

CONTRACT NO. B-14462

INDEX					
PROJECT	STRUCTURE	TYPE	SPAN	OVER	STATION
IR-465-4 (232) 149	I-465-150-2220B	DECK RECONSTRUCTION AND OVERLAY	364' x 24.86'	B. & O. R.R.	364' x 24.86'
	I-465-149-4461A			I-465	13+00
	I-465-149-3602E			BIG EAGLE CREEK	408+00
	I-465-149-2221B			CONRAIL & U.S. 136	414+02.03
SHEET NO.	SHEET DESIGNATION	SUBJECT			DATE OF APPROVAL
1		TITLE AND INDEX			
2-9		TRAFFIC MAINTENANCE DETAILS			
10	D1	GENERAL PLAN (EXISTING STRUCTURE) I-465-150-2220B			
11	D2	GENERAL PLAN (PROPOSED STRUCTURE) I-465-150-2220B			
12	D3	GENERAL PLAN I-465-149-4461A			
13	D4	GENERAL PLAN I-465-149-3602E			
14	D5	GENERAL PLAN I-465-149-2221B			
15-16	D6-D7	DETAILS			
17-18	D8-D9	FLOOR DETAILS I-465-150-2220B			
19	D10	CONCRETE BARRIER RAIL AND GUARD RAIL CONNECTION DETAILS 2220B			
20	D11	FLOOR DETAILS I-465-149-3602E			
21	D12	FLOOR DETAILS I-465-149-2221B			
22	D13	EXPANSION JOINT CLASS "S-S"			
23		BRIDGE ESTIMATE OF QUANTITIES			
18A	D9A	WINGWALL DETAILS I-465-150-2220B			
22A	D12A	BARRIER RAILING DETAILS TYPE "X"			

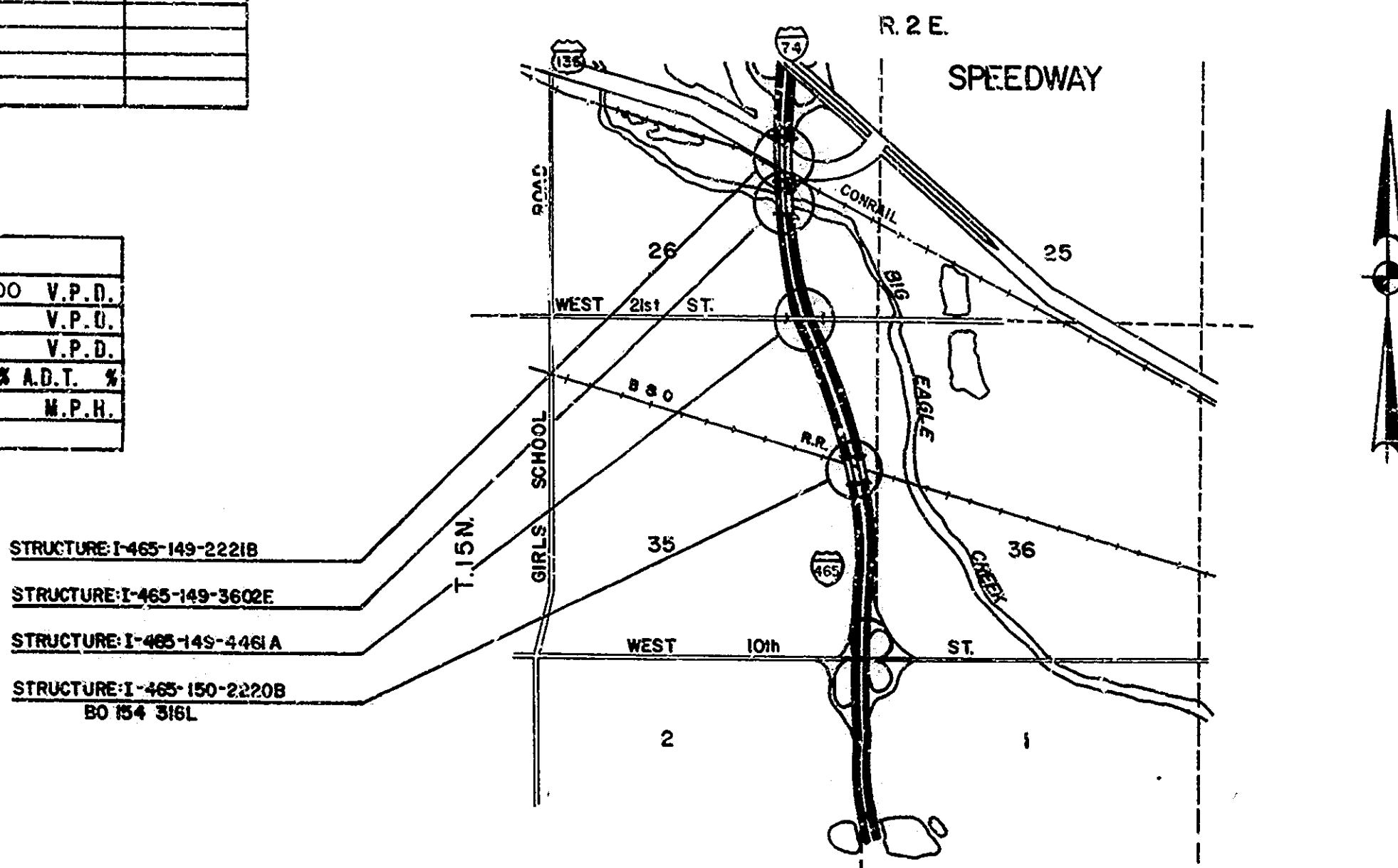
INDIANA DEPARTMENT OF HIGHWAYS

BRIDGE PLANS FOR SPANS OVER 20 FEET ON

INTERSTATE ROAD NO. I-465 & 21ST STREET PROJECT NO. IR-465-4(232) 149

THIS PROJECT CONSISTS OF DECK RECONSTRUCTION AND OVERLAYS FOR THE FOLLOWING STRUCTURES: I-465 OVER CONRAIL AND U.S. 136, I-465 OVER BIG EAGLE CREEK, WEST 21ST STREET OVER I-465, AND I-465 OVER BALTIMORE AND OHIO RAILROAD. ALL LOCATED IN SECTIONS 26, AND 35, T. 15N., R. 4E., WAYNE TOWNSHIP, MARION COUNTY, INDIANA.

TRAFFIC DATA 2220B 3602E 2221B		
A.D.T. (1978)		72,100 V.P.D.
A.D.T. (19 PROJECTED)		V.P.U.
D.H.V. (19 PROJECTED)		V.P.D.
TRUCKS		D.H.V. % A.D.T. %
DESIGN SPEED		M.P.H.
ACCESS CONTROL		



MARION COUNTY
SCALE: 1" = 2000'
BUTLER, FAIRMAN & SEUFERT, INC.
ENGINEERS
CARMEL, INDIANA

NOTE:-
WHENEVER IR-465-4 (232) 142 APPEARS
IN THESE PLANS OR CONTRACT
DOCUMENTS IT SHALL BE
INTERPRETED AS IR-465-4 (232) 149

REVISIONS	
DATE	SHEET NO.
3-15-83	1, 2, 10; ADD 22A, 23A, 23B

REVISIONS	
DATE	SHEET NO.

INDIANA STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS DATED 1978
TO BE USED WITH THESE PLANS.

BRIDGES OVER 20' SPAN					
FEDERAL DISTRICT NO.	STATE	PROJECT NO.	TYPICAL SHEET NO.	SHEET NO.	TOTAL SHEETS
5	IND.	198	1	37	

