                              |  |
| Abandoned According to Utility Records | AATUR  | Sanitary Sewer Cleanout                   |  |
| End of Information                     | E.O.I. |   |  |

\*For Existing Utilities  
Utility Line Drawn from Record (Type as Shown)   
Designated Utility Line (Type as Shown)

5/14/99

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REV: 2/1/2012



# UTILITY CONSTRUCTION

## GENERAL NOTES:

1. THE PROPOSED UTILITY CONSTRUCTION SHALL MEET THE APPLICABLE REQUIREMENTS OF THE NC DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" DATED JANUARY 2012.
2. THE EXISTING WATER UTILITIES BELONG CLEVELAND COUNTY. THE EXISTING SEWER UTILITIES BELONG TO THE TOWN OF LATTIMORE .
3. ALL WATER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL AND NATURAL RESOURCES, DIVISION OF ENVIRONMENTAL HEALTH. ALL SEWER LINES TO BE INSTALLED WITHIN COMPLIANCE OF THE RULES AND REGULATIONS OF THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES, DIVISION OF WATER QUALITY. PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE PLUMBING CODES.
4. THE UTILITY OWNER OWNS THE EXISTING UTILITY FACILITIES AND WILL OWN THE NEW UTILITY FACILITIES AFTER ACCEPTANCE BY THE DEPARTMENT. THE DEPARTMENT OWNS THE CONSTRUCTION CONTRACT AND HAS ADMINISTRATIVE AUTHORITY. COMMUNICATIONS AND DECISIONS BETWEEN THE CONTRACTOR AND UTILITY OWNER ARE NOT BINDING UPON THE DEPARTMENT OR THIS CONTRACT UNLESS AUTHORIZED BY THE ENGINEER. AGREEMENTS BETWEEN THE UTILITY OWNER AND CONTRACTOR FOR THE WORK THAT IS NOT PART OF THIS CONTRACT OR IS SECONDARY TO THIS CONTRACT ARE ALLOWED, BUT ARE NOT BINDING UPON THE DEPARTMENT.
5. PROVIDE ACCESS FOR THE DEPARTMENT PERSONNEL AND THE OWNER'S REPRESENTATIVES TO ALL PHASES OF CONSTRUCTION. NOTIFY DEPARTMENT PERSONNEL AND THE UTILITY OWNER TWO WEEKS PRIOR TO COMMENCEMENT OF ANY WORK AND ONE WEEK PRIOR TO SERVICE INTERRUPTION. KEEP UTILITY OWNERS' REPRESENTATIVES INFORMED OF WORK PROGRESS AND PROVIDE OPPROTUNITY FOR INSPECTION OF CONSTRUCTION AND TESTING.

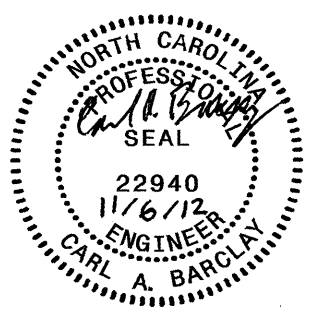
6. THE PLANS DEPICT THE BEST AVAILABLE INFORMATION FOR THE LOCATION, SIZE, AND TYPE OF MATERIAL FOR ALL EXISTING UTILITIES. MAKE INVESTIGATIONS FOR DETERMINING THE EXACT LOCATION, SIZE, AND TYPE MATERIAL OF THE EXISTING FACILITIES AS NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED UTILITIES AND FOR AVOIDING DAMAGE TO EXISTING FACILITIES. REPAIR ANY DAMAGE INCURRED TO EXISTING FACILITIES TO THE ORIGINAL OR BETTER CONDITION AT NO ADDITIONAL COST TO THE DEPARTMENT.
7. MAKE FINAL CONNECTIONS OF THE NEW WORK TO THE EXISTING SYSTEM WHERE INDICATED ON THE PLANS, AS REQUIRED TO FIT THE ACTUAL CONDITIONS, OR AS DIRECTED.
8. MAKE CONNECTIONS BETWEEN EXISTING AND PROPOSED UTILITIES AT TIMES MOST CONVENIENT TO THE PUBLIC, WITHOUT ENDANGERING THE UTILITY SERVICE, AND IN ACCORDANCE WITH THE UTILITY OWNER'S REQUIREMENTS. MAKE CONNECTIONS ON WEEKENDS, AT NIGHT, AND ON HOLIDAYS IF NECESSARY.
9. ALL UTILITY MATERIALS SHALL BE APPROVED PRIOR TO DELIVERY TO THE PROJECT. SEE 1500-7, " SUBMITTALS AND RECORDS" IN SECTION 1500 OF THE STANDARD SPECIFICATIONS.

## PROJECT SPECIFIC NOTES:

1. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTIONS 102, 107, AND 1550 OF THE STANDARD SPECIFICATIONS CONCERNING TRENCHLESS INSTALLATION. IT IS CONTRACTOR'S RESPONSIBILITY TO HAVE BORE PATH DESIGNED AND SEALED BY A LICENSED NORTH CAROLINA PROFESSIONAL ENGINEER. NO DAMAGE IS ALLOWED TO RIVER, WETLANDS, OR BUFFER ZONES.
2. CONTRACTOR'S ATTENTION IS DIRECTED TO SECTION 1510 OF THE STANDARD SPECIFICATIONS CONCERNING WATER LINE / TRACER WIRE INSTALLATION.

## LIST OF STANDARD DRAWINGS

- 1515.01 WATER METER
- 1515.02 FIRE HYDRANT

|  |  |
|--|--|
| PROJECT REFERENCE NO.<br><b>R-2707AA</b>                                   | SHEET NO.<br><b>UC-3</b>   |
| DESIGNED BY: <b>JES</b>  |  |
| DRAWN BY: <b>JES</b>   |  |
| CHECKED BY: <b>CAB</b>   |  |
| APPROVED BY: <b>CAB</b>  |  |
| REVISED:   |  |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION                                |  |
| UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 |  |

## UTILITY CONSTRUCTION

UTILITY CONSTRUCTION  
PLANS ONLY

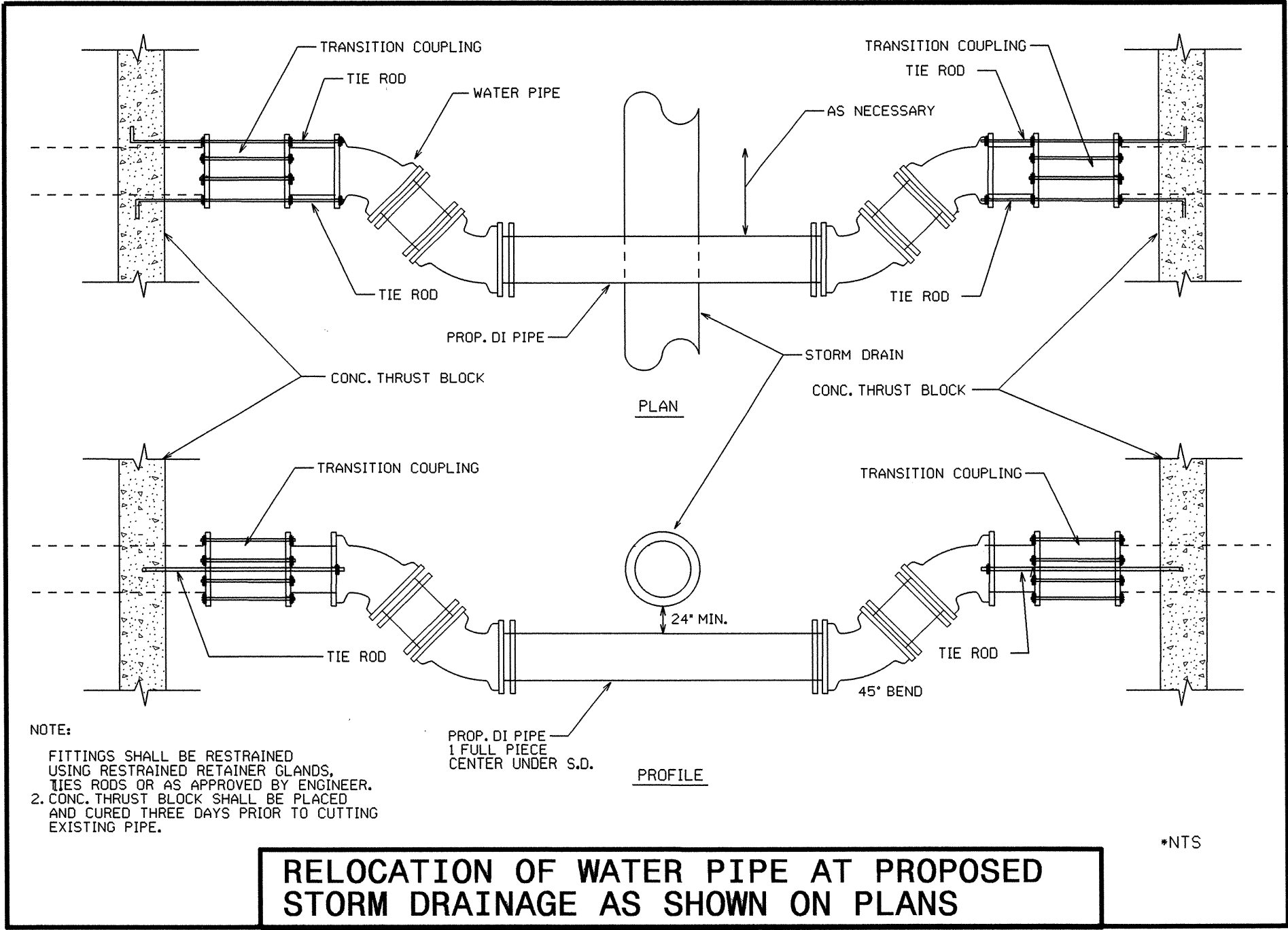
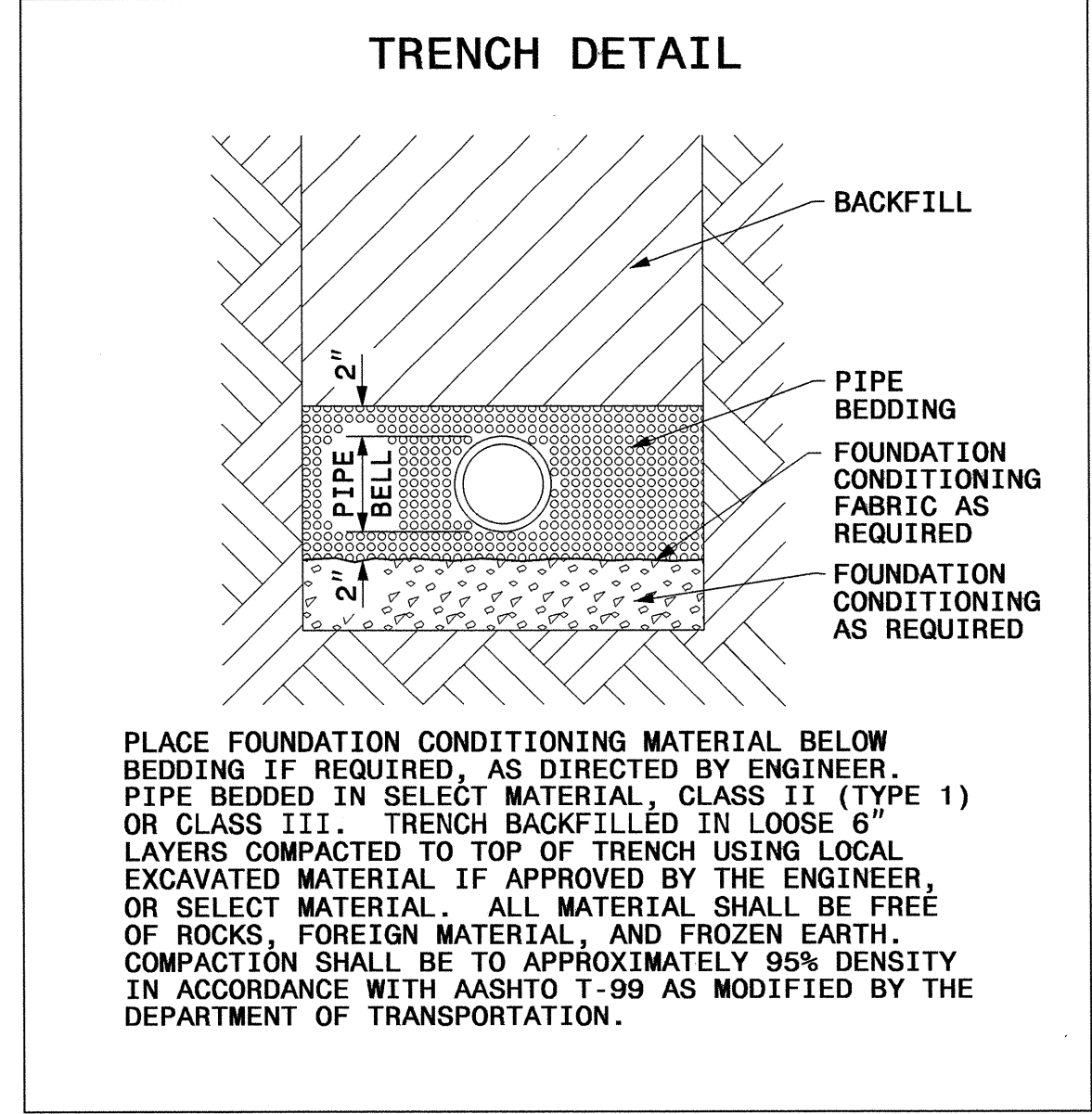
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# PROJECT TYPICAL DETAILS

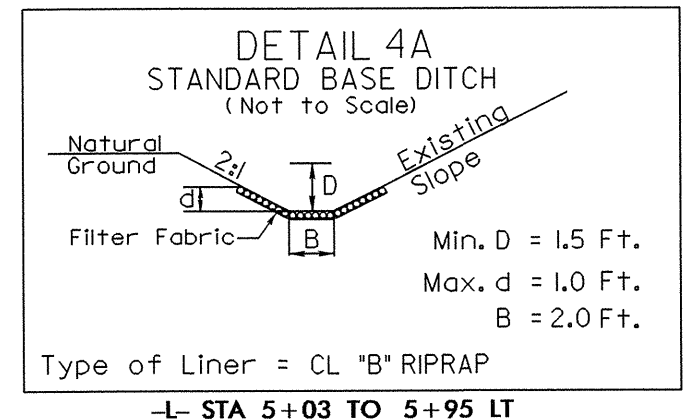
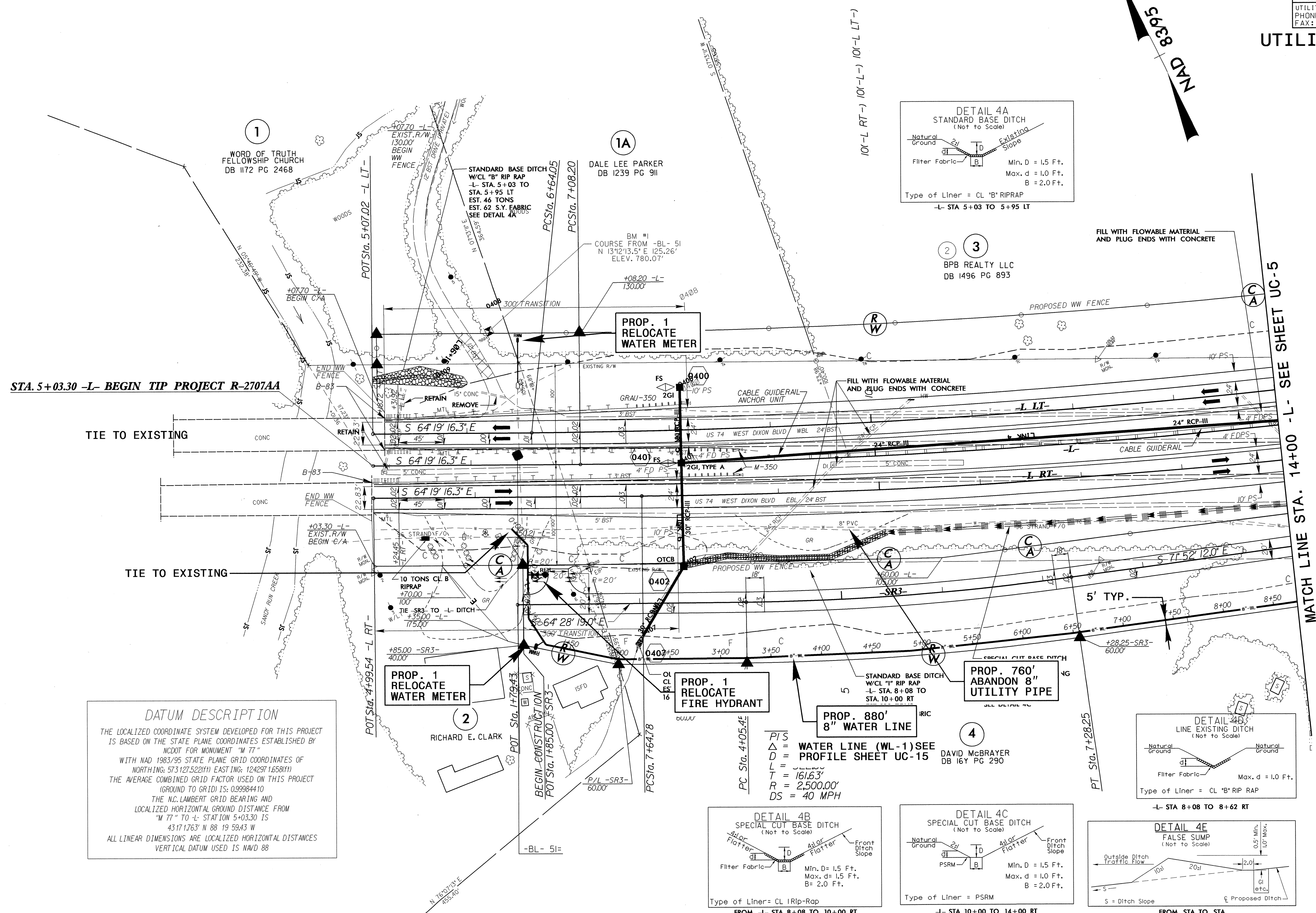
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| CHECKED BY: CAB  |           |
| APPROVED BY: CAB   |           |
| REVISED:   |           |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION                                |           |
| UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 |           |
| UTILITY CONSTRUCTION<br>PLANS ONLY   |           |

