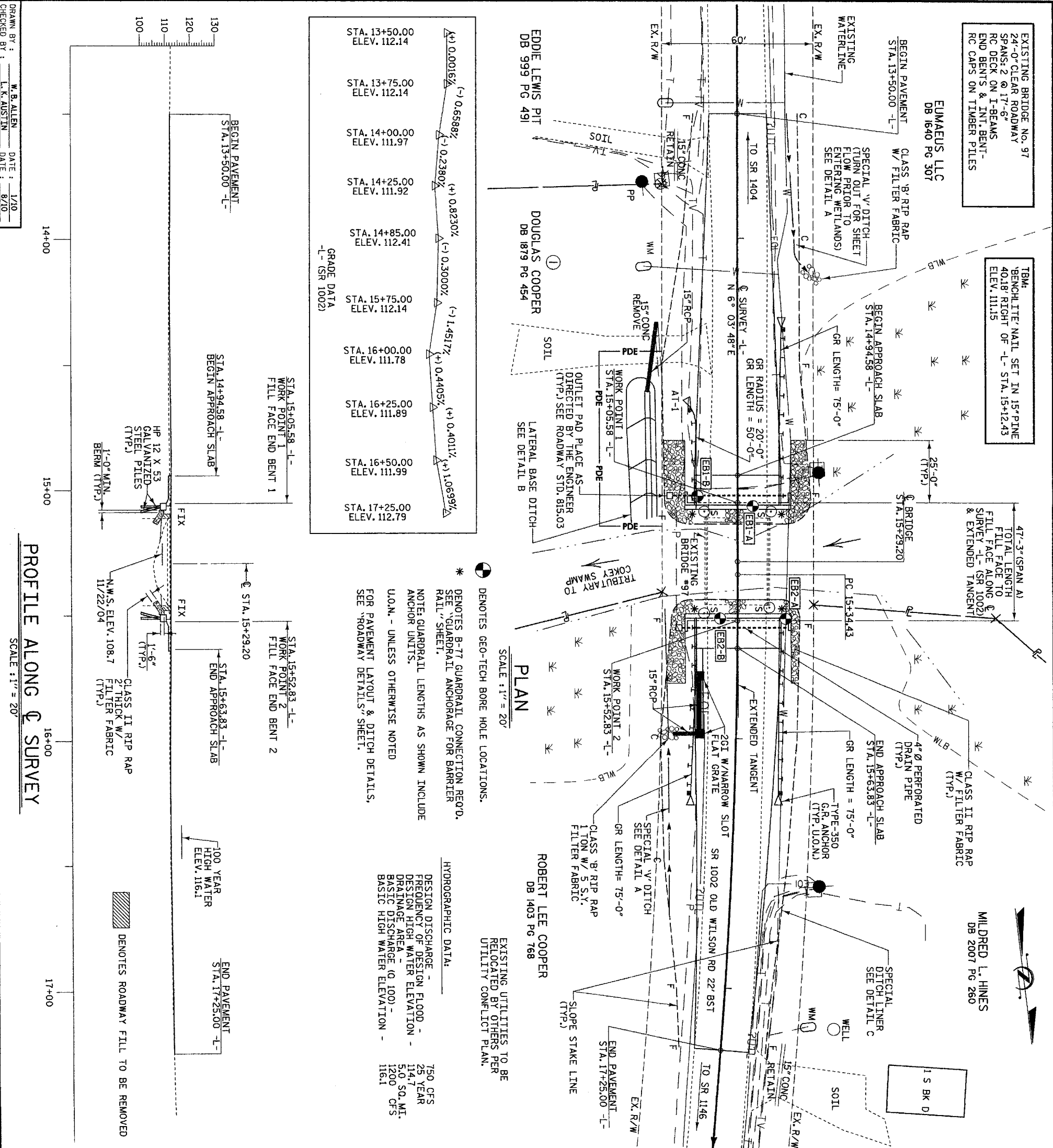


10/5/2010 7:29:57 AM R:\Structures\BK508_SD_00_01.dgn



DRAWN BY : W.B. ALLEN
CHECKED BY : L.K. AUSTIN
DATE : 8/10

PROFILE ALONG Q SURVEY
SCALE : 1" = 20'

NOTES

FOR EROSION CONTROL MEASURES SEE EROSION CONTROL PLANS.

REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR THE DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.

THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

INASMUCH AS THE PAINT SYSTEM ON THE EXISTING STRUCTURAL STEEL CONTAINS LEAD, THE CONTRACTOR'S ATTENTION IS DIRECTED TO ARTICLE 107-1 OF THE STANDARD SPECIFICATIONS. ANY COSTS RESULTING FROM COMPLIANCE WITH APPLICABLE STATE OR FEDERAL REGULATIONS PERTAINING TO HANDLING OF MATERIALS CONTAINING LEAD BASED PAINT SHALL BE INCLUDED IN THE BID PRICE FOR "REMOVAL OF EXISTING STRUCTURE." THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", NOVEMBER 1995.

THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH HEC 18, "EVALUATING SCOUR AT BRIDGES", MAY 2001.

THIS BRIDGE HAS BEEN DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR SEISMIC DESIGN OF HIGHWAY BRIDGES FOR SEISMIC CATEGORY A.

DRIVE PILES AT END BENT NO. 1 AND 2 TO A REQUIRED BEARING CAPACITY OF 90 TONS PER PILE. THE REQUIRED BEARING CAPACITY IS EQUAL TO THE ALLOWABLE BEARING CAPACITY WITH A MINIMUM FACTOR OF SAFETY OF TWO.

THE ALLOWABLE BEARING CAPACITY FOR PILES AT END BENTS NO. 1 AND 2 IS 45 TONS PER PILE.

GALVANIZED STEEL PILES ARE REQUIRED FOR AT END BENTS NO. 1 AND 2 IN ACCORDANCE WITH SECTION 450 OF THE STANDARD SPECIFICATIONS.

ADT = 1200 FOR YEAR 1999

ROADWAY APPROACH EMBANKMENT SHALL BE WIDENED AS NECESSARY FOR GUARDRAIL INSTALLATION.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

THE QUANTITY OF RIP RAP TO BE PAID FOR WILL BE THE ACTUAL NUMBER OF TONS OF EACH CLASS OF RIP RAP WHICH HAS BEEN INCORPORATED INTO THE COMPLETED AND ACCEPTED WORK. THE RIP RAP WILL BE MEASURED BY BEING WEIGHED IN TRUCKS ON CERTIFIED PLATFORM SCALES OR OTHER CERTIFIED WEIGHING DEVICES. THE QUANTITY OF RIP RAP WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER TON:

PLAIN RIP RAP CLASS II (2'-0" THICK)	
END BENT NO. 1	85 TONS
END BENT NO. 2	65 TONS
TOTAL	150 TONS

PLANS PREPARED BY:

MULKEY
ENGINEER & ARCHITECT
1100 S. 11TH ST.
NORFOLK, VA 23502
TEL: 757/622-1111
FAX: 757/622-1112

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-
REPLACES BRIDGE NO. 97

BRIDGE ON SR 1002
OVER TRIBUTARY TO
COKEY SWAMP
BETWEEN SR 1404 & SR 1146
32'-10" CLEAR ROADWAY - 90° SKEW

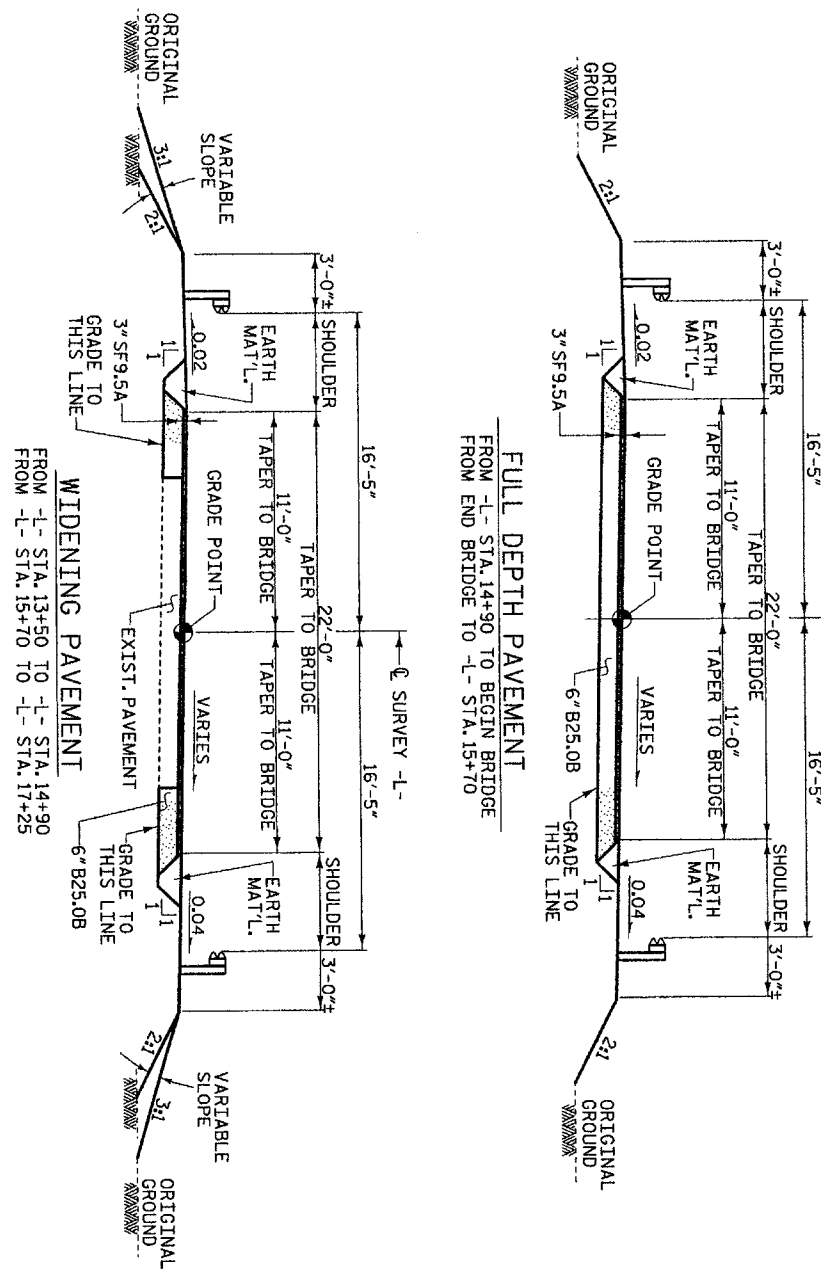
REVISIONS			
NO.	BY:	DATE:	REVISION:
1			
2			

SHEET NO. 1
TOTAL SHEETS 25

DRAWN BY: W.B. ALLEN
CHECKED BY: L.K. AUSTIN
DATE: 1/10
DATE: 8/10

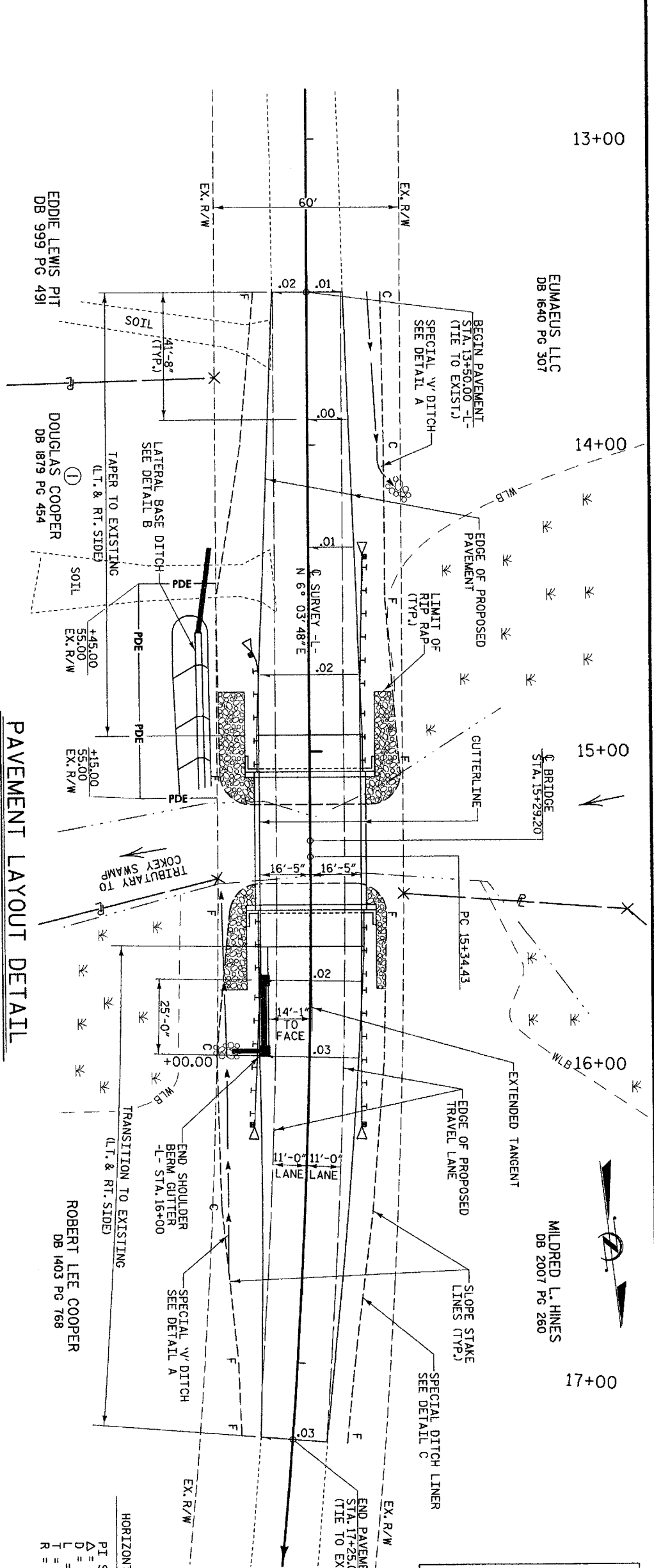
TYPICAL ROADWAY SECTION

WITHIN CONSTRUCTION LIMITS

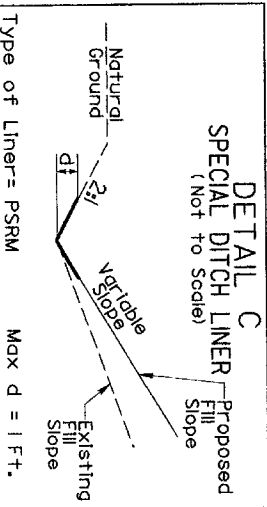
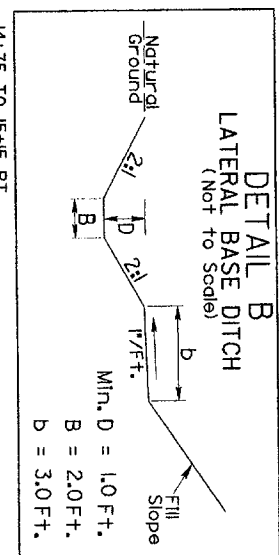
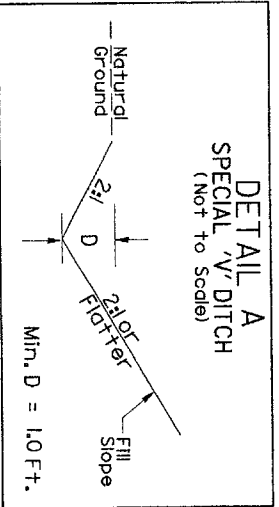


PAVEMENT LAYOUT DETAIL

SCALE: 1" = 20'



RIGHT OF WAY AREA DATA					
PARCEL NO.	PROPERTY OWNERS NAMES	TOTAL AREA	AREA TAKEN	AREA REMAINING RT.	AREA REMAINING LT.
1	DOUGLAS COOPER	0.36 AC			



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY OTHERS FOR MONUMENT "M4206-1" WITH NAD 1983/95 STATE PLANE GRID COORDINATES OF NORTHING: 765145.597 (M) EASTING: 433345.768 (M) THE MERIDIAN COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9999828

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GRID DISTANCE FROM "M4206-1" TO ± STATION IS N 6°38'43" W 415.59' LOCALIZED HORIZONTAL DISTANCE USED IS NAD 88

HORIZONTAL CURVE DATA

PI STA. 16+64.51
Δ = 6°18' 43" (RT)
D = 2°25' 43"
L = 259.90'
T = 130.08'
R = 2359.25'



