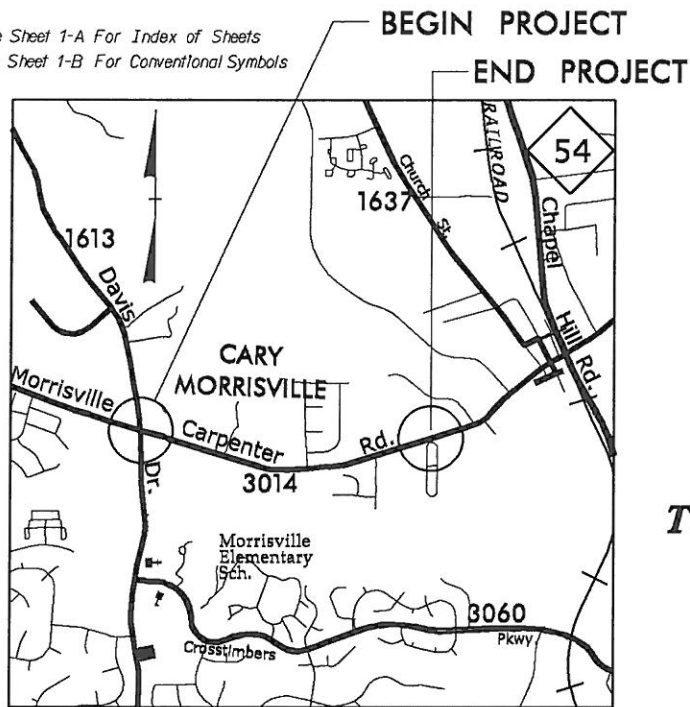


CONTRACT: DE00071 PROJECT: U-5503

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols



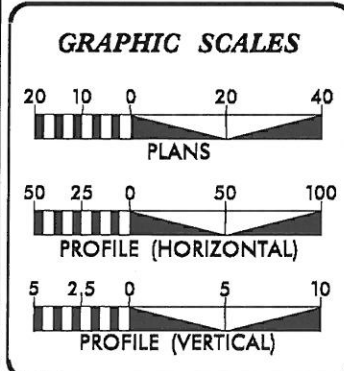
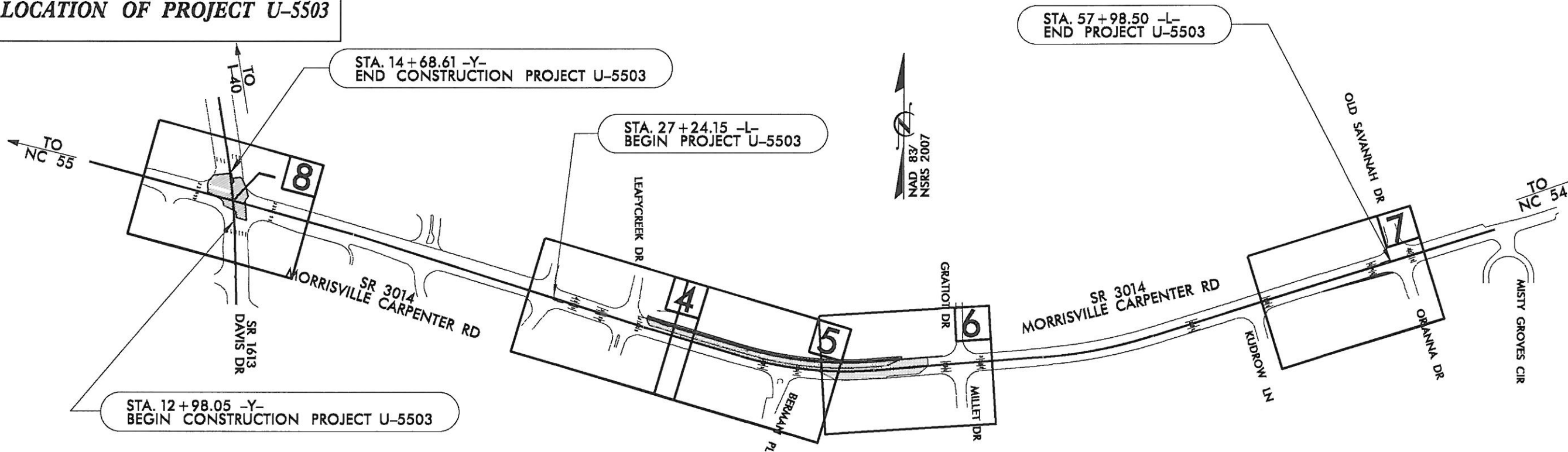
**VICINITY MAP SHOWING
LOCATION OF PROJECT U-5503**

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
WAKE COUNTY

**LOCATION: SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND
MISTY GROVES CIR.**

**TYPE OF WORK: GRADING, PAVING, DRAINAGE, PAVEMENT MARKING, SIGNING, SIGNALS AND
TRAFFIC CONTROL.**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5503	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
45490.1.1	STPDA-3014(2)	PE	
45490.2.1	STPDA-3014(2)	UTIL.	
45490.3.1	STPDA-3014(2)	CONST.	



DESIGN DATA

ADT 2011 =	16000
V =	40 MPH

PROJECT LENGTH

Length Roadway Project U-5503 = 0.902 Miles

Prepared in the Office of:
DIVISION OF HIGHWAYS
2612 N. Duke St., Durham, NC 27704

2012 STANDARD SPECIFICATIONS

BEN UPSHAW, P.E.
PROJECT ENGINEER

SUNIL PATEL
PROJECT DESIGN ENGINEER

LETTING DATE:
FEBRUARY 26, 2014

DIVISION DESIGN ENGINEER

SIGNATURE: *[Signature]* P.E.

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

FIFTH DIVISION
J. WALLY BOWMAN, P.E.
DIVISION ENGINEER

05 FEB 2014 12:38 reg Pro:U5503.Rdy, TSH.dgn

04/16/11

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.
U-5503
SHEET NO.
1-B

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○
Property Corner	-----
Property Monument	□
Parcel/Sequence Number	⑫③
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	-----
Proposed Wetland Boundary	-----
Existing Endangered Animal Boundary	-----
Existing Endangered Plant Boundary	-----
Known Soil Contamination: Area or Site	☠ ☠
Potential Soil Contamination: Area or Site	☠ ☠

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○
Well	○
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	⊕
Building	□
School	□
Church	□
Dam	-----

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	-----
Jurisdictional Stream	-----
Buffer Zone 1	-----
Buffer Zone 2	-----
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	-----
Proposed Lateral, Tail, Head Ditch	-----
False Sump	-----

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
Switch	-----
RR Abandoned	-----
RR Dismantled	-----

RIGHT OF WAY:

Baseline Control Point	◆
Existing Right of Way Marker	△
Existing Right of Way Line	-----
Proposed Right of Way Line	-----
Proposed Right of Way Line with Iron Pin and Cap Marker	-----
Proposed Right of Way Line with Concrete or Granite RW Marker	-----
Proposed Control of Access Line with Concrete C/A Marker	-----
Existing Control of Access	-----
Proposed Control of Access	-----
Existing Easement Line	-----
Proposed Temporary Construction Easement	-----
Proposed Temporary Drainage Easement	-----
Proposed Permanent Drainage Easement	-----
Proposed Permanent Drainage / Utility Easement	-----
Proposed Permanent Utility Easement	-----
Proposed Temporary Utility Easement	-----
Proposed Aerial Utility Easement	-----
Proposed Permanent Easement with Iron Pin and Cap Marker	-----

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-----
Proposed Slope Stakes Fill	-----
Proposed Curb Ramp	-----
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	⊕
Pavement Removal	-----

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----

Orchard	-----
Vineyard	-----

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	-----
MINOR:	
Head and End Wall	-----
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	-----
Paved Ditch Gutter	-----
Storm Sewer Manhole	-----
Storm Sewer	-----

UTILITIES:

POWER:	
Existing Power Pole	-----
Proposed Power Pole	-----
Existing Joint Use Pole	-----
Proposed Joint Use Pole	-----
Power Manhole	-----
Power Line Tower	-----
Power Transformer	-----
U/G Power Cable Hand Hole	-----
H-Frame Pole	-----
Recorded U/G Power Line	-----
Designated U/G Power Line (S.U.E.*)	-----

TELEPHONE:

Existing Telephone Pole	-----
Proposed Telephone Pole	-----
Telephone Manhole	-----
Telephone Booth	-----
Telephone Pedestal	-----
Telephone Cell Tower	-----
U/G Telephone Cable Hand Hole	-----
Recorded U/G Telephone Cable	-----
Designated U/G Telephone Cable (S.U.E.*)	-----
Recorded U/G Telephone Conduit	-----
Designated U/G Telephone Conduit (S.U.E.*)	-----
Recorded U/G Fiber Optics Cable	-----
Designated U/G Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	-----
Water Meter	-----
Water Valve	-----
Water Hydrant	-----
Recorded U/G Water Line	-----
Designated U/G Water Line (S.U.E.*)	-----
Above Ground Water Line	-----

TV:

TV Satellite Dish	-----
TV Pedestal	-----
TV Tower	-----
U/G TV Cable Hand Hole	-----
Recorded U/G TV Cable	-----
Designated U/G TV Cable (S.U.E.*)	-----
Recorded U/G Fiber Optic Cable	-----
Designated U/G Fiber Optic Cable (S.U.E.*)	-----

GAS:

Gas Valve	-----
Gas Meter	-----
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	-----

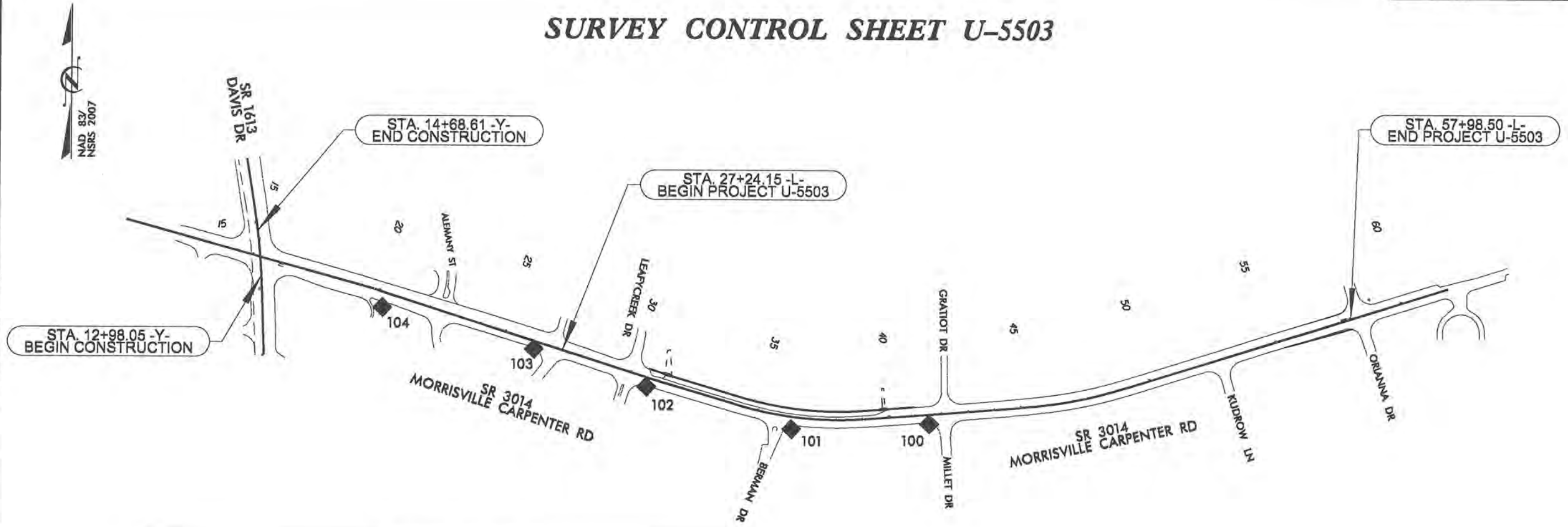
SANITARY SEWER:

Sanitary Sewer Manhole	-----
Sanitary Sewer Cleanout	-----
U/G Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	-----
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

MISCELLANEOUS:

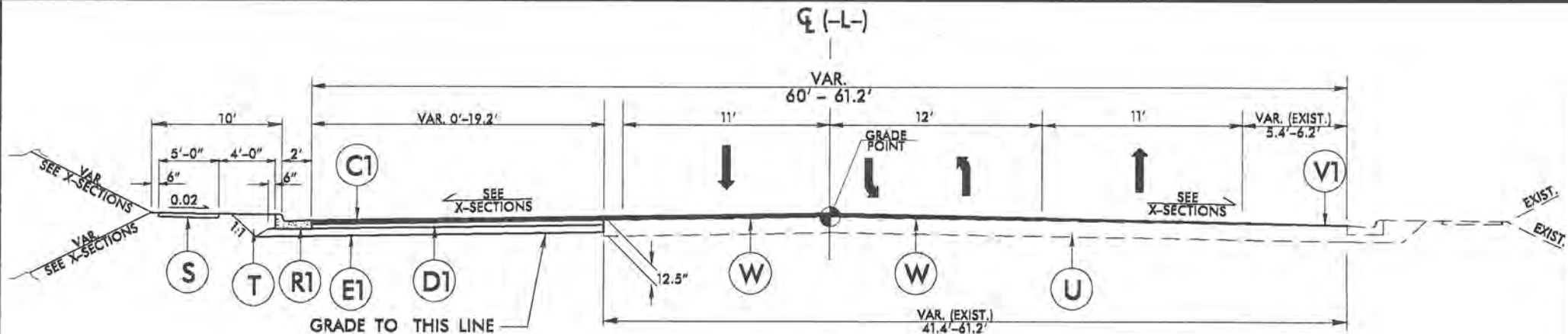
Utility Pole	-----
Utility Pole with Base	-----
Utility Located Object	-----
Utility Traffic Signal Box	-----
Utility Unknown U/G Line	-----
U/G Tank; Water, Gas, Oil	-----
Underground Storage Tank, Approx. Loc.	-----
A/G Tank; Water, Gas, Oil	-----
Geoenvironmental Boring	-----
U/G Test Hole (S.U.E.*)	-----
Abandoned According to Utility Records	-----
End of Information	-----

SURVEY CONTROL SHEET U-5503

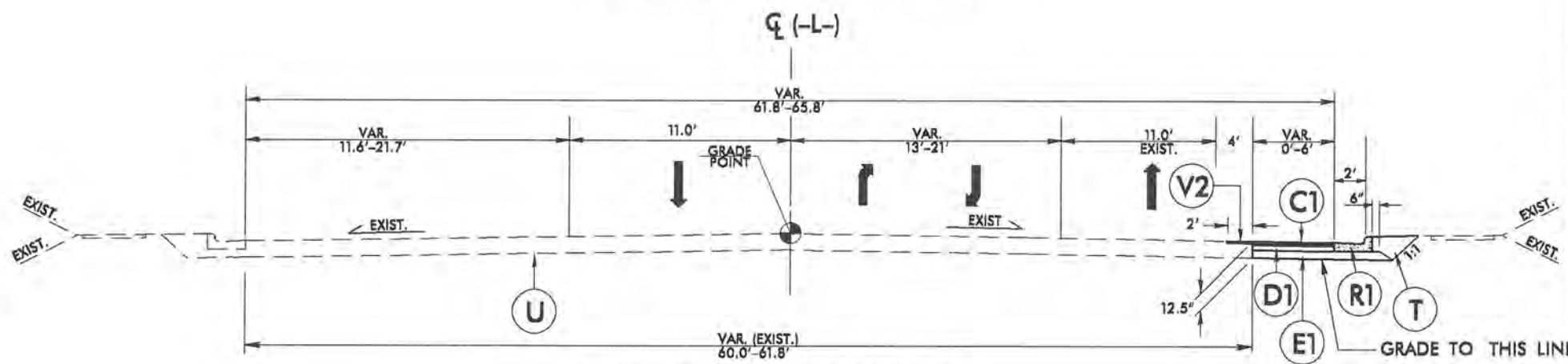


CONTROL DATA						
Point #	Description	North(Y)	East(X)	Elev(Z)	Station	Offset
100	BL100	752789.671	2047875.586	310.302	41+49.49	36.60
101	BL101	752768.317	2047163.28	316.511	36+34.65	46.57
102	BL102	752925.73	2046804.997	313.861	30+70.73	34.42
103	BL103	753066.744	2046177.151	311.865	26+20.88	30.08
104	BL104	753221.448	2045604.622	335.099	20+28.56	56.92

WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR		
DIVISION 05 WAKE COUNTY MORRISVILLE		
REVISIONS	INT.	DATE
N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT		SCALE: NONE DATE: 08/2012 PREPARED BY: SUNIL PATEL REVIEWED BY: BEN UPSHAW REVISION BY:

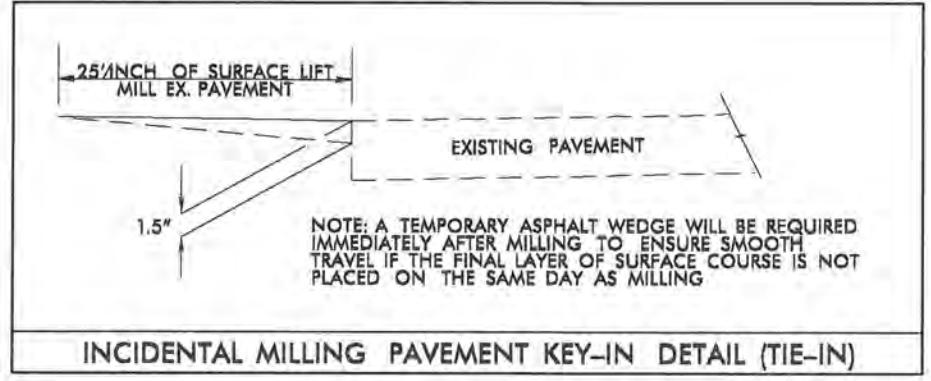
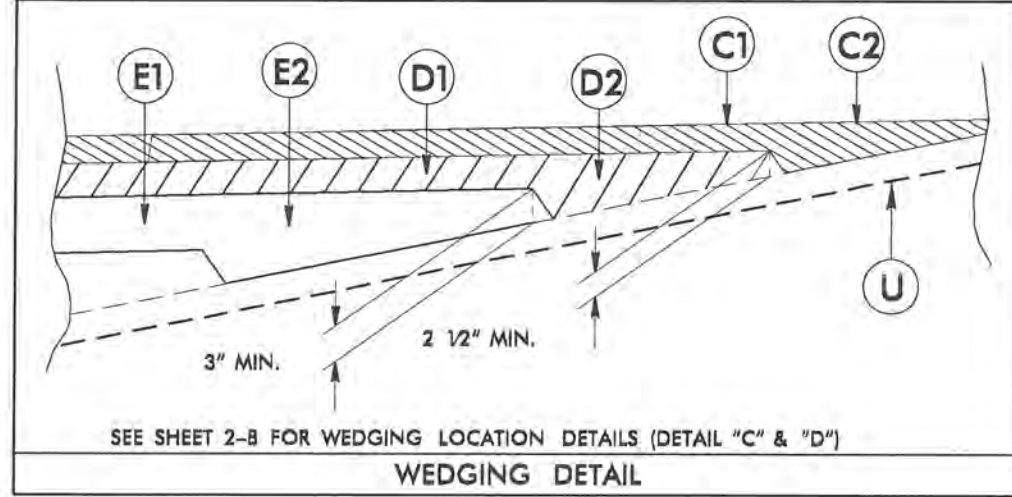


TYPICAL SECTION NO. 1
-L- STA. 30+61.42 TO -L- STA. 40+99.00

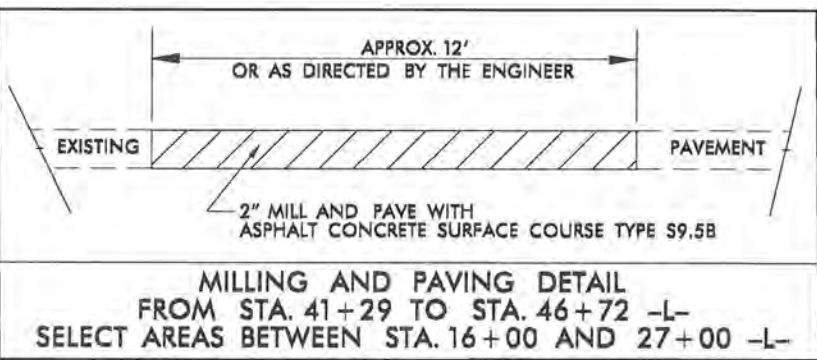
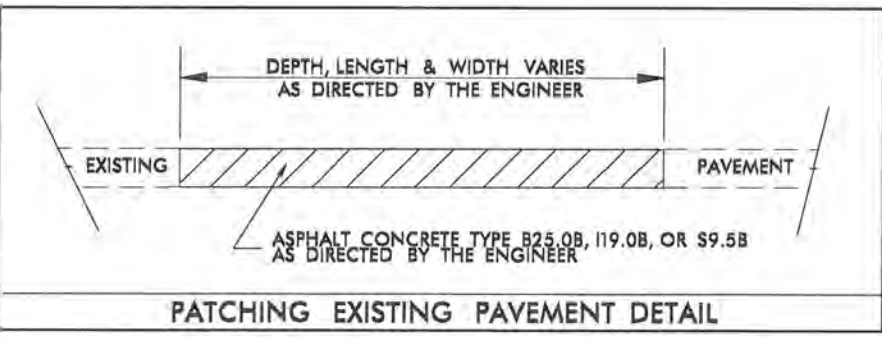


TYPICAL SECTION NO. 2
-L- STA. 55+35.43 TO -L- STA. 57+94.27

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
C2	VARIABLE DEPTH SURFACE COURSE. SEE WEDGING DETAIL, (1.5'-2.5').
D1	PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
D2	PROP. VARIABLE DEPTH INTERMEDIATE COURSE. SEE WEDGING DETAIL, (2.5'-4.0').
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
E2	PROP. VARIABLE DEPTH BASE COURSE, SEE WEDGING DETAIL, (3.0' TO 5.5').
R1	2'-8" CONCRETE CURB AND GUTTER.
R2	5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED), (SEE SHEET 2-A, DETAILS "A" & "B")
S	4" CONCRETE SIDEWALK.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V1	0"-1.5" MILLING. (SEE SHEET 2-B FOR MORE DETAILS)
V2	1.5" MILLING.
W	WEDGING (SEE SHEET 2-B FOR WEDGING LOCATION DETAIL).



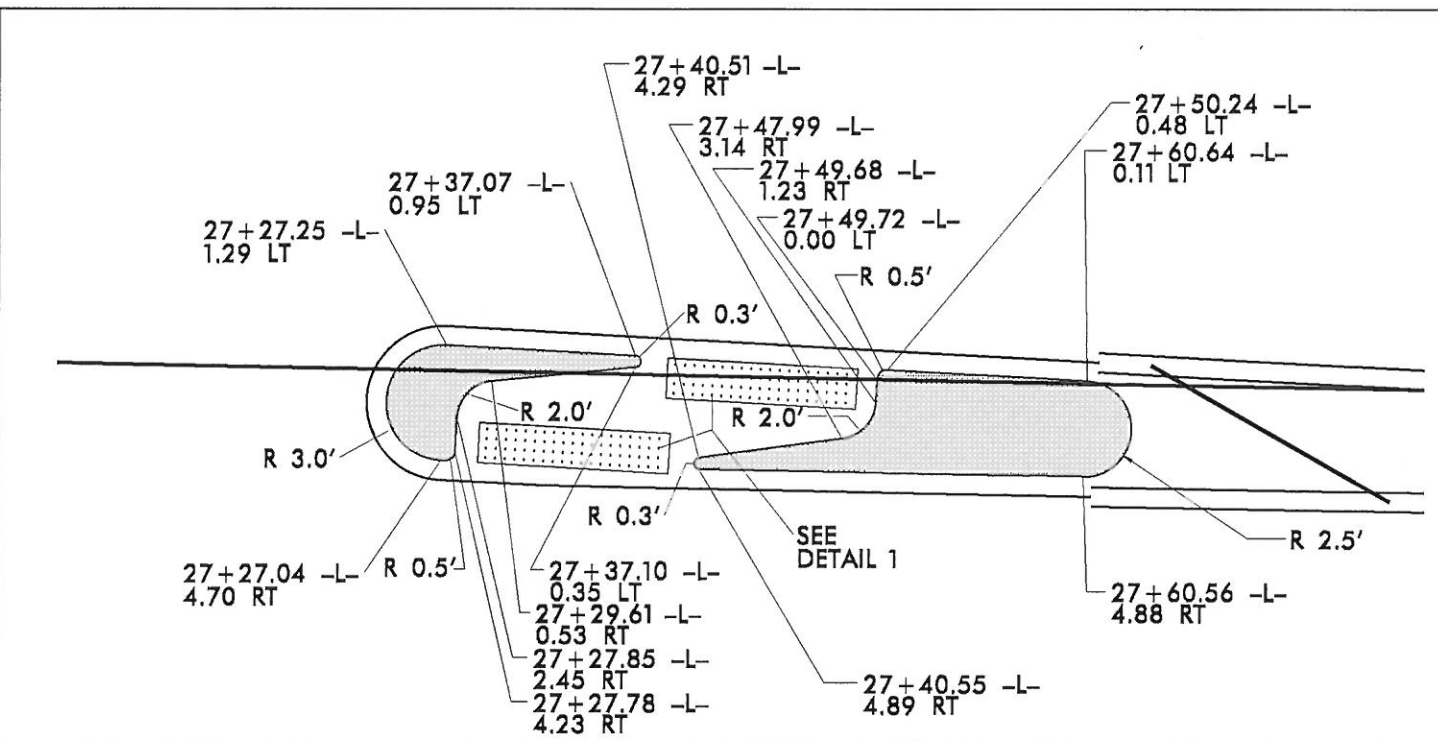
NOTES:
 1). THE PORTION OF EACH EXISTING PAVED SHOULDER THAT IS NOT FULL DEPTH IS TO BE REMOVED AND PAVED TO FULL DEPTH.
 2). PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.
 3). FOR VARIABLE DEPTH WEDGING SEE CROSS SECTIONS.



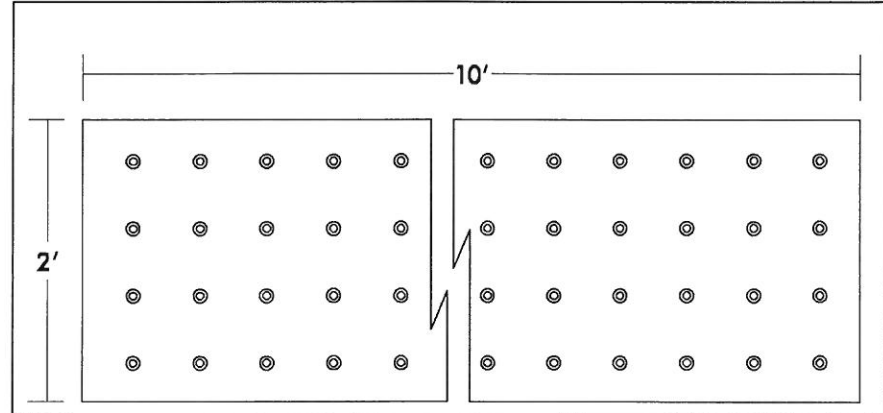
DIVISION FIVE DESIGN
 NORTH CAROLINA PROFESSIONAL SEAL 030459 ENGINEER
 BEN UPSHAW
 9/3/13
 P.E.
 SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR
 DIVISION 05 WAKE COUNTY MORRISVILLE
 REVISIONS: _____ INT. DATE _____
 N.C. DEPARTMENT OF TRANSPORTATION
 DIVISION OF HIGHWAYS
 DIVISION FIVE DESIGN UNIT

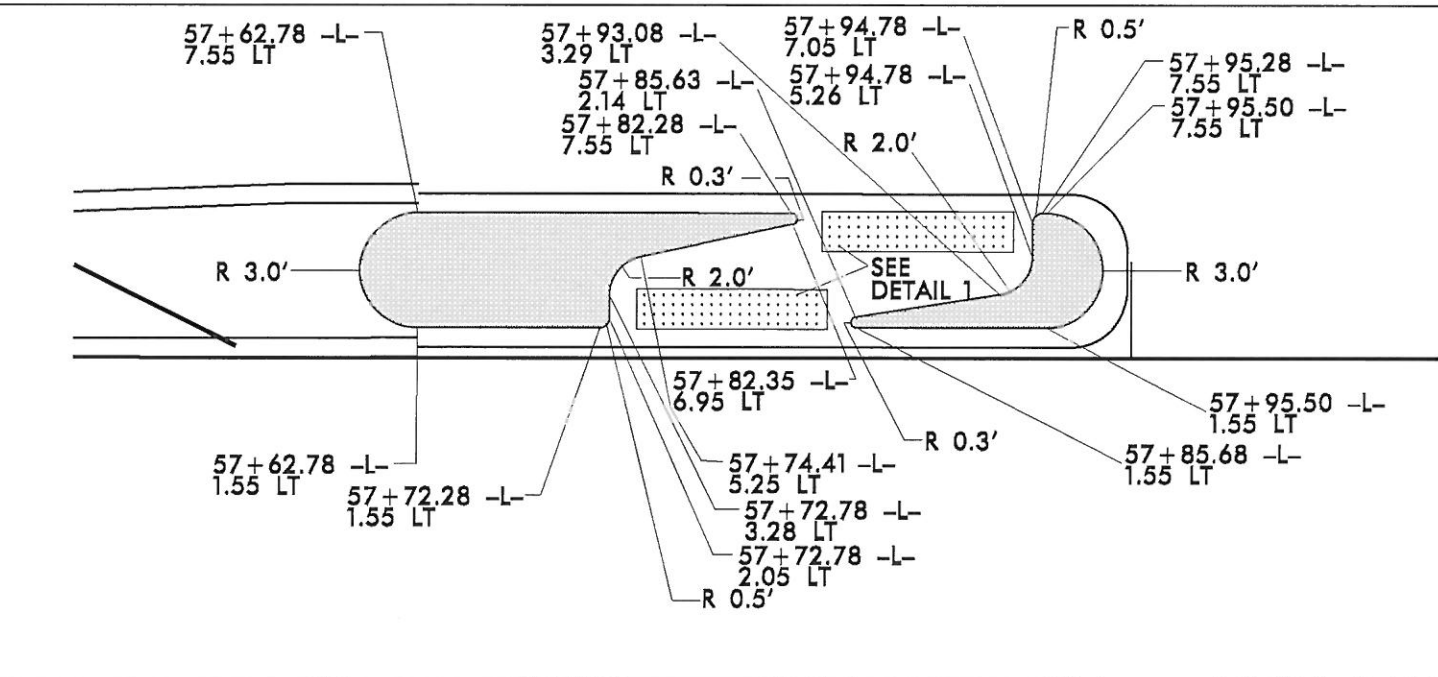
PREPARED BY: SUNIL PATEL
 REVIEWED BY: BEN UPSHAW
 SCALE: NONE DATE: 07/2013



DETAIL 'A' : MONOLITHIC CONCRETE ISLAND [STA. 27+24.15 TO STA. 27+63.06 (-L-)]



DETAIL 1: DETECTABLE WARNING DOMES



DETAIL 'B' : MONOLITHIC CONCRETE ISLAND [STA. 57+59.76 TO 57+98.50 (-L-)]

