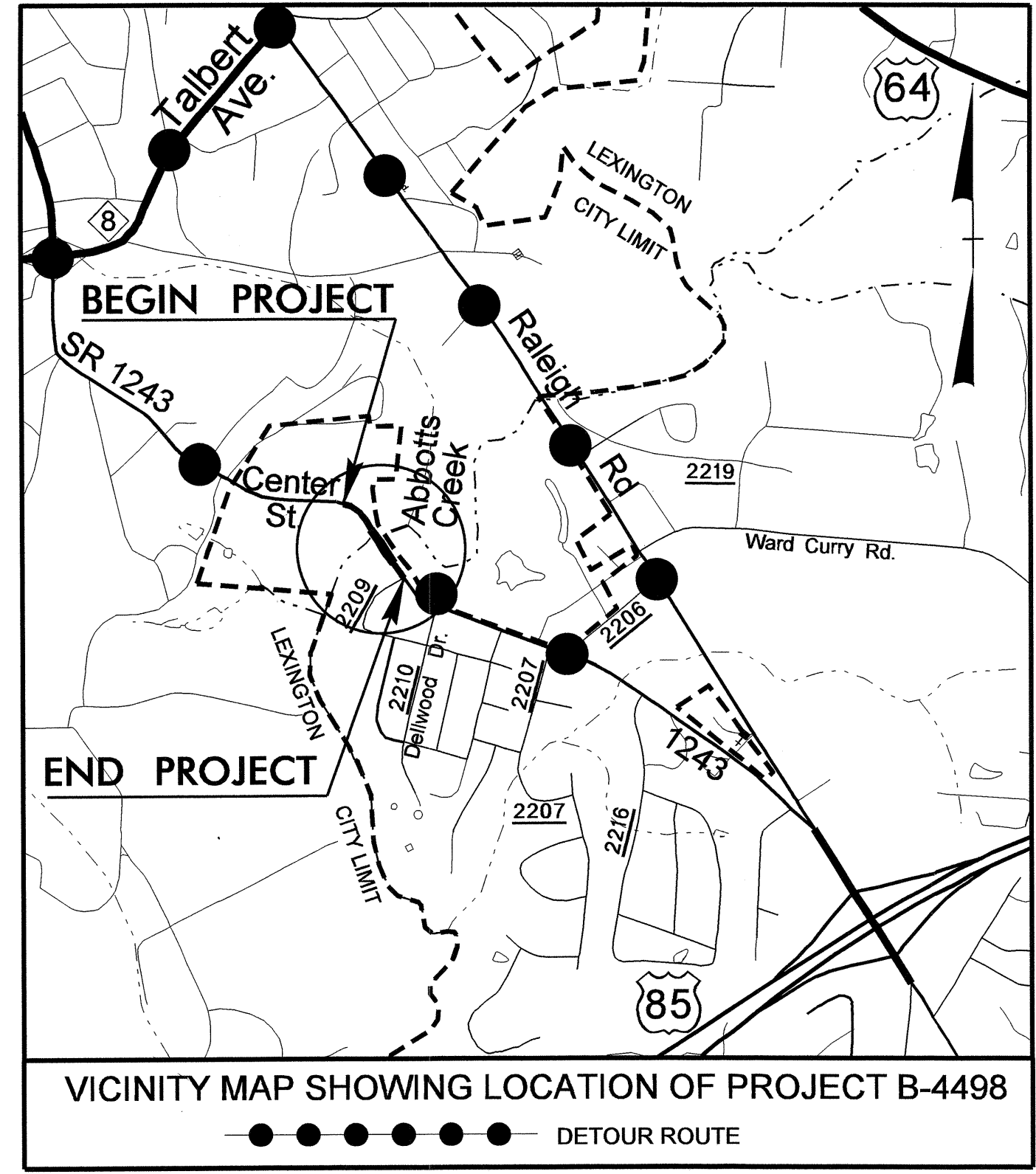


09/08/09

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

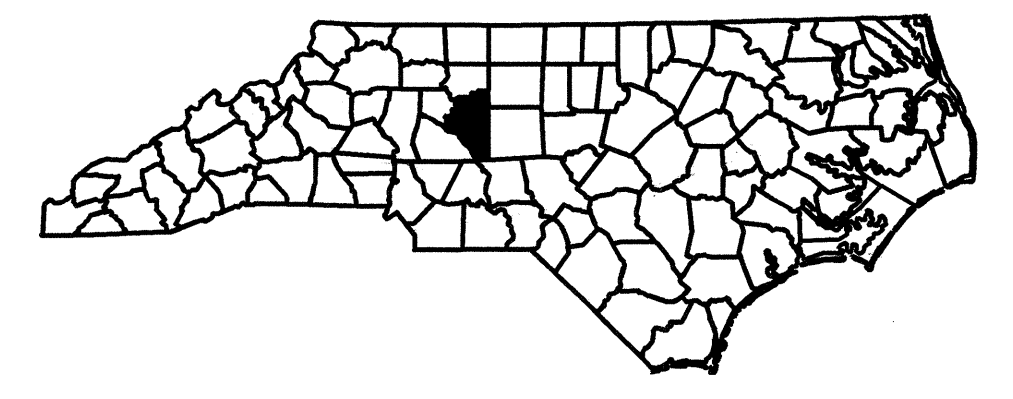


STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DAVIDSON COUNTY

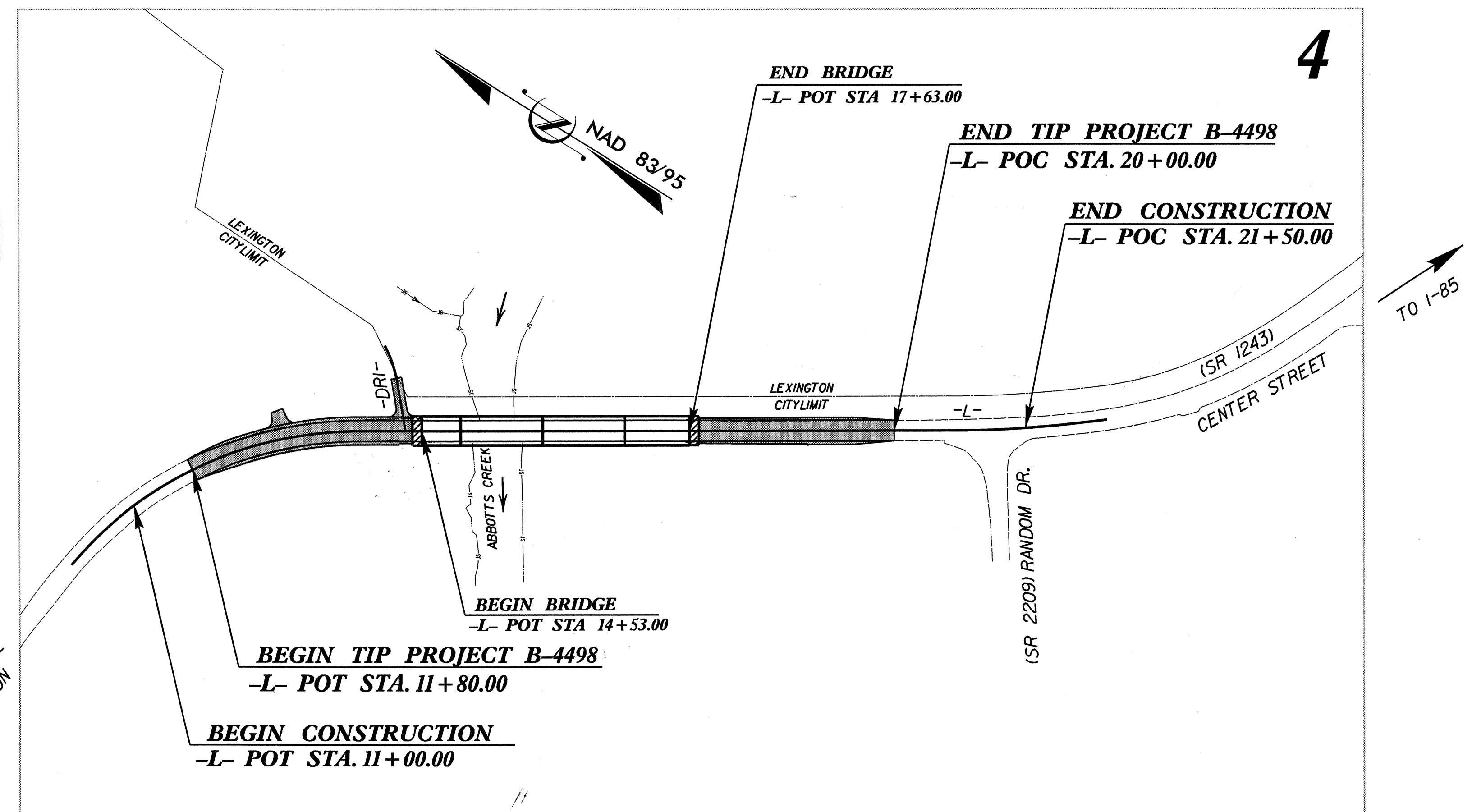
LOCATION: BRIDGE 199 ON SR 1243 (CENTER STREET) OVER ABBOTTS CREEK
TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4498	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
33731.1.1	BRSTP-1243(3)	P.E.	
33731.2.1	BRSTP-1243(3)	ROW & UTIL	
33731.3.1	BRSTP-1243(3)	CONST	



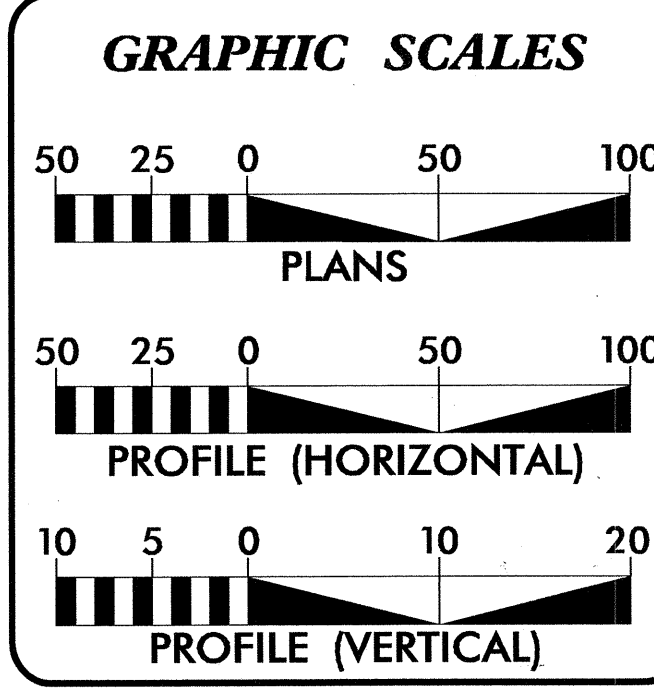
TIP PROJECT: B-4498

CONTRACT: C202738



THIS PROJECT WAS DESIGNED USING THE SUB REGIONAL TIER DESIGN GUIDELINES FOR BRIDGE PROJECTS

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT



DESIGN DATA

ADT 2011 =	6270
ADT 2031 =	7962
DHV =	12 %
D =	65 %
T =	4 % *
V =	45 MPH
* TTST 1% DUAL 3%	
FUNC. CLASS:	URBAN MINOR ARTERIAL

PROJECT LENGTH

LENGTH OF STRUCTURE TIP PROJECT B-4498 =	0.059 MILES
LENGTH OF ROADWAY TIP PROJECT B-4498 =	0.096 MILES
TOTAL LENGTH OF TIP PROJECT B-4498 =	0.155 MILES

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

2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
NOVEMBER 22, 2010

LETTING DATE:
APRIL 17, 2012

TONY HOUSER, P.E.
PROJECT ENGINEER

LEE ANN MOORE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

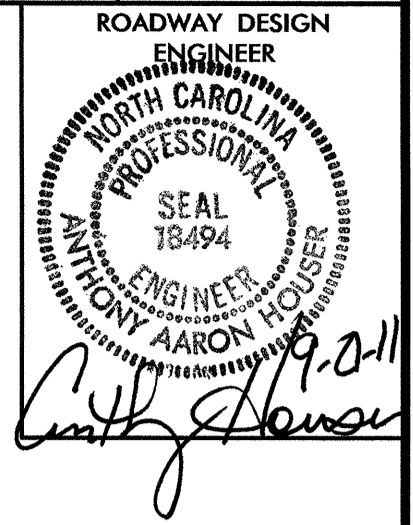
ROADWAY DESIGN ENGINEER

LEE ANN MOORE
9-21-11
PROJECT DESIGN ENGINEER

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

Art McMiller
STATE HIGHWAY DESIGN ENGINEER

21-SEP-2011 07:47
R:\Roadway\Project\B-4498_rdy_tsh.dgn
\$\$\$\$\$USERNAME\$\$\$\$\$



SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
1C	SURVEY CONTROL SHEET
2	PAVEMENT SCHEDULE, TYPICAL SECTIONS, WEDGING DETAIL, AND SHOULDER BERM GUTTER DETAIL
2A	DETAIL DRAWING - TYPE III, SHOP CURVE STRUCTURE ANCHOR UNIT
2B	DETAIL DRAWING - ANCHORAGE FOR FRAMES, BRICK/CONCRETE/PRECAST CONCRETE
2C	DETAIL DRAWING - BRIDGE APPROACH FILLS, CORED SLAB & BOX BEAM BRIDGES (SUB REGIONAL TIER)
2D, 2E	DETAIL DRAWING - METHOD OF PIPE INSTALLATION
2F	DETAIL DRAWING - CONCRETE DRIVEWAY DETAIL
3	SUMMARY OF QUANTITIES
3A	GUARDRAIL SUMMARY, EARTHWORK SUMMARY, AND ASPHALT PAVEMENT REMOVAL SUMMARY
3B	SUMMARY OF DRAINAGE QUANTITIES
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-3	TRAFFIC CONTROL PLANS
PM-1 THRU PM-2	PAVEMENT MARKING PLANS
EC-1 THRU EC-05	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-4	SIGNING PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS
X-A	CROSS-SECTION INDEX OF SHEETS
X-B	CROSS-SECTION SUMMARY
X-1 THRU X-12	CROSS-SECTIONS
S-1 THRU S-33	STRUCTURE PLANS

GENERAL NOTES:

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

**GRADE LINE:
GRADING AND SURFACING:**

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

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD 111.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 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. 560.01.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

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.

END BENTS:

THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE :

- City of Lexington - Power (Distribution)
- City of Lexington - Water (Distribution)
- City of Lexington - Natural Gas (Distribution)
- Time Warner - Cable TV
- Windstream Communications - Telephone

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY CONTRACT.