PROJECT NO. 42559
WILSON COUNTY

STATION: 15+29.20 -L-

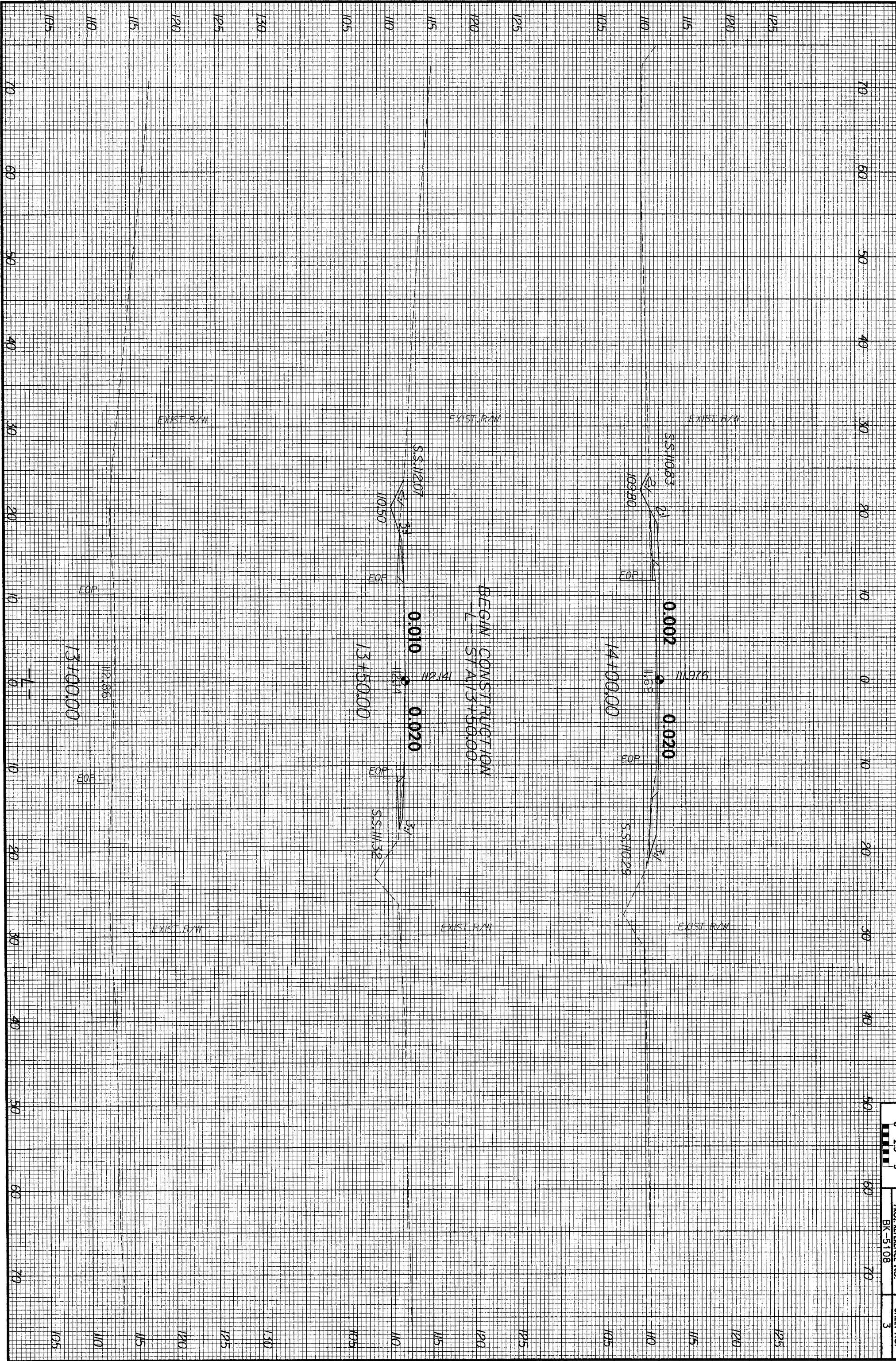
REPLACES BRIDGE NO. 97

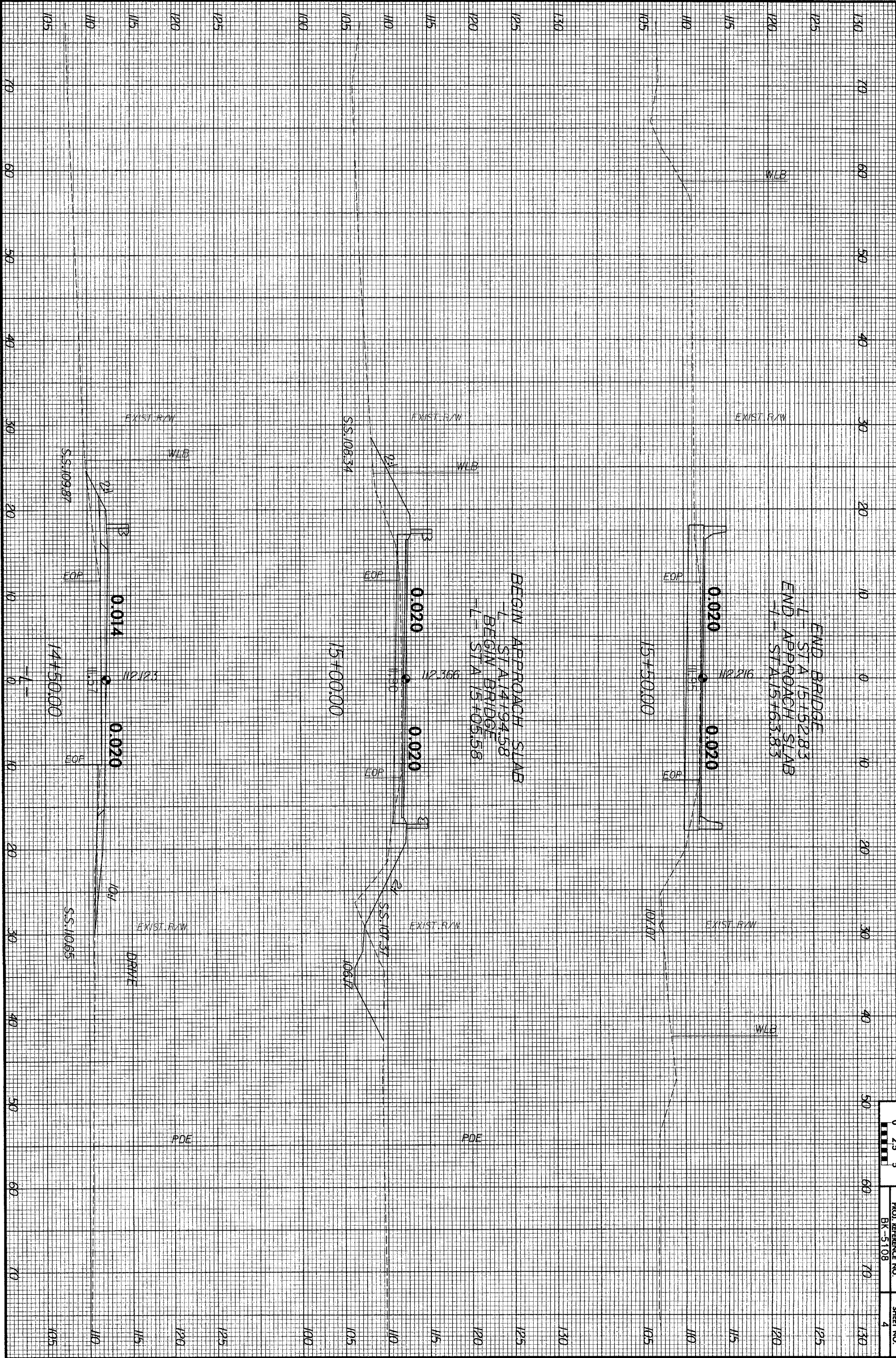
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

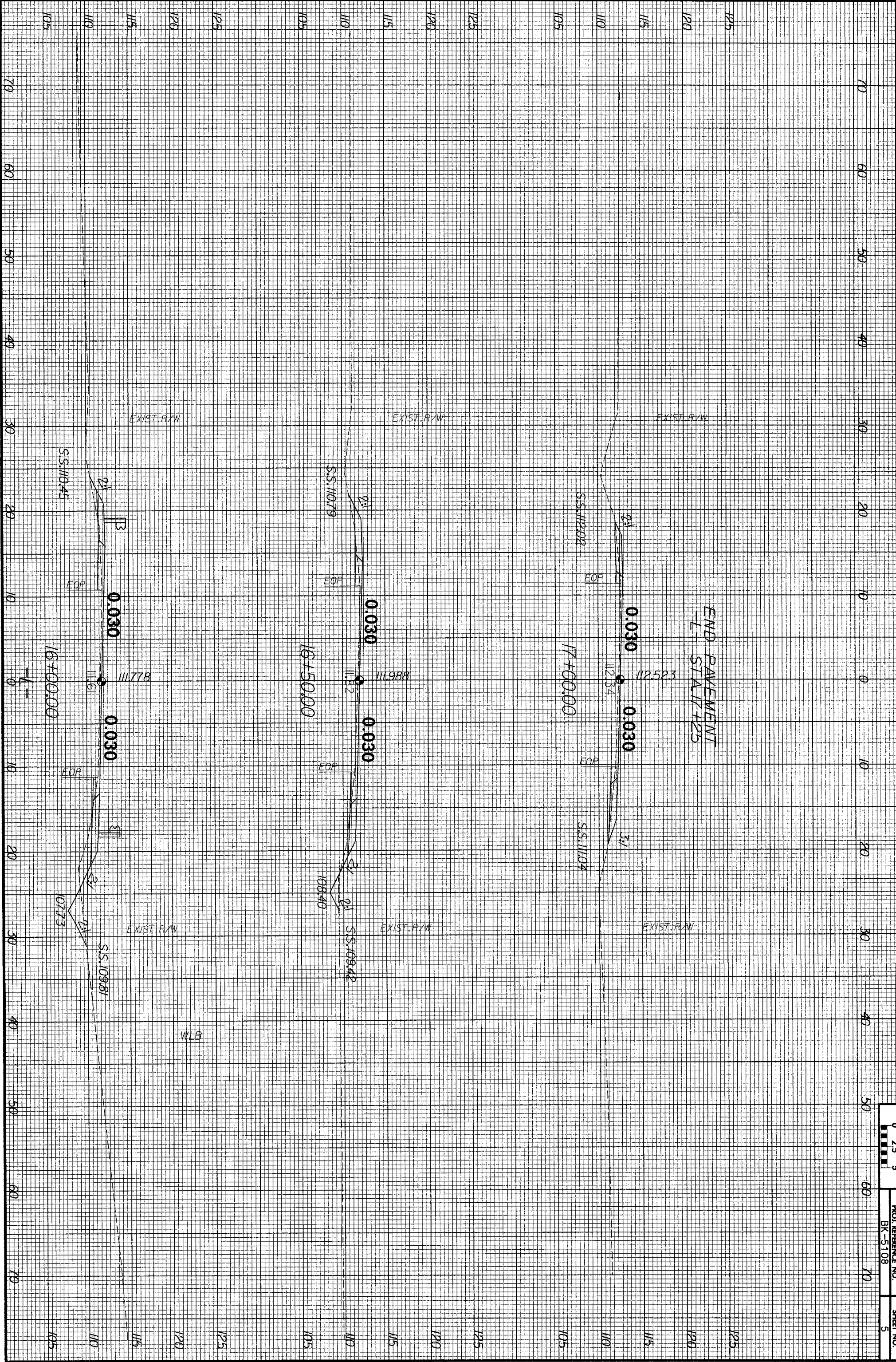
ROADWAY DETAILS

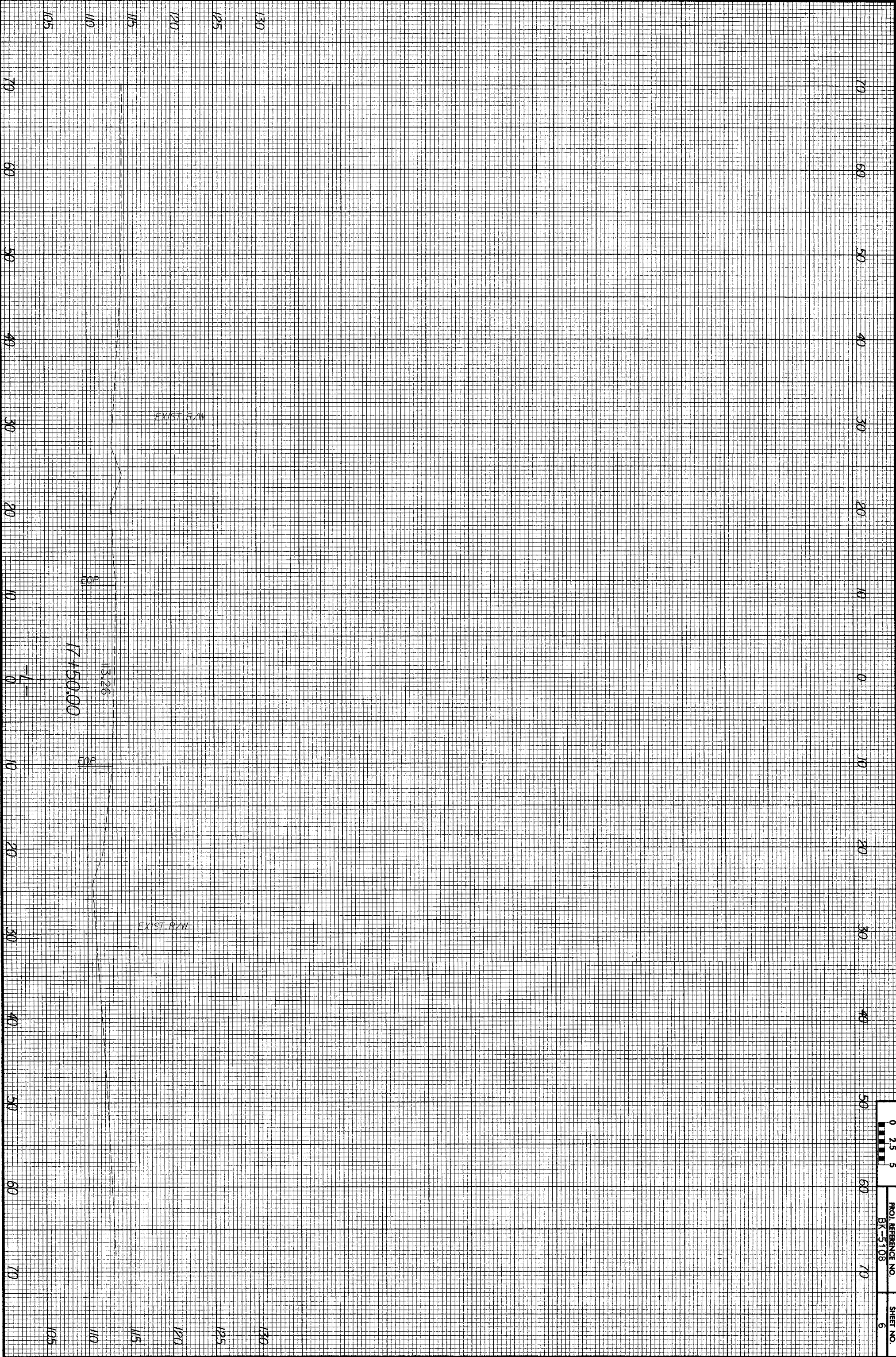
32'-10" CLEAR ROADWAY - 90° SKEW

REVISIONS				SHEET NO.
NO.	BY	DATE	NO.	
1			3	2
2			4	25









GENERAL NOTES

ASSUMED LIVE LOAD = HS 25 OR ALTERNATE LOADING.
CONCRETE = $f'c$ - 8000psi (MIN. COMP. STRENGTH @ 28 DAYS),
 $f'ci$ - 6000psi (MIN. COMP. STRENGTH @ TRANSFER OF STRESSING FORCE),

SIZE	TYPE	AREA	ULTIMATE STR.	APPLIED FORCE
0.6" Ø	LOW RELAX.	0.217 SQ. IN. PER CABLE	58,600 LBS.	43,950 LBS. PER CABLE

STRUCTURAL STEEL ITEMS SHALL BE OF A GRADE CONFORMING TO EITHER ASTM A36 OR A373, EXCEPT HIGH STRENGTH BOLTS SHALL BE ASTM A325. ALL STRUCTURAL STEEL SHALL BE GALVANIZED AS PER THE SPECIFICATION.

ALL MATERIAL AND WORKMANSHIP SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF THE STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OF THE NC DEPARTMENT OF TRANSPORTATION DATED JULY 2006 AND WITH THE SPECIAL PROVISIONS.

ALL PRESTRESSING STRANDS SHALL BE 7-WIRE LOW RELAXATION GRADE 270 STRANDS AND SHALL CONFORM TO AASHTO M203 EXCEPT FOR SAMPLING REQUIREMENTS WHICH SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

ALL REINFORCING STEEL, CAST WITH THE CORED SLAB SECTIONS SHALL BE GRADE 60, AND SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF SUPERSTRUCTURE.

RECESSES FOR TRANSVERSE STRANDS SHALL BE GROUTED AFTER THE TENSIONING OF THE STRANDS.

THE BACKER ROD SHALL CONFORM TO THE REQUIREMENTS OF TYPE M BOND BREAKER, SEE SECTION 1028 OF THE STANDARD SPECIFICATIONS. THE JOINT SHALL BE FILLED WITH GROUT.

WHEN CORED SLABS ARE CAST, A POSITIVE HOLD-DOWN SYSTEM SHALL BE EMPLOYED TO PREVENT VOIDS FROM RISING OR MOVING SIDEWAYS. THIS SYSTEM SHALL BE DESIGNED TO BE LEFT IN PLACE UNTIL THE CONCRETE HAS REACHED RELEASE STRENGTH, AT LEAST THREE WEEKS PRIOR TO CASTING THE CORED SLABS. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR REVIEW AND COMMENT, DETAILED DRAWINGS OF THE PROPOSED HOLD-DOWN SYSTEM. IN ADDITION TO STRUCTURAL DETAILS, LOCATION AND SPACING OF THE HOLD-DOWNS SHALL BE INDICATED.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

PRESTRESSING STRANDS SHALL BE CUT FLUSH WITH THE CORED SLAB UNIT ENDS.

APPLY EPOXY PROTECTIVE COATING TO CORED SLAB UNIT ENDS.

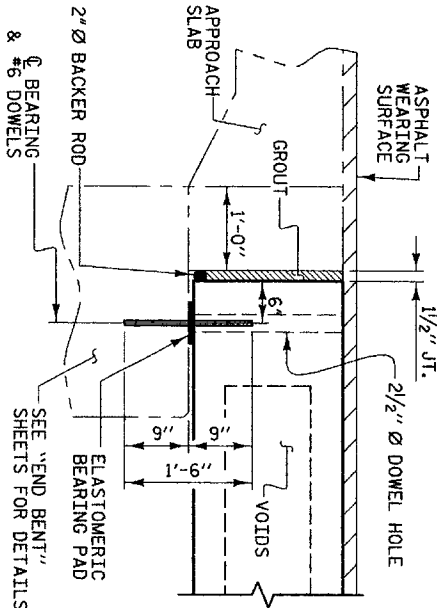
UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}"$.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

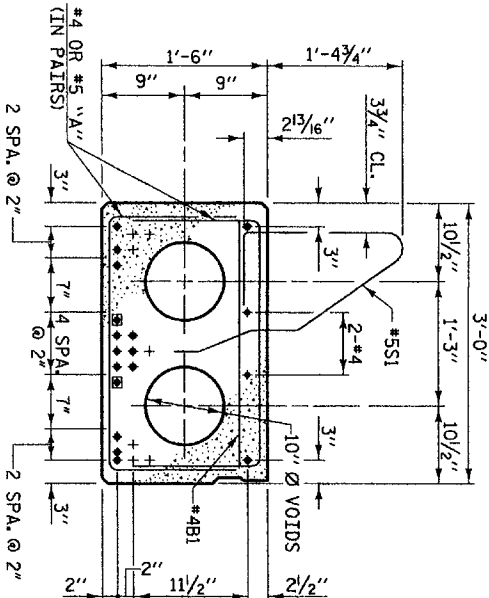
FOR PRESTRESSED CONCRETE MEMBERS, SEE SPECIAL PROVISIONS.

