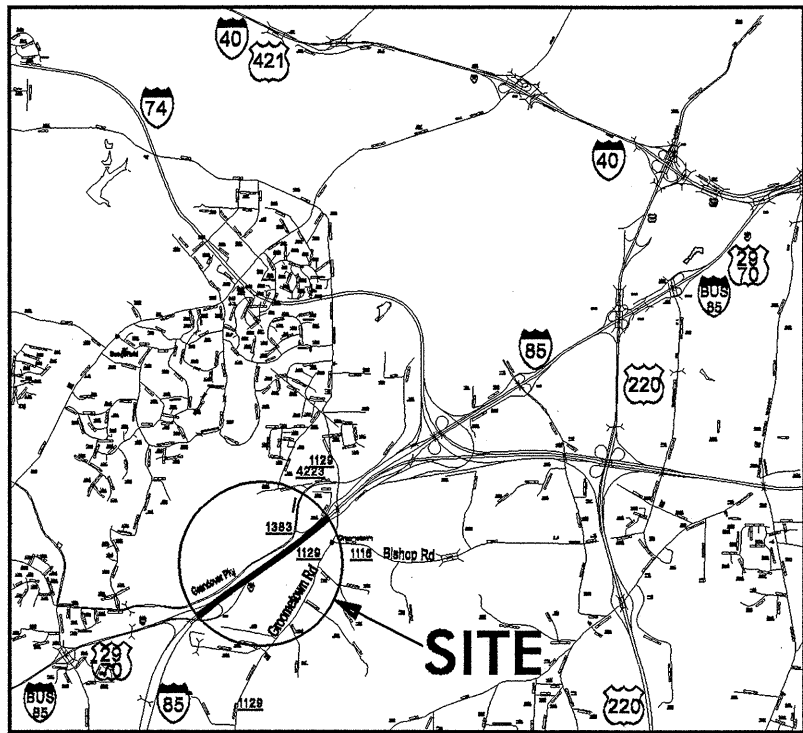


09/08/09

**TIP PROJECT: I-5117**



Vicinity Map

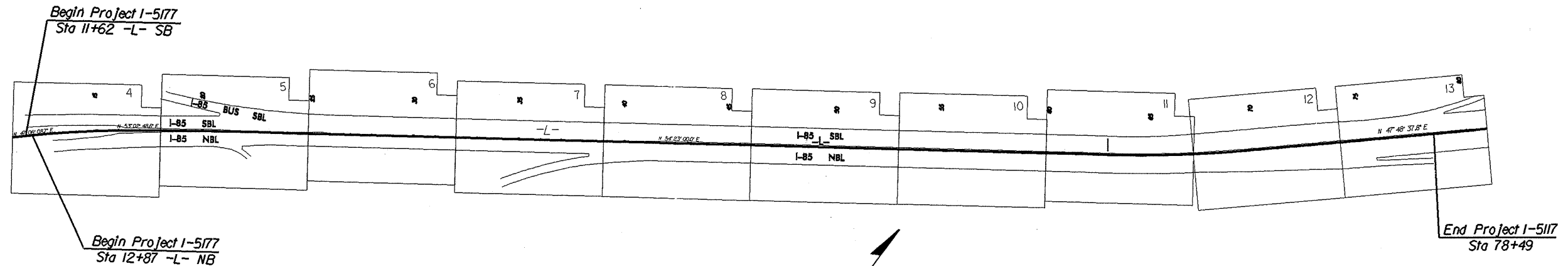
STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**GUILFORD COUNTY**

**LOCATION: I-85 FROM CONCRETE US 29-70 INTERCHANGE  
BRIDGES TO GROOMETOWN ROAD**

**TYPE OF WORK: Milling, Ultrathin Hot Mix, and Guardrail**

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5117	1	
WBS	F. A. PROJ. NO.	DESCRIPTION	
45055.3.ST1	STM-085-3(195)118	CONST	



**CONTRACT:**

**GRAPHIC SCALES**



**PROJECT LENGTH**

TOTAL LENGTH TIP PROJECT I-5117 = 1.266 MILES

Prepared in the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

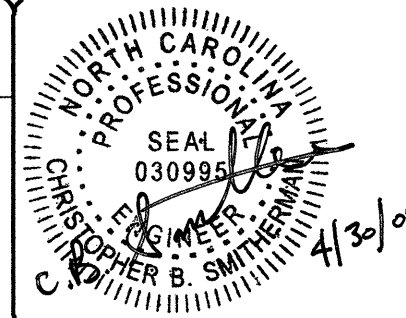
2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:  
NA

LETTING DATE:  
6-16-2009

Chris Smitherman  
PROJECT ENGINEER

PROJECT DESIGN ENGINEER



DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA



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cthuskins AT D7DB239843

PROJECT REFERENCE NO.	SHEET NO.
1-5117	1-A
	ROADWAY DESIGN ENGINEER

GENERAL NOTES:

2006 SPECIFICATIONS  
EFFECTIVE: 07-18-06  
REVISED: 07-30-08

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.02.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

IN AREAS WITH MEDIAN OBSTRUCTIONS LESS THAN 5'6" FROM THE FACE OF GUARDRAIL, A POST SPACING OF 37.5" SHOULD BE USED. SEE STANDARD DRAWING 862.01 SHEET 1 OF 11.

REUSE ALL FUNCTIONAL GUARDRAIL ITMES THAT MEET CURRENT STANDARDS AS DIRECTED BY THE ENGINEER.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

INDEX OF SHEETS

SHEET NUMBER	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS
1-B	CONVENTIONAL SYMBOLS
2 THRU 2-B	PAVEMENT SCHEDULE, TYPICAL SECTIONS, AND WEDGING DETAILS
2-C	SIGN SUPPORT DRAIN DITCH TRANSITION DETAIL
2-D	ANCHORAGE FOR FRAMES
3	SUMMARY OF GUARDRAIL
4 THRU 13	PLAN SHEETS
14	SUMMARY OF QUANTITIES
15	THERMOPLASTIC AND PAINT QUANTITIES
TCP-1 THRU TCP-16	TRAFFIC CONTROL PLANS

EFF. 07-18-06  
REV. 01-02-07

2006 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
225.05	Method of Obtaining Superelevation - Divided Highways
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.02	Method of Shoulder Construction - High Side of Superelevated Curve - Method II
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
665.01	Milled Rumble Strips - Asphalt Pavements
DIVISION 8 - INCIDENTALS	
840.00	Concrete Base Pad for Drainage Structures
840.17	Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.20	Frames and Wide Slot Flat Grates
840.26	Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe
840.45	Precast Drainage Structure
840.66	Drainage Structure Steps
850.01	Concrete Paved Ditches
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets
DIVISION 16 - EROSION CONTROL AND ROADSIDE DEVELOPMENT	
1632.03	Rock Inlet Sediment Trap, Type-C

Note: Not to Scale

\*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

# CONVENTIONAL PLAN SHEET SYMBOLS

### BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EP
Property Corner	-----
Property Monument	□ EDM
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	-w.l.b.-
Proposed Wetland Boundary	-w.l.b.-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-

### 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	-JS-
Buffer Zone 1	-BZ 1-
Buffer Zone 2	-BZ 2-
Flow Arrow	→
Disappearing Stream	→
Spring	⊕
Wetland	⊕
Proposed Lateral, Tail, Head Ditch	-----
False Sump	⊕

### RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ 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 Marker	-----
Existing Control of Access	⊕
Proposed Control of Access	⊕
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Permanent Easement with Iron Pin and Cap Marker	◆

### ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	-C-
Proposed Slope Stakes Fill	-F-
Proposed Wheel Chair Ramp	⊕ WCR
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	⊕ 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	□ CB
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	⊕
UG 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	⊕
UG 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	----- A/G Water

### TV:

TV Satellite Dish	⊕
TV Pedestal	⊕
TV Tower	⊕
UG 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:

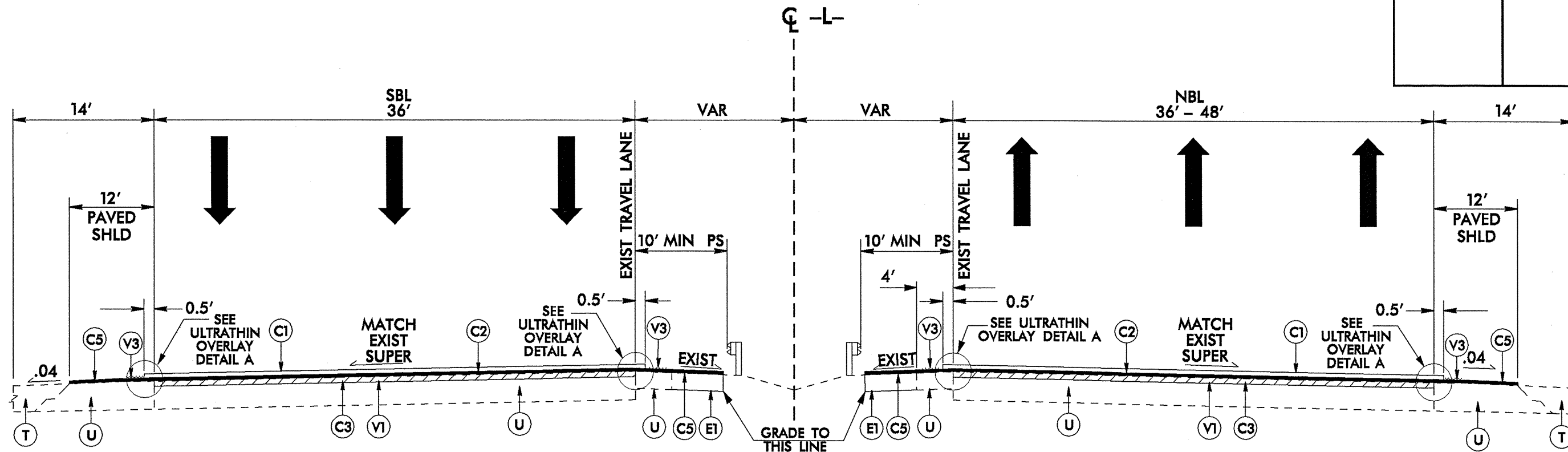
Gas Valve	⊕
Gas Meter	⊕
Recorded U/G Gas Line	-----
Designated U/G Gas Line (S.U.E.*)	-----
Above Ground Gas Line	----- A/G Gas

### SANITARY SEWER:

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

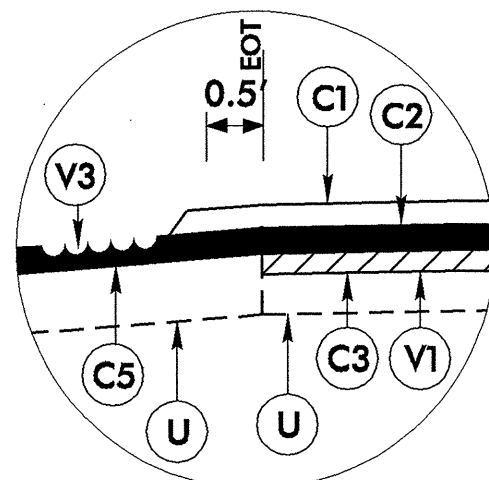
### MISCELLANEOUS:

Utility Pole	●
Utility Pole with Base	⊕
Utility Located Object	○
Utility Traffic Signal Box	⊕
Utility Unknown U/G Line	-----
UG Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
UG Test Hole (S.U.E.*)	⊕
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.



