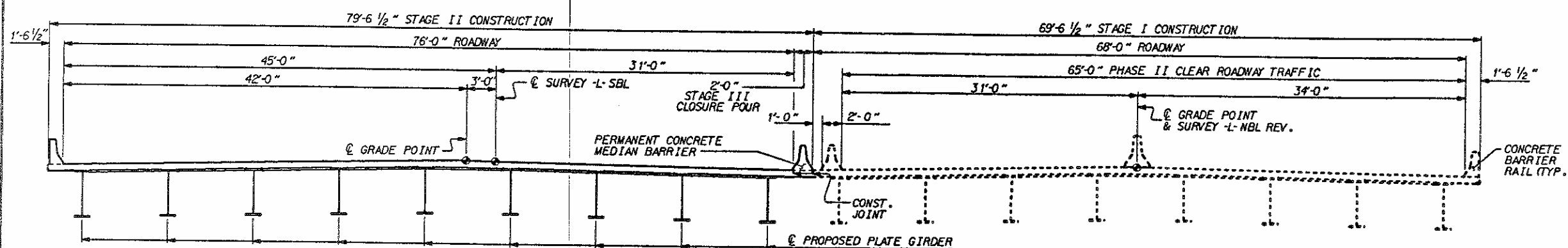


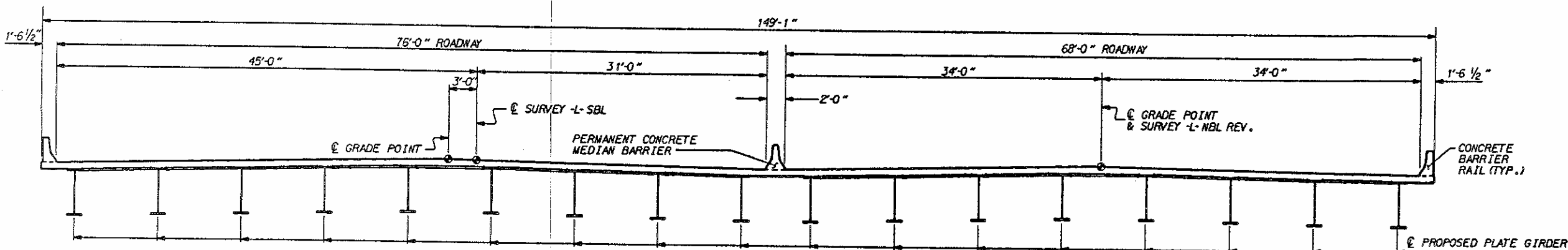
TYPICAL SECTION

STAGE I CONSTRUCTION



TYPICAL SECTION

STAGE II CONSTRUCTION



TYPICAL SECTION

COMPLETED BRIDGE

NOTE: STAGE III CONSTRUCTION IS A 2'-0" CLOSURE POUR AT THE LOCATION OF THE PROPOSED PERMANENT CONCRETE MEDIAN BARRIER.



PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

CONSTRUCTION
SEQUENCE

DRAWN BY: D.P. DONOVAN DATE: 4-31-92
CHECKED BY: S.D. RACKLEY DATE: 4-12-93

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-36
2			4			
TOTAL SHEETS						108

HORIZONTAL CURVE DATA

-L- NBL REV.
 PI = 17+19.81
 Δ = 0° 29' 23" RT.
 Dc = 0° 15' 00"
 T = 97.95
 L = 195.89
 R = 22918.312

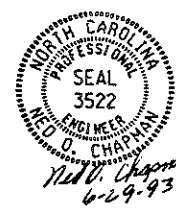
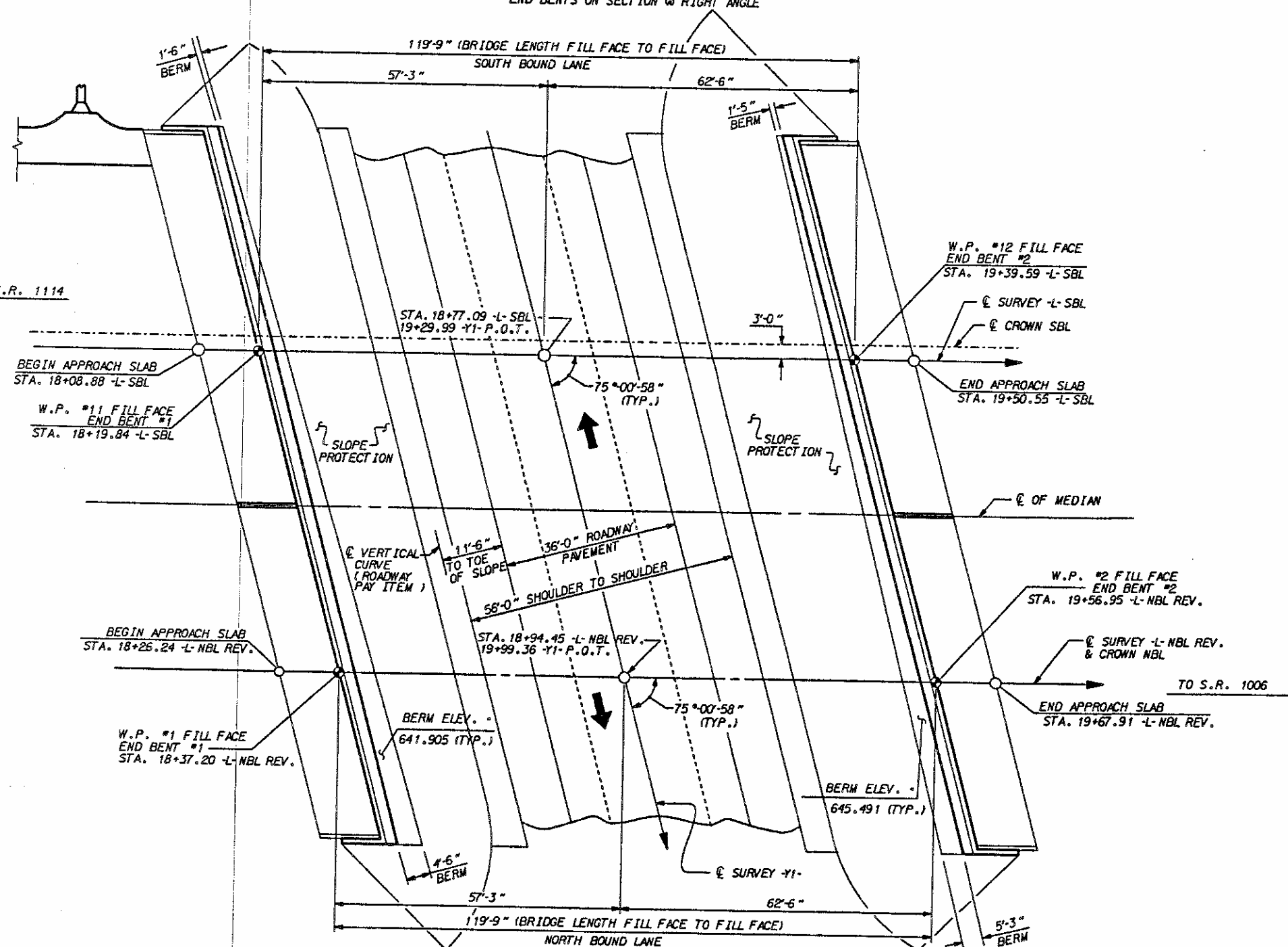
FILL FACE @ END BT. #1
 STA. 18+37.20 -L- NBL REV.
 GRADE PT. ELEV. 650.868

FILL FACE @ END BT. #2
 STA. 19+56.95 -L- NBL REV.
 GRADE PT. ELEV. 654.268

APPROX. NATURAL
 GROUND LINE

SECTION ALONG & SURVEY -L- NBL REV.

END BENTS ON SECTION @ RIGHT ANGLE



PROJECT NO. 8.T500311
 ORANGE COUNTY
 STATION: 18+94.45-L- NBL REV.
 19+99.36 -Y1-
 SHEET 1 OF 5

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

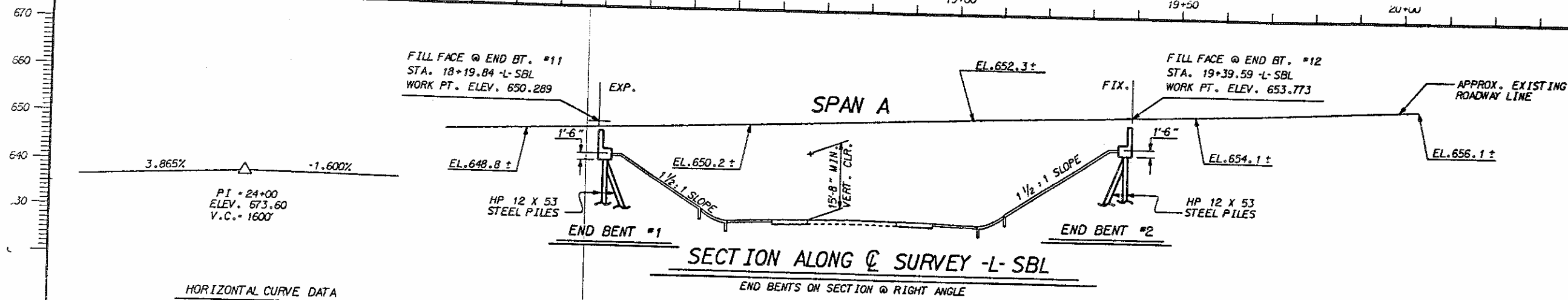
GENERAL DRAWING FOR
 BRIDGE OVER S.R. 1120
 ON I-85 BETWEEN
 S.R. 1114 AND S.R. 1006
 NBL

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-37
2			4			TOTAL SHEETS 108

DRAWN BY: D.P. DONOVAN DATE: 1-4-91
 CHECKED BY: Q. PLIGGER DATE: 5-93

REPLACES BRIDGE #40

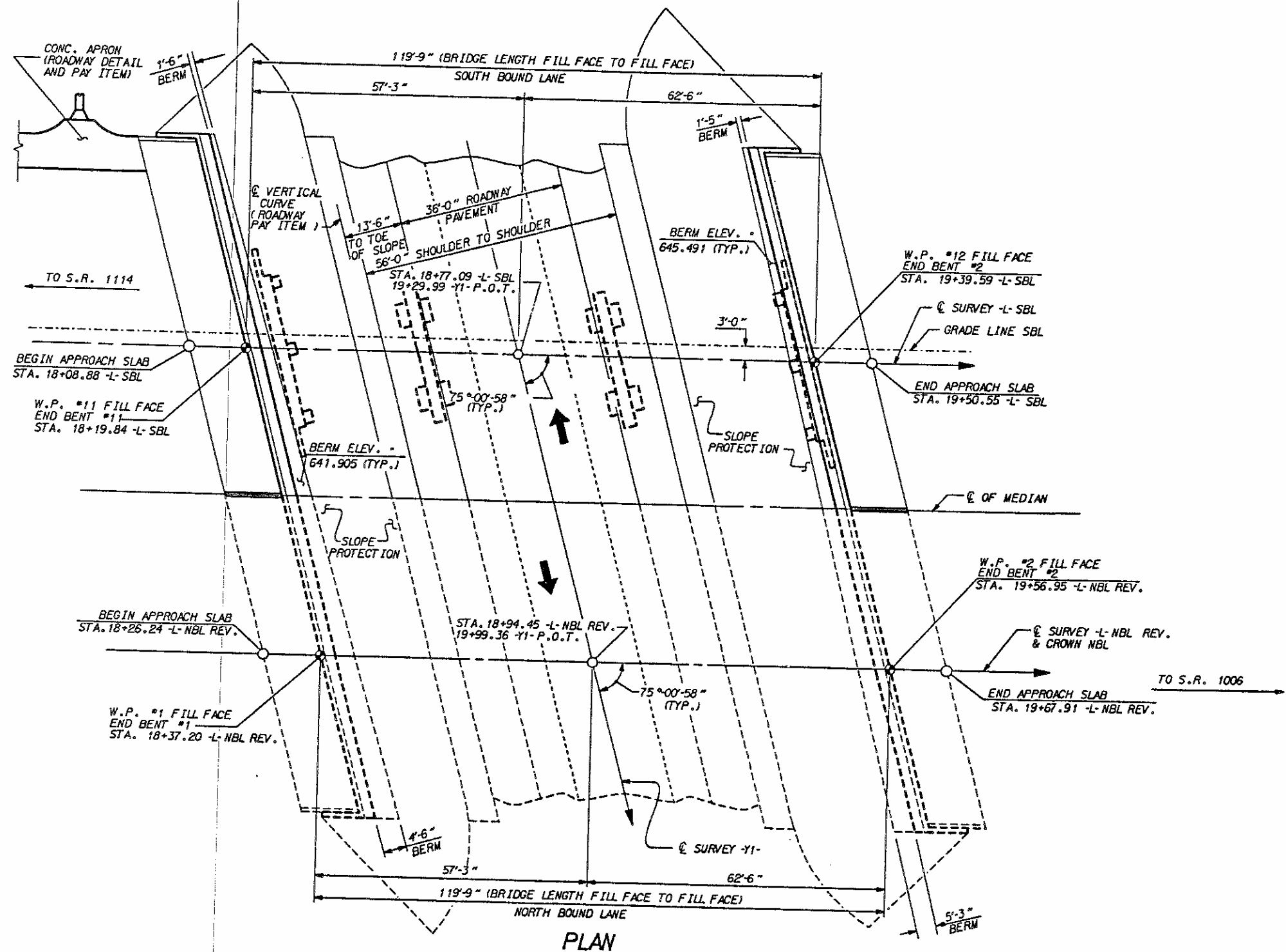
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HORIZONTAL CURVE DATA

-L- SBL

PI = 17+20.38
Δ = 0°29'23" RT.
Dc = 0°15'00"
T = 97.95'
L = 195.89
R = 22918.312



Timothy L. Collins
1/29/93

Ned O. Chapman
6-29-93

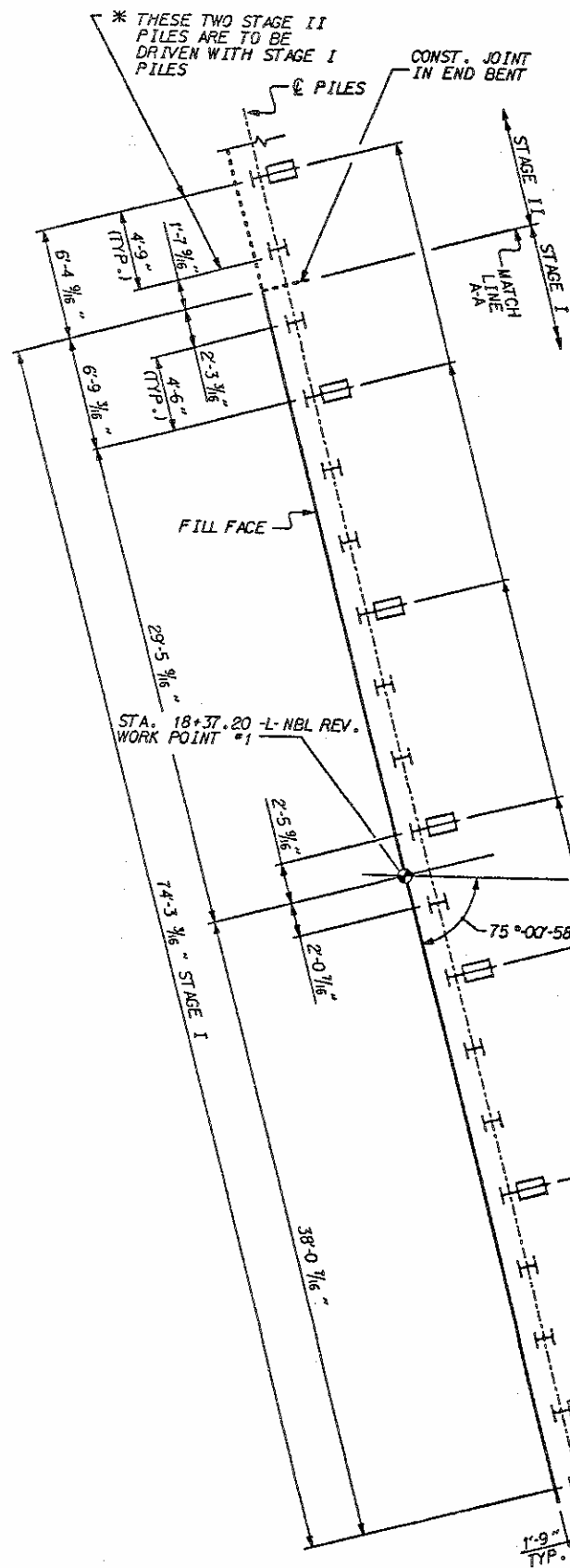
PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+77.09-L- SBL
19+29.99 -Y1-
SHEET 2 OF 5

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
GENERAL DRAWING FOR
BRIDGE OVER S.R. 1120
ON I-85 BETWEEN
S.R. 1114 AND S.R. 1006
SBL

REPLACES BRIDGE #44

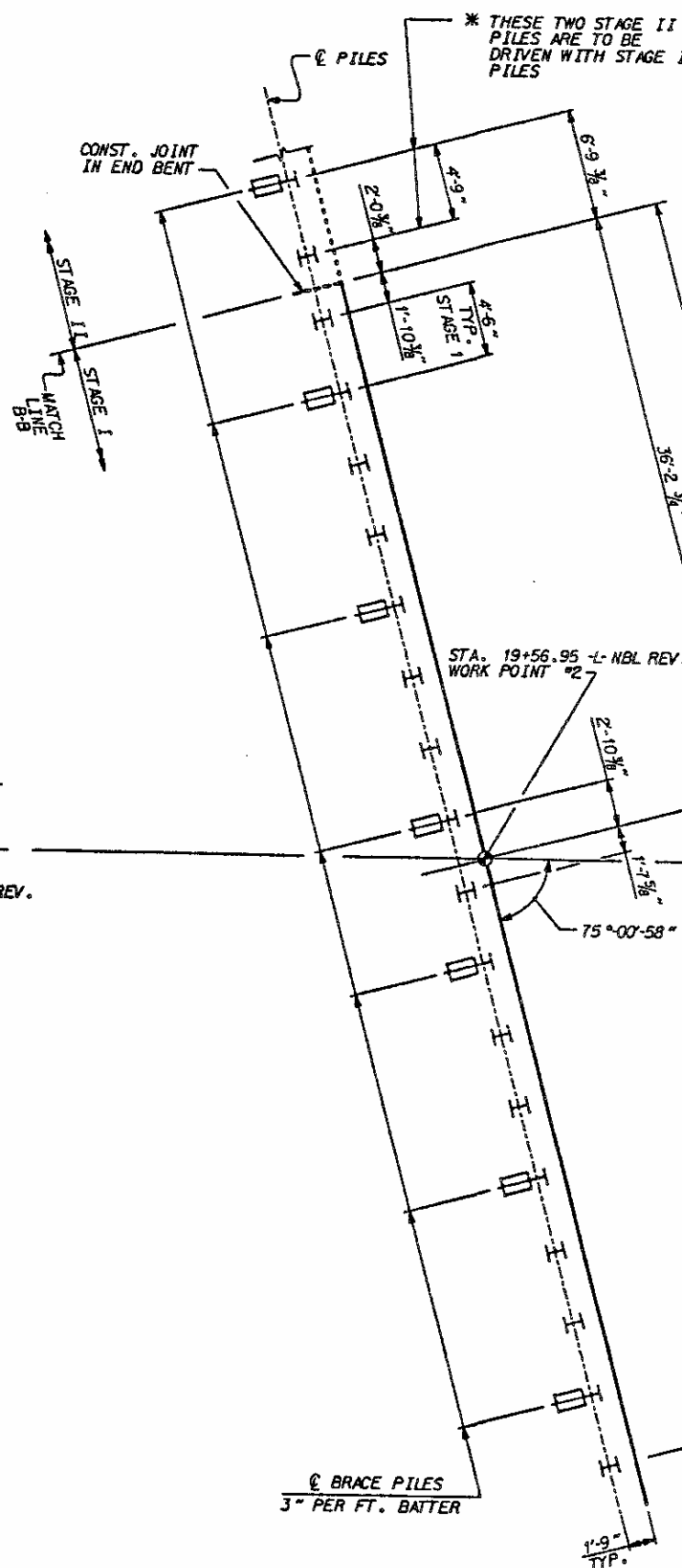
DRAWN BY: D.P. DONOVAN DATE: 1-4-91
CHECKED BY: O. PUTZGER DATE: 5-93

REVISIONS						SHEET NO. S-38
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 108
2			4			



END BENT #1
STAGE I

BRACE PILES
3" PER FT. BATTER



END BENT #2
STAGE I

BRACE PILES
3" PER FT. BATTER

FOUNDATION LAYOUT STAGE I
(DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE)
* PILES TO BE DRIVEN WITH STAGE I PILES

DRAWN BY: D.P. DONOVAN DATE: 5/7/92
CHECKED BY: O. PUIGCERVERY DATE: 5-92

21-JUN-1993 15:02
ZHO:\226025\1504E02CD.DGN
DPARKER



Timothy L. Cousins
14045



D. Chapman
3522

PROJECT NO. **8.T500311**
ORANGE COUNTY
STATION: **18+94.45 -L- NBL REV.**
19+99.36 -Y1-
SHEET 3 OF 5

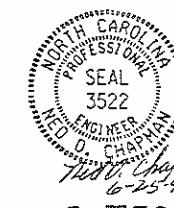
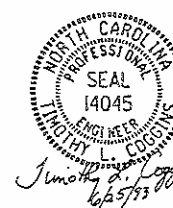
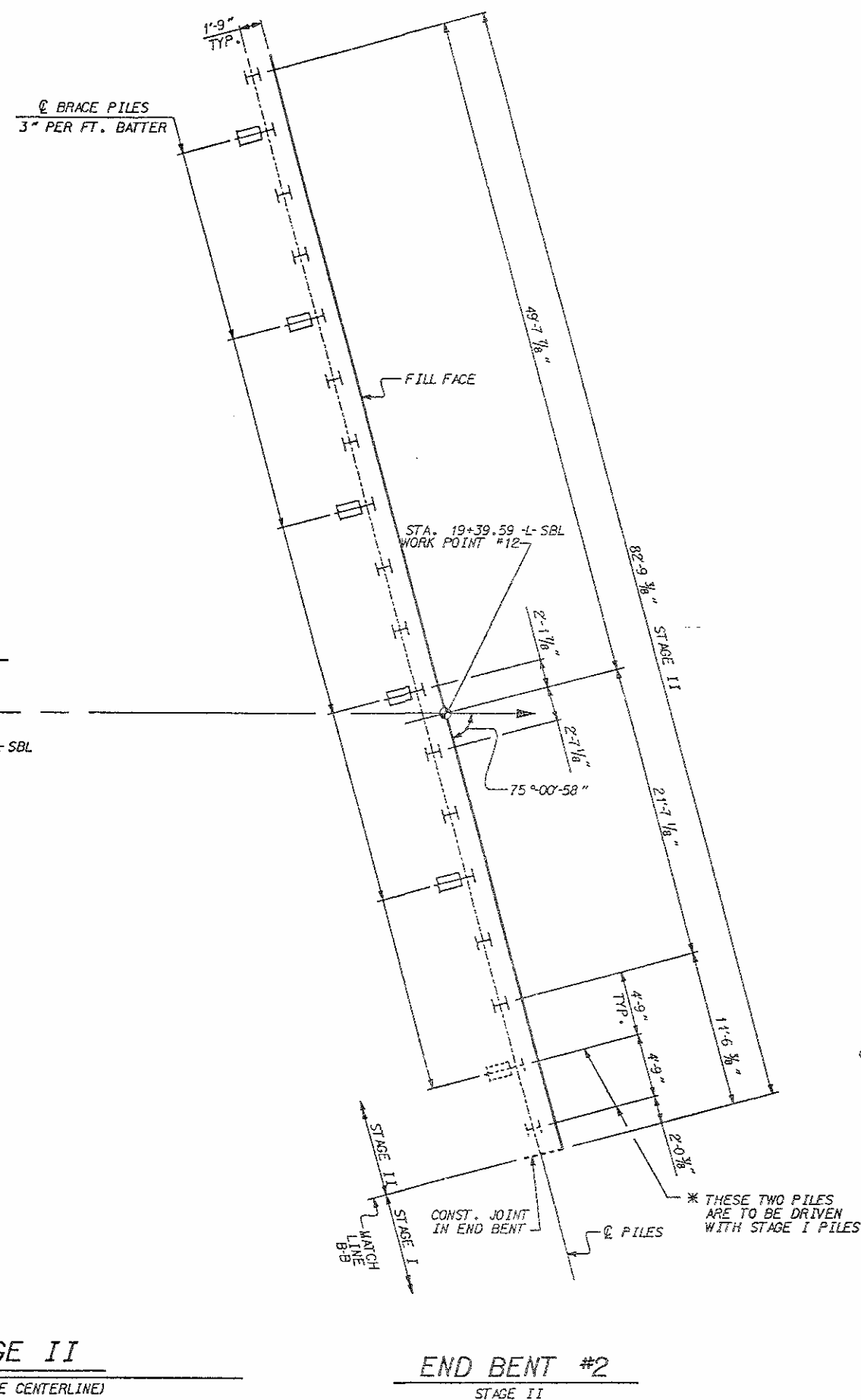
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING
FOUNDATION LAYOUT
STAGE I NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-39
2			4			
TOTAL SHEETS						103

FOUNDATION LAYOUT STAGE II

(DIMENSIONS LOCATING PILES ARE SHOWN TO THE PILE CENTERLINE)
* PILES TO BE DRIVEN WITH STAGE 1 PILES



PROJECT NO. 8.T500311
ORANGE COUNTY
 STATION: 18+77.09 -L- SBL
19+29.99 -Y1-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

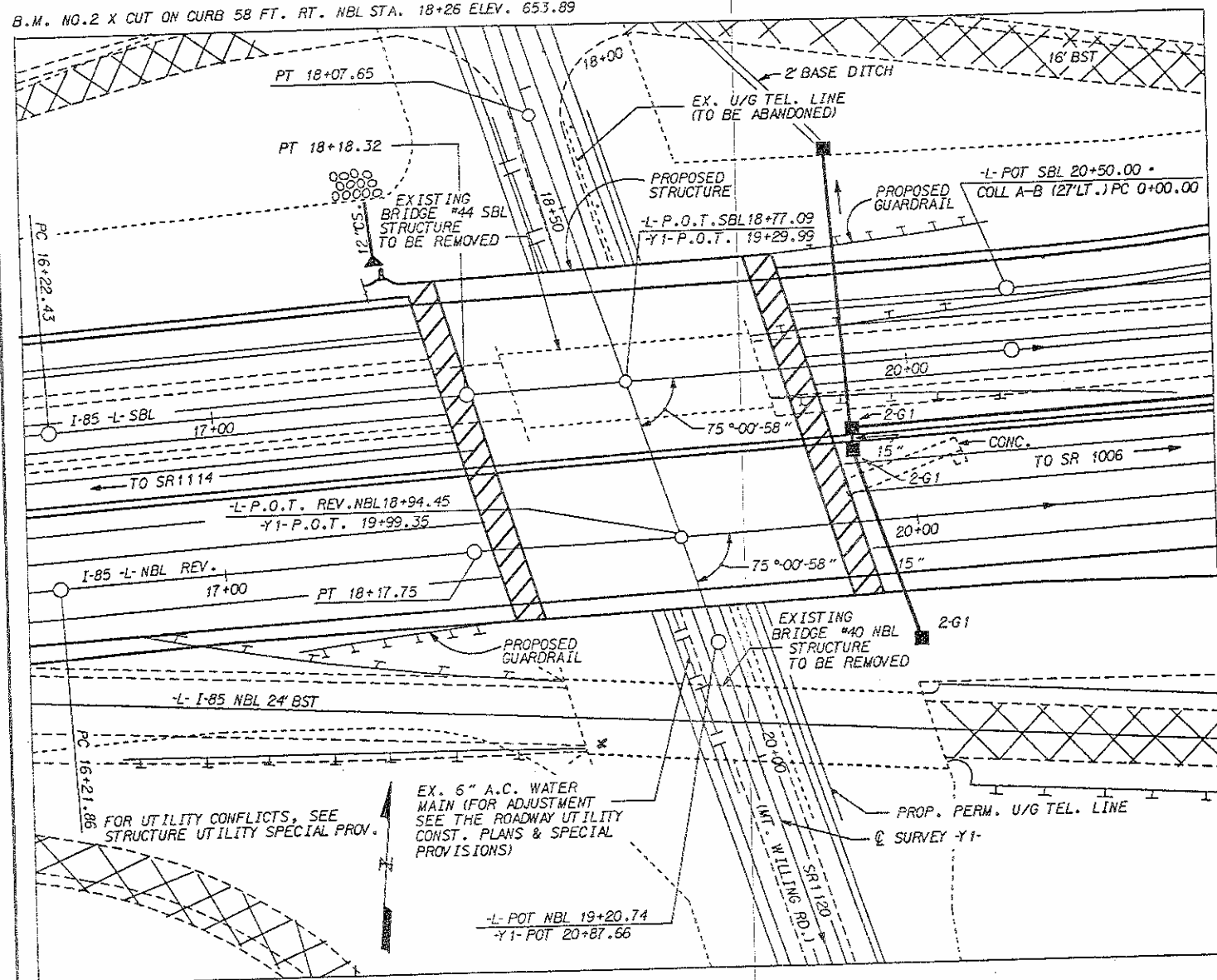
GENERAL DRAWING
FOUNDATION LAYOUT
STAGE II SBL

REVISIONS						SHEET NO. S-40
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 108
2			4			

DRAWN BY : D.P. DONOVAN DATE : 5/7/92
CHECKED BY : O. PUIGSERVER DATE : 5-93

21-JUN-1993 15:11
ZHD:1206025R304E02G0.DGN:
001256

B.M. NO. 2 X CUT ON CURB 58 FT. RT. NBL STA. 18+26 ELEV. 653.89



LOCATION SKETCH

ASSUMED LIVE LOAD = HS 20-44 OR ALTERNATE LOADING.
FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET S-N.