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

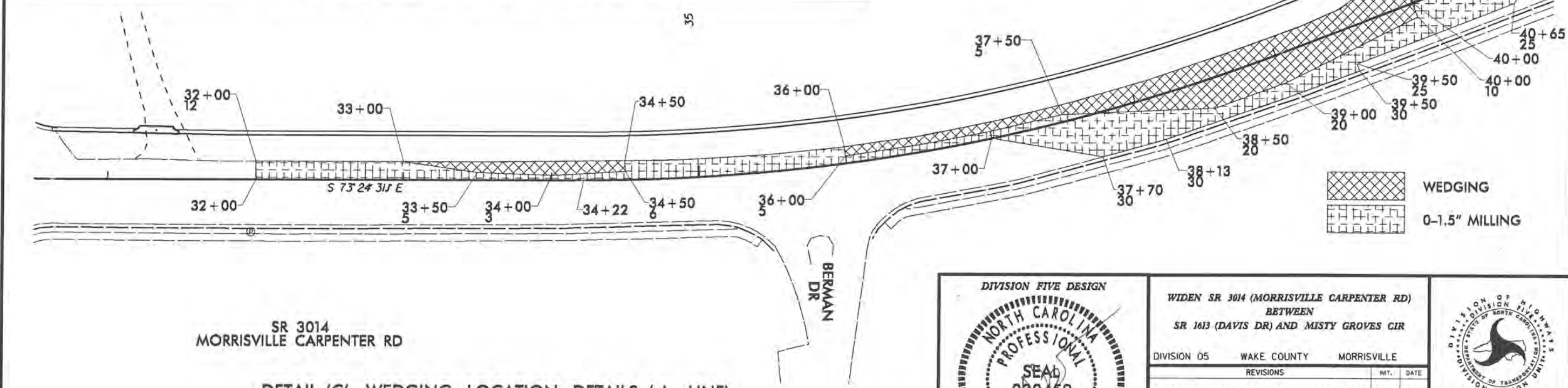
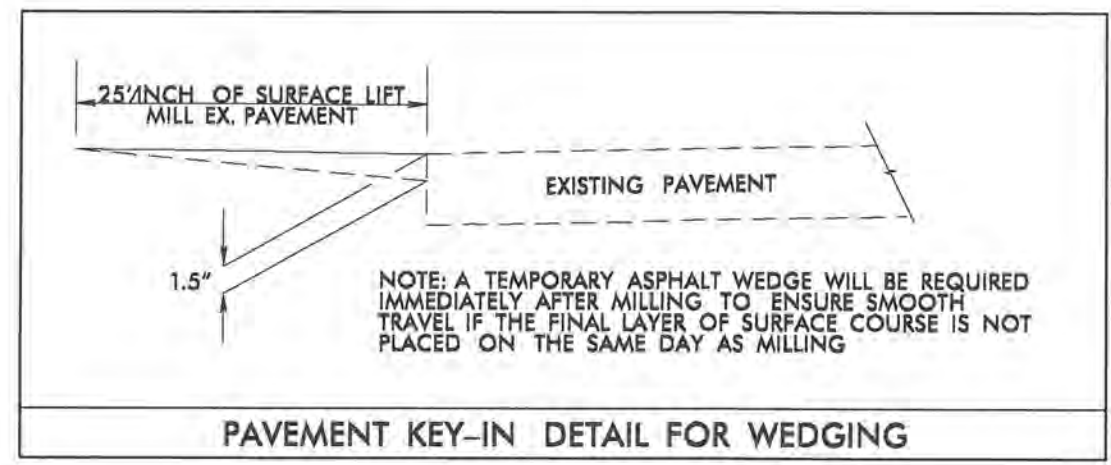
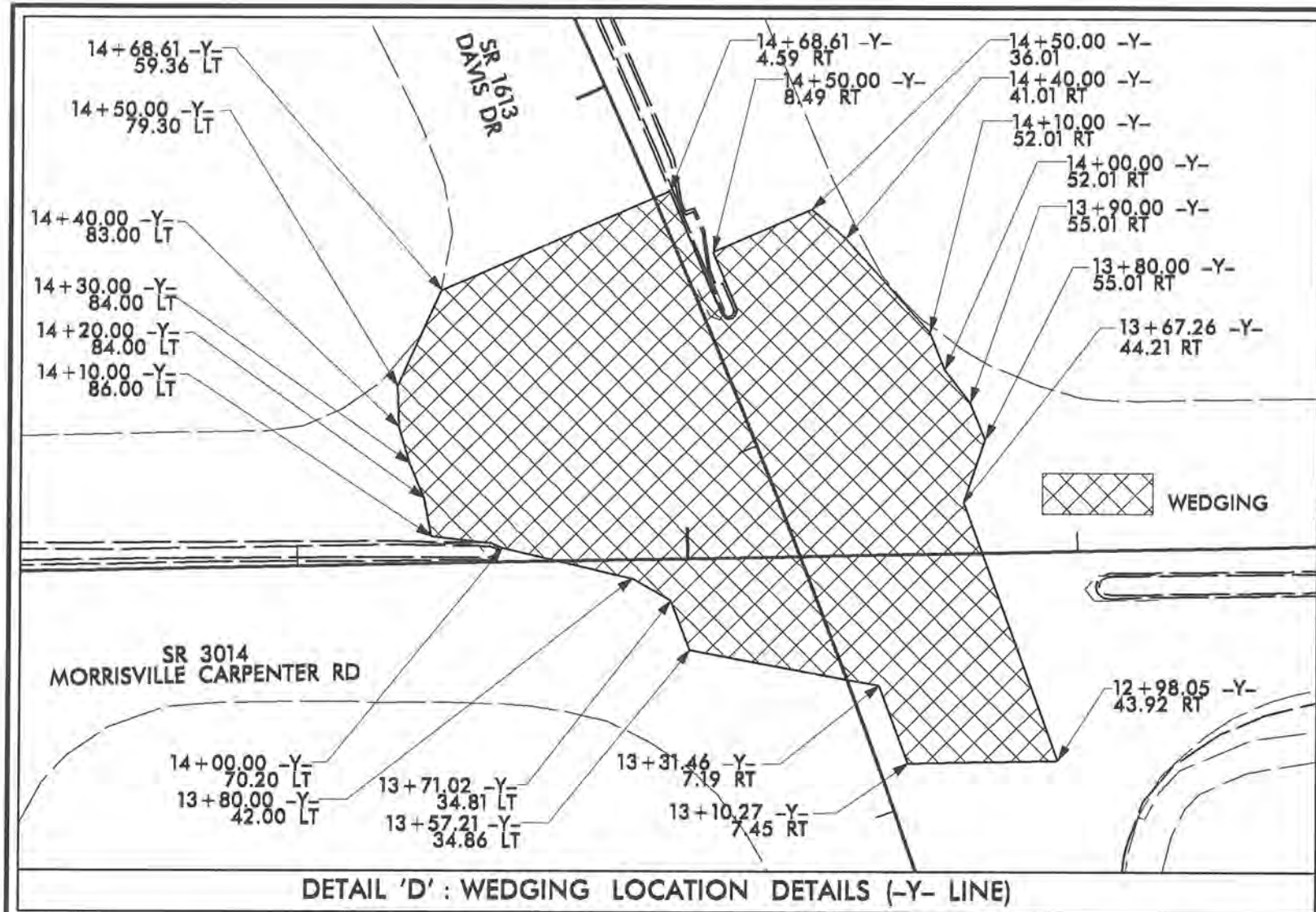
DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: NONE DATE: 08/2012

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:



SR 3014
MORRISVILLE CARPENTER RD

DETAIL 'C': WEDGING LOCATION DETAILS (-L- LINE)

DIVISION FIVE DESIGN

SEAL
030459
ENGINEER
BEN UPSHAW
P.E.

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

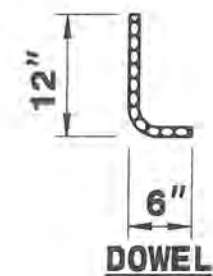
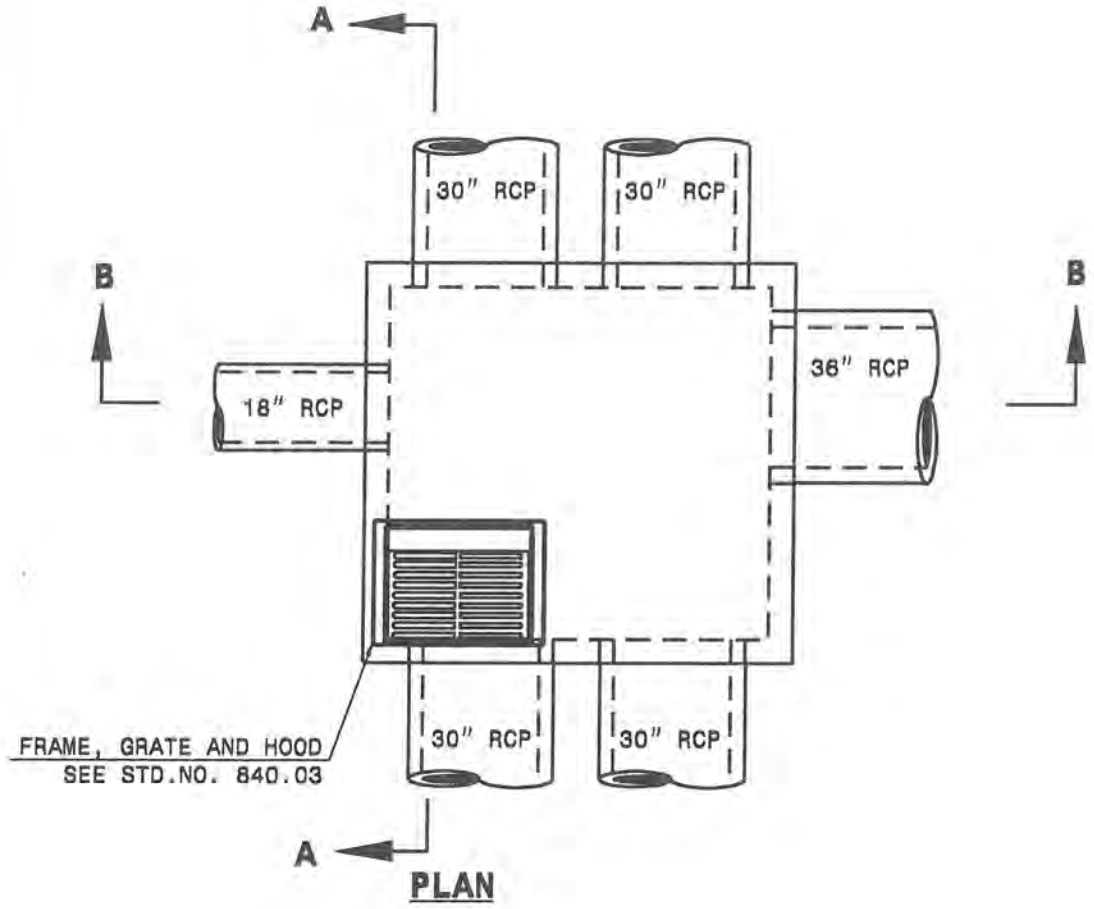
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: NONE DATE: 08/2012

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:

GENERAL NOTES:

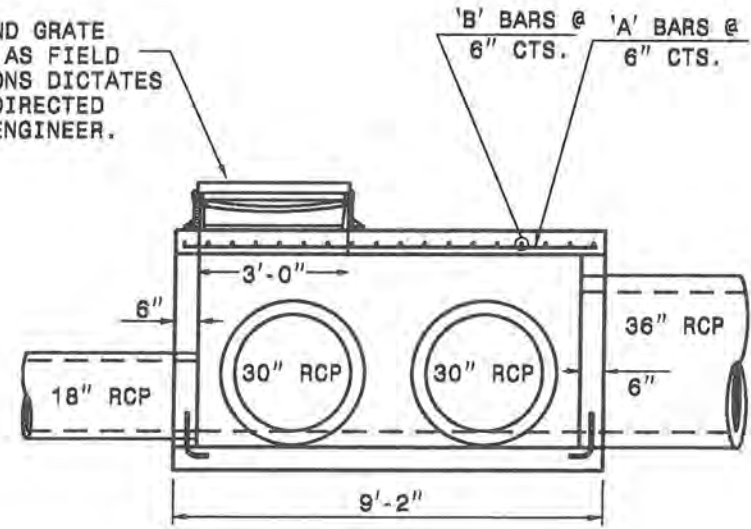
- CONSTRUCT THE BASE SLAB BY FORMING AND POURING OF CONCRETE, CLASS "A".
- IF REINFORCED CONCRETE PIPE IS SET BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD.NO. 840.00
- USE CLASS "A" CONCRETE THROUGHOUT.
- BASE SLAB OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- CHAMFER ALL EXPOSED CORNERS 1".
- MAXIMUM HEIGHT OF THIS STRUCTURE IS 12'-0".
- PROVIDE JUNCTION BOX WITH STEPS TO BE PLACED ON 12" CTRS. REFERENCE STD.NO. 840.66.
- DIMENSIONS OF CATCH BASIN MAY BE ADJUSTED AS DIRECTED BY ENGINEER.



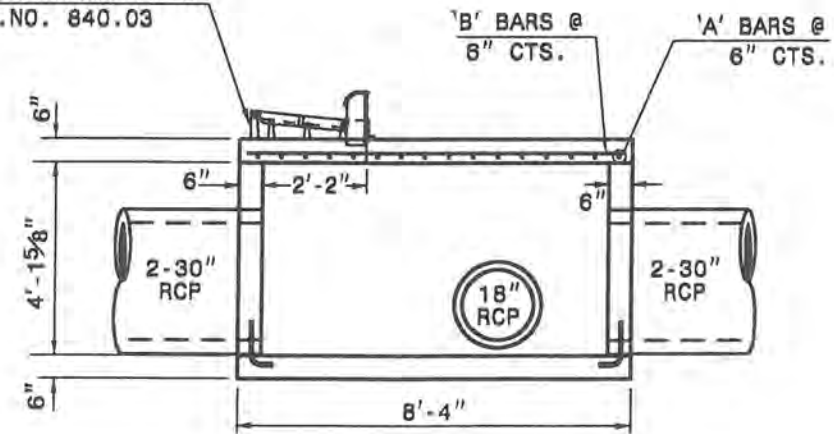
BILL OF MATERIAL				
BAR	NO.	SIZE	LENGTH	WEIGHT
A	16	#4	8'-10"	94
B	18	#4	8'-0"	96
TOTAL REINFORCING STEEL (lbs.)				190
CLASS "A" CONC. (cu. yds.)				5.5

NO DEDUCTIONS HAVE BEEN MADE TO ACCOMMODATE PIPES, CATCH BASIN OPENING AND MANHOLE OPENING.

FRAME AND GRATE LOCATED AS FIELD CONDITIONS DICTATES AND AS DIRECTED BY THE ENGINEER.



FRAME, GRATE AND HOOD SEE STD.NO. 840.03



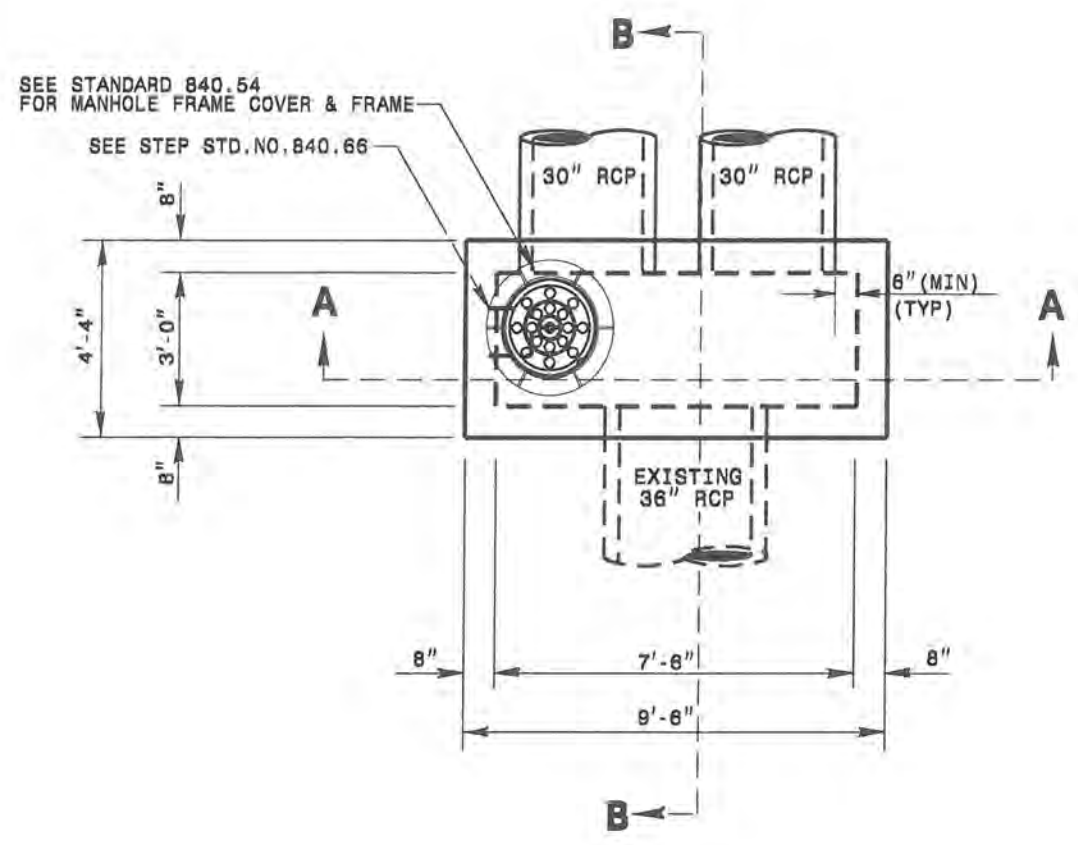
CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

SPECIAL JUNCTION BOX WITH CATCH BASIN

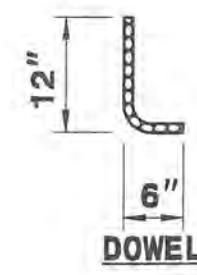
ORIGINAL BY: K.A.KEMPF DATE: Mar. 28, 2008
 MODIFIED BY: K.A.KEMPF DATE: Aug. 08, 2012
 CHECKED BY: DATE:
 FILE SPEC.: wkkempf/eng11sh/u8503_36cb.dgn

24-AUG-2012 10:57:55 USER:KEMPF Data11a\kempf\english\ub5503_36cb.dgn

GENERAL NOTES:
 USE CLASS "B" CONCRETE THROUGHOUT.
 PROVIDE ALL JUNCTION BOXES OVER 3'-8" IN DEPTH WITH STEPS 12" ON CENTER. USE STEPS WHICH COMPLY WITH STD. DRAWING 840.66.
 OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
 USE FORMS FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
 INSTALL MANHOLE IN POSITION AS DIRECTED BY THE ENGINEER. CUT AND BEND ALL REBAR CROSSING THIS OPENING TO ALLOW 2" MINIMUM CONCRETE COVERAGE.
 CHAMFER ALL EXPOSED CORNERS 1".
 2" MINIMUM CONCRETE COVERAGE ON ALL REBAR.
 HEIGHT DIMENSIONS MAY BE ADJUSTED DOWN FOR SMALLER PIPES AS DIRECTED BY THE ENGINEER.



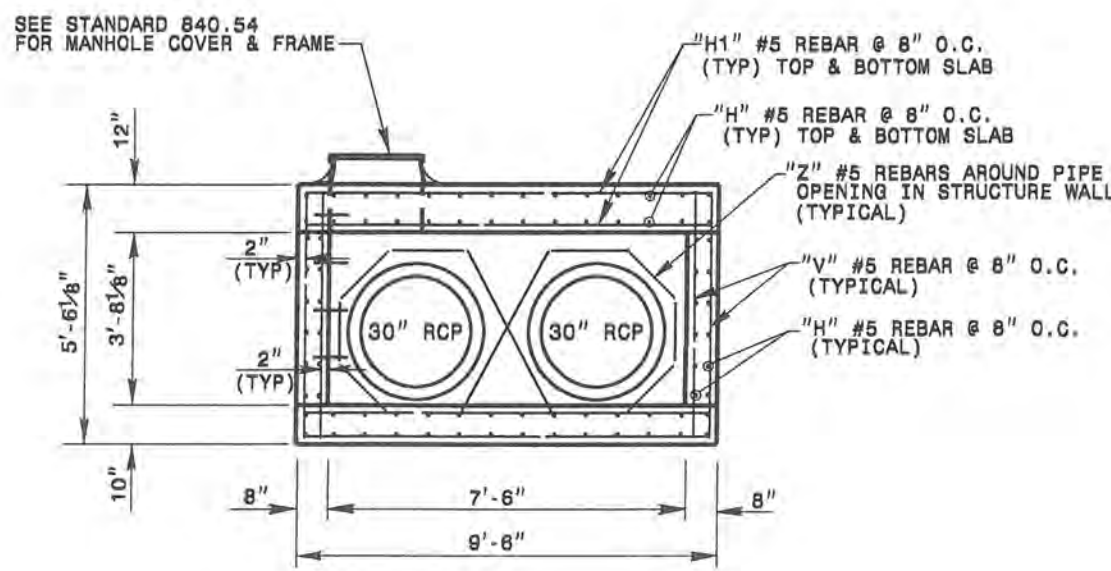
SEE STANDARD 840.54 FOR MANHOLE FRAME COVER & FRAME
 SEE STEP STD. NO. 840.66



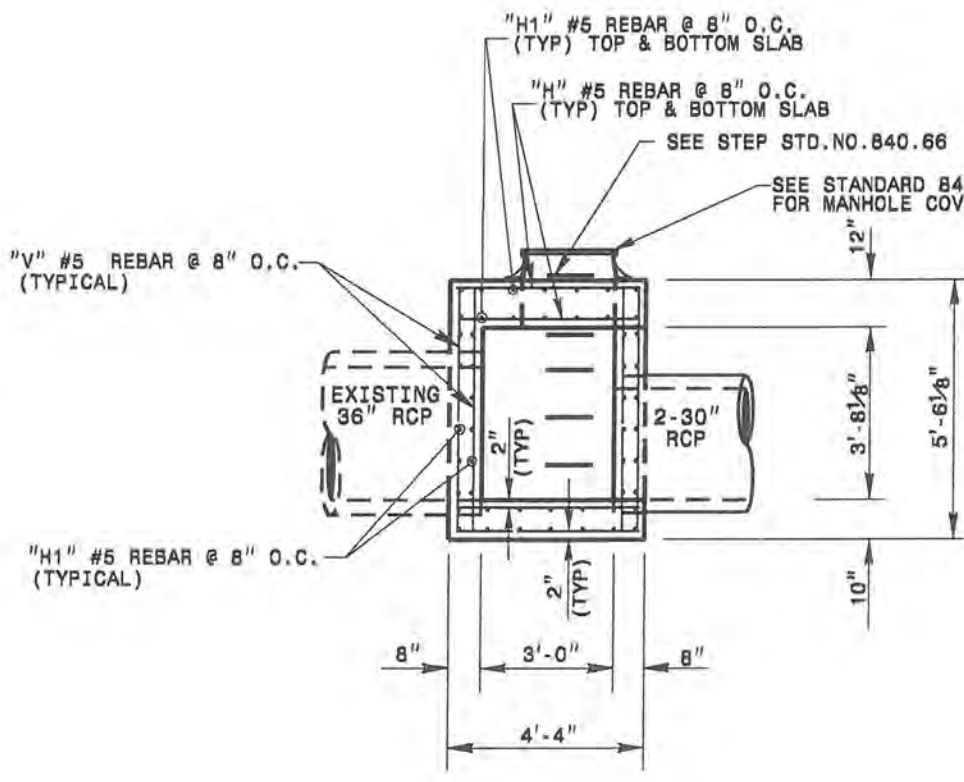
BILL OF MATERIALS				
BAR	NO.	SIZE	LENGTH	WEIGHT
H	80	#5	4'-0"	334
H1	56	#5	9'-2"	535
V	78	#5	5'-2"	410
Z	10	#5	4'-0"	42
TOTAL REINF. STEEL (LBS.)				1321
TOTAL CONC. (CU. YDS.)				4.8

* NO DEDUCTION HAS BEEN MADE FOR PIPES

PLAN VIEW



SEE STANDARD 840.54 FOR MANHOLE COVER & FRAME



SEE STEP STD. NO. 840.66

SEE STANDARD 840.54 FOR MANHOLE COVER & FRAME

SECTION A-A

SECTION B-B



CONTRACT STANDARDS AND DEVELOPMENT UNIT
 Office 919-707-6950 FAX 919-250-4119

TRAFFIC BEARING JUNCTION BOX

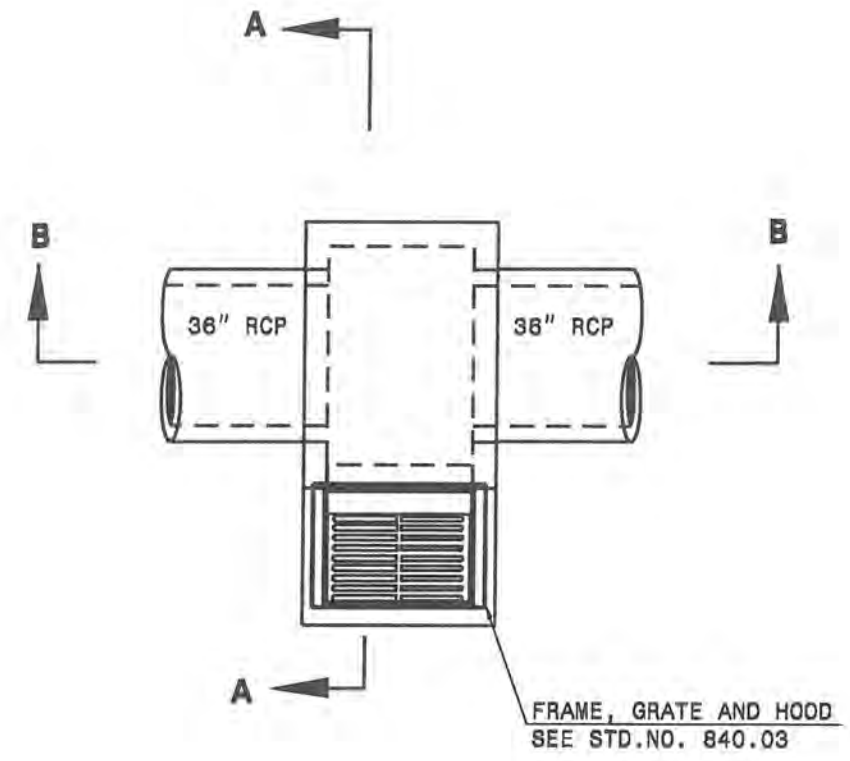
ORIGINAL BY: nbritt DATE: 04/22/08
 MODIFIED BY: kkempf DATE: 08/19/12
 CHECKED BY: DATE:
 FILE SPEC.: deta1/kkempf/ang11sh/u6503_38cb.dgn

DRAWING NOT TO SCALE

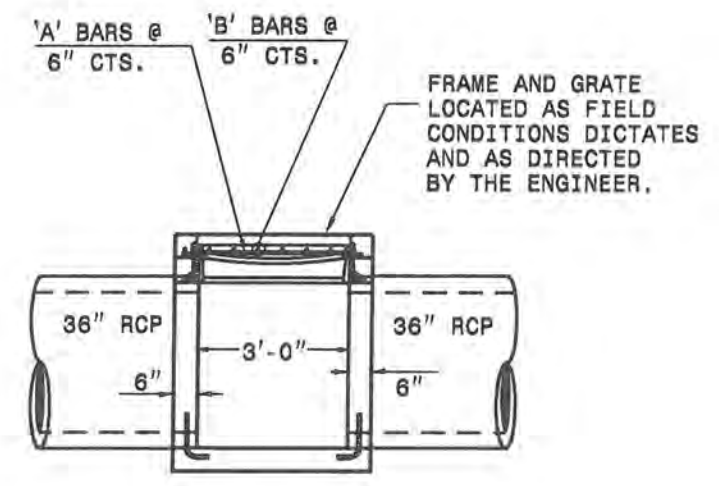
Z:\AUG-2012\0571\tr\acta\Special\Detaila\kkempf\ang11sh\05503_38cb.dgn
 \$\$\$USERNAME\$\$\$
 2012-08-19 10:57:10

GENERAL NOTES:

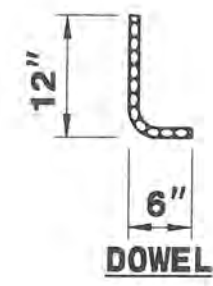
- CONSTRUCT THE BASE SLAB BY FORMING AND POURING OF CONCRETE, CLASS "A".
- IF REINFORCED CONCRETE PIPE IS SET BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD.NO. 840.00
- USE CLASS "A" CONCRETE THROUGHOUT.
- BASE SLAB OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- CHAMFER ALL EXPOSED CORNERS 1".
- MAXIMUM HEIGHT OF THIS STRUCTURE IS 12'-0".
- PROVIDE JUNCTION BOX WITH STEPS TO BE PLACED ON 12" CTRS. REFERENCE STD.NO. 840.66.
- DIMENSIONS OF CATCH BASIN MAY BE ADJUSTED AS DIRECTED BY ENGINEER.



PLAN

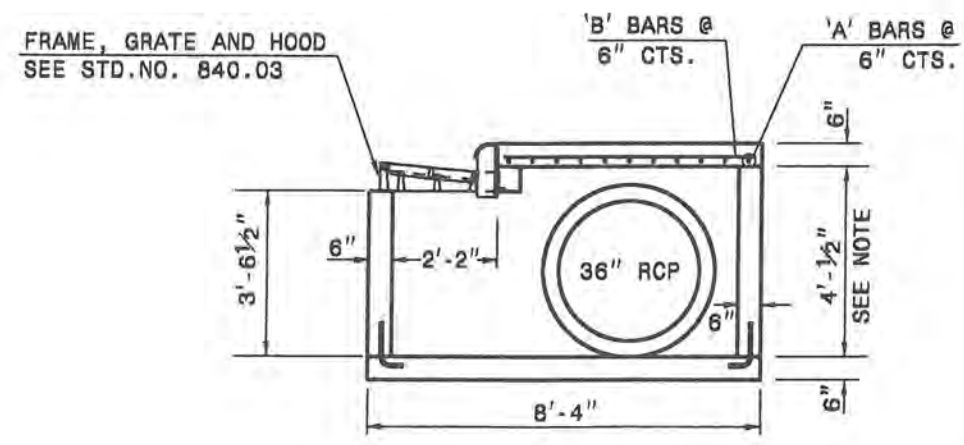


SECTION 'B-B'



BILL OF MATERIAL				
BAR NO.	SIZE	LENGTH	WEIGHT	
A	#4	5'-1"	25	
B	#4	5'-4"	39	
TOTAL REINFORCING STEEL (lbs.)			64	
CLASS "A" CONC. (cu. yds.)			2.5	

NO DEDUCTIONS HAVE BEEN MADE TO ACCOMMODATE PIPES, CATCH BASIN OPENING AND MANHOLE OPENING.