**TYPICAL SECTION NO. 1**

NBL -L- STA. 12+87.00 TO STA. 21+00.00  
 SBL -L- STA. 11+62.00 TO STA. 21+00.00



ULTRATHIN OVERLAY DETAIL A

C1	PROP. APPROX. 5/8" ULTRATHIN HOT MIX ASPHALT, TYPE B, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C3	PROP. APPROX. 2" ASPHALT CONG. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS PER SQ. YD.
C4	PROP. VAR. DEPTH ASPHALT CONG. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 112 LBS PER SQ. YD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
C5	PROP. APPROX. 1 1/2" ASPHALT CONG. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 168 LBS PER SQ. YD.
C6	PROP. VAR. DEPTH ASPHALT CONG. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D	PROP. VAR. DEPTH ASPHALT CONG. INTER. COURSE, TYPE I19.0D, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 9" ASPHALT CONCRETE BASE COURSE, TYPE B250B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B250B, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
R1	PROPOSED 4" CONCRETE PAVED DITCH.
R2	EXISTING 4" CONCRETE PAVED DITCH.
R3	EXISTING 2' - 6" CONCRETE CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING / MILLING DETAIL 1, SHEET NO. 2A)
W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL 2, SHEET NO. 2A)
W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL 3, SHEET NO. 2B)
V1	MILLING ASPHALT PAVEMENT. 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT. 1 1/2" DEPTH.
V3	MILLED RUMBLE STRIP

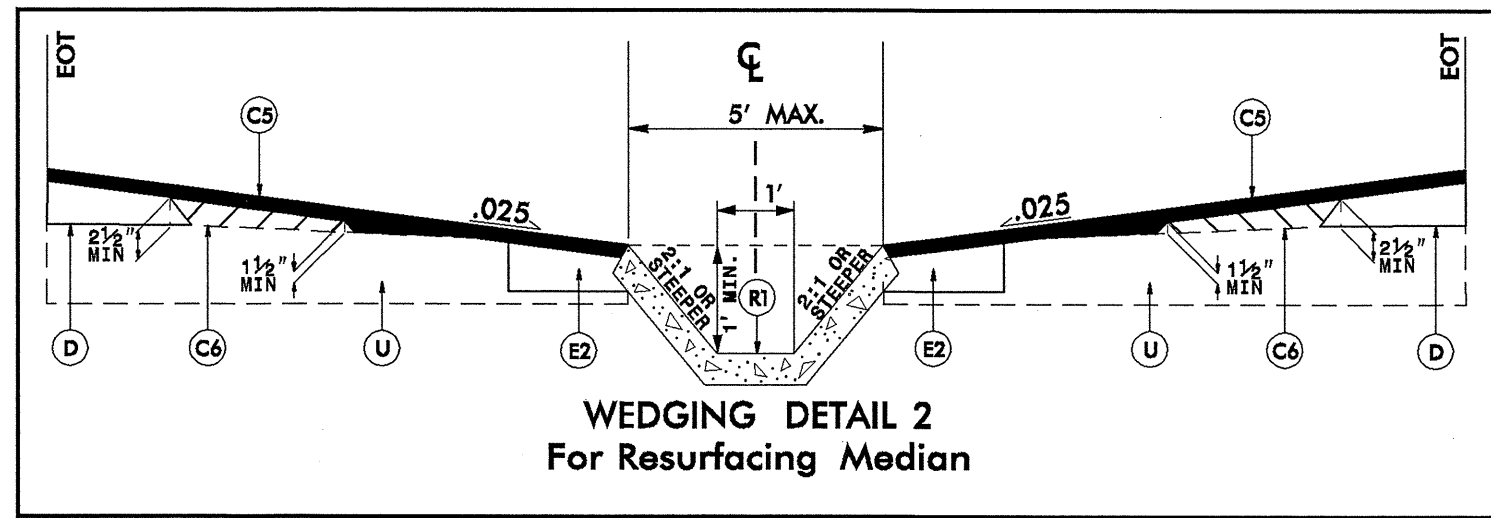
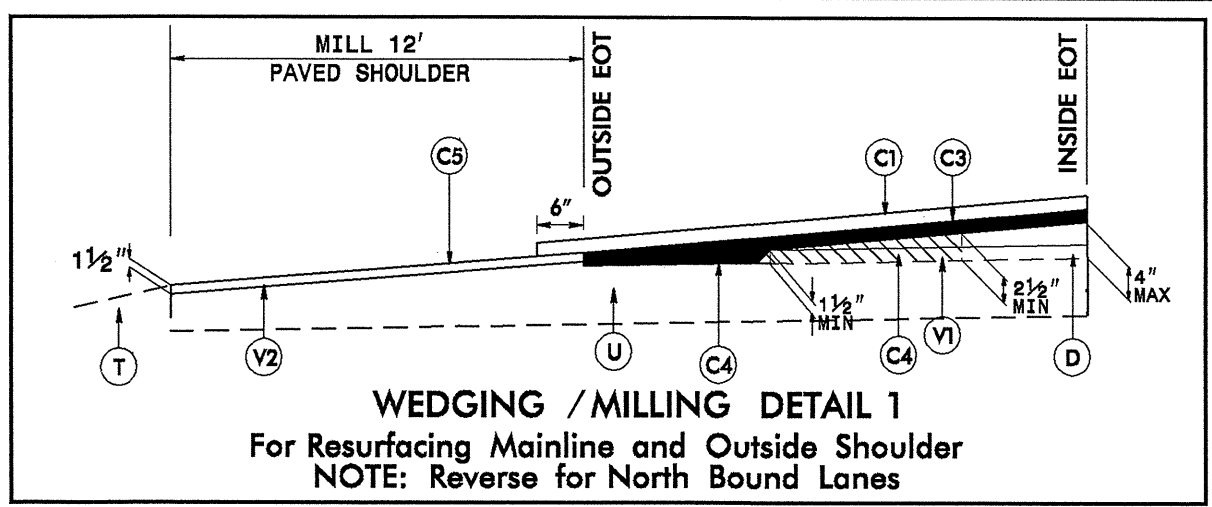
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 PROFESSIONAL  
 SEAL  
 C.B. [Signature]  
 CHRISTOPHER B. SMITHERMAN  
 ENGINEER  
 4/30/09

6/22/09

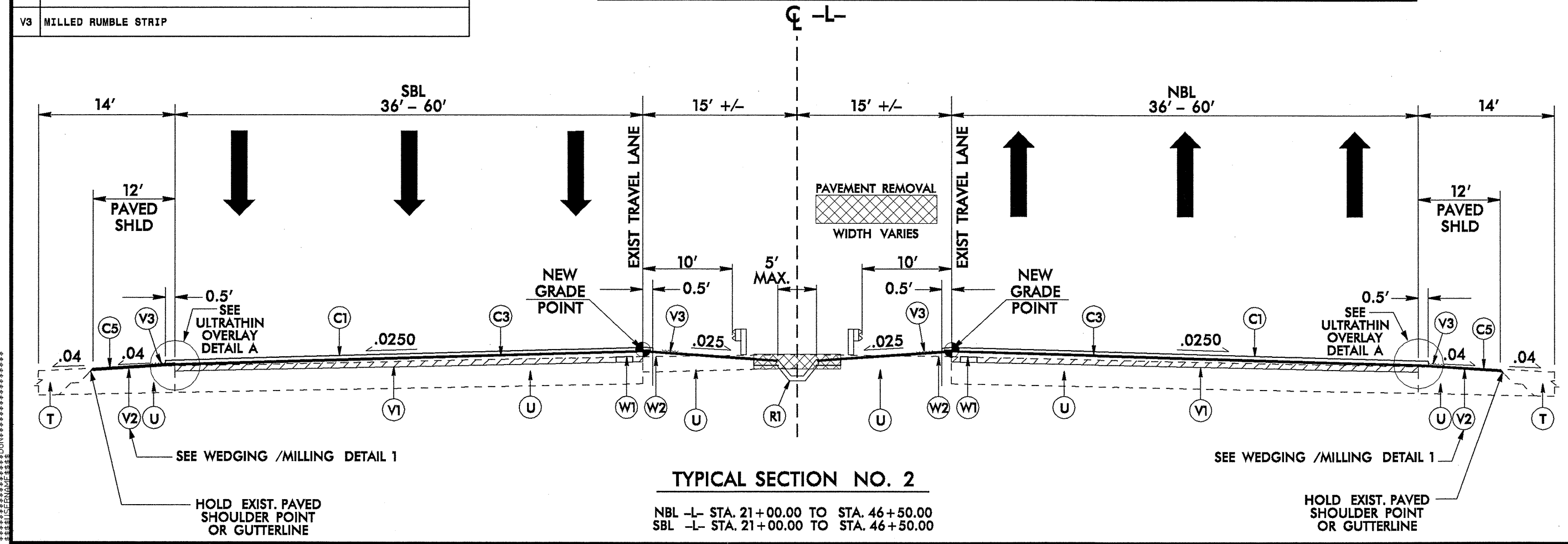
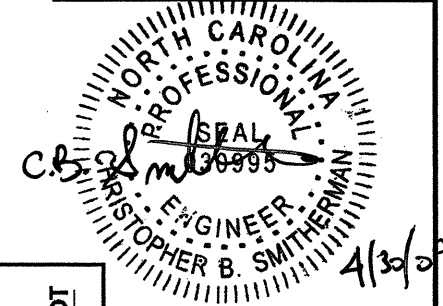
SYSTEMS DESIGN

6/2/99

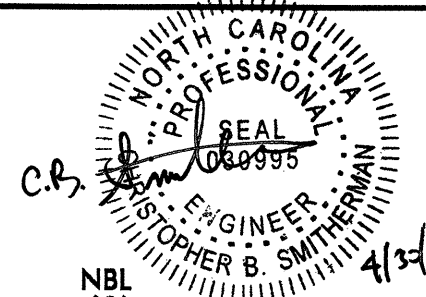
C1	PROP. APPROX. 5/8" ULTRATHIN HOT MIX ASPHALT, TYPE B, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 188 LBS. PER SQ. YD.
C3	PROP. APPROX. 2" ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 224 LBS PER SQ. YD.
C4	PROP. VAR. DEPTH ASPHALT CONC. SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 112 LBS PER SQ. YD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
C5	PROP. APPROX. 1 1/2" ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 188 LBS PER SQ. YD.
C6	PROP. VAR. DEPTH ASPHALT CONC. SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS PER SQ. YD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT TO EXCEED 2" IN DEPTH.
D	PROP. VAR. DEPTH ASPHALT CONC. INTER. COURSE, TYPE I19.0D, AT AN AVERAGE RATE OF 114 LBS PER SQ. YD PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2 1/2" OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 9" ASPHALT CONCRETE BASE COURSE, TYPE B250B, AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
E2	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B250B, AT AN AVERAGE RATE OF 458 LBS. PER SQ. YD.
R1	PROPOSED 4" CONCRETE PAVED DITCH.
R2	EXISTING 4" CONCRETE PAVED DITCH.
R3	EXISTING 2' - 8" CONCRETE CURB & GUTTER.
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W1	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING / MILLING DETAIL 1, SHEET NO. 2A)
W2	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL 2, SHEET NO. 2A)
W3	VARIABLE DEPTH ASPHALT PAVEMENT (SEE STANDARD WEDGING DETAIL 3, SHEET NO. 2B)
V1	MILLING ASPHALT PAVEMENT. 2" DEPTH.
V2	MILLING ASPHALT PAVEMENT. 1 1/2" DEPTH.
V3	MILLED RUMBLE STRIP



