

09/08/99

TIP PROJECT: R-3403AB

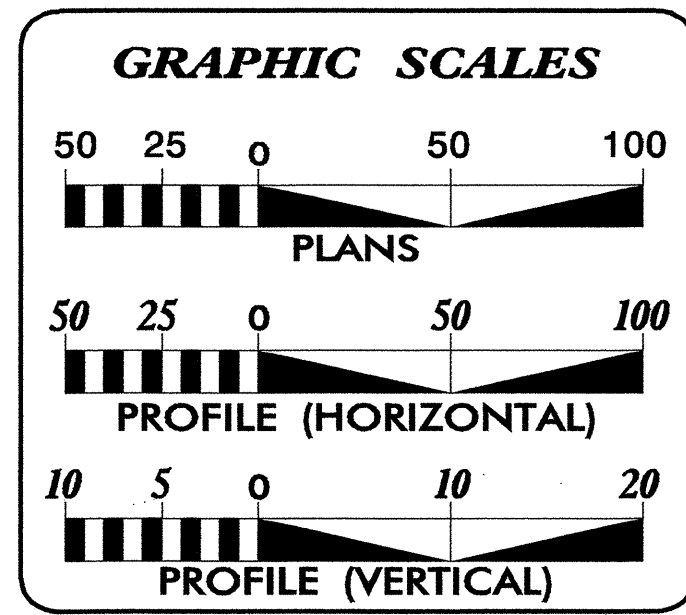
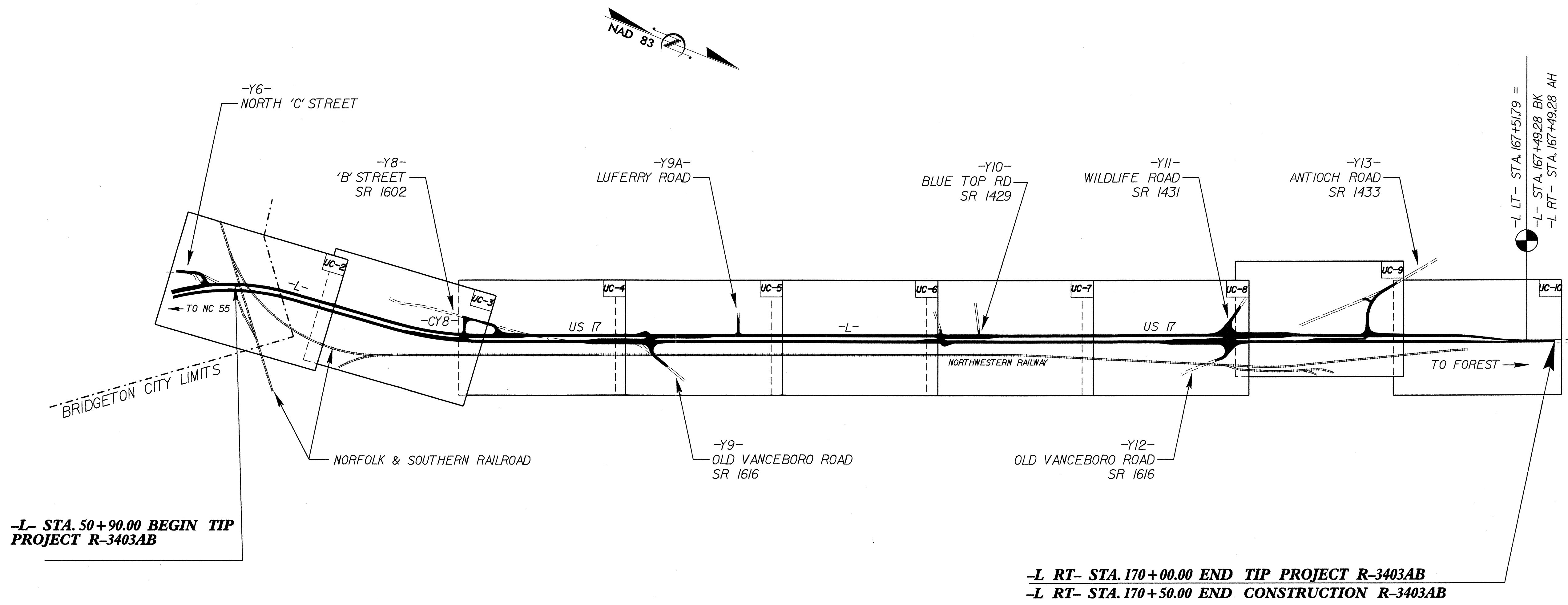
T.I.P. NO.	SHEET NO.
R-3403AB	UC-1

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

UTILITY CONSTRUCTION PLANS  
CRAVEN COUNTY

LOCATION: US 17 FROM NORFOLK SOUTHERN RR  
TO NORTH OF SR 1433 (ANTIOCH ROAD)

TYPE OF WORK: UTILITY RELOCATION

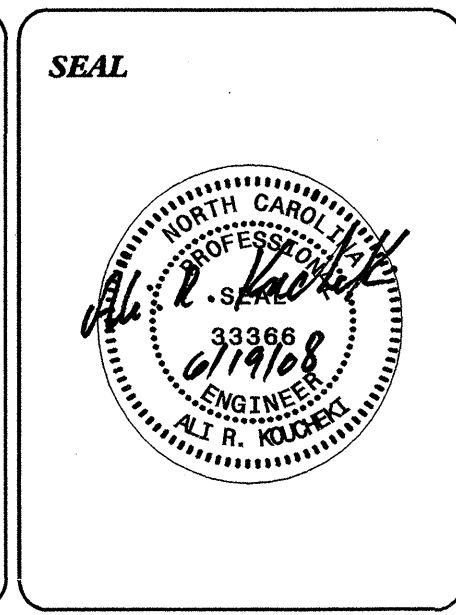


**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-10	UTILITY CONSTRUCTION PLAN SHEETS
UC-11 THRU UC-14	PROFILE SHEETS
UC-15	DETAILS SHEET

**WATER AND SEWER OWNERS ON PROJECT**

(1) WATER FIRST CRAVEN SANITARY DISTRICT  
(2) SANITARY SEWER TOWN OF BRIDGETON

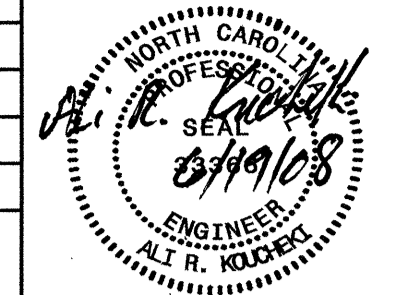


PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
PROJECT SERVICES  
UTILITY SECTION**

1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 250-4128  
FAX (919) 250-4119

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Carl Barclay, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Ali Kouchehi, PE** UTILITIES PROJECT DESIGNER

19-JUN-2008 13:40  
F:\Utilities\rdy-ut\proj\3403ab\3403ab\_rdy\_tsh.dgn  
\$\$\$\$\$USERNAME\$\$\$\$\$

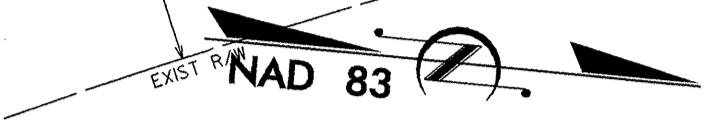


**UTILITY CONSTRUCTION**

FOR -L- PROFILE SEE SHEET 13

WATER LINE IS OWNED BY FIRST CRAVEN SANITARY DISTRICT

SEWER LINE IS OWNED BY TOWN OF BRIDGETON



NOTE: TEMPORARILY CONNECT THE PROPOSED 10" WATER LINE TO THE EXISTING 8" WATER LINE

PROP. 930' OF 10" WATER LINE INCLUDING THE WATER LINE UNDER THE RAILROAD TRACKS

PROP. 20' OF 12" WATER LINE 1-12" VALVE REMOVE PLUG AND CONNECT THE THE PROPOSED 12" WATER LINE ON PROJECT R-3403AA

PROP. 12" WATER LINE INSTALLTION WILL BE CONTINUED ON PROJECT R-3403AA

10" AND 3" WATER LINE JUST EAST OF NORFOLK SOUTHERN MP NB 29.4 AND MP BB 1.75 AT CROSSING NUMBER 466041T

UTILITIES OWNER  
 FIRST CRAVEN SANITARY DISTRICT

END STATE PROJECT R-3403AA = BEGIN STATE PROJECT R-3403AB  
 -L- Sta. 50+90.00

SEE PROFILES FOR STEEL ENCASMENTS AND PIPE LINES. ALL PIPE LINES CROSSING THE RAILROAD R/W HAVE RESTRAINED JOINTS. THE EXISTING UTILITY LINES TO BE ABANDONED WILL BE FILL WITH GROUT THROUGH RAILROAD R/W

**PIPELINE**  
 FIRST CRAVEN SANITARY DISTRICT  
 560 NC HIGHWAY 55 EAST  
 NEW BERN, NC 28519  
 10" DI WATER MAIN  
 8'-0" BELOW GRADE  
 FOR INFORMATION OR IN CASE OF RUPTURE CALL (252) 633-6500

STA. 51+03 -L- OFFSET 109' RT OF -L- SEE NOTE C

**PIPELINE**  
 FIRST CRAVEN SANITARY DISTRICT  
 560 NC HIGHWAY 55 EAST  
 NEW BERN, NC 28519  
 10" DI WATER MAIN  
 8'-0" BELOW GRADE  
 FOR INFORMATION OR IN CASE OF RUPTURE CALL (252) 633-6500

STA. 52+13.6 -L- OFFSET 99' RT OF -L- SEE NOTE C

**PIPELINE**  
 FIRST CRAVEN SANITARY DISTRICT  
 560 NC HIGHWAY 55 EAST  
 NEW BERN, NC 28519  
 10" DI WATER MAIN  
 8'-0" BELOW GRADE  
 FOR INFORMATION OR IN CASE OF RUPTURE CALL (252) 633-6500

STA. 54+06 -L- OFFSET 119' RT OF -L- SEE NOTE C

**PIPELINE**  
 FIRST CRAVEN SANITARY DISTRICT  
 560 NC HIGHWAY 55 EAST  
 NEW BERN, NC 28519  
 3" DI WATER MAIN  
 7'-0" BELOW GRADE  
 FOR INFORMATION OR IN CASE OF RUPTURE CALL (252) 633-6500

STA. 53+20 -L- OFFSET 185.82' RT OF -L- SEE NOTE C

**PIPELINE**  
 FIRST CRAVEN SANITARY DISTRICT  
 560 NC HIGHWAY 55 EAST  
 NEW BERN, NC 28519  
 3" DI WATER MAIN  
 7'-0" BELOW GRADE  
 FOR INFORMATION OR IN CASE OF RUPTURE CALL (252) 633-6500

STA. 54+29 -L- OFFSET 132.3' RT OF -L- SEE NOTE C

PI Sta 49+97.54  
 $\Delta = 27^{\circ} 59' 44.3" (RT)$   
 $D = 2^{\circ} 51' 53.2"$   
 $L = 977.23$   
 $T = 498.58'$   
 $R = 2,000.00'$

Pls Sta 55+42.88  
 $\Theta s = 2^{\circ} 51' 53.2"$   
 $L s = 200.00'$   
 $LT = 133.35'$   
 $ST = 66.68'$

BETTY A. MURPHY DB 1516 - PG 951

ROBERT LEE COWARD DB 1562 - PG 769

JEAN CAROL JONES DB 1376 - PG 424

ROBERT THOMAS COWARD, et al DB 1159 - PG 443 DB 1495 - PG 366

GEORGEANNAH LOCKLEAR, et vir DB 1411 - PG 281

RESSIE LOCKLEAR LEWIS DB 1186 - PG 834

ROGER T. NEEDHAM, et ux DB 1612 - PG 315

LINDA HINES SAULTER DB 1055 - PG 157

DEWEY R. FRAZIER, et ux DB 1453 - PG 313 MB II - PG 86

TWO-TEN INVESTORS, INC. DB 1378 - PG 514 DB 1550 - PG 12

RELOCATE WATER METER USING 2" WATER SERVICE WITH 2" VALVE

PROP. 130' OF 6" STEEL ENCASMENT PIPE 0.188" THICK, BY BORING AND JACKING

PROP. 180' OF 3" DI WATER LINE 2-3" GATE VALVES

PROP. 431' OF 10" DI WATER LINE 2-10" GATE VALVE

PROP. 331' OF 24" STEEL ENCASMENT PIPE 0.375" THICK, BY BORING AND JACKING

SPECIAL DITCH SEE DETAIL #1

SPECIAL DITCH SEE DETAIL #1

PROP. 8"x18" CONC. CURB

PROP. 8"x18" CONC. CURB

SPECIAL DITCH SEE DETAIL #12

SPECIAL DITCH SEE DETAIL #12

**PIPELINE**

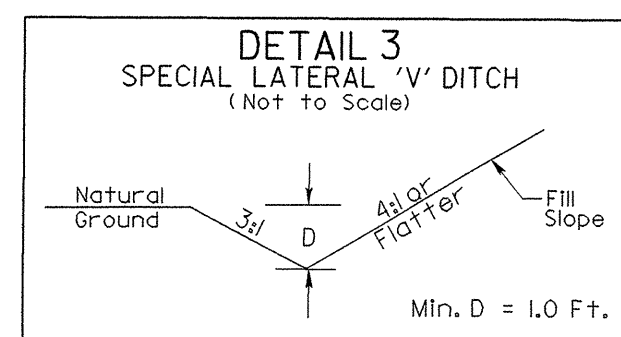
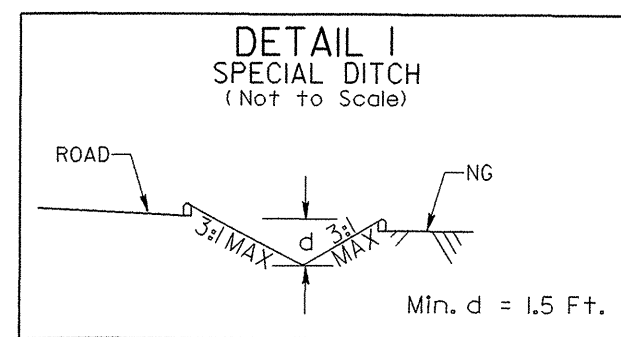
**PIPELINE**

SEE SHEET NO. UC-3

MATCHLINE STA. 59+00.00

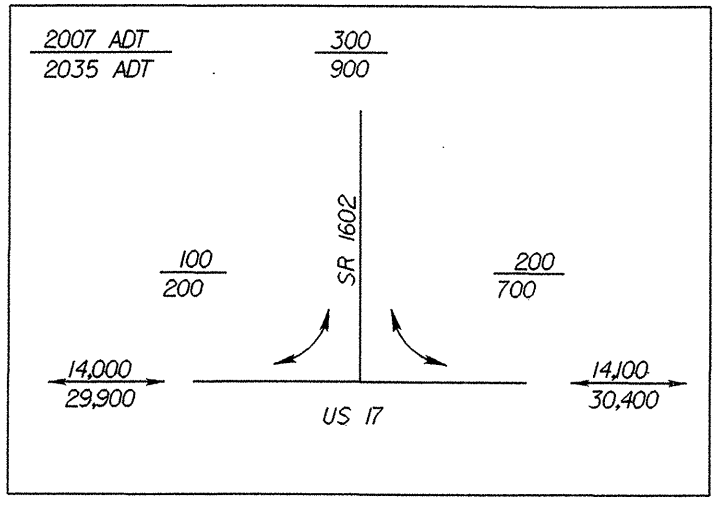
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### NAD 83



SPECIAL DITCH GRADE  
SEE PROFILE FOR GRADE

- L (LT) 59+65 TO 66+18
- L (LT) 67+60 TO 74+43



-L (LT) 57+00 TO 59+65

-L (RT) 64+00 TO 66+07

SCF = SPECIAL CONCRETE FLUME

NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT

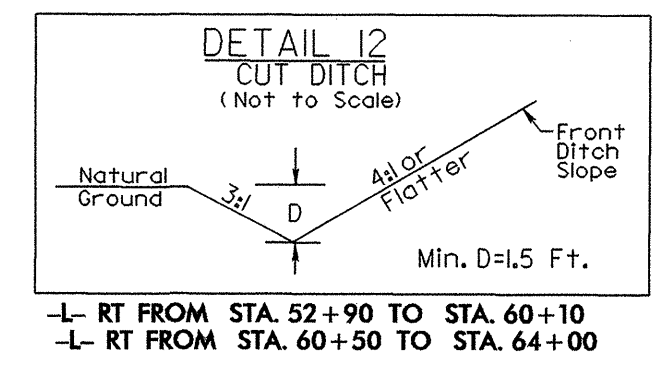
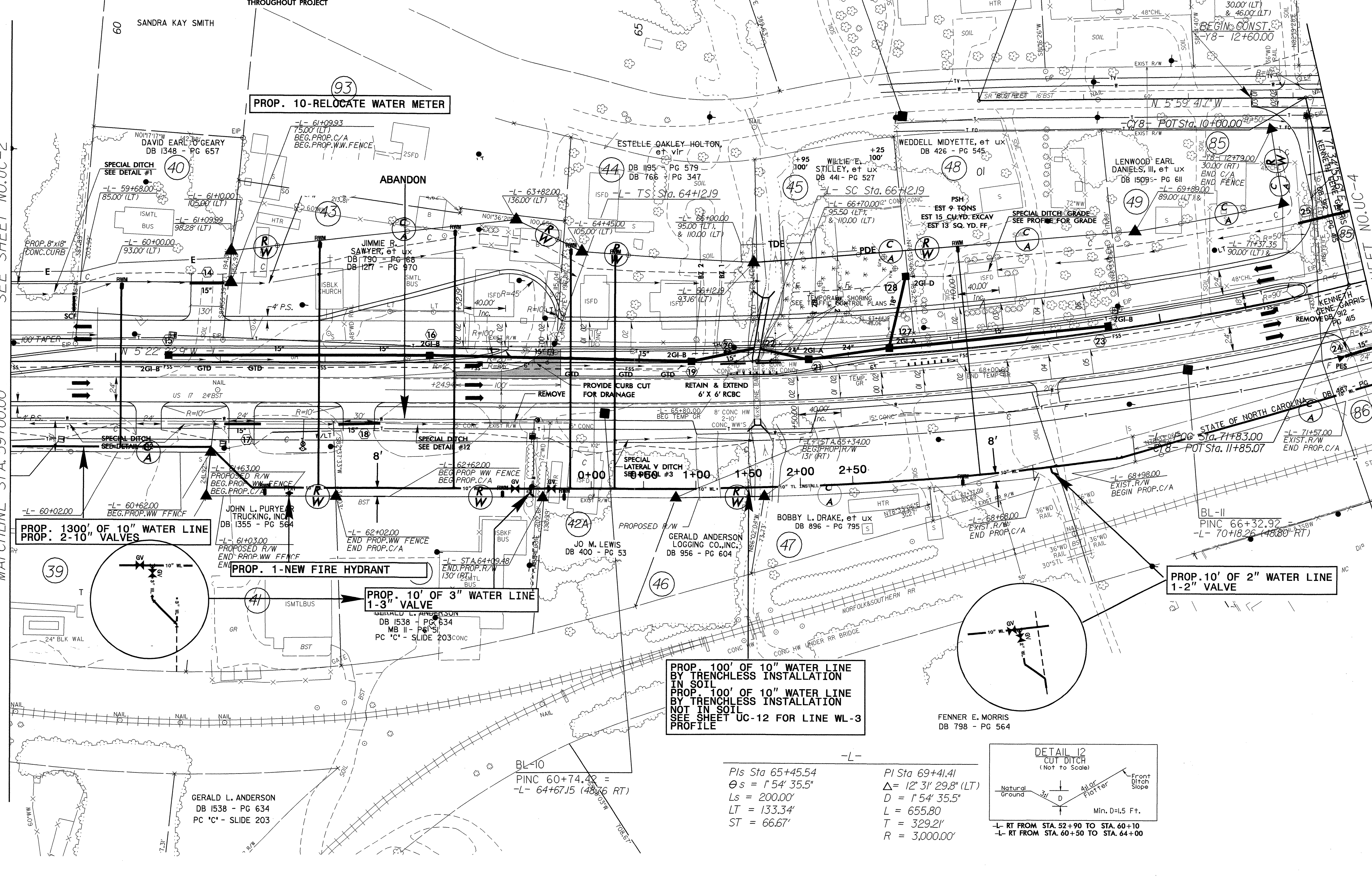
SEE SHEET NO. UC-2

SEE SHEET NO. UC-4

MATCHLINE STA. 59+00.00

MATCHLINE STA. 72+00.00

REVISIONS



-L-

PI Sta 65+45.54	PI Sta 69+41.41
$\theta s = 1' 54'' 35.5''$	$\Delta = 12' 31'' 29.8''$ (LT)
LS = 200.00'	D = 1' 54'' 35.5''
LT = 133.34'	L = 655.80
ST = 66.67'	T = 329.21'
	R = 3,000.00'

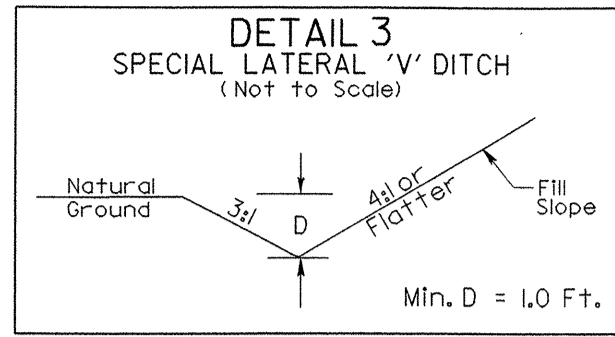
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6/17/99

WATER LINE IS OWNED BY FIRST CRAVEN SANITARY DISTRICT

SEWER FORCE MAIN IS OWNED BY TOWN OF BRIDGETON

PI Sta 18+23.82  
Δ = 91° 36' 42.5" (LT)  
D = 47' 44" 47.3"  
L = 191.87'  
T = 123.42'  
R = 120.00'

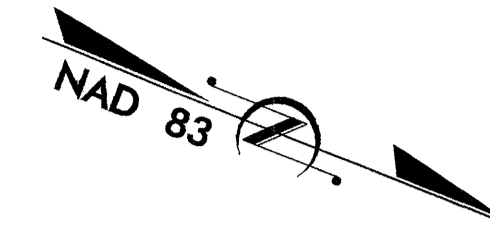


SPECIAL DITCH GRADE  
SEE PROFILE FOR GRADE

- L- (RT) 83+50 TO 84+50
- L- (LT) 67+25 TO 74+43
- L- (LT) 75+50 TO 78+50
- L- (LT) 82+50 TO 83+50
- L- (MED) 74+50 TO 78+00
- L- (MED) 78+50 TO 80+30
- Y8- (RT) 15+00 TO 16+20

- L- (LT) 78+50 TO 79+92
- L- (LT) 80+00 TO 82+50

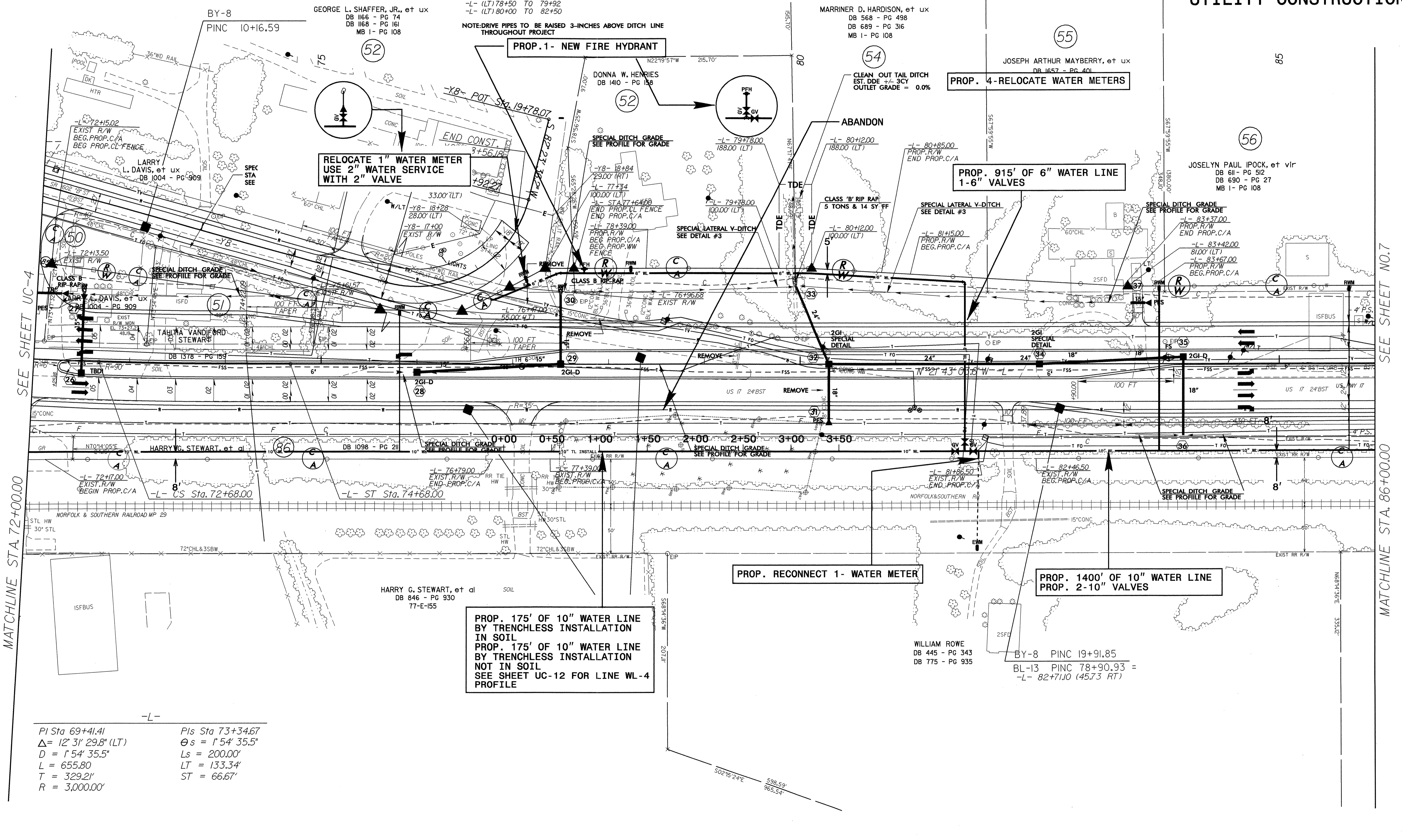
NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT



FOR -L- PROFILE SEE SHEET 14  
FOR -Y8- PROFILE SEE SHEET 19

PROJECT REFERENCE NO.	SHEET NO.
R-3403AB	UC-4
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

# UTILITY CONSTRUCTION



SEE SHEET UC-4

MATCHLINE STA. 72+00.00

SEE SHEET NO. 7

MATCHLINE STA. 86+00.00

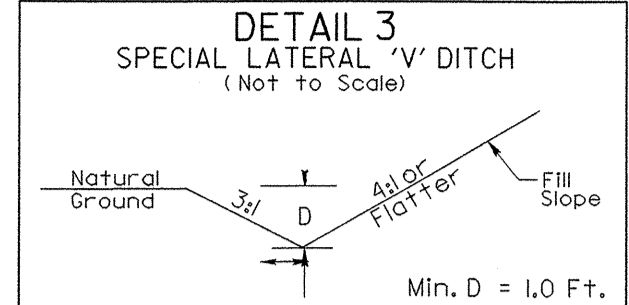
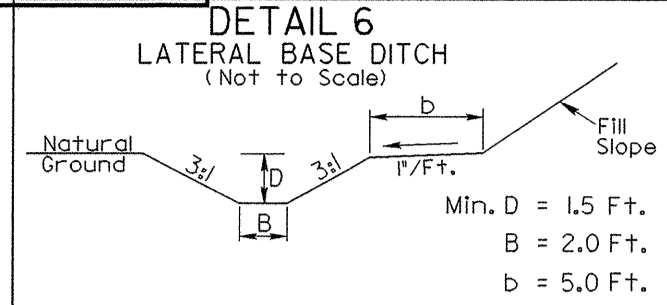
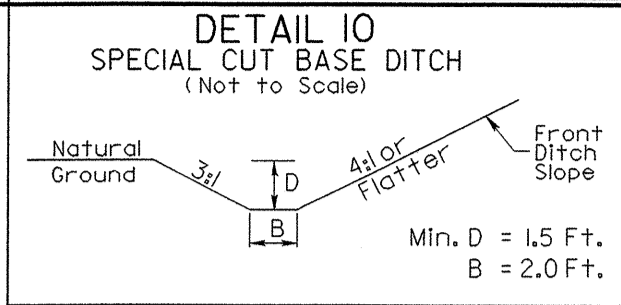
-L-

PI Sta 69+41.41	PIs Sta 73+34.67
Δ = 12° 31' 29.8" (LT)	θs = 1° 54' 35.5"
D = 1° 54' 35.5"	Ls = 200.00'
L = 655.80	LT = 133.34'
T = 329.21'	ST = 66.67'
R = 3,000.00'	

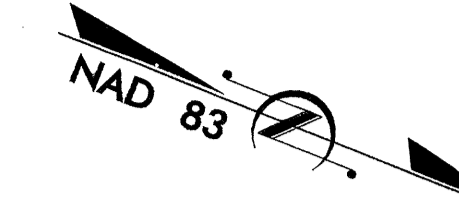
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Title

WATER LINE IS OWNED BY FIRST CRAVEN SANITARY DISTRICT

SEWER LINE IS OWNED BY TOWN OF BRIDGETON



SPECIAL DITCH GRADE  
SEE PROFILE FOR GRADE  
-L- (LT) 88+00 TO 94+50  
-L- (RT) 89+50 TO 93+50  
-Y9- (LT) 12+05 TO 13+30

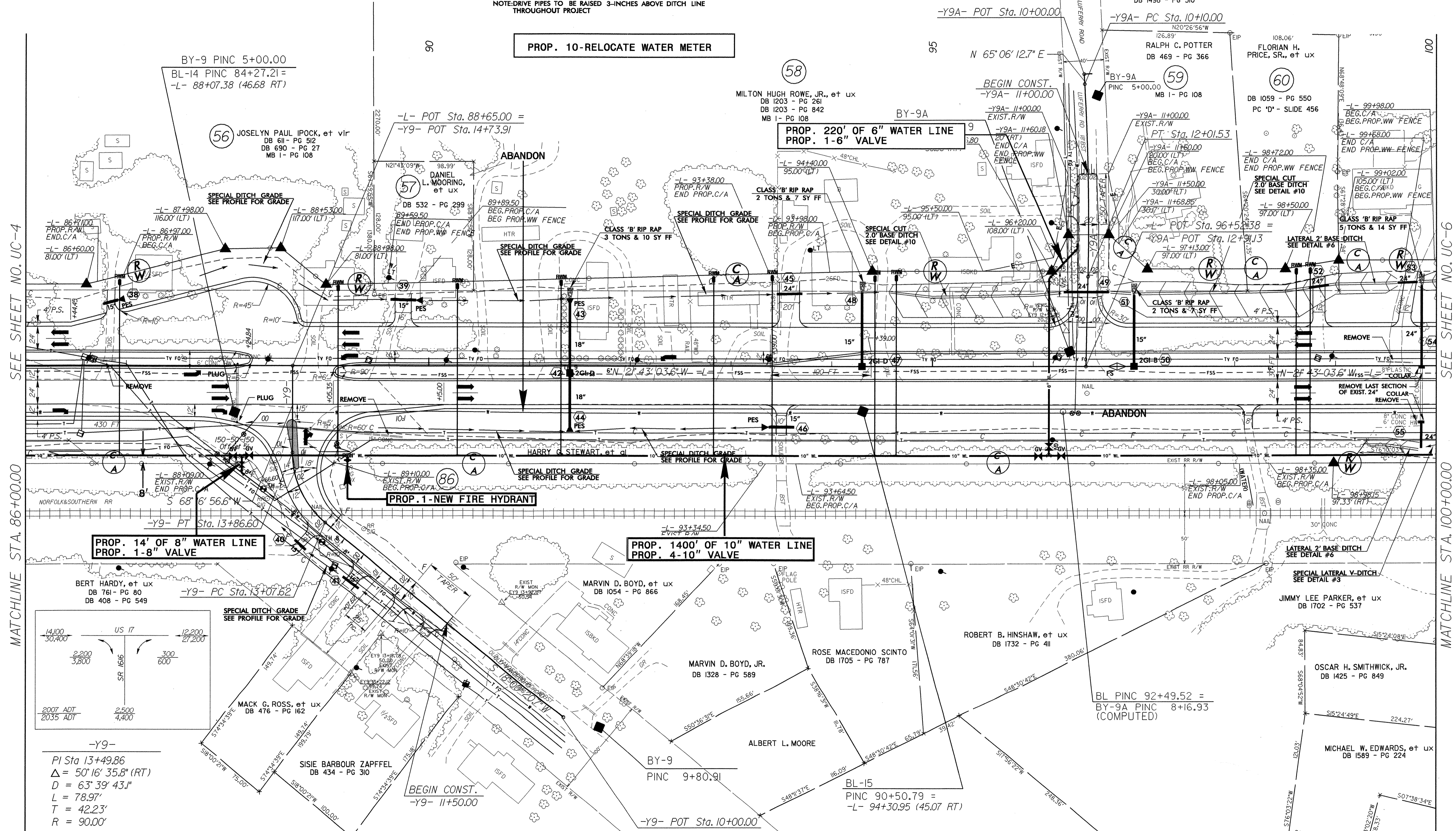


-Y9A-  
PI Sta 11+05.81  
 $\Delta = 4' 23'' 22.6'' (RT)$   
 $D = 2' 17'' 30.6''$   
 $L = 191.53'$   
 $T = 95.81'$   
 $R = 2,500.00'$

ROBERT DENNIS SCOTT, et ux  
DB 1102 - PG 33  
DB 1498 - PG 510

**UTILITY CONSTRUCTION**

PROJECT REFERENCE NO.	SHEET NO.
R-3403AB	UC-5
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	UTILITY CONSTRUCTION PLANS ONLY



SEE SHEET NO. UC-4

MATCHLINE STA. 86+00.00

SEE SHEET NO. UC-6

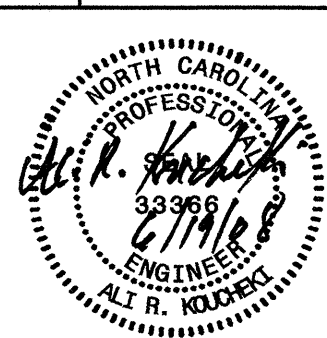
MATCHLINE STA. 100+00.00

-Y9-  
PI Sta 13+49.86  
 $\Delta = 50' 16'' 35.8'' (RT)$   
 $D = 63' 39'' 43.1''$   
 $L = 78.97'$   
 $T = 42.23'$   
 $R = 90.00'$

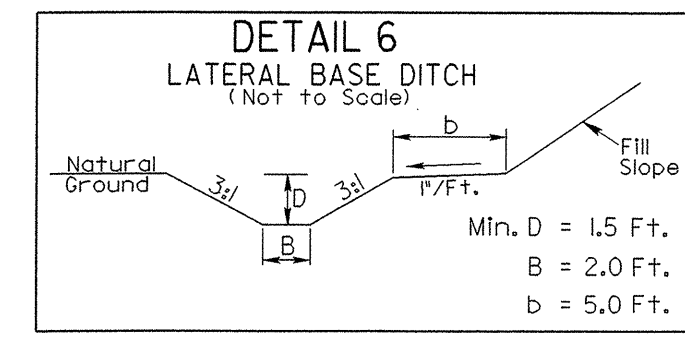
BL PINC 92+49.52 =  
BY-9A PINC 8+16.93  
(COMPUTED)

BL-15  
PINC 90+50.79 =  
-L- 94+30.95 (45.07 RT)

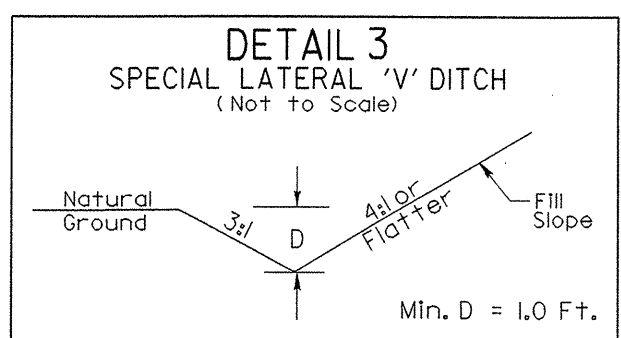
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R-3403AB	UC-6
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

**WATER LINE IS OWNED BY FIRST CRAVEN SANITARY DISTRICT**



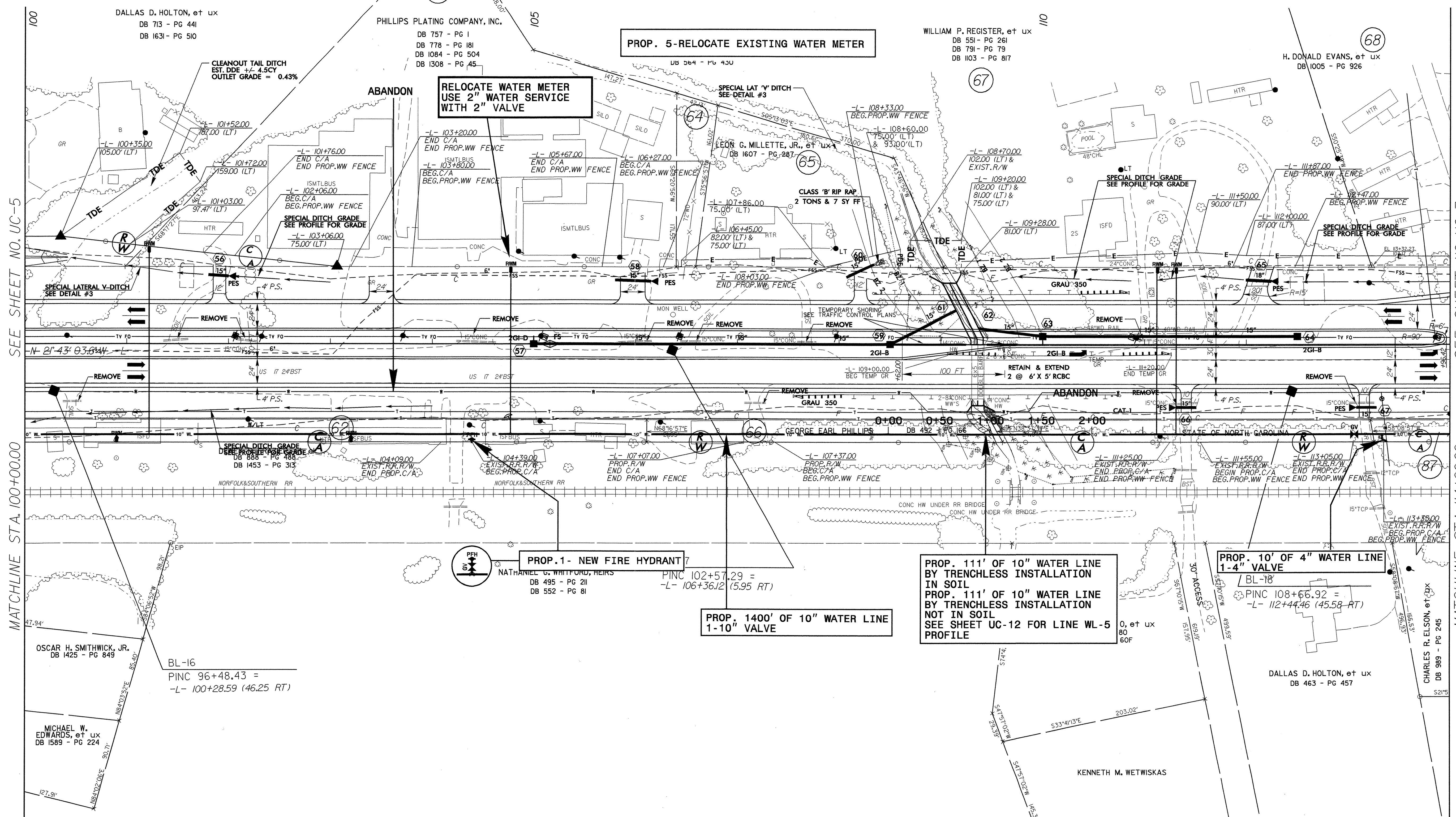
NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT



-L- (RT) 99+85 TO 100+43  
-L- (LT) 100+45 TO 101+50  
-L- (LT) 103+20 TO 103+46

**SEWER LINE IS OWNED BY TOWN OF BRIDGETON**

**UTILITY CONSTRUCTION**



SEE SHEET NO. UC-5

MATCHLINE STA. 100+00.00

SEE SHEET NO. UC-7

MATCHLINE STA. 114+00.00

REVISIONS

6/17/99  
23-JUN-2008 12:20  
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CHARLES R. ELSON, et ux  
DB 989 - PG 245

DALLAS D. HOLTON, et ux  
DB 463 - PG 457

KENNETH M. WETWISKAS

OSCAR H. SMITHWICK, JR.  
DB 1425 - PG 849

MICHAEL W. EDWARDS, et ux  
DB 1589 - PG 224

BL-16  
PINC 96+48.43 =  
-L- 100+28.59 (46.25 RT)

PROP. 1- NEW FIRE HYDRANT  
NATHANIEL G. WHITFORD, HEIRS  
DB 495 - PG 211  
DB 552 - PG 81

PROP. 1400' OF 10" WATER LINE  
1-10" VALVE  
PINC 102+57.29 =  
-L- 106+36.12 (5.95 RT)

PROP. 111' OF 10" WATER LINE  
BY TRENCHLESS INSTALLATION  
IN SOIL  
PROP. 111' OF 10" WATER LINE  
BY TRENCHLESS INSTALLATION  
NOT IN SOIL  
SEE SHEET UC-12 FOR LINE WL-5  
PROFILE

PROP. 10' OF 4" WATER LINE  
1-4" VALVE  
BL-18  
PINC 108+66.92 =  
-L- 112+44.46 (45.58 RT)

PROJECT REFERENCE NO.	SHEET NO.
R-3403AB	UC-7
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

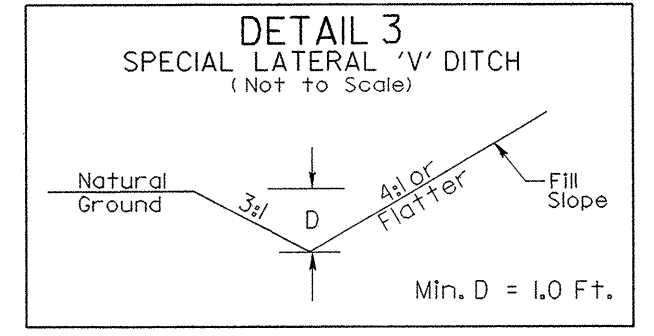
FOR -L- PROFILE SEE SHEET 16

WATER LINE IS OWNED BY FIRST CRAVEN SANITARY DISTRICT

FORCE MAIN IS OWNED BY TOWN OF BRIDGETON

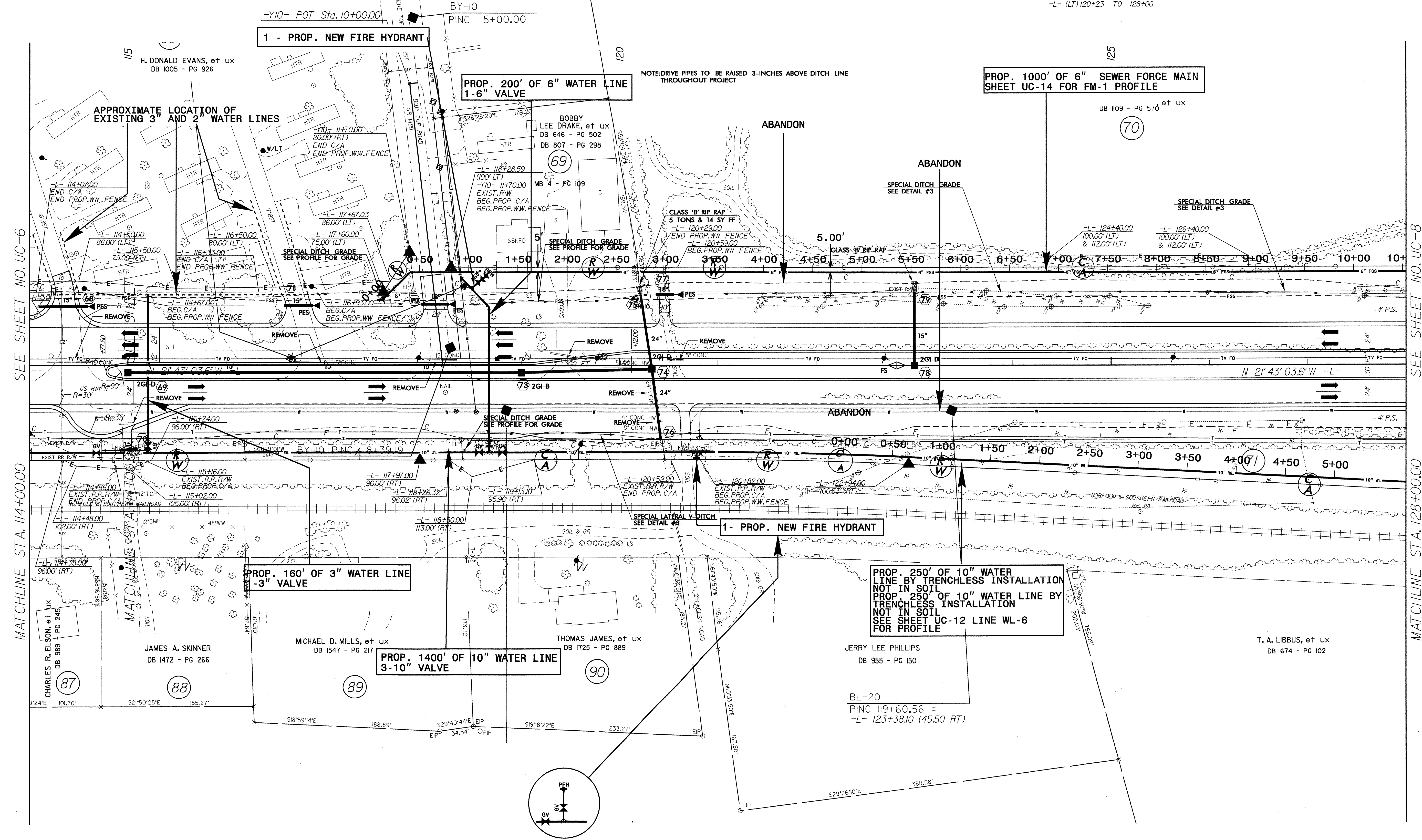
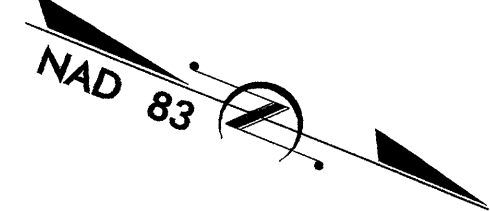
-Y10-  
PI Sta 11+76.18  
 $\Delta = 18' 28' 26.1''$  (RT)  
 $D = 57' 17' 44.8''$   
 $L = 32.24'$   
 $T = 16.26'$   
 $R = 100.00'$

SPECIAL DITCH GRADE  
SEE PROFILE FOR GRADE  
-L- (RT) 118+50 TO 119+00  
-L- (LT) 117+50 TO 120+20



-L- (RT) 119+00 TO 120+42  
-L- (LT) 120+23 TO 128+00

UTILITY CONSTRUCTION



SEE SHEET NO. UC-6

MATCHLINE STA. 114+00.00

SEE SHEET NO. UC-8

MATCHLINE STA. 128+00.00

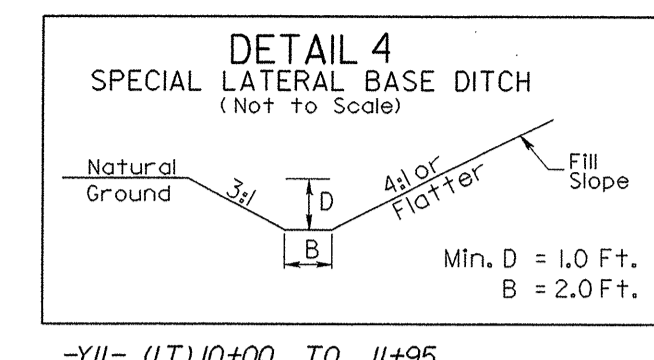
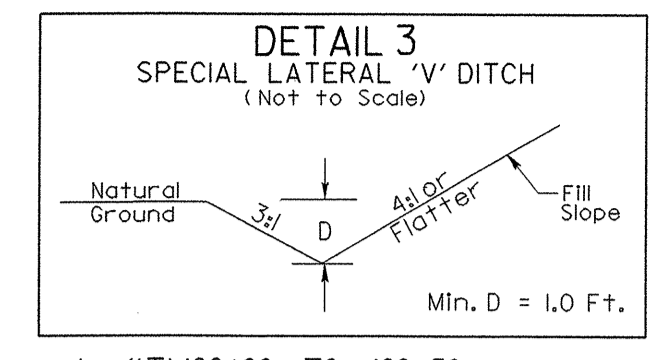
REVISIONS

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PROJECT REFERENCE NO.	SHEET NO.
R-3403AB	UC-8
DESIGNED BY: ARK	
DRAWN BY: ARK	
CHECKED BY: CAB	
APPROVED BY: CAB	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

