

PROJECT	DESIGNATION	# I-465-149-2221C I-465-149-3602F I-465-150-2220C
IM/465-4(318)	9704211, 12 & 13	
CONTRACT	BRIDGE FILE	
R 23849	#	

INDEX				
STRUCTURE	TYPE	SPAN AND SKEW	OVER	STATION
I-465-149-2221C (SB)	CONT. STEEL BEAM & REINF. CONCRETE GIRDER BRIDGE	14.28 m, 16.92 m, 14.35 m, 13.26 m, 13.22 m, & 13.22 m SKEW: 27° RT.	ABANDONED RAILROAD & U.S.-136	12+625.861
I-465-149-3602F (SB)	CONT. STEEL BEAM & REINF. CONC. GIRDER BRIDGE	15.62 m, 21.57 m, 25.60 m, 21.57 m, 10.05 m & 9.53 m SKEW: 16° RT.	BIG EAGLE CREEK	12+435.840
I-465-150-2220C (SB)	CONTINUOUS STEEL BEAM BRIDGE	14.68 m, 17.37 m, & 14.68 m SKEW: 26°55' RT.	ABANDONED RAILROAD	11+102.297

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33	CONCRETE BARRIER-DETAILS	
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38	BENT NO.1 DETAILS	(I-465-149-2221C)(SB)
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40	PIER NO.3 DETAILS	(I-465-149-2221C)(SB)
41	PIER NO.4 DETAILS	(I-465-149-2221C)(SB)
42	PIERS NO.5 & NO.6 DETAILS	(I-465-149-2221C)(SB)
43	BENT NO.7 DETAILS	(I-465-149-2221C)(SB)
44 - 45	BEAM DETAILS	(I-465-149-2221C)(SB)
46	FRAMING PLAN	(I-465-149-2221C)(SB)
47 - 49	STRUCTURAL STEEL DETAILS	(I-465-149-2221C)(SB)
50 - 55	SUPERSTRUCTURE DETAILS	(I-465-149-2221C)(SB)
56	CONCRETE BRIDGE RAILING DETAILS	(I-465-149-2221C)(SB)
57 - 58	APPROACH SLAB DETAILS	(I-465-149-2221C)(SB)
59	BRIDGE SUMMARY	(I-465-149-2221C)(SB)
60	LAYOUT	(I-465-149-3602F)(SB)
61 - 62	GENERAL PLAN	(I-465-149-3602F)(SB)
63 - 64	TIE-UP DIAGRAM	(I-465-149-3602F)(SB)
65 - 66	REMOVAL DETAILS	(I-465-149-3602F)(SB)
67	BENT NO.1 DETAILS	(I-465-149-3602F)(SB)
68	PIER NO.2 DETAILS	(I-465-149-3602F)(SB)
69	PIERS NO.3 & NO.4 DETAILS	(I-465-149-3602F)(SB)
70	PIER NO.5 DETAILS	(I-465-149-3602F)(SB)
71	BENT NO.6 DETAILS	(I-465-149-3602F)(SB)
72	BENT NO.7 DETAILS	(I-465-149-3602F)(SB)
73	FRAMING PLAN	(I-465-149-3602F)(SB)
74 - 77	STRUCTURAL STEEL DETAILS	(I-465-149-3602F)(SB)
78 - 79	BEAM DETAILS	(I-465-149-3602F)(SB)
80 - 88	SUPERSTRUCTURE DETAILS	(I-465-149-3602F)(SB)
89	CONCRETE BRIDGE RAILING DETAILS	(I-465-149-3602F)(SB)
90 - 91	APPROACH SLAB DETAILS	(I-465-149-3602F)(SB)
92	BRIDGE SUMMARY	(I-465-149-3602F)(SB)
93	LAYOUT	(I-465-150-2220C)(SB)
94	GENERAL PLAN	(I-465-150-2220C)(SB)
95	BENT NO.1 DETAILS	(I-465-150-2220C)(SB)
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97	BENT NO.4 DETAILS	(I-465-150-2220C)(SB)
98	FRAMING PLAN	(I-465-150-2220C)(SB)
99 - 100	STRUCTURAL STEEL DETAILS	(I-465-150-2220C)(SB)
101 - 103	SUPERSTRUCTURE DETAILS	(I-465-150-2220C)(SB)
104	CONCRETE BRIDGE RAILING DETAILS	(I-465-150-2220C)(SB)
105 - 106	APPROACH SLAB DETAILS	(I-465-150-2220C)(SB)
107	BRIDGE SUMMARY	(I-465-150-2220C)(SB)
108 - 120	CROSS SECTIONS	

R-23849 part 1 of 2

INDIANA DEPARTMENT OF TRANSPORTATION

BRIDGE PLANS FOR SPANS OVER 6 METERS ON I-465

PROJECT NO. IM/465-4(318) CONST.

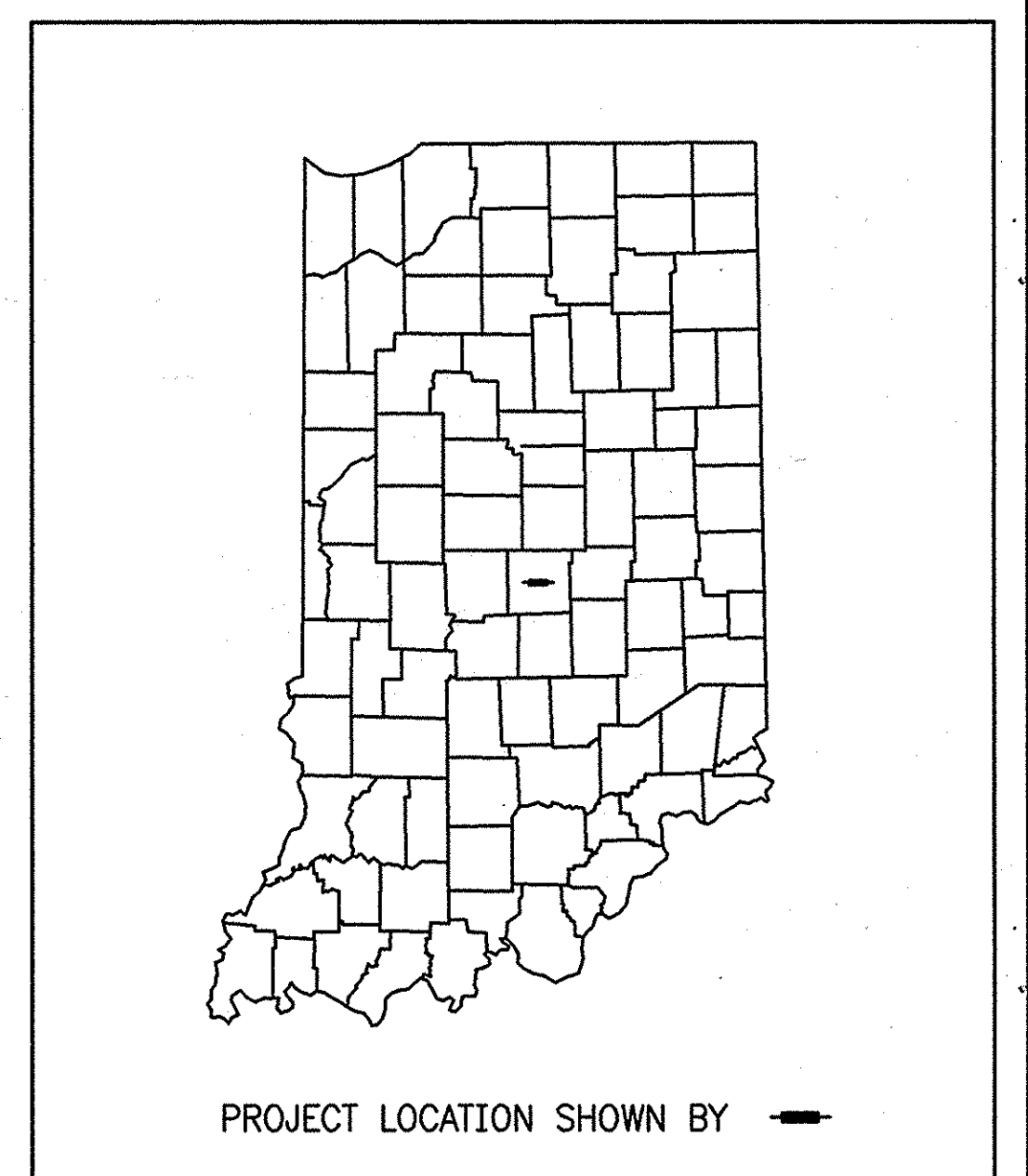
REFERENCE POINTS: 15+047 (2221C)
15+035 (3602F)
14+052 (2220C)

REHABILITATION AND PARTIAL DECK REPLACEMENT TO EXISTING BRIDGE STRUCTURE I-465-149-2221B (SB) ON I-465 OVER ABANDONED RAILROAD AND U.S. 136, APPROXIMATELY 0.47 KILOMETERS SOUTH OF I-74, LOG MILE 15.47 LOCATED IN SEC. 26, T-16-N, R-2-E, MARION COUNTY, INDIANA

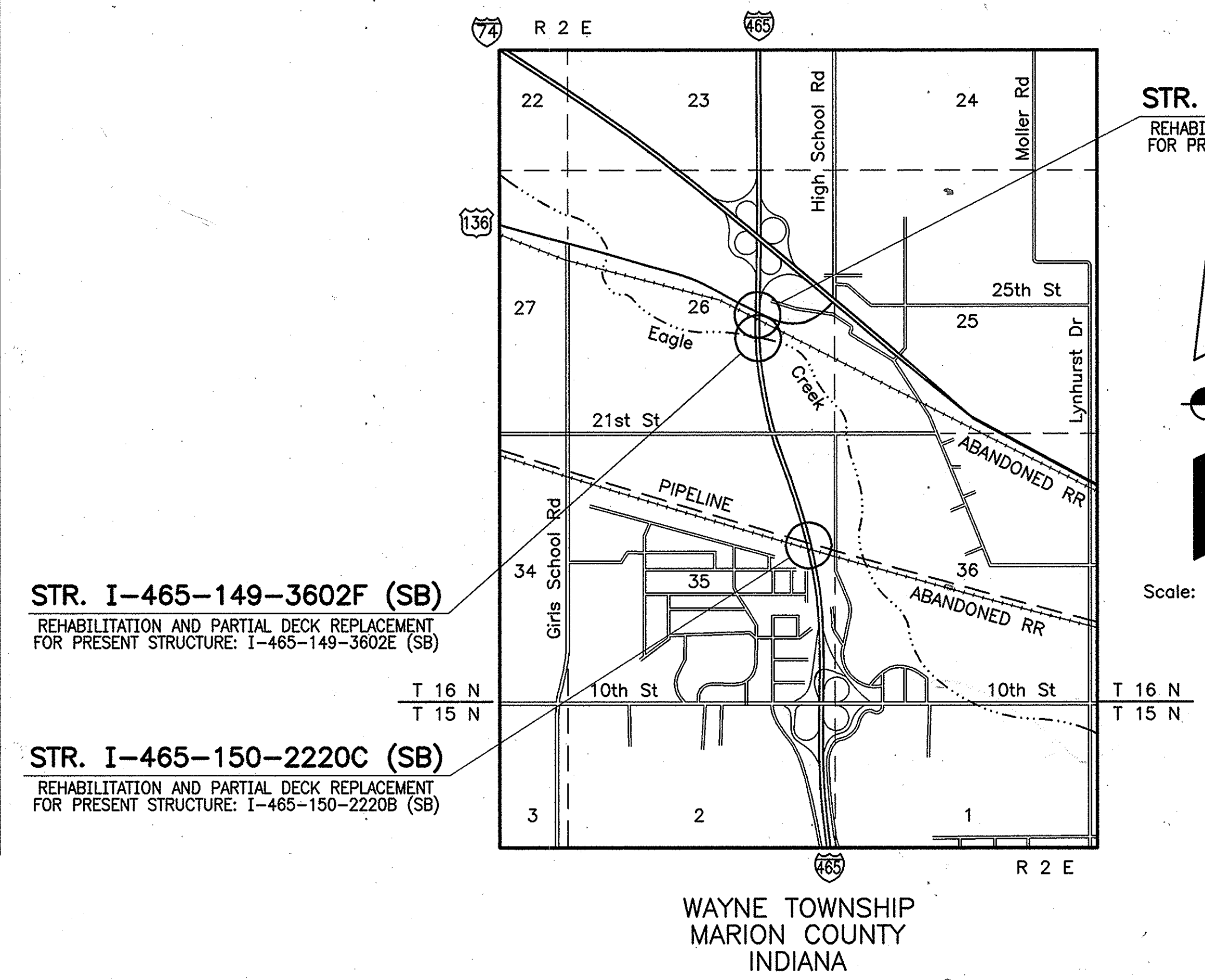
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REHABILITATION AND PARTIAL DECK REPLACEMENT TO EXISTING BRIDGE STRUCTURE I-465-150-2220B (SB) ON I-465 OVER ABANDONED RAILROAD, APPROXIMATELY 1.53 KILOMETERS SOUTH OF U.S. 136, LOG MILE 14.52 LOCATED IN SEC. 35, T-16-N, R-2-E, MARION COUNTY, INDIANA

TRAFFIC DATA	
A.A.D.T. (1996)	44,900 V.P.D. (SB)
A.A.D.T.	V.P.D.
D.H.V.	V.P.H.
DIRECTIONAL DISTRIBUTION	%
TRUCKS	% D.H.V.
	% A.A.D.T.
MAINLINE E.S.A.L.:	30,000,000
SHOULDER E.S.A.L.:	20,000,000
DESIGN DATA	
DESIGN SPEED	110 K.P.H.
PROJECT DESIGN CRITERIA	3R (FREEWAY)
FUNCTIONAL CLASSIFICATION	PRINCIPAL ARTERIAL
RURAL/URBAN	URBAN
TERRAIN	LEVEL
ACCESS CONTROL	FULL



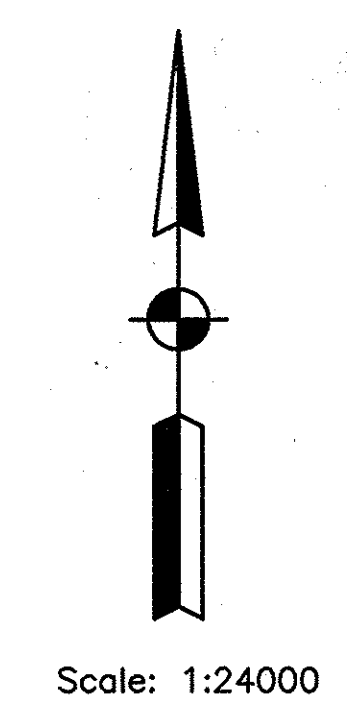
BRIDGE LENGTH :	KM.
ROADWAY LENGTH :	KM.
TOTAL LENGTH :	KM.
MAX. GRADE :	%



STR. I-465-149-3602F (SB)
REHABILITATION AND PARTIAL DECK REPLACEMENT FOR PRESENT STRUCTURE: I-465-149-3602E (SB)

STR. I-465-150-2220C (SB)
REHABILITATION AND PARTIAL DECK REPLACEMENT FOR PRESENT STRUCTURE: I-465-150-2220B (SB)

STR. I-465-149-2221C (SB)
REHABILITATION AND PARTIAL DECK REPLACEMENT FOR PRESENT STRUCTURE I-465-149-2221B (SB)



PLANS PREPARED BY:
FLOYD E. BURROUGHS & ASSOC., INC.
CONSULTING ENGINEERS
5160 EAST 65TH STREET
INDIANAPOLIS, INDIANA 46220
(317) 849-9722

[INDIANA DEPARTMENT OF TRANSPORTATION
STANDARD SPECIFICATIONS DATED 1995 TO
BE USED WITH THESE PLANS]

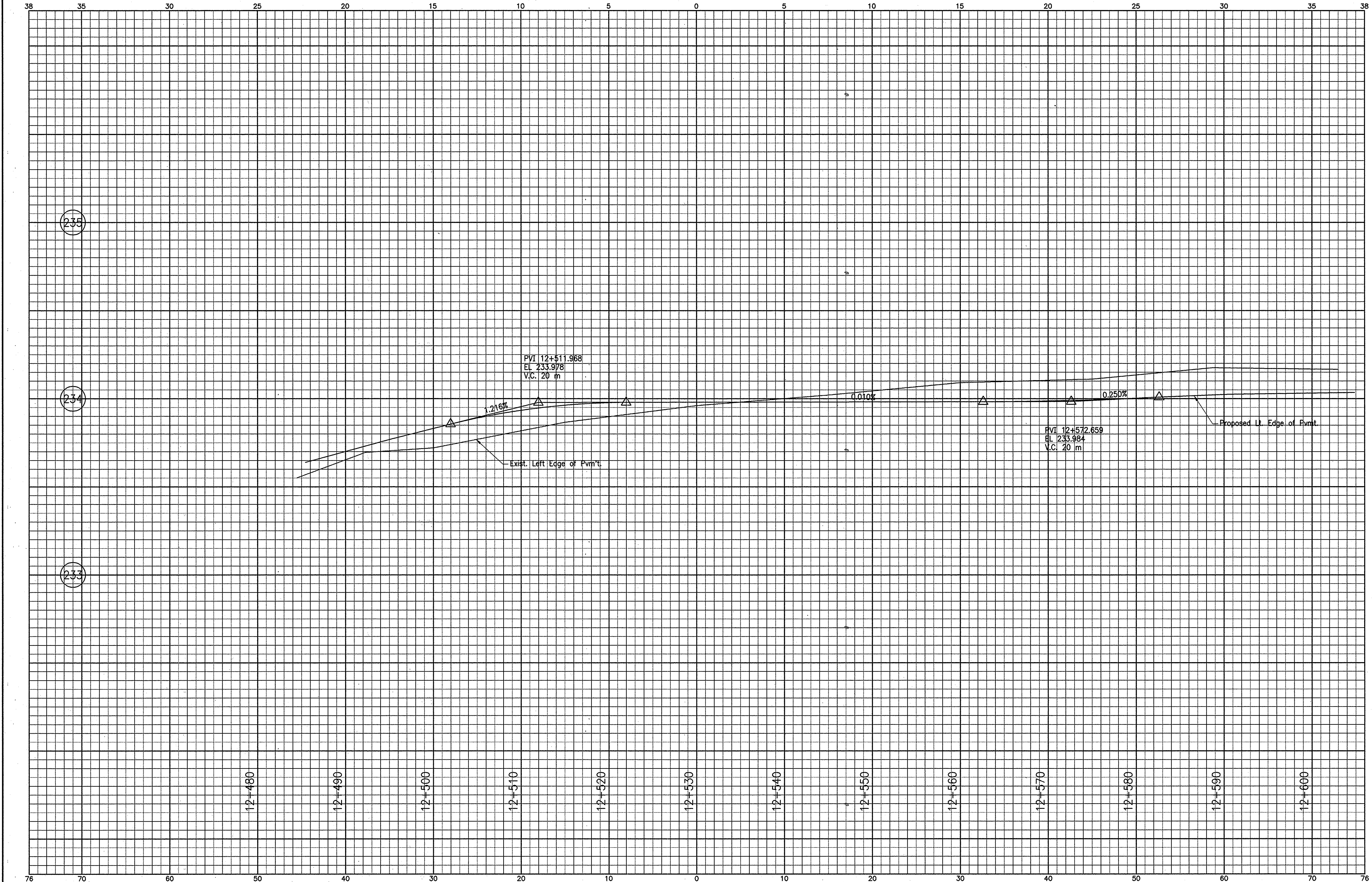
REVISIONS	
DATE	SHEET NO.
06-29-99	1 Revised
06-29-99	62, 68, 70, 92 Deleted
06-29-99	62A, 68A, 70A, 92A Added

FEDERAL HIGHWAY ADMINISTRATION
U.S. DEPT. OF TRANSPORTATION
APPROVED: _____ DATE _____
DIVISION ADMINISTRATOR

PLANS PREPARED BY: FLOYD E. BURROUGHS & ASSOC., INC. (317) 849-9722
5160 EAST 65TH STREET, INDIANAPOLIS, INDIANA 46220
PHONE NUMBER
CERTIFIED BY: *Frank E. Sailer Jr.* 1/19/99 DATE
APPROVED: *Phyllis H. Kline* 2/18/99 DATE
FOR LETTING: _____ CHIEF, DIVISION OF DESIGN

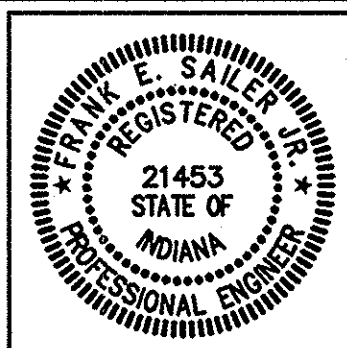
	# I-465-149-2221C I-465-149-3602F I-465-150-2220C	BRIDGE FILE #
	9704211, 12 & 13	DESIGNATION
	1 of 120	SHEETS
CONTRACT R 23849		PROJECT
		IM/465-4(318)

FILE: I465TSH



File: 9660SE

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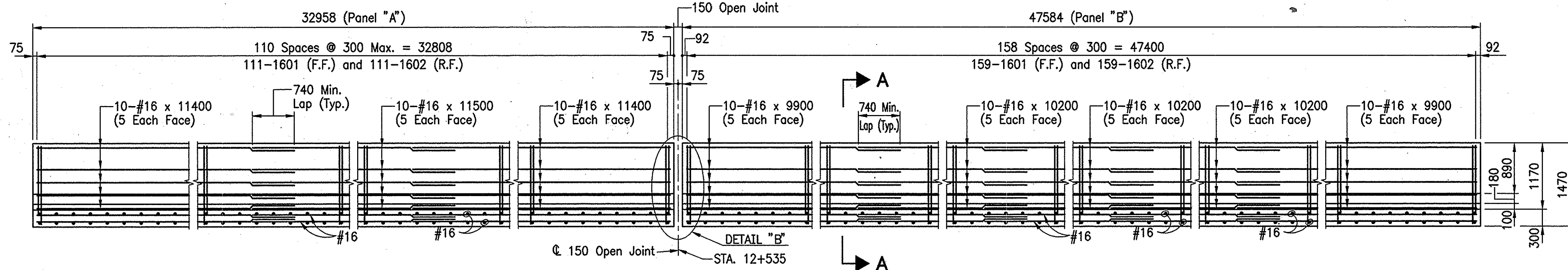


RECOMMENDED FOR APPROVAL <i>Frank E. Sailer</i> 1/19/99	
DESIGNED: JAP	DATE: 1/19/99
CHECKED: MJM	DESIGN ENGINEER: JAP
	DATE: 1/19/99
CHECKED: GU	DESIGN ENGINEER: JAP

**INDIANA
DEPARTMENT OF TRANSPORTATION**

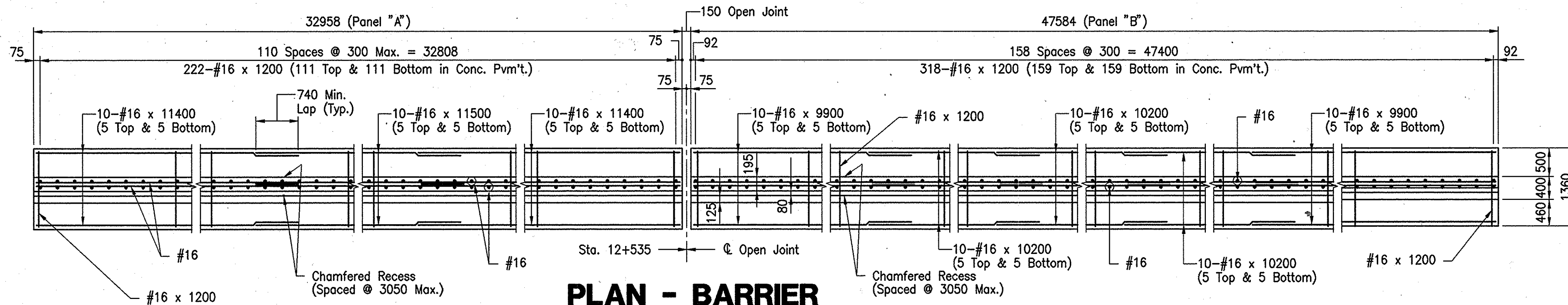
SUPERELEVATION DIAGRAM

HORIZONTAL SCALE 1:200	BRIDGE FILE
VERTICAL SCALE 1:100	DESIGNATION 9704211
SURVEY BOOK	SHEETS 32 of 120
CONTRACT R 23849	PROJECT IM/465-4(318)



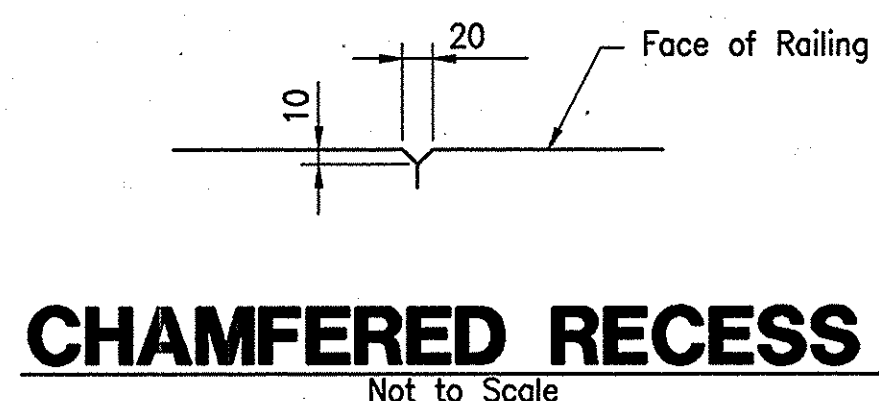
ELEVATION - BARRIER

Not to Scale



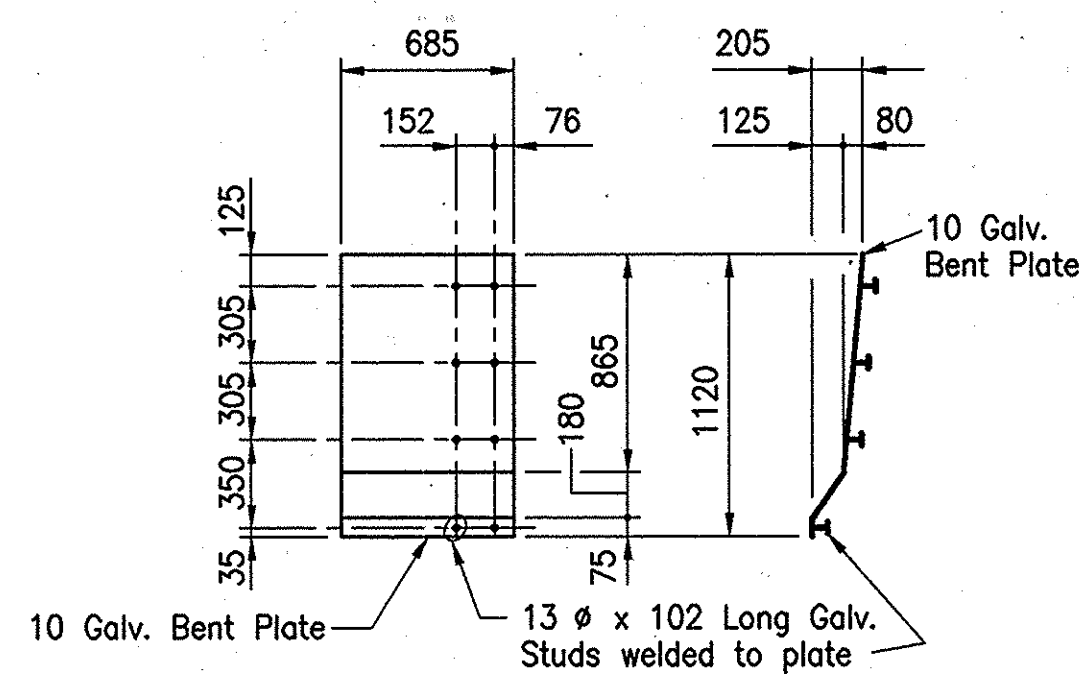
PLAN - BARRIER

Not to Scale



CHAMFERED RECESS

Not to Scale



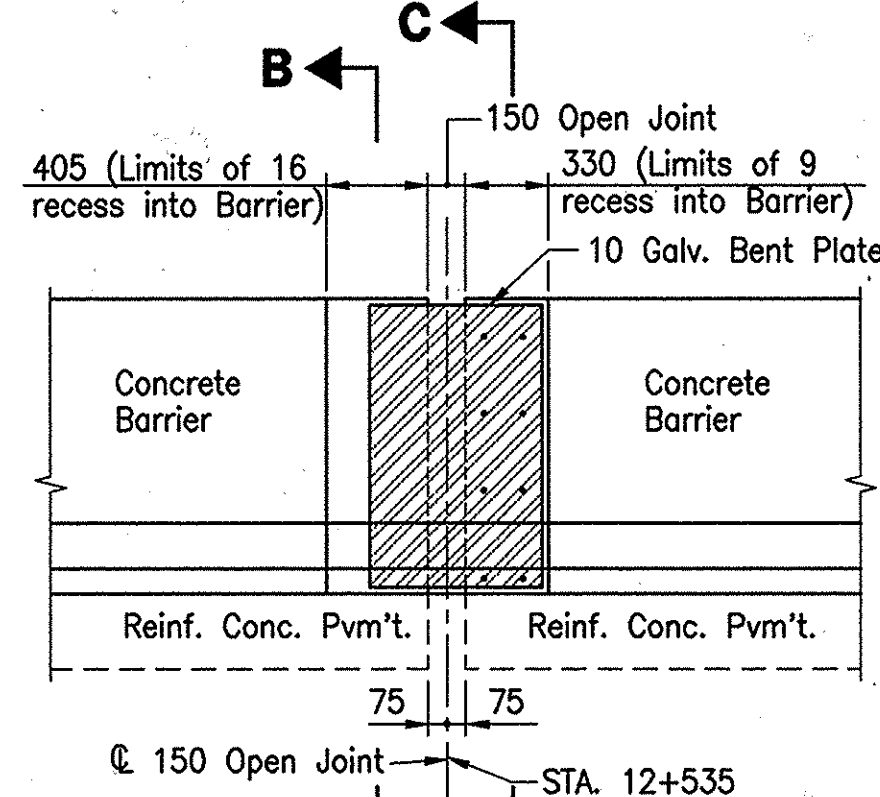
BENT PLATE DETAILS (245 MPa)

Not to Scale



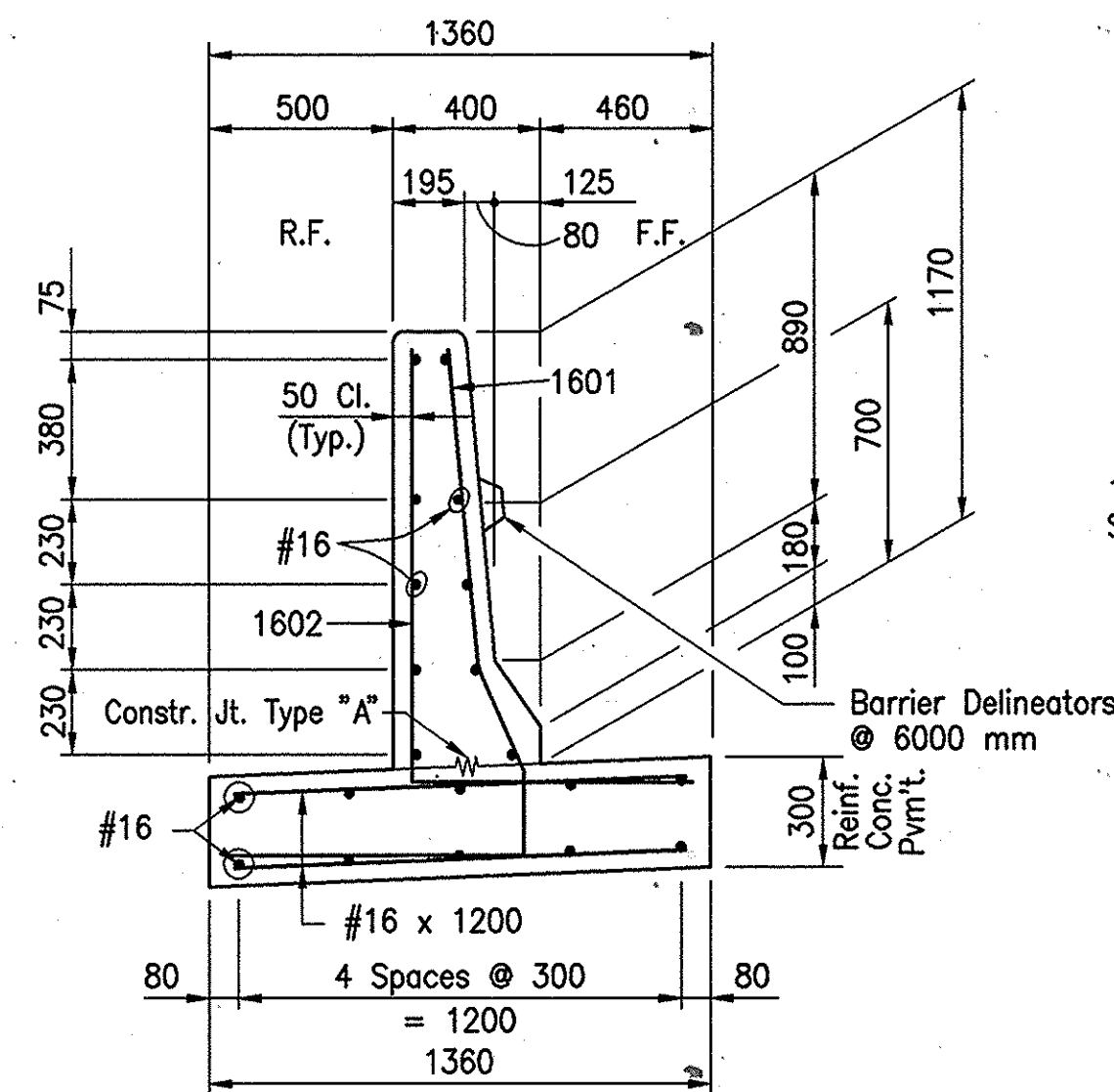
LEGEND

Indicates Steel.



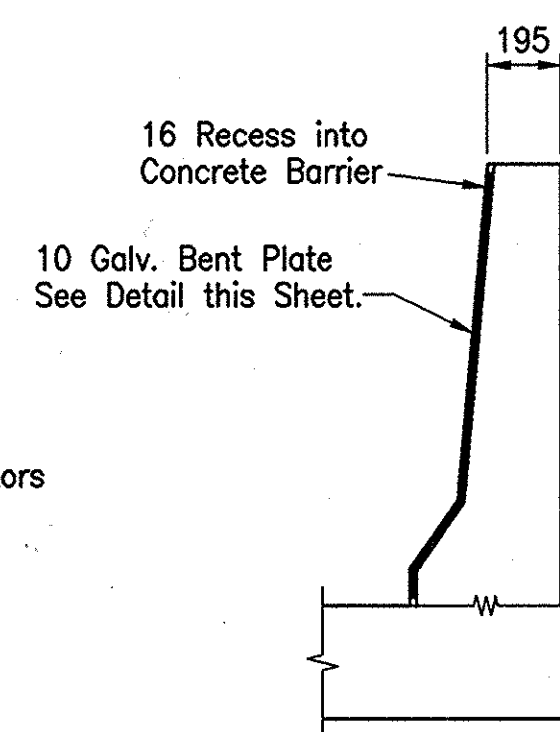
DETAIL "B"

Not to Scale



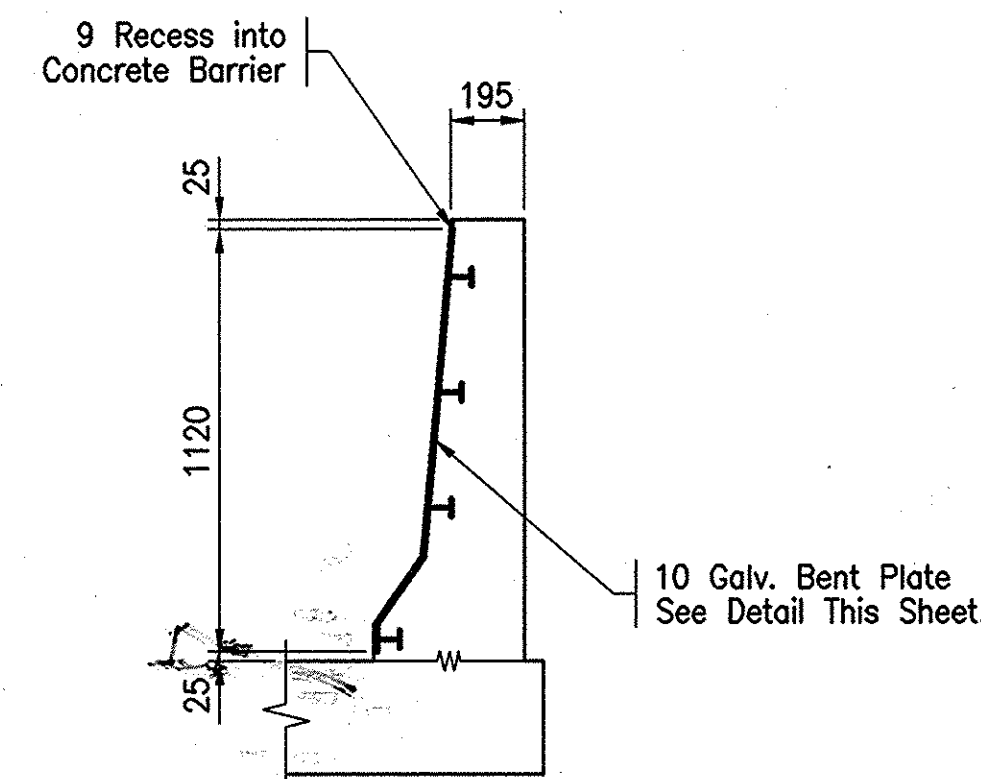
SECTION A-A

Scale: 1:20



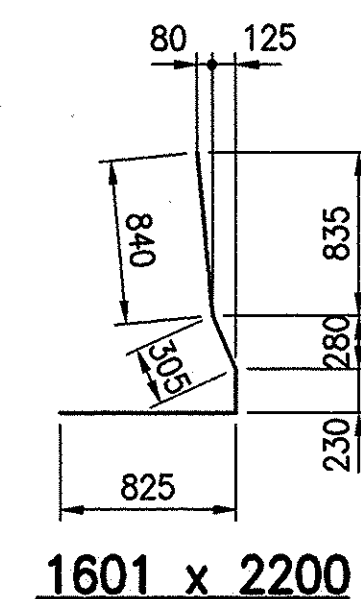
SECTION B-B

Not to Scale

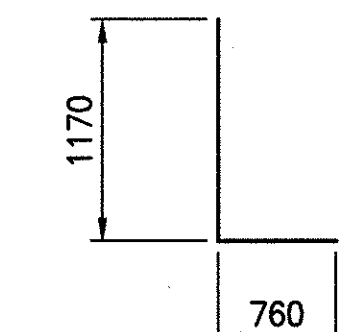


SECTION C-C

Not to Scale



1601 x 2200



1602 x 1930

**BILL OF MATERIALS
CONCRETE
BARRIER RAIL**

REINFORCING STEEL			
SIZE & MARK	NUMBER OF BARS	LENGTH (mm)	WEIGHT (kg)
1601	270	2200	
1602	270	1930	
#16	20	11500	
#16	40	11400	
#16	60	10200	
#16	40	9900	
#16	540	1200	
TOTAL #16			5365
TOTAL REINFORCING STEEL			5365
MISCELLANEOUS			
BARRIER DELINEATOR	15 EACH		
CONCRETE BARRIER - PANEL "A"	33.0 m		
CONCRETE BARRIER - PANEL "B"	47.7 m		
CEMENT CONC. PVM'T., REINF., 300 mm	109.5 m2		

NOTE:

All Dimensions are in Millimeters Unless Noted.
For Reinf. Bar Notes, See Std. Dwg. 703-BRST-01.

File: 1170CONC.BAR

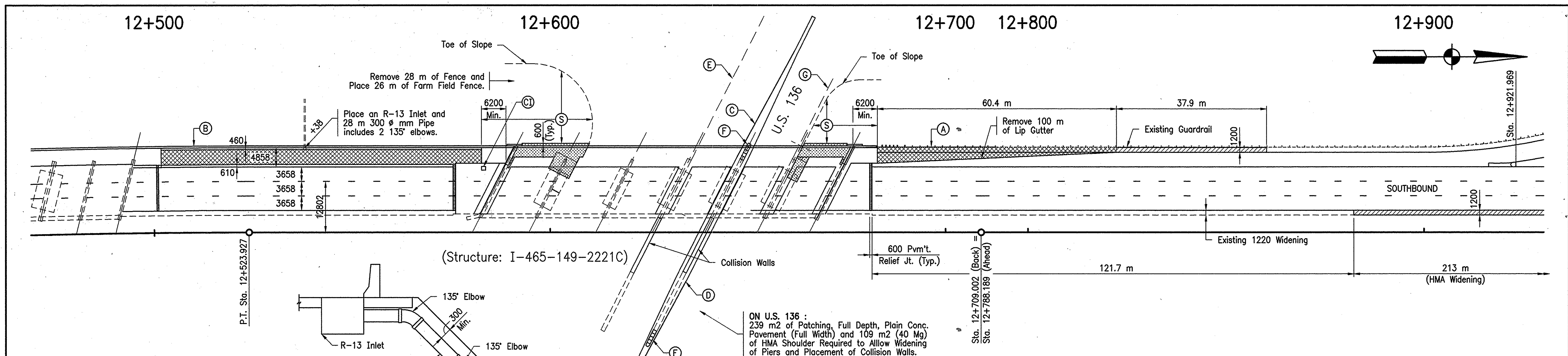


RECOMMENDED FOR APPROVAL	<i>Frank E. Sailer</i>	1/19/99
DESIGNED:	FES	DRAWN: KayO
CHECKED:	JAP	CHECKED: JAP

INDIANA
DEPARTMENT OF TRANSPORTATION

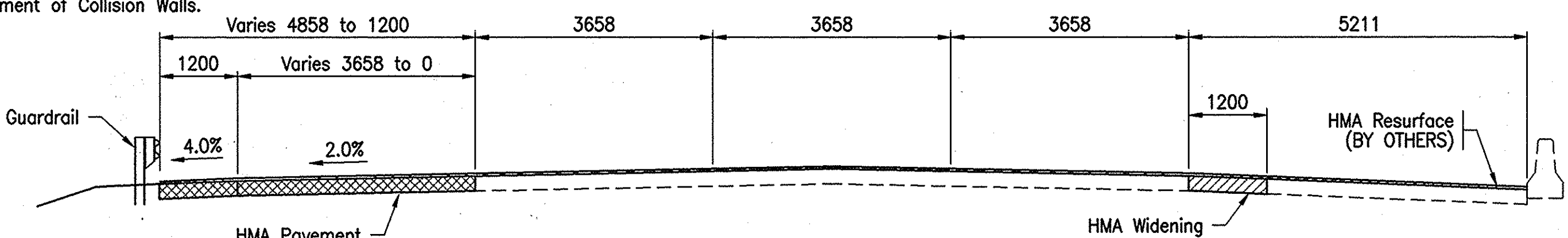
CONCRETE BARRIER DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	3602F & 2221C
VERTICAL SCALE	DESIGNATION
N/A	9704212 & 9704213
SURVEY BOOK	SHEETS
	33 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

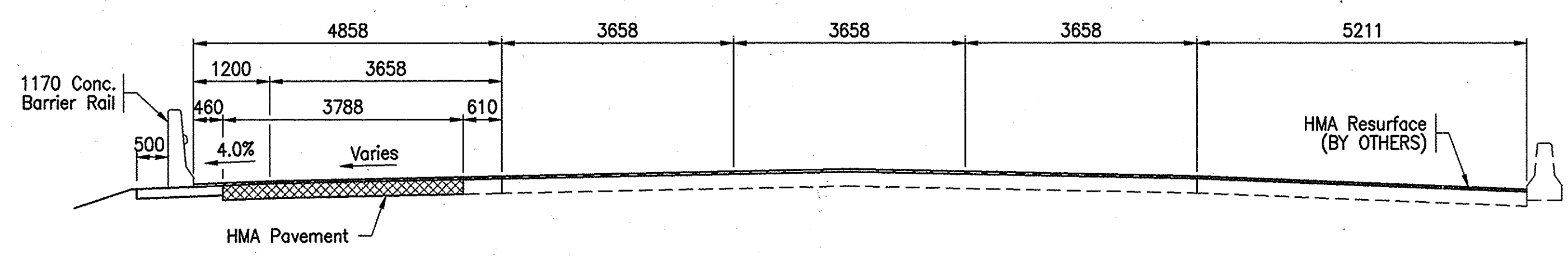


PIPE INSTALLATION
No Scale

PLAN
Scale: 1:500



TYPICAL SECTION - NORTH END
No Scale



TYPICAL SECTION - SOUTH END
No Scale

GUARDRAIL LEGEND

- (A) 1 EA. Guardrail, Transition, Type TGB
22.86 m Guardrail, W-Beam, 1905 Spa. (Attach to Exist.)
35 m Guardrail, Reset
30.5 m Removal of Guardrail
- (B) 40.3 m 1170 Concrete Barrier Rail
47.1 m Removal of Guardrail
- (C) 113.9 m Removal of Guardrail
- (D) 113.9 m Removal of Guardrail
- (E) 1 EA. Guardrail, Transition, Type GP
22.86 m Guardrail, W-Beam, 1905 Spa. (Attach to Exist.)
7.62 m Guardrail, Reset
49 m Removal of Guardrail
- (F) 1 EA. Energy Absorbing Terminal, 4-Bay
- (G) 1 EA. Guardrail, Transition, Type GP
7.62 m Guardrail, W-Beam, 1905 Spa. (Attach to Exist.)
7.62 m Guardrail, Reset
22.6 m Removal of Guardrail

HMA

INCLUDES:

HMA Pavement	=	344 Mg
HMA Shoulder	=	40 Mg
HMA Widening	=	163 Mg
Pavement Relief Joint	=	15 Mg
TOTAL	=	562 Mg

MATERIAL NOTES

BRIDGE DECK OVERLAY
45 Modified Portland Cement Concrete Overlay

HMA PAVEMENT
75 kg/m² QC/QA HMA Surface 9.5 mm Mainline on
165 kg/m² HMA Intermediate 19.0 mm Mainline on
780 Kg/m² HMA Base 25.0 mm Mainline

QC/QA HMA Surface 9.5 mm Mainline P.G. Binder
to be 70-22

GUARDRAIL SUMMARY

- 40.3 m Concrete Barrier
- 1 EA. Guardrail, Transition, Type TGB
- 2 EA. Guardrail, Transition, Type GP
- 2 EA. Energy Absorbing Terminal, 4-Bay
- 38.1 m Guardrail, W-Beam, 1905 Spa.
- 50.24 m Guardrail, Reset
- 377 m Removal of Guardrail

HMA WIDENING
540 kg/m² HMA Base 25.0 mm, Shoulder

HMA SHOULDER
360 kg/m² HMA Base 25.0 mm, Shoulder

PAVEMENT RELIEF JOINT
1020 kg/m² HMA Base 25.0 mm, Mainline

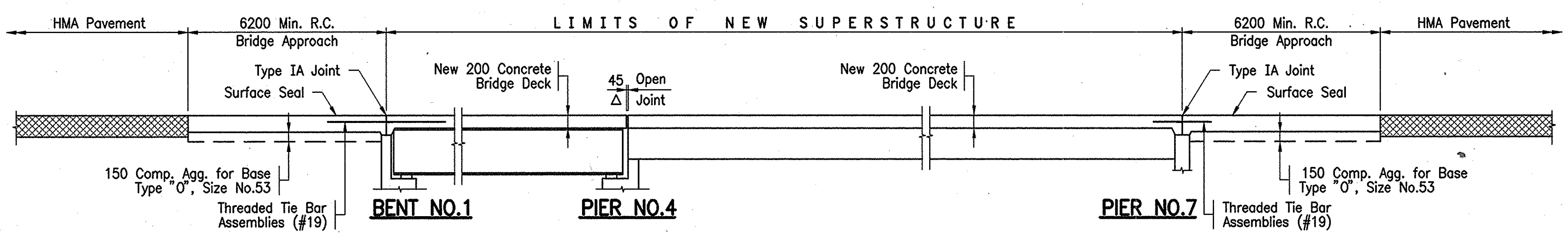
LEGEND

- (P) 600 Pavement Relief Joint
- (S) Sodding
- (CI) Cap Inlet
- HMA Widening
- HMA Pavement
- Δ Measured Along C Roadway
- Indicates 192 m² of Slope wall which includes 7 m² of Concrete Curb, 34 m² of Side Toewall and 8 m² of End Toewall.

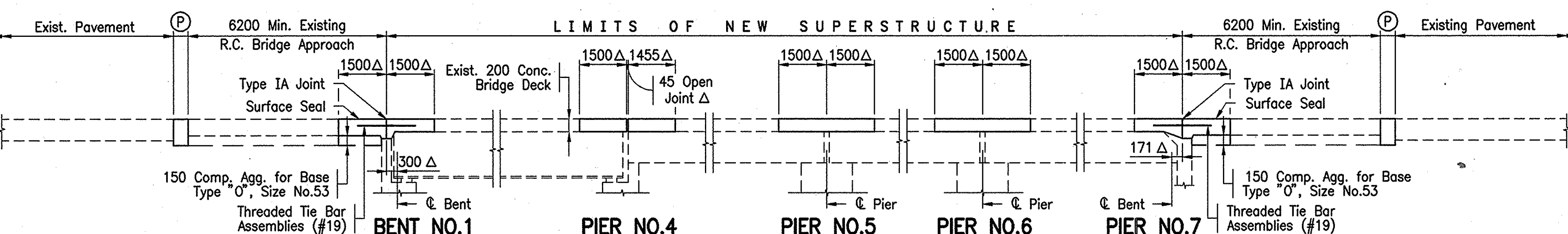
EARTHWORK SUMMARY

FILL	939 m ³
+ 25% SHRINKAGE	235 m ³
- CUT	-162 m ³
TOTAL BORROW	1012 m³
CUT	162 m ³
BENCHING	2003 m ³
TOTAL COMMON EXCAVATION	2165 m³

NOTE:
All Dimensions are in Millimeters and all Stations and Elevations are in Meters, Unless Noted.



LONGITUDINAL SECTION - WIDENED PORTION
Not To Scale



LONGITUDINAL SECTION - EXISTING PORTION
Not To Scale

File: 9661LAY1



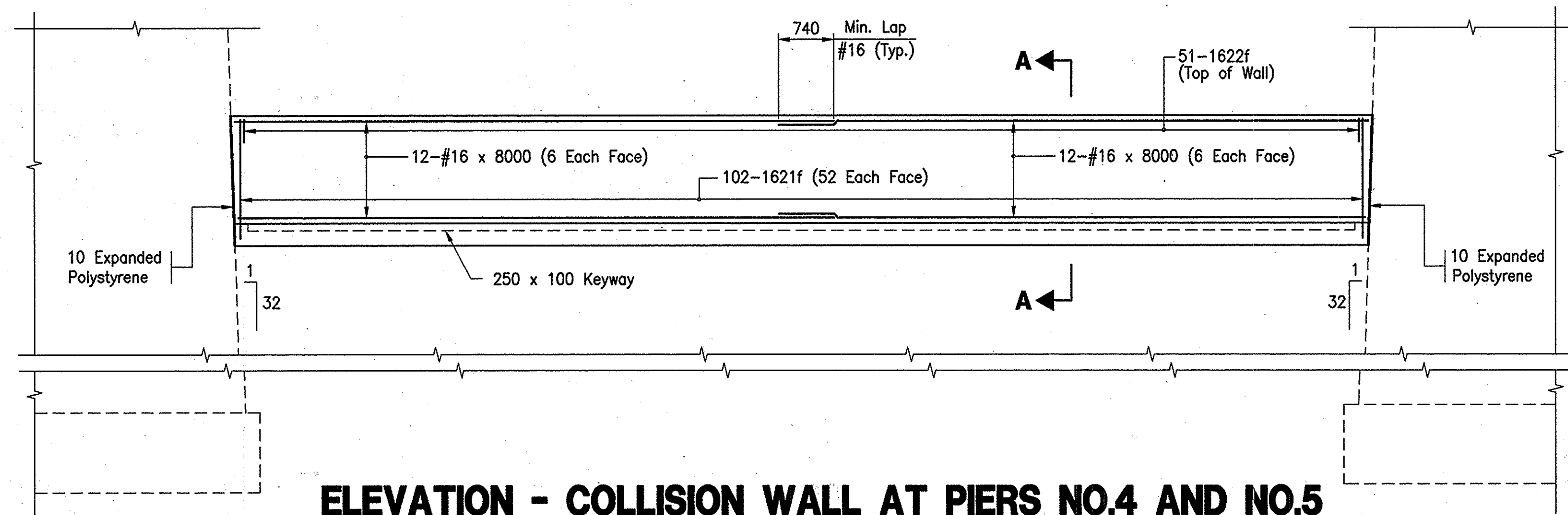
RECOMMENDED FOR APPROVAL *John E. Sailer, Jr.* 1/19/99
DESIGN ENGINEER DATE

DESIGNED: JAP	DRAWN: MBW
CHECKED: MJM	CHECKED: FES

INDIANA
DEPARTMENT OF TRANSPORTATION

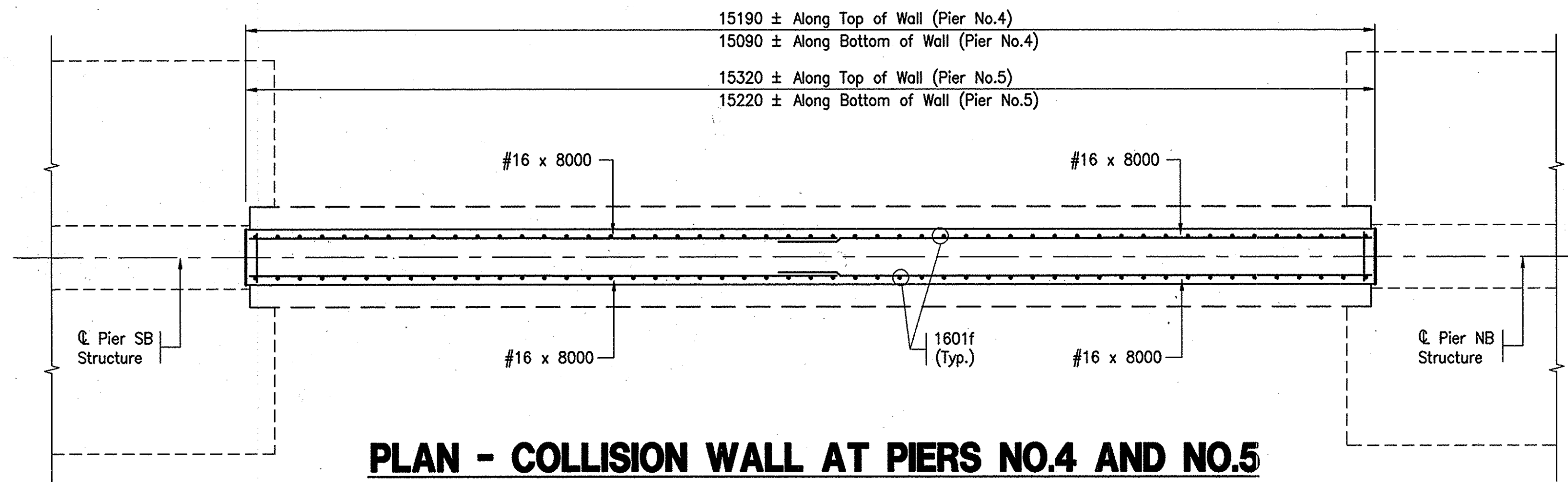
LAYOUT
I-465-149-2221C (SB)

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	34 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



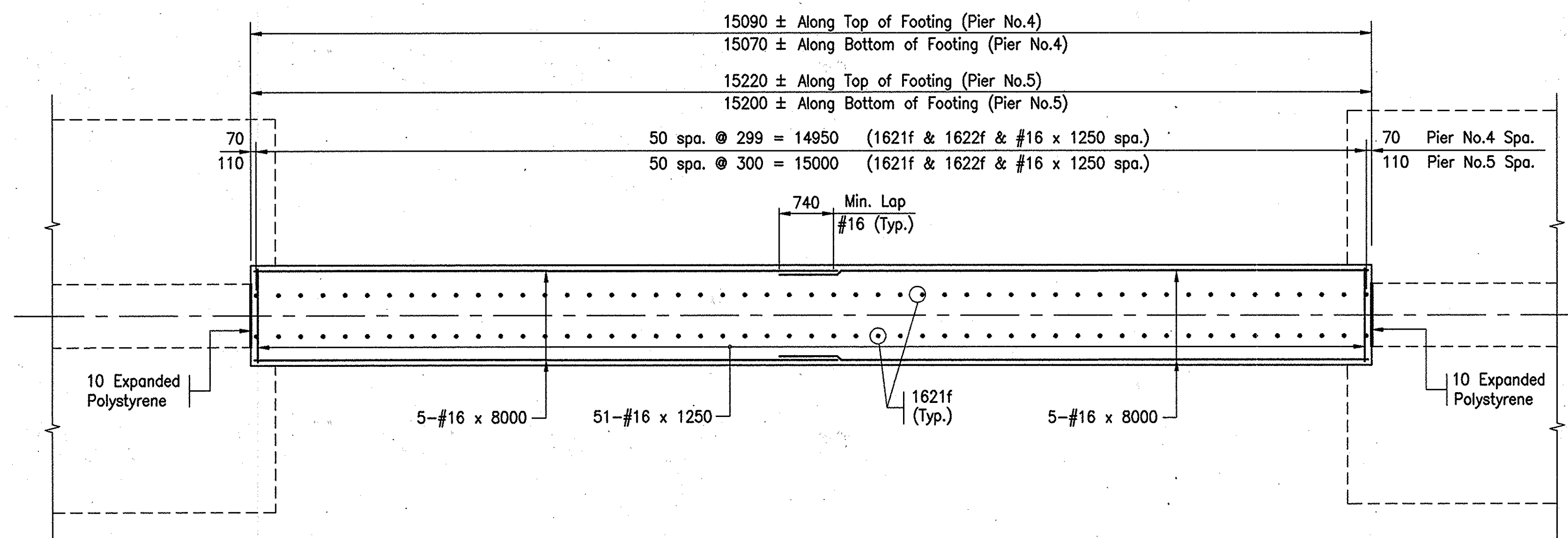
ELEVATION - COLLISION WALL AT PIERS NO.4 AND NO.5

Scale: 1:50



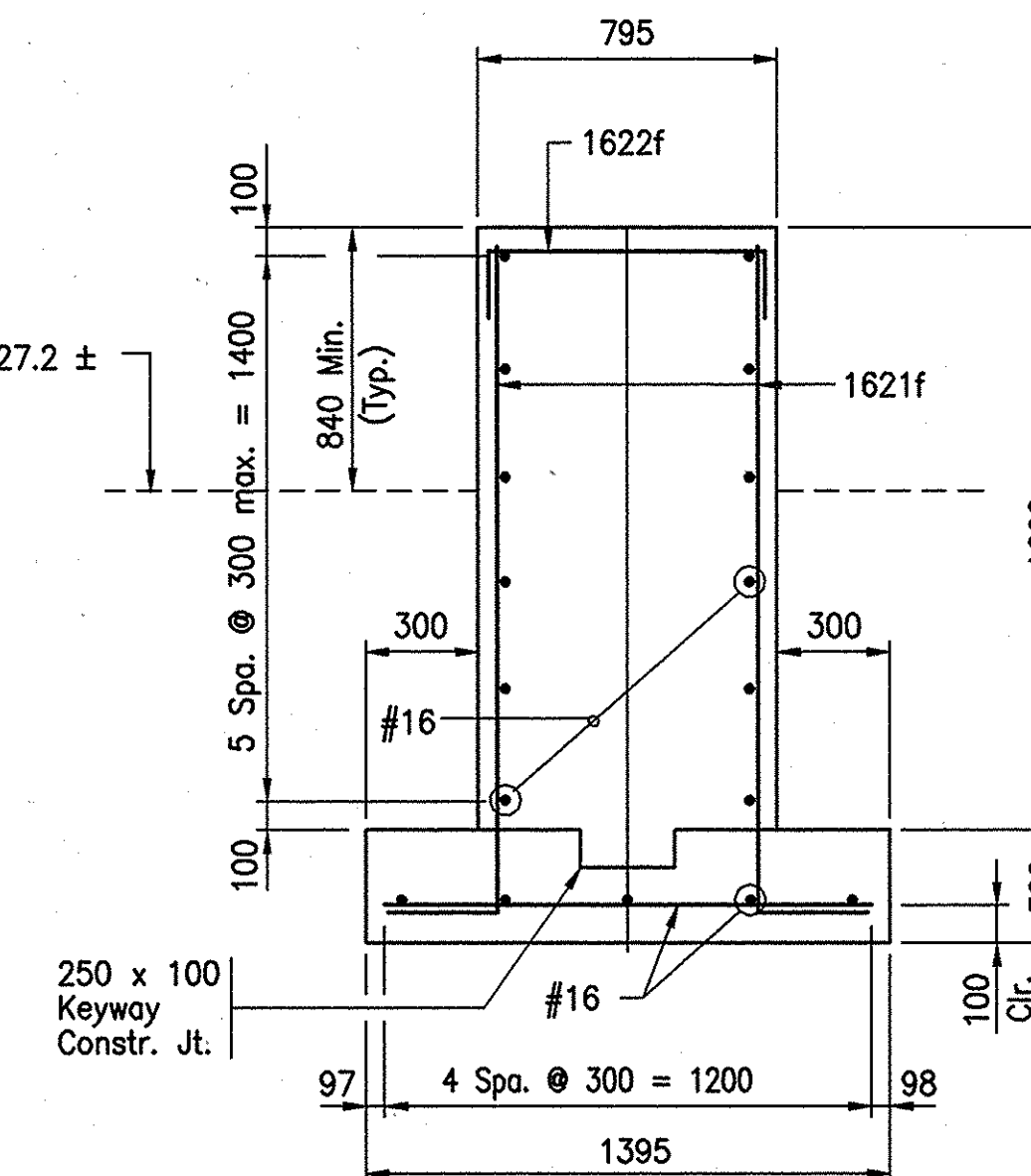
PLAN - COLLISION WALL AT PIERS NO.4 AND NO.5

Scale: 1:50



PLAN - COLLISION WALL FOOTING AT PIERS NO.4 AND NO.5

Scale: 1:50

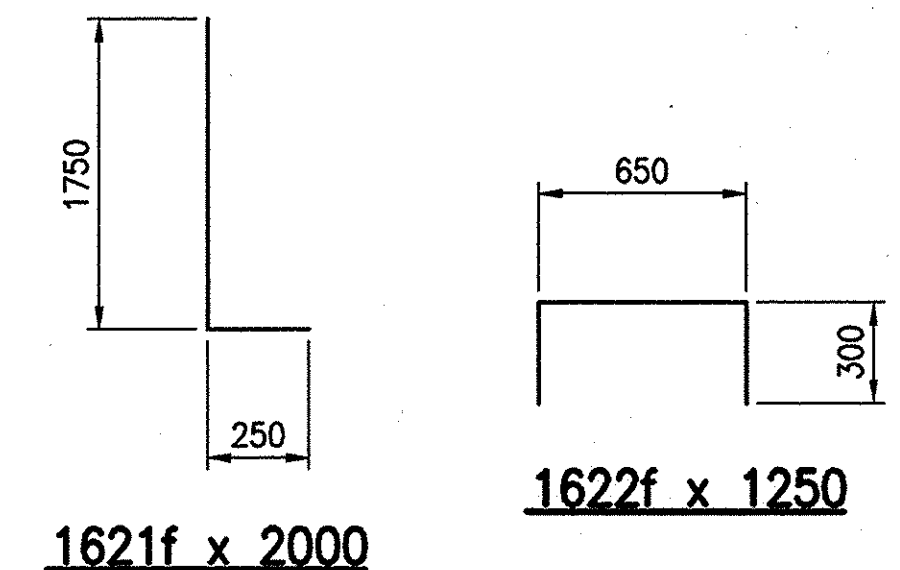


SECTION A-A

Not to Scale

BILL OF MATERIALS FOR COLLISION WALL (2 REQUIRED)

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1621f	102	2000	
1622f	51	1250	
#16	34	8000	
#16	51	1250	
TOTAL #16			937
TOTAL REINFORCING STEEL			937
CONCRETE			
CONC. A, IN FOOTING, COLLISION			6.4 m ³
CONC. A, IN WALL, COLLISION			19.5 m ³
TOTAL CONCRETE, CLASS A, IN STRUCTURES			25.9 m ³
MISCELLANEOUS			
FOUNDATION EXCAVATION UNCLASSIFIED			40 m ³
"B" BORROW FOR STRUCTURE BACKFILL			21.4 m ³

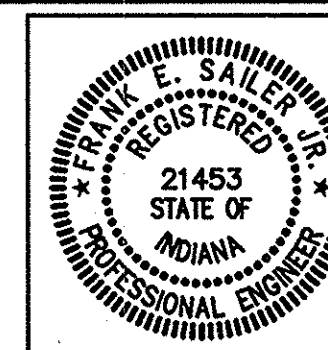


NOTES

All Dimension are in Millimeters (mm) and all Elevations are in Meters (m) Unless Noted.

For Reinforcing Bar Notes, See Bridge Std. Dwg. 703-BRST-01.

File: 9661COLL



RECOMMENDED FOR APPROVAL *Frank E. Sailer* 1/19/99
DESIGN ENGINEER DATE

DESIGNED: FES DRAWN: TLH
CHECKED: FES CHECKED: FES

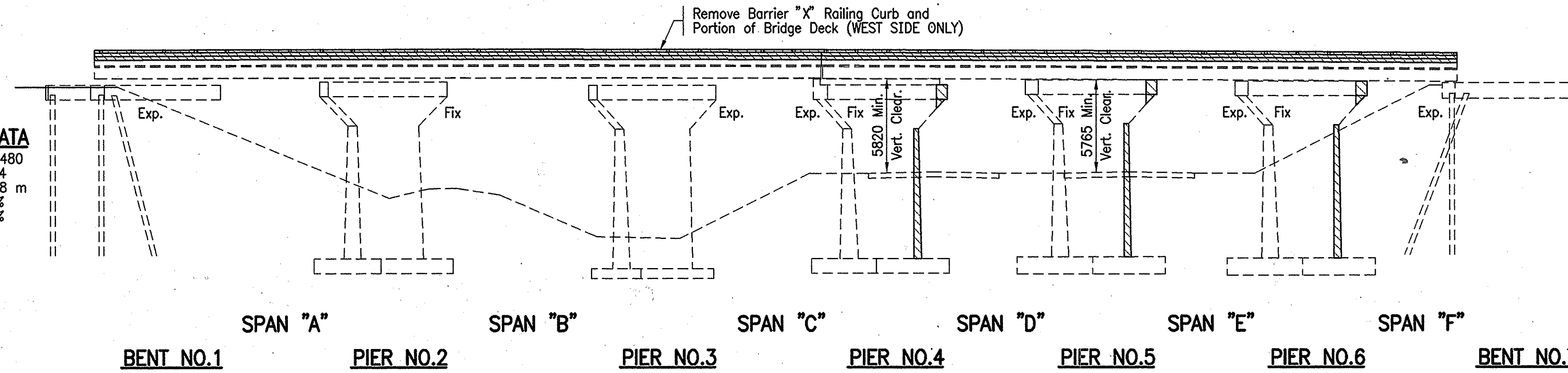
INDIANA DEPARTMENT OF TRANSPORTATION

COLLISION WALL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	35 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

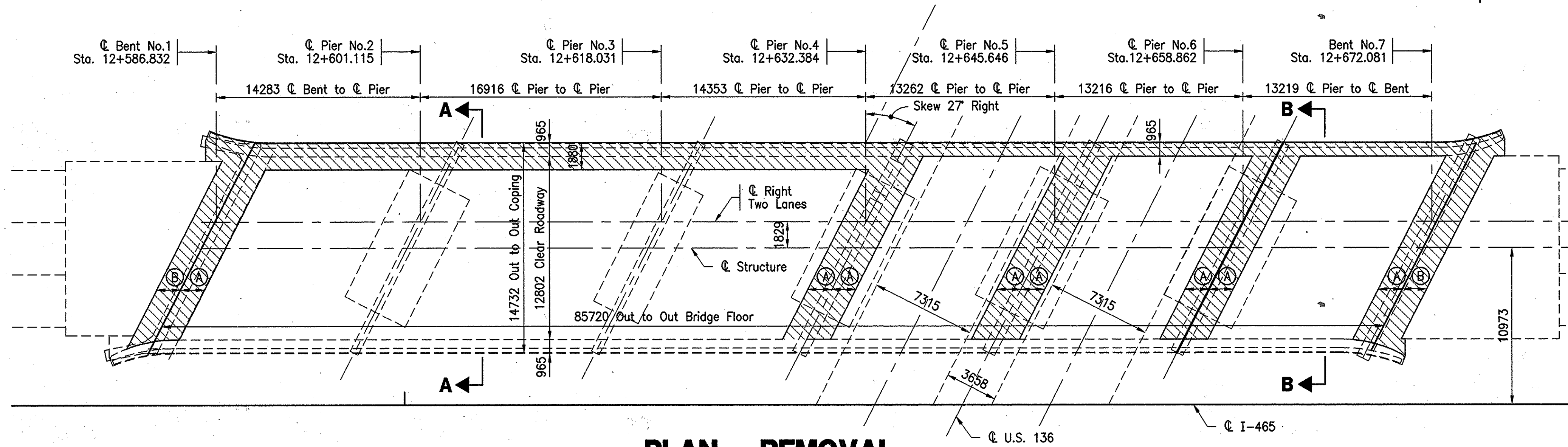
STRUCTURE TO BE BUILT TO A 487.68 m VERTICAL CURVE

CURVE DATA
 Sta. 12+603.480
 El. = 237.814
 V.C. = 487.68 m
 G1 = +2.92%
 G2 = -2.92%



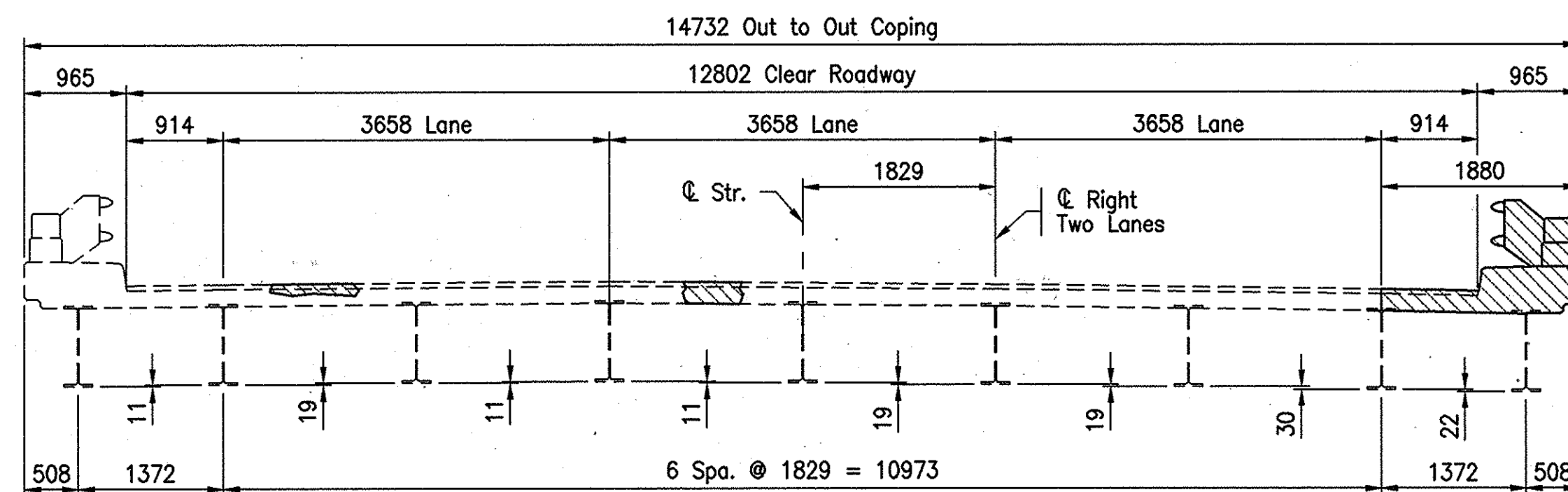
ELEVATION - REMOVAL

Scale: 1:200



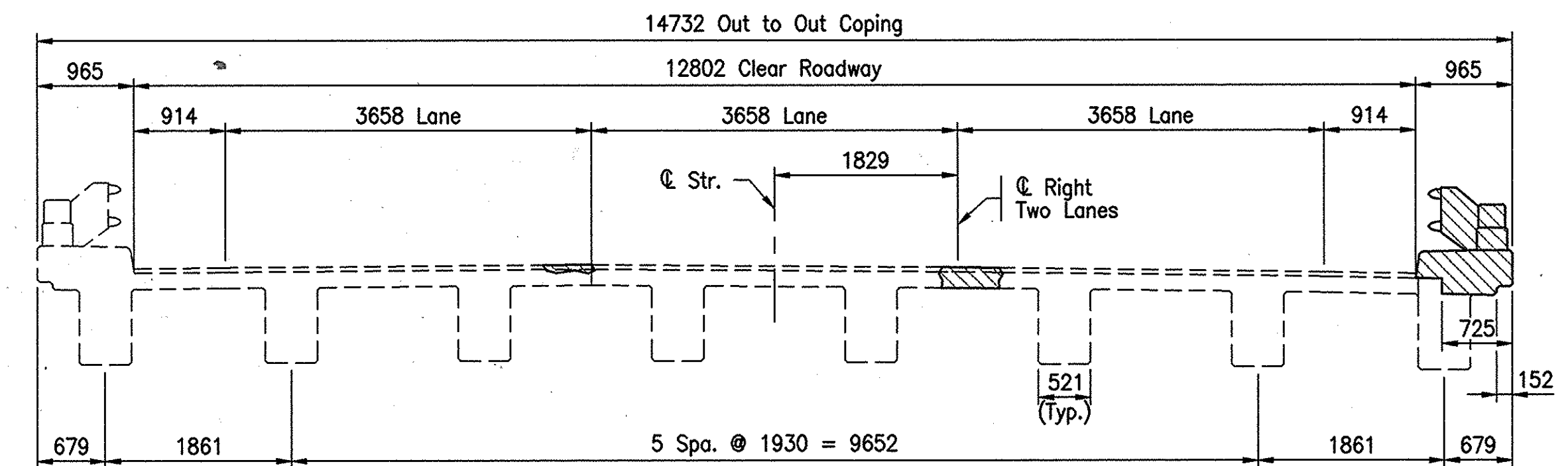
PLAN - REMOVAL

Scale: 1:200



SECTION A-A - REMOVAL

Scale: 1:50



SECTION B-B - REMOVAL

Scale: 1:50

GENERAL NOTES

Plans for the existing structure are on file in the Central Office as Bridge File I-465-149-2221, I-465-149-2221A and I-465-149-2221B and are available upon request.

Where new work is to be fitted to old work, the Contractor shall check all dimensions and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new part to old.

The handchipping and cleaning of deteriorated deck areas shall be as directed by the Engineer. It is the intent of these plans that all such deteriorated concrete be removed and should there be any doubt as to the quality of the concrete, removal shall continue until **PERFECTLY SOUND CONCRETE** is exposed.

The boundaries of full depth removal areas shall be saw cut. All saw cuts for full depth removals shall be made to a minimum depth of 25 below the original surface or to the top of reinforcing if cover is less than 25.

Chamfer exposed edges 25 unless noted.

Reinforcing cover shall be 65 in top and 25 in bottom of floor slabs, 75 in footings, except bottom steel which shall be 100, and 50 in all other parts unless noted.

All Surface Seal to be paid for as Lump Sum.

Clean and seal new concrete bridge deck, coping, bottom of bridge deck to exterior beam and exterior face of concrete I-Beam as shown on the plans.

Surface Seal on vertical surfaces to be in accordance with Article 709.05.

Clean and seal top of R. C. Bridge Approaches.

Estimated Quantity of Surface Seal = 931 m².

Remove and reset roadway and bridge reference signs.

DESIGN DATA

Allowable Design Stresses:
 Class "C" Concrete $f'_c = 27$ MPa
 Class "A" Concrete $f'_c = 24$ MPa
 Class "B" Concrete $f'_c = 21$ MPa
 Reinforcing Steel (Grade 60) $f_y = 410$ MPa

LEGEND

- Hatched Area Indicates Removal
- (A) 1500 Bridge Deck Removal
- (B) 1500 R.C. Approach Slab Removal

NOTE:

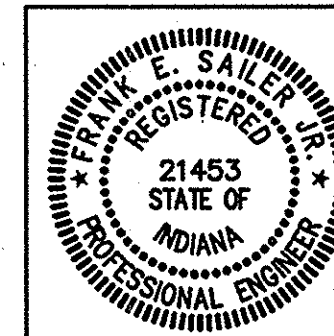
All Dimension are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

File: 9661GP1

CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE GIRDER BRIDGE

14.28 m, 16.92 m, 14.35 m, 13.26 m, 13.22 m, 13.22 m
 SKEW: 27° RIGHT; 12802 CLEAR ROADWAY
 I-465 OVER ABANDONED RAILROAD AND U.S. 136

MARION COUNTY



RECOMMENDED FOR APPROVAL *Jah & Sailer* 1/19/99
 DESIGN ENGINEER DATE

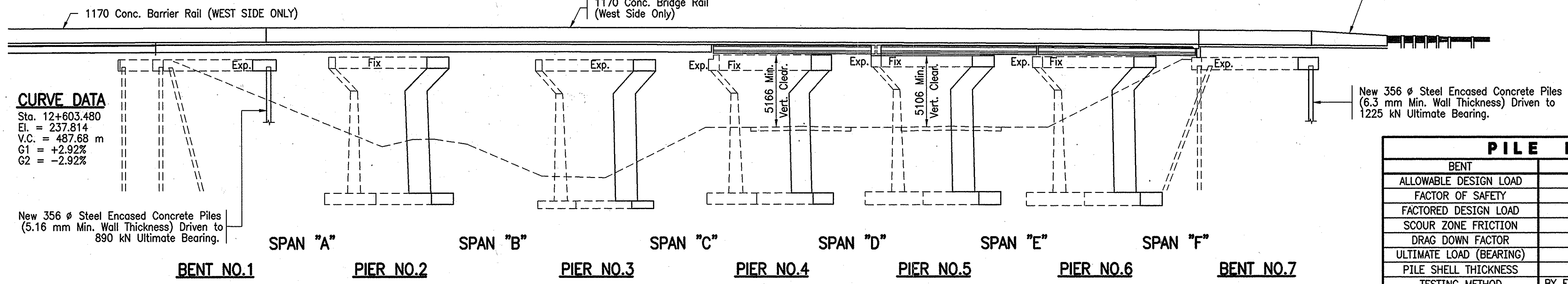
DESIGNED: JAP DRAWN: MBW
 CHECKED: MJM CHECKED: FES

INDIANA DEPARTMENT OF TRANSPORTATION

GENERAL PLAN
I-465-149-2221C (SB)

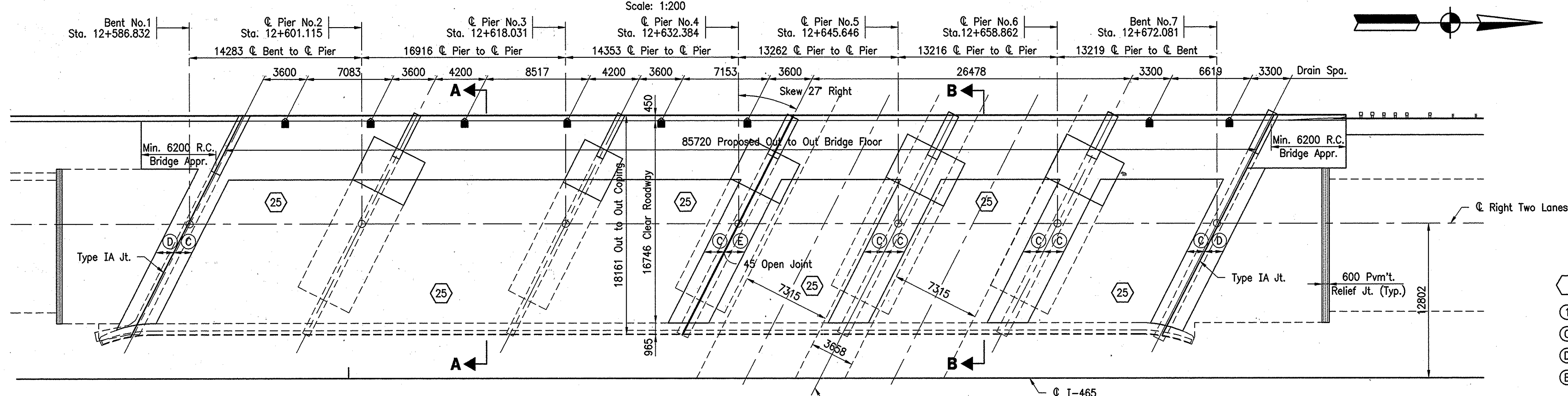
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	36 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

STRUCTURE TO BE BUILT TO A 487.68 m VERTICAL CURVE

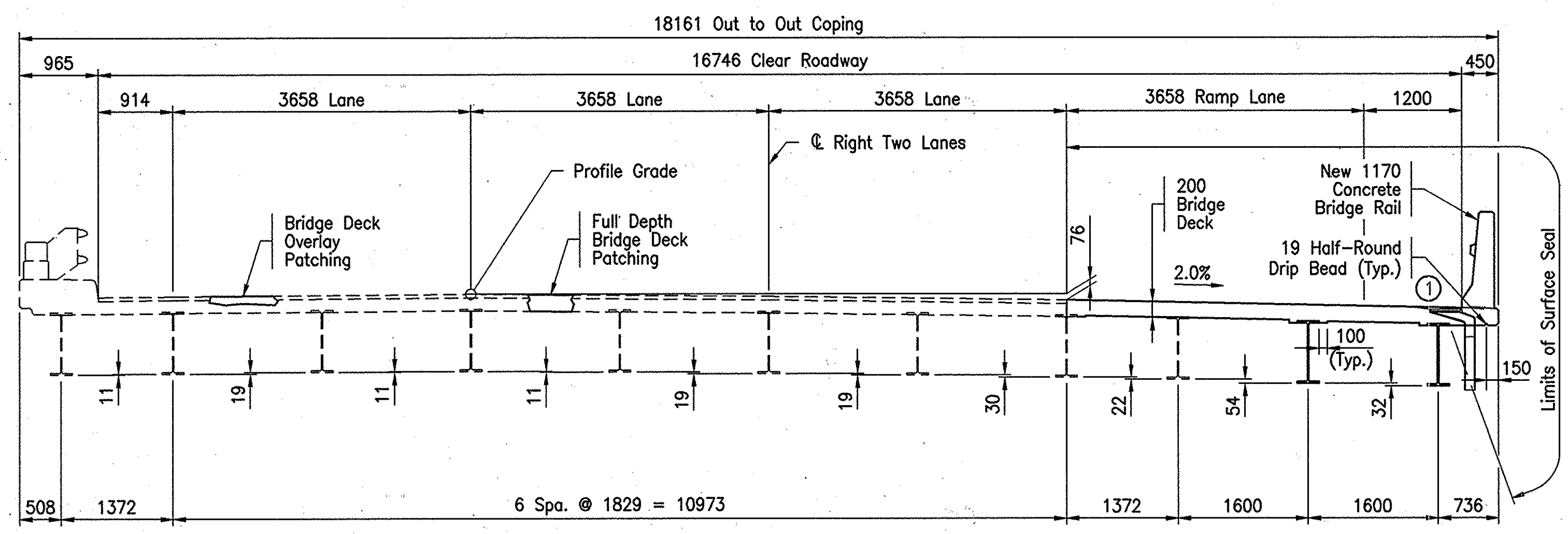


PILE LOADS		
BENT	NO.1	NO.7
ALLOWABLE DESIGN LOAD	356 kN	490 kN
FACTOR OF SAFETY	2.5	2.5
FACTORED DESIGN LOAD	890 kN	1225 kN
SCOUR ZONE FRICTION	0 kN	0 kN
DRAG DOWN FACTOR	0 kN	0 kN
ULTIMATE LOAD (BEARING)	890 kN	1225 kN
PILE SHELL THICKNESS	5.16 mm	6.3 mm
TESTING METHOD	BY FORMULA, STANDARD SPECS. 701.06	

ELEVATION - RECONSTRUCTION

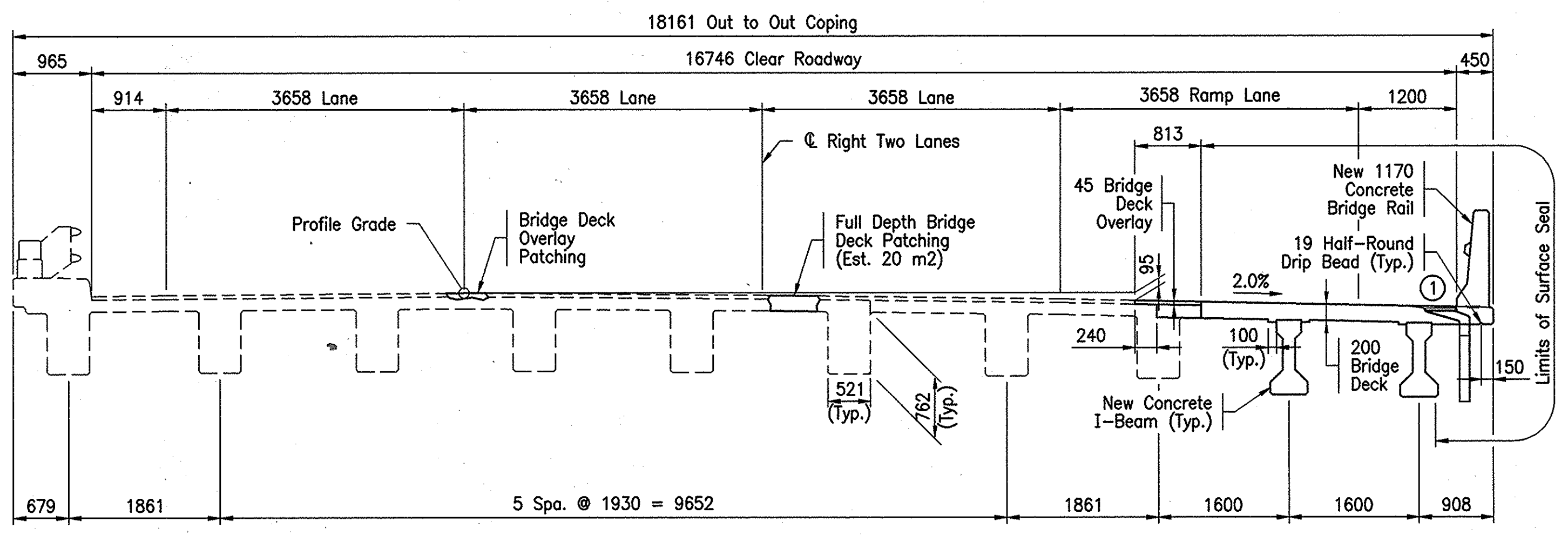


PLAN - RECONSTRUCTION



SECTION A-A - RECONSTRUCTION

Scale: 1:100



SECTION B-B - RECONSTRUCTION

Scale: 1:100

NOTE:
 All Dimension are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

File: 9661GP2

CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE GIRDER BRIDGE
 14.28 m, 16.92 m, 14.35 m, 13.26 m, 13.22 m, 13.22 m
 SKEW: 27 RIGHT; 16746 PROPOSED CLEAR ROADWAY
 I-465 OVER ABANDONED RAILROAD AND U.S. 136
 MARION COUNTY

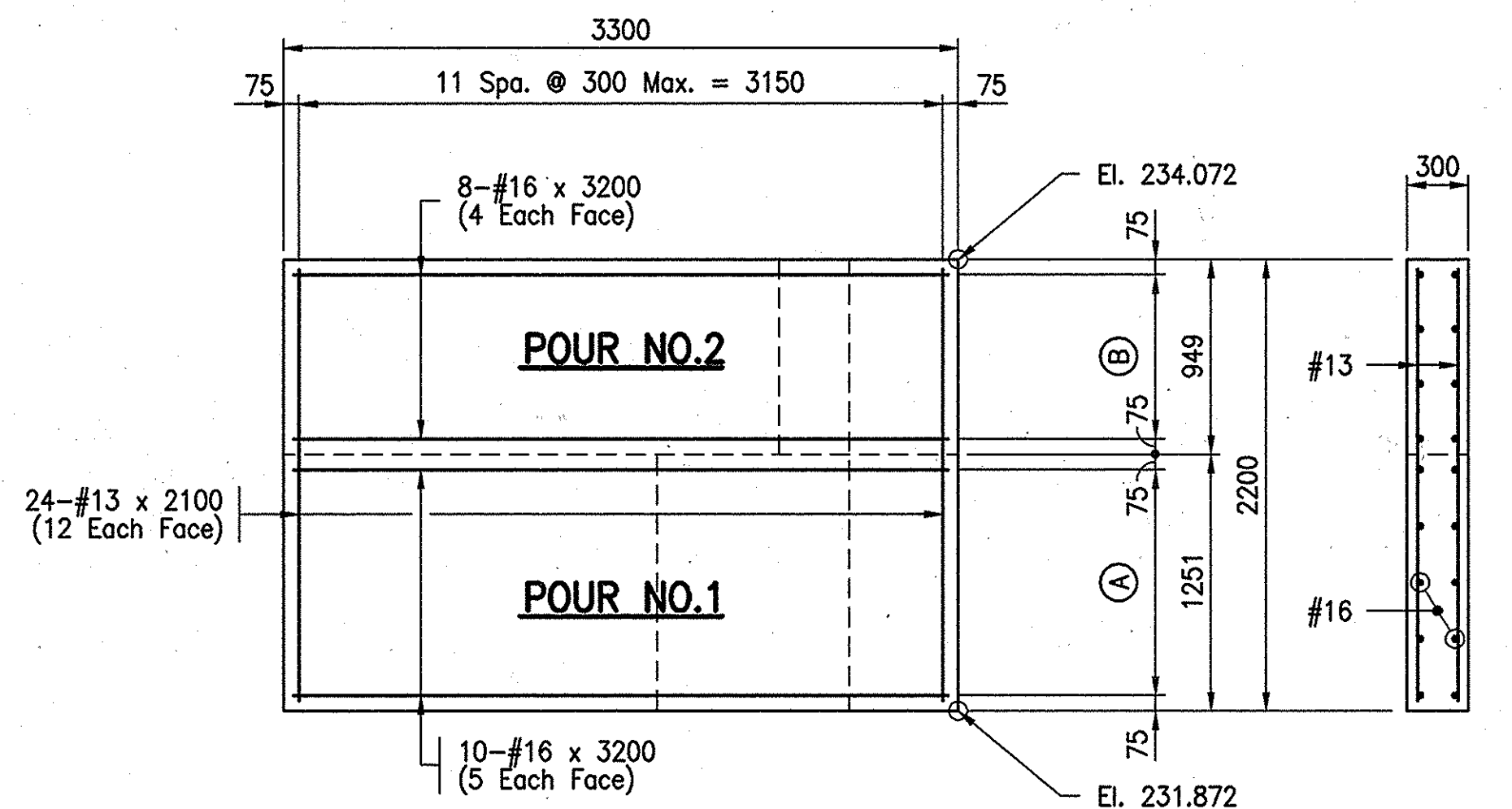


RECOMMENDED FOR APPROVAL: *Frank E. Sailer Jr.* 1/19/99
 DESIGN ENGINEER DATE

DESIGNED: JAP DRAWN: MBW
 CHECKED: MJM CHECKED: FES

INDIANA DEPARTMENT OF TRANSPORTATION
GENERAL PLAN I-465-149-2221C (SB)

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	1-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	37 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

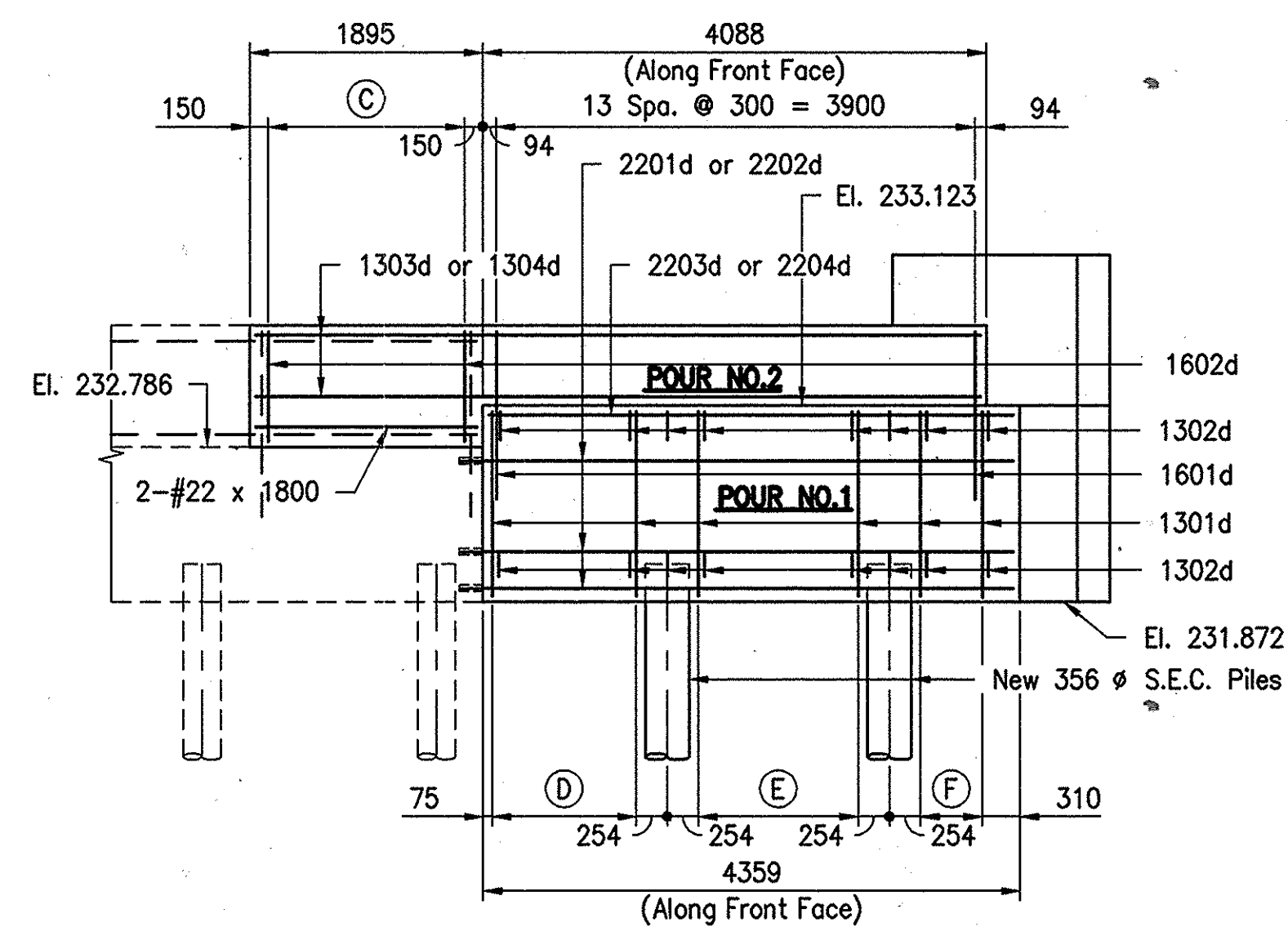


ELEVATION

SECTION

WING WALL DETAILS

Scale: 1:30

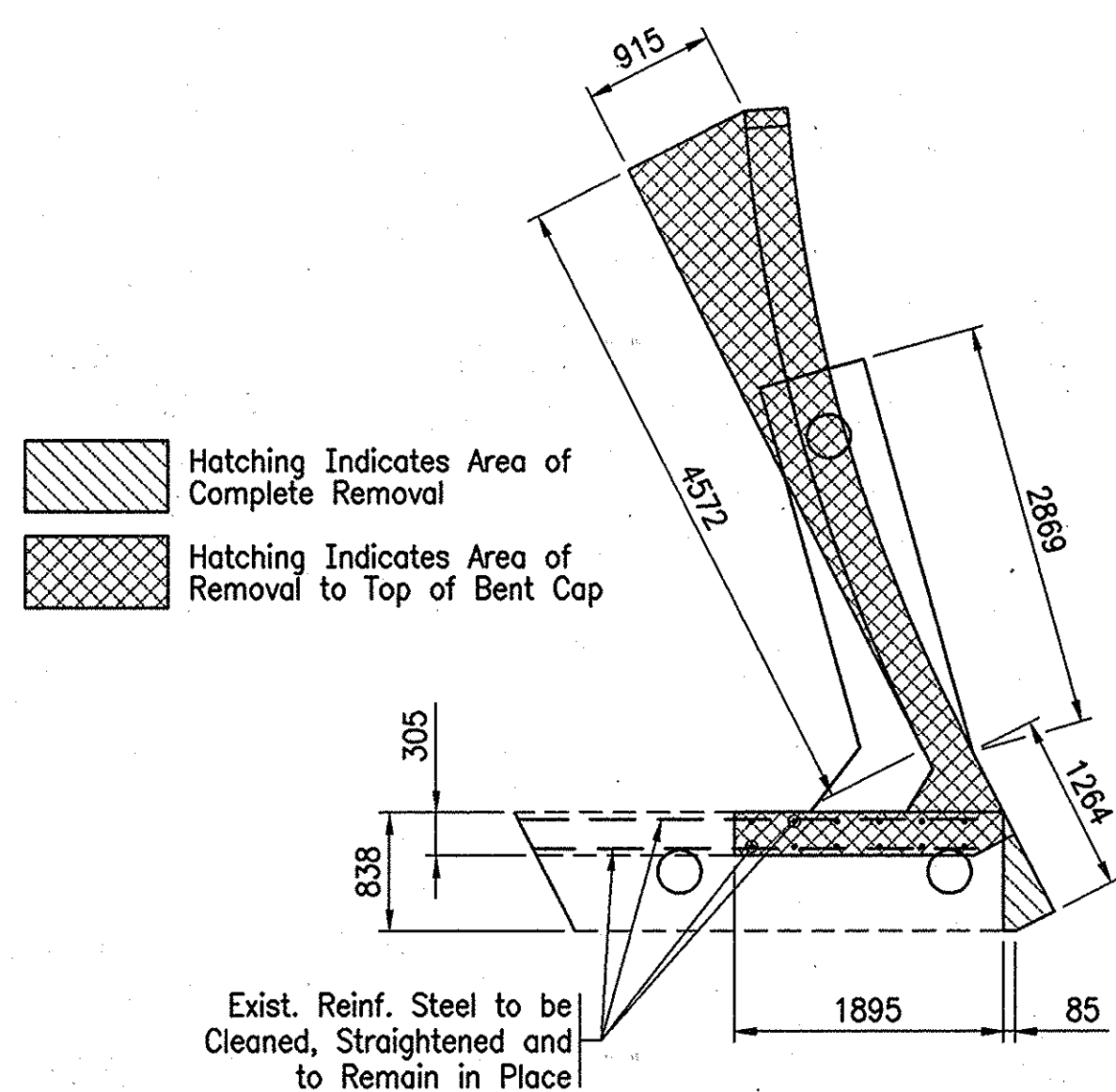


ELEVATION

Scale: 1:50

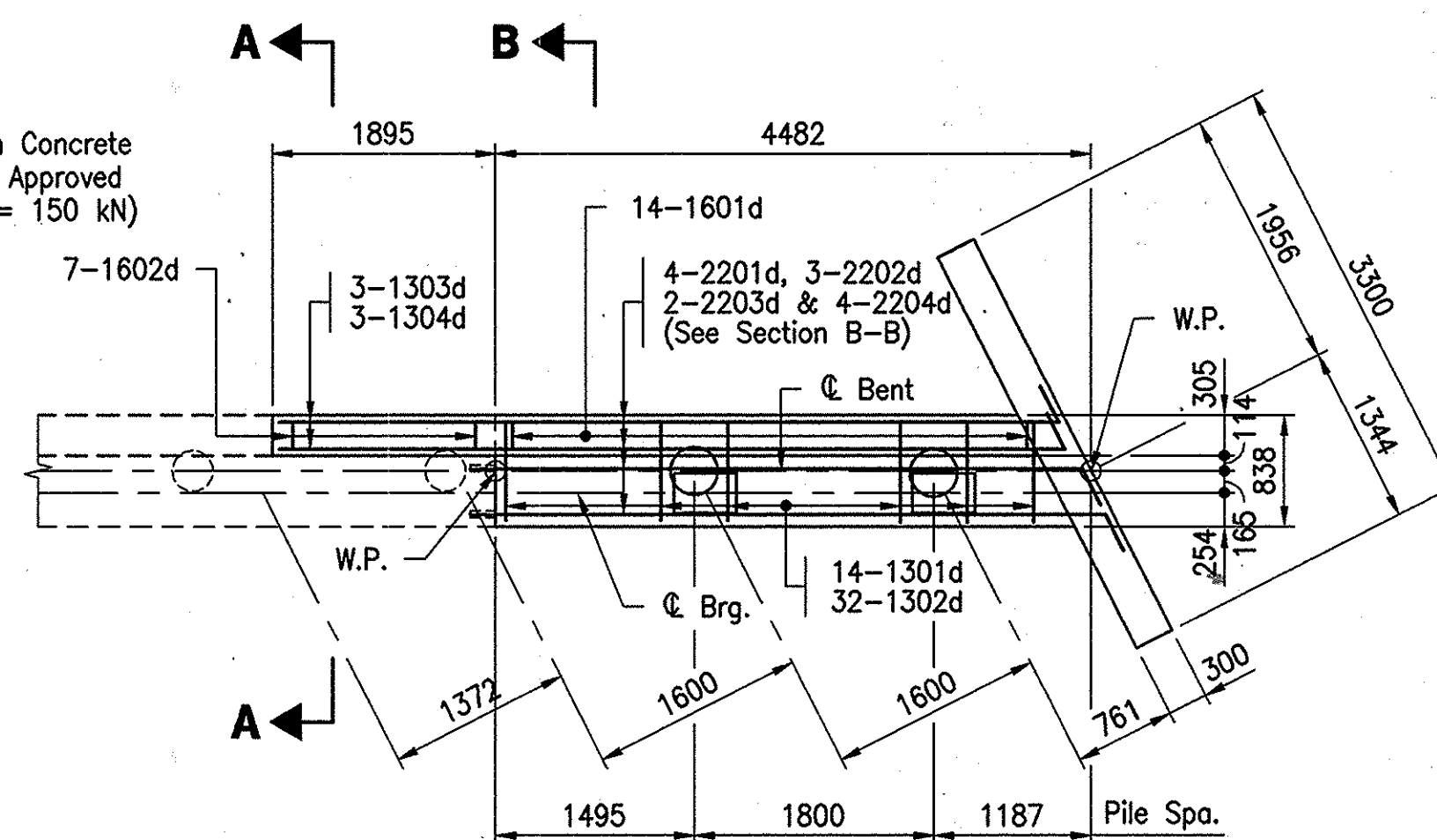
LEGEND

- (A) 4 Spa. @ 300 Max. = 1101
- (B) 3 Spa. @ 300 Max. = 799
- (C) 6 Spa. @ 300 Max. = 1595
- (D) 4 Spa. @ 300 Max. = 1166
- (E) 5 Spa. @ 300 Max. = 1292
- (F) 2 Spa. @ 300 Max. = 500
- (C) Indicates Field Drilled Hole In Concrete Embed #22 Bar 220 with an Approved Anchor System (Min. Pullout = 150 kN)



REMOVAL PLAN

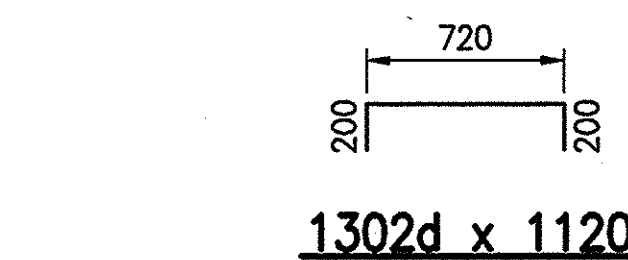
Scale: 1:50



RECONSTRUCTION PLAN

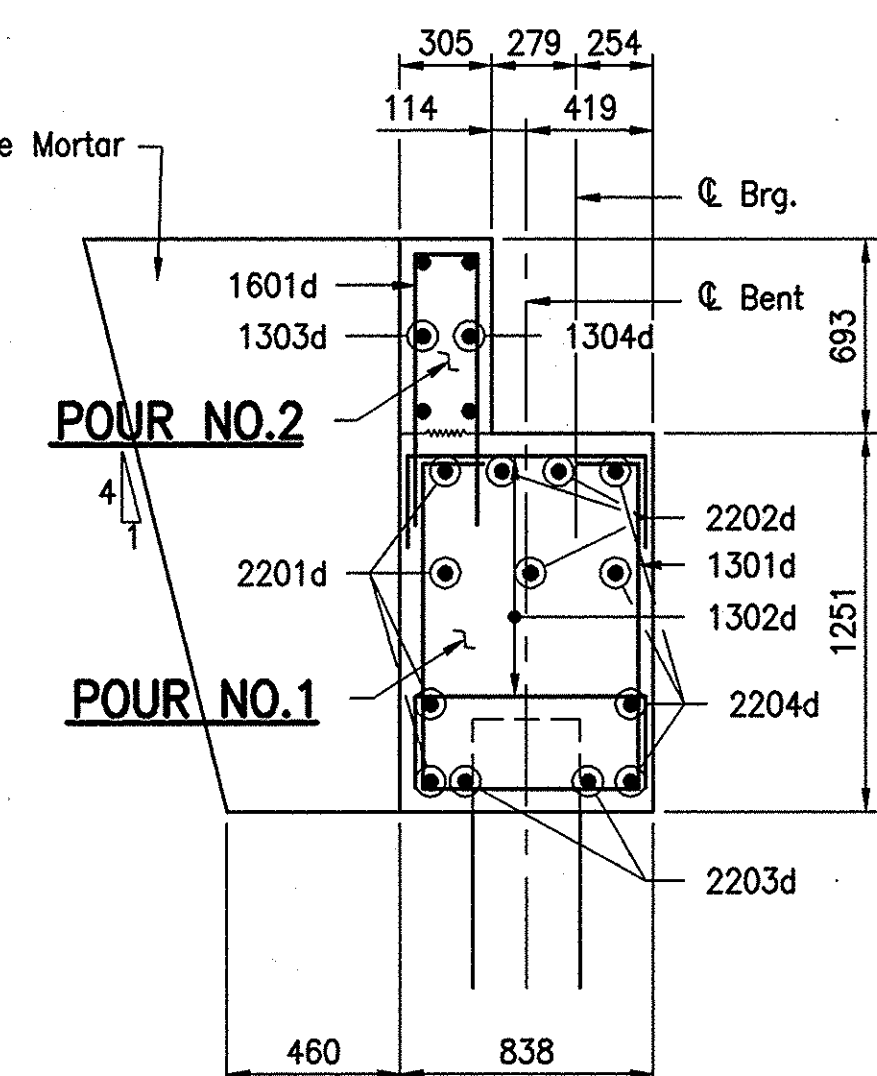
PLAN

Scale: 1:50



SECTION A-A

Scale: 1:100



SECTION B-B

Scale: 1:100

BILL OF MATERIALS FOR BENT NO.1

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2201d	4	4720	
2202d	3	4900	
2203d	2	4600	
2204d	4	5080	
#22	2	1800	
TOTAL #22			203
1601d	14	2100	
1602d	7	2040	
#16	18	3200	
TOTAL #16			157
1301d	14	3400	
1302d	32	1120	
1303d	3	6400	
1304d	3	6460	
#13	24	2100	
TOTAL #13			171
TOTAL REINFORCING STEEL			531
CONCRETE			
POUR NO.1 (5.6 m ³)			
POUR NO.2 (2.4 m ³)			
CONCRETE, A, IN SUBSTRUCTURE			8.0 m ³
MISCELLANEOUS			
FIELD DRILLED HOLE IN CONCRETE			7 EACH
356 Ø S.E.C. Piles (2 @ 13.7 m)			27.4 m
FOUNDATION EXCAVATION, UNCLASSIFIED			13 m ³
FLOWABLE MORTAR			11 m ³

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
 For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.
 For Type "A" Const. Joint, See Br. Std. 724-BJTS-01.

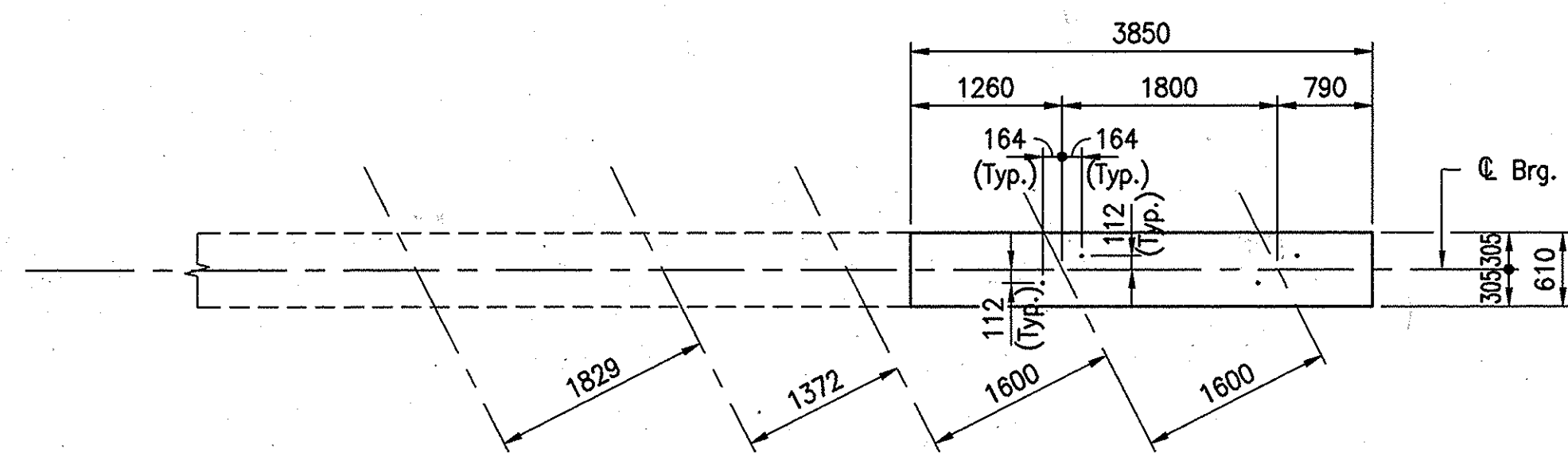
File: 9661BT1



RECOMMENDED FOR APPROVAL	<i>Frank C. Sailer</i>	1/19/99
DESIGNED:	JAP	DRAWN:
CHECKED:	MJM	CHECKED:
		DATE
		DESIGN ENGINEER
		DATE
		DATE

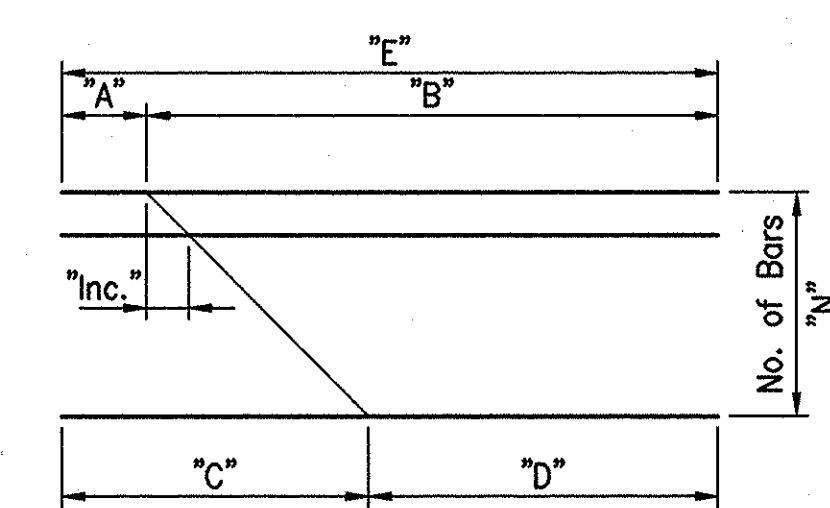
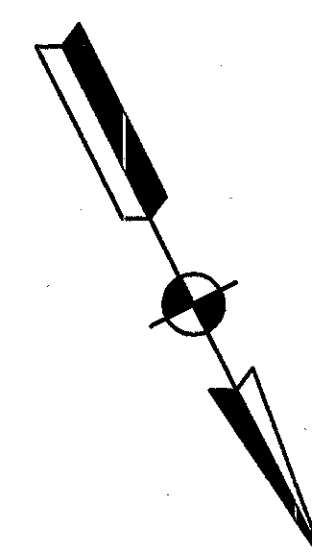
INDIANA DEPARTMENT OF TRANSPORTATION
BENT NO.1 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	38 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

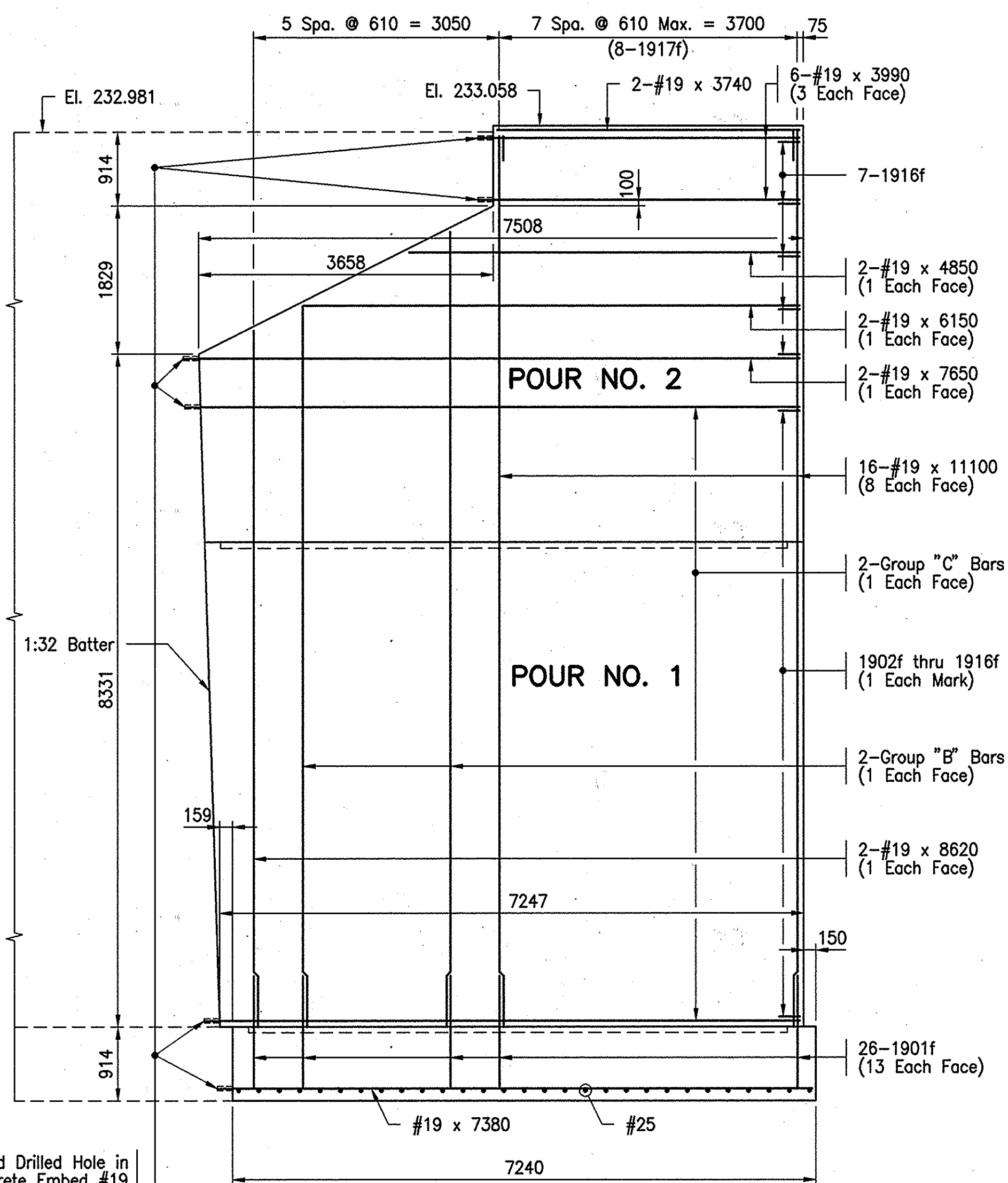


CAP PLAN

Scale: 1:50



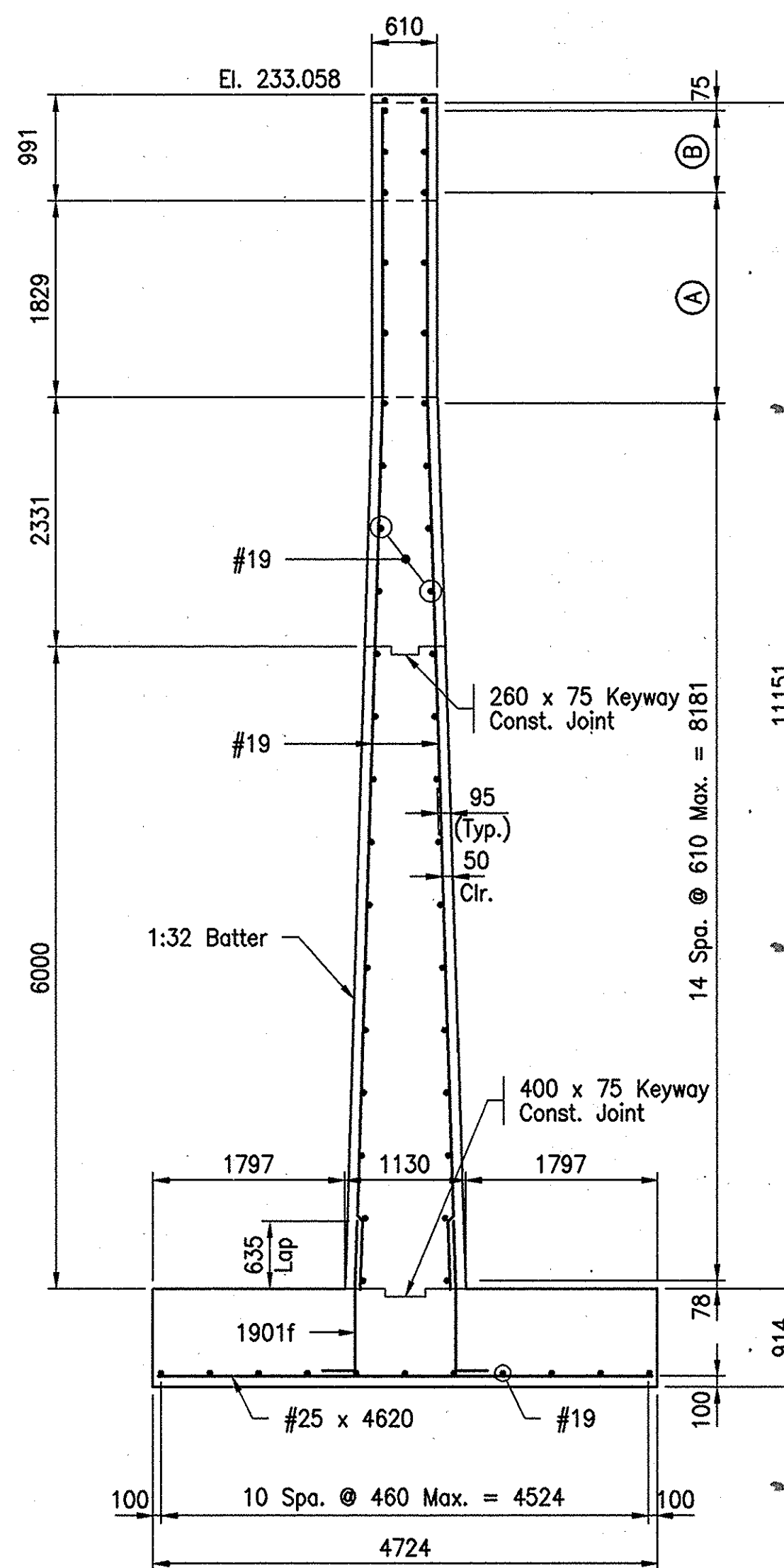
GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
B	#19	8920	9840	9230	9530	18760	307 ±	2
C	#19	7390	7630	7500	7520	15020	16 ±	7



ELEVATION

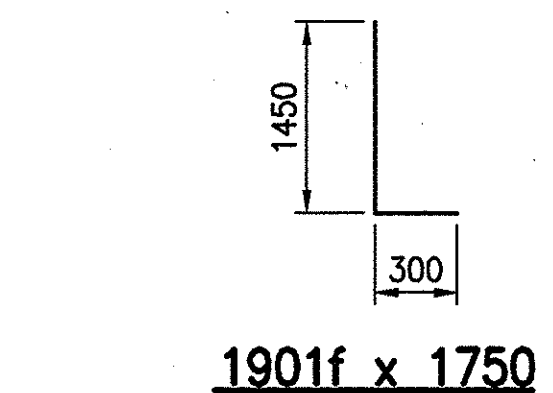
Scale: 1:50

Field Drilled Hole in Concrete Embed #19 Bars 190 w/ an Approved Anchor System. Minimum Pullout = 116 kN. (Typ.)



SECTION

Scale: 1:50

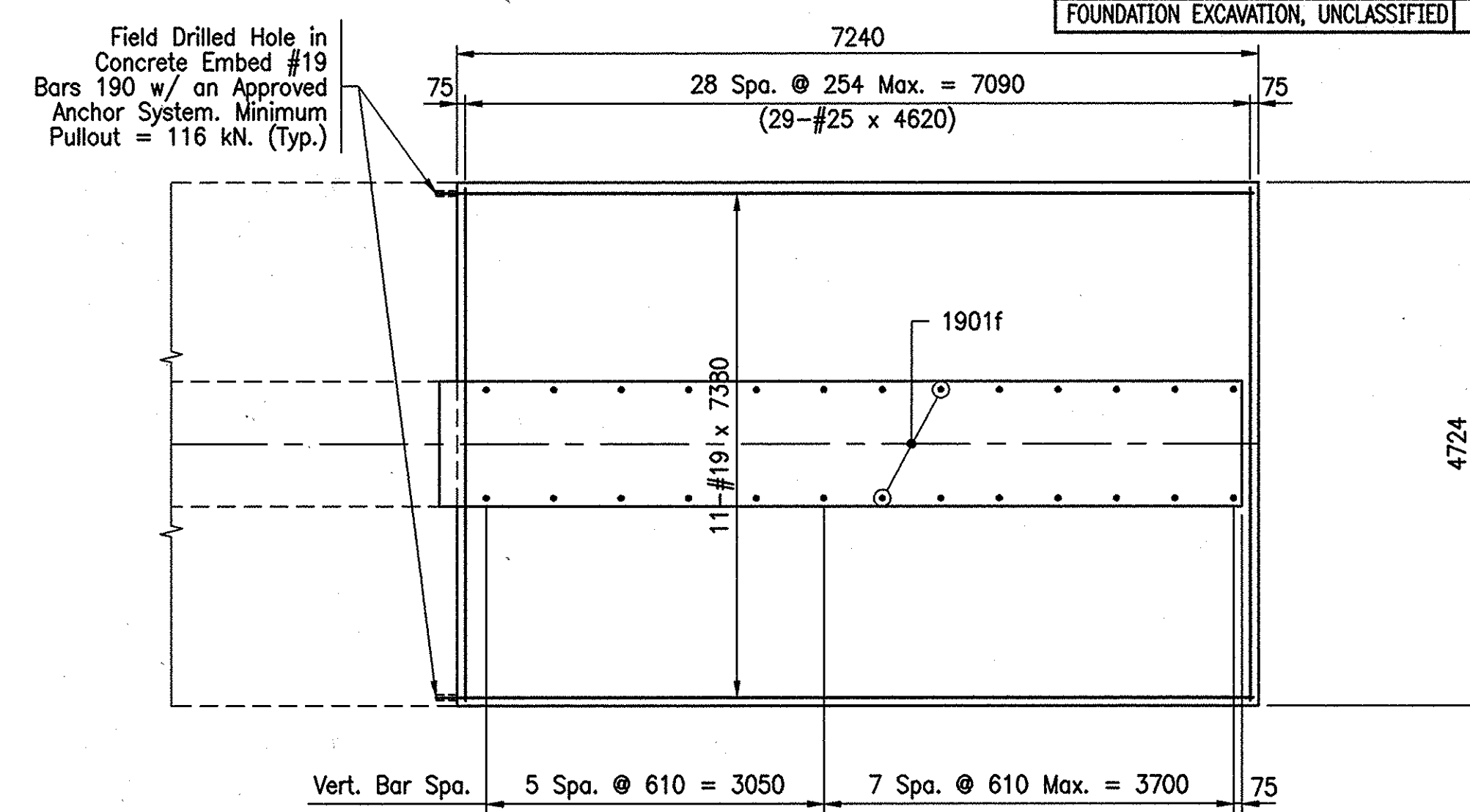


1901f x 1750

LEGEND

- (A) 3 Spa. @ 610 Max. = 1829
- (B) 2 Spa. @ 610 Max. = 764

MARK	"O"	LENGTH
1902f	940	1540
1903f	900	1500
1904f	860	1460
1905f	830	1430
1906f	790	1390
1907f	750	1350
1908f	720	1320
1909f	680	1280
1910f	640	1240
1911f	610	1210
1912f	570	1170
1913f	530	1130
1914f	500	1100
1915f	460	1060
1916f	420	1020
1917f	500	1100



FOOTING PLAN

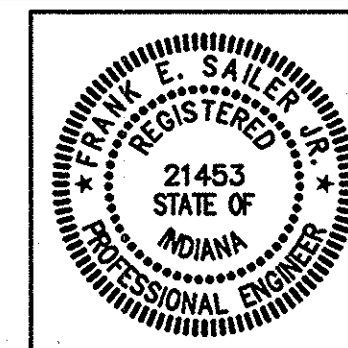
Scale: 1:50

BILL OF MATERIALS FOR PIER NO.2			
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#25	29	4620	
TOTAL #25			532
1901f	26	1750	
1902f	1	1540	
1903f	1	1500	
1904f	1	1460	
1905f	1	1430	
1906f	1	1390	
1907f	1	1350	
1908f	1	1320	
1909f	1	1280	
1910f	1	1240	
1911f	1	1210	
1912f	1	1170	
1913f	1	1130	
1914f	1	1100	
1915f	1	1060	
1916f	7	1020	
1917f	8	1100	
Group "B"	4	18760	
Group "C"	14	15020	
#19	16	11100	
#19	2	8620	
#19	2	7650	
#19	11	7380	
#19	2	6150	
#19	2	4850	
#19	6	3990	
#19	2	3740	
TOTAL #19			1586
TOTAL REINFORCING STEEL			2118
CONCRETE			
CONCRETE, B, IN FOOTING			31.3 m ³
CONCRETE, A, IN SUBSTRUCTURE			
POUR NO. 1			41.5 m ³
POUR NO. 2			20.6 m ³
TOTAL CONCRETE, A, IN SUBSTRUCTURE			62.1 m ³
MISCELLANEOUS			
FIELD DRILLED HOLE IN CONCRETE			47 EACH
FOUNDATION EXCAVATION, UNCLASSIFIED			335 m ³

NOTE:

All Dimensions are in Millimeters and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.

