FED. ROAD DIV. NO.	STATE	PROJ.
4	N. C.	8.232636
F. A. PROJECT	M-5369(3)	

+2.0% -4.4%
PI = 22+50
EL = 244.00
VC = 600'

SPAN 'A' SPAN 'B' SPAN 'C' SPAN 'D'

BEGIN BRIDGE
STA. 21+82.34
CR EL. 239.768

FIX EXP. EXP. FIX EXP. FIX

1'-0" MIN. BERM NORMAL TO CAP.

SLOPE 2:1 NORMAL TO CAP.

EL. 215.0±

FILL

17'-7" MIN. VERT. CL.

EL. 214.0±

16'-11" MIN. VERT. CL.

EL. 219.0±

SLOPE 2:1 NORMAL TO CAP.

FILL

END BRIDGE
STA. 24+44.57
CR EL. = 234.846

TOP OF FTGS = EL. 211.558

TOP OF FTGS = EL. 214.037

TOP OF FTGS = EL. 208.775

END BENT No. 1 BENT No. 1 BENT No. 2 END BENT No. 2

SECTION ALONG ℄ BRIDGE
(BENTS ALONG SECTION 'A-A')

℄ BRACE PILES
℄ CAP & PILES
1:9"
F.F. @ E.BT. No. 1
3-SPA. @ 9'-1.6" = 28'-9"
4-1¼"ø
8'-1¼"
6"ø
9'-11"
8'-3"
5'-0"
4'-11"
8'-3"
9'-11"
10'-0"
3-SPA @ 9'-1.6" = 28'-9"
1:9"
TO SKIBO
N
℄ BENT No. 1
6'-0" VG
4'-3"
30'-0" MIN. HORIZ. CL.
24'-0" PAVEMENT
4'-0"
32'-5" MIN. HORIZ. CL.
34'-0"
16'-0"
10'-0"
7'-9"
10'-1½"
5'-3"
2°-30' L.H. CURVE
PAVED SHOULDER
S.B.L.
34.7317' ARC
99.4140' ARC

269+51.05-L- P.O.C.
23+16.49-Y REV. P.O.C.
N.B.L.
PAVED SHOULDER
37.5' MIN. HORIZ.
TANG. TO CURVE
66°-01'-00"
8'-0" VG
4'-0"
9'-0"
24'-0" PAVEMENT
10'-0"
6'-0"
34'-0"
5'-6"
5'-6"
℄ BENT No. 2
LINE -L- 1° R.H. CURVE
97.8968' ARC

BENT NO. 3
℄ BRACE PILES
1:9"
℄ CAP & PILES
4-1¼"ø
8'-3"
9'-11"
A" CONCRETE SLOPE PROTECTION
3-SPA. @ 9'-0" CTS. = 25'-0"
5'-0"
4'-11"
8'-3"
9'-11"
8'-3"
5'-0"
4'-11"
8'-3"
9'-11"
8'-3"
3-SPA @ 9'-0" CTS. = 25'-0"
F.F. @ E. BT. No. 1
A
TO DOWNTOWN FAYETTEVILLE
1:3"
30'-0" MIN. HORIZ. CL.
℄ BENT No. 3
30.1828' ARC

LENGTH OF BRIDGE FLOOR = 762.2753'
ALONG ARC, FILL FACE TO FILL FACE

PLAN

℄ CAP & FTG.
BATTER 1/2:1/2
6-1'-6" SPA @ 1'-4½" = 7'-6"
BATTER 1/2:1/2
1'-4½" 2'-9" 2'-9" 1'-4½"

TYP. FOOTING @ BENT #1 & #3

℄ CAP & FTG.
BATTER 1/2:1/2
BATTER 1/2:1/2
1'-4½" 2'-2" 2'-2" 1'-4½"

TYP. FOOTING @ BENT #2

DRAWN BY W.N. GOODWIN DATE JUNE 72
CHECKED BY J.L. Lutz DATE 6-7-72

PROJECT NO. 8.232
CUMBERLAND (
STATION: 269+51.05
23+16.49
SHEET 1 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMI
RALEIGH
GENERAL DRAWING
FOR BRIDGE OVER OWEN DRI
EXPRESSWAY ON CLIFFDALE
ROAD BETWEEN SKIBO AND
DOWNTOWN FAYETTEVILLE
JUNE 1972

REVISIONS						S
NO.	BY	DATE	NO.	BY	DATE	TOTAL SHEETS
1			3			124
2			4			

FED. ROAD SRL. NO.	STATE
4	N. C.
F. A. PROJECT	M-

NOTES

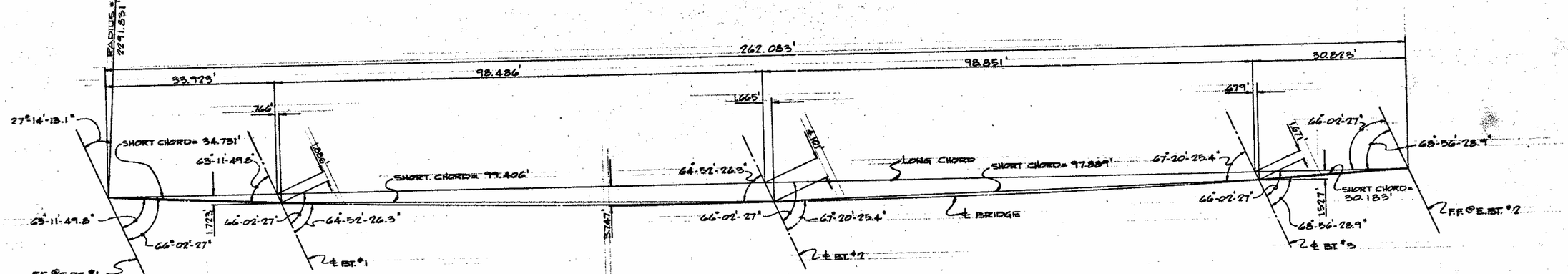
ASSUMED LIVE LOAD EQUALS HS20-44 OR ALTERNATE LOADING.
FOR OTHER DESIGN DATA AND GENERAL NOTE, SEE SHEET S-N.
ALL PILES TO BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 30 TONS EACH.
PILES FOR END BENT NO. 2 TO BE DRIVEN THROUGH THE ROADWAY FILL.

THE ROADWAY CONTRACTOR WILL BE REQUIRED TO REMOVE THE EXISTING PAVEMENT AND SCARIFY THE ROADBED TO A MINIMUM DEPTH OF 2'-0" WITHIN THE AREA OF END BENT PILES.

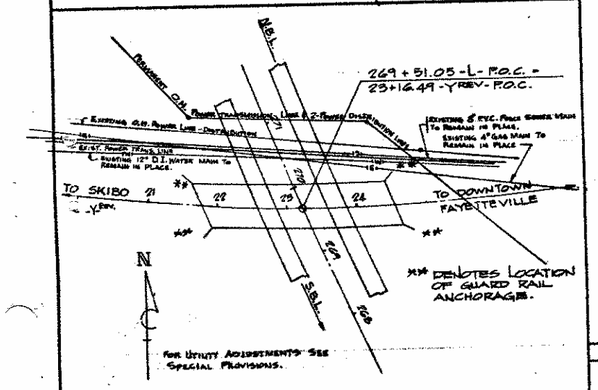
STRUCTURAL STEEL FOR THIS PROJECT SHALL BE PAINTED IN ACCORDANCE WITH PAINT SYSTEM 4. SEE SPECIAL PROVISIONS.

FOR CHARPY V-NOTCH TEST REQUIREMENTS, SEE SPECIAL PROVISIONS.

FOR HIGH STRENGTH GALVANIZED BOLTS SEE SPECIAL PROVISIONS.



LONG CHORD LAYOUT



LOCATION SKETCH

B.M. #12: R.R. SPIKE IN BASE 24" GUM, 155' LT. STA. 270+55-L-P.O.C. ELEV. 206.52.

TOTAL BILL OF MATERIAL

	CLASS "AA" CONCRETE CU. YDS.	CLASS "A" CONCRETE CU. YDS.	REINF'G. STEEL LBS.	STRUCT'L. STEEL APPROX. LBS.	3-BAR METAL RAIL LIN. FT.	12" PRESTR. CONCRETE PILES NO.	12" PRESTR. CONCRETE PILES LIN. FT.	LINSEED OIL CONCRETE PROTECTION GALLONS	4" SLOPE PROTECTION SQUARE YDS.	FOUNDATION EXCAVATION CU. YDS.	APPROACH SLABS LUMP SUM	HP12x53 STEEL PILES NO.	HP12x53 STEEL PILES LIN. FT.
SUPERSTRUCTURE	516.9		109,242	445,700	512.08			39					
END BENT NO. 1		31.4	6,397			28	1260		455	140	L.S.	13	845
BENT NO. 1		67.6	11,234			40	1680			110			
BENT NO. 2		89.5	13,414			28	1260			140			
BENT NO. 3		65.1	11,021						410		L.S.	12	840
END BENT NO. 2		27.7	5,618										
CURVED END BLOCKS	0.8		85										
TOTAL	517.7	281.3	157,011	445,700	512.08	96	4200	39	865	390	L.S.	25	1685

DRAWN BY W.N. GOODWIN DATE NOV. 72
CHECKED BY J.C. Lasso DATE Oct 1972

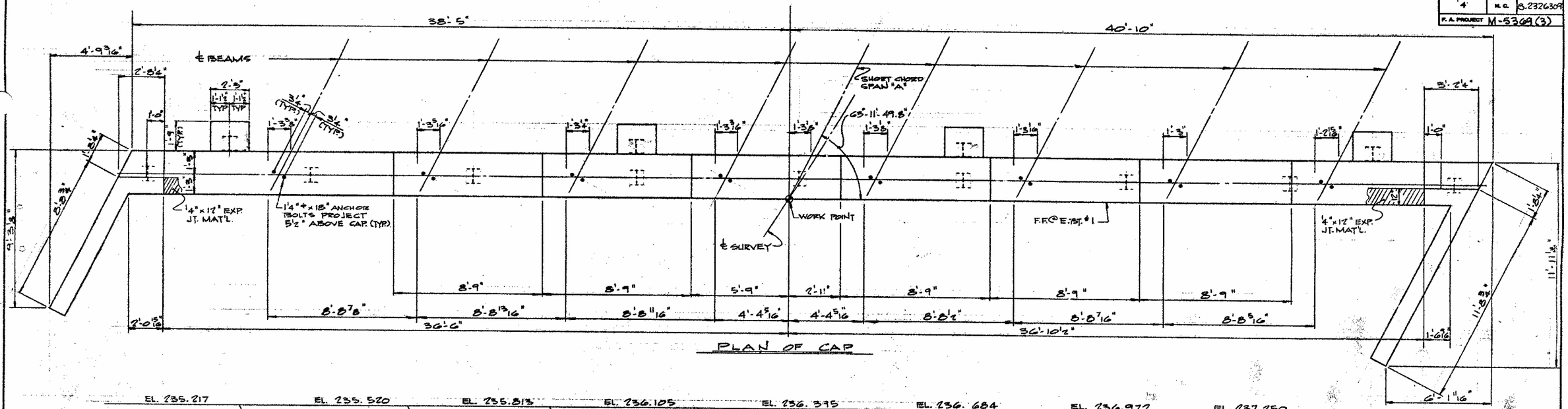
PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05
SHEET 2 OF 2

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
GENERAL DRAWING

NOVEMBER 1972

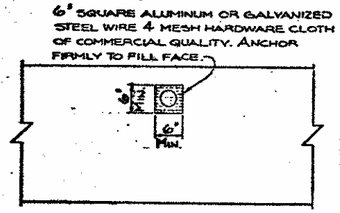
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	B-2326309
F. A. PROJECT	M-5309(3)	

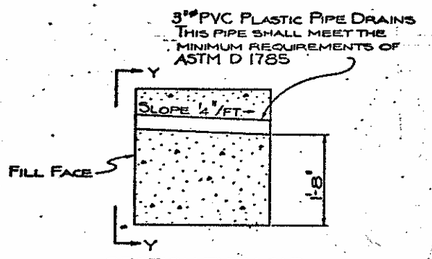


ELEVATION

NOTE: FOR PILE SPLICE DETAIL, SEE B. BT. #2.



VIEW Y-Y



SECTION THRU CAP

PIPE DRAIN DETAILS

NOTE: NO SEPARATE PAYMENT WILL BE MADE FOR FURNISHING AND INSTALLING THE PVC PLASTIC PIPE DRAINS, HARDWARE CLOTH AND FASTENERS. THE ENTIRE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT CONTRACT PRICE BID FOR THE SEVERAL PAY ITEMS.
NOTE: PIPE DRAINS MAY BE SHIFTED FROM POSITIONS SHOWN TO CLEAR REINFORCING STEEL AND ANCHOR BOLTS.

DRAWN BY W.N. GODWIN DATE AUG. 72
CHECKED BY [signature] DATE OCT 72

PROJECT NO. B-2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

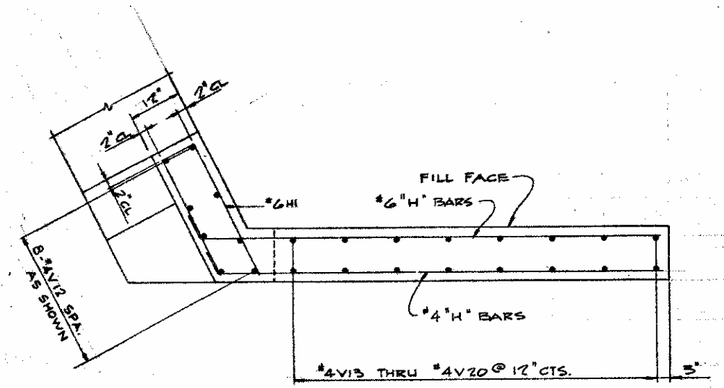
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUBSTRUCTURE
END BENT NO. 1

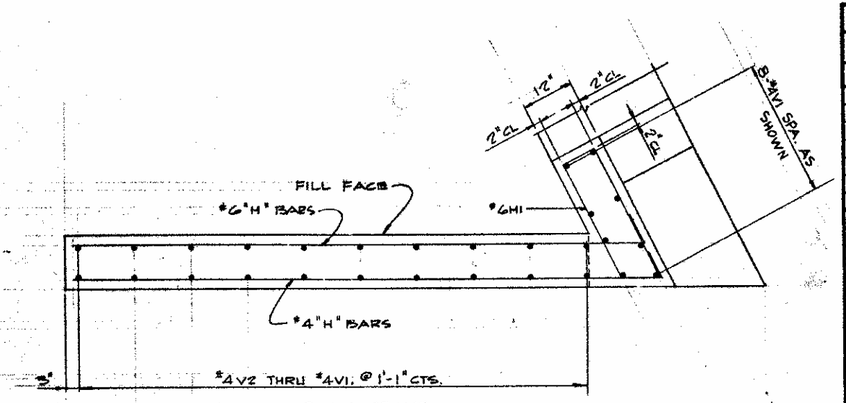
AUGUST 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-5
1			3			TOTAL SHEETS
2			4			124

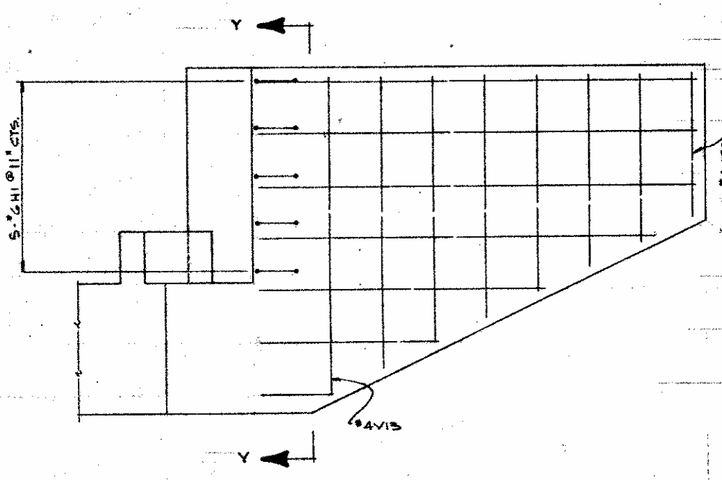
FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N.C.	8.2326309
F. A. PROJECT	M-5369(3)	



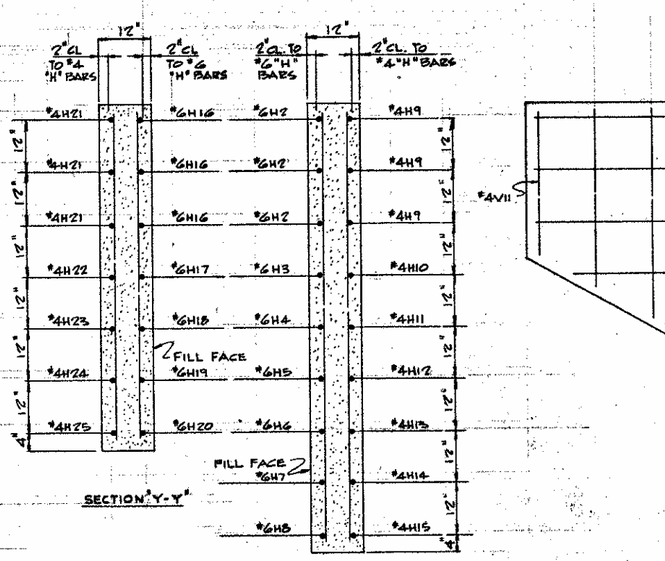
PLAN OF W1



PLAN OF W2

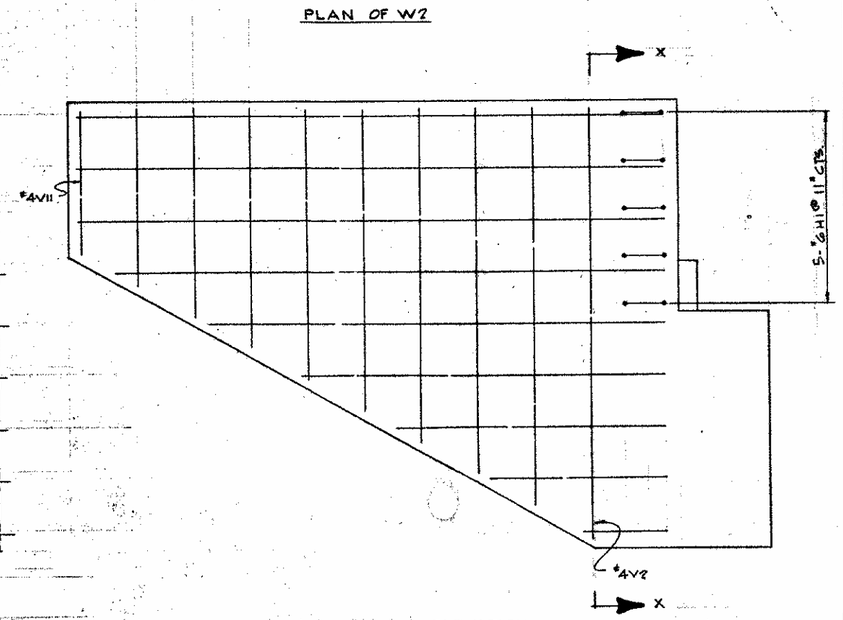


ELEVATION

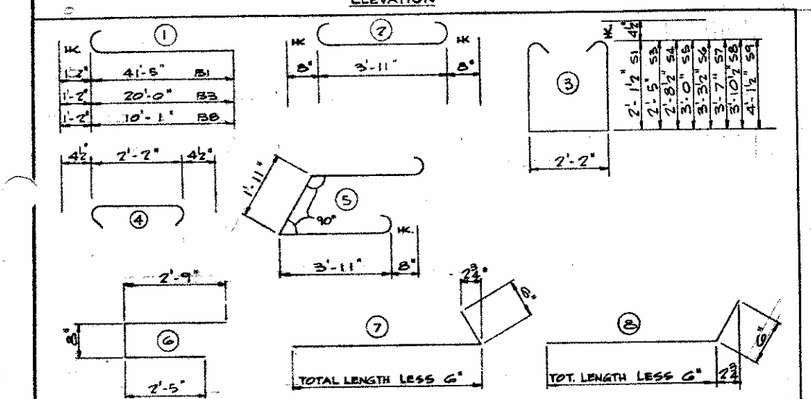


SECTION "Y-Y"

SECTION "X-X"

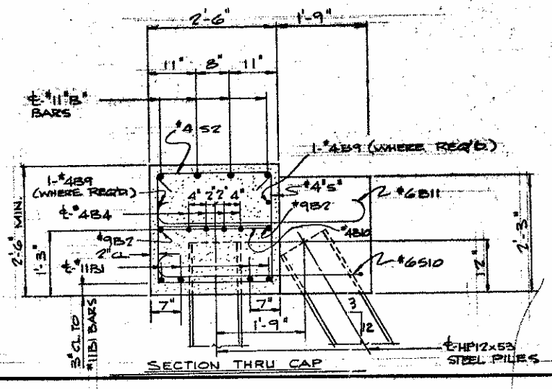


ELEVATION



BAR TYPES

ALL DIMENSIONS ARE OUT TO OUT.