## UTILITY CONSTRUCTION





# UTILITY CONSTRUCTION

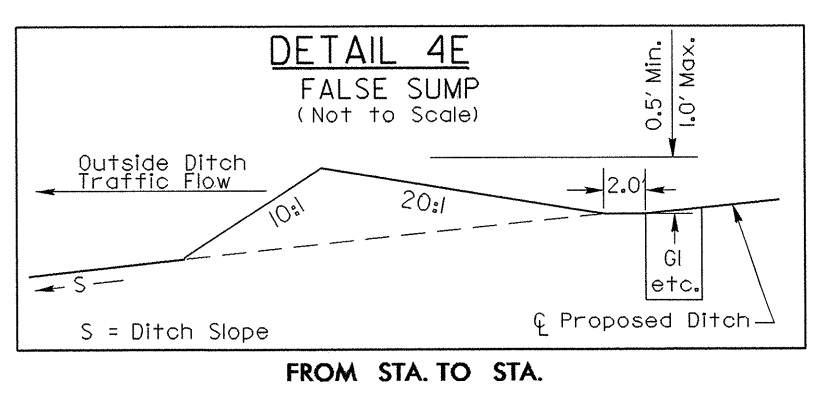
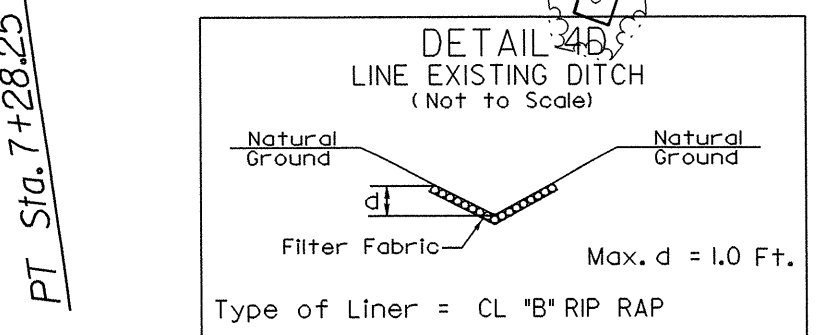
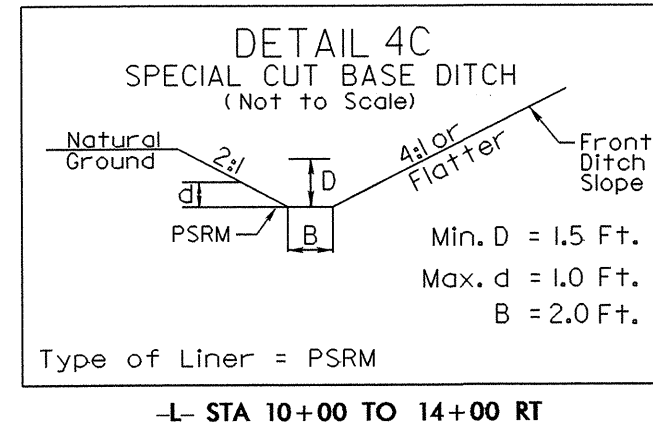
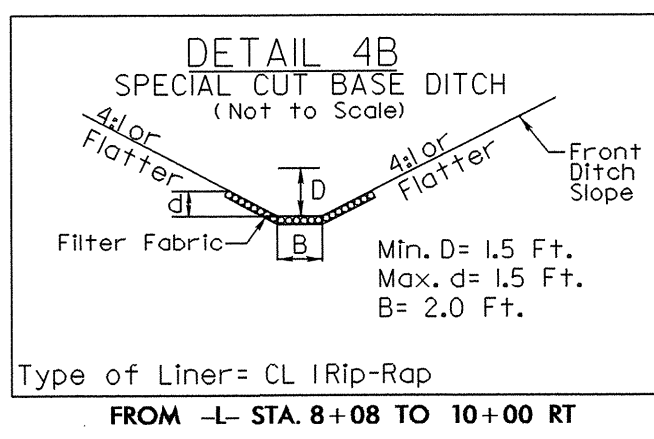


FILL WITH FLOWABLE MATERIAL AND PLUG ENDS WITH CONCRETE

2 3  
BFB REALTY LLC  
DB 1496 PG 893

FILL WITH FLOWABLE MATERIAL AND PLUG ENDS WITH CONCRETE

**DATUM DESCRIPTION**  
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "M 77" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 573127.522(FH) EASTING: 124297.1658(FH) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99984410 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "M 77" TO L- STATION 5+03.30 IS 4317.763' N 88 19 59.43' W ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88



PS = WATER LINE (WL-1) SEE PROFILE SHEET UC-15  
 D = PROFILE SHEET UC-15  
 L = 161.63'  
 T = 161.63'  
 R = 2,500.00'  
 DS = 40 MPH

4  
DAVID McBRAYER  
DB 16Y PG 290

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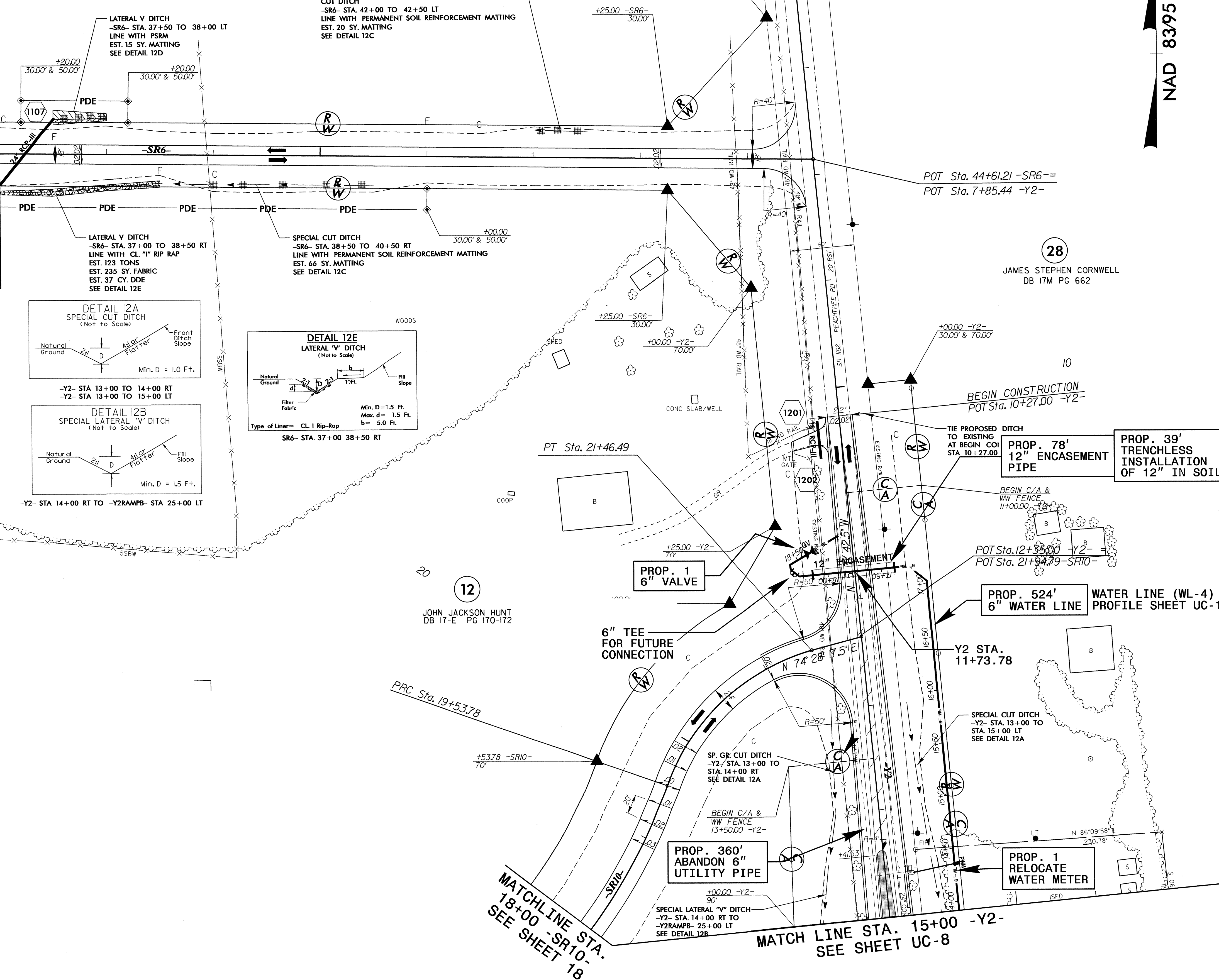


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| PROJECT REFERENCE NO.  | SHEET NO. |
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| DESIGNED BY: JES   |           |
| DRAWN BY: JES  |           |
| CHECKED BY: CAB  |           |
| APPROVED BY: CAB   |           |
| REVISED:   |       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

**UTILITY CONSTRUCTION**

NAD 83/95

MATCH LINE STA. 37+00 -SR6-  
SEE SHEET 11

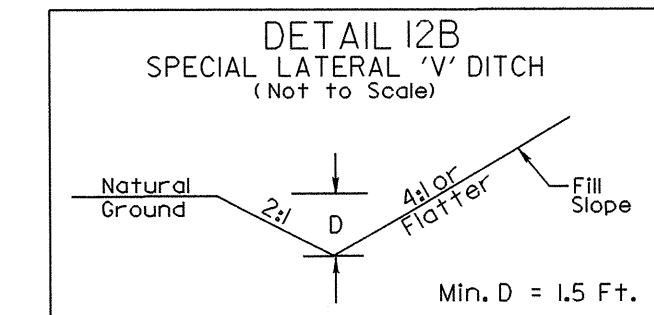
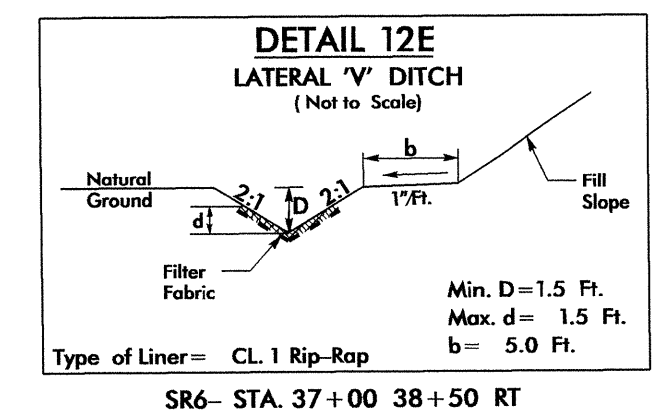
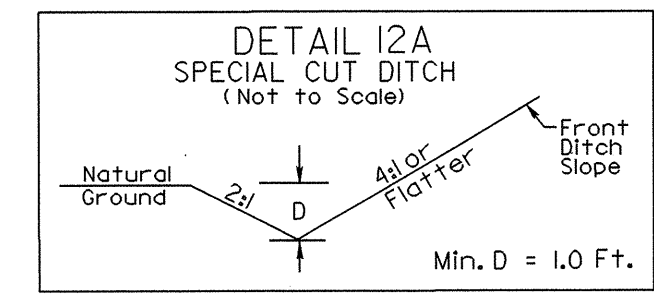


LATERAL V DITCH  
-SR6- STA. 37+50 TO 38+00 LT  
LINE WITH PSRM  
EST. 15 SY. MATTING  
SEE DETAIL 12D

CUT DITCH  
-SR6- STA. 42+00 TO 42+50 LT  
LINE WITH PERMANENT SOIL REINFORCEMENT MATTING  
EST. 20 SY. MATTING  
SEE DETAIL 12C

LATERAL V DITCH  
-SR6- STA. 37+00 TO 38+50 RT  
LINE WITH CL "I" RIP RAP  
EST. 235 SY. FABRIC  
EST. 37 CY. DDE  
SEE DETAIL 12E

SPECIAL CUT DITCH  
-SR6- STA. 38+50 TO 40+50 RT  
LINE WITH PERMANENT SOIL REINFORCEMENT MATTING  
EST. 66 SY. MATTING  
SEE DETAIL 12C



-Y2- STA 14+00 RT TO -Y2RAMPB- STA 25+00 LT

28  
JAMES STEPHEN CORNWELL  
DB 17M PG 662

12  
JOHN JACKSON HUNT  
DB 17-E PG 170-172

PROP. 39' TRENCHLESS INSTALLATION OF 12" IN SOIL

PROP. 39' TRENCHLESS INSTALLATION OF 12" NOT IN SOIL

PROP. 78' 12" ENCASMENT PIPE

PROP. 524' WATER LINE (WL-4) SEE PROFILE SHEET UC-18 & UC-19

PROP. 1 6" VALVE

6" TEE FOR FUTURE CONNECTION

PROP. 360' ABANDON 6" UTILITY PIPE

PROP. 1 RELOCATE WATER METER

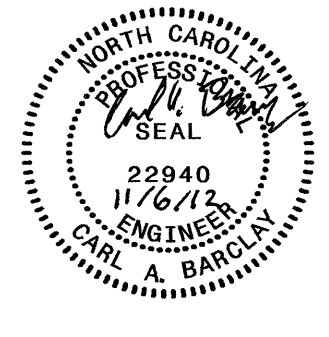
MATCHLINE STA. 18+00 -SR10-  
SEE SHEET 18

