

REVISION	DATE	BY	REASON
3	1959	JWN	1-240 - 1 (17) 13
REVISION	9-1-59		
	10-8-59		
REVISION	2-16-62		Reinf. Steel Quant.

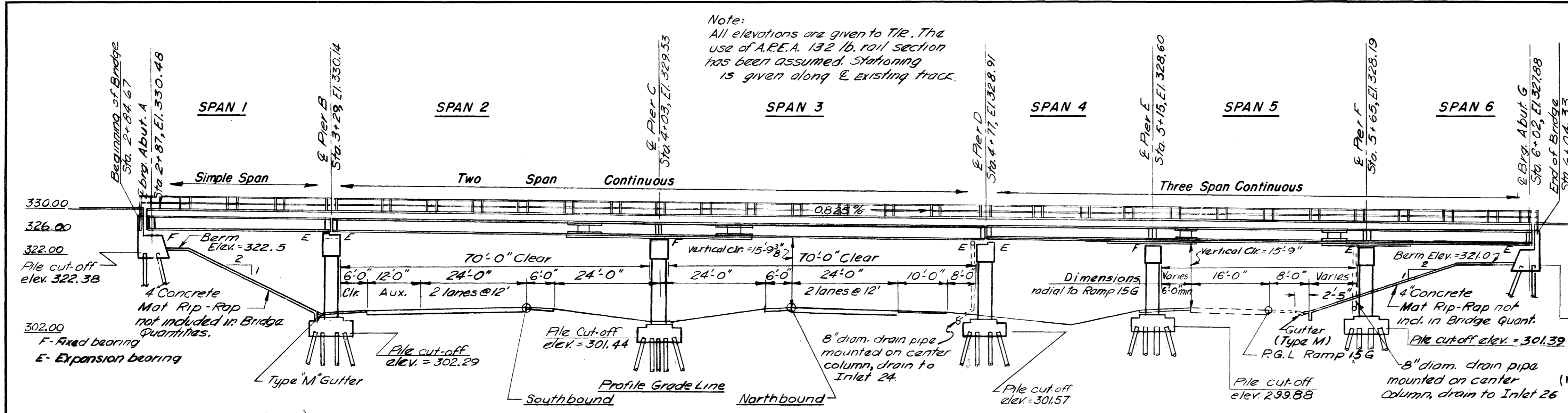
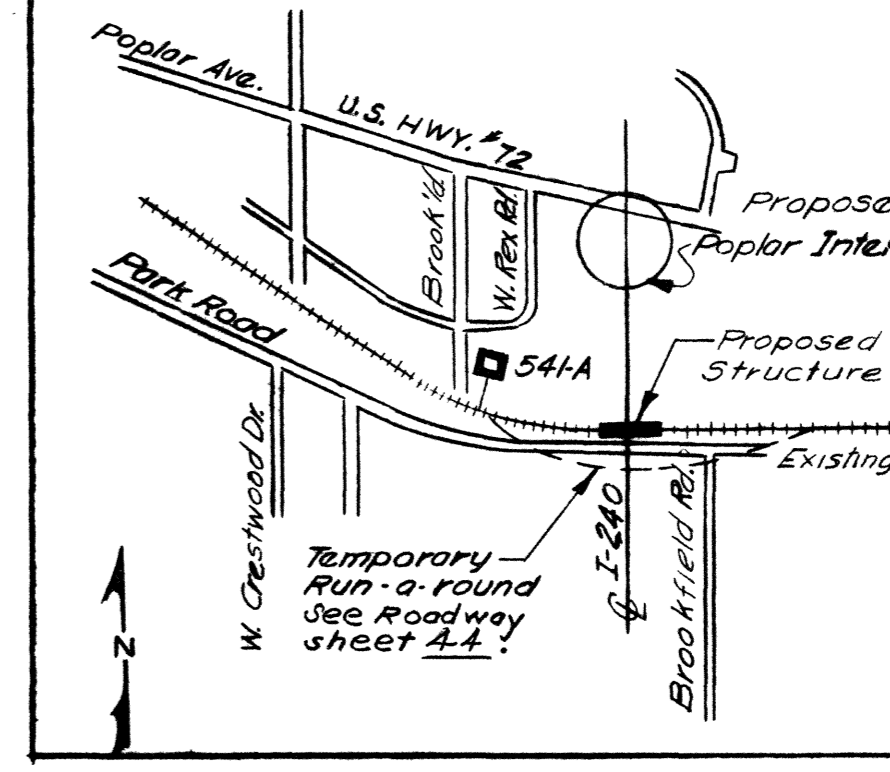
PUB. ROADS DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	1-240 - 1 (17) 13	1959	156	334

DESIGN AND CONSTRUCTION DATA

- SPECIFICATIONS:** DESIGN: AREA (1958)
CONSTRUCTION: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS.
- LOADING:** COOPER'S E-72 FOR ROLLING EQUIPMENT WITHOUT HAMMER BLOW.
- DESIGN STRESSES:** STRUCTURAL STEEL $f_s=18,000$ psi
REINFORCING STEEL $f_s=18,000$ psi
CLASS A CONCRETE $f_c=3,000$ psi
 $f_c=1,200$ psi
 $n=10$

- PILES:** SHALL BE OF CONCRETE AS SHOWN ON TENNESSEE STD NO. F-2-118. MINIMUM BEARING CAPACITY OF PILES SHALL BE 36 TONS. TEST PILES SHALL BE DRIVEN IN FINAL LOCATION IN FOOTINGS AND ABUTMENTS. BEFORE ANY PILES ARE ORDERED, PRECAST CONCRETE TEST PILES SHALL BE DRIVEN IN THE LOCATIONS SHOWN ON DWGS. 2 & 3. FROM THE RESULTS, ALL PILES SHALL BE ORDERED OF SUCH LENGTH AS TO PROVIDE THE MINIMUM BEARING CAPACITY OF 36 TONS. IF THE ENGINEER REQUIRES THE USE OF PRECAST CONCRETE PILING SIZE 2, THE CONTRACTOR WILL BE ALLOWED A 25% INCREASE IN THE CONTRACT UNIT BID PRICE FOR SIZE 1 PILING.
- FILL:** ALL FILL SHALL BE PLACED AND COMPACTED BEFORE PILES ARE DRIVEN.
- CONCRETE:** SHALL BE CLASS "A" IN ACCORDANCE WITH STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS. ALL EXPOSED EDGES OF CONCRETE SHALL BE BROKEN WITH A 1/2 INCH TRIANGULAR CHAMFER.
- REINFORCING STEEL:** SHALL BE DEFORMED STRUCTURAL GRADE BILLET STEEL IN ACCORDANCE WITH ASTM A-15-52T. THE MINIMUM LAP FOR SPLICES OF MAIN REINFORCING STEEL SHALL BE 30 DIAMETERS AND FOR OTHER STEEL, 20 DIAMETERS UNLESS OTHERWISE NOTED. ALL DIMENSIONS ARE TO THE CENTER OF BARS UNLESS OTHERWISE INDICATED. REINFORCING BEND DIMENSIONS SHALL BE THOSE RECOMMENDED BY THE ACI IN THEIR "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCING CONCRETE STRUCTURES".
- STRUCTURAL STEEL:** SHALL BE IN ACCORDANCE WITH ASTM A-7-58T, EXCEPT AS NOTED.
- STEEL DECK PLATE, CURB CHANNELS, SEAL PLATE AND BEARING DETAILS:** SHALL BE "COR-TEN", "MAYARI-R" OR EQUIVALENT CORROSION RESISTING MATERIAL.
- STRUCTURAL STEEL CONNECTIONS:** SHALL BE MADE WITH 7/8 INCH HIGH STRENGTH STEEL BOLTS WHICH SHALL BE IN ACCORDANCE WITH ASTM A-325. IN CERTAIN LOCATIONS, SUCH AS BEARINGS, 7/8 INCH RIVETS MAY BE USED WHERE NECESSARY. RIVET MATERIAL SHALL BE IN ACCORDANCE WITH ASTM A-141. SEE SPECIAL PROVISIONS.
- BALLAST TROUGH:** THE INSIDE OF THE BALLAST TROUGH SHALL RECEIVE THE FOLLOWING FIELD TREATMENT AFTER ASSEMBLY:

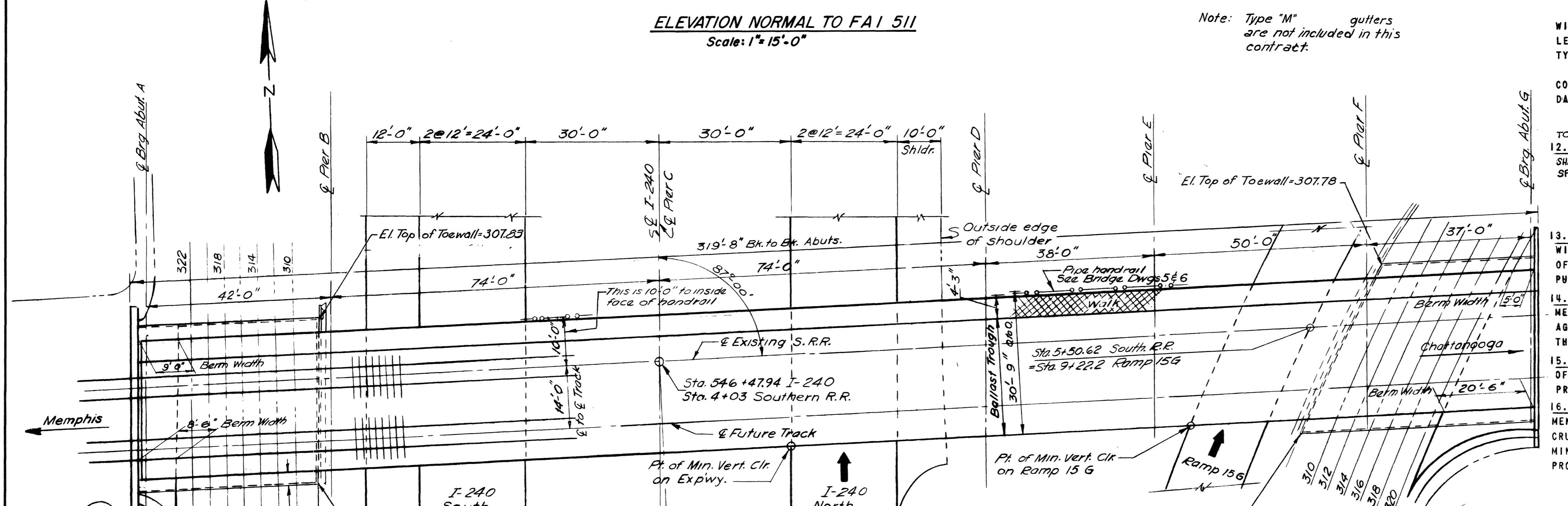
- FORMS AND FINISH:** SHALL BE IN ACCORDANCE WITH THE STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS.
- COST OF WATERPROOFING:** SHALL BE INCIDENTAL TO STEEL STRUCTURES, LUMP SUM.
- HANDRAIL AND STRUCTURAL STEEL SURFACES:** SHALL BE PAINTED ACCORDING TO TENNESSEE STANDARD SPECIFICATIONS.
- DRAINAGE SYSTEM:** THE COST OF ALL LABOR, MATERIAL AND EQUIPMENT REQUIRED FOR THE INSTALLATION OF THE DRAINAGE SYSTEM ON THE BRIDGE SHALL BE INCLUDED IN THE LUMP SUM BID FOR STRUCTURAL STEEL.
- SELF LUBRICATED PLATES:** SHALL BE CONSTRUCTED OF BRIDGE BEARING BRONZE, "LUBRITE" OR EQUAL PRODUCT. SEE SPECIAL PROVISIONS.
- BACKFILL:** OF ALL EXCAVATION BEHIND ABUTMENTS (INCLUDING WINGWALLS) SHALL BE SAND, CRUSHED STONE, OR OTHER POROUS MATERIAL HAVING MINIMUM COMPRESSIBILITY, UNLESS OTHERWISE APPROVED BY RAILWAY ENGINEER.



ELEVATION NORMAL TO FAI 511
Scale: 1" = 15'-0"

(NOTES CONT'D)

- TOUCH UP OF PRIMER COAT WITH RED LEAD SECOND COAT (1ST. FIELD) - RED LEAD RED LEAD PAINT SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR RED LEAD READY MIXED PAINT, AASHO DESIGNATION M72-49 TYPE 1
- THIRD COAT (2 FIELD) SPRAY 1/8" THICK COAT OF CAR CEMENT, SPRAY CONSISTENCY IN ACCORDANCE WITH SOUTHERN RAILWAY SPECIFICATION NO. 97.
- FOURTH COAT (3 FIELD) SAME AS THIRD COAT.
- COST OF WATERPROOFING SHALL BE INCIDENTAL TO STEEL STRUCTURES, LUMP SUM.



PLAN

SUMMARY OF ESTIMATED QUANTITIES

	Dry Excavation	Class A Concrete	Reinforcing Steel	Structural Steel	Precast Concrete	Test Piles
	Cu. Yds.	Cu. Yds.	Lbs.	Lump Sum	Lin. Ft.	Lin. Ft.
SUPERSTRUCTURE						
SUBSTRUCTURE						
ABUTMENT A	73	37.3	4260			
PIER B	128	110.1	21,110			
PIER C	139	118.0	21,660			
PIER D	128	110.0	21,030			
PIER E	128	104.2	17,660			
PIER F	288	101.6	16,860			
ABUTMENT G	155	36.4	4260			
TOTALS	1039	617.6	106,840	Lump Sum	6,250	280

(1) THE LUMP SUM PRICE BID FOR STEEL STRUCTURES SHALL CONSIST OF FURNISHING, ERECTING, PAINTING AND WATERPROOFING THE FOLLOWING ESTIMATED QUANTITIES:

ITEM	UNIT	ESTIM. QTY.	REMARKS
MAIN GIRDERS & CROSS FRAMES	LBS.	876,600	INCLUDES HANDRAIL & DRAINAGE SYSTEM SEE NOTES 8, 12 & 14 THIS SHT. & NOTES ON DWG. 6
DECK PLATE, CHANNEL, ETC.	LBS.	310,700	SEE NOTES 9 & 11 THIS SHT. & NOTES ON DWG. 6
BEARINGS	LBS.	23,700	SEE NOTES 9 & 16 THIS SHT. & NOTES ON DWG. 6
HIGH STRENGTH STEEL BOLTS	LBS.	64,700	SEE NOTE 10 THIS SHT. & NOTES ON DWG. 6
TOTAL	LBS.	1,275,700	

LIST OF DRAWINGS

DRAWING	DWG. NO.
BRIDGE LAYOUT	1
ABUTMENTS A & G	2
PIERS B, C, D, E & F	3
SUPERSTRUCTURE	4
STEEL DETAILS	5
DECKPLATE DETAILS	6
STD. PILE DETAILS - Std. F-2-118	Sht. 316
TEMPORARY RUN AROUND	Sht. 44

