

0515DEL_P21a2

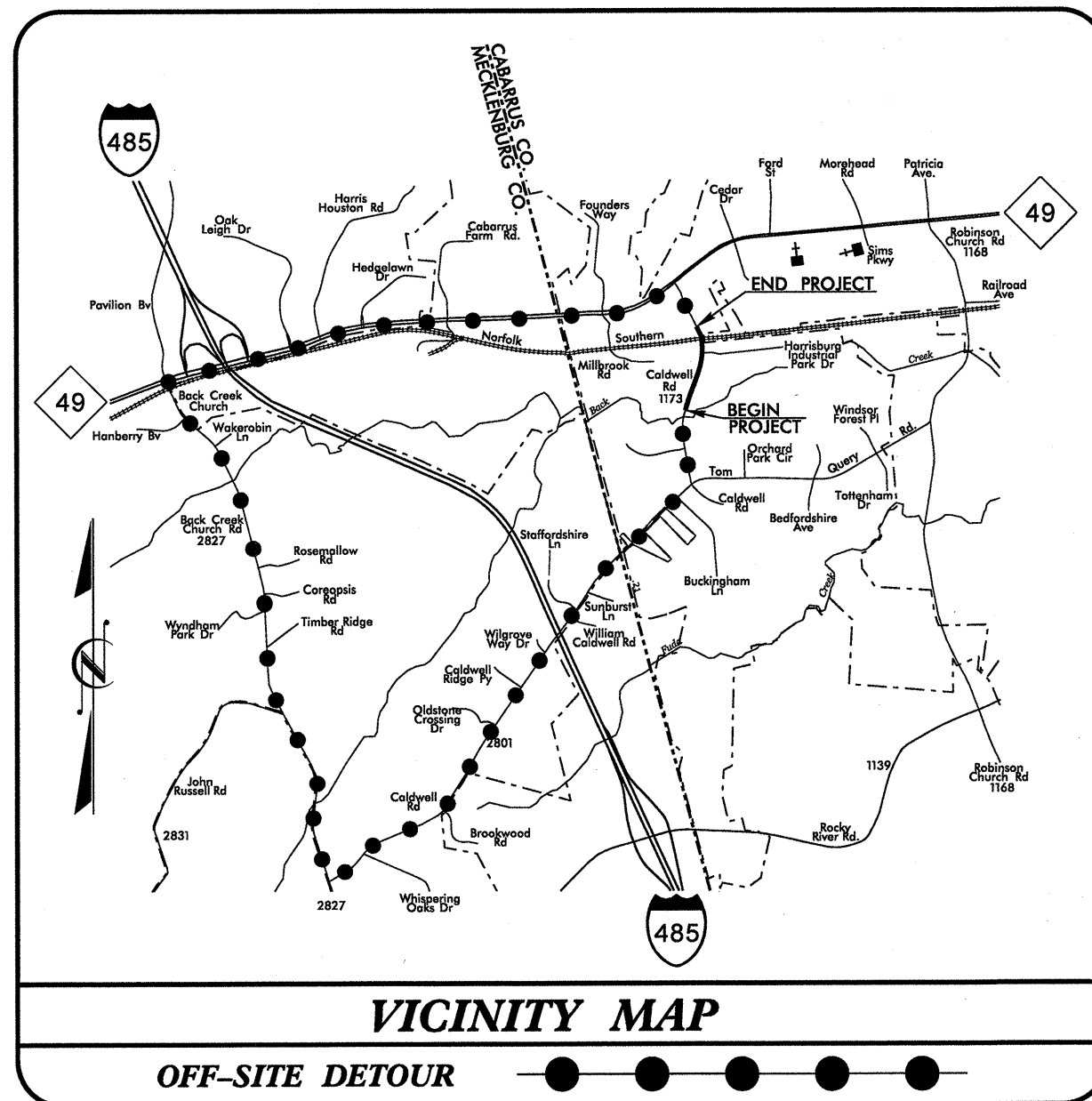
REVISIONS

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P:\2010\1104\01\P-5208F\Utilities\P5208F_u.tl.uc.tsh.dgn
2/17/2013

