



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

November 1, 2010

US Army Corps of Engineers
Raleigh Regulatory Field Office
3331 Heritage Trade Dr., Suite 105
Wake Forest, NC 27587

Attention: Eric Alsmeyer
NCDOT Coordinator, Division 5

Subject: **Application for Modification to Section 404 Individual Permit, Individual Section 401 Water Quality Certification, Isolated Wetlands Permit and Neuse Buffer Authorization** and for the Rolesville Bypass from SR 2225 (Louisburg Road) to NC 96, Zebulon Road, Wake County, Federal Aid No. STP-401(4), State Project No. 81403001, WBS 34506.1.1, Division 5, TIP R-2814 B.

Reference: Section 404 Individual Permit, issued July 14, 2009 and permit modification issued June 25, 2010, USACE Action ID 2008-01316
Section 401 Individual Water Quality Certification, Isolated Wetlands Permit and Neuse Riparian Buffer Authorization issued June 16, 2009, NCDENR-DWQ Water Quality Certification Project No. 20090104 ver.1 and permit modification issued August 30, 2010 Project No. 20090104 ver. 2.

\$540.00 Debit WBS Element 34506.1.1

Dear Sir:

The North Carolina Department of Transportation (NCDOT) is constructing an 18.5 mile long, widening and new location roadway in Wake and Franklin Counties known as the Rolesville Bypass. It is proposed as a four lane, median divided facility. NCDOT received the above stated permits for the entire project (Sections A, B, C and D) with final design approval for Sections A and B. Sections C and D are still scheduled for post year.

This permit modification request is for additional impacts to wetlands and buffers in Section B from the placement of power line poles, constructability issues with the sewer line and an error in one of the buffer permit drawings. Included with the permit modification is this cover letter and revised permit drawings.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS
NATURAL ENVIRONMENT UNIT
1598 MAIL SERVICE CENTER
RALEIGH NC 27699-1598

TELEPHONE: 919-431-2000
FAX: 919-431-2001 or
919-431-2002

WEBSITE: WWW.NCDOT.ORG

LOCATION:
4701 ATLANTIC AVE.
SUITE 116
RALEIGH NC 27604

The revised design does not compromise NCDOT's compliance with the existing permit conditions. The revision has been evaluated for compliance with the avoidance/minimization criteria and is in compliance with all previous issues, including the following:

- Protected Species
- Aquatic Life passage
- FEMA compliance
- Cultural Resources.

Power Line Poles

Site 6

Wake EMC will install an aerial line beginning at an existing pole located at approximate station – Y2- 16+00, 53 feet right of center line to a new pole at station –Y2- 19+35, 31 feet right of center line. This pole line will span through the Site 6 Buffer Site. This relocation work will impact 1,180 square feet in buffer zone 1 and 1,149 square feet in buffer zone 2 due to the proposed clearing and installation of the aerial facilities. These impacts are in addition to the impacts already permitted for the culvert.

Site 16

Wake EMC will place a pole that carries a 69kV transmission line at station –L- 274+00, 169 feet right of center line and near the boundaries of the Site 16 buffer site. In addition, Wake EMC will utilize this transmission structure for a service line that parallels the main line to serve Parcel 54. This relocation will impact 2,447 square feet of area in buffer zone 1 and 1,887 square feet in buffer zone 2 through the placement of one pole and any tree clearing throughout the area mentioned.

Both of these sites are overhead electric utility lines with perpendicular crossings of streams and impacts to buffers are less than 150 feet so these activities are exempt and no mitigation is required.

Buffer Drawing Sheet 10 of 20

Site 5

NCDOT realized that buffer impacts were left off in Buffer Drawing Site 5 submitted with the permit application dated May 14, 2010. Additional buffer impacts are shown in the north side of the pond where the wetland and stream permit drawings show excavation. These additional impacts are 570 square feet in buffer zone 1. Total buffer zone 1 impacts at this site are 24,665 square feet.

Buffers at this site were originally mitigated for. This new area is almost completely located within the wetland boundary. Since NCDOT has already mitigated for the wetlands, additional mitigation will be provided for the 38 square feet in zone 1 outside the wetland. Mitigation will be provided by the Marks Creek Mitigation Site.

To offset buffer impacts associated with R-2814 B, US 401 (Rolesville Bypass) from SR 2225 (Louisburg Road) to NC 96, Zebulon Road, NCDOT proposes debiting 38 square feet of buffer credit from the Marks Creek Mitigation site, as shown on the debit ledger below.

The Marks Creek site is situated immediately adjacent to the right-of-way of the Knightdale Bypass, R-2547, in the eastern portion of Wake County approximately 8.0 miles east of Raleigh. The Marks Creek Site was constructed as an on-site stream mitigation project associated with R-2547. The stream mitigation project involved the restoration of an unnamed tributary to Marks Creek (the Main Tributary to Marks Creek) and four of its tributaries (the North, West, Southwest, and South Tributaries). Design and construction was implemented during 2002 by NCDOT. Stream restoration involved the construction of new channels and the installation of root-wads, rock vanes, rock cross vanes, log vanes to control grade and stabilize the channel. The plan also included the restoration of the wooded buffers of all the restored channels by planting of native vegetation along the stream banks and in the floodplain.

Based on the overall monitoring assessment, the Marks Creek Site has met the required monitoring protocols for the fifth formal year of monitoring. All of the tributaries remain stable. There is extensive growth of vegetation throughout the stream corridor, both within and outside of the bank-full limits associated with the channel. The NCDOT proposes to close out Marks Creek Mitigation Site for 2008.

Site Name	HUC	River Basin	Mitigation Type	As Built Quantity	Available	Debit 1 (U-3804)	Debit 2 (R-2814B)
Marks Creek	03020201	Neuse	Buffer	324,700	210,004	114,658.5 sq/ft	38 sq/ft

Utility Sewer Drawings

Site 7 Revised Wetland Impacts

Based on constructability issues, the width of sewer line permanent fill has been expanded from 3 feet to 10 feet with 10 feet of mechanized clearing one each side the permanent fill. Some impacts from mechanized clearing have been changed to permanent fill. Impacts were only calculated beyond what has been already permitted for the roadway. Original wetland impacts were <0.01 acres of permanent fill and 0.02 acres of mechanized clearing. Total revised impacts are 0.01 acres of permanent fill and 0.06 acres of mechanized clearing.

NCDOT does not propose any mitigation for these minor impacts because we expect the sewer line footprint to return to the natural wetland grade and this wetland is not forested.

Site 7 Revised Buffer Impacts

Based on constructability issues, the width of sewer line has been expanded from 3 feet to 10 feet and 10 feet on each side of the sewer line for clearing. This in turn increased the buffer impacts. Original impacts in zone 1 were 208 square feet and zone 2 were 835 square feet. The additional impacts are 116 square feet in buffer zone 1 and 415 square feet in buffer zone 2. Revised total impacts are 324 square feet in buffer zone 1 and 1,250 square feet in buffer zone 2.

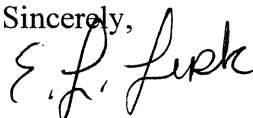
This activity was exempt in the original permit modification but now falls under the activity of non-electric utility line perpendicular crossing of streams that disturb greater than 40 feet of riparian buffer but equal to or less than 150 linear feet with a maintenance corridor equal to or less than 10 feet. This activity is allowable so buffer mitigation is not proposed.

REGULATORY APPROVALS

Application is hereby made for a modification to the Department of the Army Section 404 Individual Permit as required for the above-described activities for the proposed TIP project R-2814 Section B. We are also hereby requesting a Modification to the Individual Section 401 Water Quality Certification, Isolated Wetlands Permit and a Neuse Riparian Buffer Authorization from the Division of Water Quality. In compliance with Section 143-215.3D(e) of the NCAC, we will provide \$540 to act as payment for processing the Section 401 permit. We are providing five copies of this application to the North Carolina Department of Environment and Natural Resources, Division of Water Quality, for their review and approval.

A copy of this application will be posted on the NCDOT website at <http://www.ncdot.org/doh/preconstruct/pe/neu/Permit.html>. If you have any questions or need additional information, please call Rachelle Beaugard at 919-431-6764.