INDEX CONTINUED				
SHEET NO.	SHEET DESIGNATION	SUBJECT	DATE	REVISED BY
23A	BRIDGE STD. BR1	ALUMINUM BRIDGE RAILING	12-16-80	R-11-03-80
23B	BRIDGE STD. BR2	ALUMINUM BRIDGE RAILING DETAILS	5-10-79	R-12-01-78
	BRIDGE STD. BR3	STEEL BRIDGE RAILING		
	BRIDGE STD. BR4	STEEL BRIDGE RAILING DETAILS		
	BRIDGE STD. BR5	RAILING CONNECTION DETAILS		
	BRIDGE STD. BR6	RAILING CONNECTION DETAILS		
24	BRIDGE STD. C1	MISCELLANEOUS DETAILS	12-21-81	R12-7-81
	BRIDGE STD. C2	MISCELLANEOUS DETAILS		
25	BRIDGE STD. C3	MISCELLANEOUS DETAILS	12-21-81	R12-7-81
	BRIDGE STD. C4	MISCELLANEOUS DETAILS		
26	BRIDGE STD. D1	CASTING DETAILS - ROADWAY DRAIN	7-18-83	R-6-30-82
	BRIDGE STD.			
	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS		
	BRIDGE STD. PB	PRESTRESSED CONCRETE TYPE I-BEAMS		
	BRIDGE STD. PB	PRESTRESSED BOX BEAMS		
	BRIDGE STD. PB	PRESTRESSED COMPOSITE BOX BEAMS WIDE		
	BRIDGE STD. PB	PRESTRESSED COMPOSITE BOX BEAMS WIDE		
	BRIDGE STD. PB10	TOLERANCES FOR FABRICATION OF PRESTRESSED BEAMS		
	BRIDGE STD. PB11	ELASTOMERIC BEARING PAD DETAILS		
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD. R2A	BRIDGE LIGHTING DETAILS		
	BRIDGE STD. R2B			
	BRIDGE STD. S1	MISCELLANEOUS STANDARDS		
	BRIDGE STD. SH1	STEEL SHOE DETAILS		
	BRIDGE STD. T SHEET A	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD. T SHEET B	STANDARD TEMPORARY BRIDGE		
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD.			
	BRIDGE STD.			
	ROAD STD. SHEET A	STANDARD PAVEMENT JOINTS		
	ROAD STD. SHEET B	STANDARD PAVEMENT JOINTS		
	ROAD STD. SHEET WA	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET HA	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WB	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WB2	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WC	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WC1	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WD	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WD	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WE	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WE	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WF	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WF	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WG	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WH	MISCELLANEOUS STANDARDS		
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	ROAD STD. SHEET WI	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WJ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WJ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WK	MISCELLANEOUS STANDARDS		
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	ROAD STD. SHEET WO	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WP	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WP	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WQ	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WR	MISCELLANEOUS STANDARDS		
	ROAD STD. SHEET WR	MISCELLANEOUS STANDARDS		
27	ROAD STD. SHEET CB2	TEMPORARY CONCRETE BARRIER	6-3-81	RA-1-81
	ROAD STD.	STANDARD REINF. CONCRETE BOX CULVERTS		
	ROAD STD.	STANDARD REINF. CONCRETE CULVERTS		
	ROAD STD. SHEET GR2	GUARD RAIL CLASS B ₁	12-8-83	RIO-3-83
	ROAD STD. SHEET GR	GUARD RAIL CLASS		
	ROAD STD. SHEET GR	GUARD RAIL CLASS		
	ROAD STD. SHEET GRB	ALUMINUM GUARD RAIL DETAILS		
	ROAD STD. SHEET GRB	STEEL TUBE GUARD RAIL DETAILS		
28	ROAD STD. SHEET GR7	GUARD RAIL PIER CONNECTION DETAILS	5-21-82	RA-1-82
	ROAD STD. SHEET GR10	GUARD RAIL WIRLED ENDS		
	ROAD STD. SHEET			
30	ROAD STD. SHEET MT3	TRAFFIC SIGN DETAILS	8-30-82	A July 1982
31	ROAD STD. SHEET I DETOURS	STANDARD DETOUR SIGNS	12-8-83	R-12-3-83
	ROAD STD. SHEET 1A DETOURS	STANDARD DETOUR SIGNS		
32	ROAD STD. SHEET 1B DETOURS	STANDARD DETOUR SIGNS	12-8-83	RIO-3-83
	ROAD STD. SHEET 2 DETOURS	STANDARD DETOUR SIGNS		
33	ROAD STD. SHEET 2A DETOURS	STANDARD DETOUR SIGNS	12-8-83	R-12-3-83
	ROAD STD. SHEET 2B DETOURS	STANDARD DETOUR SIGNS	12-8-83	R-12-3-83
34	ROAD STD. SHEET 3 DETOURS	STANDARD DETOUR SIGNS	12-8-83	R-12-3-83
	ROAD STD. SHEET 3A DETOURS	STANDARD DETOUR SIGNS		
35	ROAD STD. SHEET 3B DETOURS	STANDARD DETOUR SIGNS	12-8-83	R-12-3-83
36	ROAD STD. SHEET 5 DETOURS	STANDARD DETOUR SIGNS	12-27-82	RIO-1-82
37	ROAD STD. SHEET 5A DETOURS	STANDARD DETOUR SIGNS	12-27-82	RIO-1-82

DATE Jan 27, 1984

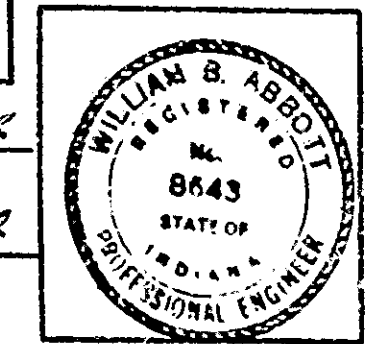
Robert L. Smith

APPROVED 2-15-84

Gene K. Hall

CHIEF HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL 2-15-84



FEDERAL HIGHWAY ADMINISTRATION
DEPARTMENT OF TRANSPORTATION

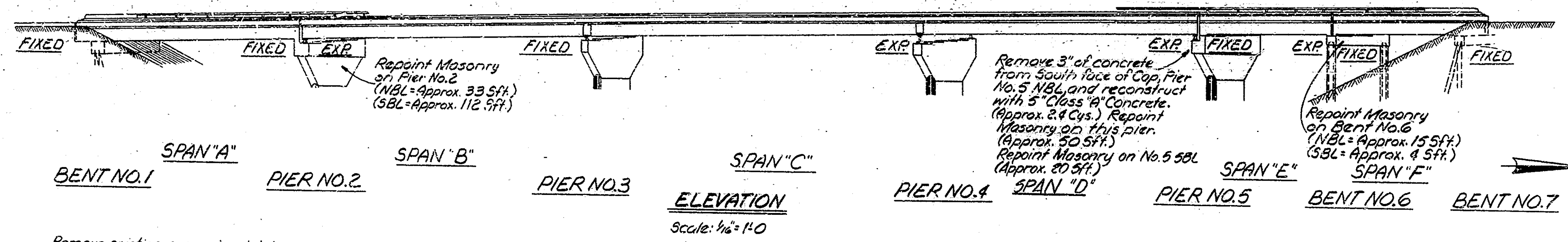
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DIVISION ADMINISTRATOR DATE

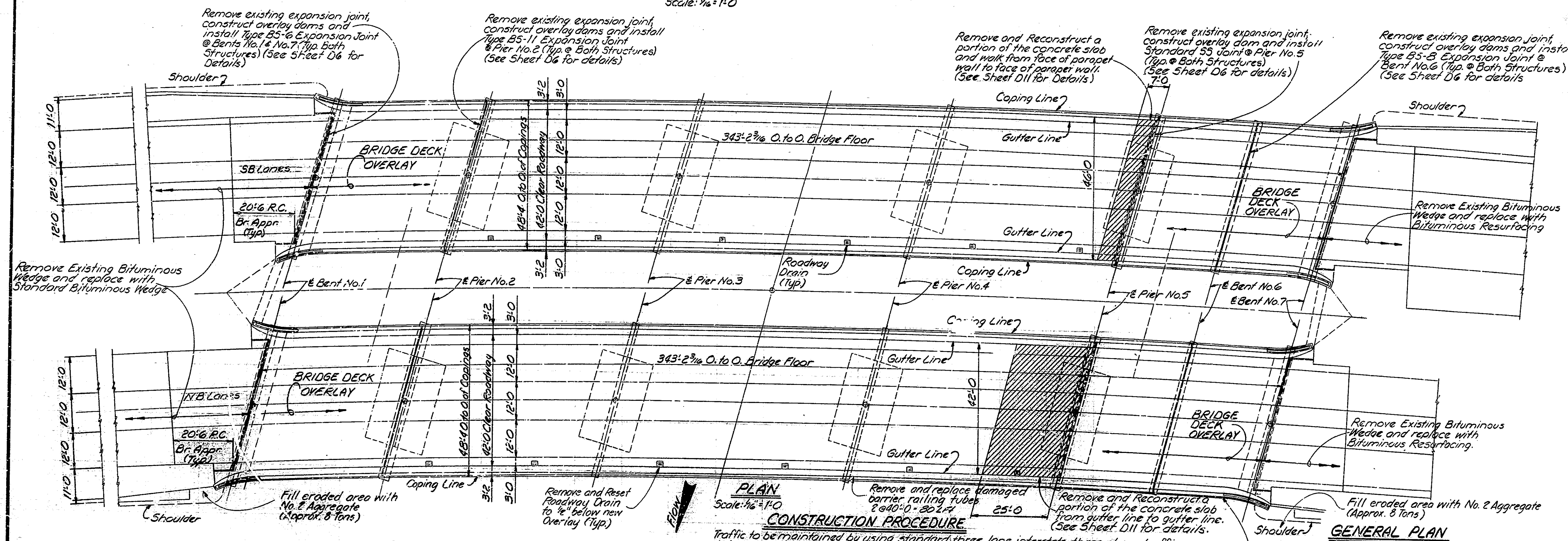
BRIDGE FILE: I-465-150-2220B, I-465-149-4461A,
I-465-149-3602E, I-465-149-2221B

STRUCTURES ARE BUILT ON A 1600' VERTICAL CURVE AND A 0° 48' HORIZONTAL CURVE

NOTES
 See Drawg. 01 for Standard Drawings.
 See Drawg. 02 for General Notes and
 Material Notes.