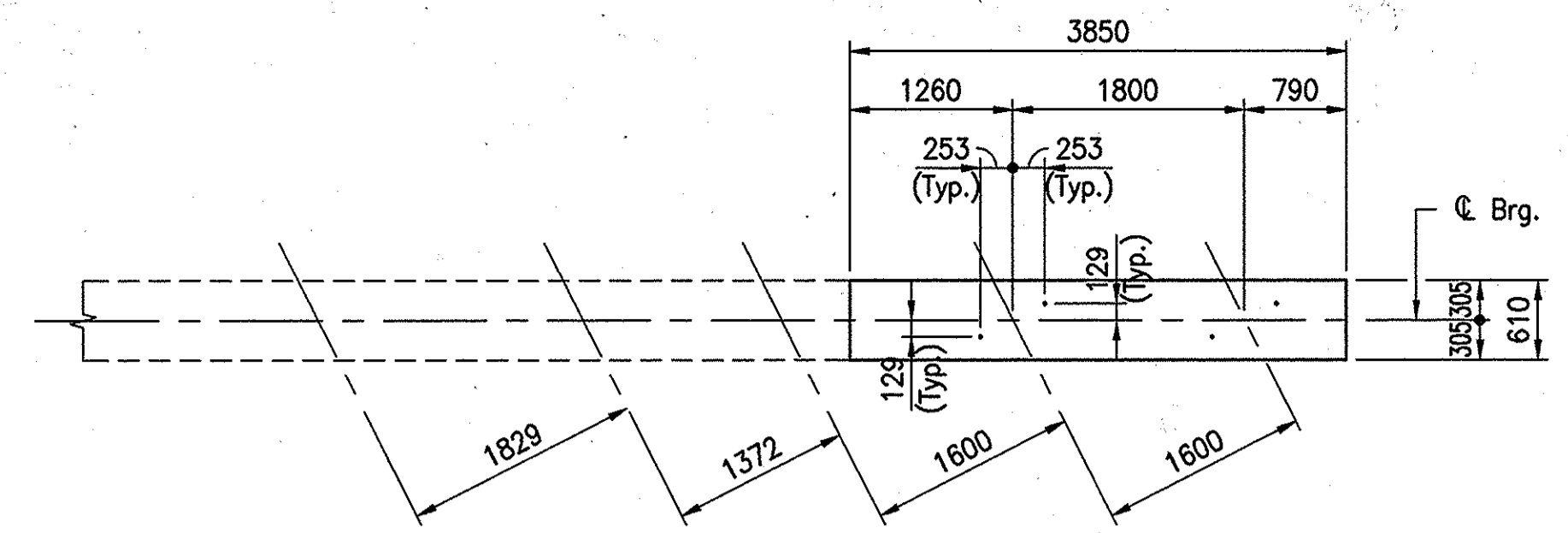
File: 9661PRZ



RECOMMENDED FOR APPROVAL	<i>E. Sailer</i>	1/19/99	
DESIGNED:	JAP	DRAWN:	MBW
CHECKED:	MJM	CHECKED:	RMG

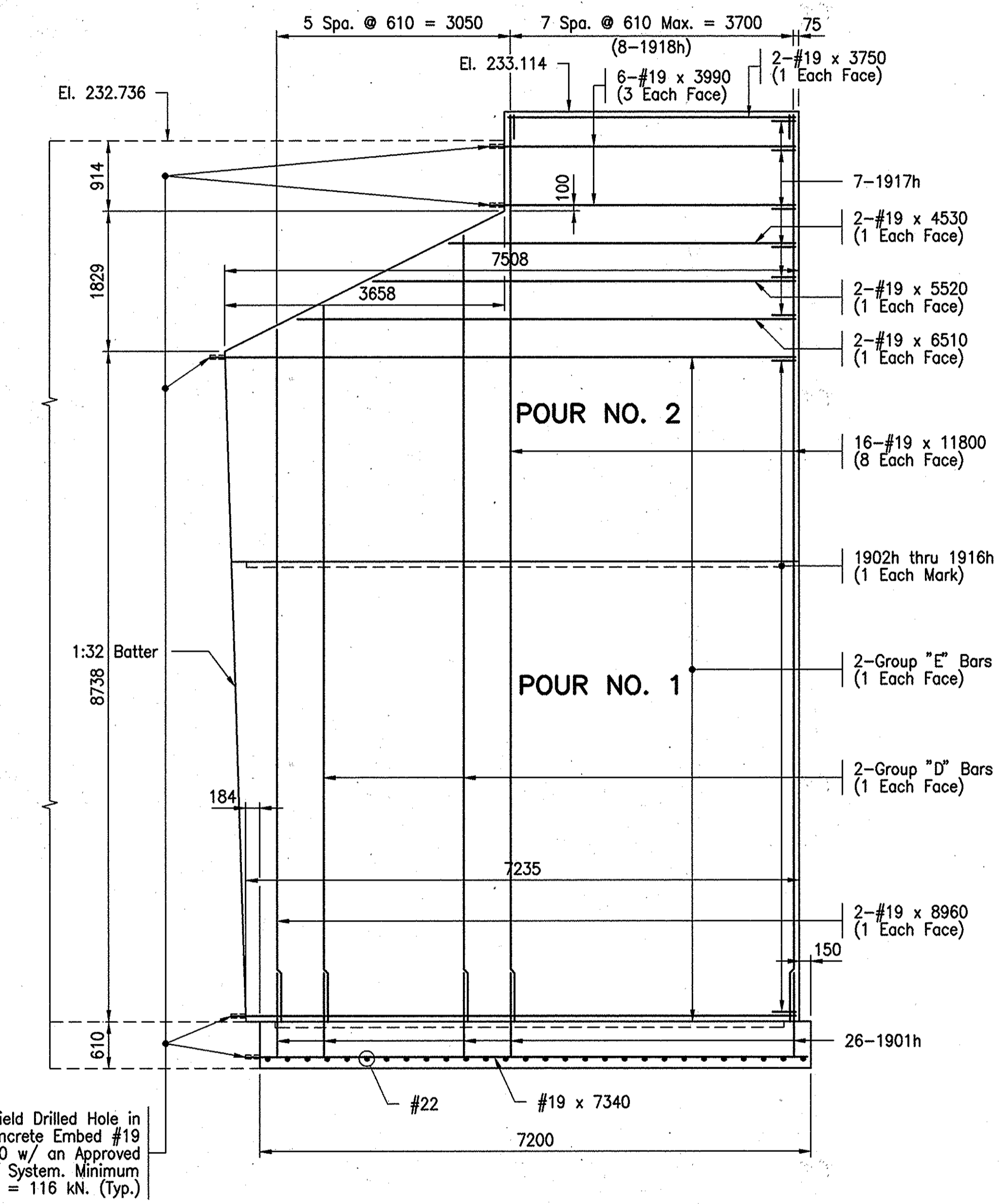
INDIANA DEPARTMENT OF TRANSPORTATION
PIER NO.2 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	39 of 120
CONTRACT	PROJECT
R 23849	IM-465-4(318)



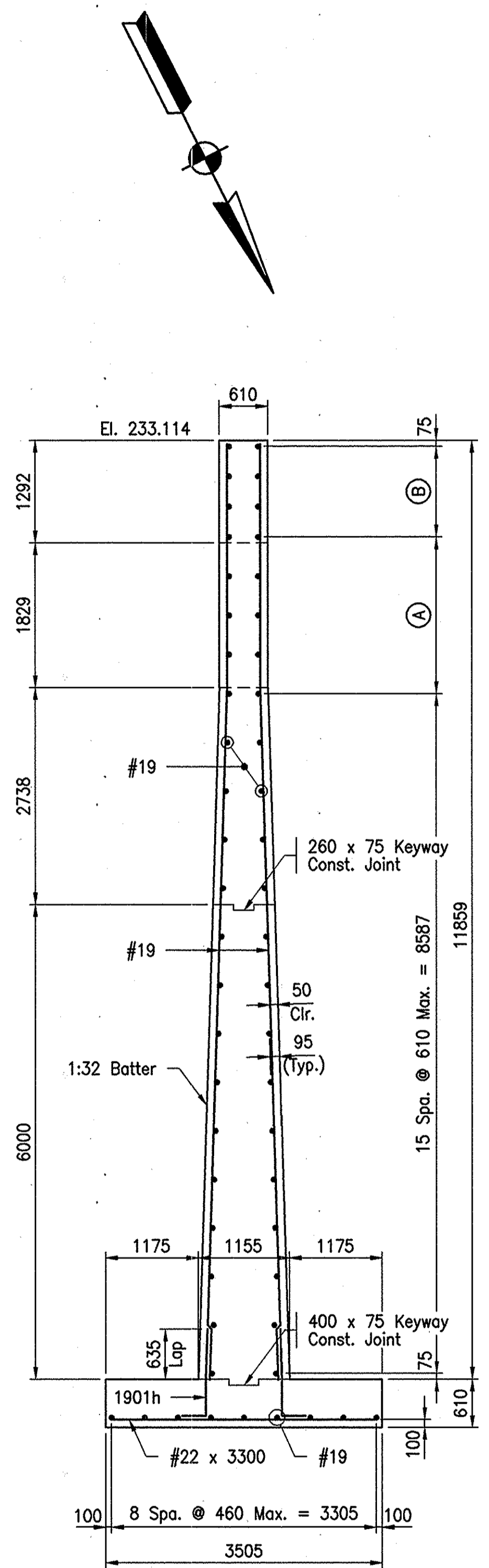
CAP PLAN

Scale: 1:50



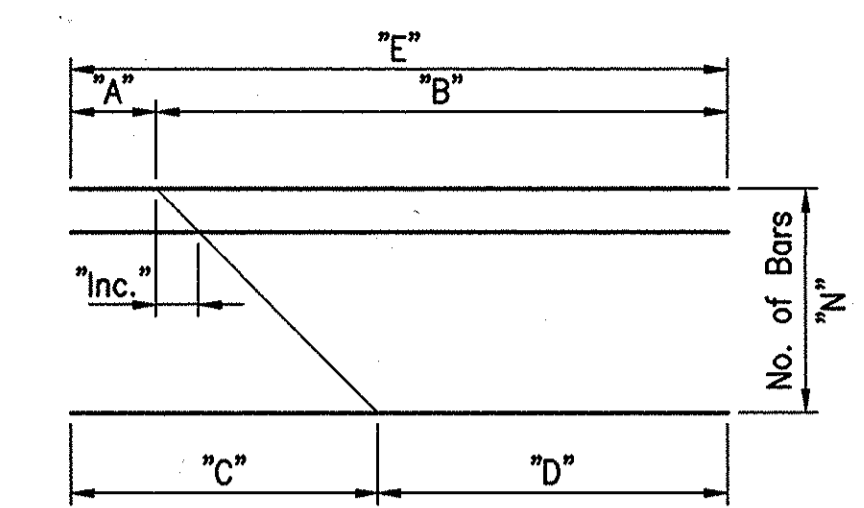
ELEVATION

Scale: 1:50



SECTION

Scale: 1:50



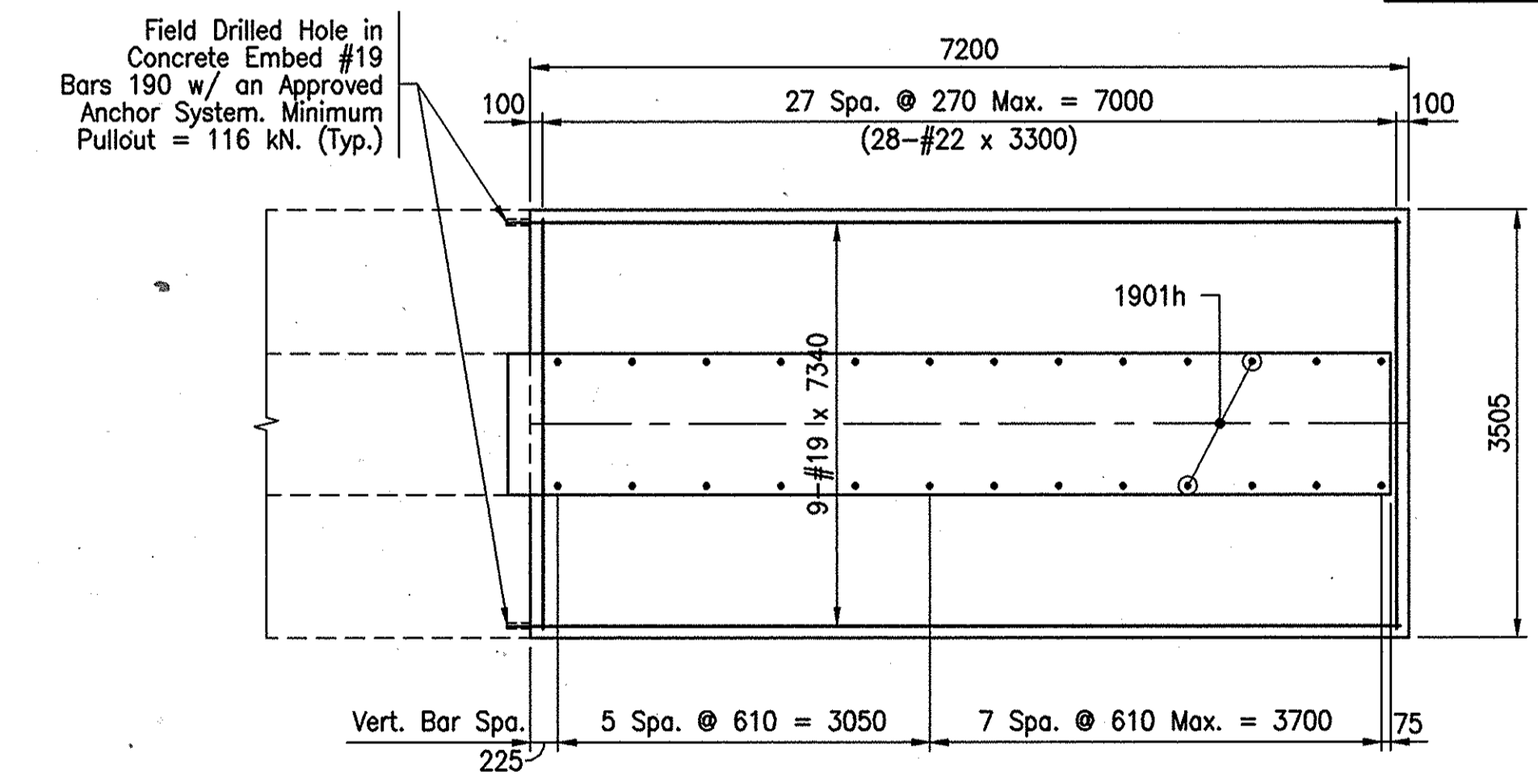
GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
D	#19	9260	10160	9560	9860	19420	303 ±	2
E	#19	7360	7650	7490	7520	15010	23 ±	8

MARK	"O"	LENGTH
1902h	960	1560
1903h	920	1520
1904h	880	1480
1905h	850	1450
1906h	810	1410
1907h	770	1370
1908h	730	1330
1909h	690	1290
1910h	650	1250
1911h	620	1220
1912h	580	1180
1913h	540	1140
1914h	500	1100
1915h	460	1060
1916h	420	1020
1917h	420	1020
1918h	500	1100

1901h x 1440

LEGEND

- (A) 2 Spa. @ 610 Max. = 765
- (B) 4 Spa. @ 610 Max. = 1979



FOOTING PLAN

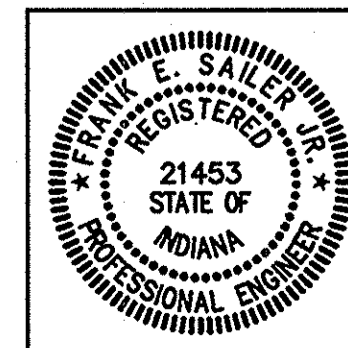
Scale: 1:50

NOTE:

All Dimensions are in Millimeters and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.

REINFORCING STEEL				
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)	
#22	28	3300		
TOTAL #22				281
1901h	26	1440		
1902h	1	1560		
1903h	1	1520		
1904h	1	1480		
1905h	1	1450		
1906h	1	1410		
1907h	1	1370		
1908h	1	1330		
1909h	1	1290		
1910h	1	1250		
1911h	1	1220		
1912h	1	1180		
1913h	1	1140		
1914h	1	1100		
1915h	1	1060		
1916h	1	1020		
1917h	7	1020		
1918h	8	1100		
Group "D"	4	19420		
Group "E"	16	15010		
#19	16	11800		
#19	2	8960		
#19	9	7340		
#19	2	6510		
#19	2	5520		
#19	2	4530		
#19	2	3750		
#19	6	3990		
TOTAL #19			1627	
TOTAL REINFORCING STEEL				1908
CONCRETE				
CONCRETE, B, IN FOOTING		15.4 m ³		
CONCRETE, A, IN SUBSTRUCTURE				
POUR NO. 1		42.5 m ³		
POUR NO. 2		23.7 m ³		
TOTAL CONCRETE, A, IN SUBSTRUCTURE		66.2 m ³		
MISCELLANEOUS				
FIELD DRILLED HOLE IN CONCRETE		47 EACH		
FOUNDATION EXCAVATION, UNCLASSIFIED		175 m ³		

File: 9661PR3



RECOMMENDED FOR APPROVAL	<i>E. Sailer</i>	1/19/99
DESIGNED:	JAP	DATE
DRAWN:	MBW	
CHECKED:	MJM	
	RMG	

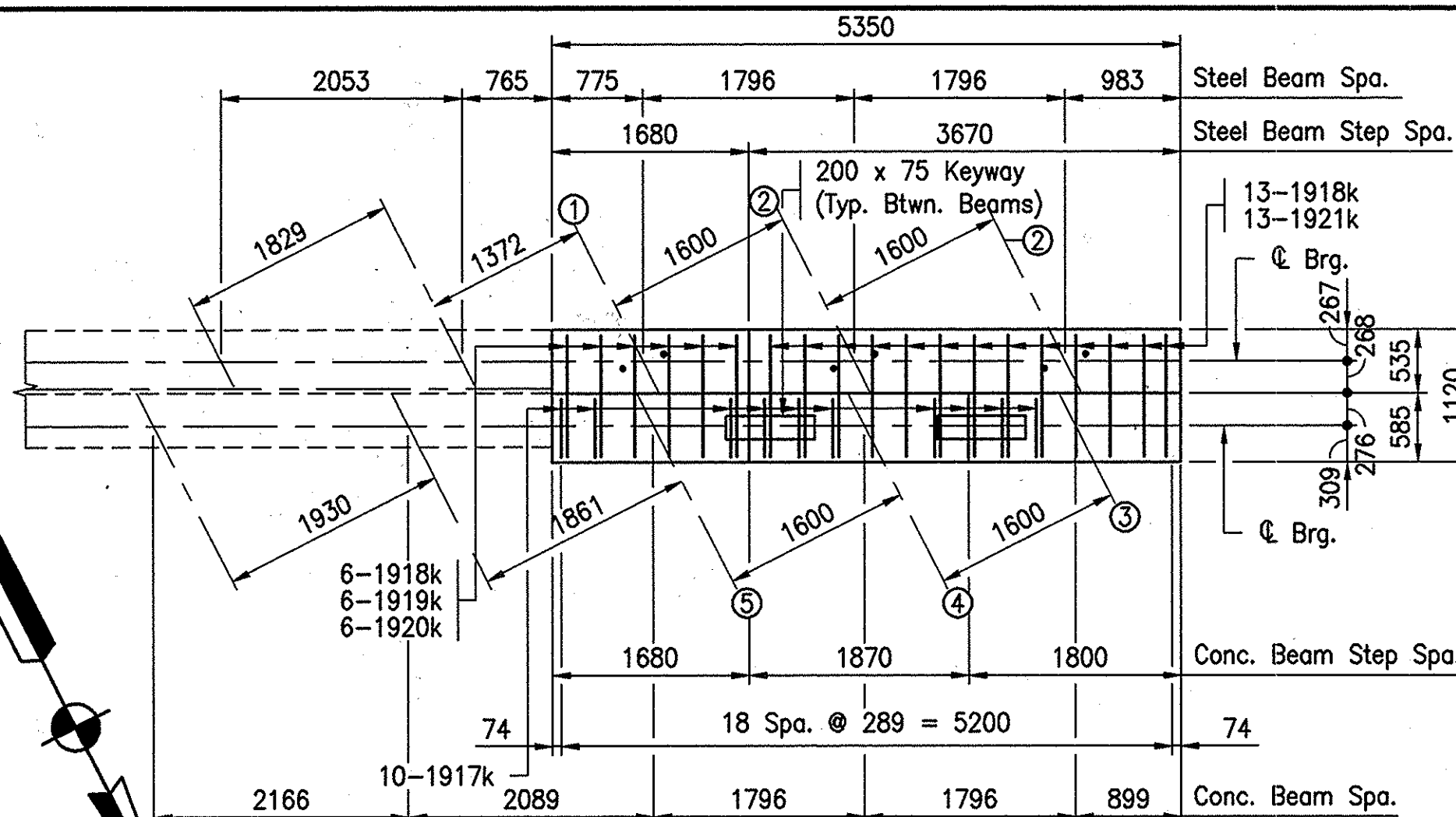
INDIANA DEPARTMENT OF TRANSPORTATION
PIER NO.3 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	40 of 120
CONTRACT	PROJECT
R 23849	IM-465-4(318)

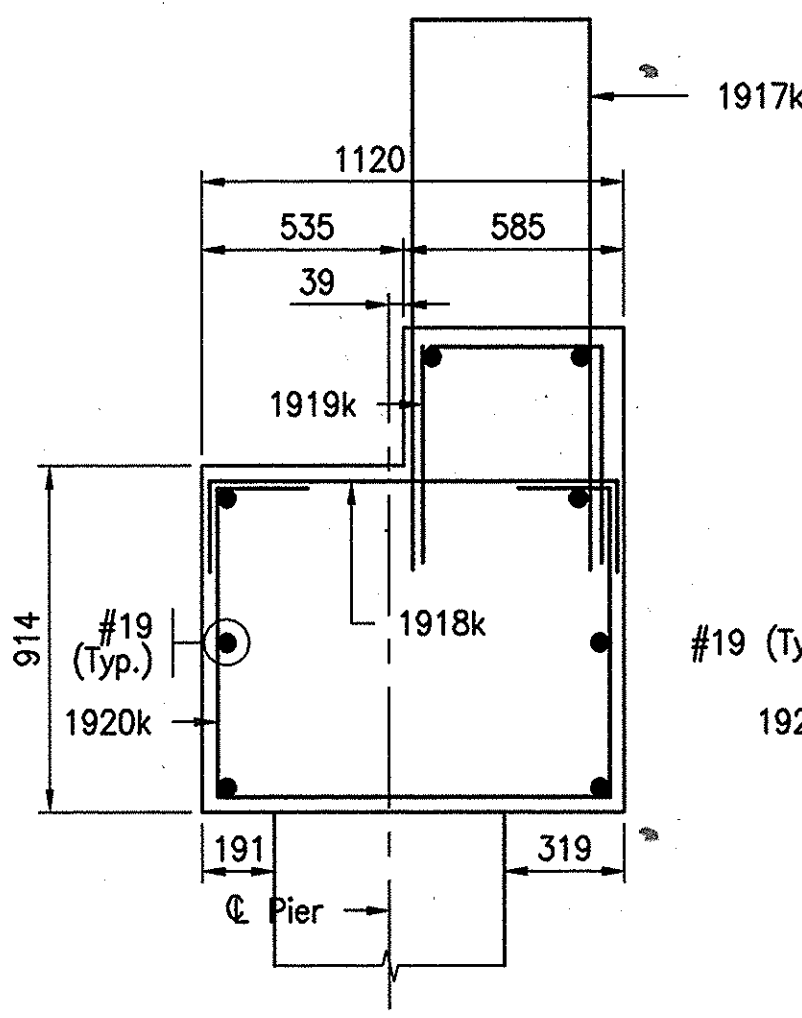
BRIDGE SEAT ELEVATIONS	
LOCATION	ELEVATION
1	232.775
2	233.067
3	232.955
4	232.990
5	233.141

JACKING LOADS*	
SPAN	LOAD
C	60 kN
D	80 kN

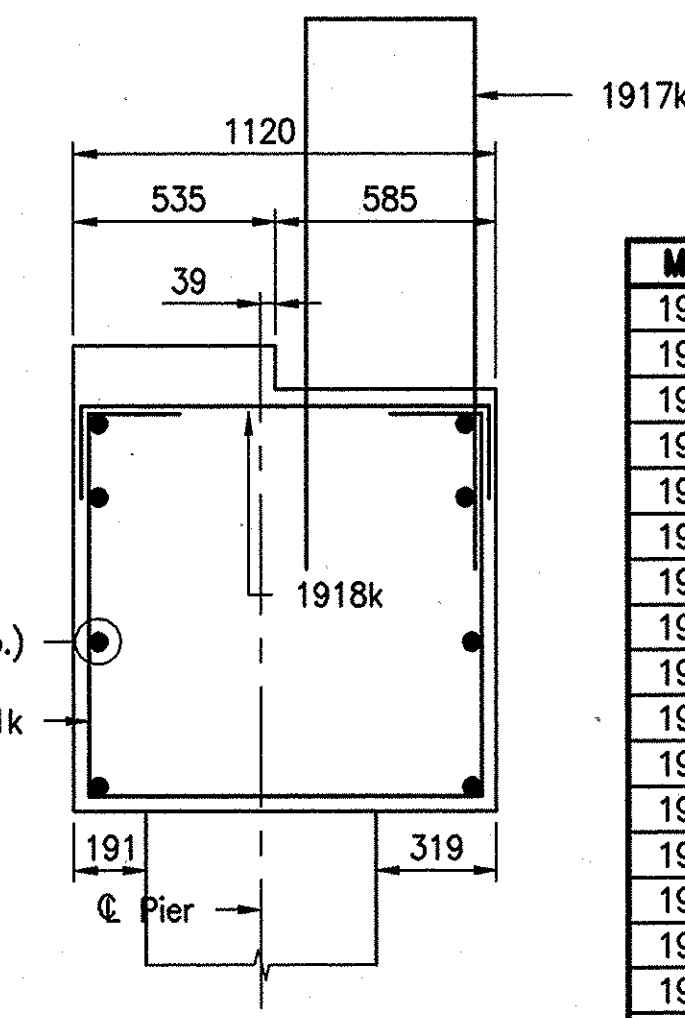
* Dead Load Only.



CAP PLAN
Scale: 1:50

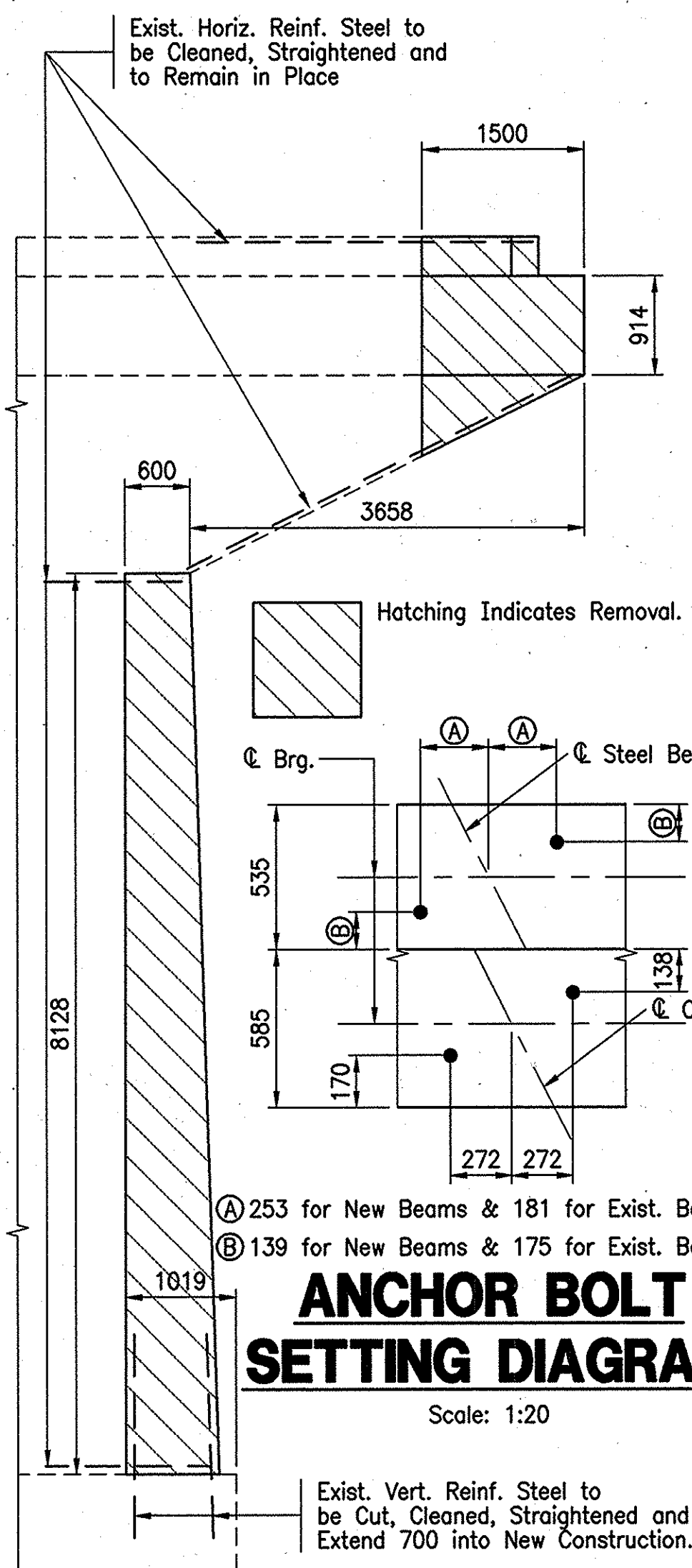


SECTION A-A
Scale: 1:20

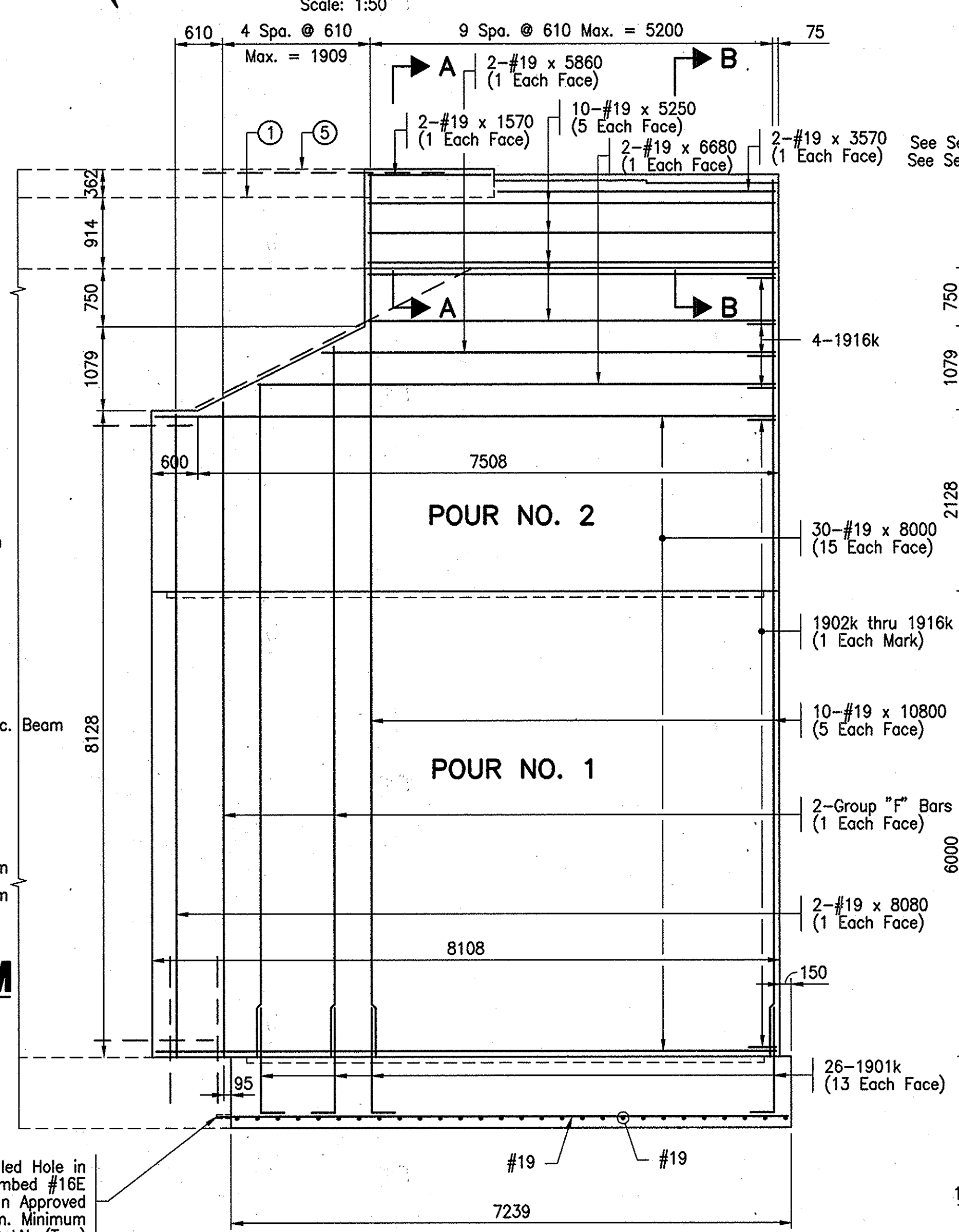


SECTION B-B
Scale: 1:20

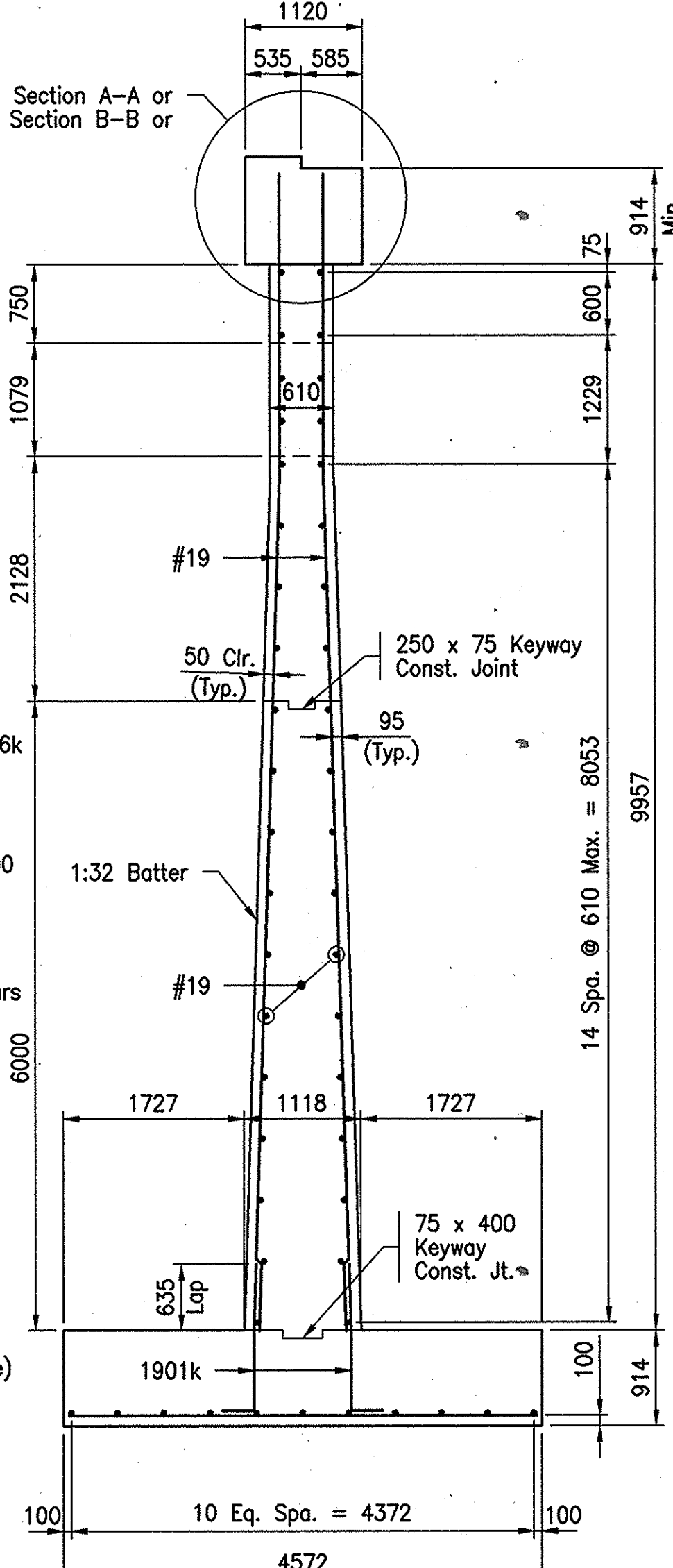
MARK	"O"	"H"	LENGTH
1902k	920	300	1520
1903k	880	300	1480
1904k	850	300	1450
1905k	810	300	1410
1906k	780	300	1380
1907k	740	300	1340
1908k	710	300	1310
1909k	670	300	1270
1910k	630	300	1230
1911k	600	300	1200
1912k	560	300	1160
1913k	530	300	1130
1914k	490	300	1090
1915k	460	300	1060
1916k	420	300	1020
1917k	480	1450	3380
1918k	1020	300	1620
1919k	490	600	1690



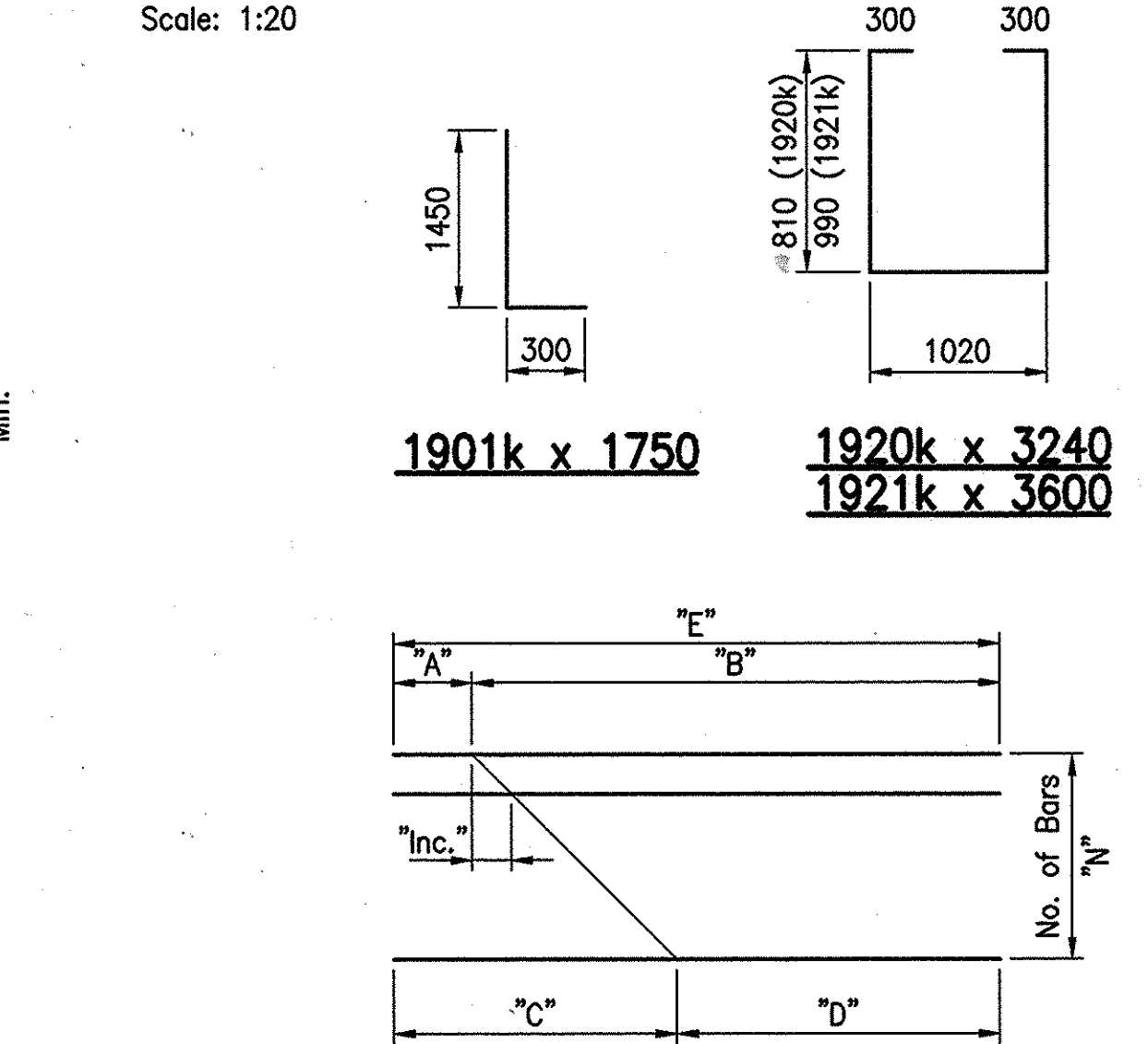
ANCHOR BOLT SETTING DIAGRAM
Scale: 1:20



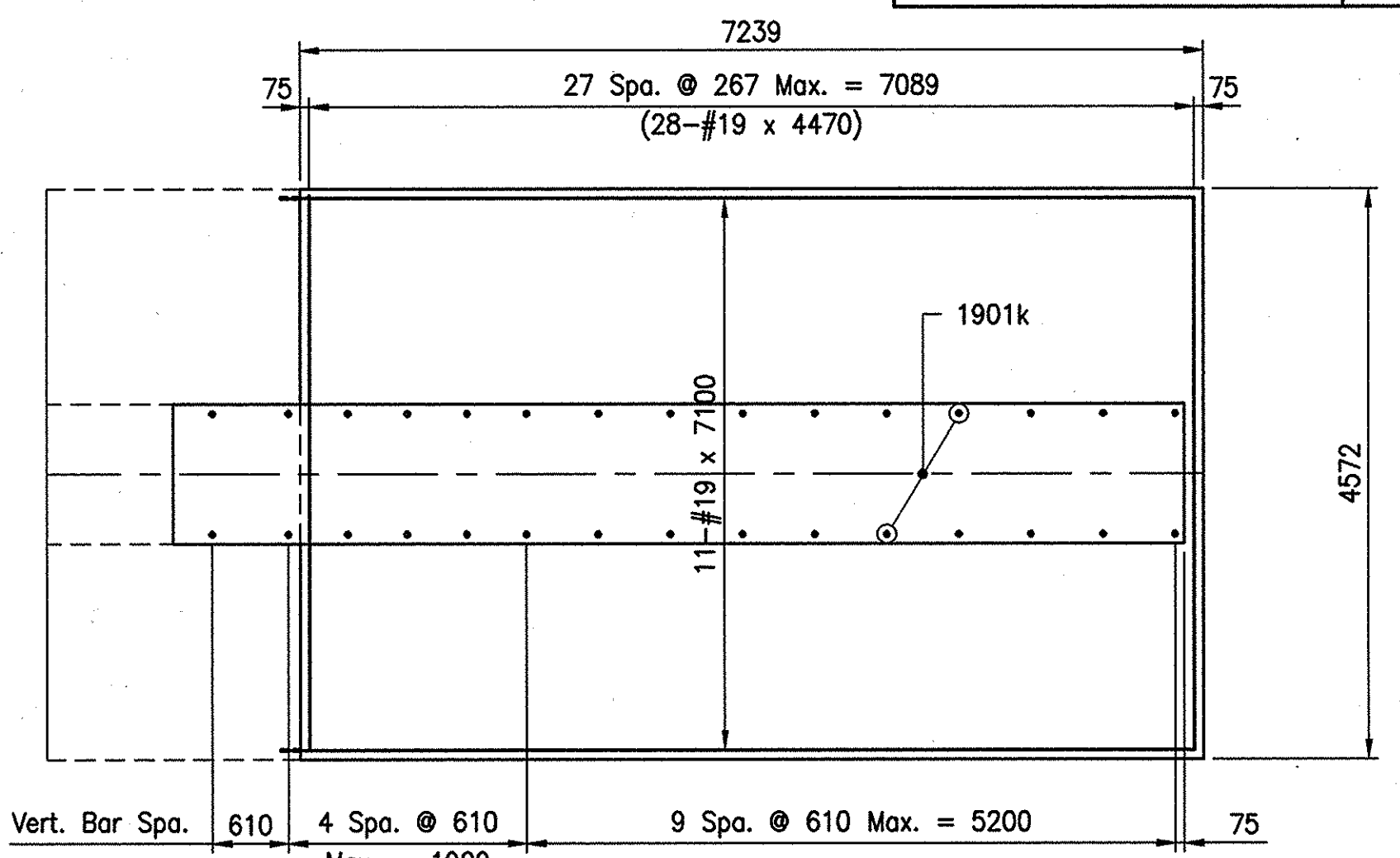
RECONSTRUCTION ELEVATION
Scale: 1:50



SECTION
Scale: 1:50



GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
"F"	#19	8200	8900	8430	8670	17100	237 ±	2



FOOTING PLAN
Scale: 1:50

NOTE:
All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.

BILL OF MATERIALS FOR PIER NO.4

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1901k	26	1750	
1902k	1	1520	
1903k	1	1480	
1904k	1	1450	
1905k	1	1410	
1906k	1	1380	
1907k	1	1340	
1908k	1	1310	
1909k	1	1270	
1910k	1	1230	
1911k	1	1200	
1912k	1	1160	
1913k	1	1130	
1914k	1	1090	
1915k	1	1060	
1916k	5	1020	
1917k	10	3380	
1918k	19	1620	
1919k	6	1690	
1920k	6	3240	
1921k	13	3600	
Group "F"	4	17100	
#19	10	10800	
#19	2	8080	
#19	30	8000	
#19	11	7100	
#19	2	6680	
#19	2	5860	
#19	10	5250	
#19	28	4470	
#19	2	3570	
#19	2	1570	
TOTAL #19			2086
TOTAL REINFORCING STEEL			2086
CONCRETE			
CONCRETE, B, IN FOOTING			30.3 m ³
CONCRETE, A, IN SUBSTRUCTURE			
POUR NO. 1			45.3 m ³
POUR NO. 2			25.2 m ³
TOTAL CONCRETE, A, IN SUBSTRUCTURE			70.5 m ³
MISCELLANEOUS			
FIELD DRILLED HOLE IN CONCRETE			11 EACH
FOUNDATION EXCAVATION, UNCLASSIFIED			310 m ³
B-BORROW FOR STRUCTURE BACKFILL			238 m ³

REMOVAL ELEVATION
Scale: 1:50

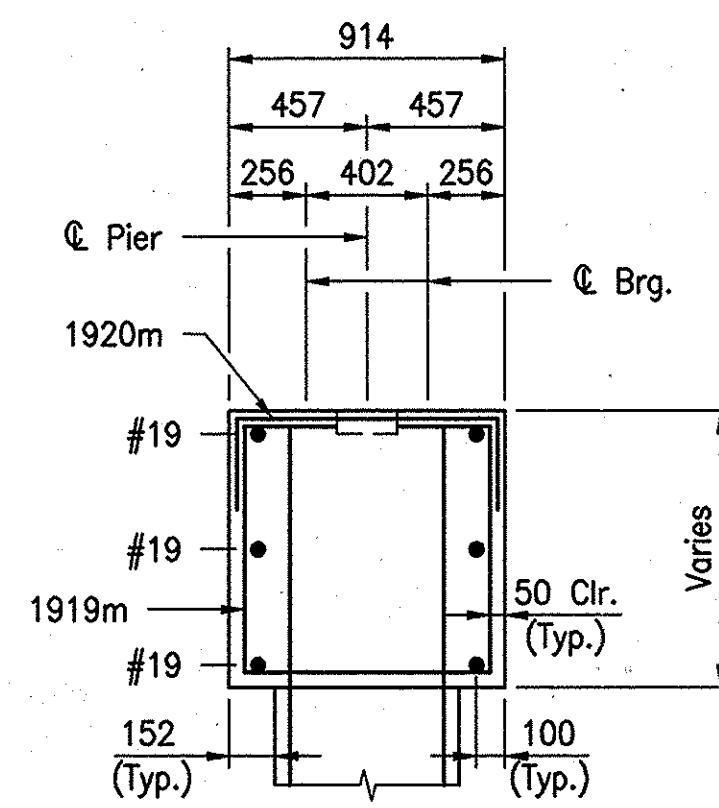
File: 9661PR4



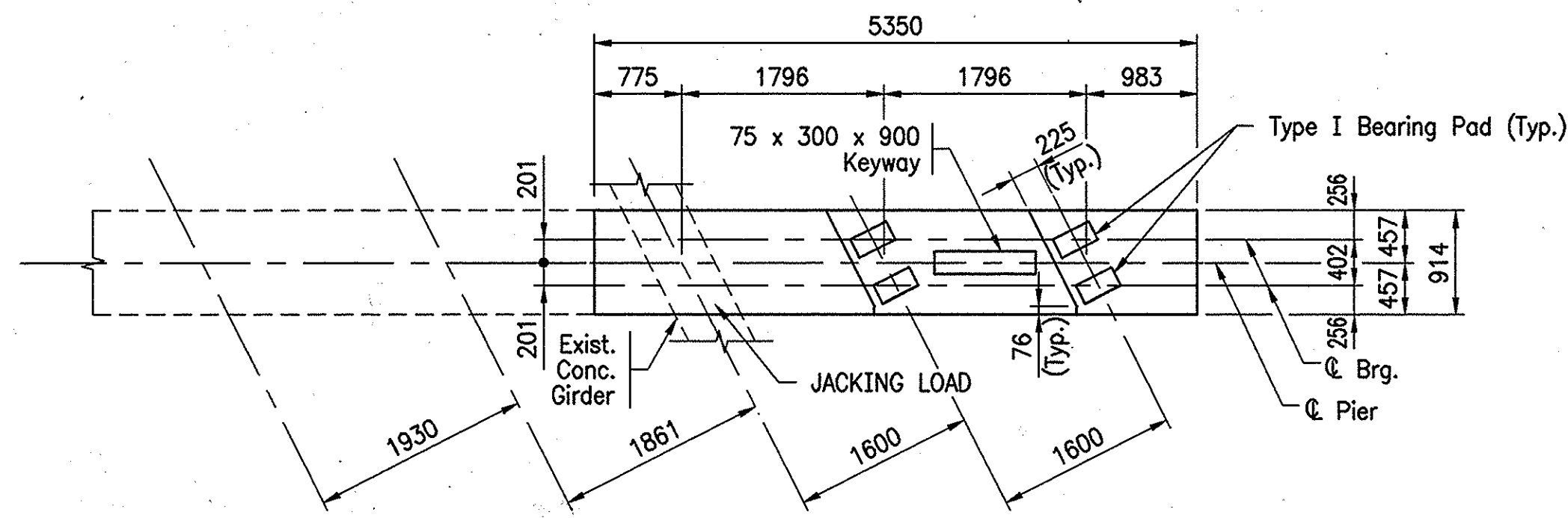
RECOMMENDED FOR APPROVAL	<i>John C. Sailer Jr.</i>	1/19/99
DESIGNED:	JAP	DRAWN:
CHECKED:	MJM	CHECKED:
		DATE
		DESIGN ENGINEER
		DATE
		DATE

INDIANA DEPARTMENT OF TRANSPORTATION
PIER NO.4 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	41 of 120
CONTRACT	PROJECT
R 23849	IM-465-4(318)



DETAIL "A"
Scale: 1:100



CAP PLAN
Scale: 1:50

JACKING LOADS*

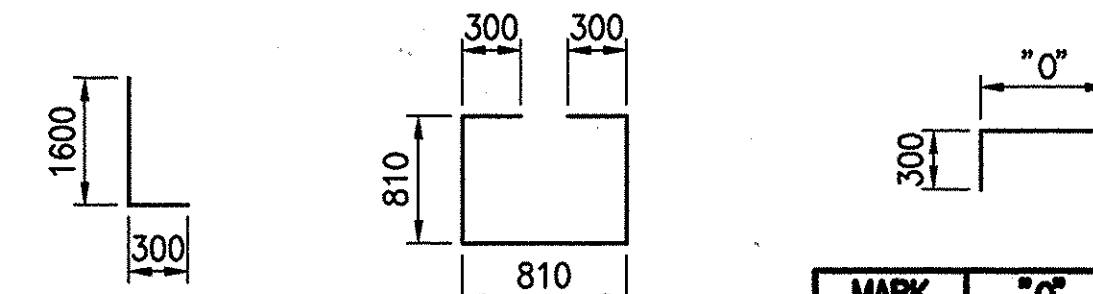
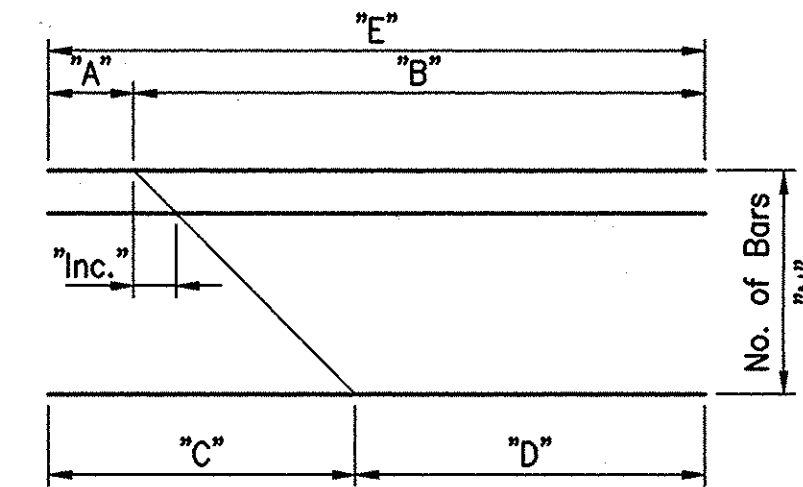
Span D	80 kN
Span E	80 kN
Span F	80 kN

* Dead Load ONLY

BRIDGE SEAT ELEVATIONS

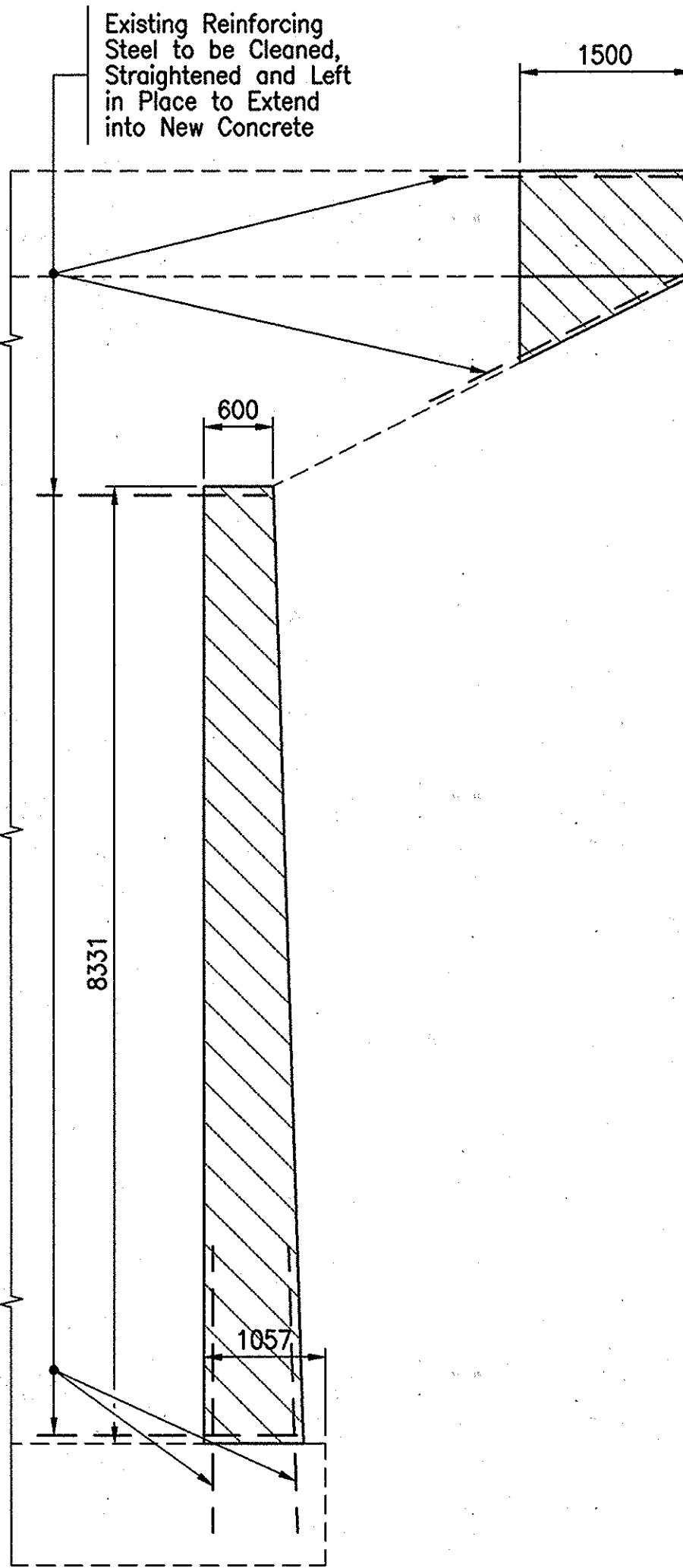
LOCATION	PIER NO.5	PIER NO.6
1	233.082	233.000
2	233.004	232.924
3	232.968	232.886

GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
A	#19	8460	9160	8690	8930	17620	233 ±	2

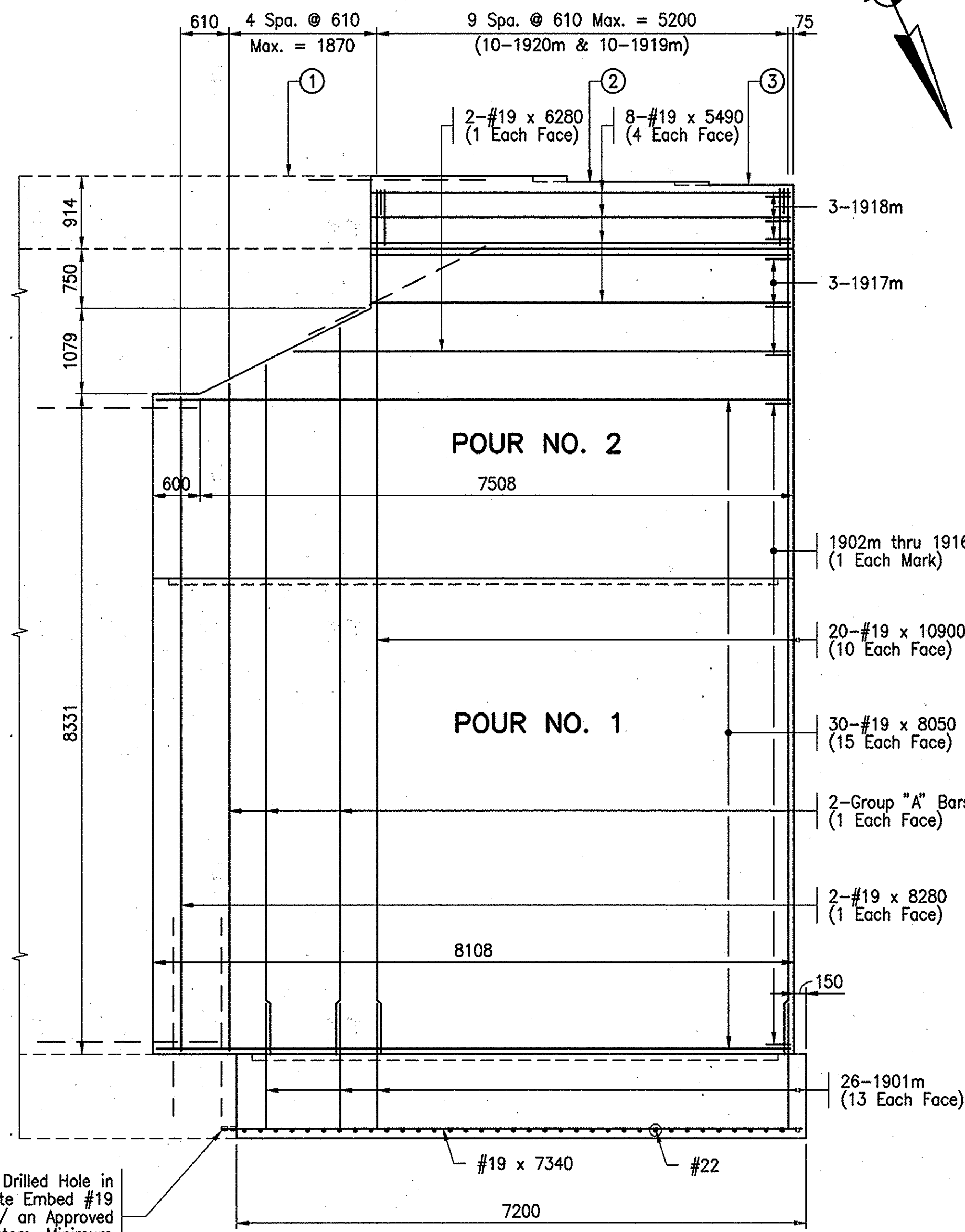


LEGEND

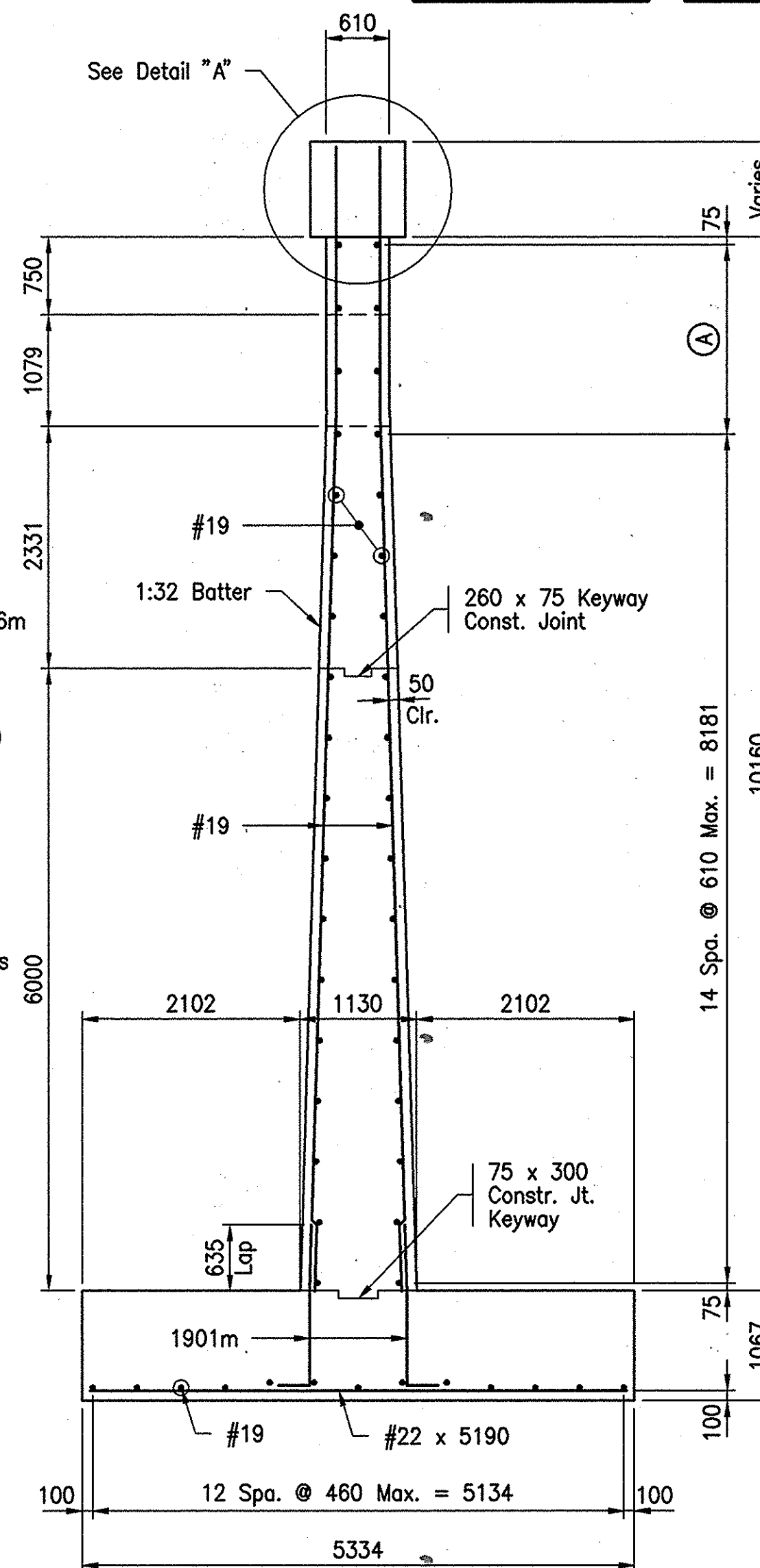
MARK	"O"	LENGTH
1902m	940	1540
1903m	900	1500
1904m	870	1470
1905m	830	1430
1906m	800	1400
1907m	760	1360
1908m	720	1320
1909m	690	1290
1910m	650	1250
1911m	610	1210
1912m	580	1180
1913m	540	1140
1914m	500	1100
1915m	470	1070
1916m	430	1030
1917m	420	1020
1918m	420	1020
1920m	810	1110
Group "A"	4	17620
#19	20	10900
#19	2	8280
#19	30	8050
#19	13	7340
#19	2	6280
#19	8	5490
TOTAL #19		1823
TOTAL REINFORCING STEEL		2391



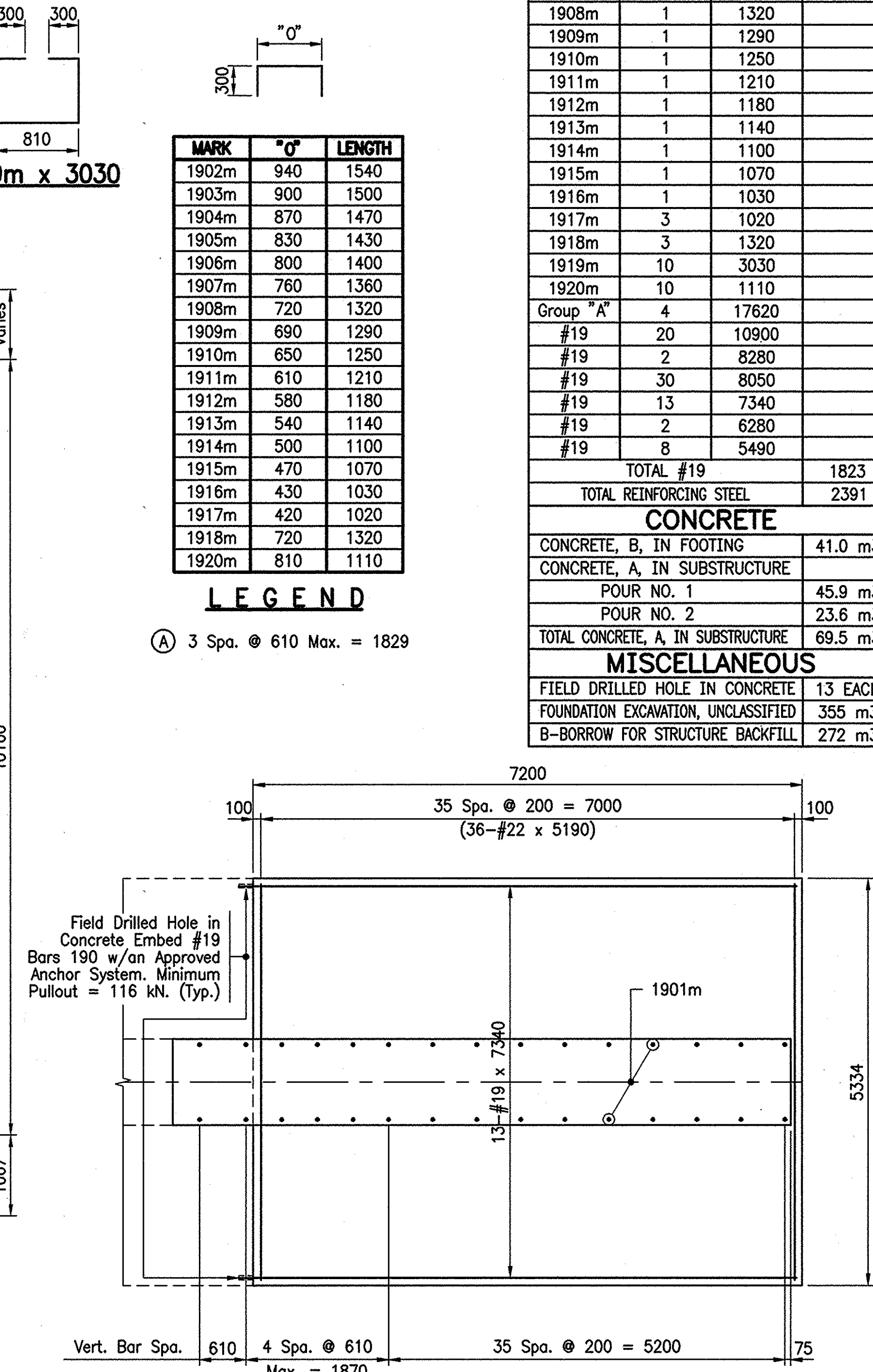
REMOVAL ELEVATION
Scale: 1:50



RECONSTRUCTION ELEVATION
Scale: 1:50



SECTION
Scale: 1:50



NOTE:
All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.
FOOTING PLAN
Scale: 1:50

BILL OF MATERIALS FOR PIER NO.5 (PIER NO.6 SAME)

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#22	36	5190	568
TOTAL #22			
1901m	26	1900	
1902m	1	1540	
1903m	1	1500	
1904m	1	1470	
1905m	1	1430	
1906m	1	1400	
1907m	1	1360	
1908m	1	1320	
1909m	1	1290	
1910m	1	1250	
1911m	1	1210	
1912m	1	1180	
1913m	1	1140	
1914m	1	1100	
1915m	1	1070	
1916m	1	1030	
1917m	3	1020	
1918m	3	1320	
1919m	10	3030	
1920m	10	1110	
Group "A"	4	17620	
#19	20	10900	
#19	2	8280	
#19	30	8050	
#19	13	7340	
#19	2	6280	
#19	8	5490	
TOTAL #19		1823	
TOTAL REINFORCING STEEL		2391	
CONCRETE			
CONCRETE, B, IN FOOTING		41.0 m3	
CONCRETE, A, IN SUBSTRUCTURE			
POUR NO. 1		45.9 m3	
POUR NO. 2		23.6 m3	
TOTAL CONCRETE, A, IN SUBSTRUCTURE		69.5 m3	
MISCELLANEOUS			
FIELD DRILLED HOLE IN CONCRETE		13 EACH	
FOUNDATION EXCAVATION, UNCLASSIFIED		355 m3	
B-BORROW FOR STRUCTURE BACKFILL		272 m3	

File: 9661PR56

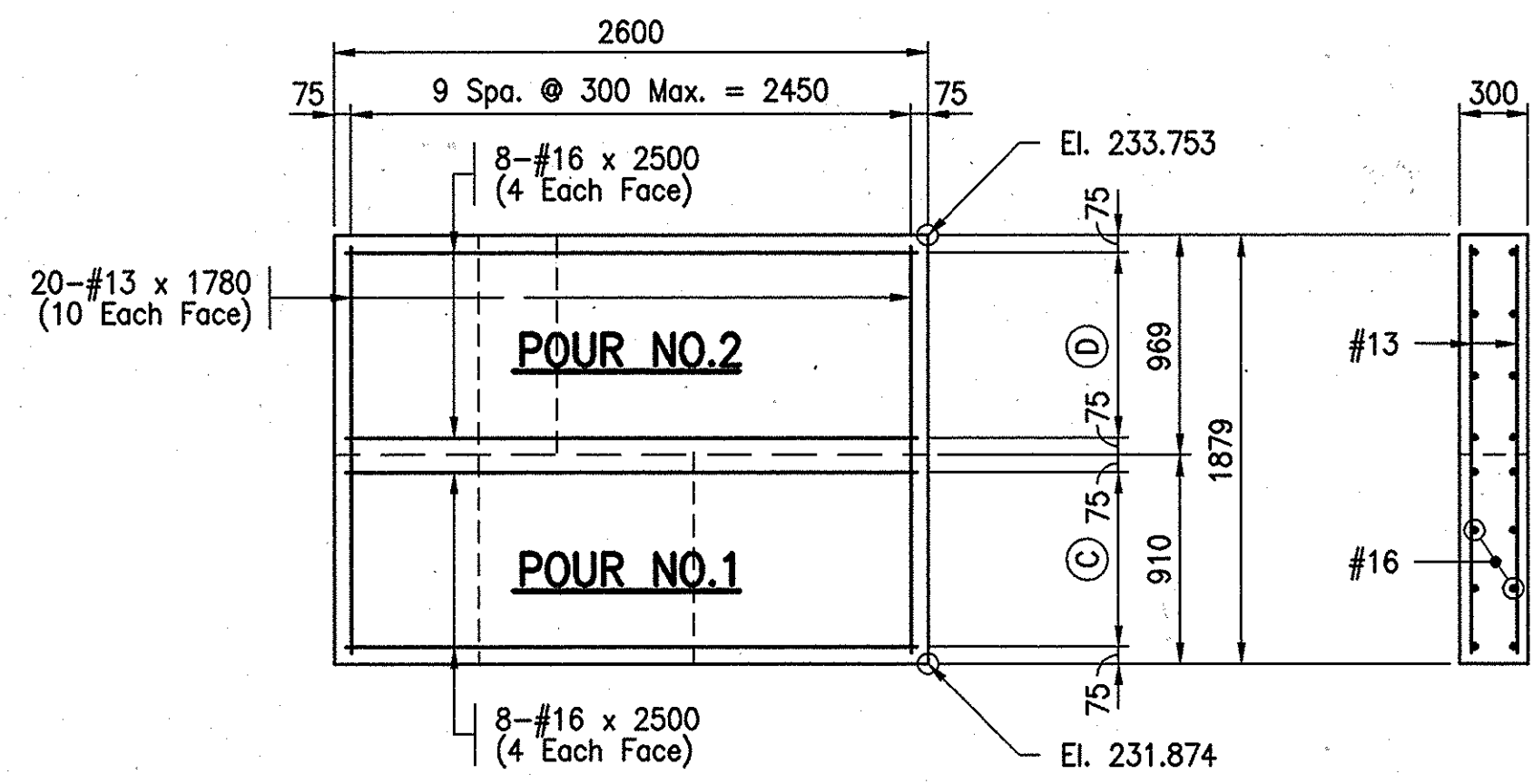


RECOMMENDED FOR APPROVAL: *Frank E. Sailer Jr.* 1/19/99
DESIGN ENGINEER DATE

DESIGNED: JAP DRAWN: MBW
CHECKED: MJM CHECKED: RMG

INDIANA DEPARTMENT OF TRANSPORTATION
PIERS NO.5 & NO.6 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	42 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

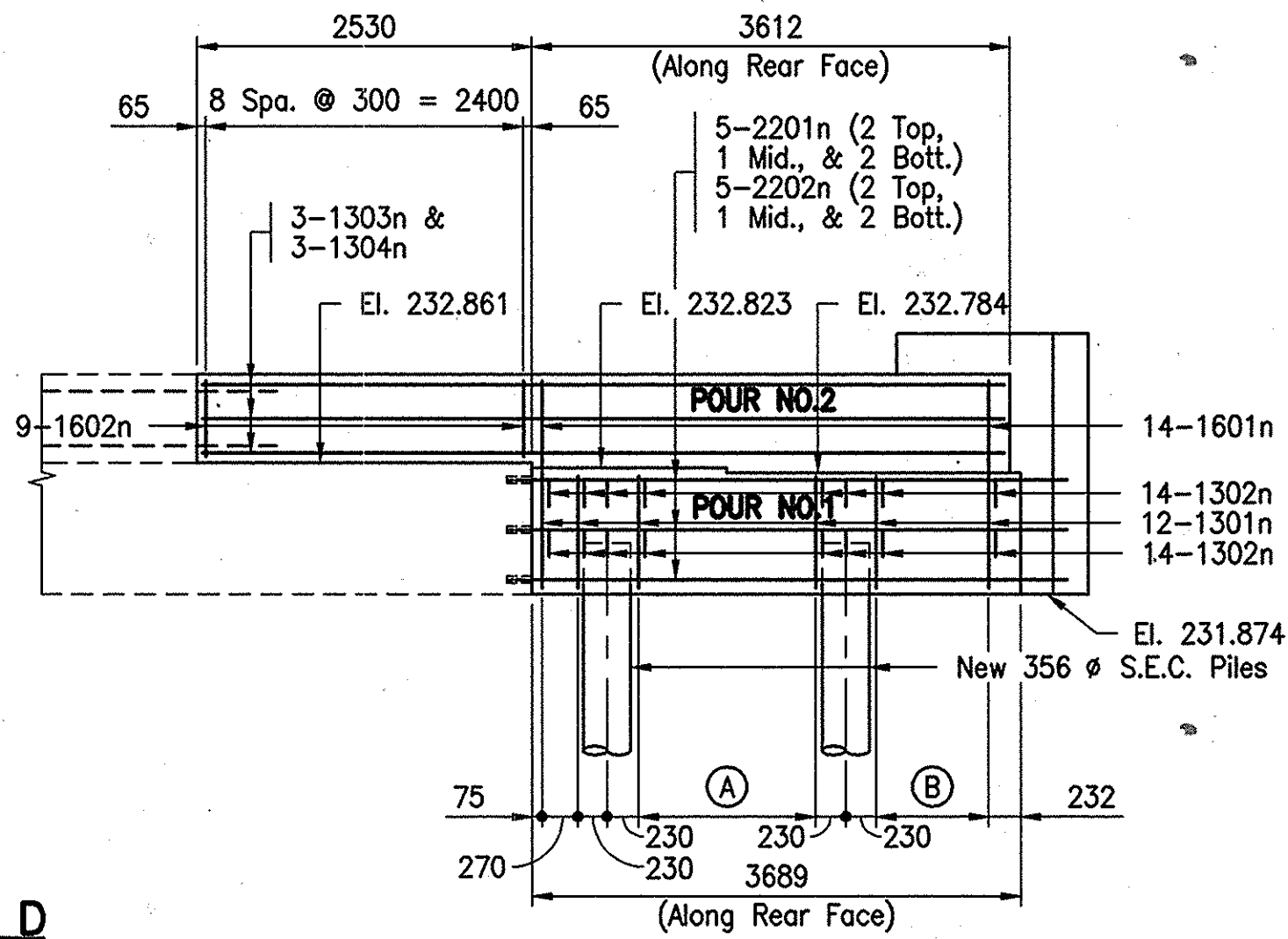


ELEVATION

SECTION

WING WALL DETAILS

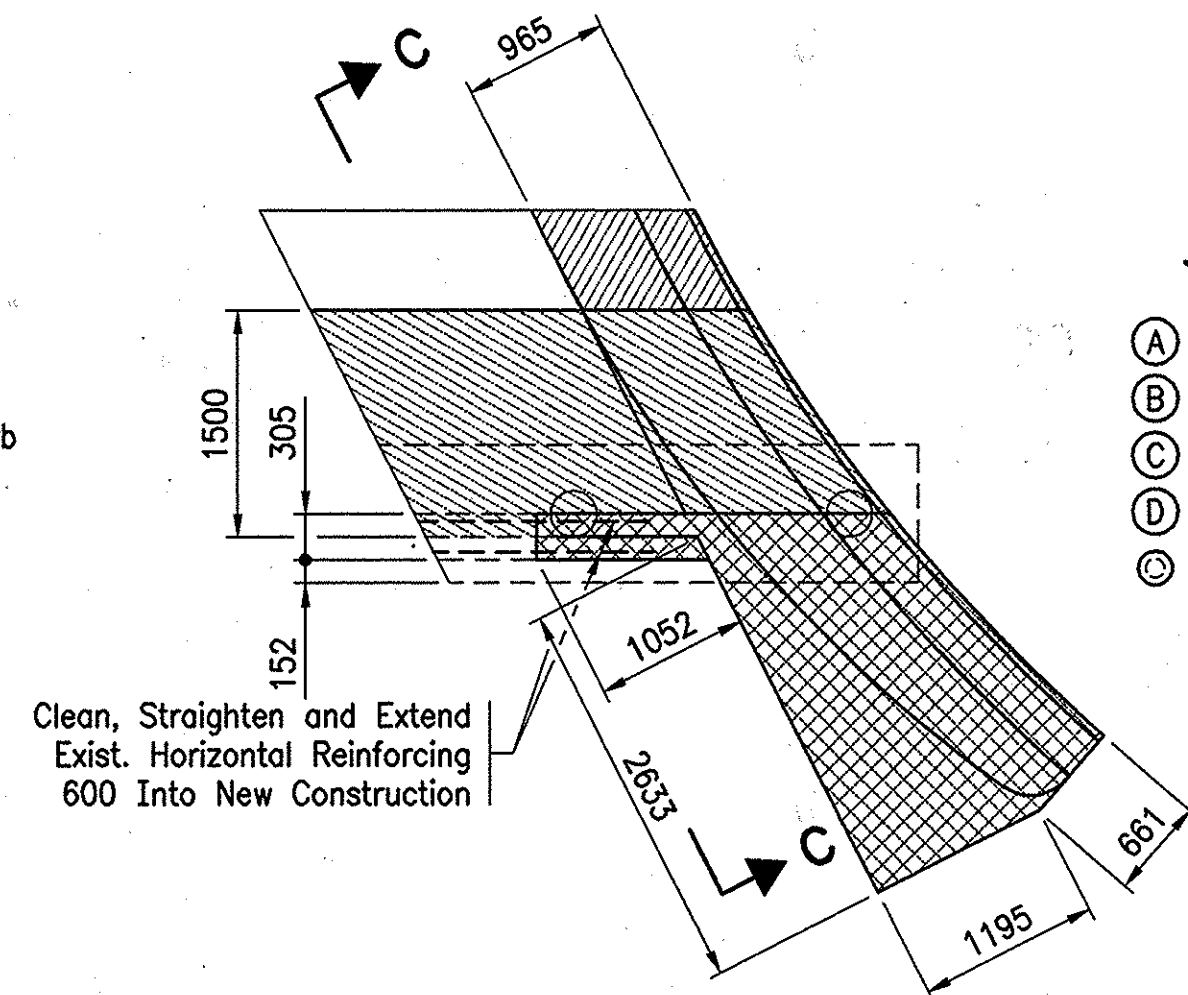
Scale: 1:30



ELEVATION

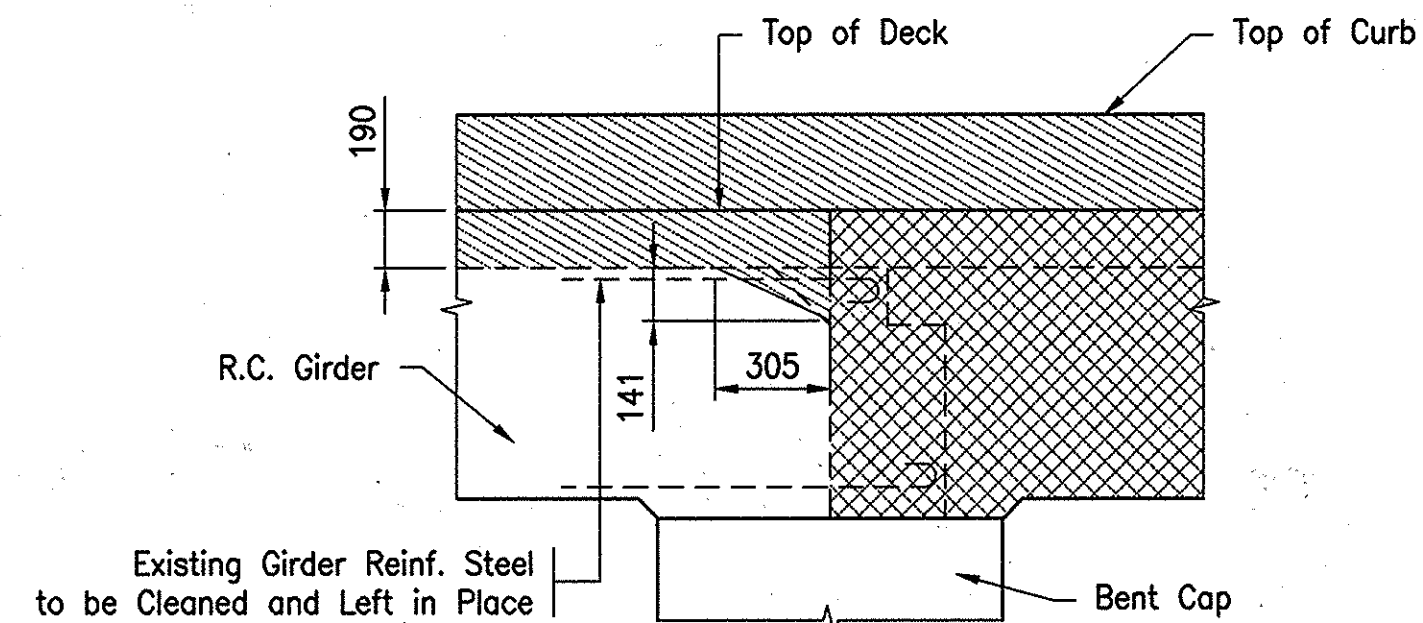
Scale: 1:50

- Hatching Indicates Area of Removal to Top of Bent Cap
- Hatching Indicates Deck and Curb Removal to Top of Mudwall
- Hatching Indicates Deck and Curb Removal



REMOVAL PLAN

Scale: 1:50

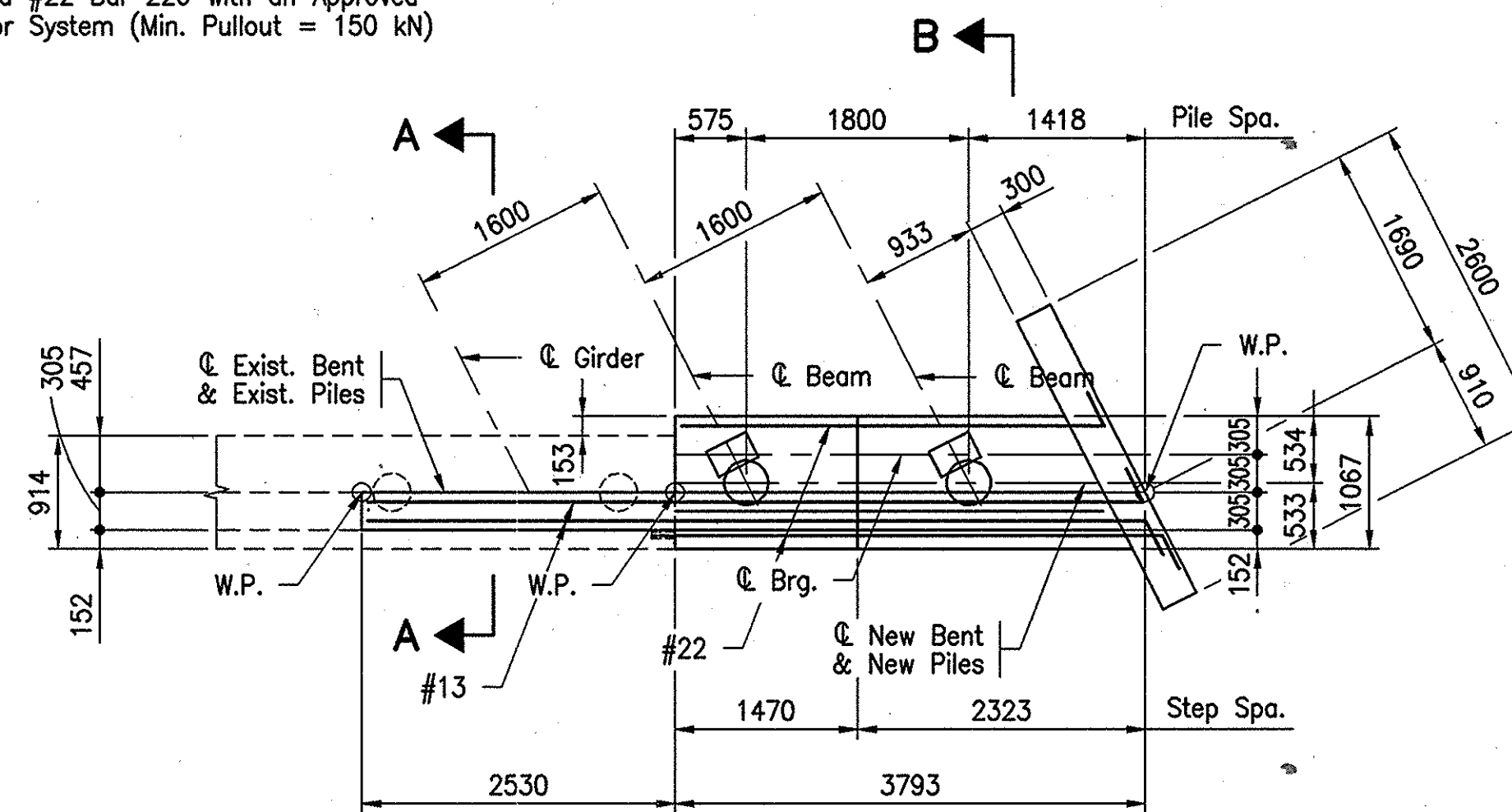


SECTION "C-C"

Scale: 1:20

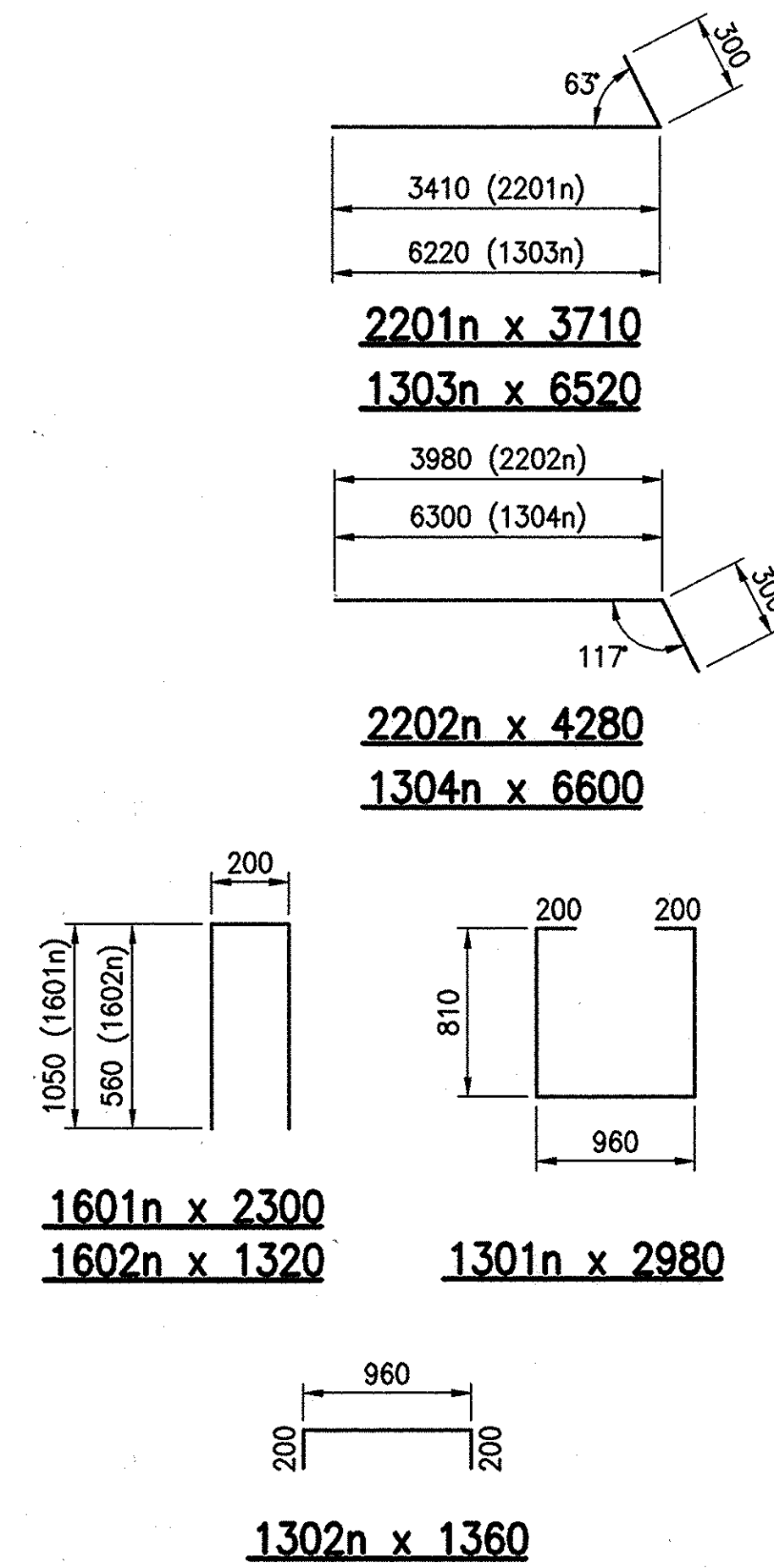
LEGEND

- (A) 5 Eq. Spa. = 1340
- (B) 3 Eq. Spa. = 852
- (C) 3 Eq. Spa. = 760
- (D) 3 Eq. Spa. = 819
- (C) Indicates Field Drilled Hole in Concrete Embed #22 Bar 220 with an Approved Anchor System (Min. Pullout = 150 kN)



RECONSTRUCTION PLAN

Scale: 1:50



SECTION A-A

Scale: 1:20

SECTION B-B

Scale: 1:20

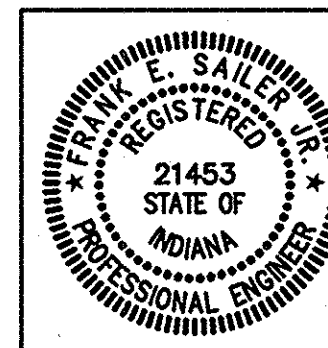
BILL OF MATERIALS FOR BENT NO.7

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2201n	5	3710	
2202n	5	4280	
TOTAL #22			122
1601n	14	2300	
1602n	9	1320	
#16	16	2500	
TOTAL #16			130
1301n	12	2980	
1302n	28	1360	
1303n	3	6520	
1304n	3	6600	
#13	20	1780	
TOTAL #13			148
TOTAL REINFORCING STEEL			400
CONCRETE			
POUR NO.1 (4.1 m ³)			
POUR NO.2 (2.4 m ³)			
TOTAL CONC., A, IN SUBSTRUCTURE			6.5 m ³
MISCELLANEOUS			
FIELD DRILLED HOLES IN CONCRETE			5 EACH
356 mm S.E.C. PILES (2 @ 13.7 m)			27.4 m
FOUNDATION EXCAVATION, UNCLASSIFIED			15 m ³
FLOWABLE MORTAR			11 m ³

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.

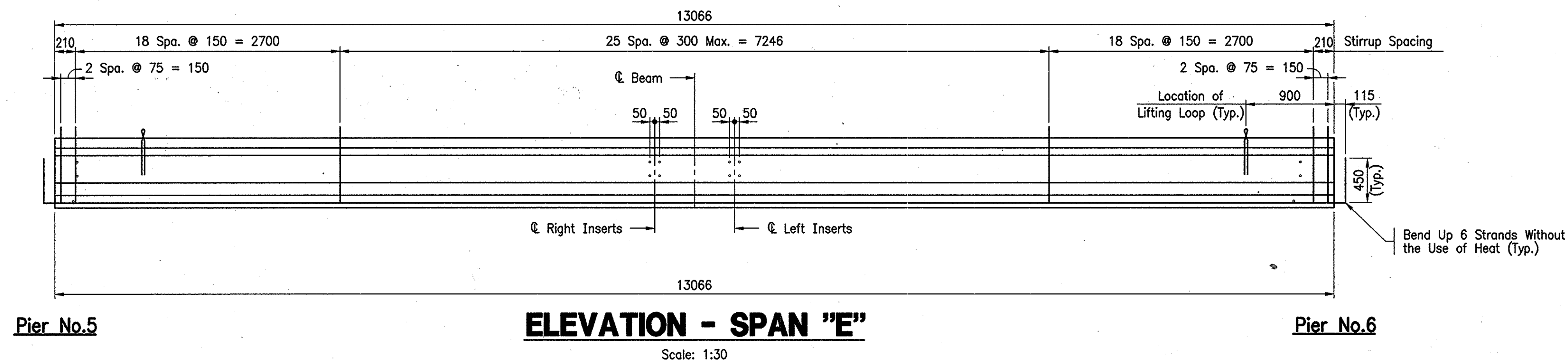
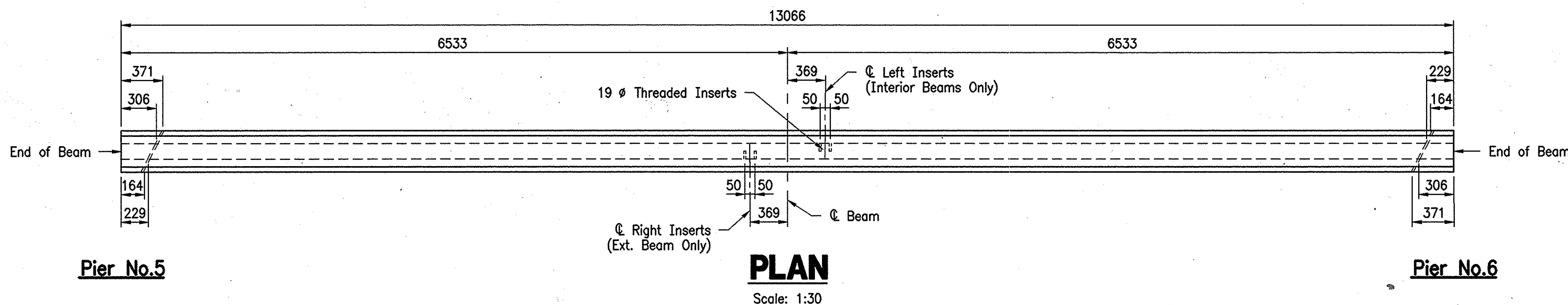
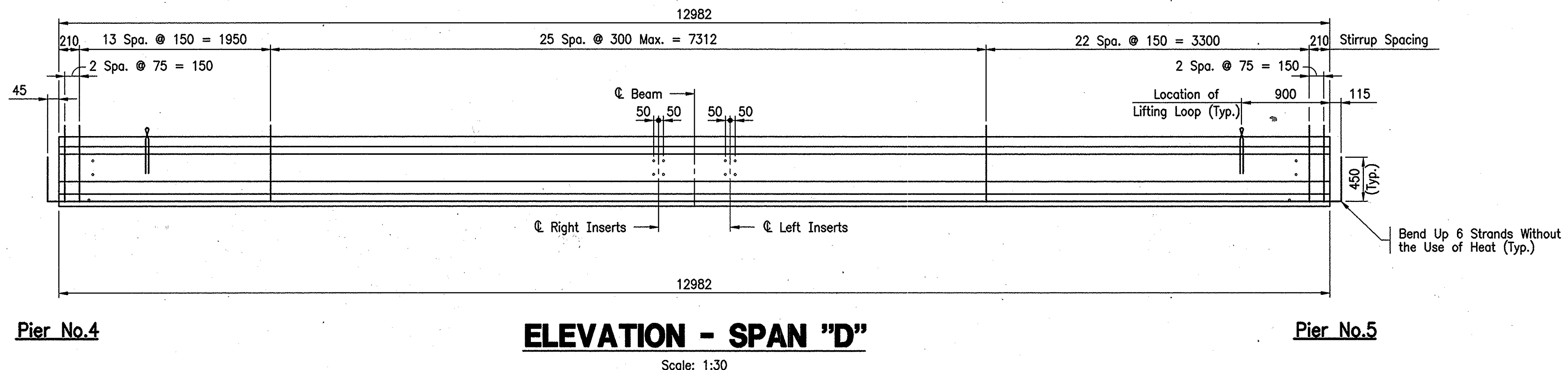
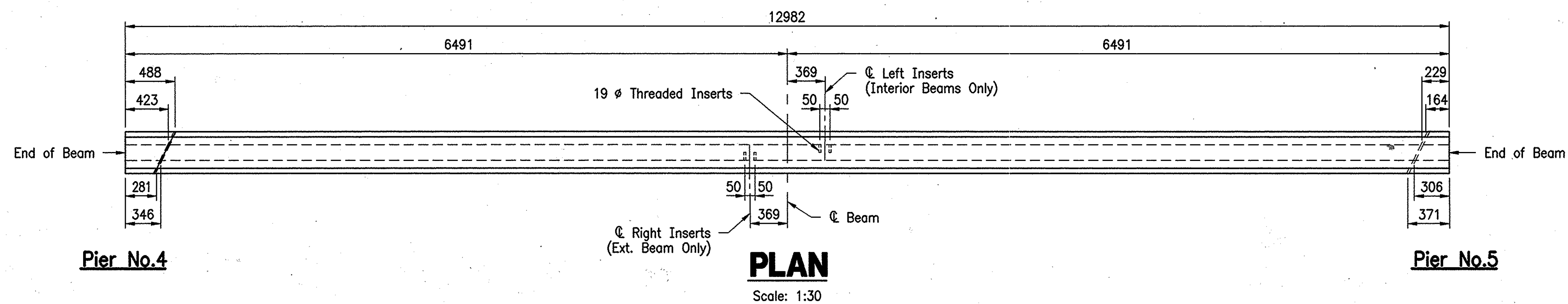
File: 9661BT7



RECOMMENDED FOR APPROVAL	<i>Wayne E. Sailer</i>	1/19/99
DESIGNED:	JAP	DRAWN:
CHECKED:	MJM	CHECKED:
		DATE
		MBW
		RMG

INDIANA DEPARTMENT OF TRANSPORTATION
BENT NO.7 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	43 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



GENERAL BEAM NOTES

Beams shall be cast a minimum of 15 days before deck is poured.
 Top of beams shall be scored transversely at about 75 mm centers with pointed tool (Max. depth of scoring 6 mm).
 The slab reinforcing at Piers 5 and 6 has been designed assuming the deck will be poured within a maximum of 75 days after the beams were cast. If the deck construction is not completed within this period, notify the design Engineer.
 See Bridge Standard 703-BRST-01 for Reinforcing Bar Notes.
 For Type 1 Bearing Pads, see Br. Std. 707-BEBP-01.
 Beams shall be supported at bearing points while stored and while transporting to job site.

DESIGN DATA

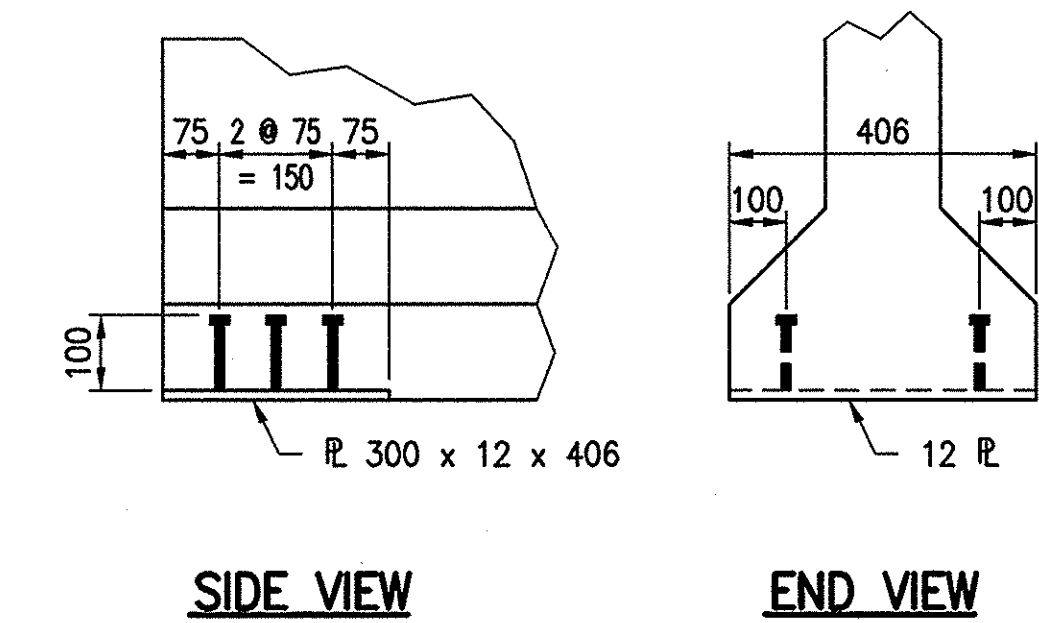
Initial Pull per Strand = 150.4 kN
 Concrete Strength $f'c$ = 34 MPa
 $f'c$ = 41 MPa
 Stirrup Steel f_y = 410 MPa
 Strands shall be 13 ϕ 7 Wire Special LoLax
 1862 MPa (As = 107.74 sq. mm / Strand) Strands

APPROXIMATE BEAM CAMBER

Span "D"
 Computed Beam Camber = 25.42 mm
 Dead Load Deflection = -11.45 mm
 Residual Camber = 13.97 mm

Span "E"
 Computed Beam Camber = 21.08 mm
 Dead Load Deflection = -12.07 mm
 Residual Camber = 9.01 mm

Span "F"
 Computed Beam Camber = 22.88 mm
 Dead Load Deflection = -11.25 mm
 Residual Camber = 11.64 mm

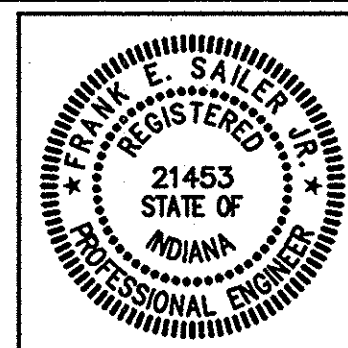


INSET PLATE (PIER NO. 4 END ONLY)

Scale: 1:10

NOTE:
 All Dimensions are in Millimeters Unless Noted.

File: 96611BM1

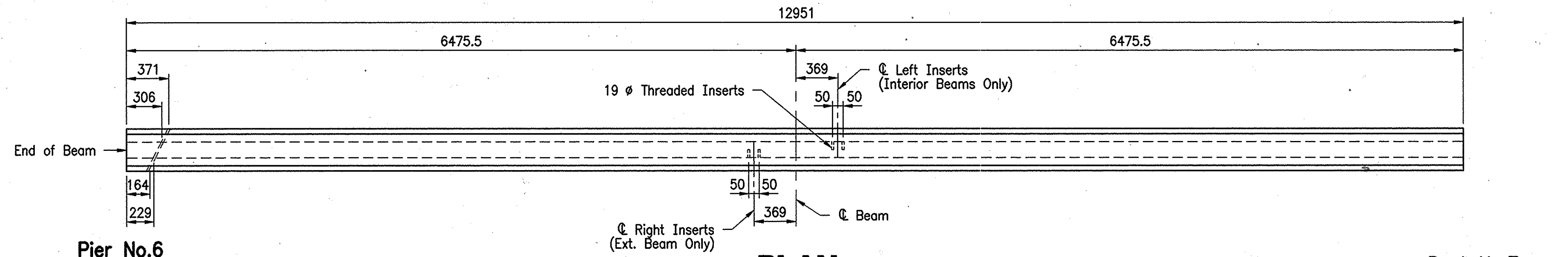


RECOMMENDED FOR APPROVAL	<i>E. Sailer Jr.</i>	1/19/99
DESIGNED:	JAP	DATE
CHECKED:	MJM	
DRAWN:	MBW	
CHECKED:	RMG	

INDIANA
 DEPARTMENT OF TRANSPORTATION

**BEAM
 DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	44 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

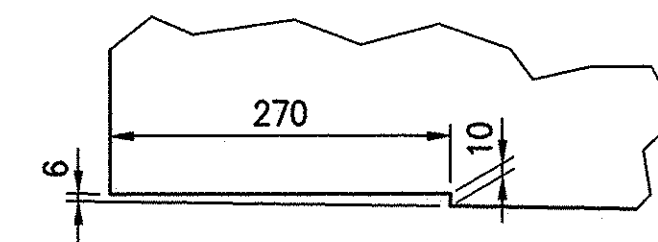


Pier No.6

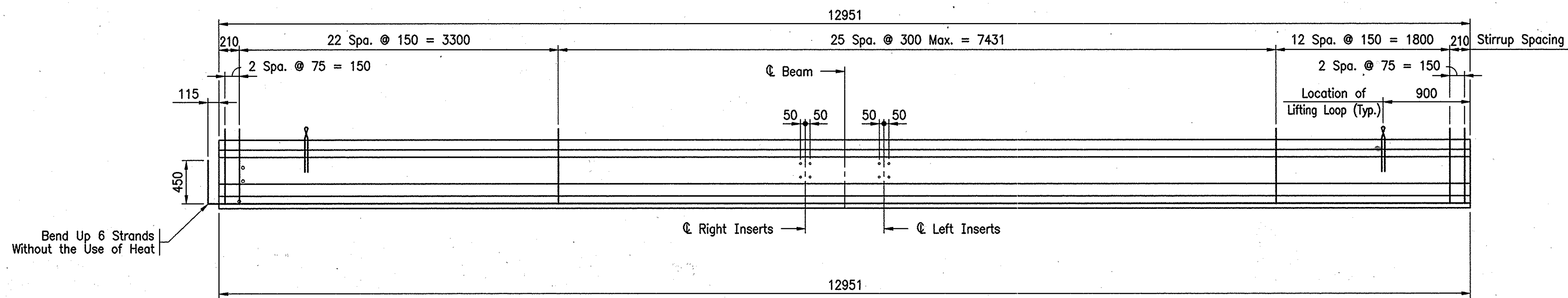
PLAN

Scale: 1:30

Bent No.7



BEAM NOTCH DETAIL
(ALL BEAMS ENDS EXCEPT @ PIER NO.4)
No Scale

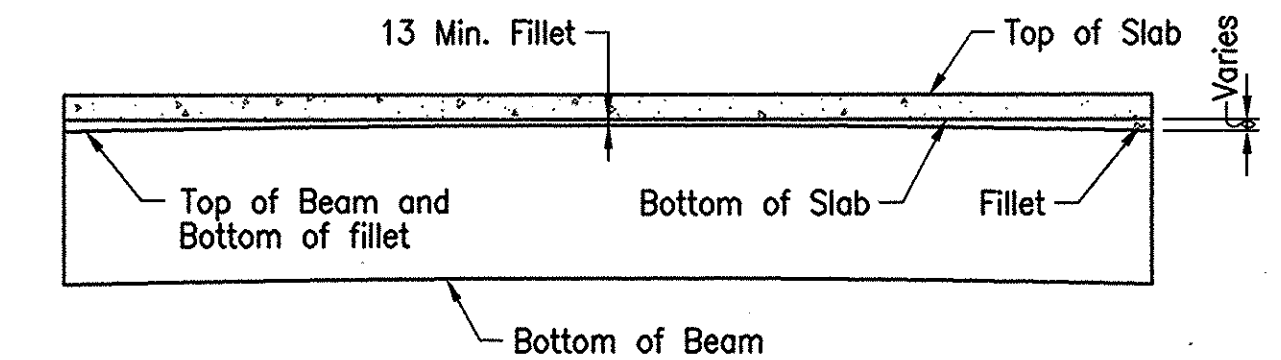


Pier No.6

ELEVATION - SPAN "F"

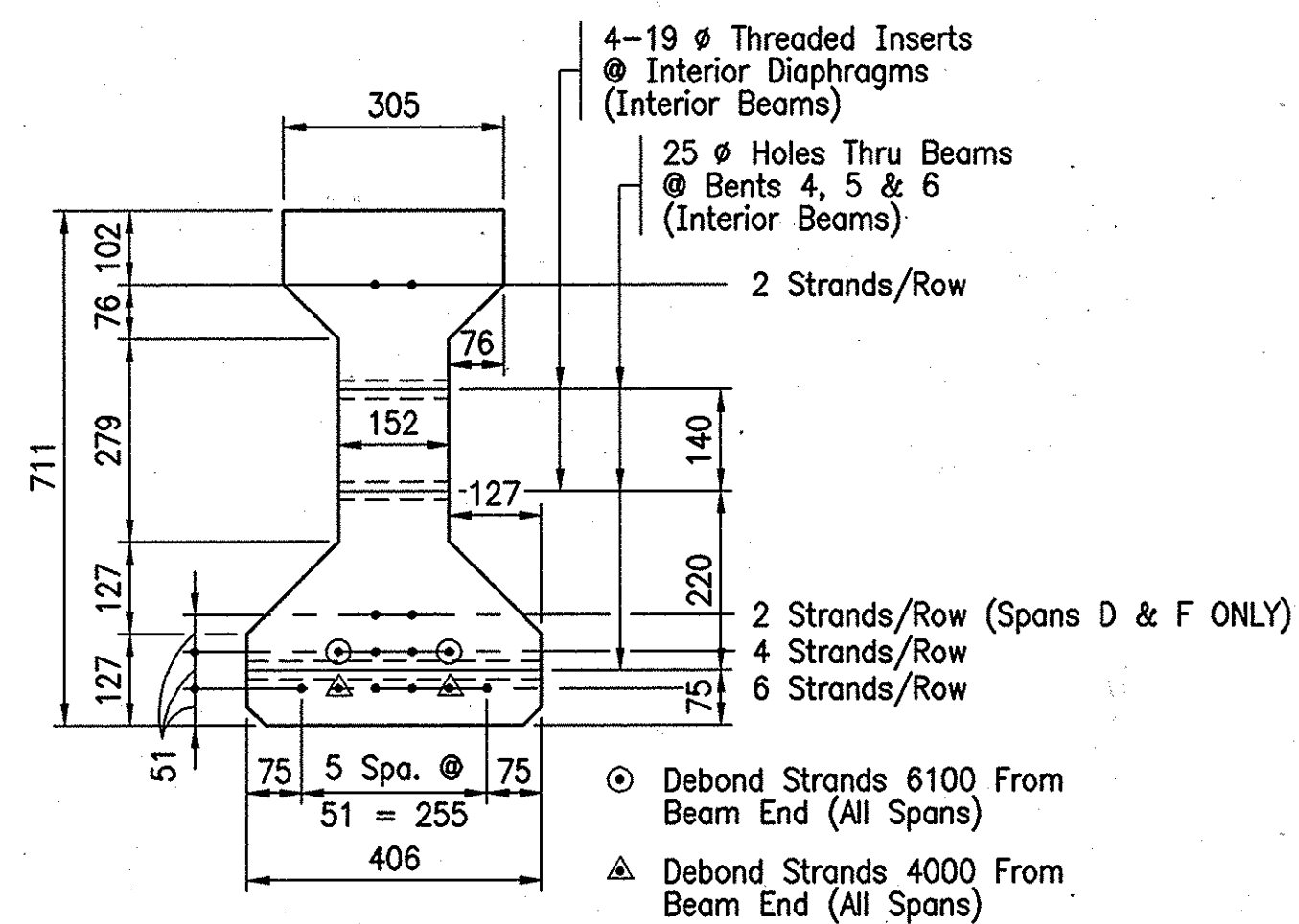
Scale: 1:30

Bent No.7



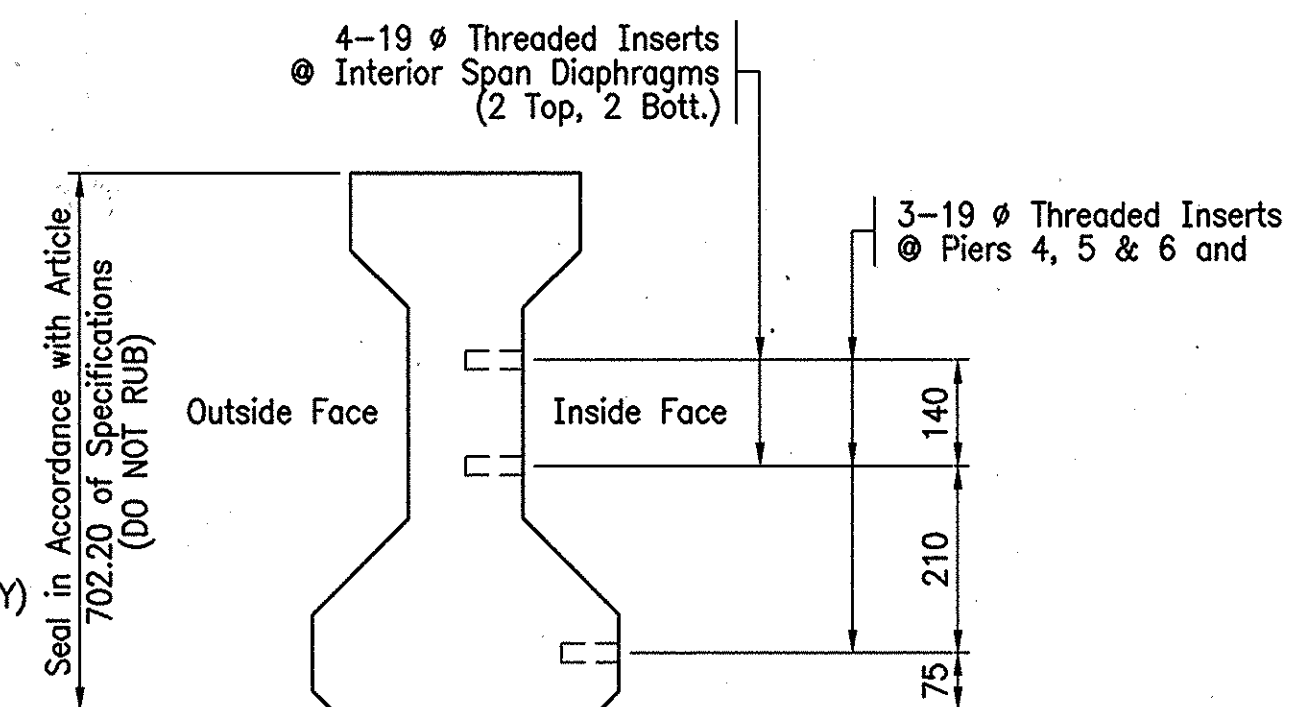
BEAM ELEVATION

Bridge seat elevations were calculated using residual beam camber (design camber and dead load deflection of slab) with the top of beam 13 mm below the bottom of slab elevation at the centerline of span.



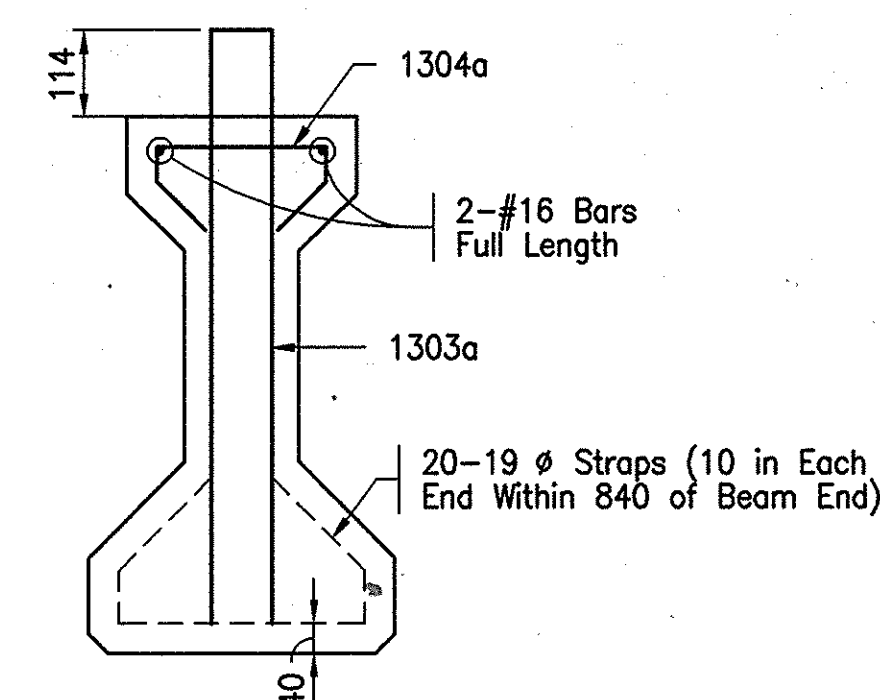
BEAM SECTION

Scale: 1:10



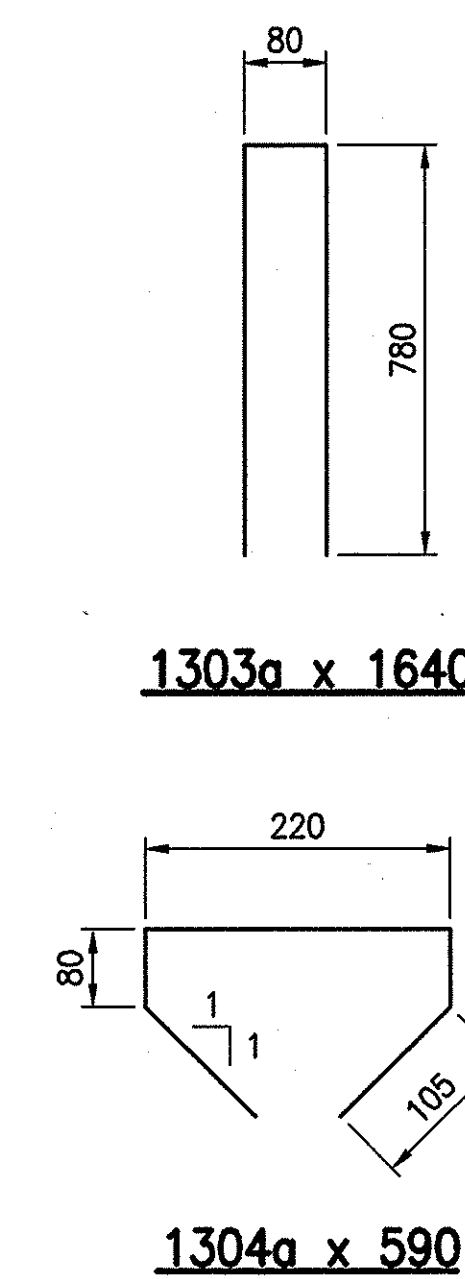
SECTION EXTERIOR BEAM

Scale: 1:10



STIRRUP DETAIL

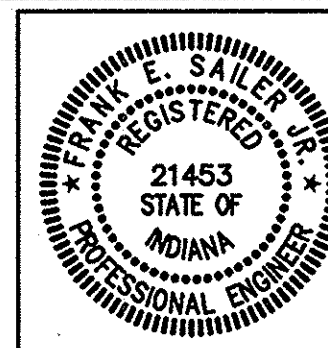
Scale: 1:10



NOTE:

All Dimensions are in Millimeters Unless Noted.

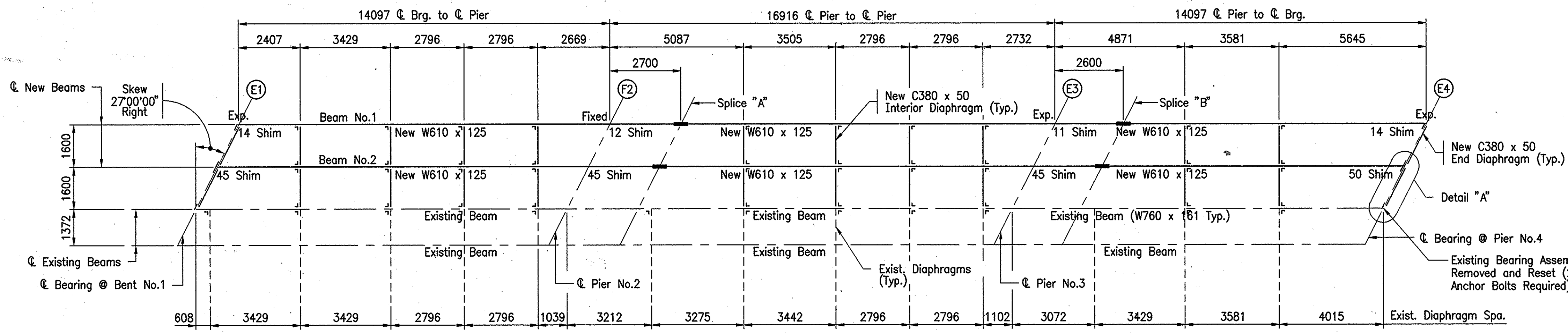
File: 96611BM2



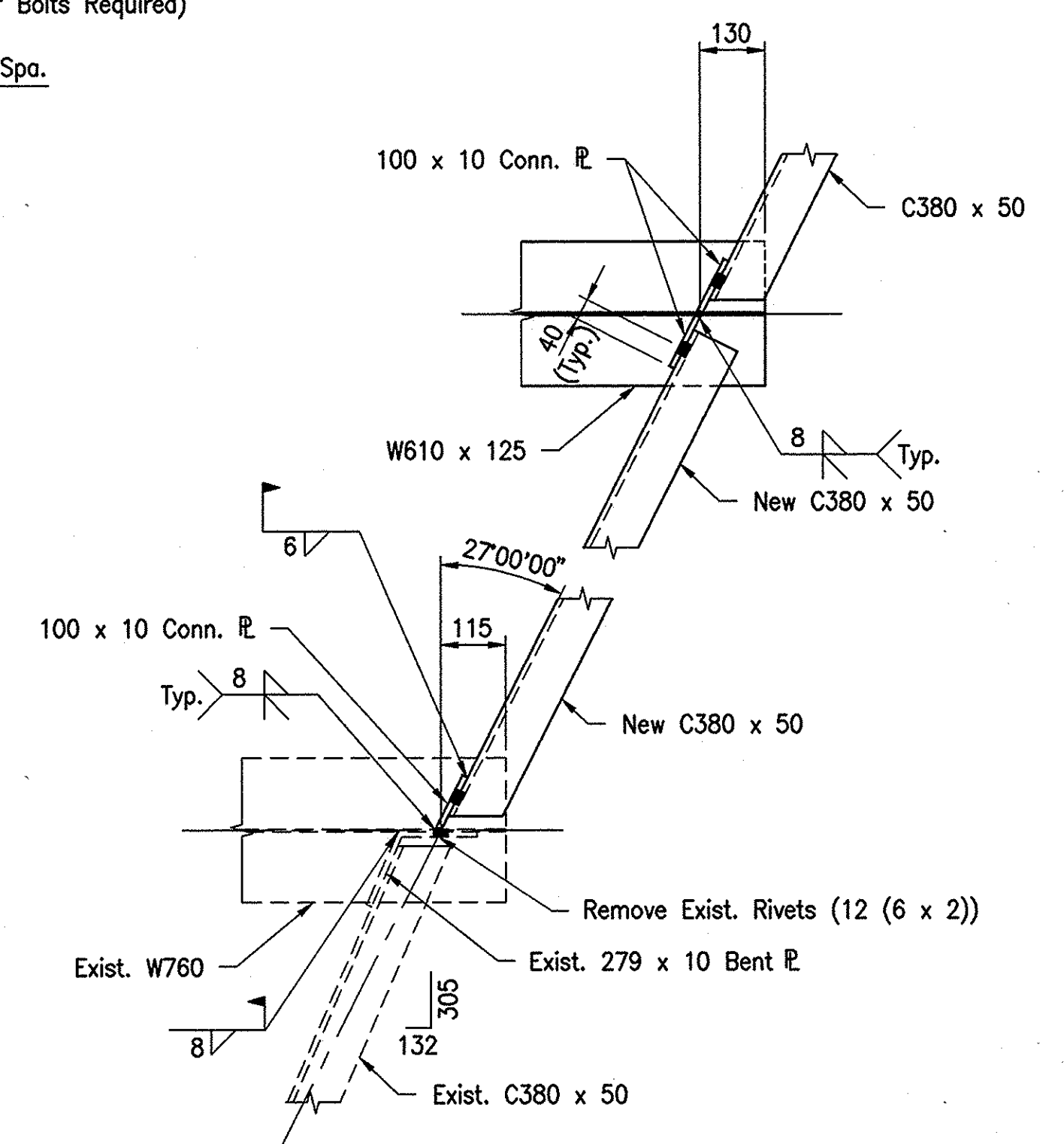
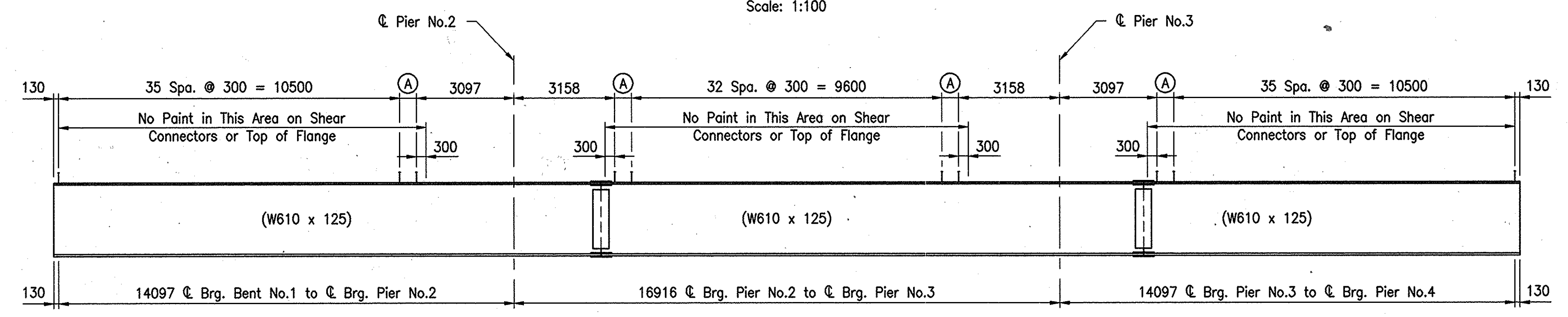
RECOMMENDED FOR APPROVAL	<i>Jack C. Sailer Jr.</i>	1/19/99
DESIGNED:	JAP	DATE
CHECKED:	MJM	
DRAWN:	MBW	
CHECKED:	RMG	

INDIANA DEPARTMENT OF TRANSPORTATION	
BEAM DETAILS	

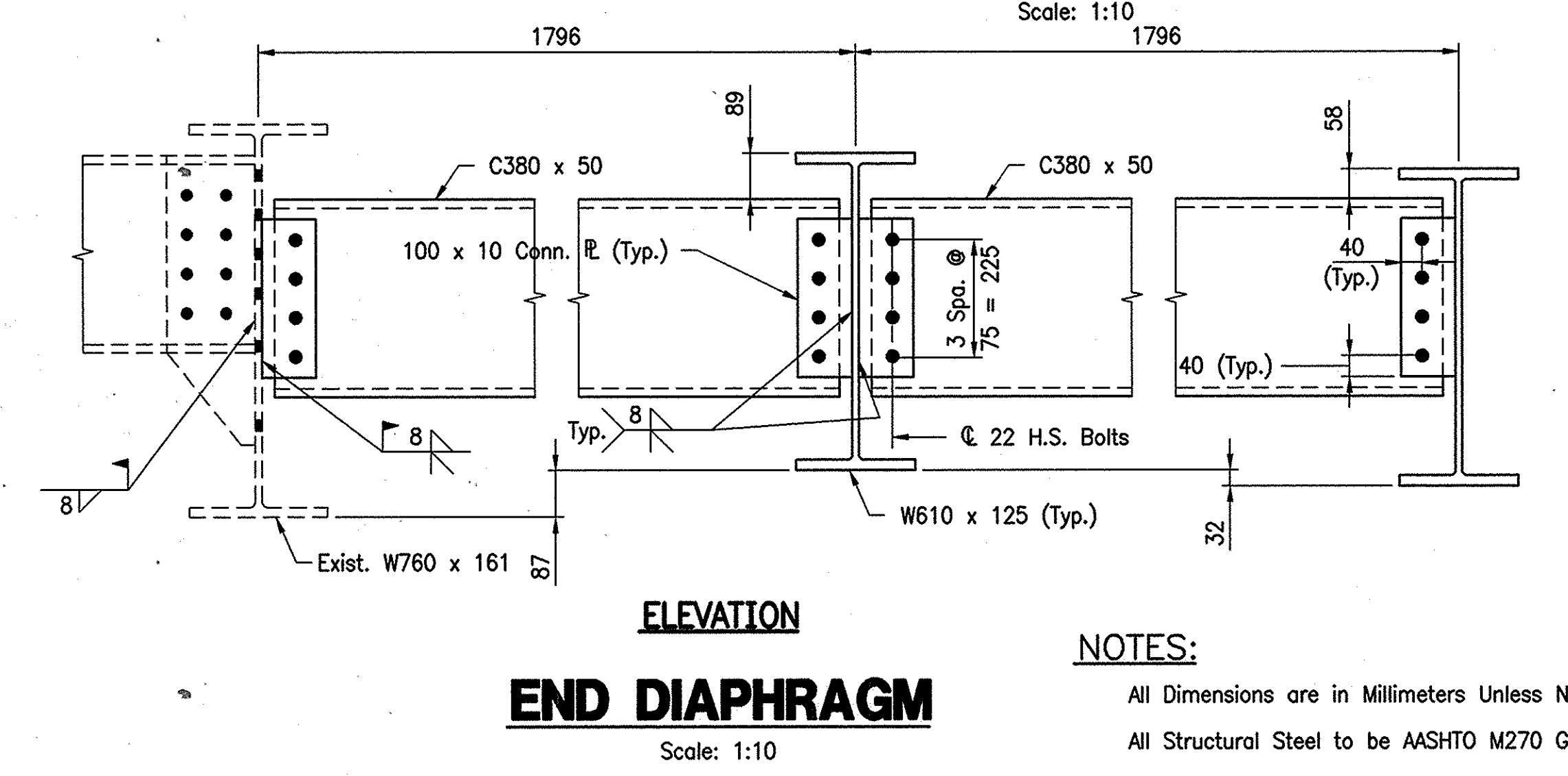
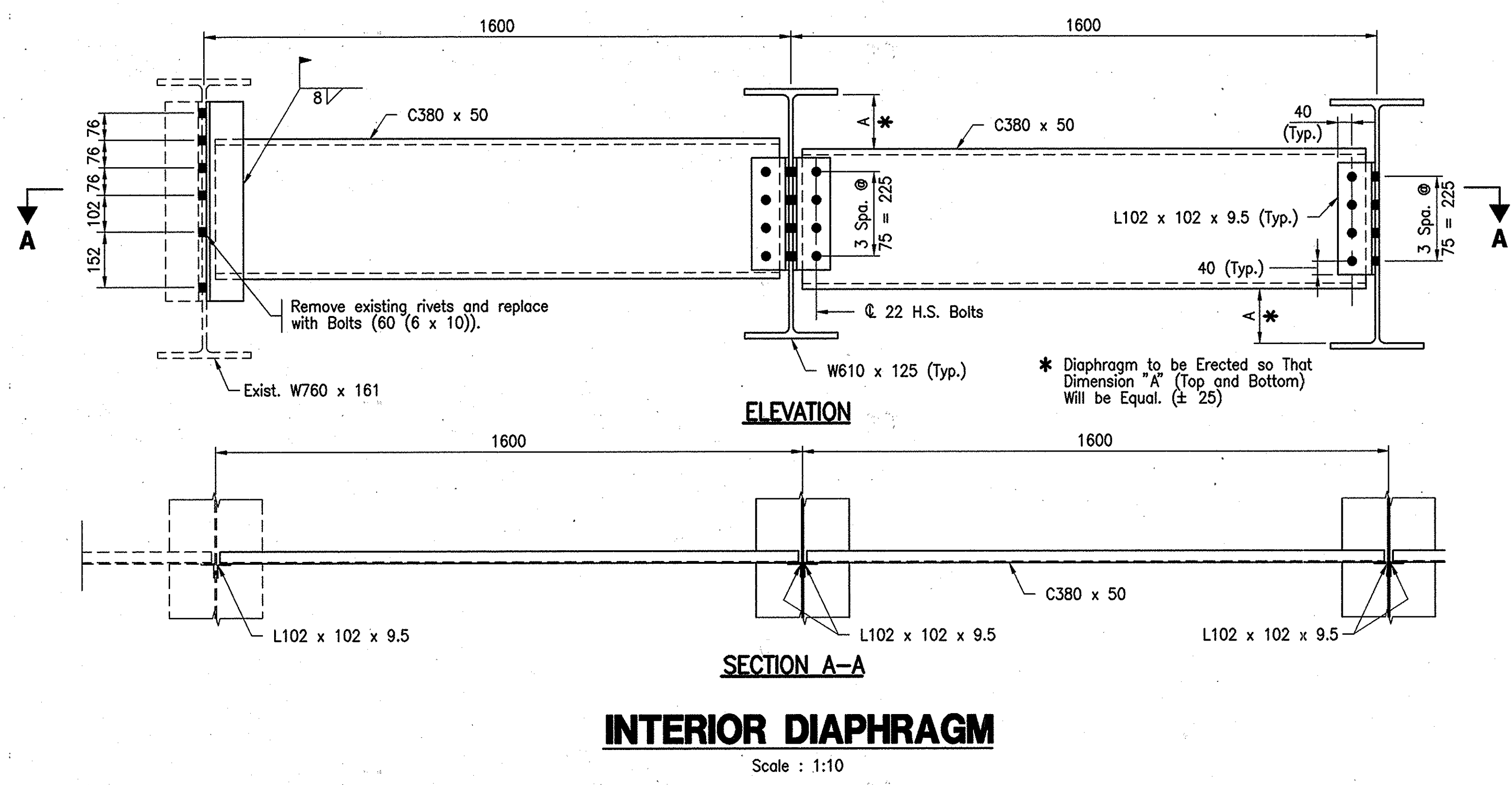
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	45 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



- LEGEND**
- (E1) 2 Bearing Assemblies "E1"
 - (F2) 2 Fixed Bearing Assemblies "F1"
 - (E3) 2 Bearing Assemblies "E1"
 - (E4) 2 Bearing Assemblies "E1"



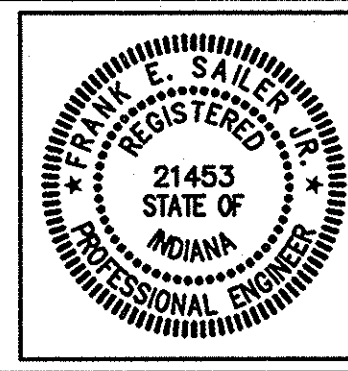
- LEGEND**
- (A) 4 Spa. @ 125 = 500



NOTES:

- All Dimensions are in Millimeters Unless Noted.
- All Structural Steel to be AASHTO M270 Grade 50.
- Total Estimated Weight of New Structural Steel is 14,600 kg. The Total Estimated Weight Includes Shear Connectors, But Does Not Include The Weight of Bolts, Anchor Bolts and Structural Steel for Bearing Assembly E1.
- All Bolts Shall be 22 ϕ ASTM A325M.