THIS BRIDGE HAS BEEN DESIGNED BY STRENGTH DESIGN METHOD
AS SPECIFIED IN AASHTO SPECIFICATIONS.

ALL STRUCTURAL STEEL FOR THIS STRUCTURE SHALL BE ASTM
A588 STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000
PSI UNLESS OTHERWISE NOTED ON THE PLANS.

FOR REINFORCED CONCRETE DECK SLAB, SEE SPECIAL PROVISIONS.

FOR FABRICATED METAL STAY-IN-PLACE FORMS, SEE SPECIAL
PROVISIONS.

FOR CURING BRIDGE DECK SLABS, SEE THE SPECIAL PROVISION
"REINFORCED CONCRETE DECK SLAB".

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

PILES FOR END BENTS NO. 1 & 2 SHALL BE DRIVEN TO A MINIMUM
BEARING CAPACITY OF 45 TONS EACH.

STEEL PILE POINTS ARE REQUIRED FOR PILES
AT END BENT NO. 1 & 2. FOR STEEL
PILE POINTS.

THE EXISTING STRUCTURE (BRIDGE #40), CONSISTING OF 1 SPAN @ 49'-10"
1 SPAN @ 56'-6", AND 1 SPAN @ 57'-0" CONSTRUCTED WITH REINFORCED CONCRETE
FLOOR ON 4 LINES OF 45" PRECAST PRESTRESSED GIRDERS WITH A CLEAR ROADWAY
OF 28' SUPPORTED BY REINFORCED CONCRETE CAPS ON PRECAST PRESTRESSED
CONCRETE PILES AND 2 COLUMN REINFORCED CONCRETE POST AND BEAM AND
LOCATED 88.31' UPSTATION ALONG @ SURVEY -Y1- OF THE PROPOSED STRUCTURE
SHALL BE REMOVED. THE EXISTING BRIDGE IS NOT PRESENTLY POSTED BELOW THE
LEGAL LOAD LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE
DETERIORATE A LOAD LIMITATION MAY BE POSTED AND MAY BE REDUCED AS
FOUND NECESSARY DURING THE LIFE OF THE PROJECT. AFTER SERVING
AS A TEMPORARY STRUCTURE, THE EXISTING STRUCTURE
(BRIDGE #44), CONSISTING OF 1 SPAN @ 30'-0" AND 2 SPANS @ 40'-0"
CONSTRUCTED WITH REINFORCED CONCRETE FLOOR WITH AWS, ON 4 LINES OF
REINFORCED CONCRETE DECK GIRDERS, WITH A CLEAR ROADWAY OF 28' SUPPORTED BY
REINFORCED CONCRETE CAPS ON TIMBER PILES AND REINFORCED CONCRETE POST AND BEAM
AND LOCATED AT THE SITE OF THE PROPOSED STRUCTURE SHALL BE REMOVED.
THE EXISTING BRIDGE IS NOT PRESENTLY POSTED BELOW THE LEGAL LOAD
LIMIT. SHOULD THE STRUCTURAL INTEGRITY OF THE BRIDGE DETERIORATE A
LOAD LIMITATION MAY BE POSTED AND MAY BE REDUCED AS
FOUND NECESSARY DURING THE LIFE OF THE PROJECT.

FOR ANCHOR BOLTS, SEE SPECIAL PROVISIONS

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

FOR MAINTENANCE OF TRAFFIC, SEE TRAFFIC CONTROL PLANS.

WORK SHALL NOT BE STARTED ON THIS BRIDGE UNTIL ROADWAY
SECTION HAS BEEN EXCAVATED.

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.

FOR PAINTING WEATHERING STEEL, SEE SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PROVIDE INDEPENDENT ASSURANCE SAMPLES
OF REINFORCING STEEL AS DIRECTED BY THE ENGINEER.

FOR FALSEWORK AND FORMS OVER OR ADJACENT TO TRAFFIC,
SEE SPECIAL PROVISIONS.

FOR MAINTENANCE OF TRAFFIC BENEATH STRUCTURE, SEE SPECIAL PROVISIONS.

A ONE MONTH WAITING PERIOD IS REQUIRED AFTER COMPLETION OF THE
APPROACH EMBANKMENT BEFORE BEGINNING CONSTRUCTION OF APPROACH SLABS
AT BOTH END BENTS.

TEMPORARY SHORING WILL BE REQUIRED ADJACENT TO EXISTING BRIDGE #44.
FOR DETAILS AND PAY ITEM, SEE ROADWAY PLANS.

SEE TRAFFIC CONTROL PLANS FOR LOCATION AND PAY LIMITS OF THE POSITIVELY
ANCHORED TEMPORARY PRECAST CONCRETE BRIDGE BARRIER - TYPE S.

FOR CONCRETE MEDIAN BARRIER, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL

	REMOVAL OF EX. STRUCTURES	REINFORCED CONCRETE DECK SLAB	GROOVING BRIDGE FLOORS	CLASS A CONCRETE	BRIDGE APPROACH SLABS	REINFORCING STEEL	STRUCTURAL STEEL	HP 12 X 53 STEEL PILES		STEEL PILE POINTS	CONCRETE BARRIER RAIL	4" SLOPE PROTECTION	T F E EXPANSION BEARING ASSEMBLIES	PREFORMED COMPRESSION JOINT SEALS	CONCRETE MEDIAN BARRIER
								NO.	LIN. FT.						
	LUMP SUM	SQ. FT.	SQ. FT.	CU. YDS.	LUMP SUM	LBS.	APPROX. LBS.			EACH	LIN. FT.	SQ. YDS.	LUMP SUM	LUMP SUM	LIN. FT.
SUPERSTRUCTURE		17,531	19,214		LUMP SUM		482,100				235.18		LUMP SUM	LUMP SUM	142.52
END BENT NO. 1				98.4		14,294		35	875	35		550			
END BENT NO. 2				96.1		14,324		35	700	35		700			
TOTAL	LUMP SUM	17,531	19,214	194.5	LUMP SUM	28,618	482,100	70	1,575	70	235.18	1,250	LUMP SUM	LUMP SUM	142.52

DRAWN BY: D. PARKER/D. DONOVAN DATE: 1-4-91
CHECKED BY: D. PUIGSERVERE DATE: 5-93

PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

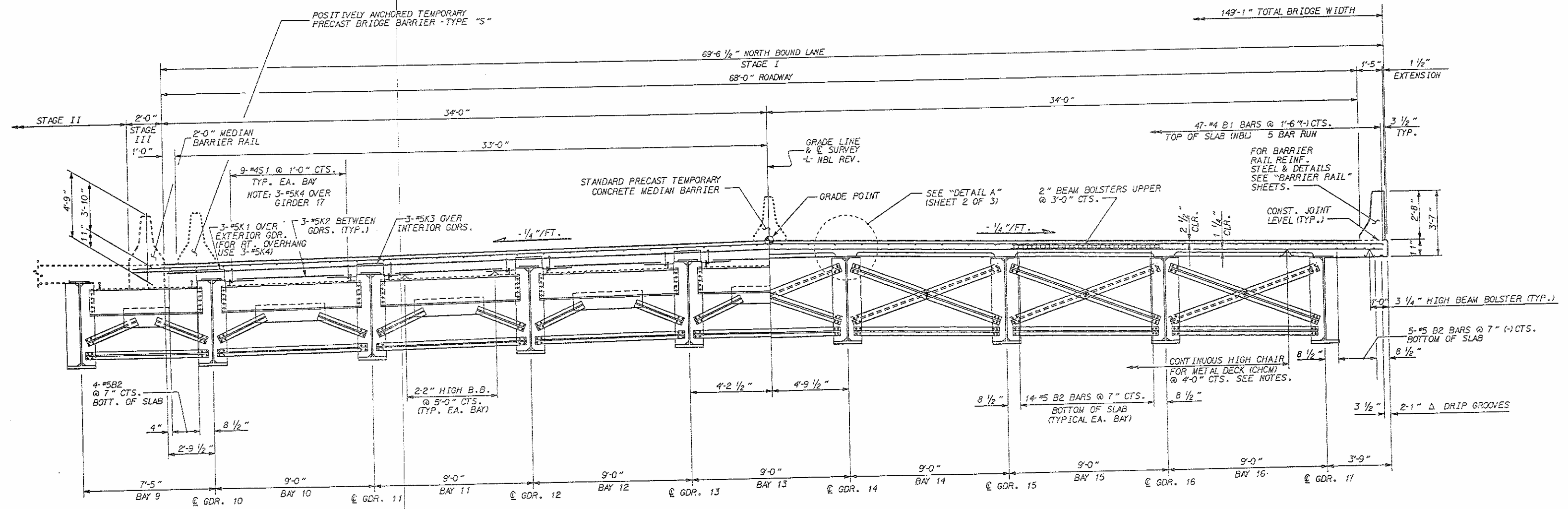
SHEET 5 OF 5 REPLACES BRIDGE #44 & #40

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

GENERAL DRAWING FOR
BRIDGE OVER S.R. 1120
ON I-85 BETWEEN
S.R. 1114 AND S.R. 1006

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-41
2			4			TOTAL SHEETS 108

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DPARKER

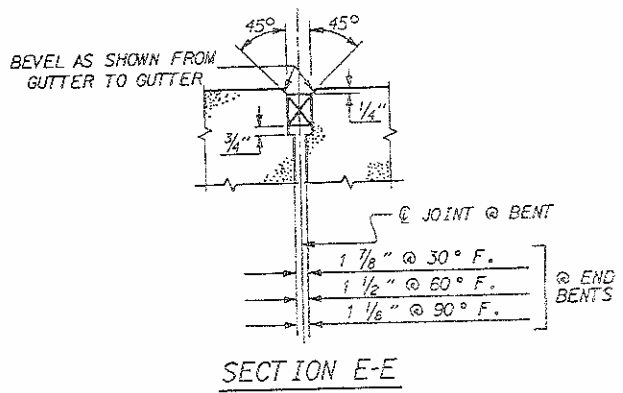
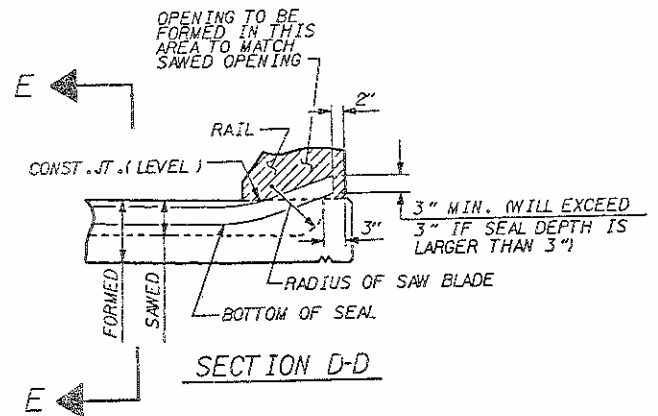
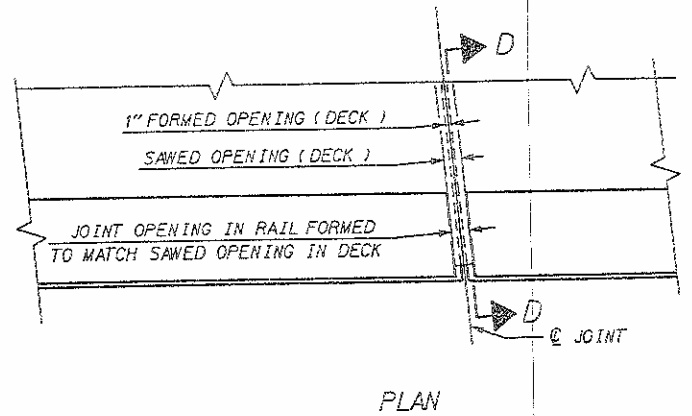


HALF TYPICAL SECTION @ END BENT DIAPHRAGM

FOR END BENT DIAPHRAGM TYPES, SEE "SUPERSTRUCTURE STRUCTURAL STEEL DETAIL" SHEETS.
FOR END BENT DIAPHRAGM LOCATIONS, SEE "FRAMING PLAN" SHEETS.

HALF TYPICAL SECTION @ INTERMEDIATE DIAPHRAGM

FOR INTERMEDIATE DIAPHRAGM TYPES, SEE "SUPERSTRUCTURE STRUCTURAL STEEL DETAIL" SHEETS.
FOR INTERMEDIATE DIAPHRAGM LOCATIONS, SEE "FRAMING PLAN" SHEETS.



COMPRESSION JOINT SEAL DETAILS @ END BENT #1

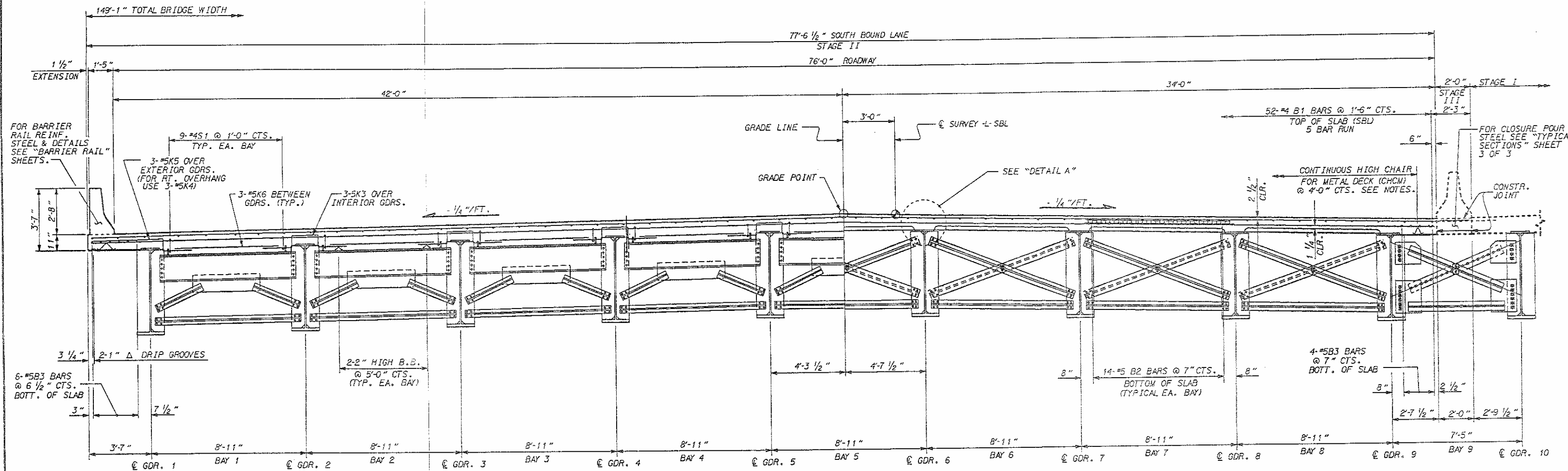


PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
SHEET 1 OF 3

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS
NBL
STAGE I

REVISIONS						SHEET NO. 5-42
NO.	BY	DATE	NO.	BY	DATE	
1			3			TOTAL SHEETS 108
2			4			

DRAWN BY: D.P. DONOVAN DATE: 6-14-91
CHECKED BY: S.D. RACKLEY DATE: 4-12-93



HALF TYPICAL SECTION @ END BENT DIAPHRAGM

FOR END BENT DIAPHRAGM TYPES, SEE "SUPERSTRUCTURE STRUCTURAL STEEL DETAIL" SHEETS.
FOR END BENT DIAPHRAGM LOCATIONS, SEE "FRAMING PLAN" SHEETS.

HALF TYPICAL SECTION @ INTERMEDIATE DIAPHRAGM

FOR INTERMEDIATE DIAPHRAGM TYPES, SEE "SUPERSTRUCTURE STRUCTURAL STEEL DETAIL" SHEETS.
FOR INTERMEDIATE DIAPHRAGM LOCATIONS, SEE "FRAMING PLAN" SHEETS.

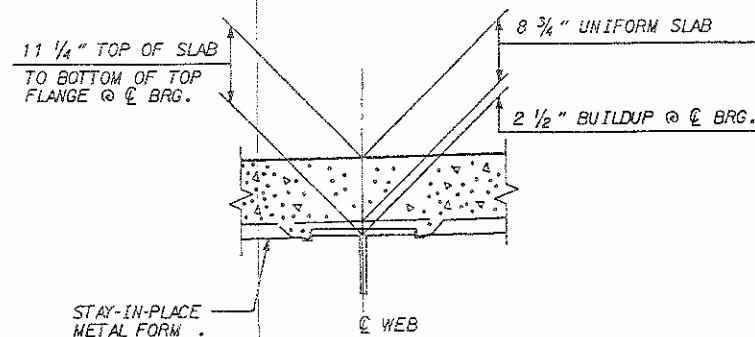
NOTES

PROVIDE CONTINUOUS HIGH CHAIR FOR METAL DECK (C.H.C.M.)
@ 4'-0" CENTERS WITH LEG SPACING TO MATCH THE PITCH OF
THE FORM AND WITH A HEIGHT TO SUPPORT THE BOTTOM LAYER OF
SLAB REINFORCEMENT A CLEAR DISTANCE OF 1 1/4' ABOVE THE
TOP OF THE STAY-IN-PLACE FORM.

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT THE JOINT IN THE DECK IS CONTINUOUS IN A STRAIGHT LINE THROUGH THE BARRIER RAIL.

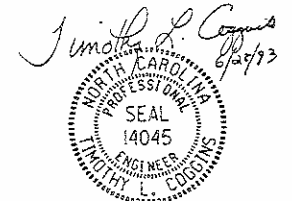
NO CHAMFER IS REQUIRED ON CORNERS OF EXTERIOR GIRDER OR BEAM BUILDUPS.

FOR EPOXY COATED REINFORCING STEEL, SEE SPECIAL PROVISIONS.



DETAIL "A"

DRAWN BY : D.P. DONOVAN DATE : 6-14-91
CHECKED BY : S.D. RACKLEY DATE : 4-13-93



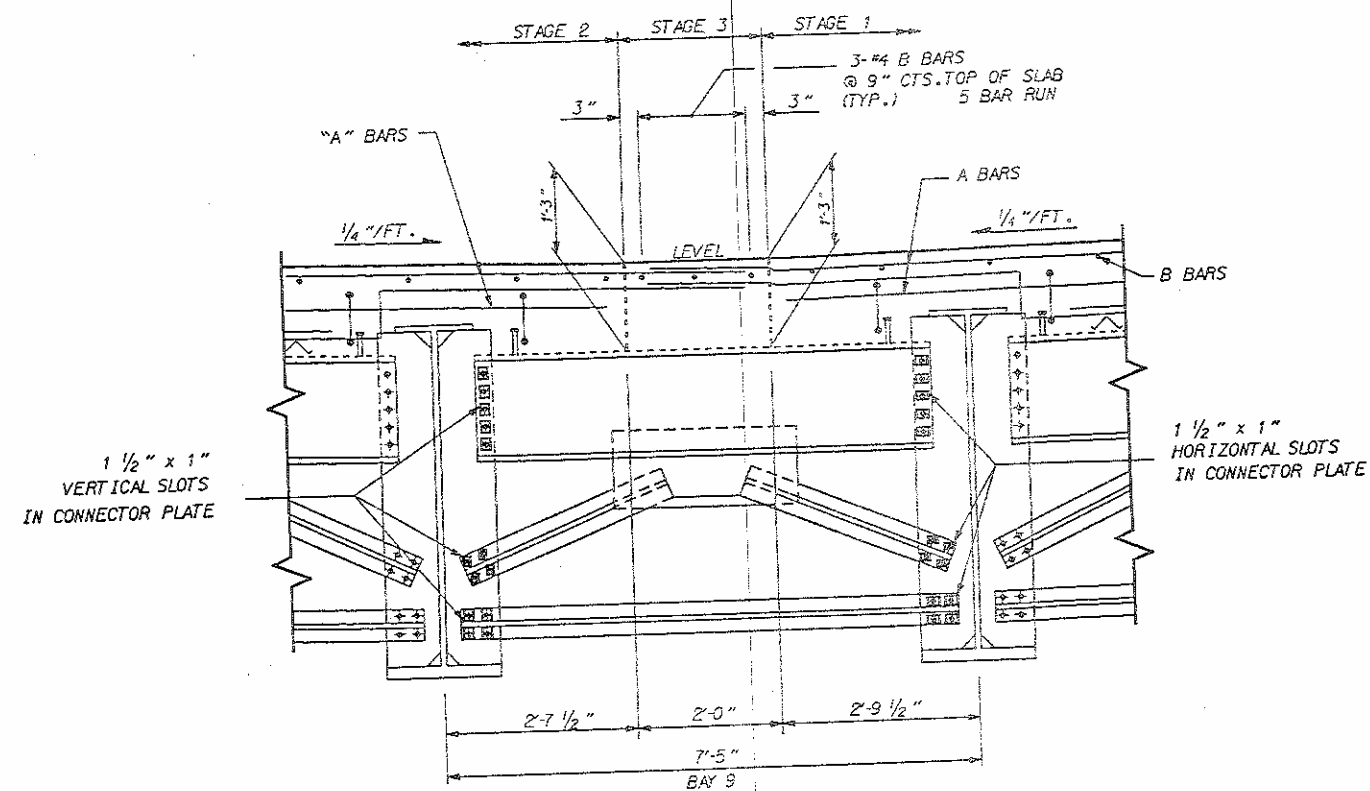
PROJECT NO. 8.T500311
ORANGE COUNTY
 STATION: 18+77.09 -L- SBL

SHEET 2 OF 3

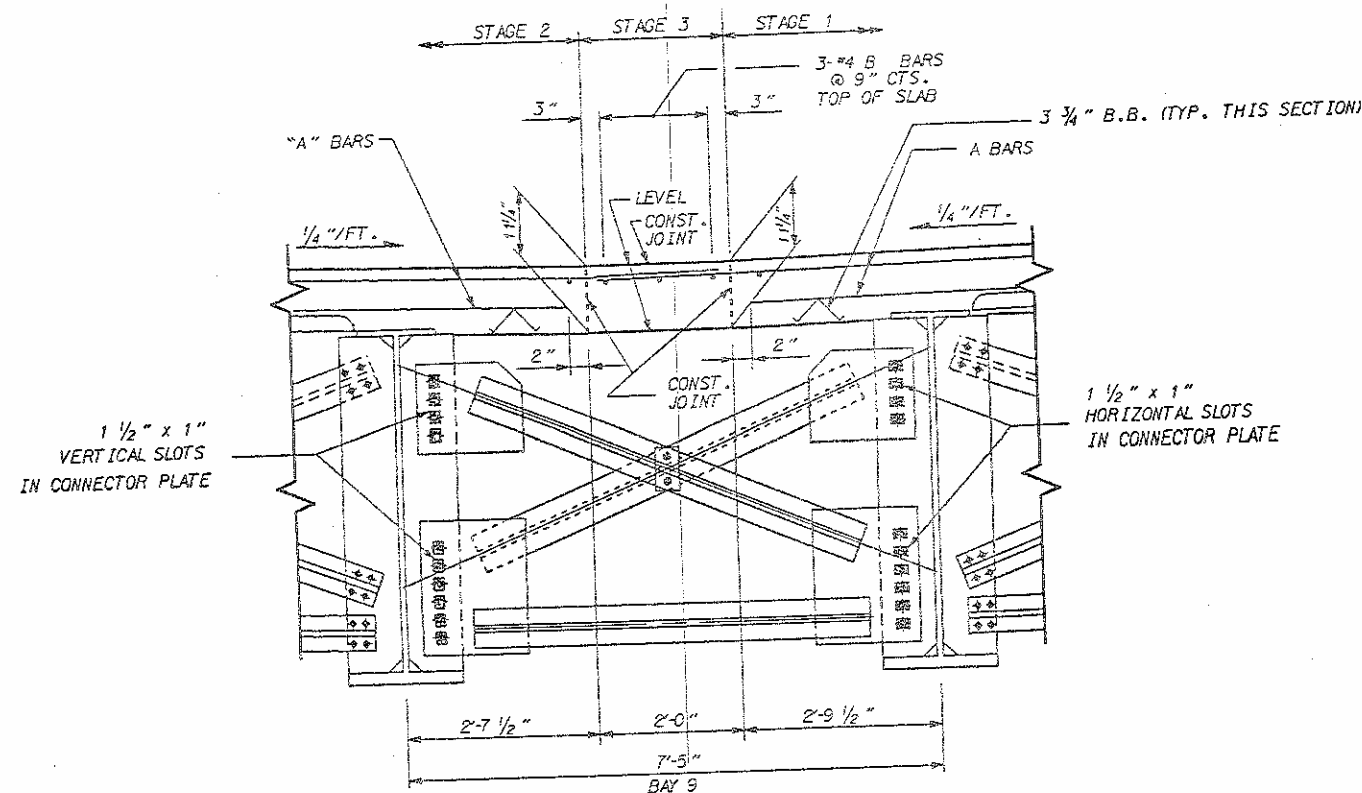
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE
TYPICAL SECTIONS
SBL
STAGE II

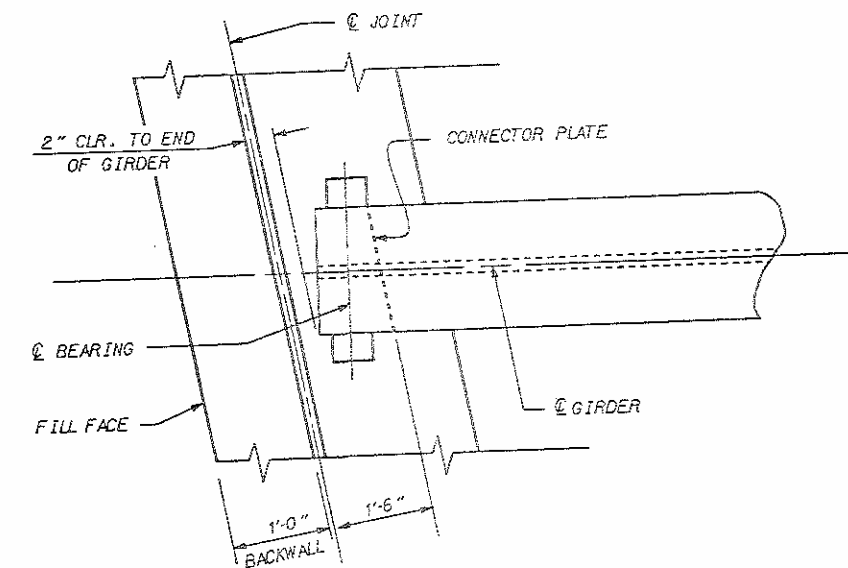
REVISIONS						SHEET NO
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S-43
2			4			TOTAL SHEETS 108



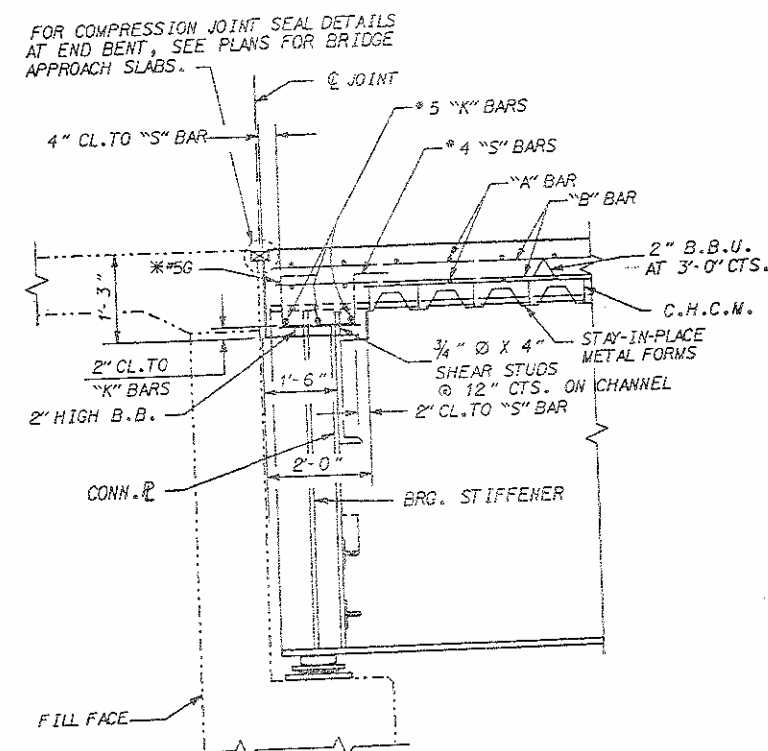
TYPICAL SECTION @ END BENT DIAPHRAGM
(BAY 9 ONLY)



TYPICAL SECTION @ INTERMEDIATE DIAPHRAGM
(BAY 9 ONLY)

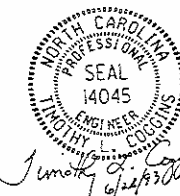


PLAN OF GIRDER AT END BENT JOINT



SECTION A-A

* #5G BAR MAY BE SHIFTED SLIGHTLY, AS NECESSARY, TO CLEAR REINFORCING STEEL AND STIRRUPS.



PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
SHEET 3 OF 3 18+77.09 -L- SBL

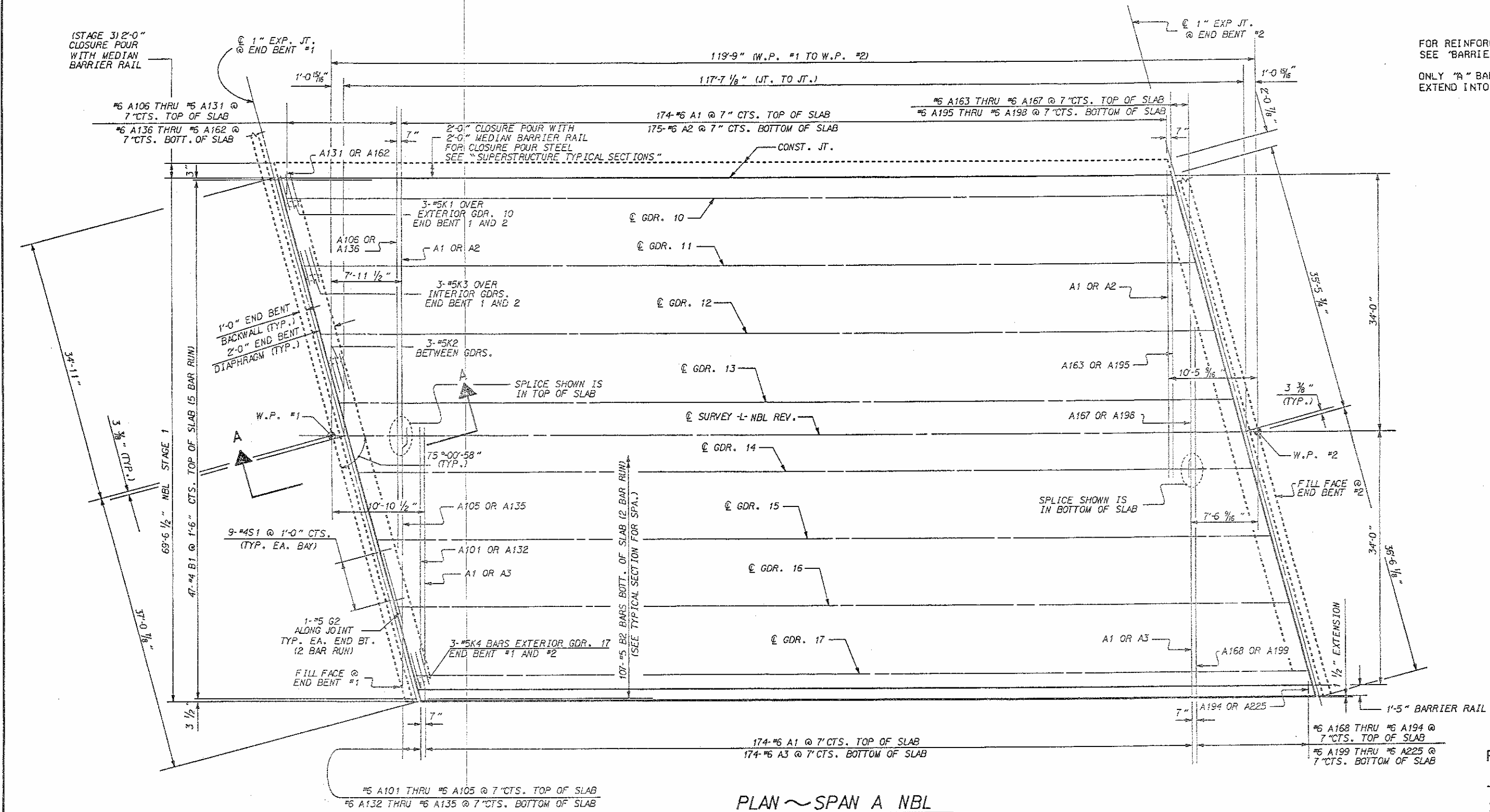
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-44
2			4			TOTAL SHEETS 102

DRAWN BY: D. DONOVAN DATE: 7 / 92
CHECKED BY: S.D. RACKLEY DATE: 4-13-93

NOTES

FOR REINFORCING STEEL IN BARRIER RAIL, SEE "BARRIER RAIL DETAILS".
ONLY "A" BARS IN TOP OF SLAB AND "K" BARS EXTEND INTO CLOSURE POUR.



PROJECT NO. **8.T500311**
ORANGE COUNTY
STATION: **18+94.45 -L- NBL REV.**
SHEET 1 OF 2

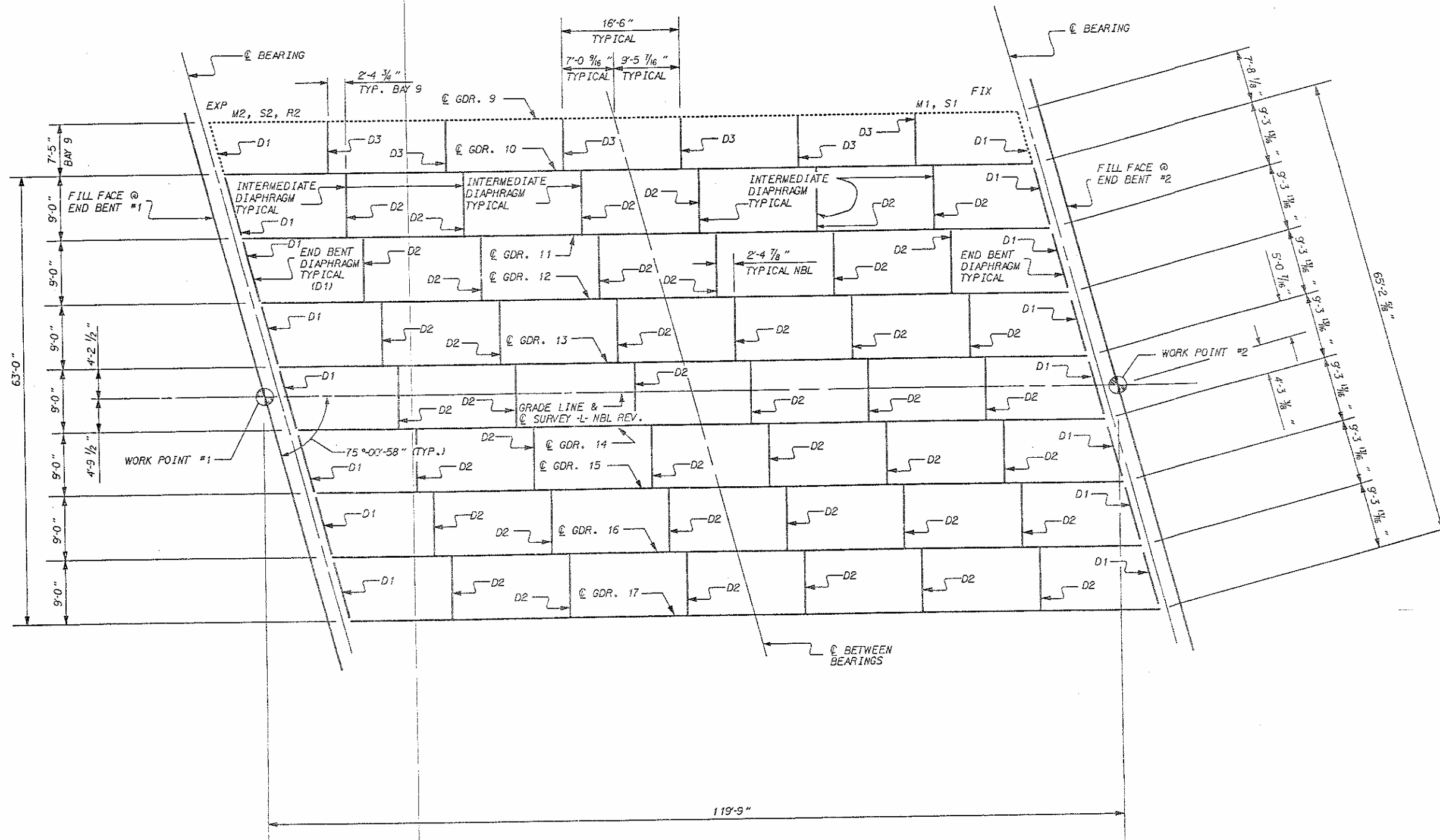
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUPERSTRUCTURE
PLAN ~ SPAN A
NBL**

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			5-45
2			4			108

DRAWN BY: **D.A. PARKER** DATE: **4/10/93**
CHECKED BY: **S.D. BACKLEY** DATE: **4/12/93**

28-JUN-1993 08:14
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RTUNG



FRAMING PLAN - SPAN A NBL



PROJECT NO. 8.7500311
 ORANGE COUNTY
 STATION: 18+94.45 -L- NBL REV.

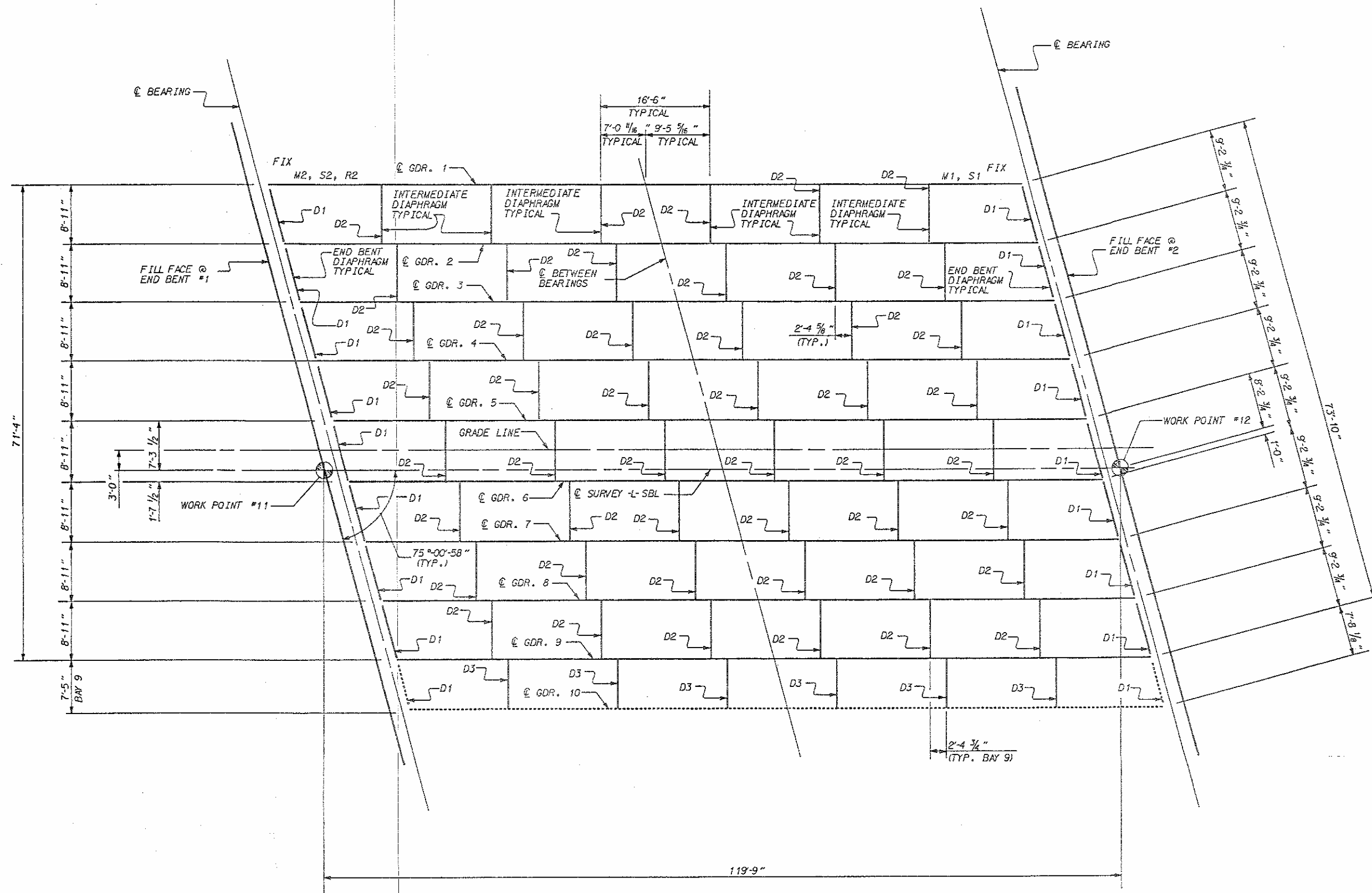
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 STRUCTURAL STEEL
 FRAMING PLAN
 NBL

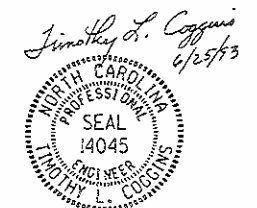
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-47
2			4			TOTAL SHEETS 108

DRAWN BY: D.A. PARKER DATE: 4/30/93
 CHECKED BY: S.D. BACKLEY DATE: 5/3/93

22-JUN-1993 15:57
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 DPARKER



FRAMING PLAN - SPAN A SBL



PROJECT NO. 8.7500311
 ORANGE COUNTY
 STATION: 18+77.09 -L- SBL

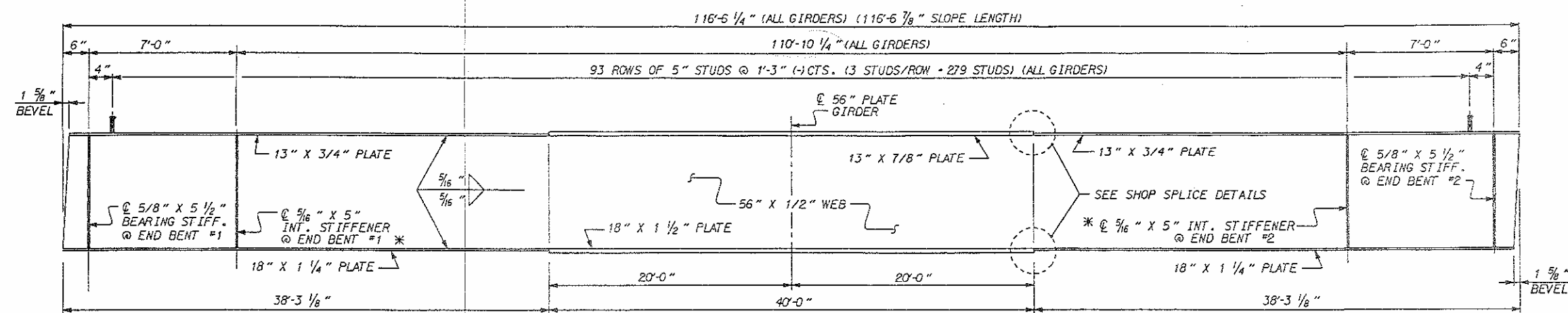
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALPH
 SUPERSTRUCTURE
 STRUCTURAL STEEL
 FRAMING PLAN
 SBL

DRAWN BY: D.A. PARKER DATE: 4/30/93
 CHECKED BY: S.D. RACKLEY DATE: 5/3/93

24-JUN-1993 10:59
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 DPARKER

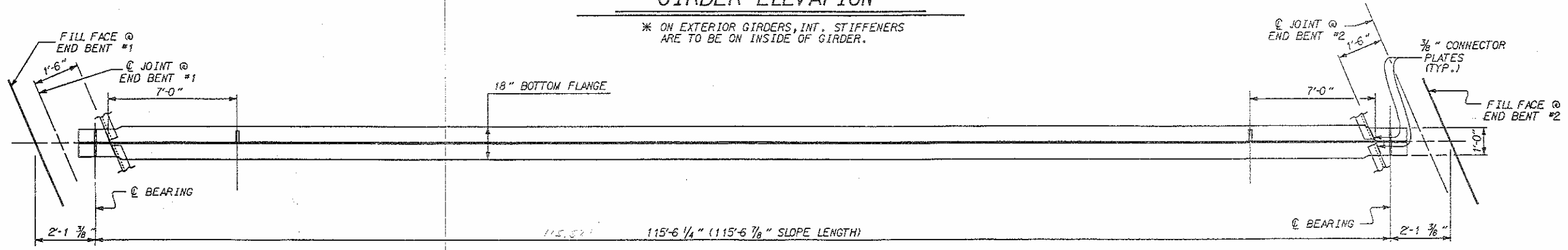
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NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-48
2			4			TOTAL SHEETS 108

24-JUN-1993 07:37
Z:\0120625\104E02D.LC\N1
DPARKER



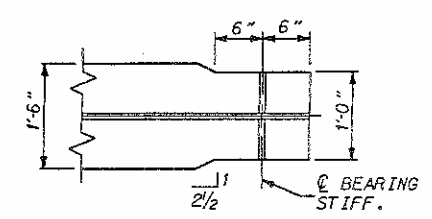
GIRDER ELEVATION

* ON EXTERIOR GIRDERS, INT. STIFFENERS ARE TO BE ON INSIDE OF GIRDER.

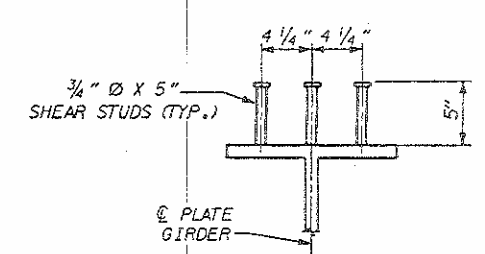


BOTTOM FLANGE DETAIL

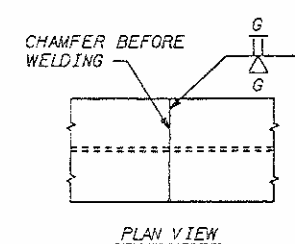
(TYPICAL ALL GIRDERS)



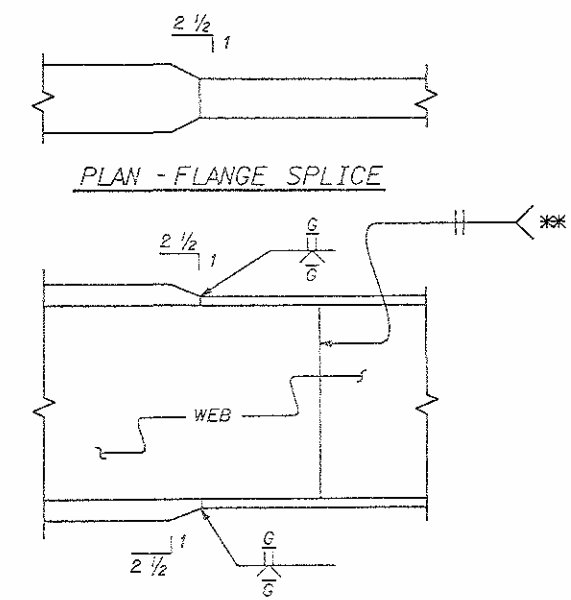
BOTTOM FLANGE TAPERING DETAIL



SHEAR STUD DETAILS

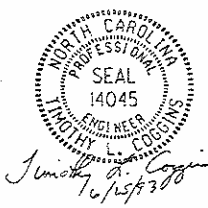


SHOP SPLICE DETAILS



TYPICAL FLANGE AND WEB BUTT JOINT

** GRIND SMOOTH AND FLUSH ON OUTER FACE OF EXTERIOR GIRDERS.



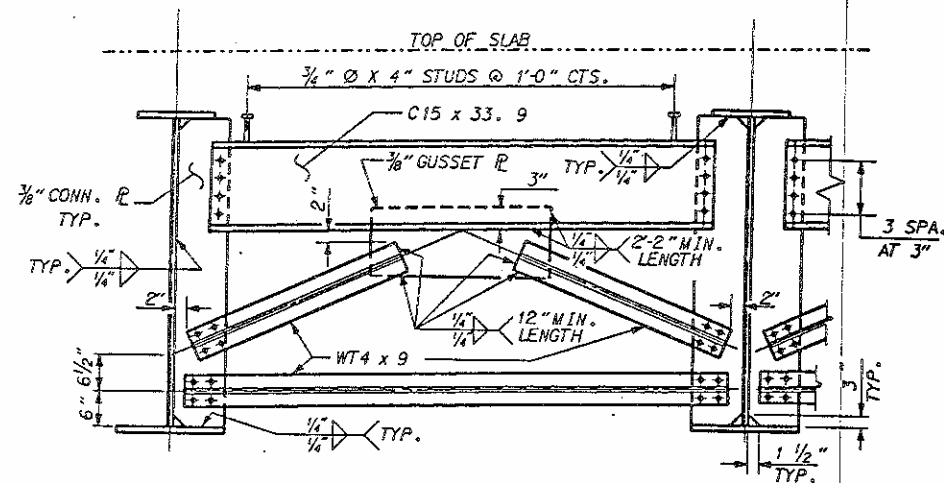
PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

**SUPERSTRUCTURE
STRUCTURAL STEEL
GIRDER DETAILS**

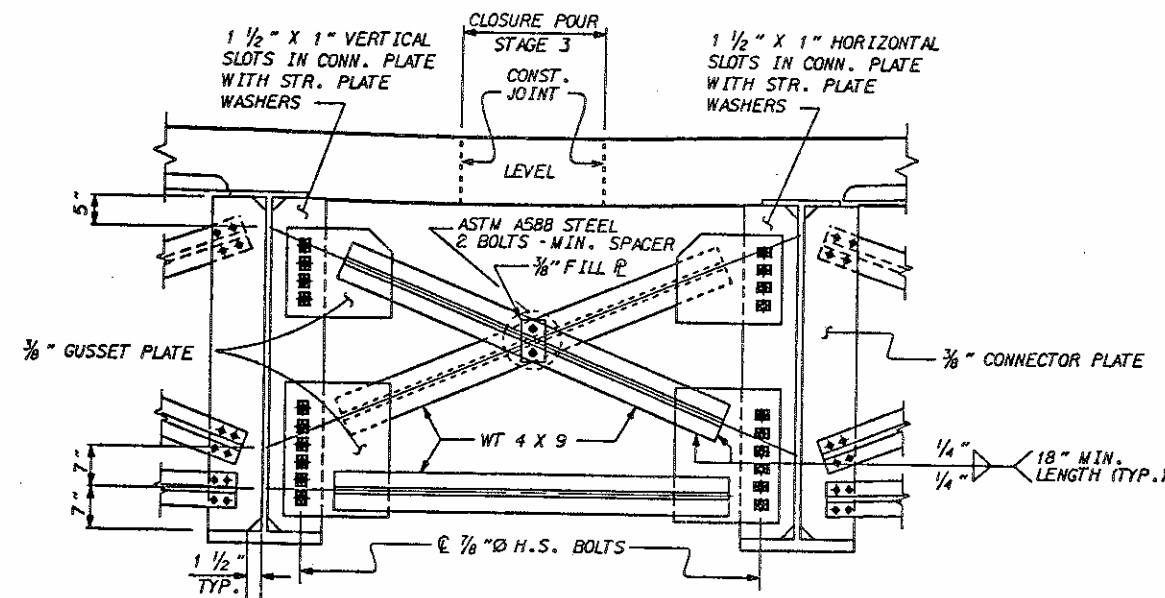
DRAWN BY: D.P. DONG/AN DATE: 7-18-91
CHECKED BY: S.D. BACKLEY DATE: 4-12-93

REVISIONS						SHEET NO
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-49
2			4			108