MATCH LINE STA. 15+00 -Y2-  
SEE SHEET UC-8

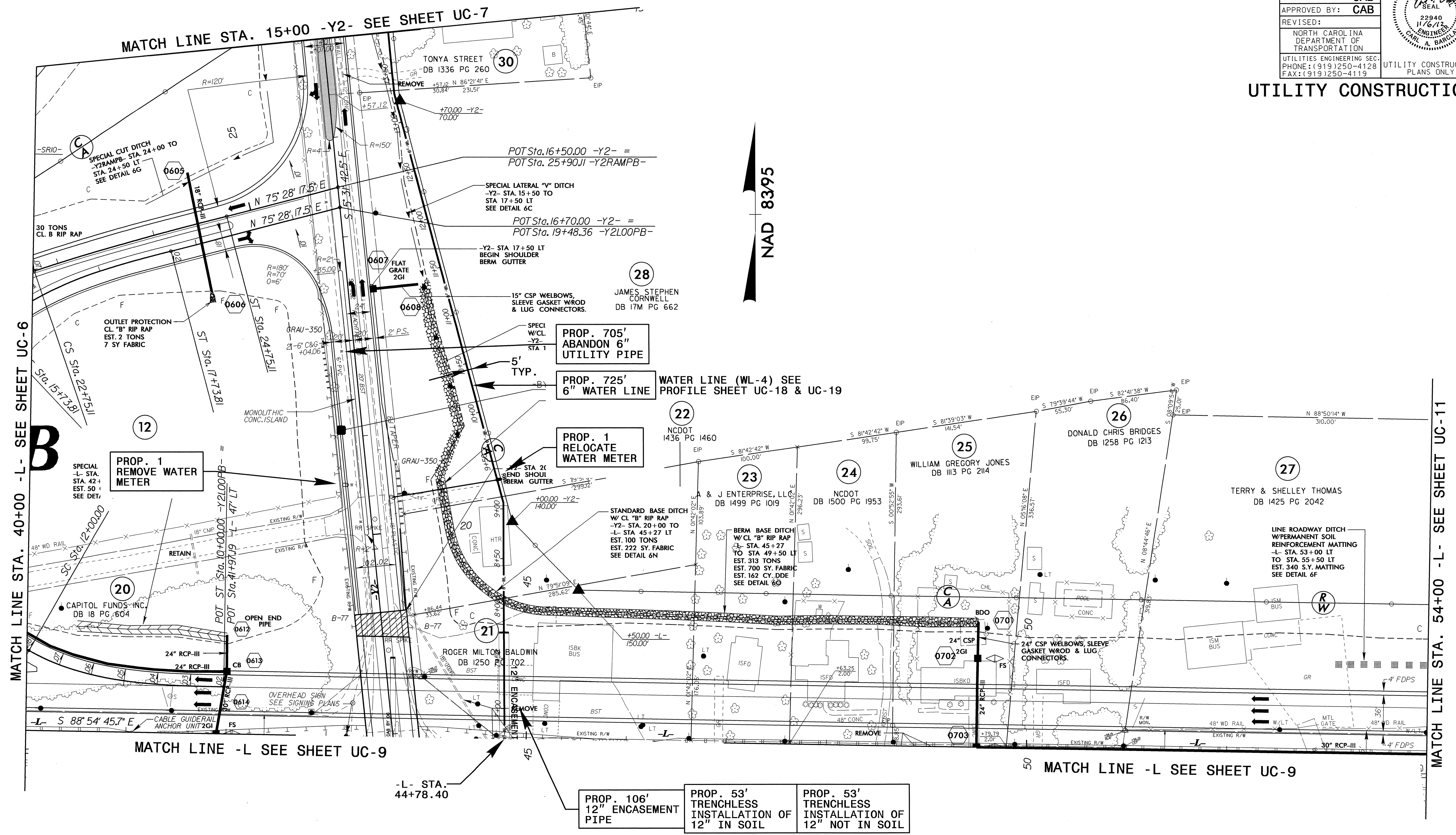
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|  |           |
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| DESIGNED BY: JES   |           |
| DRAWN BY: JES  |           |
| CHECKED BY: CAB  |           |
| APPROVED BY: CAB   |           |
| REVISED:   |           |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION                        |           |
| UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119 |           |
| UTILITY CONSTRUCTION PLANS ONLY                                    |           |



**UTILITY CONSTRUCTION**



MATCH LINE STA. 15+00 -Y2- SEE SHEET UC-7

MATCH LINE STA. 40+00 -L- SEE SHEET UC-6

MATCH LINE -L SEE SHEET UC-9

MATCH LINE -L SEE SHEET UC-9

MATCH LINE STA. 54+00 -L- SEE SHEET UC-11

NAD 8395

PROP. 705' ABANDON 6" UTILITY PIPE

PROP. 725' 6" WATER LINE

PROP. 1 RELOCATE WATER METER

PROP. 106' 12" ENCASEMENT PIPE

PROP. 53' TRENCHLESS INSTALLATION OF 12" IN SOIL

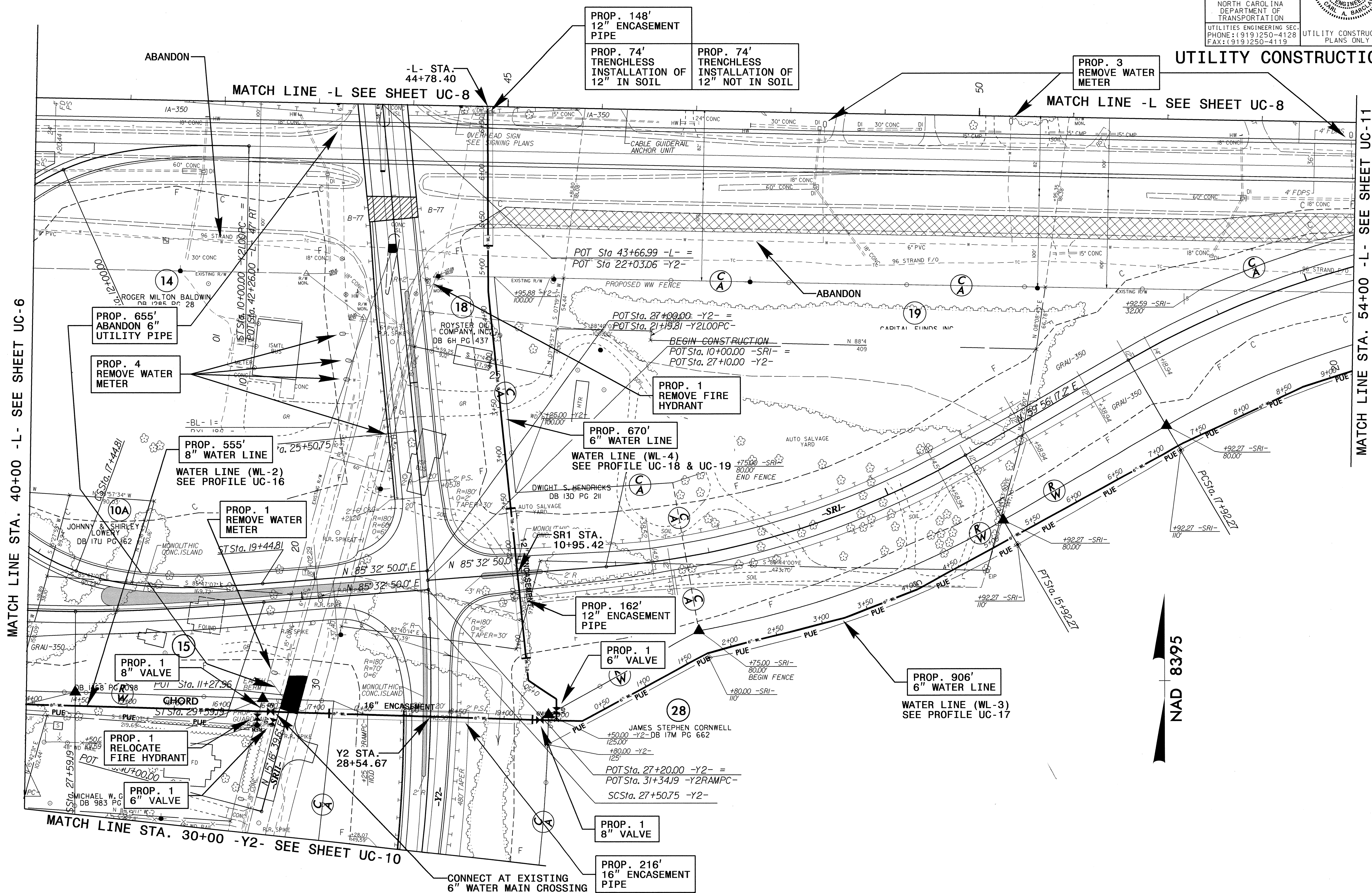
PROP. 53' TRENCHLESS INSTALLATION OF 12" NOT IN SOIL

5/14/95

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**UTILITY CONSTRUCTION**



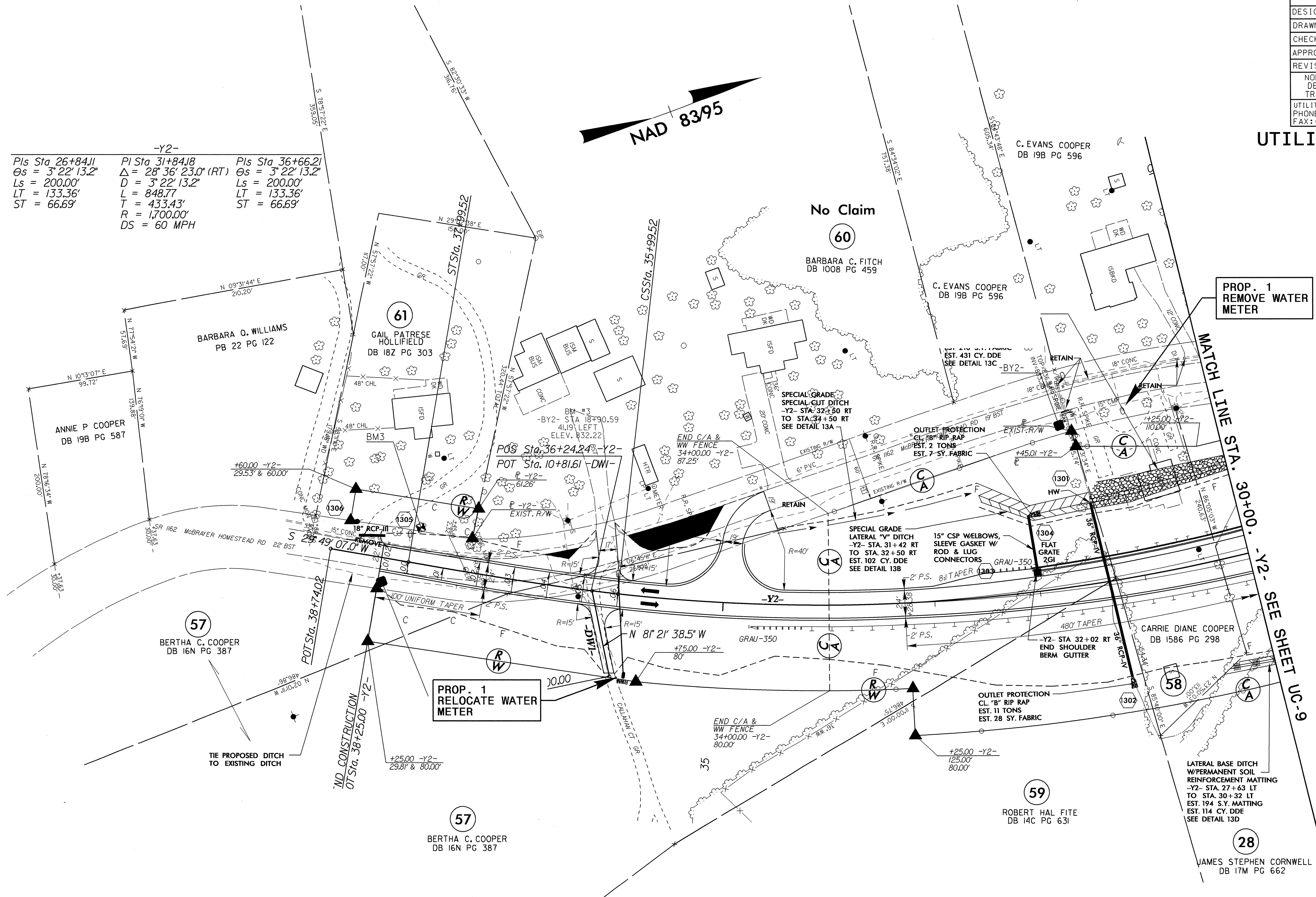
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| DRAWN BY: JES   |           |
| CHECKED BY: CAB   |           |
| APPROVED BY: CAB  |           |
| REVISED:  |           |
| NORTH CAROLINA<br>DEPARTMENT OF<br>TRANSPORTATION<br>UTILITIES ENGINEERING SEC.<br>PHONE: (919) 250-4128<br>FAX: (919) 250-4119 |           |
| UTILITY CONSTRUCTION<br>PLANS ONLY  |           |

-Y2-

|                   |                        |                   |
|-------------------|------------------------|-------------------|
| PIs Sta 26+84.11  | PI Sta 31+84.18        | PIs Sta 36+66.21  |
| Es = 3° 22' 13.2" | Δ = 28° 36' 23.0" (RT) | Es = 3° 22' 13.2" |
| Ls = 200.00'      | D = 3° 22' 13.2"       | Ls = 200.00'      |
| LT = 133.36'      | L = 848.77'            | LT = 133.36'      |
| ST = 66.69'       | T = 433.43'            | ST = 66.69'       |
|                   | R = 1,700.00'          |                   |
|                   | DS = 60 MPH            |                   |



5/14/99

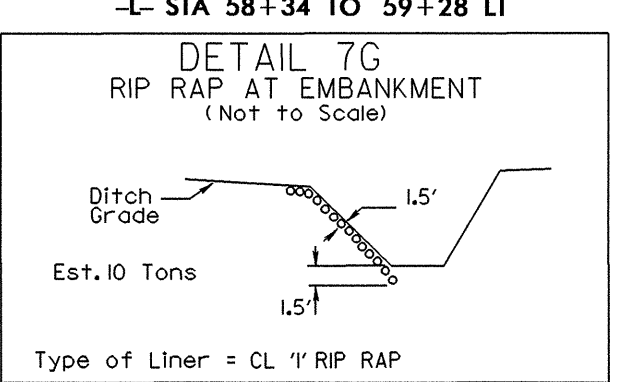
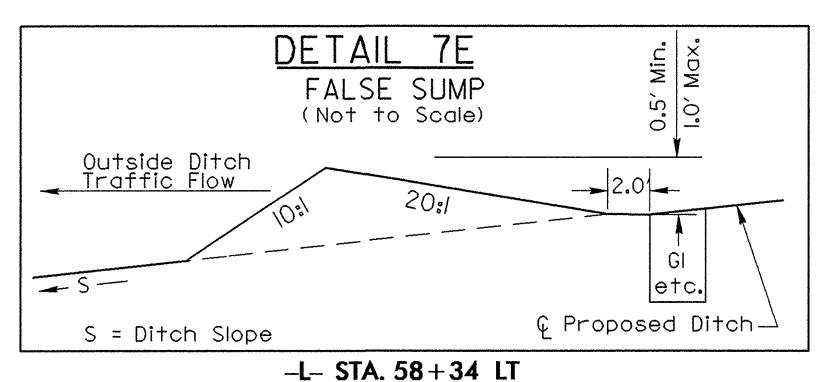
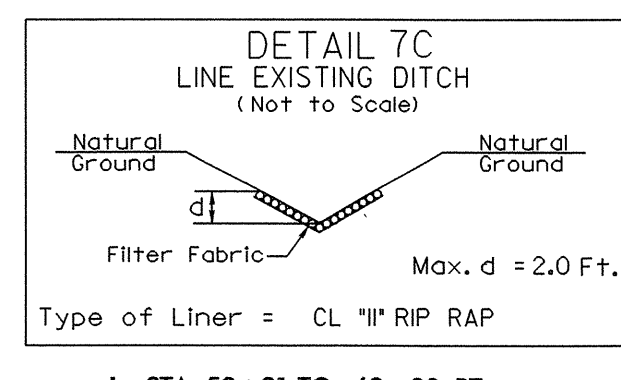
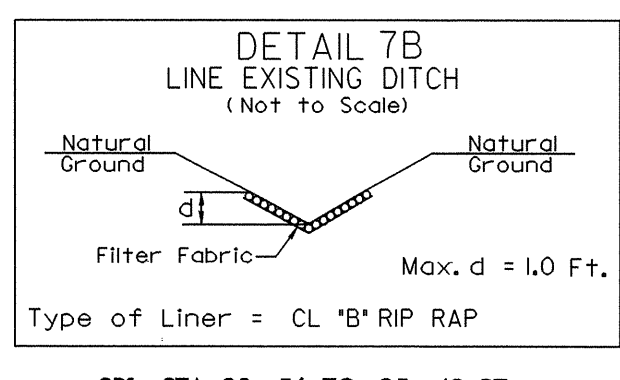
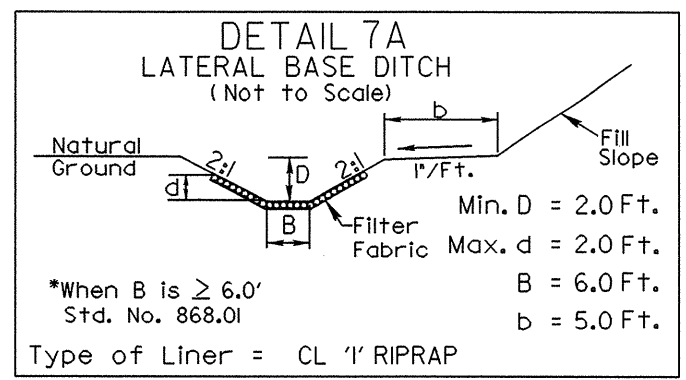
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| DRAWN BY: JES   |           |
| CHECKED BY: CAB   |           |
| APPROVED BY: CAB  |           |
| REVISED:  |           |
|   |           |
| NORTH CAROLINA<br>DEPARTMENT OF<br>TRANSPORTATION<br>UTILITIES ENGINEERING SEC.<br>PHONE: (919)250-4128<br>FAX: (919)250-4119 |           |
| UTILITY CONSTRUCTION PLANS ONLY   |           |