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	
200.03	Method of Clearing - Method 111
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
310.10	Driveway Pipe Construction
DIVISION 5 - SUBGRADE, BASES AND SHOULDERS	
560.01	Method of Shoulder Construction - High Side of Superelevated Curve - Method 1
DIVISION 8 - INCIDENTALS	
806.01	Concrete Right-of-Way Marker
806.02	Granite Right-of-Way Marker
815.03	Pipe Underdrain and Blind Drain
840.00	Concrete Base Pad for Drainage Structures
840.29	Frames and Narrow Slot Flat Grates
840.35	Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates
840.46	Traffic Bearing Precast Drainage Structure
846.04	Drop Inlet Installation in Shoulder Berm Gutter
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.02	Guide for Rip Rap at Pipe Outlets

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

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale
*S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
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	-WLB-
Proposed Wetland Boundary	-WLB-
Existing Endangered Animal Boundary	-EAB-
Existing Endangered Plant Boundary	-EPB-
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	○ 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	▬
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	○ RW
Proposed Right of Way Line with Iron Pin and Cap Marker	○ RW ▲
Proposed Right of Way Line with Concrete or Granite Marker	○ RW ▲
Existing Control of Access	○ CA
Proposed Control of Access	○ CA
Existing Easement Line	-E-
Proposed Temporary Construction Easement	-E-
Proposed Temporary Drainage Easement	-TDE-
Proposed Permanent Drainage Easement	-PDE-
Proposed Permanent Drainage / Utility Easement	-DUE-
Proposed Permanent Utility Easement	-PUE-
Proposed Temporary Utility Easement	-TUE-
Proposed Aerial Utility Easement	-AUE-
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 Curb Ramp	○ CR
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	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	○ S
Storm Sewer	-S-

UTILITIES:

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

TELEPHONE:

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

WATER:

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

TV:

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

GAS:

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

SANITARY SEWER:

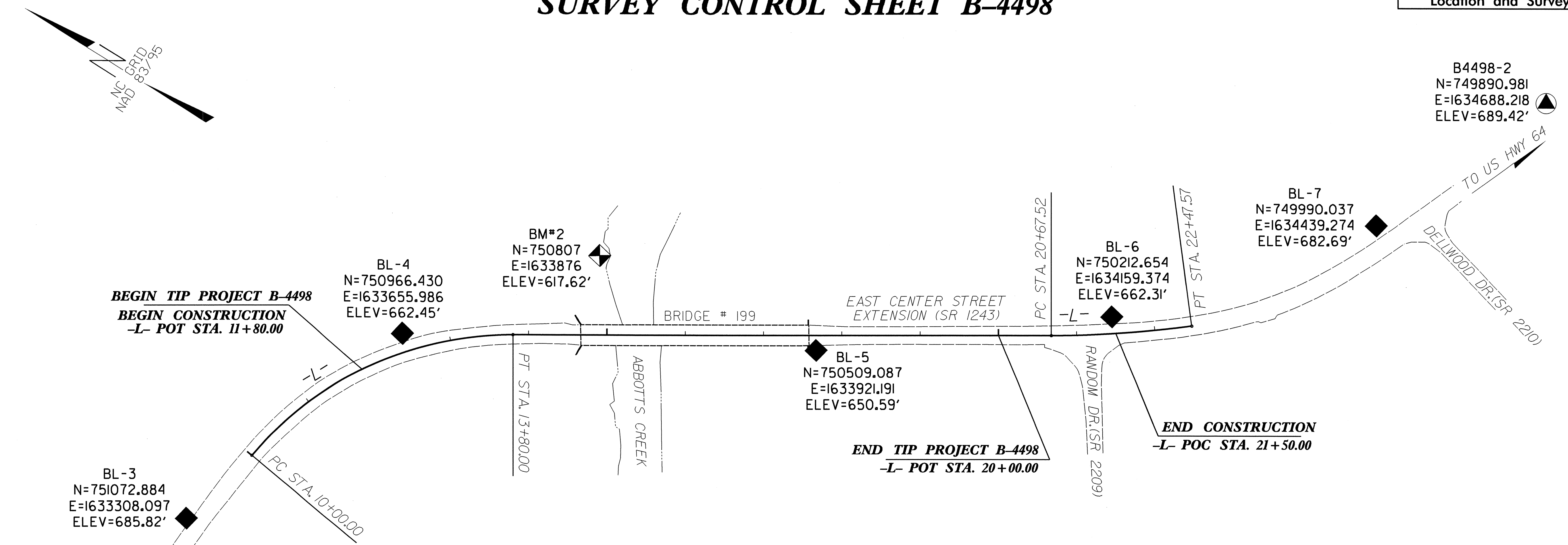
Sanitary Sewer Manhole	○ SS
Sanitary Sewer Cleanout	○
U/G Sanitary Sewer Line	-SS-
Above Ground Sanitary Sewer	-A/G Sanitary Sewer-
Recorded SS Forced Main Line	-FSS-
Designated SS Forced Main Line (S.U.E.*)	-FSS-

MISCELLANEOUS:

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

SURVEY CONTROL SHEET B-4498

PROJECT REFERENCE NO. B-4498	SHEET NO. 1C
Location and Surveys	



BEGIN TIP PROJECT B-4498
BEGIN CONSTRUCTION
-L- POT STA. 11+80.00

END TIP PROJECT B-4498
-L- POT STA. 20+00.00

END CONSTRUCTION
-L- POC STA. 21+50.00

POINT	DESC.	NORTH	EAST	ELEVATION	L STATION	OFFSET
B4498-1	GPS-1	749408.0480	1635854.6780	699.59	OUTSIDE PROJECT LIMITS	
B4498-2	GPS-2	749890.9810	1634688.2180	689.42	OUTSIDE PROJECT LIMITS	
3	BL-3	751072.8840	1633308.0970	685.82	OUTSIDE PROJECT LIMITS	
4	BL-4	750966.4300	1633655.9860	662.45	12+43.65	23.68 LT
5	BL-5	750509.0870	1633921.1910	650.59	17+66.84	19.14 RT
6	BL-6	750212.6540	1634159.3740	662.31	21+45.96	21.40 LT
7	BL-7	749990.0370	1634439.2740	682.69	OUTSIDE PROJECT LIMITS	

NOTES:

1. THE CONTROL DATA FOR THIS PROJECT CAN BE FOUND ELECTRONICALLY BY SELECTING PROJECT CONTROL DATA AT:
[HTTP://WWW.NCDOT.ORG/DOH/PRECONSTRUCT/HIGHWAY/LOCATION/PROJECT/](http://www.ncdot.org/doh/preconstruct/highway/location/project/)
 THE FILES TO BE FOUND ARE AS FOLLOWS:
 B4498_LS_CONTROL.TXT

SITE CALIBRATION INFORMATION HAS NOT BEEN PROVIDED FOR THIS PROJECT. IF FURTHER INFORMATION IS NEEDED, PLEASE CONTACT THE LOCATION AND SURVEYS UNIT.

- INDICATES GEODETIC CONTROL MONUMENTS USED OR SET FOR HORIZONTAL PROJECT CONTROL BY THE NCDOT LOCATION AND SURVEYS UNIT.
- PROJECT CONTROL ESTABLISHED USING GLOBAL POSITIONING SYSTEM.
- NETWORK ESTABLISHED FROM NGS ONLINE POSITIONING SERVICE (OPUS)
- SEE GPS CALIBRATION SHEET FOR HORIZONTAL AND VERTICAL COORDINATE VALUES.

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCGS FOR MONUMENT "B4498-1" WITH NAD 83/95 STATE PLANE GRID COORDINATES OF NORTHING: 749408.048(ft) EASTING: 1635854.678(ft) ELEVATION: 699.59(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99989024

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "B4498-1" TO -L- STATION 10+00 IS N 56°04'58.0" W 2933.17'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NAVD 88

BENCHMARKS (NAVD 88)

.....

BM1 ELEVATION = 699.72
 N 751086 E 1633107
 BL3-TO BM1 N 86°13'34" W 201.42'
 RR SPIKE SET IN BASE OF POWER POLE OWNED BY CITY OF LEXINGTON * 1530 AND BEING ON THE NORTH SIDE OF CENTER STREET EXTENSION.

.....

BM2 ELEVATION = 617.62
 N 750807 E 1633876
 L STATION 14+91 102 LEFT
 RR SPIKE SET IN BASE OF 20" BIRCH TREE OFF THE WESTERN EDGE OF ABBOTTS CREEK

.....

BM3 (B4498-2) ELEVATION = 689.42'
 N 749891 E 1634688
 OUTSIDE PROJECT LIMITS

.....

NOTE: DRAWING NOT TO SCALE

27 APR 2011 09:44 AM B4498-1s-1c.dgn

6/2/99

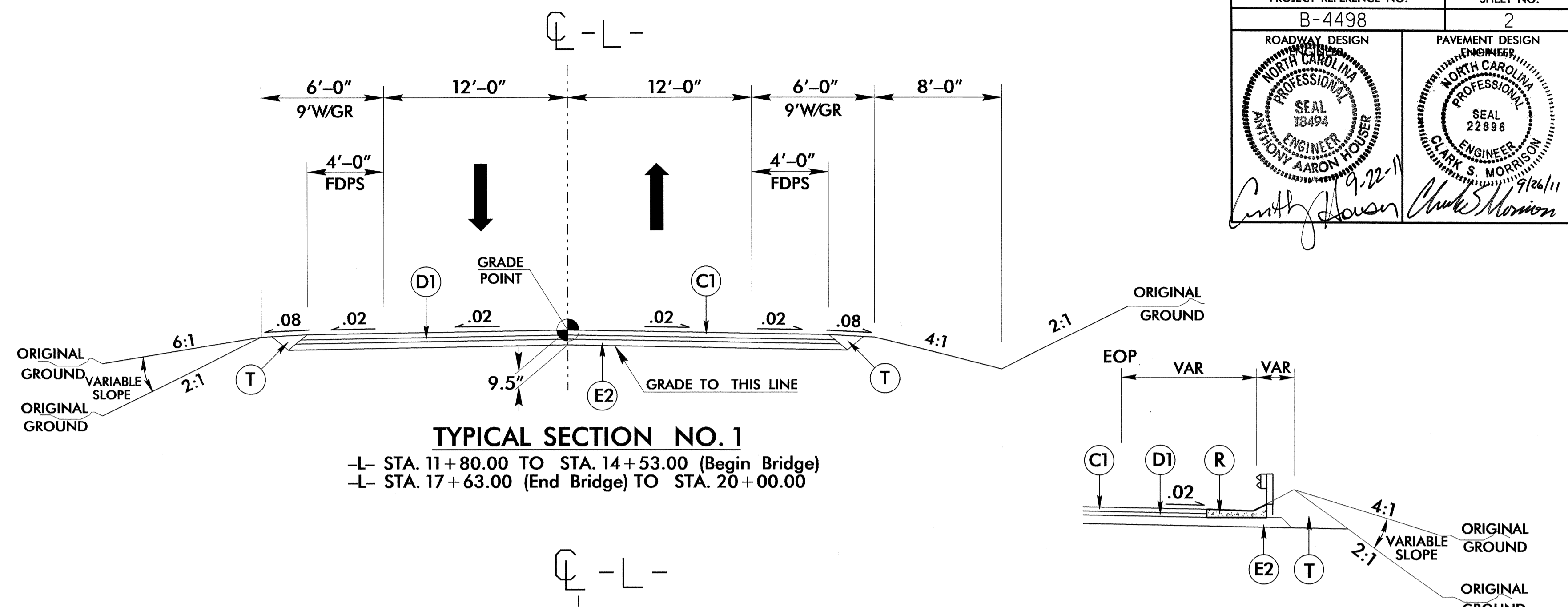
PAVEMENT SCHEDULE

A1	6" JOINTED CONCRETE REINFORCED WITH 4"x4" W3XW3 WIRE MESH OR 6"x6" W4.5XW4.5 WIRE Mesh
C1	PROP. APPROX. 1.5" ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B AT AN AVERAGE RATE OF 168 LBS. PER SQ. YD.
C2	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5B, AT AN AVERAGE RATE OF 112 LBS. PER SQ. YD. PER 1" DEPTH. TO BE PLACED IN LAYERS NOT LESS THAN 1.5" OR GREATER THAN 2" IN DEPTH.
D1	PROP. APPROX. 3.5" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 399 LBS. PER SQ. YD.
D2	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I 19.0B, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1" DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 2.5" IN DEPTH OR GREATER THAN 4" IN DEPTH.
E1	PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.
E2	PROP. APPROX. 4.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B AT AN AVERAGE RATE OF 513 LBS. PER SQ. YD.
J1	PROP. 6" AGREGATE BASE COURSE
R	SHOULDER BERM GUTTER
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAIL)

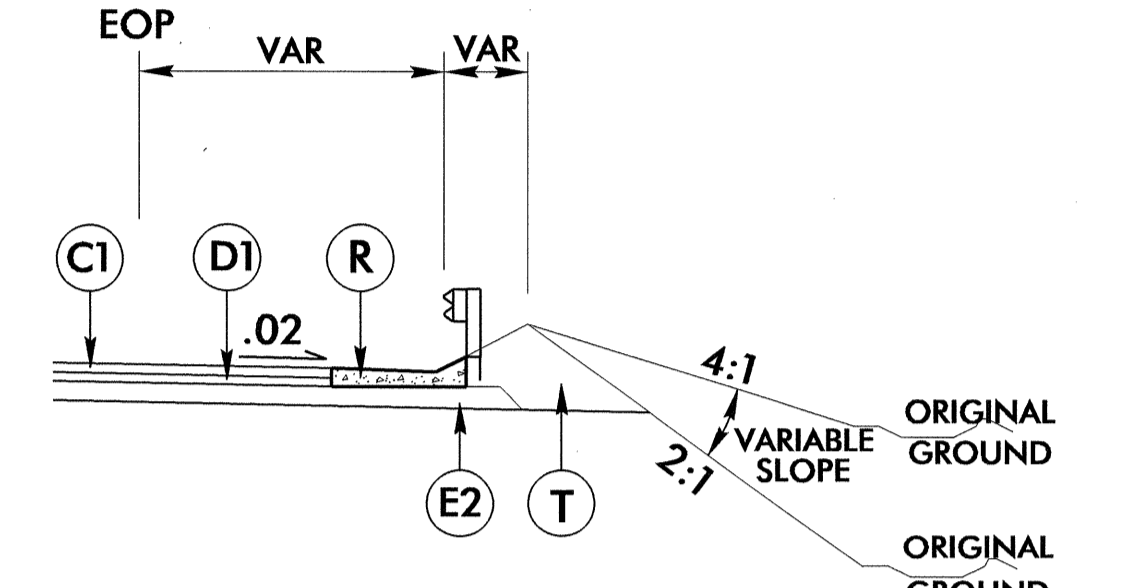
NOTE: PAVEMENT EDGE SLOPE ARE 1:1 UNLESS SHOWN OTHERWISE.

