

DCN:

0053DEL P10a2

TIP PROJECT: P-5208B

CONTRACT: C203145

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

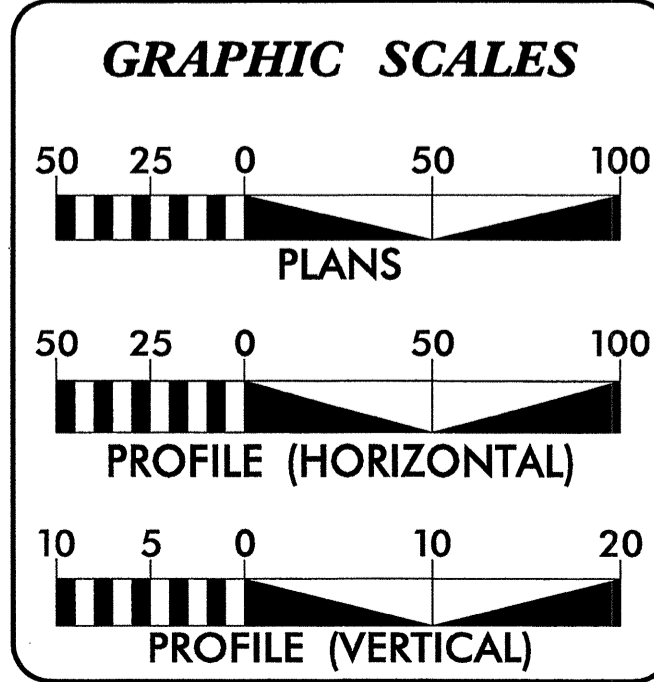
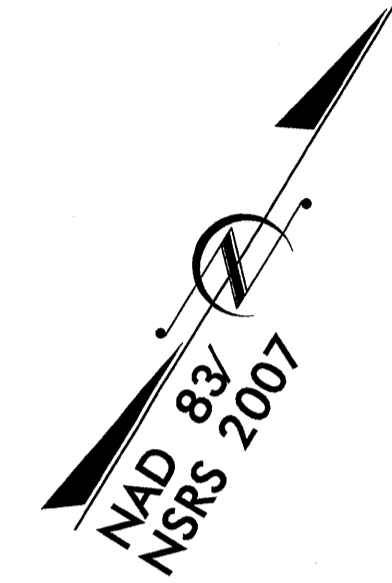
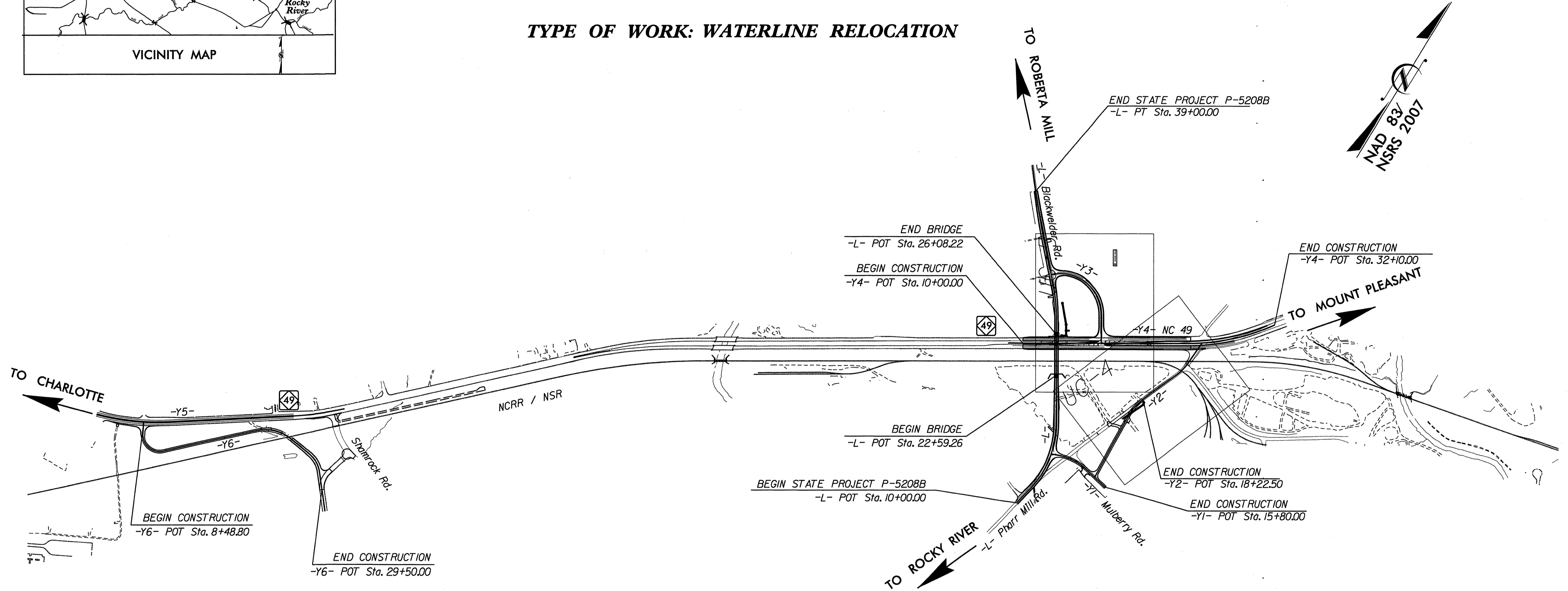
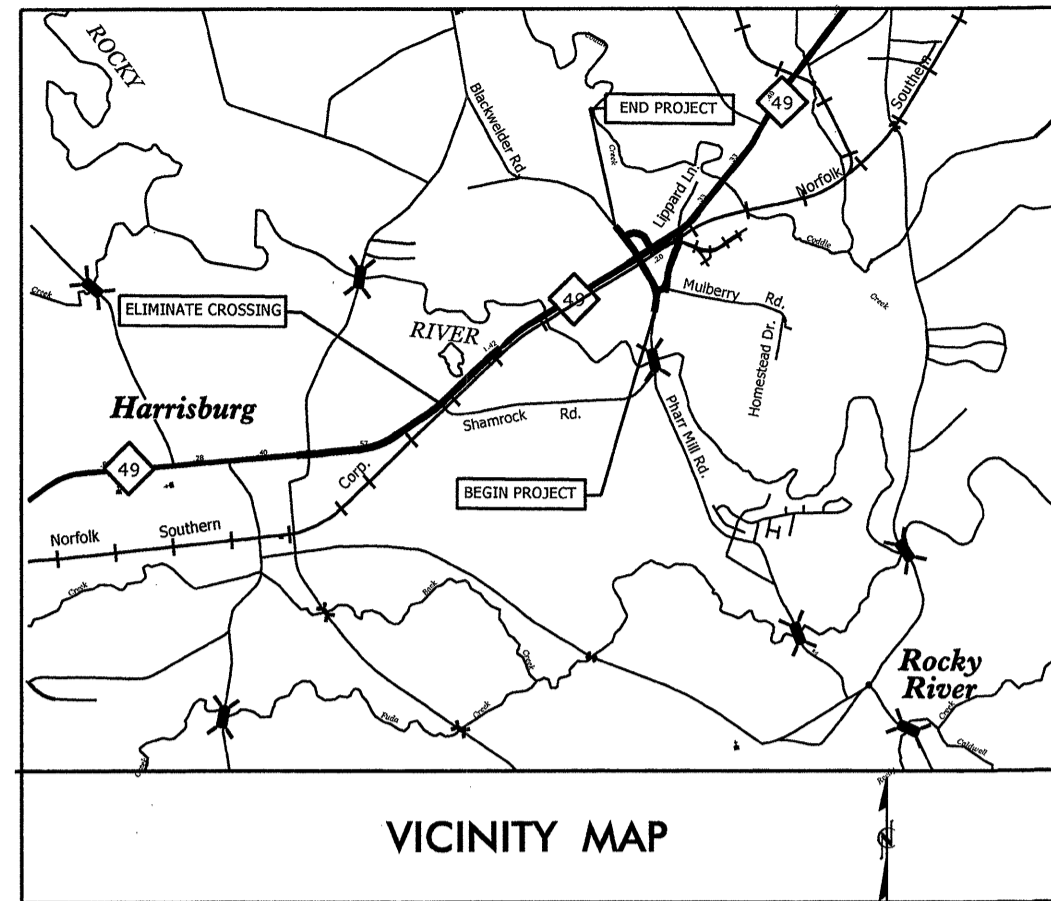
**CABARRUS COUNTY**

LOCATION: PHARR MILL ROAD /BLACKWELDER

TYPE OF WORK: WATERLINE RELOCATION



T.I.P. NO.	SHEET NO.	
P-5208B	UC-1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
50000.1.STRO5T1B	FRA-FR-HSR-006-10-01-00	PE, Util. PE
50000.3.STRO2T4D		UTIL CONSTRUCT



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILTY SYMBOLOGY
UC-3	DETAILS
UC-4 THRU UC-5	UTILTY CONSTRUCTION PLAN & PROFILE SHEETS

**WATER AND SEWER OWNERS ON PROJECT**

TOWN OF HARRISBURG

Prepared in the Office of:  
URS Corporation - North Carolina  
1600 Perimeter Park Drive  
Morrisville, North Carolina 27560  
TELEPHONE (919) 461-1100 FAX (919) 461-1415  
NC LICENSE # C-2243

**URS**

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: APRIL 30, 2012

LETTING DATE: APRIL 16, 2013

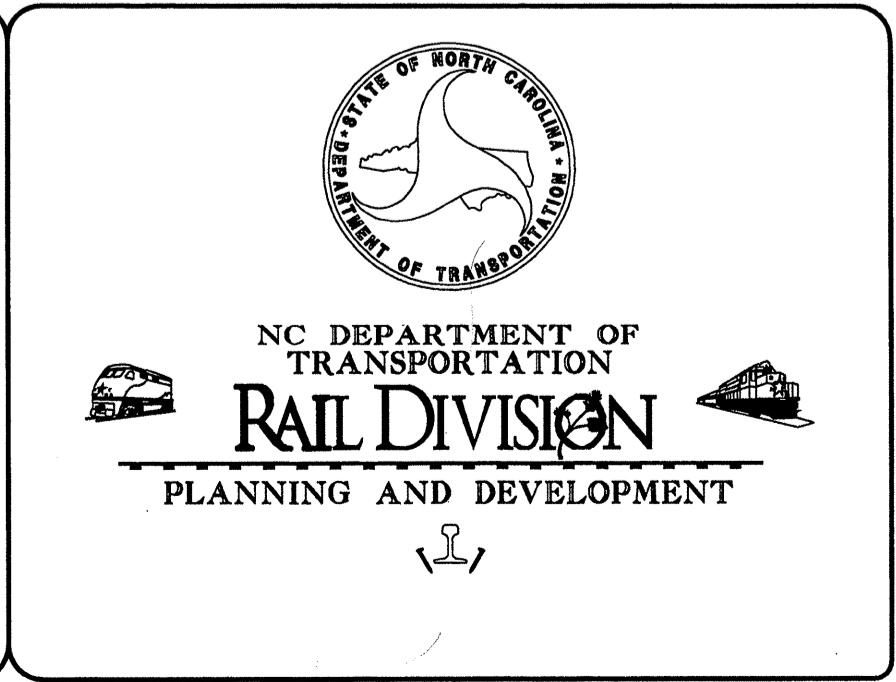
EDWARD G. EDENS, PE  
PROJECT ENGINEER

DENNIS K. HOYLE  
UTILITY ENGINEER

UTILITY ENGINEER

DENNIS K. HOYLE  
SEAL 10746  
ENGINEER

SIGNATURE: *Dennis K. Hoyle* 2-25-13 P.E.



STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# UTILITIES PLAN SHEET SYMBOLS

DCN: 0053DEL P10a2

## PROPOSED WATER SYMBOLS

Water Line (Sized as Shown)	_____
11¼ Degree Bend	++
22½ Degree Bend	++
45 Degree Bend	+X
90 Degree Bend	++
Plug	⊥
Tee	++
Cross	++
Reducer	▶
Gate Valve	GV
Butterfly Valve	BV
Tapping Valve	TGV
Line Stop	LS
Line Stop with Bypass	LS/BP
Blow Off	BO
Fire Hydrant	PH
Relocate Fire Hydrant	REH
Remove Fire Hydrant	REM FH
Water Meter	PWM
Relocate Water Meter	RWM
Remove Water Meter	REM WM
Water Pump Station	PS(W)
RPZ Backflow Preventer	PRPZ
DCV Backflow Preventer	PBFP
Relocate RPZ Backflow Preventer	RRPZ
Relocate DCV Backflow Preventer	RBFP

## PROPOSED SEWER SYMBOLS

Gravity Sewer Line (Sized as Shown)	_____
Force Main Sewer Line (Sized as Shown)	_____
Manhole (Sized per Note)	•
Sewer Pump Station	PS(SS)

## PROPOSED MISCELLANEOUS UTILITIES SYMBOLS

Power Pole	o
Telephone Pole	o
Joint Use Pole	o
Telephone Pedestal	TEL PED
Utility Line by Others (Type as Shown)	_____
Trenchless Installation	_____
Encasement by Open Cut	_____
Encasement	_____

Thrust Block	
Air Release Valve	AR
Utility Vault	UV
Concrete Pier	CP
Steel Pier	SP
Plan Note	NOTE
Pay Item Note	PAY ITEM

## EXISTING UTILITIES SYMBOLS

Power Pole	•
Telephone Pole	•
Joint Use Pole	•
Utility Pole	•
Utility Pole with Base	□
H-Frame Pole	•—•
Power Transmission Line Tower	⊠
Water Manhole	⊗
Power Manhole	⊗
Telephone Manhole	⊗
Sanitary Sewer Manhole	⊗
Hand Hole for Cable	⊠
Power Transformer	⊠
Telephone Pedestal	⊠
CATV Pedestal	⊠
Gas Valve	◇
Gas Meter	◇
Located Miscellaneous Utility Object	•
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

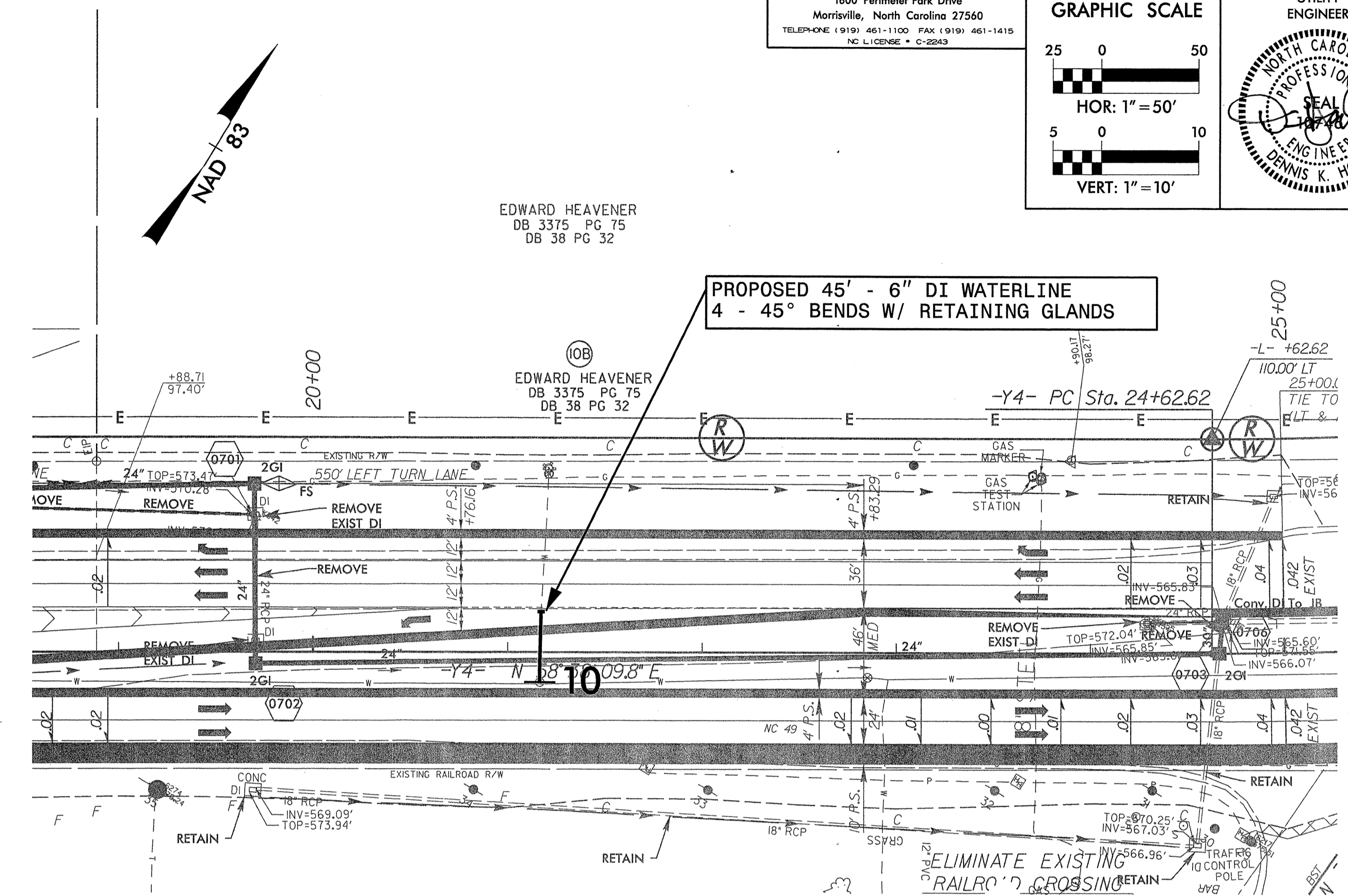
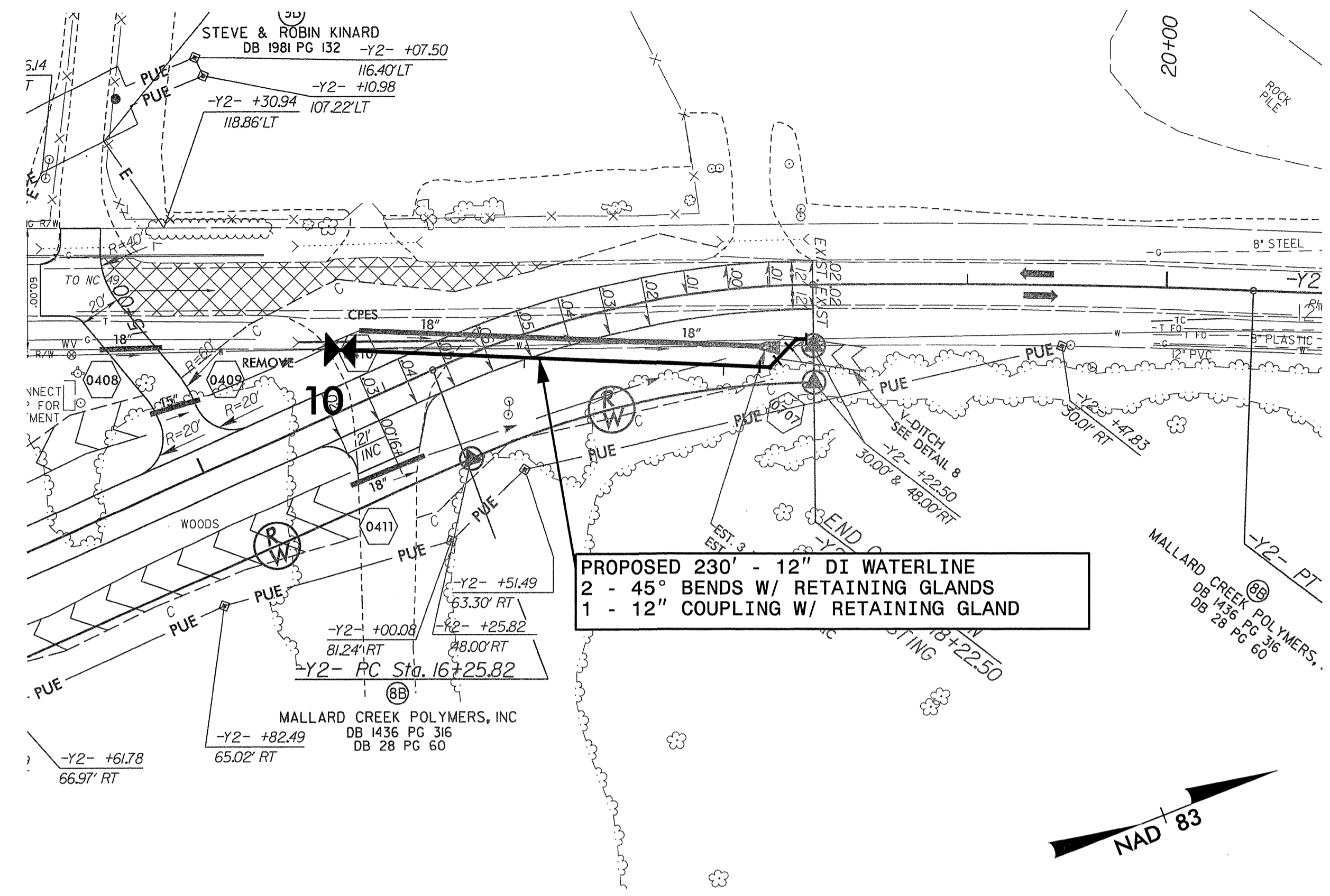
*Underground Power Line	—P—
*Underground Telephone Cable	—T—
*Underground Telephone Conduit	—TC—
*Underground Fiber Optics Telephone Cable	—T FO—
*Underground TV Cable	—TV—
*Underground Fiber Optics TV Cable	—TV FO—
*Underground Gas Pipeline	—G—
Aboveground Gas Pipeline	A/G Gas
*Underground Water Line	—W—
Aboveground Water Line	A/G Water
*Underground Gravity Sanitary Sewer Line	—SS—
Aboveground Gravity Sanitary Sewer Line	A/G Sanitary Sewer
*Underground SS Forced Main Line	—FSS—
Underground Unknown Utility Line	—?UL—
SUE Test Hole	•
Water Meter	○
Water Valve	⊗
Fire Hydrant	◇
Sanitary Sewer Cleanout	⊗