NO DECK DRAINS ALLOWED.

FIXED END



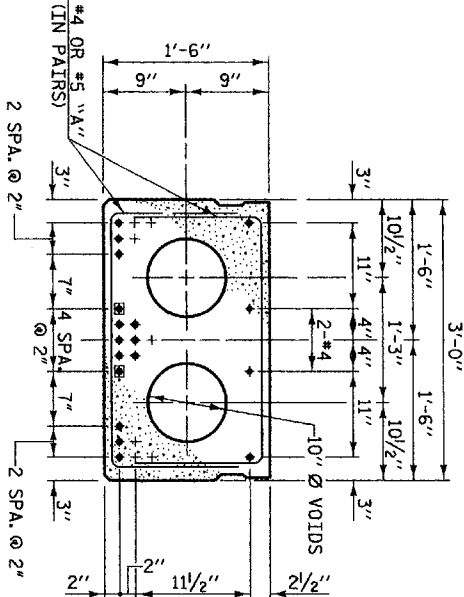
SECTION AT END BENT



45' SPAN

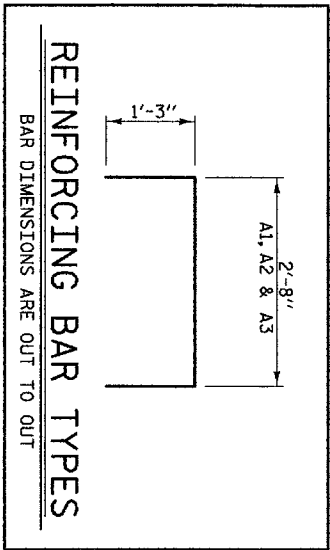
16 - 0.6" Ø L.R. STRANDS
EXTERIOR SLAB SECTIONS

Ⓜ DENOTES SHEATHED STRAND
(SEE SHEATH CHART)



45' SPAN

16 - 0.6" Ø L.R. STRANDS
INTERIOR SLAB SECTIONS



REINFORCING BAR TYPES

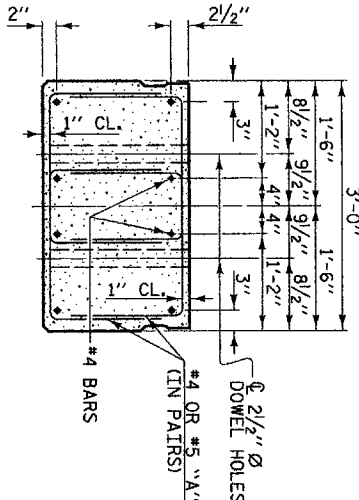
BAR DIMENSIONS ARE OUT TO OUT

SHEATH CHART	
SPAN LENGTH	NUMBER OF SHEATHED STRANDS PER EXTERIOR SLAB SECTIONS
45'	2

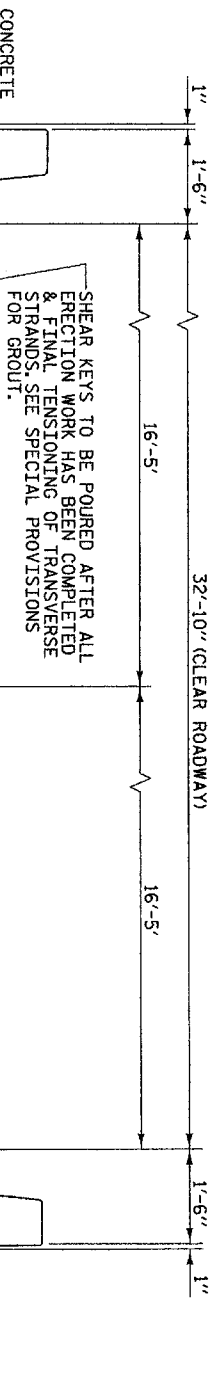
BOND SHALL BE BROKEN ON THESE STRANDS
FOR A DISTANCE OF 4'-0" FROM END OF SLAB

EXTERIOR & INTERIOR SLAB UNIT	45'
CAMBER (SLAB UNIT ALONE IN PLACE)	2 1/16" (UP)
DEFLECTION (SUPERIMPOSED DEAD LOAD)	1/4" (DOWN)
FINAL DEFLECTION	1 3/16" (UP)
* INCLUDES FUTURE WEARING SURFACE	

SLAB END ELEVATION

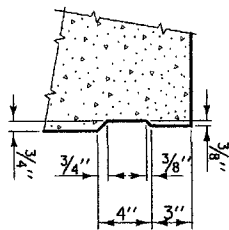


THE 2 1/2" Ø DOWEL HOLES AT FIXED ENDS OF SLAB SECTIONS
SHALL BE FILLED WITH GROUT, SEE SPECIAL PROVISIONS.



SHEAR KEY DETAIL

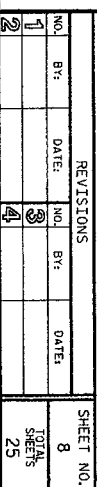
NOTE: OMIT SHEAR KEY ON OUTSIDE OF
EXTERIOR CORED SLAB



PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 - L -
REPLACES BRIDGE NO. 97
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HALEIGH
PRESTRESSED CORED SLAB
30' SPAN
32'-10" CLEAR ROADWAY - 90° SKEW

REVISIONS				SHEET NO. 7
NO.	BY	DATE	NO.	
1			3	
2			4	

TOTAL SHEETS 25



NOTES

REINFORCED BRIDGE APPROACH FILL, INCLUDING FABRIC, IMPERMEABLE GEOMEMBRANE, 4" Ø DRAINAGE PIPE, #78M STONE, AND SELECT MATERIAL, SHALL BE INCLUDED IN THE LUMP SUM CONTRACT BID PRICE FOR BRIDGE APPROACH FILL - SUB REGIONAL TIER.

FABRIC SHALL BE TYPE 1 ENGINEERING FABRIC IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS SECTION 1056.

#78M STONE BACKFILL (CLASS V SELECT MATERIAL) SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATIONS SECTION 1016.

#78M STONE BACKFILL IS TO BE CONTINUOUS ALONG FILL FACE OF BACKWALL FROM OUTSIDE EDGE TO OUTSIDE EDGE OF APPROACH SLAB.

FOR THE 4" Ø DRAINAGE PIPE OUTLETS, SEE ROADWAY STANDARD DRAWINGS.

AREA BETWEEN THE WINGWALL AND APPROACH SLAB SHALL BE GRADED TO DRAIN THE WATER AWAY FROM THE FILL FACE OF THE BRIDGE AND SHALL BE PAVED.

THE 6" COMP. A.B.C. SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB AND SHALL EXTEND 1'-0" OUTSIDE OF EACH EDGE OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 4" TYPE B-25.08 ASPHALT CONCRETE BASE COURSE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE BASE COURSE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB.

THE CONTRACTOR MAY USE 5" CLASS "A" CONCRETE BASE IN LIEU OF 6" COMP. A.B.C. IF THIS OPTION IS USED, THE CONCRETE BASE SHALL BE FLUSH WITH THE ROADWAY END OF THE APPROACH SLAB, AND THE WIDTH SHALL BE THE SAME AS THAT OF THE APPROACH SLAB. THE CONCRETE SHALL BE FINISHED TO A SMOOTH SURFACE AND A LAYER OF 30 LB ROOFING FELT SHALL BE PLACED BETWEEN THE CONCRETE BASE AND THE APPROACH SLAB TO PREVENT BOND. THE APPROACH SLAB SHALL NOT BE CAST UNTIL THE CONCRETE BASE HAS REACHED AN AGE OF THREE CURING DAYS.

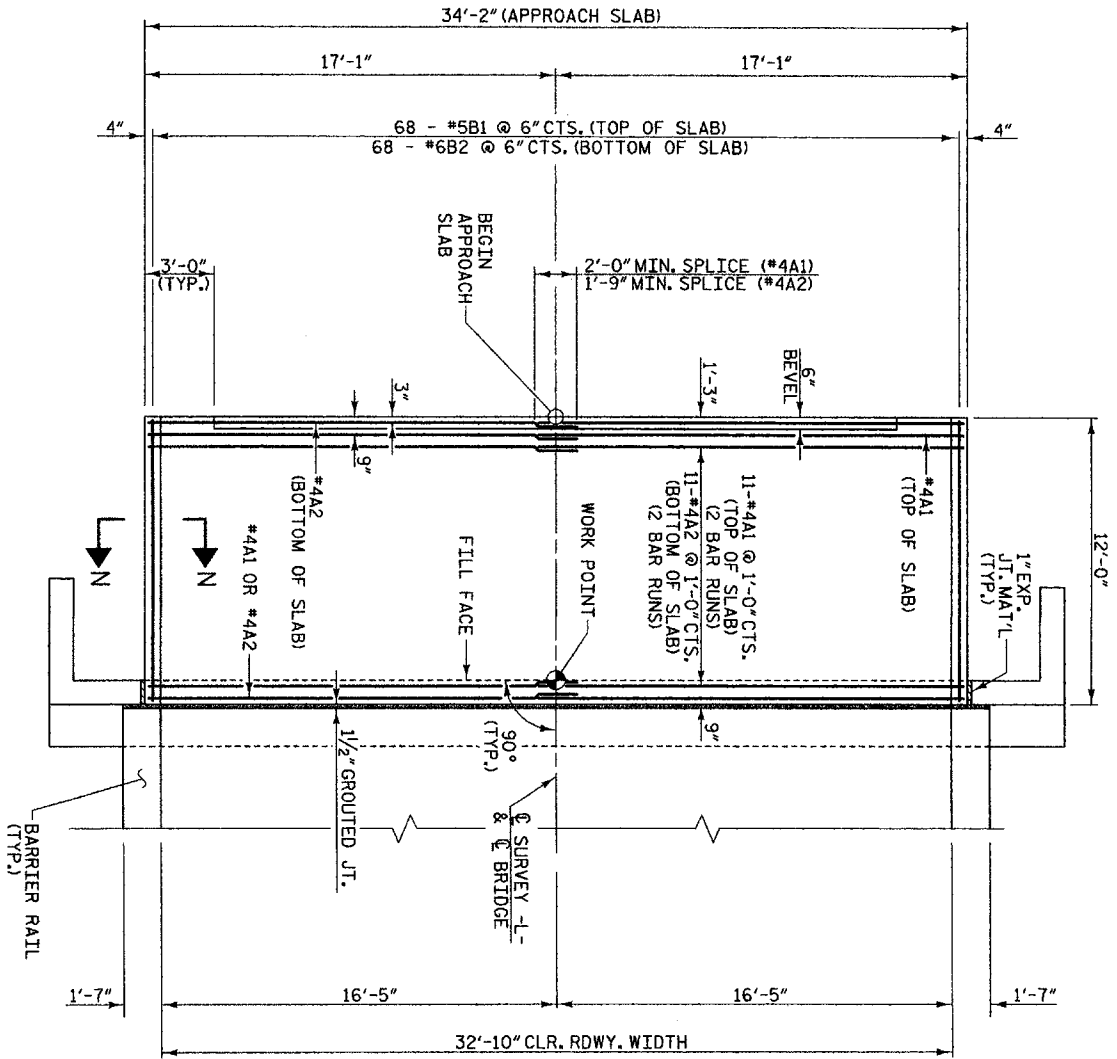
FOR JOINT DETAILS, SEE "PRESTRESSED CORED SLAB, 30' SPAN" SHEET.

THE JOINT AT THE END BENT SHALL BE GROUDED AS SOON AS PRACTICAL AFTER THE CONSTRUCTION OF THE APPROACH SLABS.

APPROACH SLAB GROOVING IS NOT REQUIRED.

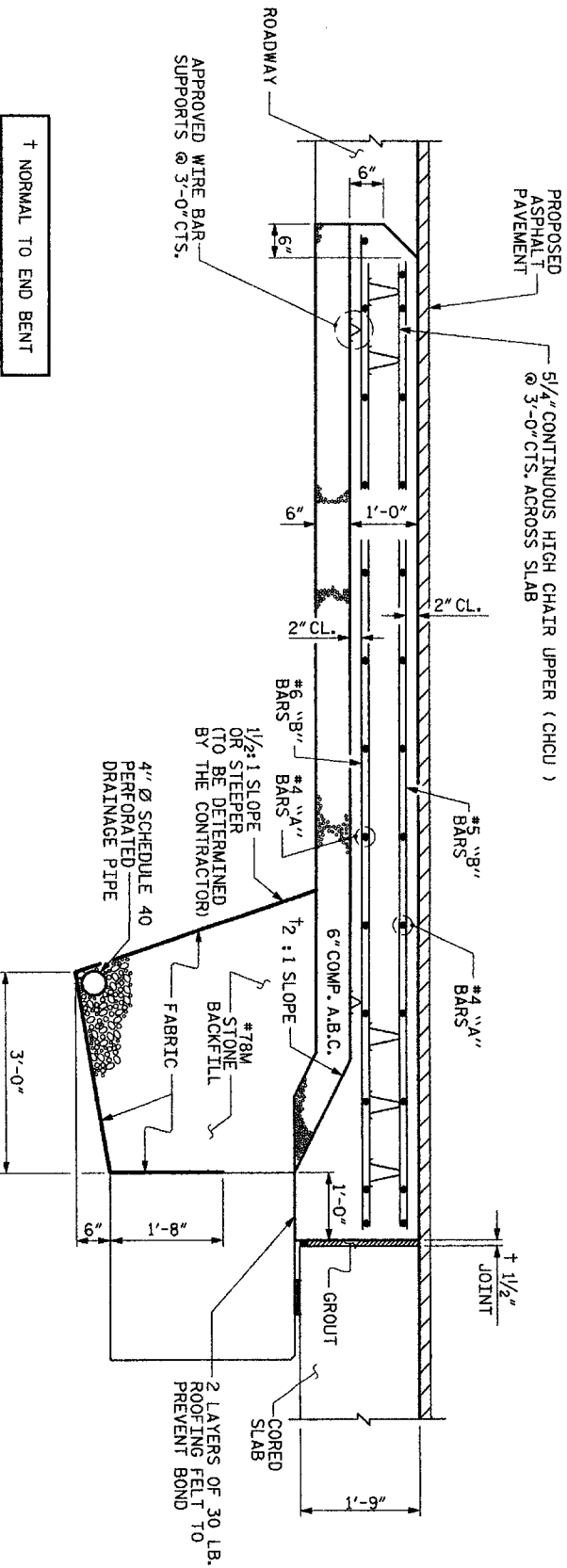
BILL OF MATERIAL

APPROACH SLAB AT EB #1					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	26	#4	STR	17'-11"	311
A2	26	#4	STR	17'-10"	310
*B1	68	#5	STR	11'-3"	798
B2	68	#6	STR	11'-8"	1192
REINFORCING STEEL					LBS. 1502
*EPOXY COATED REINFORCING STEEL					LBS. 1109
CLASS AA CONCRETE					C. Y. 16.2
APPROACH SLAB AT EB #2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	26	#4	STR	17'-11"	311
A2	26	#4	STR	17'-10"	310
*B1	68	#5	STR	11'-3"	798
B2	68	#6	STR	11'-8"	1192
REINFORCING STEEL					LBS. 1502
*EPOXY COATED REINFORCING STEEL					LBS. 1109
CLASS AA CONCRETE					C. Y. 16.2



PLAN OF APPROACH SLAB

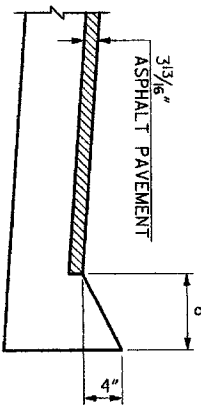
END BENT 1 APPROACH SLAB SHOWN
END BENT 2 APPROACH SLAB SIMILAR



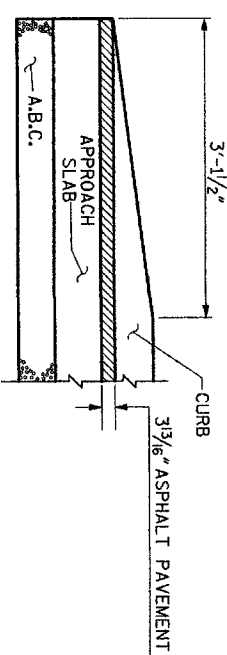
SECTION THRU SLAB

† NORMAL TO END BENT

ASSEMBLED BY : W.B. ALLEN DATE : 1/10
CHECKED BY : L.K. AUSTIN DATE : 8/10
DRAWN BY : KMM 3-08
CHECKED BY : GM 3-08



SECTION N-N



CURB DETAILS

THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:



PROJECT NO. 42559
WILSON COUNTY

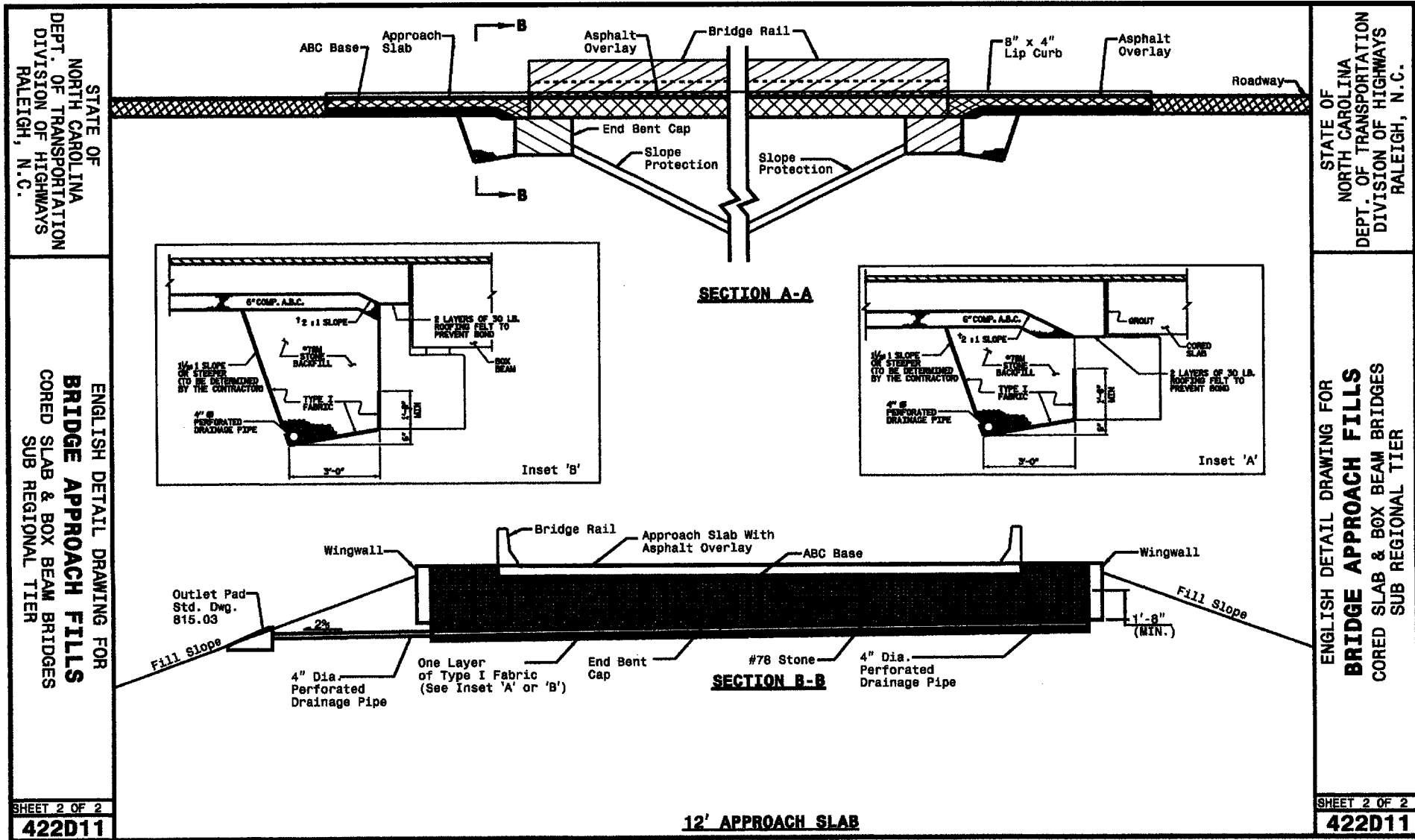
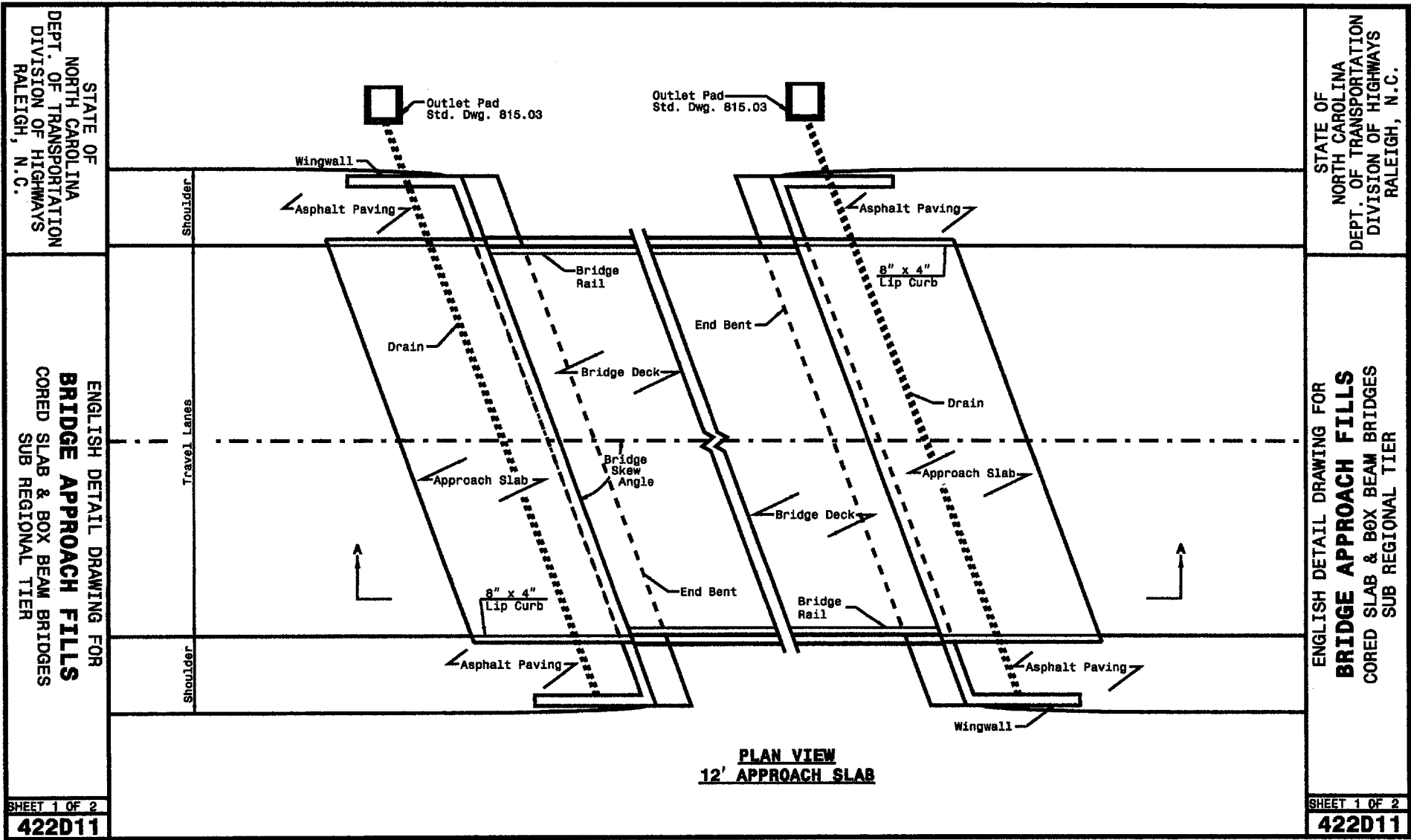
STATION: 15+29.20 -L-

REPLACES BRIDGE NO. 97

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD
BRIDGE APPROACH SLAB
FOR PRESTRESSED CONCRETE
(SUB-REGIONAL TIER)
STD. NO. BAS13

REVISIONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			2		
				TOTAL	10
				SHEETS	25



PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN
Office 919-250-4128 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: kempf\enlsh\bridge approach fills.dgn

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY SHALL CONSIST OF A 1/4 " HOLD DOWN PLATE AND 4 7/8 " Ø BOLTS WITH NUTS AND WASHERS, RUBRAIL, AND ADHESIVELY ANCHORED BOLTS.

THE HOLD-DOWN PLATE SHALL CONFORM TO AASHTO M270 GRADE 36, AFTER FABRICATION THE HOLD-DOWN PLATE SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH AASHTO M111.

BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307 AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M291. BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS, NUTS AND WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8 " Ø GALVANIZED BOLTS, NUTS AND WASHERS. THEY SHALL CONFORM TO OR EXCEED THE MECHANICAL REQUIREMENTS OF ASTM A307. THE USE OF THIS ALTERNATE SHALL BE APPROVED BY THE ENGINEER.)

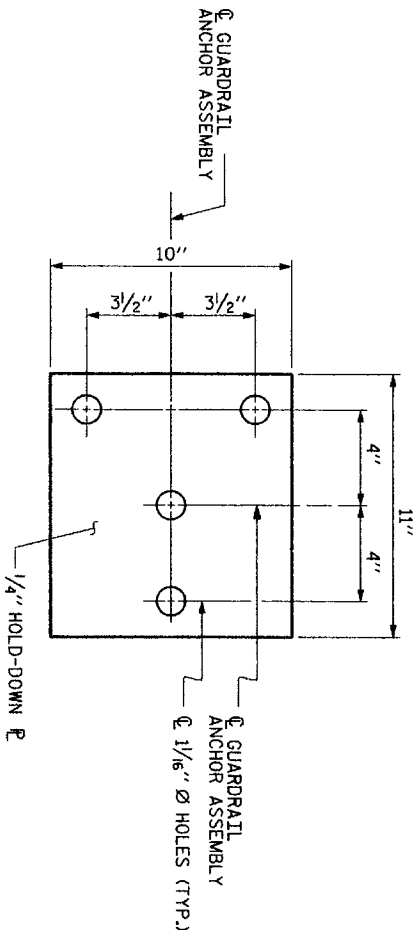
THE GUARDRAIL ANCHOR ASSEMBLY IS REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

AFTER INSTALLATION, THE EXPOSED THREAD OF THE BOLT SHALL BE BURRED WITH A SHARP POINTED TOOL.

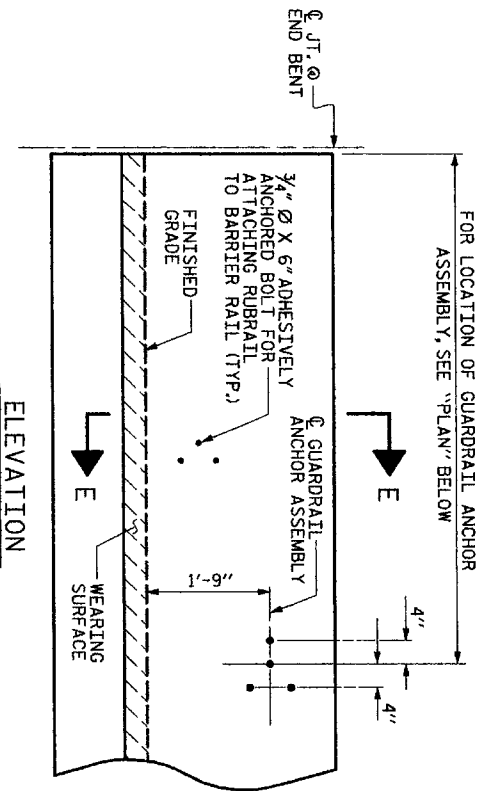
THE COST OF THE GUARDRAIL ANCHOR ASSEMBLY SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR STEEL BEAM GUARDRAIL.

THE 1 1/4 " Ø HOLES SHALL BE FORMED OR DRILLED WITH A CORE BIT. IMPACT TOOLS WILL NOT BE PERMITTED. ANY CONCRETE DAMAGED BY THIS WORK SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER.

THE C6 X 8.2 RUBRAIL IS TO BE ADHESIVELY ANCHORED TO THE RAIL USING THREE 3/4 " Ø X 6" BOLTS WITH WASHERS. LEVEL ONE FIELD TESTING IS REQUIRED, AND THE YIELD LOAD OF THE 3/4 " Ø BOLT IS 12 KIPS. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. SEE ROADWAY STANDARD 862.03 FOR DETAILS AND LOCATION OF THE RUBRAIL.

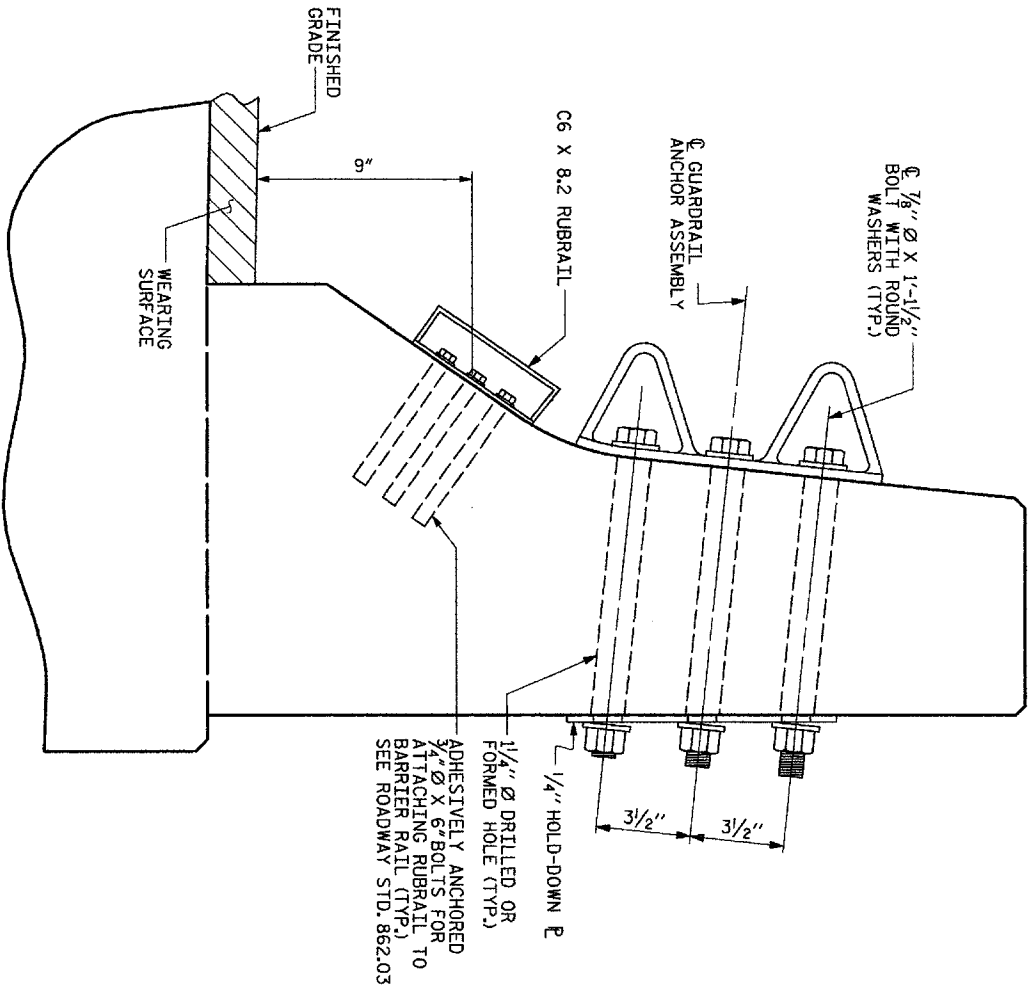


PLAN



ELEVATION

FOR LOCATION OF RUBRAIL, SEE ROADWAY STD. 862.03



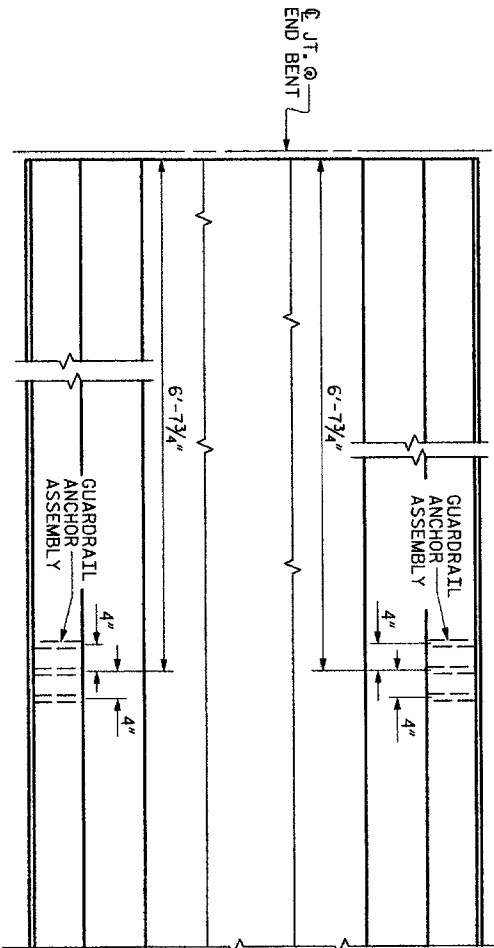
SECTION E-E

GUARDRAIL ANCHOR ASSEMBLY DETAILS

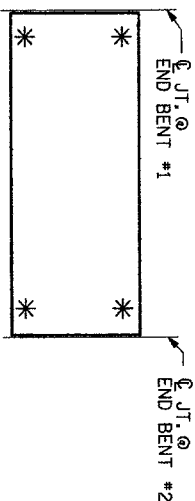
ASSEMBLED BY : W.B. ALLEN	DATE : 1/10
CHECKED BY : L.A. AUSTIN	DATE : 8/10
DRAWN BY : TLA 5/06	ADDED 5/1/06R KMM/GM
CHECKED BY : GM 5/06	

LOCATION OF ANCHORS FOR GUARDRAIL

END BENT #1 SHOWN, END BENT #2 SIMILAR.



