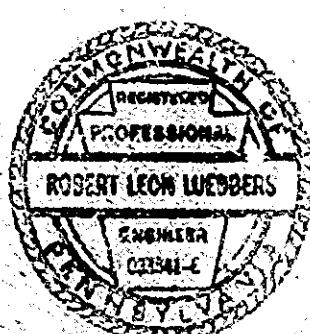


Mark	Description	By	Chk'd	App'd	Date
REVISIONS					



Robert L. Beublers, P.E.
REG. PROF. ENGINEER

DATE May 6, 1985

Commonwealth of Pennsylvania

**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE
REGISTERED STRUCTURE DESIGNER - CAST IN PLACE REINFORCED CONCRETE

GENERAL PLAN & ELEVATION

Digitized by srujanika@gmail.com

SHEET 1 OF 66

S-160934

DESIGNED BY: JMAS
DRAWN BY: JMAS
CHECKED BY: JMAS

GENERAL NOTES

- MATERIALS AND WORKMANSHIP: IN ACCORDANCE WITH PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 1983, PUBLICATION 408 AND THE CURRENT SUPPLEMENTS, AMERICAN WELDING SOCIETY'S STRUCTURAL WELDING CODE FOR STEEL (1980) AND FOR REINFORCING STEEL (1983), AND THE SPECIAL PROVISIONS.
- DESIGN SPECIFICATIONS: DESIGN DIVISION OF 1983 AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" AS SUPPLEMENTED BY THE COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF HIGHWAYS DESIGN MANUAL, PART 4, STRUCTURES, EXCEPT THAT EARTHQUAKE STRESSES WERE NOT CONSIDERED.
- DESIGN IS IN ACCORDANCE WITH THE STRENGTH DESIGN METHOD (LOAD FACTOR DESIGN).
- LIVE LOAD: ONE HUNDRED AND TWENTY-FIVE PERCENT (125%) OF HS 20-44 LOADING (HS 25-44), OR ONE HUNDRED AND TWENTY-FIVE PERCENT (125%) OF ALTERNATE MILITARY LOADING (ARTICLE 3.7.5 AASHTO 1983 SPECIFICATIONS), WHICHEVER PRODUCES THE GREATER STRESS. A CHECK WAS MADE FOR A 204K POUND VEHICLE TO SATISFY OPERATING (STRESS LEVEL/FACCTOR) RATING.
- DEAD LOAD INCLUDES 15 POUNDS PER SQUARE FOOT OF DECK AREA FORMED USING PERMANENT METAL DECK FORMS AND 30 POUNDS PER SQUARE FOOT FOR FUTURE WEARING SURFACE ON THE DECK SLAB.
- USE REINFORCING STEEL CONFORMING TO THE REQUIREMENTS FOR DEFORMED BILLET-STEEL BARS FOR CONCRETE REINFORCEMENT IN ACCORDANCE WITH AASHTO M31 (ASTM A615), RAIL STEEL (ASTM A616), OR AXLE STEEL (ASTM A617). ALL REINFORCING STEEL IS GRADE 60.
- BARS ARE DETAILED IN ACCORDANCE WITH BC-336A. PROVIDE TWO INCH CONCRETE COVER ON ALL REINFORCEMENT BARS EXCEPT WHERE NOTED OTHERWISE. PROVIDE LAP SPLICES IN ACCORDANCE WITH DESIGN SPECIFICATIONS, EXCEPT MINIMUM LAP IS 30 BAR DIAMETERS. PROVIDE MINIMUM 2-1/2 INCHES COVER FOR TOP REINFORCEMENT BARS IN DECK SLAB.
- USE EPOXY COATED REINFORCEMENT BARS IN THE DECK SLABS, BRIDGE PARAPETS, MEDIAN BARRIERS, PARAPETS ON WINGWALLS, AND ABUTMENT BACKWALLS.
- USE LIGHTWEIGHT CEMENT CONCRETE ($f'_c = 4500$ psi) IN THE DECK SLAB (SEE SPECIAL PROVISIONS).
- USE LIGHTWEIGHT CEMENT CONCRETE ($f'_c = 3500$ psi) IN BRIDGE PARAPETS AND MEDIAN BARRIERS (SEE SPECIAL PROVISIONS).
- USE CLASS AA CEMENT CONCRETE ($f'_c = 3500$ psi) IN PARAPETS AND MEDIAN BARRIERS ON WINGWALLS OR ABUTMENTS, AND IN ABUTMENT BACKWALLS AND WINGWALLS ABOVE THE BRIDGE SEAT CONSTRUCTION JOINTS.
- USE CLASS A CEMENT CONCRETE ($f'_c = 3000$ psi) ELSEWHERE UNLESS OTHERWISE NOTED.
- CHAMFER EXPOSED CONCRETE EDGES 1" x 1" EXCEPT AS NOTED.
- PROVIDE A ROUGHENED SURFACE OF APPROXIMATELY 1/4-INCH AMPLITUDE AT THE INTERFACE BETWEEN EXISTING CONCRETE AND NEW CONCRETE CONSTRUCTION. APPLY AN EPOXY BONDING COMPOUND TO THE ROUGHENED SURFACE PRIOR TO PLACING NEW CONCRETE. CLEAN AND EPOXY COAT EXISTING REINFORCEMENT THAT IS TO REMAIN IN PLACE.
- ABUTMENT BACKWALLS MAY BE PLACED UP TO A CONSTRUCTION JOINT BELOW THE LEVEL OF THE DECK SLAB PRIOR TO CONSTRUCTION OF THE SUPERSTRUCTURE.
- PREPARE BEARING AREAS AS SPECIFIED IN SECTION 1001.3(k)8 OF THE PENNSYLVANIA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS 1983.
- BEARING PAD ELEVATIONS SHOWN ON THE PLANS ARE FOR THE TOP OF THE BEARING PAD.
- EITHER PERMANENT METAL DECK FORMS OR REMOVABLE FORMS MAY BE USED IN PLACING THE DECK.
- USE RETARDER ADMIXTURE CONFORMING TO SECTION 704.1.F.3 OF PUBLICATION 408/83 IN THE CONCRETE DECK SLAB.
- FOOTINGS MAY BE ORDERED BY THE ENGINEER TO BE AT ANY ELEVATION OR OF ANY DIMENSION NECESSARY TO PROVIDE A PROPER FOUNDATION.
- DRIVE BEARING PILES TO ABSOLUTE REFUSAL INTO THE STRATUM DEFINED BY TIP ELEVATIONS PREDETERMINED BY THE ENGINEER FROM TEST PILES.

- THE ENGINEER WILL DETERMINE THE ACCEPTABILITY OF THE BEARING PILES WHICH ATTAIN ABSOLUTE REFUSAL ABOVE THE PREDETERMINED TIP ELEVATIONS. THE ENGINEER WILL VERIFY THE CAPABILITY OF THE HAMMER SELECTED FROM THE TEST PILE DRIVING RESULTS.
- USE STRUCTURAL STEEL CONFORMING TO ASTM DESIGNATION A572, GRADE 50, UNLESS OTHERWISE NOTED.
- PROVIDE FLANGE BUTT AND FLANGE-TO-WEB WELDS AS SHOWN ON THE DRAWINGS. USE AN AUTOMATIC OR SEMI-AUTOMATIC WELDING PROCESS TO MAKE THE FLANGE BUTT AND FLANGE-TO-WEB WELDS.

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44.	SLAB PLAN - SPANS 3-4 WESTBOUND
45.	SLAB PLAN - SPANS 5-6 WESTBOUND
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Mark	Description	By	Chk'd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDERS BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

INDEX OF DRAWINGS & GENERAL NOTES

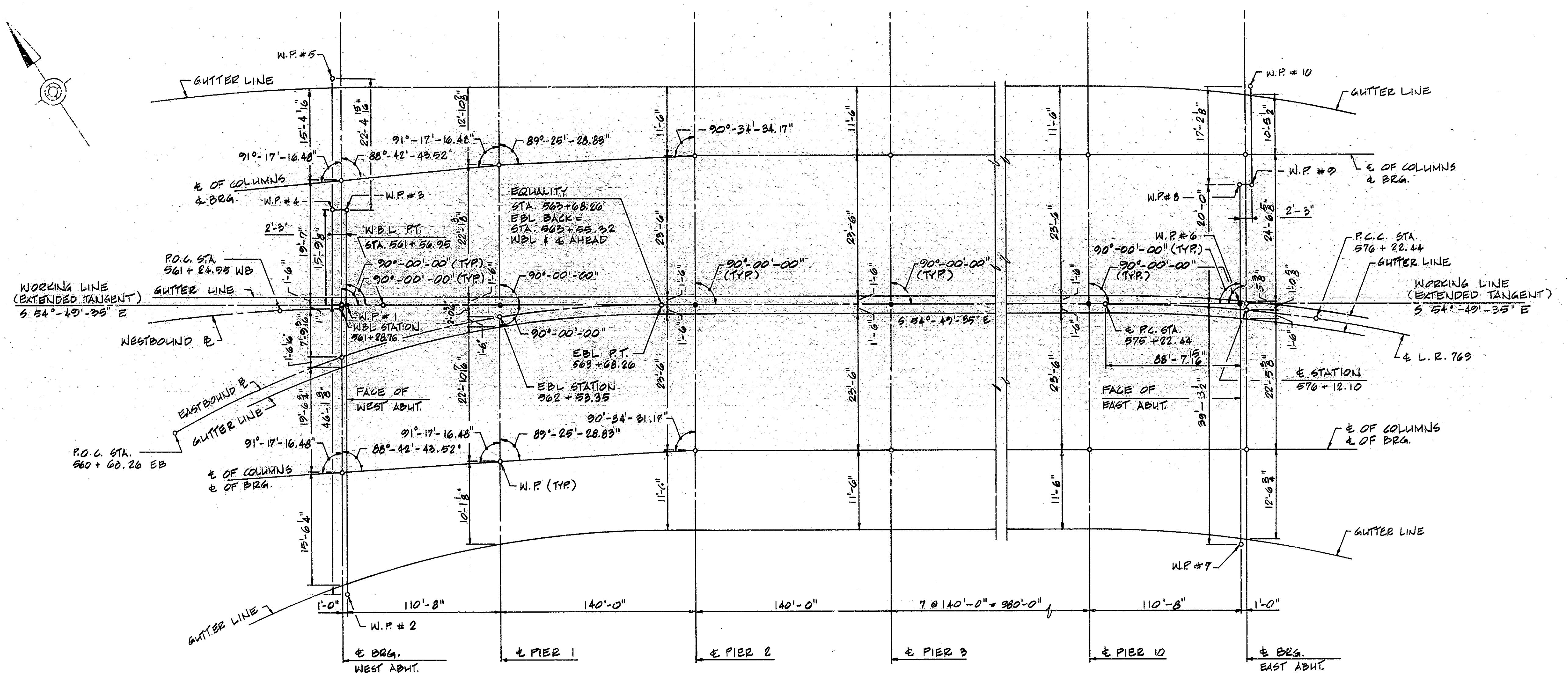
RECOMMENDED MAY 31 1985

SHEET 2 OF 66

S-16093A

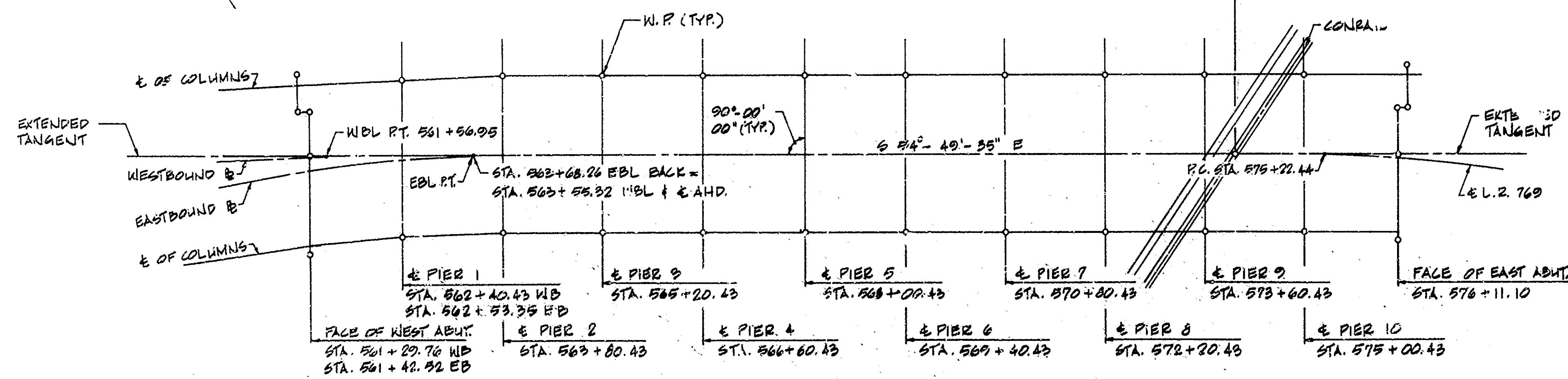
ITEM NO.		SUMMARY OF APPROXIMATE QUANTITIES										SUBSTRUCTURE										GRAND TOTAL										
		EASTBOUND SUPERSTRUCTURE					WESTBOUND SUPERSTRUCTURE					PIER					WEST ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	EAST ABUT.				
ITEM DESCRIPTION	UNITS	SPAN 1	SPAN 2	SPANS 3-4	SPANS 5-6	SPANS 7-8	SPANS 9-10	SPAN 11	SPAN 1	SPAN 2	SPANS 3-4	SPANS 5-6	SPANS 7-8	SPANS 9-10	SPAN 11	WEST ABUT.	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 6	PIER 7	PIER 8	PIER 9	PIER 10	EAST ABUT.					
CLASS 3 EXCAVATION	C.Y.															400												302	102			
SELECTED BORROW EXCAVATION - STRUCTURE BACKFILL	C.Y.															340												257	597			
CLASS AA CEMENT CONCRETE	C.Y.															67												54	121			
CLASS A CEMENT CONCRETE	C.Y.															342												274	616			
LIGHTWEIGHT CONCRETE (FC = 4500 PSI)*	C.Y.	144	176	354	354	354	354	142	144	176	354	354	354	354	142												3760					
LIGHTWEIGHT CONCRETE ** (FC = 3500 PSI)	C.Y.	34	48	74	74	74	74	29	45	41	76	76	76	76	31												822					
REINFORCEMENT BARS	LBS.															21,750												15,420	87,170			
REINFORCEMENT BARS, EPOXY COATED	LBS.	44,736	55,231	115,830	115,830	115,830	115,830	44,135	45,058	55,228	116,053	116,053	116,053	116,053	44,217	3900												3592	1223,692			
FABRICATED STRUCTURAL STEEL	LBS.	118,043	174,703	392,037	392,037	392,037	392,037	118,043	118,043	174,703	392,037	392,037	392,037	392,037	118,043		68,683	63,601	69,412	64,814	69,412	61,814	69,412	64,814	67,984	68,189		4,149,009				
ITEM INCLUDED IN LUMP SUM																												235				
STRUCTURE SEAL EXPANSION JOINT - 2"	L.F.	75									38	84					38															
STRUCTURE SEAL EXPANSION JOINT - 4"	L.F.			38	38	38	38				38	38	38	38	38												380					
AS DESIGN																																
E-16093A																																
ITEM NUMBER 200-0009																																
6" STRUCTURE FOUNDATION DRAIN	L.F.																												42	78		
NO. 57 COARSE AGGREGATE	C.Y.																												3.5	6		
STEEL BEAM TEST FILES HP 8 x 36	L.S.																	(2071) L.S.											LUMP SUM			
EPoxy RESIN PROTECTIVE *** COATING	S.F.																												794	1688		
DOWEL HOLES 24" DEPTH	EA.																												32	64		
DOWEL HOLES 18" DEPTH	EA.																												90	156		
1005-1100	STEEL BEAM BEARING PILES HP 8x36	L.F.																												700		
1005-1150	STEEL BEAM PILE TIP REINF. HP 8x36	EA.																													20	
2018-0098	REMOVAL OF PORTION OF EXISTING BRIDGE S-16093	L.S.																													LUMP SUM	
2090-0086	EPoxy INJECTION CRACK REPAIR	L.F.																													6	24
2090-0087	REPAIR DETERIORATED CONCRETE, TYPE A	S.F.																													58	
2090-0088	REPAIR DETERIORATED CONCRETE, TYPE B	S.F.																													36	
2056-0002	TEMPORARY SUPPORT SYSTEM	L.S.																													L.S.	213
ITEM INCLUDED IN LUMP SUM																															15,729	
TEMPORARY SUPPORT SYSTEM																															524,475	
STRUCTURAL STEEL	LBS.																														1,726	
THREADED REINFORCING STEEL	LBS.																														150	
STEEL BEAM BEARING PILES HP 14x73	L.F.																														365	
CLASS 3 EXCAVATION	C.Y.																														152	
BACKFILL	C.Y.																														LUMP SUM	
EITHER 2000-0009	BRIDGE STRUCTURE, AS DESIGNED S-16093 A	L.S.																													LUMP SUM	
OR 2000-0010	BRIDGE STRUCTURE, AS DESIGNED S-1																															

DESIGNED BY: MJC
DRAWN BY: SEF
CHECKED BY: CEP



STAKE-OUT PLAN
(PARTIAL STRUCTURE)
NOT TO SCALE

NOTE: COLUMN WORKING POINTS ARE TO THEORETICAL & BEARING & & COLUMN AND MAY NOT COINCIDE WITH THE PHYSICAL & OF COLUMN. LOCATE BEARINGS & THE COLUMN WORKING POINTS AND NOT & THE PHYSICAL CENTER OF COLUMN.



STAKE-OUT PLAN
NOT TO SCALE

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

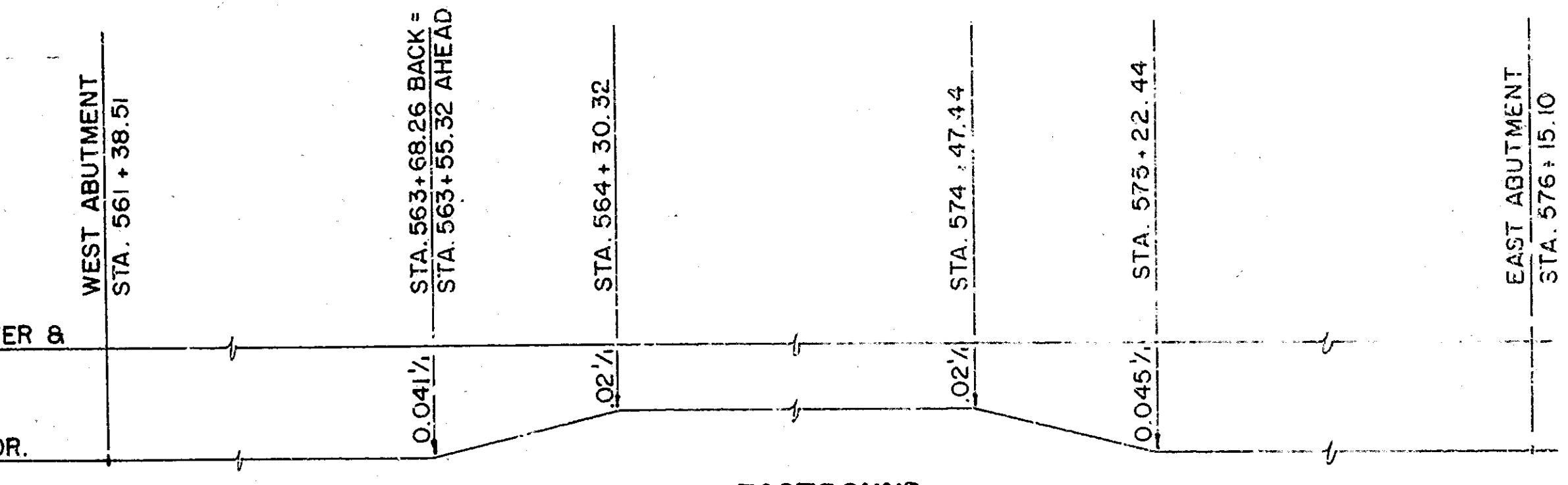
Commonwealth of Pennsylvania	
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MAINLINE OVER CONRAIL AND ABANDONED SIDING	
II SPAN STEEL MULTI-GIRDER BRIDGE	
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK	
LAYOUT PLAN	
RECOMMENDED	MAY 31 1985
SHEET 4 OF 66	
S-16093A	

EASTBOUND STRUCTURE - L.R. 769
FINISHED GRADE ELEVATIONS

STATION	LEFT GUTTER	LT. SHLDR. BREAK	RT. SHLDR. BREAK	RIGHT GUTTER
561+00	60.610	60.569	59.585	59.175
561+10	60.910	60.869	59.885	59.475
561+20	61.210	61.169	60.185	59.775
561+30	61.510	61.469	60.485	60.075
561+40	61.810	61.769	60.785	60.375
561+50	62.110	62.069	61.085	60.675
561+60	62.410	62.369	61.385	60.975
561+70	62.710	62.669	61.685	61.275
561+80	63.010	62.969	62.985	61.575
561+90	63.310	63.269	62.285	61.875

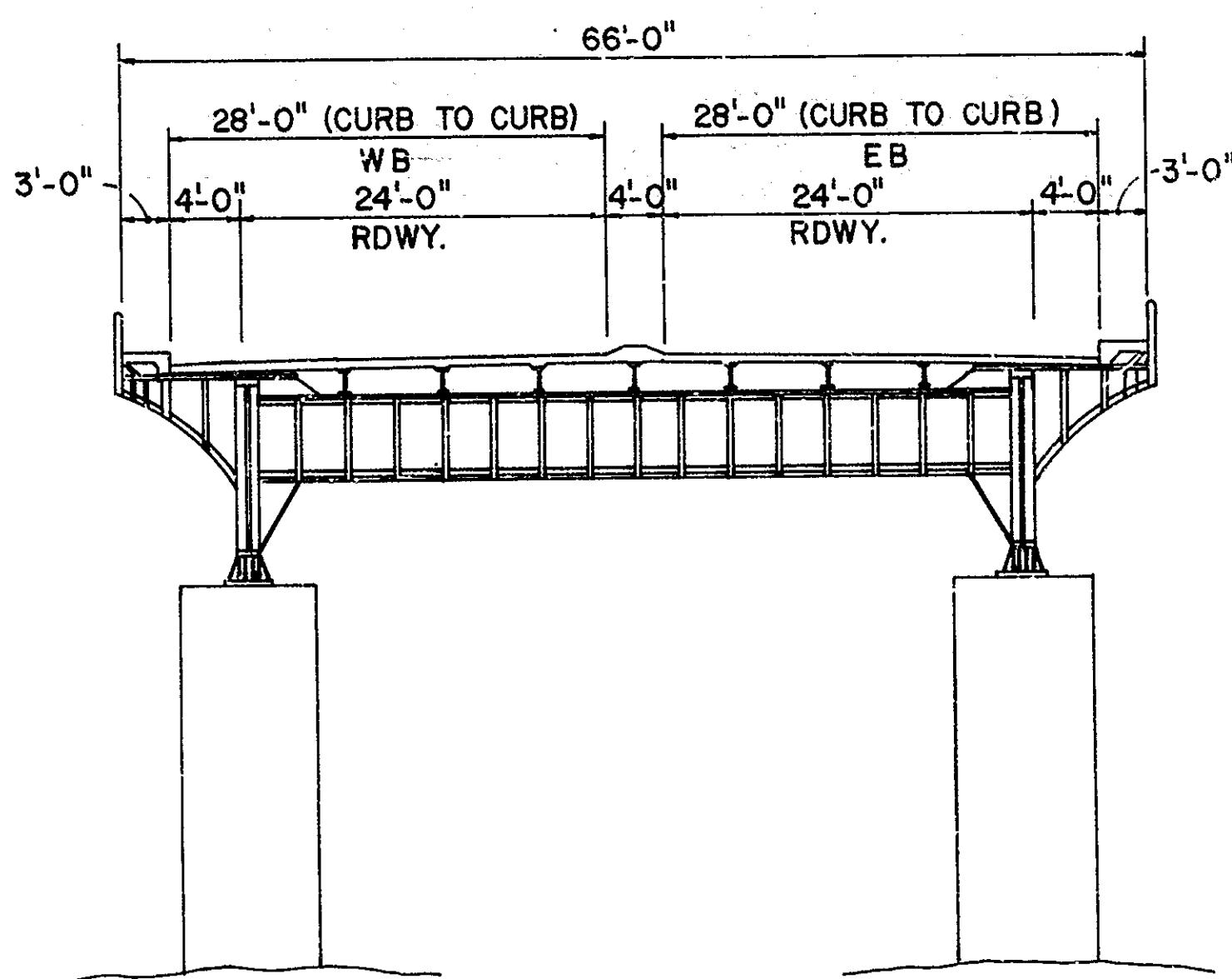
STATION	LEFT GUTTER	LT. SHLDR. BREAK	RT. SHLDR. BREAK	RIGHT GUTTER
567+00	79.000	78.980	78.500	78.100
567+10	79.300	79.280	78.800	78.400
567+20	79.600	79.580	79.100	78.700
567+30	79.900	79.880	79.400	79.000
567+40	80.200	80.180	79.700	79.300
567+50	80.500	80.480	80.000	79.600
567+60	80.800	80.780	80.300	79.900
567+70	81.100	81.080	80.600	80.200
567+80	81.400	81.380	80.900	80.500
567+90	81.700	81.680	81.200	80.800

STATION	LEFT GUTTER	LT. SHLDR. BREAK	RT. SHLDR. BREAK	RIGHT GUTTER
573+00	97.000	96.980	96.500	96.100
573+10	97.300	97.280	96.800	96.400
573+20	97.600	97.580	97.100	96.700
573+30	97.900	97.880	97.400	97.000
573+40	98.200	98.180	97.700	97.300
573+50	98.500	98.480	98.000	97.600
573+60	98.800	98.780	98.300	97.900
573+70	99.100	99.080	98.600	98.200
573+80	99.400	99.380	98.900	98.500
573+90	99.700	99.680	99.200	98.800



EASTBOUND
SUPERELEVATION TRANSITION

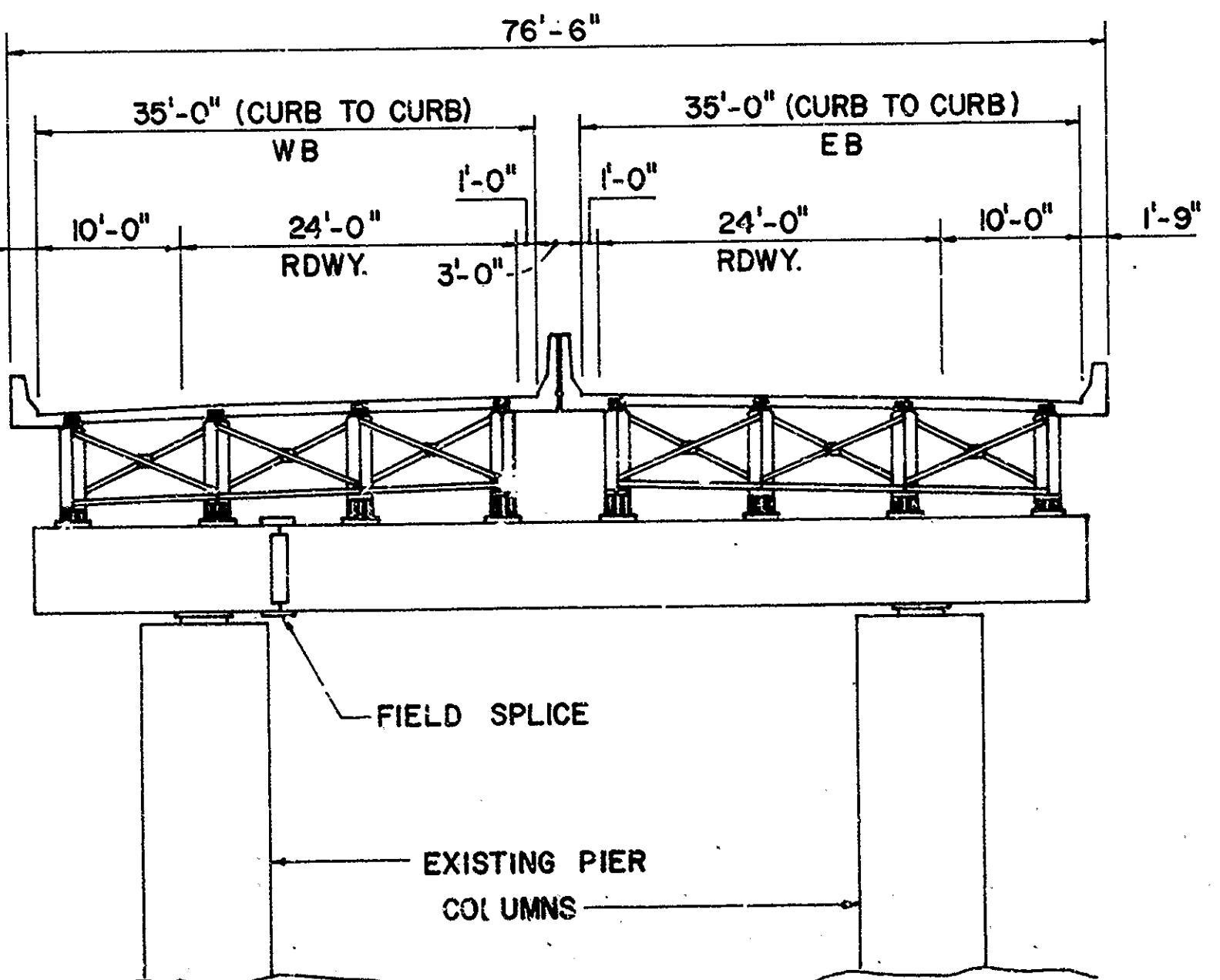
NOT TO SCALE



EQUALITY = 563+68.26 BK = 563+55.32 AHD

563+00	66.610	66.569	65.585	65.175
563+10	66.910	66.869	65.885	65.475
563+20	67.210	67.169	66.185	65.775
563+30	67.510	67.469	66.485	66.075
563+40	67.810	67.769	66.785	66.375
563+50	68.110	68.069	67.085	66.675
563+60	68.410	68.369	67.385	66.975

569+00	85.000	84.980	84.590	84.100
569+10	85.300	85.280	84.800	84.400
569+20	85.600	85.580	85.100	84.700
569+30	85.900	85.880	85.400	85.000
569+40	86.200	86.180	85.700	85.300
569+50	86.500	86.480	86.000	85.600
569+60	86.800	86.780	86.300	85.900
569+70	87.100	87.080	86.600	86.200
569+80	87.400	87.380	86.900	86.500
569+90	87.700	87.680	87.200	86.800

**EXISTING CROSS SECTION**

SCALE: 1" = 10'-0"

Mark	Description	By	Chk'd.	App'd.	Date
	REVISIONS				

PROPOSED CROSS SECTION
SCALE: 1" = 10'-0"

FIELD SPLICE

EXISTING PIER COLUMNS

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

RECOMMENDED MAY 3, 1985

SHEET 5 OF 66

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
BRIDGE DECK ELEVATIONS I

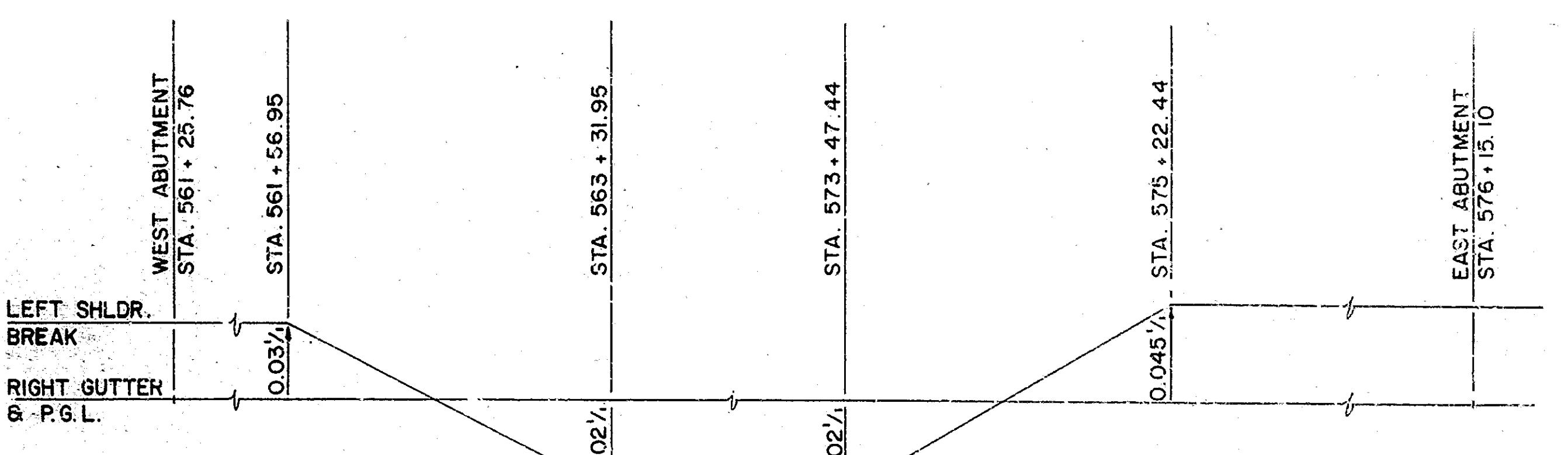
S-16093A

WESTBOUND STRUCTURE - L.R. 769
FINISHED GRADE ELEVATIONS

STATION	LEFT GUTTER	LT. SHLDR. BREAK	RT. SHLDR. BREAK	RIGHT GUTTER
561+00	61.133	61.333	60.613	60.583
561+10	61.433	61.633	60.913	60.683
561+20	61.733	61.933	61.213	61.183
561+30	62.033	62.233	61.513	61.483
561+40	62.333	62.533	61.813	61.783
561+50	62.633	62.833	62.113	62.083
561+60	62.912	63.112	62.412	62.383
561+70	63.140	63.340	62.710	62.683
561+80	63.369	63.569	63.007	62.983
561+90	63.597	63.797	63.304	63.283
562+00	63.826	64.026	63.601	63.583
562+10	64.054	64.254	63.898	63.883
562+20	64.283	64.483	64.195	64.183
562+30	64.512	64.712	64.492	64.483
562+40	64.740	64.940	64.790	64.783
562+50	64.969	65.169	65.087	65.083
562+60	65.197	65.397	65.384	65.383
562+70	65.403	65.626	65.681	65.683
562+80	65.603	65.854	65.978	65.983
562+90	65.803	66.083	66.275	66.283
563+00	66.003	66.312	66.572	66.583
563+10	66.203	66.540	66.870	66.883
563+20	66.403	66.769	67.167	67.183
563+30	66.603	66.997	67.464	67.483
563+40	66.883	67.283	67.763	67.783
563+50	67.183	67.583	68.063	68.083
563+60	67.483	67.883	68.363	68.383
563+70	67.783	68.183	68.663	68.683
563+80	68.083	68.483	68.963	68.983
563+90	68.383	68.783	69.263	69.283
564+00	68.683	69.083	69.563	69.583
564+10	68.983	69.383	69.863	69.883
564+20	69.283	69.683	70.163	70.183
564+30	69.583	69.983	70.463	70.483
564+40	69.883	70.283	70.763	70.783
564+50	70.183	70.583	71.063	71.083
564+60	70.483	70.883	71.363	71.383
564+70	70.783	71.183	71.663	71.683
564+80	71.083	71.483	71.963	71.983
564+90	71.383	71.783	72.263	72.283
565+00	71.683	72.083	72.563	72.583
565+10	71.983	72.383	72.863	72.883
565+20	72.283	72.683	73.163	73.183
565+30	72.583	72.983	73.463	73.483
565+40	72.883	73.283	73.763	73.783
565+50	73.183	73.583	74.063	74.083
565+60	73.483	73.883	74.363	74.383
565+70	73.783	74.183	74.663	74.683
565+80	74.083	74.483	74.963	74.983
565+90	74.383	74.783	75.263	75.283
566+00	74.683	75.083	75.563	75.583
566+10	74.983	75.383	75.863	75.883
566+20	75.283	75.683	76.163	76.183
566+30	75.583	75.983	76.463	76.483
566+40	75.883	76.283	76.763	76.783
566+50	76.183	76.583	77.063	77.083
566+60	76.483	76.883	77.363	77.383
566+70	76.783	77.183	77.663	77.683
566+80	77.083	77.483	77.962	77.983
566+90	77.383	77.783	78.263	78.283

STATION	LEFT GUTTER	LT. SHLDR. BREAK	RT. SHLDR. BREAK	RIGHT GUTTER
567+00	77.683	78.083	78.563	78.583
567+10	77.983	78.383	78.863	78.883
567+20	78.283	78.683	79.163	79.183
567+30	78.583	78.983	79.463	79.483
567+40	78.883	79.283	79.763	79.783
567+50	79.183	79.583	80.063	80.083
567+60	79.483	79.883	80.363	80.383
567+70	79.783	80.183	80.663	80.683
567+80	80.083	80.483	80.963	80.983
567+90	80.383	80.783	81.263	81.283
573+00	95.683	96.083	96.563	96.583
573+10	95.983	96.383	96.863	96.883
573+20	96.283	96.683	97.163	97.183
573+30	96.583	96.983	97.463	97.483
573+40	96.883	97.283	97.763	97.783
573+50	97.177	97.607	98.067	98.083
573+60	97.477	98.000	98.366	98.383
573+70	98.077	98.393	98.672	98.683
573+80	98.507	98.786	98.975	98.983
573+90	98.937	99.179	99.279	99.283

EAST ABUTMENT
STA. 575 + 15.10



Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					
Commonwealth of Pennsylvania DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DESIGN					
MONTGOMERY COUNTY L.R. 769 & L.R. 67057 SEC. 300 MAINLINE OVER CONRAIL AND ABANDONED SIDING II SPAN STEEL MULTI-GIRDER BRIDGE SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK BRIDGE DECK ELEVATIONS II					
RECOMMENDED			MAY 9 1 1985		
SHEET 6 OF 66					

FINISHED GRADE ELEVATION AT C BEARINGS

WESTBOUND STRUCTURE

GIRDER	1	2	3	4
LOCATION				
WEST ABUTMENT	62.050	62.127	61.826	61.524
PIER 1 BACK	64.780	64.914	64.850	64.787

GIRDER	1	2	3	4
LOCATION				
PIER 1 AHEAD	64.815	64.950	64.890	64.831
PIER 2 BACK	68.171	68.527	68.727	68.927

GIRDER	1	2	3	4
LOCATION				
PIER 2 AHEAD	68.222	68.572	68.772	68.972
PIER 3	72.396	72.746	72.946	73.146
PIER 4 BACK	76.573	76.923	77.123	77.323

GIRDER	1	2	3	4
LOCATION				
PIER 4 AHEAD	76.618	76.968	77.168	77.368
PIER 5	80.796	81.146	81.346	81.546
PIER 6 BACK	84.973	85.323	85.523	85.723

GIRDER	1	2	3	4
LOCATION				
PIER 6 AHEAD	85.018	85.368	85.568	85.768
PIER 7	89.196	89.546	89.746	89.946
PIER 8 BACK	93.373	93.723	93.923	94.123

GIRDER	1	2	3	4
LOCATION				
PIER 8 AHEAD	93.418	93.768	93.968	94.168
PIER 9	97.754	98.054	98.206	98.358
PIER 10 BACK	103.336	103.395	103.030	102.664

GIRDER	1	2	3	4
LOCATION				
PIER 10 AHEAD	103.395	103.453	103.082	102.711
EAST ABUTMENT	106.897	106.941	106.499	106.056

EASTBOUND STRUCTURE

GIRDER	5	6	7	8
LOCATION				
WEST ABUTMENT	60.745	61.115	60.885	60.455
PIER 1 BACK	64.707	64.658	64.238	63.817

GIRDER	5	6	7	8
LOCATION				
PIER 1 AHEAD	65.127	64.701	64.281	63.860
PIER 2 BACK	68.171	68.527	68.727	68.927

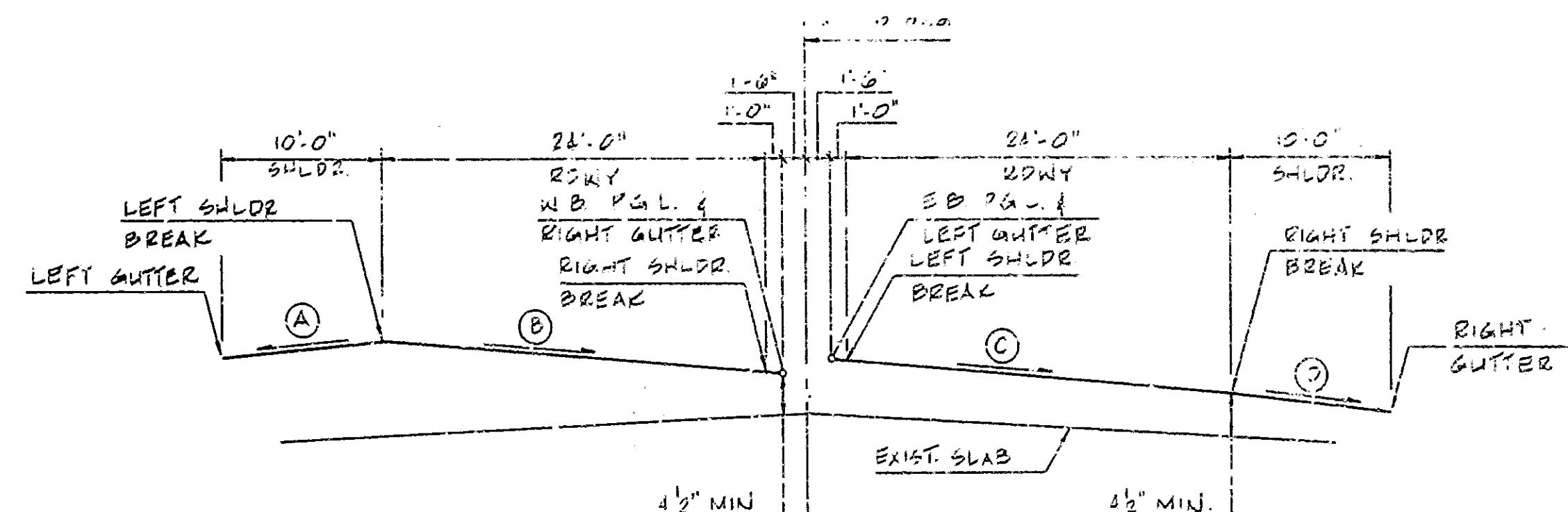
GIRDER	5	6	7	8
LOCATION				
PIER 2 AHEAD	69.154	69.017	68.680	68.295
PIER 3	73.363	73.363	73.163	72.813
PIER 4 BACK	77.740	77.540	77.340	76.990

GIRDER	5	6	7	8
LOCATION				
PIER 4 AHEAD	77.785	77.585	77.385	77.035
PIER 5	81.663	81.763	81.563	81.213
PIER 6 BACK	86.140	85.940	85.740	85.390

GIRDER	5	6	7	8
LOCATION				
PIER 6 AHEAD	86.185	85.985	85.785	85.435
PIER 7	90.363	90.163	89.963	89.613
PIER 8 BACK	94.540	94.340	94.140	93.790

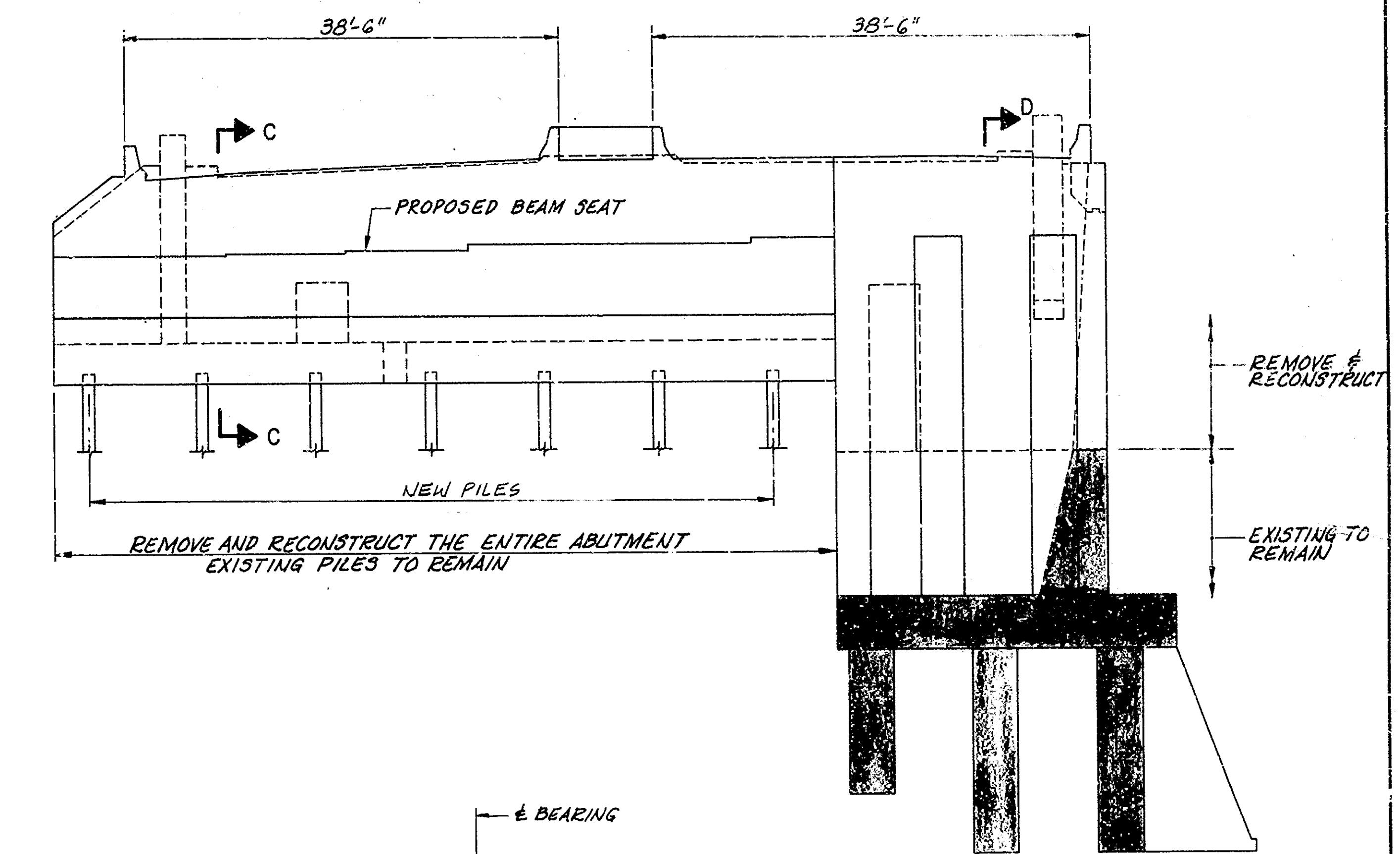
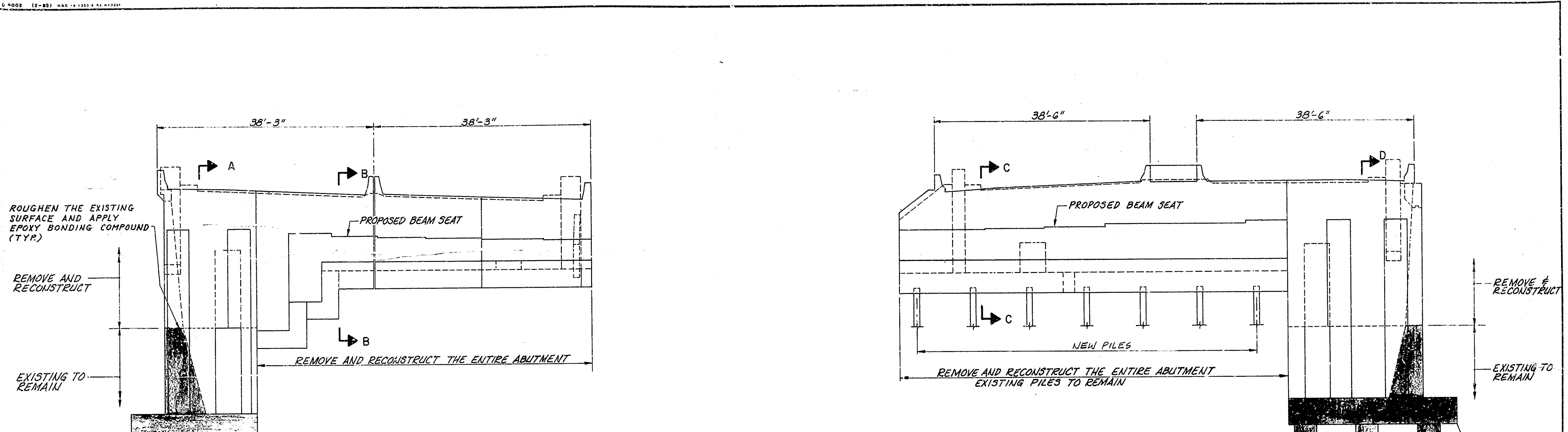
GIRDER	5	6	7	8
LOCATION				
PIER 8 AHEAD	94.585	94.385	94.185	93.835
PIER 9	98.763	98.563	98.363	98.013
PIER 10 BACK	102.896	102.522	102.148	101.755

GIRDER	5	6	7	8
LOCATION				
PIER 10 AHEAD	102.940	102.561	102.182	101.787
EAST ABUTMENT	106.253	105.811	105.368	104.925



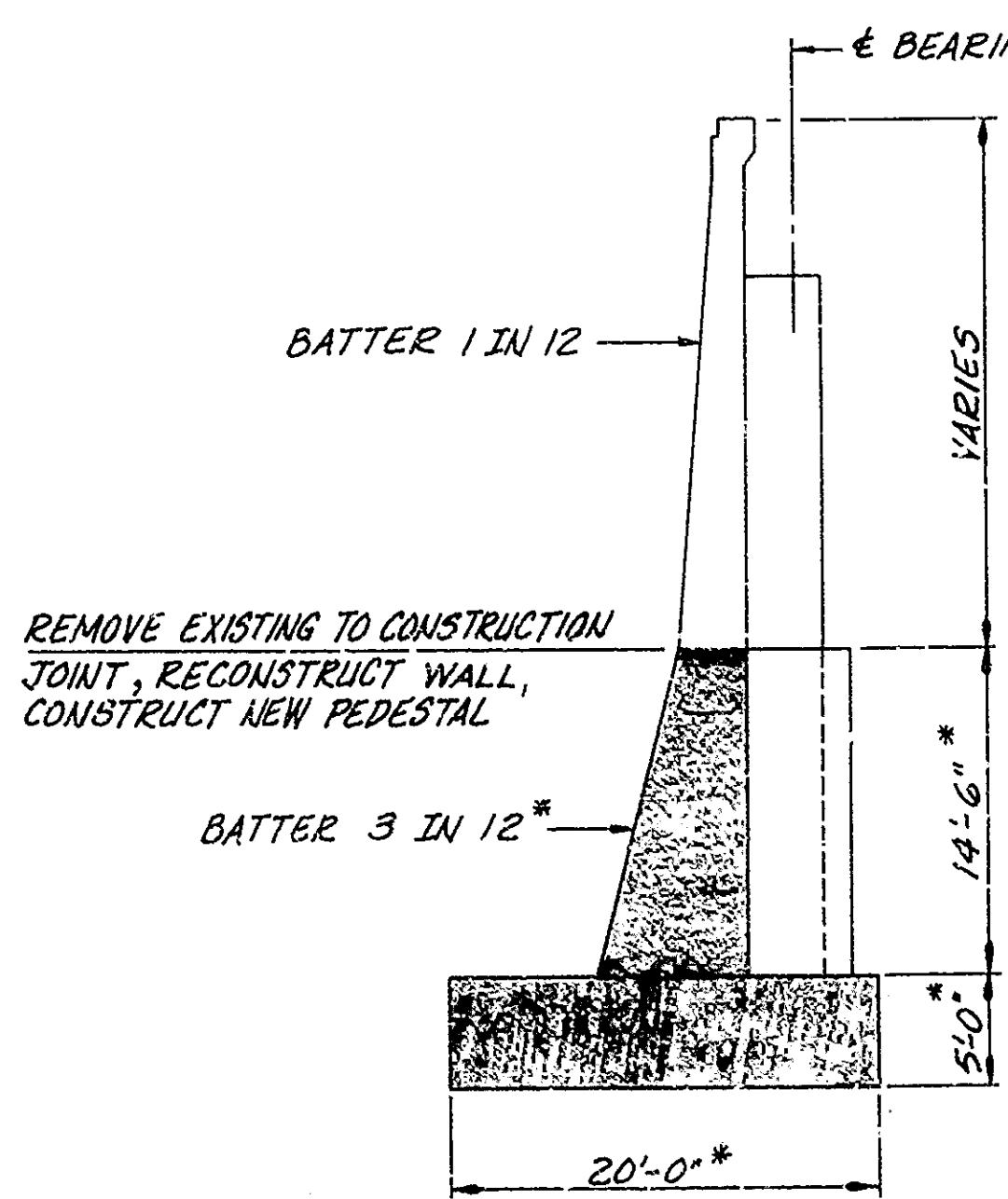
NOT TO SCALE

WB STATION	(A)	(B)	EB STATION	(C)	(D)
561+00	-0.01	+0.03	561+00	-0.041	-0.041
561+56.95		-0.03			
562+61.95	-2.02				
563+31.95	-0.04	-0.02			
			563+68.96 BK = 563+55.32 ALD	-0.041	-0.041
			563+58.89		



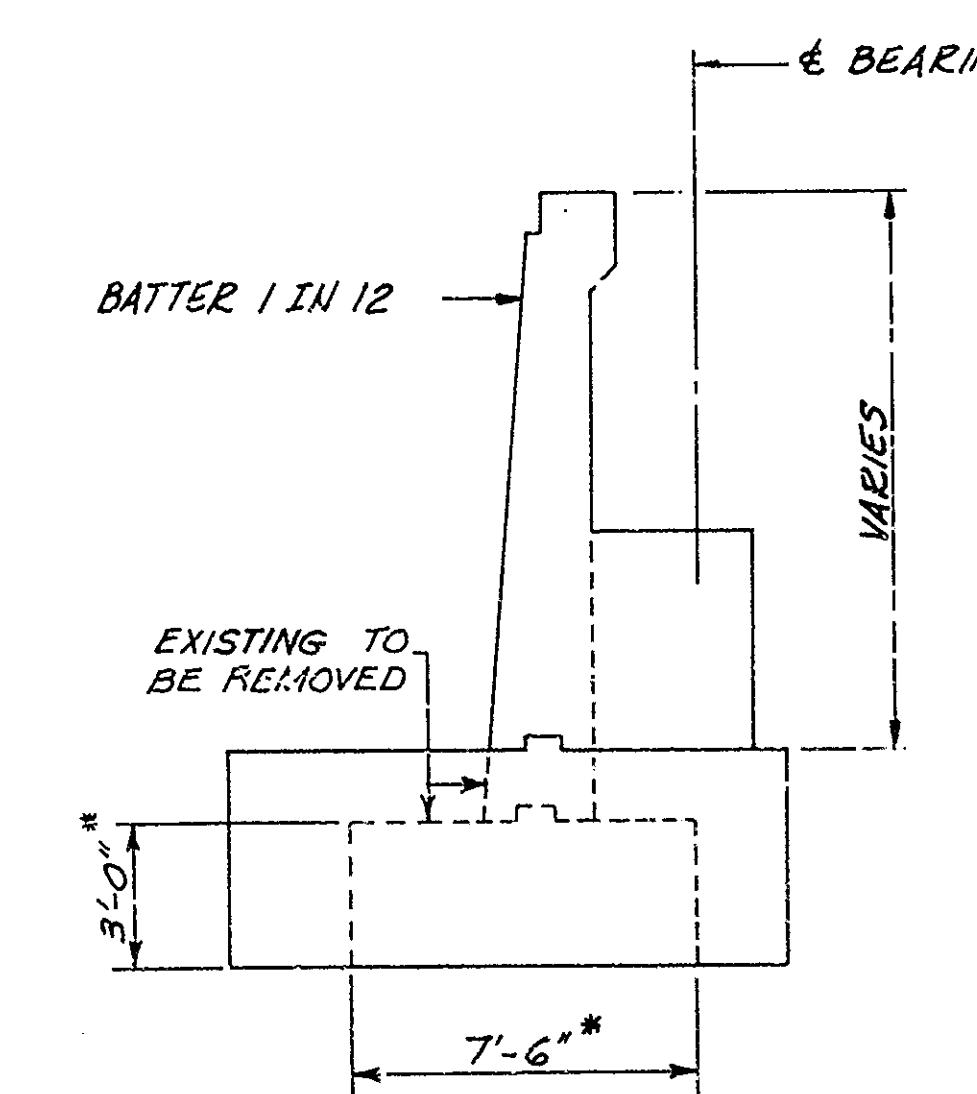
EAST ABUTMENT ELEVATION

SCALE: $\frac{1}{8}$ " = 1'-0"



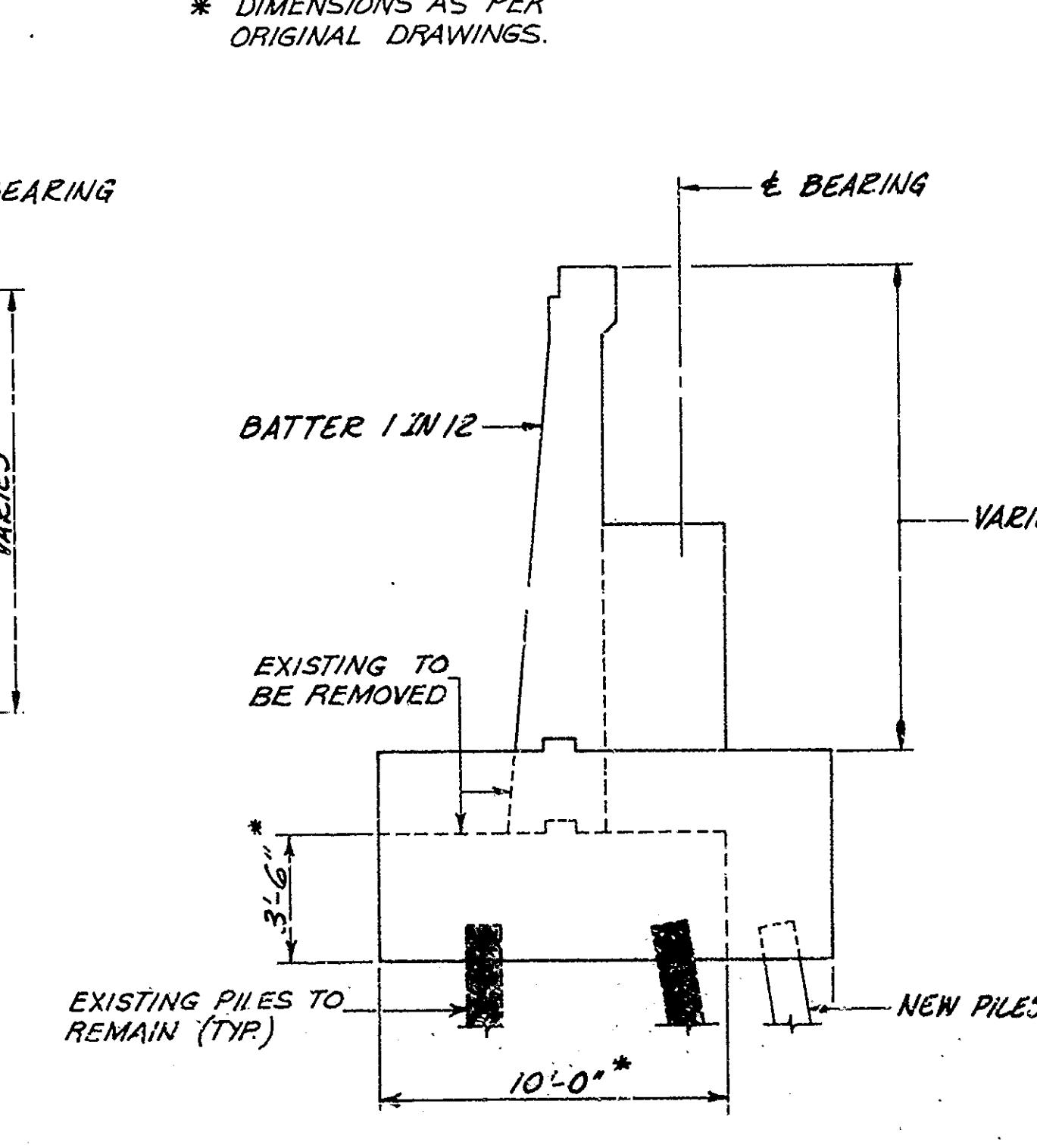
SECTION A-A

SCALE: $\frac{1}{8}$ " = 1'-0"



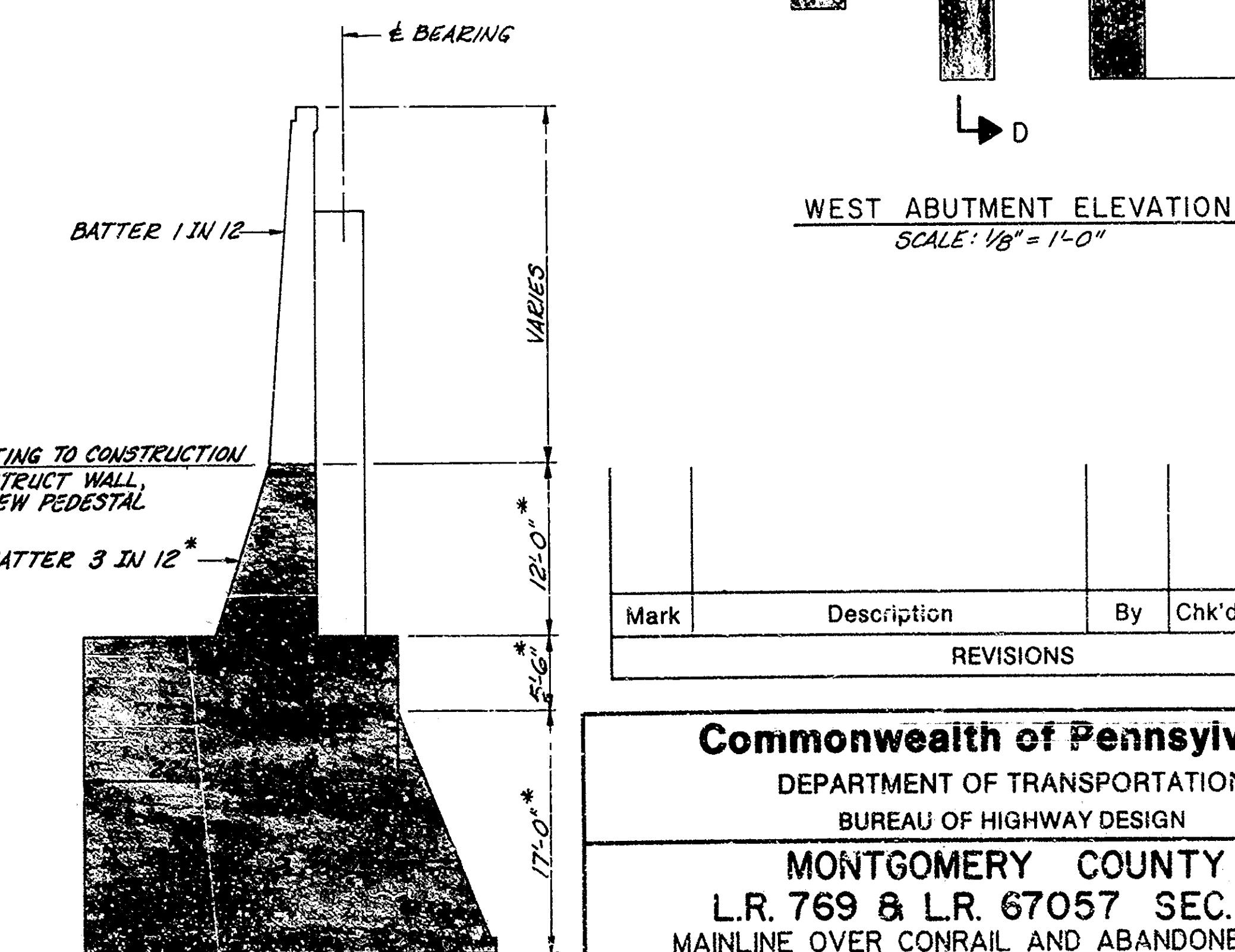
SECTION B-B

SCALE: $\frac{1}{8}$ " = 1'-0"



SECTION C-C

SCALE: $\frac{1}{8}$ " = 1'-0"



SECTION D-D

SCALE: $\frac{1}{8}$ " = 1'-0"

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

RECOMMENDED MAY 31 1985

SHEET 8 OF 66

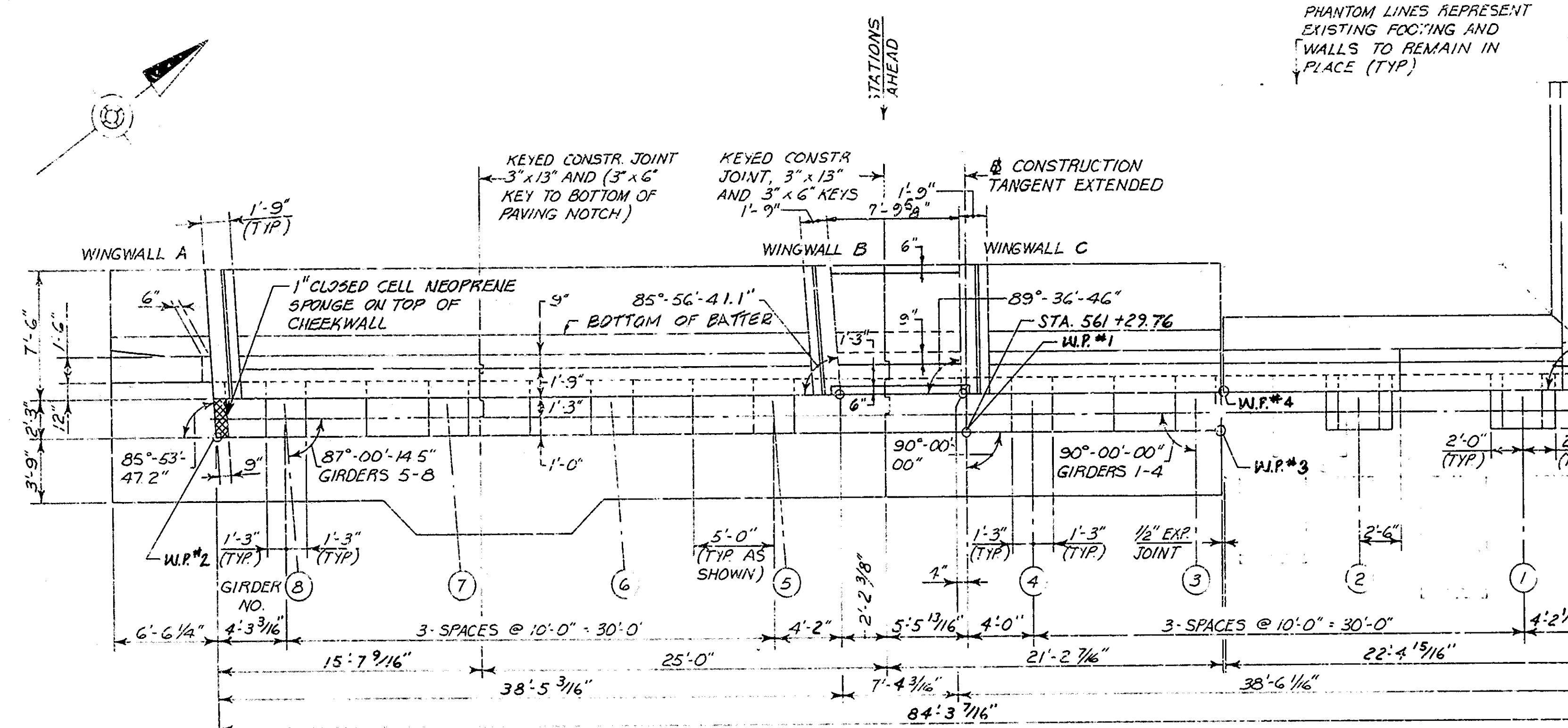
Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

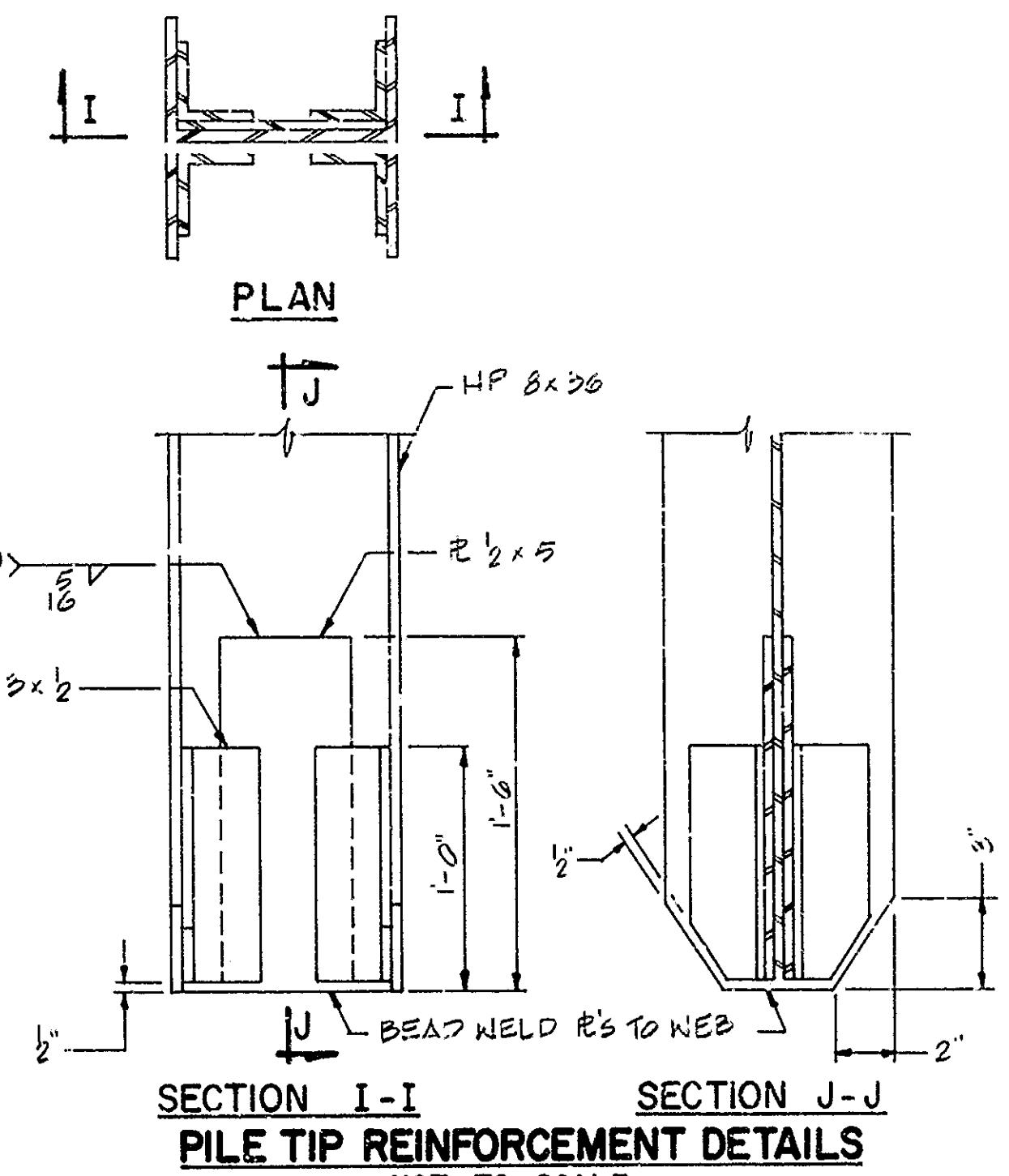
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
ABUTMENT MODIFICATIONS

S-16093A

C. T. KELLY
A. B. MACEWEN
A. VAYSBURD



PHANTOM LINES REPRESENT
EXISTING FOOTING AND
WALLS TO REMAIN IN
PLACE (TYP.)



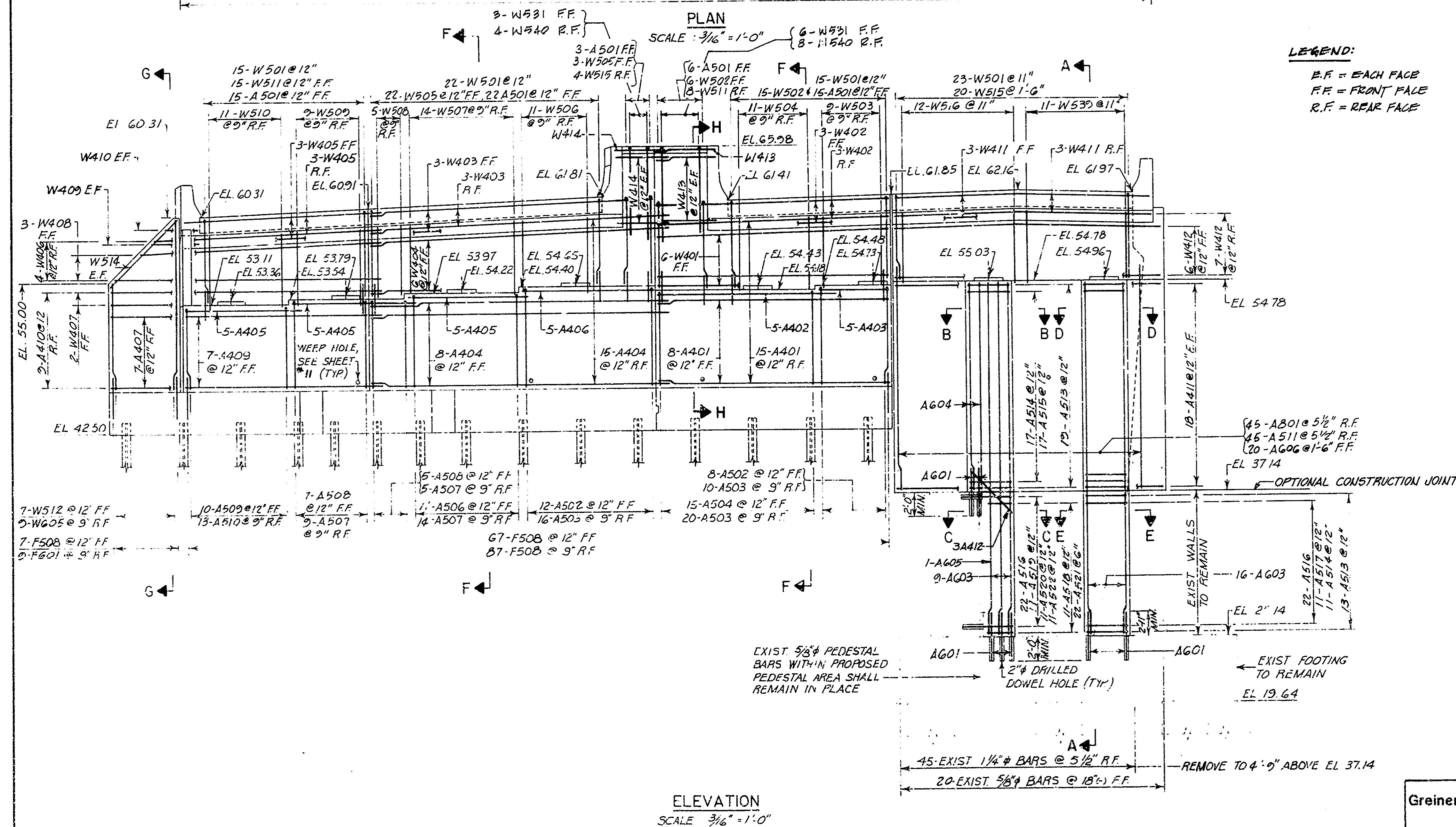
SECTION I-I SECTION J-J
PILE TIP REINFORCEMENT DETAILS

NOT TO SCALE

LEGEND:

E.F. = EACH FACE
F.F. = FRONT FACE
R.F. = REAR FACE

1. FOR GENERAL NOTES, SEE SHEET 2.
 2. CHEEKWALL TO BE PLACED AFTER GIRDERS ARE IN PLACE.
 3. BEAM SEATS SHALL BE FINISHED SMOOTH (TROWEL FINISH).
 4. WORK THIS SHEET WITH SHEETS 10 & 11
 5. FOR APPROACH SLAB DETAILS, SEE ROADWAY DRAWINGS.
 6. FOR REINFORCEMENT SCHEDULE, SEE SHEET 12.
 7. ALL PARAPET AND BACKWALL REINFORCING TO BE EPOXY COATED.
 8. FOR CONSTRUCTION AND EXPANSION JOINT DETAILS SEE PADOT STANDARD BC-335A.
 9. PROPOSED PILES SHALL BE HP8 x 36.
ALLOWABLE PILE LOAD = 95K.
MAX. DESIGN PILE LOAD = 83K.
 10. ESTIMATED PILE TIP ELEVATIONS VARY FROM +1.0 AT NORTH END
TO +13.0 AT SOUTH END.