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

R:\Utilities\5208B\UC-2\SYMB\_UC02.psh.dgn  
 Lisa  
 REV: 2/1/2012



DCN: 0053DEL P10a2

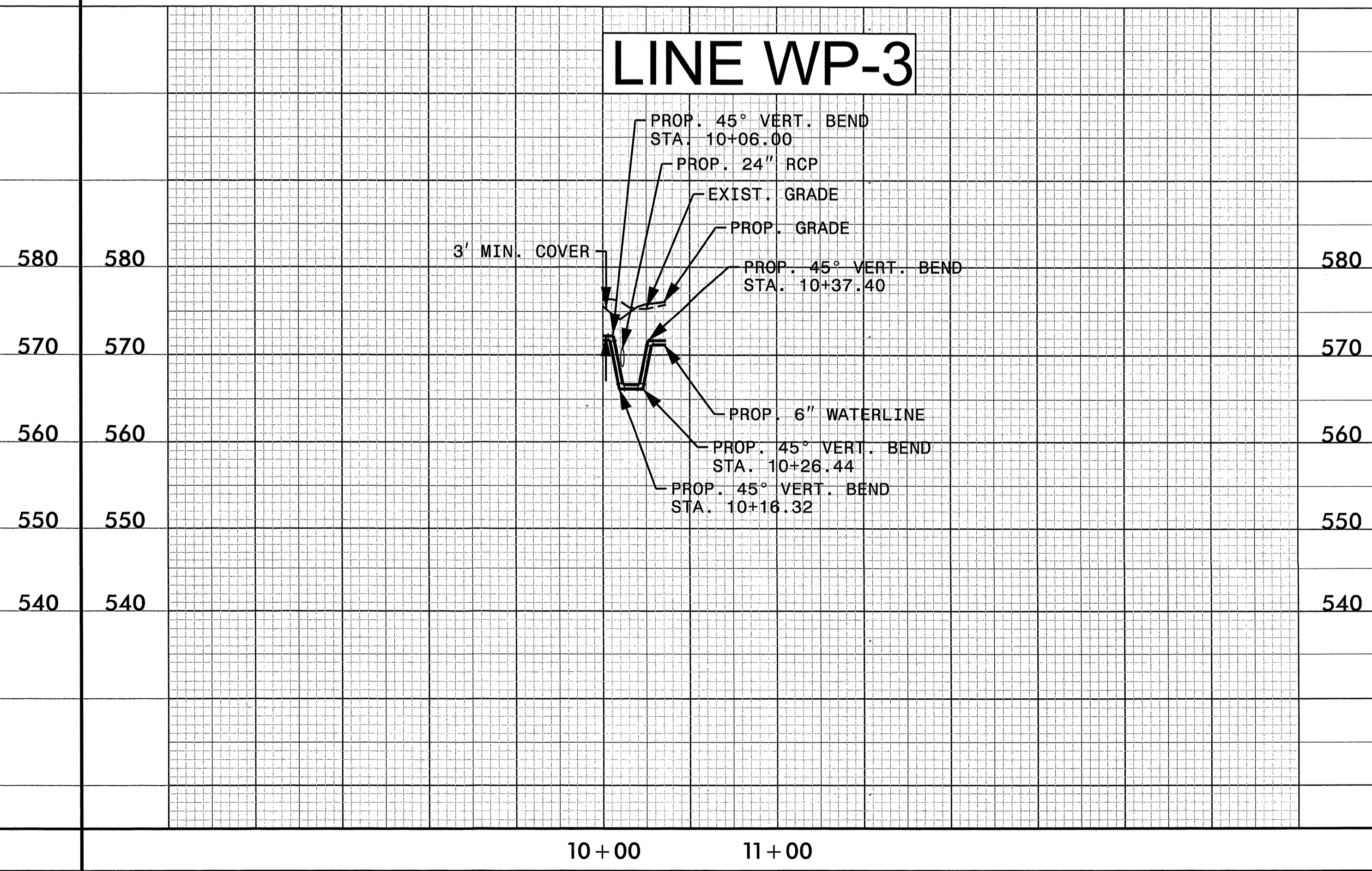
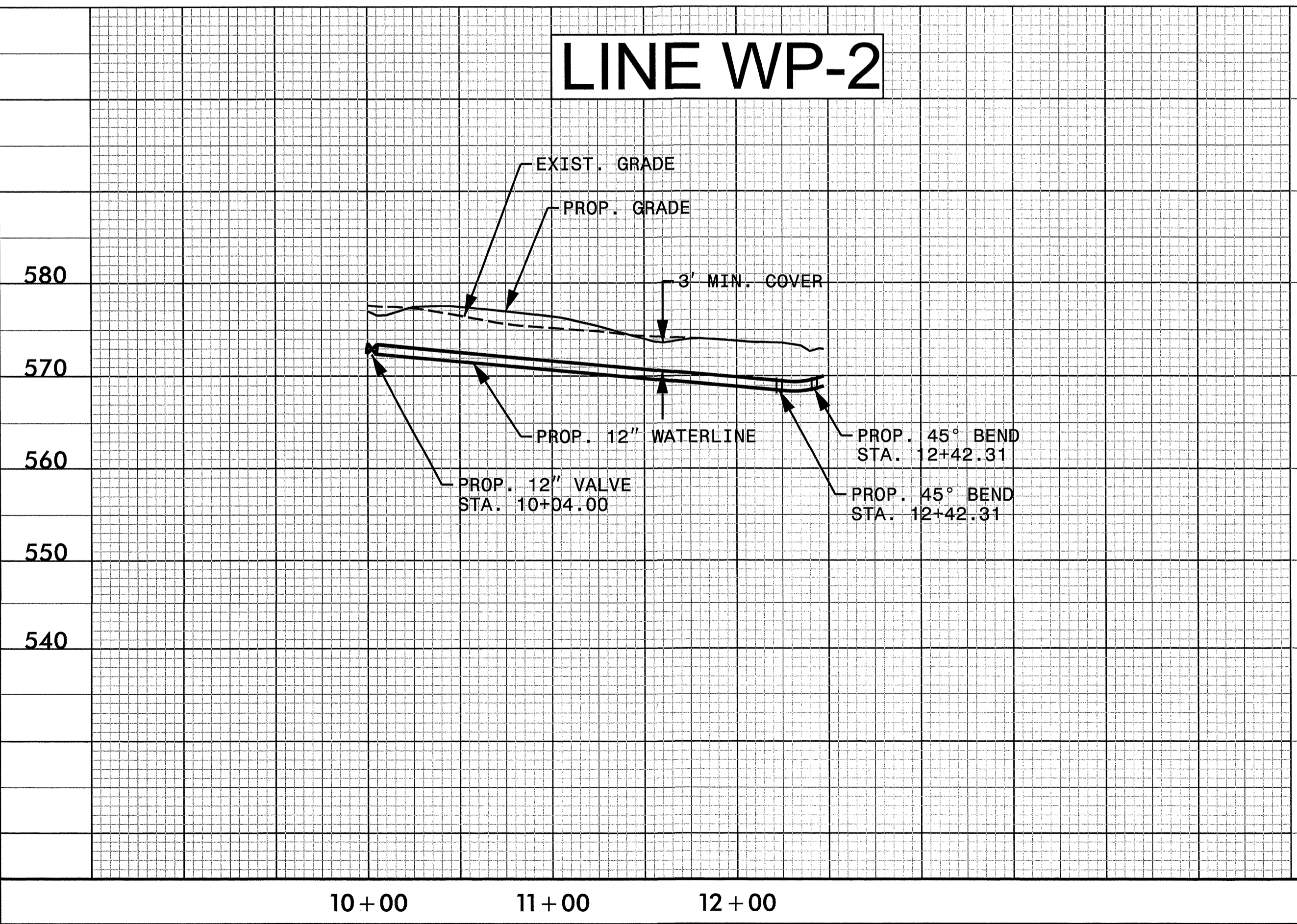


Prepared by  
**URS**  
 URS Corporation - North Carolina  
 1600 Perimeter Park Drive  
 Morrisville, North Carolina 27560  
 TELEPHONE (919) 461-1100 FAX (919) 461-1415  
 NC LIC# 004874 C-0049

PROJECT REFERENCE NO. P-5208B	SHEET NO. UC-4
RDWY. SHEET NO. 4 & 7	UTILITY ENGINEER DENNIS K. HOYLE

GRAPHIC SCALE  
 25 0 50  
 HOR: 1" = 50'  
 5 0 10  
 VERT: 1" = 10'

K:\2013\Projects\UC-P-5208B-Urty.sht-04&07-UCut1 Const Sht-04).psh.dgn  
 3/20/13 10:58:11 AM