PROJECT REFERENCE NO. B-4498	SHEET NO. 2
ROADWAY DESIGN NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18494 ANTHONY AARON HOUSER	PAVEMENT DESIGN NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22896 CLARK S. MORRISON

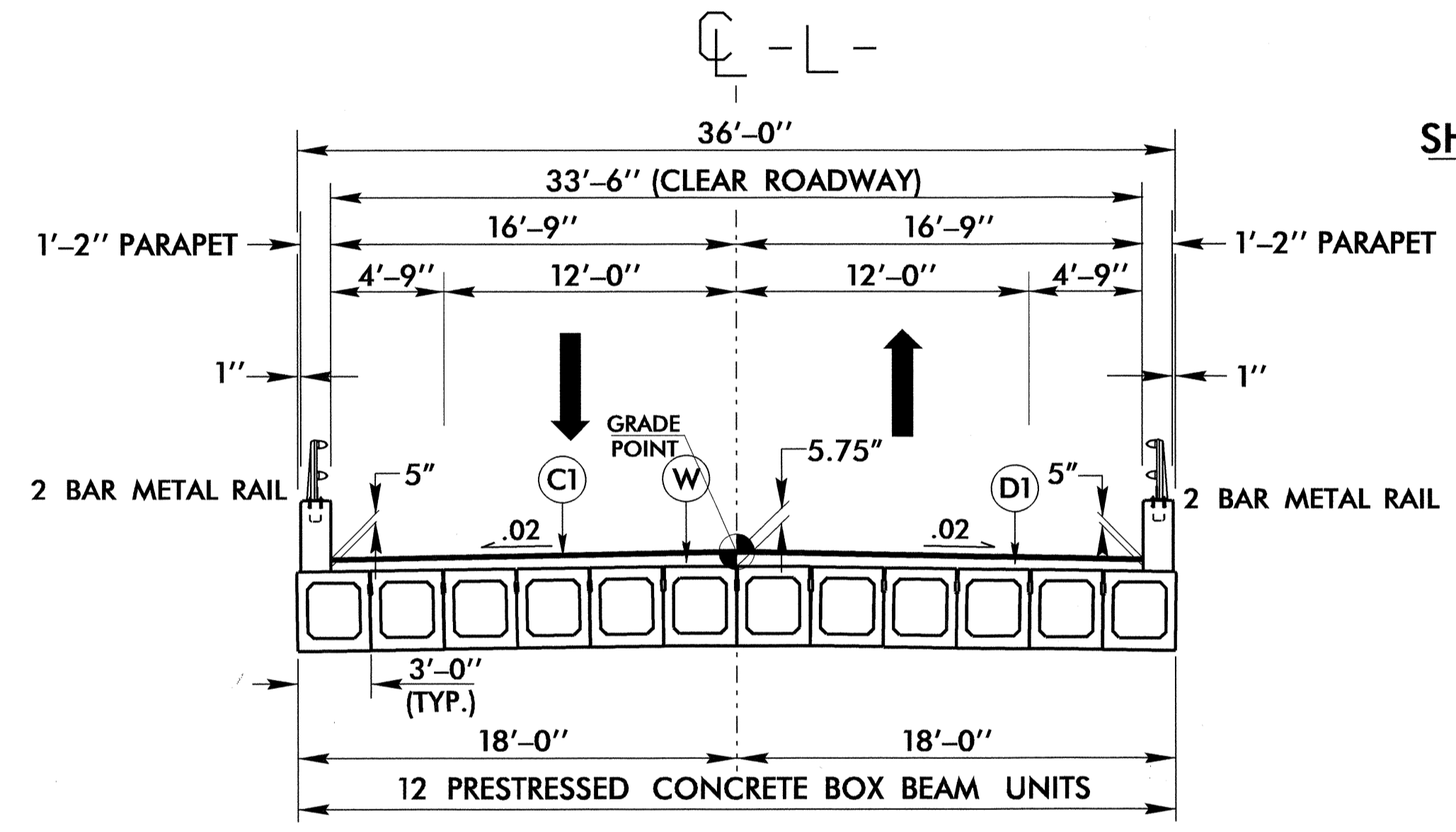
9/22/11
9/26/11



TYPICAL SECTION NO. 1
 -L- STA. 11+80.00 TO STA. 14+53.00 (Begin Bridge)
 -L- STA. 17+63.00 (End Bridge) TO STA. 20+00.00

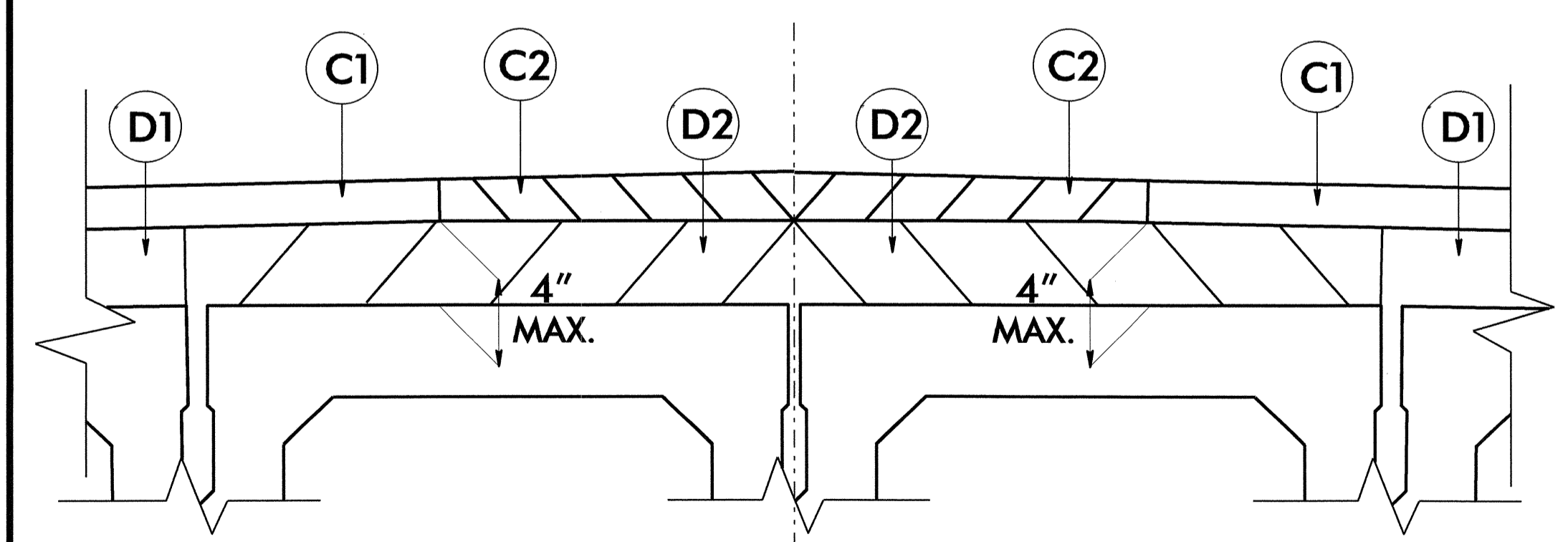


SHOULDER BERM GUTTER DETAIL:
 -L- STA. 14+26.00 TO STA. 14+42.00 RT.
 -L- STA. 17+74.00 TO STA. 19+50.00 LT.
 -L- STA. 17+74.00 TO STA. 19+00.00 RT.

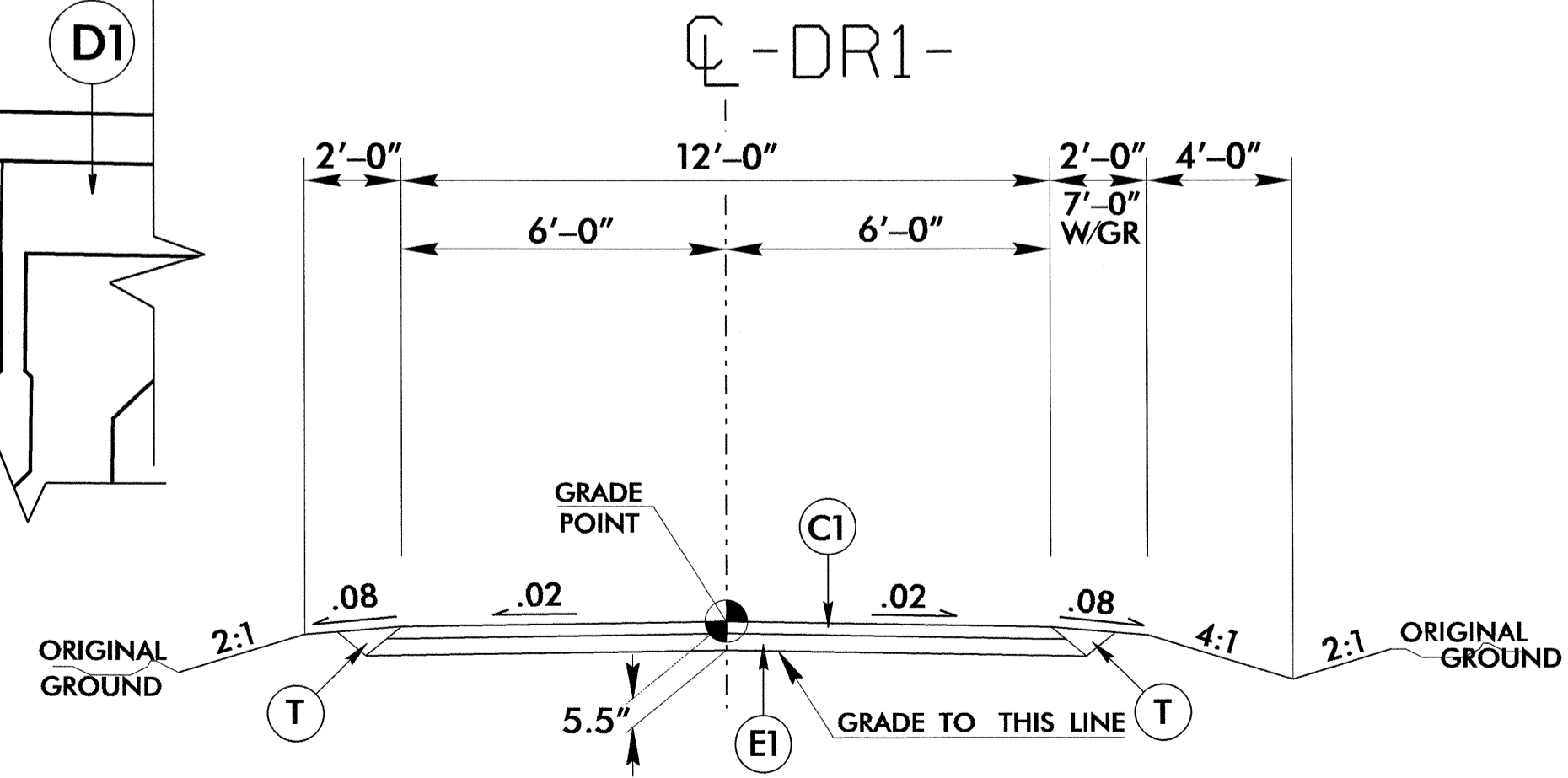


TYPICAL SECTION ON PROPOSED BRIDGE

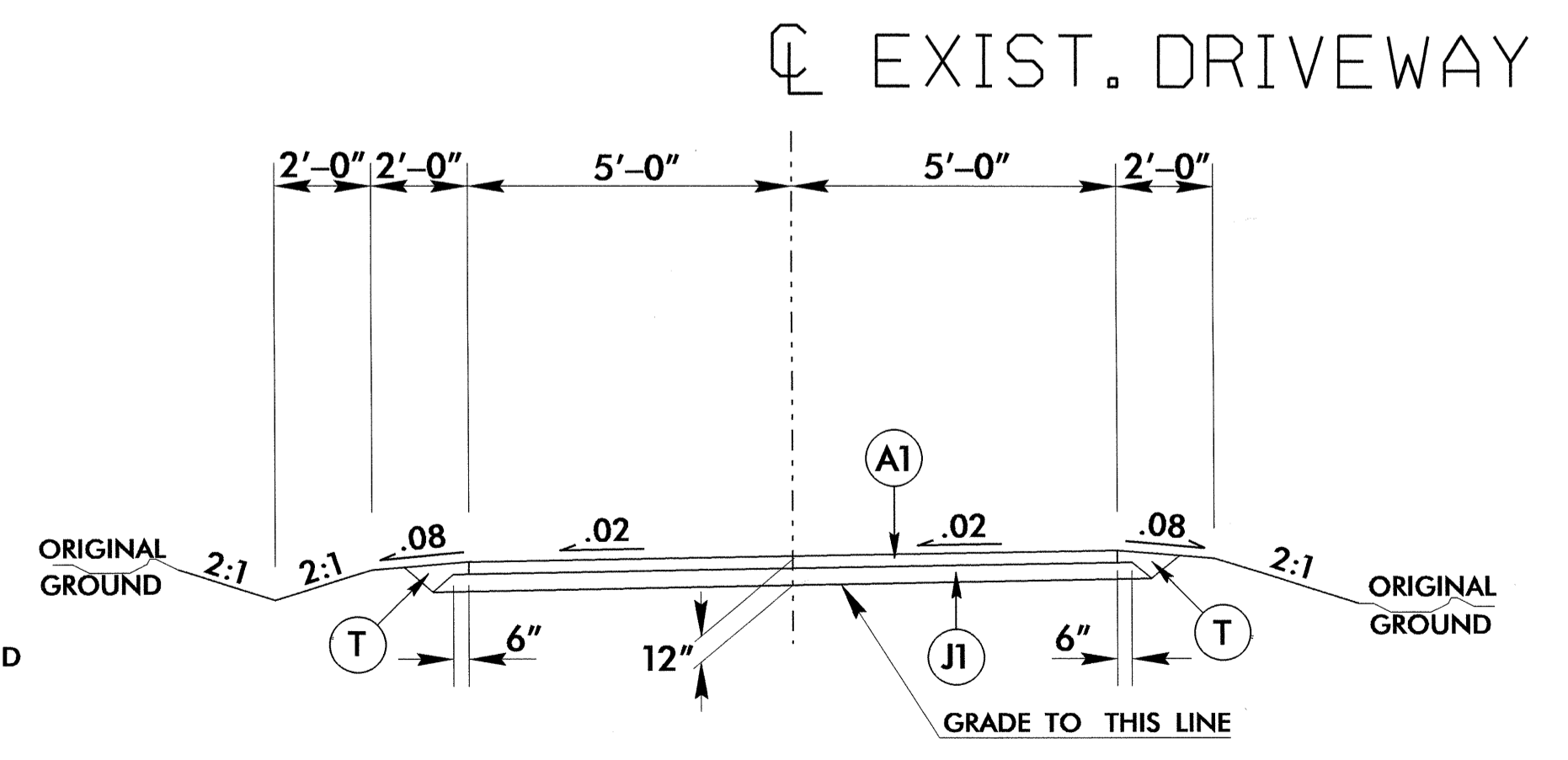
USE BRIDGE TYPICAL SECTION:
 -L- STA. 14+53.00 (Begin Bridge)
 To STA. 17+63.00 (End Bridge)