Sincerely,



Gregory J. Thorpe, Ph.D., Manager

Project Development and Environmental Analysis Branch

cc:

w/attachment

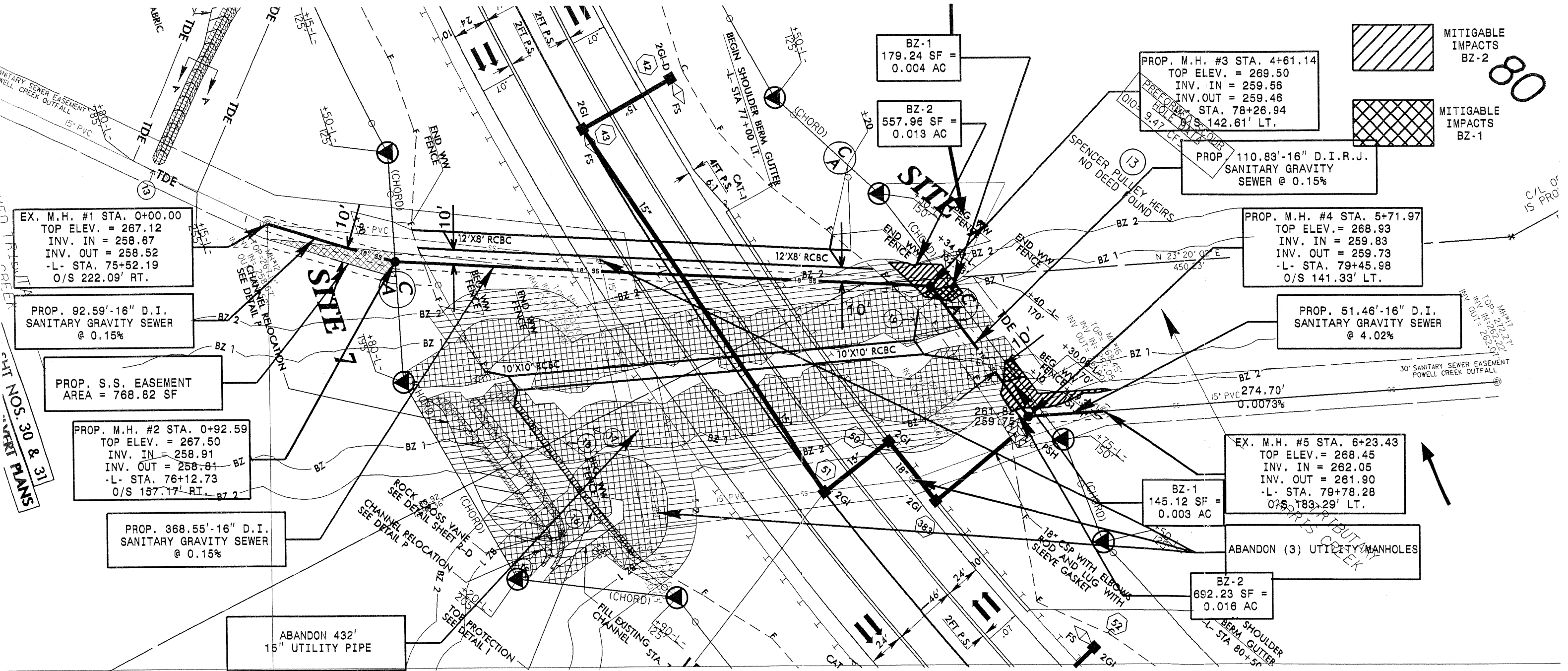
Mr. Brian Wrenn, NCDWQ (5 Copies)
Ms. Jennifer Derby, USEPA
Mr. J. Wally Bowman, PE., Division Engineer
Mr. Chris Murray, DEO

W/o attachment (see website for attachments)

Dr. David Chang, P.E., Hydraulics
Mr. Mark Staley, Roadside Environmental
Mr. Greg Perfetti, P.E., Structure Design
Mr. Victor Barbour, P.E., Project Services Unit
Mr. Jay Bennett, P.E., Roadway Design
Mr. Majed Alghandour, P. E., Programming and TIP
Mr. Art McMillan, P.E., Highway Design
Mr. Scott McLendon, USACE, Wilmington
Mr. Gary Jordan, USFWS
Mr. Travis Wilson, NCWRC
Ms. Anne Deaton, NCDMF
Ms. Beth Harmon, EEP
Mr. Phillip Ayscue, NCDOT External Audit Branch
Ms. Beverly Robinson, PDEA Project Planning Engineer
Mr. Drew Joyner, PE, Human Environment Unit Head

Mr. Clarence W. Coleman, P.E., FHWA
Ms. LeiLani Paugh, NEU

Buffer Impacts - Utilities
 Site 7 Revised 10/21/10



MITIGABLE IMPACTS BZ-2

MITIGABLE IMPACTS BZ-1

BZ-1
 179.24 SF =
 0.004 AC

BZ-2
 557.96 SF =
 0.013 AC

PROP. M.H. #3 STA. 4+61.14
 TOP ELEV. = 269.50
 INV. IN = 259.56
 INV. OUT = 259.46
 STA. 78+26.94
 O/S 142.61' LT.

PROP. 110.83'-16" D.I.R.J.
 SANITARY GRAVITY
 SEWER @ 0.15%

PROP. M.H. #4 STA. 5+71.97
 TOP ELEV. = 268.93
 INV. IN = 259.83
 INV. OUT = 259.73
 -L- STA. 79+45.98
 O/S 141.33' LT.

PROP. 51.46'-16" D.I.
 SANITARY GRAVITY SEWER
 @ 4.02%

30' SANITARY SEWER EASEMENT
 POWELL CREEK OUTFALL

EX. M.H. #5 STA. 6+23.43
 TOP ELEV. = 268.45
 INV. IN = 262.05
 INV. OUT = 261.90
 -L- STA. 79+78.28
 O/S 183.29' LT.

BZ-1
 145.12 SF =
 0.003 AC

BZ-2
 692.23 SF =
 0.016 AC

EX. M.H. #1 STA. 0+00.00
 TOP ELEV. = 267.12
 INV. IN = 258.67
 INV. OUT = 258.52
 -L- STA. 75+52.19
 O/S 222.09' RT.

PROP. 92.59'-16" D.I.
 SANITARY GRAVITY SEWER
 @ 0.15%

PROP. S.S. EASEMENT
 AREA = 768.82 SF

PROP. M.H. #2 STA. 0+92.59
 TOP ELEV. = 267.50
 INV. IN = 258.91
 INV. OUT = 258.81
 -L- STA. 76+12.73
 O/S 157.17' RT.

PROP. 368.55'-16" D.I.
 SANITARY GRAVITY SEWER
 @ 0.15%

ABANDON 432'
 15" UTILITY PIPE

ABANDON (3) UTILITY MANHOLES

Buffer Impacts - Utilities
 site 7 Revised 10/21/10

BZ-1
 179.24 SF =
 0.004 AC

BZ-2
 557.96 SF =
 0.013 AC

Buffer Drawing
 Sheet 3 of 5

PROP. M.H. #3 STA. 4+61.14
 TOP ELEV. = 269.50
 INV. IN = 259.56
 INV. OUT = 259.46
 -L- STA. 78+26.94
 O/S 142.61' LT.

PROP. 110.83'-16" D.I.
 SANITARY GRAVITY
 SEWER @ 0.15%

PROP. M.H. #4
 TOP ELEV. =
 INV. IN =
 INV. OUT =
 -L- STA. ;
 O/S 141.