ELEVATION

PREPARED BY
Greiner Engineering Sciences, Inc.
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KING OF PRUSSIA, PA

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
STRUCTURE REPLACEMENT - CAST IN PLACE DE-
FST ABUTMENT - PLAN & ELEVATION

RECOMMENDED

SHEET 9 OF 66

S-16093A

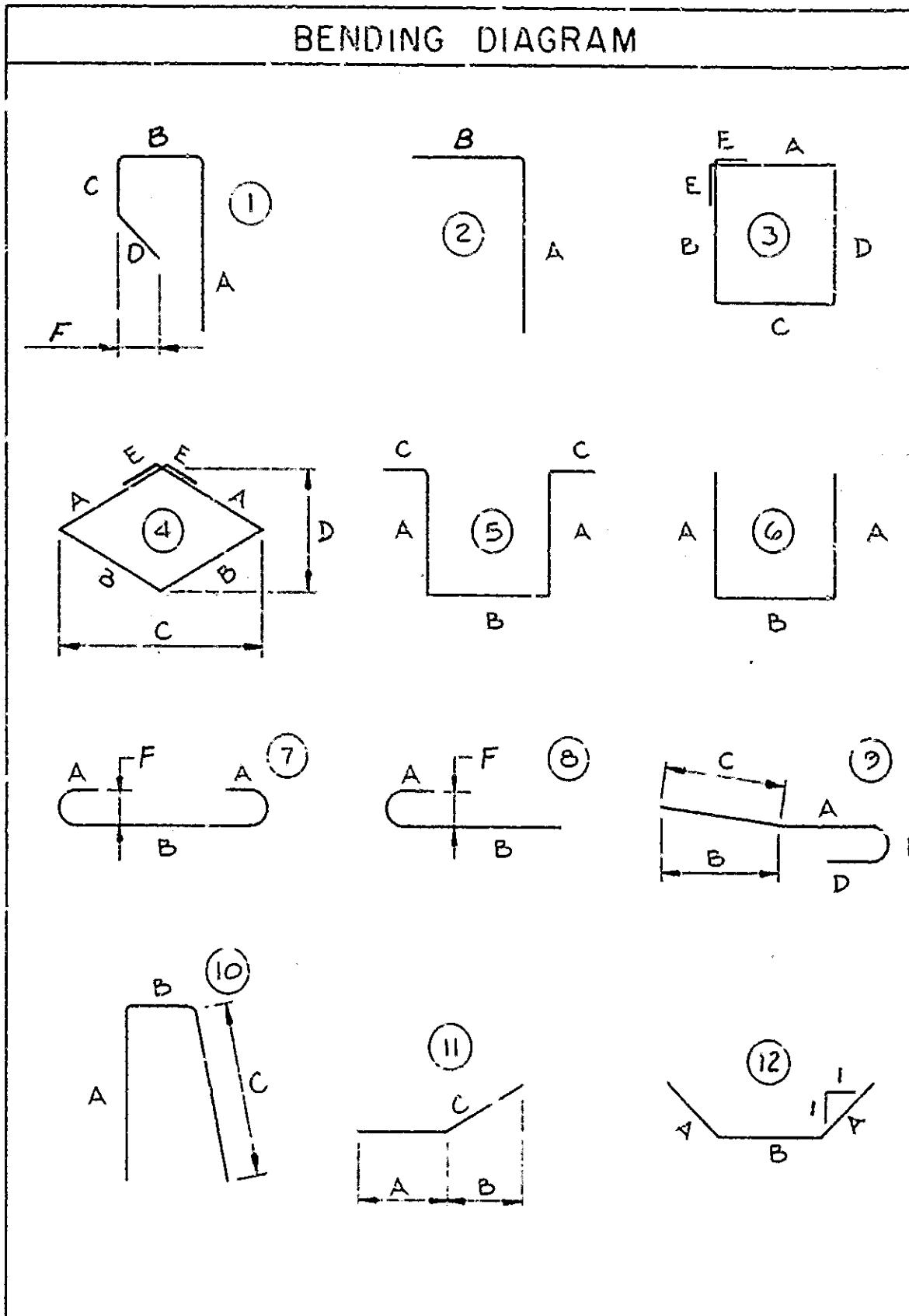
BAR SCHEDULE - WEST ABUTME

BAR SCHEDULE - WEST ABUTMENT

BAR SCHEDULE - WEST ABUTMENT

MARK	NO. MEAS.	SIZE	TYPE	LENGTH	A	B	C	D	E	F	REMARKS
W 405	6	4	STR.	17'- 5"							1 SET OF 6 Δ 1-3" EP. COAT.
W 406	4		STR.	24'-1" TO 20'-4"							EPOXY COATED
W 407	2		STR.	24'- 1"							1 SET OF 4 1-3"
W 408	3		STR.	24'-1" TO 21'-7"							1 SET OF 3 Δ 1-3" EP. COAT.
W 409	2		STR.	4'- 3"							
W 410	2		STR.	3'- 0"							
W 411	6		STR.	22'- 0"							EPOXY COATED
W 412	13		STR.	23'- 0"							EPOXY COATED
W 413	13		STR.	6'- 3"							EPOXY COATED
W 414	31		STR.	5'- 6"							EPOXY COATED
W 415	7		STR.	9'- 1"							
W 416	7	6	STR.	4'- 2"	1'-11"	4"					
W 417	39		STR.	7'- 2"							EPOXY COATED
W 418	65		STR.	6'- 2"							
W 419	16		STR.	5'- 7"							
W 420	11		STR.	17'- 7"							EPOXY COATED
W 421	46	4	STR.	16'- 6"							
W 422	14	4	STR.	7'-6"							EPOXY COATED
W 501	75	5	1	7'- 8"	2'- 5"	1'-4"	1'- 3"	2'-8"		1'-5"	EPOXY COATED
W 502	21		STR.	6'- 2"							EPOXY COATED
W 503	9		2	6'-4" TO 6'-7" 5'-6" TO 5'-9"		10"					1 SET OF 9 Δ 3/8" E.C.
W 504	11		2	6'-7" TO 6'-3" 5'-9" TO 5'-5"		10"					1 SET OF 11 Δ 3/8" E.C.
W 505	60		STR.	6'- 0"							EPOXY COATED
W 506	11		2	6'-3" TO 6'-8" 5'-5" TO 5'-10"		10"					1 SET OF 11 Δ 3/8" E.C.
W 507	14		2	6'-1" TO 6'-8" 5'-3" TO 5'-10"		10"					1 SET OF 14 Δ 3/8" E.C.
W 508	5		2	6'-3" TO 6'-6" 5'-5" TO 5'-8"		10"					1 SET OF 5 Δ 3/8" E.C.
W 509	9		2	6'-3" TO 6'-6" 5'-5" TO 5'-8"		10"					1 SET OF 9 Δ 3/8" E.C.
W 510	11		2	6'-4" TO 6'-8" 5'-6" TO 5'-10"		10"					1 SET OF 11 Δ 3/8" E.C.
W 511	8		2	6'-3"	5'-5"	10"					EPOXY COATED
W 512	7		STR.	8'-8" TO 14'-0"							1 SET OF 7 Δ 10 5/8"
W 513	4		STR.	7'-8"							
W 514	2		STR.	8'-0"							
W 515	4		2	6'-8"	5'-10"	10"					EPOXY COATED
W 516	12		2	6'-4" TO 6'-10" 5'-2" TO 5'-8"		10"					1 SET OF 12 Δ 3/8" E.C.
W 517	4		2	11'- 9"	10'-8"	1'- 1"					EPOXY COATED
W 518	4	9	12'	8"-	6'- 7"	4'-6"	4'-6 1/2"	1'- 0"	7"		
W 519	8	2	12'	0"-	10'-11"	1'- 1"					EPOXY COATED
W 520	8	9	13'	4"-	6'- 7"	4'-9"	4'-9 1/2"	1'- 0"	7"		EPOXY COATED
W 521	8	10	5'	4"-	2'- 4"	7"	2'- 1"				EPOXY COATED
W 522	9		STR.	9'- 1"							
W 523	7		STR.	8'-11"							
W 524	2		STR.	4'-4"							
W 525	6		STR.	5'-4"							
W 526	3		11	5'-10"	3'-2"	1'-11"	2'-8"				EPOXY COATED
W 527	33		11	4'- 7"	2'-4"	1'-10"	2'-3"				EPOXY COATED
W 528	8		10	8'-10"	4'-3"	7"	4'-0"				EPOXY COATED
W 529	8		10	8'- 0"	3'-10"	7"	3'-7"				EPOXY COATED
W 530	10		STR.	10'- 5"							
W 531	9	1		6'-5"	0'-0"	1'-4"	2'-5"	2'-8"			EPOXY COATED
W 532	14		STR.	9'- 5"							
W 533	19		10	7'- 7"	3'-6"	7"	3'-6"				EPOXY COATED
W 534	19		11	6'- 0"	3'-9"	2'-0"	2'-3"				EPOXY COATED
W 535	18		STR.	3'- 7"							EPOXY COATED
W 536	2		11	4'-10"	2'-2"	2'-1"	2'-8"				
W 537	18	11	5'-0" TO 4'-5"	2'-4" TO 1'-8"		2'-1"	2'-8"				1 SET OF 18 Δ 3/8" EP. COAT.
W 538	4		STR.	7'-10"							
W 539	11	5	2	6'-4" TO 6'-6" 5'-6" TO 5'-8"							1 SET OF 11 Δ 1/4"
W 540	12	5	8	8'- 3"	1'-0"	6'-3"				1'-0"	EPOXY COATED
W 601	11	6	STR.	9'-2"							
W 602	1	6	2	25'-5"	23'-1"	2'-4"					
W 603	22	6	STR.	7'-0"							
W 604	13	6	2	25'-4" TO 24'-10"	23'-0" TO 22'-6"	2'-4"					1 SET OF 13 Δ 1/2"
W 605	9	6	2	9'-8" TO 15'-0"	8'-8" TO 14'-0"	1'-0"					1 SET OF 9 Δ 8"
W 701	9	7	STR.	10'-8"							
W 102	18	7	STR.	11'-11"							
W 901	16	9	STR.	15'-5"							
W 902	31	9	STR.	14'-0"							

BENDING DIAGRAM



LEGEND:

Δ DENOTES INCREMENTS
E.C. DENOTES EPOXY COATED

Mark	Description	By	Chkd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAINLINE OVER CONDALL AND ADJACENT CIRCUITS

MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
STRUCTURE REPLACEMENT - CAST IN PLACE RE

STRUCTURE REPLACEMENT - CAST IN PLACE DECK

WEST ABUTMENT - BAR SCHEDULE

MAY 31 1985 SHEET 12 OF

RECOMMENDED MAY 10, 1960 BY THE COMMITTEE ON STANDARDS

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

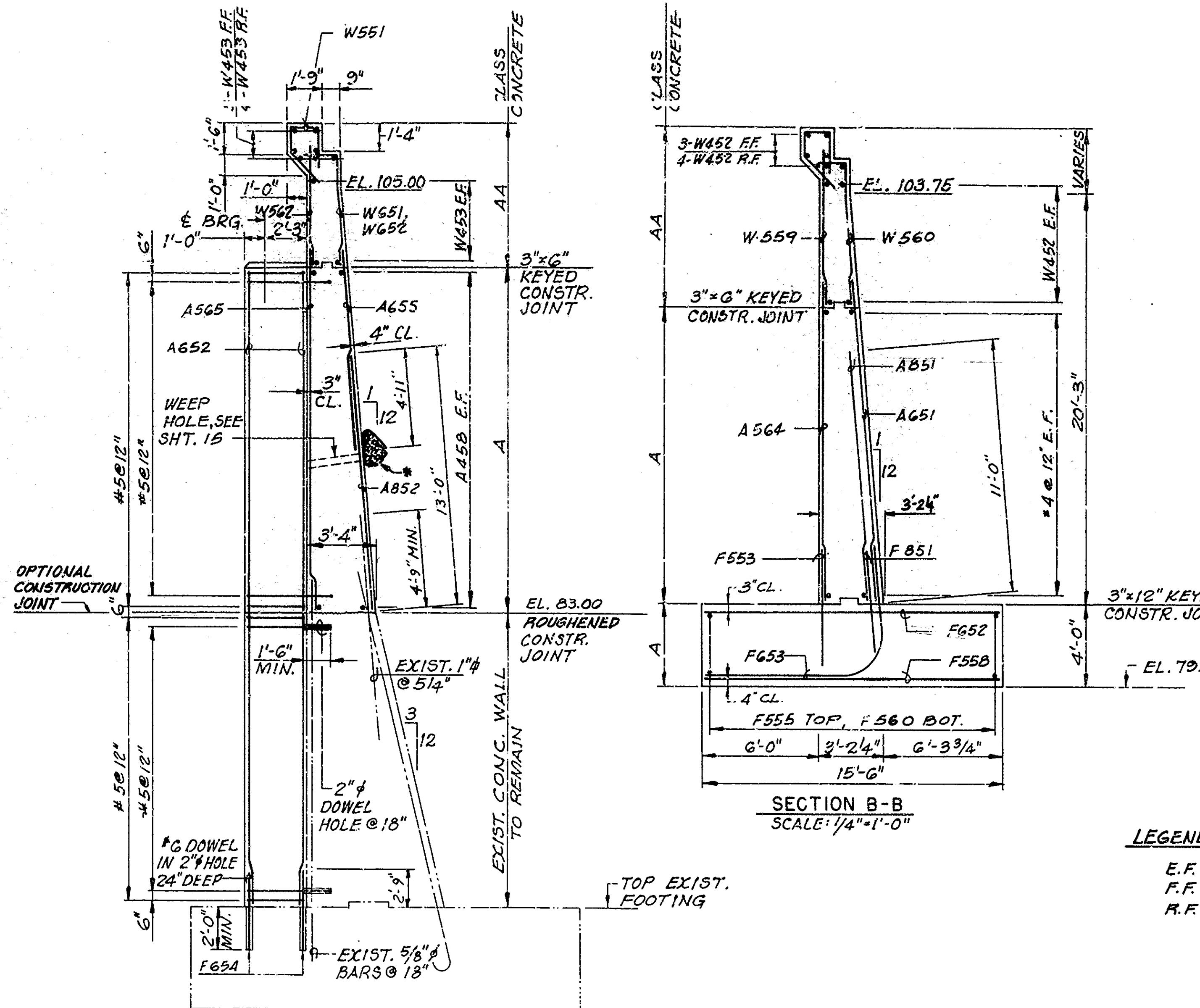
RECOMMENDED MAY 31, 1960

SHEET 12 OF 50

S-16093A

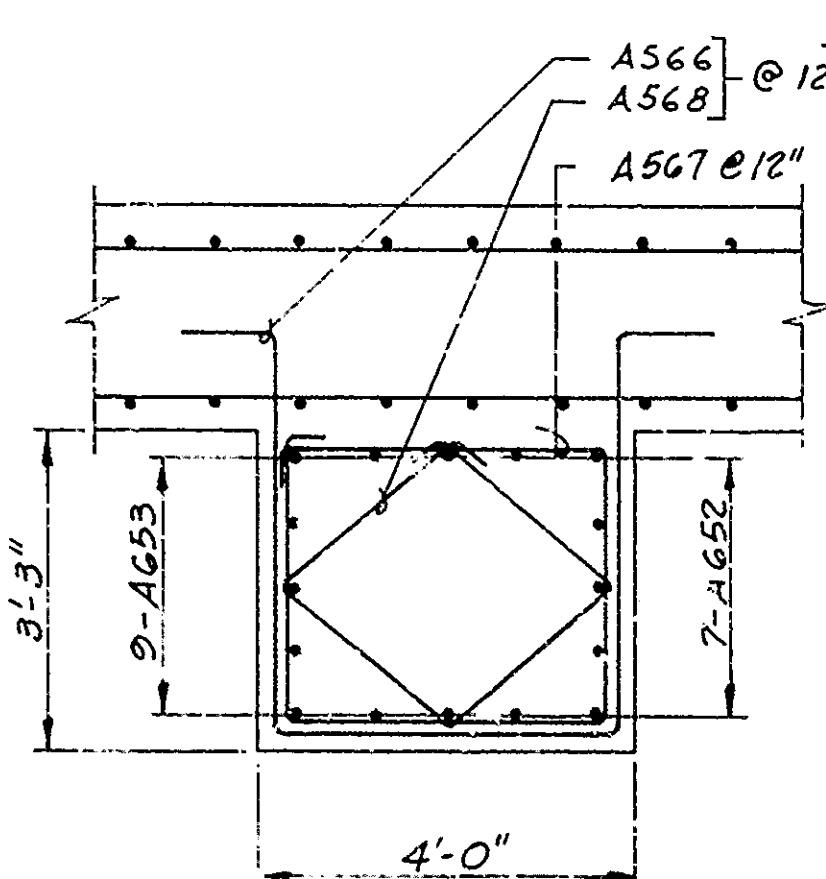
E. R. ALLEN
N. G. DEROOS

E. R. ALLEN
N. G. DEROOS

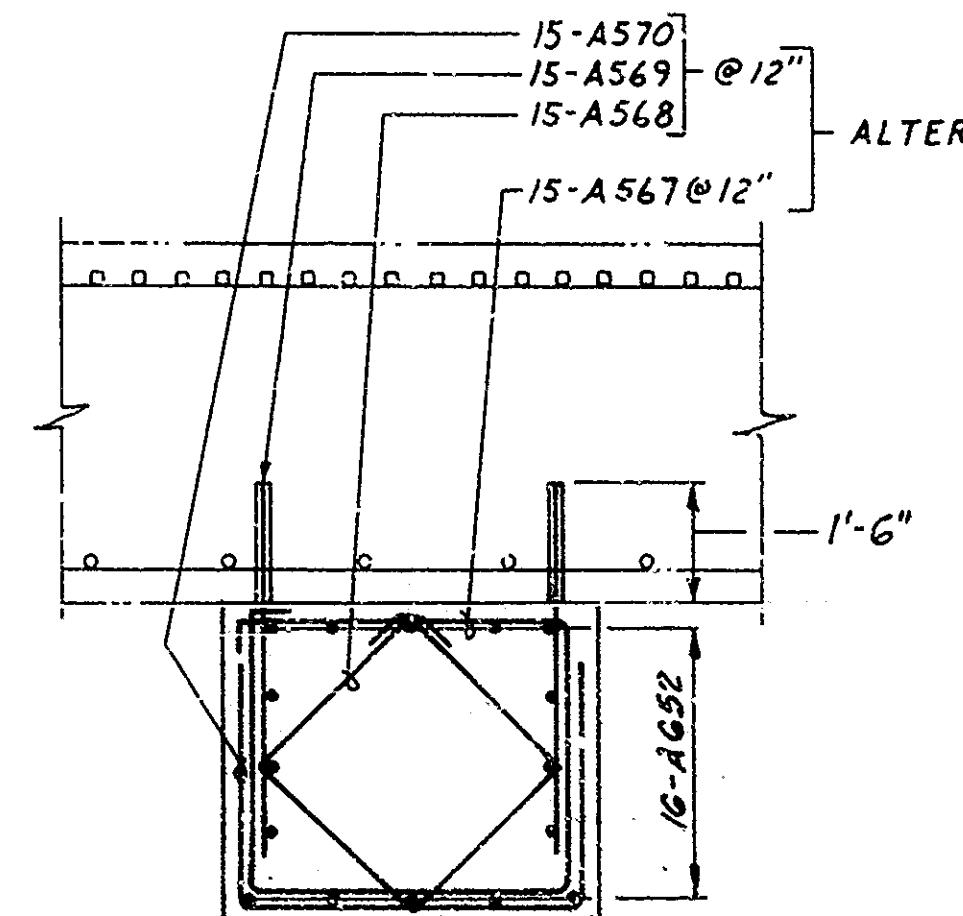


SECTION A-A

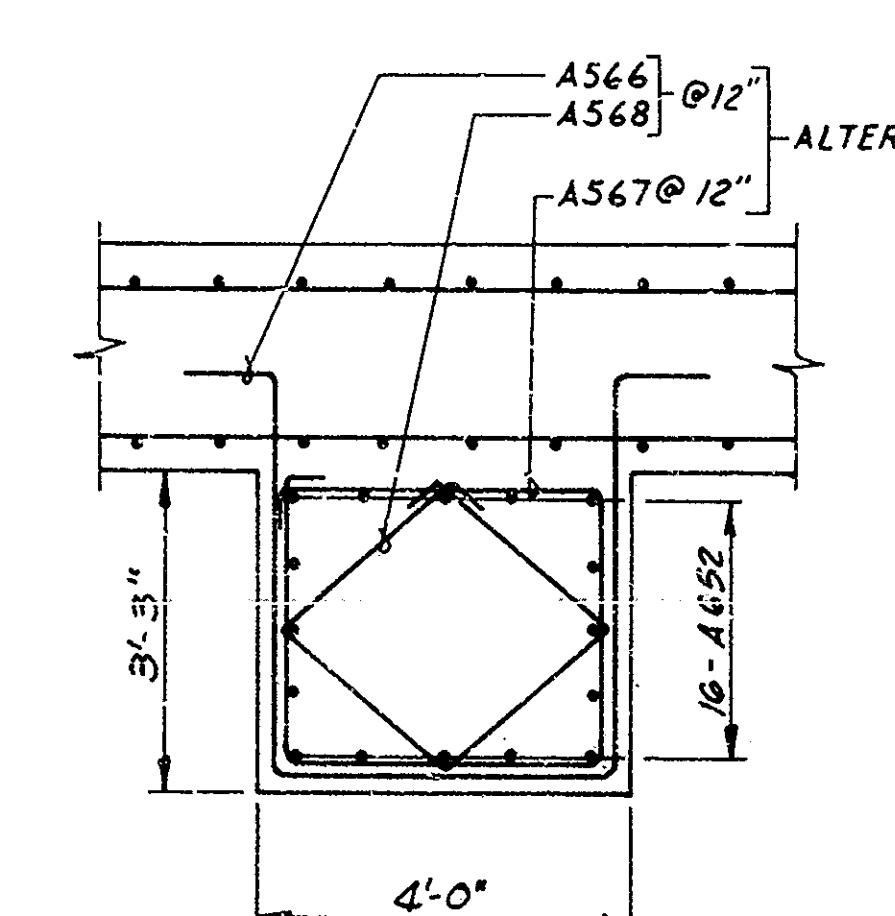
* 2 CU. YD. NO. 57 COURSE AGGREGATE WRAPPED WITH CLASS I GEOTEXTILE AT EACH WEEF HOLE.



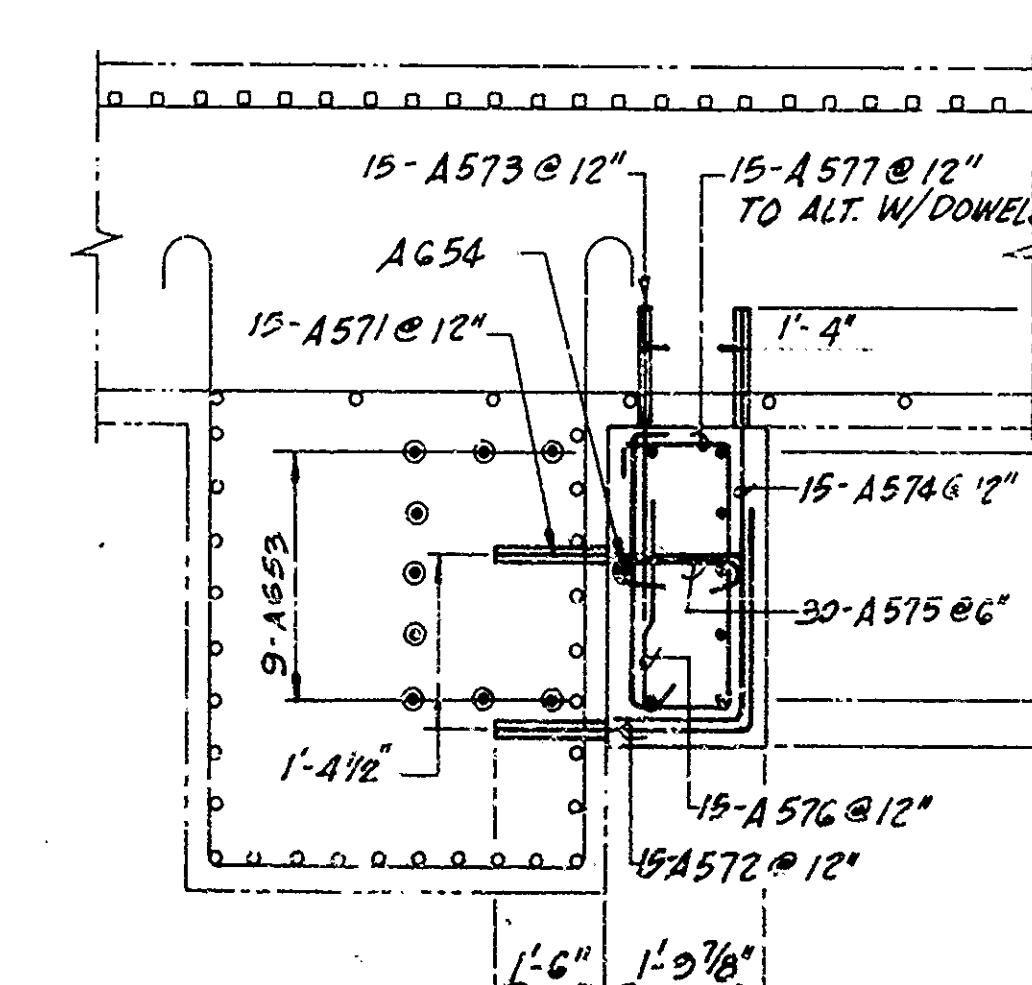
SECTION E-E



SECTION F-F
SCALE: 1/2" = 1'-0"



SECTION G-



SECTION H-

LEGE

E.F. = EACH F.
F.F. = FRONT F.
R.F. = REAR F.

SECTION C-
SCALE: 1/4"=1

NOTES:

Mark	Description	By	Chk'd.	App'd	Date	
	REVISIONS					

Commonwealth of Pennsylvania

**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAIN LINE OWNED BY COMBAIL AND ADDED OWNED BY SIRINGO

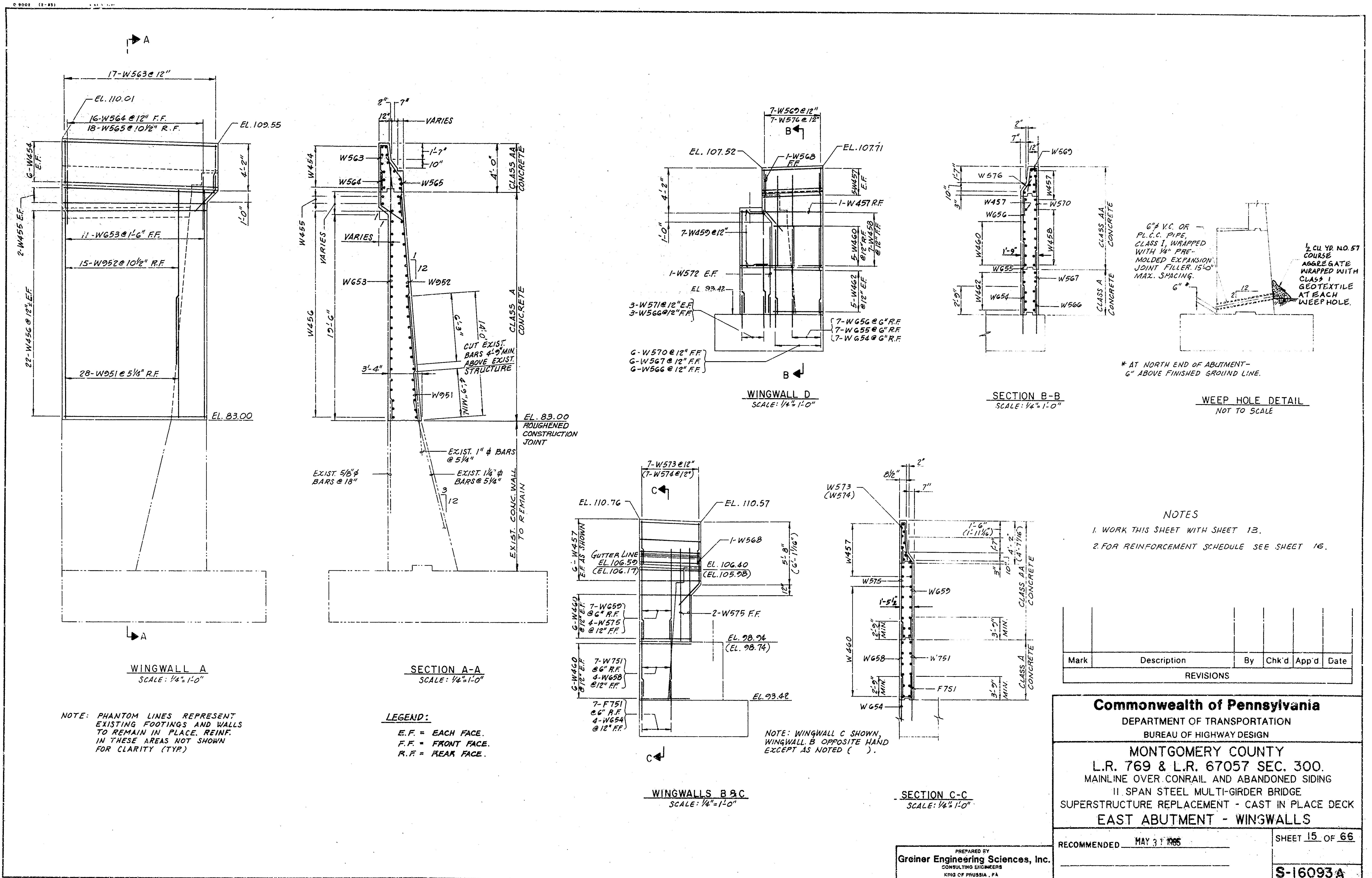
**MAINLINE OVER CONRAIL AND ABANDONED SIDING
11 SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
EAST ABUTMENT - DETAILS**

RECOMMENDED MAY 13

SHEET 14 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

S-16093A



N. G. DEROS
E. F. RODRÍGUEZ
A. VASQUEZ

BAR SCHEDULE - EAST ABUTMENT

BAR SCHEDULE - EAST ABUTMENT

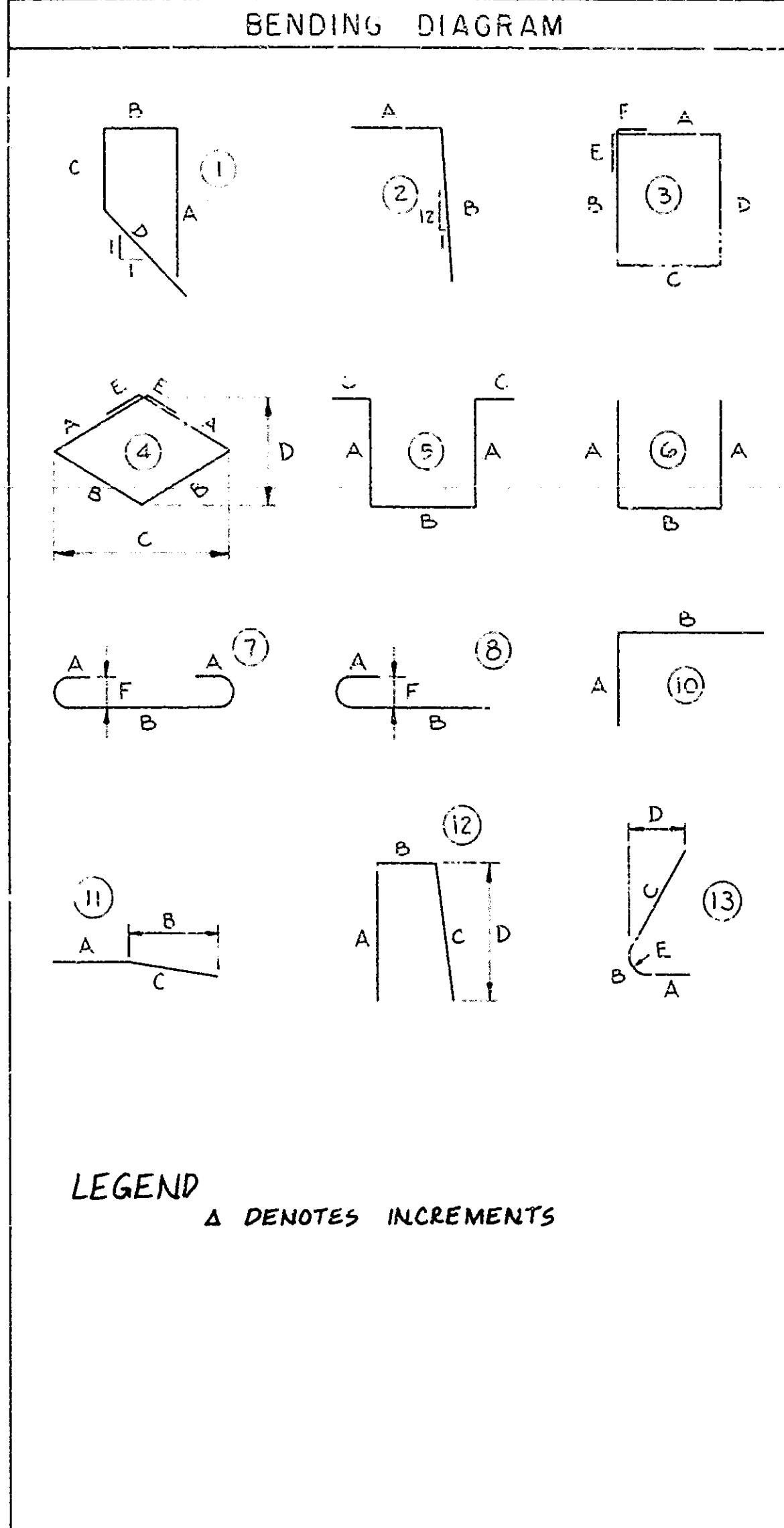
NUMBER	NO. REQ'D.	SIZE	TYPE	LENGTH"	A	B	C	D	E	F	REMARKS
F 551	16	5	STR.	38'- 5"							
F 552	4	4	STR.	10'- 8"							
F 553	118		STR.	3'- 5"							
F 554			STR.	9'- 2"							
F 555	22	10	STR.	10'-11"	5'- 2"	5'- 9"					
F 556	22	5	STR.	12'-11"							
F 557	NOT	USED									
F 558	13	5	STR.	15'- 2"							
F 559	NOT	USED									
F 560	22	5	STR.	15'- 0"	8'- 2"	8'- 5"					
F 651	NOT	USED									
F 652	14	6	STR.	15'- 2"							
F 653	7	6	STR.	18'-11"	7'- 2"	4'- 8"	7'- 1"	0'- 5"	1'- 6"		
F 654	32	6	STR.	4'- 9"							
F 751	14	7	STR.	6'- 0"							
F 851	6	8	STR.	6'-8"							
A 451	10	4	STR.	37'- 5"							
A 452	10			11'- 7"							
A 453	5			8'-10"							
A 454	6			14'-11"							
A 455	6			20'- 8"							
A 456	23			5'- 5"							
A 457	6			11'- 2"							
A 458	36			15'-11"							
A 459	12			6'- 6"							
A 460	6	4	STR.	10'- 3"							
A 551	10	5	10	8'- 8"	3'-10"	4'-10"					
A 552	10		10	9'- 1"	4'- 3"	4'-10"					
A 553	10		10	9'- 5"	4'- 8"	4'- 9"					
A 554	10		10	9'-11"	5'- 2"	4'- 9"					
A 555	10		10	9'- 8"	4'-11"	4'- 9"					
A 556	10		STR.	6'- 6"							
A 557	10		STR.	6'- 5"							
A 558	10		STR.	7'- 1"							
A 559	10		STR.	7'- 6"							
A 560	10		STR.	7'- 4"							
A 561	6		STR.	3'- 5"							
A 562	6		10	15'- 3"	10'- 7"	4'- 8"					
A 563	6		STR.	13'- 0"							
A 564	6		STR.	17'- 8"							
A 565	17		STR.	18'- 2"							
A 566	30		5	8'- 7"	4'- 2"	3'- 5"	1'- 0"				
A 567	49		3	13'- 0"	3'- 6"	2'-11"	3'- 6"	2'-11"	1"		
A 568	45		4	9'- 4"	2'- 4"	2'- 3"	3'- 7"	2'-10"	1"		
A 569	30		STR.	3'- 9"							
A 570	15		6	7'-11"	2'- 3"	3'- 5"					
A 571	15		STR.	3'- 1"							
A 572	15		10	5'- 4"	3'- 1"	2'- 3"					
A 573	15		STR.	3'- 8"							
A 574	15		10	6'- 1"	4'- 6"	1'- 7"					
A 575	30		7	2'- 8"	3"	1'- 4"				5"	
A 576	15		8	3'- 8"	3"	3'- 0"				5"	
A 577	15	5	3	8'- 4"	1'- 4"	2'- 9"	1'- 4"	2'- 9"	1"		
A 651	6	6	STR	19'-6"							
A 652	23	6	STR	30'- 9"							
A 653	9	6	STR.	18'- 0"							
A 654	1	6	STR.	16'-1"							
A 655	17	6	STR.	12'-0"							
A 851	7	8	STR.	11'-0"							
A 852	31	8	STR	13'-0"							
W 451	2	4	STR	37'-9"							EPOXY COATED
W 452	2	4	STR	20'- 8"							EPOXY COATED
W 453	2	4	3	16'-10"	11'- 7'	5'- 3"					EPOXY COATED

BAR SCHEDULE - EAST ABUTMENT

BAR SCHEDULE - EAST ABUTMENT

MARK	NO. REQ'D.	SIZE	TYPE	LENGTH	1	2	3	4	5	6	7	REMARKS
W 454	12	4	STR.	15'- 7"								EPOXY COATED
W 455	4		STR.	15'-5" TO 14'-5"								2 SETS OF 2Δ 1'-0"
W 456	44		STR.	14'- 5"								
W 457	35		STR.	5'-11"								EPOXY COATED
W 458	7		STR.	7'-10"								
W 459	7		6	4'- 5"	2'-0"	5"						
W 460	53		STR.	4'-11"								
W 461	NOT		USED									
W 462	10	4	STR.	4'- 5"								EPOXY COATED
W 551	74	5	1	7'-9"	2'-5"	1'-5"	1'-3"	2'-8"				EPOXY COATED
W 552	8		STR.	5'-10" TO 6'-3"								1 SET OF 8Δ 11/16"
W 553	20		STR.	5'-9" TO 6'-3"								2 SETS OF 10Δ 11/16"
W 554	8		STR.	5'-9" TO 6'-0"								1 SET OF 8Δ 7/16"
W 555	8		2	7'-5" TO 7'-10"	1'-10"	5'-7" TO 6'-0"						1 SET OF 8Δ 11/16"
W 556	20		2	7'-4" TO 7'-10"	1'-10"	5'-6" TO 6'-0"						2 SETS OF 10Δ 11/16"
W 557	8		2	7'-4" TO 7'-8"	1'-10"	5'-6" TO 5'-10"						1 SET OF 8Δ 7/16"
W 558	9		STR.	5'-10" TO 6'-2"								1 SET OF 9Δ 1/2"
W 559	12		STR.	5'-9" TO 6'-4"								1 SET OF 12Δ 5/8"
W 560	12		2	7'-4" TO 7'-11"	1'-10"	5'-6" TO 6'-1"						1 SET OF 12Δ 5/8"
W 561	9		2	7'-5" TO 7'-10"	1'-10"	5'-7" TO 6'-0"						1 SET OF 9Δ 1/2"
W 562	11		STR.	6'-0"								
W 563	17	12		7'-3"	3'-6"	7"	3'-2 1/4"	3'-2"				
W 564	16	11		4'-5"	2'-2"	1'-7"	2'-3"					
W 565	18	11		11'-0"	7'-7"	2'-0"	3'-5"					EPOXY COATED
W 566	9		STR.	3'-7"								
W 567	6		STR.	6'-0"								
W 568	3	11		5'-10"	3'-2"	1'-11"	2'-8"					EPOXY COATED
W 569	7	12		5'-2"	2'-4"	7"	2'-4"	2'-3				EPOXY COATED
W 570	6		STR.	9'-5"								
W 571	6		STR.	9'-7"								
W 572	2		STR.	8'-6"								
W 573	7	12		7'-11"	3'-10"	4"	3'-9"	3'-8"				EPOXY COATED
W 574	7	12		8'-9"	4'-3"	4"	4'-2"	4'-1"				EPOXY COATED
W 575	12		STR.	9'-9"								
W 576	7	5	11	4'-9"	2'-5"	1'-8"	2'-4"					EPOXY COATED
W 651	11	6	2	7'-8" TO 7'-10"	2'-1"	5'-7" TO 5'-9"						1 SET OF 11Δ 3/16"
W 652	6		2	7'-10" TO 7'-8"	2'-1"	5'-9" TO 5'-7"						1 SET OF 6Δ 3/8"
W 653	11		STR.	21'-2"								
W 654	15		STR.	4'-5"								
W 655	7		STR.	6'-7"								
W 656	7	6	STR.	7'-1"								
W 657	NOT		USED									
W 658	8	6	STR.	8'-0"								
W 659	14	6	11	9'-0"	7'-6"	1'-1"	1'-6"					
W 751	14	7	STR.	9'-0"								
W 951	28	9	STR.	14'-0"								
W 952	15	9	STR.	12'-9"								

BENDING DIAGRAM



LEGEND

DENOTES INCREMENTS

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

REAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL. MULTI-GIRDER BRIDGE
STRUCTURE REPLACEMENT - CAST IN PLACE DE

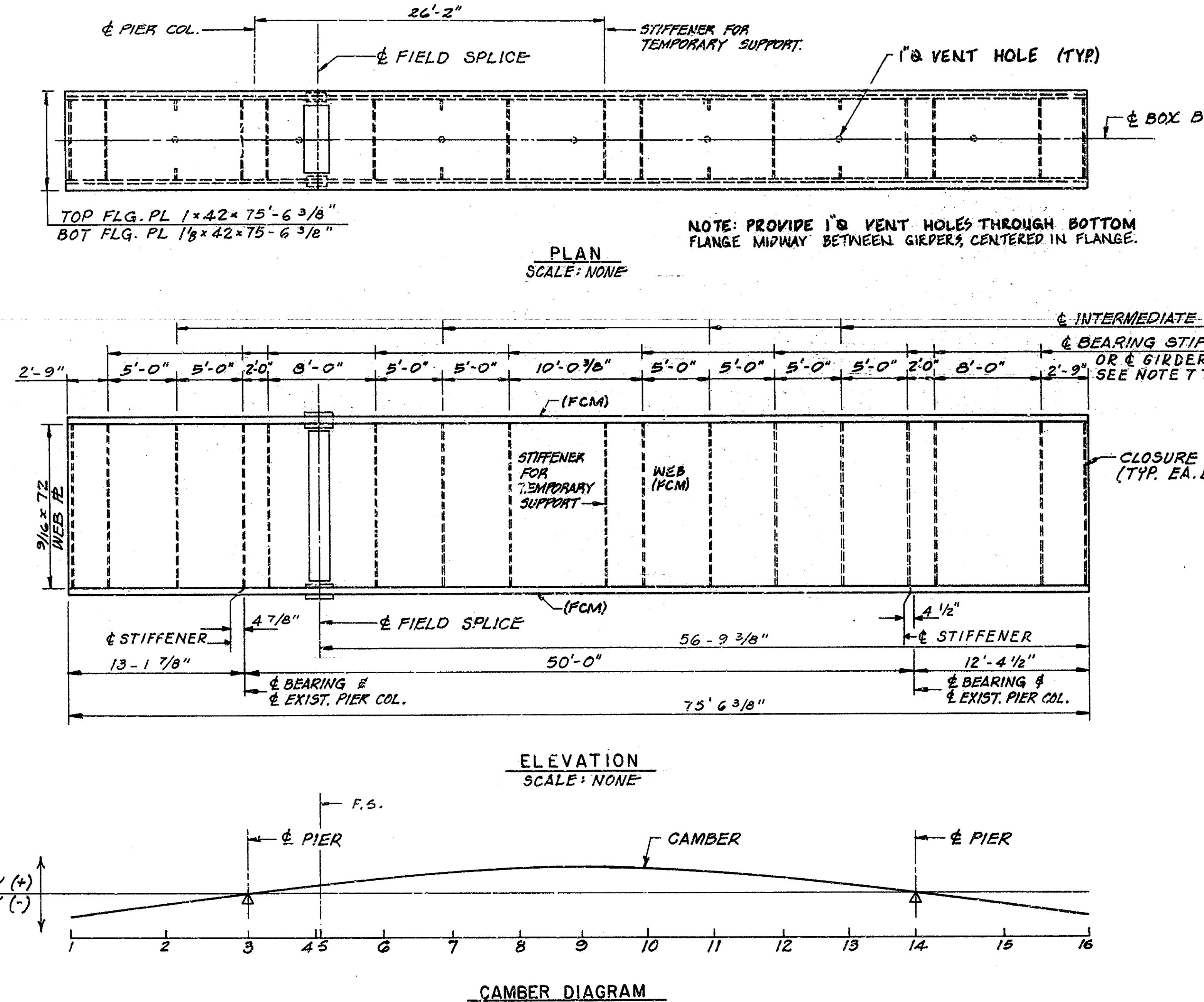
EAST ABUTMENT - BAR SCHEDULE

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KING OF PRUSSIA, PA

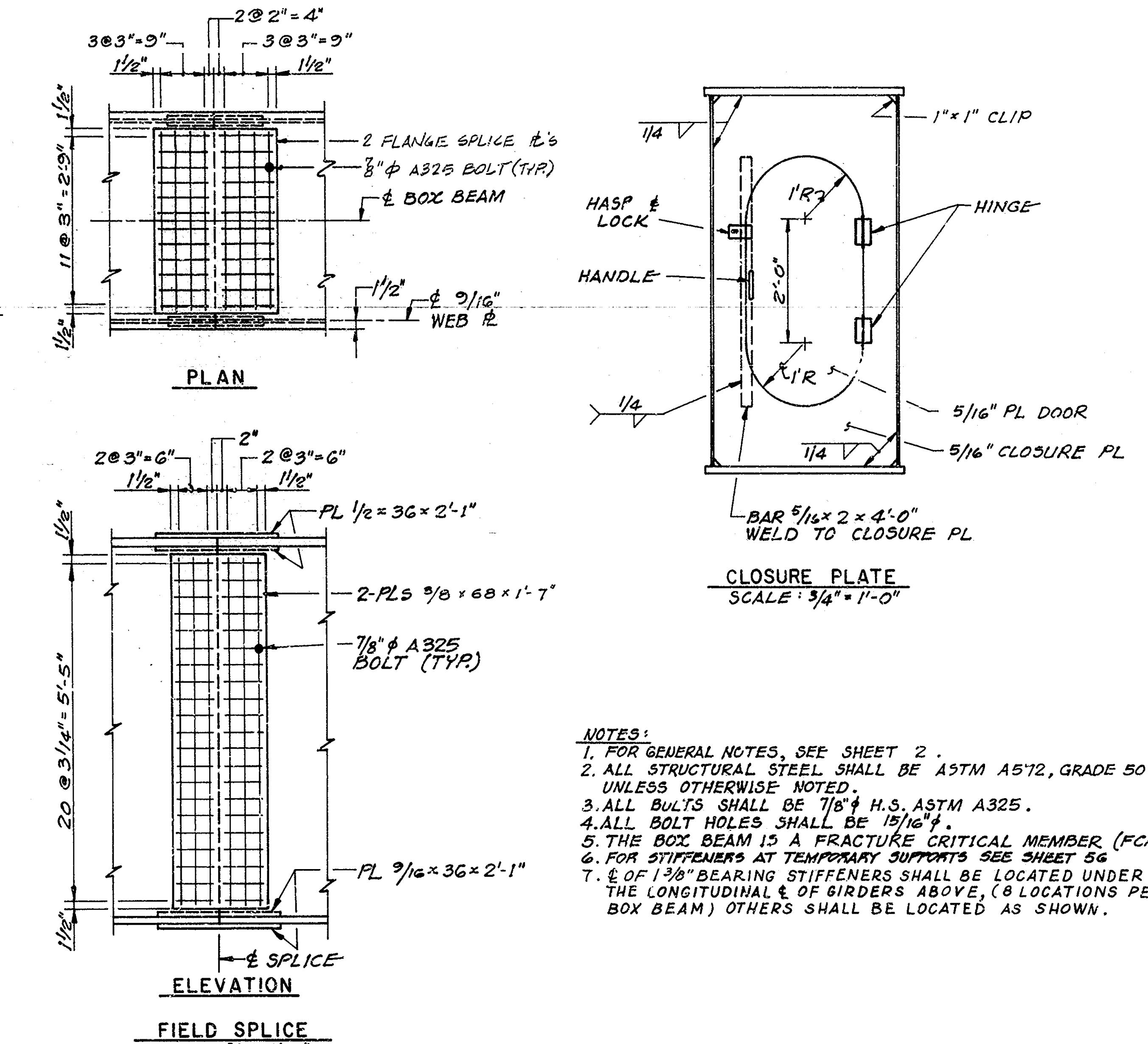
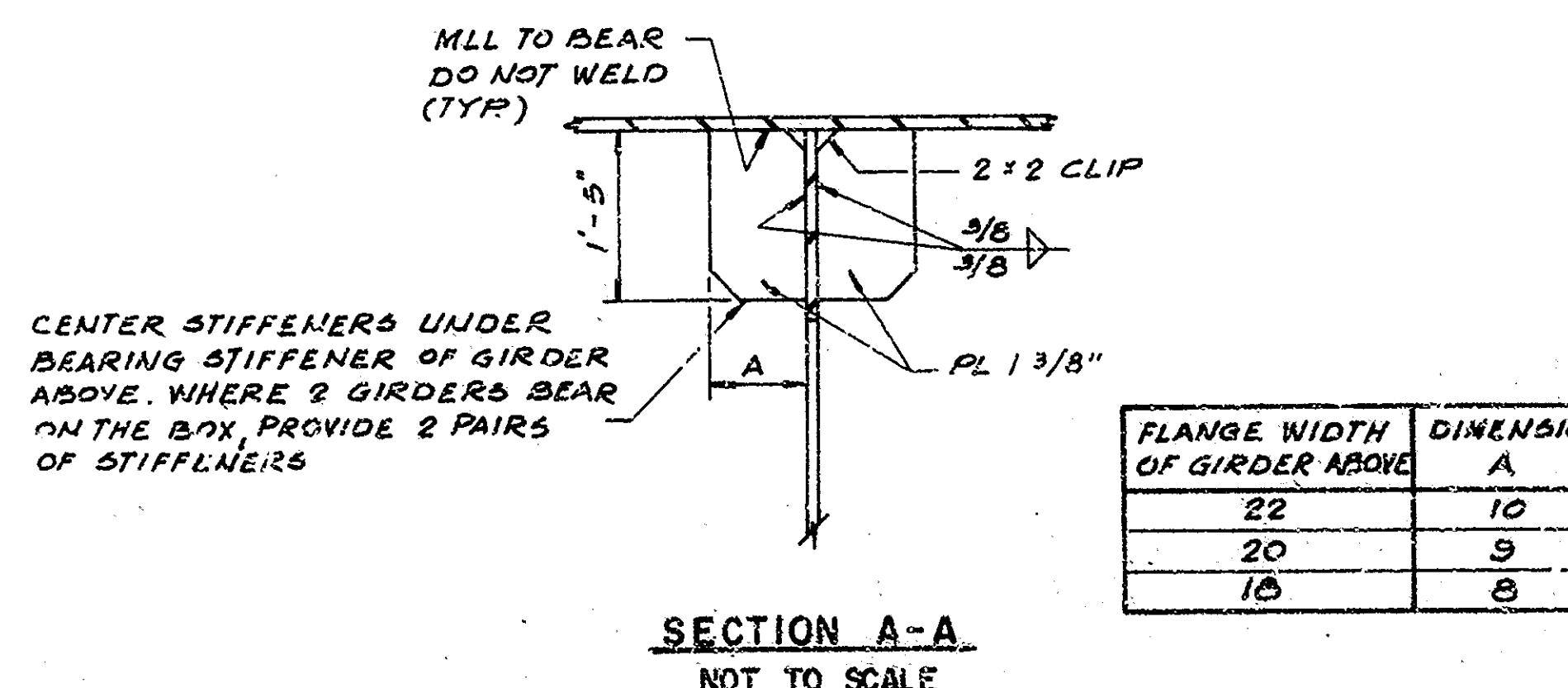
RECOMMENDED MAY 31 1965

SHEET 16 OF 66

S-16093A

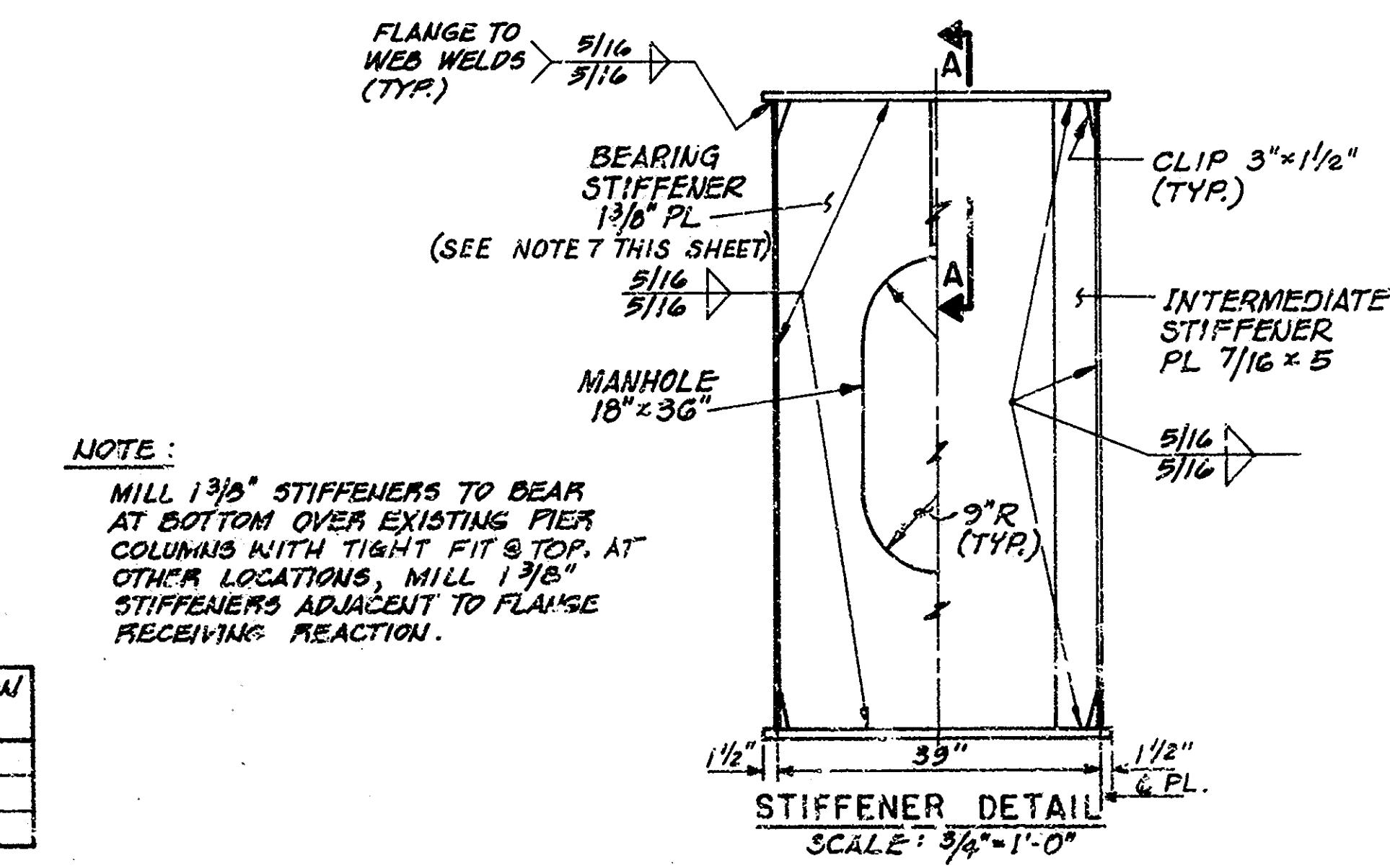


CAMBER ORDINATE Y INCHES															
POINT NO.															
1	2	3	4	5(F.S.)	6	7	8	9	10	11	12	13	14	15	16
-1/4	-1/8	0	1/8	1/8	1/4	3/16	3/8	7/16	3/8	2/16	1/4	1/8	0	-1/8	-1/4



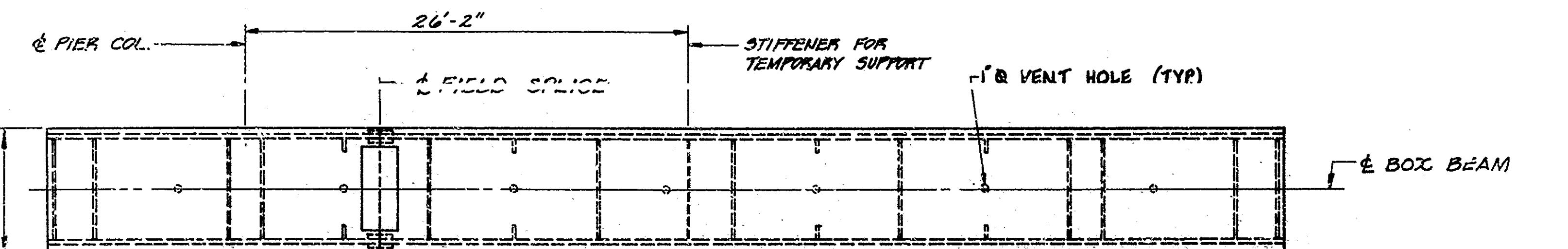
NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50 UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE 7/8" H.S. ASTM A325.
- ALL BOLT HOLES SHALL BE 15/16".
- THE BOX BEAM IS A FRACTURE CRITICAL MEMBER (FCM).
- FOR STIFFENERS AT TEMPORARY SUPPORTS SEE SHEET 5G
- 1/8 OF 1 3/8" BEARING STIFFENERS SHALL BE LOCATED UNDER THE LONGITUDINAL 1/8 OF GIRDERS ABOVE, (8 LOCATIONS PER BOX BEAM) OTHERS SHALL BE LOCATED AS SHOWN.



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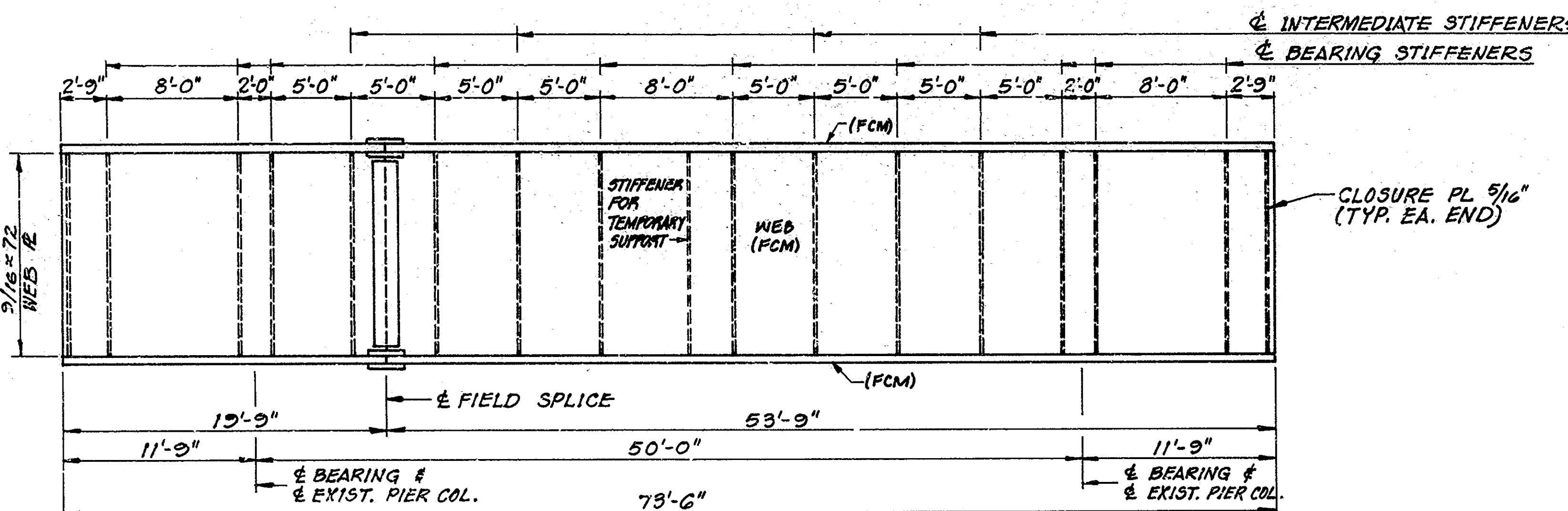
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					
Commonwealth of Pennsylvania DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DESIGN MONTGOMERY COUNTY L.R. 769 & L.R. 67057 SEC. 300 MAINLINE OVER CONRAIL AND ABANDONED SIDING II SPAN STEEL MULTI-GIRDER BRIDGE SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK BOX BEAM - PIER 1					
RECOMMENDED MAY 31 1985					SHEET 17 OF 66
					S-16093A



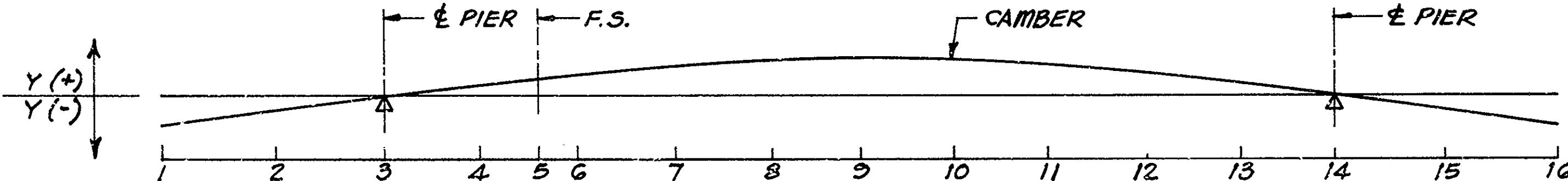
TOP FLANGE PL 1 x 42 x 73'-6"
BOT FLANGE PL 1/8 x 42 x 73'-6"

PLAN
SCALE: NONE

NOTE: PROVIDE 1/2" VENT HOLES THROUGH BOTTOM FLANGE
MID WAY BETWEEN GIRDERS, CENTERED IN FLANGE.



ELEVATION
SCALE: NONE



CAMBER DIAGRAM

CAMBER ORDINATE Y INCHES															
POINT NO.															
1	2	3	4	5(F.S.)	6	7	8	9	10	11	12	13	14	15	16
-1/4	-1/8	0	1/8	3/16	1/4	5/16	5/8	7/16	3/8	5/16	1/4	1/8	0	-1/8	-1/4

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 2.
2. ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50 UNLESS OTHERWISE NOTED.
3. ALL BOLTS SHALL BE 7/8" H.S. ASTM A325.
4. ALL BOLT HOLES SHALL BE 15/16".
5. THE BOX BEAM IS A FRACTURE CRITICAL MEMBER (FCM).
6. FOR CLOSURE PLATE DETAIL, SEE SHEET 17.
7. FOR STIFFENER DETAIL, SEE SHEET 17.
8. FOR STIFFENERS AT TEMPORARY SUPPORTS, SEE SHEET 5G
9. FOR FIELD SPLICE, USE SPLICE SHOWN FOR BOX BEAM 1 ON SHEET 17.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

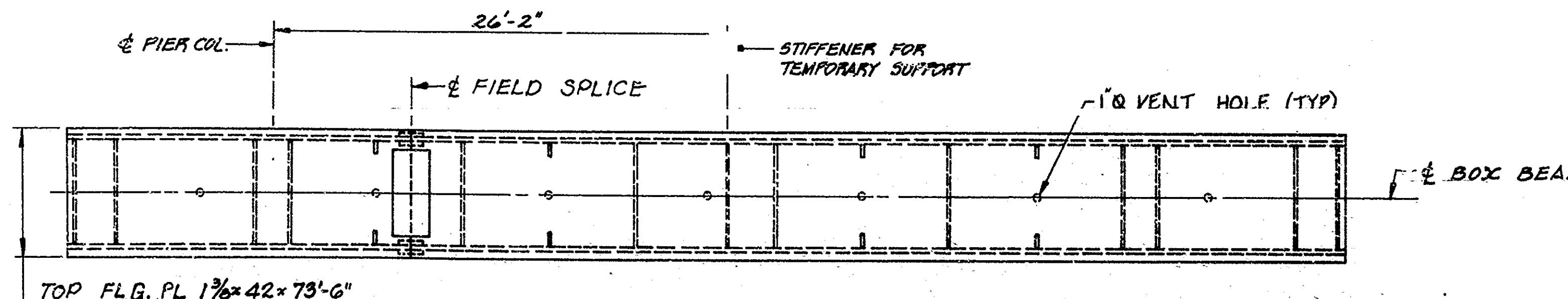
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
BOX BEAM - PIERS 2, 4, 6 & 8

RECOMMENDED MAY 31 1985

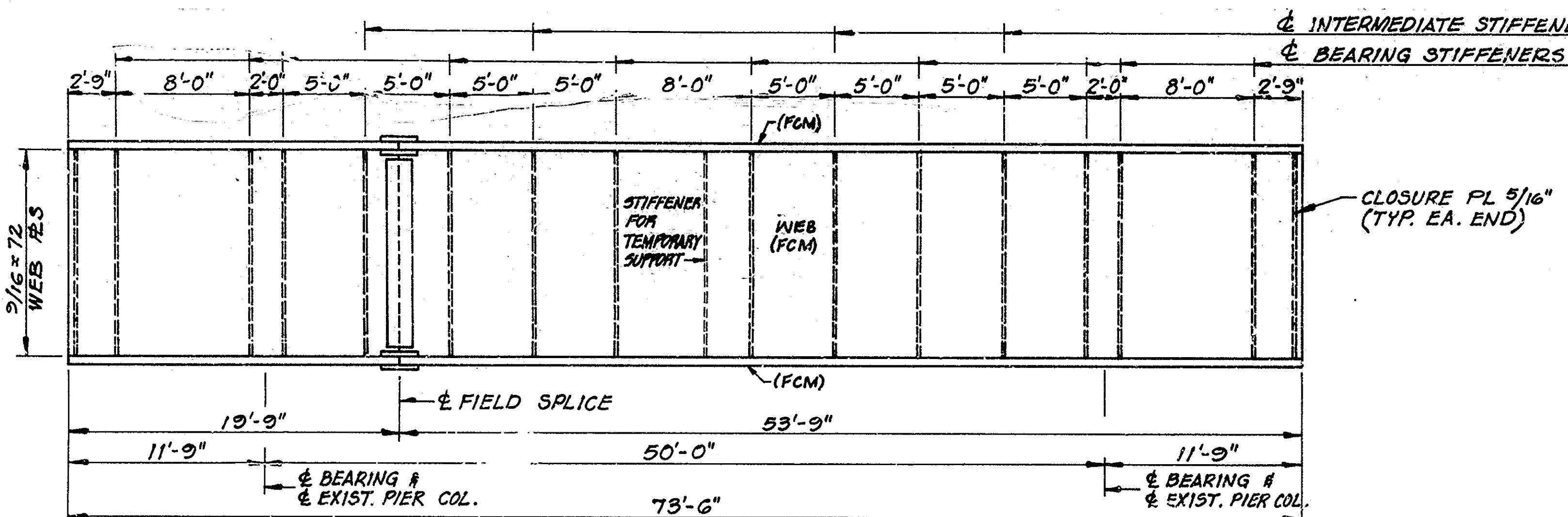
SHEET 18 OF 66

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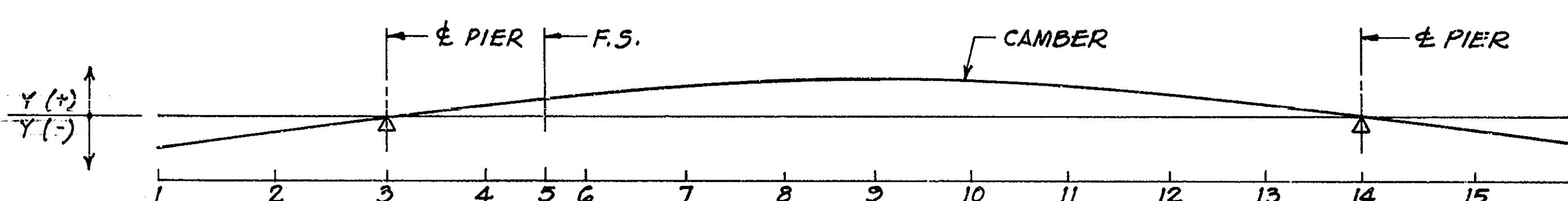
S-16093A



PLAN
SCALE: NONE

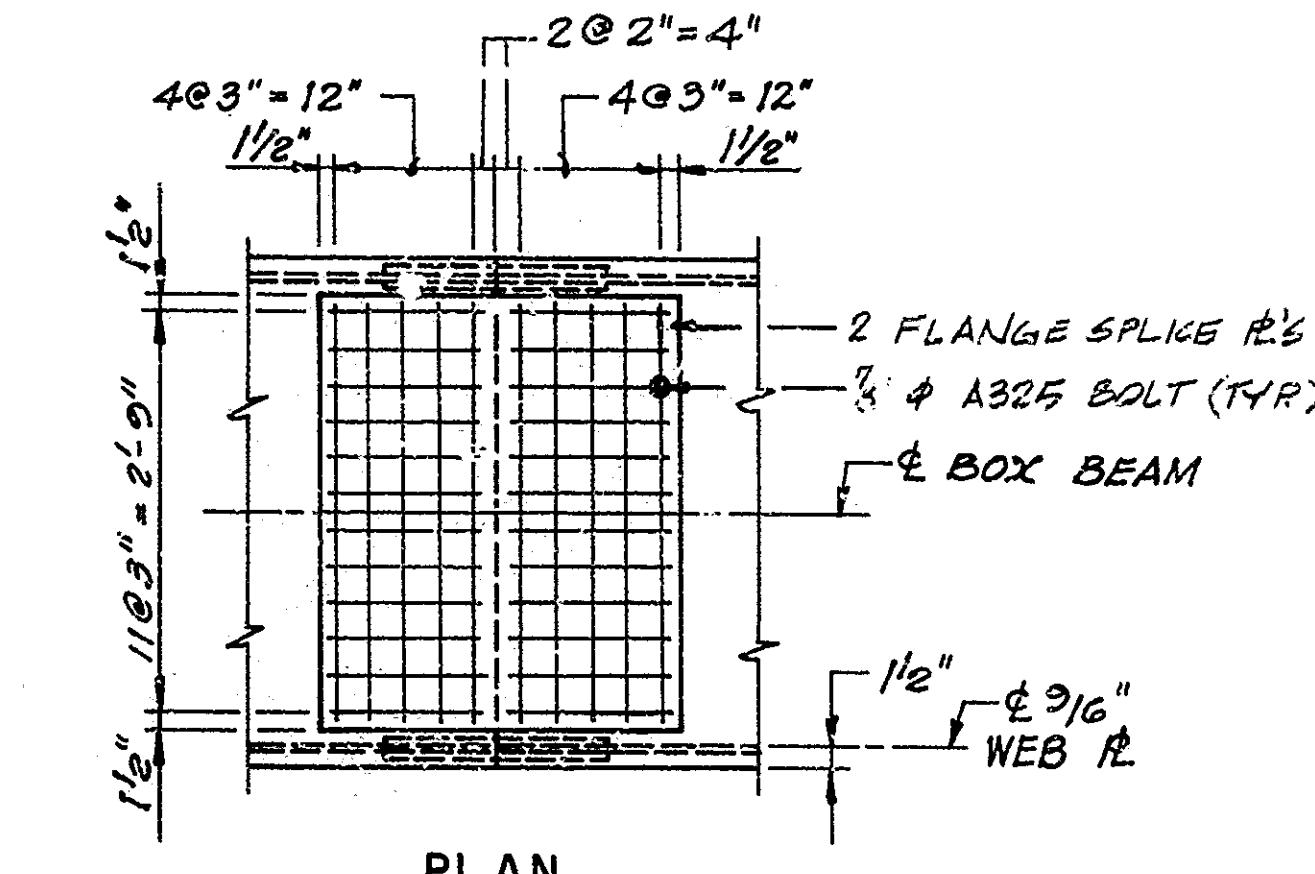


ELEVATION
SCALE: NONE

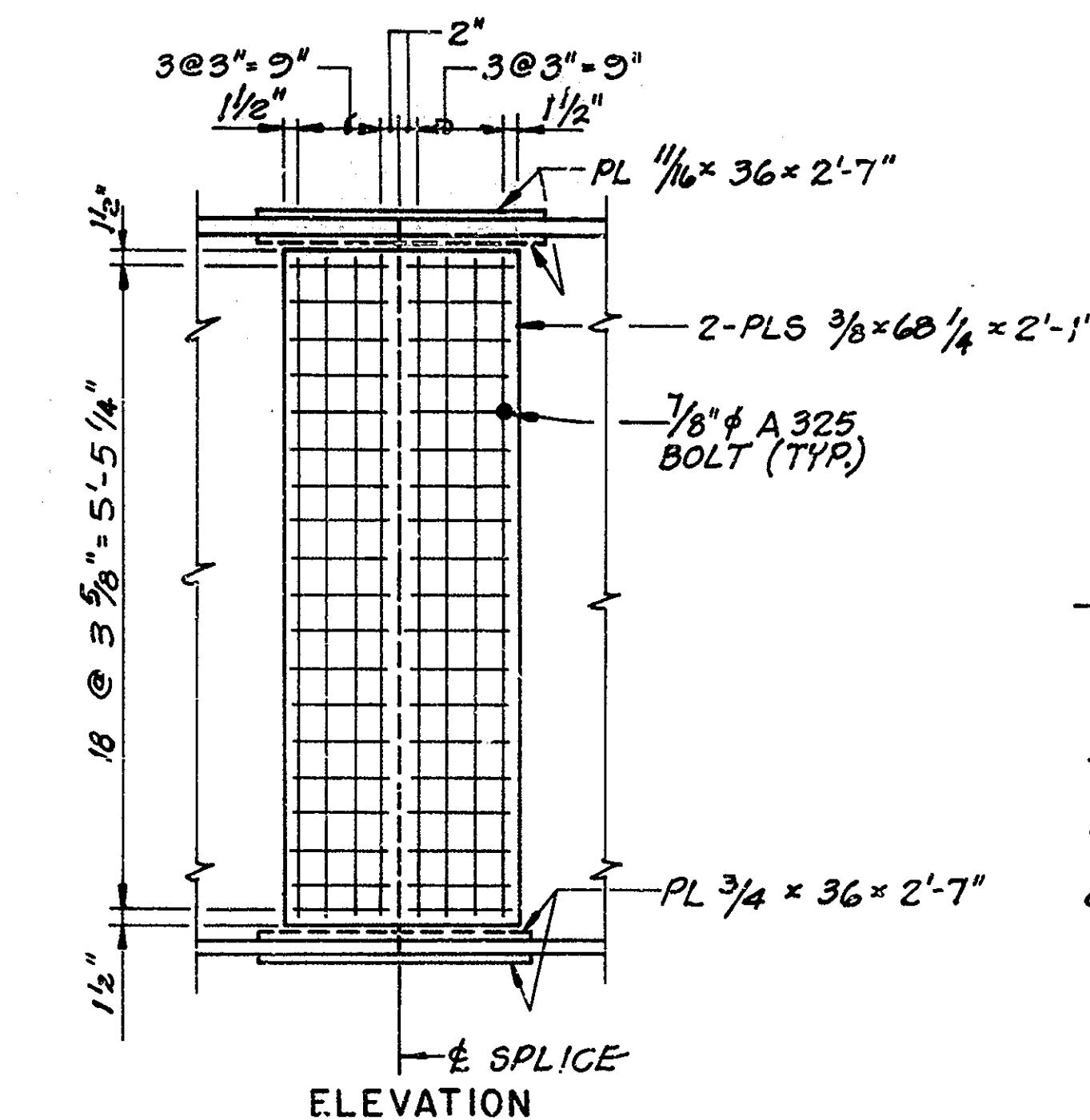


CAMBER DIAGRAM

CAMBER ORDINATE Y INCHES																
POINT NO.																
1	2	3	4	5(F.S.)	6	7	8	9	10	11	12	13	14	15	16	
-9/16	-9/16	0	3/16	1/4	5/16	7/16	9/16	9/16	9/16	7/16	5/16	3/16	0	-9/16	-9/16	



PLAN



ELEVATION
FIELD SPLICE
SCALE: 3/4" = 1'-0"

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50 UNLESS OTHERWISE NOTED.
 3. ALL BOLTS SHALL BE 7/8" A 325 H.S. ASTM A325.
 4. ALL BOLT HOLES SHALL BE 15/16" Ø.
 5. THE BOX BEAM IS A FRACTURE CRITICAL MEMBER (FCM).
 6. FOR CLOSURE PLATE DETAIL, SEE SHEET 17.
 7. FOR STIFFENER DETAIL, SEE SHEET 17.
 8. FOR STIFFENERS AT TEMPORARY SUPPORTS SEE SHEET 56.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

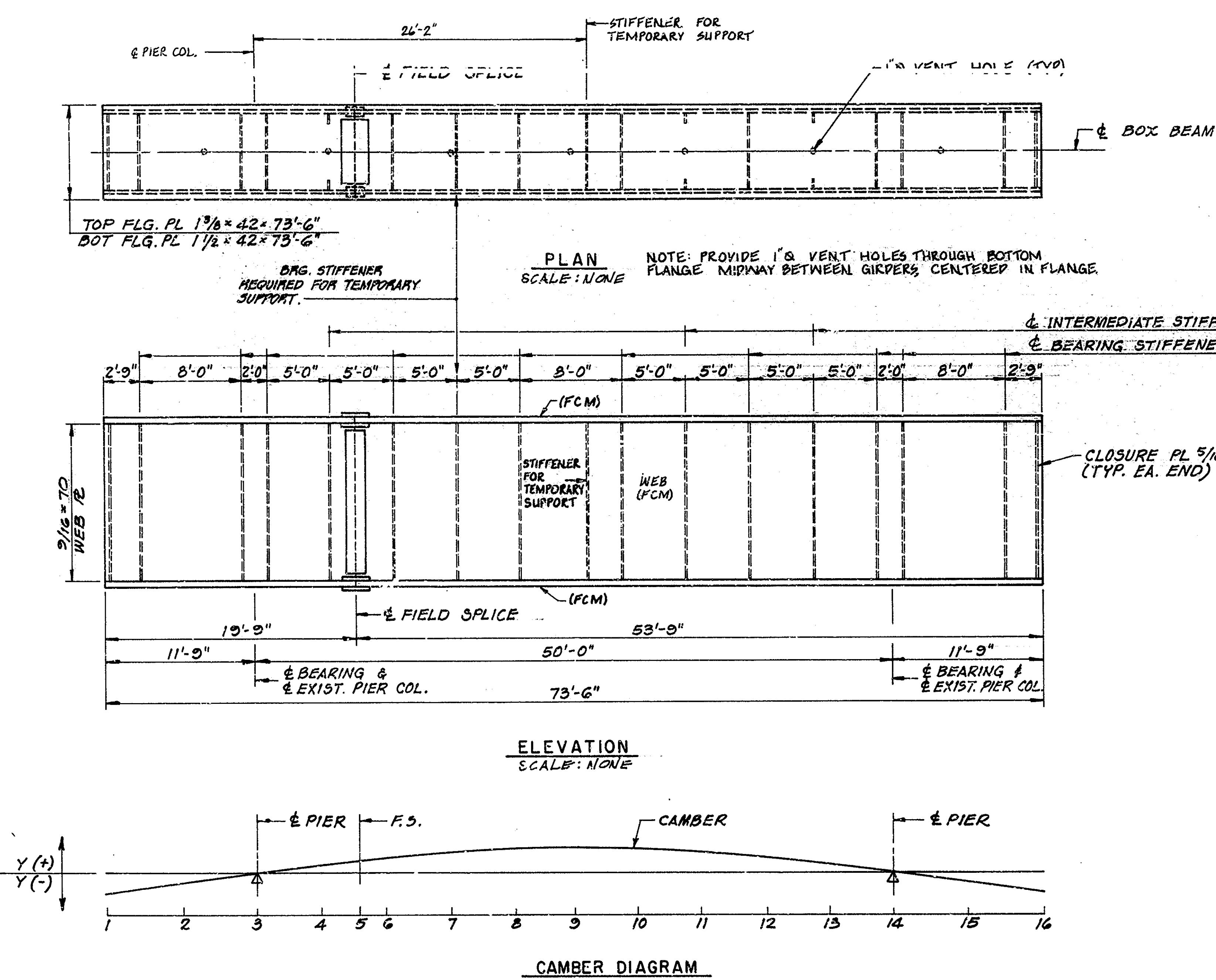
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
BOX BEAM - PIERS 3,5 & 7

RECOMMENDED MAY 31 1986

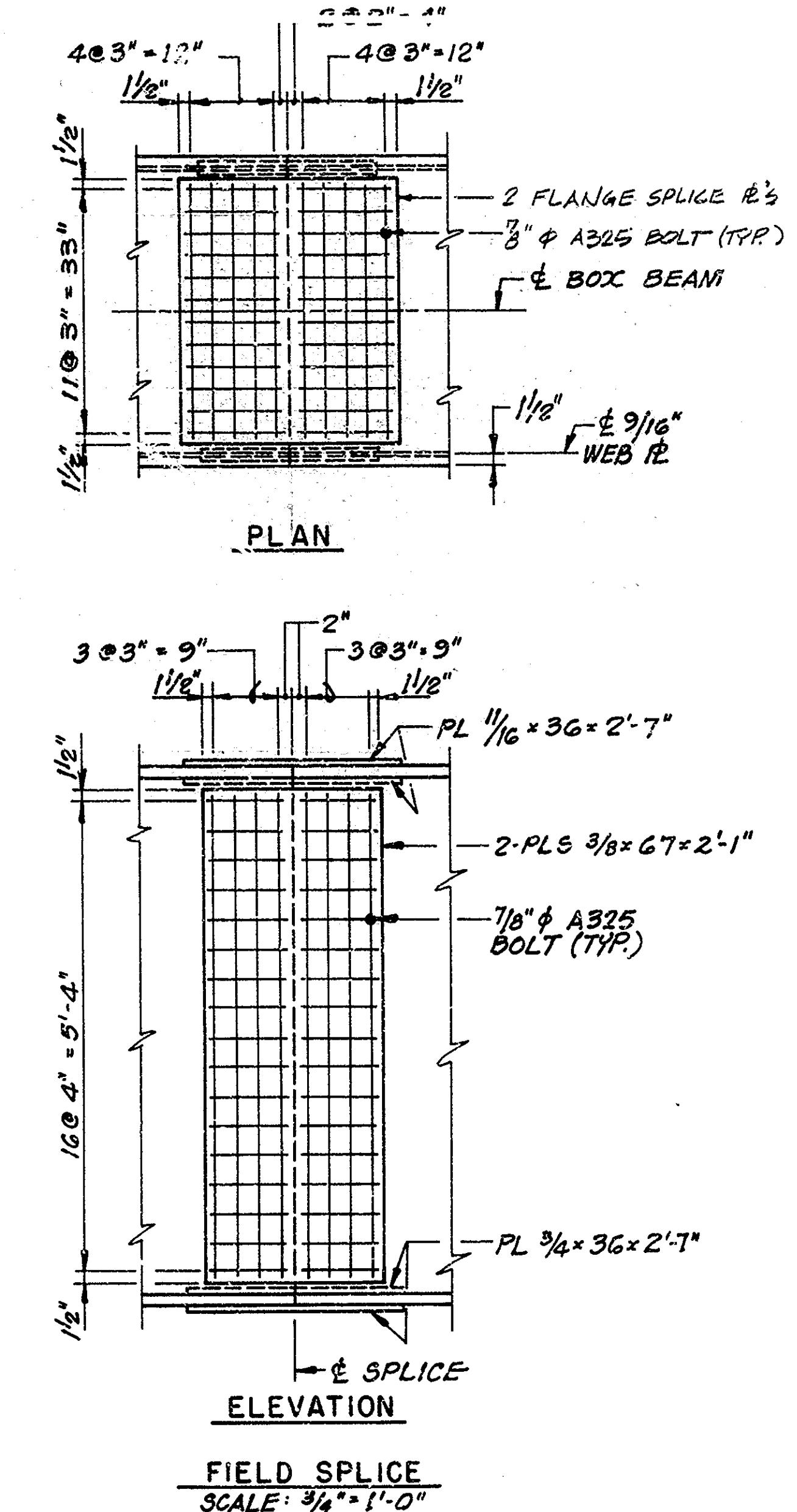
SHEET 19 OF 66

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KING OF PRUSSIA, PA

S-16093A



CAMBER ORDINATE Y INCHES															
POINT NO.															
-3/8	-3/16	0	3/16	1/4	5/16	1/2	9/16	5/8	9/16	1/2	5/16	3/16	0	-3/16	-3/8



NOTES:

- FOR GENERAL NOTES, SEE SHEET 2.
- ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50 UNLESS OTHERWISE NOTED.
- ALL BOLTS SHALL BE 7/8" H.S. ASTM A325.
- ALL BOLT HOLES SHALL BE 15/16".
- THE BOX BEAM IS A FRACTURE CRITICAL MEMBER (FCM).
- FOR CLOSURE PLATE DETAIL, SEE SHEET 17.
- FOR STIFFENER DETAIL, SEE SHEET 17.
- FOR STIFFENERS AT TEMPORARY SUPPORTS, SEE SHEET 58

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

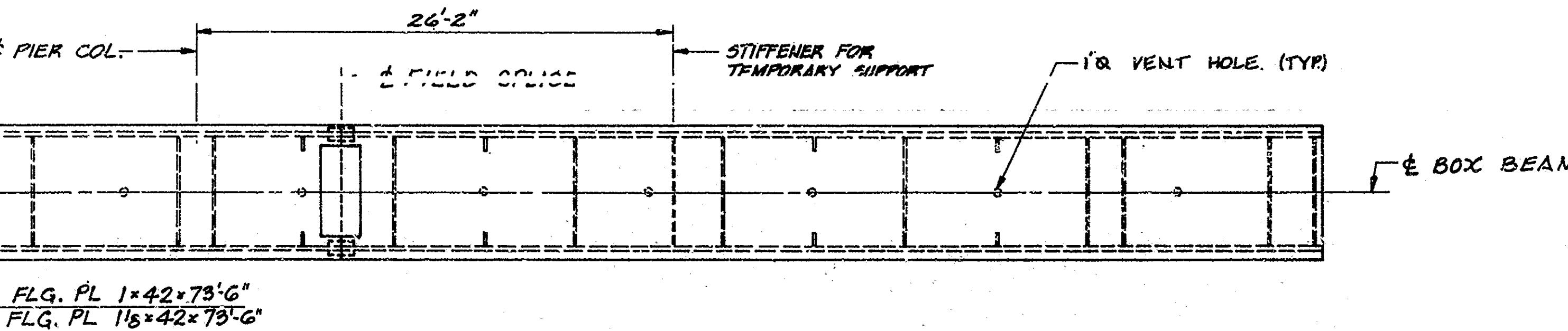
Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
BOX BEAM - PIER 9

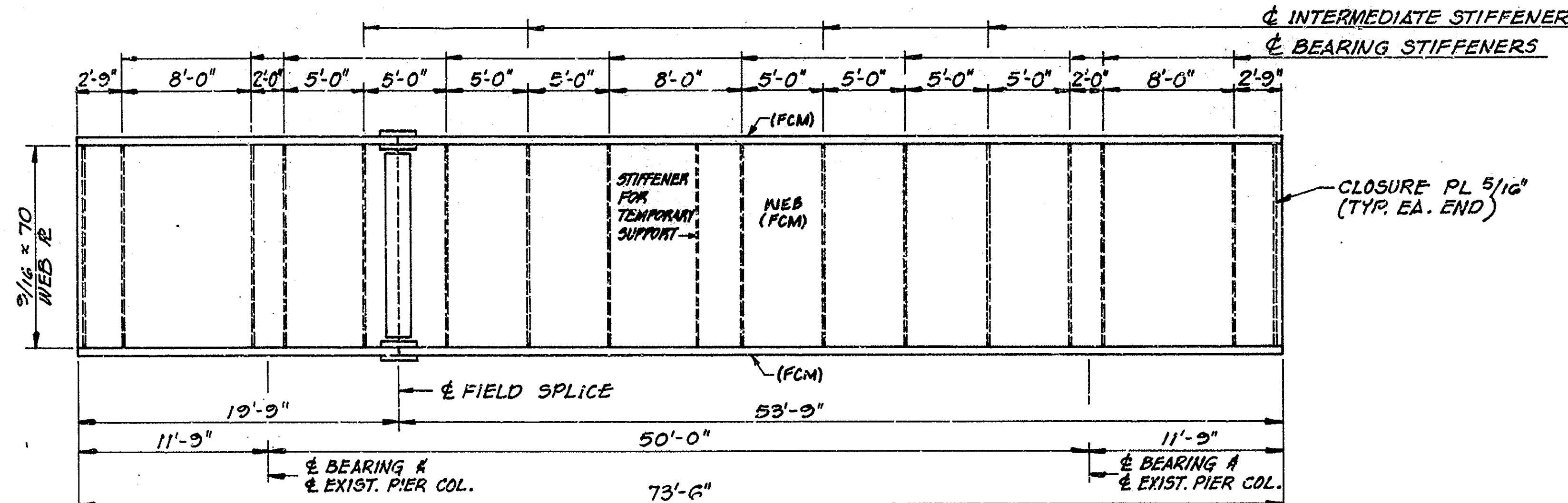
RECOMMENDED MAY 31 1985
SHEET 20 OF 66

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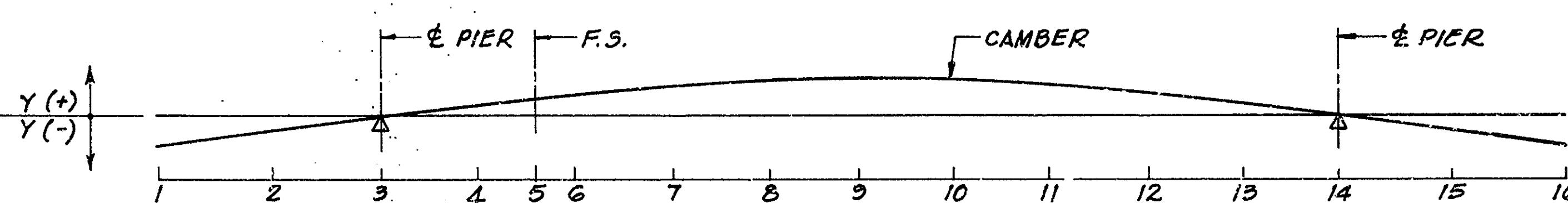
S-16093A



PLAN NOTE: PROVIDE 1/8" VENT HOLES THROUGH BOTTOM FLANGE
SCALE: NONE MIDWAY BETWEEN GIRDERS CENTERED IN FLANGE.