SECTION THRU CAP

DRAWN BY: W.N. GOODWIN DATE: AUG. '72

CHECKED BY: DATE: OCT. '72

DRAWING 19064

BILL OF MATERIAL (CONTINUED)

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
V1	8	#4	STR	8'-3	44
V2	2	"	"	8'-2	11
V3	"	"	"	7'-8	10
V4	"	"	"	7'-0	9
V5	"	"	"	6'-5	9
V6	"	"	"	5'-10	8
V7	"	"	"	5'-3	7
V8	"	"	"	4'-7	6
V9	"	"	"	4'-0	5
V10	"	"	"	3'-4	4
V11	2	"	"	2'-9	4
V12	8	"	"	6'-4	34
V13	2	"	"	6'-1	8
V14	"	"	"	5'-7	8
V15	"	"	"	5'-1	7
V16	"	"	"	4'-8	6
V17	"	"	"	4'-2	6
V18	2	#4	STR	3'-9	5
V19	2	#4	STR	3'-3	4
V20	2	#4	STR	2'-9	4

REINFORCING STEEL - LBS. - 6297

CLASS "A" CONCRETE - CUYDS. - 31.4

HP12x53 STEEL PILES

NO. - 13 - LIN. FT. - 845

BILL OF MATERIAL

FOR END BENT NO. 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	8	#11	1	42'-7	1810
B2	4	#9	STR	41'-0	558
B3	4	#11	1	21'-3	450
B4	12	#4	STR	27'-3	218
B5	12	#11	STR	12'-3	781
B6	8	#11	STR	14'-5	613
B7	4	#11	STR	15'-9	669
B8	4	#11	1	11'-3	239
B9	4	#4	STR	20'-5	55
B10	18	#4	STR	2'-2	26
B11	12	#6	2	5'-3	95
H1	10	#6	6	5'-10	88
H2	3	"	7	11'-5	51
H3	1	"	"	10'-8	16
H4	1	"	"	8'-11	13
H5	1	"	"	7'-2	11
H6	1	"	"	5'-4	8
H7	1	"	"	3'-7	5
H8	1	#6	"	1'-9	3
H9	3	#4	"	11'-9	24
H10	1	"	"	11'-0	7
H11	1	"	"	9'-3	6
H12	1	"	"	7'-6	5
H13	1	"	"	5'-8	4
H14	1	"	"	3'-11	3
H15	1	#4	7	2'-1	1
H16	3	#6	2	9'-4	42
H17	1	"	"	8'-6	13
H18	1	"	"	6'-5	10
H19	1	"	"	4'-4	7
H20	1	#6	"	2'-3	3
H21	3	#4	"	9'-0	18
H22	1	"	"	8'-3	6
H23	1	"	"	6'-0	4
H24	1	"	"	3'-11	3
H25	1	#4	8	1'-11	1
S1	12	#4	3	7'-2	57
S2	58	"	4	2'-11	113
S3	6	"	3	7'-9	31
S4	6	"	"	8'-4	33
S5	7	"	"	8'-11	42
S6	6	"	"	9'-6	38
S7	6	"	"	10'-1	40
S8	7	"	"	10'-8	50
S9	8	#4	3	11'-2	60
S10	4	#6	5	11'-1	67

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

RALEIGH

SUBSTRUCTURE

END BENT NO. 1

AUGUST 1972

REVISIONS						SHEET NO.
NO.	BY.	DATE	NO.	BY	DATE	S-6
1			3			TOTAL SHEETS
2			4			124

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	

℄ BEAMS SPAN "B"

32'-4½"

8'-8" | 8'-8" | 6'-4⅝" | 2'-3⅞" | 8'-8" | 8'-8" | 8'-8" | 8'-8"

32'-3½"

9⅛" | 9" | 8½° | 8¹⁵⁄₁₆" | 8¹⁵⁄₁₆" | 8¹⁵⁄₁₆" | SHORT CHORD SPAN "B" | 8⅞" | 8⅞" | 8⅞" | 8⅞" | 8¹³⁄₁₆"

℄-49-52-26.3

1'-7" | 1'-7"

℄ CAP

2" | 1¼" | 1¼"

1¼"ϕ x 18' ANCH. BOLTS PROJECT 5½" ABOVE CAP. (TYP.)

9¾" | 9¹¹⁄₁₆" | 9⅝" | 9½" | 9⅝" | 9½" | 9½" | 9⅝" | 9½" | 9⅝" | 9½" | 9⅝"

8'-8⅛" | 8'-8" | 8'-7⅞" | 4'-8¹⁵⁄₁₆" | 4'-3⅞" | 8'-7¹¹⁄₁₆" | 8'-7⅝" | 8'-7⁹⁄₁₆"

S 11-49-34

SHORT CHORD SPAN "A"

WORK POINT

2-℄ SURVEY

℄ BEAMS - SPAN "A"

PLAN OF CAP

EL. 239.037 | EL. 233.329 | EL. 235.609 | EL. 233.887 | EL. 234.164 | EL. 234.440 | EL. 234.715 | EL. 234.978

6-#11B3 | 4-#458 @ 3" CTS UNDER EA. BM. BRG. | 6-#11B4 | 6-#11B4 | 2-#486 (3-BAR RUNS) | WORK LINE | 6-#11B4 | 2-#486 | 6-#11B4 | 6-#11B5

2'-6" MIN

CONST. JT. (TYP.)

6-SPA. @ 6" | 1" | 7-SPA. @ 8" | 5-#11B1 | 8-SPA. @ 12" | 7-SPA. @ 4" | 9-SPA. @ 5" | 10" | 6-SPA. @ 12" | 10-SPA. @ 5" | 7-SPA. @ 4" | 8-SPA. @ 12" | 5-#11B2 | 7-SPA. @ 8" | 6-SPA. @ 6"

22-#451 (IN PAIRS) | 20-#452 (IN PAIRS) | 26-#453 (IN PAIRS) | 24-#454 (IN PAIRS) | 26-#455 (IN PAIRS) | 24-#456 (IN PAIRS) | 32-#457 (IN PAIRS)

5'-1" | 3'-7" | 3'-0" | 18'-2" | 15'-2" | 3'-0" | 9'-1½" | 7'-7½" | 9'-0½" | 7'-6½" | 3'-0" | 18'-2" | 15'-2" | 3'-0" | 5'-1" | 3'-7"

PROVIDE 3" HIGH BEAM BOLSTERS (B.B.) @ 5'-0" MAX. CTS.

16'-6"

NOTE: INVERT ALTERNATE PAIRS OF STIRRUPS.

8-#10V1

8-#10M1

5'-9"

5'-0" | 3'-0" | 3'-0"

2'-6"

#GT1

12" CL.

3" CL.

ELEVATION

POUR NO. 3 CAP

POUR NO. 2 COLS.

#359 @ 12" CTS.

17'-0"

TOP OF FTGS. EL. 214.037 (TYP.)

8-#10M1

8-#10V1

3" POUR NO. 1 FTGS.

END ELEVATION

4" | 4'-1½" | 4'-1½" | 14-⅝" ϕ T1 @ 7" CTS. | 4"

4½" | 16-#GT1 @ 6" CTS | 4½"

8'-3"

1'-4½" | 2'-9" | 2'-9" | 1'-4½"

1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½"

8'-3"

9'-11"

SHORT CHORD SPAN "B"

WORK POINT

SHORT CHORD SPAN "A"

5'-0" | 4'-11"

#359

#10M1 OR V1 EQUALLY SPA. ON 1'-2⅝" RAD.

2" CL. RADIALLY (TYP.)

8'-3"

9'-11"

℄ CAP & FTGS.

8'-3"

PLAN OF FOOTINGS

DRAWN BY W.N. GOODWIN DATE SEPT.-72

CHECKED BY DATE Oct 72

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

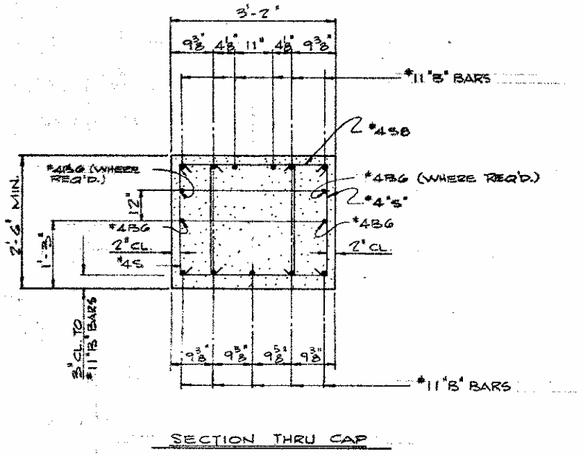
RALEIGH

SUBSTRUCTURE BENT NO. 1

SEPTEMBER 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	57
1			3			TOTAL SHEETS
2			4			124

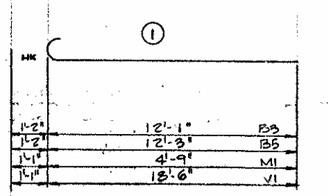
FED. ROAD DIV. NO.	STATE	PROJ.
4	N.C.	8.2326309
F. A. PROJECT	M-5369(3)	

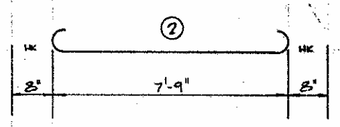


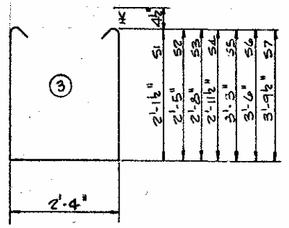
SECTION THRU CAP

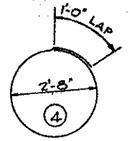
BAR TYPES

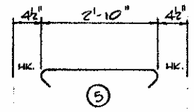
ALL DIMENSIONS ARE OUT TO OUT.











BILL OF MATERIAL

FOR BENT NO. 1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	5	#11	STR	25'-0"	664
B2	5	#11	STR	43'-2"	1147
B3	6	#11	1	13'-3"	422
B4	30	#11	STR	12'-2"	1939
B5	6	#11	1	13'-5"	428
B6	8	#4	STR	22'-4"	119
M1	32	#10	1	5'-6"	805
S1	22	#4	3	7'-4"	108
S2	20	#4	3	7'-11"	106
S3	26	#4	3	8'-5"	145
S4	34	#4	3	9'-0"	144
S5	26	#4	3	9'-7"	166
S6	24	#4	3	10'-1"	163
S7	32	#4	3	10'-8"	228
S8	32	#4	5	3'-7"	77
S9	68	#3	4	9'-5"	241
T1	120	#6	2	9'-1"	1637
V1	32	#10	1	19'-7"	2697

REINFORCING STL.-LBS.- 11,234
CLASS "A" CONC.-CU.YDS.- 67.6
12" ϕ PRESTR. CONCRETE PILES
-NO.- 28 -LIN.FT.- 1260

DIVISION CLASS "A" CONC.
POUR #1 (FTGS.) -CU.YDS.- 24.4
POUR #2 (COLS.) - " " - 17.3
POUR #3 (CAP) - " " - 25.9

PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05 -L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUBSTRUCTURE
BENT NO. 1

SEPTEMBER 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-8
1			3			TOTAL SHEETS
2			4			124

DRAWN BY W.N.GOODWIN DATE SEPT-72
CHECKED BY J.E.Eas DATE SEPT-72

DIETZGEN 1966M

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	

℄ BEAMS SPAN "C"

32'-4½"

8'-8" | 8'-8" | 6'-5½" | 2'-2 13/16" | 8'-8" | 8'-8" | 8'-8"

32'-3½"

8½" TYP. | 8½" | 1'-7" | 1'-7" | 1'-4"x18" ANCH. BOLTS PROJECT 6" ABOVE CAP. (TYP.) | 9" | 8½" TYP. | ℄ CAP

8'-5 15/16" | 8'-5 7/8" | 8'-5¾" | 4'-2⅞" | 4'-2 13/16" | 8'-5⅝" | 8'-5 9/16" | 8'-5½"

8" | 8" | 15/16" | 8" | 7 15/16" | 7⅞" | 7⅞" | 7 13/16"

SHORT CHORD SPAN "C" | 7 15/16" | 67'-20'-25.4" | 7 15/16" | SHORT CHORD SPAN "B" | 64'-52'-26.3" | WORK POINT | 8 15/16" | 8 15/16" | 8⅞" | 8 13/16"

℄ SURVEY

℄ BEAMS SPAN "B"

PLAN OF CAP

EL. 231.778 | EL. 232.035 | EL. 232.281 | EL. 232.526 | EL. 232.770 | EL. 233.013 | EL. 233.256 | EL. 233.488

6-#11B3 | 4-#458@3' CTS. UNDER EA. BM. BEARING. | 2-#456(3-BAR RUNS) | 6-#11B4 | 6-#11B4 | 6-#11B4 | WORK LINE | 6-#11B4 | 2-#457(2-BAR RUNS) | 6-#11B4 | 6-#11B5

3'-6" MIN. | 19'-6"

4-SPA@8" | 4" | 7" | 14-#551 (IN PAIRS) | 5'-1" | 3'-7"

3-SPA@1'-4" | 1'-4" | 5-SPA@1'-6" | 12-#552(IN PAIRS) | 18'-2" | 15'-2" | 1'-6" | 7-SPA@5" | 2" | 0⅝" | 3'-0"

6-#11B1 | CONST. JT.(TYP.) | 5-SPA@8" | 5-SPA@1'-6" | 16-#554(IN PAIRS) | 9'-1½" | 7'-7½" | 1'-6" | 20-#555(IN PAIRS) | 3'-0"

4-SPA@8" | 0⅝" | 2⅜" | 18-#555(IN PAIRS) | 9'-0½" | 7'-6½" | 3'-0"

5-SPA@⅝" | 5-SPA@1'-6" | 6-#11B2 | 16-#556(IN PAIRS) | 18'-2" | 15'-2" | 1'-6" | 20-#557(IN PAIRS) | 4-SPA@1'-4" | 2'-6" | 3'-0"

4" | 4-SPA@8" | 5'-1" | 3'-7"

PROVIDE 3" HIGH BEAM BOLSTERS (B.B.) @ 5'-0" MAX. CTS.

NOTE: INVERT ALTERNATE PAIRS OF STIRRUPS.

8-#10V1 | 3'-3" | 8-#10M1

ELEVATION

POUR NO. 3 CAP | 20-#359@12" CTS. | POUR NO. 2 COLS. | 8-#10V1 | TOP OF FTGS. EL. 208.778 (TYP.) | 8-#10M1 | #711 | #712 | 3" | POUR NO. 1 FTGS. | 3'-0" | 3'-0" CL

END ELEVATION

3'-0" | 3'CL | #711 | #712 | 1½" | 2'-0"

CONST. JT.(TYP.) | 9" | 1½ 12 | 1½ 12

2'-0" | 5'-6" | 5'-6" | 15-#712@6" MAX CTS | 4½" | 4½" | 3'-0" | 7'-9" | 10'-5"

1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 2'-6" | 2'-6" | 1'-4½" | 7'-9"

WORK POINT | 5'-3½" | 5'-2" | #359 | #10M1 DE V. | 2'-0" CL RADIALLY (TYP.) | 5'-9" | 9'-5" | ℄ CAP & FTGS. | 5'-7½"

PLAN OF FOOTINGS

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

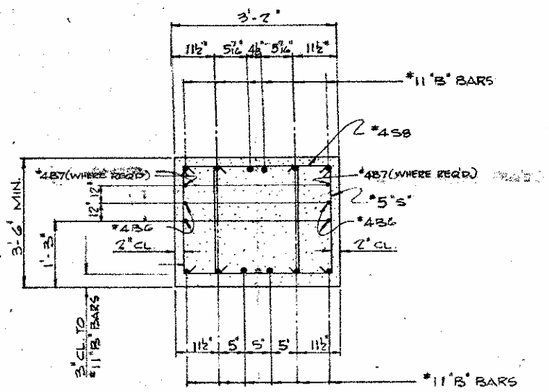
SUBSTRUCTURE
BENT NO. 2

1972

DRAWN BY W.N. GOODWIN DATE AUG. 72
CHECKED BY [signature] DATE OCT. 72

REVISIONS							SHEET NO. S-2
NO.	BY	DATE	NO.	BY	DATE		
1			3				TOTAL SHEETS 124
2			4				

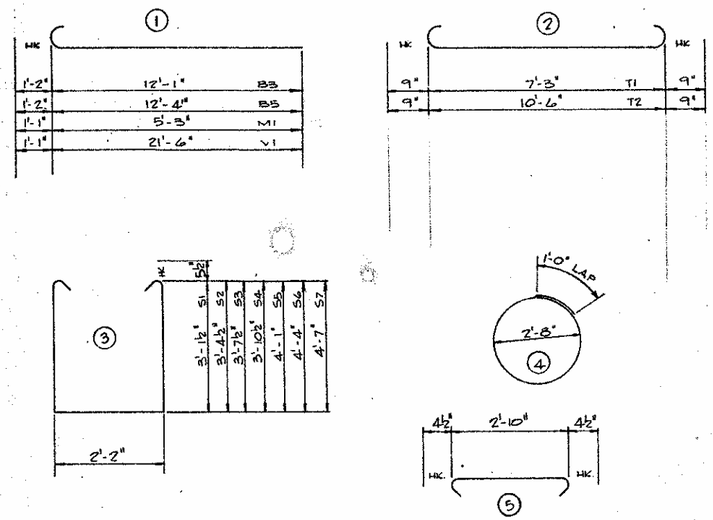
FED. ROAD DIV. NO.	STATE	PROJECT
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	



SECTION THRU CAP

BAR TYPES

ALL DIMENSIONS ARE OUT TO OUT.



BILL OF MATERIAL

FOR BENT NO. 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	6	#11	STR.	25'-0"	774
B2	6	#11	STR.	43'-2"	1334
B3	6	#11	1	13'-3"	412
B4	30	#11	STR.	12'-2"	1883
B5	6	#11	1	13'-6"	433
B6	12	#4	STR.	22'-4"	179
B7	4	#4	STR.	24'-3"	65
M1	32	#10	1	6'-4"	870
S1	14	#5	3	9'-4"	136
S2	12	#5	3	9'-10"	123
S3	20	#5	3	10'-4"	215
S4	16	#5	3	12'-10"	171
S5	18	#5	3	11'-3"	211
S6	16	#5	3	11'-9"	157
S7	20	#5	3	12'-3"	213
S8	32	#4	5	3'-7"	77
S9	80	#3	4	9'-5"	282
T1	60	#7	2	8'-9"	1074
T2	60	#7	2	12'-0"	1474
V1	32	#10	1	22'-7"	3111

REINFORCING STEEL-LBS.- 13,414

CLASS "A" CONCRETE-CU.YDS.- 89.5

12"ø PRESTR. CONC. PILES

NO. 40 -LIN. FT. - 1680

DIVISION OF CLASS "A" CONC.

POUR #1 (FTGS.)	36.4	CU.YDS.
POUR #2 (COLS.)	20.4	"
POUR #3 (CAP)	32.7	"

PROJECT NO. 8.2326309

CUMBERLAND **COUNTY**

STATION: 269+51.05 -L-

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

RALEIGH

SUBSTRUCTURE
BENT NO. 2

SEPTEMBER 1972

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

DRAWN BY W.N. GOODWIN DATE 9-29-72

CHECKED BY [illegible] DATE Oct 72

DIETZGEN 10694

FED. ROAD DIV. NO.	STATE	S
4	N. C.	6
F. A. PROJECT	M-5364	

32'-4½"

℄ BEAMS SPAN "D"

8'-8" | 8'-8" | 6'-6½" | 2'-1 15/16" | 8'-8" | 7'-8" Δ1 | 8'-8"

7½" | 7⅜" | 7¾" (TYP) | 7⅜" | 7⅝" | 7⅝" | 7⅝" | 7¼" | 7¼" | 7¼" | 7 3/16"

SHORT CHORD SPAN "D"

68°56'-28.9"

67°20'-25.4"

WORK POINT

SHORT CHORD SPAN "C"

1'-7" | 1'-7"

℄ CAP

8½" | 8½" (TYP) | 8" | 1¼"ø x 18" ANCH. BOLTS PROJECT 5½" ABOVE CAP. (TYP.)

8'-4 1/16" | 8'-4" | 8'-3 15/16" | 4'-½" | 4'-1 15/16" | 8'-3⅞" | 8'-3 13/16" | 8'-3¾"

℄ SURVEY

℄ BEARINGS-SPAN "C"

PLAN OF CAP

EL. 229.558 | EL. 229.790 | EL. 230.011 | EL. 230.232 | EL. 230.452 | EL. 230.672 | EL. 230.891 | EL. 231.100

4-#458@3" CTS UNDER EA. BM. BZG.

6-#1183 | 6-#1184 | 2-#486 (3 BAR RUNS) | 6-#1184 | 6-#1184 | WORK LINE | 6-#1184 | 6-#1184 | 2-#486 | 6-#1185

2'-6" MIN.

CONST. JT. (TYP.)

5-#1181

6-SPA.@6" | 1" | 1 1/16" | 7-SPA.@8" | 8-SPA.@12" | 7-SPA.@4" | 0 7/16" | 2½" | 9-SPA.@5" | 10" | 6-SPA.@12" | 10-SPA.@5" | 2½" | 0 7/16" | 7-SPA.@4" | 8-SPA.@12" | 5-#1182 | 7-SPA.@8" | 1½" | 1" | 6-SPA.@6"

22-#451 (IN PAIRS) | 8" | 20-#452 (IN PAIRS) | 12" | 24-#453 (IN PAIRS) | 13" | 26-#454 (IN PAIRS) | 12" | 24-#455 (IN PAIRS) | 4" | 26-#456 (IN PAIRS) | 12" | 32-#457 (IN PAIRS)

5'-1" | 3'-7" | 3'-0" | 18'-2" | 15'-2" | 3'-0" | 9'-1½" | 7'-7½" | 3'-0" | 9'-0½" | 7'-6½" | 3'-0" | 18'-2" | 15'-2" | 3'-0" | 5'-1" | 3'-7"

PROVIDE 3" HIGH BEAM BOLSTERS (B.B.) @ 5'-0" MAX. CTS.

NOTE: INVERT ALTERNATE PAIRS OF STIRRUPS.

15'-6"

8-#10V1

8-#10M1

8-#10V1

8-#10M1

TOP OF FTGS. EL. 211.558 (TYP.)

16-#3 STIR @ 12" CTS.

POUR NO. 2

POUR NO. 3

3'CL | 3'CL | #GT1 | #GT1 | 2'-6" | 1'-0"

CONST. JT. (TYP.) | 6" | 1½ | 12 | 1½ | 12

ELEVATION

END ELEVATION

3'-3" | 4'-1½" | 4'-1½" | 4" | 4" | 16-#GT1 @ 6" CTS | 4½" | 4½" | 8'-3"

1'-4½" | 2'-9" | 2'-9" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 1'-4½" | 8'-3"

SHORT CHORD - SPAN "D" | WORK POINT | SHORT CHORD SPAN "C" | 5'-0" | 4'-11"

#359 | #10M1 OR V1 EQUALLY SPA. ON 1'-2⅞" RAD. | 2" CL RADIALLY (TYP.) | 8'-3"

9'-11" | 8'-3"

℄ CAP & FTGS.

PLAN OF FOOTINGS

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

RALEIGH

SUBSTRUCTURE

BENT NO 3

SEPTEMBER 1972

DRAWN BY: W.N. GOODWIN DATE:

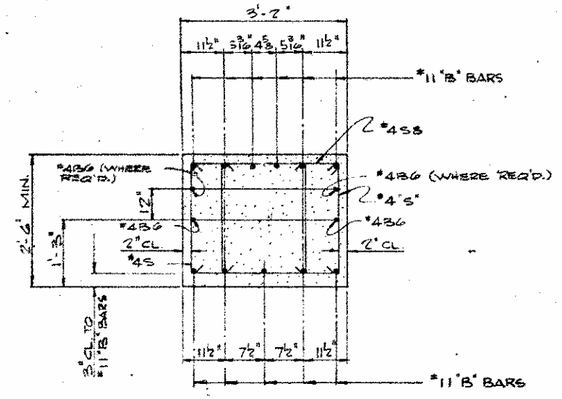
CHECKED BY: DATE: Oct 72

Δ1 REVISED TO CORRECT BUILD-UP DIMENSION. √ BY W.N.G.

REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
Δ1	WST	9-23-75	3		
2			4		

SNP NO.

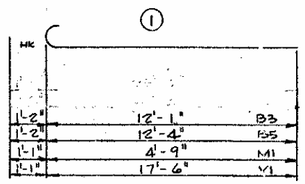
FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2320309
F. A. PROJECT	M-5369(3)	

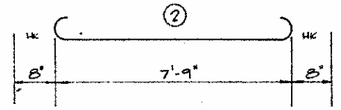


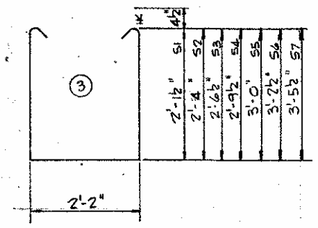
SECTION THRU CAP

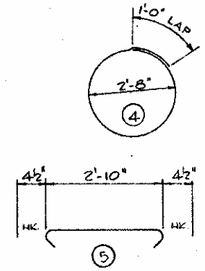
BAR TYPES

ALL DIMENSIONS ARE OUT TO OUT.









BILL OF MATERIAL

FOR BENT NO. 3

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	5	#11	1	25'-0"	2.64
B2	5	#11	1	43'-2"	1 37
B3	6	#11	1	13'-3"	422
B4	30	#11	STR	12'-2"	1838
B5	6	#11	1	13'-6"	429
B6	8	#4	STR	22'-4"	119
M1	38	#10	1	5'-10"	303
S1	22	#4	3	7'-2"	105
S2	20	#4	3	7'-7"	101
S3	24	#4	3	8'-0"	128
S4	26	#4	3	8'-6"	58
S5	24	#4	3	8'-11"	143
S6	26	#4	3	9'-4"	162
S7	32	#4	3	9'-10"	210
S8	32	#4	5	3'-7"	77
S9	64	#3	4	9'-5"	227
T1	120	#6	2	9'-1"	1637
V1	32	#10	1	18'-7"	2559

REINFORCING STEEL-LBS.- 11021
CLASS 'A' CONC.-CU.YDS.- 63.1
12"ϕ PRESTR. CONCRETE PILES
NO. 28 -LIN. FT.- 1260

DIVISION OF CLASS "A" CONC.
POUR NO.1 (FTGS) 24.4
POUR NO.2 (COLS) 16.2
POUR NO.3 (CAP) 22.5

PROJECT NO. 8.2320309

CUMBERLAND **COUNTY**

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

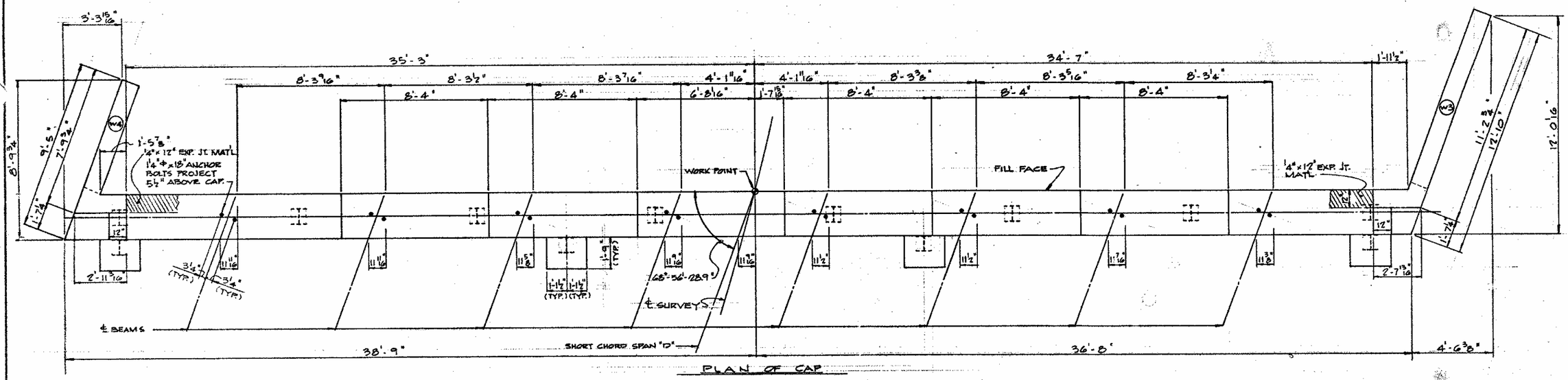
SUBSTRUCTURE
BENT NO. 3

SEPTEMBER 1972

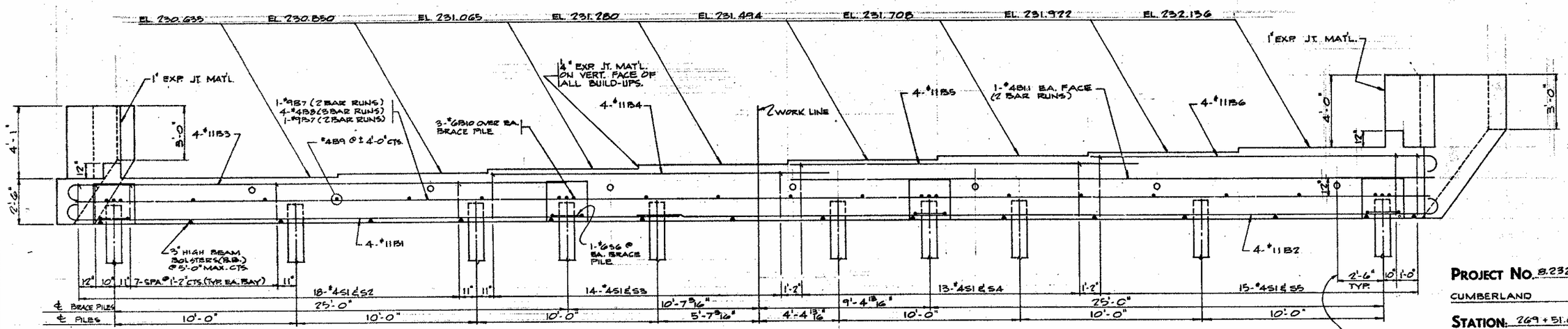
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-12
1			3			TOTAL SHEETS
2			4			124

DRAWN BY W.N. GOODWIN DATE SEPT. 72
CHECKED BY [signature] DATE Oct 72

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-533(3)	



PLAN OF CAP



℄-3" I.D. P.V.C. PLASTIC PIPE DRAINS. 7-REQ'D. SPA. AS SHOWN. SEE E.BT.#1 FOR DETAILS.

ELEVATION

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

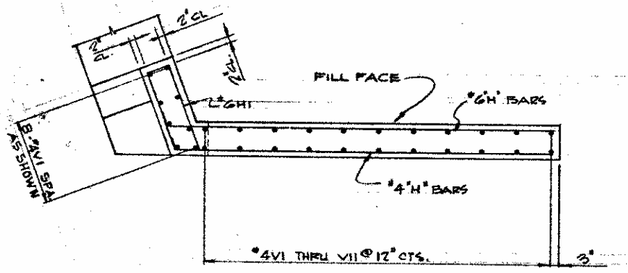
SUBSTRUCTURE
END BENT NO. 2

AUGUST 1972

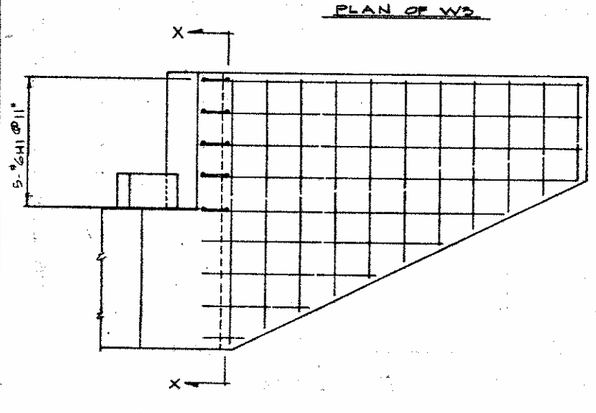
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-13
1			3			TOTAL SHEETS
2			4			124

DRAWN BY W.N. GOODWIN DATE AUG. '72
CHECKED BY [signature] DATE Oct '72

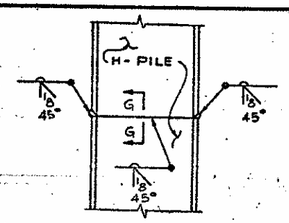
FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	



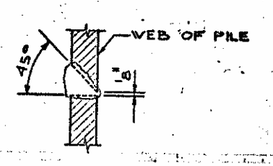
PLAN OF W3



ELEVATION

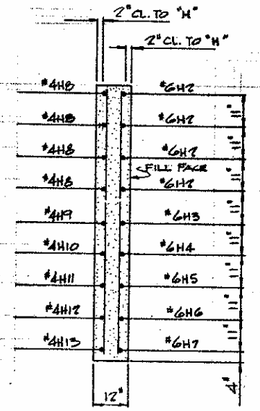


ELEVATION

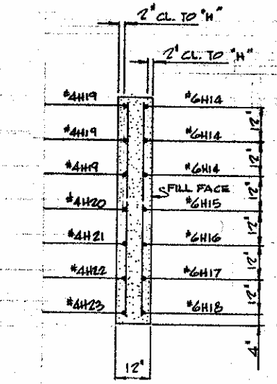


SECTION G-G
(SAME FOR FLANGES)

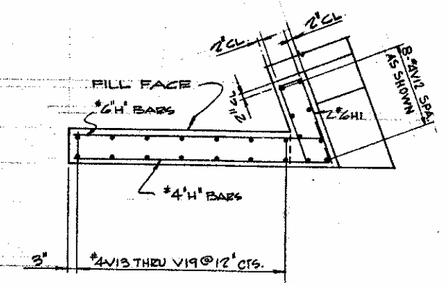
PILE SPLICE DETAIL



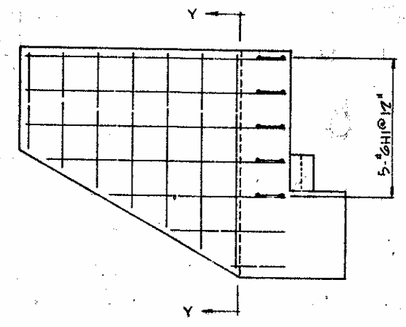
SECTION 'X-X'



SECTION 'Y-Y'



PLAN OF W4



ELEVATION

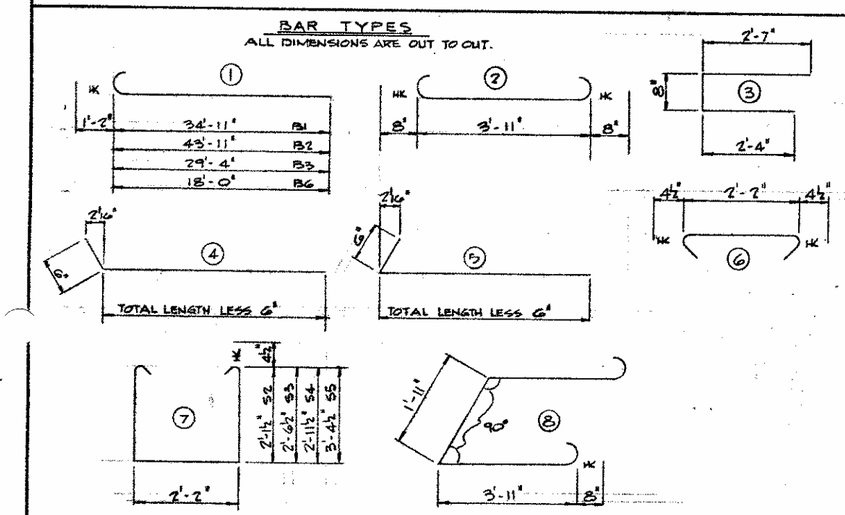
BILL OF MATERIAL

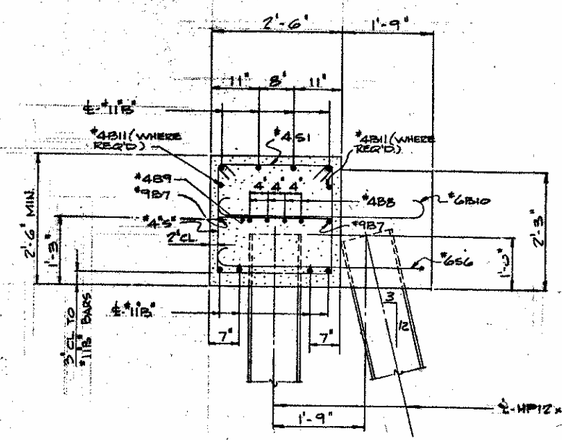
FOR END BENT NO. 2

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	4	#11	1	36'-1"	767
B2	4	#11	1	45'-1"	958
B3	4	#11	1	30'-6"	648
B4	4	#11	STR.	20'-4"	432
B5	4	#11	STR.	21'-4"	453
B6	4	#11	1	19'-2"	407
B7	4	#9	STR.	39'-0"	530
B8	12	#4	STR.	25'-11"	208
B9	14	#4	STR.	2'-2"	20
B10	12	#6	2	5'-3"	95
B11	4	#4	STR.	18'-7"	50
H1	10	#6	3	5'-7"	84
H2	4	#6	4	11'-8"	70
H3	1	#6	4	9'-6"	14
H4	1	#6	4	7'-8"	12
H5	1	#6	4	5'-9"	9
H6	1	#6	4	3'-10"	6
H7	1	#6	4	2'-0"	3
H8	4	#4	4	11'-5"	31
H9	1	#4	4	9'-3"	6
H10	1	#4	4	7'-5"	5
H11	1	#4	4	5'-6"	4
H12	1	#4	4	3'-7"	2
H13	1	#4	4	1'-9"	1
H14	3	#6	5	7'-9"	35
H15	1	#6	5	7'-1"	11
H16	1	#6	5	5'-5"	8
H17	1	#6	5	3'-6"	5
H18	1	#6	5	1'-9"	3
H19	3	#4	5	8'-0"	16
H20	1	#4	5	7'-4"	5
H21	1	#4	5	5'-6"	4
H22	1	#4	5	3'-9"	3
H23	1	#4	5	2'-0"	1

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
S1	60	#4	6	2'-11"	117
S2	18	#4	7	7'-2"	86
S3	14	#4	7	8'-0"	75
S4	13	#4	7	8'-10"	77
S5	15	#4	7	9'-8"	97
S6	4	#6	8	11'-1"	67
V1	10	#4	STR	7'-8"	51
V2	2	#4	STR	7'-3"	10
V3	2	#4	STR	6'-9"	9
V4	2	#4	STR	6'-4"	8
V5	2	#4	STR	5'-9"	8
V6	2	#4	STR	5'-3"	7
V7	2	#4	STR	4'-10"	6
V8	2	#4	STR	4'-4"	6
V9	2	#4	STR	3'-9"	5
V10	2	#4	STR	3'-4"	4
V11	2	#4	STR	2'-8"	4
V12	8	#4	STR	6'-3"	33
V13	2	#4	STR	6'-2"	8
V14	2	#4	STR	5'-8"	8
V15	2	#4	STR	5'-0"	7
V16	2	#4	STR	4'-6"	6
V17	2	#4	STR	3'-11"	5
V18	2	#4	STR	3'-4"	4
V19	2	#4	STR	2'-8"	4

REINFORCING STL. - LBS - 5618
CLASS 'A' CONC. - CU. YDS - 27.7
HP12 x 53 STEEL PILES
NO. - 12
LIN. FT. - 840





SECTION THRU CAP

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

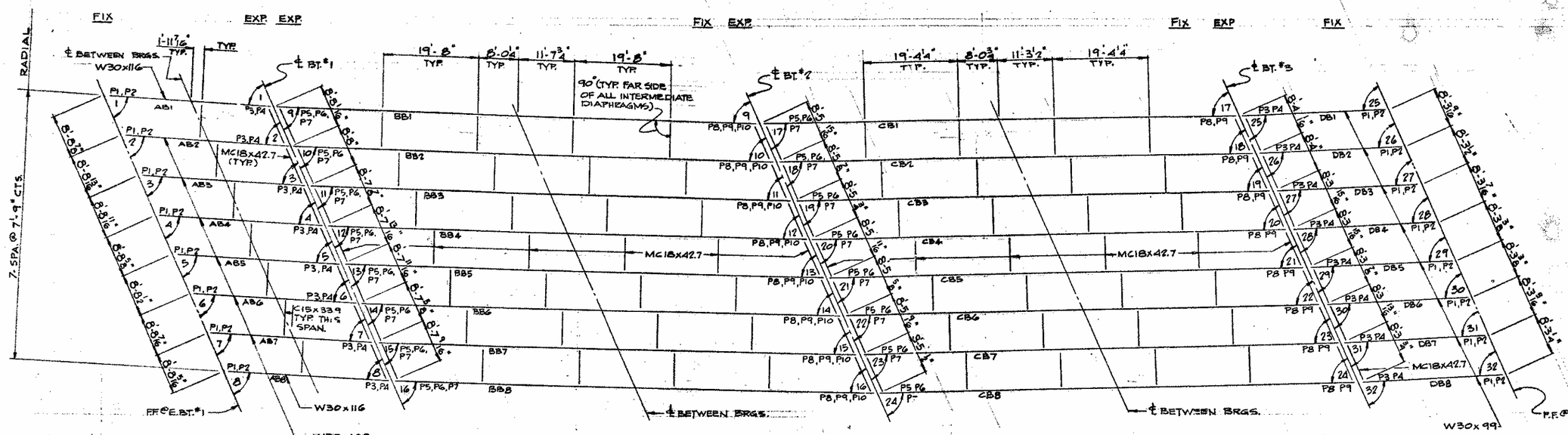
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUBSTRUCTURE
END BENT NO. 2

AUGUST 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-14
1			3			TOTAL SHEETS
2			4			124

DRAWN BY W.N. GOODWIN DATE AUG. 72
CHECKED BY J.C. Gilbert DATE Oct 72

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	B-2326309
F. A. PROJECT	M-5369(3)	



SPAN "A" SPAN "B" STRUCTURAL STEEL LAYOUT SPAN "C" SPAN "D"

ANGLE NO.	VALUE
1	62° 50' 59.7"
2	62 57 00.3
3	63 02 58.2
4	63 08 53.3
5	63 14 45.7
6	63 20 35.4
7	63 26 22.5
8	63 32 07.0
9	64 33 05.5
10	64 38 40.3
11	64 44 12.6
12	64 49 42.4
13	64 55 09.7
14	65 00 34.5
15	65 05 57.0
16	65 11 17.0
17	67 03 12.3
18	67 08 10.2
19	67 13 05.9
20	67 17 59.4
21	67 22 50.8
22	67 27 40.0
23	67 32 27.1
24	67 37 12.1
25	68 40 36.8
26	68 45 11.3
27	68 49 43.9
28	68 54 14.4
29	68 58 43.0
30	69 03 09.6
31	69 07 34.3
32	69 11 57.2

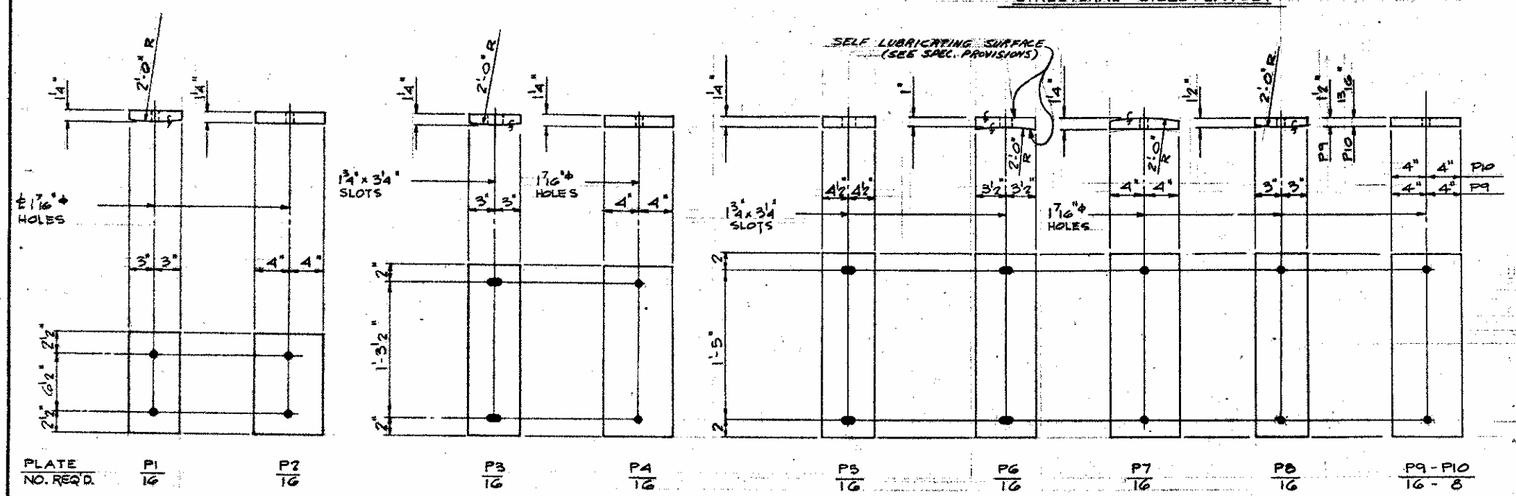
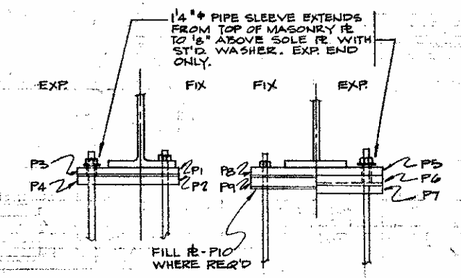


PLATE NO. REQ'D.	P1 16	P2 16	P3 16	P4 16	P5 16	P6 16	P7 16	P8 16	P9 - P10 16 - 8

NOTE: AT THE CONTRACTORS OPTION FILL PLATES MAY BE COMBINED WITH MASONRY PLATES.