Wedging Detail on Bridge



TYPICAL SECTION NO. 2
 -DRI- STA. 10+40.00 TO STA. 10+86.31



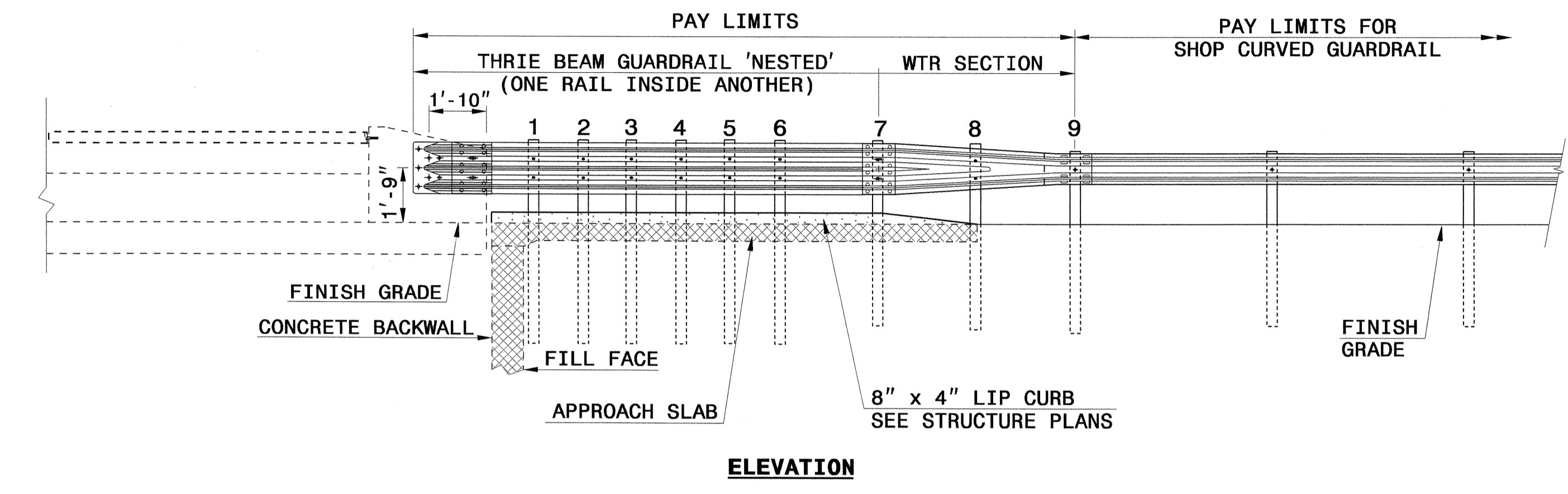
TYPICAL SECTION NO. 3
 TO BE USED ON PARCEL #4

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 4498.DWG

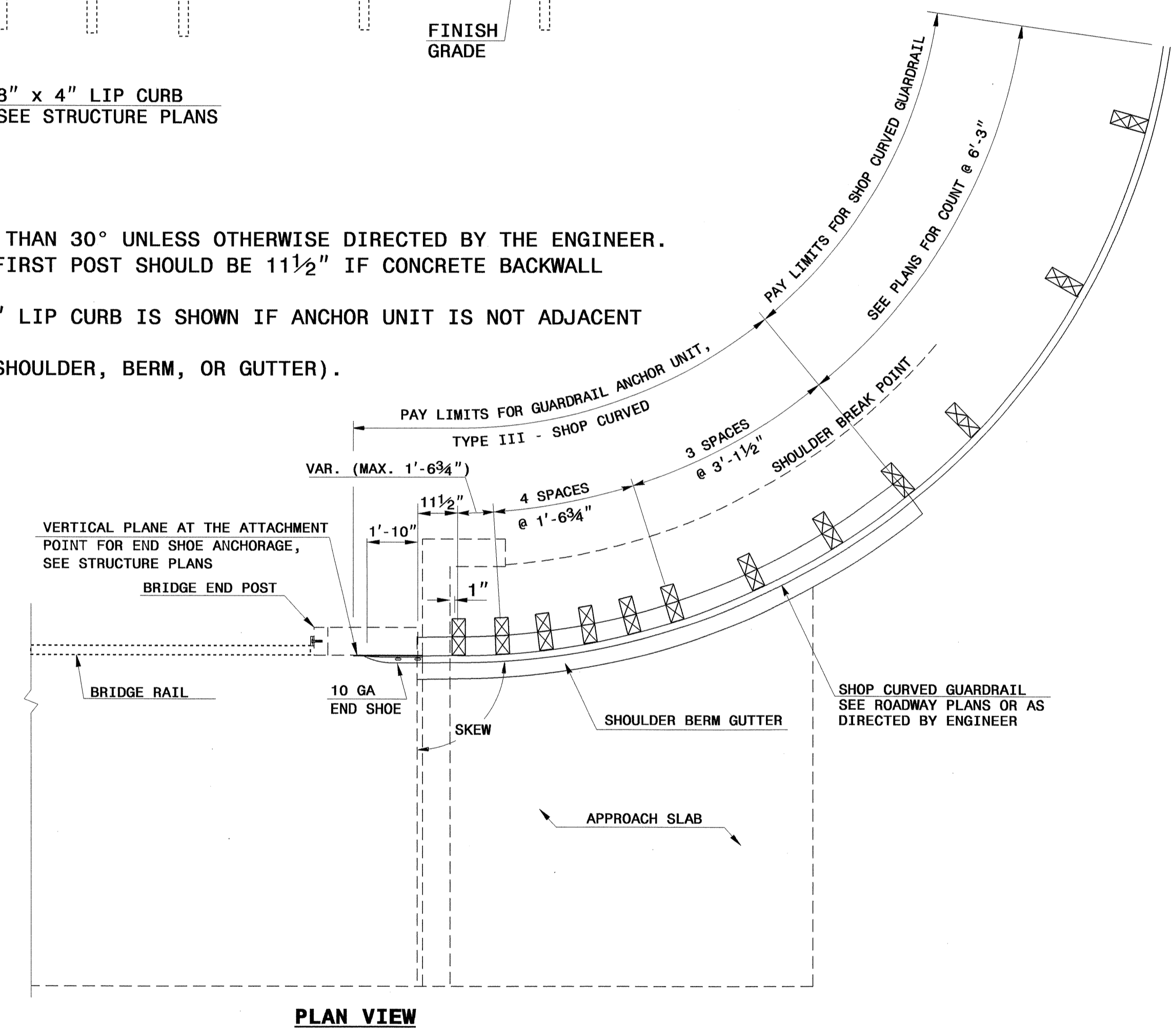
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
TYPE III - SHOP CURVED
STRUCTURE ANCHOR UNIT

SHEET 1 OF 1
TYPE III SC



NOTE:
 **POST NOT REQUIRED FOR SKEW ANGLES GREATER THAN 150° OR LESS THAN 30° UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
 *THE DISTANCE FROM END OF BRIDGE RAIL TO CENTER LINE OF THE FIRST POST SHOULD BE 11½" IF CONCRETE BACKWALL IS NOT PRESENT.
 -SHOULDER BERM GUTTER MUST BE INSTALLED TO THE LIMITS 8" x 4" LIP CURB IS SHOWN IF ANCHOR UNIT IS NOT ADJACENT TO AN APPROACH SLAB.
 -MEASURE GUARDRAIL HEIGHT FROM THE TOP OF ADJACENT SURFACE (SHOULDER, BERM, OR GUTTER).
 -USE NO STEEL POSTS WITHIN THE GUARDRAIL ANCHOR UNIT LIMITS.
 -LAP JOINTS IN THE DIRECTION OF TRAFFIC FLOW.
 -SEE STANDARD 862.03 SHEET 4 FOR POST SECTIONS 1 THRU 9.

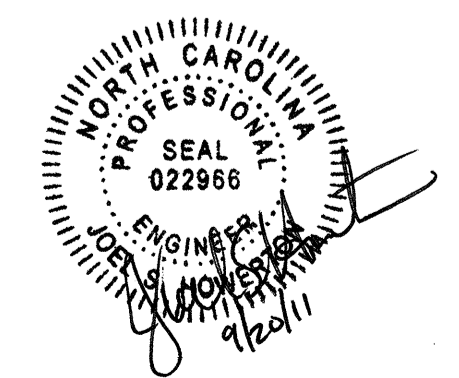


**GUARDRAIL ANCHOR UNIT, TYPE III - SHOP CURVED
FOR ATTACHMENT TO RAIL ON BRIDGE**

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

ENGLISH DETAIL DRAWING FOR
TYPE III - SHOP CURVED
STRUCTURE ANCHOR UNIT

SHEET 1 OF 1
TYPE III SC



CONTRACT STANDARDS & DEVELOPMENT UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6900 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: nbritt DATE: 01-26-11
 CHECKED BY: _____ DATE: _____
 FILE SPEC.: details/nbritt/english/bridge/b4498typeiiiisc.dgn

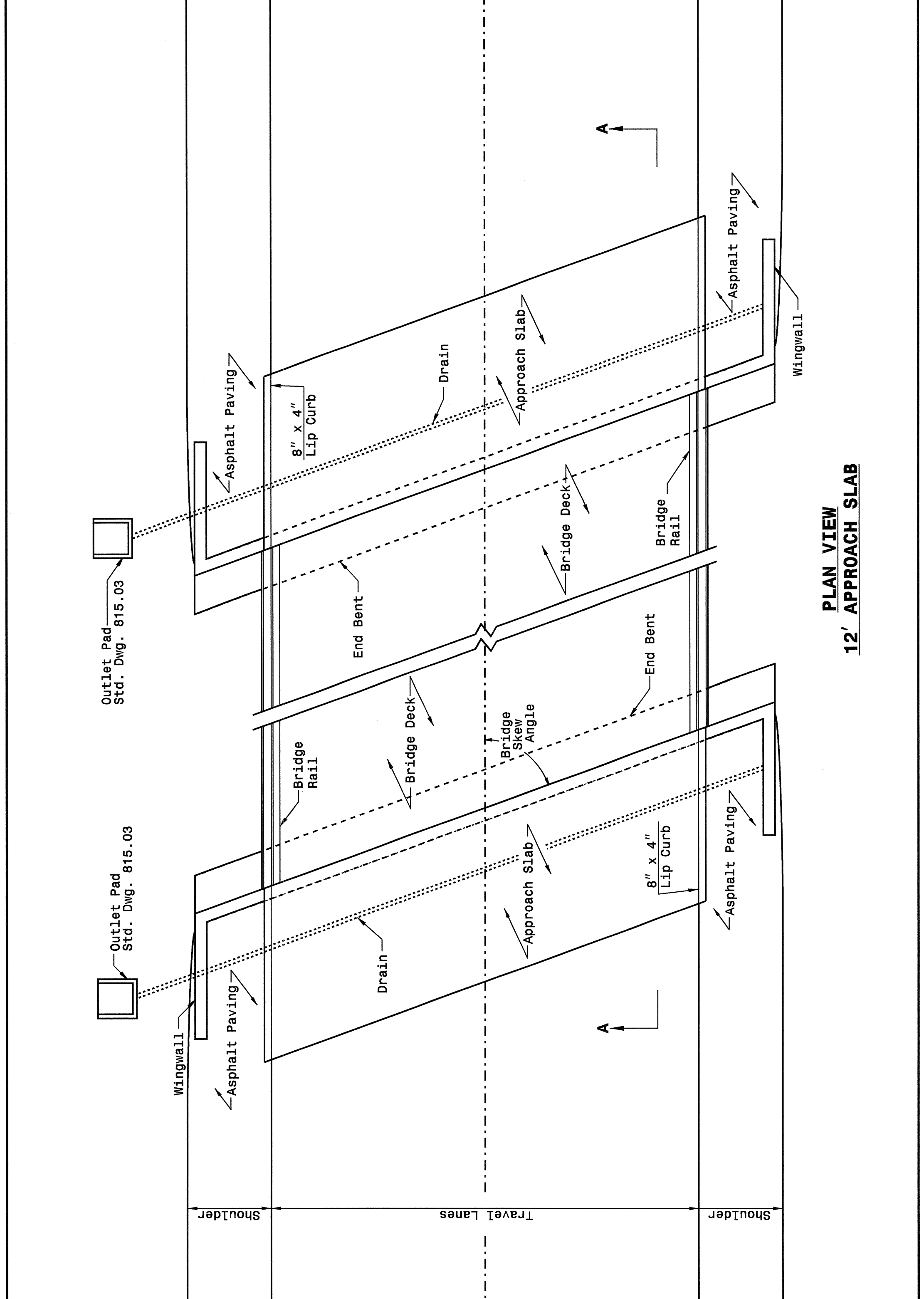
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 SYSTEMS
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STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