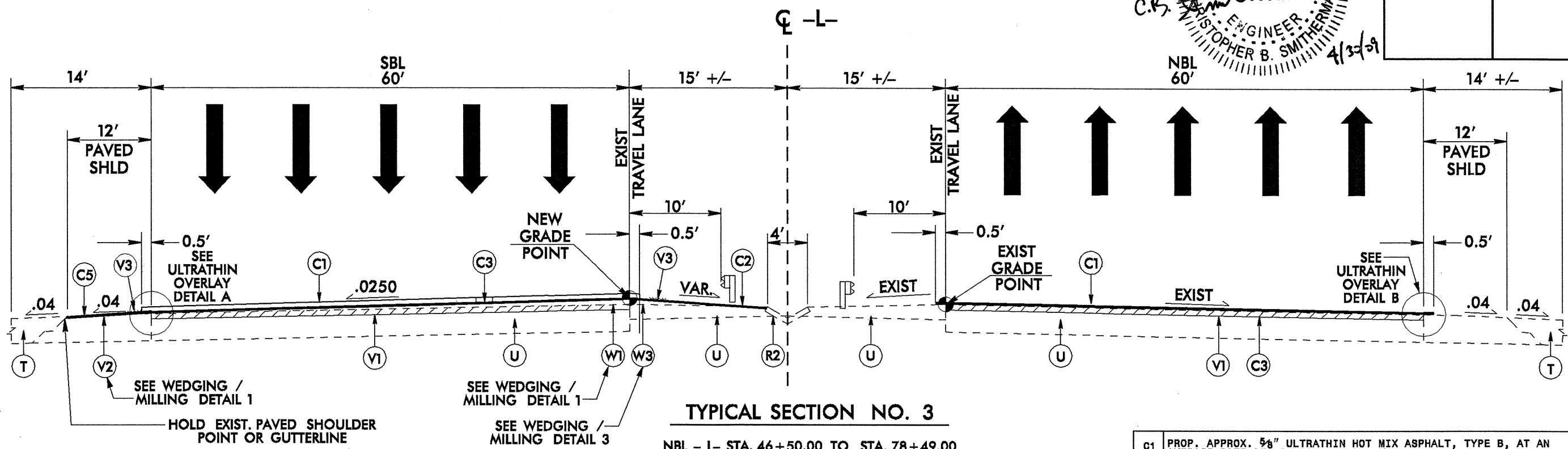
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ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



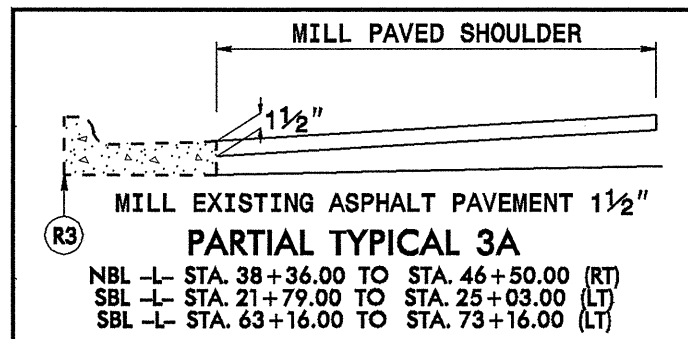
6/2/99



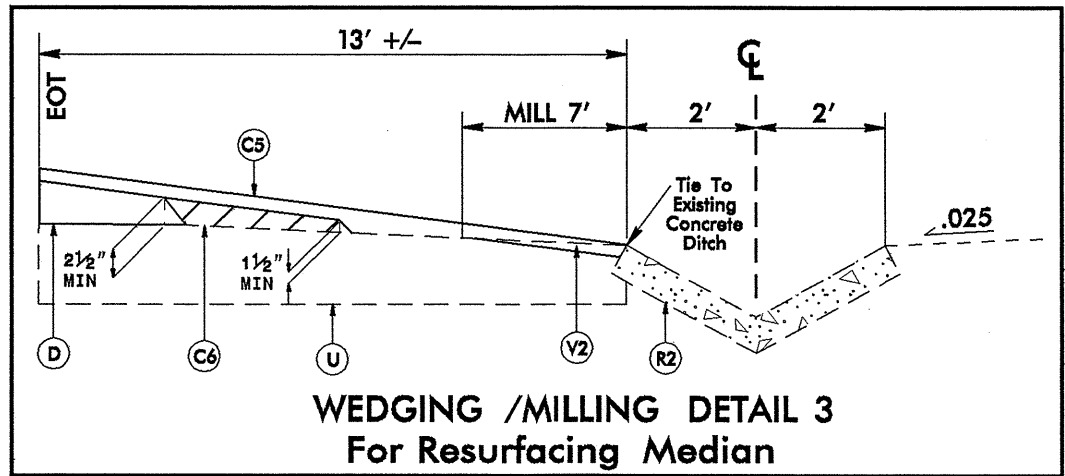
PROJECT REFERENCE NO. 1-5117	SHEET NO. 2B
ROADWAY DESIGN ENGINEER	PAVEMENT DESIGN ENGINEER



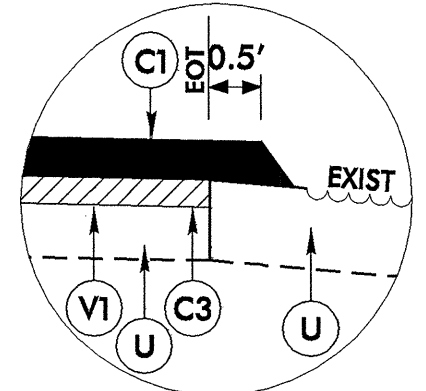
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 SBL - L- STA. 46+50.00 TO STA. 78+49.00



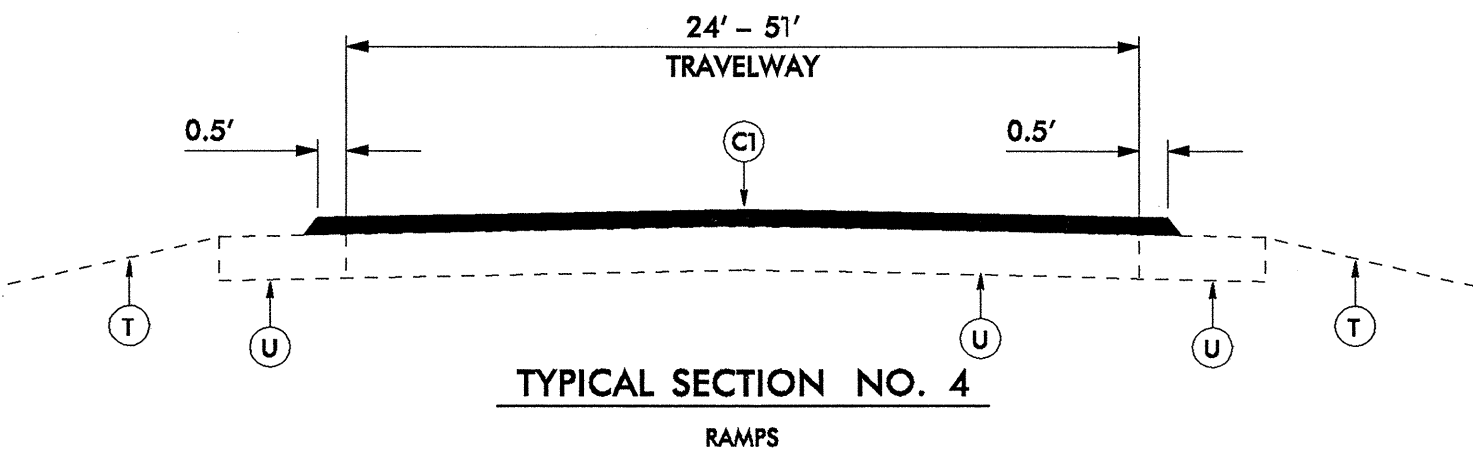
**PARTIAL TYPICAL 3A**  
 NBL - L- STA. 38+36.00 TO STA. 46+50.00 (RT)  
 SBL - L- STA. 21+79.00 TO STA. 25+03.00 (LT)  
 SBL - L- STA. 63+16.00 TO STA. 73+16.00 (LT)



**WEDGING /MILLING DETAIL 3**  
 For Resurfacing Median



**ULTRATHIN OVERLAY DETAIL B**

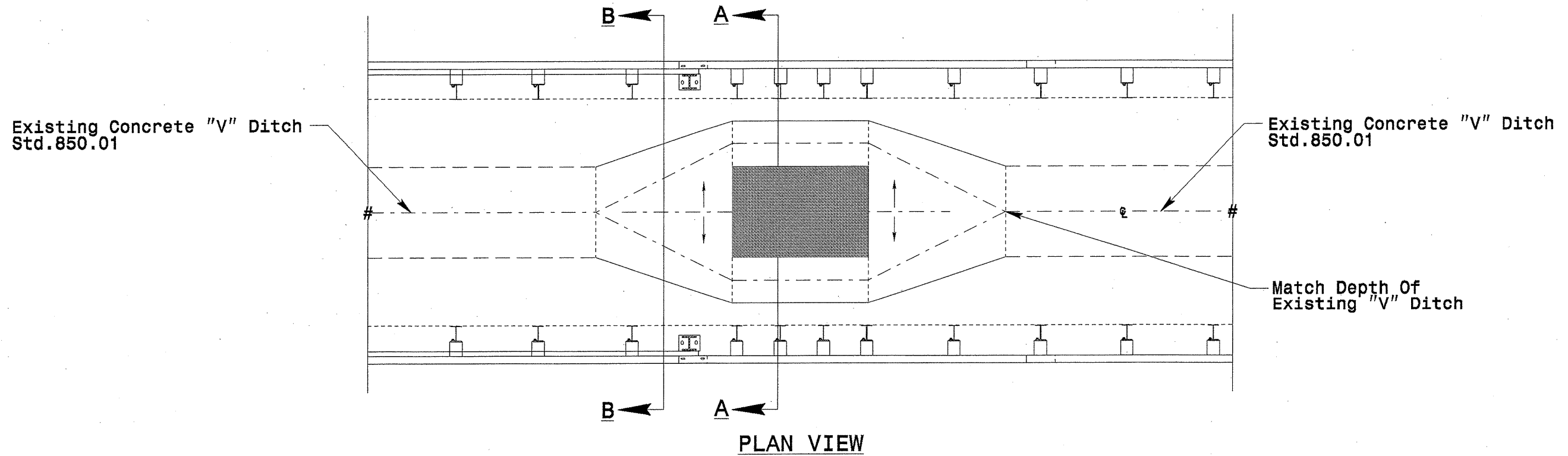
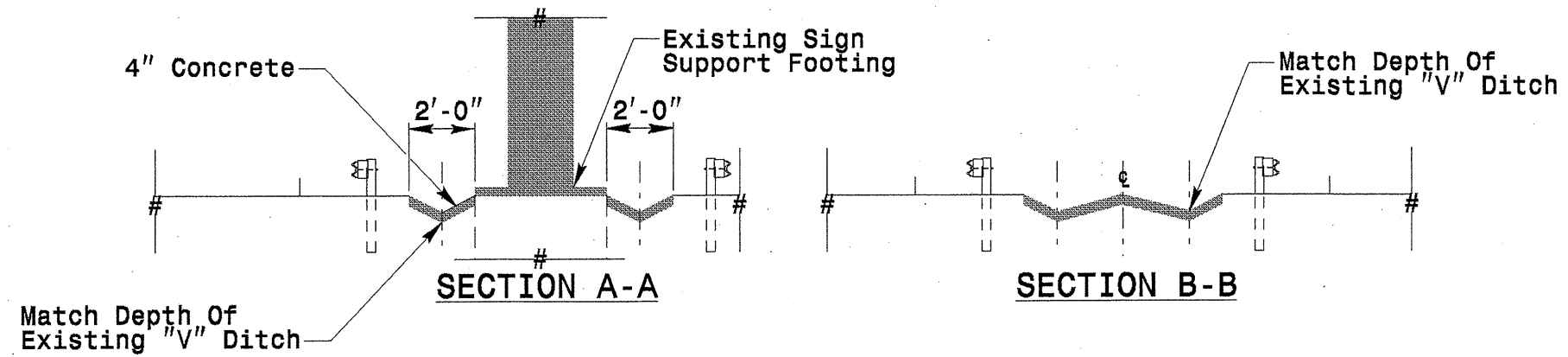


**TYPICAL SECTION NO. 4**  
 RAMPS

C1	PROP. APPROX. 5/8" ULTRATHIN HOT MIX ASPHALT, TYPE B, AT AN AVERAGE RATE OF 70 LBS. PER SQ. YD.
C2	PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5D, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
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V1	MILLING ASPHALT PAVEMENT. 2" DEPTH.
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V3	MILLED RUMBLE STRIP

\*\*\*\*\*  
 DESIGNER'S SEAL  
 \*\*\*\*\*

5/14/99

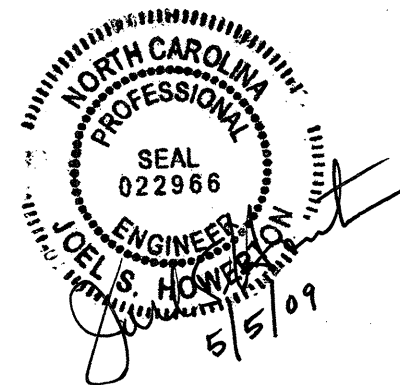


**Notes:**

Match Proposed "V" Ditch Around Sign Support With Existing "V" Ditch.