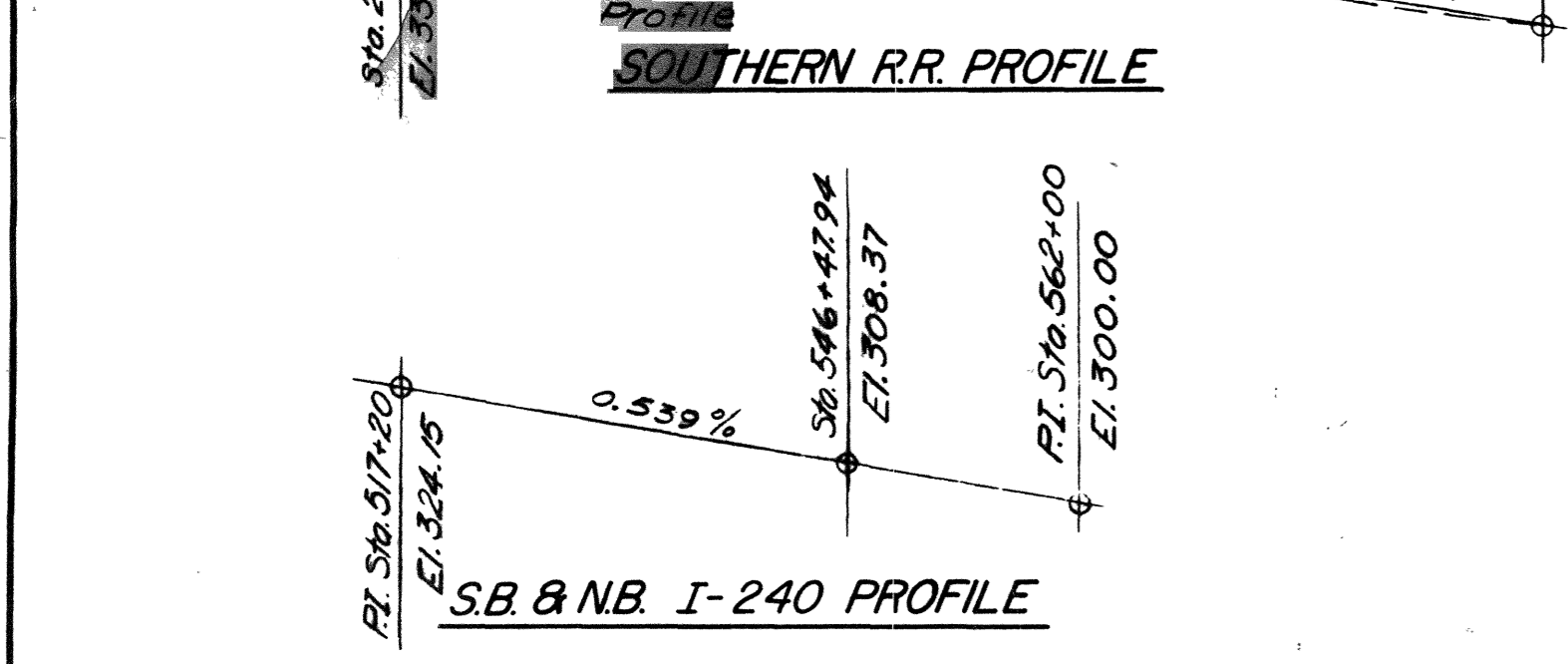
SOUTHERN RAILWAY M.P. 540.8A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
PROJECT 1-240 - 1 (17) 15 SHELBY CO.
MEMPHIS CIRCUMFERENTIAL INTERSTATE HIGHWAY
SOUTHEAST SECTION

HARLAND BARTHOLOMEW AND ASSOCIATES, ENGINEERS
CLARK AND DAILY ASSOCIATED ENGINEERS

SOUTHERN RAILWAY OVER I-240
BRIDGE LAYOUT

DATE: 9-10-58 SCALE: 1" = 15'-0" DRAWN BY: JWN CHECKED BY: H.N.W. IN CHARGE: BCC



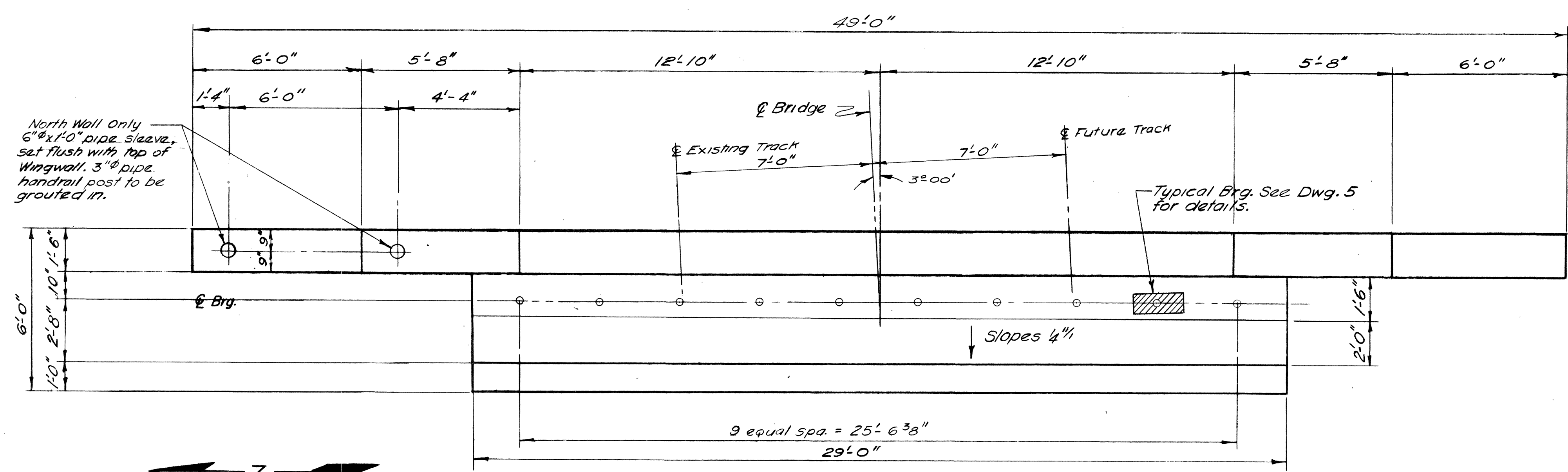
RAMP 15G PROFILE

NOTES: THE INTERSTATE CONTRACTOR WILL PERFORM ALL WORK IN CONNECTION WITH THIS STRUCTURE AND THE TEMPORARY RUNAROUND EXCEPT THE FOLLOWING WHICH WILL BE DONE BY THE SOUTHERN RAILWAY:

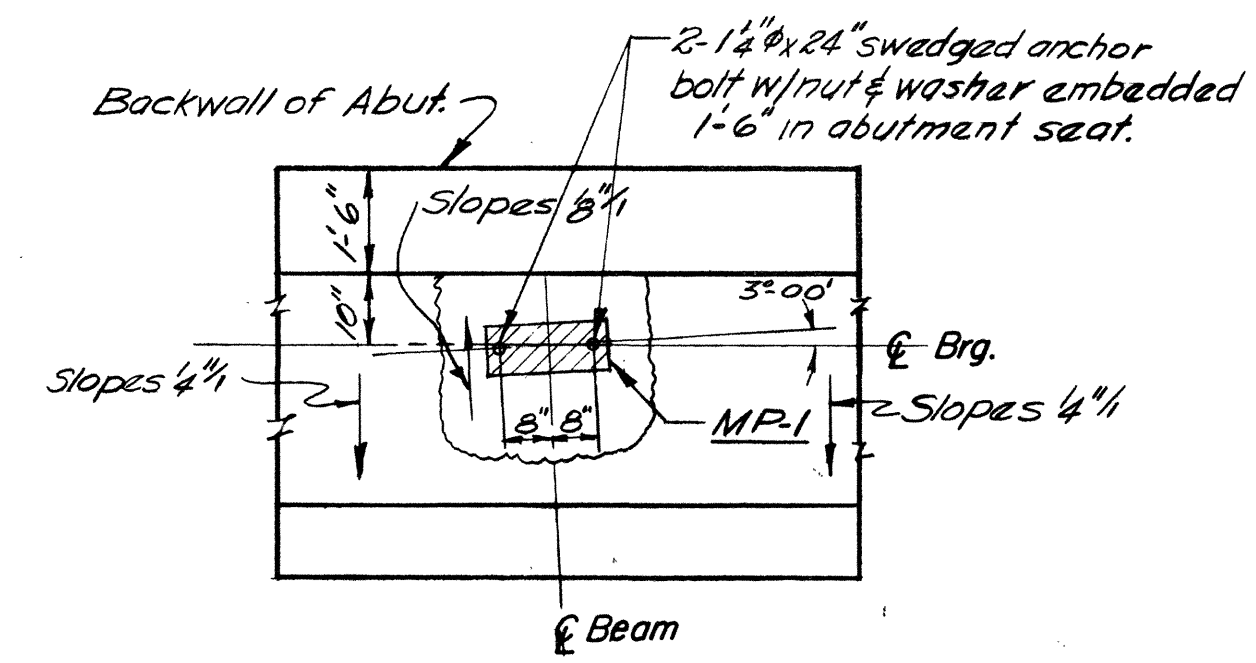
- FURNISH & PLACE BALLAST, TIES & RAILS ON THE APPROACHES & TEMPORARY RUN AROUND.
- REMOVE EXISTING RAIL & TIES IN THE AREA OF CONSTRUCTION OF THE NEW STRUCTURE.
- FURNISH & PLACE BALLAST, TIES & RAILS ON THE PERMANENT STRUCTURE & ITS APPROACHES.

MICROFILMED

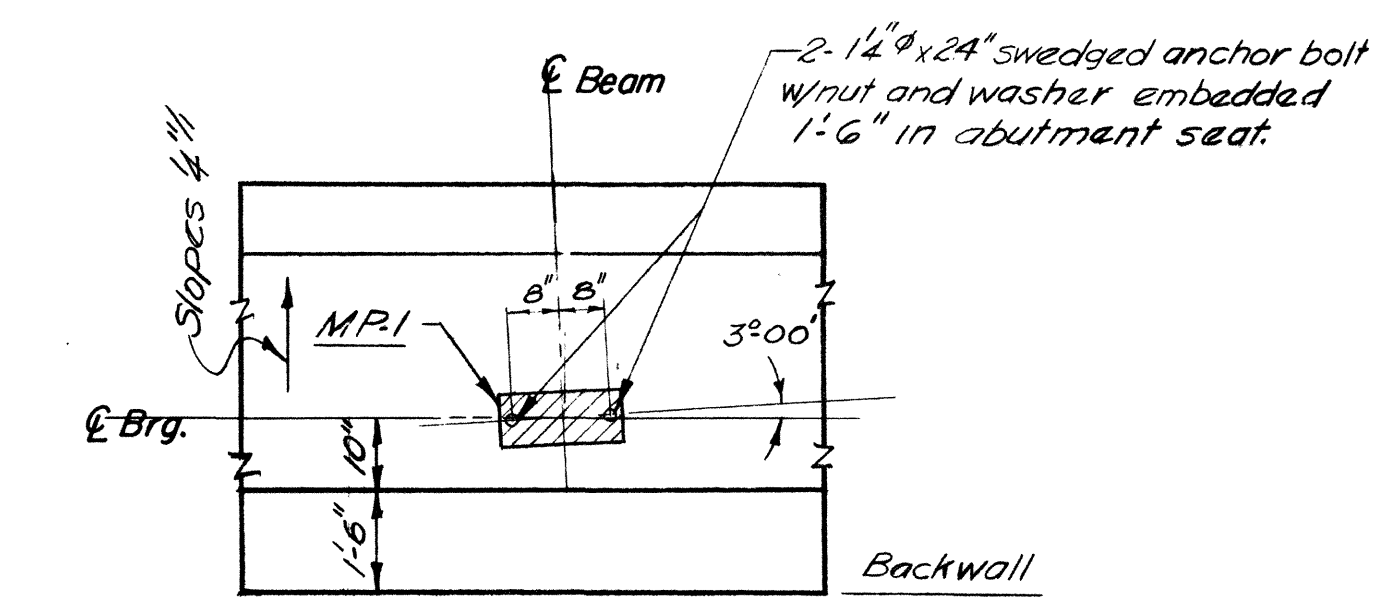
PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	1-240 -1 (17) 13	1959	157	334
REVISION					
9-1-59					
REVISION					



PLAN ABUTMENT G
Scale: 3/8" = 1'-0"
Abutment A is similar

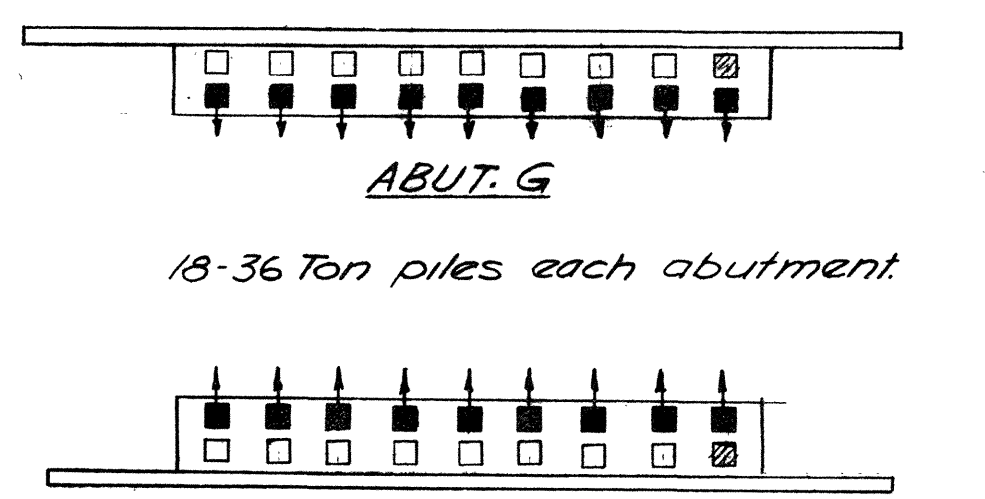


ABUTMENT G



ABUTMENT A
BEARING ANCHOR BOLT LOCATIONS

- NOTES**
- See Bridge Dwg. 1 for General notes.
 - Reinforcing bar locations shall be shifted slightly to allow for placement of anchor bolts for bearings.
 - All bars in abutments shall have a minimum cover of 2" unless noted otherwise.



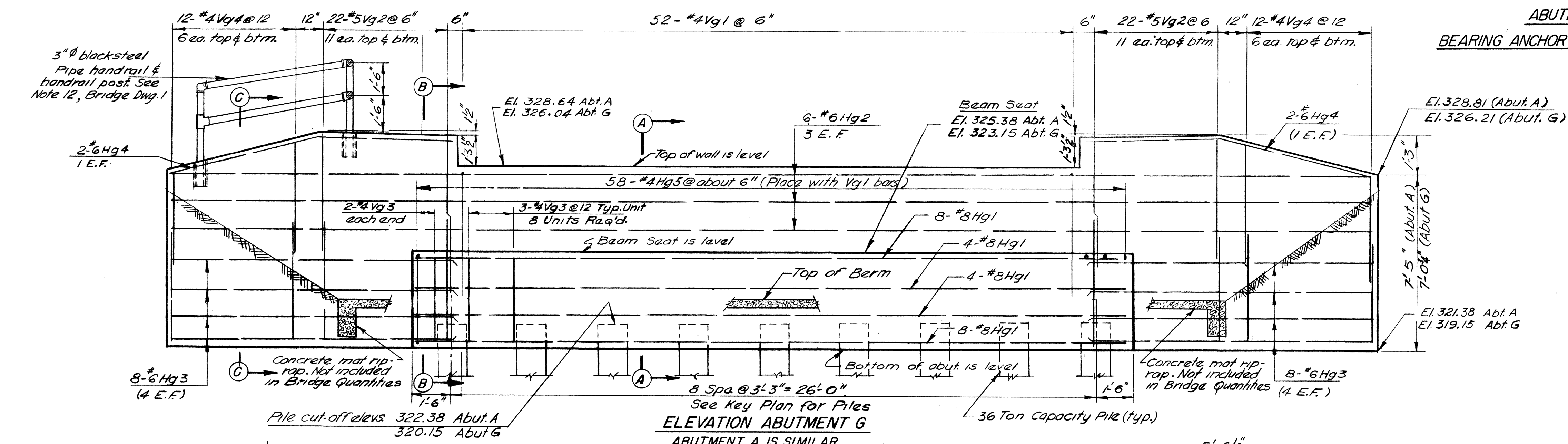
- Vertical pile **ABUT. A**
 - Batter pile (Batter 3 in 12 in abutments)
 - Test Piles - 40' Long
- KEY PLAN FOR PILES**