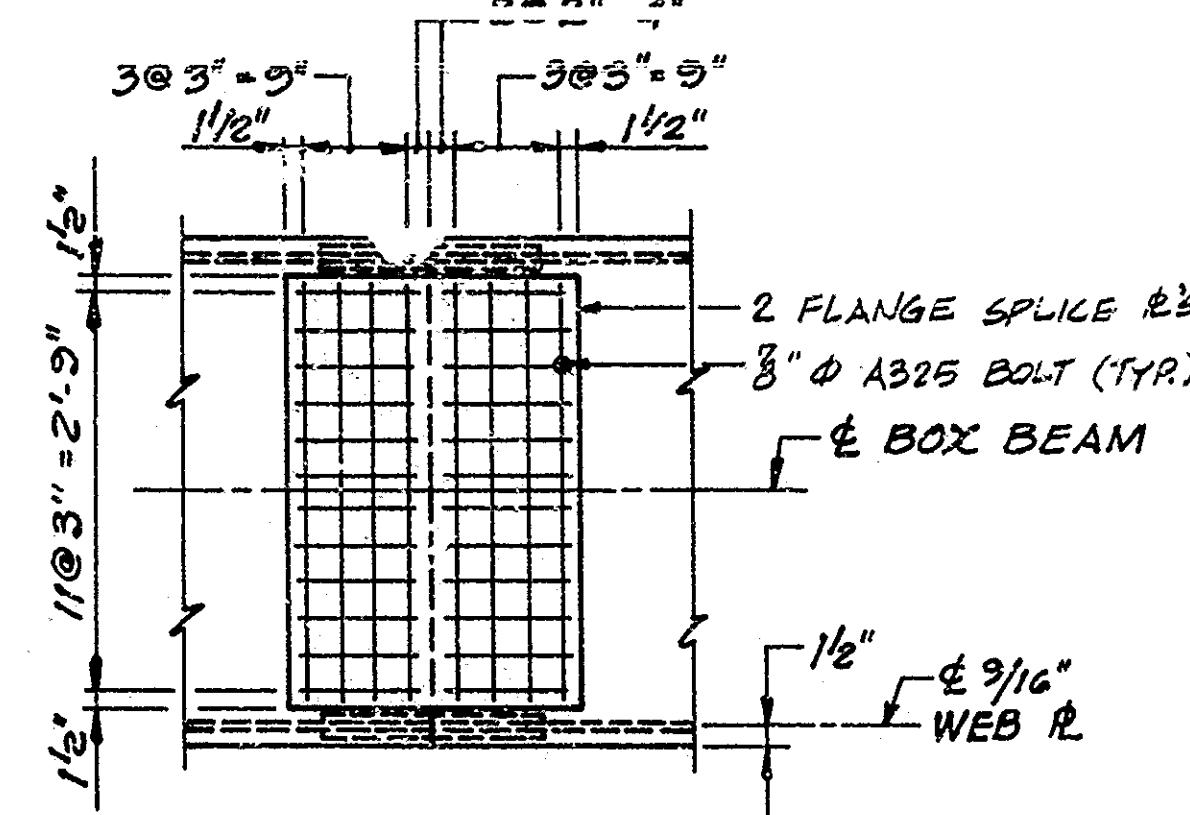


ELEVATION
SCALE: NONE

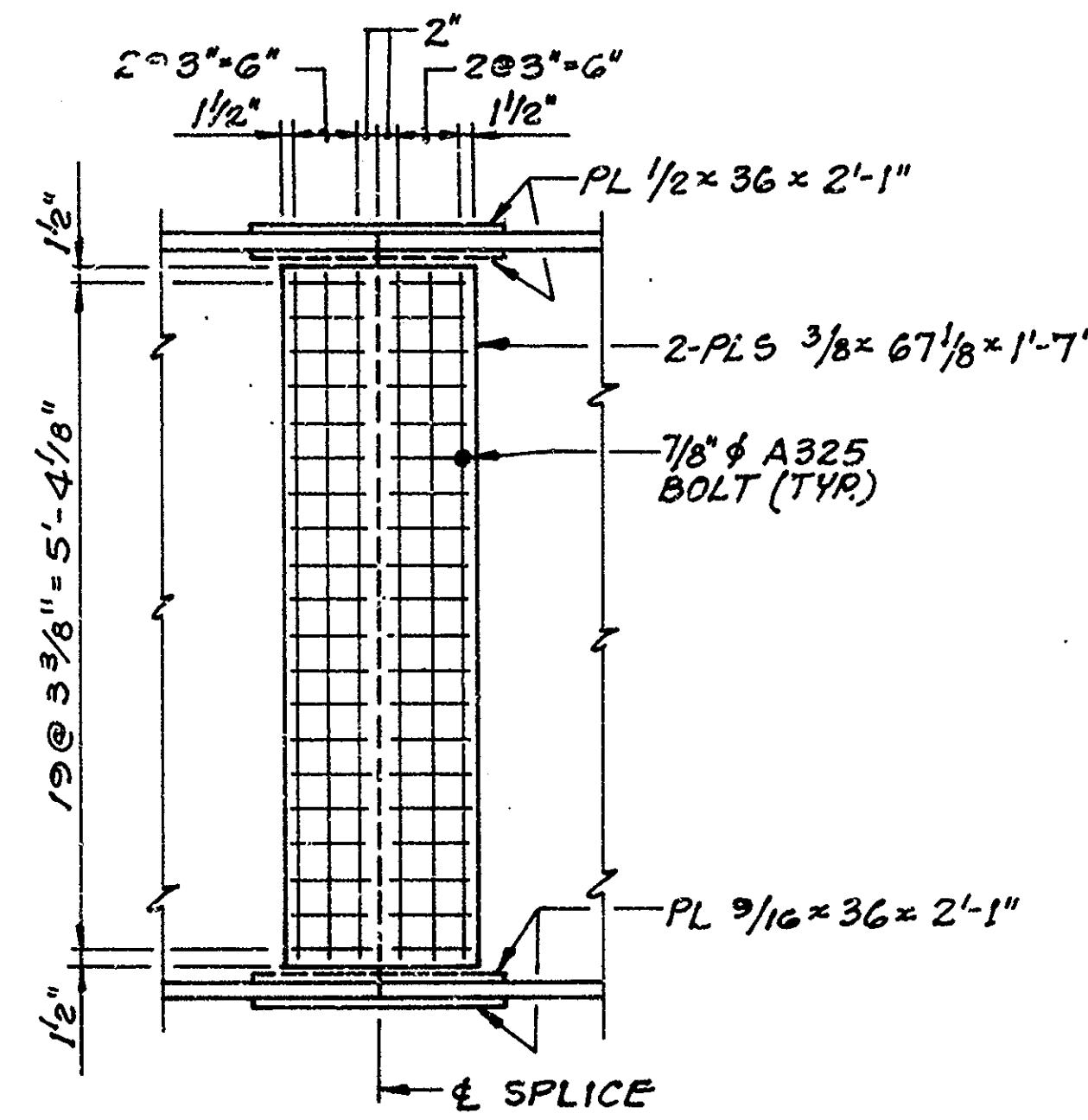


CAMBER DIAGRAM

CAMBER ORDINATE Y INCHES															
POINT NO.															
1	2	3	4	5(F.S.)	6	7	8	9	10	11	12	13	14	15	16
-1/4	-1/8	0	1/8	3/16	1/4	3/8	7/16	7/16	7/16	3/8	1/4	1/8	0	-1/8	-1/4



PLAN



ELEVATION

FIELD SPLICE
SCALE: 3/4" = 1'-0"

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50 UNLESS OTHERWISE NOTED.
 3. ALL BOLTS SHALL BE 7/8" Φ H.S. ASTM A325.
 4. ALL BOLT HOLES SHALL BE 15/16" Φ.
 5. THE BOX BEAM IS A FRACTURE CRITICAL MEMBER (FCM).
 6. FOR CLOSURE PLATE DETAIL, SEE SHEET 17.
 7. FOR STIFFENER DETAIL, SEE SHEET 17.
 8. FOR STIFFENERS AT TEMPORARY SUPPORTS, SEE SHEET 56

Mark	Description	By	Chk'd.	App'd.	Date
<u>REVISIONS</u>					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

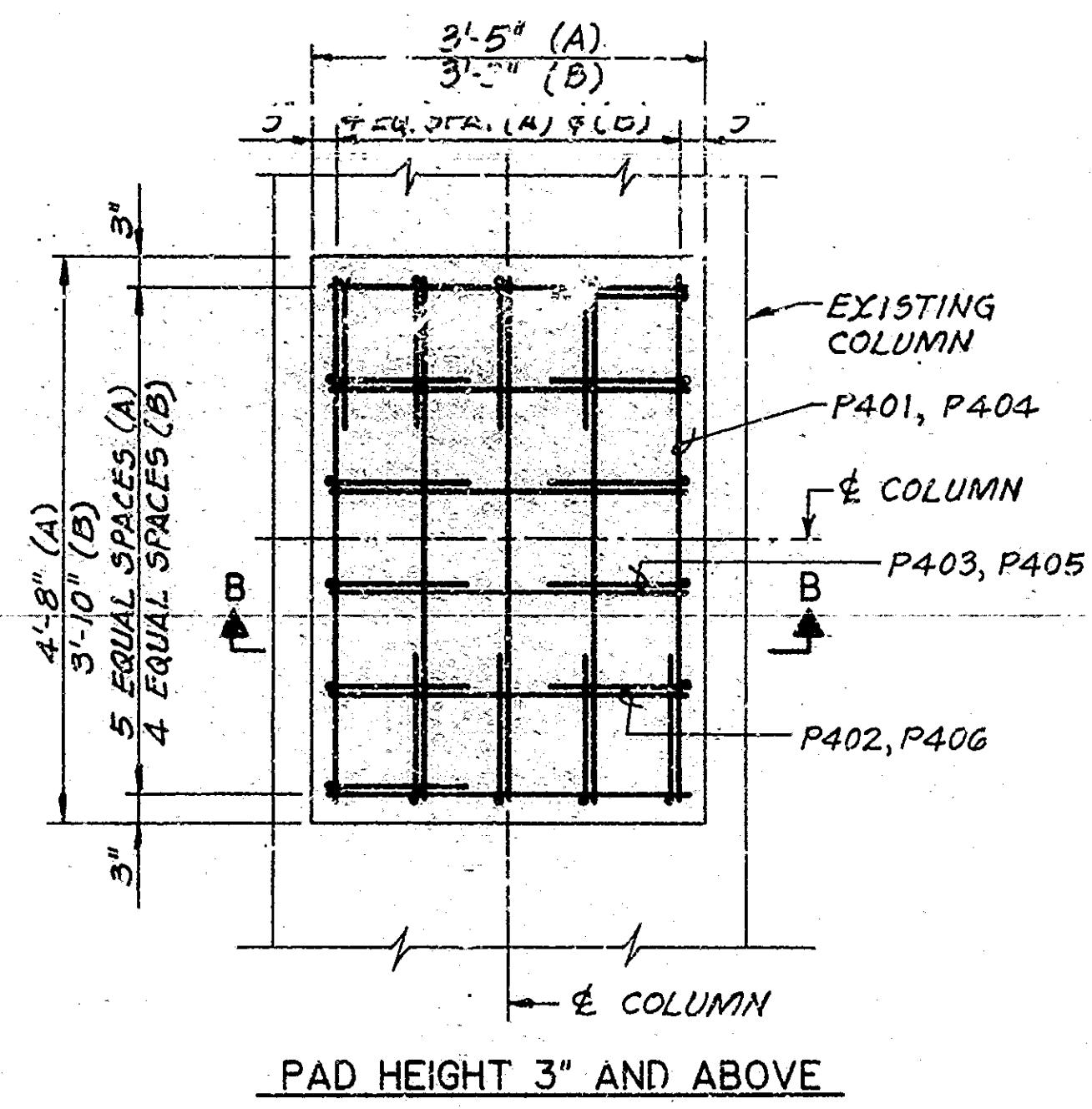
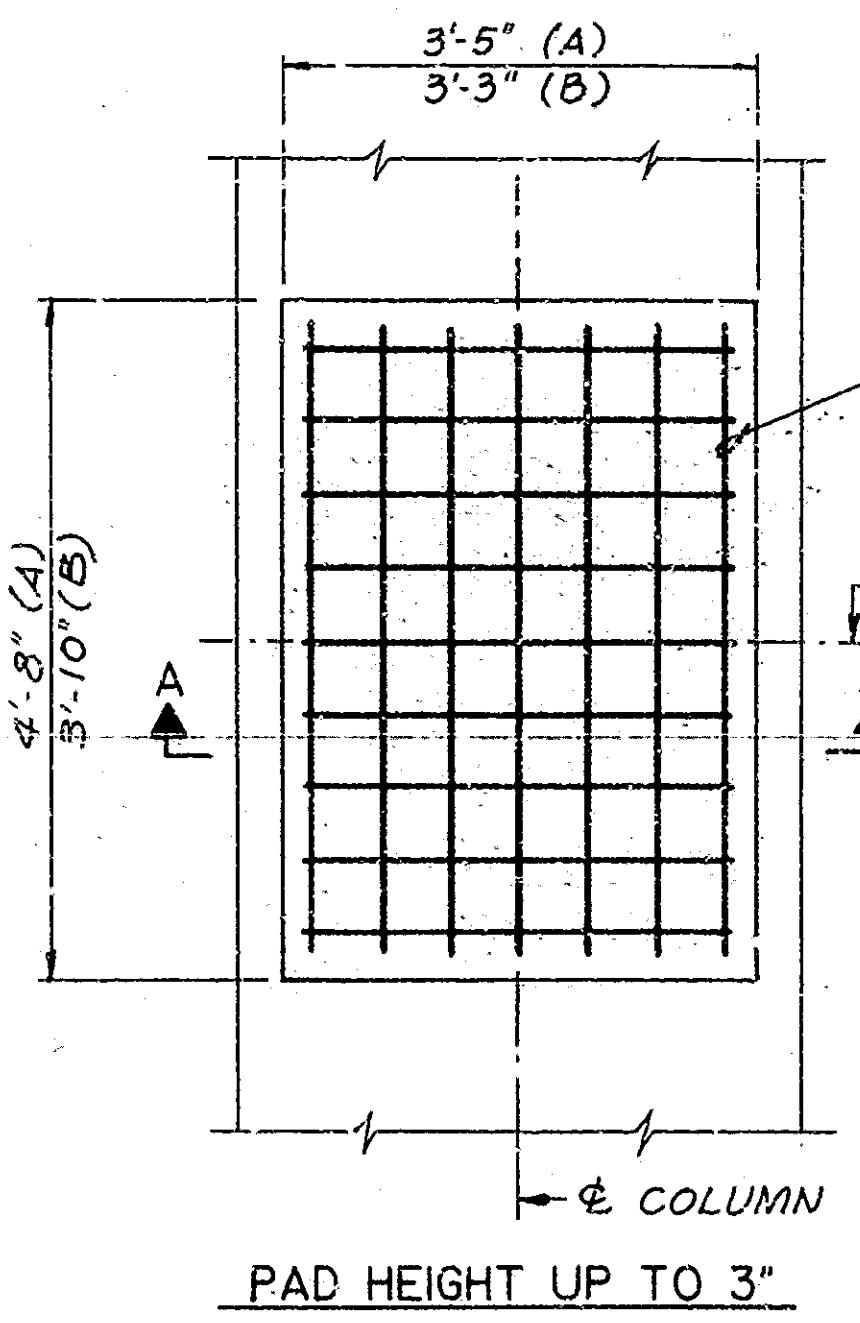
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
BOX BEAM - PIER 10

RECOMMENDED MAY 9, 1985

SHEET 21 OF 56

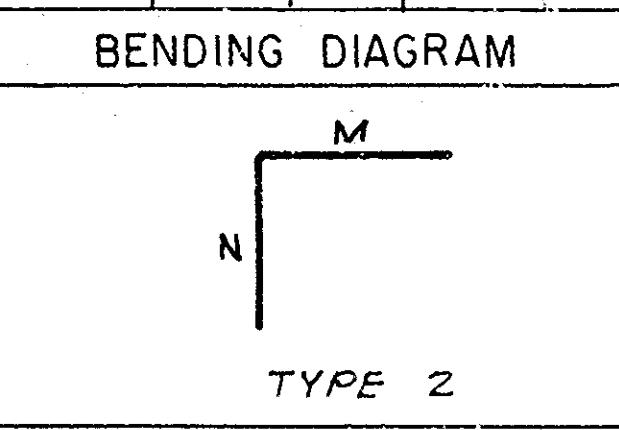
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KING OF PRUSSIA, PA

S-16093A



MASONRY PAD ELEVATIONS		
PIER NO.	ELEVATION	
	LEFT COL.	RIGHT COL.
1	50.178	50.178
2	54.383	54.383
3	58.368	58.368
4	62.659	62.513
5	66.768	66.518
6	71.059	70.913
7	74.918	74.918
8	79.313	79.313
9	83.758	83.758
10	88.039	88.185

** BAR SCHEDULE - MASONRY PADS							
MARK	REQ'D.	SIZE	TYPE	LENGTH	M	N	C
P401	25	4	STR	4'-2"			
P402	30	4	STR	2'-11"			
P403	90	4	Z		1'-3"	*	
P404	60	4	STR	3'-4"			
P405	192	4	Z		1'-3"	*	
P406	60	4	STR	2'-9"			
P407	15	4	STR	3'-8"			
P408	15	4	STR	3'-4"			
P409	48	4	Z		1'-3"	*	

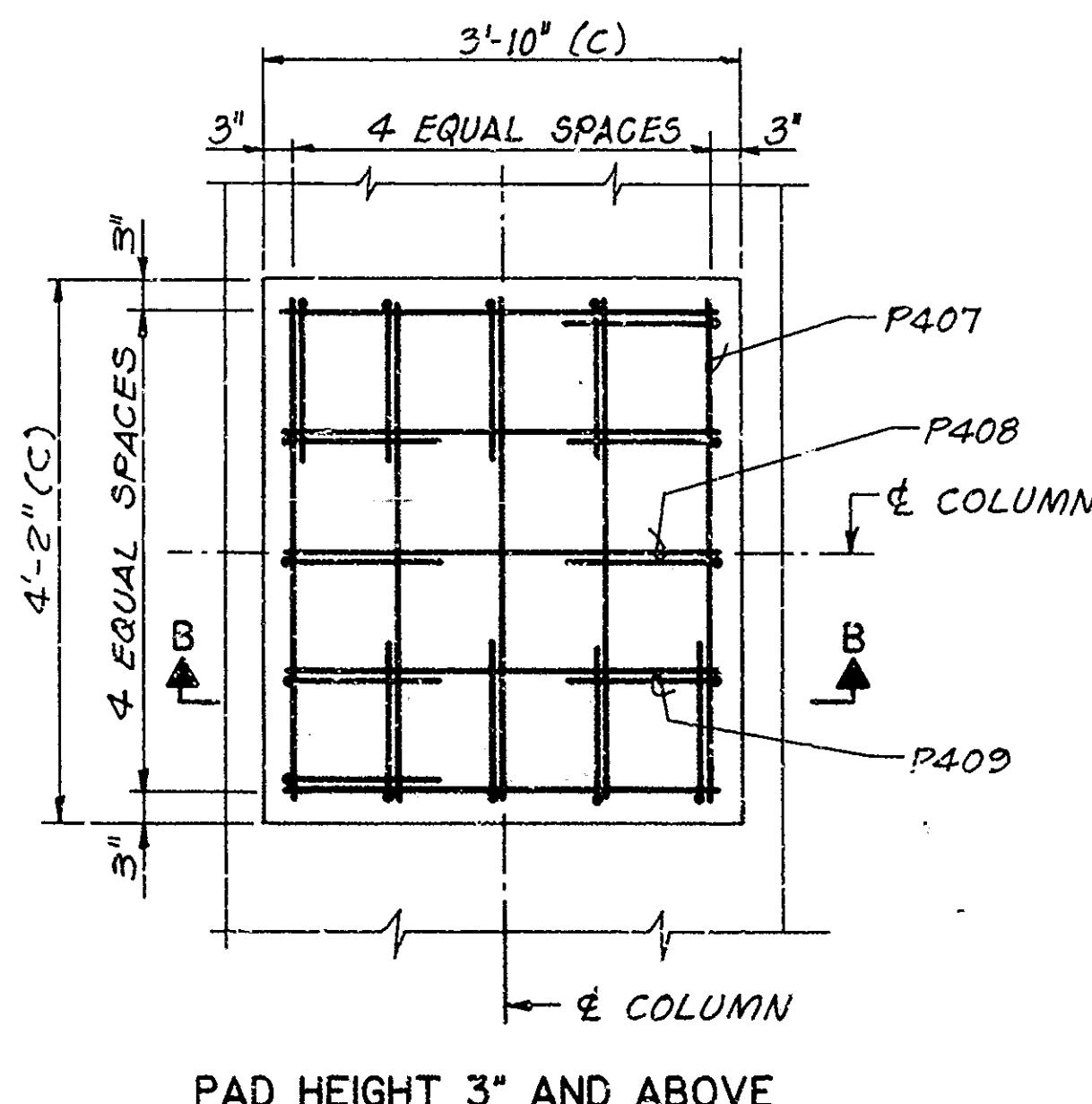
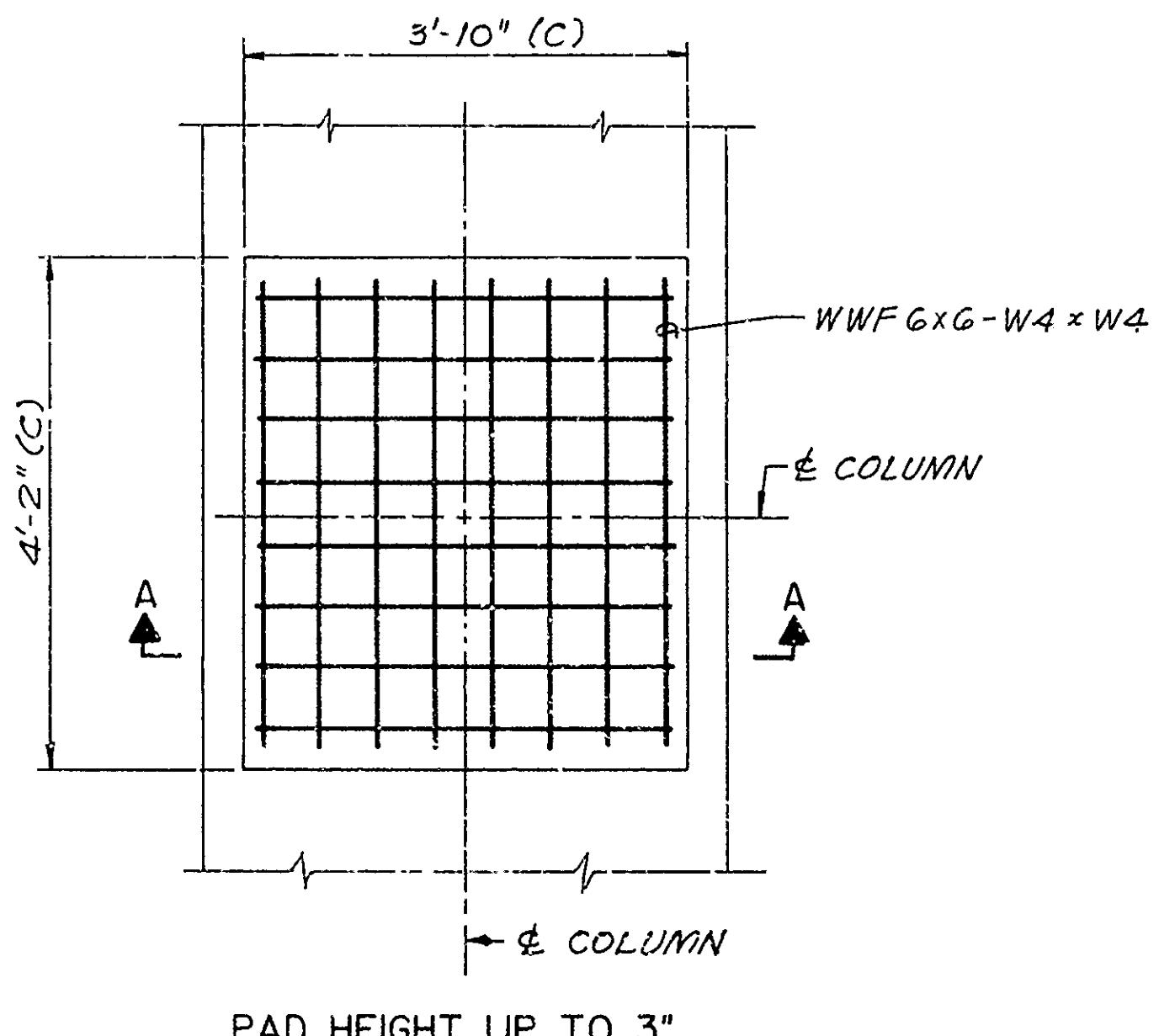


* DETERMINE DIMENSION 'N' IN ACCORDANCE WITH THE PROCEDURE OUTLINED ON THIS SHEET.

** ALL BARS TO BE EPOXY COATED

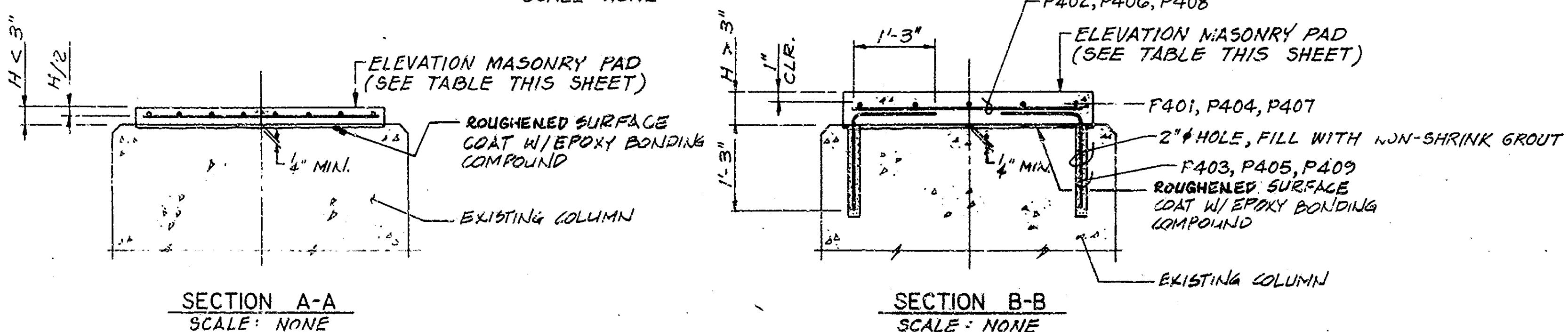
MASONRY PADS

PAD (A) PIER COLUMN 5R, 7L, 7R, 9L & 9R
PAD (B) PIER COLUMN 1L, 1R, 2L, 2R, 4L, 4R,
GL, GR, 8L, BR, 10L & 10R
SCALE: NONE



MASONRY PADS

PAD (C) PIER COLUMN 3L, 3R & 5L
SCALE: NONE



PROCEDURE TO DETERMINE THE MASONRY PAD LOCATION AND HEIGHT

1. HOLD THE CENTER LINE BEARING WEST ABUTMENT STATION AND BASED ON THE PLANNED SPAN LENGTHS, LOCATE THE CENTER LINE OF BOX BEAMS ON THE EXISTING PIER COLUMNS.
2. DETERMINE THE ANCHOR BOLT AND MASONRY PAD LOCATIONS ON THE PIER COLUMNS FROM THE CENTER LINE OF BOX BEAMS.
3. VERIFY THE EXISTING PIER COLUMN TOP ELEVATIONS AND DETERMINE THE HEIGHT OF THE MASONRY PADS.
4. USE APPROPRIATE MASONRY PAD DETAIL BASED ON THE MASONRY PAD HEIGHT.
5. DETERMINE REBAR DIMENSION 'B' FOR TYPE 2 REBARS FROM THE MASONRY PAD HEIGHT.

NOTES:

1. FOR GENERAL NO. 25, SEE SHEET 2.

Mark	Description	By	Chkd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

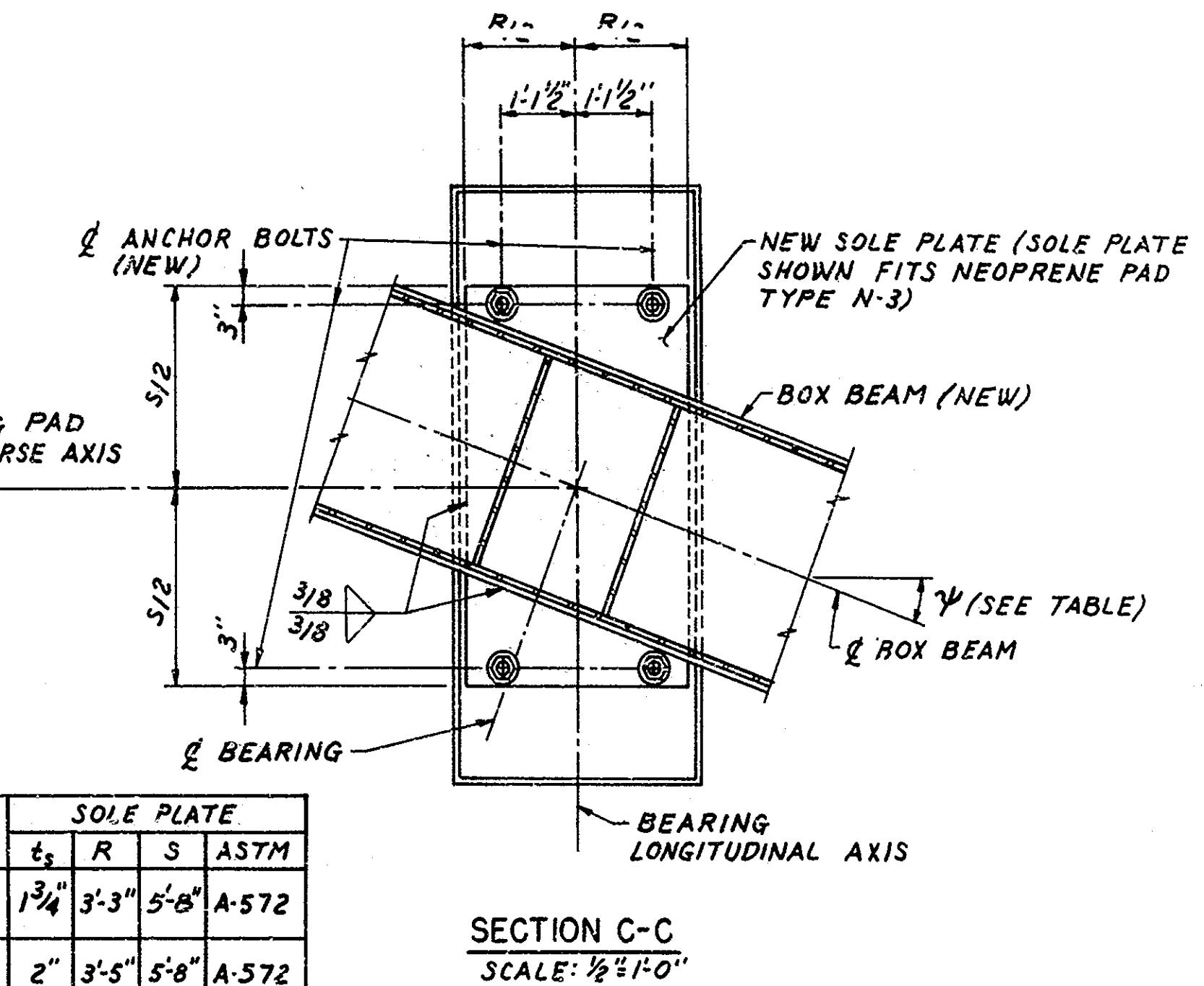
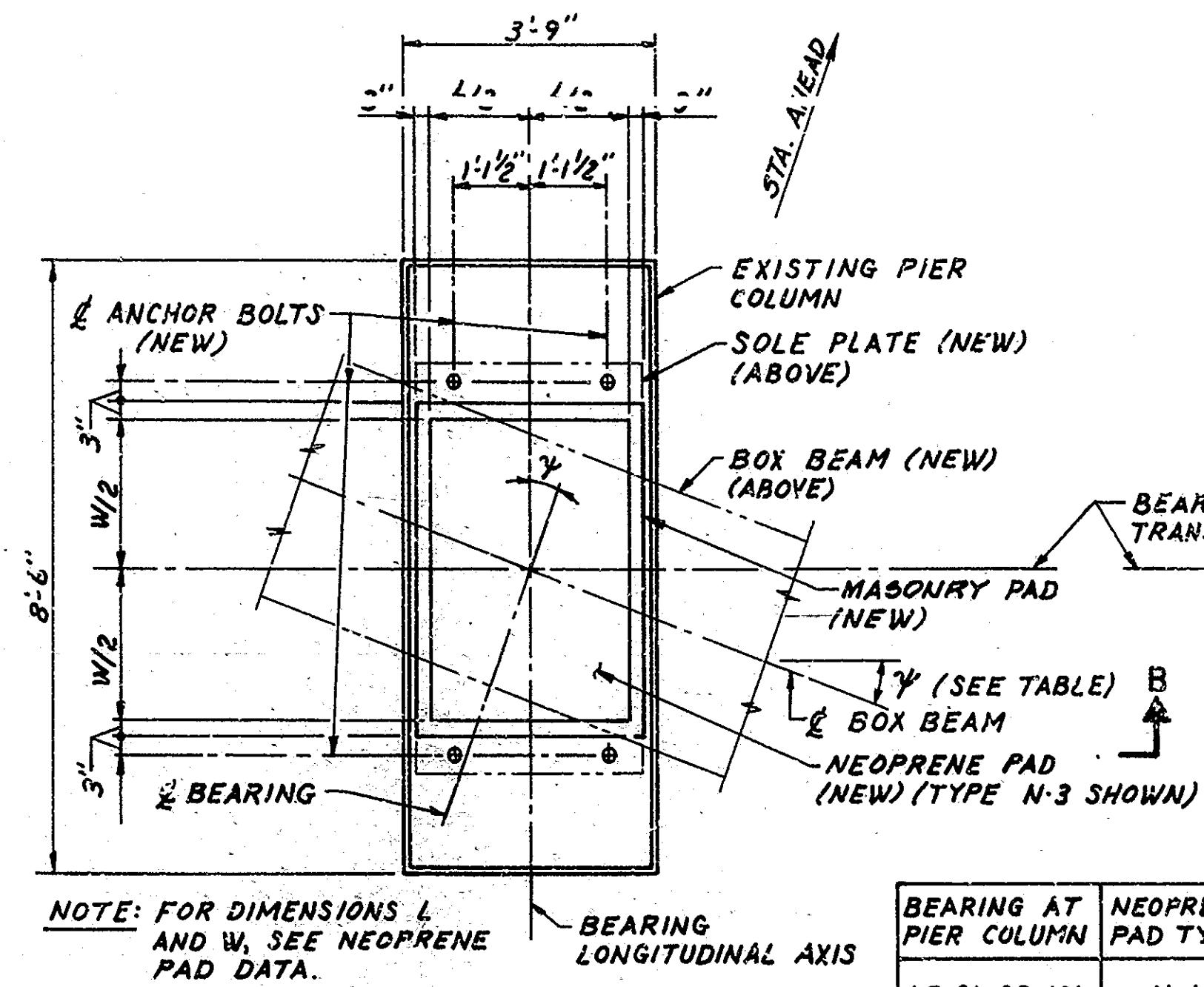
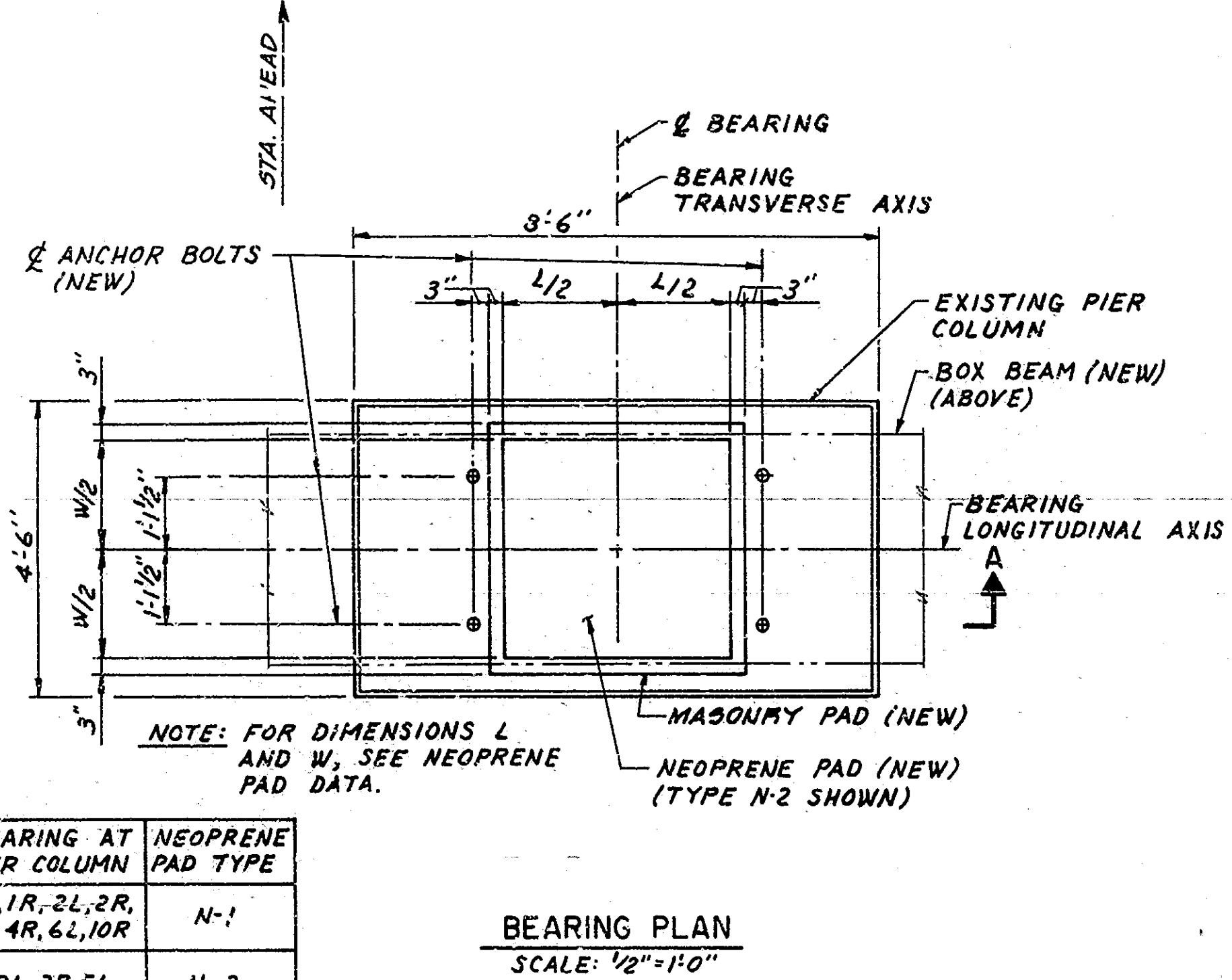
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
MASONRY PAD DETAILS

RECOMMENDED MAY 31 1986

SHEET 22 OF 66

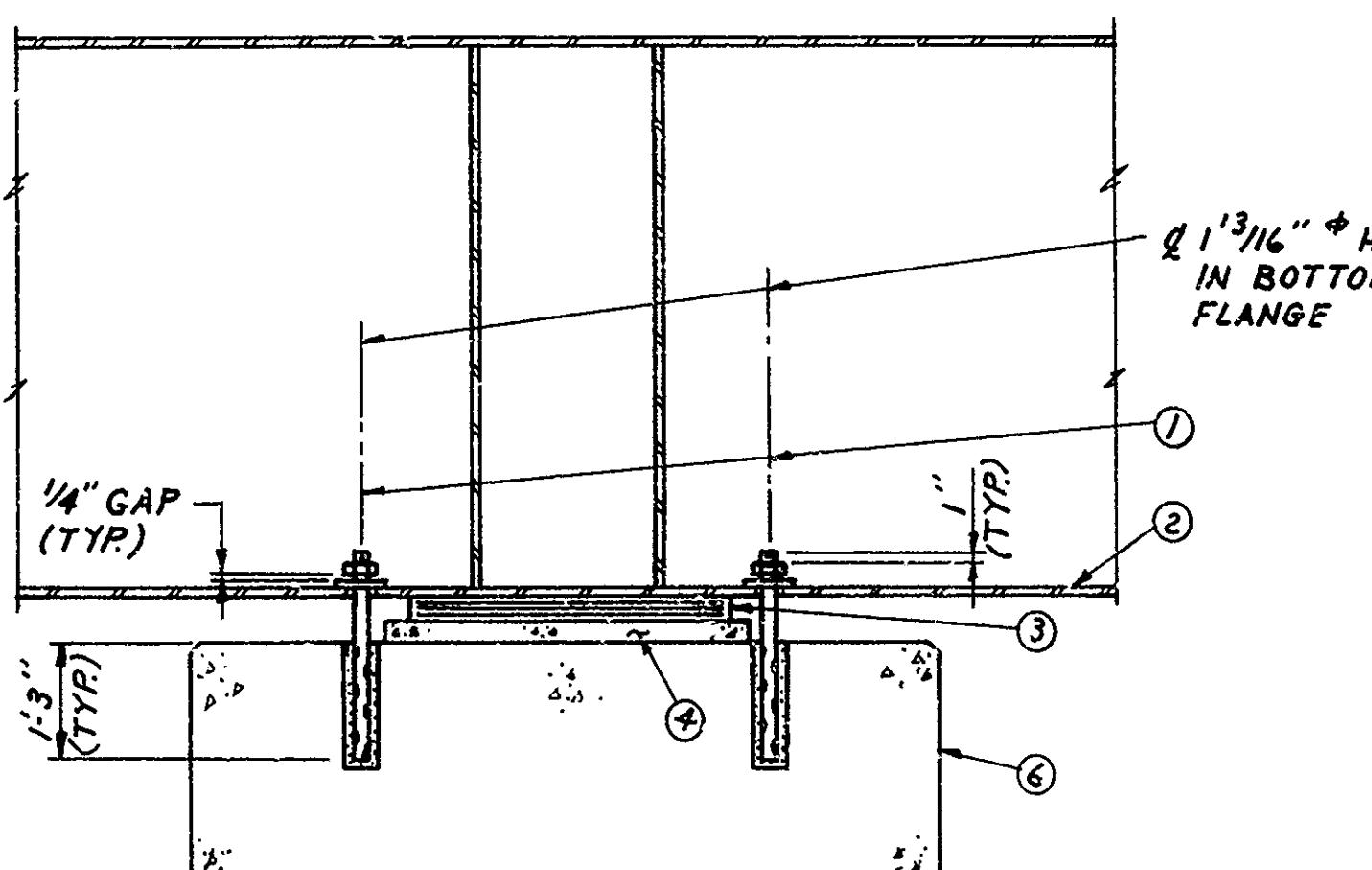
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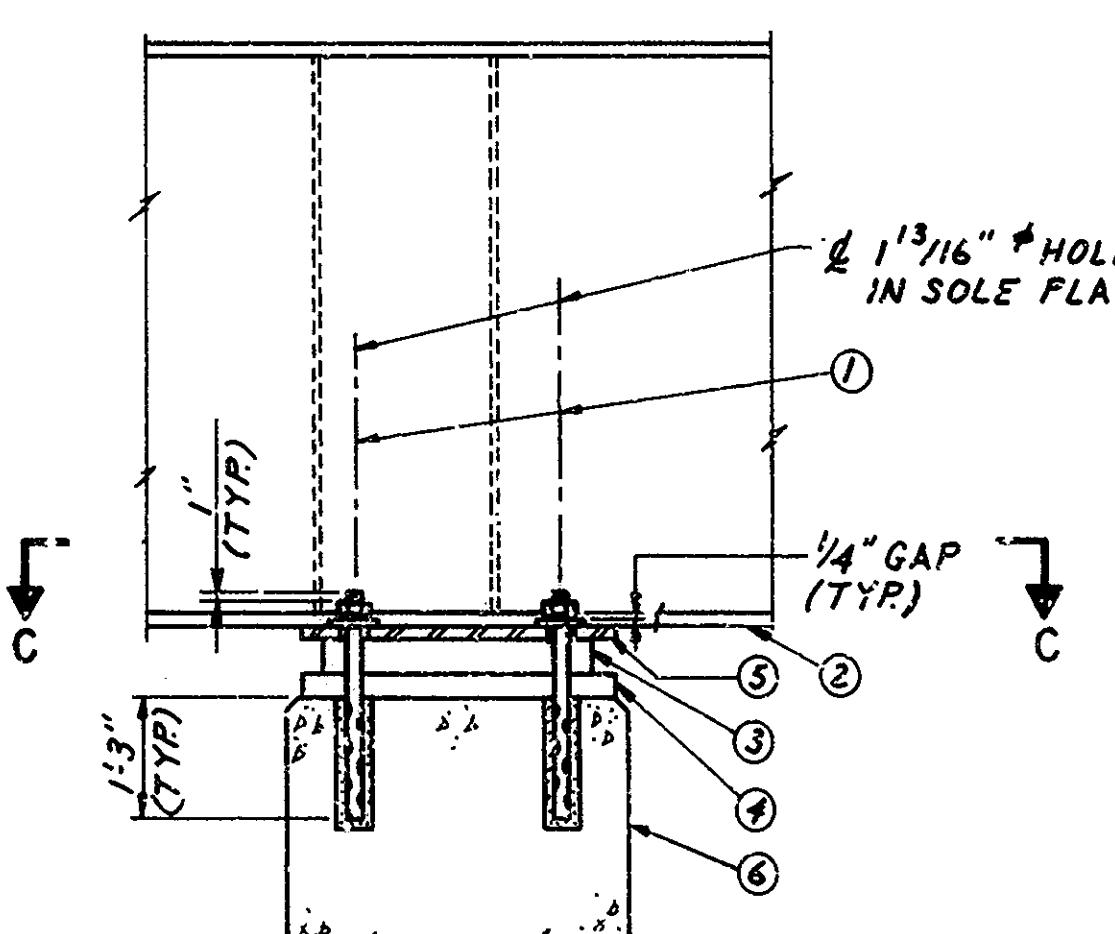


PIER	COLUMN	SKew ANGLE ψ
5	RIGHT	8°-15'
6	RIGHT	14°-15'
7	LEFT	19°-15'
7	RIGHT	18°-15'
8	LEFT	20°-15'
8	RIGHT	20°-15'
9	LEFT	20°-15'
9	RIGHT	20°-15'
10	LEFT	20°-15'

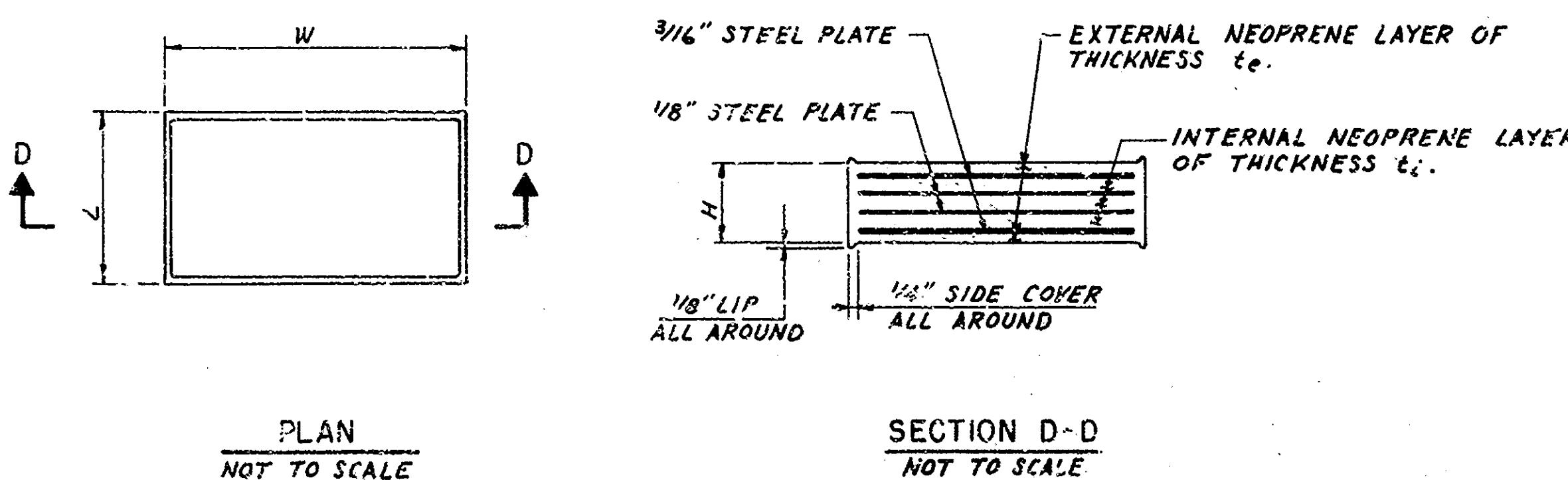
* AS PER ORIGINAL CONTRACT DRAWINGS



BEARING AT PIER COLUMNS:
IL,IR,2L,2R,3L,3R,4L,4R,5L,6L,10R



BEARING AT PIER COLUMNS:
5R,6R,7L,7R,8L,8R,9L,9R,10L



NEOPRENE PAD DATA							
NEOPRENE PAD TYPE	L	W	t_e	R	t_i	T	n_e
N-1	33"	40"	1/2"	3	3/4"	3/4"	2
N-2	44"	50"	5/8"	2	7/8"	3"	1
N-3	35"	50"	5/8"	3	7/8"	3/8"	2
							4/2"
							5

t_e = TOTAL THICKNESS OF ALL NEOPRENE LAYERS COMBINED.

n_e = NUMBER OF INTERNAL NEOPRENE LAYERS.

t_i = NUMBER OF 1/8" THICK STEEL PLATES.

LEGEND

- ① NEW $1\frac{3}{16}''$ SWEDGED ANCHOR BOLT, HEAVY HEX. NUT AND STANDARD ROUND WASHER. GROUT BOLT WITH NON-SHRINK GROUT IN PREDRILLED $4\frac{1}{2}''$ HOLE IN MASONRY AFTER INSTALLATION, BURR THREADS IMMEDIATELY BELOW AND ABOVE THE NUT.
- ② NEW BOX BEAM BOTTOM FLANGE.
- ③ NEW NEOPRENE PAD.
- ④ NEW MASONRY PAD (DEPTH VARIES).
- ⑤ NEW SOLE PLATE.
- ⑥ EXISTING PIER COLUMN.

NOTES

1. DURING REMOVAL OF EXISTING BEARINGS CUT OFF EXISTING ANCHOR BOLTS FLUSH WITH TOP OF EXISTING MASONRY. (EXISTING ANCHOR BOLTS NOT SHOWN).
2. FOR DETAILS OF MASONRY PAD SEE SHEET 22.
3. THE SWEDGED ANCHOR BOLTS SHALL BE ASTM A36.

Mark	Description	By	Chk'd	App'd	Date
REVISONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

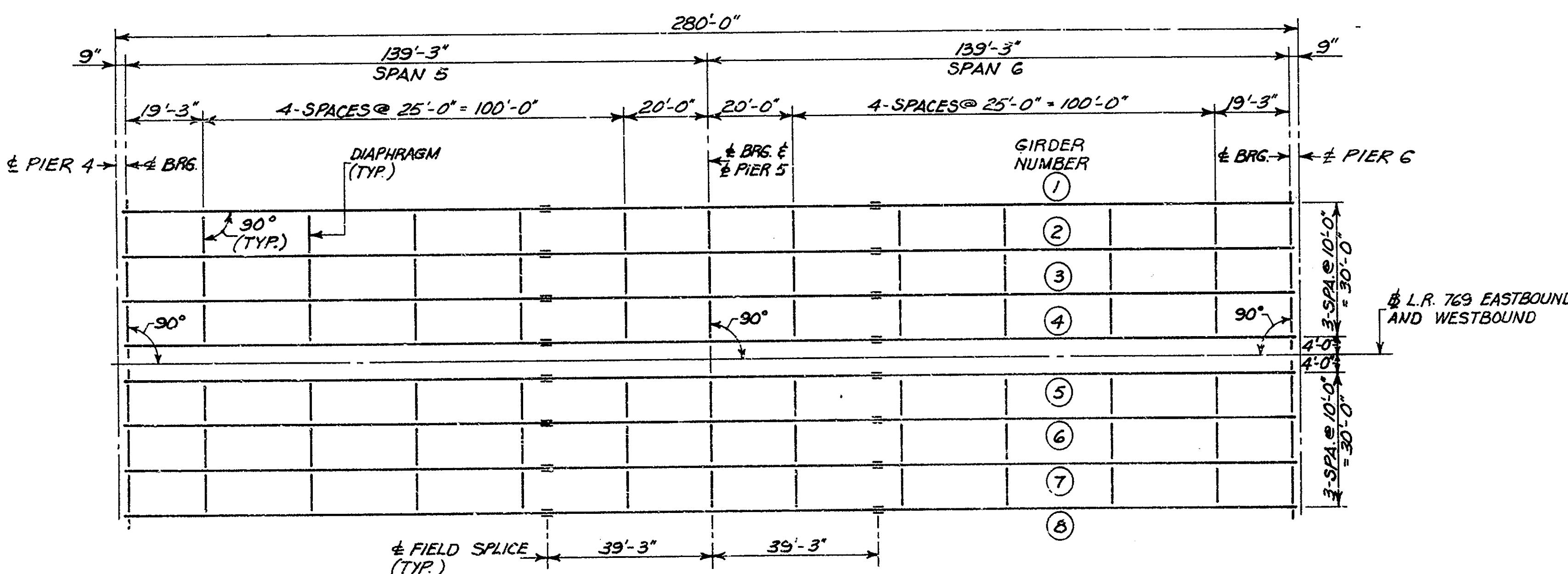
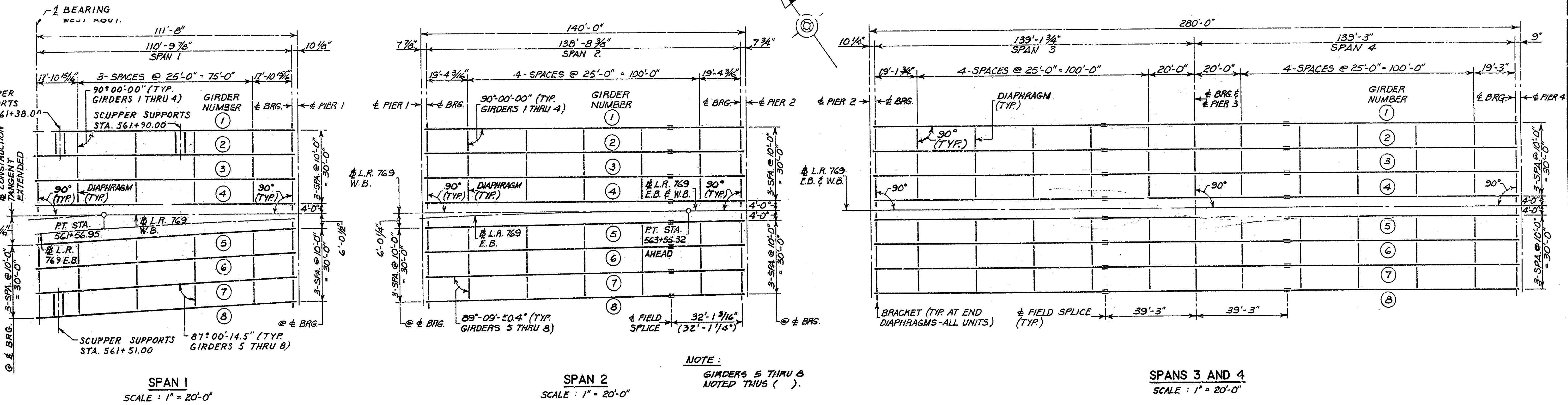
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

BOX BEAM BEARINGS

RECOMMENDED MAY 31 1985

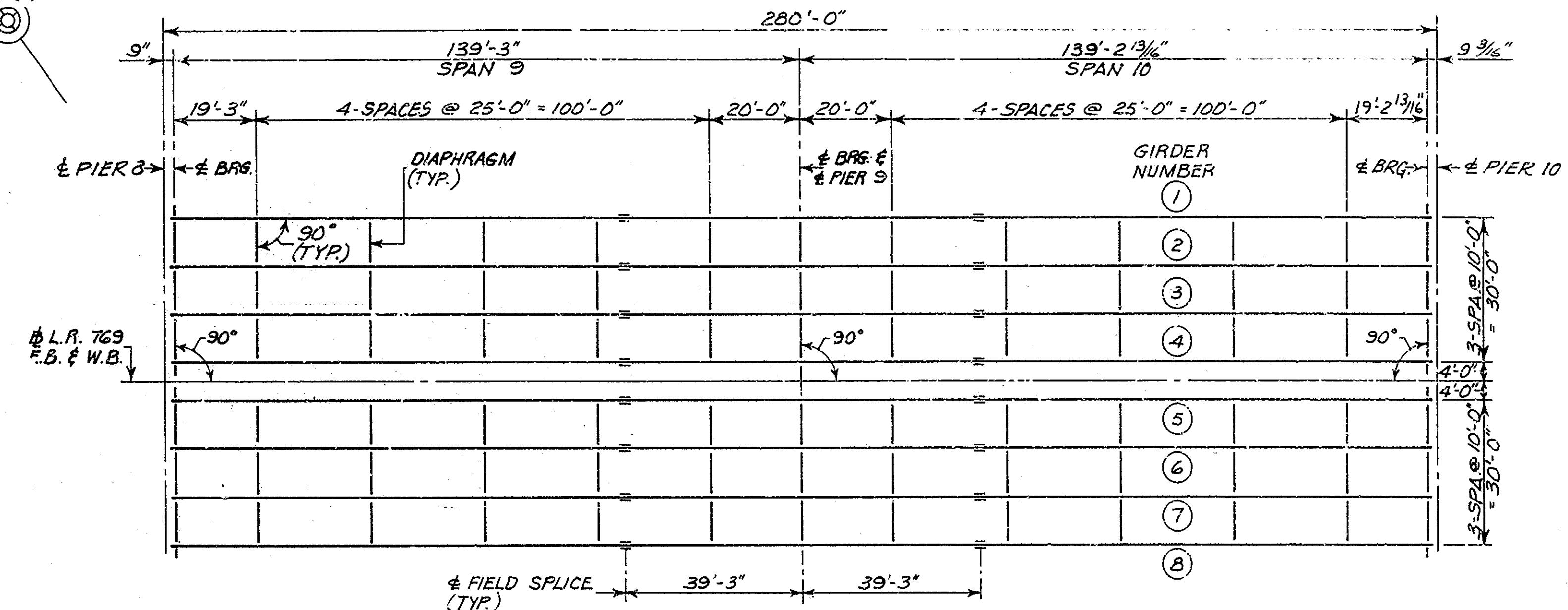
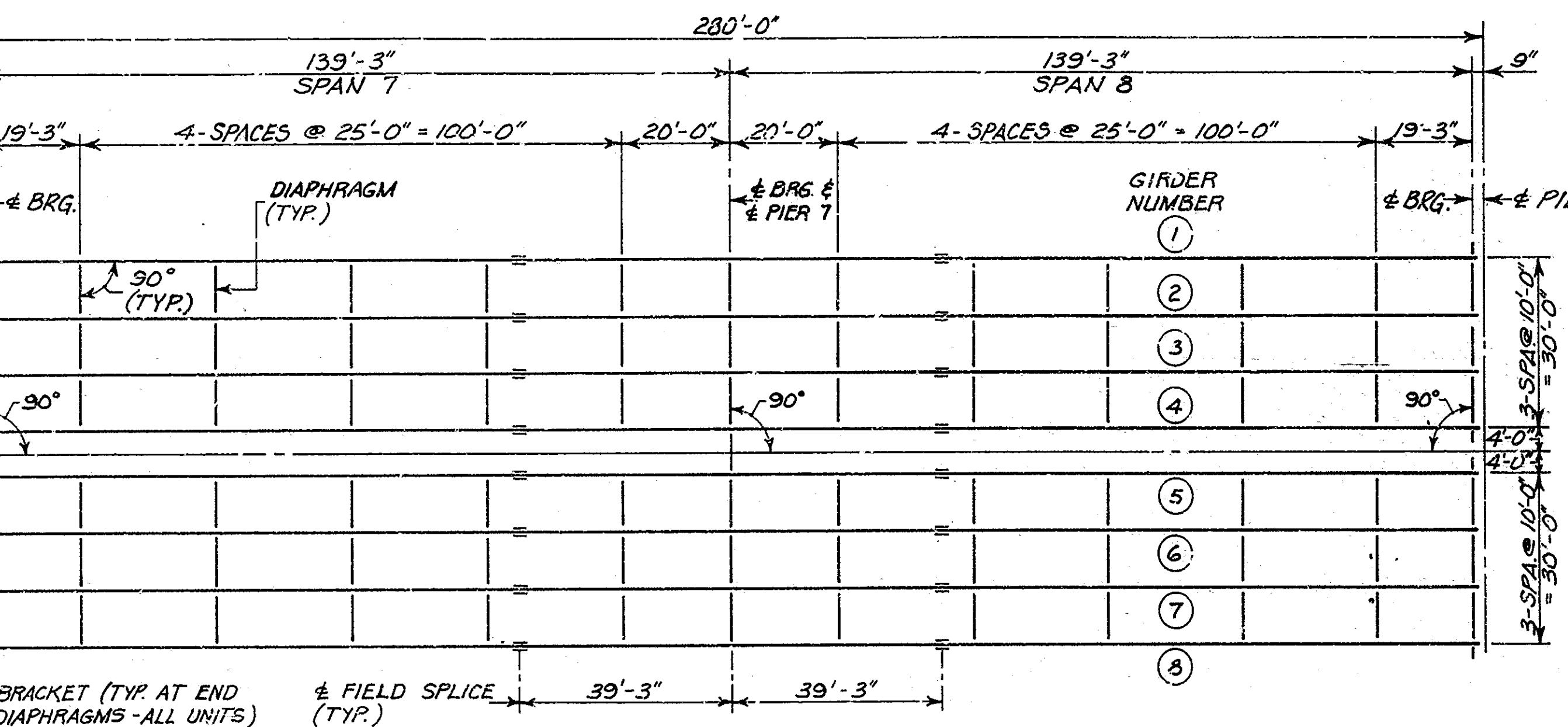
SHEET 23 OF 66



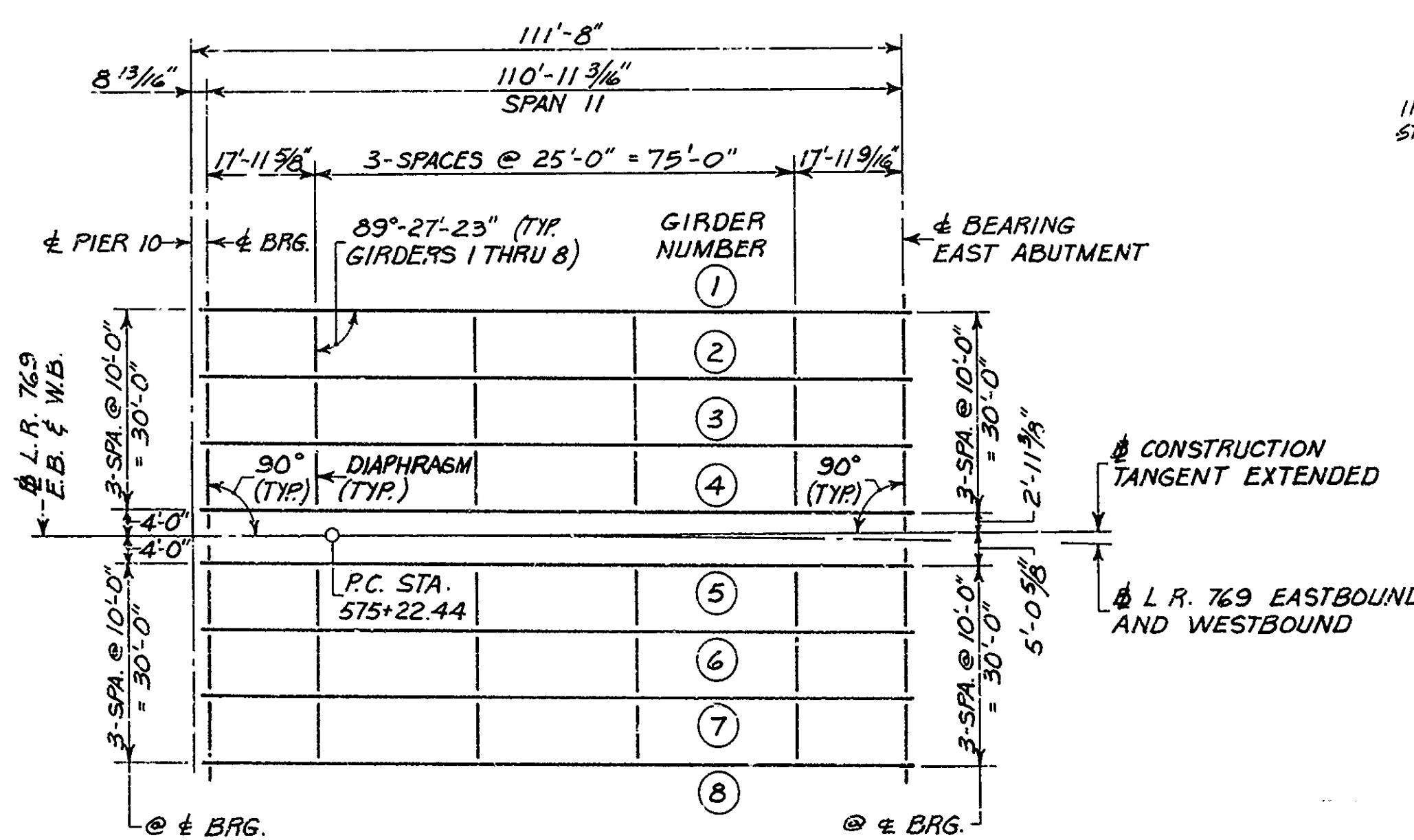
- NOTES**
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. FOR GIRDER ELEVATION, SEE SHEETS 26, 27, & 28.
 3. FOR DIAPHRAGM, SHEAR CONNECTOR & STIFFENER DETAILS, SEE SHEET 30.
 4. INTERMEDIATE STIFFENERS AT EXTERIOR GIRDER TO BE PLACED ON INSIDE FACE OF WEB ONLY.
 5. FOR BEARING DETAILS, SEE SHEETS 31 & 32.
 6. FOR EXPANSION JOINT DETAILS, SEE SHEET 53.
 7. FOR SCUPPER SUPPORT DETAILS, SEE SHEET 54.

Mark	Description	By	Chk'd	App'd.	Date
REVISIONS					

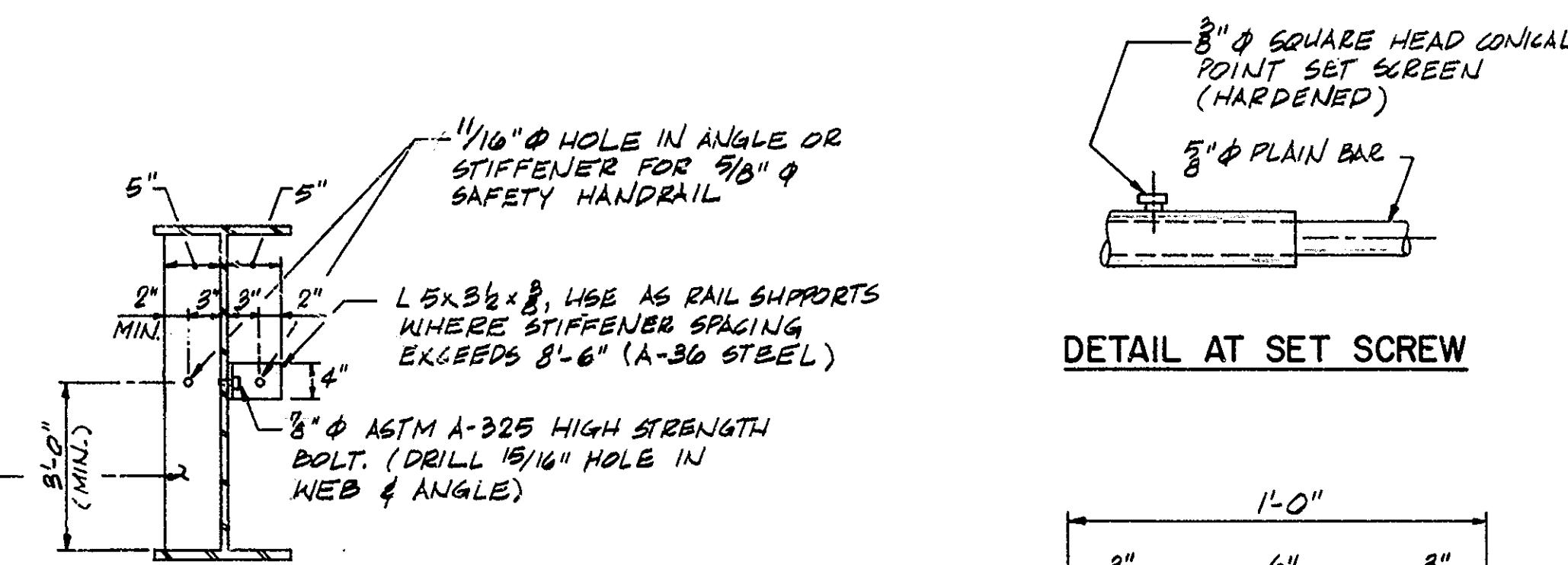
Commonwealth of Pennsylvania DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DESIGN					
MONTGOMERY COUNTY L.R. 769 & L.R. 67057 SEC. 300 MAINLINE OVER CONRAIL AND ABANDONED SIDING II SPAN STEEL MULTI-GIRDER BRIDGE SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK FRAMING PLAN - I					
RECOMMENDED	MAY 31 1985		SHEET 24 OF 66		
PREPARED BY Greiner Engineering Sciences, Inc. CONSULTING ENGINEERS KING OF PRUSSIA, PA					
S-16093A					



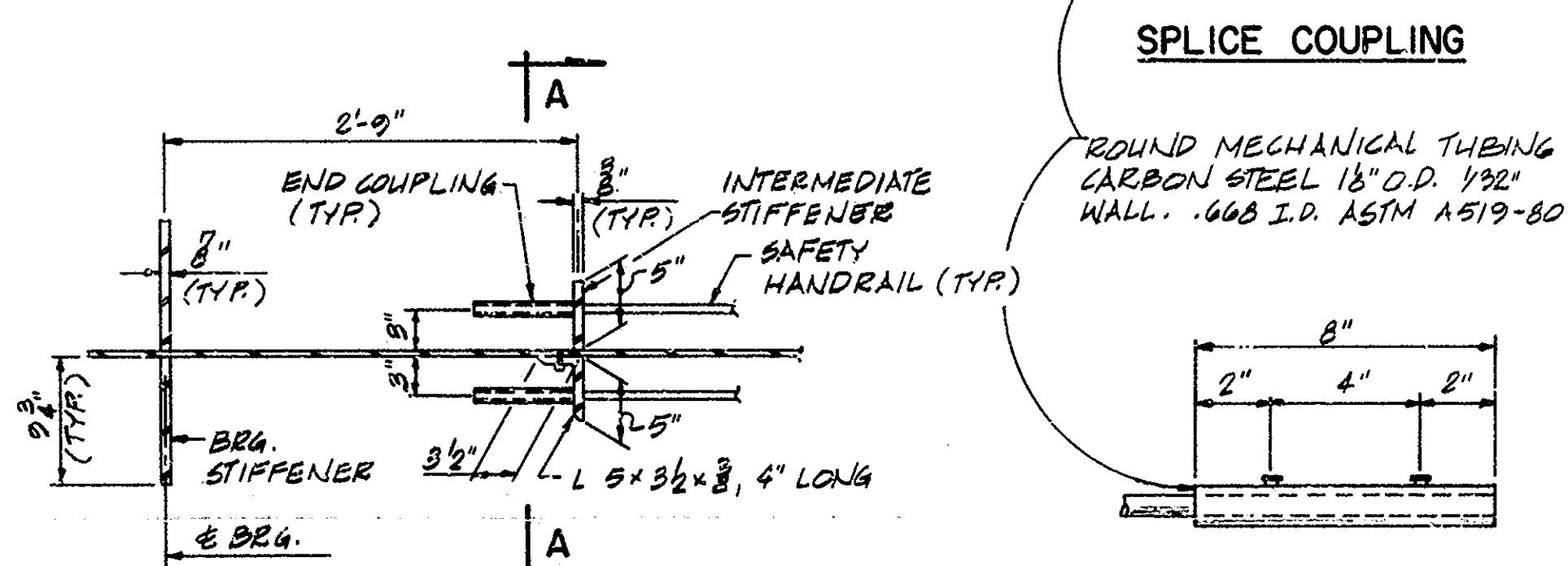
SPANS 7 AND 8
SCALE : 1" = 20'-0"



SPAN 11
SCALE : 1" = 20'-0"



SECTION A-A



PARTIAL PLAN AT END OF GIRDER

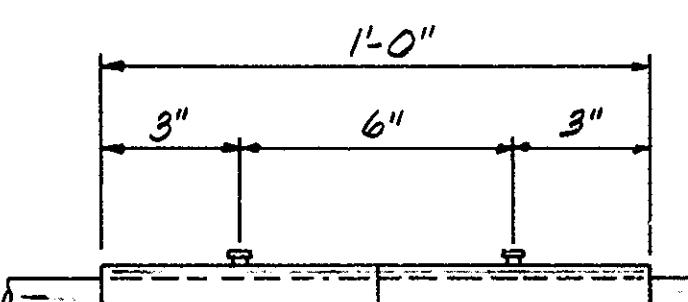
DETAILS FOR FIELD ERECTED SAFETY HANDRAIL
NOT TO SCALE

NOTES:

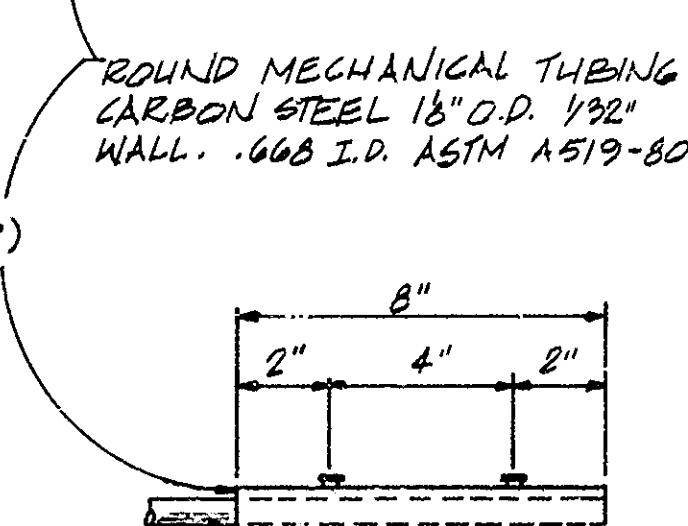
- INSTALL HANDRAIL ON BOTH FACES OF INTERIOR GIRDERS AND ON INSIDE FACE OF EXTERIOR GIRDERS
- MAKE RAIL CONTINUOUS OVER LENGTH OF GIRDER BY USE OF SPLICE COUPLINGS
- DISTANCE BETWEEN RAIL SUPPORTS IS NOT TO EXCEED 6'-6"

SPANS 9 AND 10
SCALE : 1" = 20'-0"

DETAIL AT SET SCREW



SPLICE COUPLING



END COUPLING

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

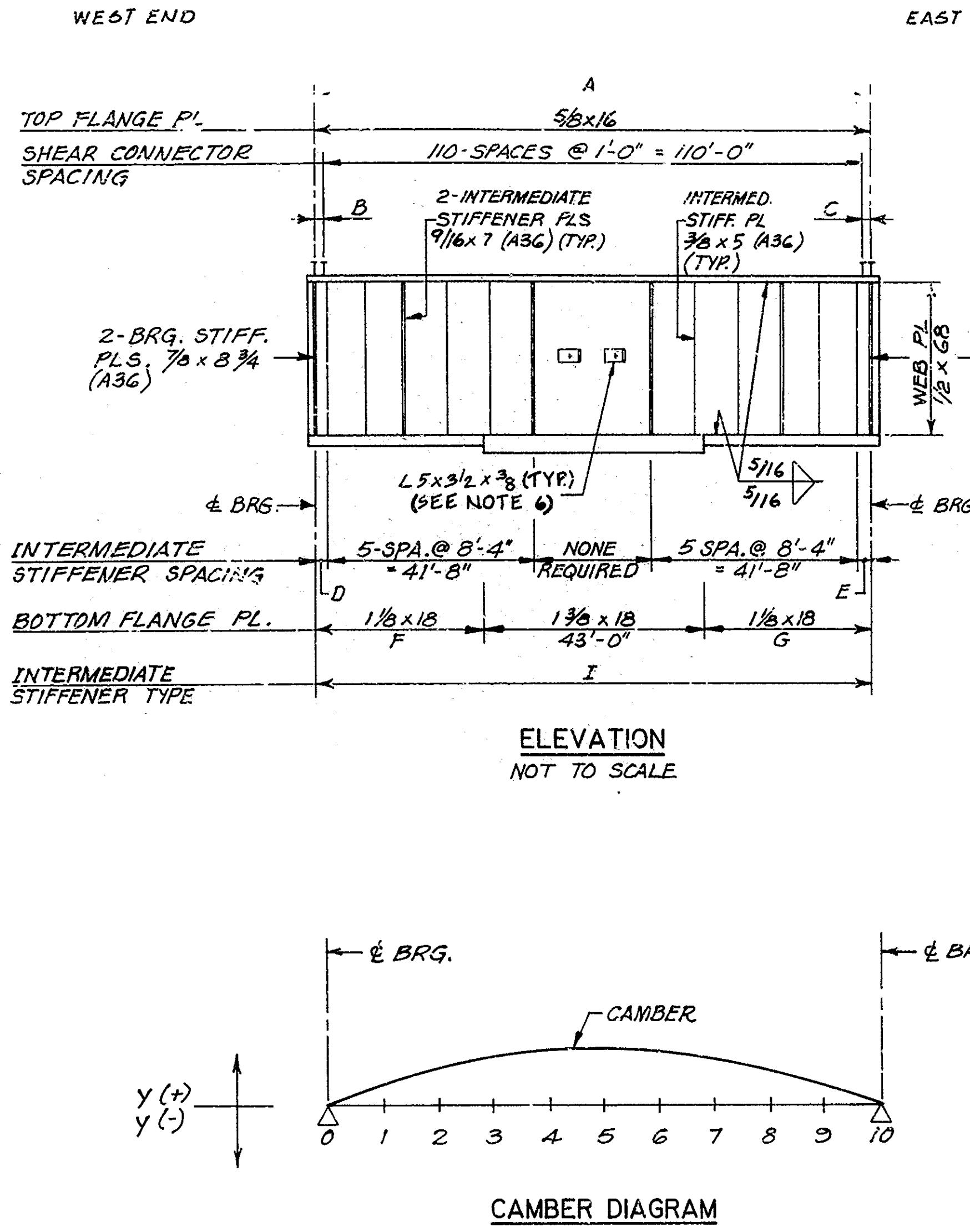
FRAMING PLAN - II

RECOMMENDED MAY 31, 1985

SHEET 25 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

S-16093A

A VAYSBURG
BORN BY F. R. ALLEN
CROWNED BY
D. BRONSON

SPAN	CAMBER COMPONENT	GIRDER NUMBER	CAMBER ORDINATES Y INCHES										
			1	2	3	4	5	6	7	8	9	10	
1	WEIGHT OF STEEL	1 THRU 8	0	5/16	3/8	1/2	9/16	5/8	9/16	1/2	5/8	5/16	0
	WEIGHT OF SLAB	1, 4, 5 & 8	0	11/16	1 1/4	1 3/4	2 1/16	2 1/8	2 1/16	1 3/4	1 1/4	11/16	0
	SUPERIMPOSED DEAD LOAD	2, 3, 6 & 7	0	13/16	1 1/2	2	2 3/8	2 7/16	2 3/8	2	1 1/2	13/16	0
	SUPER-ELEVATION	1 THRU 8	0	11/16	1/8	3/16	1/4	1/4	1/4	3/16	1/8	1/16	0
	TOTAL	1	0	11/16	1 3/8	1 7/16	1 3/16	1 1/16	1 1/2	1 1/16	1/4	1/4	0
		2		5/8	1 1/4	1 7/16	1 1/4	1 1/16	1 3/8	1/2	1 1/16	3/16	1
		3		5/16	1 1/16	1 3/16	1 1/8	9/16	7/16	3/8	1/4	1/8	
		4		1/16	1/8	1/8	1/8	1/8	1/16	1/16	1/16	0	
		5		-1/16	-1/8	-3/16	-1/4	-1/4	-1/4	-3/16	-1/8	-1/16	
		6		-1/16	-1/8	-3/16	-1/4	-1/4	-1/4	-3/16	-1/8	-1/16	
		7		-1/16	-1/8	-3/16	-1/4	-1/4	-1/4	-3/16	-1/8	-1/16	
		8		-1/16	-1/8	-3/16	-1/4	-1/4	-1/4	-3/16	-1/8	-1/16	0
11	WEIGHT OF STEEL	1 THRU 8	0	3/16	3/8	1/2	9/16	5/8	9/16	1/2	5/8	5/16	0
	WEIGHT OF SLAB	1, 4, 5 & 8	0	11/16	1 1/4	1 3/4	2 1/16	2 1/8	2 1/16	1 3/4	1 1/4	11/16	0
	SUPERIMPOSED DEAD LOAD	2, 3, 6 & 7	0	13/16	1 1/2	2	2 3/8	2 7/16	2 3/8	2	1 1/2	13/16	0
	SUPER-ELEVATION	1 THRU 8	0	11/16	1/8	3/16	1/4	1/4	1/4	3/16	1/8	1/16	0
	TOTAL	1	0	11/16	2	1 3/4	1 9/16	1 5/16	1 1/16	1 3/16	9/16	1 1/4	0
		2		7/8	1 5/8	1 3/8	1 1/8	7/8	1 1/16	1/2	5/16	1/8	1
		3		7/16	7/8	11/16	9/16	5/16	3/16	1/8	1/16		
		4		1/16	1/16	0	-1/16	-1/16	-1/8	-1/16	-1/16	-1/16	
		5		-1/8	-3/16	-5/16	-5/16	-5/16	-5/16	-1/4	-3/16	-1/8	
		6		-1/2	-1	-15/16	-7/8	-3/4	-5/8	-1/2	-3/8	-3/16	
		7		-7/8	-1 1/16	-1 9/16	-1 3/8	-1 9/16	-1	-3/4	-1/2	-1/4	
		8		-1 1/16	-2 1/4	-2	-1 3/4	-1 1/2	-1 1/4	-1 9/16	-1 1/16	-3/16	0
		1	0	2	3 3/4	4 1/16	4 7/16	4 5/16	3 1/4	2 5/16	1 9/16	0	
		2		11/16	3 5/8	4 1/16	4 5/16	4 5/16	3 1/8	2 5/16	1 9/16		
		3		1 1/2	2 7/8	3 3/8	3 3/4	3 1/16	3 1/2	2 1/8	1 1/8		
		4		1	1 13/16	2 7/16	2 15/16	2 15/16	2 3/4	2 5/16	1 1/16	1/8	
		5		13/16	1 7/16	2 1/8	2 9/16	2 9/16	2 9/16	1 9/16	1 9/16		
		6		9/16	1	1 3/4	2 9/16	2 9/16	2 9/16	1 9/16	1 9/16	1/8	
		7		3/16	5/16	1 1/8	1 13/16	2 1/8	2 3/16	1 9/16	1 1/2	1 9/16	
		8		0	-1/8	-1/2	7/16	1 1/8	1 1/2	1 9/16	1 1/2	1 1/16	5/8

NOTES:

- FOR GENERAL NOTES, SEE SHEET 2
- ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50, UNLESS OTHERWISE NOTED.
- FOR FRAMING PLAN, SEE SHEETS 24 & 25.
- FOR BEARING DETAILS, SEE SHEETS 31 & 32.
- FOR DIAPHRAGMS, STIFFENERS AND SHEAR CONNECTOR DETAILS SEE SHEET 30.
- PROVIDE ANGLES ON BOTH SIDES OF INTERIOR GIRDERS AND ON INSIDE OF EXTERIOR GIRDERS FOR SAFETY HANDRAIL MAX. SPACING = 8'-6". USE A-36 STEEL. FOR DETAILS NOT SHOWN, SEE SHEET 25.