TIP PROJECT: P-5208F

CONTRACT: C203147

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
NCDOT RAIL DIVISION

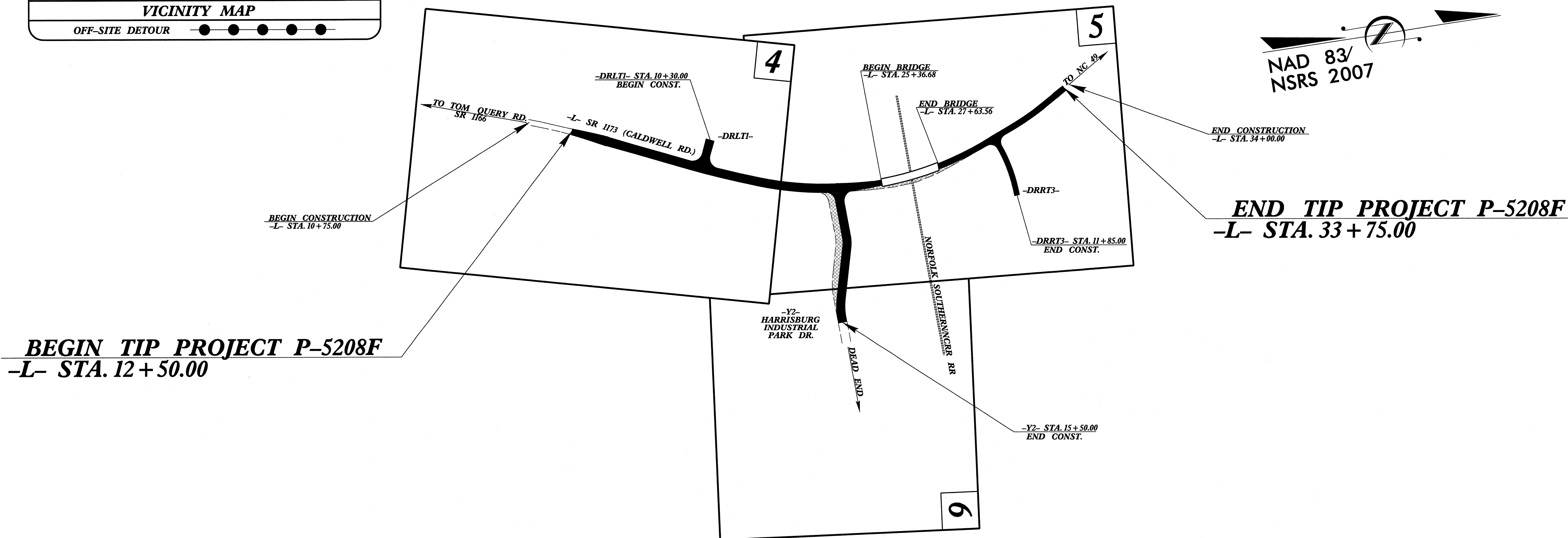


T.I.P. NO.
P-5208F

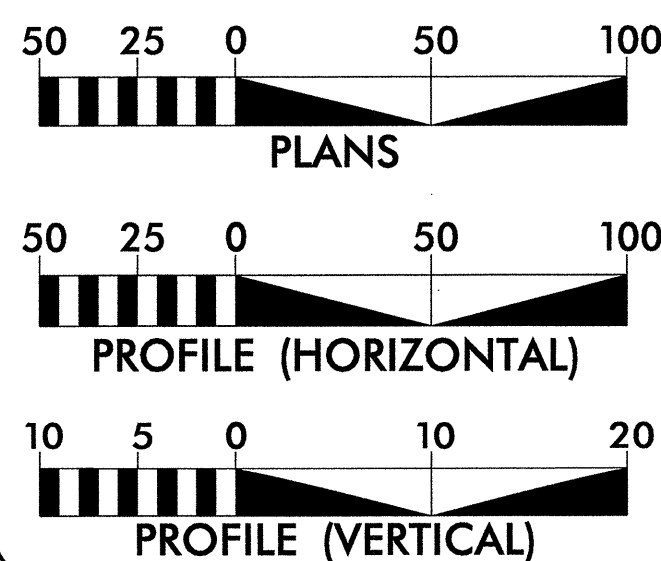
SHEET NO.
UC-1

CABARRUS COUNTY

LOCATION: PROPOSED CALDWELL ROAD (SR 1173) GRADE SEPARATION OVER THE NS/NCRR RAILROAD IN HARRISBURG
TYPE OF WORK: UTILITY CONSTRUCTION



GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2 THRU UC-4	UTILITY CONSTRUCTION SHEETS
UC-5 THRU UC-6	PROFILE SHEETS

UTILITY OWNERS ON PROJECT

- (1) WATER - TOWN OF HARRISBURG
- (2) SANITARY SEWER - TOWN OF HARRISBURG



Prepared for the North Carolina Department of Transportation in the Office of:
559 JONES FRANKLIN ROAD
SUITE 164
RALEIGH, N.C. 27606
License No. F-50377
Bus: 919 851 8077
Fax: 919 851 8107

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
APRIL 30, 2012

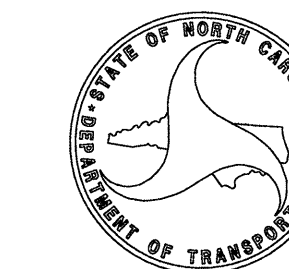
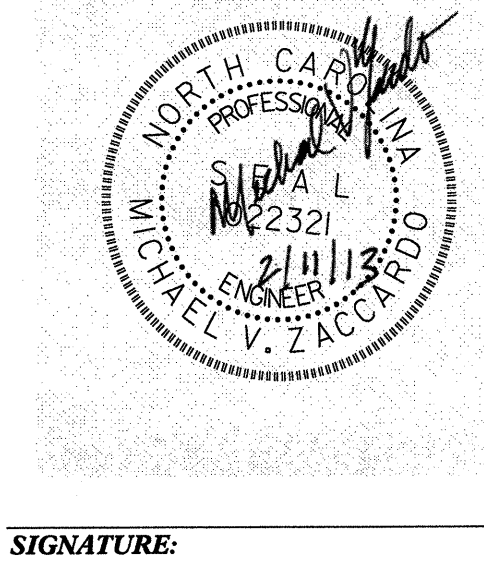
LETTING DATE:
MAY 21, 2013

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

SEAL:

UTILITY DESIGN ENGINEER



NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT

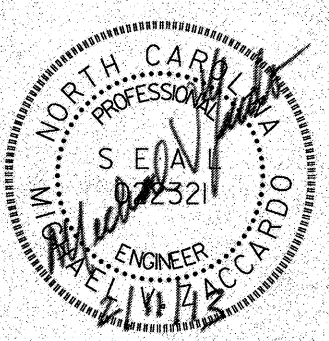
CAPITAL YARD
156 MAIL SERVICE CENTER
RALEIGH, NC 27606

0515DEL P21a
5/14/99

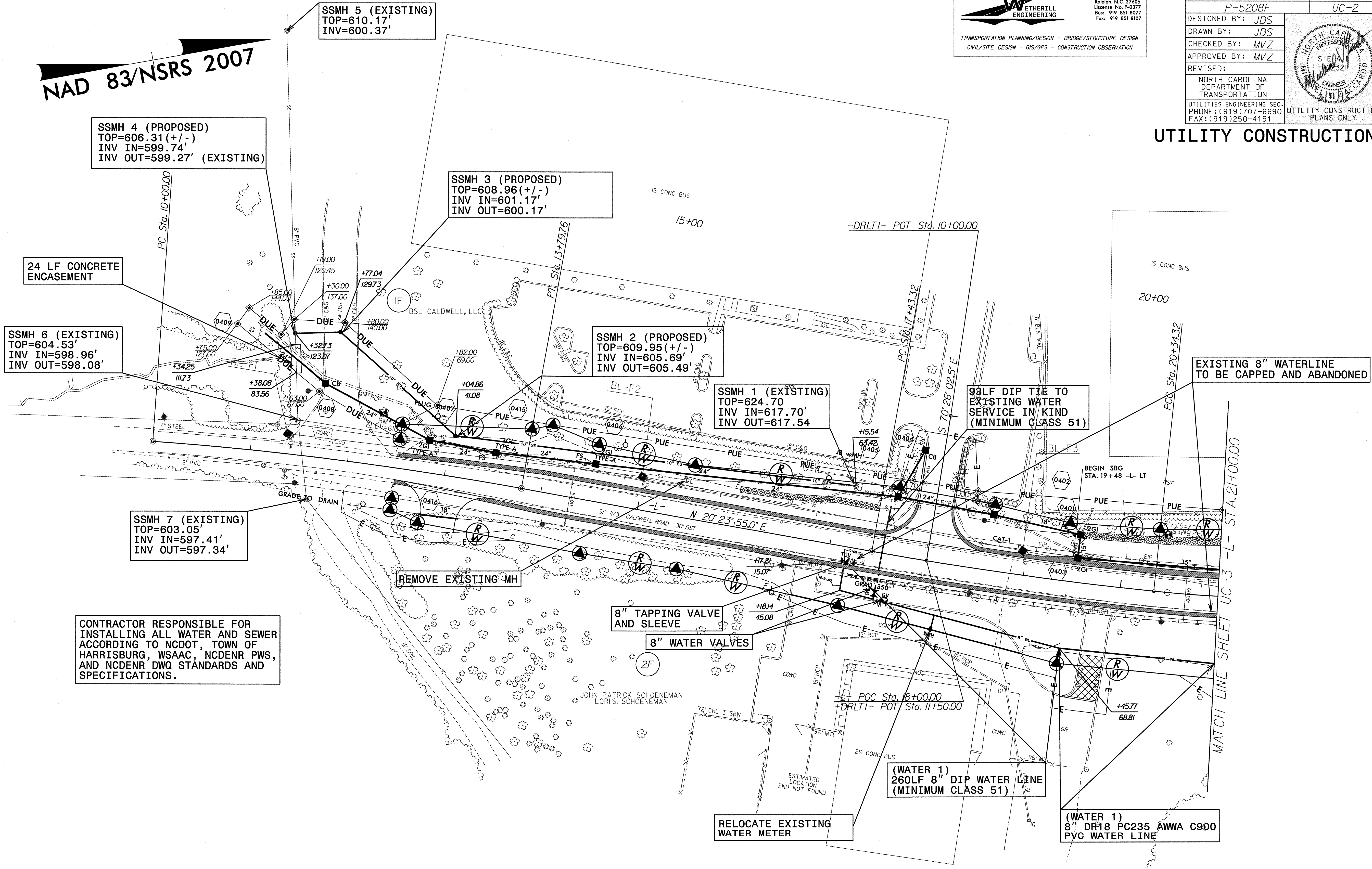
NAD 83/NSRS 2007

ETHERILL ENGINEERING
559 Jones Franklin Rd. Suite 164
Raleigh, N.C. 27604
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. <i>P-5208F</i>	SHEET NO. <i>UC-2</i>
DESIGNED BY: <i>JDS</i>	
DRAWN BY: <i>JDS</i>	
CHECKED BY: <i>MVZ</i>	
APPROVED BY: <i>MVZ</i>	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