SHEET 1 OF 2
422D11



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

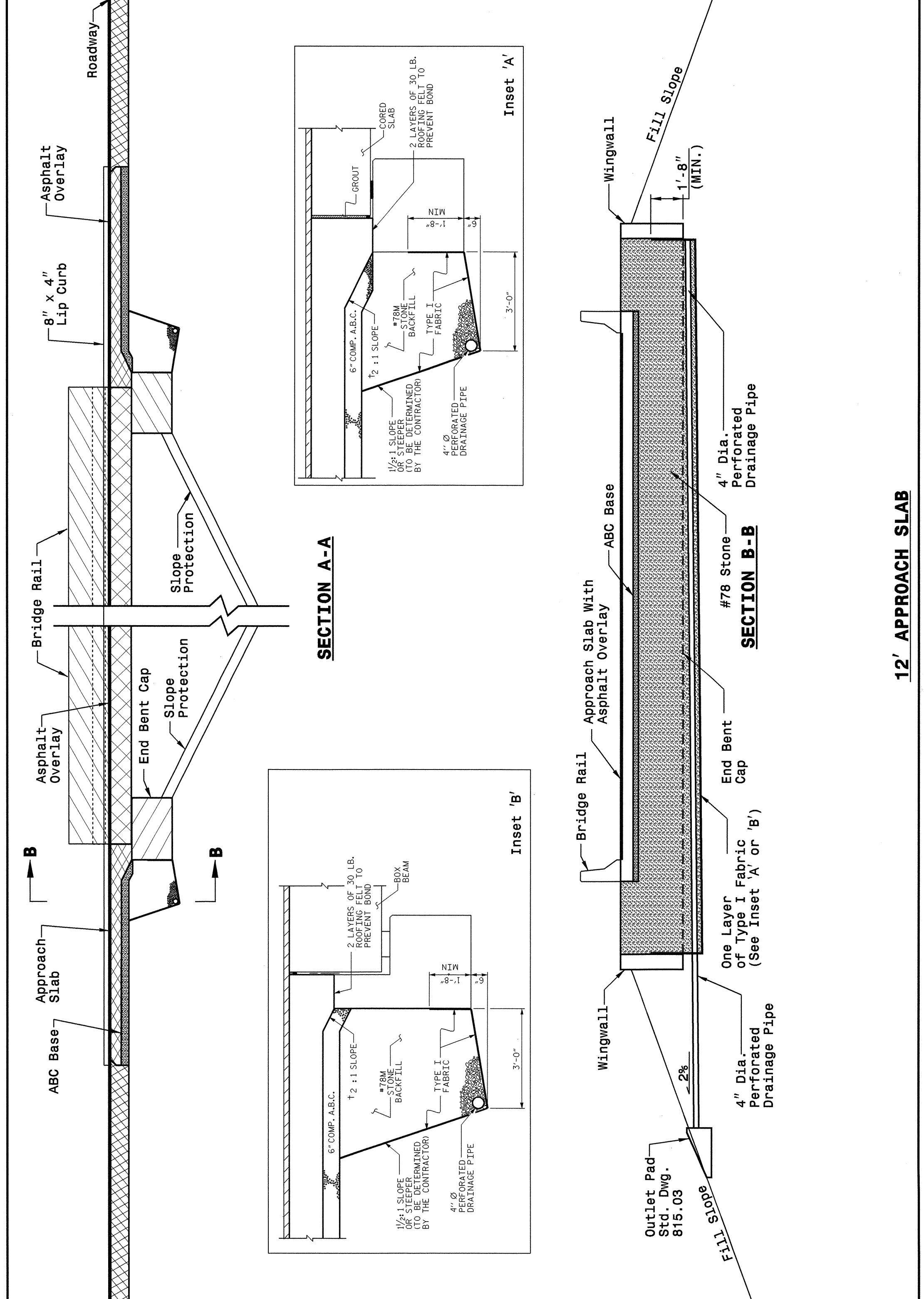
ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

SHEET 1 OF 2
422D11

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

ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

SHEET 2 OF 2
422D11



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

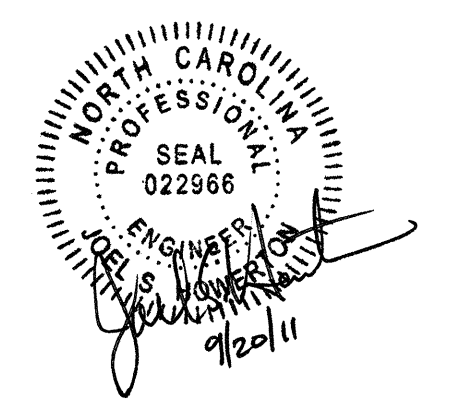
ENGLISH DETAIL DRAWING FOR
BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

SHEET 2 OF 2
422D11

PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-707-6900 FAX 919-250-4119

BRIDGE APPROACH FILLS
CORED SLAB & BOX BEAM BRIDGES
SUB REGIONAL TIER

ORIGINAL BY: K. A. Kempf DATE: 6-10-08
MODIFIED BY: DATE:
CHECKED BY: DATE:
FILE SPEC.: kkempf\english\bridge approach fills.dgn



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\$\$\$\$SERVING\$\$\$\$

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

7-06 ENGLISH DETAIL DRAWING FOR METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

SHEET 1 OF 3
300D01

GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
 TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
 LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

LEGEND:
 - - - - - SPRINGLINE OF PIPE
 [Hatched Pattern] SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.
 [Wavy Pattern] APPROVED SUITABLE LOCAL MATERIAL.
 [Horizontal Line Pattern] UNDISTURBED EARTH MATERIAL
 [Cross-hatched Pattern] SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

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

7-06 ENGLISH DETAIL DRAWING FOR METHOD OF PIPE INSTALLATION

RIGID PIPE

SHEET 2 OF 3
300D01

GENERAL NOTES:
 I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.
 O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.
 H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.
 TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.
 LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

LEGEND:
 - - - - - SPRINGLINE OF PIPE
 [Hatched Pattern] SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 BELOW SPRINGLINE.
 [Wavy Pattern] APPROVED SUITABLE LOCAL MATERIAL ABOVE SPRINGLINE.
 [Horizontal Line Pattern] UNDISTURBED EARTH MATERIAL
 [Cross-hatched Pattern] SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH ENGINEERING FABRIC AS DIRECTED BY THE ENGINEER.

**PROJECT SERVICES UNIT
 STANDARDS AND SPECIAL DESIGN**
 Office 919-707-6900 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: KKempf DATE: 5-15-09
 MODIFIED BY: [Signature] DATE: 7/30/09
 CHECKED BY: [Signature] DATE: 7/30/09
 FILE SPEC: /eric/gard/stds/stdsdetails/30001/0300d01.dgn



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

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 FILL HEIGHT TABLES

FLEXIBLE PIPE

Round Corrugated Steel Pipe
2 2/3 x 1/2 corrugation **

Diameter (inches)	Minimum cover (inches)		Maximum Height of Cover (feet)	
	12	14	12	10
12	12	204	256	8
15	12	162	204	
18	12	135	169	239
21	12	115	145	204
24	12	100	126	178
30	12	79	100	142
36	12	65	83	117
42	12	55	70	100
48	12	48	61	87
54	12	42	54	77
60	12	36	48	69
66	12	30	42	61
72	12	24	36	54
78	12	18	30	48
84	12	12	24	42

Round Corrugated Aluminum Pipe
2 2/3 x 1/2 corrugation **

Diameter (inches)	Minimum cover (inches)		Maximum Height of Cover (feet)	
	12	14	12	10
12	12	123	155	218
15	12	98	123	174
18	12	81	102	144
21	12	69	87	123
24	12	60	76	108
27	12	67	95	123
30	12	60	85	111
36	12	50	71	92
42	12	42	60	78
48	12	36	52	68
54	12	30	46	60
60	12	24	36	50
66	12	18	30	42
72	12	12	24	36

** FOR DIFFERENT CORRUGATIONS AND ARCH PIPES REFER TO ROADWAY DESIGN MANUAL OR MANUFACTURERS SPECIFICATION.

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS

- CSP - AASHTO M36
- CAAP - AASHTO M196
- HDPE - AASHTO M294
- PVC - ASTM F949 or AASHTO M304

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
 1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

RIGID PIPE

- HDPE - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 60"
 * (Maximum fill) 20' for pipe diameters ≤ 24"
 17' for pipe diameters ≥ 30" and ≤ 60"
- PVC - * (Minimum fill) 2' for pipe diameters ≥ 12" and ≤ 36"
 * (Maximum fill) 30' for pipe diameters ≥ 12" and ≤ 36"

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

- RCP - * (Minimum fill) 1' for Class IV & CLASS V
 2' for Class III & Class II
- * (Maximum fill) 10' - Class II pipe
 20' - Class III pipe
 30' - Class IV pipe
 40' - Class V pipe

(For fills > 40' & < 80' use LRFD Direct Design Method)

* FILL HEIGHT IS MEASURED FROM THE TOP OF THE PIPE TO THE BOTTOM OF THE PAVEMENT STRUCTURE

REFER TO THE FOLLOWING FOR PIPE SPECIFICATIONS
 RCP - AASHTO M170

NOTES: FILL HEIGHTS SHOWN WERE CALCULATED USING AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS
 1' MINIMUM COVER FOR ALL SIDE DRAIN PIPE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS

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

ENGLISH DETAIL DRAWING FOR
METHOD OF PIPE INSTALLATION
 FILL HEIGHT TABLES

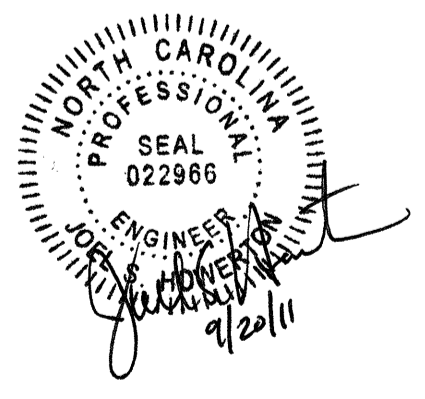
SHEET 3 OF 3
300D01

SHEET 3 OF 3
300D01

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SEE PLATE FOR TITLE

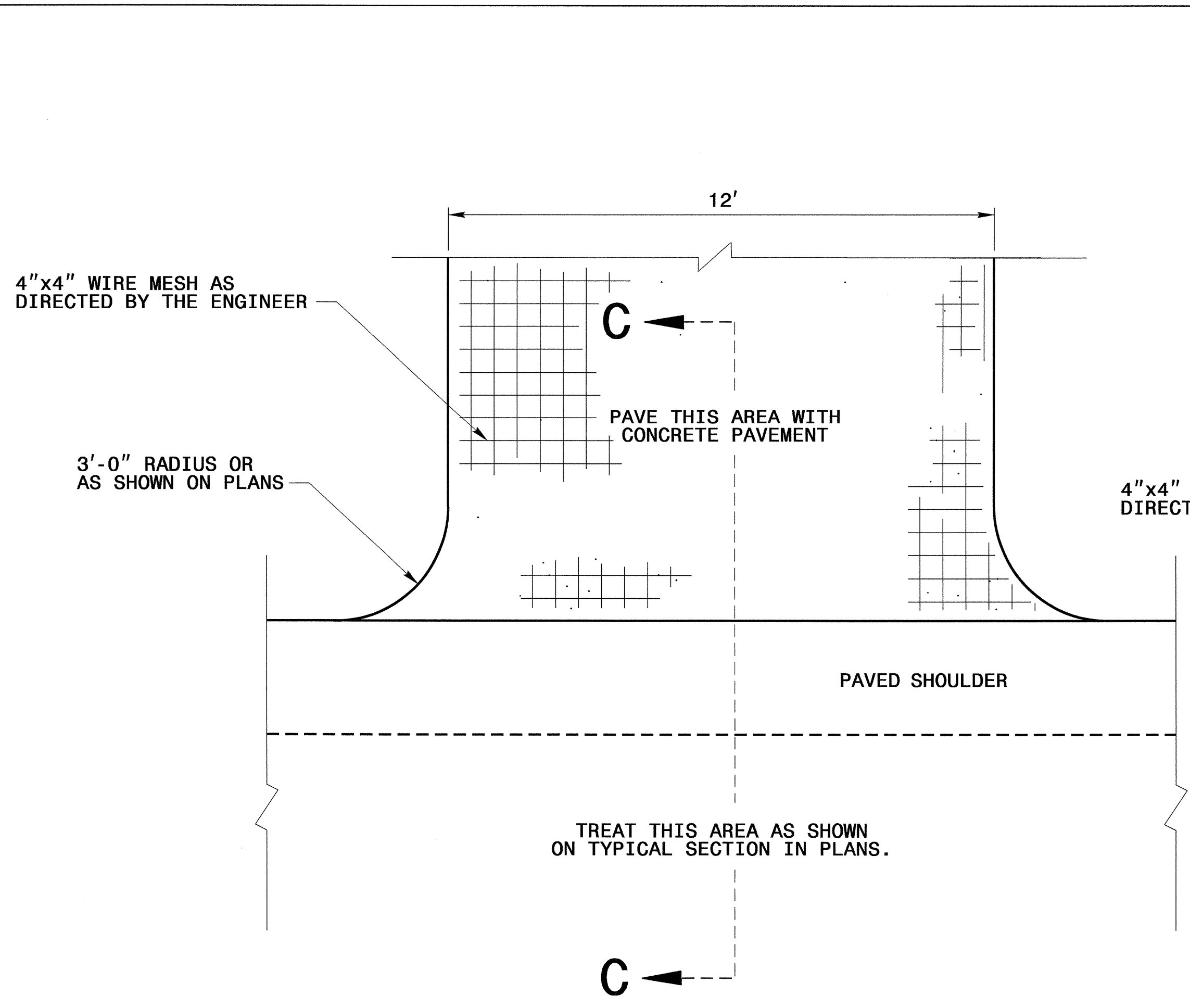
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STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