Mark	Description	By	Chk'd.	App'd.	Date
REVISONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
GIRDER ELEVATION III-8' SPAN

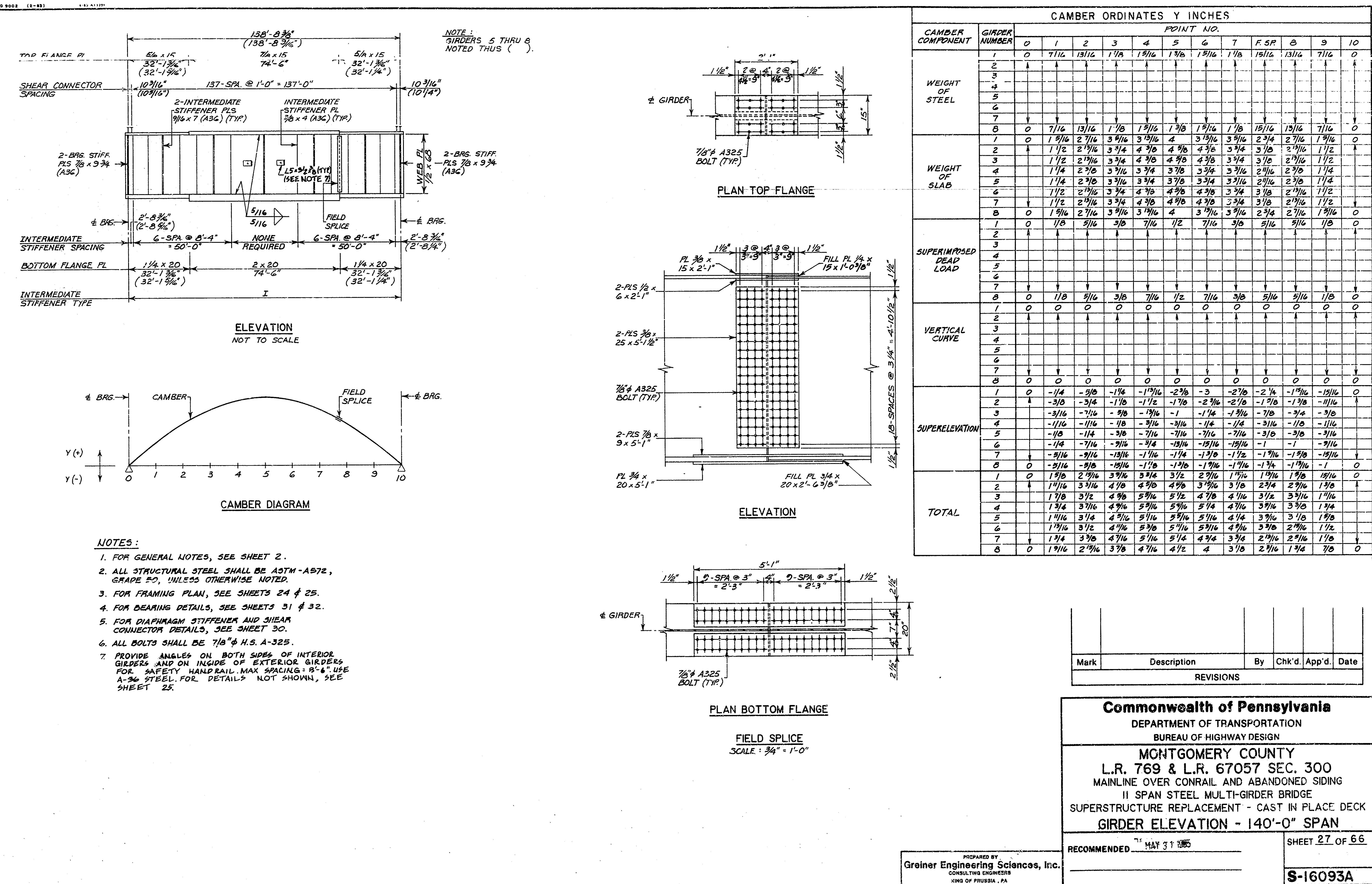
RECOMMENDED MAY 3 1986

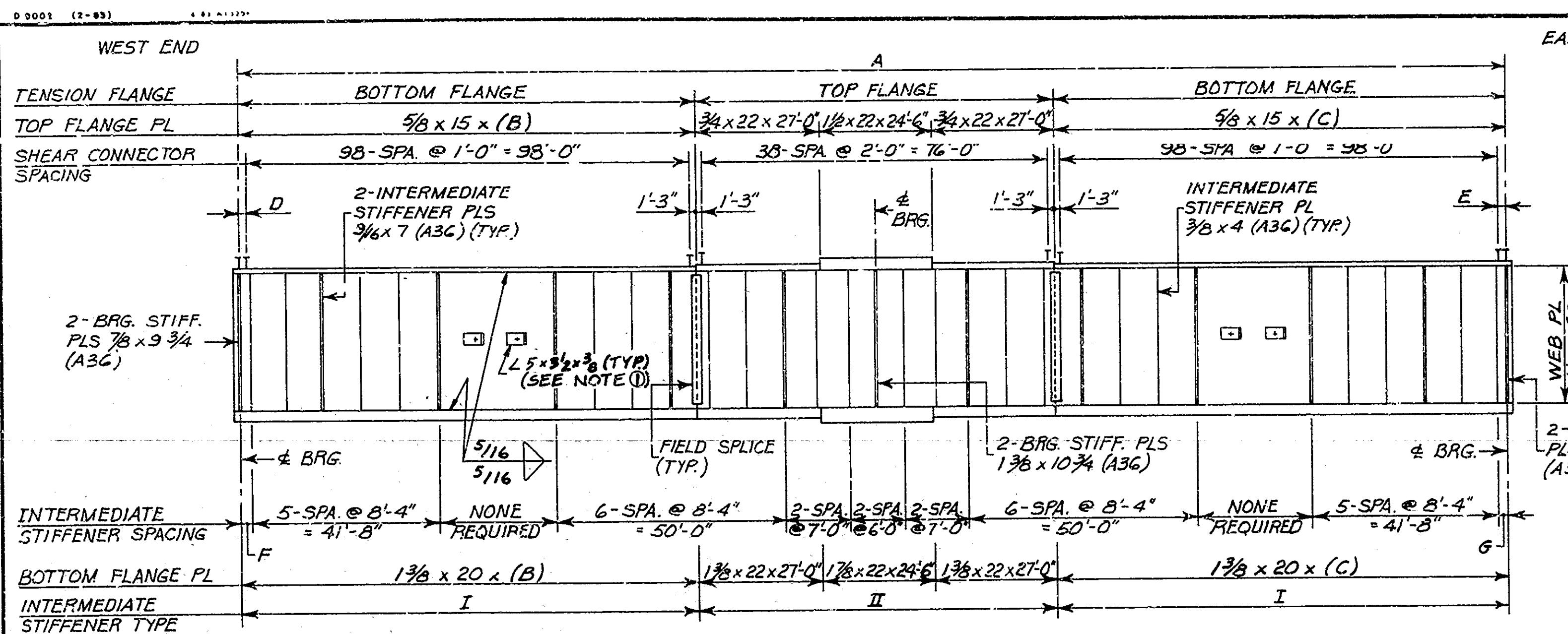
SHEET 26 OF 66

S-16093A

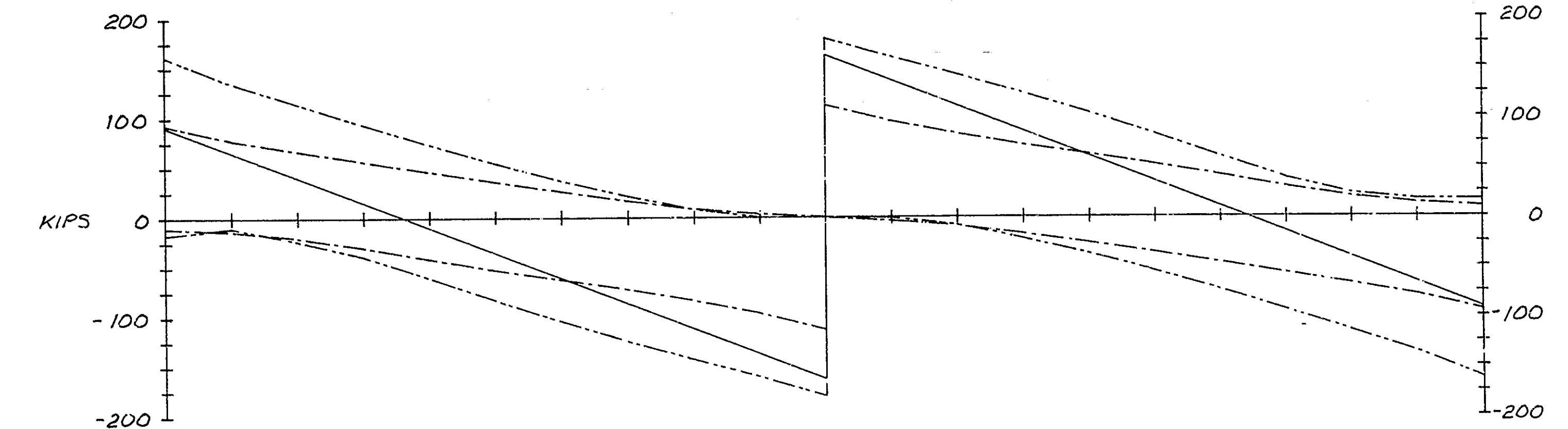
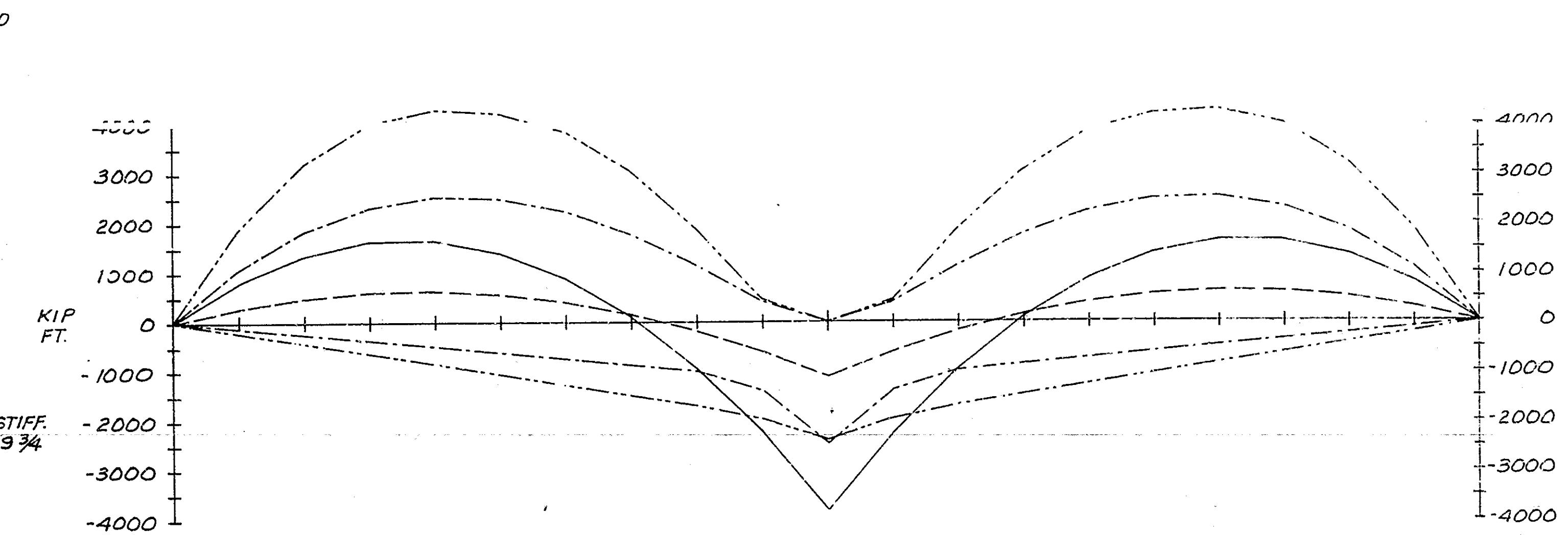
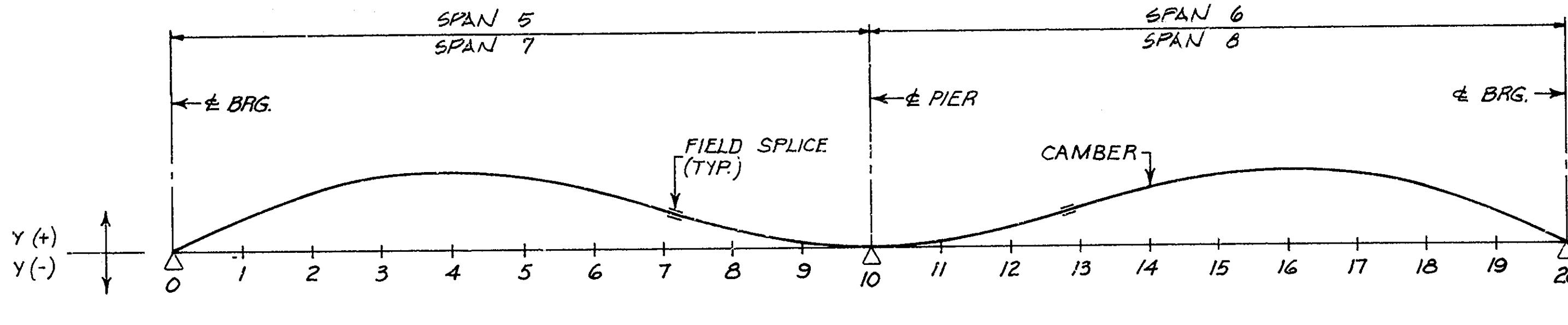
GIRDER DIMENSIONS								
SPAN	GIRDERS	A	B	C	D	E	F	
1	1-4	110'-9 7/8"	4 15/16"	4 15/16"	1'-2 5/16"	1'-2 15/16"	33'-10 9/16"	32'-10 15/16"
1	5-8	110'-11 11/16"	5 7/8"	5 13/16"	1'-3 7/8"	1'-3 13/16"	33'-11 7/8"	33'-11 15/16"
11	1-8	110'-11 1/4"	5 5/8"	5 5/8"	1'-3 5/8"	1'-3 5/8"	33'-11 5/8"	33'-11 5/8"

PREPARED BY
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CONSULTING ENGINEERS
KING OF PRUSSIA, PA





NOTE:
 ① PROVIDE ANGLES ON BOTH SIDES OF INTERIOR GIRDERS AND ON INSIDE OF EXTERIOR GIRDERS FOR SAFETY
 NOT TO SCALE.
 HANDBRAIL, MAX. SPACING = 8'-6". USE A-36 STEEL. FOR DETAILS
 NOT SHOWN, SEE SHEET 25.



CAMBER COMPONENT	GIRDER NUMBER	CAMBER ORDINATES Y INCHES																							
		POINT NO.	0	1	2	3	4	5	6	7	F.S.P.	8	9	10	11	12	F.S.P.	13	14	15	16	17	18	19	20
WEIGHT OF STEEL	1 1/8	0	0	1/4	7/16	9/16	9/16	9/16	7/16	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	7/16	9/16	9/16	7/16	1/4	0	
	2, 3, 6 1/2	0	0	1/4	7/16	9/16	9/16	9/16	7/16	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	7/16	9/16	9/16	7/16	1/4	0	
	4 1/2	0	0	1/4	7/16	9/16	9/16	9/16	7/16	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	7/16	9/16	9/16	7/16	1/4	0	
WEIGHT OF SLAB	1 1/8	0	3/4	1 7/16	1 1/2	2	1 7/8	1 1/2	1 1/4	1 1/16	15/16	1/2	1/8	0	1/8	1/2	15/16	1 1/16	1 1/2	2	1 7/8	1 7/16	3/4	0	
	2, 3, 6, 1/2	0	13/16	1 1/2	1 15/16	2 1/16	1 15/16	1 9/16	1 1/16	1	9/16	1/8	0	1/8	9/16	1	1 1/16	1 9/16	1 15/16	2 1/16	1 15/16	1 3/4	0		
	4 1/2	0	3/4	1 3/8	1 13/16	1 15/16	1 13/16	1 1/2	1	15/16	1/2	1/8	0	1/8	1/2	15/16	1	1 1/16	1 9/16	1 15/16	1 13/16	1 3/8	3/4	0	
SUPERIMPOSED DEAD LOAD	1 1/8	0	1/16	5/16	3/16	1/4	1/4	3/16	1/4	3/16	1/8	1/16	0	0	0	1/16	1/8	3/16	1/4	3/16	3/16	1/16	0	0	
	2, 3, 6, 1/2	0	1/16	3/16	3/16	1/4	1/4	3/16	1/4	3/16	1/8	1/16	0	0	0	1/16	1/8	3/16	1/4	3/16	3/16	1/16	0	0	
	4 1/2	0	1/16	3/16	3/16	1/4	1/4	3/16	1/4	3/16	1/8	1/16	0	0	0	1/16	1/8	3/16	1/4	3/16	3/16	1/16	0	0	
VERTICAL CURVE	1 1/8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2, 3, 6, 1/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	4 1/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SUPERELEVATION	1 1/8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2, 3, 6, 1/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4 1/2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	1 1/8	0	1/16	2 1/16	2 5/8	2 13/16	2 11/16	2 1/8	1 1/2	1 5/16	11/16	3/16	0	3/16	11/16	1 5/16	1 1/2	2 1/8	2 11/16	2 3/4	2 5/8	2 1/8	1 1/16	0	
	2, 3, 6, 1/2	0	1/16	2 1/8	2 11/16	2 7/8	2 3/4	2 3/16	1 1/2	1 3/8	3/4	3/16	0	3/16	3/4	1 3/8	1 1/2	2 3/16	2 3/4	2 1/8	2 1/8	1 1/8	0	0	
	4 1/2	0	1/16	2	2 9/16	2 3/4	2 3/8	2 1/8	1 7/16	1 5/16	11/16	3/16	0	3/16	11/16	1 5/16	1 7/16	2 1/8	2 5/8	2 3/4	2 3/8	2	1 1/16	0	0

- NOTES**
- FOR GENERAL NOTES, SEE SHEET 2
 - ALL STRUCTURAL STEEL SHALL BE ASTM A572, GRADE 50, UNLESS OTHERWISE NOTED.
 - FOR FRAMING PLAN, SEE SHEETS 24 AND 25
 - FOR BEARING DETAILS, SEE SHEETS 31 AND 32
 - FOR FIELD SPLICE DETAILS, SEE SHEET 30
 - FOR DIAPHRAGM, STIFFENERS & SHEAR CONNECTOR DETAILS, SEE SHEET 30

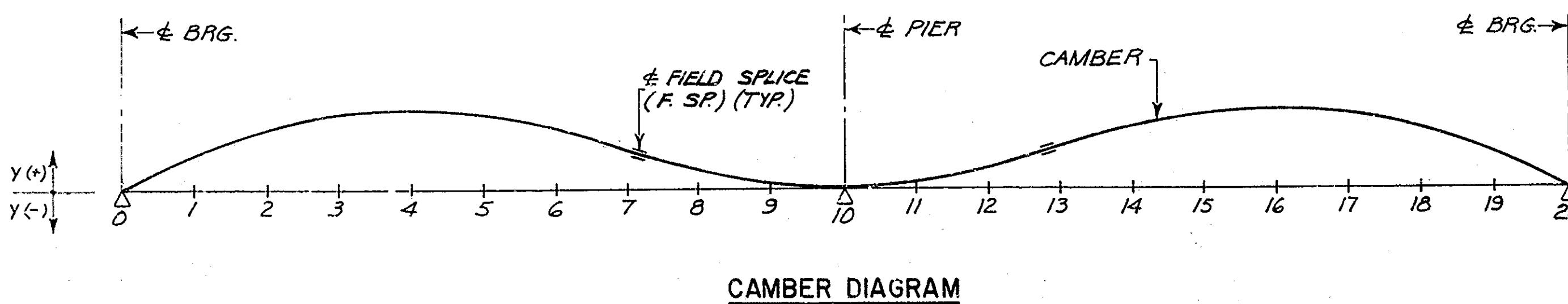
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 CONSULTING ENGINEERS
 KING OF PRUSSIA, PA

DESIGN MOMENTS LEGEND :		DESIGN SHEAR LEGEND :	
DEAD LOAD	SUPERIMPOSED DEAD LOAD	TOTAL DEAD LOAD	HS-25 LOAD
HS-25 LOAD	204K PERMIT LOAD	204K PERMIT LOAD	204K PERMIT LOAD
204K PERMIT LOAD			
NOTES : 1. MOMENTS & SHEAR PLOTTED AT TENTH POINTS ALONG THE GIRDER.			
2. DESIGN MOMENTS AND SHEAR DIAGRAMS ARE THOSE RESULTING FROM SERVICE LOAD CONDITIONS.			
Mark	Description	By	Chk'd. App'd. Date
REVISIONS			

Commonwealth of Pennsylvania
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAY DESIGN

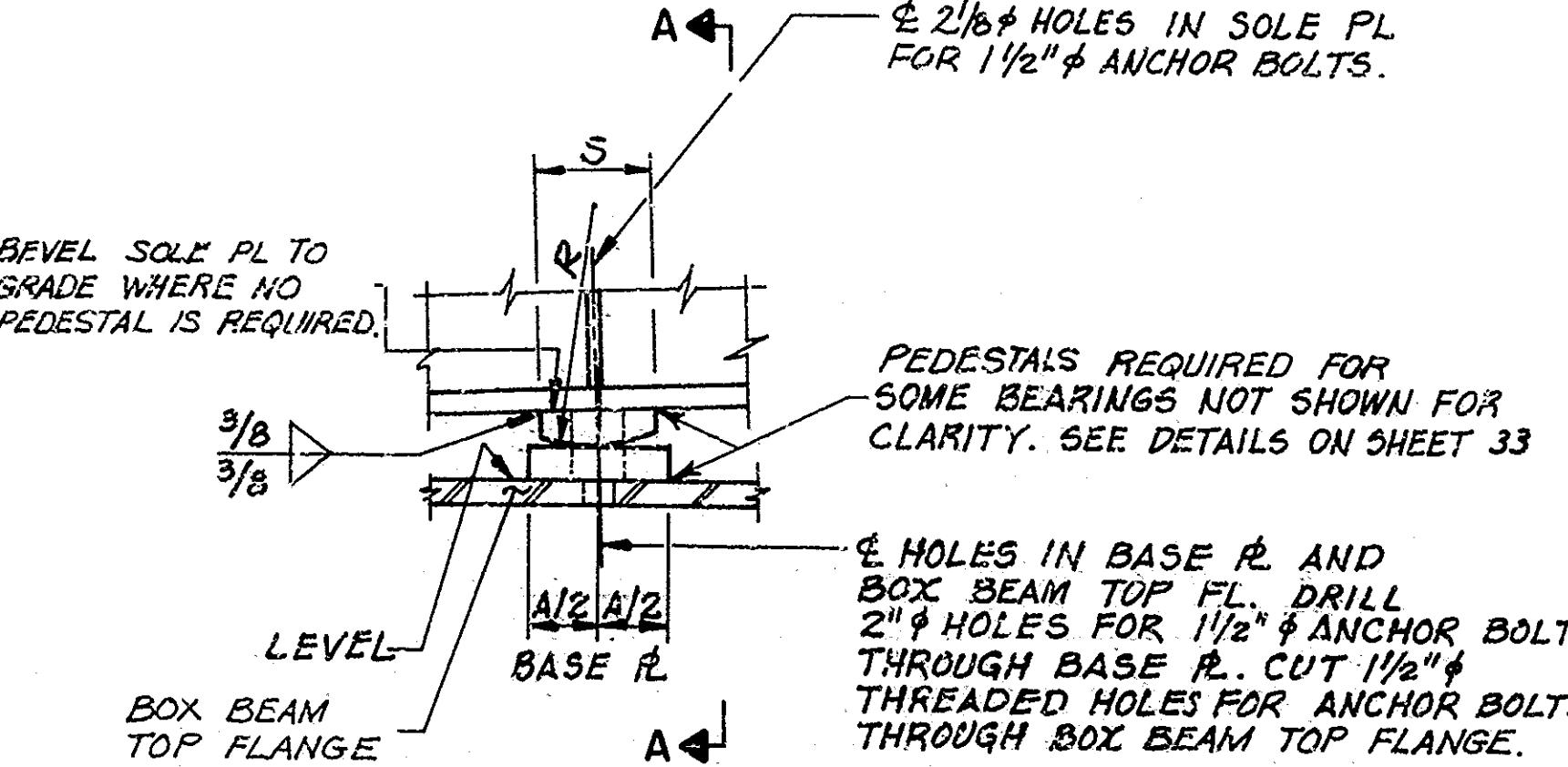
MONTGOMERY COUNTY
 L.R. 769 & L.R. 67057 SEC. 300
 MAINLINE OVER CONRAIL AND ABANDONED SIDING
 11 SPAN STEEL MULTI-GIRDER BRIDGE
 SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
 GIRDER ELEVATION - 2 SPAN CONTINUOUS

RECOMMENDED	MAY 31 1985	SHEET 28 OF 66
S-16093A		



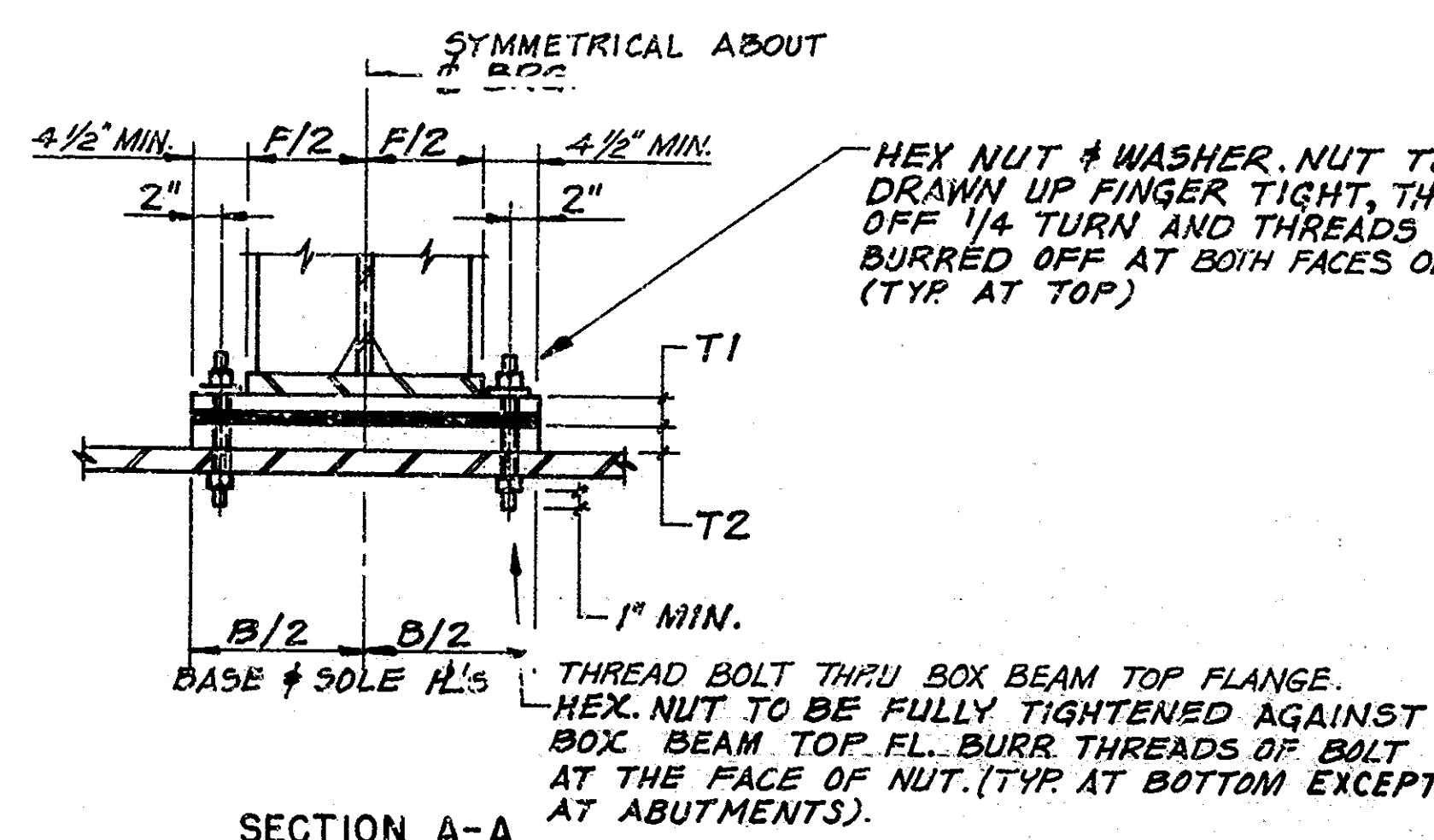
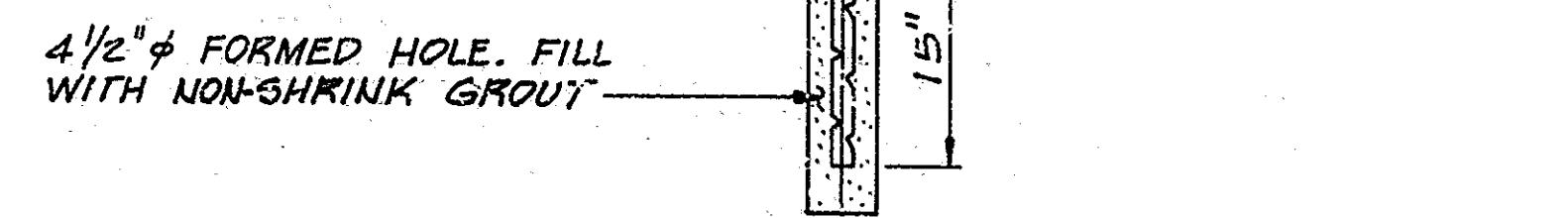
SPANS	CAMBER COMPONENT	GIRDER NUMBER	CAMBER ORDINATES Y INCHES																						
			0	1	2	3	4	5	6	7	F.S.P.	8	9	10	11	12	F.S.P.	13	14	15	16	17	18	19	20
3 & 4	WEIGHT OF STEEL	1 THRU 8	0	1/4	7/16	9/16	9/16	7/16	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	7/16	9/16	9/16	9/16	7/16	1/4	0	
	WEIGHT OF SLAB	1, 4, 5 & 8	0	3/4	1 7/16	1 7/8	2	1 7/8	1 1/2	1 1/16	15/16	1/2	1/8	0	1/8	1/2	15/16	1 1/16	1 1/2	1 7/8	2	1 7/8	1 7/16	3/4	0
	SUPERIMPOSED DEAD LOAD	2, 3, 6 & 7	0	13/16	1 1/2	1 15/16	2 1/16	1 15/16	1 9/16	1 1/16	1	9/16	1/8	0	1/8	9/16	1	1 1/16	1 9/16	1 15/16	2 1/16	1 15/16	1 1/2	1 9/16	0
	SUPER-ELEVATION	1 THRU 8	0	1/16	3/16	1/4	1/4	3/16	1/8	1/8	1/16	0	0	0	1/16	1/8	1/8	3/16	1/4	1/4	3/16	3/16	1/16	0	
	TOTAL	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		2	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	
		3	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	
		4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9 & 10	WEIGHT OF STEEL	1 THRU 8	0	1/4	7/16	9/16	9/16	7/16	5/16	1/4	1/8	1/16	0	1/16	1/8	1/4	5/16	7/16	9/16	9/16	9/16	7/16	1/4	0	
	WEIGHT OF SLAB	1, 4, 5 & 8	0	3/4	1 7/16	1 7/8	2	1 7/8	1 1/2	1 1/16	15/16	1/2	1/8	0	1/8	1/2	15/16	1 1/16	1 1/2	1 7/8	2	1 7/8	1 7/16	3/4	0
	SUPERIMPOSED DEAD LOAD	2, 3, 6 & 7	0	13/16	1 1/2	1 15/16	2 1/16	1 15/16	1 9/16	1 1/16	1	9/16	1/8	0	1/8	9/16	1	1 1/16	1 9/16	1 15/16	2 1/16	1 15/16	1 1/2	1 9/16	0
	SUPER-ELEVATION	1 THRU 8	0	1/16	3/16	1/4	1/4	3/16	1/8	1/8	1/16	0	0	0	1/16	1/8	1/8	3/16	1/4	1/4	3/16	3/16	1/16	0	
	TOTAL	1	0	-3/16	-3/8	-9/16	-3/4	-15/16	-1 1/8	-1 5/16	-1 3/8	-1 1/2	-1 1/16	0	5/16	11/16	15/16	13/16	11/16	9/16	7/16	3/8	1/4	1/8	
		2	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	
		3	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	
		4	0	0	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	-1/16	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	SUPER-ELEVATION	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TOTAL	1	0	7/8	1 1/16	2 1/16	2 1/16	1 3/4	1	3/16	-1/16	-1 3/16	-1 1/2	0	1/2	1 3/8	2 1/4	2 5/16	3 1/4	3 1/4	3	2 9/16	1 3/16	0	
		2	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	
		3	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	↑	↓	
		4	1 1/16	2 1/16	2 3/16	2 3/16	2 3/16	2 1/16	1 3/8	1 3/16	9/16	1/16	1 1/16	1 1/16	1 1/2	2 1/16	2 1/16	2 5/16	2 1/16	2 1/16	1 1/16	1 1/16	1 1/16		
		5	1 1/16	2 1/16	2 5/8	2 13/16	2 11/16	2 1/8	1 1/2	1 5/16	1 1/16	3/16	1/2	1 1/16	1 1/16	1 1/2	2 5/16	2 5/16	3 1/8	2 5/8	1 3/4	7/8	0	0	
		6	1 1/8	2 1/8	2 11/16	2 7/8	2 3/4	2 3/4	1 1/2	1 3/8	3/4	3/16	1/16	1 1/16	1 1/16	2 1/8	2 1/8	2 5/16	3 1/8	2 7/8	4 1/16	4	3	1 9/16	0
		7	1 1/8	2 1/8	2 11/16	2 7/8	2 3/4	2 3/4	1 1/2	1 3/8	3/4	3/16	1/16	1 1/16	1 1/16	2 1/8	2 1/8	2 5/16	3 1/8	2 7/8	5 1/8	5 1/16	5 1/16	3 1/16	1 9/16
		8	0	1 1/16	2 1/16	2 5/8	2 13/16	2 11/16	2 1/8	1 1/2	1 5/16	1 1/16	3/16	0	1 1/16	1 1/16	1 3/4	3 1/16	4 1/4	5 3/8	5 1/4	3 1/3/16	1 9/16	0	

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					
Commonwealth of Pennsylvania DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DESIGN MONTGOMERY COUNTY L.R. 769 & L.R. 67057 SEC. 300 MAINLINE OVER CONRAIL AND ABANDONED SIDING II SPAN STEEL MULTI-GIRDER BRIDGE SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK CAMBER DIAGRAM - 2 SPAN CONTINUOUS					
RECOMMENDED	MAY 31 1985				SHEET 29 OF 66
					S-16093A



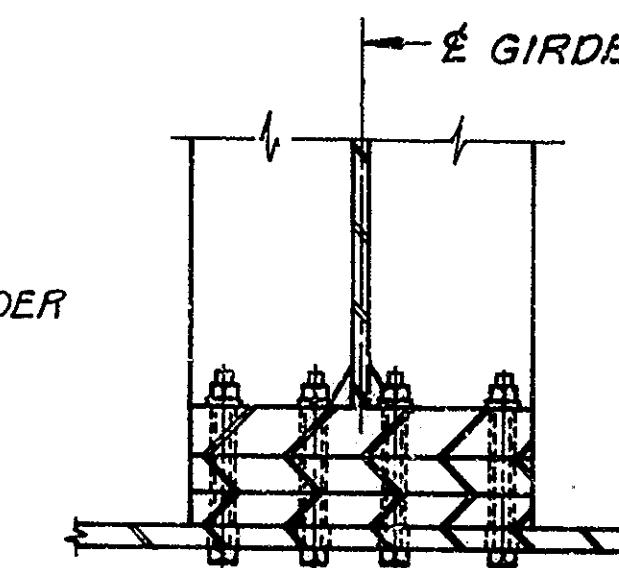
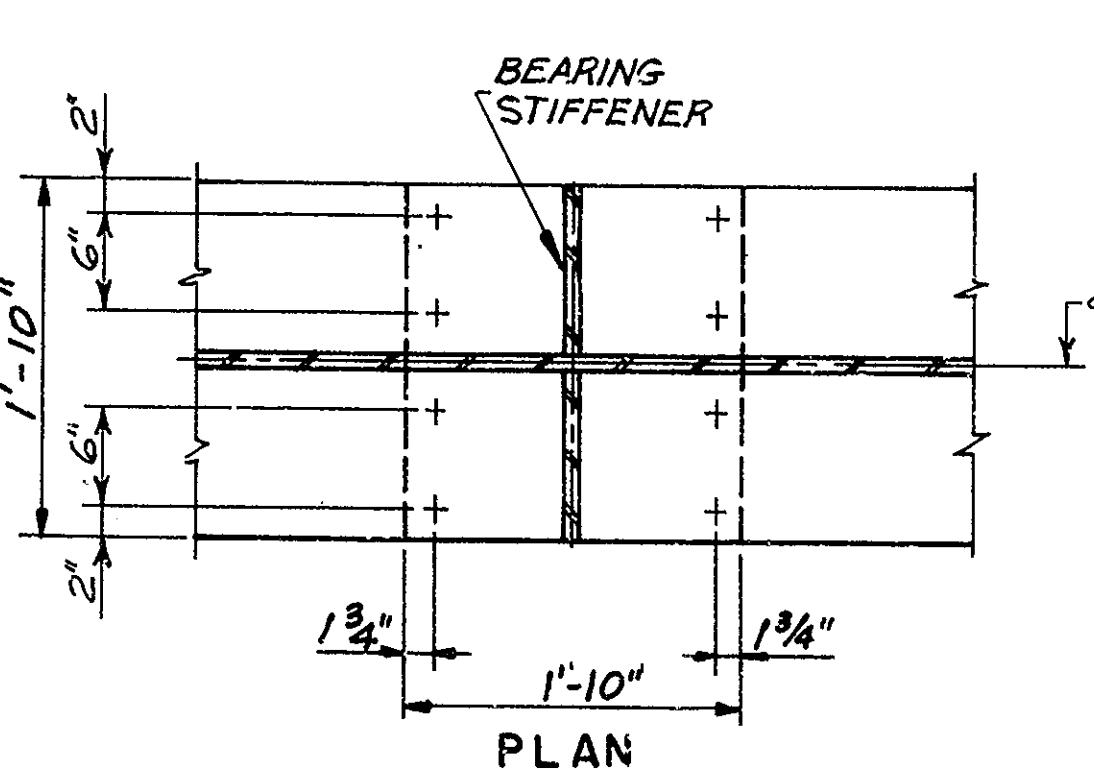
ELEVATION

BEARING TYPE	GIRDER SPAN	F	S	A	B	T1	T2	R	BEARINGS REQUIRED
F1 - A	111'-8", SIMPLE	18"	8"	10"	27"	2"	2"	12"	16
F1 - B	140'-0", SIMPLE	20"	10"	11"	29"	2 $\frac{1}{4}$ "	2 $\frac{1}{4}$ "	12"	8
F1 - C	140'-0", 2SPAN CONTS	22"	11"	14"	31"	3"	3"	14"	16

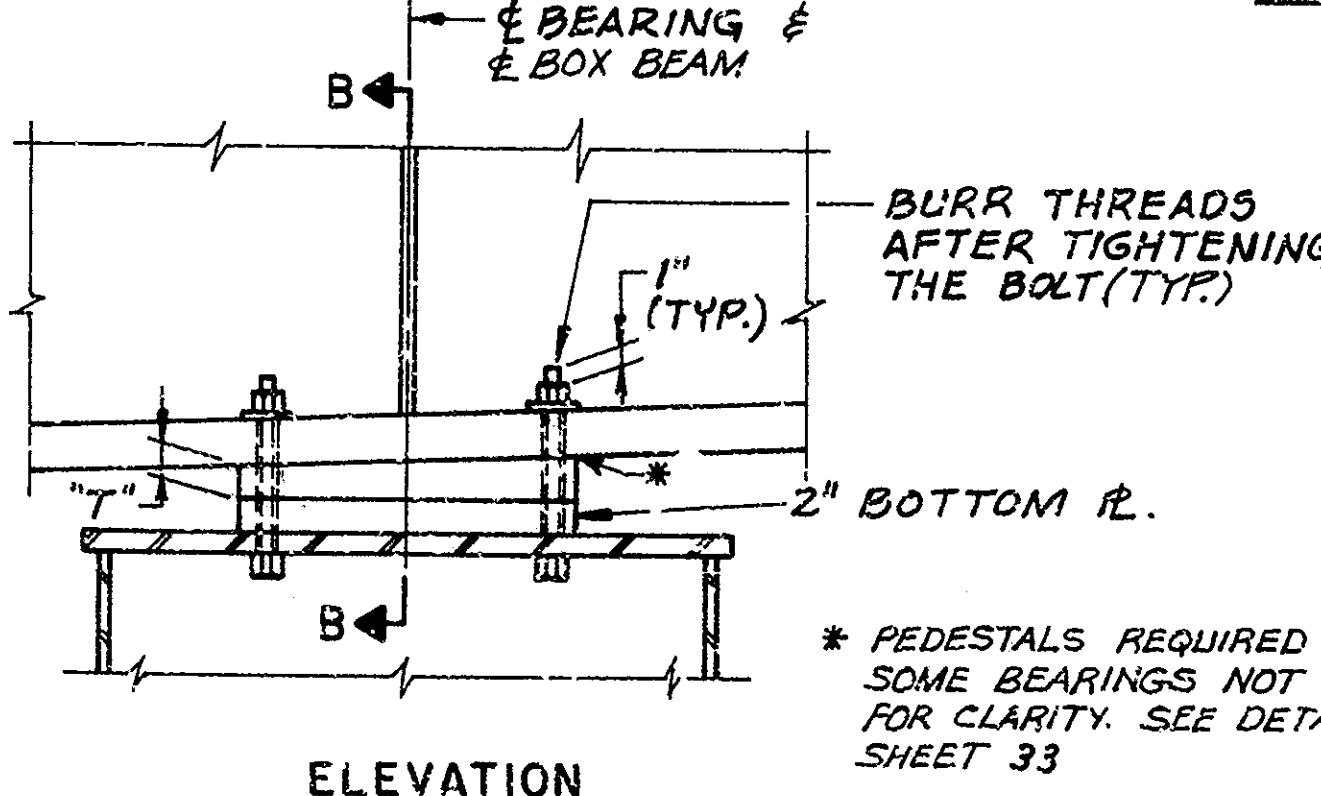
4 $\frac{1}{2}$ " ϕ FORMED HOLE, FILL WITH NON-SHRINK GROUTTYPICAL DETAIL
AT ABUTMENTS
NOT TO SCALE

NOTES:

1. FOR GENERAL NOTES, SEE SHEET 2.
2. FOR BEARING LOCATIONS, SEE GENERAL PLAN AND ELEVATION, SHEET 1.
3. ALL STRUCTURAL STEEL SHALL BE ASTM A36.
4. ALL BOLTS SHALL BE H.S. ASTM A-325, UNLESS NOTED.
5. ANCHOR BOLTS SHALL BE ASTM A36.



SECTION B-B

TYPE F2 BEARING
NOT TO SCALE
(BEARINGS REQUIRED - 16)

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300.
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
FIXED BEARINGS

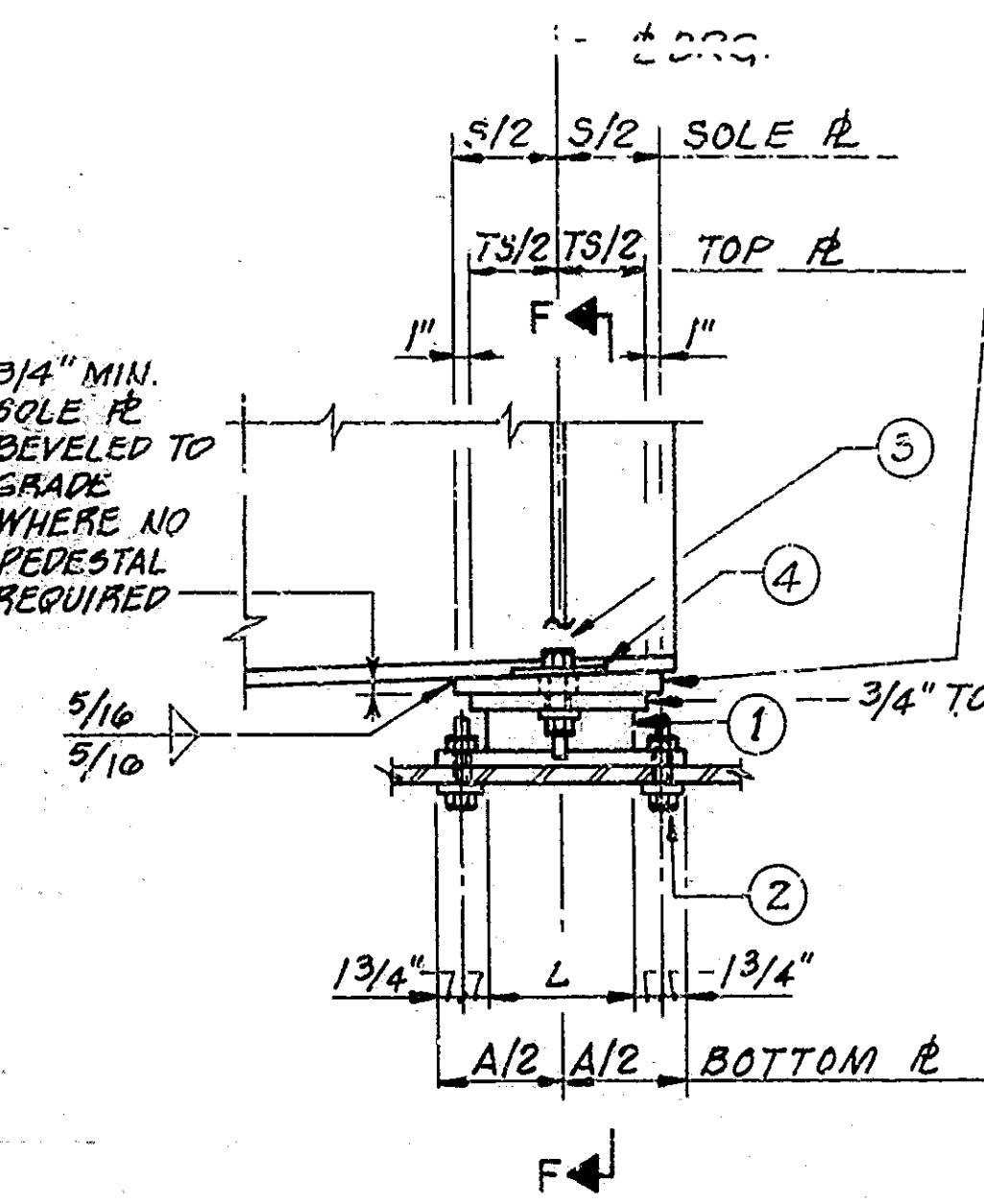
RECOMMENDED MAY 31 1985 BY

SHEET 31 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

S-16093A

RESISTANCE OF V. JANDAEK
Dwarfed by E.R. ALLEGH
C.E. PANCHOLI
Bred by

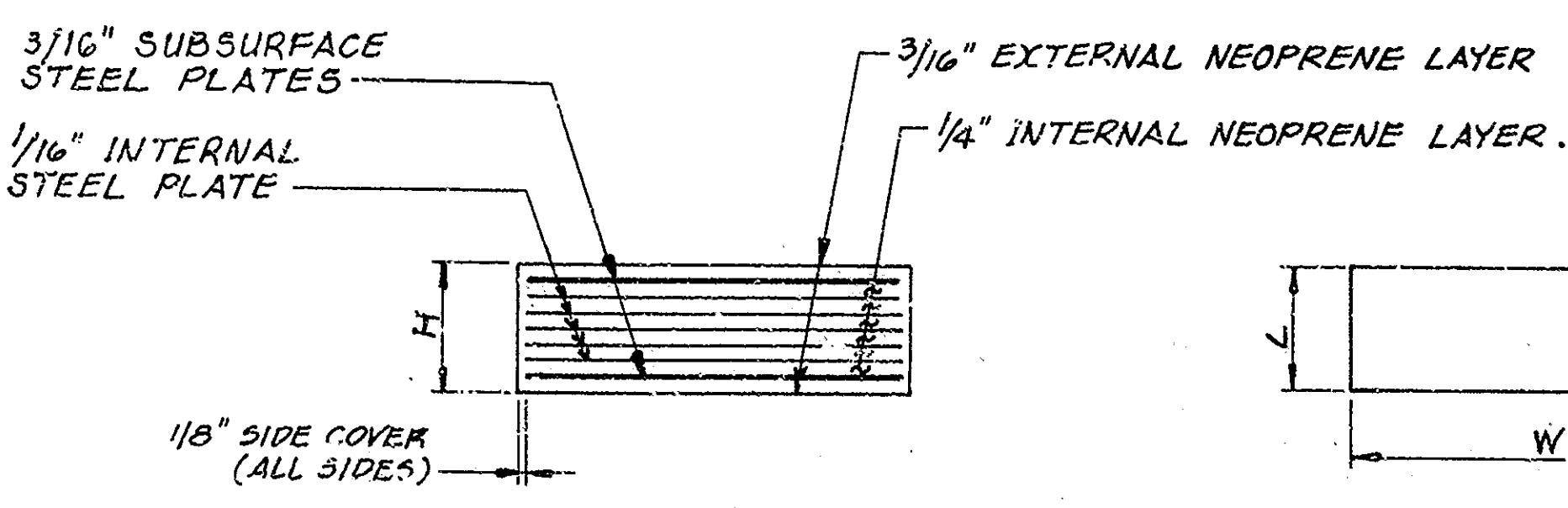


ELEVATION
NOT TO SCALE

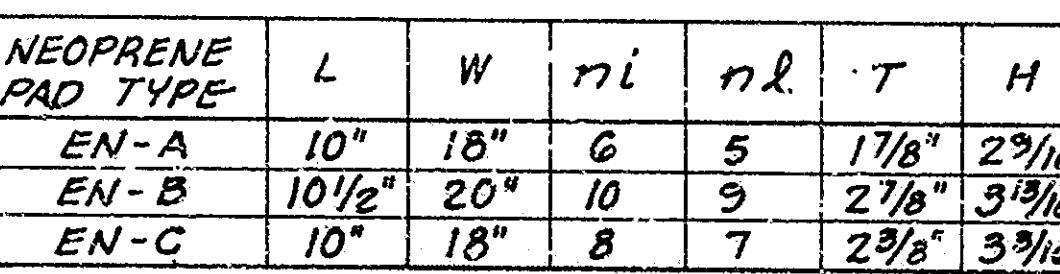
- ① STEEL REINFORCED, NEOPRENE PAD, HAVING PLAN DIMENSIONS L AND W, SHOP BONDED (VULCANIZED) TO TOP AND BOTTOM PLATES.
- ② 1" ϕ A325 BOLT, HEAVY HEX. SELF LOCKING NUT AND STD. HARDENED WASHER THROUGH $1\frac{1}{16}$ " ϕ HOLE IN BOTTOM PLATE AND THROUGH $1\frac{1}{4}$ " ϕ HOLE IN BOX BEAM TOP PLATE.
- ③ SETTING BOLT, 1" ϕ A325, HEAVY HEX. NUT THROUGH $1\frac{1}{16}$ " ϕ \times $2\frac{1}{2}$ " SLOTTED HOLE IN SOLE PLATE AND $1\frac{1}{16}$ " ϕ HOLE IN TOP PLATE, USE STD. HARDENED WASHER UNDER NUT AND PLATE WASHER UNDER HEAD (SEE ④).
- ④ PLATE WASHER $\frac{3}{8} \times 2 \times 4\frac{1}{4}$, HAVING $1\frac{1}{16}$ " ϕ HOLE IN CENTER.

BEARING TYPE	GIRDER, SPAN	PAD TYPE	DIMENSIONS (INCHES)						BEARINGS REQUIRED
			F	S	TS	A	B	BB	
E-A	111'-8", SIMPLE	EN-A	18	14	12	17	27	20	16
E-B	140'-0", SIMPLE	EN-B	20	14 $\frac{1}{2}$	12 $\frac{1}{2}$	17 $\frac{1}{2}$	29	22	8
E-C	140'-0"; 2-SPAN CONT.	EN-C	20	14	12	17	29	20	64

TYPE E BEARING (UNSET)



NEOPRENE PAD DETAILS



NEOPRENE PAD NOT

1. NEOPRENE PADS SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO 1985 INTERIM SPECIFICATIONS.
 2. EACH PAD SHALL BE SHOP BONDED (VULCANIZED) TO TOP AND BOTTOM STEEL PLATES OF THE PROPER DIMENSIONS. SEE ELEVATION TYPE E BEARING (UNSET). MARK EACH BEARING AS REQUIRED BY AASHTO.

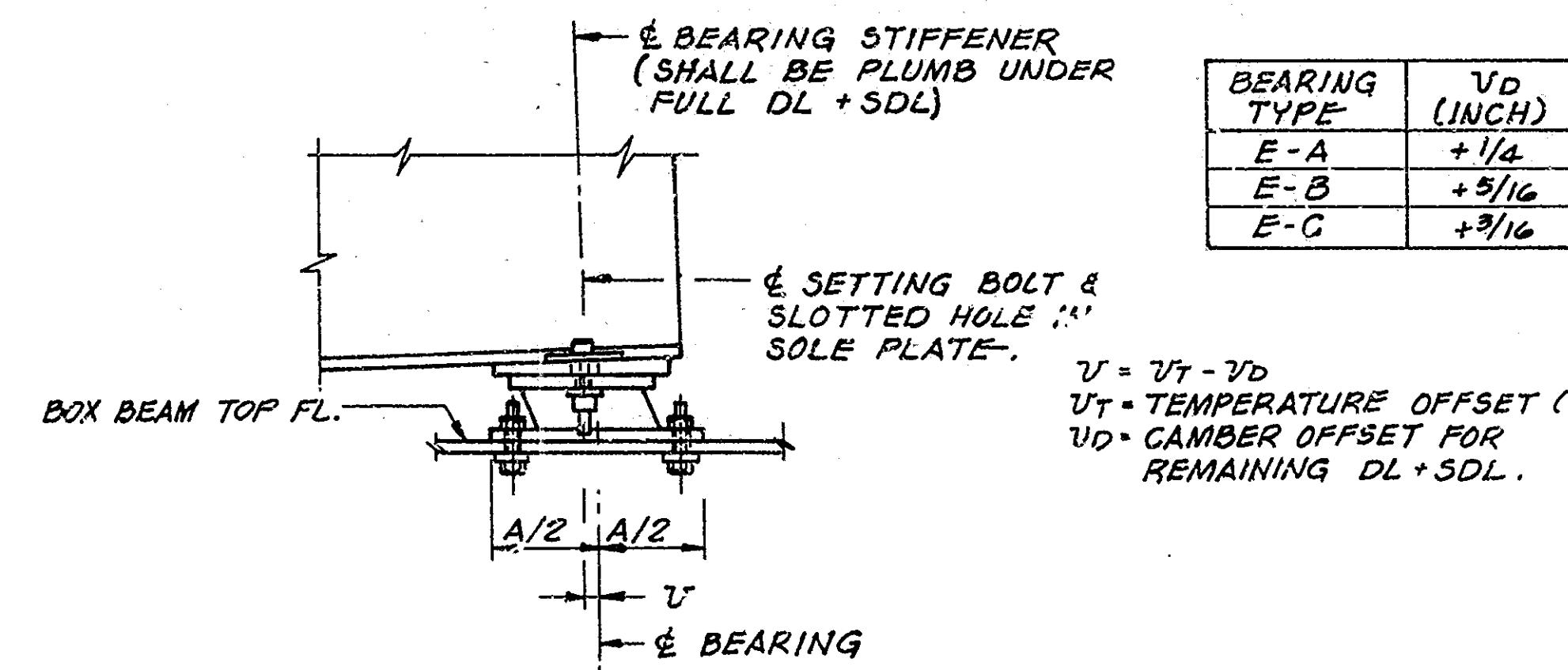
T = TOTAL THICKNESS OF ALL NEOPRENE LAYERS COMBINED.

?*i* = NUMBER OF INTERNAL NEOPRENE LAYER

n_2 = NUMBER OF INTERNAL STEEL PLATE

SETTING NOTES

1. PLACE BEARING ON BOX BEAM, INSERT BOLTS THROUGH HOLES IN BEARING BOTTOM PLATE AND MAKE THEM FINGER TIGHT.
 2. AFTER SEATING THE LONGITUDINAL GIRDERS, INSERT SETTING BOLTS THROUGH SLOTTED HOLES AND MAKE THEM FINGER TIGHT. TIGHTEN BOLTS THROUGH HOLES IN BOTTOM PLATE.
 3. JACK BEARING TOP PLATE AGAINST THE SOLE PLATE UNTIL THE REQUIRED OFFSET FOR THE PREVAILING TEMPERATURE IS ACHIEVED AND THEN TIGHTEN UP THE SETTING BOLTS.



$V = V_T - V_D$
 V_T = TEMPERATURE OFFSET (SEE DIAGRAM THIS SHEET).
 V_D = CAMBER OFFSET FOR
 REMAINING DL + SDL.

VIEW OF TYPE E BEARING SET
NOT TO SCALE.

SUGGESTED SETTING PROCEDURE FOR TYPE E BEARING

NOTES

1. FOR GENERAL NOTES, SEE SHEET 2.
 2. FOR BEARING LOCATIONS, SEE "GENERAL PLAN & ELEVATION" SHEET 1.
 3. ALL STRUCTURAL STEEL SHALL BE ASTM A36.
 4. ALL BOLTS SHALL BE 1"Ø H.S., ASTM A-325.

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

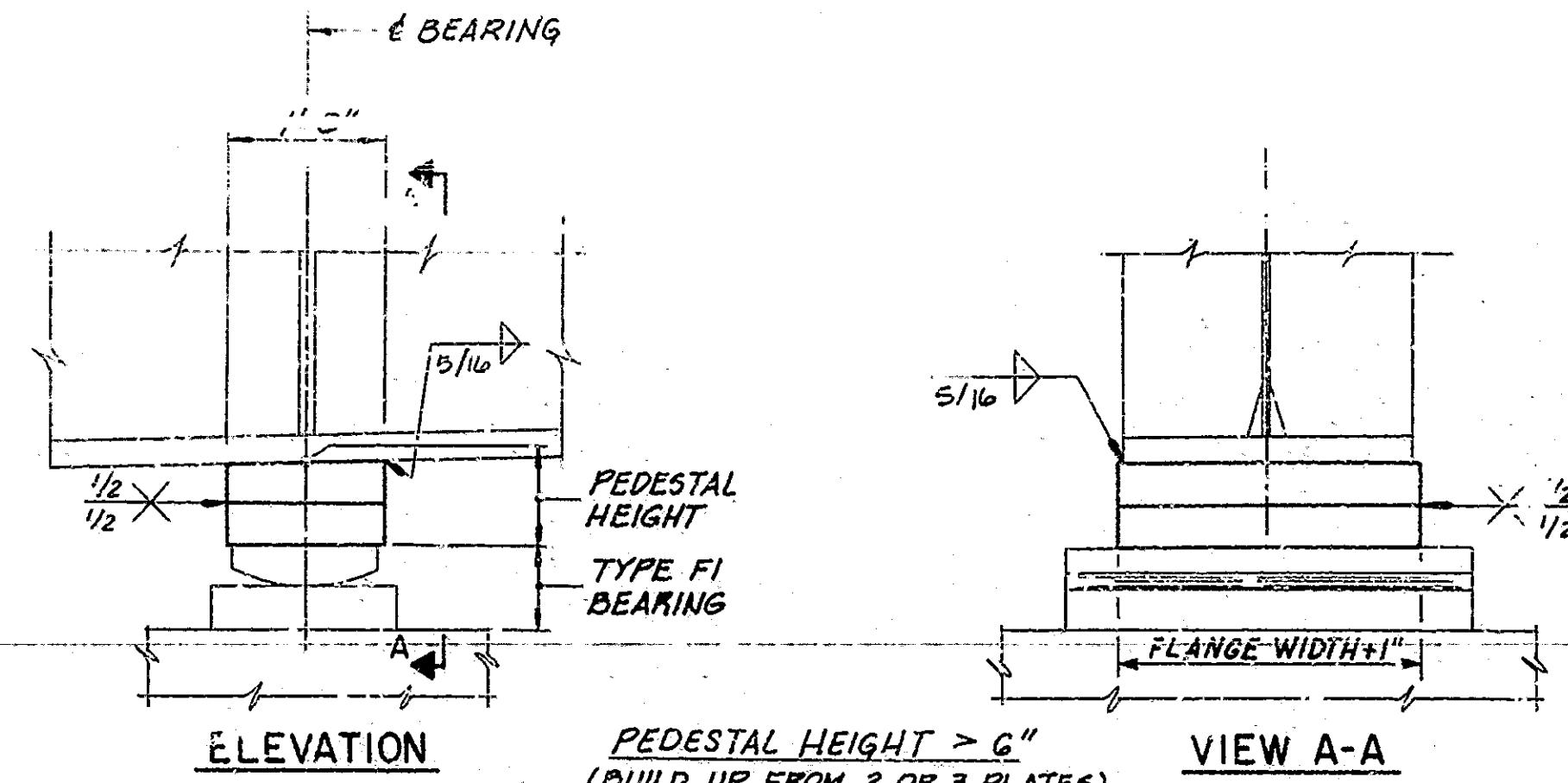
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
11 SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
EXPANSION BEARINGS

RECOMMENDED **MAY 31, 1985**

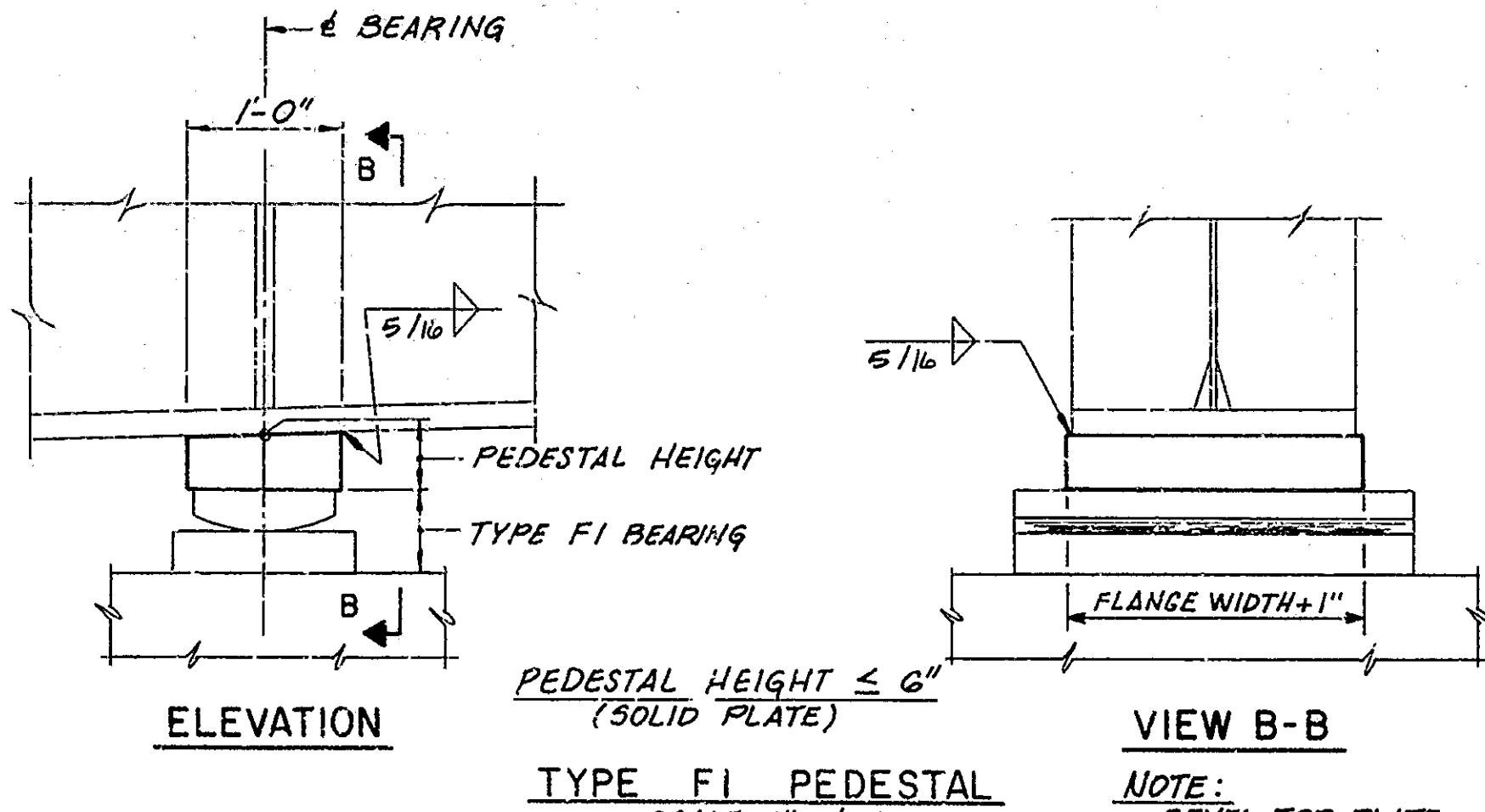
SHEET 32 OF 66

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KING LANE, PRUSSIA, PA.

S-16093A



ELEVATION PEDESTAL HEIGHT > 6"
(BUILD UP FROM 2 OR 3 PLATES) VIEW A-A

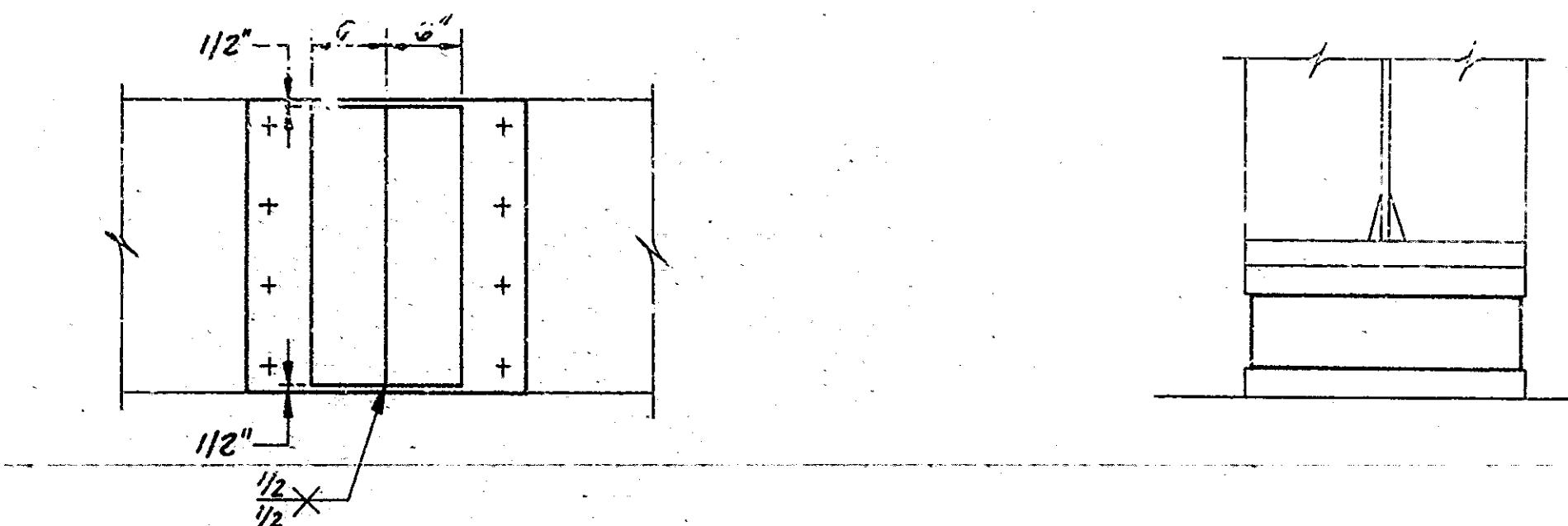


ELEVATION PEDESTAL HEIGHT ≤ 6"
(SOLID PLATE) VIEW B-B

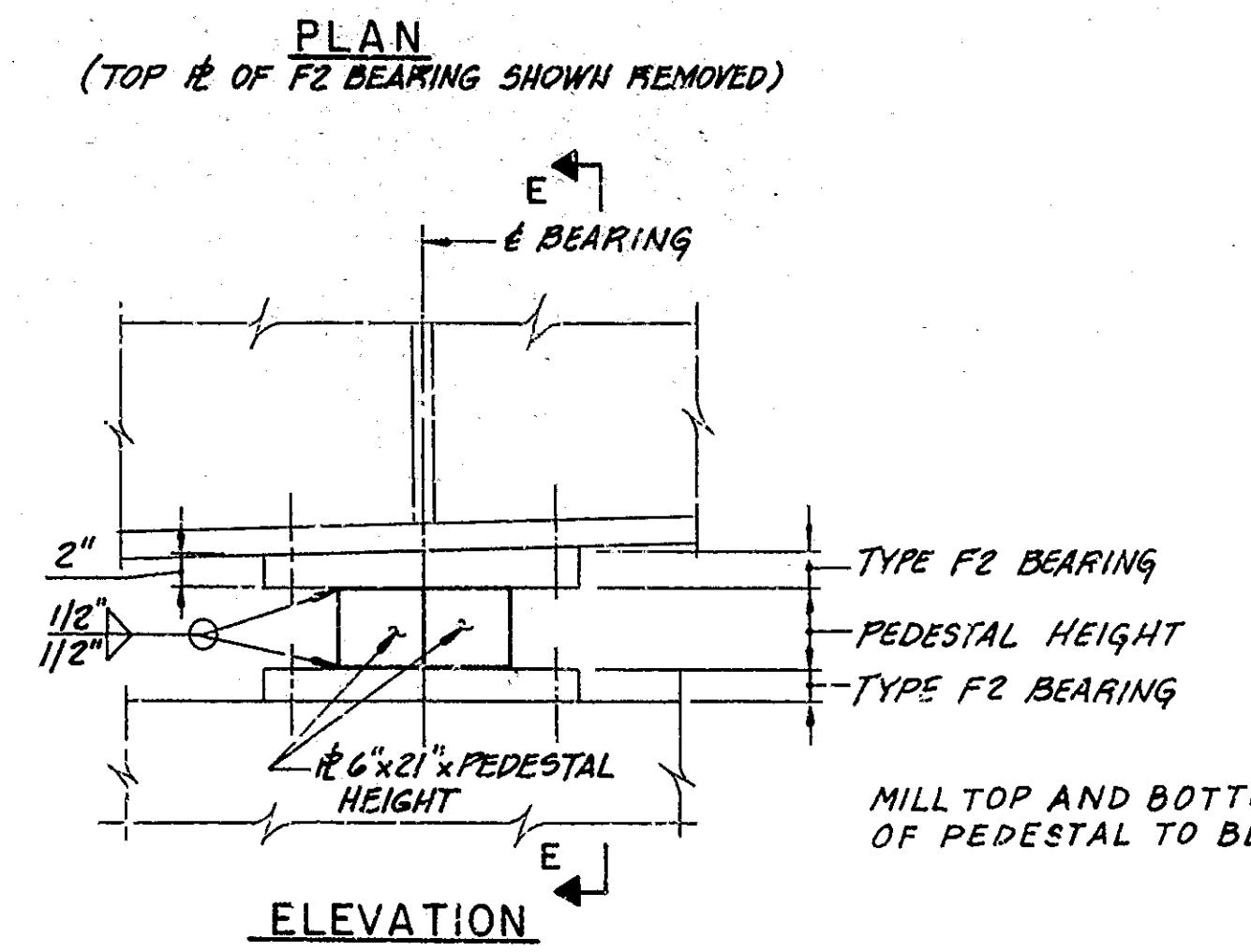
TYPE F1 PEDESTAL

SCALE: 1" = 1'-0"

NOTE:
BEVEL TOP PLATE
TO GRADE.