BEARING PLATE DETAILS



SPANS "A & D" SPANS "B & C"

BEARING DETAILS

ALL BEARING ASSEMBLIES SHALL BE GALVANIZED EXCEPT SELF LUBRICATING PLATES.

ALL BEARING SURFACES THAT ARE NOT REQUIRED TO BE FINISHED SHALL BE SMOOTH AND STRAIGHT BUT NOT PLANED.

DRAWN BY W.N. GOODWIN DATE JUNE - 72
CHECKED BY J.F. Cole DATE Oct. 1972

DIETZGEN 1080 N785

PROJECT NO. B-2326309

CUMBERLAND **COUNTY**

STATION: 269 + 51.05 -L-

SHEET 1 OF 4

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

RALEIGH

SUPERSTRUCTURE

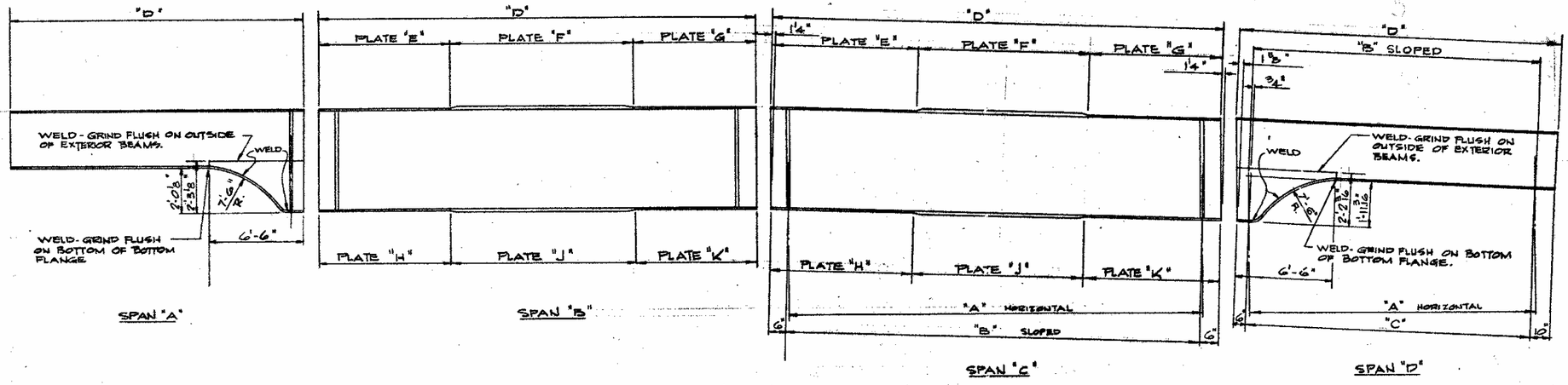
STRUCTURAL STEEL LAYOUT

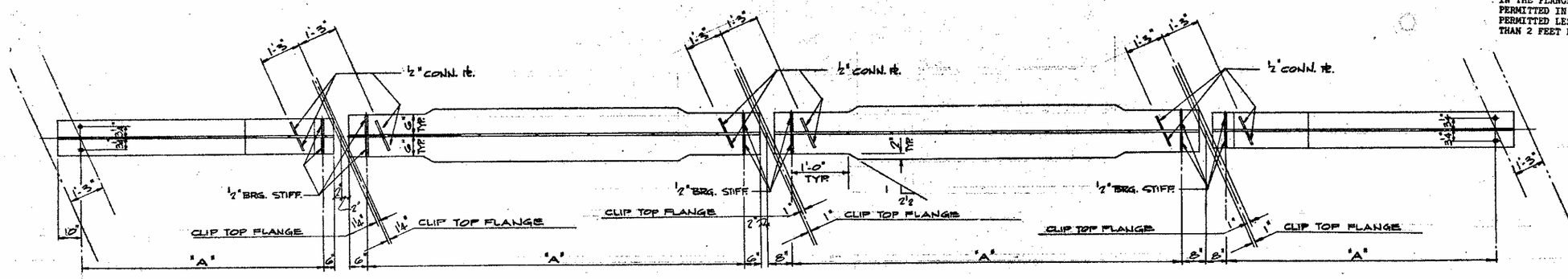
BEARING PLATE DETAILS

JUNE 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-15
1			3			TOTAL SHEETS
2			4			124

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	





BOTTOM FLANGE DETAIL

BEAM	DIMENSION "A"	DIM. "B"	DIM. "C"	DIM. "D"
AB1	32'-9 7/16"			34-1 5/16
AB2	32'-8 5/8"			34-0 1/8
AB3	32'-8 1/2"			34-0 1/2
AB4	32'-8 1/8"			34-0 1/8
AB5	32'-7 15/16"			33-11 5/16
AB6	32'-7 11/16"			33-11 1/16
AB7	32'-7 1/8"			33-11 1/8
AB8	32'-6 15/16"			33-10 5/16
BB1	98-4			99-4
BB2	98-2 1/8"			99-2 1/8
BB3	98-2 1/4"			99-2 1/4
BB4	98-1 1/8"			99-1 1/8
BB5	98-0 1/2"			99-0 1/2
BB6	97-11 1/8"			98-11 1/8
BB7	97-10 1/4"			98-10 1/4
BB8	97-9 1/8"			98-9 1/8
CB1	96-9 1/8"	96-9 1/2		97-9 1/2
CB2	96-8 1/2"	96-8 3/4		97-8 3/4
CB3	96-7 3/4"	96-8 1/8		97-8 1/8
CB4	96-7	96-7 3/8		97-7 3/8
CB5	96-6 3/8"	96-6 3/4		97-6 3/4
CB6	96-6	96-6		97-6
CB7	96-5	96-5 3/8		97-5 3/8
CB8	96-4 3/8"	96-4 3/4		97-4 3/4
DB1	28-2 3/4"	28-2 1/8	28-2 1/8	29-7 3/4
DB2	28-2 9/16"	28-2 1/16	28-1 15/16	29-7 7/16
DB3	28-2 7/16"	28-2 1/16	28-1 15/16	29-7 1/16
DB4	28-2 5/16"	28-1 15/16	28-1 5/8	29-7 1/4
DB5	28-2	28-1 15/16	28-1 11/16	29-7 1/16
DB6	28-1 5/8"	28-2	28-1 1/4	29-6 5/8
DB7	28-1 11/16"	28-1 7/8	28-1 1/2	29-6 3/4
DB8	28-1 1/2"	28-1 11/16	28-0 15/16	29-6 9/16

NO SPLICE OTHER THAN THOSE SHOWN ON THE PLANS WILL BE PERMITTED IN THE FLANGE PLATES. EITHER ONE OR TWO SHOP WEB SPLICES WILL BE PERMITTED IN THE WEB PLATE; HOWEVER, NO SHOP WEB SPLICE WILL BE PERMITTED LESS THAN 10 FEET FROM A CENTER LINE OF BEARING OR LESS THAN 2 FEET FROM A SHOP FLANGE SPLICE.

NOTES

AT ALL FIXED POINTS OF SUPPORT, NUTS FOR ANCHOR BOLTS ARE TO BE TIGHTENED FINGER TIGHT AND THEN BACKED OFF 1/2 TURN, THE THREAD OF NUT AND BOLT SHALL THEN BE BURRED WITH A SHARP POINTED TOOL.

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

HAUNCH MAKEUP OTHER THAN THAT SHOWN MAY BE SUBMITTED FOR APPROVAL. TYPES OF WELDS USED SHALL BE APPROVED PREQUALIFIED WELDS. THE SIZES OF THE HAUNCH PLATES SHALL MATCH THOSE OF THE BEAMS.

ALL STRUCTURAL STEEL SHALL BE ASTM A36 GRADE STEEL.

SHIPPING DETAILS FOR BEAMS AND GIRDERS SHALL BE SUBMITTED FOR APPROVAL, INDICATING THE TOP FLANGE LOCATION DURING SHIPMENT, AND IN ALL CASES SHOWING THE WEB VERTICAL. THE METHOD OF SHIPMENT, POSITION ON THE VEHICLE, AND ATTACHMENTS TO THE BEAMS OR GIRDERS OF ANY SHIPPING RESTRAINTS SHALL BE CLEARLY DETAILED.

RADIOGRAPHIC INSPECTION OF HAUNCH WELDS WILL BE REQUIRED.

DRAWN BY W.N. GOODWIN DATE 7-72
CHECKED BY [illegible] DATE OCT 1972

PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05 -L-
SHEET 2 OF 4

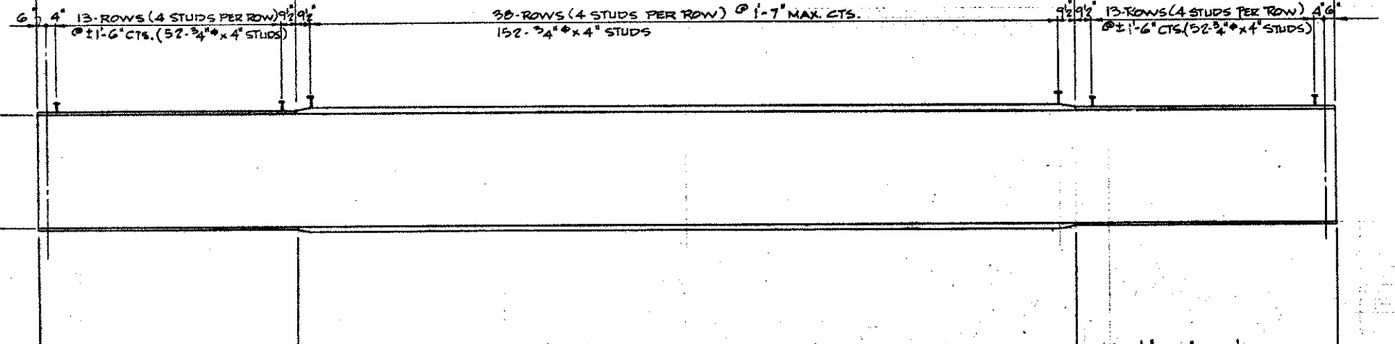
STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL DETAILS

JULY 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-16
1			3			TOTAL SHEETS
2			4			124

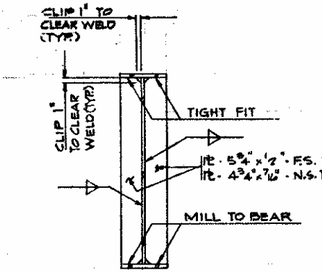
FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N.C.	B-2326309
F. A. PROJECT	M-5309(3)	

PLATE "E"	PLATE "F"	PLATE "G"	
PL- 1" x 12" x 19'-8	PL- 1 3/4" x 12" x 60'-0"	PL- 1" x 12" x 19'-8	BB1
PL- 5/8" x 12" x 19'-7 9/16	PL- 1 1/8" x 12" x 60'-0"	PL- 5/8" x 12" x 19'-7 9/16	BB2
PL- 5/8" x 12" x 19'-7 1/8	DO	PL- 5/8" x 12" x 19'-7 1/8	BB3
PL- 5/8" x 12" x 19'-6 11/16	DO	PL- 5/8" x 12" x 19'-6 11/16	BB4
PL- 5/8" x 12" x 19'-6 1/4	DO	PL- 5/8" x 12" x 19'-6 1/4	BB5
PL- 5/8" x 12" x 19'-5 13/16	DO	PL- 5/8" x 12" x 19'-5 13/16	BB6
PL- 5/8" x 12" x 19'-5 3/8	PL- 1 1/8" x 12" x 60'-0"	PL- 5/8" x 12" x 19'-5 3/8	BB7
PL- 1" x 12" x 19'-4 9/16	PL- 1 3/4" x 12" x 60'-0"	PL- 1" x 12" x 19'-4 9/16	BB8
PL- 1" x 12" x 18'-10 3/4	PL- 1 3/4" x 12" x 60'-0"	PL- 1" x 12" x 18'-10 3/4	CB1
PL- 5/8" x 12" x 18'-10 3/8	PL- 1 1/8" x 12" x 60'-0	PL- 5/8" x 12" x 18'-10 3/8	CB2
PL- 5/8" x 12" x 18'-10 1/16	DO	PL- 5/8" x 12" x 18'-10 1/16	CB3
PL- 5/8" x 12" x 18'-9 11/16	DO	PL- 5/8" x 12" x 18'-9 11/16	CB4
PL- 5/8" x 12" x 18'-9 3/8	DO	PL- 5/8" x 12" x 18'-9 3/8	CB5
PL- 5/8" x 12" x 18'-9	DO	PL- 5/8" x 12" x 18'-9	CB6
PL- 5/8" x 12" x 18'-8 11/16	PL- 1 1/8" x 12" x 60'-0"	PL- 5/8" x 12" x 18'-8 11/16	CB7
PL- 1" x 12" x 18'-8 3/8	PL- 1 3/4" x 12" x 60'-0"	PL- 1" x 12" x 18'-8 3/8	CB8

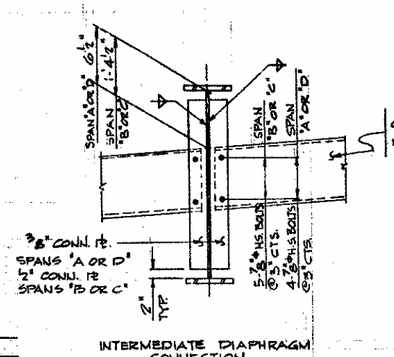


GIRDER ELEVATION

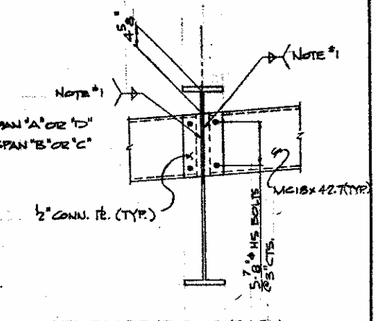
PLATE "H"	PLATE "J"	PLATE "K"	
PL- 1 1/8" x 16" x 19'-8"	PL- 2" x 16" x 60'-0"	PL- 1 1/8" x 16" 19'-8	BB1
PL- 1" x 16" x 19'-7 9/16	PL- 1 3/4" x 16" x 60'-0"	PL- 1" x 16" x 19'-7 9/16	BB2
PL- 1" x 16" x 19'-7 1/8	DO	PL- 1" x 16" x 19'-7 1/8	BB3
PL- 1" x 16" x 19'-6 11/16	DO	PL- 1" x 16" x 19'-6 11/16	BB4
PL- 1" x 16" x 19'-6 1/4	DO	PL- 1" x 16" x 19'-6 1/4	BB5
PL- 1" x 16" x 19'-5 13/16	DO	PL- 1" x 16" x 19'-5 13/16	BB6
PL- 1" x 16" x 19'-5 3/8	PL- 1 3/4" x 16" x 60'-0"	PL- 1" x 16" x 19'-5 3/8	BB7
PL- 1 1/8" x 16" x 19'-4 9/16	PL- 2" x 16" x 60'-0"	PL- 1 1/8" x 16" x 19'-4 9/16	BB8
PL- 1 1/8" x 16" x 18'-10 3/4	PL- 2" x 16" x 60'-0"	PL- 1 1/8" x 16" x 18'-10 3/4	CB1
PL- 1" x 16" x 18'-10 3/8	PL- 1 3/4" x 16" x 60'-0"	PL- 1" x 16" x 18'-10 3/8	CB2
PL- 1" x 16" x 18'-10 1/16	DO	PL- 1" x 16" x 18'-10 1/16	CB3
PL- 1" x 16" x 18'-9 11/16	DO	PL- 1" x 16" x 18'-9 11/16	CB4
PL- 1" x 16" x 18'-9 3/8	DO	PL- 1" x 16" x 18'-9 3/8	CB5
PL- 1" x 16" x 18'-9	DO	PL- 1" x 16" x 18'-9	CB6
PL- 1" x 16" x 18'-8 11/16	PL- 1 3/4" x 16" x 60'-0"	PL- 1" x 16" x 18'-8 11/16	CB7
PL- 1 1/8" x 16" x 18'-8 3/8	PL- 2" x 16" x 60'-0"	PL- 1 1/8" x 16" x 18'-8 3/8	CB8



BEARING STIFF. DETAIL

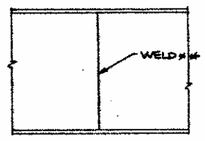


INTERMEDIATE DIAPHRAGM CONNECTION



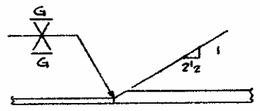
BENT DIAPHRAGM CONNECTION

NOTE #1 - WELD TO CONFORM PER A.W.S. FIGURE 224C. BEVEL IF NECESSARY.

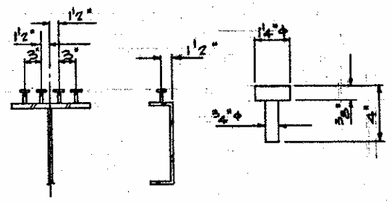


** GRIND FLUSH ON OUTSIDE OF EXT. GIRDER

PERMISSIBLE SHOP WEB SPLICE

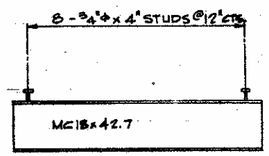


SHOP FLANGE SPLICE



STUD DETAILS

FOR DESCRIPTION OF STUDS SEE "SPECIAL PROVISIONS



BENT DIAPHRAGM CHANNEL STUD SPACING

PROJECT NO. B-2326309

CUMBERLAND COUNTY

STATION: 269 + 51.05 -L-

SHEET 3 OF 4

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL DETAILS

JULY 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-17
1			3			TOTAL SHEETS
2			4			124

DRAWN BY W.N. GOODWIN DATE JULY '72
CHECKED BY DATE Oct 1972

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N.C.	8.2326309
F. A. PROJECT	M-5369(3)	

DEAD LOAD DEFLECTION & CAMBER TABLE ~ SPANS "A" & "D"

	SPAN "A"		SPAN "D"	
	INT. BMS.	EXT. BMS.	INT. BMS.	EXT. BMS.
DEFLECTION DUE TO WEIGHT OF BEAM	0	0	0	0
DEFLECTION DUE TO WEIGHT OF SLAB	3/16"	1/4"	1/8"	3/16"
DEFLECTION DUE TO POST & RAIL, & FUTURE WEARING SURFACE	0	0	0	0
TOTAL DEAD LOAD DEFLECTION	3/16"	1/4"	1/8"	3/16"
VERTICAL CURVE ORDINATE (CREST)	3/16"	3/16"	1/8"	1/8"
HORIZONTAL CURVE COMPENSATION(-)	-1/16"	-1/16"	-0	-0
CAMBER * (NET DEFLECTION)	*5/16	3/8"	*1/4	*5/16

* NO SHOP CAMBER REQUIRED, TURN NATURAL MILL CAMBER UP.

DEAD LOAD DEFLECTION & CAMBER TABLE ~ SPANS "B" & "C"

	SPAN "B" INTERIOR GIRDERS									SPAN "B" EXTERIOR GIRDERS									SPAN "C" INTERIOR GIRDERS									SPAN "C" EXTERIOR GIRDERS								
	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9	.1	.2	.3	.4	.5	.6	.7	.8	.9
DEFLECTION DUE TO WEIGHT OF GIRDER	.016	.029	.039	.046	.048	.046	.039	.029	.016	.014	.025	.034	.040	.042	.040	.034	.025	.014	.016	.029	.039	.046	.048	.046	.039	.029	.016	.014	.025	.034	.040	.042	.040	.034	.025	.014
DEFLECTION DUE TO WEIGHT OF SLAB	.056	.101	.136	.158	.166	.158	.136	.101	.054	.062	.115	.154	.179	.187	.179	.154	.115	.062	.054	.101	.136	.158	.166	.158	.136	.101	.054	.062	.115	.154	.179	.187	.179	.154	.115	.062
DEFLECTION DUE TO POST & RAIL, & FUTURE WEARING SURFACE	.005	.009	.012	.014	.014	.014	.012	.009	.005	.004	.007	.009	.010	.011	.010	.009	.007	.004	.005	.009	.012	.014	.014	.014	.012	.009	.005	.004	.007	.009	.010	.011	.010	.009	.007	.004
TOTAL DEAD LOAD DEFLECTION	.075	.139	.187	.218	.228	.218	.187	.139	.075	.080	.147	.197	.229	.240	.229	.197	.147	.080	.075	.139	.187	.218	.228	.218	.187	.139	.075	.080	.147	.197	.229	.240	.229	.197	.147	.080
VERTICAL CURVE ORDINATE (CREST)	.046	.082	.108	.123	.128	.123	.108	.082	.046	.046	.082	.108	.123	.128	.123	.108	.082	.046	.045	.080	.104	.119	.124	.119	.104	.080	.045	.045	.080	.104	.119	.124	.119	.104	.080	.045
HORIZONTAL CURVE COMPENSATION(-)	-.007	-.013	-.018	-.020	-.021	-.020	-.018	-.013	-.007	-.007	-.013	-.018	-.020	-.021	-.020	-.018	-.013	-.007	-.007	-.013	-.017	-.019	-.020	-.019	-.017	-.013	-.007	-.007	-.013	-.017	-.019	-.020	-.019	-.017	-.013	-.007
CAMBER (NET DEFLECTION)	.114	.208	.277	.321	.335	.321	.277	.208	.114	.119	.216	.287	.332	.347	.332	.287	.216	.119	.113	.206	.274	.318	.332	.318	.274	.206	.113	.113	.214	.284	.329	.344	.329	.284	.214	.118

NOTE: VALUES SHOWN IN DECIMALS OF A FOOT.