SECTION 'A-A'



CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-8950 FAX 919-250-4119

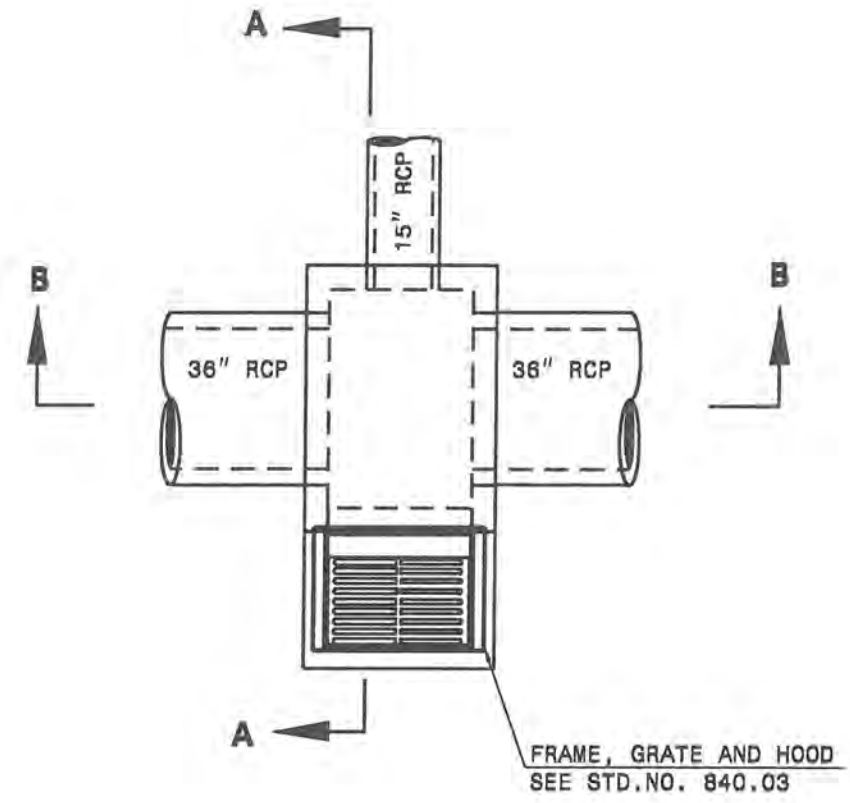
SPECIAL JUNCTION BOX WITH CATCH BASIN

ORIGINAL BY: K.A.KEMPF DATE: Mar. 28, 2008
 MODIFIED BY: K.A.KEMPF DATE: Aug. 08, 2012
 CHECKED BY: DATE:
 FILE SPEC.: wkkempf@engr1sh/u9603_36cb.dgn

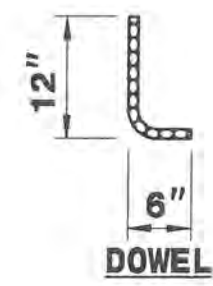
24-AUG-2012 10:57:55 AM C:\Users\jkkempf\Special Data\11\kempf\engr1sh\115903_36cb.dgn

GENERAL NOTES:

- CONSTRUCT THE BASE SLAB BY FORMING AND POURING OF CONCRETE, CLASS "A".
- IF REINFORCED CONCRETE PIPE IS SET BOTTOM SLAB OF BOX, ADD TO SLAB AS SHOWN ON STD.NO. 840.00
- USE CLASS "A" CONCRETE THROUGHOUT.
- BASE SLAB OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #4 BAR AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
- CHAMFER ALL EXPOSED CORNERS 1".
- MAXIMUM HEIGHT OF THIS STRUCTURE IS 12'-0".
- PROVIDE JUNCTION BOX WITH STEPS TO BE PLACED ON 12" CTRS. REFERENCE STD.NO. 840.66.
- DIMENSIONS OF CATCH BASIN MAY BE ADJUSTED AS DIRECTED BY ENGINEER.

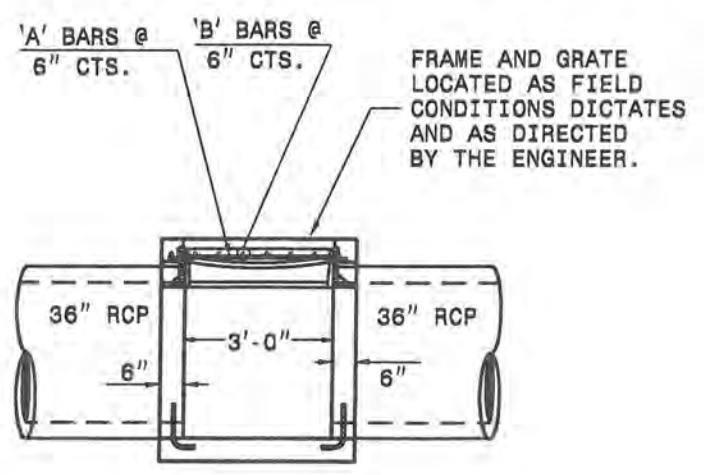


PLAN

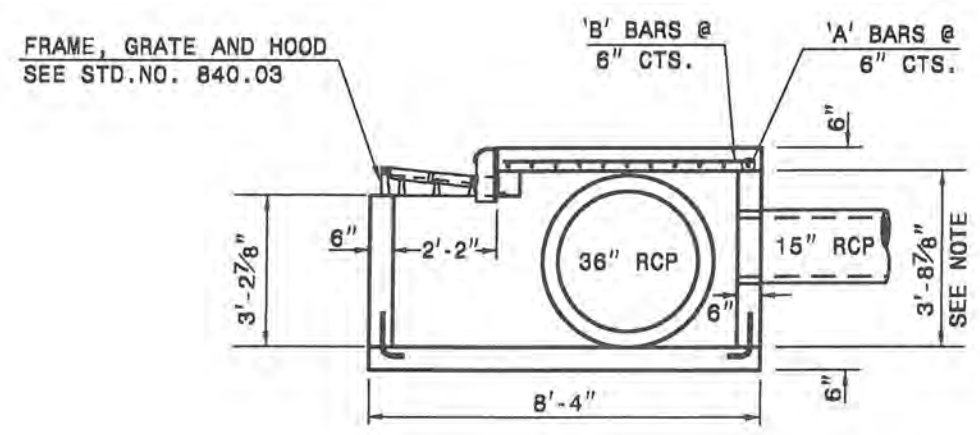


BILL OF MATERIAL				
BAR	NO.	SIZE	LENGTH	WEIGHT
A	10	#4	3'-8"	25
B	11	#4	5'-4"	39
TOTAL REINFORCING STEEL (lbs.)				64
CLASS "A" CONC. (cu. yds.)				2.4

NO DEDUCTIONS HAVE BEEN MADE TO ACCOMMODATE PIPES, CATCH BASIN OPENING AND MANHOLE OPENING.



SECTION 'B-B'



SECTION 'A-A'



CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

SPECIAL JUNCTION BOX WITH CATCH BASIN

ORIGINAL BY: K.A.KEMPF DATE: Mar. 28, 2008
 MODIFIED BY: K.A.KEMPF DATE: Aug. 08, 2012
 CHECKED BY: DATE:
 FILE SPEC.: wkkempf@nclish\46502_36cb.dgn

C:\AUG-2012\1026\Projects\Special Details\kempf\eng\lsh\46502_36cb.dgn
 8/24/12 10:56 AM
 JOEL S. KEMPF

CAROLINA POWER AND LIGHT COMPANY
BOOK 2478 PAGE 133



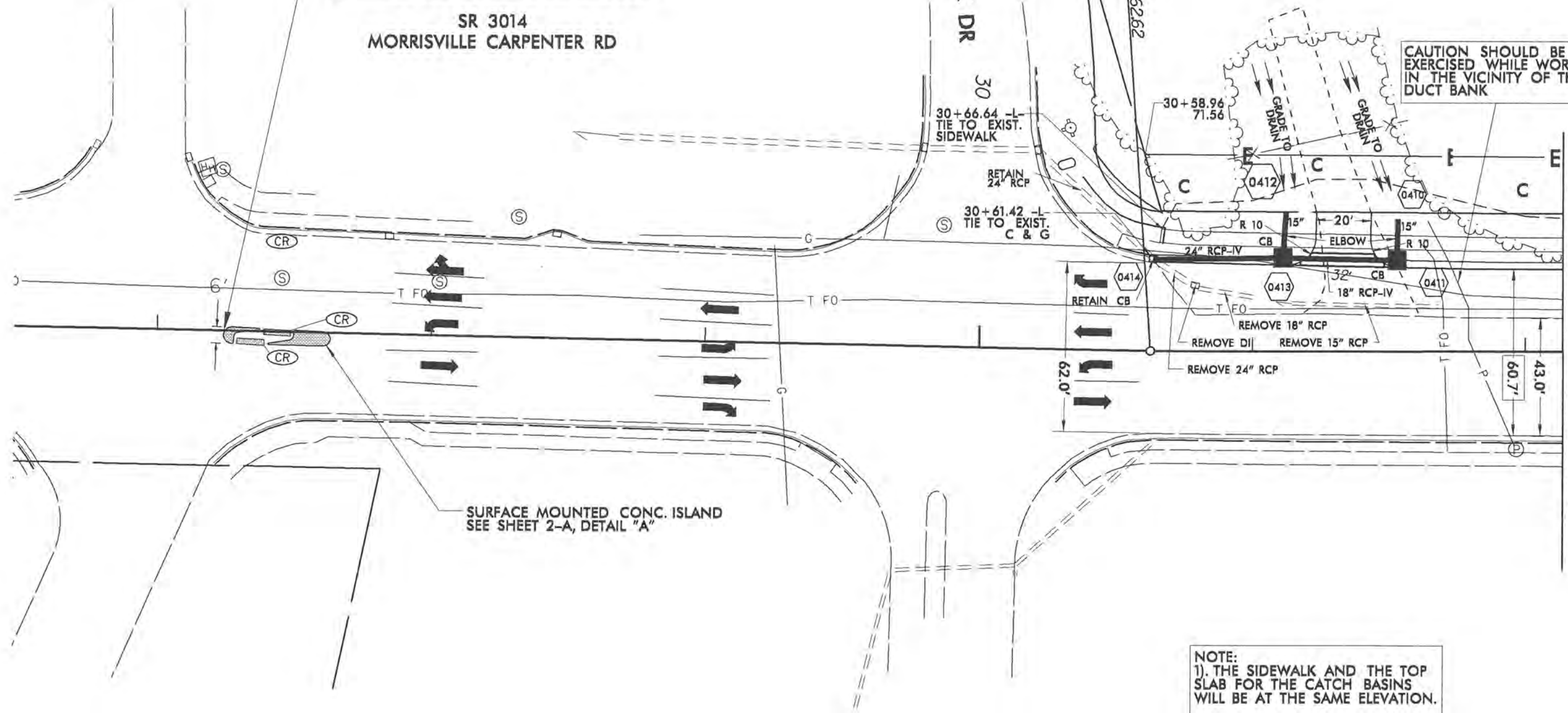
STA. 27+24.15 -L-
BEGIN PROJECT U-5503

SR 3014
MORRISVILLE CARPENTER RD

LEAFYCREEK DR

PI Sta. 30+62.62

CAUTION SHOULD BE EXERCISED WHILE WORKING IN THE VICINITY OF THIS DUCT BANK



MATCHLINE STA. 32+13.97

SURFACE MOUNTED CONC. ISLAND
SEE SHEET 2-A, DETAIL "A"

NOTE:
1). THE SIDEWALK AND THE TOP SLAB FOR THE CATCH BASINS WILL BE AT THE SAME ELEVATION.

<p>DIVISION FIVE DESIGN</p> <p>SIGNATURE</p>	<p>WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR</p>							
	<p>DIVISION 05 WAKE COUNTY MORRISVILLE</p> <table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>			REVISIONS	INT.	DATE		
REVISIONS	INT.	DATE						
<p>N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT</p>		<p>PREPARED BY: SUNIL PATEL REVIEWED BY: BEN UPSHAW</p>						

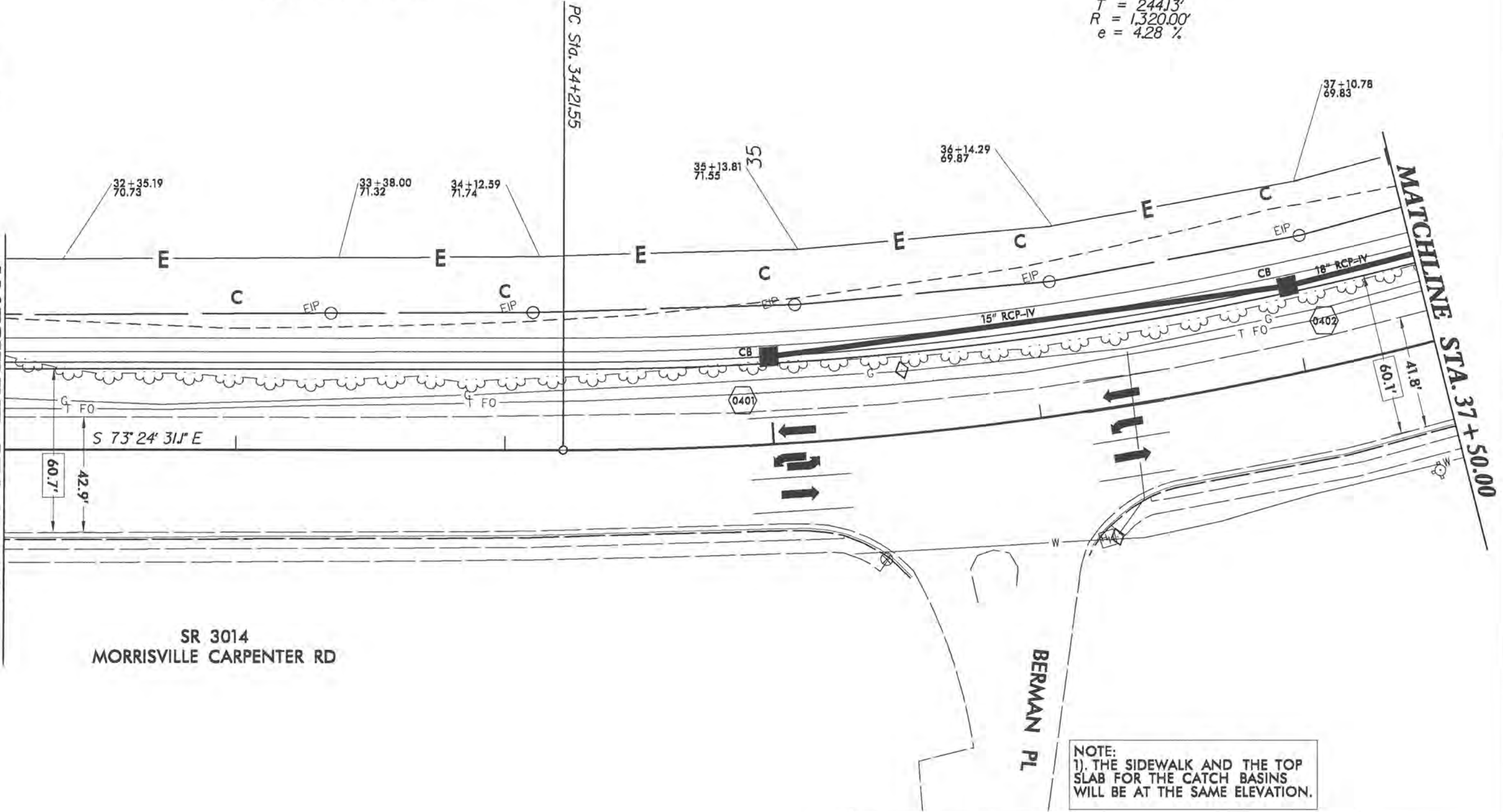
CAROLINA POWER AND LIGHT COMPANY
BOOK 2478 PAGE 133

PI Sta 36+65.68 (-L-)
D = 20° 57' 23.0" (LT)
D = 4' 20' 26.1"
L = 482.80'
T = 244.13'
R = 1,320.00'
e = 4.28 %



MATCHLINE STA. 32+13.97

MATCHLINE STA. 37+50.00



SR 3014
MORRISVILLE CARPENTER RD

BERMAN PL

NOTE:
1). THE SIDEWALK AND THE TOP SLAB FOR THE CATCH BASINS WILL BE AT THE SAME ELEVATION.

DIVISION FIVE DESIGN

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

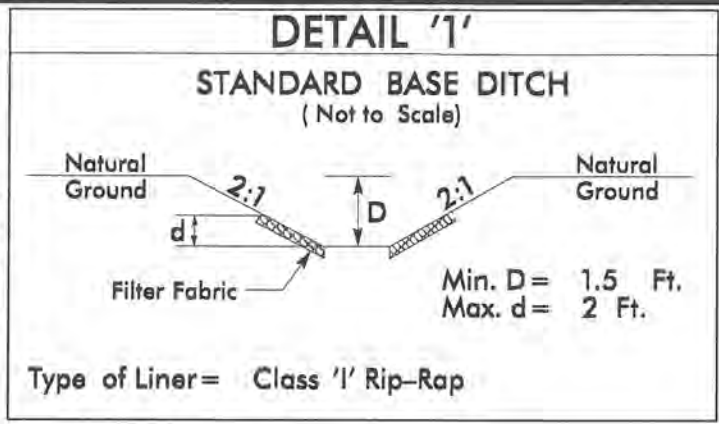
DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW



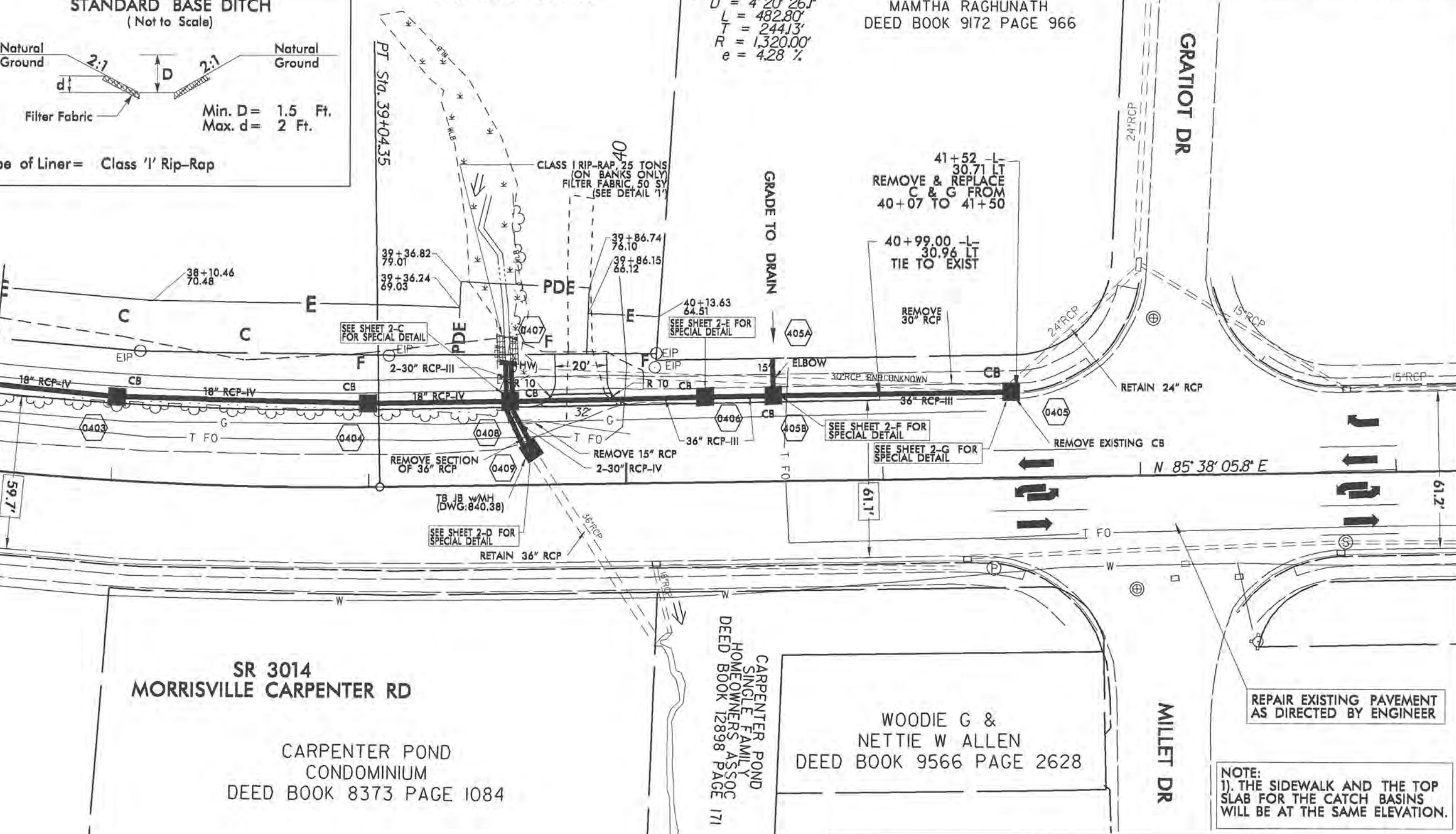
CAROLINA POWER AND LIGHT COMPANY
 BOOK 2478 PAGE 133

PJ Sta 36+65.68 (-L-)
 $D = 20' 57' 23.0''$ (LT)
 $D = 4' 20' 26.1''$
 $L = 482.80'$
 $T = 244.13'$
 $R = 1,320.00'$
 $e = 4.28\%$

KITTU SRIDHAR &
 MAMTHA RAGHUNATH
 DEED BOOK 9172 PAGE 966

PROJECT REFERENCE NO. U-5503
 SHEET NO. 6

MATCHLINE STA. 37+50.00



SR 3014
 MORRISVILLE CARPENTER RD

CARPENTER POND
 CONDOMINIUM
 DEED BOOK 8373 PAGE 1084

CARPENTER POND
 SINGLE FAMILY HOMEOWNERS ASSOC
 DEED BOOK 12898 PAGE 171

WOODIE G &
 NETTIE W ALLEN
 DEED BOOK 9566 PAGE 2628

DIVISION FIVE DESIGN

BEN UPSHAW
 ENGINEER
 8/2/13

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR

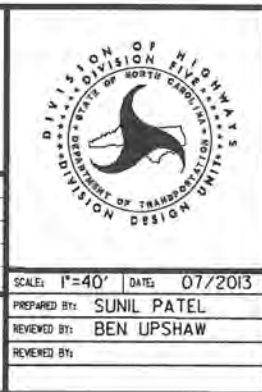
DIVISION 05 WAKE COUNTY MORRISVILLE

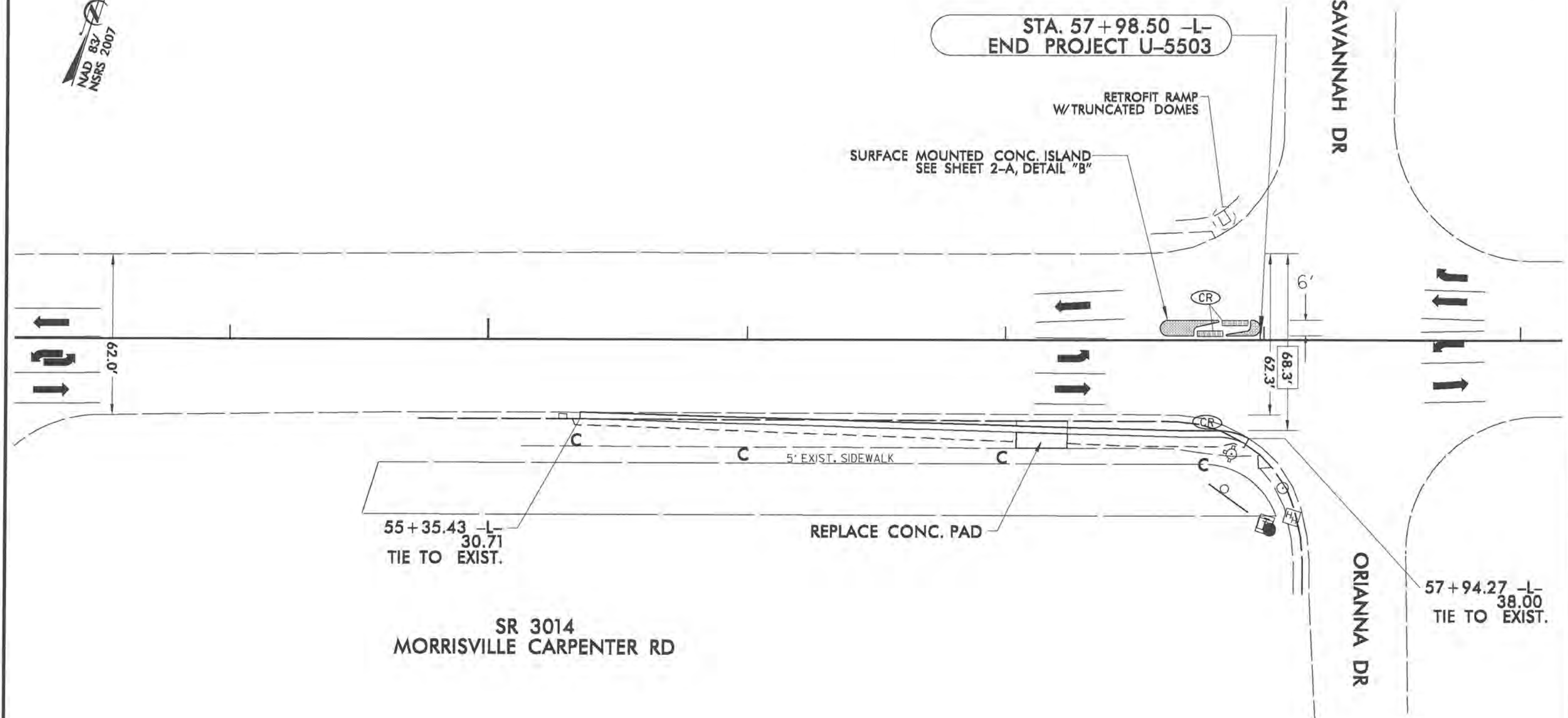
REVISIONS	INT.	DATE

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
 REVIEWED BY: BEN UPSHAW
 REVIEWED BY:

N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 DIVISION FIVE DESIGN UNIT





DIVISION FIVE DESIGN

Ben Upshaw
P.E.
SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:

PI Sta. 14+02.88
 D = 7' 4" 24.7" (LT)
 D = 2' 17" 30.6"
 L = 335.55'
 T = 168.03'
 R = 2500.00'



SR 1613
DAVIS DR

STA. 14+68.61 -Y-
END CONSTRUCTION

CLARENCE BENJAMIN RIDOUT
BOOK 11479 PAGE 2502

MORRISVILLE INVESTMENTS
C/O WALGREENS COMPANY
TAX DEPARTMENT
BOOK 13750 PAGE 628

PT Sta. 15+70.40 -Y-

-L- STA. 15+28.70
-Y- STA. 13+69.64

SEE DETAIL 'D', SHEET 2-B FOR
WEDGING LOCATION DETAIL

SR 3014
MORRISVILLE CARPENTER RD

S 74° 36' 19.9" E

MORRISVILLE MARKET LLC
DEED 10884 PAGE 0005

STA. 12+98.05 -Y-
BEGIN CONSTRUCTION

PC Sta. 12+34.85 -Y-

SR 1613
DAVIS DR

CVS 8417 LLC
CVS CORPORATION
DEED 11738 PAGE 1036

DIVISION FIVE DESIGN

SEAL
030459
ENGINEER
BEN UPSHAW 8/21/13

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INIT.	DATE

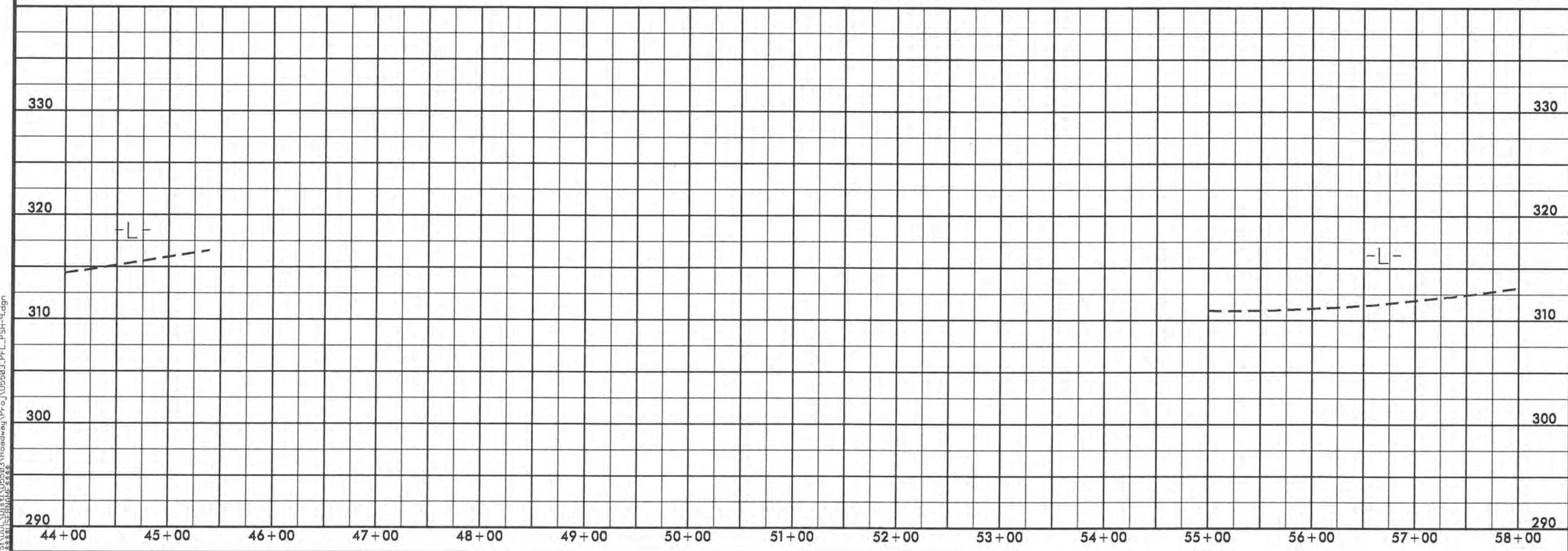
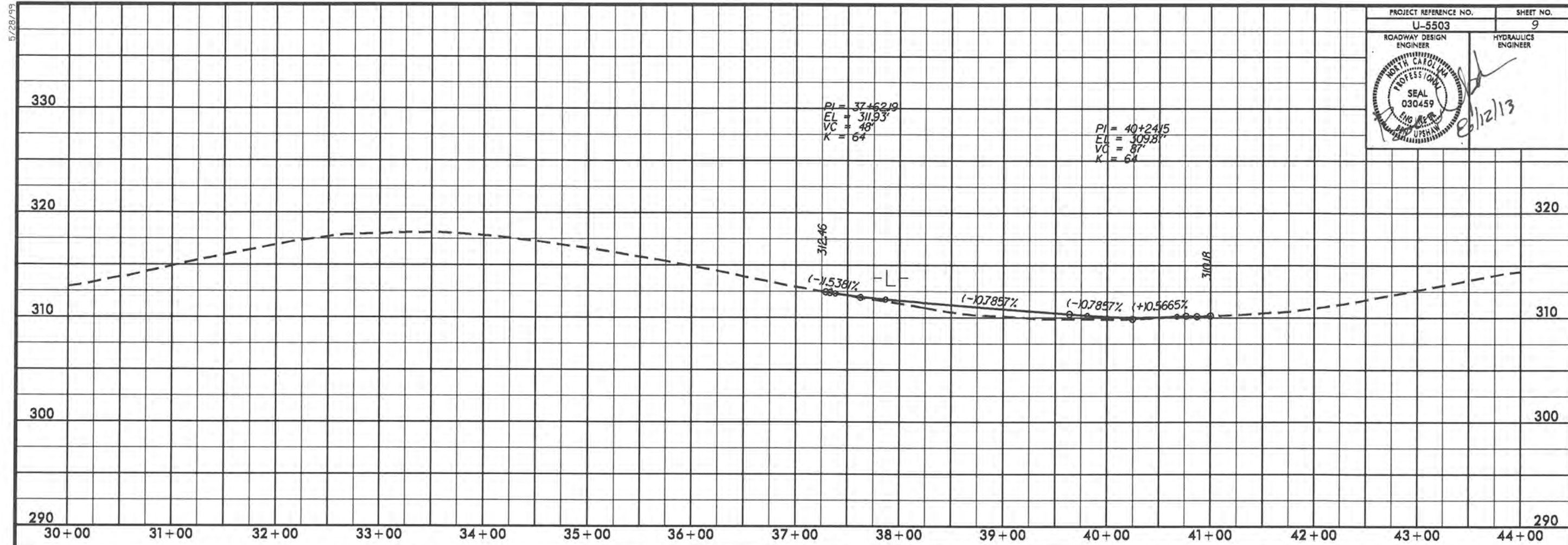
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:

5/28/99

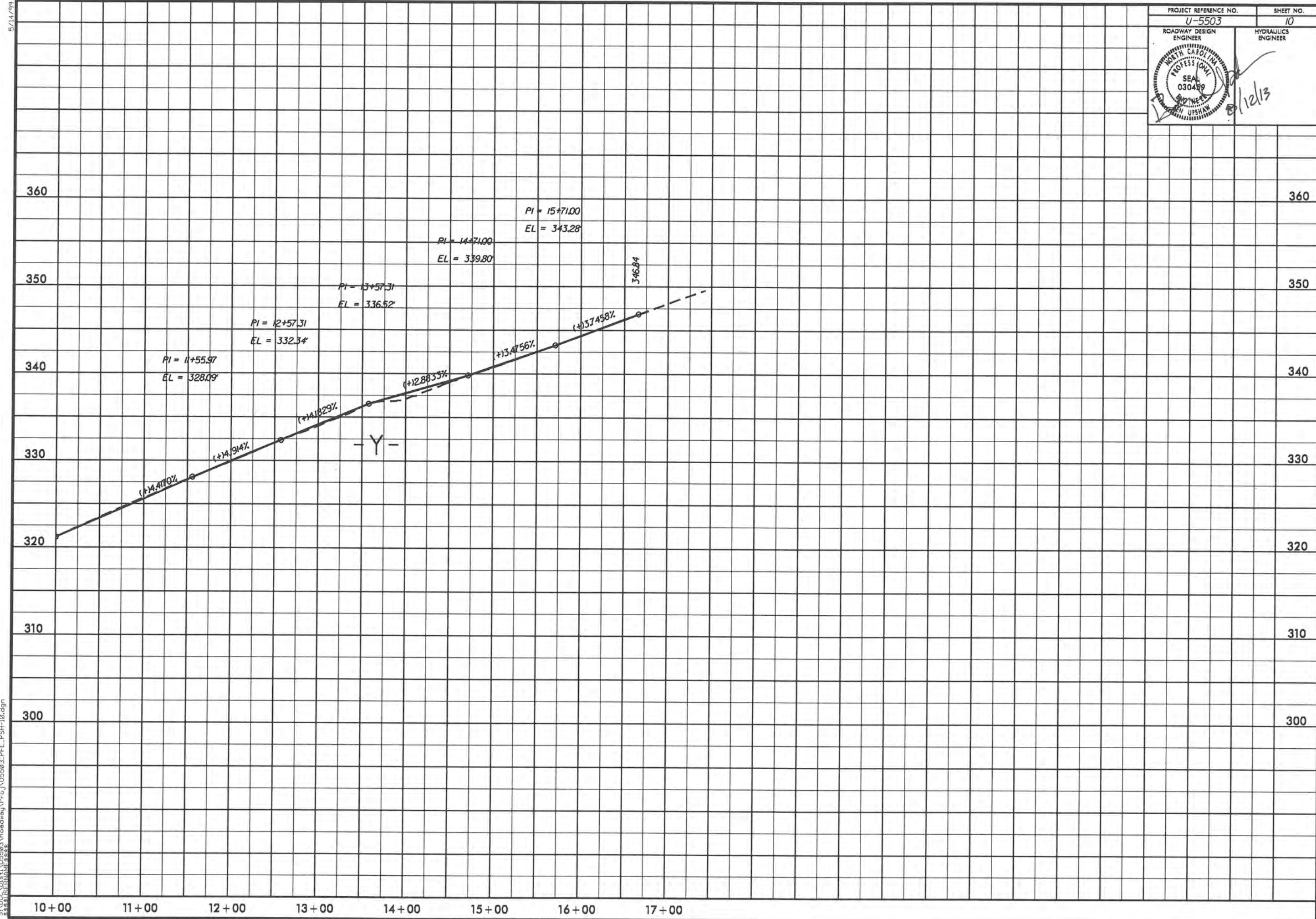
PROJECT REFERENCE NO. U-5503	SHEET NO. 9
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



25-FEB-2013 15:00
S:\DCC\DATA\U5503\Roadway\Pro\U5503-PFL-P5H-9.dgn

5/14/99

PROJECT REFERENCE NO. U-5503	SHEET NO. 10
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
12/13	

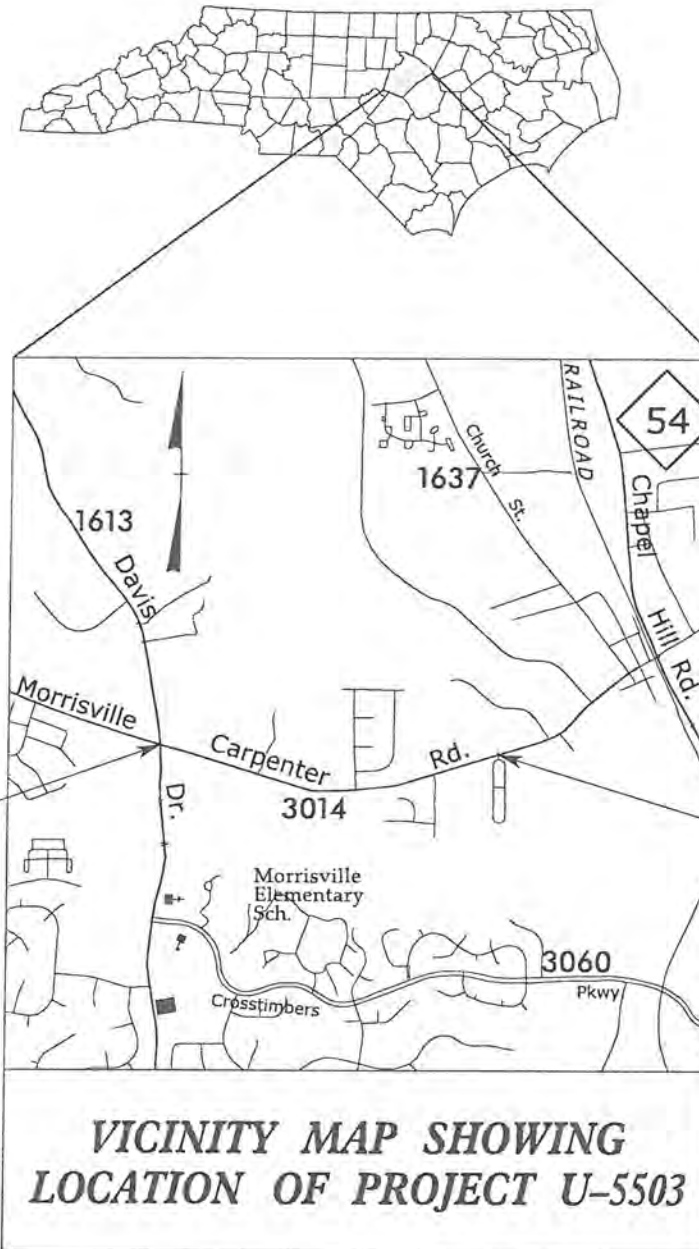


25-FEB-2013 15:06
S:\000\0001\U5503\Roadway\Proj\U5503.PFL.FSH-10.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

WAKE COUNTY



**VICINITY MAP SHOWING
LOCATION OF PROJECT U-5503**

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, LEGEND, AND TEMPORARY PAVEMENT MARKING
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES AND GENERAL NOTES)
TMP-2	TEMPORARY TRAFFIC CONTROL PHASING
TMP-3 - TMP-5	TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
TMP-6 - TMP-7	TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

SHEET NO.
TMP-1

U-5503

TIP PROJECT:



N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER
J. ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER
B. SCHOENBAUER, P.E. TRAFFIC CONTROL PROJECT DESIGN ENGINEER
S. B. JENNINGS TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: *Ben Schoenbauer*
DATE: *March 4, 2013*

3/1/2013 3:14:10 PM WZTCN Design Group 2: special projects\poc\Projects\U-5503\TrafficControl\TCP\U-5503.TC.TMP.dgn User: jshak

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.01	WORK ZONE WARNING SIGNS
1101.02	TEMPORARY LANE CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW BOARDS
1130.01	DRUMS
1135.01	CONES
1150.01	FLAGGING DEVICES
1160.01	TEMPORARY CRASH CUSHION
1165.01	WORK VEHICLE LIGHTING SYSTEMS AND TMA DELINEATION
1180.01	SKINNY - DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - TWO LANE AND MULTILANE ROADWAYS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.05	PAVEMENT MARKINGS - TURN LANES
1205.06	PAVEMENT MARKINGS - LANE DROPS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS
1205.08	PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES
1205.09	PAVEMENT MARKINGS - PAINTED ISLANDS
1250.01	RAISED PAVEMENT MARKERS - INSTALLATION SPACING
1251.01	RAISED PAVEMENT MARKERS - (PERMANENT AND TEMPORARY)

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

USER DEFINED (IF NEEDED)

USER DEFINED (IF NEEDED)

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

TEMPORARY PAVEMENT MARKING

PAINT - 4"

- PA WHITE EDGELINE
- PB YELLOW EDGELINE
- PC 10' WHITE SKIP
- PD 2' WHITE MINISKIP
- PE WHITE SOLID LANE LINE
- PF 10' YELLOW SKIP
- PH YELLOW SINGLE CENTER
- PI DOUBLE YELLOW CENTER

PAINT - 8"

- PN WHITE GORELINE
- PO WHITE DIAGONAL
- PP YELLOW DIAGONAL
- PQ WHITE CROSSWALK LINE

PAINT - 24"

- P2 24" WHITE STOPBAR
- P3 24" WHITE CROSSWALK LINE

SYMBOLS

- QA LEFT TURN ARROW
- QB RIGHT TURN ARROW
- QE CMBN. STRAIGHT & RIGHT TURN ARROW
- QN 24" YIELD BAR

APPROVED: DATE: 5/4/13		
ROADWAY STANDARD DRAWINGS & LEGEND		

MANAGEMENT STRATEGIES

TRAFFIC ON THIS PROJECT WILL BE MAINTAINED USING LANE CLOSURES, LANE SHIFTS AND LAW ENFORCEMENT AS NEEDED TO COMPLETE WIDENING AND WEDGING ON -L- (SR 3014 - MORRISVILLE CARPENTER RD) AND WEDGING ON -Y- (SR 1613 - DAVIS DR).

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
SR 3014 (MORRISVILLE CARPENTER RD)	MON - FRI 6:00 AM - 9:00 AM
	AND MON - FRI 3:00 PM - 7:00 PM
SR 1617 (DAVIS DR)	MON - SUN 6:00 AM - 7:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME
SR 3014 (MORRISVILLE CARPENTER RD)
SR 1617 (DAVIS DR)

HOLIDAY

- FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
- FOR NEW YEAR'S, BETWEEN THE HOURS OF 8:00 A.M. DECEMBER 31st TO 7:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 7:00 P.M. THE FOLLOWING TUESDAY.
- FOR EASTER, BETWEEN THE HOURS OF 6:00 A.M. THURSDAY AND 7:00 P.M. MONDAY.
- FOR MEMORIAL DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY TO 7:00 P.M. TUESDAY.
- FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 6:00 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 6:00 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 7:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
- FOR LABOR DAY, BETWEEN THE HOURS OF 6:00 A.M. FRIDAY AND 7:00 P.M. TUESDAY.
- FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 6:00 A.M. TUESDAY TO 7:00 P.M. MONDAY.
- FOR CHRISTMAS, BETWEEN THE HOURS OF 6:00 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 7:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS.

C) DO NOT CONDUCT ANY HAULING OPERATIONS AGAINST THE FLOW OF TRAFFIC OF AN OPEN TRAVELWAY UNLESS THE HAULING OPERATION IS PROTECTED BY BARRIER OR GUARDRAIL OR AS DIRECTED BY THE ENGINEER.

LANE AND SHOULDER CLOSURE REQUIREMENTS

- D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.
- E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.
- F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.
- G) DO NOT WORK SIMULTANEOUSLY WITHIN 15 FT ON BOTH SIDES OF AN OPEN TRAVELWAY, RAMP, OR LOOP WITHIN THE SAME LOCATION UNLESS PROTECTED WITH GUARDRAIL OR BARRIER.

PAVEMENT EDGE DROP OFF REQUIREMENTS

- H) BACKFILL AT A 6:1 SLOPE UP TO THE EDGE AND ELEVATION OF EXISTING PAVEMENT IN AREAS ADJACENT TO AN OPENED TRAVEL LANE THAT HAS AN EDGE OF PAVEMENT DROP-OFF AS FOLLOWS:
- BACKFILL DROP-OFFS THAT EXCEED 2 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS OF 45 MPH OR GREATER.
- BACKFILL DROP-OFFS THAT EXCEED 3 INCHES ON ROADWAYS WITH POSTED SPEED LIMITS LESS THAN 45 MPH.
- BACKFILL WITH SUITABLE COMPACTED MATERIAL, AS APPROVED BY THE ENGINEER, AT NO EXPENSE TO THE DEPARTMENT.
- I) DO NOT EXCEED A DIFFERENCE OF 2 INCHES IN ELEVATION BETWEEN OPEN LANES OF TRAFFIC FOR NOMINAL LIFTS OF 1.5 INCHES. INSTALL ADVANCE WARNING "UNEVEN LANES" SIGNS (WB-11) 350 FT IN ADVANCE AND A MINIMUM OF EVERY HALF MILE THROUGHOUT THE UNEVEN AREA.

TRAFFIC PATTERN ALTERATIONS

- J) NOTIFY THE ENGINEER TWENTY ONE (21) CALENDAR DAYS PRIOR TO ANY TRAFFIC PATTERN ALTERATION.

SIGNING

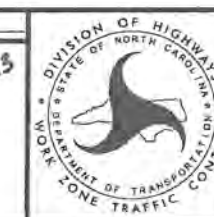
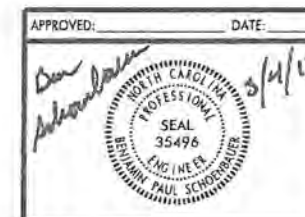
- K) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- L) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

- M) WHEN LANE CLOSURES ARE NOT IN EFFECT SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH) EXCEPT, 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY. REFER TO STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES SECTIONS 1130 (DRUMS), 1135 (CONES) AND 1160 (SKINNY DRUMS) FOR ADDITIONAL REQUIREMENTS.
- N) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.
- O) PLACE ONE APPLICATION OF PAINT FOR TEMPORARY TRAFFIC PATTERNS. PLACE A SECOND APPLICATION OF PAINT SIX (6) MONTHS AFTER THE INITIAL APPLICATION AND EVERY SIX MONTHS AS DIRECTED BY THE ENGINEER.
- P) TIE PROPOSED PAVEMENT MARKING LINES TO EXISTING PAVEMENT MARKING LINES.
- Q) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS BY THE END OF EACH DAY'S OPERATION.

MISCELLANEOUS

- R) LAW ENFORCEMENT MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.
- S) ALL CURB RAMP LOCATIONS SHALL BE DERIVED FROM STATIONING SHOWN ON PAVEMENT MARKING PLANS OR AS DIRECTED BY THE ENGINEER IN COORDINATION WITH THE SIGNING AND DELINEATION UNIT.



**TRANSPORTATION
OPERATIONS
PLAN**

PHASING

NOTE: MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

PHASE I

STEP 1

- USING RSD 1101.01, INSTALL ALL ADVANCE WORK ZONE WARNING SIGNS ON -L- (SR 3014 / MORRISVILLE CARPENTER RD) AND ON -Y- (SR 1613 / DAVIS DRIVE).

STEP 2

- USING RSD 1101.02, SHEETS 1 OR 2 OF 15; PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON SHEETS TMP-3 AND TMP-4. REMOVE CONFLICTING PAVEMENT MARKINGS ON -L- (SR 3014). SHIFT TRAFFIC TO TEMPORARY PATTERN (SEE SHEETS TMP-3 THROUGH TMP-5).

STEP 3

- USING RSD 1101.02, SHEETS 1 OR 2 OF 15, AS NECESSARY; CONSTRUCT ROADWAY, GRADING, DRAINAGE, AND SIDEWALK FROM -L- STA. 30+61 +/- TO STA. 40+07 +/- UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE (SEE TMP-3, TMP-4, AND ROADWAY PLANS).
- USING RSD 1101.04, SHEET 1 OF 1, CONSTRUCT CURB AND GUTTER FROM -L- STA. 55+35 +/- TO -L- STA. 57+94 +/- UP TO AND INCLUDING LAYER OF SURFACE COURSE (SEE TMP-5 AND ROADWAY PLANS).
- USING RSD 1101.02, SHEETS 1 OR 2 OF 15, WEDGE -L- FROM STA. 35+70 +/- TO STA. 40+30 +/- UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE (SEE ROADWAY PLANS). RESTORE PAVEMENT WITH TEMPORARY PAVEMENT MARKINGS AS SHOWN ON TMP-3 AND TMP-4 AS NEEDED.
- USING RSD 1101.02, SHEET 3 OF 15, AND UTILIZING LAW ENFORCEMENT, WEDGE -Y- AS SHOWN ON ROADWAY PLANS UP TO AND INCLUDING FINAL LAYER OF SURFACE COURSE. PLACE TEMPORARY PAVEMENT MARKINGS AS SHOWN ON FINAL PAVEMENT MARKING PLANS.

STEP 4

- USING RSD 1101.02, PLACE TEMPORARY PAVEMENT MARKING AS SHOWN IN THE FINAL PAVEMENT MARKING PLANS AND REMOVE CONFLICTING PAVEMENT MARKINGS ON -L-. PLACE TRAFFIC IN FINAL PATTERN.

PHASE II

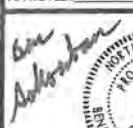


STEP 1

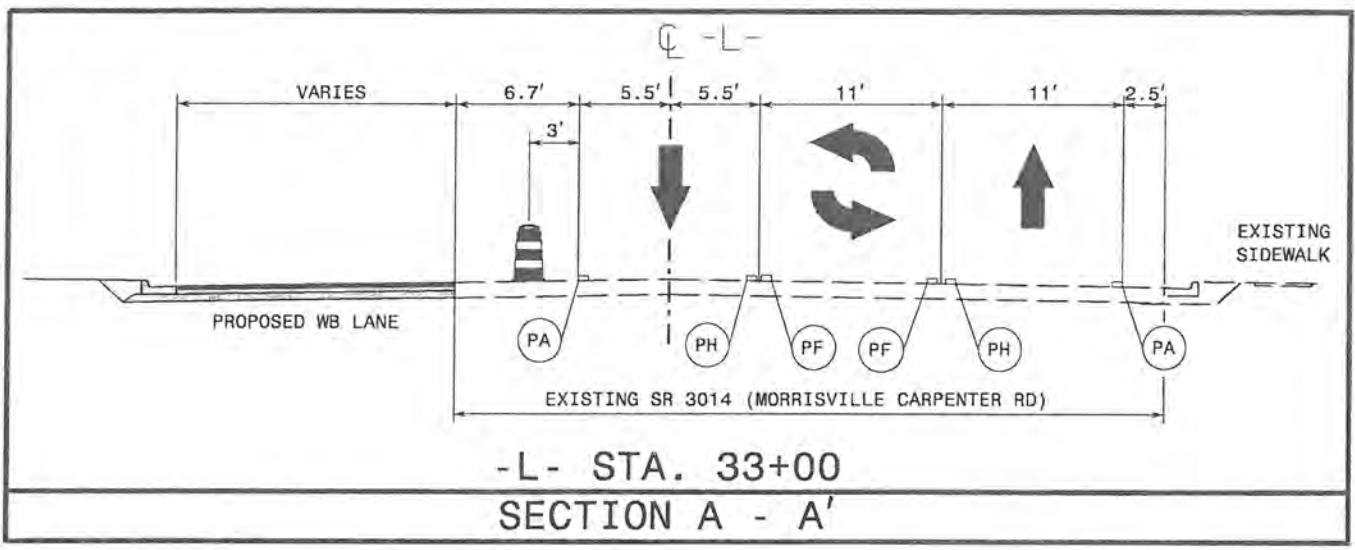
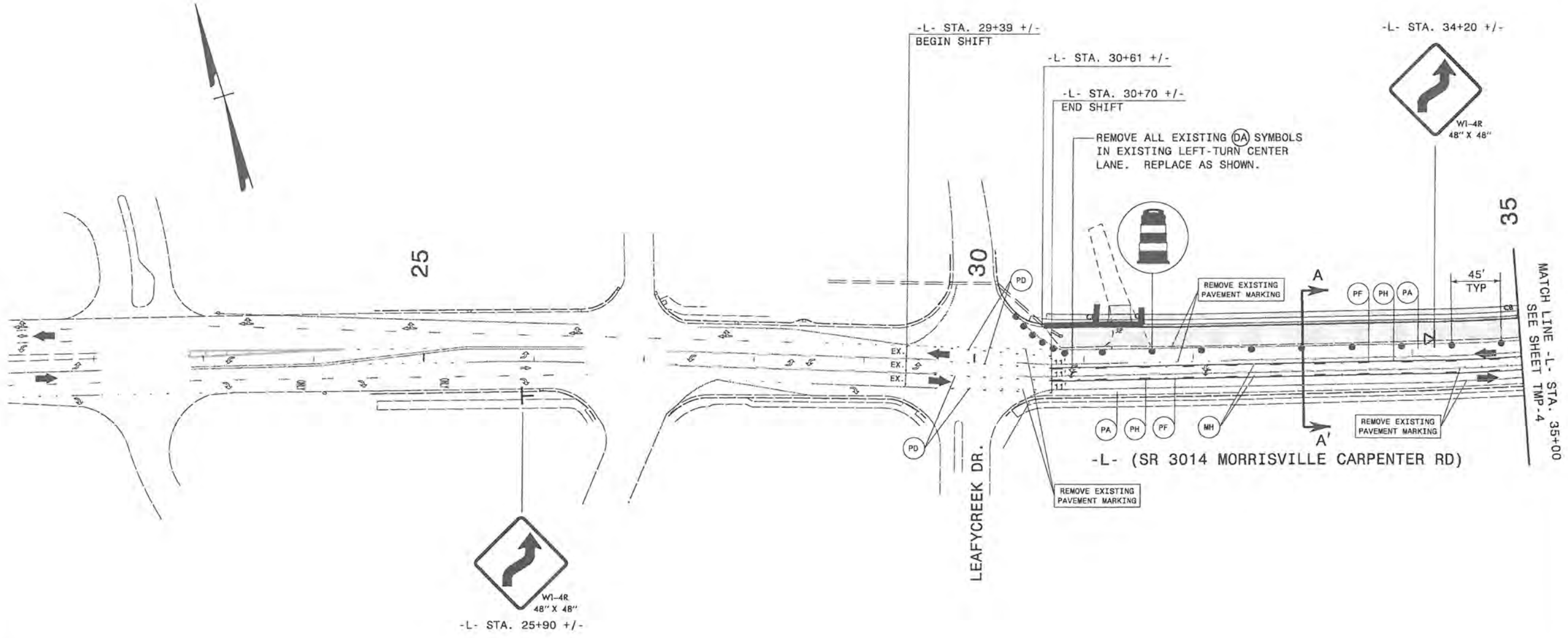
- CONSTRUCT SURFACE MOUNTED CONCRETE ISLANDS ON -L-. (SEE TMP-6 AND TMP-7). PLACE PROPOSED PAVEMENT MARKINGS AS SHOWN ON FINAL PAVEMENT MARKING PLANS.

STEP 2

- REMOVE ALL WORK ZONE TRAFFIC CONTROL DEVICES.

3/1/2013 5:41:10 PM S:\TMU\WZTC\DesignGroup2\special\projects\0P00\Projects\U-5503\U5503\TrafficControl\TCP\U-5503_TC_TMP-2.dgn User:shobson

APPROVED: 	DATE: 5/4/13			<h3 style="margin: 0;">TEMPORARY TRAFFIC CONTROL PHASING</h3>
---	--------------	---	---	---



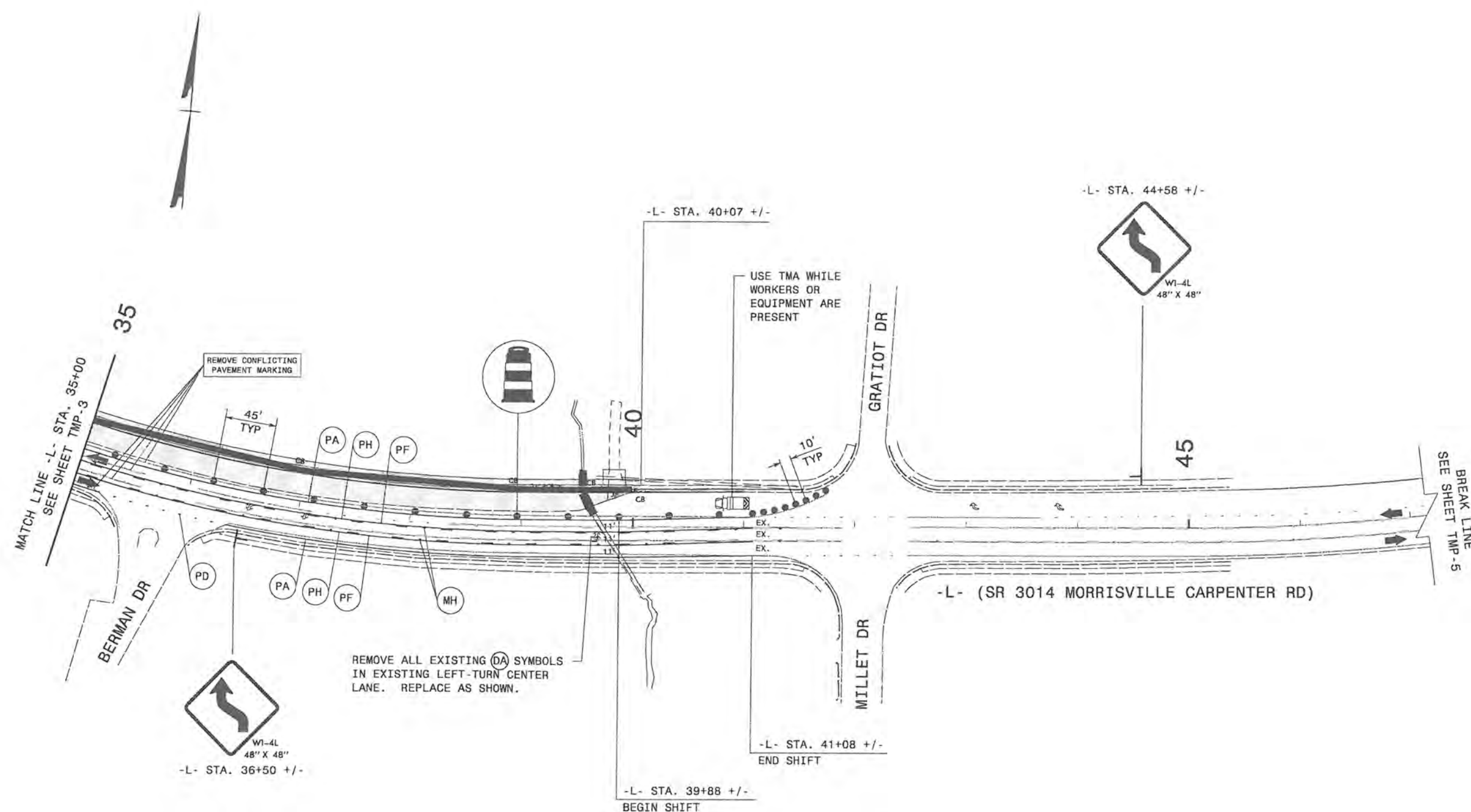
APPROVED: *Car Schwaninger* DATE: 3/4/13
 PROFESSIONAL SEAL 35496
 ENGINEER
 BRUCE PAUL SCHWANINGER



DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 WORK ZONE TRAFFIC CONTROL

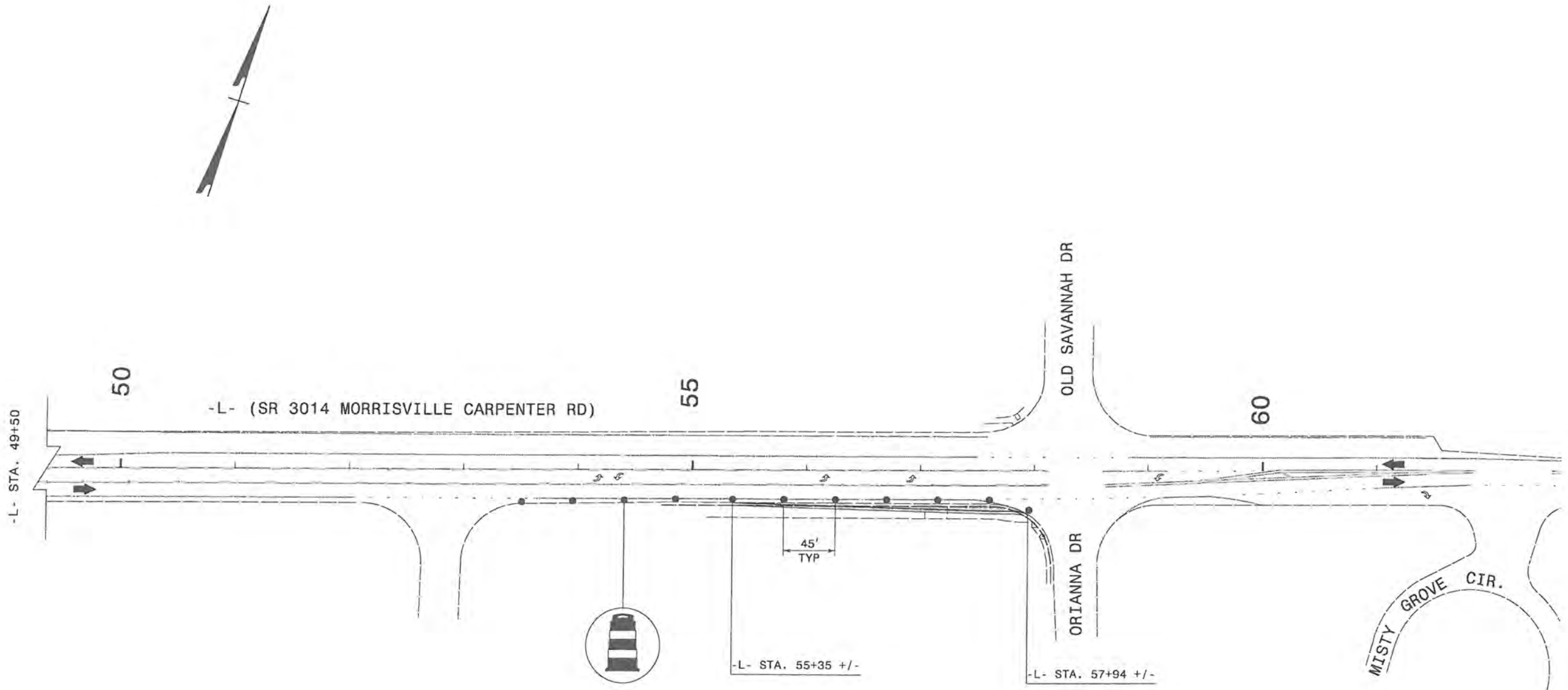
TEMPORARY TRAFFIC CONTROL PHASE I DETAIL