-L-

PI Sta 11+90.07 Δ = 6' 13" 00.2" (RT) D = 1' 38' 13.3" L = 379.76' T = 190.07' R = 3,500.00' SE = SEE PLANS	PI Sta 18+88.89 Δ = 4' 16' 30.5" (LT) D = 1' 28' 08.8" L = 291.00' T = 145.57' R = 3,900.00' SE = SEE PLANS	PI Sta 25+29.02 Δ = 42' 06' 40.1" (LT) D = 4' 27' 31.7" L = 944.45' T = 494.70' R = 1,285.00' SE = SEE PLANS
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SEE SHEET UC-5 FOR SEWER PROFILE
SEE SHEET UC-6 FOR WATER PROFILE

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 4/13/15 10:50 AM
 11/11/2016

0515DEL P21a2

5/14/09

CONTRACTOR RESPONSIBLE FOR INSTALLING ALL WATER AND SEWER ACCORDING TO NCDOT, TOWN OF HARRISBURG, WSAAC, NCDENR PWS, AND NCDENR DWQ STANDARDS AND SPECIFICATIONS.

PI Sta 25+29.02 Δ = 42°06'40" (LT) D = 4'27'31.7" L = 944.45' T = 494.70' R = 1,285.00' SE = SEE PLANS	PI Sta 32+14.25 Δ = 10'32'50" (LT) D = 5'15'23.4" L = 200.65' T = 100.61' R = 1,090.00'	PI Sta 34+26.76 Δ = 17'45'23.9" (RT) D = 7'57'27.9" L = 223.14' T = 112.47' R = 720.00'
--	--	--

ETHERILL ENGINEERING
559 Jones Franklin Rd, Suite 164
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TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO. P-5208F	SHEET NO. UC-3
DESIGNED BY: JDS	
DRAWN BY: JDS	
CHECKED BY: MVZ	
APPROVED BY: MVZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

EXISTING 8" PVC WATER LINE TO BE CAPPED AND ABANDONED

75 LF 8" RESTRAINED JOINT DIP (MINIMUM CLASS 51) INSIDE 75 LF 18" STEEL ENCASMENT PIPE (0.312" THICKNESS) TO BE INSTALLED BY CONVENTIONAL METHODS. CONTRACTOR TO FIELD WELD TO ENCASMENT INSTALLED BY JACK AND BORE.

EXISTING 8" PVC WATER LINE TO BE CAPPED AND ABANDONED

8" TAPPING VALVE AND SLEEVE

RAISE EXISTING VALVE COVERS TO NEW FINISHED GRADE

RELOCATE EXISTING FH

(WATER 2) 8" RESTRAINED JOINT DIP WATER LINE (MINIMUM CLASS 51)

CONNECT TO EXISTING SERVICE IN KIND. (APPROXIMATE LOCATION SHOWN)

(WATER 2) 8" DR18 PC 235 AWWA C900 PVC WATER LINE

5' MINIMUM DEPTH BELOW EXISTING GRADE

(WATER 2) 8" RESTRAINED JOINT DIP WATER LINE (MINIMUM CLASS 51)

75 LF 8" RESTRAINED JOINT DIP (MINIMUM CLASS 51) INSIDE 75 LF 18" STEEL ENCASMENT PIPE (0.312" THICKNESS) TO BE INSTALLED BY CONVENTIONAL METHODS. CONTRACTOR TO FIELD WELD TO ENCASMENT INSTALLED BY JACK AND BORE.

(WATER 2) 50 LF 8" RESTRAINED JOINT DIP (MINIMUM CLASS 51) INSIDE 50 LF 18" STEEL ENCASMENT PIPE (0.312" THICKNESS) TO BE INSTALLED BY BORE AND JACK.

(WATER 2) 96 LF 8" DIP WATER LINE (MINIMUM CLASS 51)

EXISTING 8" PVC WATER LINE TO BE CAPPED AND ABANDONED

(WATER 2) 8" DR18 PC 235 AWWA C900 PVC WATER LINE

(WATER 2) 8" DR18 PC 235 AWWA C900 PVC WATER LINE

RELOCATE EXISTING FH

MATCH LINE SHEET UC-2 - L- STA. 21+00.00

MATCH LINE SHEET UC-4 - Y2- STA. 13+50.00

11/10/09 4:01 PM \\11104015-5208F\Utilities\P5208F_util_uc-3.dgn

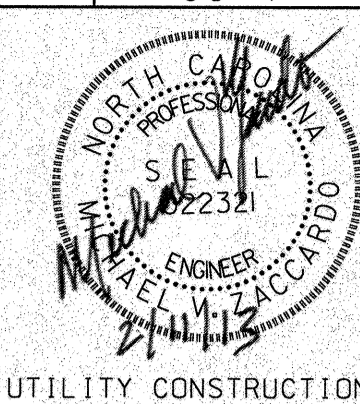
SEE SHEET UC-5 FOR SEWER PROFILE
SEE SHEET UC-6 WATER PROFILE

0515DEL P21a2

5/14/99

CONTRACTOR RESPONSIBLE FOR INSTALLING ALL WATER AND SEWER ACCORDING TO NCDOT, TOWN OF HARRISBURG, WSAAC, NCDENR PWS, AND NCDENR DWQ STANDARDS AND SPECIFICATIONS.

WETHERILL ENGINEERING
559 Jones Franklin Rd. Suite 164
Raleigh, N.C. 27606
License No. F-0377
Bus: 919 851 8077
Fax: 919 851 8107
TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

PROJECT REFERENCE NO.	SHEET NO.
P-5208F	UC-4
DESIGNED BY: JDS	
DRAWN BY: JDS	
CHECKED BY: MVZ	
APPROVED BY: MVZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION

NAD 83/NSRS 2007

RELOCATE EXISTING WATER METER AND RPZ ASSEMBLY. LOCATE RPZ ASSEMBLY OFF NCDOT RIGHT OF WAY.