DRAWN BY W.N. GOODWIN DATE JULY - 1972
CHECKED BY J.L. Cato DATE Oct 1972

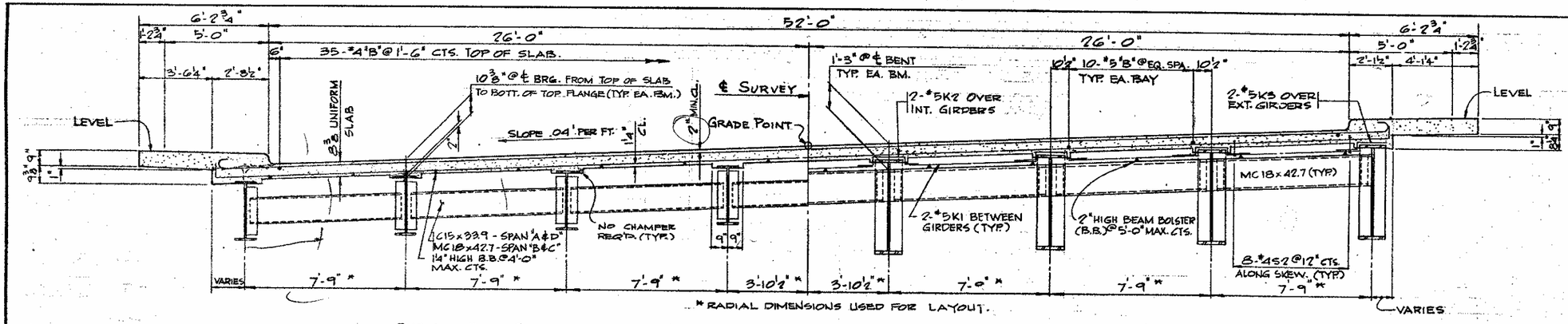
PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05-L-
SHEET 4 OF 4

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
STRUCTURAL STEEL DETAILS

JULY 1972

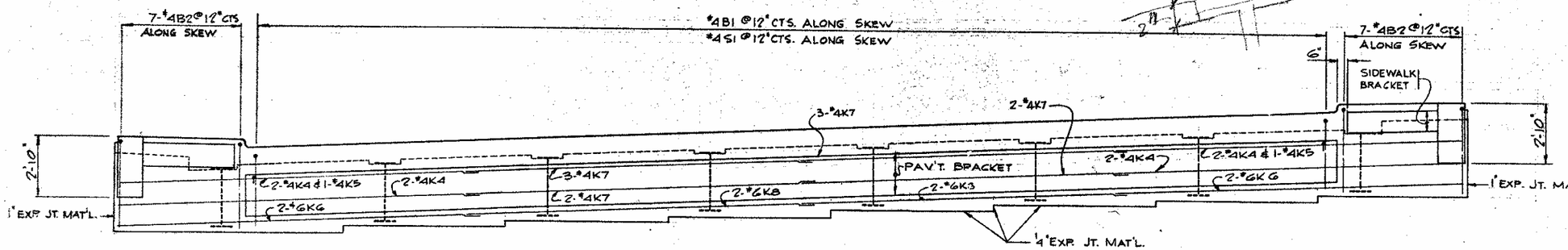
REVISIONS					
NO.	BY	DATE	NO.	BY	DATE
1			3		
2			4		

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	B-2326309
F. A. PROJECT	M-5369(3)	



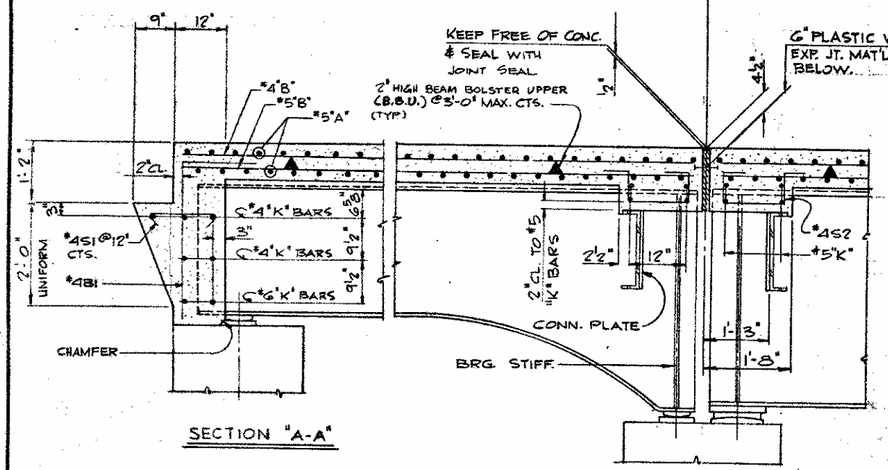
TYPICAL HALF SECTION
SHOWING INTERMEDIATE DIAPHRAGMS @ SPAN 'A OR D'
TYPICAL FOR ALL SPANS.

TYPICAL HALF SECTION
SHOWING BENT DIAPHRAGM @ SPAN 'B OR C'
TYPICAL FOR ALL SPANS



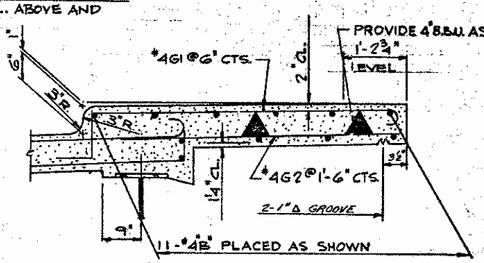
℄ 1" EXP. JT. MAT'L. @ BT. #2 & #3
2½" EXP. JT. MAT'L. @ BT. #1

END ELEVATION

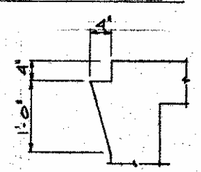


SECTION "A-A"

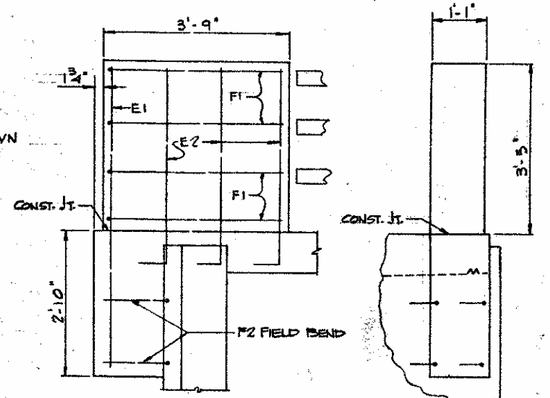
SECTION "B-B"
NOTE: SECTION @ BT. #2 SIMILAR.

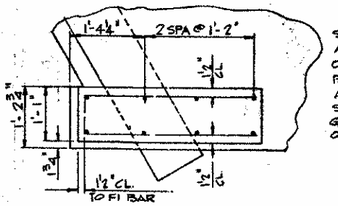


SECTION THRU SIDEWALK



DETAIL OF SIDEWALK BRACKET





END POST DETAILS

SEE STD. GUARD RAIL ANCHORAGE SHEET FOR LOCATION OF CG BARS FOR CURVED END BLOCKS AND GUARD RAIL ANCHORAGE ASSEMBLY. SEE LOCATION SKETCH ON GENERAL DRWG. FOR LOCATION OF GUARD RAIL ANCHORAGE.

PROJECT NO. B-2326309
CUMBERLAND COUNTY
STATION: 269 + 51.05

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
TYPICAL SECTIONS
DETAILS

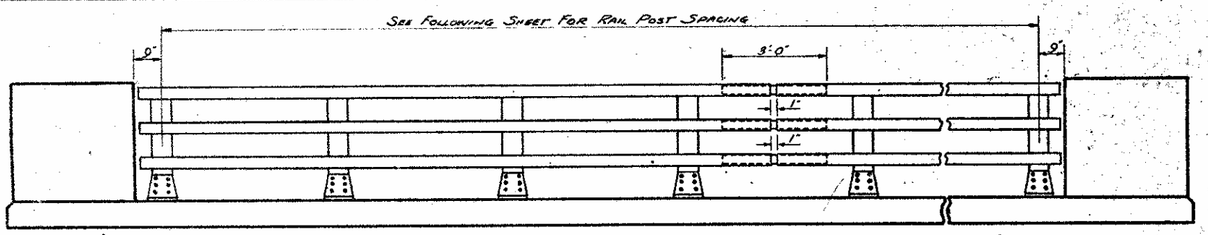
JUNE 1972

REVISIONS						
NO.	BY	DATE	NO.	BY	DATE	
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2			4			

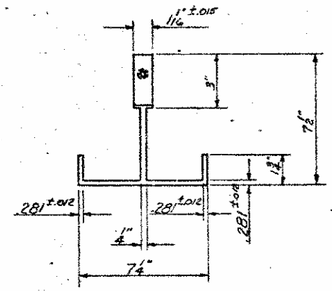
SHEET NO. S-19
TOTAL SHEETS 124

DRAWN BY W.N. GOODWIN DATE JUNE - 72
CHECKED BY DATE Oct. 1972

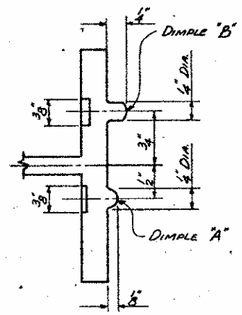
FED. ROAD DIST. NO.	STATE	PROJECT NO.
4	N. C.	B-2326(3)
F. A. PROJECT	M-5304(3)	



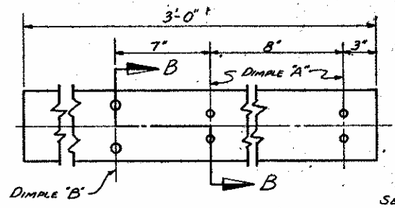
ELEVATION



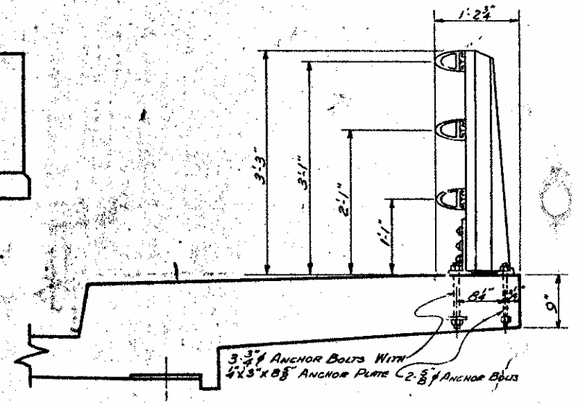
PLAN

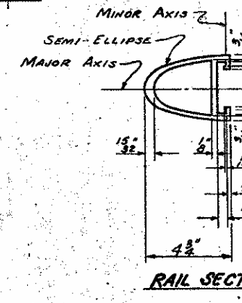


SECTION B-B



BACK ELEVATION

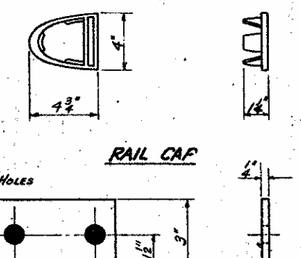




BAR SECTION

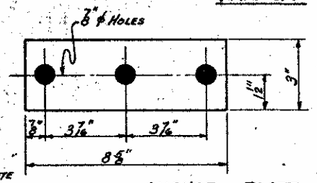
EXPANSION BAR DETAILS

RAIL SECTION

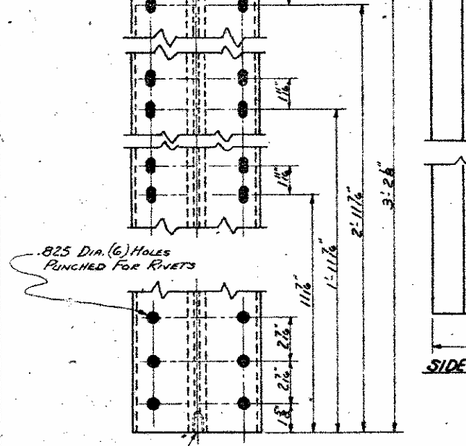


SECTION THRU CURB & RAIL

RAIL CAP

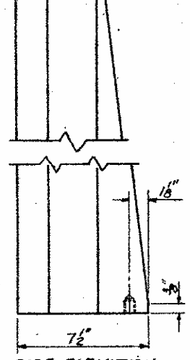


ANCHOR PLATE

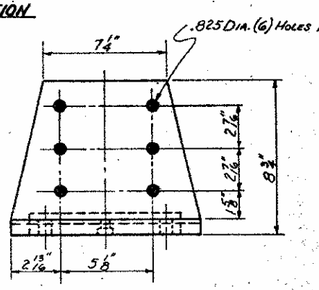


FRONT ELEVATION

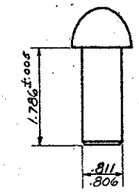
DETAILS OF POST



SIDE ELEVATION

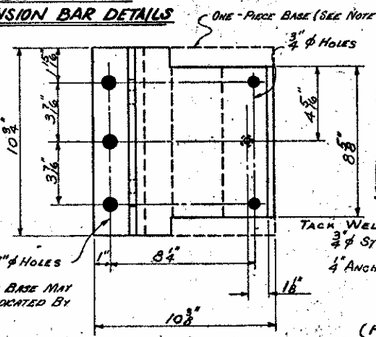


FRONT ELEVATION

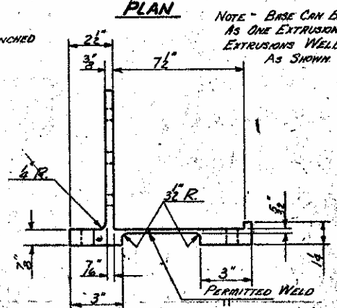


RIVET DETAIL

Note No 1- One-Piece Base May Be The Shape As Indicated By The Dash Lines.



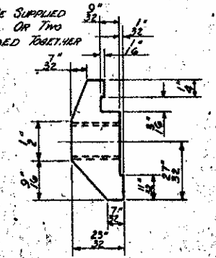
PLAN



SIDE ELEVATION

POST BASE DETAILS

Note - Base Can Be Supplied As One Extrusion. Or Two Extrusions Welded Together As Shown

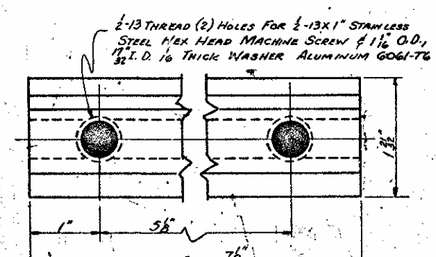




ANCHOR ASSEMBLY

(For Optional Anchor Unit See Sheet 3 Of 3)

CLAMP & RAIL ASSEMBLY



CLAMP BAR DETAIL

(6 Required Per Post)

At The Contractors Option Metal Rail May Be Either Aluminum Or Galvanized Steel In Accordance With The Requirements Of The General Notes And The Following Specifications For The Alternate Materials; However The Contractor Will Be Required To Use The Same Rail Material On All Structures On The Project For Which Metal Rail Is Designated.

ALUMINUM RAILS

Material For Posts, Bases & Rails, Expansion Bars, & Clamp Bars Shall Be A.S.T.M. B221 Alloy 6061-T6

Material For Aluminum Washer Shall Be A.S.T.M. B-209 Alloy Alclad 2024-T4.

Material For Rivets Shall Be A.S.T.M. B-316 Alloy 6061-T6

Rivets Shall Be Std. Button Head & Cone Point Cold Driven As Per Drawing.

Material For Aluminum Nuts Shall Be A.S.T.M. B211 Alloy 6061-T6

The Base Of Rail Posts, Or Any Other Aluminum Surface In Contact With Concrete Shall Be Thoroughly Coated With An Aluminum Impregnated Caulking Compound Of Approved Quality.

Material for shims to be A.S.T.M. B-209 Alloy 6061-T6.

GALVANIZED STEEL RAILS

Materials And Galvanizing Are To Conform To The Following Specifications.

Post, Post Bases, Rails, Expansion Bars And Clamp Bars: ASTM A-36 Grade Structural Steel - Galvanized To ASTM - A-123.

Rivets: Rivets Shall Meet The Requirments Of A.S.T.M. A502 For Grade 1 Rivets.

Nuts & Washers For Top End Of Anchor Assembly For Steel Rail Shall Be Type 430 Stainless Steel.

The Cut Ends Of Galvanized Steel Railing, After Grinding Smooth Shall Be Given Two Coats Of Zinc Rich Paint Meeting The Requirements Of Federal Specification MIL-P-26915 USAF Type I, Or Of Federal Specifications TT-P-641.

Shims: Shims Shall Meet The Requirments Of A.S.T.M. A570 For Grade C Or A611 For Grade C, And Shall Be Galvanized In Accordance With A.S.T.M. A123

Closure Plates: Closure Plates Shall Meet The Requirments Of ASTM A 245 Grade C And Shall Be Galvanized In Accordance With ASTM - A123

GENERAL NOTES

1. Railing Shall Be Continuous From End Post To End Post Of Bridge. Each Joint In Rail Length Shall Be Spliced As Detailed. Panel Lengths Of Rail Shall Be Attached To A Minimum Of Three Posts.
2. End Of Rail To Clear Face Of Concrete End Post By 1½".
3. Material For Anchor Studs Shall Be Type 430 Stainless Steel With Minimum 70,000 P.S.I. Ultimate Strength.

 Studs To Be Embedded 7" In Concrete. Nuts Shall Be American Standard Finished Hexagon Thick Nuts, Class 2B Thread. Anchor Plates Shall Be A.S.T.M. A-36. Machine Screws For Rail Attachment Shall Be Type 430 Stainless Steel.
4. Certified Mill Reports Are Required For Rails & Posts. Shop Inspection Is Not Required.
5. Metal Rail Posts To Be Set Normal To Curb Grade.
6. Method Of Measurment For Metal Rails: For Length Of Metal Rails To Be Paid For See The 1972 Standard Specifications Sub Article 460-4(A)
7. Curved Rail Usage: Where Rails Are To Be Used On Bridges On Horizontal And/Or Vertical Curvature The Contractor May At His Option Have The Required Curvature In The Rail Formed In The Shop Or In The Field. In Either Event The Rail Shall Conform Without Buckling Or Kinking To The Required Curvature In A Uniform Manner Acceptable To The Engineer.
8. To insure future identification of the fabricater, a permanent identifing mark shall be placed on each post. The method of marking and location shall be such that it does not detract from the appearance of the post.
9. Shims to be used as necessary for post alignment.
10. Alloy 6351-T5 may be substituted for Alloy 6061-T6 where applicable.

PROJECT NO. B-2326(3)

CUMBERLAND COUNTY

STATION: 269+51.05

SHEET 1 OF 3

NOTE: Minor Variations In Details Of Metal Rail Will Be Considered. Details Of Such Variations, If Desired, Shall Be Submitted For Approval.

REVISIONS	NO.	BY	DATE
	1		
	2		
	3		
	4		

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

STANDARD
3 BAR
METAL RAIL

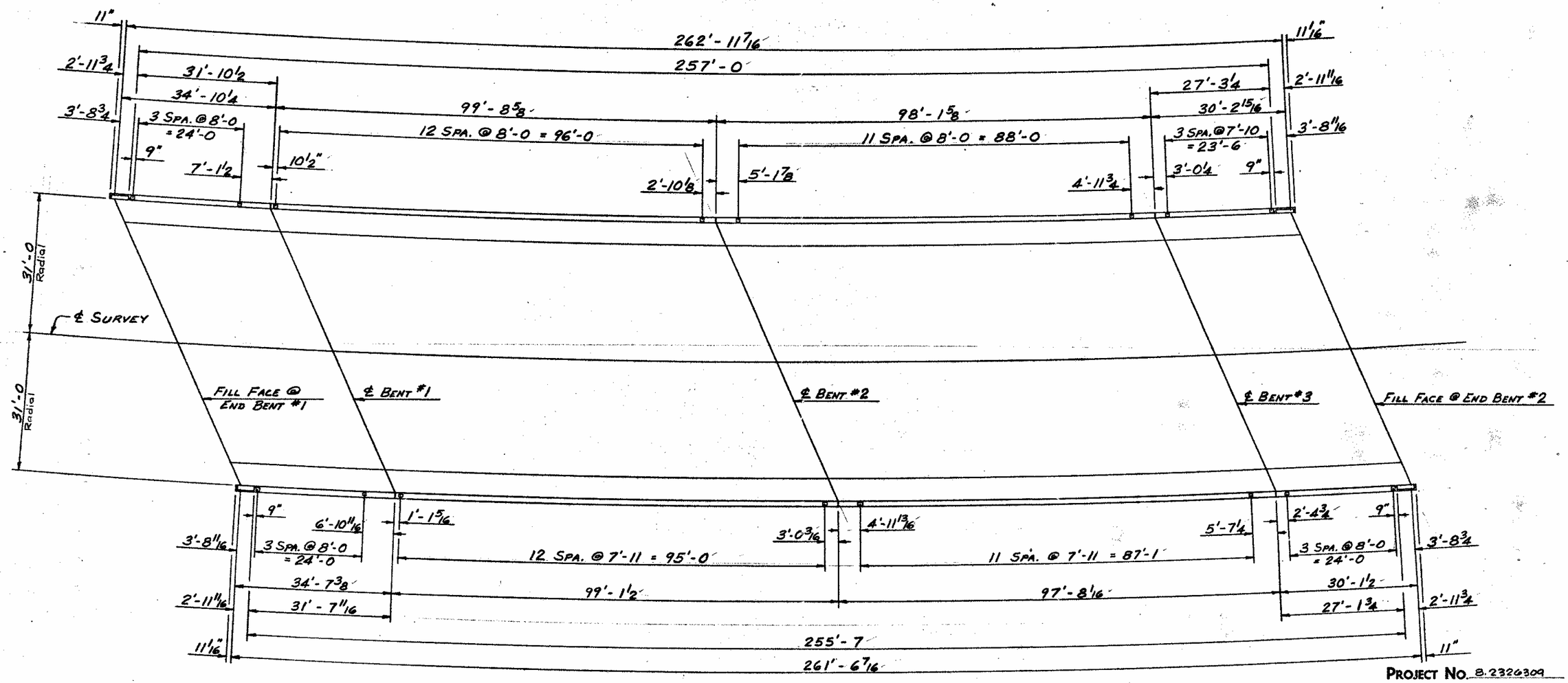
AUGUST 1964

SHEET NO. 2-2-2
TOTAL SHEETS 3

DRAWN BY GOODWIN DATE 1-17-73
CHECKED BY [illegible] DATE 1-17-73

Rev. #1 - To Change Aluminum Alloy From 2024-T3 To 2024-T4.

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(5)	



RAIL POST SPACING

NOTE: ALL DIMENSIONS ARE ALONG INSIDE FACE OF RAILS.