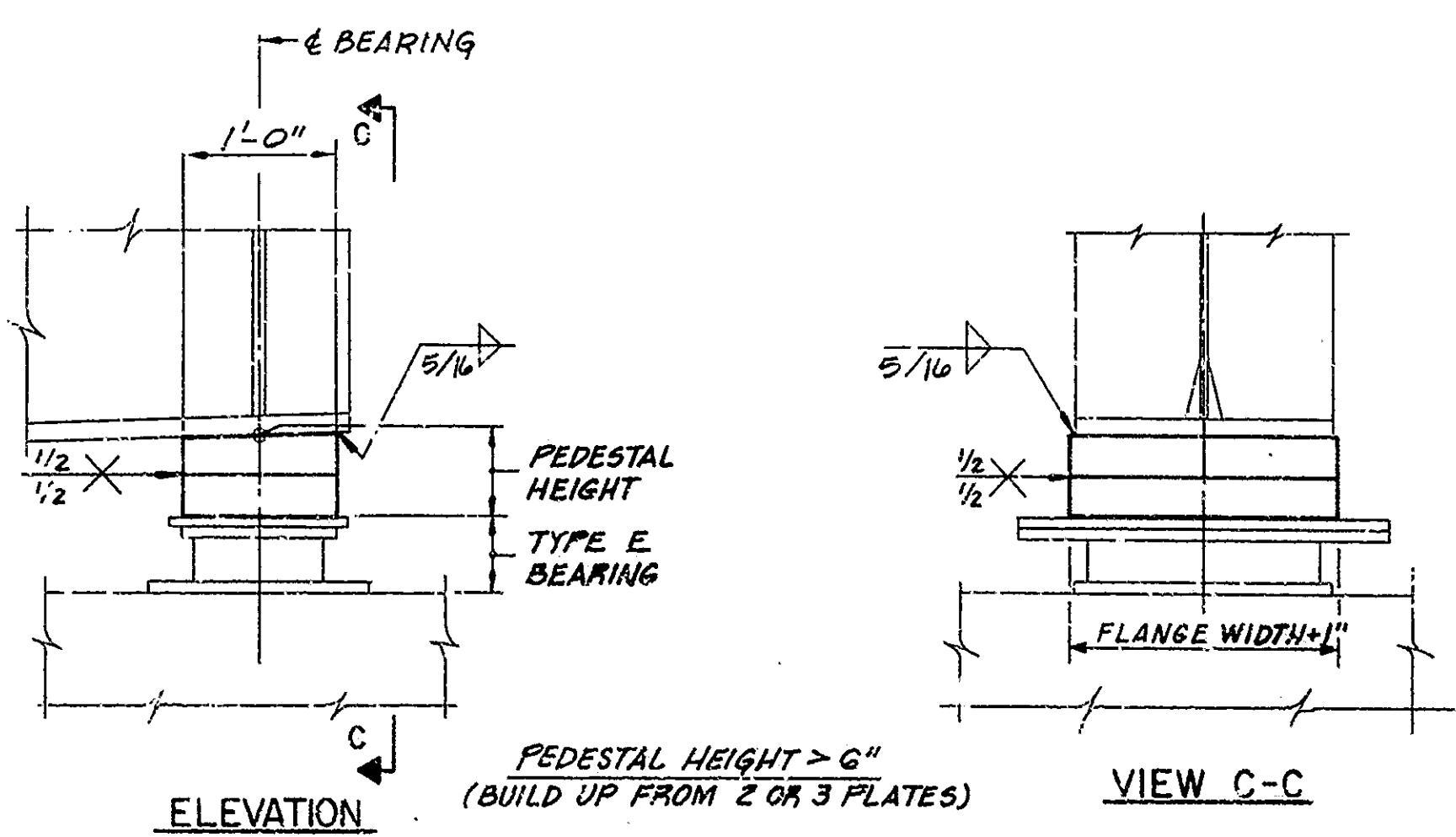


VIEW E-E

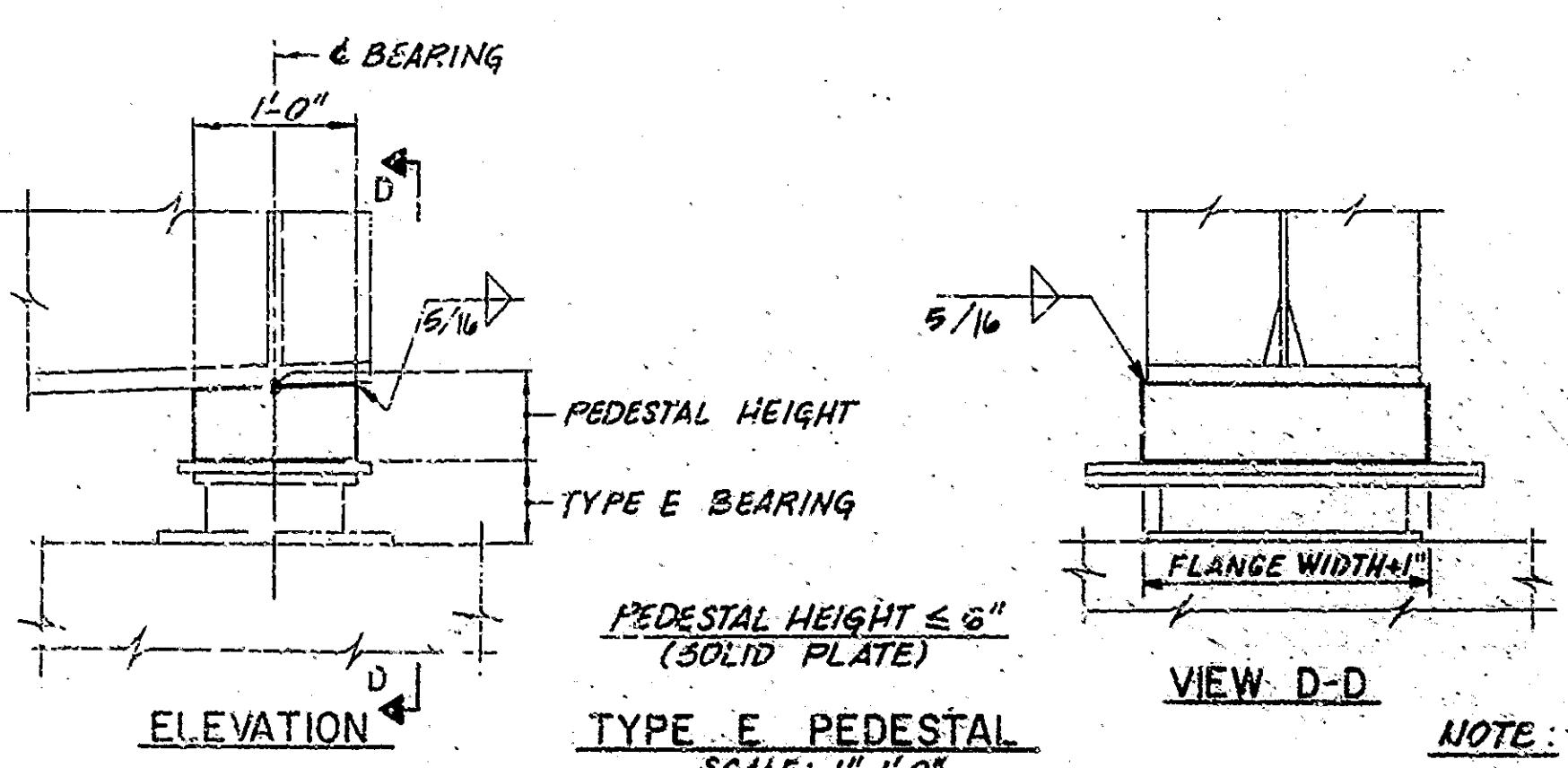


TYPE F2 PEDESTAL

SCALE: 1" = 1'-0"



ELEVATION PEDESTAL HEIGHT > 6"
(BUILD UP FROM 2 OR 3 PLATES) VIEW C-C

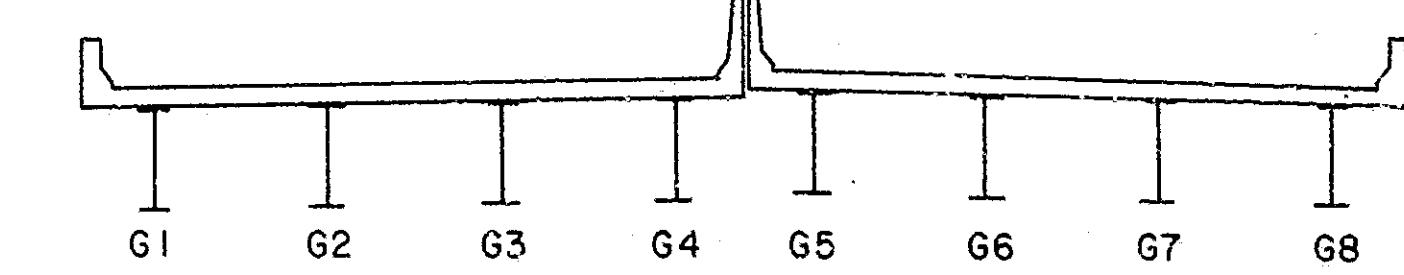


ELEVATION PEDESTAL HEIGHT ≤ 6"
(SOLID PLATE) VIEW D-D

TYPE E PEDESTAL

SCALE: 1" = 1'-0"

NOTE: BEVEL TOP PLATE
TO GRADE.



KEY ELEVATION - LOOKING STATIONS AHEAD

TABLE I - PEDESTAL HEIGHT									
LOCATION	G1	G2	G3	G4	G5	G6	G7	G8	
PIER 1	BACK	1 1/16"	1 0 5/8"	1 1 3/8"	1 1 5/16"	1 2 3/4"	2 7/8"	4 5/16"	0
	AHEAD	1 1 3/16"	1 1 7/16"	1 0 1/16"	1 0 5/16"	1 2 3/16"	1 0 5/8"	5 1/16"	3/4"
PIER 2	BACK	0	4 3/16"	6 5/8"	9"	1 1 1/16"	5 1/2"	5 1/16"	0 1/16"
	AHEAD	1/16"	5 1/4"	7 3/8"	10 1/16"	1 2 5/16"	10 3/16"	6 7/16"	1 1/8"
PIERS 3,5&7	0	4 3/16"	6 5/8"	9"	1 3 3/16"	1 1 7/16"	1 1/16"	6 1/16"	0
	PIERS 6,8&9	0	4 9/16"	6 5/8"	9"	1 2 1/16"	1 0 1/16"	2 3/4"	5"
PIER 9	9/16"	4 1/8"	6"	7 3/4"	1 2 7/16"	1 0 1/16"	9 1/16"	5 1/16"	0
	PIER 10	1 1/8"	1 7/16"	1 3/16"	10 3/4"	1 1 3/16"	9 3/16"	4 1/16"	0
AHEAD	1 8/16"	1 8 3/16"	1 4 1/16"	11 3/8"	1 2 3/16"	10 3/8"	5 1/16"	1 1/8"	

NOTES:

1. PEDESTALS ARE A 36 STEEL
2. FOR BEARING TYPES, SEE SHEETS 31 AND 32
3. FOR BEARING TYPE LOCATIONS, SEE SHEET 1

Mark	Description	By	Chk'd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

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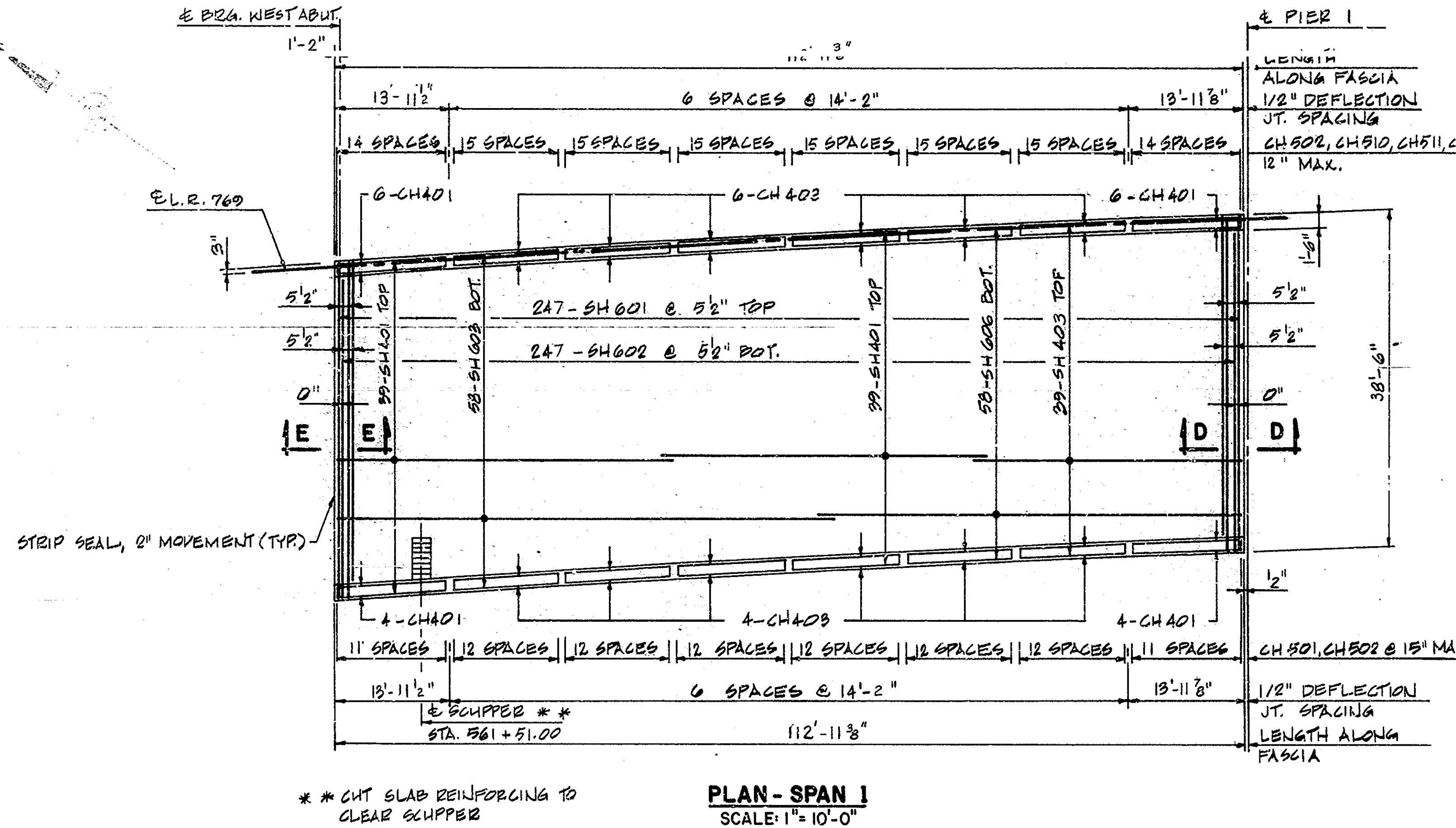
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
BEARING PEDESTALS

RECOMMENDED MAY 31 1980

SHEET 33 OF 66

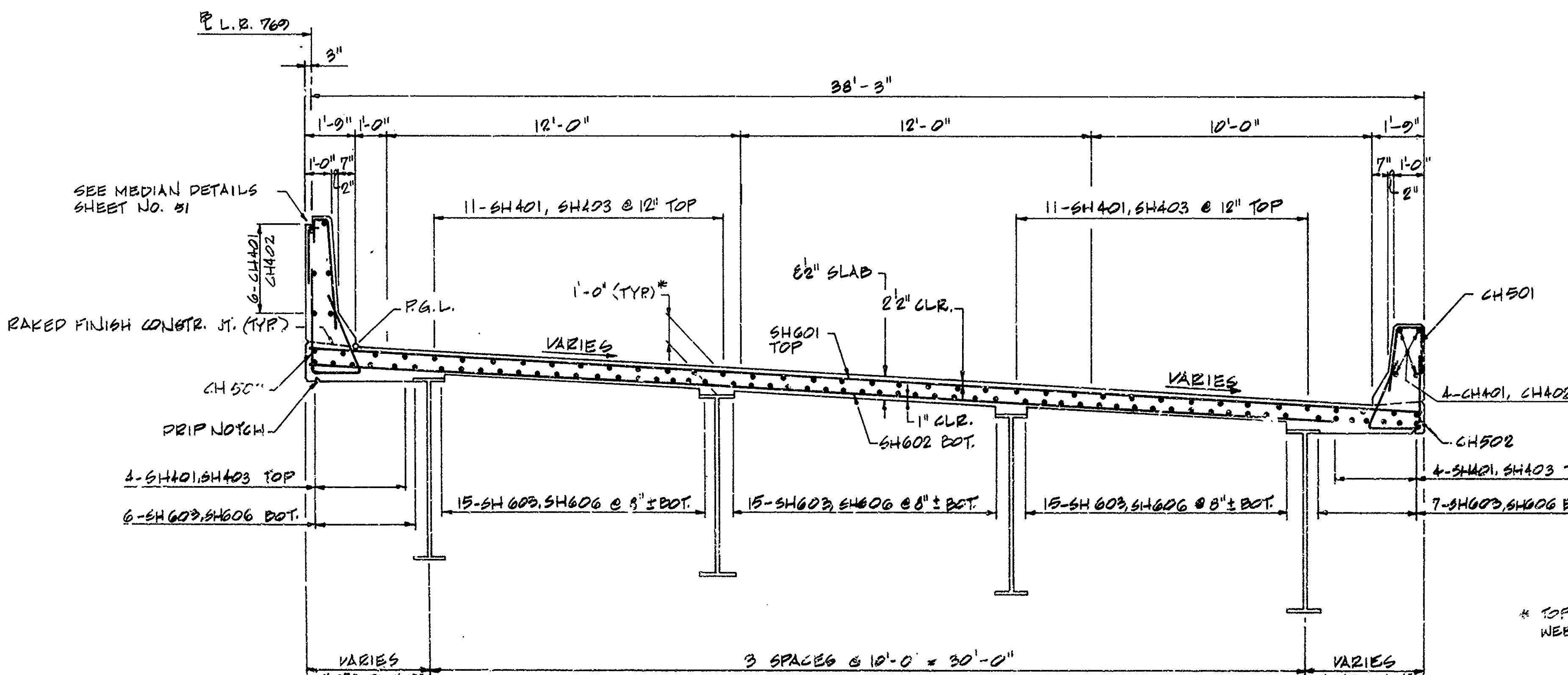
S-16093A

SIGNED BY: CER
AWN BY: SRF
ECKED BY: BIV



PLAN - SPAN 1

* * CUT SLAB REINFORCING TO
CLEAR SCHUPPER



HALF SECTION AT MIDSPAN

HALF SECTION AT INTERMEDIATE PIE

TYPICAL SECTION

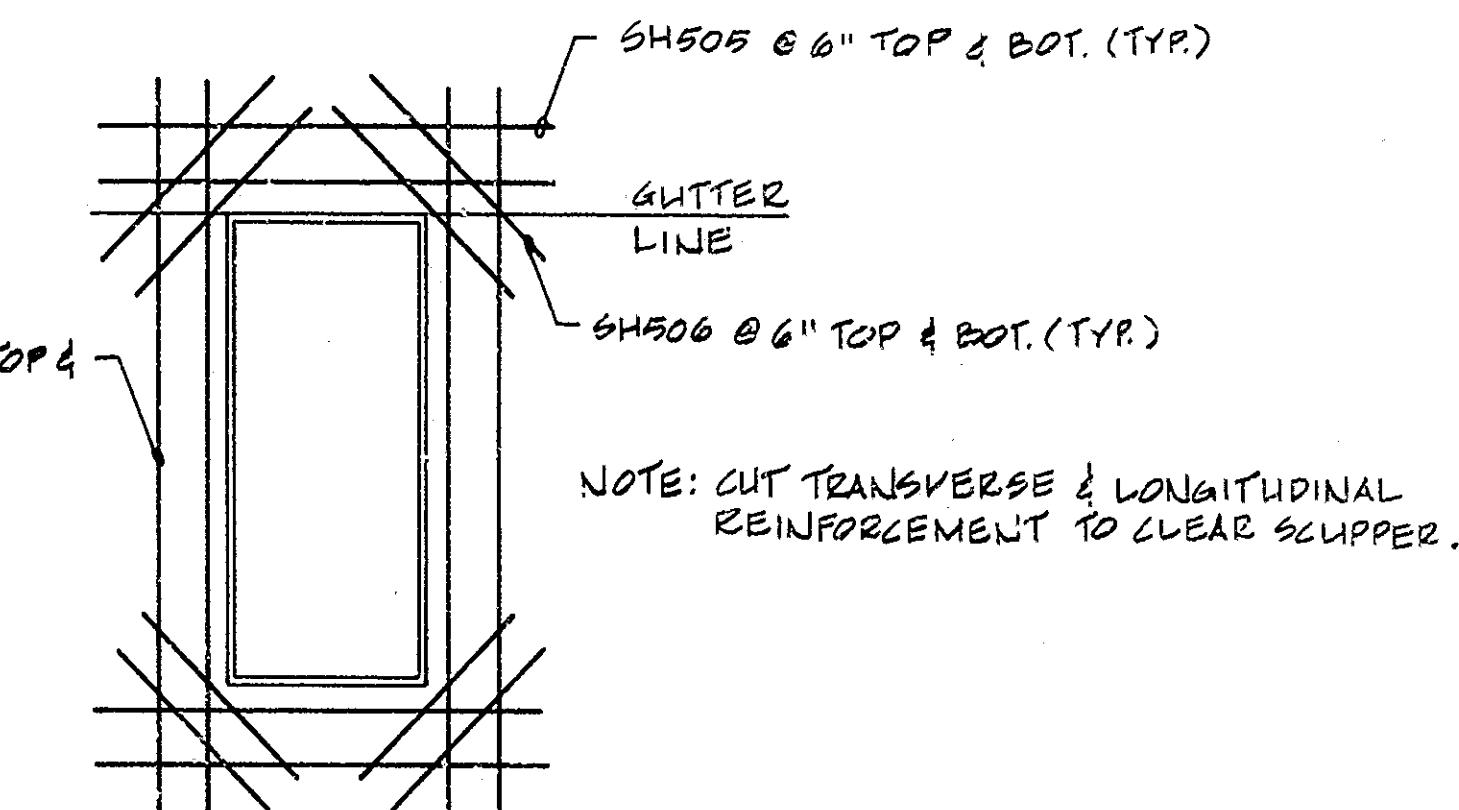
SCALE: 3/8" = 1'-0"

PREPARED BY
Greiner Engineering Sciences, Inc.
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KING OF PRUSSIA, PA

RECOMMENDED **MAY 31 1985**

SHEET 34 OF 66

S-16093A



REINFORCEMENT AT SCUPPER

NOT TO SCALE

1. FOR BAR SCHEDULE, SEE SHEET 41
 2. FOR SECTIONS D-D & E-E & EXPANSION DAM DETAILS, SEE SHEET 53.
 3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50.
 4. FOR MEDIAN SLAB DETAILS, SEE SHEETS 51 & 52
 5. FOR CONSTRUCTION JOINT DETAILS, SEE STD. DWG BC-335 A
 6. FOR PERMANENT METAL DECK FORM DETAILS, SEE STD. DWG. BC-332 B
 7. FOR SCHIPPER DETAILS, SEE SHEET 54.
 8. CLEAN TOP OF GIRDERS BEFORE DECK SLAB IS POURED

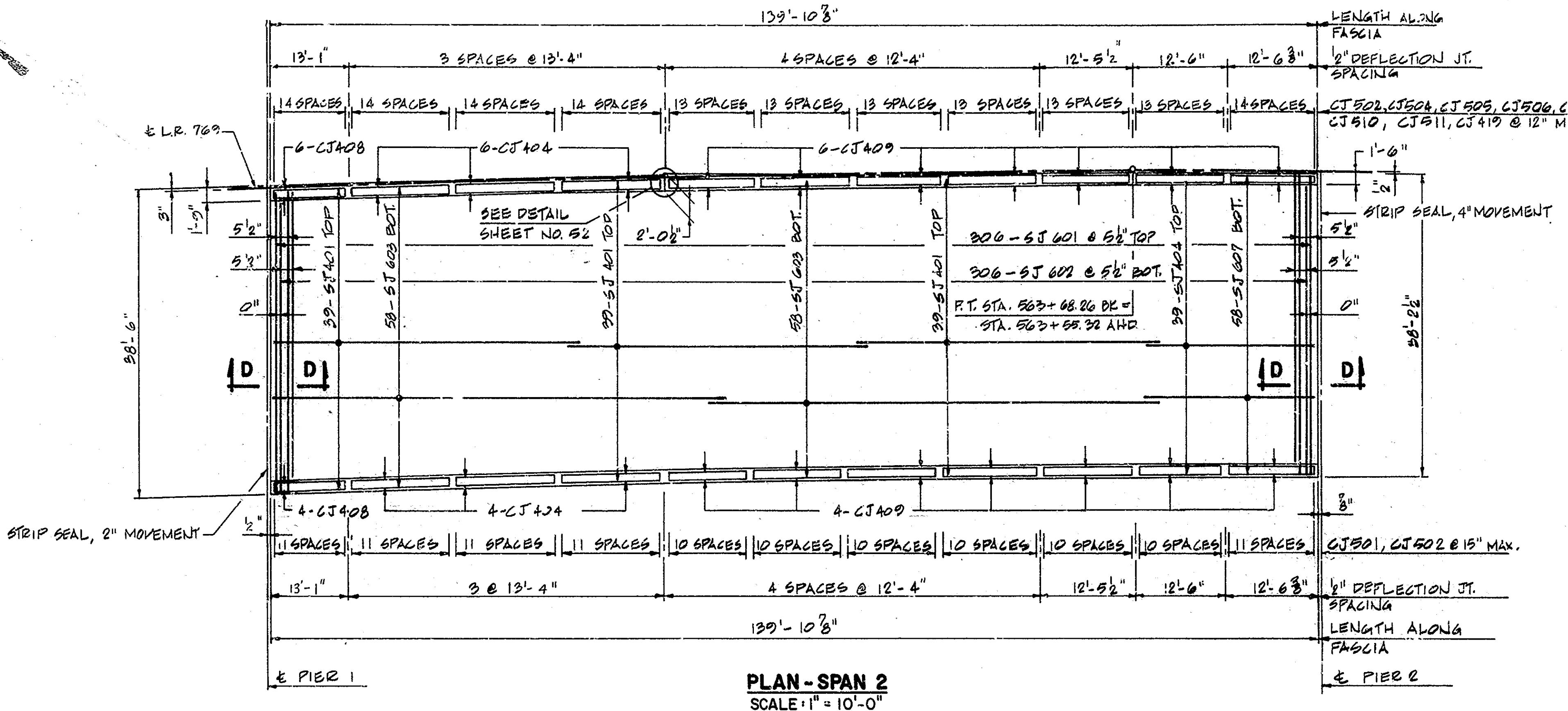
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REVISIONS					

Commonwealth of Pennsylvania

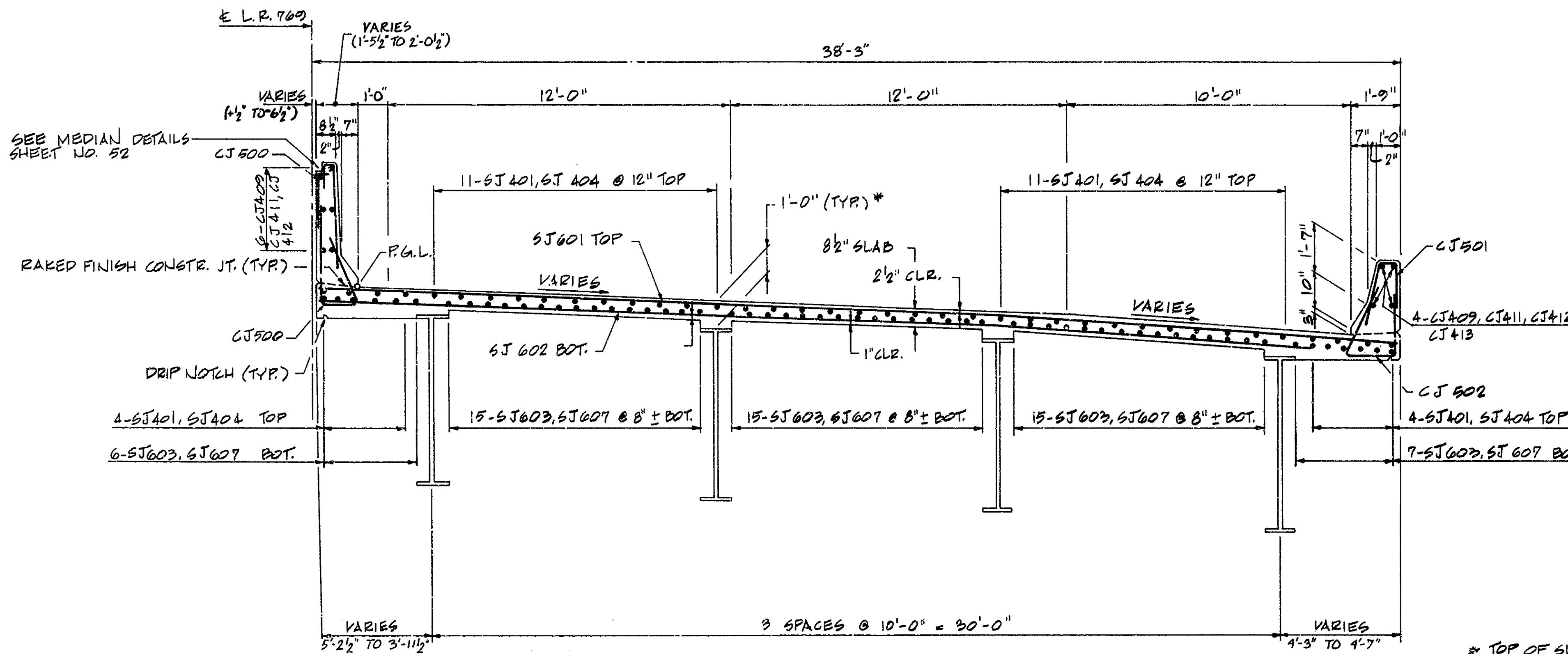
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**MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
SLAB PLAN - SPAN I EB**



PLAN - SPAN 2
SCALE: 1" = 10'-0"



HALF SECTION AT MIDSPAN

HALF SECTION AT INTERMEDIATE PIER

TYPICAL SECTION
SCALE: 3/8" = 1'-0"

* TOP OF SLAB TO TOP OF WEB & BEARING

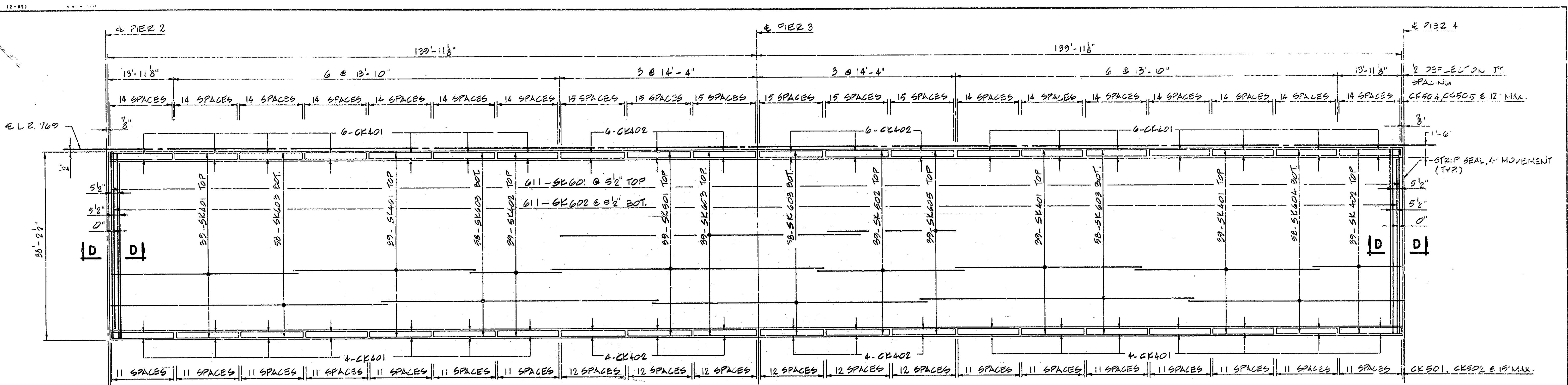
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KING OF PRUSSIA, PA

RECOMMENDED MAY 31 1985

SHEET 35 OF 66

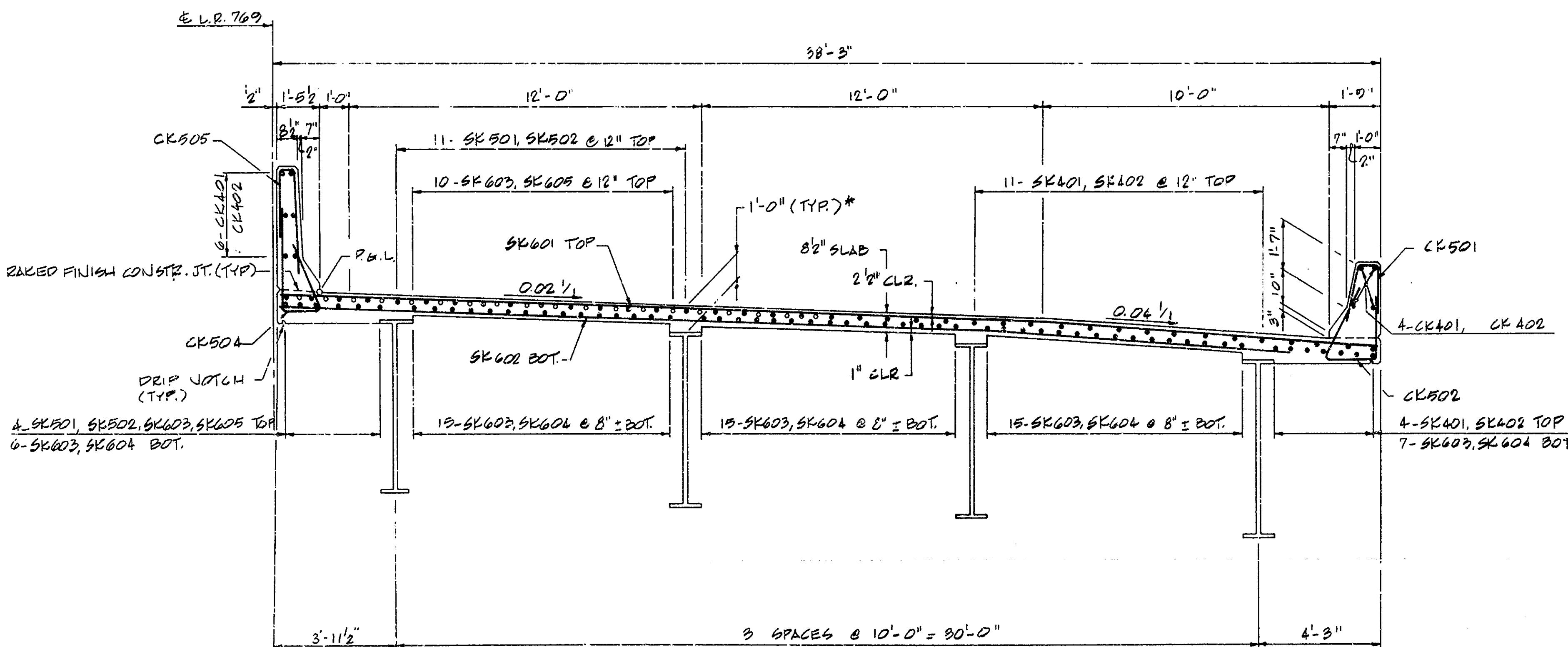
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MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
11 SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
SLAB PLAN - SPAN 2 EB



PLAN - SPANS 3-4

SCALE: 1" = 10'-0"

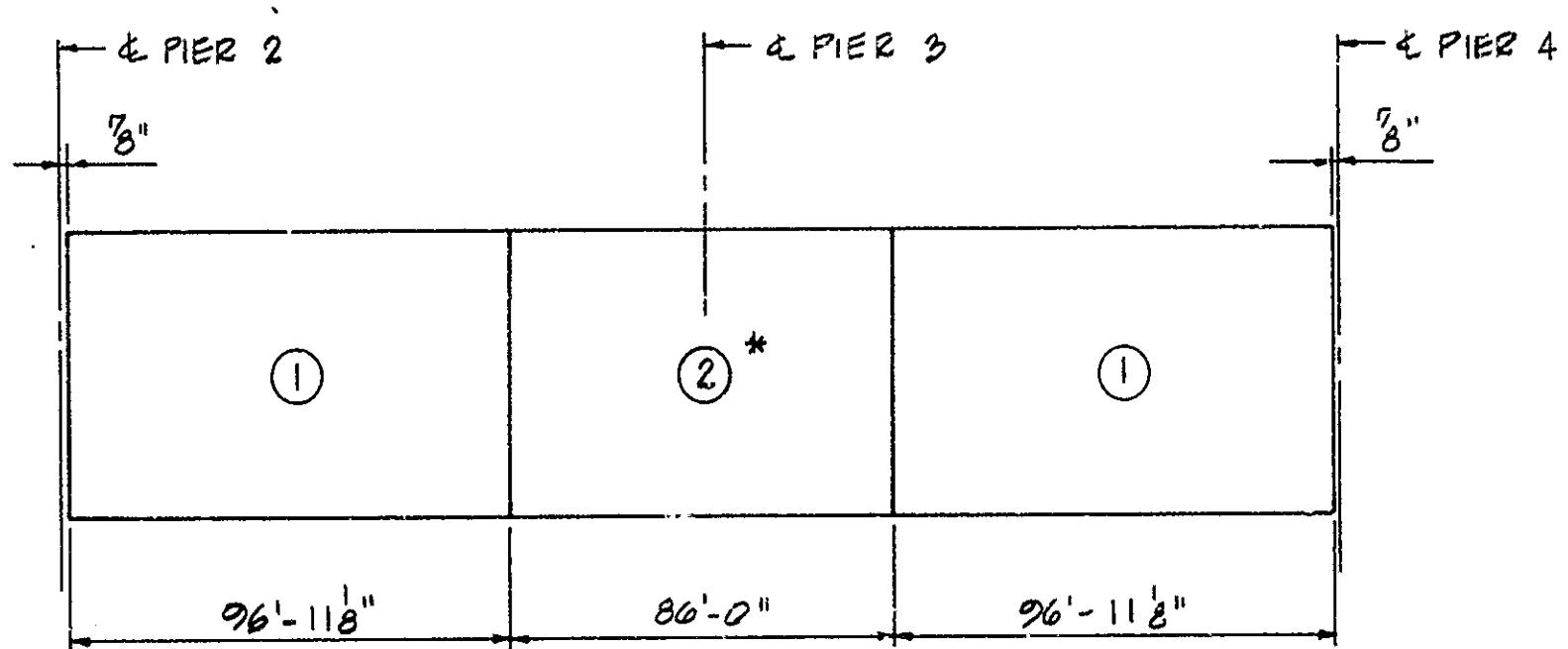


HALF SECTION AT INTERMEDIATE PIER

HALF SECTION AT MIDSPAN

TYPICAL SECTION

SCALE: 3/8" = 1'-0"



DECK POURING SEQUENCE

NOT TO SCALE

* NOTE: CONCRETE IN POUR 1 MUST ACHIEVE ITS 7 DAY STRENGTH BEFORE POUR 2 IS MADE UNLESS POUR 2 IS MADE WHILE POUR 1 IS STILL PLASTIC

- NOTES:**

 1. FOR BAR SCHEDULE, SEE SHEET 41
 2. FOR SECTION D-D & EXPANSION DAM DETAILS,
SEE SHEET 53
 3. FOR PARAPET & MEDIAN BARRIER DETAILS,
SEE SHEET 50.
 4. FOR CONSTRUCTION JOINT DETAILS, SEE
STD. DWG. BC-335 A
 5. FOR PERMANENT METAL DECK FORM
DETAIL, SEE STD. DWG. BC-333 B
 6. CLEAN TOP OF GIRDERS BEFORE DECK
SLAB IS POURED

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

FAIL OF HIGHWAY DESIGN

MONTGOMERY COUNTY

MONTGOMERY COUNTY
I.D. 769 & I.B. 67057 SEC 300

E.R. 769 & E.R. 81031 SEC. 300
MAIN LINE OVER CONRAIL AND ABANDONED SIDING

I SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

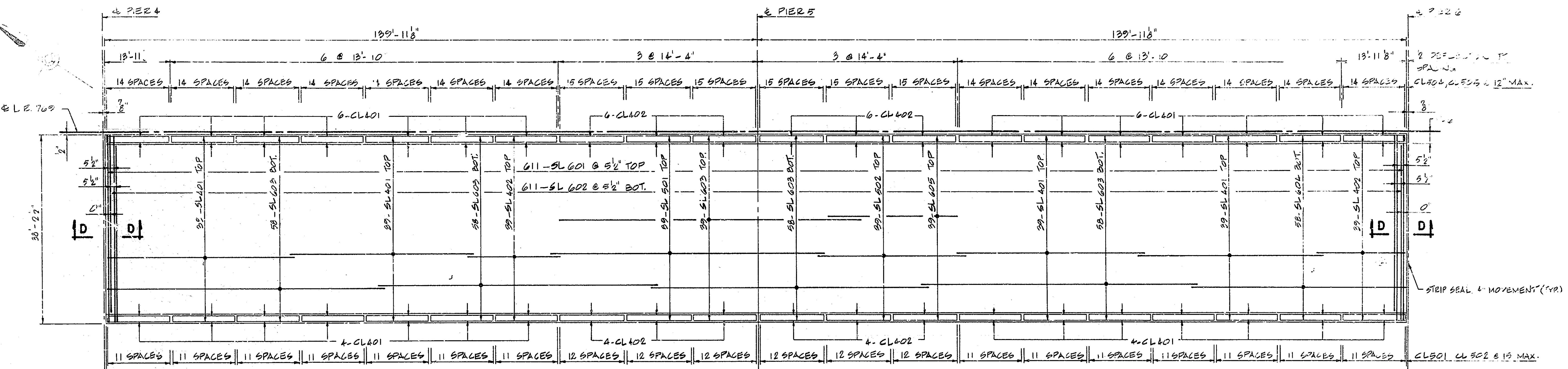
SIAB PLAN-SPANS 3-4 FB

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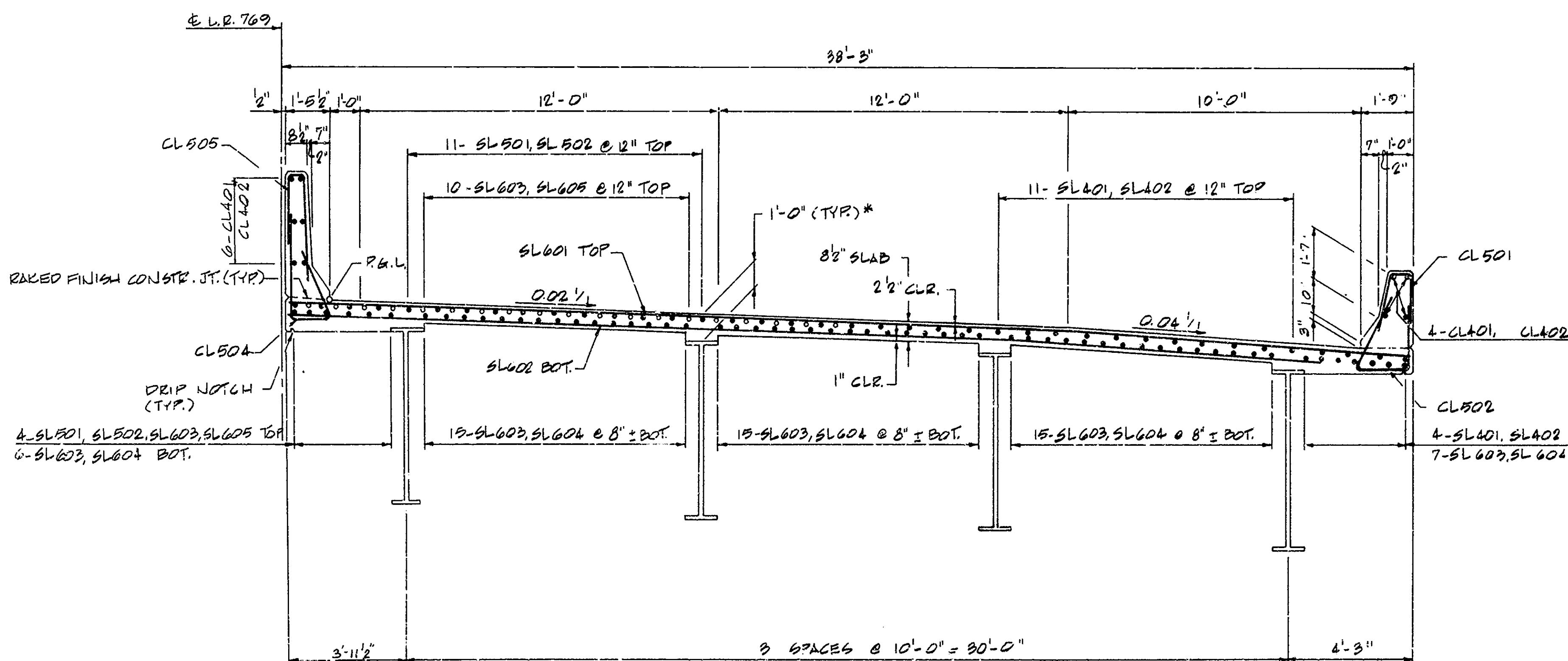
SHEET 36 OF 66

S-16093A



PLAN - SPANS 5 - 6

SCALE : 1" = 10'-0"



HALF SECTION AT INTERMEDIATE PIER

HALF SECTION AT MIDSPAN

TYPICAL SECTION

SCALE: 3/8" = 1'-0"

DECK POURING SEQUENCE

NOT TO SCALE

NOTES

1. FOR BAR SCHEDULE, SEE SHEET 41
 2. FOR SECTION D-D & EXPANSION DAM DETAILS,
SEE SHEET 53
 3. FOR PARAPET & MEDIAN BARRIER DETAILS,
SEE SHEET 50
 4. FOR CONSTRUCTION JOINT DETAILS, SEE
STD. DWG. BC-335A
 5. FOR PERMANENT METAL DECK FORM
DETAIL, SEE STD. DWG. BC-332B
 6. CLEAN TOP OF GIRERS BEFORE DECK
SLAB IS Poured

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

* TOP OF SLAB TO TOP OF
WEB AT BEARING

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

I R 7698 I R 67057 SEC 300

MAINLINE OVER CONRAIL AND ABANDONED SOUTHERN

II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE

SLAB PLAN- SPANS 5-6 EB

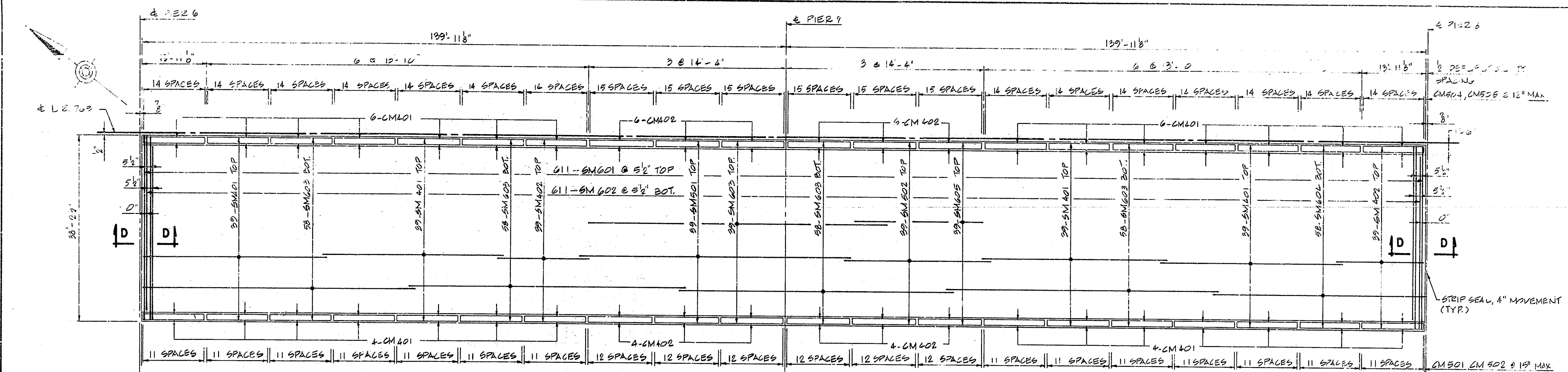
MIX-14001 SHEET 37 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA.

RECOMMENDED MAY 31 1965

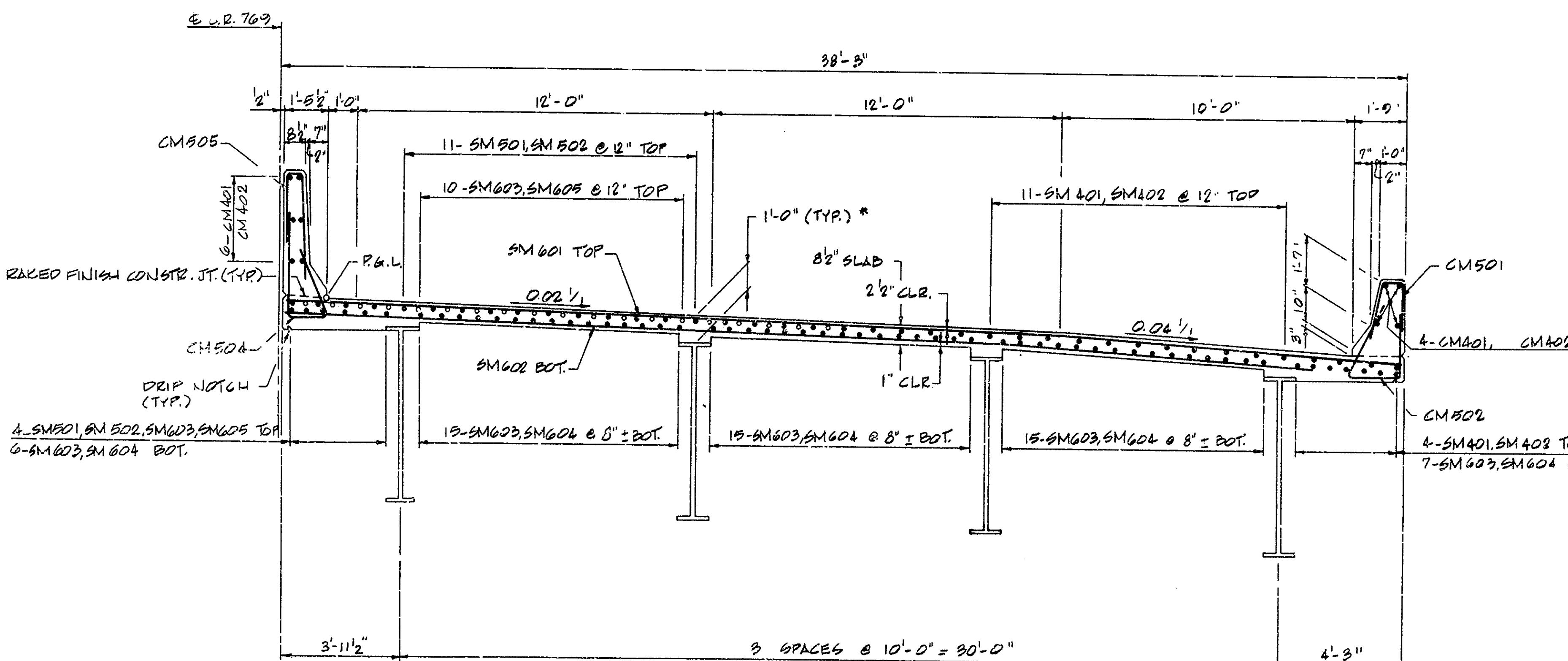
SHEET 37 OF 66

S-16093A



PLAN - SPANS 7-8

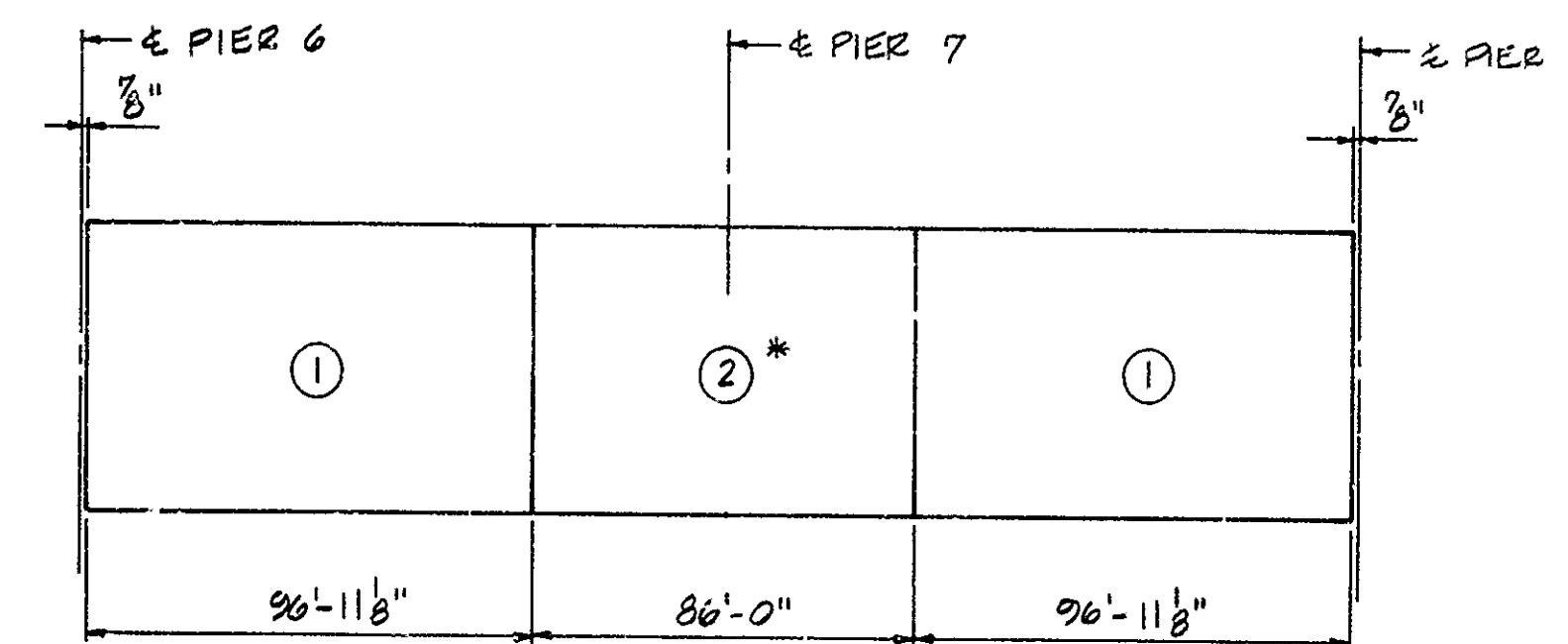
SCALE: 1" = 10'-0"



HALF SECTION AT INTERMEDIATE PIER

HALF SECTION AT MIDSPAN

TYPICAL SECTION
SCALE: 3/8" = 1'-0"



DECK POURING SEQUENCE
NOT TO SCALE

* FOR NOTE, SEE SHEET 36

NOTES:

1. FOR BAR SCHEDULE, SEE SHEET 41
2. FOR SECTION D-D & EXPANSION DAM DETAILS, SEE SHEET 53
3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50
4. FOR CONSTRUCTION JOINT DETAILS, SEE STD. Dwg. BC-332A
5. FOR PERMANENT METAL DECK FORM DETAIL, SEE STD. Dwg. BC-332B
6. CLEAN TOP OF GIRDER BEFORE DECK SLAB IS POURED

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

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BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

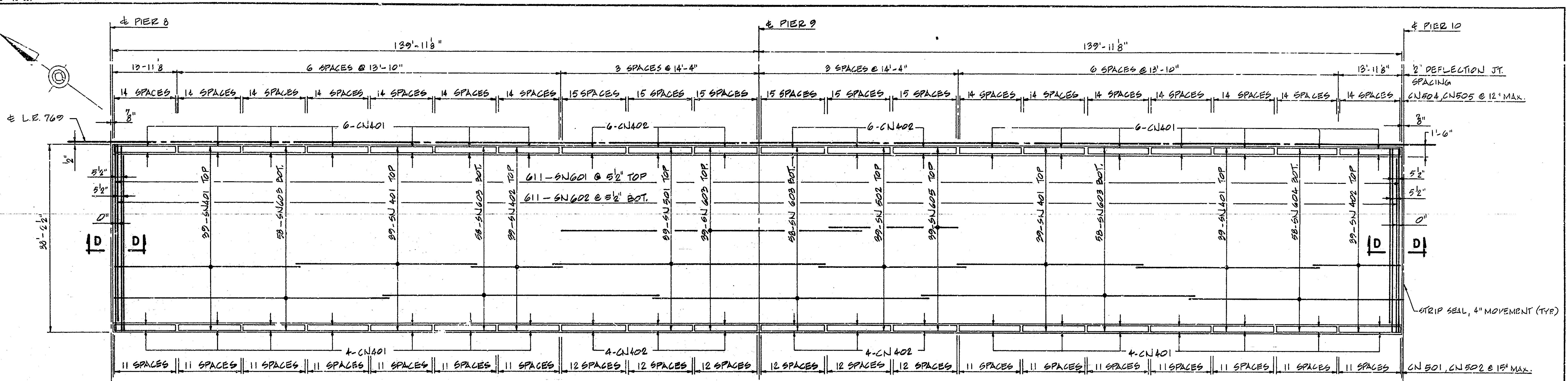
II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

SLAB PLAN - SPANS 7-8 EB

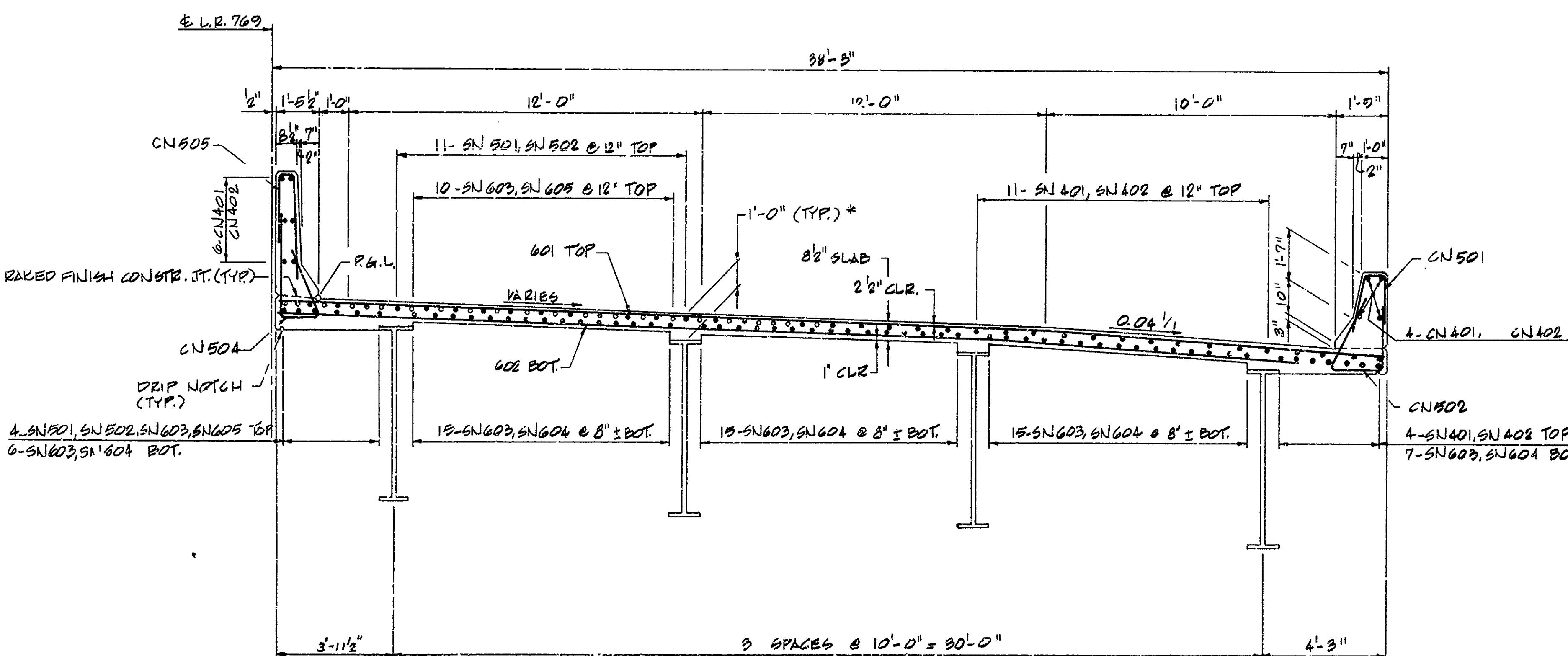
RECOMMENDED MAY 31 1985

SHEET 38 OF 66



PLAN - SPANS 9-11

SCALE: 1" = 10'-0"

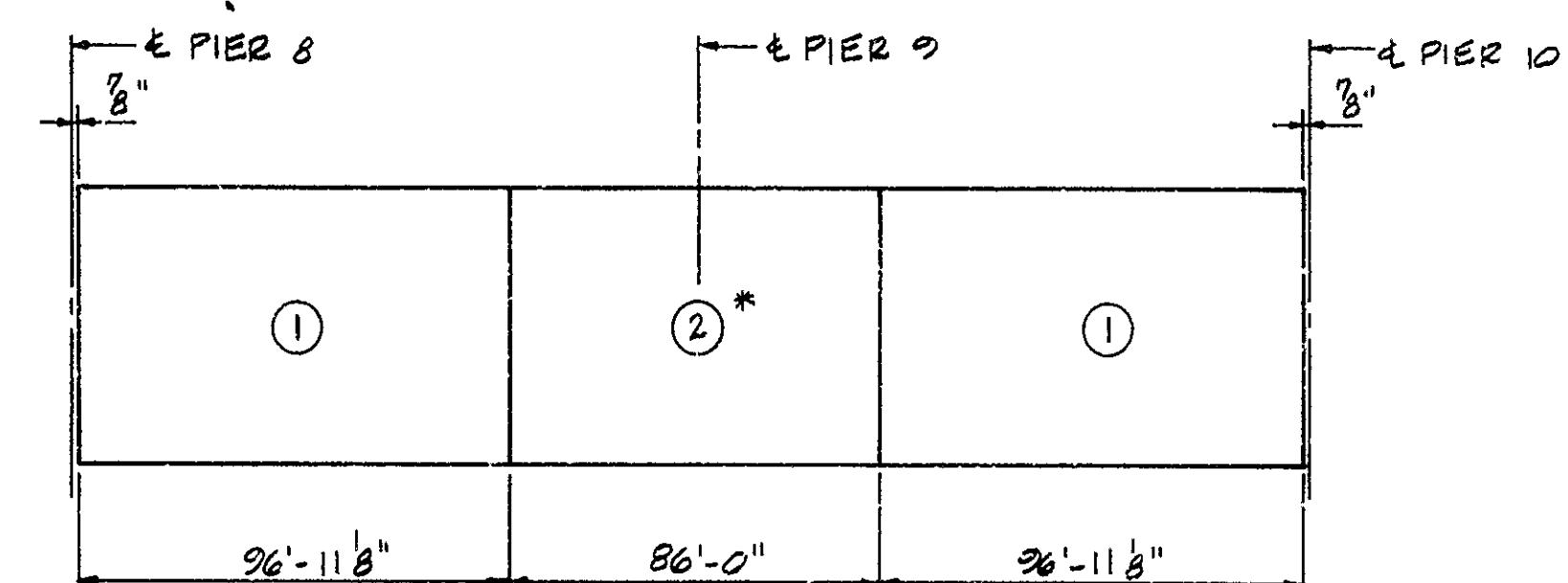


HALF SECTION AT INTERMEDIATE PIECE

HALF SECTION AT MIDSPAN

TYPICAL SECTION

SCALE: 3/8" = 1'-0"



DECK POURING SEQUENCE

NOT TO SCALE

* FOR NOTE, SEE SHEET 36.

- NOTES:

 1. FOR BAR SCHEDULE, SEE SHEET 41
 2. FOR SECTION D-D & EXPANSION DAM DETAILS,
SEE SHEET 53
 3. FOR PARAPET & MEDIAN BARRIER DETAILS,
SEE SHEET 50
 4. FOR CONSTRUCTION JOINT DETAILS, SEE
STD. DWG. BC-335 A
 5. FOR PERMANENT METAL DECK FORM
DETAIL, SEE STD. DWG. BC-332 B
 6. CLEAN TOP OF GIRDERS BEFORE DECK
SLAB IS POURED

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

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**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

MONTGOMERY COUNTY

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING

**II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK**

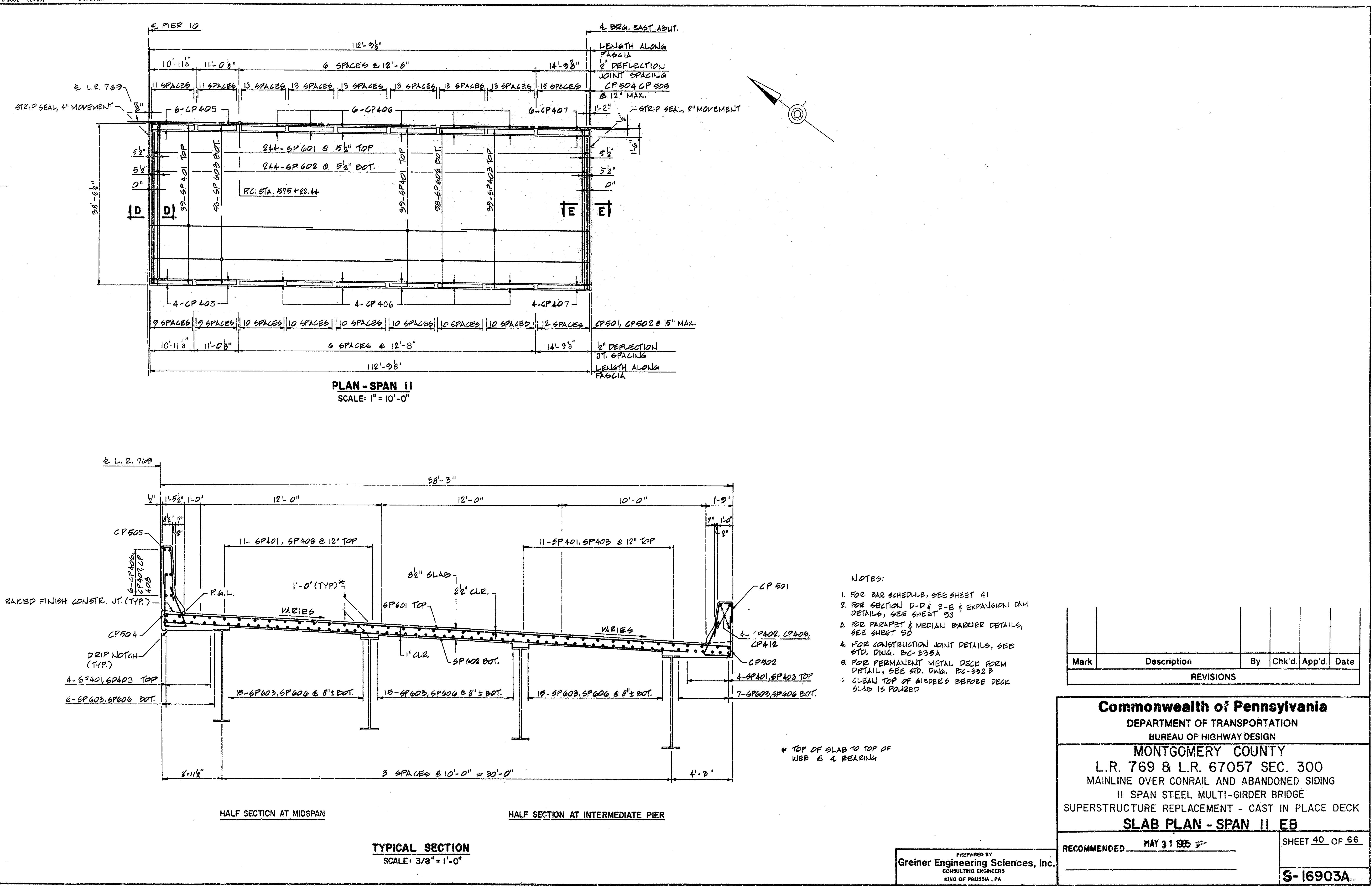
SLAB PLAN - SPANS 9-10 EB

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KING OF PRUSSIA, PA.

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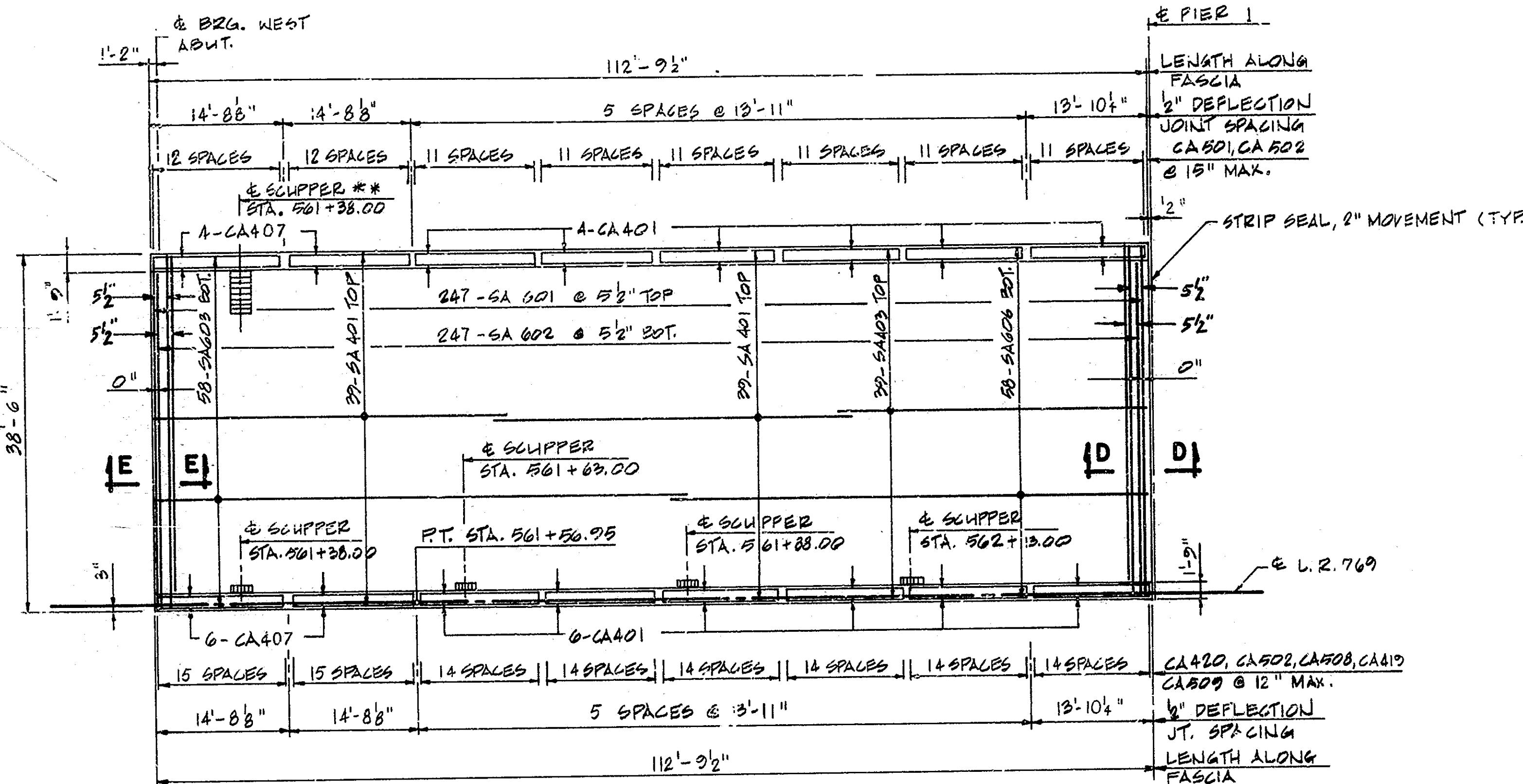
SHEET 39 OF 66

S-16093A



REINFORCEMENT BAR SCHEDULE *

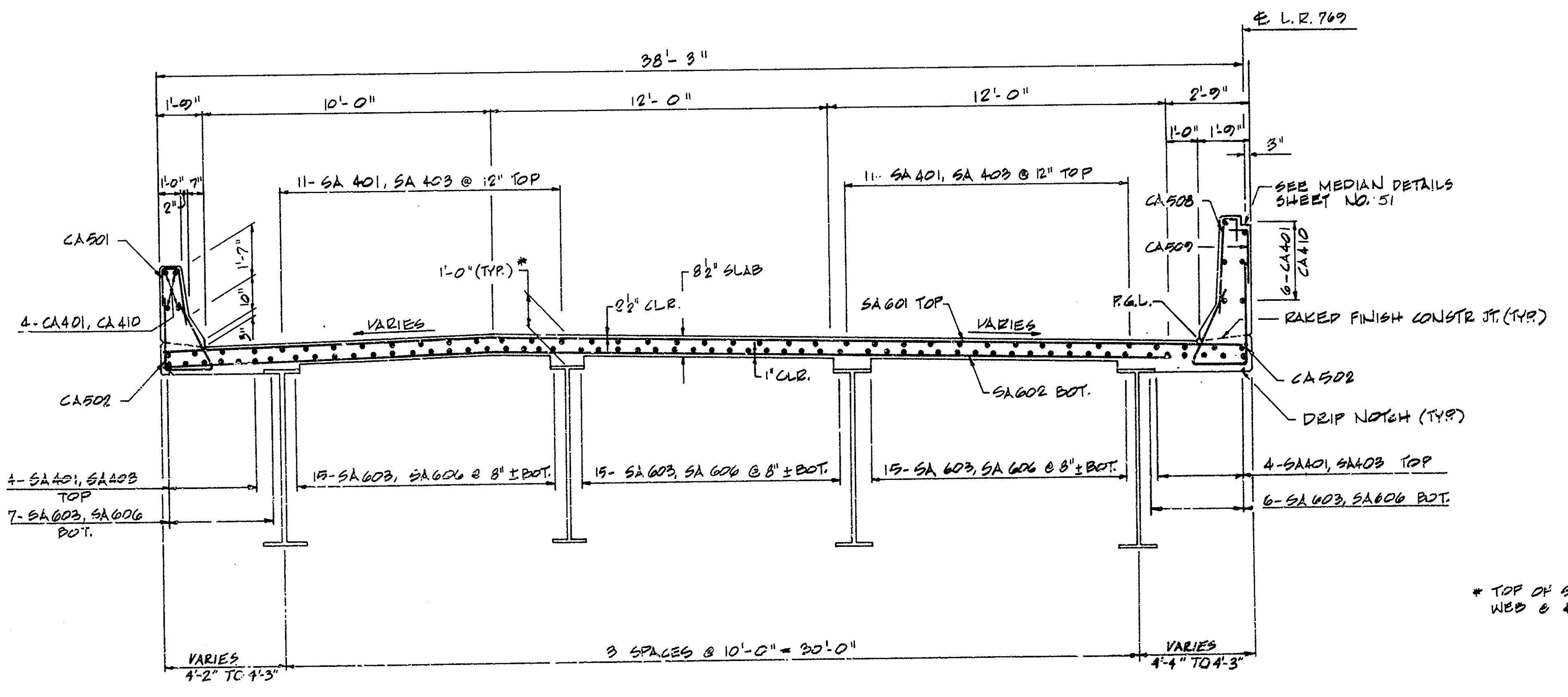
LOC.	MARK	NO. REQ'D.	SIZE TYPE	LENGTH	DIMENSIONS (OUT TO OUT)				REMARKS	LOC.	MARK	NO. REQ'D.	SIZE TYPE	LENGTH	DIMENSIONS (OUT TO OUT)				REMARKS								
					A	B	C	D							A	B	C	D									
SPAN 1	SH401	78	4	STR.	40'-0"					SK601	611	6	STR.	37'-11"					SN601	39	5	STR.	60'-0"				
	SH403	39	4	STR.	35'-2"					SK602	611	6	STR.	34'-6"					SN602	79	5	STR.	26'-0"				
	SH405	12	4	STR.	9'-9"					SK603	271	6	STR.	60'-0"					SN603	78	5	STR.	4'-3"	1'-7"	0'-9"	1'-2"	
	SH503	73	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"	SK604	58	6	STR.	50'-0"					SN604	011	6	STR.	37'-11"				
	SH504	8	5	STR.	7'-9"					SK605	39	6	STR.	28'-7"					SN605	611	6	STR.	34'-6"				
	SH505	8	5	STR.	6'-3"					CK401	140	4	STR.	13'-7"					SN606	271	6	STR.	60'-0"				
	SH506	16	5	STR.	4'-0"					CK402	60	4	STR.	14'-0"					SN607	58	6	STR.	50'-0"				
	SH601	247	6	STR.	37'-11"					CL501	246	5	1	5'-10"	2'-9 $\frac{1}{2}$ "	0'-9"	0'-3 $\frac{1}{2}$ "		SN608	39	6	STR.	28'-7"				
	SH602	247	6	STR.	34'-6"					CL502	246	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "	CL401	140	4	STR.	13'-7"				
	SH603	58	6	STR.	60'-0"					CL504	306	5	2	6'-4"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	1'-9"	CL402	60	4	STR.	14'-0"				
	SH606	58	6	STR.	55'-3"					CL505	306	5	1	8'-3"	4'-2"	0'-5 $\frac{1}{2}$ "	3'-7 $\frac{1}{2}$ "		CL501	246	5	1	5'-10"	2'-9 $\frac{1}{2}$ "	0'-9"	2'-3 $\frac{1}{2}$ "	
	CH401	20	4	STR.	13'-7"					SL401	156	4	STR.	40'-0"					CL502	246	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "
	CH403	60	4	STR.	13'-11"					SL402	78	4	STR.	20'-10"					CL504	306	5	2	6'-4"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	1'-9"
	CH419	126	4	STR.	8'-11"	1'-5 $\frac{1}{2}$ "				SL405	12	4	STR.	9'-9"					CL505	306	5	1	8'-3"	4'-2"	0'-5 $\frac{1}{2}$ "	3'-7 $\frac{1}{2}$ "	
	CH501	102	5	1	5'-10"	0'-9 $\frac{1}{2}$ "	0'-9"	2'-3 $\frac{1}{2}$ "		SL501	39	5	STR.	60'-0"					SP401	78	4	STR.	40'-0"				
	CH502	228	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "	SL502	39	5	STR.	32'-6"					SP403	39	4	STR.	35'-2"				
	CH510	126	5	STR.	4'-1"					SL503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"	SP405	12	4	STR.	9'-9"				
	CH511	126	5	4	3'-11"	3L1"	0'-10"			SL601	611	6	STR.	37'-11"					SP406	78	5	3	4'-3"	1'-7"	0'-9"	1'-2"	
	SJ401	117	4	STR.	40'-0"					SL602	611	6	STR.	34'-6"					SP501	78	5	1	5'-10"	2'-9 $\frac{1}{2}$ "	0'-9"	2'-3 $\frac{1}{2}$ "	
	SJ404	39	4	STR.	24'-10"					SL603	271	6	STR.	60'-0"					SP502	246	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "
	SJ405	12	4	STR.	9'-9"					SL604	58	6	STR.	50'-0"					SP503	306	5	2	6'-4"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	1'-9"
	SJ503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"	SL605	39	6	STR.	28'-7"					SP601	247	6	STR.	37'-11"				
	SJ601	206	6	STR.	37'-11"					CL401	140	4	STR.	13'-7"					SP602	247	6	STR.	34'-6"				
	SJ602	306	6	STR.	24'-6"					CL402	60	4	STR.	14'-0"					SP603	58	6	STR.	60'-0"				
	SJ603	116	6	STR.	60'-0"					CL501	246	5	1	5'-10"	2'-9 $\frac{1}{2}$ "	0'-9"	0'-3 $\frac{1}{2}$ "		SP606	58	6	STR.	55'-3"				
	SJ607	58	6	STR.	24'-3"					CL502	246	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "	CP405	20	4	STR.	10'-8"				
	CJ404	30	4	STR.	13'-0"					CL504	306	5	2	6'-4"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	1'-9"	CP406	60	4	STR.	12'-5"				
	CJ408	20	4	STR.	12'-8"					CL505	306	5	1	8'-3"	4'-2"	0'-5 $\frac{1}{2}$ "	3'-7 $\frac{1}{2}$ "		CP407	10	4	STR.	14'-5"				
	CJ409	70	4	STR.	12'-0"					SM401	156	4	STR.	40'-0"					CP501	99	5	1	5'-10"	2'-9 $\frac{1}{2}$ "	0'-9"	2'-3 $\frac{1}{2}$ "	
	CJ419	60	4	5	2'-11"	1'-5 $\frac{1}{2}$ "				SM402	78	4	STR.	20'-10"					CP502	99	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "
	CJ501	126	5	1	5'-10"	2'-9 $\frac{1}{2}$ "	0'-9"	2'-3 $\frac{1}{2}$ "		SM405	12	4	STR.	9'-9"					CP504	124	5	2	6'-4"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	1'-9"
	CJ502	186	5	2	6'-8"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-4"	1'-9 $\frac{1}{2}$ "	SM501	39	5	STR.	60'-0"					CP505	124	5	1	8'-3"	4'-2"	0'-5 $\frac{1}{2}$ "	3'-7 $\frac{1}{2}$ "	
	CJ504	43	5	2	6'-4"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	1'-9"	SM502	39	5	STR.	32'-6"					SM601	611	6	STR.	37'-11"				
	CJ505	43	5	1	8'-4 $\frac{1}{2}$ " TO 8'-10"	4'-2"	1'-0 $\frac{1}{2}$ "	1'-0 $\frac{1}{2}$ "	3'-7 $\frac{1}{2}$ "	SM503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"	SM602	611	6	STR.	34'-6"				
	CJ506	56	5	1	6'-6" TO 7'-0"	2'-11"	0'-7 $\frac{1}{2}$ "	1'-8"	1'-9 $\frac{1}{2}$ "	SM603	271	6	STR.	60'-0"					SM604	58	6						



** CUT SLAB REINFORCING TO CLEAR SCUPPER

PLAN - SPAN 1

SCALE: 1" = 10'-0"



TYPICAL SECTION

SCALE: 3/8" = 1'-0"

NOTES:

1. FOR BAR SCHEDULE, SEE SHEET 49
2. FOR SECTIONS D-D & E-E & EXPANSION DAM DETAILS, SEE SHEET 53
3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50
4. FOR MEDIAN SLAB DETAILS, SEE SHEETS 51 & 52
5. FOR CONSTRUCTION JOINT DETAILS, SEE STD. DWG. BC-325 A
6. FOR PERMANENT METAL DECK FORM DETAIL, SEE STD. DWG. BC-322 B
7. FOR SCUPPER DETAILS, SEE SHEET 54
8. CLEAN TOP OF GIRDERS BEFORE DECK SLAB IS Poured

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

SLAB PLAN - SPAN 1 WB

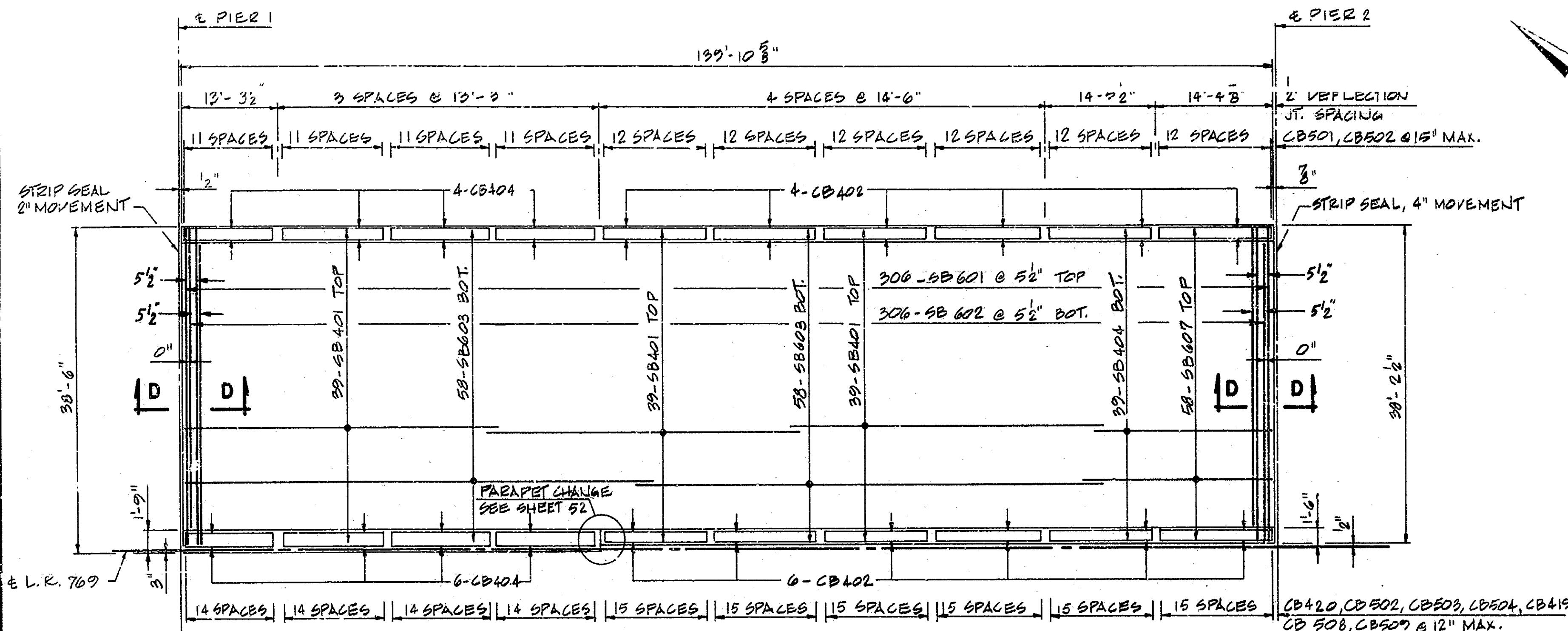
RECOMMENDED MAY 31 1986

SHEET 42 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

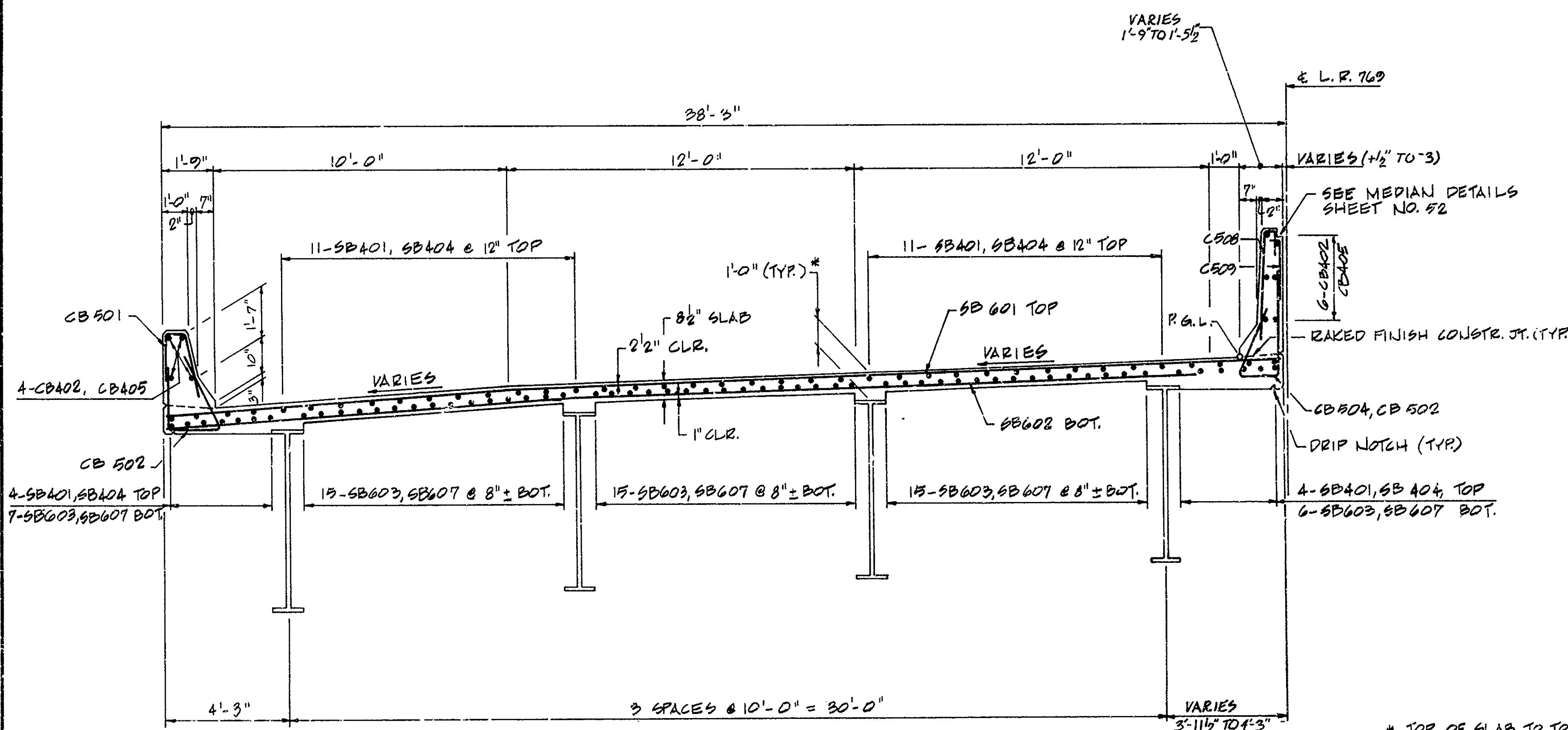
S-16093A

DESIGNED BY: CEE
DRAWN BY: CEE
CHECKED BY: CEE



PLAN - SPAN 2

SCALE: 1" = 10'-0"



HALF SECTION AT MIDSPEC

HALF SECTION AT INTERMEDIATE PIER

TYPICAL SECTION

SCALE: 3/8" = 1'-0"

- NOTES
1. FOR BAR SCHEDULE, SEE SHEET 49
 2. FOR SECTION D-D & EXPANSION DAM DETAILS, SEE SHEET 53
 3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50
 4. FOR MEDIAN SLAB DETAILS, SEE SHEETS 51 & 52
 5. FOR CONSTRUCTION JOINT DETAILS, SEE STD. DNG. BC-335 A
 6. FOR PERMANENT METAL DECK FORMS DETAIL, SEE STD. DNG. BC-332 B
 7. CLEAN TOP OF GIRDERS BEFORE DECK SLAB IS POURED

* TOP OF SLAB TO TOP OF WEB & BEARING

Mark	Description	By	Chkd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

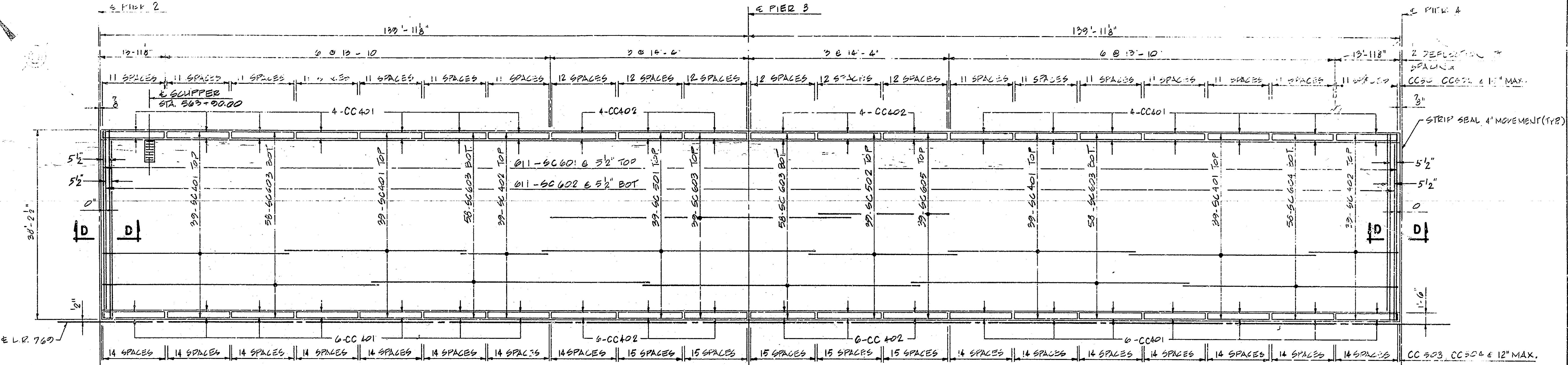
SLAB PLAN - SPAN 2 WB

RECOMMENDED MAY 31 1988

SHEET 43 OF 66

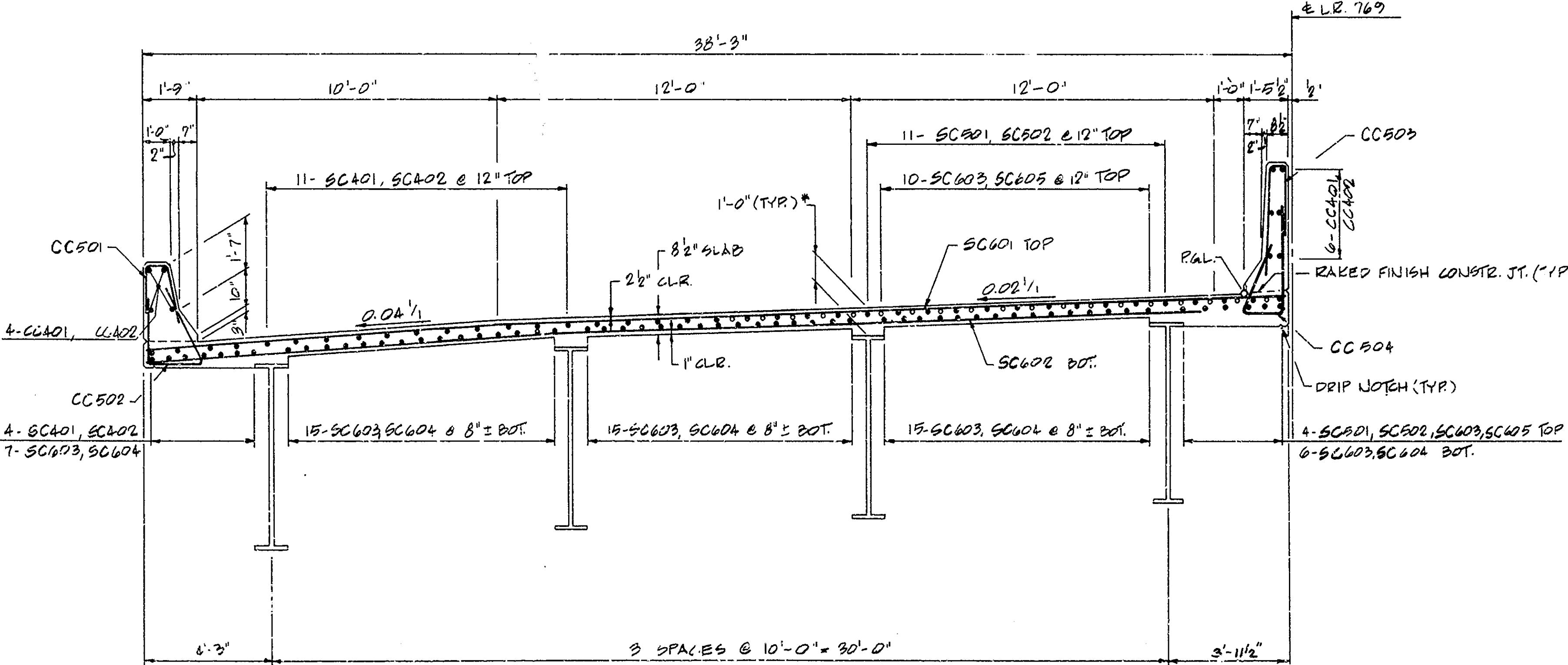
DESIGNED BY: E.P.
DRAWN BY: S.P.F.
CHECKED BY: S.J.Y.