FOR -L- PROFILE SEE SHEET 16  
FOR -Y11- PROFILE SEE SHEET 20  
FOR -Y12- PROFILE SEE SHEET 20

VICKIE PHILLIPS HARDEE, et vir  
DB 1052 - PG 934

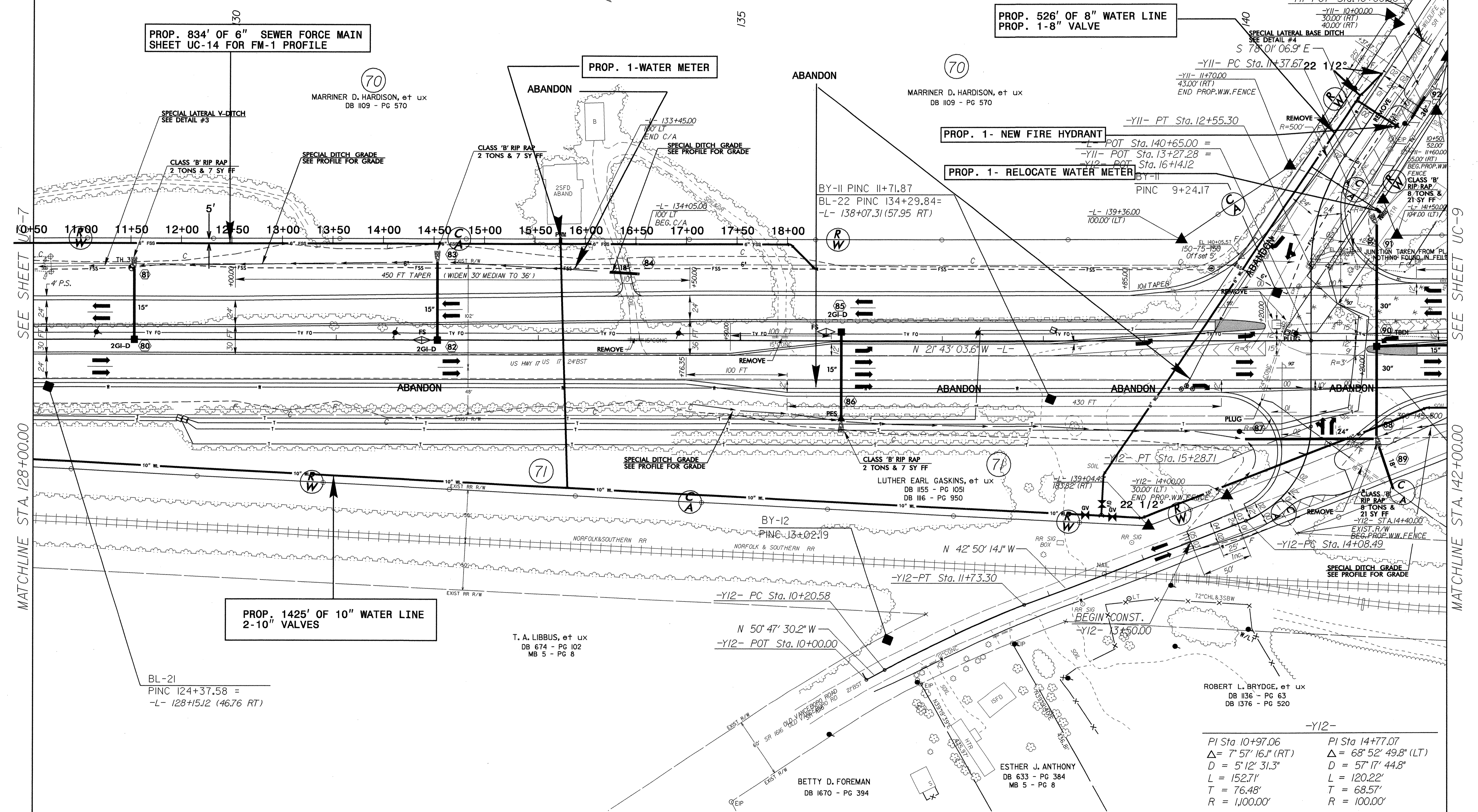


SPECIAL DITCH GRADE  
SEE PROFILE FOR GRADE

- L- (LT) 129+50 TO 134+00
- L- (RT) 134+00 TO 140+00
- L- (RT) 141+30 TO 143+50
- Y12- (LT) 14+00 TO 14+95

-Y11-  
PI Sta 11+98.24  
 $\Delta = 33^\circ 41' 56.9''$  (LT)  
 $D = 28^\circ 38' 52.4''$   
 $L = 117.63'$   
 $T = 60.57'$   
 $R = 200.00'$

NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT



SEE SHEET UC-7

SEE SHEET UC-9

MATCHLINE STA. 128+00.00

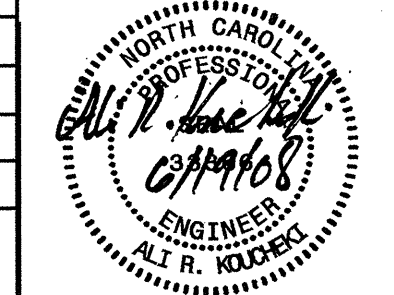
MATCHLINE STA. 142+00.00

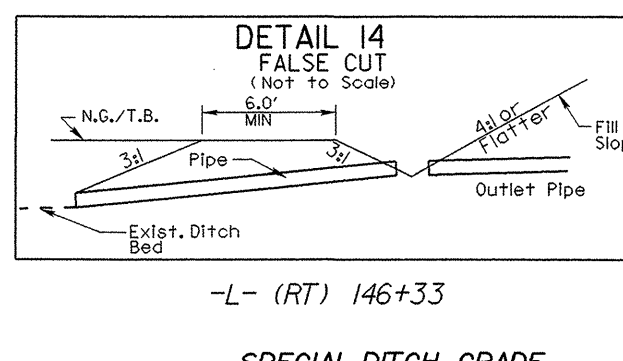
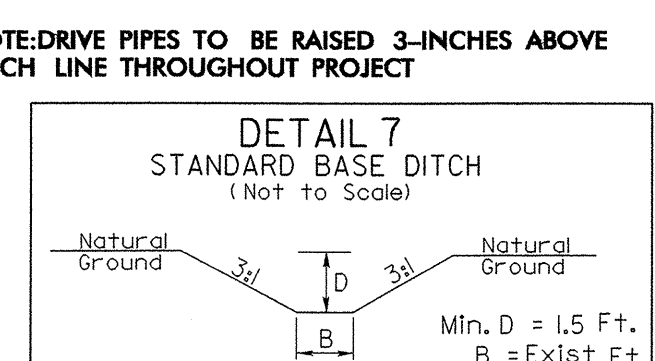
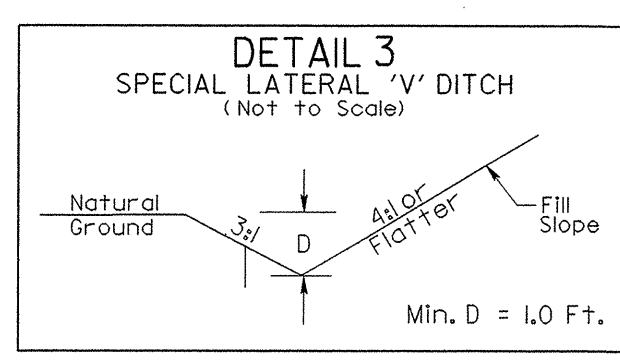
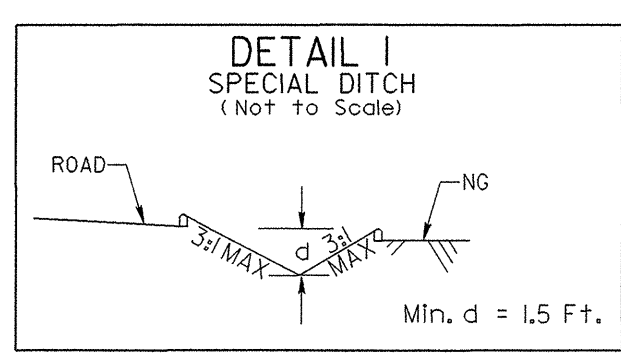
REVISIONS

8/17/99

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PROJECT REFERENCE NO.	R-3403AB	SHEET NO.	UC-9
DESIGNED BY:	ARK		
DRAWN BY:	ARK		
CHECKED BY:	CAB		
APPROVED BY:	CAB		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119		UTILITY CONSTRUCTION PLANS ONLY	



-L- (RT) 148+05 TO 149+05  
-L- (RT) 149+60 TO 153+50

-L- (RT) 145+30 TO 147+50  
-L- (RT) 153+50 TO 154+45  
-Y13- (RT) 13+20 TO 16+00

-Y13- (LT) 13+70

-L- (RT) 146+33  
SPECIAL DITCH GRADE  
SEE PROFILE FOR GRADE  
-L- (RT) 141+30 TO 143+50  
-L- (LT) 148+50 TO 152+50  
-Y13- (LT) 13+75 TO 15+50

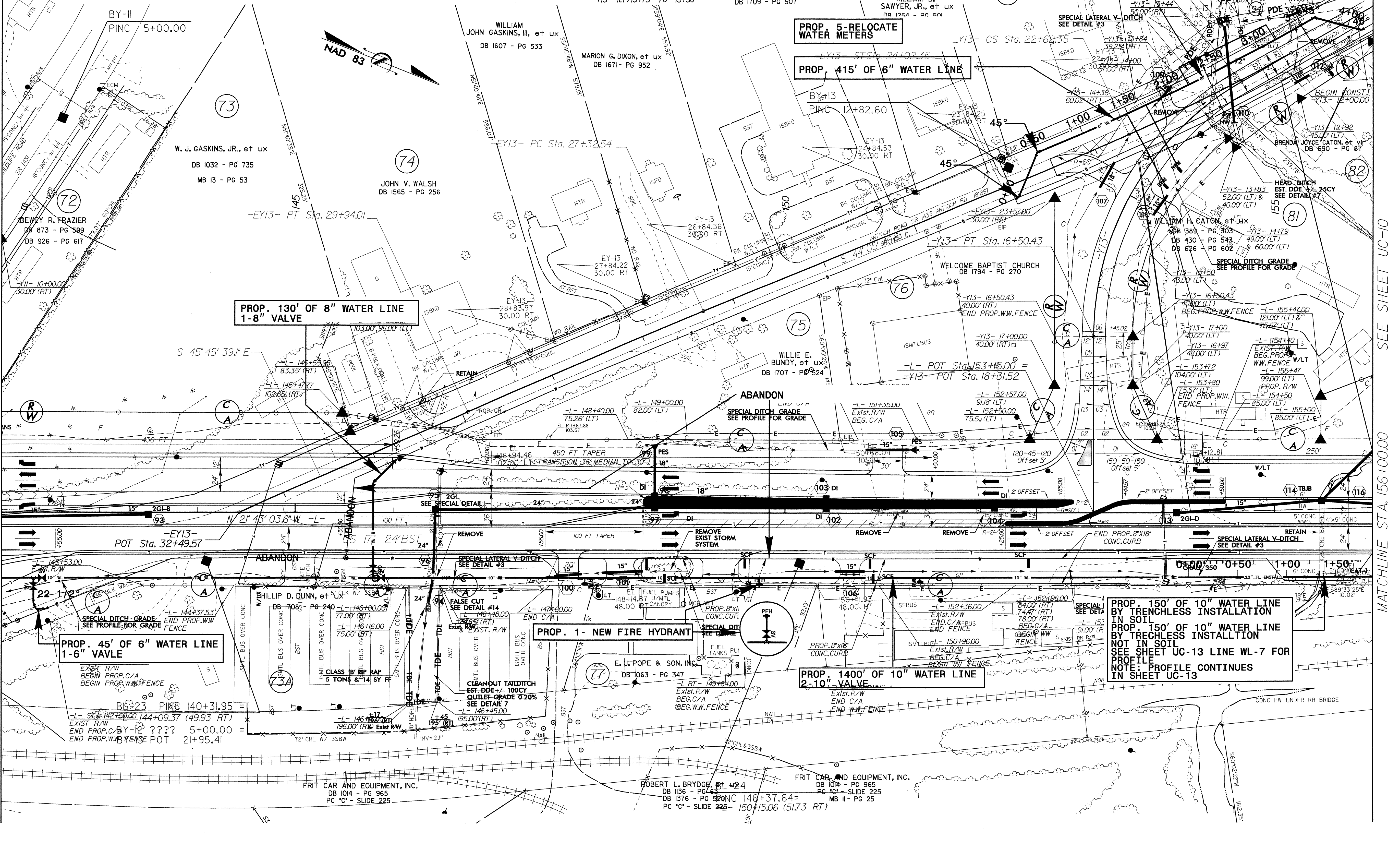
PROP. 50' OF 6" WATER LINE BY TRENCHLESS INSTALLATION IN SOIL  
PROP. 50' OF 6" WATER LINE BY TRENCHLESS INSTALLATION IN SOIL  
NOT IN SOIL  
SEE SHEET UC-13 LINE WL-8 FOR PROFILE

-Y13-  
PI Sta 15+09.23  
 $\Delta = 60^\circ 08' 11.6''$  (LT)  
 $D = 19^\circ 05' 54.9''$   
 $= 314.87'$   
 $= 173.68'$   
 $= 300.00'$

SEE SHEET UC-8

MATCHLINE STA. 142+00.00

23-JUNE-2008 08:16:50



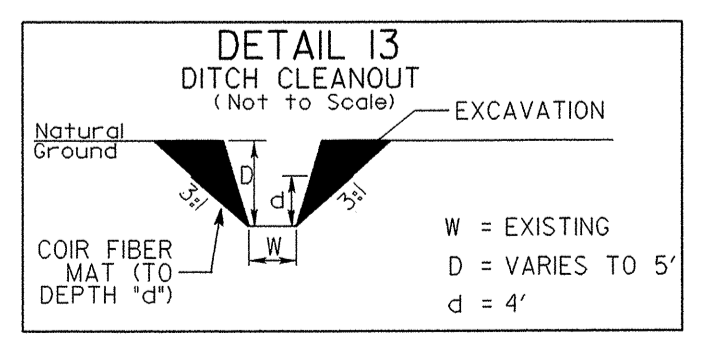
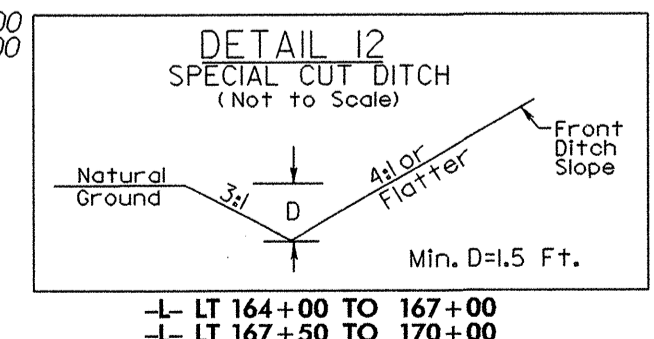
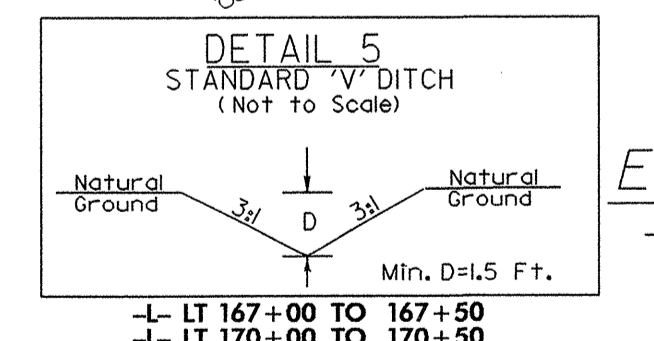
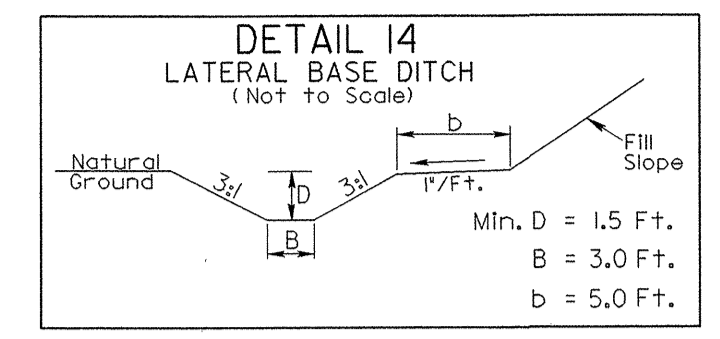
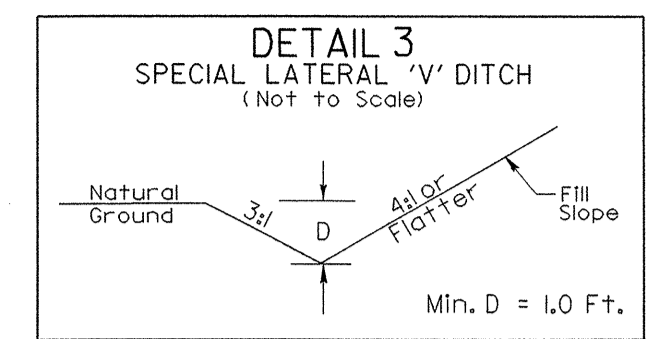
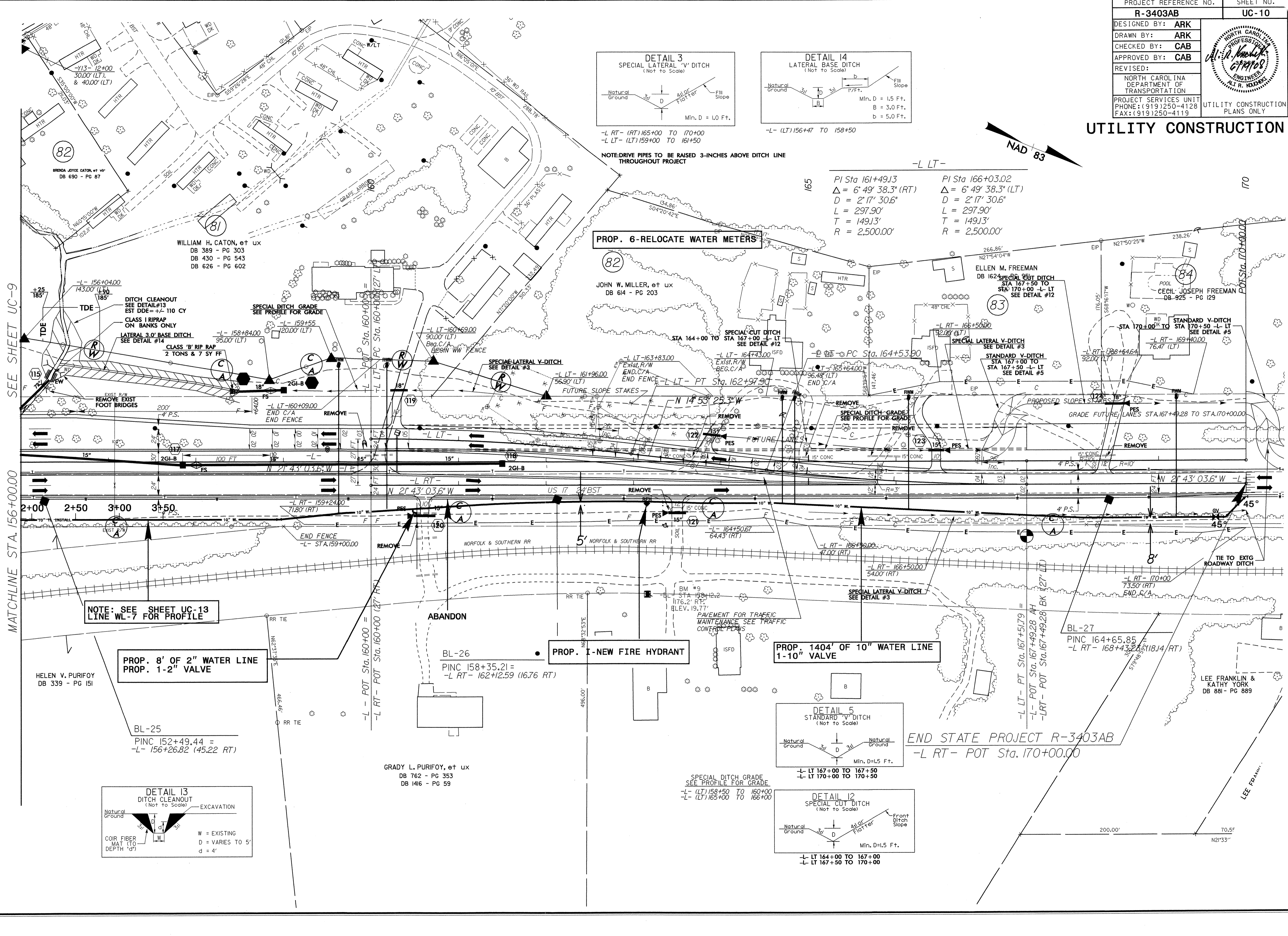
REVISIONS

SEE SHEET UC-10

MATCHLINE STA. 156+00.00

UTILITY CONSTRUCTION

# UTILITY CONSTRUCTION



-L RT- (RT) 165+00 TO 170+00  
-L LT- (LT) 159+00 TO 161+50

-L- (LT) 156+47 TO 158+50

NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT

-L LT-  
PI Sta 161+49.13      PI Sta 166+03.02  
Δ = 6' 49' 38.3" (RT)      Δ = 6' 49' 38.3" (LT)  
D = 2' 17' 30.6"      D = 2' 17' 30.6"  
L = 297.90'      L = 297.90'  
T = 149.13'      T = 149.13'  
R = 2,500.00'      R = 2,500.00'

SEE SHEET UC-9

MATCHLINE STA. 156+00.00

NOTE: SEE SHEET UC-13 LINE WL-7 FOR PROFILE

PROP. 8' OF 2" WATER LINE  
PROP. 1-2" VALVE

BL-25  
PINC 152+49.44 =  
-L- 156+26.82 (45.22 RT)

GRADY L. PURIFOY, et ux  
DB 762 - PG 353  
DB 1416 - PG 59

PROP. 1-NEW FIRE HYDRANT

BL-26  
PINC 158+35.21 =  
-L RT- 162+12.59 (16.76 RT)


PROP. 1404' OF 10" WATER LINE  
1-10" VALVE

BL-27  
PINC 164+65.85 =  
-L RT- 168+43.26 (18.14 RT)

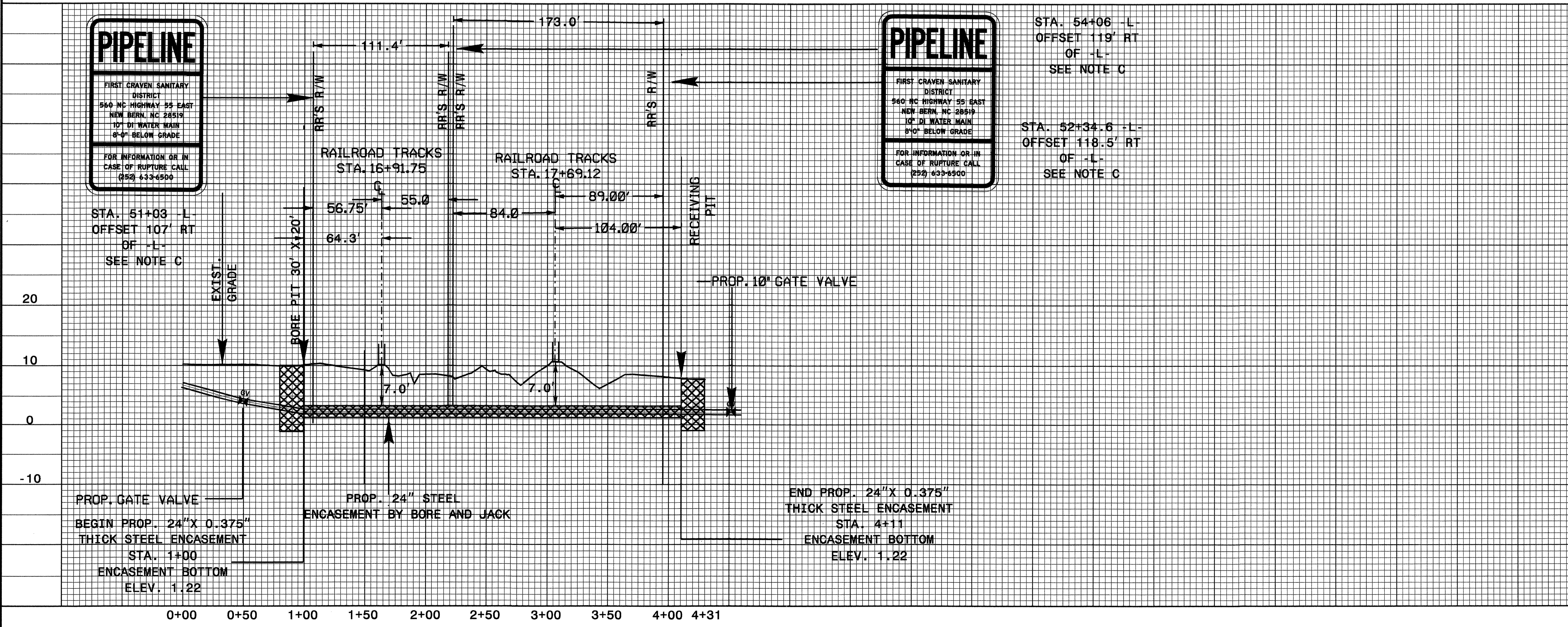
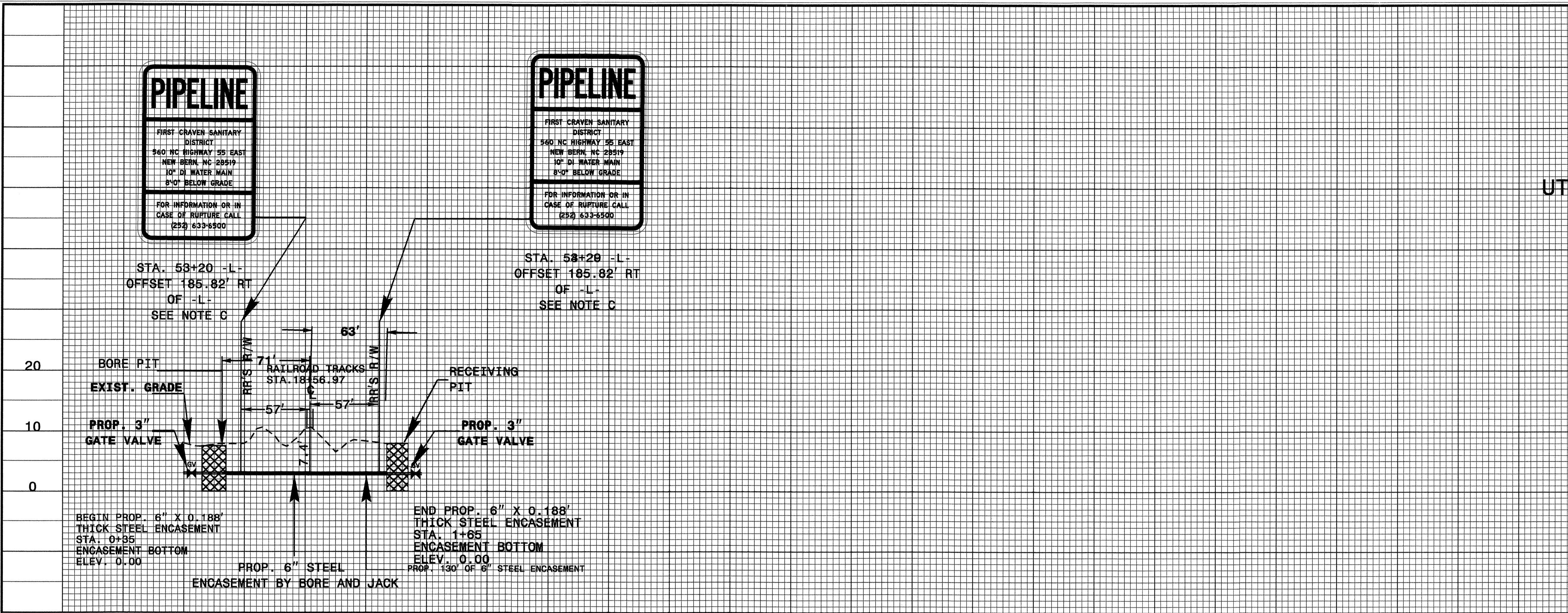
END STATE PROJECT R-3403AB  
-L RT- POT Sta. 170+00.00