3/4/2013 S:\TMU\WZTC\Design\group2\special projects\DF0C Projects\U-5503\Traffic\TrafficControl\TCP\U-5503-TC-TMP-3.dgn User:shassan





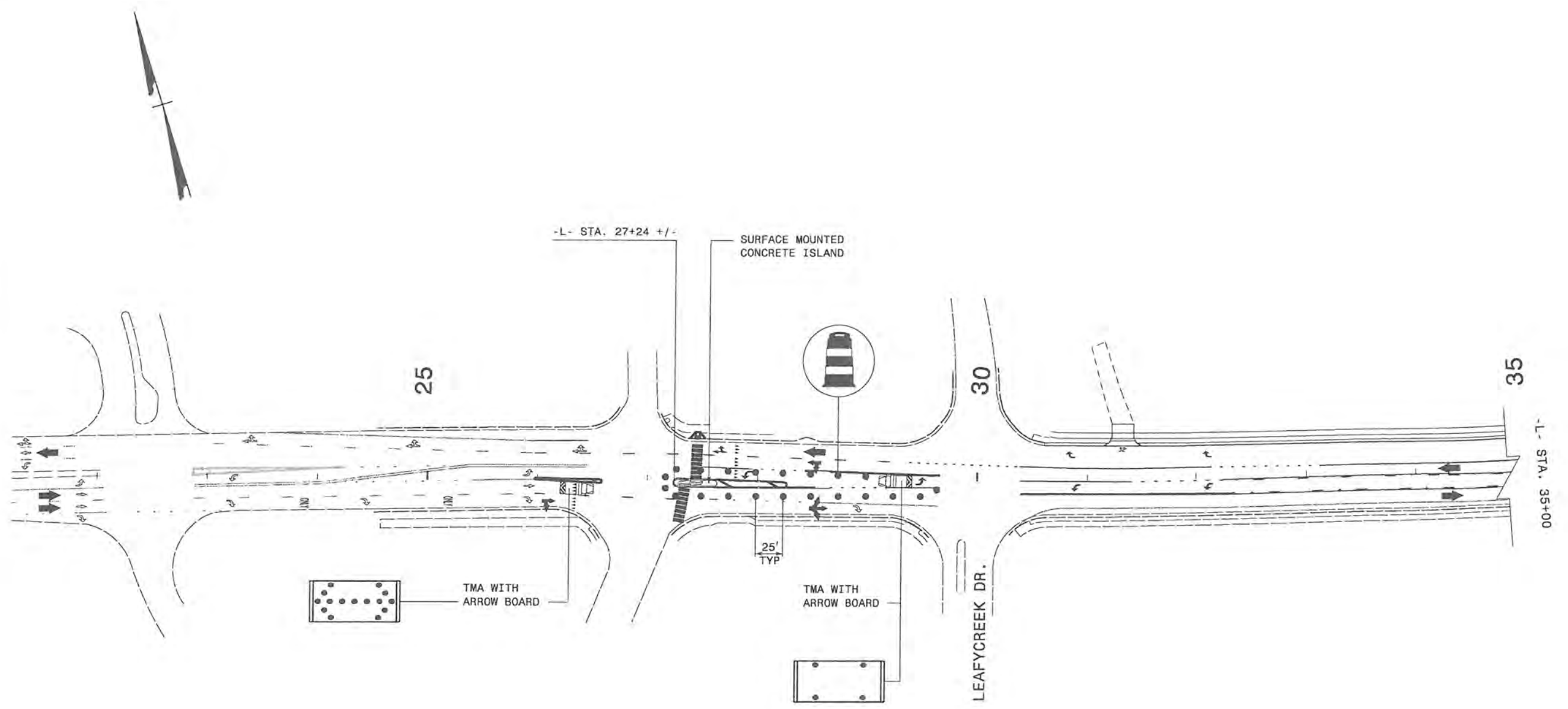
3/4/2013
 S:\TMU\WZTC\Design\Group2\Special\Projects\DPDC Projects\U-5503\Traffic\TrafficControl\TC-U-5503_TC_TMP-4.dgn
 User: bhossein

APPROVED:	DATE:			TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
<i>Paul Schorban</i>	3/4/13			



3/1/2013
 S:\IMU\WZTC\DesignGroup\special\projects\0800 Projects\U-5503\U5503\TrafficControl\TCP\U-5503_TC_TMP_5.dgn
 User: shasson

APPROVED: <i>Paul Schorbusch</i>  DATE: 5/4/13		TEMPORARY TRAFFIC CONTROL PHASE I DETAIL
---	---	---



NOTE: REFER TO FINAL PAVEMENT MARKING PLAN FOR ANY TEMPORARY PAVEMENT MARKING NOT IDENTIFIED

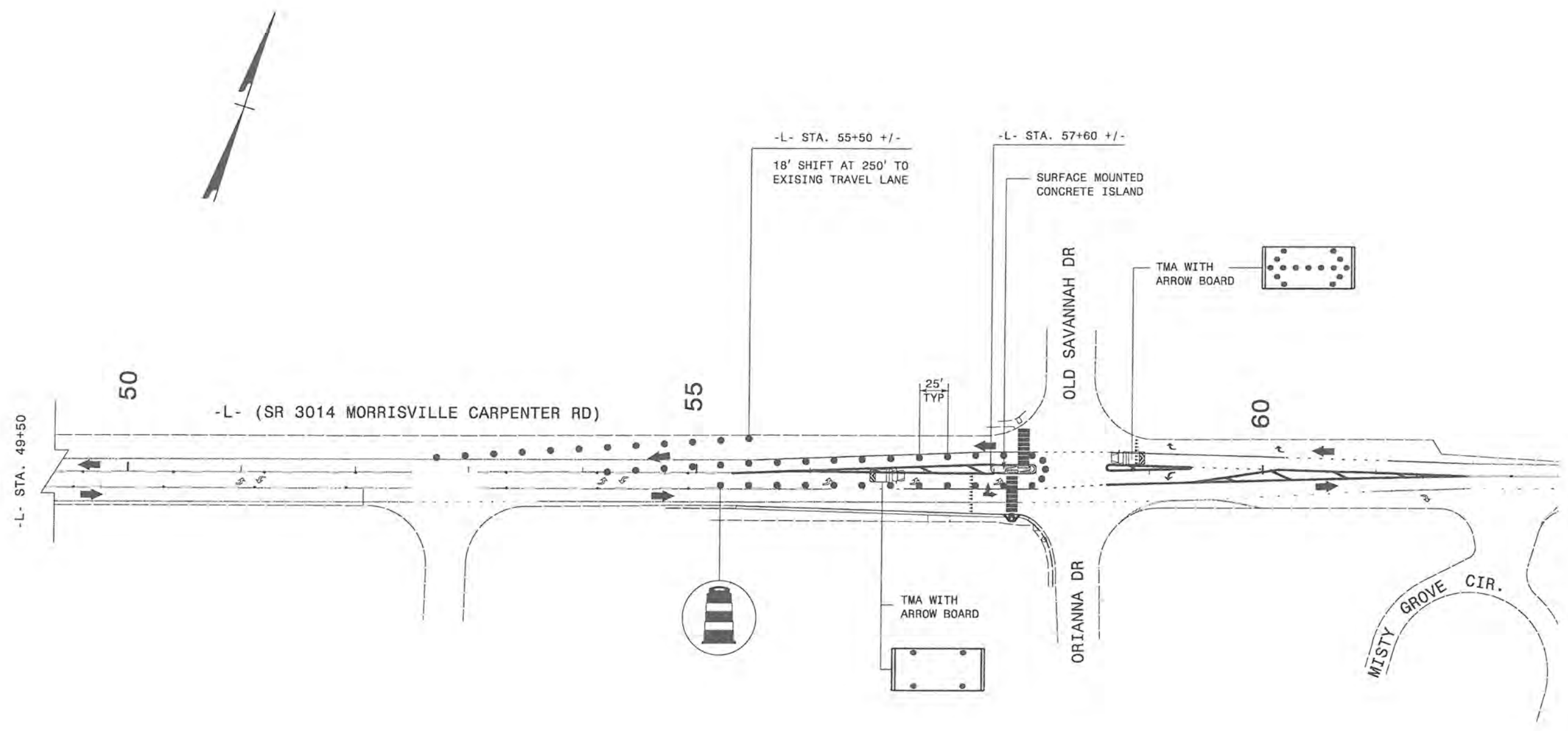
APPROVED: *Bar Schwaninger* DATE: 5/4/13

PROFESSIONAL SEAL 35496
 ENGINEER
 BRUNNEN PAUL SCHROEDER



TEMPORARY TRAFFIC CONTROL PHASE II DETAIL

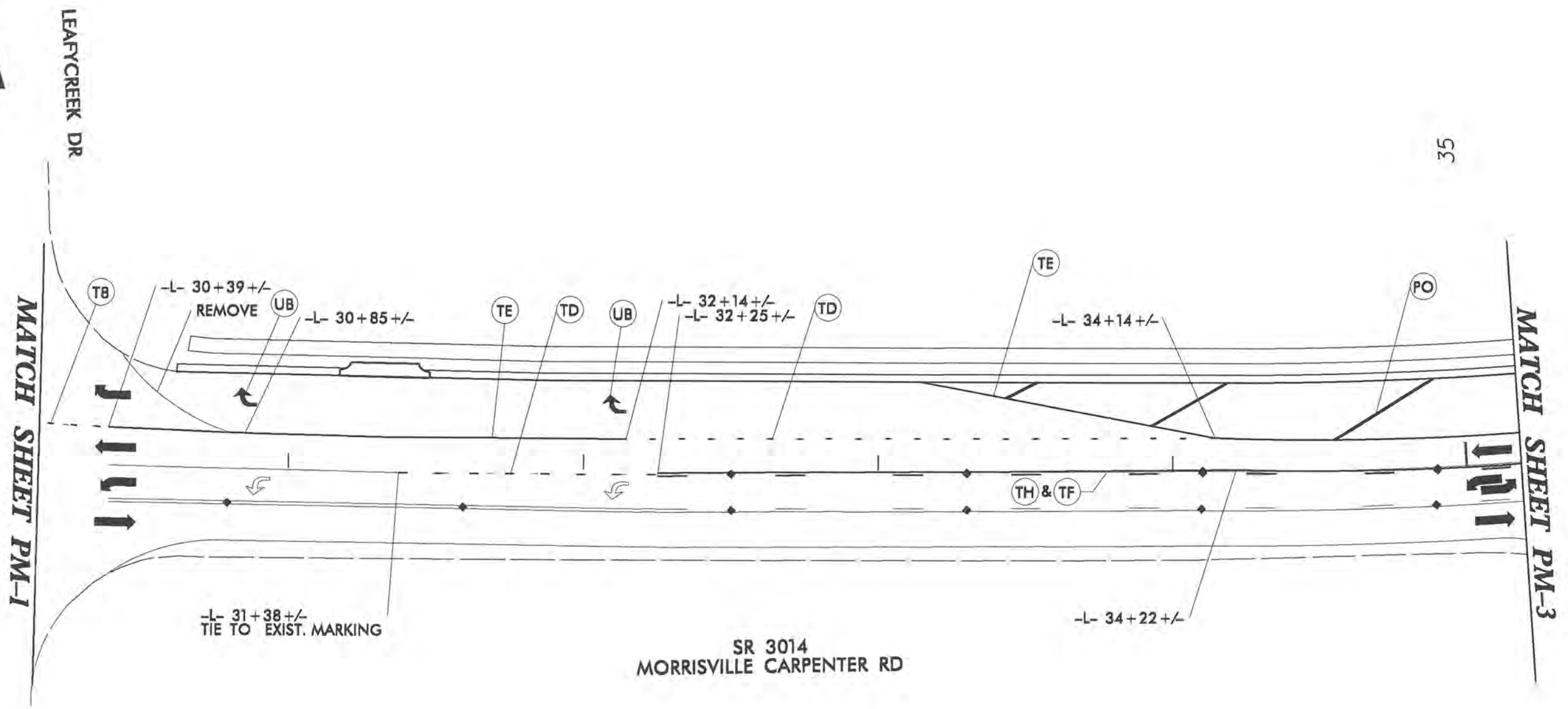
3/1/2013
 S:\IMU\2171\DesignGroup2\SpecialProjects\DP000 Projects\U-5503\U5503_Traffic\TrafficControl\TCP\U-5503_TC_TMP-6.dgn
 User:shassan



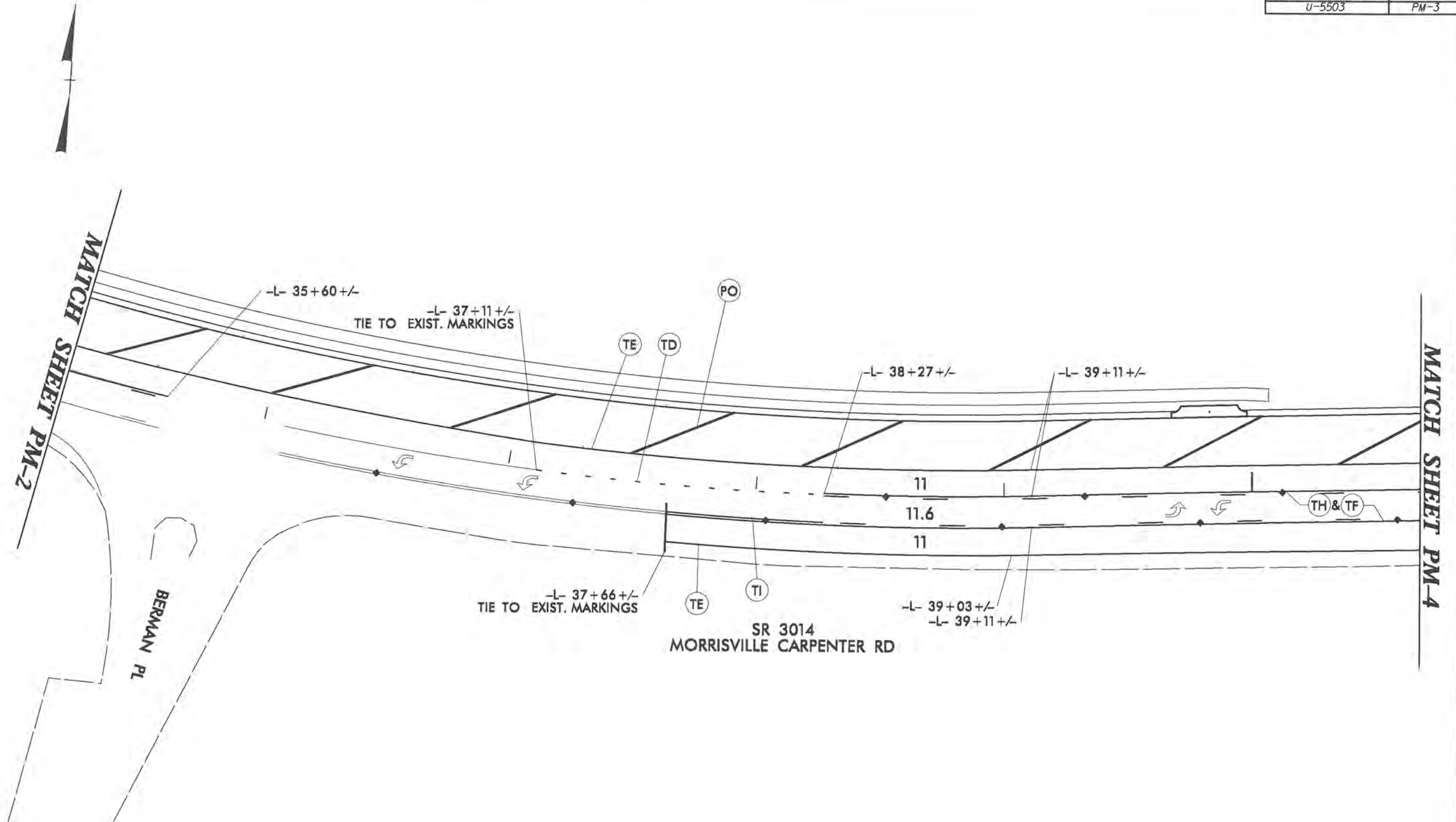
NOTE: REFER TO FINAL PAVEMENT MARKING PLAN FOR ANY TEMPORARY PAVEMENT MARKING NOT IDENTIFIED

3/1/2013
 S:\TMU\WZTC\DesignGroup\specialprojects\VP000 Projects\U-5503\U5503\TrafficControl\TCP\U-5503_TC_TMP_7.dgn
 User: jshasson

APPROVED:	DATE:		TEMPORARY TRAFFIC CONTROL PHASE II DETAIL
 BEN SCHWANINGER PROFESSIONAL ENGINEER SEAL 35496 NORTH CAROLINA PAUL SCHROEDER	8/2/13		



<p>DIVISION FIVE DESIGN</p> <p><i>Ben Upshaw</i> P.E.</p> <p>SIGNATURE</p>	<p>WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR</p> <p>DIVISION 05 WAKE COUNTY MORRISVILLE</p>													
	<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		REVISIONS	INT.	DATE									
	REVISIONS		INT.	DATE										
<p>N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT</p>	<p>SCALE: 1"=40' DATE: 07/2013</p> <p>PREPARED BY: SUNIL PATEL REVIEWED BY: BEN UPSHAW REVIEWED BY: </p>													



DIVISION FIVE DESIGN

NORTH CAROLINA
PROFESSIONAL
SEAL
030459
ENGINEER
BEN UPSHAW
P.E.

[Signature]

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

NORTH CAROLINA
DIVISION OF HIGHWAYS
DEPARTMENT OF TRANSPORTATION
DESIGN

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:



MATCH SHEET PM-3

MATCH SHEET PM-5

41+52 -L-
30.71 LT
REMOVE & REPLACE
C & G FROM
40+07 TO 41+50

40+99.00 -L-
30.96 LT
TIE TO EXIST

-L- 41+06 +/-
TIE TO EXIST.
MARKINGS

TE

PO

11

11.6

11

TH & TF

-L- 40+84 +/-
TIE TO EXIST. MARKINGS

GRATIOT DR

N 85° 38' 05.8" E

MILLET DR

REPAIR EXISTING PAVEMENT
AS DIRECTED BY ENGINEER

SR 3014
MORRISVILLE CARPENTER RD

-L- 44+63 +/-

-L- 45+70 +/-

TE

PO

11

DIVISION FIVE DESIGN

Ben Upshaw 8/16/13
P.E.

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

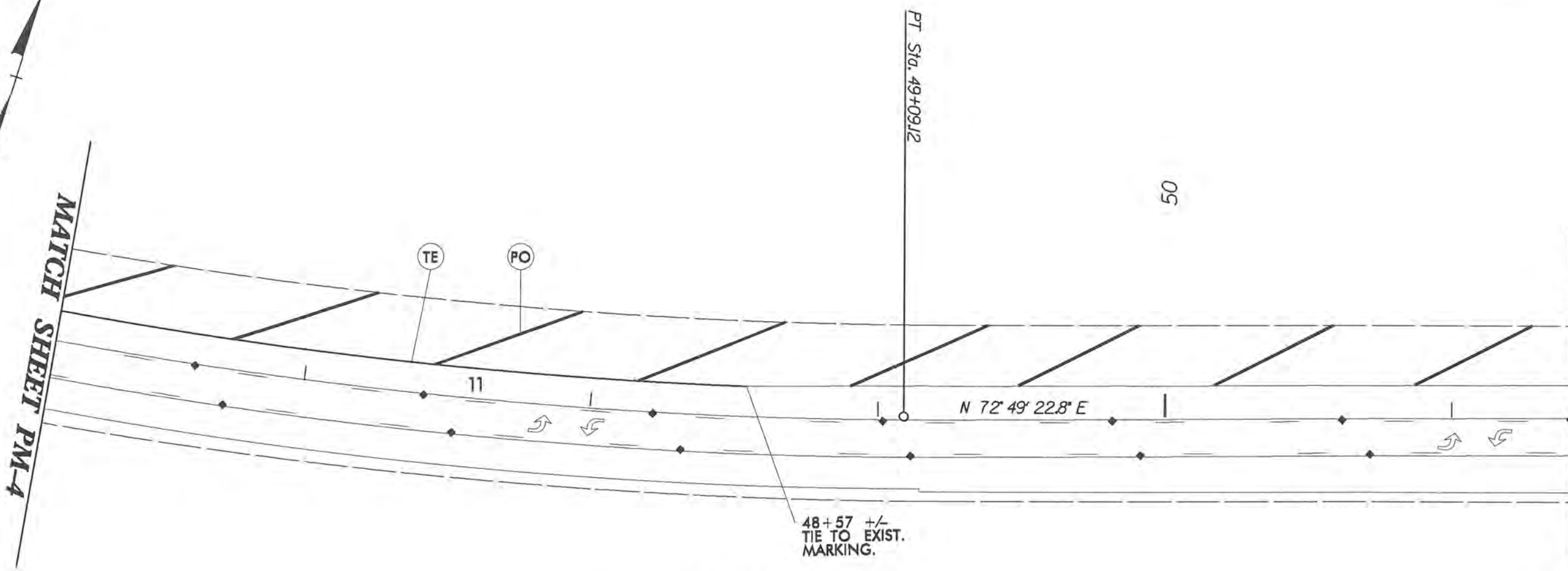
SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:



MATCH SHEET PM-4

MATCH SHEET PM-6



SR 3014
MORRISVILLE CARPENTER RD

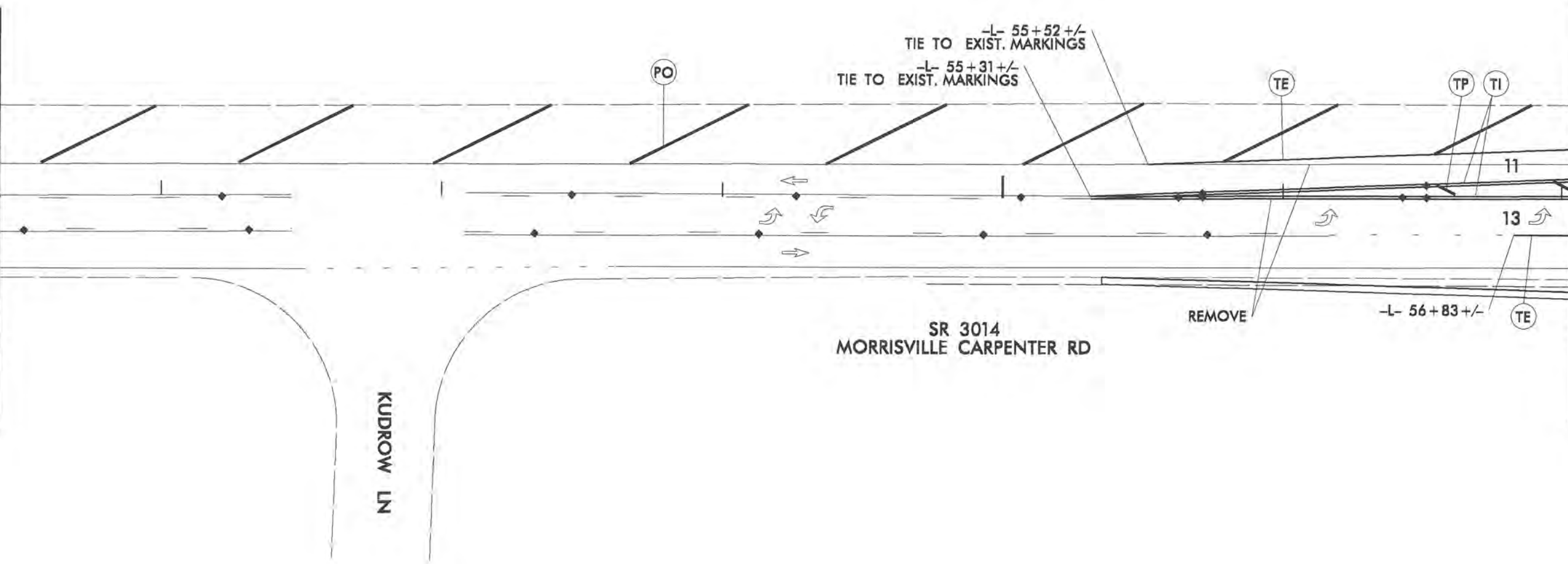
48+57 +/-
TIE TO EXIST.
MARKING.

<p>DIVISION FIVE DESIGN</p> <p><i>B. Upshaw</i> 8/16/13</p> <p>SIGNATURE P.E.</p>	<p>WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR</p> <p>DIVISION 05 WAKE COUNTY MORRISVILLE</p>												
	<table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INIT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>		REVISIONS	INIT.	DATE								
REVISIONS	INIT.	DATE											
<p>N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT</p>													



MATCH SHEET PM-5

MATCH SHEET PM-7



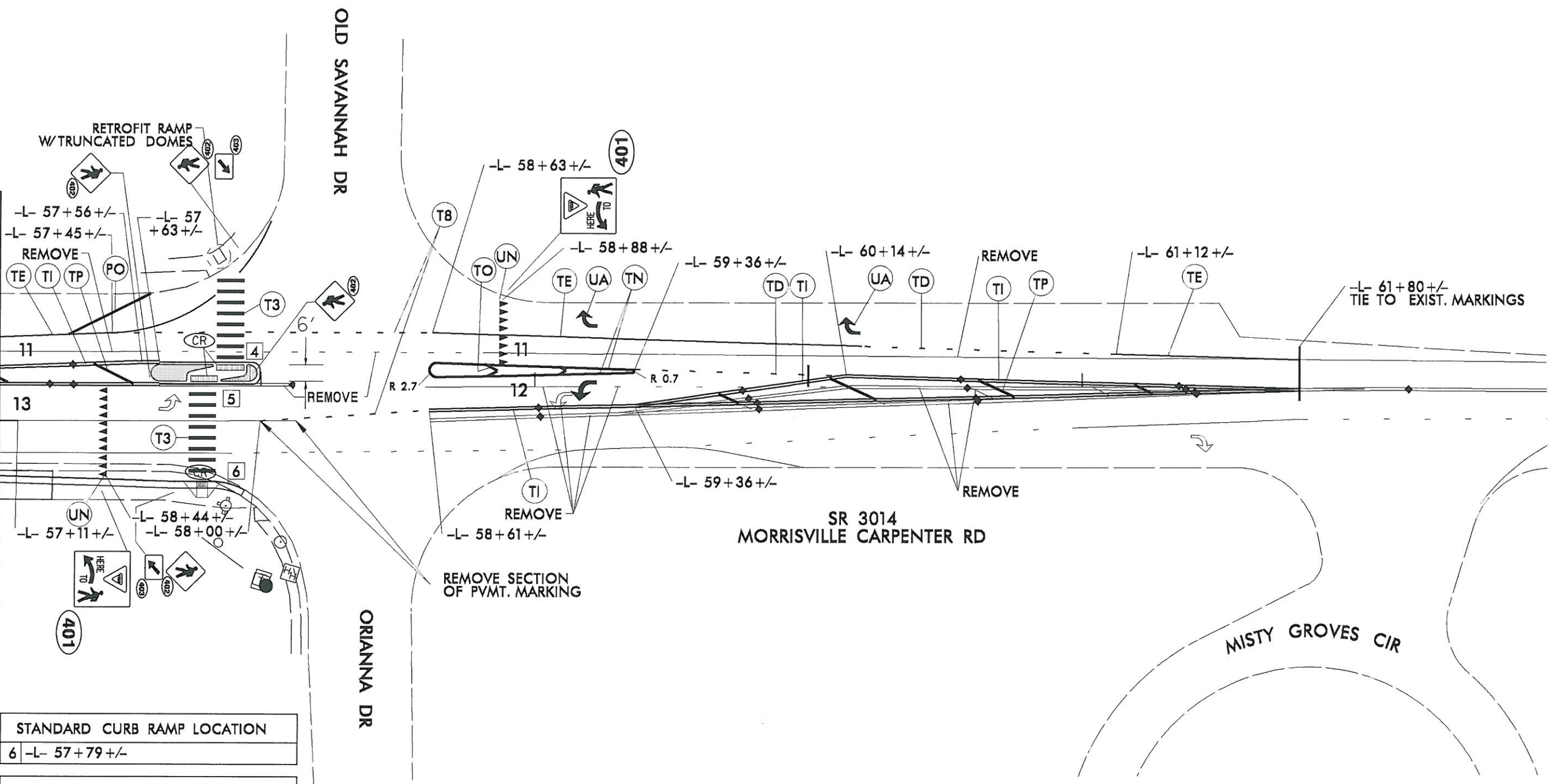
KUDROW LN

SR 3014
MORRISVILLE CARPENTER RD

<p>DIVISION FIVE DESIGN</p> <p><i>Ben Upshaw</i> 8/16/13 P.E.</p> <p>SIGNATURE</p>	<p>WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR</p> <p>DIVISION 05 WAKE COUNTY MORRISVILLE</p> <table border="1"> <thead> <tr> <th>REVISIONS</th> <th>INT.</th> <th>DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	REVISIONS	INT.	DATE										<p>SCALE: 1"=40' DATE: 07/2013</p> <p>PREPARED BY: SUNIL PATEL REVIEWED BY: BEN UPSHAW REVIEWED BY:</p>
	REVISIONS	INT.	DATE											
<p>N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT</p>														



MATCH SHEET PM-6



STANDARD CURB RAMP LOCATION	
6	-L- 57+79 +/-
TRUNCATED DOMES ONLY	
4	-L- 57+89 +/-
5	-L- 57+79 +/-

DIVISION FIVE DESIGN

Ben Upshaw
10/17/13
P.E.