File: 9661FRAM

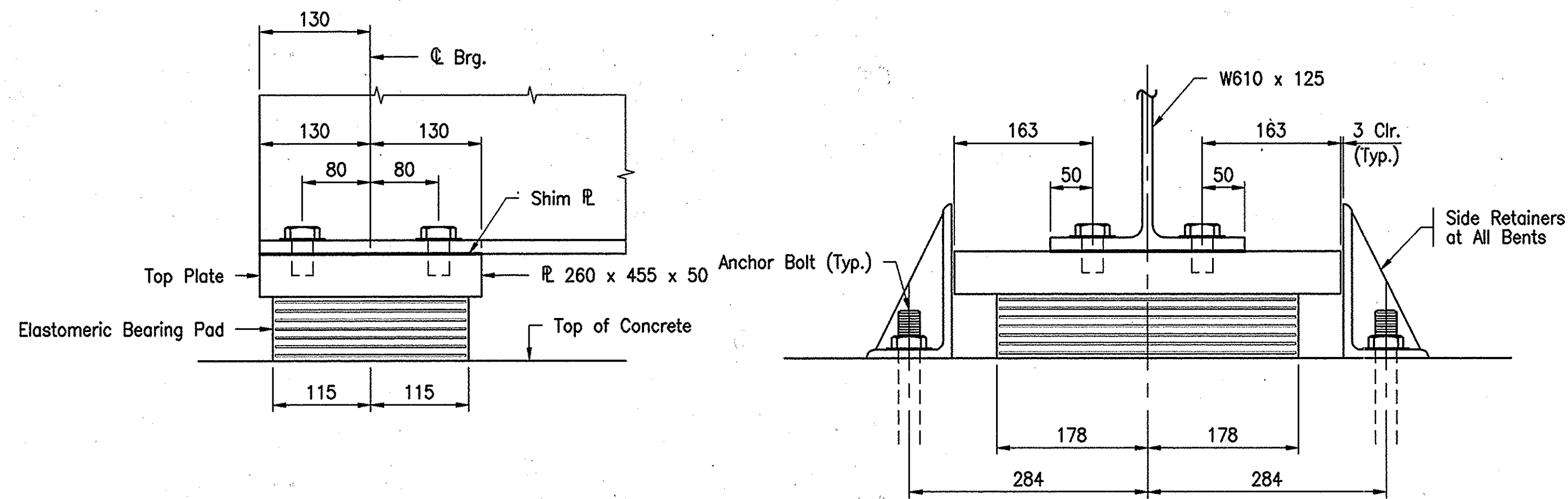


RECOMMENDED FOR APPROVAL	<i>John C. Baker</i>	1/19/99
DESIGNED:	JAP	DRAWN:
CHECKED:	MJM	CHECKED:
		DATE
		DESIGN ENGINEER
		DATE
		DATE

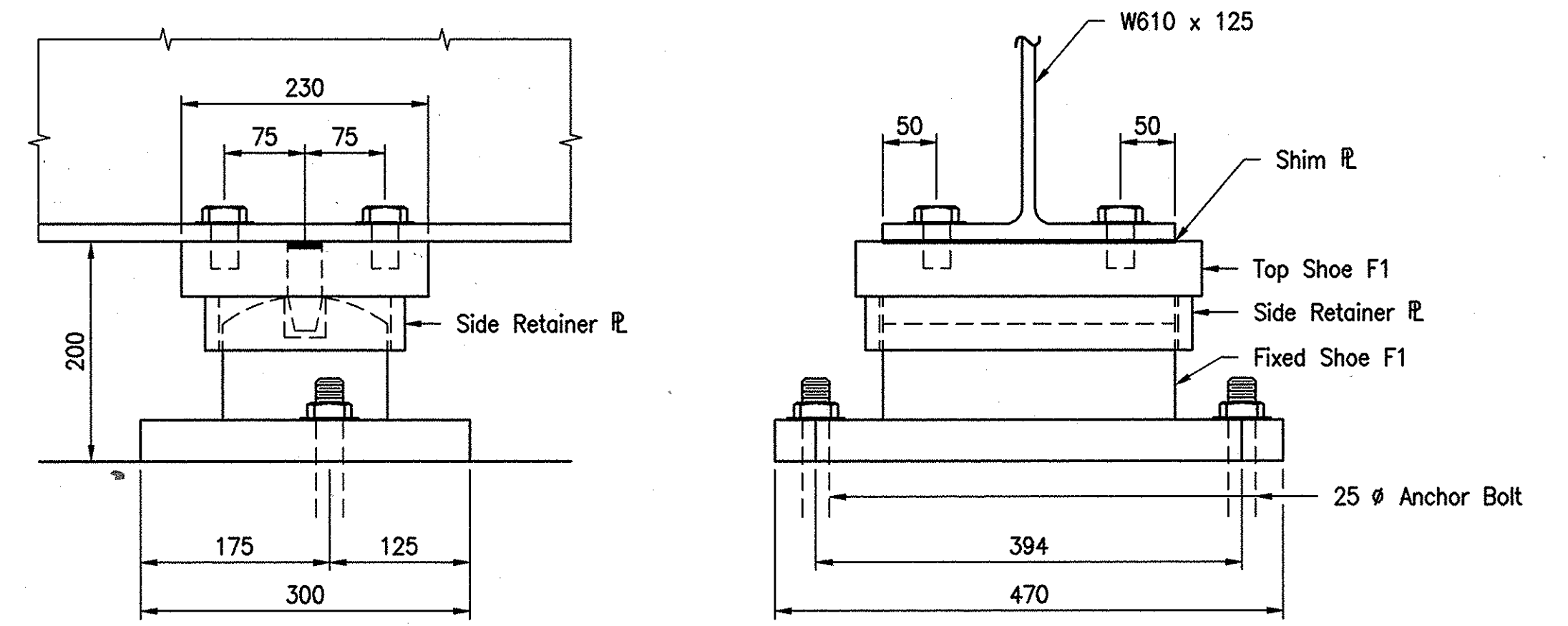
INDIANA
DEPARTMENT OF TRANSPORTATION

**STRUCTURAL STEEL
DETAILS**

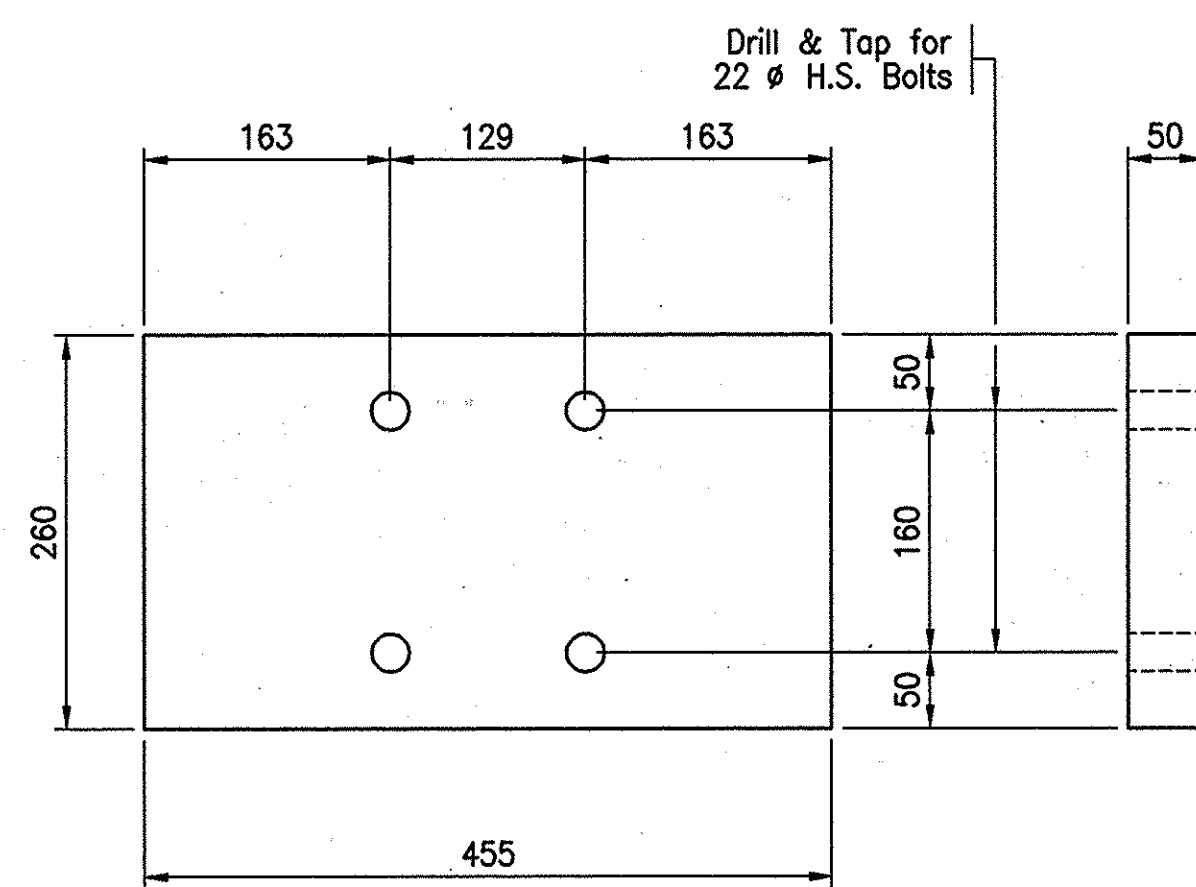
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	46 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



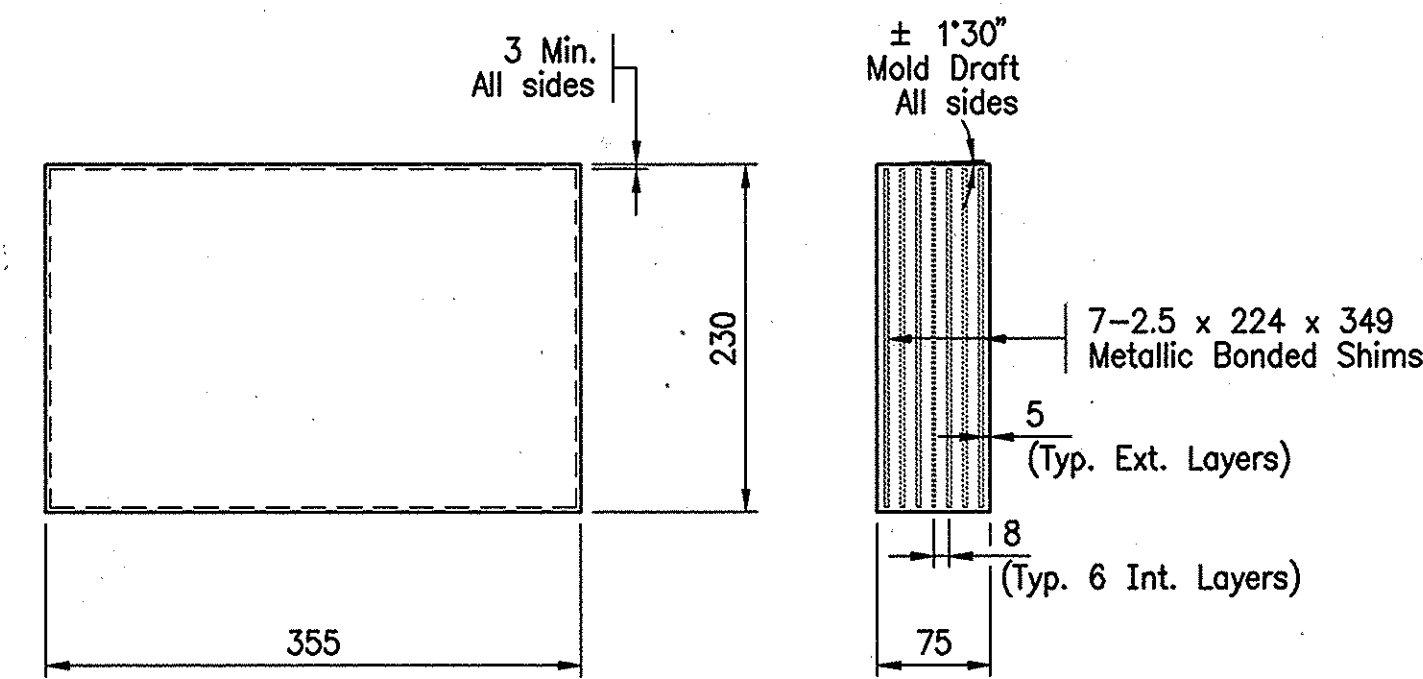
BEARING ASSEMBLY "E1"
(Bent No.1, Piers No.3, & 4 ONLY)
Scale: 1:5



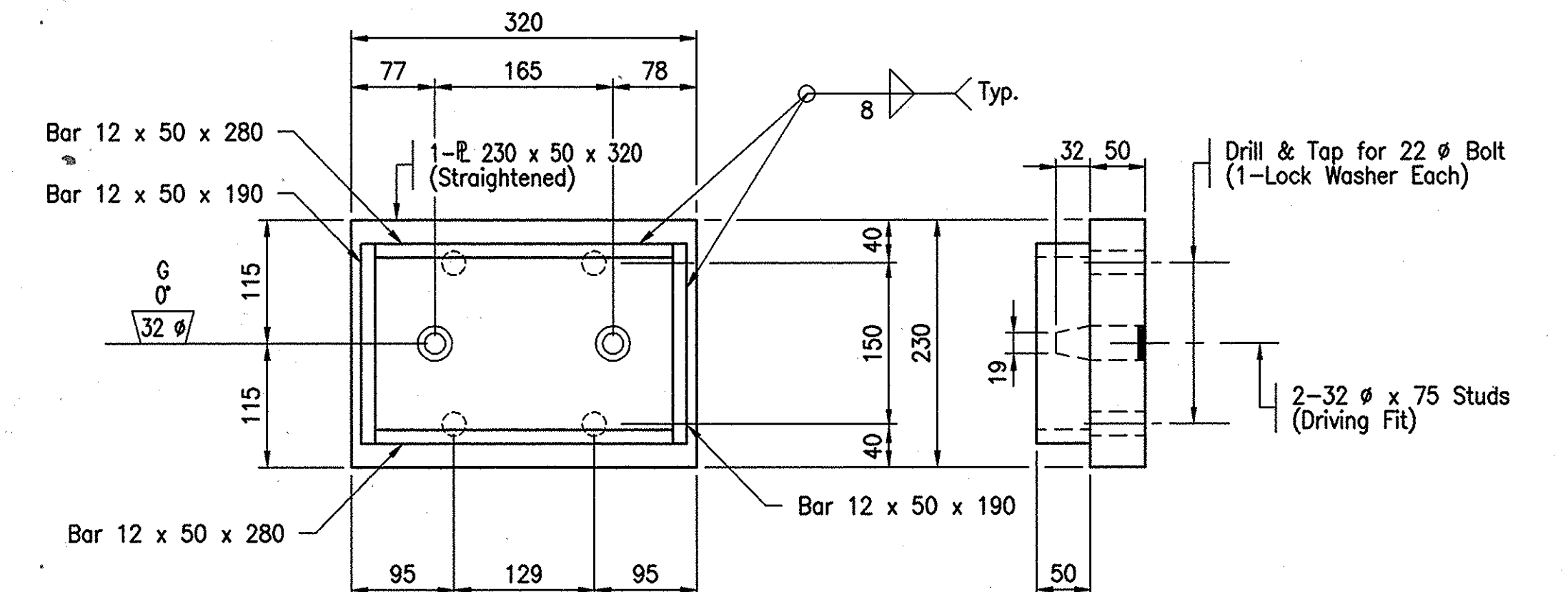
FIXED BEARING ASSEMBLY "F1"
(Pier No. 2 ONLY)
Scale: 1:5



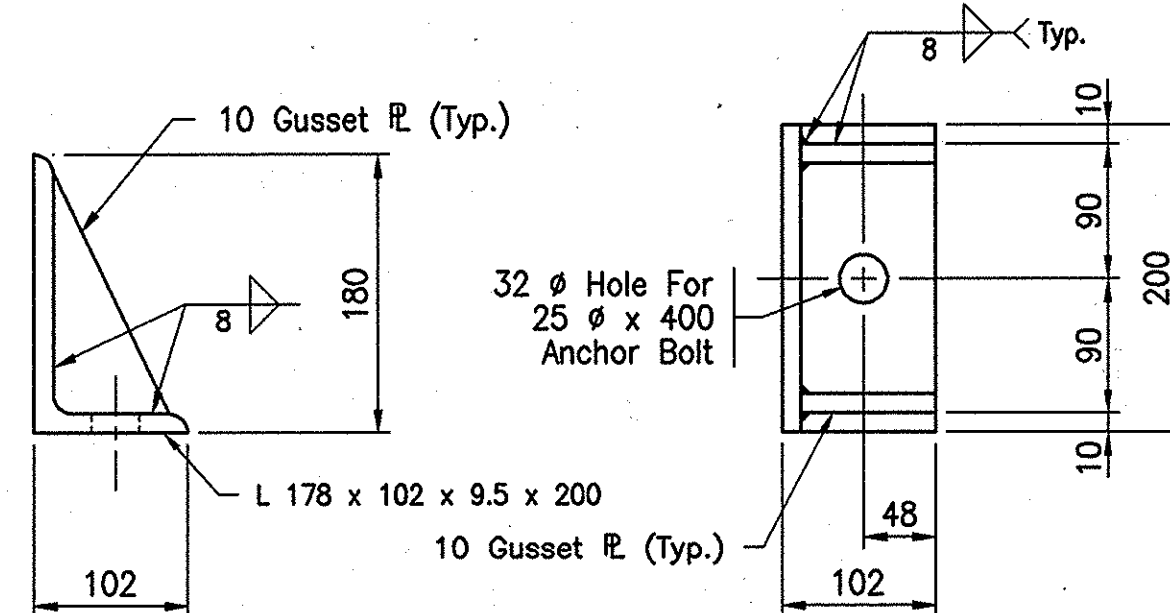
TOP PLATE
Scale: 1:5



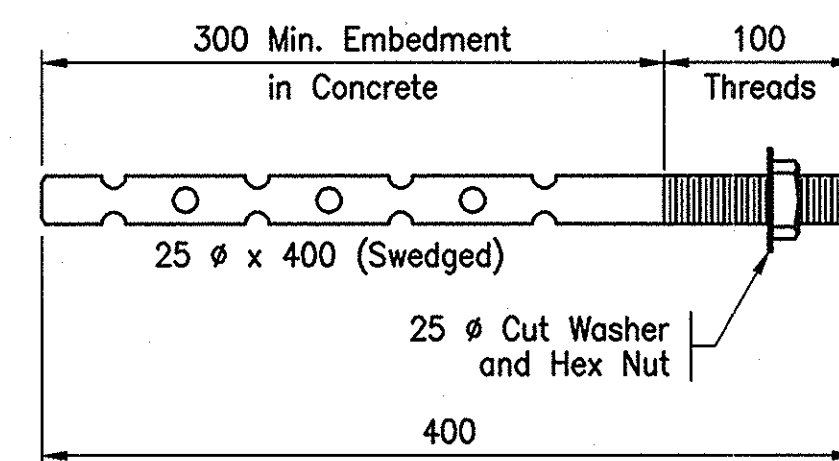
ELASTOMERIC BEARING PAD
Scale: 1:5



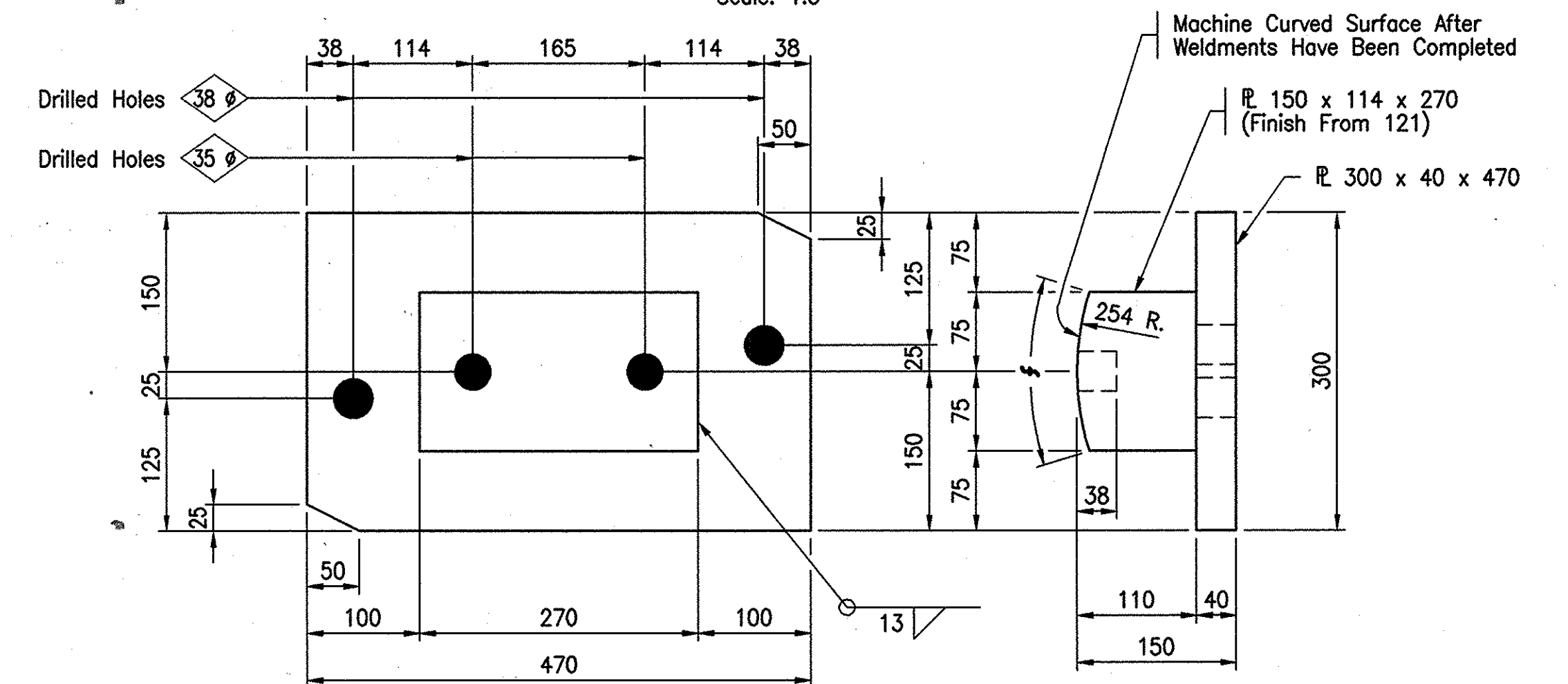
TOP SHOE F1
Scale: 1:5



TYPICAL SIDE RETAINER
Scale: 1:5



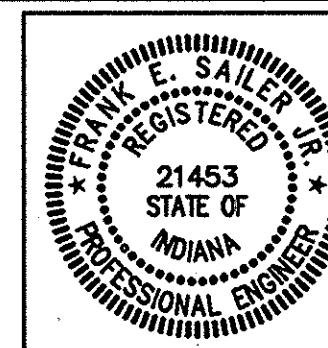
ANCHOR BOLT
N Scale



FIXED SHOE F1
Scale: 1:5

NOTE:
All Dimensions Are In Millimeter Unless Noted.

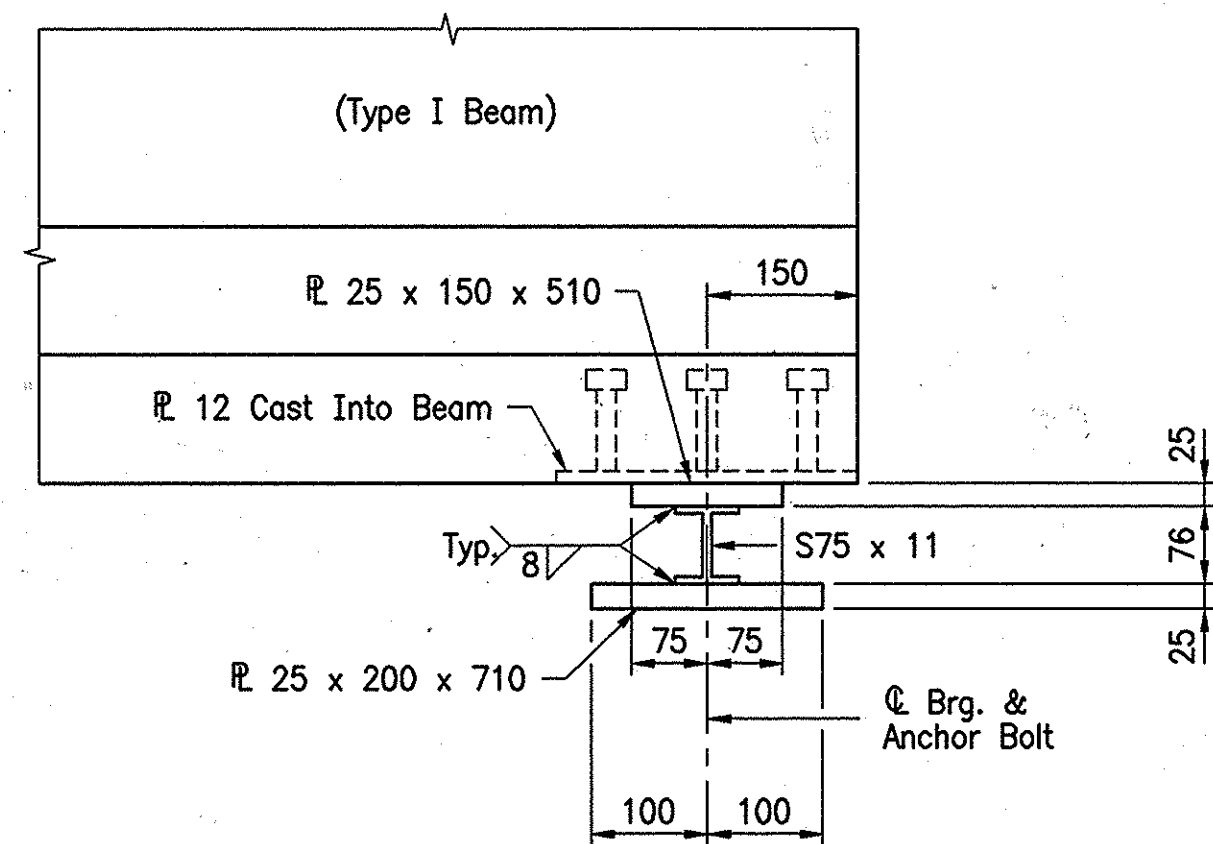
File: 9661SSD1



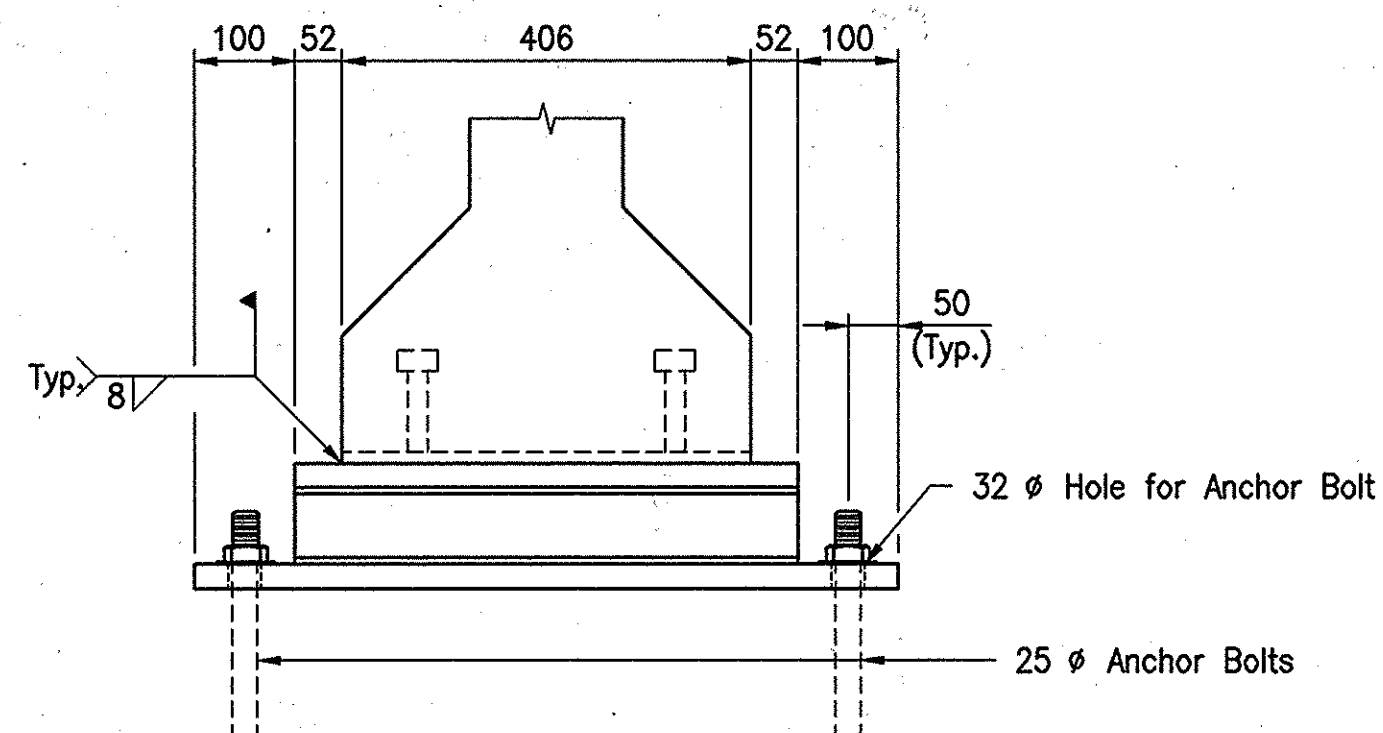
RECOMMENDED FOR APPROVAL	<i>John E. Sailer, Jr.</i>	1/19/99
DESIGNED:	JAP	DRAWN:
CHECKED:	MJM	CHECKED:
		DATE
		DESIGN ENGINEER
		DATE

INDIANA
DEPARTMENT OF TRANSPORTATION
**STRUCTURAL STEEL
DETAILS**

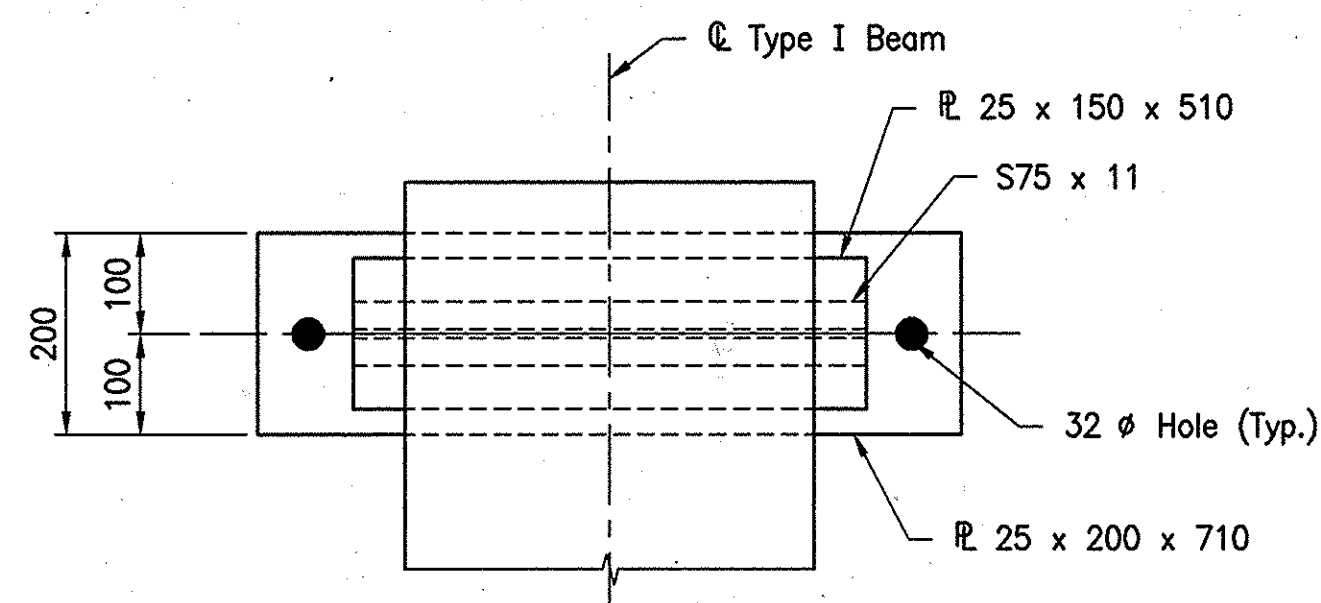
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	47 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



SIDE VIEW



END VIEW



PLAN VIEW

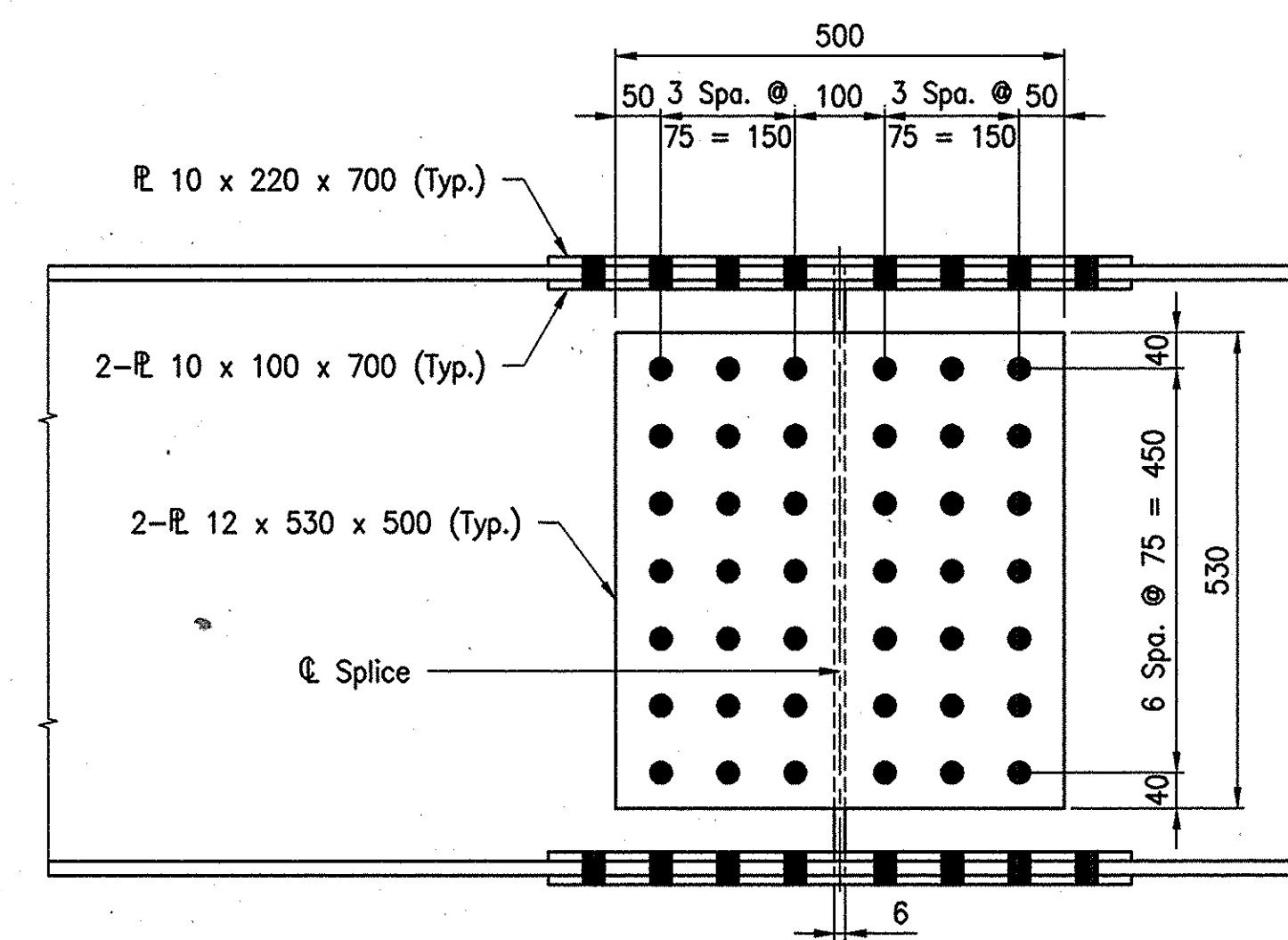
TYPE F-7 BEARING DETAILS

No Scale

TABLE OF ELEVATIONS FOR TOP OF BEAM SPLICE

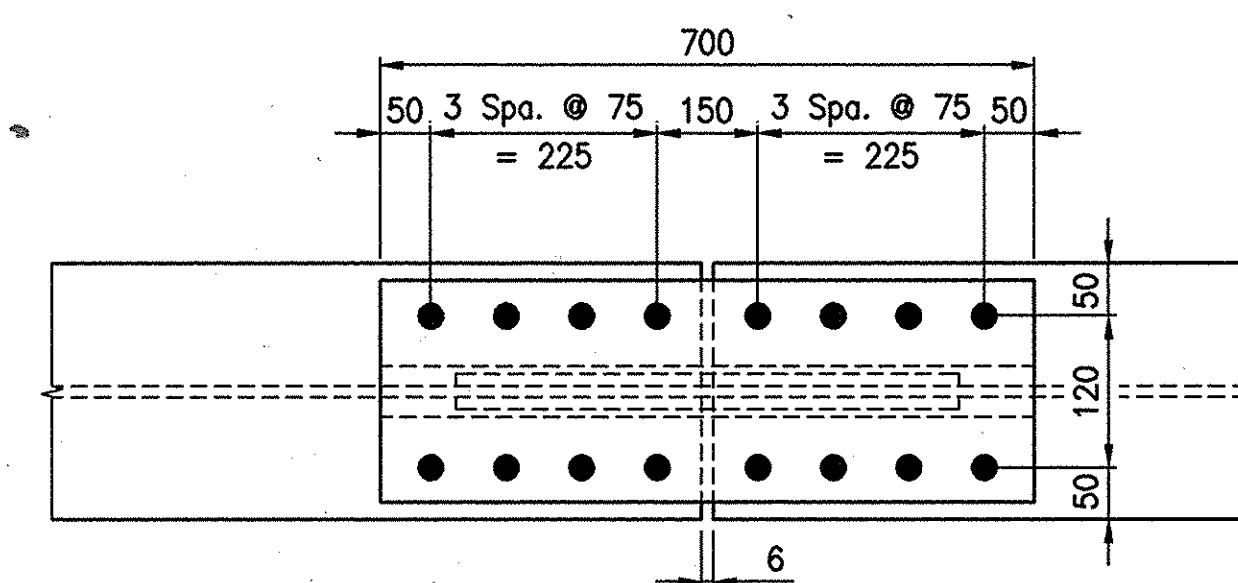
BEAM	C. Splice	
	"A"	"B"
Beam No.1	233.895	233.869
Beam No.2	233.928	233.903

Splice elevations are with falsework removed and carrying steel dead load ONLY. Top of the splice plates shall be adjusted to the above elevations before bolting the field splices.



WEB SPLICE ELEVATION

No Scale



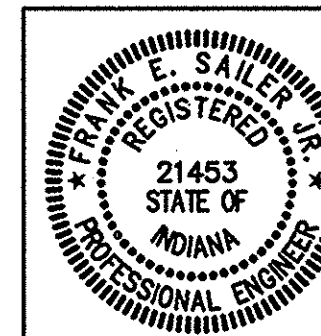
FLANGE SPLICE

No Scale

NOTE:

All Dimensions are in Millimeters Unless Noted.
 All Structural Steel to be AASHTO M270 Grade 50, &
 All High Strength Bolts Shall be 22 φ ASTM A325M.

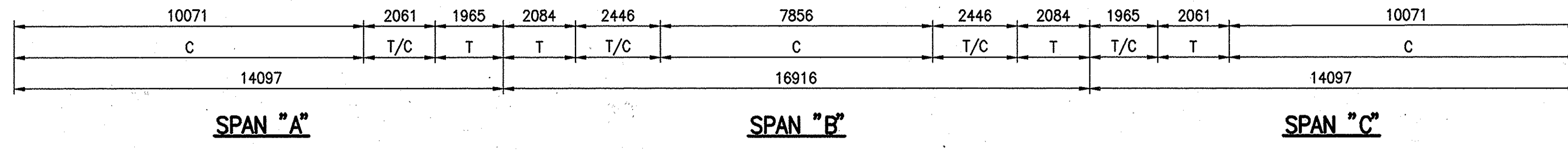
File: 9661SSD2



RECOMMENDED FOR APPROVAL	<i>Frank E. Sailer</i>	1/19/99
DESIGNED:	JAP	DRAWN: MBW
CHECKED:	MJM	CHECKED: RMG

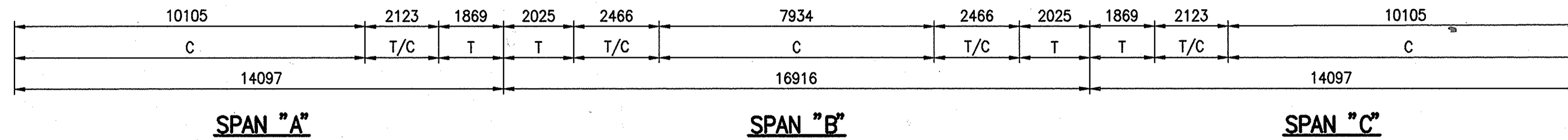
INDIANA
 DEPARTMENT OF TRANSPORTATION
**STRUCTURAL STEEL
 DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	48 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



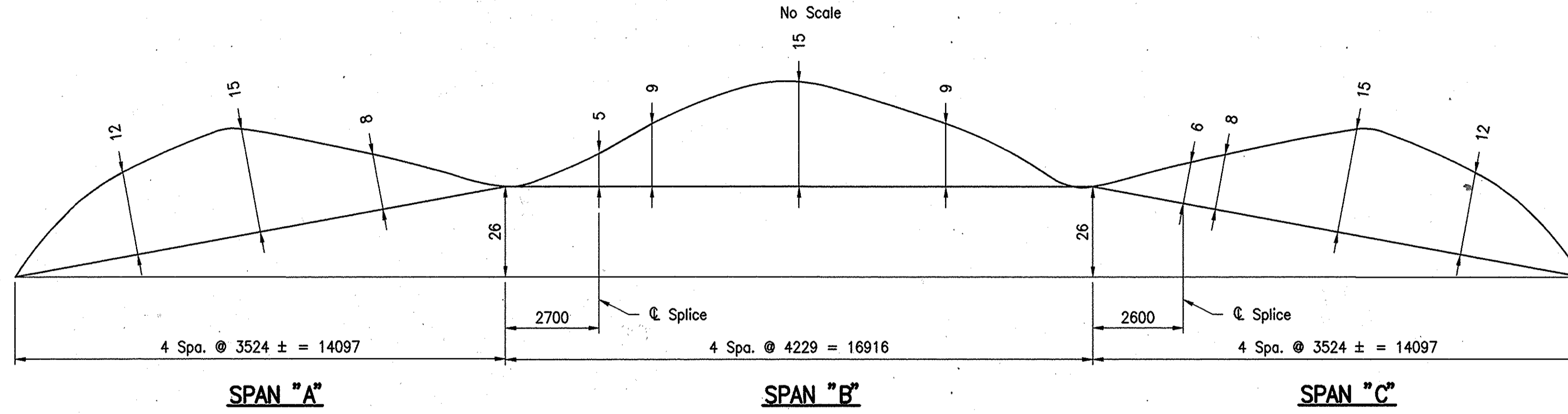
TENSION / COMPRESSION DIAGRAM - EXISTING BEAM

No Scale



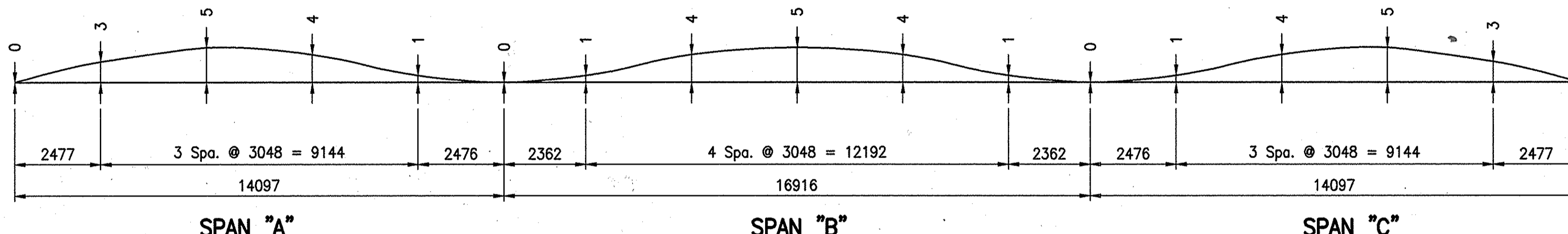
TENSION / COMPRESSION DIAGRAM - NEW BEAM

No Scale



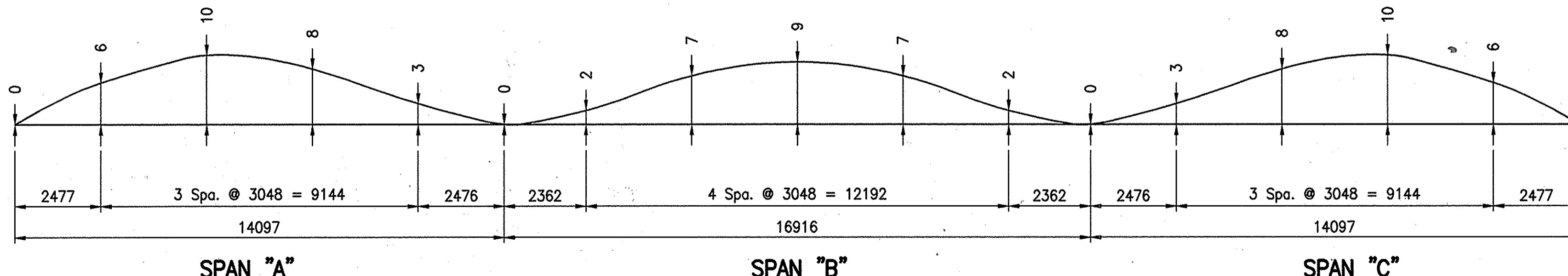
NO LOAD CAMBER DIAGRAM - NEW BEAM

No Scale



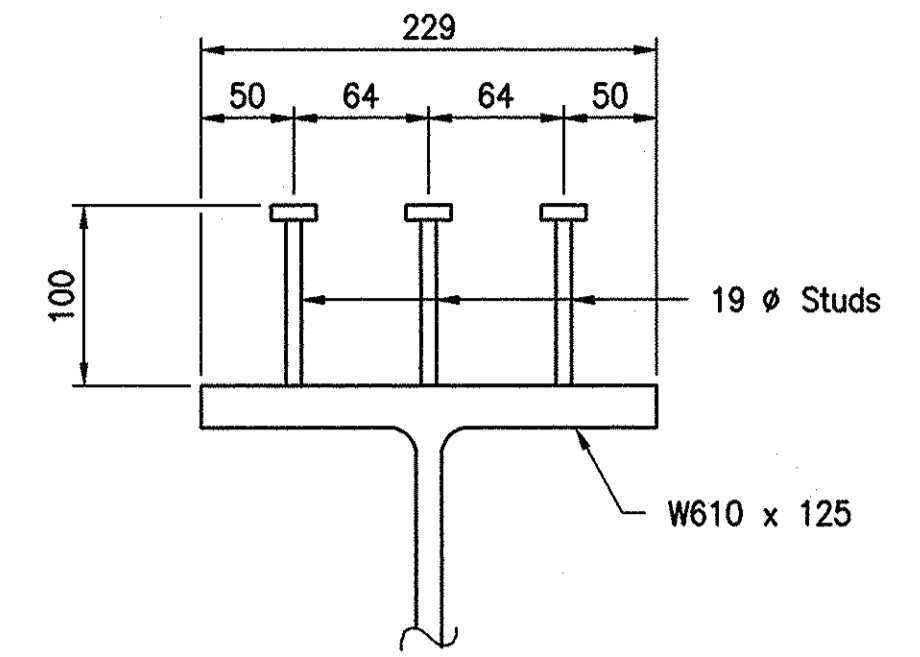
CONCRETE DEAD LOAD DEFLECTIONS - EXISTING BEAM

No Scale



CONCRETE DEAD LOAD DEFLECTIONS - NEW BEAM

No Scale

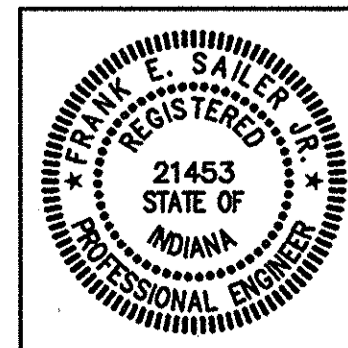


TYPICAL SHEAR CONNECTOR DETAIL - NEW

No Scale

NOTE:
All Dimensions are in Millimeters Unless Noted.
All Structural Steel to AASHTO M270 Grade 50.

File: 9661SSD3

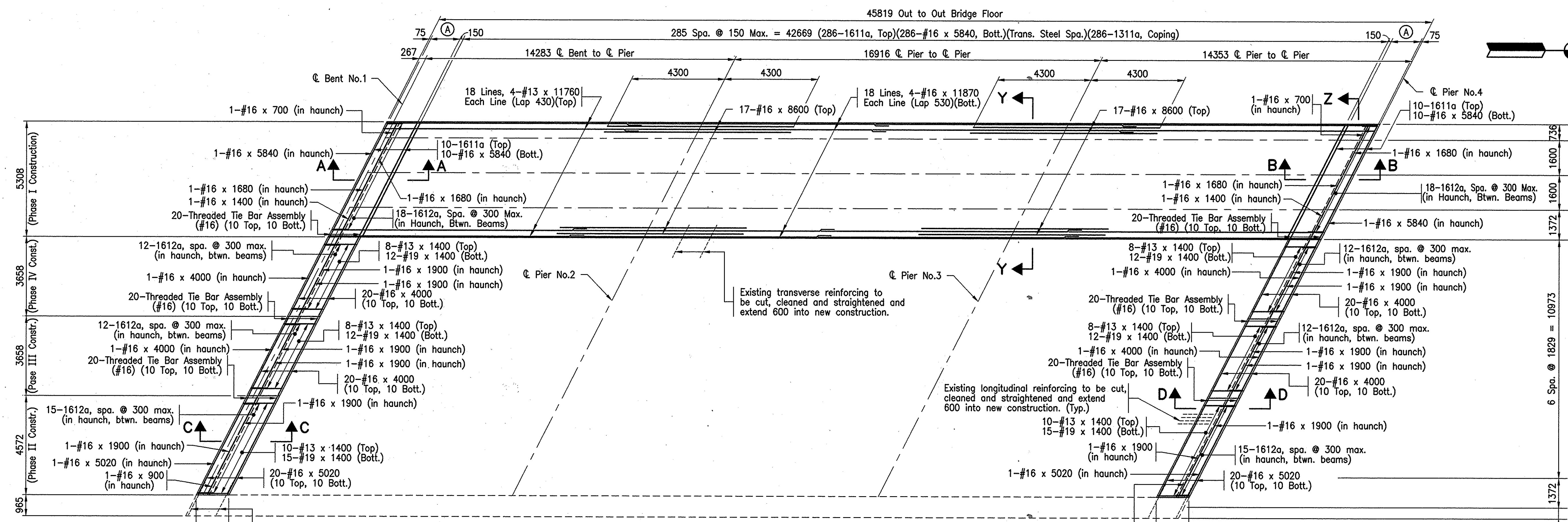


RECOMMENDED FOR APPROVAL	<i>E. Sailer</i>	1/19/99
DESIGN ENGINEER		DATE
DESIGNED:	JAP	DRAWN: MBW
CHECKED:	MJM	CHECKED: RMG

INDIANA
DEPARTMENT OF TRANSPORTATION

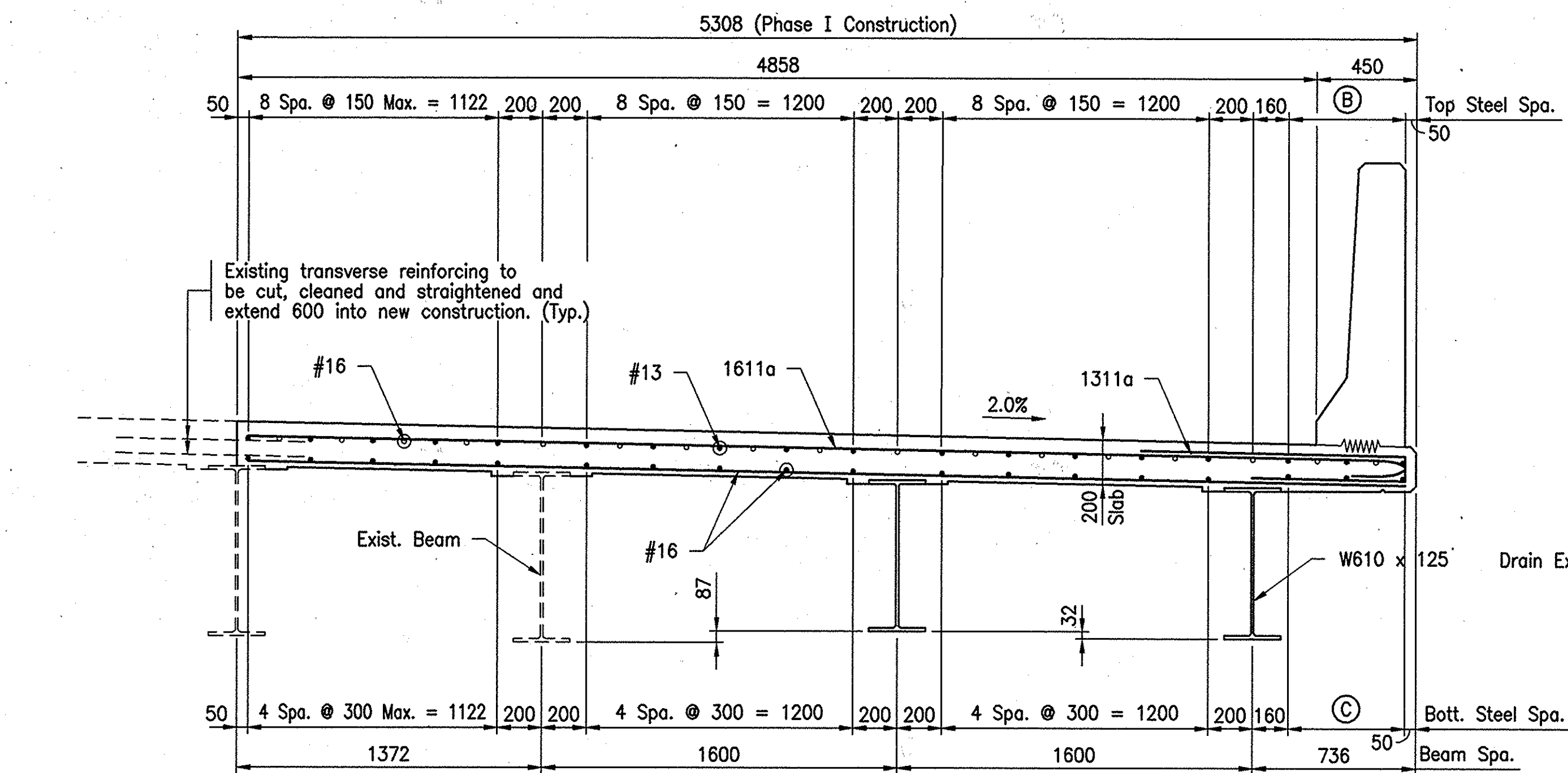
**STRUCTURAL STEEL
DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	49 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



PLAN - SPANS "A", "B", & "C"

Scale: 1:100

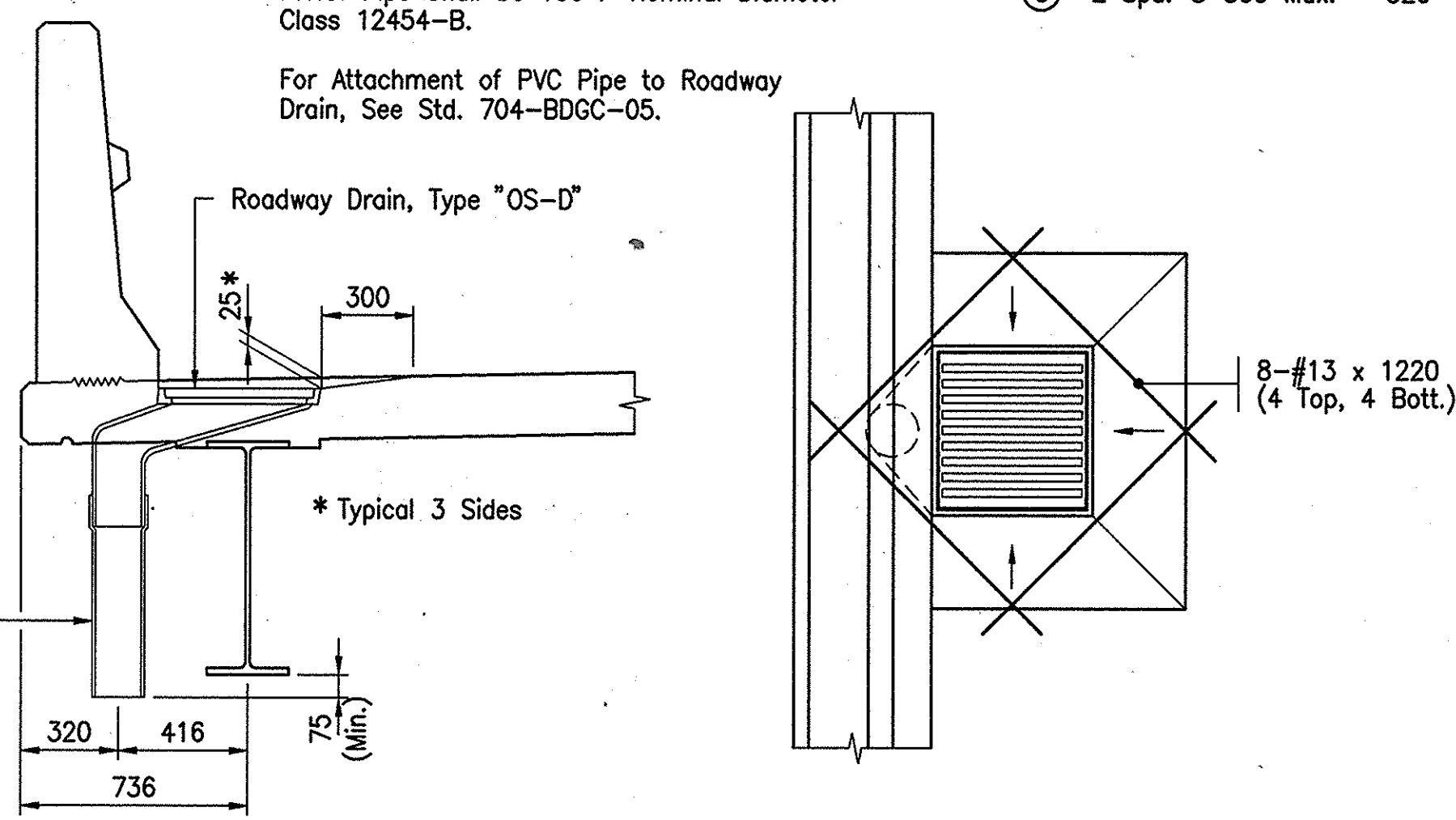


SECTION Y-Y

Scale: 1:20

NOTES:

At Roadway Drain Locations Bend Bottom Reinforcing to Miss Drain and Cut Top Reinforcing in Field to Fit.
 P.V.C. Pipe Shall be 150 ϕ Nominal Diameter Class 12454-B.
 For Attachment of PVC Pipe to Roadway Drain, See Std. 704-BDCG-05.



DRAIN DETAILS

(6 Required)

Scale: 1:20

LEGEND

- (A) 9 Spa. @ 150 = 1350 (10-1311a, Coping)
- (B) 4 Spa. @ 150 Max. = 526
- (C) 2 Spa. @ 300 Max. = 526

DESIGN DATA

ALLOWABLE STRESSES

Class C Concrete	$f'_c =$ 27 MPa (4,000 psi)
Class A Concrete	$f'_c =$ 24 MPa (3,500 psi)
Class B Concrete	$f'_c =$ 21 MPa (3,000 psi)
Reinforcing Steel (Grade 60)	$f_y =$ 410 MPa (60,000 psi)

LIVE LOAD

Designed for HS20-44 loading in accordance with 1992 AASHTO Specifications and subsequent Interim Specifications.

DEAD LOAD

Designed for actual loads plus 1.7 kN/m² for future wearing surface and plus 0.7 kN/m² for permanent metal stay-in-place deck forms.
 Slab designed with a structural depth of 165.

NOTES:

- For Reinforcing Bar Notes, see Br. Std. 70-BRST-01.
- For Sections, See Sht. 51.
- For Concrete Barrier Rail Details, See Sht. 56.
- For Additional Details and Bill of Materials, See Sht. 51.
- For Roadway Drain Details, See Br. Stds. 704-BDCG-02 and 704-BDCG-03.
- Either Permanent Metal Deck Forms or Precast Concrete Deck Panels May be Substituted for Removable Forms at This Structure. See Br. Stds. 707-BPDP-01 Thru 05 for Deck Panel Details.
- Screed Data Will be Furnished Upon Request.
- All Dimensions Shown are in Millimeters and All Elevations and Stations are in Meters Unless Noted.
- For Drain Locations, See General Plan.

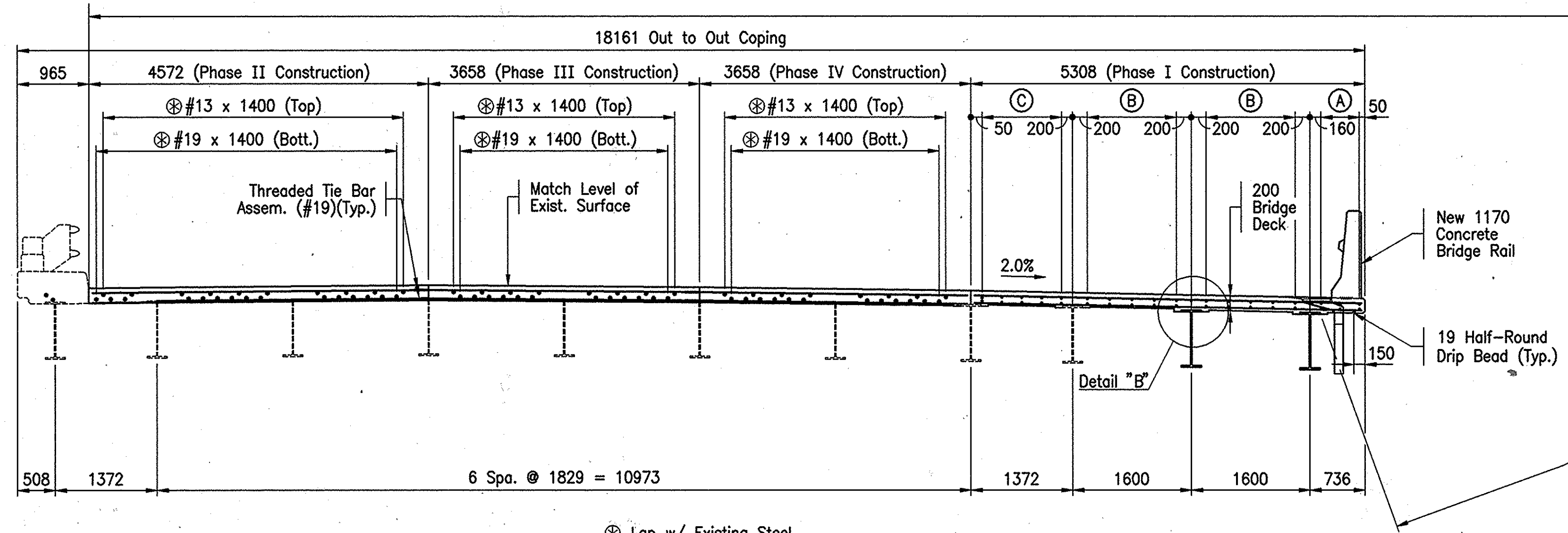
File: 9661FLR1



RECOMMENDED FOR APPROVAL	<i>J.P. Sailer</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	JAP	DRAWN: MBW
CHECKED:	MJM	CHECKED: RMG

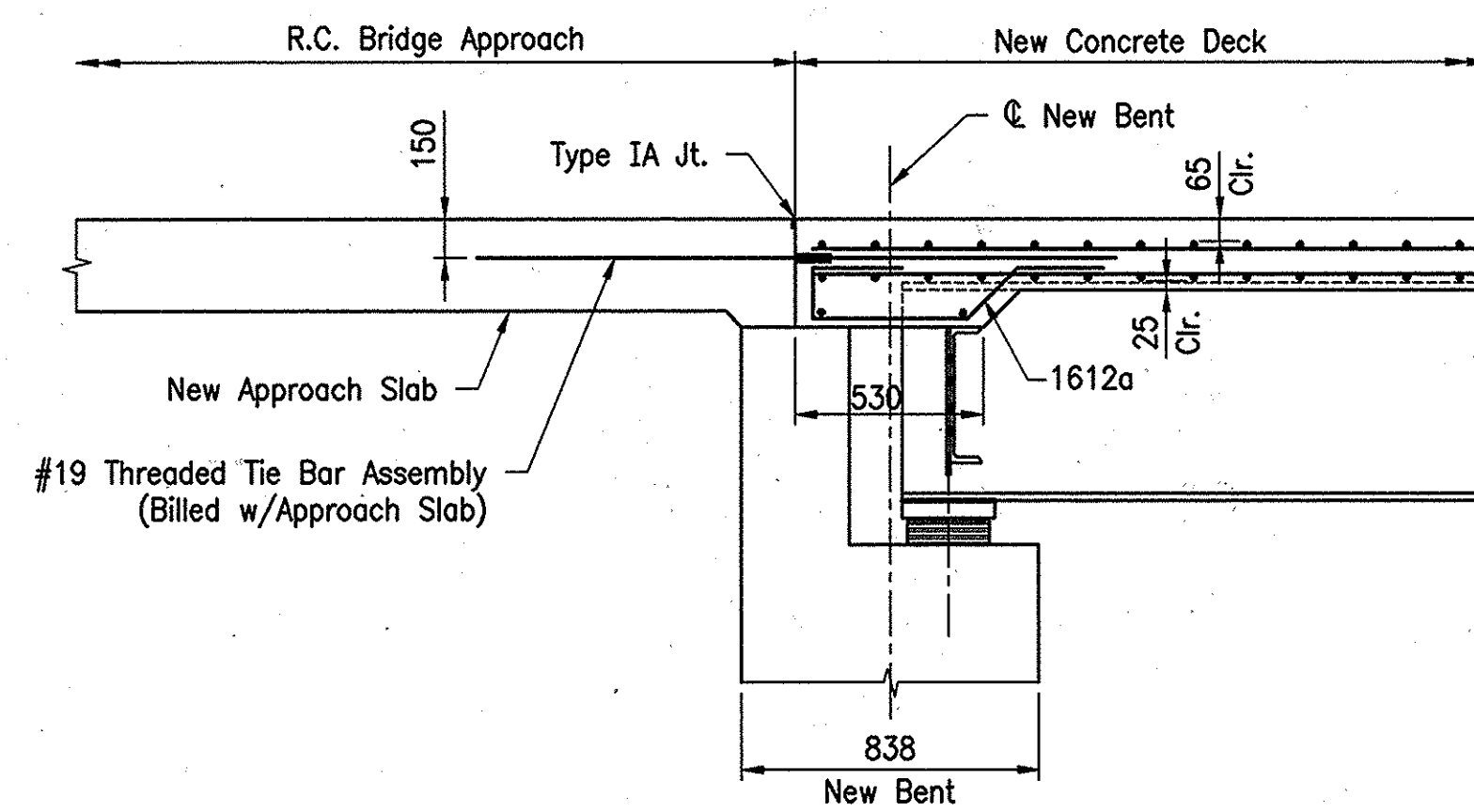
INDIANA DEPARTMENT OF TRANSPORTATION	
SUPERSTRUCTURE DETAILS	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	50 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



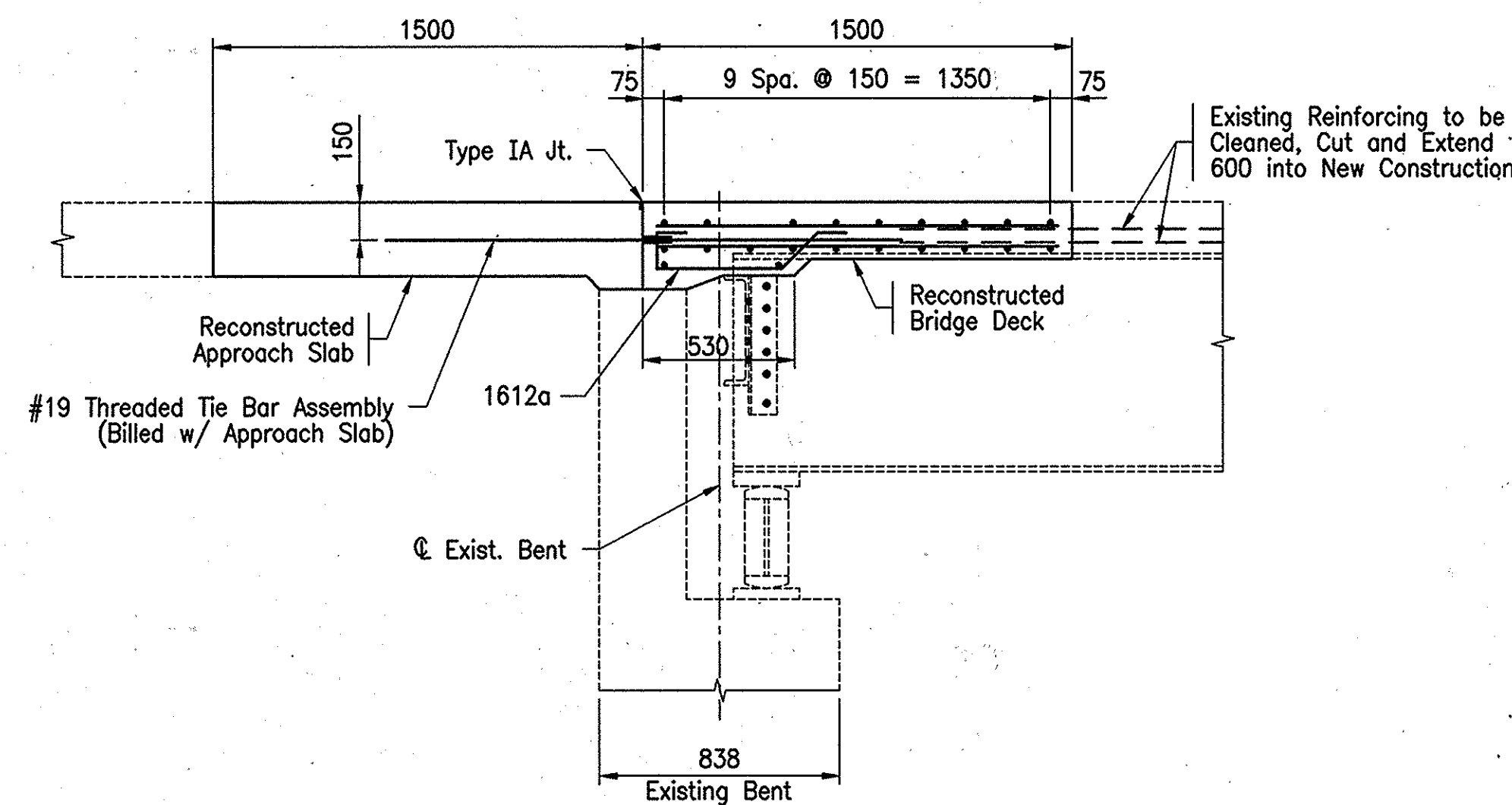
SECTION Z-Z - RECONSTRUCTION

Scale: 1:50



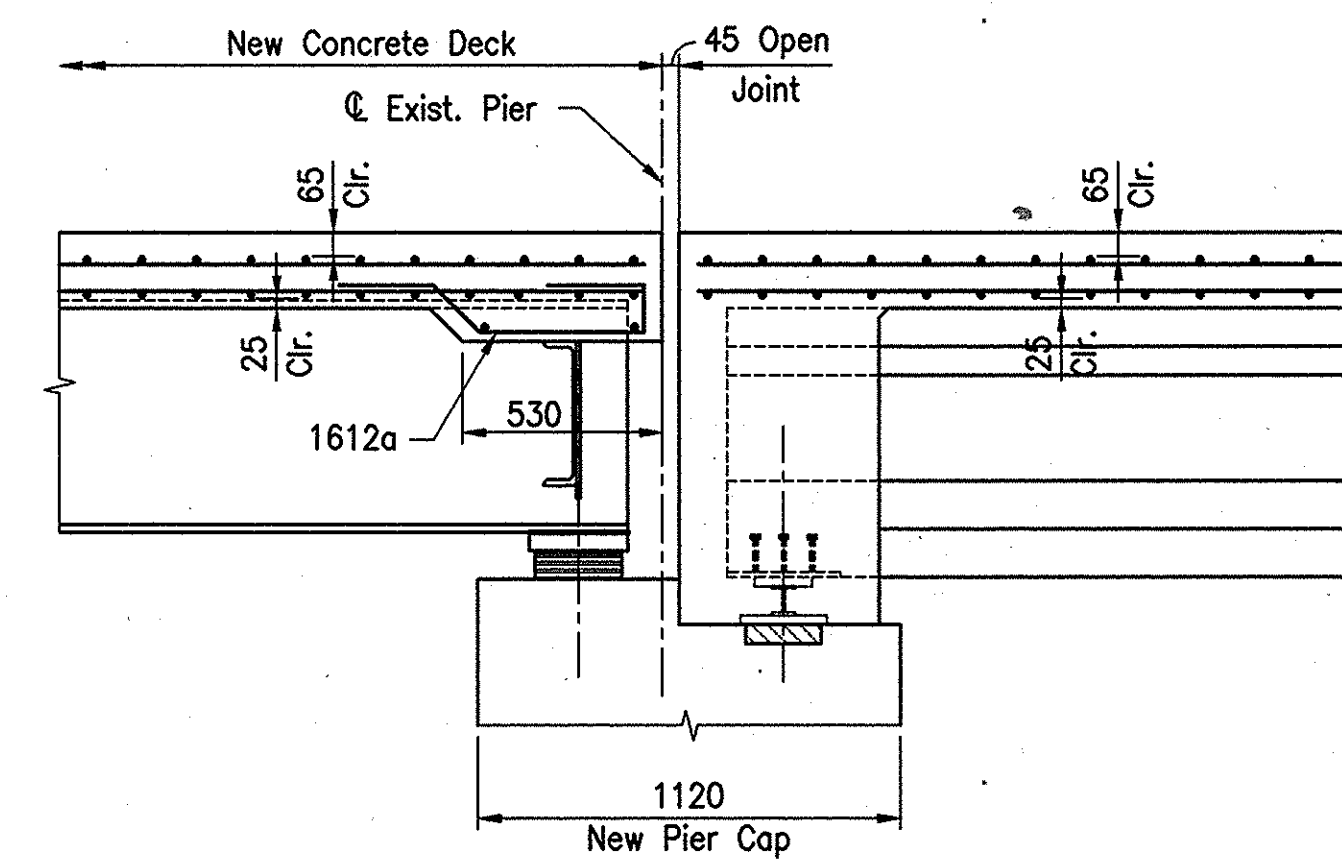
SECTION A-A

Scale: 1:20



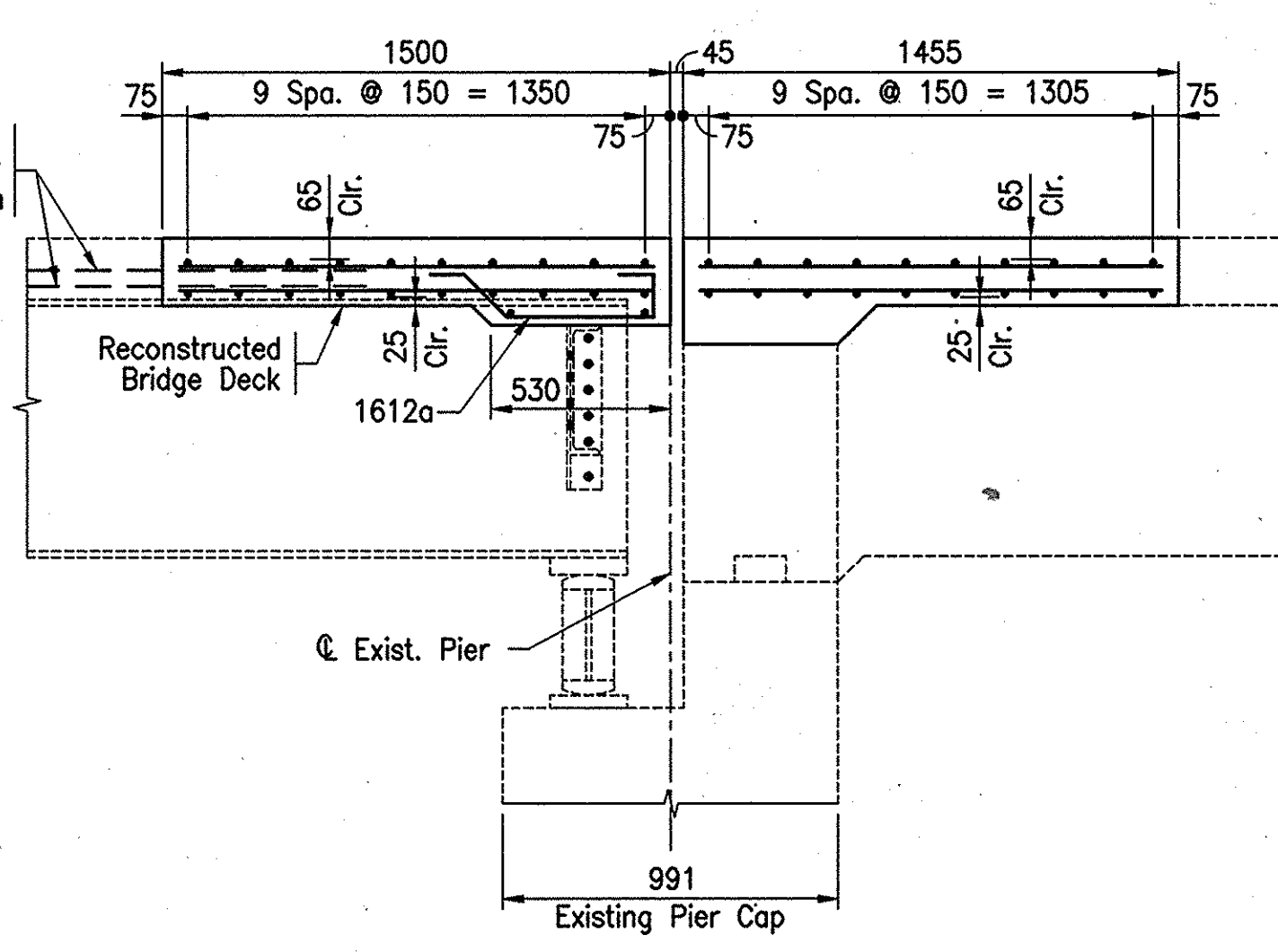
SECTION C-C

Scale: 1:20



SECTION B-B

Scale: 1:20

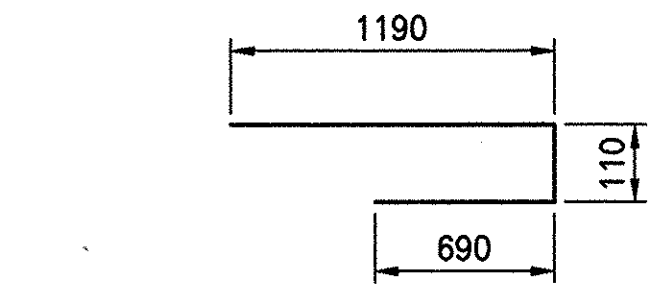
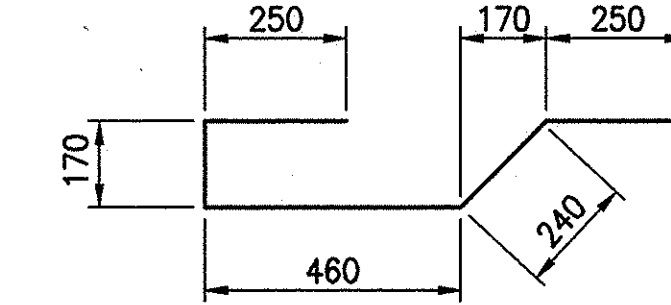
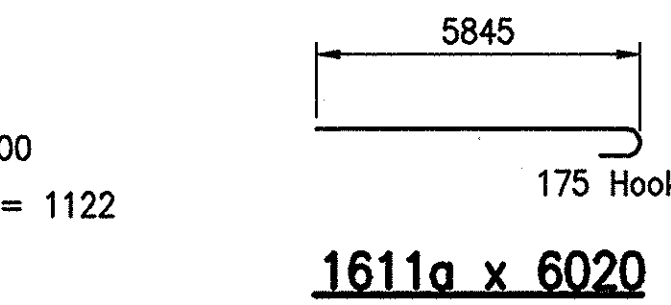


SECTION D-D

Scale: 1:20

LEGEND

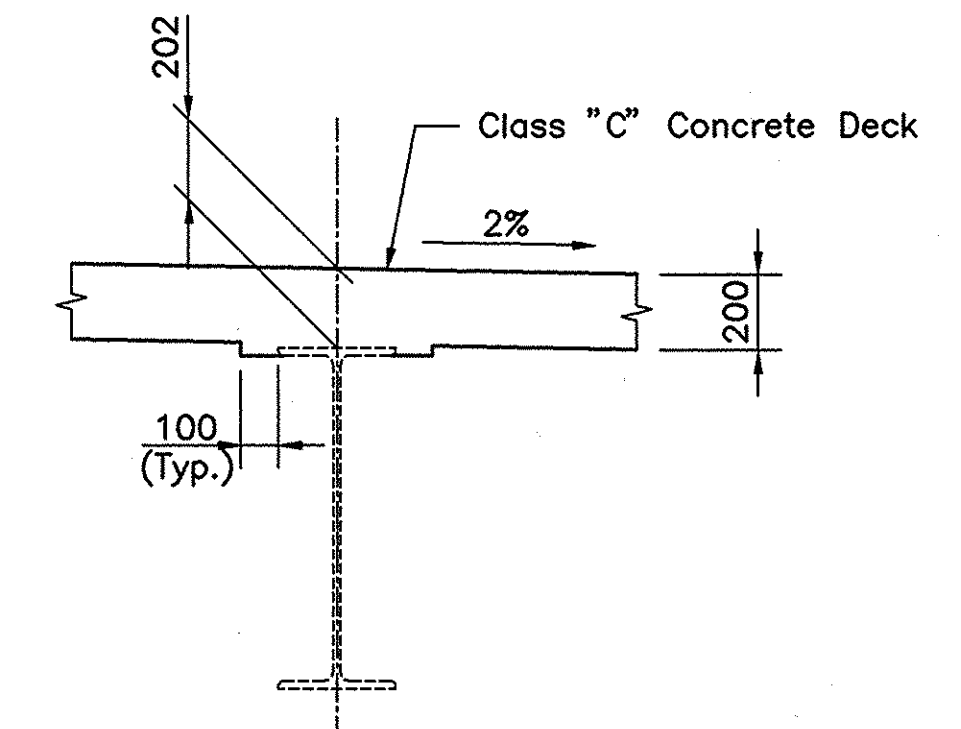
- (A) 2 Eq. Spa. = 526
- (B) 4 Spa. @ 300 = 1200
- (C) 4 Spa. @ 300 Max. = 1122



1611a x 6020

1612a x 1370

1311a x 1990



DETAIL "B"

NOT TO SCALE

BILL OF MATERIALS FOR SUPERSTRUCTURE (SPANS "A", "B", & "C")

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#19	78	1400	
TOTAL #19			244
1611a	306	6020	
1612a	114	1370	
#16	72	11870	
#16	34	8600	
#16	308	5840	
#16	42	5020	
#16	84	4000	
#16	12	1900	
#16	4	1680	
#16	2	1400	
#16	2	900	
#16	2	700	
TOTAL #16			8577
1311a	306	1990	
#13	72	11760	
#13	52	1400	
#13	48	1220	
TOTAL #13			1577
TOTAL EPOXY COATED REINFORCING STEEL			10398
CONCRETE			
CONCRETE, C, IN SUPERSTRUCTURE			
PHASE I			50.1 m ³
PHASE II			3.4 m ³
PHASE III			2.8 m ³
PHASE IV			2.8 m ³
TOTAL CONCRETE, C, IN SUPERSTRUCTURE			59.1 m ³
MISCELLANEOUS			
THREADED TIE BAR ASSEMBLIES			120 EACH
CAST IRON, GRATES, BASINS & FITTINGS			876.6 kg
PIPE, PVC, 150 mm ø			9 m
SURFACE SEAL (EST. 417 m ²)			LSUM ITEM

- * INCLUDES BRIDGE RAILING

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Metric Std. 703-BRST-01.

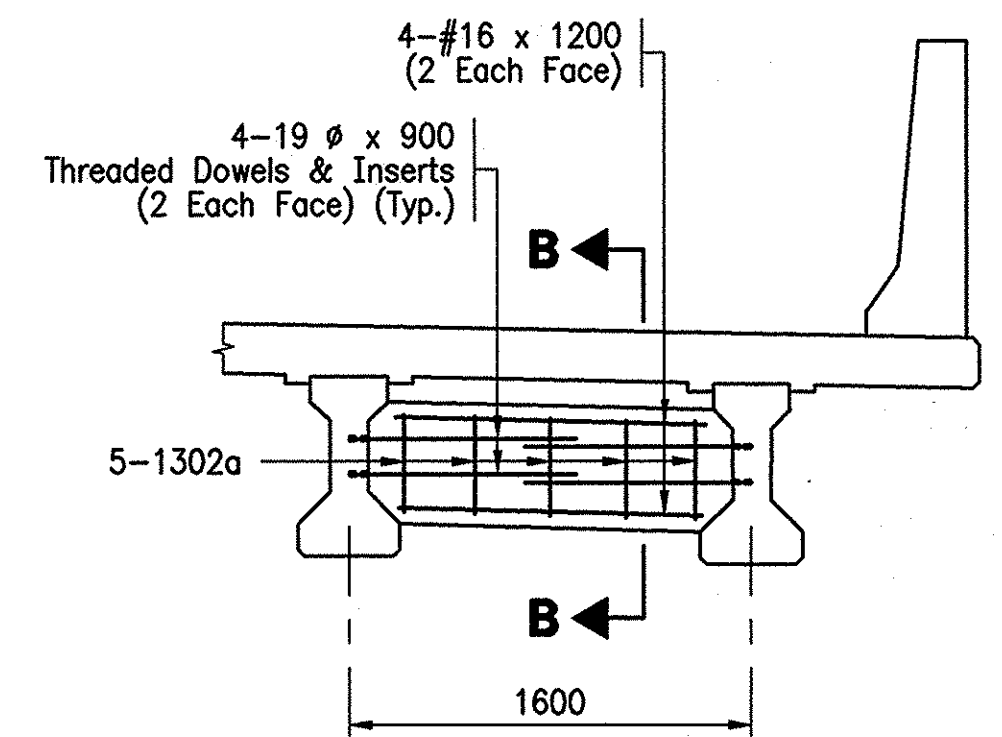
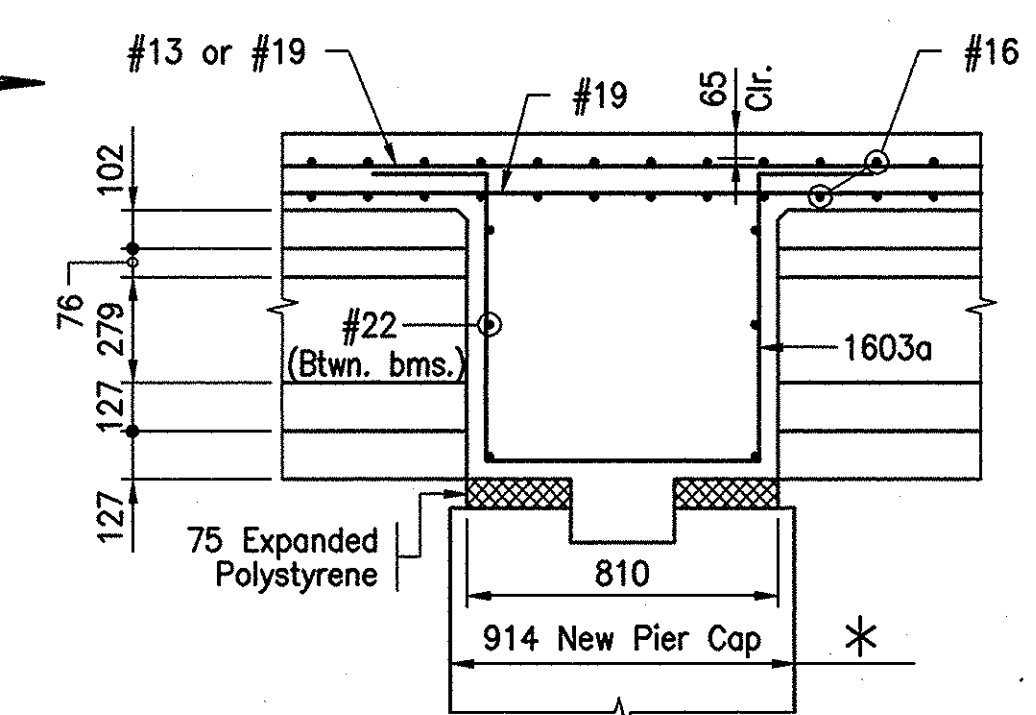
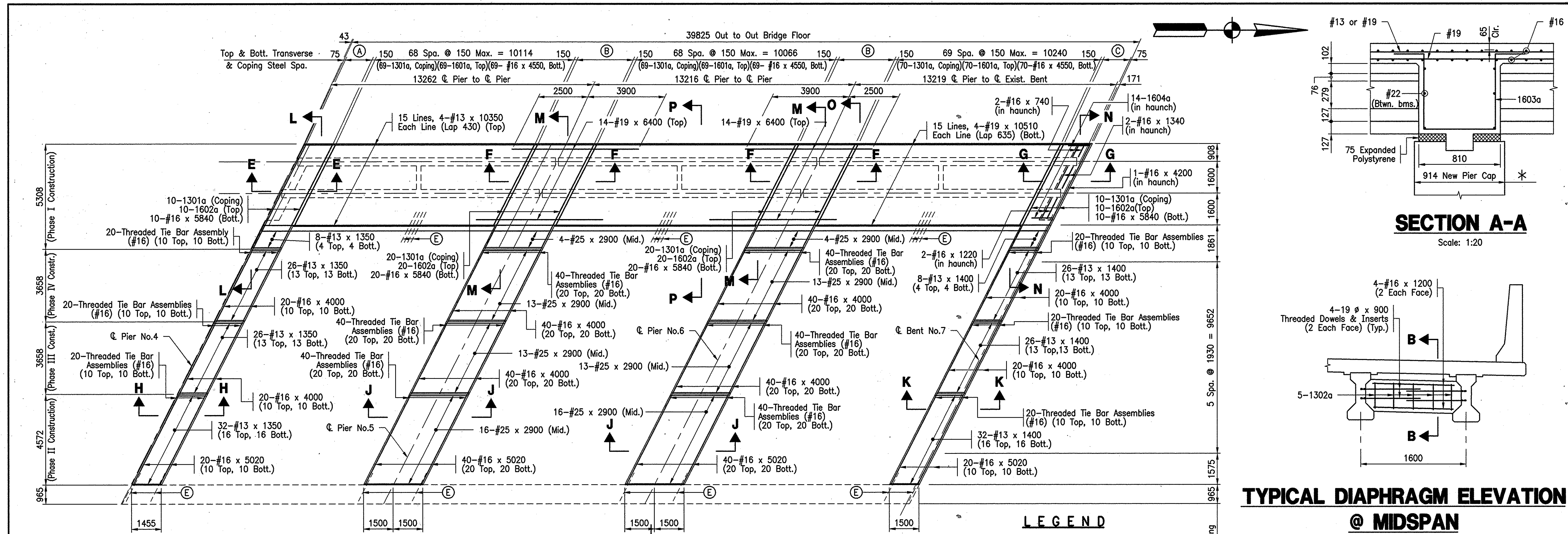
File: 9661FLR2



RECOMMENDED FOR APPROVAL	<i>Judith S. Sailer</i>	1/19/99
DESIGNED:	JAP	DATE
DRAWN:	MBW	
CHECKED:	MJM	
	RMG	

INDIANA DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS

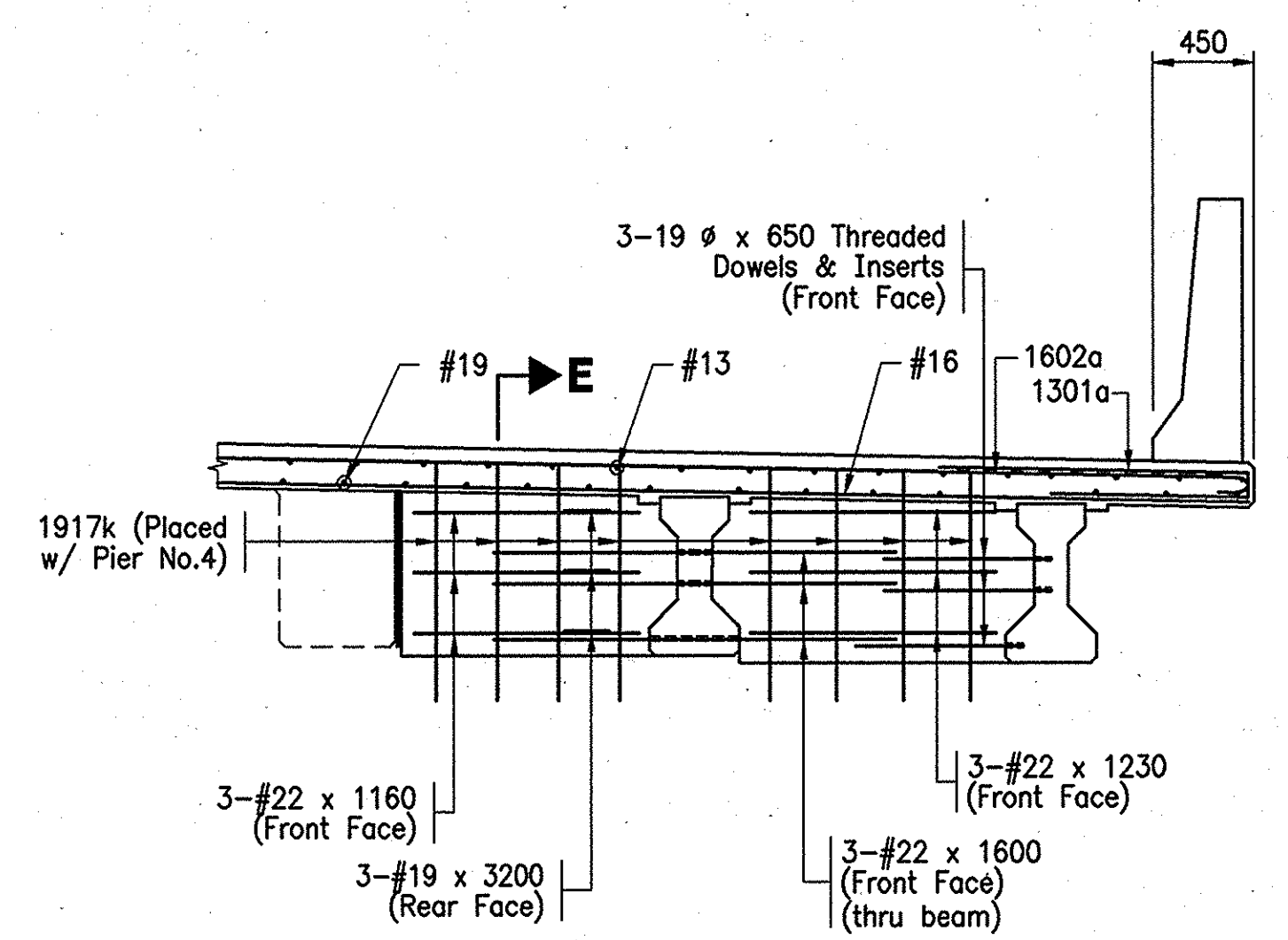
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	51 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



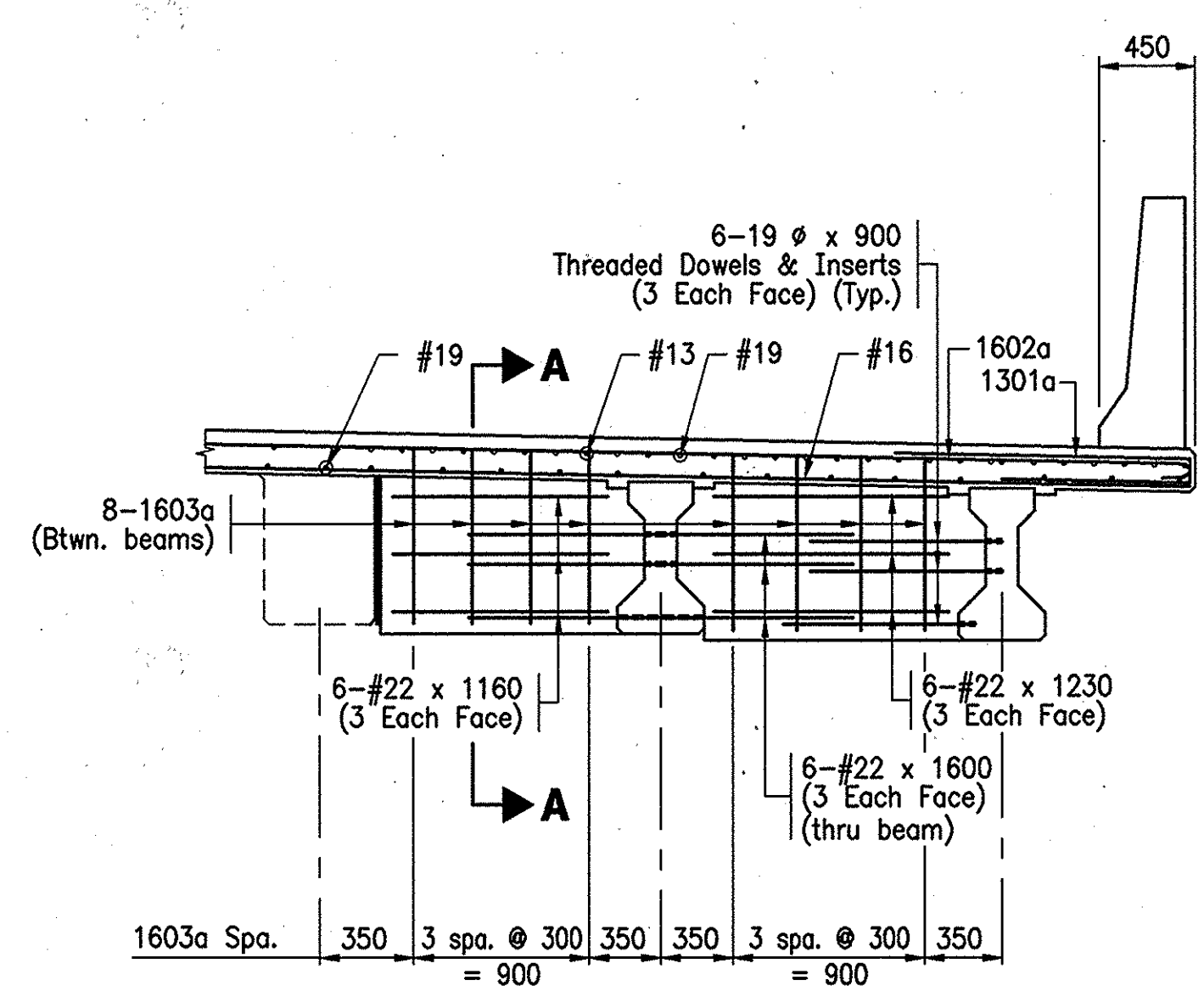
TYPICAL DIAPHRAGM ELEVATION @ MIDSPAN

LEGEND

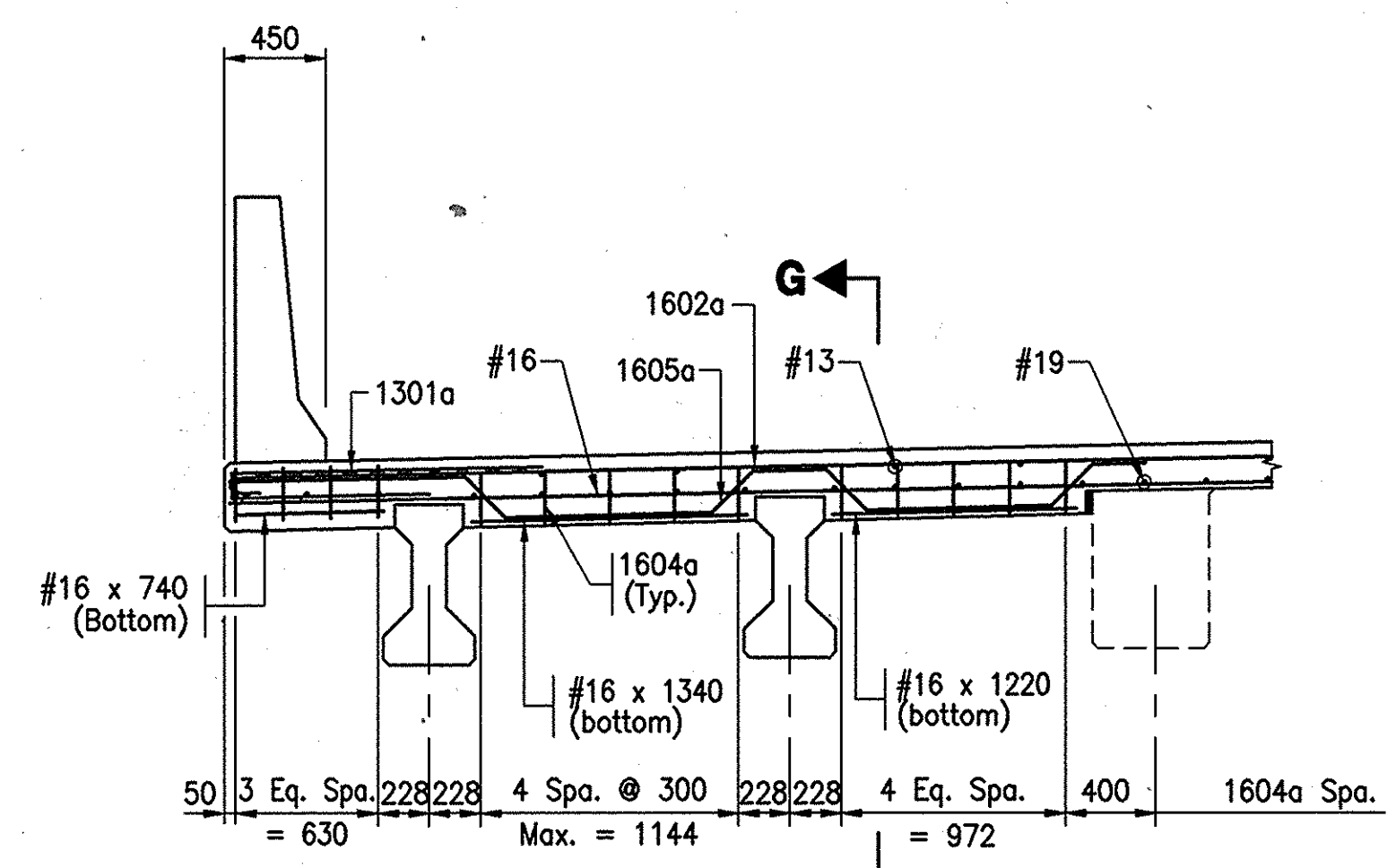
- (A) 9 Spa. @ 150 Max. = 1305
- (B) 19 Spa. @ 150 = 2850
- (C) 9 Spa. @ 150 = 1350
- (D) 240 Concrete Overlay
- (E) Existing transverse reinforcing to be cut, cleaned and straightened and extend 600 into new construction. (Typ.)
- * Measured Perpendicular to Skew



**SECTION L-L
TYPICAL DIAPHRAGM ELEVATION
@ PIER NO.4**



**SECTION M-M
TYPICAL DIAPHRAGM ELEVATION
@ PIER NO.5 AND NO.6**



**SECTION N-N
TYPICAL HAUNCH SECTION
@ BENT NO.7**

NOTES:

- For Reinforcing Bar Notes, see Br. Std. 703-BRST-01.
- For Sections "E-E" thru "O-O", Bar Bending Details and Bill of Materials, See Sht. 53.
- For Section "P-P", See Sheet 55.
- For Concrete Barrier Rail Details, See Sht. 56
- For Roadway Drain Details, See Br. Stds. 704-BDCG-02 and 704-BDCG-03 and Sht.
- Either Permanent Metal Deck Forms or Precast Concrete Deck Panels May be Substituted for Removable Forms at This Structure. See Br. Stds. 707-BPDP-01 Thru 05 for Deck Panel Details.
- For Type I Prestressed Concrete I-Beam Details, See Sht.
- Suitable Restraint Shall be Provided to Prevent the Rotation of the Outside Beams From Construction Loads Such as Finishing Machine, Forms, etc.
- Screed Data Will be Furnished Upon Request.
- All Dimensions Shown are in Millimeters and All Elevations and Stations are in Meters Unless Noted.

File: 9661FLR3



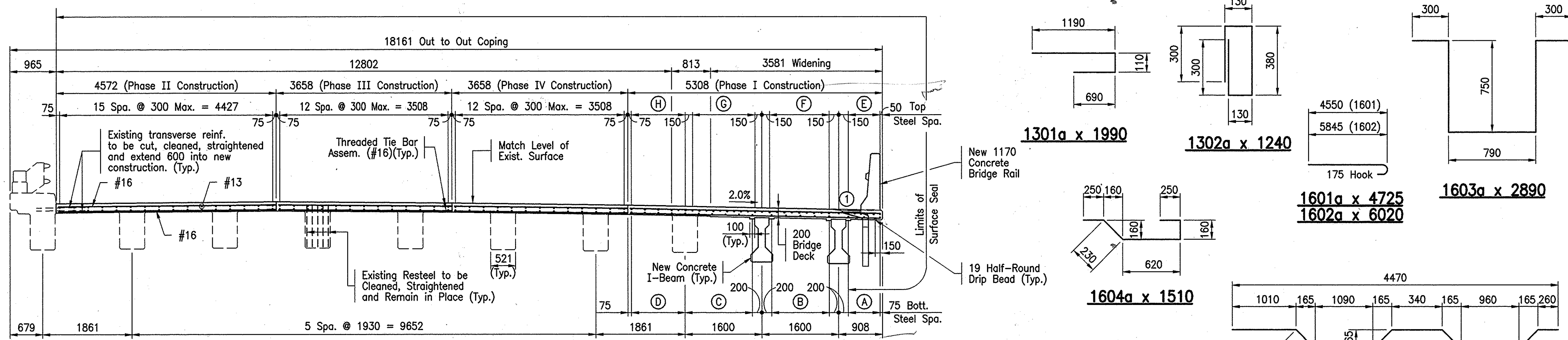
RECOMMENDED FOR APPROVAL: *E. Sailer* 1/19/99
DESIGN ENGINEER DATE

DESIGNED: JAP DRAWN: MBW
CHECKED: MJM CHECKED: RMG

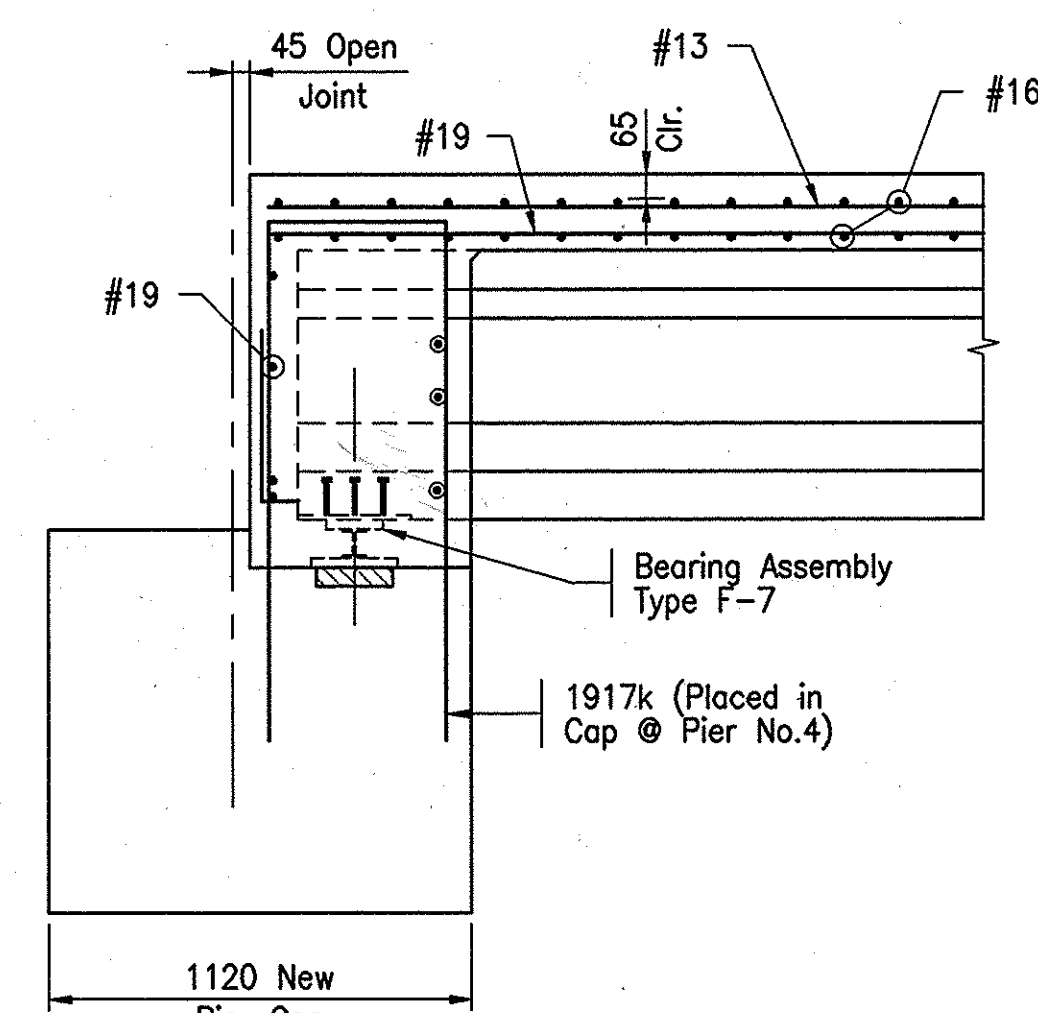
**INDIANA
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE
DETAILS**

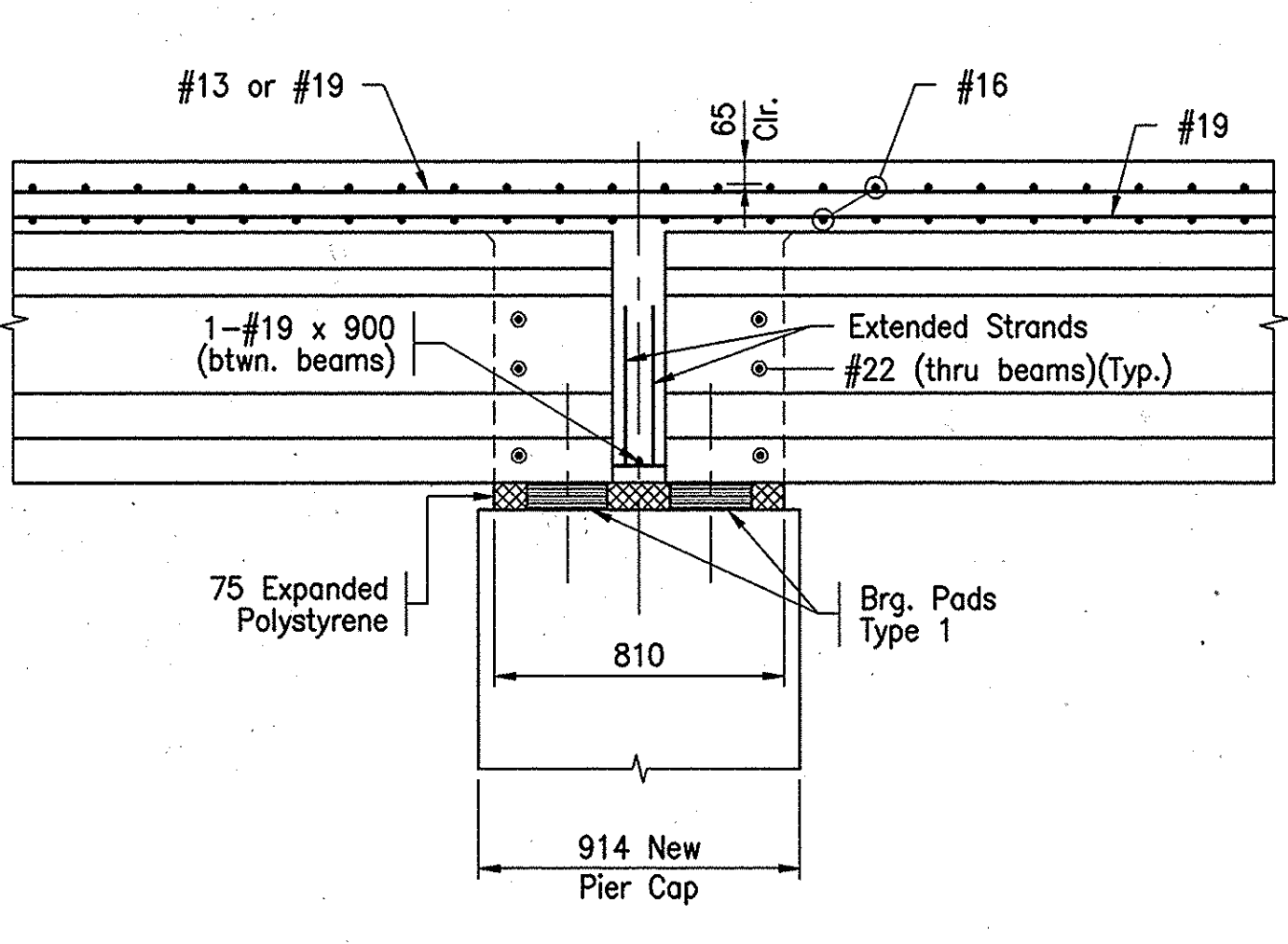
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
R 23849	52 of 120
	PROJECT
	IM/465-4(318)



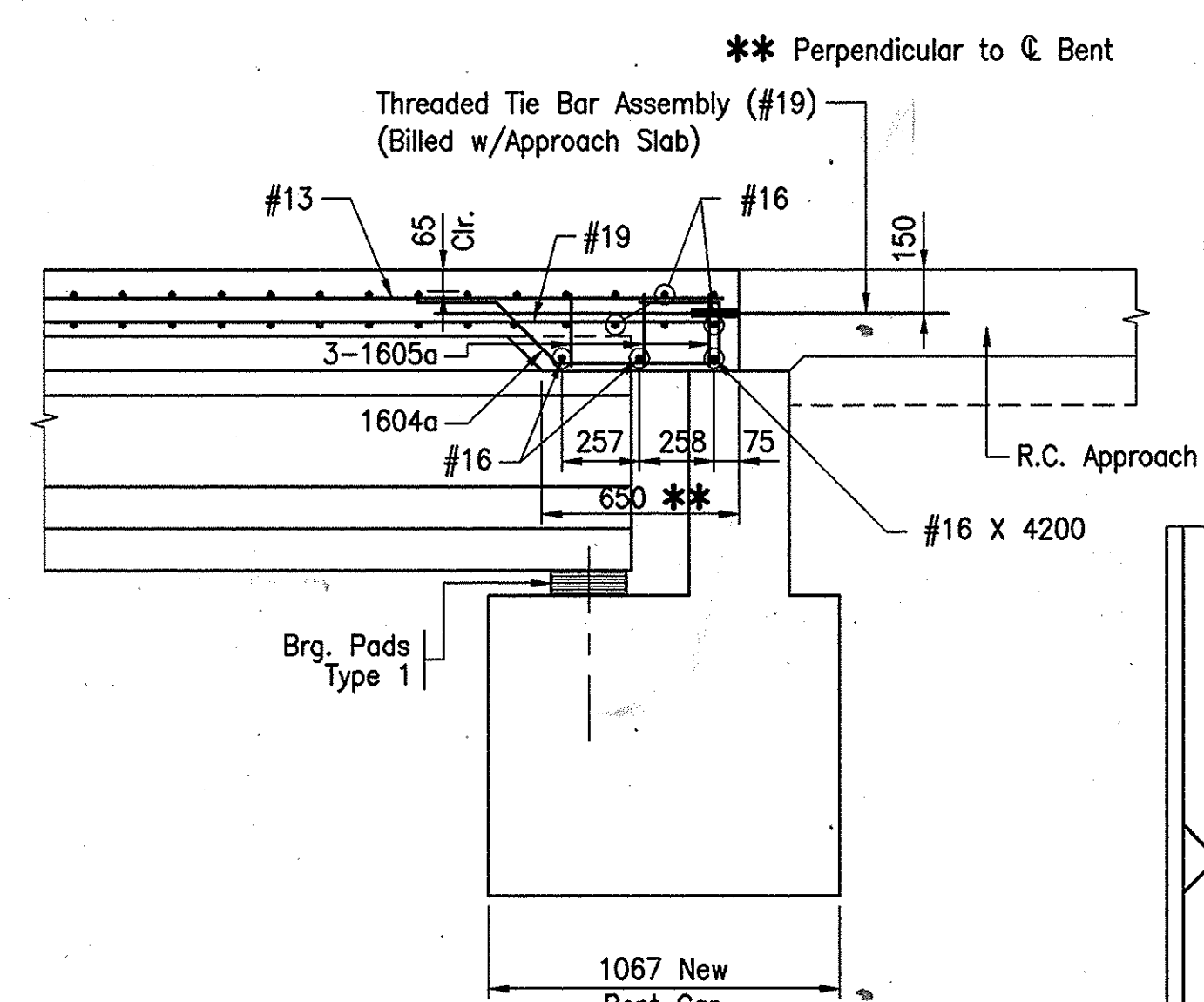
SECTION O-O
Scale: 1:50



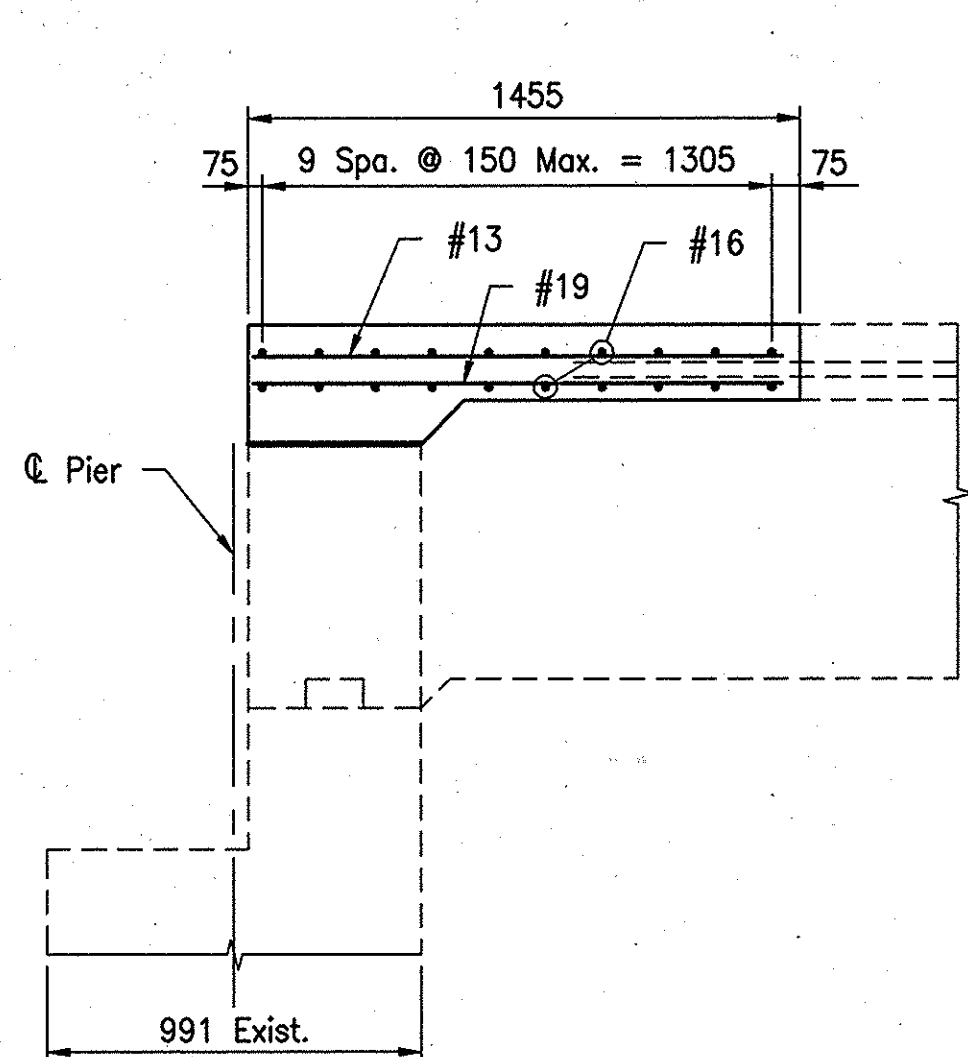
SECTION E-E
Scale: 1:20



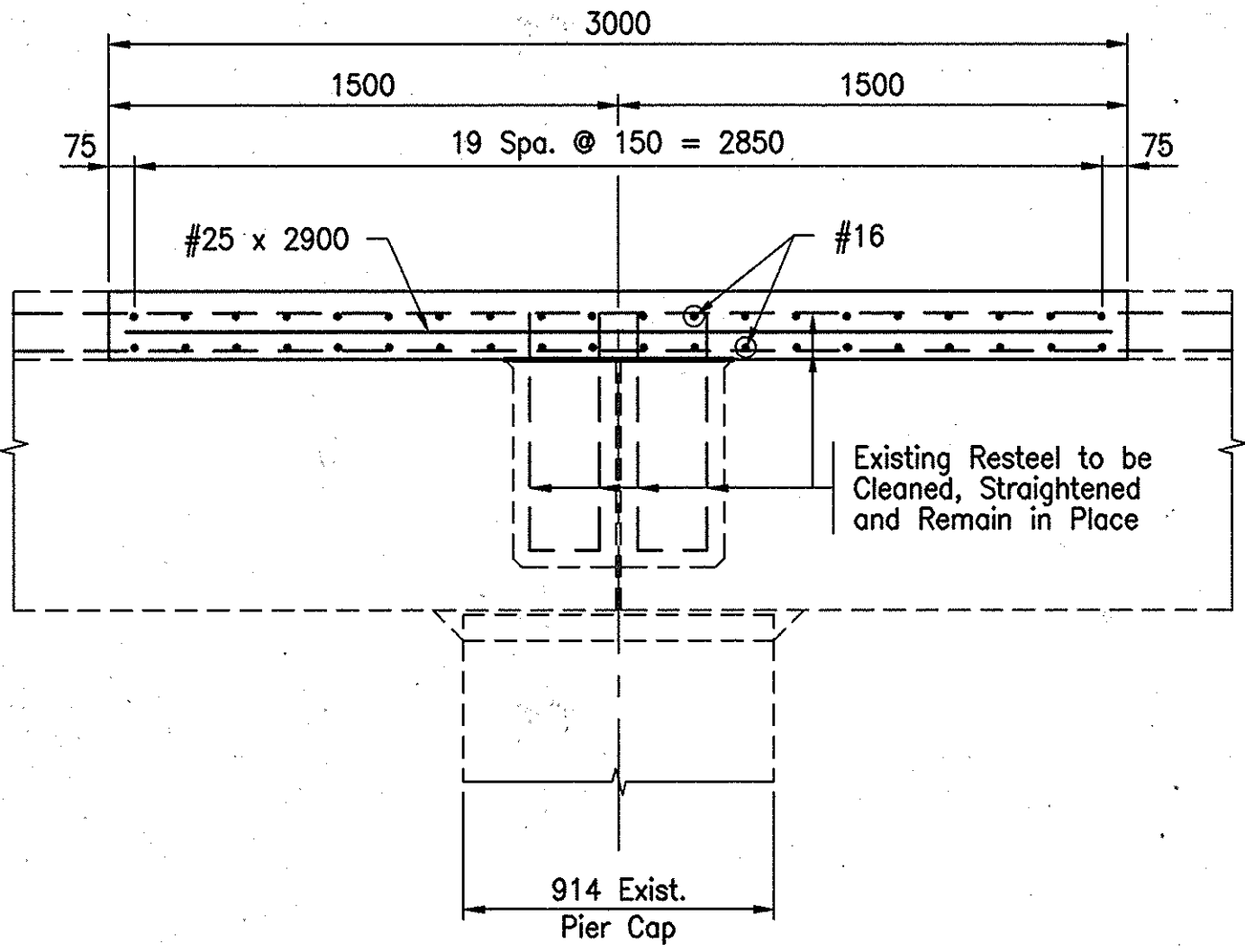
SECTION F-F
Scale: 1:20



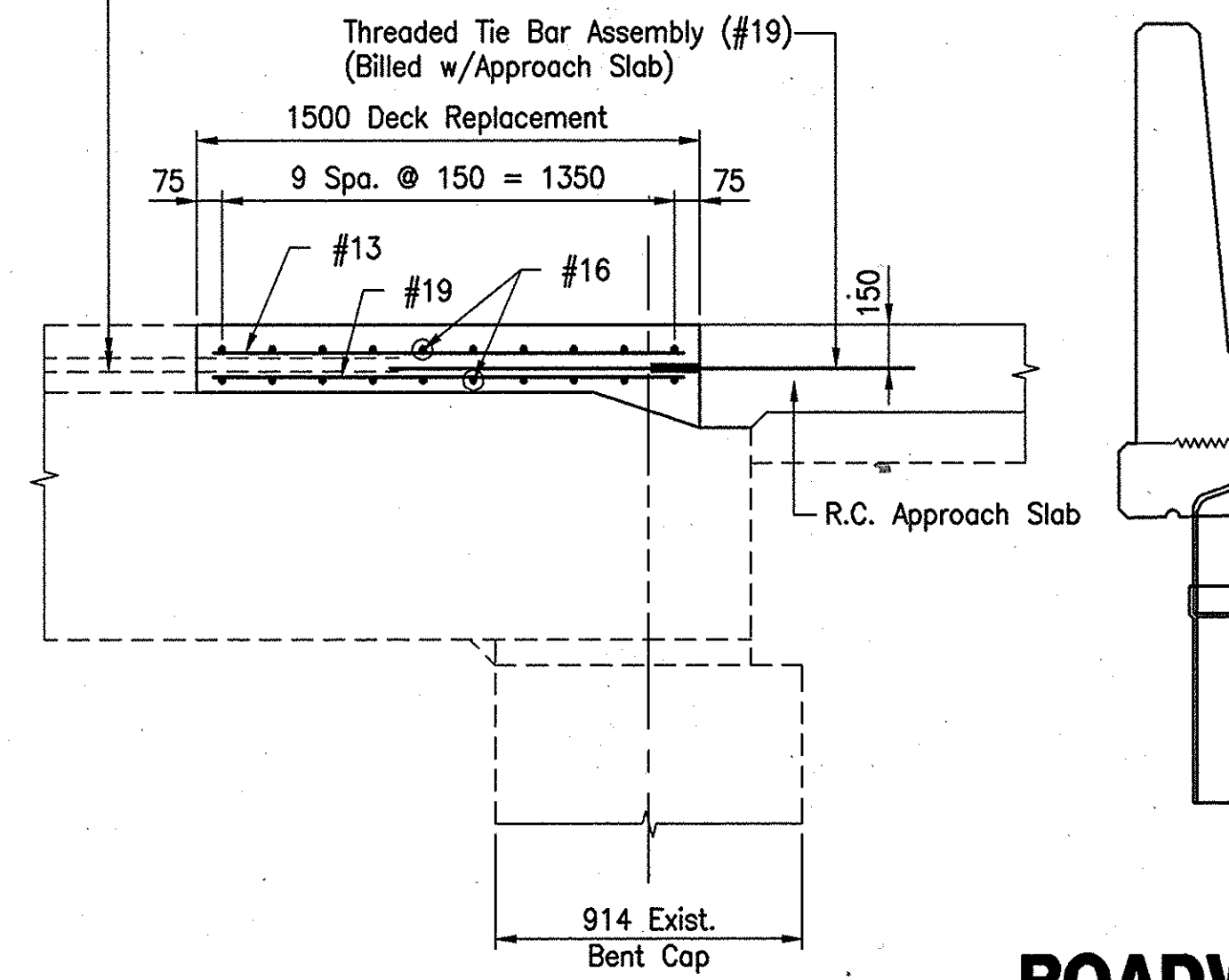
SECTION G-G
Scale: 1:20



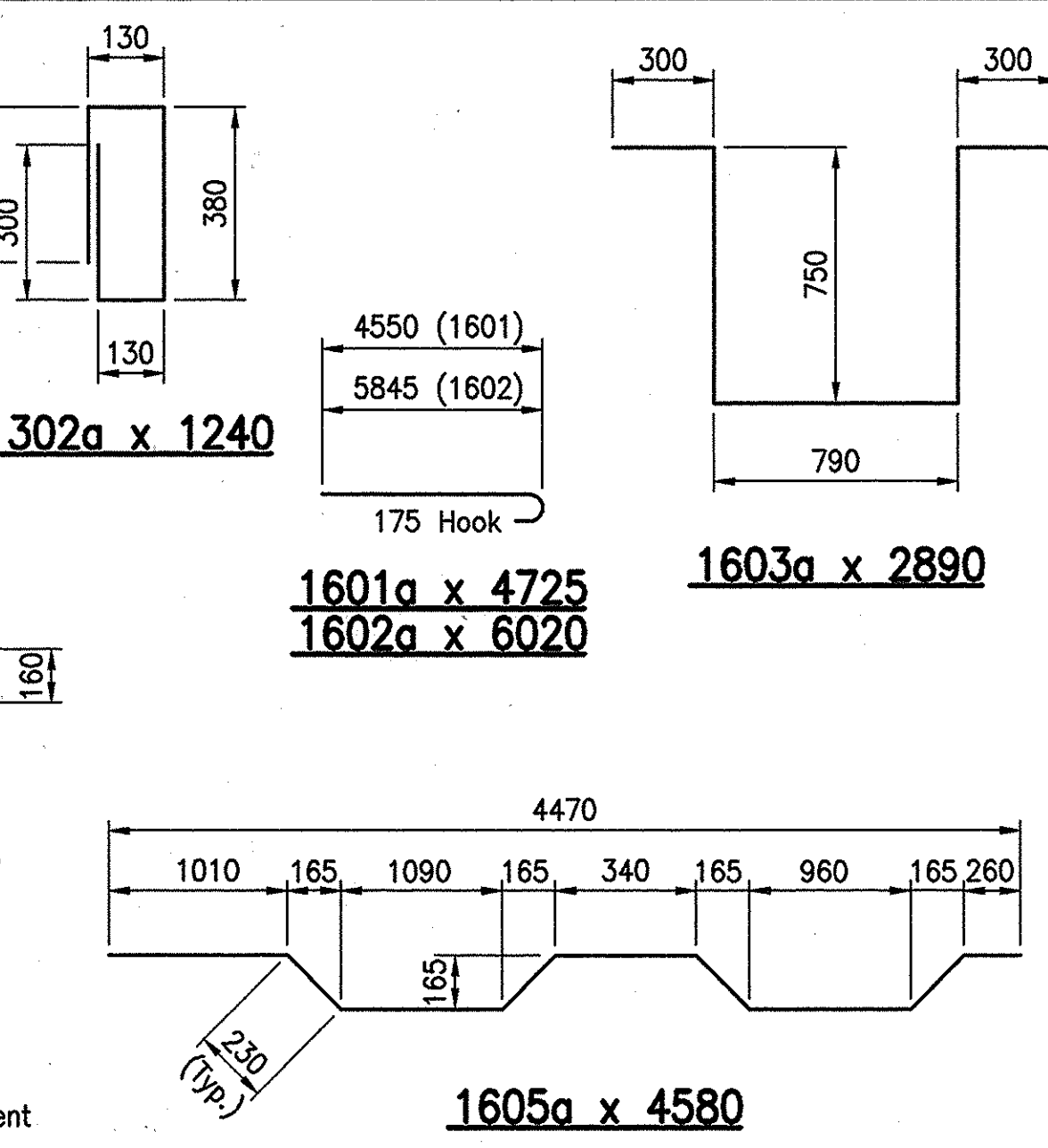
SECTION H-H
Scale: 1:20



SECTION J-J
Scale: 1:20



SECTION K-K
Scale: 1:20



ROADWAY DRAIN DETAILS
(2 REQUIRED)
Scale: 1:20

- LEGEND**
- (A) 2 Eq. Spa. = 633
 - (B) 4 Spa. @ 300 = 1200
 - (C) 5 Spa. @ 280 = 1400
 - (D) 4 Eq. Spa. = 1125
 - (E) 5 Spa. @ 150 Max. = 708
 - (F) 9 Spa. @ 150 Max. = 1300
 - (G) 9 Spa. @ 150 Max. = 1300
 - (H) 4 Eq. Spa. = 1125

BILL OF MATERIALS FOR SUPERSTRUCTURE (SPANS "D", "E" & "F") REINFORCING STEEL				
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)	
#25	92	2900		
TOTAL #19			1060	
#22	15	1600		
#22	15	1230		
#22	15	1160		
TOTAL #19			182	
#19	60	10510		
#19	28	6400		
#19	3	3200		
#19	4	900		
TOTAL #19			1839	
1601a	208	4725		
1602a	60	6020		
1603a	16	2890		
1604a	14	1510		
1605a	3	4580		
#16	60	5840		
#16	120	5020		
#16	208	4550		
#16	1	4200		
#16	240	4000		
#16	2	1340		
#16	2	1220		
#16	12	1200		
#16	2	740		
TOTAL #16			6688	
1301a	268	1990		
1302a	15	1240		
#13	60	10350		
#13	92	1400		
#13	92	1350		
#13	16	1220		
TOTAL #13			1437	
TOTAL REINFORCING STEEL			11206	
CONCRETE				
PHASE I (38.7 m ³)				
PHASE II (8.2 m ³)				
PHASE III (6.6 m ³)				
PHASE IV (6.6 m ³)				
TOTAL CONCRETE, C, IN SUPERSTR.			60.1 m ³	
MISCELLANEOUS				
THREADED TIE BAR ASSEMBLY			360 EACH	
CAST IRON, GRATES, BASINS & FITTINGS			292.2 kg	
PIPE, PVC, 150 mm Ø			6 m	
SURFACE SEAL (EST. 417 m ²)			LSUM ITEM	

NOTES:

All Dimensions Shown are in Millimeters and All Elevations and Stations are in Meters Unless Noted.