PLAN



SKETCH SHOWING POINTS OF ATTACHMENTS

* DENOTES GUARDRAIL ANCHOR ASSEMBLY

PROJECT NO. 42559

WILSON COUNTY

STATION: 15+29.20 -1-

REPLACES BRIDGE NO. 97

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
STANDARD
GUARDRAIL ANCHORAGE
FOR BARRIER RAIL

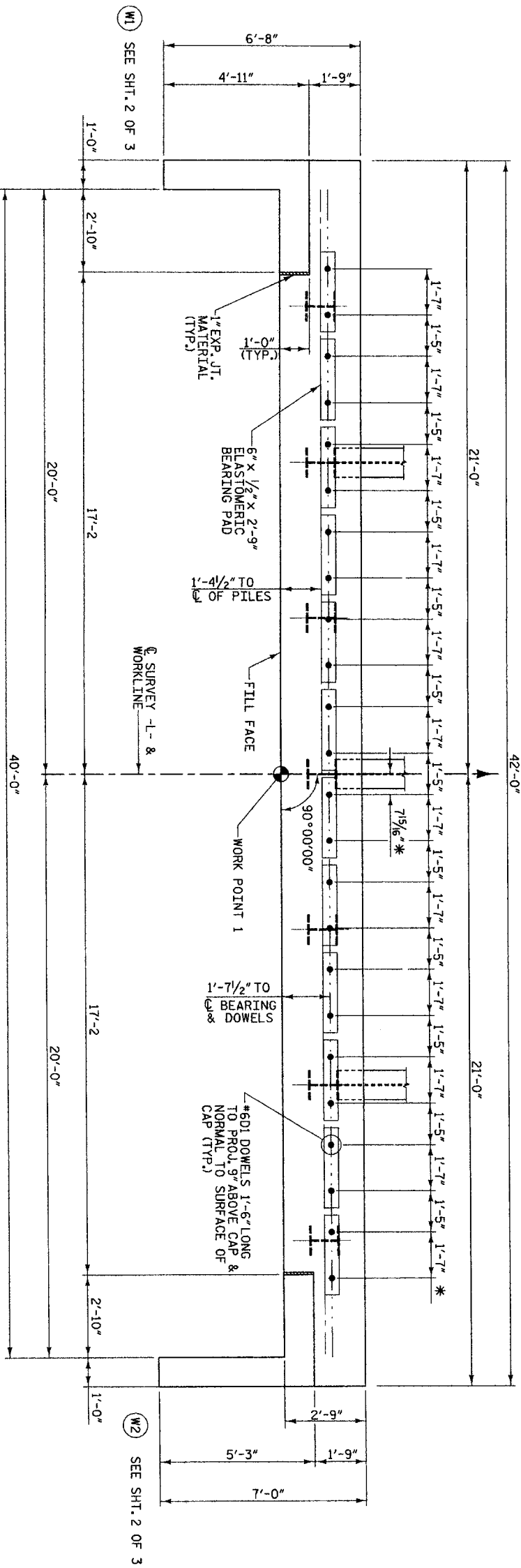
STD. NO. GRA2

NO.	BY:	DATE:	NO.	BY:	DATE:	SHEET NO.
1			2			12
2			3			25

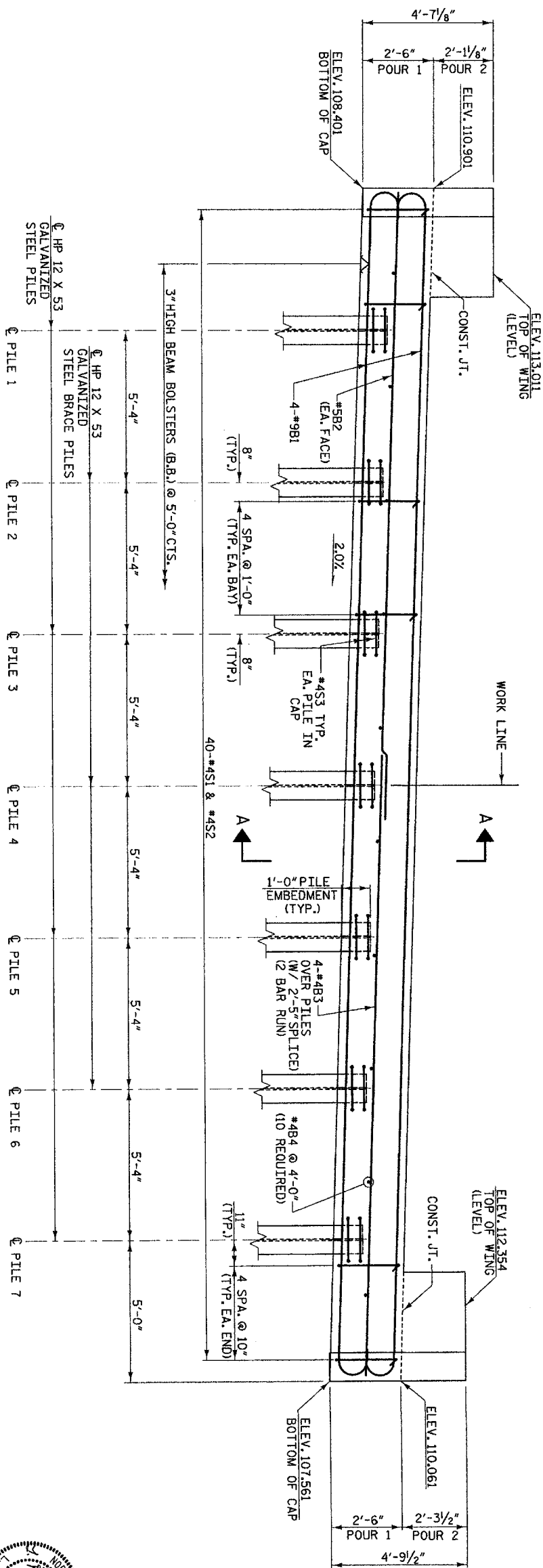


THIS STANDARD DRAWING REVIEWED & ADOPTED FOR USE AT THE REFERENCED LOCATION BY THE UNDERSIGNED:





PLAN



ELEVATION

NOTES
STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #6D1 DOWELS. FOR DOWEL DETAIL, SEE SHEET 3 OF 3.
* MEASURED ALONG SURFACE OF CAP

PILE	ELEVATION
1	109.311
2	109.204
3	109.098
4	108.991
5	108.884
6	108.778
7	108.671

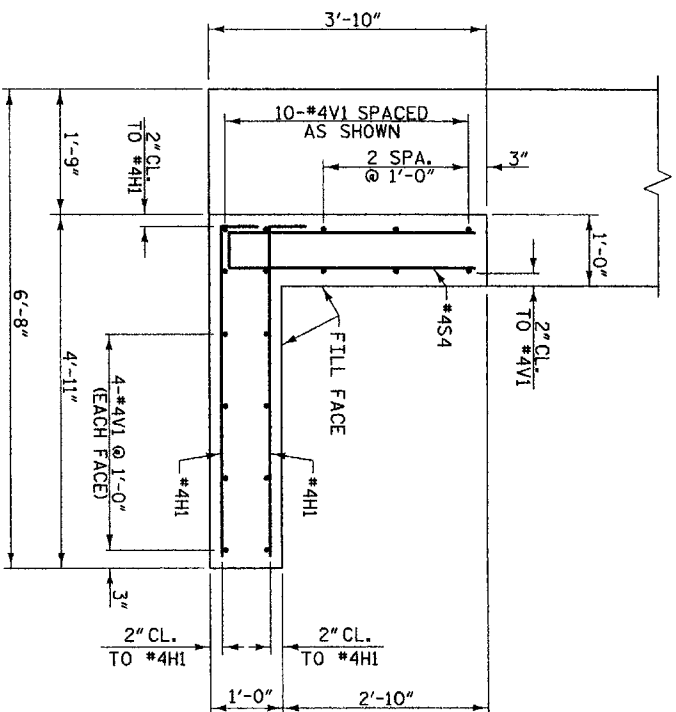
PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-
REPLACES BRIDGE NO. 97 SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUBSTRUCTURE
END BENT 1

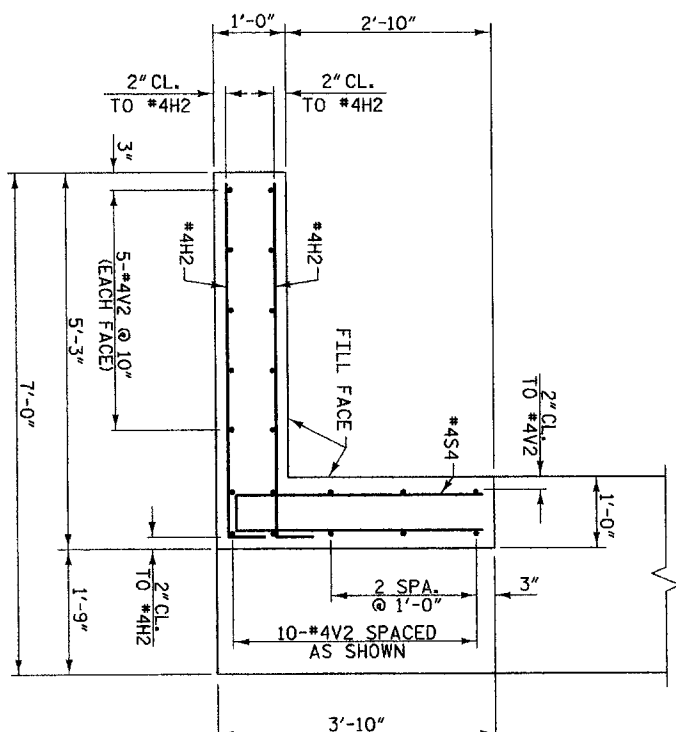
32'-10" CLEAR ROADWAY - 90° SKEW

NO.	BY	DATE	NO.	BY	DATE	SHEET NO.
1			3			13
2			4			25

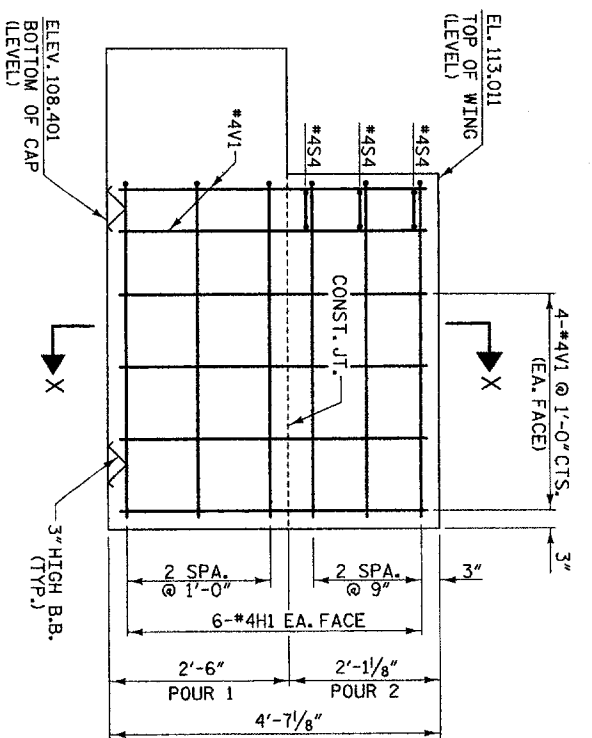




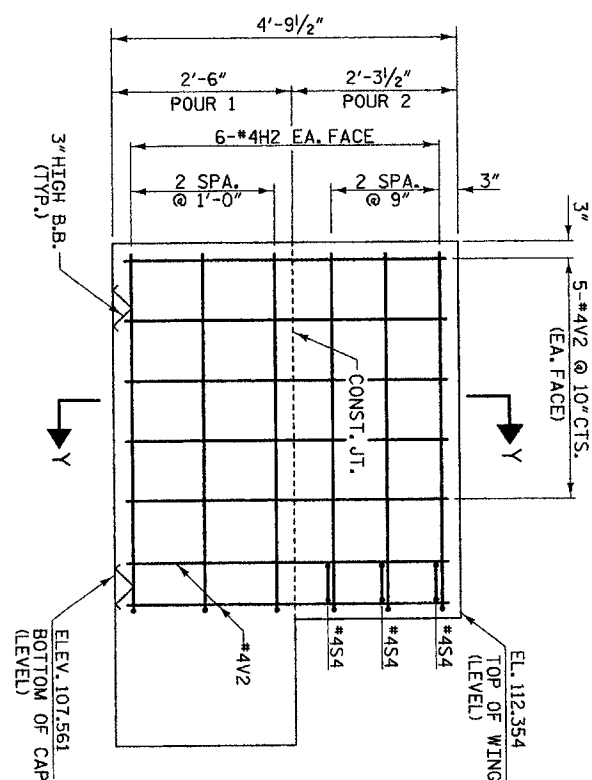
W1 PLAN OF LEFT WING



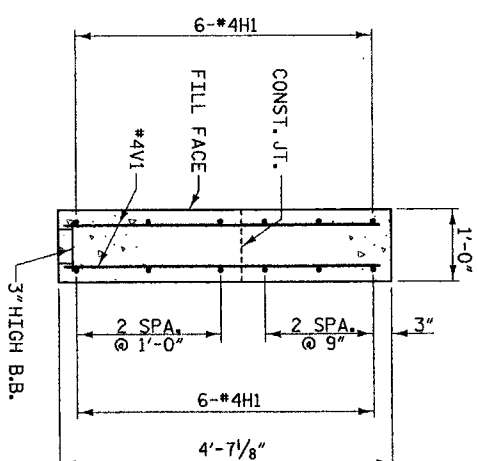
W2 PLAN OF RIGHT WING



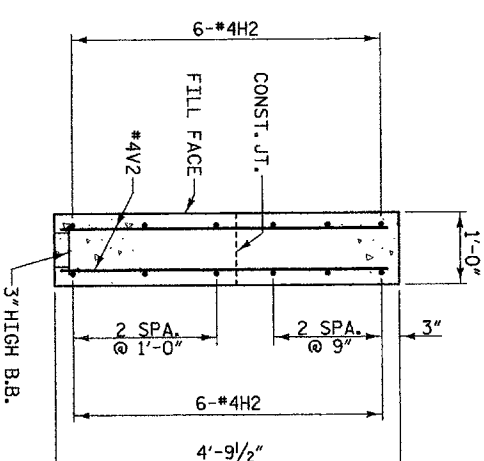
W1 ELEVATION OF LEFT WING



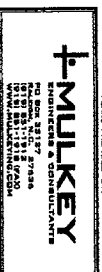
W2 ELEVATION OF RIGHT WING



SECTION X-X



SECTION Y-Y



PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-

REPLACES BRIDGE NO. 97 SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

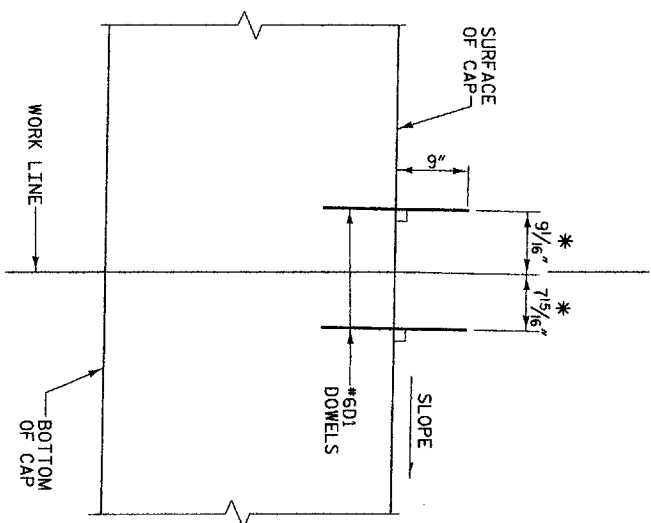
SUBSTRUCTURE
END BENT 1

32'-10" CLEAR ROADWAY - 90° SKEW

REVISIONS		SHEET NO.	
NO.	DATE	NO.	DATE
1	10/5/10	14	
2		25	

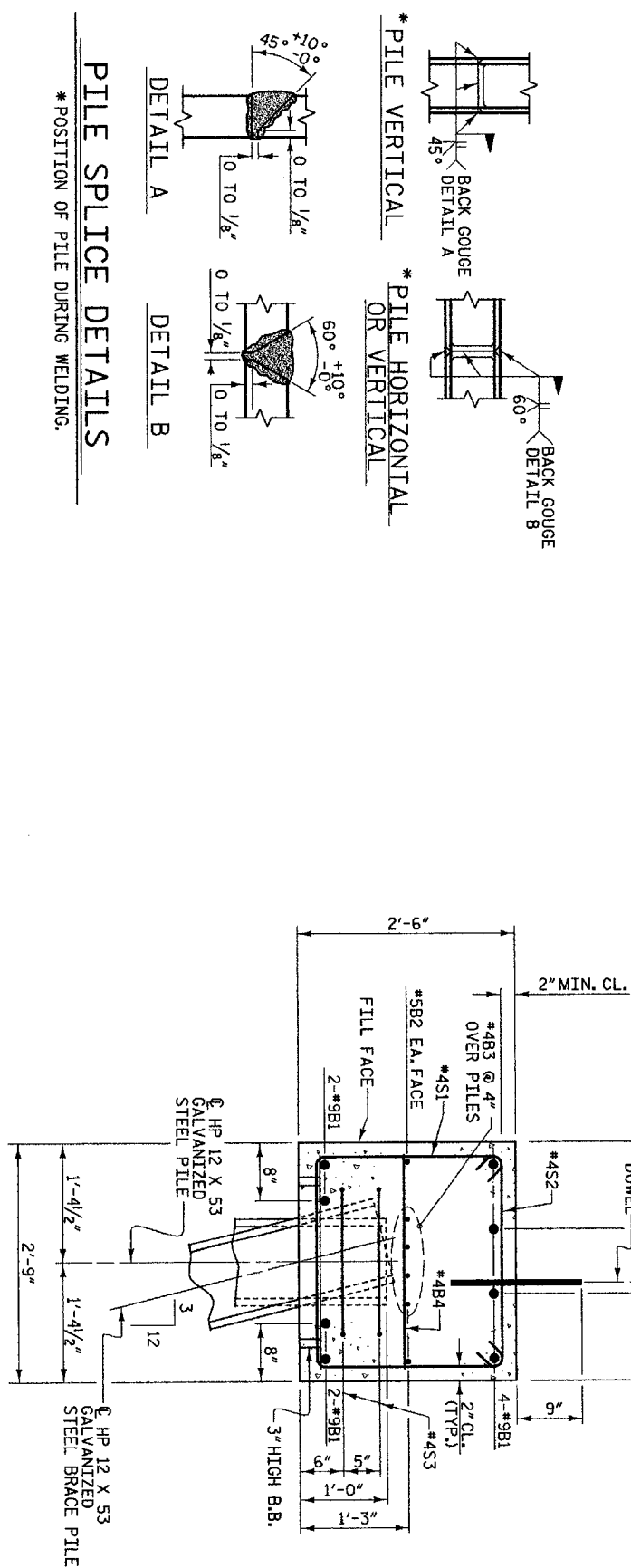
DRAWN BY: W.B. ALLEN DATE: 1/10
CHECKED BY: L.K. AUSTIN DATE: 8/20

W.B. ALLEN	DATE :	1/10
L.K. AUSTIN	DATE :	8/10



DOWEL DETAIL

* MEASURED ALONG SURFACE OF CAP



SECTION A-A

BAR TYPES _____

- BILL OF MATERIAL

Technical drawings of five types of bent bars:

- 1**: A U-shaped bar with a width of 2'-5" and a depth of 2'-1 1/2". The ends are bent at 4 1/2" angles.
- 2**: A U-shaped bar with a width of 2'-5" and a depth of 4'-2". The ends are bent at 4 1/2" angles.
- 3**: A C-shaped bar with a width of 4'-8" and a depth of 1'-3". The ends are bent at 4 1/2" angles.
- 4**: A U-shaped bar with a width of 4'-7" and a depth of 4'-11". The ends are bent at 8" angles.
- 5**: A circular bar with a diameter of 1'-8" and a length of 1'-3" LAP.