BILL OF MATERIAL

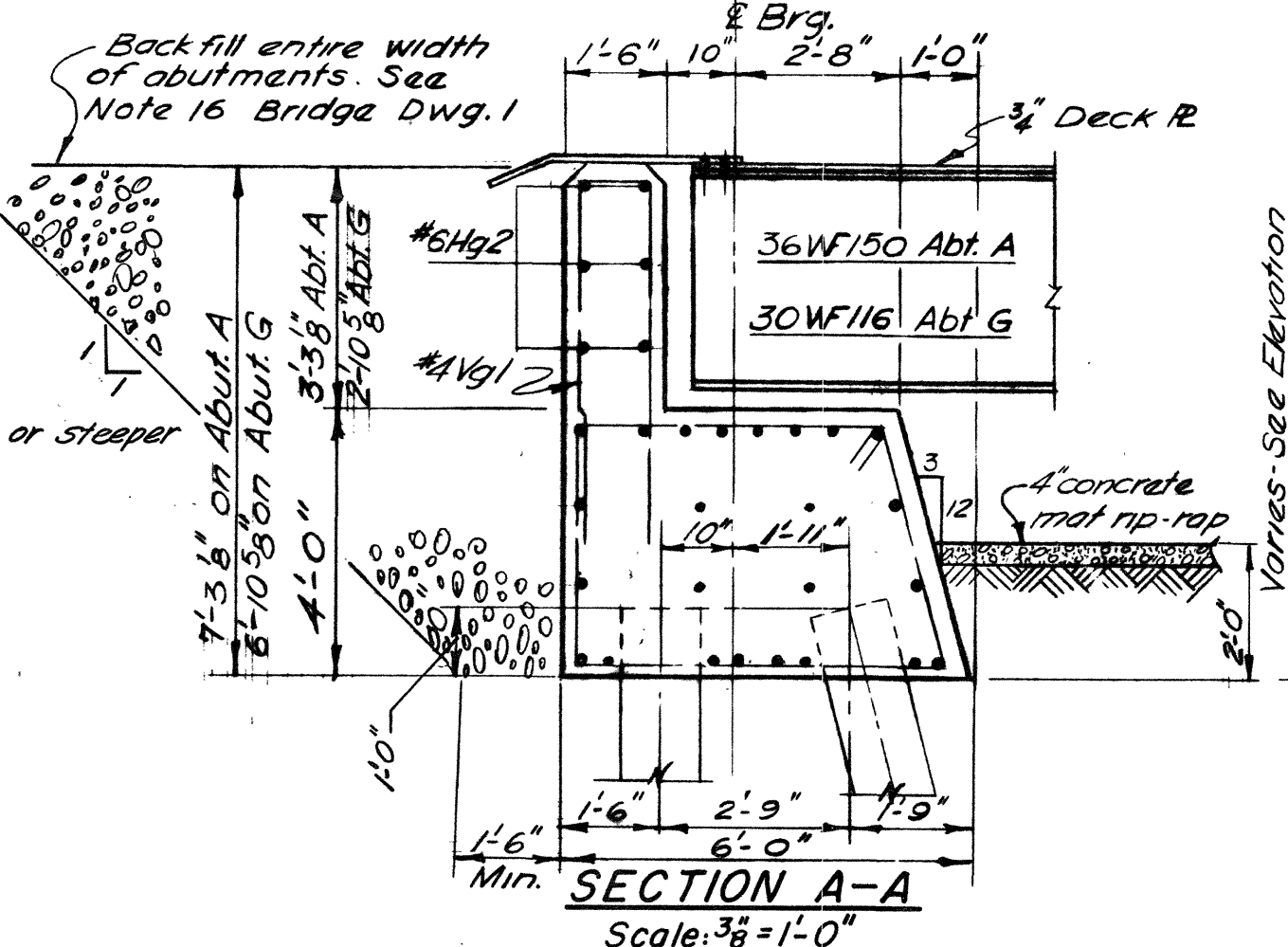
BAR SIZE	ABT. A	ABT. G	LENGTH	SHAPE	LOCATION
Hg1	8	24	28'-6"	—	Seat
Hg2	6	6	48'-6"	—	Parapet
Hg3	6	16	12'-0"	—	Wingwall
Hg4	6	4	11'-6"	—	Wingwall
Hg5	4	58	4'-8"	—	Seat
Vg1	4	52	12'-1"	□	Parapet
Vg2	5	44	11'-1"	□	Wingwall
Vg3	4	28	18'-6"	□	Seat
Vg4	4	24	11'-1"	□	Wingwall

ESTIMATE OF QUANTITIES

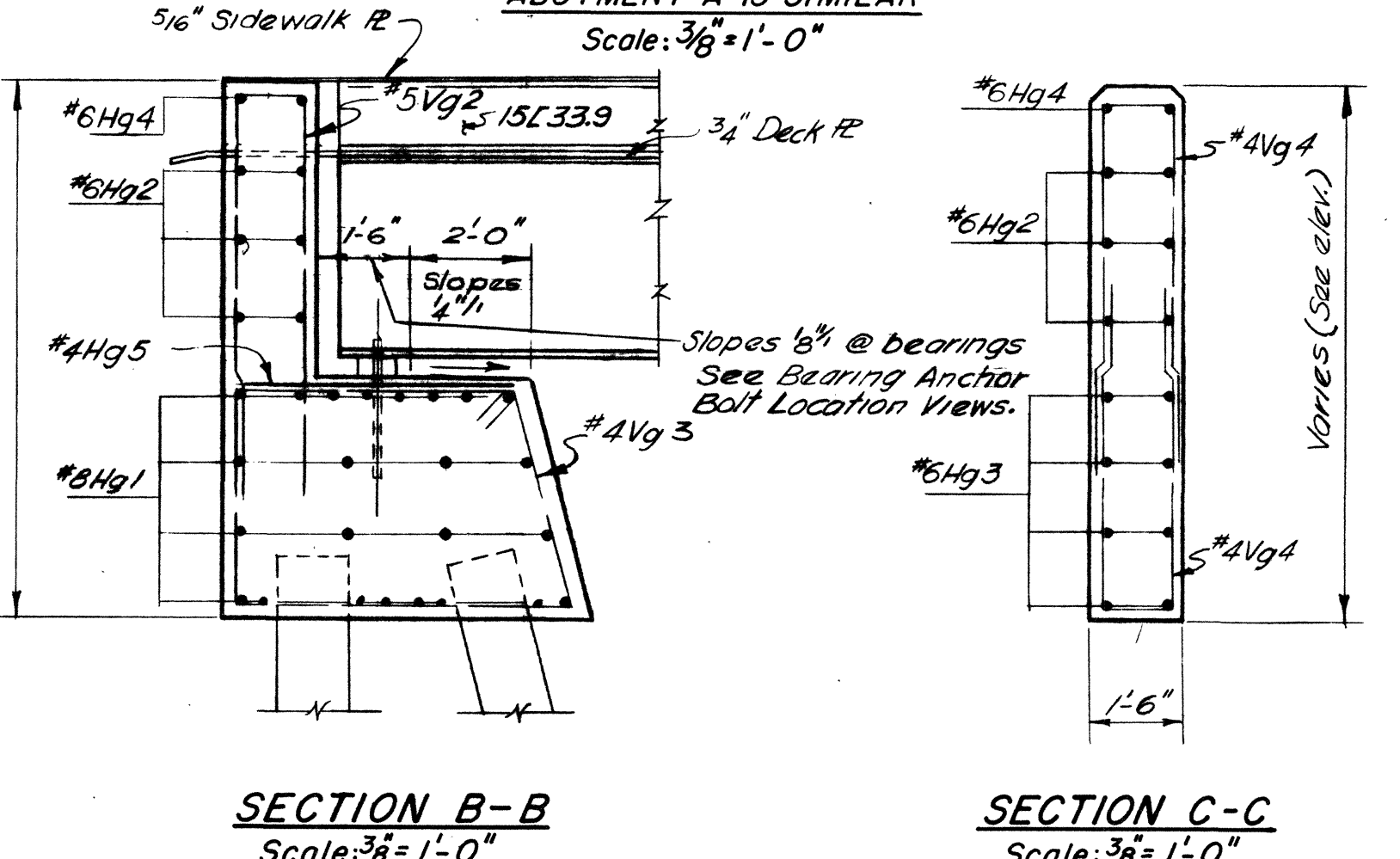
ITEM	UNIT	QUANTITIES	
		ABT. A	ABT. G
Class A Concrete	Cu. Yds.	37.3	36.4
Reinforcing Steel	Lbs.	4260	4260



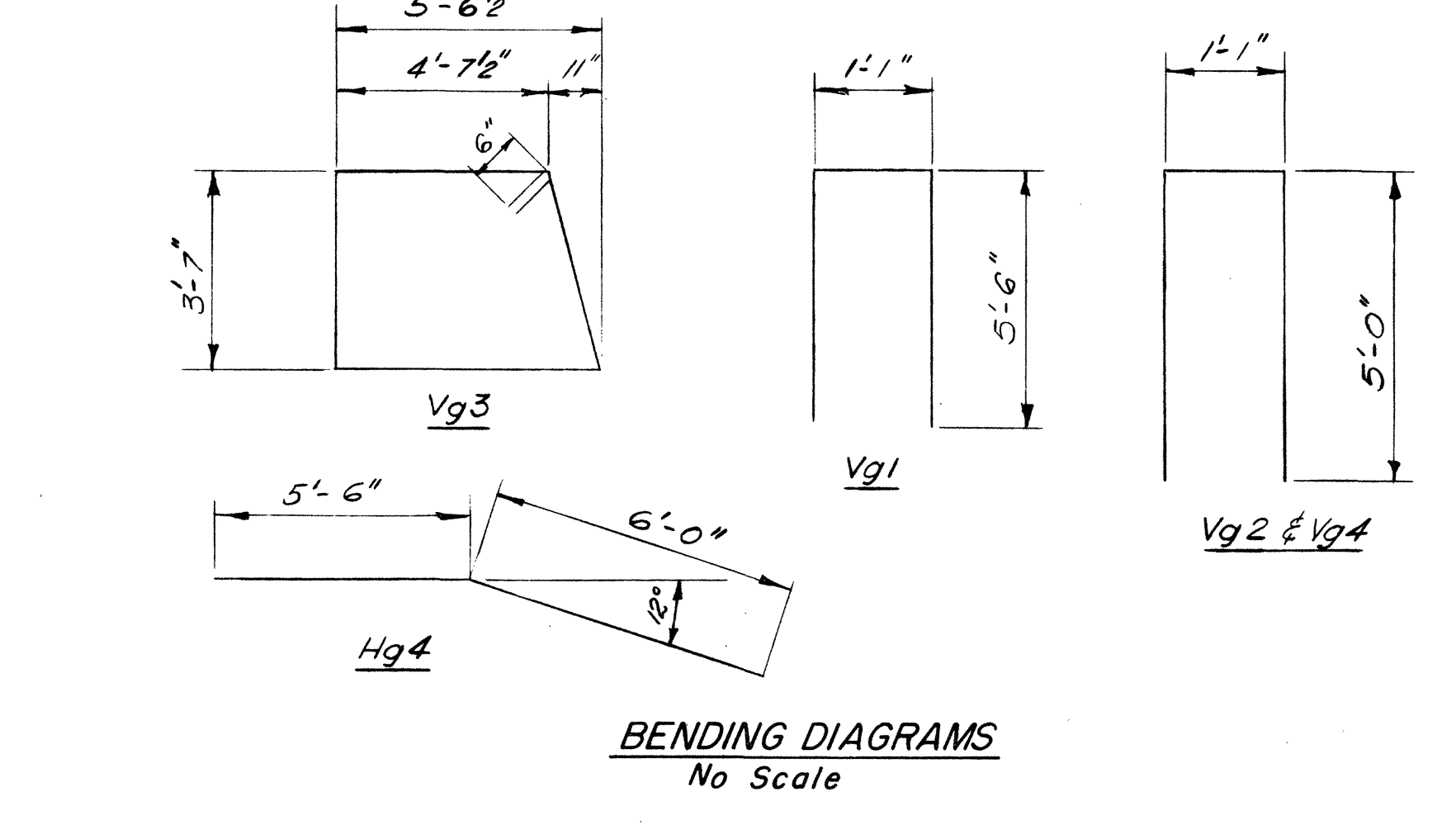
ELEVATION ABUTMENT G
ABUTMENT A IS SIMILAR
Scale: 3/8" = 1'-0"



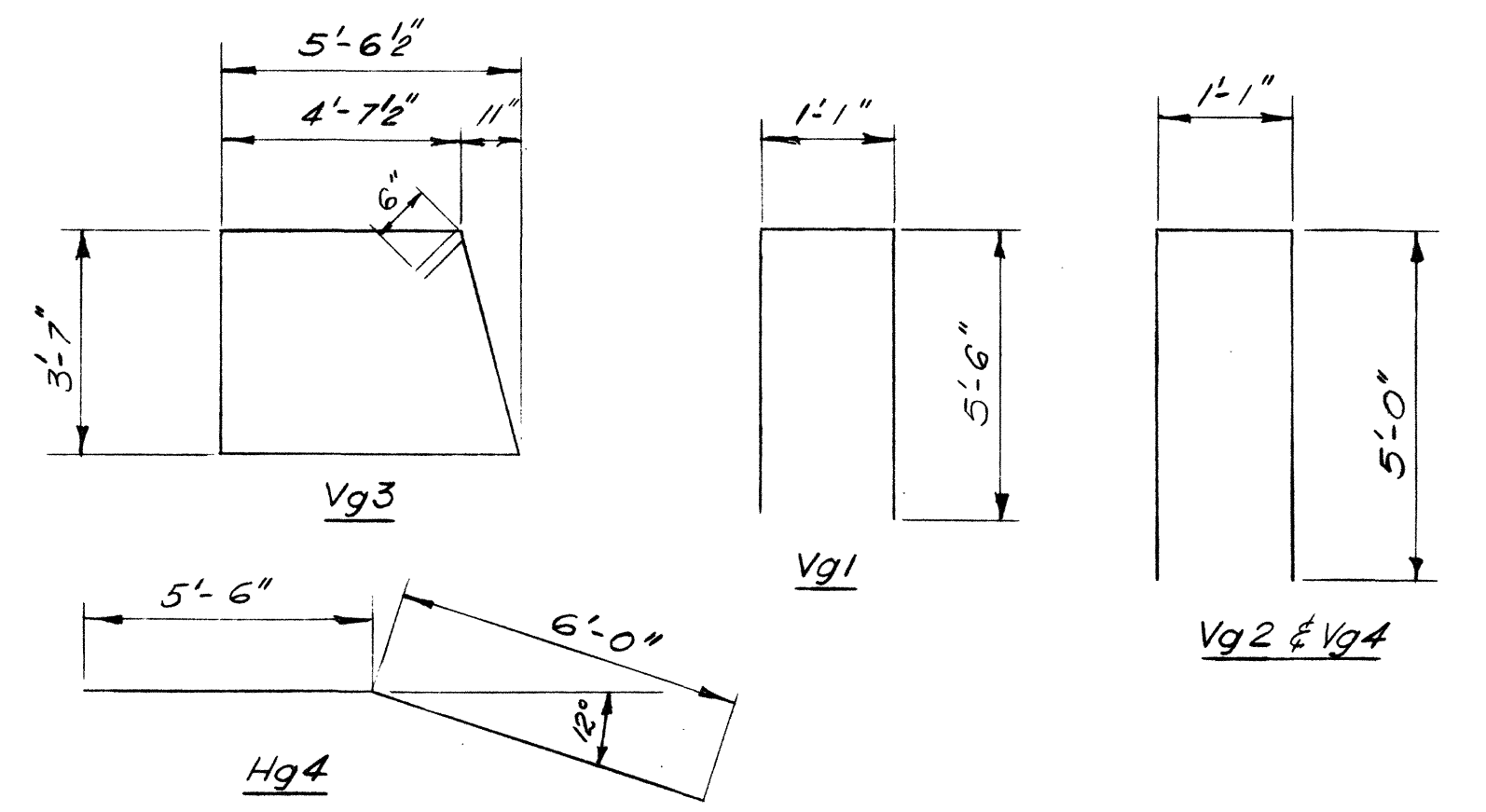
SECTION A-A
Scale: 3/8" = 1'-0"



SECTION B-B
Scale: 3/8" = 1'-0"



SECTION C-C
Scale: 3/8" = 1'-0"



