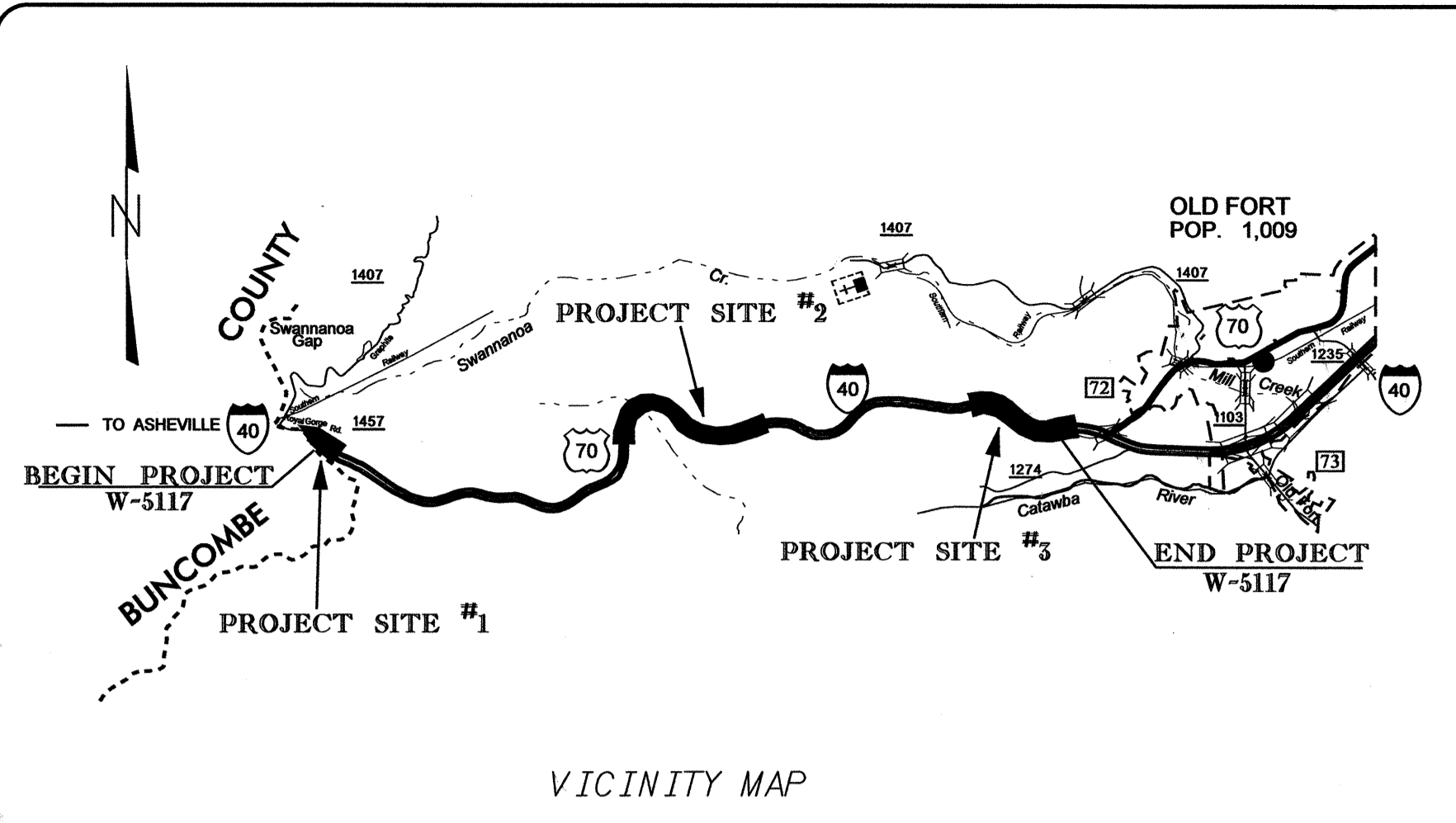


09/28/09

TIP PROJECT: W-5117

CONTRACT: C202790

21-JAN-2011 09:55
4:14:11 AM
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\$\$\$\$\$USERNAM\$\$\$\$\$



VICINITY MAP

See Sheet 1-A For Index of Sheets

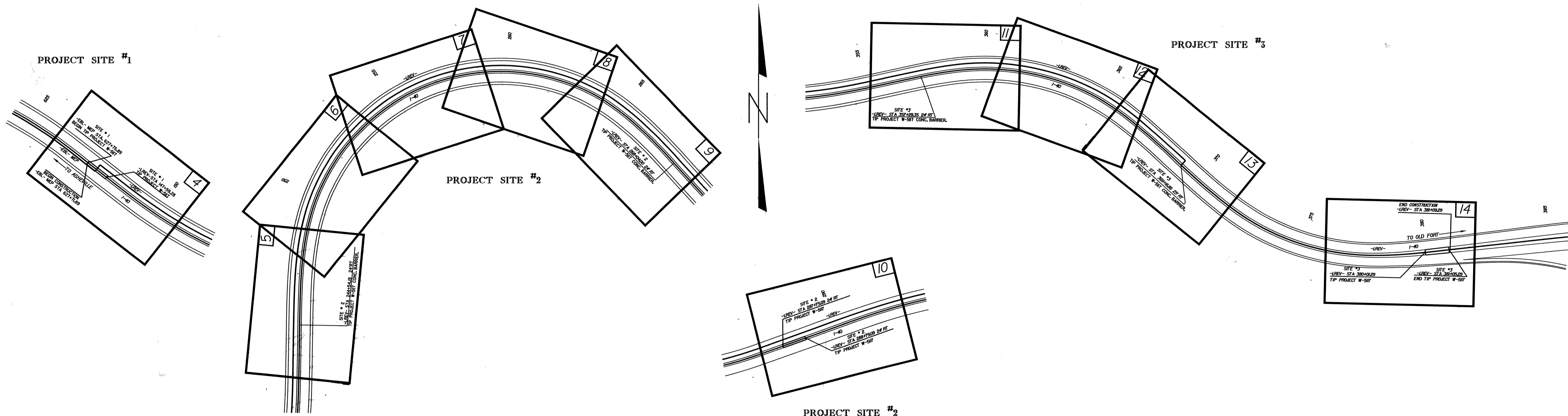
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

McDOWELL COUNTY

LOCATION: I-40 FROM THE BUNCOMBE COUNTY LINE
TO US 70

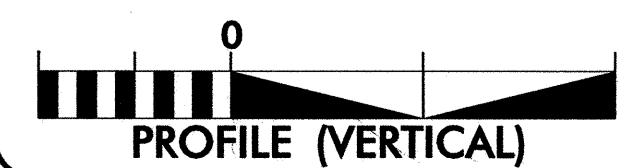
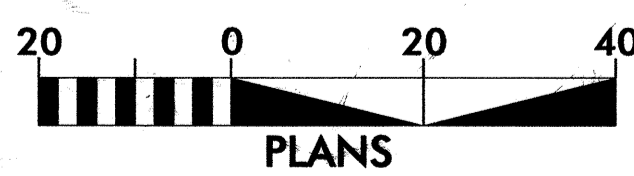
TYPE OF WORK: MEDIAN BARRIERS, MEDIAN GATES, PAVEMENT
AND THERMO PAVEMENT MARKINGS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	W-5117	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
41880.1.1	STPIMS-040-2 (139) 67	PE	
41880.2.1		RW & UTL	
41880.3.1	STPIMS-040-2 (139) 67	CONSTRUCTION	



THIS IS A CONTROLLED-ACCESS PROJECT WITH ACCESS LIMITED TO THE INTERCHANGES

GRAPHIC SCALES



DESIGN DATA

ADT =
ADT =
DHV = %
D = %
T = % *
V = MPH
* TTST DUAL

PROJECT LENGTH

PROJECT LENGTH W-5117 = 0.729 MILES

Prepared in the Office of:
DIVISION OF HIGHWAYS
55 Orange Street, Asheville, NC 28801

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: **KENNETH A. WILSON P.E.**
PROJECT ENGINEER

LETTING DATE:
JUNE 21, 2011

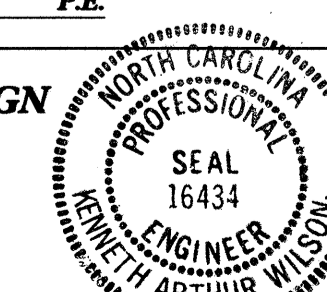
M. K. PENLAND
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

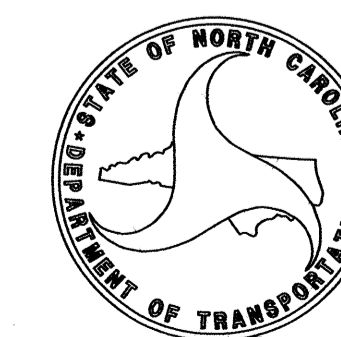
SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

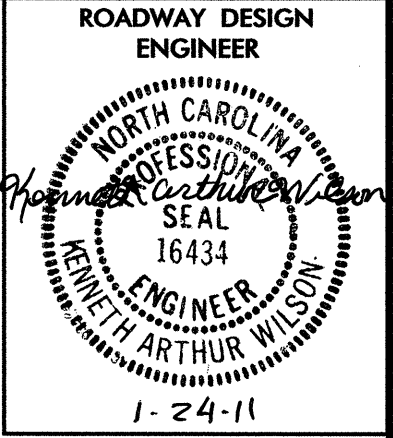
Kenneth A. Wilson P.E.
SIGNATURE: _____ 1-24-11



DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA



STATE HIGHWAY DESIGN ENGINEER



SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2-2A	TYPICAL SECTIONS
2-B	DETAIL DRAWING OF SINGLE SLOPE CONCRETE BARRIER
2-C	DETAIL DRAWING OF EXISTING CONCRETE MEDIAN BARRIER (W/ H-PILES)
2-D	DETAIL DRAWING OF CONCRETE PAVEMENT JOINTS
2-E	DETAIL DRAWING OF DOWEL ASSEMBLY
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF EARTHWORK, REMOVAL OF EXISTING ASPHALT PAVEMENT
3-B	SUMMARY OF PROPOSED CONCRETE BARRIERS AND SUMMARY OF REMOVAL OF EXISTING CONCRETE BARRIERS
4 THRU 14	PLAN SHEETS
TMP-1 THRU TMP-5	TRANSPORTATION MANAGEMENT PLANS

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

GRADING:
THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED AS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

TEMPORARY SHORING:
SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

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

UTILITIES:
ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

EFF. 07-18-06

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	
225.01	Guide for Grading Subgrade - Interstate and Freeway
DIVISION 6 - ASPHALT BASES AND PAVEMENTS	
665.01	Milled Rumble Strips - Asphalt Pavements
DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS	
700.05	Tying Proposed Pavement to Existing
DIVISION 8 - INCIDENTALS	
854.01	Double Faced Concrete Barrier - Types I, II, III and IV
854.05	Concrete Median Transition Barrier - Location of Overhead Assembly
DIVISION 12 - PAVEMENT MARKINGS, MARKERS AND DELINEATION	
1205.01	PAVEMENT MARKINGS - LINE TYPES AND OFFSETS
1205.02	PAVEMENT MARKINGS - DIVIDED AND UNDIVIDED ROADWAYS

REV. 01-02-07

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	□ ECM
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	--- WLB ---
Proposed Wetland Boundary	--- WLB ---
Existing Endangered Animal Boundary	--- EAB ---
Existing Endangered Plant Boundary	--- EPB ---

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or UG Tank Cap	○
Sign	○ S
Well	○ W
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	← FLOW
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○
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	○ R W
Proposed Right of Way Line with Iron Pin and Cap Marker	○ R W ▲
Proposed Right of Way Line with Concrete or Granite Marker	○ R W ◆
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	CONC
Bridge Wing Wall, Head Wall and End Wall	CONC WW
MINOR:	
Head and End Wall	CONC HW
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 UG Power Line	-----
Designated UG 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 UG Telephone Cable	-----
Designated UG Telephone Cable (S.U.E.*)	-----
Recorded UG Telephone Conduit	-----
Designated UG Telephone Conduit (S.U.E.*)	-----
Recorded UG Fiber Optics Cable	-----
Designated UG Fiber Optics Cable (S.U.E.*)	-----

WATER:

Water Manhole	⊕
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded UG Water Line	-----
Designated UG 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 UG TV Cable	-----
Designated UG TV Cable (S.U.E.*)	-----
Recorded UG Fiber Optic Cable	-----
Designated UG Fiber Optic Cable (S.U.E.*)	-----

GAS:

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

SANITARY SEWER:

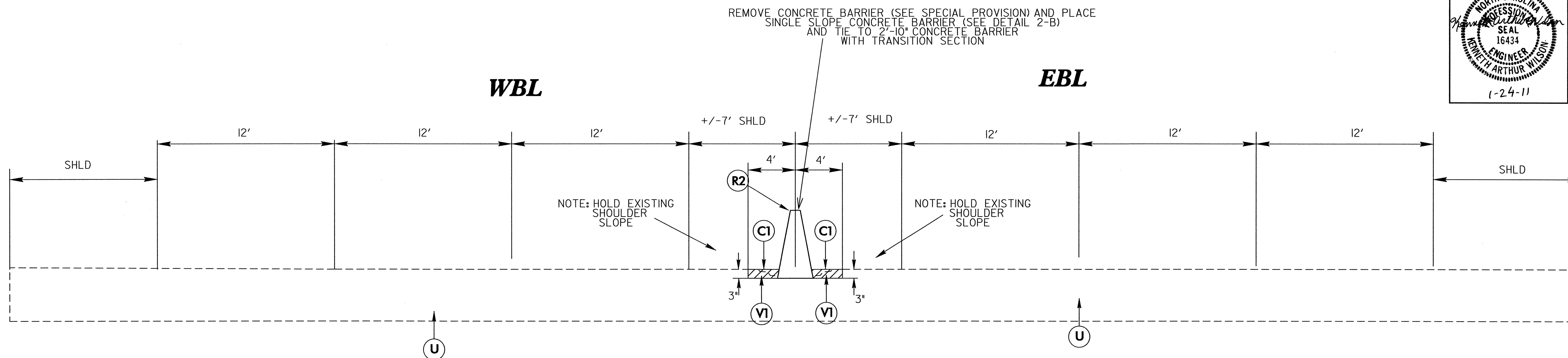
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
UG Sanitary Sewer Line	-----
Above Ground Sanitary Sewer	----- A/G Sanitary Sewer
Recorded SS Forced Main Line	-----
Designated SS Forced Main Line (S.U.E.*)	-----

MISCELLANEOUS:

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

6/2/99

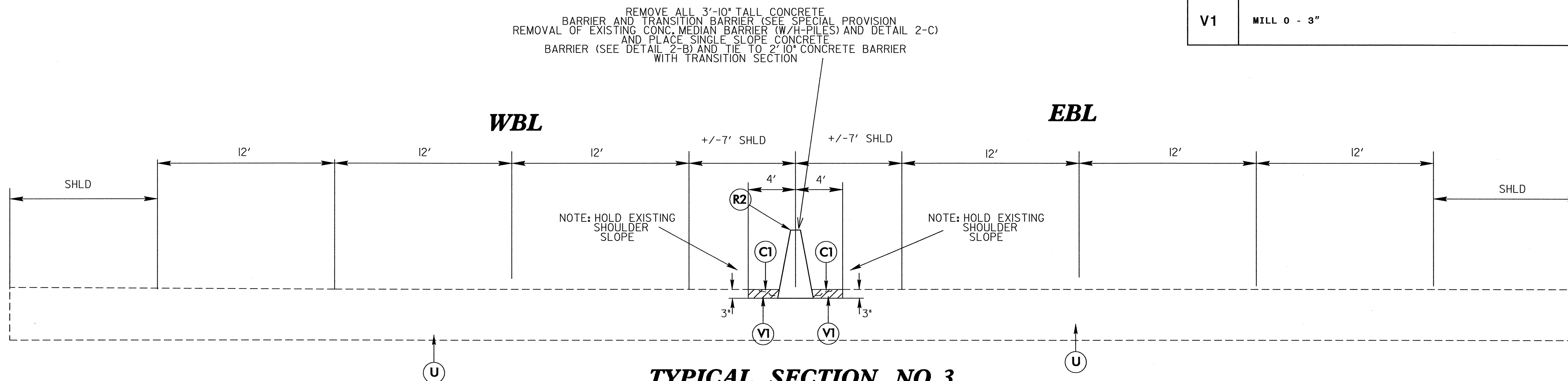
PROJECT REFERENCE NO. W-517	SHEET NO. 2-A
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16434 KENNETH ARTHUR WILSON 1-24-11	PAVEMENT DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16434 KENNETH ARTHUR WILSON 1-24-11