UTILITY CONSTRUCTION

5/14/99

NAD 83/95



28

JAMES STEPHEN CORNWELL  
DB 17M PG 662

BANK STABILIZATION  
58+34 LT  
SEE DETAIL 7G

JAMES STEPHEN CORNWELL  
DB 94E PG 665

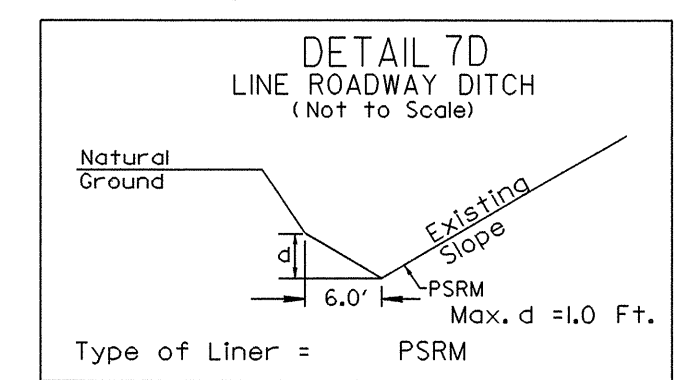
MATCH LINE STA. 54+00 -L- SEE SHEET UC-9

MATCH LINE STA. 62+00 -L- SEE SHEET 8

PROP. 400'  
6" WATER LINE  
WATER LINE (WL-3)  
SEE PROFILE UC-17

PTS  
Δ = 25'  
D = 6'  
L = 402.27'  
T = 204.55'  
R = 900.00'  
DS = 50 MPH

SR1 STA.  
22+89.38  
105' RT.



-L- STA 45+00 TO 49+50 LT  
-L- STA 53+00 TO 55+50 LT

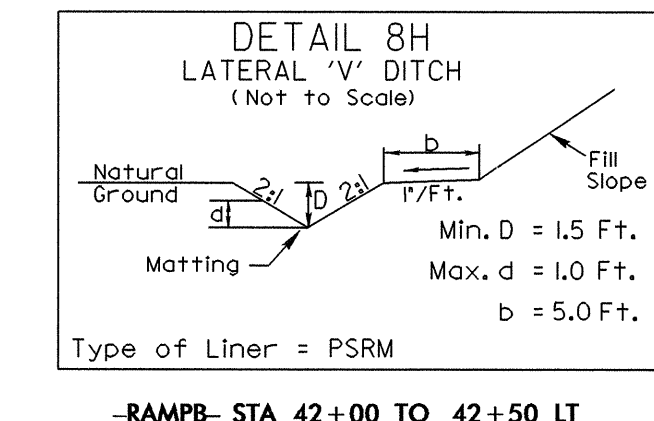
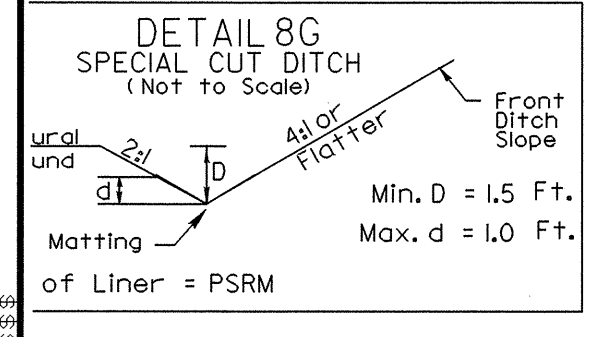
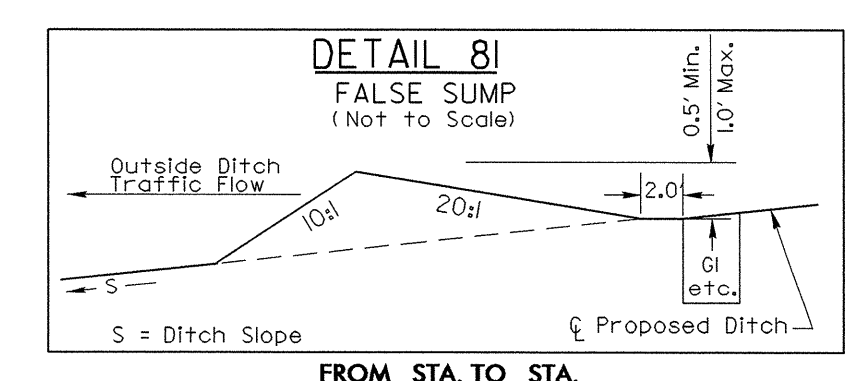
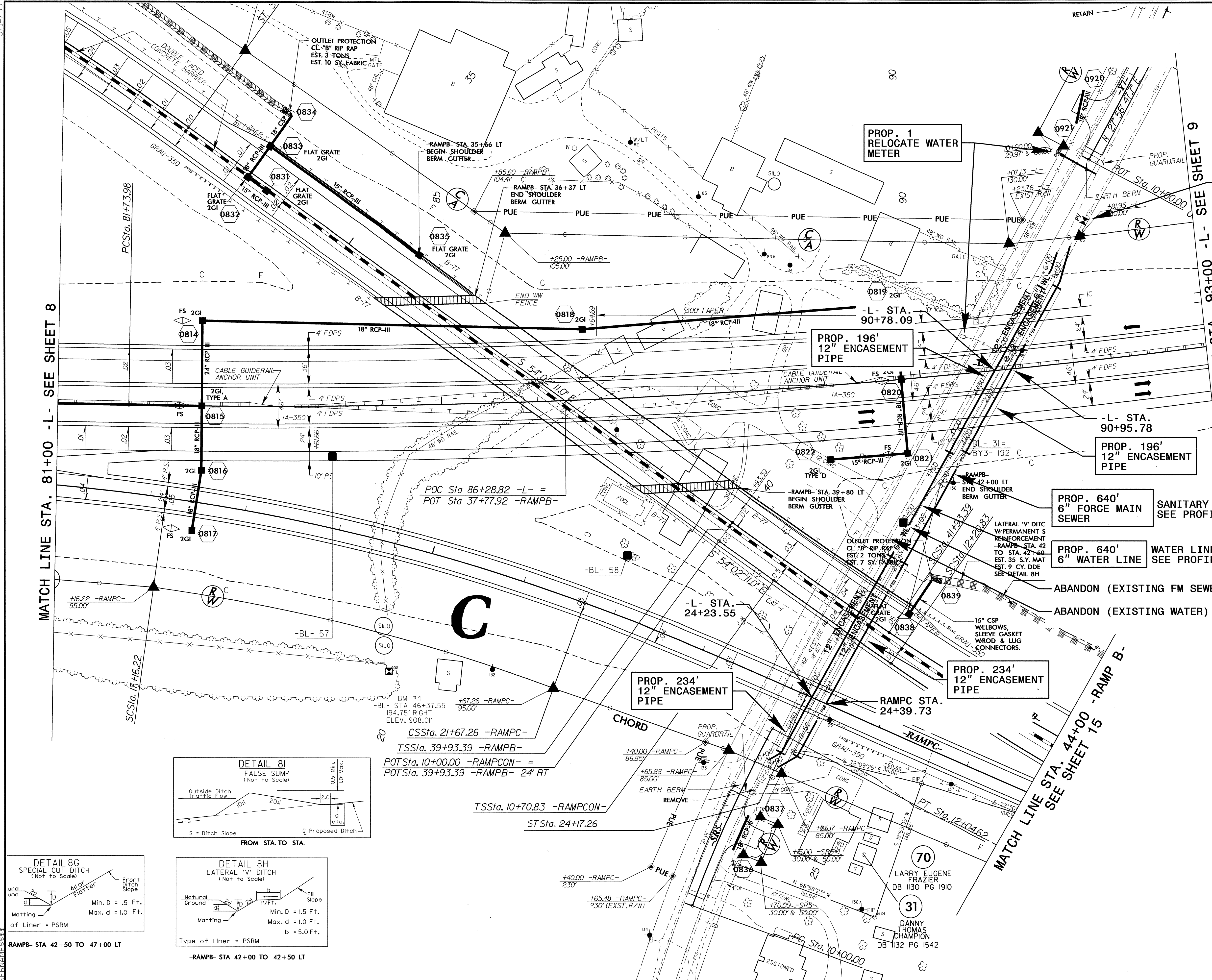
02-10-V-2012 14:18 UC-R-2707AA-UT-7\_UC11\_psh.dgn



|  |           |
|--|-----------|
| PROJECT REFERENCE NO.  | SHEET NO. |
| R-2707AA   | UC-12     |
| DESIGNED BY: JES   |           |
| DRAWN BY: JES  |           |
| CHECKED BY: CAB  |           |
| APPROVED BY: CAB   |           |
| REVISER:   |           |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION<br>UTILITIES ENGINEERING SECTION<br>PHONE: (919) 250-4128<br>FAX: (919) 250-4119 |           |
| UTILITY CONSTRUCTION PLANS ONLY  |           |

**UTILITY CONSTRUCTION**

NAD 8395



RAMPB- STA 42+50 TO 47+00 LT

-RAMPB- STA 42+00 TO 42+50 LT

05-NOV-2012 10:38  
 C:\Users\jes\Documents\2707AA-UT-8-UC12\_psh.dgn  
 Utility Construction Plans







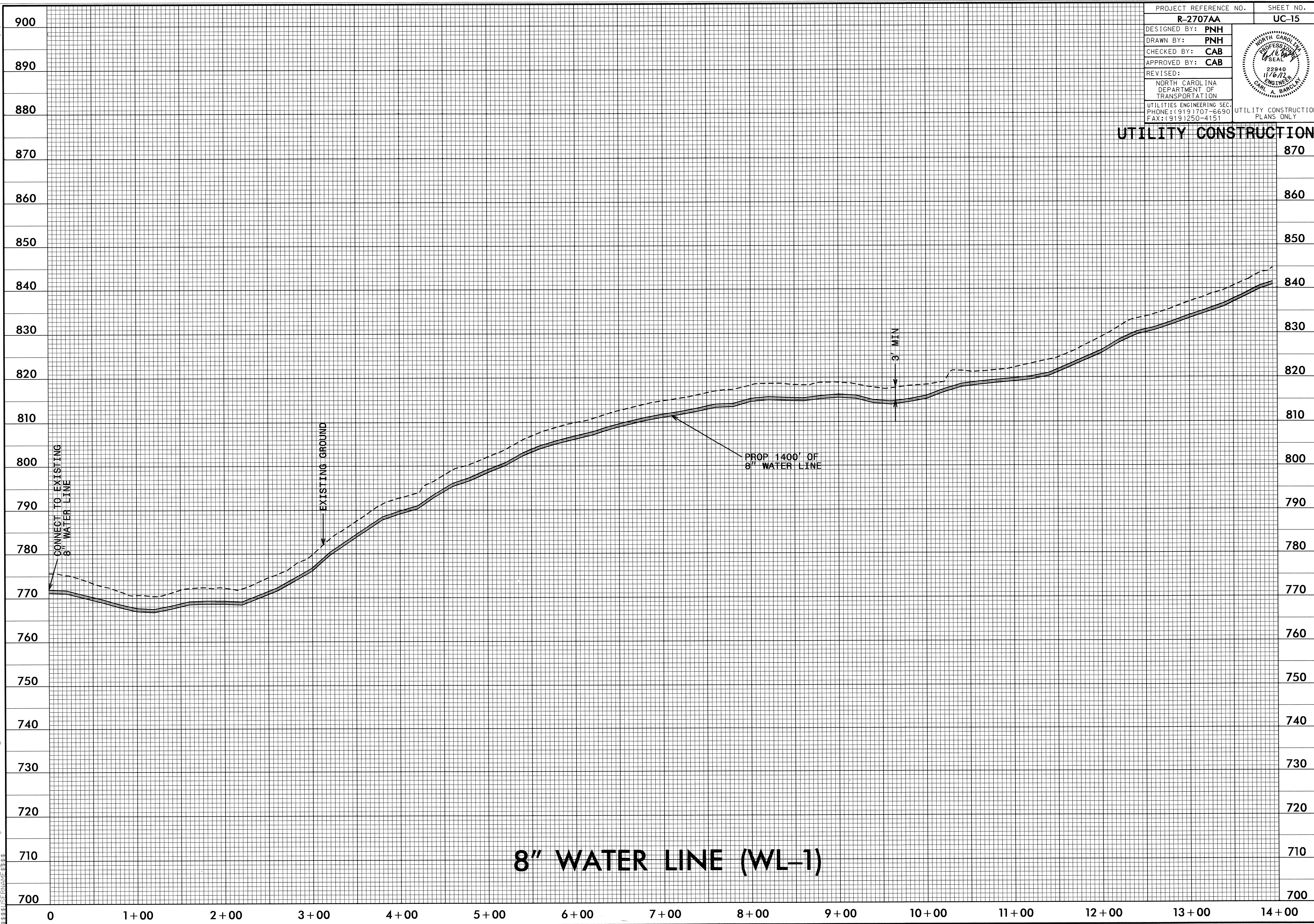




5/14/99

|   |           |
|---|-----------|
| PROJECT REFERENCE NO.   | SHEET NO. |
| R-2707AA  | UC-15     |
| DESIGNED BY: PNH  |           |
| DRAWN BY: PNH   |           |
| CHECKED BY: CAB   |           |
| APPROVED BY: CAB  |           |
| REVISED:  |           |
| NORTH CAROLINA<br>DEPARTMENT OF<br>TRANSPORTATION<br>UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 |           |
| UTILITY CONSTRUCTION PLANS ONLY   |           |