RAISE EXISTING SEWER MANHOLE TO NEW FINISHED GRADE

8" DR18 PG235 AWWA C900 PVC WATER LINE

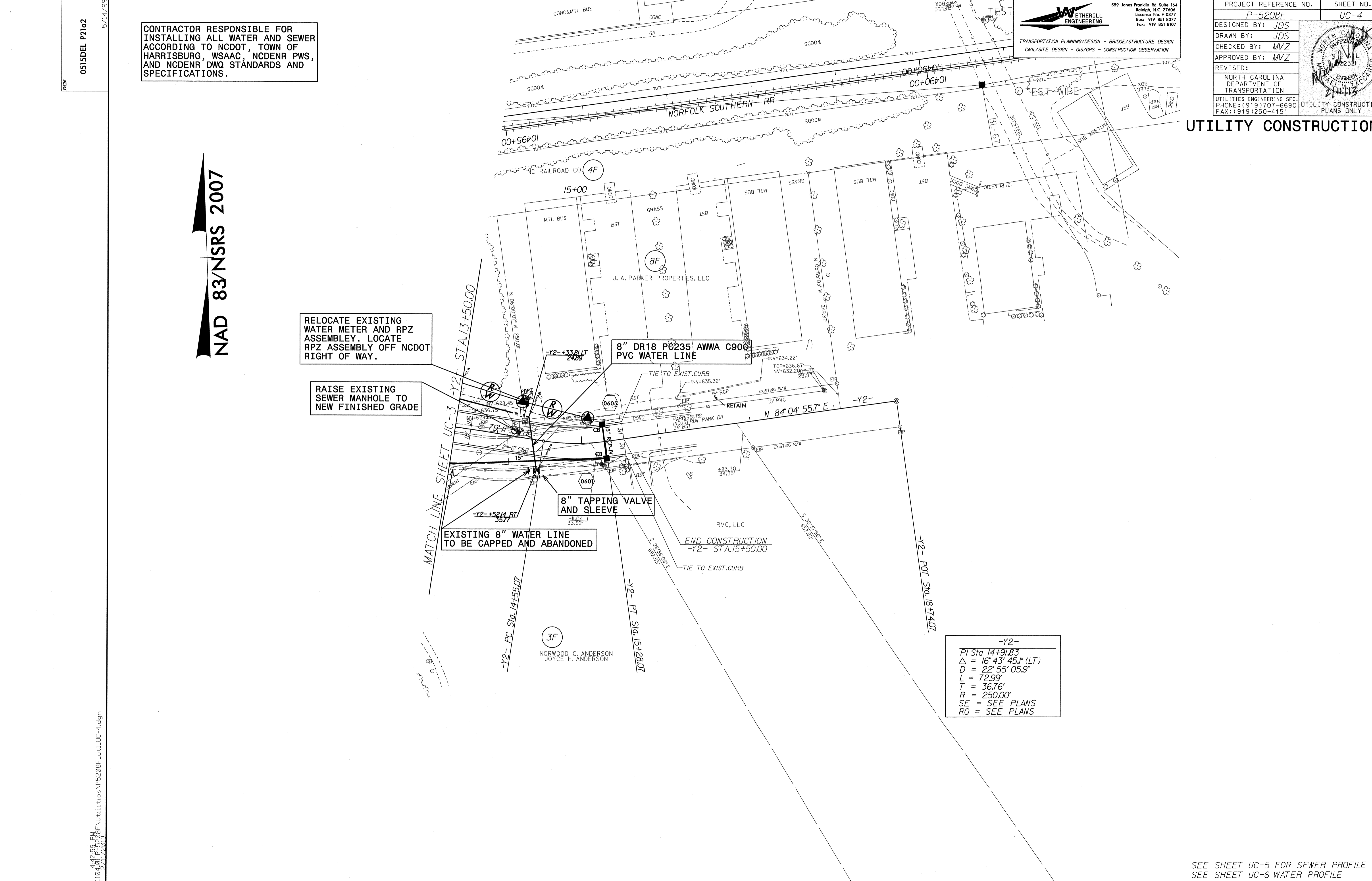
8" TAPPING VALVE AND SLEEVE

EXISTING 8" WATER LINE TO BE CAPPED AND ABANDONED

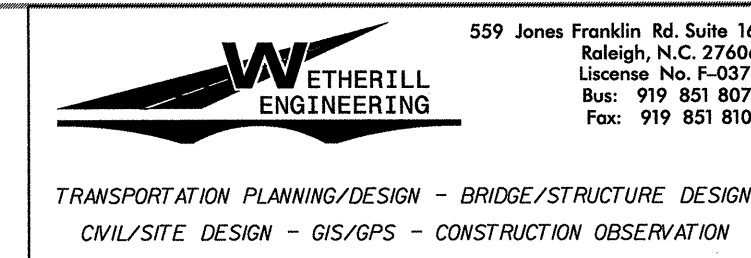
-Y2-

PI Sta 14+91.83
 $\Delta = 16' 43' 45.1" (LT)$
 $D = 22' 55' 05.9"$
 $L = 72.99'$
 $T = 36.76'$
 $R = 250.00'$
 SE = SEE PLANS
 RO = SEE PLANS

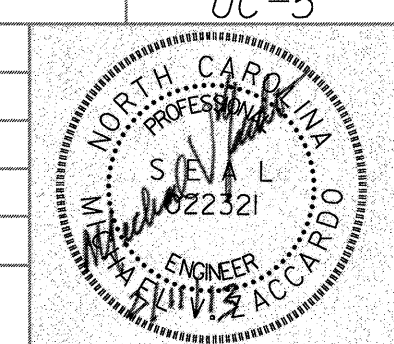
SEE SHEET UC-5 FOR SEWER PROFILE
SEE SHEET UC-6 WATER PROFILE



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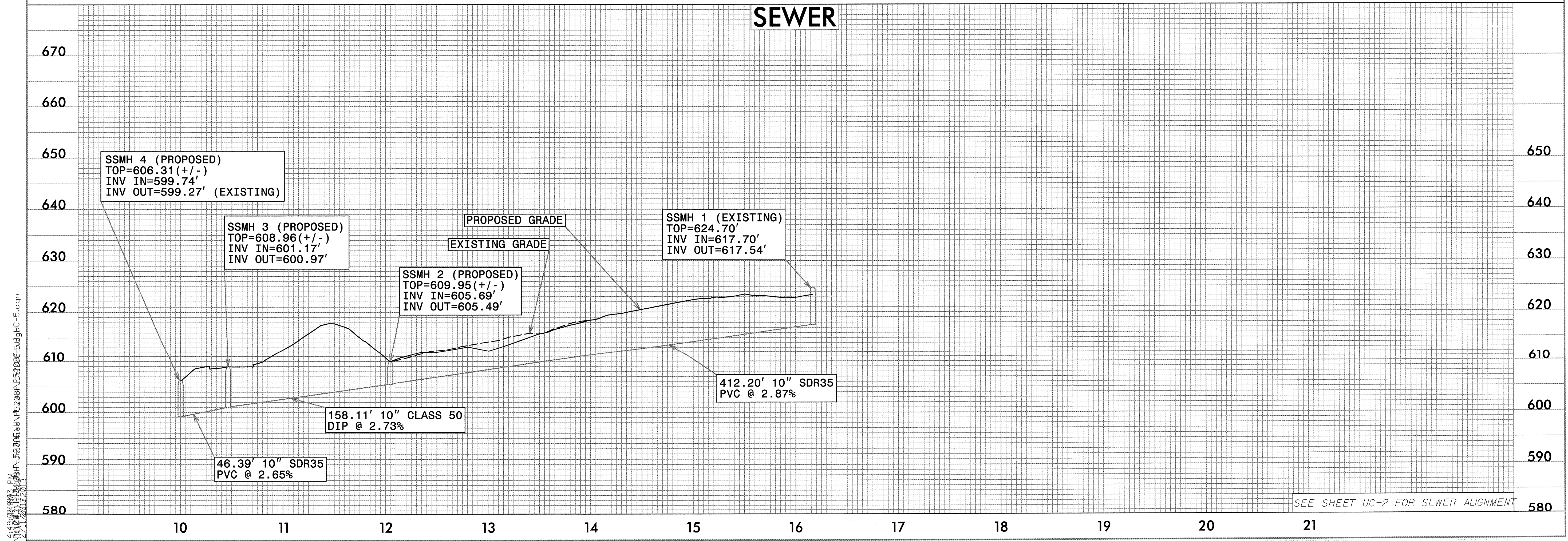
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P-5208F	UC-5
DESIGNED BY: JDS	
DRAWN BY: JDS	
CHECKED BY: MVZ	
APPROVED BY: MVZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION	
UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	