For Reinforcing Bar Notes, see Br. Std. 703-BRST-01.

For Concrete Barrier Rail Details, See Sht. 56.

For Roadway Drain Details, See Br. Stds. 704-BDCG-02 and 704-BDCG-03.

For Type I Prestressed Concrete I-Beam Details, See Shts. 44 & 45.

Suitable Restraint Shall be Provided to Prevent the Rotation of the Outside Beams From Construction Loads Such as Finishing Machine, Forms, etc.

Screed Data Will be Furnished Upon Request.

For Additional Floor Details See Sht 52.

For Roadway Drain Locations, See Sheet 37.

File: 9661FLR4



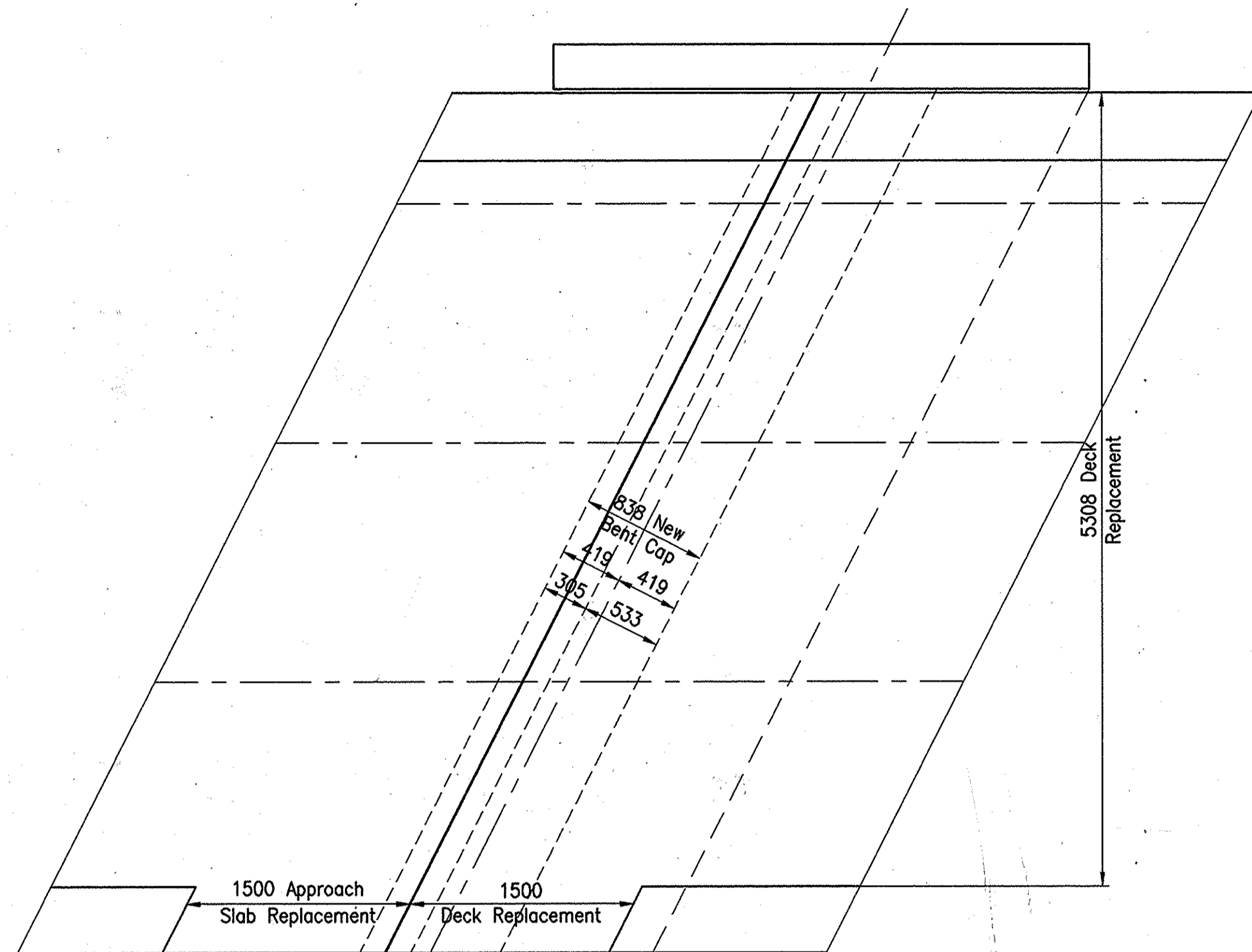
RECOMMENDED FOR APPROVAL	<i>Frank E. Sailer</i>	1/19/99
DESIGNED:	JAP	DATE
CHECKED:	MJM	DESIGN ENGINEER
	MBW	
	RMG	

INDIANA DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

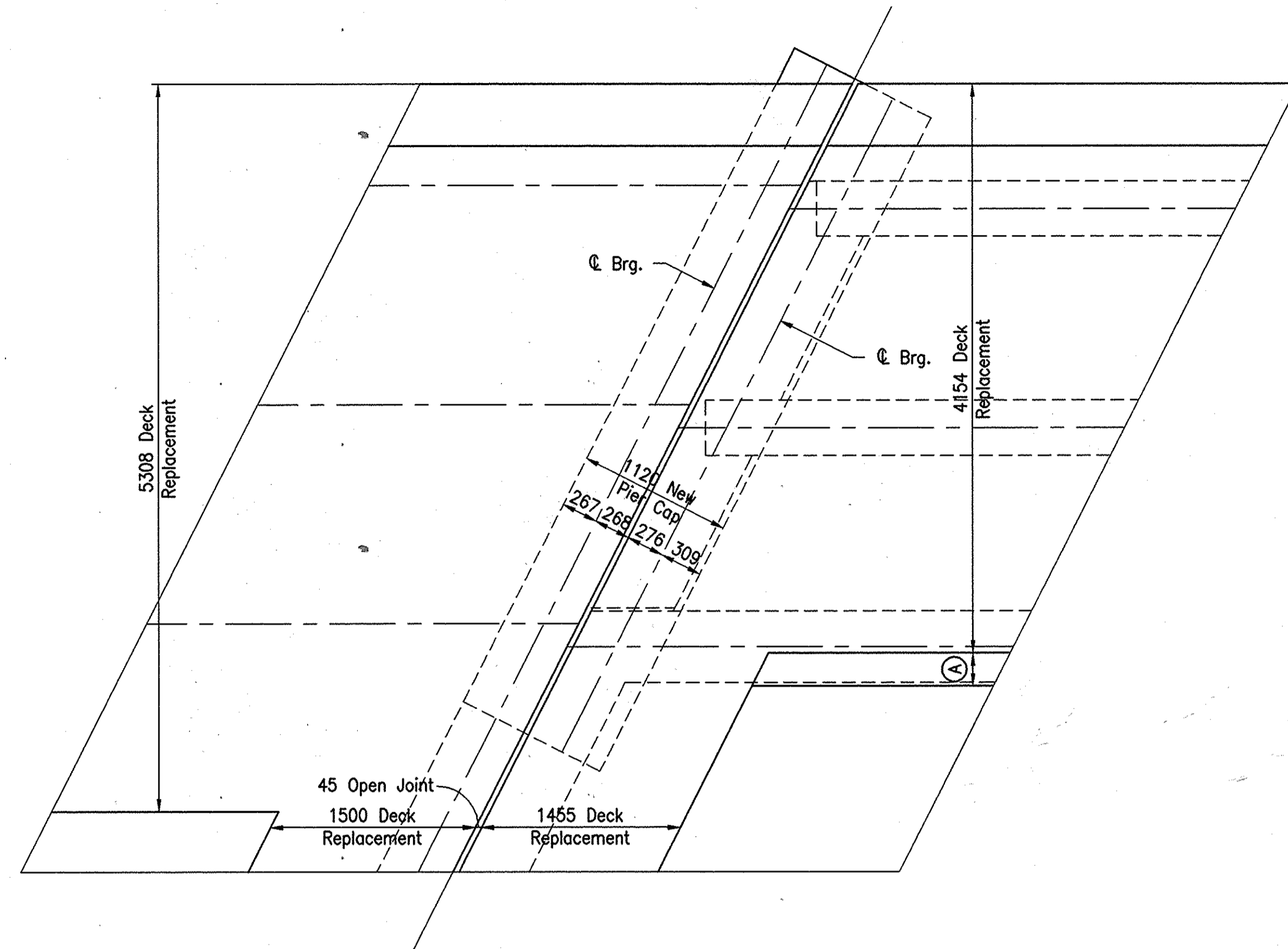
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	53 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

R-23849 part 2 of 2



SOUTHWEST CORNER @ BENT NO.1

Scale: 1:30

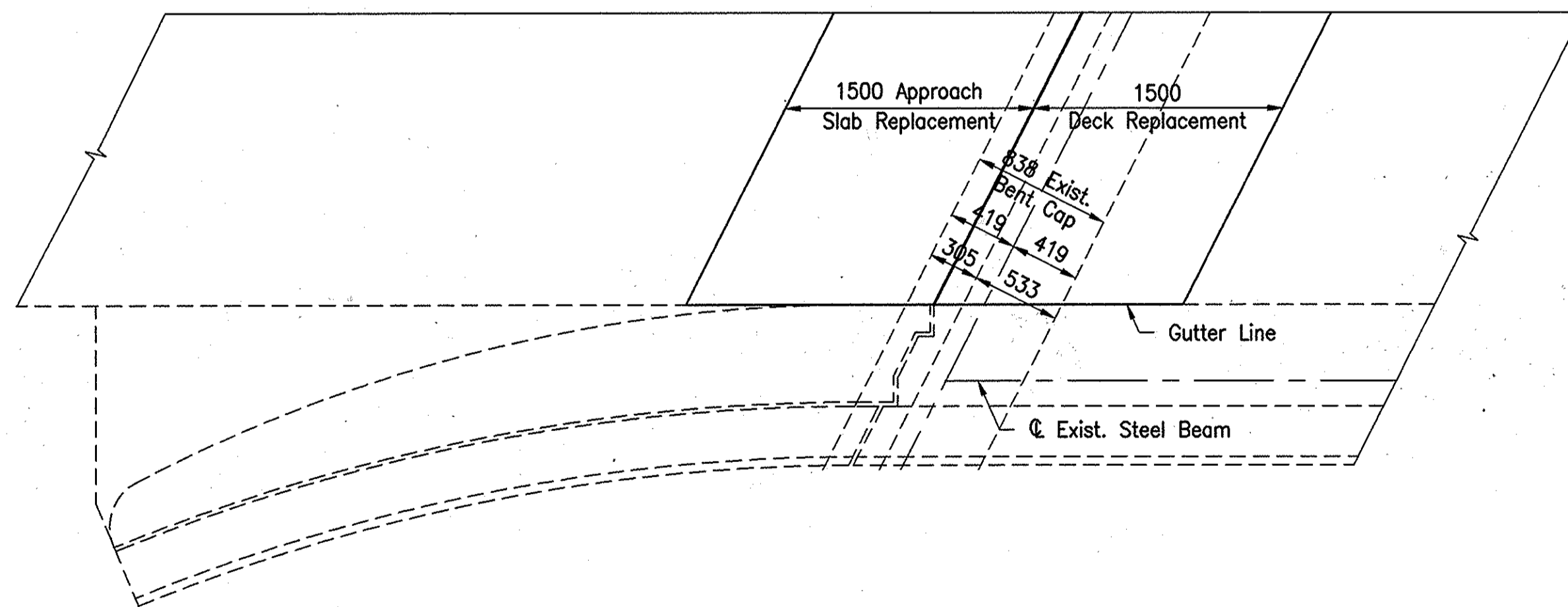


WEST COPING @ PIER NO.4

Scale: 1:30

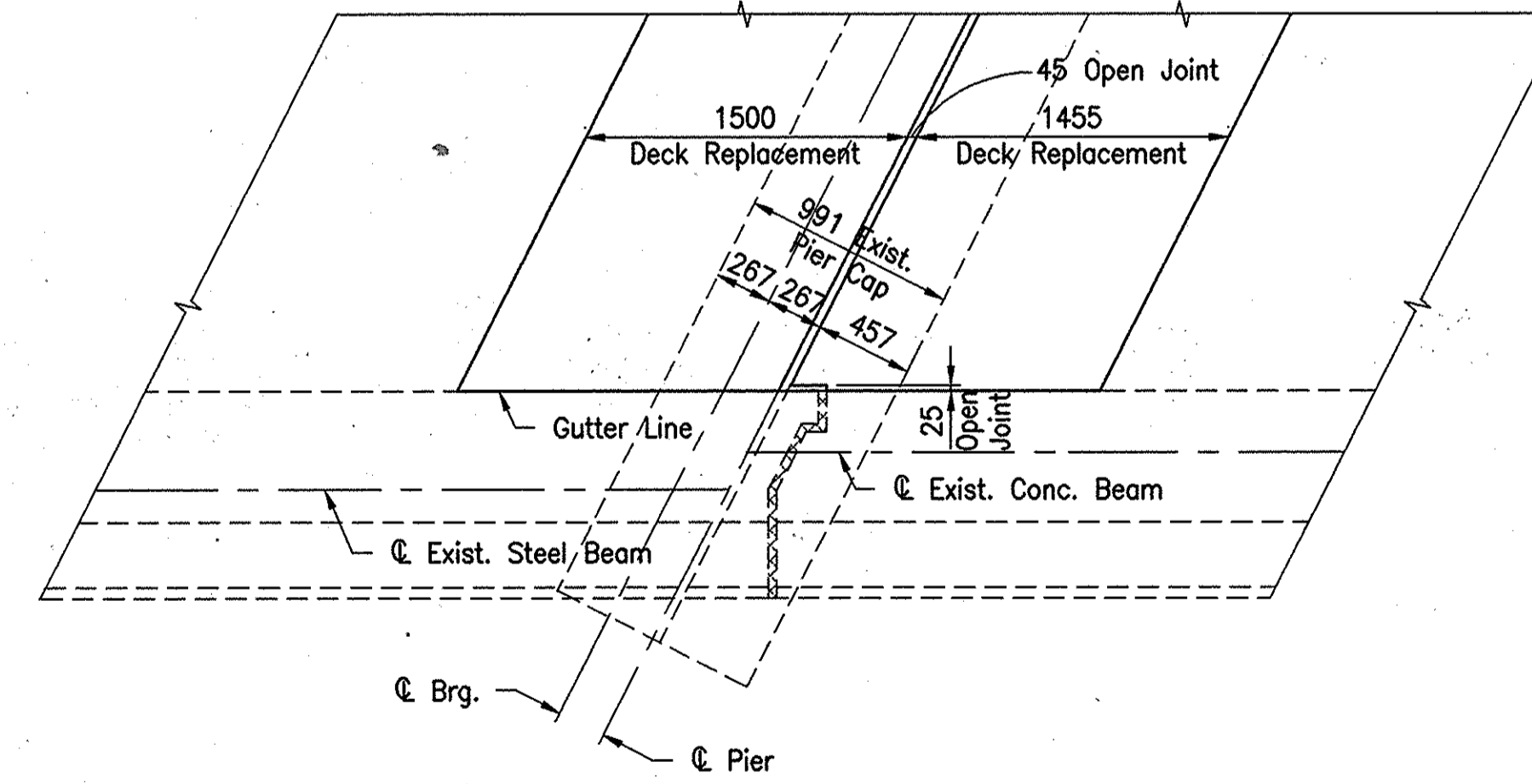
LEGEND

Ⓐ 240 Concrete Overlay



SOUTHEAST CORNER @ BENT NO.1

Scale: 1:30



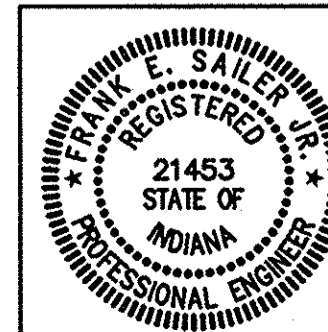
EAST COPING @ PIER NO.4

Scale: 1:30

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

File: 9661FLRS

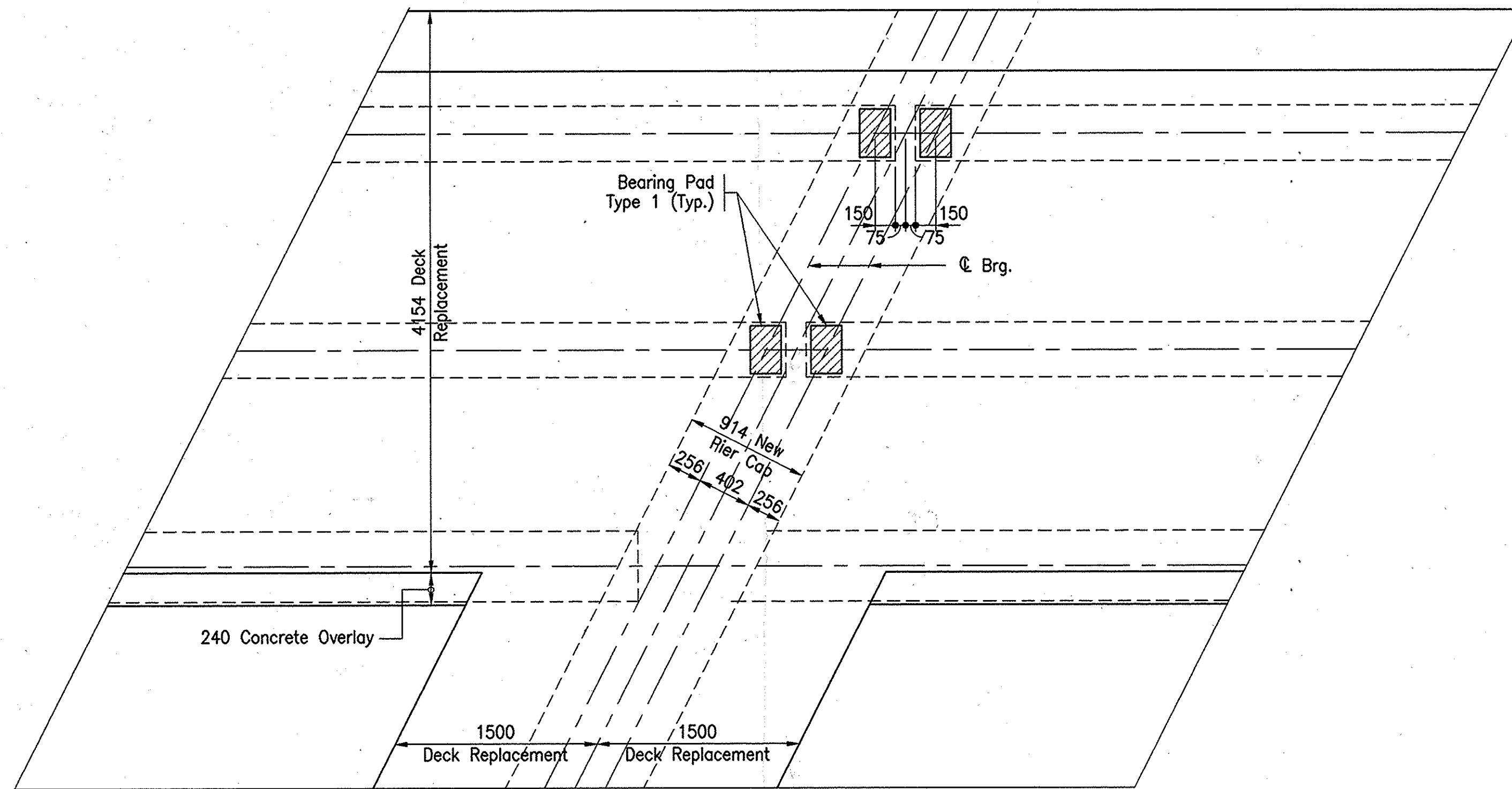


RECOMMENDED FOR APPROVAL	<i>James E. Sailer</i>	1/19/99
DESIGNED:	JAP	DRAWN:
CHECKED:	MJM	CHECKED:
		DATE
		DESIGN ENGINEER
		DATE
		DATE

**INDIANA
DEPARTMENT OF TRANSPORTATION**

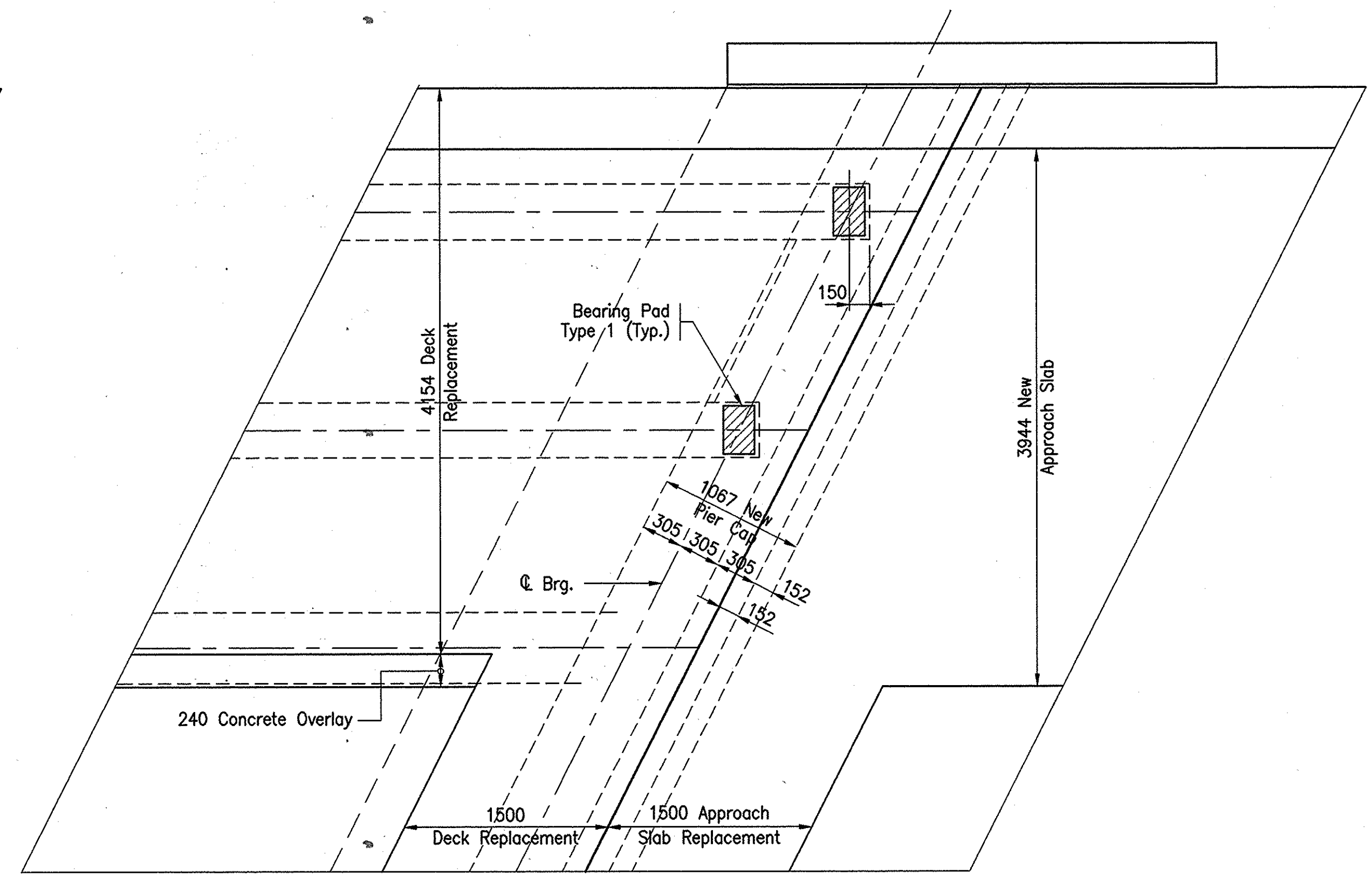
**CORNER
DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	54 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



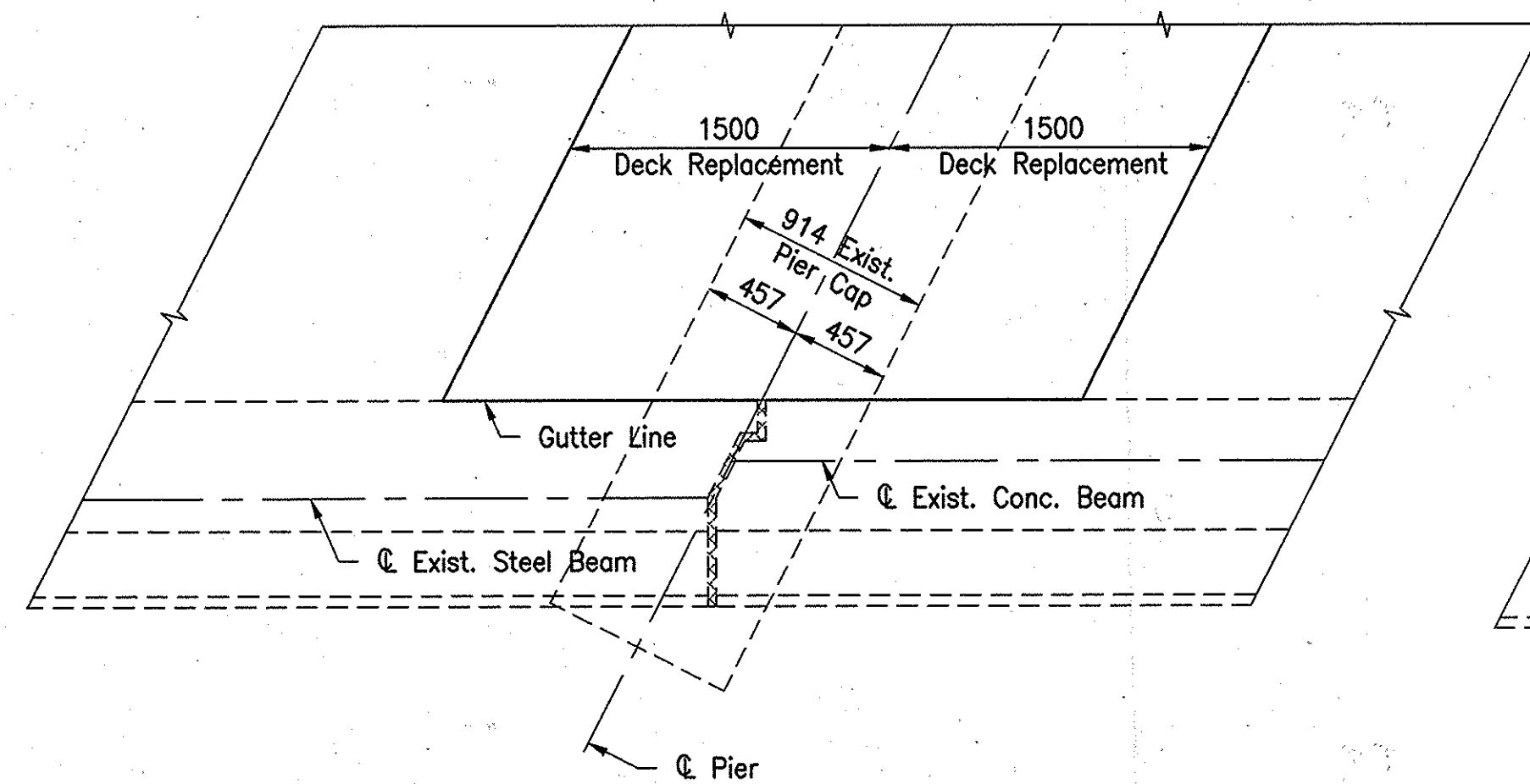
WEST COPING @ PIERS NO.5 or NO.6

Scale: 1:30



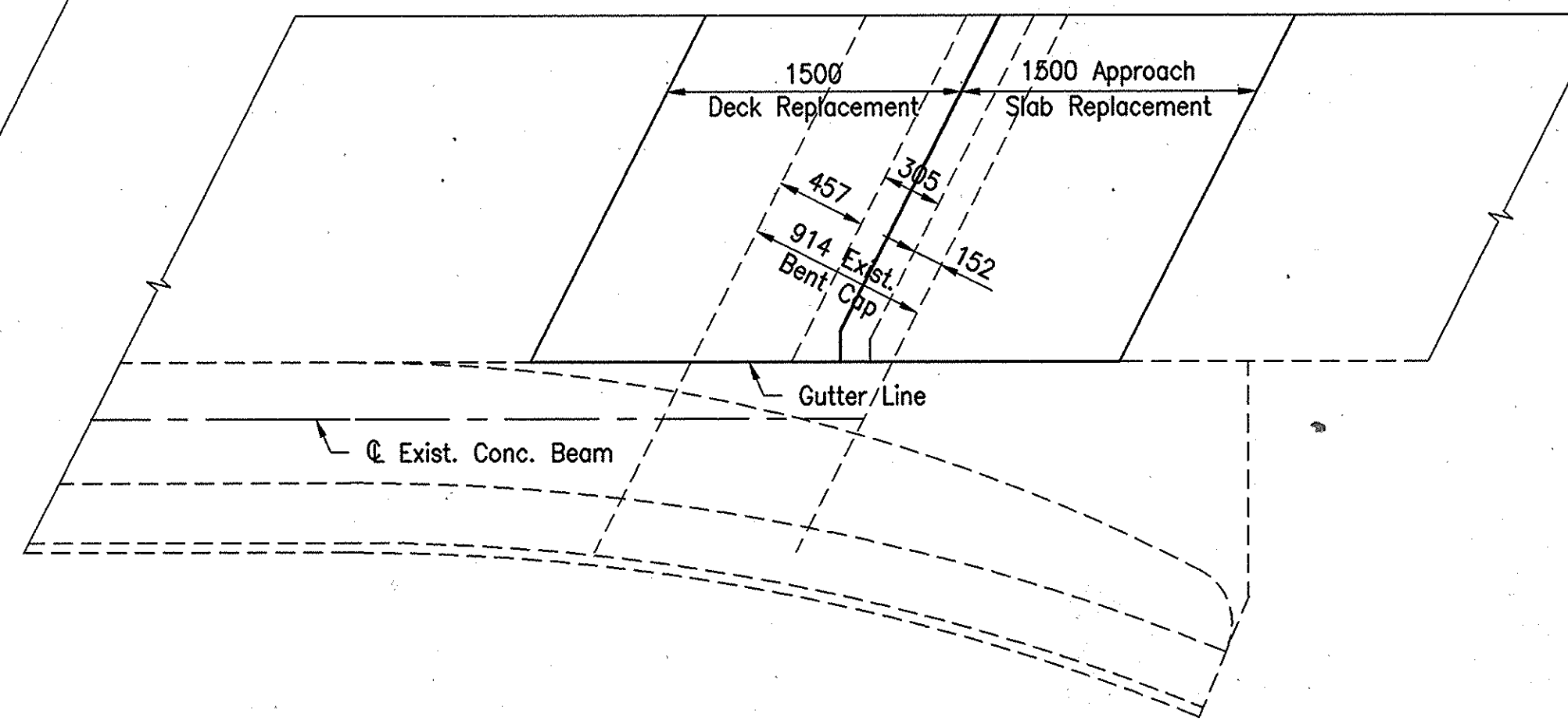
NORTHWEST CORNER @ BENT NO.7

Scale: 1:30



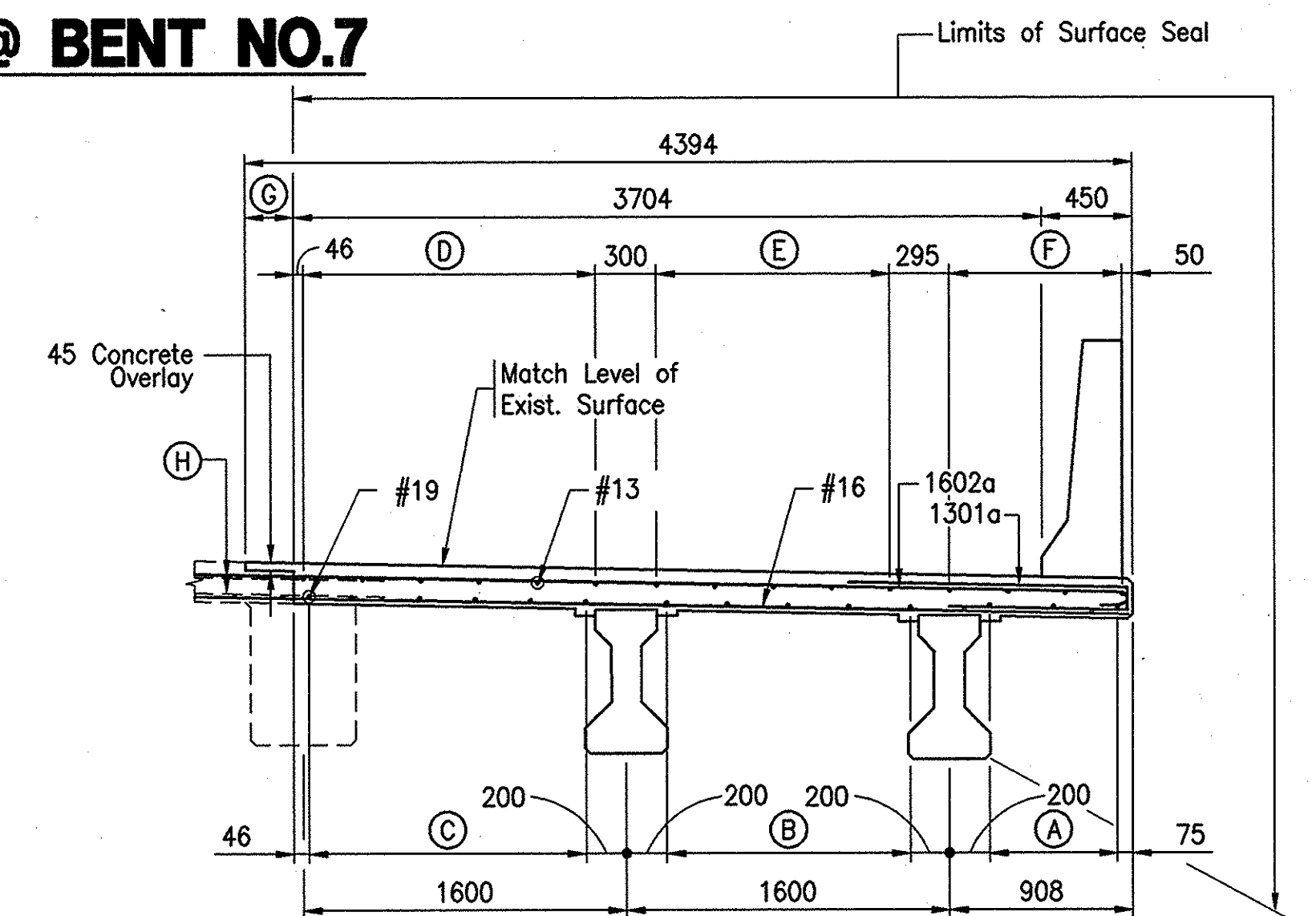
EAST COPING @ PIERS NO.5 or NO.6

Scale: 1:30



NORTHEAST CORNER @ BENT NO.7

Scale: 1:30



SECTION P-P

Scale: 1:30

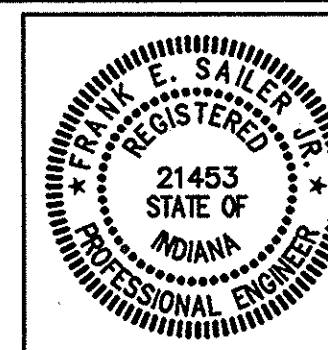
LEGEND

- (A) 2 Eq. Spa. = 633
- (B) 4 Spa. @ 300 = 1200
- (C) 5 Spa. @ 280 = 1400
- (D) 5 Spa. @ 300 Max. = 1450
- (E) 4 Spa. @ 300 Max. = 1155
- (F) 3 Spa. @ 300 Max. = 858
- (G) 240
- (H) Clean, Straighten and Extend Exist. Reinforcing 600 Into New Construction

NOTES

All dimensions shown are in millimeters and all elevations and stations are in meters unless noted.

File: 9661FLR6



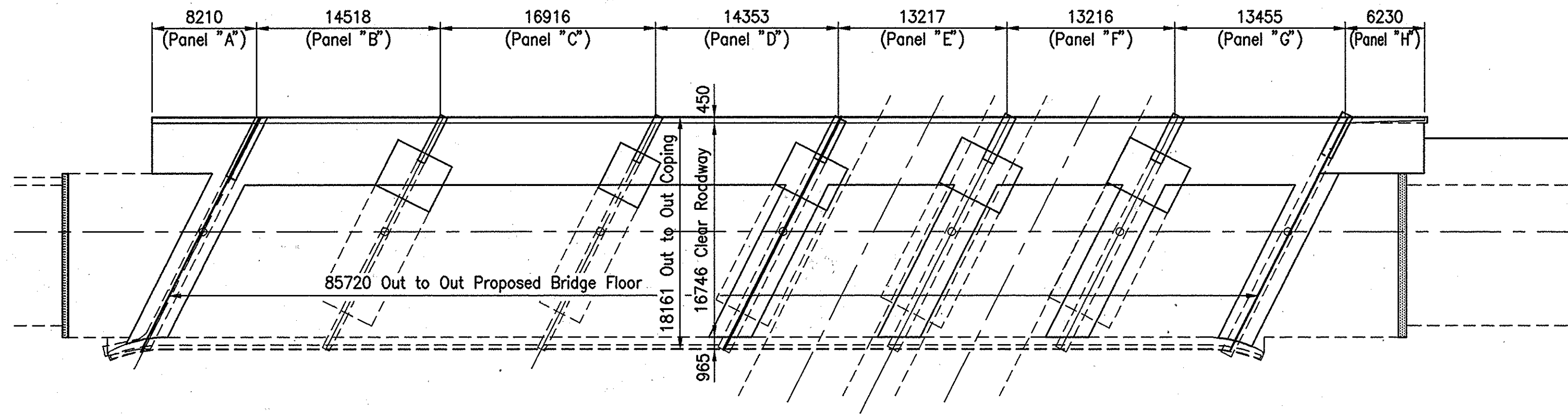
RECOMMENDED FOR APPROVAL: *Frank E. Sailer, Jr.* 1/19/99
DESIGN ENGINEER DATE

DESIGNED: JAP DRAWN: MBW
CHECKED: MJM CHECKED: RMG

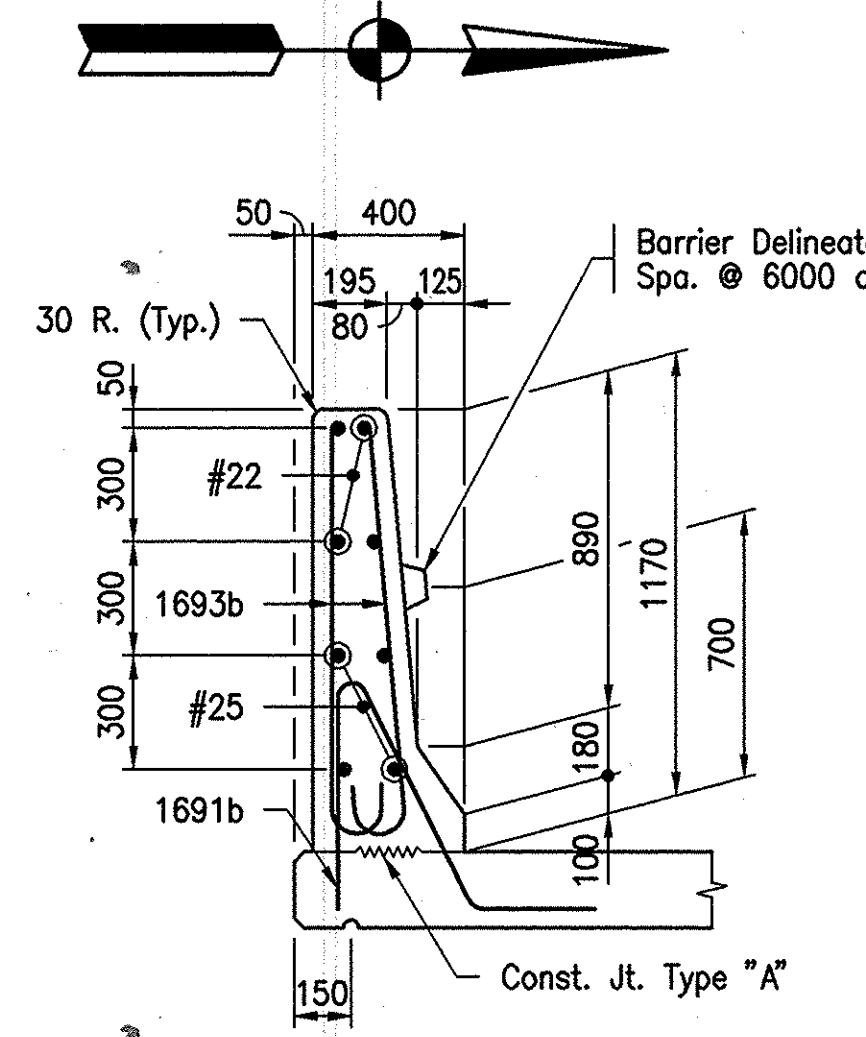
INDIANA DEPARTMENT OF TRANSPORTATION

CORNER DETAILS

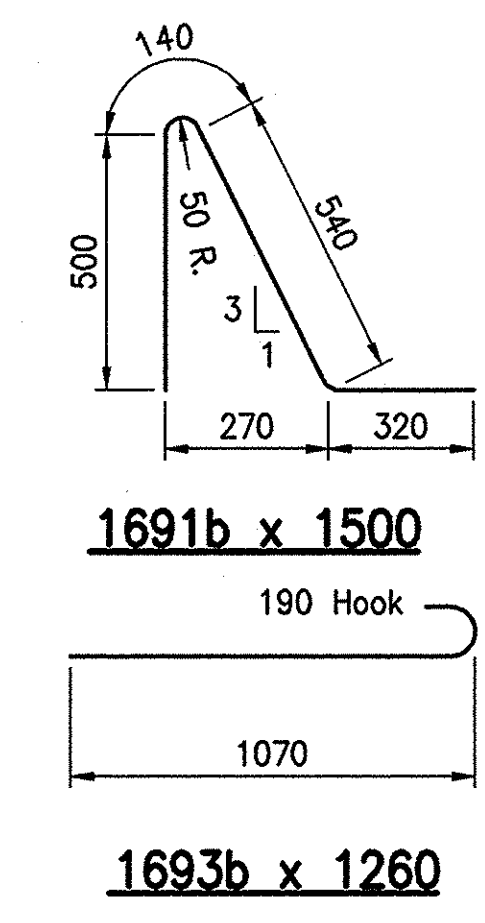
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	55 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



RAILING PLAN
NO SCALE

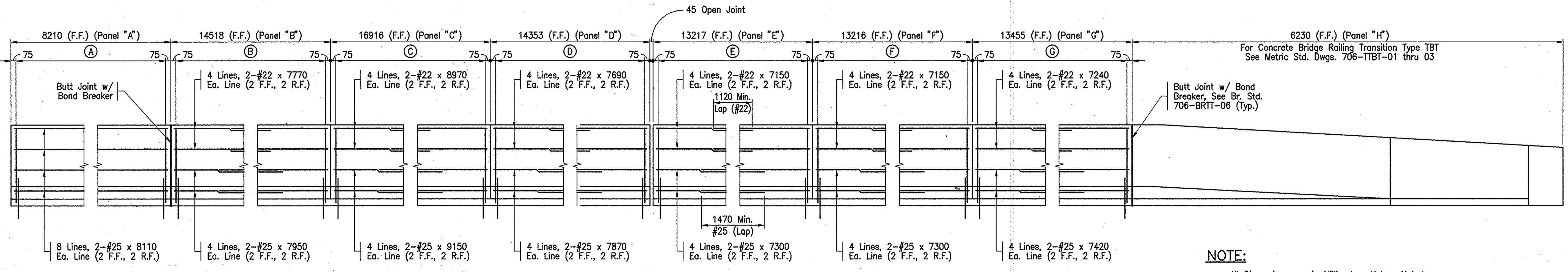


SECTION A-A
Scale: 1:20



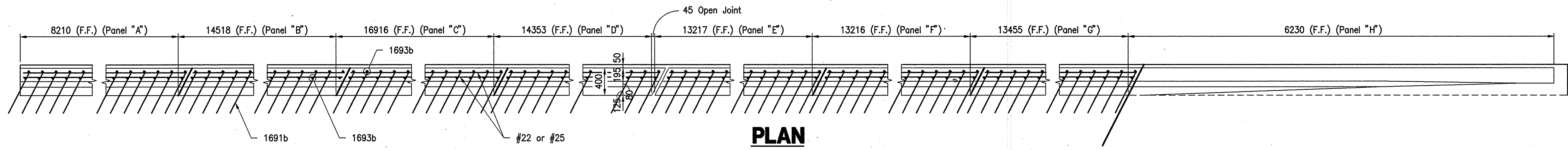
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#25	8	9150	
#25	16	8110	
#25	8	7950	
#25	8	7870	
#25	8	7420	
#25	16	7300	
TOTAL #25			2009
#22	8	8970	
#22	8	7770	
#22	8	7690	
#22	8	7240	
#22	16	7150	
TOTAL #22			1119
1691b	475	1500	
1693b	950	1260	
TOTAL #16			2964
TOTAL REINFORCING STEEL			6092
CONCRETE			
CONCRETE, C, IN RAILING			
PANEL "A" (1 @ 2.5 m3)	2.5 m3		
PANEL "B" (1 @ 4.5 m3)	4.5 m3		
PANEL "C" (1 @ 5.2 m3)	5.2 m3		
PANEL "D" (1 @ 4.4 m3)	4.4 m3		
PANEL "E" (1 @ 4.1 m3)	4.1 m3		
PANEL "F" (1 @ 4.1 m3)	4.1 m3		
PANEL "G" (1 @ 4.2 m3)	4.2 m3		
TOTAL CONC., C IN RAILING	29.0 m3		
MISCELLANEOUS			
CONC. BR. RAILING TRANS. TYPE TBT	1	EACH	
BARRIER DELINEATOR	17	EACH	

- LEGEND**
- (A) 41 Spa. @ 200 Max. = 8060 (42-1693b F.F., 42-1693b R.F. & 42-1691b)
 - (B) 72 Spa. @ 200 Max. = 14368 (73-1693b F.F., 73-1693b R.F. & 73-1691b)
 - (C) 84 Spa. @ 200 Max. = 16766 (85-1693b F.F., 85-1693b R.F. & 85-1691b)
 - (D) 72 Spa. @ 200 Max. = 14203 (73-1693b F.F., 73-1693b R.F. & 73-1691b)
 - (E) 66 Spa. @ 200 Max. = 13112 (67-1693b F.F., 67-1693b R.F. & 67-1691b)
 - (F) 66 Spa. @ 200 Max. = 13066 (67-1693b F.F., 67-1693b R.F. & 67-1691b)
 - (G) 67 Spa. @ 200 Max. = 13305 (68-1693b F.F., 68-1693b R.F. & 68-1691b)



ELEVATION
Scale: 1:30

NOTE:
All Dimensions are in Millimeters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.



PLAN
Scale: 1:30

File: 9661CBRT1



RECOMMENDED FOR APPROVAL	<i>Frank E. Sailer Jr.</i>	1/19/99
DESIGNED:	JAP	DATE
DRAWN:	MBW	
CHECKED:	MJM	
		DATE
		RMG

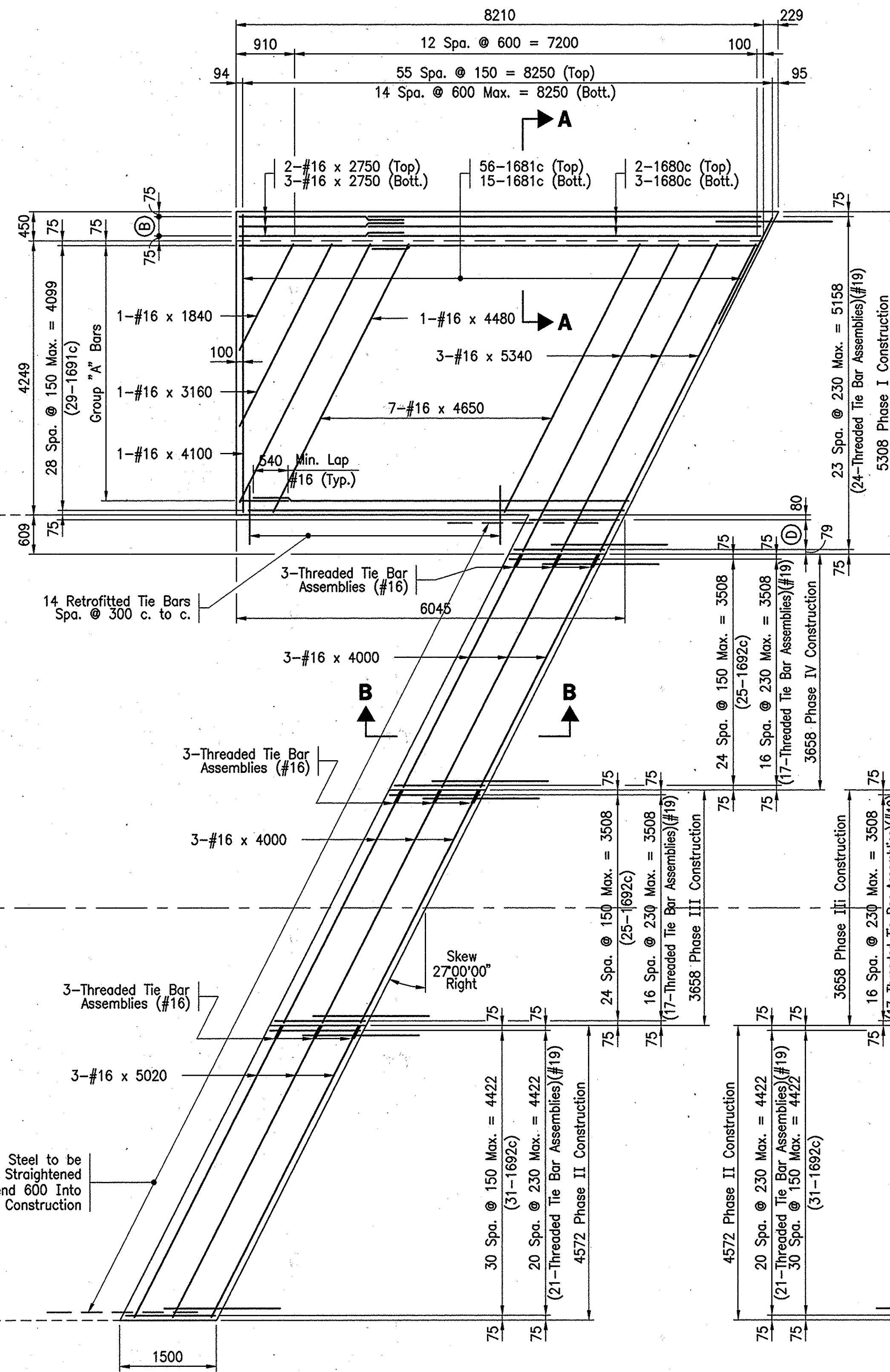
INDIANA
DEPARTMENT OF TRANSPORTATION

CONCRETE BRIDGE
RAILING DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	56 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

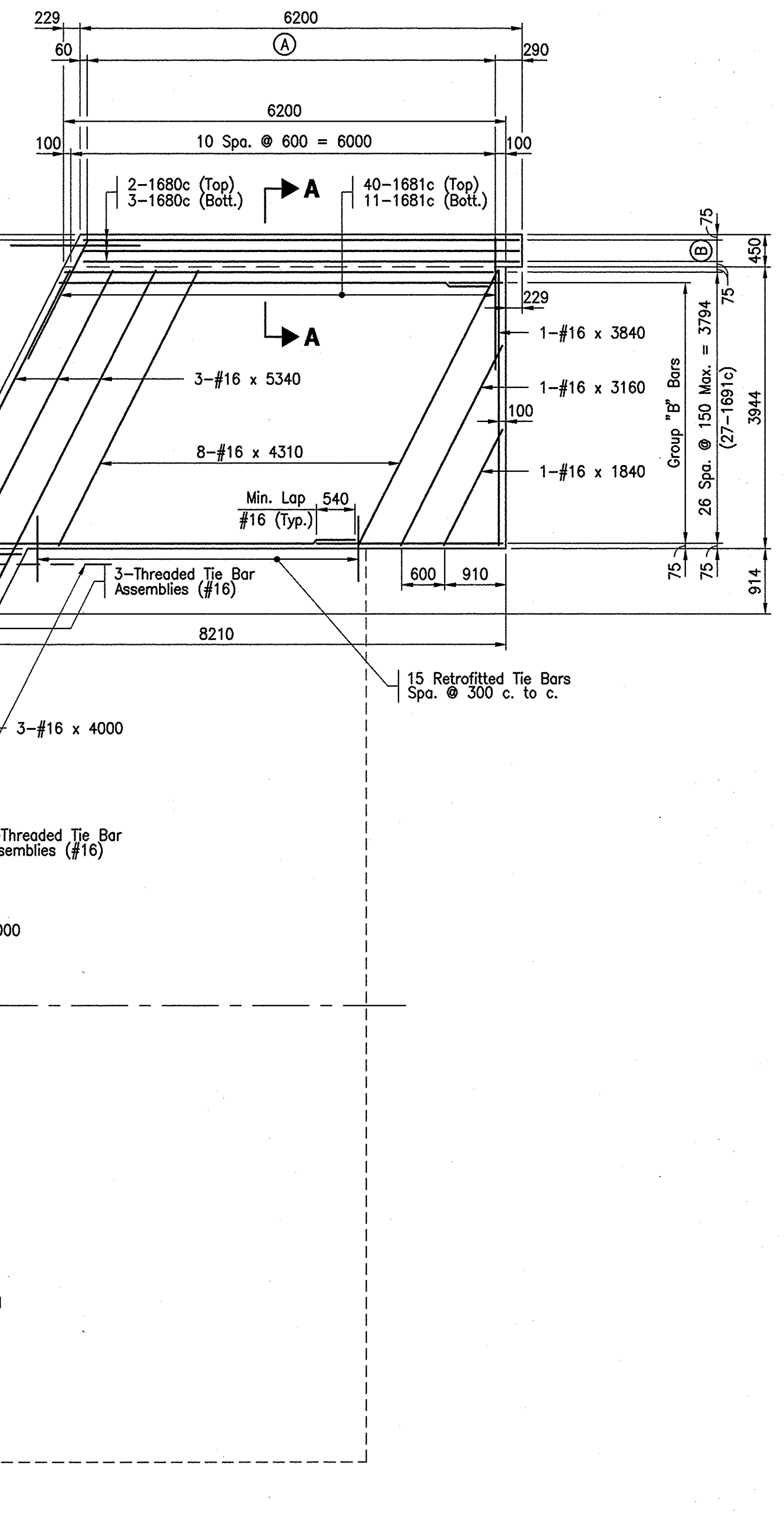
LEGEND

- (A) 39 Spa. @ 150 = 5850 (Top)
10 Spa. @ 600 max. = 5850 (Bott.)
- (B) 1 Spa. @ 300 = 300 (Top)
2 Spa. @ 150 = 300 (Bott.)
- (C) 6 Spa. @ 150 Max. = 764
(7-1692c)
- (D) 3 Spa. @ 150 = 450
(4-1692c)



PLAN - SOUTHWEST APPROACH SLAB

Scale: 1:50



PLAN - NORTHWEST APPROACH SLAB

Scale: 1:50

NOTE:

All Dimensions are in Millimeters Unless Noted.
For Details of Retrofitted Tie Bars, See Stds. 501-CCPJ-07 and 501-CCPJ-08.

File: 9661APP1

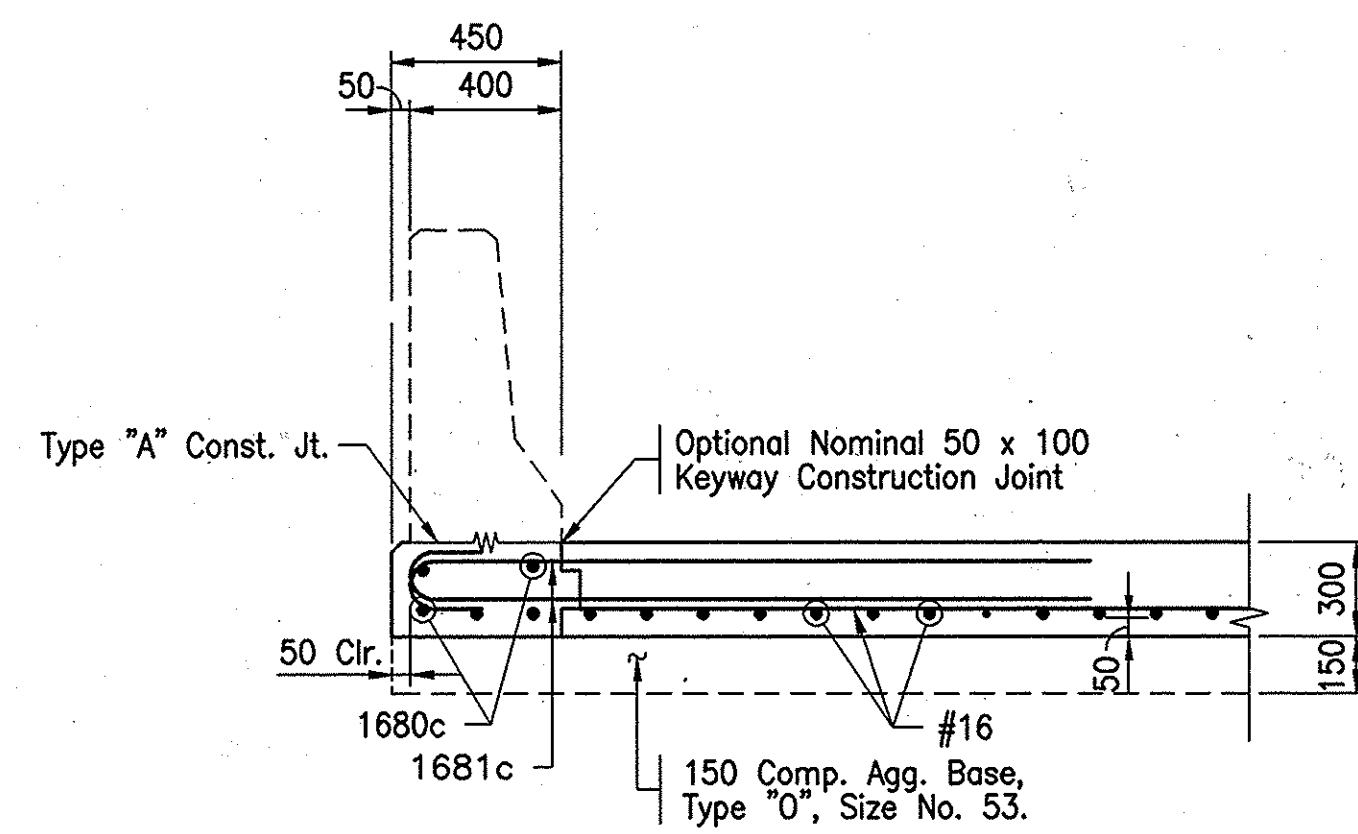


RECOMMENDED FOR APPROVAL	<i>John E. Sailer, Jr.</i>	1/19/99
DESIGNED:	JAP	DATE
CHECKED:	MJM	
DRAWN:	MBW	
CHECKED:	RMG	

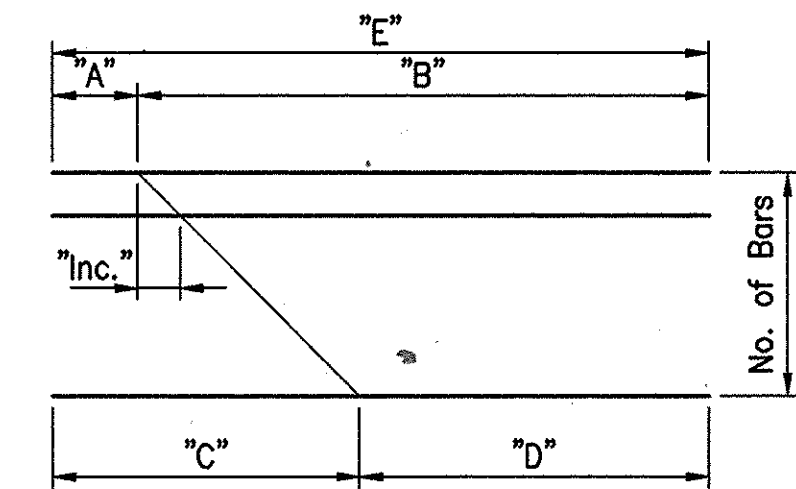
**INDIANA
DEPARTMENT OF TRANSPORTATION**

**APPROACH SLAB
DETAILS**

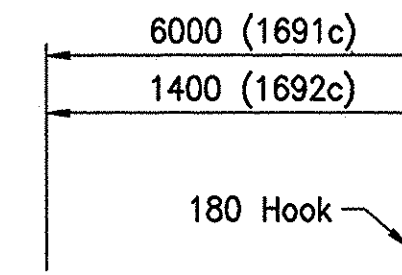
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	57 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



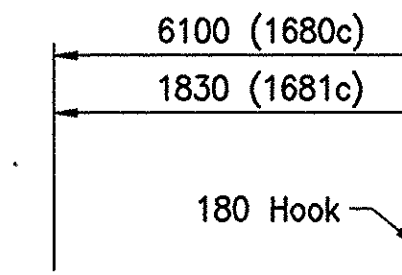
SECTION A-A
Scale: 1:20



GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
A	#16	600	2610	1570	1640	3210	74 ±	14
B	#16	750	2610	1640	1720	3360	74 ±	13



1691c x 6180
1692c x 1580



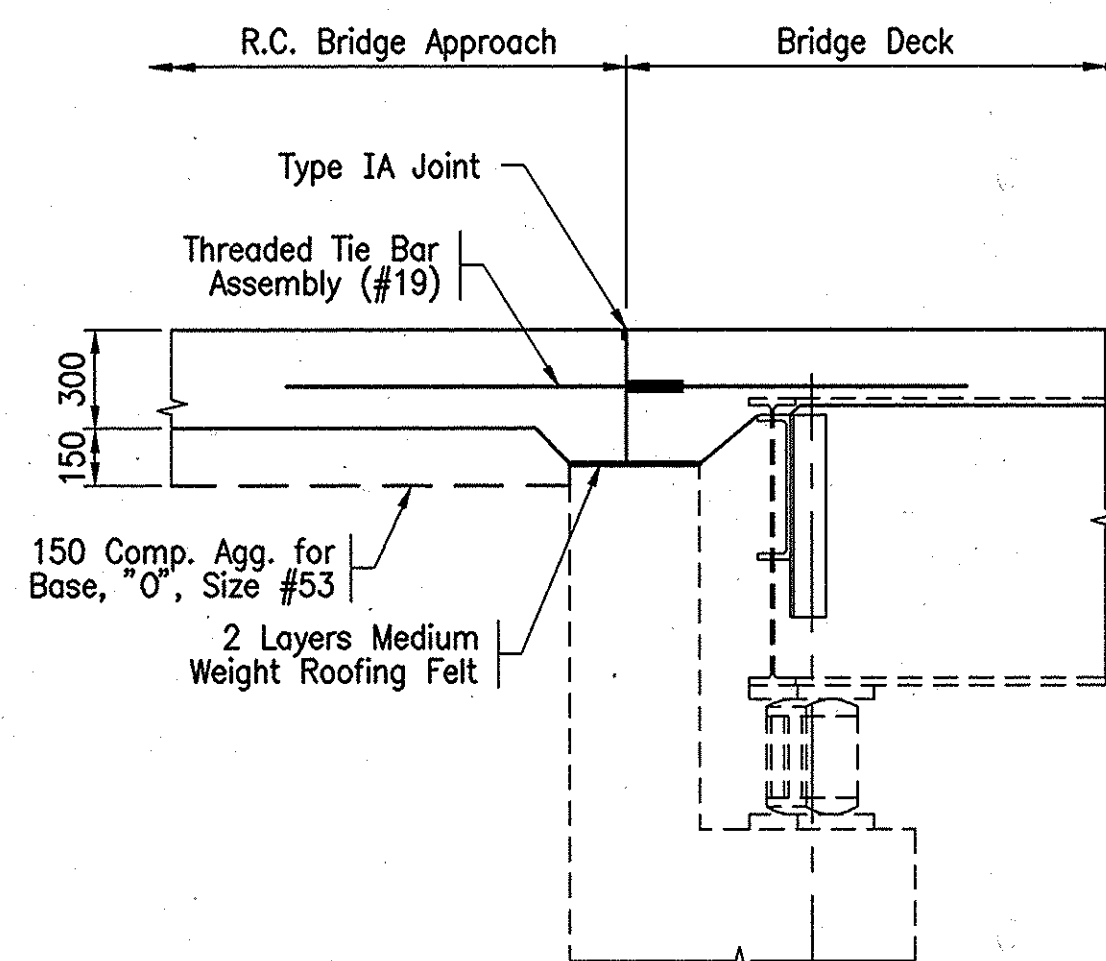
1680c x 6280
1681c x 2010

BILL OF MATERIALS FOR SOUTHWEST APPROACH SLAB

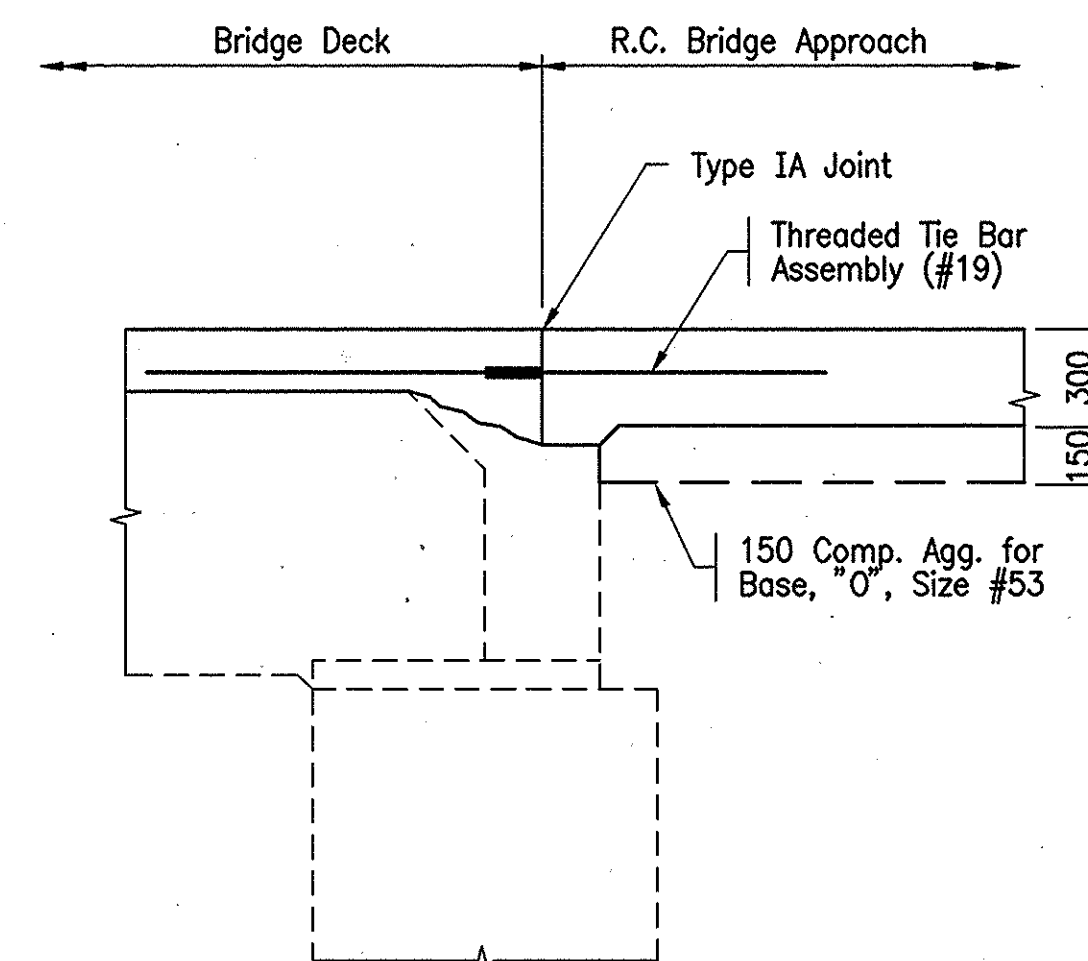
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1680c	5	6280	
1681c	71	2010	
1691c	29	6180	
1692c	85	1580	
Group "A"	14	3210	
#16	3	5340	
#16	3	5020	
#16	7	4650	
#16	1	4480	
#16	1	4100	
#16	6	4000	
#16	1	3160	
#16	5	2750	
#16	1	1840	
TOTAL #16			1005
TOTAL REINFORCING STEEL			1005
MISCELLANEOUS			
CEMENT CONC. PWMT., REINF., 300 mm		52.8	m2
COMP. AGG. FOR BASE, 0, SIZE NO.53		18.8	Mg
THREADED TIE BAR ASSEMBLY		88	EACH
PAVEMENT REMOVAL		30.3	m2
RETROFITTED TIE BARS		14	EACH
SURFACE SEAL (EST. 49 m2)			LSUM ITEM

BILL OF MATERIALS FOR NORTHWEST APPROACH SLAB

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1680c	5	6280	
1681c	51	2010	
1691c	27	6180	
1692c	88	1580	
Group "B"	13	3360	
#16	3	5340	
#16	3	5020	
#16	8	4310	
#16	6	4000	
#16	1	3840	
#16	1	3160	
#16	1	1840	
TOTAL #16			903
TOTAL REINFORCING STEEL			903
MISCELLANEOUS			
CEMENT CONC. PWMT., REINF., 300 mm		50.5	m2
COMP. AGG. FOR BASE, 0, SIZE NO.53		17.9	Mg
THREADED TIE BAR ASSEMBLY		88	EACH
PAVEMENT REMOVAL		29.4	m2
RETROFITTED TIE BARS		15	EACH
SURFACE SEAL (EST. 48 m2)			LSUM ITEM



SECTION B-B
Scale: 1:20

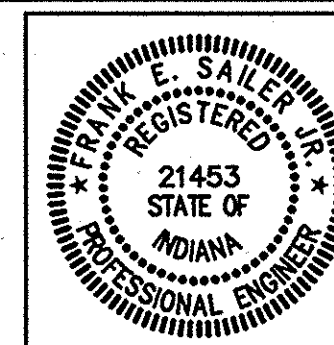


SECTION C-C
Scale: 1:20

NOTE:

All Dimensions are in Millimeters Unless Noted.
For Reinforcing Bar Notes, See Br. Std. 703-BRST-01.

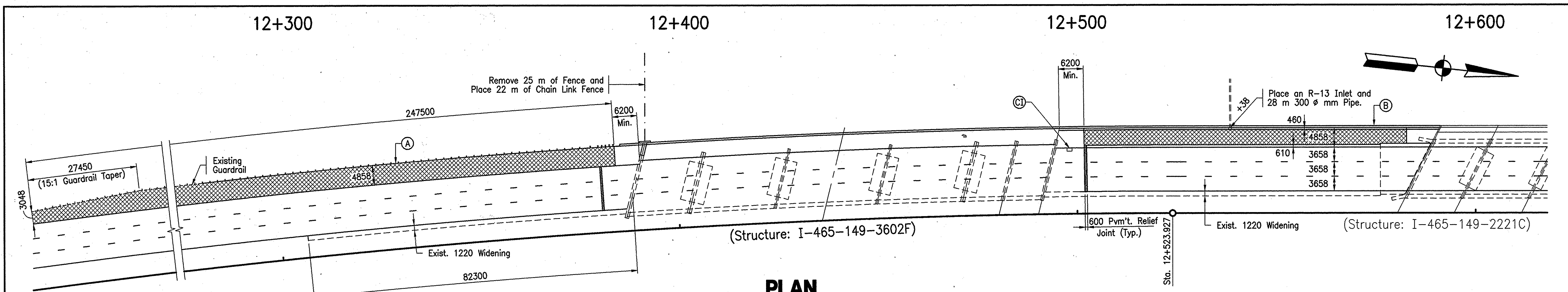
File: 9661APP2



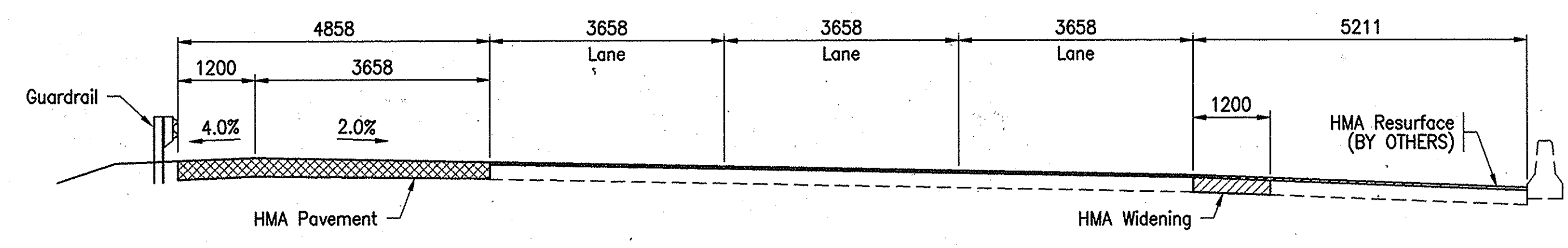
RECOMMENDED FOR APPROVAL	<i>Frank P. Sailer Jr.</i>	1/19/99
DESIGNED:	JAP	DRAWN: MBW
CHECKED:	MJM	CHECKED: RMG

INDIANA DEPARTMENT OF TRANSPORTATION	
APPROACH SLAB DETAILS	

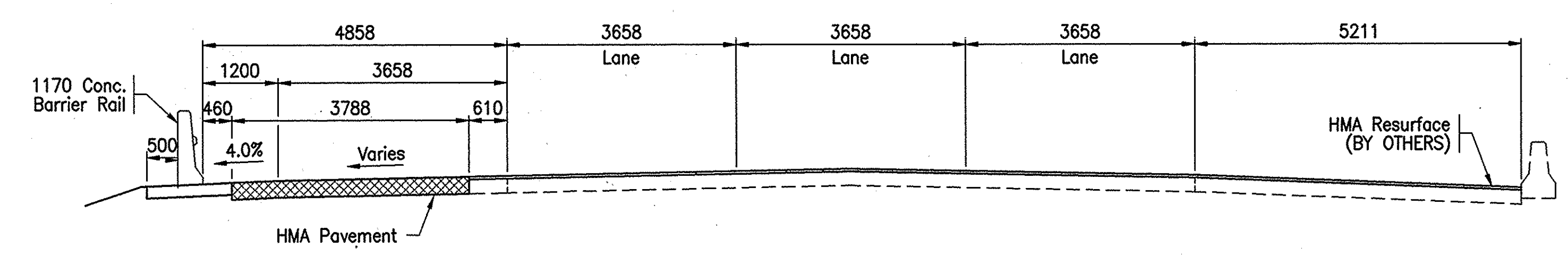
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-2221C(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704213
SURVEY BOOK	SHEETS
	58 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



PLAN
Scale: 1:500



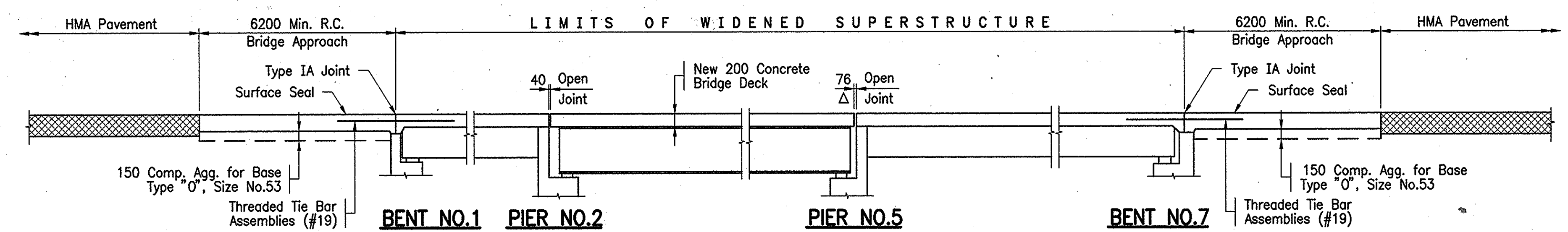
TYPICAL SECTION - SOUTH END
No Scale



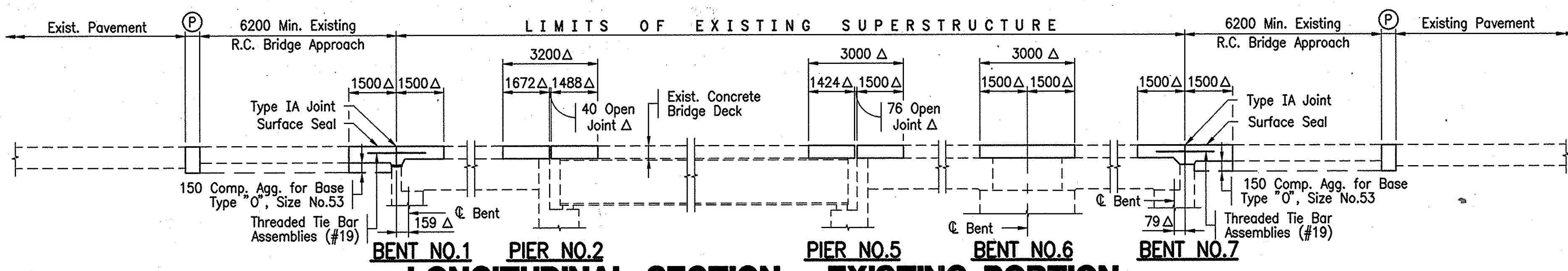
TYPICAL SECTION - NORTH END
No Scale

EARTHWORK SUMMARY

FILL	1976 m ³
+25% Shrinkage	494 m ³
- CUT	-379 m ³
TOTAL BORROW	2091 m³
CUT	379 m ³
BENCHING	2841 m ³
TOTAL COMMON EXCAVATION	3220 m³



LONGITUDINAL SECTION - WIDENED PORTION
Not To Scale



LONGITUDINAL SECTION - EXISTING PORTION
Not To Scale

GUARDRAIL LEGEND

- (A) 99.06 m EA. Guardrail, Transition, Type TGB
- 145.00 m EA. Guardrail, W-Beam, 1905 Spa. (Attach to Exist.)
- 106.70 m Removal of Guardrail
- (B) 40.35 m 1170 Concrete Barrier Rail
- 47.1 m Removal of Guardrail

HMA

- INCLUDES:
- HMA Pavement = 1358 Mg
 - Pavement Relief Joint = 14 Mg
 - TOTAL = 1372 Mg**

MATERIAL NOTES

- HMA PAVEMENT**
- 75 Kg/m² QC/QA HMA Surface 9.5 mm, Mainline over
 - 165 Kg/m² HMA Intermediate 19.0 mm, Mainline over
 - 780 Kg/m² HMA Base 25.0 mm, Mainline
 - QC/QA HMA Surface 9.5 mm, Mainline P.G. Binder to be 70-22
- PAVEMENT RELIEF JOINT**
- 1020 kg/m² HMA Base 25.0 mm, Mainline

GUARDRAIL SUMMARY

- 40.35 m Concrete Barrier
- 1 EA. Guardrail, Transition, Type TGB
- 99.06 m EA. Guardrail, W-Beam, 1905 Spa.
- 145.00 m Guardrail, Reset
- 153.8 m Removal of Guardrail

LEGEND

- (CI) Cap Inlet
- (P) 600 Pavement Relief Joint
- HMA Widening
- HMA Pavement
- Δ Measured Along C Roadway

BRIDGE DECK OVERLAY

- 45 Modified Portland Cement Concrete Overlay

NOTE:
All Dimensions are in Millimeters and all Stations and Elevations are in Meters, Unless Noted.

File: 9660LAY1



RECOMMENDED FOR APPROVAL	<i>Frank E. Sailer Jr.</i>	1/19/99
DESIGNED:	FES	DATE
DRAWN:	MBW	
CHECKED:		FES

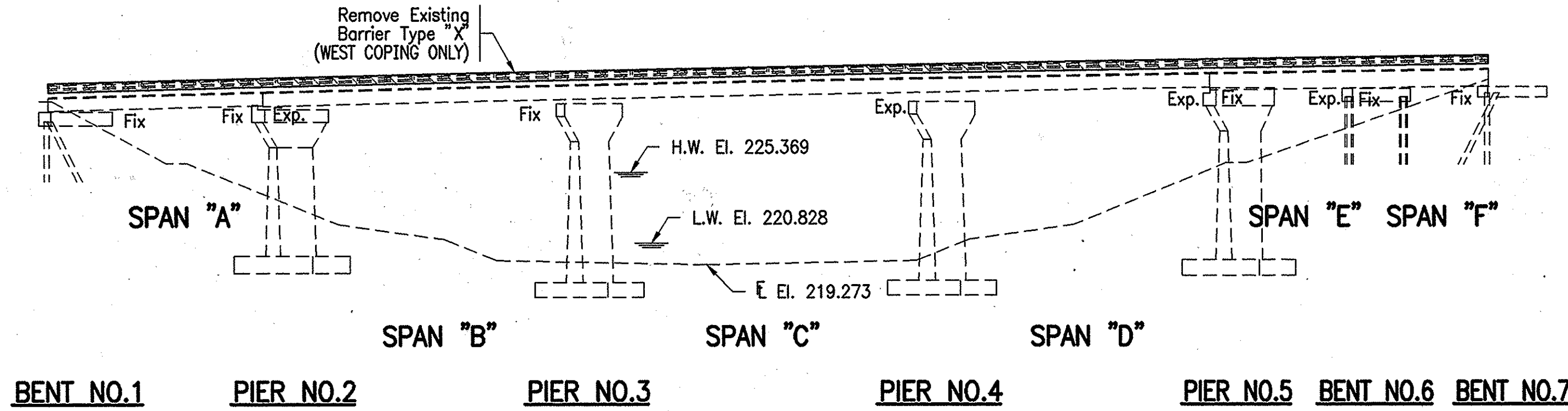
INDIANA DEPARTMENT OF TRANSPORTATION

LAYOUT I-465-149-3602F (SB)

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	60 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

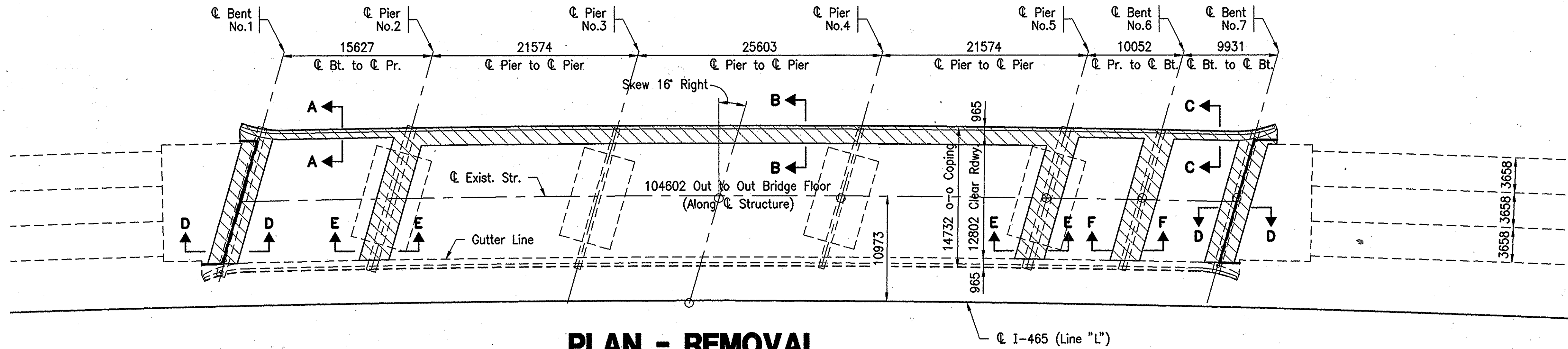
CURVE DATA
 PVI Sta. 12+603.480
 El. = 237.814
 V.C. = 487.68 m
 G1 = +2.92%
 G2 = -2.92%

STRUCTURE TO BE BUILT TO A 487.68 m VERTICAL CURVE & A 2182.969 m RADIUS HORIZONTAL CURVE



ELEVATION - REMOVAL

Scale: 1:300



PLAN - REMOVAL

Scale: 1:300

GENERAL NOTES

Plans for the existing structure are on file in the Central Office as Bridge File I-465-149-3602 I-465-149-3602A, B, C, D, & E and are available upon request.

Where new work is to be fitted to old work, the Contractor shall check all dimensions and conditions in the field and report any errors or discrepancies to the Engineer and assume responsibility for their correctness and the fit of the new part to old.

The handchipping and cleaning of deteriorated deck areas shall be as directed by the Engineer. It is the intent of these plans that all such deteriorated concrete be removed and should there be any doubt as to the quality of the concrete, removal shall continue until PERFECTLY SOUND CONCRETE is exposed.

The boundaries of full depth removal areas shall be saw cut. All saw cuts for full depth removals shall be made to a minimum depth of 25 below the original surface or to the top of reinforcing if cover is less than 25.

Chamfer exposed edges 25 unless noted.

Reinforcing cover shall be 65 in top and 25 in bottom of floor slabs, 75 in footings, except bottom steel which shall be 100, and 50 in all other parts unless noted.

All Surface Seal to be paid for as Lump Sum.

Clean and seal new concrete bridge deck, new bridge railing, coping, bottom of bridge deck to exterior beam and exterior face of concrete I-Beam as shown on the plans.

Clean and Seal Pier Caps at Piers No.2 and No.5.

Clean and Seal front face of Mudwalls, Bridge Seats and Exposed face of Wingwalls at End Bents.

Clean and seal top of R. C. Bridge Approaches.

Estimated Quantity of Surface Seal = 1458 m².

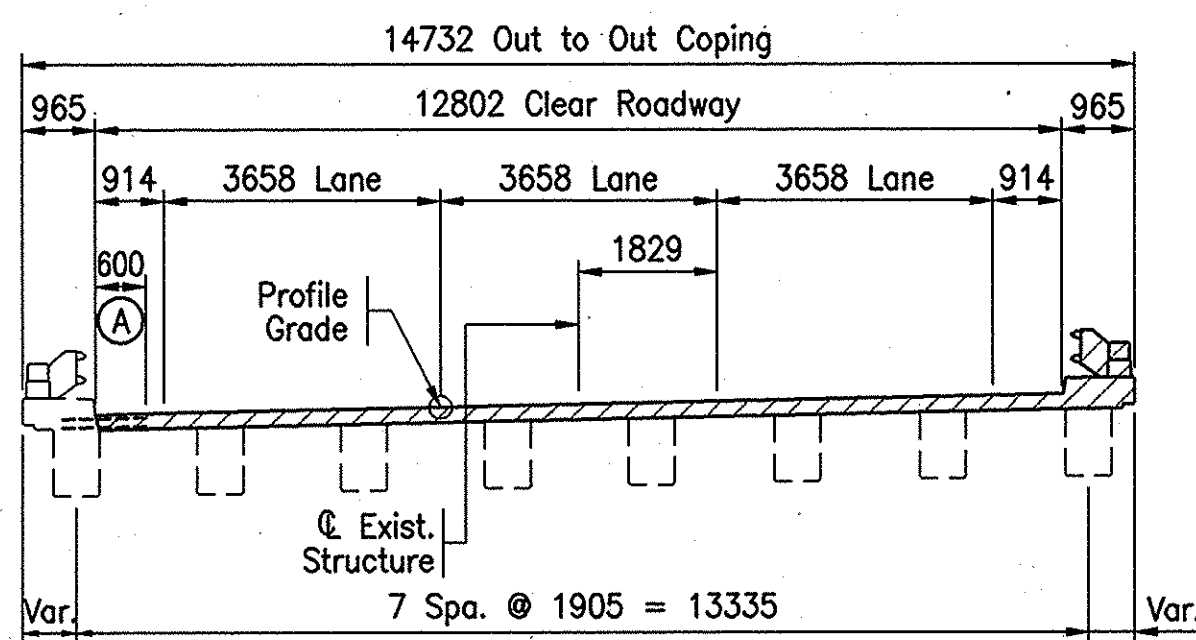
Remove and reset roadway and bridge reference signs.

DESIGN DATA

Allowable Design Stresses:
 Class "C" Concrete $f'_c = 27$ MPa
 Class "A" Concrete $f'_c = 24$ MPa
 Class "B" Concrete $f'_c = 21$ MPa
 Reinforcing Steel (Grade 60) $f_y = 410$ MPa

LEGEND

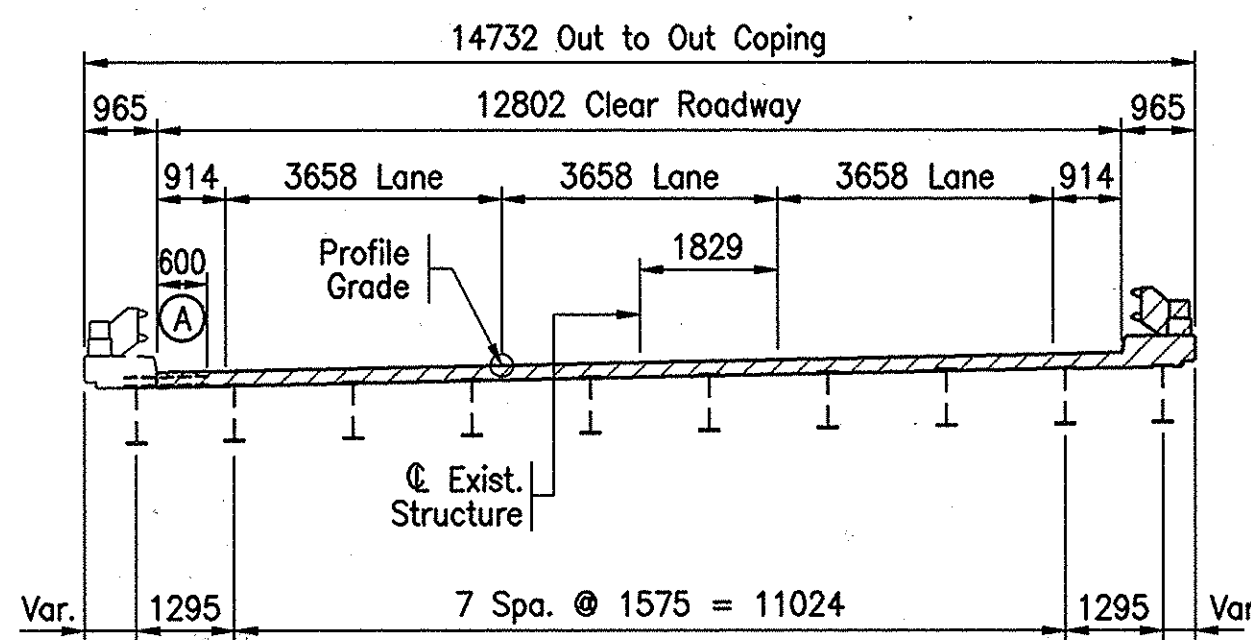
- Hatching Indicates Removal
- Existing Transverse Slab Reinforcing to be Cleaned, Straightened and Left in Place.



(SPAN "A")

FULL WIDTH REMOVAL SECTION

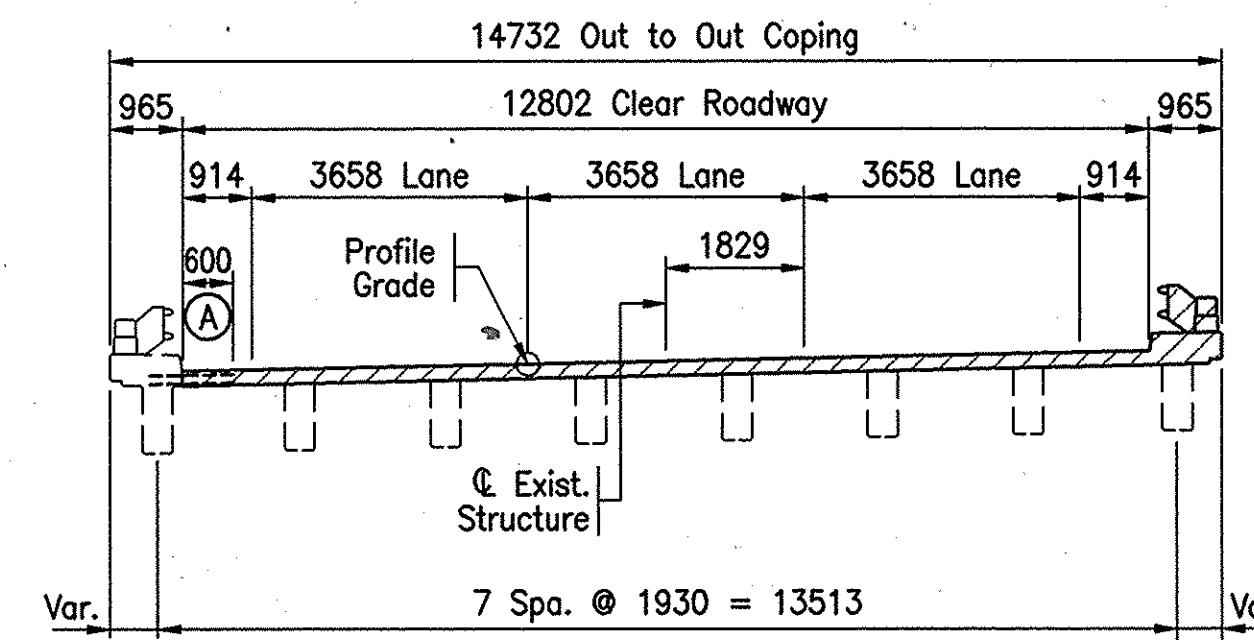
Scale: 1:100



(SPANS "B", "C", & "D")

FULL WIDTH REMOVAL SECTION

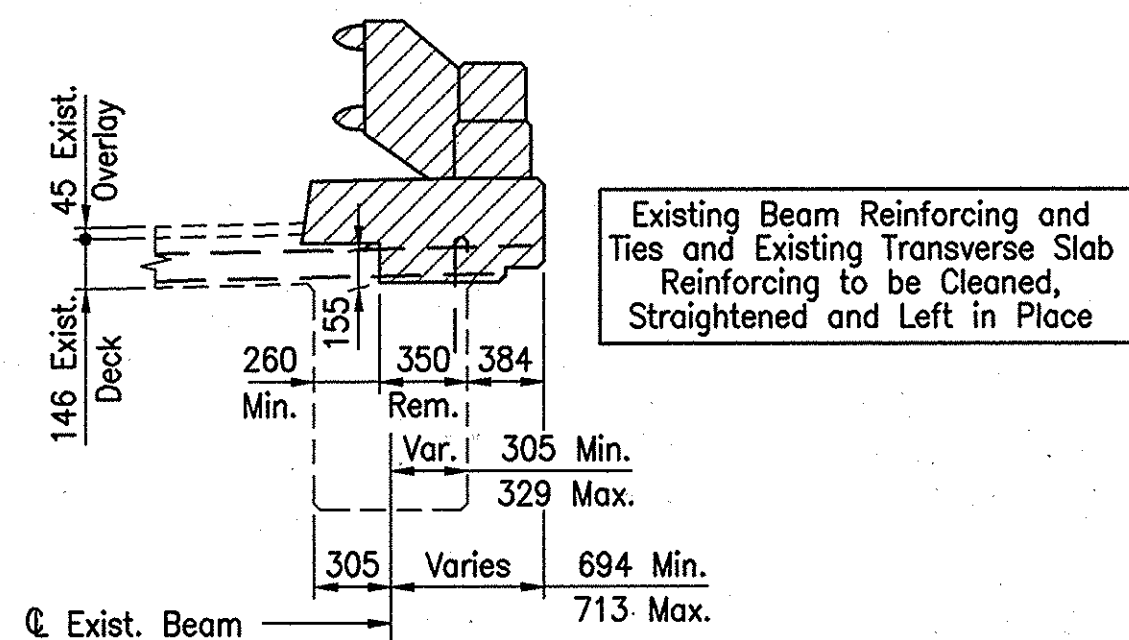
Scale: 1:100



(SPANS "E" & "F")

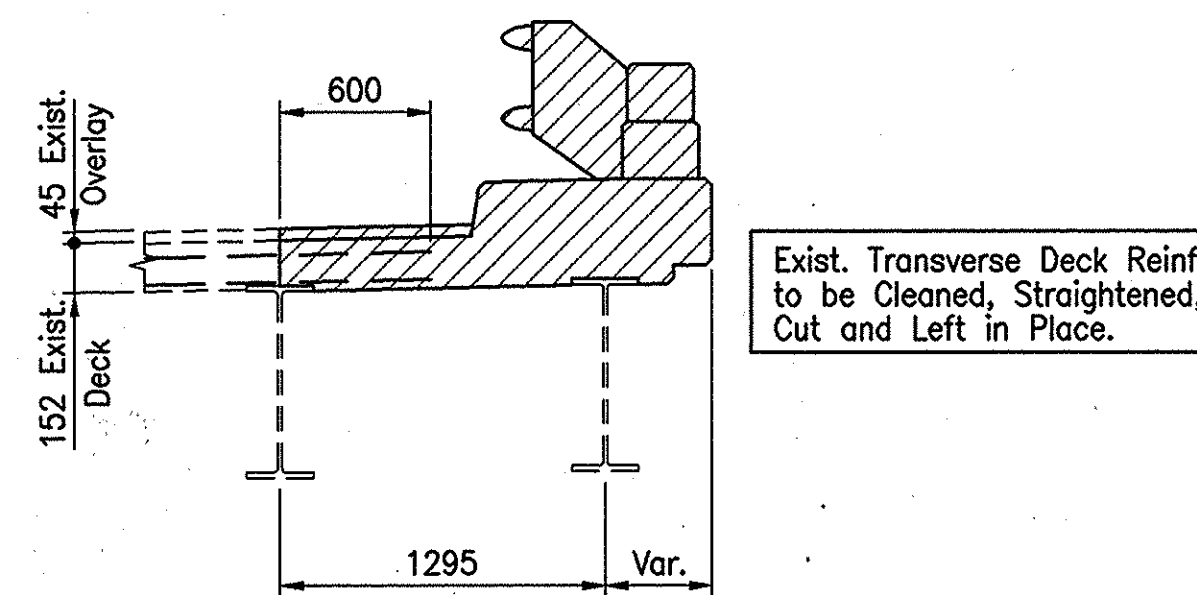
FULL WIDTH REMOVAL SECTION

Scale: 1:100



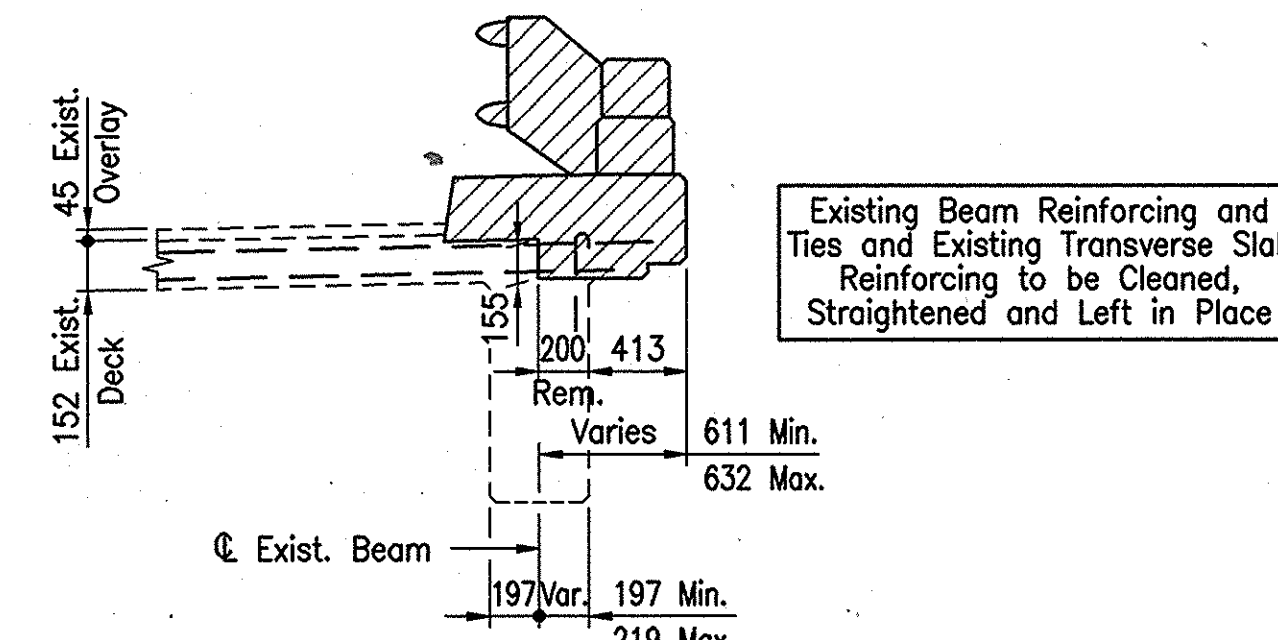
SECTION A-A - REMOVAL

Scale: 1:30



SECTION B-B - REMOVAL

Scale: 1:30



SECTION C-C - REMOVAL

Scale: 1:30

NOTE:

All Dimension are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

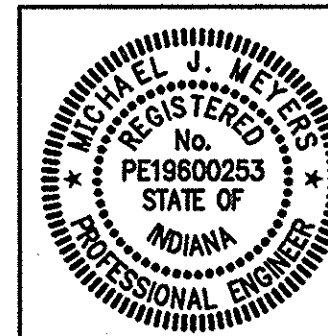
For Sections D-D, E-E, & F-F and Additional Removal Details, See Sheet 66.

File: 9660GP1

CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE GIRDER BRIDGE

15.62 m, 21.57 m, 25.60 m, 21.57 m, 10.05 m, 9.93 m
 SKEW: 16° RIGHT; 12802 CLEAR ROADWAY
 I-465 OVER BIG EAGLE CREEK

MARION COUNTY



RECOMMENDED FOR APPROVAL *Michael J. Meyer* 1/19/99
 DESIGN ENGINEER DATE

DESIGNED: MJM DRAWN: MBW
 CHECKED: JAP CHECKED: FES

INDIANA DEPARTMENT OF TRANSPORTATION

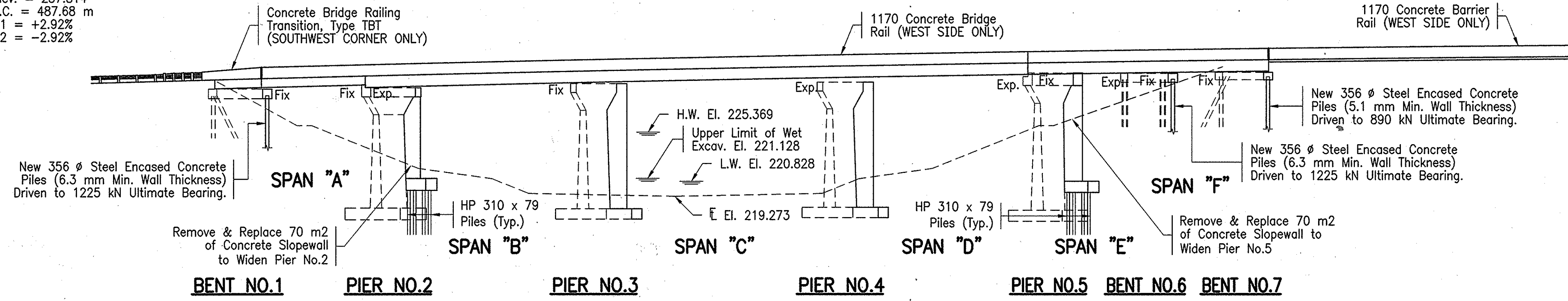
GENERAL PLAN
I-465-149-3602F (SB)

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	61 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

CURVE DATA

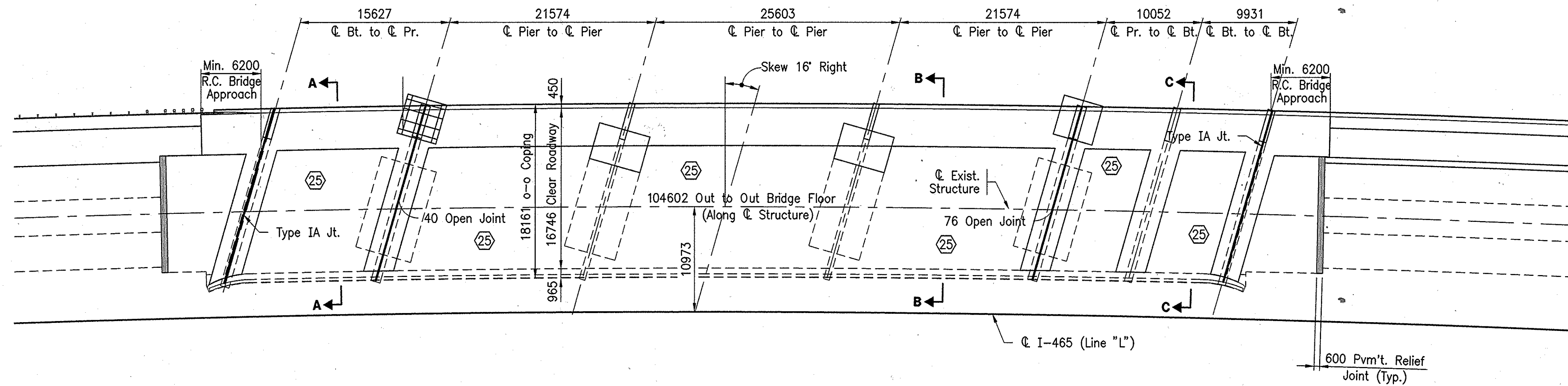
PVI Sta. 12+603.480
 Elev. = 237.814
 V.C. = 487.68 m
 G1 = +2.92%
 G2 = -2.92%

STRUCTURE TO BE BUILT TO A 487.68 m VERTICAL CURVE & A 2182.969 m RADIUS HORIZONTAL CURVE



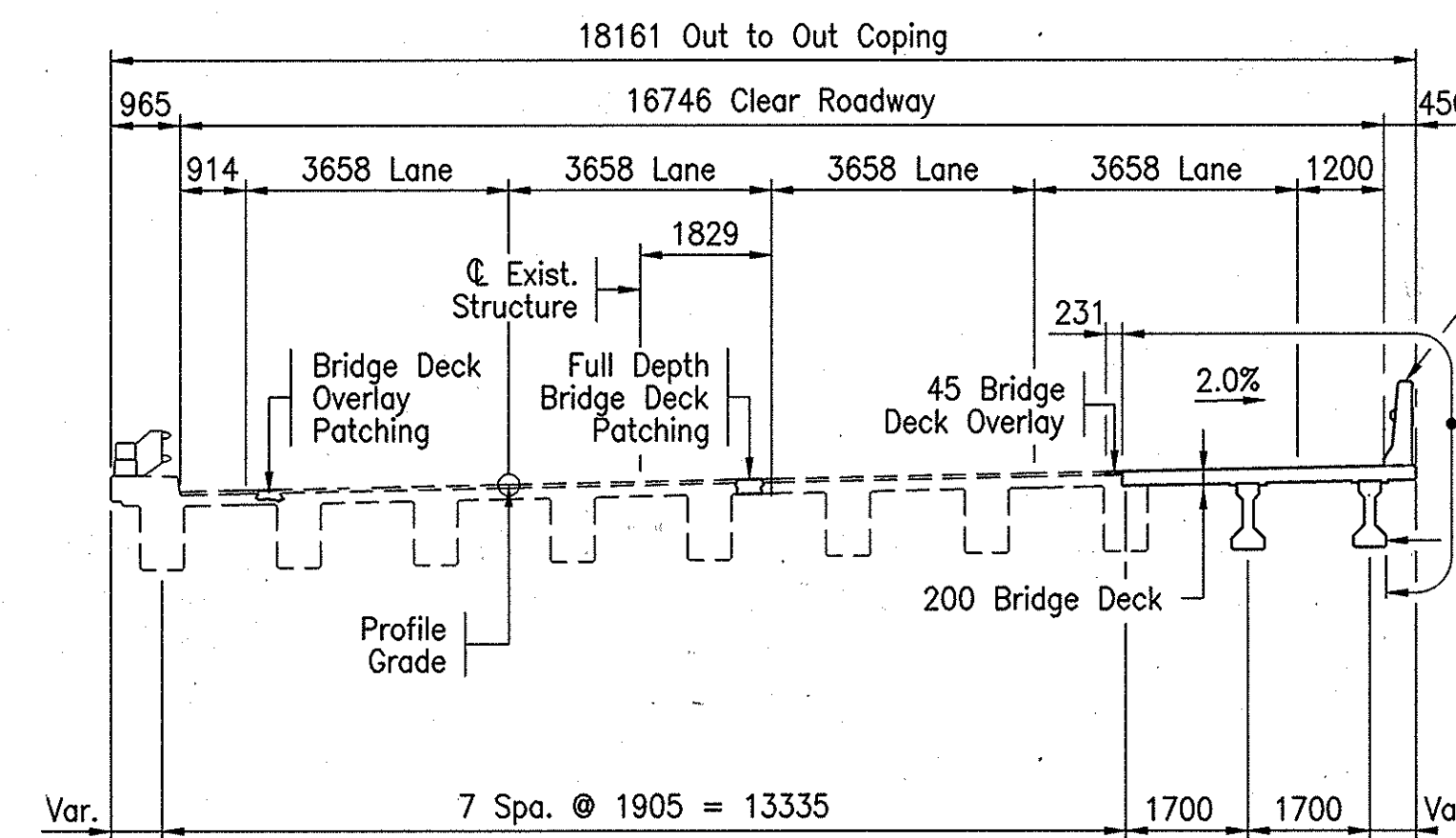
ELEVATION - RECONSTRUCTION

Scale: 1:300



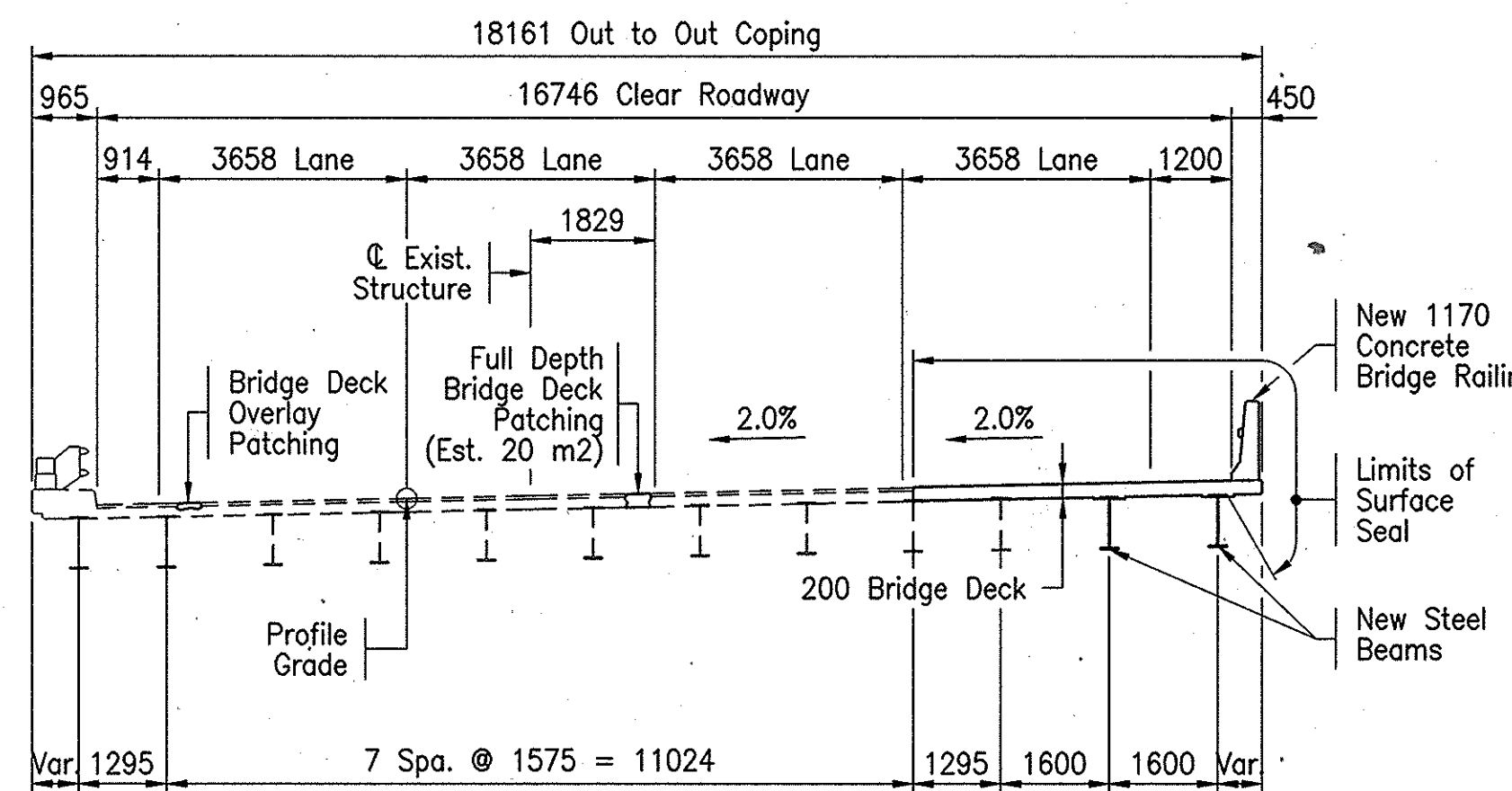
PLAN - RECONSTRUCTION

Scale: 1:300



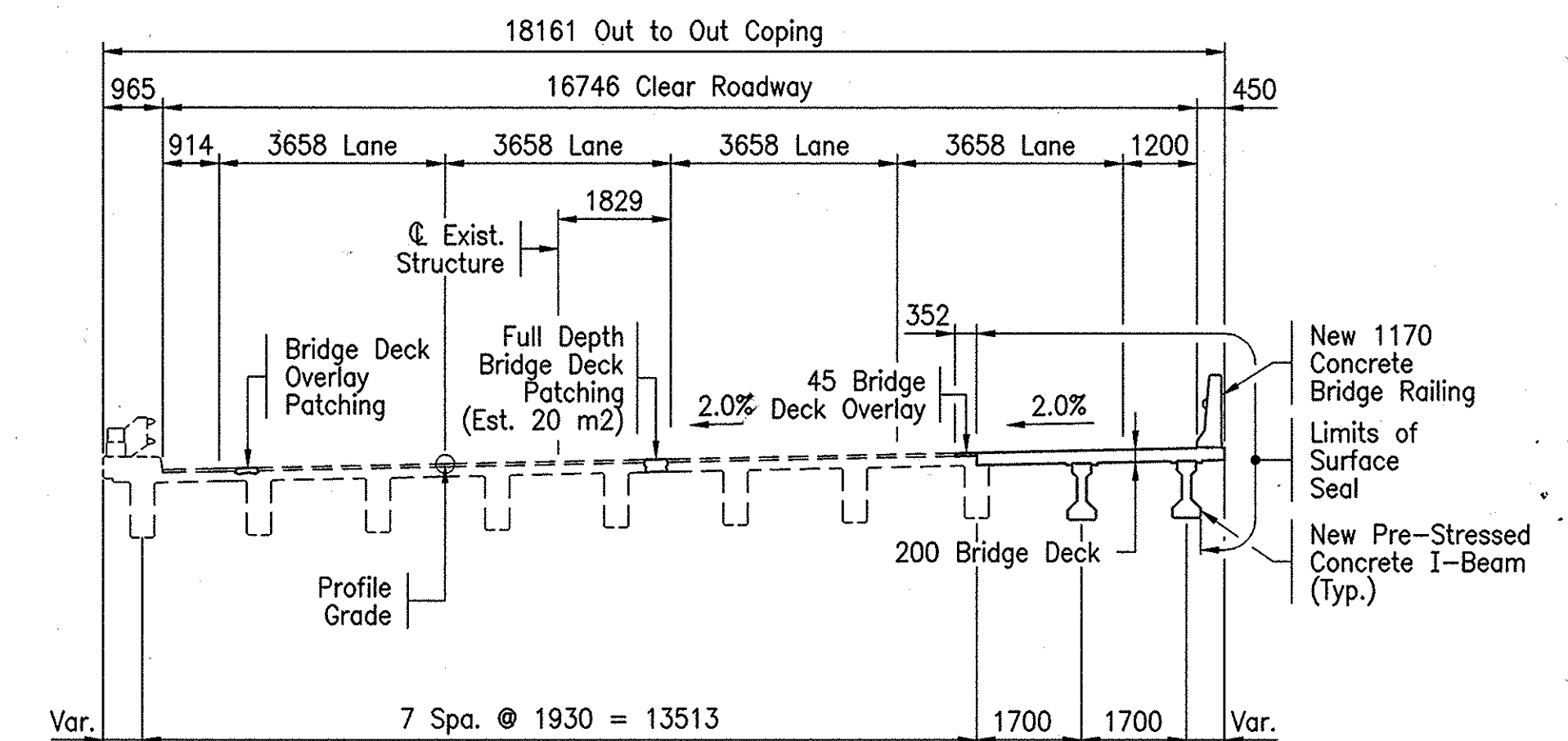
SECTION A-A - RECONSTRUCTION

Scale: 1:100



SECTION B-B - RECONSTRUCTION

Scale: 1:100



SECTION C-C - RECONSTRUCTION

Scale: 1:100

LEGEND

○ Indicates Estimated Percentage of Bridge Deck Overlay Patching Per Span

PILE LOADS			
BENT	NO.1	NO.6	NO.7
ALLOWABLE DESIGN LOAD	490 kN	490 kN	356 kN
FACTOR OF SAFETY	2.5	2.5	2.5
FACTORED DESIGN LOAD	1225 kN	1225 kN	890 kN
SCOUR ZONE FRICTION	0 kN	0 kN	0 kN
DRAG DOWN FRICTION	0 kN	0 kN	0 kN
ULTIMATE LOAD (BEARING)	1225 kN	1225 kN	890 kN
PILE SHELL THICKNESS	6.3 mm	6.3 mm	5.1 mm
TESTING METHOD	BY FORMULA, STANDARD SPECIFICATIONS 701.06		

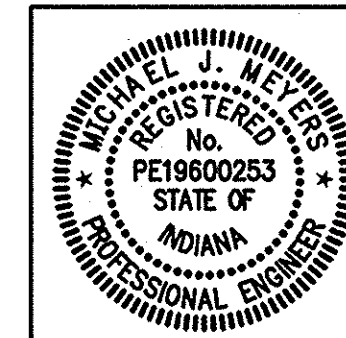
PILE LOADS		
PIER	NO.2	NO.5
ALLOWABLE DESIGN LOAD	623 kN	623 kN
FACTOR OF SAFETY	2.5	2.5
FACTORED DESIGN LOAD	1557 kN	1557 kN
SCOUR ZONE FRICTION	0 kN	0 kN
DRAG DOWN FRICTION	0 kN	0 kN
ULTIMATE LOAD (BEARING)	1557 kN	1557 kN
PILE TYPE	HP 310 x 79	HP 310 x 79
TESTING METHOD	BY FORMULA, STANDARD SPECIFICATIONS 701.06	

NOTE:

All Dimension are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

File: 9660GP2

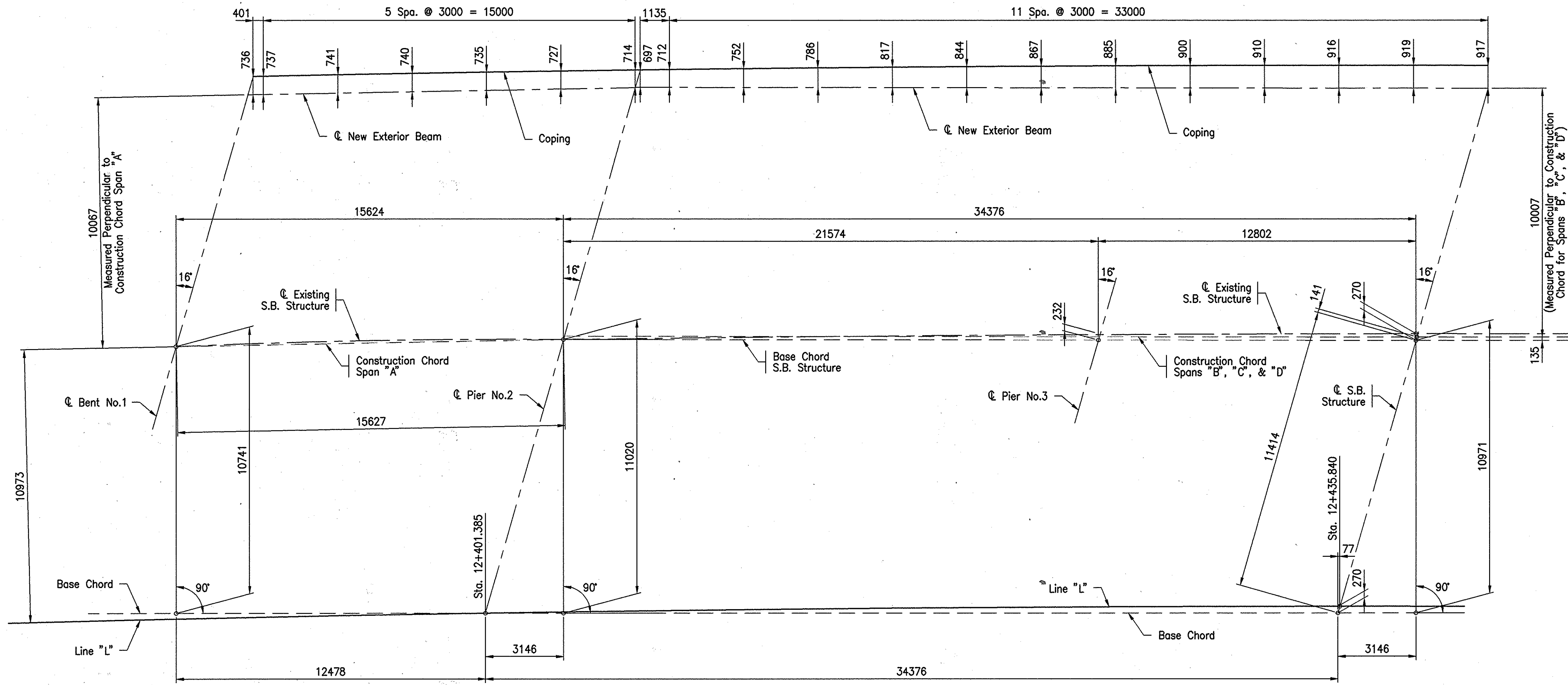
CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE GIRDER BRIDGE
 15.62 m, 21.57 m, 25.60 m, 21.57 m, 10.05 m, 9.93 m
 SKEW: 16' RIGHT; 16746 PROPOSED CLEAR ROADWAY
 I-465 OVER BIG EAGLE CREEK
 MARION COUNTY



RECOMMENDED FOR APPROVAL: *Michael J. Meyer* 6/29/99
 DESIGN ENGINEER DATE
 DESIGNED: MJM DRAWN: MBW
 CHECKED: JAP CHECKED: FES

INDIANA DEPARTMENT OF TRANSPORTATION
GENERAL PLAN I-465-149-3602F (SB)

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	62A of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



PARTIAL PLAN

Scale: 1:50

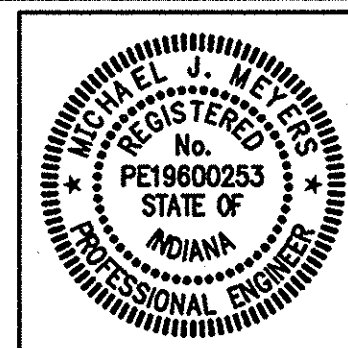
CURVE DATA LINE "L"

P.I. STA. 12+418.395
 $\Delta = 19^\circ 55'$ RIGHT
 $D = 0' 48"$
 $R = 2182.969$ m
 $T = 383.286$ m
 $L = 758.830$ m
 $E = 33.415$ m

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
 Coping Offsets are Measured Perpendicular to the Construction Chord and Exterior Beam Line.