Exhibit 2



PLAN-SPANS 3-4

SCALE: 1" = 10'-0"



HALF SECTION AT MIDSPAN

HALF SECTION AT INTERMEDIATE PIECE

TYPICAL SECTION

SCALE: 3/8" = 1'-0"

DECK POURING SEQUENCE
NOT TO SCALE

* NOTE: CONCRETE IN POUR 1 MUST ACHIEVE ITS 7 DAY STRENGTH BEFORE POUR 2 IS MADE UNLESS POUR 2 IS MADE WHILE POUR 1 IS STILL PLASTIC.

- NOTES:

 1. FOR BAR SCHEDULE, SEE SHEET 49
 2. FOR SECTION D-D & EXPANSION DAM DETAILS,
SEE SHEET 53
 3. FOR PARAPET & MEDIAN BARRIER DETAILS,
SEE SHEET 50
 4. FOR CONSTRUCTION JOINT DETAILS, SEE
STD. DWG. BG-335 A
 5. FOR PERMANENT METAL DECK FORM
DETAIL, SEE STD. DWG., BG-332 B
 6. CLEAN TOP OF GIRDERS BEFORE DECK
SLAB IS POURED

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

MONTGOMERY COUNTY
I.B. 769 & I.B. 67057 SEC. 300

LINE OVER CONBAU AND ABANDONED S.

11 SPAN STEEL MULTI-GIBRER BRIDGE

STRUCTURE REPLACEMENT - CAST IN PLACE

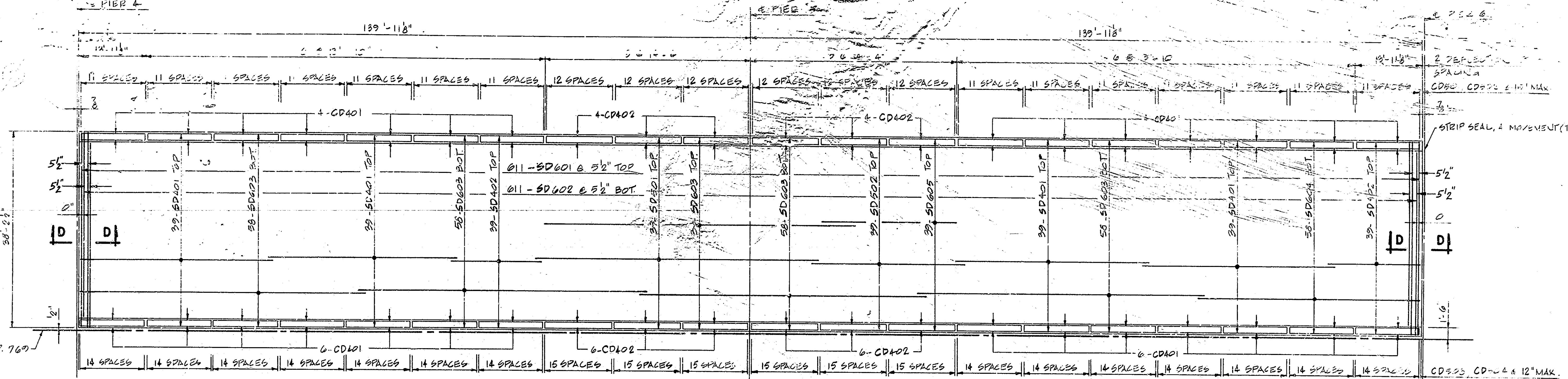
SLAB PLAN - SPANS 3-4 WB

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Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA - PA.

RECOMMENDED MAY 21 1996

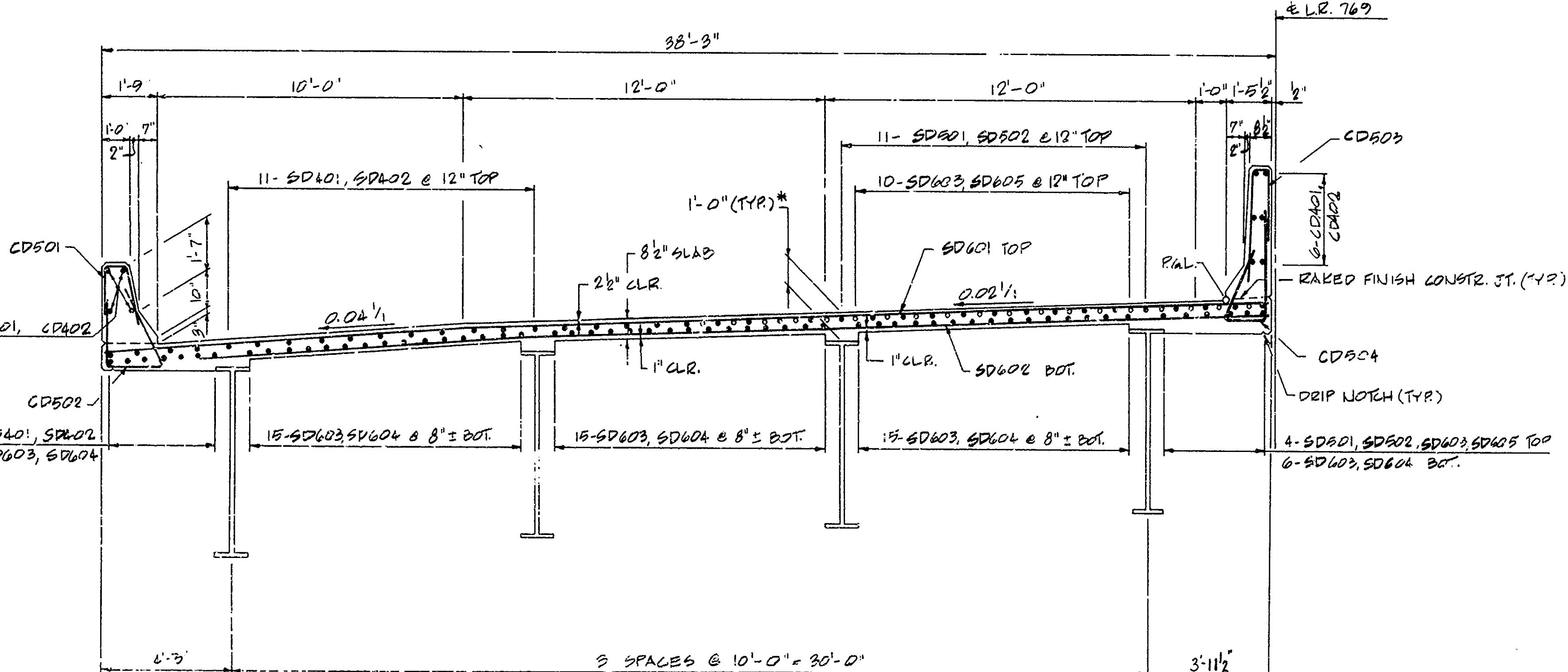
SHEET 44 OF 66

S-16093A



PLAN - SPANS 5-6

SCALE: 1" = 10'-0"

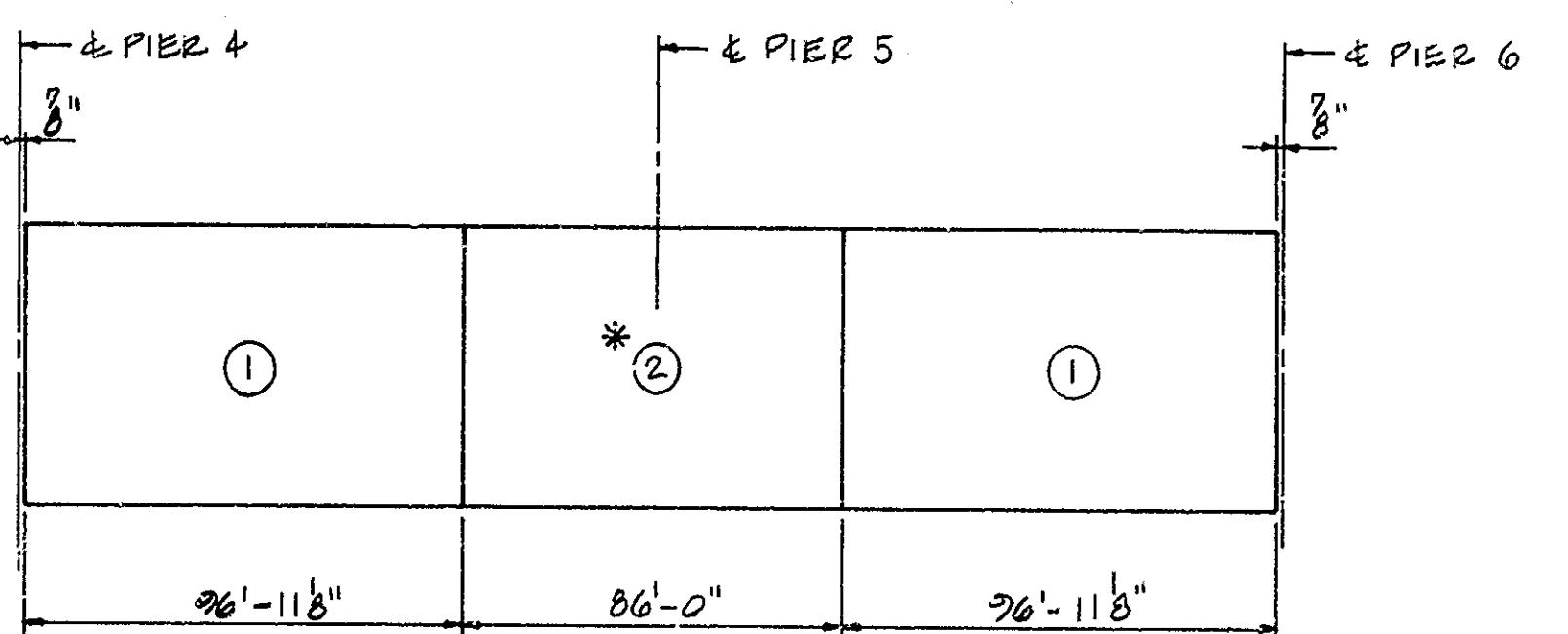


HALF SECTION AT MIDSPAN

HALF SECTION AT INTERMEDIATE PIER

TYPICAL SECTION
SCALE: 3/8" = 1'-0"

* TOP OF SLAB TO TOP OF WEB & BEARING



* FOR NOTE SEE SHEET 44.

DECK POURING SEQUENCE
NOT TO SCALE

NOTES:

1. FOR BAR SCHEDULE, SEE SHEET 49
2. FOR SECTION D-D & EXPANSION DAM DETAILS, SEE SHEET 53
3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50
4. FOR CONSTRUCTION JOINT DETAILS, SEE STD. Dwg. BC-335 A
5. FOR PERMANENT METAL DECK FORM DETAIL, SEE STD. Dwg. BC-332 B
6. CLEAN TOP OF GIRDERS BEFORE DECK SLAB IS POURED

Mark	Description	By	Chk'd	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

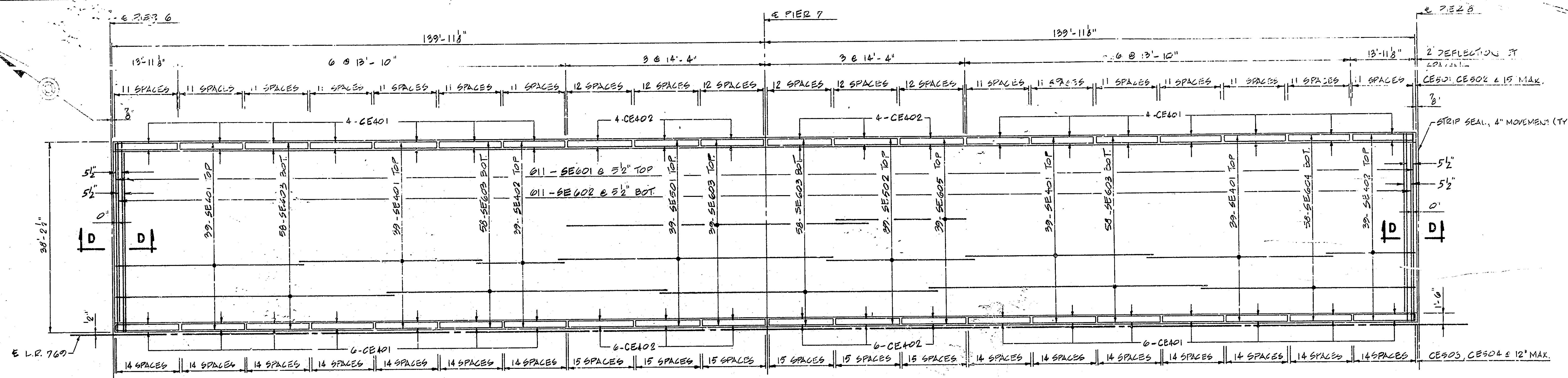
II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

SLAB PLAN - SPANS 5-6 WB

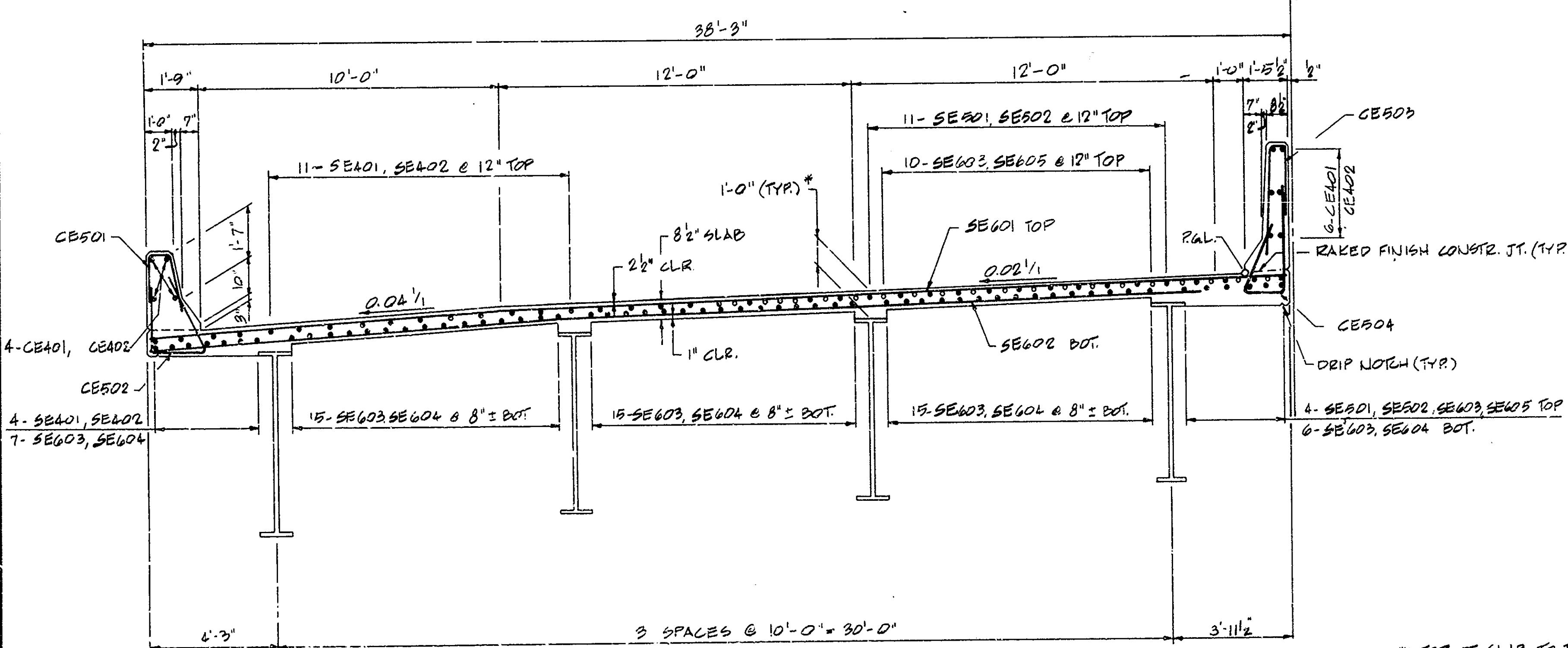
RECOMMENDED _____

Sheet 45 of 66



PLAN - SPANS 7-8

SCALE: 1" = 10'-0"

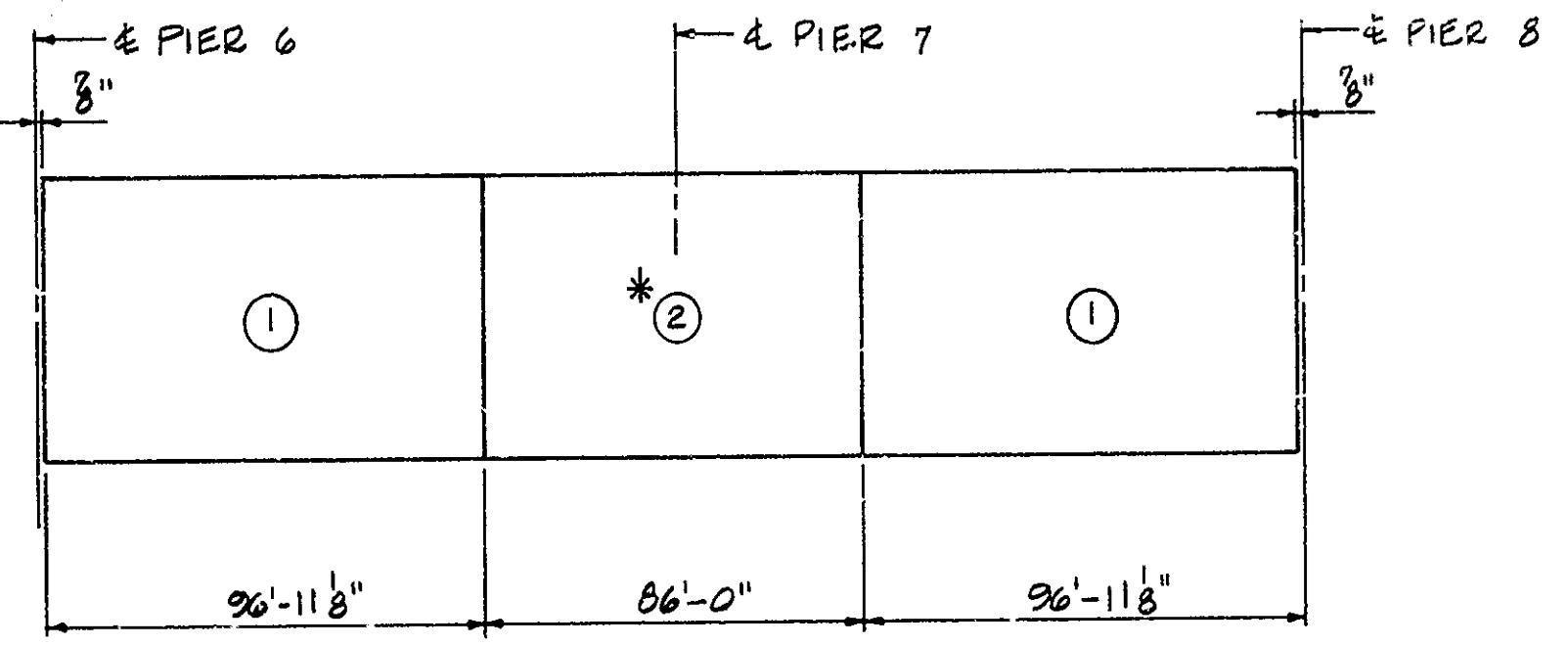


HALF SECTION AT MIDSPAN

HALF SECTION AT INTERMEDIATE PIER

TYPICAL SECTION

SCALE: 3/8" = 1'-0"



* FOR NOTE SEE SHEET 14.

DECK POURING SEQUENCE
NOT TO SCALE

NOTES:

1. FOR BAR SCHEDULE, SEE SHEET 49
2. FOR SECTION D-D & EXPANSION DAM DETAILS, SEE SHEET 53
3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50
4. FOR CONSTRUCTION JOINT DETAILS, SEE STD. DWG. BC-335 A
5. FOR PERMANENT METAL DECK FORM DETAIL, SEE STD. DWG. BC-332 B
6. CLEAN TOP OF GIRDERS BEFORE DECK SLAB IS Poured

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

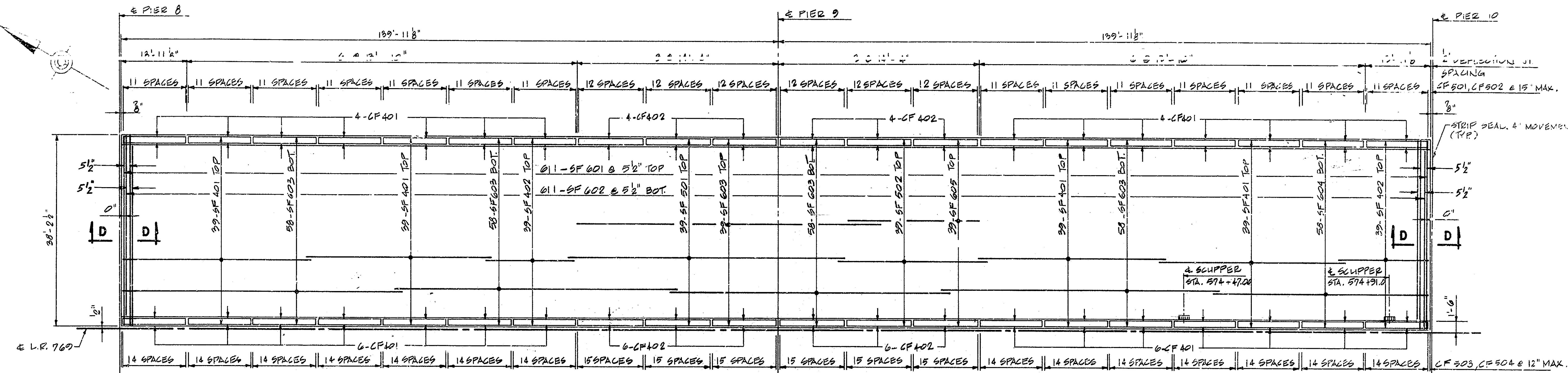
SLAB PLAN - SPANS 7-8 W.B.

RECOMMENDED MAY 31 1985

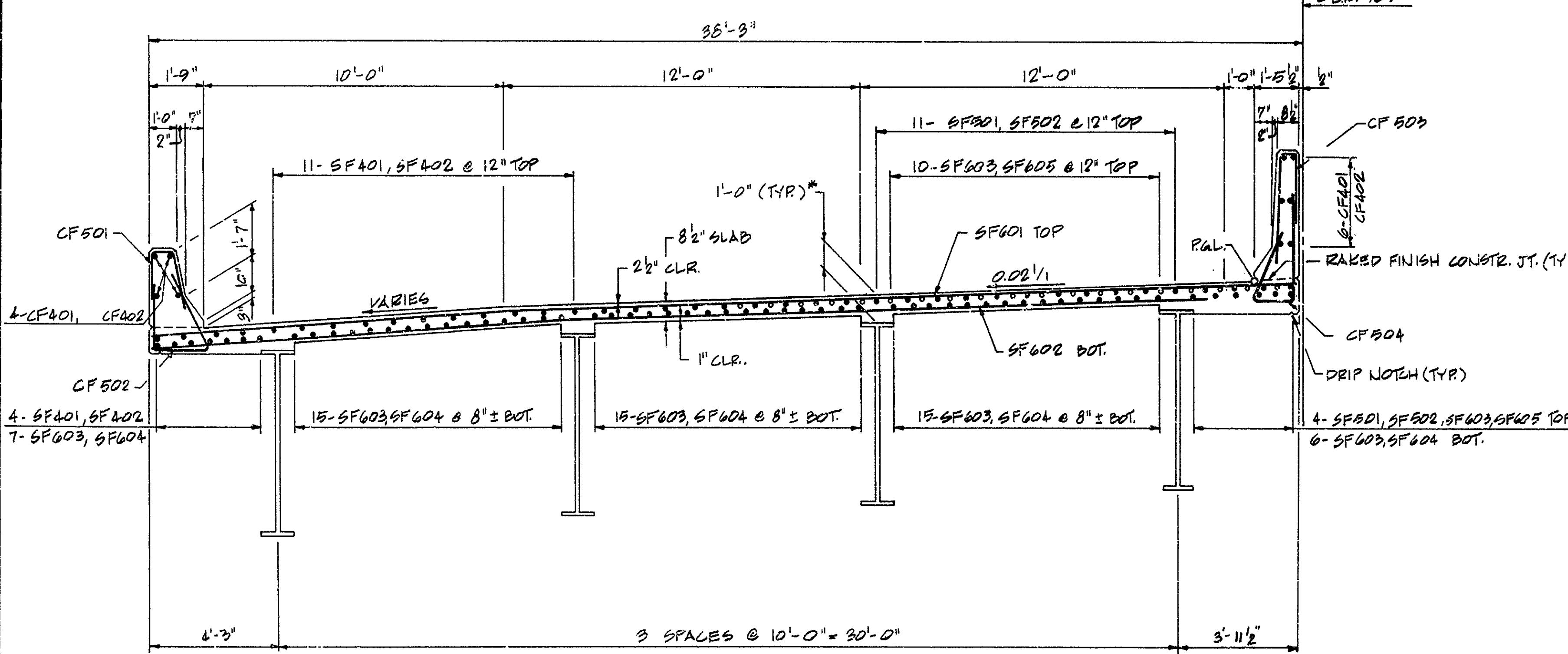
SHEET 46 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

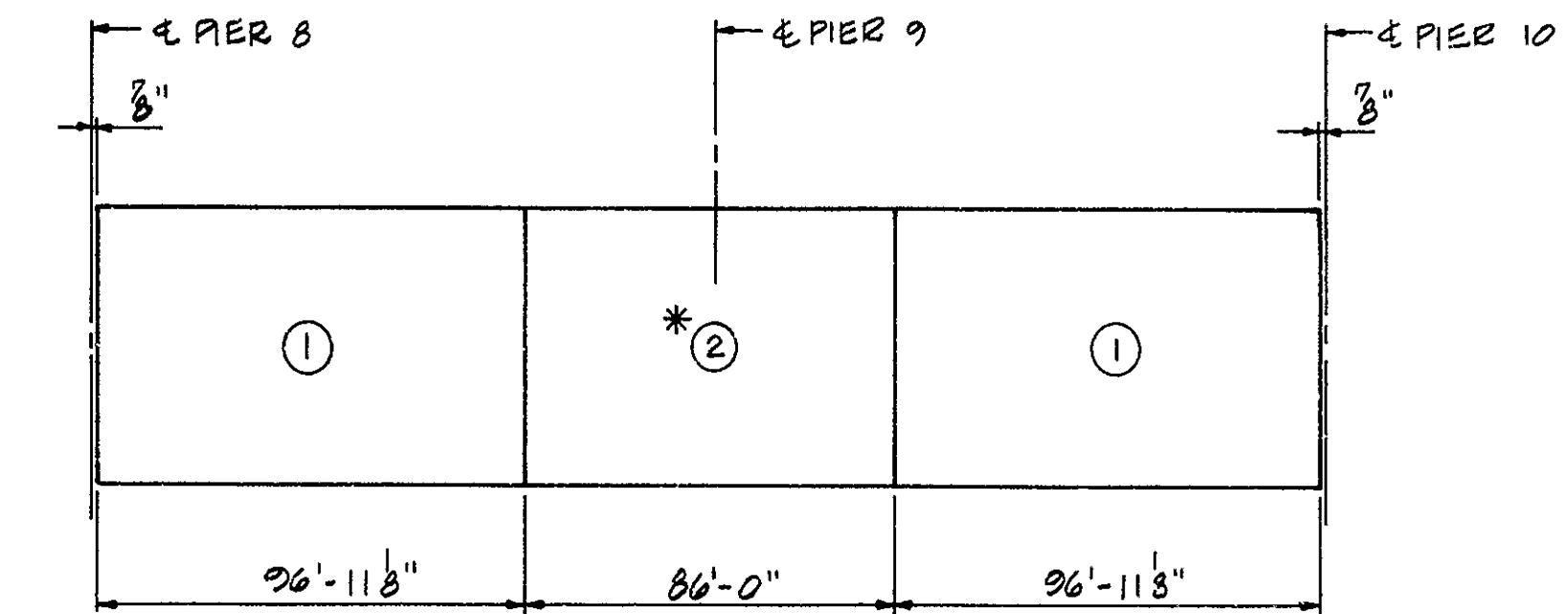
S-16093A

**PLAN-SPANS 9-10**

SCALE: 1" = 10'-0"

HALF SECTION AT MIDSPANHALF SECTION AT INTERMEDIATE PIER**TYPICAL SECTION**

SCALE: 3/8" = 1'-0"



* FOR NOTE SEE SHEET 44

DECK POURING SEQUENCE
NOT TO SCALE**NOTES:**

1. FOR BAR SCHEDULE, SEE SHEET 49
2. FOR SECTION D-D & EXPANSION DAM DETAILS SEE SHEET 53
3. FOR PARAPET & MEDIAN BARRIER DETAILS, SEE SHEET 50
4. FOR CONSTRUCTION JOINT DETAILS, SEE STD. DWG. BC-335 A
5. FOR PERMANENT METAL DECK FORM DETAIL, SEE STD. DWG. BC-332 B
6. CLEAN TOP OF GIRDERS BEFORE DECK SLAB IS POURED

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of PennsylvaniaDEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
11 SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
SLAB PLAN - SPANS 9-10 W.B.

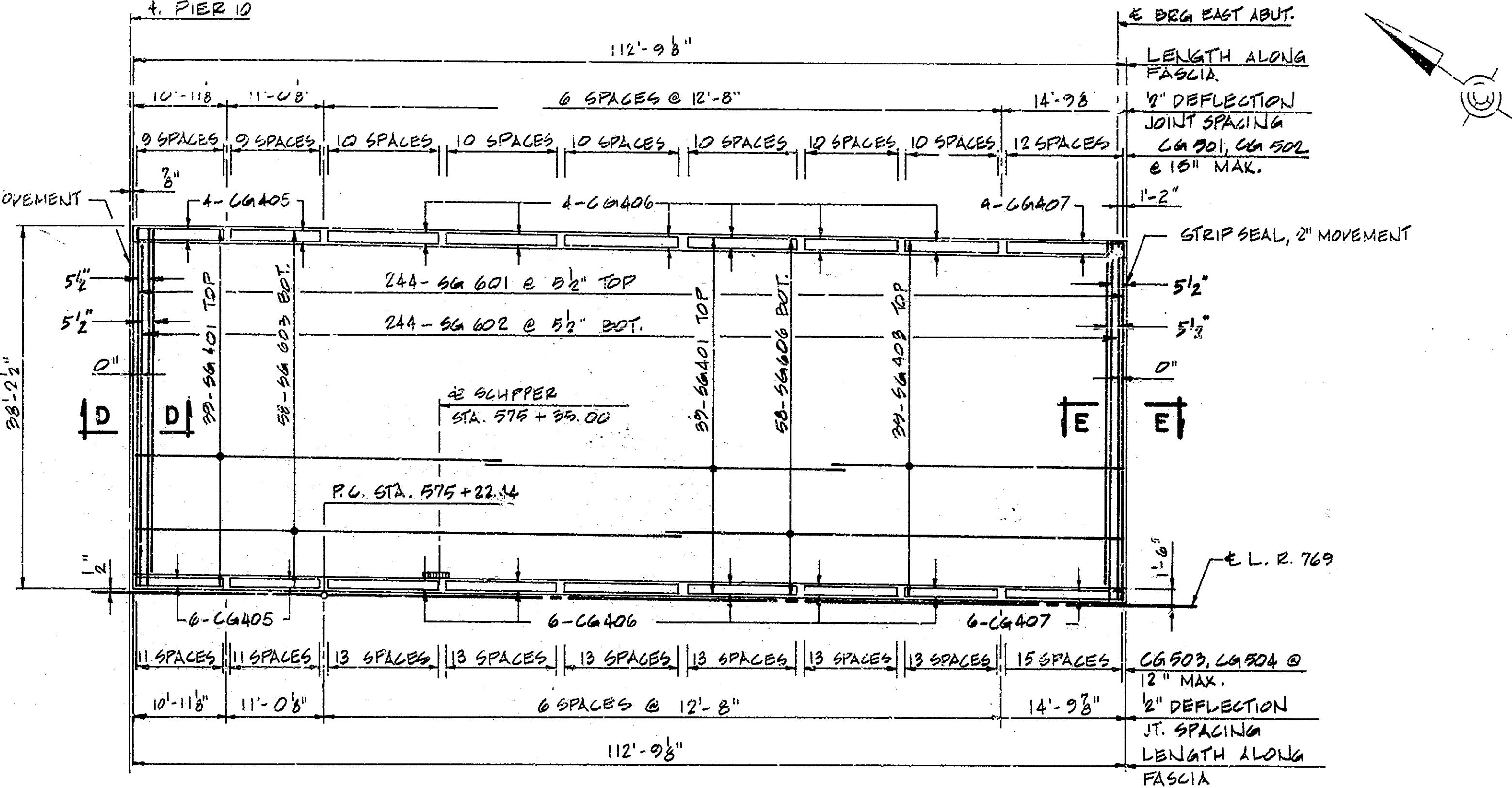
RECOMMENDED MAY 31 1995

SHEET 47 OF 66

PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

S-16093A

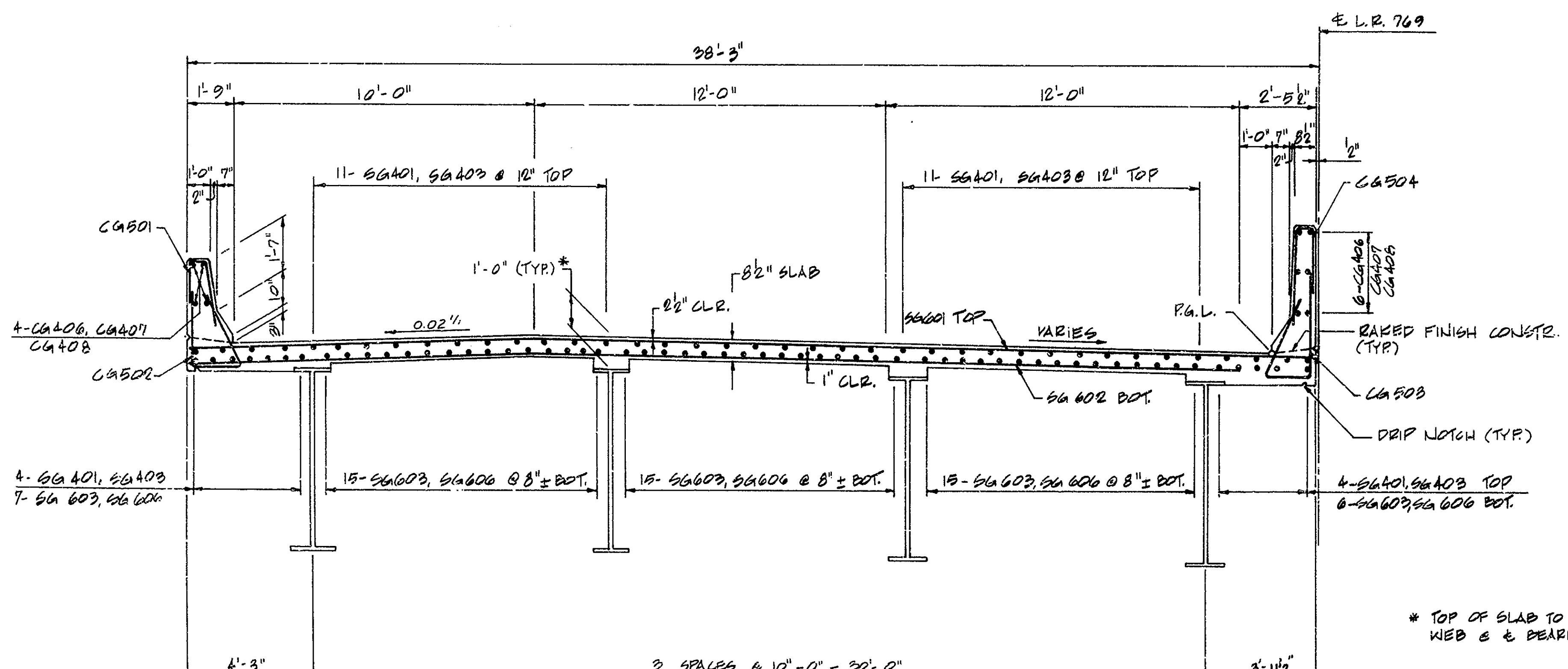
STRIP SEAL, 4' MOVEMENT



PLAN - SPAN 1

SCALE : 1" = 10'-0"

DESIGNED BY: E.E.
DRAWN BY: S.R.F.
CHECKED BY: S.J.V.



HALF SECTION AT MIDSPAN

HALF SECTION AT INTERMEDIATE

TYPICAL SECTION

SCALE: 3/B" = 1'

1. FOR BAR SCHEDULE, SEE SHEET 49
 2. FOR SECTION D-D & E-E & EXPANSION DAM DETAILS, SEE SHEET 53.
 3. FOR PARAPET & MEDIAN BARRIER DETAILS
SEE SHEET 50
 4. FOR CONSTRUCTION JOINT DETAILS, SEE
STD. DWG. BC-335 A
 5. FOR PERMANENT METAL DECK FORM
DETAIL, SEE STD. DWG., BC-332 B
 6. CLEAN TOP OF GIRDERS BEFORE DECK
SLAB IS POURED

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

BUREAU OF HIGHWAY DESIGN
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
11 SPAN STEEL MULTI-GIRDER BRIDGE
RESTRUCTURE REPLACEMENT - CAST IN PLACE DE
SLAB PLAN - SPAN 11 W.B.

PREPARED BY
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KING OF PRUSSIA, PA

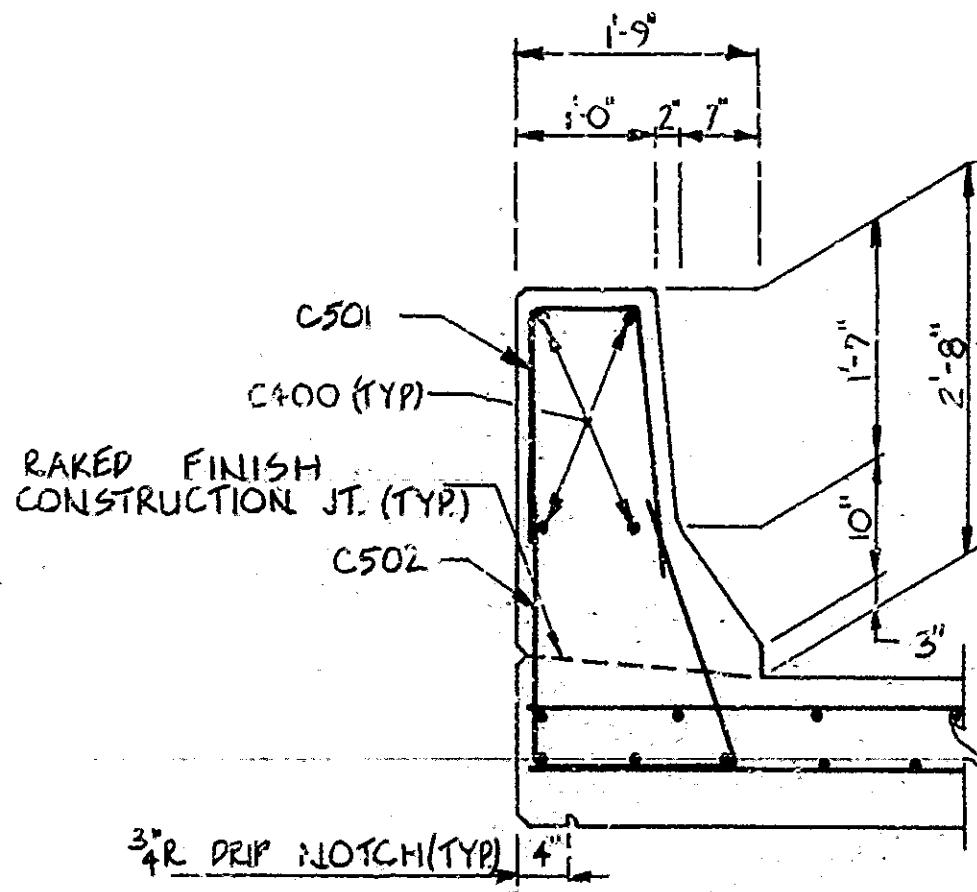
RECOMMENDATION May 21, 19

SHEET 48 OF 66

S-16093A

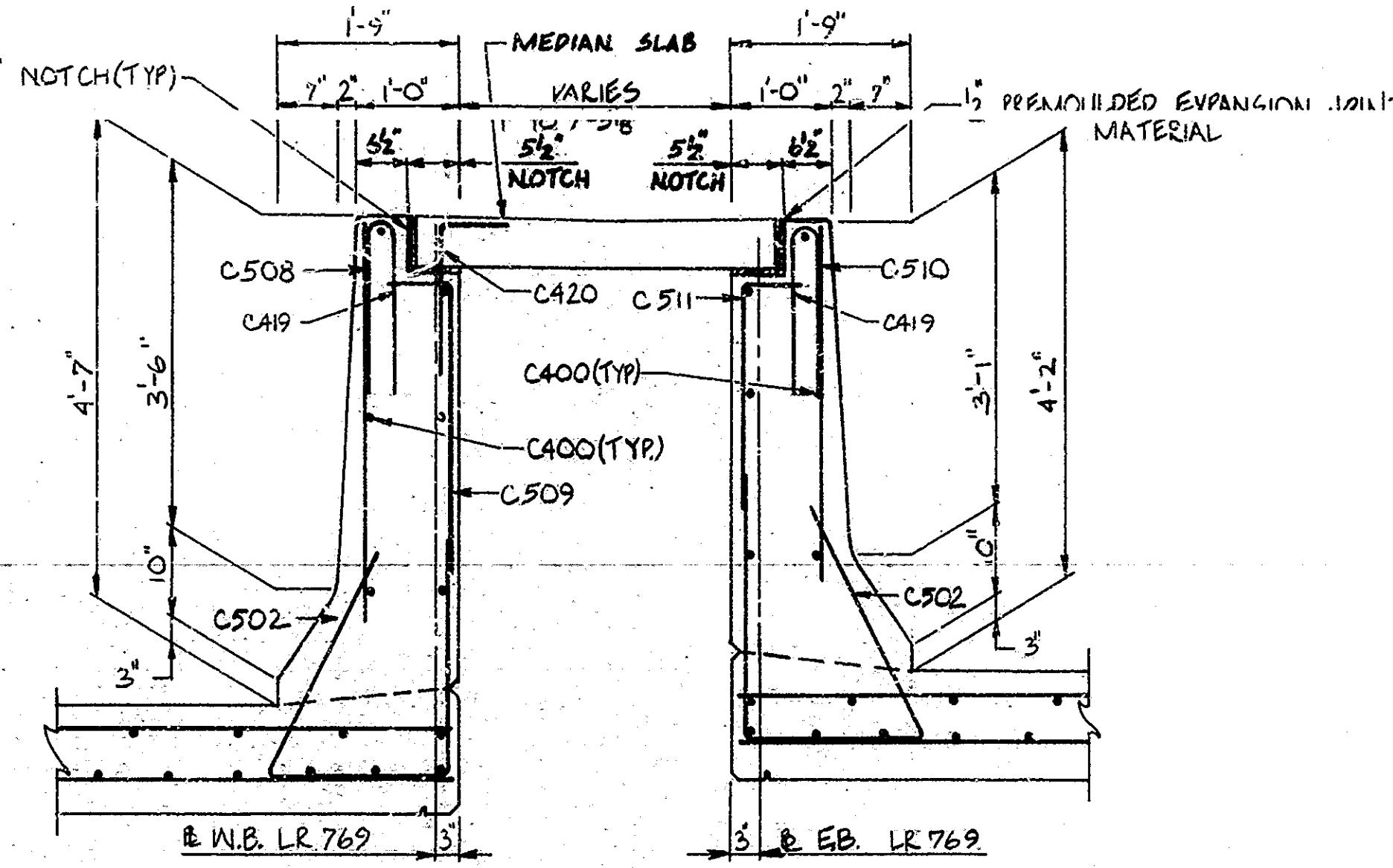
REINFORCEMENT BAR SCHEDULE *

LOC.	MARK	NO. REQ'D	SIZE	TYPE	LENGTH	DIMENSIONS (OUT TO OUT)				REMARKS	LOC.	MARK	NO. REQ'D	SIZE	TYPE	LENGTH	DIMENSIONS (OUT TO OUT)				LOC.	MARK	NO. REQ'D	SIZE	TYPE	LENGTH	DIMENSIONS (OUT TO OUT)				REMARKS
						A	B	C	D								A	B	C	D							A	B	C	D	
SPAN 1	SA 401	78	4	STR.	40'-0"						SPANS 3 & 4 (CONT.)	CC 401	140	4	STR.	13'-7"					SPANS 9 & 10	SF 502	39	5	STR.	32'-6"					
	SA 403	39	4	STR.	35'-2"							CC 402	60	4	STR.	14'-0"						SF 503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"	
	SA 405	2	4	STR.	9'-9"																	SF 601	611	6	STR.	37'-11"					
	SA 503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"	ADDITIONAL SCUPPER REINF.		CC 501	246	5	1	5'-10"	2'-9 1/2"	0'-9"	2'-3 1/2"			SF 602	611	6	STR.	34'-6"					
	SA 504	8	5	STR.	7'-9"					ADDITIONAL SCUPPER REINF.		CC 502	246	5	2	6'-8"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"		SF 603	271	6	STR.	60'-0"					
	SA 505	8	5	STR.	6'-3"					ADDITIONAL SCUPPER REINF.		CC 503	306	5	1	8'-11"	4'-6"	0'-5 1/2"	3'-11 1/2"			SF 604	58	6	STR.	50'-0"					
	SA 506	16	5	STR.	4'-0"					ADDITIONAL SCUPPER REINF.		CC 504	306	5	2	6'-4"	2'-11"	0'-7 1/2"	1'-0 1/2"	1'-9"		SF 605	39	6	STR.	28'-7"					
	SA 601	247	6	STR.	37'-11"															CF 401	140	4	STR.	13'-7"							
	SA 602	247	6	STR.	34'-6"							SD 401	150	4	STR.	40'-0"					CF 402	60	4	STR.	14'-0"						
	SA 603	58	6	STR.	60'-0"							SD 402	78	4	STR.	20'-10"															
	SA 606	58	6	STR.	55'-3"							SD 405	12	4	STR.	9'-9"															
SPAN 2	CA 401	60	4	STR.	13'-7"						SPANS 5 & 6	SD 501	39	5	STR.	60'-0"					SPAN II	CF 501	246	5	1	5'-11"	2'-9 1/2"	0'-9"	2'-3 1/2"		
	CA 407	20	4	STR.	14'-5"							SD 502	39	5	2	6'-8"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"		CF 502	246	5	2	6'-8"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"	
	CA 419	122	4	5	2'-11"	1'-5 1/2"			0'-3"	J=4"		SD 503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"		CF 503	306	5	1	8'-11"	4'-6"	0'-5 1/2"	3'-11 1/2"		
	CA 420	122	4	4	2'-0 1/2"	1'-4 1/2"	0'-8"			MEDIAN SLAB REINFORCEMENT		SD 504	306	5	2	6'-4"	2'-11"	0'-7 1/2"	1'-0 1/2"	1'-0"		CF 504	306	5	2	6'-4"	2'-11"	0'-7 1/2"	1'-0 1/2"	1'-0"	
	CA 501	98	5	1	5'-0"	2'-9 1/2"	0'-9"	2'-3 1/2"												SG 401	78	4	STR.	40'-0"							
	CA 502	220	5	2	6'-13"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"											SG 403	39	4	STR.	35'-2"							
	CA 508	122	5	STR.	4'-6"															SG 405	12	4	STR.	9'-9"							
	CA 509	122	5	4	4'-4"	3'-6"	0'-10"													SG 503	78	5	3	4'-3"	1'-7"	0'-9"	0'-9"	1'-2"			
	CB 401	60	4	STR.	14'-0"															SG 601	247	6	STR.	37'-11"							
	CB 404	40	4	STR.	13'-0"															SG 602	247	6	STR.	34'-6"							
SPAN 2	CB 419	60	4	5	2'-11"	1'-5 1/2"			0'-3"	J=4"	SPANS 7 & 8	CD 501	246	5	1	5'-10"	2'-9 1/2"	0'-9"	2'-3 1/2"		SPAN II	CG 401	246	5	1	5'-10"	2'-9 1/2"	0'-9"	2'-3 1/2"		
	CB 420	60	4	4	2'-0 1/2"	1'-4 1/2"	0'-8"			MEDIAN SLAB REINFORCEMENT		CD 502	246	5	2	6'-8"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"		CG 402	60	4	STR.	12'-5"					
	CB 501	126	5	1	5'-10"	2'-9 1/2"	0'-9"	2'-3 1/2"				CD 503	306	5	1	8'-11"	4'-6"	0'-5 1/2"	3'-11 1/2"			CG 407	10	4	STR.	14'-5"					
	CB 502	166	5	2	6'-8"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"			CD 504	306	5	2	6'-4"	2'-11"	0'-7 1/2"	1'-0 1/2"	1'-0"		CG 501	99	5	1	5'-10"	2'-9 1/2"	0'-9"	2'-3 1/2"		
	CB 503	96	5	1	8'-11"	4'-6"	0'-5 1/2"	3'-11 1/2"				SE 401	150	4	STR.	40'-0"						CG 502	99	5	2	6'-8"	2'-11"	0'-7 1/2"	1'-4"	1'-9 1/2"	
	CB 504	96	5	2	6'-4"	2'-11"	0'-7 1/2"	1'-0 1/2"	1'-9"			SE 402	78	4	STR.	20'-10"						CG 503	124	5	1	8'-11"	4'-6"	0'-5 1/2"	3'-11 1/2"		
	CB 508	60	5	STR.	4'-6"							SE 405	78	4	STR.	9'-9"						CG 504	124	5	2	6'-4"	2'-11"	0'-7 1/2"	1'-0 1/2"	1'-0"	
	CB 509	60	5	4	4'-4"	3'-6"	0'-10"																								
SPAN 3	SC 401	136	4	STR.	40'-0"																										



TYPICAL PARAPET DETAIL

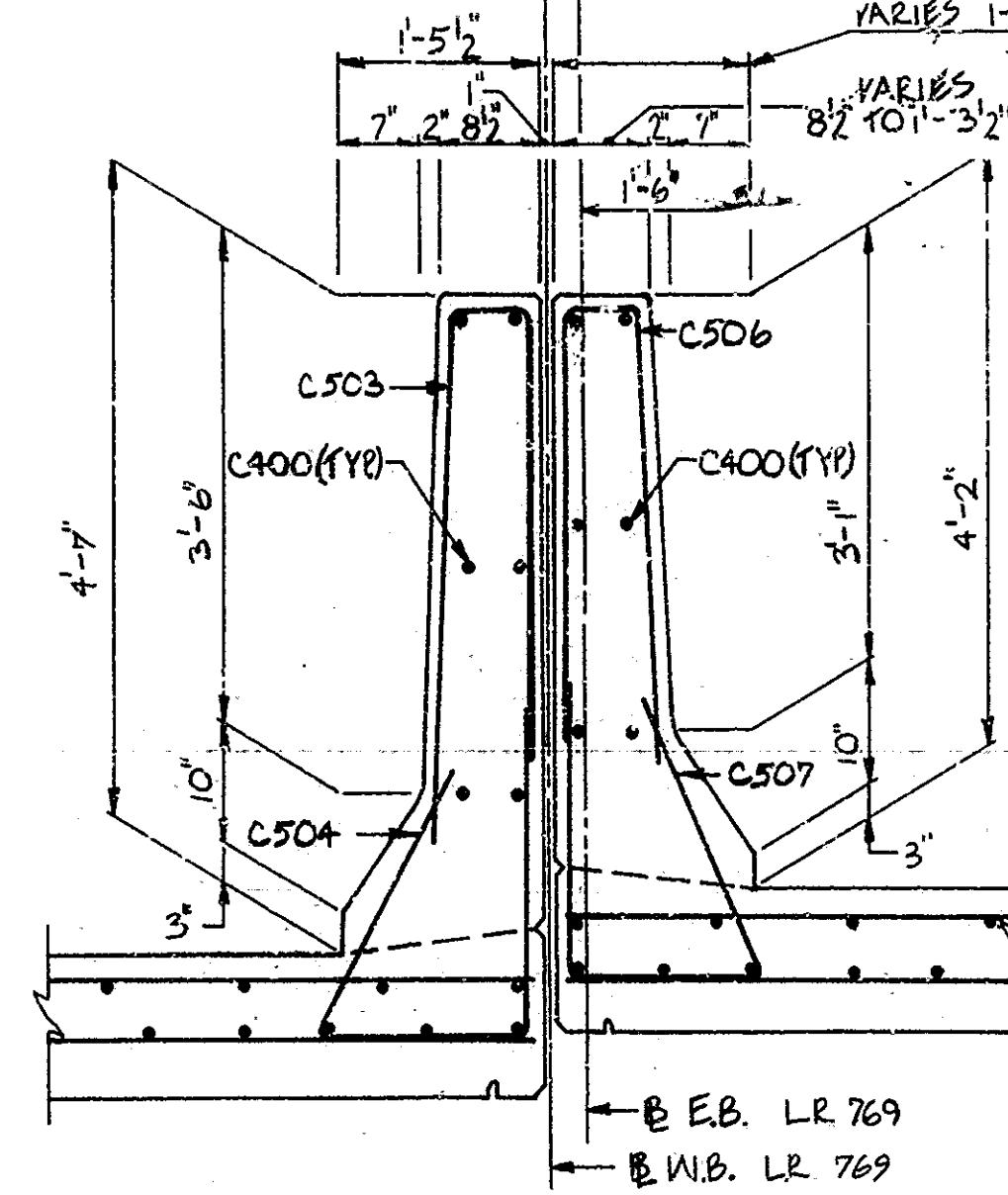
SCALE: 3/4"=1'-0"



MEDIAN BARRIER DETAIL

STA. 561+27.59 TO STA. 562+93.52 W.B.
STA. 561+40.35 TO STA. 563+06.46 E.B.

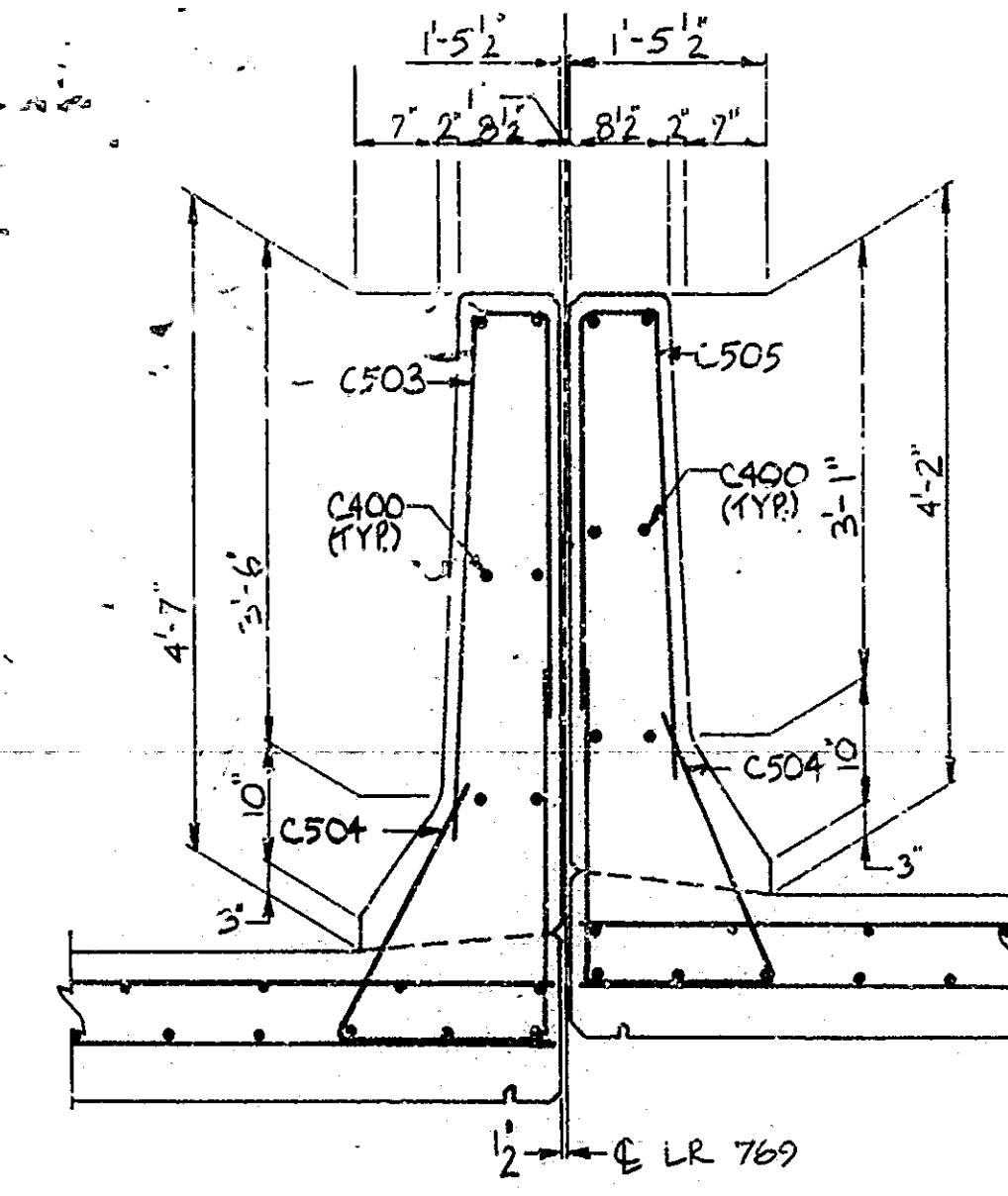
SCALE: 3/4"=1'-0"



MEDIAN BARRIER DETAIL

STA. 562+93.52 TO STA. 563+55.32 W.B.
STA. 563+06.46 TO STA. 563+68.26 E.B.

SCALE: 3/4"=1'-0"



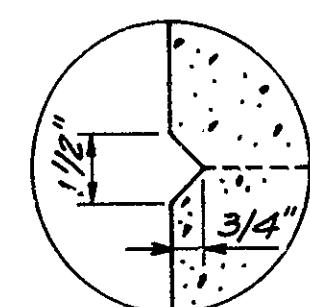
MEDIAN BARRIER DETAIL

STA. 563+55.32 TO STA. 576+1327 W.B.
STA. 563+55.32 TO STA. 576+1327 E.B.

SCALE: 3/4"=1'-0"

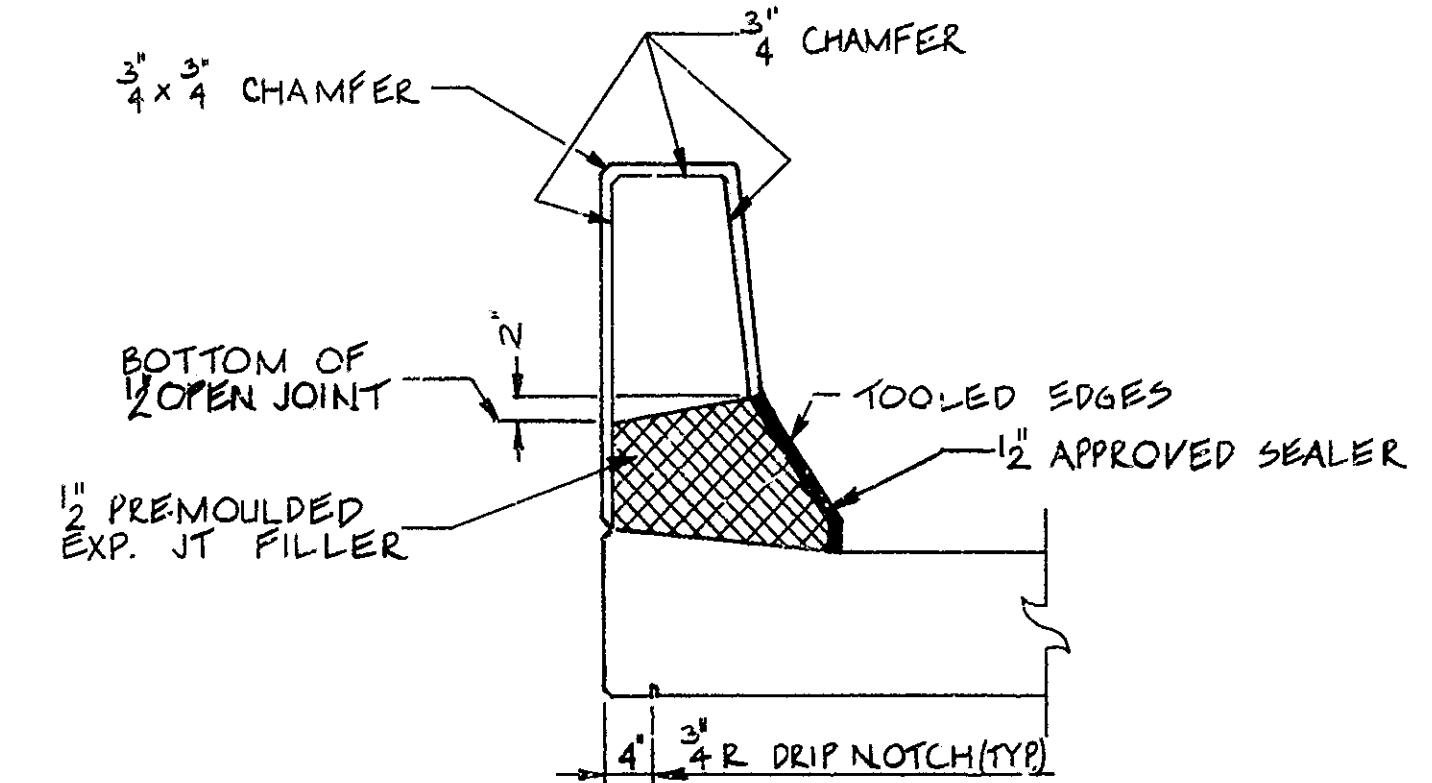
NOTES:

- FOR MEDIAN SLAB DETAILS, SEE SHEETS 51 & 52



V-NOTCH DETAIL

SCALE: 3"=1'-0"



1/2" DEFLECTION JOINT DETAIL

SCALE: 3/4"= 1'-0"

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

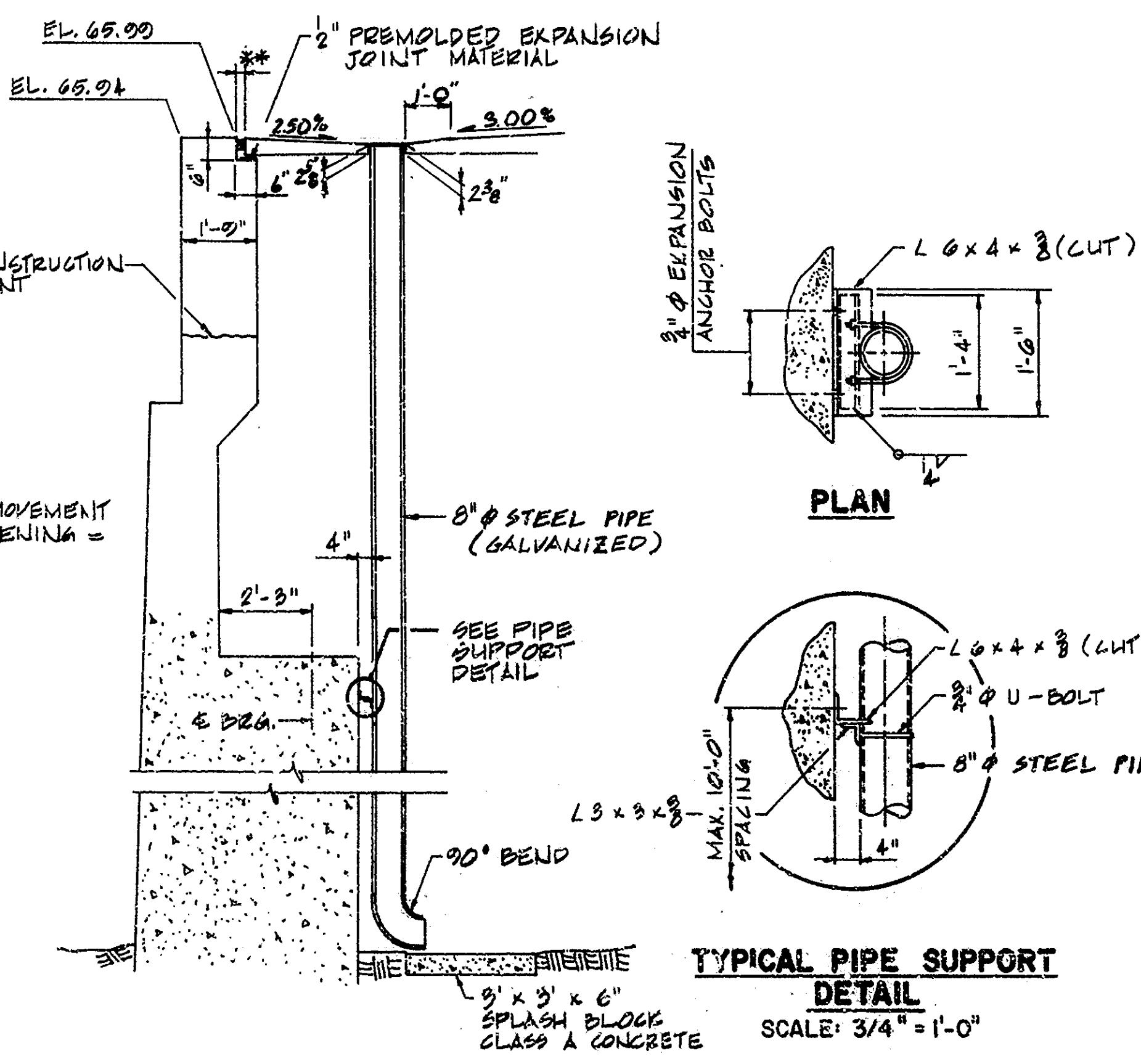
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

SLAB DETAILS

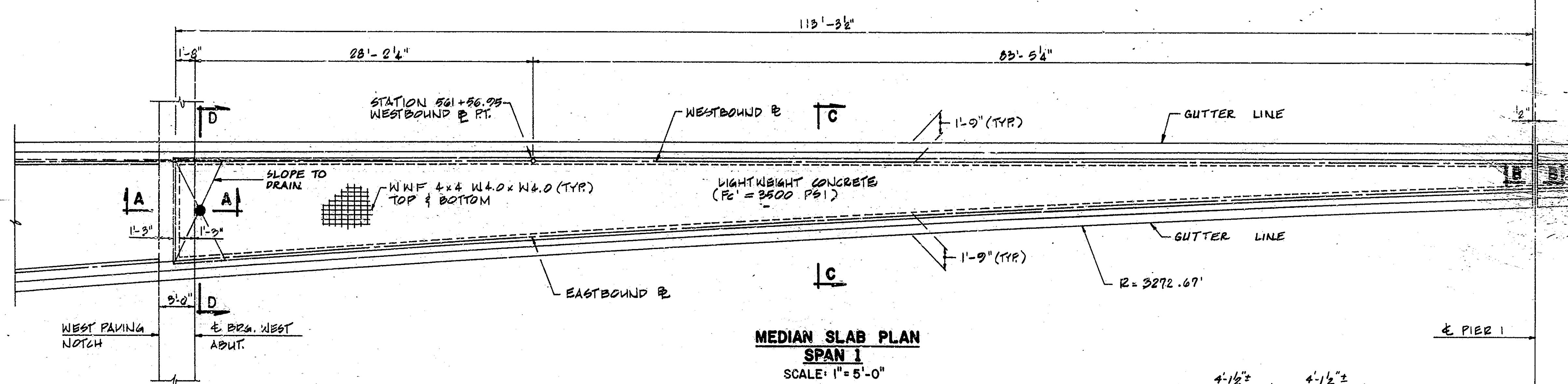
RECOMMENDED MAY 11 1985

SHEET 50 OF 66

DESIGNED BY: NJC
DRAWN BY: SEF
CHECKED BY: EEB



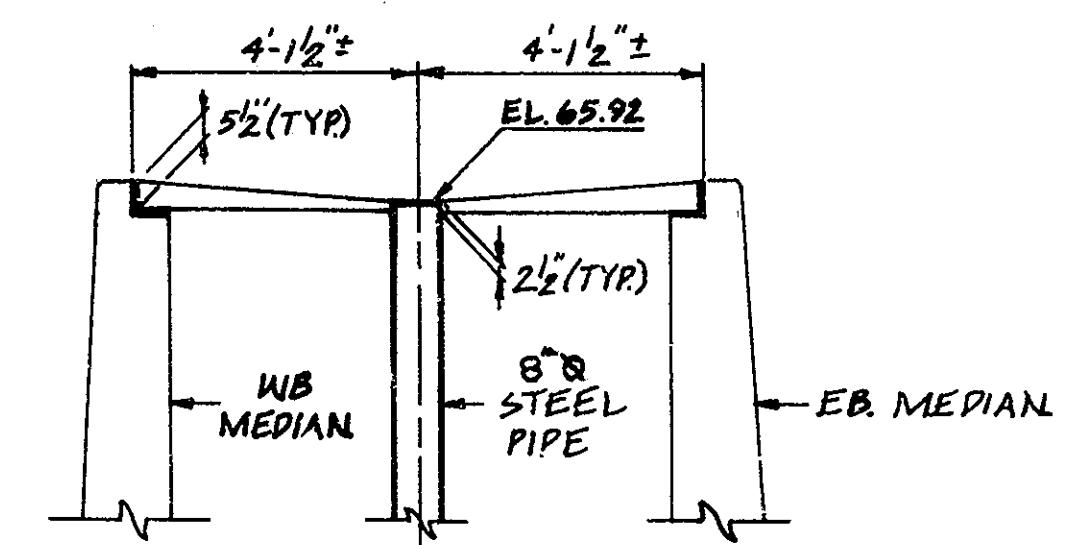
SECTION A-A



MEDIAN SLAB PLATE

SCALE: 1" = 5'-0"

LOCATION	WBL STATION	PERPENDICULAR OFFSET FROM THE REAR OF THE WESTBOUND MEDIAN TO THE REAR OF THE EASTBOUND MEDIAN
FACE OF EXTENDED W. ABUT.	561 + 27.51	7'-5 ¹ / ₈ "
WEST & BEARING	561 + 28.76	7'-4 ³ / ₁₆ "
PIER 1	562 + 40.43	1'-6 ³ / ₁₆ "
MEDIAN TRANSITION	562 + 93.52	0'-1"
EASTBOUND B. PT.	563 + 55.32	0'-1"



SECTION D-D
SCALE 3/8"-1'-0"

NOTES:

1. SEE SHEET NO. 52 FOR SECTION C-C
2. FOR MEDIAN BARRIER DETAILS SEE SHEET 52

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

**DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN**

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
STRUCTURE REPLACEMENT - CAST IN PLACE DE
MEDIAN SLAB - SPAN I

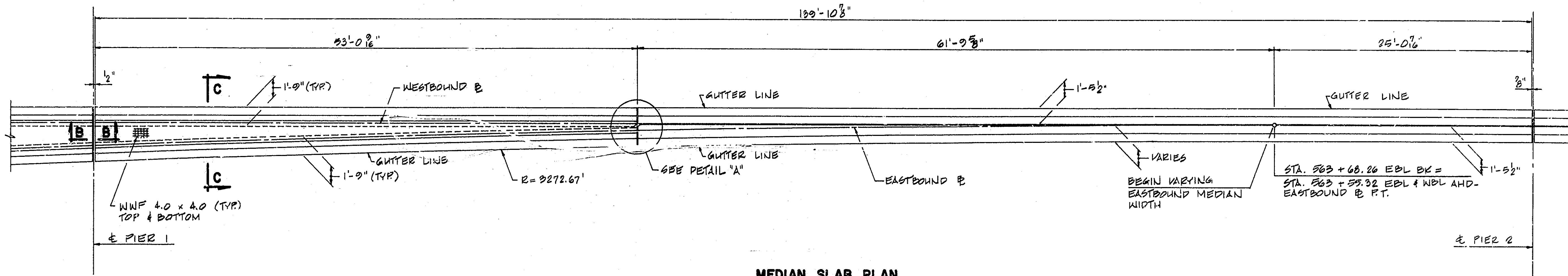
PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

RECOMMENDED **MAY 31, 1985**

SHEET 51 OF 66

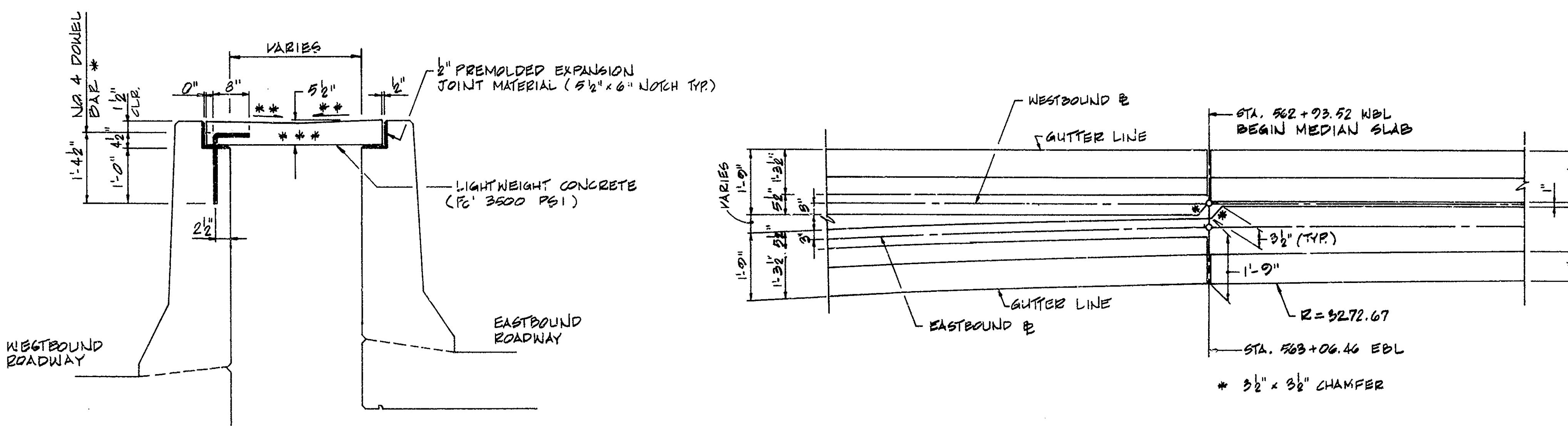
S-16093-A

OWN BY: SBF
CHECKED BY: CER



MEDIAN SLAB PLATE

SCALE: 1" = 5'-0"



- * NO. 4 DOWEL BARS @ 15" MAX. SPACING
- ** SLOPE MEDIAN SLAB @ 0.02 V. TO DRAIN
- *** SEE SECTION B - B FOR MEDIAN SLAB REINFORCING DETAILS.