### UTILITY CONSTRUCTION



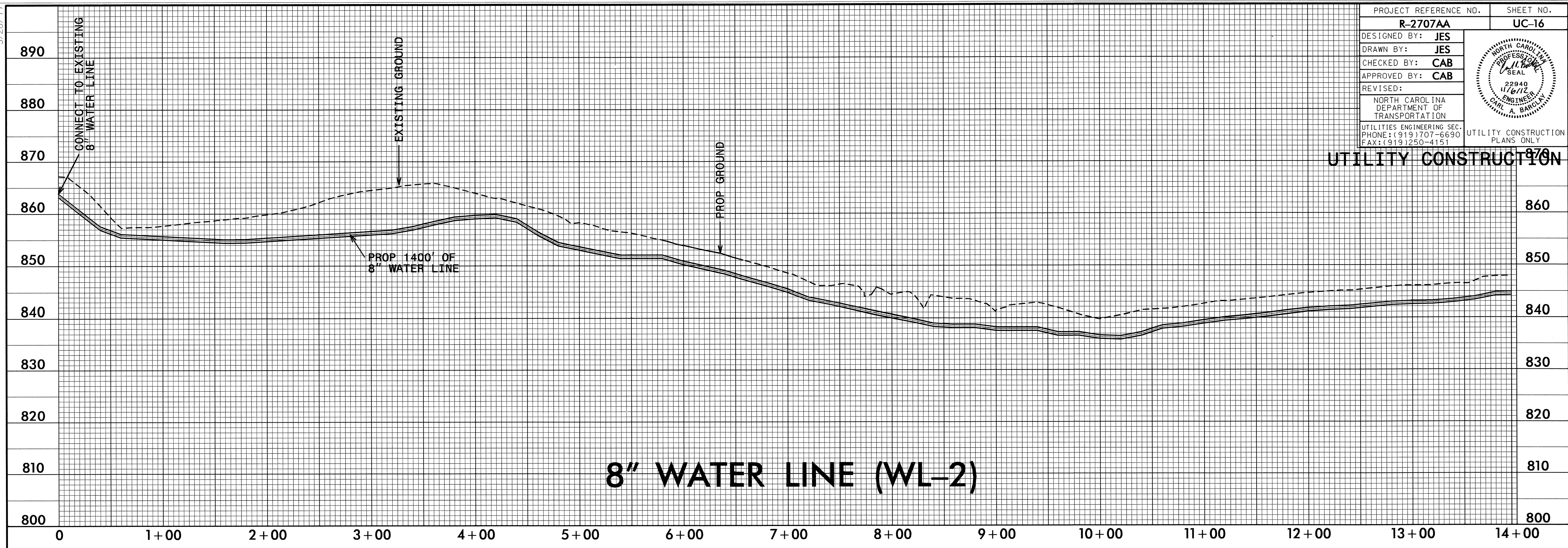
## 8" WATER LINE (WL-1)

05-NOV-2012 09:58 \\P:\o\NAT-PRO-WL1.LUC15.dgn



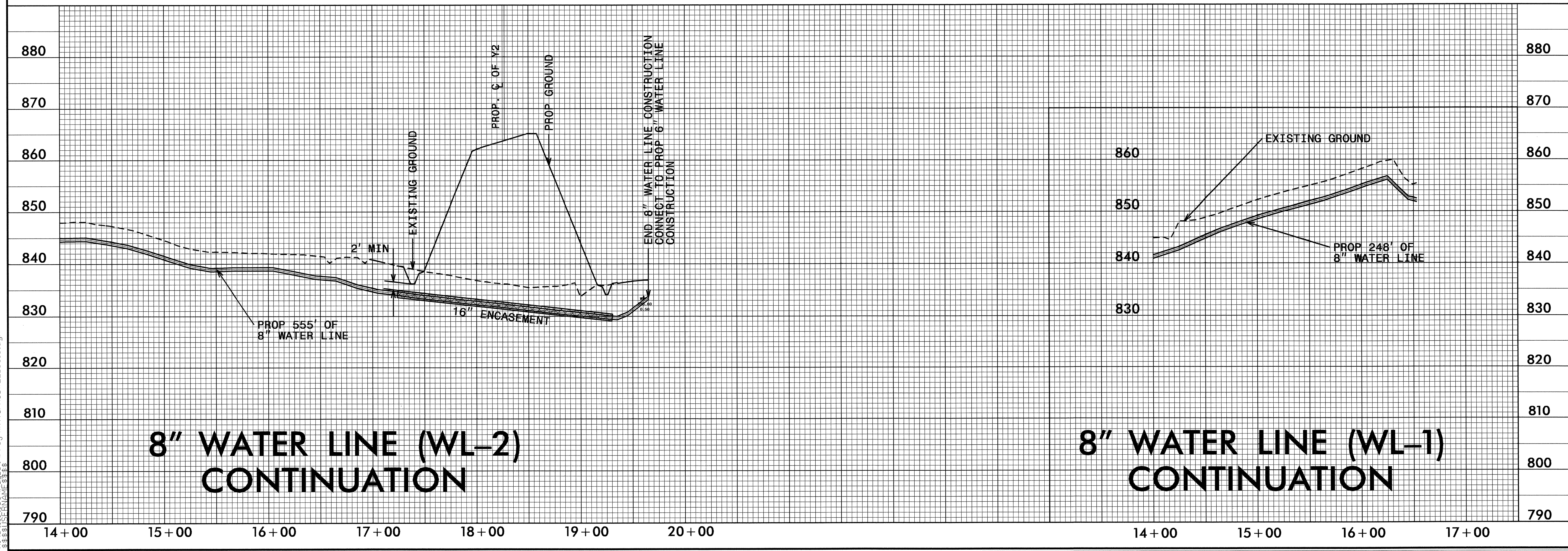
5/28/99

|   |           |
|---|-----------|
| PROJECT REFERENCE NO.   | SHEET NO. |
| R-2707AA  | UC-16     |
| DESIGNED BY: JES  |           |
| DRAWN BY: JES   |           |
| CHECKED BY: CAB   |           |
| APPROVED BY: CAB  |           |
| REVISED:  |           |
| NORTH CAROLINA<br>DEPARTMENT OF<br>TRANSPORTATION<br>UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 |           |
| UTILITY CONSTRUCTION PLANS ONLY   |           |



### 8" WATER LINE (WL-2)

05-NOV-2002 10:18 AM \\P-01\WAT\_PROJ\WL2\_UC16.dgn



### 8" WATER LINE (WL-2) CONTINUATION

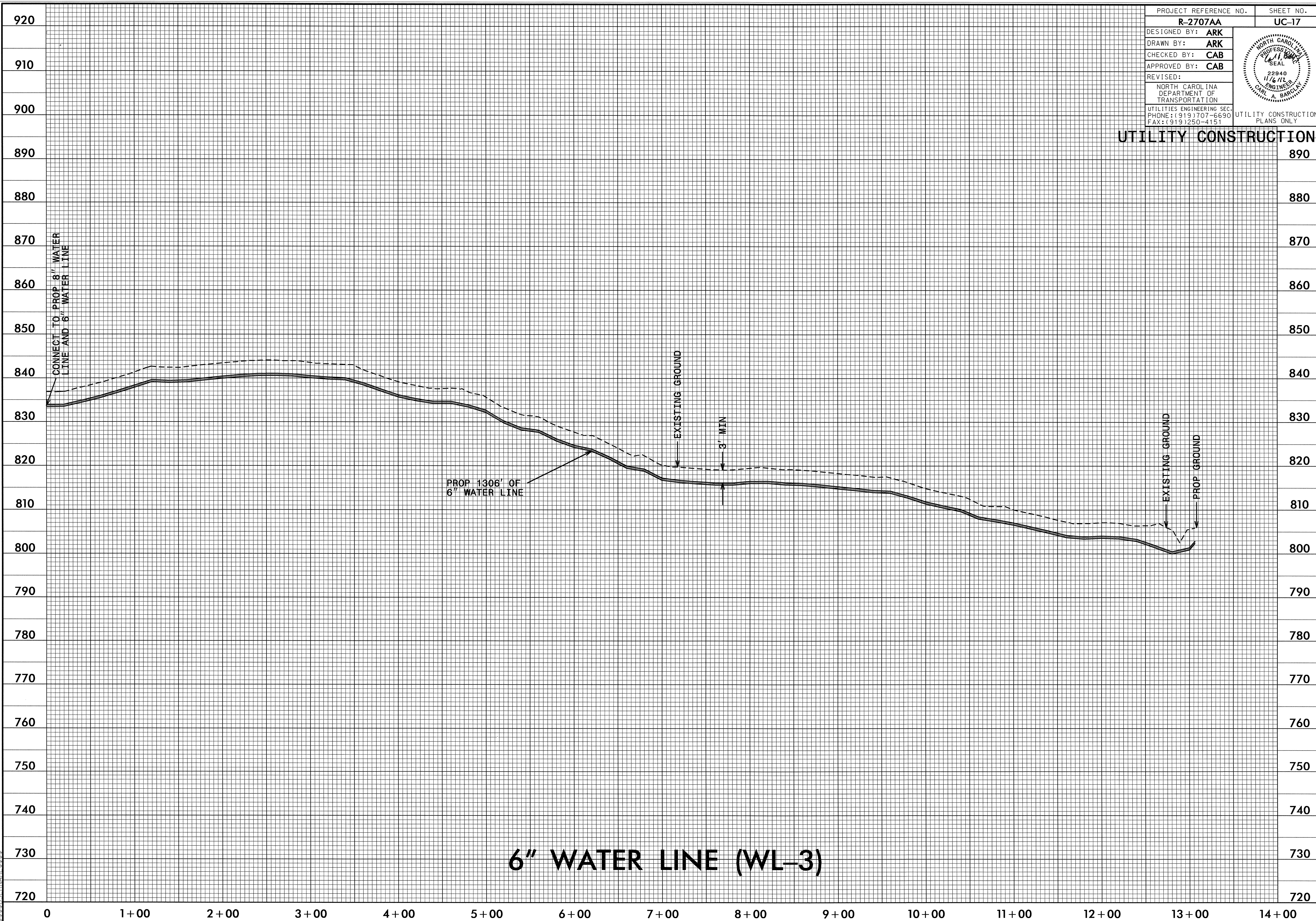
### 8" WATER LINE (WL-1) CONTINUATION



5/14/99

|  |                                    |
|--|------------------------------------|
| PROJECT REFERENCE NO.  | SHEET NO.                          |
| R-2707AA   | UC-17                              |
| DESIGNED BY: <b>ARK</b>  |                                    |
| DRAWN BY: <b>ARK</b>   |                                    |
| CHECKED BY: <b>CAB</b>   |                                    |
| APPROVED BY: <b>CAB</b>  |                                    |
| REVISED:   |                                    |
| NORTH CAROLINA DEPARTMENT OF TRANSPORTATION                                |                                    |
| UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 | UTILITY CONSTRUCTION<br>PLANS ONLY |

### UTILITY CONSTRUCTION



## 6" WATER LINE (WL-3)

30-OCT-2012 17:48  
R:\Utilities\RDG\Ut\Proj\WAT\_PROJ\WL3\_UC17.dgn  
###LSR###



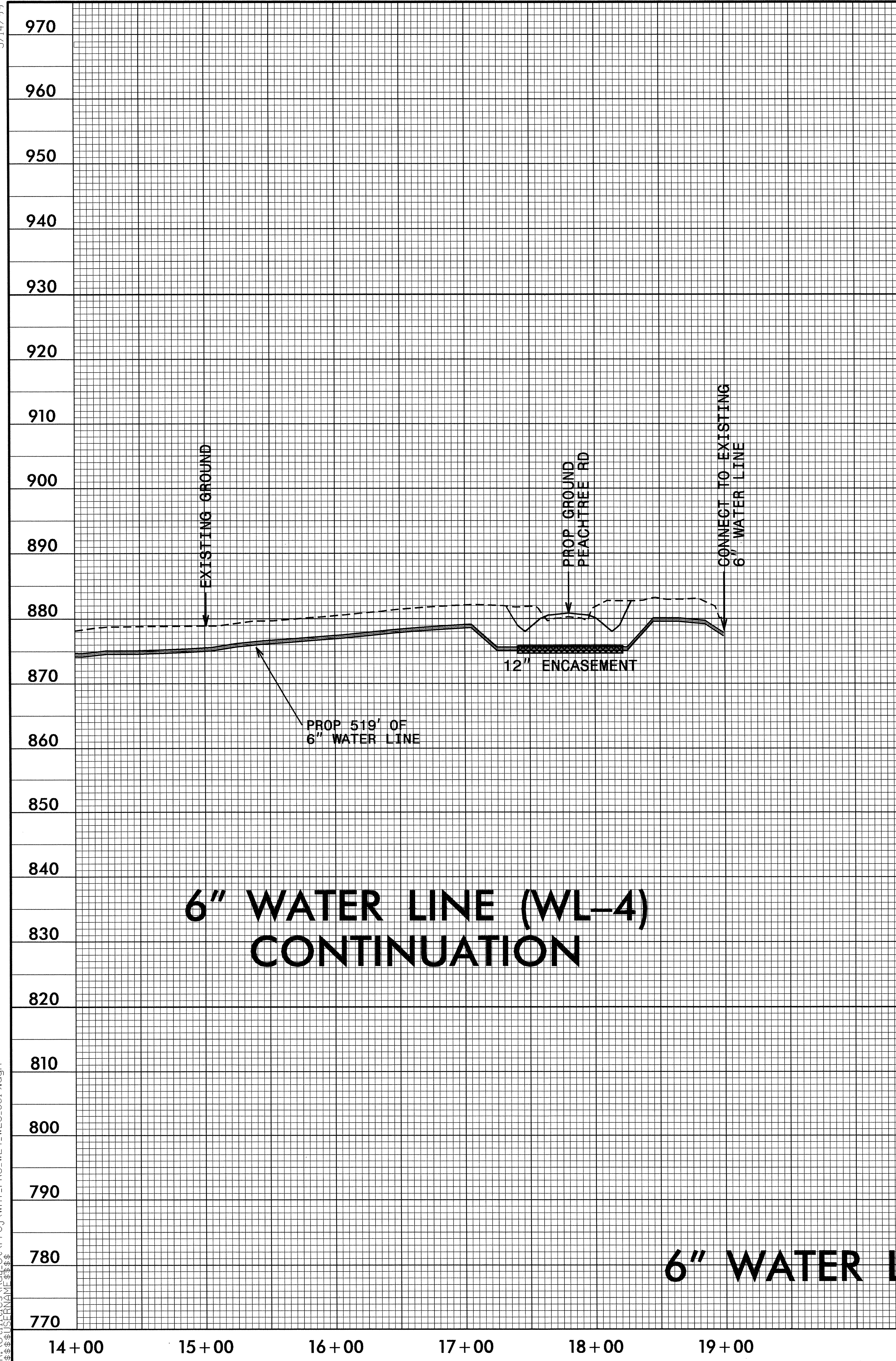




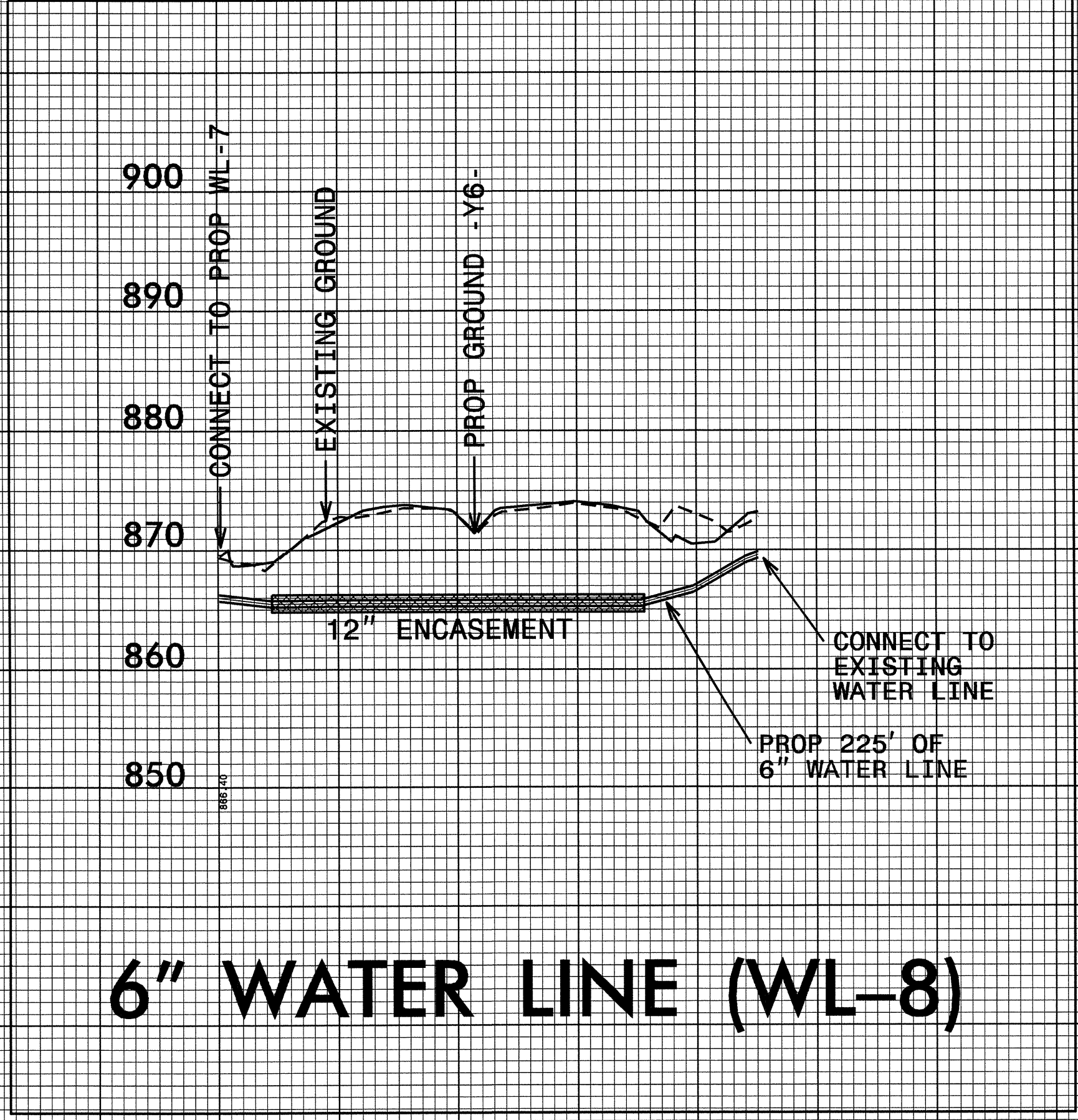
5/14/09

|  |                           |
|--|---------------------------|
| PROJECT REFERENCE NO.<br><b>R-2707AA</b>                                   | SHEET NO.<br><b>UC-19</b> |
| DESIGNED BY: <b>PNH</b>  |                           |
| DRAWN BY: <b>PNH</b>   |                           |
| CHECKED BY: <b>CAB</b>   |                           |
| APPROVED BY: <b>CAB</b>  |                           |
| REVISED:   |                           |
| NORTH CAROLINA<br>DEPARTMENT OF<br>TRANSPORTATION                          |                           |
| UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 |                           |