File: 9660TUD1

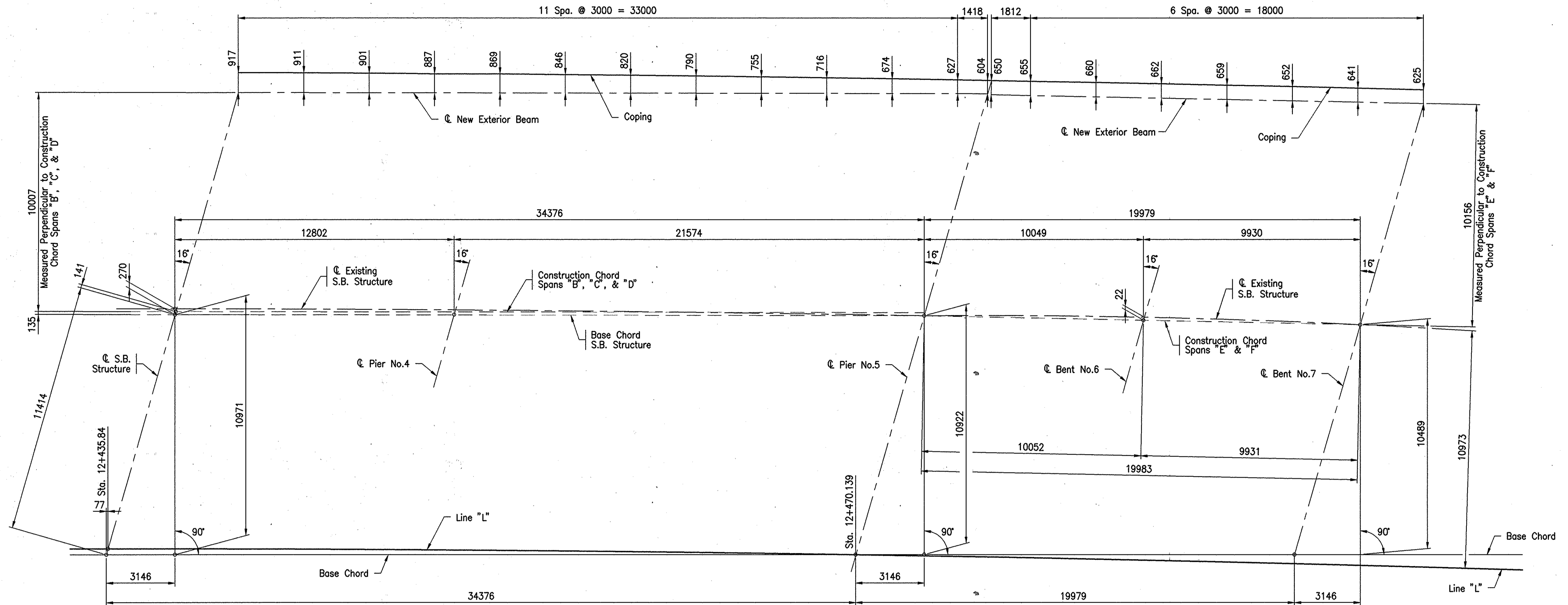


RECOMMENDED FOR APPROVAL	<i>Michael Meyer</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA DEPARTMENT OF TRANSPORTATION

TE UP DIAGRAM

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	63 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



PARTIAL PLAN

Scale: 1:100

CURVE DATA LINE "L"

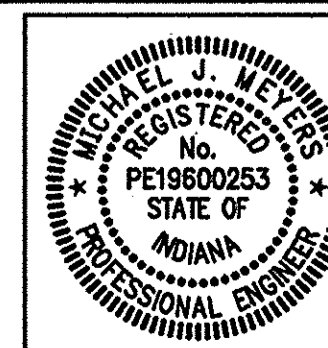
P.I. STA. 12+418.395
 $\Delta = 19^\circ 55'$ RIGHT
 $D = 0' 48''$
 $R = 2182.969$ m
 $T = 383.286$ m
 $L = 758.830$ m
 $E = 33.415$ m

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

Coping Offsets are Measured Perpendicular to the Construction Chord and Exterior Beam Line.

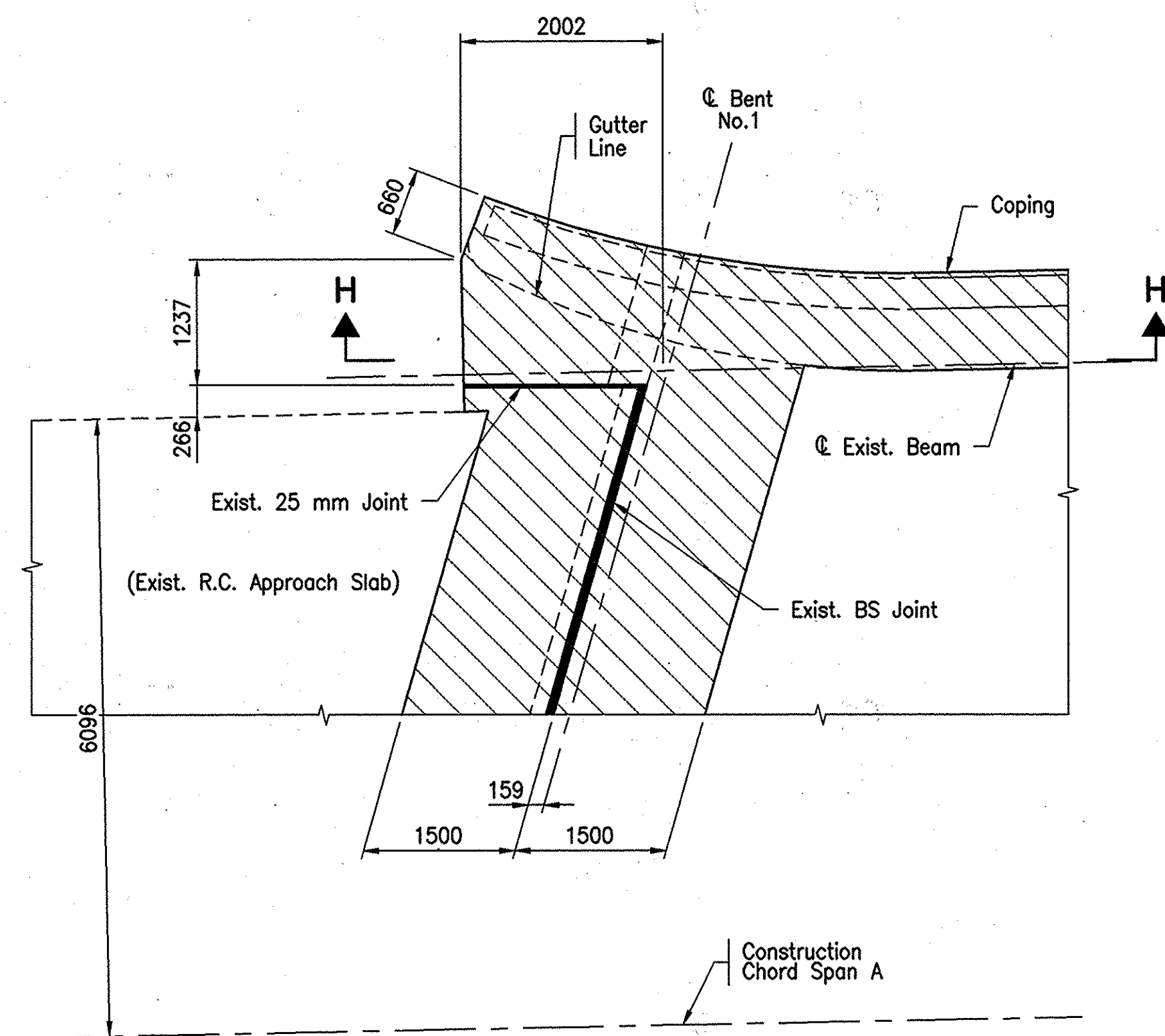
File: 9660TUD2



RECOMMENDED FOR APPROVAL *Michael J. Meness* 1/19/99
 DESIGN ENGINEER DATE
 DESIGNED: MJM DRAWN: MBW
 CHECKED: JAP CHECKED: MJM

INDIANA DEPARTMENT OF TRANSPORTATION
TIE UP DIAGRAM

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	64 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

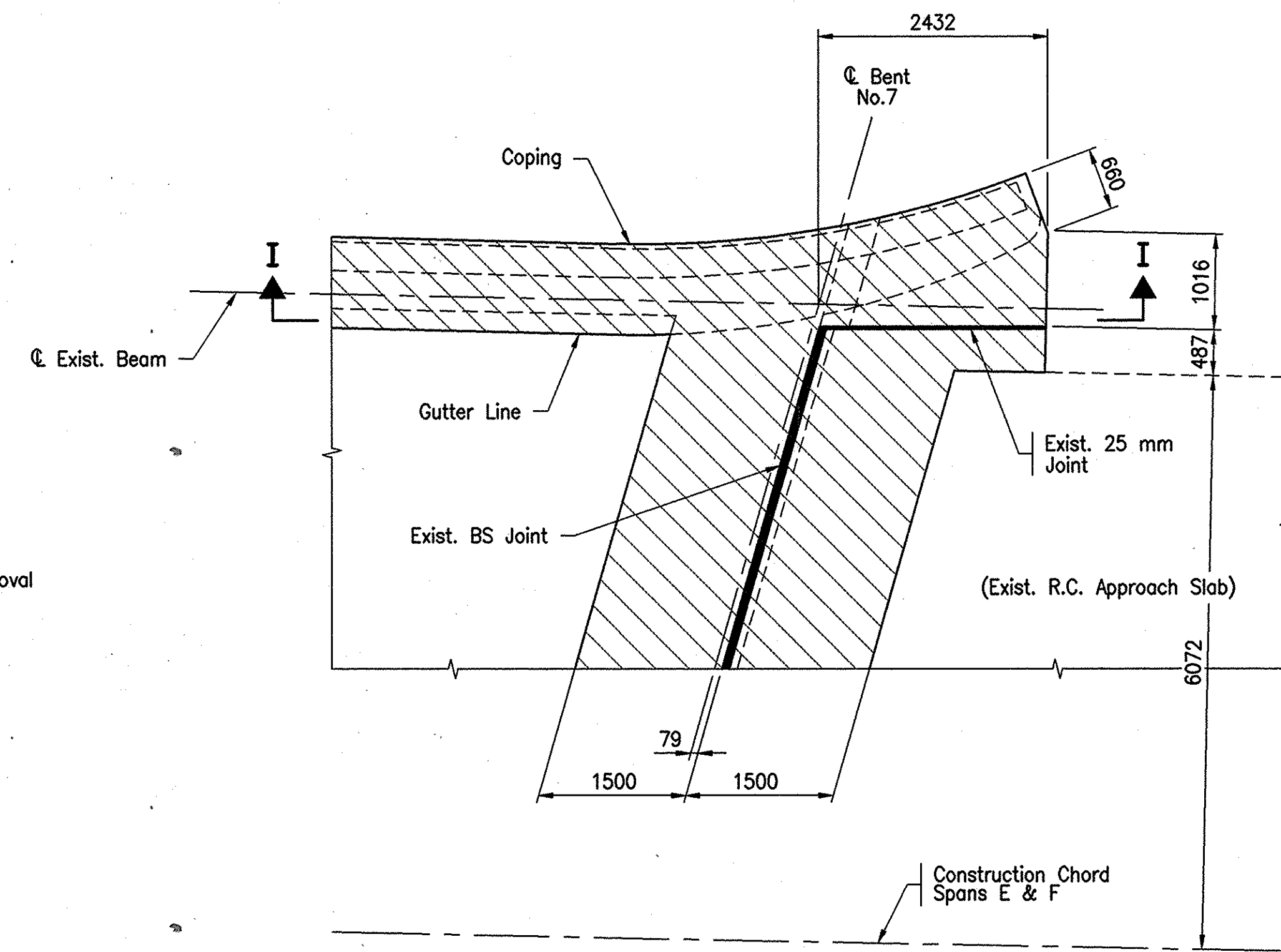


SOUTHWEST CORNER DETAIL SHOWING REMOVAL

Scale: 1:50

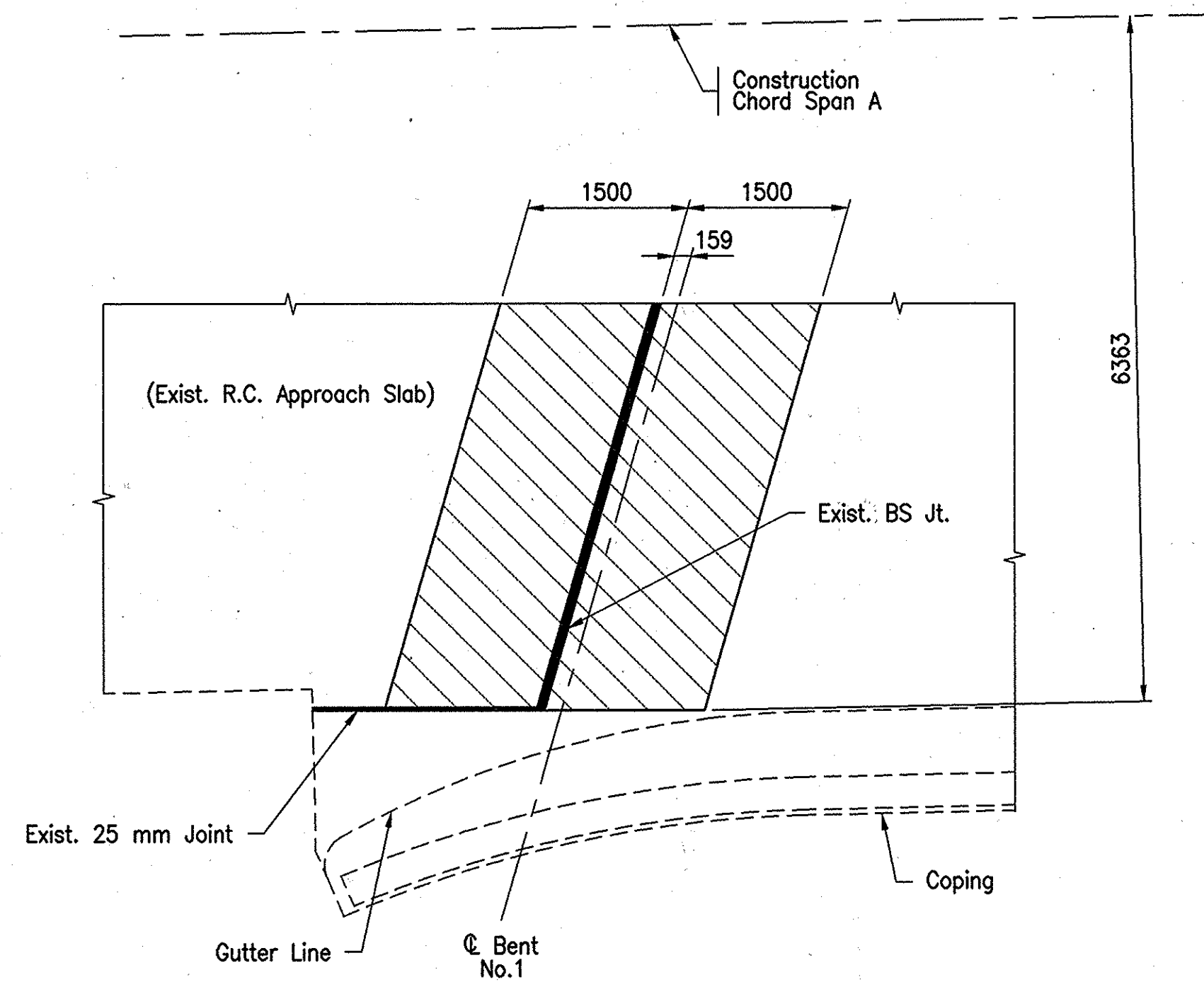


Hatching Indicates Removal



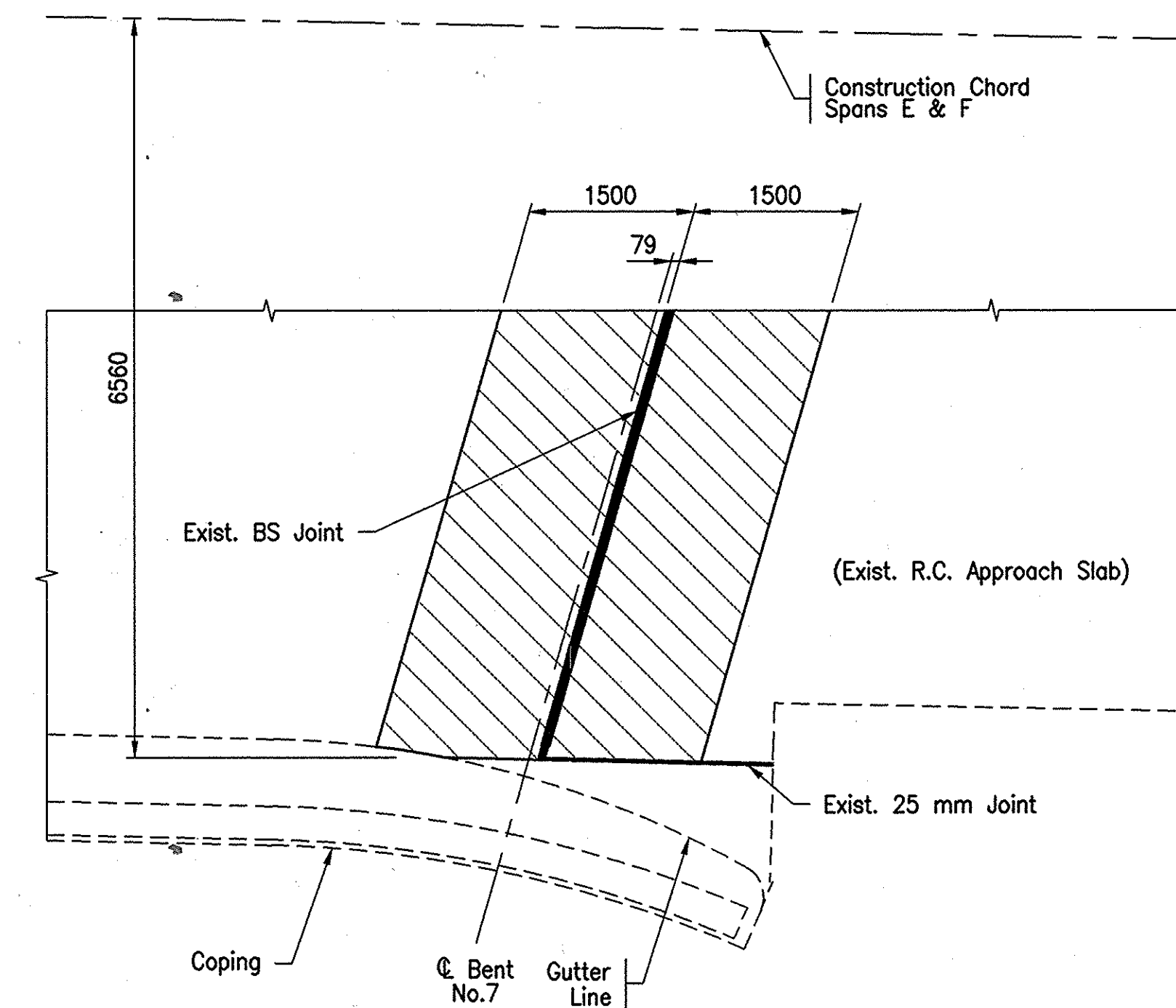
NORTHWEST CORNER DETAIL SHOWING REMOVAL

Scale: 1:50



SOUTHEAST CORNER DETAIL SHOWING REMOVAL

Scale: 1:50



NORTHEAST CORNER DETAIL SHOWING REMOVAL

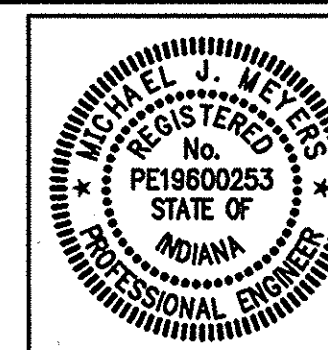
Scale: 1:50

NOTE:

All Dimension are in Millimeters and all Stations and Elevations are in Meters Unless Noted.

For Sections H-H, I-I and Additional Removal Details, See Sheet 66.

File: 9660REM1



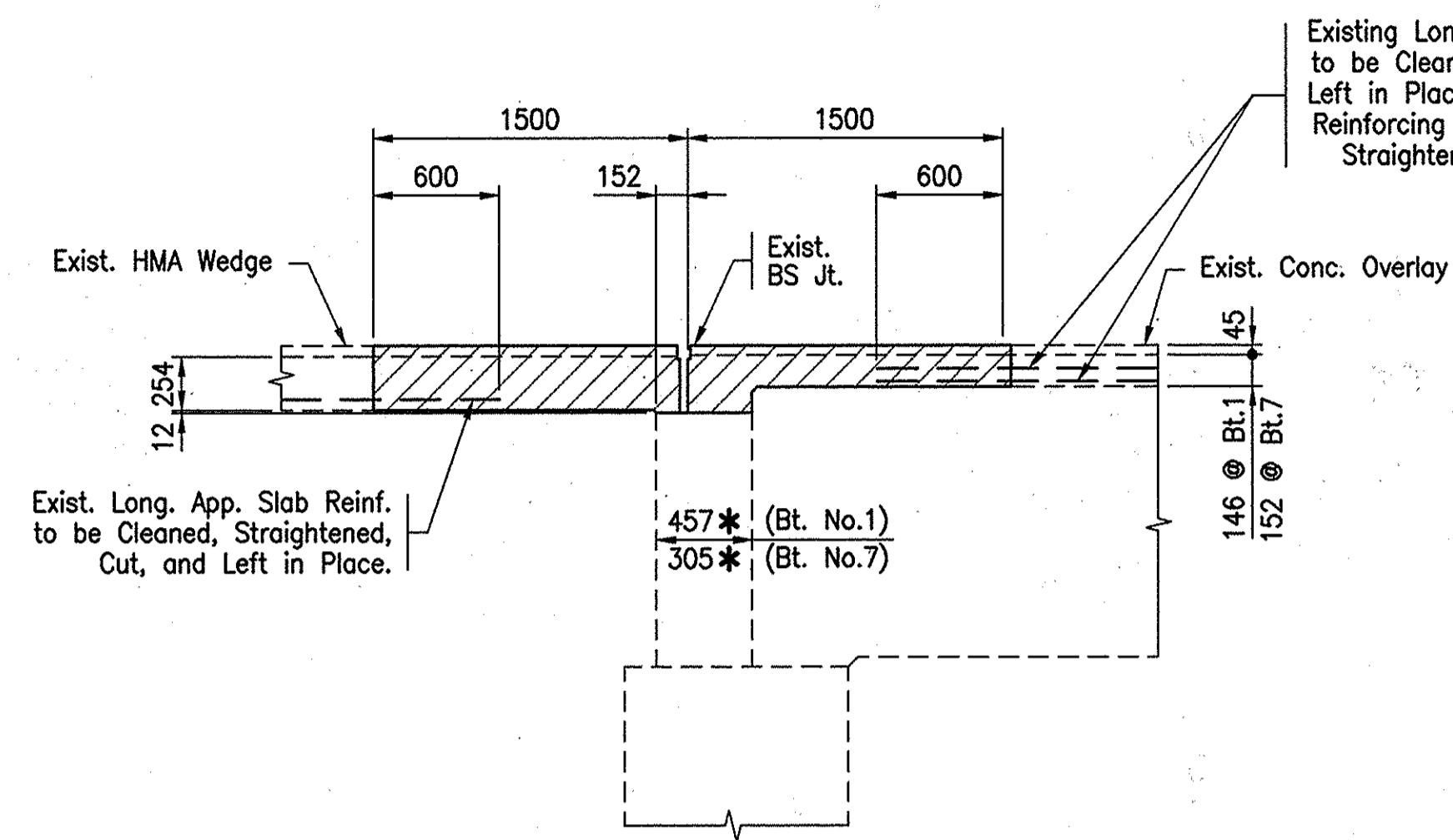
RECOMMENDED FOR APPROVAL *Michael J. Meyers* 1/19/99
DESIGN ENGINEER DATE

DESIGNED: MJM DRAWN: MBW
CHECKED: JAP CHECKED: MJM

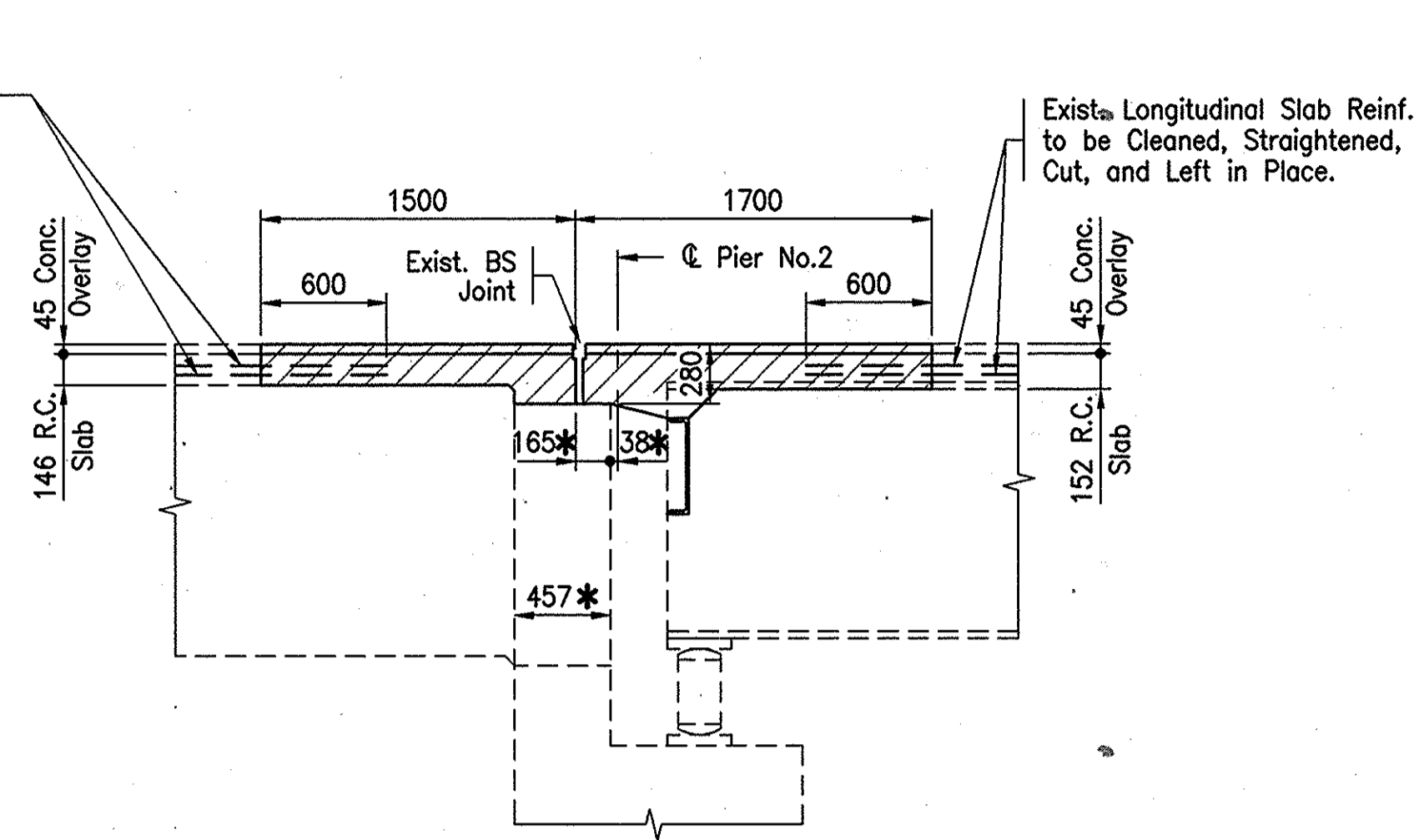
INDIANA
DEPARTMENT OF TRANSPORTATION

**REMOVAL
DETAILS**

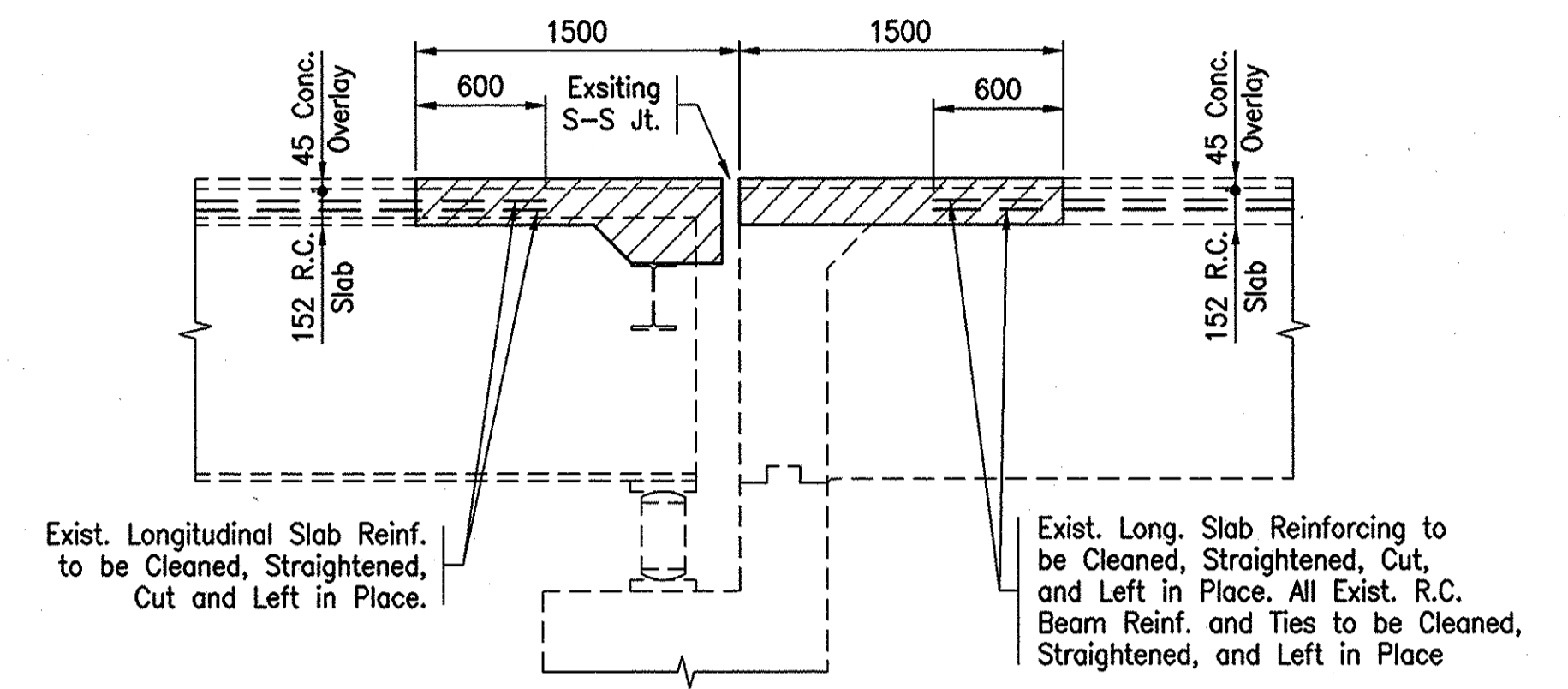
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	65 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



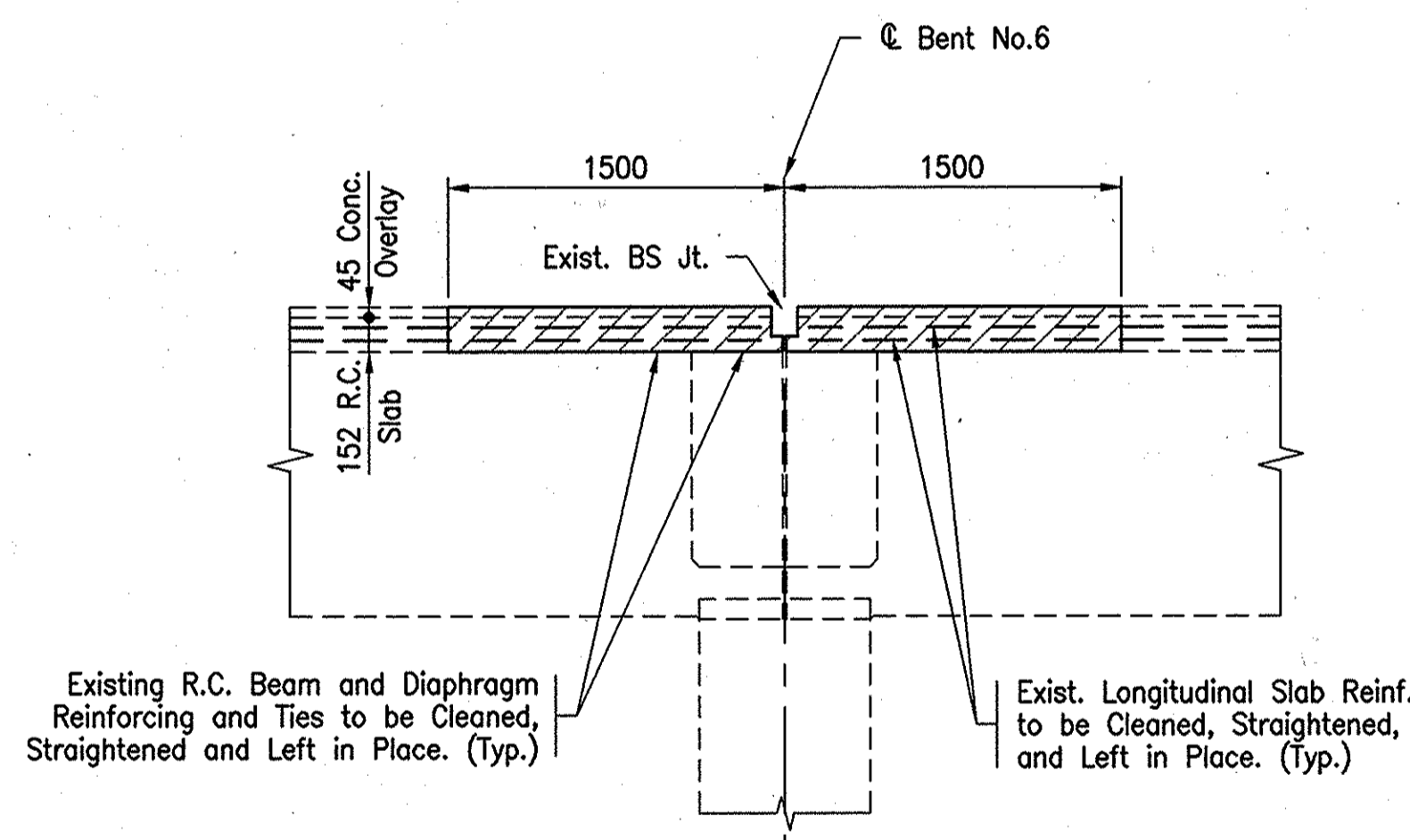
SECTION D-D
Scale: 1:30



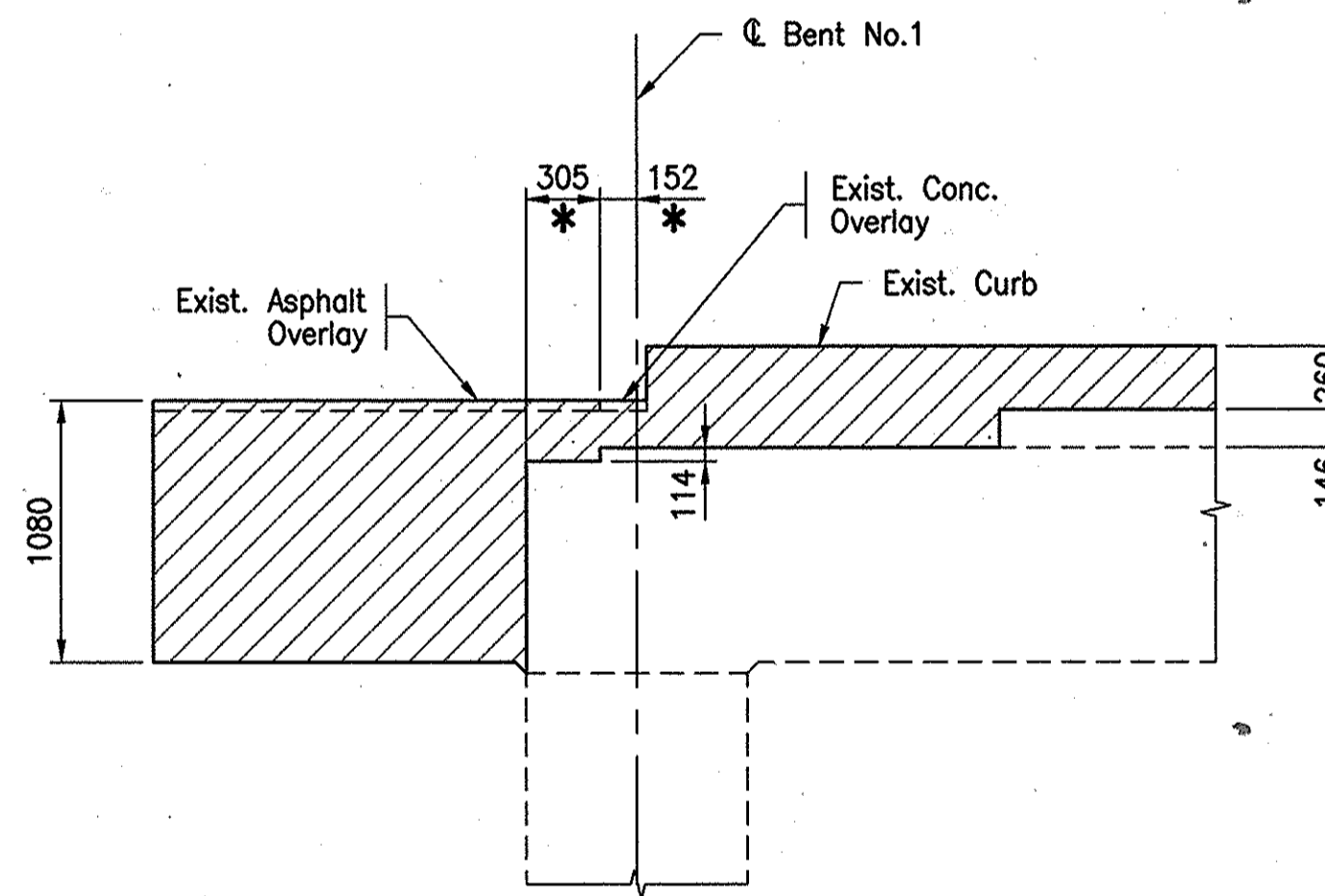
SECTION E-E
Scale: 1:30



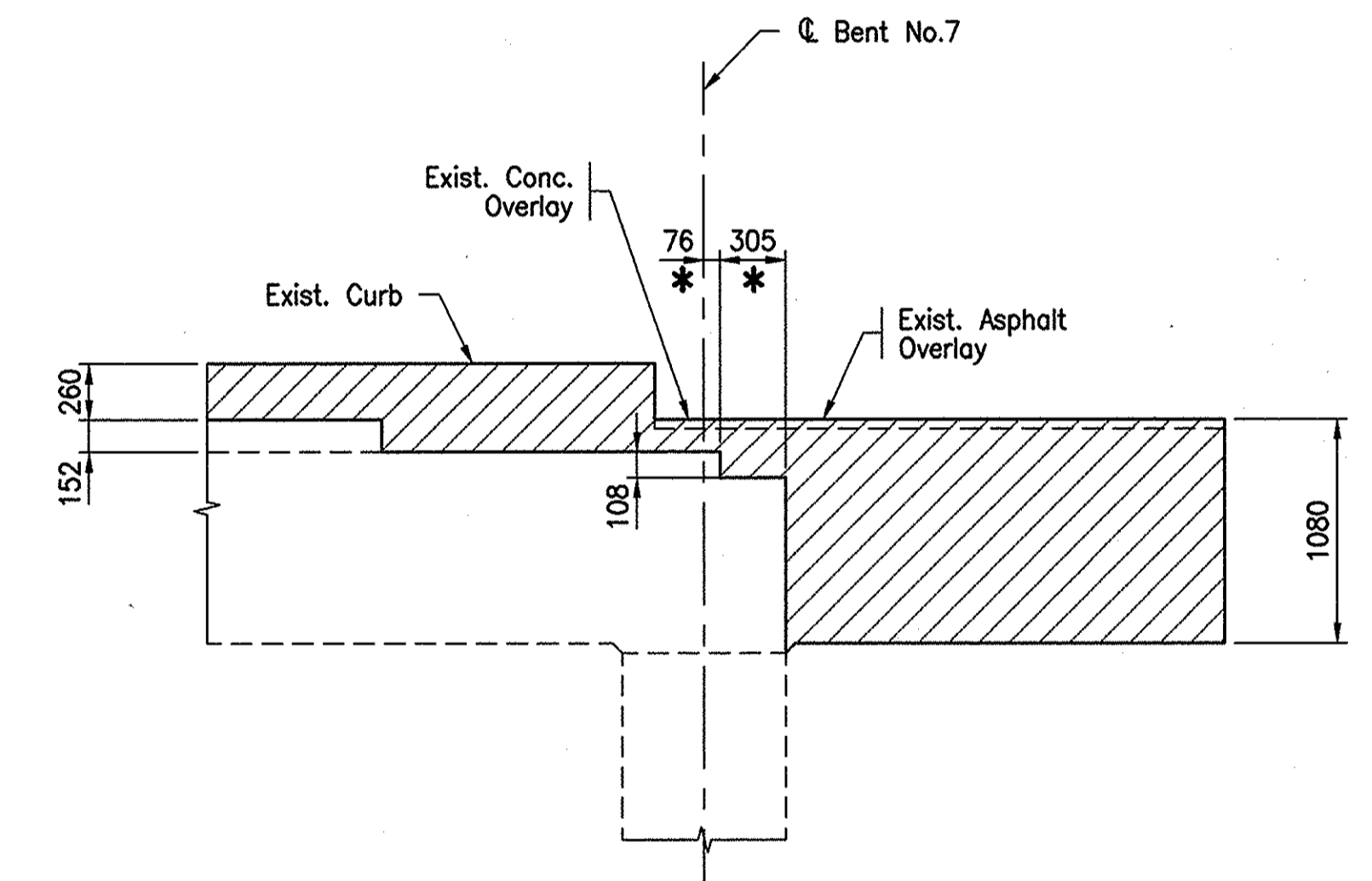
SECTION F-F
Scale: 1:30



SECTION G-G
Scale: 1:30



SECTION H-H
Scale: 1:30



SECTION I-I
Scale: 1:30

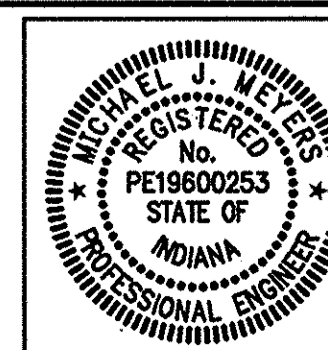
LEGEND

- * Measured Perpendicular to C. Bent
- Hatching Indicates Removal

NOTE:

All Dimension are in Millimeters Unless Noted.

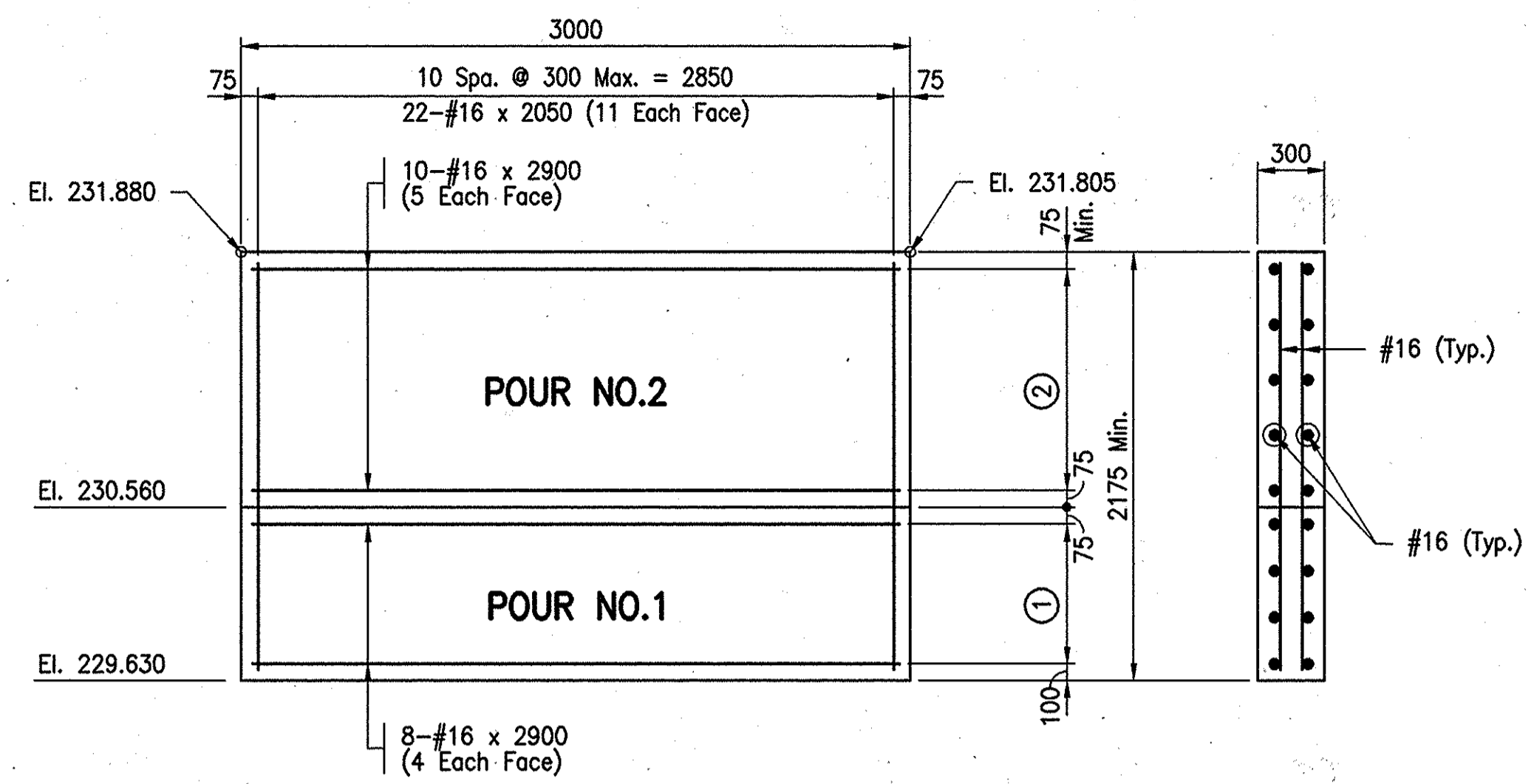
File: 9660REM2



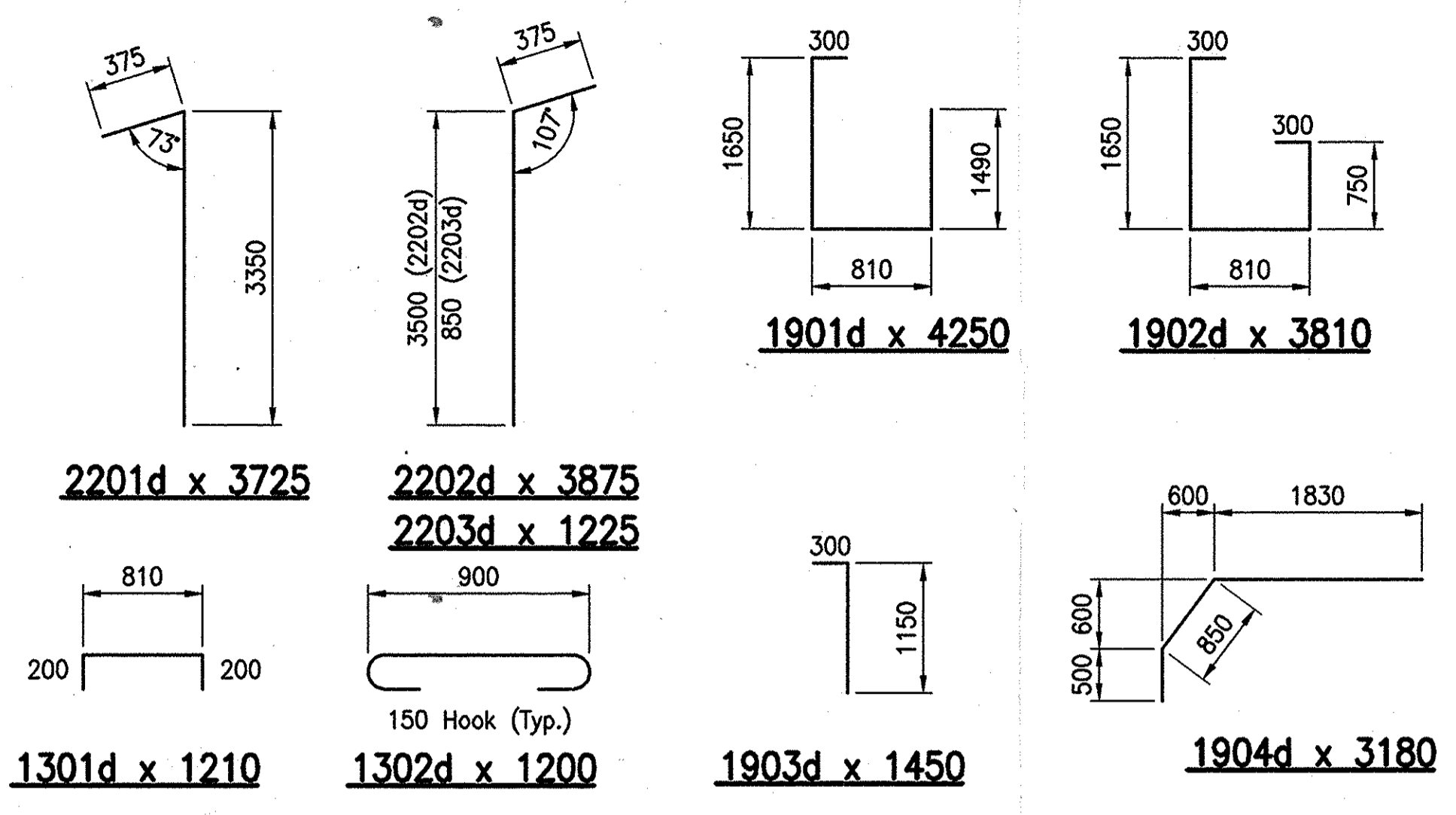
RECOMMENDED FOR APPROVAL	<i>Michael J. M...</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA DEPARTMENT OF TRANSPORTATION	
REMOVAL DETAILS	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	66 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

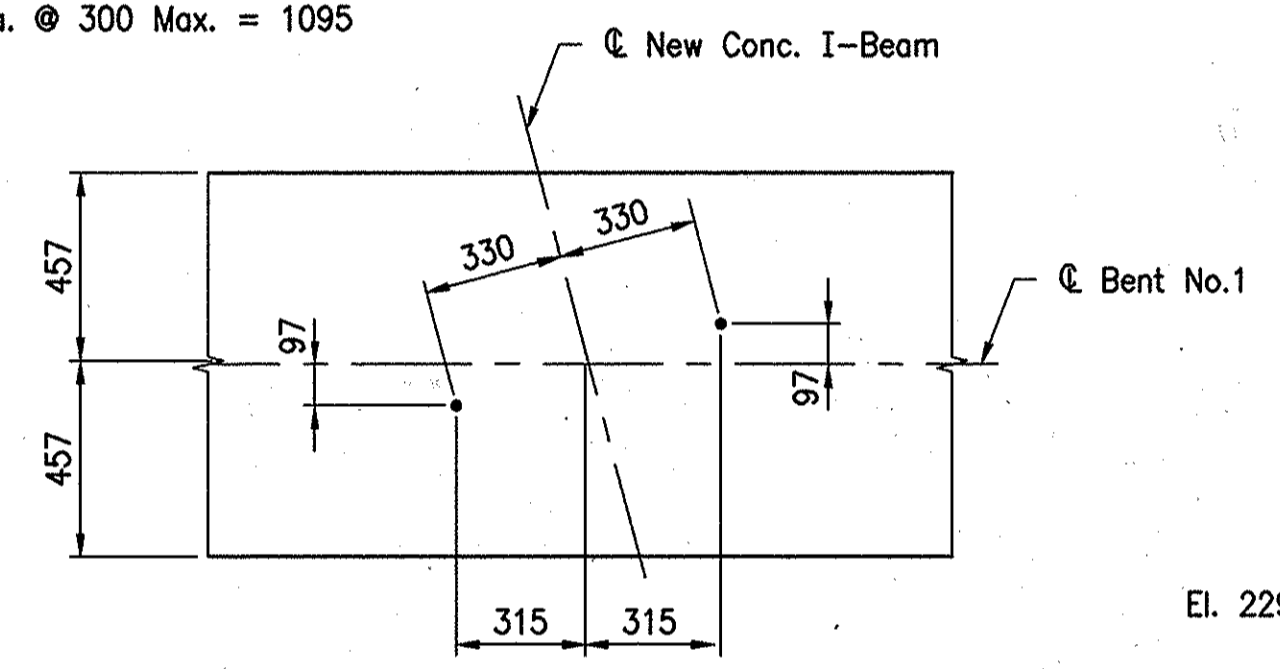


BRIDGE SEAT ELEVATIONS	
LOCATION	ELEVATIONS
A	230.621
B	230.513
C	230.560

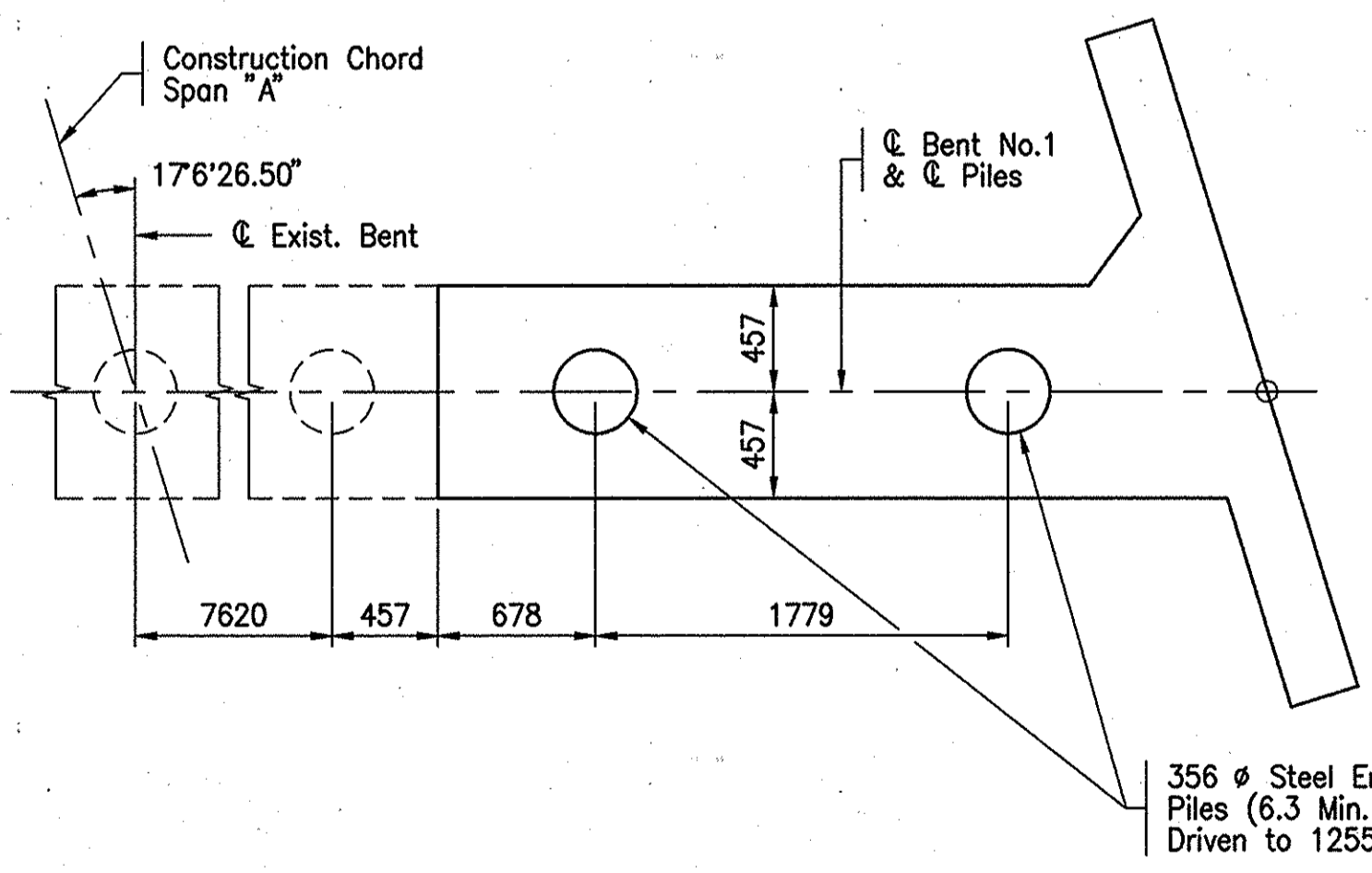


LEGEND
 ① 3 Spa. @ 300 Max. = 755
 ② 4 Spa. @ 300 Max. = 1095

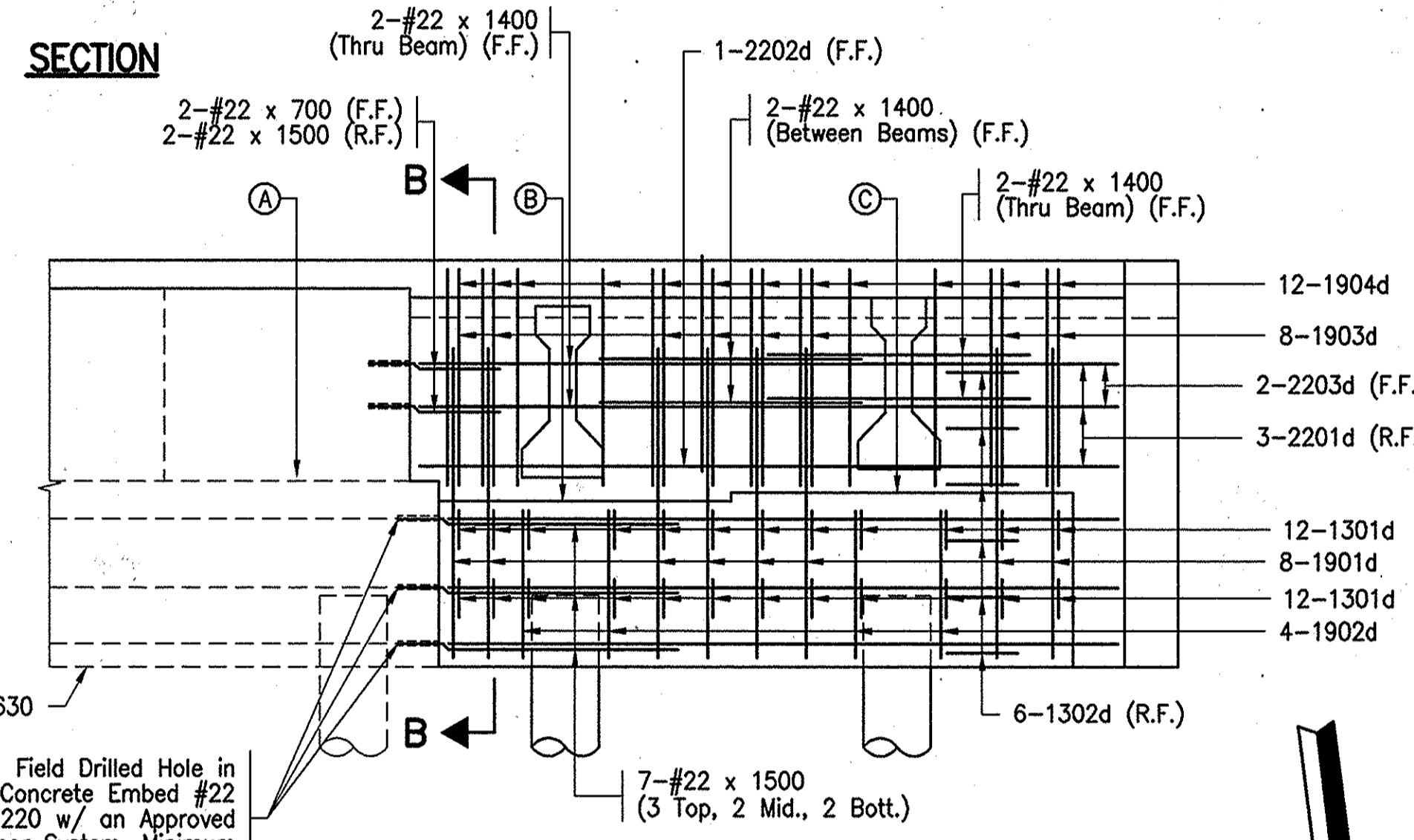
WINGWALL DETAILS
 No Scale



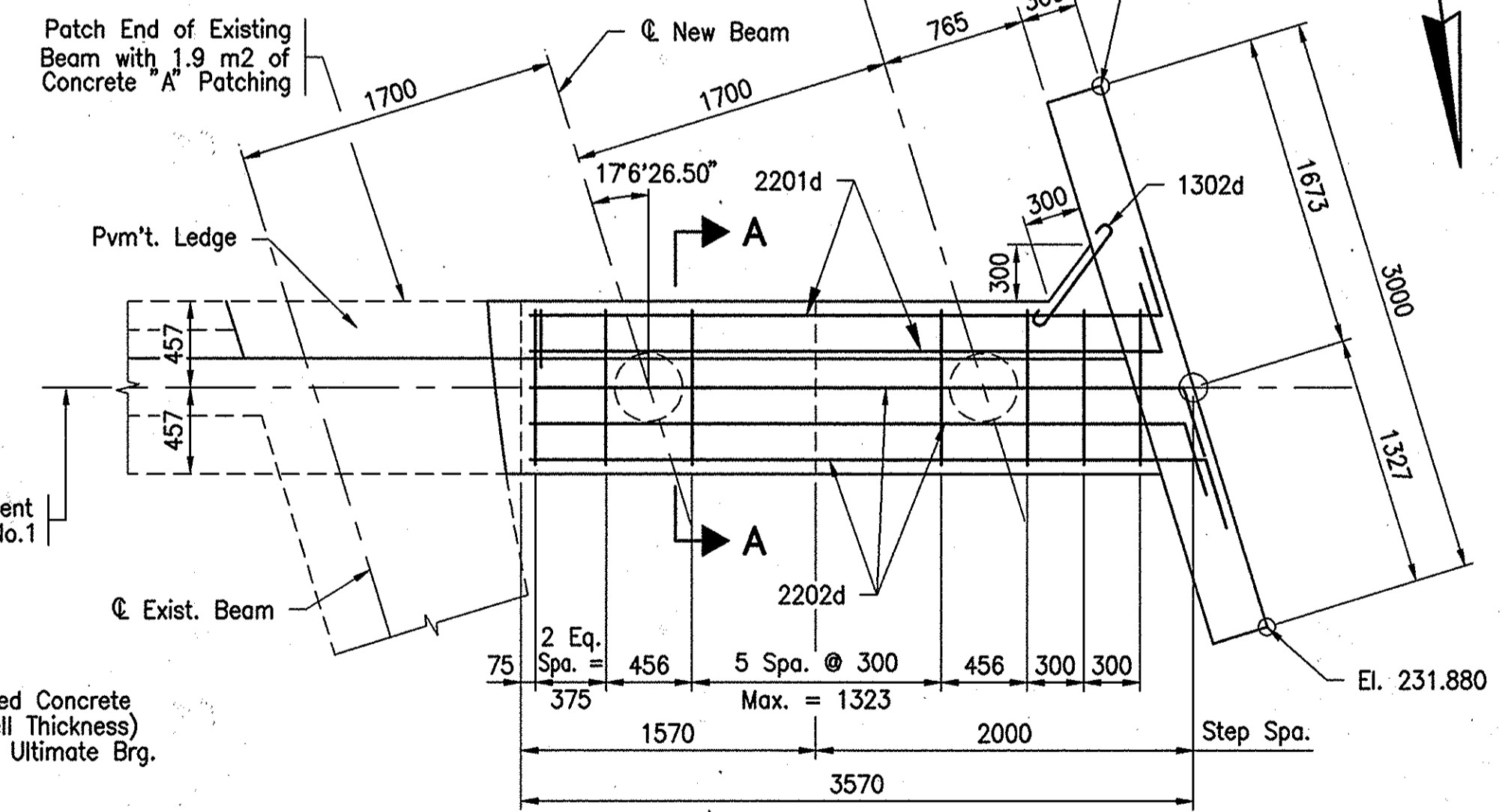
ANCHOR BOLT SETTING DIAGRAM
 Scale: 1:30



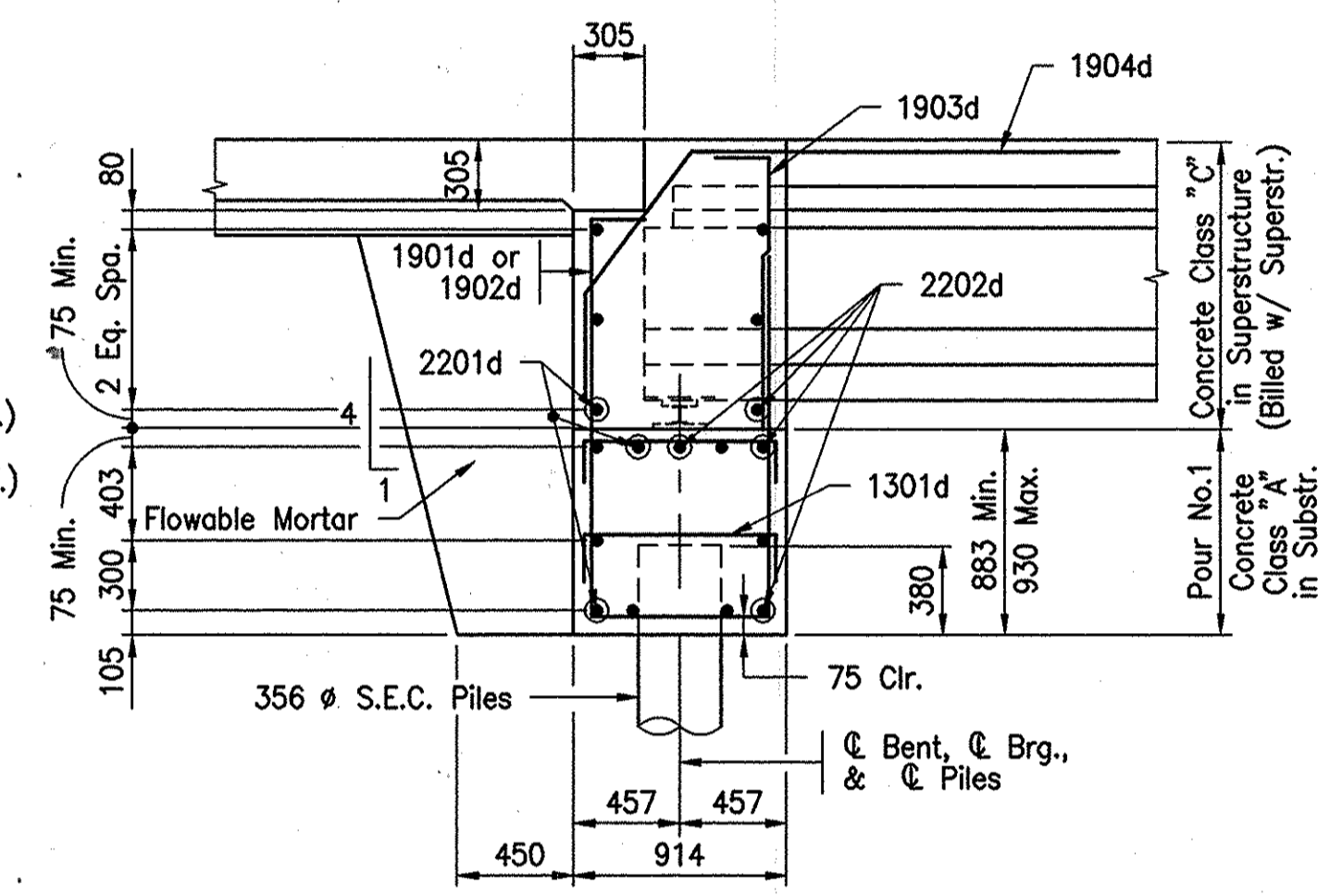
PILING PLAN - BENT NO.1
 Scale: 1:50



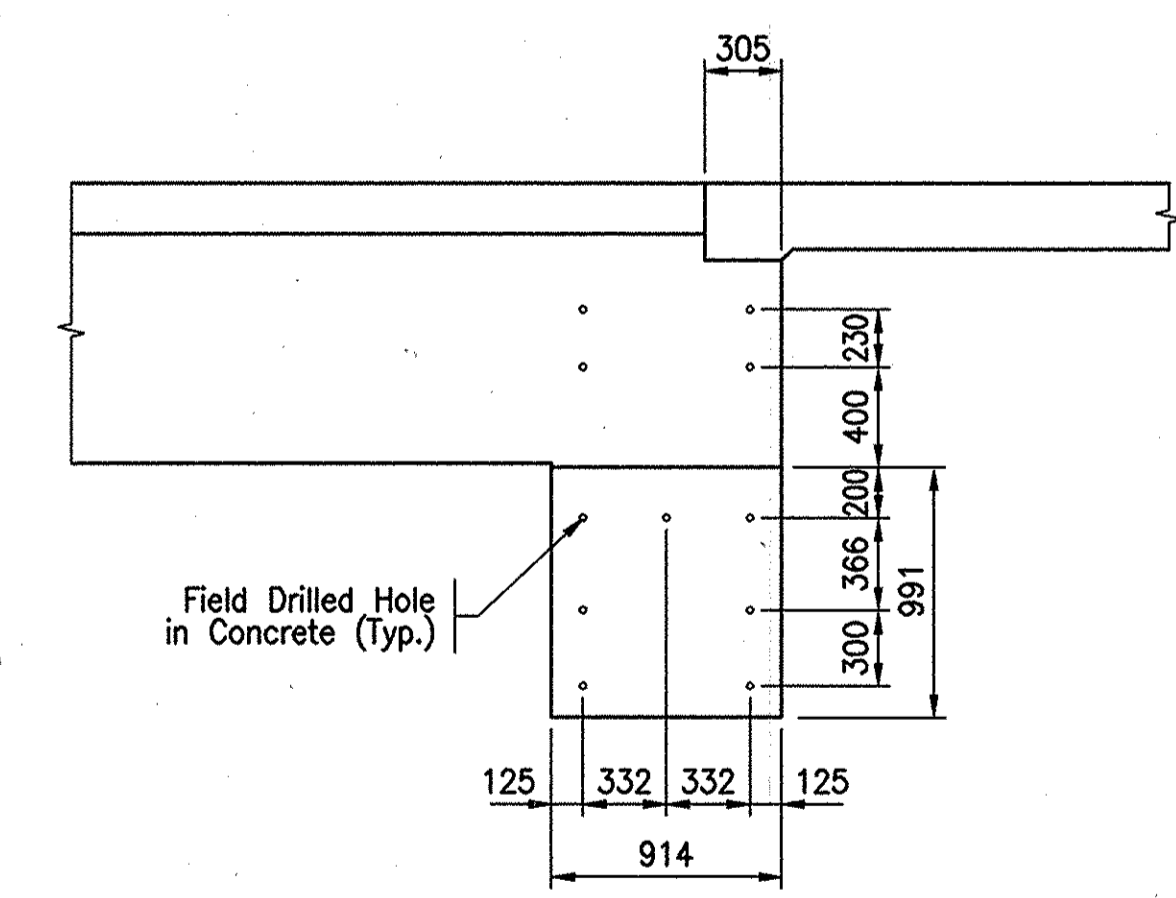
ELEVATION
 Scale: 1:50



PLAN
 Scale: 1:30



SECTION A-A
 Scale: 1:30

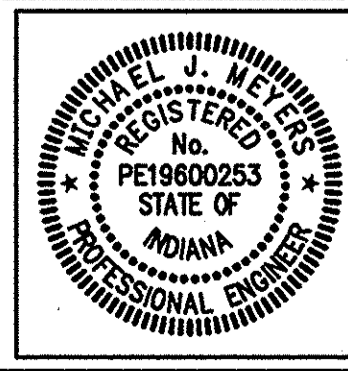


SECTION B-B
 Scale: 1:30

BILL OF MATERIALS BENT NO.1 (SOUTHBOUND STRUCTURE)			
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2201d	8	3725	
2202d	7	3875	
2203d	2	1225	
#22	9	1500	
#22	6	1400	
#22	2	700	
TOTAL #22			251
1901d	8	4250	
1902d	4	3810	
1903d	8	1450	
1904d	12	3180	
TOTAL #19			221
#16	18	2900	
#16	22	2050	
TOTAL #16			151
1301d	24	1210	
1302d	6	1200	
TOTAL #13			36
TOTAL REINFORCING STEEL			659
CONCRETE			
POUR NO.1			3.6 m2
POUR NO.2			1.2 m2
TOTAL CONC. IN SUBSTRUCTURE			4.8 m2
MISCELLANEOUS			
356mm STEEL ENC. CONC. PILES, 6.3mm THICKNESS (2 @ 14m)			28 m
DRY EXCAVATION			12.3 m3
FLOWABLE MORTAR			6.6 m3
FIELD DRILLED HOLES IN CONC.			11 EACH
CONCRETE, A, PATCHING			1.9 m2
SURFACE SEAL (EST. 54 m2)			LSUM ITEM

NOTE:
 All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
 For Superstructure Details in Span "A", See Sheets 80 thru 82.
 For Anchor Bolt Details, See Sheet 74.
 For Pile Loads Table, See Sheet 62.
 For Reinforcing Bar Notes, See Std. dwg 703-BRST-01.

File: 9660BT1



RECOMMENDED FOR APPROVAL	<i>Michael J. Mason</i>	1/19/99
DESIGNED:	MJM	DATE
DRAWN:	MBW	
CHECKED:	JAP	
	MJM	

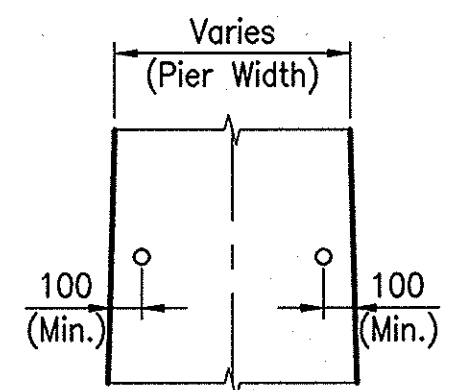
INDIANA DEPARTMENT OF TRANSPORTATION
BENT NO.1 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	67 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

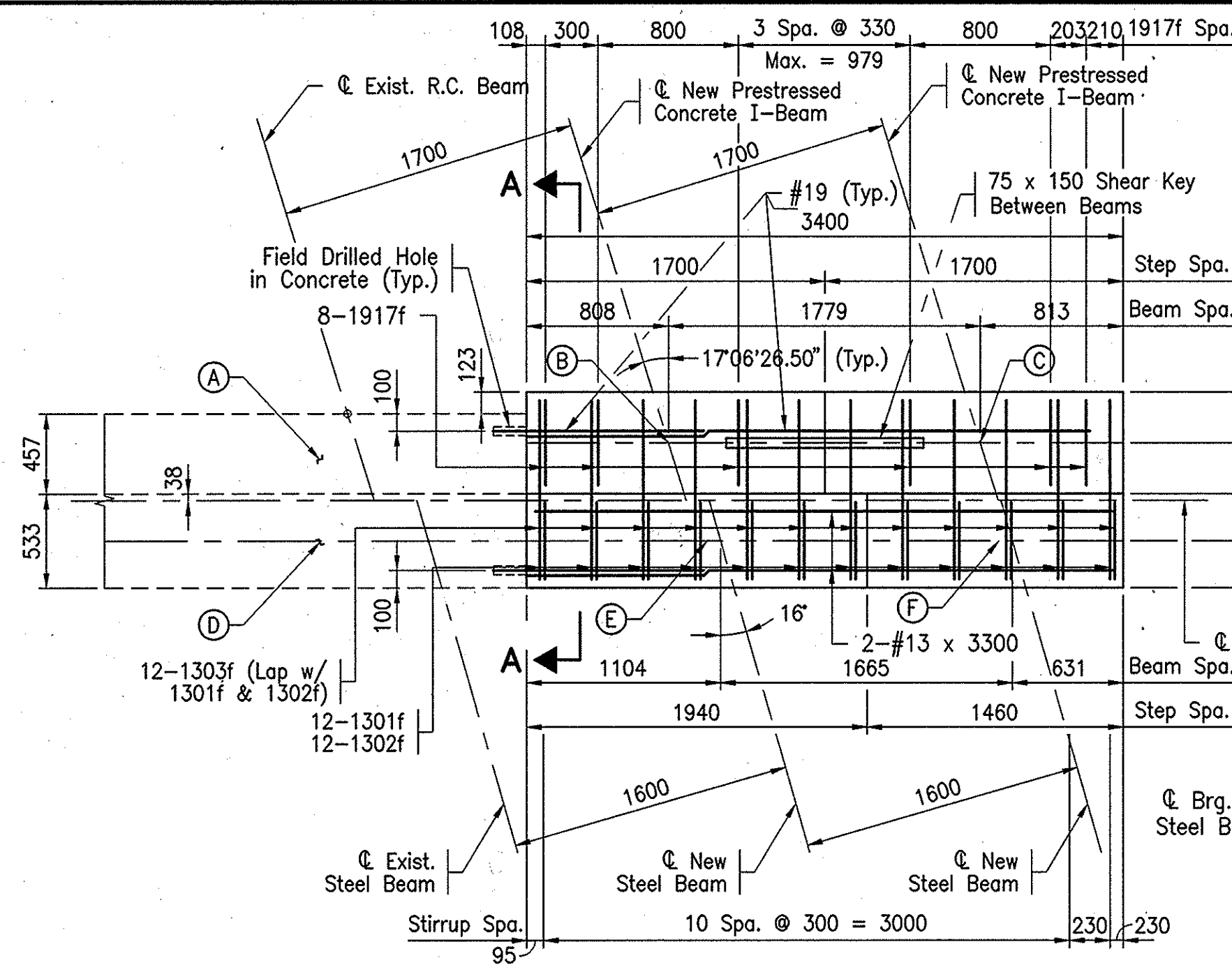
BRIDGE SEAT ELEVATIONS	
LOCATION	ELEVATION
A	230.926
B	230.883
C	230.929
D	230.606
E	231.008
F	231.051

LEGEND

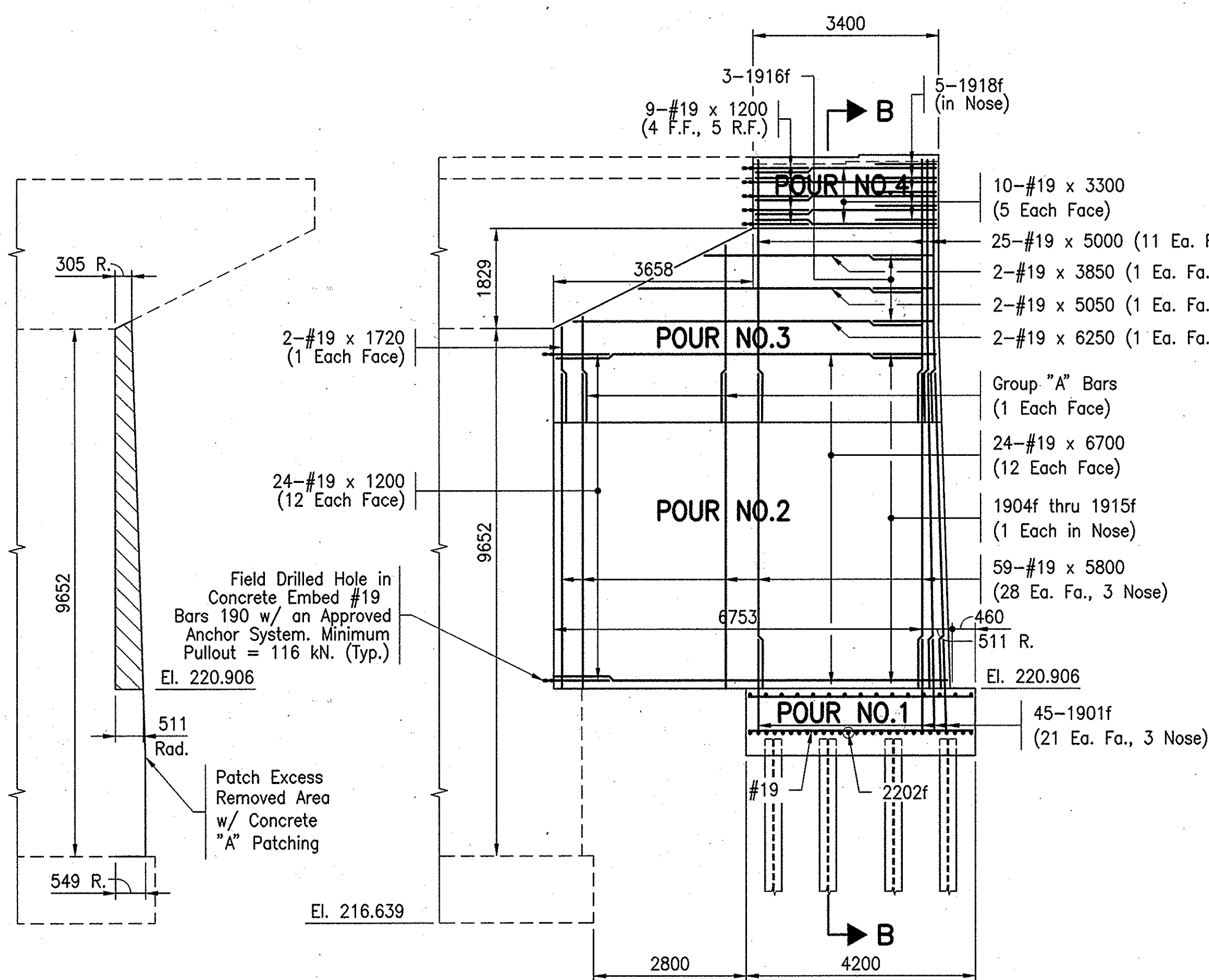
- Hatching Indicates Removal
- Bridge Seat Elevation Location



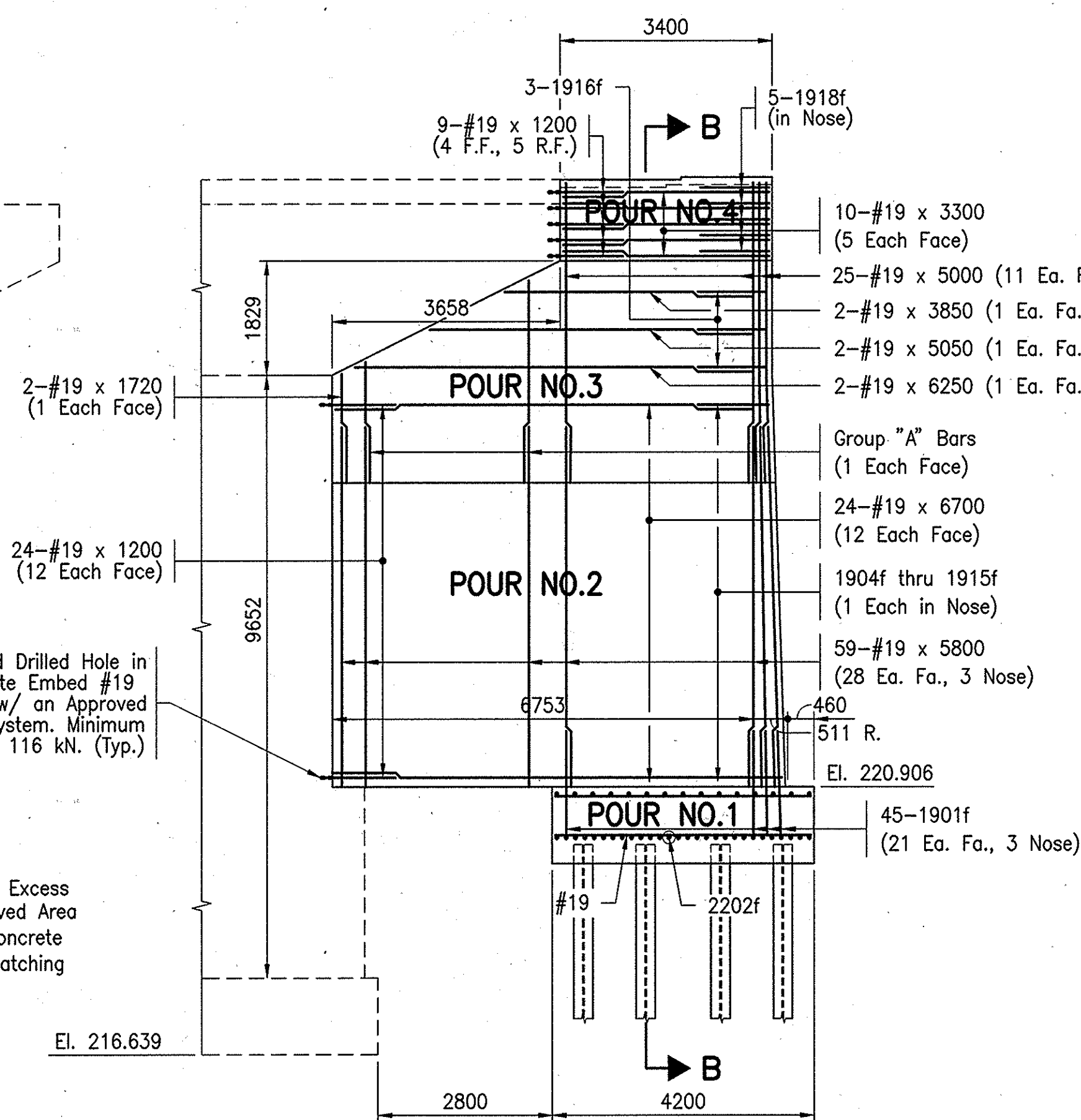
TYPICAL FIELD DRILLED HOLE DETAIL
No Scale



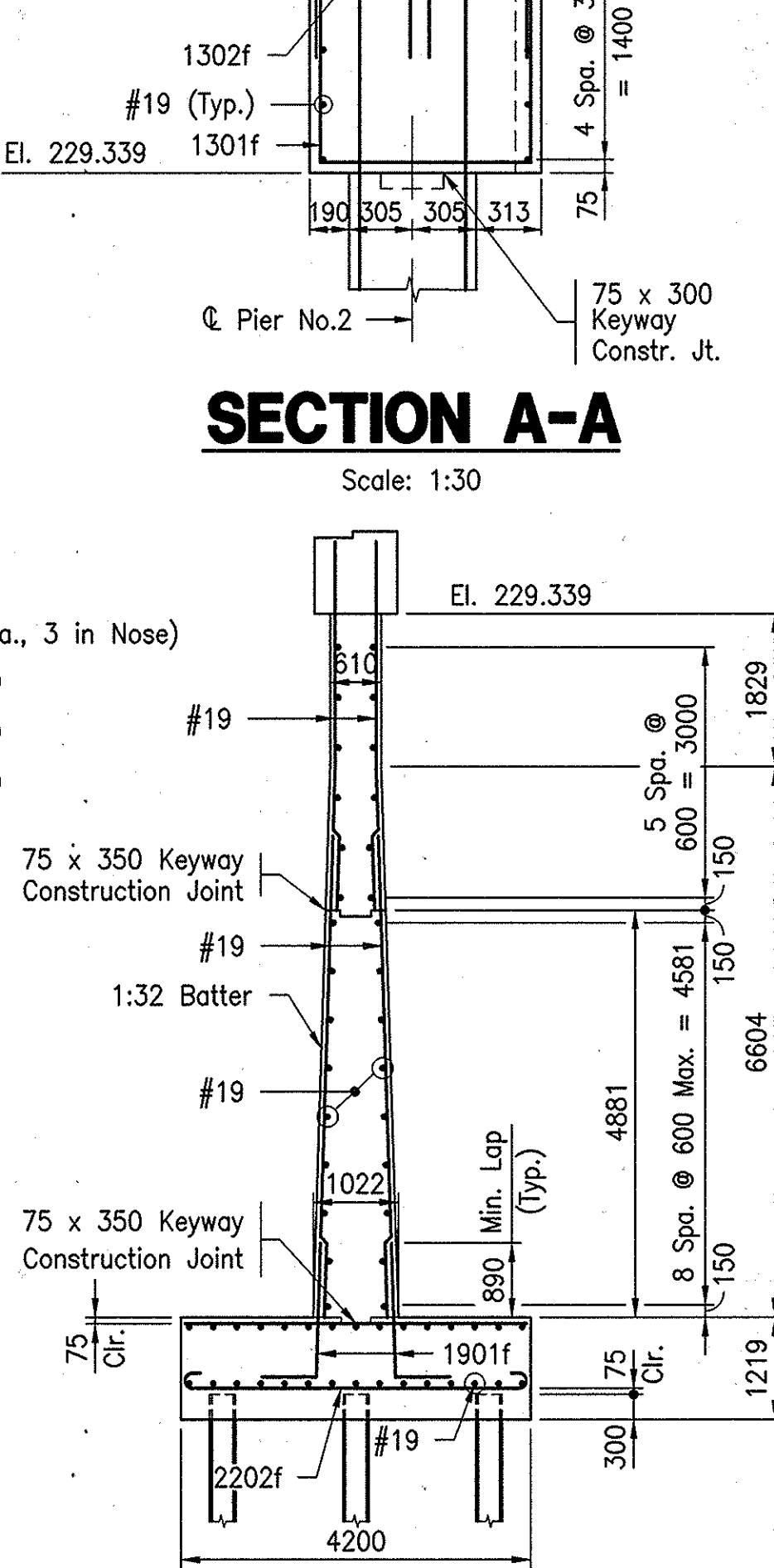
CAP PLAN
Scale: 1:30



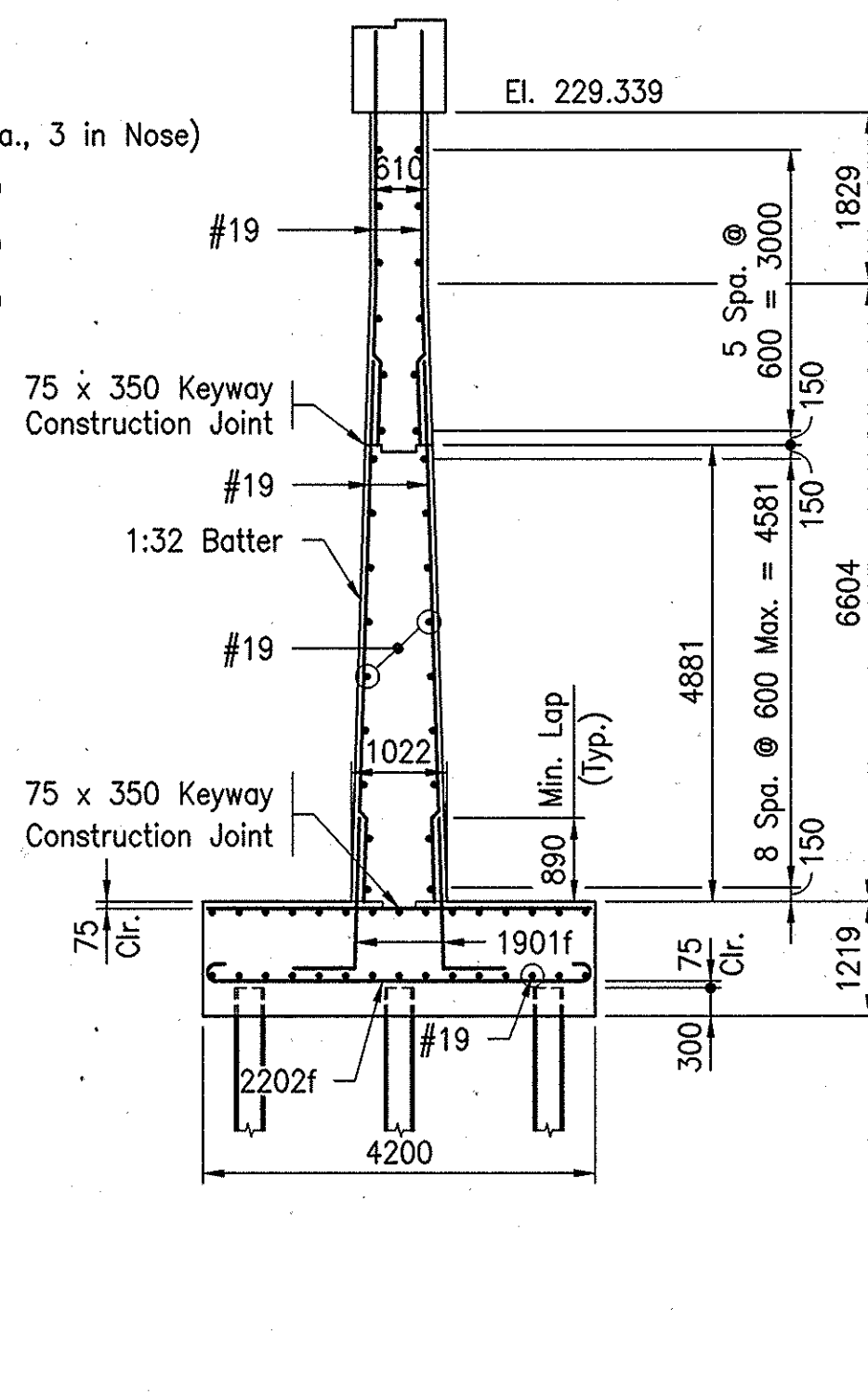
REMOVAL ELEVATION
Scale: 1:75



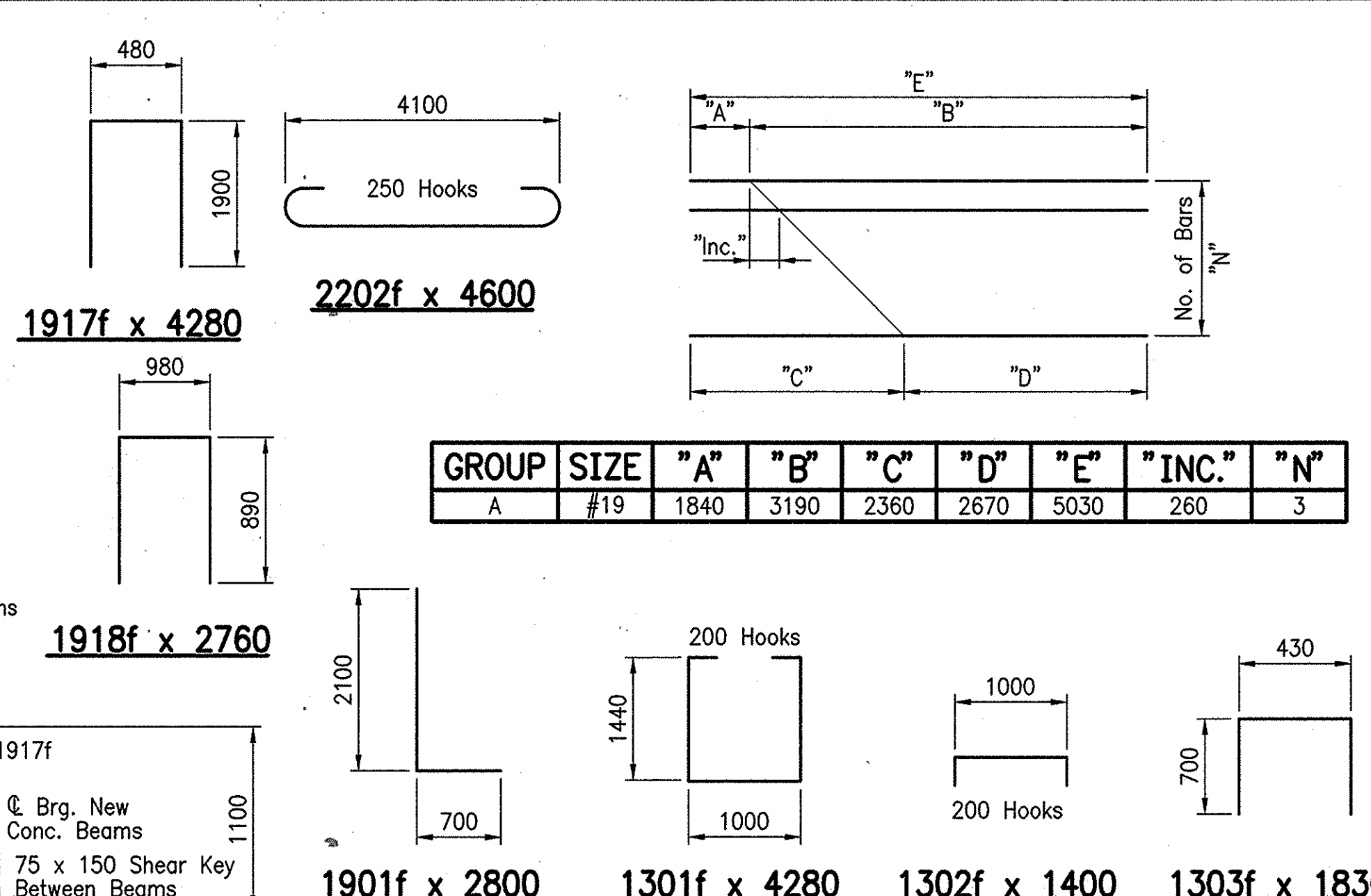
RECONSTRUCTION ELEVATION
Scale: 1:75



SECTION A-A
Scale: 1:30

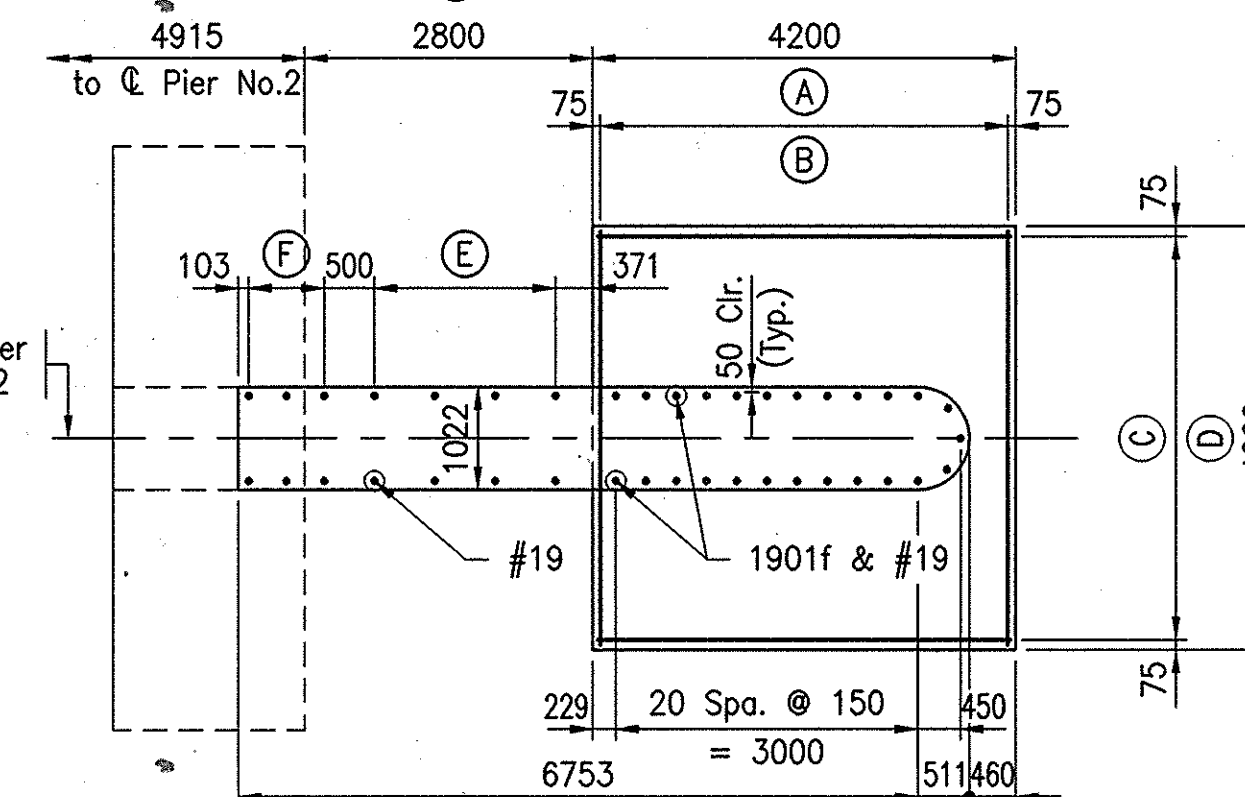


SECTION B-B
Scale: 1:75

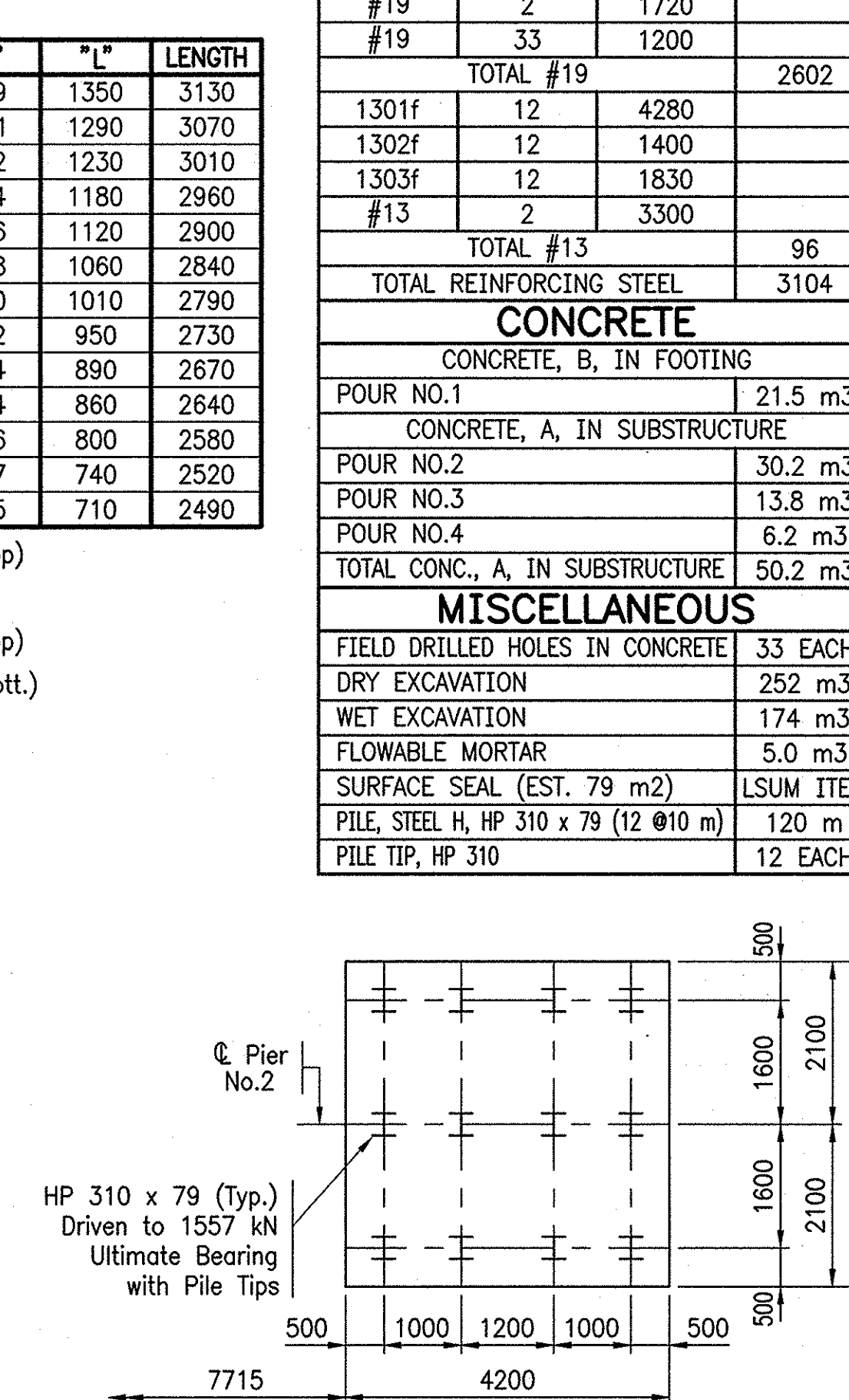
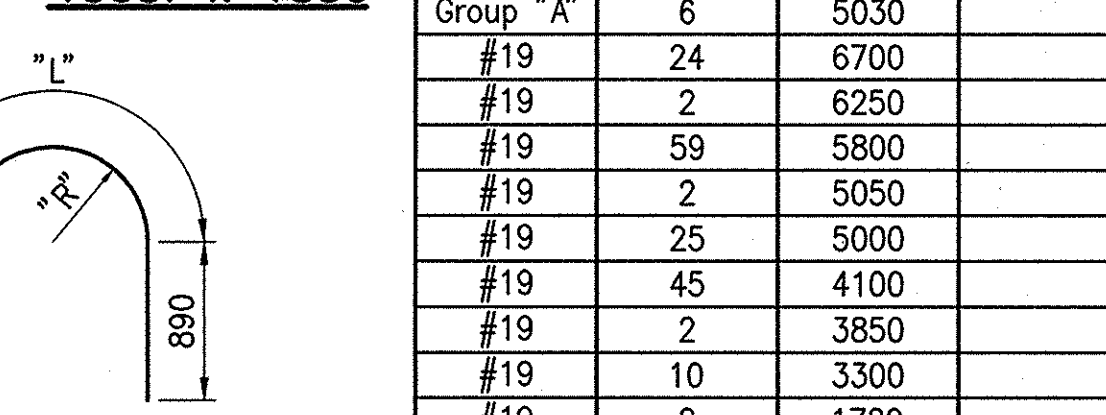


ANCHOR BOLT SETTING PLAN
No Scale

- (A) 14 Spa. @ 300 Max. = 4050 (15-#19 x 4100) (Top)
- (B) 28 Spa. @ 150 Max. = 4050 (29-2202f) (Bott.)
- (C) 14 Spa. @ 300 Max. = 4050 (15-#19 x 4100) (Top)
- (D) 14 Spa. @ 300 Max. = 4050 (15-#19 x 4100) (Bott.)
- (E) 3 Spa. @ 600 = 1800
- (F) 2 Spa. @ 375 = 750



FOOTING PLAN
Scale: 1:75



PILING PLAN
Scale: 1:75

NOTES:
All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Anchor Bolt Details, See Sht 74.
For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01.

BILL OF MATERIALS PIER NO.2 (SOUTHBOUND STRUCTURE) REINFORCING STEEL

SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2202f	29	4600	
TOTAL #22			406
1901f	45	2800	
1904f	1	3130	
1905f	1	3070	
1906f	1	3010	
1907f	1	2960	
1908f	1	2900	
1909f	1	2840	
1910f	1	2790	
1911f	1	2730	
1912f	1	2670	
1913f	1	2640	
1914f	1	2580	
1915f	1	2520	
1916f	3	2490	
1917f	8	4280	
1918f	5	2760	
Group "A"	6	5030	
#19	24	6700	
#19	2	6250	
#19	59	5800	
#19	2	5050	
#19	25	5000	
#19	45	4100	
#19	2	3850	
#19	10	3300	
#19	2	1720	
#19	33	1200	
TOTAL #19			2602
1301f	12	4280	
1302f	12	1400	
1303f	12	1830	
#13	2	3300	
TOTAL #13			96
TOTAL REINFORCING STEEL			3104

CONCRETE	
CONCRETE, B, IN FOOTING	
POUR NO.1	21.5 m ³
CONCRETE, A, IN SUBSTRUCTURE	
POUR NO.2	30.2 m ³
POUR NO.3	13.8 m ³
POUR NO.4	6.2 m ³
TOTAL CONC., A, IN SUBSTRUCTURE	
50.2 m ³	

MISCELLANEOUS	
FIELD DRILLED HOLES IN CONCRETE	33 EACH
DRY EXCAVATION	252 m ³
WET EXCAVATION	174 m ³
FLOWABLE MORTAR	5.0 m ³
SURFACE SEAL (EST. 79 m ²)	LSUM ITEM
PILE, STEEL H, HP 310 x 79 (12 Ø10 m)	120 m
PILE TIP, HP 310	12 EACH

File: 9660PRZ



RECOMMENDED FOR APPROVAL	<i>Michael J. Messer</i>	6/25/99
DESIGNED:	MJM	DRAWN:
CHECKED:	FES	CHECKED:
		MJM

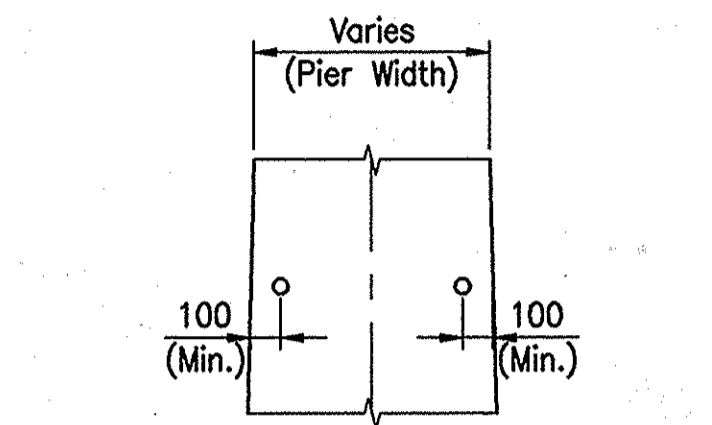
INDIANA DEPARTMENT OF TRANSPORTATION
PIER NO.2 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	68A of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

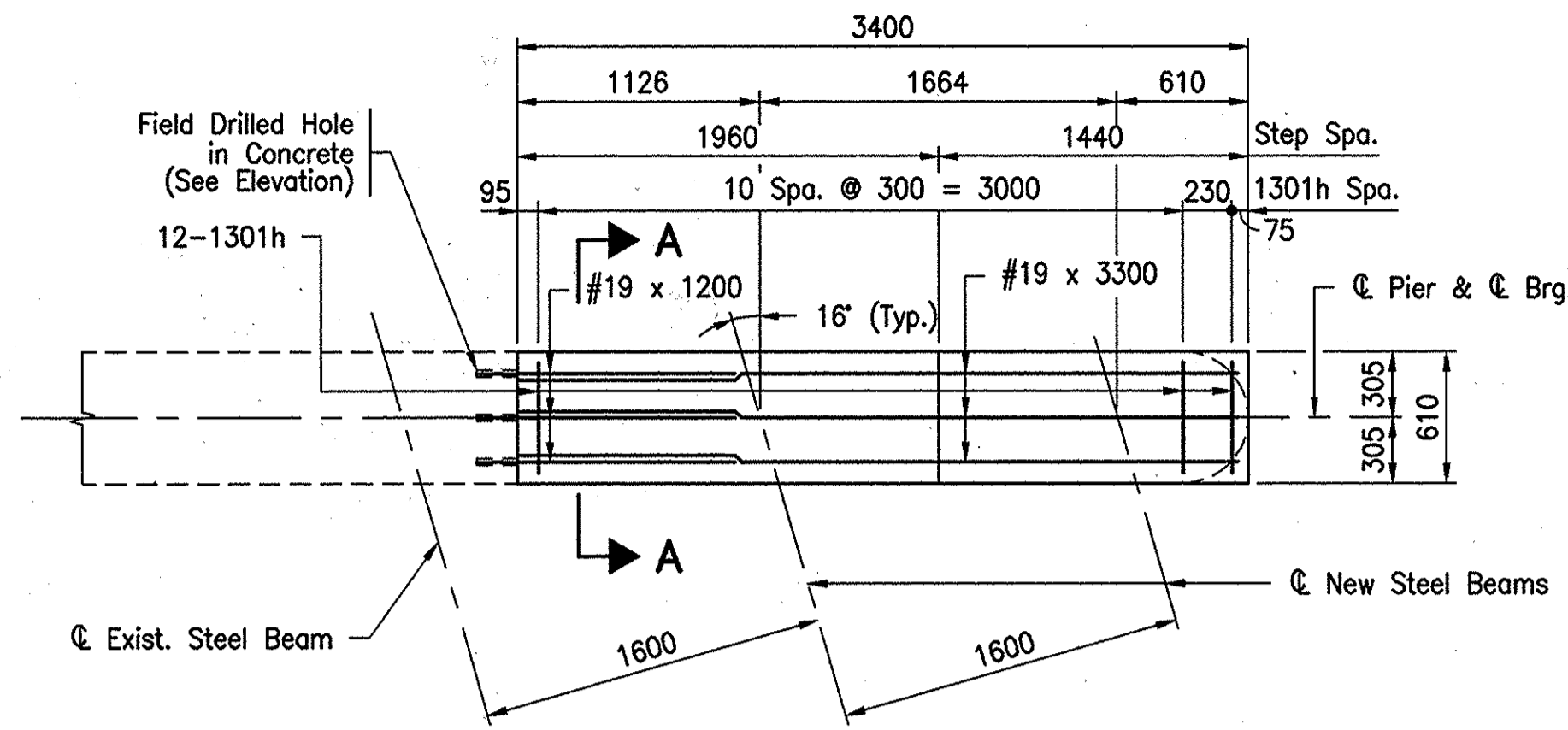
BRIDGE SEAT ELEVATIONS		
LOCATION	PIER NO.3	PIER NO.4
A	231.231	231.356
B	231.381	231.930
C	231.423	231.970

LEGEND

- Hatching Indicates Removal
- Bridge Seat Elevation Location

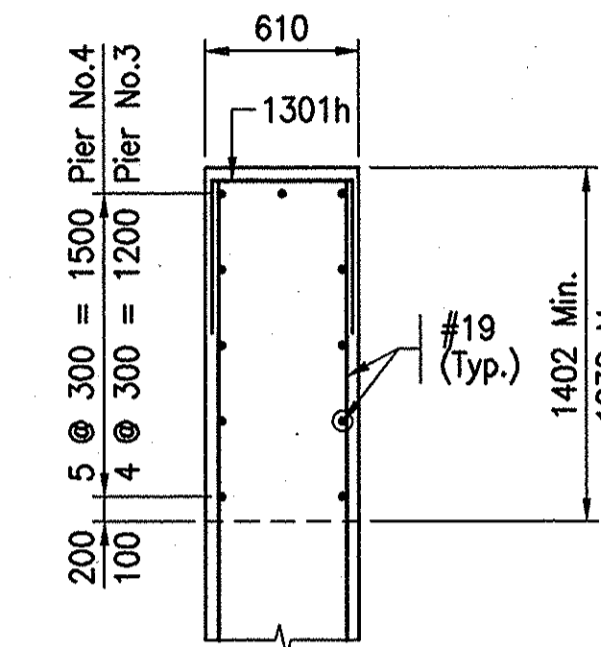


TYPICAL FIELD DRILLED HOLE DETAIL
No Scale



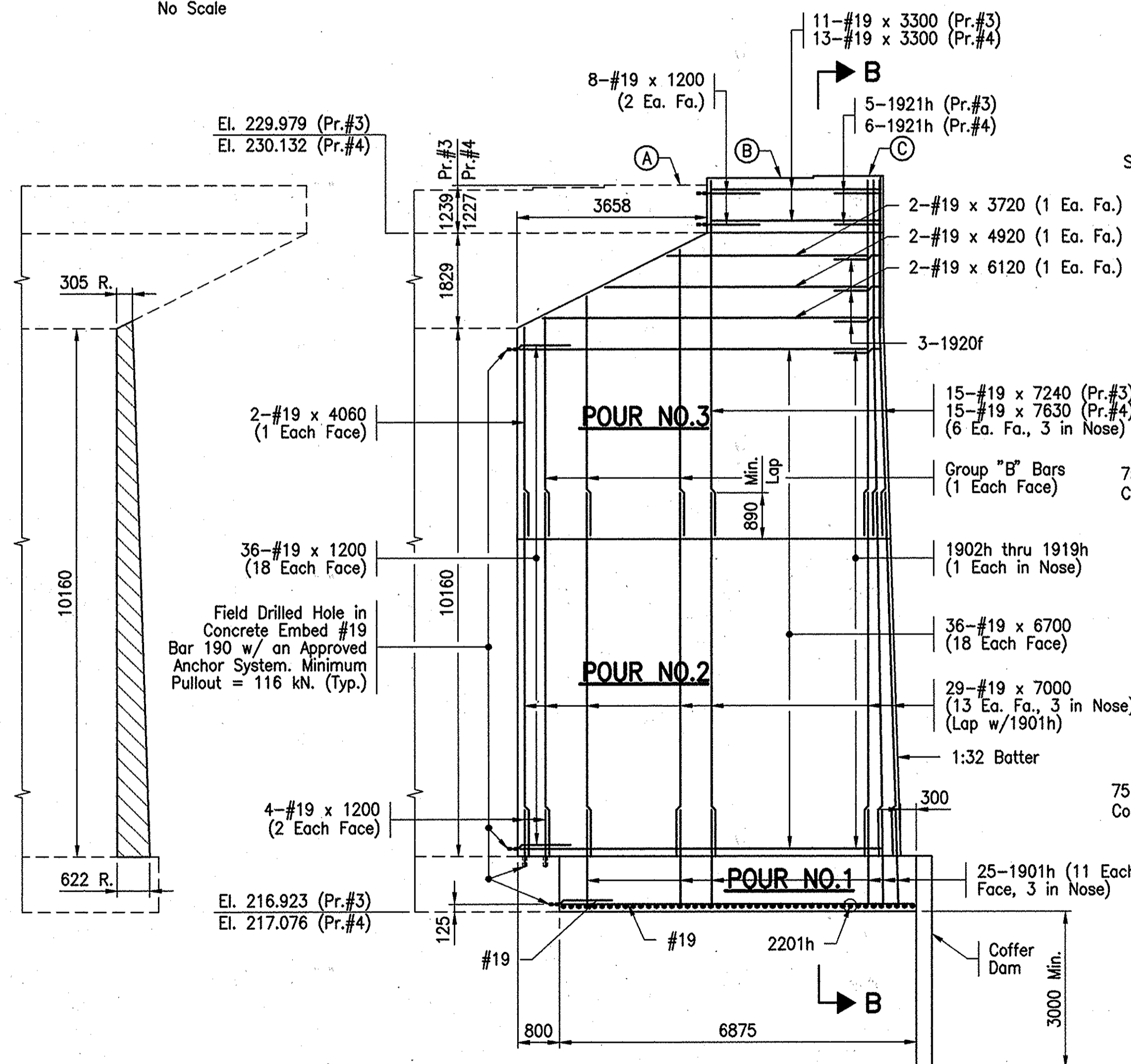
CAP PLAN

Scale: 1:30



SECTION A-A

Scale: 1:30

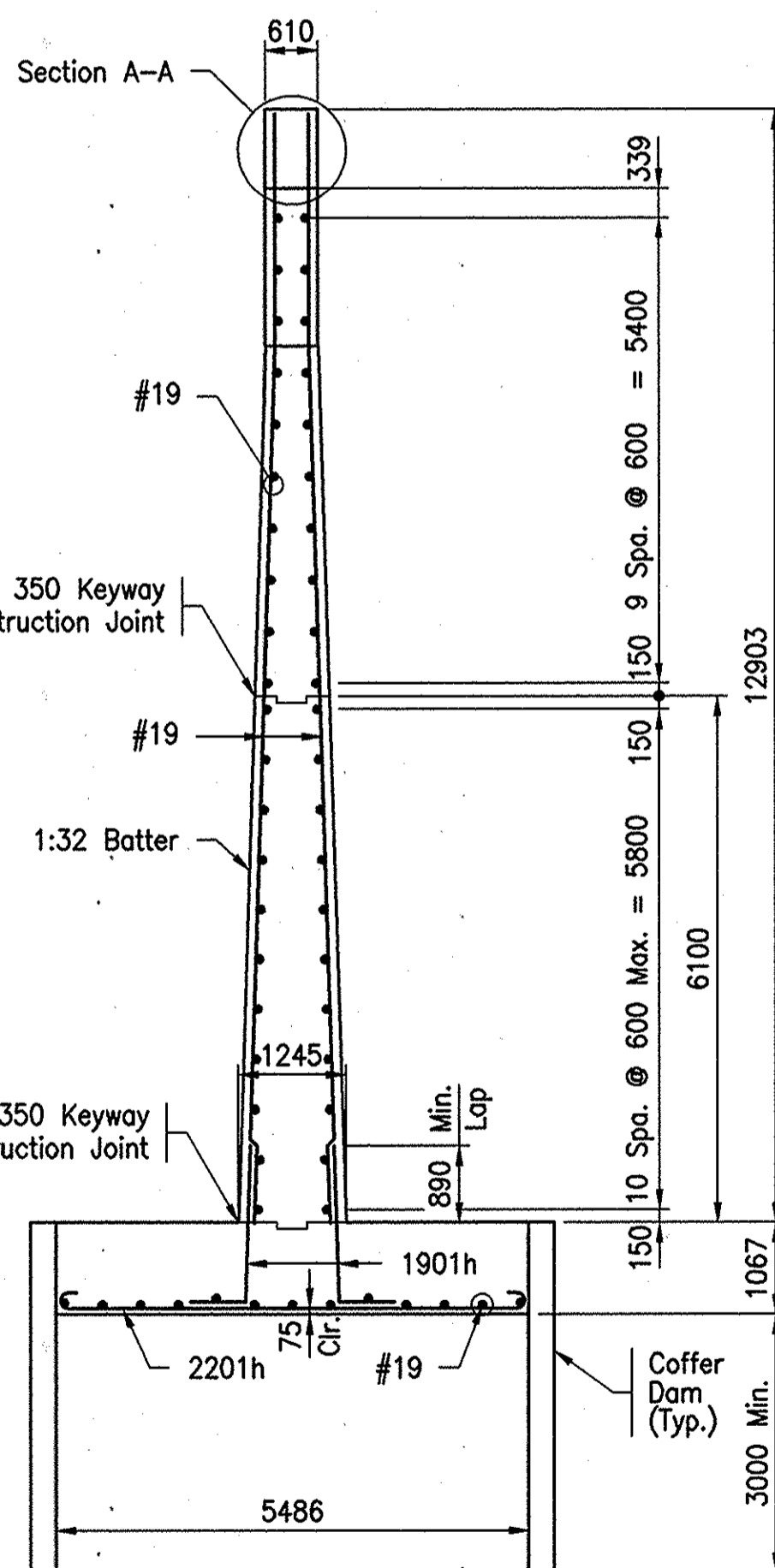


REMOVAL ELEVATION

Scale: 1:75

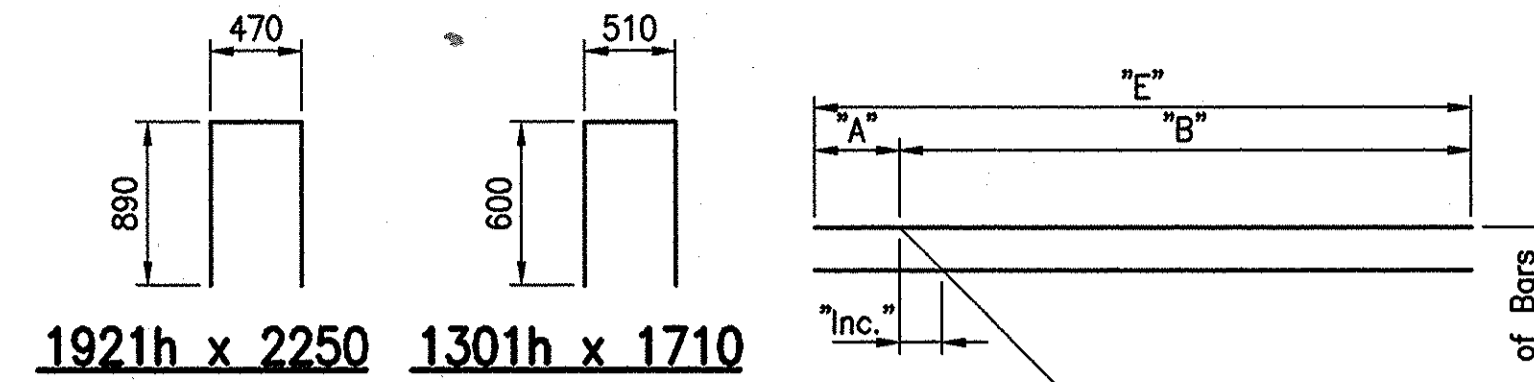
RECONSTRUCTION ELEVATION

Scale: 1:75

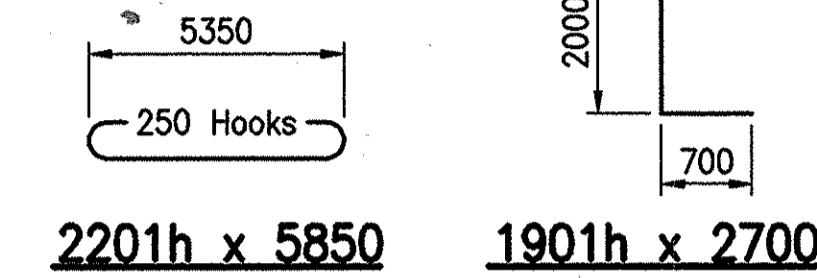


SECTION B-B

Scale: 1:75

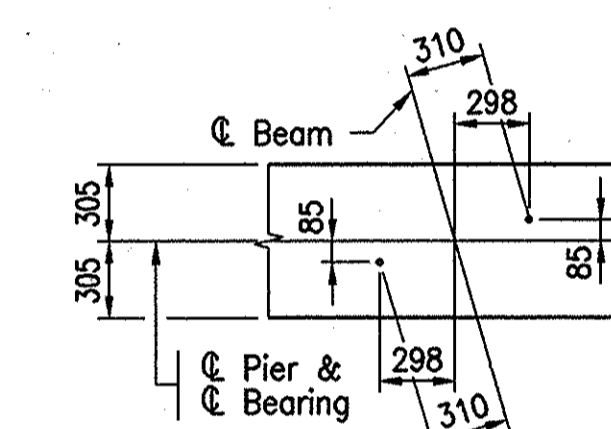


GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
B	#19	4200	5520	4710	5010	9720	255	3



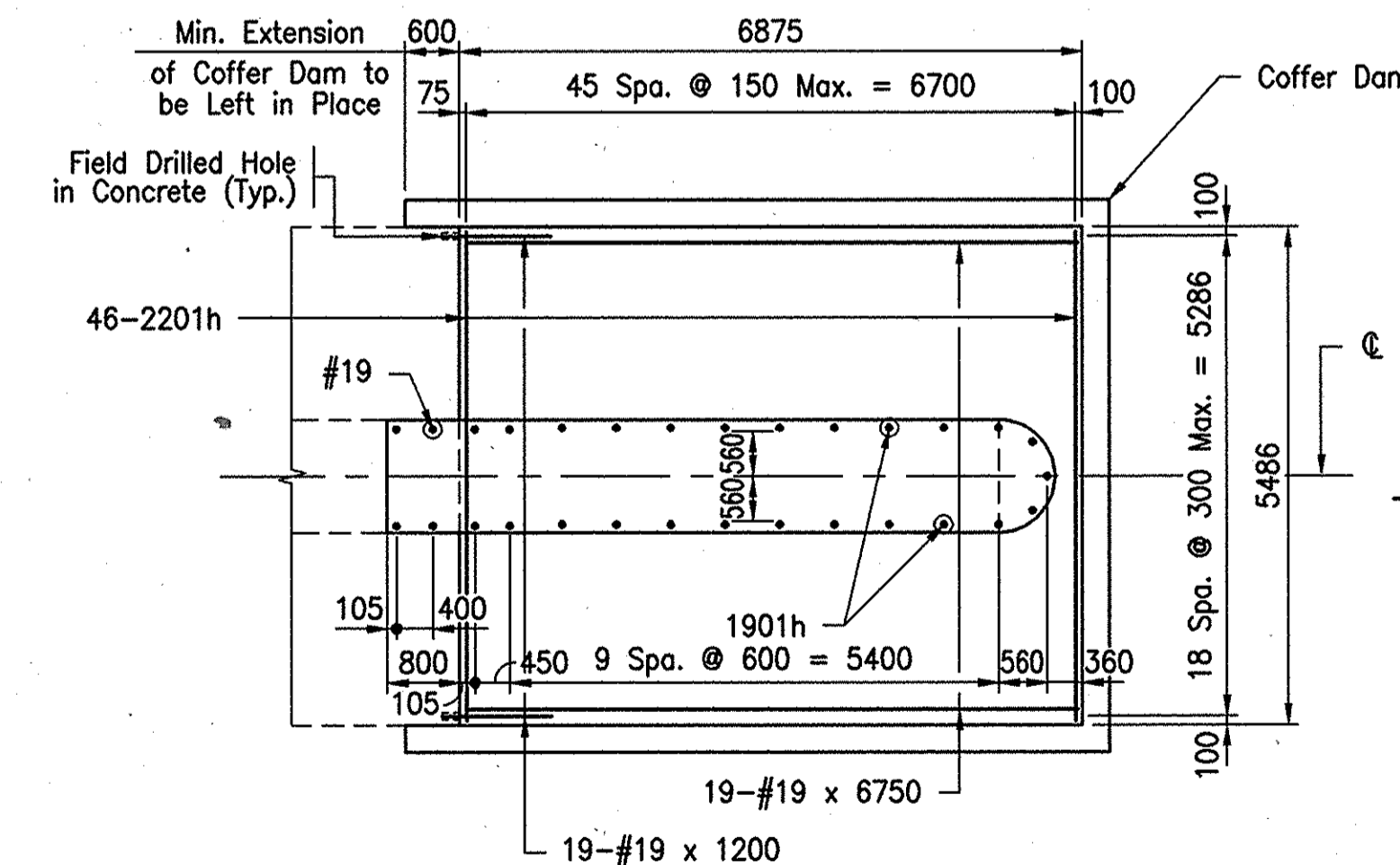
PIER NO.3 ANCHOR BOLT SETTING PLAN

Scale: 1:30



PIER NO.4 ANCHOR BOLT SETTING PLAN

Scale: 1:30



FOOTING PLAN

Scale: 1:75

BILL OF MATERIALS PIER NO.3 (PIER NO.4 SAME, EXCEPT AS NOTED) (SOUTHBOUND STRUCTURE)

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2201h	46	5850	
TOTAL #22			819
1901h	25	2700	
1902h	1	3470	
1903h	1	3410	
1904h	1	3360	
1905h	1	3300	
1906h	1	3240	
1907h	1	3180	
1908h	1	3130	
1909h	1	3070	
1910h	1	3020	
1911h	1	2960	
1912h	1	2900	
1913h	1	2870	
1914h	1	2810	
1915h	1	2750	
1916h	1	2690	
1917h	1	2640	
1918h	1	2580	
1919h	1	2520	
1920h	3	2490	
1921h	5	2250	
1922h	6	2250	
Group "B"	6	9720	
#19	15	7630	
#19	29	7000	
#19	15	7240	
#19	19	6750	
#19	36	6700	
#19	2	6120	
#19	2	4920	
#19	2	3720	
#19	11	3300	
#19	13	3300	
#19	67	1200	
TOTAL #19 (PIER NO.3)			2292
TOTAL #19 (PIER NO.4)			2325
1301h	12	1710	
TOTAL #13			20
TOTAL REINFORCING STEEL + PIER NO.3			3131
TOTAL REINFORCING STEEL + PIER NO.4			3164

CONCRETE	
CONCRETE, B, IN FOOTING	
POUR NO.1	40.2 m ³
CONCRETE, A, IN SUBSTRUCTURE	
POUR NO.2	46.1 m ³
POUR NO.3 (PIER NO.3)	29.8 m ³
POUR NO.3 (PIER NO.4)	30.6 m ³
TOTAL CONC., A, IN SUBSTR. (PIER NO.3)	75.9 m ³
TOTAL CONC., A, IN SUBSTR. (PIER NO.4)	76.7 m ³

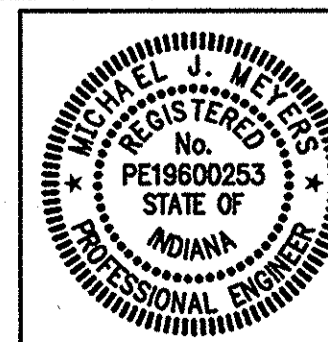
MISCELLANEOUS	
FIELD DRILLED HOLES IN CONCRETE	67 EACH
WET EXCAVATION	256 m ³

- * PIER NO.3 ONLY
- ** PIER NO.4 ONLY

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Anchor Bolt Details, See Sht. 74.
For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01.
Footing Dimensions Shown are Minimum Dimensions. The Footing Shall be Poured to the Inside Face of the Cofferdam. The Cofferdam Shall Extend a Min. of 3 Meters Below the Bottom of the Footing, Shall be cut off Flush with the Top of the Footing, and Shall be Left in Place.