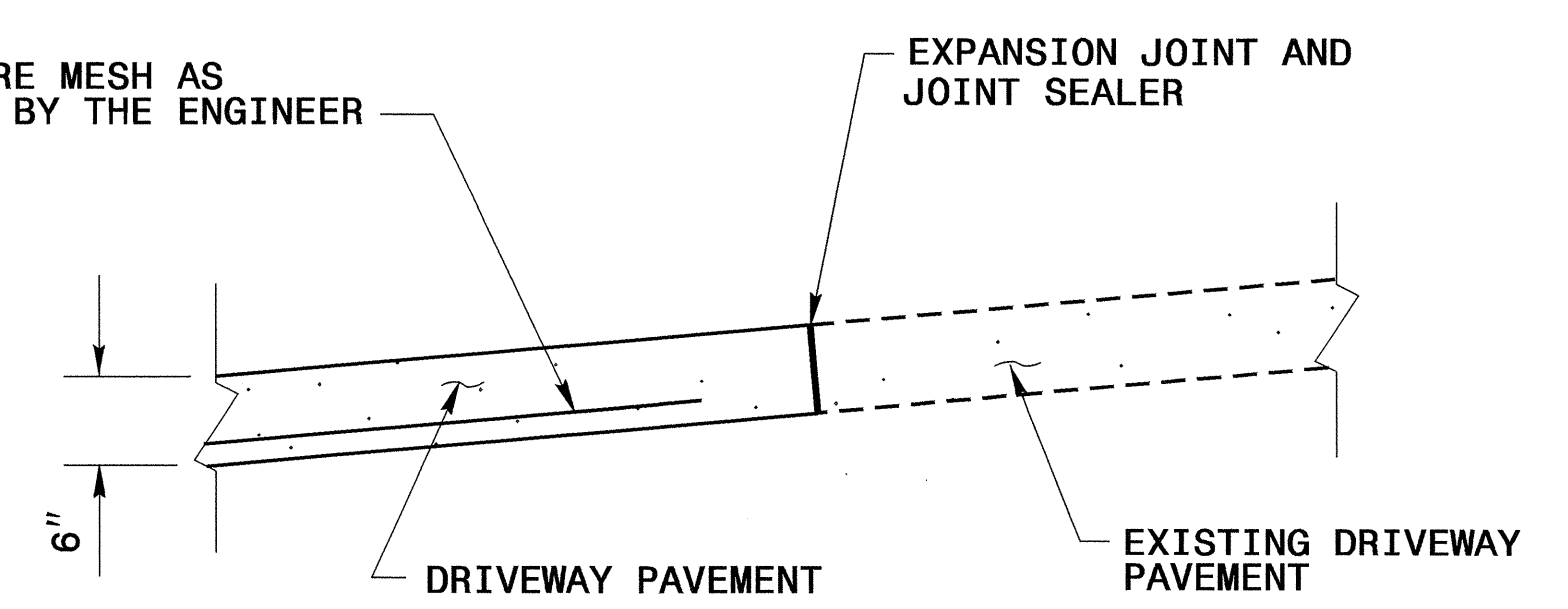
ENGLISH DETAIL DRAWING FOR
DRIVEWAY TURNOUT
RADIUS TYPE

SHEET 1 OF 1
848D02



PARTIAL PLAN OF PAVED DRIVEWAY TURNOUT

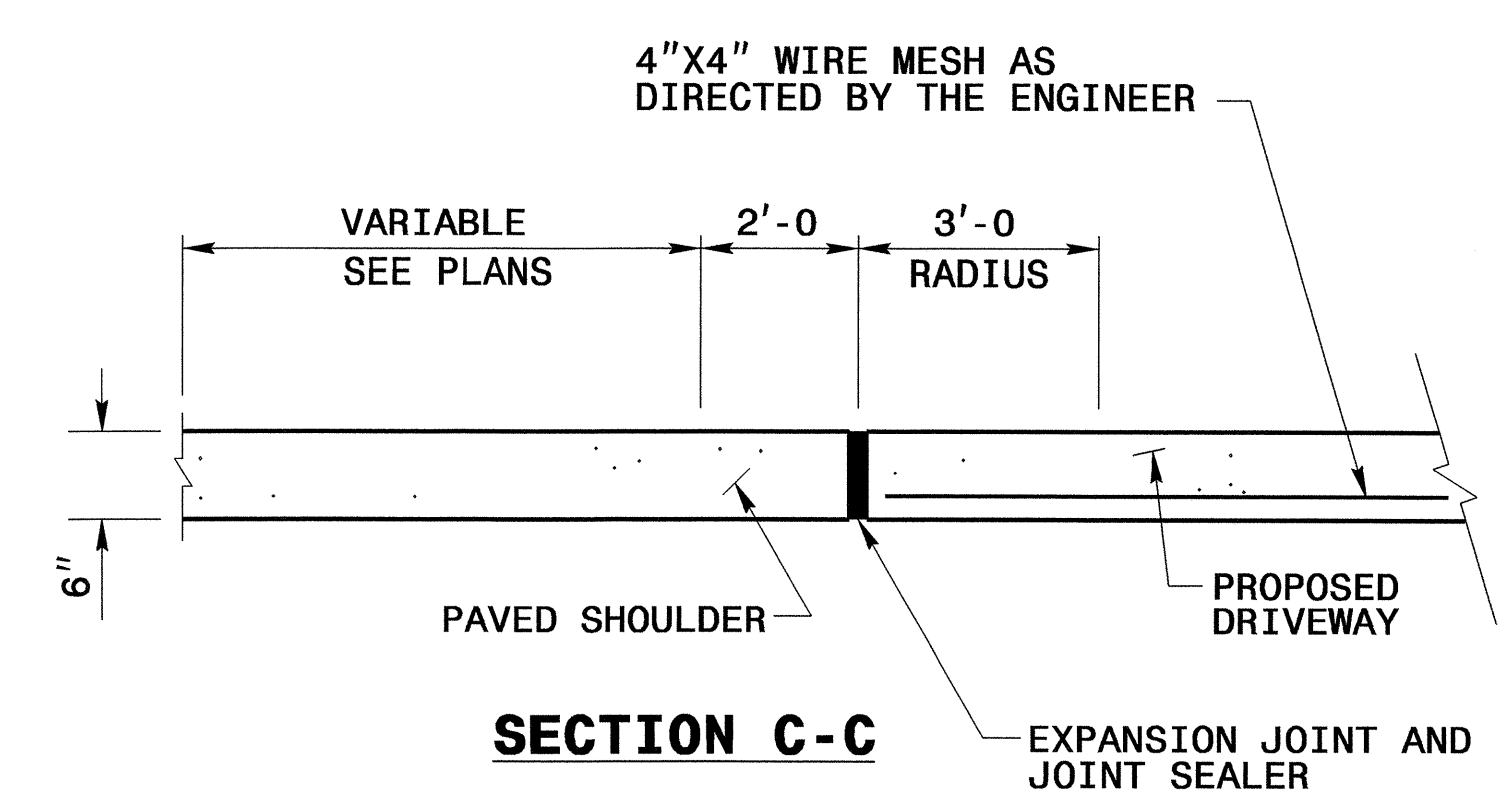
- NOTES:
- CONSTRUCT STANDARD DRIVEWAY THE WIDTH OF EXISTING DRIVE. CONSTRUCT DRIVE 6" THICK UNLESS OTHERWISE NOTED ON PLANS.
 - PLACE 1/2" EXPANSION JOINT BETWEEN DRIVEWAY AND ROADWAY AND AT LOCATIONS AS DIRECTED BY THE ENGINEER. SEAL JOINT WITH JOINT SEALER (SEE STD. SECTION 1028)
 - PLACE WIRE MESH IN BOTTOM THIRD OF CONCRETE DRIVEWAY.
 - SAW CUT OR FORM CONTRACTION JOINTS IN DRIVEWAY @ 10' INTERVALS. AT EVERY THIRD JOINT, PLACE EXPANSION MATERIAL AS SHOWN IN SECTION C-C.



METHOD OF TIE IN

WHEN EXISTING DRIVEWAY PAVEMENT IS CONCRETE, SAW CUT A 2" DEEP JOINT AT THE POINT OF TIE IN WITH EXISTING DRIVEWAY GRADE.

SAW JOINT PERPENDICULAR TO EDGE OF EXISTING DRIVEWAY PAVEMENT.



SECTION C-C

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

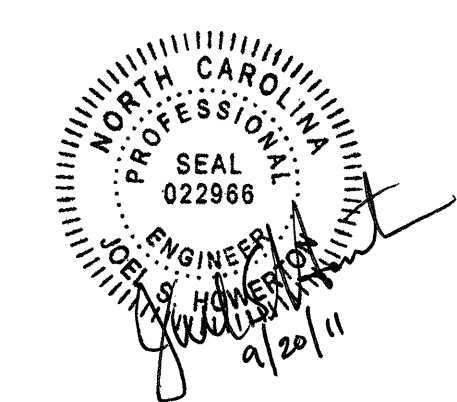
ENGLISH DETAIL DRAWING FOR
DRIVEWAY TURNOUT
RADIUS TYPE

SHEET 1 OF 1
848D02

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

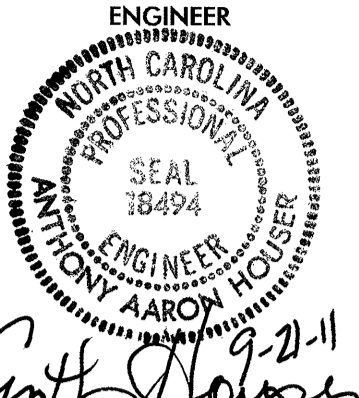
CONCRETE DRIVEWAY DETAIL

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 MODIFIED BY: rnbritt DATE: 03/20/08
 CHECKED BY: [Signature] DATE: 9/13/11
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5/14/99

PROJECT REFERENCE NO.	SHEET NO.
B-4498	3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202738

ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
000100000-N	800	Lump Sum		MOBILIZATION	2000000000-N	806	5	EA	RIGHT OF WAY MARKERS	4102000000-N	904	5	EA	SIGN ERECTION, TYPE E
000400000-N	801	Lump Sum		CONSTRUCTION SURVEYING	2022000000-E	SP	44.8	CY	SUBDRAIN EXCAVATION	4155000000-N	907	7	EA	DISPOSAL OF SIGN SYSTEM, U-CHANNEL
003000000-N	SP	Lump Sum		BRIDGE APPROACH FILL - SUB REGIONAL TIER, STATION ***** (16+08.00 -L-)	2033000000-E	SP	33.6	CY	SUBDRAIN FINE AGGREGATE	4400000000-E	1110	493	SF	WORK ZONE SIGNS (STATIONARY)
004300000-N	226	Lump Sum		GRADING	2044000000-E	SP	200	LF	6" PERFORATED SUBDRAIN PIPE	4410000000-E	1110	139	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
005000000-E	226	1	ACR	SUPPLEMENTARY CLEARING & GRUB-BING	2070000000-N	SP	1	EA	SUBDRAIN PIPE OUTLETS	4430000000-N	1130	15	EA	DRUMS
005700000-E	226	600	CY	UNDERCUT EXCAVATION	2077000000-E	SP	6	LF	6" OUTLET PIPE (SUBDRAINS)	4445000000-E	1145	136	LF	BARRICADES (TYPE III)
013400000-E	240	76.9	CY	DRAINAGE DITCH EXCAVATION	2286000000-N	840	2	EA	MASONRY DRAINAGE STRUCTURES	4685000000-E	1205	1,640	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)
019500000-E	SP	500	CY	SELECT GRANULAR MATERIAL	2367000000-N	840	2	EA	FRAME WITH TWO GRATES, STD 840.29	4686000000-E	1205	1,640	LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)
019600000-E	270	600	SY	FABRIC FOR SOIL STABILIZATION	2556000000-E	846	320	LF	SHOULDER BERM GUTTER	6000000000-E	1605	715	LF	TEMPORARY SILT FENCE
022300000-E	SP	560	SY	ROCK PLATING	2738000000-E	SP	200	SY	GENERIC PAVING ITEM 6" CONCRETE DRIVEWAYS	6006000000-E	1610	270	TON	STONE FOR EROSION CONTROL, CLASS A
031800000-E	SP	20	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	3030000000-E	862	450	LF	STEEL BM GUARDRAIL	6009000000-E	1610	120	TON	STONE FOR EROSION CONTROL, CLASS B
032000000-E	SP	40	SY	FOUNDATION CONDITIONING FABRIC	3150000000-N	862	5	EA	ADDITIONAL GUARDRAIL POSTS	6012000000-E	1610	345	TON	SEDIMENT CONTROL STONE
034300000-E	SP	52	LF	15" SIDE DRAIN PIPE	3180000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE ***** (III SHOP CURVED)	6015000000-E	1615	2.5	ACR	TEMPORARY MULCHING
035400000-E	SP	32	LF	**** RC PIPE CULVERTS, CLASS ***** (15", V)	3195000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE AT-1	6018000000-E	1620	100	LB	SEED FOR TEMPORARY SEEDING
058200000-E	SP	32	LF	15" CS PIPE CULVERTS, 0.064" THICK	3215000000-N	862	3	EA	GUARDRAIL ANCHOR UNITS, TYPE III	6021000000-E	1620	1.5	TON	FERTILIZER FOR TEMPORARY SEEDING
063600000-E	SP	2	EA	*** CS PIPE ELBOWS, ***** THICK (15", 0.064")	3270000000-N	SP	3	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	6024000000-E	1622	200	LF	TEMPORARY SLOPE DRAINS
099500000-E	340	50	LF	PIPE REMOVAL	3360000000-E	863	748	LF	REMOVE EXISTING GUARDRAIL	6027000000-N	1622	4	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
112100000-E	520	80	TON	AGGREGATE BASE COURSE	3551000000-E	866	2	EA	METAL GATE POSTS FOR *** CHAIN LINK FENCE, SINGLE GATE 48" SINGLE GATE	6029000000-E	SP	200	LF	SAFETY FENCE
122000000-E	545	300	TON	INCIDENTAL STONE BASE	3564000000-E	866	1	EA	SINGLE GATES, *** HIGH, ** WIDE, ** OPENING (48", 14", 14")	6030000000-E	1630	450	CY	SILT EXCAVATION
148900000-E	610	480	TON	ASPHALT CONC BASE COURSE, TYPE B25.0B	3628000000-E	876	82	TON	RIP RAP, CLASS I	6036000000-E	1631	5,000	SY	MATTING FOR EROSION CONTROL
149800000-E	610	590	TON	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	3649000000-E	876	1	TON	RIP RAP, CLASS B	6037000000-E	SP	20	SY	COIR FIBER MAT
151900000-E	610	260	TON	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	3656000000-E	876	1,425	SY	FILTER FABRIC FOR DRAINAGE	6038000000-E	SP	2,355	SY	PERMANENT SOIL REINFORCEMENT MAT
157500000-E	SP	66	TON	ASPHALT BINDER FOR PLANT MIX	4072000000-E	903	100	LF	SUPPORTS, 3-LB STEEL U-CHANNEL	6042000000-E	1632	210	LF	1/4" HARDWARE CLOTH
169300000-E	654	30	TON	ASPHALT PLANT MIX, PAVEMENT REPAIR	4096000000-N	904	2	EA	SIGN ERECTION, TYPE D	6070000000-N	SP	12	EA	SPECIAL STILLING BASINS
										6071030000-E	SP	145	LF	COIR FIBER BAFFLE
										6071050000-E	SP	2	EA	*** SKIMMER (1-1/2")
										6084000000-E	1660	3	ACR	SEEDING & MULCHING
										6087000000-E	1660	3	ACR	MOWING
										6090000000-E	1661	50	LB	SEED FOR REPAIR SEEDING
										6093000000-E	1661	0.25	TON	FERTILIZER FOR REPAIR SEEDING
										6096000000-E	1662	75	LB	SEED FOR SUPPLEMENTAL SEEDING
										6108000000-E	1665	1.75	TON	FERTILIZER TOPDRESSING
										6114500000-N	SP	10	MHR	SPECIALIZED HAND MOWING
										6117000000-N	SP	18	EA	RESPONSE FOR EROSION CONTROL

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12/06/07

COMPUTED BY: J. Y. CAO	DATE: 10-11-10
CHECKED BY: J. W. BRAXTON	DATE: 10-12-10

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. B-4498	SHEET NO. 3A
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SUMMARY OF EARTHWORK

STATION	STATION	UNCL. EXCAV.	EMBANK. +%	BORROW	WASTE
-L-					
11+00.00	14+53.00 (BEGIN BRIDGE)	622	181		441
17+63.00 (END BRIDGE)	20+00.00	67	1,280	1,213	
-DRI-					
10+40.00	10+86.31	23	48	25	
SUBTOTALS:		712	1,509	1,238	441
HARD ROCK WASTE TO REPLACE BORROW				-22	-22
ADJUST FOR ROCK SWELL:			-6	-6	
LOSS DUE TO CLEARING & GRUBBING:		-150		150	
WASTE TO REPLACE BORROW				-419	-419
PROJECT TOTALS:		562	1,503	941	0
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT:				47	
GRAND TOTALS:		562	1,503	988	0
SAY:		570		990	
SELECT GRANULAR MATERIAL CLASS II OR III		500 CY			
Contingency Undercut		600 CY			
Drainage Ditch Excavation		76.9 CY			

Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD'
-L-	11+80.00	14+67.00	L&R	796.28
-L-	17+58.00	20+00.00	L&R	672.86
TOTAL:				1,469.14
SAY:				1,470 SY

SUMMARY OF EXISTING DRIVEWAY CONCRETE PAVEMENT REMOVAL

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD'
-L-	19+88.00	20+58.00	RT	152.78
TOTAL:				152.78
SAY:				160

Note: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOUL. WIDTH	FLARE LENGTH		W		ANCHORS							IMPACT ATTENUATOR TYPE 350			SINGLE FACED GUARDRAIL	REMOVE EXISTING GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS						
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	XI MOD	XI	GRAU 350	M-350	XIII	CAT-1	TYPE-III	TYPE-III SHOP CURVED	AT-1	EA	G	NG										
																													APPROACH END	TRAILING END	APPROACH END	TRAILING END	XI MOD	XI
-L-	10+70.57(DRI)	14+53.00(BR)	LT	6.25	18.75			14+53.00(BR)	4.75	9		0		0															29					
-L-	17+63.00(BR)	20+81.75	LT	318.75				19+81.75	4.75	9	300.0		2.25				1														376			
-L-	13+71.75	14+53.00(BR)	RT	81.25				14+53.00(BR)	4.75	9	62.5		2.25				1														80			
-L-	17+63.00(BR)	20+19.25	RT	256.25				19+19.25	4.75	9		237.5		2.25			1														263			
SUB TOTAL:				662.50	18.75				4.75	9							3															748		
ANCHOR DEDUCTION:				-212.50	-18.75																													
TOTAL:				450	0																													
SAY:				450	0																													
ANCHOR DEDUCTION:				ANCHOR DEDUCTION:																														
				GRAU-350 3 @ 50 = 150																														
				TYPE-III 3 @ 18.75 = 56.25																														
				TYPE-III SHOPE CURVED @ 18.75 = 18.75																														
				TYPE AT-1 @ 6.25 = 6.25																														
				ADDITIONAL POSTS: 5																														

15-SEP-2011 11:43 AM Roadway\Project\Ab4498_rdy_sum.dgn

COMPUTED BY: T.V. CAO

DATE: 10/9/2009

CHECKED BY: JOHN BRAXTON

DATE: 5/2/2011

PROJECT NO.

SHEET NO.

B-4498

3B

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Main data table with columns for Station, Structure No., Invert Elevation, Slope, Drainage Pipe, C.S. Pipe, R.C. Pipe Class III, R.C. Pipe Class IV, Endwalls, Quantities, Frame/Grates, and Abbreviations. Includes a 'SHEET TOTALS' row at the bottom.

ABBREVIATIONS

- C.B. CATCH BASIN
N.D.I. NARROW DROP INLET
D.I. DROP INLET
G.D.I. (N.S.) GRATED DROP INLET (NARROW SLOT)
J.B. JUNCTION BOX
M.H. MANHOLE
T.B.D.I. TRAFFIC BEARING DROP INLET
T.B.J.B. TRAFFIC BEARING JUNCTION BOX

REMARKS

SHEET TOTALS

32

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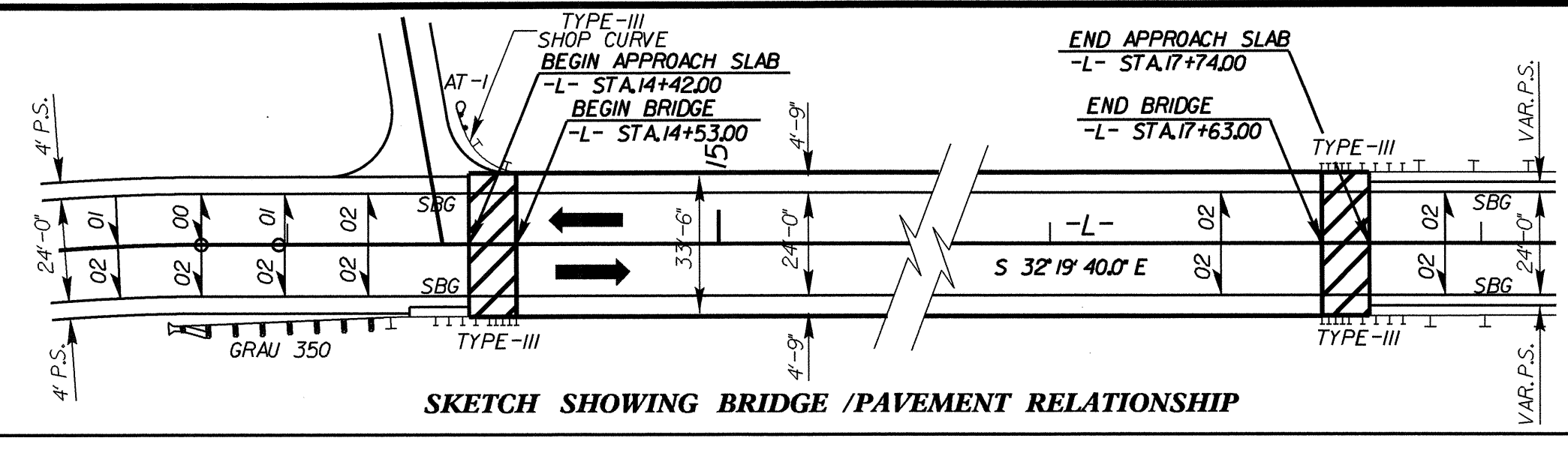
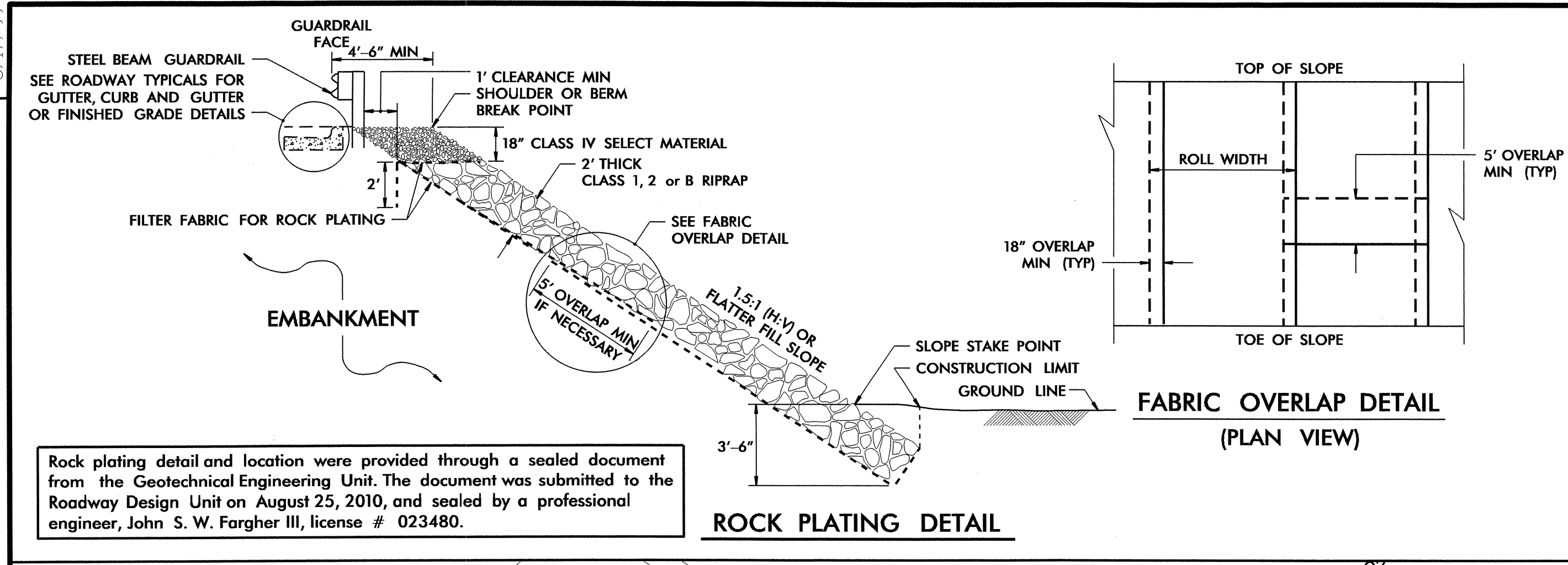
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2 2

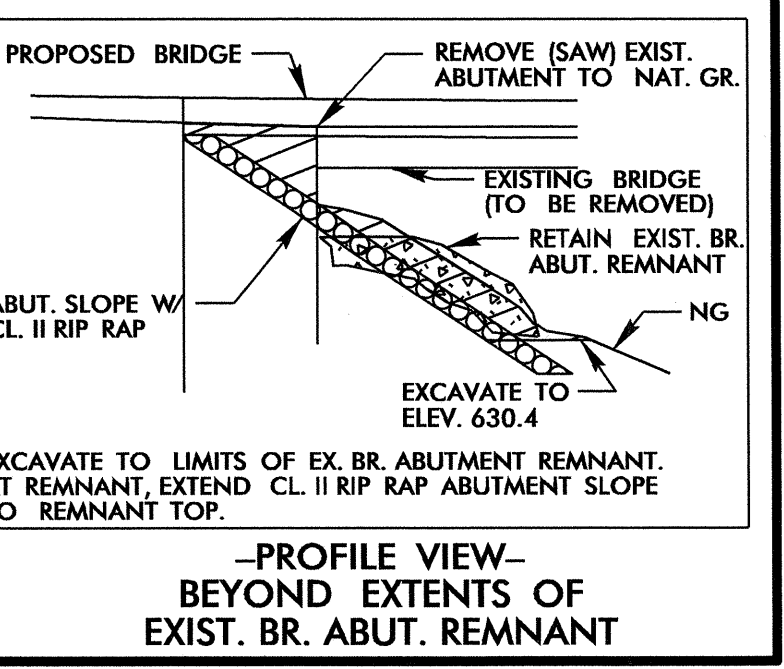
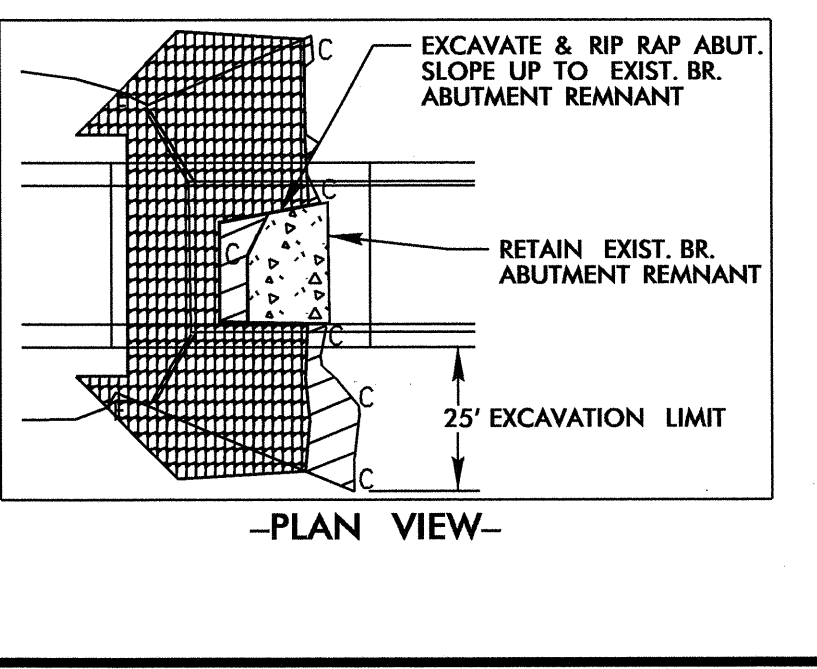
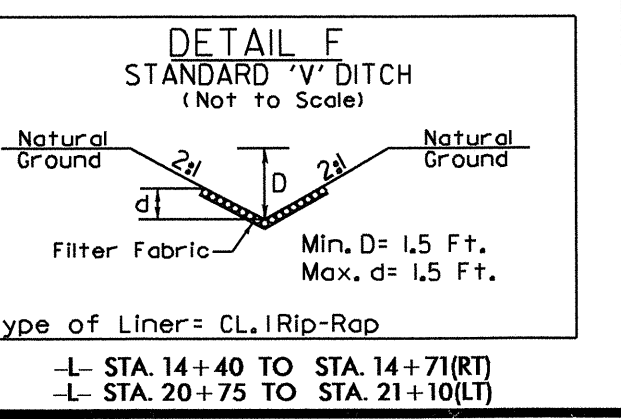
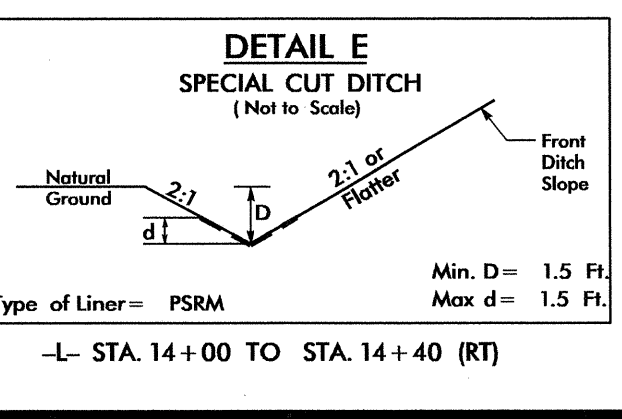
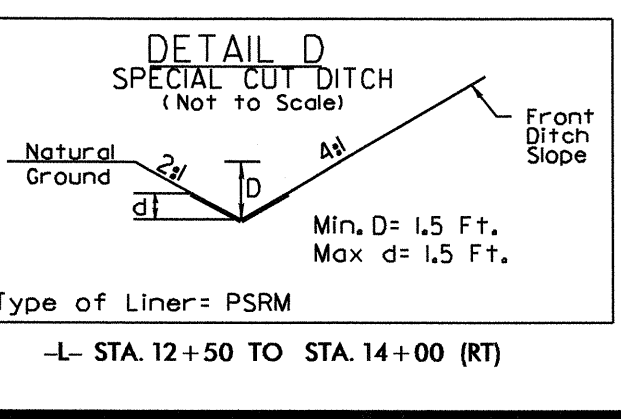
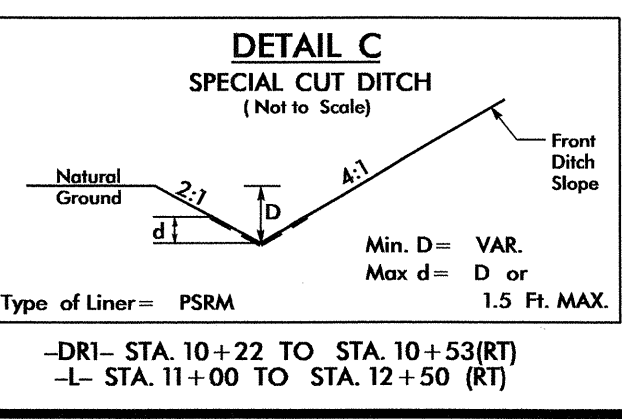
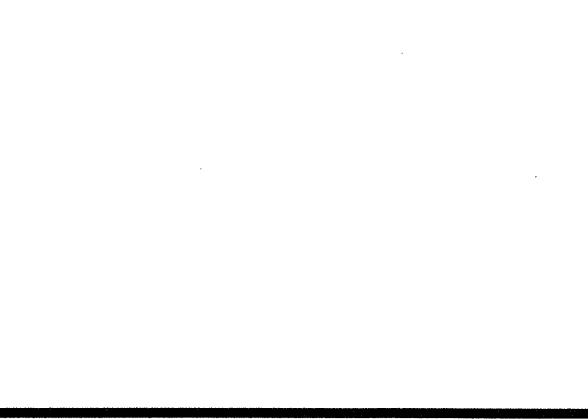
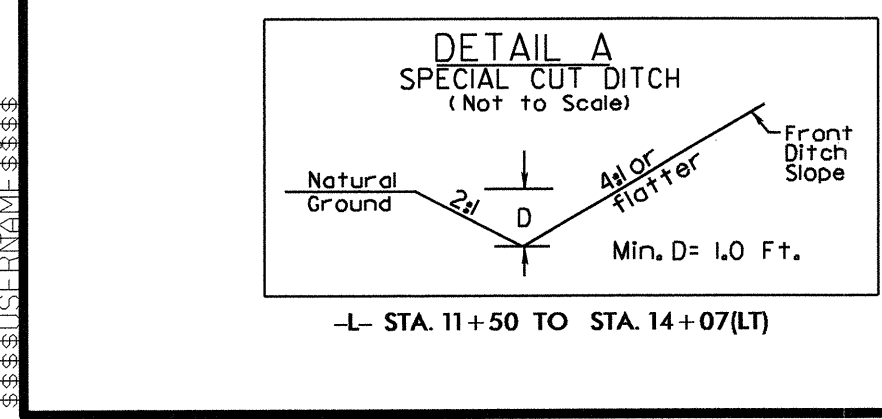
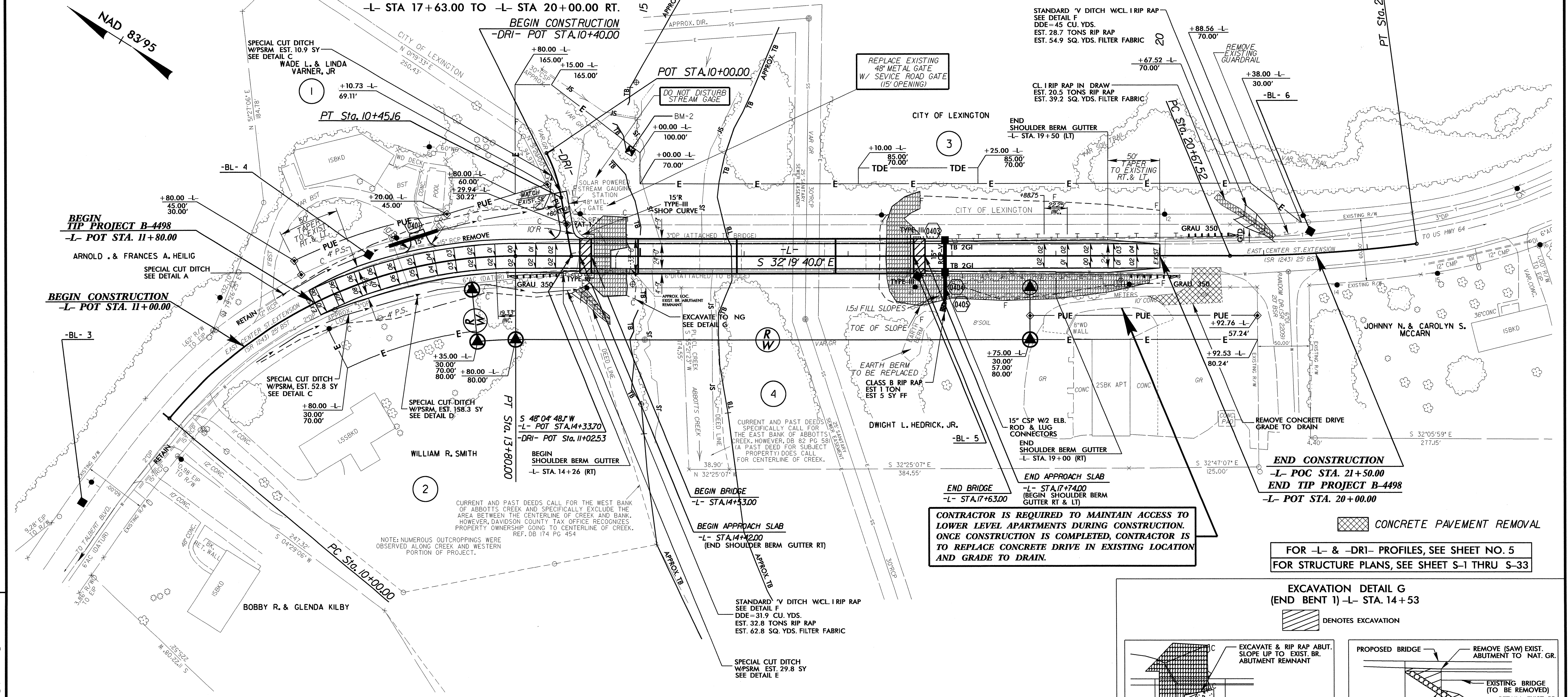
2 @ 15'