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05

SHEET 2 OF 3

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

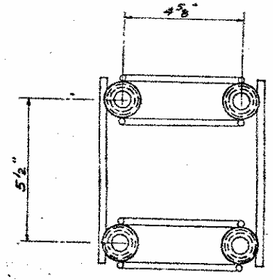
SUPERSTRUCTURE
RAIL POST SPACING

OCTOBER 1972

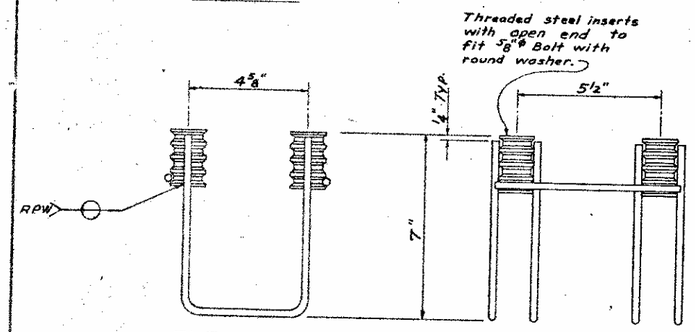
REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-21
1			3			TOTAL SHEETS
2			4			124

DRAWN BY J.C. CATO DATE OCT. 1972
CHECKED BY W.N.G. DATE OCT. 1972

FED. ROAD DIV. NO.	STATE	PROJECT NO.
7	N.C.	B-2326(3)
F.A. PROJECT	M-536A(3)	

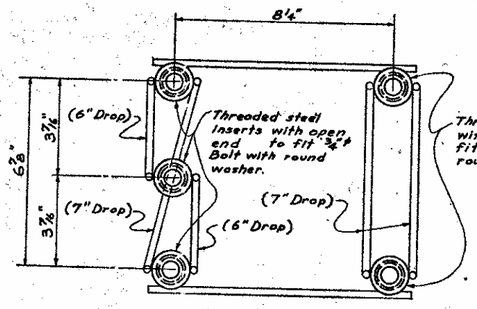


PLAN

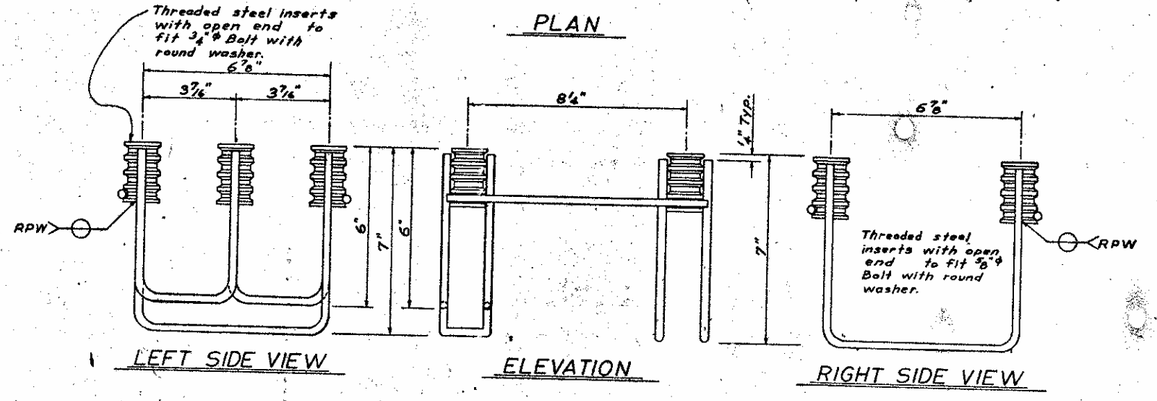


ELEVATION SIDE VIEW

4-BOLT PRESET ANCHOR
FOR 1 BAR METAL RAIL



PLAN



LEFT SIDE VIEW ELEVATION RIGHT SIDE VIEW

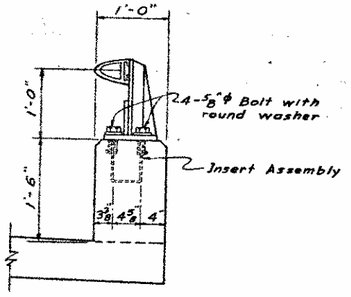
5-BOLT PRESET ANCHOR
FOR 2 OR 3 BAR METAL RAIL

GENERAL NOTES

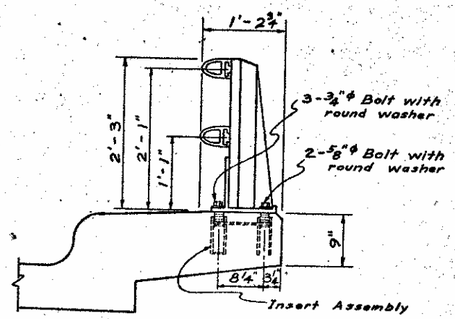
This Preset Anchor Assembly may be used in lieu of the anchorage shown on the Standard Metal Rail Sheet.
The cost of the Preset Anchor Assembly with bolts and washers complete in place shall be included in the price bid for Lin. Ft. Metal Rail.
The wire gage and threaded steel inserts to be of sufficient strength to insure load anchoring capacity as specified in the AASHO Specifications.
The Preset Anchor Units to be hot dipped galvanized to conform to requirements of A.S.T.M. A 123.

Anchor Bolts to be either high tensile steel conforming to A.S.T.M. A 449 and galvanized to conform to A.S.T.M. 153 or stainless steel Type 430 with a minimum 70,000 p.s.i. ultimate strength.

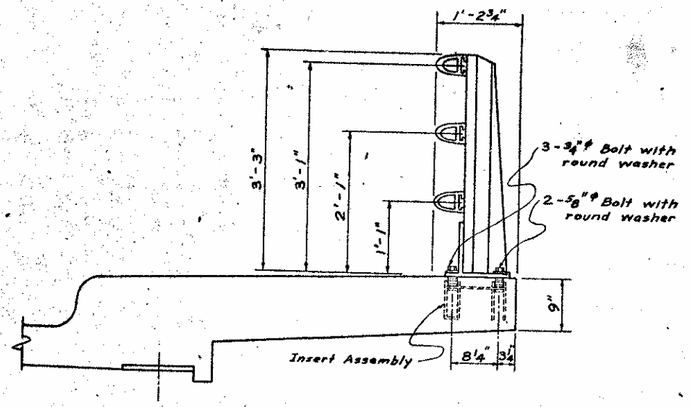
Bolts to be tightened one-half turn with the wrench from a finger-tight position.



SECTION THRU PARAPET & RAIL



SECTION THRU CURB & RAIL



SECTION THRU SIDEWALK & RAIL

Revision Nº 1: Revised to change Preset Anchor for 1-Bar Metal Rail. 2-4-71 By J.A.J ✓By J.L.S.
Revision Nº 2: Revised to change note concerning tightening of bolts. 3-15-71 By J.A.J. ✓ By J.L.S.
Revision Nº 3: Revised to change weld symbol. 3-19-71 By J.A.J. ✓By J.L.S.

ASSEMBLED BY Goodwin DATE 1-17-73		
CHECKED BY [illegible] DATE 1-17-73	SPECIAL	
DRAWN BY Joel R. Johnson DATE Dec. 3, 1970		
CHECKED BY G.L. Smith, Jr. DATE Dec. 16, 1970	STANDARD	

GUTZMER PRINT 5201

No Change May 1972

PROJECT NO. B-2326309
CUMBERLAND COUNTY
STATION: 269+51.05
SHEET 3 OF 3

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

STANDARD METAL RAIL OPTIONAL PRESET ANCHOR UNITS

DECEMBER 1970

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-22
1	J.A.J.	2-4-71	3	J.A.J.	3-19-71	TOTAL SHEETS
2	J.A.J.	3-15-71	4			

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326301
F. A. PROJECT	M-5369(3)	

74 -#G1 @ 6" CTS.
25 -#G2 @ 1'-6" CTS.
#5A141 THRU A170 @ 5½" CTS. BOTTOM OF SLAB. (2-BARS PER MARK)
#5A101 THRU A130 @ 5½" CTS. TOP OF SLAB. (2-BARS PER MARK)
11 -#4B4 IN SIDEWALK (2-BAR RUNS) SEE TYP. SECT. FOR SPA.
7 -#4B2 @ 12" CTS. ALONG SKEW
RADIAL
6'-2¾"
5'-7½"
26'-0"
A141
A101
A2
A1
12" CURTAIN WALL
F.F. @ E.BT. #1
29'-3 7/16"
14'-5⅞"
14'-8⅝"
35 -#4B3 @ 1'-6" TOP OF SLAB (2-BAR RUNS)
70 -#5B3 IN BOTTOM OF SLAB (SEE TYP. SECT. FOR SPA.)
56 -#A52 (SEE TYP. SECT. FOR SPA.)
29'-0¾"
5'-7½"
SHORT CHORD SPAN "A" = 34'-8¾"
63°-11'-49.8"
2¾"
℄ SURVEY
59 -#B1 @ 4'-9½" @ 9" CTS. ALONG SKEW
9" PAVEMENT BRACKET
29'-2 3/8"
12 -#5A2 @ 5½" CTS. BOTTOM OF SLAB.
13 -#5A1 @ 5½" CTS. TOP OF SLAB.
A1
A2
A181
A211
28'-11¾"
℄ BT. #1
5'-6⅛"
7 -#4B2 @ 12" CTS. ALONG SKEW
11 -#4B4 IN SIDEWALK (2-BAR RUNS) SEE TYP. SECT. FOR SPA.
#5A181 THRU A209 @ 5½" CTS. TOP OF SLAB. (2-BARS PER MARK)
#5A211 THRU A240 @ 5½" CTS. BOTTOM OF SLAB. (2-BARS PER MARK)
74 -#G1 @ 6" CTS.
25 -#G2 @ 1'-6" CTS.
℄ EXP. JT. MAT'L.

2'-5"
6 SPA. @ 5'-0"
2'-5"
F.F. @ E.BT. #1
℄ E.BT. #1
CURB OFFSETS - LEFT SIDE - SPAN "A"
2'-3⅞"
6 SPA. @ 5'-0"
2'-3⅞"
F.F. @ E.BT. #1
℄ E.BT. #1
CURB OFFSETS - RIGHT SIDE - SPAN "A"

SPAN "A"

65 -#G1 @ 6" CTS.
22 -#G2 @ 1'-6" CTS.
#5A521 THRU A543 @ 5½" CTS. BOTTOM OF SLAB (2-BARS PER MARK)
#5A491 THRU A512 @ 5½" CTS. TOP OF SLAB (2-BARS PER MARK)
11 -#4B6 IN SIDEWALK SEE TYP. SECT. FOR SPA.
7 -#4B2 @ 12" CTS. ALONG SKEW
5'-4⅛"
56 -#A52 (SEE TYP. SECT. FOR SPA.)
27'-11½"
A521
A491
A2
A1
35 -#4B6 @ 1'-6" TOP OF SLAB
70 -#5B6 IN BOTTOM OF SLAB (SEE TYP. SECT. FOR SPA.)
11'-1 3/16"
SHORT CHORD SPAN "D" = 30'-2 3/16"
68°-56'-28.9"
2¾"
℄ SURVEY
℄ BT. #3
18 -#5A1 @ 5½" CTS. TOP OF SLAB
17 -#5A2 @ 5½" CTS. BOTTOM OF SLAB
A1
A2
A551
A581
27'-10⅜"
5'-4⅛"
5'-4"
56 -#B1 & #A51 @ 12" CTS. ALONG SKEW
27'-9¾"
12" CURTAIN WALL
11-3 1/16"
F.F. @ E.BT. #2
9" PAVEMENT BRACKET
7 -#4B2 @ 12" CTS. ALONG SKEW
11 -#4B6 IN SIDEWALK SEE TYP. SECT. FOR SPA.
#5A551 THRU A572 @ 5½" CTS. TOP OF SLAB. (2-BARS PER MARK)
#5A581 THRU A603 @ 5½" CTS. BOTTOM OF SLAB. (2-BARS PER MARK)
℄ EXP. JT. MAT'L.
65 -#G1 @ 6" CTS.
22 -#G2 @ 1'-6" CTS.

SPAN "D"

0'-1⅜"
6 SPA. @ 5'-0"
0'-1⅜"
℄ BT. #3
℄ E.BT. #2
CURB OFFSETS - LEFT SIDE - SPAN "D"
0'-0⅝"
6 SPA. @ 5'-0"
0'-0⅝"
℄ BT. #3
℄ E.BT. #2
CURB OFFSETS - RIGHT SIDE - SPAN "D"

PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE PLAN
SPANS "A & D"

JUNE 1972

DRAWN BY W.N. GOODWIN DATE JUNE 1972
CHECKED BY [illegible] DATE Oct. 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-23
1			3			TOTAL SHEETS
2			4			124

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	

*5A281 THRU A308 @5½" CTS.
(2 BARS PER MARK) BOTTOM OF SLAB
*5A251 THRU A278 @5½" CTS.
(2 BARS PER MARK) TOP OF SLAB
204 -*4G1 @6" CTS.
68 -*4G2 @1'-6" CTS.
11 -*4B8 IN SIDEWALK
4 - BAR RUNS (SEE TYP. SECT. FOR SPA.)
RADIAL
1'-2¾"
6'-2¾"
9'-7⅜"
56 -*4S2 SEE TYP. SECT. FOR SPA.
29'-0¾"
26'-0"
A1
A2
A281
A251
2¾"
2¾"
2¾"
13'-6 "16"
@1'-6" CTS. TOP OF SLAB (4 BAR RUNS)
IN BOTTOM OF SLAB (2 BAR RUNS)
SEE TYP. SECT. FOR SPA.
35 -*4B8
70 -*5S7
SHORT CHORD SPAN "B" = 99'-4⅞"
℄ SURVEY
64°-52'-26.3"
158 -*5A2 BARS @5½" CTS. BOTTOM OF SLAB
159 -*5A1 BARS @5½" CTS. TOP OF SLAB
℄ BT. #1
28'-11⅜"
6'-2¾"
5'-5⅜"
1'-2¾"
℄ ½" EXP. JT. MAT'L.
11 -*4B8 IN SIDEWALK
4 - BAR RUNS (SEE TYP. SECT. FOR SPA.)
204 -*4G1 @6" CTS.
68 -*4G2 @1'-6" CTS.

18 SPA. @5'-0"
4'-7"
1⅛" 2⅝" 3⅝" 4⅛" 4⅝" 5" 5⅛" 5⅛" 5⅛" 5⅛" 5⅛" 5" 4⅝" 4⅛" 3⅝" 2⅝" 1⅛"
℄ BT. #1
℄ BT. #2
CURB OFFSETS - RIGHT SIDE - SPAN "B"

5'-5⅜"
56 -*4S2 SEE TYP. SECT. FOR SPA.
28'-5⅝"
13'-7⅜"
64°-52'-26.3"
℄ BENT #2
28'-4⅞"
5'-5⅜"
A1
A2
A311
A341
*5A311 THRU A337 @5½" CTS.
(2 BARS PER MARK) TOP OF SLAB
*5A341 THRU A367 @5½" CTS. (2 BARS PER MARK) BOTTOM OF SLAB
℄ 1" EXP. JT. MAT'L.

18 SPA. @5'-0"
4'-7"
1⅛" 2⅛" 2⅝" 3⅛" 3⅝" 4⅛" 4⅝" 5" 5⅛" 5⅛" 5⅛" 5⅛" 5⅛" 5" 4⅝" 4⅛" 3⅝" 3⅛" 2⅝" 2⅛" 1⅛"
℄ BT. #1
℄ BT. #2
CURB OFFSETS - LEFT SIDE - SPAN "B"

PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
PLAN OF SLAB
SPAN "B"

JUNE 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-24
1			3			TOTAL SHEETS
2			4			124

DRAWN BY: W.N. GOODWIN DATE: JUNE-72
TRACED BY: DATE:

FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N.C.	[illegible]
F. A. PROJECT	M-5369(3)	

*5A401 THRU A425 @5½" CTS.
(2 BARS PER MARK) BOTTOM OF SLAB
*5A371 THRU A395 @5½" CTS.
(2 BARS PER MARK) TOP OF SLAB

200 -*AG1 @6" CTS.
67 -*AG2 @1'-6" CTS.

11-*4B10 IN SIDEWALK
4-BAR RUNS (SEE TYP. SECT. FOR SPA.)

RADIAL

6'-2¾"

1'-2¾"

5'-5½"

56-*4S2 SEE TYP. SECT. FOR SPA.

28'-5½"

26'-0"

A1
A2

2¾"
2¾"
2¾"

12'-1'16"

@1'-6" CTS. TOP OF SLAB (4 BAR RUNS)

35-*4B10 IN BOTTOM OF SLAB (2 BAR RUNS)
70-*5B9 SEE TYP. SECT. FOR SPA.

SHORT CHORD SPAN "C" = 97'-10 11/16"

℄ SURVEY

67°-20'-25.4"

6 BT #2

28-A3¾"

6'-2¾"

1'-2¾"

5'-5½"

℄ 1" EXP. JT. MAT'L.

161-*5A2 BARS @5½" CTS. BOTTOM OF SLAB
162-*5A1 BARS @5½" CTS. TOP OF SLAB

11-*4B10 IN SIDEWALK
4-BAR RUNS (SEE TYP. SECT. FOR SPA.)

200 -*AG1 @6" CTS.
67 -*AG2 @1'-6" CTS.

2'-10¾"

18-SPA @5'-0"

2'-10¾"

℄ BT. #2

4-BT. #3

CURB OFFSETS - RIGHT SIDE - SPAN "C"

4'-0½"

18-SPA @5'-0"

4'-0½"

CURB OFFSETS - LEFT SIDE - SPAN "C"

5'-4½"

56-*4S2 SEE TYP. SECT. FOR SPA.

27'-11½"

12'-1¾"

67°-20'-25.4"

2¾"
2¾"
2¾"

A1
A2

℄ BENT #3

27'-10½"

5'-4½"

℄ 1" EXP. JT. MAT'L.

*5A431 THRU A454 @5½" CTS.
(2 BARS PER MARK) TOP OF SLAB

*5A461 THRU A484 @5½" CTS. (2 BARS PER MARK) BOTTOM OF SLAB

DRAWN BY W.N. GOODWIN DATE JUNE '72
CHECKED BY [illegible] DATE Oct. 1972

PROJECT NO. 8.2326309
CUMBERLAND COUNTY
STATION: 269+51.05

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH
SUPERSTRUCTURE
PLAN OF SLAB
SPAN "C"

JUNE 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-2
1			3			TOTAL SHEETS
2			4			12