File: 9660PR34



RECOMMENDED FOR APPROVAL	<i>Michael J. Maguire</i>	1/19/99
DESIGNED:	MJM	DRAWN:
CHECKED:	JAP	CHECKED:

INDIANA DEPARTMENT OF TRANSPORTATION
PIERS NO.3 & NO.4 DETAILS

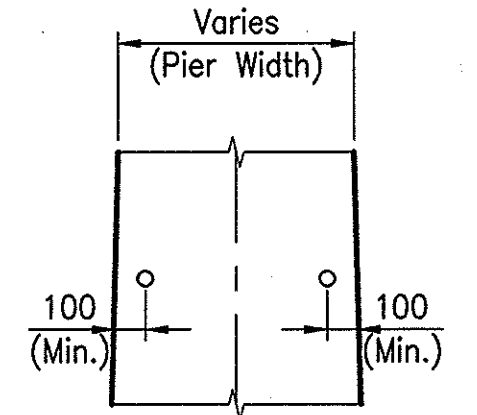
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	69 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

BRIDGE SEAT ELEVATIONS	
LOCATION	ELEVATION
A	231.936
B	232.324
C	232.362
D	232.291
E	232.431
F	232.472

LEGEND

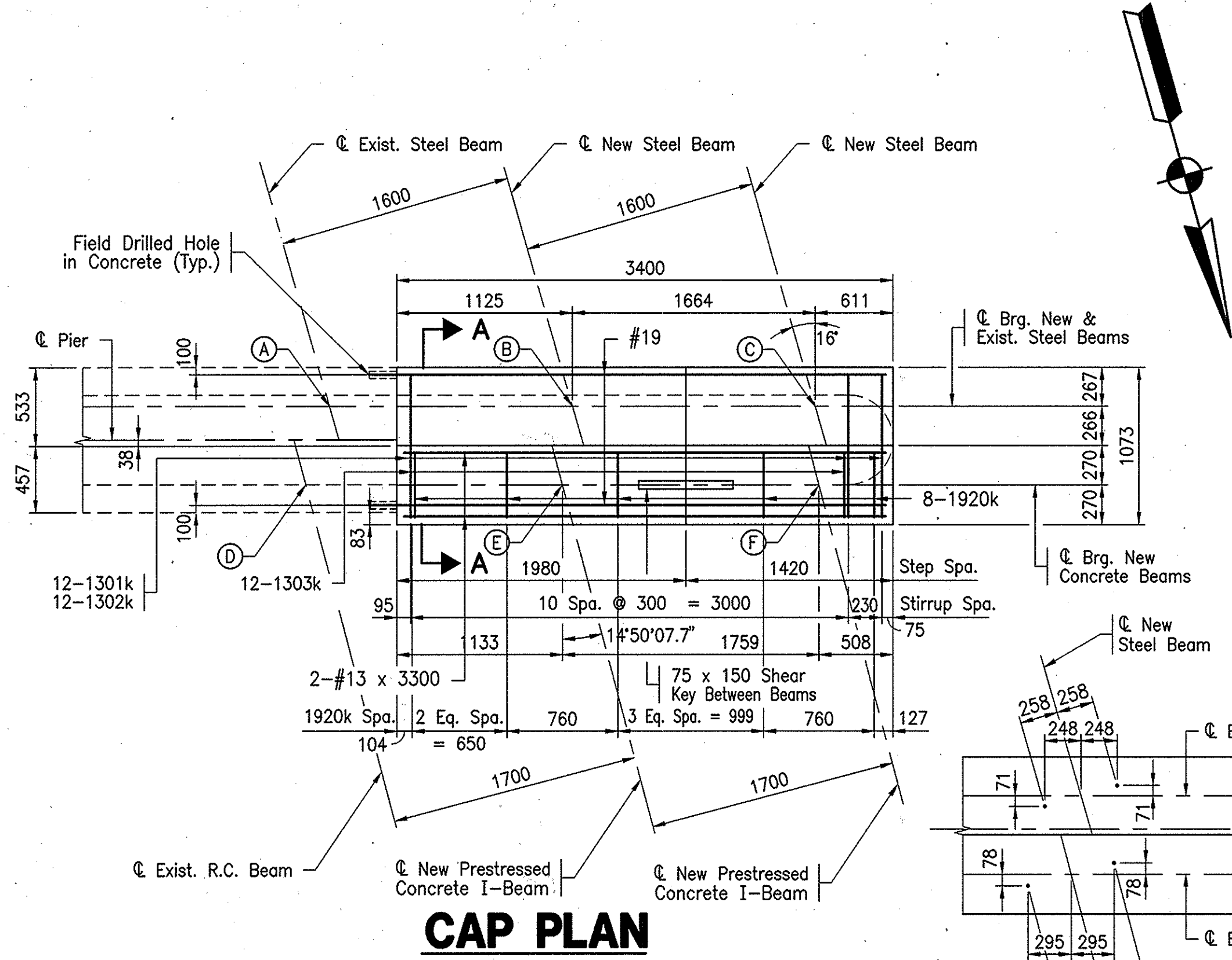
Hatching Indicates Removal

(A) Bridge Seat Elevation



TYPICAL FIELD DRILLED HOLE DETAIL

No Scale

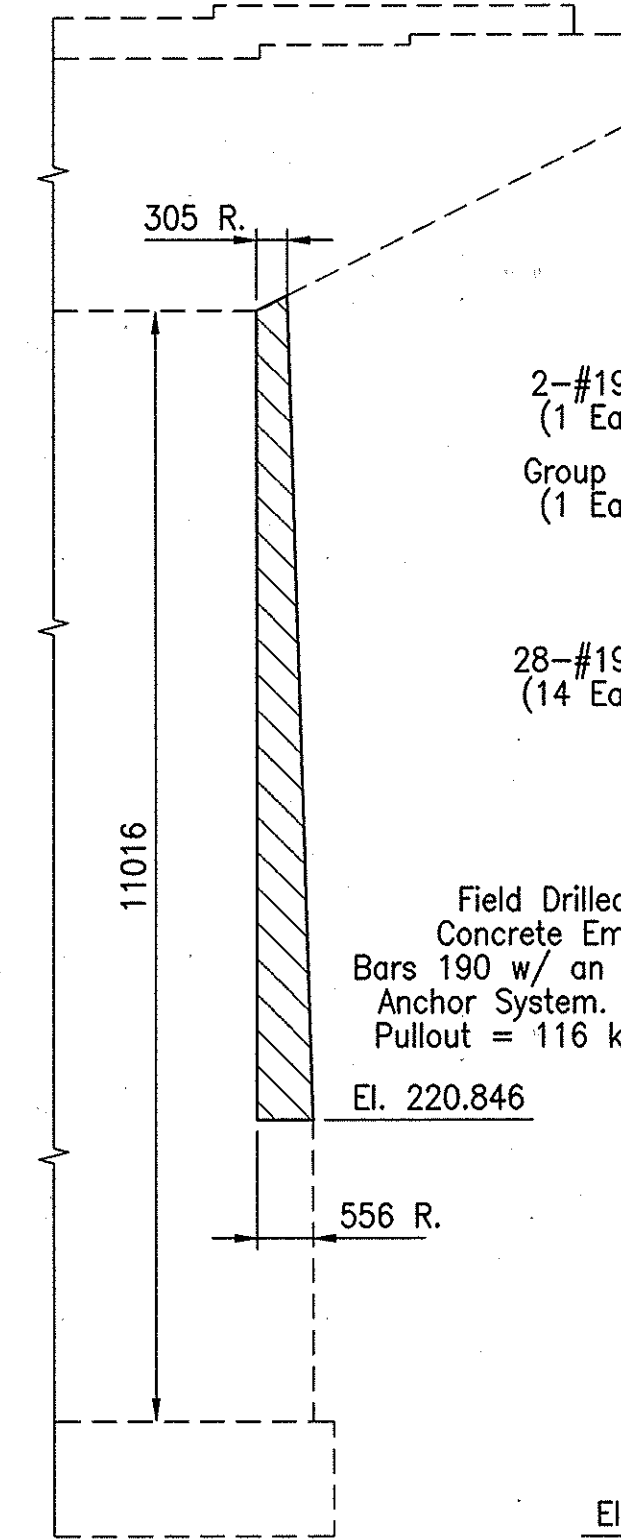


CAP PLAN

Scale: 1:30

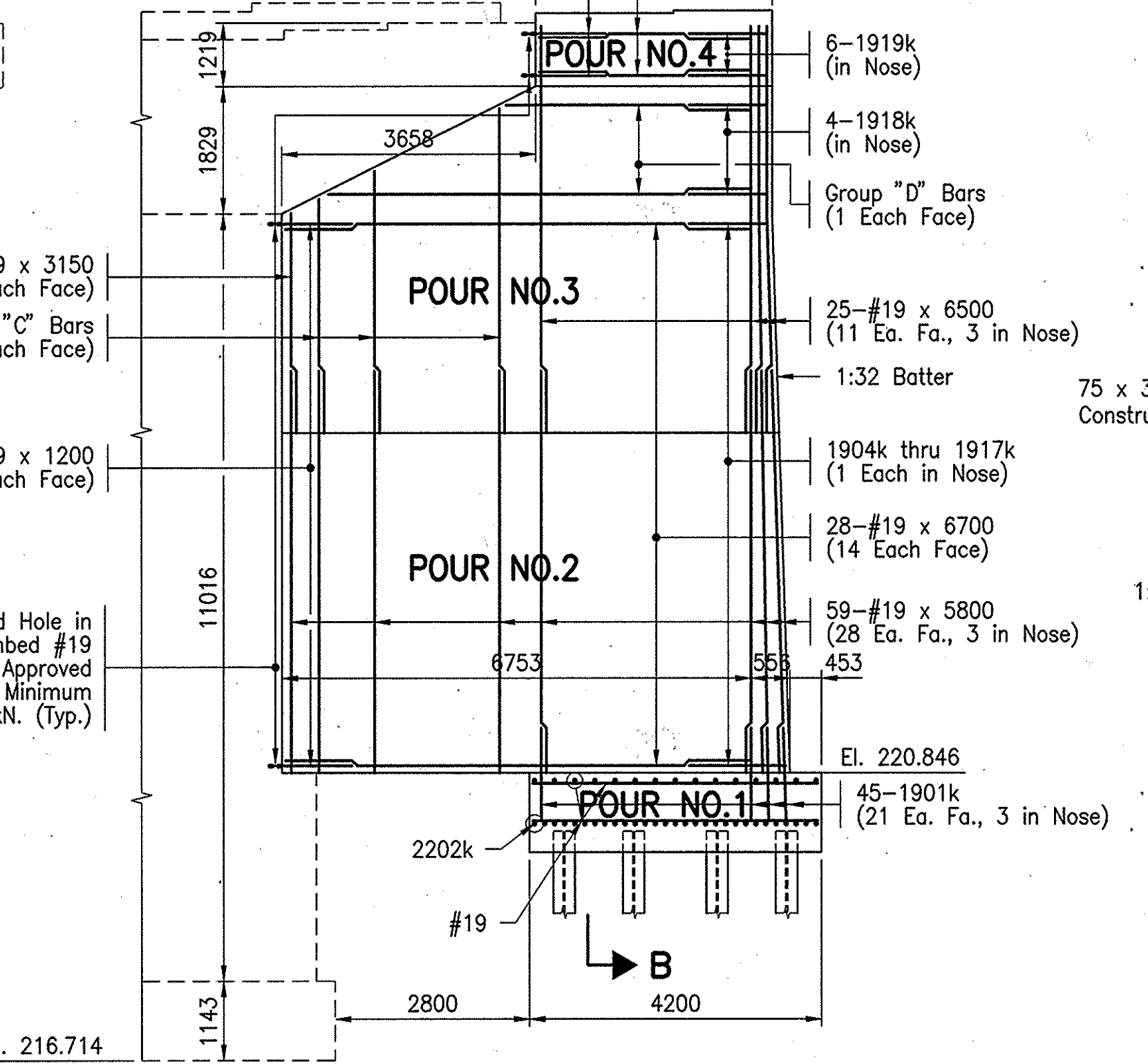
ANCHOR BOLT SETTING PLAN

Scale: 1:30



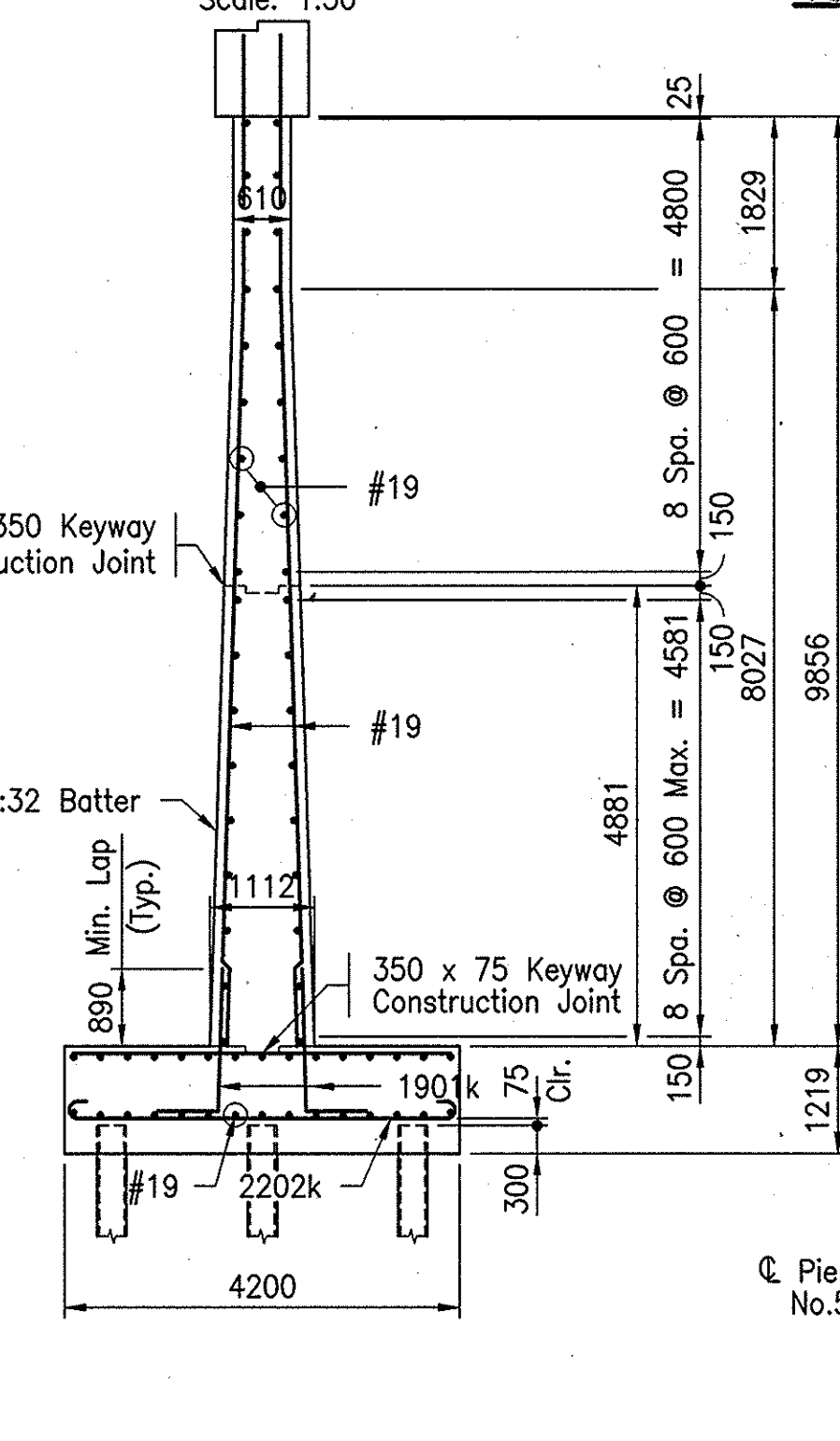
REMOVAL ELEVATION

Scale: 1:75



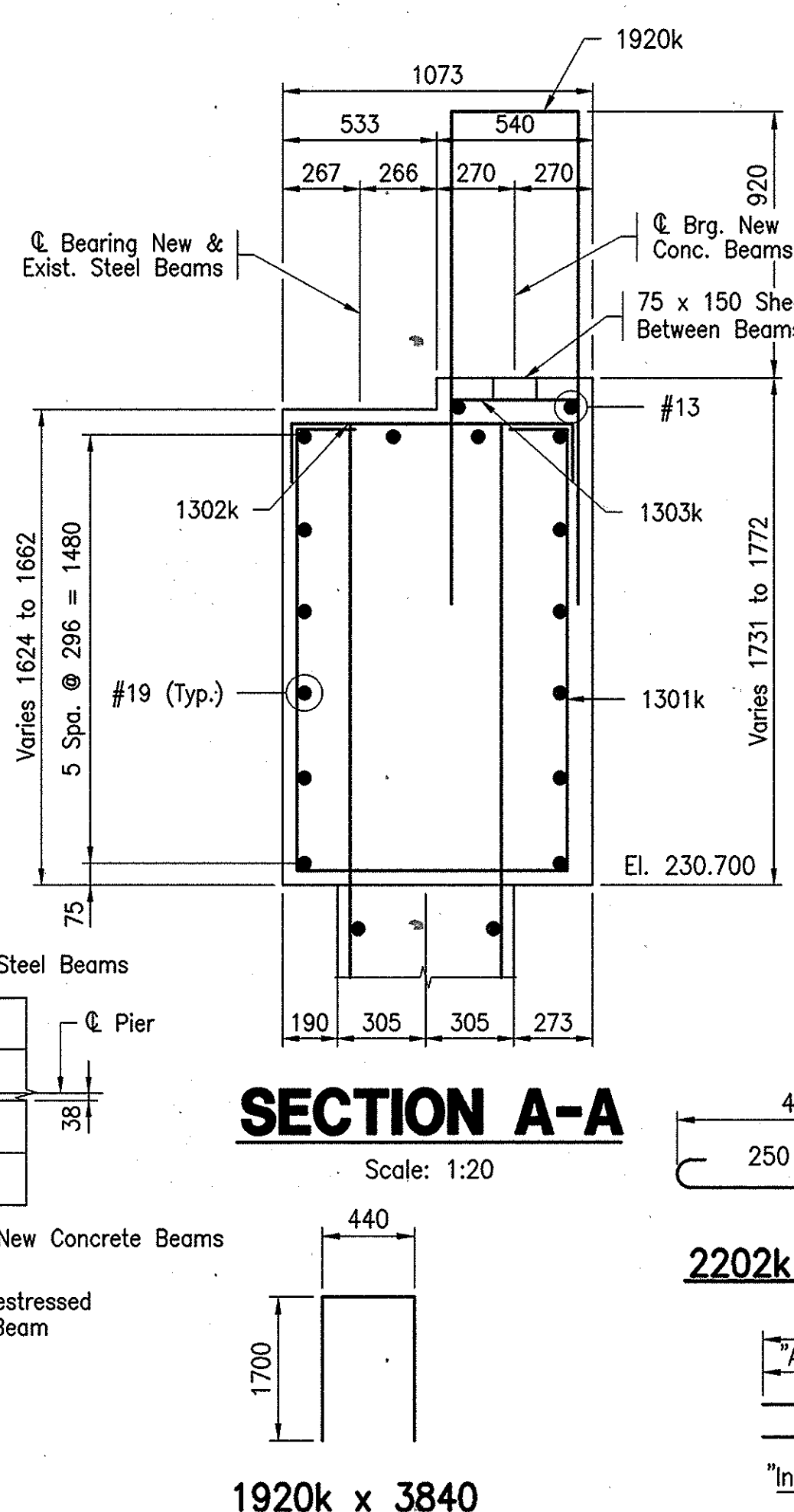
RECONSTRUCTION ELEVATION

Scale: 1:75



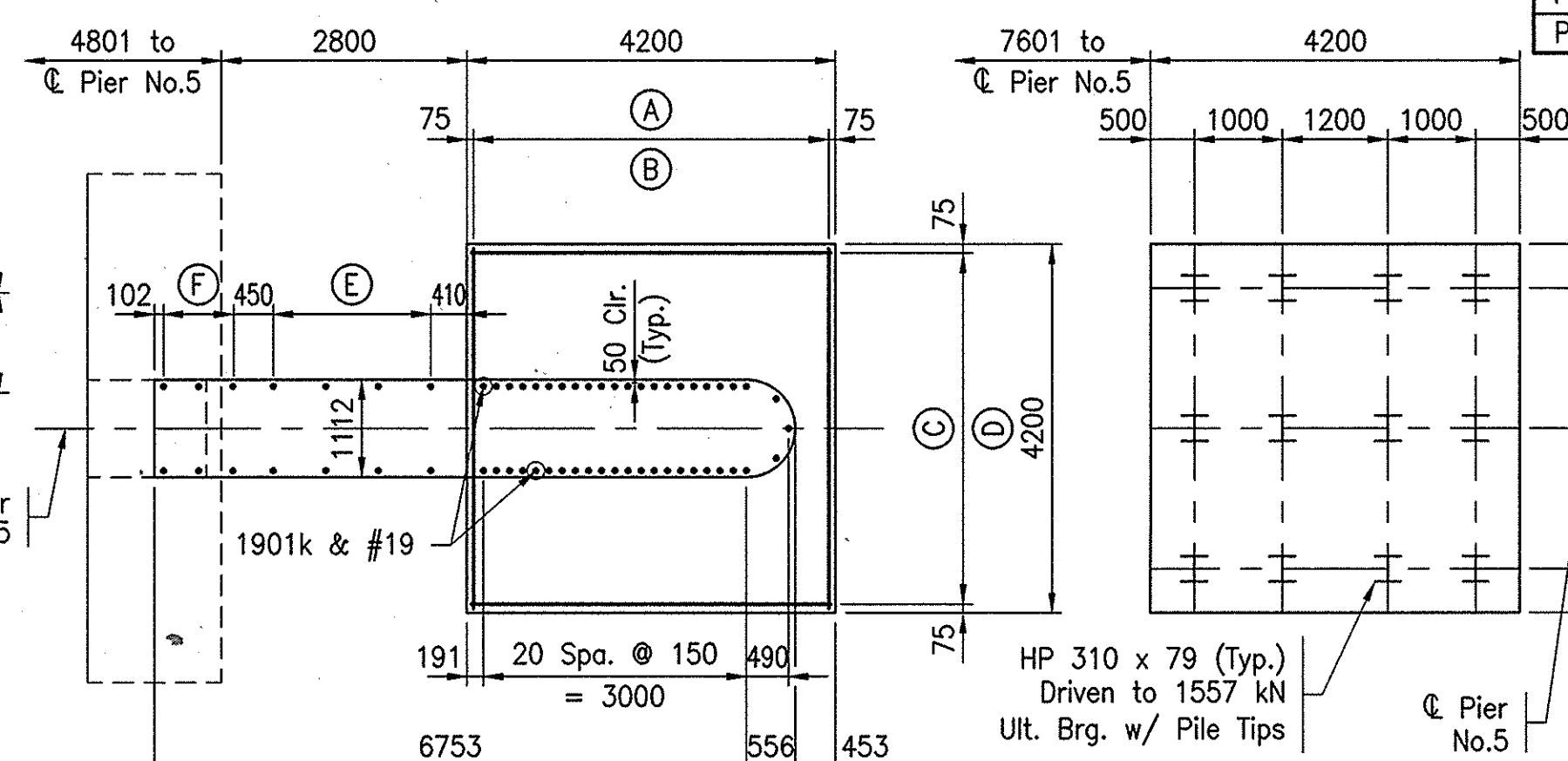
SECTION B-B

Scale: 1:75



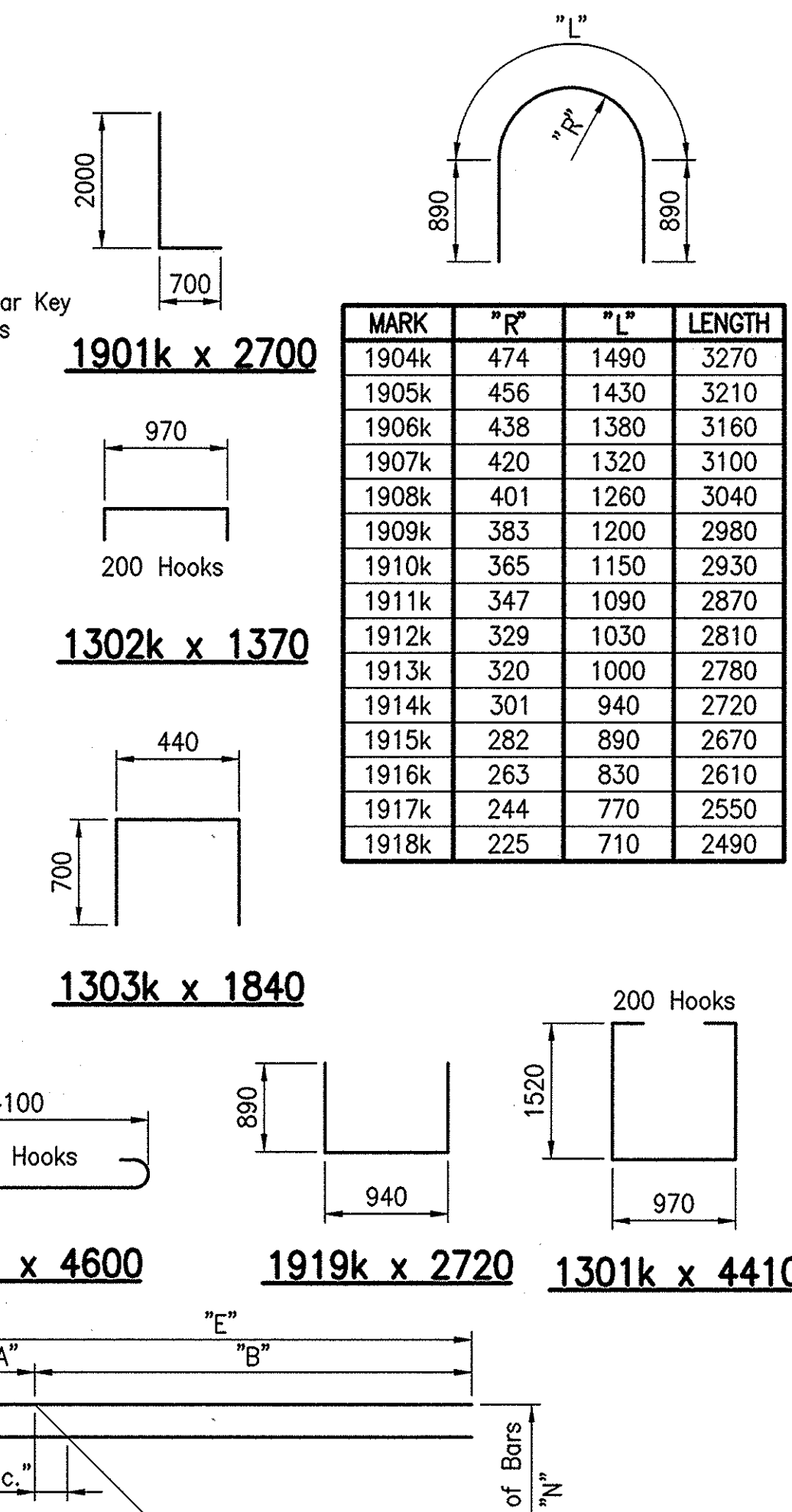
SECTION A-A

Scale: 1:20



FOOTING PLAN

Scale: 1:75



PILING PLAN

Scale: 1:75

MARK	"R"	"L"	LENGTH
1904k	474	1490	3270
1905k	456	1430	3210
1906k	438	1380	3160
1907k	420	1320	3100
1908k	401	1260	3040
1909k	383	1200	2980
1910k	365	1150	2930
1911k	347	1090	2870
1912k	329	1030	2810
1913k	320	1000	2780
1914k	301	940	2720
1915k	282	890	2670
1916k	263	830	2610
1917k	244	770	2550
1918k	225	710	2490

GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
"c"	#19	3290	4610	3810	4090	7900	260	3
"b"	#19	3100	6700	4300	5500	9800	3600	2

- (A) 14 Spa. @ 300 Max. = 4050 (15-#19 x 4100) (Top)
- (B) 28 Spa. @ 150 Max. = 4050 (29-2202k) (Bott.)
- (C) 14 Spa. @ 300 Max. = 4050 (15-#19 x 4100) (Top)
- (D) 14 Spa. @ 300 Max. = 4050 (15-#19 x 4100) (Bott.)
- (E) 3 Spa. @ 600 = 1800
- (F) 2 Spa. @ 400 = 800

BILL OF MATERIALS PIER NO.5 (SOUTHBOUND STRUCTURE) REINFORCING STEEL

SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2202k	29	4600	
TOTAL #22			406
1901k	45	2700	
1904k	1	3270	
1905k	1	3210	
1906k	1	3160	
1907k	1	3100	
1908k	1	3040	
1909k	1	2980	
1910k	1	2930	
1911k	1	2870	
1912k	1	2810	
1913k	1	2780	
1914k	1	2720	
1915k	1	2670	
1916k	1	2610	
1917k	1	2550	
1918k	4	2490	
1919k	6	2720	
1920k	8	3840	
Group "C"	6	7900	
Group "D"	4	9800	
#19	28	6700	
#19	25	6500	
#19	59	5800	
#19	45	4100	
#19	14	3300	
#19	2	3150	
#19	36	1200	
TOTAL #19			2857
1301k	12	4410	
1302k	12	1370	
1303k	12	1840	
#13	2	3300	
TOTAL #13			97
TOTAL REINFORCING STEEL			3360

CONCRETE

CONCRETE, B, IN FOOTING	
POUR NO.1	21.5 m ³
CONCRETE, A, IN SUBSTRUCTURE	
POUR NO.2	33.4 m ³
POUR NO.3	21.4 m ³
POUR NO.4	6.2 m ³
TOTAL CONC., A, IN SUBSTRUCTURE	61.0 m ³

MISCELLANEOUS

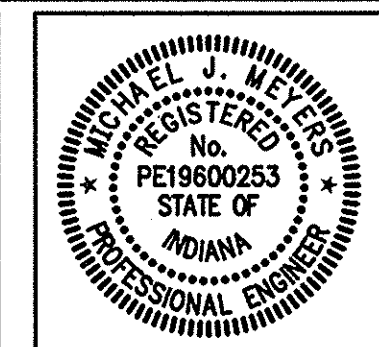
FIELD DRILLED HOLES IN CONCRETE	36 EACH
DRY EXCAVATION	221 m ³
WET EXCAVATION	169 m ³
SURFACE SEAL (EST. 78 m ²)	LSUM ITEM
FLOWABLE MORTAR	5.0 m ³
PILE, STEEL H, HP 310 x 79 (12 @ 10 m)	120 m
PILE TIP, HP 310	12 EACH

NOTE:
All Dimensions are in Millimeters and Elevations are in Meters Unless Noted.

For Anchor Bolt Details, See Sheet 74.

For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01.

File: 9660PRS

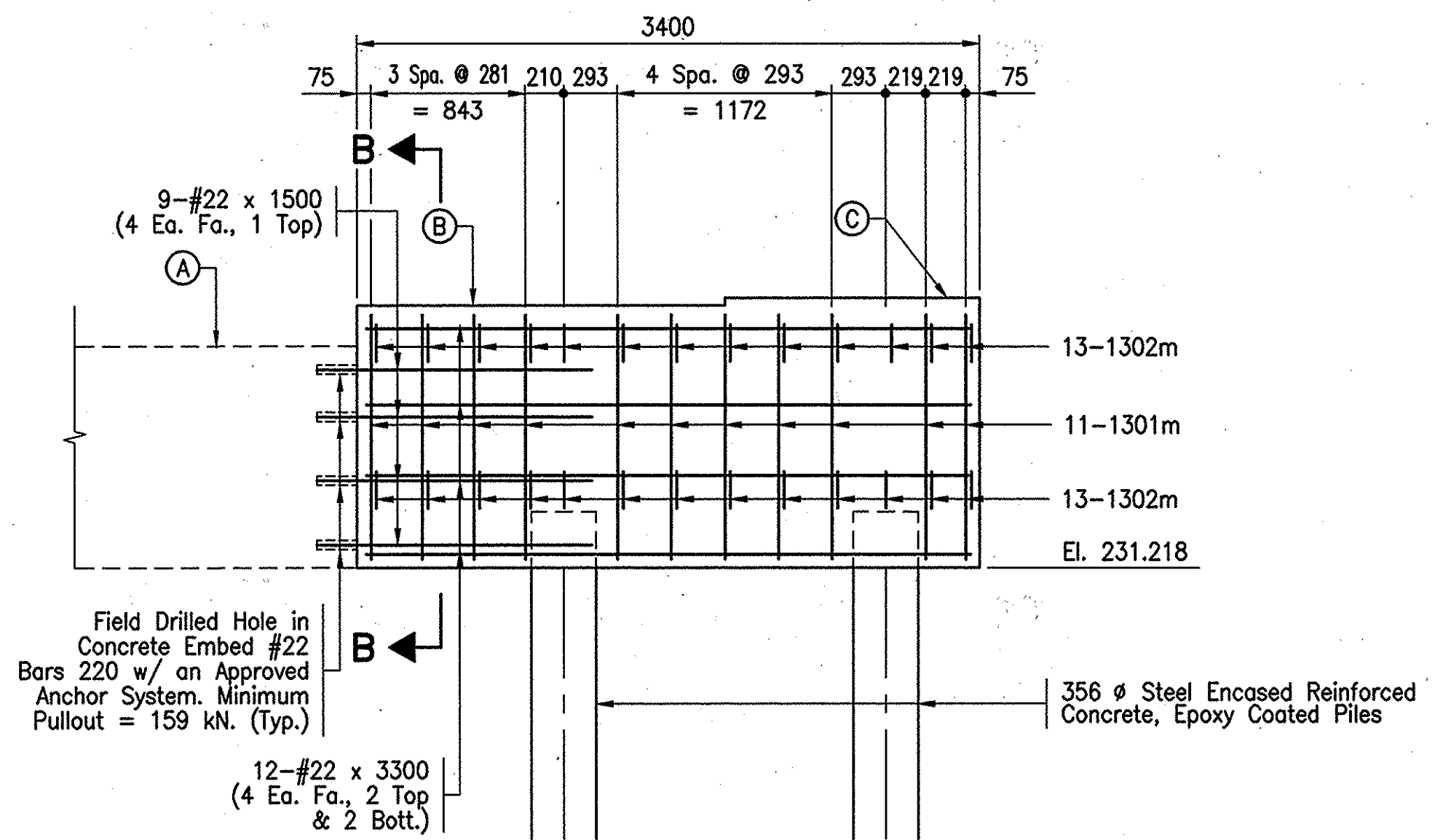


RECOMMENDED FOR APPROVAL	<i>Michael J. Meyers</i>	6/29/99
DESIGNED:	MJM	DRAWN:
CHECKED:	FES	CHECKED:

INDIANA DEPARTMENT OF TRANSPORTATION

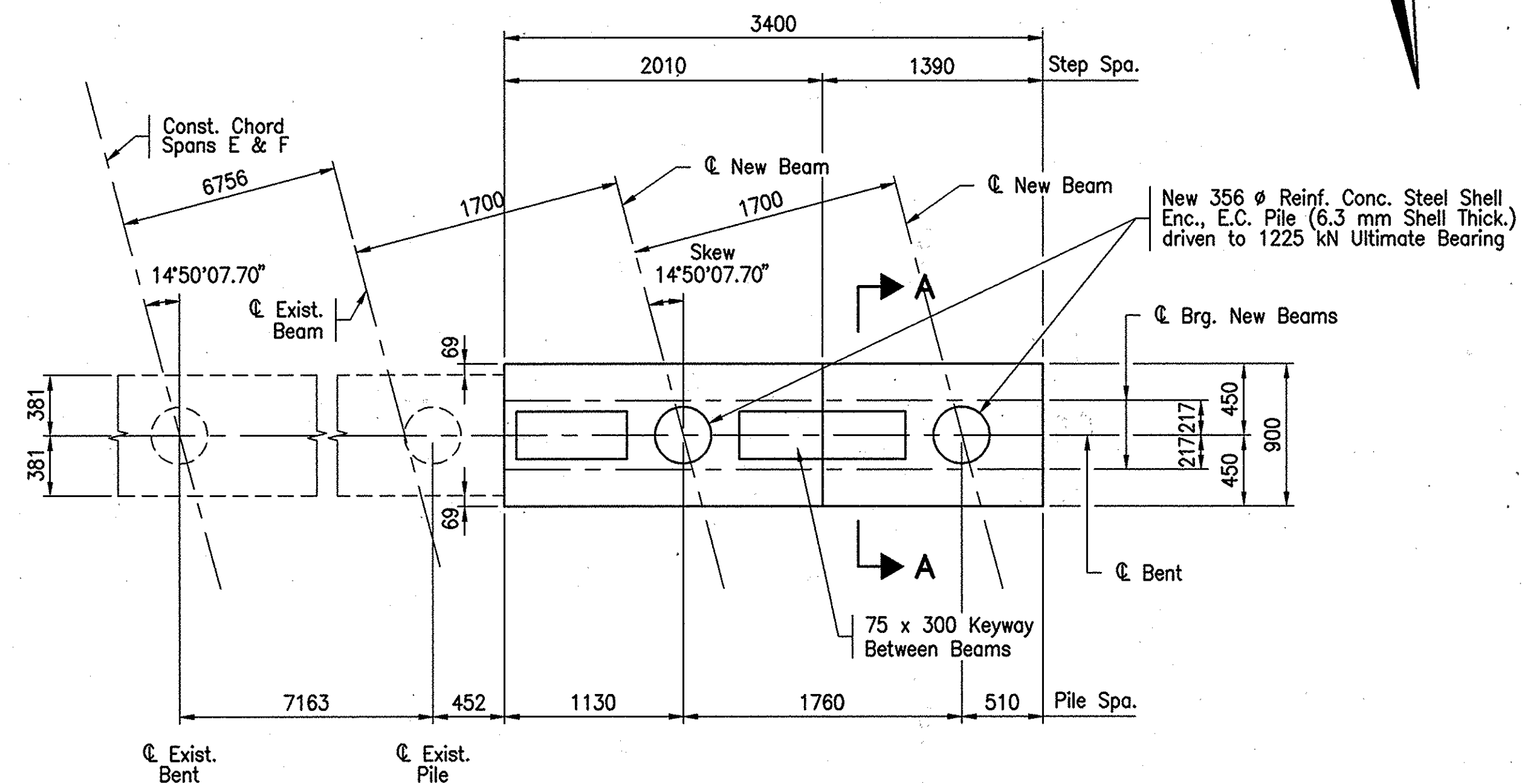
PIER NO.5 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	70A of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



ELEVATION

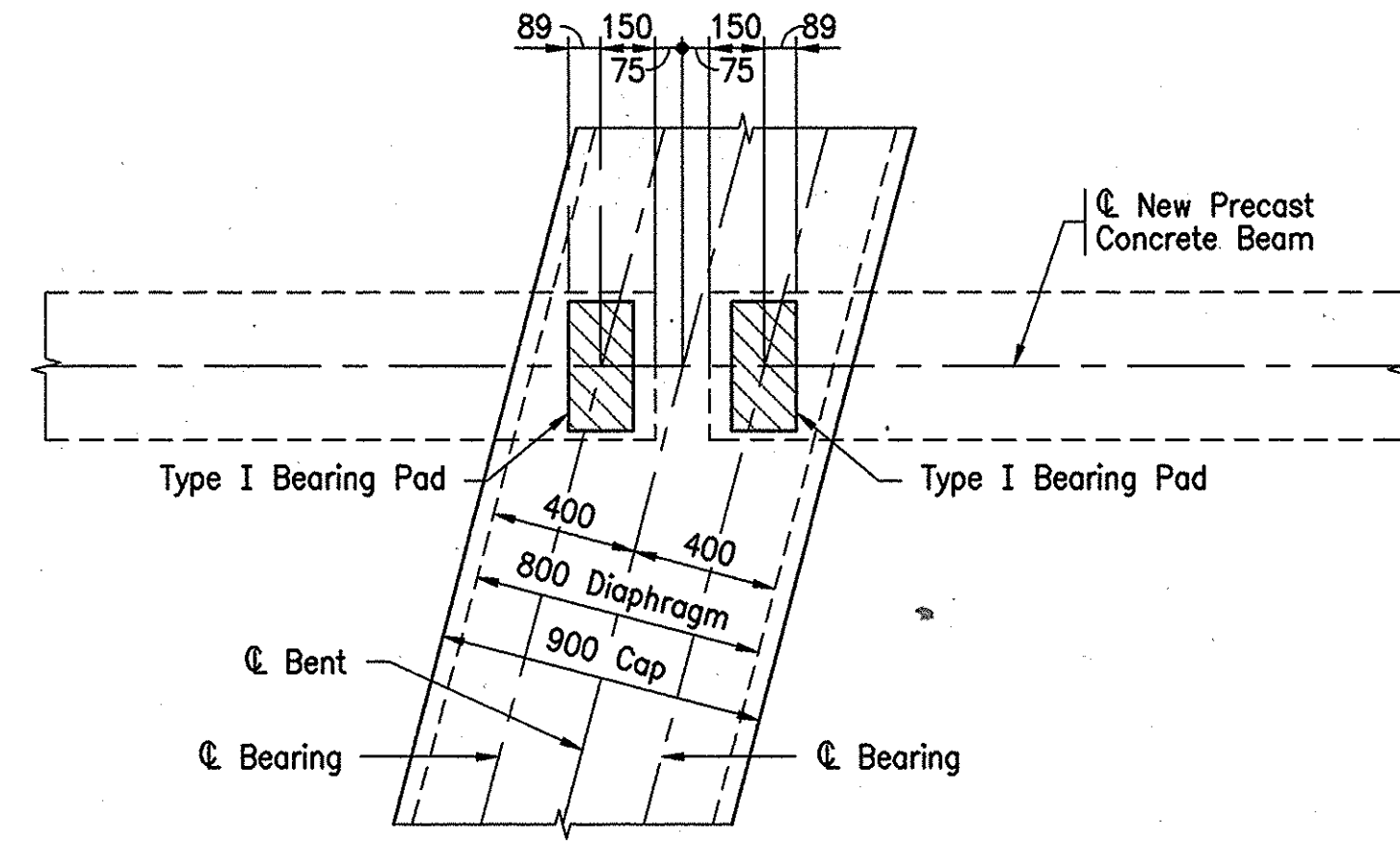
Scale: 1:30



PLAN

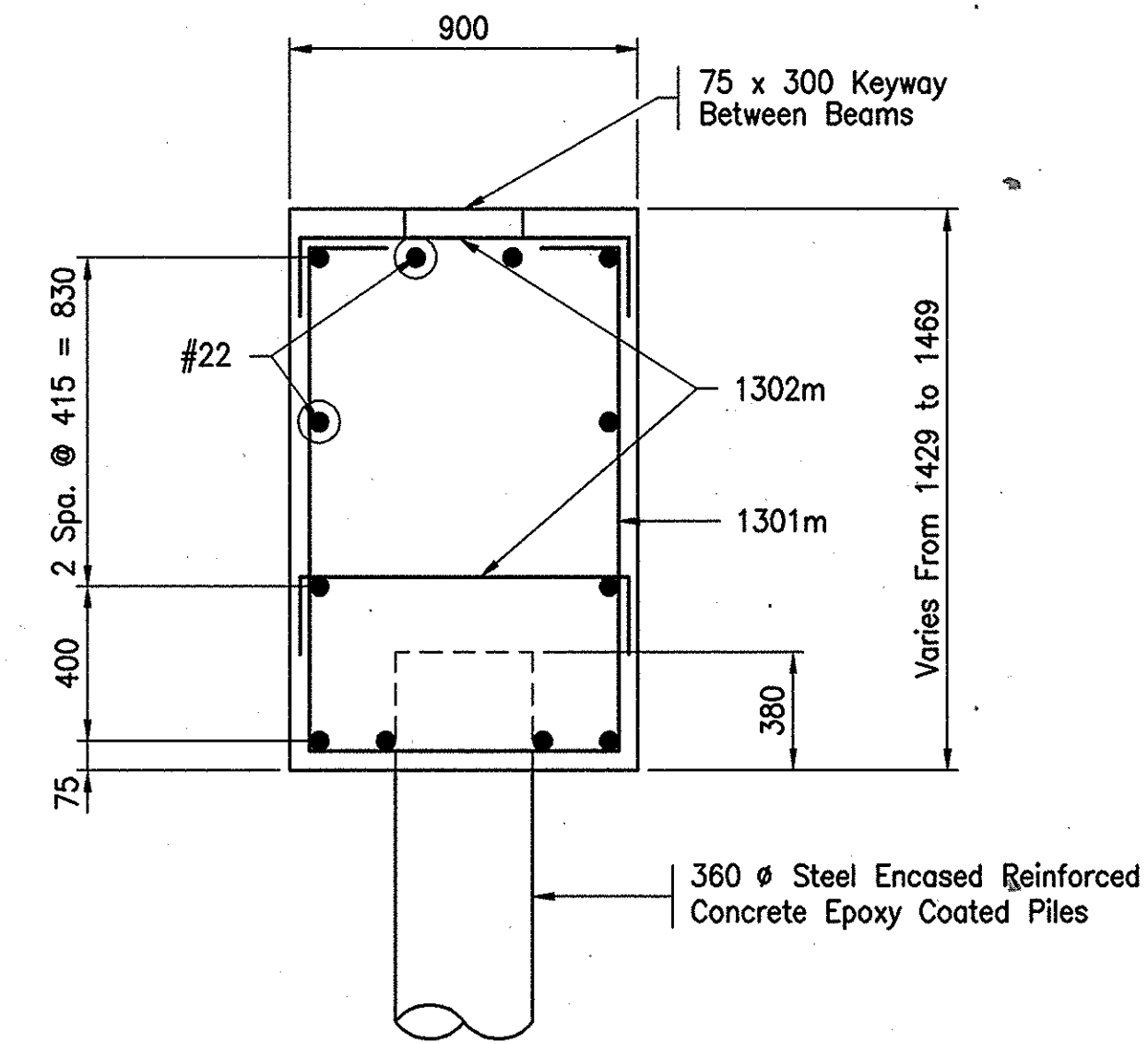
Scale: 1:30

BRIDGE SEAT ELEVATIONS	
LOCATION	ELEVATION
A	232.421
B	232.647
C	232.687



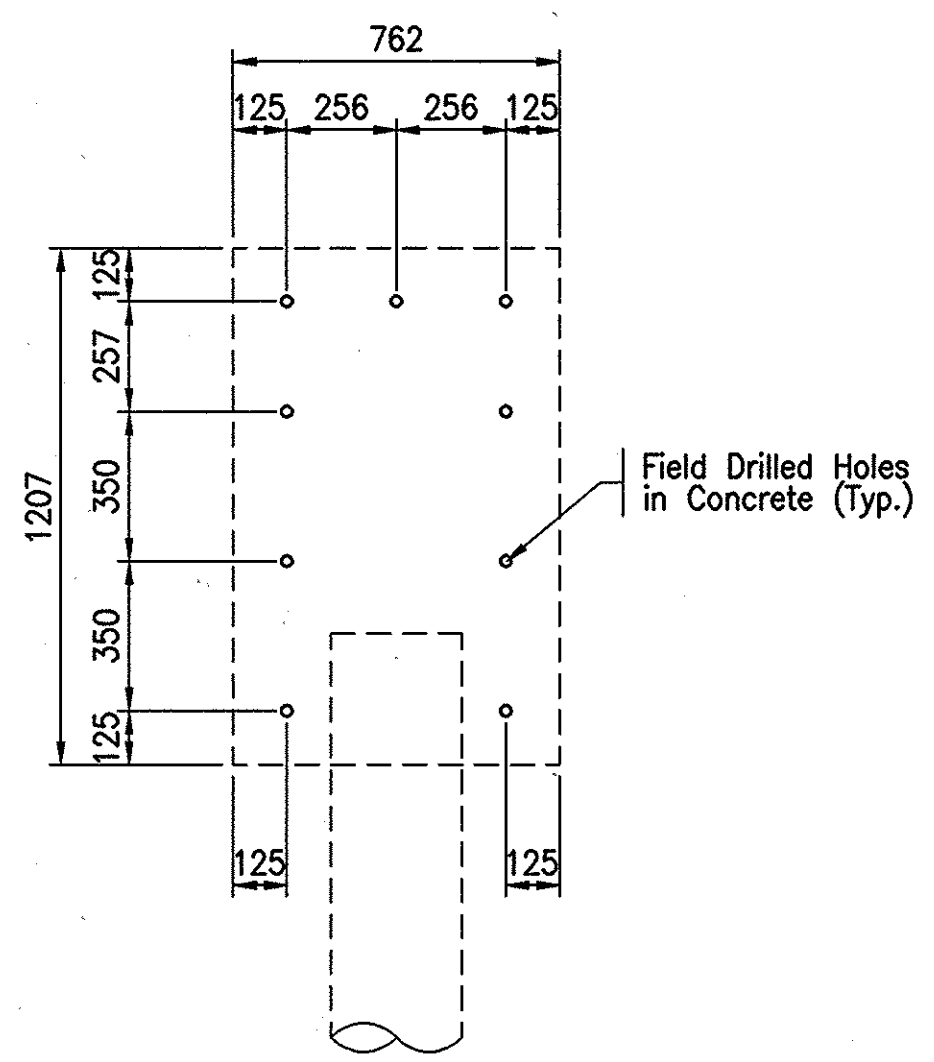
BEARING PAD PLACEMENT DETAIL

Scale: 1:50



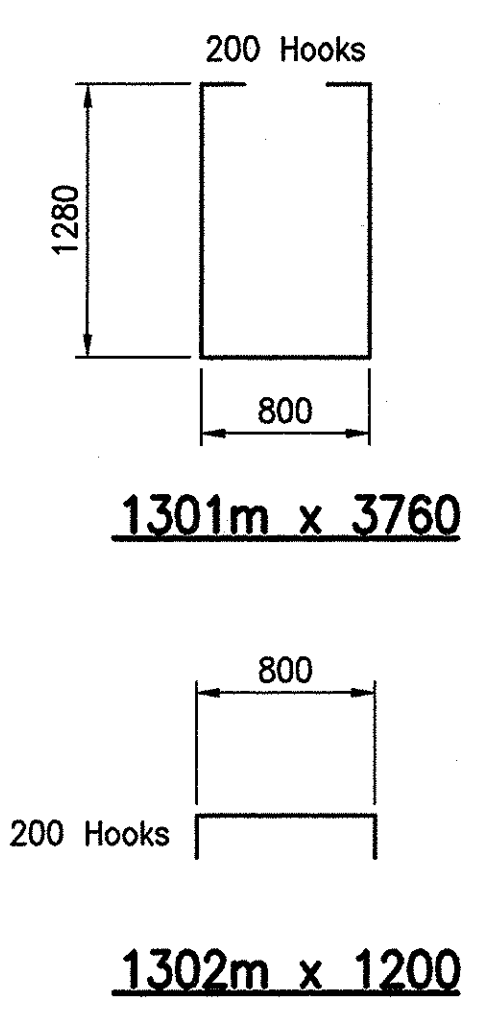
SECTION A-A

Scale: 1:50



SECTION B-B

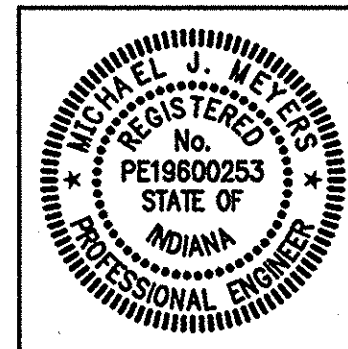
Scale: 1:50



BILL OF MATERIALS BENT NO.6 (SOUTHBOUND STRUCTURE)			
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#22	12	3300	
#22	9	1500	
TOTAL #22			162
1301m	11	3760	
1302m	26	1200	
TOTAL #13			72
TOTAL REINFORCING STEEL			234
CONCRETE			
CONCRETE, A, IN SUBSTRUCTURE			4.4 m ³
MISCELLANEOUS			
PILE, REINF., CONC. STEEL SHELL ENC. E.C. 6.3 mm SHELL 356 mm (2 @ 17)			34 m
FIELD DRILLED HOLES IN CONCRETE			9 EACH

NOTE:
All Dimensions are in Millimeters and Elevations are in Meters Unless Noted.
For Superstructure Details in Spans E & F, See Sheets 86 thru 88.
For Pile Load Tables, See Sheet 62.
For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01.
For Pile Reinforcing Details and Extent of Epoxy Coating, See Std. Dwg. 701-BPIL-02.
For Type I Elastomeric Bearing Pad Details, See Std. Dwg. 707-BEBP-01.

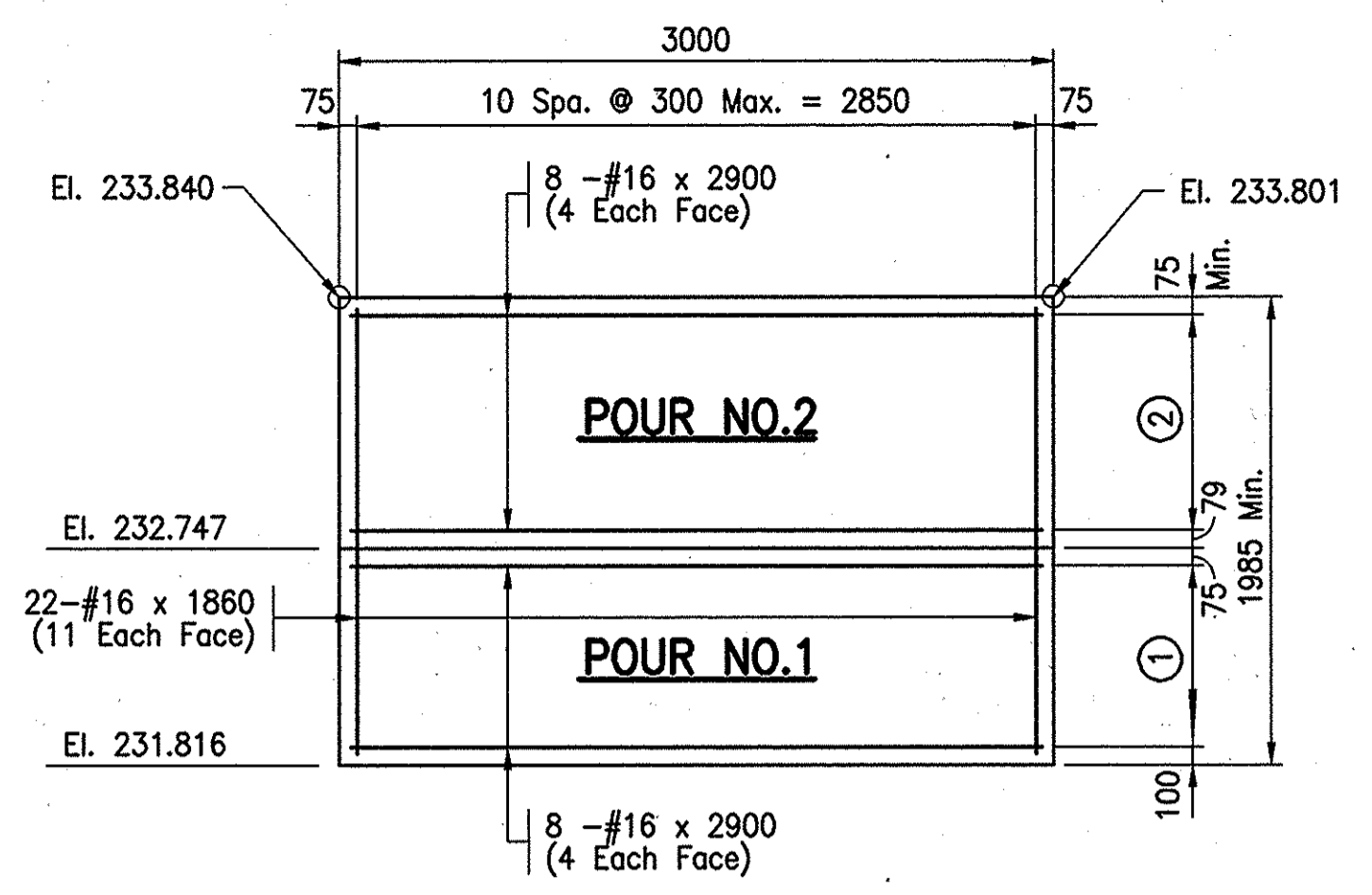
File: 9660BT6



RECOMMENDED FOR APPROVAL	<i>Michael J. Meyers</i>	1/19/99
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA
DEPARTMENT OF TRANSPORTATION
**BENT NO.6
DETAILS**

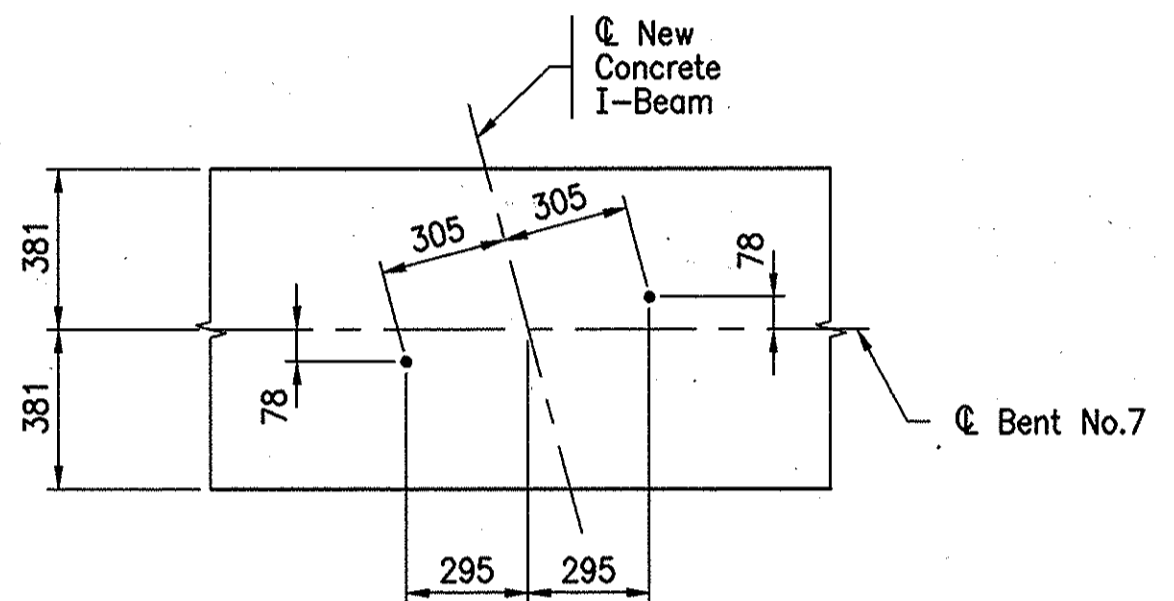
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	71 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



WINGWALL DETAILS

Scale: 1:50

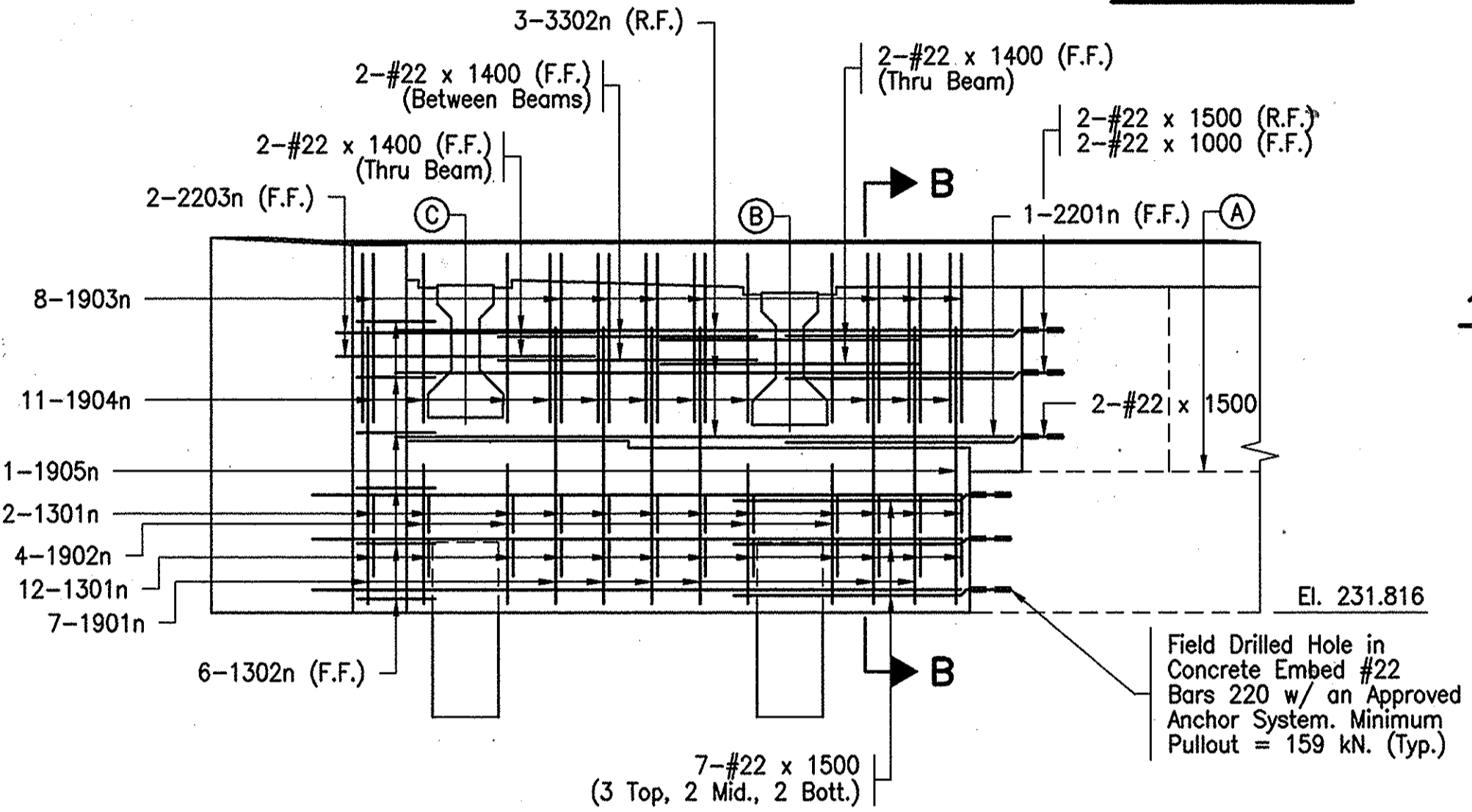
- LEGEND**
- ① 3 Spa. @ 300 Max. = 756
 - ② 3 Spa. @ 300 = 900



ANCHOR BOLT SETTING DIAGRAM

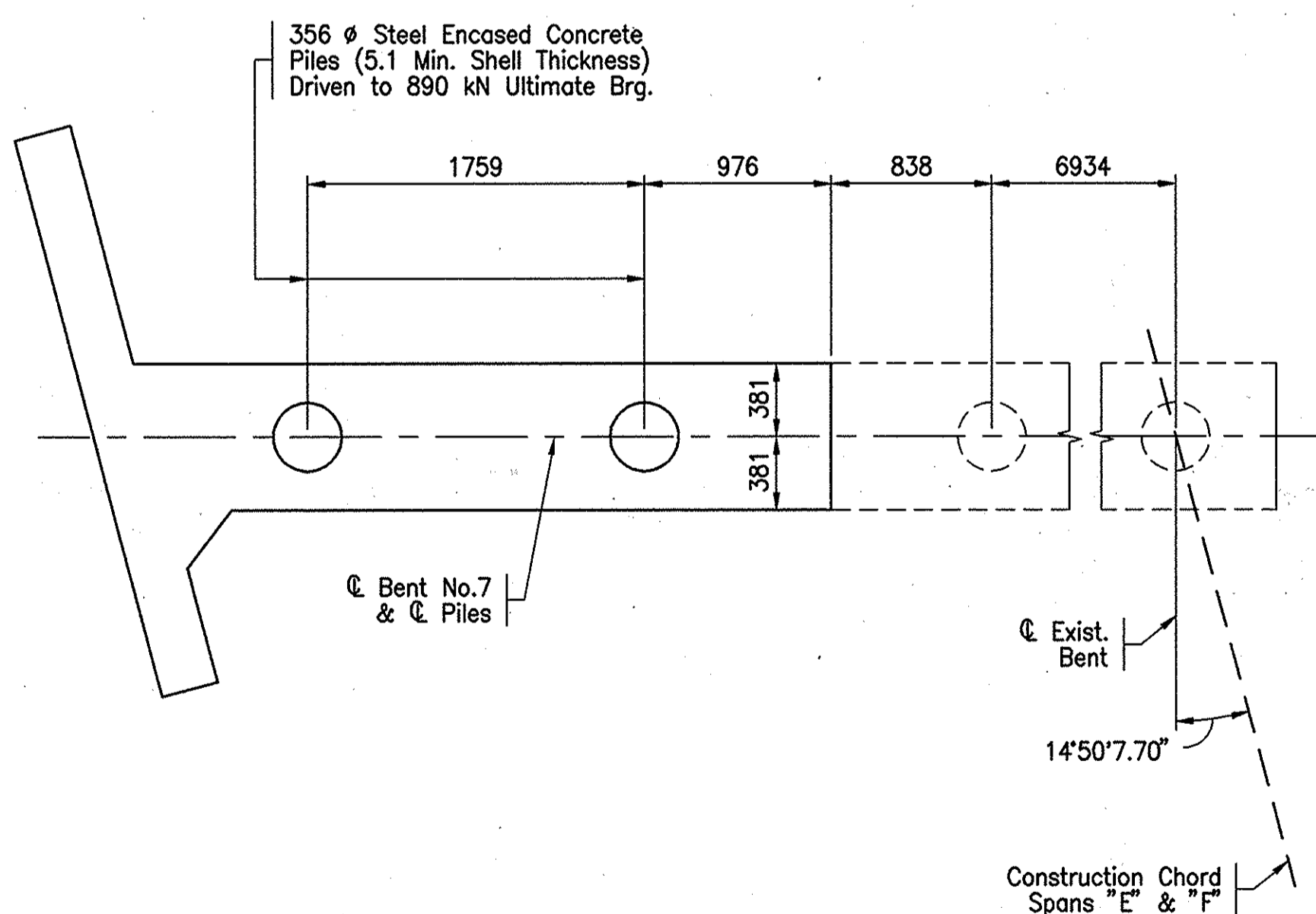
Scale: 1:30

BRIDGE SEAT ELEVATIONS	
LOCATION	ELEVATIONS
A	232.578
B	232.707
C	232.747



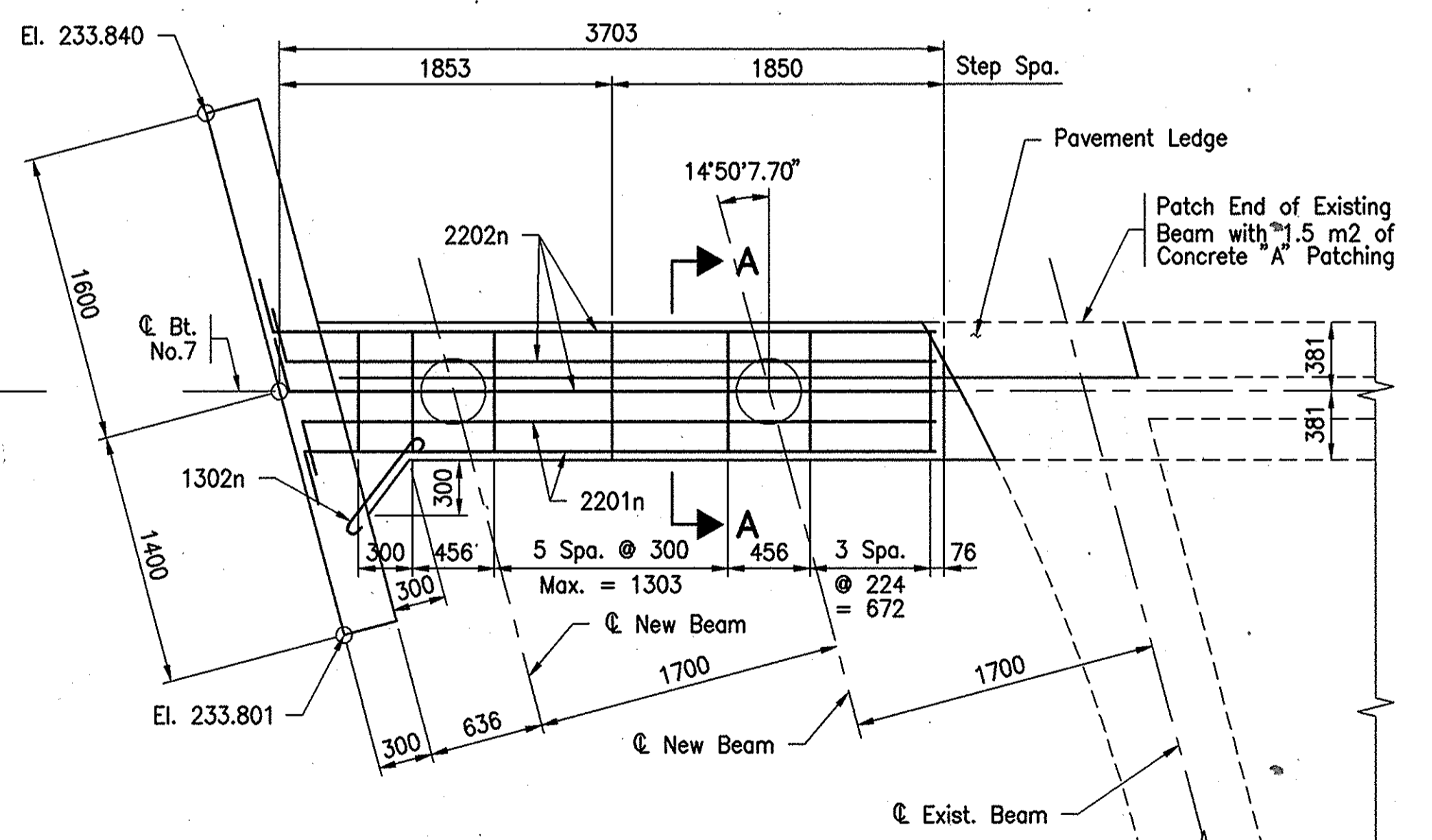
ELEVATION

Scale: 1:30



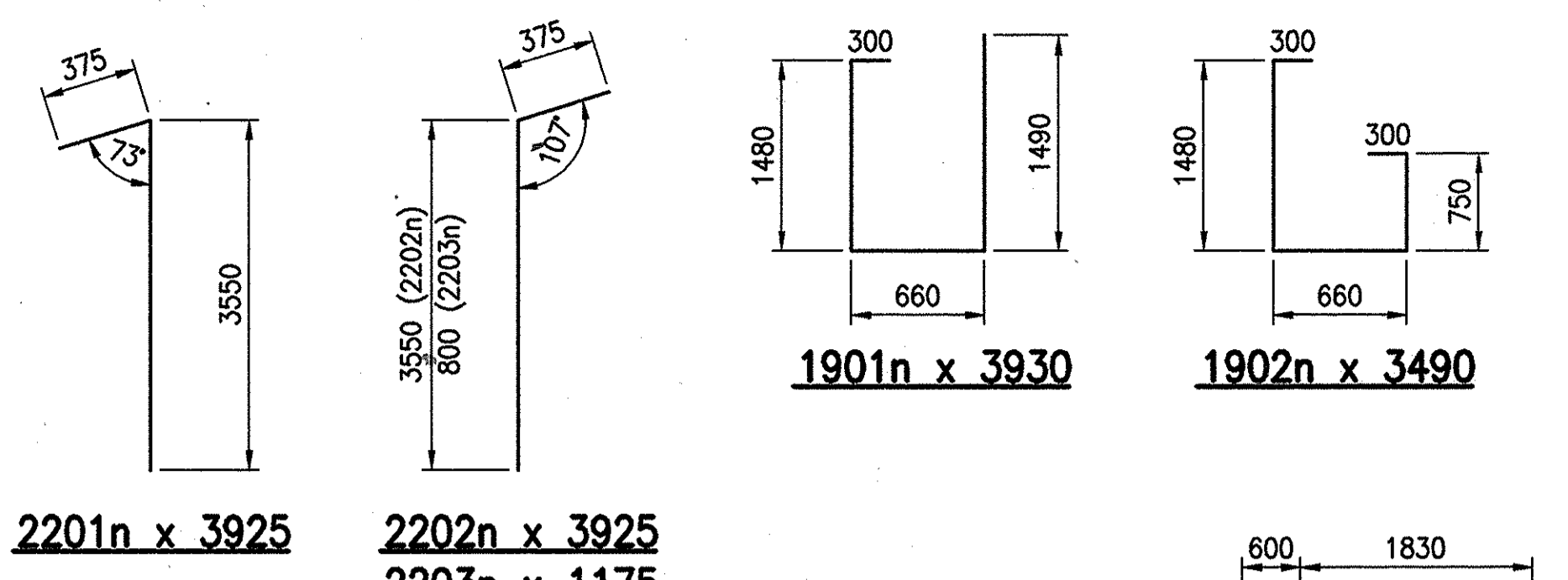
PILING PLAN

Scale: 1:30



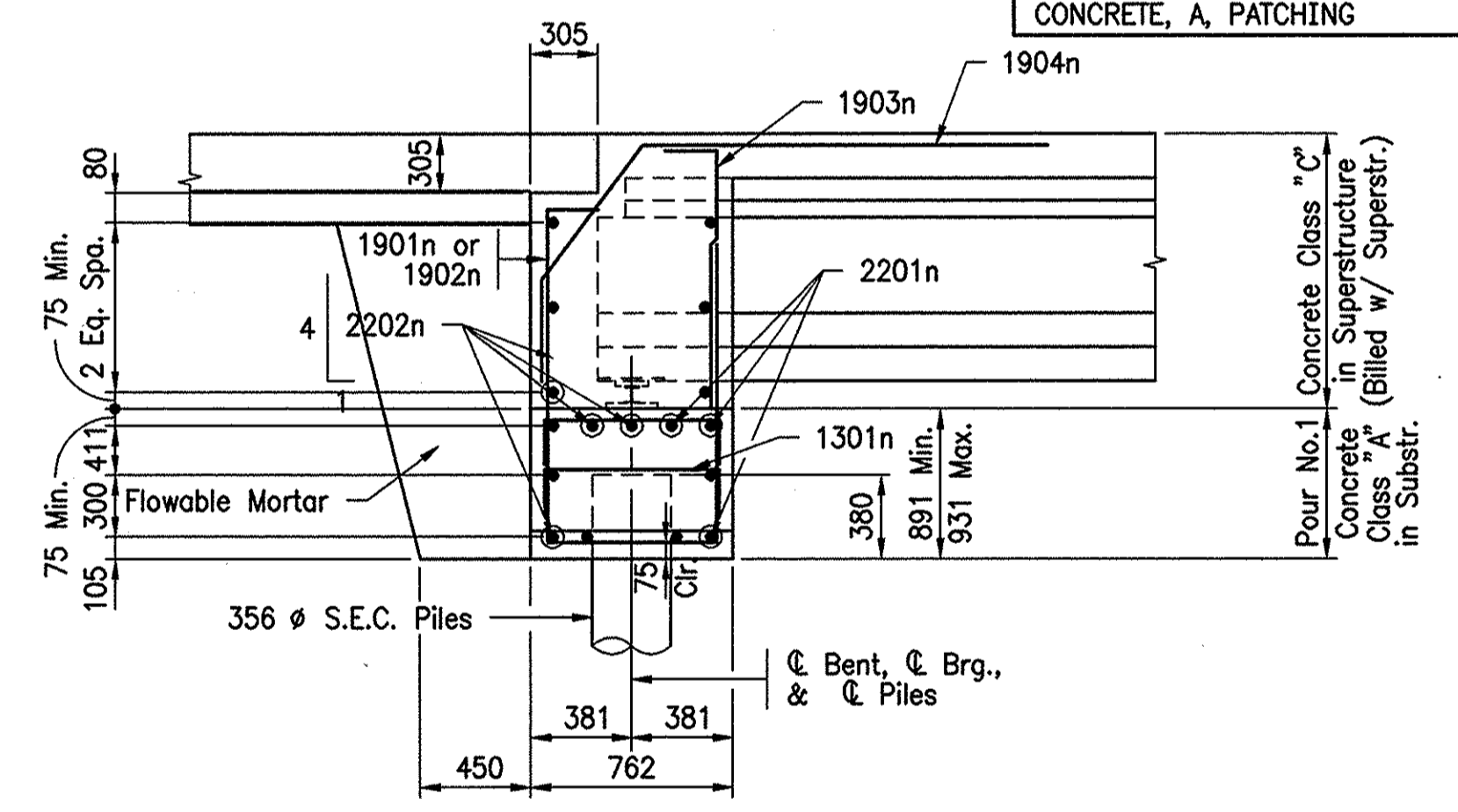
PLAN

Scale: 1:30



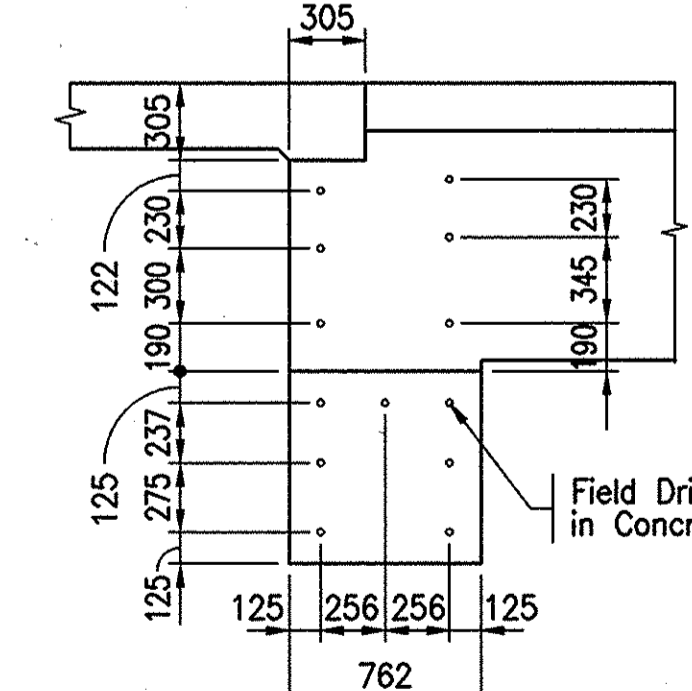
BILL OF MATERIALS BENT NO.7 (SOUTHBOUND STRUCTURE)

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
2201n	6	3925	
2202n	9	3925	
2203n	2	1175	
#22	11	1500	
#22	6	1400	
#22	2	1000	
TOTAL #22			268
1901n	7	3930	
1902n	4	3490	
1903n	8	1200	
1904n	11	3030	
1905n	1	2780	
TOTAL #19			195
#16	16	2900	
#16	22	1860	
TOTAL #16			136
1301n	24	1060	
1302n	6	1200	
TOTAL #13			32
TOTAL REINFORCING STEEL			631
CONCRETE			
POUR NO.1			3.2 m3
POUR NO.2			1.0 m3
TOTAL CONC., A, IN SUBSTRUCTURE			4.2 m3
MISCELLANEOUS			
356 Ø S.E.C. PILES, 5.1 mm SHELL THICKNESS (2 @ 15 m)			30.0 m
DRY EXCAVATION			10.7 m3
FIELD DRILLED HOLES IN CONCRETE			13 EACH
FLOWABLE MORTAR			5.8 m3
SURFACE SEAL (EST. 47 m2)			LSUM ITEM
CONCRETE, A, PATCHING			1.5 m2



SECTION A-A

Scale: 1:30



SECTION B-B

Scale: 1:100

NOTE:
 All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
 For Reinforcing Bar Notes, See Std. dwg. 703-BRST-01.
 For Pile Loading Table, See Sheet 62.
 For Superstructure Details in Span F, See Sheets 86 thru 88.
 For Anchor Bolt Details, See Sheet 74.

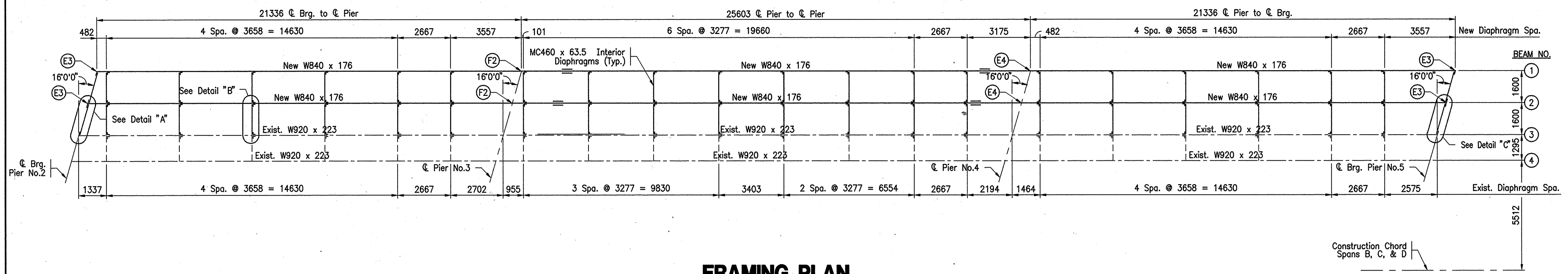
File: 9660BT7



RECOMMENDED FOR APPROVAL	<i>Michael J. Mezon</i>	1/19/99	
	DESIGN ENGINEER	DATE	
DESIGNED:	MJM	DRAWN:	
			MBW
CHECKED:	JAP	CHECKED:	
			MJM

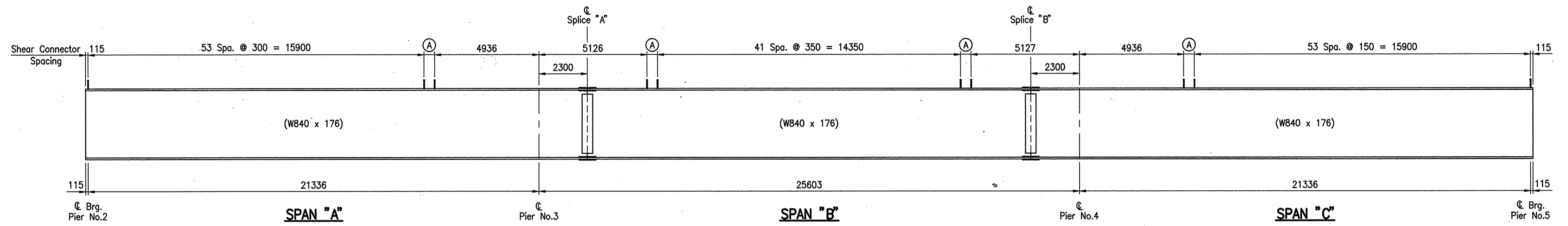
INDIANA DEPARTMENT OF TRANSPORTATION
BENT NO.7 DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	72 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



FRAMING PLAN

Scale: 1:50



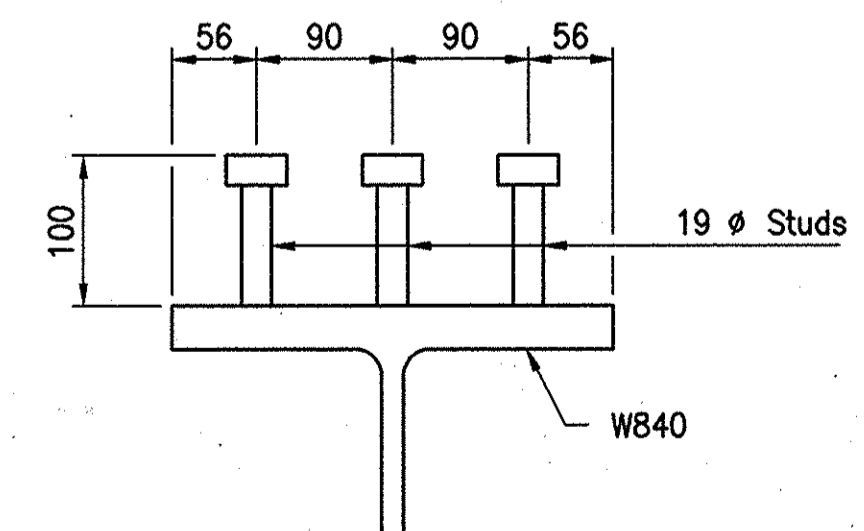
TYPICAL BEAM ELEVATION

Scale: 1:50

TABLE OF SHIMS				
LOCATION	PIER NO.2	PIER NO.3	PIER NO.4	PIER NO.5
Beam #1	12	12	12	12
Beam #2	12	12	12	12

LEGEND

- (E3) Bearing Assembly "E3"
- (F2) Bearing Assembly "F2"
- (E4) Bearing Assembly "E4"
- (A) 4 Spa. @ 125 = 600



TYPICAL SHEAR CONNECTOR DETAIL

Scale: 1:5

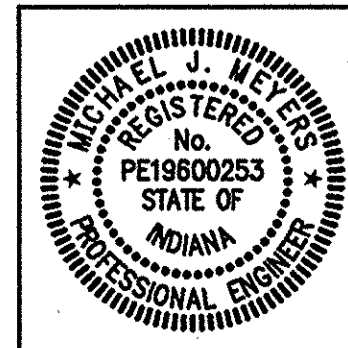
TABLE OF ELEVATIONS FOR TOP OF BEAM SPLICE		
	C. Splice	
	"A"	"B"
Beam #1	232.530	232.933
Beam #2	232.489	232.893

Splice Elevations Are With Falsework Removed and Carrying Steel Dead Load ONLY. The Top of the Splice Plates Shall be Adjusted to the Above Elevations Before Bolting the Field Splices.

NOTES:

- All Dimensions are in Millimeters Unless Noted.
- All Structural Steel to be AASHTO M270 Grade 50.
- Total Estimated Weight of New Structural Steel is 29,902 kg. The Total Estimated Weight Includes Shear Connectors, But Does Not Include The Weight of Bolts, Anchor Bolts and Structural Steel for Bearing Assemblies.
- All High Strength Bolts Shall be 22 φ ASTM A325M.

File: 9660FP1

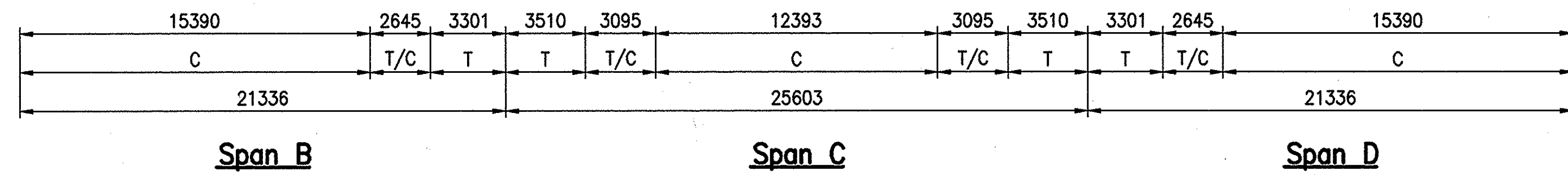


RECOMMENDED FOR APPROVAL	<i>Michael S. Wilson</i>	1/19/99
DESIGNED:	MJM	DATE
DRAWN:	MBW	
CHECKED:	JAP	CHECKED: MJM

INDIANA
DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
SPANS "B", "C", & "D"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	73 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

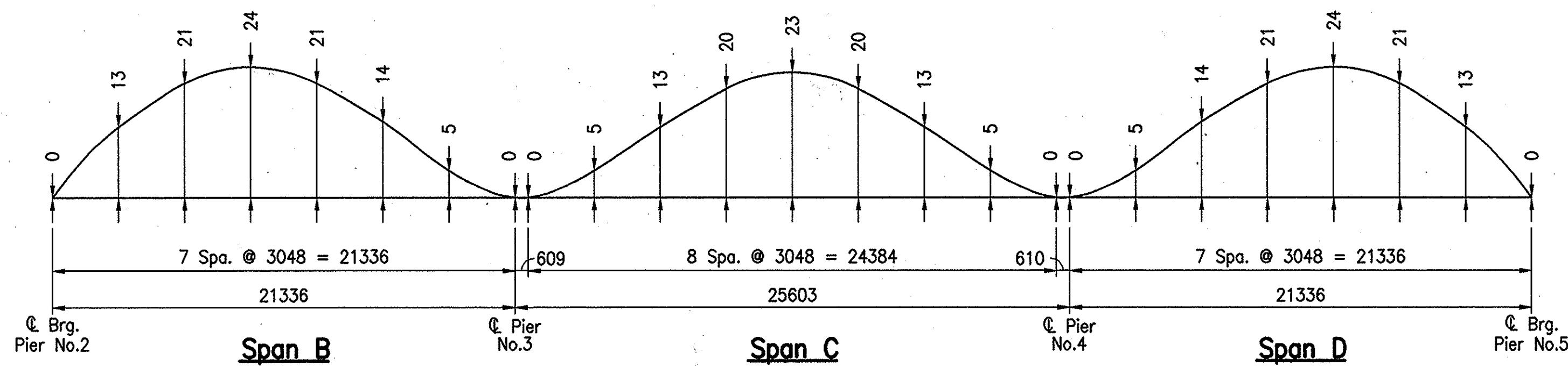


TENSION / COMPRESSION DIAGRAM - NEW BEAM

No Scale

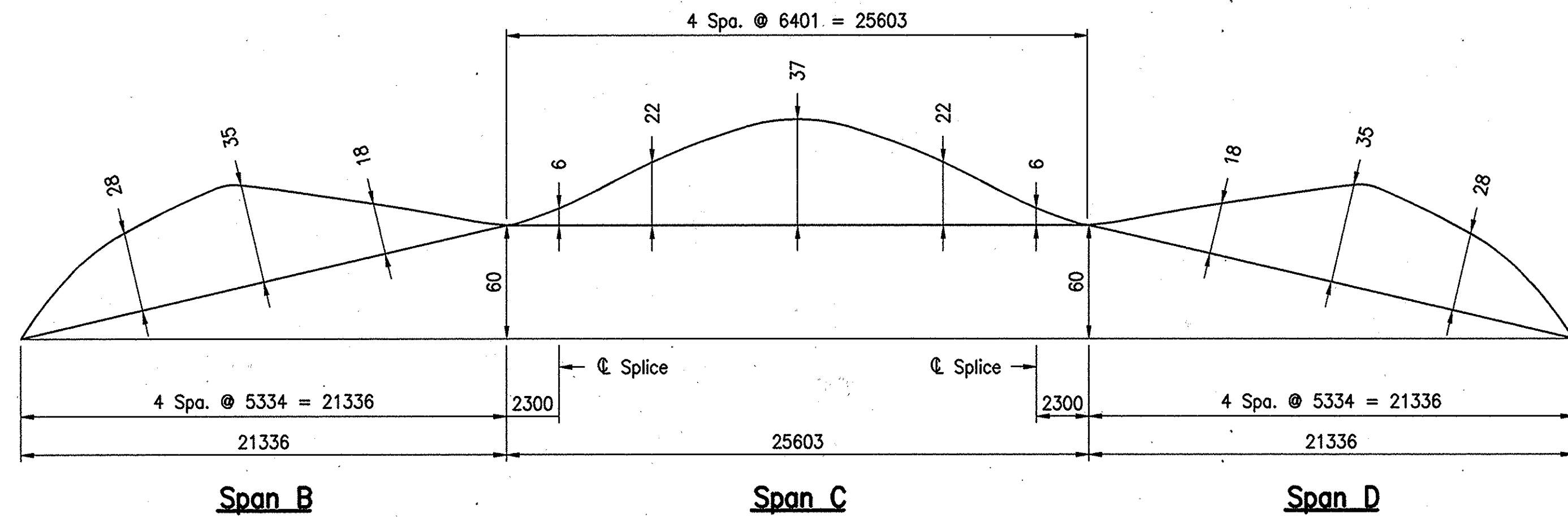
LEGEND

- T = Top Flange in Tension
- T/C = Top Flange in Tension or Compression
- C = Top Flange in Compression



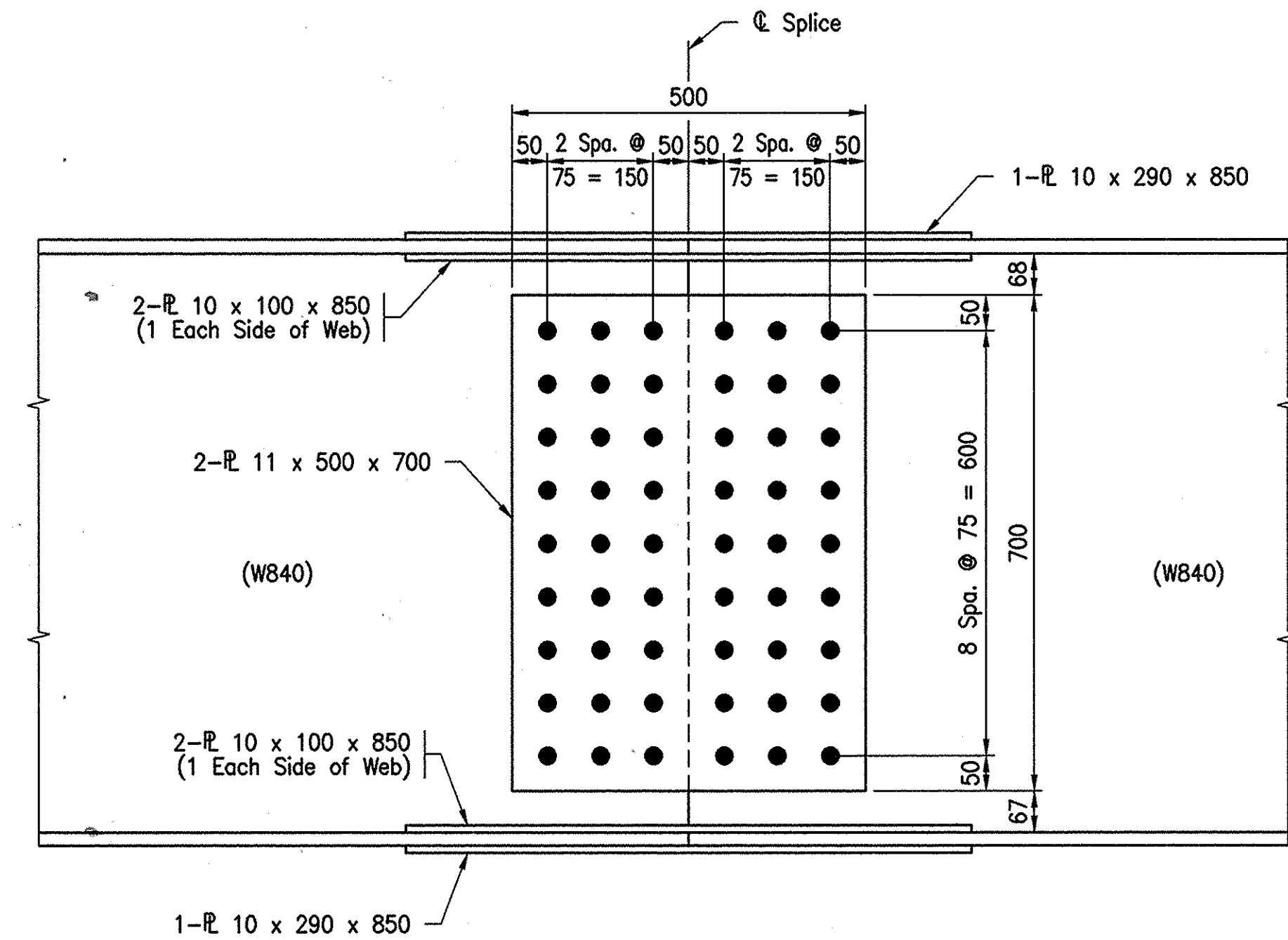
CONCRETE DEAD LOAD DEFLECTION DIAGRAM

No Scale



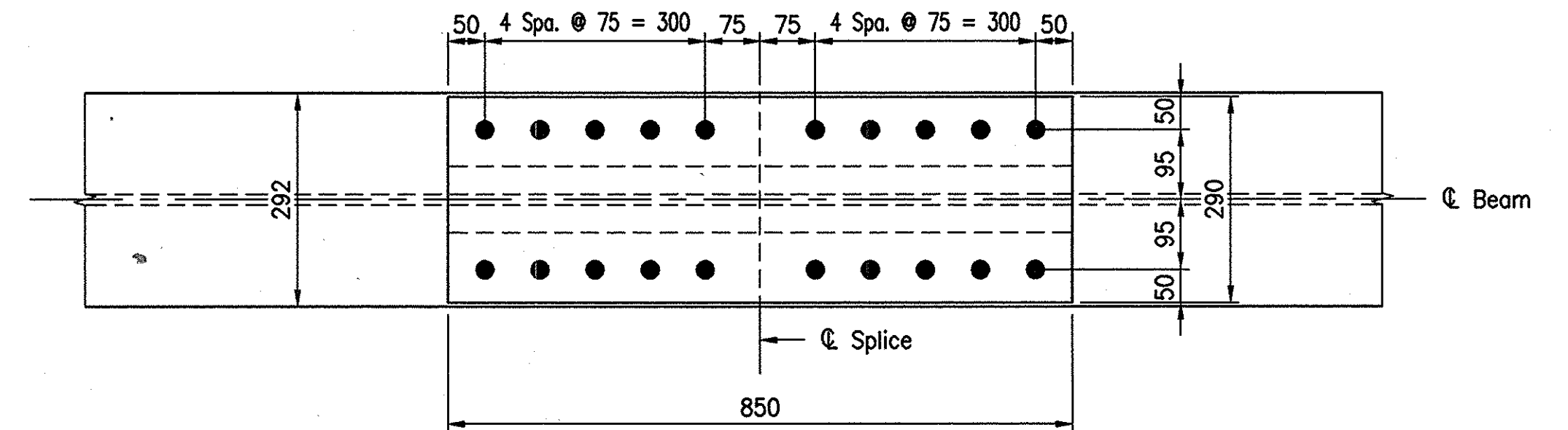
NO LOAD CAMBER DIAGRAM - NEW BEAMS

No Scale



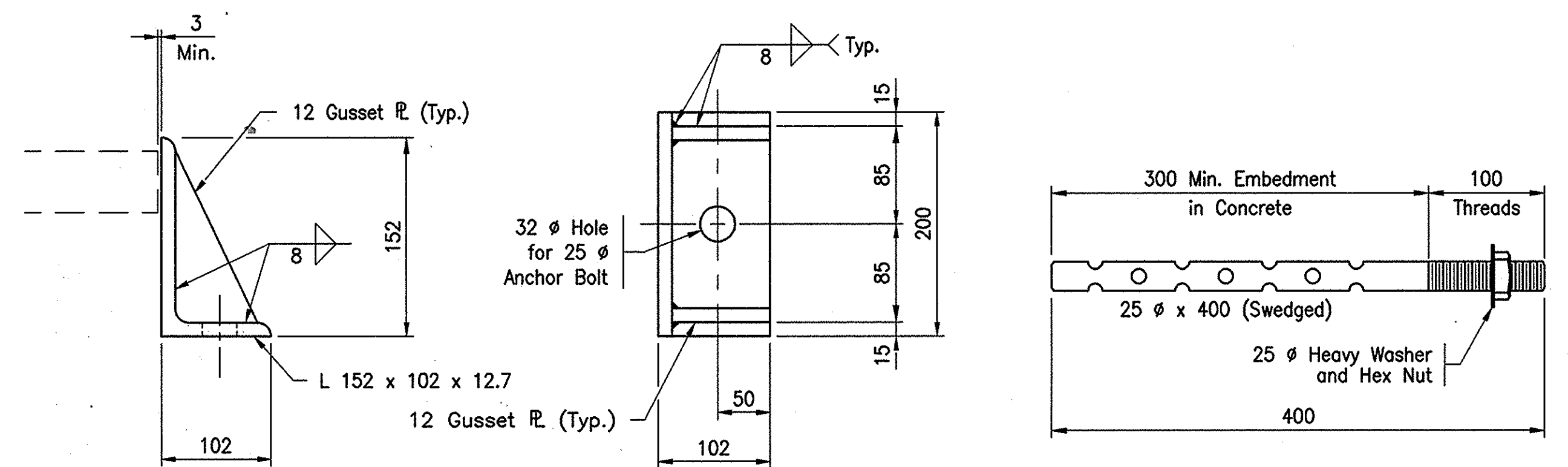
SPLICE ELEVATION

No Scale



SPLICE PLAN

(Top Flange Shown, Bottom Flange Same)
No Scale



TYPICAL SIDE RETAINER

No Scale

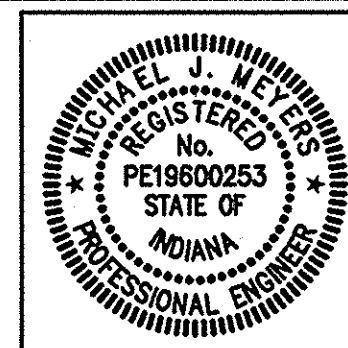
ANCHOR BOLT

NO Scale

NOTE:

All Dimensions are in Millimeters Unless Noted.
All Structural Steel to be AASHTO M270 Grade 50 &
All High Strength Bolts Shall be 22 phi ASTM A325M.

File: 9660SSD3



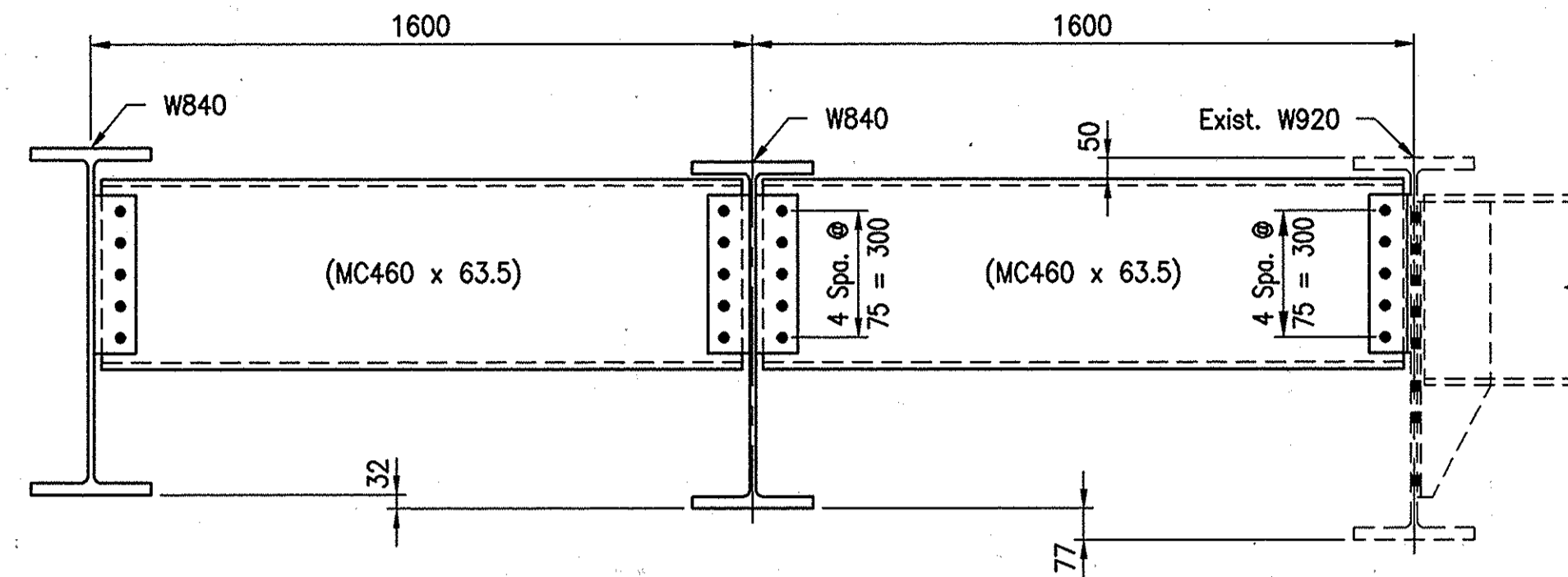
RECOMMENDED FOR APPROVAL	<i>Michael J. Mueser</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA
DEPARTMENT OF TRANSPORTATION

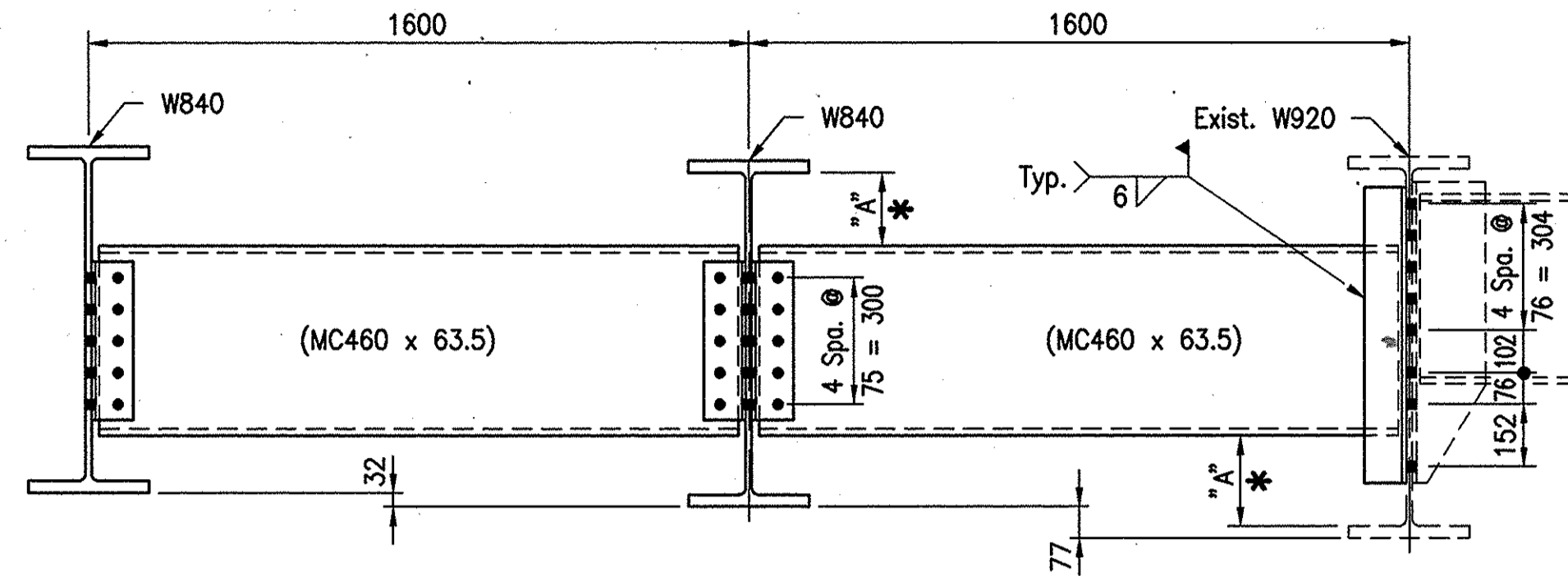
**STRUCTURAL STEEL
DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	74 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

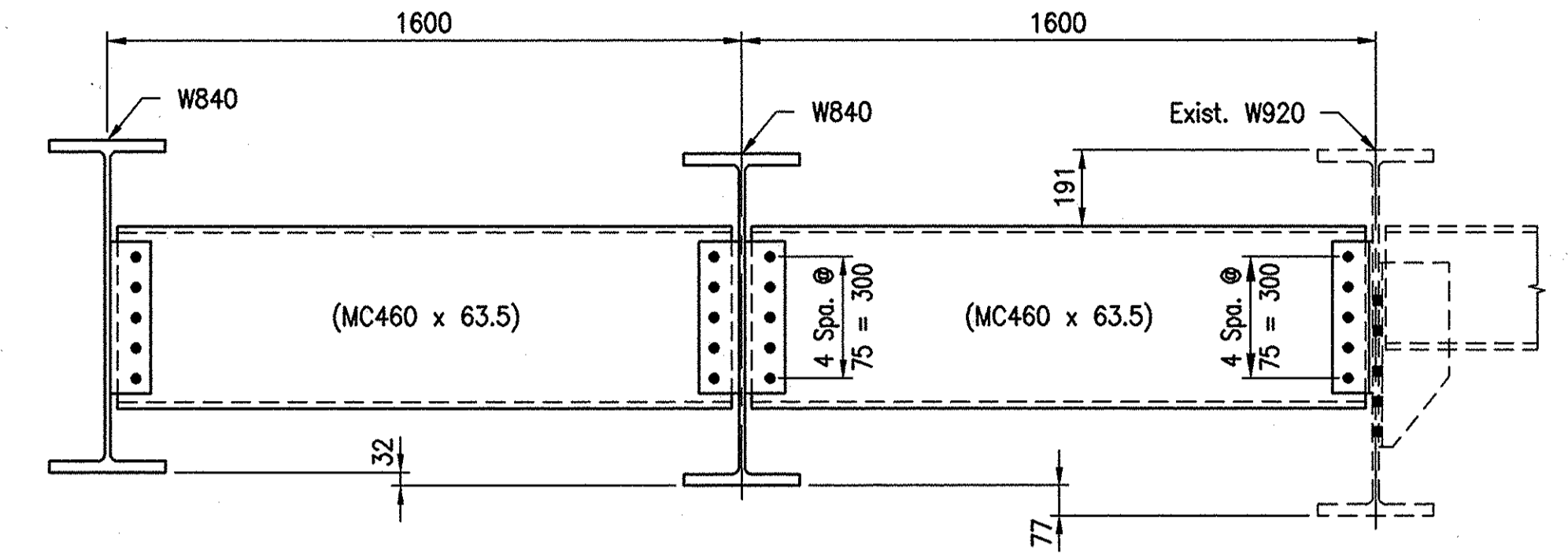
* Intermediate diaphragms to be erected so that Dimension "A" (Top & Bott.) will be equal 25 ±.



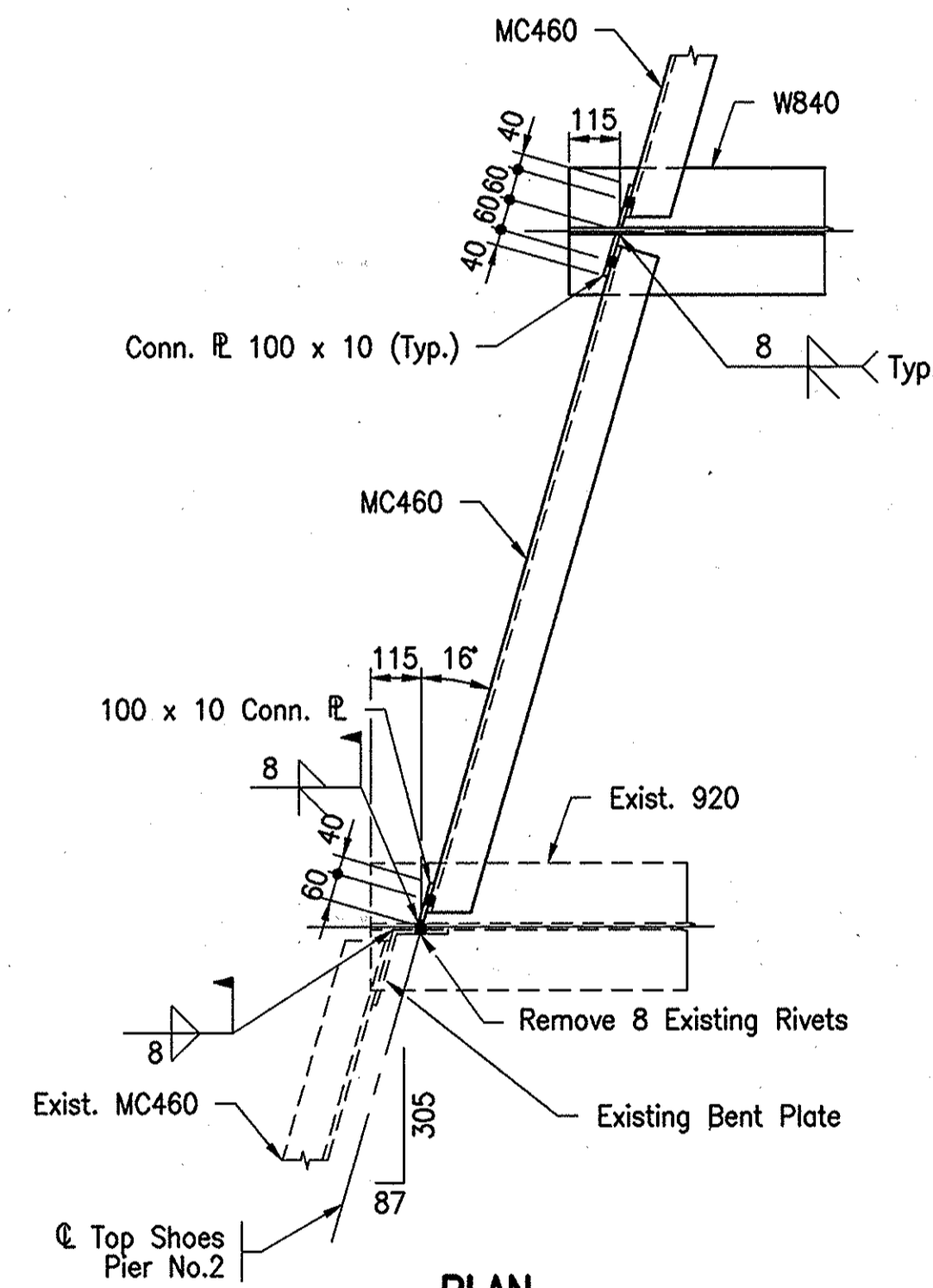
ELEVATION



ELEVATION



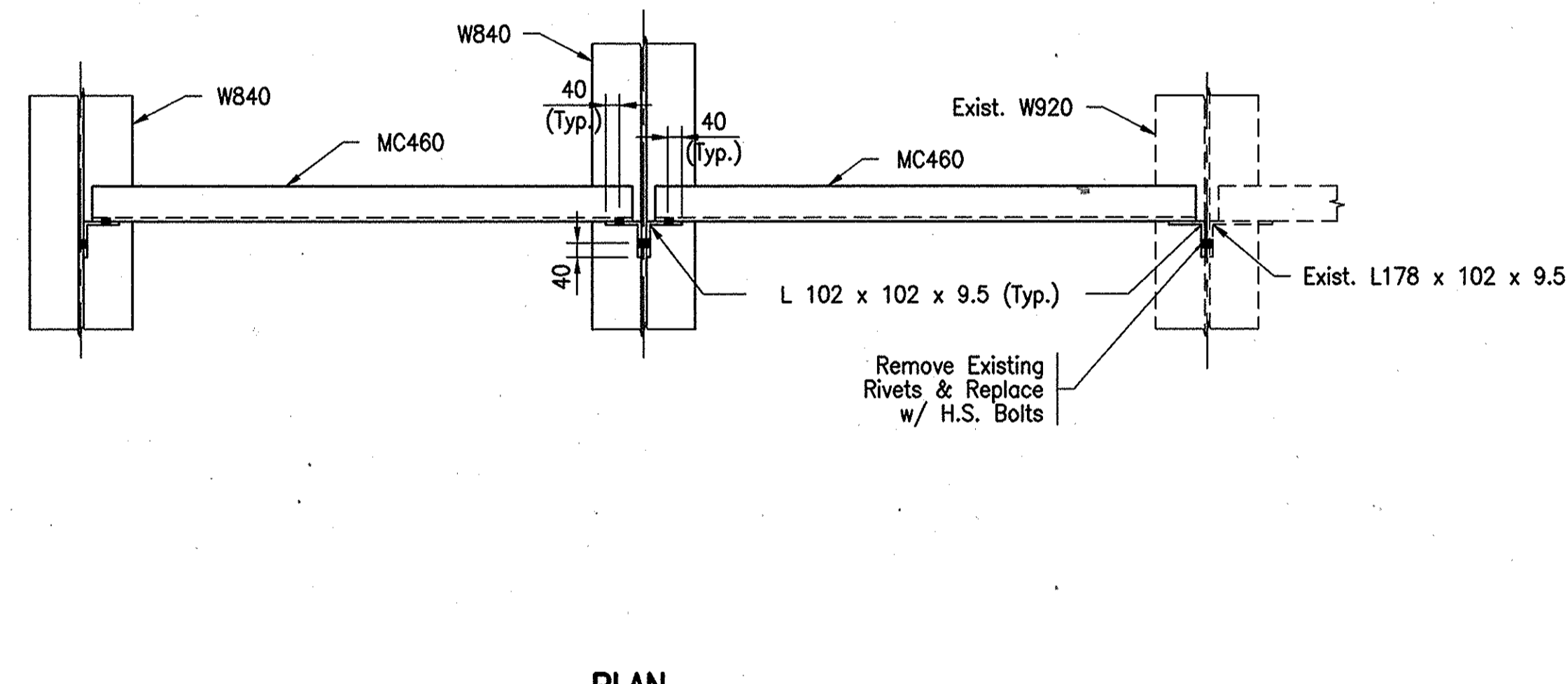
ELEVATION



PLAN

DETAIL "A" - END DIAPHRAGM @ PIER NO.2

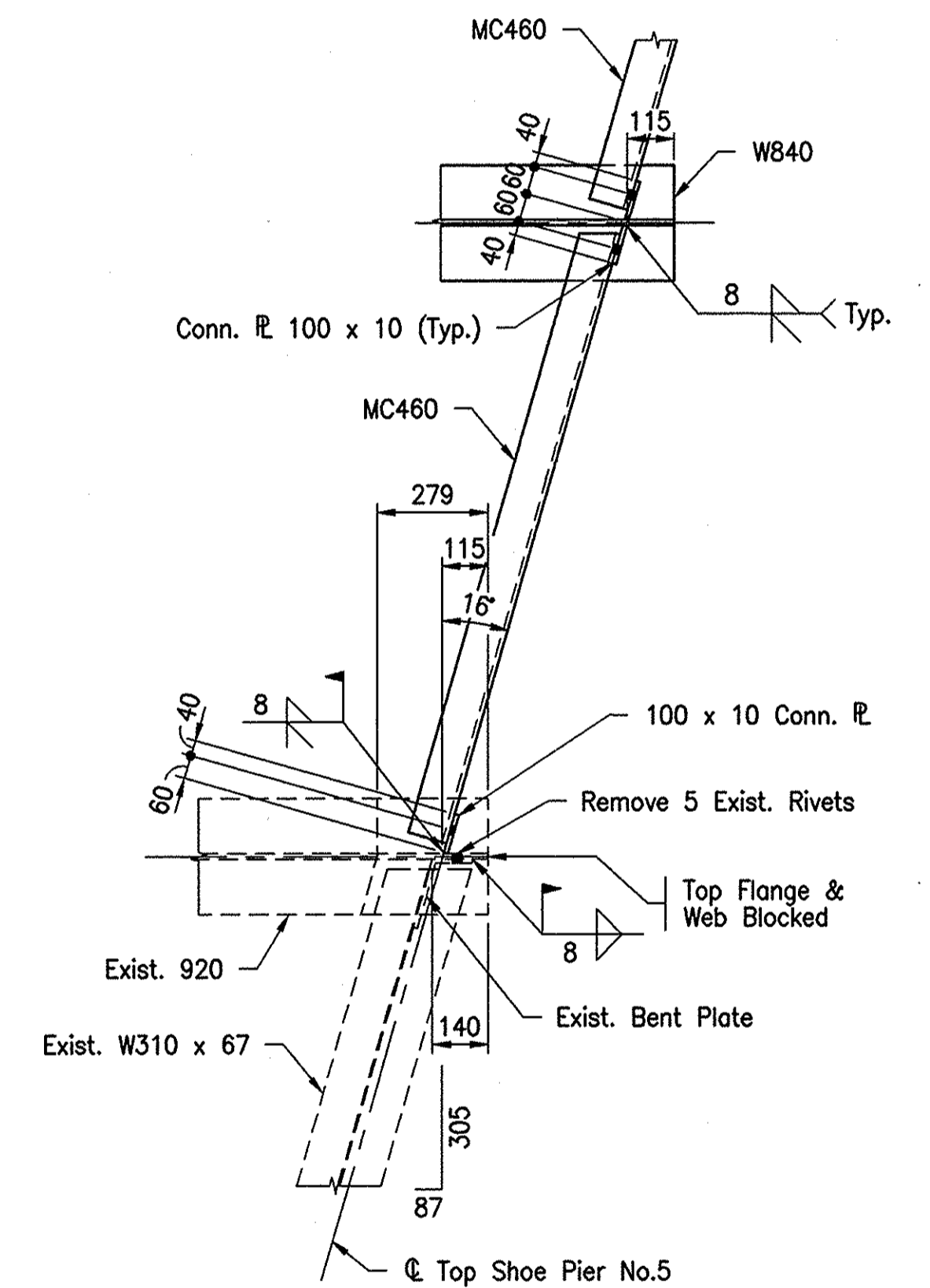
No Scale



PLAN

DETAIL "B" - INTERMEDIATE DIAPHRAGM

No Scale



PLAN

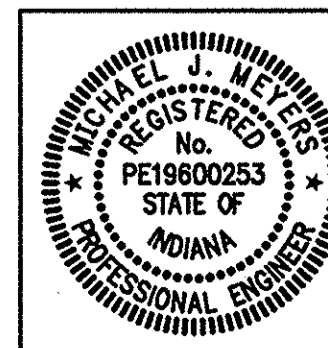
DETAIL "C" - END DIAPHRAGM @ PIER NO.5

No Scale

NOTE:

All Dimensions are in Millimeters Unless Noted.
All Structural Steel to be ASHTO M270 Grade 50 &
All High Strength Bolts Shall be 22 φ ASTM A325 M.