Verify Median Width And Other "V" Dimensions In Field.

Width Of Proposed "V" May Be Adjusted As Field Conditions Dictate.



PROJECT SERVICES UNIT  
STANDARDS AND SPECIAL DESIGN  
Office 919-250-4128 FAX 919-250-4119

**I-85 SIGN SUPPORT  
DRAIN DITCH TRANSITION**

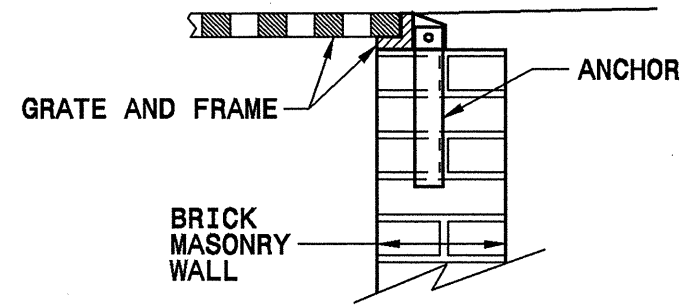
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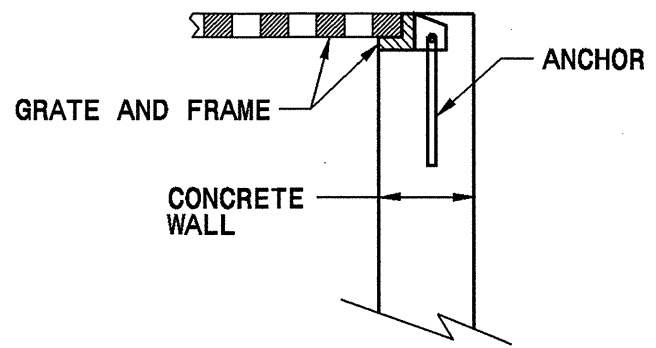
STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**ANCHORAGE FOR FRAMES**  
BRICK/CONCRETE/PRECAST CONCRETE

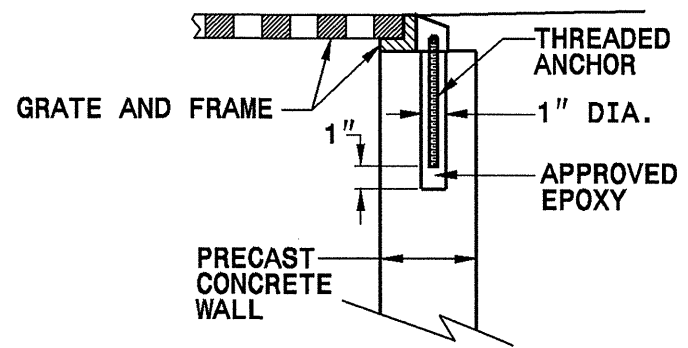
SHEET 1 OF 1  
**840D25**



**BRICK MASONRY  
CONSTRUCTION**



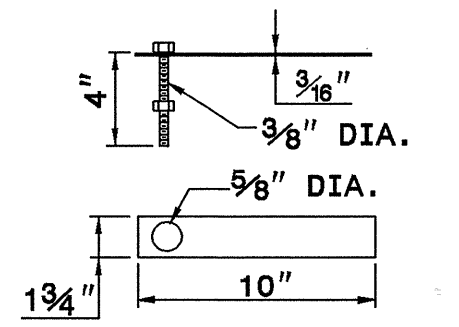
**CONCRETE  
CONSTRUCTION**



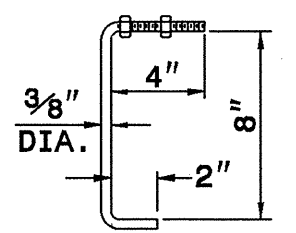
**PRECAST CONCRETE  
CONSTRUCTION**

**DETAIL SHOWING ANCHORAGE OF  
FRAME FOR GRATED DROP INLET**

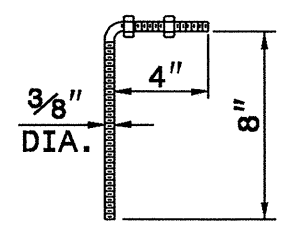
NOTE:  
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL  
OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



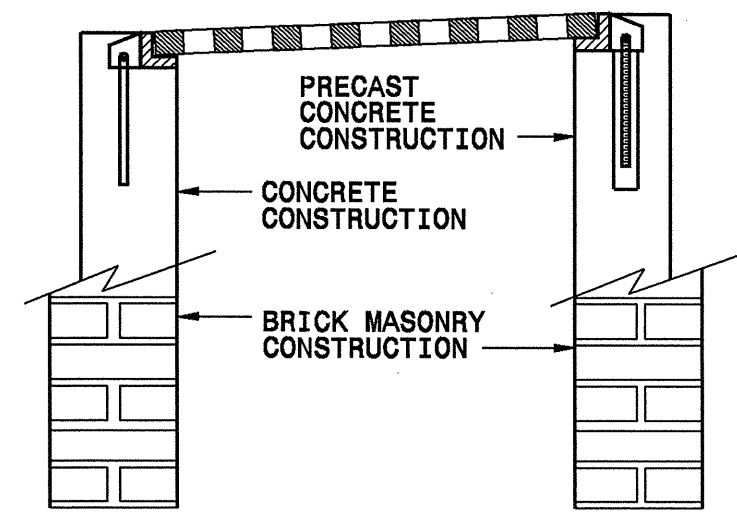
**MASONRY ANCHOR**  
3/8" DIA. BOLT WITH PLATE



**CONCRETE ANCHOR**  
3/8" DIA. BENT BAR



**PRECAST  
CONCRETE ANCHOR**  
3/8" DIA. BENT BAR

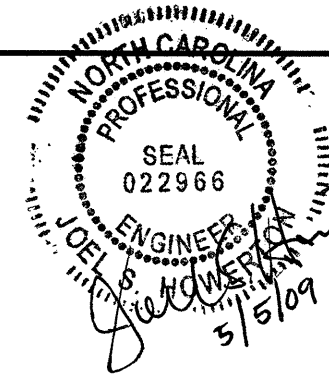


**FRAME AND GRATE INSTALLATION  
FOR NORMAL CROWN AND  
SUPERELEVATED SECTIONS**

STATE OF  
NORTH CAROLINA  
DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR  
**ANCHORAGE FOR FRAMES**  
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1  
**840D25**



PROJECT SERVICES UNIT  
STANDARDS AND SPECIAL DESIGN  
Office 919-250-4128 FAX 919-250-4119

**SEE PLATE FOR TITLE**

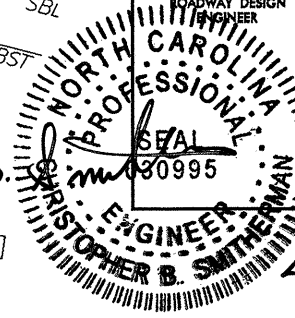
ORIGINAL BY: 2008 STD 840.25 DATE: 07/18/08  
MODIFIED BY: E.E. WARD DATE: 9/25/08  
CHECKED BY: DATE:  
FILE SPEC.:

\*\*\*\*\*  
SYSTEMS  
\*\*\*\*\*





PROJECT REFERENCE NO. I-5177	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