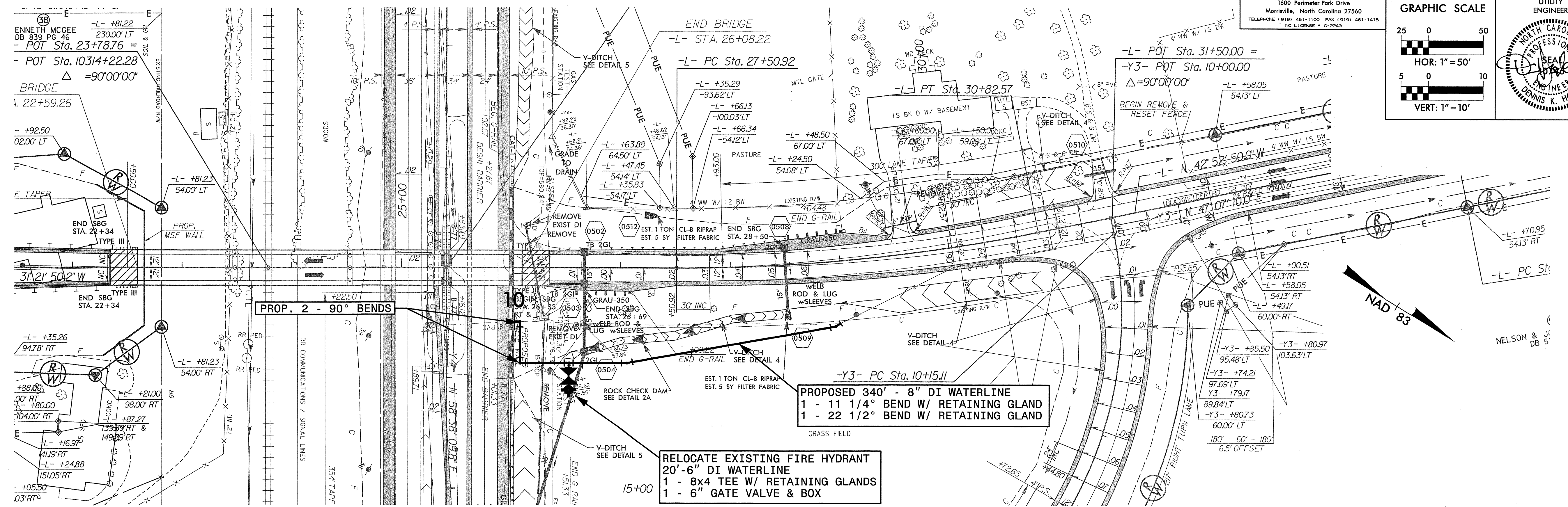


DCN: 0053DEL P10a2

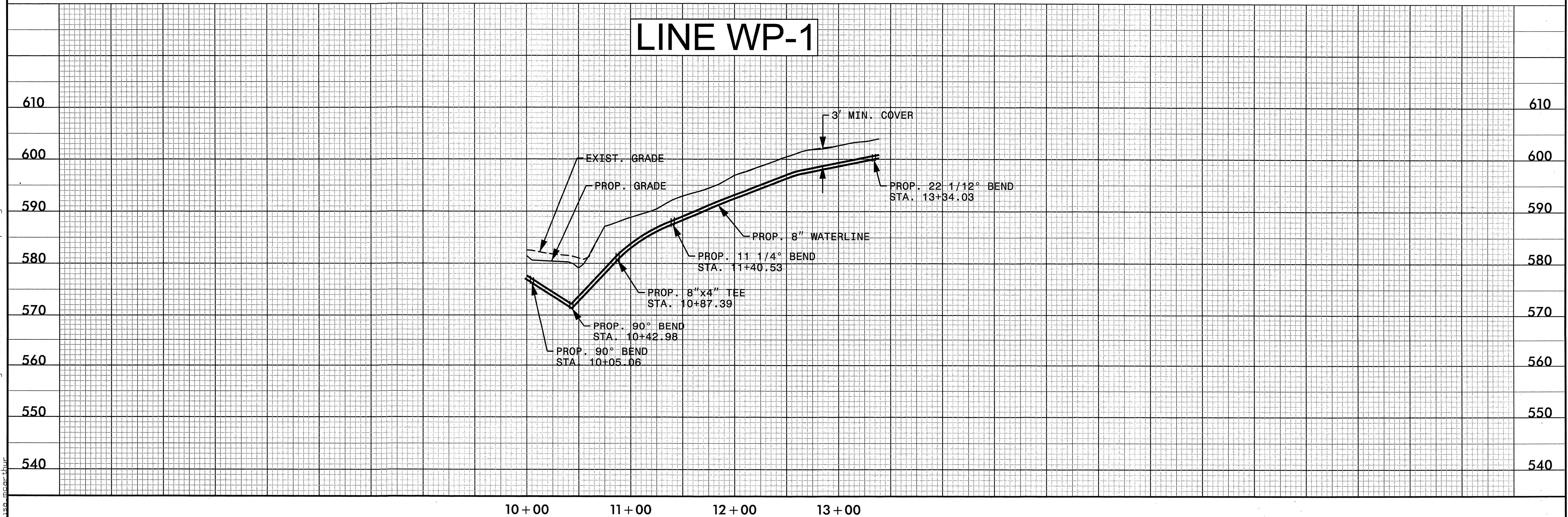
Prepared by  
**URS**  
 URS Corporation - North Carolina  
 1600 Perimeter Park Drive  
 Morrisville, North Carolina 27560  
 TELEPHONE (919) 461-1100 FAX (919) 461-1415  
 NO. LICENSE C-2243

PROJECT REFERENCE NO. P-5208B	SHEET NO. UC-5
RDWY. SHEET NO. 5	UTILITY ENGINEER

GRAPHIC SCALE  
 25 0 50  
 HOR: 1" = 50'  
 5 0 10  
 VERT: 1" = 10'



**LINE WP-1**



1/3/2013 4:16:53 AM NUC-P-5208B.Ut.(r-dy sht..05).LIC(ut) Const Sht..(05).psh.dgn  
 User: mcarthur

DCN: 0053DEL P10a2

TIP PROJECT: P-5208B

CONTRACT: C203145

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**UTILITIES BY OTHERS PLANS  
CABARRUS COUNTY**

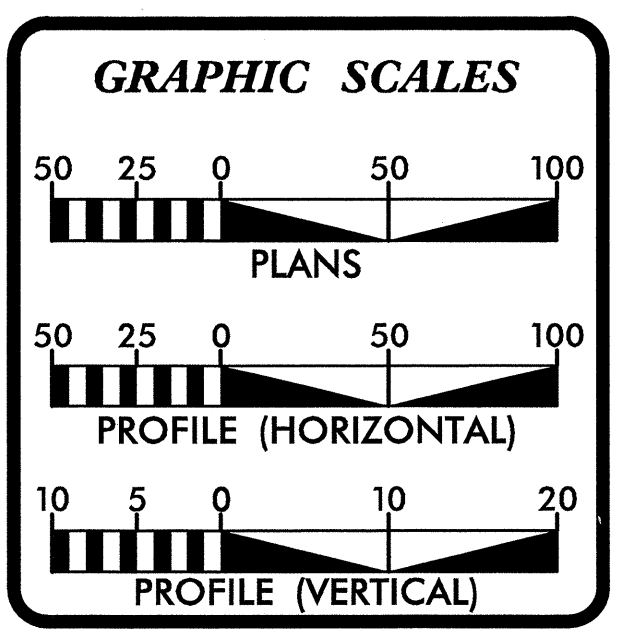
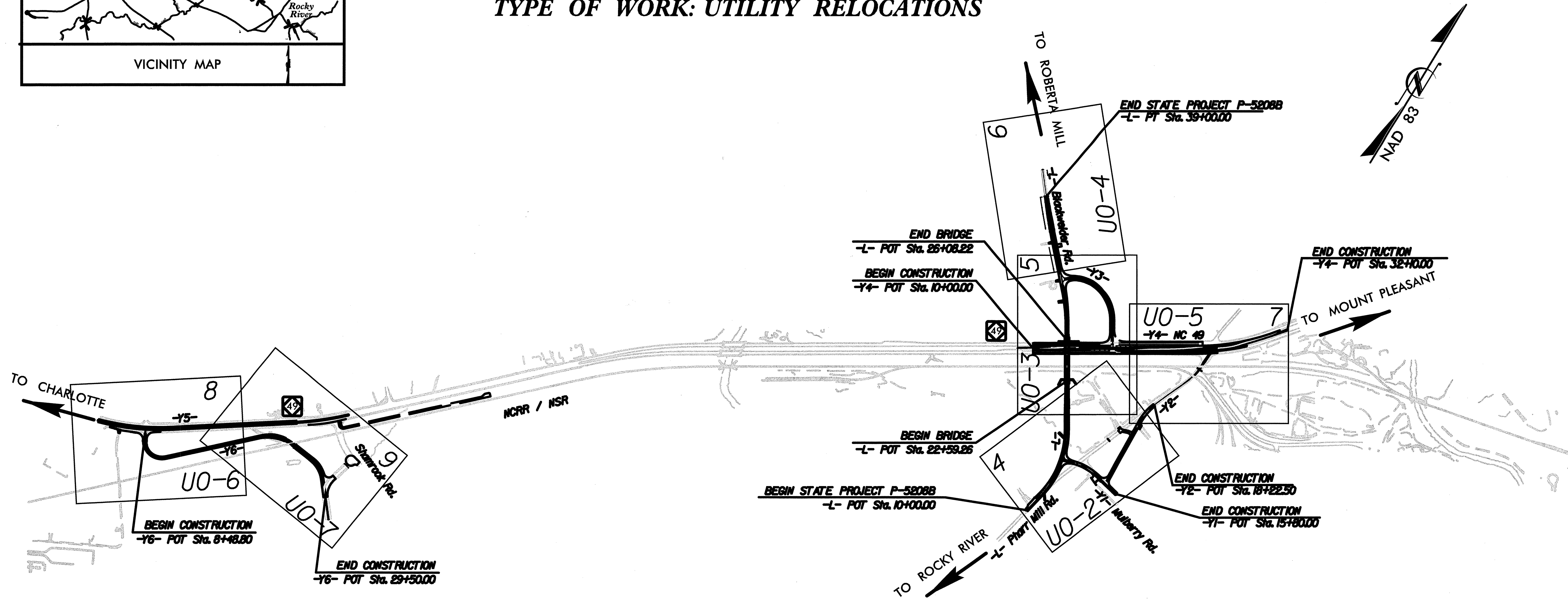
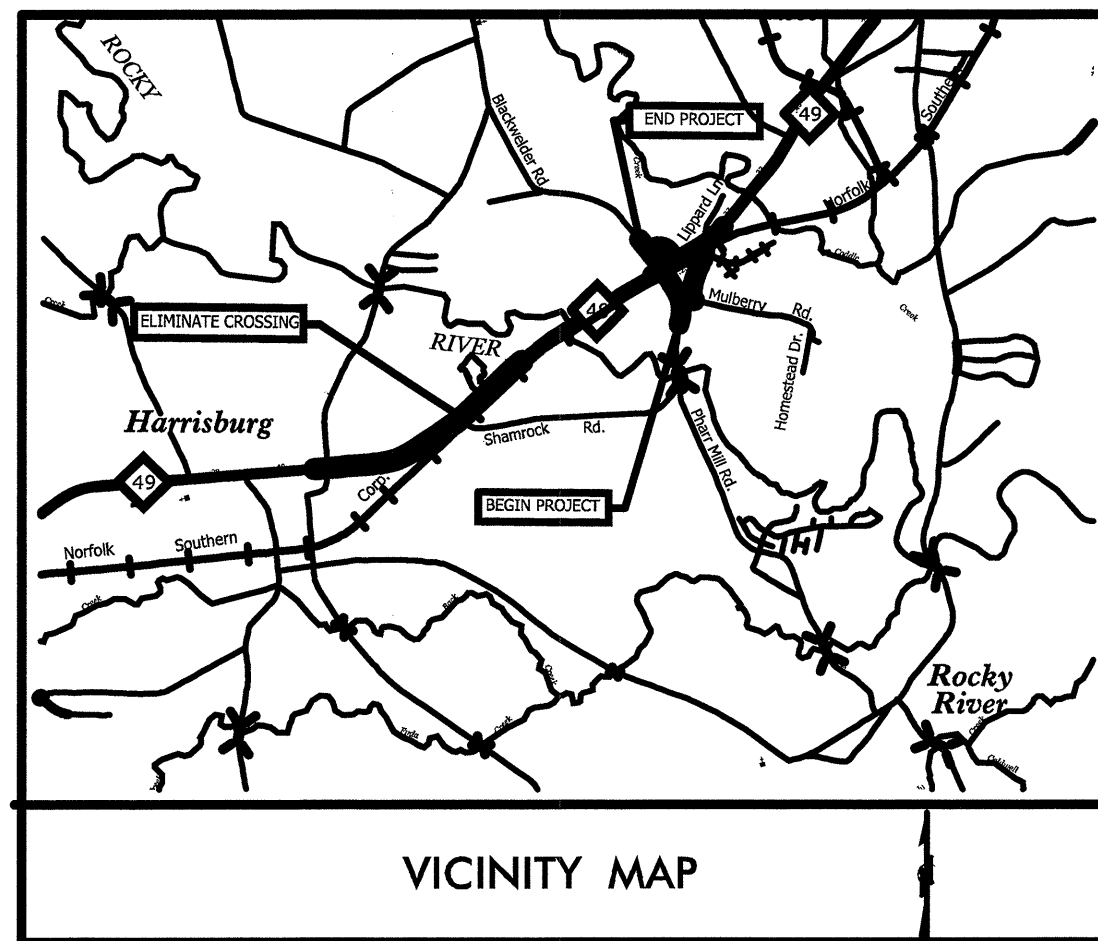
LOCATION: PHARR MILL ROAD /BLACKWELDER  
ROAD GRADE SEPARATION OVER NCRR /NS