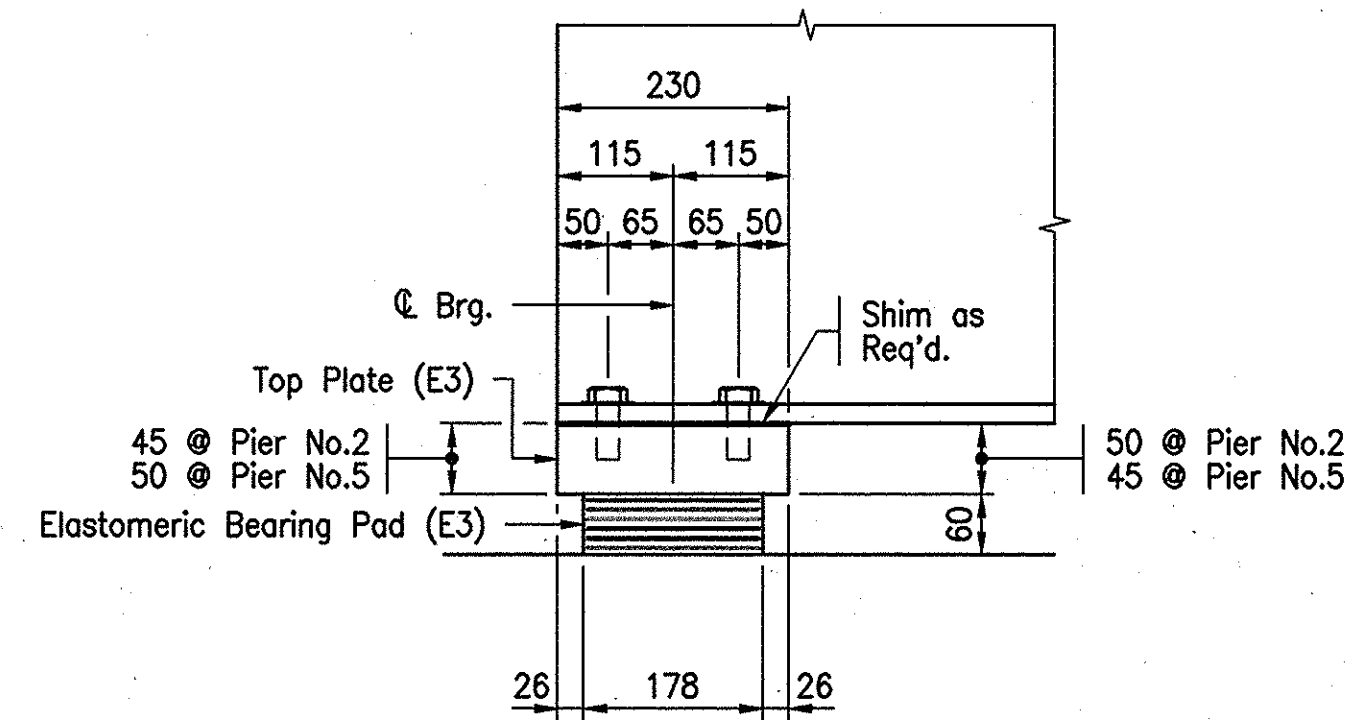
File: 9660SSD1



RECOMMENDED FOR APPROVAL	<i>Michael J. Mays</i>	1/19/99
DESIGNED:	MJM	DATE
CHECKED:	JAP	
DRAWN:	MBW	
CHECKED:	MJM	

INDIANA DEPARTMENT OF TRANSPORTATION	
STRUCTURAL STEEL DETAILS	

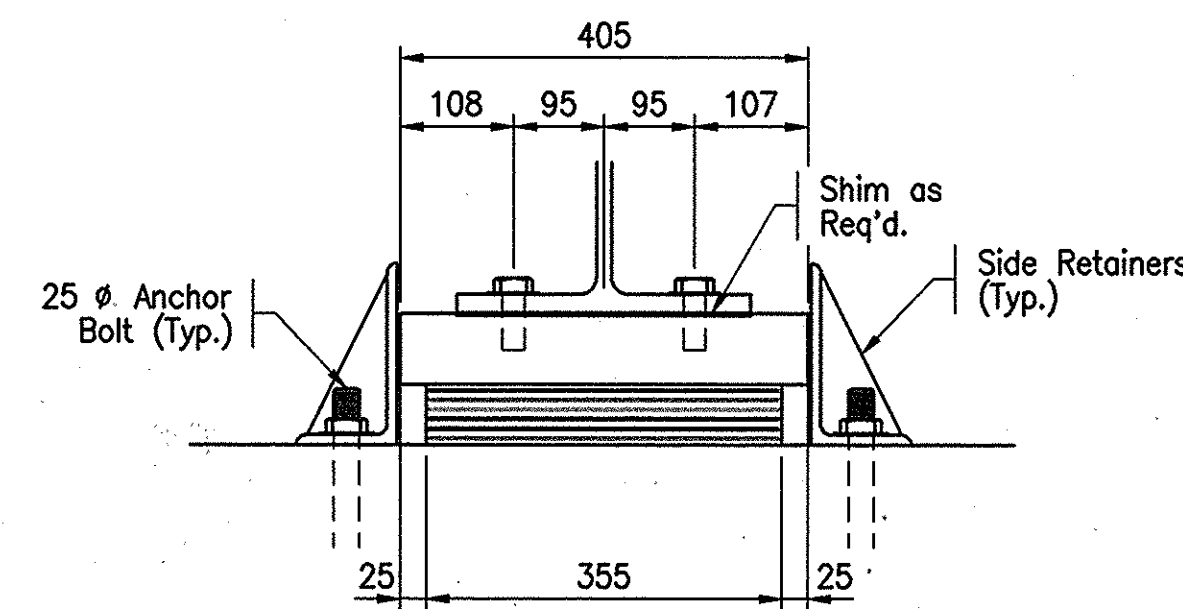
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	75 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



TYPE E3 BEARING DETAILS

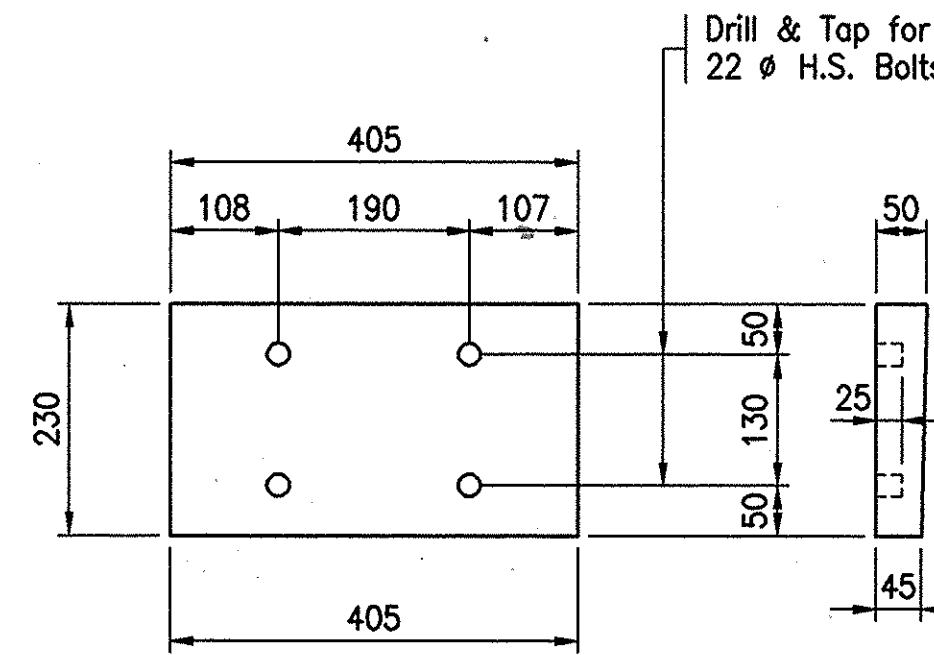
(BENTS NO.2 & NO.5)

No Scale



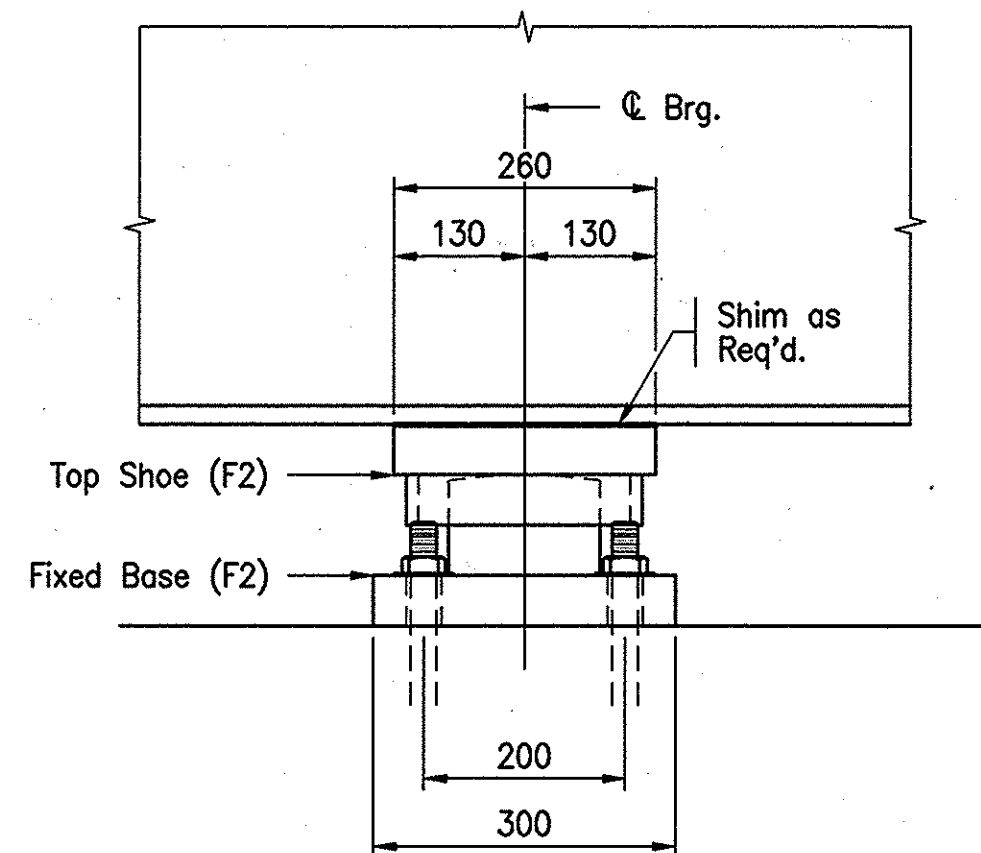
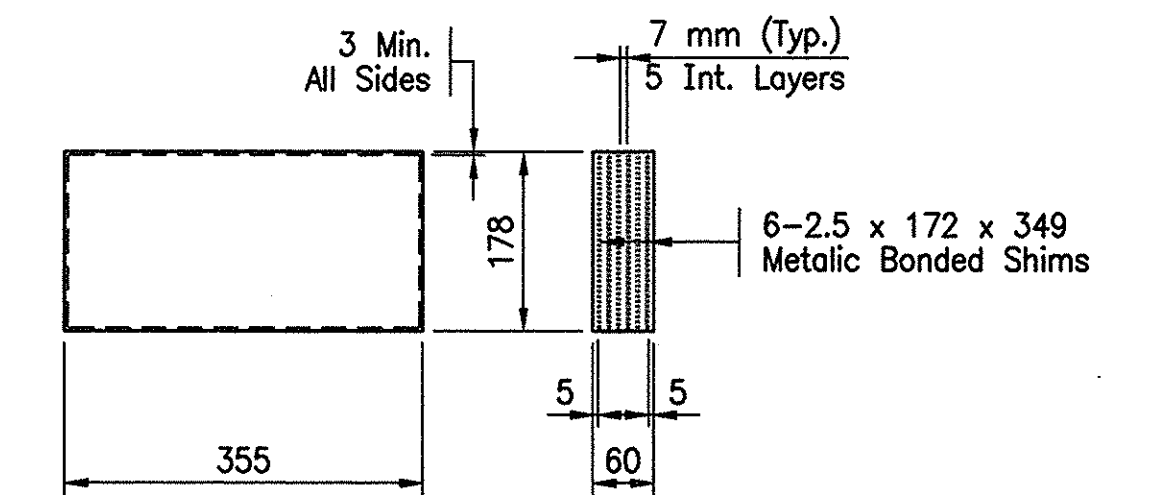
TOP PLATE "E3"

No Scale



ELASTOMERIC BEARING PAD "E3"

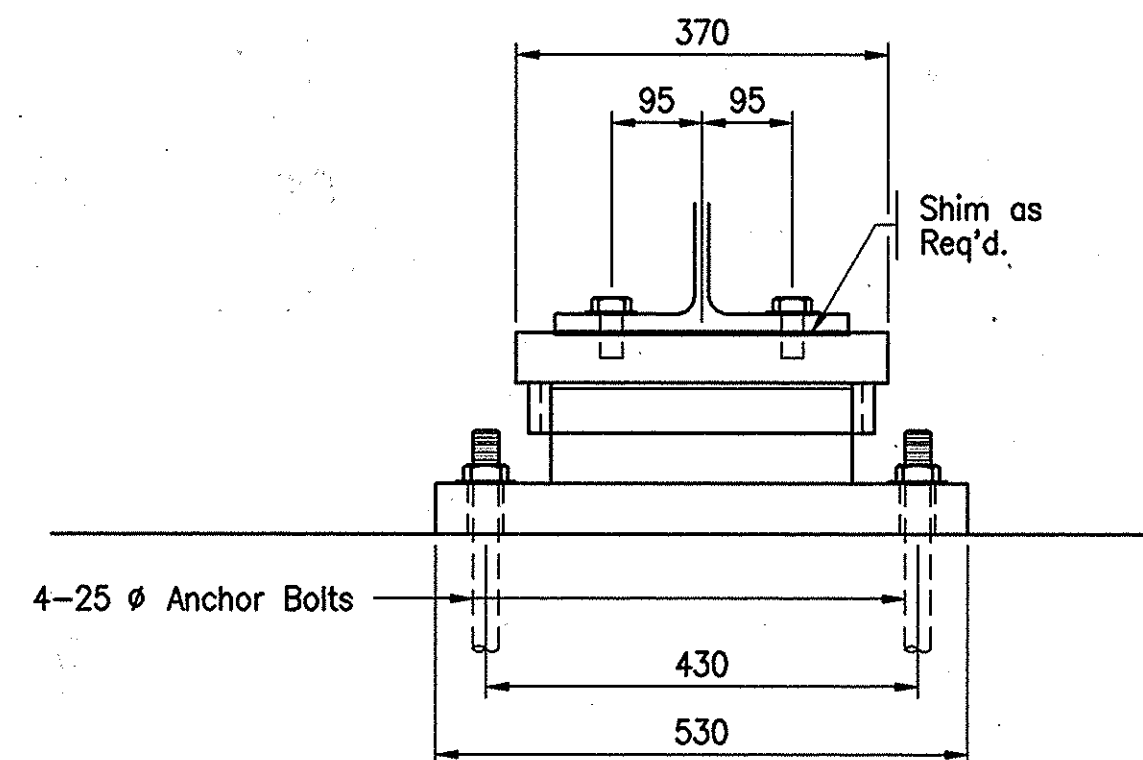
No Scale



TYPE F2 BEARING DETAILS

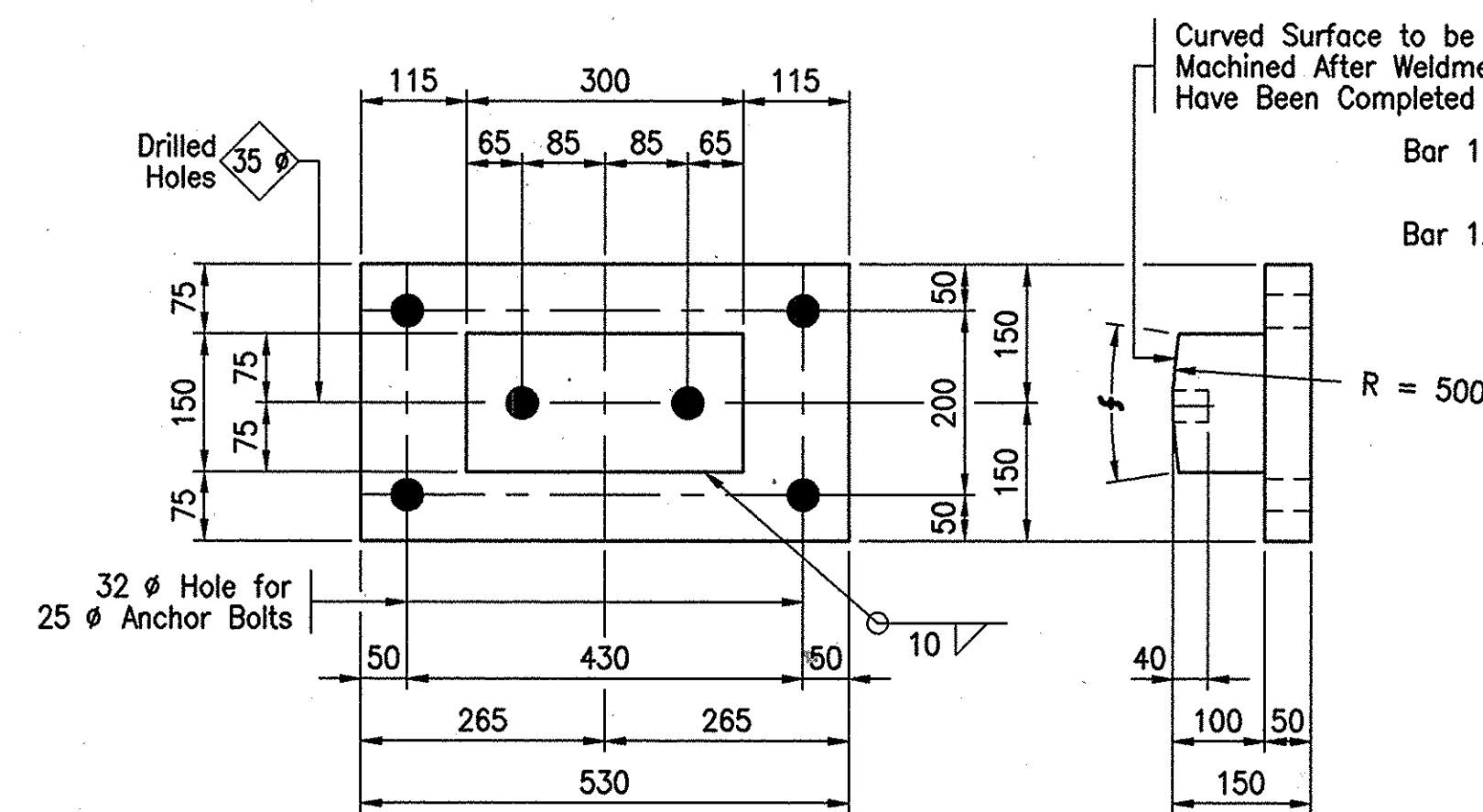
(PIER NO.3)

No Scale



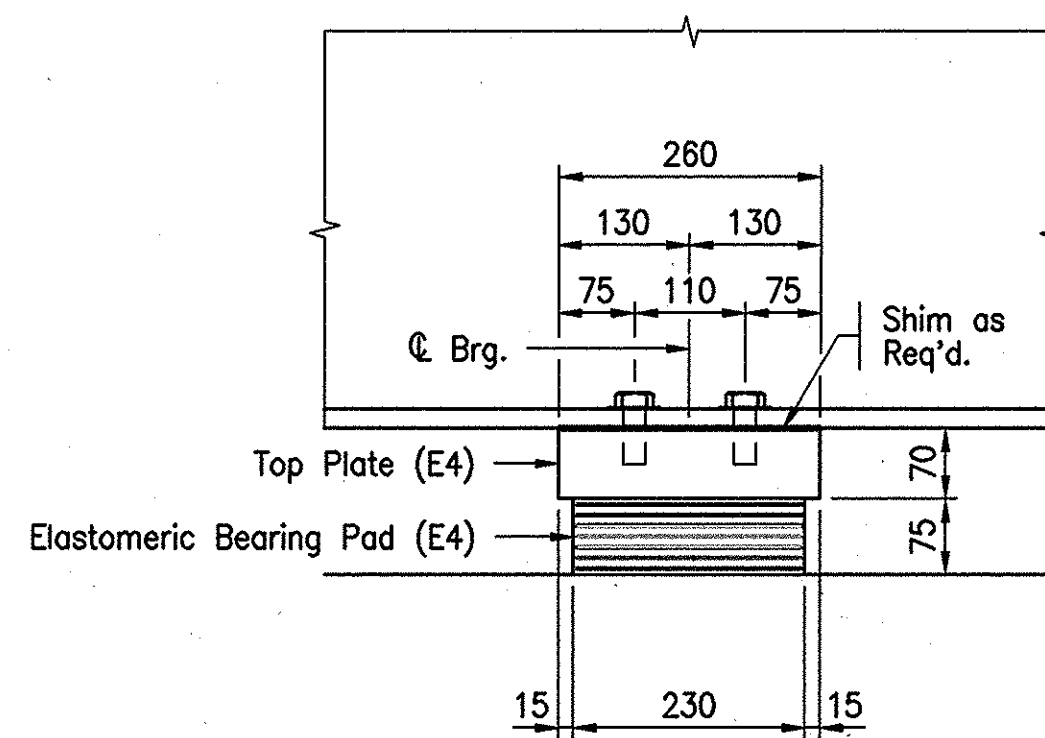
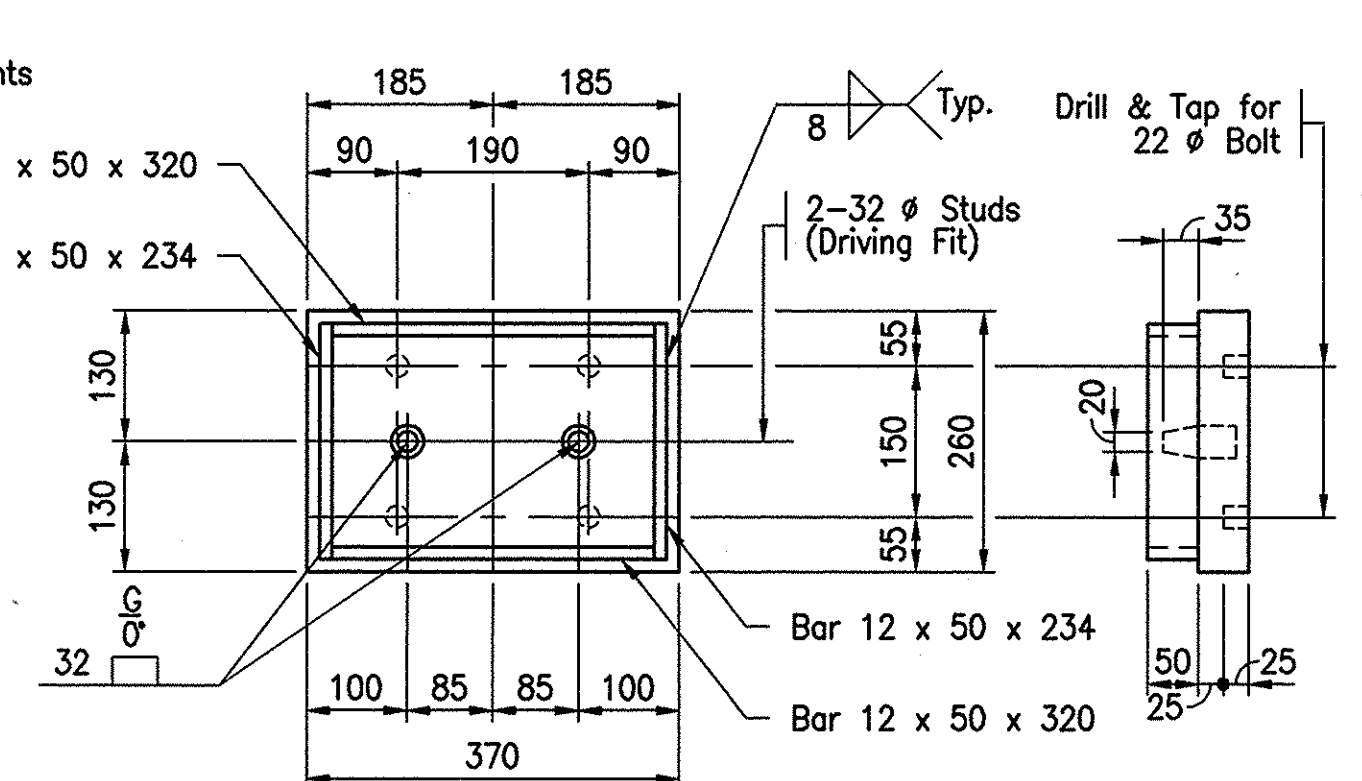
FIXED BASE "F2"

No Scale



TOP SHOE "F2"

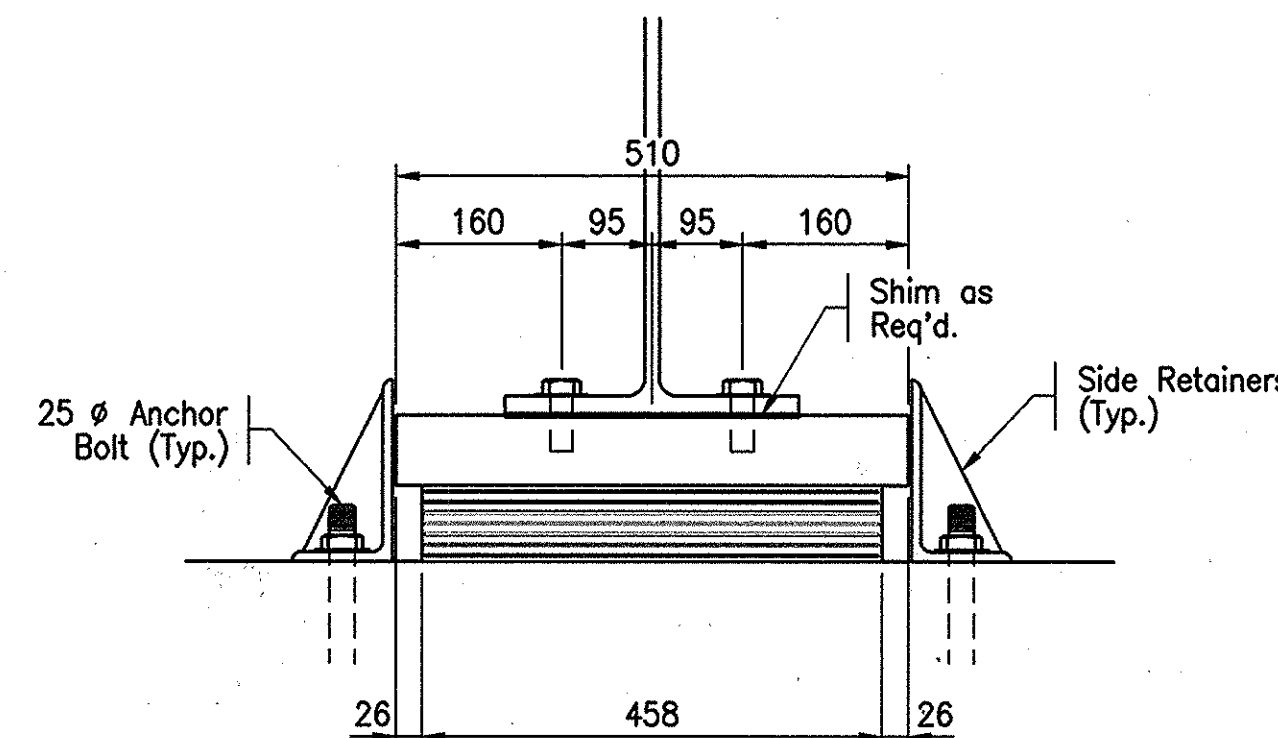
No Scale



TYPE E4 BEARING DETAILS

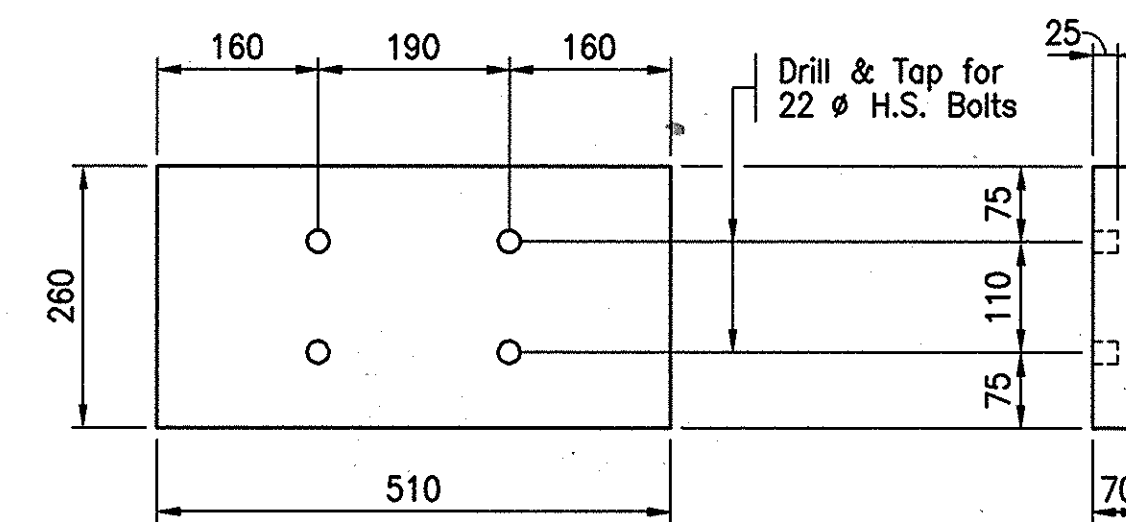
(BENT NO.4)

No Scale



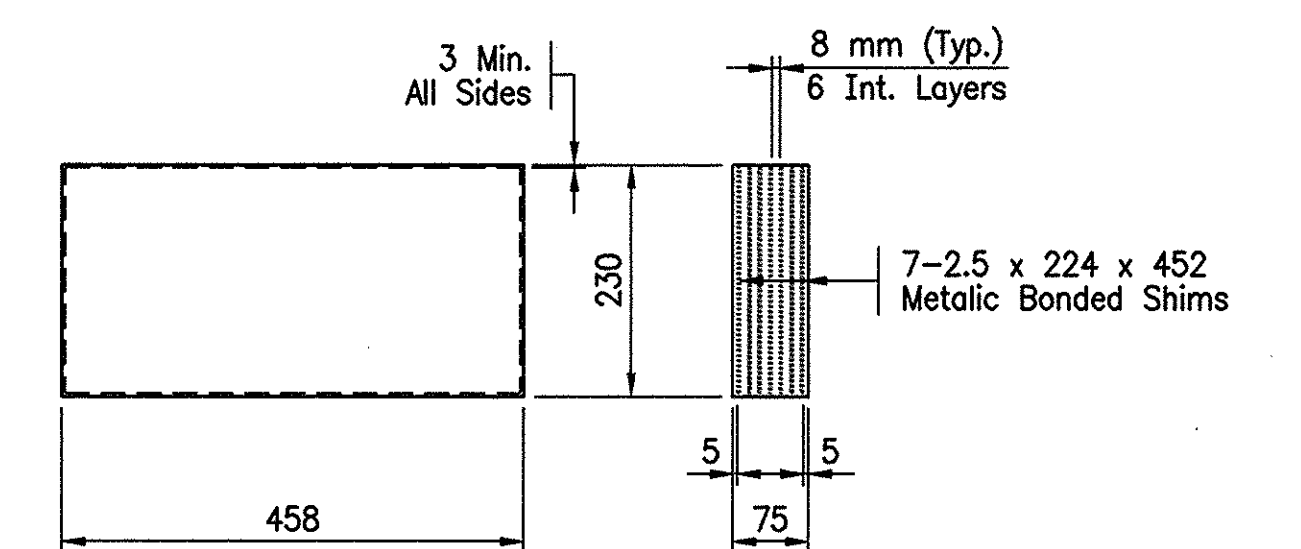
TOP PLATE "E4"

No Scale



ELASTOMERIC BEARING PAD "E4"

No Scale



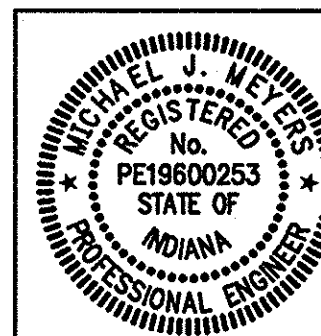
NOTE:

After the bearings are set, take elevations at all screed points on the top of the beams. Subtract these elevations from the screed elevations corrected for dead load deflection, and use the resulting dimension as the height for setting the screed above that point. This dimension remains constant at each point regardless of how much or in what order the concrete is poured. Do not set screeds by leveling. Elevations will be furnished upon request.

NOTE:

All Dimensions are in Millimeters Unless Noted.
See Sht. 73 for Shim Table.
All Structural Steel to be AASHTO M270 Grade 50 and All High Strength Bolts Shall be 22 # ASTM A325M.
For Additional Elastomeric Bearing Pad Details, See Std. Dwg. 707-BEBP-01 & 02.
For Anchor Bolt & Side Retainer Details, See Sheet 74.

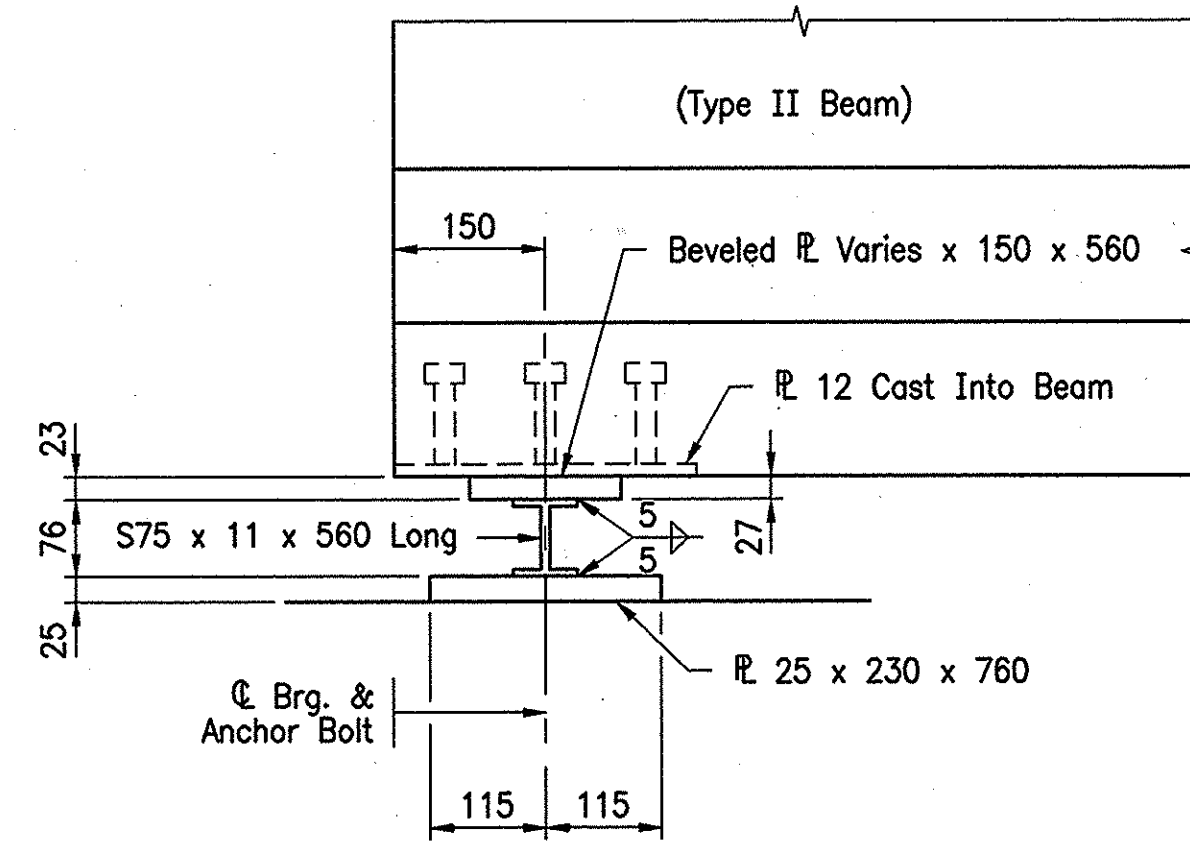
File: 9660SSD2



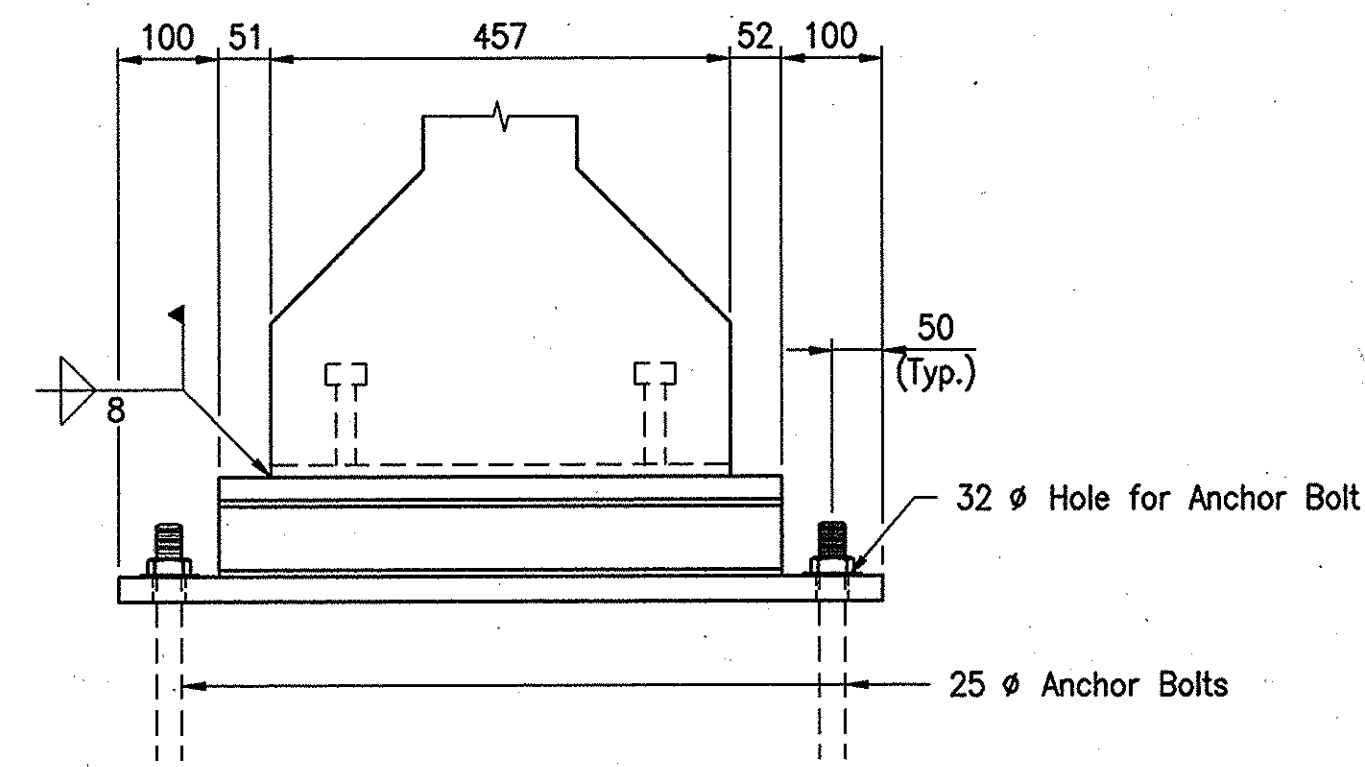
RECOMMENDED FOR APPROVAL	<i>Michael J. Meyer</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA
DEPARTMENT OF TRANSPORTATION
**STRUCTURAL STEEL
DETAILS**

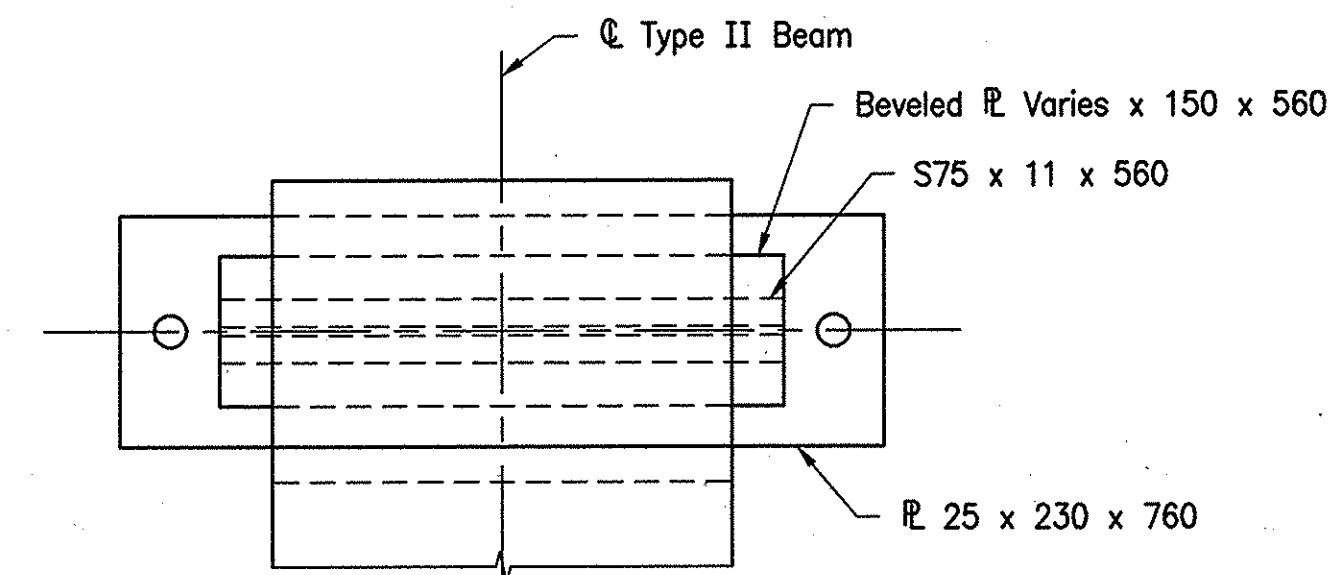
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	76 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



SIDE VIEW



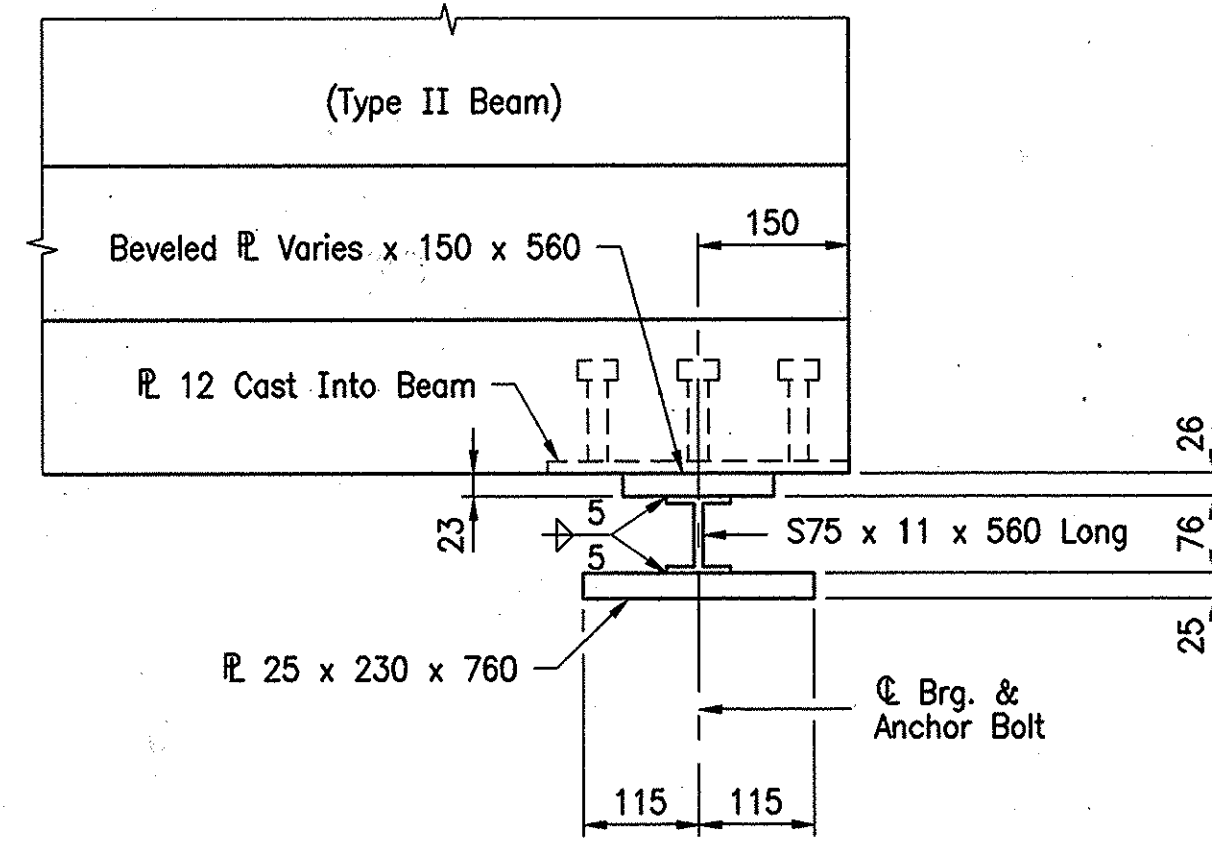
END VIEW



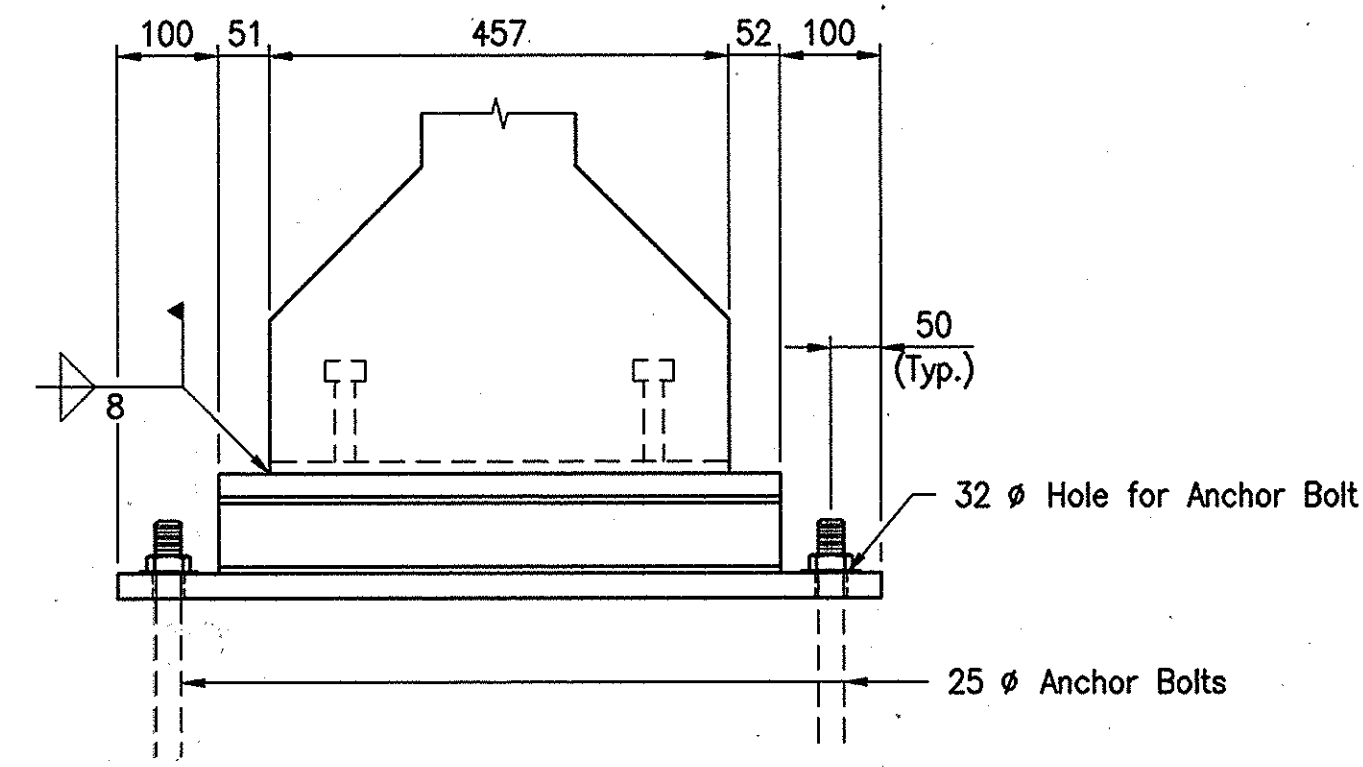
PLAN VIEW

TYPE F-3 BEARING DETAILS

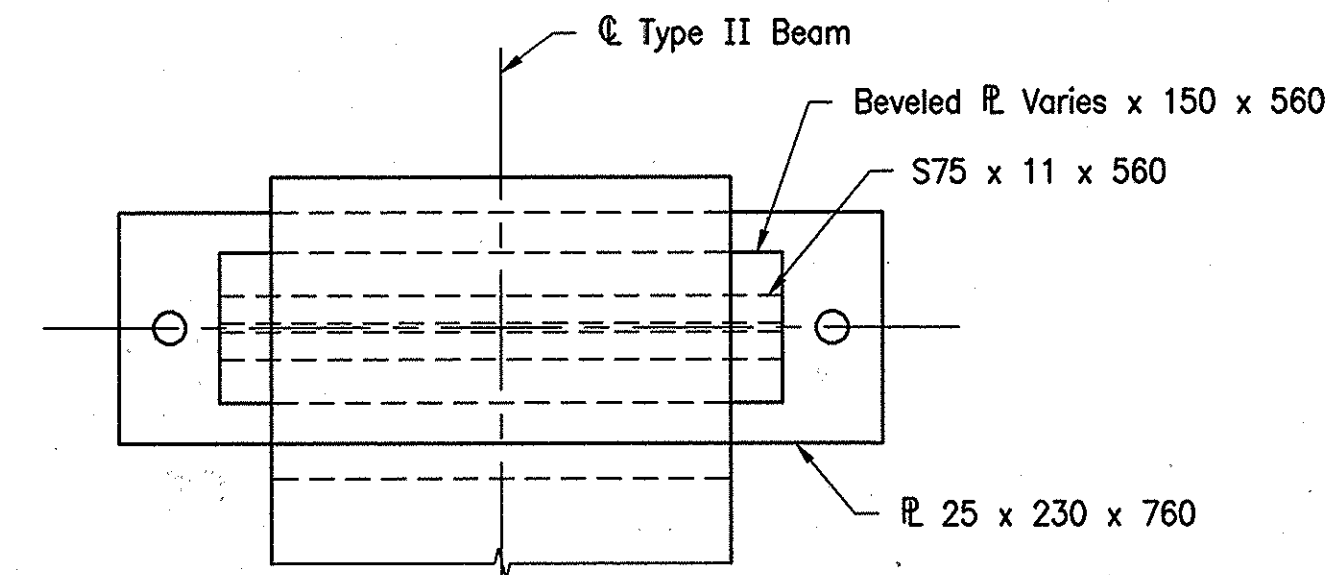
Scale: 1:50



SIDE VIEW



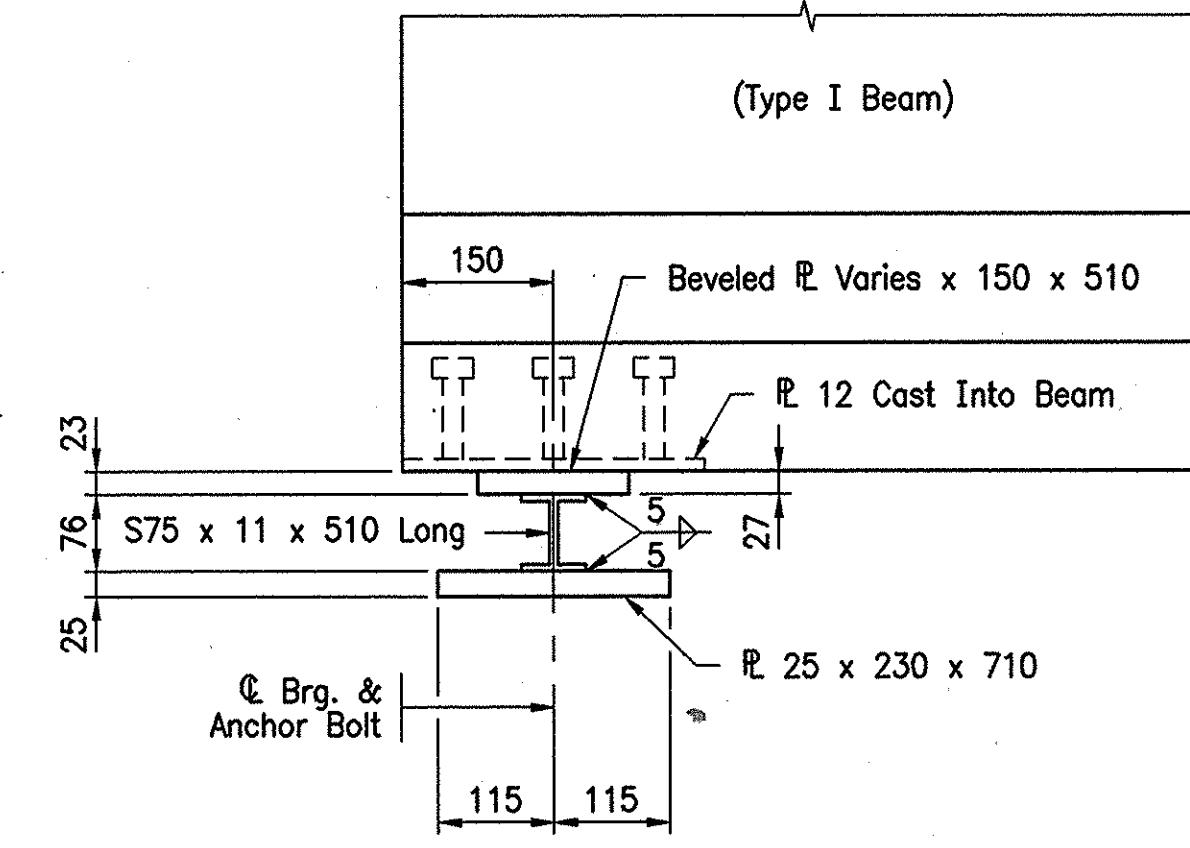
END VIEW



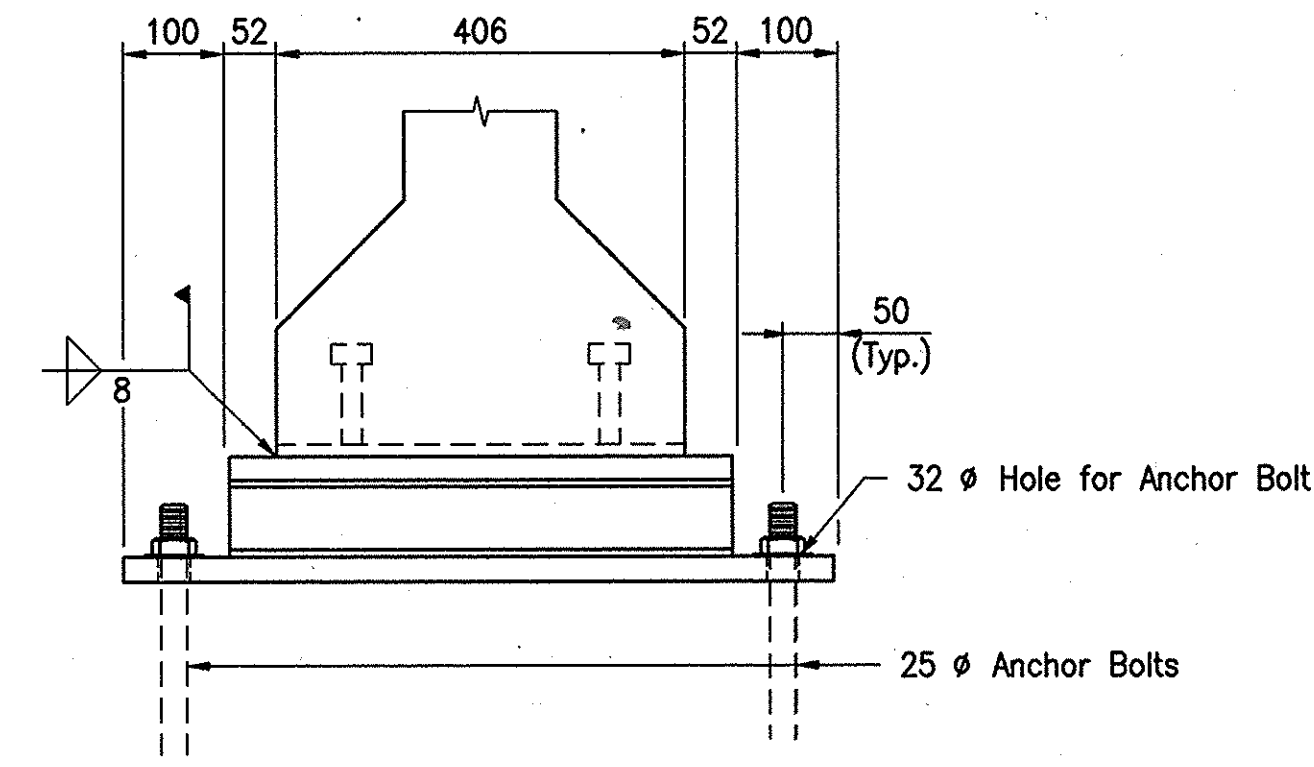
PLAN VIEW

TYPE F-4 BEARING DETAILS

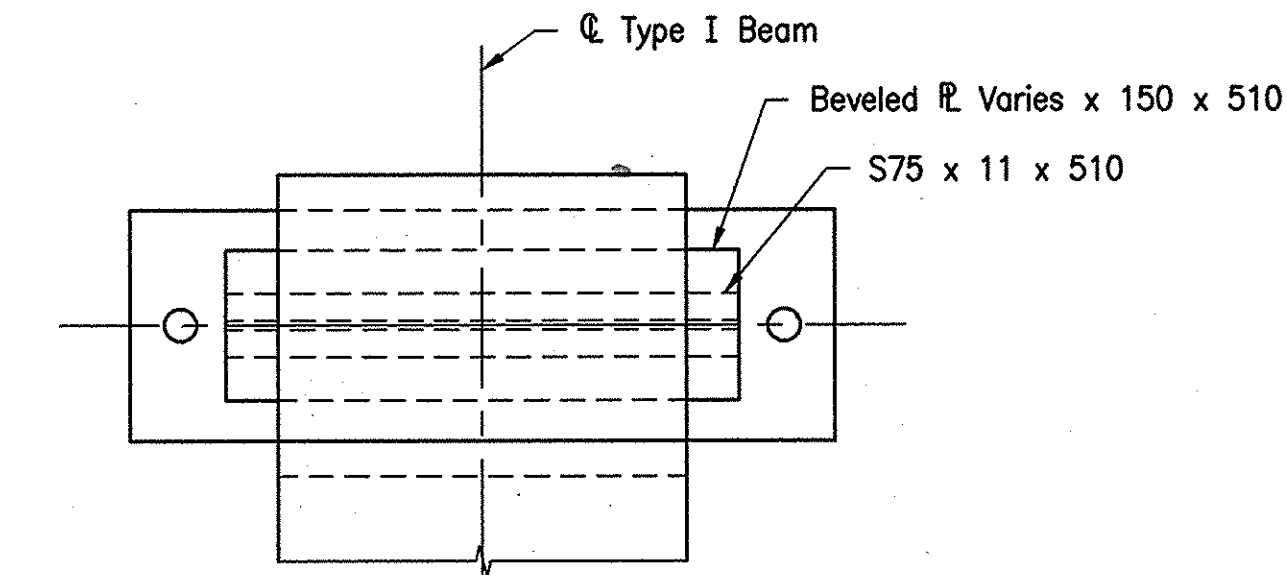
Scale: 1:50



SIDE VIEW



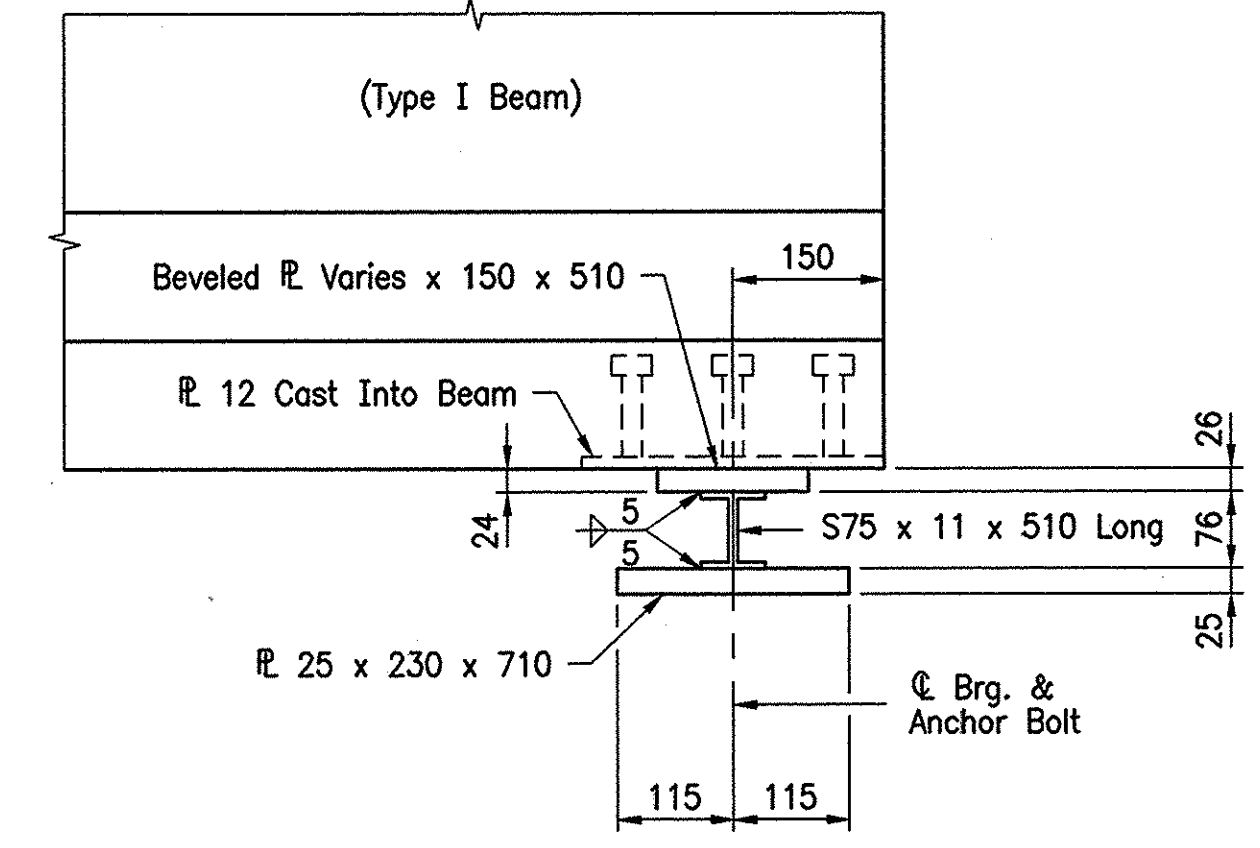
END VIEW



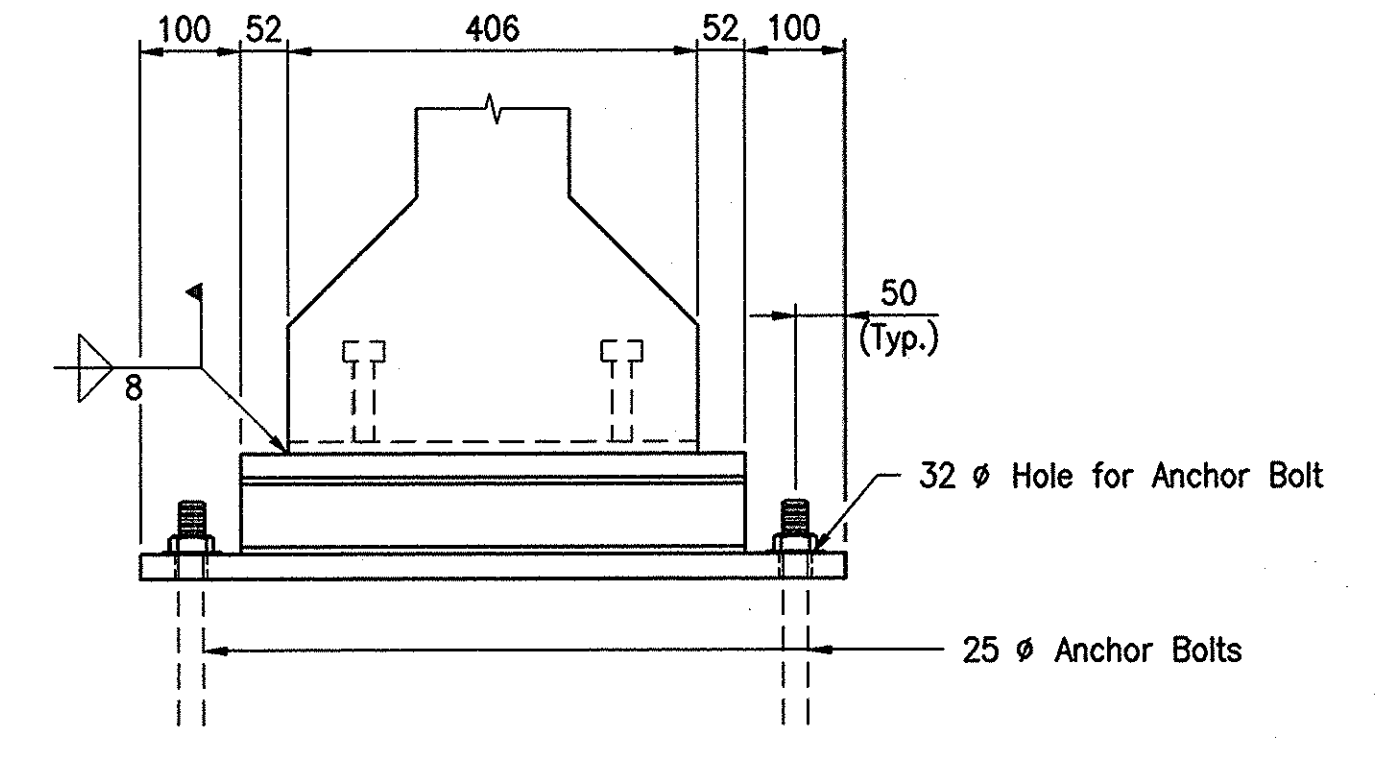
PLAN VIEW

TYPE F-5 BEARING DETAILS

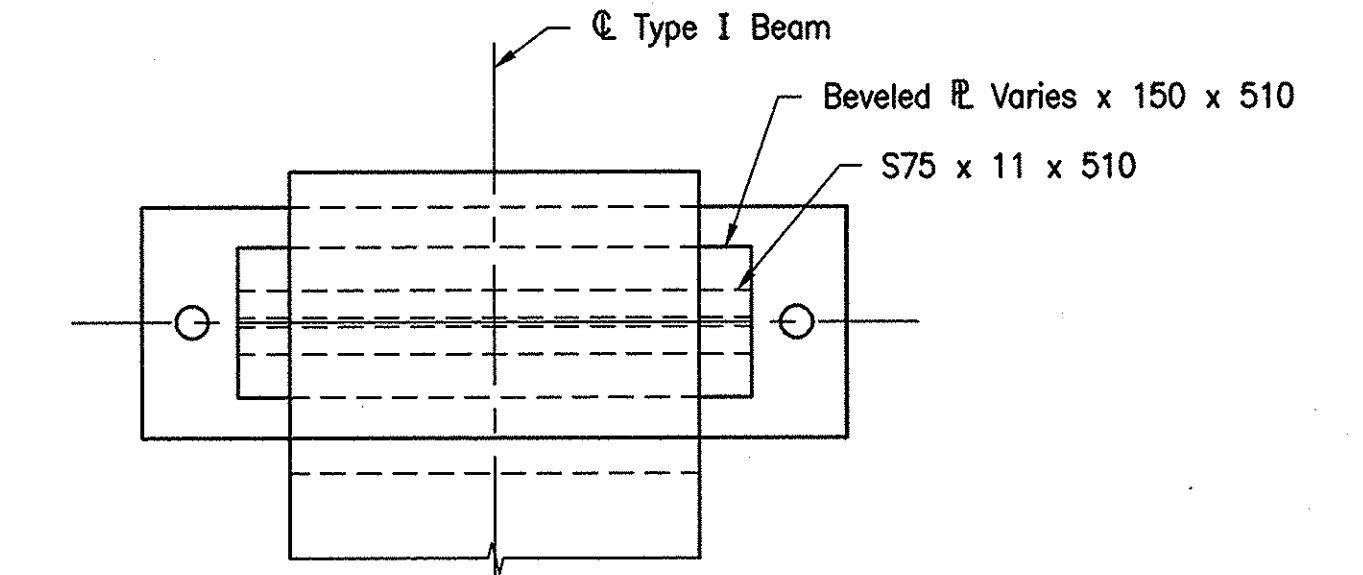
Scale: 1:50



SIDE VIEW



END VIEW



PLAN VIEW

TYPE F-6 BEARING DETAILS

Scale: 1:50

NOTE:

All Dimensions are in Millimeters Unless Noted.
 All Structural Steel to be AASHTO M270 Grade 50, &
 All High Strength Bolts Shall be 22 ϕ ASTM A325M.
 For Anchor Bolt Details, See Sheet 74.

File: 9660SSD4



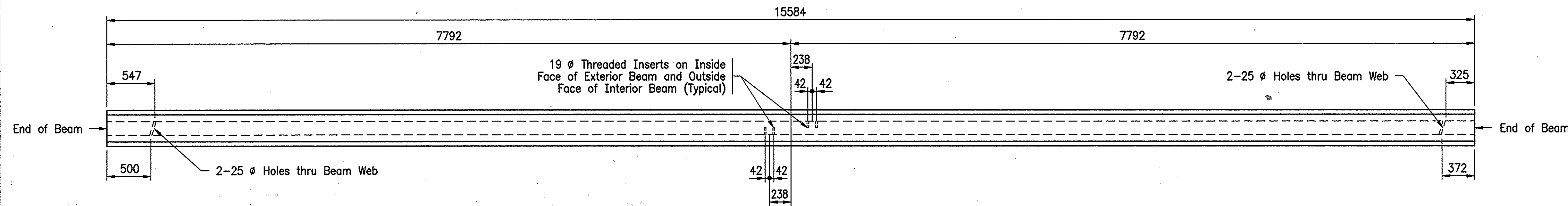
RECOMMENDED FOR APPROVAL *Michael J. Meyer* 1/19/99
 DESIGN ENGINEER DATE

DESIGNED: MJM DRAWN: MBW
 CHECKED: JAP CHECKED: MJM

INDIANA DEPARTMENT OF TRANSPORTATION

STRUCTURAL STEEL DETAILS

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	77 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



BEAM PLAN - SPAN "A"

Scale: 1:30

GENERAL BEAM NOTES

Beams shall be cast a minimum of 15 days before deck is poured. Top of beams shall be scored transversely at about 75 mm centers with pointed tool (Max. depth of scoring 6 mm). The slab reinforcing has been designed assuming the deck will be poured within a maximum of 75 days after the beams were cast. If the deck construction is not completed within this period, notify the design engineer. See Bridge Standard 703-BRST-01 for Reinforcing Bar Notes. Beams shall be supported at bearing points while stored and while transporting to job site. For Prestressed Beam Fabrication Tolerances and Additional Notes, See Std. Dwgs. 707-BPBF-02 & 03.

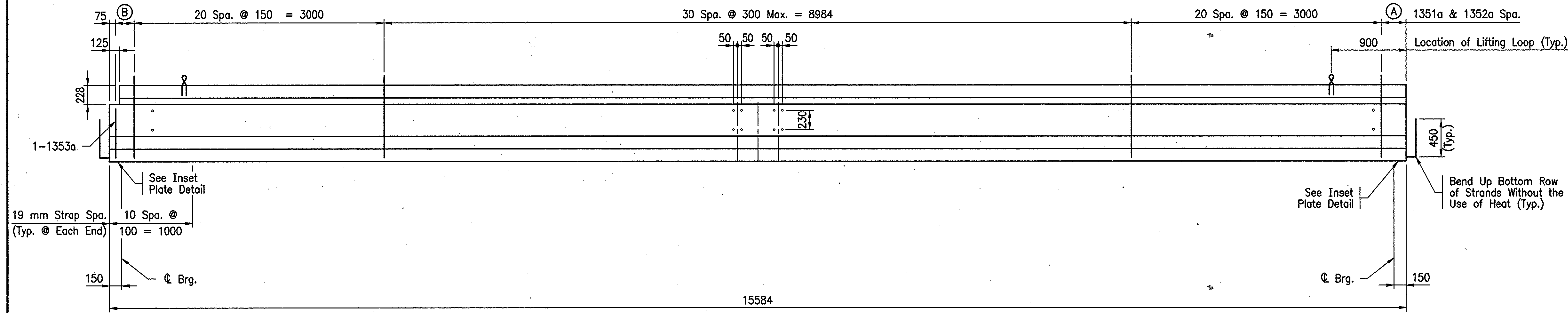
DESIGN DATA

Initial Pull per Strand = 150.4 kN
 Concrete Strength f'_{ci} = 34 MPa (@ Release)
 f'_c = 41 MPa (28 Day Strength)
 Stirrup Steel f_y = 410 MPa

Strands shall be 12.7 ϕ 7 Wire Special LoLax
 1862 MPa Strands (Minimum Area = 107.7 mm²/Strand)

BENT NO.1

PIER NO.2



BEAM ELEVATION - SPAN "A"

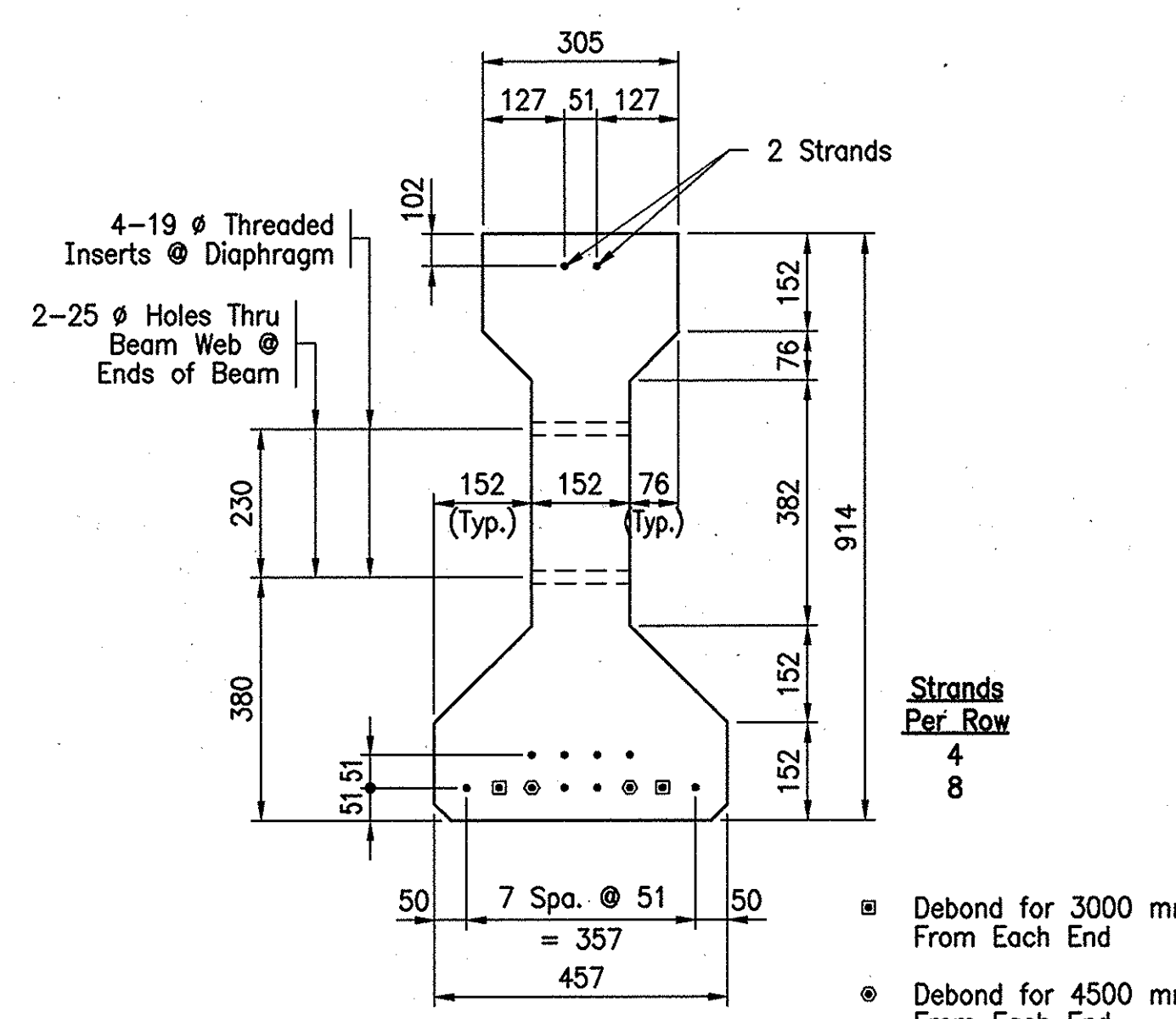
Scale: 1:30

APPROXIMATE BEAM CAMBER

Span "A"	
Computed Beam Camber	= 21.3 mm
Dead Load Deflection	= - 11.0 mm
Residual Camber	= 10.3 mm
Span "E"	
Computed Beam Camber	= 10.8 mm
Dead Load Deflection	= - 3.6 mm
Residual Camber	= 7.2 mm
Span "F"	
Computed Beam Camber	= 11.2 mm
Dead Load Deflection	= - 4.0 mm
Residual Camber	= 7.2 mm

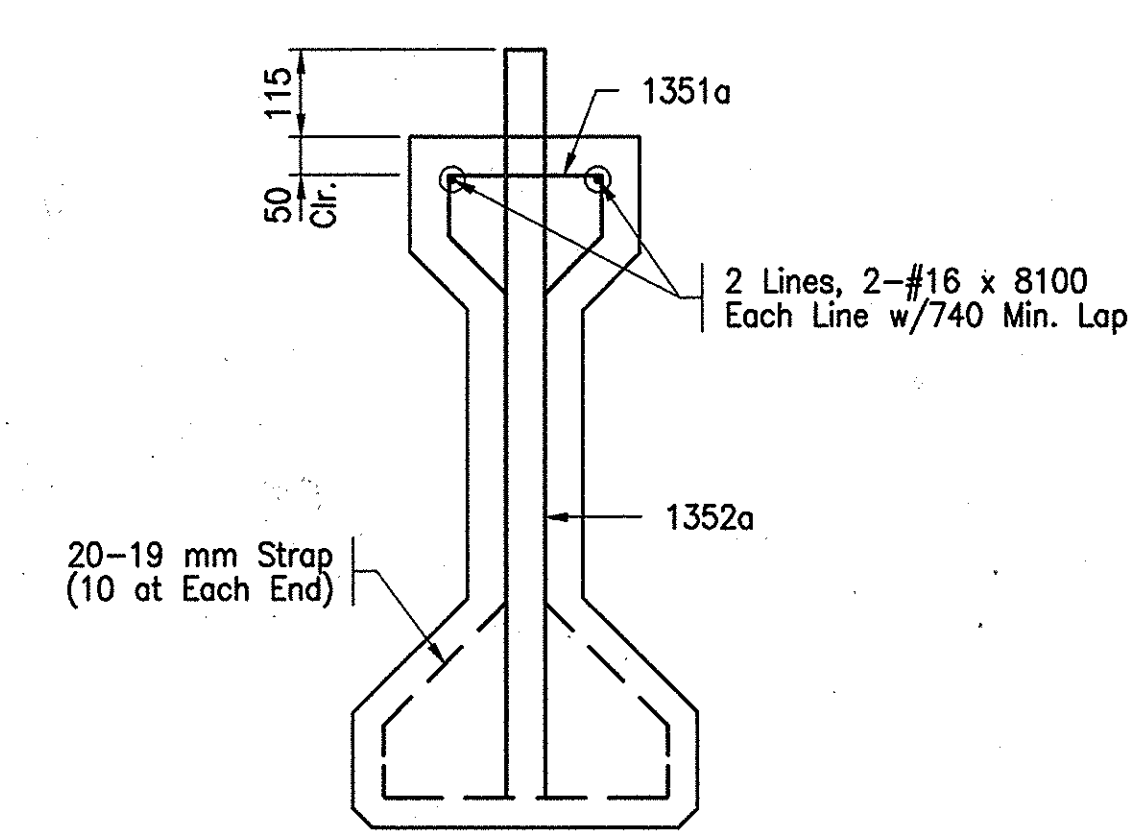
BENT NO.1

PIER NO.2



BEAM SECTION - SPAN "A"

Scale: 1:10

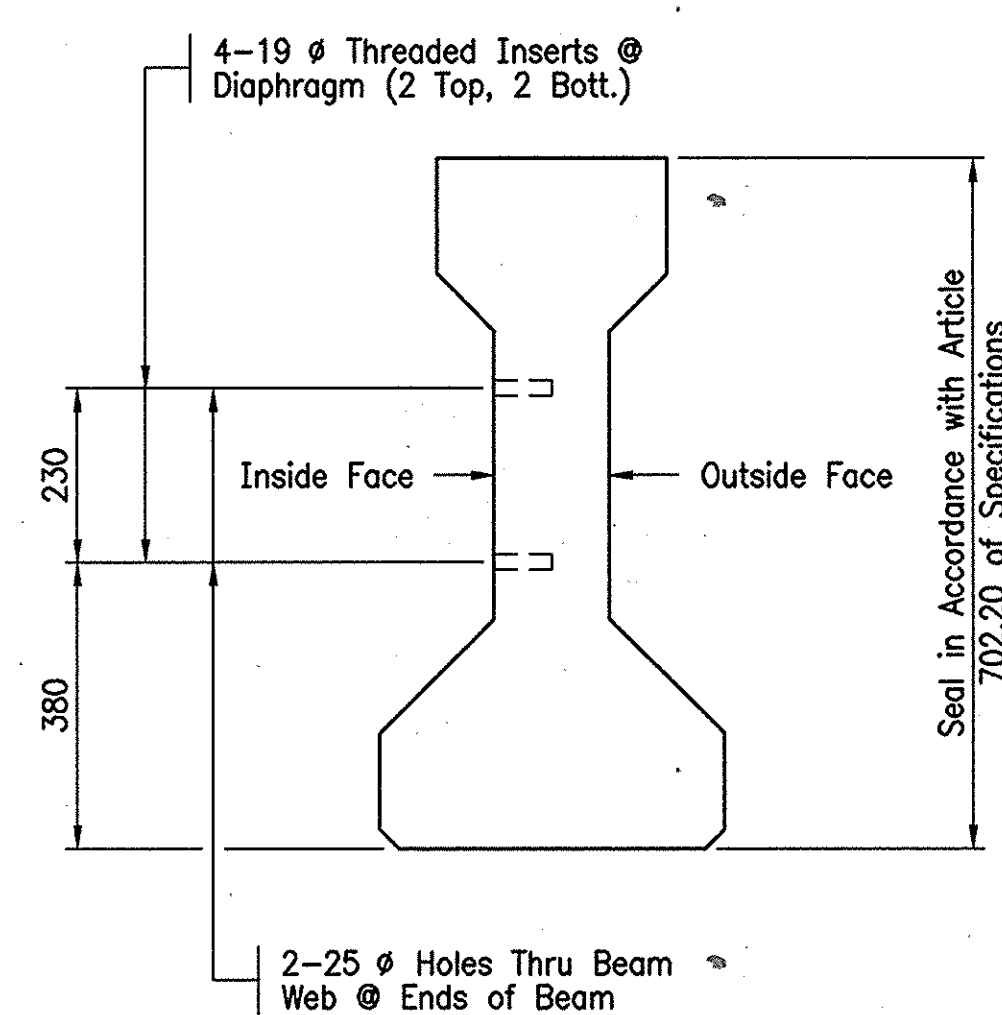


STIRRUP DETAIL - SPAN "A"

Scale: 1:50

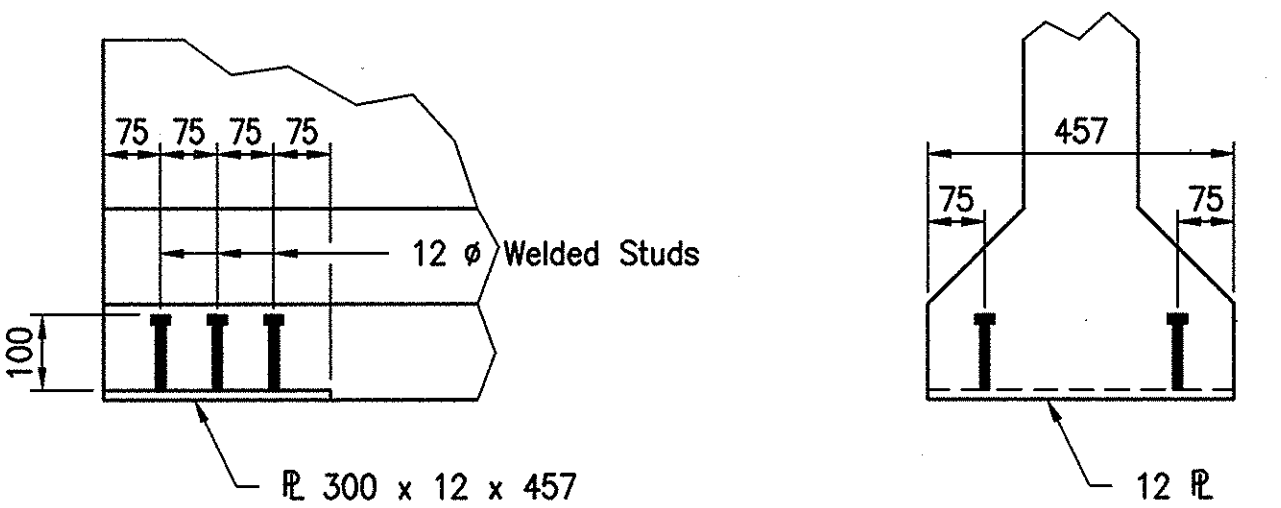
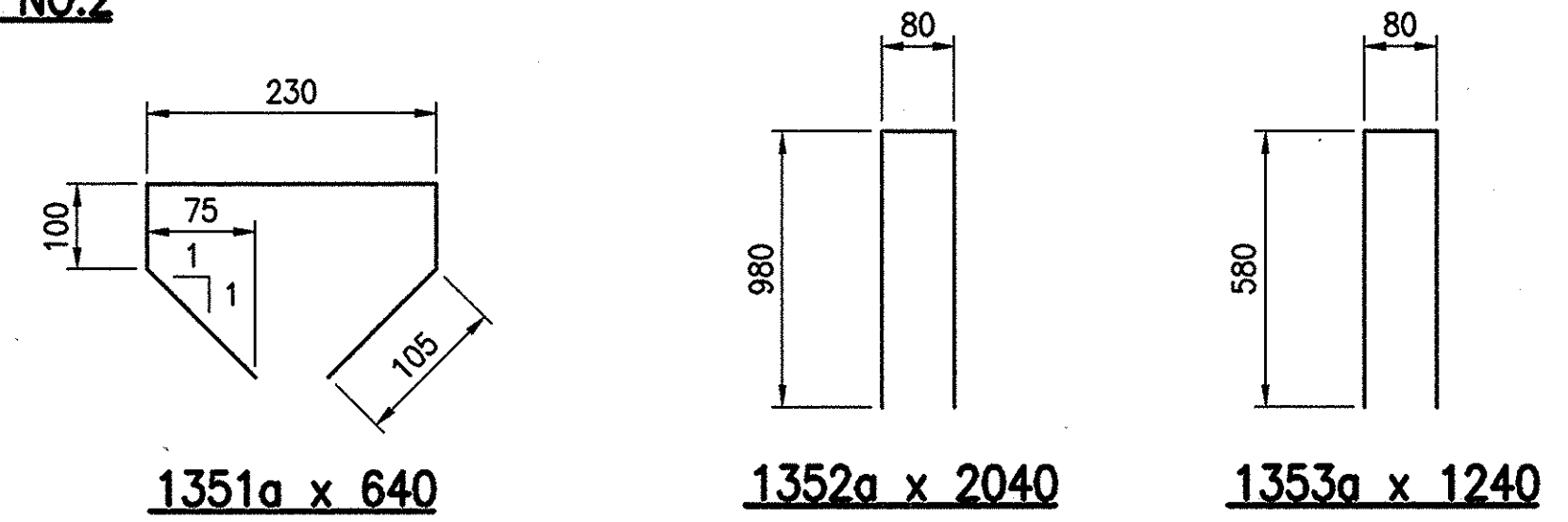
LEGEND

- (A) 4 Spa. @ 75 = 300
- (B) 3 Spa. @ 75 = 225



SECTION EXTERIOR BEAM - SPAN "A"

Scale: 1:50

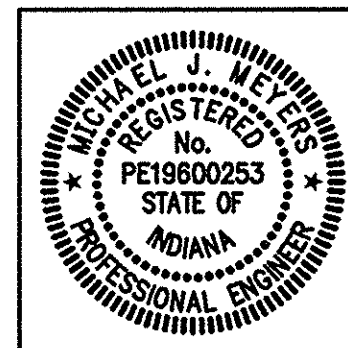


INSET PLATE DETAIL - SPAN "A"

Scale: 1:10

NOTE:
 All Dimensions are in Millimeters Unless Noted

File: 9660BM1

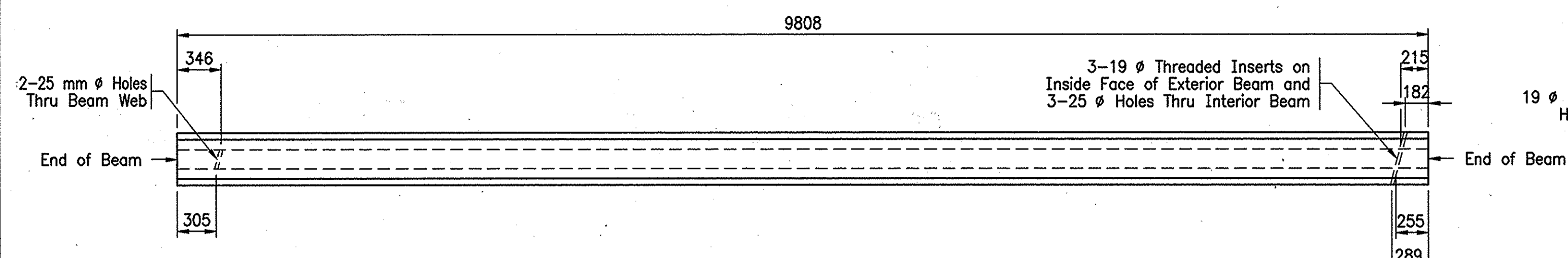


RECOMMENDED FOR APPROVAL	<i>Michael J. Meyer</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA
 DEPARTMENT OF TRANSPORTATION

**BEAM DETAILS
 SPAN "A"**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	78 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

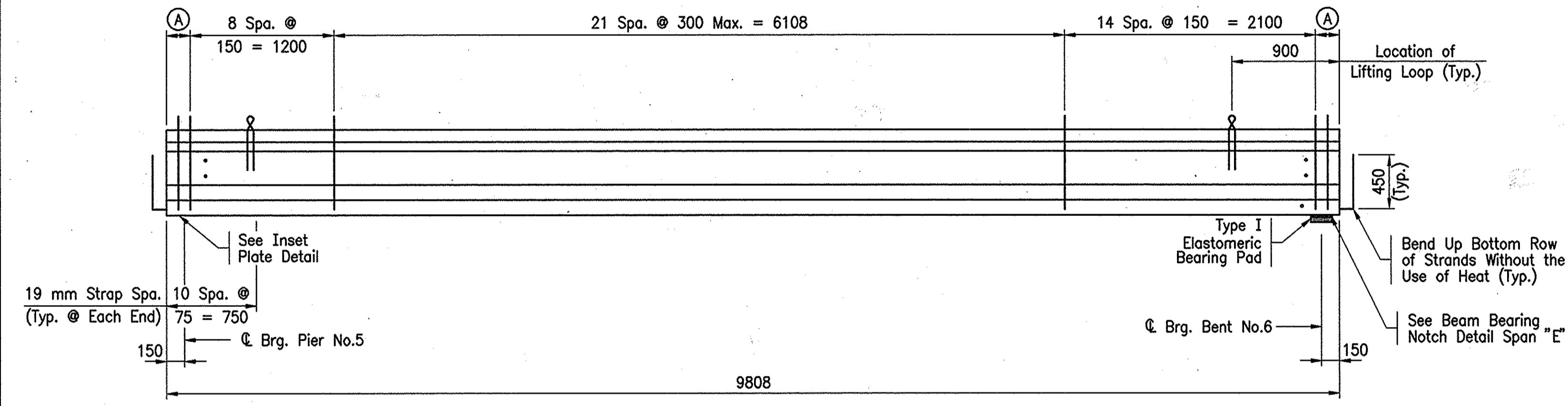


PIER NO.5

PLAN - SPAN "E"

Scale: 1:30

BENT NO.6

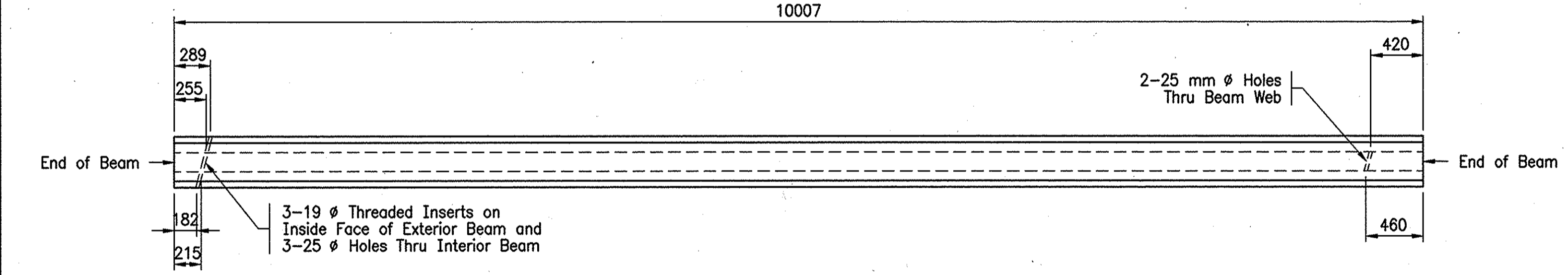


ELEVATION - SPAN "E"

Scale: 1:30

LEGEND

- (A) 2 Spa. @ 100 = 200
- (B) 5 Spa. @ 75 = 575

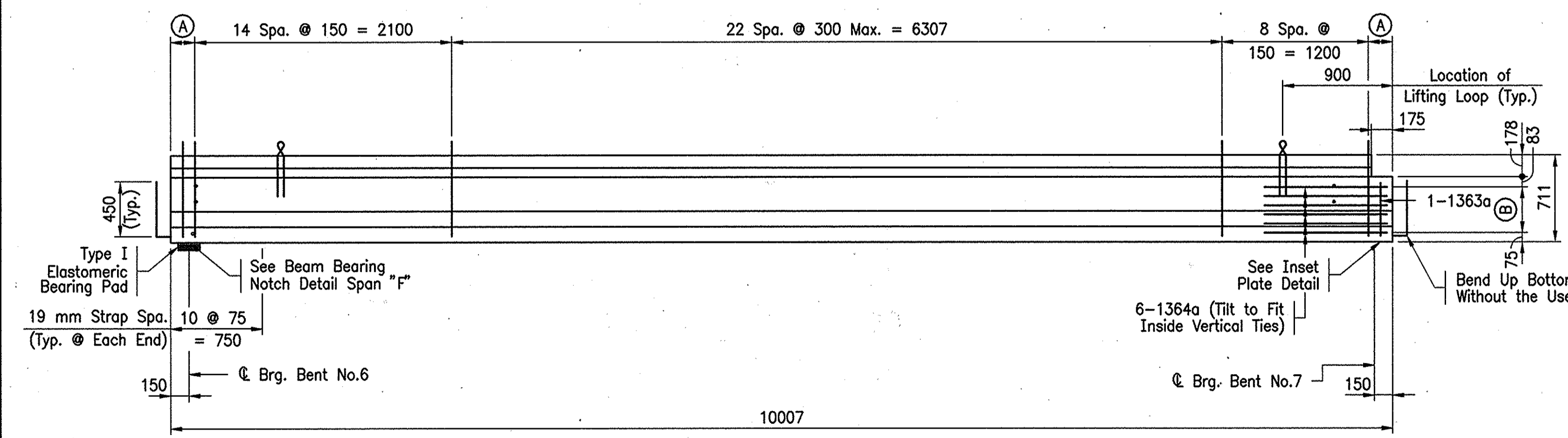


BENT NO.6

PLAN - SPAN "F"

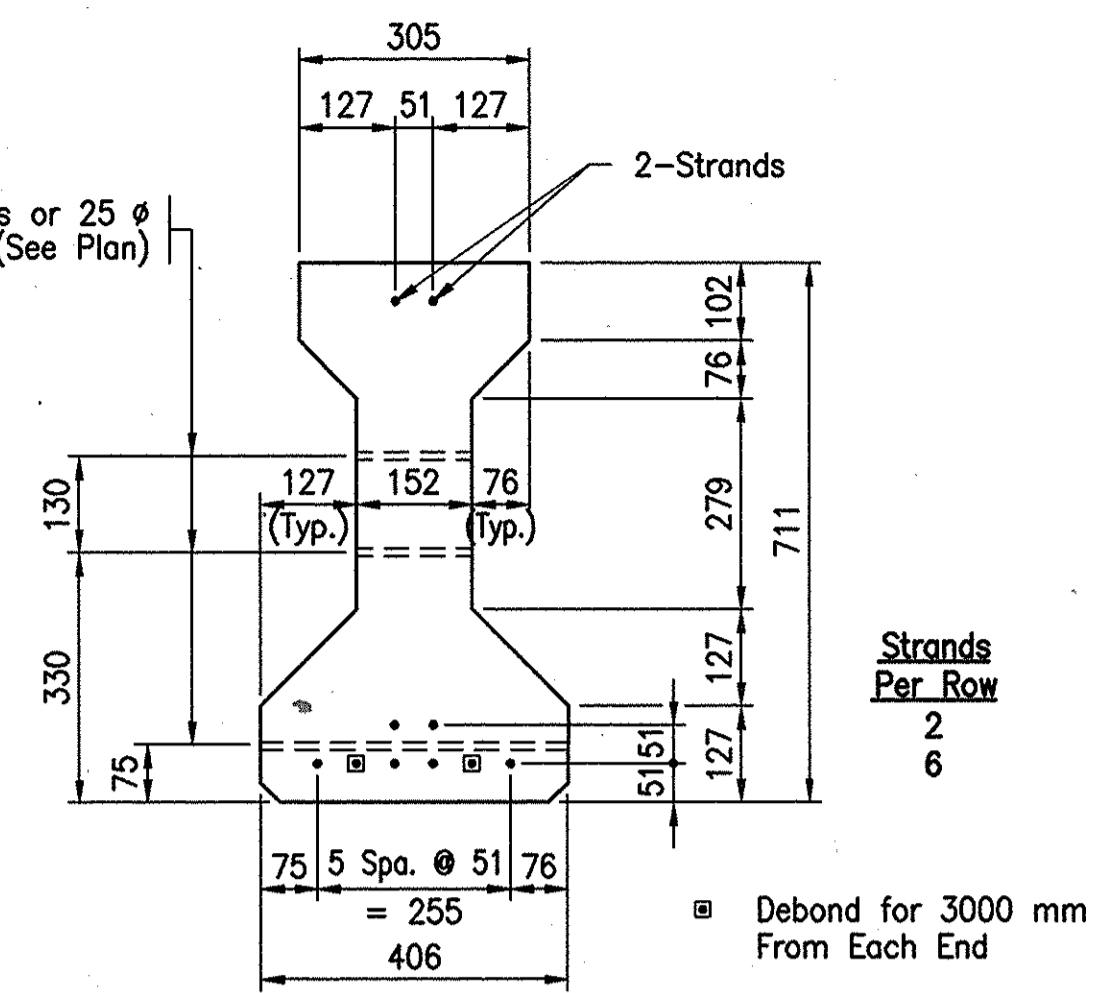
Scale: 1:30

BENT NO.7



ELEVATION - SPAN "F"

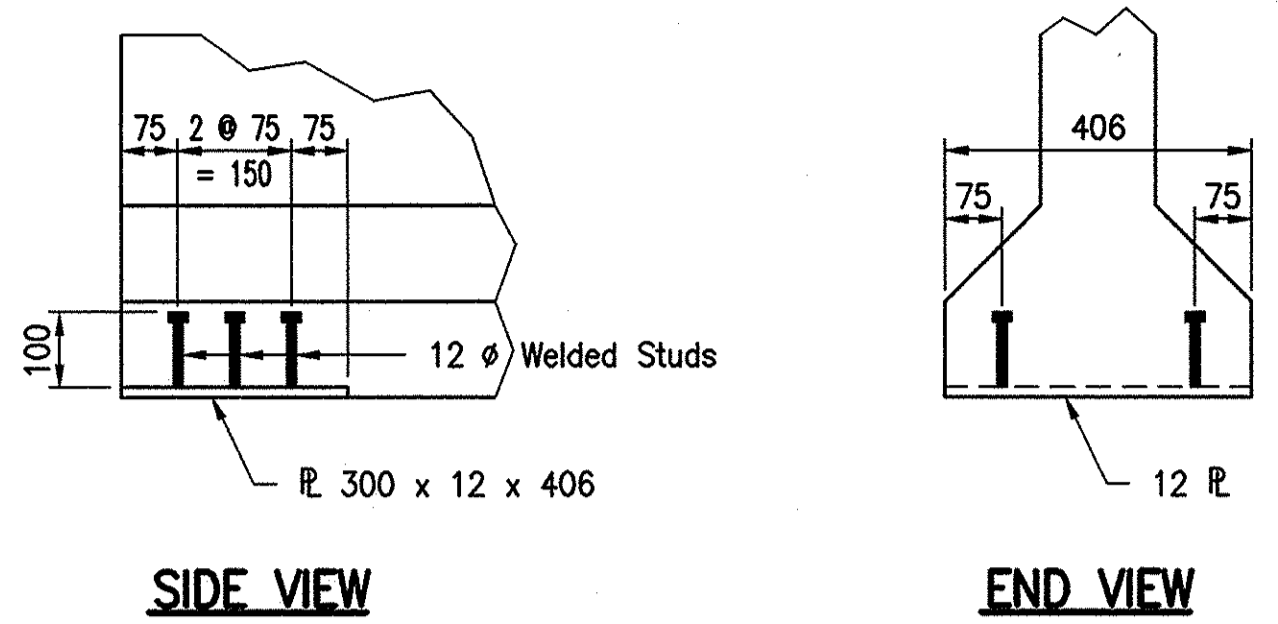
Scale: 1:30



BEAM SECTION

(SPANS "E" & "F")

Scale: 1:10



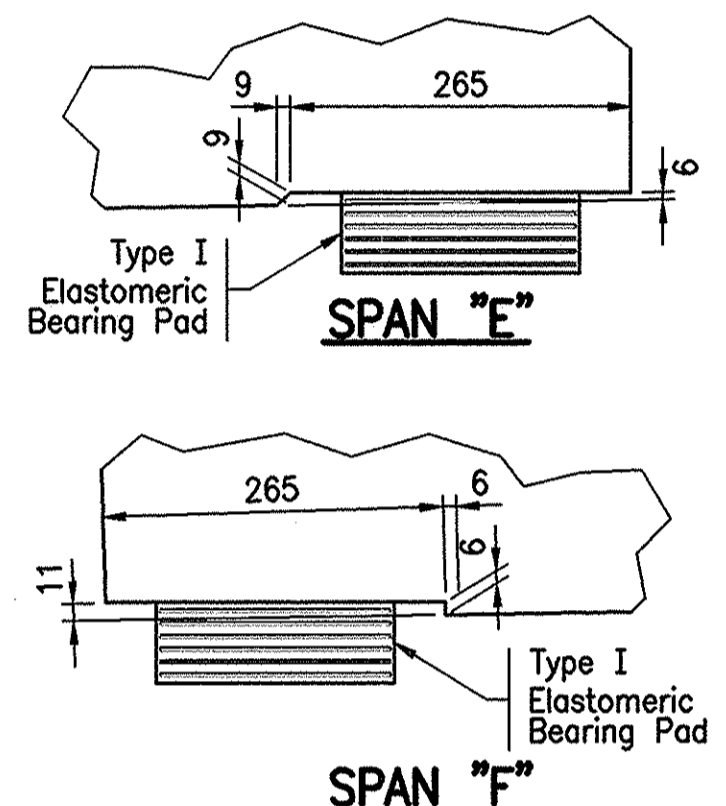
SIDE VIEW

END VIEW

INSET PLATE DETAIL

(@ PIER NO.5 AND BENT NO.7 ONLY)

Scale: 1:10

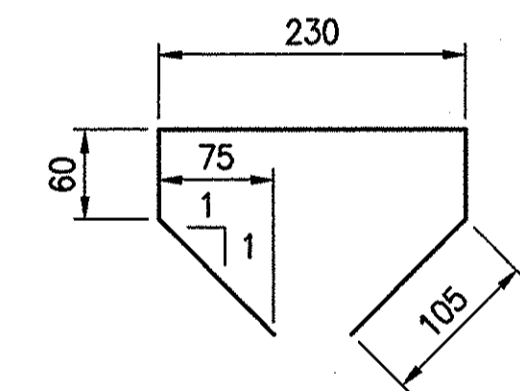


SPAN "E"

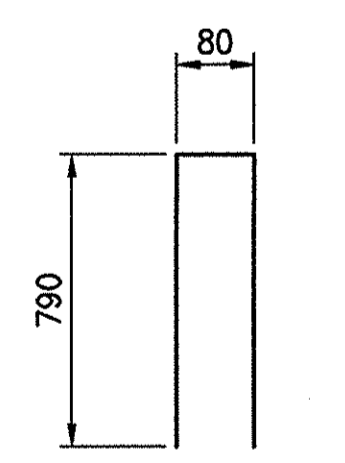
SPAN "F"

BEAM BEARING NOTCH DETAILS

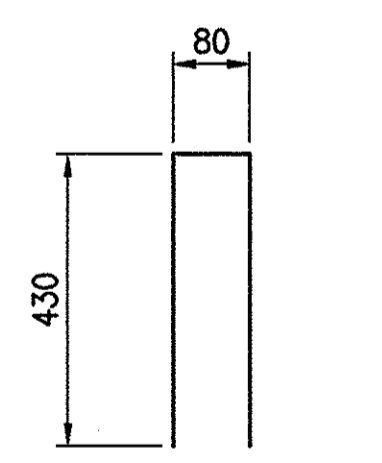
No Scale



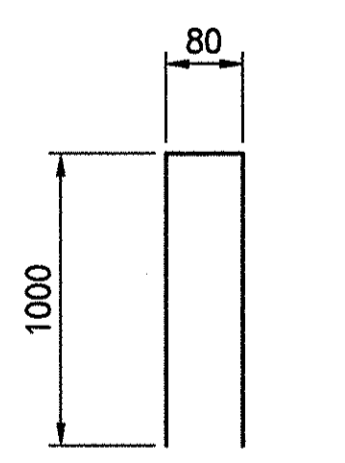
1361a x 560



1362a x 1660



1363a x 940

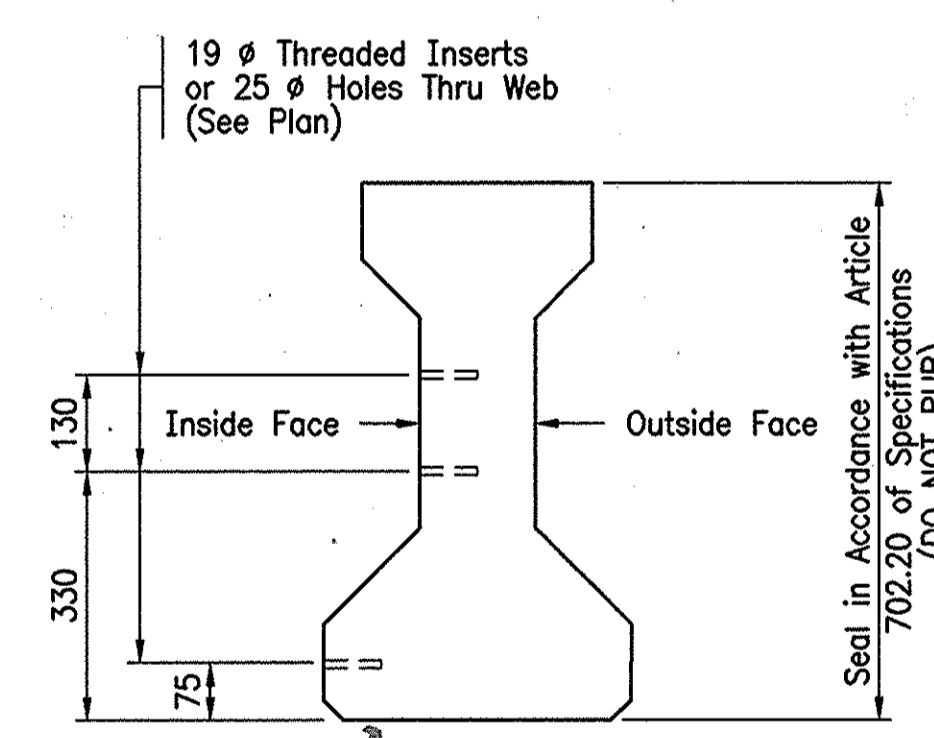


1364a x 2080

STIRRUP DETAIL

(SPANS "E" & "F")

Scale: 1:50



SECTION EXTERIOR BEAM

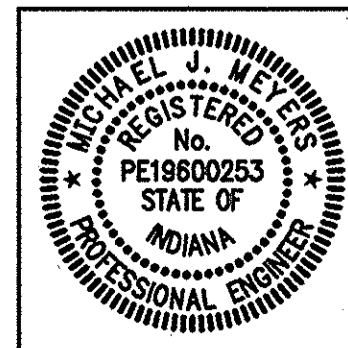
(SPANS "E" & "F")

Scale: 1:50

NOTE:

All Dimensions are in Millimeters Unless Noted.
 For General Beam Notes, Design Data, and Beam Camber, See Sheet 78.
 For Type I Elastomeric Bearing Pad Details, See Std. Dwg. 707-BEBP-01.

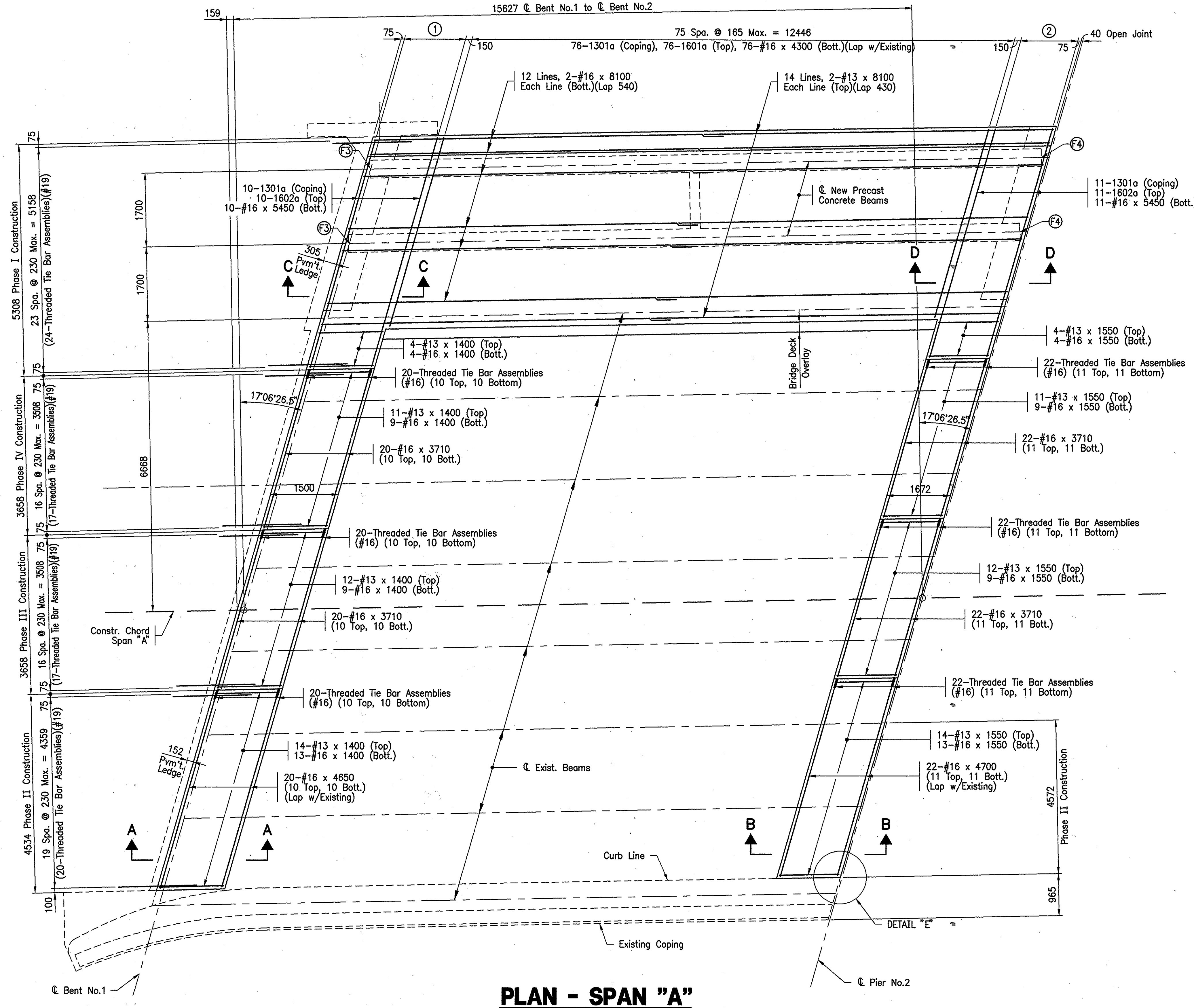
File: 9660BM2



RECOMMENDED FOR APPROVAL	<i>Michael J. Wagner</i>	1/19/99
DESIGNED:	MJM	DATE
DRAWN:	MBW	
CHECKED:	JAP	CHECKED: MJM

INDIANA DEPARTMENT OF TRANSPORTATION	
BEAM DETAILS SPANS "E" & "F"	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	79 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

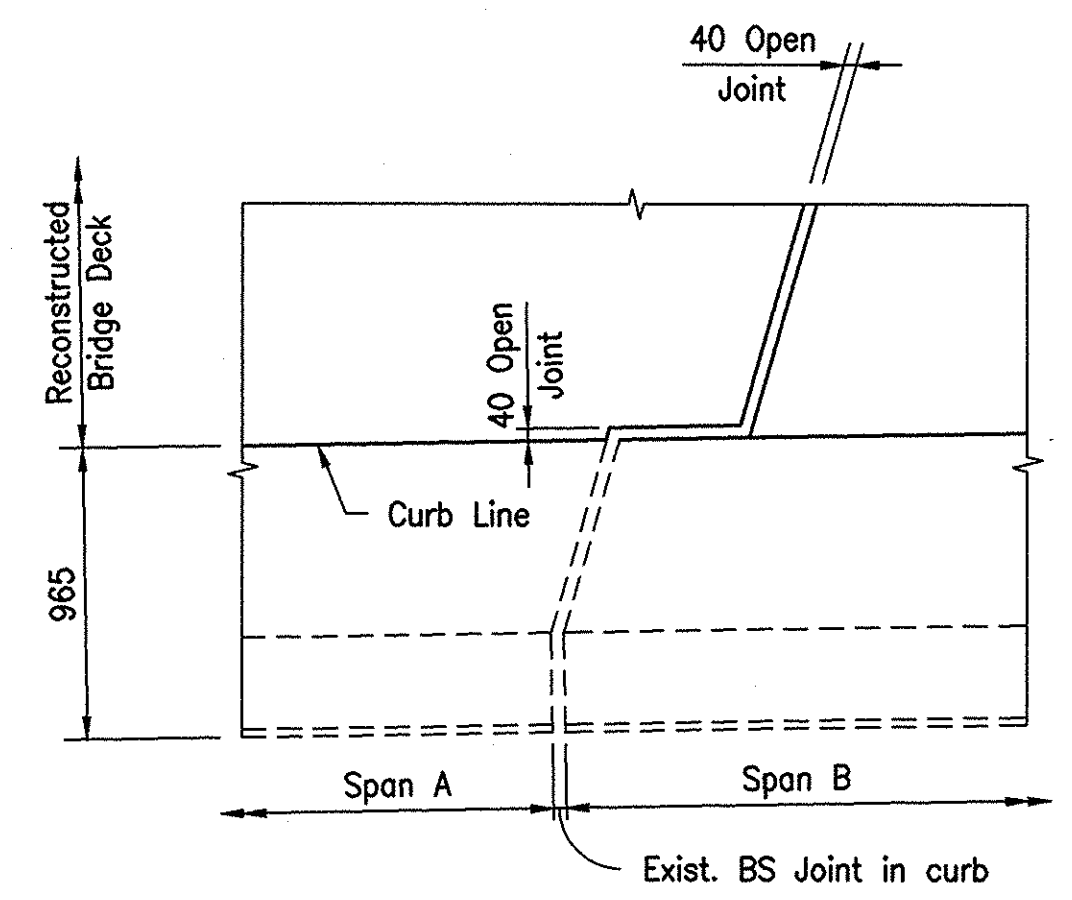


PLAN - SPAN "A"
Scale: 1:50



LEGEND

- ① 9 Spa. @ 150 = 1350
- ② 10 Spa. @ 150 = 1500
- ⓕ3 Bearing Assembly "F3"
- ⓕ4 Bearing Assembly "F4"



DETAIL "E"
Scale: 1:100

DESIGN DATA

LIVE LOAD: HS20-44 loading with impact and distribution of loads in accordance with 1996 AASHTO Specifications and all subsequent interim specifications.

DEAD LOAD: Actual load plus 1675 Pa of roadway for future wearing surface.

Slab designed with a structural depth of 165.

NOTE:

- All Dimensions are in Millimeters Unless Noted.
- For Typical Section & Sections A-A thru D-D, See Sheet 82.
- For Bent Bar Details and Bill of Materials, See Sheet 82.
- Skew Shown is Relative to the Construction Chord for Span "A".
- For Bearing Assembly Details, See Sheet 77.

File: 9660FLR1

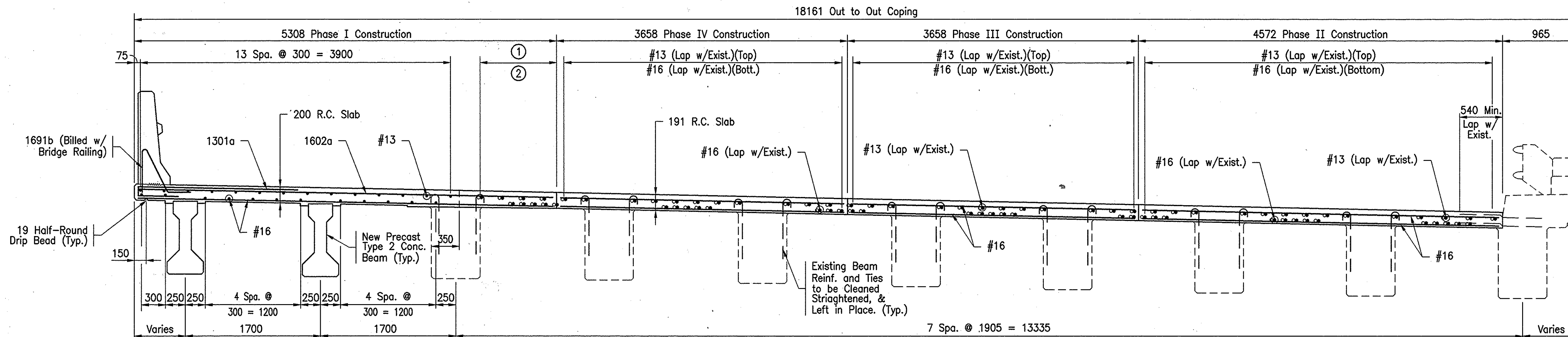


RECOMMENDED FOR APPROVAL	<i>Michael J. Meyer</i>	1/19/99
DESIGNED:	MJM	DRAWN:
CHECKED:	JAP	CHECKED:
		MJM

INDIANA
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
SPAN "A"

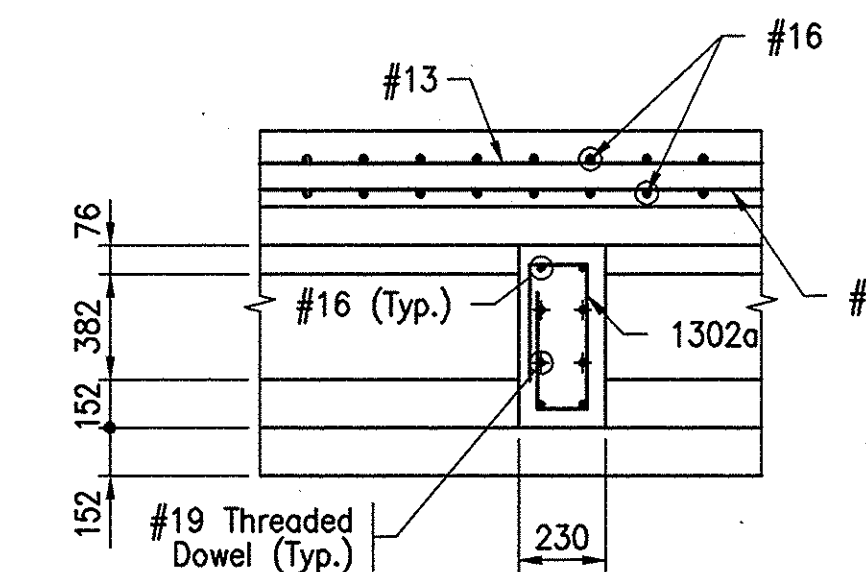
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	80 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



- LEGEND**
- ① #13 (Lap w/Exist.)(Top)
 - ② #16 (Lap w/Exist.)(Bott.)