PROP. SANITAF

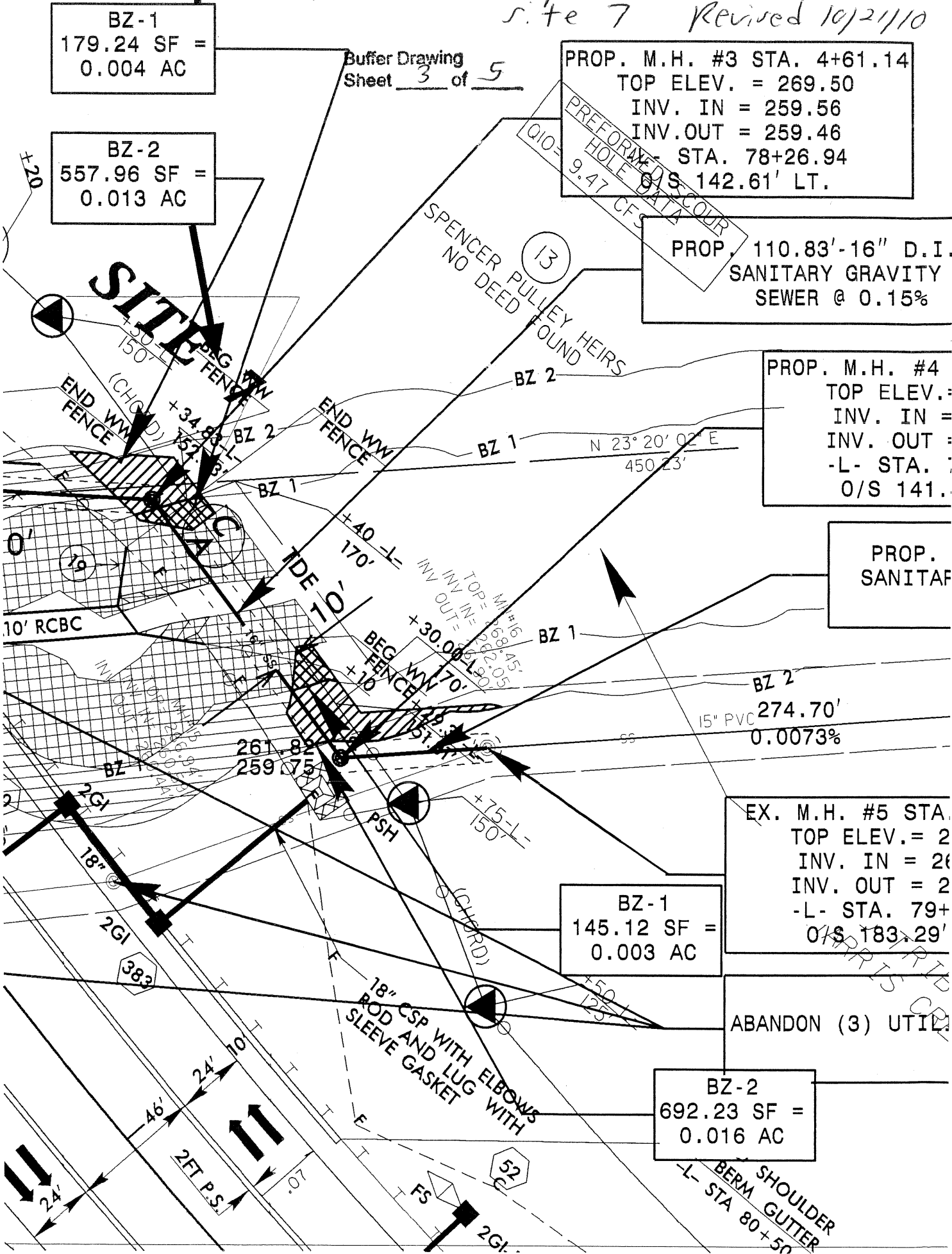
EX. M.H. #5 STA.
 TOP ELEV. = 2
 INV. IN = 2
 INV. OUT = 2
 -L- STA. 79+
 O/S 183.29'

BZ-1
 145.12 SF =
 0.003 AC

ABANDON (3) UTIL

BZ-2
 692.23 SF =
 0.016 AC

SHOULDER
 BERM GUTTER
 -L- STA 80+50



UTILITY BUFFER IMPACTS SUMMARY

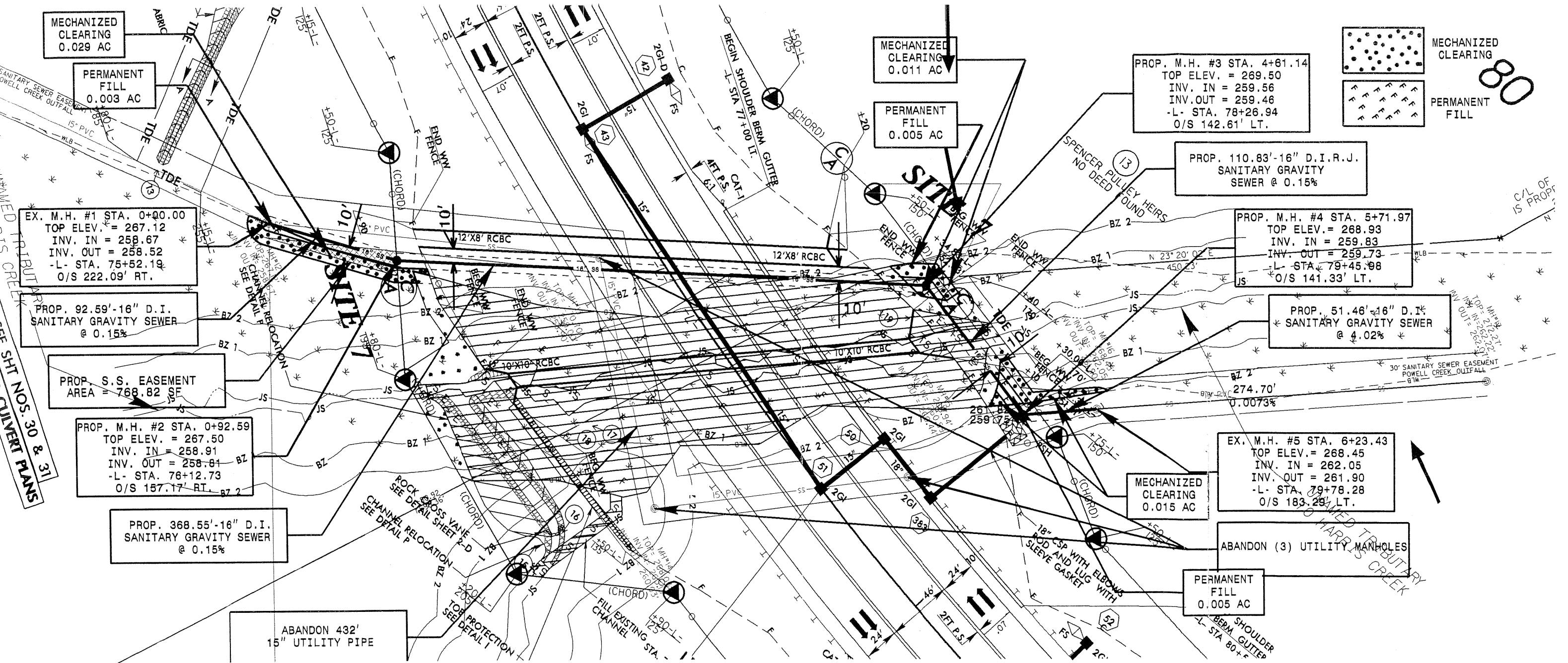
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT						BUFFER REPLACEMENT					
			TYPE		ALLOWABLE		MITIGABLE		ZONE 1 (ft ²)	ZONE 2 (ft ²)				
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)			
7	Sanitary Sewer	See Drawing				324	1250	1575						
TOTAL:							324	1250	1575	0.0	0.0	0.0		

N.C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 WAKE COUNTY
 PROJECT: 34506.3.GV3 (R-2814B)

 10/21/2010
 SHEET OF

Wetland & Stream Utility Impacts
 Site 7
 Revised 10/21/10



Wetland & Stream Utility Impacts
 Site 7 revised 10/21/10

MECHANIZED
 CLEARING
 0.011 AC

PERMANENT
 FILL
 0.005 AC

PROP. M.H. #3 STA. 4+61.14
 TOP ELEV. = 269.50
 INV. IN = 259.56
 INV. OUT = 259.46
 -L- STA. 78+26.94
 O/S 142.61' LT.

PROP. 110.83' - 16" D.I.R.J.
 SANITARY GRAVITY
 SEWER @ 0.15%

PROP. M.H. #4 STA. 5+7'
 TOP ELEV. = 268.93
 INV. IN = 259.83
 INV. OUT = 259.73
 -L- STA. 79+45.98
 O/S 141.33' LT.