TYPICAL END BENT CROSSFRAME

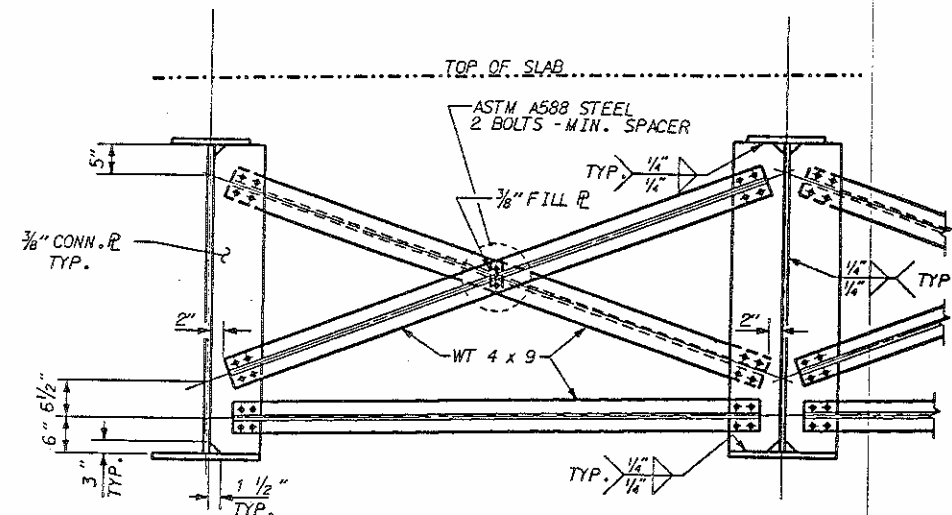
D1 32 REQUIRED



TYPICAL SECTION @ INTERMEDIATE DIAPHRAGM

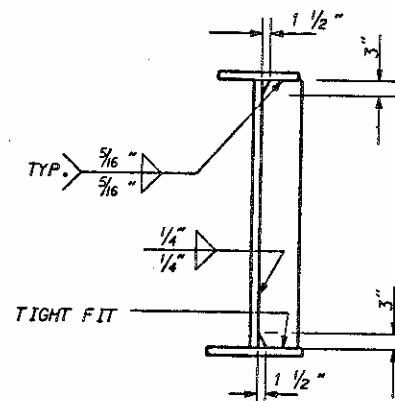
D3 6 REQUIRED (BAY 9 ONLY)

NOTE: NUTS ON BOLTS FOR CONNECTING CHANNEL TO CONNECTOR PLATE OF ADJUSTMENT UNTIL BOTH SIDES OF SLAB HAVE BEEN POURED

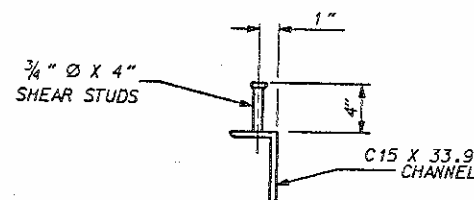


TYPICAL INTERMEDIATE CROSSFRAME

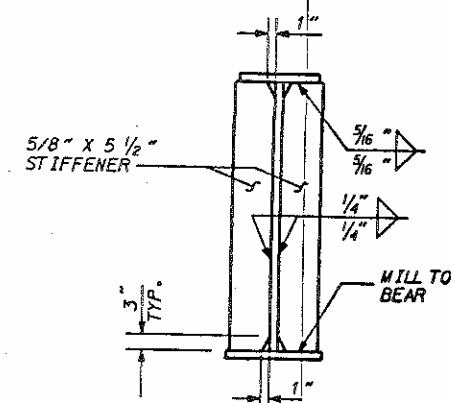
D2 90 REQUIRED



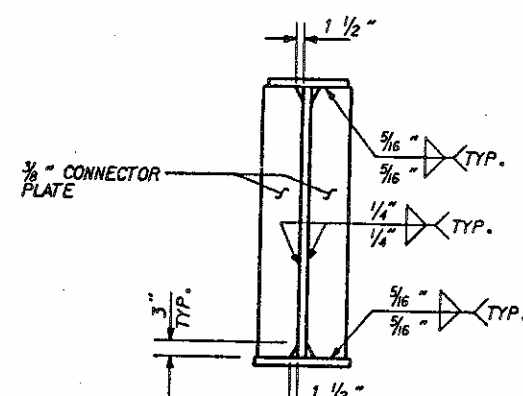
INTERMEDIATE STIFFENER



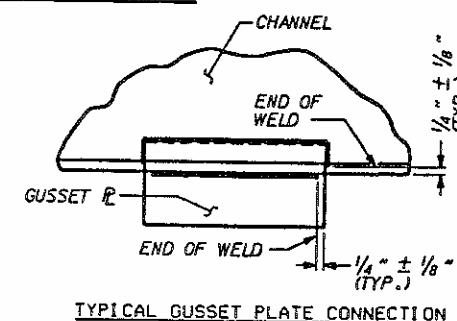
SHEAR STUD DETAILS



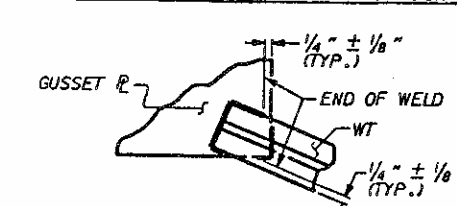
BEARING STIFFENER



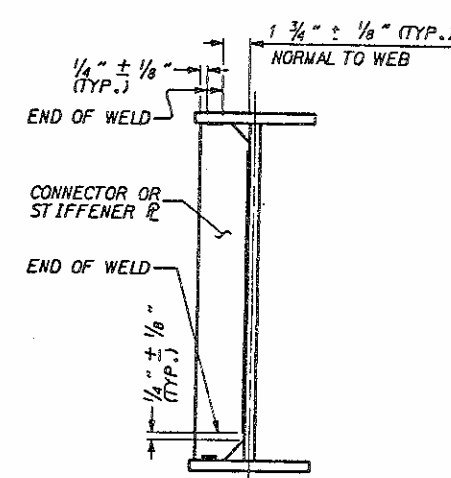
CONNECTOR PLATE DETAILS



TYPICAL GUSSET PLATE CONNECTION



TYPICAL "TEE" TO GUSSET PLATE CONNECTION



TYPICAL STIFFENER OR CONNECTOR PLATE CONNECTIONS

WELD TERMINATION DETAILS

NOTES

ALL STRUCTURAL STEEL SHALL BE ASTM A588 STEEL WITH A MINIMUM YIELD STRENGTH OF 50,000 PSI, UNLESS OTHERWISE NOTED ON THE PLANS.

ALL DIMENSIONS SHOWN ARE HORIZONTAL OR VERTICAL, UNLESS OTHERWISE NOTED.

ALL FIELD CONNECTIONS TO BE 7/8" DIA. HIGH STRENGTH BOLTS UNLESS OTHERWISE NOTED.

STIFFENERS ARE NOT REQUIRED ON THE OUTSIDE OF EXTERIOR BEAMS.

BEARING STIFFENERS ARE TO BE PLACED NORMAL TO THE WEB OF THE GIRDER AND SHALL BE PLUMB.

A CHARPY V-NOTCH TEST IS REQUIRED FOR WEB PLATES, AND BOTTOM FLANGE PLATES, FOR ALL GIRDERS. SEE SPECIAL PROVISIONS.

NUTS ON BOLTS FOR CONNECTING CHANNEL TO CONNECTOR PLATE SHALL BE LEFT LOOSE FOR PURPOSE OF ADJUSTMENT UNTIL BOTH SIDES OF SLAB HAVE BEEN POURED.

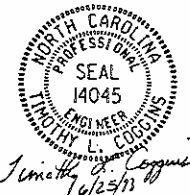
STUDS ON GIRDERS MAY BE SHIFTED UP TO 1" IF NECESSARY TO CLEAR FLANGE SPICE WELD.

ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.

SHOP SPLICES ARE PERMITTED TO LIMIT THE MAXIMUM REQUIRED FLANGE PIECE LENGTHS TO 60 FEET AND WEB PIECE LENGTHS TO 45 FEET. PERMITTED FLANGE AND WEB SHOP SPLICES SHALL NOT BE LOCATED WITHIN 15 FEET OF MAXIMUM DEAD LOAD DEFLECTION. KEEP 2 FEET MINIMUM BETWEEN WEB AND FLANGE SHOP SPLICES.

THE CONTRACTOR MAY, WHEN NECESSARY, PROPOSE A SCHEME FOR AVOIDING INTERFERENCE BETWEEN METAL STAY-IN-PLACE FORM SUPPORTS OR FORMS AND GIRDER STIFFENER OR CONNECTOR PLATES. THE PROPOSAL SHALL BE INDICATED, AS APPROPRIATE, ON EITHER THE STEEL WORKING DRAWINGS OR THE METAL STAY-IN-PLACE FORM WORKING DRAWINGS.

CAMBERED GIRDER LENGTHS SHALL BE ADJUSTED AND BEARINGS ARE TO BE PLACED ON THE CAMBERED GIRDER SO AS TO BE ALIGNED WITH THE ANCHORS AFTER THE DEAD LOAD DEFLECTION HAS OCCURRED. SHOP PLANS SHALL BE PREPARED ACCORDINGLY.



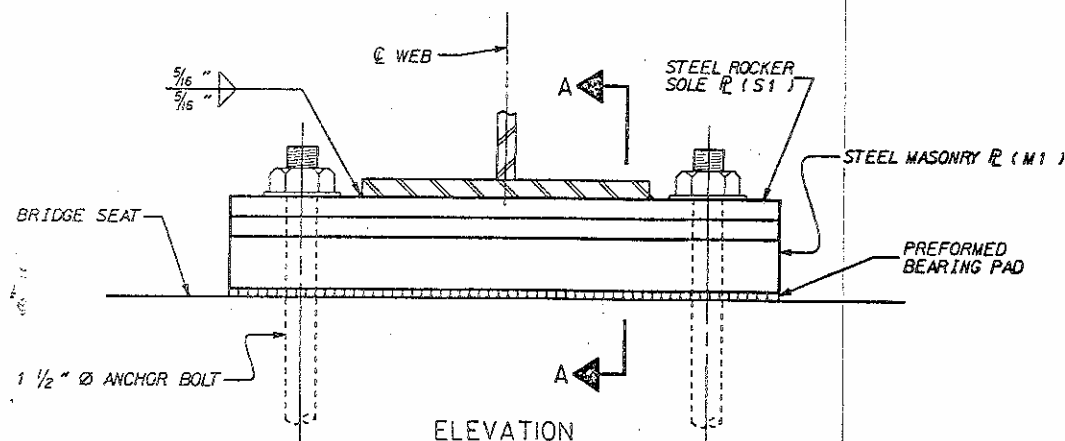
PROJECT NO. **8.7500311**
ORANGE COUNTY
STATION: **18+94.45 -L- NBL REV.**
18+77.09 -L- SBL

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

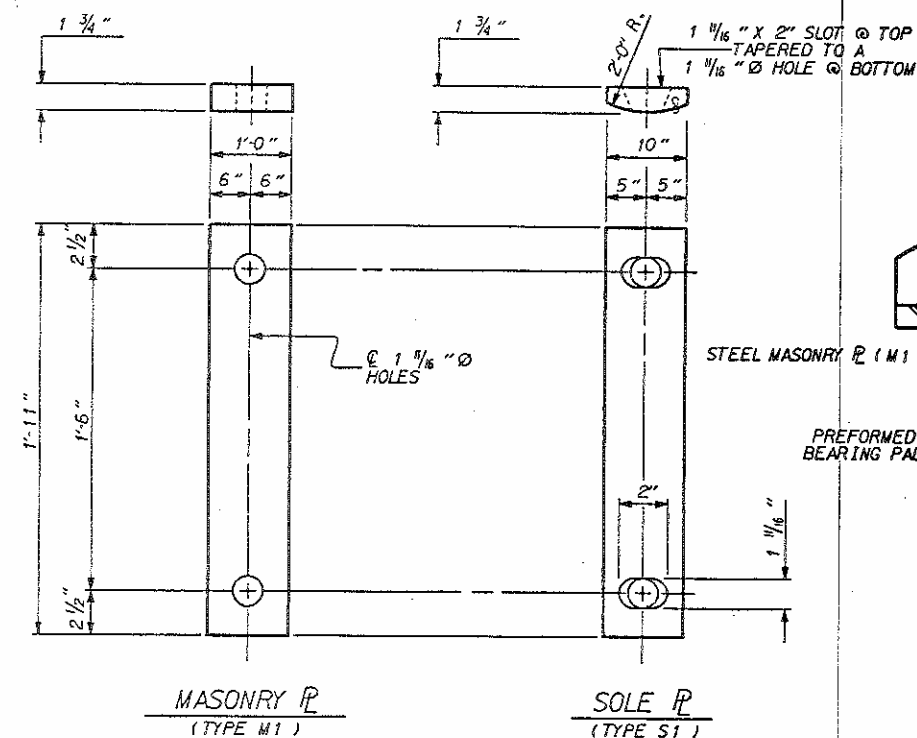
**SUPERSTRUCTURE
STRUCTURAL STEEL
DETAILS**

DRAWN BY: **D.P. DONOVAN** DATE: **6-14-91**
CHECKED BY: **S.D. RACKLEY** DATE: **4-12-93**

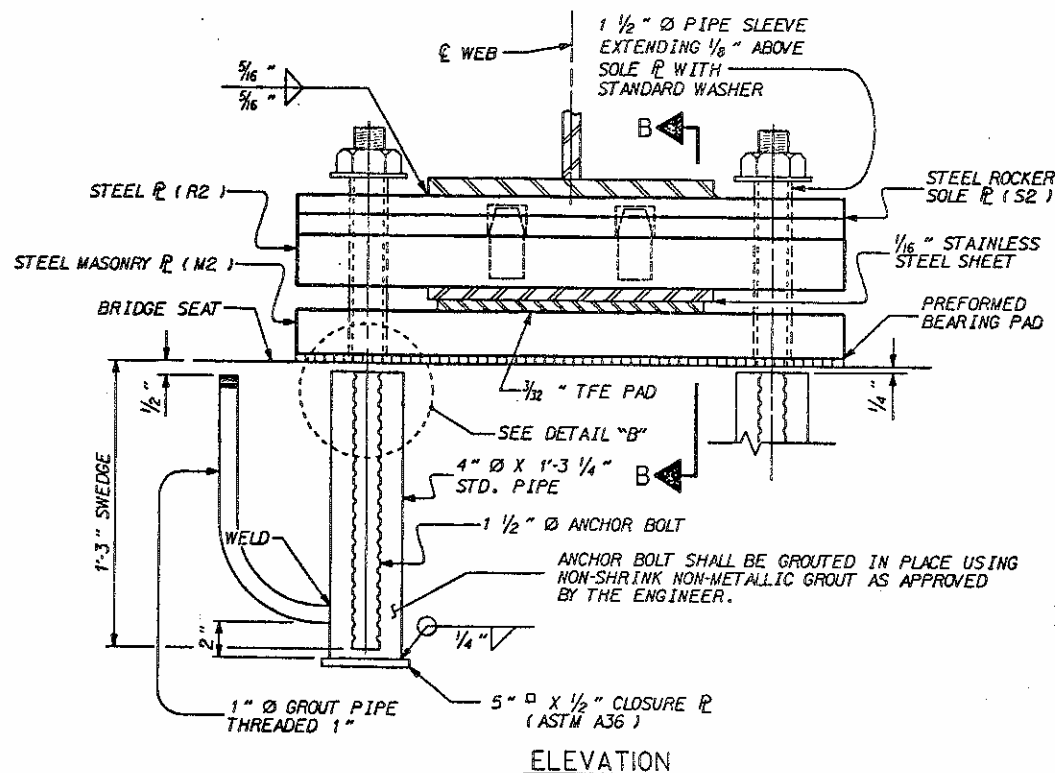
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-50
2			4			TOTAL SHEETS 108



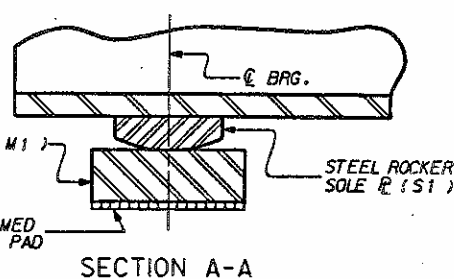
ELEVATION



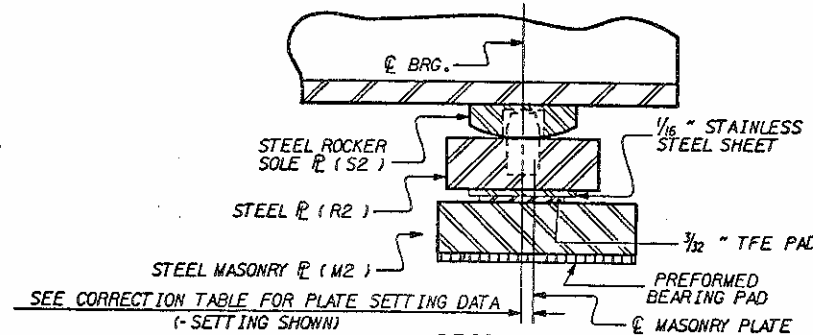
FIXED BEARING DETAILS



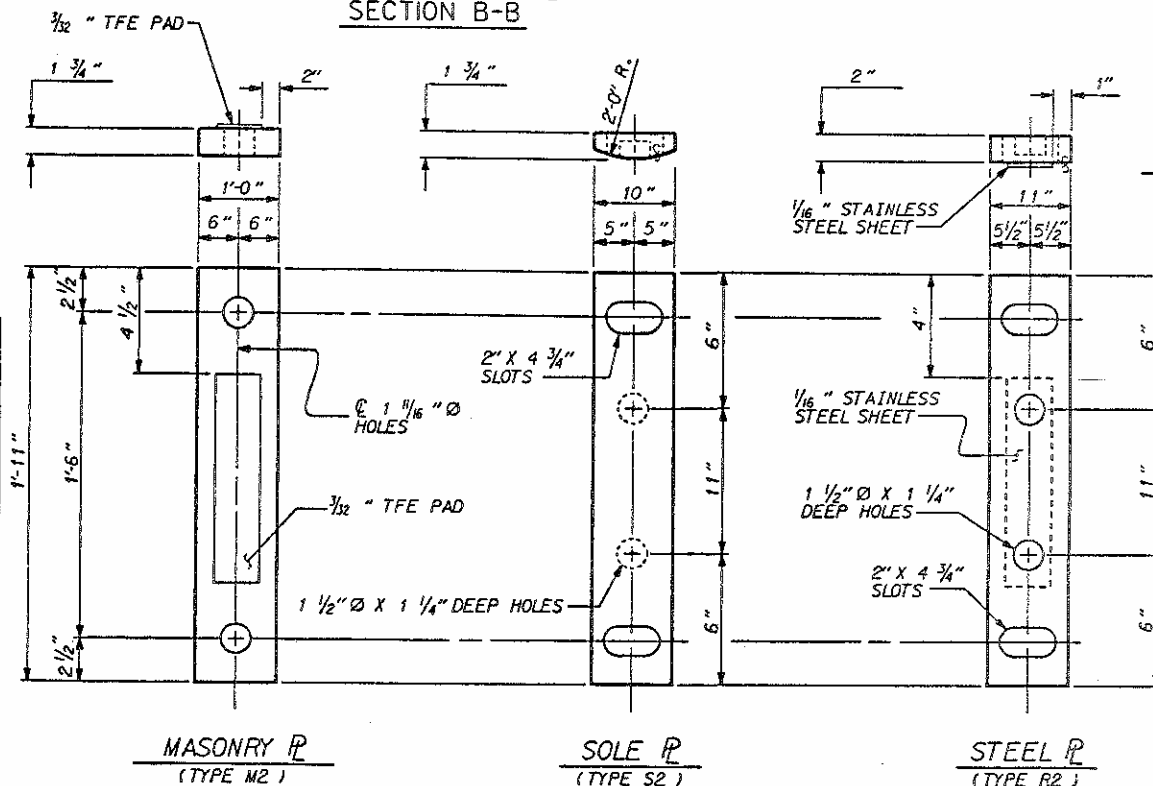
ELEVATION



SECTION A-A



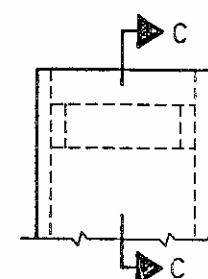
SECTION B-B



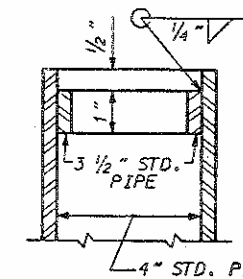
EXPANSION BEARING DETAILS

NOTES:

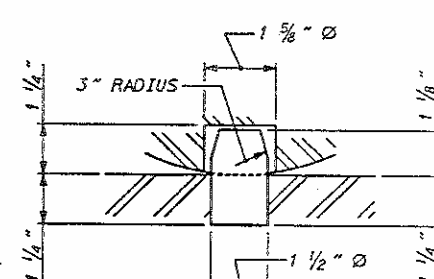
1. AT FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN. THE THREAD OF THE NUT & BOLT SHALL THEN BE BURIED WITH A SHARP POINTED TOOL.
2. THE 1 1/2" Ø PIPE SLEEVE SHALL BE CUT FROM SCHEDULE 40 PVC PIPE. THE PVC PIPE SHALL MEET THE REQUIREMENTS OF ASTM D1785. THE PAYMENT FOR THE PIPE SLEEVES SHALL BE INCLUDED IN THE SEVERAL PAY ITEMS.
3. ALL BEARING PLATES SHALL BE ASTM A-588.
4. ON PLATES TO BE PAINTED, ALL SHARP EDGES AND ENDS OF PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16" OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE. THIS ROUNDOFF OF EDGES SHALL BE PAID FOR IN THE CONTRACT LUMP SUM PRICE FOR "TFE EXPANSION BEARING ASSEMBLIES".
5. THE CLOSURE PLATE & THE STANDARD PIPE FOR THIS ASSEMBLY NEED NOT BE GALVANIZED.
6. FOR TFE EXPANSION BEARING ASSEMBLIES, SEE SPECIAL PROVISIONS.
7. ANCHOR BOLTS SHOULD BE GROUTED BEFORE FALSEWORK IS PLACED.
8. SOLE PLATES, MASONRY PLATES, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
9. ALL SURFACES OF BEARING PLATES SHALL BE SMOOTH AND STRAIGHT.



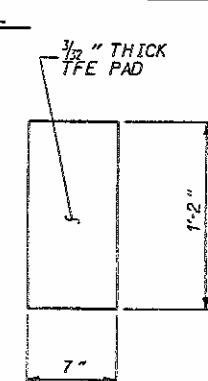
DETAIL "B"



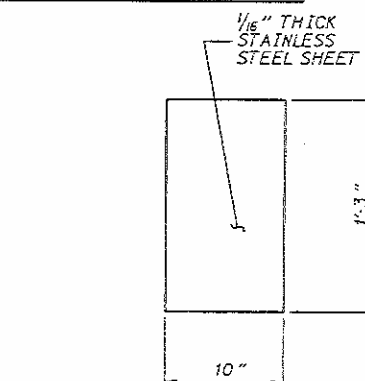
SECTION C-C



PINTLE DETAIL



TFE PAD (ON R M2)



STAINLESS STEEL SHEET (ON R R2)



PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
TFE BEARING
DETAILS

REVISIONS				SHEET NO.
NO.	BY:	DATE:	NO.	
1			2	5-51
2			4	108

TABLE 1	
ITEM	NO. REQ'D
FIX.	
STEEL ROCKER SOLE PLATE (TYPE S1)	17
STEEL MASONRY PLATE (TYPE M1)	17
1 1/2" Ø X 21" ANCHOR BOLTS	34
EXP.	
STEEL ROCKER SOLE PLATE (TYPE S2)	17
STEEL MASONRY PLATE (TYPE M2)	17
STEEL PLATE (TYPE R2)	17
1 1/2" Ø X 23 1/2" ANCHOR BOLTS (SWEDGE TYPE)	34

TABLE FOR PLATE SETTING DATA				
TEMPERATURE AT TIME OF SETTING	30° F	60° F	90° F	*
END BENT 1	-1/4"	0"	+1/4"	3/16"

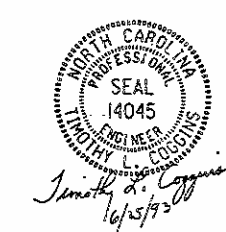
* CORRECTION FOR END ROTATION DUE TO WEIGHT OF SLAB AND COMPOSITE DEAD LOAD.

DRAWN BY: D.P. DONOVAN DATE: 7-24-91
CHECKED BY: S.D. RACKLEY DATE: 4-15-93

DEAD LOAD DEFLECTION TABLE FOR GIRDERS																																						
TENTH POINTS	SPAN A											SPAN A											SPAN A															
	GIRDER 10											GIRDER 11											GIRDER 12															
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0					
DEFLECTION DUE TO WEIGHT OF GIRDER	0.00	0.026	0.050	0.068	0.078	0.082	0.078	0.068	0.050	0.026	0.000	0.00	0.027	0.051	0.069	0.081	0.084	0.081	0.069	0.051	0.027	0.000	0.00	0.027	0.051	0.069	0.081	0.084	0.081	0.069	0.051	0.027	0.00					
DEFLECTION DUE TO WEIGHT OF SLAB *	0.00	0.110	0.207	0.281	0.327	0.343	0.327	0.281	0.207	0.110	0.000	0.00	0.127	0.239	0.325	0.378	0.396	0.378	0.325	0.239	0.127	0.000	0.00	0.127	0.239	0.325	0.378	0.396	0.378	0.325	0.239	0.127	0.00					
DEFLECTION DUE TO WEIGHT OF BARRIER RAIL	0.00	0.009	0.016	0.022	0.026	0.027	0.026	0.022	0.016	0.009	0.000	0.00	0.006	0.012	0.016	0.019	0.020	0.019	0.016	0.012	0.006	0.000	0.00	0.006	0.012	0.016	0.019	0.020	0.019	0.016	0.012	0.006	0.000					
TOTAL DEAD LOAD DEFLECTION	0.00	0.145	0.274	0.373	0.433	0.454	0.433	0.373	0.274	0.145	0.000	0.00	0.161	0.303	0.411	0.479	0.501	0.479	0.411	0.303	0.161	0.000	0.00	0.154	0.290	0.394	0.458	0.479	0.458	0.394	0.290	0.154	0.00					
VERTICAL CURVE ORDINATE	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.00					
REQUIRED CAMBER	0	2	3 ¾	5 1/16	5 7/8	6 1/8	5 7/8	5 1/16	3 ¾	2	0	0	2 3/16	4 1/16	5 1/2	6 1/16	6 1/16	6 1/16	5 1/2	4 1/16	2 3/16	0	0	2 1/16	3 5/16	5 5/16	6 1/8	6 1/16	6 1/8	5 7/8	5 1/16	3 5/16	2 1/16	0				
TENTH POINTS	SPAN A											SPAN A											SPAN A															
	GIRDERS 13 AND 14											GIRDERS 15 AND 16											GIRDER 17															
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0					
DEFLECTION DUE TO WEIGHT OF GIRDER	0.00	0.027	0.051	0.069	0.081	0.084	0.081	0.069	0.051	0.027	0.000	0.00	0.027	0.051	0.069	0.081	0.084	0.081	0.069	0.051	0.027	0.000	0.00	0.026	0.050	0.068	0.078	0.082	0.078	0.068	0.050	0.026	0.00					
DEFLECTION DUE TO WEIGHT OF SLAB *	0.00	0.130	0.246	0.334	0.388	0.407	0.388	0.334	0.246	0.130	0.000	0.00	0.127	0.239	0.325	0.378	0.396	0.378	0.325	0.239	0.127	0.000	0.00	0.119	0.224	0.305	0.355	0.372	0.355	0.305	0.224	0.119	0.00					
DEFLECTION DUE TO WEIGHT OF BARRIER RAIL	0.00	0.000	0.000	0.000	-.001	-.001	-.001	0.000	0.000	0.000	0.000	0.00	0.006	0.011	0.015	0.017	0.018	0.017	0.015	0.011	0.006	0.000	0.00	0.008	0.016	0.022	0.025	0.026	0.025	0.022	0.016	0.008	0.00					
TOTAL DEAD LOAD DEFLECTION	0.00	0.157	0.297	0.403	0.468	0.490	0.468	0.403	0.297	0.157	0.000	0.00	0.160	0.301	0.409	0.476	0.498	0.476	0.409	0.301	0.160	0.000	0.00	0.153	0.290	0.395	0.458	0.480	0.458	0.395	0.290	0.153	0.00					
VERTICAL CURVE ORDINATE	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.00					
REQUIRED CAMBER	0	2 1/8	4	5 7/16	6 1/4	6 3/16	6 1/4	5 7/16	4	2 1/8	0	0	2 3/16	4 1/16	5 1/2	6 3/8	6 1/16	6 3/8	5 1/2	4 1/16	2 3/16	0	0	2 1/16	3 5/16	5 5/16	6 1/8	6 1/16	6 1/8	5 7/8	5 1/16	3 5/16	2 1/16	0				
* INCLUDES SLAB, BUILDUPS & STAY-IN-PLACE FORMS																																						

* INCLUDES SLAB, BUILDUPS & STAY-IN-PLACE FORMS.
ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM), EXCEPT "REQUIRED CAMBER", WHICH IS GIVEN IN INCHES (FRACTION FORM).