244 JUN 22 2008 09:55:59  
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 1:1:1

5/28/99

PROJECT REFERENCE NO.	SHEET NO.
<b>R-3403AB</b>	<b>UC-11</b>
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 PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

# UTILITY CONSTRUCTION



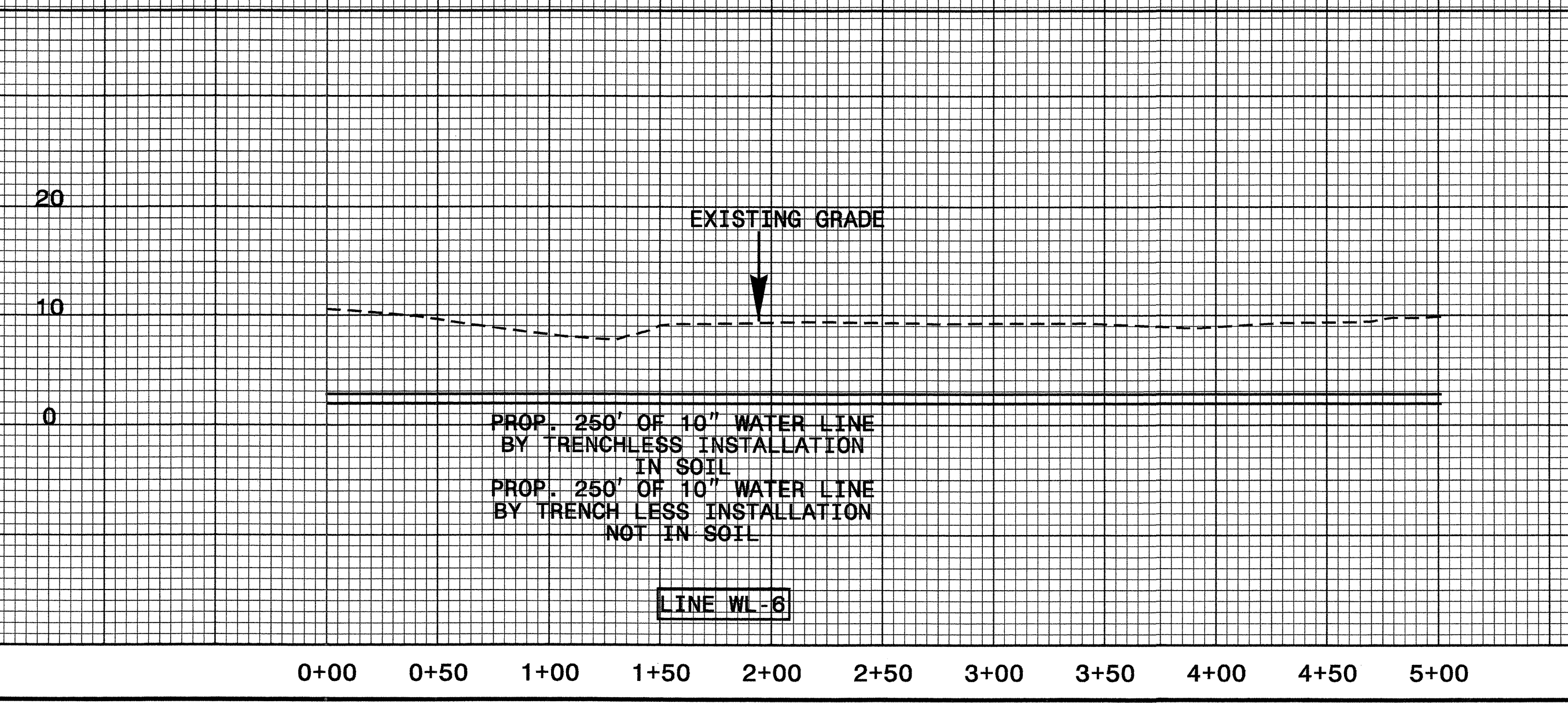
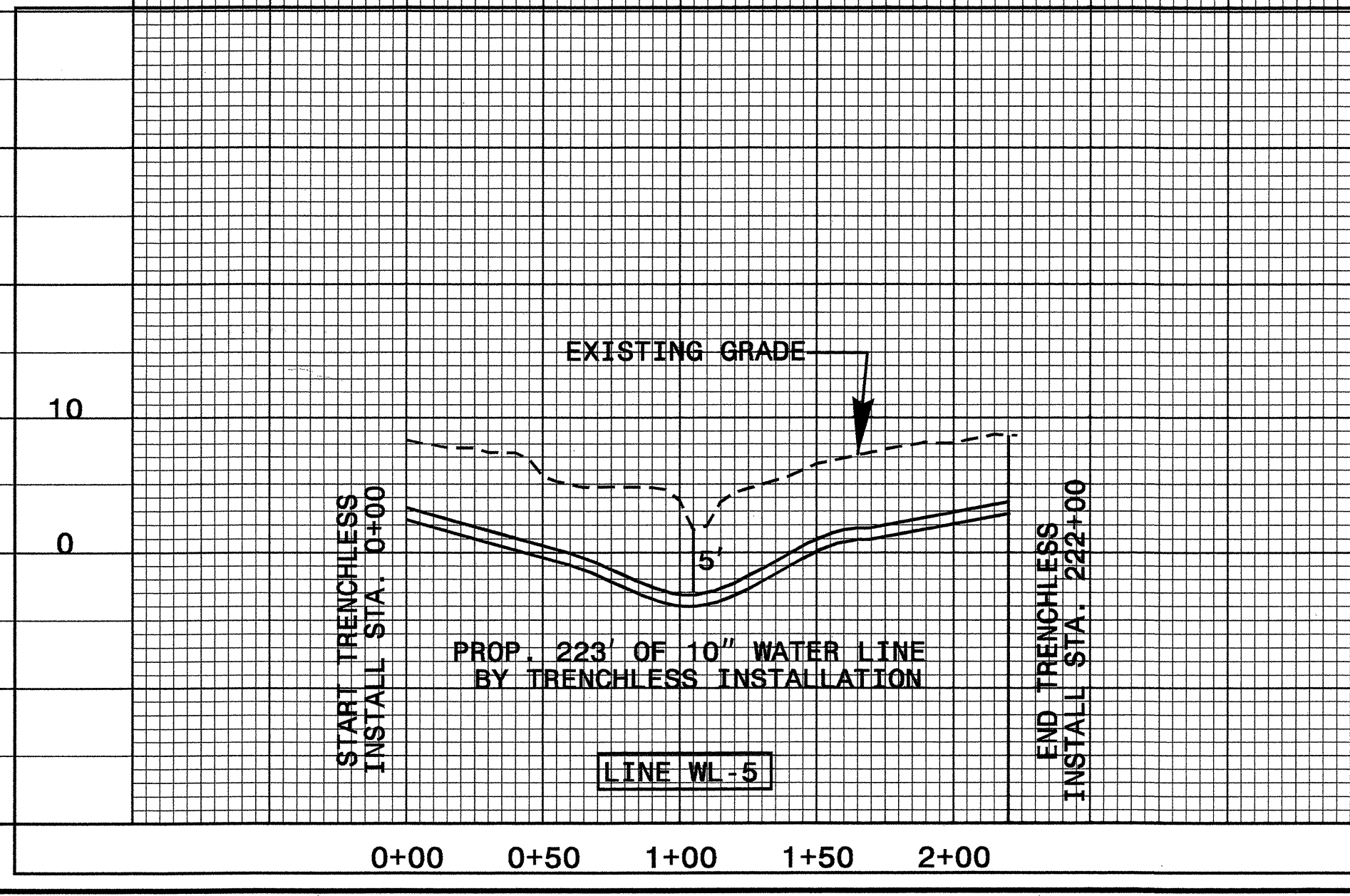
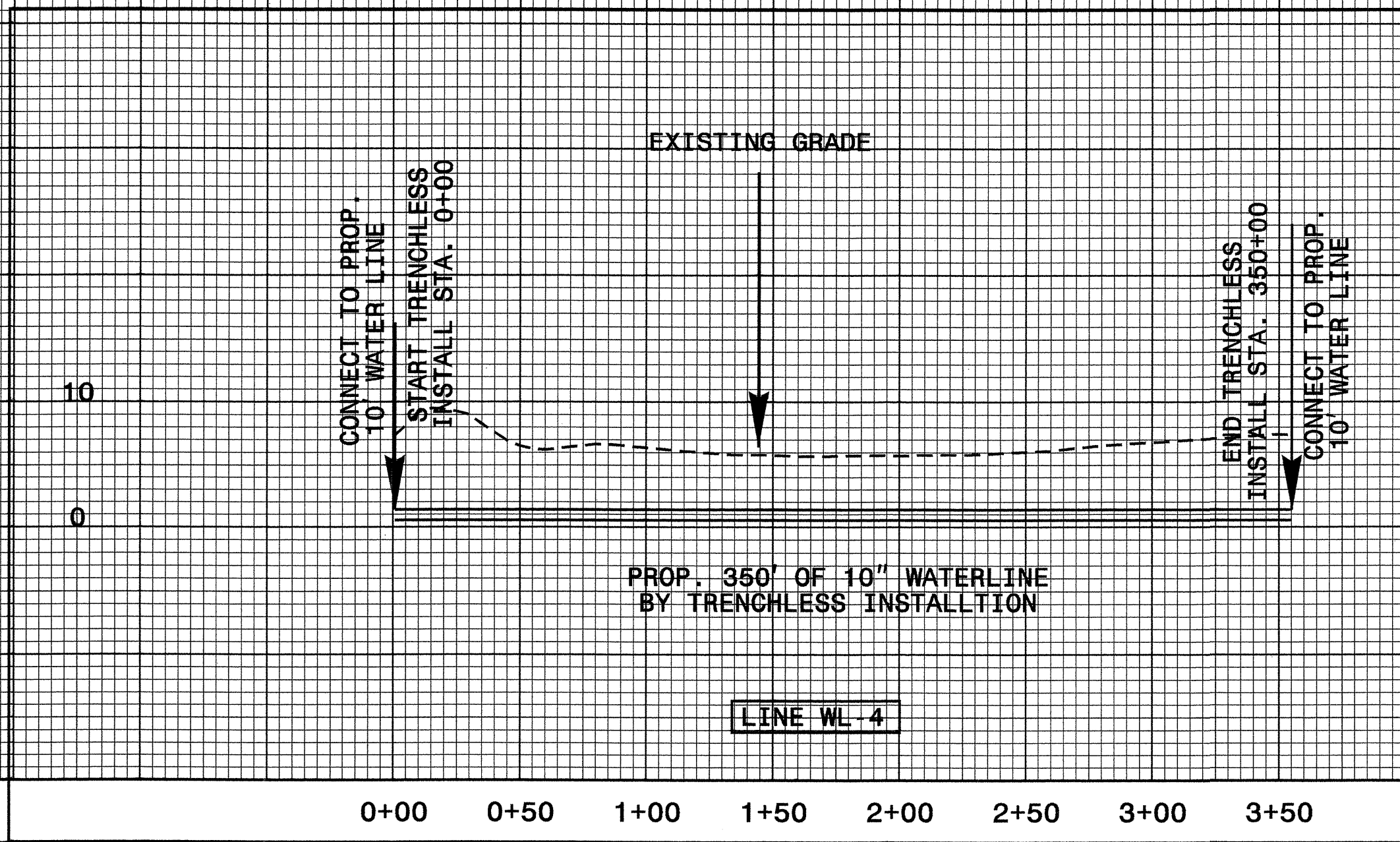
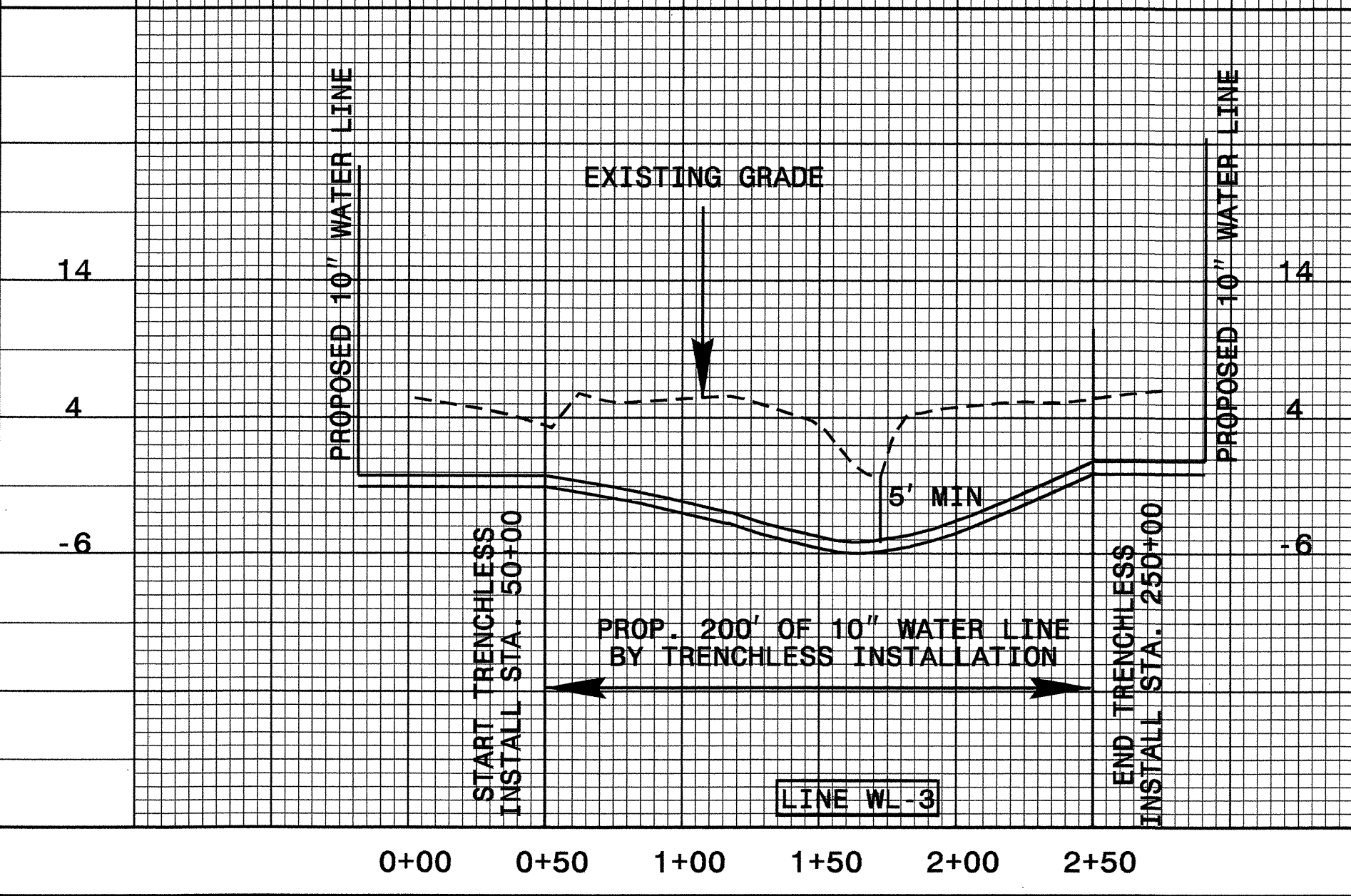
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5/28/99

PROJECT REFERENCE NO.	R-3403AB	SHEET NO.	UC-12
DESIGNED BY:	ARK		
DRAWN BY:	ARK		
CHECKED BY:	CAB		
APPROVED BY:	CAB		
REVISED:		NORTH CAROLINA DEPARTMENT OF TRANSPORTATION PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
		UTILITY CONSTRUCTION PLANS ONLY	

**NOTE:**  
 IF HDPE, DR 9 IS USED FOR  
 TRENCHLESS INSTALLATION, THE  
 INSIDE DIAMETER SHALL EQUAL  
 THE SIZE OF THE PIPE BEING  
 TIED INTO.

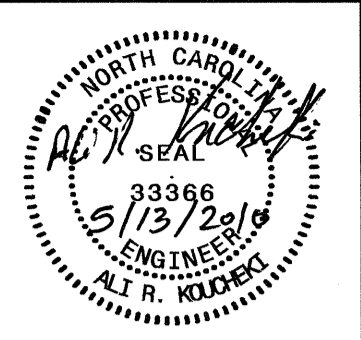
**UTILITY CONSTRUCTION**



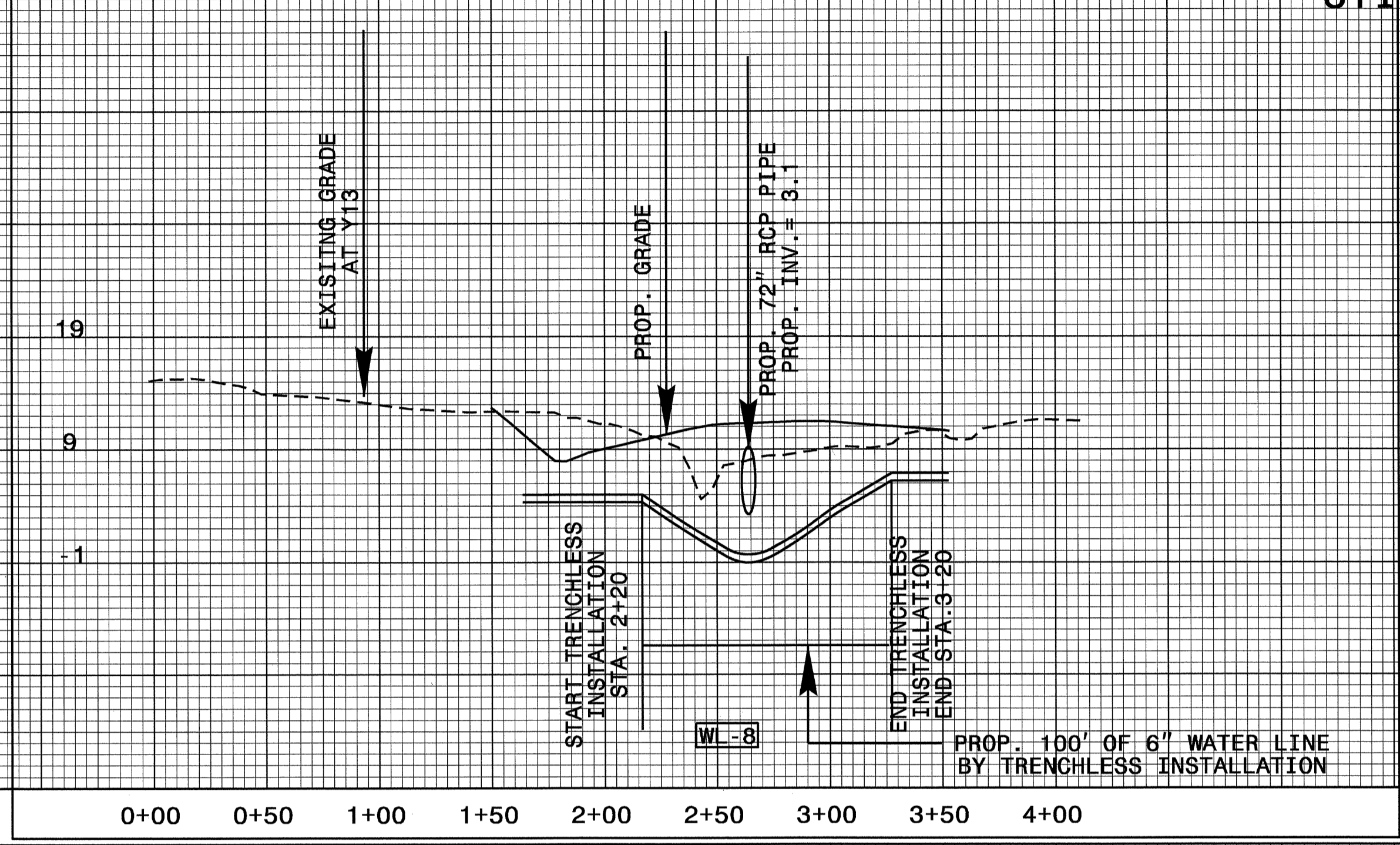
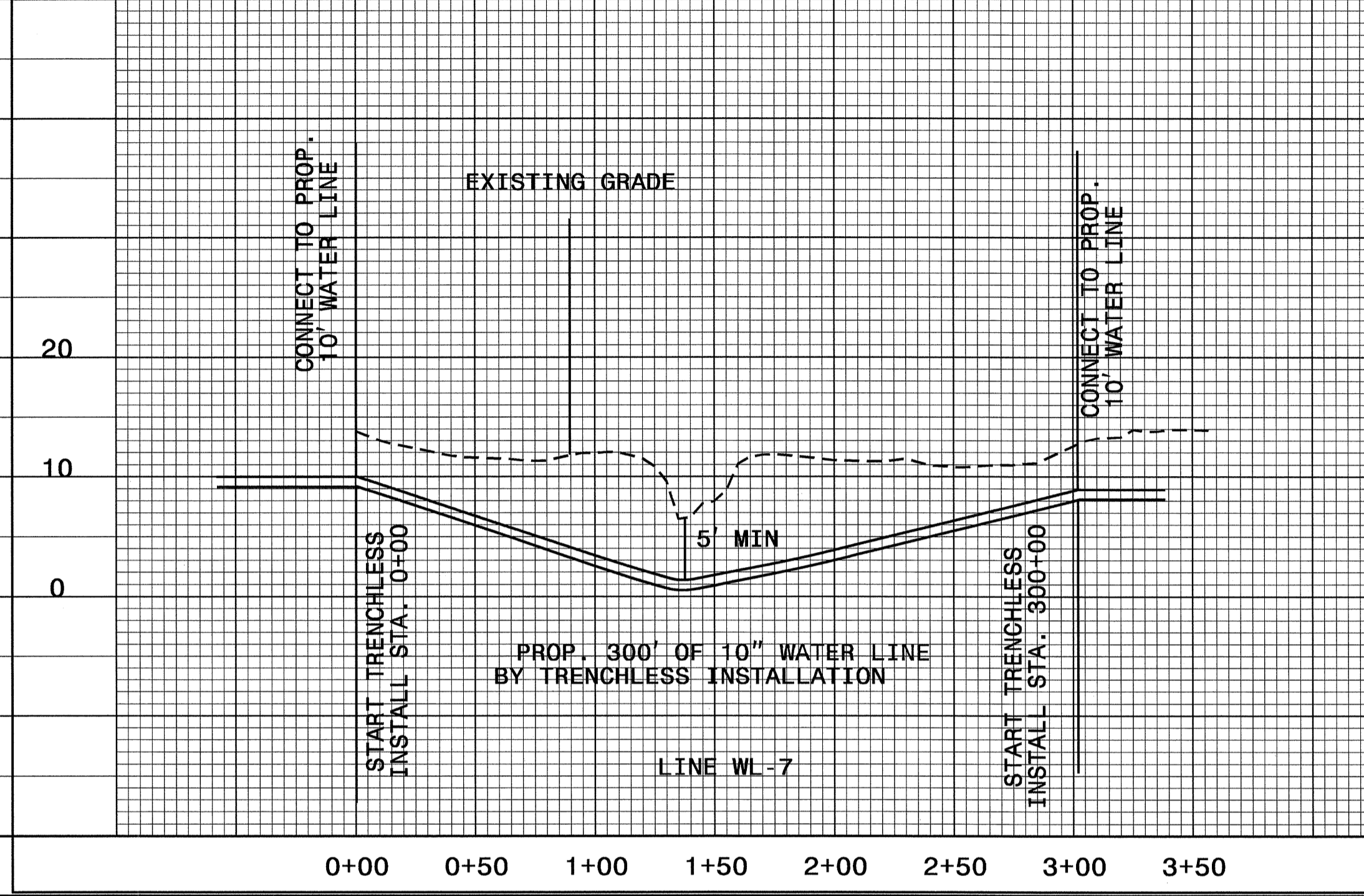
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5/28/99

NOTE:  
IF HDPE, DR 9 IS USED FOR  
TRENCHLESS INSTALLATION, THE  
INSIDE DIAMETER SHALL EQUAL  
THE SIZE OF THE PIPE BEING  
TIED INTO.