PROP. 51.46' - 16"
 SANITARY GRAVITY
 @ 4.02%

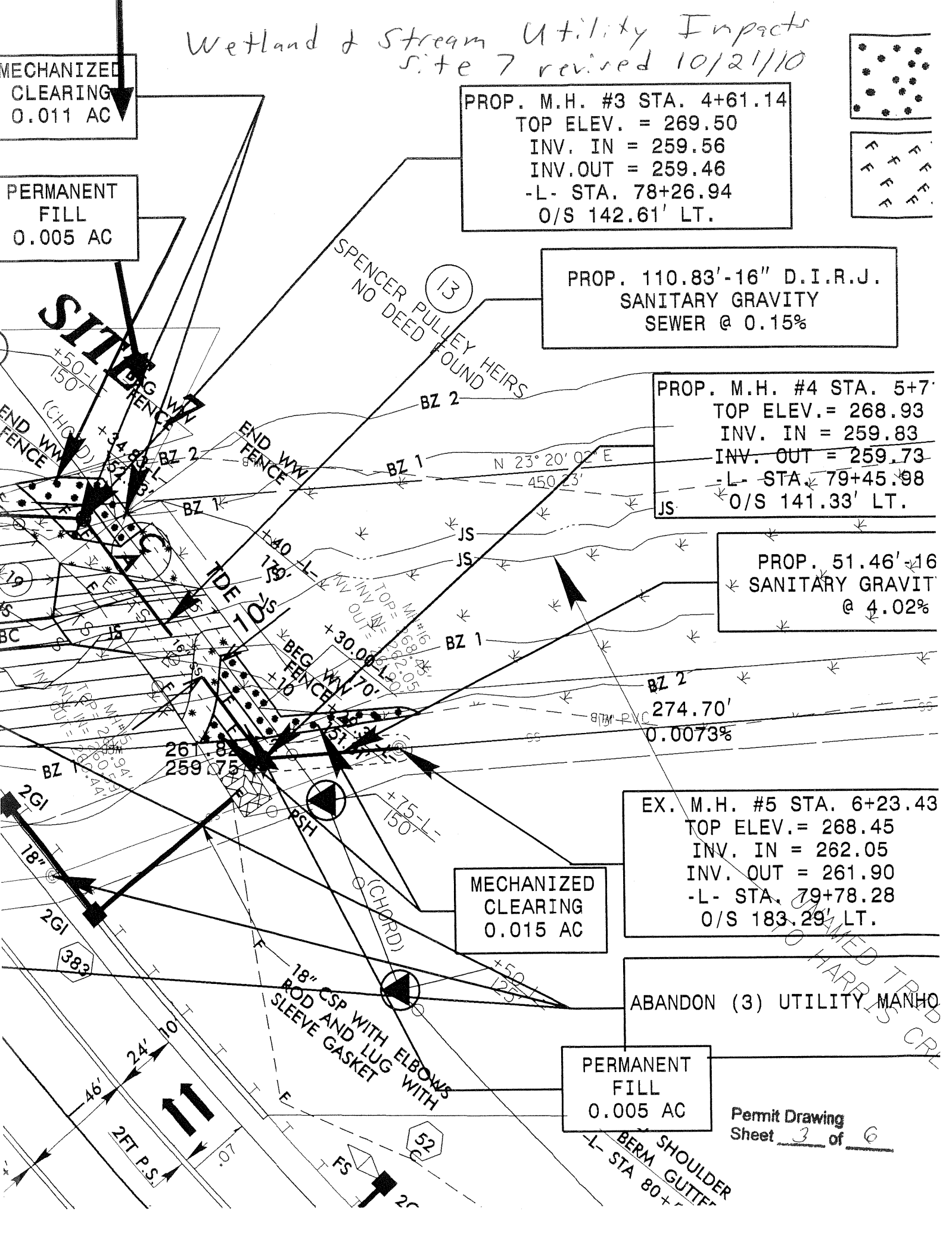
EX. M.H. #5 STA. 6+23.43
 TOP ELEV. = 268.45
 INV. IN = 262.05
 INV. OUT = 261.90
 -L- STA. 79+78.28
 O/S 183.29' LT.

MECHANIZED
 CLEARING
 0.015 AC

PERMANENT
 FILL
 0.005 AC

ABANDON (3) UTILITY MANHO

Permit Drawing
 Sheet 3 of 6



CLEARING
0.029 AC

PERMANENT
FILL
0.003 AC

wetland & stream
utility impacts
site 7
revised 10/21/10

Permit Drawing
Sheet 39 of 6

EX. M.H. #1 STA. 0+00.00
TOP ELEV. = 267.12
INV. IN = 258.67
INV. OUT = 258.52
-L- STA. 75+52.19
O/S 222.09' RT.

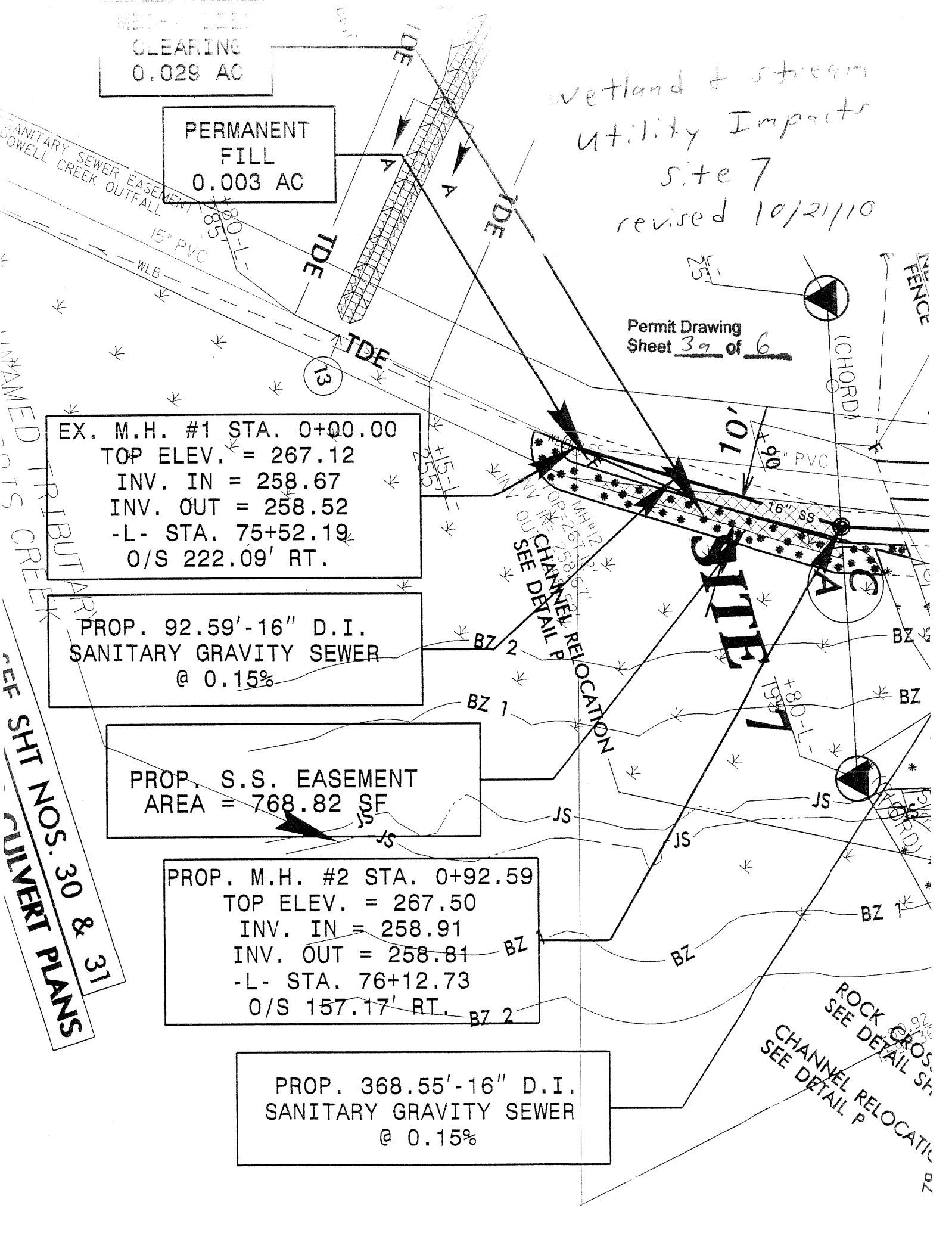
PROP. 92.59'-16" D.I.
SANITARY GRAVITY SEWER
@ 0.15%

PROP. S.S. EASEMENT
AREA = 768.82 SF

PROP. M.H. #2 STA. 0+92.59
TOP ELEV. = 267.50
INV. IN = 258.91
INV. OUT = 258.81
-L- STA. 76+12.73
O/S 157.17' RT.