PROJECT NO. 8.7500311
ORANGE COUNTY
 STATION: 18+94.45 -L- NBL REV.



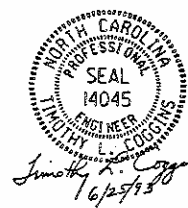
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DEAD LOAD DEFLECTION TABLES NBL					
REVISIONS					SHEET NO.
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
TOTAL SHEETS					108

DRAWN BY: D.A. PARKER DATE: 4/93
 CHECKED BY: S.D. BACKLEY DATE: 4-20-93
 22-JUN-1993 10:38
 Z:\012065025\3304E02DL.DGN

DEAD LOAD DEFLECTION TABLE FOR GIRDERS																																	
TENTH POINTS	SPAN A											SPAN A										SPAN A											
	GIRDER 1											GIRDERS 2 AND 3										GIRDERS 4 AND 7											
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
DEFLECTION DUE TO WEIGHT OF GIRDER	0.00	0.025	0.048	0.065	0.076	0.079	0.076	0.065	0.048	0.025	0.000	0.00	0.026	0.049	0.067	0.078	0.081	0.078	0.067	0.049	0.026	0.000	0.00	0.026	0.049	0.067	0.078	0.081	0.078	0.067	0.049	0.026	0.00
DEFLECTION DUE TO WEIGHT OF SLAB *	0.00	0.116	0.219	0.298	0.346	0.362	0.346	0.298	0.219	0.116	0.000	0.00	0.126	0.237	0.323	0.375	0.393	0.375	0.323	0.237	0.126	0.000	0.00	0.126	0.237	0.323	0.375	0.393	0.375	0.323	0.237	0.126	0.00
DEFLECTION DUE TO WEIGHT OF BARRIER RAIL	0.00	0.009	0.016	0.022	0.026	0.027	0.026	0.022	0.016	0.009	0.000	0.00	0.006	0.011	0.015	0.018	0.018	0.018	0.015	0.011	0.006	0.000	0.00	0.000	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.000	0.00
TOTAL DEAD LOAD DEFLECTION	0.00	0.150	0.283	0.385	0.448	0.468	0.448	0.385	0.283	0.150	0.000	0.00	0.158	0.297	0.405	0.471	0.492	0.471	0.405	0.297	0.158	0.000	0.00	0.152	0.286	0.390	0.452	0.473	0.452	0.390	0.286	0.152	0.00
VERTICAL CURVE ORDINATE	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.00
REQUIRED CAMBER	0	2 1/16	3 1/16	5 3/16	6 1/16	6 7/16	6 1/16	5 3/16	3 1/16	2 1/16	0	0	2 1/16	4	5 1/16	6 3/16	6 3/16	6 3/16	5 1/16	4	2 1/16	0	0	2 1/16	3 7/8	5 1/4	6 1/16	6 3/8	6 1/16	5 1/4	3 7/8	2 1/16	0
TENTH POINTS	SPAN A											SPAN A										SPAN A											
	GIRDERS 5 AND 6											GIRDER 8										GIRDER 9											
	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	0
DEFLECTION DUE TO WEIGHT OF GIRDER	0.00	0.026	0.049	0.067	0.078	0.081	0.078	0.067	0.049	0.026	0.000	0.00	0.026	0.049	0.067	0.078	0.081	0.078	0.067	0.049	0.026	0.000	0.00	0.025	0.048	0.065	0.076	0.079	0.076	0.065	0.048	0.025	0.00
DEFLECTION DUE TO WEIGHT OF SLAB *	0.00	0.129	0.243	0.331	0.385	0.403	0.385	0.331	0.243	0.129	0.000	0.00	0.126	0.237	0.323	0.375	0.393	0.375	0.323	0.237	0.126	0.000	0.00	0.107	0.202	0.275	0.320	0.335	0.320	0.275	0.202	0.107	0.00
DEFLECTION DUE TO WEIGHT OF BARRIER RAIL	0.00	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.00	0.006	0.012	0.016	0.019	0.020	0.019	0.016	0.012	0.006	0.000	0.00	0.009	0.017	0.023	0.027	0.028	0.027	0.023	0.017	0.009	0.00
TOTAL DEAD LOAD DEFLECTION	0.00	0.155	0.292	0.398	0.462	0.483	0.462	0.398	0.292	0.155	0.000	0.00	0.159	0.299	0.407	0.473	0.495	0.473	0.407	0.299	0.159	0.000	0.00	0.141	0.268	0.364	0.424	0.444	0.424	0.364	0.268	0.141	0.00
VERTICAL CURVE ORDINATE	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.000	0.00	0.020	0.036	0.048	0.055	0.057	0.055	0.048	0.036	0.020	0.00
REQUIRED CAMBER	0	2 1/8	3 15/16	5 3/8	6 3/16	6 1/2	6 3/16	5 3/8	3 15/16	2 1/8	0	0	2 1/8	4	5 1/16	6 3/16	6 3/16	6 3/16	5 1/16	4	2 1/8	0	0	1 15/16	3 5/8	4 15/16	5 3/4	6	5 3/4	4 15/16	3 5/8	1 15/16	0
* INCLUDES SLAB, BUILDUPS & STAY-IN-PLACE FORMS.																																	

* INCLUDES SLAB, BUILDUPS & STAY-IN-PLACE FORMS.
ALL VALUES ARE SHOWN IN FEET (DECIMAL FORM), EXCEPT "REQUIRED CAMBER", WHICH IS GIVEN IN INCHES (FRACTION FORM).

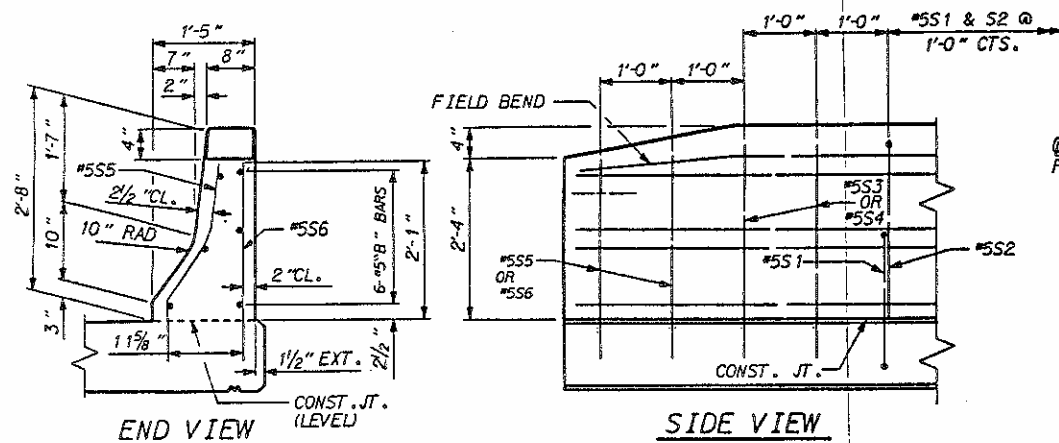
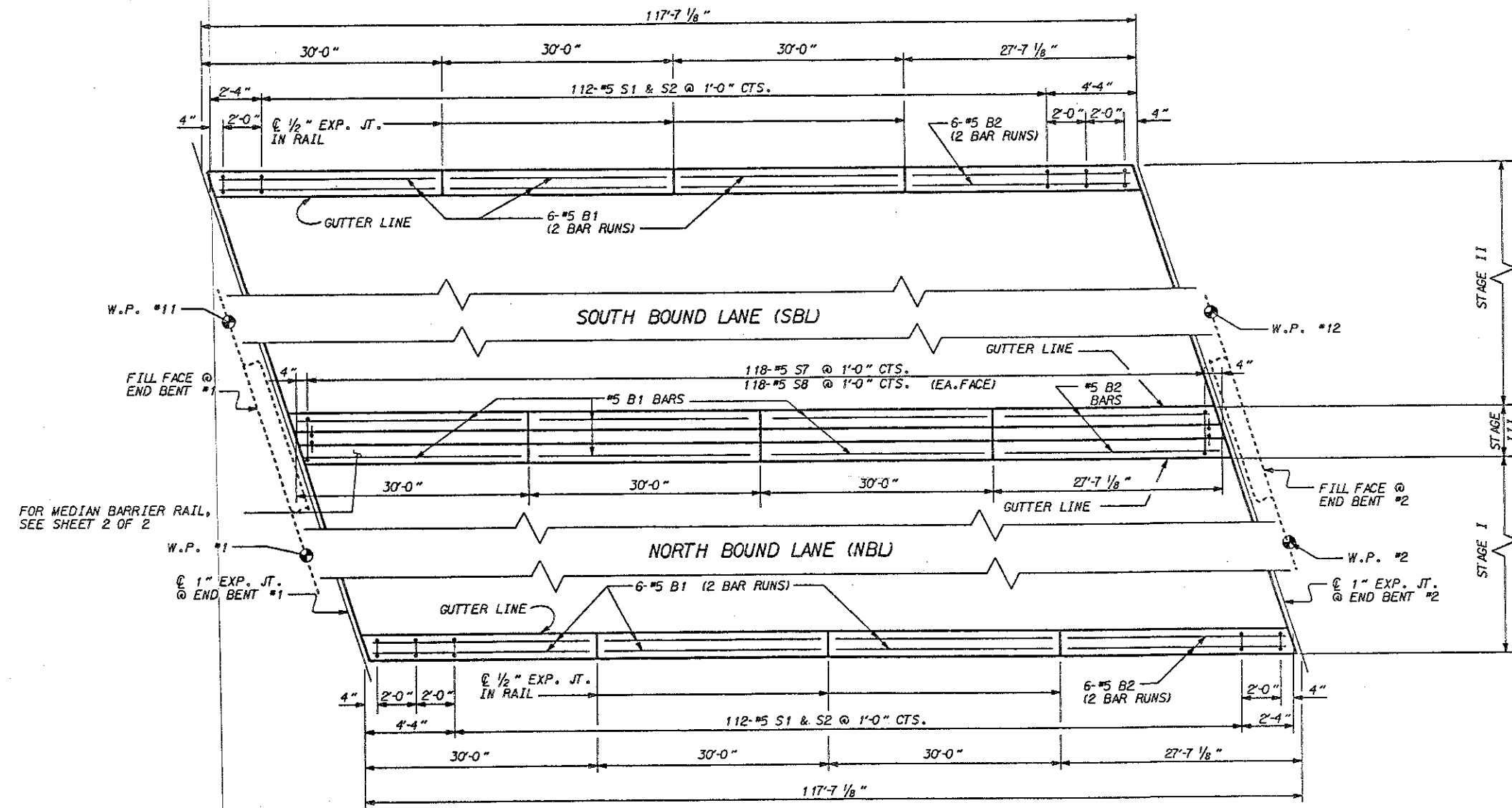
PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+77.09 -L- SBL



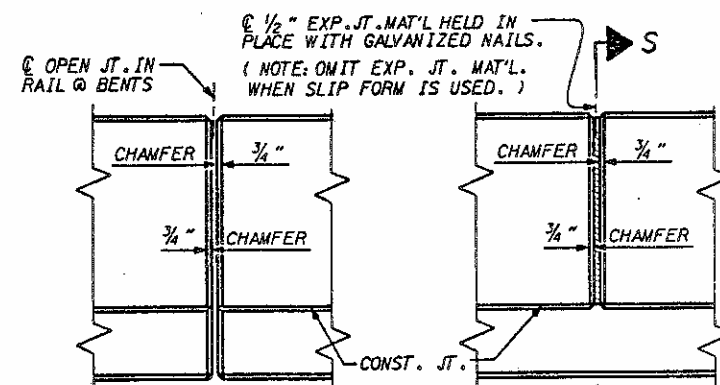
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
DEAD LOAD DEFLECTION TABLE SBL					
REVISIONS					SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					5-53
					TOTAL SHEETS 108

DRAWN BY: D.A. PARKER DATE: 4/93
CHECKED BY: S.D. RACKLEY DATE: 4-20-93

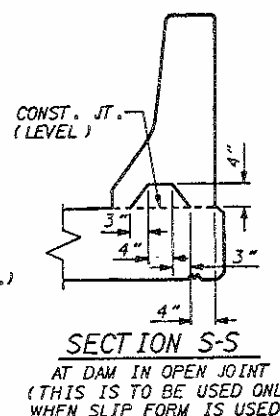
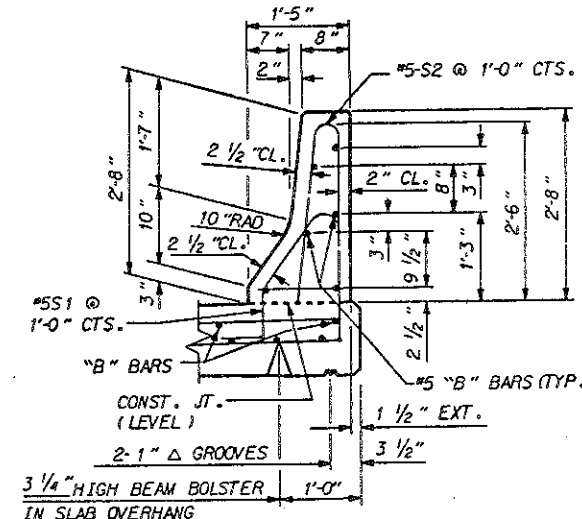
22-JUN-1993 10:34
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RDAR22P



BARRIER RAIL-END OF RAIL DETAILS



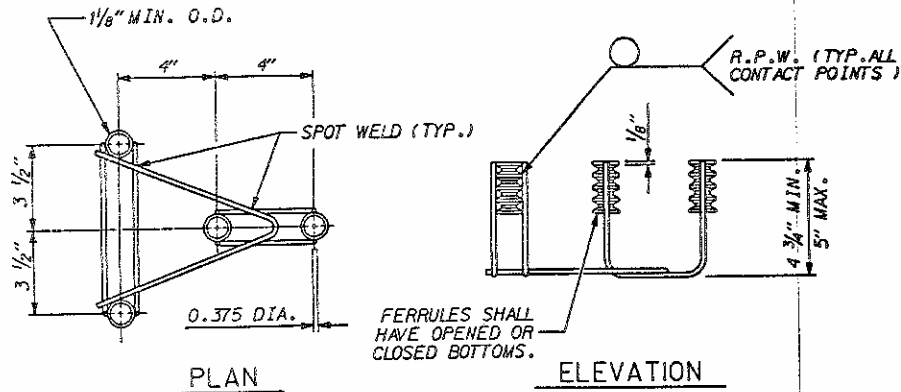
BARRIER RAIL DETAILS



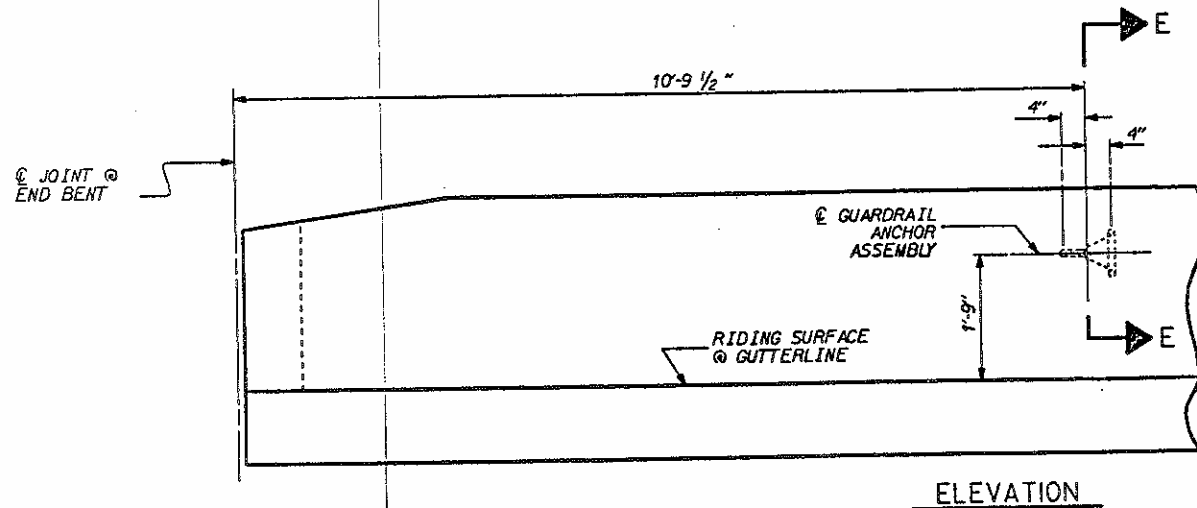
PROJECT NO. 8.7500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

REVISIONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
TOTAL SHEETS				108	

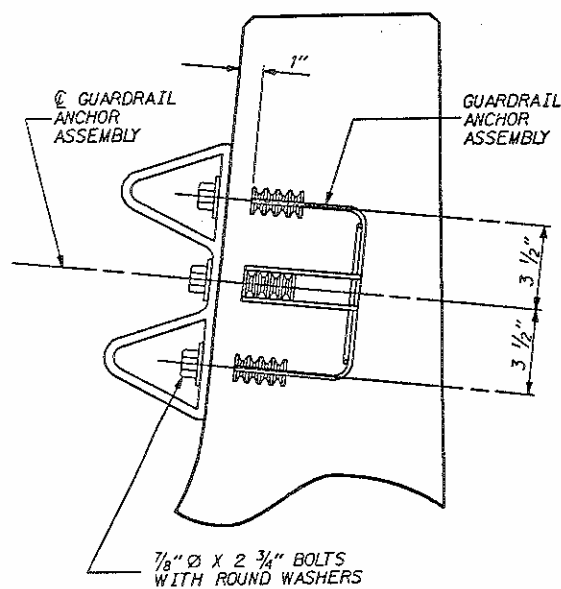
STD. NO. CRP1



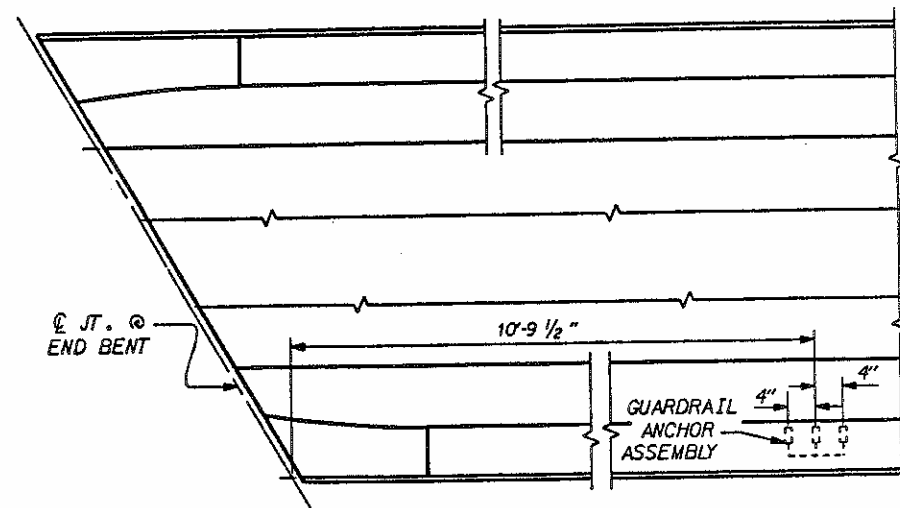
GUARDRAIL ANCHOR ASSEMBLY



ELEVATION



SECTION E-E



PLAN

LOCATION OF ANCHORS FOR GUARDRAIL AND OFFSET BLOCK

NOTES

THE GUARDRAIL ANCHOR ASSEMBLY AND THE 2-BOLT ANCHOR ASSEMBLY SHALL CONSIST OF THE FOLLOWING COMPONENTS:

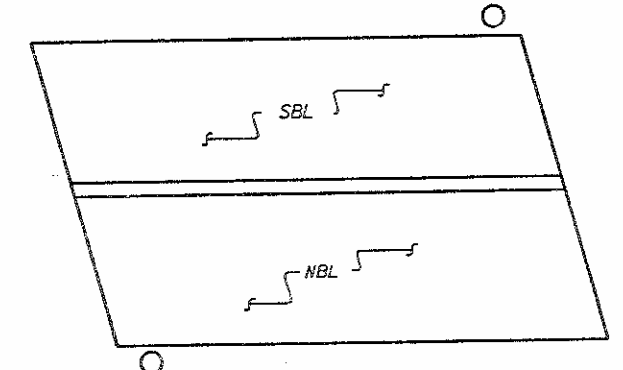
- FERRULES SHALL BE MADE FROM STEEL MEETING THE REQUIREMENTS OF ASTM A108, GRADE 12L14 AND SHALL HAVE A MINIMUM LENGTH OF THREADS OF 1/2".
- 4 - 7/8" ϕ X 2 3/4" BOLTS WITH WASHERS FOR GUARDRAIL ANCHOR ASSEMBLY AND 2 - 1/8" ϕ X 2 3/4" BOLTS WITH WASHERS FOR 2-BOLT ANCHOR ASSEMBLY SHALL CONFORM TO THE REQUIREMENTS OF ASTM A307. BOLTS AND WASHERS SHALL BE GALVANIZED. (AT THE CONTRACTOR'S OPTION, STAINLESS STEEL BOLTS WITH WASHERS MAY BE USED AS AN ALTERNATE FOR THE 7/8" ϕ X 2 3/4" GALVANIZED BOLTS 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.)
- WIRE STRUTS SHOWN IN THE ANCHOR ASSEMBLY ARE THE MINIMUM ALLOWABLE SIZE AND SHALL HAVE A MINIMUM TENSILE STRENGTH OF 100,000 PSI.

THE GUARDRAIL ANCHOR ASSEMBLIES AND THE 2-BOLT ANCHOR ASSEMBLIES WITH BOLTS SHALL BE ASSEMBLED IN THE SHOP. BOLT THREADS MAY BE RECUT AS NECESSARY.

THE COST OF THE GUARDRAIL ANCHOR ASSEMBLIES AND THE 2-BOLT ANCHOR ASSEMBLIES WITH BOLTS AND WASHERS COMPLETE IN PLACE, SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR CONCRETE BARRIER RAIL.

THE GUARDRAIL ANCHOR ASSEMBLY AND THE 2-BOLT ANCHOR ASSEMBLY ARE REQUIRED AT ALL POINTS WHERE APPROACH GUARDRAIL IS TO BE ATTACHED TO THE END OF BARRIER RAIL. FOR POINTS OF ATTACHMENT, SEE SKETCH.

THE CONTRACTOR MAY, AT HIS OPTION, USE ADHESIVELY ANCHORED ANCHOR BOLTS IN PLACE OF GUARDRAIL ANCHOR AND 2-BOLT ANCHOR ASSEMBLY. SEE SPECIAL PROVISIONS FOR "ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS". THE REQUIRED DESIGN LOAD OF THE 7/8" ϕ BOLT IS 12 KIPS. THE ANCHOR BOLTS SHALL BE COATED WITH A DEBONDING AGENT SO THAT THE ANCHOR BOLTS CAN BE EASILY REMOVED IF NECESSARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE DEBONDING AGENT DOES NOT REDUCE THE STRENGTH OF THE ANCHOR SYSTEM. TESTING OF THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.