UTILITY CONSTRUCTION

0515DEL_P21a2 5/14/99

SEWER

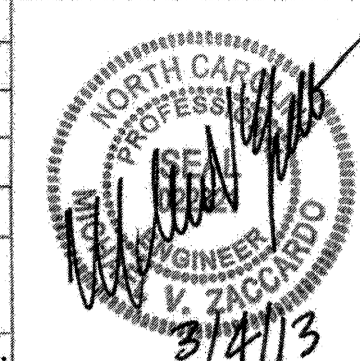


SEE SHEET UC-2 FOR SEWER ALIGNMENT

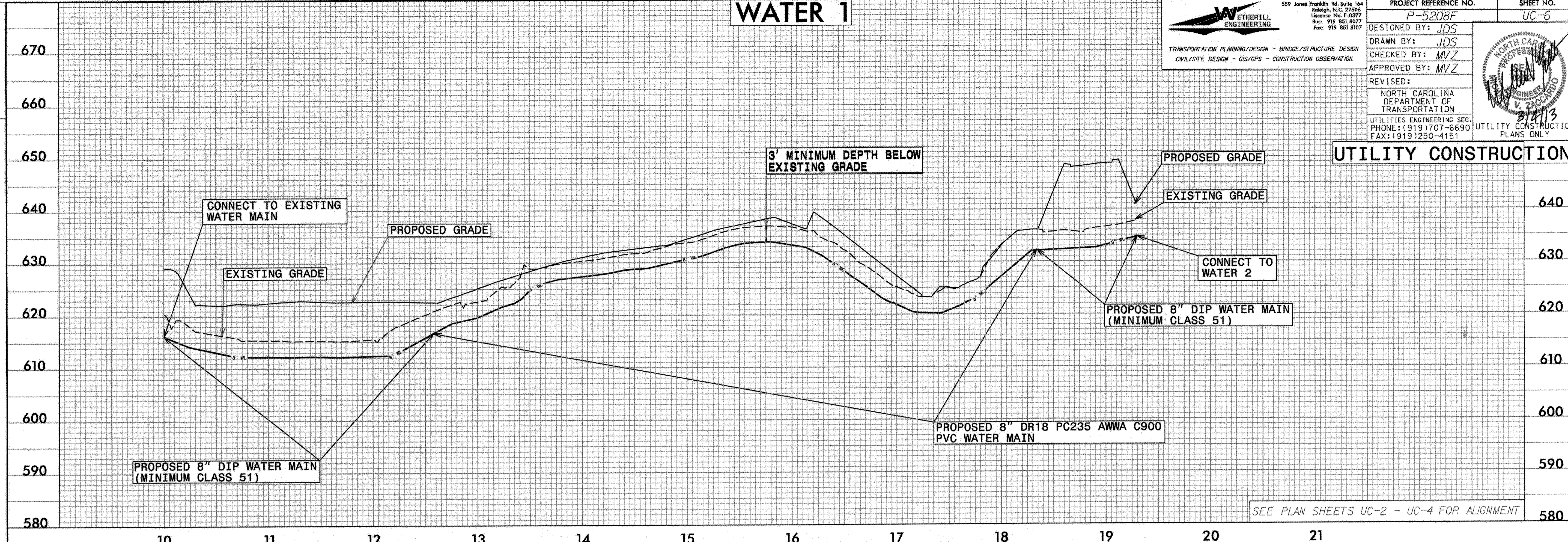
WATER 1

WETHERILL ENGINEERING
 559 Jones Franklin Rd. Suite 164
 Raleigh, N.C. 27606
 License No. F-0377
 Bus: 919 851 8077
 Fax: 919 851 8107

TRANSPORTATION PLANNING/DESIGN - BRIDGE/STRUCTURE DESIGN
 CIVIL/SITE DESIGN - GIS/GPS - CONSTRUCTION OBSERVATION

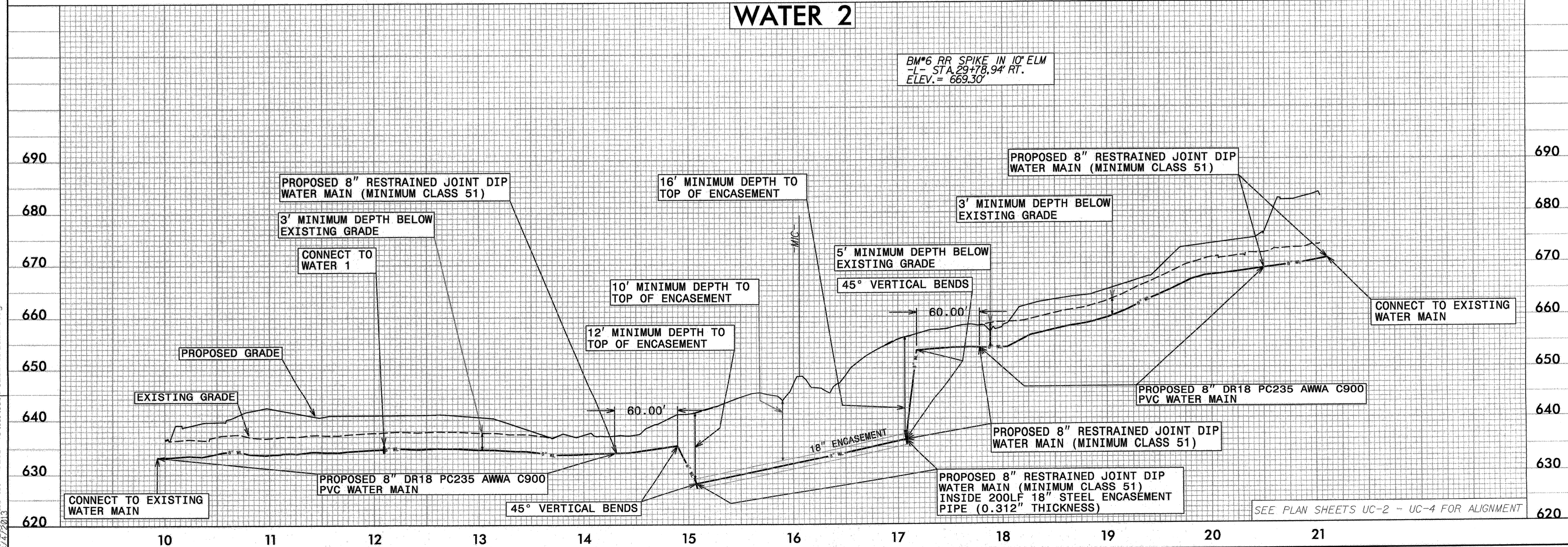
PROJECT REFERENCE NO. P-5208F	SHEET NO. UC-6
DESIGNED BY: JDS	
DRAWN BY: JDS	
CHECKED BY: MVZ	
APPROVED BY: MVZ	
REVISED:	
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