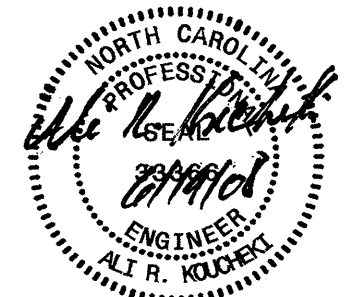
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DESIGNED BY: <b>ARK</b>	
DRAWN BY: <b>ARK</b>	
CHECKED BY: <b>CAB</b>	
APPROVED BY: <b>CAB</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
PROJECT SERVICES UNIT PHONE: (919) 250-4128 FAX: (919) 250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

### UTILITY CONSTRUCTION

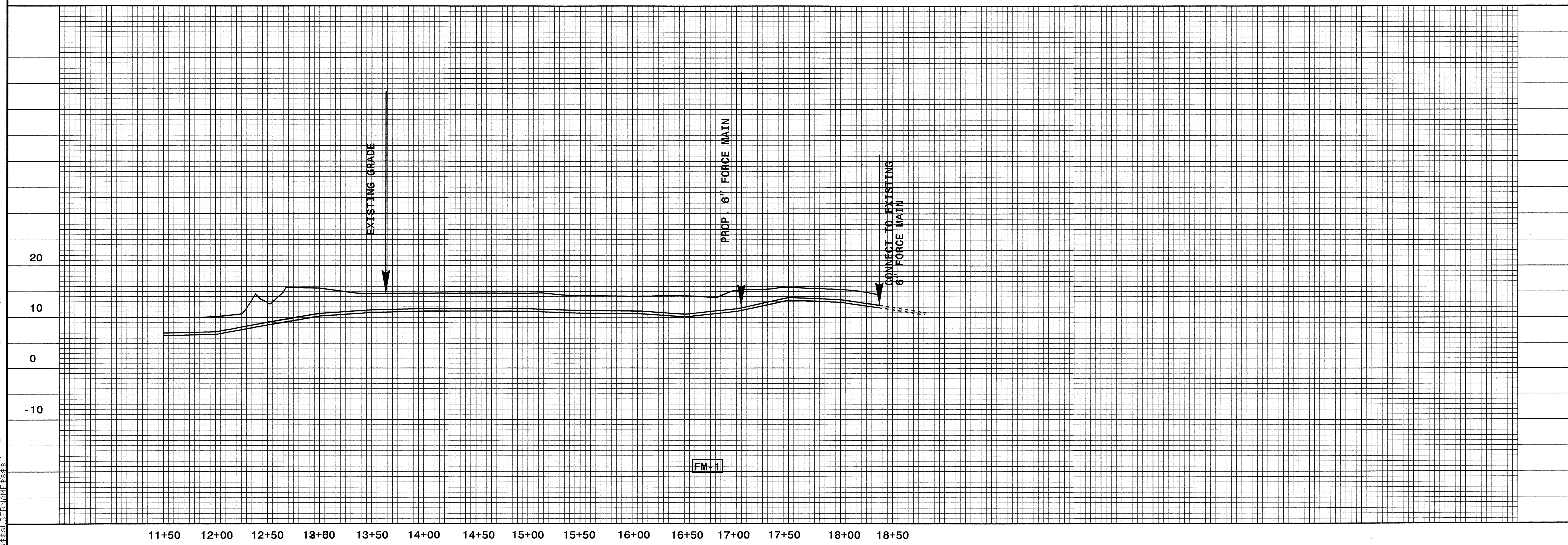
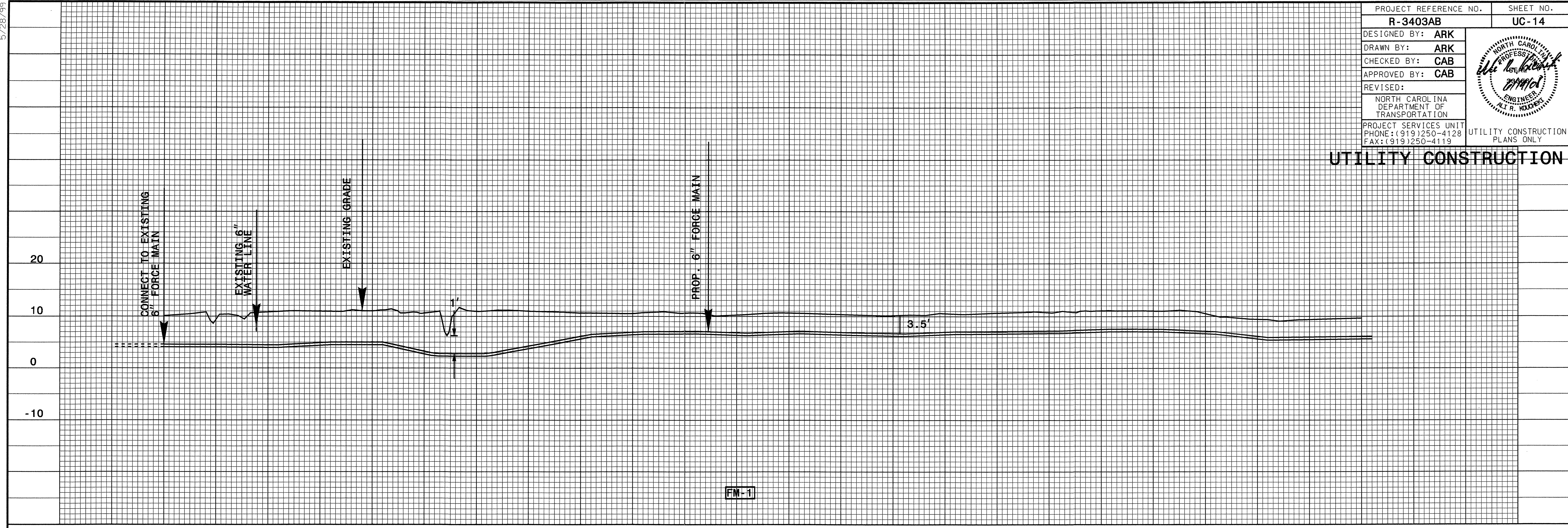


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5/28/99

PROJECT REFERENCE NO. <b>R-3403AB</b>	SHEET NO. <b>UC-14</b>
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	
PROJECT SERVICES UNIT PHONE: (919)250-4128 FAX: (919)250-4119	

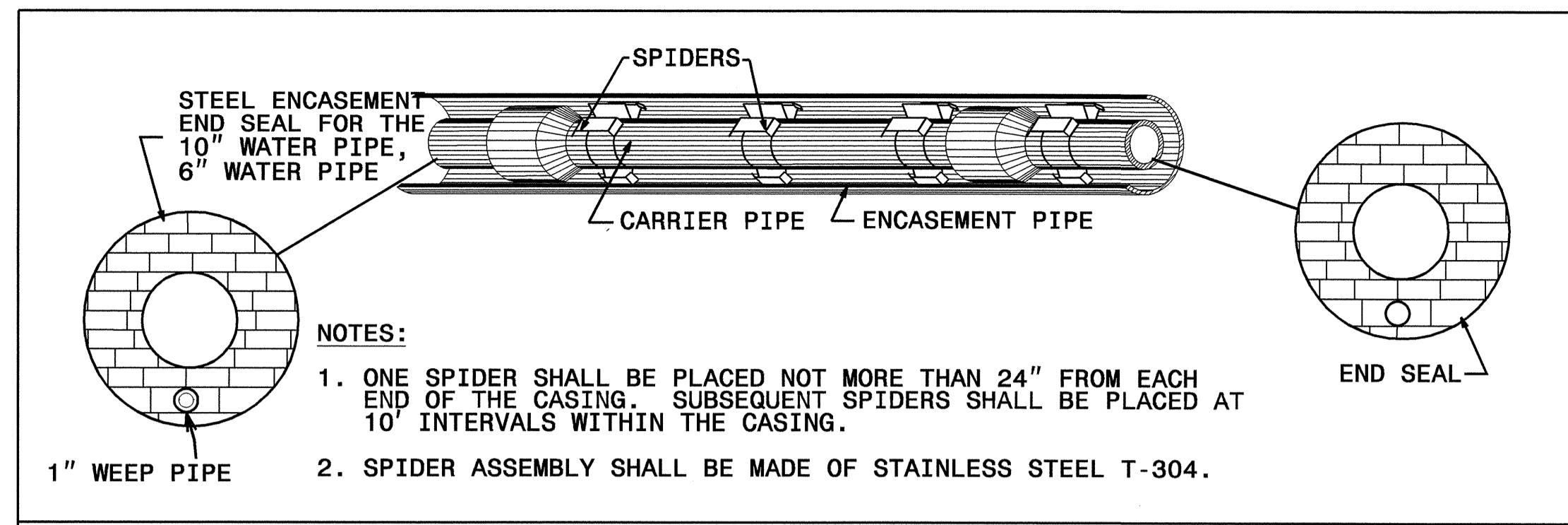
### UTILITY CONSTRUCTION



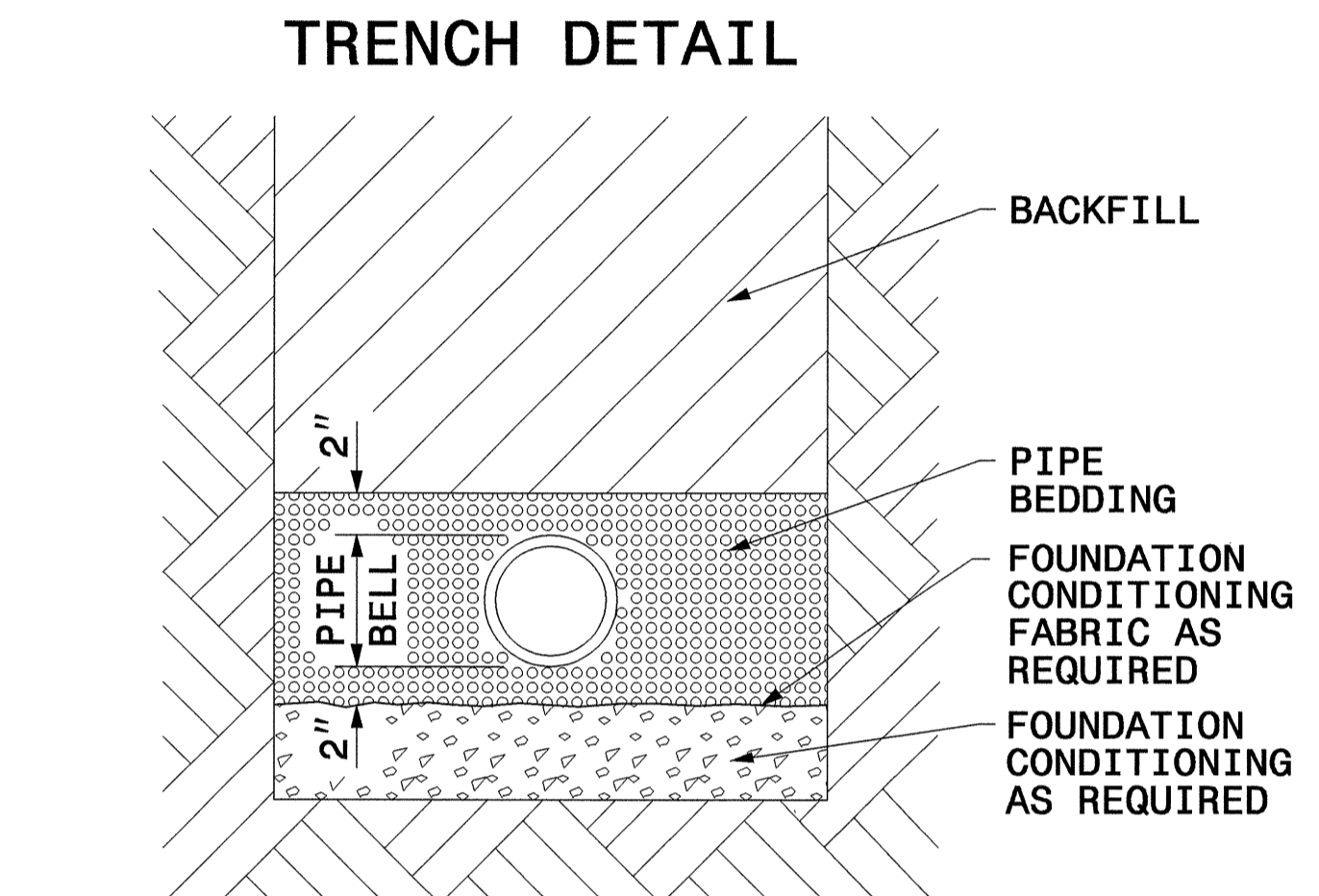
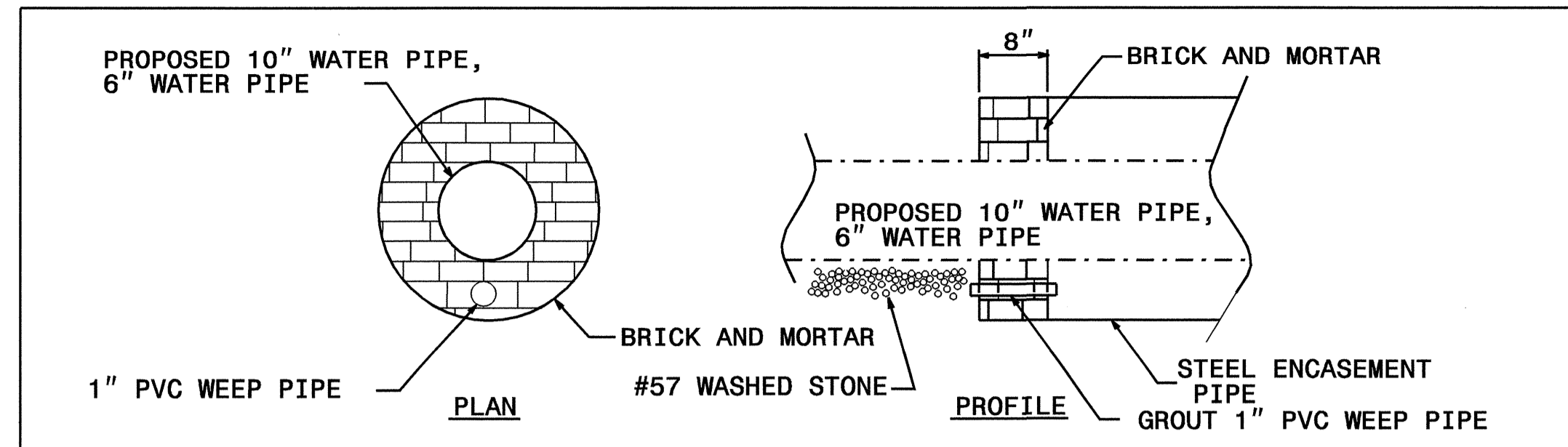
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PROJECT REFERENCE NO. <b>R-3403AB</b>	SHEET NO. <b>UC-15</b>
DESIGNED BY: <b>ARK</b>	
DRAWN BY: <b>ARK</b>	
CHECKED BY: <b>CAB</b>	
APPROVED BY: <b>CAB</b>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919)250-4128 FAX: (919)250-4119	
UTILITY CONSTRUCTION PLANS ONLY	

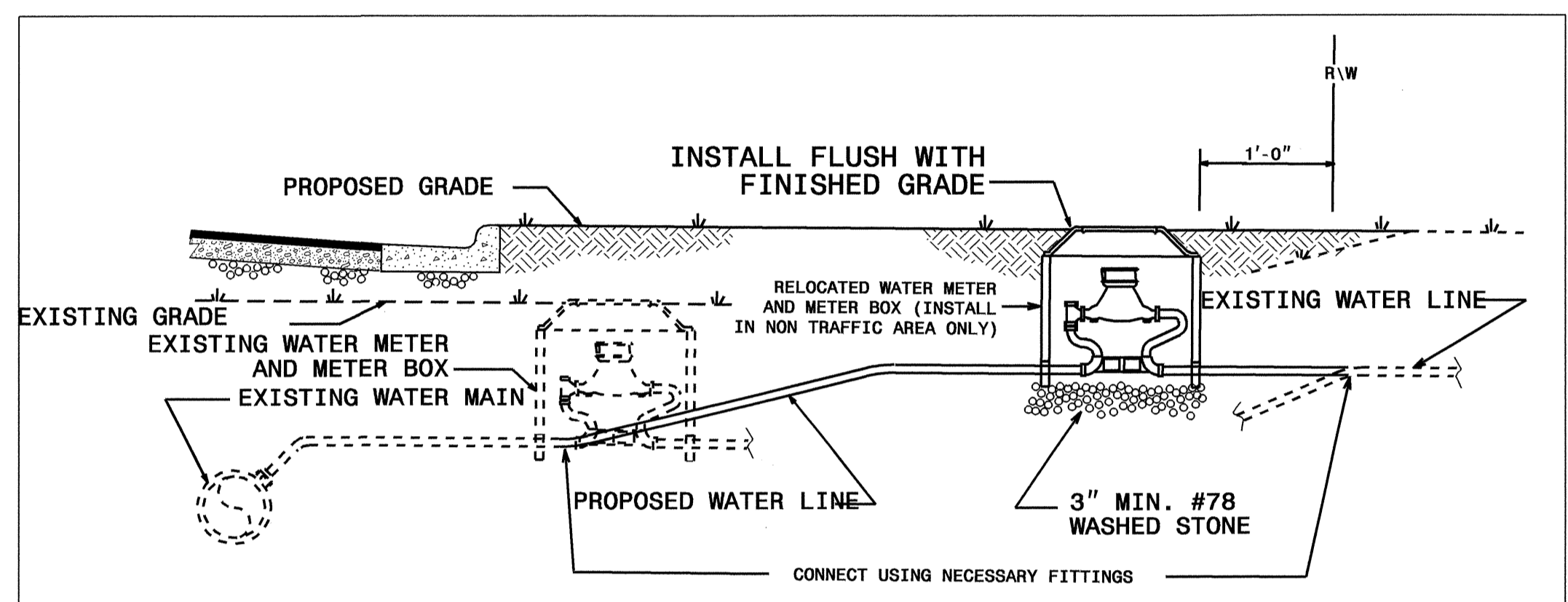
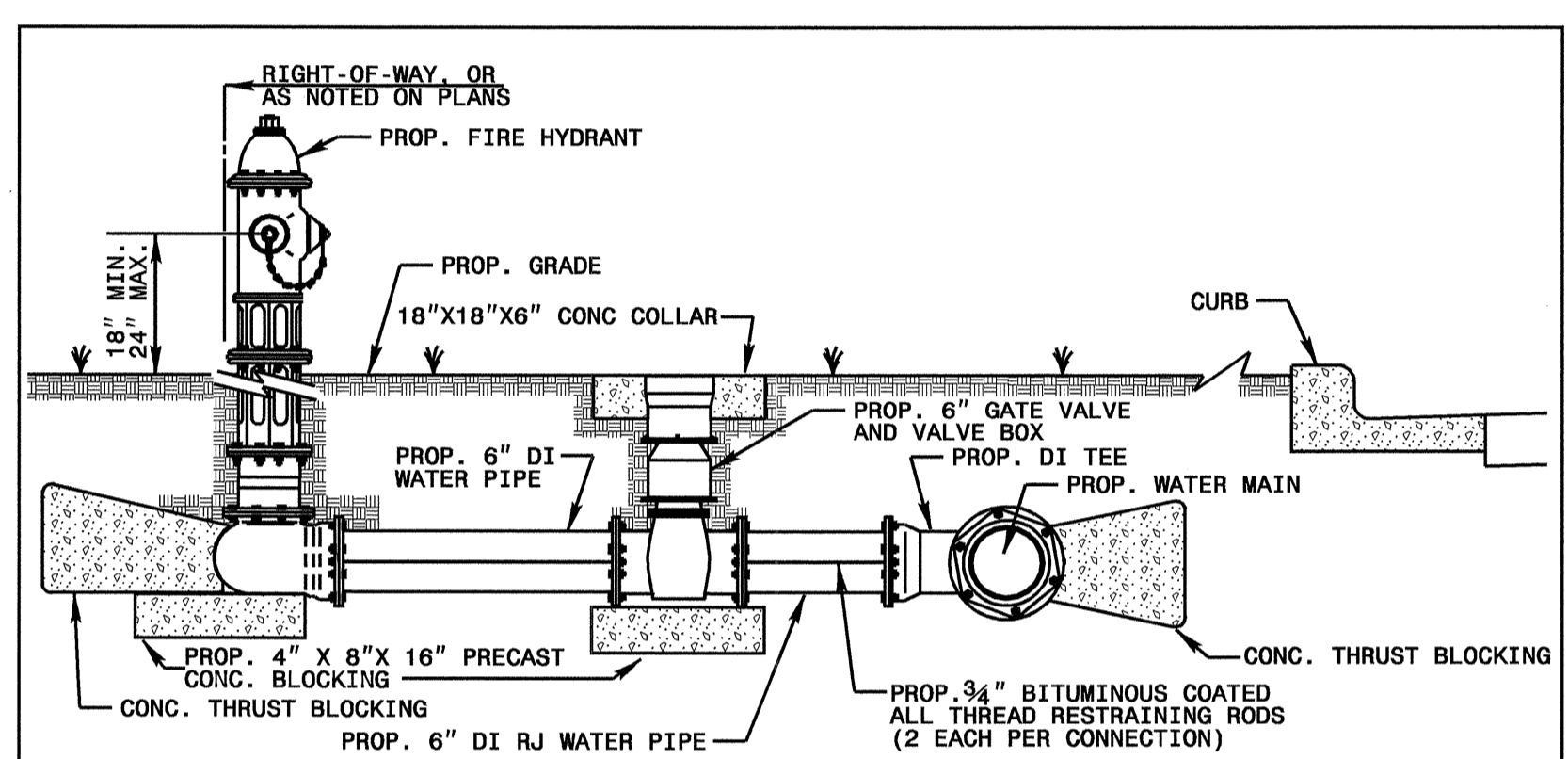
**UTILITY CONSTRUCTION**



- NOTES:**
- ONE SPIDER SHALL BE PLACED NOT MORE THAN 24" FROM EACH END OF THE CASING. SUBSEQUENT SPIDERS SHALL BE PLACED AT 10' INTERVALS WITHIN THE CASING.
  - SPIDER ASSEMBLY SHALL BE MADE OF STAINLESS STEEL T-304.

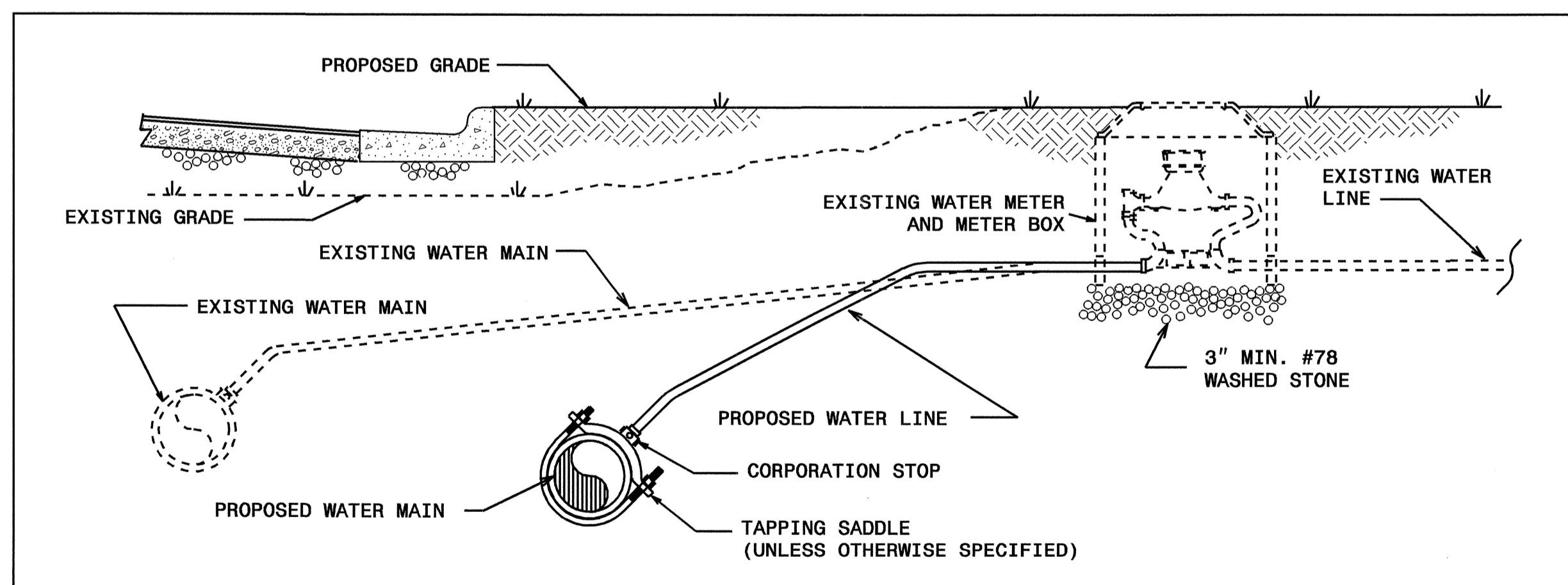


PLACE FOUNDATION CONDITIONING MATERIAL BELOW BEDDING IF REQUIRED, AS DIRECTED BY ENGINEER. PIPE BEDDED IN SELECT MATERIAL, CLASS II (TYPE 1) OR CLASS III. TRENCH BACKFILLED IN LOOSE 6" LAYERS COMPACTED TO TOP OF TRENCH USING LOCAL EXCAVATED MATERIAL IF APPROVED BY THE ENGINEER, OR SELECT MATERIAL. ALL MATERIAL SHALL BE FREE OF ROCKS, FOREIGN MATERIAL, AND FROZEN EARTH. COMPACTION SHALL BE TO APPROXIMATELY 95% DENSITY IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE DEPARTMENT OF TRANSPORTATION.