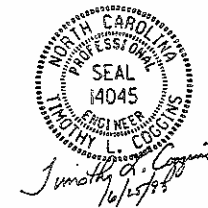
SKETCH SHOWING POINTS OF ATTACHMENTS

○ INDICATES GUARDRAIL POINTS OF ATTACHMENT

PROJECT NO. 8.T500311

ORANGE COUNTY

STATION: 18+94.45 -L- NBL REV. 18+77.09 -L- SBL



STATE OF NORTH CAROLINA			
DEPARTMENT OF TRANSPORTATION			
RALEIGH			
STANDARD			
GUARDRAIL ANCHORAGE			
FOR BARRIER RAIL			
FEB. 1988			
REVISIONS			
NO.	BY	DATE	NO.
1			3
2			4
SHEET NO. S-56			TOTAL SHEETS 108

STD.No. GRA1

ASSEMBLED BY: D.P. DONOVAN	DATE: 4-22-91	SPECIAL
CHECKED BY: S.D. RACKLEY	DATE: 5-11-93	
DRAWN BY: MIKE BRITT	DATE: DEC. 1987	STANDARD
CHECKED BY: RANDY BISSETTE	DATE: DEC. 1987	

REINFORCING BAR SCHEDULE

SPAN A NBL STAGE I

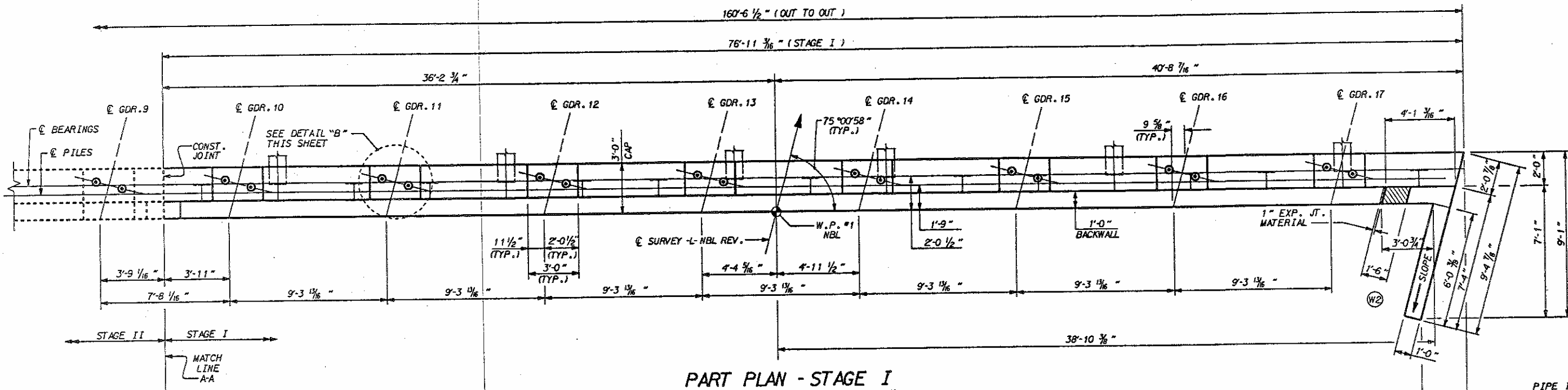
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A1	348	6	STR	36-8	19166
A2	175	6	STR	39-6	10383
A3	174	6	STR	31-6	8232
*A121	1	6	STR	34-8	52
*A122	1	6	STR	32-6	49
*A123	1	6	STR	30-4	46
*A124	1	6	STR	28-2	42
*A125	1	6	STR	26-0	39
*A126	1	6	STR	24-8	36
*A127	1	6	STR	22-6	33
*A128	1	6	STR	20-4	30
*A129	1	6	STR	18-2	27
*A130	1	6	STR	16-0	24
*A131	1	6	STR	14-8	21
*A132	1	6	STR	12-6	18
*A133	1	6	STR	10-4	15
*A134	1	6	STR	8-2	12
*A135	1	6	STR	6-0	9
*A136	1	6	STR	3-8	6
*A137	1	6	STR	1-6	3
*A138	1	6	STR	1-4	3
*A139	1	6	STR	1-2	3
*A140	1	6	STR	1-0	3
*A141	1	6	STR	8-10	387
*A142	1	6	STR	8-8	387
*A143	1	6	STR	8-6	387
*A144	1	6	STR	8-4	387
*A145	1	6	STR	8-2	387
*A146	1	6	STR	8-0	387
*A147	1	6	STR	7-10	387
*A148	1	6	STR	7-8	387
*A149	1	6	STR	7-6	387
*A150	1	6	STR	7-4	387
*A151	1	6	STR	7-2	387
*A152	1	6	STR	7-0	387
*A153	1	6	STR	6-10	387
*A154	1	6	STR	6-8	387
*A155	1	6	STR	6-6	387
*A156	1	6	STR	6-4	387
*A157	1	6	STR	6-2	387
*A158	1	6	STR	6-0	387
*A159	1	6	STR	5-10	387
*A160	1	6	STR	5-8	387
*A161	1	6	STR	5-6	387
*A162	1	6	STR	5-4	387

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A182	1	6	STR	27-11	42
*A183	1	6	STR	25-9	39
*A184	1	6	STR	23-7	36
*A185	1	6	STR	21-5	33
*A186	1	6	STR	19-3	30
*A187	1	6	STR	17-1	27
*A188	1	6	STR	14-10	22
*A189	1	6	STR	12-8	19
*A190	1	6	STR	10-6	16
*A191	1	6	STR	8-4	13
*A192	1	6	STR	6-2	9
*A193	1	6	STR	4-0	6
*A194	1	6	STR	1-9	3
A195	1	6	STR	37-6	56
A196	1	6	STR	35-4	53
A197	1	6	STR	33-2	50
A198	1	6	STR	31-0	47
A199	1	6	STR	28-8	44
A200	1	6	STR	26-6	41
A201	1	6	STR	24-4	38
A202	1	6	STR	22-2	35
A203	1	6	STR	20-0	32
A204	1	6	STR	17-8	29
A205	1	6	STR	15-6	26
A206	1	6	STR	13-4	23
A207	1	6	STR	11-2	20
A208	1	6	STR	9-0	17
A209	1	6	STR	6-8	14
A210	1	6	STR	4-6	11
A211	1	6	STR	2-4	8
A212	1	6	STR	1-2	6
A213	1	6	STR	1-0	6
A214	1	6	STR	8-10	387
A215	1	6	STR	8-8	387
A216	1	6	STR	8-6	387
A217	1	6	STR	8-4	387
A218	1	6	STR	8-2	387
A219	1	6	STR	8-0	387
A220	1	6	STR	7-10	387
A221	1	6	STR	7-8	387
A222	1	6	STR	7-6	387
A223	1	6	STR	7-4	387
A224	1	6	STR	7-2	387
A225	1	6	STR	7-0	387
*B1	235	4	STR	24-7	3859
B2	214	5	STR	59-4	13243
*G2	4	5	STR	36-8	153
*K1	6	5	1	8-3	52
K2	42	5	STR	8-10	387
*K3	36	5	2	7-0	263
*K6	6	5	1	7-1	44
*S1	126	4	3	4-0	337
REINFORCING STEEL					LBS. 35,049
EPOXY COATED REINFORCING STEEL					LBS. 26,763

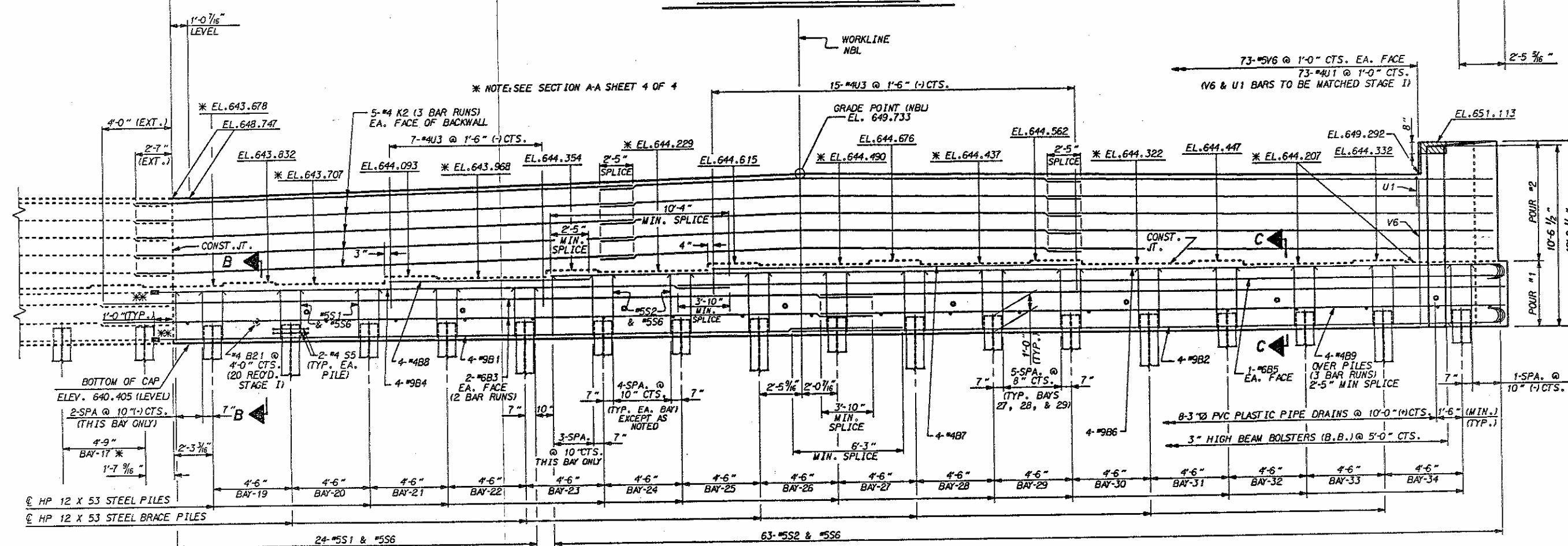
SPAN A SBL STAGE II

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
*A4	174	6	STR	44-5	11608
*A5	174	6	STR	36-11	9648
A6	174	6	STR	40-0	10454
A7	175	6	STR	39-0	10251
*A381	1	6	STR	32-10	49
*A382	1	6	STR	30-8	46
*A383	1	6	STR	28-6	43
*A384	1	6	STR	26-4	40
*A385	1	6	STR	24-2	36
*A386	1	6	STR	22-0	33
*A387	1	6	STR	19-8	30
*A388	1	6	STR	17-6	26
*A389	1	6	STR	15-4	23
*A390	1	6	STR	13-2	20
*A391	1	6	STR	11-0	17
*A392	1	6	STR	8-8	14
*A393	1	6	STR	6-6	11
*A394	1	6	STR	4-4	8
*A395	1	6	STR	2-2	6
*A396	1	6	STR	1-0	6
*A397	1	6	STR	1-0	6
*A398	1	6	STR	1-0	6
*A399	1	6	STR	1-0	6
*A400	1	6	STR	1-0	6
*A401	1	6	STR	1-0	6
*A402	1	6	STR	1-0	6
*A403	1	6	STR	1-0	6
*A404	1	6	STR	1-0	6
*A405	1	6	STR	1-0	6
A406	1	6	STR	38-0	57
A407	1	6	STR	35-10	54
A408	1	6	STR	33-8	51
A409	1	6	STR	31-6	47
A410	1	6	STR	29-4	44
A411	1	6	STR	27-2	41
A412	1	6	STR	25-0	38
A413	1	6	STR	22-8	34
A414	1	6	STR	20-6	31
A415	1	6	STR	18-4	28
A416	1	6	STR	16-2	24
A417	1	6	STR	14-0	21
A418	1	6	STR	11-8	18
A419	1	6	STR	9-6	15
A420	1	6	STR	7-4	12
A421	1	6	STR	5-2	9
A422	1	6	STR	3-0	6
A423	1	6	STR	1-8	3
A424	1	6	STR	1-6	3
A425	1	6	STR	1-4	3
A426	1	6	STR	1-2	3
A427	1	6	STR	1-0	3
A428	1	6	STR	8-10	387
A429	1	6	STR	8-8	387
A430	1	6	STR	8-6	387
A431	1	6	STR	8-4	387
A432	1	6	STR	8-2	387
A433	1	6	STR	8-0	387
A434	1	6	STR	7-10	387
A435	1	6	STR	7-8	387
A436	1	6	STR	7-6	387
A437	1	6	STR	7-4	387
A438	1	6	STR	7-2	387
A439	1	6	STR	7-0	387
A440	1	6	STR	6-10	387
*B1	260	4	STR	24-7	4270
B2	244	5	STR	59-4	15100
*G1	4	5	STR	40-10	170
*K3	42	5	2	7-0	307
*K5	6	5	1	6-11	43
K6	48	5	STR	8-9	438
*K7	6	5	1	8-1	51
*S1	144	4	3	4-0	385
REINFORCING STEEL					LBS. 39,345
EPOXY COATED REINFORCING STEEL					LBS. 29,668
CLOSURE POUR STAGE III					
*A371	1	6	STR	42-5	64
*A372	1	6	STR	40-3	60
*A373	1	6	STR	38-1	57
*A374	1	6	STR	35-10	54
*A375	1	6	STR	33-8	51
*A376	1	6	STR	31-6	47
*A377	1	6	STR	29-4	44
*A378	1	6	STR	27-2	41
*A379	1	6	STR	25-0	38
*A380	1	6	STR	22-8	34
*A381	1	6	STR	20-6	31
*A382	1	6	STR	18-4	28
*A383	1	6	STR	16-2	24
*A384	1	6	STR	14-0	21
*A385	1	6	STR	11-8	18
*A386	1	6	STR	9-6	15
*A387	1	6	STR	7-4	12
*A388	1	6	STR	5-2	9
*A389	1	6	STR	3-0	6
*A390	1	6	STR	1-8	3
*A391	1	6	STR	1-6	3
*A392	1	6	STR	1-4	3
*A393	1	6	STR	1-2	3
*A394	1	6	STR	1-0	3
*A395	1	6	STR	8-10	387
*A396	1	6	STR	8-8	387
*A397	1	6	STR	8-6	387
*A398	1	6	STR	8-4	387
*A399	1	6	STR	8-2	387
*A400	1	6	STR	8-0	387
*A401	1	6	STR	7-10	387
*A402	1	6	STR	7-8	387
*A403	1	6	STR	7-6	387
*A404	1	6	STR	7-4	387
*A405	1	6	STR	7-2	387
*A406	1	6	STR	7-0	387
*A407	1	6	STR	6-10	387
*A408	1	6	STR	6-8	387
*A409	1	6	STR	6-6	387
*A410	1	6	STR	6-4	387
*A411	1	6	STR	6-2	387
*A412	1	6	STR	6-0	387
*A413	1	6	STR	5-10	387
*A414	1	6	STR	5-8	387
*A415	1	6	STR	5-6	387
*A416	1	6	STR	5-4	387
*A417	1	6	STR	5-2	387
*A418	1	6	STR	5-0	387
*A419	1	6	STR	4-10	387
*A420	1	6	STR	4-8	387
*A421	1	6	STR	4-6	387
*A422	1	6	STR	4-4	387
*A423	1	6	STR	4-2	387
*A424	1	6	STR	4-0	387
*A425	1	6	STR	3-10	387
*A426	1	6	STR	3-8	387
*A427	1	6	STR	3-6	387
*A428	1	6	STR	3-4	387
*A429	1	6	STR	3-2	387
*A430	1	6	STR	3-0	387
*A431	1	6	STR	2-10	387
*A432	1	6	STR	2-8	387
*A433	1	6	STR	2-6	387
*A434	1	6	STR	2-4	387
*A435	1	6	STR	2-2	387
*A436	1	6	STR	2-0	387
*A437	1	6	STR	1-8	387
*A438	1	6	STR	1-6	387
*A439	1	6	STR	1-4	387
*A440	1	6	STR	1-2	387

* THESE BARS ARE EPOXY COATED.

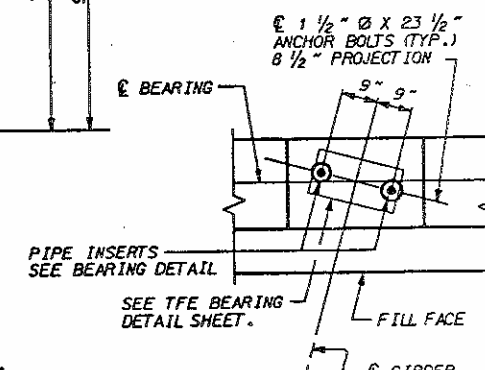


PART PLAN - STAGE I



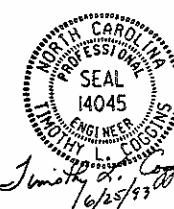
PART ELEVATION - STAGE I

NOTE: SEE NOTE ON SHEET 2 OF 4 IN STAGE II, ABOUT PILES IN BAY 17.



DETAIL "B"

TYP. END BENT 1



PROJECT NO. 8.7500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.

SHEET 1 OF 4

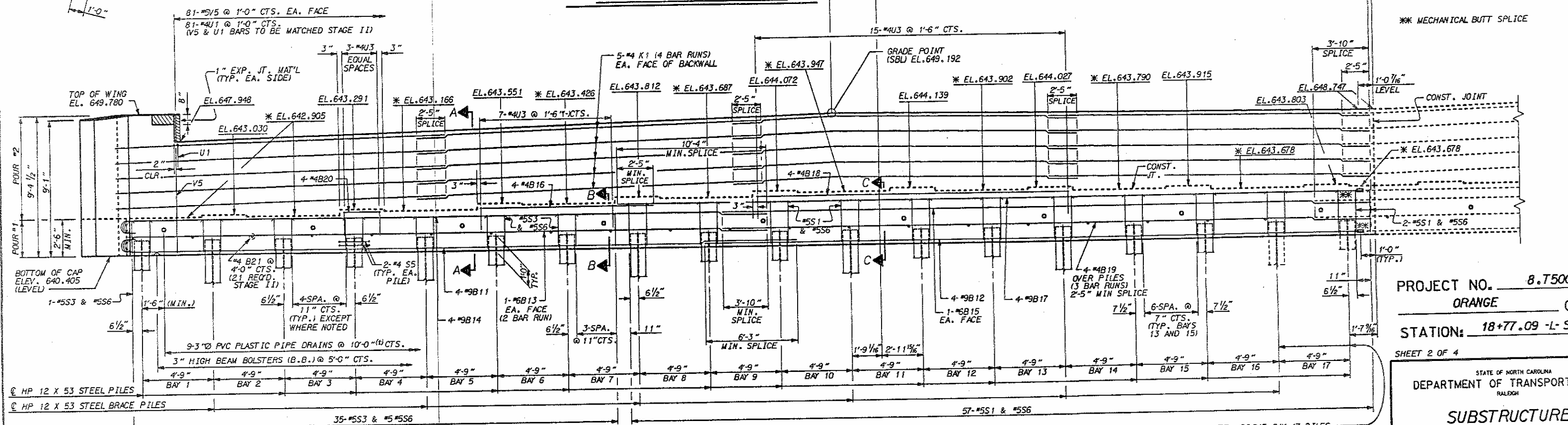
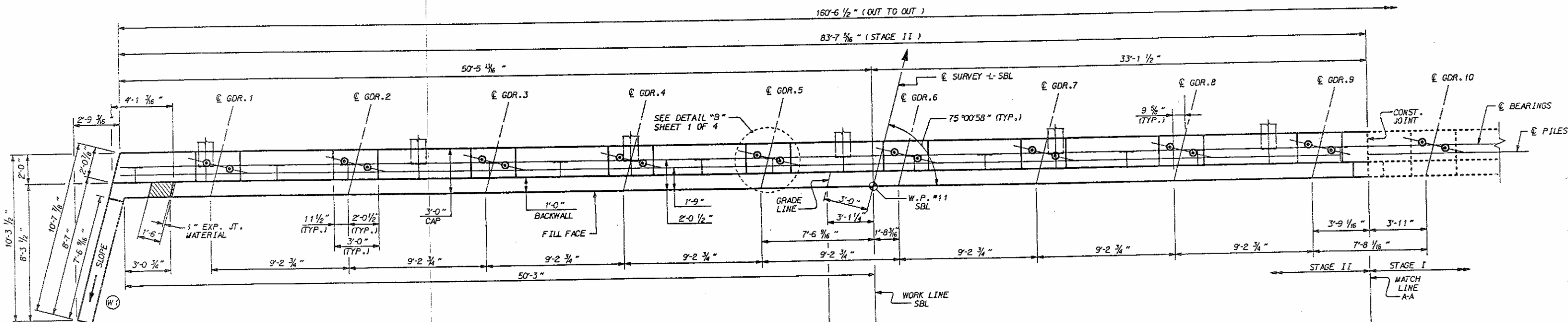
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT NO. 1
STAGE I NBL

REVISIONS				SHEET NO.	
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
				TOTAL SHEETS	
				108	

DRAWN BY: D.P. DONOVAN DATE: 8-22-91
CHECKED BY: G.F. LANE DATE: 9-2-92

* DRIVE BAY 17 PILES WITH STAGE I CONST.
** MECHANICAL BUTT SPLICE



DRAWN BY: D.P. DONOVAN DATE: 8-22-91
CHECKED BY: G.F. LANE DATE: 9-2-92

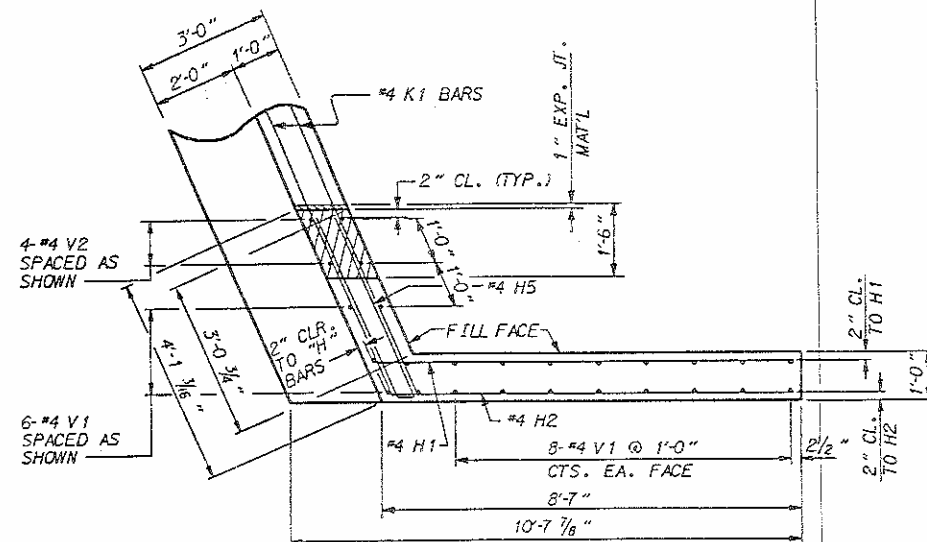


PROJECT NO. 8.7500311
ORANGE COUNTY
STATION: 18+77.09 -L- SBL
SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

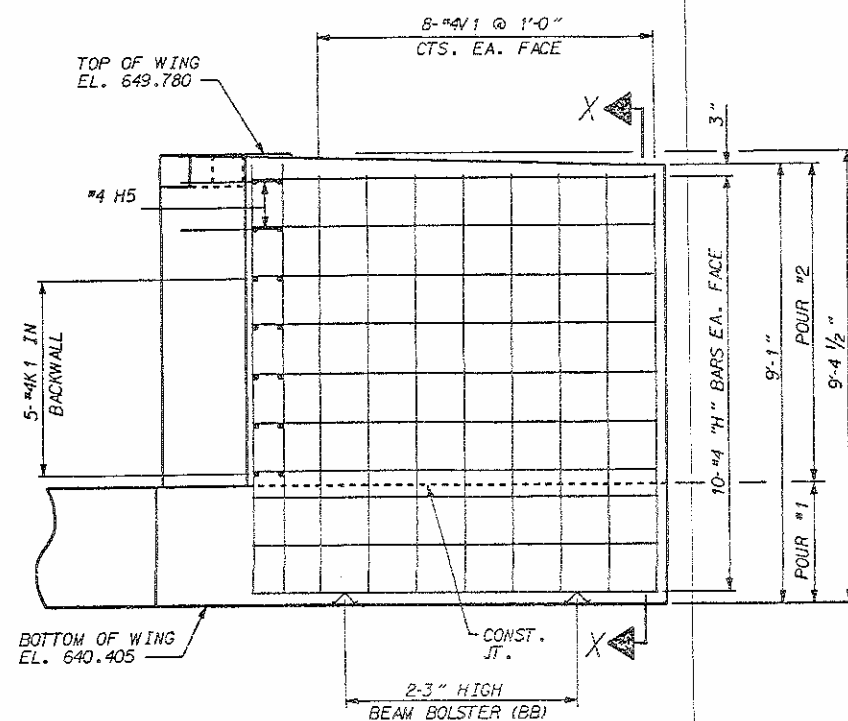
SUBSTRUCTURE
END BENT NO. 1
STAGE II SBL

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
				TOTAL SHEETS	108



PLAN OF LEFT WING (W1)

STAGE II



ELEVATION OF LEFT WING (W1)

STAGE II

DRAWN BY : D.P. DONOVAN DATE : 8-22-91
CHECKED BY : G.F. LANE DATE : 9-2-92

-----NOTES-----

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

PIPE DRAINS MAY BE SHIFTED SLIGHTLY AS NECESSARY TO CLEAR REINFORCING STEEL AND ANCHOR BOLTS.

FOR PIPE DRAIN DETAILS, SEE END BENT SHEET 4 OF 4.

FOR PILE SPLICE DETAILS, SEE END BENT SHEET 4 OF 4.

BACKWALL SHALL BE PLACED BEFORE APPLYING THE EPOXY PROTECTIVE COATING.

THE TOP SURFACE AREAS OF THE END BENT CAPS SHALL BE CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT THAT THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.

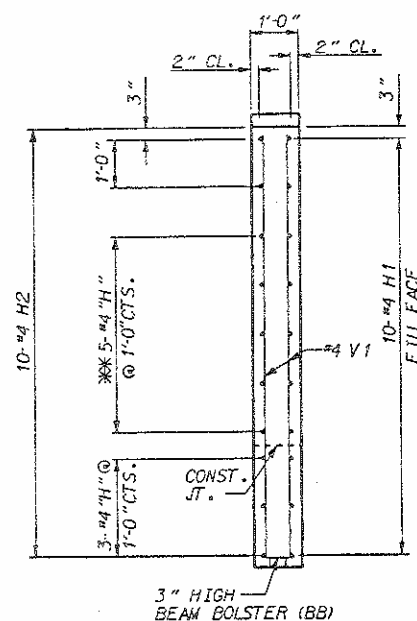
THE TOP SURFACE OF THE END BENT CAP EXCEPT THE
BRIDGE SEAT BUILDBUPS SHALL BE SLOPED TRANSVERSELY
FROM THE FILL FACE TO THE BACK FACE AT THE RATE OF
1/4" PER FOOT.

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE JOINT IN THE DECK AND THE APPROACH SLAB HAS BEEN SAWED AND THE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

STEEL PILE POINTS ARE REQUIRED FOR PILES IN END BENT "A".

FOR MECHANICAL BUTT SPLICING FOR REINFORCING STEEL,
SEE SPECIAL PROVISIONS.

FOR PIPE INSERT DETAILS, SEE BEARING SHEET.

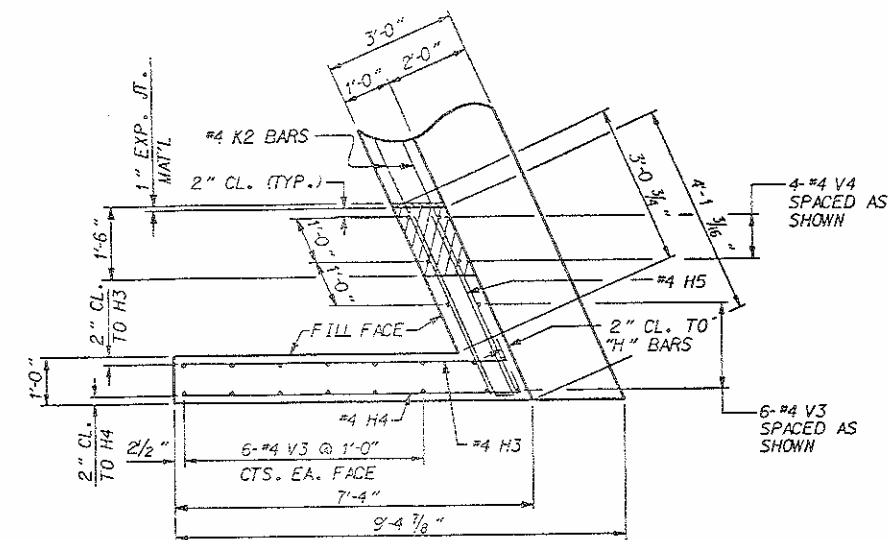


SECTION X-X

SECTION Y-Y

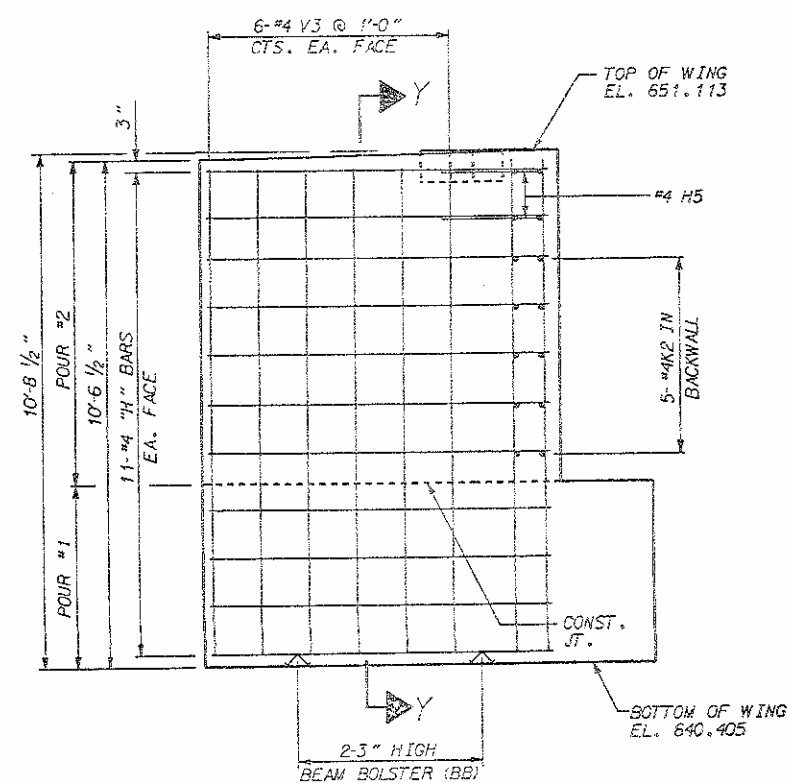
NOTES: ** MATCH THESE "H" BARS IN THE WINGS TO THE "K" BARS IN THE BACKWALL. "K" BARS SHALL EXTEND FROM WING TO WING.