Table of dimensions for bent bars (6):

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	#9	3	44'-2"	1201
B2	#5	STR	41'-8"	87
B3	#4	STR	22'-1"	118
B4	#4	STR	2'-5"	16
D1	#6	STR	1'-6"	54
H1	#4	4	5'-3"	42
H2	#4	4	5'-7"	45
S1	#4	1	7'-5"	198
S2	#4	2	3'-2"	85
S3	#4	5	6'-6"	61
S4	#4	6	7'-6"	30
V1	#4	STR	4'-3"	51
V2	#4	STR	4'-5"	59

TOTAL REINFORCING STEEL =	2047lbs.
CLASS "A" CONCRETE - CU. YARDS	
POUR 1	11.5 cu. yds.
POUR 2	1.3 cu. yds.
TOTAL	12.8 cu. yds.
HP 12 X 53 GALVANIZED STEEL PILES	
7 PILES REQUIRED - LIN. FEET	455

PROJECT NO. 42559

WILSON
COUNTY

STATION: 15+29.20 -L-

REPLACES BRIDGE NO. 97 SHEET 3 OF 3

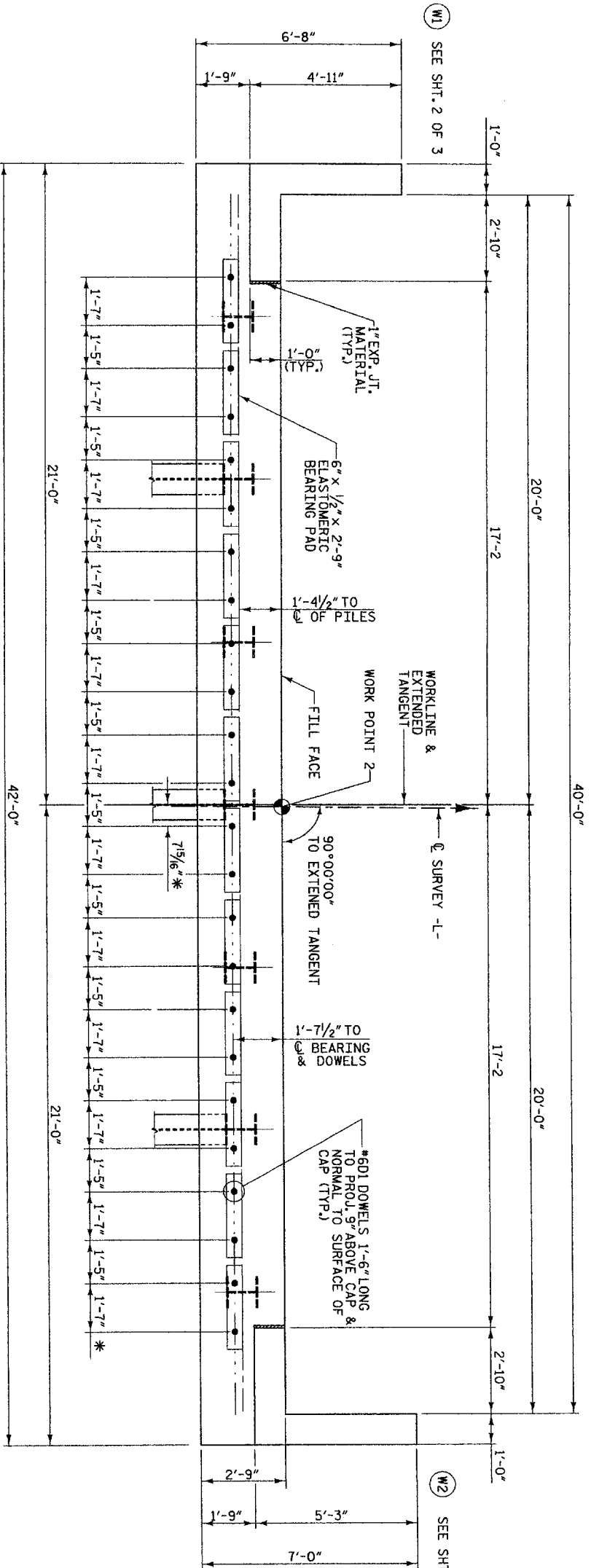
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT 1

32'-10" CLEAR ROADWAY - 90° SKEW

REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 15
					25



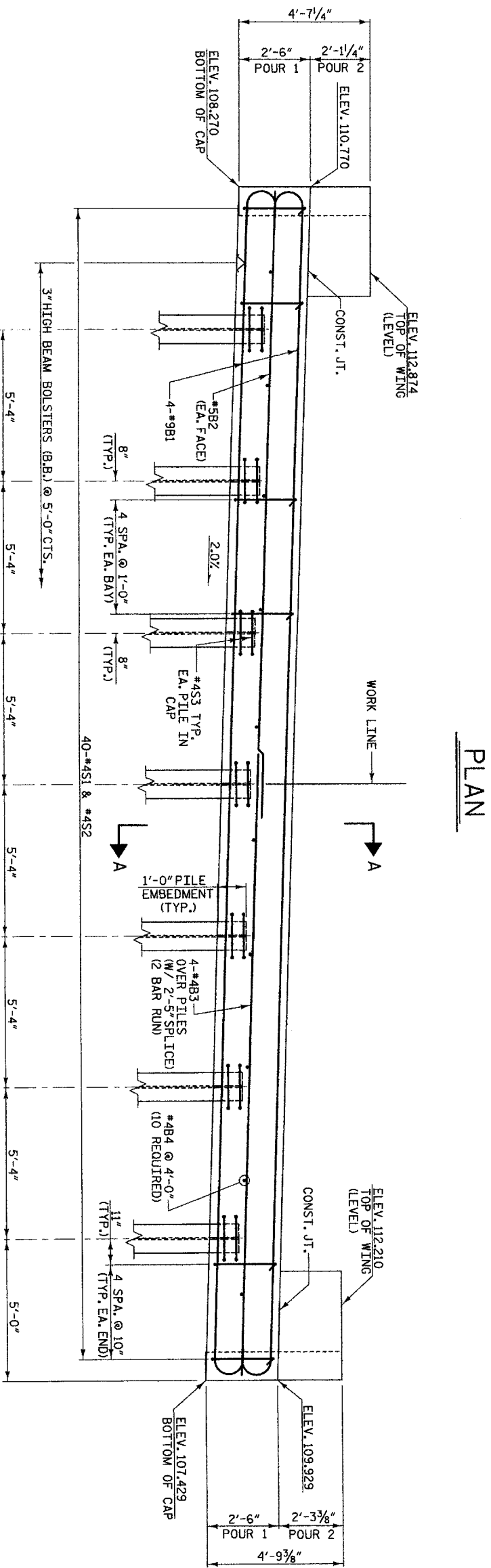


(W1) SEE SHT. 2 OF 3

(W2) SEE SHT. 2 OF 3

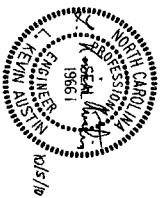
NOTES
STRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR #601 DOWELS. FOR PILE SPLICE DETAIL, SEE END BENT 1 SHEET 3 OF 3.
FOR DOWEL DETAIL, SEE END BENT 1, SHEET 3 OF 3.
* MEASURED ALONG SURFACE OF CAP

PILE	ELEVATION
1	109.180
2	109.073
3	108.967
4	108.860
5	108.753
6	108.647
7	108.540



ELEVATION

DRAWN BY: W.B. ALLEN DATE: 1/10
CHECKED BY: L.K. AUSTIN DATE: 9/10



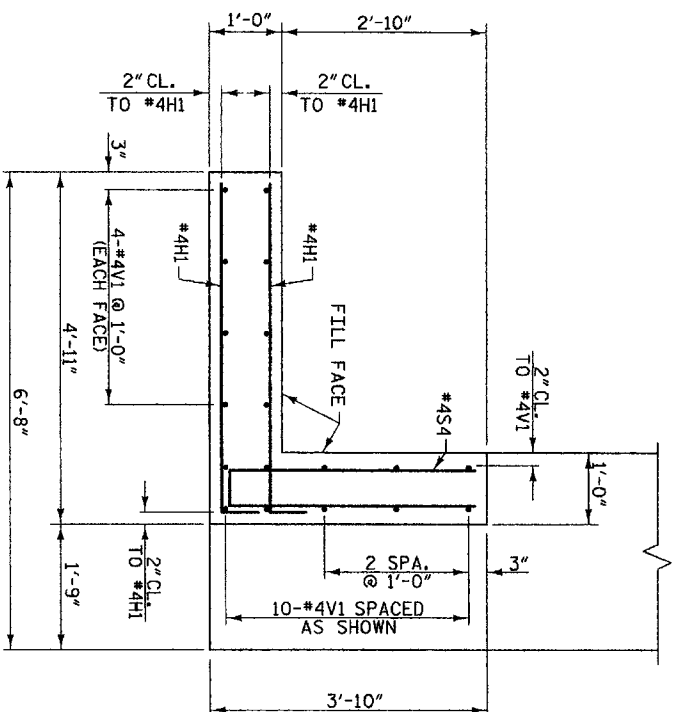
PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-
REPLACES BRIDGE NO. 97 SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

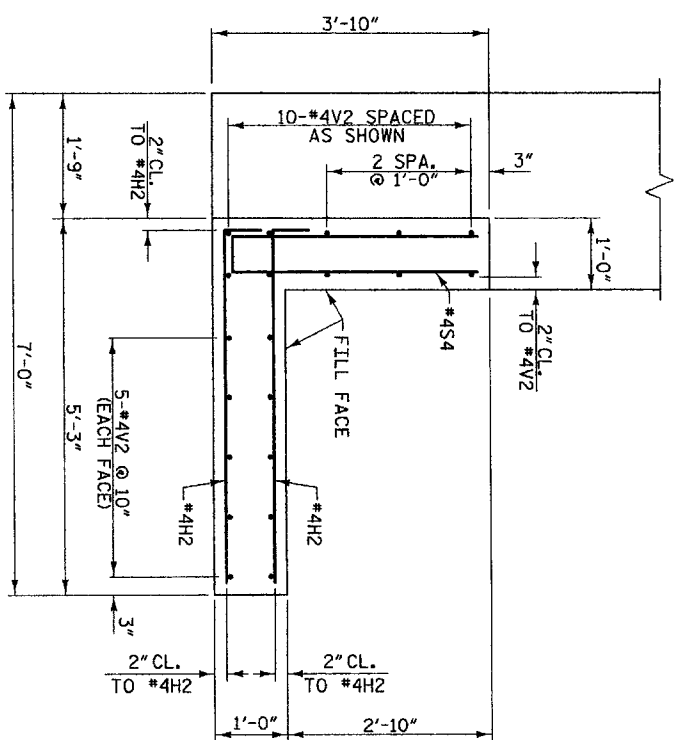
SUBSTRUCTURE
END BENT 2

32'-10" CLEAR ROADWAY - 90° SKEW

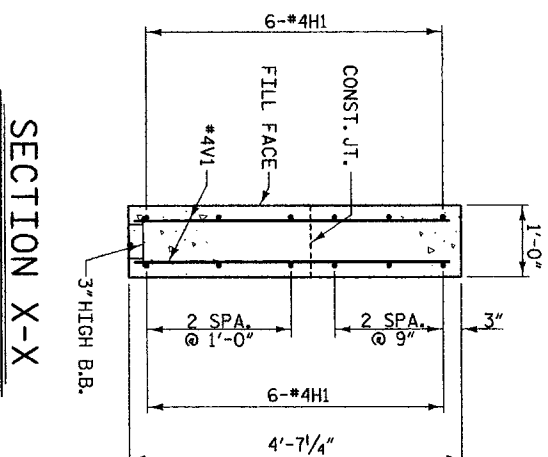
REVISONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			2		
3			4		
5			6		
7			8		
9			10		
11			12		
13			14		
15			16		
17			18		
19			20		
21			22		
23			24		
25			26		



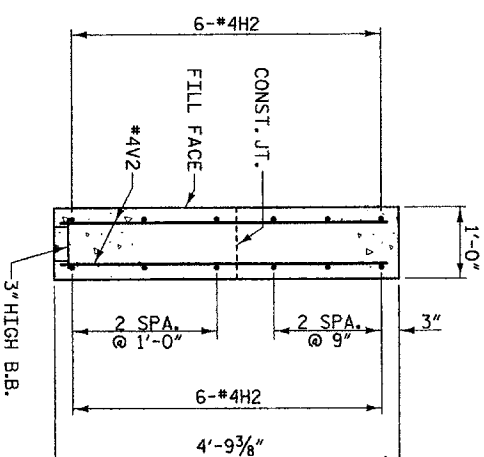
W1
PLAN OF LEFT WING



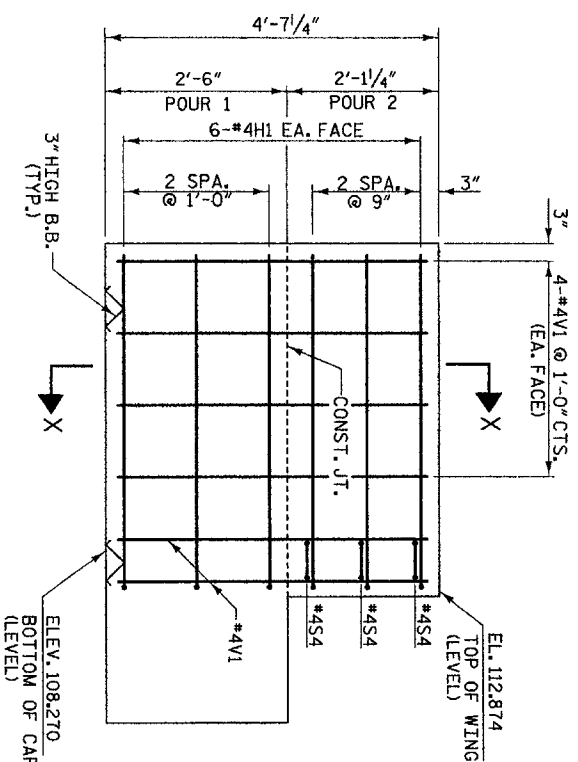
W2
PLAN OF RIGHT WING



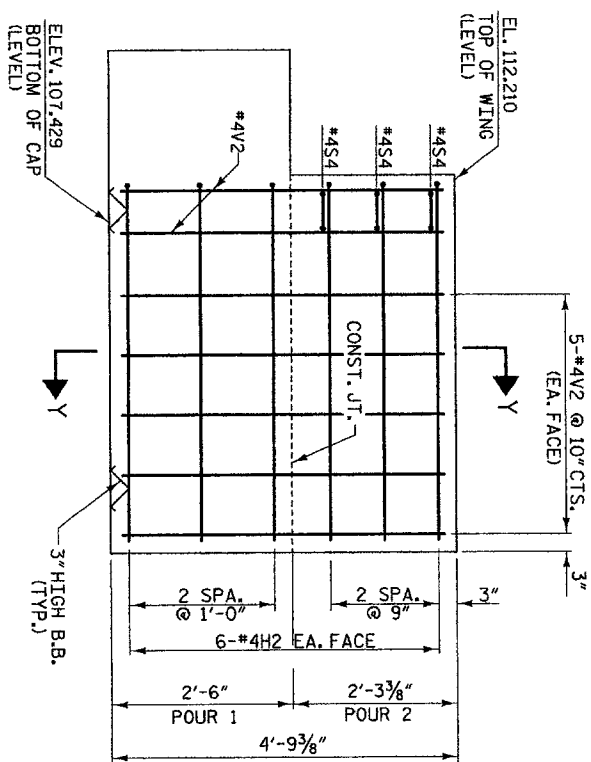
SECTION X-X



SECTION Y-Y



W1
ELEVATION OF LEFT WING



W2
ELEVATION OF RIGHT WING



DRAWN BY : W.B. ALLEN
CHECKED BY : L.K. AUSTIN
DATE : 1/10
DATE : 8/10

PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-

REPLACES BRIDGE NO. 97 SHEET 2 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

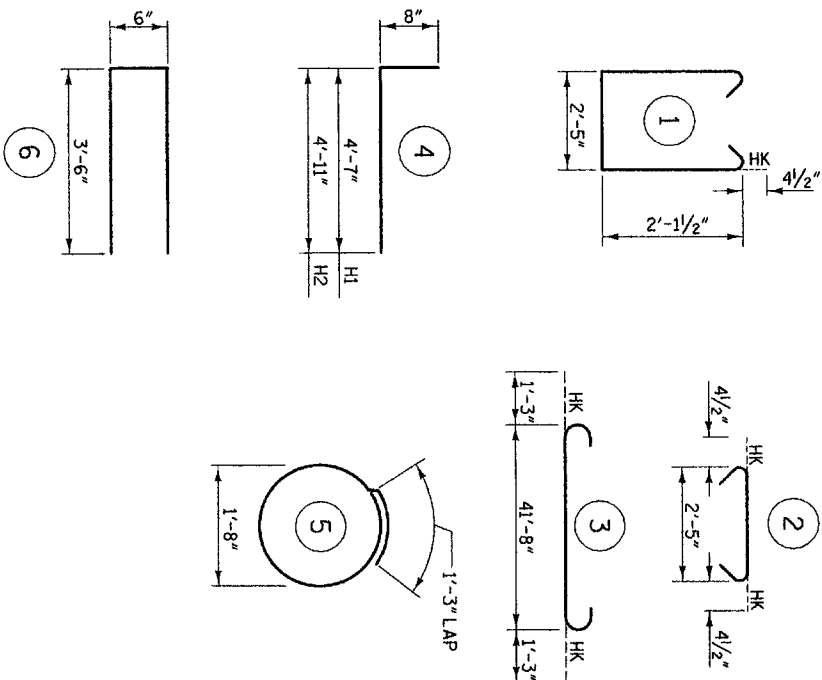
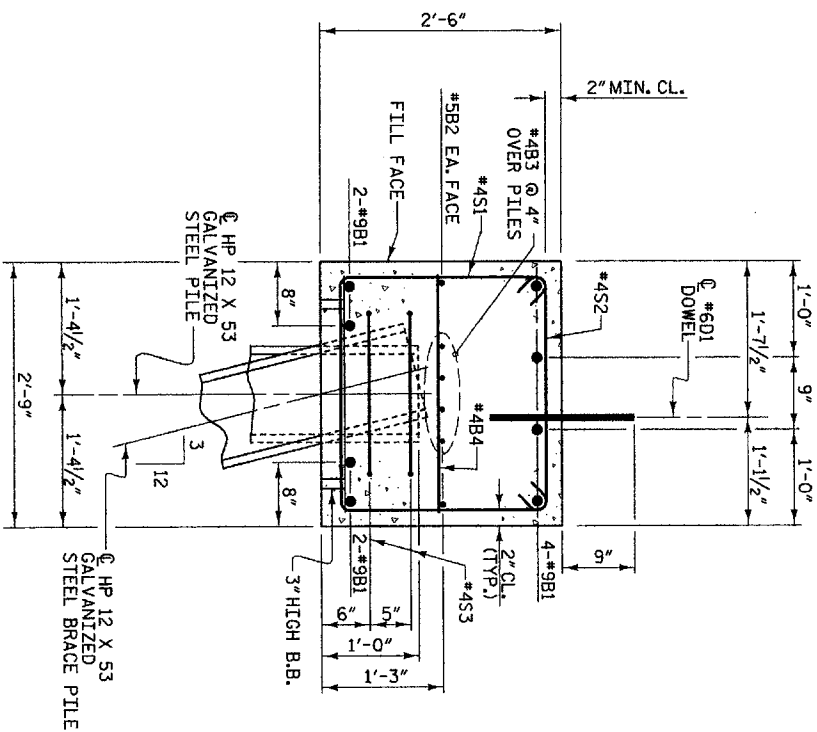
SUBSTRUCTURE
END BENT 2