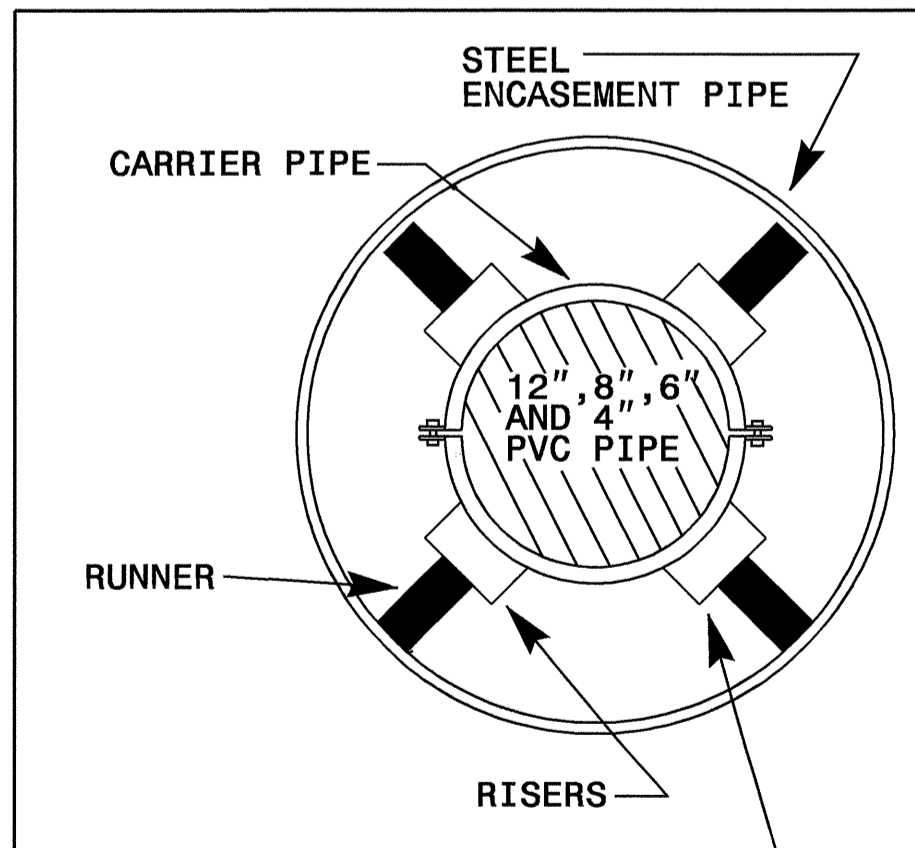


- THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
- THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 48" COVER BELOW FINISHED GRADE.

MAXIMUM TRENCH WIDTH AT TOP OF PIPE	
NOMINAL PIPE SIZE (INCHES)	TRENCH WIDTH (INCHES)
4	28
6	30
8	32
10	34
12	36



- NOTES:**
- THE NEW WATER SERVICE LINE SHALL BE OF THE SAME TYPE AND GRADE AS THE EXISTING WATER SERVICE LINE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
  - THE NEW WATER SERVICE LINE SHALL BE INSTALLED WITH A MINIMUM OF 36" COVER BELOW FINISHED GRADE.



- NOTES:**
- ONE SPIDER SHALL BE PLACED NOT MORE THAN 24" FROM EACH END OF THE CASING. SUBSEQUENT SPIDERS SHALL BE PLACED AT 10' INTERVALS WITHIN THE CASING.
  - CAP THE ENDS OF THE ENCASEMENT WITH BRICK AND MORTAR OR FLEXIBLE END SEAL, SEE DETAIL.
  - THE CASING SPIDERS SHALL BE MADE OF TWO PIECE SHELL T-304 STAINLESS STEEL OF A MINIMUM 14 GAGE THICKNESS. EACH CONNECTING FLANGE SHALL HAVE A MIN. OF 3 - 5/16", T-304 STAINLESS STEEL BOLTS. THE SHELL SHALL BE LINED WITH A RIBBED PVC EXTRUSION WITH A RETAINING SECTION THAT OVERLAPS THE EDGES OF THE SHELL AND PREVENTS SLIPPAGE.
  - RISERS SHALL BE MADE OF T-304 STAINLESS STEEL OF A MINIMUM THICKNESS OF 10 GAUGE. ALL RISERS OVER 6" IN HEIGHT SHALL HAVE ADDITIONAL REINFORCEMENT. RUNNERS BE MADE OF ULTRA HIGH MOLECULAR WEIGHT POLYMER WITH A LOW COEFFICIENT OF FRICTION.

**STEEL ENCASEMENT PIPE**

09/08/99

T.I.P. NO.	SHEET NO.
R-3403AB	UO-1

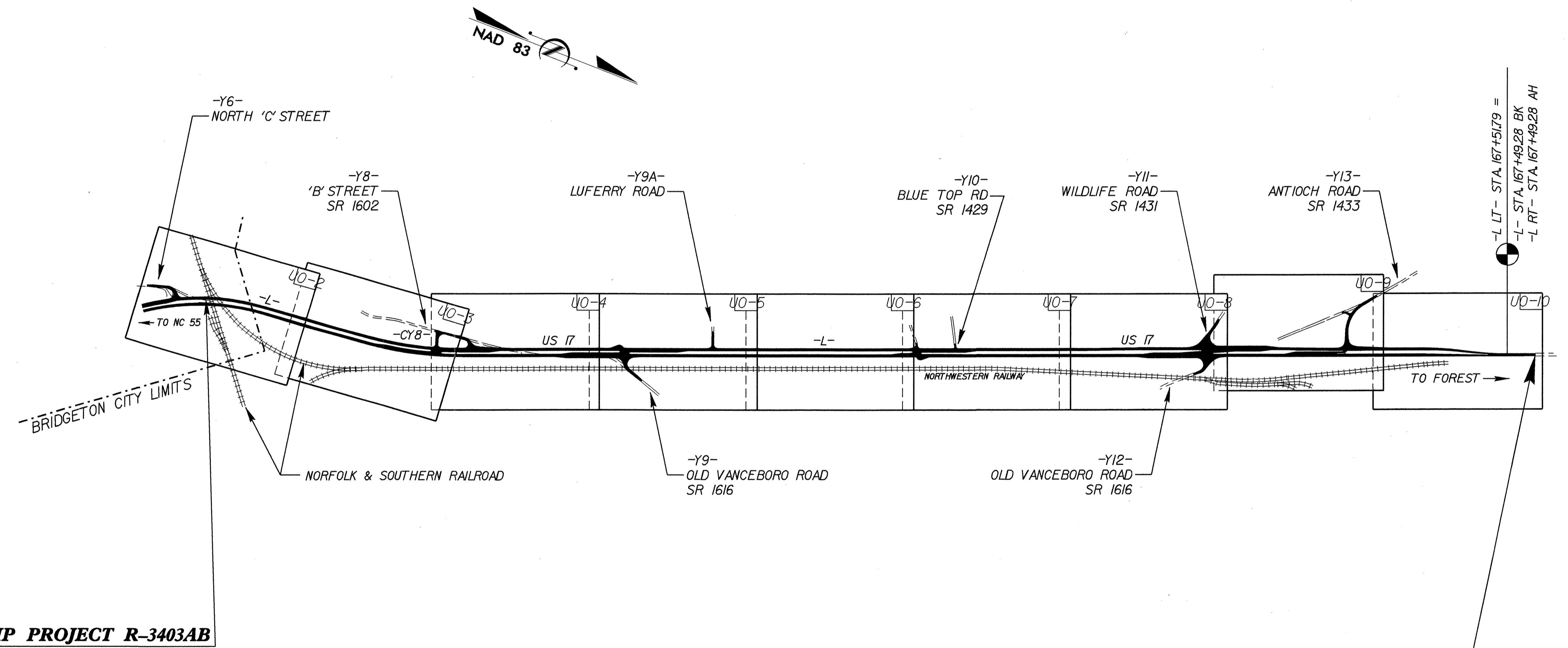
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITY BY OTHERS PLANS  
CRAVEN COUNTY**

**LOCATION: US 17 FROM NORFOLK & SOUTHERN  
TO NORTH OF SR 1433 (ANTIOCH ROAD)**

**TYPE OF WORK: UTILITY RELOCATION**

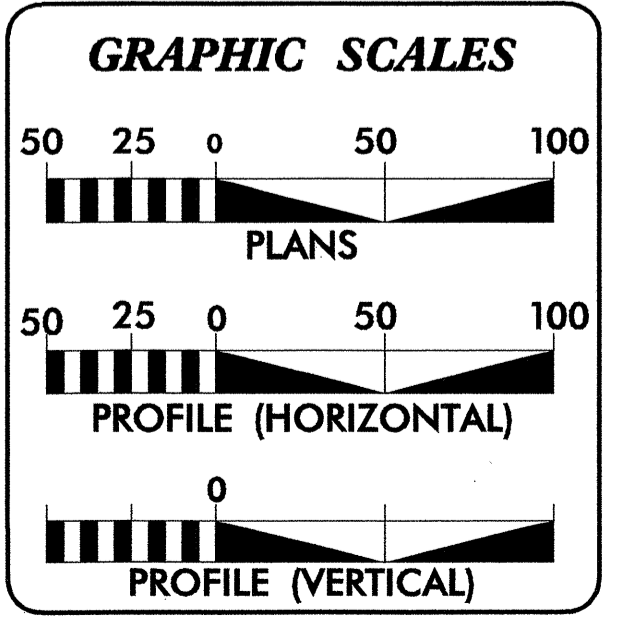
**TIP PROJECT:**



**-L- STA. 50+90.00 BEGIN TIP PROJECT R-3403AB**

**-L RT- STA. 170+00.00 END TIP PROJECT R-3403AB**  
**-L RT- STA. 170+50.00 END CONSTRUCTION R-3403AB**

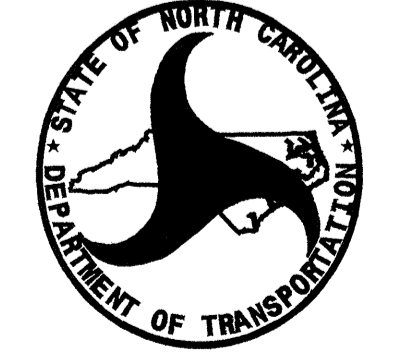
THIS IS A PARTIAL CONTROLLED-ACCESS PROJECT WITH ACCESS BEING LIMITED TO POINTS AS SHOWN ON THE PLANS



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-10	UTILITY BY OTHERS PLAN SHEETS

- UTILITY OWNERS ON PROJECT**
- (1) PROGRESS ENRGY- POWER
  - (2) EMBARQ-TELEPHONE
  - (3) CABLE VISION-SUDDEN LINK-CABLE TV



PREPARED IN THE OFFICE OF:  
**DIVISION OF HIGHWAYS  
DESIGN SERVICES  
UTILITY SECTION**

1591 MAIL SERVICES CENTER  
RALEIGH NC 27699-1591  
PHONE (919) 250-4128  
FAX (919) 250-4119

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER  
**Carl Barcaly, P.E.** UTILITIES SQUAD LEADER PROJECT ENGINEER  
**Ali Kouchehi, P.E.** UTILITIES PROJECT DESIGNER

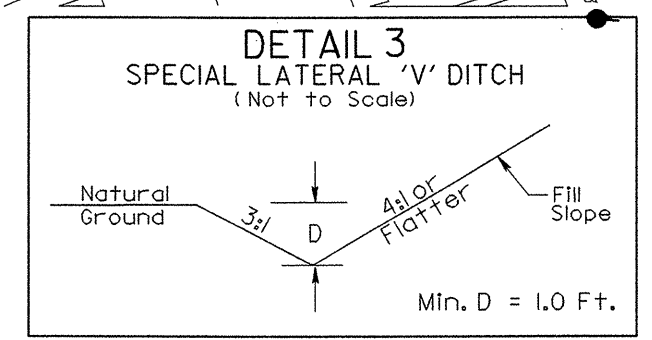
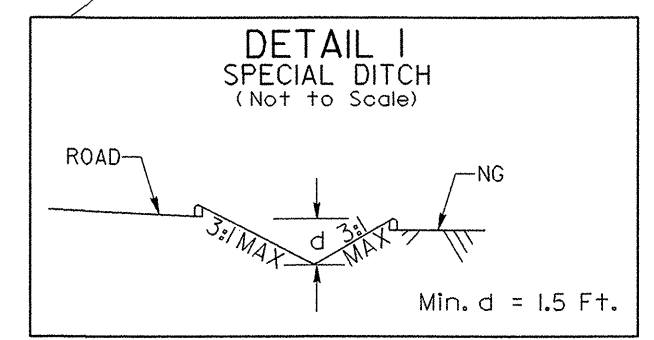
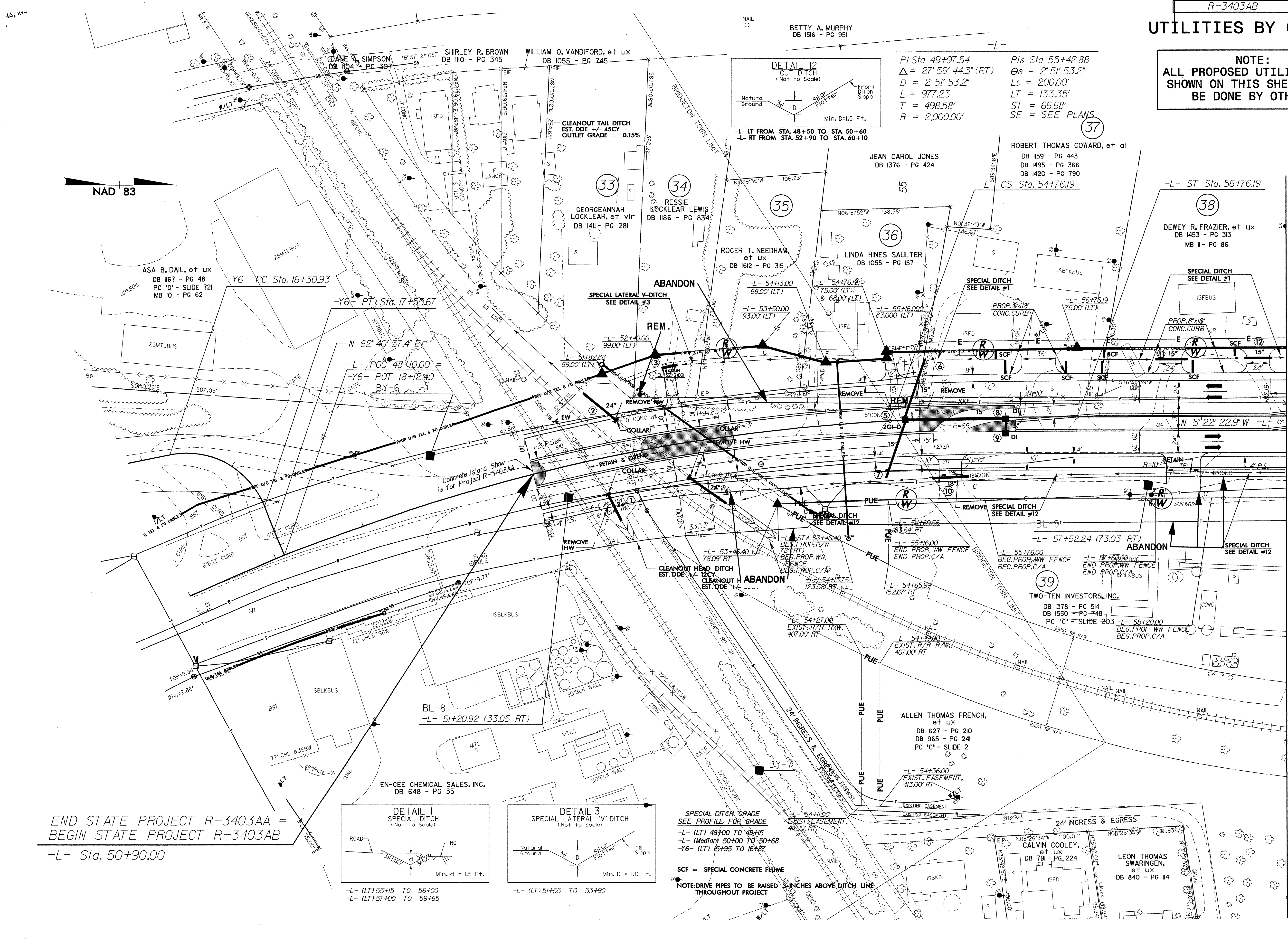
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USER: jw



UTILITIES BY OTHERS

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

8/13/99  
 2:44 JUN 20 09 01:28:4  
 \\p01\proj\3-38-2008\2d\3403AA\util\02\2d\3403AA\util\02\2d\3403AA.dgn  
 EN-CEE CHEMICAL SALES, INC. DB 648 - PG 35  
 REVISIONS  
 MATCHLINE STA. 59+00.00  
 SEE SHEET U0-3



**SPECIAL DITCH GRADE**  
SEE PROFILE FOR GRADE  
-L- (LT) 48+00 TO 49+15  
-L- (Median) 50+00 TO 50+68  
-Y6- (LT) 15+95 TO 16+87

SCF = SPECIAL CONCRETE FLUME  
NOTE: DRIVE PIPES TO BE RAISED 3 INCHES ABOVE DITCH LINE THROUGHOUT PROJECT

PI Sta 49+97.54  
 $\Delta = 27^\circ 59' 44.3''$  (RT)  
 $D = 2' 51' 53.2''$   
 $L = 977.23$   
 $T = 498.58'$   
 $R = 2,000.00'$

PIs Sta 55+42.88  
 $\Theta_s = 2' 51' 53.2''$   
 $L_s = 200.00'$   
 $LT = 133.35'$   
 $ST = 66.68'$   
 $SE = \text{SEE PLANS}$

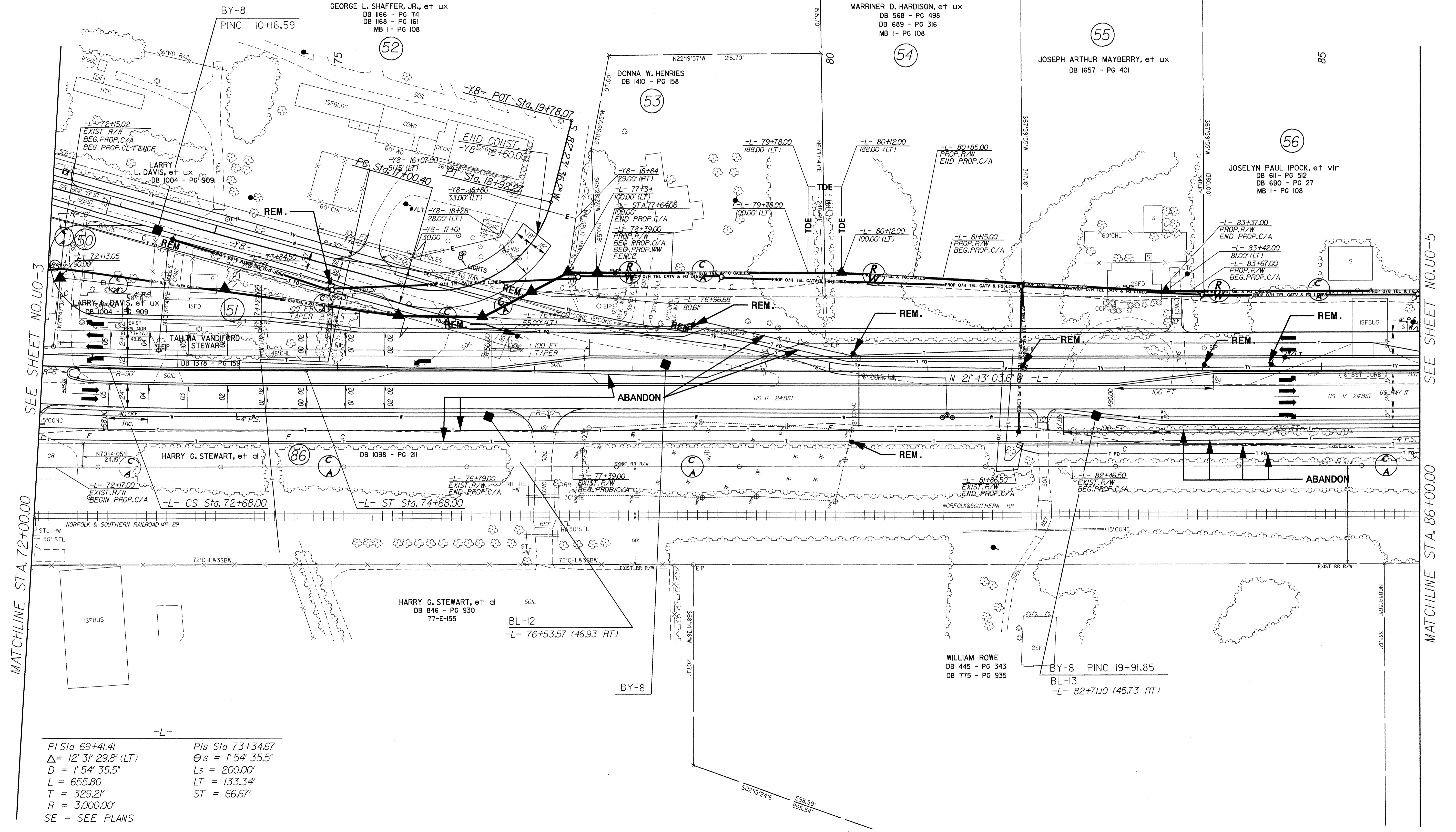
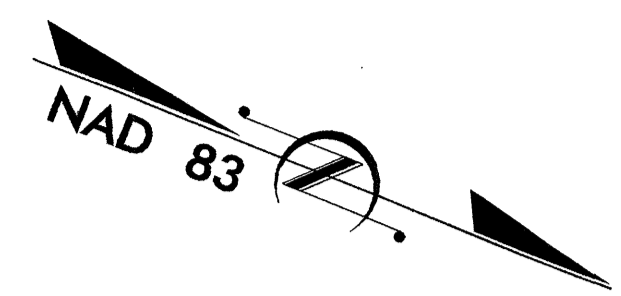
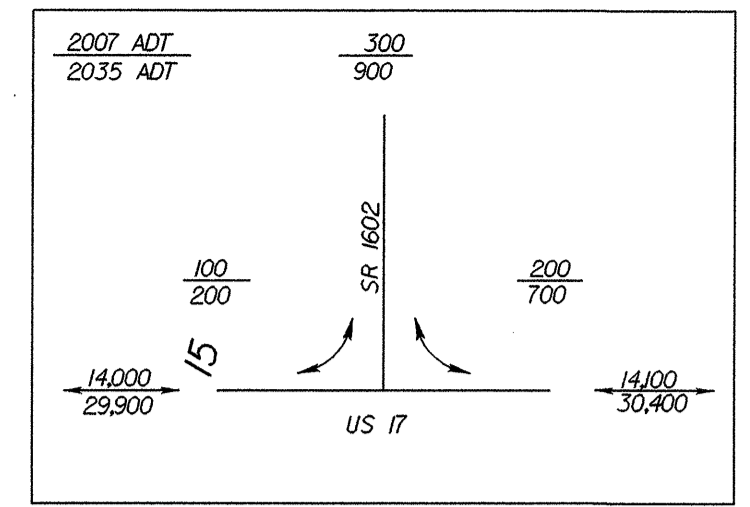


FOR -L- PROFILE SEE SHEET 14  
FOR -Y8- PROFILE SEE SHEET 10

**UTILITIES BY OTHERS**

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

-Y8-  
PI Sta 18+23.82  
Δ = 9° 36' 42.5" (LT)  
D = 47' 44" 47.3"  
L = 191.87'  
T = 123.42'  
R = 120.00'  
SE = SEE PLANS



-L-  
PI Sta 69+41.41      PIs Sta 73+34.67  
Δ = 12° 31' 29.8" (LT)      Θs = 1° 54' 35.5"  
D = 1° 54' 35.5"      Ls = 200.00'  
L = 655.80      LT = 133.34'  
T = 329.21'      ST = 66.67'  
R = 3,000.00'  
SE = SEE PLANS