REINFORCING STEEL IN BLOCKOUT MAY BE BENT AS NECESSARY.



PLAN OF RIGHT WING (W2)

STAGE I



ELEVATION OF RIGHT WING (W2)

STAGE 1



James L. Cagney
10/25/53

PROJECT NO. 8.7500311

ORANGE COUNTY

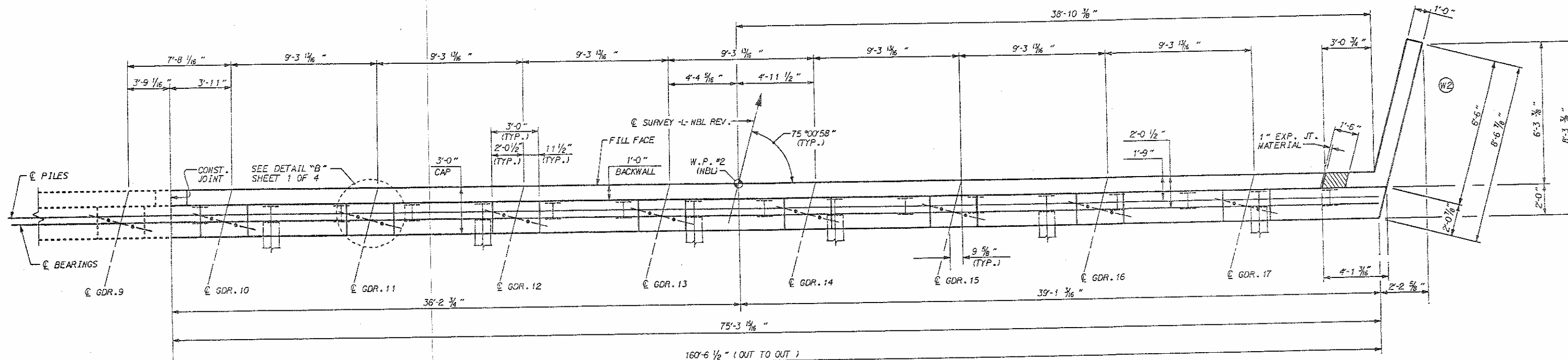
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

SHEET 3 OF 4

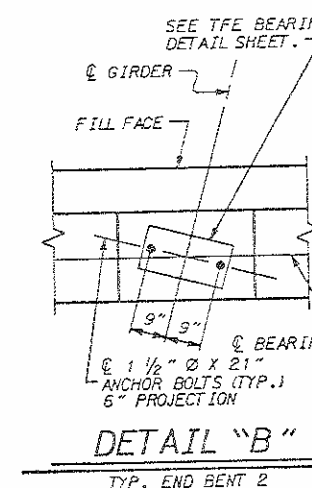
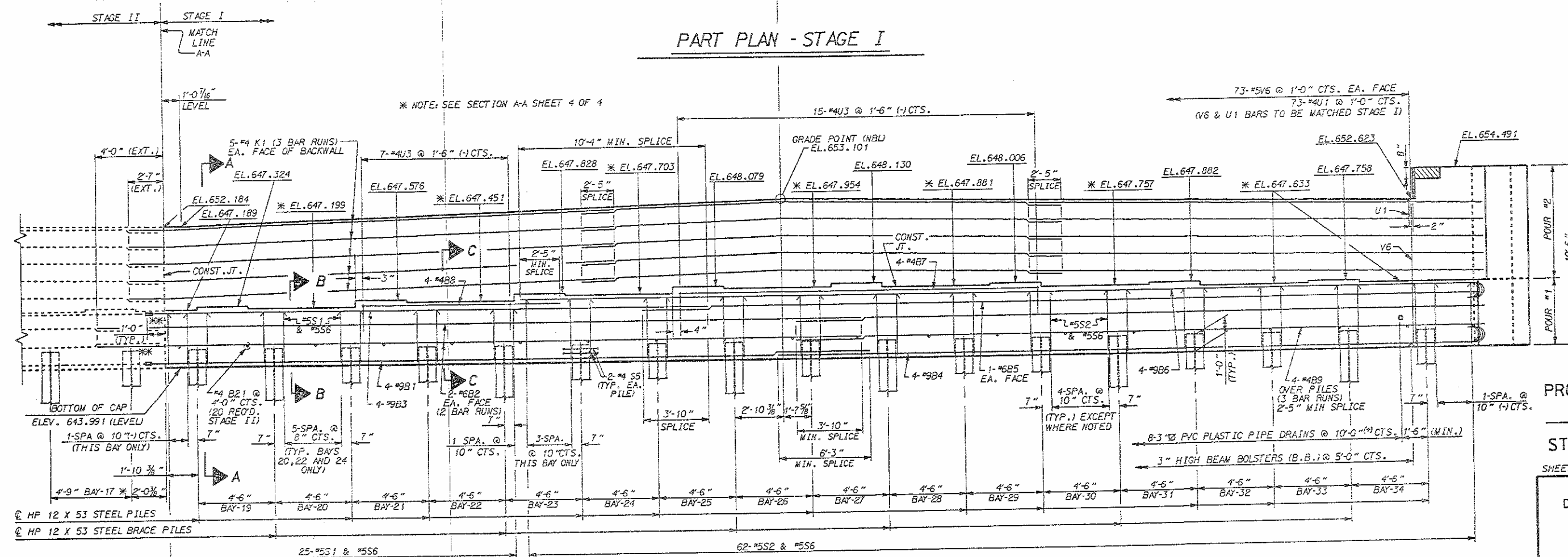
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT NO. 1

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			108



PART PLAN - STAGE I



PROJECT NO. 8.T500311
ORANGE COUNTY
 STATION: 18+94.45 -L- NBL REV.

SHEET 1 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT NO. 2
STAGE I NBL

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS
2			4			108

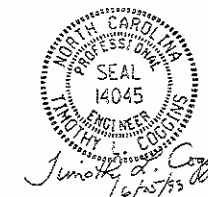
* DRIVE BAY 17 PILES
WITH STAGE I CONST

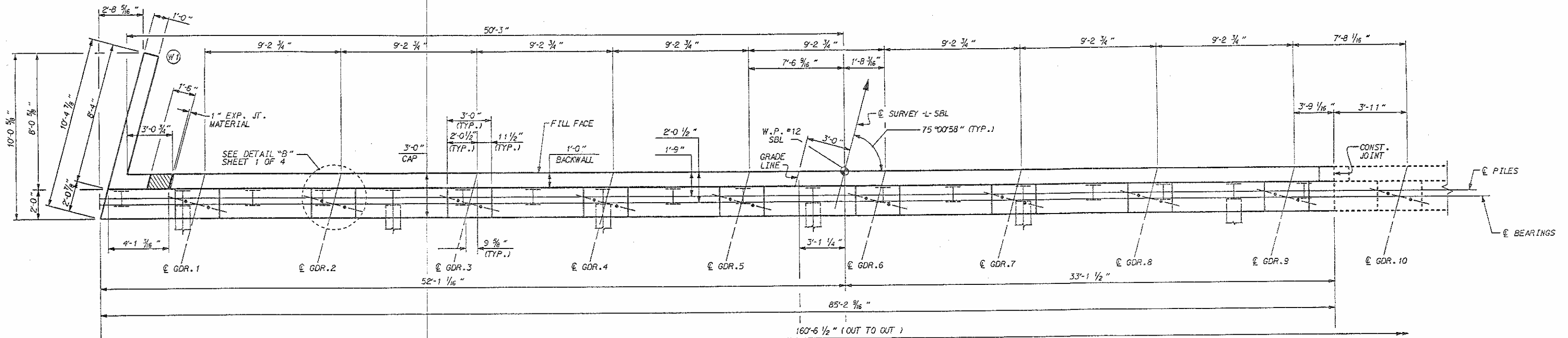
** MECHANICAL BUTT SPLIC

PART ELEVATION - STAGE I

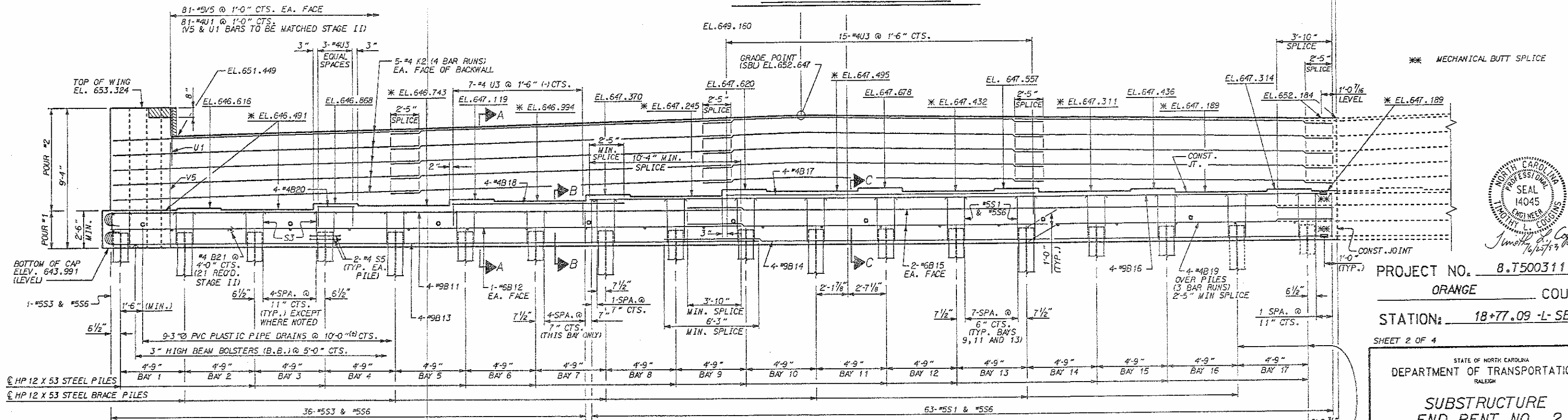
NOTE : SEE NOTE ON SHEET 2 OF 4 IN STAGE II, ABOUT PILES IN BAY 17.

DRAWN BY : D.P.DONOVAN DATE : 8-22-91
CHECKED BY : G.F. LANE DATE : 9-2-92



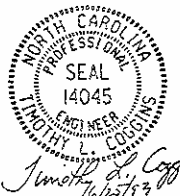


PART PLAN - STAGE II



PART ELEVATION - STAGE II

NOTE: DRIVE BAY 17 PILES
WITH STAGE I CONSTR.



PROJECT NO. 8.7500311
ORANGE COUNTY
STATION: 18+77.09 -L- SBL

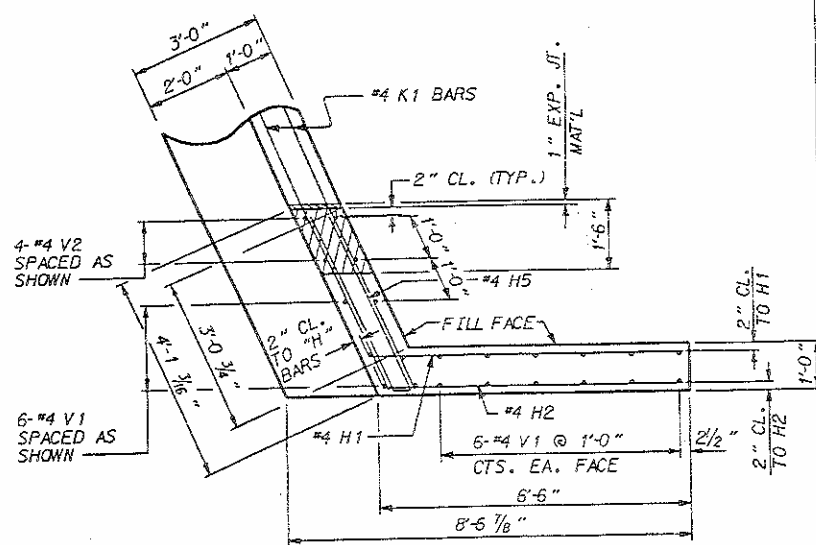
SHEET 2 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT NO. 2
STAGE II SBL

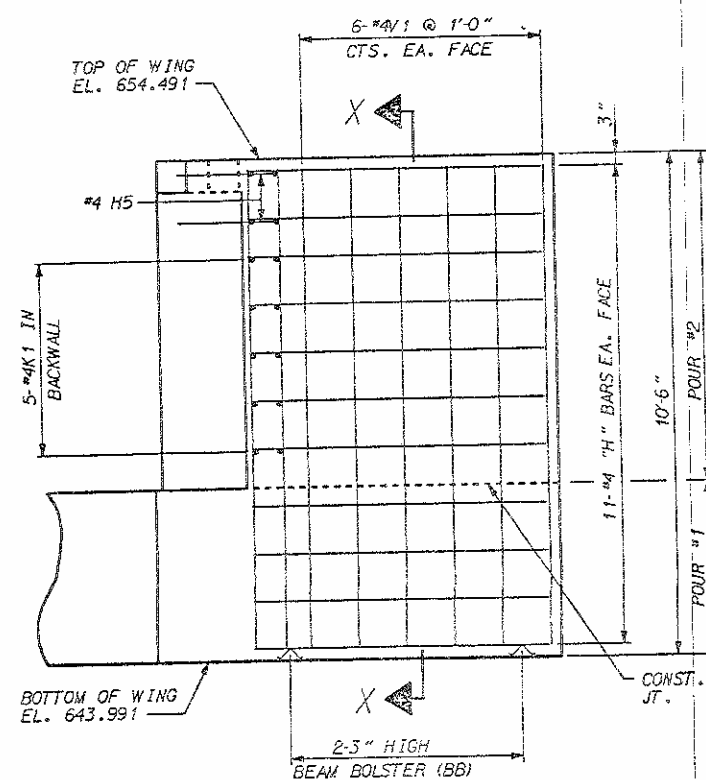
DRAWN BY: D.P. DONOVAN DATE: 8-22-91
CHECKED BY: G.F. LANE DATE: 9-2-92

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	
1			3			S-63
2			4			
						TOTAL SHEETS
						108



PLAN OF RIGHT WING (W2)

STAGE I



ELEVATION OF RIGHT WING (W2)

STAGE 1

DRAWN BY : D.P. DONOVAN DATE : 8-22-91
CHECKED BY : G.F. LANE DATE : 9-2-92

-----NOTES-----

STIRRUPS IN CAP MAY BE SHIFTED AS NECESSARY TO CLEAR ANCHOR BOLTS.

FOR EPOXY PROTECTIVE COATING, SEE SPECIAL PROVISIONS.

PIPE DRAINS MAY BE SHIFTED SLIGHTLY AS NECESSARY TO CLEAR REINFORCING STEEL AND ANCHOR BOLTS.

FOR PIPE DRAIN DETAILS, SEE END BENT SHEET 4 OF 4 .

FOR PILE SPLICE DETAILS, SEE END BENT SHEET 4 OF 4 .

BACKWALL SHALL BE PLACED BEFORE APPLYING THE EPOXY
PROTECTIVE COATING.

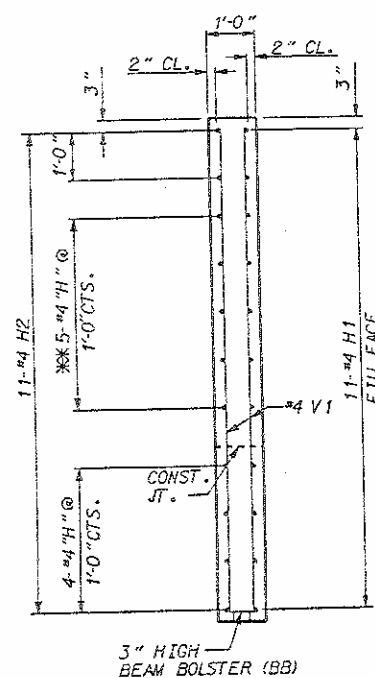
THE TOP SURFACE AREAS OF THE END BENT CAPS SHALL BE CURED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS EXCEPT THAT THE MEMBRANE CURING COMPOUND METHOD SHALL NOT BE USED.

THE TOP SURFACE OF THE END BENT CAP EXCEPT THE BRIDGE SEAT BUILDUPS SHALL BE SLOPED TRANSVERSELY FROM THE FILL FACE TO THE BACK FACE AT THE RATE OF 1/4" PER FOOT.

THE CONCRETE IN THE SHADED AREA OF THE WING SHALL BE POURED AFTER THE JOINT IN THE DECK AND THE APPROACH SLAB HAS BEEN SAWED AND THE BARRIER RAIL IS CAST IF SLIP FORMING IS USED.

STEEL PILE POINTS ARE REQUIRED FOR PILES IN END BENT #2.

FOR MECHANICAL BUTT SPLICING FOR REINFORCING STEEL.

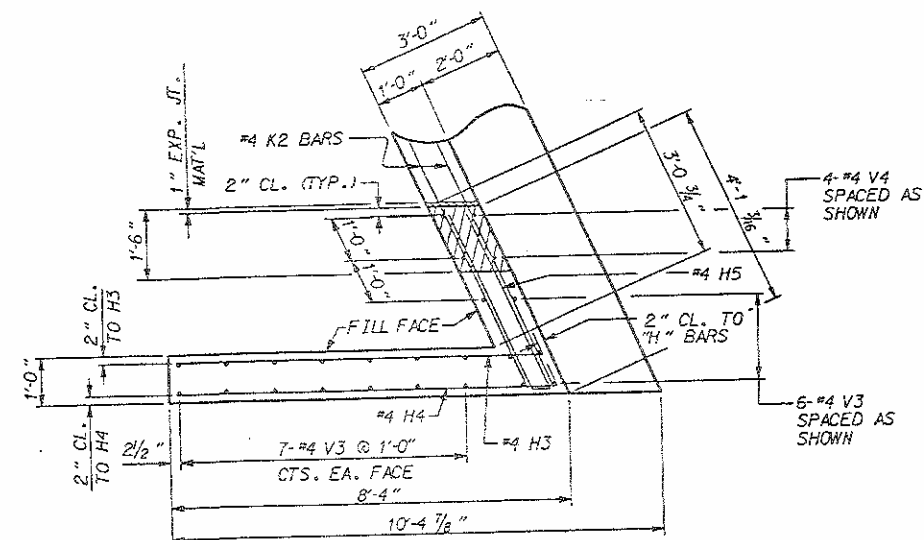


SECTION X-X

SECTION Y-Y

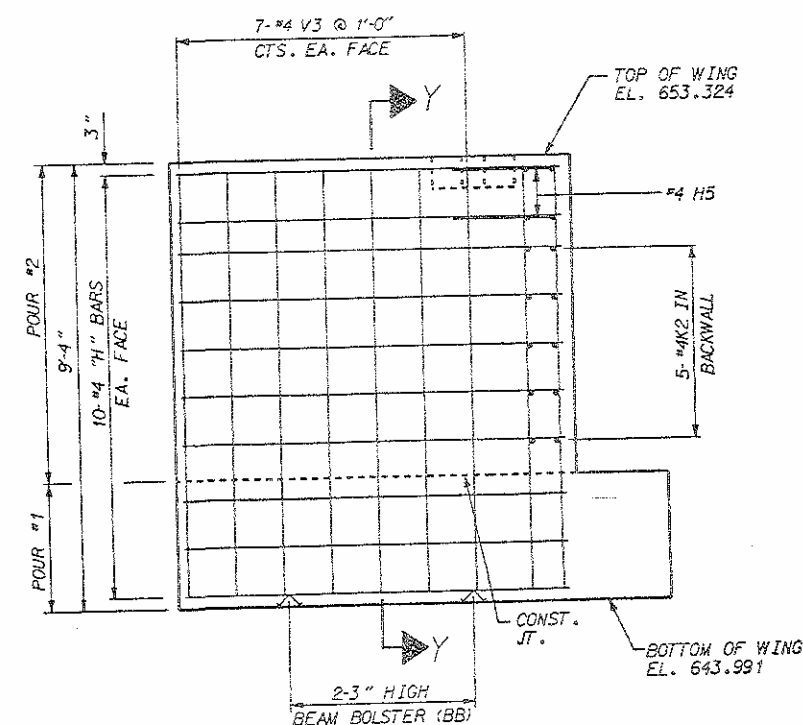
NOTES: ** MATCH THESE "H" BARS IN THE WINGS TO THE "K" BARS
IN THE BACKWALL. "K" BARS SHALL EXTEND FROM WING
TO WING.

REINFORCING STEEL IN BLOCKOUT MAY BE BENT AS NECESSARY.



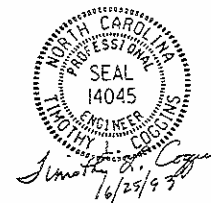
PLAN OF LEFT WING (W1)

STAGE II



ELEVATION OF LEFT WING (W1)

STAGE II



PROJECT NO. 8.7500311

ORANGE COUNTY

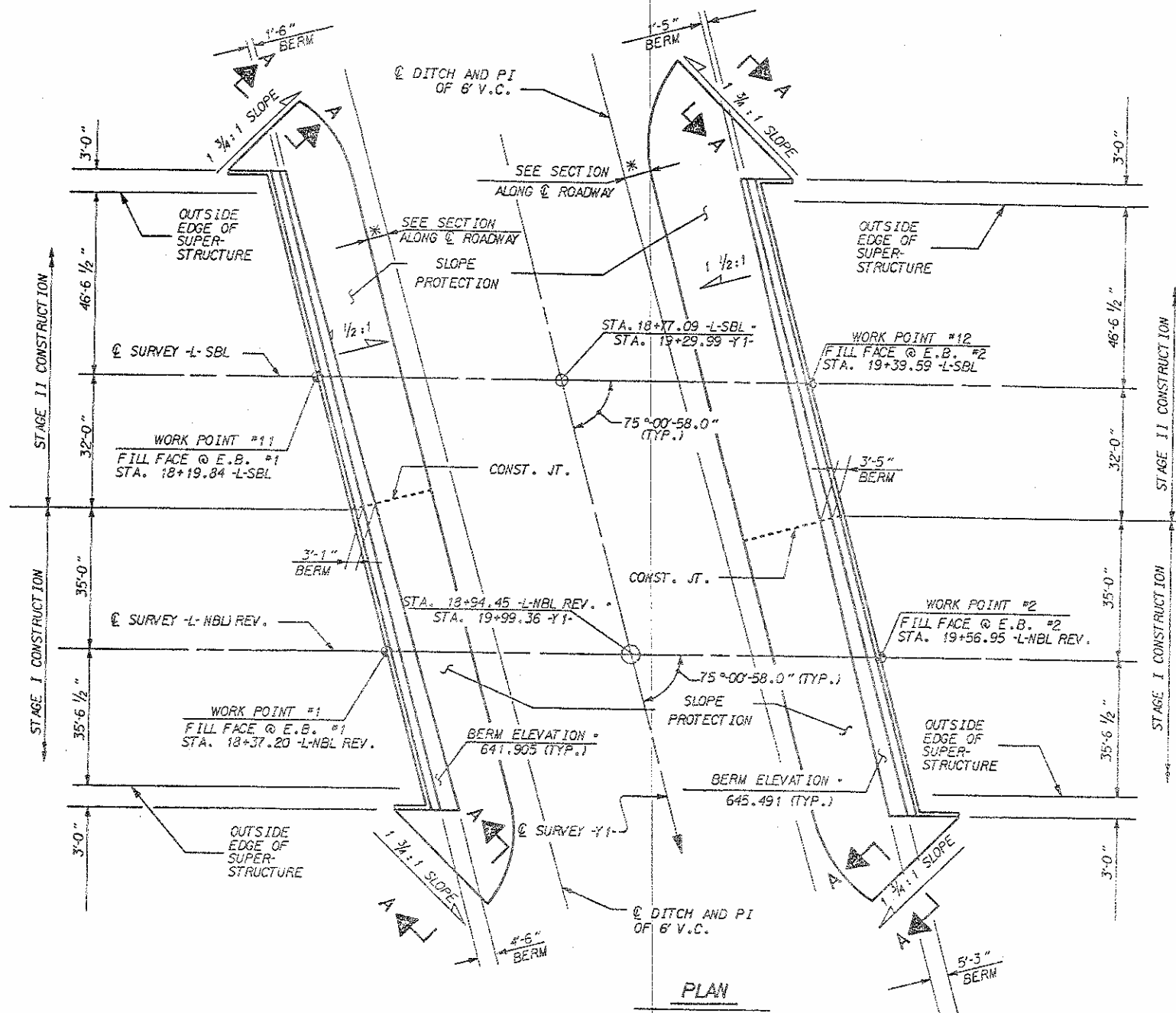
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

SHEET 3 OF 4

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUBSTRUCTURE
END BENT NO. 2

REVISIONS						SHEET NO. 5-64
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			TOTAL SHEETS 108
2			4			



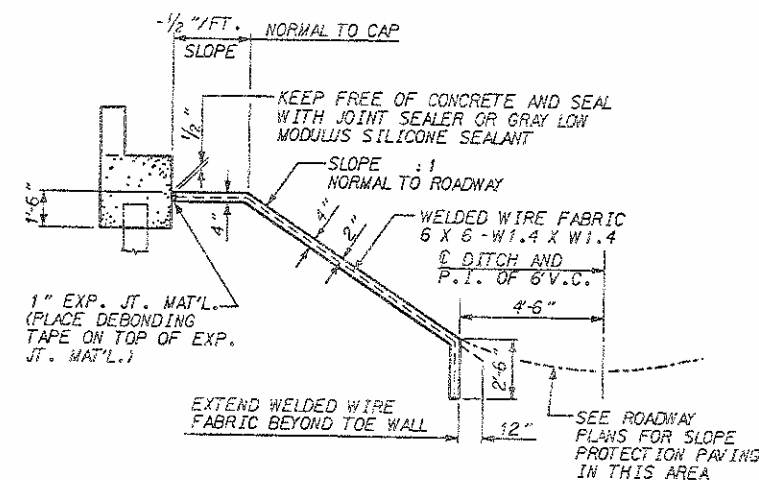
GENERAL NOTES

SLOPE PROTECTION SHALL BE PLACED UNDER THE ENDS OF THE BRIDGE AS SHOWN IN THE DETAILS. STRAIGHT EDGING WILL NOT BE REQUIRED UNLESS, IN THE OPINION OF THE ENGINEER, VISUAL INSPECTION INDICATES A NEED FOR IT. METHOD OF MEASUREMENT AND BASIS OF PAYMENT SHALL BE AS PRESCRIBED IN SECTION 462 OF THE STANDARD SPECIFICATIONS. FOR BERM WIDTH, SEE GENERAL DRAWING.

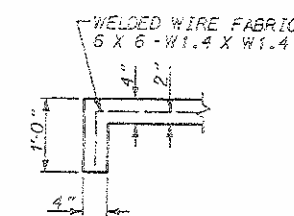
ALTERNATE "A"

ALTERNATE "A" SHALL CONSIST OF 4 INCH POURED-IN-PLACE CONCRETE PAVING AS SHOWN IN THE DETAILS ON THIS SHEET. CONCRETE SHALL BE CLASS "B". THE CONCRETE SURFACE SHALL BE FLOATED WITH A WOODEN FLOAT AND FINISHED. WELDED WIRE FABRIC REINFORCING SHALL BE 6 X 6-W1.4 X W1.4, 50 INCHES WIDE. ADJACENT RUNS OF WELDED WIRE FABRIC SHALL LAP AT LEAST SIX INCHES. SLOPE PROTECTION SHALL BE POURED IN ALTERNATE FOUR AND FIVE FOOT STRIPS AS SHOWN IN THE POURING DETAIL. THE COST OF THE WELDED WIRE FABRIC SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE BID PER SQUARE YARD FOR SLOPE PROTECTION.