**UTILITY CONSTRUCTION**



**6" WATER LINE (WL-4)  
CONTINUATION**



**6" WATER LINE (WL-8)**

**6" WATER LINE (WL-4 & WL-8)**

01-NOV-2012 13:39  
R:\Projects\11888\11888.dwg  
R:\Projects\11888\11888.dwg  
R:\Projects\11888\11888.dwg

14+00 15+00 16+00 17+00 18+00 19+00 0+00 1+00 2+00 3+00

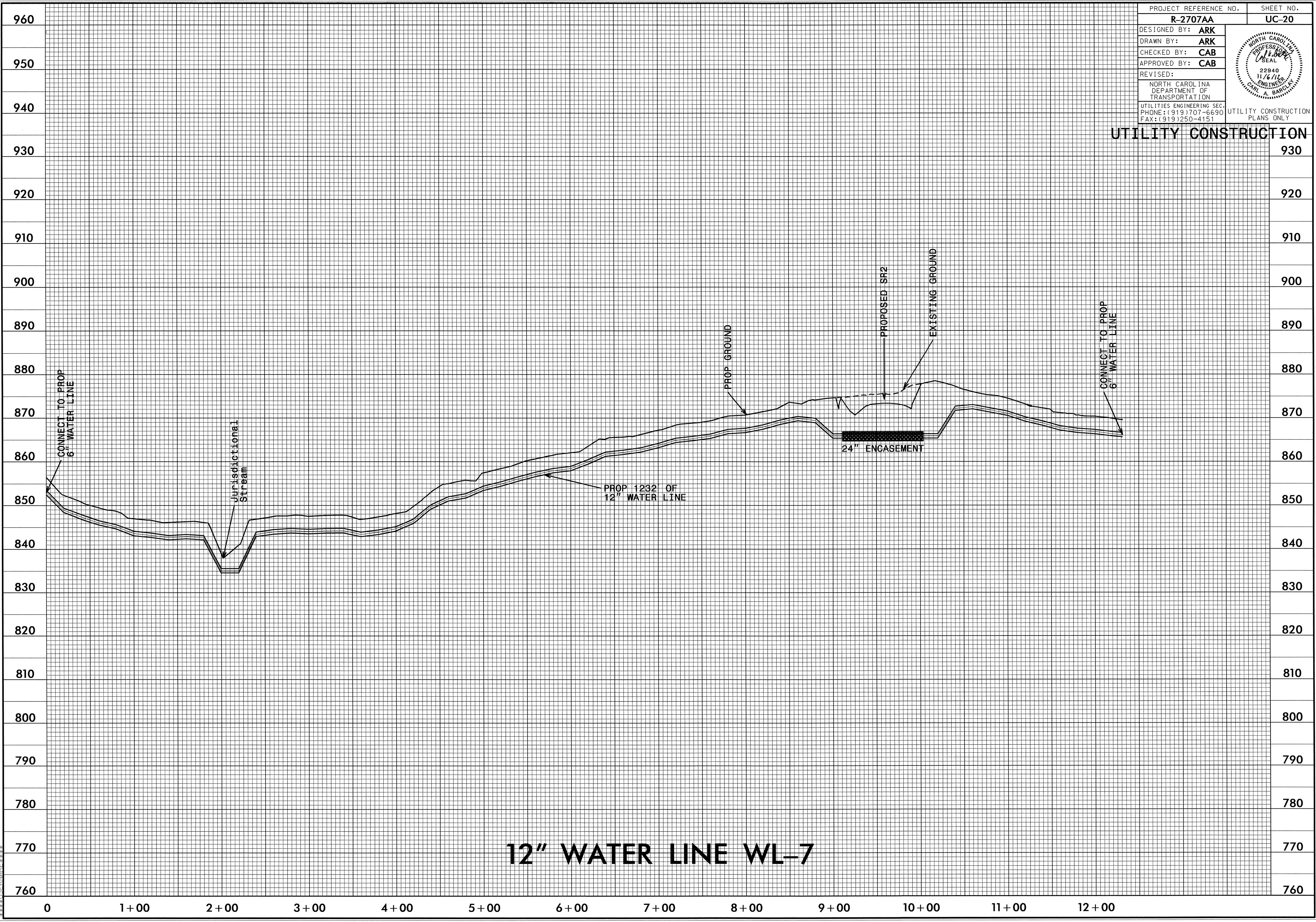
940  
930  
920  
910  
900  
890  
880  
870  
860  
850  
840  
830  
820  
810  
800  
790  
780  
770



5/14/99

|                       |          |   |                                    |
|-----------------------|----------|---|------------------------------------|
| PROJECT REFERENCE NO. | R-2707AA | SHEET NO.   | UC-20                              |
| DESIGNED BY:          | ARK      |   |                                    |
| DRAWN BY:             | ARK      |   |                                    |
| CHECKED BY:           | CAB      |   |                                    |
| APPROVED BY:          | CAB      |   |                                    |
| REVISED:              |          | NORTH CAROLINA<br>DEPARTMENT OF<br>TRANSPORTATION<br>UTILITIES ENGINEERING SEC.<br>PHONE: (919) 707-6690<br>FAX: (919) 250-4151 |                                    |
|                       |          |   | UTILITY CONSTRUCTION<br>PLANS ONLY |

### UTILITY CONSTRUCTION



## 12" WATER LINE WL-7

30-001-202 1456  
 R:\Utilities\Gd\U\Proj\WAT\_PRO\_WL8\_UC20.dgn  
 \$\$\$USERNAME\$\$\$



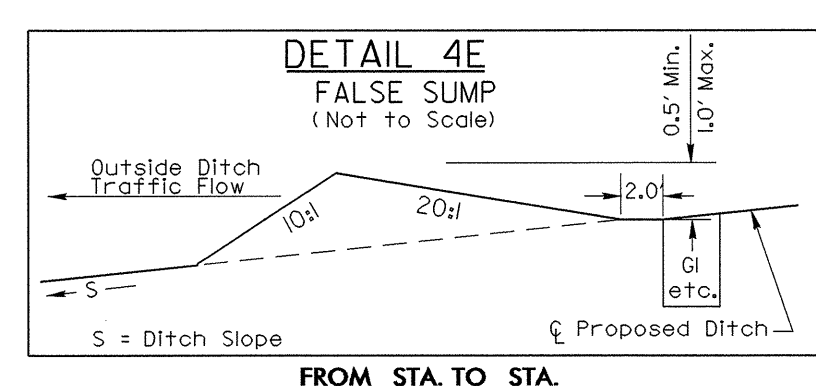
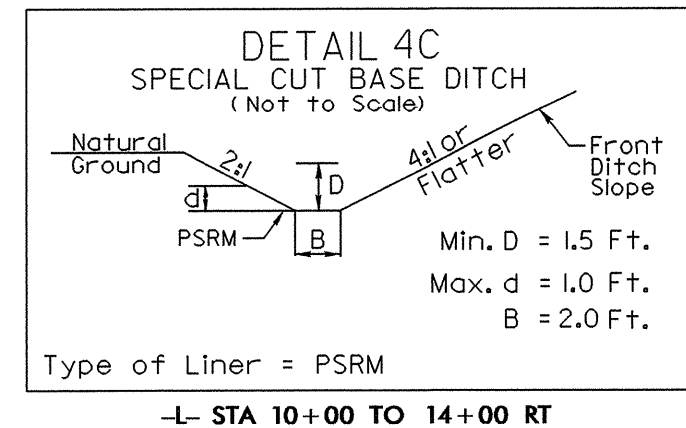
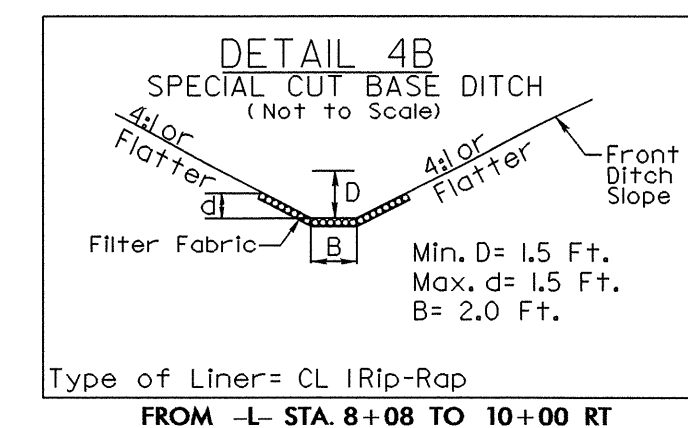
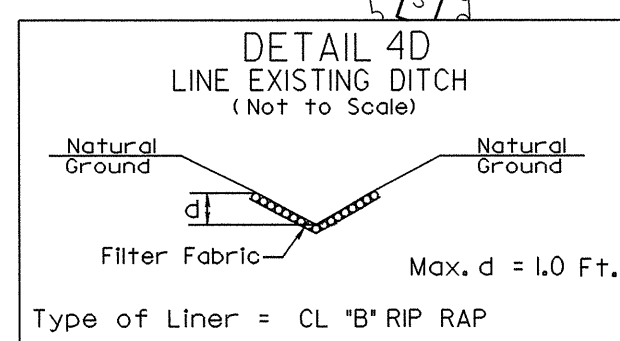
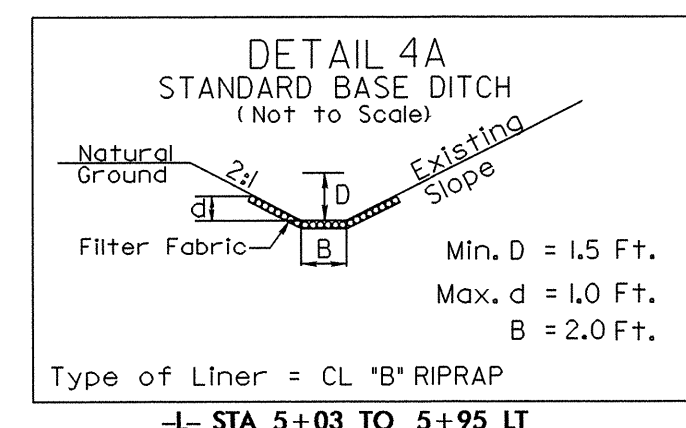
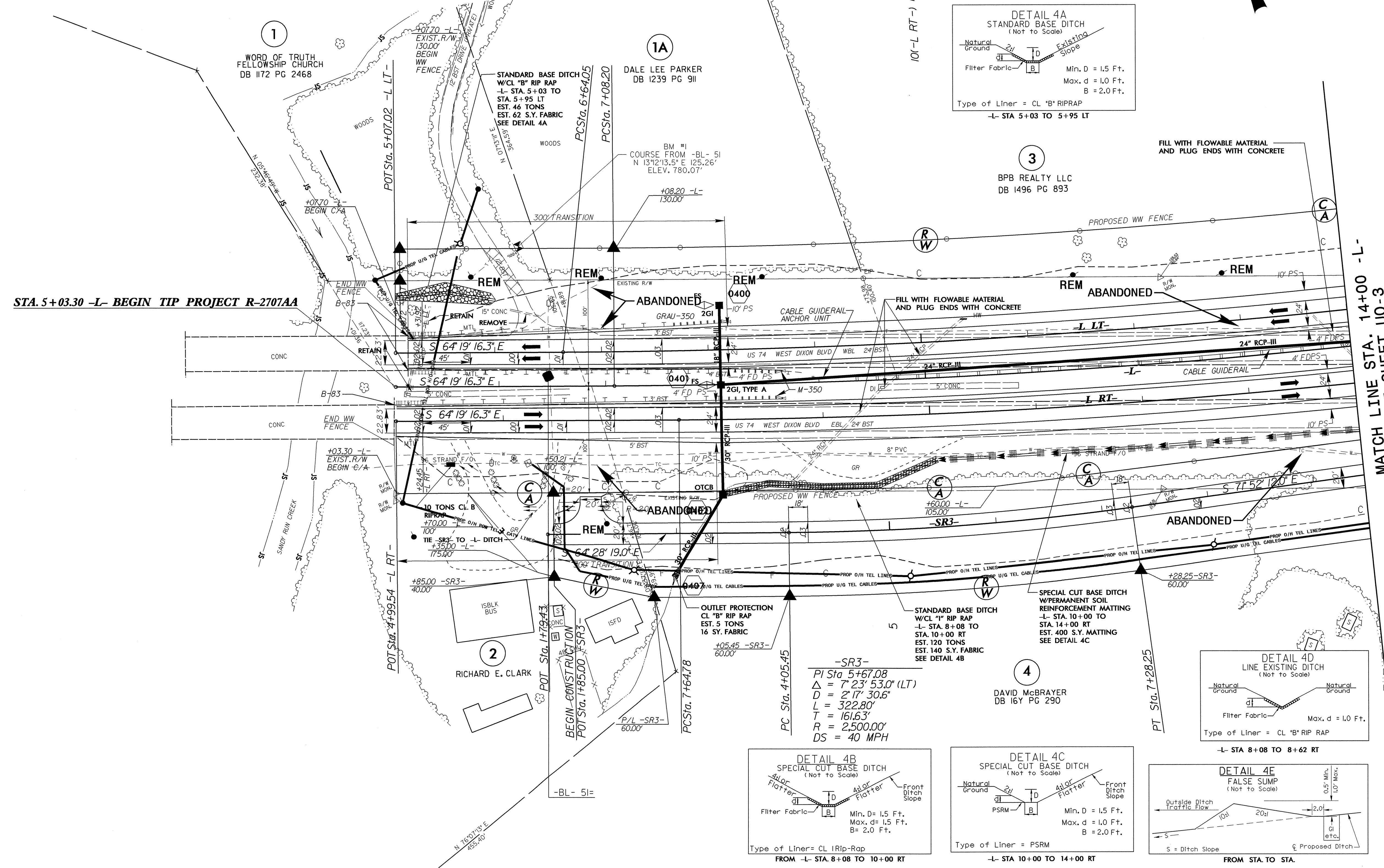