USE TYPICAL SECTION NO. 2
AT THE FOLLOWING LOCATIONS
-LREV- STA 244+54.19 TO -LREV- 268+04.00

**TYPICAL SECTION NO. 2
TO BE USED AT BARRIER
WALL LOCATION SITE 2
SEE DETAIL DRAWING 2-B FOR
SINGLE SLOPE CONCRETE BARRIER
AND SPECIAL PROVISION REMOVAL
OF EXISTING CONC. MEDIAN BARRIER**

PAVEMENT SCHEDULE	
C1	PROP. APPROX. 3" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
R2	SINGLE SLOPE CONCRETE BARRIER, SEE SPECIAL DETAIL DRAWING 2-B
U	EXISTING PAVEMENT
V1	MILL 0 - 3"



USE TYPICAL SECTION NO. 3
AT THE FOLLOWING LOCATIONS
-LREV- STA 357+29.35 TO -LREV- 369+16.86

**TYPICAL SECTION NO. 3
TO BE USED AT BARRIER
WALL LOCATION SITE 3
SEE DETAIL DRAWING 2-B FOR
SINGLE SLOPE CONCRETE BARRIER.
SEE DETAIL DRAWING 2-C FOR H-PILE
LOCATION AND NUMBER AND SEE SPECIAL
PROVISION FOR REMOVAL OF EXISTING CONC.
MEDIAN BARRIER (W/H-PILES).**

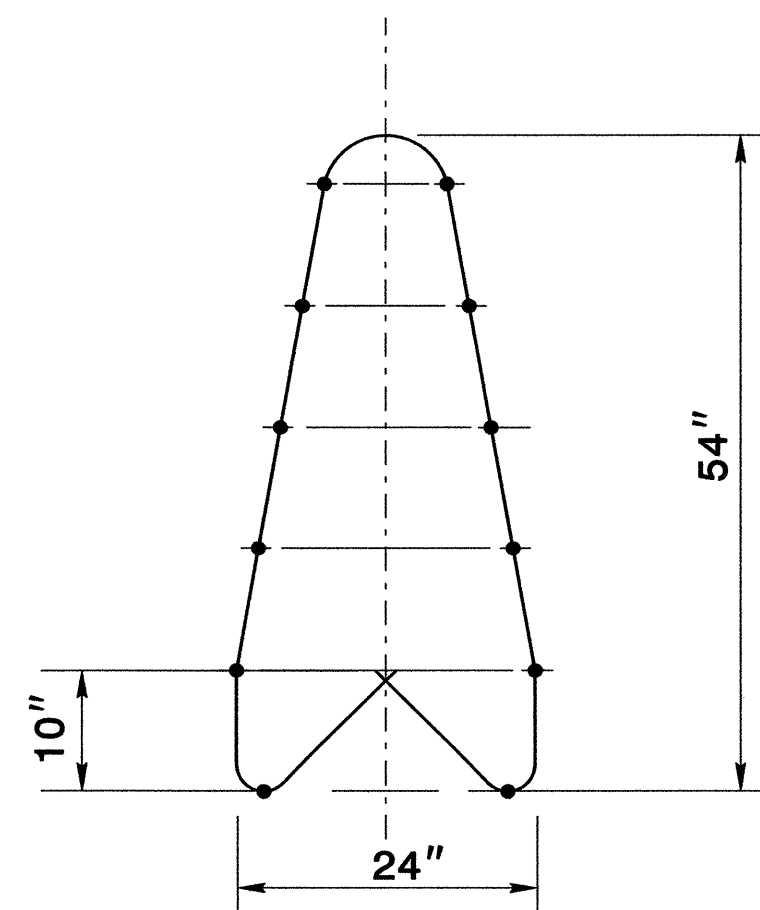
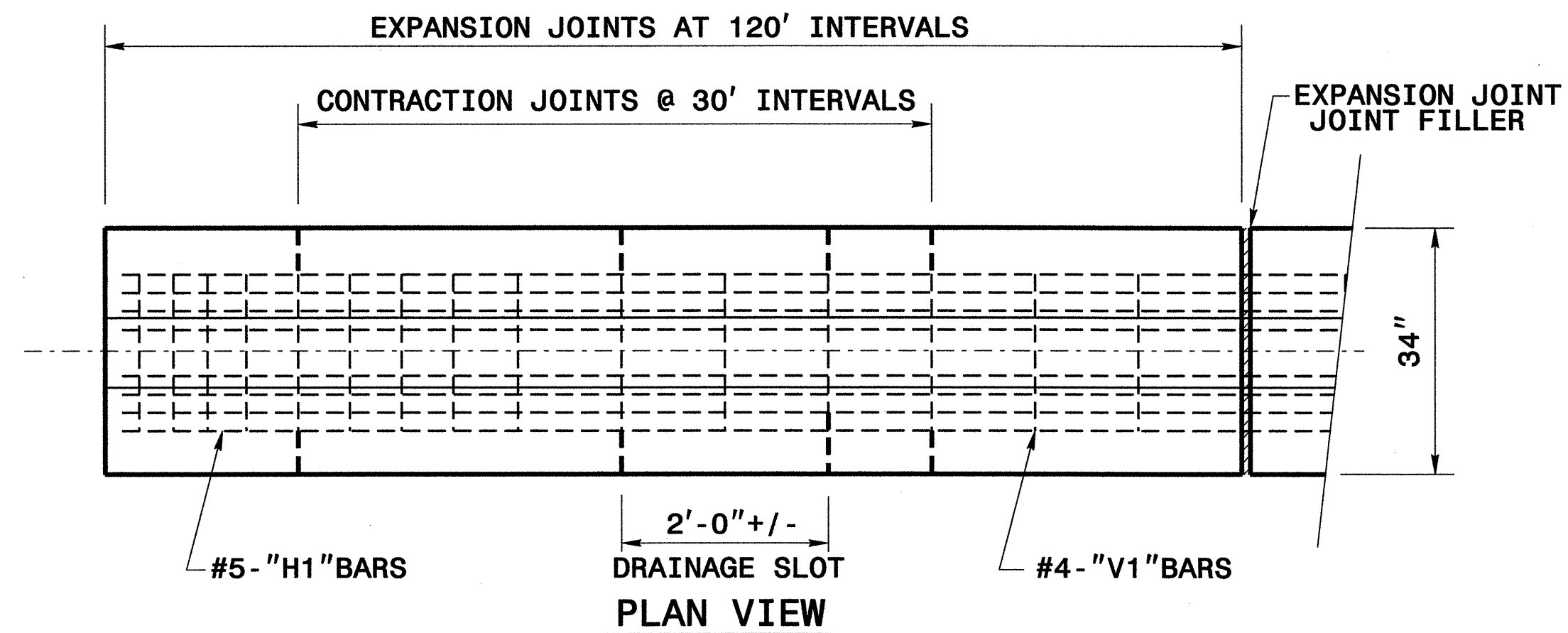
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5/14/99

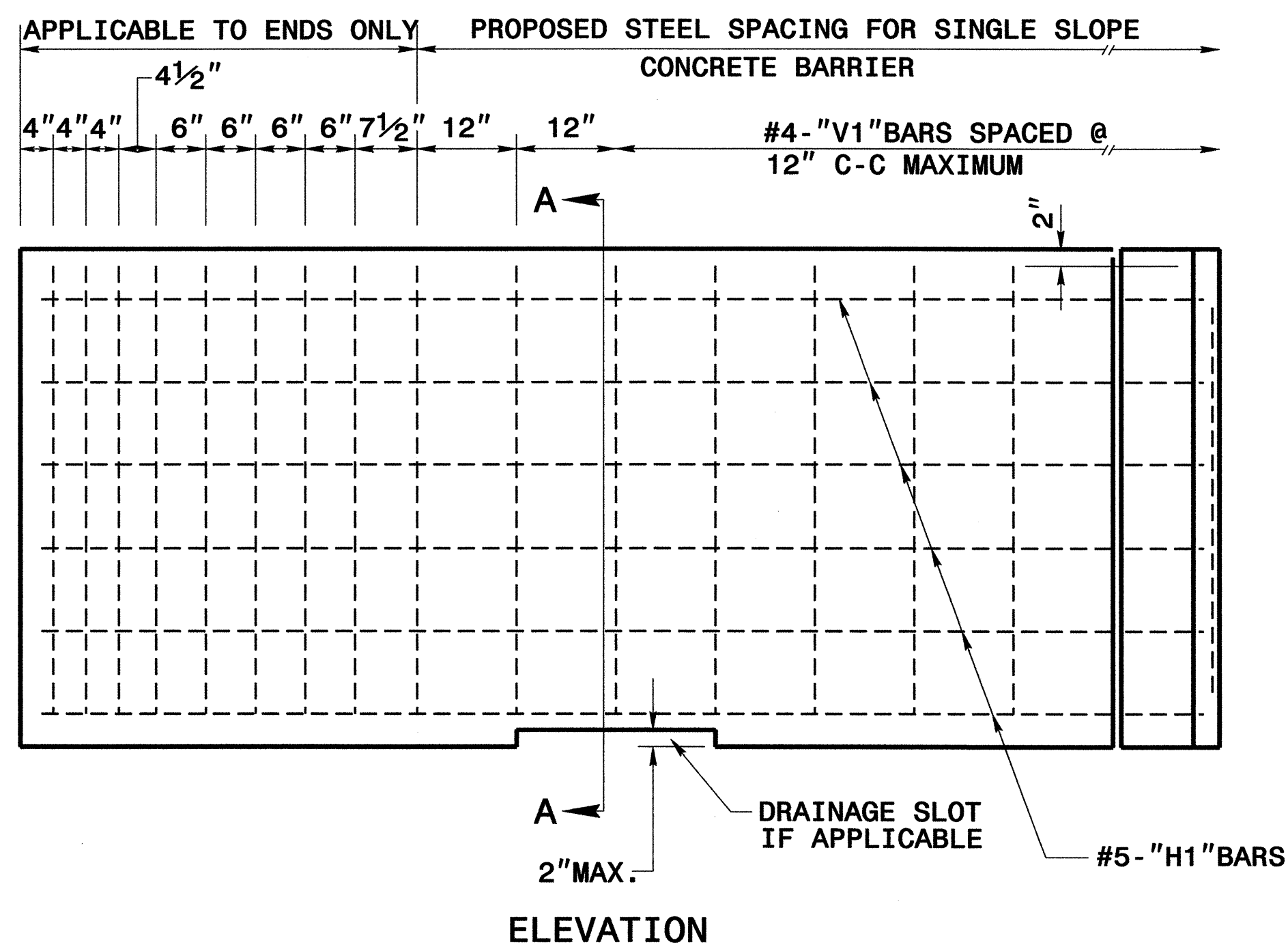
GENERAL NOTES:

1. USE CLASS "AA" CONCRETE.
2. CHAMFER TOP AND ENDS OF BARRIER 1/2 INCH.
3. USE BAR SPLICE LENGTHS A MINIMUM OF 20 TIMES THE NORMAL DIAMETER OF THE BAR. ANY METHOD DEvised BY THE CONTRACTOR AND APPROVED BY THE ENGINEER THAT WILL ASSURE THE LONGITUDINAL ROADWAY STEEL WILL BE POSITIONED +/- 1/2 INCH AS DIMENSIONED WILL BE SATISFACTORY.

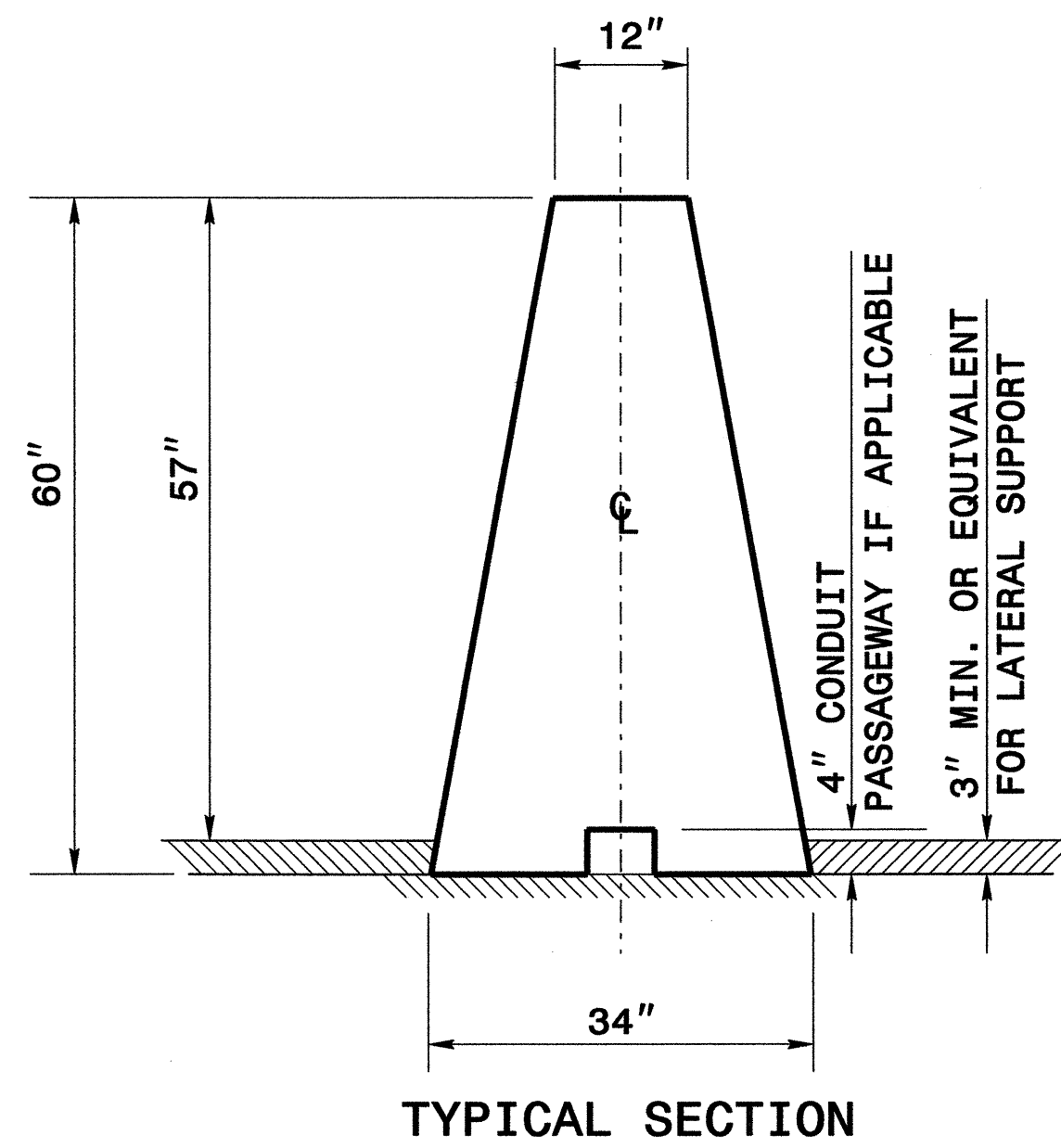
WELDED WIRE FABRIC MAY BE USED AS AN OPTION TO CONVENTIONAL REINFORCEMENT FOR CAST-IN-PLACE BARRIER. WELDED WIRE FABRIC SHALL BE MADE IN ACCORDANCE WITH ASTM A497. CONDUIT TO BE PROVIDED ONLY WHEN CALLED FOR ELSEWHERE IN THE PLANS. POSITION OF THE CONDUIT CONDUIT PASSAGEWAY MAY BE ADJUSTED TO FACILITATE CONSTRUCTION, SUBJECT TO APPROVAL BY THE ENGINEER.
4. REFER TO ROADWAY STANDARD DRAWING NO.854.01 FOR EXPANSION AND CONTRACTION JOINT, FILLER AND OTHER SPECIFICATIONS.