BENDING DIAGRAMS
No Scale

SOUTHERN RAILWAY M.P. 540.8A

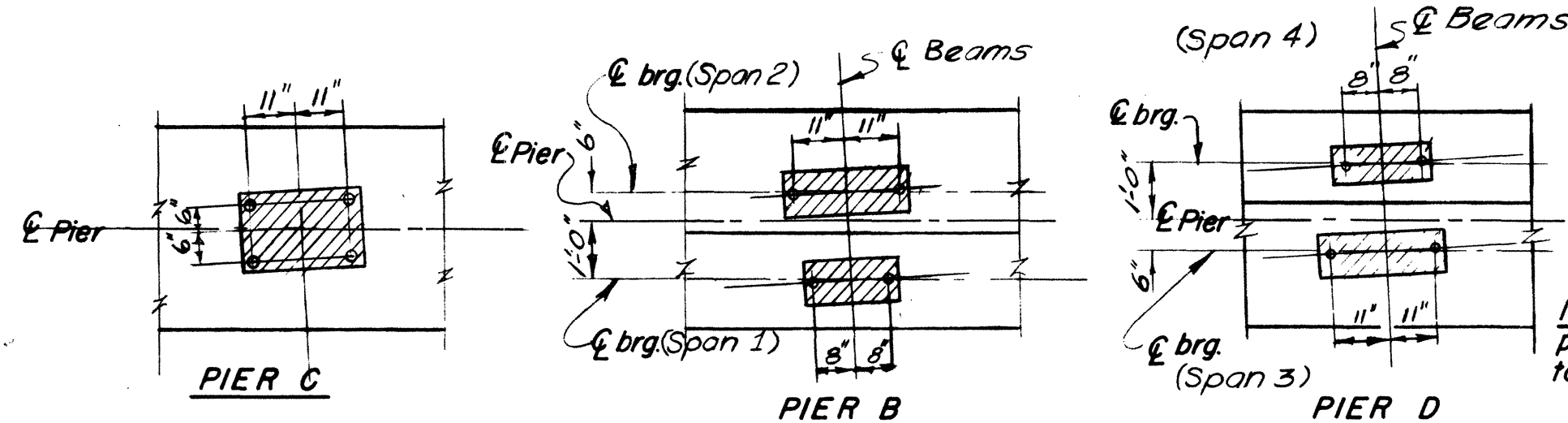
STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
PROJECT 1-240 -1 (17) 15 SHELBY CO.
MEMPHIS CIRCUMFERENTIAL INTERSTATE HIGHWAY
SOUTHEAST SECTION

HARLAND BARTHOLOMEW AND ASSOCIATES, ENGINEERS
CLARK AND DAILY ASSOCIATED ENGINEERS

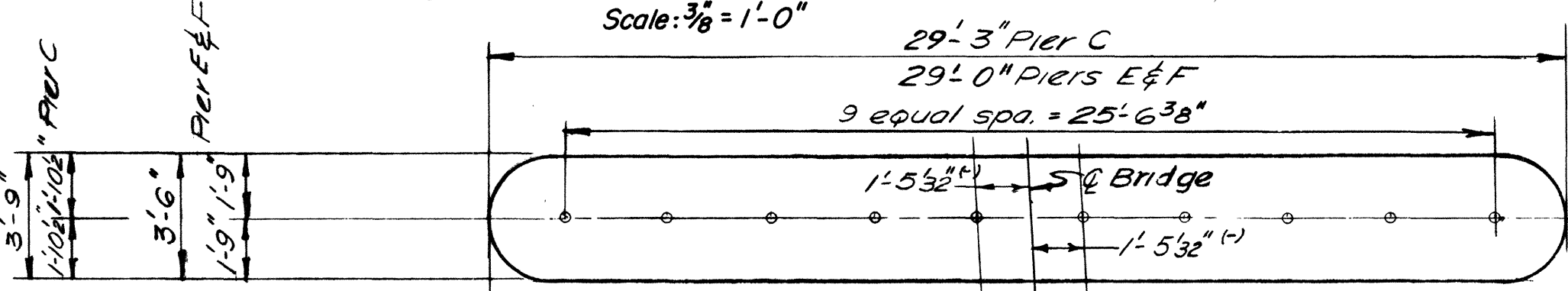
SOUTHERN RAILWAY OVER I-240
ABUTMENTS A & G

DATE:	SCALE:	DRAWN BY:	CHECKED BY:	IN CHARGE:
9-30-58	As Noted	JWN	C.O.	BCC

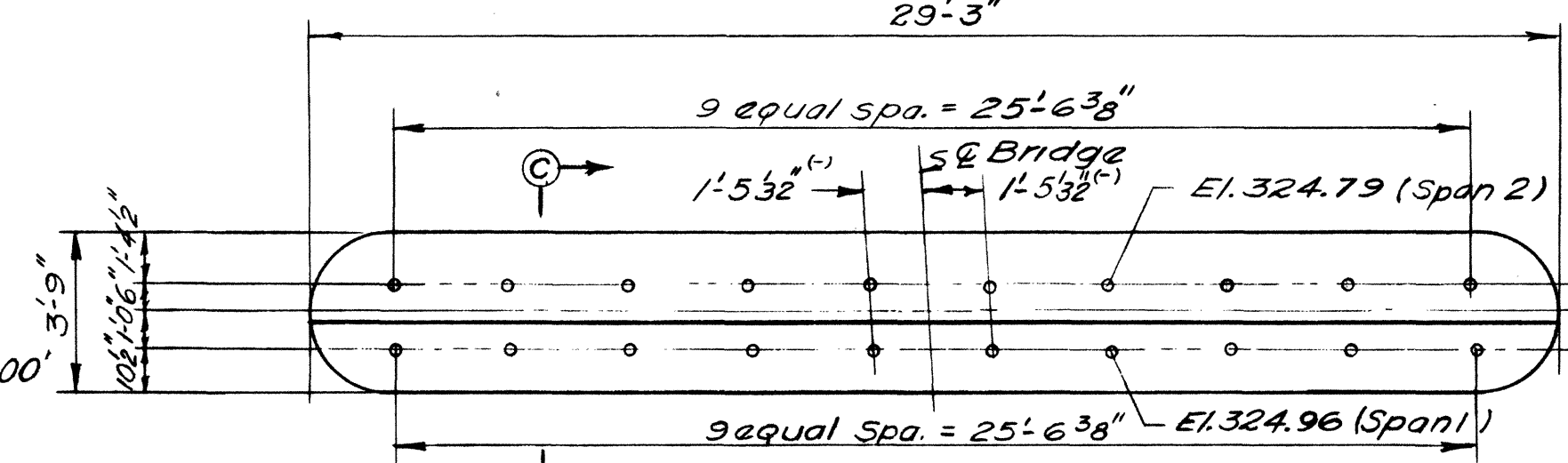
PUB. ROADS DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	1-240-1 (17) 13	1959	158	334
REVISION 9-1-59					
REVISION 10-8-59					
REVISION 2-16-62 Reinf. Steel Quant.					



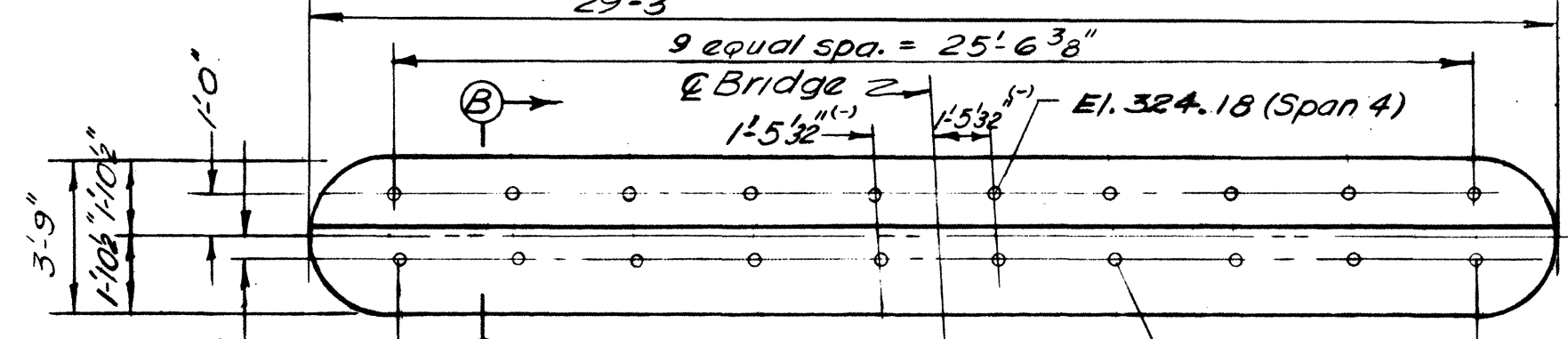
BEARING ANCHOR BOLT LOCATIONS
Scale: 3/8" = 1'-0"



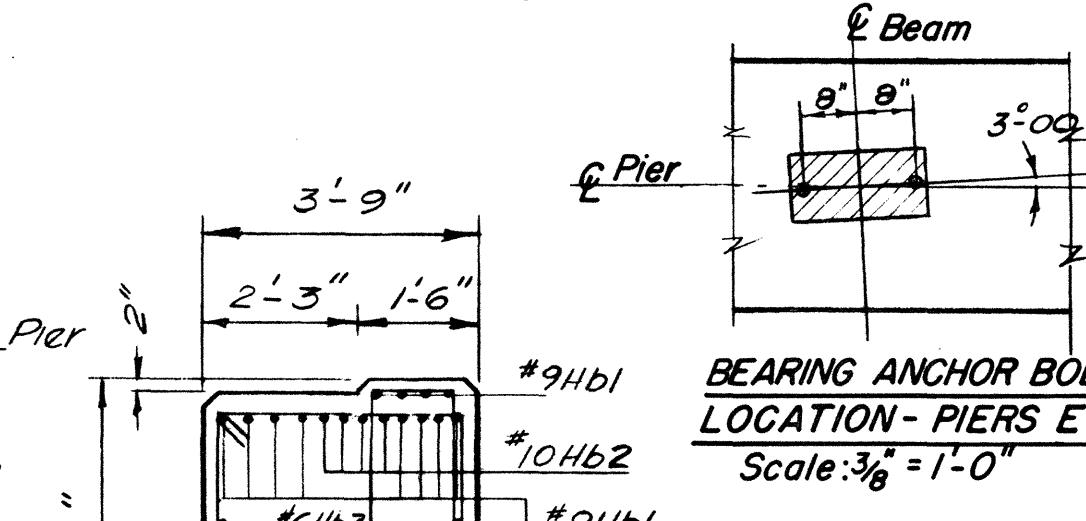
PLAN PIER C, E & F
Scale: 3/8" = 1'-0"



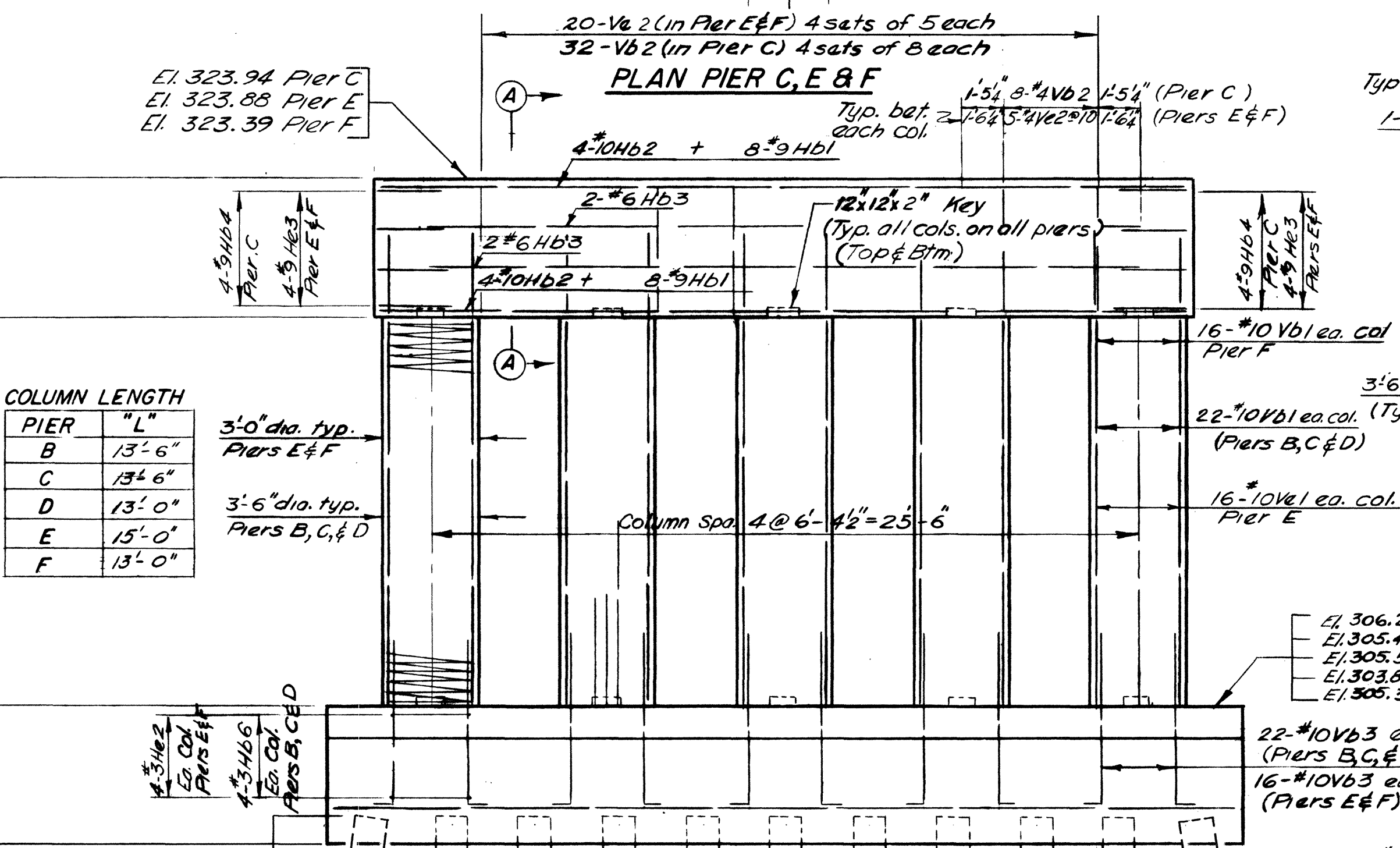
PLAN PIER B
Scale: 3/8" = 1'-0"



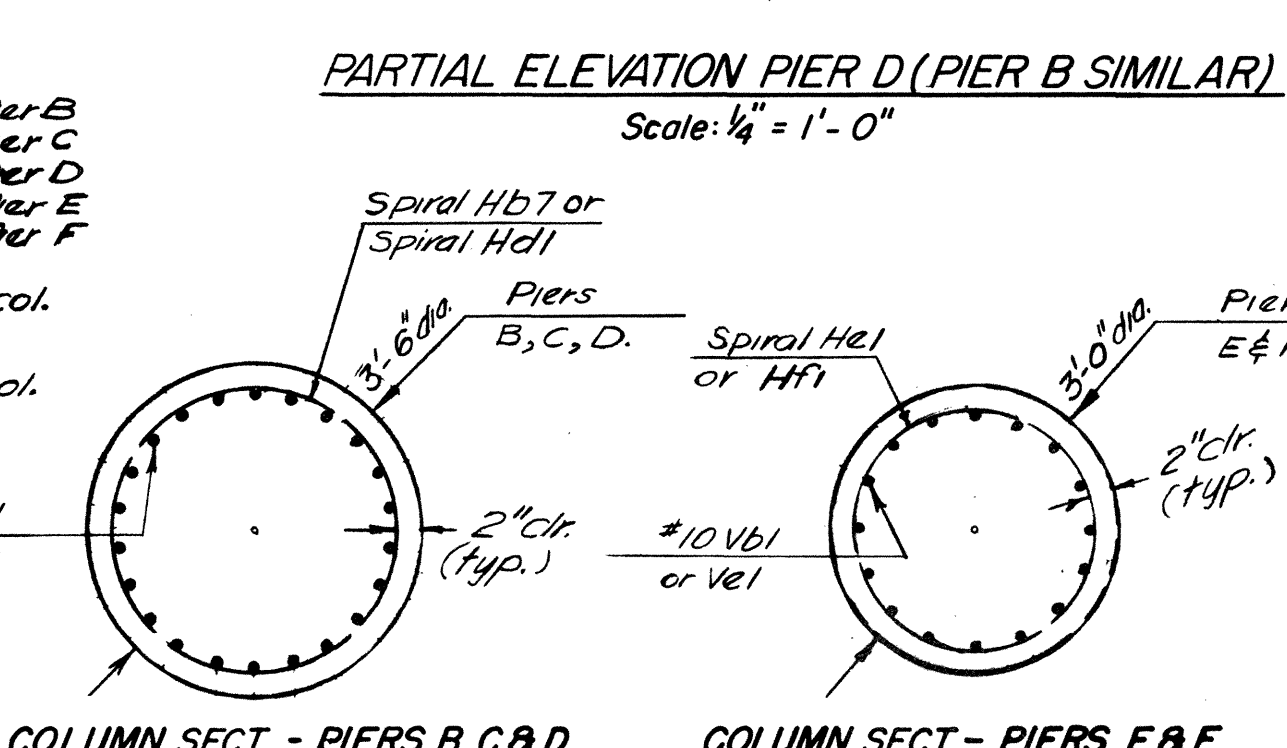
PLAN PIER D
Scale: 3/8" = 1'-0"