BAR SCHEDULE

BAR	NUMBR	SIZE	TYPE	LENGTH	WEIGHT
A1	352	5	1	57- 6	21,110
A2	348	5	2	58- 2	21,112
B1	115	4	11	5- 6	423
B2	20	4	11	6- 0	112
B3	70	5	STR	34- 3	2,501
B4	114	4	STR	18- 0	1,371
B5	70	5	STR	29- 9	2,172
B6	57	4	STR	29- 9	1,135
B7	140	5	STR	50- 6	7,174
B8	228	4	STR	25- 10	3,935
B9	140	5	STR	49- 10	7,277
B10	228	4	STR	25- 6	3,884
E1	8	8	STR	5-11	126
E2	24	8	11	4- 4	278
F1	16	6	10	7-10	188
F2	16	4	STR	3- 4	36
G1	1086	4	5	8- 4	6,045
G2	364	4	STR	5- 0	1,216
K1	84	5	STR	8- 0	701
K2	72	5	6	6- 0	451
K3	24	5	7	3- 11	98
K4	16	4	STR	19- 4	207
K5	4	4	STR	13- 0	35
K6	8	6	STR	19- 8	236
K7	20	4	STR	18- 8	249
K8	8	6	STR	19- 5	233
A101	2	5	3	55- 4	115
A102	2	5	3	53- 6	112
A103	2	5	3	51- 8	108
A104	2	5	3	49-10	104
A105	2	5	3	48- 1	100
A106	2	5	3	46- 3	96
A107	2	5	3	44- 5	93
A108	2	5	3	42- 7	89
A109	2	5	3	40-10	85
A110	2	5	3	39- 0	81
A111	2	5	3	37- 2	78
A112	2	5	3	35- 5	74
A113	2	5	3	33- 7	70
A114	2	5	3	31- 9	66
A115	2	5	3	29-11	62
A116	2	5	3	28- 2	59
A117	2	5	3	26- 4	55
A118	2	5	3	24- 6	51
A119	2	5	3	22- 9	47
A120	2	5	3	20-11	44
A121	2	5	3	19- 1	40
A122	2	5	3	17- 4	36
A123	2	5	3	15- 6	32
A124	2	5	3	13- 8	29
A125	2	5	3	11-11	25
A126	2	5	3	10- 1	21
A127	2	5	3	8- 3	17
A128	2	5	3	6- 6	14
A129	2	5	3	4- 8	10
A130	2	5	3	2-11	6
A141	2	5	4	56- 1	117
A142	2	5	4	54- 3	113
A143	2	5	4	52- 6	110
A144	2	5	4	50- 8	106
A145	2	5	4	48-10	102
A146	2	5	4	47- 0	98
A147	2	5	4	45- 3	94
A148	2	5	4	43- 5	91
A149	2	5	4	41- 7	87
A150	2	5	4	39- 9	83
A151	2	5	4	38- 0	79
A152	2	5	4	36- 2	75
A153	2	5	4	34- 4	72
A154	2	5	4	32- 7	68
A155	2	5	4	30- 9	64
A156	2	5	4	28-11	60
A157	2	5	4	27- 1	56
A158	2	5	4	25- 4	53
A159	2	5	4	23- 6	49
A160	2	5	4	21- 8	45
A161	2	5	4	19-11	42
A162	2	5	4	18- 1	38
A163	2	5	4	16- 3	34
A164	2	5	4	14- 6	30
A165	2	5	4	12- 8	26
A166	2	5	4	10-10	23
A167	2	5	4	9- 1	19
A168	2	5	4	7- 3	15
A169	2	5	4	5- 6	11
A170	2	5	4	3- 8	8
A181	2	5	3	55- 4	115
A182	2	5	3	53- 6	112
A183	2	5	3	51- 8	108
A184	2	5	3	49-10	104
A185	2	5	3	48- 0	100
A186	2	5	3	46- 3	96
A187	2	5	3	44- 5	93
A188	2	5	3	42- 7	89
A189	2	5	3	40- 9	85
A190	2	5	3	38-11	81
A191	2	5	3	37- 1	77
A192	2	5	3	35- 4	74
A193	2	5	3	33- 6	70
A194	2	5	3	31- 8	66
A195	2	5	3	29-10	62
A196	2	5	3	28- 0	58
A197	2	5	3	26- 2	55
A198	2	5	3	24- 4	51
A199	2	5	3	22- 7	47
A200	2	5	3	20- 9	43
A201	2	5	3	18-11	39
A202	2	5	3	17- 1	36
A203	2	5	3	15- 3	32
A204	2	5	3	13- 5	28
A205	2	5	3	11- 7	24
A206	2	5	3	9- 9	20
A207	2	5	3	8- 0	17
A208	2	5	3	6- 2	13
A209	2	5	3	4- 4	9
A211	2	5	4	56- 1	117
A212	2	5	4	54- 3	113
A213	2	5	4	52- 5	109
A214	2	5	4	50- 8	106
A215	2	5	4	48-10	102
A216	2	5	4	47- 0	98
A217	2	5	4	45- 2	94
A218	2	5	4	43- 4	90
A219	2	5	4	41- 7	87
A220	2	5	4	39- 9	83
A221	2	5	4	37-11	79
A222	2	5	4	36- 1	75
A223	2	5	4	34- 3	71
A224	2	5	4	32- 5	68
A225	2	5	4	30- 8	64
A226	2	5	4	28-10	60
A227	2	5	4	27- 0	56
A228	2	5	4	25- 2	52
A229	2	5	4	23- 4	49
A230	2	5	4	21- 6	45
A231	2	5	4	19- 8	41
A232	2	5	4	17-10	37
A233	2	5	4	16- 1	34
A234	2	5	4	14- 3	30
A235	2	5	4	12- 5	26
A236	2	5	4	10- 7	22
A237	2	5	4	8- 9	18
A238	2	5	4	6-11	14
A239	2	5	4	5- 1	11
A240	2	5	4	3- 3	7
A251	2	5	3	55- 2	115
A252	2	5	3	53- 5	111
A253	2	5	3	51- 4	107
A254	2	5	3	49- 4	103
A255	2	5	3	47- 5	99
A256	2	5	3	45- 6	95
A257	2	5	3	43- 7	91
A258	2	5	3	41- 7	87
A259	2	5	3	39- 8	83
A260	2	5	3	37- 9	79
A261	2	5	3	35-10	75
A262	2	5	3	33-10	71
A263	2	5	3	31-11	67
A264	2	5	3	30- 0	63
A265	2	5	3	28- 1	59
A266	2	5	3	26- 2	55
A267	2	5	3	24- 2	50
A268	2	5	3	22- 3	46
A269	2	5	3	20- 4	42
A270	2	5	3	18- 5	38
A271	2	5	3	16- 6	34
A272	2	5	3	14- 6	30
A273	2	5	3	12- 7	26
A274	2	5	3	10- 8	22
A275	2	5	3	8- 9	18
A276	2	5	3	6-10	14
A277	2	5	3	4-11	10
A278	2	5	3	2-11	6
A281	2	5	4	56- 0	117
A282	2	5	4	54- 1	113
A283	2	5	4	52- 1	109
A284	2	5	4	50- 2	105
A285	2	5	4	48- 3	101
A286	2	5	4	46- 4	97
A287	2	5	4	44- 4	92
A288	2	5	4	42- 5	88
A289	2	5	4	40- 6	84
A290	2	5	4	38- 7	80
A291	2	5	4	36- 7	76
A292	2	5	4	34- 8	72
A293	2	5	4	32- 9	68
A294	2	5	4	30-10	64
A295	2	5	4	28-11	60
A296	2	5	4	26-11	56
A297	2	5	4	25- 0	52
A298	2	5	4	23- 1	48
A299	2	5	4	21- 2	44
A300	2	5	4	19- 3	40
A301	2	5	4	17- 3	36
A302	2	5	4	15- 4	32
A303	2	5	4	13- 5	28
A304	2	5	4	11- 6	24
A305	2	5	4	9- 7	20
A306	2	5	4	7- 7	16
A307	2	5	4	5- 8	12
A308	2	5	4	3- 9	8
A311	2	5	3	55- 2	115
A312	2	5	3	53- 2	111
A313	2	5	3	51- 3	107
A314	2	5	3	49- 3	103
A315	2	5	3	47- 3	99
A316	2	5	3	45- 4	95
A317	2	5	3	43- 4	90
A318	2	5	3	41- 4	86
A319	2	5	3	39- 5	82
A320	2	5	3	37- 5	78
A321	2	5	3	35- 5	74
A322	2	5	3	33- 6	70
A323	2	5	3	31- 6	66
A326	2	5	3	29- 6	62
A325	2	5	3	27- 7	58
A326	2	5	3	25- 7	53
A327	2	5	3	23- 7	49
A328	2	5	3	21- 8	45
A329	2	5	3	19- 8	41
A330	2	5	3	17- 8	37
A331	2	5	3	15- 8	33
A332	2	5	3	13- 9	29
A333	2	5	3	11- 9	25
A334	2	5	3	9- 9	20
A335	2	5	3	7-10	16
A336	2	5	3	5-10	12
A117	2	5	3	3-10	8
A341	2	5	4	56- 0	117
A342	2	5	4	54- 0	113
A343	2	5	4	52- 0	108
A344	2	5	4	50- 1	104
A345	2	5	4	48- 1	100
A346	2	5	4	46- 2	96
A347	2	5	4	44- 2	92
A348	2	5	4	42- 2	88
A349	2	5	4	40- 3	84
A350	2	5	4	38- 3	80
A351	2	5	4	36- 3	76
A352	2	5	4	34- 4	72
A353	2	5	4	32- 4	67
A354	2	5	4	30- 4	63
A355	2	5	4	28- 5	59
A356	2	5	4	26- 5	55
A357	2	5	4	24- 5	51
A358	2	5	4	22- 5	47
A359	2	5	4	20- 6	43
A360	2	5	4	18- 6	39
A361	2	5	4	16- 6	34
A362	2	5	4	14- 7	30
A363	2	5	4	12- 7	26
A364	2	5	4	10- 7	22
A365	2	5	4	8- 7	18
A366	2	5	4	6- 8	14
A367	2	5	4	4- 8	10
A371	2	5	3	54-11	115
A372	2	5	3	52- 9	110
A373	2	5	3	50- 7	106
A374	2	5	3	48- 5	101
A375	2	5	3	46- 3	96
A376	2	5	3	44- 1	92
A377	2	5	3	41-10	87
A378	2	5	3	39- 8	83
A379	2	5	3	37- 6	78
A380	2	5	3	35- 4	74
A381	2	5	3	33- 2	69
A382	2	5	3	31- 0	65
A383	2	5	3	28-10	60
A384	2	5	3	26- 8	56
A385	2	5	3	24- 5	51
A386	2	5	3	22- 3	46
A387	2	5	3	20- 1	42
A388	2	5	3	17-11	37
A389	2	5	3	15- 9	33
A390	2	5	3	13- 7	28
A391	2	5	3	11- 5	24
A392	2	5	3	9- 5	19
A393	2	5	3	7- 1	15
A394	2	5	3	4-11	10
A395	2	5	3	2- 9	6
A431	2	5	4	55-10	116
A402	2	5	4	53- 8	112
A403	2	5	4	51- 6	107
A404	2	5	4	49- 3	103
A405	2	5	4	47- 1	98
A406	2	5	4	44-11	94
A407	2	5	4	42- 9	89
A408	2	5	4	40- 7	85
A409	2	5	4	38- 5	80
A410	2	5	4	36- 3	76
A411	2	5	4	34- 0	71
A412	2	5	4	31-10	66
A413	2	5	4	29- 8	62
A414	2	5	4	27- 6	57
A415	2	5	4	25- 4	53
A416	2	5	4	23- 2	48
A417	2	5	4	21- 0	44
A418	2	5	4	18-10	39
A419	2	5	4	16- 8	35
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A421	2	5	4	12- 3	26
A422	2	5	4	10- 1	21
A423	2	5	4	7-11	17
A424	2	5	4	5- 9	12
A425	2	5	4	3- 7	7
A431	2	5	3	54-11	115
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A433	2	5	3	50- 6	105
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A442	2	5	3	30- 7	64
A443	2	5	3	28- 4	59
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A445	2	5	3	23-11	50
A446	2	5	3	21- 9	45
A447	2	5	3	19- 6	41
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A449	2	5	3	15- 1	31
A450	2	5	3	12-10	27
A451	2	5	3	10- 8	22
A452	2	5	3	8- 5	18
A453	2	5	3	6- 2	13
A454	2	5	3	4- 0	8
A461	2	5	4	55-10	116
A462	2	5	4	53- 7	112
A463	2	5	4	51- 5	107
A464	2	5	4	49- 2	103
A465	2	5	4	47- 0	98
A466	2	5	4	44- 9	93
A467	2	5	4	42- 6	89
A468	2	5	4	40- 4	84
A469	2	5	4	38- 1	79
A470	2	5	4	35-11	75
A471	2	5	4	33- 8	70
A472	2	5	4	31- 6	66
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A474	2	5	4	27- 1	56
A475	2	5	4	24-10	52
A476	2	5	4	22- 7	47
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A478	2	5	4	18- 2	38
A479	2	5	4	16- 0	33
A480	2	5	4	13- 9	29
A481	2	5	4	11- 6	24
A482	2	5	4	9- 4	19
A483	2	5	4	7- 1	15
A486	2	5	4	4-10	10
A491	2	5	3	54- 9	114
A492	2	5	3	52- 5	109
A493	2	5	3	50- 0	104
A494	2	5	3	47- 7	99
A495	2	5	3	45- 3	94
A496	2	5	3	42-10	89
A497	2	5	3	40- 6	84
A498	2	5	3	38- 1	79
A499	2	5	3	35- 9	75
A500	2	5	3	33- 4	70
A501	2	5	3	31- 0	65
A502	2	5	3	28- 7	60
A503	2	5	3	26- 3	55
A504	2	5	3	23-10	50
A505	2	5	3	21- 6	45
A506	2	5	3	19- 1	40
A507	2	5	3	16- 9	35
A508	2	5	3	14- 4	30
A509	2	5	3	12- 0	25
A510	2	5	3	9- 8	20
A511	2	5	3	7- 3	15
A512	2	5	3	4-11	10
A521	2	5	4	55- 8	116
A522	2	5	4	53- 4	111
A523	2	5	4	50-11	106
A524	2	5	4	48- 7	101
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A526	2	5	4	43-10	91
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A536	2	5	4	20- 1	42
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A540	2	5	4	10- 7	22
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A543	2	5	4	3- 5	7
A551	2	5	3	54- 9	114
A552	2	5	3	52- 4	109
A553	2	5	3	50- 0	104
A554	2	5	3	47- 7	99
A555	2	5	3	45- 3	94
A556	2	5	3	42-10	89
A557	2	5	3	40- 5	84
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A560	2	5	3	33- 4	70
A561	2	5	3	30-11	64
A562	2	5	3	28- 6	59
A563	2	5	3	26- 2	55
A564	2	5	3	23- 9	50
A565	2	5	3	21- 4	45
A566	2	5	3	19- 0	40
A567	2	5	3	16- 7	35
A568	2	5	3	14- 2	30
A569	2	5	3	11-10	25
A570	2	5	3	9- 5	20
A571	2	5	3	7- 0	15
A572	2	5	3	4- 8	10
A581	2	5	4	55- 8	116
A582	2	5	4	53- 4	111
A583	2	5	4	50-11	106
A584	2	5	4	48- 6	101
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A587	2	5	4	41- 5	86
A588	2	5	4	39- 0	81
A589	2	5	4	36- 7	76
A590	2	5	4	34- 3	71
A591	2	5	4	31-10	66
A592	2	5	4	29- 5	61
A593	2	5	4	27- 1	56
A594	2	5	4	24- 8	51
A595	2	5	4	22- 3	46
A596	2	5	4	19-11	42
A597	2	5	4	17- 6	37
A598	2	5	4	15- 2	32
A599	2	5	4	12- 9	27
A600	2	5	4	10- 4	22
A601	2	5	4	7-11	17
A602	2	5	4	5- 7	12
A603	2	5	4	3- 2	7
S1	115	4	8	2- 0	154
S2	336	4	9	3- 8	823

AREA OF LINSEED OIL APPLICATION

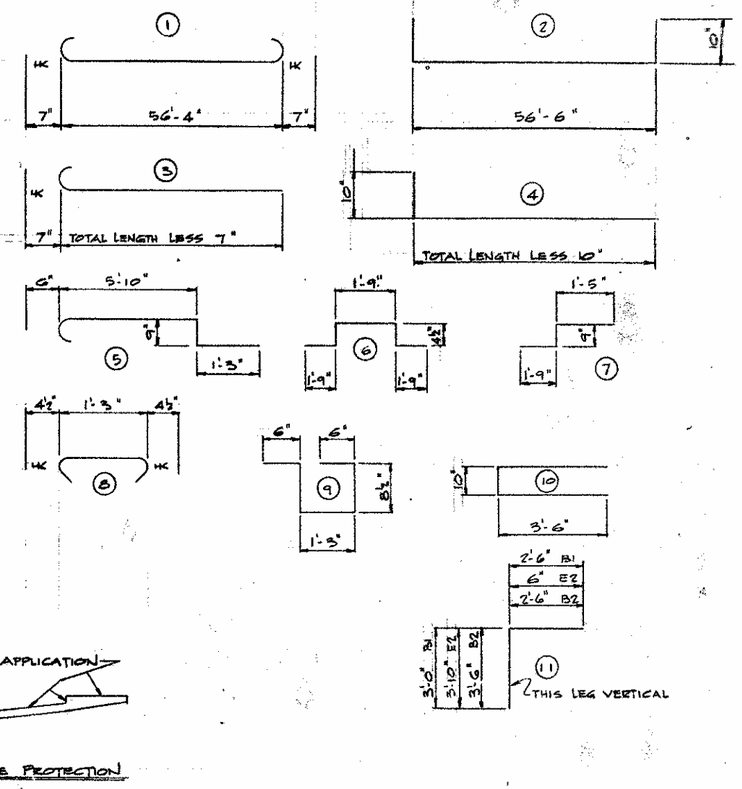
LINSEED OIL CONCRETE PROTECTION

BILL OF MATERIALS	
REINFORCING STEEL - LBS. -	109,242
STRUCTURAL STEEL - APPX. LBS. -	445,700
CLASS "A-A" CONCRETE - CU. YDS. -	516.9
LINSEED OIL CONCRETE PROTECTION - GALS. -	39
3-BAR METAL RAIL - LIN. FT. -	512.08

DIVISION OF CLASS "AA" CONCRETE	
SPAN "A"	* 78.0 CU. YDS
SPAN "B"	186.3 " "
SPAN "C"	183.5 " "
SPAN "D"	* 69.1 " "

* INCLUDES 1.0 CU. YD. FOR 2 END POSTS

BAR TYPES
ALL DIMENSIONS ARE OUT TO OUT.



FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	

PROJECT NO. 8.2326309

CUMBERLAND **COUNTY**

STATION: 269+51.05-L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

SUPERSTRUCTURE
BILL OF MATERIALS
BAR TYPES

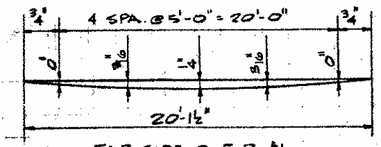
JULY 1972

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-23
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2			4			124

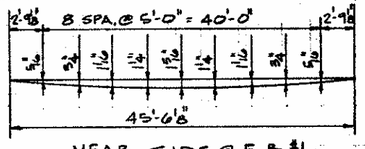
DRAWN BY W.N. GOODWIN DATE JULY-1972
CHECKED BY [illegible] DATE Oct. 1972

DIETZGEN 1566 11753

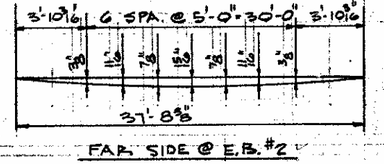
FED. ROAD DIV. NO.	STATE	PROJECT NO.
4	N.C.	8.2326309
F. A. PROJECT	M-5369(3)	



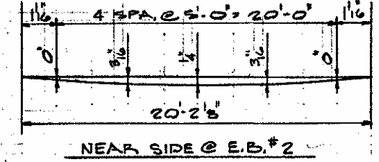
FAR SIDE @ E.B. #1



NEAR SIDE @ E.B. #1

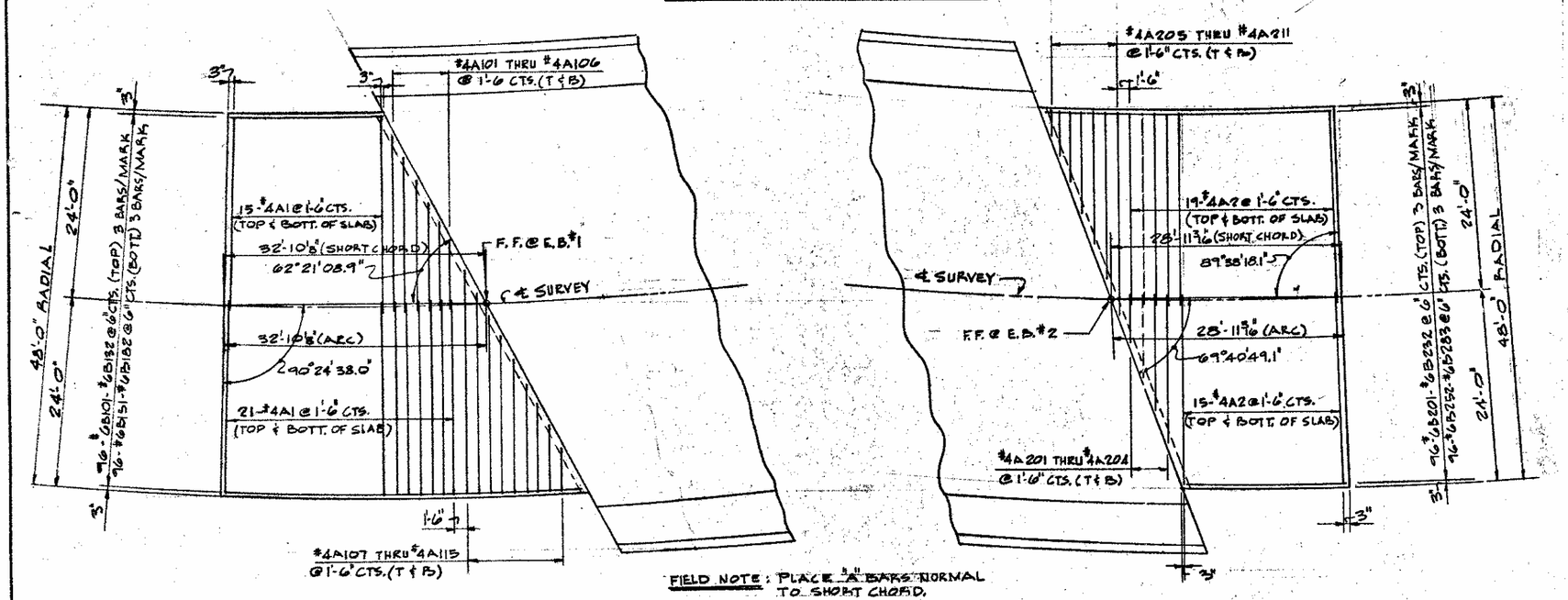


FAR SIDE @ E.B. #2



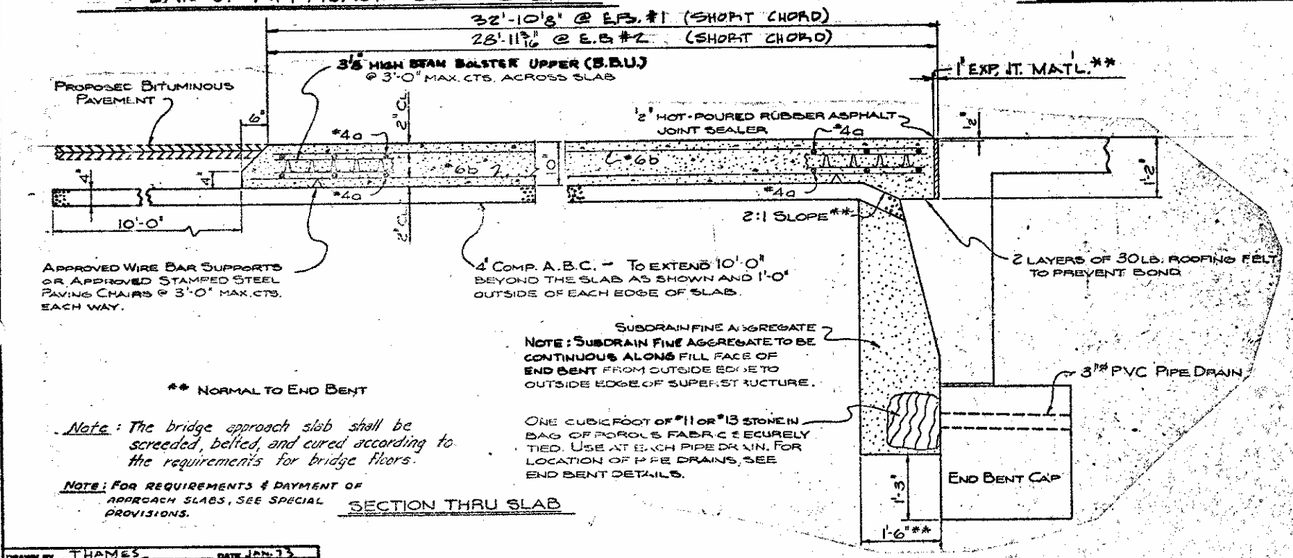
NEAR SIDE @ E.B. #2

CURVE OFFSETS



FIELD NOTE: PLACE "A" BARS NORMAL TO SHORT CHORD.

PLAN OF APPROACH SLAB @ E.B. #1



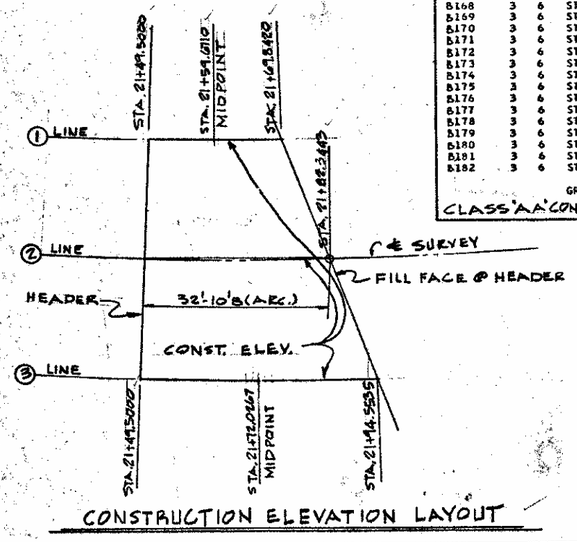
** NORMAL TO END BENT

Note: The bridge approach slab shall be screeded, belted, and cured according to the requirements for bridge floors.

Note: FOR REQUIREMENTS & PAYMENT OF APPROACH SLABS, SEE SPECIAL PROVISIONS.