ESTIMATED FULL DEPTH PATCHING		
SPAN	NB	SB
2"	20 SF.	20 SF.
3"	100 SF.	---
4"	---	---
5"	30 SF.	---
6"	15 SF.	20 SF.
7"	50 SF.	---



PLAN
 Scale: 1/8" = 1'-0"

CONSTRUCTION PROCEDURE

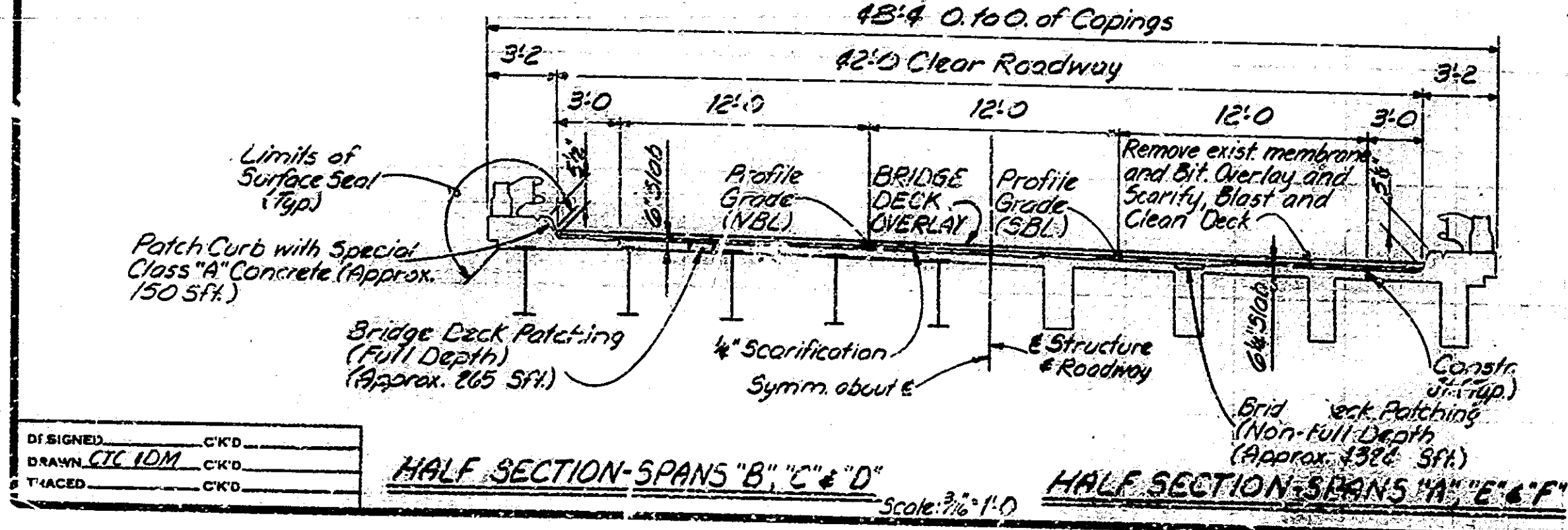
Traffic to be maintained by using standard three phase traffic maintenance procedures, keeping two lanes of traffic open in each direction on I-465 at all times.
 Remove existing bituminous overlay, wedging and membrane.
 Remove and Replace portions of the bridge deck and walk as shown on the details.
 Remove any existing patches or areas that show deterioration, but leave in place any apparently sound patches made during previous overlay construction.
 Scarify the remaining bridge floor to a depth of 1/4 inch. Remove scarified dust.
 Remove all deteriorated concrete below the level of scarification, around exposed reinforcing, along curbs inaccessible to scarifying equipment and as required for the construction of overlay gains.
 Blast and clean all removal and scarified deck areas. Construct overlay dams.
 Place the bridge deck patching and overlay as shown on the plans and in accordance with the Special Provisions. Install BS expansion joint seals.
 Clean and seal exposed concrete surfaces as noted on the plans including overlay dams on R.O. Bridge Approach slabs with a penetrating epoxy sealer.
 Place the bituminous wedges and level courses and construct all other work shown on the plans.
 The sequence of the above notes does not necessarily indicate the sequence of operations.

GENERAL PLAN

DECK RECONSTRUCTION AND OVERLAY
CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE BRIDGE
 6 SPANS @ 43'-0", 70'-0", 84'-0", 70'-0", 28'-0"; SKEW 16° 00' RIGHT
 42'-0" CLEAR ROADWAY; 8'-2'-0" CURBS; I-465 OVER
BIG EAGLE CREEK
INDIANA DEPARTMENT OF HIGHWAYS
MARION COUNTY

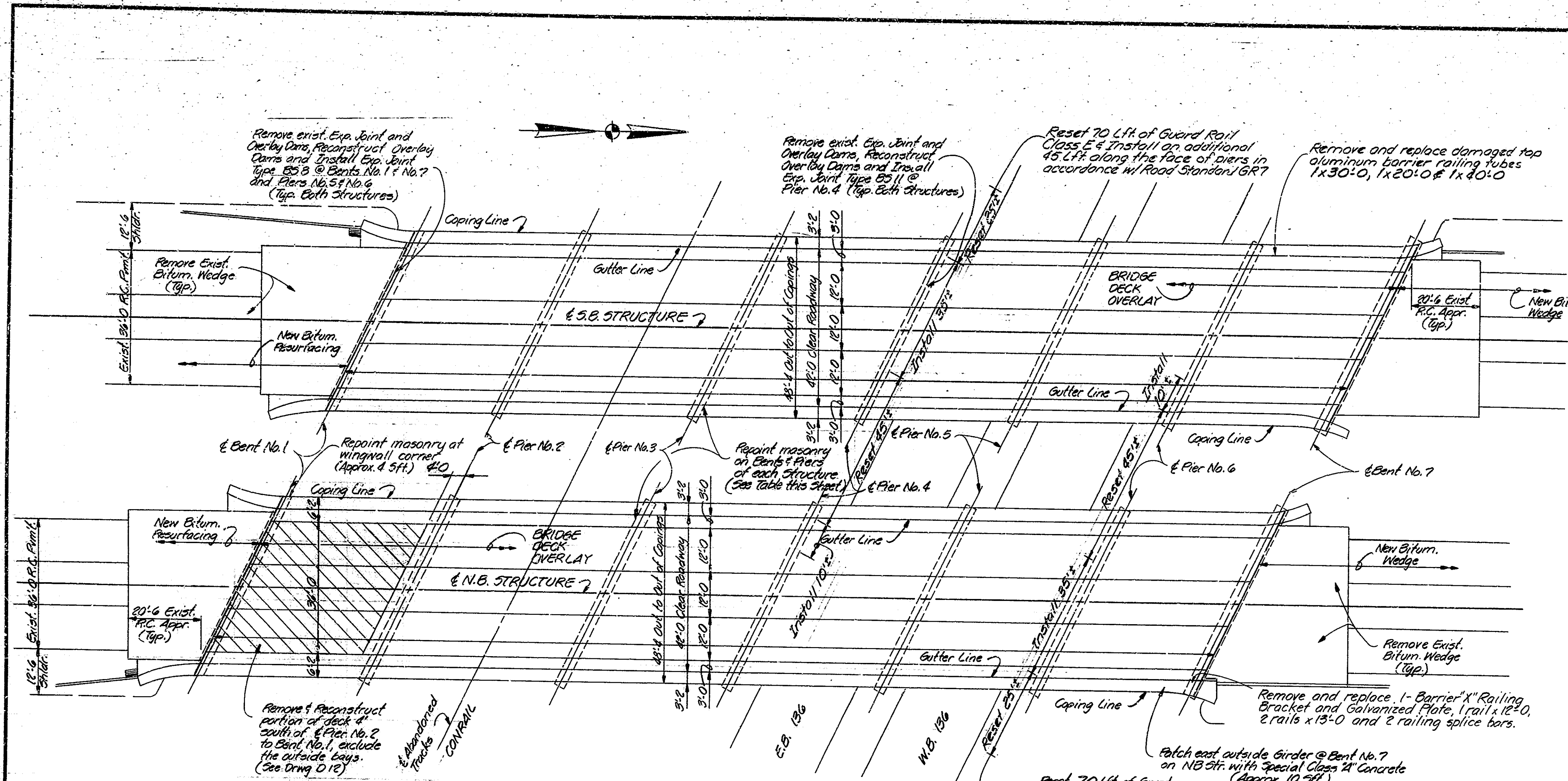
SCALE: AS NOTED
 DATE: Jan 27, 1984
 SUBMITTED FOR APPROVAL: [Signature]

DRAWING: 04 OF 15 SHEET: 13 OF 37
 PROJECT: I-465-4(122)142
 CONTRACT NO. B-14462
 BRIDGE FILE: I-465-149-3602E



HALF SECTION- SPANS "B", "C", "D"
 Scale: 3/8" = 1'-0"
 HALF SECTION- SPANS "A", "E", "F"
 Scale: 3/8" = 1'-0"