32'-10" CLEAR ROADWAY - 90° SKEW

REVISITONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

TOTAL SHEETS 25

DRAWN BY : W.B. ALLEN DATE : 1/10
CHECKED BY : L.K. AUSTIN DATE : 8/10

[illegible]

PLANS PREPARED BY:

+ **MULKEY**
ENGINEERS & CONSULTANTS

REVISONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS
					18
					25

32'-10" CLEAR ROADWAY - 90° SKEW

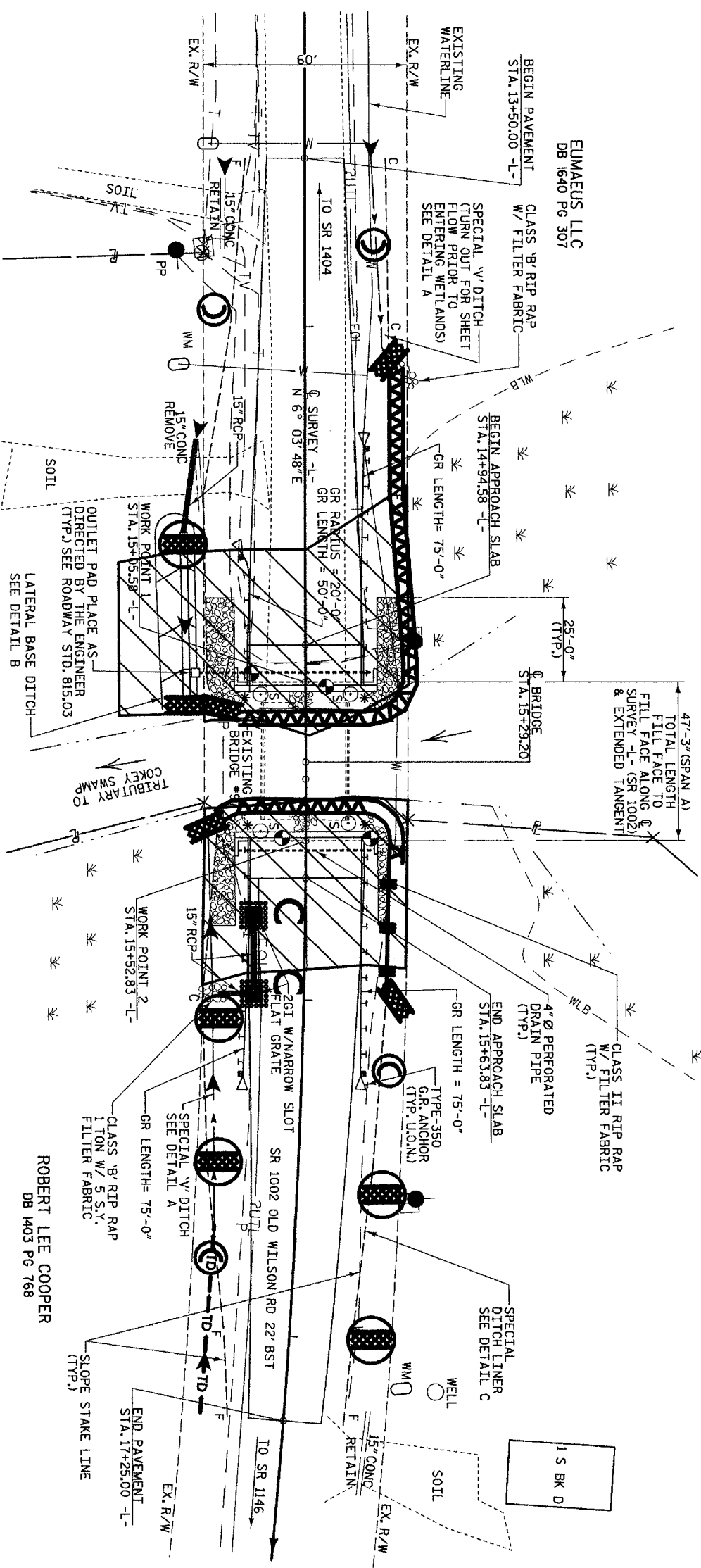
SUBSTRUCTURE
END BENT 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

REPLACES BRIDGE NO. 97 SHEET 3 OF 3

PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-

EROSION CONTROL PLAN



<u>Sed.</u> #	<u>Description</u>	<u>Symbol</u>
1605.01	Temporary Silt Fence.....	
1606.01	Special Sediment Control Fence	
1607.01	Gravel Construction Entrance	
1622.01	Temporary Berms and Slope Drains	
1630.05	Temporary Diversion	
1632.03	Rock Inlet Sediment Trap Type C	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-B.....	
	Wattle with Polyacrylamide (PAM).....	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM).....	

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

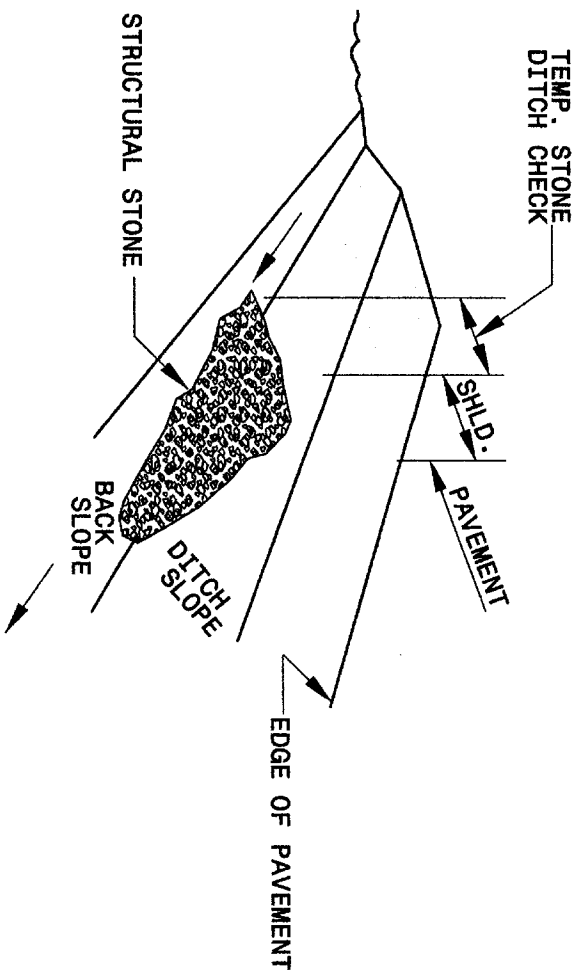
ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-

DEPARTMENT OF TRANSPORTATION
RALEIGH
BRIDGE ON SR 1002
OVER TRIBUTARY TO
COKEY SWAMP
BETWEEN SR 1404 & SR 1146

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					TOTAL SHEETS 25

TEMPORARY ROCK SILT CHECK TYPE 'B' DETAIL

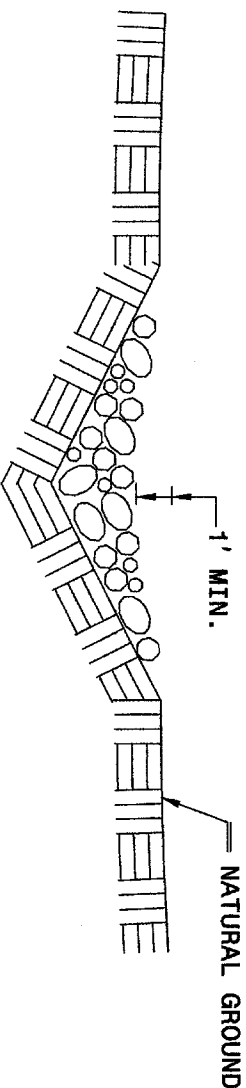


ISOMETRIC VIEW

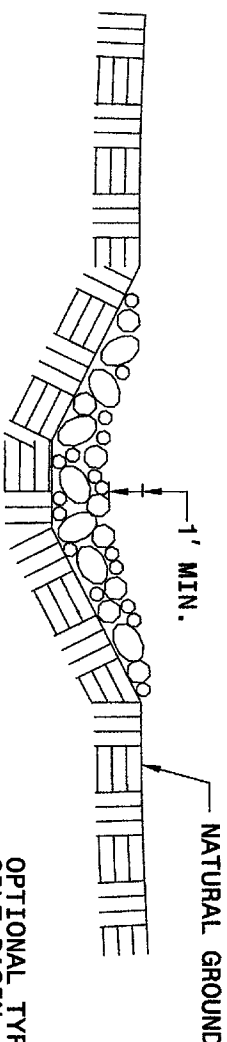
NOTES:

USE CLASS 'B' EROSION CONTROL STONE FOR STRUCTURAL STONE.

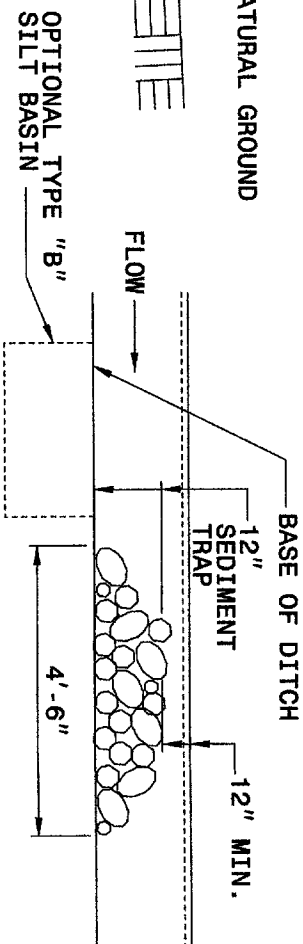
THE ENGINEER MAY DIRECT THE OPTION OF CLASS "A" STONE FOR SITES HAVING LESS THAN ONE (1) ACRE DRAINAGE AREA AND A DITCH GRADE LESS THAN 3%.



CROSS SECTION
VEE DITCH



CROSS SECTION
TRAPEZOIDAL DITCH



ELEVATION VIEW

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

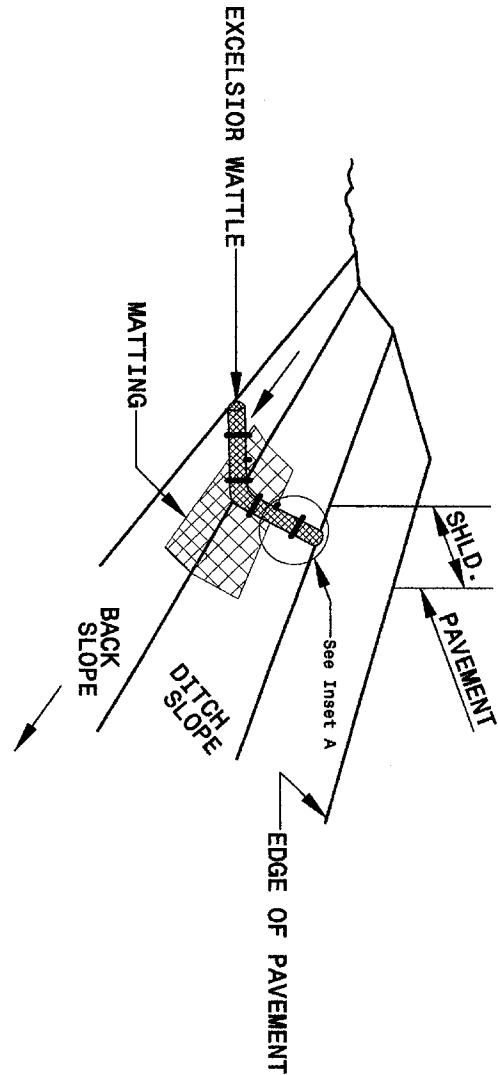
2006 STANDARD SPECIFICATIONS

PROJECT NO. 42559
WILSON COUNTY
STATION: 15+29.20 -L-
REPLACES BRIDGE NO. 97 BK-5108

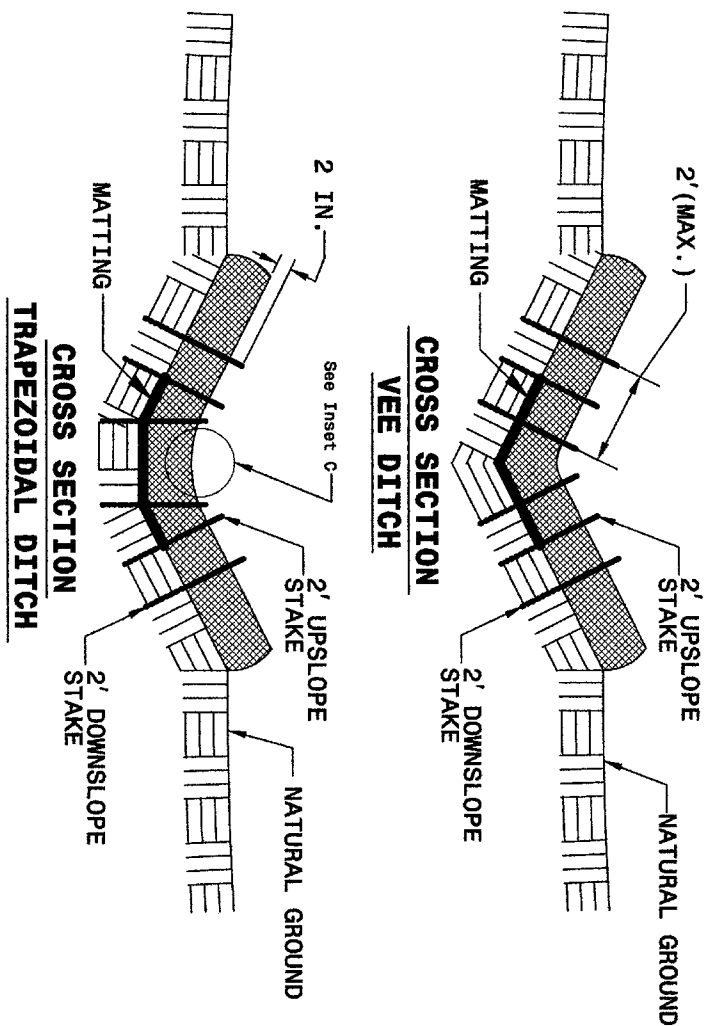
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
BRIDGE ON SR 1002
OVER TRIBUTARY TO
COKEY SWAMP
BETWEEN SR 1404 & SR 1146

REVISIONS						SHEET NO. 20 TOTAL SHEETS 25
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			
2			4			

WATTLE WITH POLYACRYLAMIDE (PAM) DETAIL



ISOMETRIC VIEW



CROSS SECTION
VEE DITCH

CROSS SECTION
TRAPEZOIDAL DITCH

NOTES:

USE MINIMUM 12 IN. DIAMETER EXCELSIOR WATTLE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

ONLY INSTALL WATTLE(S) TO A HEIGHT IN DITCH SO FLOW WILL NOT WASH AROUND WATTLE AND SCOUR DITCH SLOPES AND AS DIRECTED.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO BOTTOM OF DITCH.

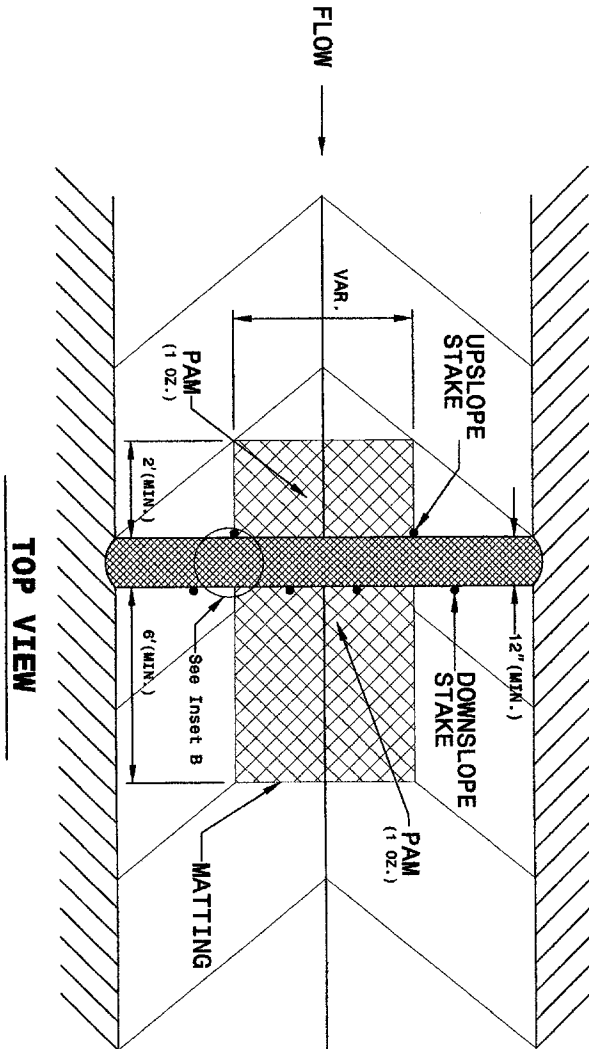
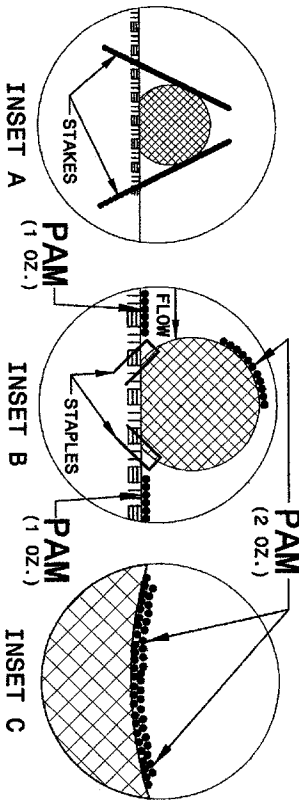
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

INSTALL MATTING IN ACCORDANCE WITH SECTION 1631 OF THE STANDARD SPECIFICATIONS.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH WATTLE.