REVISIONS  
 R/W REVISION - ADDED PARCEL LABEL ON PARCEL NO. 85. DYP 9-28-05  
 R/W REVISION - ADDED PARCEL LABEL ON PARCEL NO. 86. - DYP 9-28-05  
 R/W REVISION - ADDED PARCEL LABEL ON PARCEL NO. 52. COMBINE WITH PARCEL NO. 53. - DYP 9-28-05  
 R/W REVISION - NAME & DB CHANGE ON PARCEL NO. 52. COMBINE WITH PARCEL NO. 53. - DYP 9-28-05  
 R/W REVISION - WIDENED DRIVEWAY ON PARCEL NO. 52 FROM 20 TO 30'. - BMJ 01-31-2006

SEE SHEET NO. U0-3  
 MATCHLINE STA. 72+00.00

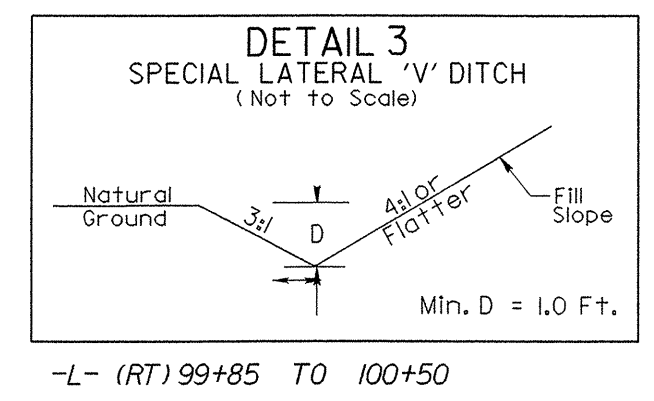
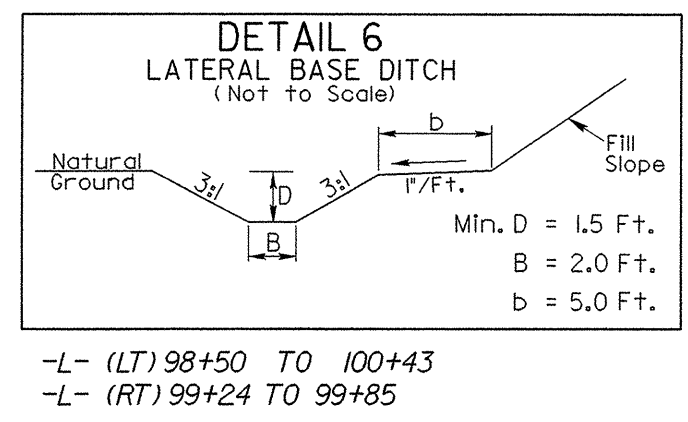
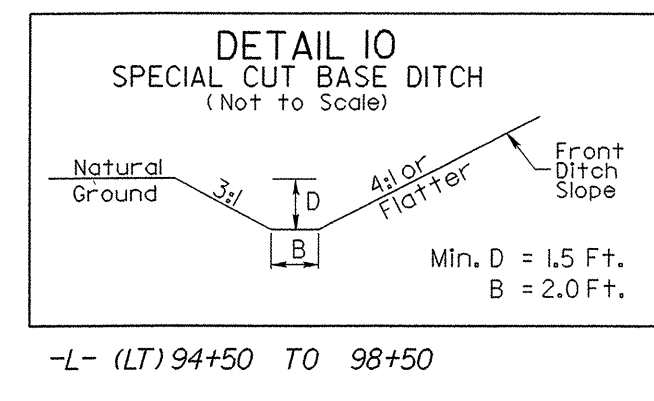
SEE SHEET NO. U0-5  
 MATCHLINE STA. 86+00.00

8/13/99

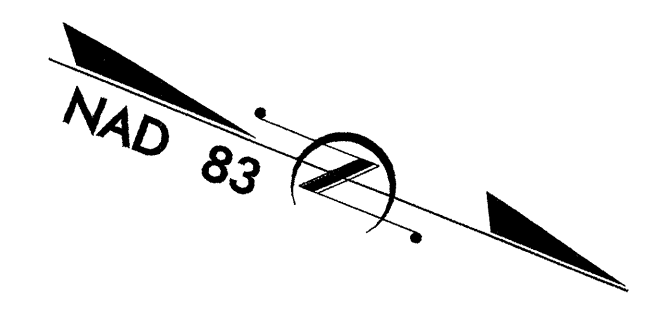
24 JUN 2008 10:23  
 10:23  
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 10:23

FOR -L- PROFILE SEE SHEET 15 FOR -Y9- PROFILE SEE SHEET 19  
FOR -Y9A- PROFILE SEE SHEET 19

UTILITIES BY OTHERS

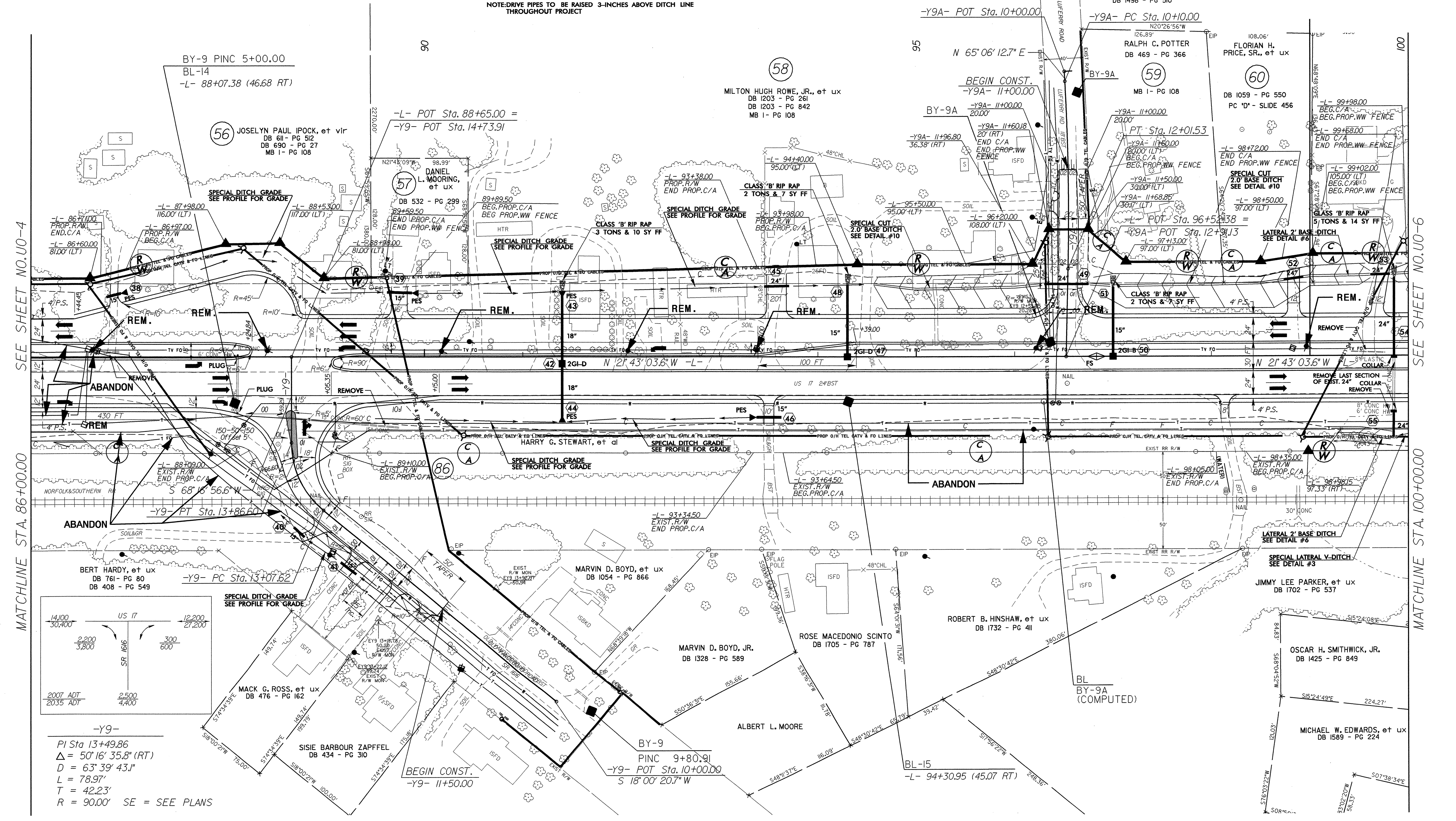


**SPECIAL DITCH GRADE**  
SEE PROFILE FOR GRADE  
-L- (LT) 88+00 TO 94+50  
-L- (RT) 89+50 TO 93+50  
-Y9- (LT) 12+05 TO 13+30



-Y9A-  
PI Sta 11+05.81  
 $\Delta = 4' 23'' 22.6''$  (RT)  
D = 2' 17' 30.6"  
L = 191.53'  
T = 95.81'  
R = 2,500.00'

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

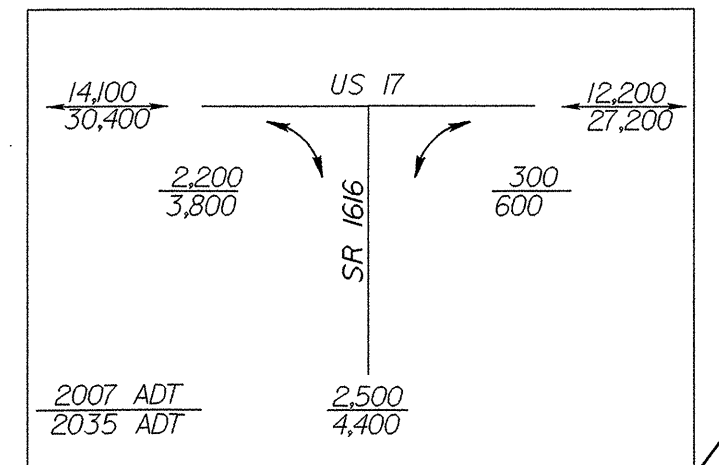


SEE SHEET NO. U0-4

MATCHLINE STA. 86+00.00

SEE SHEET NO. U0-6

MATCHLINE STA. 100+00.00



-Y9-  
PI Sta 13+49.86  
 $\Delta = 50' 16'' 35.8''$  (RT)  
D = 63' 39' 43.1"  
L = 78.97'  
T = 42.23'  
R = 90.00' SE = SEE PLANS

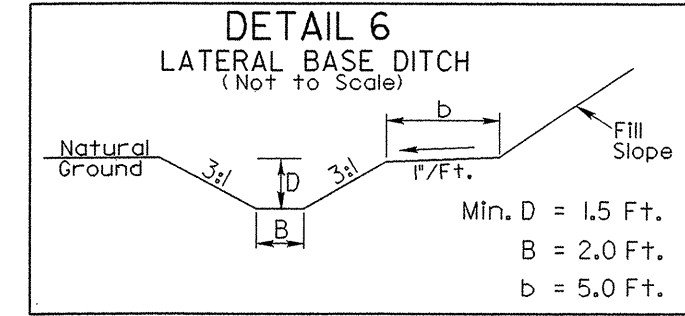
REVISIONS

8/17/99

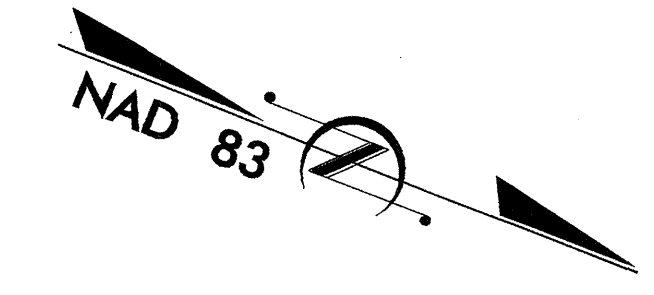
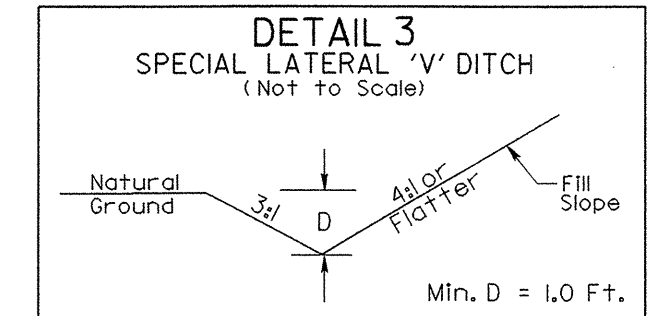
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I:\ut\GIS\PROJECTS\3403AB\3403AB.dwg  
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UTILITIES BY OTHERS

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



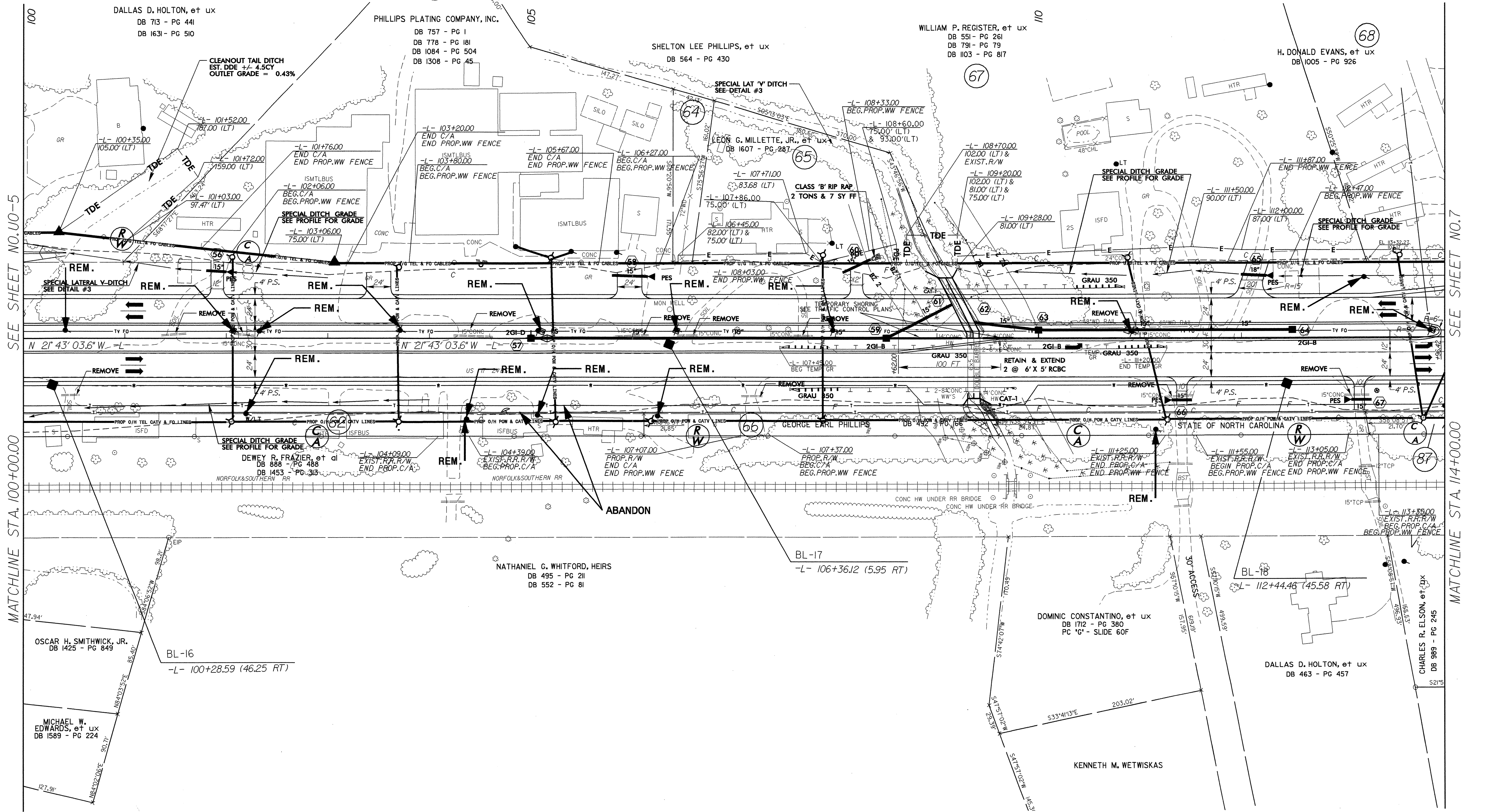
NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT



SPECIAL DITCH GRADE SEE PROFILE FOR GRADE  
-L- (RT) 100+50 TO 104+00  
-L- (LT) 101+50 TO 103+00  
-L- (LT) 109+75 TO 114+00

-L- (LT) 98+50 TO 100+43

-L- (RT) 99+85 TO 100+43  
-L- (LT) 100+45 TO 101+50  
-L- (LT) 108+20 TO 108+46



SEE SHEET NO. U0-5

MATCHLINE STA. 100+00.00

SEE SHEET NO. 7

MATCHLINE STA. 114+00.00

REVISIONS

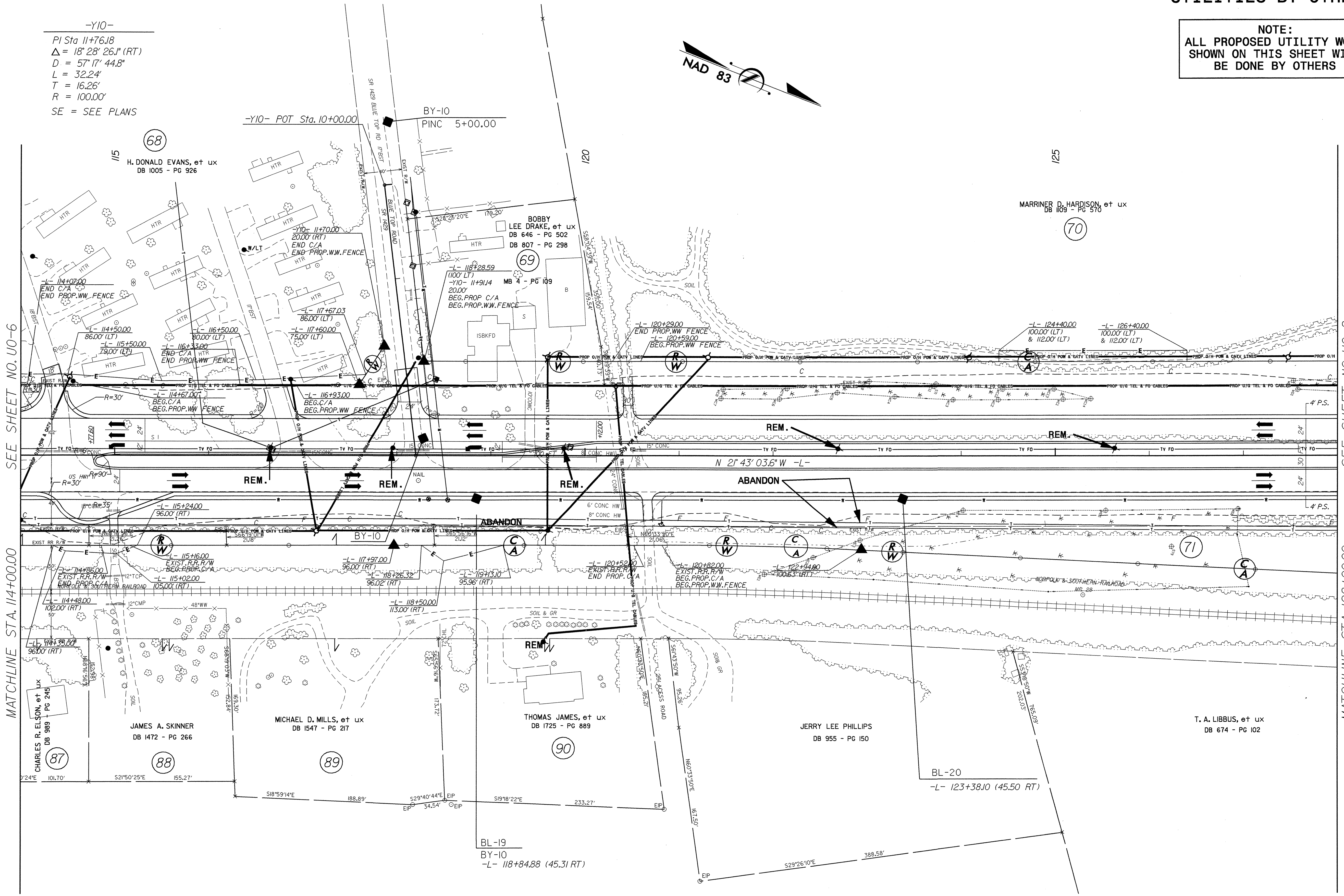
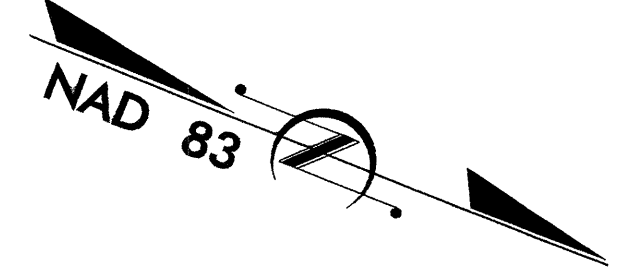
24-JUN-2008 10:22  
p:\projects\3403ab\3403ab\_r.dwg, ps:\08\_U06.dgn  
UT

UTILITIES BY OTHERS

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

6/17/99

-Y10-  
PI Sta 11+76.18  
Δ = 18° 28' 26.1" (RT)  
D = 57° 17' 44.8"  
L = 32.24'  
T = 16.26'  
R = 100.00'  
SE = SEE PLANS



SEE SHEET NO. U0-6

MATCHLINE STA. 114+00.00

SEE SHEET NO. U0-8

MATCHLINE STA. 128+00.00

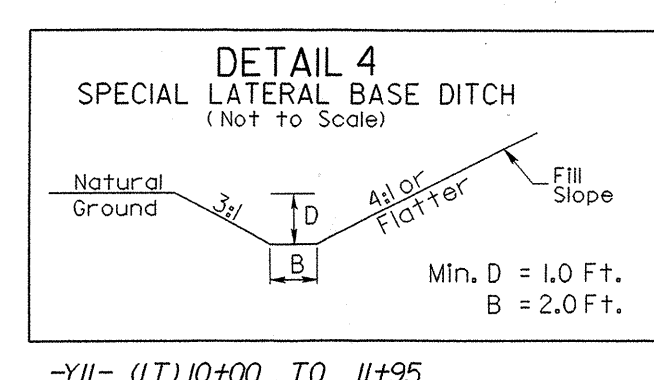
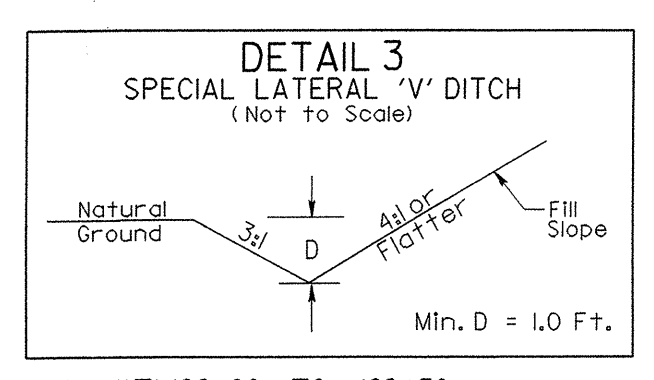
REVISIONS

24 JUN 2000 09:00:22 ut\... rdu\psb09\_uo7.dgn

FOR -L- PROFILE SEE SHEET 16  
 FOR -Y11- PROFILE SEE SHEET 20  
 FOR -Y12- PROFILE SEE SHEET 20

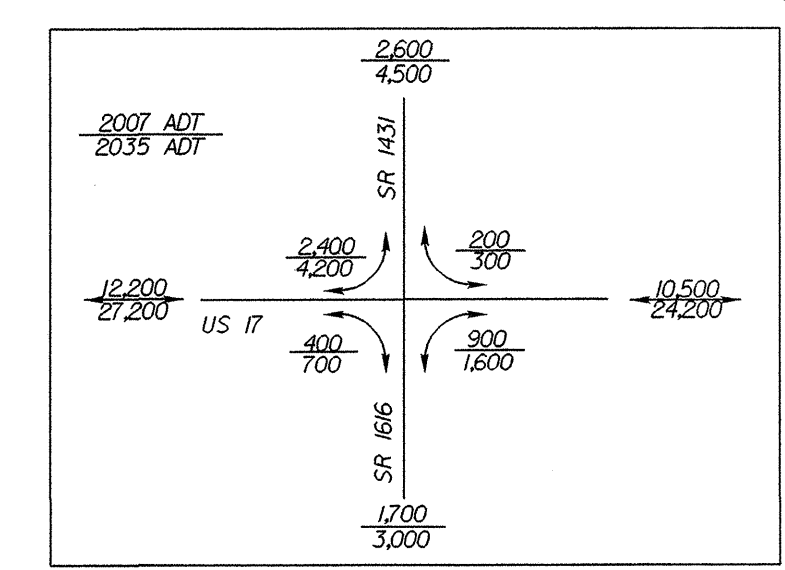
**UTILITIES BY OTHERS**

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



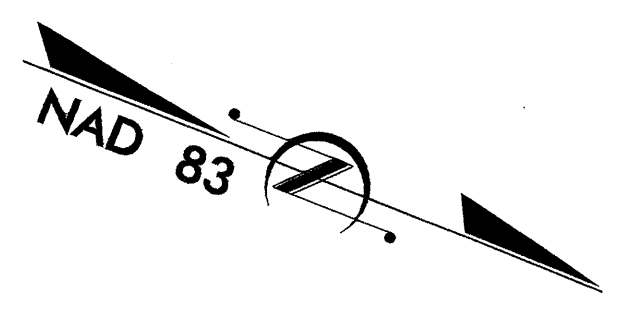
**SPECIAL DITCH GRADE**  
 SEE PROFILE FOR GRADE  
 -L- (LT) 129+50 TO 134+00  
 -L- (RT) 134+00 TO 140+00  
 -L- (RT) 141+30 TO 143+50  
 -Y12- (LT) 14+00 TO 14+95