SIGNATURE

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

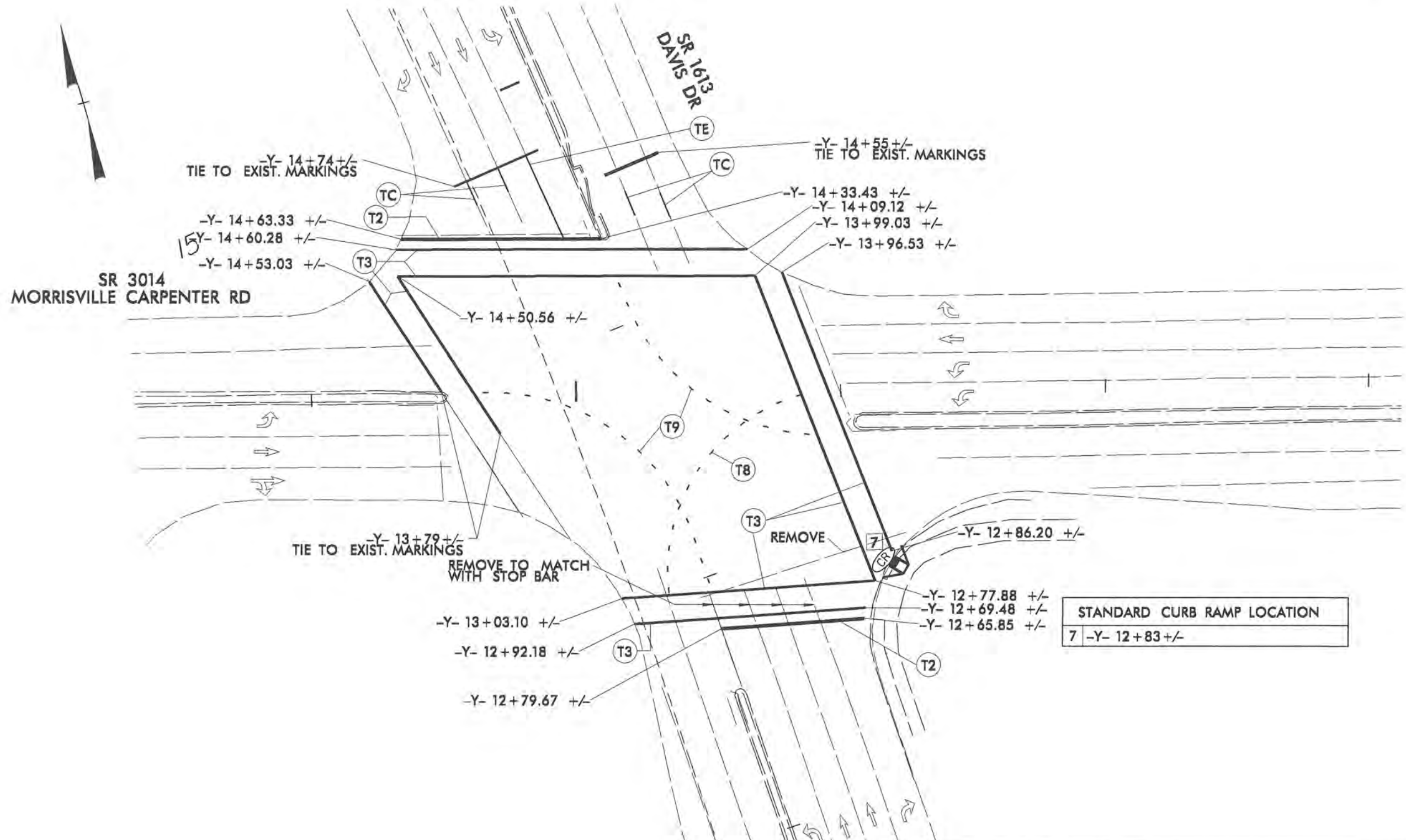
DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:



STANDARD CURB RAMP LOCATION
7 -Y- 12+83 +/-

DIVISION FIVE DESIGN

SEAL
NORTH CAROLINA
PROFESSIONAL
ENGINEER
030459
BEN UPSHAW
6/16/13

SIGNATURE P.E.

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

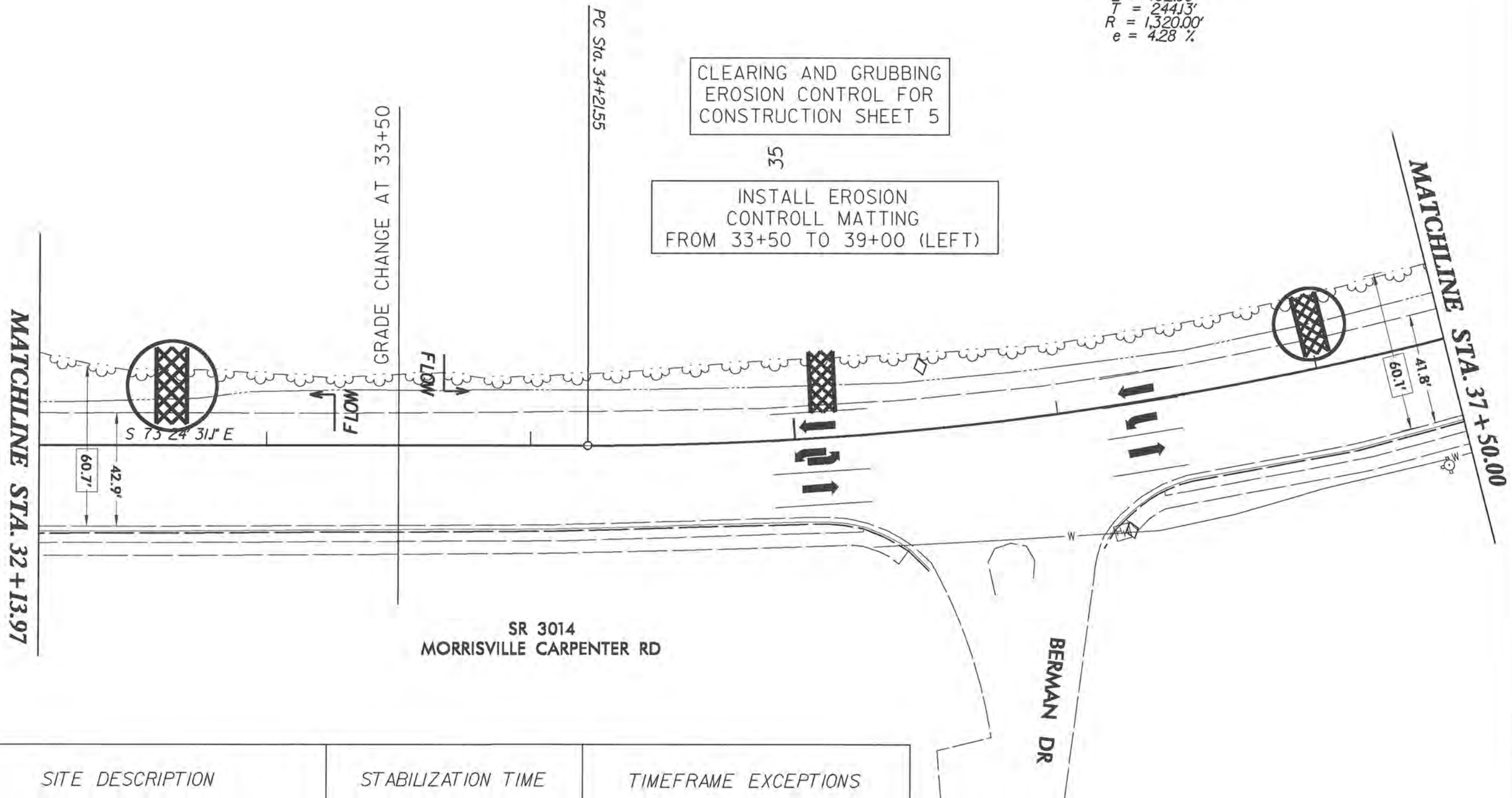
N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

DIVISION OF HIGHWAYS
N.C. DEPARTMENT OF TRANSPORTATION
DESIGN UNIT

SCALE: 1"=40' DATE: 07/2013

PREPARED BY: SUNIL PATEL
REVIEWED BY: BEN UPSHAW
REVIEWED BY:

PI Sta 36+65.68 (-L-)
D = 20° 57' 23.0" (LT)
D = 4° 20' 26.1"
L = 482.80'
T = 244.13'
R = 1,320.00'
e = 4.28 %



SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

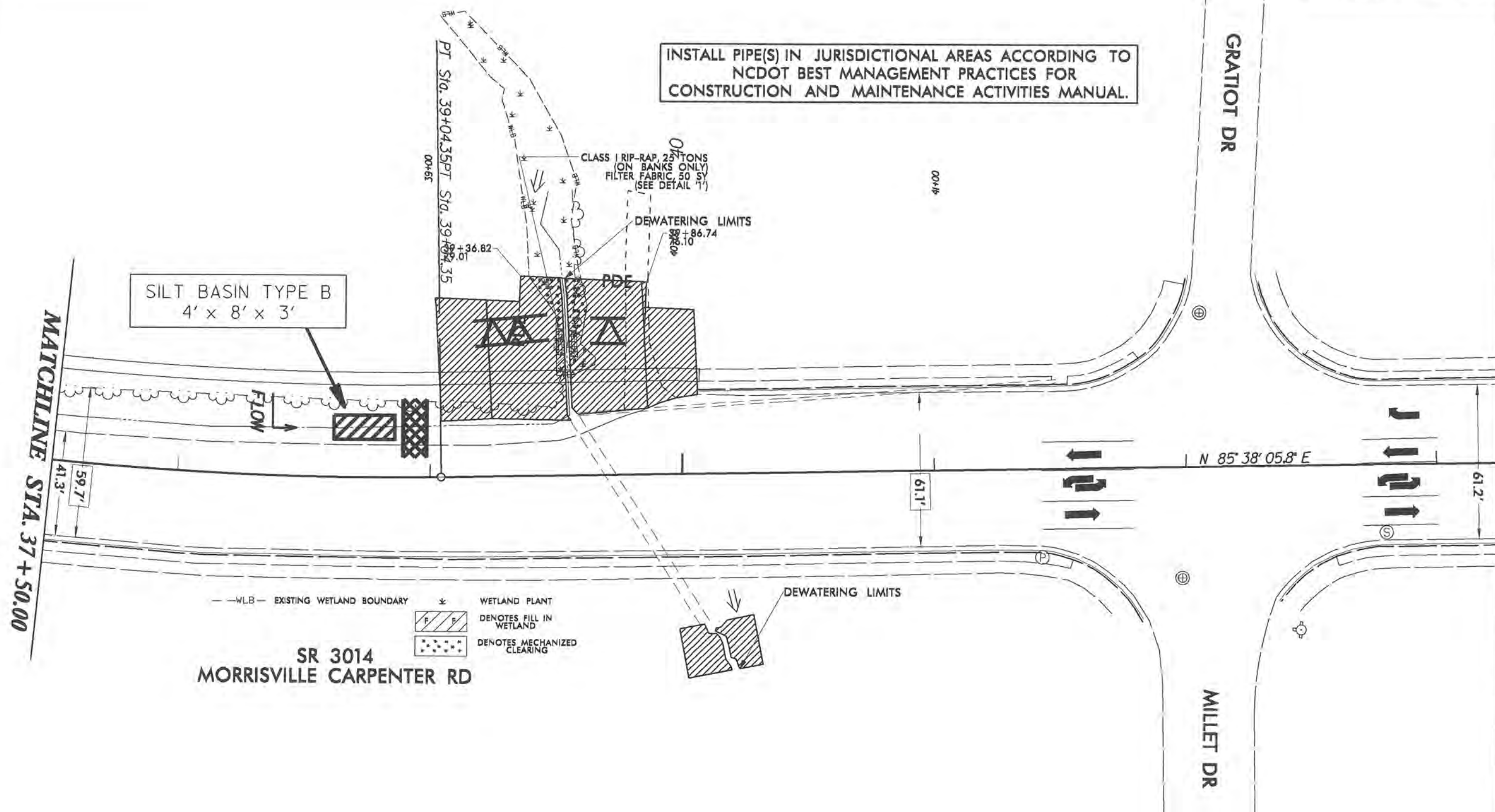
DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INIT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: 1"=40' DATE: 08/2012

PREPARED BY: DAVID DAVIS
REVIEWED BY: BEN UPSHAW
REVIEWED BY:



INSTALL PIPE(S) IN JURISDICTIONAL AREAS ACCORDING TO NCDOT BEST MANAGEMENT PRACTICES FOR CONSTRUCTION AND MAINTENANCE ACTIVITIES MANUAL.

SILT BASIN TYPE B
4' x 8' x 3'

CLASS 1 RIP-RAP, 25 TONS
(ON BANKS ONLY)
FILTER FABRIC, 50 SY
(SEE DETAIL '1')

DEWATERING LIMITS
86.10
86.74

MATCHLINE STA. 37+50.00

GRATIOT DR

N 85° 38' 05.8\"/>

SR 3014
MORRISVILLE CARPENTER RD

MILLET DR

—WLB— EXISTING WETLAND BOUNDARY
 WETLAND PLANT
 DENOTES FILL IN WETLAND
 DENOTES MECHANIZED CLEARING

DEWATERING LIMITS

CLEARING AND GRUBBING
EROSION CONTROL FOR
CONSTRUCTION SHEET 4



ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT



SCALE: 1"=40' DATE: 08/2012
 PREPARED BY: DAVID DAVIS
 REVIEWED BY: BEN UPSHAW

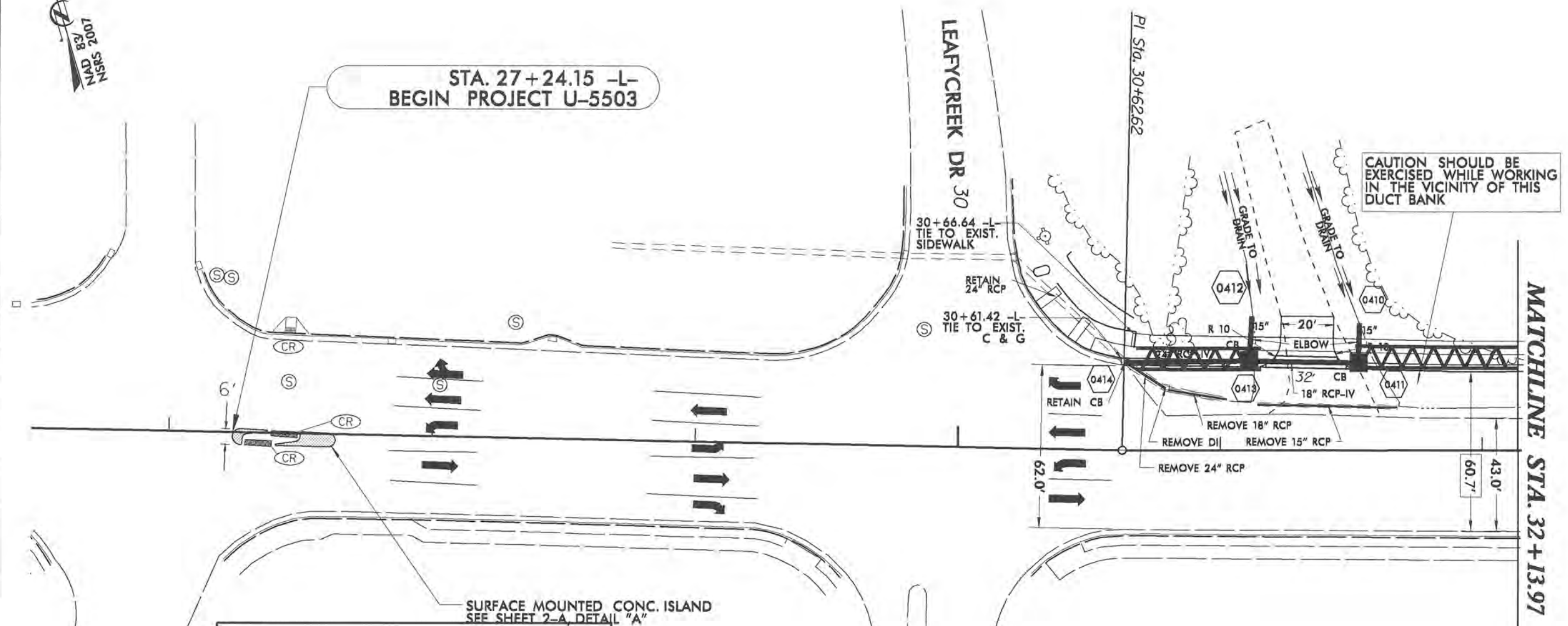


STA. 27+24.15 -L-
BEGIN PROJECT U-5503

LEAFYCREEK DR 30

PI Sta. 30+62.62

CAUTION SHOULD BE EXERCISED WHILE WORKING IN THE VICINITY OF THIS DUCT BANK



MATCHLINE STA. 32+13.97

SURFACE MOUNTED CONC. ISLAND
SEE SHEET 2-A, DETAIL "A"

Std. #	Description	Symbol
1605.01	Temporary Silt Fence	||| ||| |||
1606.01	Special Sediment Control Fence	--- / \ / \ / \
1622.01	Temporary Berms and Slope Drains	--- / \ / \ / \
1630.02	Silt Basin Type B	▨
1630.03	Temporary Silt Ditch	--- / \ / \ / \
1630.05	Temporary Diversion	--- / \ / \ / \
1630.06	Special Stilling Basin	--- / \ / \ / \
1632.03	Rock Inlet Sediment Trap Type C	□
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▨
1633.02	Temporary Rock Silt Check Type-B	▨
	Wattle	⤴
	Wattle with Polyacrylamide (PAM)	⤴
1634.02	Temporary Rock Sediment Dam Type-B	▨
1635.01	Rock Pipe Inlet Sediment Trap Type-A	⤴

NOTE:
1). THE SIDEWALK AND THE TOP SLAB FOR THE CATCH BASINS WILL BE AT THE SAME ELEVATION.

WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

N.C. DEPARTMENT of TRANSPORTATION
DIVISION of HIGHWAYS
DIVISION FIVE DESIGN UNIT

SCALE: 1"=40' DATE: 08/2012

PREPARED BY: DAVID DAVIS
REVIEWED BY: BEN UPSHAW

PI Sta 36+65.68 (-L-)
 D = 20° 57' 23.0" (LT)
 D = 4° 20' 26.1"
 L = 482.80'
 T = 244.13'
 R = 1,320.00'
 e = 4.28 %

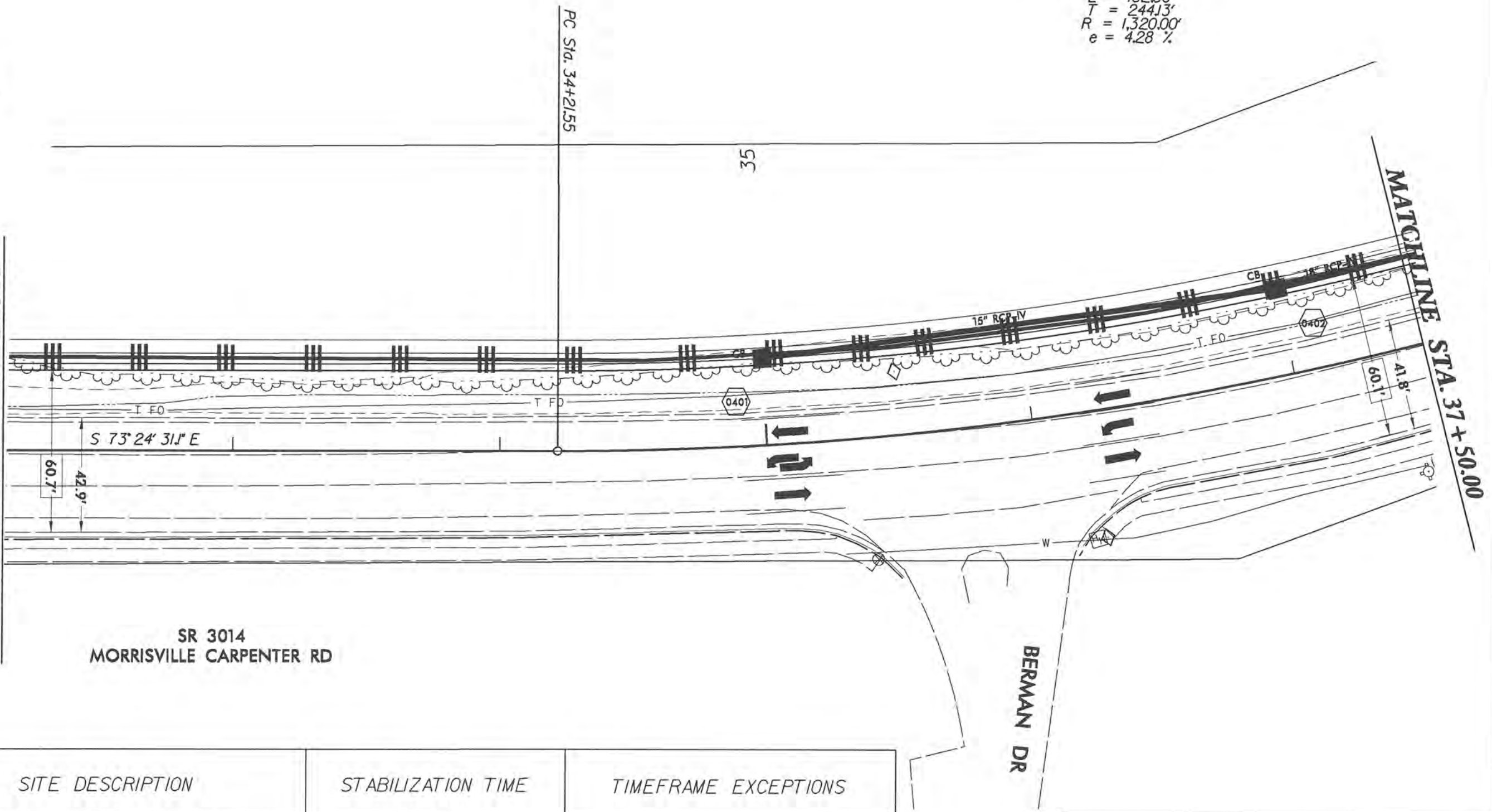


MATCHLINE STA. 32+13.97

MATCHLINE STA. 37+50.00

PC Sta. 34+21.55

35



SR 3014
MORRISVILLE CARPENTER RD

BERMAN DR

SITE DESCRIPTION	STABILIZATION TIME	TIMEFRAME EXCEPTIONS
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HOW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HOW ZONES.

WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
 BETWEEN
 SR 1613 (DAVIS DR) AND MISTY GROVES CIR

DIVISION 05 WAKE COUNTY MORRISVILLE

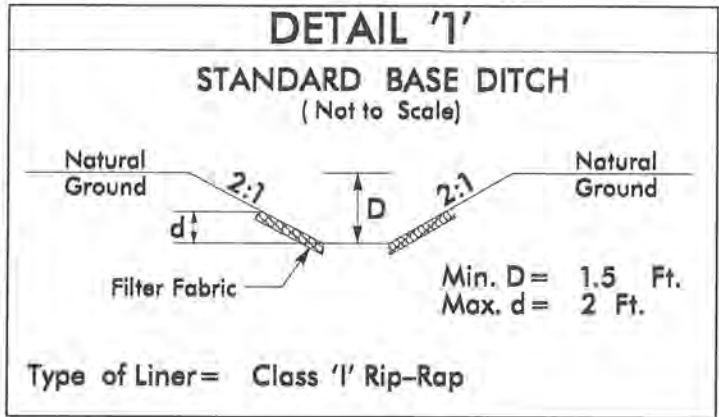
REVISIONS	INT.	DATE

SCALE: 1"=40' DATE: 08/2012

N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 DIVISION FIVE DESIGN UNIT

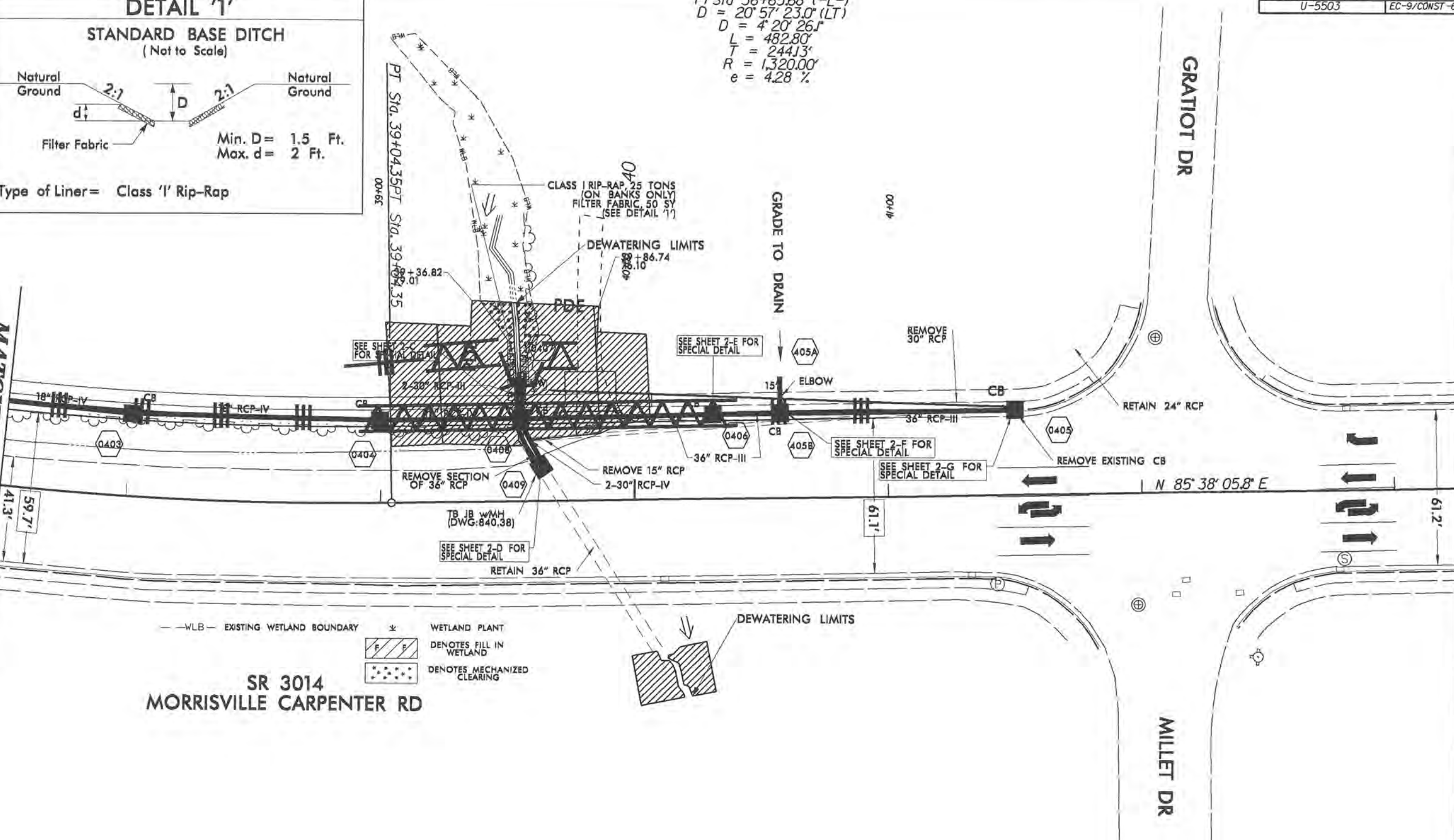
PREPARED BY: DAVID DAVIS
 REVIEWED BY: _____
 REVIEWED BY: _____





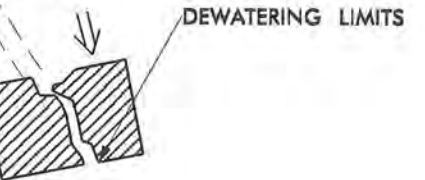
PI Sta 36+65.68 (-L-)
 D = 20' 57" 23.0" (LT)
 D = 4' 20" 26"
 L = 482.80'
 T = 244.13'
 R = 1,320.00'
 e = 4.28 %

MATCHLINE STA. 37+50.00



SR 3014
 MORRISVILLE CARPENTER RD

- WLB — EXISTING WETLAND BOUNDARY
- WETLAND PLANT
- DENOTES FILL IN WETLAND
- DENOTES MECHANIZED CLEARING



WIDEN SR 3014 (MORRISVILLE CARPENTER RD)
BETWEEN
SR 1613 (DAVIS DR) AND MISTY GROVES CIR

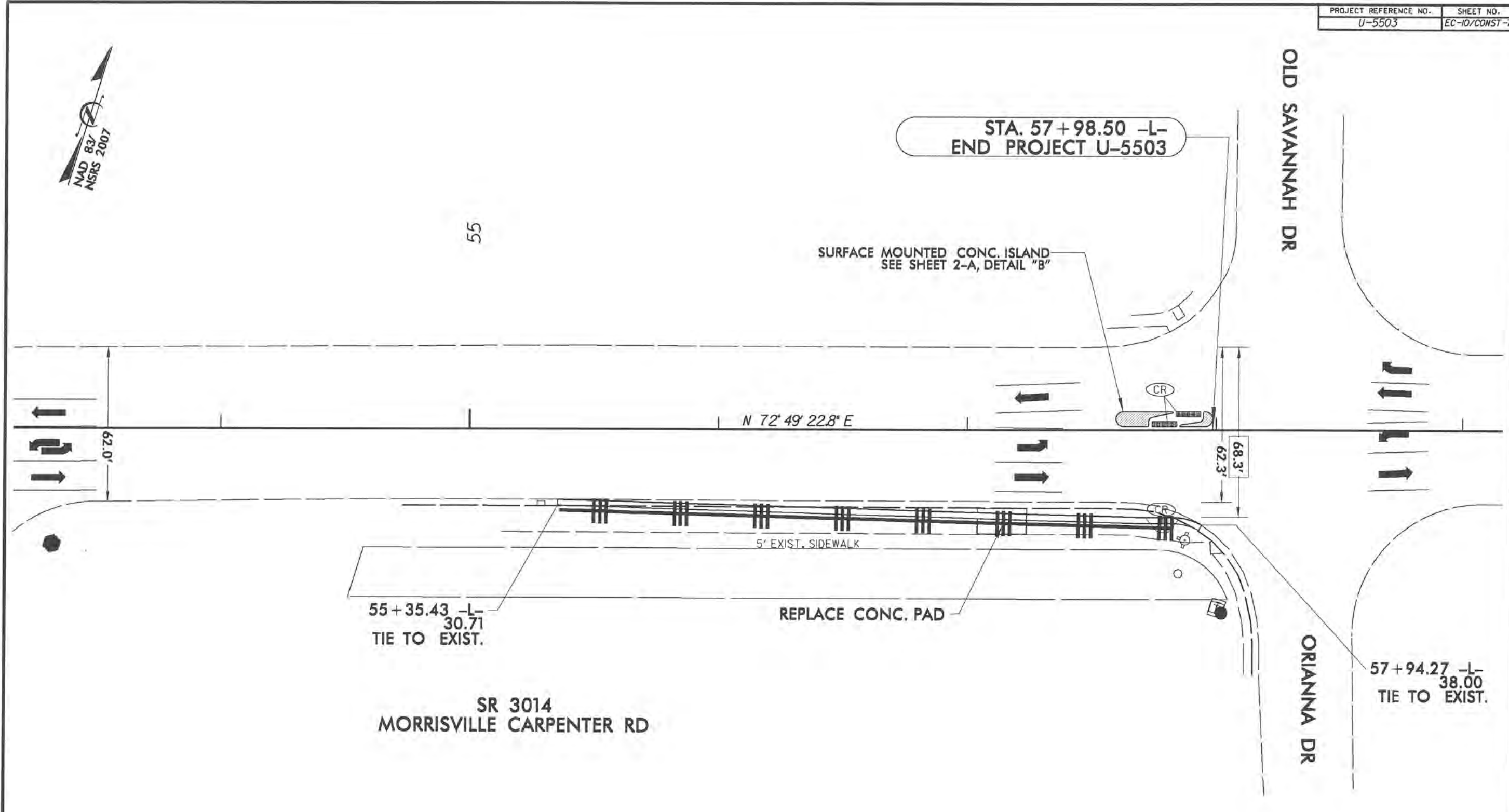
DIVISION 05 WAKE COUNTY MORRISVILLE

REVISIONS	INT.	DATE

SCALES: 1"=40' DATE: 08/2012

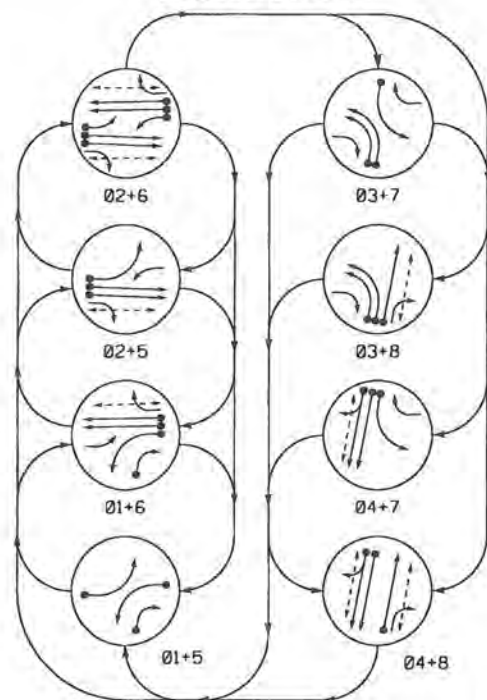
N.C. DEPARTMENT of TRANSPORTATION
 DIVISION of HIGHWAYS
 DIVISION FIVE DESIGN UNIT

PREPARED BY: DAVID DAVIS
 REVIEWED BY: BEN UPSHAW
 REVIEWED BY:



WIDEN SR 3014 (MORRISVILLE CARPENTER RD) BETWEEN SR 1613 (DAVIS DR) AND MISTY GROVES CIR			
DIVISION 05 WAKE COUNTY MORRISVILLE			
REVISIONS	INT.	DATE	SCALES: 1"=40' DATE: 08/2012 PREPARED BY: DAVID DAVIS REVIEWED BY: BEN LIPSHAW REVIEWED BY:
N.C. DEPARTMENT of TRANSPORTATION DIVISION of HIGHWAYS DIVISION FIVE DESIGN UNIT			

PHASING DIAGRAM



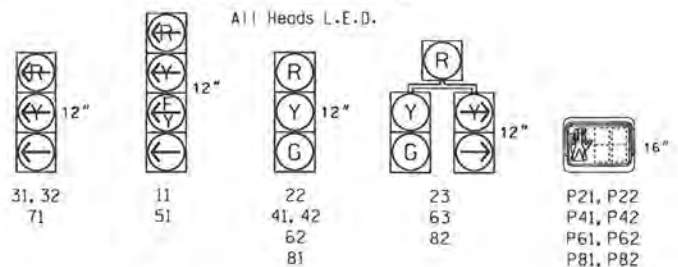
PHASING DIAGRAM DETECTION LEGEND

- ← ● ← DETECTED MOVEMENT
- ← ○ ← UNDETECTED MOVEMENT (OVERLAP)
- ← ○ ← UNSIGNALIZED MOVEMENT
- ← ○ ← PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE								F L H	
	01	02	03	04	05	06	07	08		
11	---	---	---	---	---	---	---	---	---	---
22	R	R	G	G	R	R	R	R	Y	
23	R	R	G	G	R	R	R	R	Y	
31, 32	---	---	---	---	---	---	---	---	---	---
41, 42	R	R	R	R	R	R	G	G	R	
51	---	---	---	---	---	---	---	---	---	---
62	R	G	R	G	R	R	R	R	Y	
63	R	G	R	G	R	R	R	R	Y	
71	---	---	---	---	---	---	---	---	---	---
81	R	R	R	R	R	G	R	G	R	
82	R	R	R	R	R	G	R	G	R	
P21, P22	DW	DW	W	W	DW	DW	DW	DRK		
P41, P42	DW	DW	DW	DW	DW	W	W	DRK		
P61, P62	DW	W	DW	W	DW	DW	DW	DRK		
P81, P82	DW	DW	DW	DW	W	DW	W	DRK		

⚡ = Flashing Yellow Arrow

SIGNAL FACE I.D.