TYPE OF WORK: UTILITY RELOCATIONS

T.I.P. NO.	SHEET NO.
P-5208B	UO-1

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
50000.LSTR061B	FRA-FR-HSR-0006-10-01-00	PE, UTIL. PE
50000.LSTR061B		UTIL. CONSTRUCT

**UCC**  
UTILITY COORDINATION CONSULTANTS  
P.O. BOX 450  
MINERAL SPRINGS, N.C. 28108  
(704) 844-9093



**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-7	UTILITIES BY OTHERS PLAN SHEETS

- UTILITY OWNERS ON PROJECT**
- (1) DUKE ENERY.....POWER
  - (2) UNION POWER.....POWER
  - (3) WINDSTREAM.....COMMUNICATIONS
  - (4) PSNC ENERGY.....GAS
  - (5) TIME WARNER CABLE.....CABLE TV

PREPARED IN THE OFFICE OF:  
DIVISION OF HIGHWAYS  
UTILITIES UNIT  
UTILITIES ENGINEERING

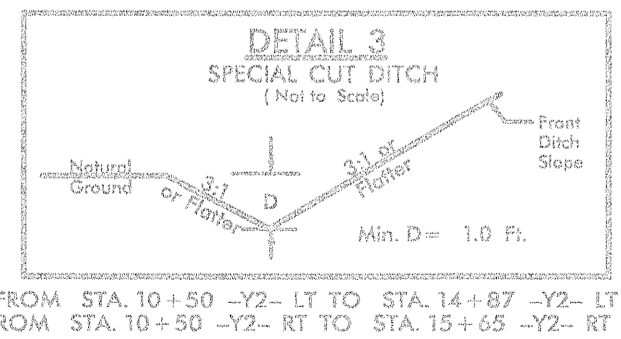
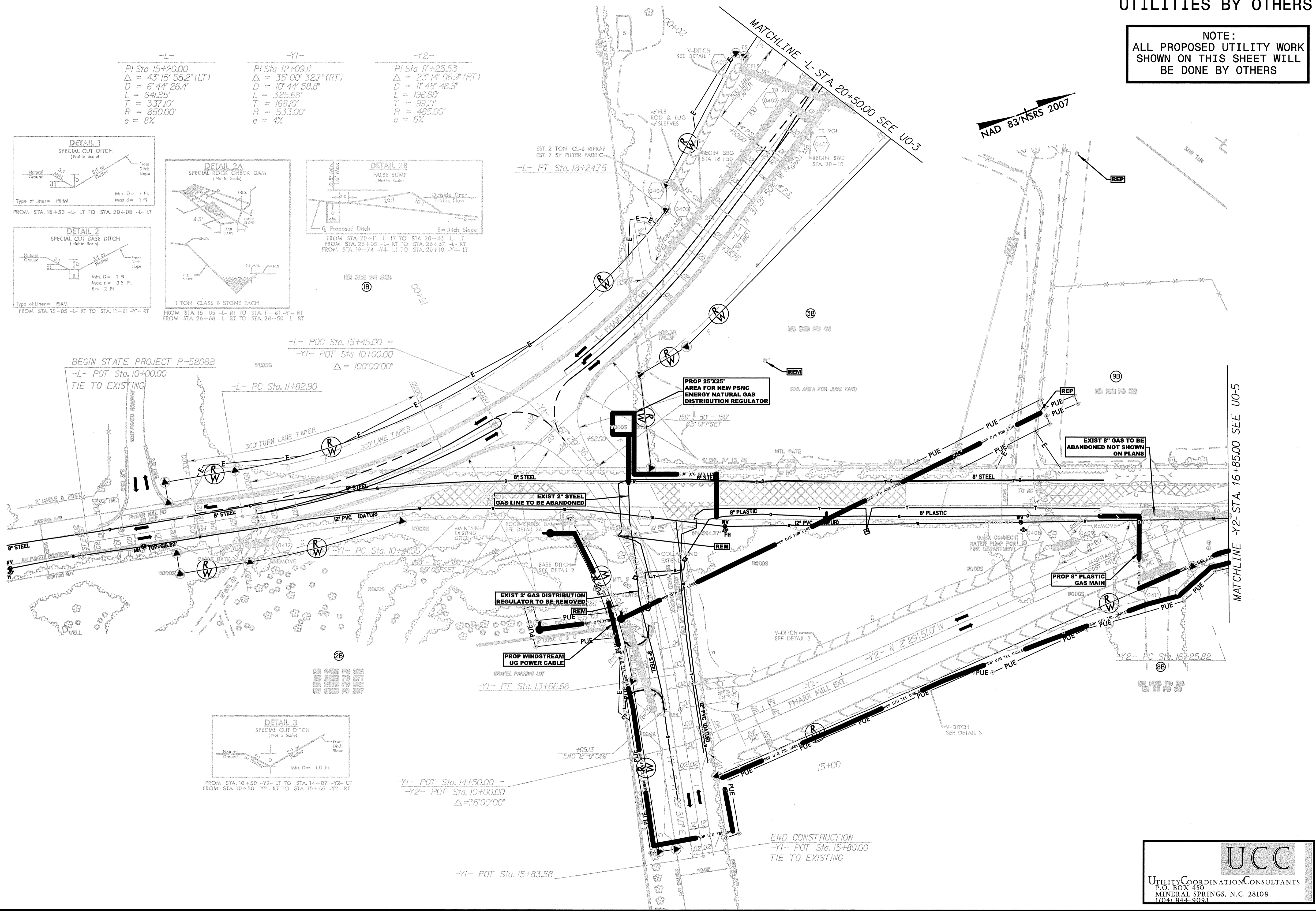
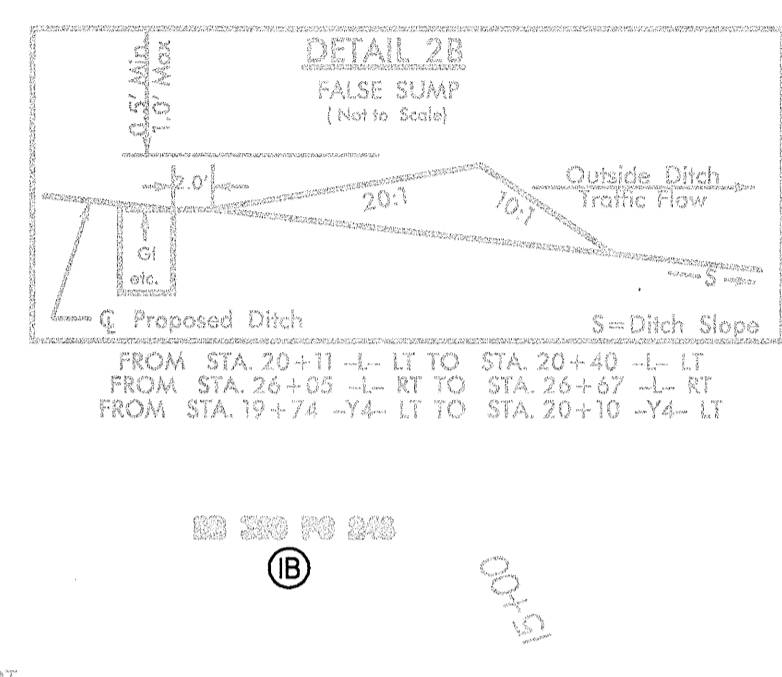
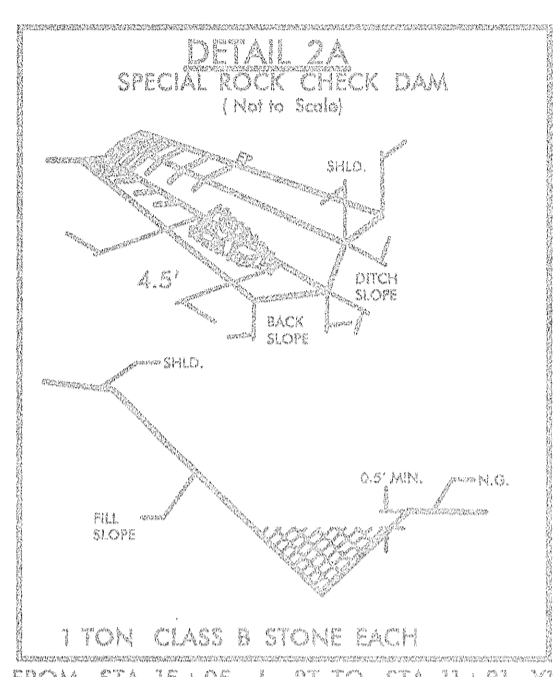
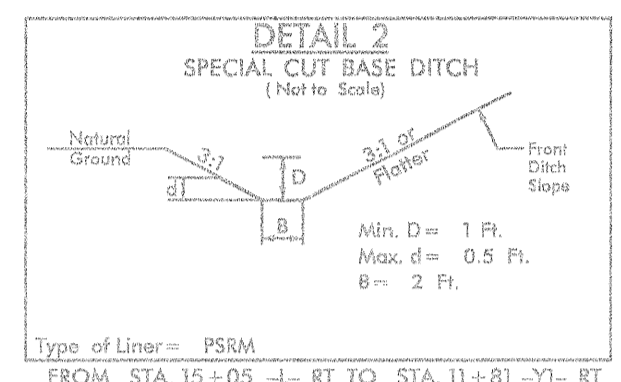
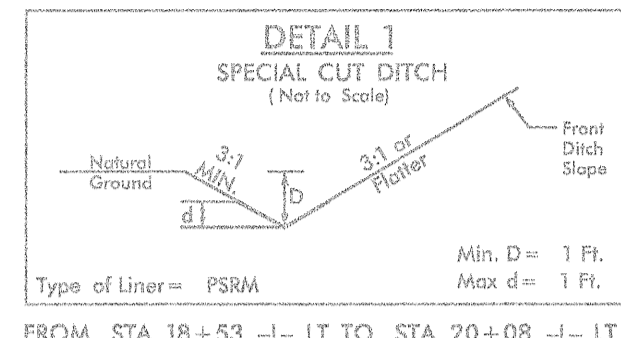
1555 MAIL SERVICES CENTER  
RALEIGH NC 27699-1555  
PHONE (919) 707-6690  
FAX (919) 250-4151