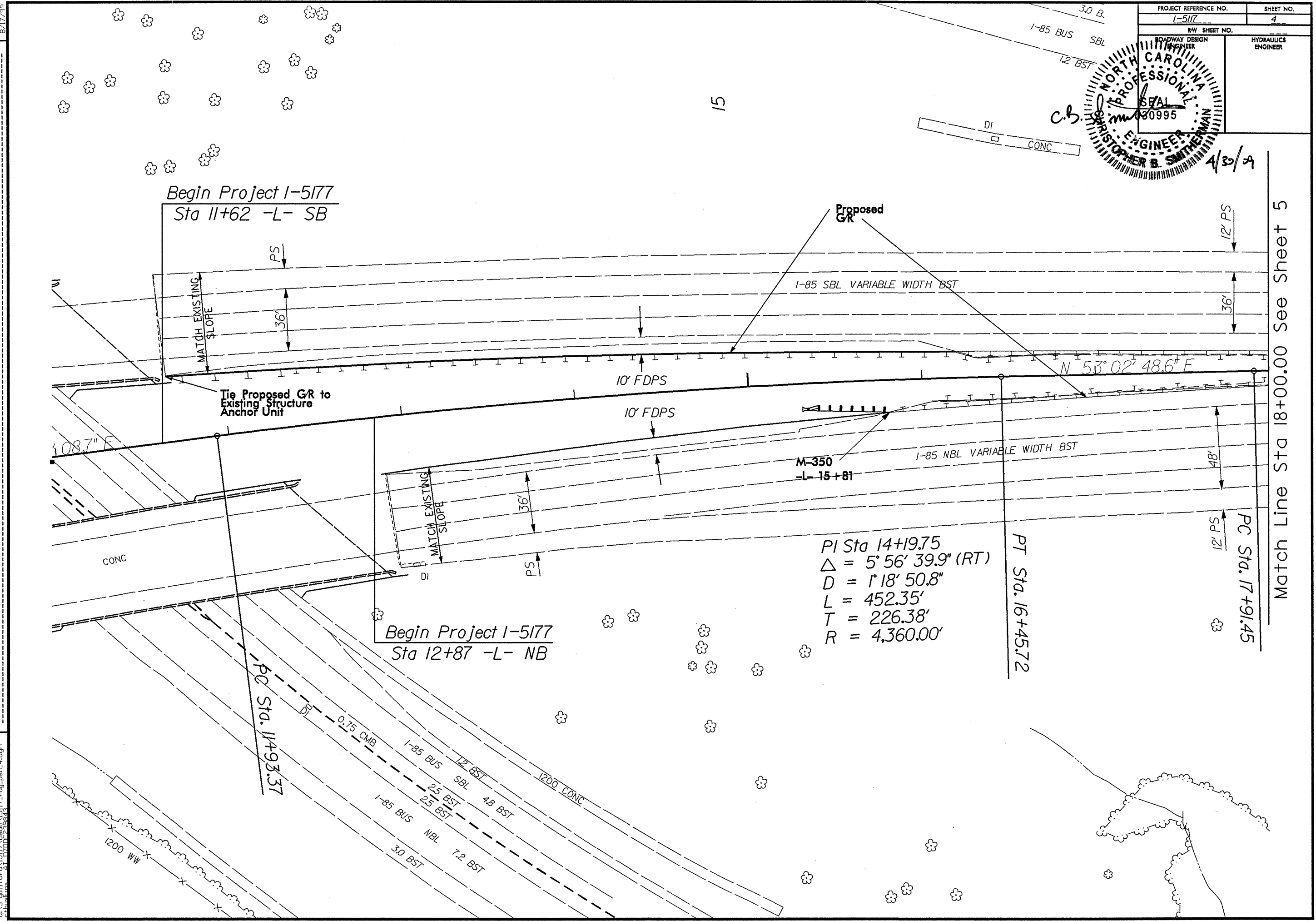
C.B. Smitherman

4/30/21

8/17/99

REVISIONS

29-APR-2009 09:29  
at:\3-gu\Ford\I-517\eesd\I517-rdy-ph-4.dgn

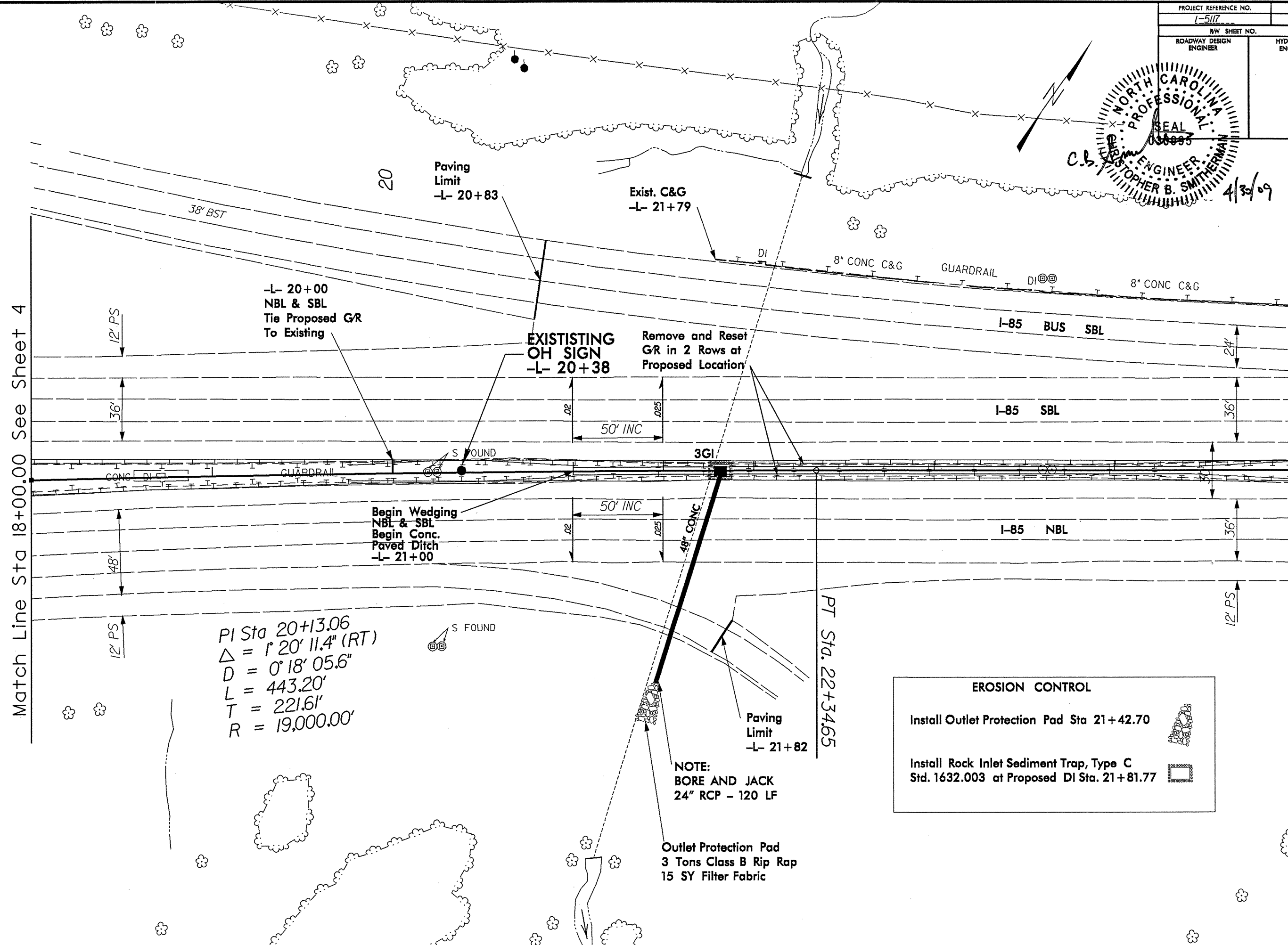
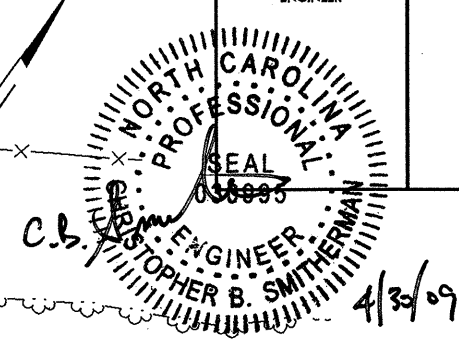


Match Line Sta 18+00.00 See Sheet 5

PC Sta. 17+91.45

PT Sta. 16+45.72



PI Sta 14+19.75  
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 $D = 1^\circ 18' 50.8''$   
 $L = 452.35'$   
 $T = 226.38'$   
 $R = 4,360.00'$



Match Line Sta 18+00.00 See Sheet 4

Match Line Sta 25+00.00 See Sheet 6

**EROSION CONTROL**

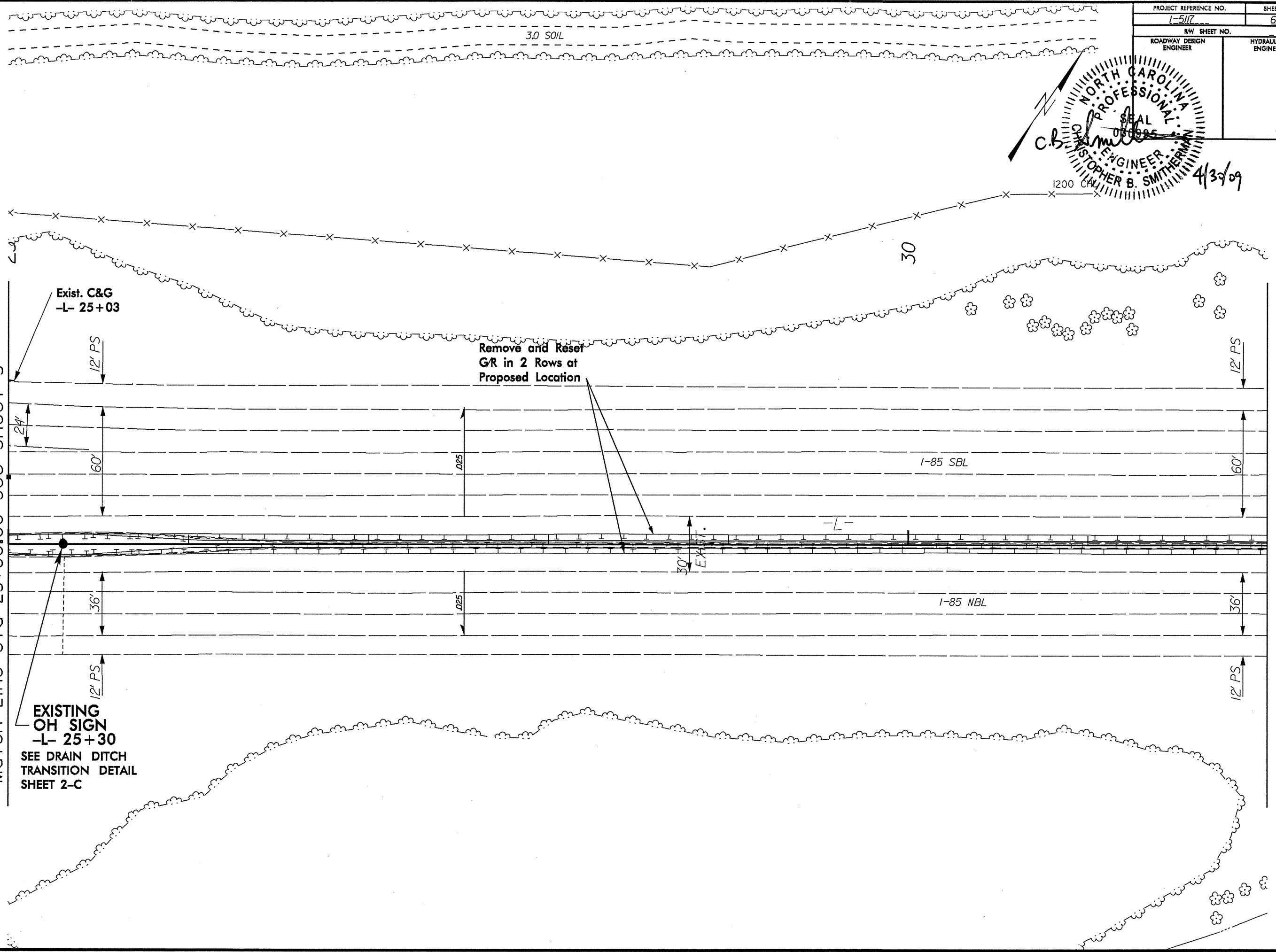
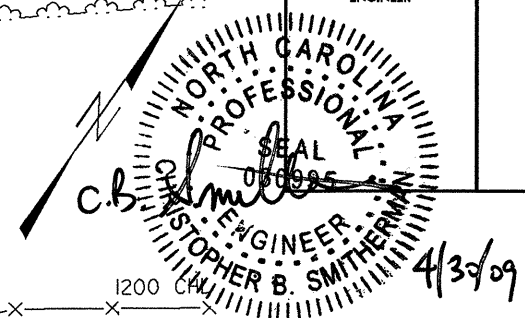
- Install Outlet Protection Pad Sta 21+42.70 
- Install Rock Inlet Sediment Trap, Type C Std. 1632.003 at Proposed DI Sta. 21+81.77 

REVISIONS

8/17/09  
29-APR-2009 09:29  
at: S:\gu117\p\5117\add\5117\_rdy\_psh\_5.dgn  
admin

8/17/99

PROJECT REFERENCE NO. I-517	SHEET NO. 6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

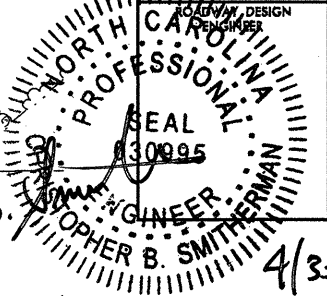


REVISIONS

29-APR-2009 09:28  
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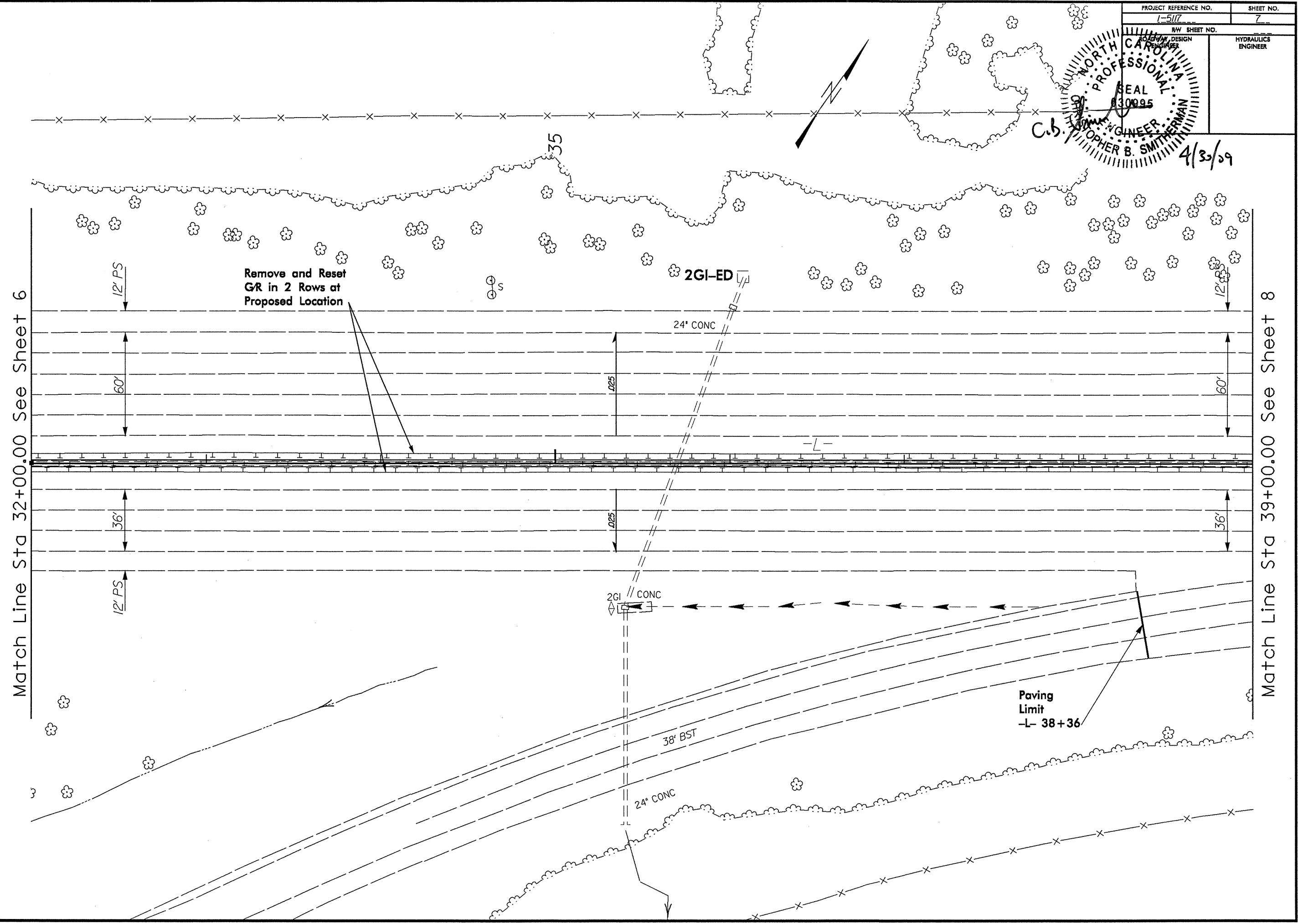
Match Line Sta 25+00.00 See Sheet 5