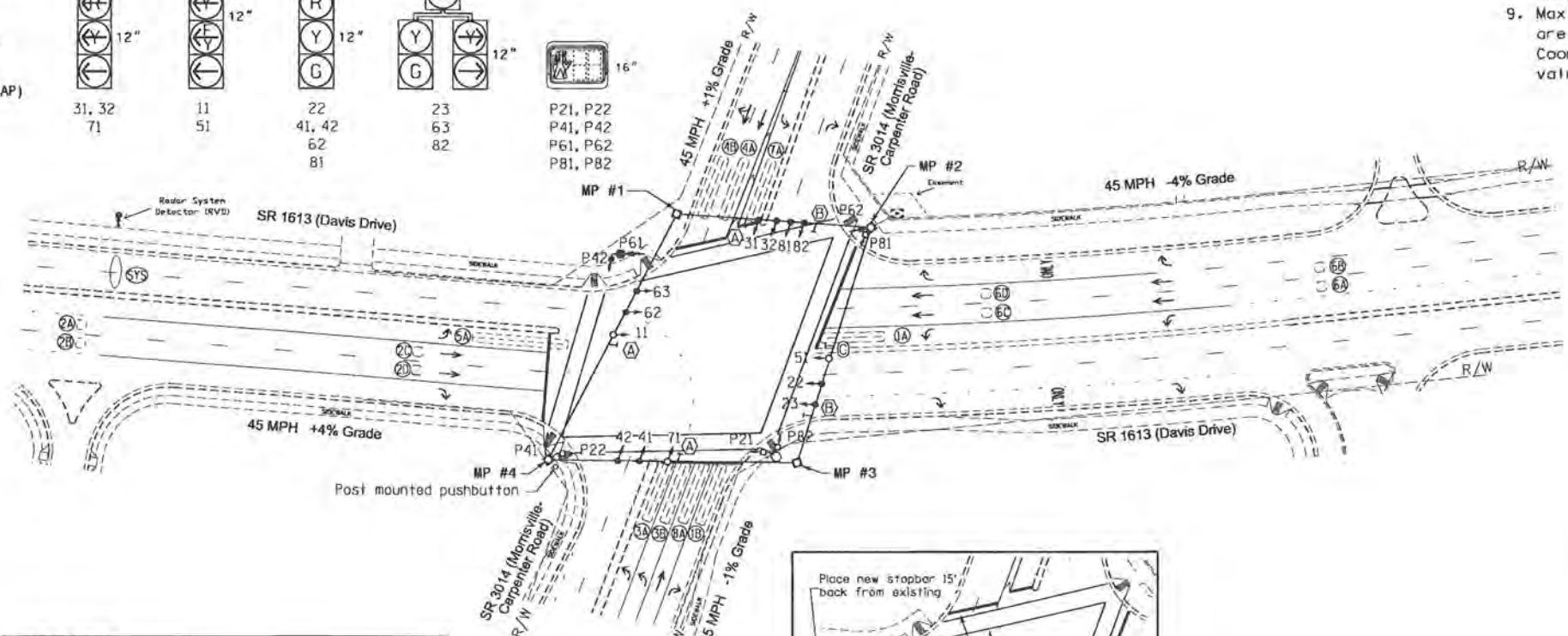
LOOP & DETECTOR UNIT INSTALLATION CHART NEMA CONTROLLER WITH TS-2 CABINET												
LOOP NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	NEMA PHASE		TIMING		PLACE CALL DURING PHASE	INHIBIT DELAY DURING GREEN	
						NEW	EXISTING	FEATURE	TIME			
1A	6x40	2-4-2	0	-	X	1	-	X	DELAY	15 SEC.	ALL	YES
1B	6x40	2-4-2	0	-	X	1	-	X	DELAY	15 SEC.	ALL	YES
2A, 2B	6x6	5	290	-	X	2	-	X	EXTEND	1.6 SEC.	ALL	NO
2C, 2D	6x6	5	80	-	X	2	-	X	-	-	ALL	NO
3A	6x40	2-4-2	0	-	X	3	-	X	-	-	ALL	NO
3B	6x40	2-4-2	0	-	X	3	-	X	-	-	ALL	NO
4A	6x40	2-4-2	0	-	X	4	-	X	-	-	ALL	NO
4B	6x40	2-4-2	0	-	X	4	-	X	DELAY	10 SEC.	ALL	YES
5A	6x60	2-4-2	+12	-	X	2	-	X	-	-	ALL	NO
6A, 6B	6x6	4	300	-	X	6	-	X	EXTEND	1.6 SEC.	ALL	NO
6C, 6D	6x6	3	90	-	X	6	-	X	-	-	ALL	NO
7A	6x40	2-4-2	0	-	X	7	-	X	-	-	ALL	NO
8A	6x40	2-4-2	0	-	X	8	-	X	-	-	ALL	NO
SYS	*	*	+450	-	X	-	-	X	-	-	ALL	NO

* Radar System Detector (RVD)

8 Phase Fully Actuated (Cary Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
8. Pavement markings are existing unless otherwise shown.
9. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

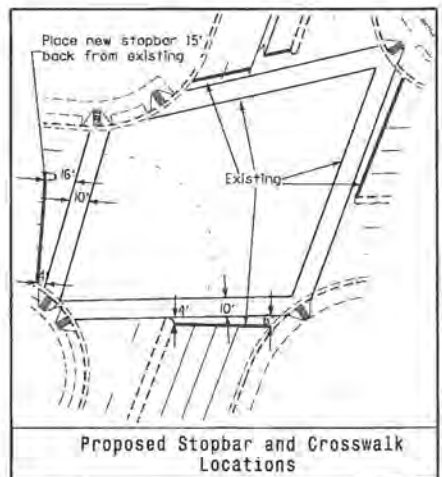


TIMING CHART 2070 CONTROLLER WITH TS-2 CABINET								
PHASE	01	02	03	04	05	06	07	08
MINIMUM GREEN*	7 SEC.	12 SEC.	7 SEC.	7 SEC.	7 SEC.	12 SEC.	7 SEC.	7 SEC.
PASSAGE GAP*	2.0 SEC.	2.0 SEC.	2.0 SEC.	2.0 SEC.	1.0 SEC.	2.0 SEC.	2.0 SEC.	2.0 SEC.
YELLOW CHANGE INT.	3.0 SEC.	4.9 SEC.	3.0 SEC.	4.4 SEC.	3.0 SEC.	4.9 SEC.	3.0 SEC.	4.6 SEC.
RED CLEARANCE	3.7 SEC.	2.3 SEC.	3.4 SEC.	2.0 SEC.	4.0 SEC.	2.3 SEC.	3.1 SEC.	2.2 SEC.
MAX. 1"	25 SEC.	90 SEC.	30 SEC.	40 SEC.	25 SEC.	90 SEC.	30 SEC.	50 SEC.
RECALL POSITION	NONE	MIN. RECALL	NONE	NONE	NONE	MIN. RECALL	NONE	NONE
VEHI. CALL MEMORY	NONLOCK	LOCK	NONLOCK	LOCK	NONLOCK	LOCK	NONLOCK	NONLOCK
WALK*	- SEC.	7 SEC.	- SEC.	7 SEC.	- SEC.	7 SEC.	- SEC.	7 SEC.
FLASHING DON'T WALK	- SEC.	32 SEC.	- SEC.	22 SEC.	- SEC.	30 SEC.	- SEC.	35 SEC.
VOLUME DENSITY	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF

* These values may be field adjusted. Do not adjust Min. Green and Extension times for phases 2 and 6 lower than what is shown. Min. Green for all other phases should not be lower than 4 seconds.

PROPOSED	LEGEND	EXISTING
○	Traffic Signal Head	●
□	Signal Pole with Guy	□
○	Inductive Loop Detector	○
○	Out of Pavement Detector	○
□	Controller & Cabinet Junction Box	□
---	2-in Underground Conduit	---
N/A	Right of Way Easement	N/A
→	Directional Arrow	→
○	Signal Pedestal	○
⊙	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	⊙
⊙	Right Arrow "ONLY" Sign (R3-SR)	⊙
⊙	No U-Turn Sign (R3-4)	⊙

This plan supersedes the plan signed and sealed on 7/25/11.



Signal Upgrade

Prepared in the Office of:
TRANSPORTATION PLANNING & DESIGN
SIGNAL DESIGN SECTION

SR 1613 (Davis Drive) at SR 3014 (Morrisville-Carpenter Road)

Division 5 Wake County Morrisville

PLAN DATE: July 2012 REVIEWED BY: B. Hough

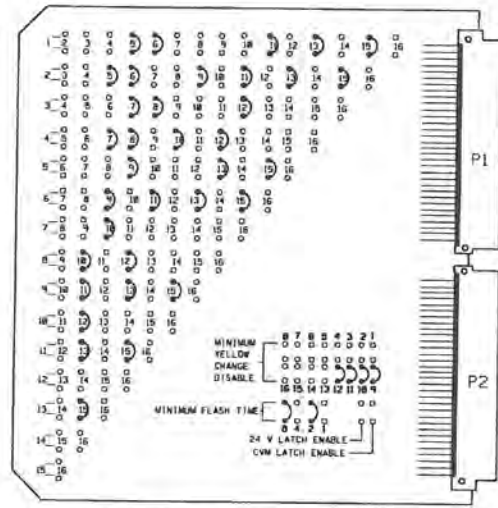
SCALE: 1" = 50'

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER ROBERT J. ZEMBA

Sig. Inventory No. 05-1547

**EDI MODEL MMU-16LE
MALFUNCTION MANAGEMENT UNIT
PROGRAMMING DETAIL**

(program card and tables as shown below)



MMU PROGRAMMING CARD

CHANNEL NUMBER (G,Y,R)	ENABLE/DISABLE
1	ENABLE
2	ENABLE
3	ENABLE
4	ENABLE
5	DISABLE
6	ENABLE
7	ENABLE
8	ENABLE
9	ENABLE
10	ENABLE
11	ENABLE
12	ENABLE
13	ENABLE
14	DISABLE
15	ENABLE
16	DISABLE

OPTION	SETTING
RECURRENT PULSE	ON
WALK DISABLE	OFF
LOG CVM FAILTS	ON
EXTERN WATCHDOG	OFF
24V-2+12VDC	OFF
PCM CARD MEMORY	ON
LEDguard	ON
FORCE TYPE 16	OFF
TYPE12-SOLC	OFF

CH. GROUP FOR PROTECTED GREEN ARROWS	CH. 1,3,5,7
ENABLE CHANNEL PAIR, FYA	
CH 1-13	ON
CH 3-14	OFF
CH 5-15	ON
CH 7-16	OFF

MMU PROGRAMMING NOTE
1. ENSURE YELLOW CHANGE PLUS RED CLEARANCE MONITORING IS ENABLED FOR ALL CHANNELS.

NOTES

- To prevent "Flash-conflict" problems, wire all unused load switches to flash red. Verify that signal heads flash in accordance with the signal plans.
- To prevent red failures on unused monitor channels, tie unused load switch red outputs 14 and 16 to load switch AC+ by inserting a jumper plug in the unused load switch socket from pin 1 (LS AC+) to pin 3 (red out). Make sure all flash transfer relays are in place.
- Program controller to start up in phases 2 and 6 green.
- Set power-up flash time to 10 seconds and implement on the Malfunction Management Unit. Set controller power-up flash time to 0 seconds.
- Enable simultaneous gap-out feature, on controller unit, for all phases.
- Program detectors in accordance with the manufacturer's instructions to accomplish the detection schemes shown on the signal design plans.
- Program detector call delay and extension timing on the controller, unless otherwise specified.
- Set all detector card unit channels to "presence" mode.
- This controller and cabinet are part of the Cory Signal System.

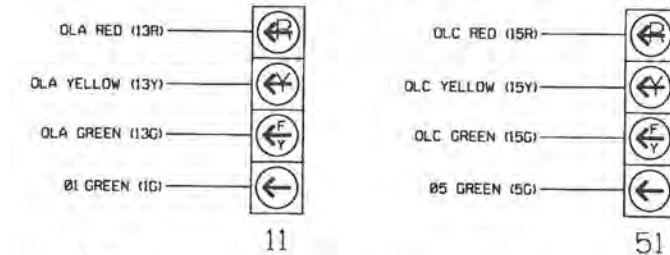
SIGNAL HEAD HOOK-UP CHART

PHASE	1	2	3	4	5	6	7	8	2 PED	4 PED	6 PED	8 PED	OLA	OLB	OLC	OLD			
SIGNAL HEAD NO.	11*	82	22,23	23	31,32	41,42	51*	62,63	63	71	81,82	P21, P22	P41, P42	P61, P62	P81, P82	11*	NU	51*	NU
RED		* 2R		4R	* 6R			8R											
YELLOW		2Y		4Y	* 6Y			8Y											
GREEN		2G		4G	* 6G			8G											
RED ARROW				3R				7R								13R	15R		
YELLOW ARROW		1Y	3Y	3Y				7Y	7Y							13Y	15Y		
FLASHING YELLOW ARROW																13G	15G		
GREEN ARROW	1G	1G	3G	3G	5G	7G	7G									9R	10R	11R	12R
																9G	10G	11G	12G

NU = Not Used
* Denotes install Load Resistor, see Load Resistor installation detail this sheet.
* See pictorial of head wiring detail this sheet.

4 SECTION FYA PPLT SIGNAL WIRING DETAIL

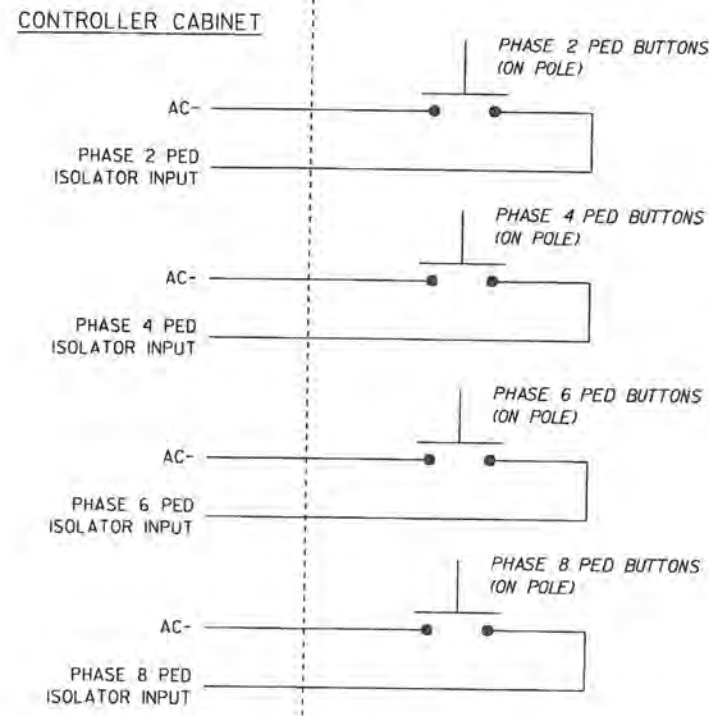
(wire signal heads as shown)



NOTE
1. See overlap programming instructions sheet 2 of 2.

PEDESTRIAN PUSH-BUTTON WIRING DETAIL

(wire push-buttons as shown below)



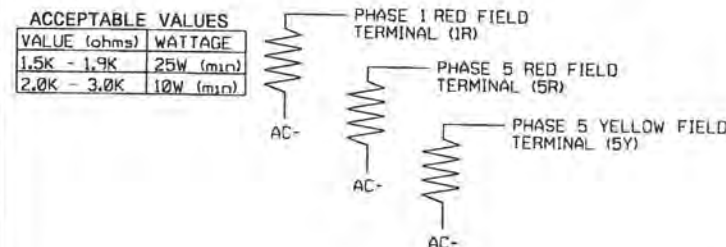
EQUIPMENT INFORMATION

CONTROLLER.....2070L
CABINETECONOLITE TS-2 TYPE 1
SOFTWAREASC/2070
CABINET MOUNT.....BASE
LOADBAY POSITIONS.....16
LOAD SWITCHES USED.....1,2,3,4,5,6,7,8,9,10,11,12,13,15
PHASES USED.....1,2,2 PED,3,4,4 PED,5,6,6 PED,7,8,8 PED
OLA.....*
OLB.....NOT USED
OLC.....*
OLD.....NOT USED

* See Sheet 2 of 2 Econolite ASC/2070 Overlap Programming Detail.

LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown below)



LOAD SWITCH ASSIGNMENT DETAIL

(program controller according to schedule in chart below)

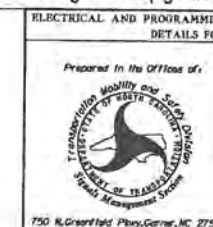
LOAD SWITCH NUMBER	FUNCTION
1	Ø1
2	Ø2
3	Ø3
4	Ø4
5	Ø5
6	Ø6
7	Ø7
8	Ø8
9	2 PED
10	4 PED
11	6 PED
12	8 PED
13	OLA
14	OLB
15	OLC
16	OLD

COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

THIS ELECTRICAL DETAIL
SUPERSEDES THE DETAIL
SEALED ON 07/26/11

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1547
DESIGNED: July 2012
SEALED: 07/20/2012
REVISED: N/A



Electrical and Programming Details for:
SR 1613 (Davis Drive)
at
SR 3014 (Morrisville-Carpenter Road)
Division 5 Wake County Morrisville
PLAN DATE: July 2012
PREPARED BY: C. Strickland
REVISIONS: _____ DATE: _____
DATE: _____



DETECTOR RACK SET-UP DETAIL

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

BIU	CH1	CH1	CH1	CH1	CH1	CH1	CH1	CH1	S L O T	S L O T	S L O T
	L3 ø1	L1 ø1	L7 ø3	L5 ø2	L11 ø5	L9 ø4	L15 ø7	L13 ø6			
	CH2	CH2	CH2	CH2	CH2	CH2	CH2	CH2	E M P T Y	E M P T Y	E M P T Y
	NOT USED	L2 ø6	L8 ø3	L6 ø2	L12 ø2	L10 ø4	NOT USED	L14 ø6			

DETECTOR RACK NO. 2 SET-UP DETAIL

INSERT DETECTOR CARDS IN RACK ACCORDING TO THE DETAIL SHOWN BELOW. PARTICULAR DETECTOR CHANNELS WILL CALL PHASES INDICATED.

BIU	S L O T	CH1	CH1
		L17 ø8	S L O T	L21 SYS. DET. **
	E M P T Y	CH2	CH2
		NOT USED	NOT USED

WIRE LOOPS TO TERMINALS ON LOOP PANEL AS SHOWN IN THE CHART BELOW

LOOP NO.	LOOP PANEL TERMINALS
1A	L1A.L1B
	L2A.L2B
1B	L3A.L3B
	L4A.L4B
2A,2B	L5A.L5B
2C,2D	L6A.L6B
3A	L7A.L7B
3B	L8A.L8B
4A	L9A.L9B
4B	L10A.L10B
5A	L11A.L11B
	L12A.L12B
6A,6B	L13A.L13B
6C,6D	L14A.L14B
7A	L15A.L15B
	L16A.L16B
8A	L17A.L17B
	L18A.L18B
	L19A.L19B
	L20A.L20B
SYS	L21A.L21B
	L22A.L22B
	L23A.L23B
	L24A.L24B

NOTE
BE SURE TO PROGRAM DETECTOR TYPES AND TIMERS (EXTEND AND DELAY) AS SHOWN ON THE SIGNAL PLANS.

PROGRAM CONTROLLER DETECTORS ACCORDING TO THE SCHEDULE SHOWN IN THE CHART BELOW

CONTROLLER DETECTOR NO.	FUNCTION	TIMING	
		FEATURE	TIME(SEC)
1	ø 1	DELAY	15
2	ø 6	-	-
3	ø 1	DELAY	15
4	-	-	-
5	ø 2	EXTEND	1.6
6	ø 2	-	-
7	ø 3	-	-
8	ø 3	-	-
9	ø 4	-	-
10	ø 4	DELAY	10
11	ø 5	DELAY	15
12	ø 2	-	-
13	ø 6	EXTEND	1.6
14	ø 6	-	-
15	ø 7	-	-
16	-	-	-
17	ø 8	-	-
18	-	-	-
19	-	-	-
20	-	-	-
21	SYS	-	-
22	-	-	-
23	-	-	-
24	-	-	-

** INSTALL INTERFACE CARD FOR RADAR SYSTEM DETECTOR (RVD) PER MANUFACTURER'S INSTRUCTIONS.

ECONOLITE ASC/2070 OVERLAP PROGRAMMING DETAIL

(program controller as shown)

FROM MAIN MENU SELECT 2 (CONTROLLER) AND THEN 5 (OVERLAP DATA)

OVERLAP A

CONTROLLER OVERLAP DATA

OVERLAP A	1	2	3	4	5	6	7	8	9	1	1	1
STANDARD	X	.	.	.	.	.	.	.	.	.	.	.
PROTECTED	X	.	.	.	.	.	.	.	.	.	.	.
PERMITTED . . . . .	.	X	.	.	.	.	.	.	.	.	.	.
ENABLE LAG . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
ENABLE LEAD . . . . .	.	.	.	.	.	.	.	.	.	.	.	.
SPARE . . . . .	.	.	.	.	.	.	.	.	.	.	.	.

ADVANCE GREEN TIMER 0.0
LAG/LEAD GREEN TIMER 0.0
LAG/LEAD YELLOW TIMER 0.0
LAG/LEAD RED TIMER 0.0
ADDITIONAL PAGE(S)

OVERLAP C

CONTROLLER OVERLAP DATA

OVERLAP C	1	2	3	4	5	6	7	8	9	0	1	1	1
STANDARD . . . . .	.	.	.	.	X	.	.	.	.	.	.	.	.
PROTECTED . . . . .	.	.	.	.	X	.	.	.	.	.	.	.	.
PERMITTED . . . . .	.	.	.	.	.	X	.	.	.	.	.	.	.
ENABLE LAG . . . . .	.	.	.	.	.	.	.	.	.	.	.	.	.
ENABLE LEAD . . . . .	.	.	.	.	.	.	.	.	.	.	.	.	.
SPARE . . . . .	.	.	.	.	.	.	.	.	.	.	.	.	.

ADVANCE GREEN TIMER 0.0
LAG/LEAD GREEN TIMER 0.0
LAG/LEAD YELLOW TIMER 0.0
LAG/LEAD RED TIMER 0.0
ADDITIONAL PAGE(S)

ECONOLITE ASC/2070 SPECIAL MMU PROGRAMMING
(program controller as shown below)

CONFIGURATION SUBMENU

- 1. CONTROLLER SEQUENCE
- 2. PHASES IN USE
- 3. PH TO LS ASSIGNMENT
- 4. SDLC OPTIONS
- 5. PORT 2
- 6. PORT 3
- 7. ENABLE LOGGING
- 8. OPTIONS
- 9. MMU PROGRAM

PRESS KEYS 1..9 TO SELECT

MMU PROGRAM

CAN SERVE WITH:

CHANNEL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2
1	.	X	.	X	.	X	.	.	.	X	X	.	.	.	.
2	.	X	.	X	.	X	.	X	.	X	X	.	.	.	.
3	.	.	.	X	.	X	.	X	.	X	X	.	.	.	.
4	.	.	.	X	.	X	.	X	.	X	X	.	.	.	.
5	.	X	.	X	.	X	.	X	.	X	X	.	.	.	.
6	.	X	.	X	.	X	.	X	.	X	X	.	.	.	.
7	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
8	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
9	.	X	.	X	.	X	.	.	.	.	.	.	.	.	.
10	.	.	.	.	.	X	.	.	.	.	.	.	.	.	.
11	.	X	.	X	.	.	.	.	.	.	.	.	.	.	.
12	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
13	.	X	.	.	.	.	.	.	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
15	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

END OF SUBMENU

CAUTION!

SET INTERSECTION TO FLASH BEFORE ATTEMPTING TO ENTER OR CHANGE ANY MMU PROGRAMMING DATA. THIS PROGRAMMING AND THAT OF THE MMU PROGRAMMING CARD MUST MATCH EXACTLY. IF THEY DO NOT, THE INTERSECTION WILL BE PLACED INTO FLASH.

WRITE-PROTECT FOR FLASHING YELLOW ARROWS DETAIL
(program controller as shown below)

FROM MAIN MENU SELECT 8 (UTILITIES) AND THEN 9 (WRITE PROTECT DATA)

UTILITIES SUBMENU

- 1. COPY
- 2. MEMORY CLEAR
- 3. PRINT
- 4. TRANSFER
- 5. SIGN ON
- 6. LOG BUFFERS
- 7. SEND D.M.
- 8. CUSTOM APPL.
- 9. PROG MODULE

PRESS KEYS 1..0 TO SELECT

WRITE PROTECT DATA

ADDRESS	1/9
00B-00F	50

SPECIAL BACK-UP PROTECTION NOTES



- Program controller to omit phase 1 during phase 2 on, and to omit phase 5 during phase 6 on.
- To accomplish back-up feature described in note 1, enable 'BACK-UP PROTECTION GROUP 1' under controller submenu 9: 'OPTION DATA'.
- It is required for the controller to be programmed such that if it is in phase 2+6, then phase 1 and/or 5 cannot be served next without first progressing through phase 4. This additional back-up protection feature shall be implemented in the write-protect area of the controller software. For directions on having this feature installed, contact the Town of Cary Engineering Department at: (919) 380-2105.

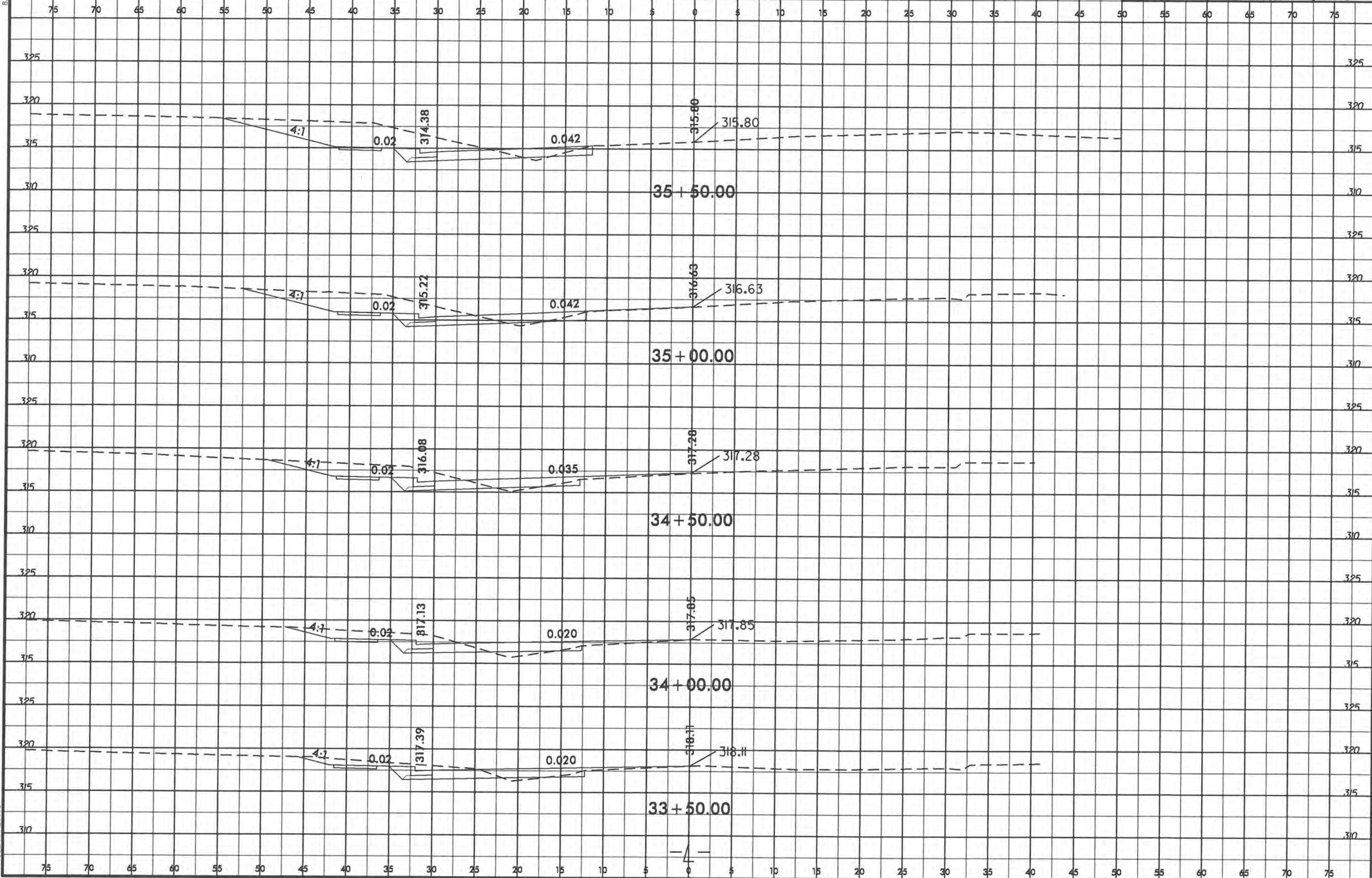
! IMPORTANT: Remove Special Back-up Protection by disabling 'BACK-UP PROTECTION GROUP 1'.