SECTION THRU SLAB

PLAN OF APPROACH SLAB @ E.B. #2



CONSTRUCTION ELEVATION LAYOUT

BILL OF MAT'L. (APPR. SLAB @ E.B. #1)					
BAR	NUMB	SIZE	TYPE	LENGTH	WEIGHT
A1	72	4	STR	24'-6	1,178
A101	2	4	STR	21'-8	29
A102	2	4	STR	18'-9	25
A103	2	4	STR	15'-11	21
A104	2	4	STR	13'-1	17
A105	2	4	STR	10'-2	14
A106	2	4	STR	7'-4	10
A107	2	4	STR	27'-8	37
A108	2	4	STR	24'-10	33
A109	2	4	STR	21'-11	29
A110	2	4	STR	19'-1	25
A111	2	4	STR	16'-2	22
A112	2	4	STR	13'-4	18
A113	2	4	STR	10'-5	14
A114	2	4	STR	7'-7	10
A115	2	4	STR	4'-8	6
B101	3	6	STR	44'-6	201
B102	3	6	STR	43'-8	197
B103	3	6	STR	42'-10	193
B104	3	6	STR	42'-1	190
B105	3	6	STR	41'-3	186
B106	3	6	STR	40'-6	182
B107	3	6	STR	39'-8	179
B108	3	6	STR	38'-11	175
B109	3	6	STR	38'-1	172
B110	3	6	STR	37'-3	168
B111	3	6	STR	36'-6	164
B112	3	6	STR	35'-8	161
B113	3	6	STR	34'-11	157
B114	3	6	STR	34'-1	154
B115	3	6	STR	33'-3	150
B116	3	6	STR	32'-6	146
B117	3	6	STR	31'-8	143
B118	3	6	STR	30'-11	139
B119	3	6	STR	30'-1	136
B120	3	6	STR	29'-4	132
B121	3	6	STR	28'-6	128
B122	3	6	STR	27'-8	125
B123	3	6	STR	26'-11	121
B124	3	6	STR	26'-1	118
B125	3	6	STR	25'-4	114
B126	3	6	STR	24'-6	110
B127	3	6	STR	23'-9	107
B128	3	6	STR	22'-11	103
B129	3	6	STR	22'-1	100
B130	3	6	STR	21'-4	96
B131	3	6	STR	20'-6	92
B132	3	6	STR	19'-9	89
B151	3	6	STR	45'-0	203
B152	3	6	STR	44'-2	199
B153	3	6	STR	43'-4	195
B154	3	6	STR	42'-7	192
B155	3	6	STR	41'-9	188
B156	3	6	STR	41'-0	185
B157	3	6	STR	40'-2	181
B158	3	6	STR	39'-5	178
B159	3	6	STR	38'-7	174
B160	3	6	STR	37'-9	170
B161	3	6	STR	37'-0	167
B162	3	6	STR	36'-2	163
B163	3	6	STR	35'-5	160
B164	3	6	STR	34'-7	156
B165	3	6	STR	33'-9	152
B166	3	6	STR	33'-0	149
B167	3	6	STR	32'-2	145
B168	3	6	STR	31'-5	142
B169	3	6	STR	30'-7	138
B170	3	6	STR	29'-10	134
B171	3	6	STR	29'-0	131
B172	3	6	STR	28'-2	127
B173	3	6	STR	27'-5	124
B174	3	6	STR	26'-7	120
B175	3	6	STR	25'-10	116
B176	3	6	STR	25'-0	113
B177	3	6	STR	24'-3	109
B178	3	6	STR	23'-5	106
B179	3	6	STR	22'-7	102
B180	3	6	STR	21'-10	98
B181	3	6	STR	21'-0	95
B182	3	6	STR	20'-3	91
				GRAND TOTAL	10,819

CLASS "AA" CONC. (C.Y.) - 49.8

BILL OF MAT'L. (APPR. SLAB @ E.B. #2)					
BAR	NUMB	SIZE	TYPE	LENGTH	WEIGHT
A2	68	4	STR	24'-6	1,113
A201	2	4	STR	20'-6	27
A202	2	4	STR	16'-6	22
A203	2	4	STR	12'-5	17
A204	2	4	STR	8'-4	11
A205	2	4	STR	27'-7	37
A206	2	4	STR	23'-6	31
A207	2	4	STR	19'-6	26
A208	2	4	STR	15'-5	21
A209	2	4	STR	11'-5	15
A210	2	4	STR	7'-5	10
A211	2	4	STR	3'-4	4
B201	3	6	STR	36'-11	166
B202	3	6	STR	36'-4	164
B203	3	6	STR	35'-9	161
B204	3	6	STR	35'-3	159
B205	3	6	STR	34'-8	156
B206	3	6	STR	34'-2	154
B207	3	6	STR	33'-7	151
B208	3	6	STR	33'-0	149
B209	3	6	STR	32'-6	146
B210	3	6	STR	31'-11	144
B211	3	6	STR	31'-4	141
B212	3	6	STR	30'-10	139
B213	3	6	STR	30'-3	136
B214	3	6	STR	29'-9	136
B215	3	6	STR	29'-2	131
B216	3	6	STR	28'-7	129
B217	3	6	STR	28'-1	127
B218	3	6	STR	27'-6	124
B219	3	6	STR	27'-0	122
B220	3	6	STR	26'-5	119
B221	3	6	STR	25'-10	116
B222	3	6	STR	25'-4	114
B223	3	6	STR	24'-9	112
B224	3	6	STR	24'-3	109
B225	3	6	STR	23'-8	107
B226	3	6	STR	23'-1	104
B227	3	6	STR	22'-7	102
B228	3	6	STR	22'-0	99
B229	3	6	STR	21'-5	97
B230	3	6	STR	20'-11	94
B231	3	6	STR	20'-4	92
B232	3	6	STR	19'-10	89
B252	3	6	STR	37'-5	169
B253	3	6	STR	36'-10	166
B254	3	6	STR	36'-3	163
B255	3	6	STR	35'-9	161
B256	3	6	STR	35'-2	158
B257	3	6	STR	34'-8	156
B258	3	6	STR	34'-1	154
B259	3	6	STR	33'-6	151
B260	3	6	STR	33'-0	149
B261	3	6	STR	32'-5	146
B262	3	6	STR	31'-10	143
B263	3	6	STR	31'-4	141
B264	3	6	STR	30'-9	139
B265	3	6	STR	30'-3	136
B266	3	6	STR	29'-8	134
B267	3	6	STR	29'-1	131
B268	3	6	STR	28'-7	129
B269	3	6	STR	28'-0	126
B270	3	6	STR	27'-6	124
B271	3	6	STR	26'-11	121
B272	3	6	STR	26'-4	119
B273	3	6	STR	25'-10	116
B274	3	6	STR	25'-3	114
B275	3	6	STR	24'-9	112
B276	3	6	STR	24'-2	109
B277	3	6	STR	23'-7	106
B278	3	6	STR	23'-1	104
B279	3	6	STR	22'-6	101
B280	3	6	STR	21'-11	99
B281	3	6	STR	21'-5	97
B282	3	6	STR	20'-10	94
B283	3	6	STR	20'-4	92
				GRAND TOTAL	9,581

CLASS "AA" CONC (C.Y.) - 44.3

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269 + 51.05 -L-

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

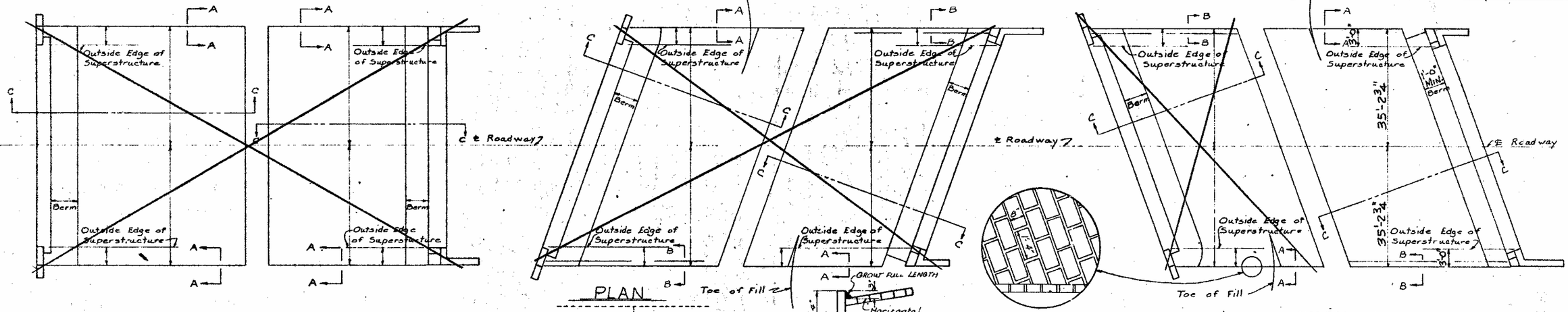
BRIDGE APPROACH SLAB
FOR FLEXIBLE PAVEMENT

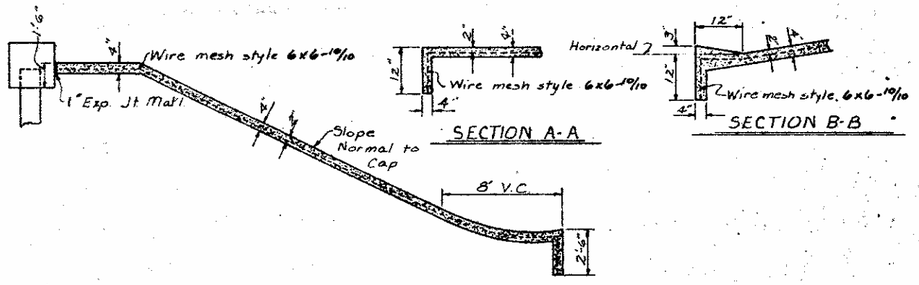
JAN. 1973

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-27
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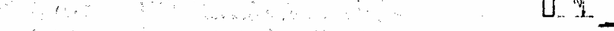
DRAWN BY THAMES DATE JAN. 73
CHECKED BY [illegible] DATE Jan. 1973

FED. ROAD INV. NO.	STATE	PROJECT
4	N. C.	8.2326309
F. A. PROJECT	M-5369(3)	





SECTION C-C



NOTES:

A 4" concrete slope protection paving shall be placed under the ends of the bridge. Limits of the protection shall be as shown in the details. The contractor, at his option, may place either type, Alternate "A" or "B" as described below. Immediately before placing the paving, the slope shall be properly shaped and firmly compacted so that it conforms to the lines and grades shown. The finished surface shall be reasonably smooth and uniform and shall not vary more than ½ inch in a distance of 10 feet. 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 870 of the Standard Specifications.

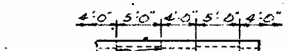
Alternate "A" shall consist of 4" poured in place concrete paving as shown in details on this sheet. Concrete shall be Class B. The concrete surface shall be floated with a wooden float and finished.

Alternate "B" shall consist of solid concrete blocks 4"x8"x16" laid in horizonal courses such that those in successive courses will break joints with units in the preceding one. Blocks are to be laid with their long axis parallel to the end bent cap with grouted joints preferably ¾" but not less than ½" nor more than 1¼" wide between successive courses and ends of blocks. Joints shall be grouted by pouring a mixture of one part Portland cement to three parts sand mixed with sufficient water to enable the mixture to be poured through a spout.

The concrete blocks shall be cast to accurate dimensions, shall have uniform surface color and texture and shall be manufactured of materials to produce a compressive strength of not less than 3,000 p.s.i. at age of 28 days. No broken blocks shall be used except in constructing a straight line along each side of the paving down the slope. Care shall be taken to break the blocks so as to give a uniform workmanlike joint and surface.

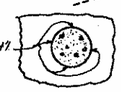
ALTERNATE "A" wire mesh reinforcing to be style 6x6-10/10 60" wide. Adjacent runs of wire mesh to lap at least 6". Slope Protection to be poured in alternate 4'&5' strips as shown in Pouring Detail. The cost of wire mesh to be included in the contract unit price bid per square yard for 4" concrete slope protection.

The same type of slope protection shall be used under both ends of any one bridge.



POURING DETAIL

Pour a 4' strip first. Strip widths may vary in curved portion.



PLAN WHERE CONC. OR CONC. BLOCK SLOPE PROTECT MUST BE PLACED AROUND A BENT COLUMN

	4" Conc. Slope Protection or 4" Conc. Block Slope Protect. SY		Wire Mesh 60" Wide
BRIDGE @	E.B. 1	E.B. 2	Approx. L.F.
269+51.05-L-	455	410	1730

PROJECT NO. 8.2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

SHEET 1 of 2

STATE OF NORTH CAROLINA

STATE HIGHWAY COMMISSION

RALEIGH

STANDARD SLOPE PROTECTION PAVING DETAILS

DEC. 1970

REVISIONS						SHEET NO.
NO.	BY	DATE	NO.	BY	DATE	S-2
1	FAM	6-13-75	3			TOTAL SHEETS
2			4			124

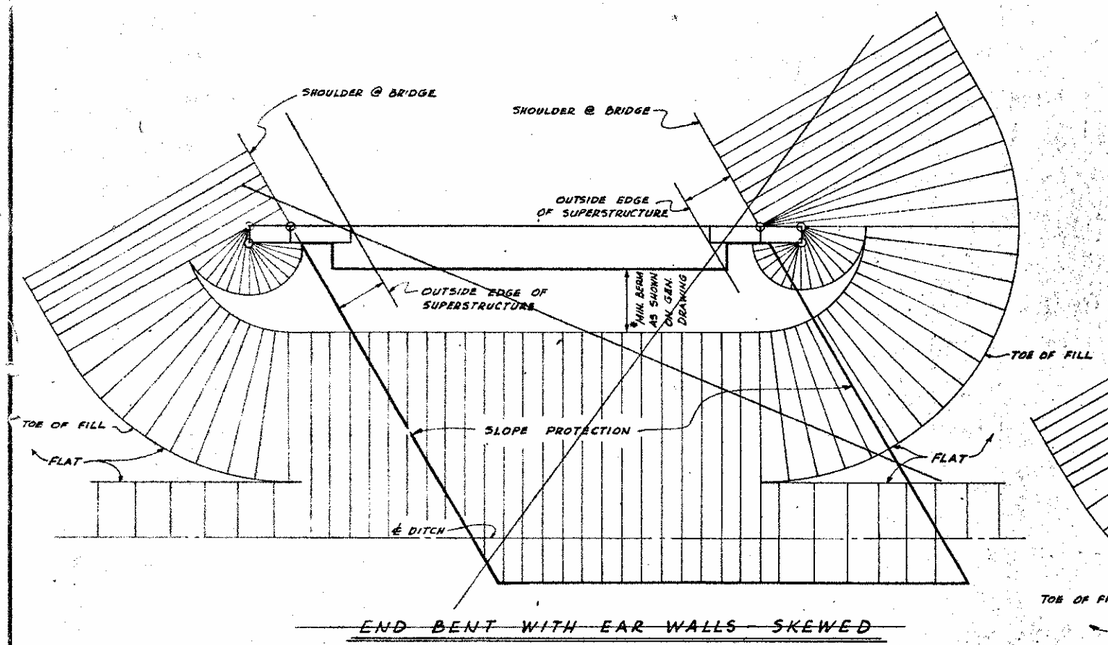
ASSEMBLED BY J.C. CATO DATE 2-27-74
CHECKED BY S.M. White DATE "
DRAWN BY F.A. Mimms DATE 12-17-70
CHECKED BY C.B. Taylor DATE 12-21-70

DETAILS FOR ALTERNATE "A"

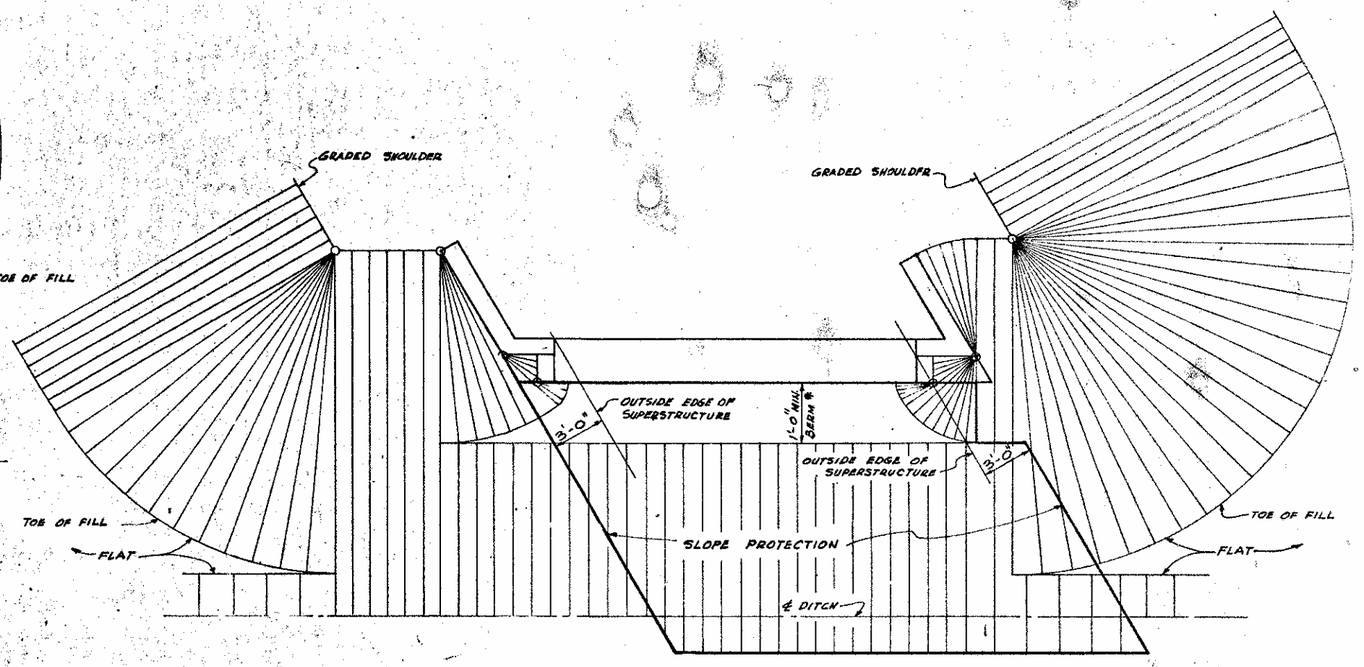
DETAILS FOR ALTERNATE "B"

Revision No. 1- Revised to change method of measurement and basis of payment. by FAM. 1976.

4	N. C	B-2326
F. A. PROJECT		M-5369

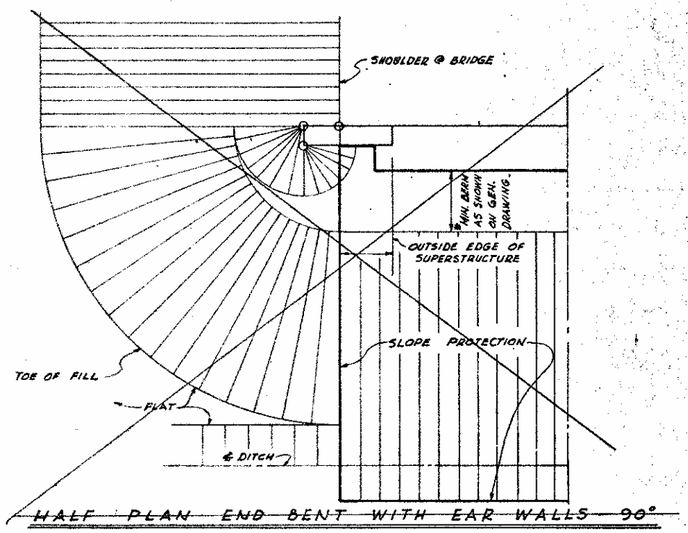


END BENT WITH EAR WALLS SKEWED



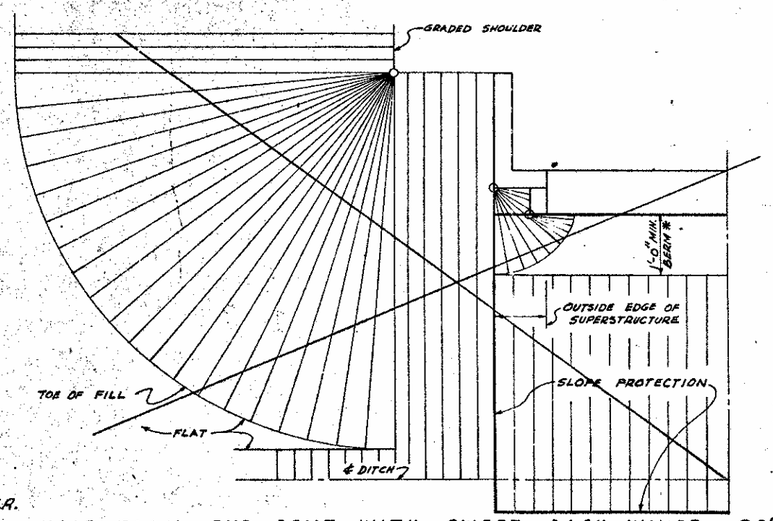
END BENT WITH SWEPT BACK WINGS - SKEWED

* NOTE: VARY BERM WIDTH AS NECESSARY TO FIT DITCH ALIGNMENT.



HALF PLAN END BENT WITH EAR WALLS 90°

NOTE: OTHER SIDE SIMILAR.



HALF PLAN END BENT WITH SWEPT BACK WINGS - 90°

NOTE: OTHER SIDE SIMILAR.

PROJECT NO. B-2326309

CUMBERLAND COUNTY

STATION: 269+51.05-L-

SHEET 2 OF 2

REVISIONS	NO.	1	2	3	4	5	6
	BY	E.G.A.	E.G.A.		R.H.E.		
	DATE	10-27-64	2-5-65		10-3-65		

STATE OF NORTH CAROLINA
STATE HIGHWAY COMMISSION
RALEIGH

STANDARD
SLOPE PROTECTION PAVING
DETAILS

FEBRUARY 1964

ASSEMBLED BY	W.N. GOODWIN	DATE JAN. '73
CHECKED BY	[illegible]	DATE Jan '73
DRAWN BY	E.G. ALFORD, JR.	DATE FEB. '64
CHECKED BY	G.T. PHILLIPS	DATE MARCH '64

Rev. No. 3 To change min. berm from 3'-6" to 1'-0" on End Bents with Swept Back Wings. ✓O.W.A.
REV. NO. 2 TO ELIMINATE 90° CORNER AT TOE OF SLOPE FOR SKEWED BRIDGES. ✓G.T.P.
REV. NO. 1 TO TAKE OUT DIMENSIONS FROM OUTSIDE EDGE OF SUPERSTRUCTURE TO OUTSIDE SLOPE PROTECTION. ✓RHE