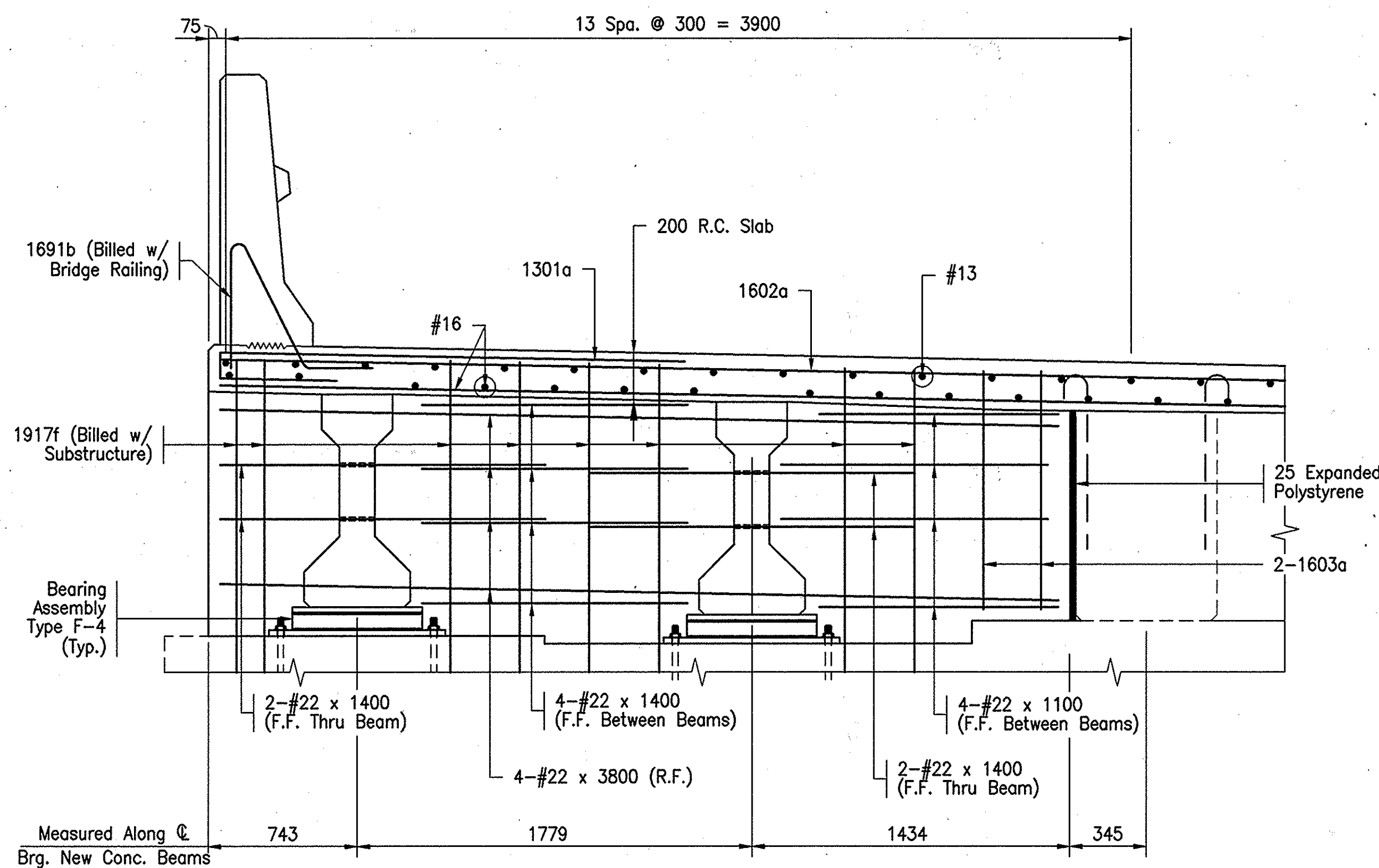
TYPICAL SECTION AT FULL WIDTH DECK REPLACEMENT - SPAN "A"

Scale: 1:30



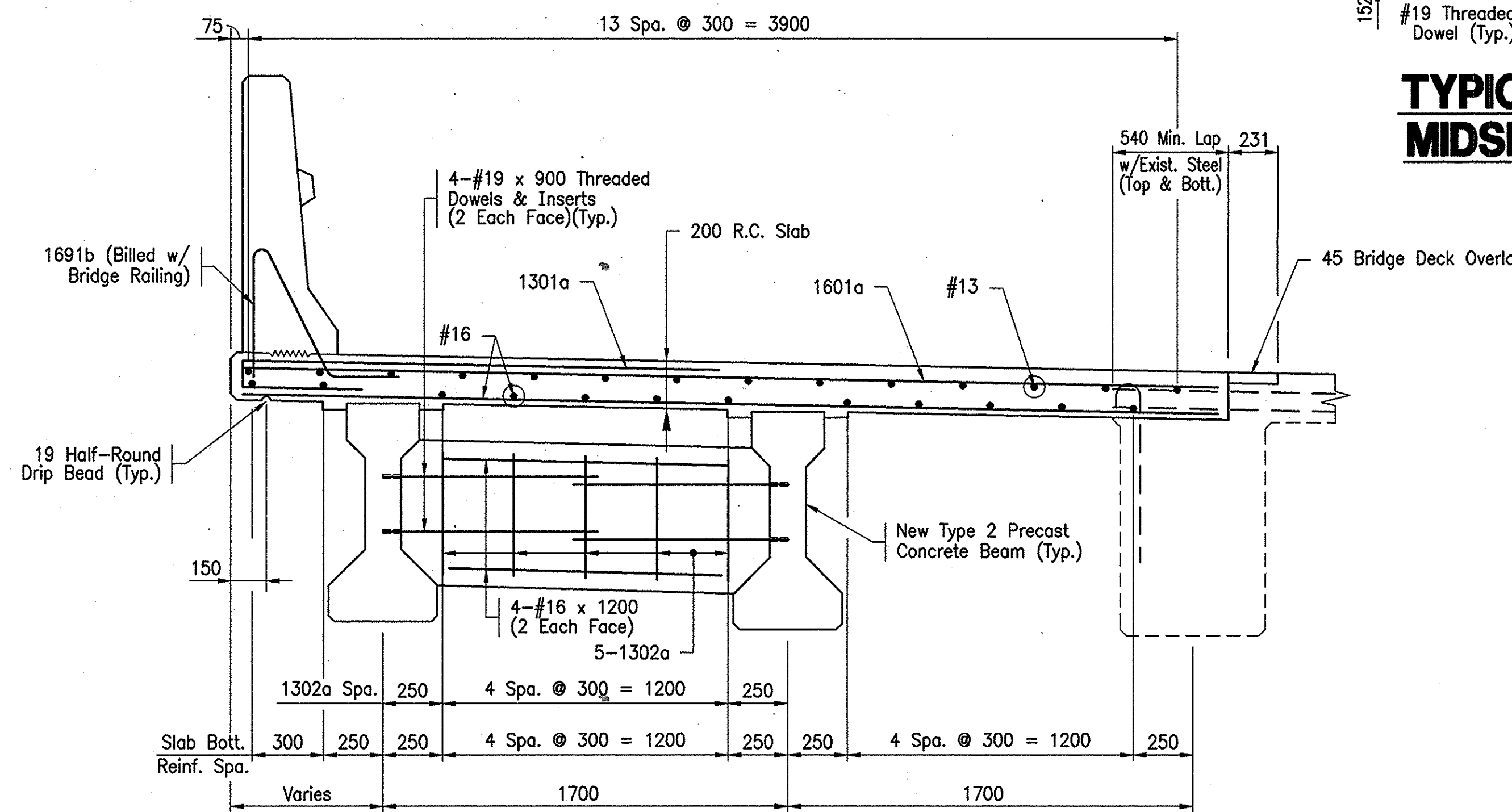
TYPICAL SECTION AT MIDSPAN DIAPHRAGM

Scale: 1:20



TYPICAL DIAPHRAGM ELEVATION AT PIER NO.2

Scale: 1:50



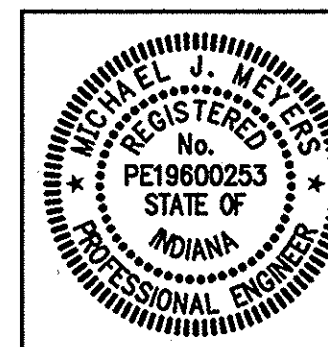
TYPICAL SECTION AT PARTIAL WIDTH DECK REPLACEMENT - SPAN "A"

Scale: 1:50

NOTE:

All Dimensions are in Millimeters Unless Noted.
For Type 2 Precast Concrete Beam Details, See Sheet 78.
See Plan Sheet 80 for Extents of Deck Replacement.

File: 9660FLR2

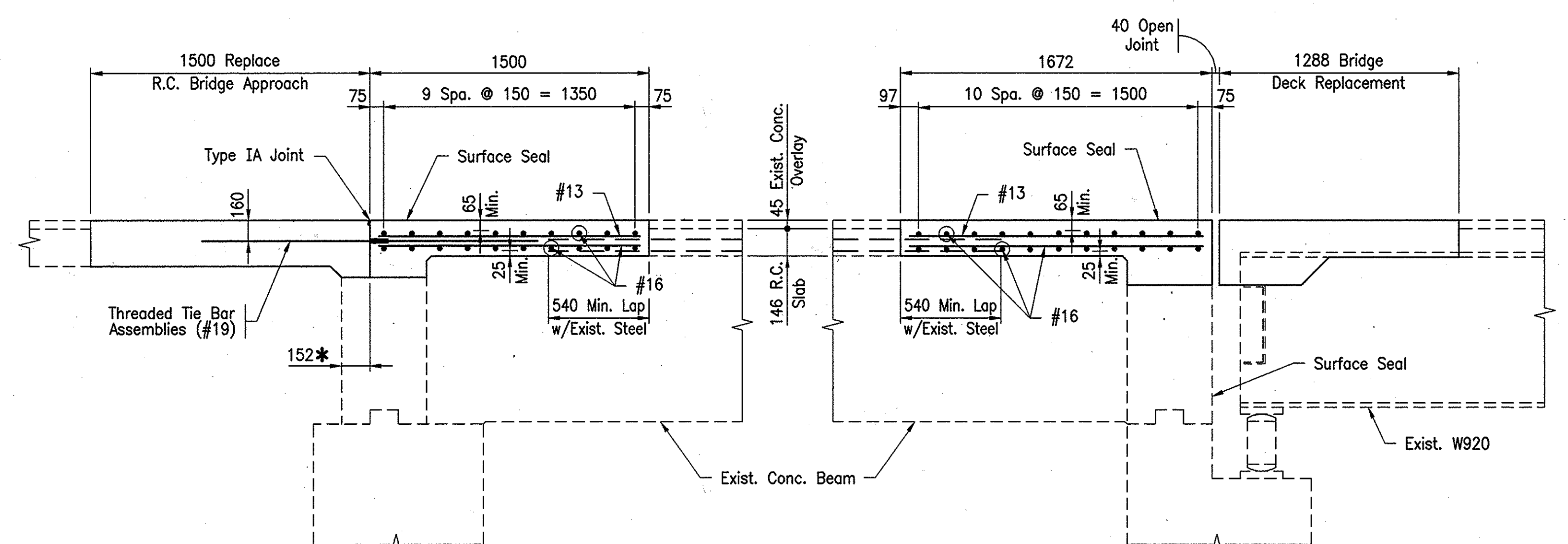


RECOMMENDED FOR APPROVAL	<i>Michael J. W. S.</i>	1/19/99
DESIGNED:	MJM	DATE
CHECKED:	JAP	
DRAWN:	MBW	
CHECKED:	MJM	

INDIANA
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE DETAILS
SPAN "A"**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	81 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



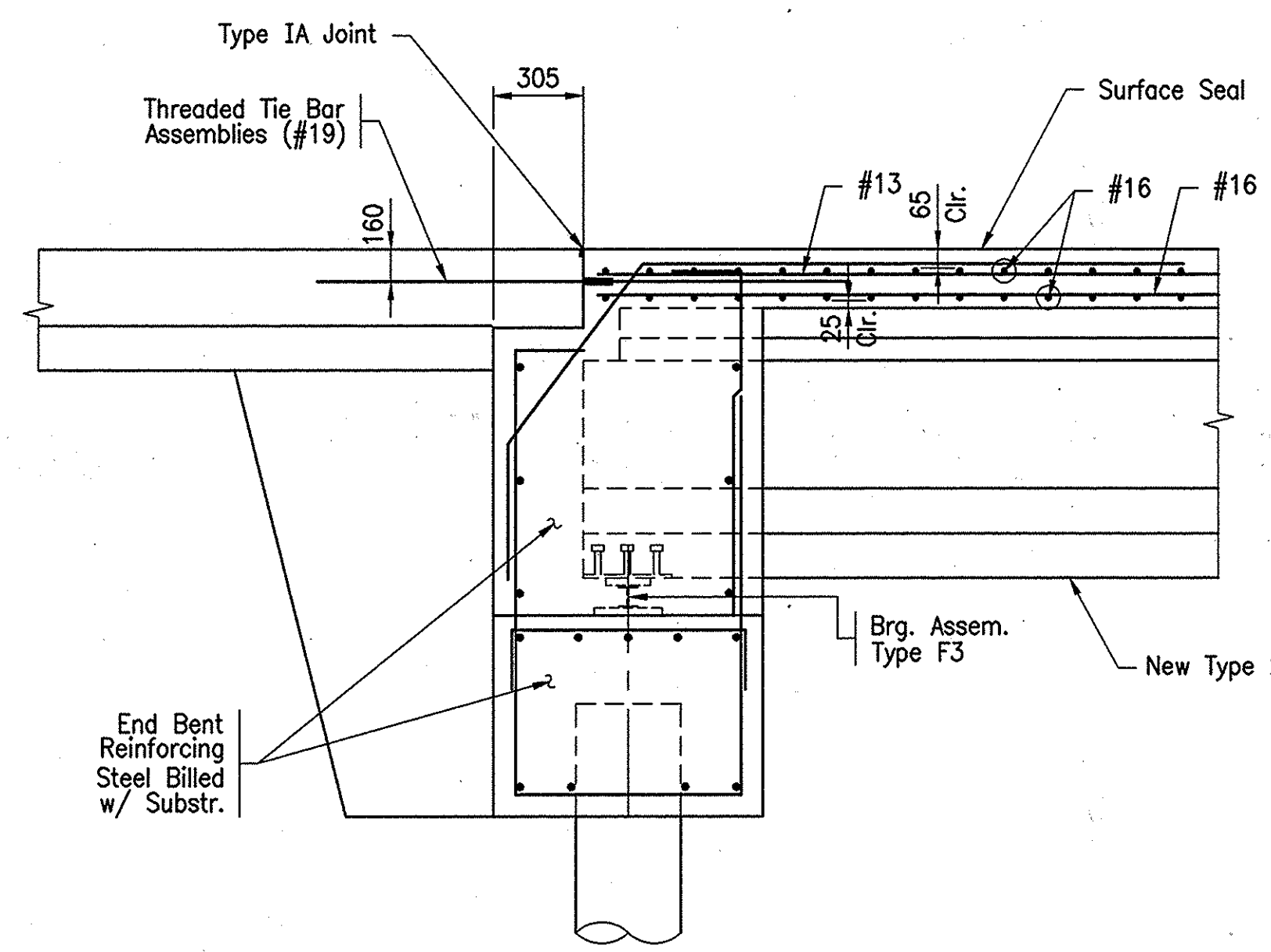
BENT NO.1
SECTION A-A

Scale: 1:20

* Measured Perpendicular to C_g Bent

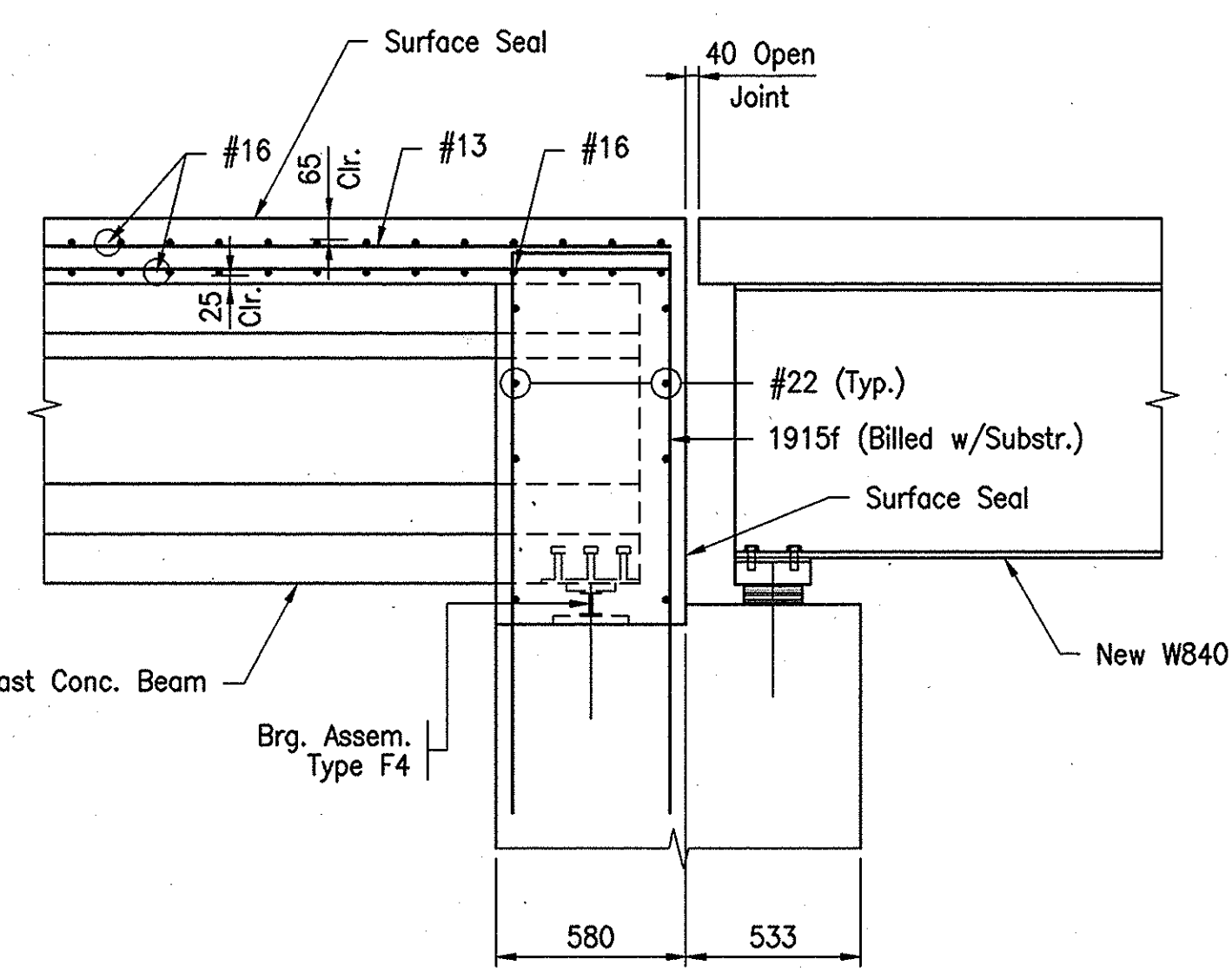
PIER NO.2
SECTION B-B

Scale: 1:20



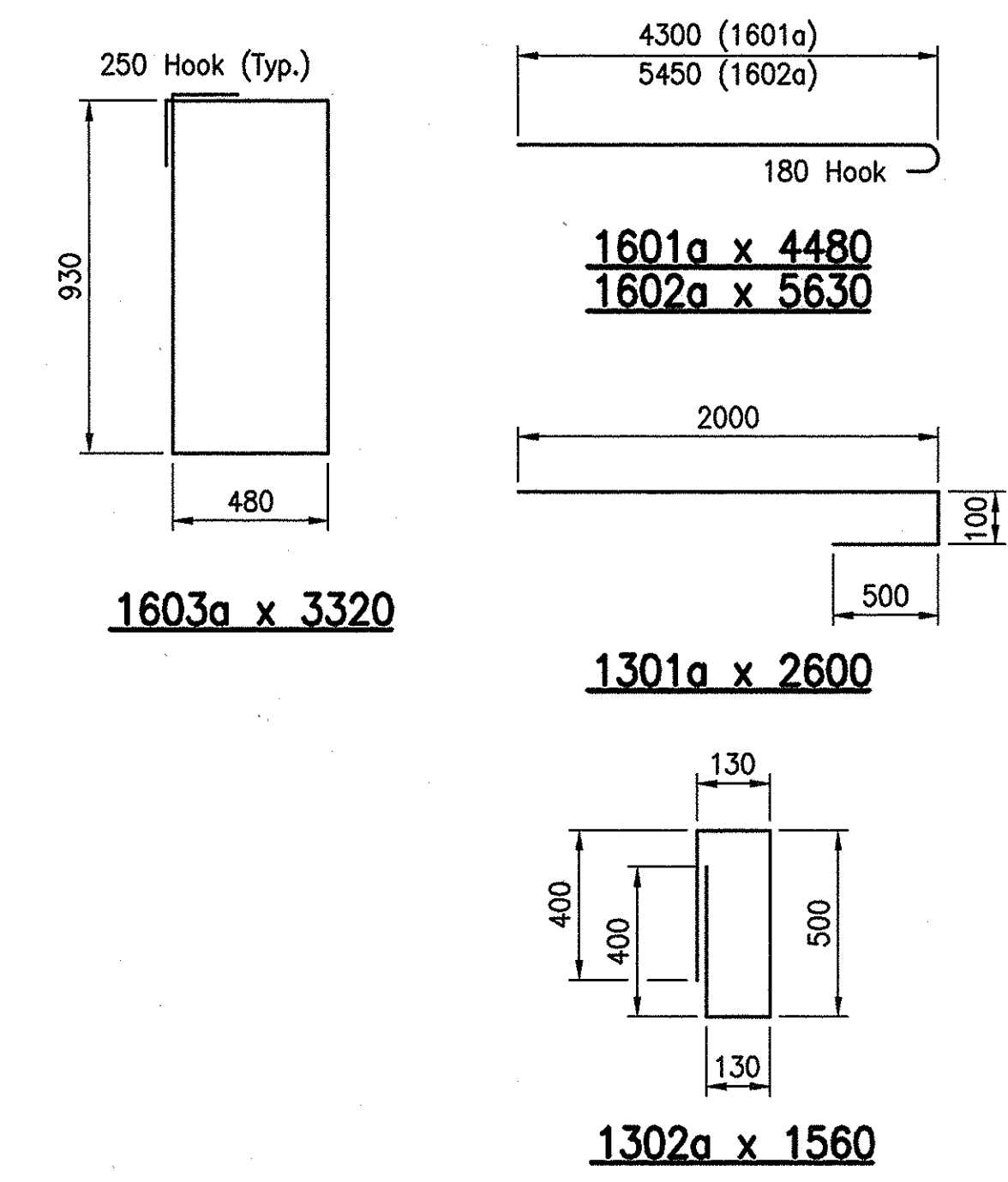
BENT NO.1
SECTION C-C

Scale: 1:20

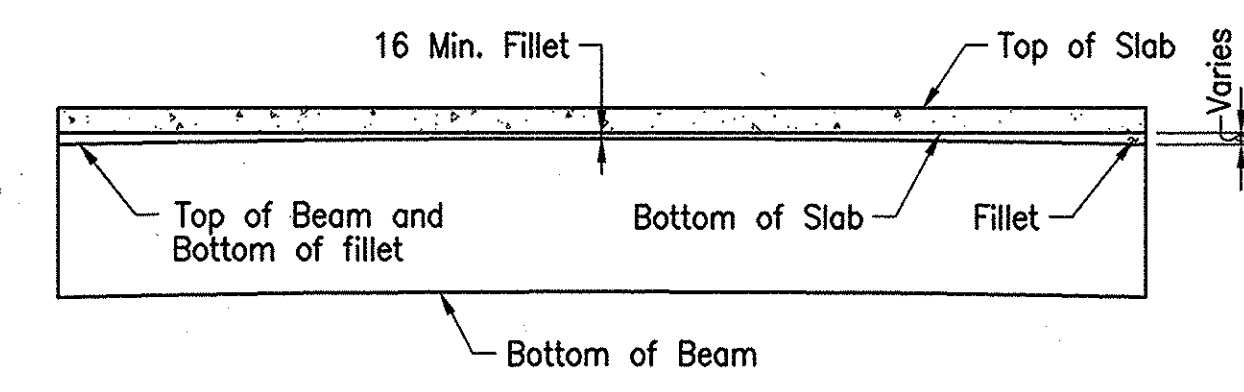


PIER NO.2
SECTION D-D

Scale: 1:20



SECTION



BEAM ELEVATION

Bridge seat elevations were calculated using residual beam camber (design camber and dead load deflection of slab) with the top of beam 16 mm below the bottom of slab elevation at the centerline of span.

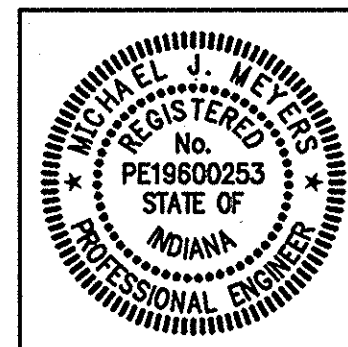
BILL OF MATERIALS SUPERSTRUCTURE (SOUTHBOUND STRUCTURE - SPAN "A")			
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#22	4	3800	
#22	8	1400	
#22	4	1100	
TOTAL #19			94
1601a	76	4480	
1602a	21	5630	
1603a	2	3320	
#16	24	8100	
#16	21	5450	
#16	22	4700	
#16	20	4650	
#16	76	4300	
#16	84	3710	
#16	35	1550	
#16	35	1400	
#16	4	1200	
TOTAL #16			2665
1301a	97	2600	
1302a	5	1560	
#13	28	8100	
#13	41	1550	
#13	41	1400	
TOTAL #13			604
TOTAL REINFORCING STEEL			3363
CONCRETE			
PHASE NO.1 (Phase I Constr.)			19.7 m ³
PHASE NO.2 (Phase II Constr.)			2.8 m ³
PHASE NO.3 (Phase III Constr.)			2.2 m ³
PHASE NO.4 (Phase IV Constr.)			2.2 m ³
MIDSPAN DIAPHRAGM			0.2 m ³
TOTAL CONC., C, IN SUPERSTRUCTURE			27.1 m ³
MISCELLANEOUS			
THREADED TIE BAR ASSEMBLIES			204 EACH
* SURFACE SEAL (EST. 200 m ²)			LSUM ITEM

* INCLUDES CONCRETE BRIDGE RAIL

NOTE:

- All Dimensions are in Millimeters Unless Noted.
- For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01.
- For Type 2 Precast Concrete Beam Details, See Sheet 78.
- See Plan Sheet 80 for Extents of Deck Replacement.

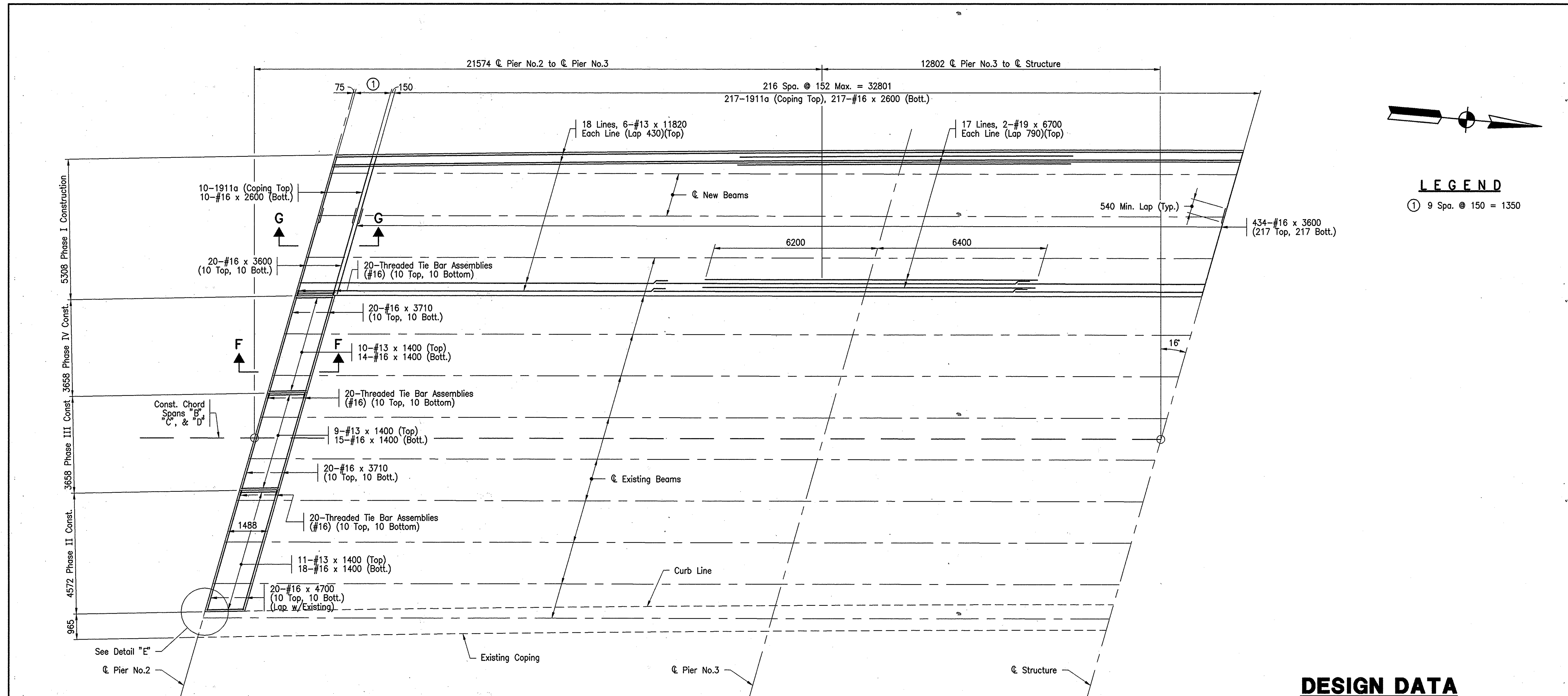
File: 9660FLR3



RECOMMENDED FOR APPROVAL	<i>Michael J. Weyers</i>	1/19/99
DESIGNED:	MJM	DATE
DRAWN:	MBW	
CHECKED:	JAP	CHECKED: MJM

INDIANA
DEPARTMENT OF TRANSPORTATION
SUPERSTRUCTURE DETAILS
SPAN "A"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	82 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



LEGEND
 ① 9 Spa. @ 150 = 1350

PARTIAL PLAN - SPANS "B", "C" & "D"

Scale: 1:100

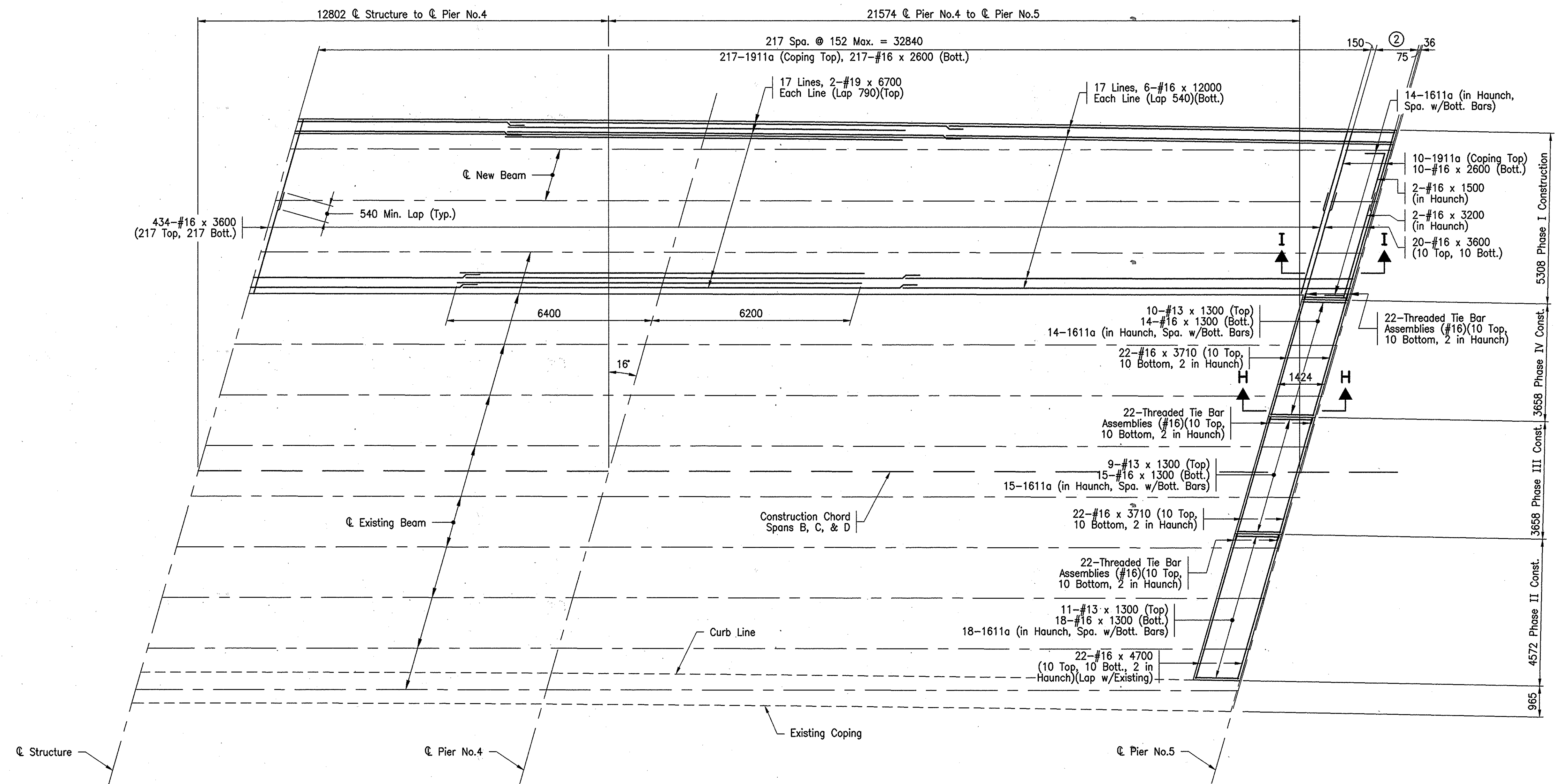
DESIGN DATA

LIVE LOAD: HS20-44 loading with impact and distribution of loads in accordance with 1996 AASHTO Specifications and all subsequent interim specifications.
DEAD LOAD: Actual load plus 1675 Pa of roadway for future wearing surface.
 Slab designed with a structural depth of 165.

NOTE:
 All Dimensions are in Millimeters Unless Noted.
 For Typical Section and Sections F-F & G-G, See Sheet 85.
 For Bent Bar Details and Bill of Materials, See Sheet 85.
 For Detail E, See Sheet 80.

File: 9660FLR4

	RECOMMENDED FOR APPROVAL	<i>Michael J. Pappas</i>	1/19/99	INDIANA DEPARTMENT OF TRANSPORTATION SUPERSTRUCTURE DETAILS SPANS "B", "C", & "D"		HORIZONTAL SCALE	BRIDGE FILE
	DESIGNED: MJM	DRAWN: MBW	CHECKED: JAP			CHECKED: MJM	AS NOTED
						VERTICAL SCALE	DESIGNATION
						N/A	9704212
						SURVEY BOOK	SHEETS
							83 of 120
						CONTRACT	PROJECT
						R 23849	IM/465-4(318)



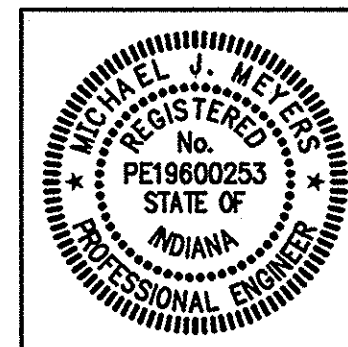
LEGEND

② 9 Spa. @ 150 Max. = 1275

PARTIAL PLAN - SPANS "B", "C" & "D"
Scale: 1:100

NOTE:
All Dimensions are in Millimeters Unless Noted.
For Typical Section & Sections H-H & I-I, See Sheet 85.
For Bar Bending Details & Bill of Materials, See Sheet 85.

File: 9660FLRS

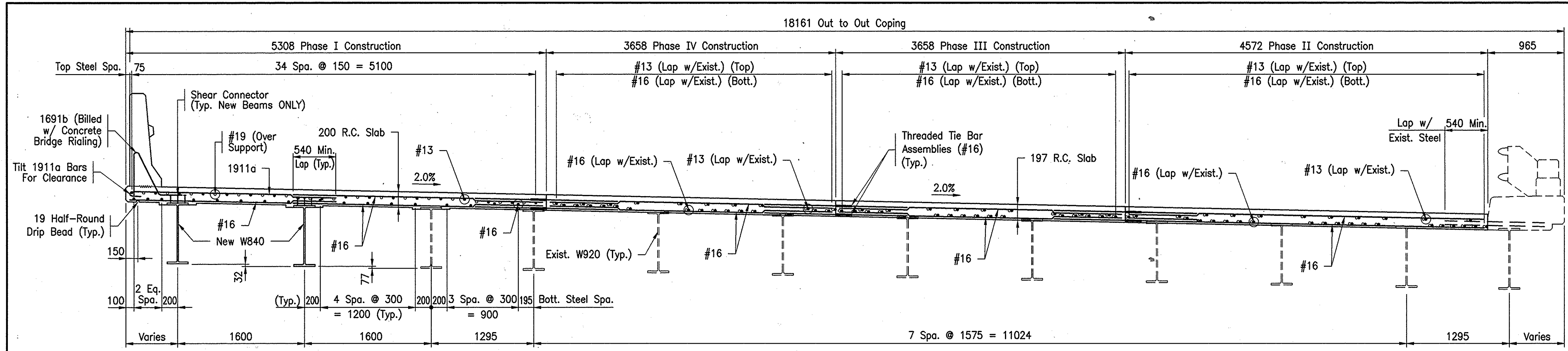


RECOMMENDED FOR APPROVAL	<i>Michael J. Meyers</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

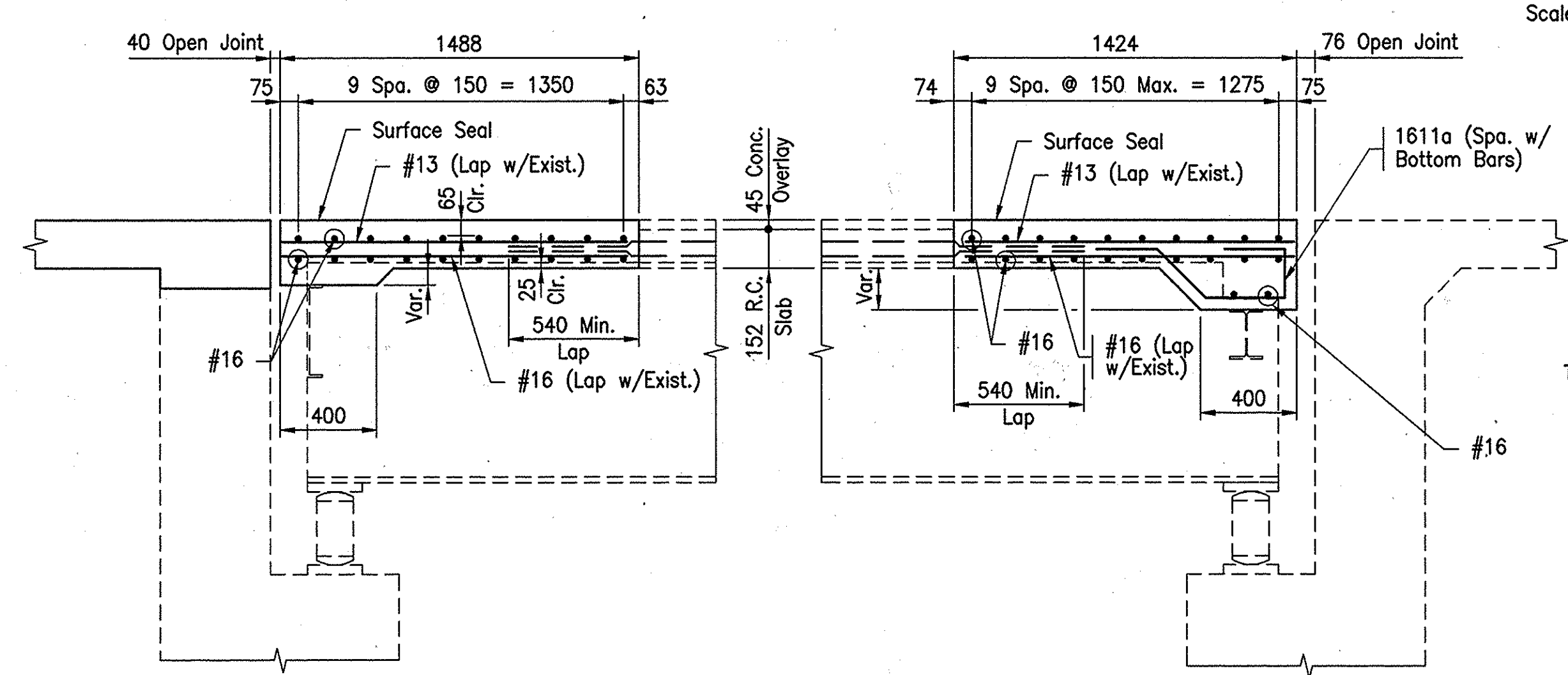
**INDIANA
DEPARTMENT OF TRANSPORTATION**

**SUPERSTRUCTURE DETAILS
SPANS "B", "C", & "D"**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	84 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(31B)

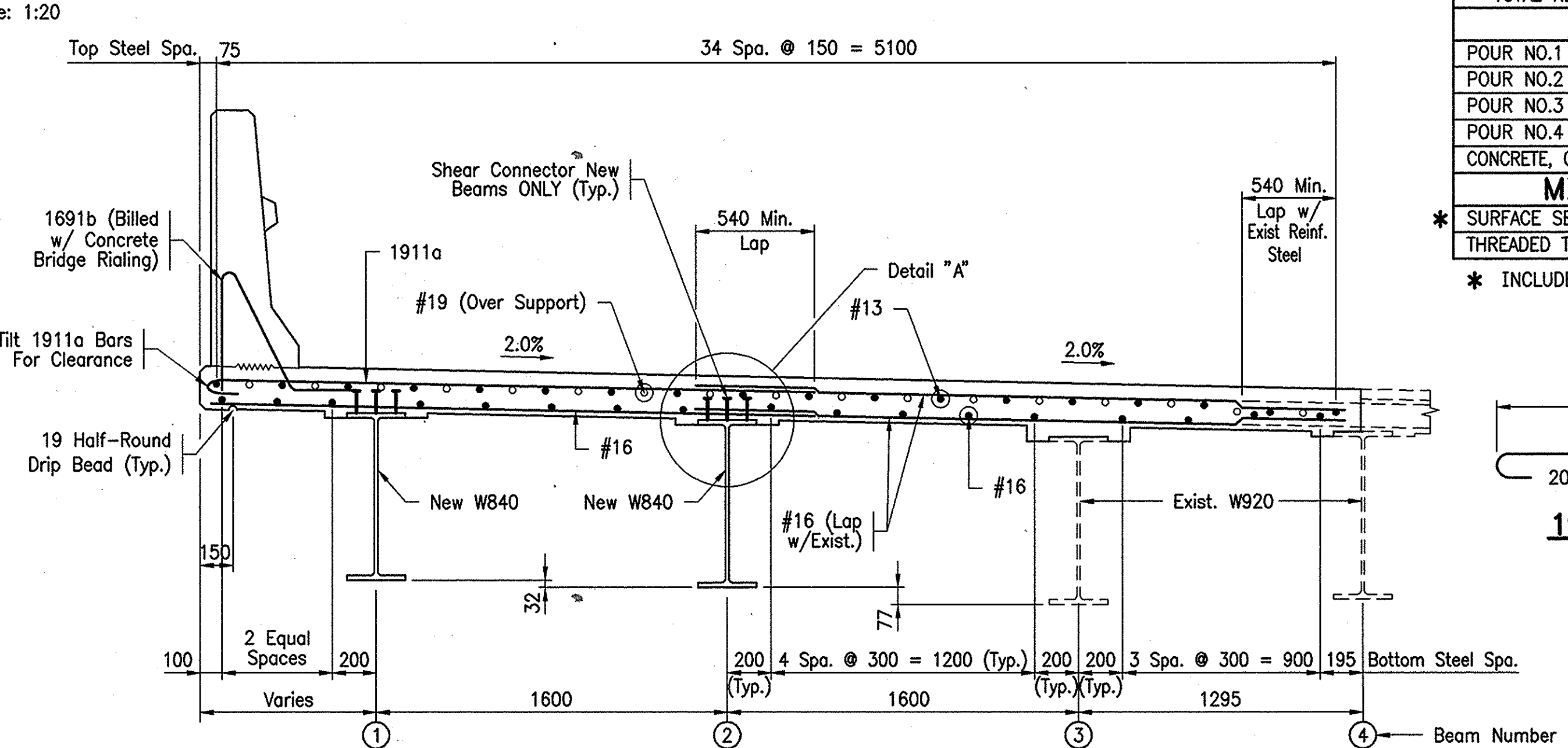


(SPANS "B", "C", & "D")
TYPICAL SECTION AT FULL WIDTH DECK REPLACEMENT

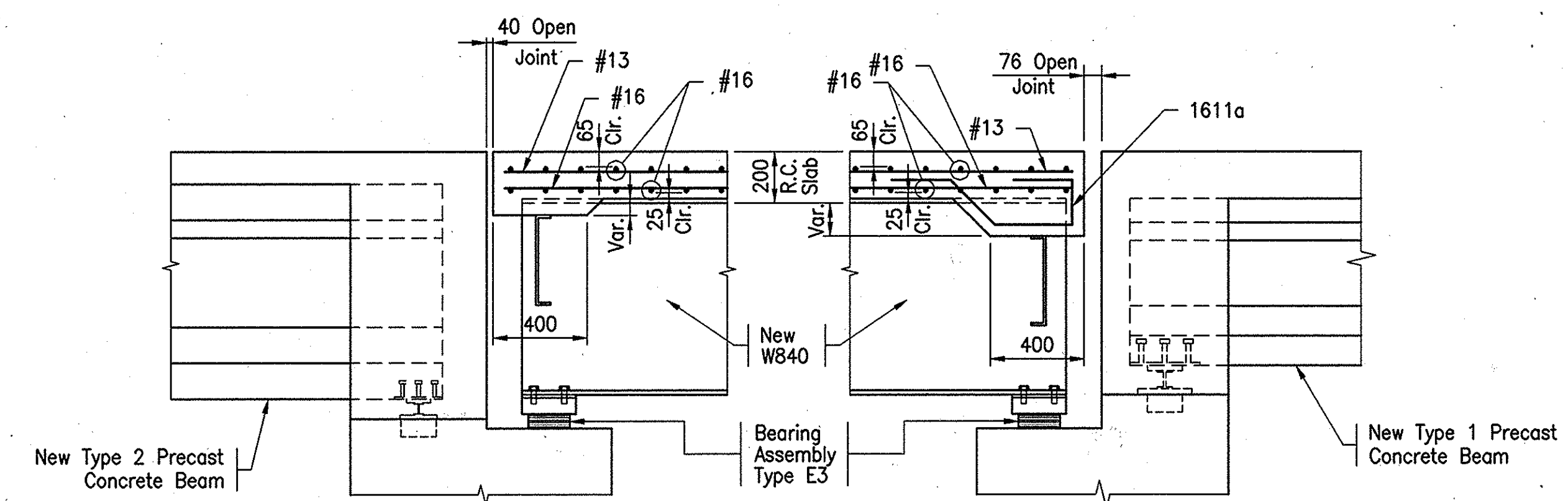


PIER NO.2 SECTION F-F
 Scale: 1:20

PIER NO.5 SECTION H-H
 Scale: 1:20

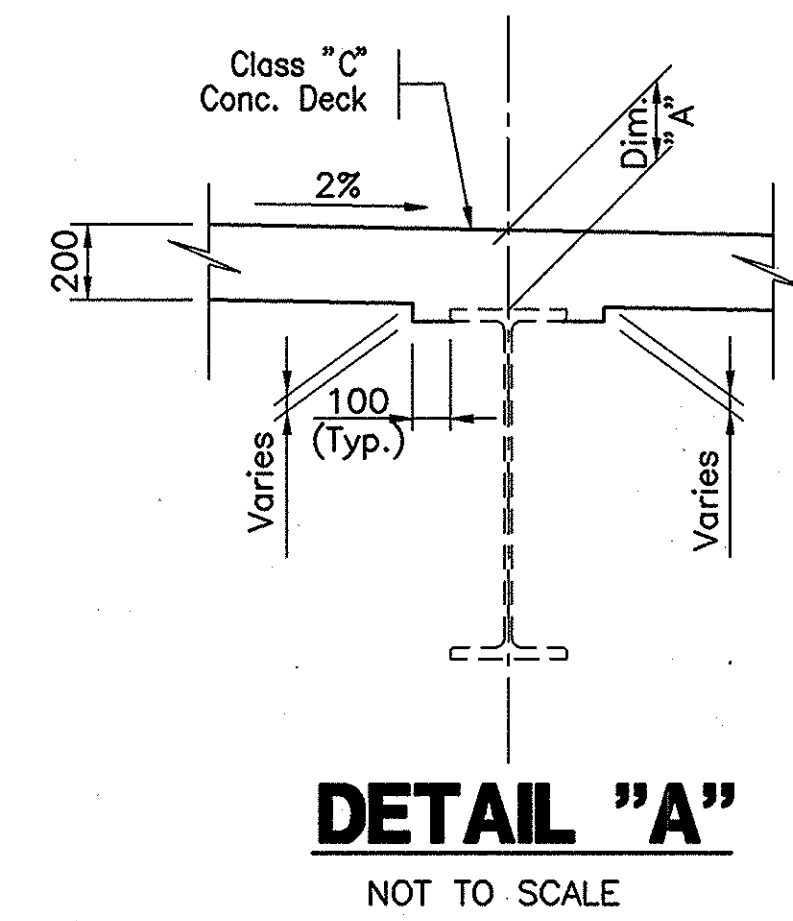


(SPANS "B", "C", & "D")
TYPICAL SECTION AT PARTIAL WIDTH DECK REPLACEMENT



PIER NO.2 SECTION G-G
 Scale: 1:20

PIER NO.5 SECTION I-I
 Scale: 1:20



DETAIL "A"
 NOT TO SCALE

BEAM NO.	①	②	③	④
DIM "A"	203	203	172	173

For All Other Existing Beams Dim. "A" = 173.

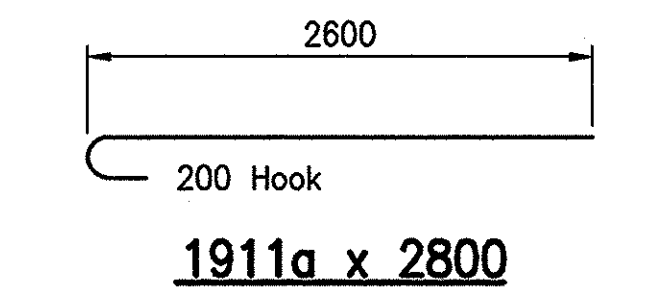
NOTE:
 All Dimensions are in Millimeters Unless Noted.
 For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01.
 For Framing Plan and Structural Steel Details, See Sheets 73 thru 77.
 For Extents of Deck Replacement, See Plan, Sheets 83 & 84.

**BILL OF MATERIALS
 SUPERSTRUCTURE
 (S.B. STR. - SPANS B, C, & D)**

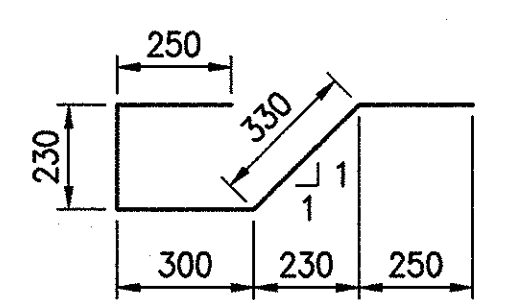
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1911a	454	2800	
#19	68	6700	
TOTAL #19			3859
1611a	61	1360	
#16	102	12000	
#16	454	2600	
#16	908	3600	
#16	42	4700	
#16	84	3710	
#16	2	3200	
#16	2	1500	
#16	47	1400	
#16	47	1300	
TOTAL #16			9935
#13	108	11820	
#13	30	1400	
#13	30	1300	
TOTAL #13			1349
TOTAL REINFORCING STEEL			15143

CONCRETE	
POUR NO.1 (Phase I Constr.)	73.5 m ³
POUR NO.2 (Phase II Constr.)	3.1 m ³
POUR NO.3 (Phase III Constr.)	2.5 m ³
POUR NO.4 (Phase IV Constr.)	2.5 m ³
CONCRETE, C, IN SUPERSTRUCTURE	81.6 m ³

MISCELLANEOUS	
* SURFACE SEAL (EST. 625 m ²)	LSUM ITEM
THREADED TIE BAR ASSEMBLIES	126 EACH
* INCLUDES CONCRETE BRIDGE RAILING	



1911a x 2800



1611a x 1360

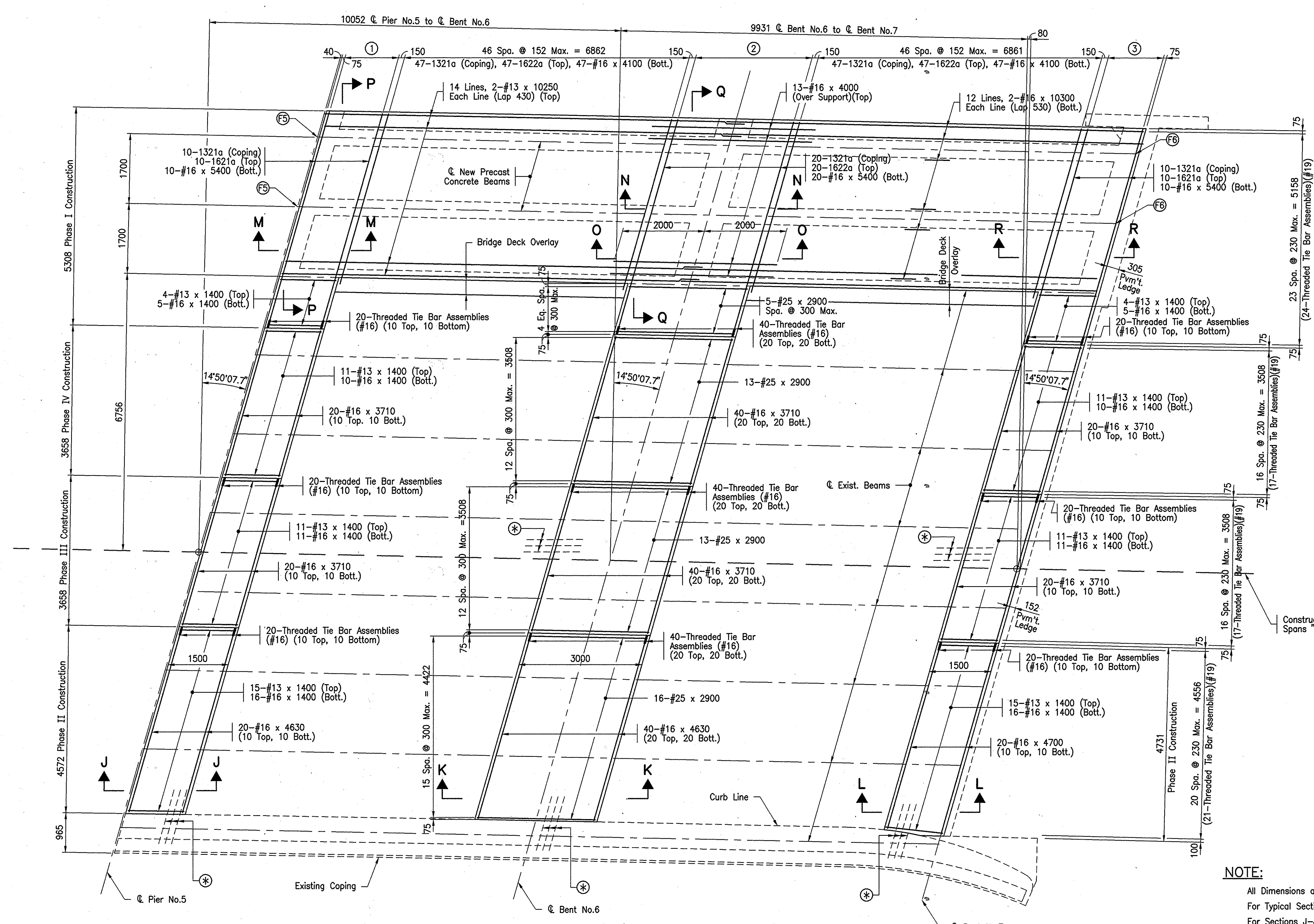
File: 9660FLR6



RECOMMENDED FOR APPROVAL	<i>W. E. J. W.</i>	1/19/99
DESIGNED:	MJM	DATE
CHECKED:	JAP	
DRAWN:	MBW	
CHECKED:	MJM	

INDIANA
 DEPARTMENT OF TRANSPORTATION
**SUPERSTRUCTURE DETAILS
 SPANS "B", "C", & "D"**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	85 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



LEGEND

- (F5) Bearing Assembly "F5"
- (F6) Bearing Assembly "F6"
- (1) 9 Spa. @ 150 = 1350
- (2) 19 Spa. @ 150 = 2850
- (3) 9 Spa. @ 150 = 1350

DESIGN DATA

LIVE LOAD: HS20-44 loading with impact and distribution of loads in accordance with 1996 AASHTO Specifications and all subsequent interim specifications.

DEAD LOAD: Actual load plus 1675 Pa of roadway for future wearing surface.

Slab designed with a structural depth of 165.

NOTE:

All Dimensions are in Millimeters Unless Noted.

For Typical Sections, Sections P-P and Q-Q, See Sheet 87.

For Sections J-J thru O-O, Bent Bar Details and Bill of Materials, See Sheet 88.

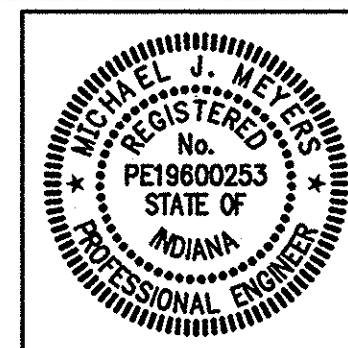
Skew Shown is Relative to the Construction Chord for Spans E & F.

For Bearing Assembly Details, See Sheet 77.

PLAN - SPANS "E" & "F"

Scale: 1:50

File: 9660FLR7



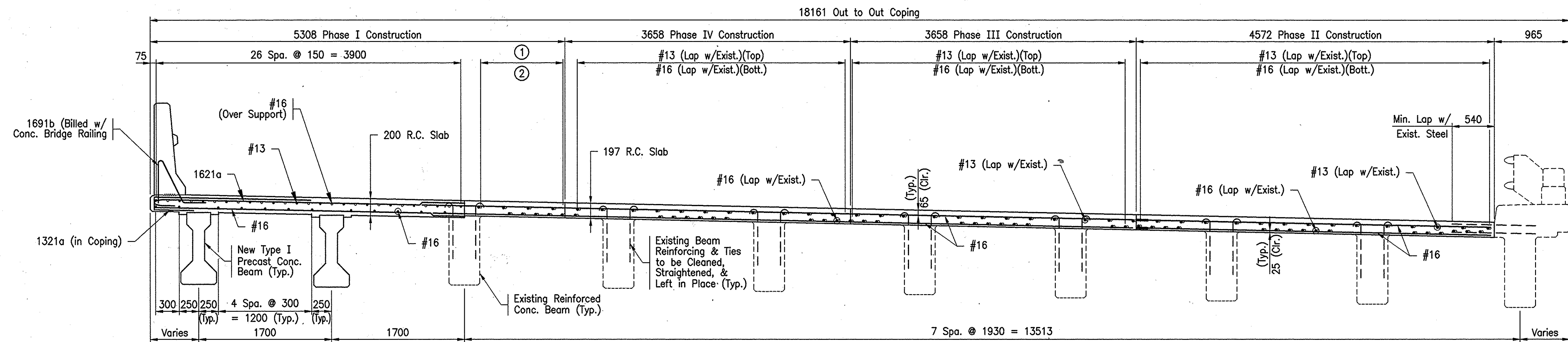
RECOMMENDED FOR APPROVAL	<i>Michael J. W. Jones</i>	1/19/99
DESIGNED:	MJM	DRAWN:
CHECKED:	JAP	CHECKED:
		DATE
		DESIGN ENGINEER
		DATE

INDIANA DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS

SPANS "E" & "F"

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	86 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

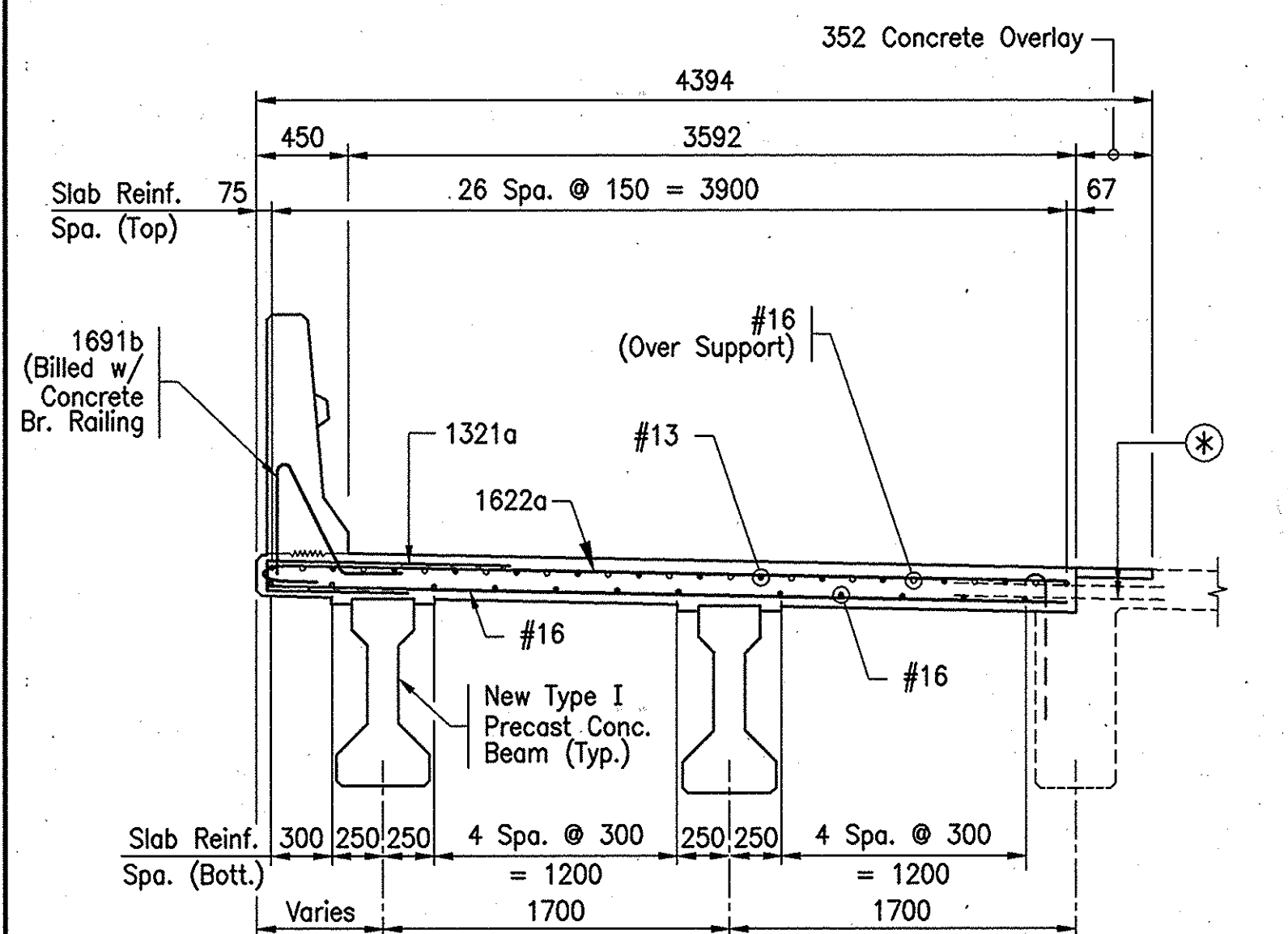


TYPICAL SECTION AT FULL WIDTH DECK REPLACEMENT - SPANS "E" & "F"

Scale: 1:30

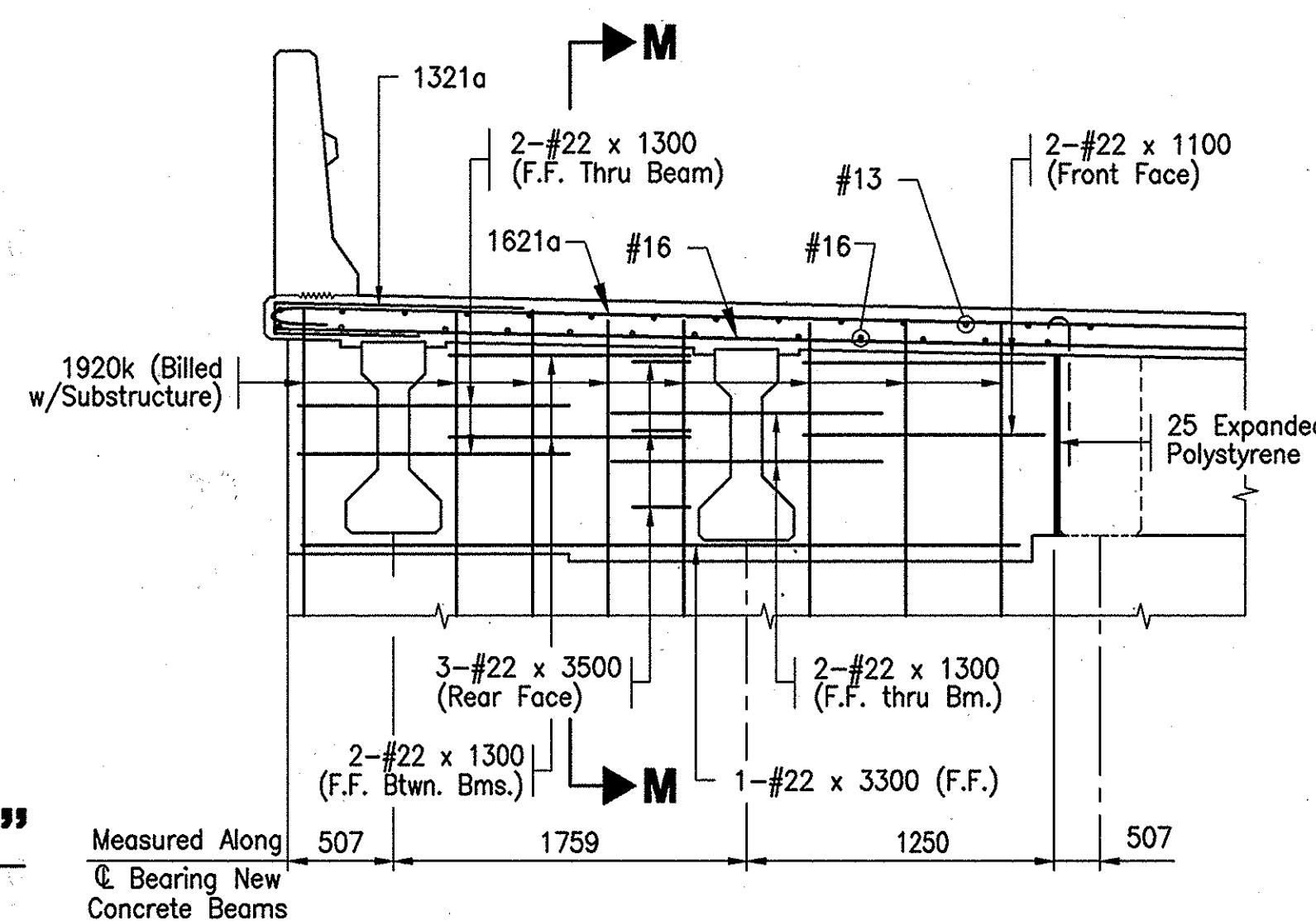
LEGEND

- ⊗ Existing Transverse Reinforcing to be Cleaned and Straightened and Left in Place.
- ① #13 (Lap w/Exist.)(Top)
- ② #16 (Lap w/Exist.)(Bott.)



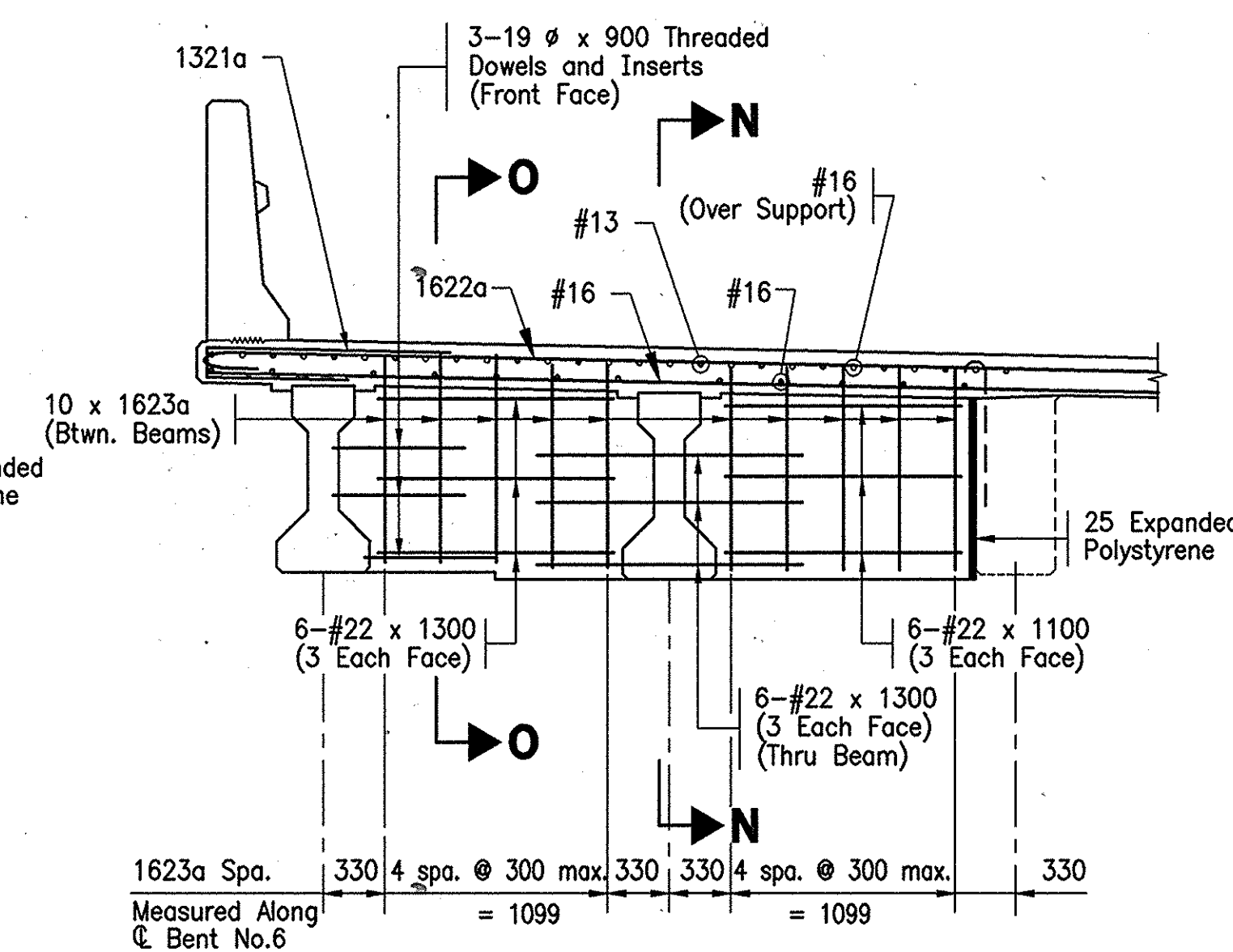
TYPICAL SECTION AT PARTIAL WIDTH DECK REPLACEMENT - SPANS "E" & "F"

Scale: 1:30



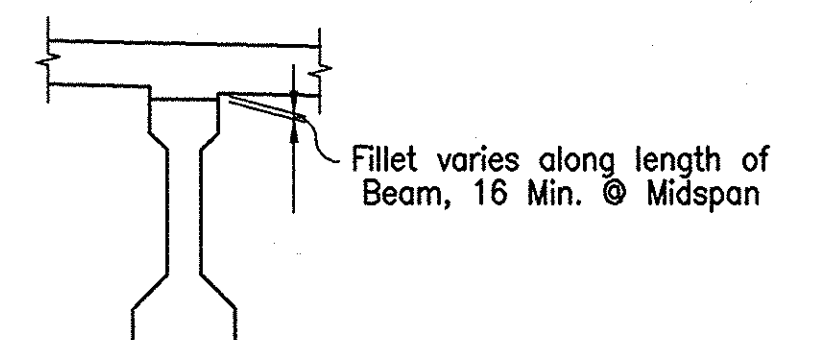
**SECTION P-P
TYPICAL DIAPHRAGM SECTION
@ PIER NO.5**

Scale: 1:30

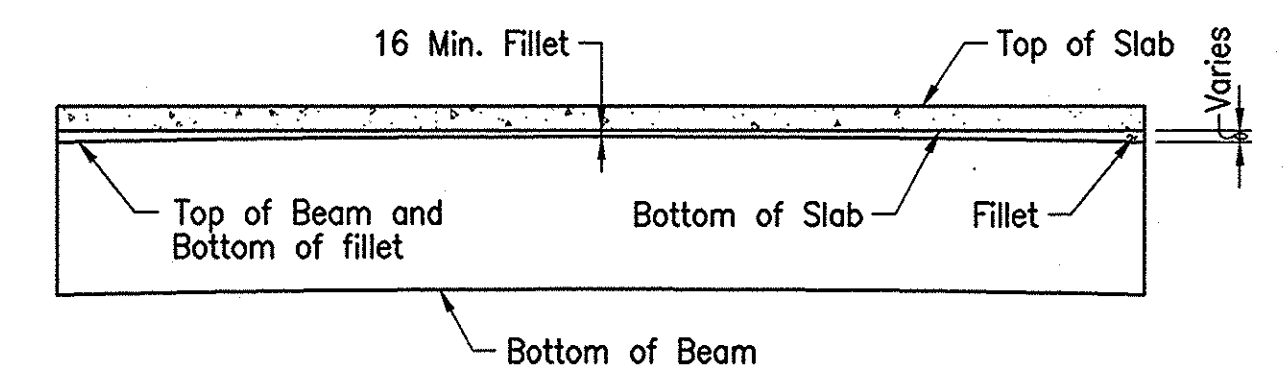


**SECTION Q-Q
TYPICAL DIAPHRAGM SECTION
@ BENT NO.6**

Scale: 1:30



SECTION



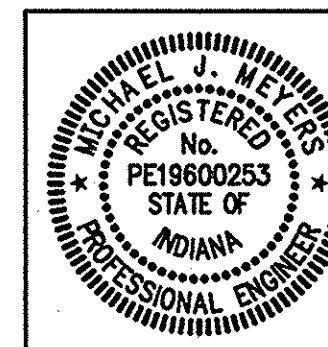
BEAM ELEVATION

Bridge seat elevations were calculated using residual beam camber (design camber and dead load deflection of slab) with the top of beam 16 mm below the bottom of slab elevation at the centerline of span.

NOTE:

- All Dimensions are in Millimeters Unless Noted.
- For Extents of Deck Replacement See Plan, Sheet 86.
- For Type I Precast Concrete Beam Details, See Sheet 79.
- For Sections M-M, N-N and Q-Q, See Sht. 88.

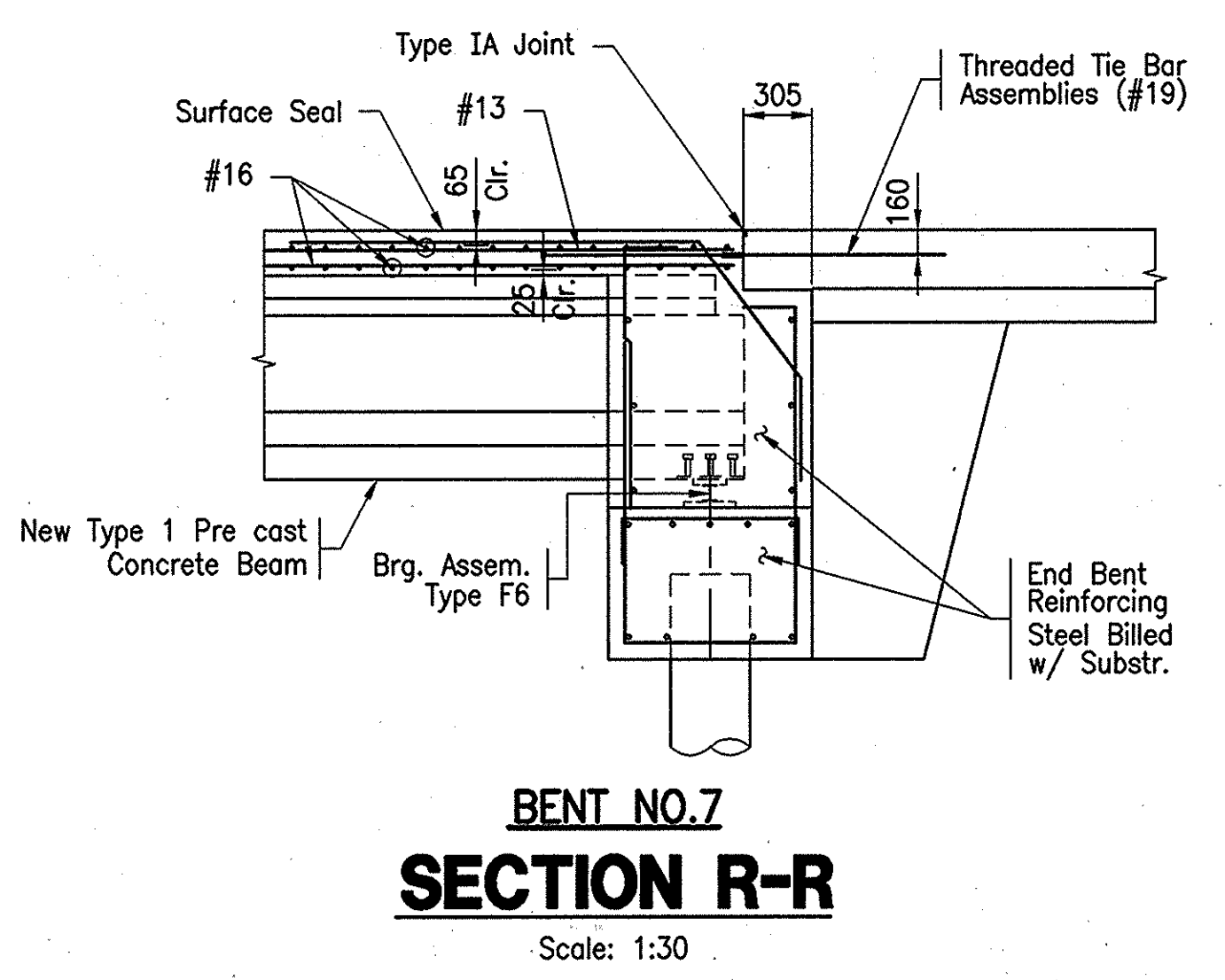
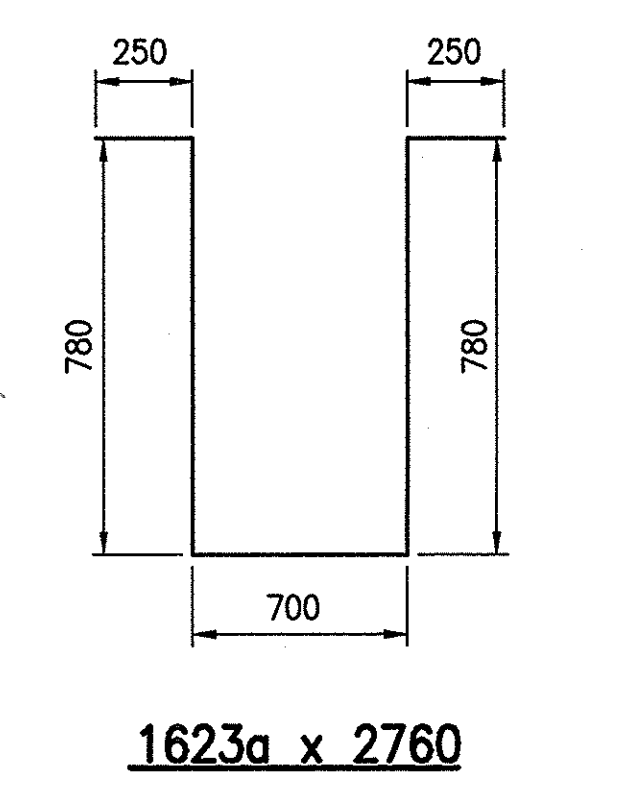
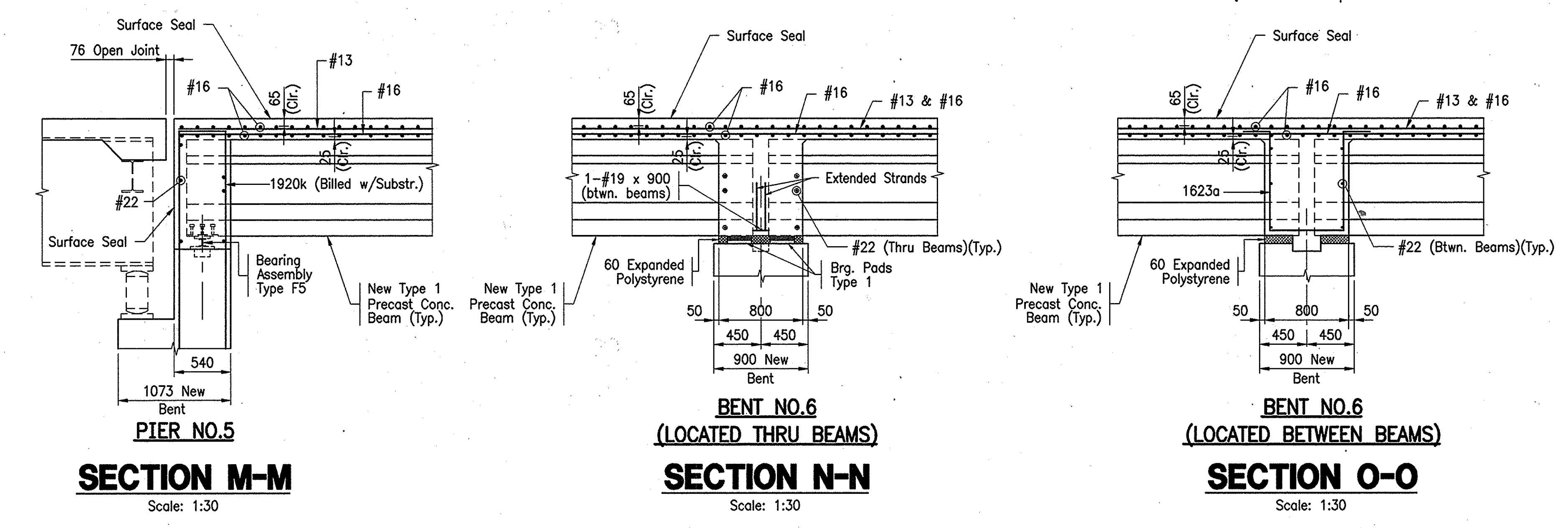
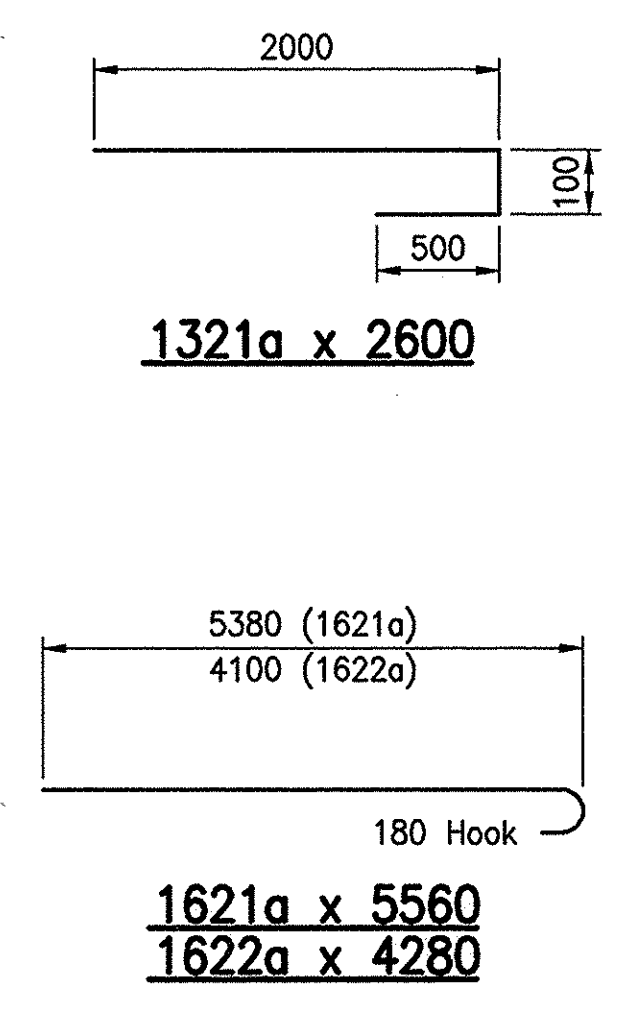
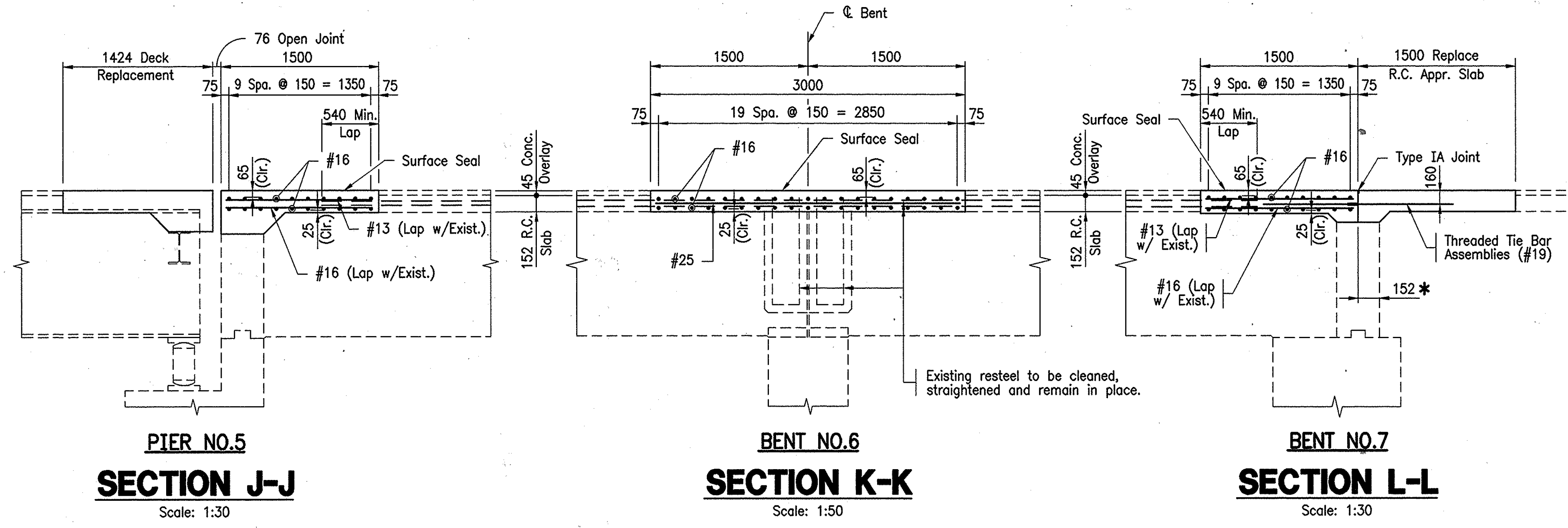
File: 9660FLR8



RECOMMENDED FOR APPROVAL	<i>Michael J. Meyers</i>	1/19/99
DESIGNED:	MJM	DRAWN:
CHECKED:	JAP	CHECKED:

INDIANA DEPARTMENT OF TRANSPORTATION	
SUPERSTRUCTURE DETAILS - SPANS "E" & "F"	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	87 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

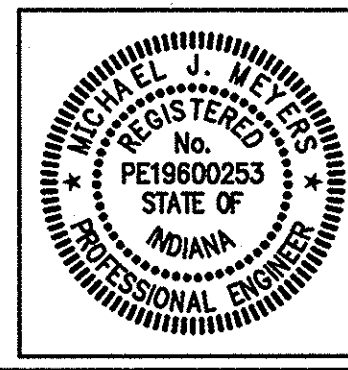


BILL OF MATERIALS SUPERSTRUCTURE (SB STRUCTURE - SPANS "E" & "F")			
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#25	47	2900	
TOTAL #25			542
#22	3	3500	
#22	1	3300	
#22	18	1300	
#22	8	1100	
TOTAL #22			140
#19	2	900	
TOTAL #19			4
1621a	20	5560	
1622a	114	4280	
1623a	10	2760	
#16	24	10300	
#16	40	5400	
#16	60	4630	
#16	13	4000	
#16	94	4100	
#16	160	3710	
#16	84	1400	
TOTAL #16			3905
1321a	134	2600	
#13	28	10250	
#13	82	1400	
TOTAL #13			746
TOTAL REINFORCING STEEL			5337
CONCRETE			
POUR NO.1 (Phase I Constr.)			23.1 m ³
POUR NO.2 (Phase II Constr.)			5.6 m ³
POUR NO.3 (Phase III Constr.)			4.4 m ³
POUR NO.4 (Phase IV Constr.)			4.4 m ³
CONCRETE, C. IN SUPERSTRUCTURE			37.5 m ³
MISCELLANEOUS			
THREADED TIE BAR ASSEMBLIES			319 EACH
* SURFACE SEAL (EST. 257 m ²)			LSUM ITEM

* INCLUDES CONCRETE BRIDGE RAIL

NOTE:
All Dimensions are in Millimeters Unless Noted.
For Reinforcing Bar Notes, See Metric Std. 703-BRST-01.
For Extents of Deck Replacement See Plan, Sheet 86.
For Type I Pre cast Concrete Beam Details, See Sheet 79.

File: 9660FLR9

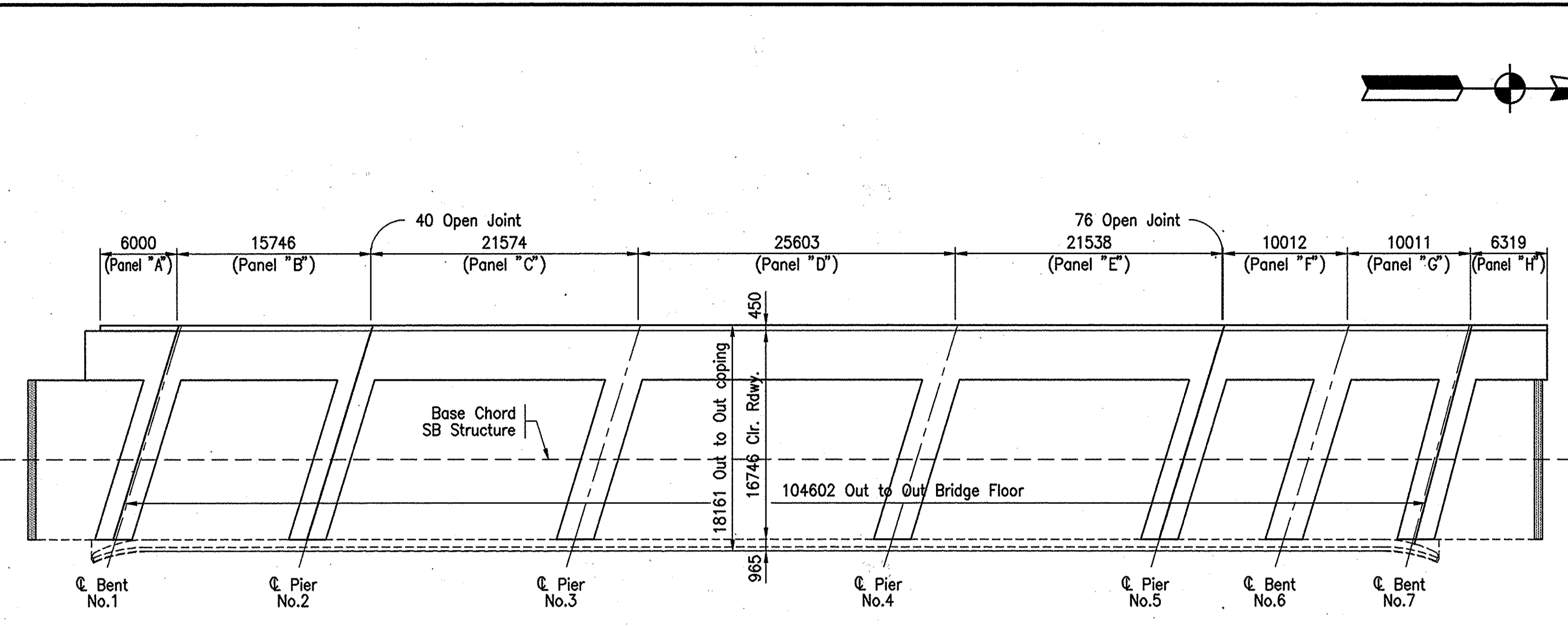


RECOMMENDED FOR APPROVAL	<i>Michael J. M...</i>	1/19/99
DESIGNED:	MJM	DATE
CHECKED:	JAP	
DRAWN:	MBW	
CHECKED:	MJM	

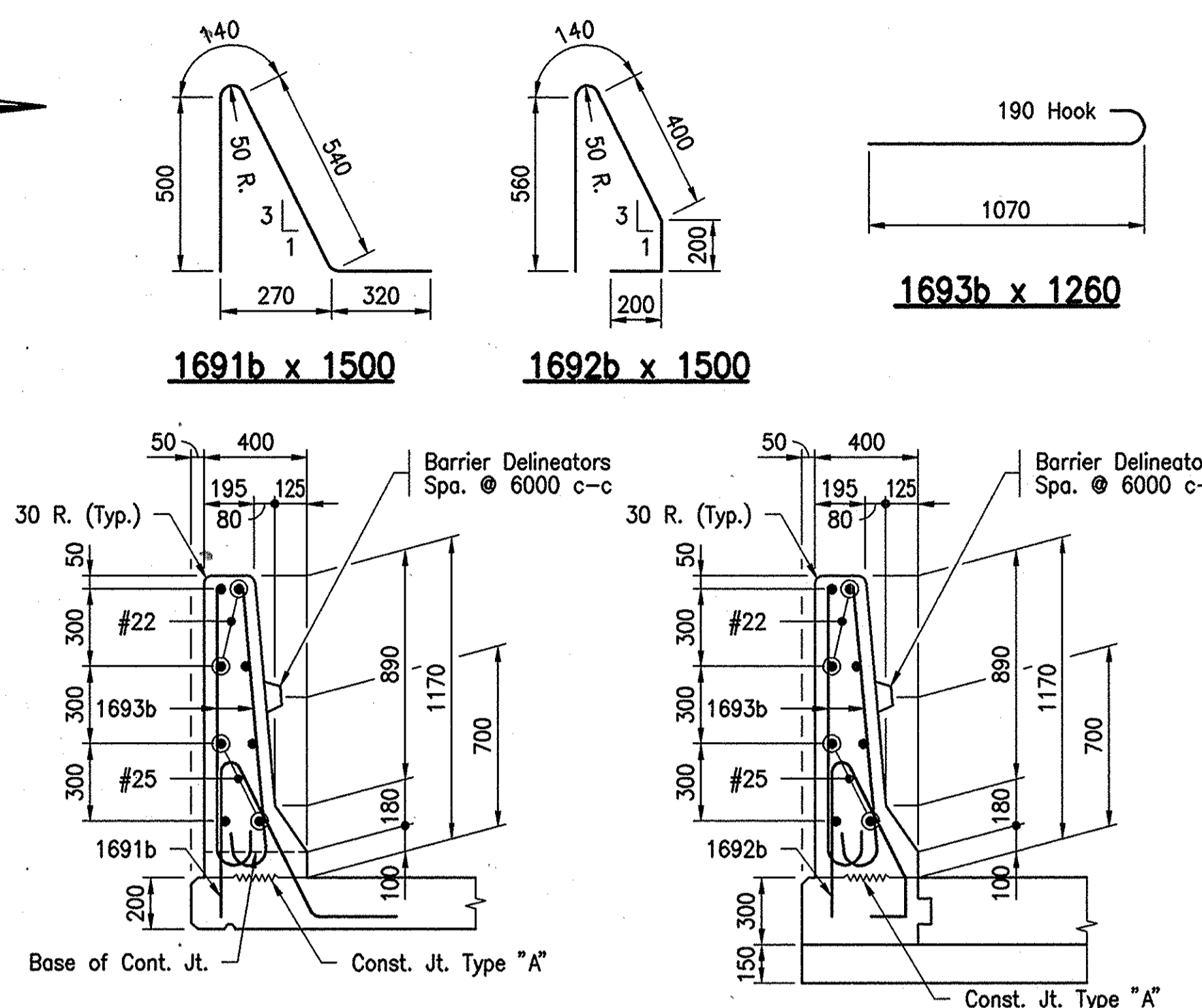
INDIANA
DEPARTMENT OF TRANSPORTATION

**SUPERSTRUCTURE
DETAILS - SPANS "E" & "F"**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	88 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



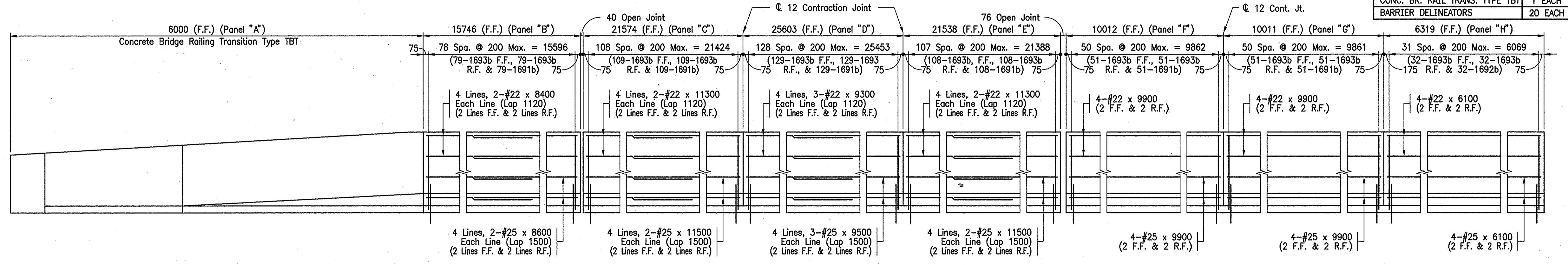
RAILING PLAN
No Scale



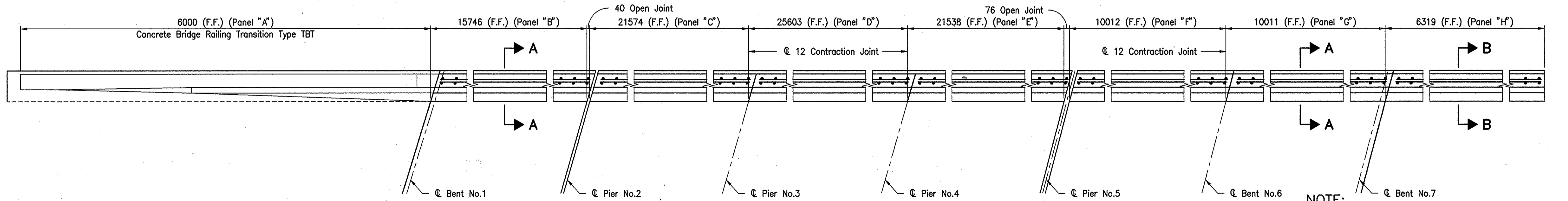
SECTION A-A
Scale: 1:20

SECTION B-B
Scale: 1:20

BILL OF MATERIALS			
CONCRETE BRIDGE RAILING			
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
#25	16	11500	
#25	8	9900	
#25	12	9500	
#25	8	8600	
#25	4	6100	
TOTAL #25			1869
#22	16	11300	
#22	8	9900	
#22	12	9300	
#22	8	8400	
#22	4	6100	
TOTAL #22			1409
1691b	527	1500	
1692b	32	1500	
1693b	1118	1260	
TOTAL #16			3488
TOTAL REINFORCING STEEL			6766
CONCRETE			
CONCRETE, C, IN RAILING			
PANEL B (1 @ 4.9 m ³)			4.9 m ³
PANEL C (1 @ 6.7 m ³)			6.7 m ³
PANEL D (1 @ 7.9 m ³)			7.9 m ³
PANEL E (1 @ 6.7 m ³)			6.7 m ³
PANEL F (1 @ 3.1 m ³)			3.1 m ³
PANEL G (1 @ 3.1 m ³)			3.1 m ³
PANEL H (1 @ 2.0 m ³)			2.0 m ³
TOTAL CONCRETE, C, IN RAILING			34.4 m ³
MISCELLANEOUS			
CONC. BR. RAIL TRANS. TYPE TBT			1 EACH
BARRIER DELINEATORS			20 EACH



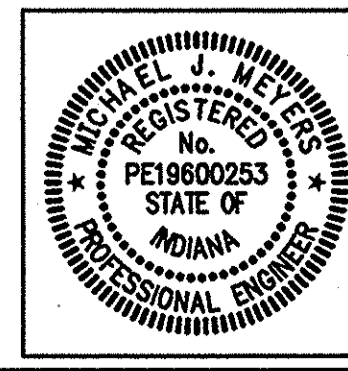
ELEVATION
Scale: 1:30



PLAN
Scale: 1:30

NOTE:
All Dimensions are in Millimeters Unless Noted.
For Concrete Bridge Railing transition Type TBT, See Br. Stds. 706-TBT-01 thru 03 and 706-CBT-01, 02, & 04.
For Reinforcing Bar Notes, See Std. Dwg. 703-BRST-01

File: 9860CBRT

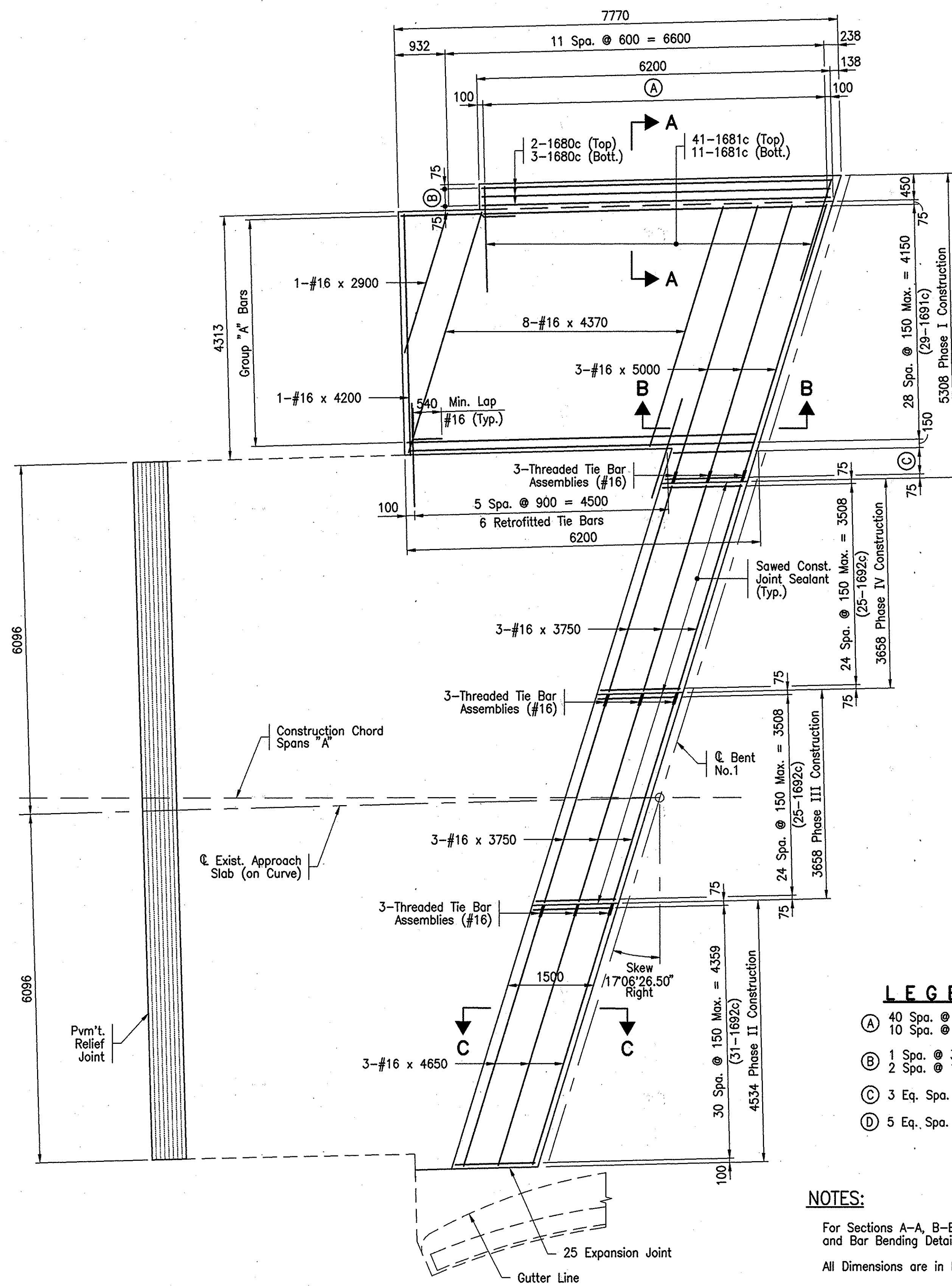


RECOMMENDED FOR APPROVAL	<i>Michael J. W. Jones</i>	1/19/99
DESIGNED:	MJM	DATE
CHECKED:	JAP	
DRAWN:	MBW	
CHECKED:	MJM	

INDIANA
DEPARTMENT OF TRANSPORTATION

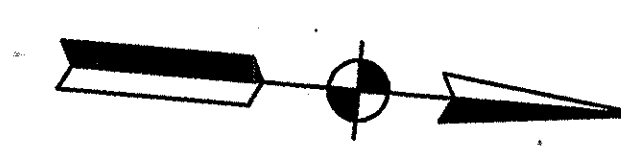
**CONCRETE BRIDGE
RAILING DETAILS**

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	89 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



PLAN - SOUTHWEST APPROACH SLAB

Scale: 1:50

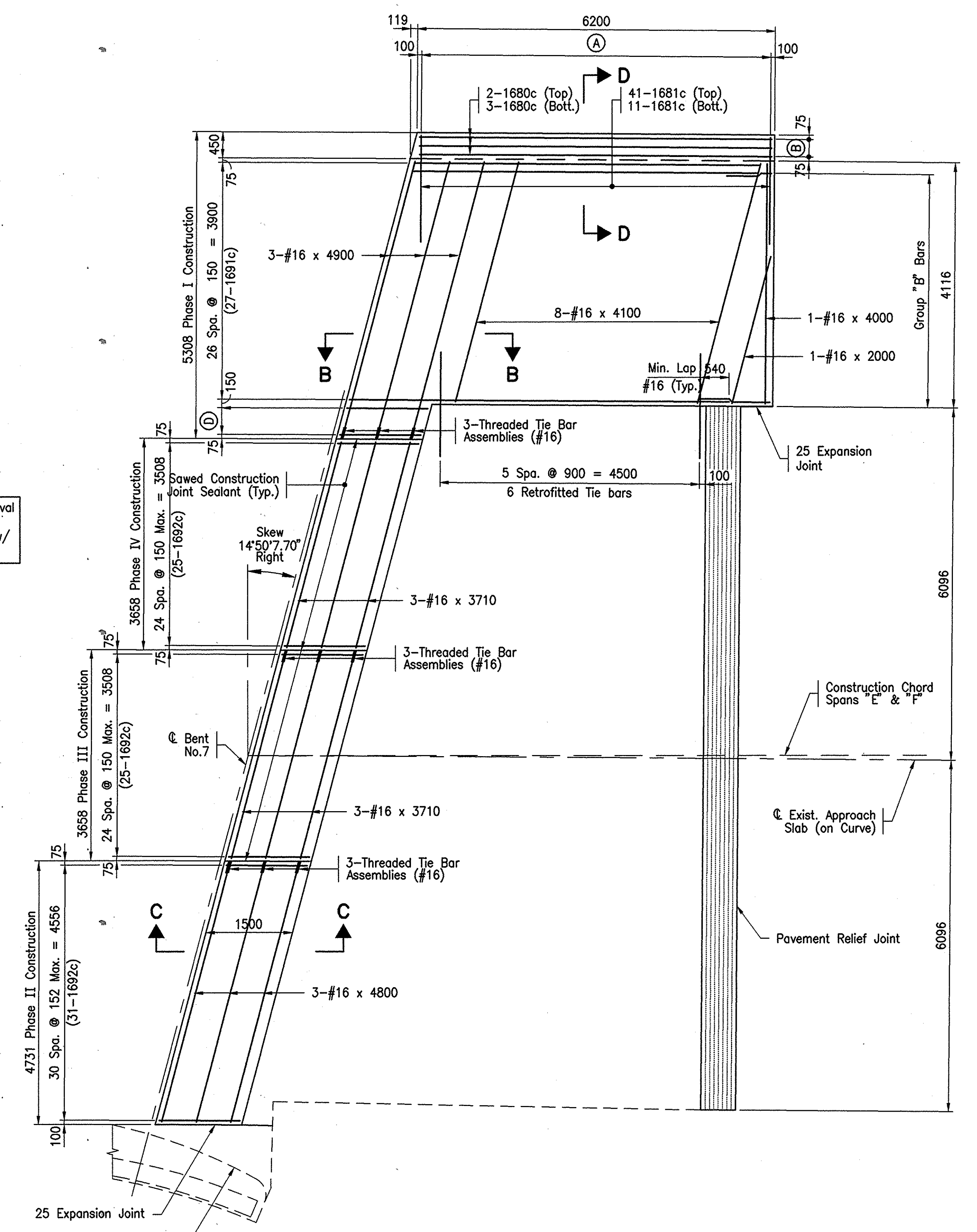


Existing Reinforcing Steel in Removal Areas to be Cleaned, Straightened and Left in Place to be Lapped w/ New Reinforcing Steel

- LEGEND**
- (A) 40 Spa. @ 150 = 6000 (Top)
10 Spa. @ 600 = 6000 (Bott.)
 - (B) 1 Spa. @ 300 = 300 (Top)
2 Spa. @ 150 = 300 (Bott.)
 - (C) 3 Eq. Spa. = 408 (4-1692c)
 - (D) 5 Eq. Spa. = 658 (6-1692c)

NOTES:

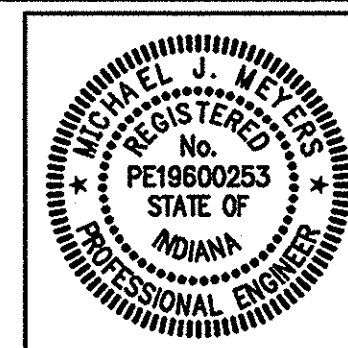
- For Sections A-A, B-B, C-C, & D-D, Bill of Materials, and Bar Bending Details, See Sheet 91.
- All Dimensions are in Millimeters Unless Noted.
- For Additional App. Slab Ext. Details, See Std. Dwg. 706-TASE-02 & 05.
- For Expansion Joint Details, See Std. Dwg. 501-CCPJ-09.
- For Sawed Const. Jt Sealant Details, See Std. Dwg. 501-CCPJ-04.
- For Retrofitted Tie Bar Details, See Std. Dwg. 501-CCPJ-04 & 10.



PLAN - NORTHWEST APPROACH SLAB

Scale: 1:50

File: 9660APP1

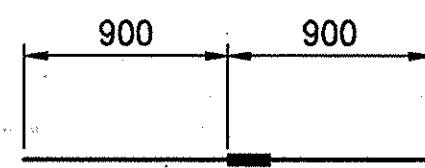


RECOMMENDED FOR APPROVAL	<i>Michael J. Meyer</i>	1/19/99
DESIGNED:	MJM	DATE
DRAWN:	MBW	
CHECKED:	JAP	
		MJM

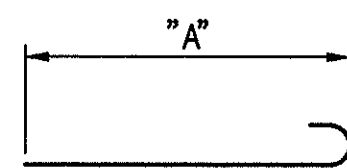
INDIANA DEPARTMENT OF TRANSPORTATION

APPROACH SLAB

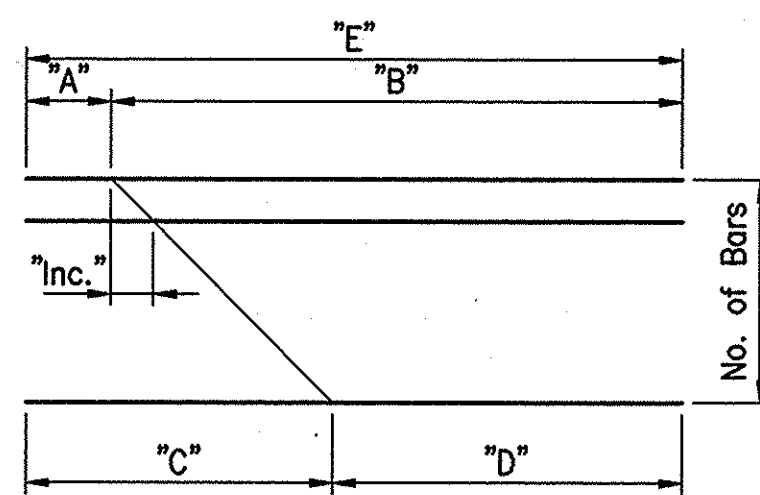
HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	90 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)



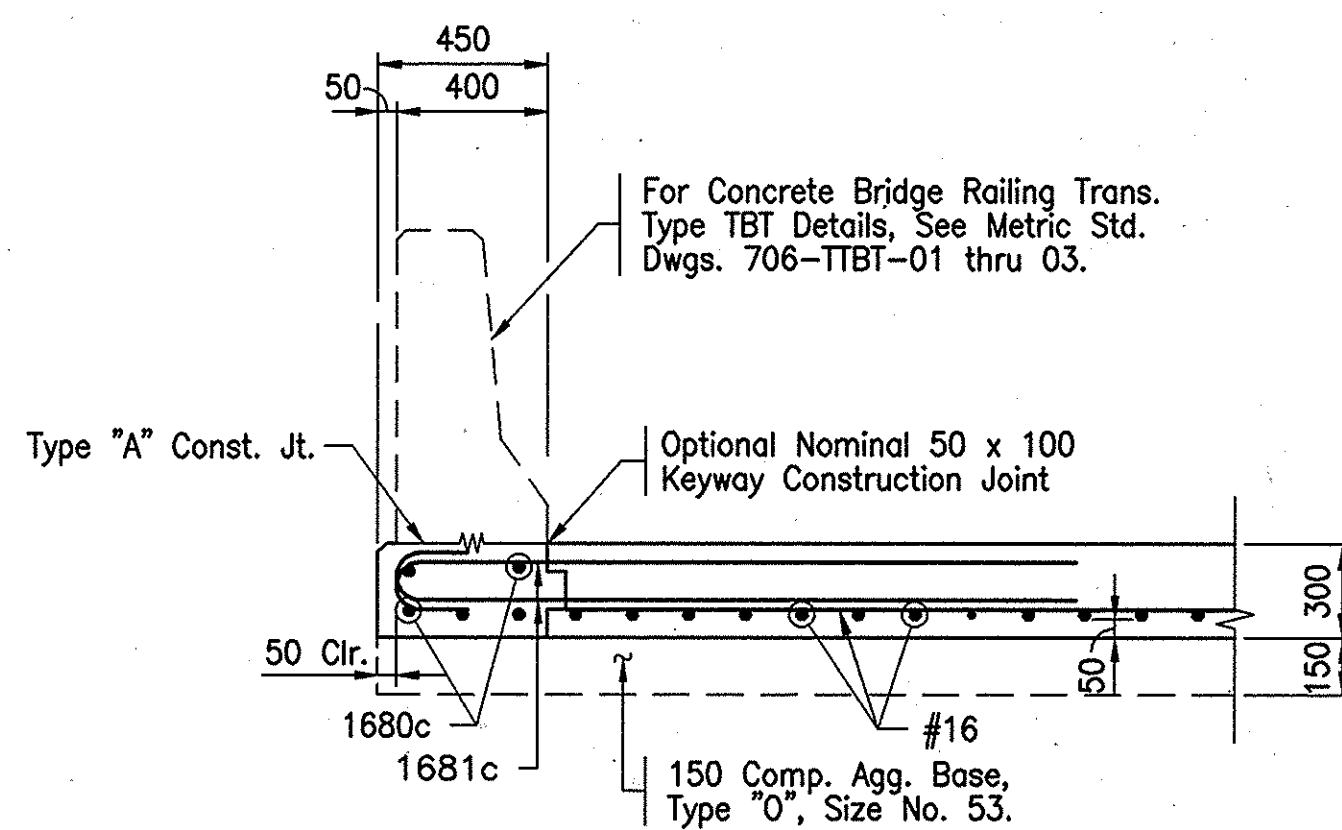
THREADED TIE BAR ASSEMBLIES, E.C. (#19)
(Extends From Bridge Deck into R.C. Bridge Approach Slab)



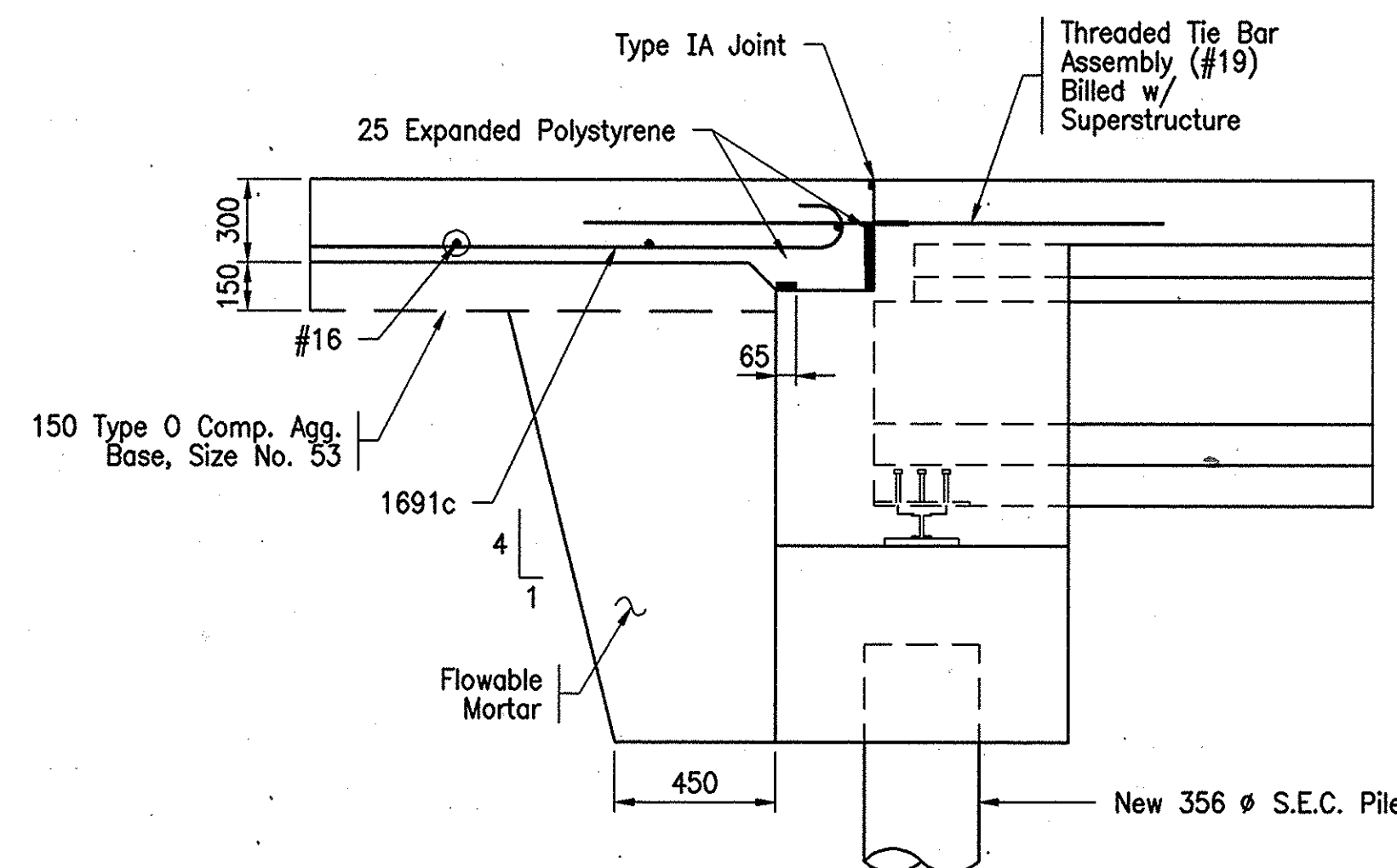
MARK	"A"	LENGTH
1680c	6100	6280
1681c	1830	2020
1691c	8000	6180
1692c	1400	1580



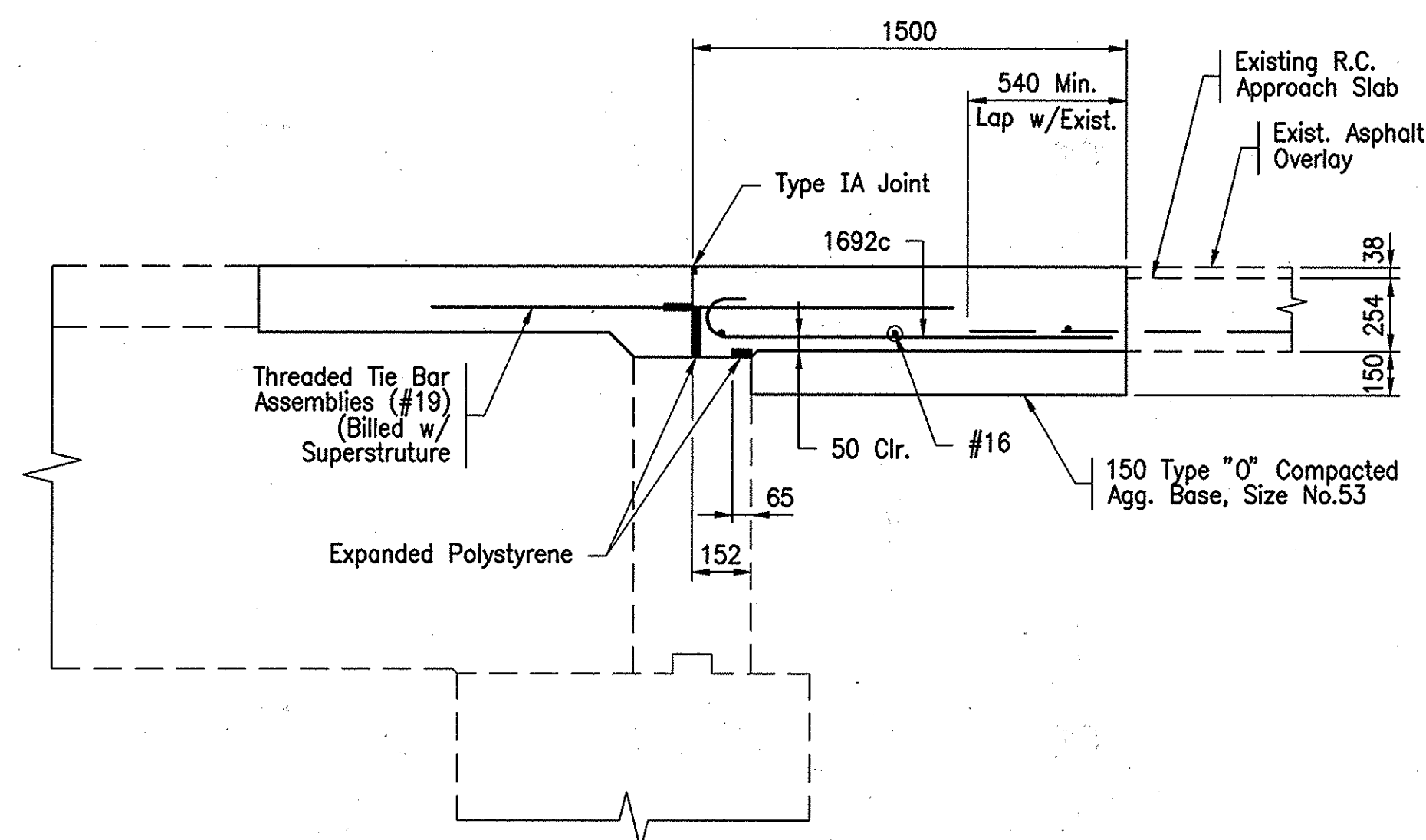
GROUP	SIZE	"A"	"B"	"C"	"D"	"E"	"INC."	"N"
"A"	#16	720	2230	1435	1515	2950	55	14
"B"	#16	700	1700	1180	1220	2400	40	13



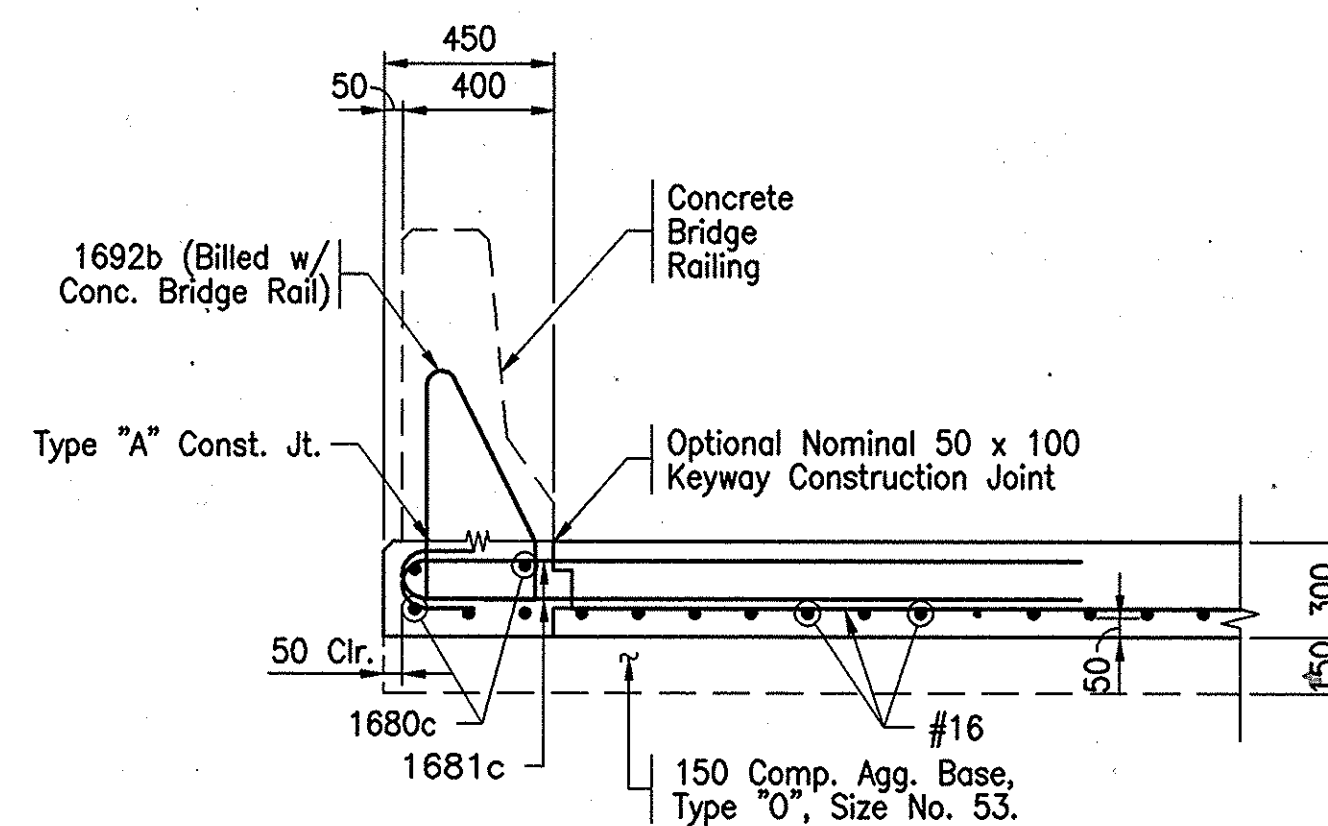
SECTION A-A
Scale: 1:20



SECTION B-B
Scale: 1:20



SECTION C-C
Scale: 1:20



SECTION D-D
Scale: 1:20

**BILL OF MATERIALS
SOUTHWEST APPROACH**

REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1680c	5	6280	
1681c	52	2020	
1691c	29	6180	
1692c	85	1580	
Group "A"	14	2950	
#16	3	5000	
#16	3	4650	
#16	8	4370	
#16	1	4200	
#16	6	3750	
#16	1	2900	
TOTAL #16			908
TOTAL REINFORCING STEEL			908
CONCRETE			
CEMENT CONC. PAVT., REINF., 300 mm			51.7 m2
MISCELLANEOUS			
PAVEMENT REMOVAL			26.4 m2
COMP. AGG. BASE, 0, SIZE NO.53			18.6 Mg
SURFACE SEAL (EST. 51.7 m2)			LSUM ITEM
THREADED TIE BAR ASSEMBLIES			9 EACH
RETROFITTED TIE BARS			6 EACH

**BILL OF MATERIALS
NORTHWEST APPROACH**

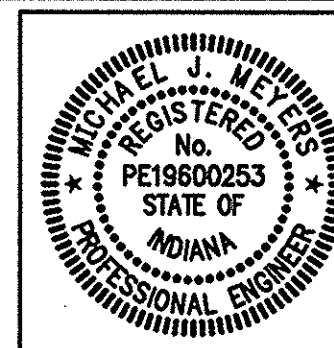
REINFORCING STEEL			
SIZE OR MARK	NUMBER OF BARS	LENGTH (mm)	MASS (kg)
1680c	5	6280	
1682c	52	2020	
1691c	27	6180	
1692c	87	1580	
Group "B"	13	2400	
#16	3	4900	
#16	3	4800	
#16	8	4100	
#16	1	4000	
#16	6	3710	
#16	1	2000	
TOTAL #16			872
TOTAL REINFORCING STEEL			872
CONCRETE			
CEMENT CONC. PAVT., REINF., 300 mm			50.0 m2
MISCELLANEOUS			
PAVEMENT REMOVAL			27.4 m2
COMP. AGG. BASE, 0, SIZE NO.53			18.0 Mg
SURFACE SEAL (EST. 66.3 m2)			LSUM ITEM
THREADED TIE BAR ASSEMBLIES			9 EACH
RETROFITTED TIE BARS			6 EACH

* INCLUDES BRIDGE DECK RAILING

NOTE:

All Dimensions are in Millimeters and all Stations and Elevations are in Meters Unless Noted.
For Reinforcing Bar Notes, See Metric Std. 703-BRST-01.
For Concrete Bridge Railing Details, See Sheet 89.

File: 9660APP2



RECOMMENDED FOR APPROVAL	<i>Michael J. Mason</i>	1/19/99
	DESIGN ENGINEER	DATE
DESIGNED:	MJM	DRAWN: MBW
CHECKED:	JAP	CHECKED: MJM

INDIANA DEPARTMENT OF TRANSPORTATION	
APPROACH SLAB	

HORIZONTAL SCALE	BRIDGE FILE
AS NOTED	I-465-149-3602F(SB)
VERTICAL SCALE	DESIGNATION
N/A	9704212
SURVEY BOOK	SHEETS
	91 of 120
CONTRACT	PROJECT
R 23849	IM/465-4(318)