50



Rock plating detail and location were provided through a sealed document from the Geotechnical Engineering Unit. The document was submitted to the Roadway Design Unit on August 25, 2010, and sealed by a professional engineer, John S. W. Fargher III, license # 023480.

-L-	-DRI-
PI Sta 12+03.08	PI Sta 21+57.68
$\Delta = 50^{\circ} 03' 07.7''$ (RT)	$\Delta = 7^{\circ} 30' 09.3''$ (LT)
$D = 13^{\circ} 10' 17.2''$	$D = 4^{\circ} 10' 01.1''$
$L = 380.00'$	$L = 180.05'$
$T = 203.08'$	$T = 90.15'$
$R = 435.00'$	$R = 1,375.00'$
SE = SEE PLANS	SE = EXISTING
RO = SEE PLANS	RO = EXISTING



CONTRACTOR IS REQUIRED TO MAINTAIN ACCESS TO LOWER LEVEL APARTMENTS DURING CONSTRUCTION. ONCE CONSTRUCTION IS COMPLETED, CONTRACTOR IS TO REPLACE CONCRETE DRIVE IN EXISTING LOCATION AND GRADE TO DRAIN.

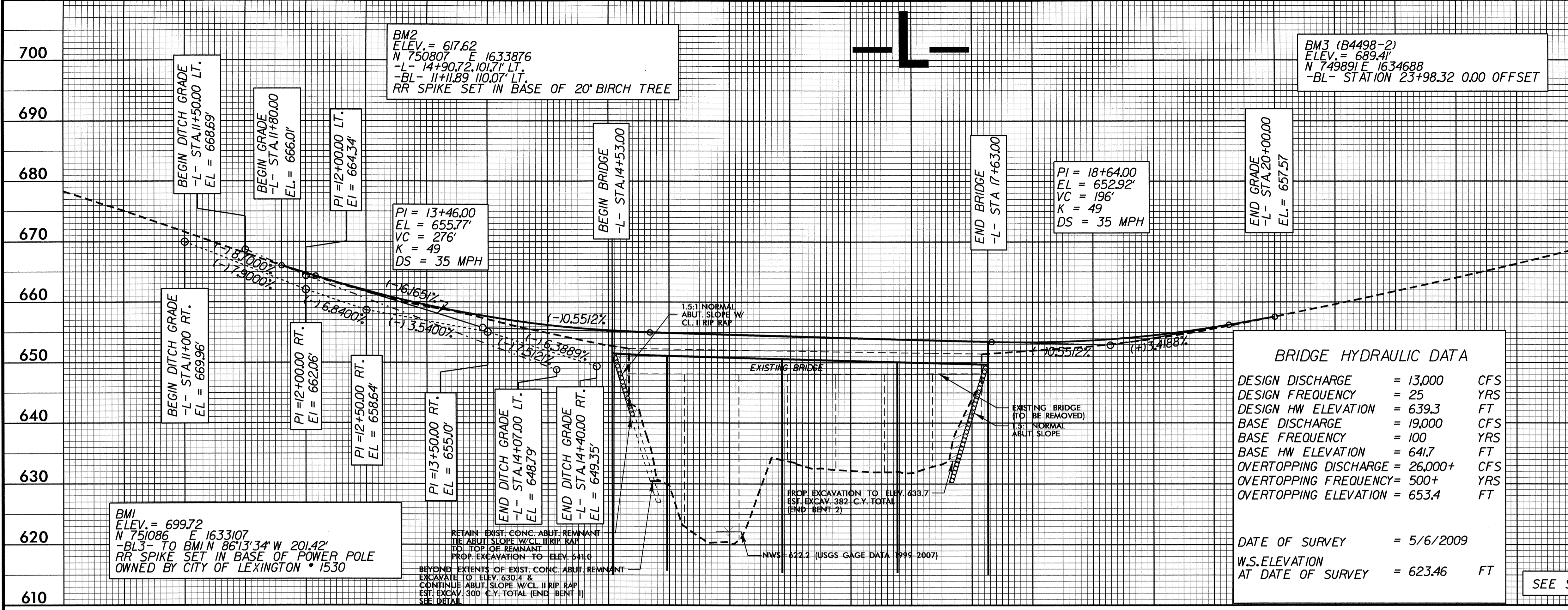
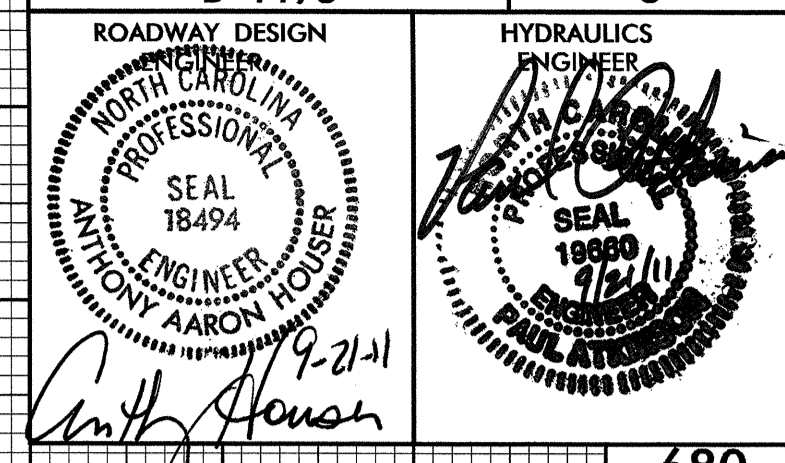
FOR -L- & -DRI- PROFILES, SEE SHEET NO. 5
 FOR STRUCTURE PLANS, SEE SHEET S-1 THRU S-33

CONCRETE PAVEMENT REMOVAL

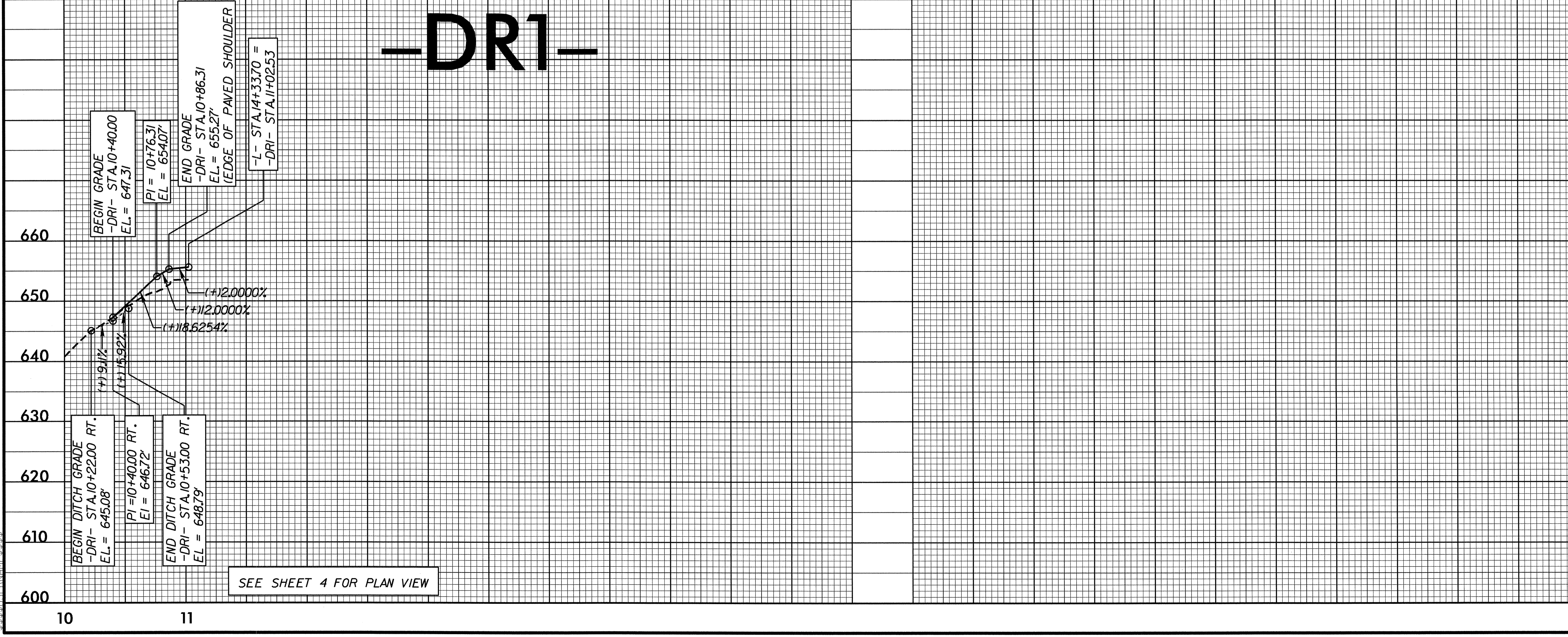
REVISIONS

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