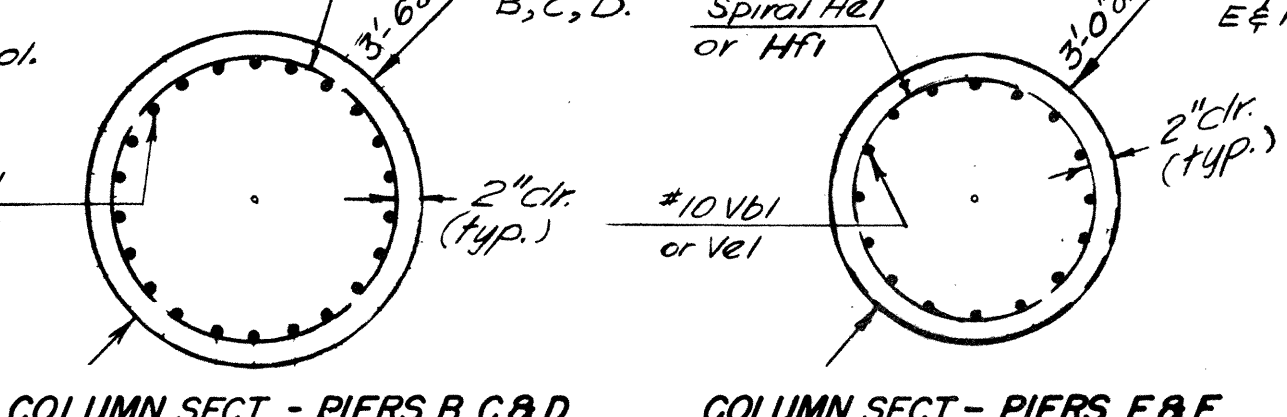
SECTION CC, PIER B
Scale: 3/8" = 1'-0"



ELEVATION ALL PIERS
Scale: 1/4" = 1'-0"



PARTIAL ELEVATION PIER D (PIER B SIMILAR)
Scale: 1/4" = 1'-0"



COLUMN SECT. - PIERS B, C & D

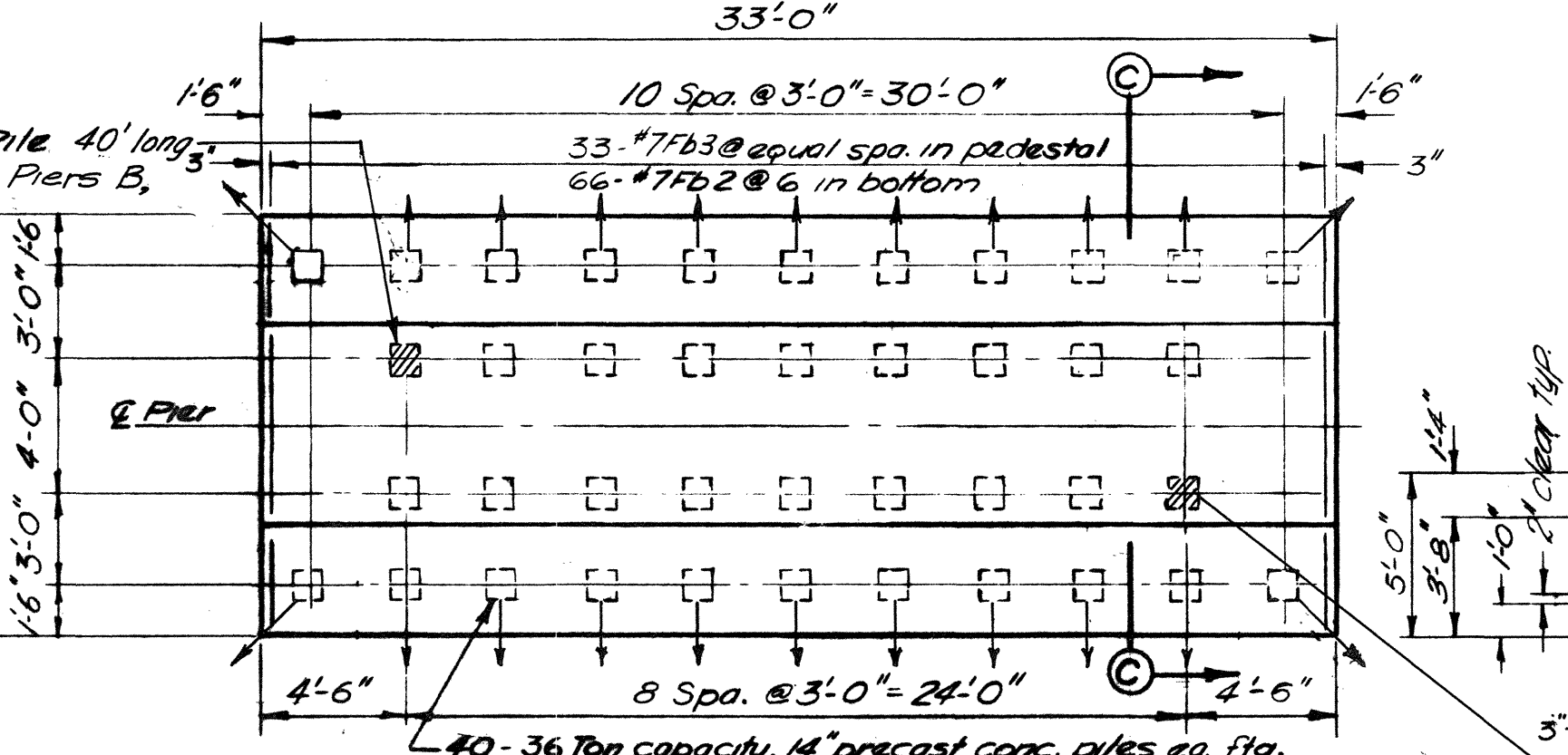
COLUMN SECT. - PIERS E & F

Column Length Table:

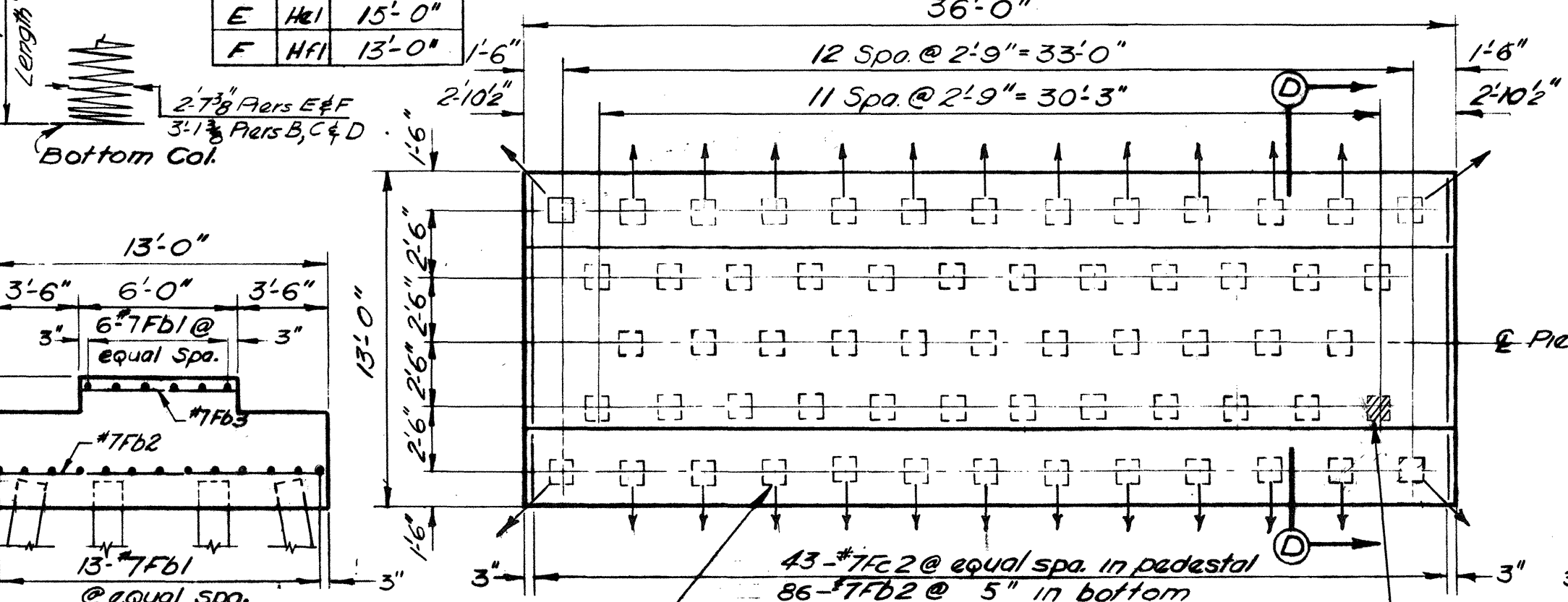
PIER	"L"
B	13'-6"
C	13'-6"
D	13'-0"
E	15'-0"
F	13'-0"

Spiral Lengths Table:

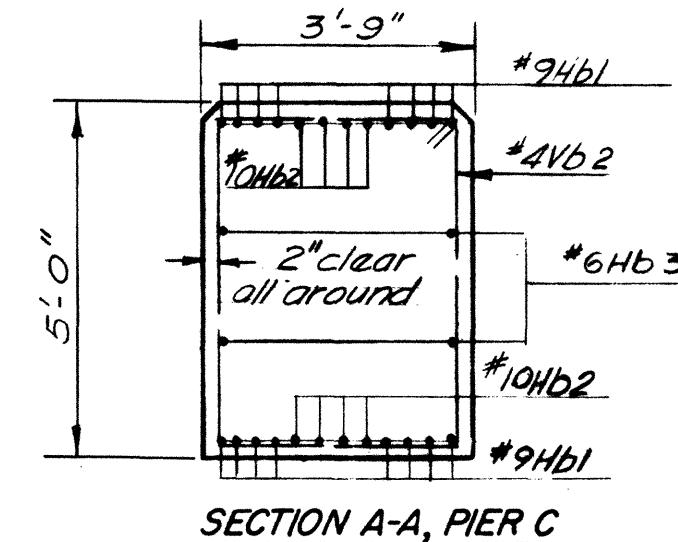
Pier	Bar	"S"
B	Hb7	13'-6"
C	Hb7	13'-6"
D	Hb1	13'-0"
E	Hb1	15'-0"
F	Hb1	13'-0"



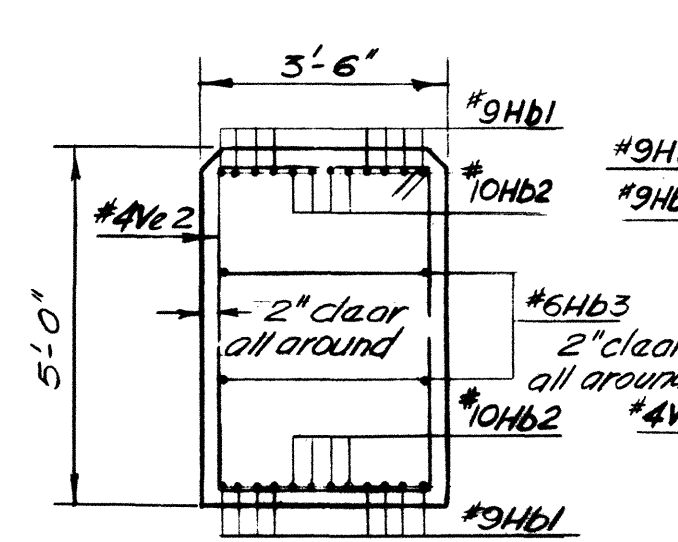
FOOTING PLAN PIERS B, D, E & F
Scale: 3/16" = 1'-0"



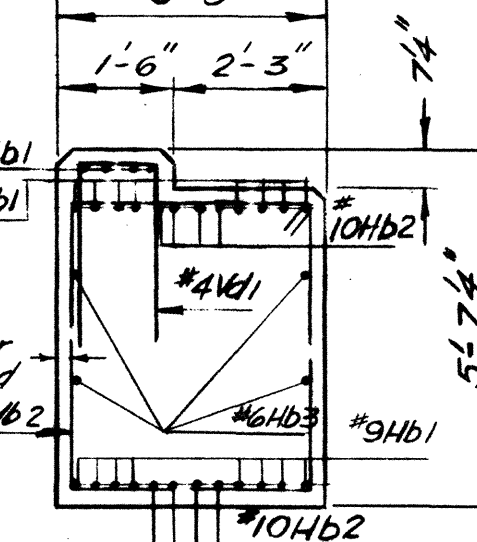
FOOTING PLAN PIER C
Scale: 3/16" = 1'-0"



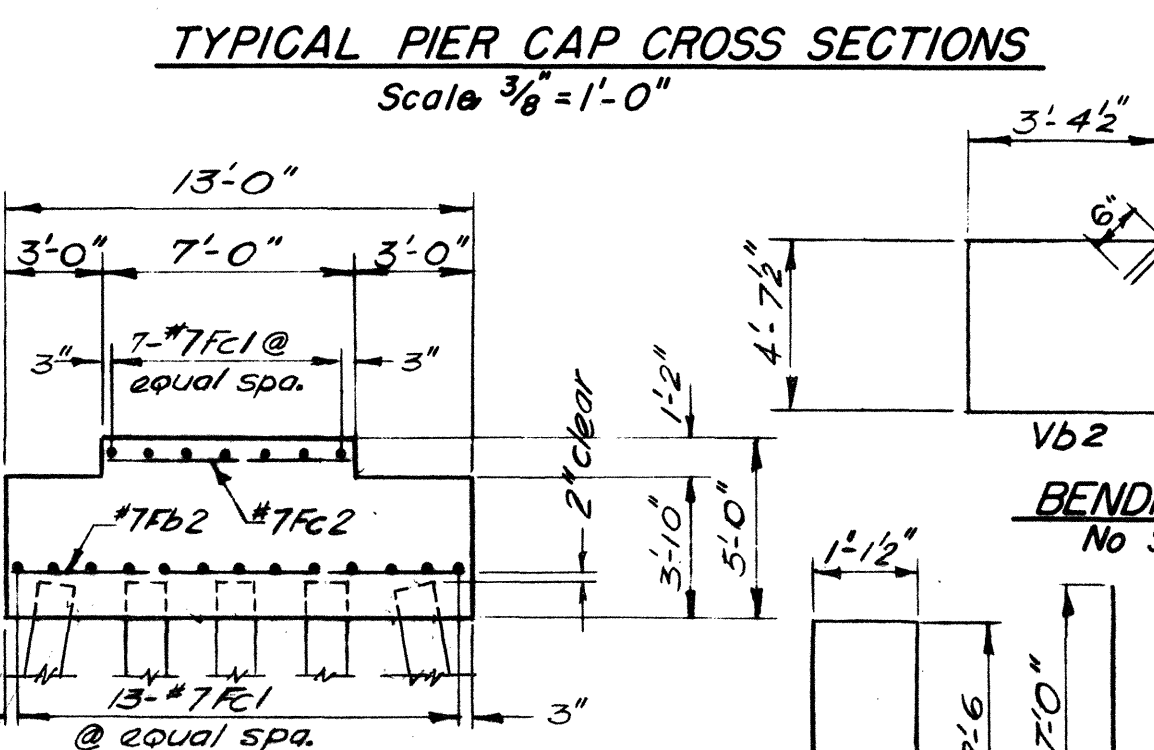
SECTION A-A, PIER C



SECTION A-A, PIERS E & F

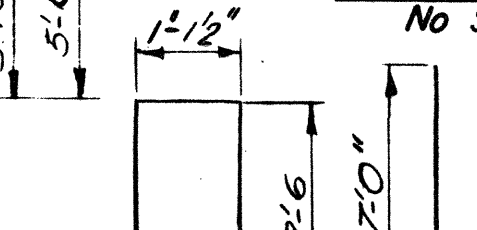


SECTION B-B, PIER D



TYPICAL PIER CAP CROSS SECTIONS
Scale: 3/8" = 1'-0"