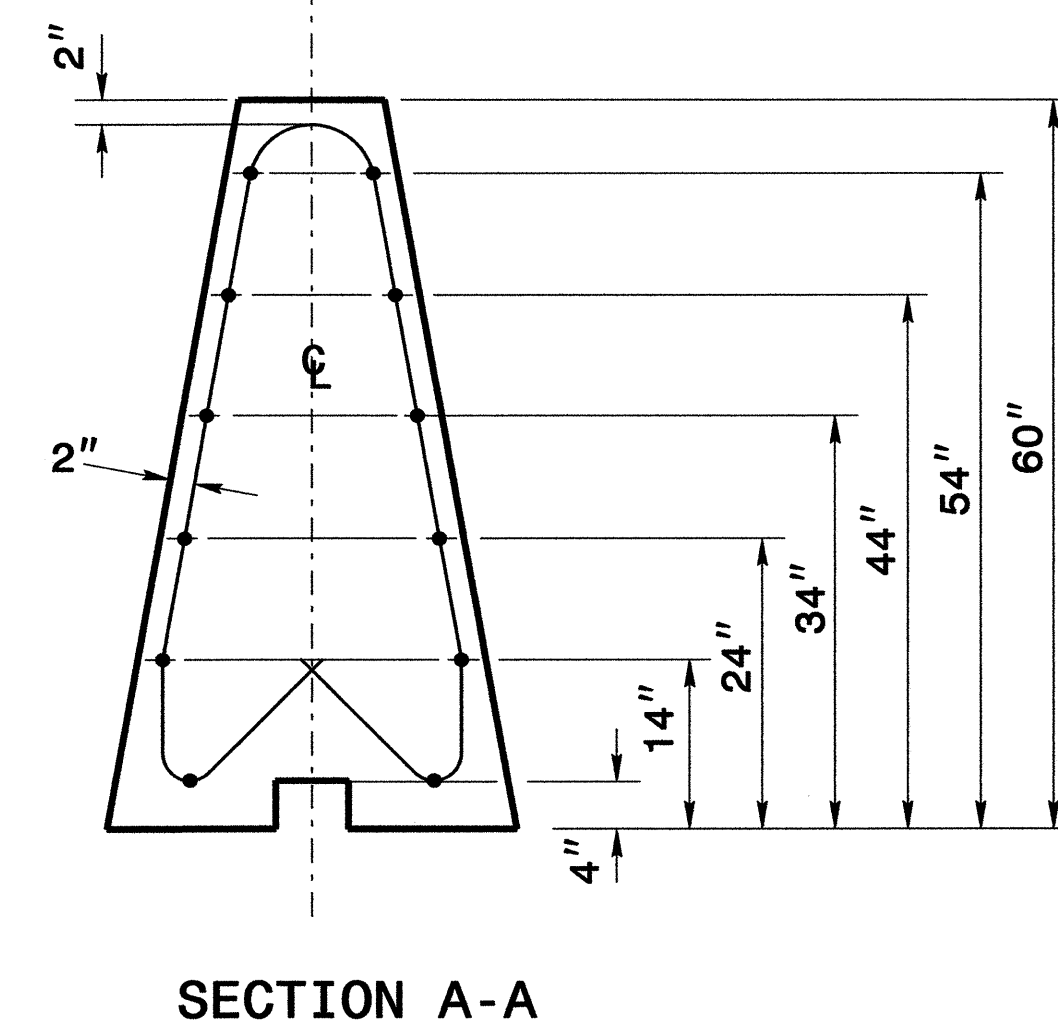
#4-\"V1\" BAR REINFORCING DETAIL



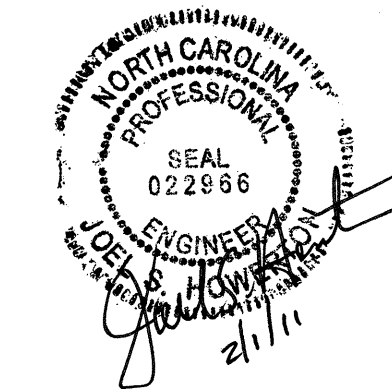
ELEVATION



TYPICAL SECTION



SECTION A-A

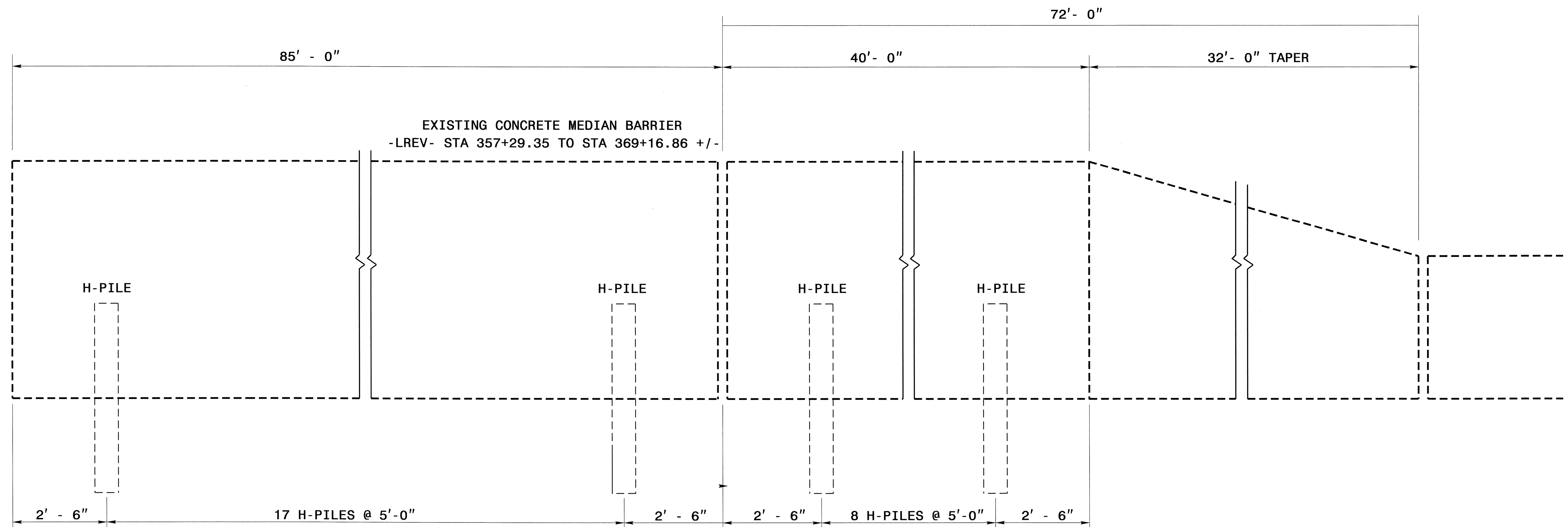


PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 FAX 919-250-4119

**SINGLE SLOPE
CONCRETE BARRIER**

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: kakempf DATE: 03-03-10
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/mbritt/english/gurardrai1/singleslope.dgn

5/14/99



TYPICAL 85' SEGMENT (12 SEGMENTS)
 228 H-PILES TOTAL FOR 12 SEGMENTS

TYPICAL 72' SEGMENT (2 SEGMENTS)
 20 H-PILES TOTAL FOR 2 SEGMENTS

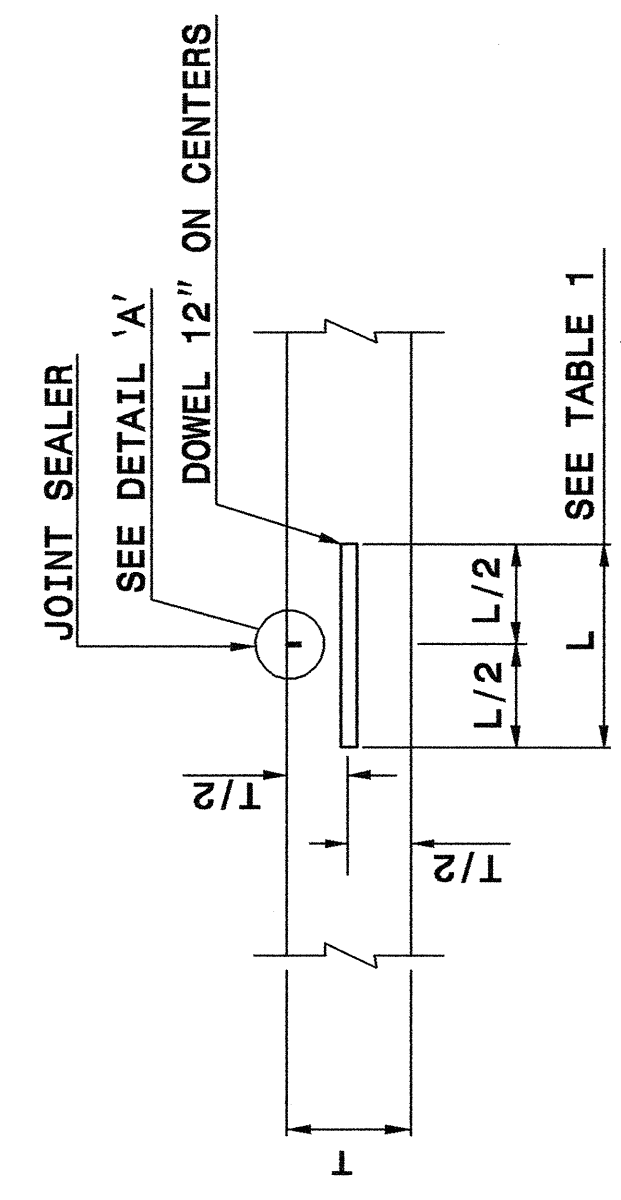
DETAIL OF EXISTING CONCRETE MEDIAN BARRIER (W/H-PILES)

H-PILE LOCATION AND NUMBER
 248 H-PILES TOTAL

DIVISION 13	
DDC UNIT	
Office 828-251-6171	
EXISTING CONC. MEDIAN BARRIER (W/H-PILES)	
ORIGINAL BY: MKP	DATE: 01-04-11
MODIFIED BY: MKP	DATE: 02-02-11
CHECKED BY:	DATE:
FILE SPEC.:	

26-SEP-2006 13:58
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STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



TRANSVERSE CONTRACTION JOINT

ENGLISH DETAIL DRAWING FOR
CONCRETE PAVEMENT JOINTS
CONSTRUCTION AND CONTRACTION JOINTS

SHEET 1 OF 2
700D01

GENERAL NOTES:
 -FORM TRANSVERSE CONTRACTION JOINTS BY SAWING WITH APPROVED EQUIPMENT.
 -SPACE TRANSVERSE CONTRACTION JOINTS AT INTERVALS OF 15'.
 -USE A DOWEL ASSEMBLY OR OTHER APPROVED DOWEL INSERTION TECHNIQUE IN ALL TRANSVERSE CONTRACTION JOINTS.
 -DOWEL ASSEMBLIES ARE COVERED IN DETAIL 700D03.
 -PROVIDE SMOOTH DOWEL BARS. PROVIDE DEFORMED TIE BARS.
 -WHEN UTILIZING AN EARLY ENTRY SAW, CUT THE JOINT TO A MINIMUM DEPTH OF 4".

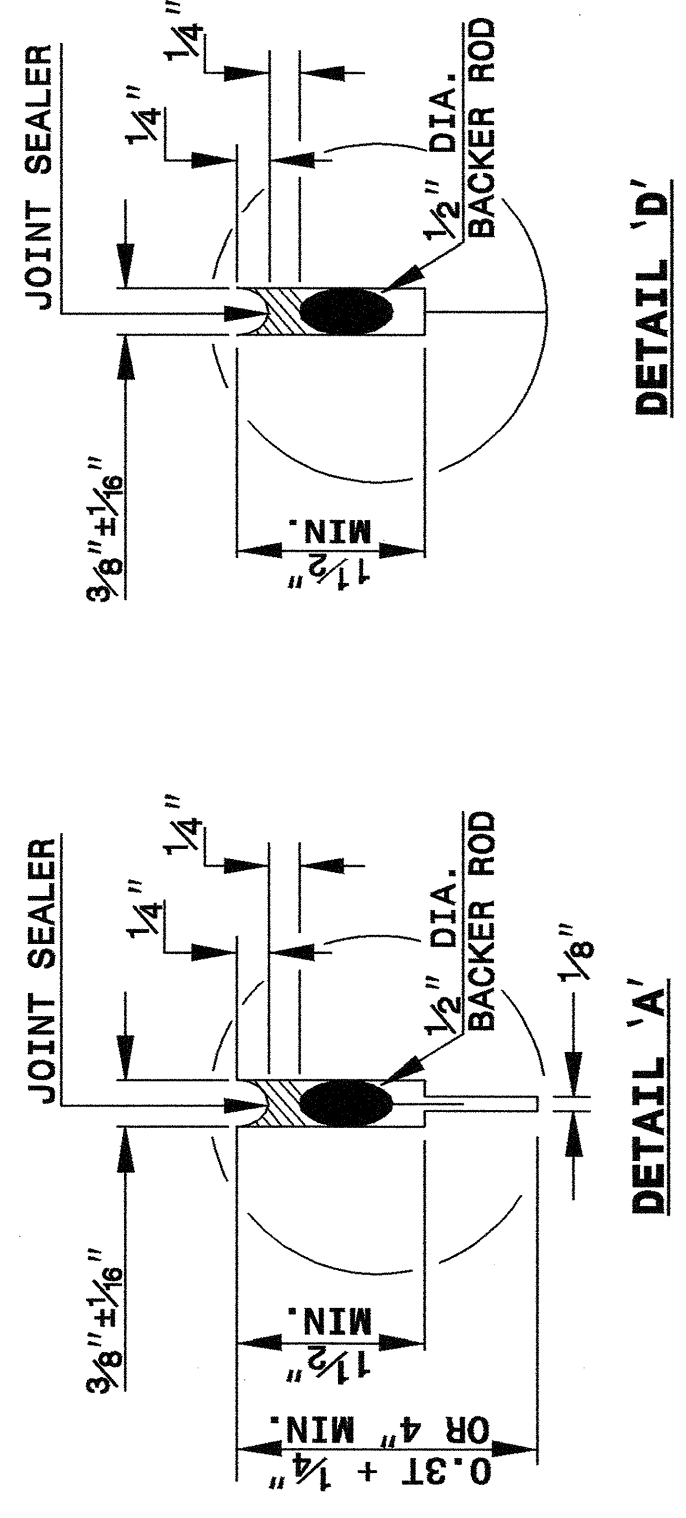


TABLE I - DOWEL BARS

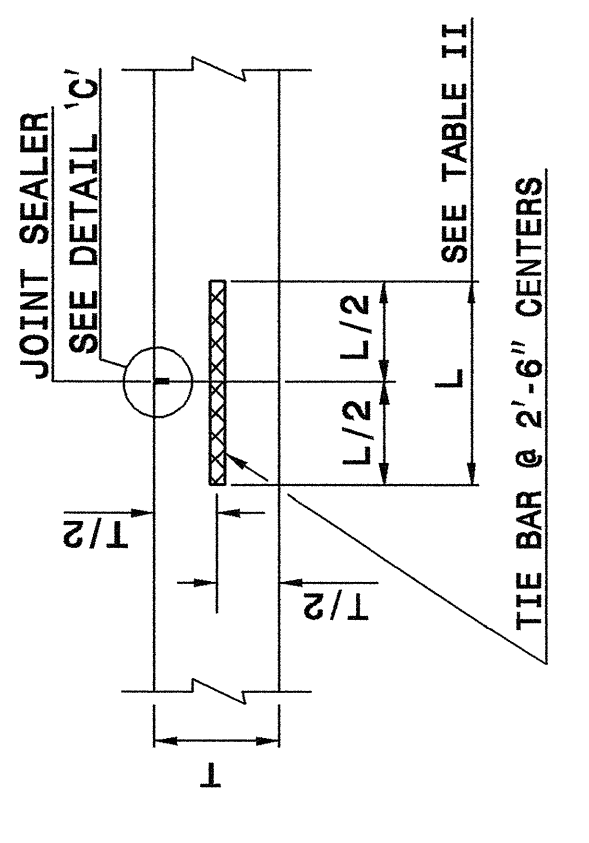
SLAB THICKNESS	DOWEL BAR "D"	DOWEL BAR LENGTH "L"
8" OR LESS	1"	14"
8 1/2" TO 9 1/2"	1 1/8"	16"
10" TO 10 1/2"	1 1/4"	18"
11" AND ABOVE	1 1/2"	18"