**Roger Worthington, P.E.** UTILITIES SECTION ENGINEER

UTILITIES BY OTHERS

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

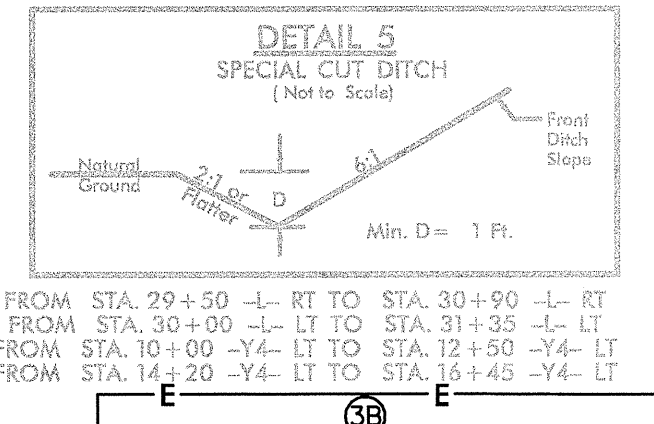
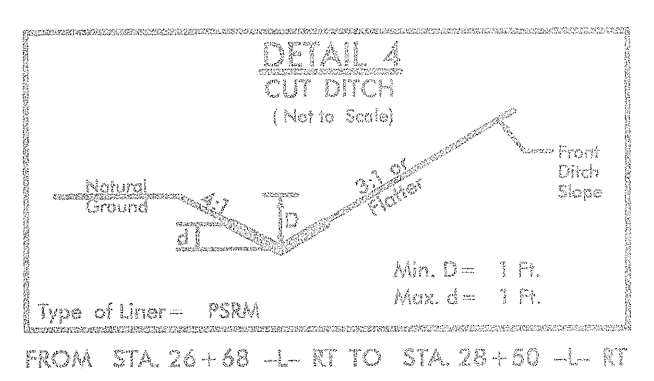
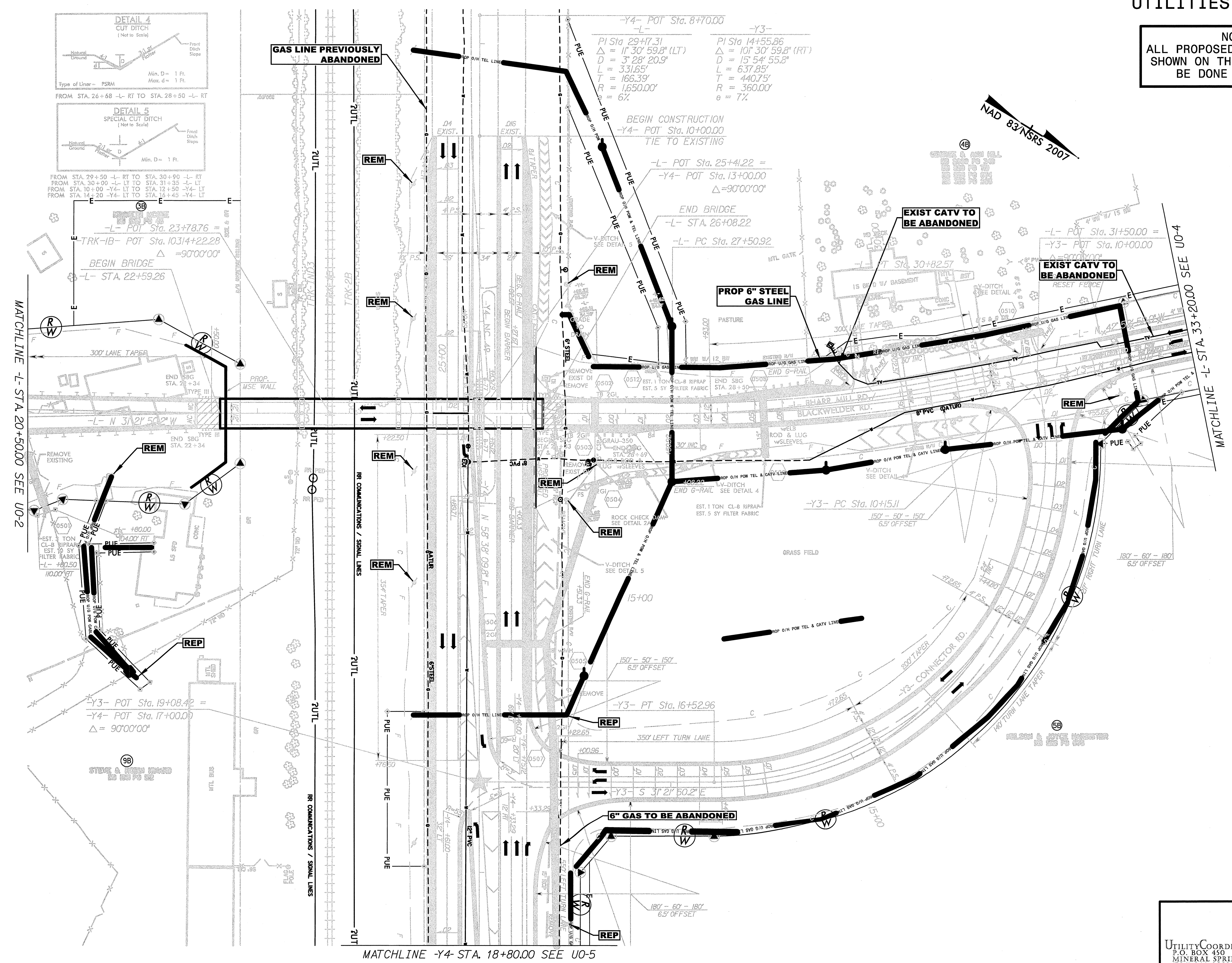
-L-	-Y1-	-Y2-
PI Sta 15+20.00	PI Sta 12+09.11	PI Sta 17+25.53
$\Delta = 43^{\circ}15'55.2''$ (LT)	$\Delta = 35^{\circ}00'32.7''$ (RT)	$\Delta = 23^{\circ}14'06.9''$ (RT)
D = 6' 44" 26.4"	D = 10' 44" 58.8"	D = 11' 48" 48.8"
L = 641.85'	L = 325.68'	L = 196.68'
T = 337.10'	T = 168.10'	T = 99.71'
R = 850.00'	R = 533.00'	R = 485.00'
e = 8%	e = 4%	e = 6%



### UTILITIES BY OTHERS

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

DCN: 0053DEL\_P10a2



MATCHLINE -L- STA. 20+50.00 SEE UO-2

MATCHLINE -Y4- STA. 18+80.00 SEE UO-5

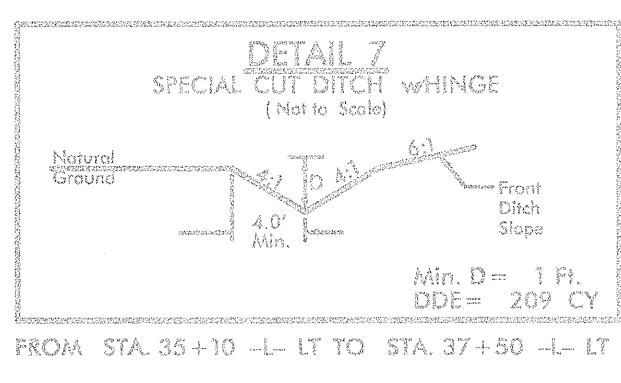
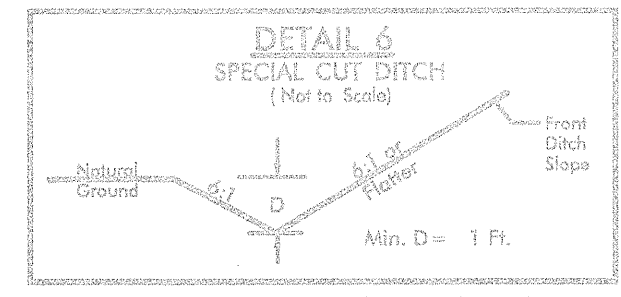