UTILITY CONSTRUCTION



WATER 2

BM*6 RR SPIKE IN 10" ELM
 -L- STA. 29+78.94' RT.
 ELEV. = 669.30'



0515DEL_P21a2

REVISIONS

UC REVISION - 3/4/13 - REVISED DEPTH OF PIPE UNDER TRACKS

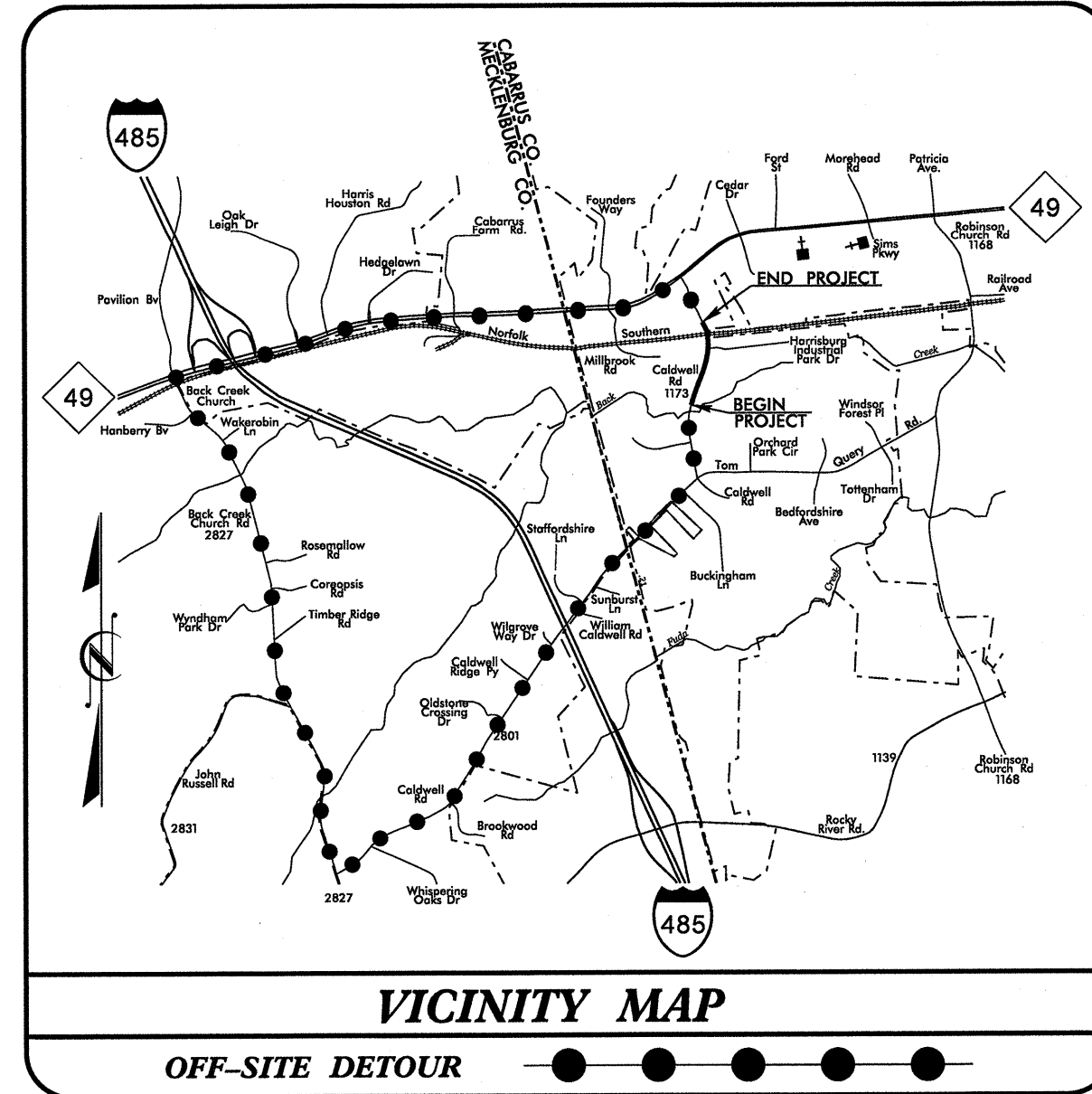
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 3/4/2013