BENDING DIAGRAMS
No Scale



SOUTHERN RAILWAY M.P. 540.8A

SOUTHERN RAILWAY OVER I-240
PIERS B, C, D, E & F

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

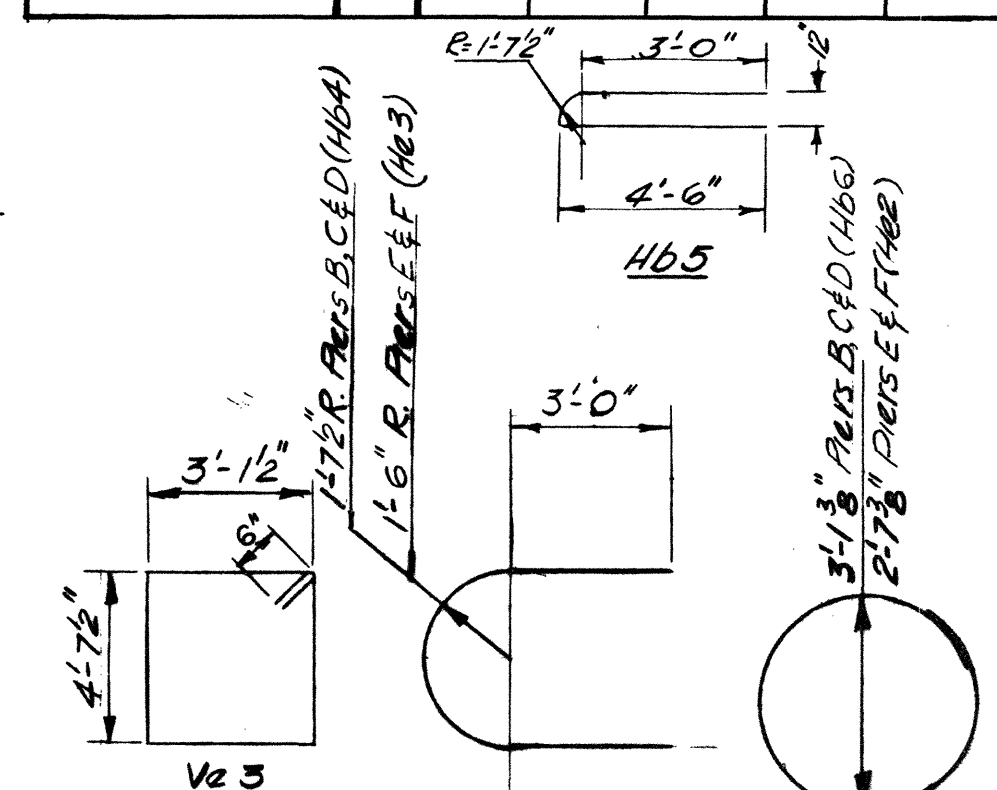
NOTES
1. See Bridge Dwg. 1 for Design and Construction Data.
2. Pier cap shall be cast level. Pier cap surface shall be finished to drain away from the C of piers at 1/4" in areas not under the bearings.

BILL OF STEEL - 5 PIERS

Bar	Size	Length	Pier B	Pier C	Pier D	Pier E	Pier F	Shape	Location
Hb1	9	26'-0"	20	16	20	16	16	—	Cap - All
Hb2	10	28'-6"	8	8	8	8	8	—	Cap - All
Hb3	6	26'-0"	4	4	4	4	4	—	Cap - All
Hb4	9	11'-0"	8	8	8	—	—	—	Cap - B, C, & D
Hb5	9	9'-6"	2	—	2	—	—	—	Cap - B & D
Hb6	3	11'-0"	20	20	20	—	—	—	Fig. - B, C & D
Hb7	5	41'-3"	5	5	—	—	—	—	Spiral Col. - B & C
Hd1	5	40'-7"	—	—	5	—	—	—	Spiral Col. - D
He1	5	38'-5"	—	—	—	5	—	—	Spiral Col. - E
Hf1	3	9'-3"	—	—	—	20	20	—	Fig. - E & F
Hf2	9	10'-9"	—	—	—	8	8	—	Cap - E & F
Hf3	5	33'-11"	—	—	—	5	—	—	Spiral Col. - F
Vb1	10	16'-6"	110	110	110	—	80	—	Col. - B, C, D & E
Vb2	4	17'-0"	20	32	20	—	—	—	Cap - B, C & D
Vb3	10	8'-0"	110	110	110	80	80	—	Col. - Fig. - All
Vd1	4	6'-2"	20	—	20	—	—	—	Cap - B & D
Ve1	10	18'-0"	—	—	—	80	—	—	Col. - E
Ve2	4	16'-6"	—	—	—	20	20	—	Cap - E & F
Fb1	7	32'-8"	19	—	19	19	19	—	Fig. - B, D, E & F
Fb2	7	12'-8"	66	86	66	66	66	—	Fig. - All
Fb3	7	5'-8"	33	—	33	33	33	—	Fig. - B, D, E & F
Fc1	7	35'-8"	—	20	—	—	—	—	Fig. - C
Fc2	7	6'-8"	—	43	—	—	—	—	Fig. - C

ESTIMATED QUANTITIES - 5 PIERS

ITEM	UNITS	Pier B	Pier C	Pier D	Pier E	Pier F
Class A Concrete	cuyd	110.1	118.0	110.0	104.2	101.6
Steel Bar Reinforcement	lbs.	21,110	21,640	21,030	17,660	16,860



SOUTHERN RAILWAY M.P. 540.8A

SOUTHERN RAILWAY OVER I-240
PIERS B, C, D, E & F

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

Scale: 3/16" = 1'-0"

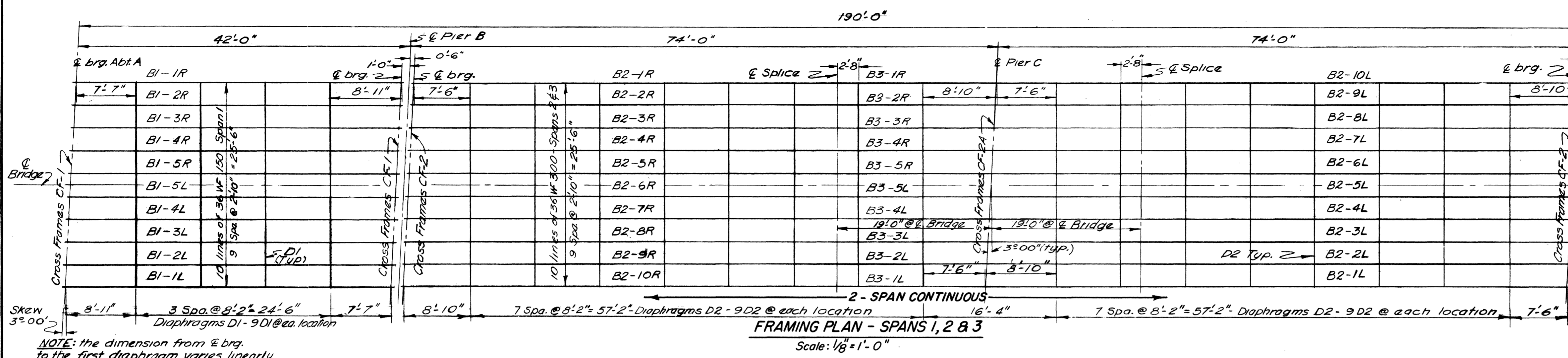
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Scale: 3/16" = 1'-0"

JOB NO. 332

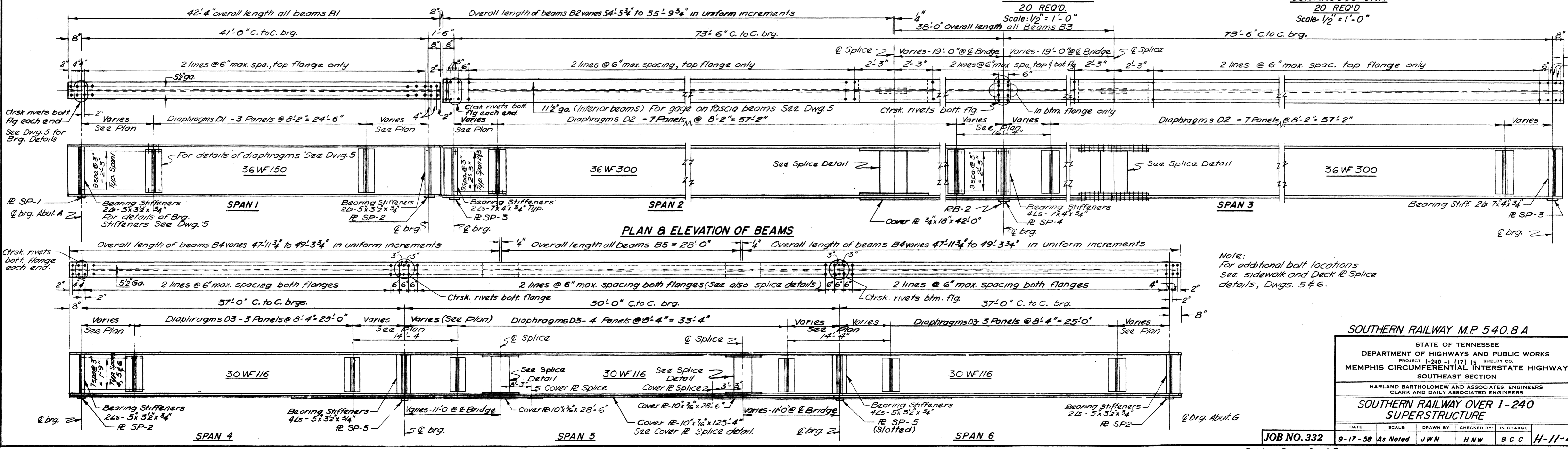
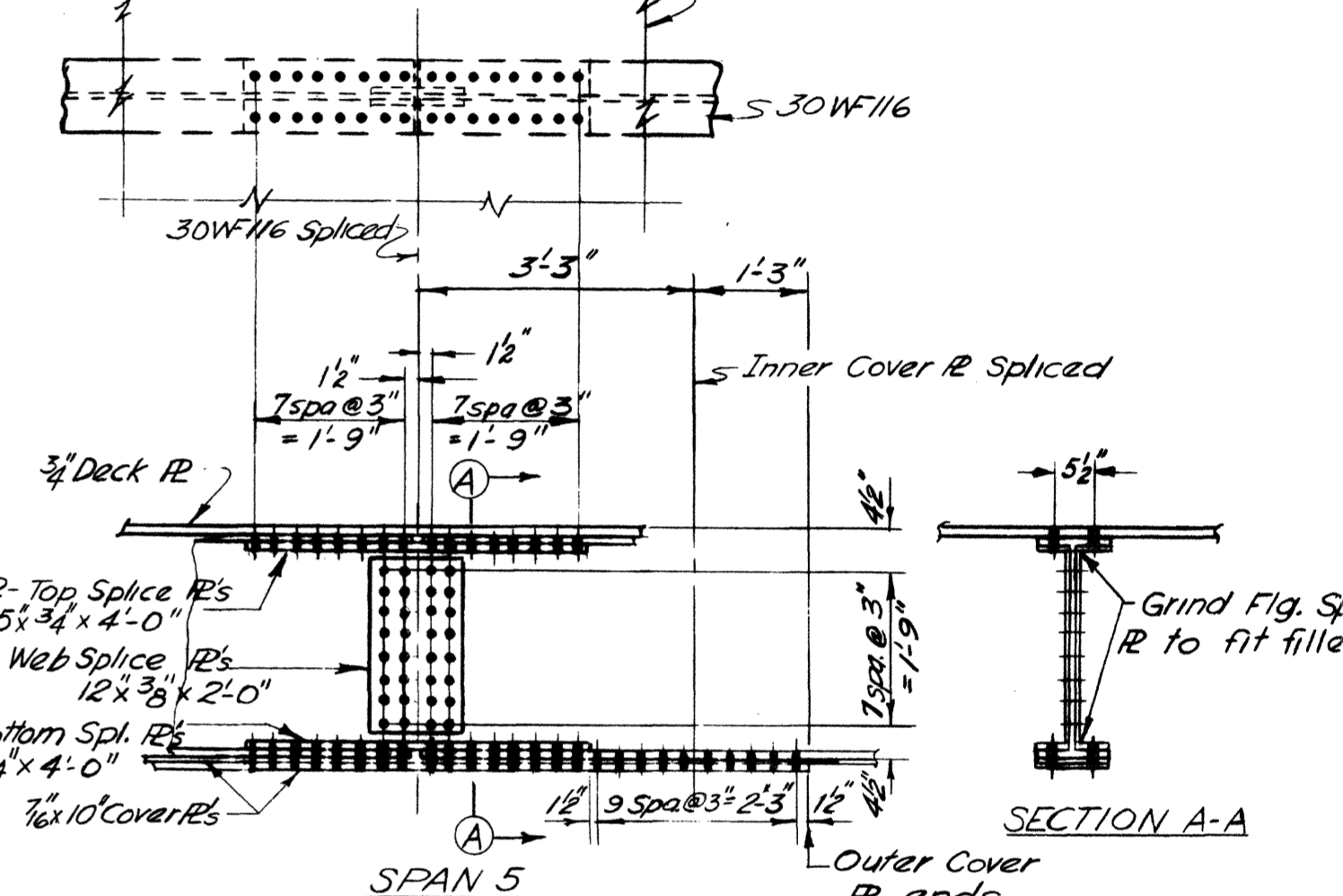
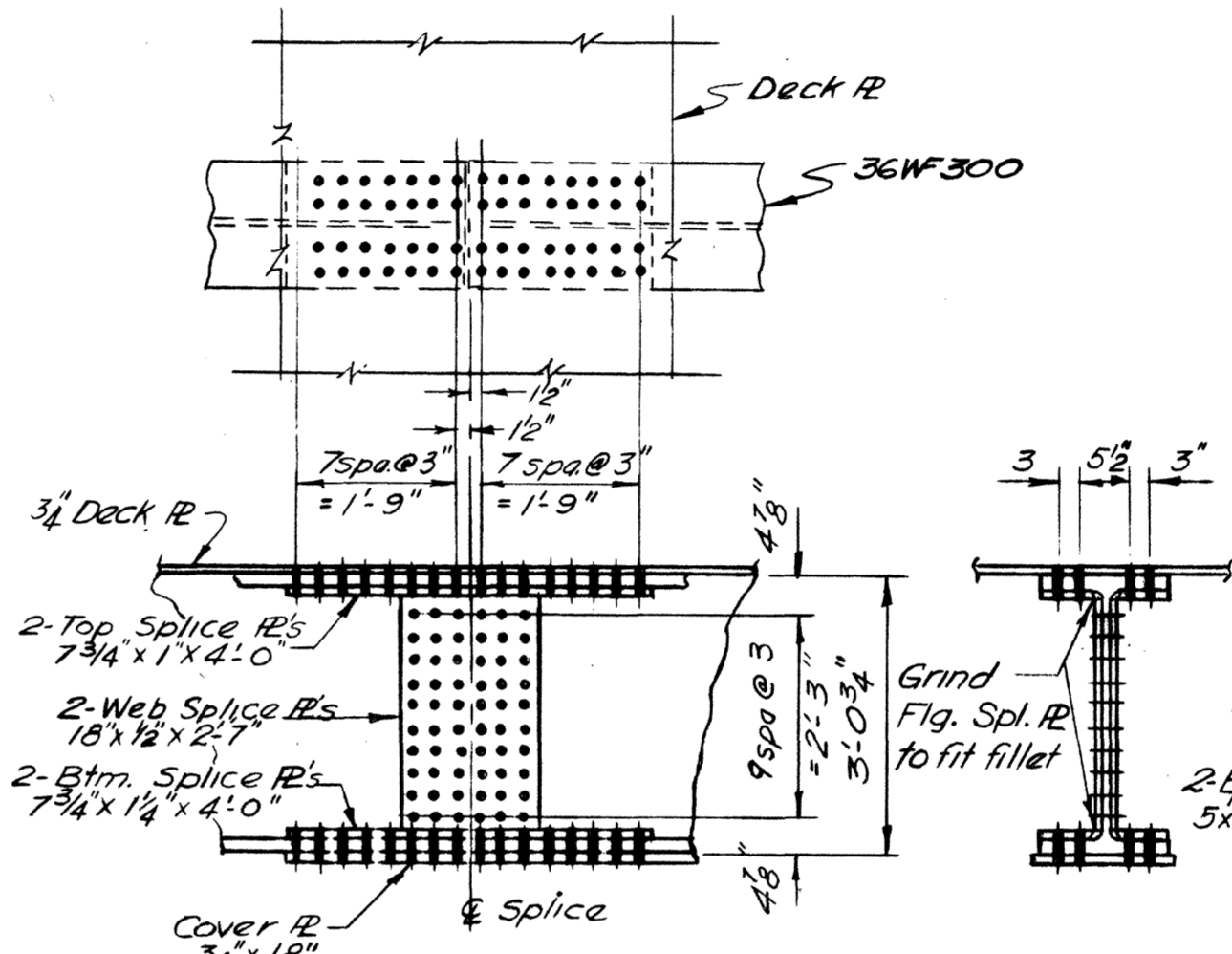
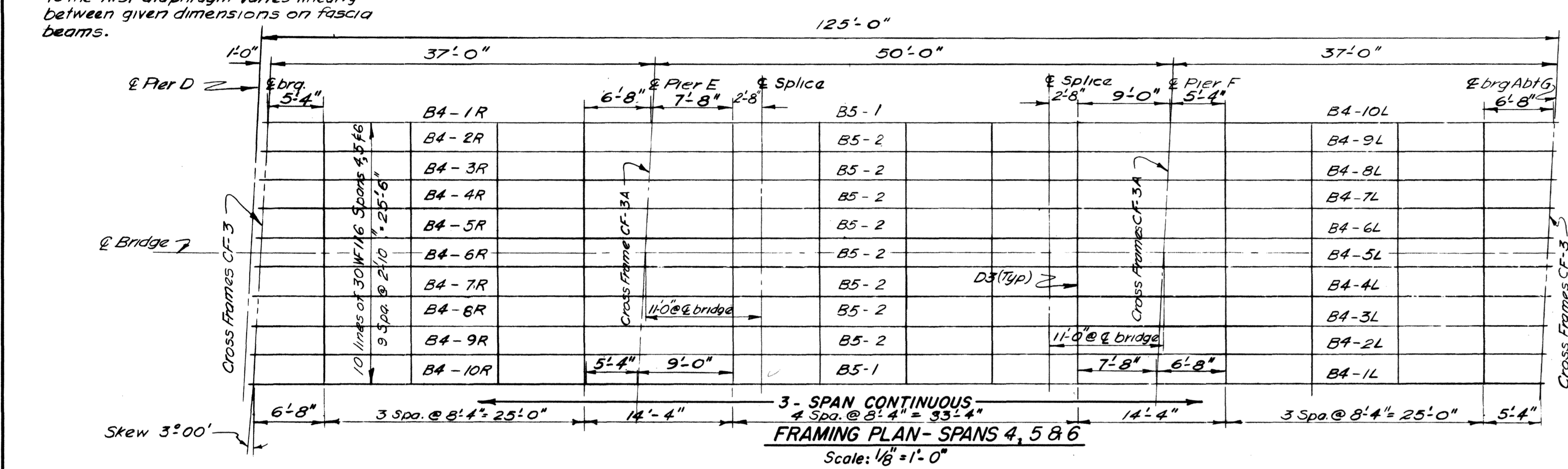
10-4-58 As Noted JWN H.N.W. BCC H-11-3