UTILITIES BY OTHERS

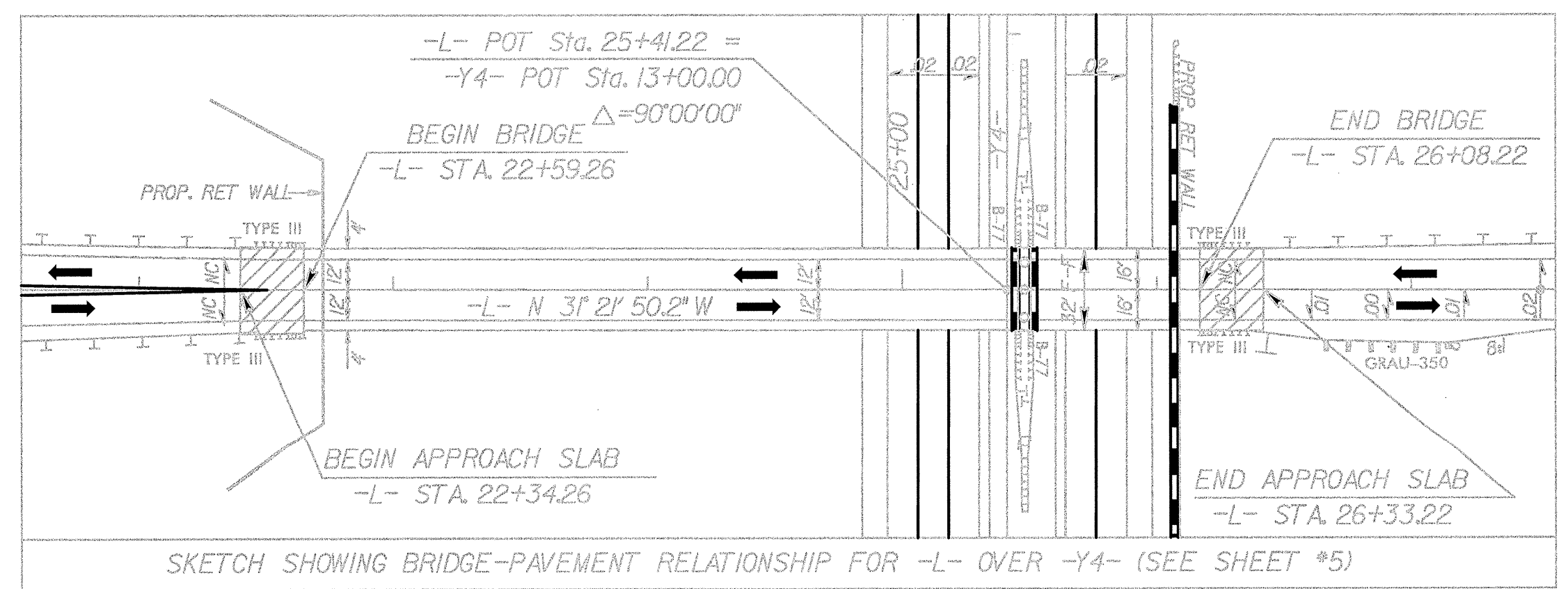
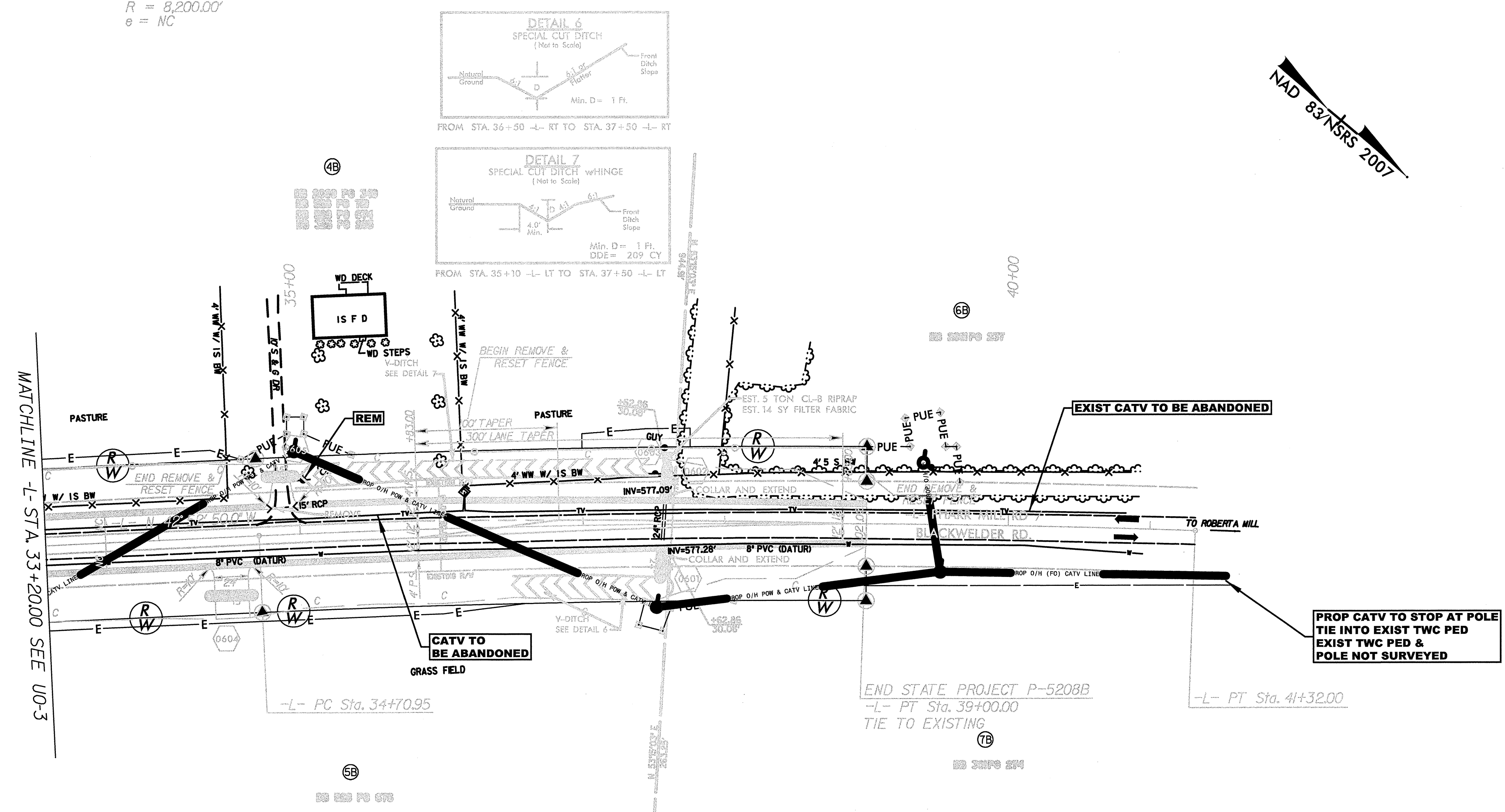
NOTE:  
ALL PROPOSED UTILITY WORK  
SHOWN ON THIS SHEET WILL  
BE DONE BY OTHERS

DCN: 0053DEL\_P10a2

-L-  
PI Sta 38+01.69  
 $\Delta = 4^{\circ} 37' 10.0''$  (RT)  
D = 0' 41' 55.4"  
L = 66112'  
T = 3307.4'  
R = 8,200.00'  
e = NC



NAD 83 N/SRS 2007

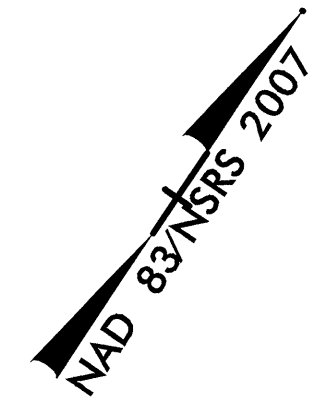




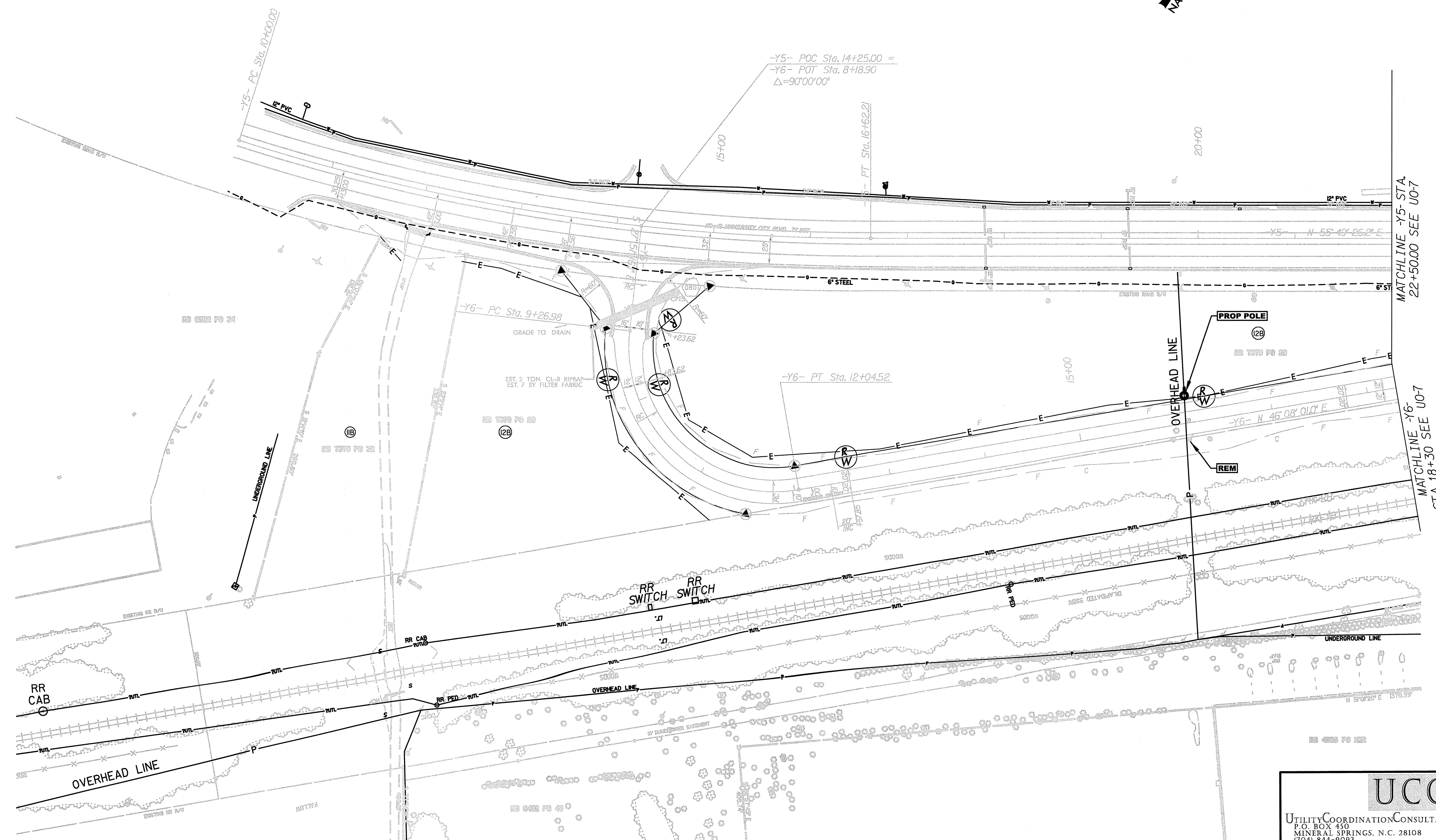
DCN: 0053DEL\_P10a2

### UTILITIES BY OTHERS

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



-Y5-	-Y6-
PI Sta 13+33.75	PI Sta 11+26.08
$\Delta = 17^{\circ} 38' 51.0''$ (LT)	$\Delta = 106^{\circ} 00' 42.9''$ (LT)
D = 2' 39" 53.7"	D = 38' 11" 49.9"
L = 662.21'	L = 277.54'
T = 333.75'	T = 199.10'
R = 2150.00'	R = 150.00'
e = Exlst.	e = FC