ENGLISH DETAIL DRAWING FOR
CONCRETE PAVEMENT JOINTS
CONSTRUCTION AND CONTRACTION JOINTS

SHEET 1 OF 2
700D01

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

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

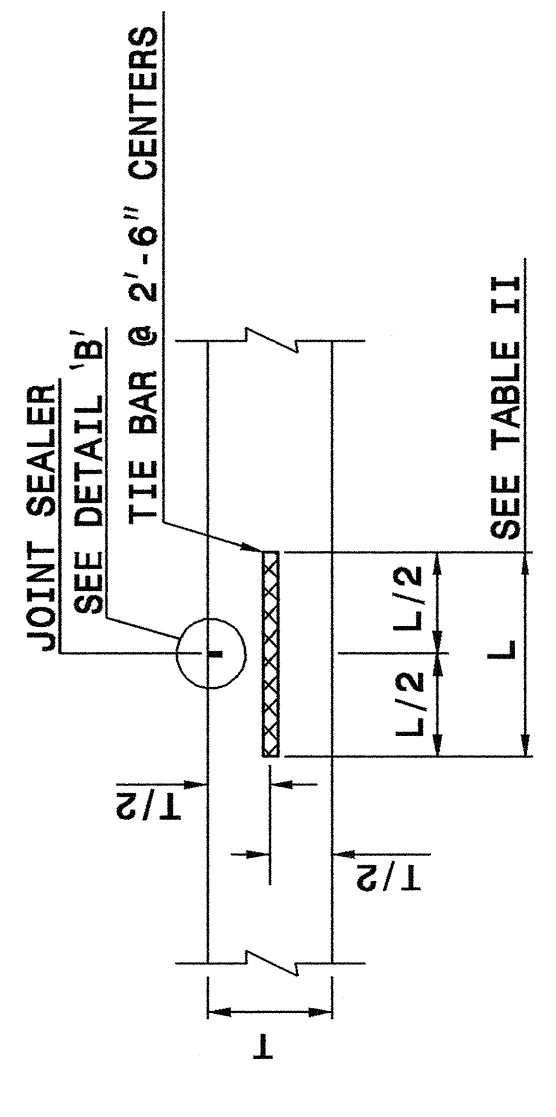


LONGITUDINAL CONSTRUCTION JOINT

ENGLISH DETAIL DRAWING FOR
CONCRETE PAVEMENT JOINTS
CONSTRUCTION AND CONTRACTION JOINTS

SHEET 2 OF 2
700D01

GENERAL NOTES:
 -CONSTRUCT TRANSVERSE CONTRACTION JOINTS AT THE END OF EACH DAY'S OPERATION (PLANNED JOINT) OR WHEN THE PLACING OF CONCRETE IS SUSPENDED FOR MORE THAN 30 MINUTES (EMERGENCY JOINT).
 -USE AN APPROVED HEADER AT EMERGENCY JOINTS STD. DWG. 700.04 AND DESIGNED TO PERMIT THE PLACEMENT OF AND CORRECTLY HOLD IN PLACE TIE BARS.
 -USE TIE BARS OF THE SAME DIAMETER AS DOWEL BARS FOR EMERGENCY TRANSVERSE CONTRACTION JOINTS.
 -LOCATE PLANNED TRANSVERSE CONTRACTION JOINTS AT THE SPACING REQUIRED FOR CONTRACTION JOINTS. USE AN APPROVED METHOD OF INSTALLING DOWELS IN ALL PLANNED TRANSVERSE CONTRACTION JOINTS.
 -DO NOT LOCATE EMERGENCY CONTRACTION JOINTS LESS THAN 6' FROM ANY CONTRACTION JOINT OR PLANNED CONTRACTION JOINT.
 -DO NOT PLACE TIE BARS IN LONGITUDINAL JOINTS WITHIN 1'-4" OF A TRANSVERSE JOINT.
 -WHEN UTILIZING AN EARLY ENTRY SAW, CUT THE JOINT TO A MINIMUM DEPTH OF 4".



LONGITUDINAL JOINT

EMERGENCY TRANSVERSE CONSTRUCTION JOINT

ENGLISH DETAIL DRAWING FOR
CONCRETE PAVEMENT JOINTS
CONSTRUCTION AND CONTRACTION JOINTS

SHEET 2 OF 2
700D01

STATE OF
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RALEIGH, N.C.

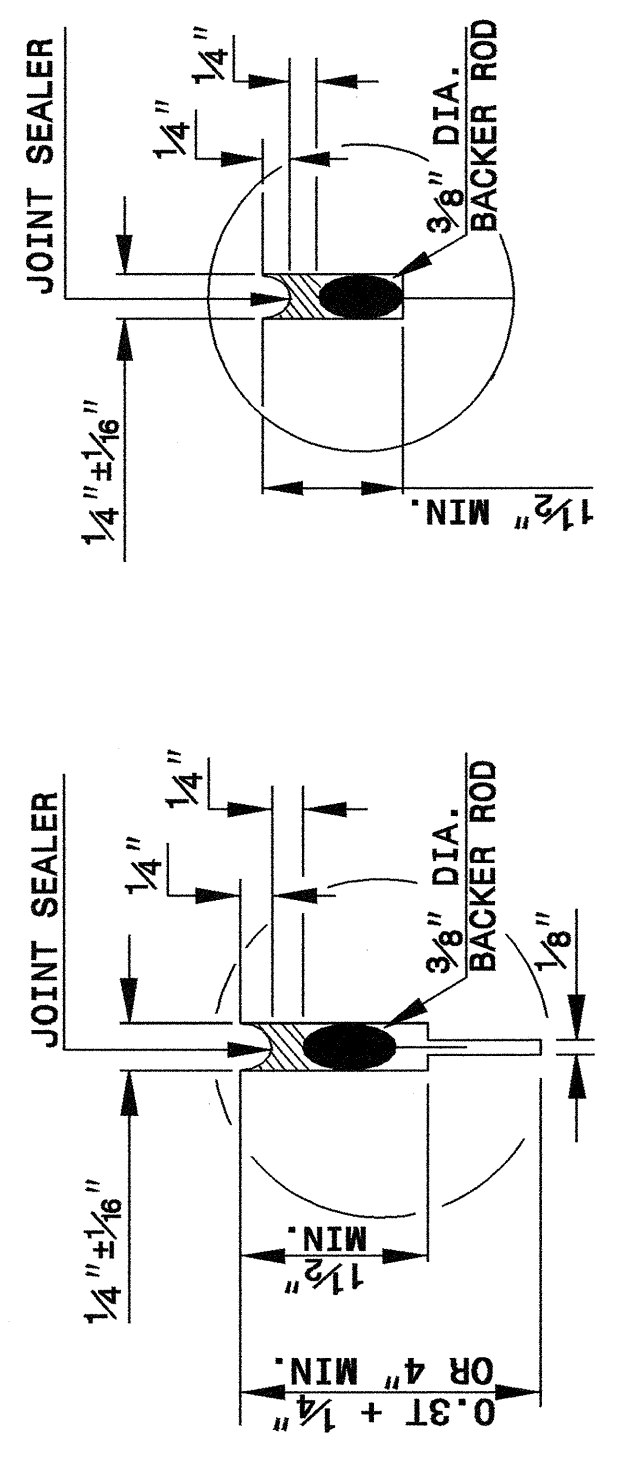


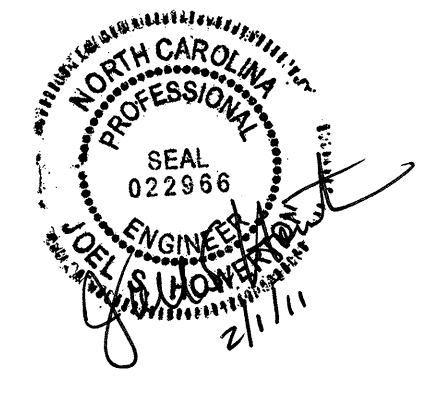
TABLE II - LONGITUDINAL TIE BARS

SLAB THICKNESS	TIE BAR DIA. "D"	TIE BAR LENGTH "L"
8 1/2" OR LESS	1/2"	30"
9" OR ABOVE	5/8"	30"

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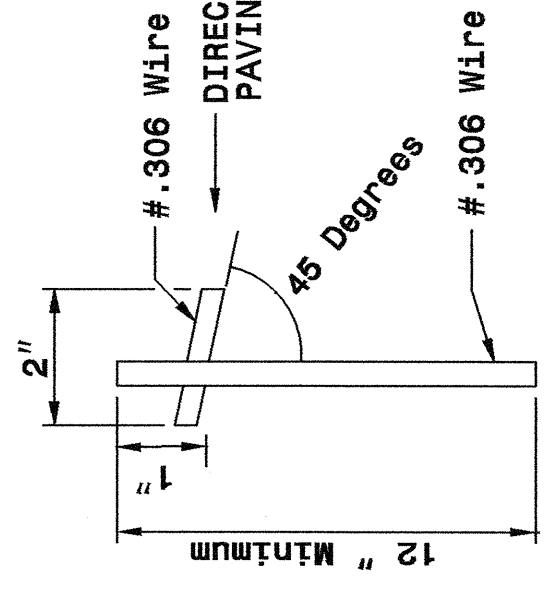
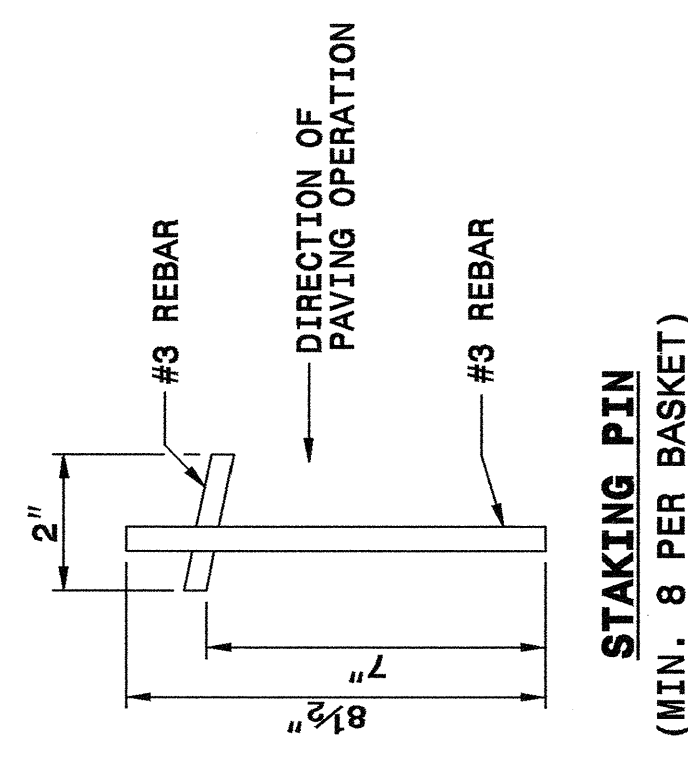
SEE PLATE FOR TITLE

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 MODIFIED BY: E.E. WARD DATE: 09-26-06
 CHECKED BY: DATE:
 FILE SPEC.: stds\06stdstodetails/english\700d01.dgn



07-FEB-2006 16:00
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STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.



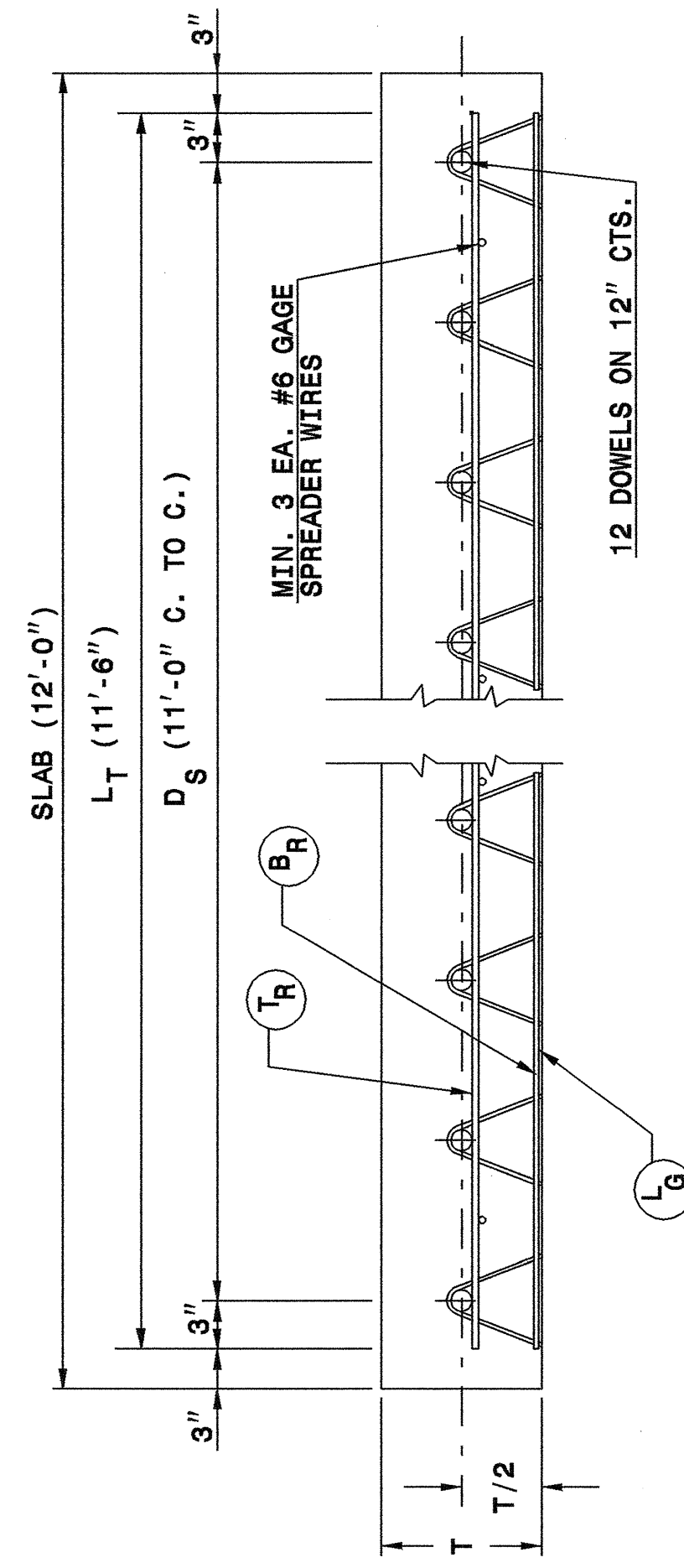
ENGLISH DETAIL DRAWING FOR
DOWEL ASSEMBLY

SHEET 1 OF 2
700D03

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

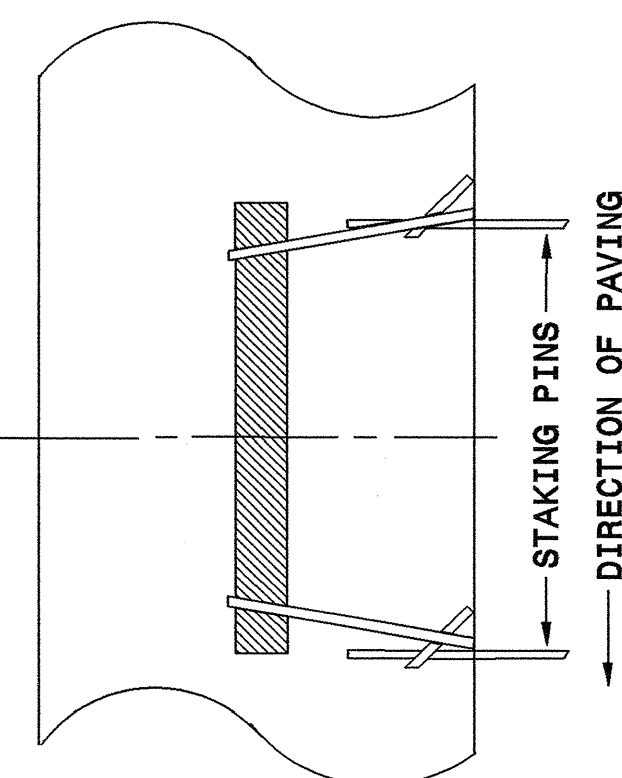
ENGLISH DETAIL DRAWING FOR
DOWEL ASSEMBLY