UTILITIES BY OTHERS

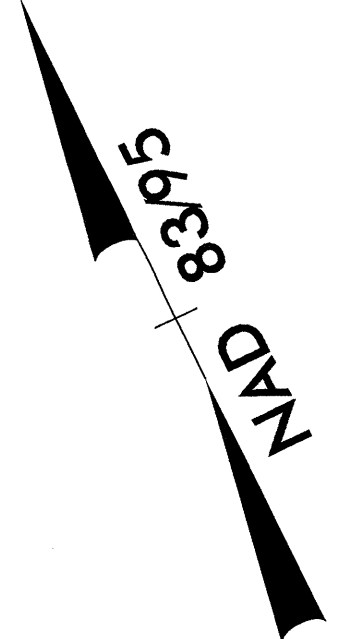
NOTE:  
 ALL PROPOSED UTILITY WORK  
 SHOWN ON THIS SHEET WILL  
 BE DONE BY OTHERS



**-SR3-**  
 PI Sta. 5+67.08  
 $\Delta = 7' 23" 53.0" (LT)$   
 $D = 2' 17" 30.6"$   
 $L = 322.80'$   
 $T = 161.63'$   
 $R = 2,500.00'$   
 $DS = 40 MPH$

STA. 5+03.30 -L- BEGIN TIP PROJECT R-2707AA

MATCH LINE STA. 14+00 -L-  
 SEE SHEET UO-3



5/14/99

05-NOV-2012 11:20 JBO:R-2707AA\_U-04-U02.dgn  
 13:58:33



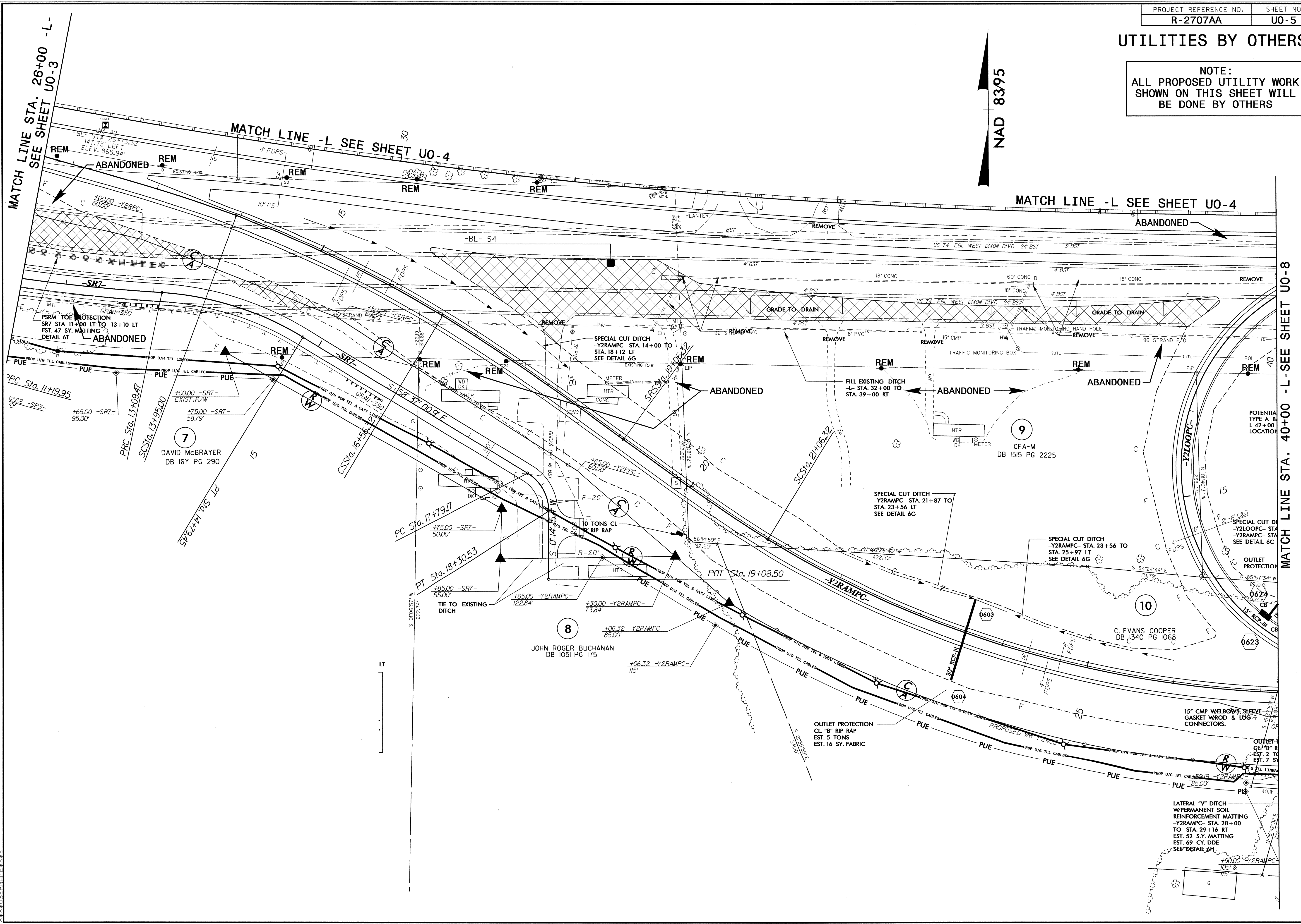
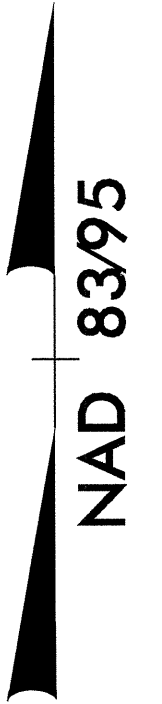






# UTILITIES BY OTHERS

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



MATCH LINE STA. 26+00 -L-  
SEE SHEET UO-3

MATCH LINE -L SEE SHEET UO-4

MATCH LINE -L SEE SHEET UO-4

MATCH LINE STA. 40+00 -L- SEE SHEET UO-8

7  
DAVID McBRAYER  
DB 16Y PG 290

8  
JOHN ROGER BUCHANAN  
DB 105I PG 175

9  
CFA-M  
DB 1515 PG 2225

10  
C. EVANS COOPER  
DB 1340 PG 1068

0624  
0623

0624  
0623

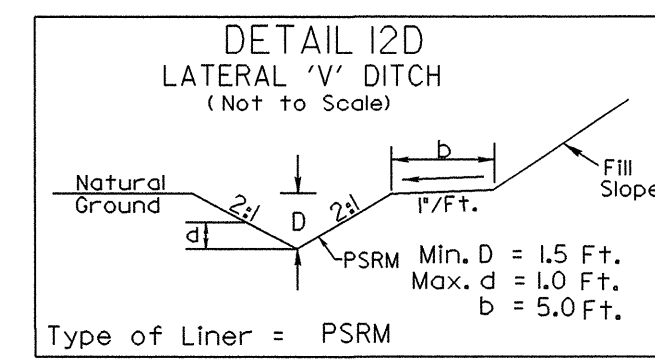
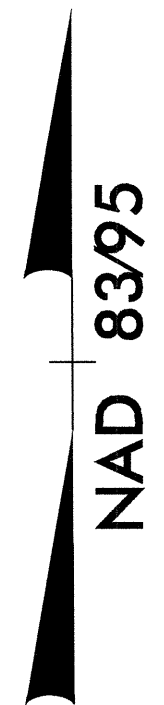
LATERAL "V" DITCH  
W/PERMANENT SOIL  
REINFORCEMENT MATTING  
TO STA. 29+16 RT  
EST. 52 SY. MATTING  
EST. 69 CY. DDE  
SEE DETAIL 6H

5/14/99  
05-NOV-2019 17:27  
C:\Users\jrb\OneDrive\Documents\Projects\2707AA\_UO-06\_UO5.dgn

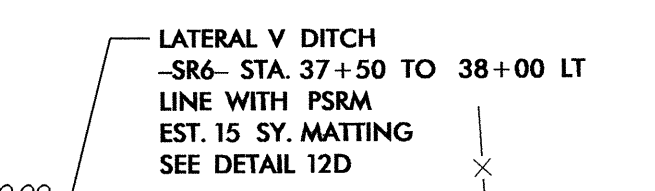


UTILITIES BY OTHERS

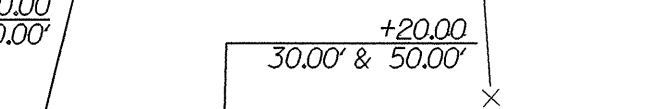
NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS



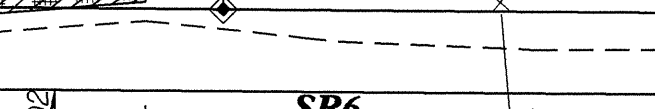
SR6- STA 37+50 TO 38+00 LT



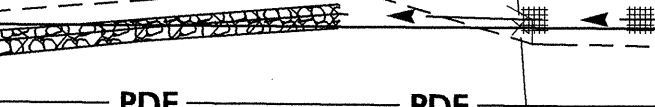
CUT DITCH  
-SR6- STA. 42+00 TO 42+50 LT  
LINE WITH PERMANENT SOIL REINFORCEMENT MATTING  
EST. 20 SY. MATTING  
SEE DETAIL 12C



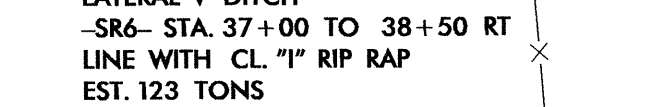
SR6- STA. 37+00 TO 38+50 RT



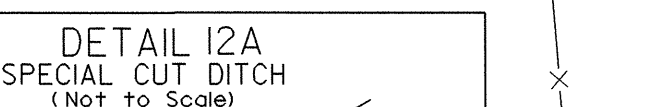
SR6- STA. 37+00 TO 38+50 RT



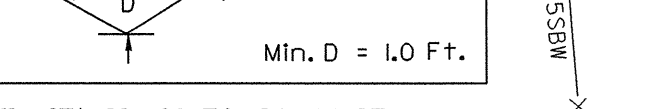
-Y2- STA 13+00 TO 14+00 RT  
-Y2- STA 13+00 TO 15+00 LT



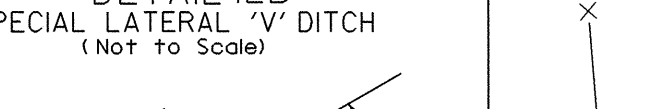
-Y2- STA 14+00 RT TO -Y2RAMPB- STA 25+00 LT



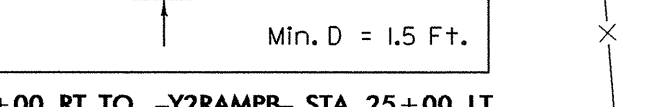
SR6- STA. 37+00 TO 38+50 RT



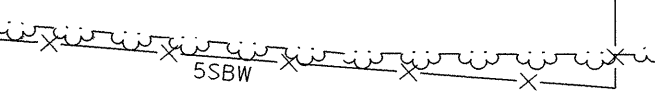
SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



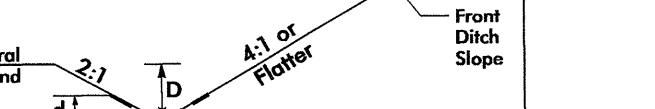
SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



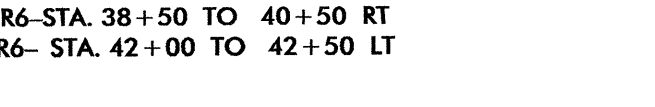
SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



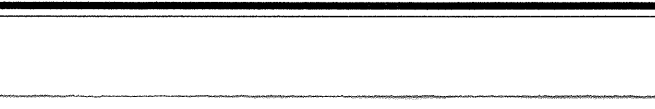
SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT



SR6- STA. 38+50 TO 40+50 RT  
SR6- STA. 42+00 TO 42+50 LT

MATCH LINE STA. 37+00 -SR6-  
SEE SHEET II

MATCHLINE STA.  
18+00 -SR10-  
SEE SHEET UO-4

MATCH LINE STA. 15+00 -Y2-  
SEE SHEET UO-7

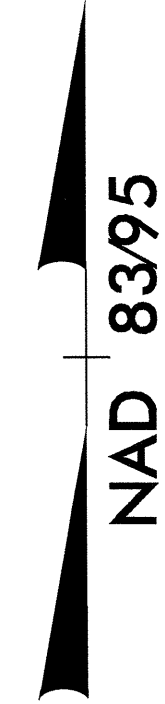
5/14/99

05-NOV-2012 17:28 JBC\N-R-2707AA\_Ut-12\_UO6.dgn



# UTILITIES BY OTHERS

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



5/14/99  
05-NOV-2017 17:53 \\UBON\R-2707AA\Uo-06-U07.dgn  
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MATCH LINE STA. 18+00 -SR10-  
SEE SHEET UO-6

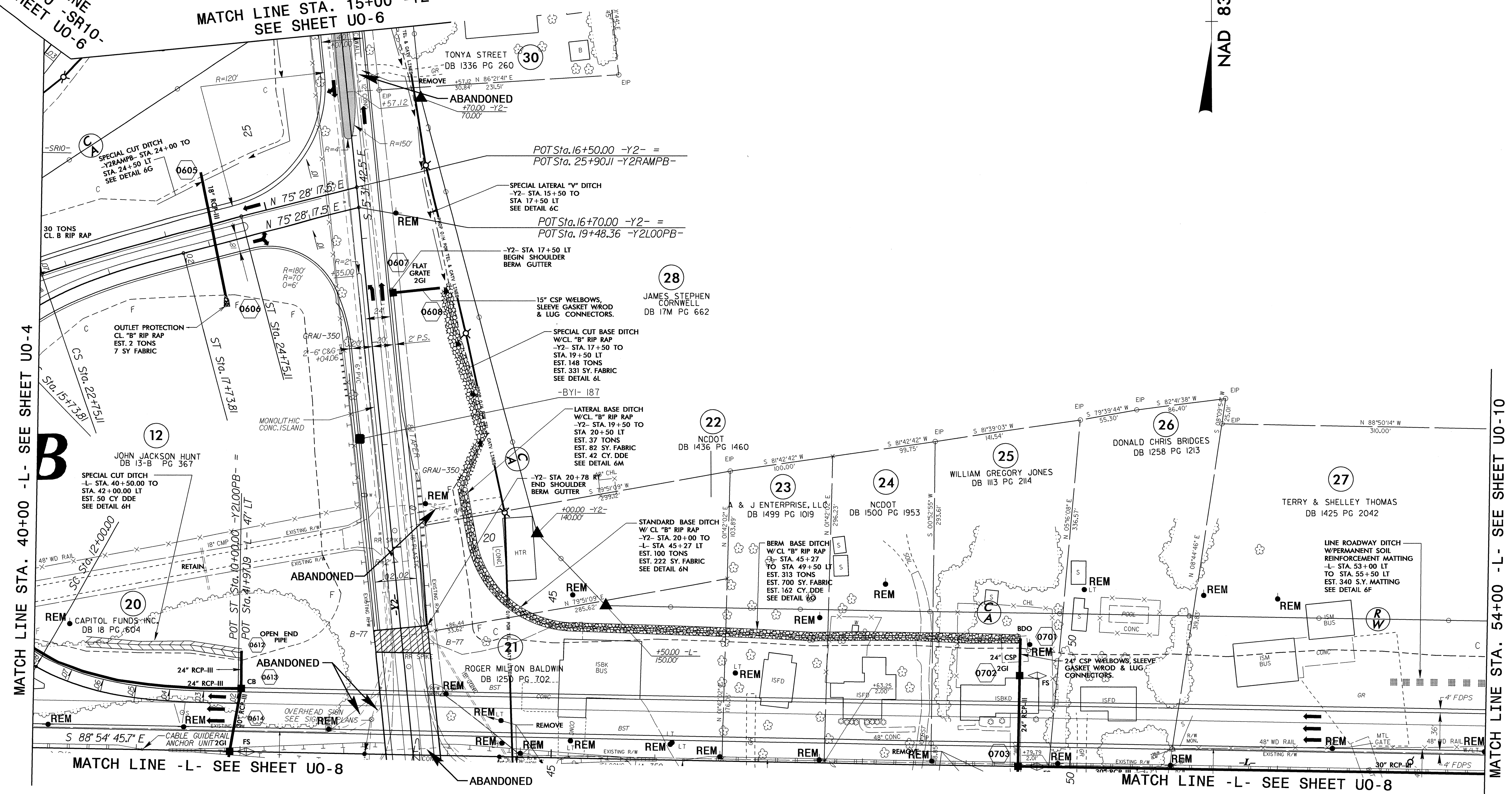
MATCH LINE STA. 15+00 -Y2-  
SEE SHEET UO-6