Match Line Sta 32+00.00 See Sheet 7



HYDRAULICS  
ENGINEER

C.B. [Signature]  
4/30/09



Match Line Sta 32+00.00 See Sheet 6

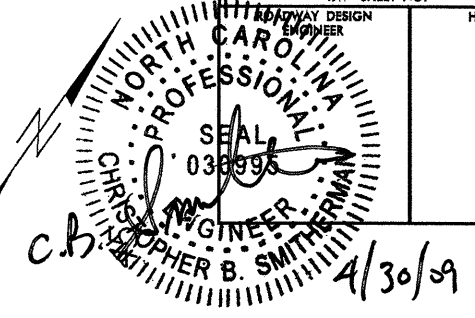
Match Line Sta 39+00.00 See Sheet 8

REVISIONS

8/17/99

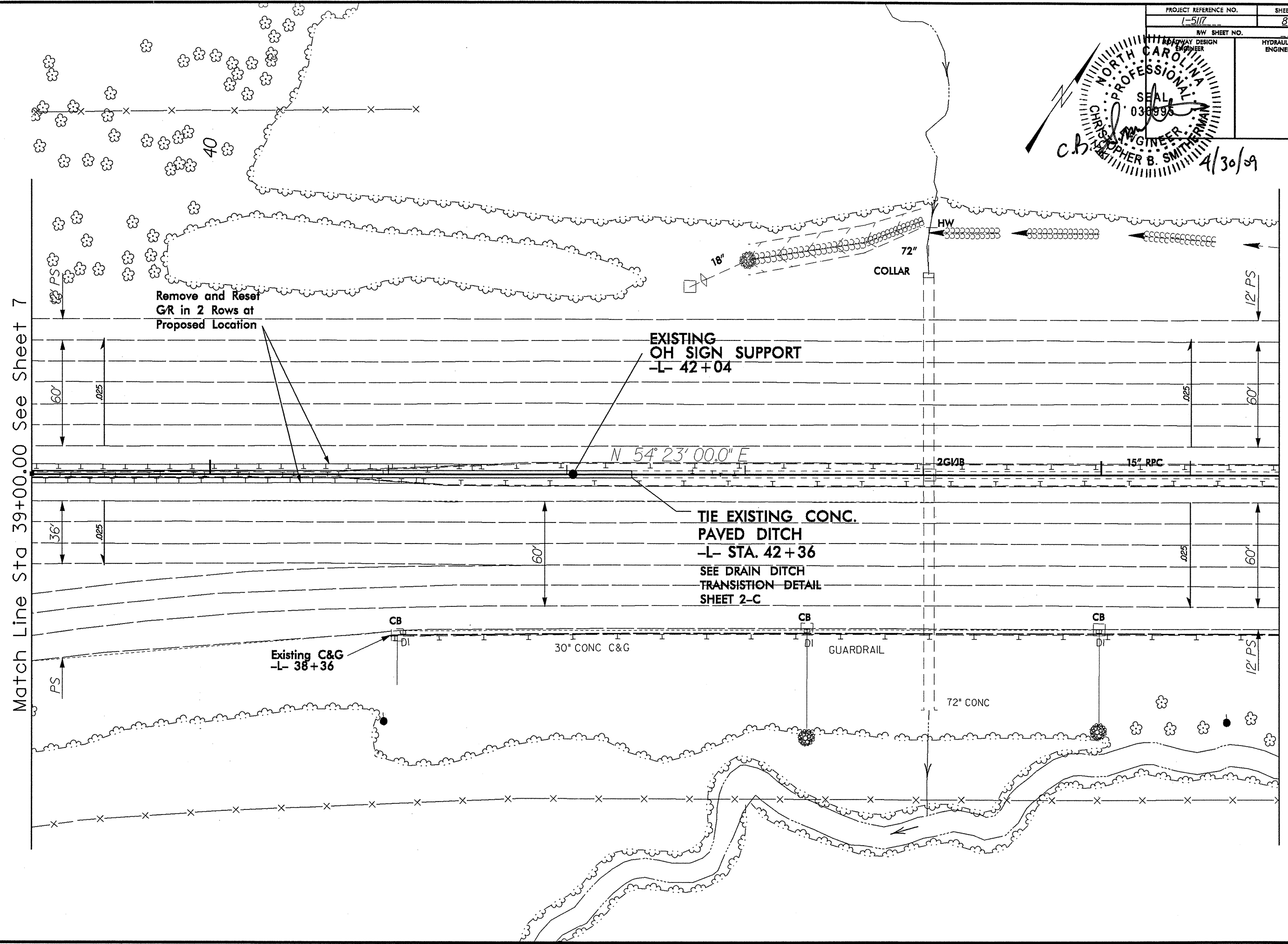
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PROJECT REFERENCE NO. 1-5117	SHEET NO. 8
NW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



29-APR-2009 09:28  
 c:\3-guillford\17\cecd\17-rdy-psh\_8.dgn  
 8/17/09

REVISIONS



Match Line Sta 39+00.00 See Sheet 7

Match Line Sta 46+00.00 See Sheet 9

Remove and Reset  
G/R in 2 Rows at  
Proposed Location

EXISTING  
OH SIGN SUPPORT  
-L- 42+04

TIE EXISTING CONC.  
PAVED DITCH  
-L- STA. 42+36  
SEE DRAIN DITCH  
TRANSITION DETAIL  
SHEET 2-C

Existing C&G  
-L- 38+36

30" CONC C&G

GUARDRAIL

72" CONC

72" COLLAR

N 54° 23' 00.0" E

2G1/B

15" RPC

60'

.025

36'

.025

60'

.025

60'

.025

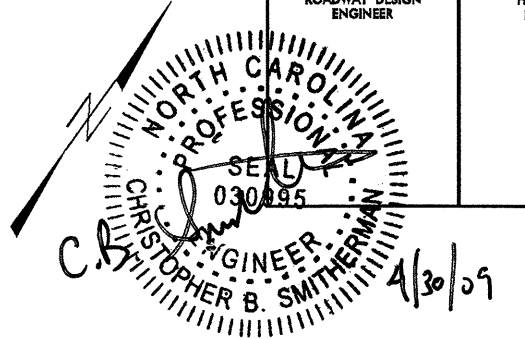
60'

12' PS

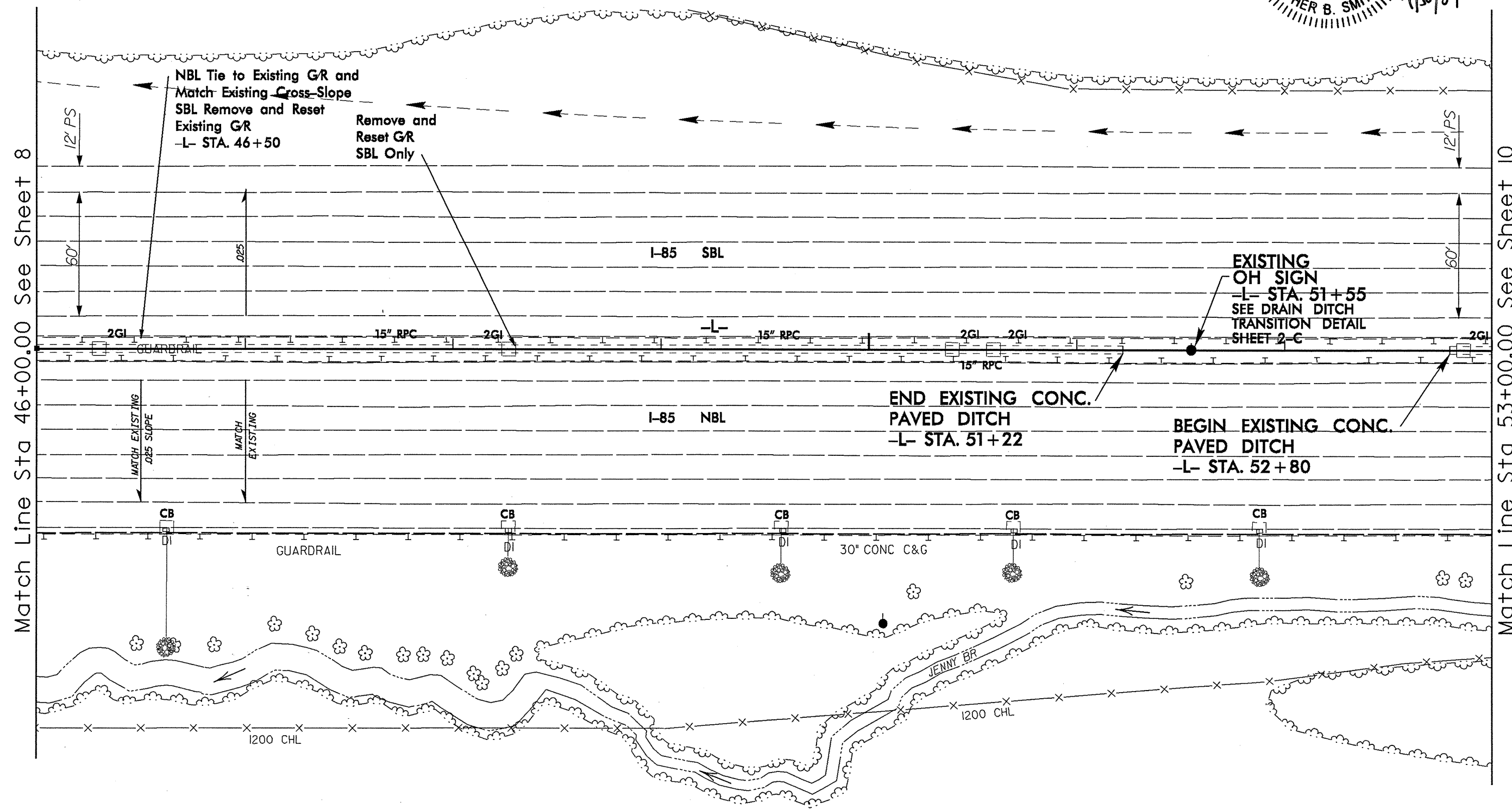
PS

12' PS

PROJECT REFERENCE NO. 1-5117	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



50



Match Line Sta 46+00.00 See Sheet 8

Match Line Sta 53+00.00 See Sheet 10

REVISIONS

8/17/95

29-APR-2009 09:28  
 at: S:\guilford\5117\cedd\5117\_rdy\_psh\_9.dgn  
 User: Administrator