PROP. 368.55'-16" D.I.
SANITARY GRAVITY SEWER
@ 0.15%

UNNAMED TRIBUTARY
CREEK
SEE SHI NOS. 30 & 31
CULVERT PLANS



UTILITY WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS					SURFACE WATER IMPACTS							
			Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)			
7	See Drawing	Sanitary Sewer	0.013			0.055							3		
TOTALS:			0.013			0.055							3		

NC DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 WAKE COUNTY
 WBS - 34506.3.GV3 (R-2814B)

10/21/2010
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SHT 1 OF 1

Permit Drawing
 Sheet 6 of 6

BUFFER IMPACTS SUMMARY

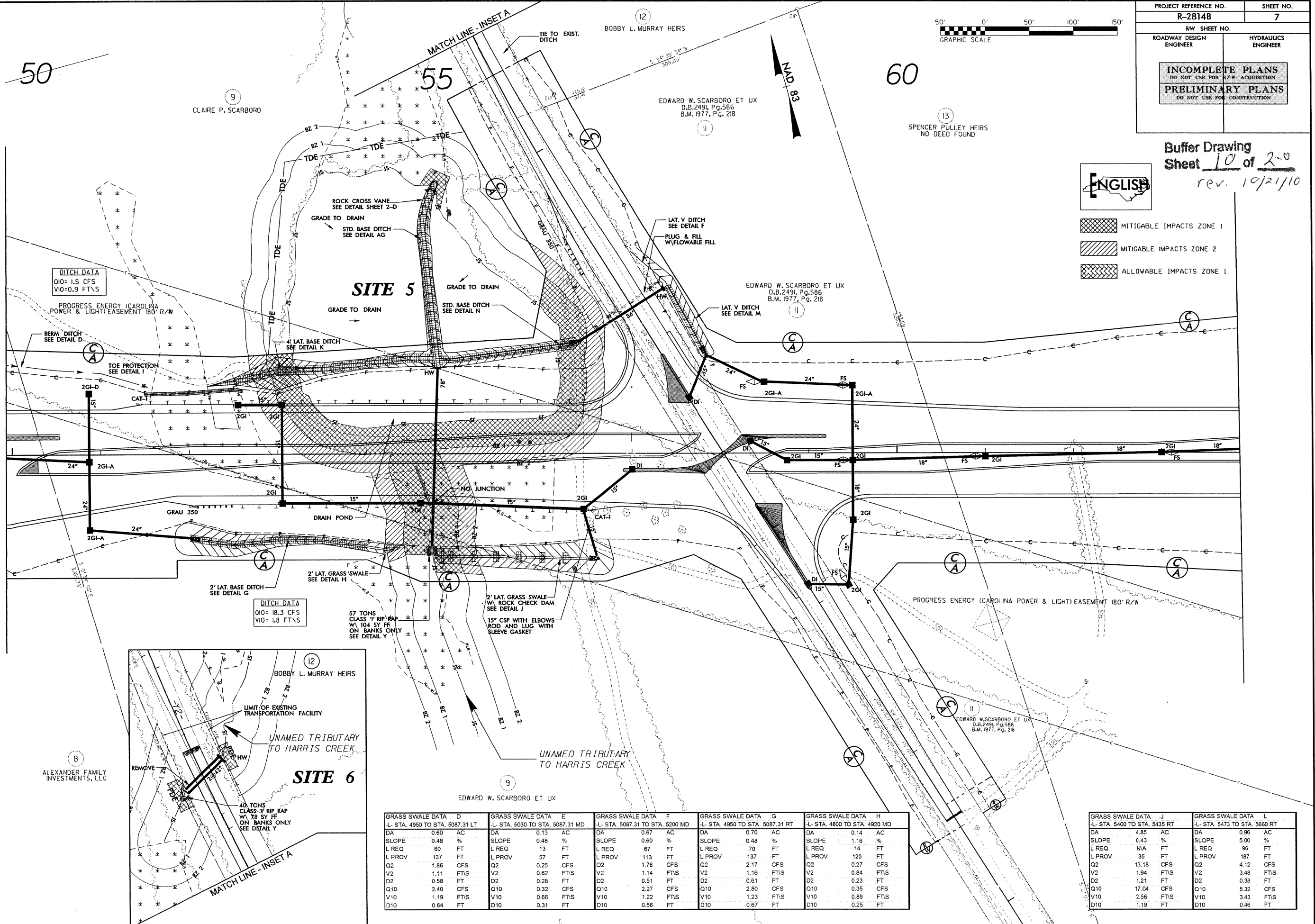
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	IMPACT										BUFFER REPLACEMENT	
			TYPE		ALLOWABLE		MITIGABLE			TOTAL		ZONE 1 (ft ²)	ZONE 2 (ft ²)	
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)			
												ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)
1	60" RCP	-L- 38+11	X						13743	9262	23005			
2	30" RCP	-L- 41+07 RT			X					6	6			
5	78" RCP	-L- 55+00	X					24665	16852	41517				
6	2@42" RCP	-Y2- 17+31	X			856								
7	10'X10' RCBC	-L- 77+89	X					31468	16685	48153				
8	10'X10' RCBC	-L- 115+74	X					28702	15200	43902				
9	72" RCP	-L- 147+00	X					53503	31621	85124				
10	N/A	-L- 187+00 RT			X			2133	4772	6905				
11	10'X9' RCBC	-L- 200+04	X					25288	14205	39493				
12	42" RCP	-L- 219+03	X					17088	15041	32129				
15	N/A	-L- 255+00	X					19154	15890	35044				
16	2@12'X12' RCBC	-L- 275+39	X					19724	10366	30090				
18	2@36" RCP	-Y6- 15+17	X			3475	1585	5060						
TOTAL:						4331	1585	5916	235468	149900	385368			

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

WAKE COUNTY
PROJECT: 34506.1.1 (R-2814B)

KCV
10/14/2010
SHEET OF

8/17/99
 I:\14\10_14\10\26\PERMITS\Environmental\Drawings\2814b_hyd_buf_prm_07.dgn
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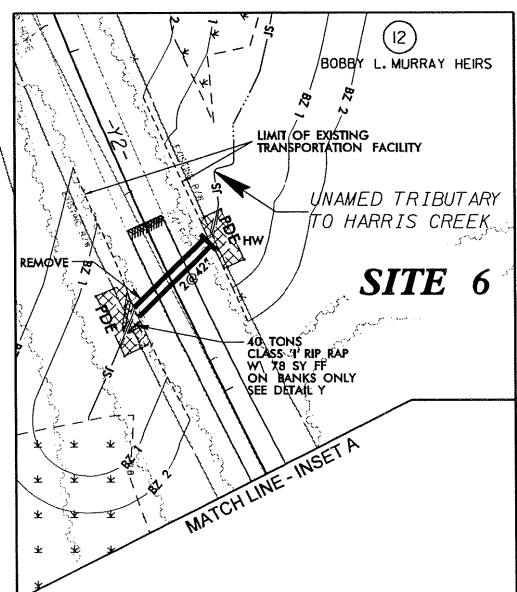
REVISIONS

PROJECT REFERENCE NO. R-2814B	SHEET NO. 7
RW SHEET NO.	HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER	

Buffer Drawing
Sheet 10 of 20
 rev. 10/21/10



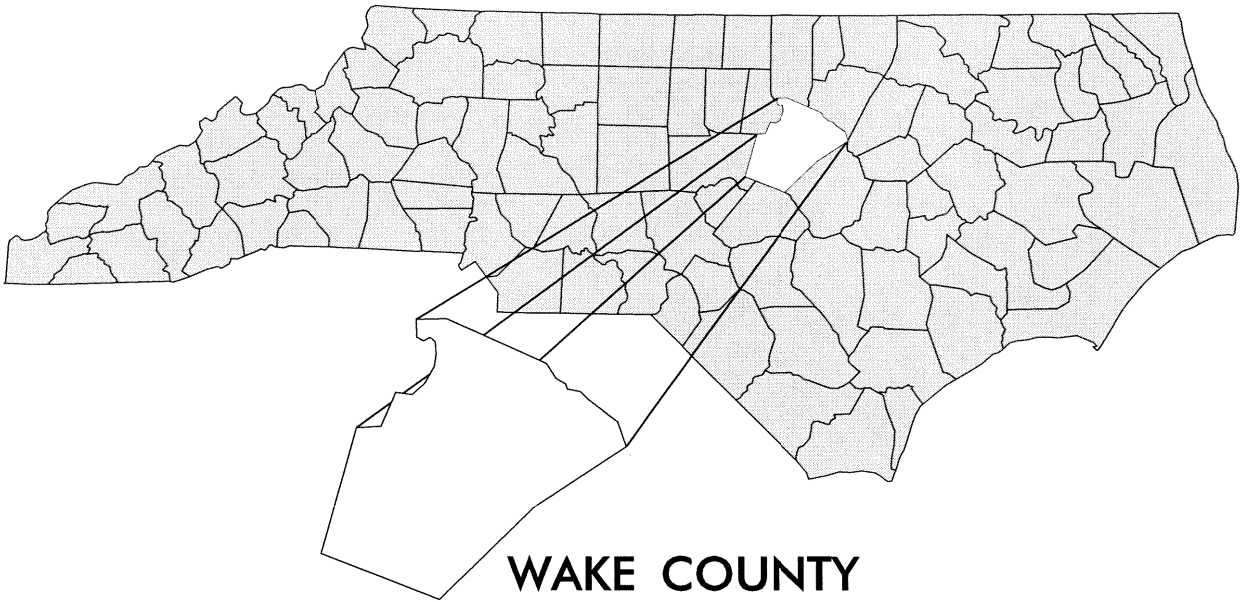
- MITIGABLE IMPACTS ZONE 1
- MITIGABLE IMPACTS ZONE 2
- ALLOWABLE IMPACTS ZONE 1