SHEET 1 OF 2
700D03



TYPICAL UNIT DIMENSIONS

SLAB THICKNESS	"V" LEG ONLY WIRE GAGE		
	Tr	Br	Lg
8" OR LESS	2	2	2
8 1/2" - 10"	0	2	2
10 1/2" & ABOVE	2/0's	2/0's	2/0's

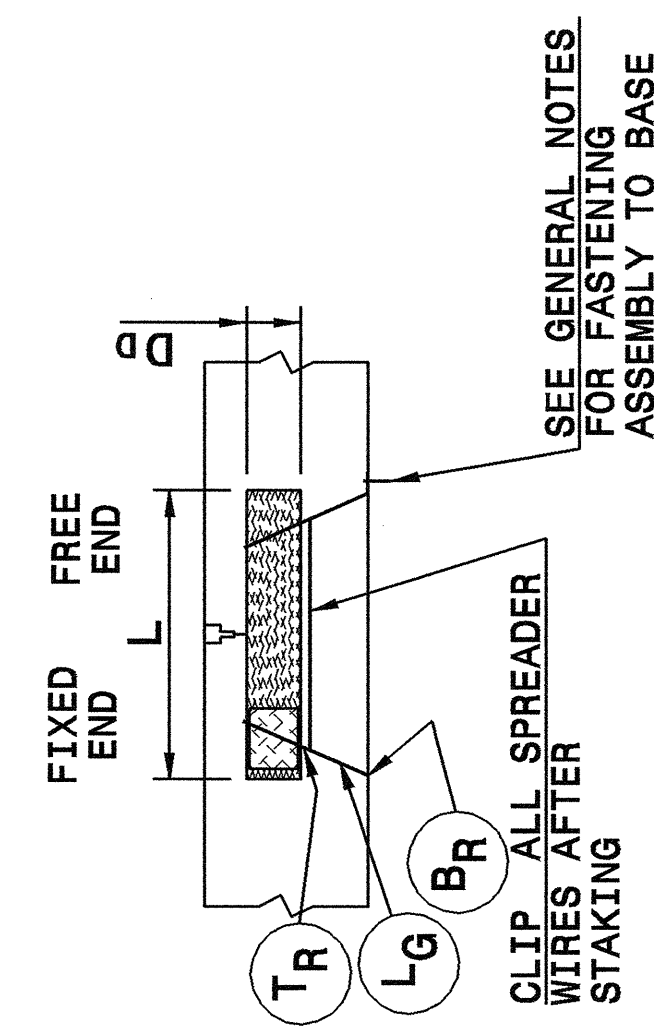


GENERAL NOTES:
 -USE RIGID CONSTRUCTED DOWEL ASSEMBLY CAPABLE OF HOLDING THE DOWEL BAR IN PROPER POSITION DURING PLACEMENT OF CONCRETE AND DESIGNED AS TO PERMIT UNRESTRICTED MOVEMENT OF THE SLAB.
 -USE DOWEL ASSEMBLY APPROVED BY THE ENGINEER PRIOR TO USE.
 -USE DOWEL ASSEMBLIES MANUFACTURED WITH DOWELS ALTERNATELY WELDED TO FRAME MEMBERS.
 -USE STAKING PIN OR APPROVED ALTERNATE.
 -SAW CUT EPOXY COATED DOWELS, BUFFING AS NECESSARY TO FACILITATE PROPER WELDING OF THE DOWEL TO THE ASSEMBLY FRAME. TOUCH UP OF THE BUFFED AREA WILL NOT BE REQUIRED.
 -RESISTANCE WELD FRAME MEMBERS; DOWELS AND SPREADER WIRES MAY BE ARC WELDED. WELD IN ACCORDANCE WITH AWS WELDING CODE.
 -FULLY DIP THE DOWEL ASSEMBLIES TO ASSURE A COMPLETE COATING OF WAX.
 -SEE DETAIL 700D01 FOR DOWEL BAR SIZES.

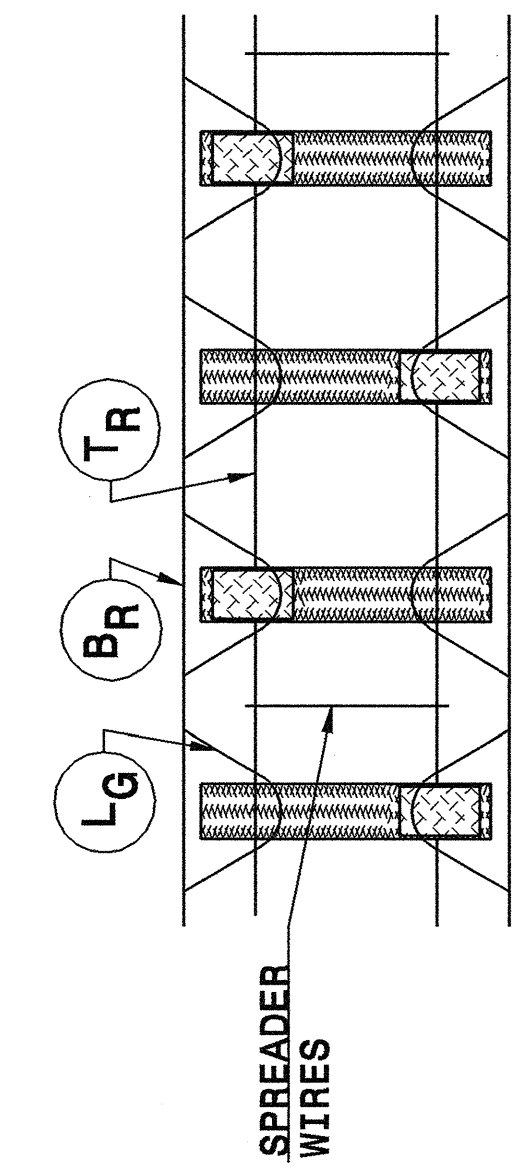
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
DOWEL ASSEMBLY

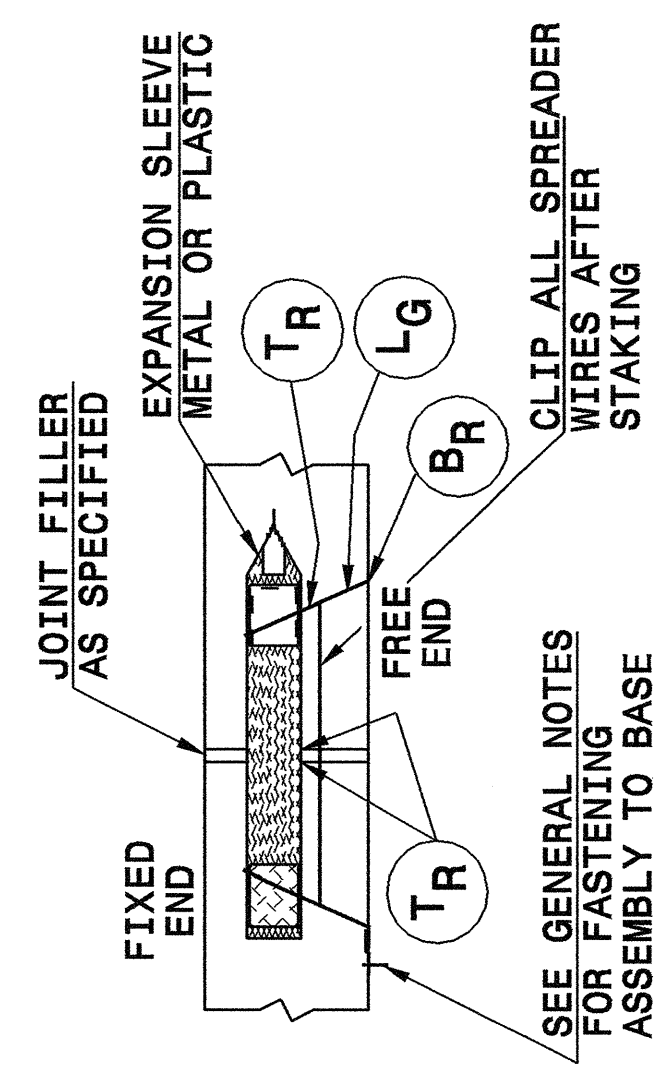
SHEET 2 OF 2
700D03



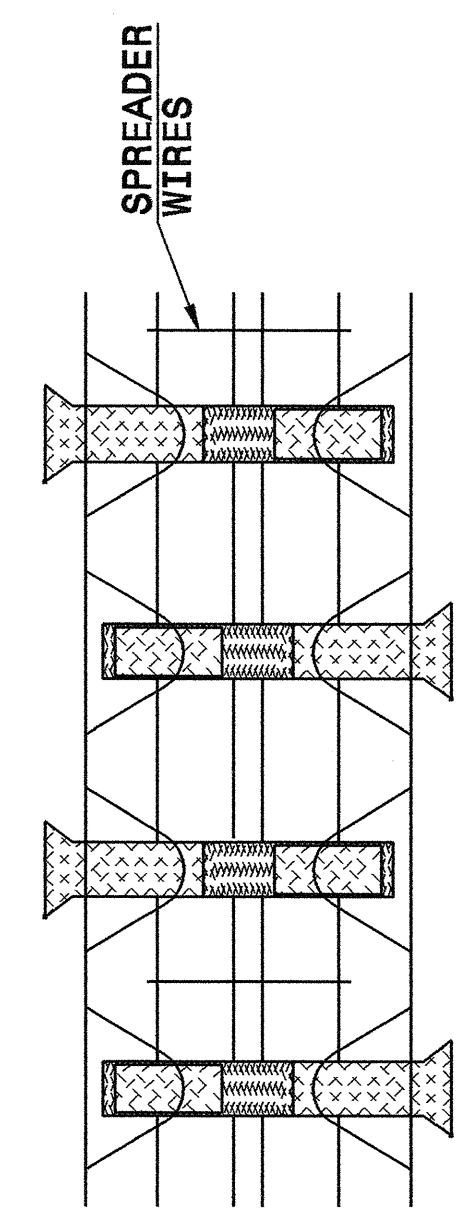
SECTION - CONTRACTION



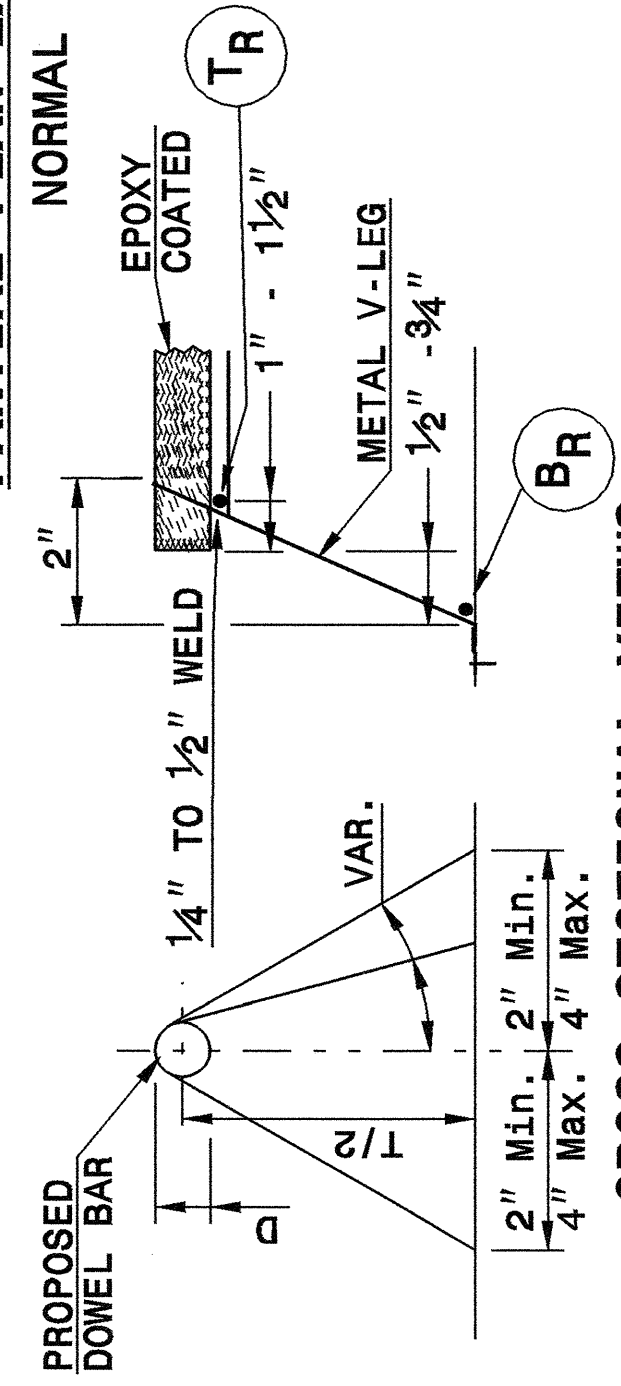
PARTIAL PLAN CONTRACTION
NORMAL



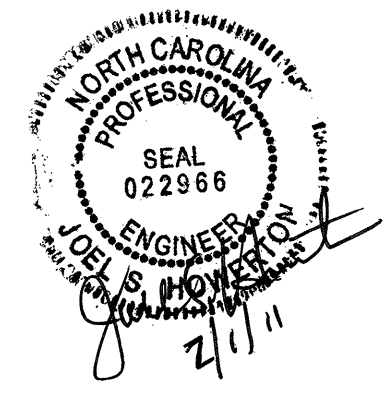
SECTION - EXPANSION



PARTIAL PLAN EXPANSION
NORMAL



CROSS SECTIONAL VIEWS



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

SEE PLATE FOR TITLE

ORIGINAL BY: 2002 STANDARDS DATE: 01-15-02
 MODIFIED BY: E.E. WARD DATE: 12-15-05
 CHECKED BY: DATE:
 FILE SPEC.: stds/02stdstodetails/english/700d01.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202770					STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202770				
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	3435000000-N	SP	3	EA	GENERIC GUARDRAIL ITEM MEDIAN BARRIER MOVABLE GATE
0022000000-E	225	320	CY	UNCLASSIFIED EXCAVATION	4400000000-E	1110	1,385	SF	WORK ZONE SIGNS (STATIONARY)
0038000000-E	SP	220	CY	SHALLOW UNDERCUT	4405000000-E	1110	643	SF	WORK ZONE SIGNS (PORTABLE)
0080000000-E	SP	420	TON	CLASS IV SUBGRADE STABILIZA- TION	4415000000-N	1115	4	EA	FLASHING ARROW PANELS, TYPE C
0156000000-E	250	653	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT	4420000000-N	1120	4	EA	CHANGEABLE MESSAGE SIGN
0196000000-E	270	330	SY	FABRIC FOR SOIL STABILIZATION	4430000000-N	1130	206	EA	DRUMS
1011000000-N	500	Lump Sum		FINE GRADING	4465000000-N	1160	2	EA	TEMPORARY CRASH CUSHIONS
1121000000-E	520	323	TON	AGGREGATE BASE COURSE	4470000000-N	1160	4	EA	RESET TEMPORARY CRASH CUSHIONS
1308000000-E	607	3,080	SY	MILLING ASPHALT PAVEMENT, **** TO ***** DEPTH (9" TO 3")	4480000000-N	1165	4	EA	TMIA
1491000000-E	610	140	TON	ASPHALT CONC BASE COURSE, TYPE B25.0C	4485000000-E	1170	8,940	LF	PORTABLE CONCRETE BARRIER
1503000000-E	610	120	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	4500000000-E	1170	5,260	LF	RESET PORTABLE CONCRETE BAR- RIER
1523000000-E	610	510	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	4510000000-N	SP	300	HR	LAW ENFORCEMENT
1560000000-E	620	15	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 64-22	4688000000-E	1205	13,820	LF	THERMOPLASTIC PAVEMENT MARKING LINES (6", 90 MILS)
1565000000-E	620	35	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG 70-22	4775000000-E	1205	27,020	LF	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (6") (IV)
1840000000-E	665	7,750	LF	MILLED RUMBLE STRIPS (ASPHALT CEMENT CONCRETE)	4815000000-E	1205	27,640	LF	PAINT PAVEMENT MARKING LINES (6")
1847000000-E	710	140	SY	***** PORT CEM CONC PAVEMENT, THROUGH LANES (WITH DOWELS) (9-1/2")	4855000000-E	1205	13,820	LF	REMOVAL OF PAVEMENT MARKING LINES (6")
2703000000-E	854	240	LF	CONCRETE BARRIER, TYPE ***** (IV)	6012000000-E	1610	5	TON	SEDIMENT CONTROL STONE
2703000000-E	854	3,500	LF	CONCRETE BARRIER, TYPE ***** (SINGLE SLOPE)	6030000000-E	1630	7	CY	SILT EXCAVATION
2710000000-N	854	4	EA	CONCRETE BARRIER TRANSITION SECTION	6042000000-E	1632	116	LF	1/4" HARDWARE CLOTH
2752000000-E	SP	2,902	LF	GENERIC PAVING ITEM REMOVAL OF EXISTING CONCRETE MEDIAN BARRIER					
2752000000-E	SP	1,188	LF	GENERIC PAVING ITEM REMOVAL OF EXISTING CONCRETE MEDIAN BARRIER (W/ H-PILES)					