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

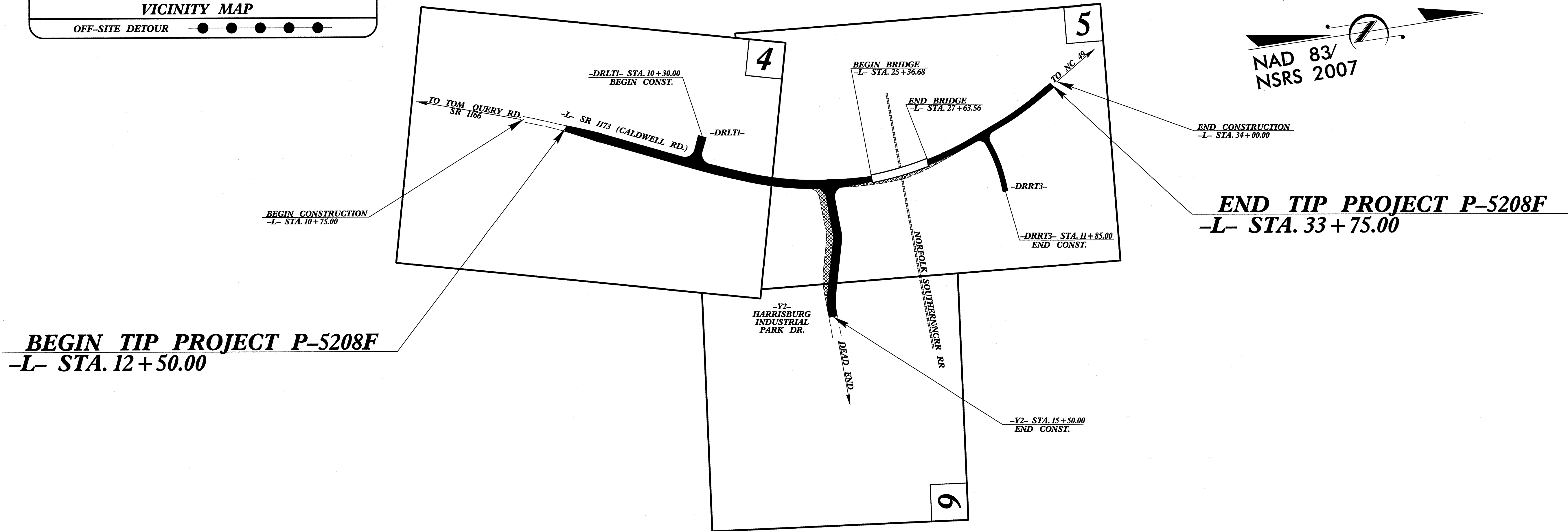
TIP PROJECT: P-5208F

CONTRACT: C2034147

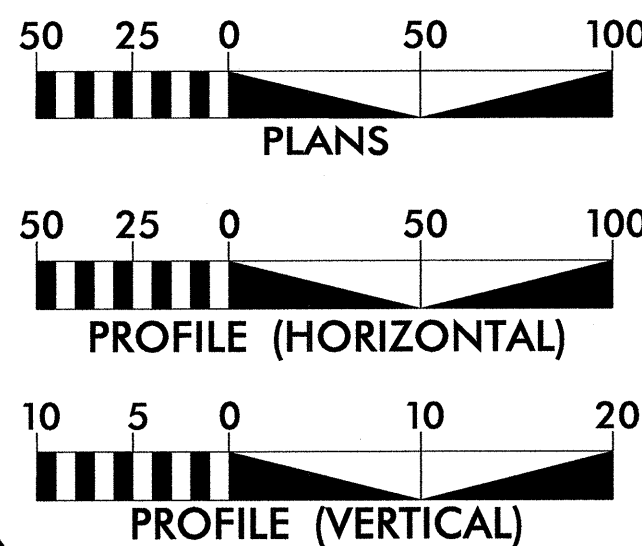


CABARRUS COUNTY

LOCATION: PROPOSED CALDWELL ROAD (SR 1173) GRADE SEPARATION OVER THE NS/NCRR RAILROAD IN HARRISBURG
TYPE OF WORK: UTILITIES BY OTHERS



GRAPHIC SCALES



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2 THRU UO-4	UTILITIES BY OTHERS SHEETS

UTILITY OWNERS ON PROJECT

- (1) POWER - DUKE ENERGY
- (2) TELEPHONE - WINDSTREAM
- (3) NATURAL GAS - PSNC

Prepared for the North Carolina Department of Transportation in the Office of:
559 JONES FRANKLIN ROAD
SUITE 164
RALEIGH, N.C. 27606
License No. F-4377
Bus: 919 851 8077
Fax: 919 851 8107

WETHERILL ENGINEERING

2012 STANDARD SPECIFICATIONS

EDWARD G. WETHERILL, PE
PROJECT ENGINEER

BOB A. MAY, PE
PROJECT DESIGN ENGINEER

JOHN D. SCHRINER, PLS
UTILITY COORDINATOR

RIGHT OF WAY DATE:
APRIL 30, 2012

LETTING DATE:
MAY 21, 2013

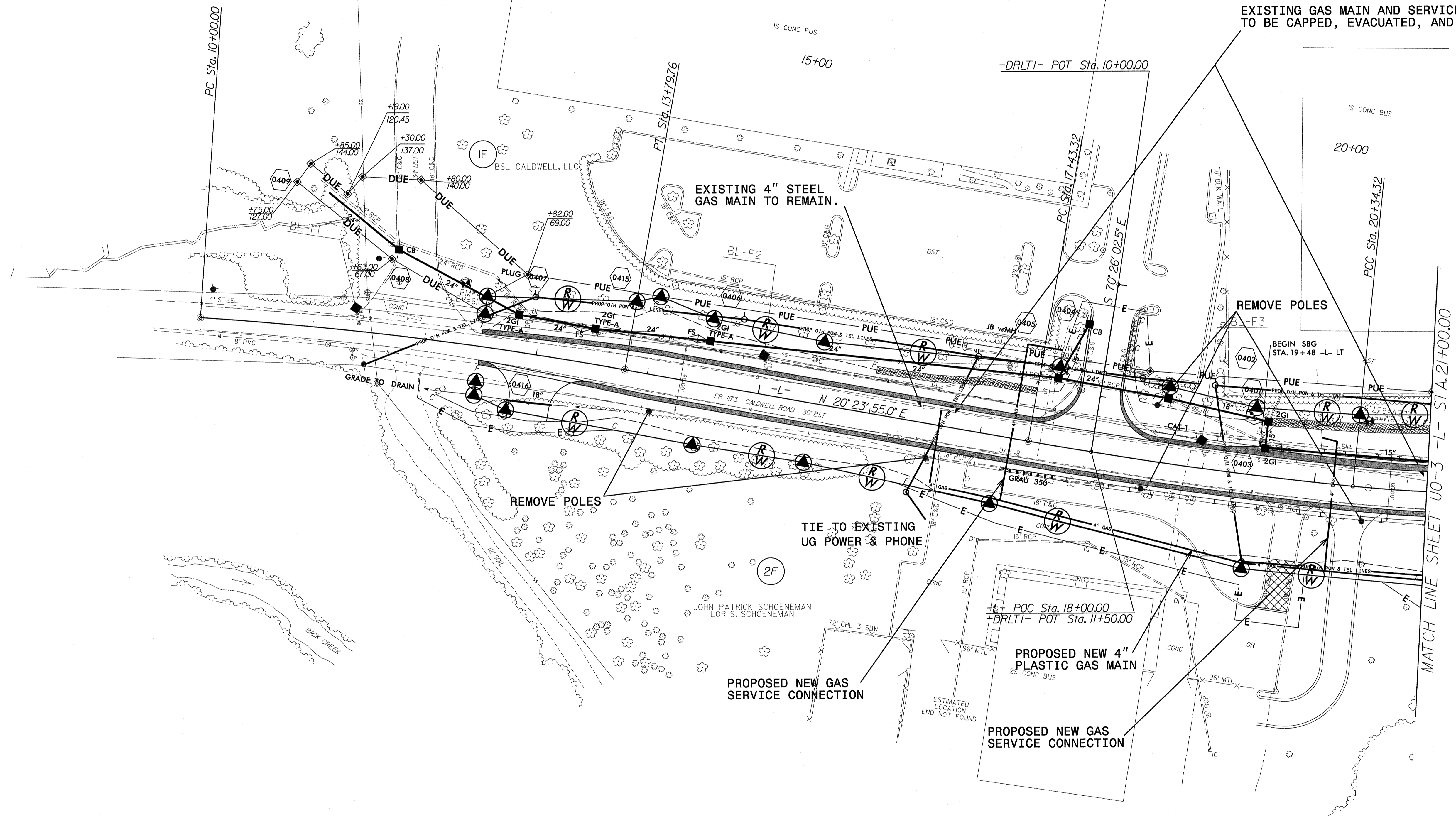
NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PLANNING AND DEVELOPMENT