DESIGNED: CJK
 DRAWN: CJK
 CHECKED: CJK



CONSTRUCTION PROCEDURE

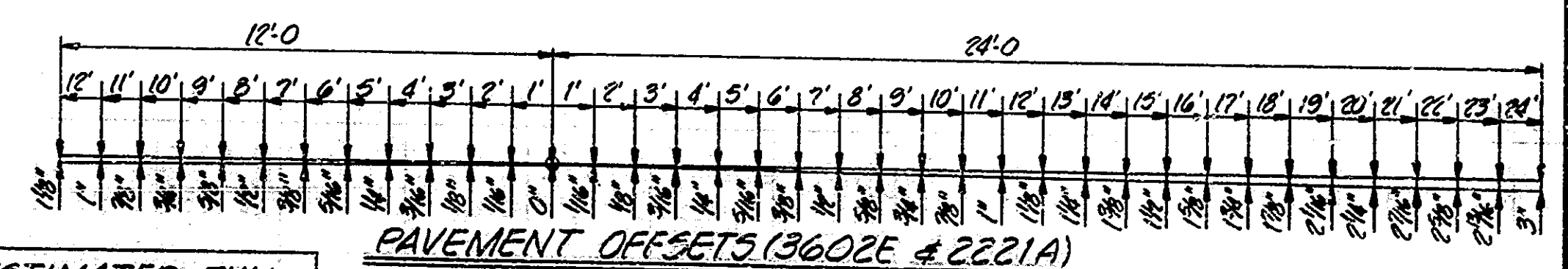
Traffic to be maintained by using standard three phase traffic maintenance procedures, keeping two lanes of traffic open in each direction on I-465 all times.
 Remove portions of floor slab as shown on the plans.
 Scarify the remaining bridge floor to a depth of 1/4 inch.
 Remove scarified dust. Remove existing unsound patches and all deteriorated concrete below the level of scarification, around reinforcing along curbs inaccessible to scarifying equipment and as required for the construction of overlay dams.
 Repair the full depth slab removal areas and overlay dams to the level of scarification. Blast and clean all repaired deck areas and all removal and scarified deck areas.
 Place the Bridge Deck Patching and Overlay as shown on the plans and in accordance with the Special Provisions. Install E5 expansion joint seals where shown on plans.
 Clean and seal exposed concrete surfaces as noted on the plans with a penetrating epoxy sealer.
 Place bituminous wedge and level courses and construct all other work shown on the plans.
 The sequence of the above notes does not necessarily indicate the sequence of operations.

NOTES
 See Orig. O1 for Standard Drawings.
 See Orig. O2 for General Notes and Material Notes.

ESTIMATED REPOINTING

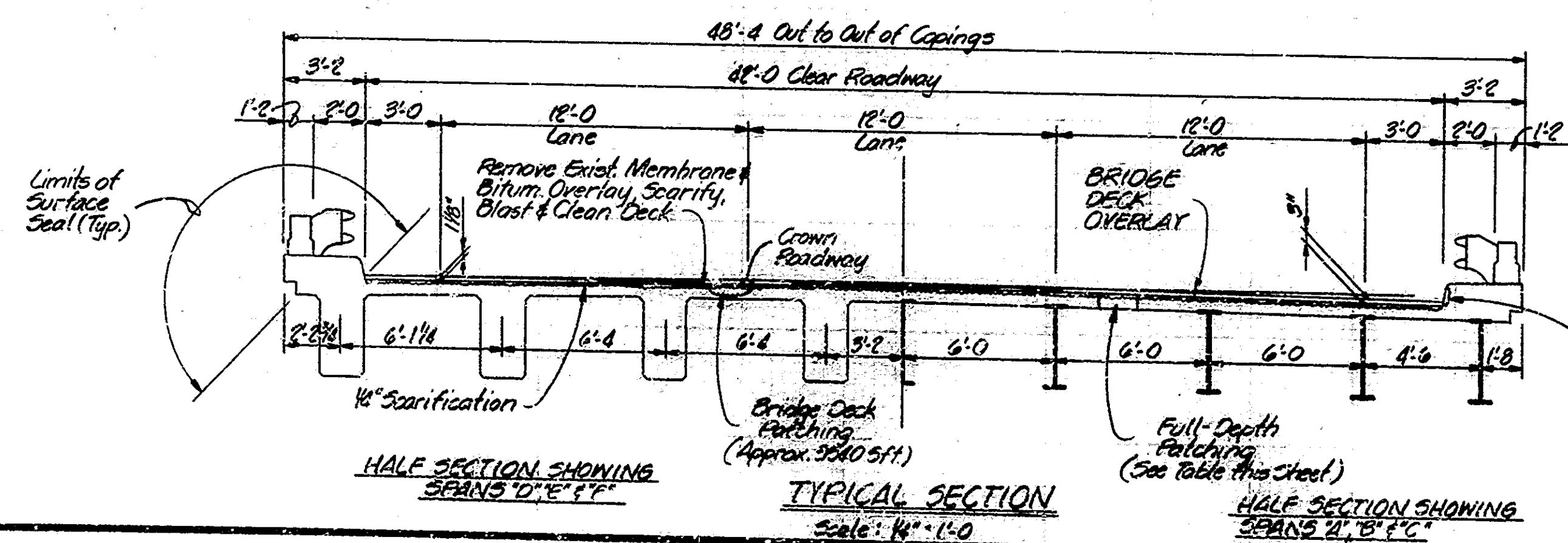
	NB	SB
Bent No. 1		
Pier No. 2		
Pier No. 3		
Pier No. 4	250 Sft.	200 Sft.
Pier No. 5	17.9 Ft.	25 Sft.
Pier No. 6	26 Sft.	25 Sft.
Bent No. 7	6 Sft.	

PLAN
 Scale: 1/4" = 1'-0"



ESTIMATED FULL DEPTH PATCHING

SPAN	NB	SB
10'	20 Sft.	10 Sft.
11'	40 Sft.	—
12'	20 Sft.	30 Sft.
13'	30 Sft.	15 Sft.
14'	—	50 Sft.



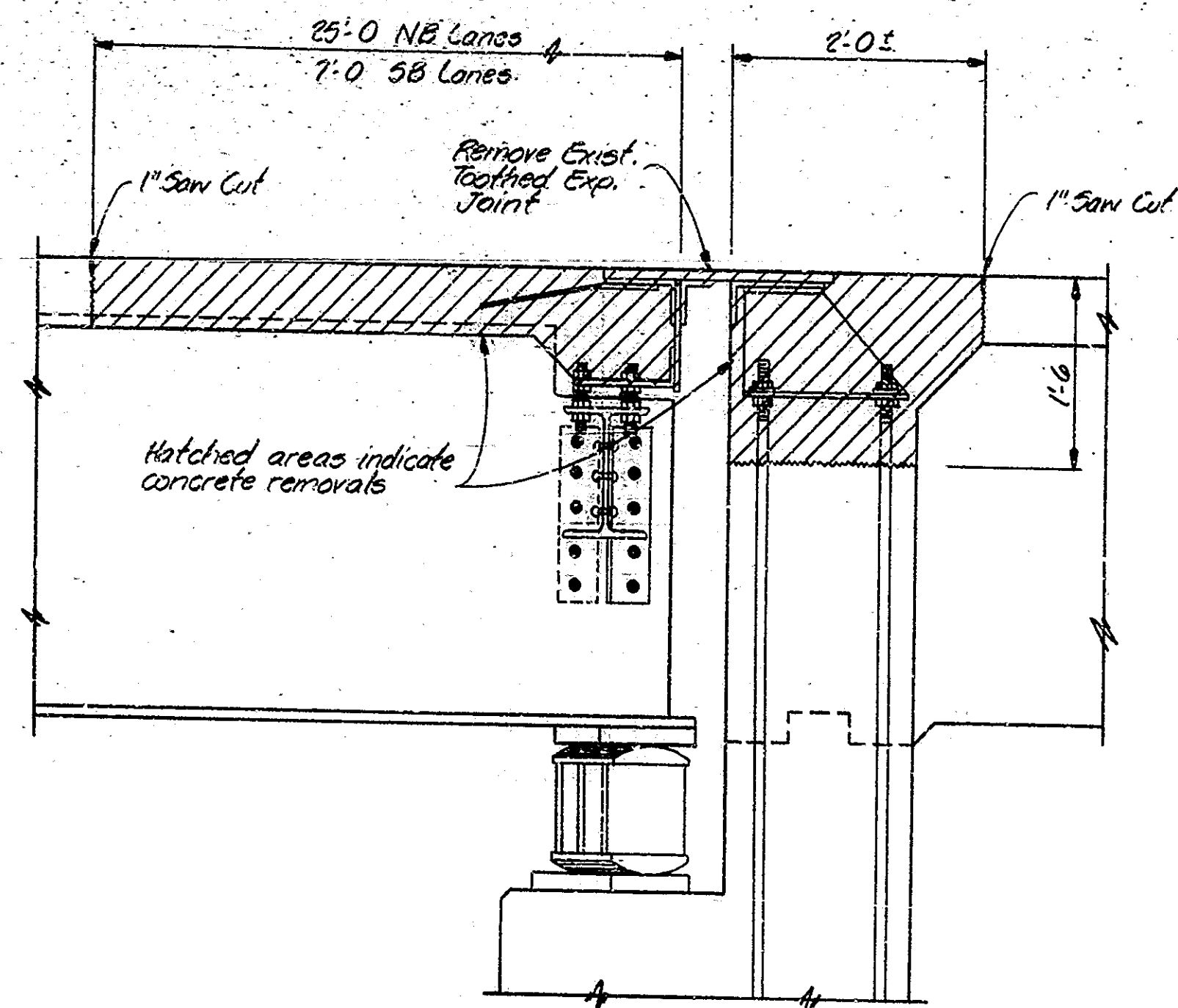
TYPICAL SECTION
 Scale: 1/4" = 1'-0"