5/28/99

21-DEC-2000 10:41
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\$\$\$\$\$USERNAME\$\$\$\$\$

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

SUMMARY OF EARTHWORK
 IN CUBIC YARDS

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
EBL MEP 627 + 71.89 LREV 147 + 63.28	96.31				96.31
LREV 287 + 71.09 LREV 288 + 83.09	84.69				84.69
LREV 379 + 97.29 LREV 381 + 09.29	136.05				136.05
PROJECT TOTAL	317.05				317.05
GRAND TOTAL	317.05				317.05
SAY	320				320
CONTINGENCY SHALLOW UNDERCUT	220 CUBIC YARDS				
CLASS IV SUBGRADE STABILIZATION	420 TONS				

REMOVAL OF EXISTING ASPHALT PAVMENT

LOCATION	LT/RT	SQUARE YARDS
EBL MEP 627 + 71.89 LREV 147 + 63.28	LT/RT	198.11
LREV 287 + 71.09 LREV 288 + 83.09	RT	174.22
LREV 379 + 97.29 LREV 381 + 09.29	LT/RT	279.88
TOTAL		652.21
SAY		653

**SUMMARY OF PROPOSED CONCRETE BARRIER
 TYPE IV
 IN FEET**

BEGINNING STATION	END STATION	LOCATION	TYPE IV LENGTH
-EBL- MEP 627+35.89	-EBL- MEP 627+75.89	MEDIAN	40.00
-LREV- 147+59.28	-LREV- 147+99.28	MEDIAN	40.00
-LREV- 287+35.09	-LREV- 287+75.09	MEDIAN	40.00
-LREV-288+79.09	-LREV- 289+19.09	MEDIAN	40.00
-LREV- 379+61.29	-LREV- 380+01.29	MEDIAN	40.00
-LREV- 381+05.29	-LREV- 381+45.29	MEDIAN	40.00
TOTAL			240.00
SAY			240.00

CONCRETE BARRIER TYPE IV
 AS DIRECTED BY THE ENGINEER

**SUMMARY OF REMOVAL OF
 EXISTING CONC.MEDIAN BARRIER
 IN FEET**

BEGINNING STATION	END STATION	LOCATION	TYPE IV LENGTH
-EBL- MEP 627+35.89	-LREV- 147+99.28	MEDIAN	184.00'
-LREV- 244+54.19	-LREV- 268+04.00	MEDIAN	2349.81'
-LREV- 287+35.09	-LREV- 289+19.09	MEDIAN	184.00'
-LREV- 379+61.29	-LREV- 381+45.29	MEDIAN	184.00'
TOTAL			2901.81'
SAY			2902'

REMOVAL OF CONCRETE BARRIER
 AS DIRECTED BY THE ENGINEER
 AT MEDIAN BARRIER MOVABLE GATE LOCATIONS

**SUMMARY OF PROPOSED CONCRETE BARRIER
 SINGLE SLOPE CONCRETE BARRIER**

BEGINNING STATION	END STATION	LOCATION	LENGTH (FT.)	TRANSITION SECTION (EA)
-LREV- 244+54.19	-LREV- 268+04.00	MEDIAN	2328.98'	2
-LREV- 357+29.35	-LREV- 369+16.86	MEDIAN	1166.68'	2
TOTAL			3495.66'	TOTAL 4
SAY			3500'	

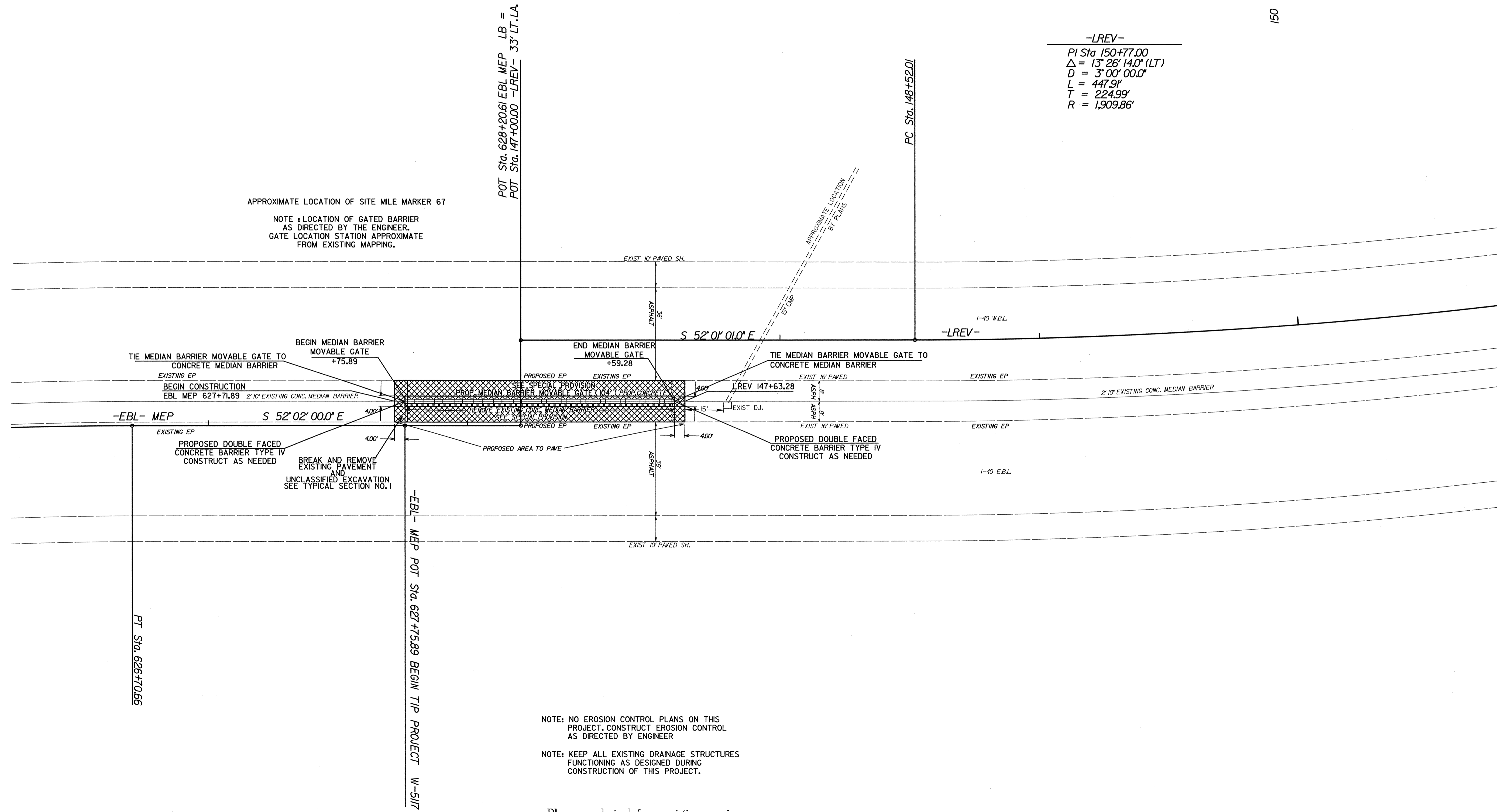
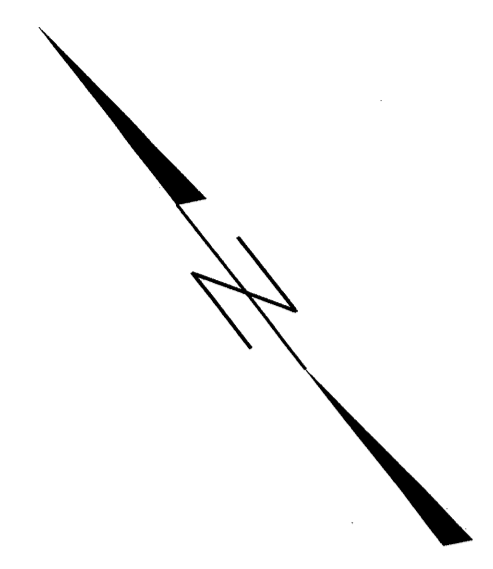
**SUMMARY OF REMOVAL OF
 EXISTING CONC.MEDIAN BARRIER (W/H-PILES)
 IN FEET**

BEGINNING STATION	END STATION	LOCATION	LENGTH
-LREV- 357+29.35	-LREV- 369+16.86	MEDIAN	1187.51'
TOTAL			1187.51'
SAY			1188'

PROJECT REFERENCE NO.	SHEET NO.
W-5117	4
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

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 \$\$\$\$SUSTAINMENT\$\$\$\$

REVISIONS



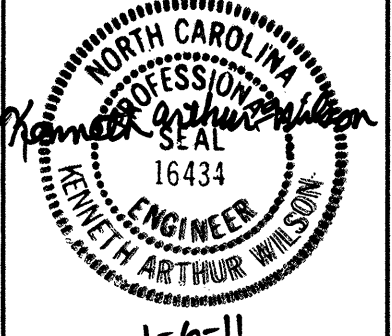
-LREV-
 PI Sta 150+77.00
 $\Delta = 13^\circ 26' 14.0''$ (LT)
 $D = 3^\circ 00' 00.0''$
 $L = 447.9'$
 $T = 224.99'$
 $R = 1,909.86'$

NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

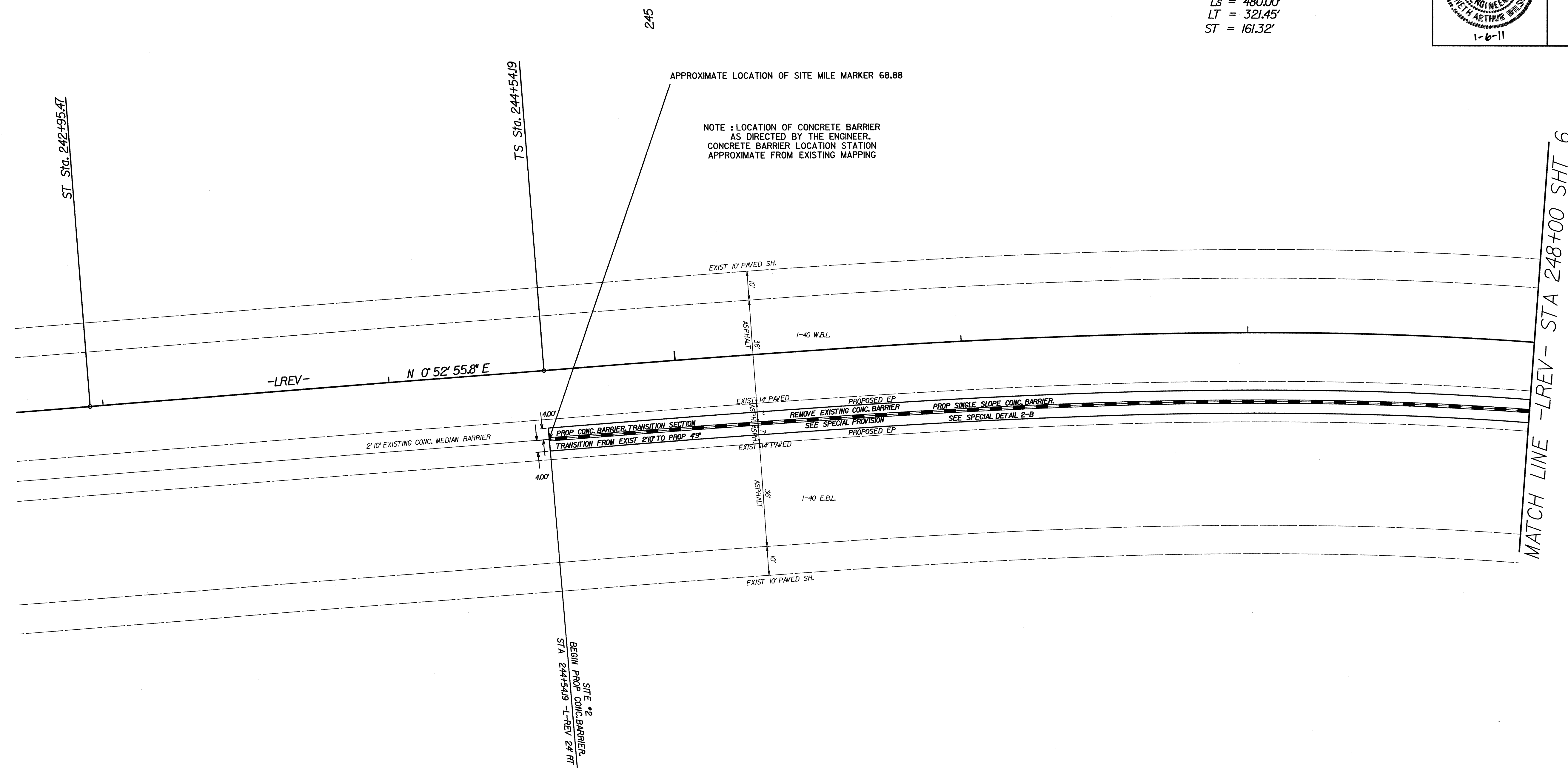
NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

150

PROJECT REFERENCE NO. W-5117	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
1-6-11	

-LREV-
 Pls Sta 247+75.64
 $\theta_s = 16^\circ 46' 33.6''$
 $L_s = 480.00'$
 $LT = 321.45'$
 $ST = 161.32'$



REVISIONS

MATCH LINE -LREV- STA 248+00 SHT 6

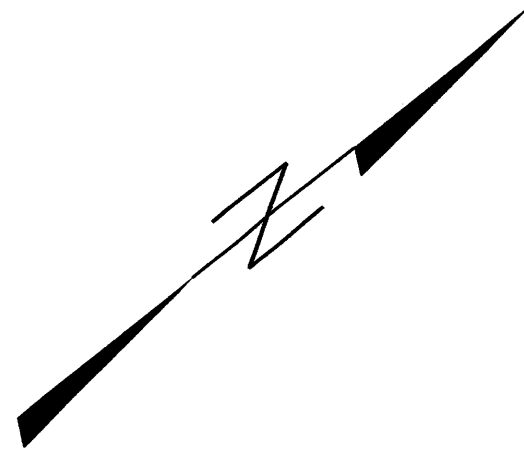
NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY THE ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