PUB. ROADS DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	1-240-1 (17) 13	1959	159	334



10" diam. hole in diaphragms for 8" dia longitudinal drain. See Dwg 6 for location of diaphragms which have these holes

- NOTES**
- See Bridge Dwg. 1 for Design and Construction Data.
 - See Bridge Dwg. 6 for details of Deck Plate.



SOUTHERN RAILWAY M.P. 540.8 A

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
PROJECT 1-240-1 (17) 15 SHELBY CO.
MEMPHIS CIRCUMFERENTIAL INTERSTATE HIGHWAY
SOUTHEAST SECTION

HARLAND BARTHOLOMEW AND ASSOCIATES, ENGINEERS
CLARK AND DAILY ASSOCIATED ENGINEERS

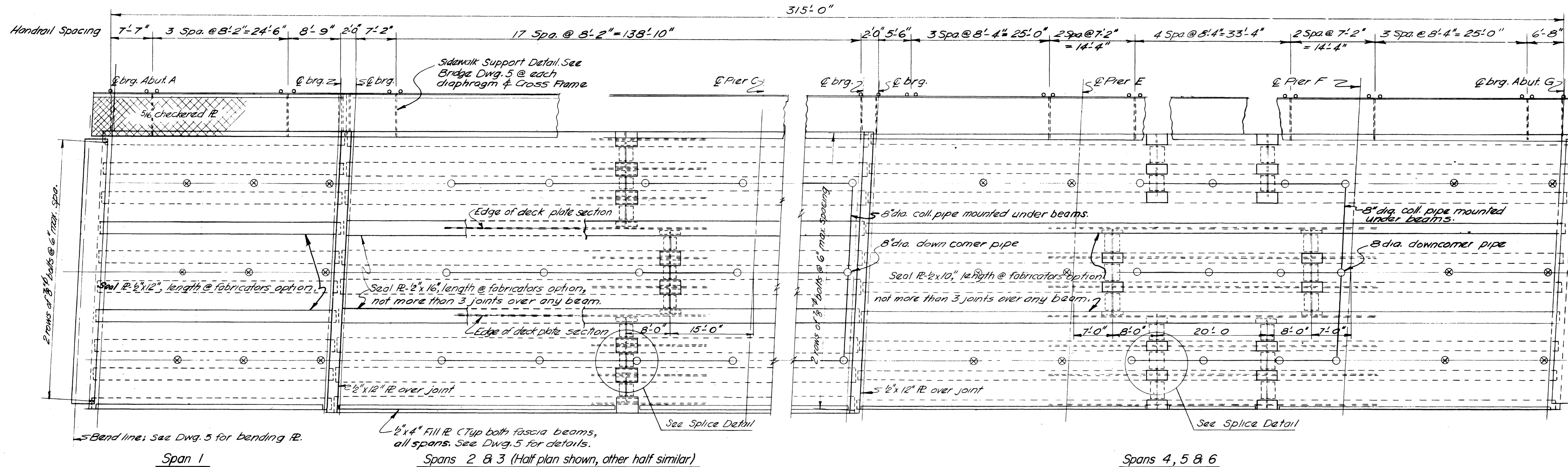
SOUTHERN RAILWAY OVER I-240 SUPERSTRUCTURE

DATE	SCALE	DRAWN BY	CHECKED BY	IN CHARGE
9-17-58	As Noted	JWN	HNW	BCC

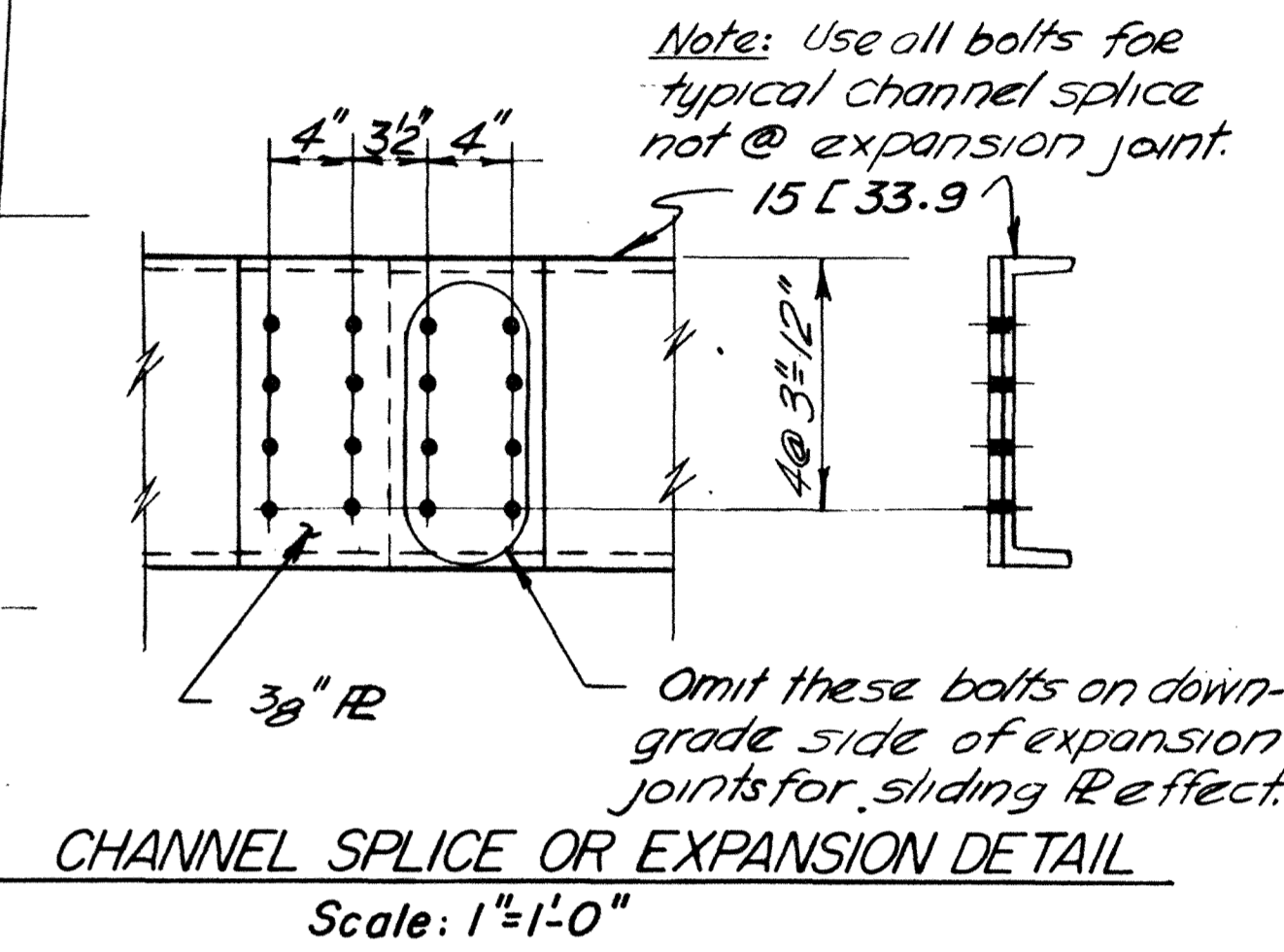
JOB NO. 332

MICROFILMED

PUB. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
3	TENNESSEE	I-240-1 (17) 13	1989	161	334



NOTES:
1. SEE BRIDGE DWG. 1 FOR DESIGN AND CONSTRUCTION DATA.



8" drop through drain connected to 8" half circle drain in ballast. See Detail A. Fabricators shall locate drains in such manner that they are at least 1'-0" from the diaphragms.
8" drain pipe connected to 8" half circle drain in ballast and 8" carry-off pipe thru diaphragms. See Detail B.