GENERAL PLAN
 DECK RECONSTRUCTION AND OVERLAY
 TWIN CONTINUOUS STEEL BEAM AND REINFORCED CONCRETE GIRDER BRIDGES
 6 SPANS: 46'-3", 53'-6", 36'-3", 36'-0", 36'-0", 36'-0"
 48'-0" CL. ROADWAY OVER CONRAIL & U.S. 136
INDIANA DEPARTMENT OF HIGHWAYS
 MARION COUNTY

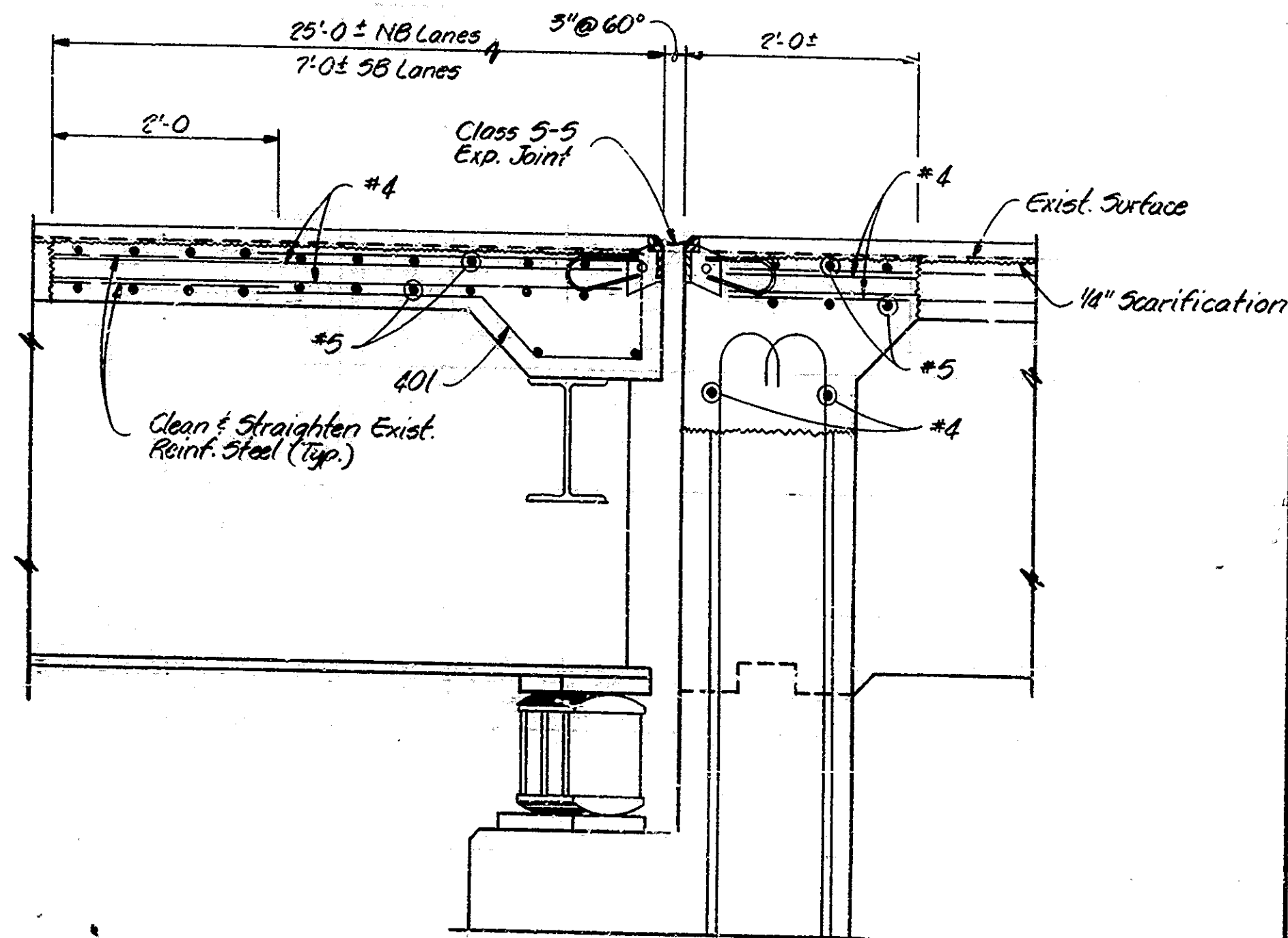
SCALE: AS NOTED DATE: Jan 27, 1984
 SUBMITTED FOR APPROVAL: Robert J. Smith

DRAWING: 05 OF 13 SHEET: 14 OF 57
 PROJECT: I.R. 465-4(229)142
 CONTRACT NO. B-14462
 BRIDGE FILE: I-465-149-2221B

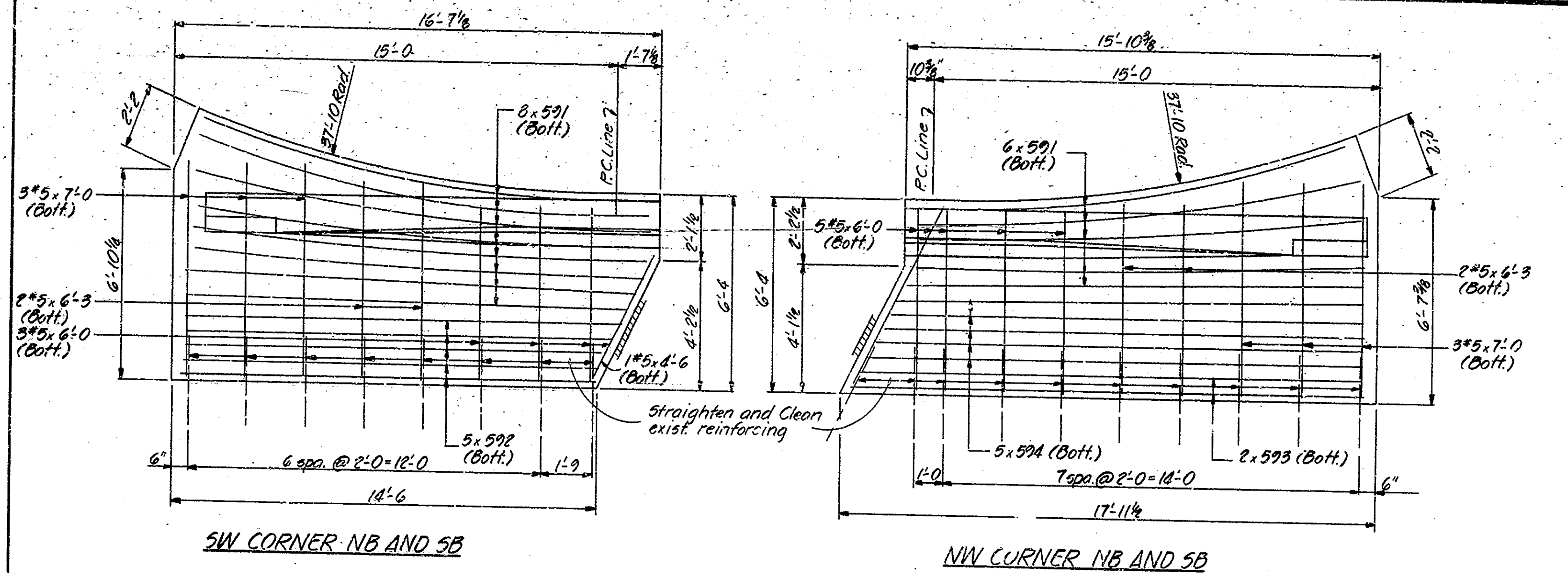
DESIGNED: J. Brand, C.K.D. R. Smith
 DRAWN: B. Bratton, C.K.D. R. Smith
 TRACED: C.K.D.