8/17/99
 05 JAN 20 10 53 P.01 \V5117.ddc_PSH5.120908.dgn
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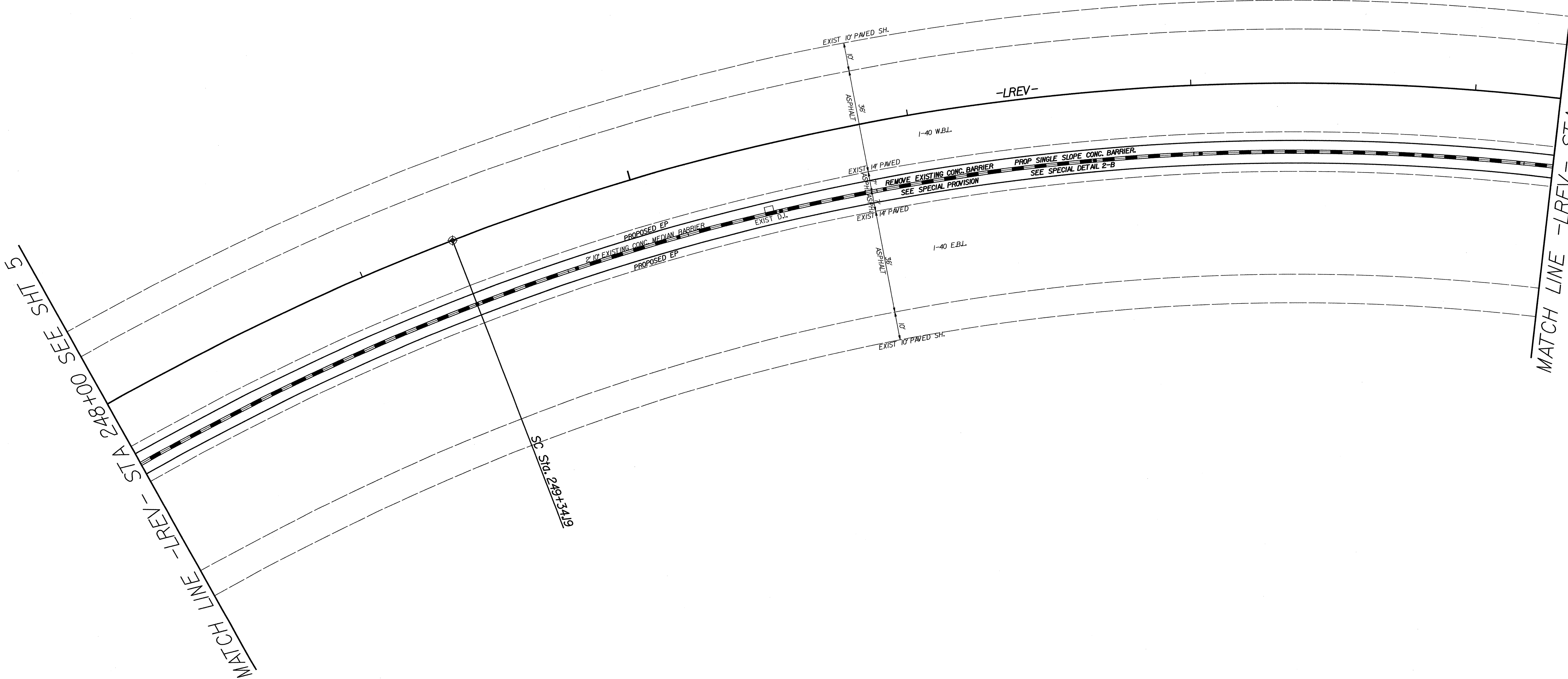
PROJECT REFERENCE NO.	SHEET NO.
W-5117	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



250

NOTE: LOCATION OF CONCRETE BARRIER AS DIRECTED BY THE ENGINEER

-LREV-
 PI Sta 260+23.63
 $\Delta = 106^{\circ} 05' 07.4''$ (RT)
 $D = 6' 53' 24.0''$
 $L = 1,517.67'$
 $T = 1,089.44'$
 $R = 819.68'$



REVISIONS

NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY THE ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

08-JAN-2010 09:01 P:\0517\DDC\p-coj\W5117-ddc_PSH6_120908.dgn
 8/17/99

8/17/99

REVISIONS

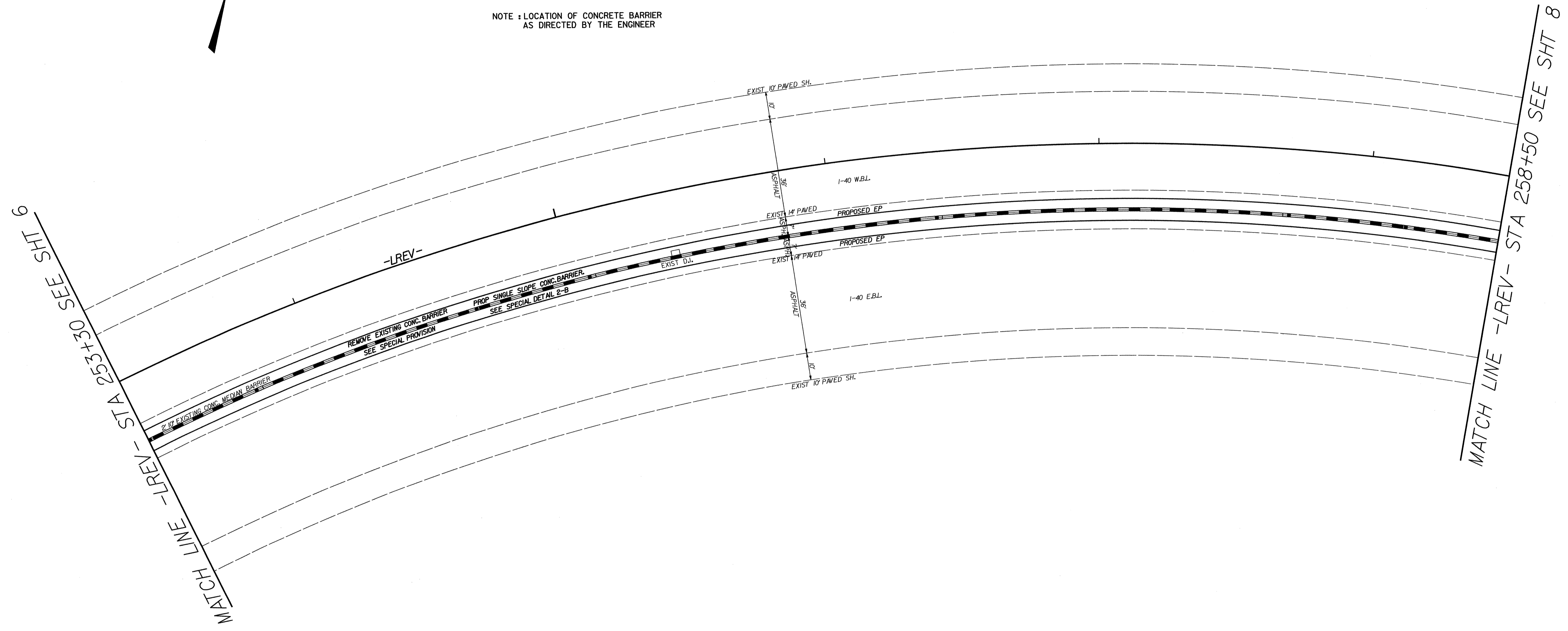
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PROJECT REFERENCE NO.	SHEET NO.
W-5117	7
R/W SHEET NO.	HYDRAULICS ENGINEER

-LREV-
 PI Sta 260+23.63
 $\Delta = 106^{\circ} 05' 07.4" (RT)$
 $D = 6^{\circ} 59' 24.0"$
 $L = 1,517.67'$
 $T = 1,089.44'$
 $R = 819.68'$

255

NOTE: LOCATION OF CONCRETE BARRIER AS DIRECTED BY THE ENGINEER



NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

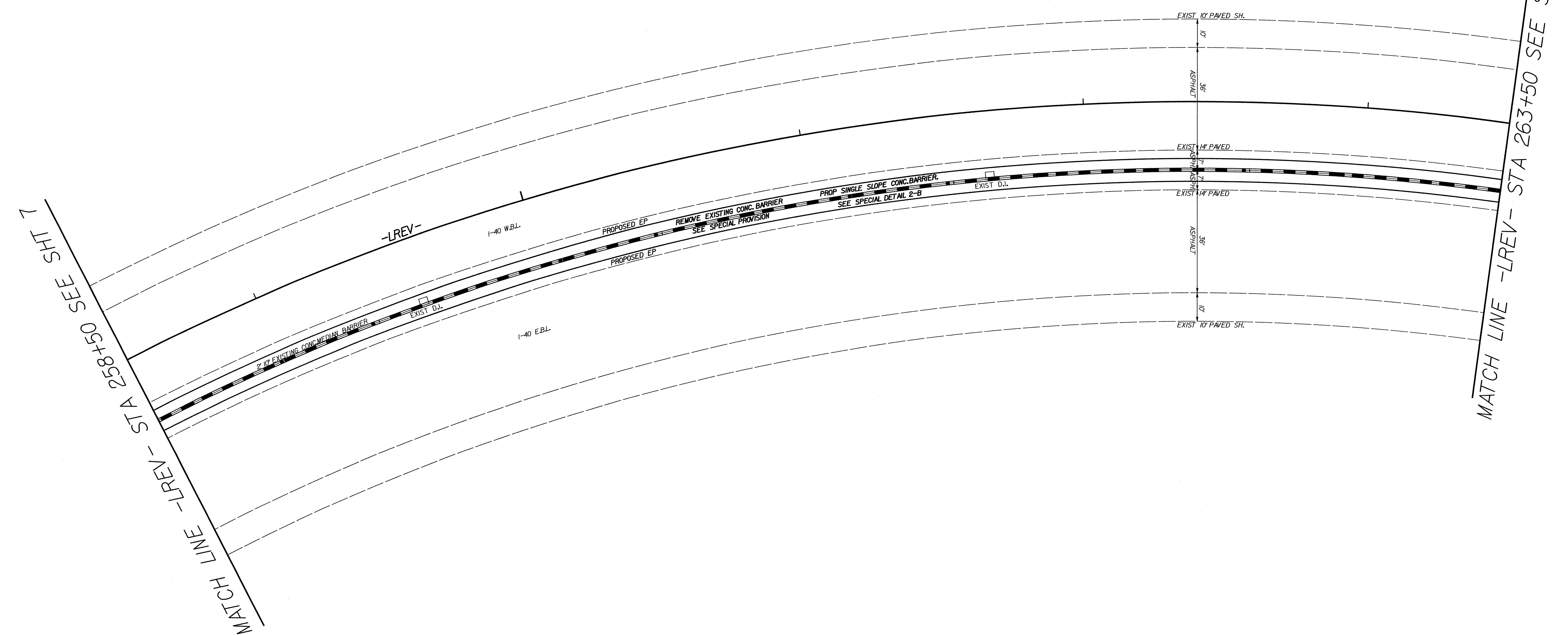
NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
No field surveys were performed.

PROJECT REFERENCE NO.	SHEET NO.
W-5117	8
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

-LREV-
 PI Sta 260+23.63
 $\Delta = 106^{\circ} 05' 07.4''$ (RT)
 $D = 6' 59' 24.0''$
 $L = 1,517.67'$
 $T = 1,089.44'$
 $R = 819.68'$

NOTE: LOCATION OF CONCRETE BARRIER
 AS DIRECTED BY THE ENGINEER




NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

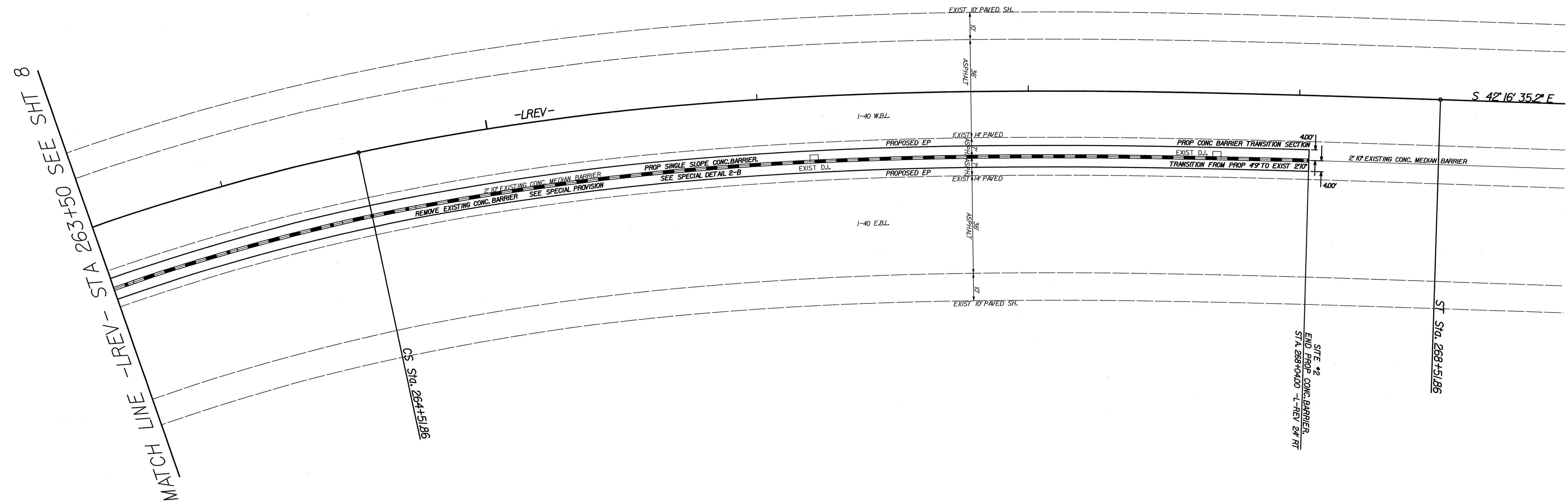
REVISIONS

8/17/99
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PROJECT REFERENCE NO.	SHEET NO.
W-5117	9
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
1-6-11	

-LREV-
 PIs Sta 265+85.96
 Os = 13° 58' 48.0"
 Ls = 400.00'
 LT = 267.50'
 ST = 134.09'

NOTE: LOCATION OF CONCRETE BARRIER AS DIRECTED BY THE ENGINEER. CONCRETE BARRIER LOCATION STATION APPROXIMATE FROM EXISTING MAPPING.



NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER.

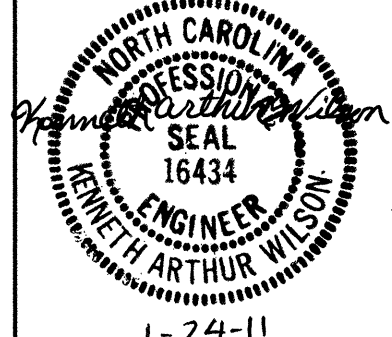
NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

REVISIONS

8/17/99

05 JAN 29 10 37 AM '07 P-o-j W5117_DDC-psh9.dgn
 \$\$\$\$ INTERMEDIATE \$\$\$

PROJECT REFERENCE NO.	SHEET NO.
W-5117	10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
1-24-11	

8/17/99

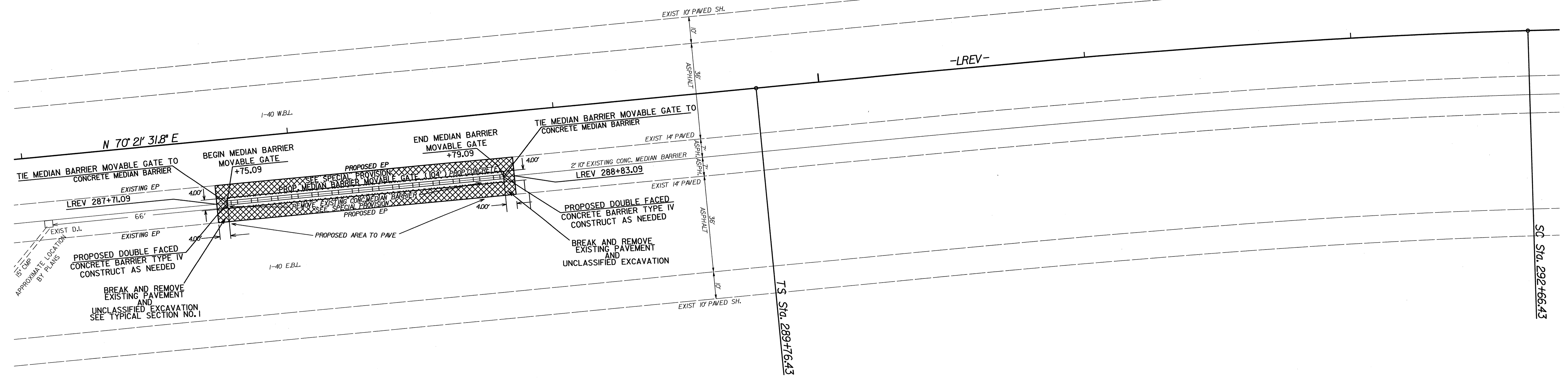
290

-LREV-
 PIs Sta 291+69.80
 Os = 3' 49' 06.0"
 Ls = 290.00'
 LT = 193.38'
 ST = 96.71'

APPROXIMATE LOCATION OF SITE MILE MARKER 69.67

NOTE: LOCATION OF GATED BARRIER AS DIRECTED BY THE ENGINEER. GATE LOCATION STATION APPROXIMATE FROM EXISTING MAPPING

REVISIONS



NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping. No field surveys were performed.