CAPITAL YARD
100 RAIL SERVICE CENTER
RALEIGH, NC 27609-1000

UTILITIES BY OTHERS

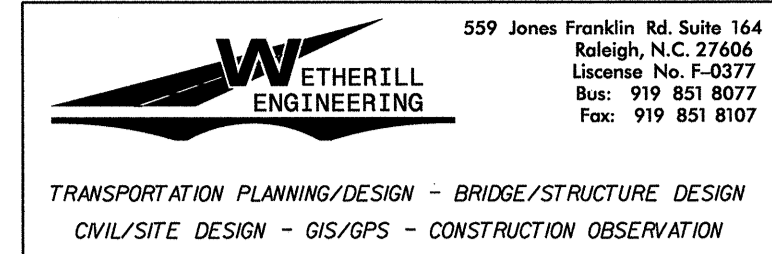
NOTE:
 ALL PROPOSED UTILITY WORK
 SHOWN ON THIS SHEET WILL
 BE DONE BY OTHERS

NAD 83/NSRS 2007



-L-		
PI Sta 11+90.07	PI Sta 18+88.89	PI Sta 25+29.02
$\Delta = 6' 13'' 00.2''$ (RT)	$\Delta = 4' 16'' 30.5''$ (LT)	$\Delta = 42' 06'' 40.1''$ (LT)
D = 1' 38'' 13.3"	D = 1' 28'' 08.8"	D = 4' 27'' 31.7"
L = 379.76'	L = 291.00'	L = 944.45'
T = 190.07'	T = 145.57'	T = 494.70'
R = 3,500.00'	R = 3,900.00'	R = 1,285.00'
SE = SEE PLANS	SE = SEE PLANS	SE = SEE PLANS

8:26:35 AM
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 2/28/2013



UTILITIES BY OTHERS

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

PI Sta 25+29.02 $\Delta = 42^{\circ}06'40.1''$ (LT) $D = 4'27.317''$ $L = 944.45'$ $T = 494.70'$ $R = 1,285.00'$ SE = SEE PLANS	PI Sta 32+14.25 $\Delta = 10^{\circ}32'50.1''$ (LT) $D = 5'15.234''$ $L = 200.65'$ $T = 100.61'$ $R = 1,090.00'$	PI Sta 34+26.76 $\Delta = 17^{\circ}45'23.9''$ (RT) $D = 7'57.279''$ $L = 223.14'$ $T = 112.47'$ $R = 720.00'$
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NAD 83/NSRS 2007

EXISTING 4" GAS MAIN TO BE CAPPED, EVACUATED, AND ABANDONED.

EXISTING 4" GAS MAIN TO BE CAPPED, EVACUATED, AND ABANDONED.

EXISTING 4" GAS MAIN TO REMAIN.

PROPOSED NEW 4" PLASTIC GAS MAIN.

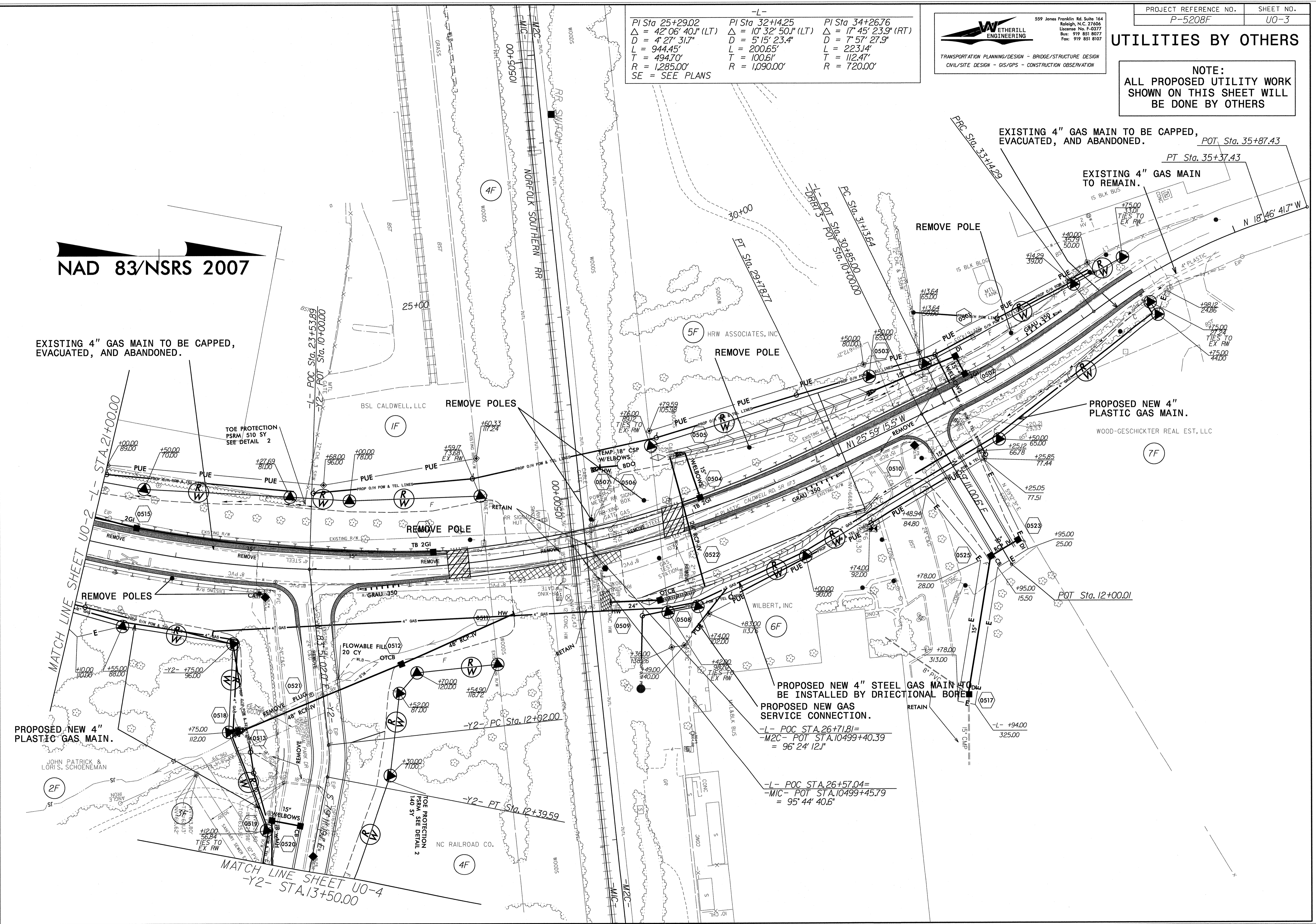
PROPOSED NEW 4" STEEL GAS MAIN TO BE INSTALLED BY DIRECTIONAL BORE
PROPOSED NEW GAS SERVICE CONNECTION.

PROPOSED NEW 4" PLASTIC GAS MAIN.

MATCH LINE SHEET U0-2
-L- STA. 2+100.00

MATCH LINE SHEET U0-4
-Y2- STA. 13+50.00

V:\1104\0515DEL_P21a2\Utilities\NF5208F_util_u0-3.dgn 2/26/2003 2:56:49 PM



UTILITIES BY OTHERS

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

NAD 83/NSRS 2007

EXISTING 2" GAS MAIN TO BE CAPPED,
EVACUATED, AND ABANDONED.

TIE TO EXISTING 2"
PLASTIC GAS MAIN

PROPOSED NEW 4"
PLASTIC GAS MAIN

-Y2-
PI Sta 14+91.83
Δ = 16' 43' 45.1" (LT)
D = 22' 55' 05.9"
L = 72.99'
T = 36.76'
R = 250.00'
SE = SEE PLANS
RO = SEE PLANS