PIER NO. 5 (SHOWING REMOVALS)
BRIDGE FILE: 3602E
Scale: 1" = 1'-0"

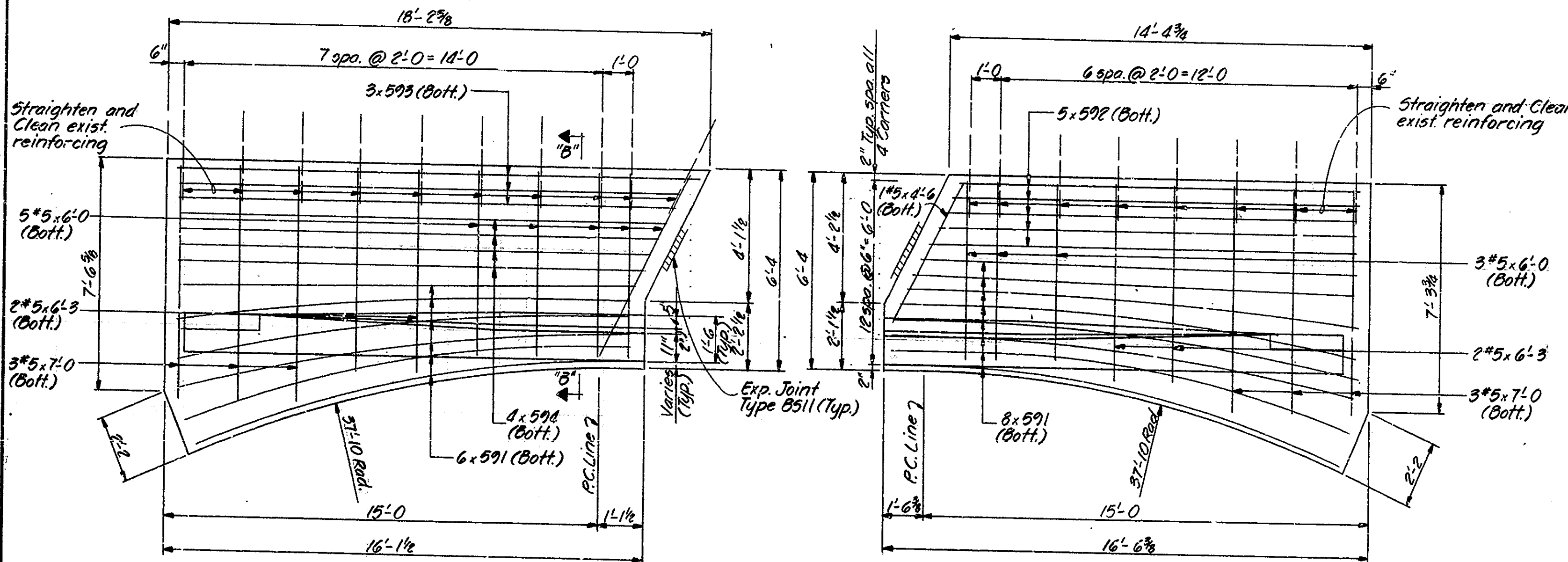


SECTION "A-A"
PIER NO. 5 (SHOWING RECONSTRUCTION)
BRIDGE FILE: 3602E
Scale: 1" = 1'-0"



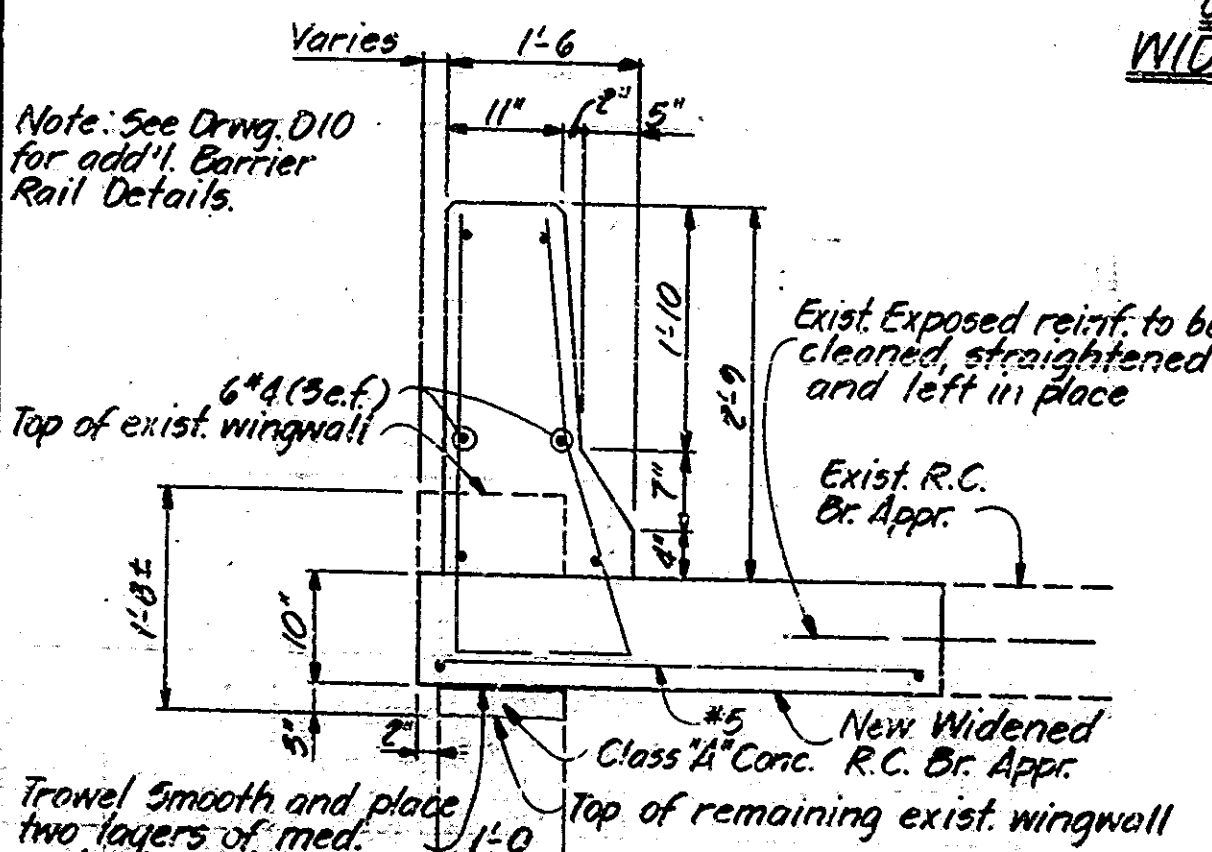
SW CORNER NB AND SB

NW CORNER NB AND SB



SE CORNER NB AND SB

NE CORNER NB AND SB



SECTION "B-B"
Scale: 3/4" = 1'-0"

BRIDGE FILE: I-465-150-2220B
WIDENED R.C. BRIDGE APPR DETAILS

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

BILL OF MATERIALS WIDENED R.C. BR. APPR-NB LANE (SB Lane Same)			
REINFORCING STEEL			
Mark or Size	No. of Bars	Length (Ft)	Weight (Lbs.)
591	28	18-7	
592	10	14-7	
593	8	17-7	
594	9	16-7	
#5	12	7-0	
#5	8	6-3	
#5	16	6-0	
#5	2	4-6	
Total Steel			1104

BILL OF MATERIALS (CONTD.)		
CONCRETE		
Conc. Primt. Reinf. 10"	55	5ys.
Class 4" in Substructure 0.7 Cys.		