28-JAN-2011 4:27
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 \$\$\$USERNAME\$\$\$

SC Sta. 292+66.43

PROJECT REFERENCE NO. W-5117	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

8/17/99

-LREV-

Pls Sta 358+39.54
 $\Theta_s = 8' 57' 00.0''$
 $L_s = 300.00'$
 $LT = 200.26'$
 $ST = 100.23'$

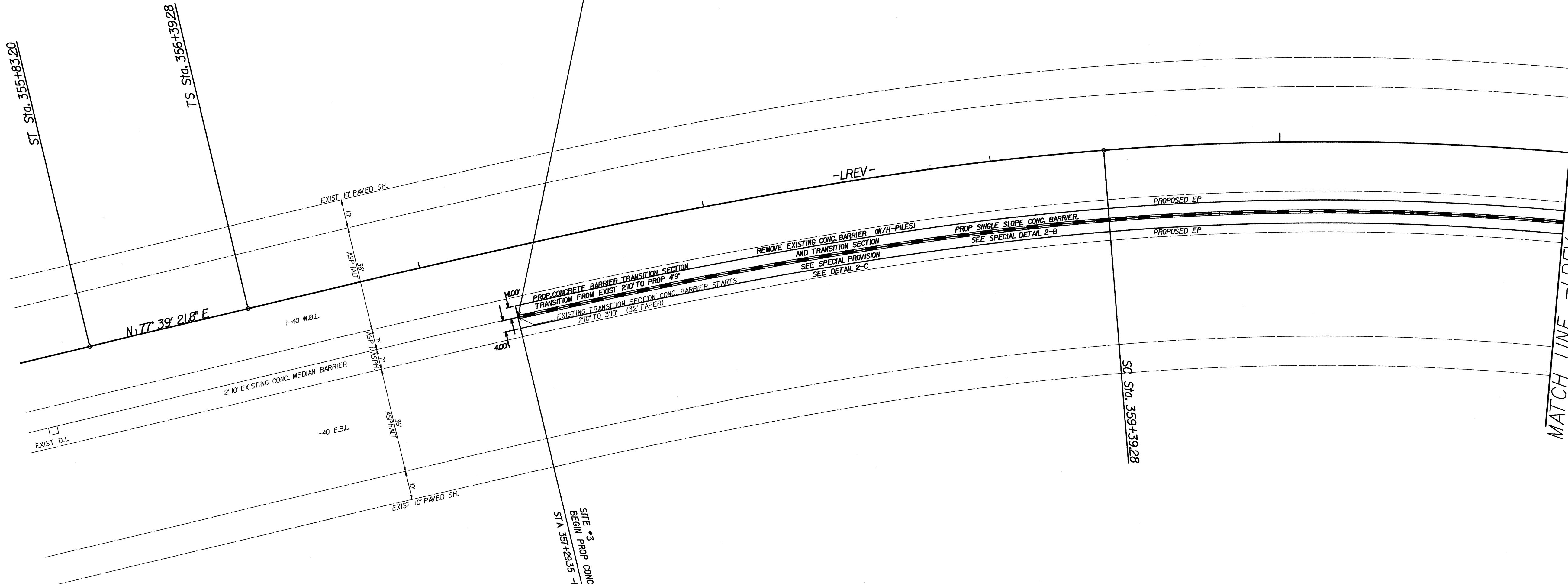
360



APPROXIMATE LOCATION OF SITE MILE MARKER 70.98

NOTE: LOCATION OF CONCRETE BARRIER AS DIRECTED BY THE ENGINEER. CONCRETE BARRIER LOCATION STATION APPROXIMATE FROM EXISTING MAPPING

REVISIONS



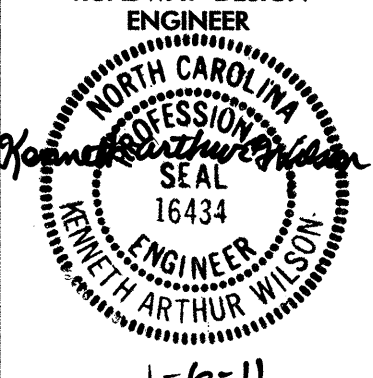
NOTE: NO EROSION CONTROL PLAN ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

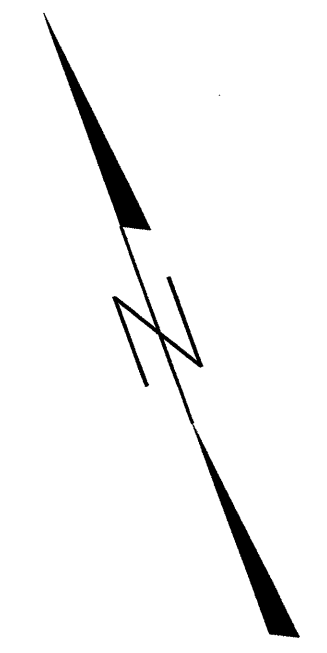
Plans were derived from existing mapping.
 No field surveys were performed.

06-JAN-2010 09:48
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8/17/99

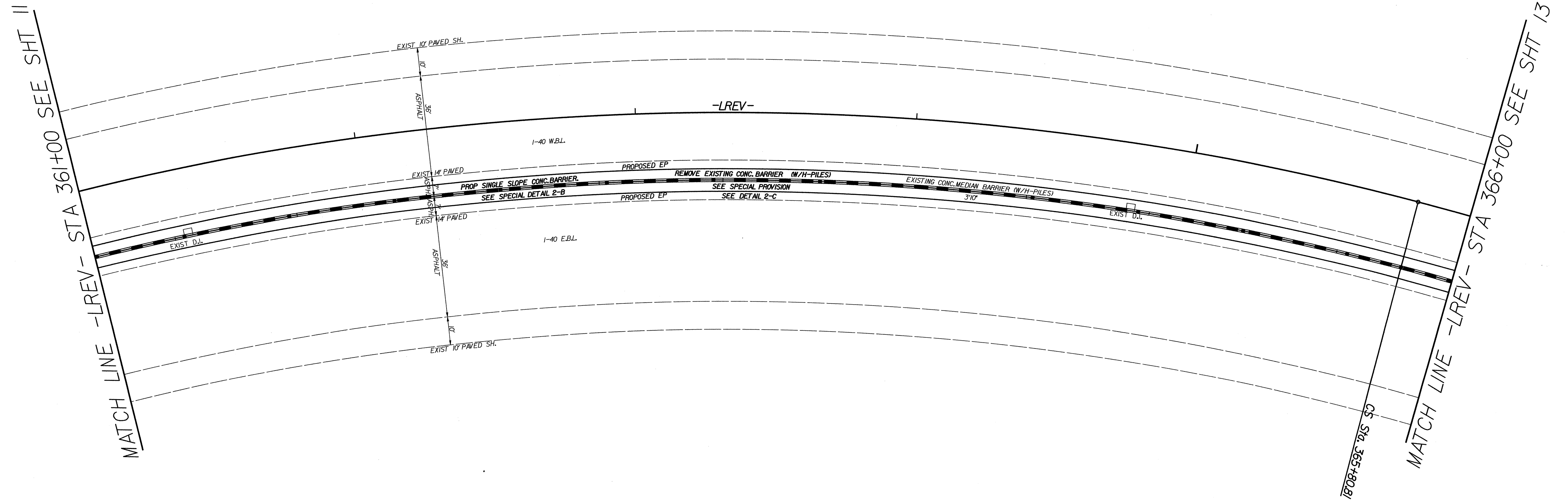
PROJECT REFERENCE NO.	SHEET NO.
W-5117	12
R/W SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	

-LREV-
 PI Sta 362+72.53
 $\Delta = 38^{\circ} 16' 40.0''$ (RT)
 $D = 5' 58'' 00.0''$
 $L = 641.53'$
 $T = 333.25'$
 $R = 960.26'$



365

NOTE: LOCATION OF CONCRETE BARRIER AS DIRECTED BY THE ENGINEER



REVISIONS

NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

06-JAN-2010 10:03
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PROJECT REFERENCE NO. W-5117	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

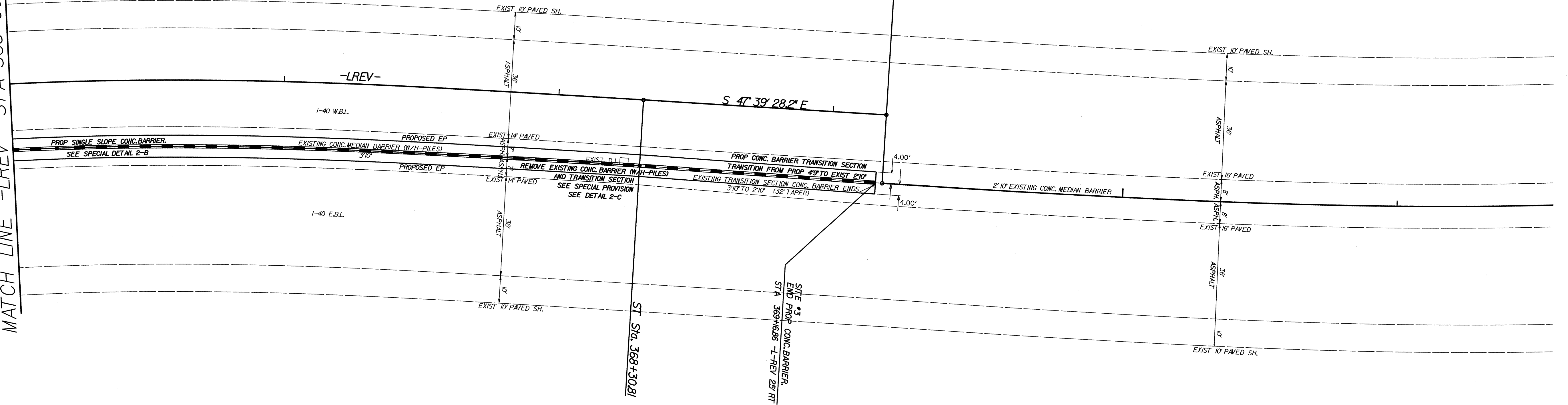
-LREV-
 Pls Sta 366+64.28
 Os = 7' 27' 30.0"
 Ls = 250.00'
 LT = 166.81'
 ST = 83.47'

NOTE: LOCATION OF CONCRETE BARRIER AS DIRECTED BY THE ENGINEER. CONCRETE BARRIER LOCATION APPROXIMATE FROM EXISTING MAPPING

-LREV-
 Pls Sta 371+46.18
 Os = 10' 30' 00.0"
 Ls = 350.00'
 LT = 233.75'
 ST = 117.04'

MATCH LINE -LREV- STA 366+00 SEE SHT 12

REVISIONS

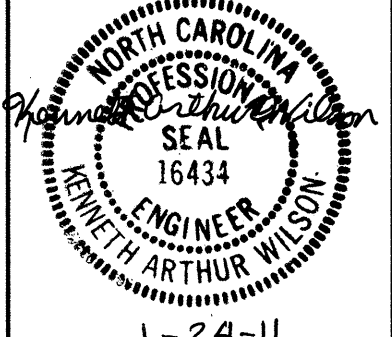


NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
 No field surveys were performed.

06-JAN-2011 10:08
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PROJECT REFERENCE NO.	SHEET NO.
W-5117	14
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	
1-24-11	

-LREV-

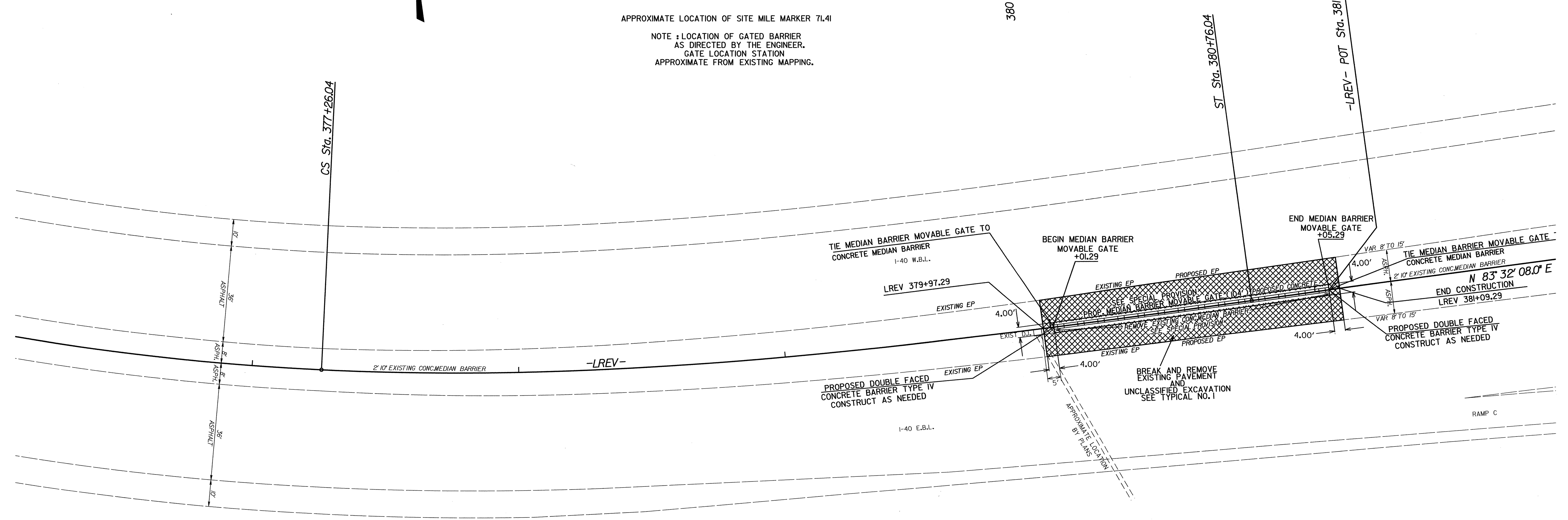
PI Sta 374+98.90	PIs Sta 378+43.08
$\Delta = 27^{\circ} 49' 00.0''$ (LT)	$\Theta_s = 10^{\circ} 30' 00.0''$
$D = 6^{\circ} 00' 00.0''$	$L_s = 350.00'$
$L = 463.61'$	$LT = 233.75'$
$T = 236.47'$	$ST = 117.04'$
$R = 954.93'$	



APPROXIMATE LOCATION OF SITE MILE MARKER 71.41

NOTE: LOCATION OF GATED BARRIER AS DIRECTED BY THE ENGINEER. GATE LOCATION STATION APPROXIMATE FROM EXISTING MAPPING.

REVISIONS



NOTE: NO EROSION CONTROL PLANS ON THIS PROJECT. CONSTRUCT EROSION CONTROL AS DIRECTED BY ENGINEER

NOTE: KEEP ALL EXISTING DRAINAGE STRUCTURES FUNCTIONING AS DESIGNED DURING CONSTRUCTION OF THIS PROJECT.

Plans were derived from existing mapping.
No field surveys were performed.

8/17/99
 28-JAN-2011 4:27
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