SECTION C-C

SCALE: 3/4" = 1'-0"

DETAIL "A"

PREPARED BY
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CONSULTING ENGINEERS
KING OF PRUSSIA, PA

NOTES:

1. SEE SHEET 51 FOR SECTION B-B
 2. SEE SHEETS 41 & 49 FOR MEDIAN BARRIER BAR SCHEDULE
 3. SEE SHEET 1 FOR HORIZONTAL CURVE DATA
 4. SEE SHEET 50 FOR MEDIAN BARRIER DETAILS

Mark	Description	By	Chk'd.	App'd.	Date
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DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

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MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

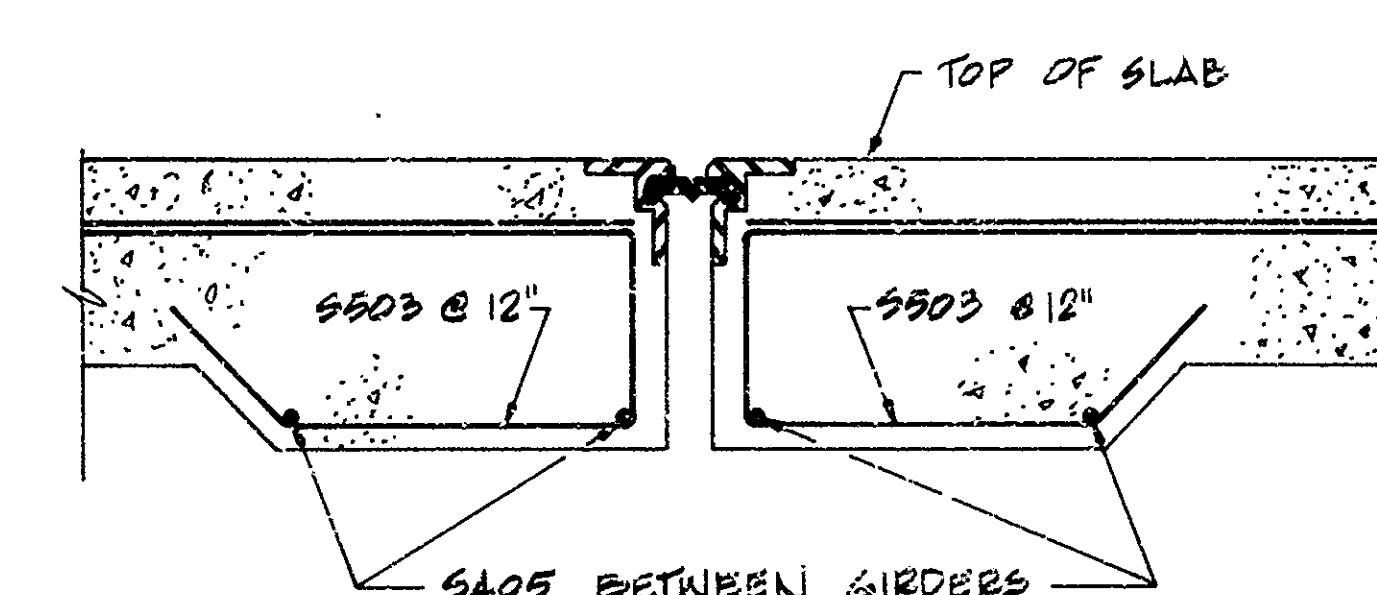
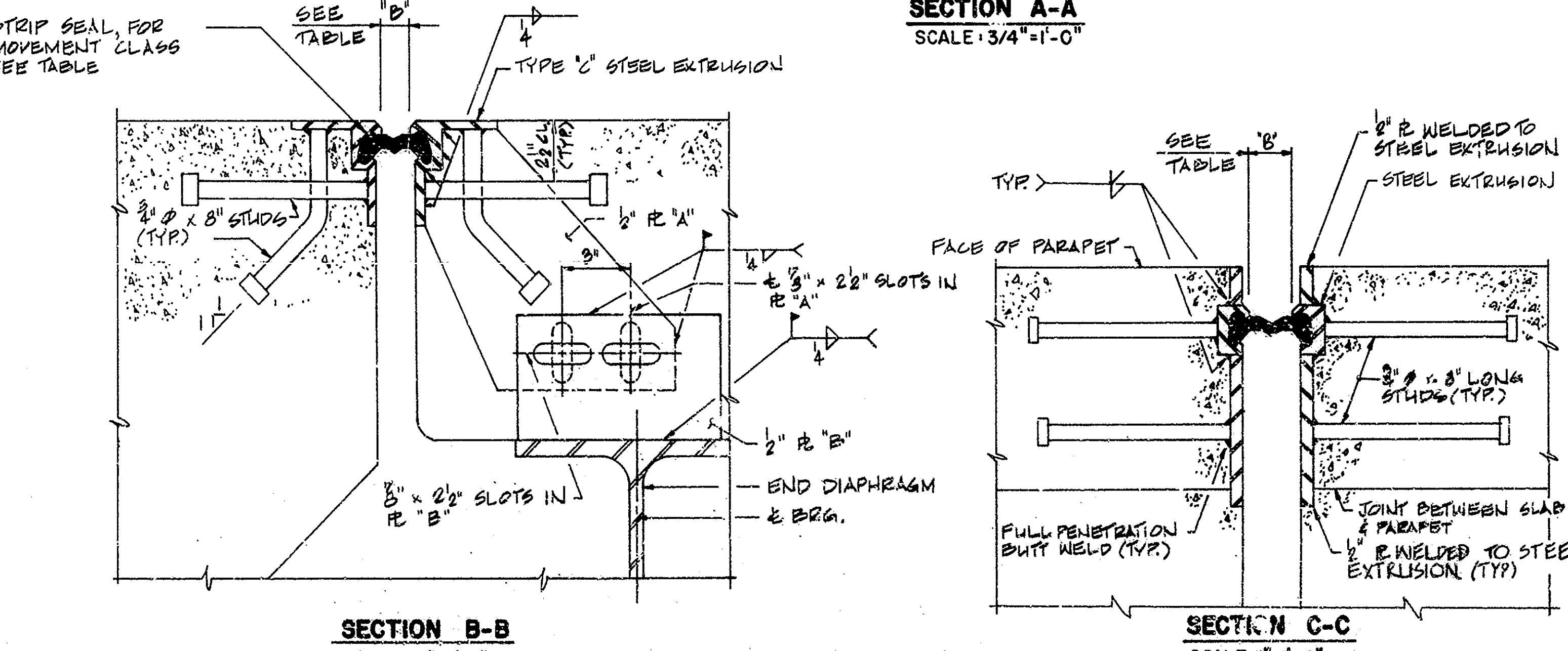
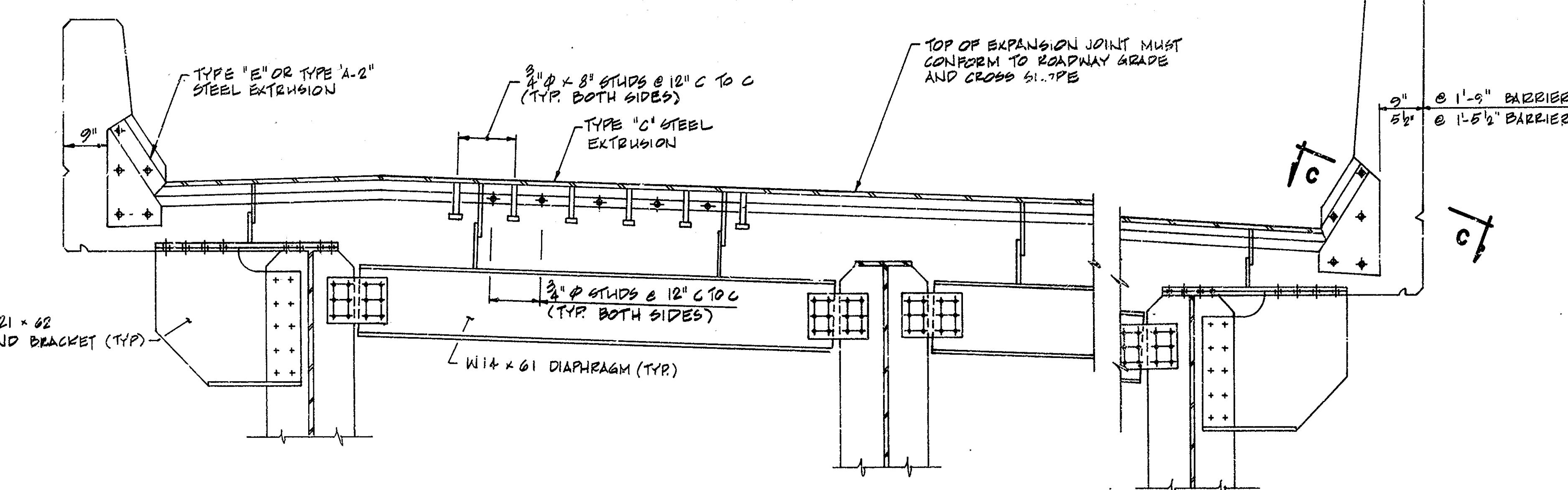
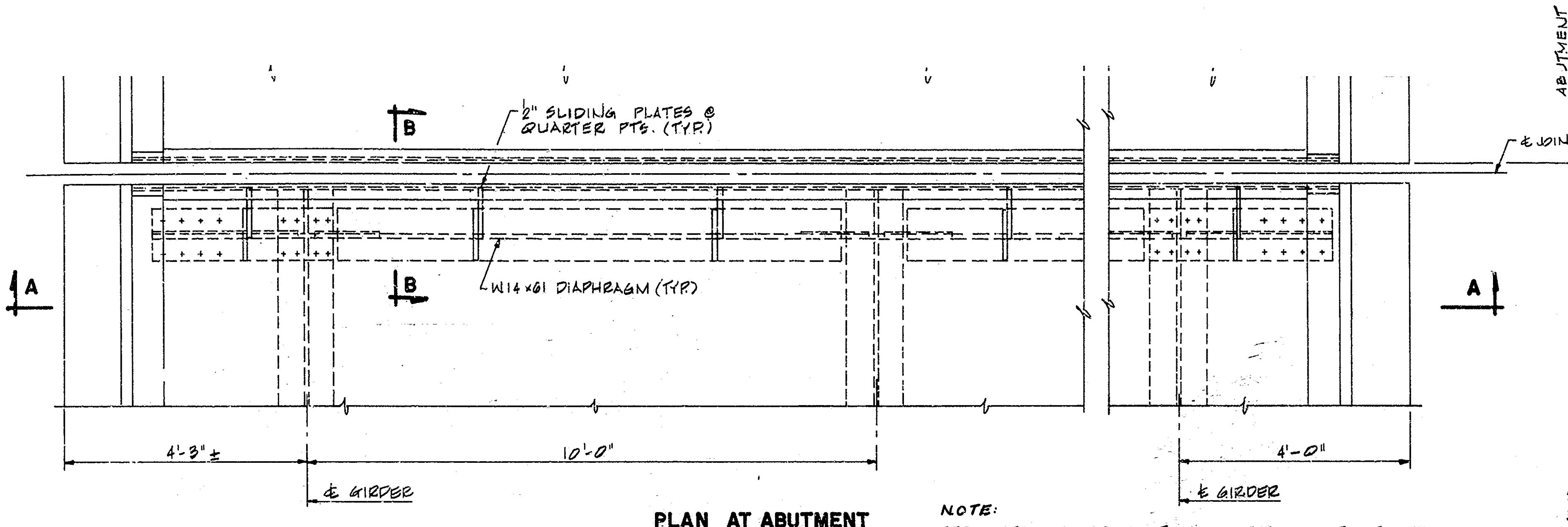
STRUCTURE REPLACEMENT - CAST IRON

RECOMMENDED **MAY 31, 1965**

SHEET 52 OF 66

S-16093 A

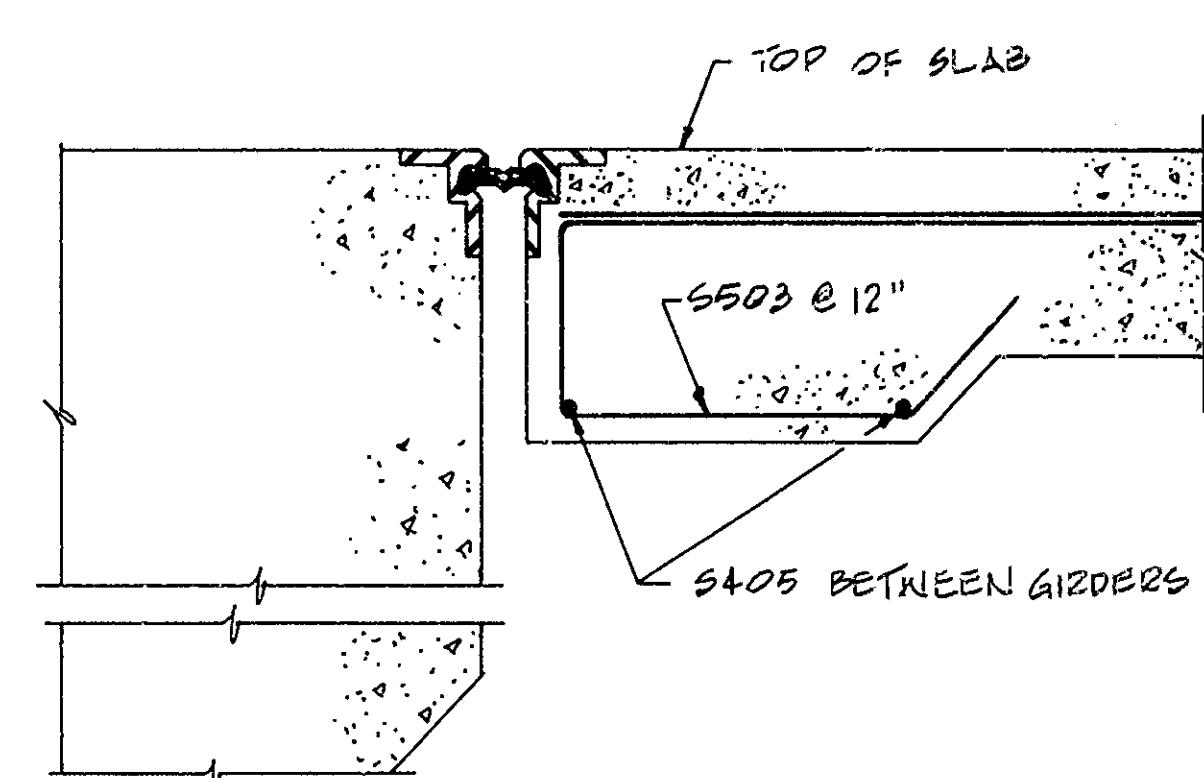
D 9002 (L-80) 4-83 A-1237
 DRAWN BY: G.P.F.
 CHECKED BY: C.E.P.
 DESIGNED BY: C.E.P.



STRIP SEALS			
TABLE OF DIMENSIONS "B"			
TEMPERATURE (1)	2" MOVEMENT JOINT OPENING (2)	4" MOVEMENT JOINT OPENING (3)	
35°	1 3/16"	2 7/16"	
40°	1 1/4"	2 5/16"	
50°	1 3/16"	2 1/8"	
60°	1 1/8"	1 15/16"	
68°	(4) 1"	1 3/4"	
70°	1"	1 1/16"	
80°	15/16"	1 1/2"	
90°	13/16"	1 1/4"	

1. AVERAGE TEMPERATURE @ THE TIME OF PLACING CONCRETE SLAB
2. 2" MOVEMENT STRIP SEALS ARE LOCATED @ ABUT. I & ABUT. 2
3. 4" MOVEMENT STRIP SEALS ARE LOCATED @ PIERS 2, 4, 6, 8, 9 & 10
4. 2" MOVEMENT STRIP SEAL @ PIER 1 ARE SET FOR 1" JOINT OPENING @ ANY TEMPERATURE

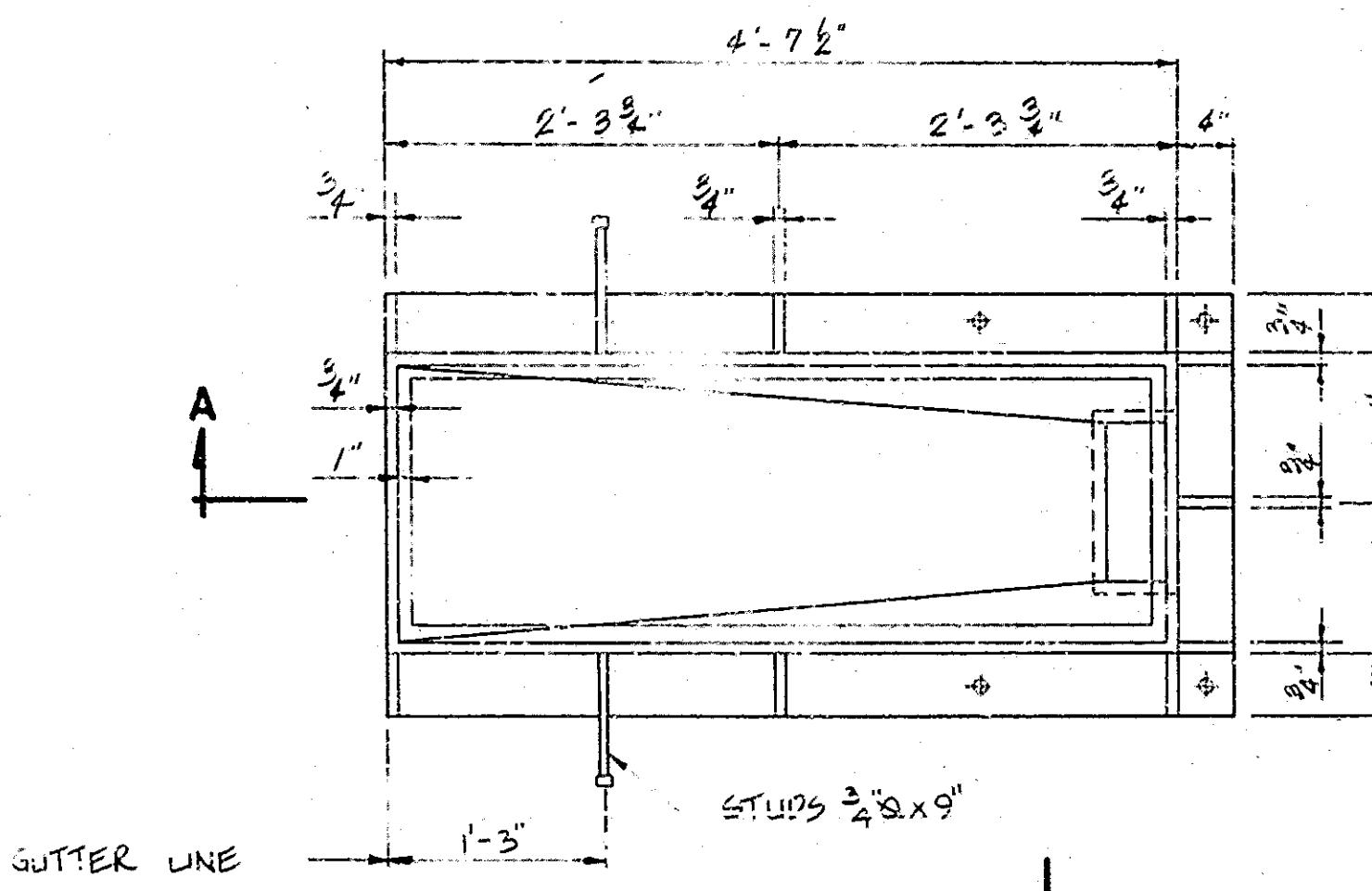
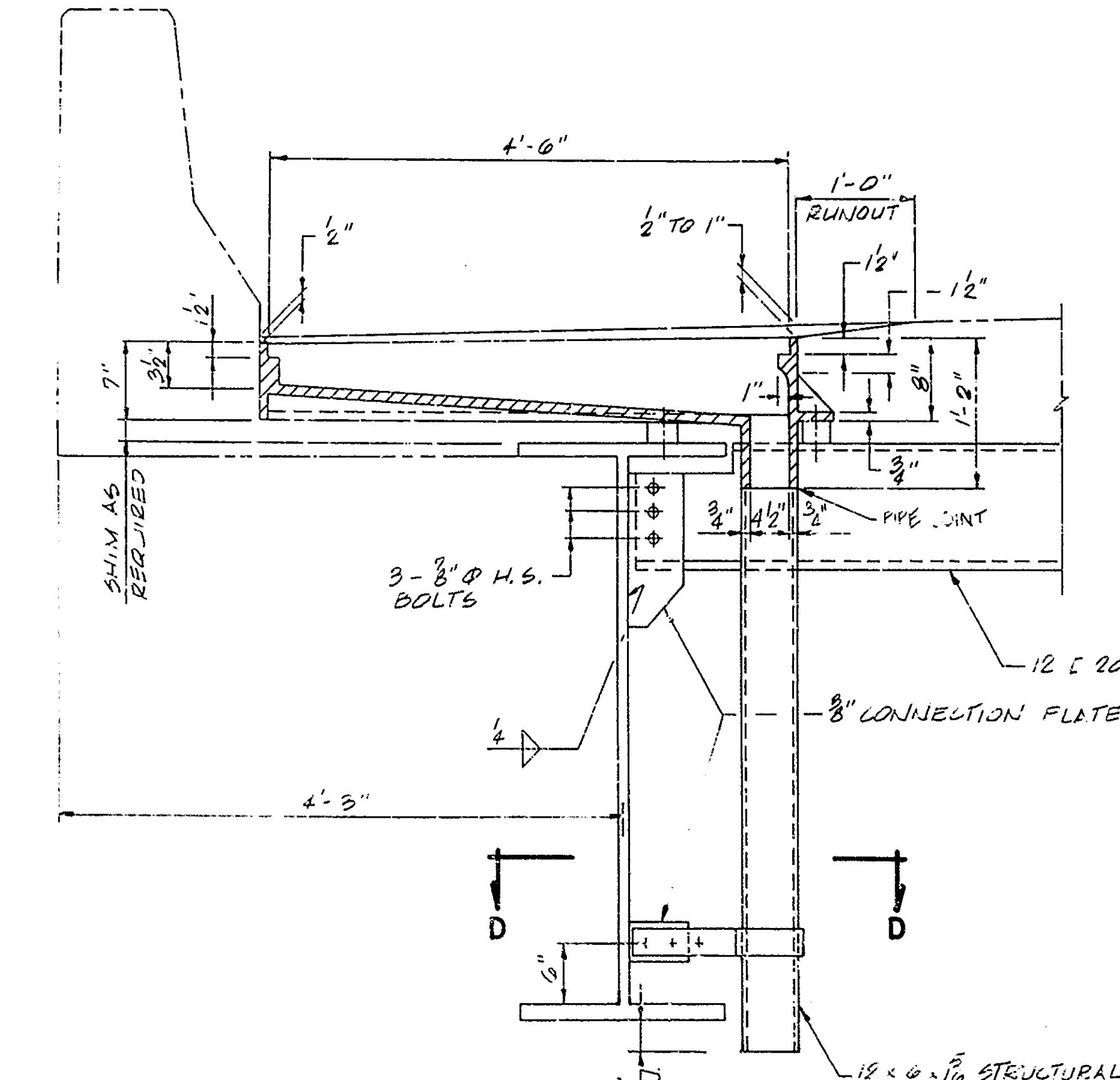
- NOTES:**
1. FOR LOCATION OF SECTION D-D & SECTION E-E, SEE SLAB PLANS
 2. FOR FINISHED GRADE ELEVATIONS, SEE SHEET NOS. 5-7
 3. FOR DIAPHRAGM & END BRACKET DETAILS, SEE SHEET NO. 30
 4. FOR PARAPET & MEDIAN DETAILS, SEE SHEET NOS. 50, 51 & 52



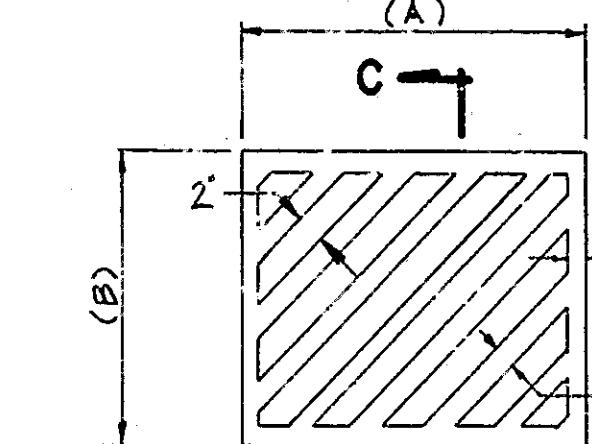
Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania
 DEPARTMENT OF TRANSPORTATION
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MONTGOMERY COUNTY
 L.R. 769 & L.R. 67057 SEC. 300
 MAINLINE OVER CONRAIL AND ABANDONED SIDING
 II SPAN STEEL MULTI-GIRDER BRIDGE
 SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
 EXPANSION JOINT DETAILS

RECOMMENDED	MAY 31 1985	SHEET 53 OF 66
		S- 16093A



SHLDR. SCUPPER LOC.
STA. 561 + 51.00 WB
STA. 561 + 98.00 WB
STA. 562 + 00.00 WB



GRATING PLAN
NOT TO SCALE

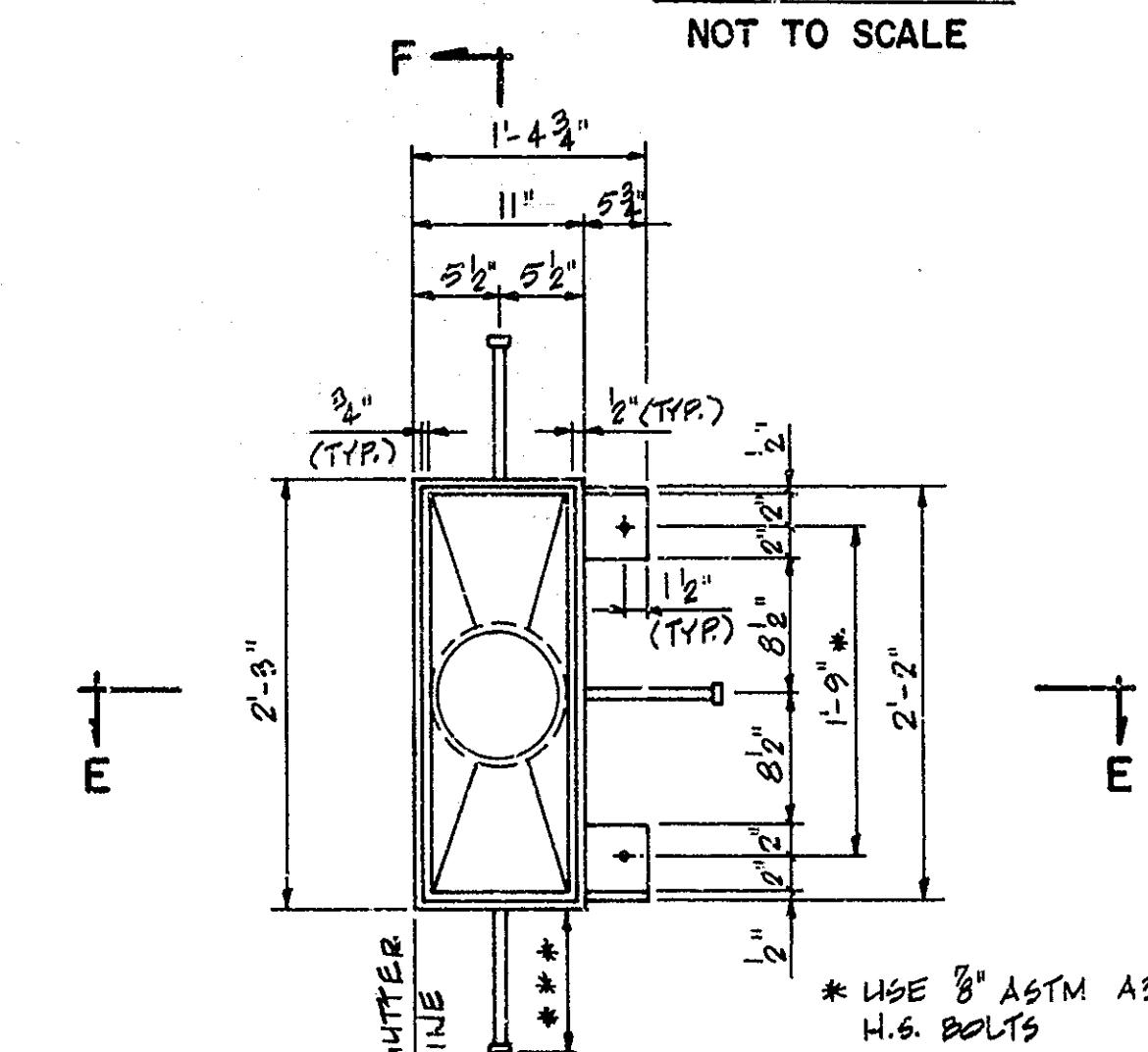
MEDIAN SCUPPER LOCATIONS
STA. 561 + 38.00 WB
STA. 561 + 63.00 WB
STA. 561 + 88.00 WB
STA. 562 + 13.00 WB

STA. 574 + 47.00 WB
STA. 574 + 91.00 WB
STA. 575 + 35.00 WB

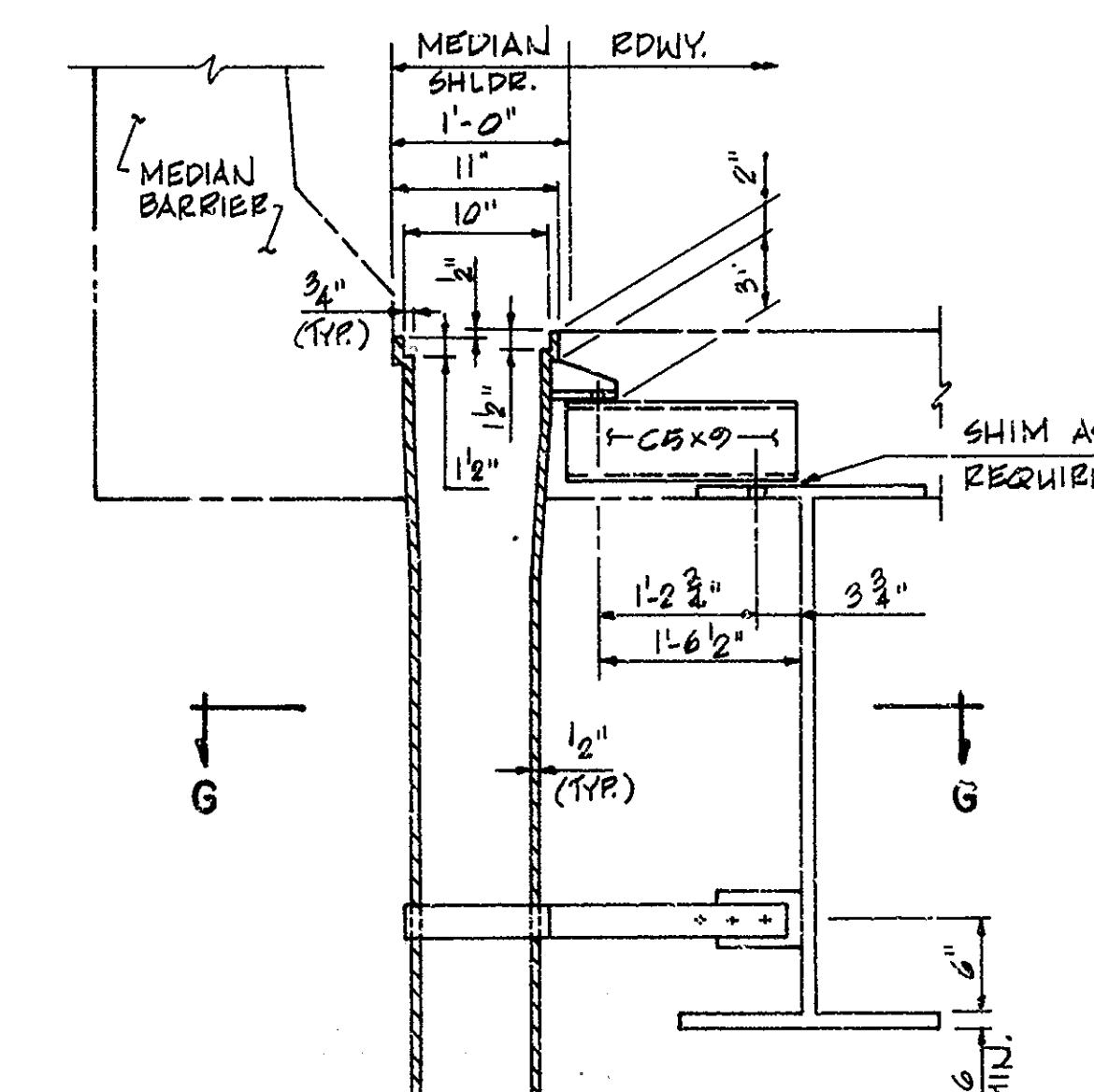
SECTION C-C
NOT TO SCALE

GRATE TYPE	DIMENSIONS	
	(A)	(B)
A	1'-10 1/4"	1'-6 1/4"
B	2'-7 1/4"	1'-6 1/4"
C	9 3/8"	2'-1 1/2"

NOTE: USE 1 TYPE A & 1 TYPE B GRATE FOR EACH SHLDR. SCUPPER.
 USE 1 TYPE C GRATE FOR EACH MEDIAN SCUPPER.

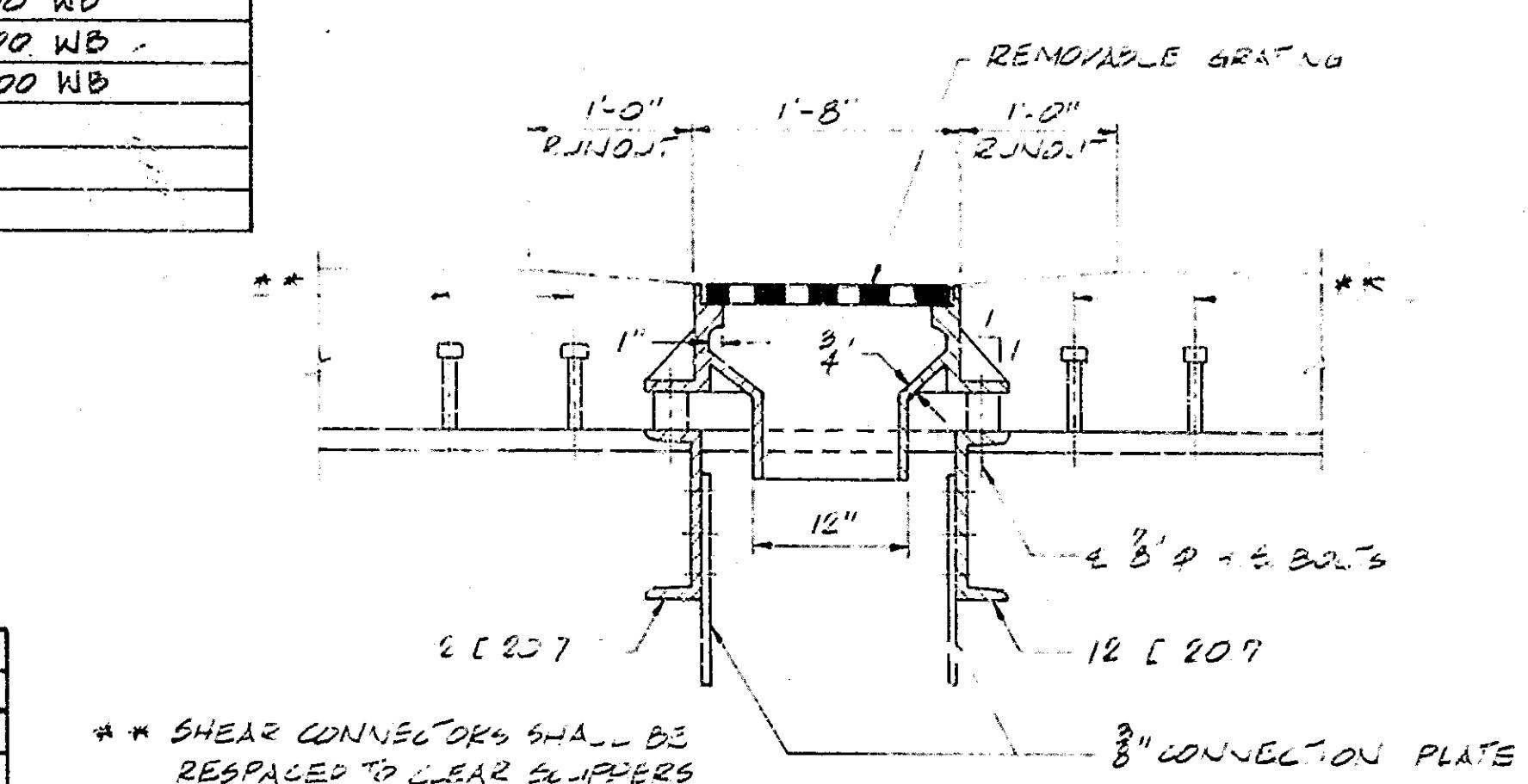


PLAN OF SCUPPER @ MEDIAN
 SCALE: 1" = 1'-0"



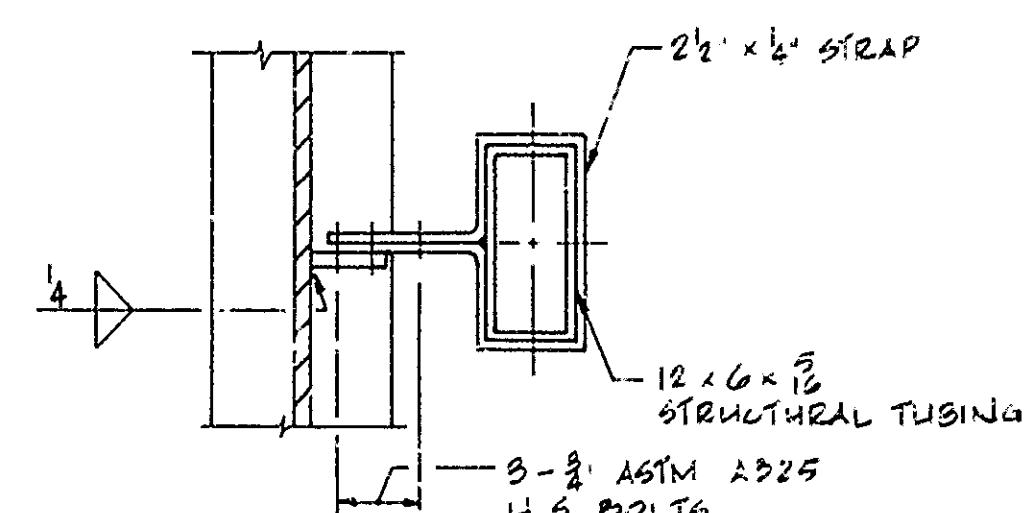
SECTION E-E
NOT TO SCALE

SECTION F-F
NOT TO SCALE

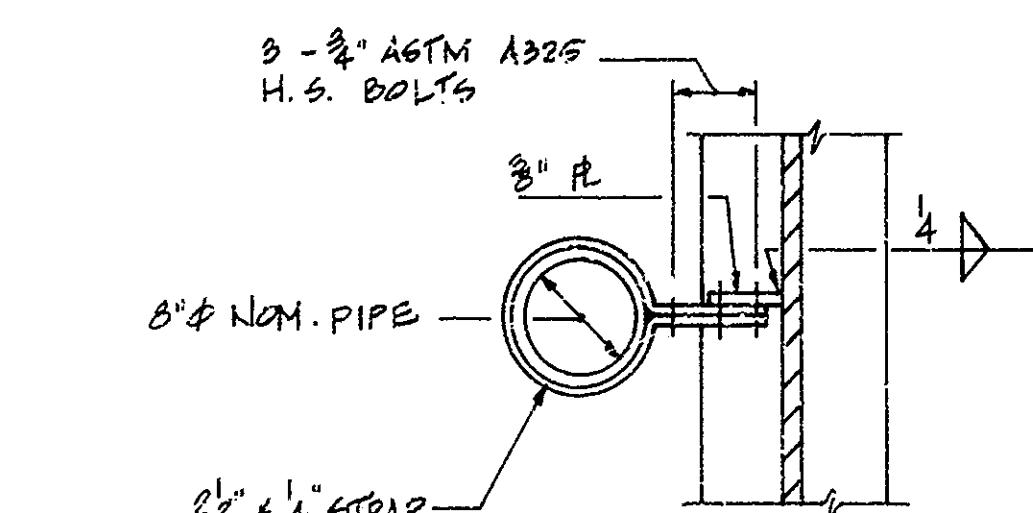


SECTION B-B
SCALE: 1" = 1'-0"

- NOTES:
 1. FOR SCUPPER LOCATIONS AND ADDITIONAL REINFORCING, SEE SLAB PLANS
 2. SCUPPERS AND ALL COMPONENTS TO BE GALVANIZED



Mark	Description	By	Chk'd	App'd	Date
REVISONS					



SECTION G-G
NOT TO SCALE

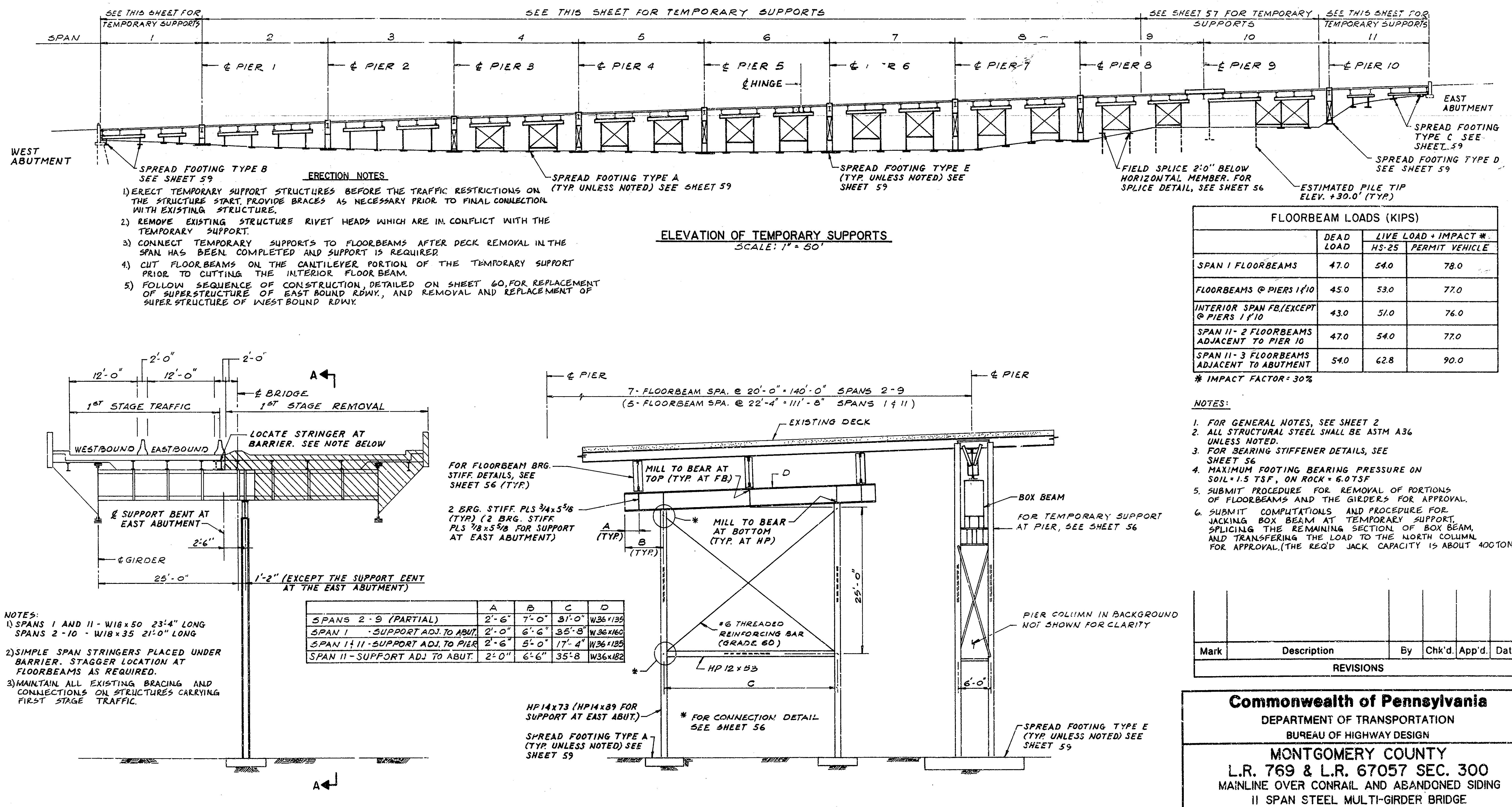
PREPARED BY
 Greiner Engineering Sciences, Inc.
 CONSULTING ENGINEERS
 KING OF PRUSSIA, PA

RECOMMENDED MAY 3 1984

SHEET 54 OF 66

S-16093A

Commonwealth of Pennsylvania
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAY DESIGN
 MONTGOMERY COUNTY
 L.R. 769 & L.R. 67057 SEC. 300
 MAINLINE OVER CONRAIL AND ABANDONED SIDING
 II SPAN STEEL MULTI-GIRDER BRIDGE
 SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
 BRIDGE DRAINAGE DETAILS



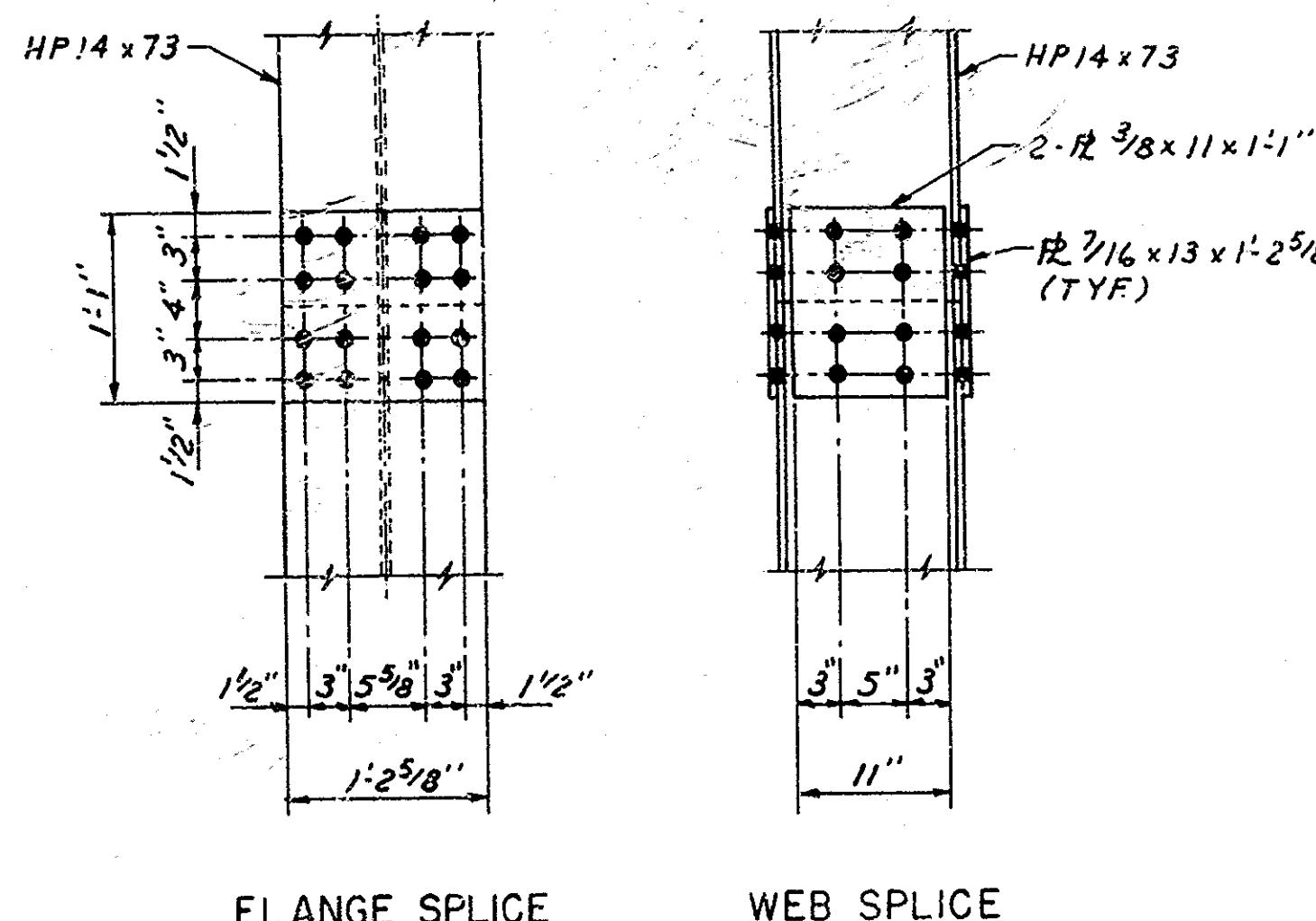
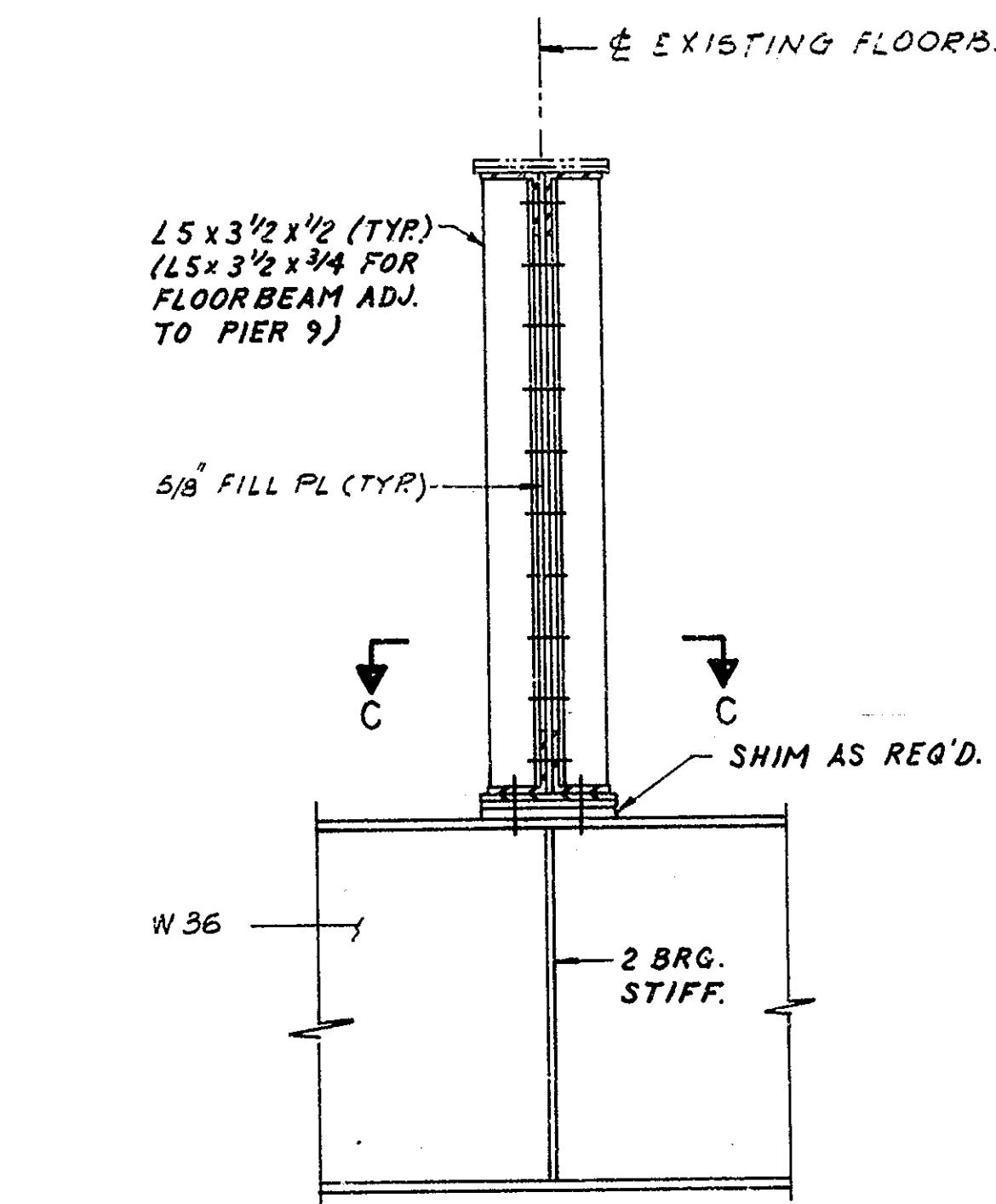
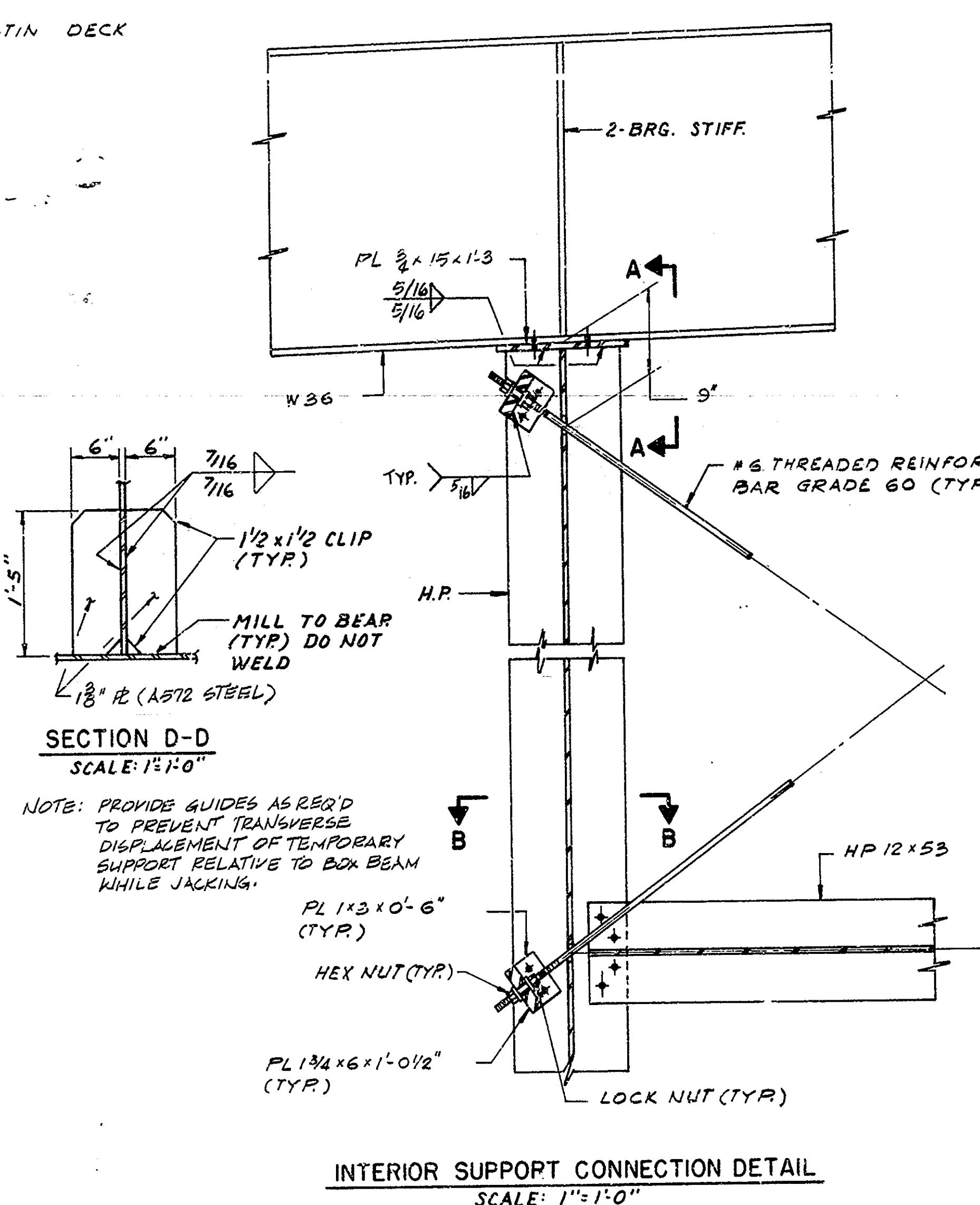
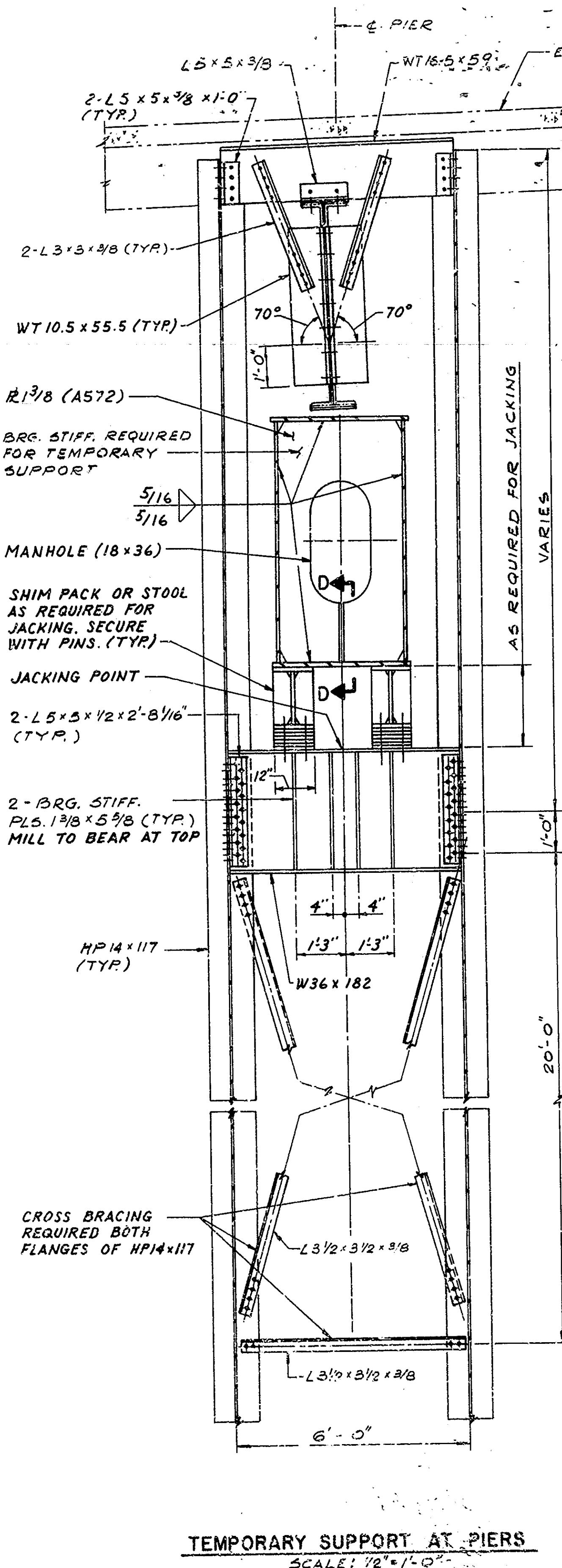
PREPARED BY
Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

RECOMMENDED MAY 31 1985

SHEET 55 OF 66

S-16093A

Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
TEMPORARY SUPPORT ELEVATION



FIELD SPLICE DETAIL
SCALE: 1"=1'-0"

- NOTES:
1. FOR GENERAL NOTES, SEE SHEET 2.
 2. ALL BOLTS SHALL BE 7/8" ϕ ASTM A325 UNLESS NOTED.
 3. ALL STRUCTURAL STEEL SHALL BE ASTM A36 UNLESS NOTED.
 4. BEARING STIFFENERS IN THE BOX BEAM SHALL BE ASTM A572, GRADE 50.

Mark	Description	By	Chkd	App'd	Date
REVISIONS					

Commonwealth of Pennsylvania

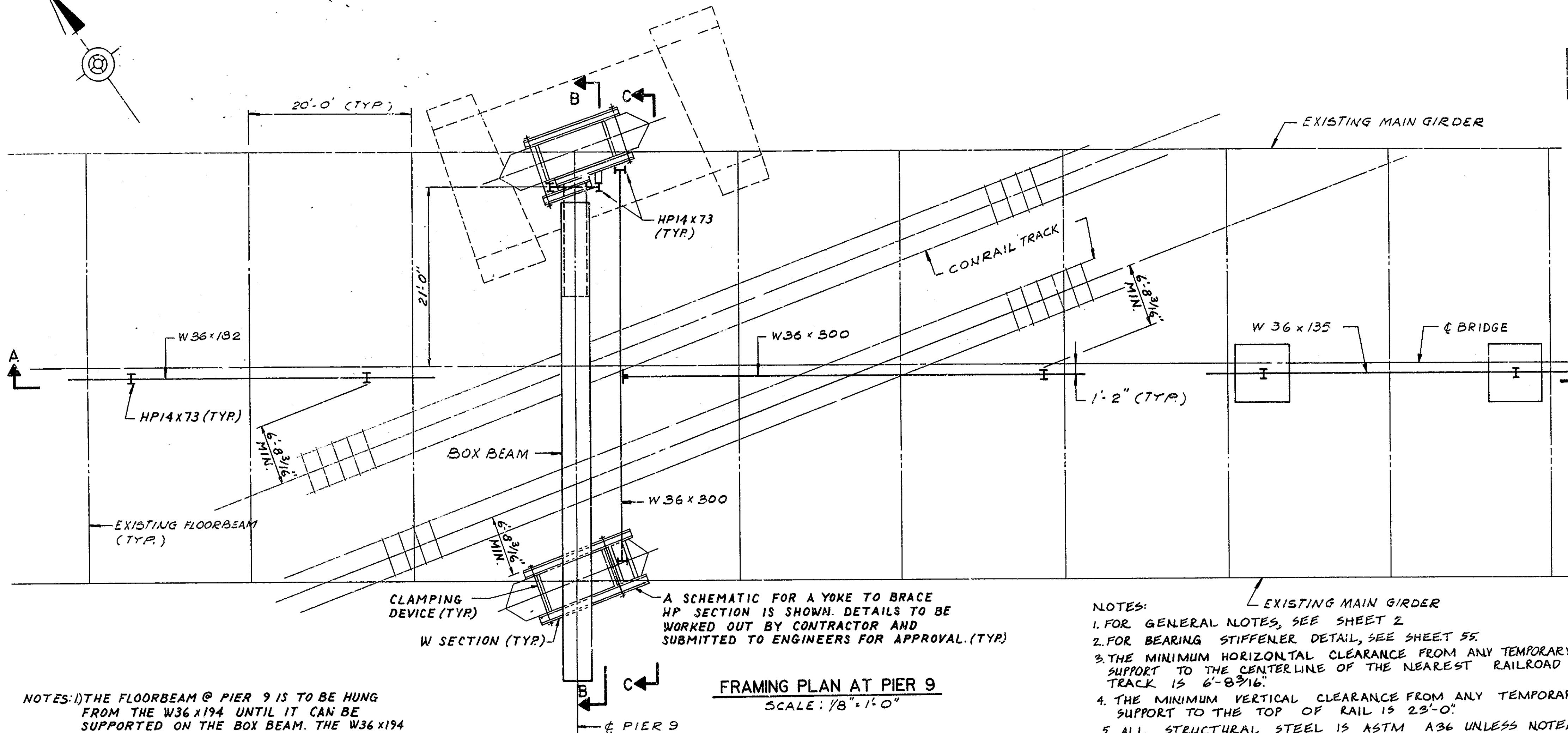
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
TEMPORARY SUPPORT DETAILS - I

RECOMMENDED MAY 31 1986

SHEET 56 OF 66

Designed by: J.E. HARDEE
Drawn by: O.A. BENOUEK
Checked by: B.G. PATEL

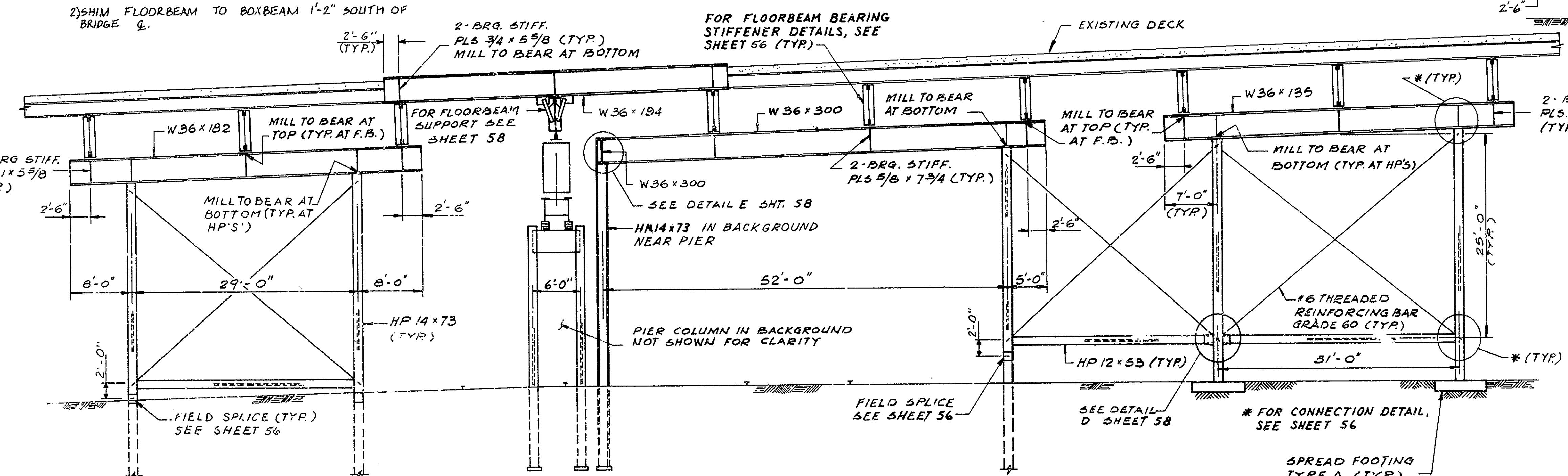


NOTES: 1) THE FLOORBEAM @ PIER 9 IS TO BE HUNG FROM THE W36 x 194 UNTIL IT CAN BE SUPPORTED ON THE BOX BEAM. THE W36 x 194 CAN THEN BE REMOVED TO CONSTRUCT THE

NEW DECK.
2) SHIM FLOORBEAM TO BOXBEAM 1'-2" SOUTH OF
BRIDGE G.

NOTES: EXISTING MAIN GIRDERS

1. FOR GENERAL NOTES, SEE SHEET 2
2. FOR BEARING STIFFENER DETAIL, SEE SHEET 55.
3. THE MINIMUM HORIZONTAL CLEARANCE FROM ANY TEMPORARY SUPPORT TO THE CENTERLINE OF THE NEAREST RAILROAD TRACK IS 6'-8³/₁₆".
4. THE MINIMUM VERTICAL CLEARANCE FROM ANY TEMPORARY SUPPORT TO THE TOP OF RAIL IS 23'-0".
5. ALL STRUCTURAL STEEL IS ASTM A36 UNLESS NOTED.