INITIALLY APPLY 2 OUNCES OF ANIONIC OR NEUTRALLY CHARGED PAM OVER WATTLE WHERE WATER WILL FLOW AND 1 OUNCE OF PAM ON MATTING ON EACH SIDE OF WATTLE. REAPPLY PAM AFTER EVERY RAINFALL EVENT THAT IS EQUAL TO OR EXCEEDS 0.50 IN.



TOP VIEW

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

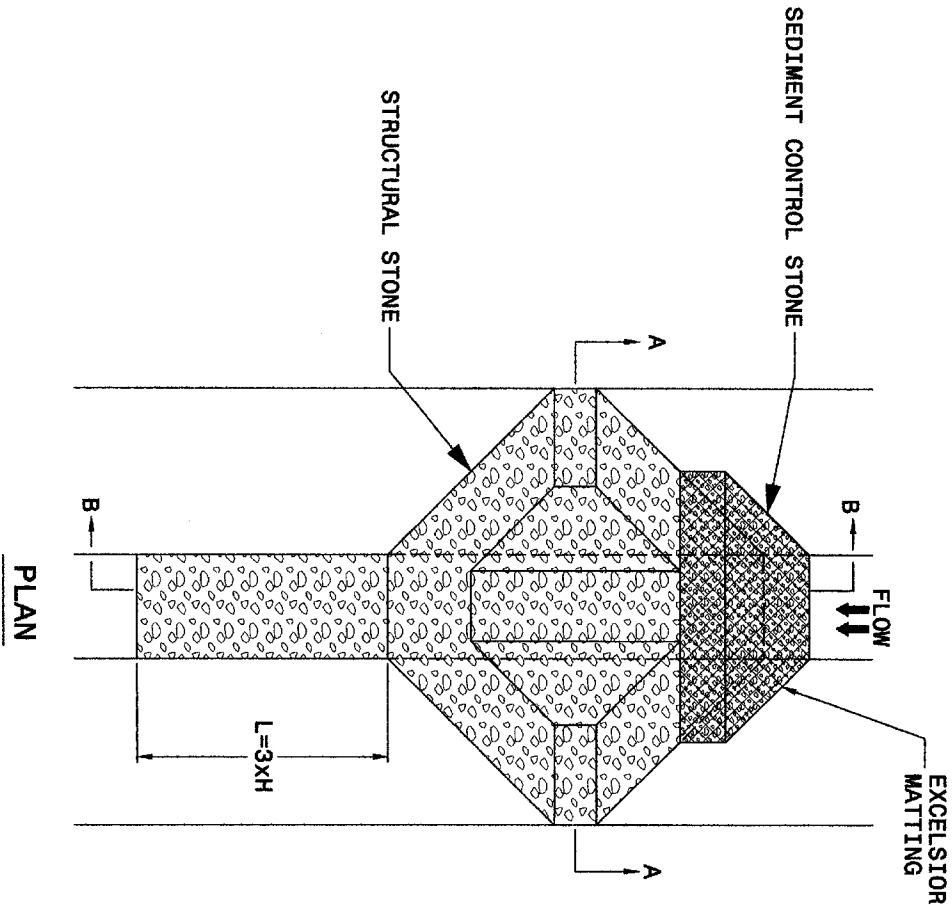
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

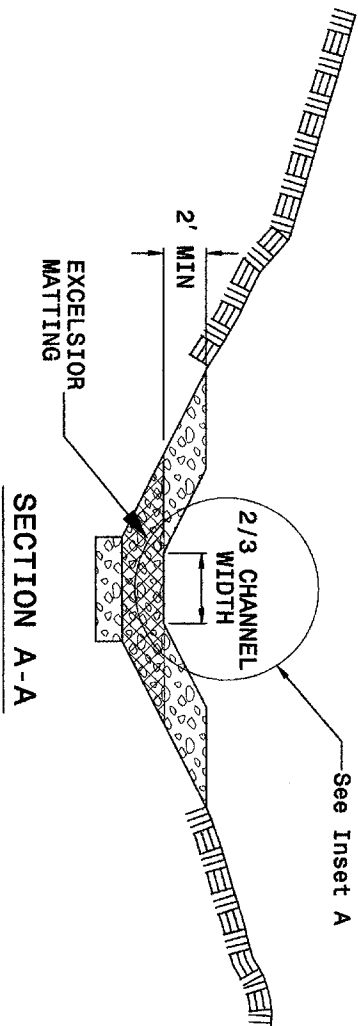
2006 STANDARD SPECIFICATIONS

PROJECT NO. 42559						
WILSON COUNTY						
STATION: 15+29.20 -1-						
REPLACES BRIDGE NO. 97 BK-5108						
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH						
BRIDGE ON SR 1002 OVER TRIBUTARY TO COKEY SWAMP BETWEEN SR 1404 & SR 1146						
REVISIONS					SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			21
2			4			25

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)



PLAN



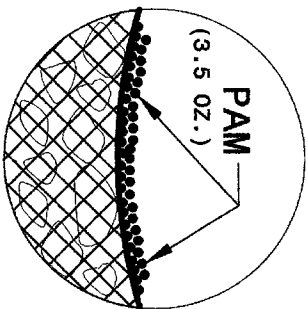
SECTION A-A

NOTES

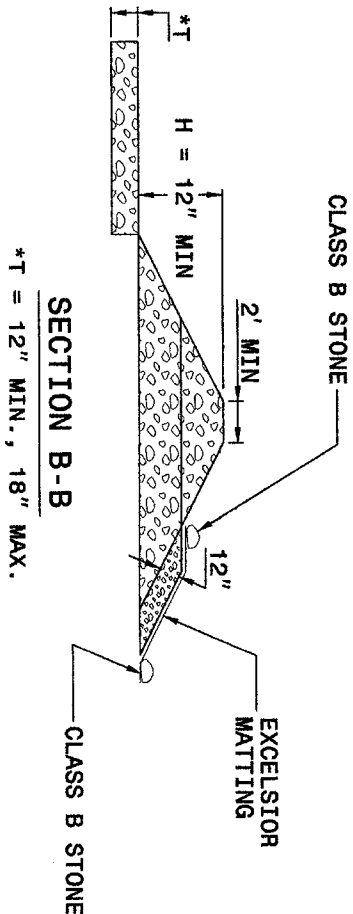
USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 3.5 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



INSET A



SECTION B-B

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

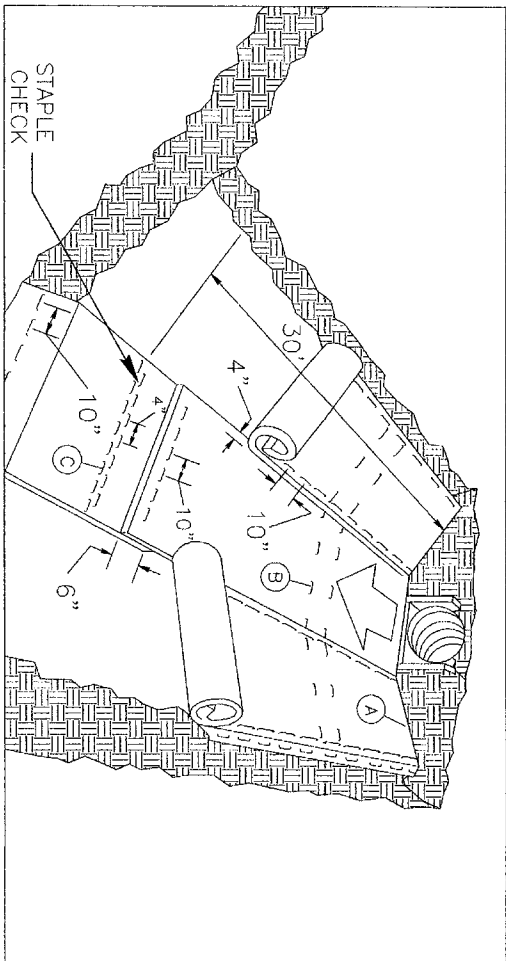
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, NC.

2006 STANDARD SPECIFICATIONS

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH									
BRIDGE ON SR 1002 OVER TRIBUTARY TO COKEY SWAMP BETWEEN SR 1404 & SR 1146									
REPLACES BRIDGE NO. 97 BK-5108									
PROJECT NO. 42559									
WILSON COUNTY									
STATION: 15+29.20 -L-									
REVISITONS									
NO.	BY	DATE	NO.	BY	DATE	SHEET NO.			
1			3			22			
2			4			25			

MATTING INSTALLATION DETAIL



MATTING IN DITCHES

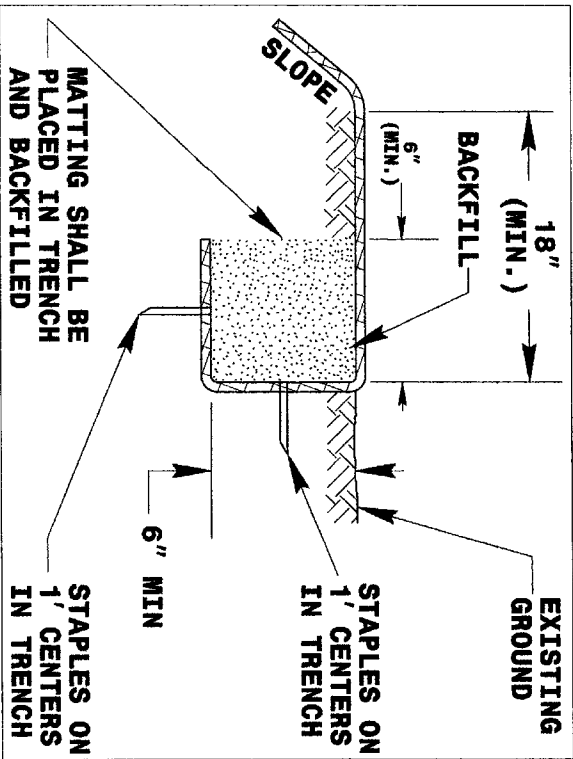
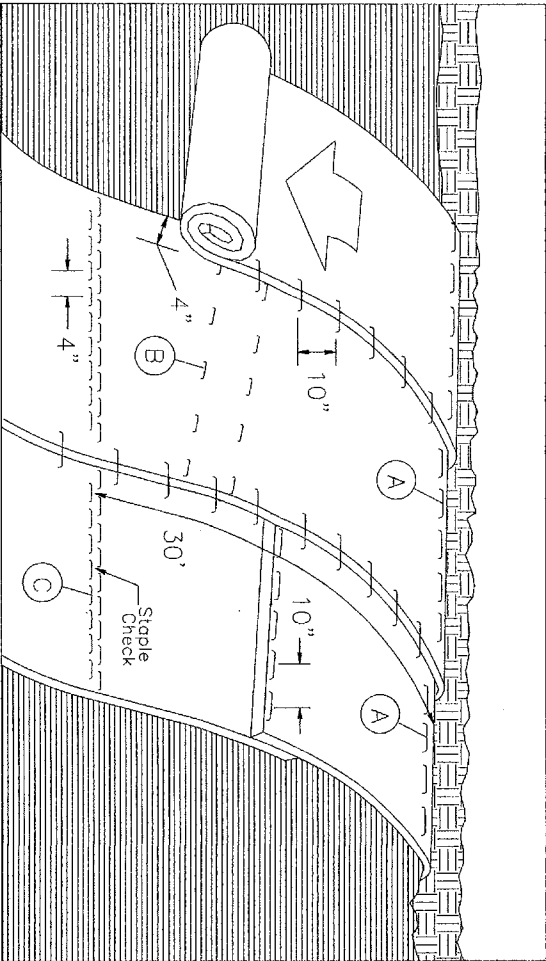


DIAGRAM (A)



MATTING ON SLOPES

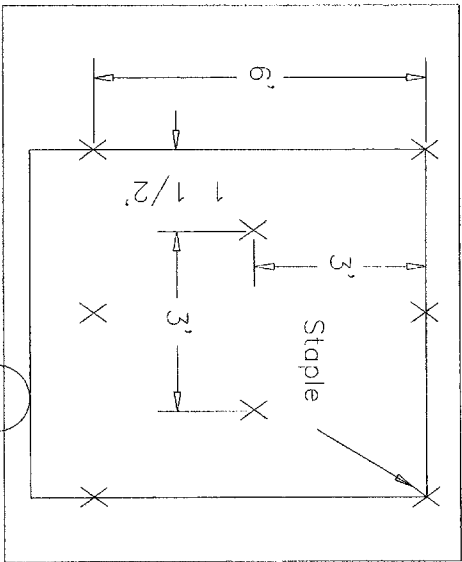


DIAGRAM B

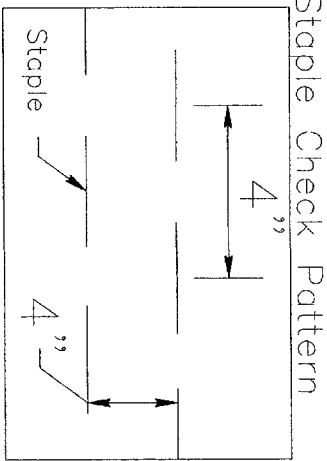


DIAGRAM (C)

NOTES:

THIS DETAIL APPLIES TO STRAW, EXCELSTOR, AND PERMANENT SOIL REINFORCEMENT MAT (PSRM) INSTALLATION. STAPLES SHALL BE NO. 11 GAUGE STEEL WIRE FORMED INTO A "U" SHAPE WITH A MINIMUM THROAT WIDTH OF 1 INCH AND NOT LESS THAN 6 INCHES IN LENGTH.

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2006 STANDARD SPECIFICATIONS

PROJECT NO. 42559

WILSON COUNTY

STATION: 15+29.20 -L-

REPLACES BRIDGE NO. 97 BK-5108

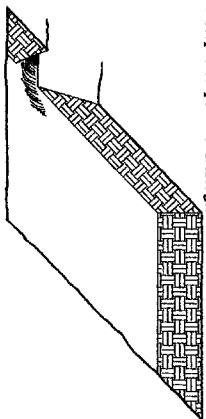
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
BRIDGE ON SR 1002
OVER TRIBUTARY TO
COKEY SWAMP
BETWEEN SR 1404 & SR 1146

REVISIONS					SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE	
1			3			23
2			4			25

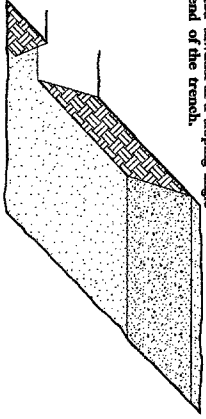
PLANTING DETAILS
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

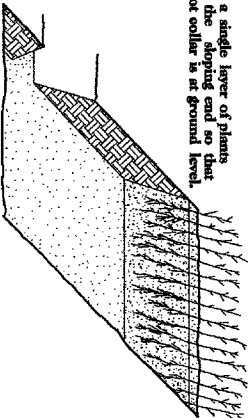
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



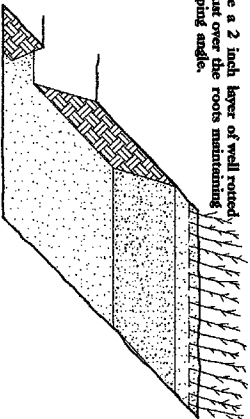
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

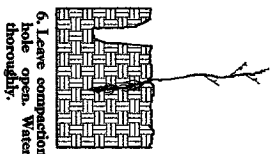
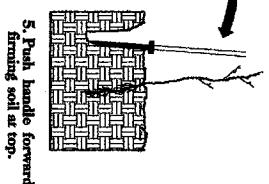
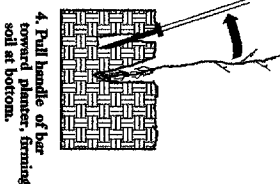
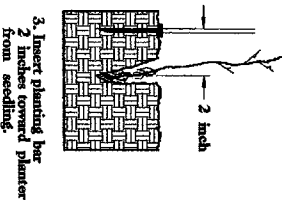
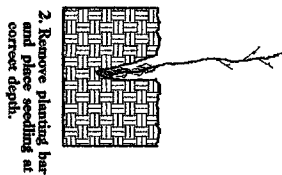
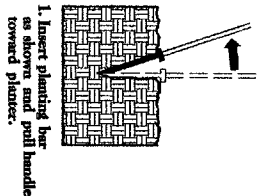


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.



6. Repeat layers of plants and sawdust as necessary and water thoroughly.

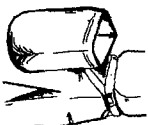
DIBBLE PLANTING METHOD
USING THE KBC PLANTING BAR



PLANTING NOTES:

PLANTING BAG

During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR

Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

ROOT PRUNING

All seedlings shall be root pruned, if necessary, so that roots extend no more than 10 inches below the root collar.



REFORESTATION

- ☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

30% PLATANUS OCCIDENTALIS	SYCAMORE	12 in - 18 in BR
40% FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
30% BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

PROJECT NO. 42559

WILSON COUNTY

STATION: 15+29.20 -L-

REPLACES BRIDGE NO. 97 BK-5108

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE ON SR 1002
OVER TRIBUTARY TO
COKEY SWAMP
BETWEEN SR 1404 & SR 1146

REVISIONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
				TOTAL	24
				SHEETS	25

NOTES: ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.
ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.
2006 STANDARD SPECIFICATIONS