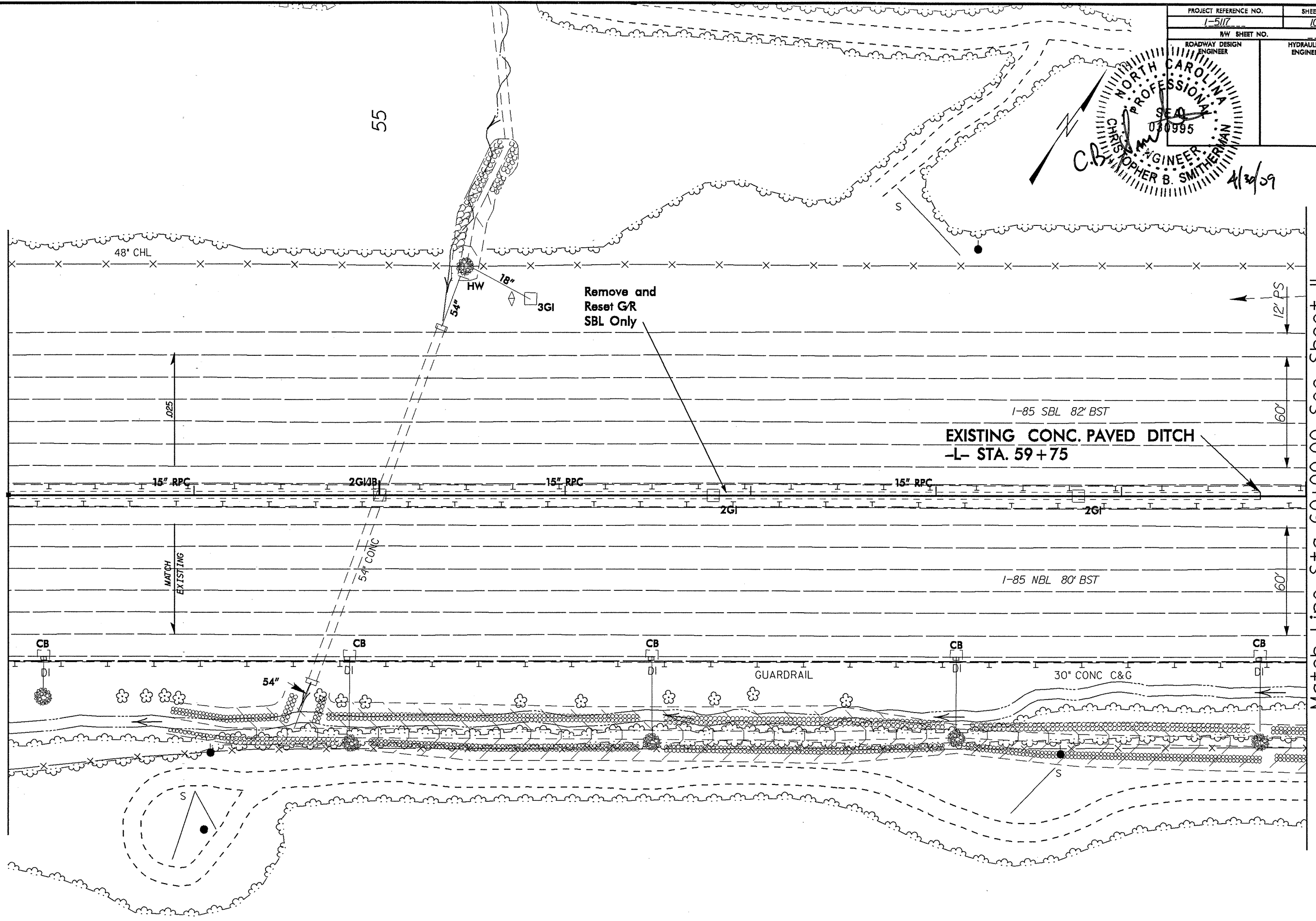


PROJECT REFERENCE NO. I-517	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

NORTH CAROLINA  
 PROFESSIONAL ENGINEER  
 C.B. SMITHERMAN  
 030995  
 11/30/09

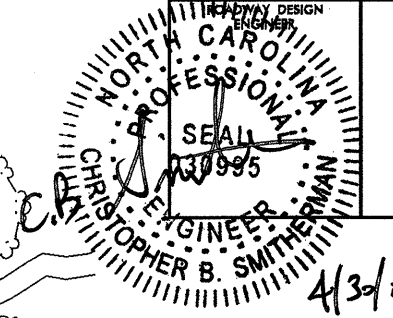
Match Line Sta 53+00.00 See Sheet 9

Match Line Sta 60+00.00 See Sheet 11

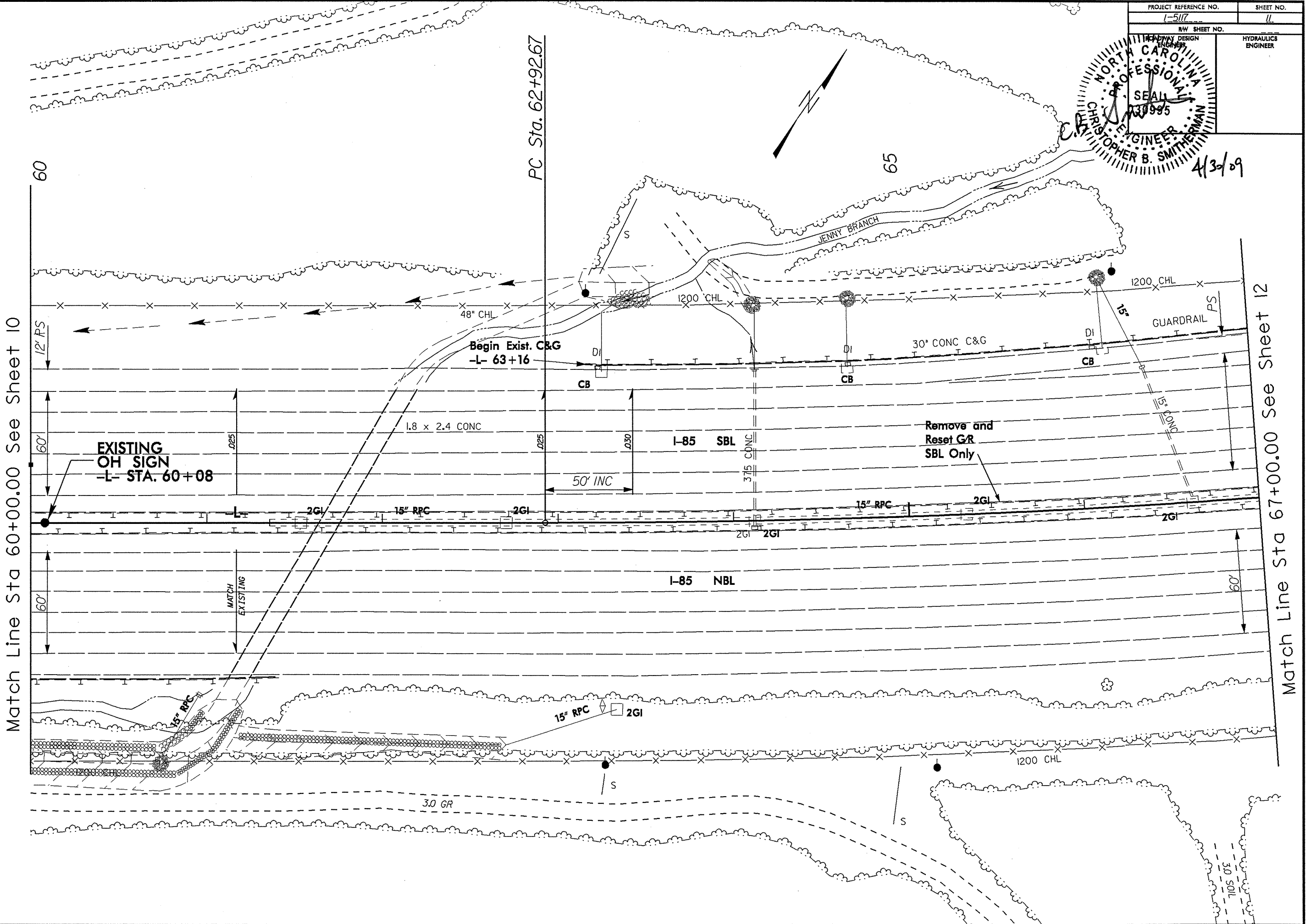


REVISIONS

8/17/99  
 29-APR-2009 09:28  
 g:\s-guilford\517\517.dwg  
 10



HYDRAULICS ENGINEER



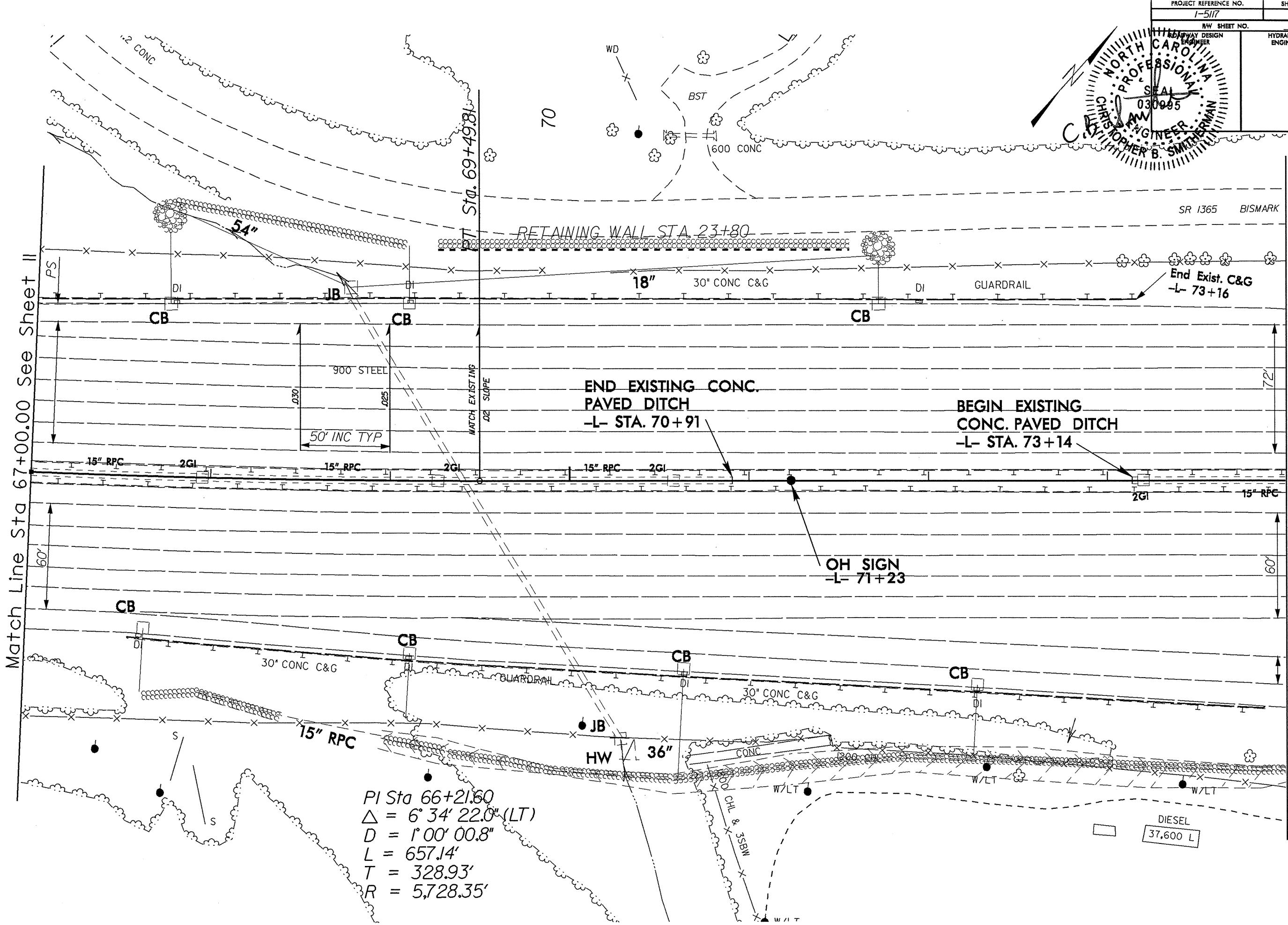
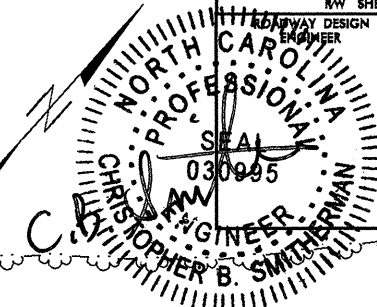
Match Line Sta 60+00.00 See Sheet 10