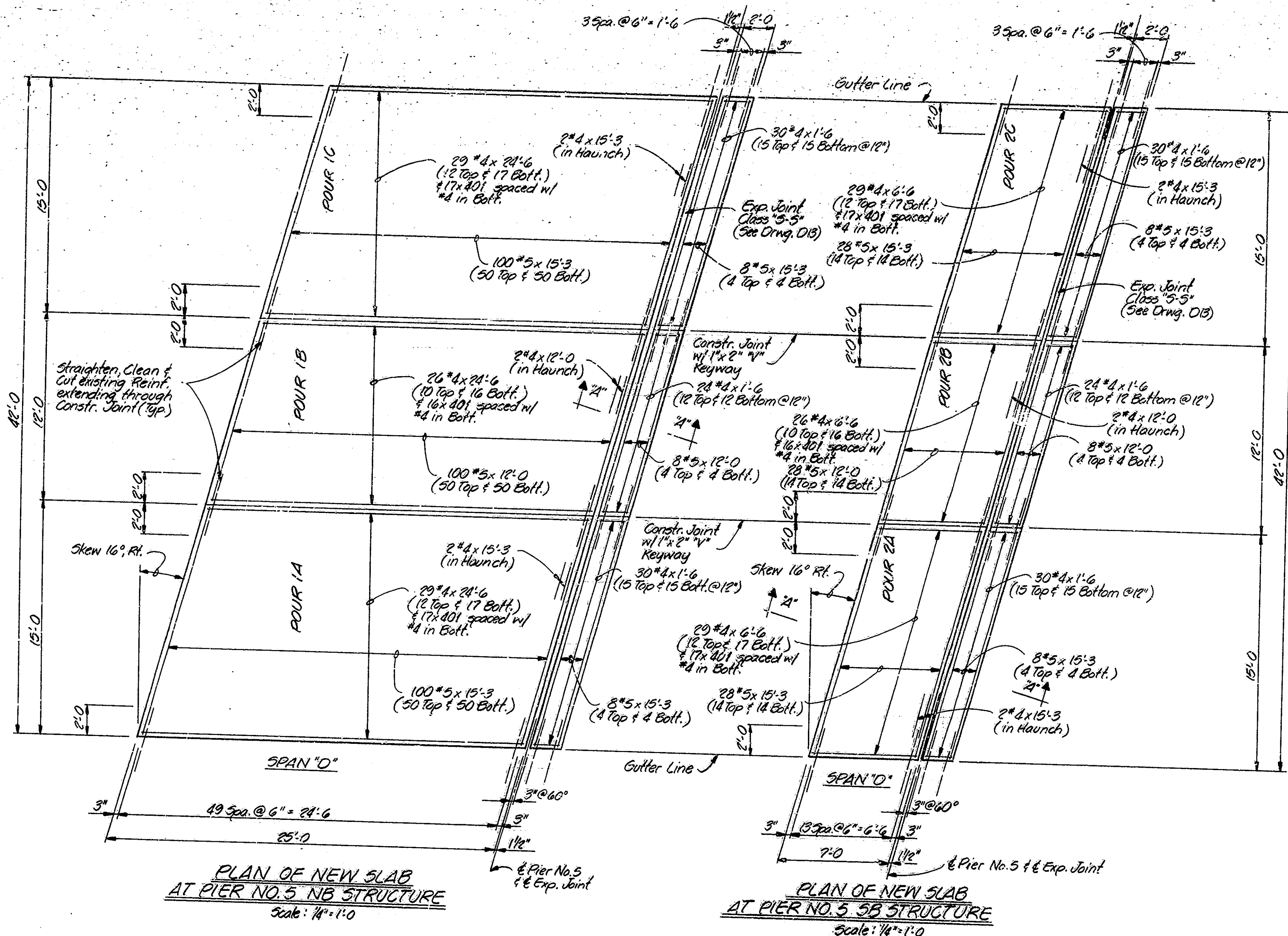
T _C		
Mark	B	Length
591	15'-0"	18'-7"
592	14'-0"	14'-7"
593	17'-0"	17'-7"
594	16'-0"	16'-7"

INDIANA DEPARTMENT OF HIGHWAYS
MARION COUNTY

SCALE: AS NOTED DATE: JAN 27, 1974
SUBMITTED FOR APPROVAL: Robert H. Smith

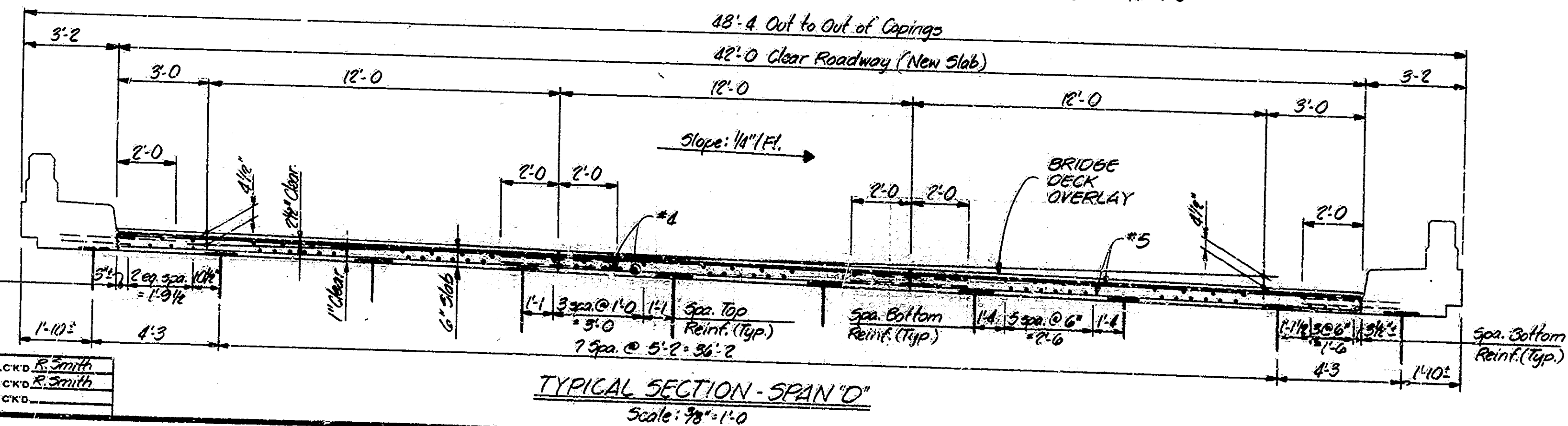
DRAWING: D7 OF 15 SHEET: 16 OF 37
PROJECT: IR-465-4(220)142
CONTRACT NO. B-14462
BRIDGE FILE: I-465-150-2220B & I-465-149-3602E

DESIGNED: J. Brand CWD, R. Smith
DRAWN: M.B. Lopez CWD
TRACED: CWD



PLAN OF NEW SLAB AT PIER NO. 5 NB STRUCTURE
Scale: 1/4" = 1'-0"

PLAN OF NEW SLAB AT PIER NO. 5 SB STRUCTURE
Scale: 1/4" = 1'-0"



TYPICAL SECTION - SPAN 'D'
Scale: 3/8" = 1'-0"

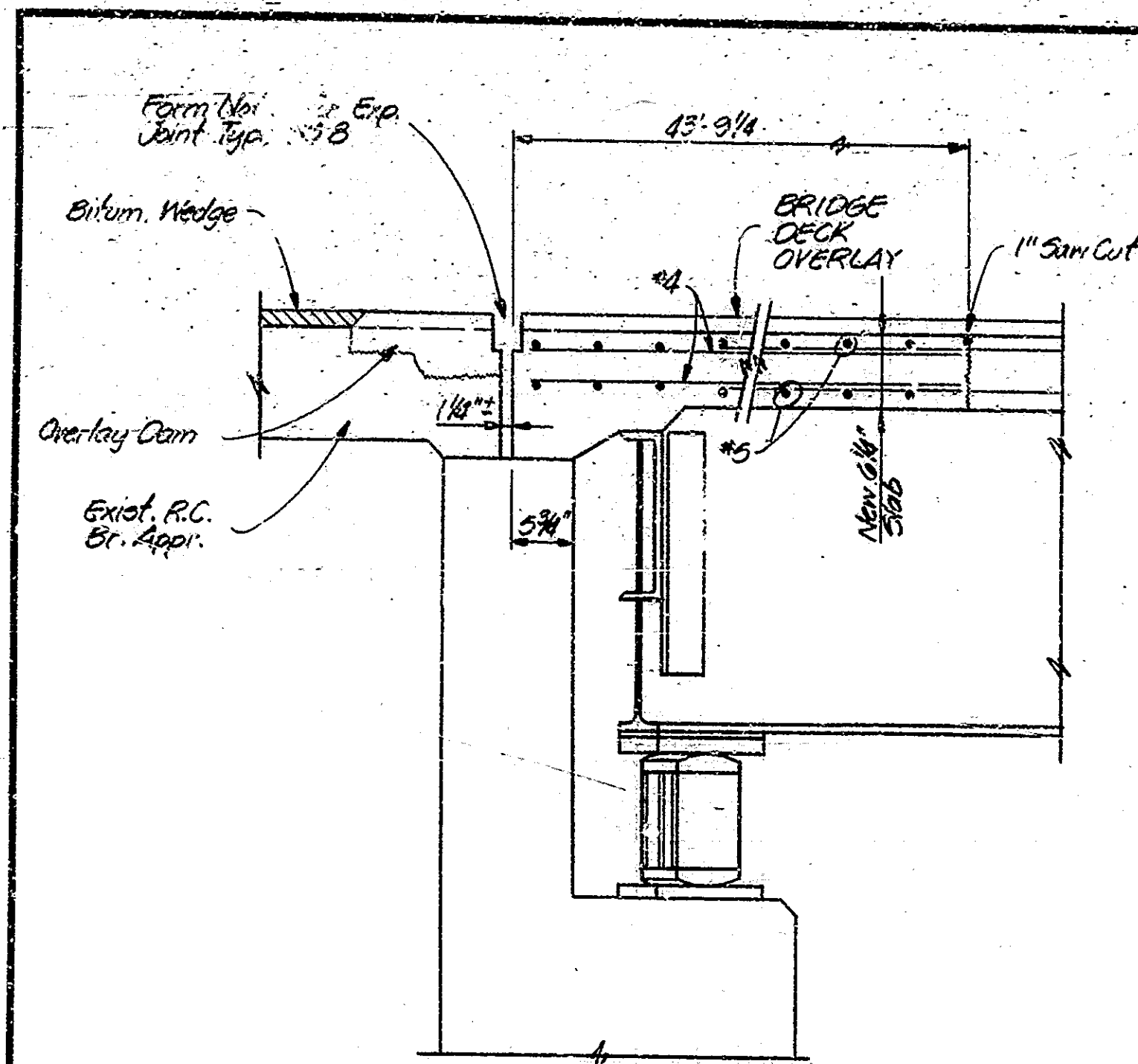
BILL OF MATERIALS				
FLOOR SLABS				
STRUCTURE: I-465-149-3602E				
REINFORCING STEEL				
Mark or Size	No. of Bars	Length (Ft.)	Weight (Lbs.)	
NB STRUCTURE				
#5	216	15'-3"		
#5	108	12'-0"		
Total #5				4787
401	50	5'-7"		
#4	24	21'-6"		
#4	4	15'-3"		
#4	2	12'-0"		
#4	24	1'-6"		
Total #4				1702
Total Steel NB Structure				6489
SB STRUCTURE				
#5	72	15'-3"		
#5	36	12'-0"		
Total #5				1596
401	50	5'-7"		
#4	4	15'-3"		
#4	2	12'-0"		
#4	24	6'-6"		
#4	24	1'-6"		
Total #4				492
Total Steel SB Structure				2288
Total Steel NB+SB Structures				8777
CONCRETE				
Class 'C' in Superstructure				
Pours 1A+1C	208.5	17.0 Cys.		
Pour 1B		6.9 Cys.		
Total Class 'C' NB Structure		23.9 Cys.		
Pours 2A+2C	216.6	7.2 Cys.		
Pour 2B		2.9 Cys.		
Total Class 'C' SB Structure		10.1 Cys.		
Total Class 'C' NB+SB Str.		34.0 Cys.		