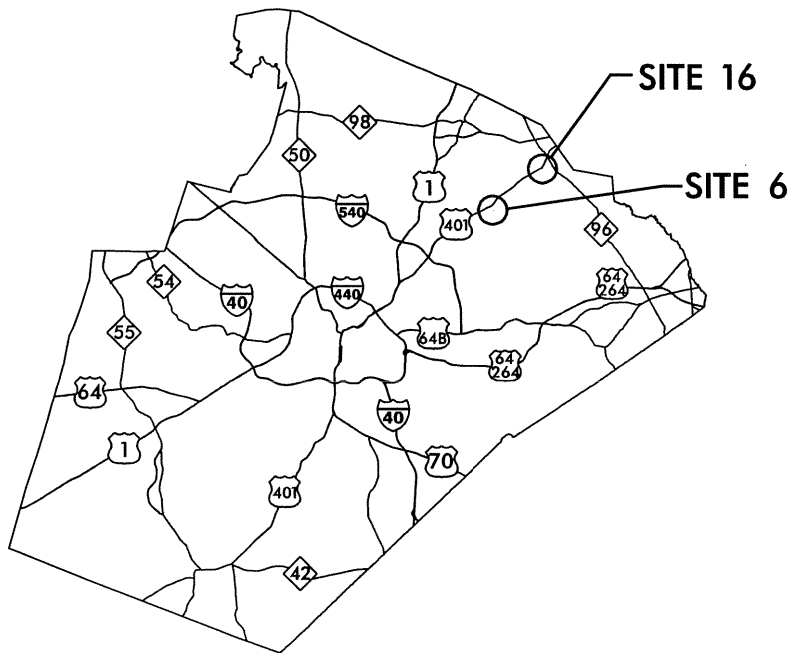
GRASS SWALE DATA D		GRASS SWALE DATA E		GRASS SWALE DATA F		GRASS SWALE DATA G		GRASS SWALE DATA H	
L- STA. 4950 TO STA. 5087.31 LT		L- STA. 5030 TO STA. 5087.31 MD		L- STA. 5087.31 TO STA. 5200 MD		L- STA. 4950 TO STA. 5087.31 RT		L- STA. 4800 TO STA. 4920 MD	
DA	0.60 AC	DA	0.13 AC	DA	0.67 AC	DA	0.70 AC	DA	0.14 AC
SLOPE	0.48 %	SLOPE	0.48 %	SLOPE	0.60 %	SLOPE	0.48 %	SLOPE	1.16 %
L REQ	60 FT	L REQ	13 FT	L REQ	67 FT	L REQ	70 FT	L REQ	14 FT
L PROV	137 FT	L PROV	57 FT	L PROV	113 FT	L PROV	137 FT	L PROV	120 FT
Q2	1.86 CFS	Q2	0.25 CFS	Q2	1.76 CFS	Q2	2.17 CFS	Q2	0.27 CFS
V2	1.11 FT/S	V2	0.62 FT/S	V2	1.14 FT/S	V2	1.16 FT/S	V2	0.84 FT/S
D2	0.58 FT	D2	0.28 FT	D2	0.51 FT	D2	0.61 FT	D2	0.23 FT
Q10	2.40 CFS	Q10	0.32 CFS	Q10	2.27 CFS	Q10	2.80 CFS	Q10	0.35 CFS
V10	1.19 FT/S	V10	0.66 FT/S	V10	1.22 FT/S	V10	1.23 FT/S	V10	0.89 FT/S
D10	0.64 FT	D10	0.31 FT	D10	0.56 FT	D10	0.67 FT	D10	0.25 FT

GRASS SWALE DATA J		GRASS SWALE DATA L	
L- STA. 5400 TO STA. 5435 RT		L- STA. 5473 TO STA. 5660 RT	
DA	4.85 AC	DA	0.96 AC
SLOPE	0.43 %	SLOPE	5.00 %
L REQ	NA FT	L REQ	96 FT
L PROV	35 FT	L PROV	187 FT
Q2	13.18 CFS	Q2	4.12 CFS
V2	1.94 FT/S	V2	3.48 FT/S
D2	1.21 FT	D2	0.38 FT
Q10	17.04 CFS	Q10	5.32 CFS
V10	2.56 FT/S	V10	3.43 FT/S
D10	1.19 FT	D10	0.46 FT

NORTH CAROLINA



WAKE COUNTY



POWER BUFFER VICINITY MAP

Buffer Drawing
Sheet 1 of 6

NCDOT
DIVISION OF HIGHWAYS
WAKE COUNTY
PROJECT: 34506.1.1 (R-2814B)
US 401 ROLESVILLE BYPASS
FROM SR 2225, LOUISBURY ROAD
TO NC 96, ZEBULON ROAD

PROP. NO.	PROPERTY OWNER NAME	PROP. OWNER ADDRESS
<p>9 55 57</p>	<p>Scarboro , E. Walter and Claire P. Stell, Meith & Mary Sue Et. Al. Sylvania Frazier & Lula Barnes McGhee</p>	<p>9412 Louisburg Rd., Wake Forest, NC 27587 1132 Louisburg Rd., Wake Forest, NC 27587 2725 Wait Ave., Wake Forest, NC 27857</p>
<p>N.C. DEPT. OF TRANSPORTATION DIVISION OF HIGHWAYS WAKE COUNTY PROJECT: 34506.1.1 (R-2814B) 9/28/2010</p>		

Buffer Drawing
Sheet 2 of 6

UTILITY BUFFER IMPACTS SUMMARY POWER

		IMPACT										BUFFER REPLACEMENT		
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	TYPE			ALLOWABLE			MITIGABLE			ZONE 1 (ft ²)	ZONE 2 (ft ²)	
			ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)	ZONE 1 (ft ²)	ZONE 2 (ft ²)	TOTAL (ft ²)			
6	Aerial Power	Y2: 16+66 - 18+28	X			1180	1419	2599						
16	Aerial Power	L: 274+36 - 275+56	X			2447	1887	4334						
TOTAL:						3627	3306	6933						

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

WAKE COUNTY
PROJECT: 34506.1.1 (R-2814B)

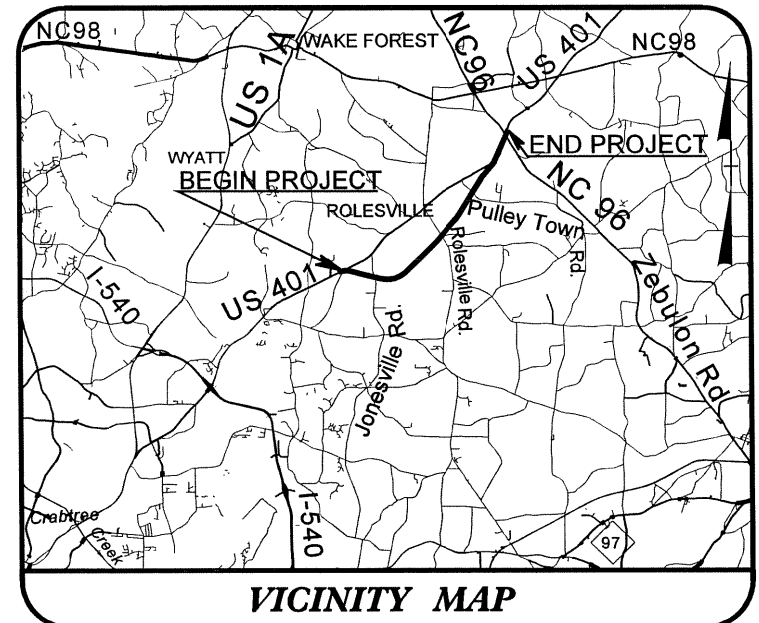
10/13/2010
SHEET 1 OF 1

Buffer Drawing
Sheet 3 of 6

09/28/99
 13-OCT-2010 12:38 (UTILITY_COORDINATION)
 Y:\Projects\NCDOT\Utility On-Call\Contract\R-2814B Wake County\Environmental\R-2814b_rdy_tsh_UBO_09.30.10.dgn
 icole AT LPA30899

TIP PROJECT: R-2814B
CONTRACT:

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

UTILITY BUFFER IMPACT PLAN
WAKE COUNTY

T.I.P. NO.	SHEET NO.
R-2814B	U-1

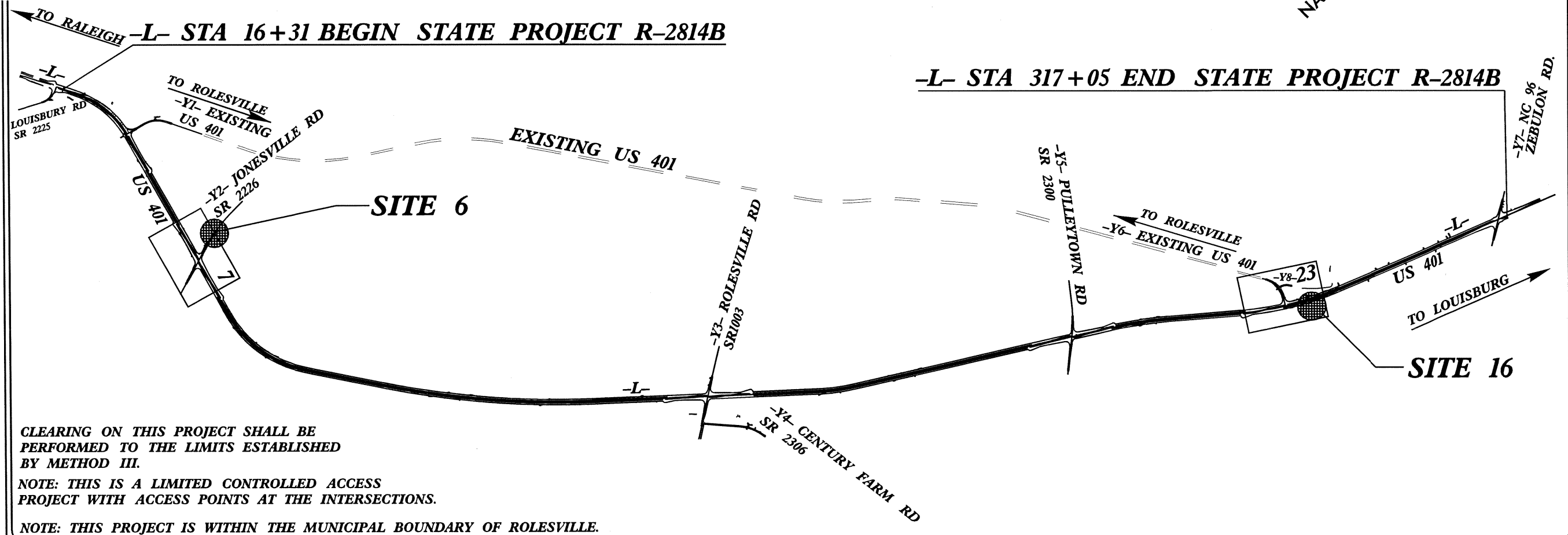
PRELIMINARY PLANS

Buffer Drawing
 Sheet 4 of 6



**LOCATION: US 401 ROLESVILLE BYPASS FROM SR 2225,
 LOUISBURY ROAD TO NC 96, ZEBULON ROAD**

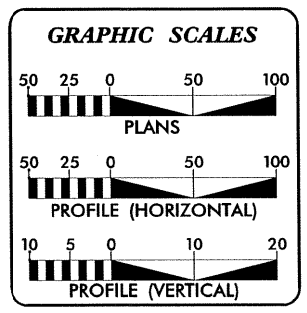
TYPE OF WORK: GRADING, DRAINAGE, PAVING, CULVERTS, AND SIGNALS



CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

NOTE: THIS IS A LIMITED CONTROLLED ACCESS PROJECT WITH ACCESS POINTS AT THE INTERSECTIONS.

NOTE: THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARY OF ROLESVILLE.



- UTILITY OWNERS ON PROJECT**
- (1) Progress Energy (Power Distribution /Transmission)
 - (2) Wake EMC (Power Distribution /Transmission)
 - (3) Century Link (Telecommunications)
 - (4) AT&T (Telecommunications)
 - (5) Windstream (Telecommunications)
 - (6) Time Warner Cable (Cable Television)
 - (7) PSNC (Distribution Gas)
 - (8) City of Raleigh (Water, Sewer)

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

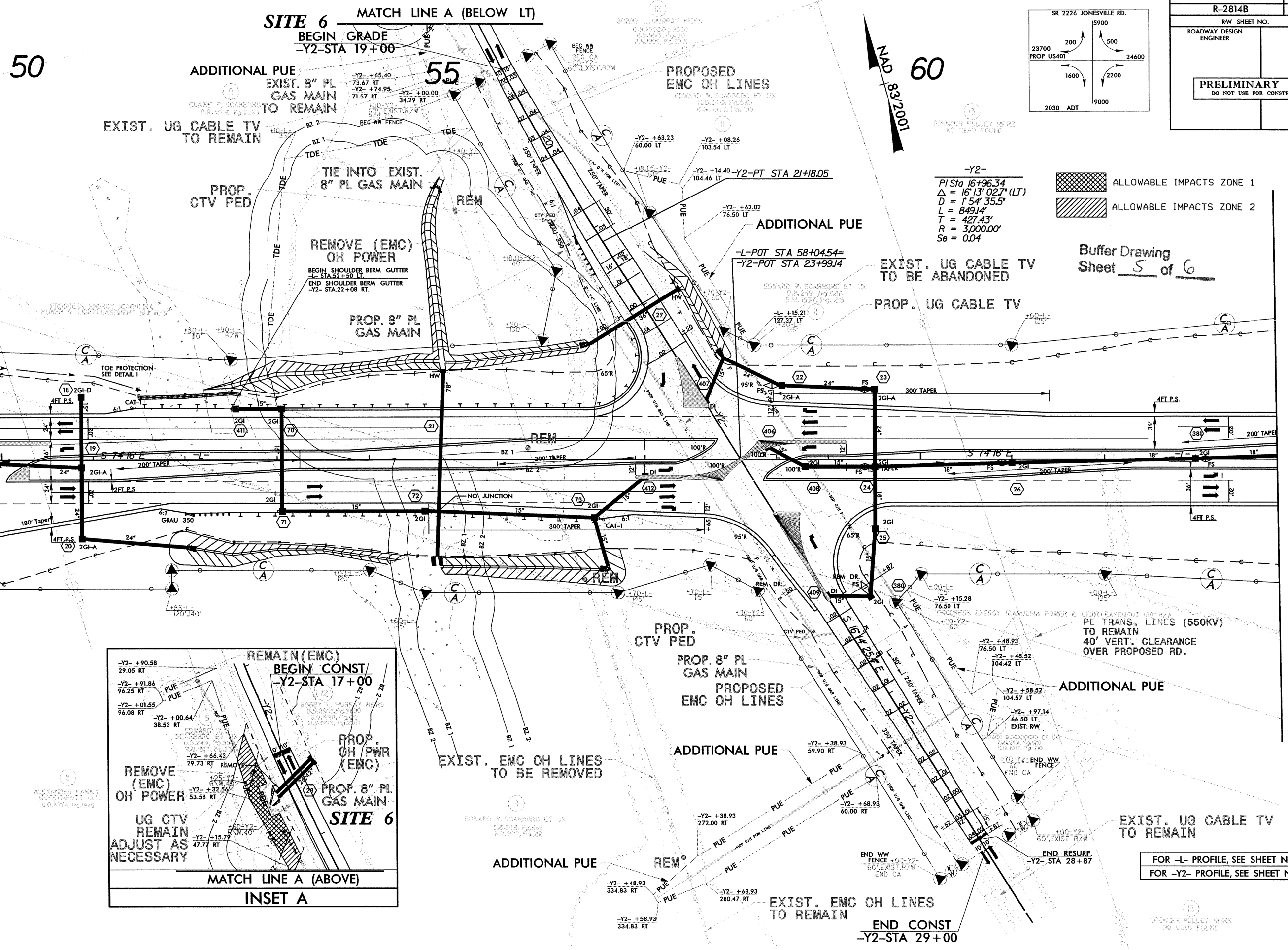
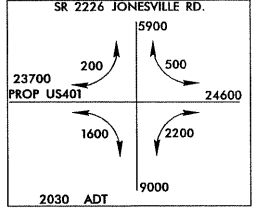
1591 MAIL SERVICES CENTER
 RALEIGH NC 27699-1591
 PHONE (919) 250-4128
 FAX (919) 250-4119

<u>Roger Worthington, P.E.</u>	UTILITIES SECTION ENGINEER
<u>Steve McKee, P.E.</u>	UTILITIES SQUAD LEADER PROJECT ENGINEER
<u>Brandy Creech</u>	UTILITIES COORDINATION CONSULTANT

8/17/99

REVISIONS
V:\04-2010\04-2010\DOT\NCDOT\Utility On-Call\Contract\2814B-rdy.psh_u07_09_30.10.dgn
V:\04-2010\04-2010\DOT\NCDOT\Utility On-Call\Contract\2814B-rdy.psh_u07_09_30.10.dgn
V:\04-2010\04-2010\DOT\NCDOT\Utility On-Call\Contract\2814B-rdy.psh_u07_09_30.10.dgn