Match Line Sta 67+00.00 See Sheet 12

REVISIONS

29-APR-2009 09:28  
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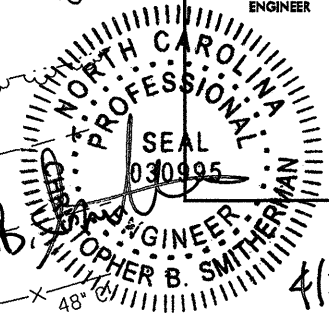
8/17/99



PI Sta 66+21.60  
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 $D = 1^\circ 00' 00.8''$   
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 $T = 328.93'$   
 $R = 5,728.35'$

8/17/99  
 REVISIONS  
 29-APR-2009 09:28  
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 checked at 17:11:23

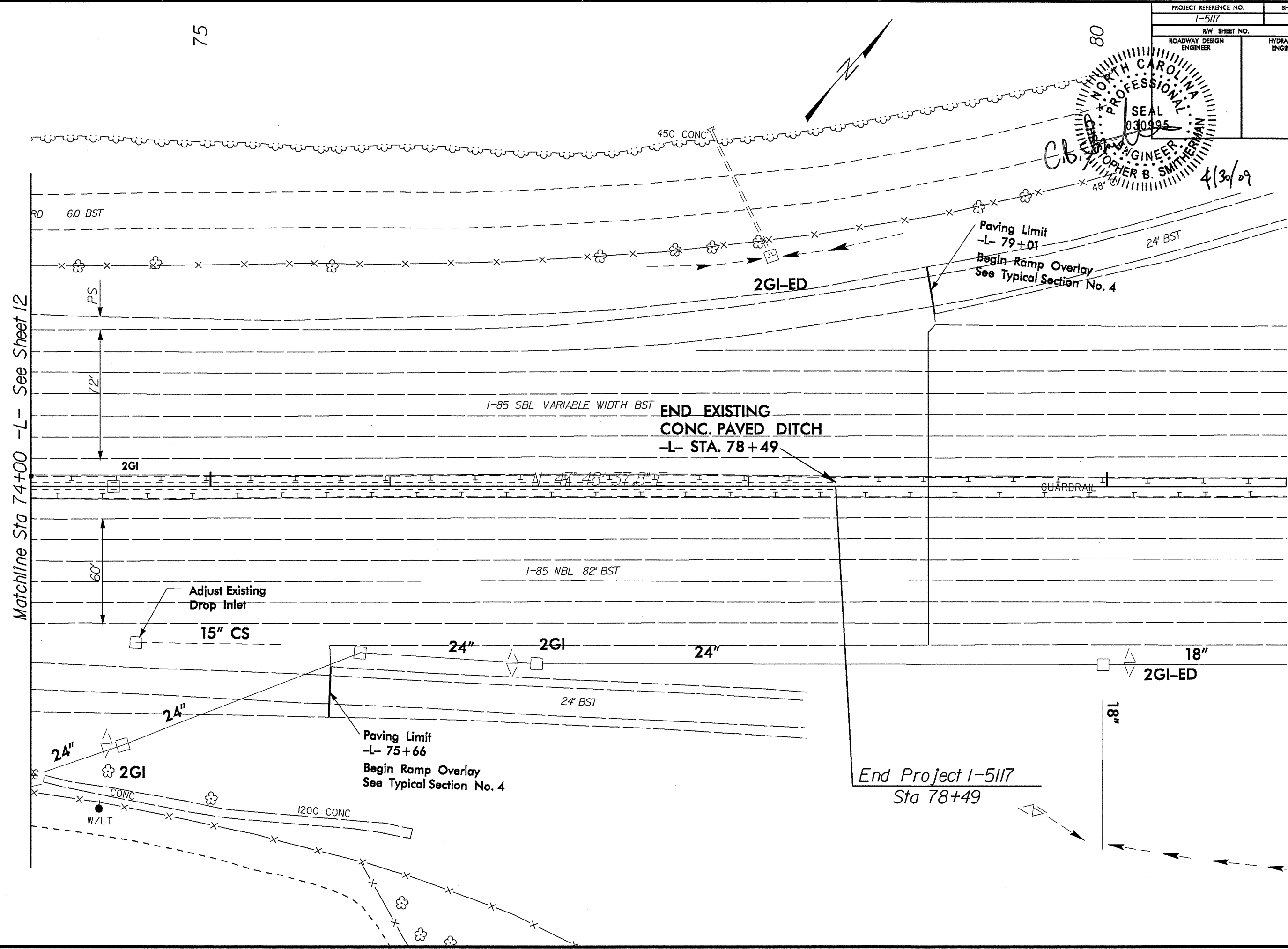
PROJECT REFERENCE NO. 1-5117	SHEET NO. 13
R/W SHEET NO. N/A	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



4/30/09

75

80



REVISIONS

Matchline Sta 74+00 -L- See Sheet 12

End Project 1-5117  
Sta 78+49

29-APR-2009 09:28  
g:\3-gu11For-d\1-5117\0906\1-5117\_rdy\_pah.l3.dgn

PROJECT NO.	SHEET NO.	TOTAL NO.
45055.3.ST1 TIP I-5117	14	15

## SUMMARY OF QUANTITIES

PROJECT NO	COUNTY	MAP NO	ROUTE	FINAL SURFACE TESTING	DESCRIPTION	LENGTH		REMOVAL OF EXISTING ASPHALT PAVEMENT	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	MILLING ASPHALT PAVEMENT, 2" DEPTH	MILLING ASPHALT PAVEMENT, 1 1/2" DEPTH	INCIDENTAL MILLING	BASE COURSE, B25.0B	INTERMEDIATE COURSE, I19.0D	SURFACE COURSE, S9.5B	SURFACE COURSE, S9.5D	PG 64-22 PLANT MIX	PG 70-22 PLANT MIX	PG 70-28 PLANT MIX	PG 76-22 PLANT MIX	ULTRATHIN HOT MIX, TYPE B	APPLICATION OF ULTRATHIN BONDED WEARING COURSE	MILLED RUMBLE STRIPS	MASONRY DRAINAGE STRUCTURE	FRAME WITH GRATE, STD 840.20	FRAME WITH TWO GRATES, STD. 840.20	ADJUSTMENT OF DROP INLETS	4" CONCRETE PAVED DITCH	STEEL BEAM GUARDRAIL	ADDITIONAL GUARDRAIL POST	GUARDRAIL ANCHOR UNIT, TYPE M-350	REMOVE & RESET EX. GUARDRAIL	REMOVE EXISTING GUARDRAIL	RIP RAP, CLASS B	FILTER FABRIC FOR DRAINAGE	SEDIMENT CONTROL STONE	1/4" HARDWARE CLOTH	PORTABLE LIGHTING	BORE & JACK (24" RCP)					
						MI	FT																																	SY	TON	SY	SY	SY
45055.3.ST1	Guilford	1	I-85 NORTH BOUND	YES	BEGINNING AT THE NORTH EDGE OF CONCRETE BRIDGE OVER US-85B / US 29/70 TO A POINT 0.16 MILES SOUTH OF GROOMETOWN ROAD	1.24	80	1,190	20	39,428	3,400	819	105		670	5,490	45		72	302	1,380	39,429	6,726	1	1	1	1		425		1	2,550	385					3	12	*	120			
"	"	2	I-85 NORTHBOUND OFF RAMP	YES	TO SR 1129 (GROOMETOWN ROAD)	0.11	16												5		95	2,714																						
"	"	3	I-85 SOUTH BOUND	YES	BEGINNING AT A POINT 0.13 MILES SOUTH OF GROOMETOWN ROAD TO THE SOUTH EDGE OF CONCRETE BRIDGE OVER I-85 / US 29/70	1.27	80	1,190		44,127	10,155	1,511	605	240	1,530	8,390	118	11	80	461	1,545	44,143	13,374				1,190	800	268		5,750	365	3	15							*			
"	"	4	I-85 ON RAMP	YES	FROM SR 1129 (GROOMETOWN ROAD)	0.14	16												3		60	1,714																						
TOTAL FOR PROJ NO. 45055.3.ST1						2.76		2,380	20	83,555	13,555	2,330	710	240	2,200	13,880	163	11	160	763	3,080	88,000	20,100	1	1	1	1	1,190	1,225	268	1	8,300	750	3	15	3	12	1	120					
GRAND TOTAL						2.76		2,380	20	83,555	13,555	2,330	710	240	2,200	13,880	163	11	160	763	3,080	88,000	20,100	1	1	1	1	1,190	1,225	268	1	8,300	750	3	15	3	12	1	120					

PROJECT NO.	SHEET NO.	TOTAL NO.
45055.3.ST1 TIP I-5117	15	15

### THERMOPLASTIC AND PAINT QUANTITIES

PROJECT NO.	COUNTY	MAP	ROUTE	DESCRIPTION	STATIONARY WORK ZONE SIGNS	PORTABLE WORK ZONE SIGNS	BARRICADE MOUNTED WORK ZONE SIGNS	FLASHING ARROW PANELS, TYPE C	CHANGEABLE MESSAGE SIGN	DRUMS	TYPE III BARRICADES	TEMPORARY CRASH CUSHIONS	TMIA	PORTABLE CONCRETE BARRIER	LAW ENFORCEMENT	6" X 90 M YELLOW THERMO	6" X 90 M WHITE THERMO	6" X 120 M WHITE THERMO	12" X 90 M WHITE THERMO	THERMO MERGE LEFT ARROW 90 M	COLD APPLIED PLASTIC, TYPE IV (6" YELLOW) LF	6" YELLOW PAINT	6" WHITE PAINT	12" WHITE PAINT	PAINT STRAIGHT ARROW	SNOW PLOWABLE MARKERS
NO		NO			SF	SF	SF	EA	EA	EA	LF	EA	EA	LF	HR	LF	LF	LF	LF	EA	LF	LF	EA	EA	EA	EA
45055.3.ST1	Gulford	1	I-85 NORTH BOUND	BEGINNING AT THE NORTH EDGE OF CONCRETE BRIDGE OVER US-85B / US 29/70 TO A POINT 0.16 MILES SOUTH OF GROOMETOWN ROAD	750	410	64	6	4	200	51	1	1	6941	306	6,223	6,223	5,709	1,960		6,860	12,386	23,809	3,920	3	294
"	"	2	I-85 NORTHBOUND OFF RAMP	TO SR 1129 (GROOMETOWN ROAD)																						
"	"	3	I-85 SOUTH BOUND	BEGINNING AT A POINT 0.13 MILES SOUTH OF GROOMETOWN ROAD TO THE SOUTH EDGE OF CONCRETE BRIDGE OVER I-85 / US 29/70	*	*	66	*	*	*	49	1	2	6669	318	6,477	6,477	5,941	2,040	3	7,140	25,243	49,962	4,080	3	306
"	"	4	I-85 ON RAMP	FROM SR 1129 (GROOMETOWN ROAD)												800	800	11,650	4,000	3	14,000	37,629	73,771	8,000	6	600
TOTAL FOR PROJ NO. 45055.3.ST1					750	410	130	6	4	200	100	2	3	13,610	624	13,500	13,500	11,650	4,000	3	14,000	37,629	73,771	8,000	6	600
GRAND TOTAL					750	410	130	6	4	200	100	2	3	13,610	624	13,500	13,500	11,650	4,000	3	14,000	37,629	73,771	8,000	6	600