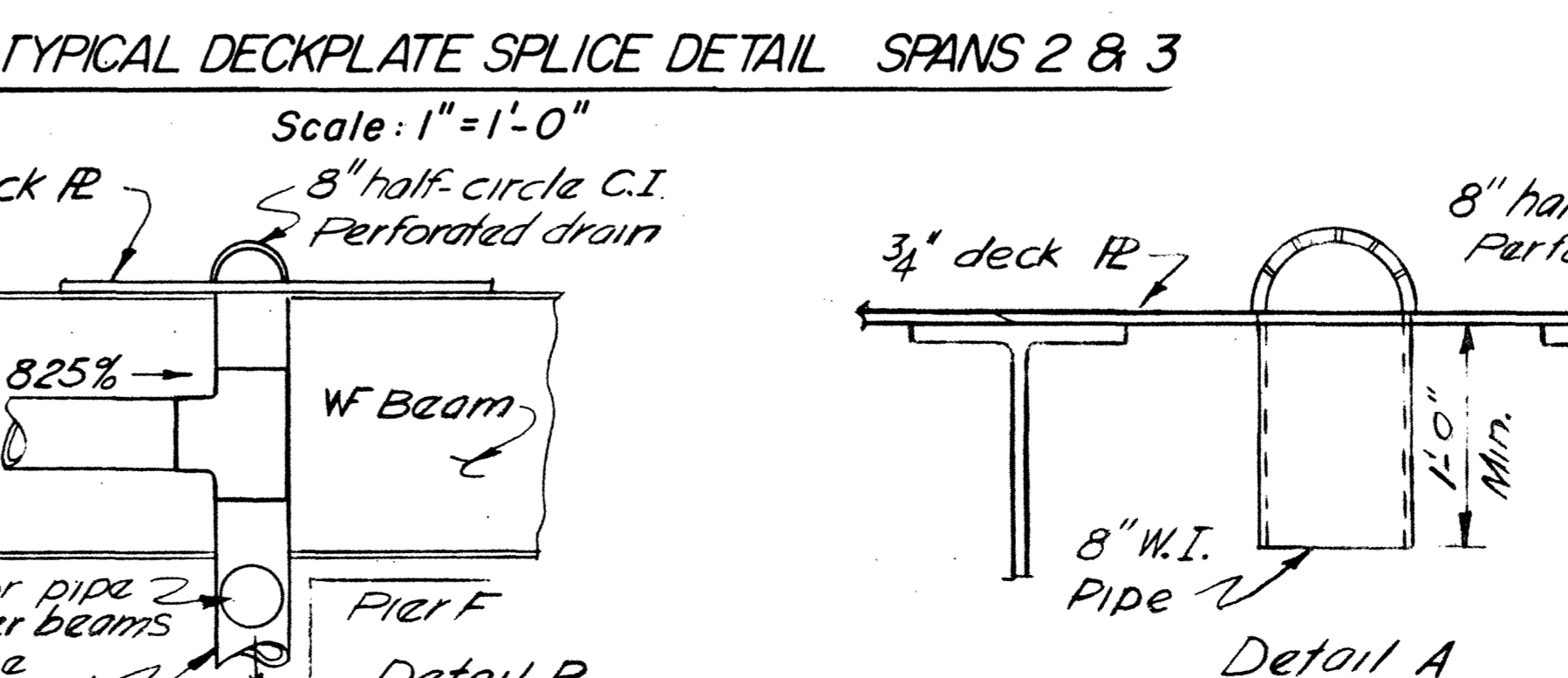
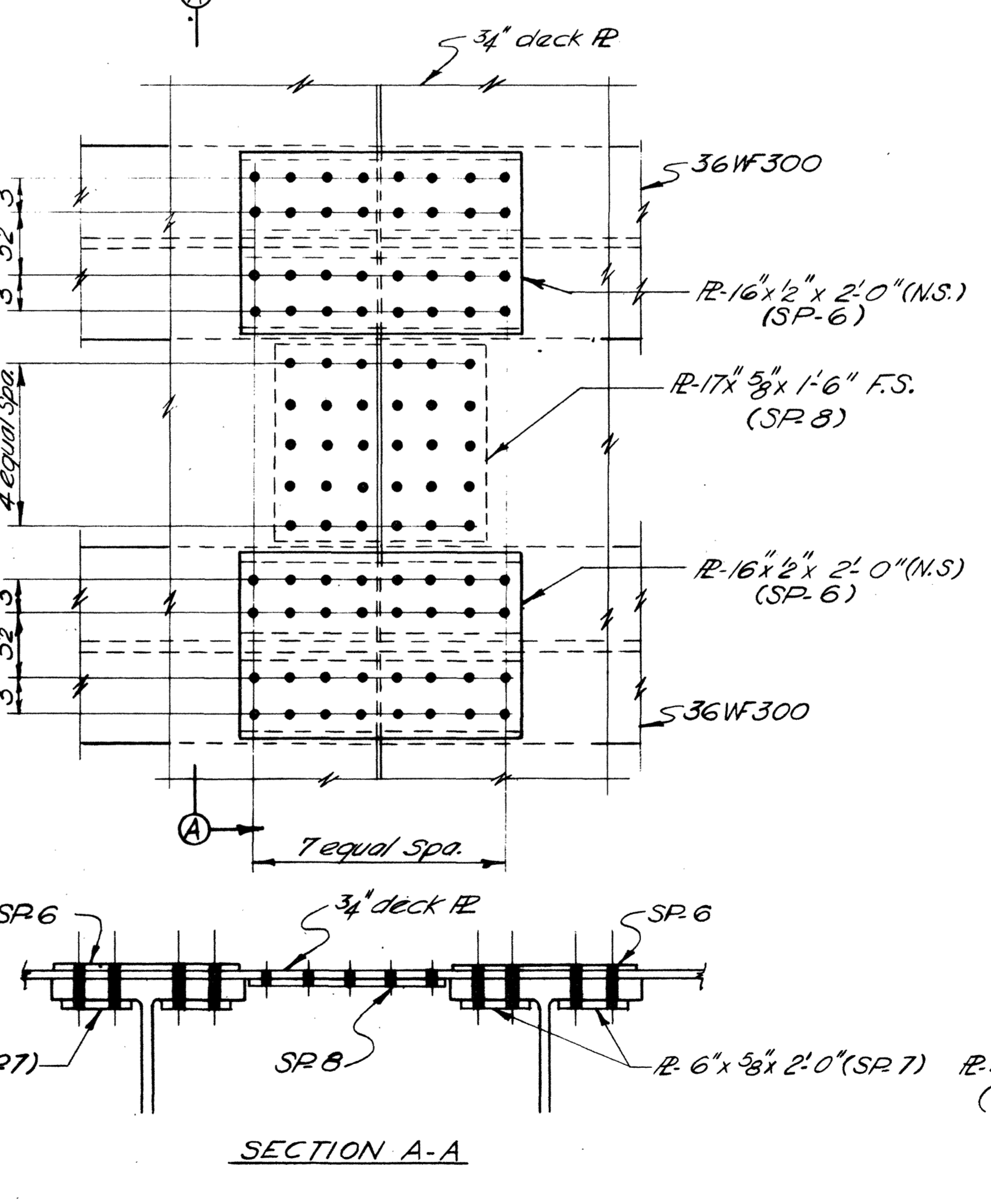
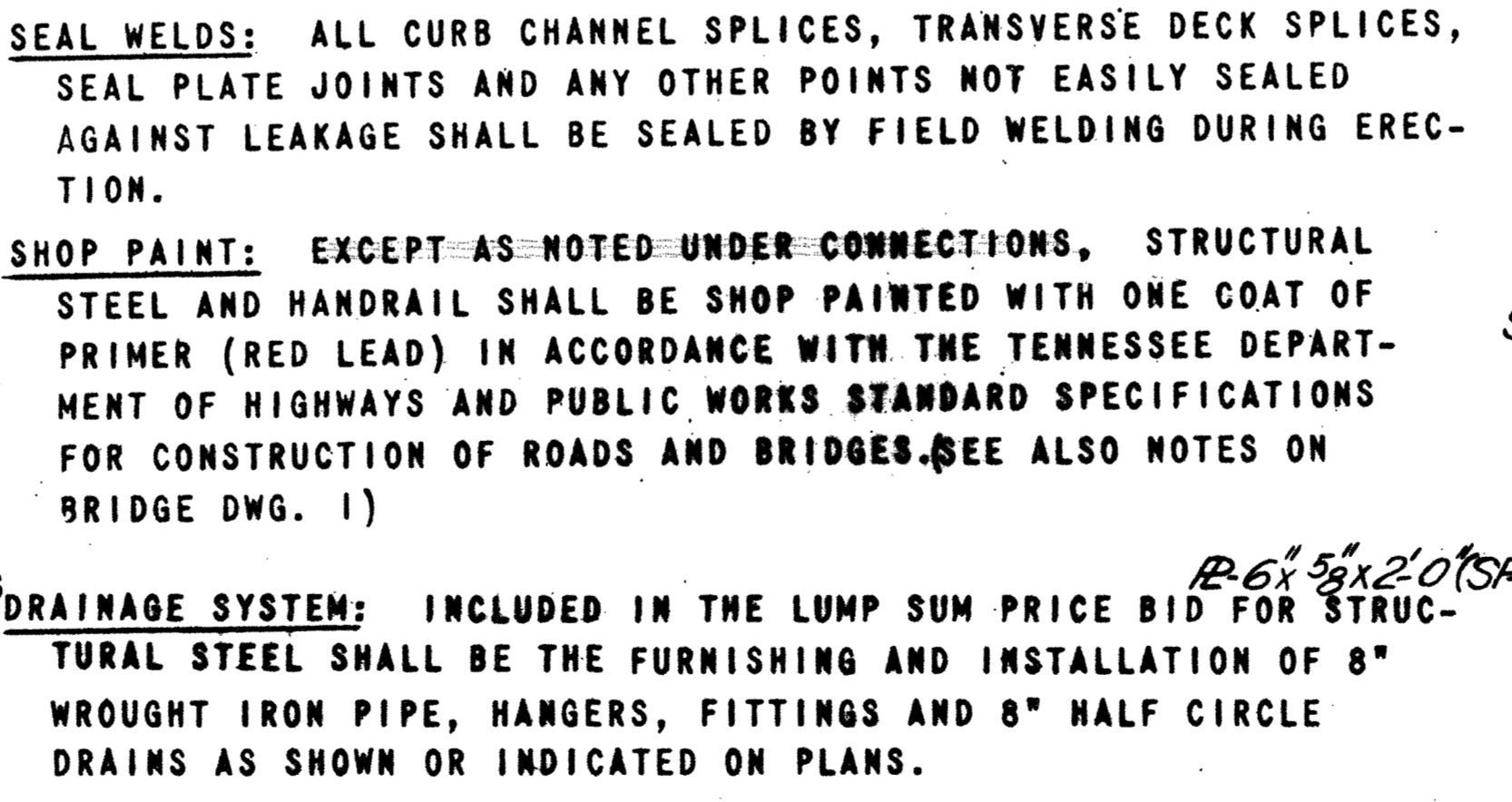
NOTES FOR STEEL SUPERSTRUCTURE:
FABRICATOR TO FURNISH: STRUCTURAL STEEL PLATES AND SHAPES, PIPE HANDRAILING, ANCHOR BOLTS, HIGH STRENGTH BOLTS FOR FIELD CONNECTIONS AND U-BOLTS FOR ATTACHING HANDRAILING, AND DRAINAGE SYSTEM ALL AS SHOWN OR INDICATED ON THE PLANS.
DESIGN: IN ACCORDANCE WITH CURRENT AREA SPECIFICATIONS USING E-72 LOADING AND FULL DIESEL IMPACT.
FABRICATION AND WORKMANSHIP: TO BE IN ACCORDANCE WITH CURRENT AREA SPECS. UNLESS OTHERWISE NOTED.
SHOP DETAILS: FABRICATOR SHALL FURNISH SHOP DETAILS INCLUDING BILL OF HIGH STRENGTH BOLTS AND WASHERS FOR FIELD CONNECTIONS TO THE ENGINEER FOR APPROVAL BEFORE FABRICATION IS STARTED.
INSPECTION: MILL AND SHOP INSPECTION BY C.E. WEBB, ENGINEER OF TESTS, SOUTHERN RAILWAY COMPANY, ALEXANDRIA, VA.

KEPT FAR ENOUGH AHEAD OF THE DISASSEMBLING TO ASSURE A PROPER FIT OF ALL THE PARTS.
MATERIAL: STEEL PLATES AND SHAPES: ALL MATERIAL IN BEARING DETAILS, DECK PLATES, DECK SEAL PLATES, DECK SPLICE PLATES, DECK CHANNELS, AND DECK CHANNEL SPLICE PLATES TO BE UNITED STATES STEEL COR-TEN OR BETHLEHEM MAYARI-R; ALL OTHER PLATES AND SHAPES TO BE STRUCTURAL STEEL IN ACCORDANCE WITH ASTM SPECIFICATIONS DESIGNATION A-7.
PIPE HANDRAILING: TO BE STANDARD WEIGHT BLACK STEEL PIPE IN ACCORDANCE WITH ASTM DESIGNATION A-120.
HIGH STRENGTH BOLTS: SEE SPECIAL PROVISIONS.

THE BOLT HEADS IF THE SURFACE OF THE BOLTED MATERIAL ADJACENT TO THE HEAD HAS A SLOPE IN EXCESS OF 1:20 WITH RESPECT TO A PLANE NORMAL TO THE BOLT AXIS AND BEVELED WASHERS SHALL BE USED UNDER THE NUTS WHERE THE SURFACE OF THE BOLTED MATERIAL ADJACENT TO THE NUT IS NOT PERPENDICULAR TO THE BOLT AXIS.
 2. ALL NUTS MUST BE TIGHTENED TO A MINIMUM TORQUE OF 470 POUND FEET MEASURED WITH THE NUT IN MOTION BY A MANUAL TORQUE WRENCH OR BY A POWER WRENCH THAT CAN BE SET TO PRODUCE A PREDETERMINED TORQUE. IF A POWER WRENCH IS USED IT SHOULD BE CALIBRATED TO CUT OUT AT A TORQUE OF 540 POUND-FEET.
 3. WHEN DIFFICULTY IS EXPERIENCED IN HOLDING THE HEAD OF ANY BOLT IT SHALL BE TAKEN OUT AND DISCARDED AS THIS IS AN INDICATION OF A DEFECTIVE THREAD.
SEAL WELDS: ALL CURB CHANNEL SPLICES, TRANSVERSE DECK SPLICES, SEAL PLATE JOINTS AND ANY OTHER POINTS NOT EASILY SEALED AGAINST LEAKAGE SHALL BE SEALED BY FIELD WELDING DURING ERECTION.
SHOP PAINT: EXCEPT AS NOTED UNDER CONNECTIONS, STRUCTURAL STEEL AND HANDRAIL SHALL BE SHOP PAINTED WITH ONE COAT OF PRIMER (RED LEAD) IN ACCORDANCE WITH THE TENNESSEE DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF ROADS AND BRIDGES. (SEE ALSO NOTES ON BRIDGE DWG. 1)
DRAINAGE SYSTEM: INCLUDED IN THE LUMP SUM PRICE BID FOR STRUCTURAL STEEL SHALL BE THE FURNISHING AND INSTALLATION OF 8" WROUGHT IRON PIPE, HANGERS, FITTINGS AND 8" HALF CIRCLE DRAINS AS SHOWN OR INDICATED ON PLANS.
SHOP DRAWINGS: AFTER COMPLETION OF SHIPMENT OF THE STRUCTURAL STEEL BY THE FABRICATOR, SHOP DRAWINGS, IN INK ON LINEN, OR APPROVED REPRODUCTIONS ON LINEN, SHOWING THE STRUCTURAL STEEL AS FABRICATED, SHALL BE FURNISHED TO THE SOUTHERN RAILWAY COMPANY.

PREPARATION OF HOLES: ALL HOLES FOR HIGH STRENGTH BOLTS SHALL BE 1/16" DIAMETER AND SHALL BE SUBPUNCHED OR SUBDRILLED 1/4" LESS IN DIAMETER THAN THAT OF THE FINISHED HOLES, AND SHALL BE REAMED TO SIZE WITH THE PARTS ASSEMBLED, WITH THE FOLLOWING EXCEPTIONS:
 1. HOLES IN BEAMS AND SOLE PLATES SHALL NOT BE PUNCHED; HOWEVER, AT THE FABRICATOR'S OPTION, THEY MAY BE SUBDRILLED TO THE DIAMETER SPECIFIED FOR SUBPUNCHING OR MAY BE DRILLED FULL SIZE WITH THE PARTS ASSEMBLED, PROVIDED THAT THE PARTS ARE ADEQUATELY CLAMPED OR BOLTED TOGETHER.
 2. HOLES IN STIFFENER ANGLES MAY BE SUBPUNCHED 1/8" LESS IN DIAMETER THAN FULL SIZE AND REAMED TO SIZE AFTER ASSEMBLY.
 3. HOLES IN SIDEWALK SUPPORT MATERIAL MAY BE PUNCHED FULL SIZE OR, AT THE FABRICATOR'S OPTION, MAY BE SUBPUNCHED 1/8" LESS IN DIAMETER THAN THE FINISHED HOLE AND REAMED TO FULL SIZE AFTER ASSEMBLY.
HOLES FOR STANDARD MACHINE BOLTS AND U-BOLTS MAY BE PUNCHED FULL SIZE AND SHALL BE 1/16" LARGER IN DIAMETER THAN THE NOMINAL BOLT SIZE.
HOLES FOR ANCHOR BOLTS MAY BE DRILLED FULL SIZE AND HOLES IN END SOLE PLATES SHALL BE SLOTTED AS INDICATED ON PLANS.
SHOP ASSEMBLY: ALL PARTS OF THE SUPERSTRUCTURE MUST BE SHOP ASSEMBLED AND MATCH MARKED. THE ENTIRE SUPERSTRUCTURE NEED NOT BE COMPLETELY ASSEMBLED AT ONE TIME BUT THE ASSEMBLING MUST BE

BOLT-7/8" DIAMETER WITH REGULAR SEMIFINISHED HEX. HEAD IN ACCORDANCE WITH ASA DESIGNATION B-18.2.
NUT-HEAVY HEX. SEMIFINISHED IN ACCORDANCE WITH ASA DESIGNATION B-18.2.
WASHERS-SMOOTH, FLAT, HEAVY, PLAIN, IN ACCORDANCE WITH ASA DESIGNATION B-27.2, EXCEPT THAT SMOOTH-BEVELED WASHERS TO COMPENSATE FOR LACK OF PARALLELISM SHALL BE USED WHERE THE BEARING SURFACES OF THE BOLTED PARTS HAVE A SLOPE GREATER THAN 1:20 WITH RESPECT TO A PLANE NORMAL TO THE BOLT AXIS OR WHERE THE BEARING SURFACE OF THE BOLTED PARTS ADJACENT TO THE NUT IS NOT PERPENDICULAR TO THE BOLT AXIS.
CONNECTIONS: ALL CONNECTIONS SHALL BE MADE WITH HIGH STRENGTH BOLTS (EXCEPT STANDARD MACHINE BOLTS ARE TO BE USED WHERE BOLT SIZES OTHER THAN 7/8" DIAM. ARE SPECIFIED ON THE PLANS).
FREE OF DIRT, OIL, LOOSE SCALE, BURRS, PITS AND OTHER DEFECTS THAT WOULD PREVENT SOLID SEATING OF THE PARTS. CONTACT SURFACES OF MATERIAL ENGAGED BY HIGH STRENGTH BOLTS THROUGH DECK PLATES, BEAM COVER PLATES OR BEAM SPLICES MUST BE FREE OF PAINT WHEN ASSEMBLED. CONTACT SURFACES OF ALL OTHER BOLTED CONNECTIONS TO BE SHOP PAINTED.
INSTALLATION OF HIGH STRENGTH BOLTS:
 1. HIGH STRENGTH BOLTS SHALL BE ASSEMBLED WITH ONE HARDENED WASHER ON EACH END. BEVELED WASHERS SHALL BE USED UNDER THE



SOUTHERN RAILWAY M.P. 540.8 A

STATE OF TENNESSEE
 DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
 PROJECT I-240-1 (17) 15 SHELBY CO.
 MEMPHIS INTERSTATE HIGHWAY
 SOUTHEAST SECTION

HARLAND BARTHOLOMEW AND ASSOCIATES, ENGINEERS
 CLARK, DAILY AND DIETZ, ASSOCIATED ENGINEERS

SOUTHERN RAILWAY OVER I-240
 DECKPLATE DETAILS

DATE:	SCALE:	DRAWN BY:	CHECKED BY:	IN CHARGE:
11-5-58	AS NOTED	JWN	H.N.W.	B.G.G.

H-11-6