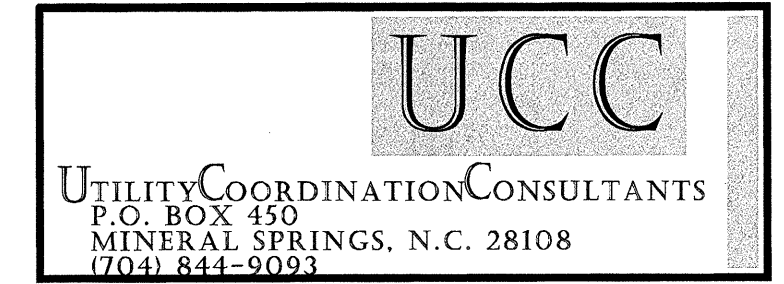


MATCHLINE -Y5- STA. 22+50.00 SEE U0-7

MATCHLINE -Y6- STA. 18+30 SEE U0-7

### UTILITIES BY OTHERS

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

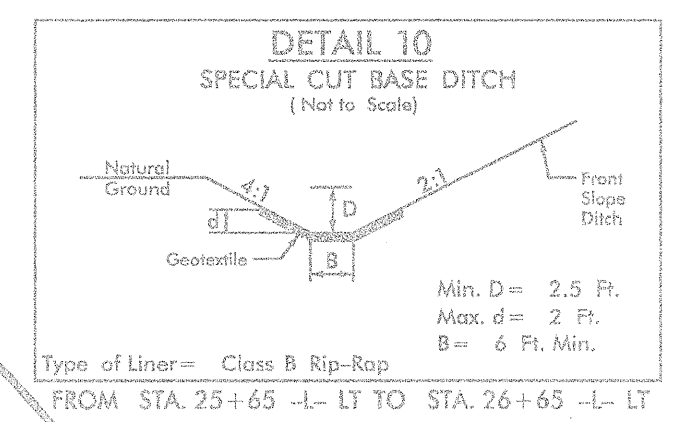
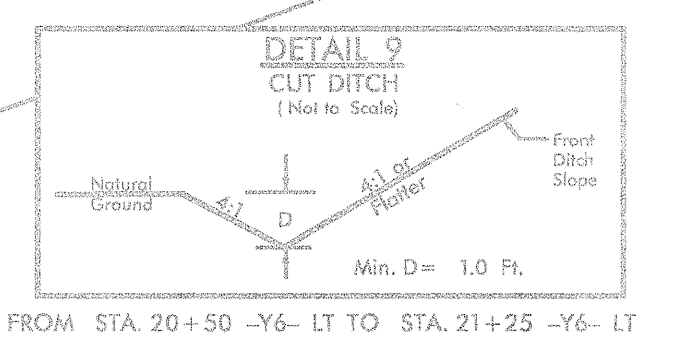
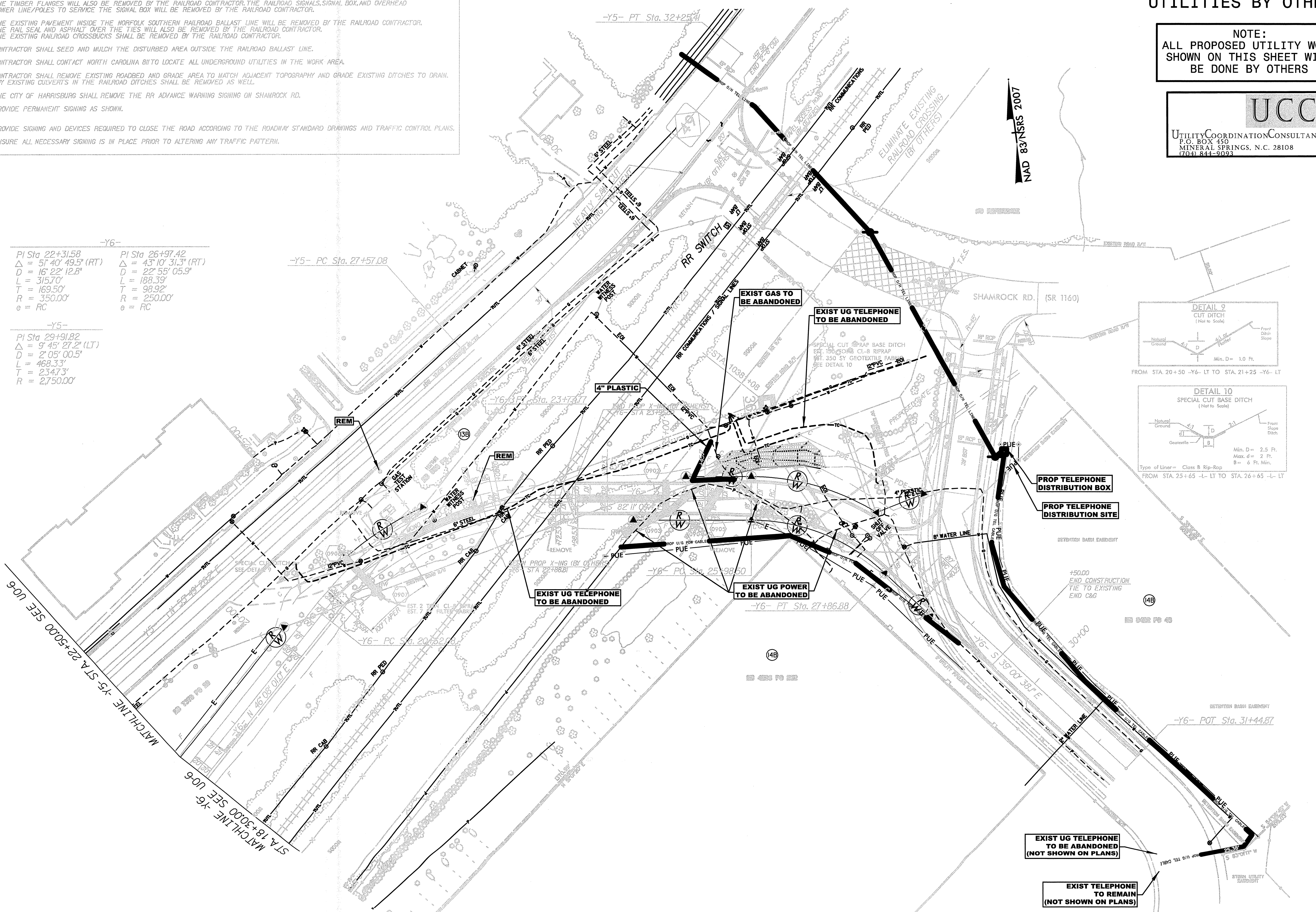


DCN: 0053DEL P10a2

AT GRADE RAILROAD CLOSURE NOTES:  
CONTACT THE NCDOT RAIL DIVISION PROJECT ENGINEER AT 919-715-0296 TO SCHEDULE THE CLOSURE OF SHAMROCK RD.  
THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR. THE TIMBER FLANGES WILL ALSO BE REMOVED BY THE RAILROAD CONTRACTOR. THE RAILROAD SIGNALS, SIGNAL BOX, AND OVERHEAD POWER LINE/POLES TO SERVICE THE SIGNAL BOX WILL BE REMOVED BY THE RAILROAD CONTRACTOR.  
THE EXISTING PAVEMENT INSIDE THE NORFOLK SOUTHERN RAILROAD BALLAST LINE WILL BE REMOVED BY THE RAILROAD CONTRACTOR. THE RAIL SEAL AND ASPHALT OVER THE TIES WILL ALSO BE REMOVED BY THE RAILROAD CONTRACTOR. THE EXISTING RAILROAD CROSSBUCKS SHALL BE REMOVED BY THE RAILROAD CONTRACTOR.  
CONTRACTOR SHALL SEED AND MULCH THE DISTURBED AREA OUTSIDE THE RAILROAD BALLAST LINE.  
CONTRACTOR SHALL CONTACT NORTH CAROLINA BUI TO LOCATE ALL UNDERGROUND UTILITIES IN THE WORK AREA.  
CONTRACTOR SHALL REMOVE EXISTING ROADBED AND GRADE AREA TO MATCH ADJACENT TOPOGRAPHY AND GRADE EXISTING DITCHES TO DRAIN. ANY EXISTING CULVERTS IN THE RAILROAD DITCHES SHALL BE REMOVED AS WELL.  
THE CITY OF HARRISBURG SHALL REMOVE THE RR ADVANCE WARNING SIGNING ON SHAMROCK RD.  
PROVIDE PERMANENT SIGNING AS SHOWN.  
PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC CONTROL PLANS. ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

**-Y6-**  
PI Sta 22+31.58      PI Sta 26+97.42  
Δ = 57° 40' 49.5" (RT)      Δ = 43° 10' 31.3" (RT)  
D = 16° 22' 12.8"      D = 22° 55' 05.9"  
L = 315.70'      L = 188.39'  
T = 169.50'      T = 98.92'  
R = 350.00'      R = 250.00'  
e = RC      e = RC

**-Y5-**  
PI Sta 29+91.82  
Δ = 9° 45' 27.2" (LT)  
D = 2° 05' 00.5"  
L = 468.33'  
T = 234.73'  
R = 2750.00'



NAD 83/NSRS 2007