PROJECT REFERENCE NO. R-2814B		SHEET NO. U7
RW SHEET NO.		HYDRAULICS ENGINEER
ROADWAY DESIGN ENGINEER		
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION		



50

55

60

SITE 6 MATCH LINE A (BELOW LT)

BEGIN GRADE
-Y2-STA 19+00

ADDITIONAL PUE
EXIST. 8" PL GAS MAIN
TO REMAIN

EXIST. UG CABLE TV
TO REMAIN

PROP. CTV PED

TIE INTO EXIST.
8" PL GAS MAIN

REMOVE (EMC)
OH POWER

PROP. 8" PL GAS MAIN

PROPOSED
EMC OH LINES

EDWARD W. SCARBORO ET UX
D.B. 249, PG. 985
D.M. 1977, PG. 218

ADDITIONAL PUE

-L-POT STA 58+04.54=
-Y2-POT STA 23+99.14

EXIST. UG CABLE TV
TO BE ABANDONED

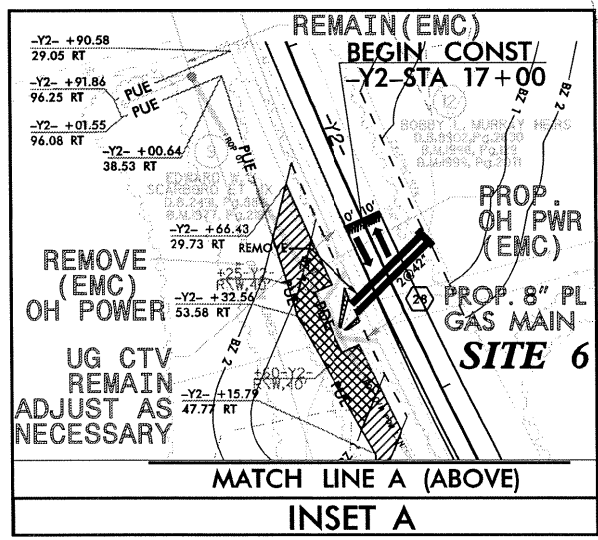
PROP. UG CABLE TV

-Y2-
PI Sta 16+96.34
Δ = 16°13'02.7" (LT)
D = 154'35.5"
L = 849.14'
T = 427.43'
R = 3,000.00'
Se = 0.04

ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2

Buffer Drawing
Sheet 5 of 6

PE TRANS. LINES (550KV)
TO REMAIN
40' VERT. CLEARANCE
OVER PROPOSED RD.



MATCH LINE A (ABOVE)

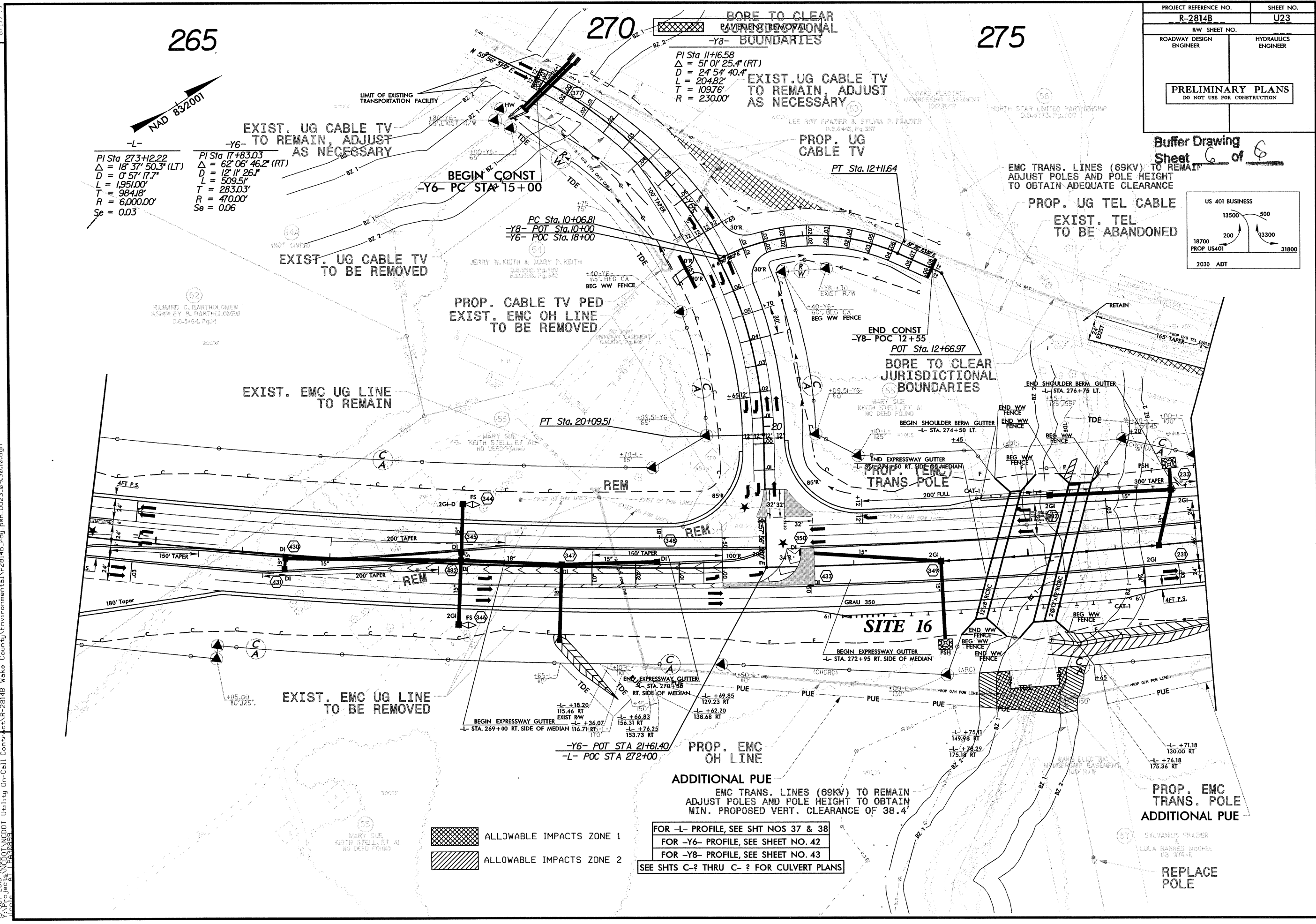
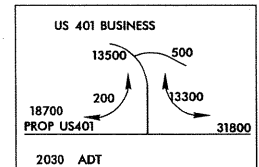
INSET A

FOR -L- PROFILE, SEE SHEET NO. 30
FOR -Y2- PROFILE, SEE SHEET NO. 40

SPENCER PULLEY HEIRS
NO DEED FOUND

PROJECT REFERENCE NO.	SHEET NO.
R-2814B	U23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
PRELIMINARY PLANS DO NOT USE FOR CONSTRUCTION	

Buffer Drawing Sheet 6 of 6



PI Sta 273+12.22
 $\Delta = 18^\circ 37' 50.3"$ (LT)
 $D = 0' 57' 17.7"$
 $L = 1951.00'$
 $T = 984.18'$
 $R = 6,000.00'$
 $Se = 0.03$

PI Sta 17+83.03
 $\Delta = 62^\circ 06' 46.2"$ (RT)
 $D = 12' 11' 26.1"$
 $L = 509.51'$
 $T = 283.03'$
 $R = 470.00'$
 $Se = 0.06$

BORE TO CLEAR JURISDICTIONAL BOUNDARIES
 -Y8-
 PI Sta 11+16.58
 $\Delta = 51^\circ 01' 25.4"$ (RT)
 $D = 24' 54' 40.4"$
 $L = 204.82'$
 $T = 109.76'$
 $R = 230.00'$

275

270

265



- ALLOWABLE IMPACTS ZONE 1
- ALLOWABLE IMPACTS ZONE 2

FOR -L- PROFILE, SEE SHS NOS 37 & 38
 FOR -Y6- PROFILE, SEE SHEET NO. 42
 FOR -Y8- PROFILE, SEE SHEET NO. 43
 SEE SHS C-? THRU C-? FOR CULVERT PLANS

PROP. EMC TRANS. POLE
 ADDITIONAL PUE
 REPLACE POLE

REVISIONS

8/17/99
 V:\07-2006\1838\1838\DOT\NC001\Utility On-Call\Constr\Act\R-2814B_Weke County\Environmental\1838\1838\psh_U023_09_30_10.dgn
 P:\07-2006\1838\1838\DOT\NC001\Utility On-Call\Constr\Act\R-2814B_Weke County\Environmental\1838\1838\psh_U023_09_30_10.dgn