SECTION A-A

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DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

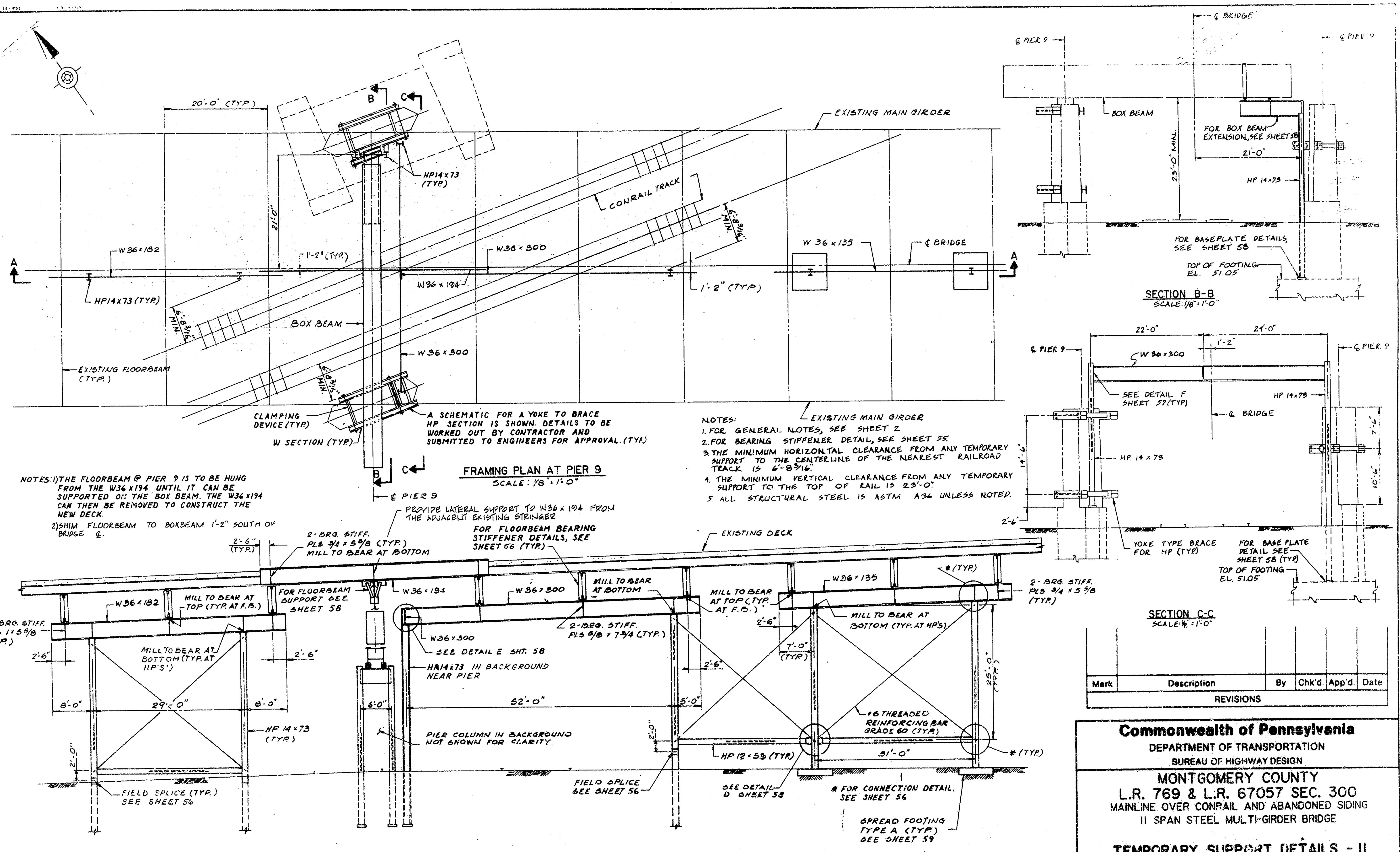
**MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE**

TEMPORARY SUPPORT DETAILS - II

RECOMMENDED **MAY 31 1985**

SHEET 57 OF 66

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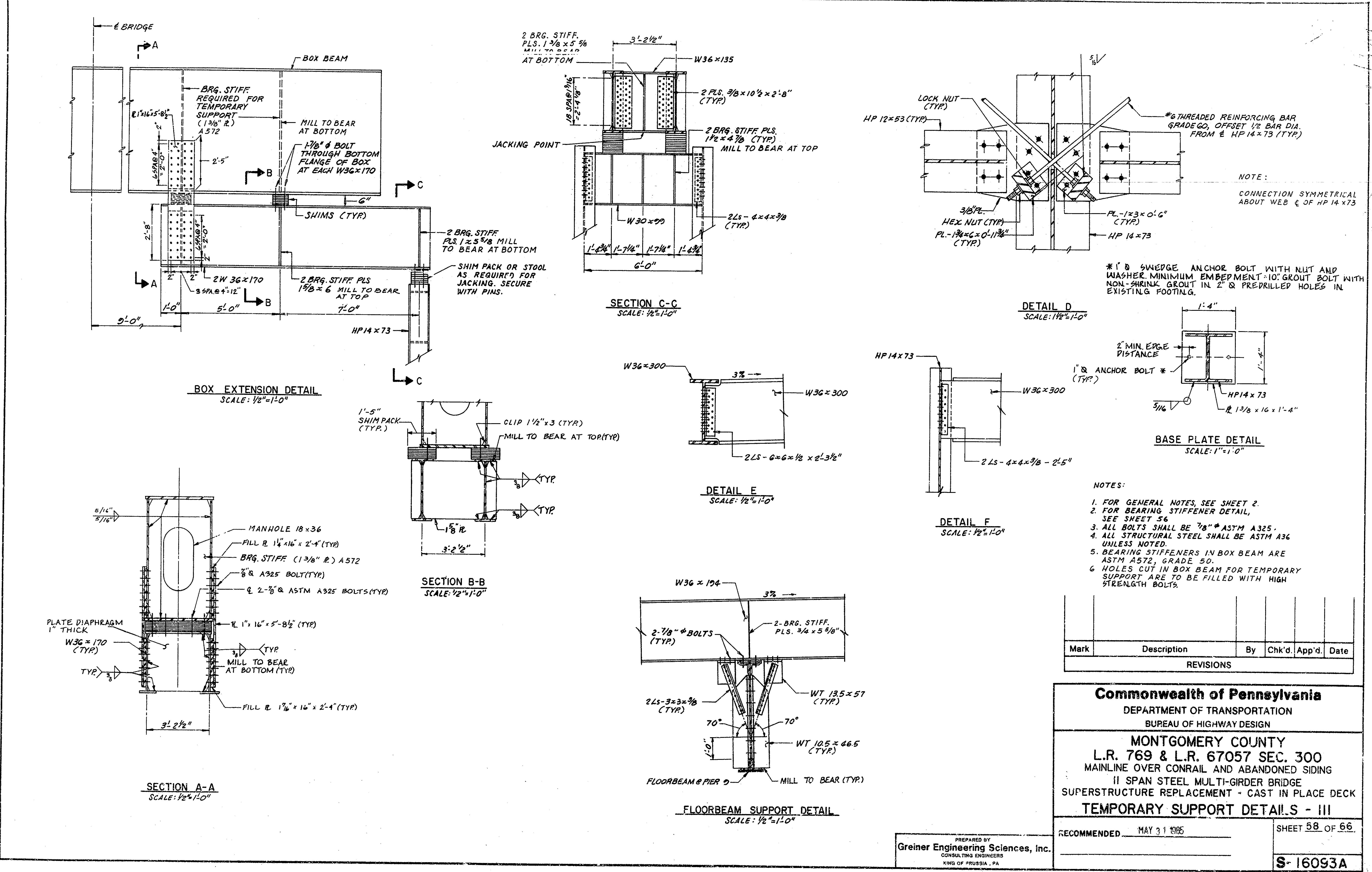


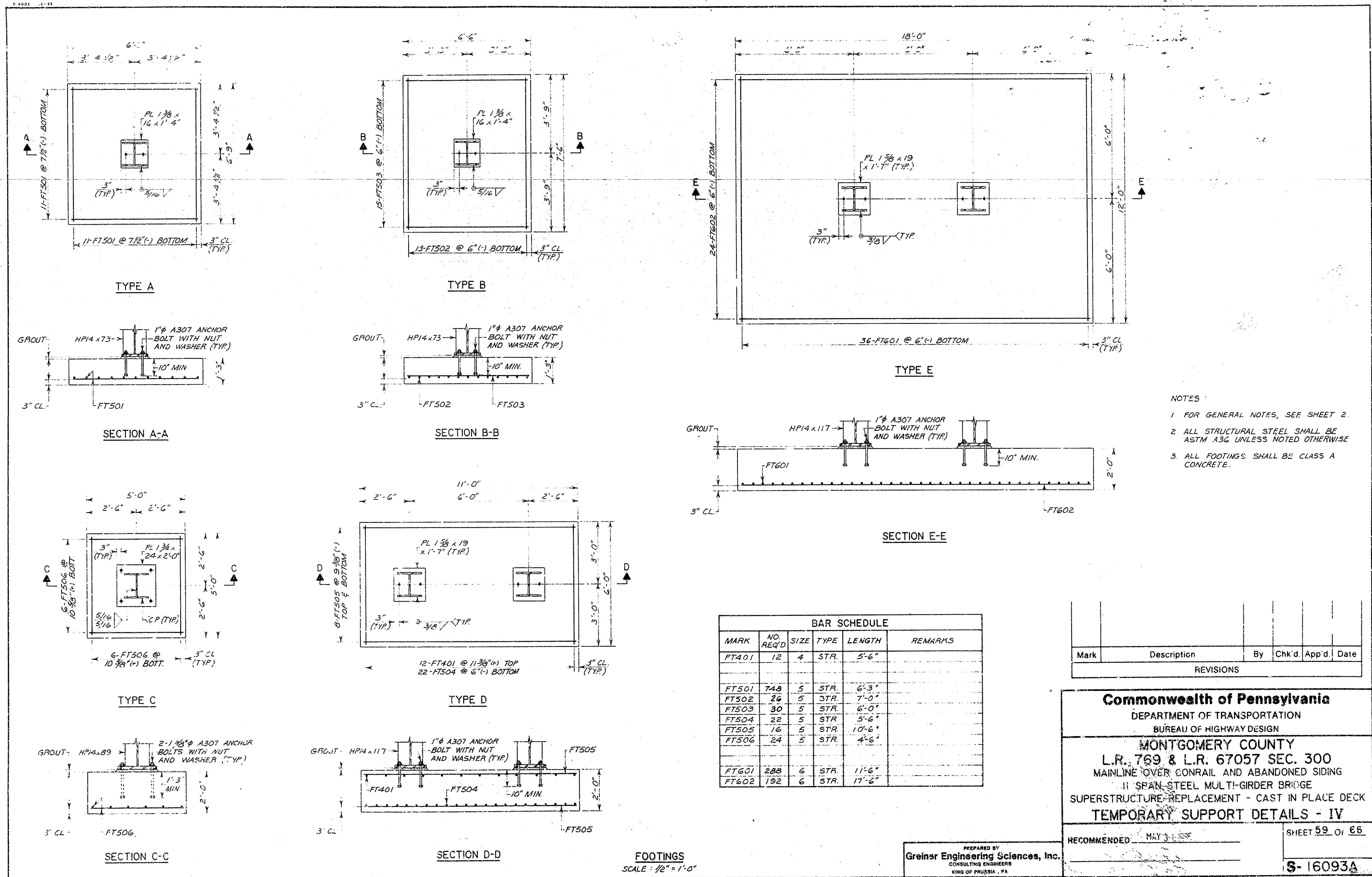
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KING OF PRUSSIA, PA

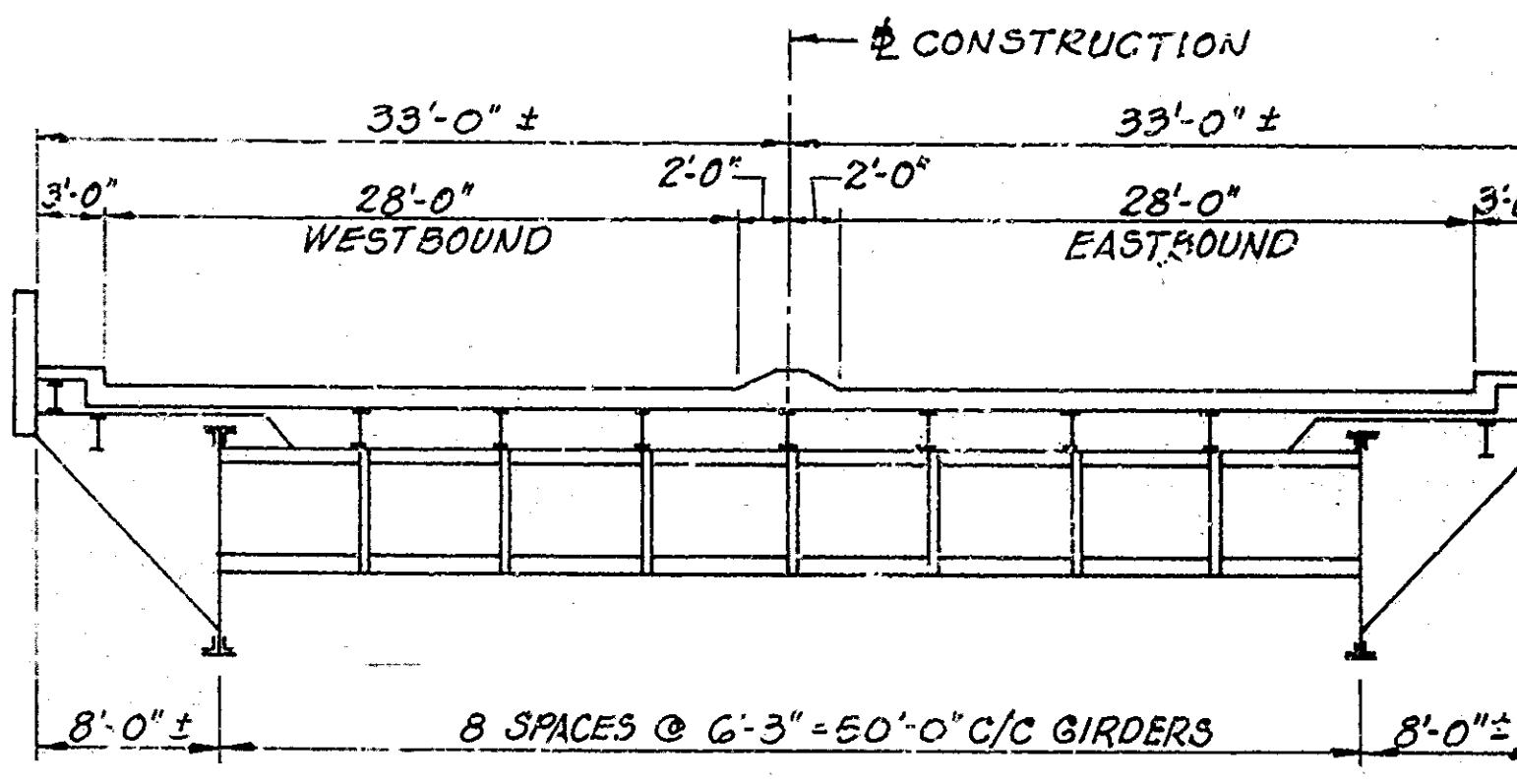
RECOMMENDED _____
SHEET 57A OF 66
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Commonwealth of Pennsylvania
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE

TEMPORARY SUPPORT DETAILS - II





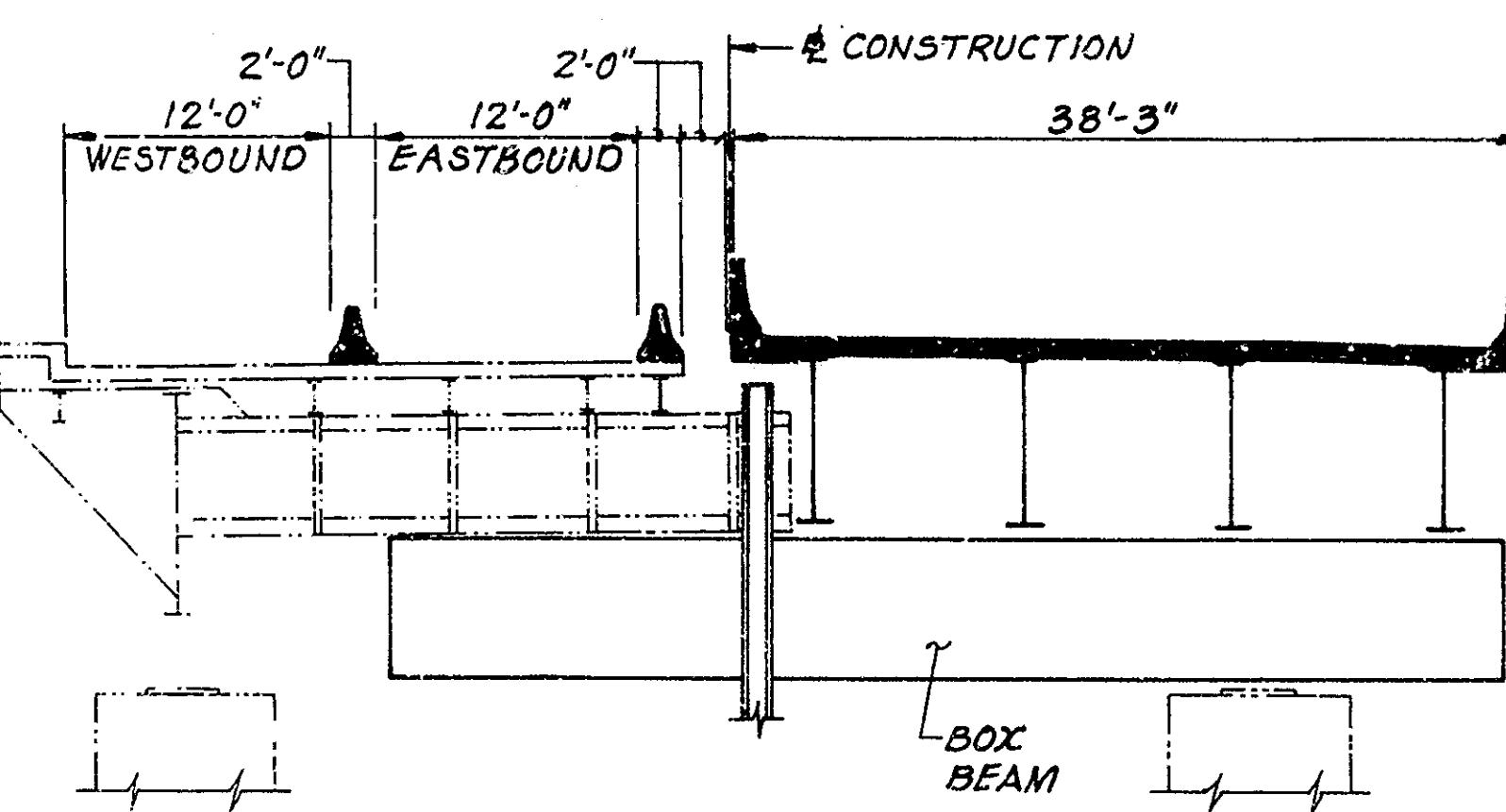
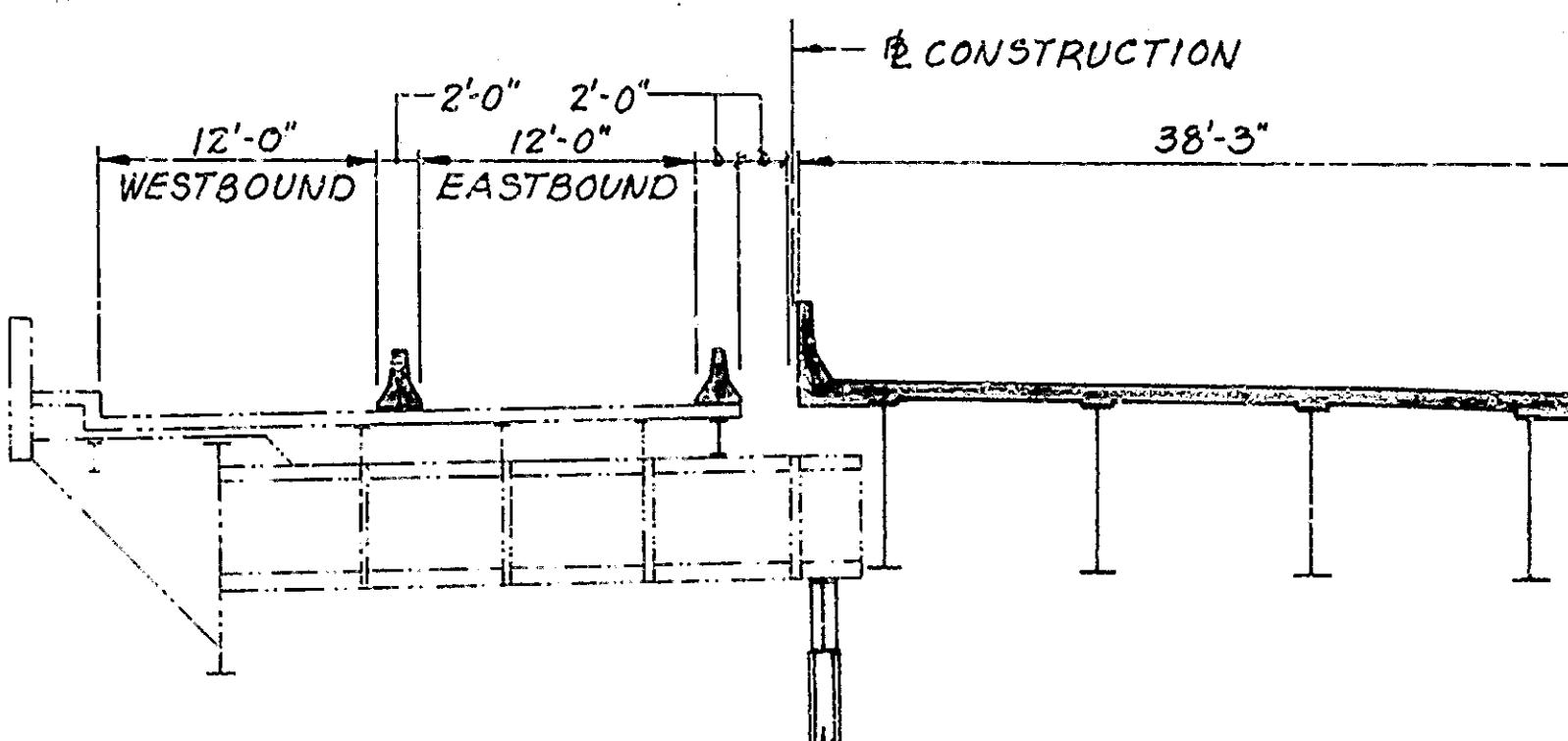


STAGE I CONSTRUCTION

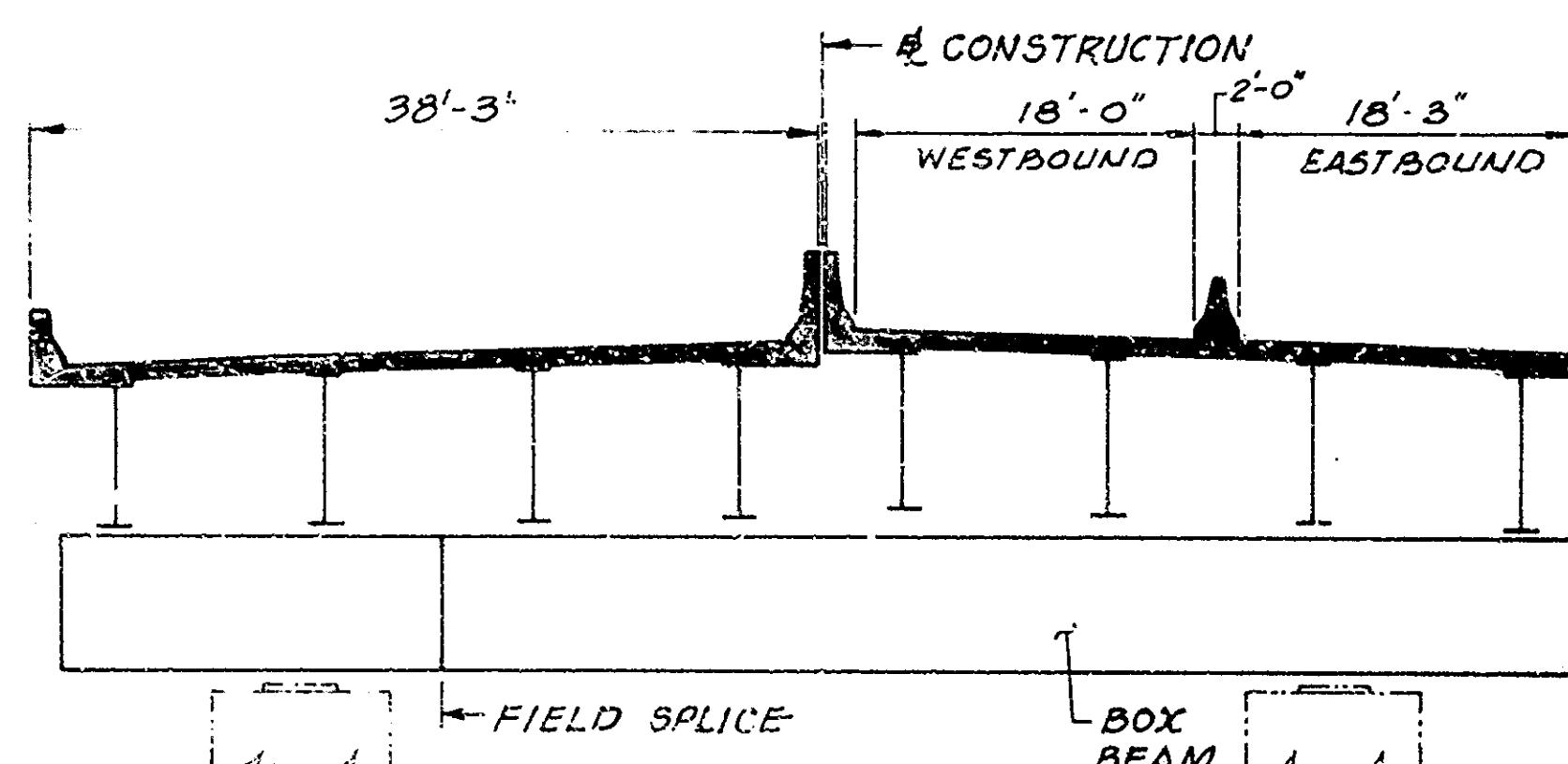
1. ERECT THE TEMPORARY SUPPORT STRUCTURES UNDERNEATH THE BRIDGE BEFORE THE TRAFFIC RESTRICTIONS ON THE STRUCTURE STARTS.
2. DETOUR TRAFFIC TO WESTBOUND ROADWAY AS PER THE TRAFFIC CONTROL PLANS.
3. REMOVE RAISED MEDIAN.
4. SAW CUT CONCRETE FILLED GRID DECK
5. REMOVE EASTBOUND ROADWAY GRID DECK, SAFETY WALK, RAILING AND STRINGERS. REMOVE PART OF THE WESTBOUND ROADWAY GRID DECK ALSO.
6. CUT THE FLOORBEAMS AND REMOVE THE FLOORBEAMS, GIRDER AND ALL OTHER REMAINING STRUCTURAL STEEL FROM THE EASTBOUND ROADWAY.
7. REMOVE THE PORTIONS OF THE EAST AND WEST ABUTMENTS UNDER EASTBOUND ROADWAY DESIGNATED AS SUCH AND REBUILD THE SAME.
8. POUR MASONRY PADS ON PIER COLUMNS AND INSTALL BEARINGS.
9. INSTALL BOX BEAM SECTIONS FOR EASTBOUND ROADWAY.
10. INSTALL GIRDERS.
11. POUR DECK, EXTERIOR BARRIER AND MEDIAN BARRIER.

STAGE II CONSTRUCTION

1. DETOUR TRAFFIC TO EASTBOUND ROADWAY AS PER THE TRAFFIC CONTROL PLANS.
2. REMOVE EXISTING WESTBOUND ROADWAY DECK, SAFETY WALK, RAILING, STRINGERS, REMAINING FLOORBEAM SECTIONS, GIRDER AND ALL OTHER REMAINING STRUCTURAL STEEL FROM WESTBOUND ROADWAY.
3. REMOVE THE REMAINING PORTIONS OF THE EAST AND WEST ABUTMENTS UNDER WESTBOUND ROADWAY DESIGNATED AS SUCH AND REBUILD THE SAME.
4. POUR MASONRY PADS ON PIER COLUMNS AND INSTALL BEARINGS.
5. INSTALL AND FIELD SPLICE THE REMAINING PORTIONS OF THE BOX BEAMS. (JACK BOX BEAMS FROM TEMPORARY SUPPORTS TO FACILITATE SPLICING.)
6. REMOVE TEMPORARY SUPPORTS.
7. INSTALL GIRDERS.
8. POUR DECK, EXTERIOR BARRIER AND MEDIAN BARRIER.
9. POUR SLAB ON MEDIAN BARRIERS IN SPANS 1 AND 2.
10. REMOVE DETOUR AND OPEN BOTH ROADWAYS TO NORMAL TRAFFIC.



STAGE I CONSTRUCTION



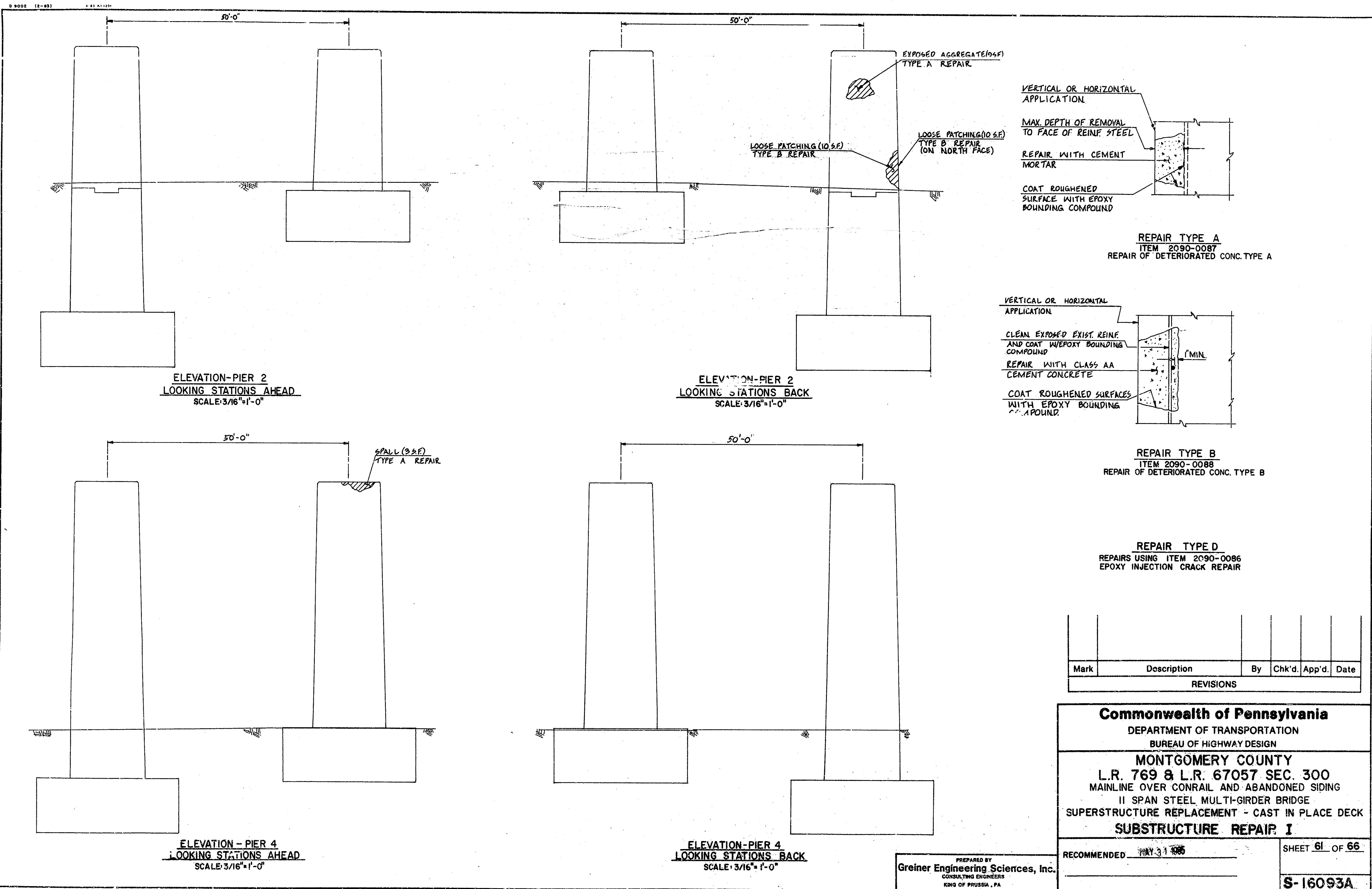
Man.	Description	By	Chk'd.	App'd.	Date
REVISIONS					

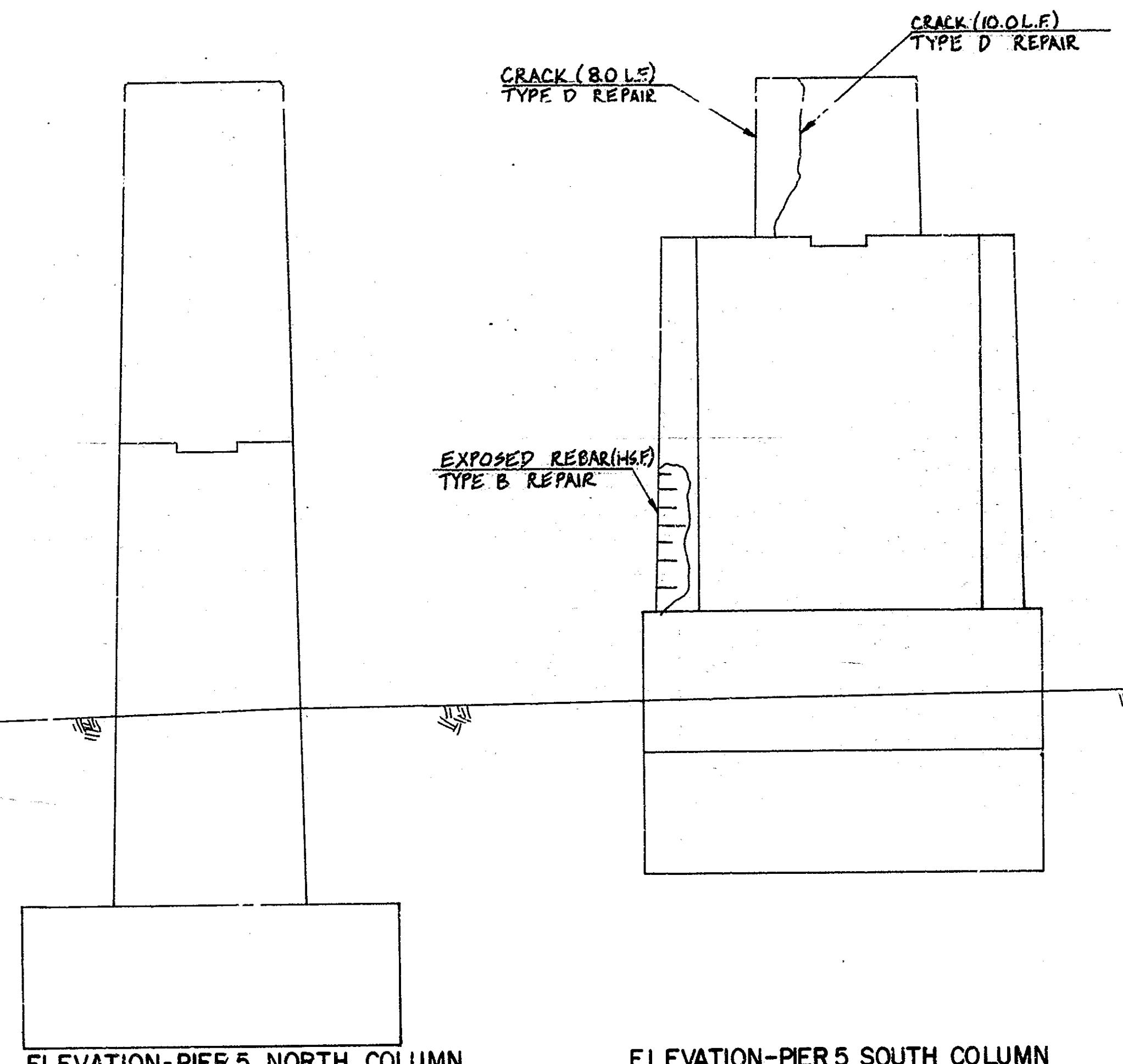
Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DESIGN

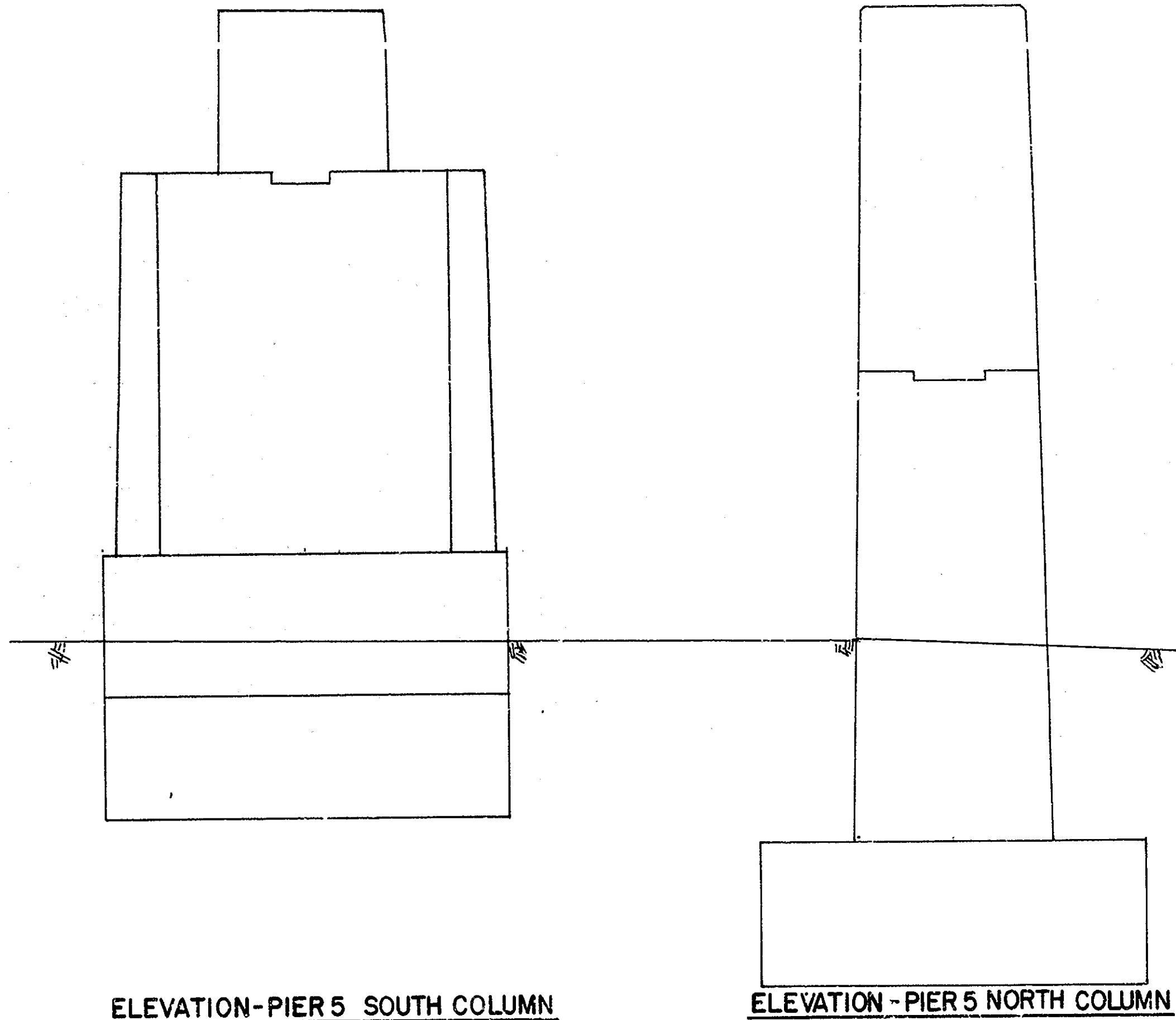
MONTGOMERY COUNTY
L.R. 769 & L.R. 67057 SEC. 300
MAINLINE OVER CONRAIL AND ABANDONED SIDING
II SPAN STEEL MULTI-GIRDER BRIDGE
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
CONSTRUCTION STAGING

RECOMMENDED	MAY 31 1995	SHEET 60 OF 66
		S-16093

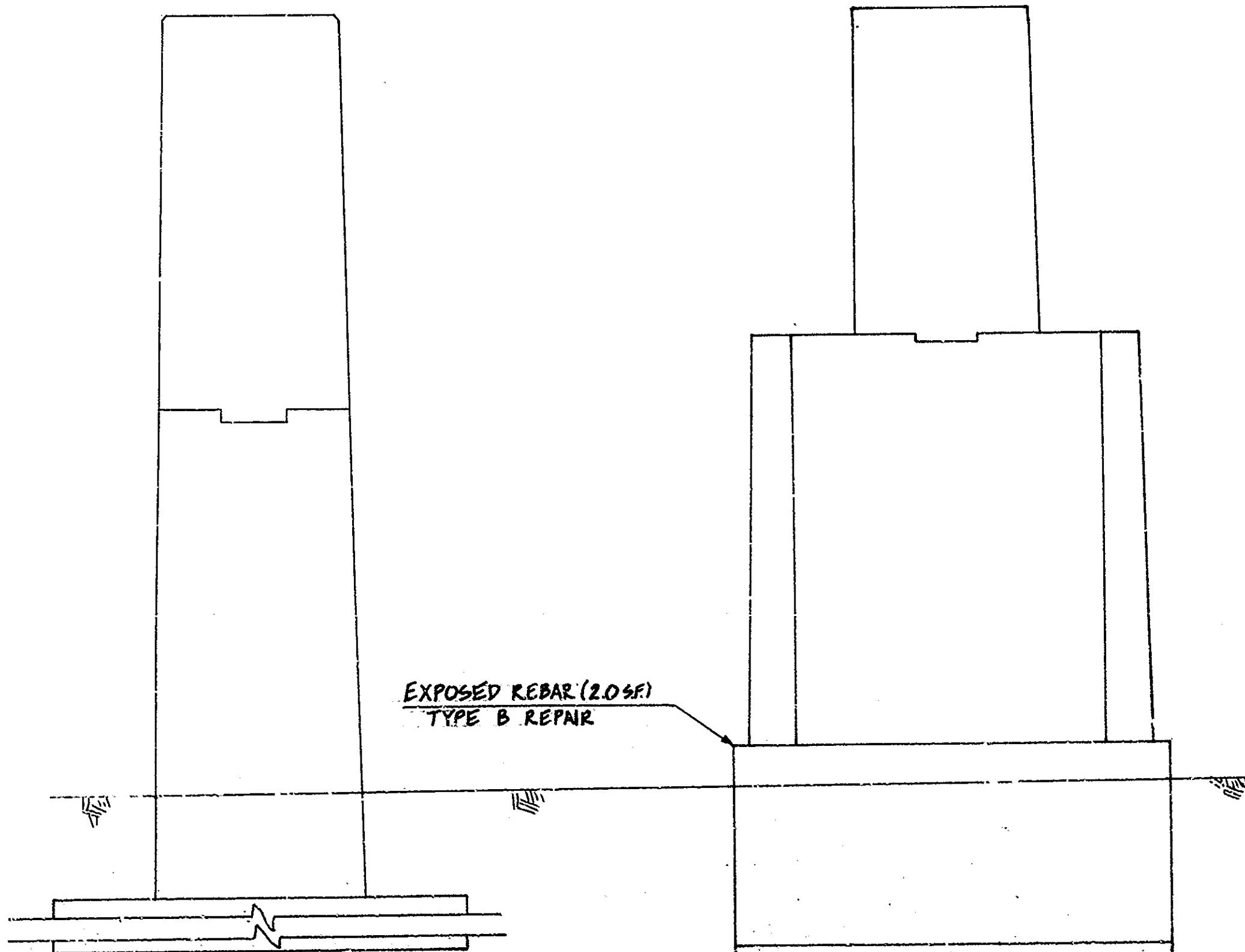




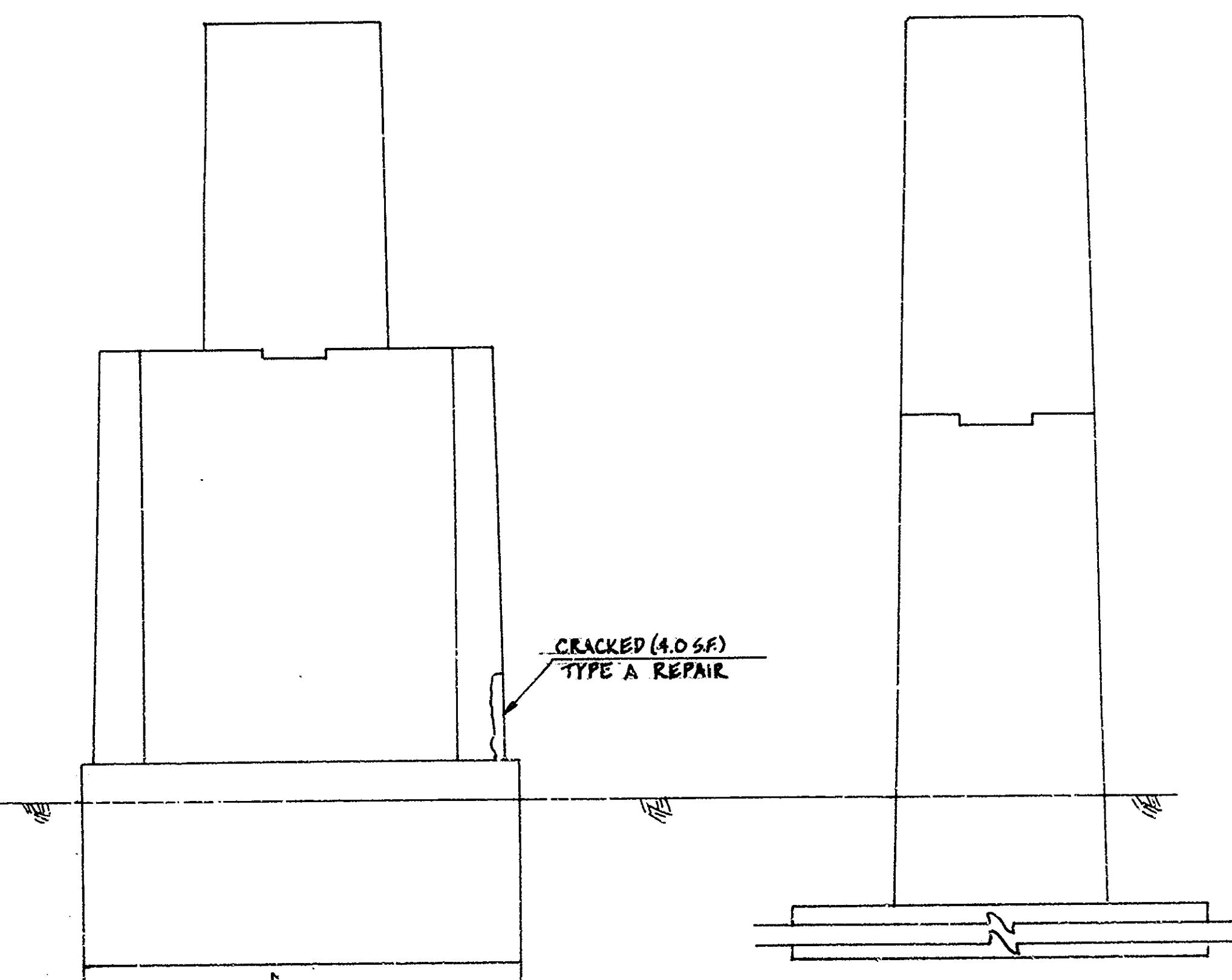
ELEVATION - PIER 5 NORTH COLUMN
LOOKING STATIONS AHEAD
SCALE: 3/16" = 1'-0"



ELEVATION - PIER 5 NORTH COLUMN
LOOKING STATIONS BACK
SCALE: 3/16" = 1'-0"



ELEVATION - PIER 6 NORTH COLUMN
LOOKING STATIONS AHEAD
SCALE: 3/16" = 1'-0"



ELEVATION - PIER 6 NORTH COLUMN
LOOKING STATIONS BACK
SCALE: 3/16" = 1'-0"

Mark	Description	By	Chk'd.	App'd.	Date
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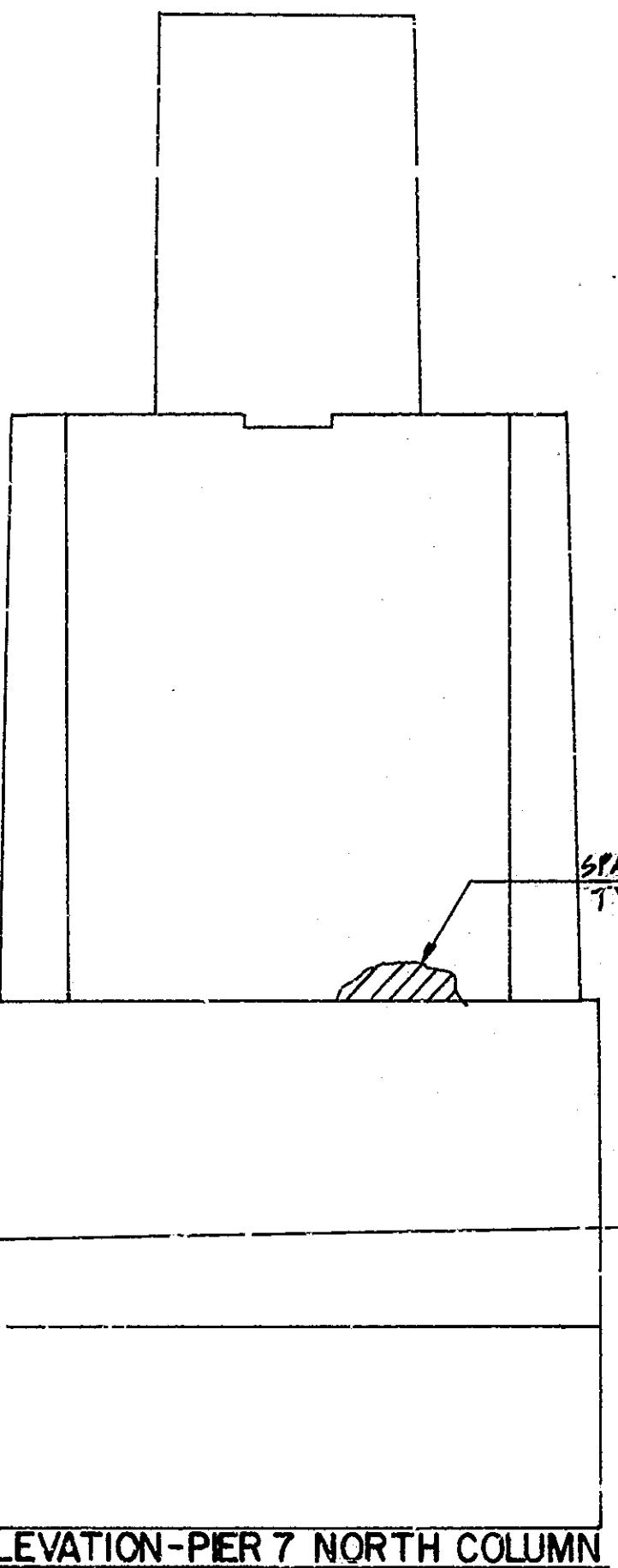
Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

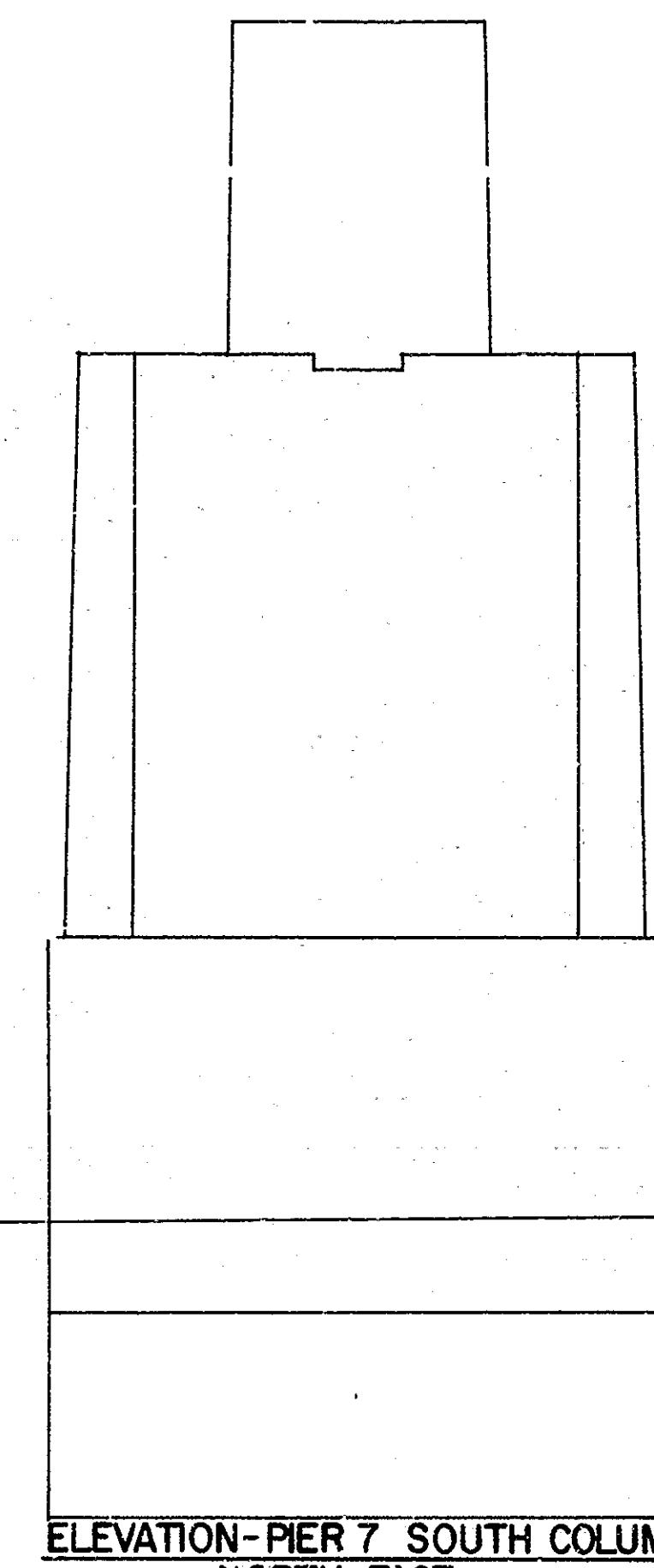
BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY
 L.R. 769 & L.R. 67057 SEC. 300
 M. INLINE OVER CONRAIL AND ABANDONED SIDING
 II SPAN STEEL MULTI-GIRDER BRIDGE
 SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK
 SUBSTRUCTURE REPAIR II

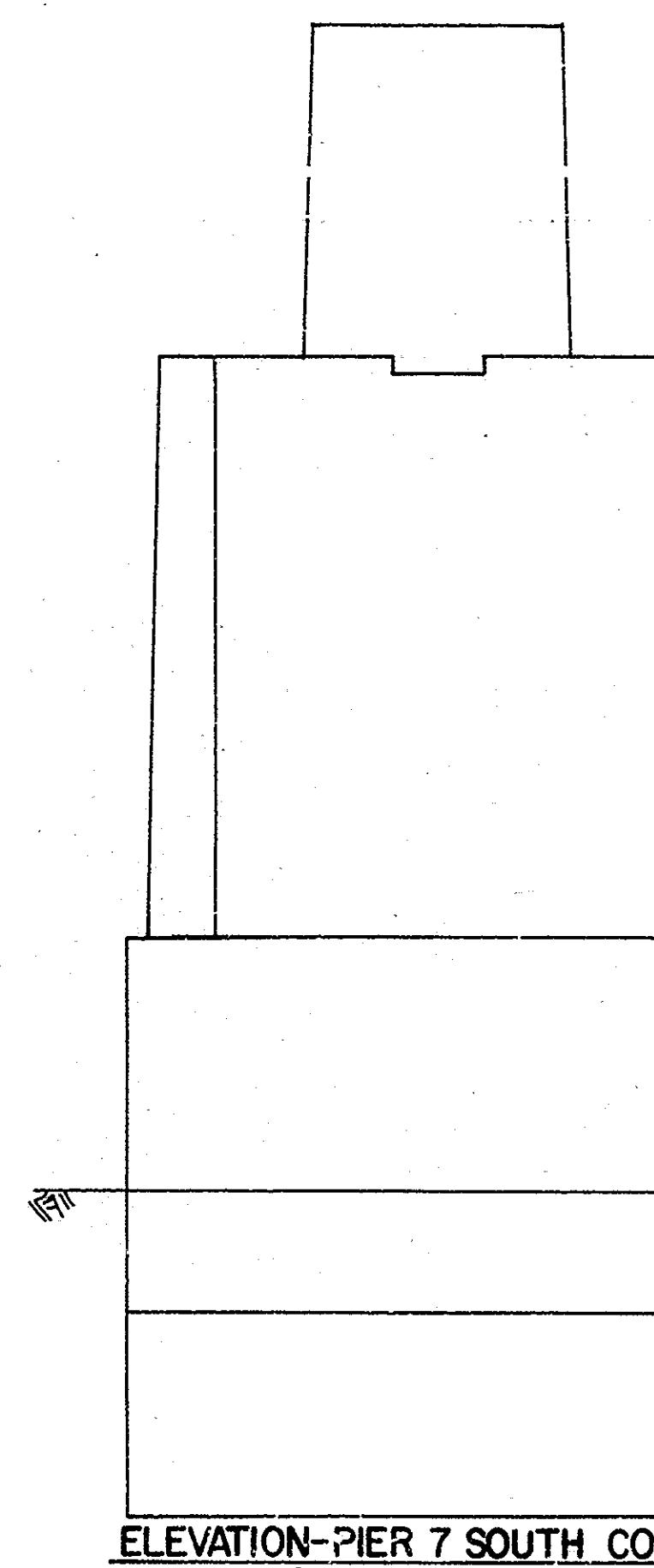
RECOMMENDED	MAY 31 1985	SHEET 62 OF 66
		S-16093A



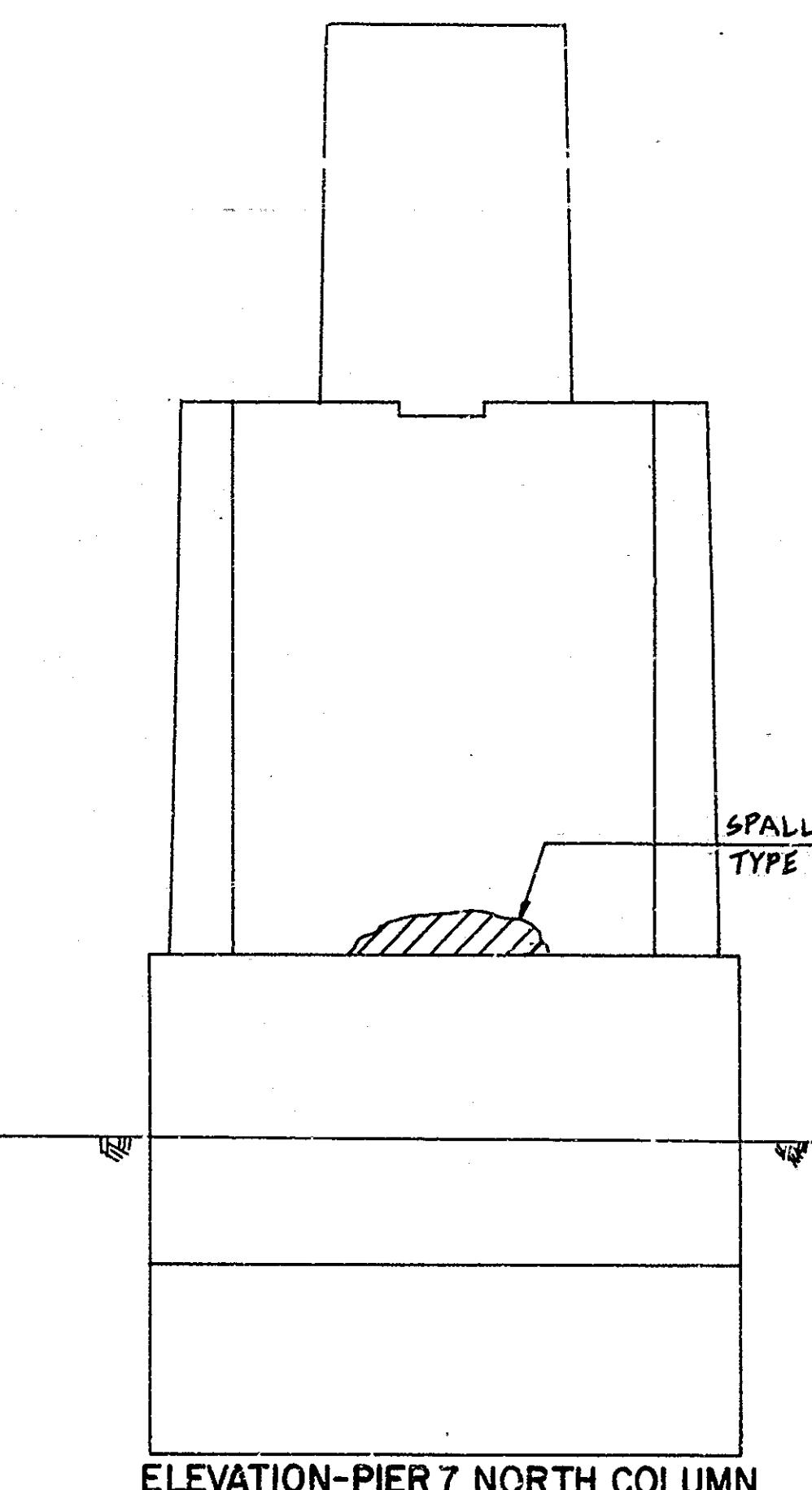
ELEVATION-PIER 7 NORTH COLUMN

NORTH FACE
SCALE: 3/16"=1'-0"

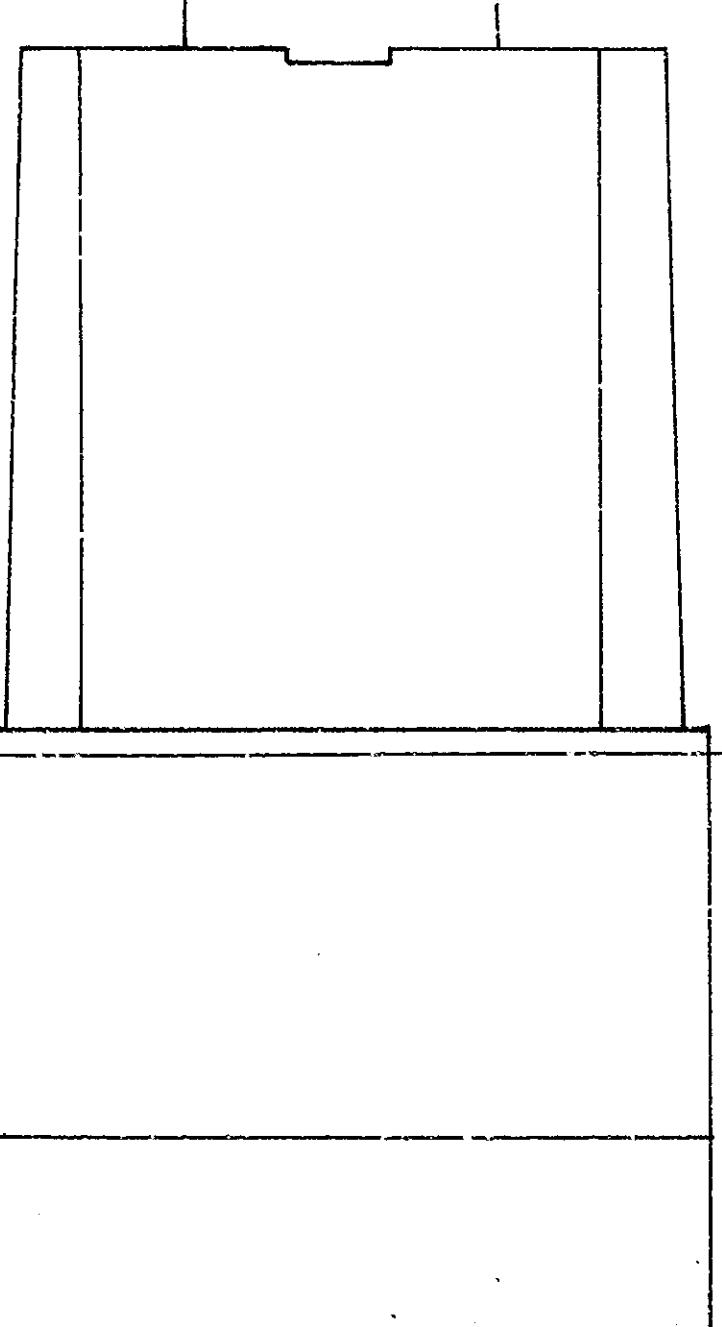
ELEVATION-PIER 7 SOUTH COLUMN

NORTH FACE
SCALE: 3/16"=1'-0"

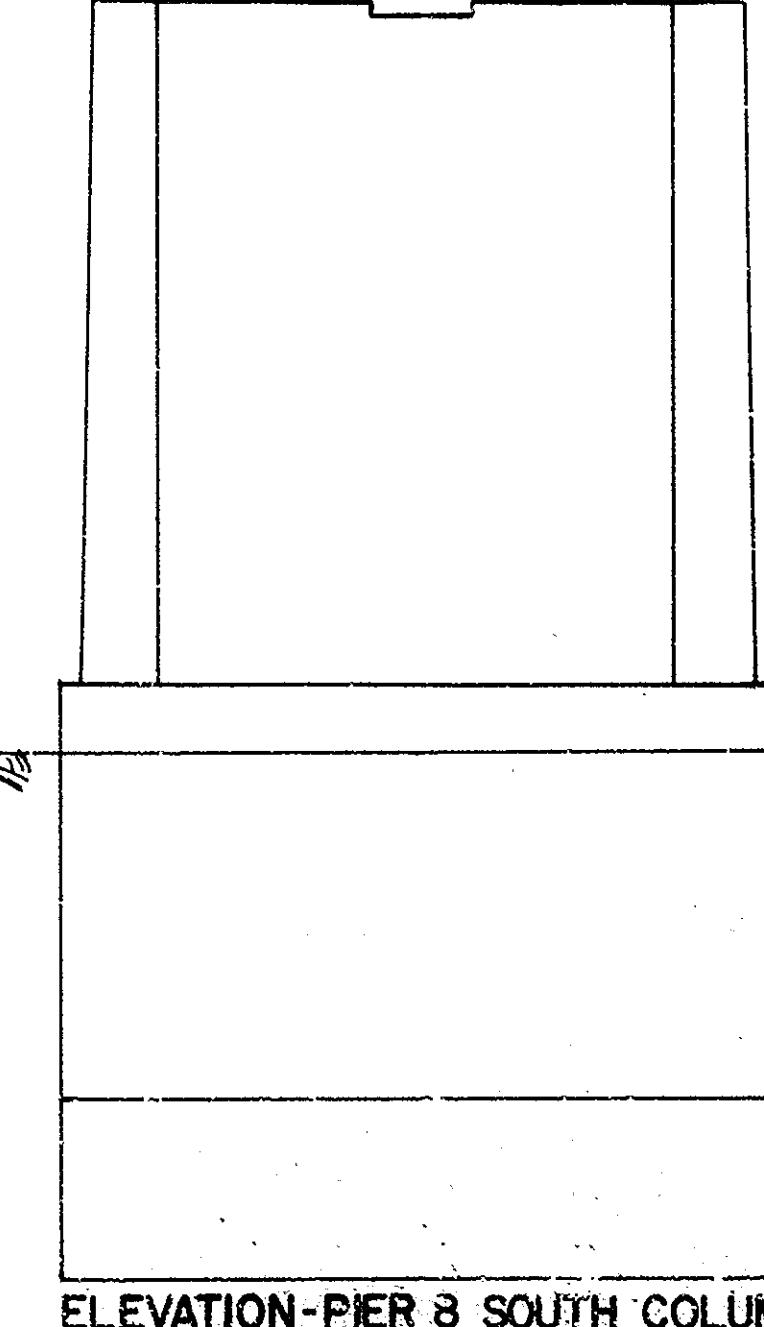
ELEVATION-PIER 7 SOUTH COLUMN

SOUTH FACE
SCALE: 3/16"=1'-0"

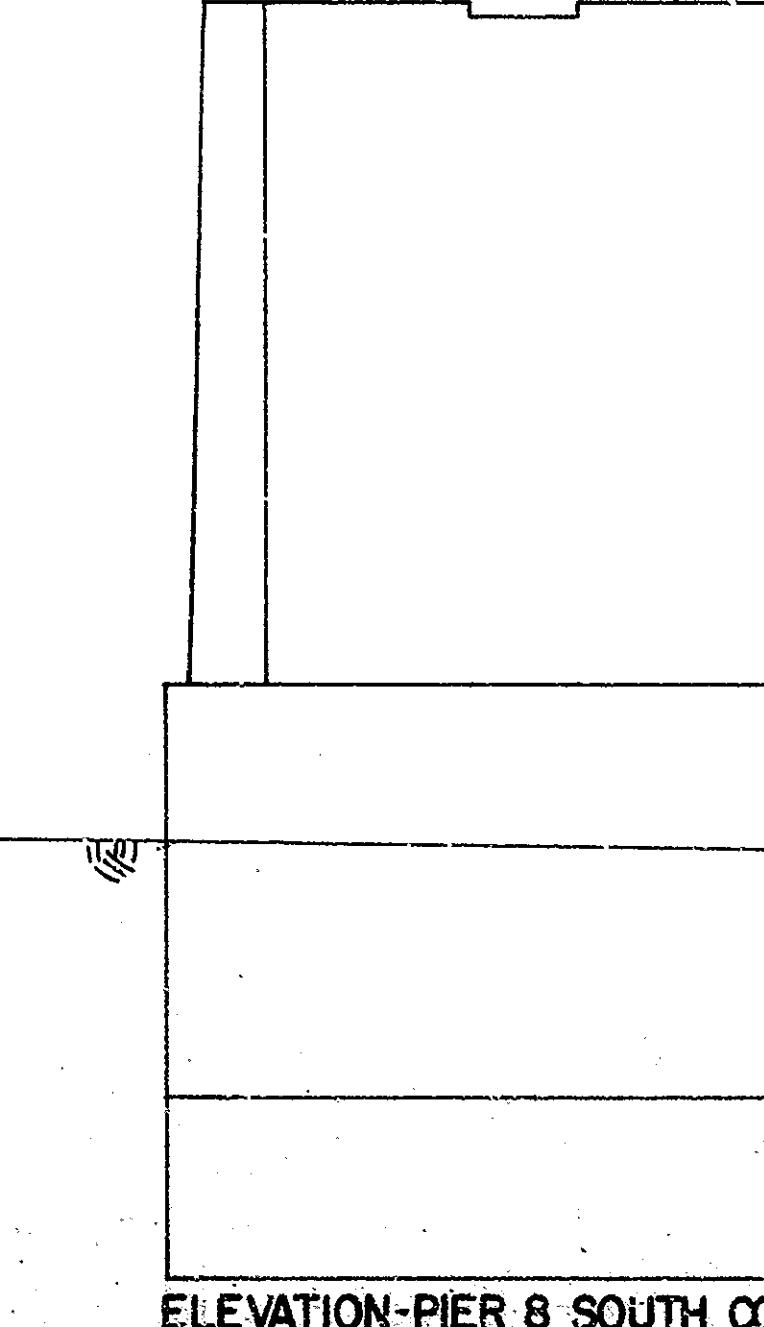
ELEVATION-PIER 7 NORTH COLUMN

SOUTH FACE
SCALE: 3/16"=1'-0"

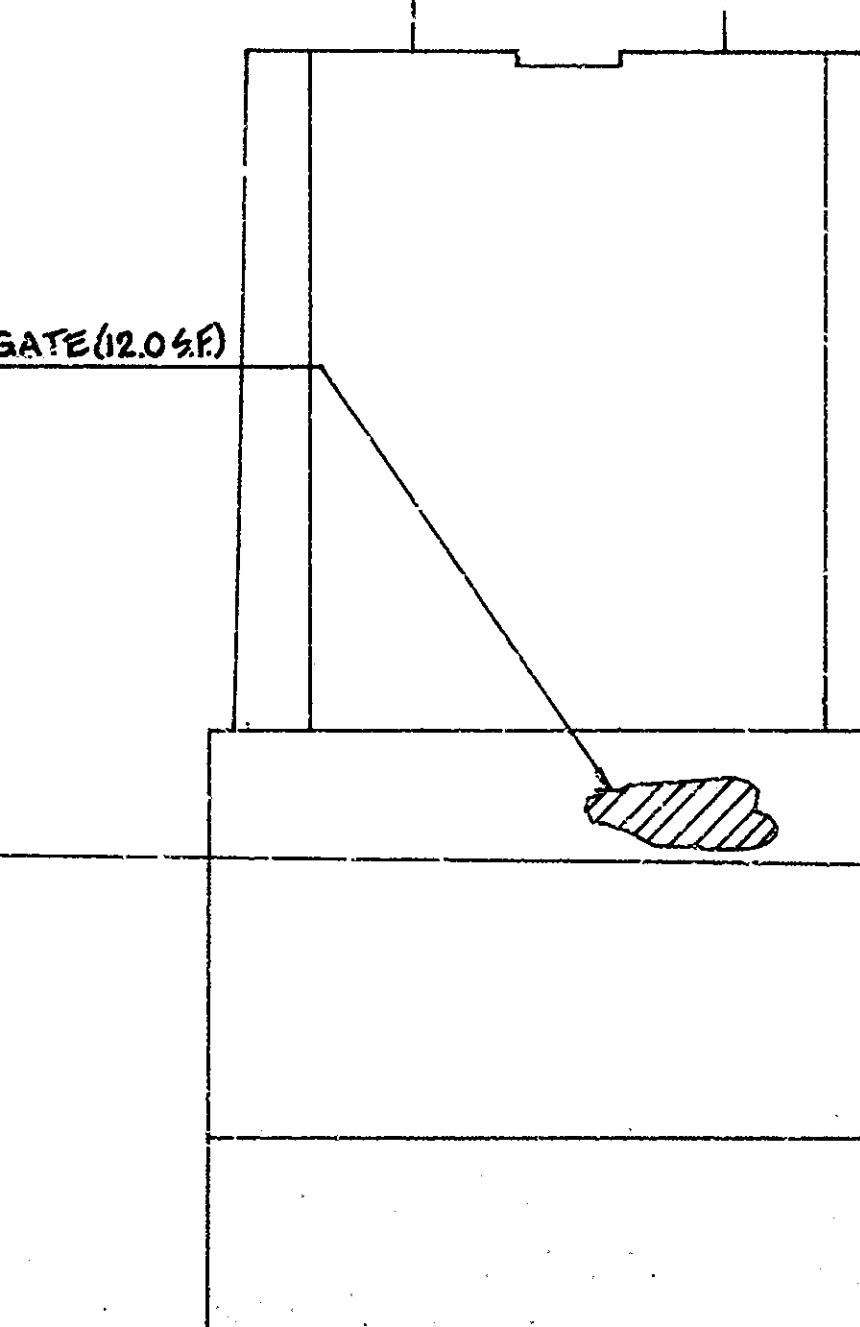
ELEVATION-PIER 8 NORTH COLUMN

NORTH FACE
SCALE: 3/16"=1'-0"

ELEVATION-PIER 8 SOUTH COLUMN

NORTH FACE
SCALE: 3/16"=1'-0"

ELEVATION-PIER 8 SOUTH COLUMN

SOUTH FACE
SCALE: 3/16"=1'-0"

ELEVATION-PIER 8 NORTH COLUMN

SOUTH FACE
SCALE: 3/16"=1'-0"

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Greiner Engineering Sciences, Inc.
CONSULTING ENGINEERS
KING OF PRUSSIA, PA

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

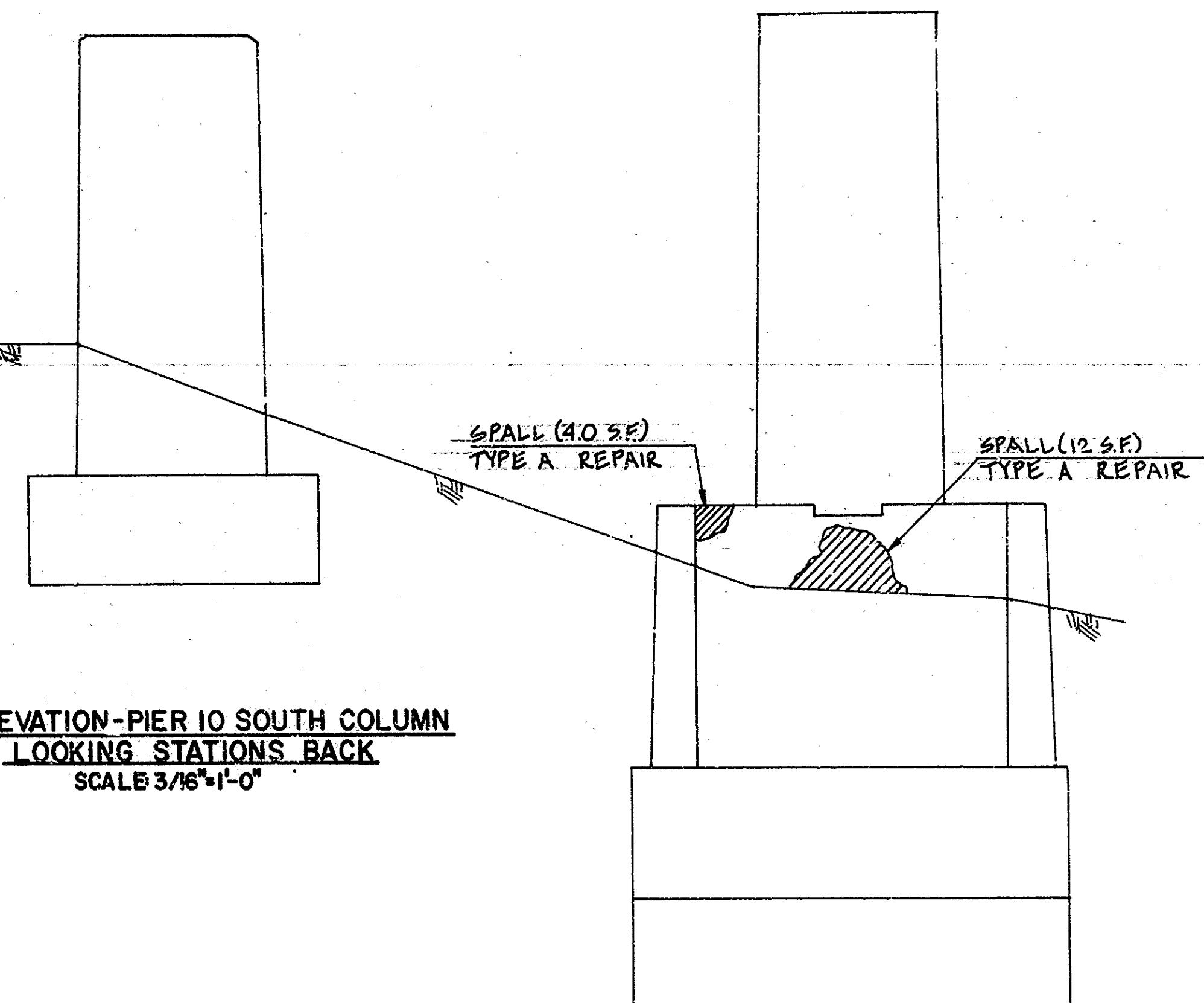
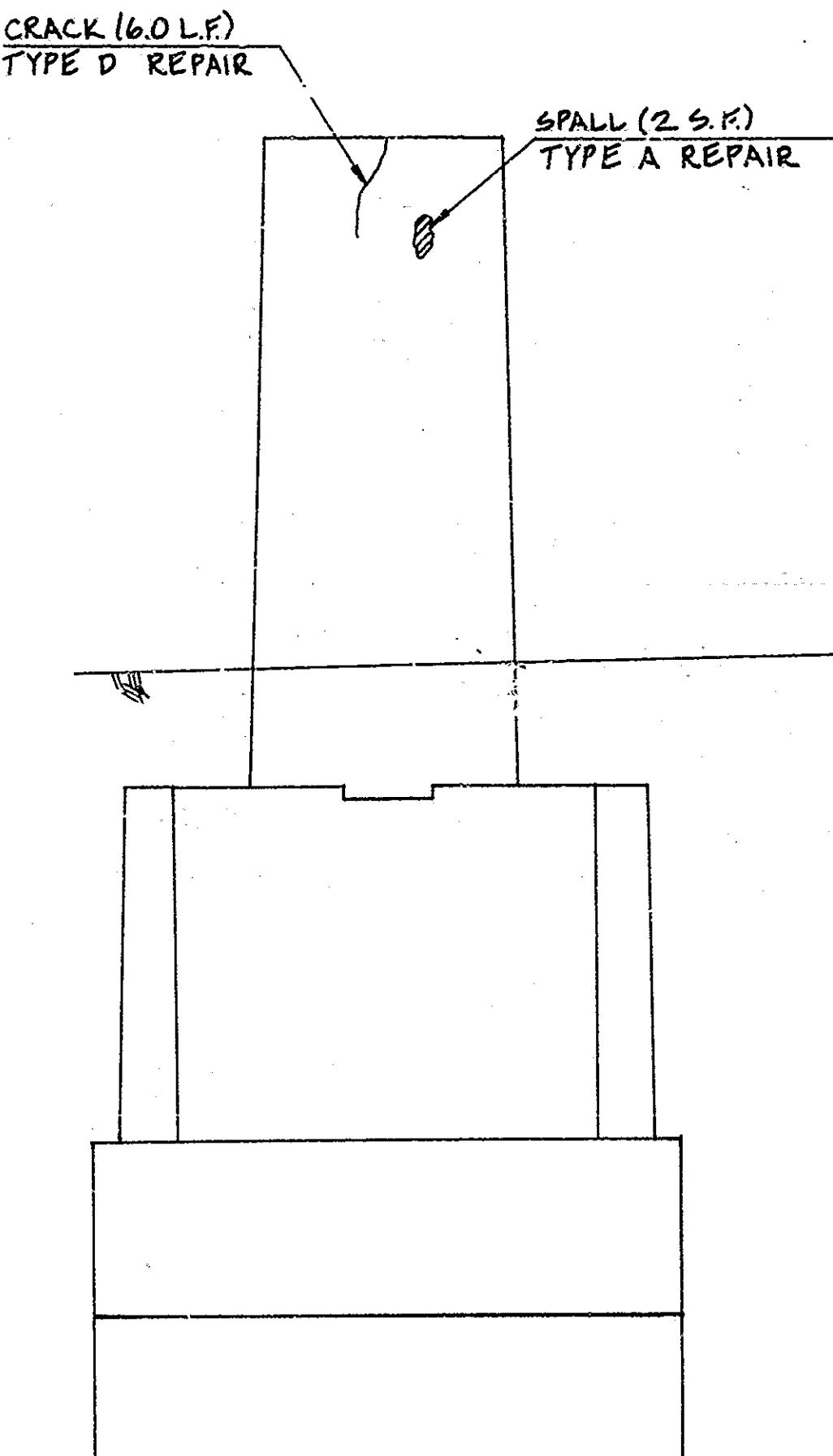
SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

SUBSTRUCTURE REPAIR III

RECOMMENDED MAY 31 1985

SHEET 63 OF 66

S-16093A



**ELEVATION - PIER 10 NORTH COLUMN
NORTH FACE**
SCALE: 3/16" = 1'-0"

**ELEVATION - PIER 10 NORTH COLUMN
SOUTH FACE**
SCALE: 3/16" = 1'-0"

Mark	Description	By	Chk'd.	App'd.	Date
REVISIONS					

Commonwealth of Pennsylvania DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAY DESIGN	
MONTGOMERY COUNTY L.R. 769 & L.R. 67057 SEC. 300 MAINLINE OVER CONRAIL AND ABANDONED SIDING II SPAN STEEL MULTI-GIRDER BRIDGE SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK SUBSTRUCTURE REPAIR IV	
RECOMMENDED	MAY 31 1985
SHEET 64 OF 66	
S-16093A	

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KING OF PRUSSIA, PA

P2L
STATION 564+07, 25' LT.

	1	2	3	G.E. 35.3
R E A M E D	1.5'	17-15		
HW	6.0'	7-12		
				9.0' CINDERS, SLAG, SAND, DAMP
				26.3
	10.5'	12	7-4	4.5' CINDERS & SLAG, DAMP
	15.0'	10	8-10	21.8
	19.5'	4	4-5	4.5' CINDERS, SLAG, BRICK FRAGMENTS, DAMP
	24.0'	3	4-5	4.5' CINDERS & SLAG, DAMP
	28.25	30-45	100/25	12.8 W.L. 13.3 O.F. 24 HRS. 4.5' BROWN SAND & GRAVEL, SLAG, CINDERS, WET 8.3 1.25' BROWN & GRAY WEATHERED MICA SCHIST, MOIST 7.05

P3L
STATION 565+46, 15' LT.

	1	2	3	G.E. 32.3
R E A M E D	1.5'	18-15		
HW	6.0'	9		13.5' BROWN DECOMPOSED MICA SCHIST, SLAG, CINDERS, DAMP
	10.5'	5		
	15.0'	20	7-7	18.8
	19.5'	15	7-8	4.5' BROWN DECOMPOSED MICA SCHIST, CINDERS, ASHES, DAMP 14.3
	25.0'	7-23	54-72	4.0' BROWN DECOMPOSED MICA SCHIST, SLAG, SOME ROCK FRAGMENTS, DAMP 10.3 W.L. 3.0' SILT, CINDERS, SLAG, DAMP 12.6

P4R
STATION 566+00, 22' RT.

	1	2	3	G.E. 33.6
R E A M E D	1.5'	3-7		
HW	6.0'	10		4.5' BROWN DECOMPOSED MICA SCHIST, CINDERS, SAND, SLAG, DAMP
	10.5'	4	4-7	29.1
	15.0'	3	3-5	4.5' BROWN DECOMPOSED MICA SCHIST, CINDERS, SAND, DAMP
	19.5'	6	8-4	24.6
	24.0'	1	1-2	3.0' BROWN DECOMPOSED MICA SCHIST, MOIST 9.6

P5R
STATION 568+35, 18' RT.

	1	2	3	G.E. 34.1
R E A M E D	1.5'	10		
HW	6.0'	8		4.5' BROWN DECOMPOSED MICA SCHIST, CINDERS, SOME ROCK FRAGMENTS, DAMP 29.6
	10.5'	5		29.1
	15.0'	4		4.5' BROWN DECOMPOSED MICA SCHIST, CINDERS, SAND, DAMP
	19.5'	17	7-9	4.5' BROWN DECOMPOSED MICA SCHIST, DAMP
	24.0'	1	1-2	4.5' BROWN DECOMPOSED MICA SCHIST, BROWN CLAY, SOME ROCK FRAGMENTS, DAMP 16.1

P6L
STATION 596+56, 11' LT.

	1	2	3	G.E. 33.2
R E A M E D	1.5'	6		
HW	6.0'	9		4.5' BROWN DECOMPOSED MICA SCHIST, SOME CINDERS, DAMP 28.7
	10.5'	4		24.2
	15.0'	14		4.5' BROWN DECOMPOSED MICA SCHIST, TRACE CINDERS, DAMP 19.7
	19.5'	7		4.5' BROWN & GRAY DECOMPOSED MICA SCHIST, DAMP
	24.0'	13		4.5' BROWN DECOMPOSED MICA SCHIST, BROWN CLAY, TRACE ROCK FRAGMENTS, DAMP 15.2
	28.0'	26		3.5' BROWN DECOMPOSED MICA SCHIST, MOIST 12.6
	28.0'	26		2.5' BROWN SILTY SAND & GRAVEL, WET 6.6
	28.0'	26		0.5' BROWN GRAVEL W.L. 9.1
	28.0'	26		0.5' SILTY SAND CHANGING TO 0.485
	28.0'	26		0.5' GRAY DECOMPOSED MICA SCHIST, WET 6.1
	30.0'	28		3.0' GRAY MICA SCHIST 3.2

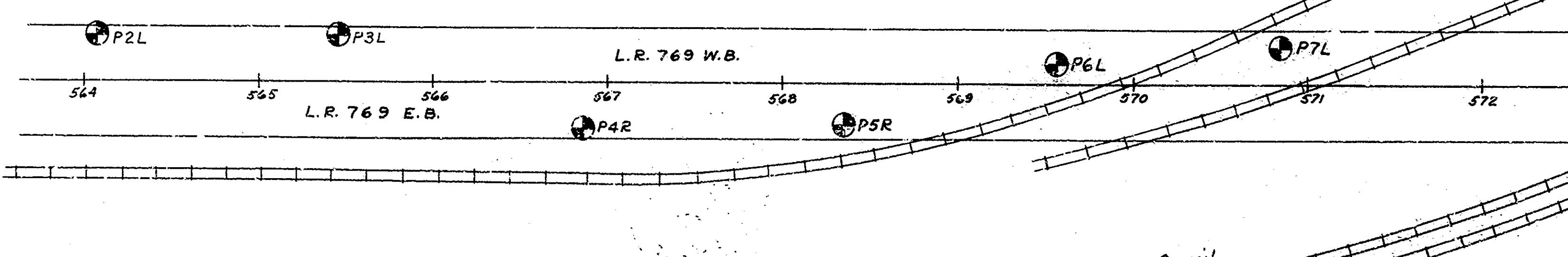
P7L
STATION 570+82, 15' LT.

	1	2	3	G.E. 35.1
R E A M E D	1.5'	5		
HW	6.0'	11		9.0 BROWN DECOMPOSED MICA SCHIST, DAMP
	10.5'	11		26.1
	15.0'	15		4.5' SLAG & SAND, WET 21.6
	19.5'	12		4.5' CINDERS, SLAG, SOME CLAY, MOIST 17.1
	24.0'	20	9	4.5' CINDERS, SLAG, DECOMPOSED MICA SCHIST, MOIST 12.6
	28.0'	26		3.5' BROWN DECOMPOSED MICA SCHIST, MOIST 9.1
	28.0'	26		2.5' BROWN SILTY SAND & GRAVEL, WET 6.6
	28.0'	26		0.5' BROWN GRAVEL W.L. 9.1
	28.0'	26		0.5' SILTY SAND CHANGING TO 0.485
	28.0'	26		0.5' GRAY DECOMPOSED MICA SCHIST, WET 6.1

▲ = TEMPORARY SUPPORT SYSTEM
BOTTOM OF FOOTING ELEVATION

MONTGOMERY COUNTY

SCHUYLKILL RIVER ↗



BORING PLAN

SCALE: 1" = 50'

"THIS SHEET IS INCLUDED FOR THE CONVENIENCE OF THE DEPARTMENT AND IS NOT TO BE CONSIDERED AS A PART OF THE CONTRACT DRAWINGS. (SEE SECTION 102.05 OF PUB. 400/83)"

NOTES
HAMMER DROP ON SAMPLER = 30", WEIGHT = 140 LBS.
HAMMER DROP ON CASING = 24", WEIGHT = 300 LBS.
SAMPLER SIZE = 2"
CASING SIZE = HW, NW, NX
SIZE OF CORE BIT = NX
COLUMN 1 - DENOTES BLOWS ON CASING PER FOOT.
COLUMN 2 - DENOTES LOWER LIMIT OF SAMPLES & CORE RUNS.
COLUMN 3 - DENOTES BLOWS ON SAMPLER PER SIX INCHES,
PERCENT OF CORE RECOVERY & RPD%
W.L. — GROUND WATER LEVEL AT TIME INDICATED.
G.E. = GROUND ELEVATION. VERTICAL SCALE: 1" = 50'.
CLASSIFICATION OF SOIL HAS BEEN MADE BY THE DRILLER
AND HAS NOT BEEN CHECKED BY A SOILS ENGINEER.
CLASSIFICATION OF ROCK HAS BEEN MADE BY THE DRILLER
AND HAS NOT BEEN CHECKED BY A GEOLOGIST.

Mark	Description	By	Chkd.	App'd.	Date

REVISIONS					

Commonwealth of Pennsylvania

DEPARTMENT OF TRANSPORTATION

BUREAU OF HIGHWAY DESIGN

MONTGOMERY COUNTY

L.R. 769 & L.R. 67057 SEC. 300

MAINLINE OVER CONRAIL AND ABANDONED SIDING

II SPAN STEEL MULTI-GIRDER BRIDGE

SUPERSTRUCTURE REPLACEMENT - CAST IN PLACE DECK

CORE BORINGS I

RECOMMENDED MAY 31 1985

SHEET 65 OF 66

TEST BORINGS
MADE BY
SPRAGUE & HENWOOD, INC.
FOR
GREINER ENGINEERING SCIENCES, INC.
MARCH 1985

S-16093A