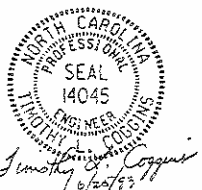
ESTIMATED QUANTITIES							
4" SLOPE PROTECTION SQ. YDS.				WELDED WIRE FABRIC 60" WIDE APPROX. LIN. FT.			
STAGE I		STAGE II		STAGE I		STAGE II	
E.BT. NO. 1	E.BT. NO. 2	E.BT. NO. 1	E.BT. NO. 2	E.BT. NO. 1	E.BT. NO. 2	E.BT. NO. 1	E.BT. NO. 2
260	330	290	370	520	560	580	740



SECTION A-A



POURING DETAIL



PROJECT NO. 8.T500311
 ORANGE COUNTY
 STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 Raleigh

STANDARD SLOPE PROTECTION DETAILS

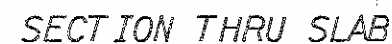
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	DATE:	TOTAL SHEETS
1			3		108
2			4		

STD. NO. SP1

REDRAWN 8-28-1992

ASSEMBLED BY: <u>D.A. PARKER</u>	DATE: <u>4/15/93</u>	SPECIAL
CHECKED BY: <u>J.R. DUGGINS</u>	DATE: <u>4-15-93</u>	
DRAWN BY: <u>E.L. ROSE</u>	DATE: <u>5/12/92</u>	STANDARD
CHECKED BY: <u>G.R. PERFETTI</u>	DATE: <u>5/8/92</u>	

CONCRETE MEDIAN BARRIER ON APPROACH SLABS SHALL NOT BE CAST UNTIL ALL CONCRETE IN APPROACH SLAB HAS BEEN CAST AND REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.



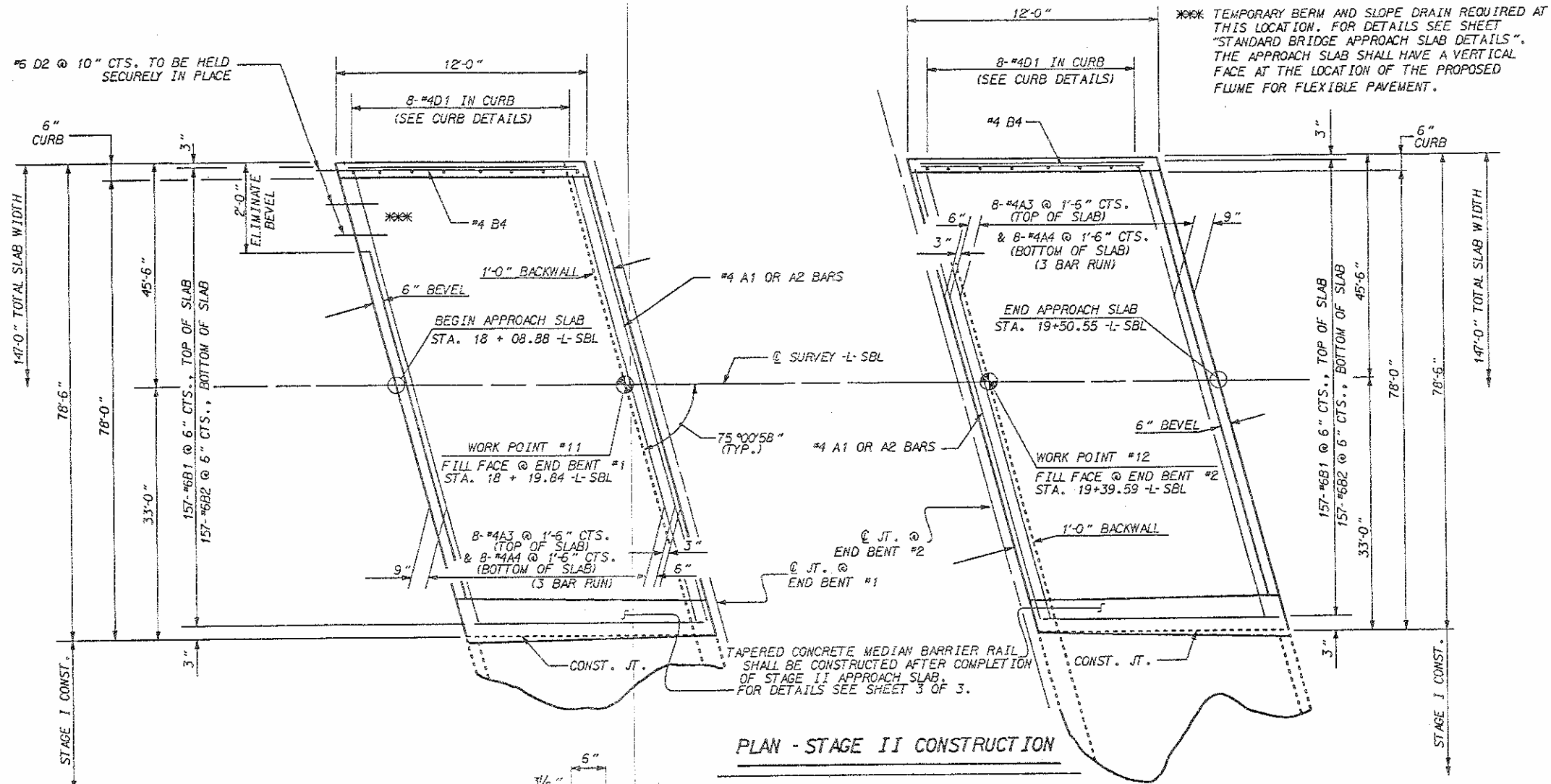
Timothy L. Cozzino
 4/2/03
 NORTH CAROLINA
 PROFESSIONAL
 SEAL
 14045
 EASTERN
 TIMOTHY COZZINO

STD. NO. BAS2

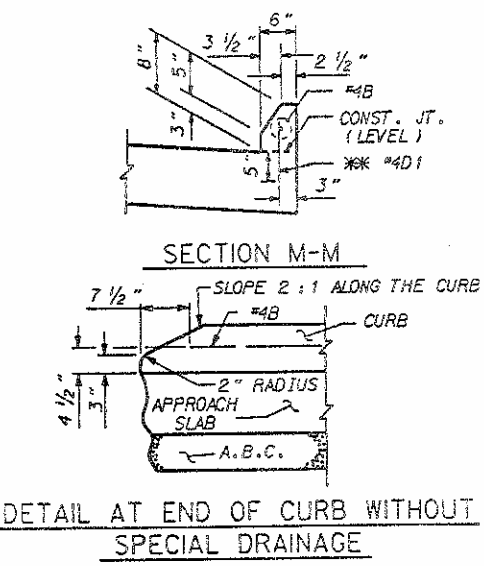
REVISED 8/22/89 by: FCJ Jby: CRK
REVISED 12/1/88 by: FCJ J by: BEW
REDRAWN 2/29/88

DARKER

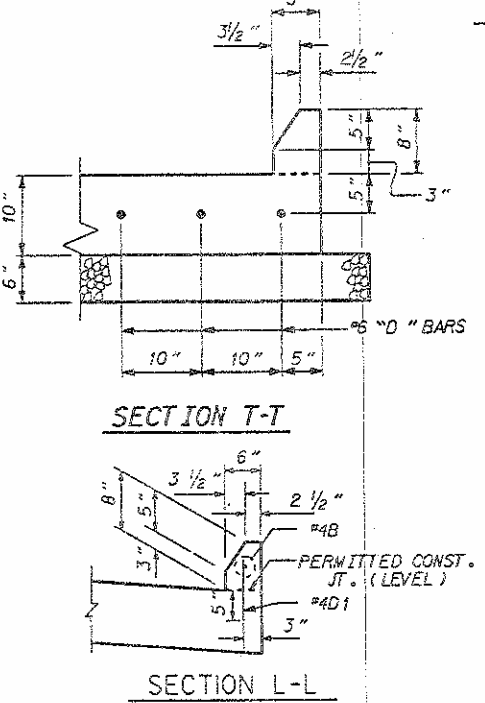
REVISED 8/28/92 BY: EJR / D: GSH
REVISED 10/1/93 BY: ARB / D: BSH
REVISED 3/1/95 BY: WJH / D: CK
REVISED 8/22/99 BY: FJ / D: LK
REVISED 12/1/99 BY: FJ / D: BEW
REDRAWN 2/29/98



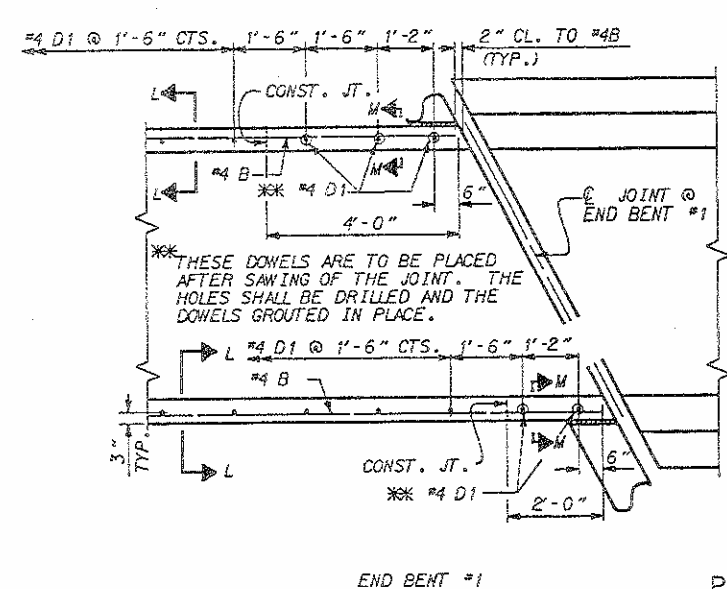
PLAN - STAGE II CONSTRUCTION



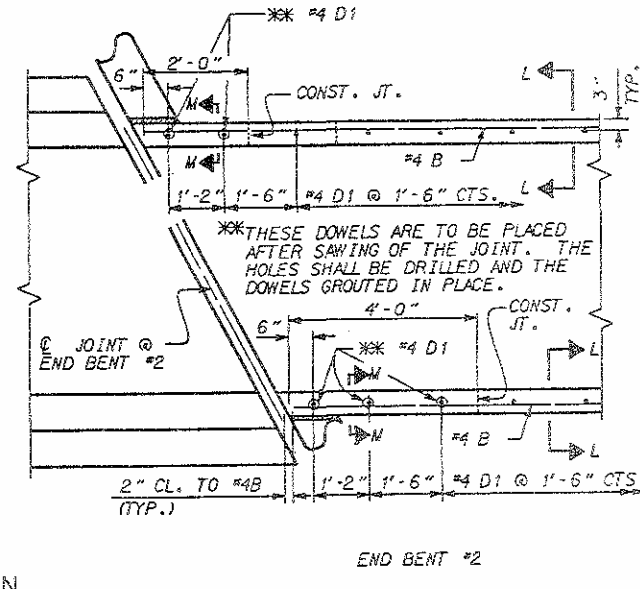
DETAIL AT END OF CURB WITHOUT SPECIAL DRAINAGE



CURB DETAILS



END BENT #1

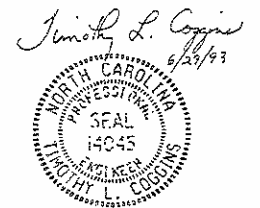


END BENT #2

*** TEMPORARY BERM AND SLOPE DRAIN REQUIRED AT THIS LOCATION. FOR DETAILS SEE SHEET "STANDARD BRIDGE APPROACH SLAB DETAILS". THE APPROACH SLAB SHALL HAVE A VERTICAL FACE AT THE LOCATION OF THE PROPOSED FLUME FOR FLEXIBLE PAVEMENT.

BILL OF MATERIAL

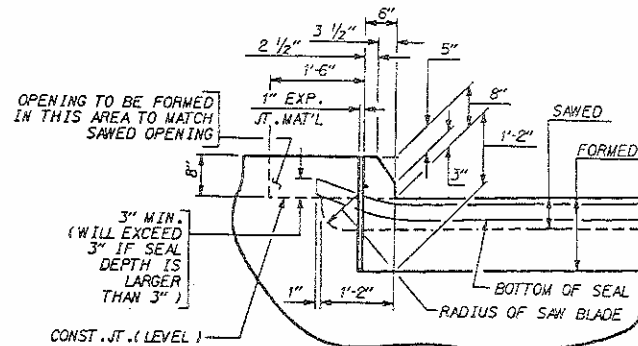
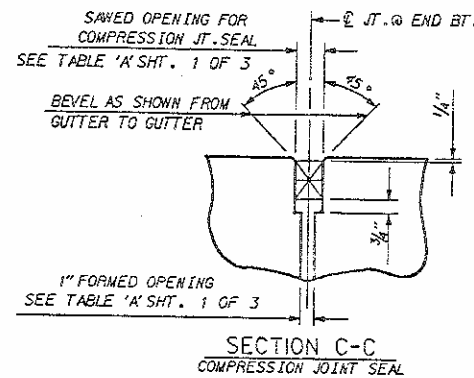
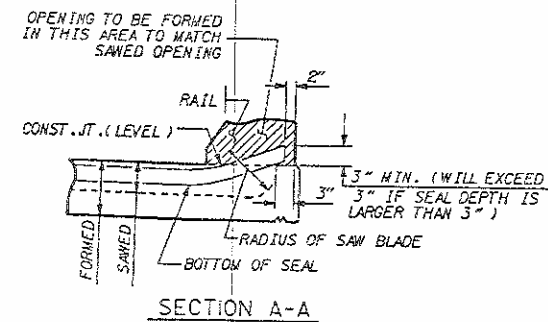
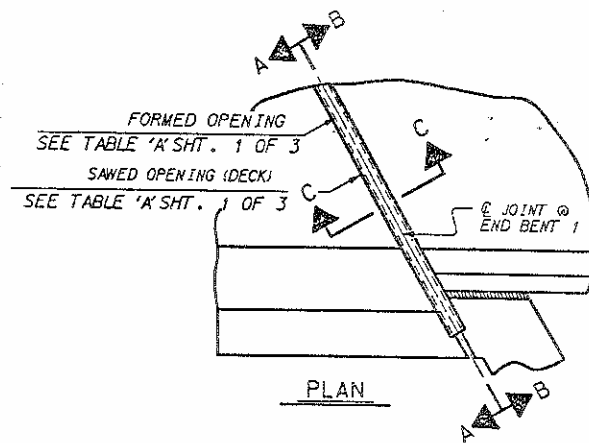
STAGE I - END BENT #1						STAGE I - END BENT #2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A1	27	4	STR.	25'-1"	452	* A1	27	4	STR.	25'-1"	452
A2	27	4	STR.	24'-10"	448	A2	27	4	STR.	24'-10"	448
* B1	137	6	STR.	11'-1"	2281	* B1	137	6	STR.	11'-1"	2281
B2	137	6	STR.	11'-7"	2384	B2	137	6	STR.	11'-7"	2384
* B4	1	4	STR.	10'-8"	7	* B4	1	4	STR.	10'-8"	7
* D1	8	4	STR.	0'-10"	5	* D1	8	4	STR.	0'-10"	5
REINFORCING STEEL						REINFORCING STEEL					
EPOXY COATED						EPOXY COATED					
REINFORCING STEEL						REINFORCING STEEL					
CLASS "AA" CONCRETE						CLASS "AA" CONCRETE					
* THESE BARS ARE EPOXY COATED						* THESE BARS ARE EPOXY COATED					
STAGE II - END BENT #1						STAGE II - END BENT #2					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* A3	27	4	STR.	27'-11"	504	* A3	27	4	STR.	27'-11"	504
A4	27	4	STR.	27'-9"	501	A4	27	4	STR.	27'-9"	501
* B1	157	6	STR.	11'-1"	2614	* B1	157	6	STR.	11'-1"	2614
B2	157	6	STR.	11'-7"	2732	B2	157	6	STR.	11'-7"	2732
* B4	1	4	STR.	10'-8"	7	* B4	1	4	STR.	10'-8"	7
* D1	8	4	STR.	0'-10"	5	* D1	8	4	STR.	0'-10"	5
* D2	3	6	STR.	1'-6"	7						
REINFORCING STEEL						REINFORCING STEEL					
EPOXY COATED						EPOXY COATED					
REINFORCING STEEL						REINFORCING STEEL					
CLASS "AA" CONCRETE						CLASS "AA" CONCRETE					
* THESE BARS ARE EPOXY COATED						* THESE BARS ARE EPOXY COATED					



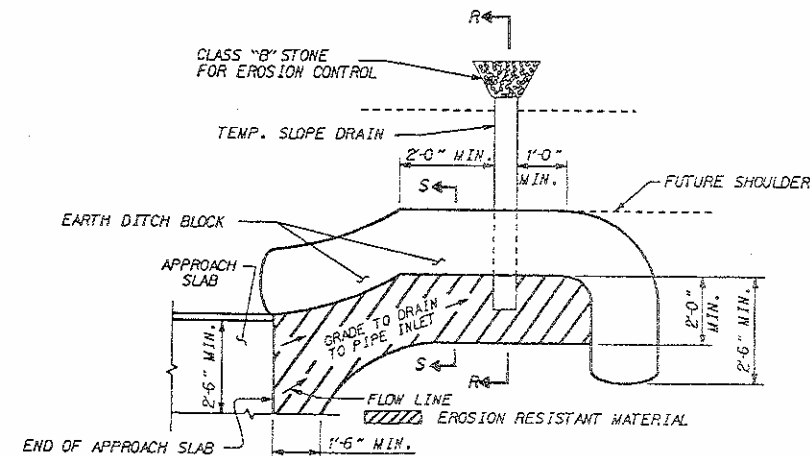
PROJECT NO. 8.T500311
ORANGE COUNTY
STATION: 18+77.09 -L- SBL
SHT. 2 OF 3

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			5-68
2			4			TOTAL SHEETS 108

STD. NO. BAS2

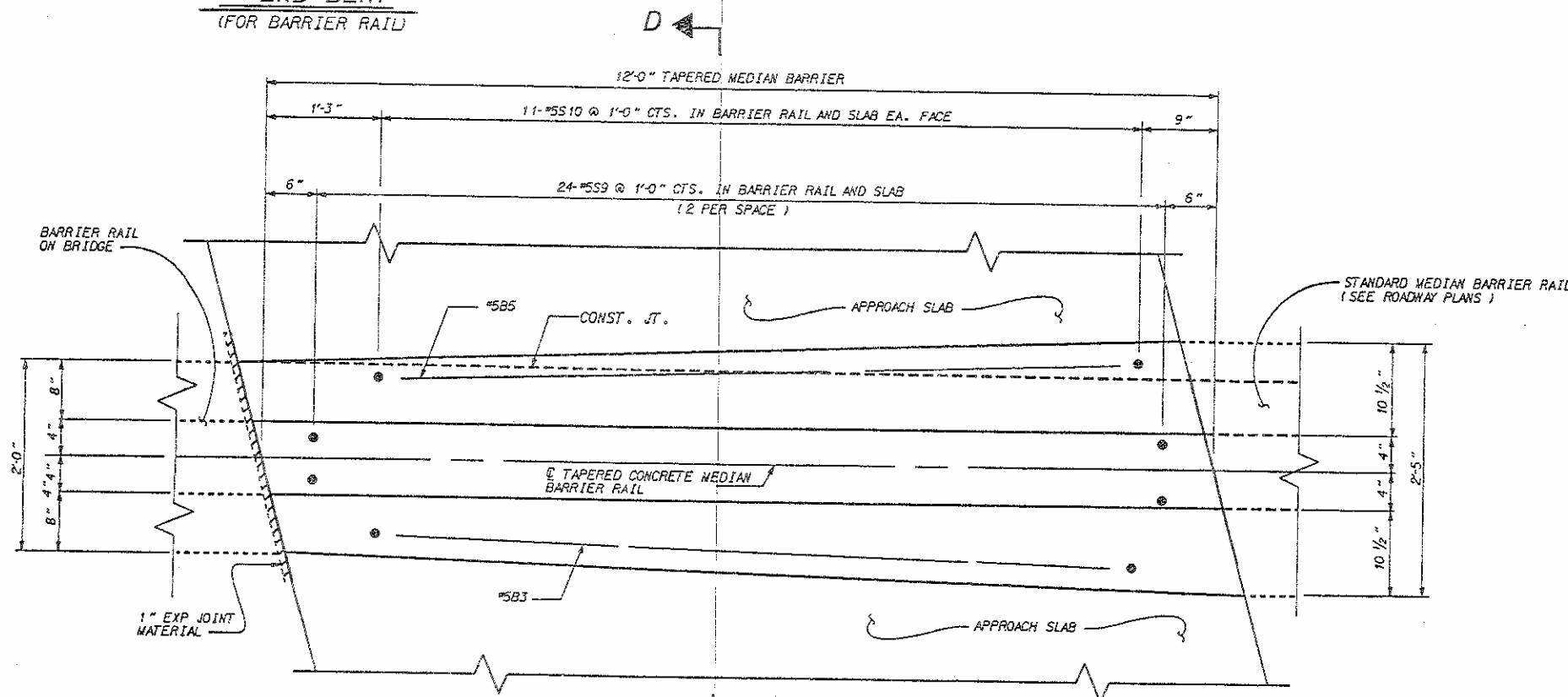
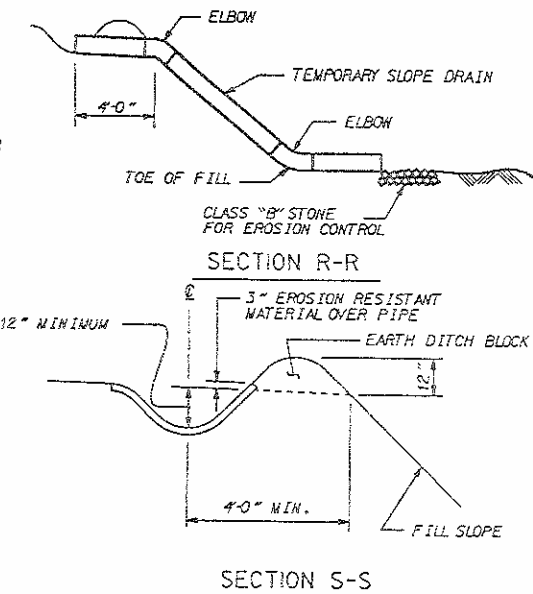


SECTION B-B
JOINT SEAL DETAILS
@ END BENT
(FOR BARRIER RAIL)

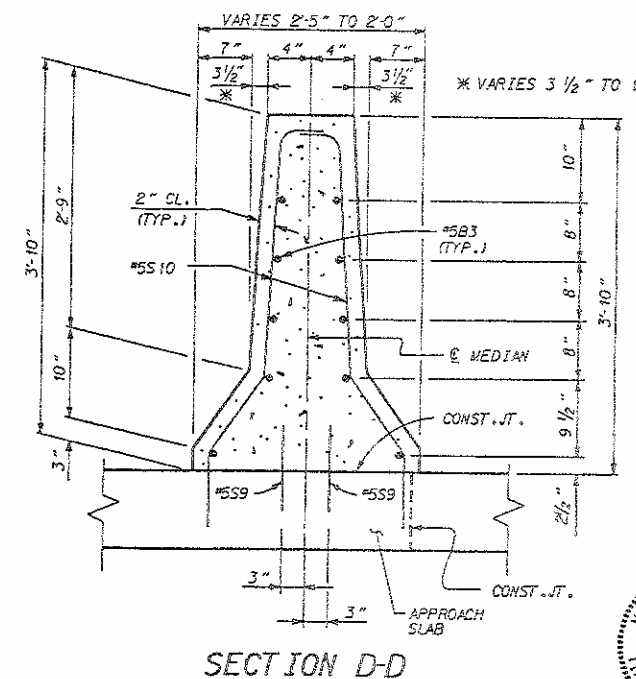


NOTE: IMMEDIATELY AFTER THE CONSTRUCTION OF THE APPROACH SLAB, THE CONTRACTOR SHALL PROVIDE TEMPORARY BERM AND SLOPE DRAIN. CONTRACTOR SHALL GRADE TO PIPE INLET AND PROVIDE EROSION RESISTANT MATERIAL AS SHOWN. THE EROSION RESISTANT MATERIAL SHALL BE EITHER 1) BITUMINOUS PLANT MIX, TYPE 1 OR TYPE 2, MIN. 2" DEPTH; 2) EROSION CONTROL MAT, OR 3) CONCRETE, AS DIRECTED BY THE ENGINEER. THE SLOPE DRAIN SHALL CONSIST OF A NON-PERFORATED TEMPORARY DRAINAGE PIPE, 12 INCHES IN DIAMETER.

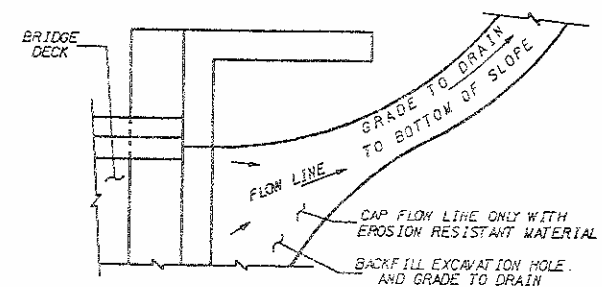
PLAN VIEW
TEMPORARY BERM AND SLOPE DRAIN DETAILS



TAPERED CONCRETE MEDIAN BARRIER RAIL
ON APPROACH SLAB
END BENT #1 SHOWN - END BENT #2 SIMILAR



CONCRETE MEDIAN BARRIER ON APPROACH SLABS IS INCLUDED IN STAGE III BILL OF MATERIAL FOR CONCRETE MEDIAN BARRIER, SEE SHEET S-55.



NOTE: IF THE APPROACH SLAB IS NOT CONSTRUCTED IMMEDIATELY AFTER THE BACKFILLING OF THE END BENT EXCAVATION, GRADE TO DRAIN TO THE BOTTOM OF THE SLOPE AND PROVIDE EROSION RESISTANT MATERIAL, SUCH AS FIBERGLASS PROVING OR AS DIRECTED BY THE ENGINEER TO PREVENT SOIL EROSION AND TO PROTECT THE AREA ADJACENT TO THE STRUCTURE. THE CONTRACTOR WILL BE REQUIRED TO REMOVE THESE MATERIALS PRIOR TO CONSTRUCTION OF THE APPROACH SLAB.

TEMPORARY DRAINAGE DETAIL

PROJECT NO. B.T500311
ORANGE COUNTY
STATION: 18+94.45 -L- NBL REV.
18+77.09 -L- SBL

SHT. 3 OF 3

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALPH					
STANDARD BRIDGE APPROACH SLAB DETAILS					
DECEMBER 1988					
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		
					SHEET NO. S-69
					TOTAL SHEETS 108

STD. NO. 8453

REVISED 8/28/89 BY: ELR, J. BY: GJP
REVISED 3/15/91 BY: ELR, J. BY: GJP
REVISED 3/1/90 BY: ELR, J. BY: GJP
REVISED 8/28/88 BY: ELR, J. BY: GJP
REVISED 3/1/88 BY: ELR, J. BY: GJP
REVISED 12/1/88 BY: ELR, J. BY: GJP

ASSEMBLED BY: <u>D.A. PARKER</u>	DATE: <u>3/26/93</u>	SPECIAL
CHECKED BY: <u>J.R. DUGGINS</u>	DATE: <u>4/7/93</u>	
DRAWN BY: <u>F.C. JONES</u>	DATE: <u>1/28/88</u>	STANDARD
CHECKED BY: <u>A.R. BISSETTE</u>	DATE: <u>1/28/88</u>	