THIS ELECTRICAL DETAIL
SUPERSEDES THE DETAIL
SEALED ON 07/26/11

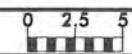
THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 05-1547
DESIGNED: July 2012
SEALED: 07/20/2012
REVISED: N/A

Signal Upgrade - Sheet 2 of 2

	SR 1613 (Davis Drive) at SR 3014 (Morrisville-Carpenter Road)		
	Division 5 Wake County Morrisville	PREPARED BY: C. Strickland REVIEWED BY: T. Jeps		SEAL 022013 ENGINEER GEORGE C. BROWN
PREPARED IN THE OFFICE OF: TOWN OF CARY, NC 750 N. Greenfield Pkwy, Cary, NC 27529	PLAN DATE: July 2012 REVISIONS:	DATE:	SIGNATURE: <i>George C. Brown</i> 7/20/12 DATE:

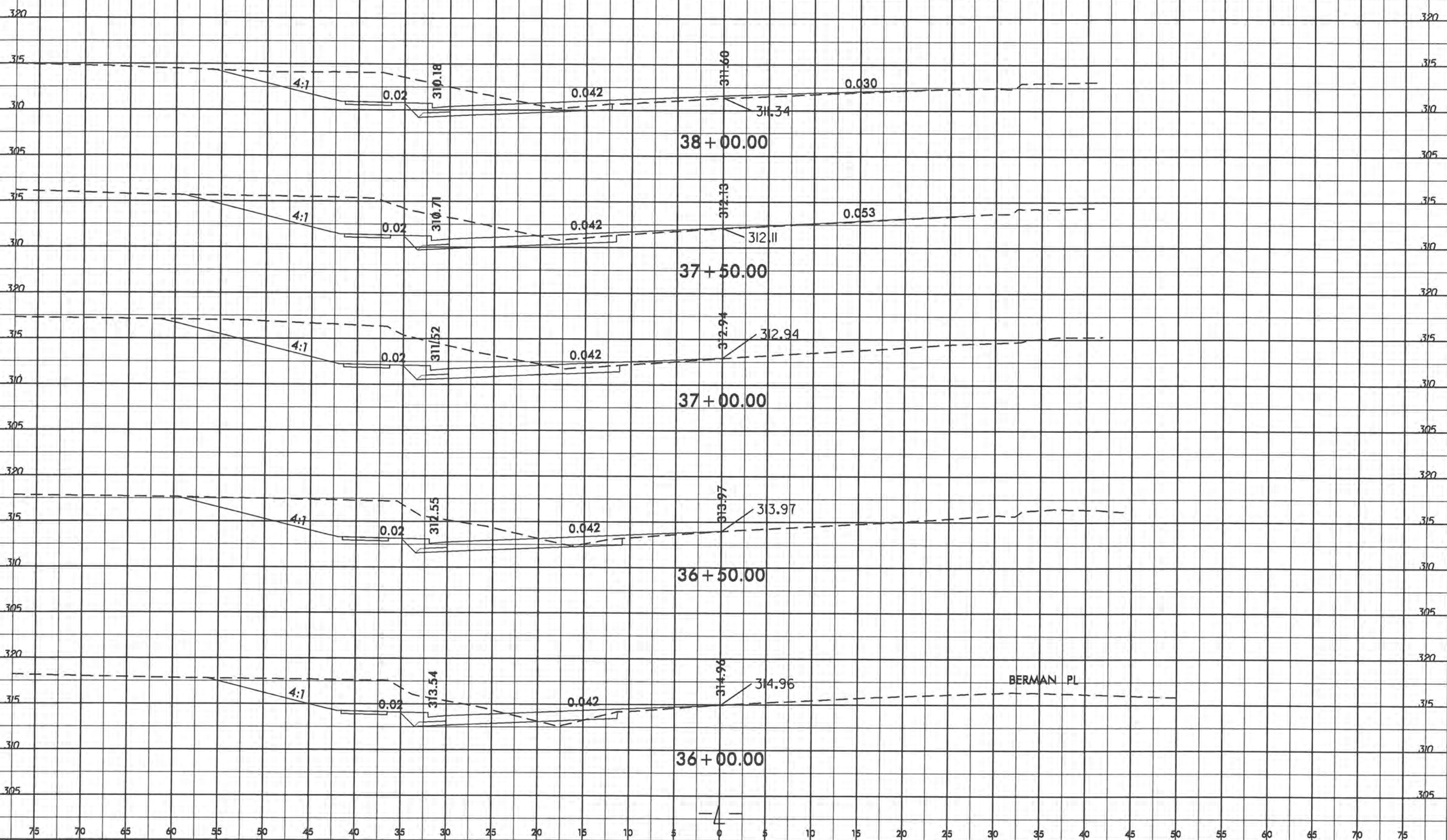


8/23/99



PROJ. REFERENCE NO. U-5503 SHEET NO. X-3

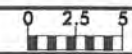
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



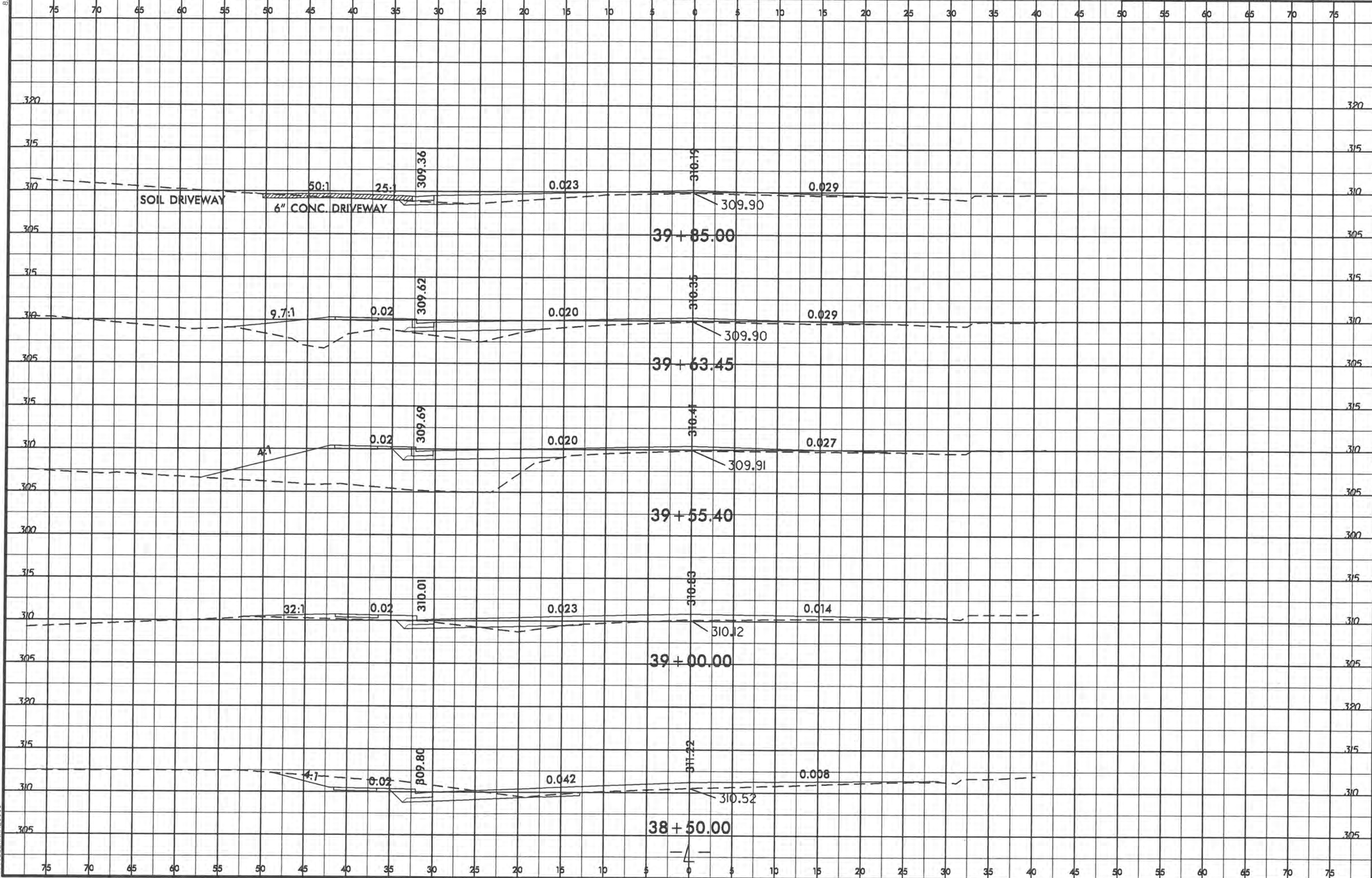
25-FEB-2015 17:30 C:\UDR\UDR\U5503\Roadway\CorridorModeling\U5503_Rdy_XPL.dgn

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

8/23/99

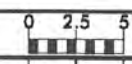


PROJ. REFERENCE NO. U-5503 SHEET NO. X-4



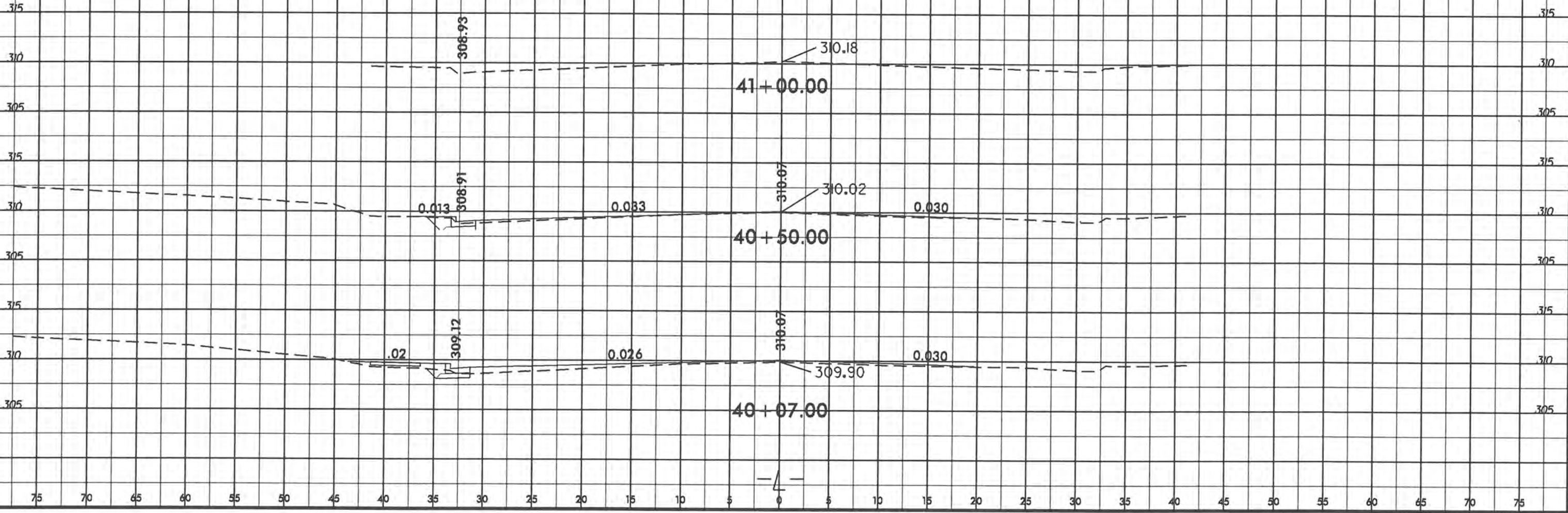
25-FEB-2013 17:41 S:\DDC\Dist\U5503\Roadway\CorridorModeling\U5503_Rdy_XPL.dgn

8/23/99

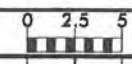


PROJ. REFERENCE NO.	SHEET NO.
U-5503	X-5

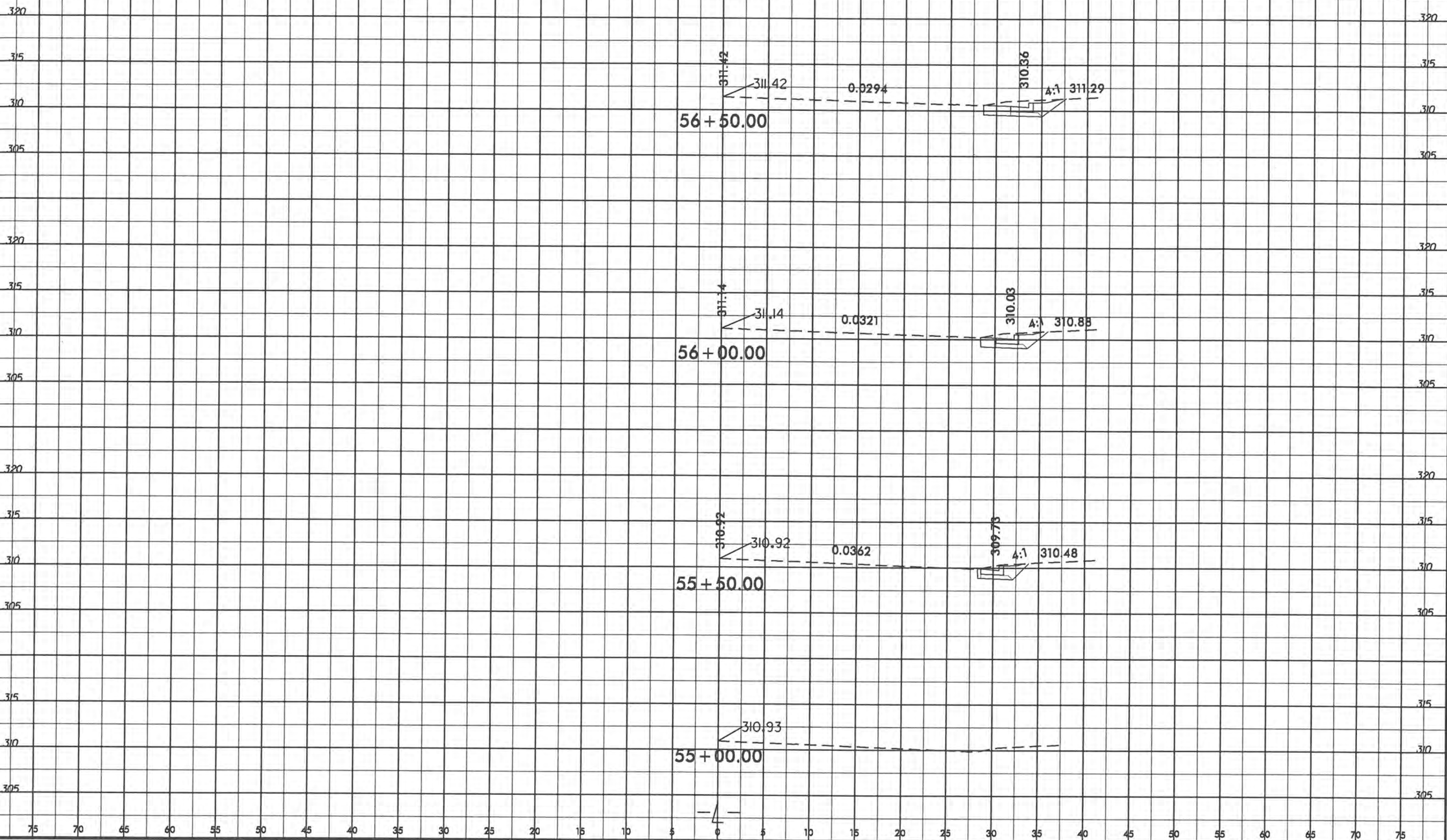
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

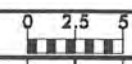


25-FEB-2013 11:32
 SA:\DDP\Drawings\Roadway\CorridorModeling\U5503_Rdy_XPL_L.dgn
 \$\$\$\$USERNAME\$\$\$

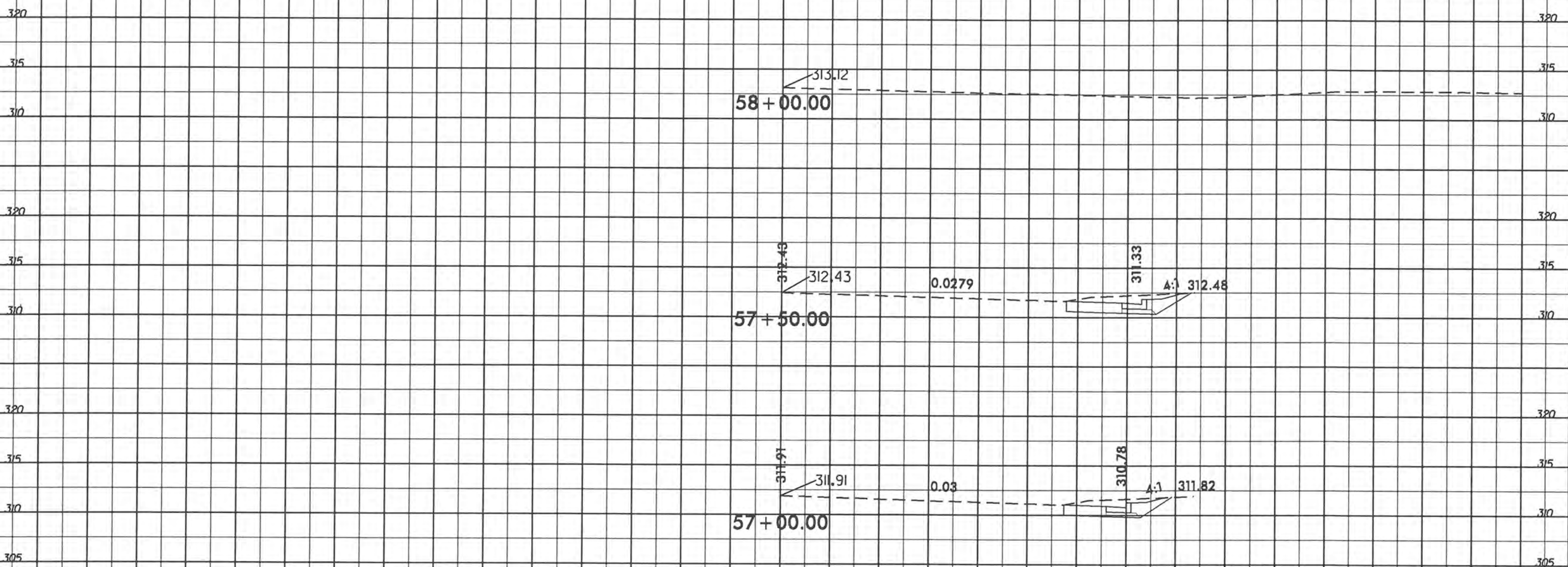


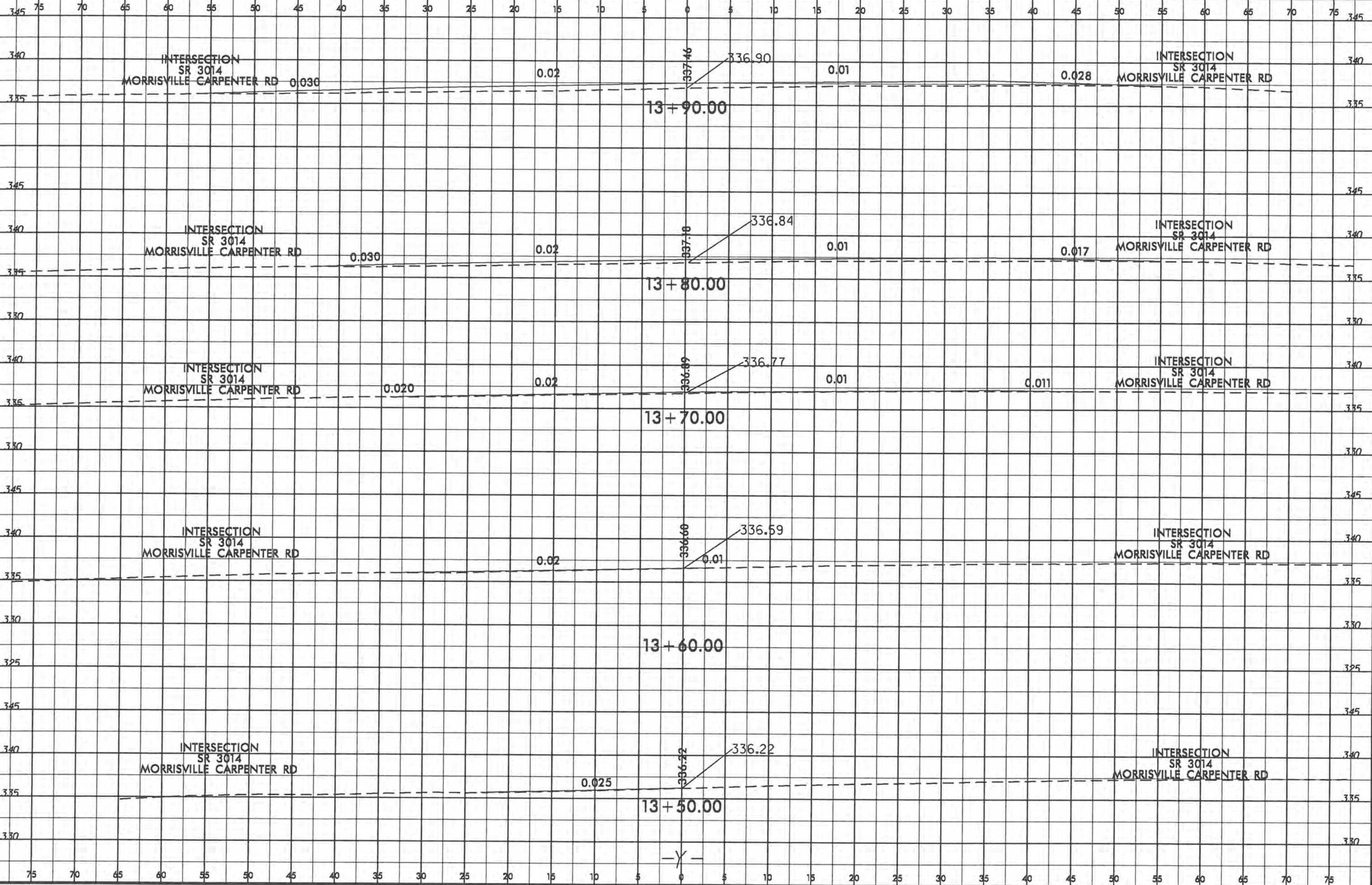
75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75

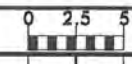
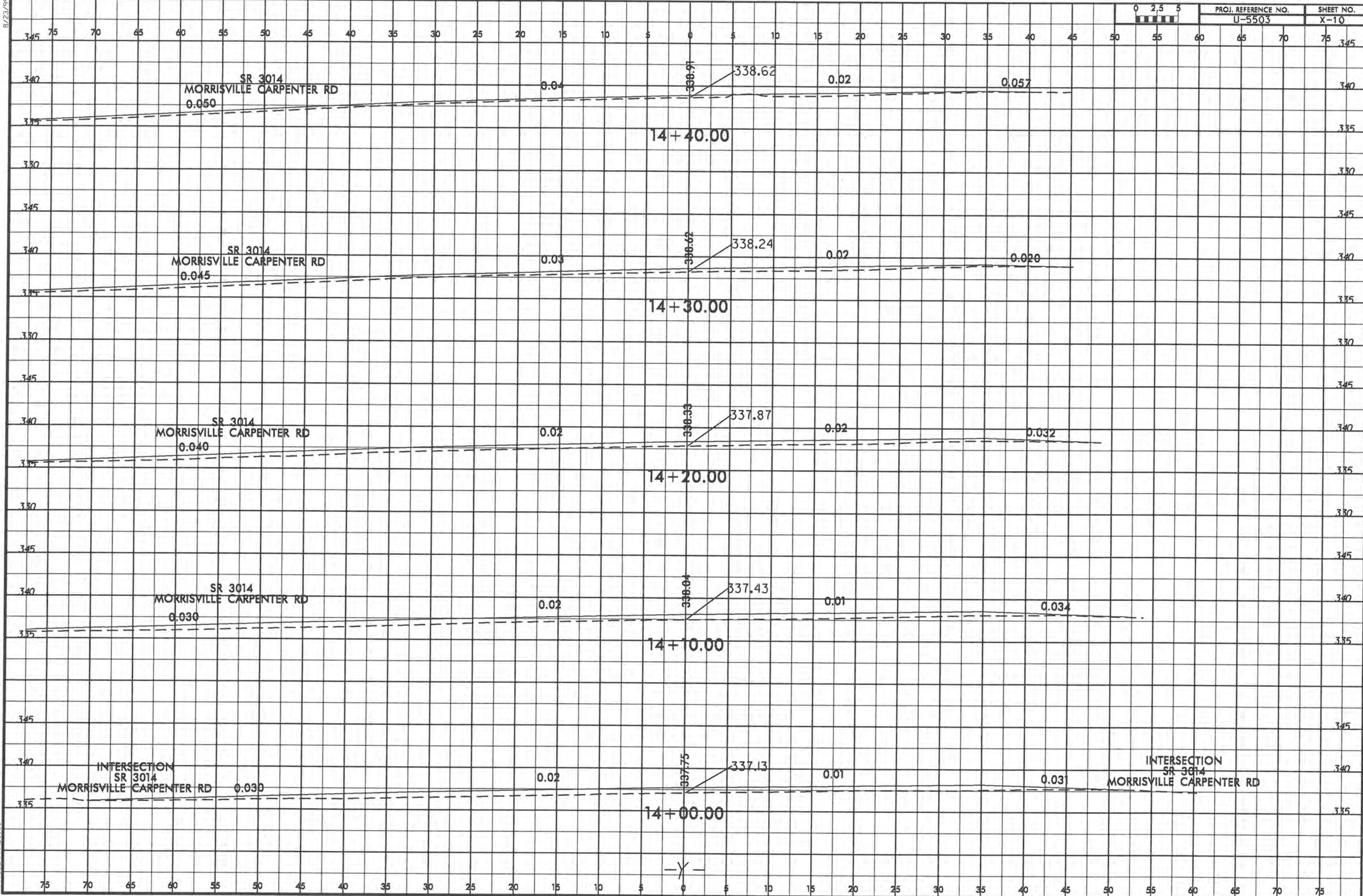




75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



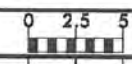




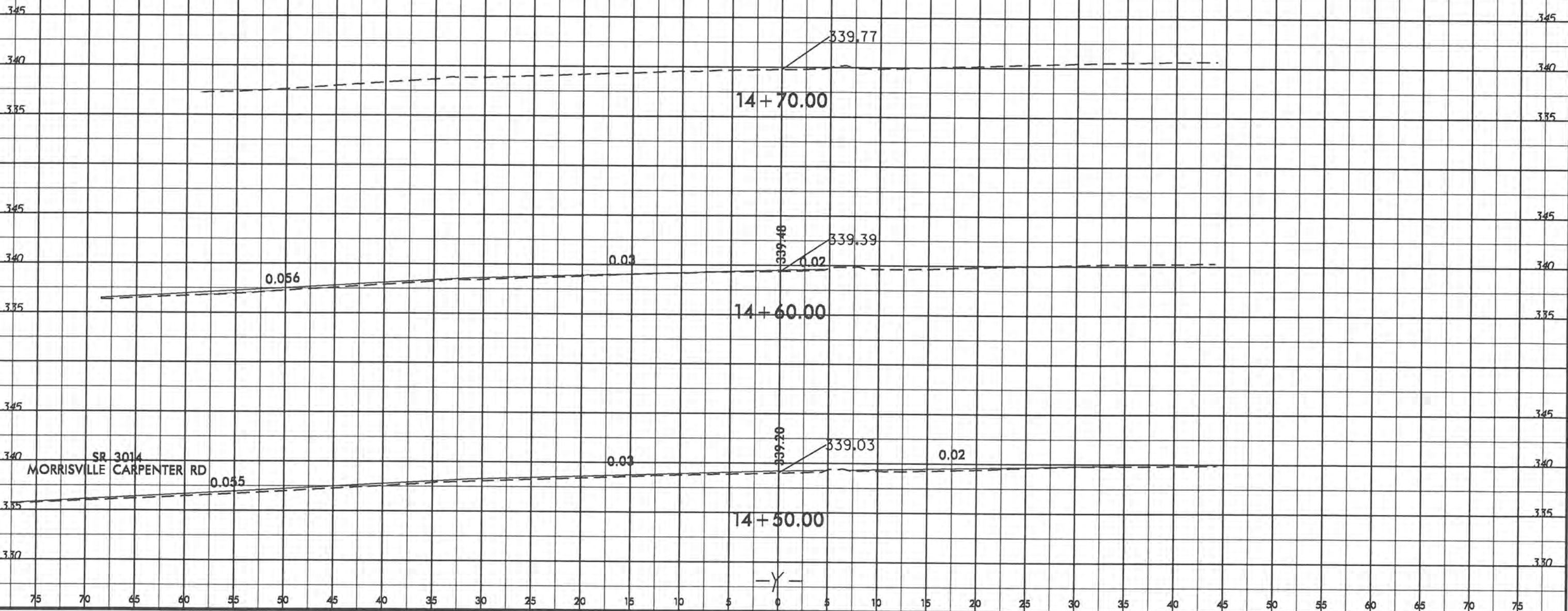
25-FEB-2013 17:27
 S:\DDC\031\U5503\Roadway\Corridor\Modelling\U5503_Rdy_XPL_Y.dgn
 8/23/99

8/23/99

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



PROJ. REFERENCE NO. U-5503 SHEET NO. X-11



25-FEB-2013 17:28 S:\DCCAD\11\U5503\Roadway\CorridorModeling\U5503_Rdy_XPL_Y.dgn