MATCH LINE STA. 40+00 -L- SEE SHEET UO-4

MATCH LINE -L- SEE SHEET UO-8

MATCH LINE -L- SEE SHEET UO-8

MATCH LINE STA. 54+00 -L- SEE SHEET UO-10



**B**

12

20

21

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27

R

W





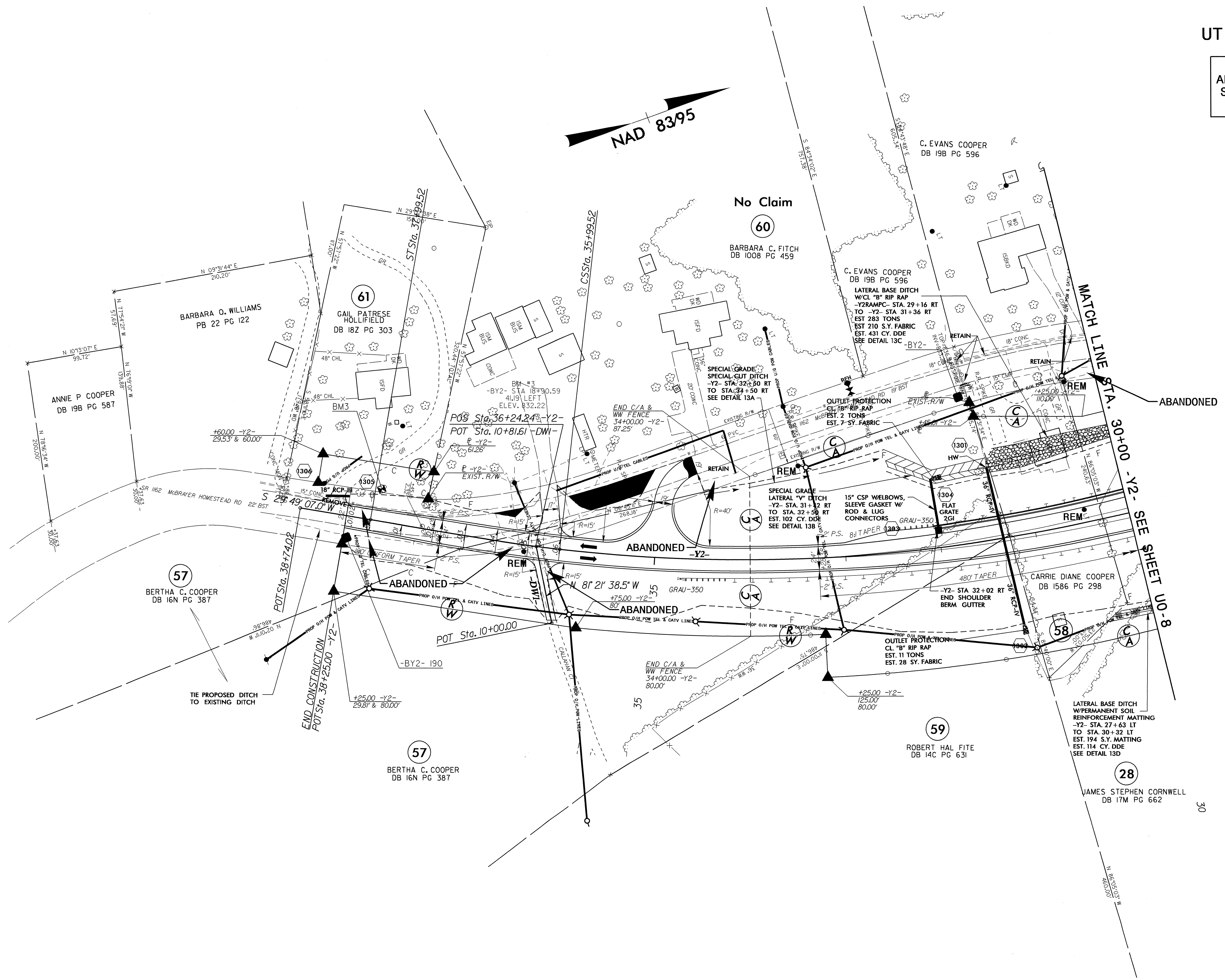


### UTILITIES BY OTHERS

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

5/14/99

05-NOV-2012 17:34  
\\utl\utilities\BCH\UN\PROJ\UBOVR-2707AA-U\13-U09.dgn  
\*\*\*\*\*USER NAME\*\*\*\*\*



30

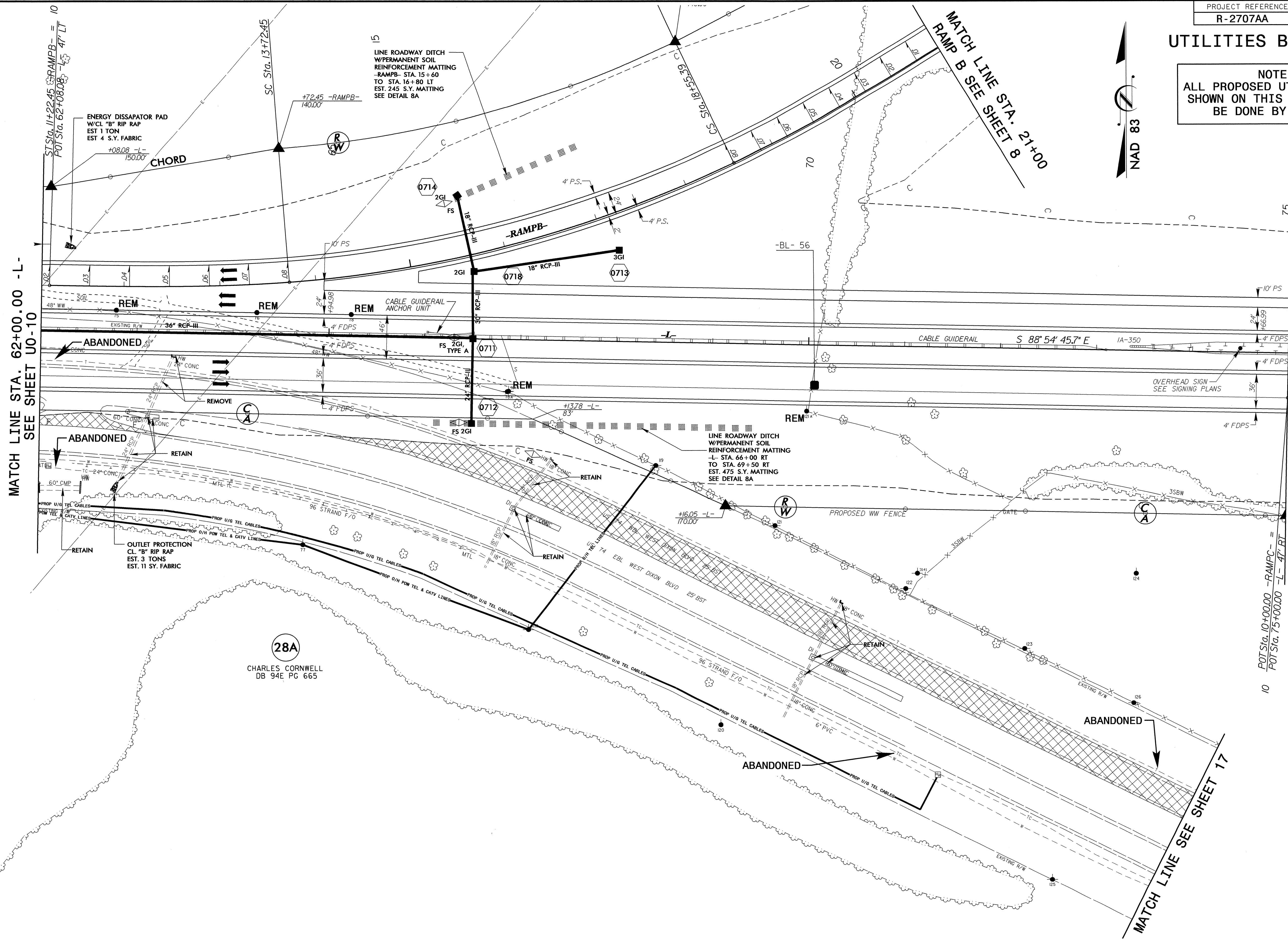
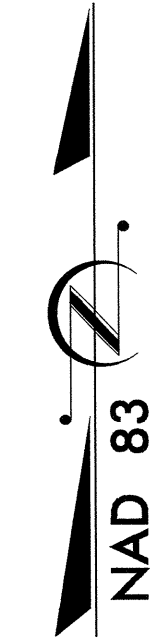






### UTILITIES BY OTHERS

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



MATCH LINE STA. 62+00.00 - L-  
SEE SHEET U0-10

MATCH LINE STA. 75+00.00 - L-  
SEE SHEET 8

MATCH LINE STA. 21+00  
RAMP B SEE SHEET 8

10 POT Sta. 10+00.00 - RAMP C -  
POT Sta. 75+00.00 - L- 47' RT

28A  
CHARLES CORNWELL  
DB 94E PG 665

LINE ROADWAY DITCH  
W/PERMANENT SOIL  
REINFORCEMENT MATTING  
-RAMPB- STA. 15+60  
TO STA. 16+80 LT  
EST. 245 S.Y. MATTING  
SEE DETAIL 8A

LINE ROADWAY DITCH  
W/PERMANENT SOIL  
REINFORCEMENT MATTING  
-L- STA. 66+00 RT  
TO STA. 69+50 RT  
EST. 475 S.Y. MATTING  
SEE DETAIL 8A

ENERGY DISSIPATOR PAD  
W/CL "B" RIP RAP  
EST. 1 TON  
EST. 4 S.Y. FABRIC

OUTLET PROTECTION  
CL. "B" RIP RAP  
EST. 3 TONS  
EST. 11 S.Y. FABRIC

5/14/99  
06-NOV-2012 10:45:50 \\P-2707AA-Ut\_08\_L011.psh.dgn



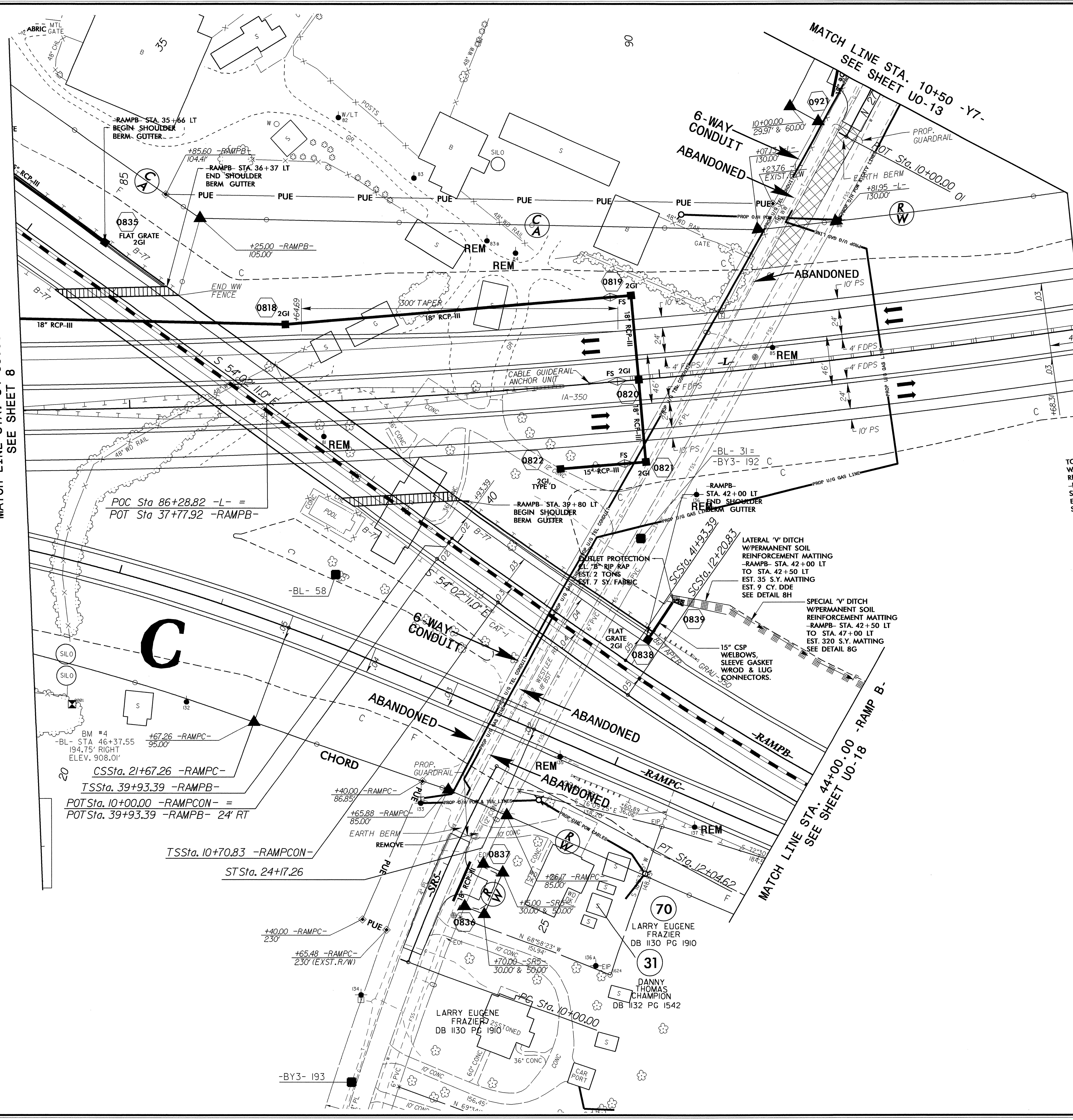
### UTILITIES BY OTHERS

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



MATCH LINE STA. 84+00.00 -L-  
SEE SHEET 8

MATCH LINE STA. 94+00 -L-  
SEE SHEET 9



POC Sta 86+28.82 -L- =  
POT Sta 37+77.92 -RAMPB-

BM #4  
-BL- STA 46+37.55  
194.75' RIGHT  
ELEV. 908.01'  
CSSta. 21+67.26 -RAMPC-  
TSSSta. 39+93.39 -RAMPB-  
POTSta. 10+00.00 -RAMPCON- =  
POTSta. 39+93.39 -RAMPB- 24' RT

TSSSta. 10+70.83 -RAMPCON-  
STSta. 24+17.26

LATERAL 'V' DITCH  
W/PERMANENT SOIL  
REINFORCEMENT MATTING  
-RAMPB- STA. 42+00 LT  
TO STA. 42+50 LT  
EST. 35 S.Y. MATTING  
EST. 9 CY. DDE  
SEE DETAIL 8H

SPECIAL 'V' DITCH  
W/PERMANENT SOIL  
REINFORCEMENT MATTING  
-RAMPB- STA. 42+50 LT  
TO STA. 47+00 LT  
EST. 320 S.Y. MATTING  
SEE DETAIL 8G

15" CSP  
WELBOWS,  
SLEEVE GASKET  
WOOD & LUG  
CONNECTORS.

OUTLET PROTECTION  
2" 18" RIP RAP  
EST. 2 TONS  
EST. 7 S.Y. FABRIC

RAMPB- STA. 39+80 LT  
BEGIN SHOULDER  
BERM GUTTER

RAMPB- STA. 42+00 LT  
END SHOULDER  
BERM GUTTER

TOE PRG  
W/PERM  
REINFOR  
-RAMPD-  
STA. 17+  
EST. 180  
SEE DET

5/14/99

06-NOV-2012 11:01 AM R-2707AA-Ut\_08809\_U012.dgn















# UTILITIES BY OTHERS

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

MATCH LINE STA. 22+00 -Y6-  
SEE SHEET UO-17

HAMERICK BROTHERS, INC.  
DB 16-0 PG 798

WINDEMERE SUBDIVISION 2  
CLIFFORD HAMRICK  
DB 1447 PG 1719

DB 1607 PG 1438

NC GRID NAD 8395