**-Y11-**  
 PI Sta 11+98.24  
 $\Delta = 33^\circ 41' 56.9''$  (LT)  
 $D = 28' 38" 52.4''$   
 $L = 117.63'$   
 $T = 60.57'$   
 $R = 200.00'$   
 SE = SEE PLANS



-L- (LT) 128+00 TO 129+50  
 NOTE-DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT

AREA=25566 SQ FEET  
 AREA=.059 ACRE  
 PERIMETER=452



70 DENOTES HAND CLEARING

MARRINER D. HARDISON, et ux  
 DB 1109 - PG 570

MARRINER D. HARDISON, et ux  
 DB 1109 - PG 570

-Y11- PT Sta. 12+55.30

-L- POT Sta. 140+65.00 =  
 -Y11- POT Sta. 13+27.28 =  
 -Y12- POT Sta. 16+14.12

BY-II  
 BL-22  
 -L- 138+07.31 (57.95 RT)

SEE SHEET NO. U0-7

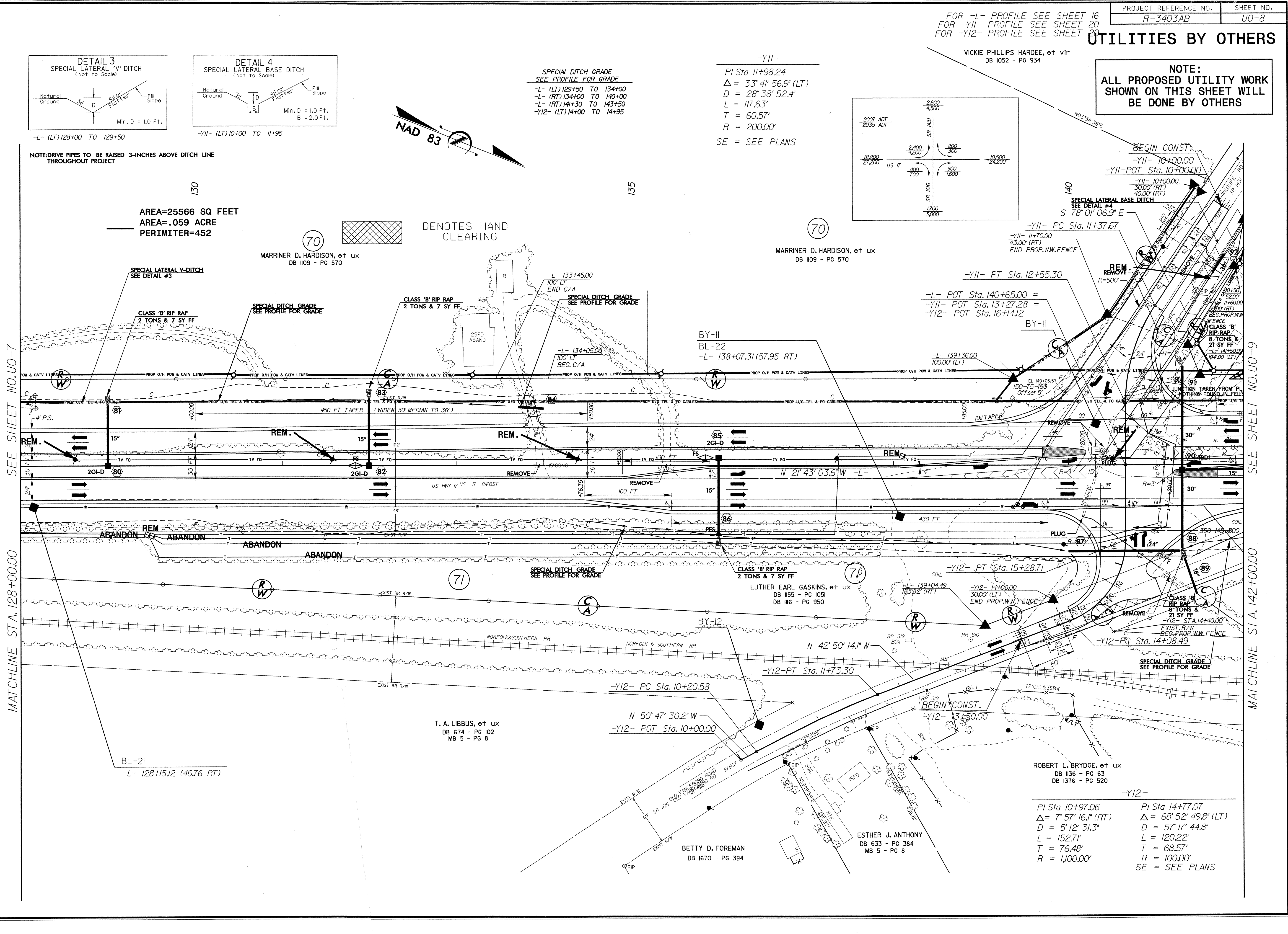
SEE SHEET NO. U0-9

MATCHLINE STA. 128+00.00

MATCHLINE STA. 142+00.00

24-JUN-2008 10:22  
 I:\ut\p\3403ab\plans\3403ab\1-3403ab.rdj.psh10\_U08.dgn

8/17/99



ROBERT L. BRYDGE, et ux  
 DB 1136 - PG 63  
 DB 1376 - PG 520

**-Y12-**  
 PI Sta 10+97.06  
 $\Delta = 7^\circ 57' 16.1''$  (RT)  
 $D = 5' 12" 31.3''$   
 $L = 152.22'$   
 $T = 76.48'$   
 $R = 1,100.00'$   
 SE = SEE PLANS

PI Sta 14+77.07  
 $\Delta = 68^\circ 52' 49.8''$  (LT)  
 $D = 57' 17" 44.8''$   
 $L = 120.22'$   
 $T = 68.57'$   
 $R = 100.00'$   
 SE = SEE PLANS

T. A. LIBBUS, et ux  
 DB 674 - PG 102  
 MB 5 - PG 8

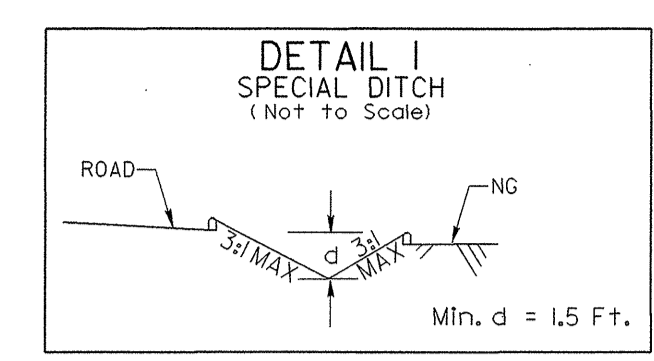
BETTY D. FOREMAN  
 DB 1670 - PG 394

ESTHER J. ANTHONY  
 DB 633 - PG 384  
 MB 5 - PG 8

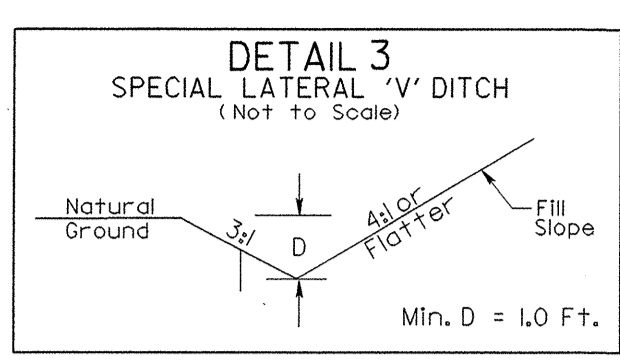
FOR -L- PROFILE SEE SHEET 17  
FOR -Y13- PROFILE SEE SHEET 20

UTILITIES BY OTHERS

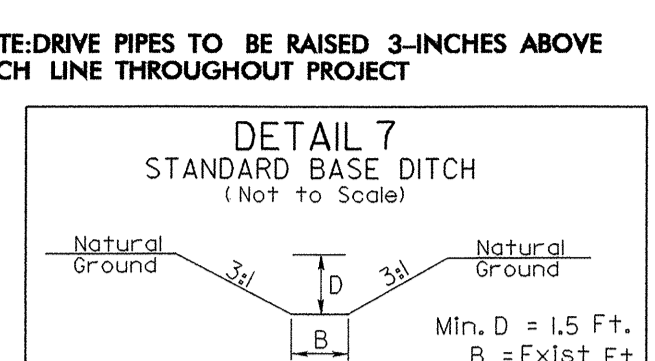
NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS



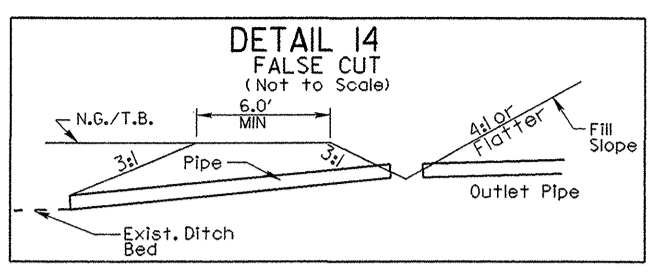
-L- (RT) 148+05 TO 149+05  
-L- (RT) 149+60 TO 153+50



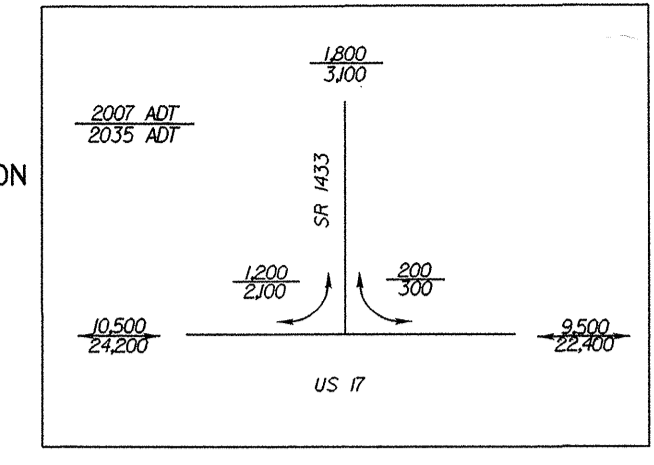
-L- (RT) 145+30 TO 147+50  
-L- (RT) 153+50 TO 154+45  
-Y13- (RT) 13+20 TO 16+00



-Y13- (LT) 13+70



-L- (RT) 146+33



-Y13-  
PI Sta 15+09.23  
 $\Delta = 60' 08'' 11.6'' (LT)$   
 $D = 19' 05'' 54.9''$   
 $L = 314.87'$   
 $T = 173.68'$   
 $R = 300.00'$   
SE = SEE PLANS

BRENDA JOYCE CATON  
DB 690 - PG 87

DAVID E. BANKS, et ux  
DB 1709 - PG 907

WILLIAM B. SAWYER, JR., et ux  
DB 1254 - PG 501

WILLIAM JOHN GASKINS, III, et ux  
DB 1607 - PG 533

MARION G. DIXON, et ux  
DB 1671 - PG 952

W. J. GASKINS, JR., et ux  
DB 1032 - PG 735  
MB 13 - PG 53

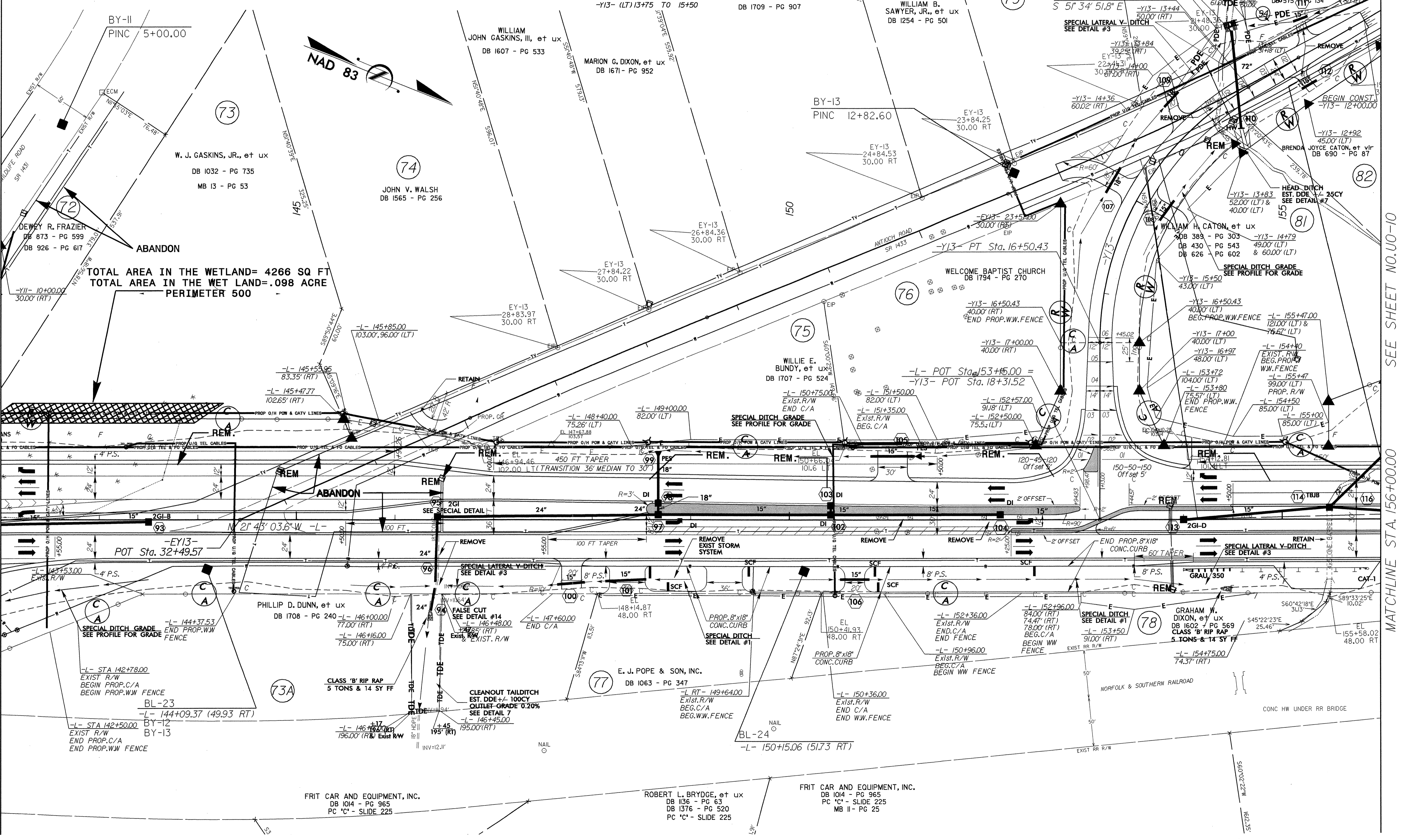
JOHN V. WALSH  
DB 1565 - PG 256

SEE SHEET NO. U0-8

MATCHLINE STA. 142+00.00

SEE SHEET NO. U0-10

TOTAL AREA IN THE WETLAND= 4266 SQ FT  
TOTAL AREA IN THE WET LAND=.098 ACRE  
PERIMETER 500



8/17/99

REVISIONS

23 JUN 2008 11:00 AM  
C:\Users\jrb\Documents\Projects\11009\11009.dgn

FRIT CAR AND EQUIPMENT, INC.  
DB 1014 - PG 965  
PC 'C' - SLIDE 225

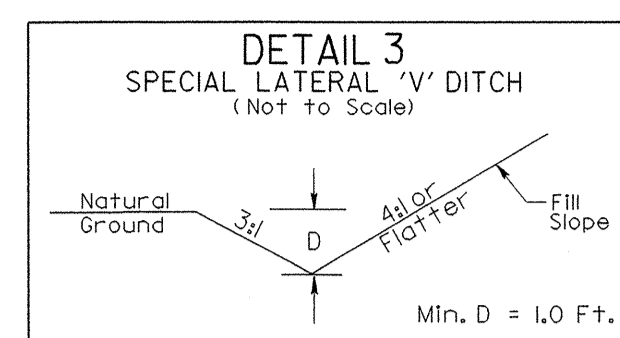
ROBERT L. BRYDGE, et ux  
DB 1136 - PG 63  
DB 1376 - PG 520  
PC 'C' - SLIDE 225

FRIT CAR AND EQUIPMENT, INC.  
DB 1014 - PG 965  
PC 'C' - SLIDE 225  
MB II - PG 25

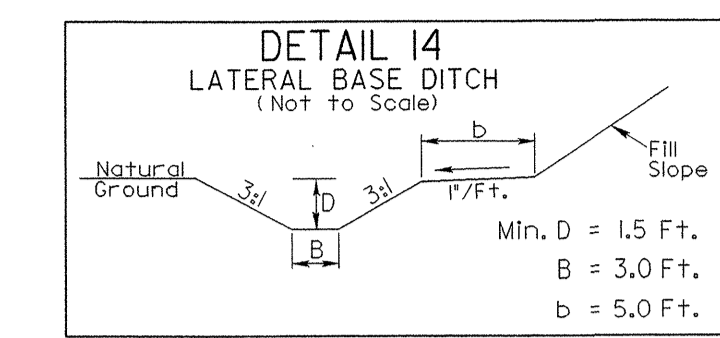


FOR -L- PROFILE SEE SHEET 17  
 FOR -TRANRT- PROFILE SEE SHEET 18  
 FOR -TRANLT- PROFILE SEE SHEET 19

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



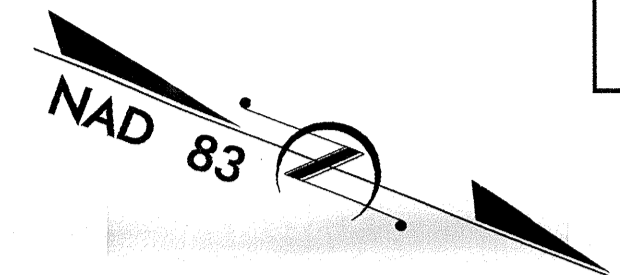
-L RT- (RT) 165+00 TO 170+00  
 -L LT- (LT) 159+00 TO 161+50



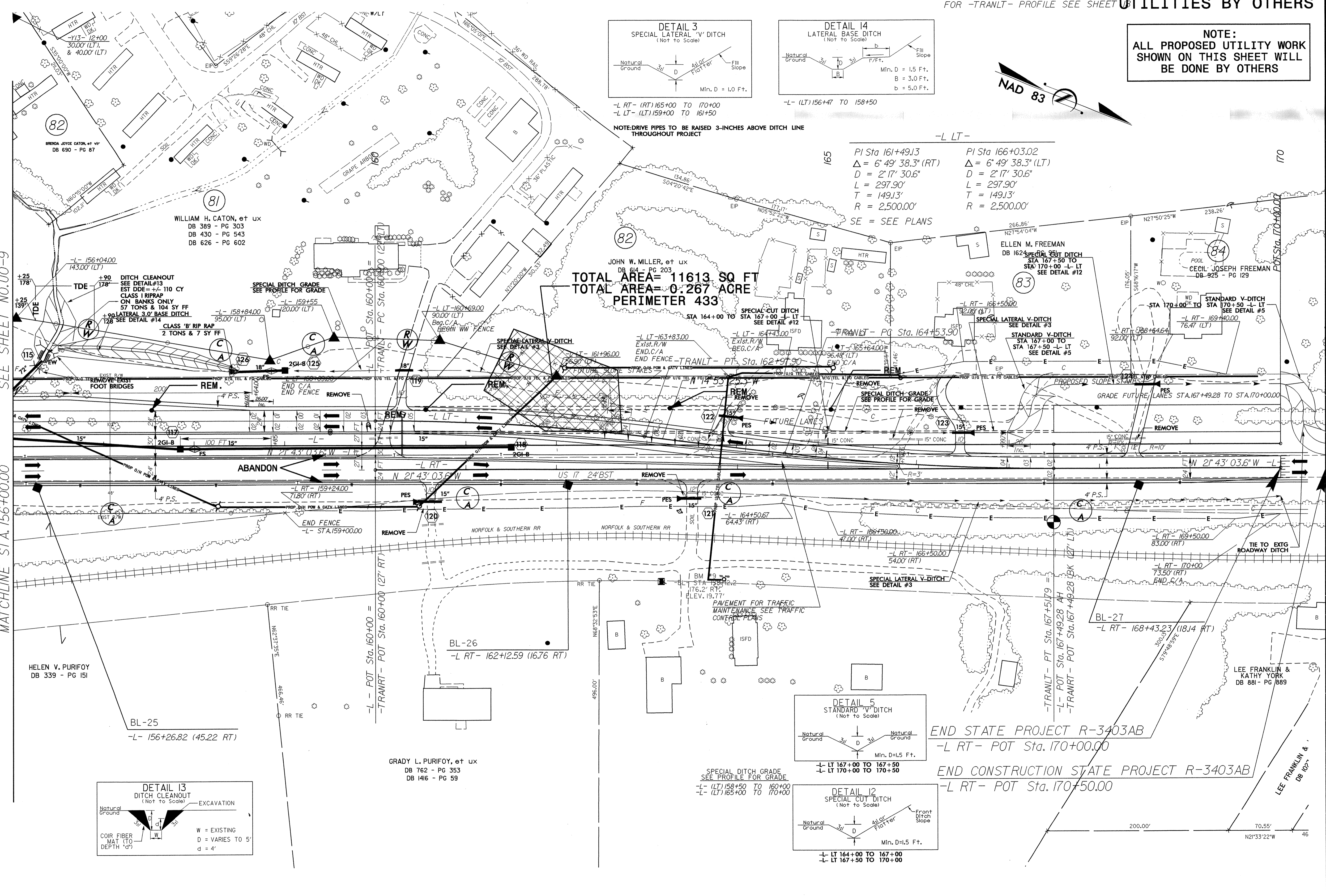
-L (LT) 156+47 TO 158+50

NOTE: DRIVE PIPES TO BE RAISED 3-INCHES ABOVE DITCH LINE THROUGHOUT PROJECT

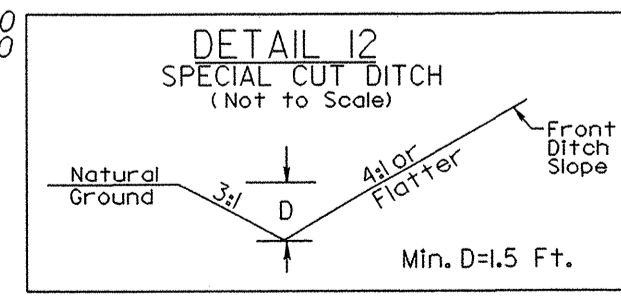
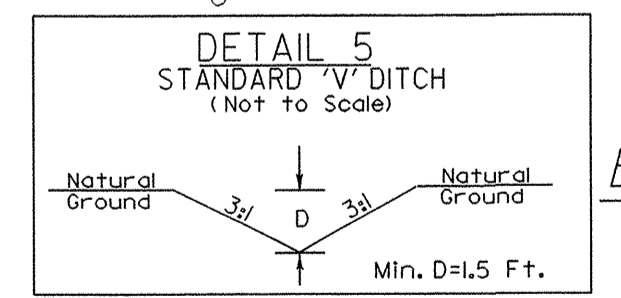
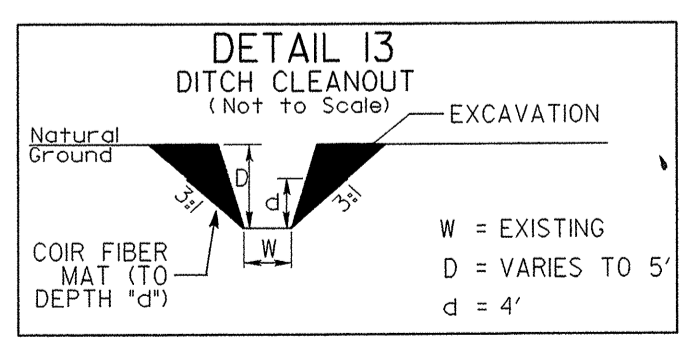
-L LT-  
 PI Sta 161+49.13 Δ = 6' 49" 38.3" (RT)  
 D = 2' 17" 30.6"  
 L = 297.90'  
 T = 149.13'  
 R = 2,500.00'  
 SE = SEE PLANS



SEE SHEET NO. U0-9  
 MATCHLINE STA. 156+00.00



TOTAL AREA = 11613 SQ FT  
 TOTAL AREA = 0.267 ACRE  
 PERIMETER 433



SPECIAL DITCH GRADE  
 SEE PROFILE FOR GRADE  
 -L (LT) 158+50 TO 160+00  
 -L (LT) 165+00 TO 170+00

-L LT 167+00 TO 167+50  
 -L LT 170+00 TO 170+50

-L LT 164+00 TO 167+00  
 -L LT 167+50 TO 170+00

END STATE PROJECT R-3403AB  
 -L RT- POT Sta. 170+00.00

END CONSTRUCTION STATE PROJECT R-3403AB  
 -L RT- POT Sta. 170+50.00

8/13/99

23-JUN-2008 17:40:5...  
 ut