NOTES
 See Drwg. 07 for Section 'A-A'.
 See Bridge Std. C1 for Reinf. Bar Notes.
 See Drwg. 05 for Pavement Offsets Diagram.

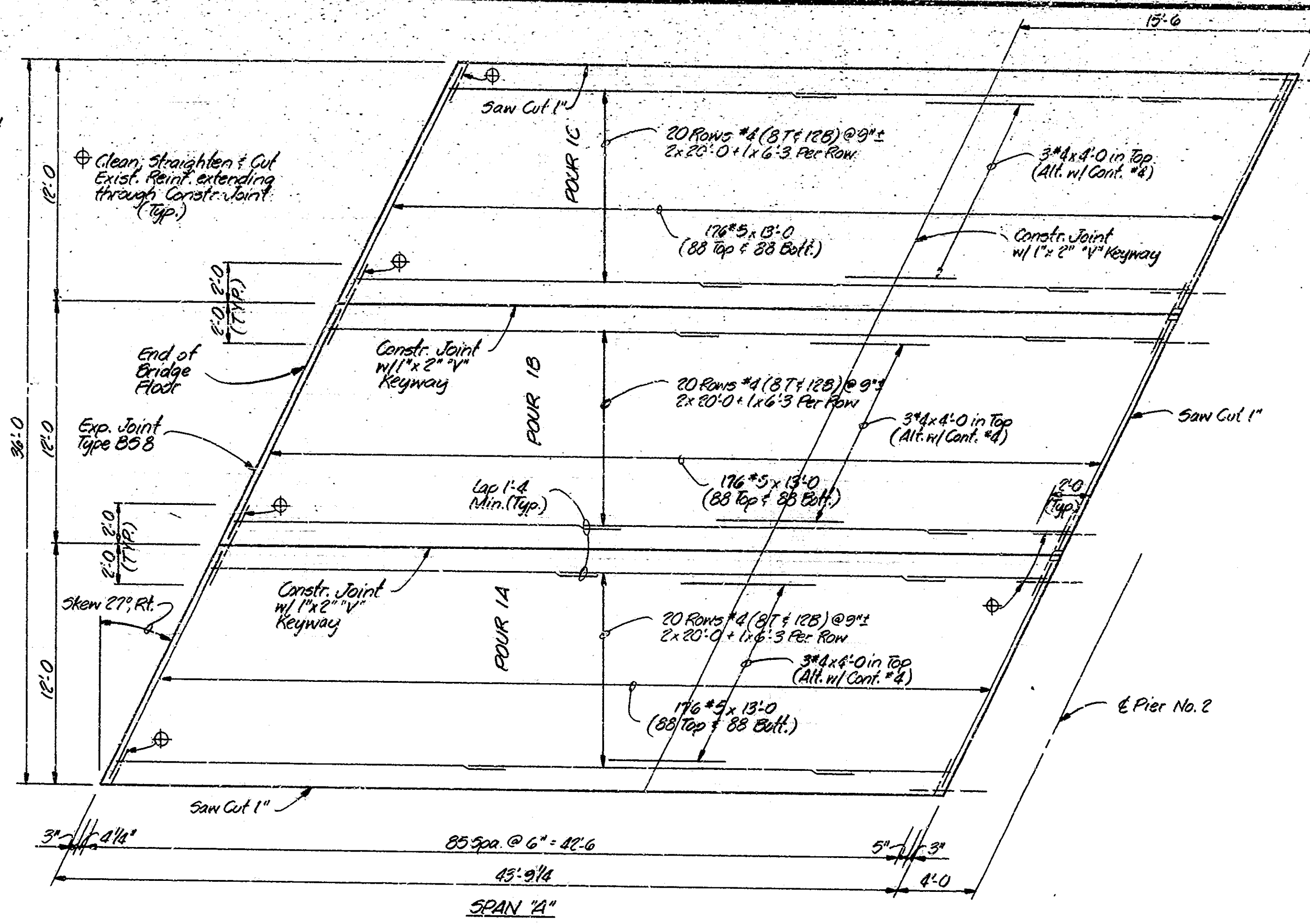
FLOOR DETAILS
 INDIANA DEPARTMENT OF HIGHWAYS
 MARION COUNTY

SCALE: AS NOTED DATE: Jan 27, 1984
 SUBMITTED FOR APPROVAL: Robert P. Smith

DRAWING: 011 OF 15 SHEET: 20 OF 37
 PROJECT: IR-465-4(229)142
 CONTRACT NO B-14462
 BRIDGE FILE: I-465-149-3602E

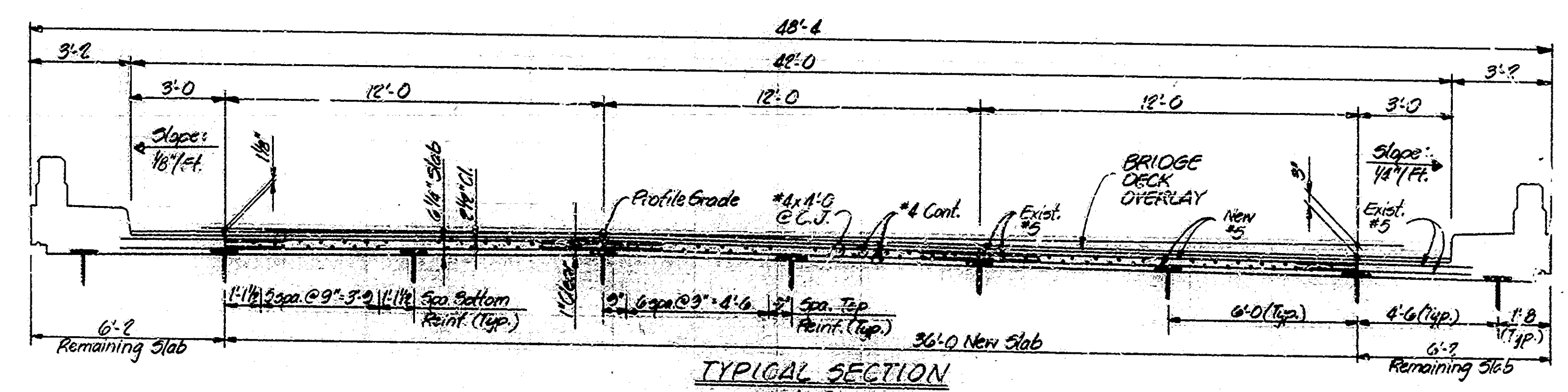


SECTION AT BENT NO. 1 (NB STRUCTURE)
 (BRIDGE FILE: I-465-149-2221B)
 Scale: 1" = 1'-0"



PLAN OF NEW SLAB
NB STRUCTURE
 Scale: 1/4" = 1'-0"

BILL OF MATERIALS			
FLOOR SLAB			
STRUCTURE: I-465-149-2221B			
REINFORCING STEEL			
Mark or Size	No. of Bars	Length (Ft.)	Weight (Lbs.)
#5	828	13'-0"	
Total #5			7159
#4	120	20'-0"	
#4	60	6'-0"	
#4	9	4'-0"	
Total #4			1878
Total Steel			9037
CONCRETE			
Class 'C' in Superstructure			
Piers 1A, 1B & 1C 30'10.0			30.0 Cfs

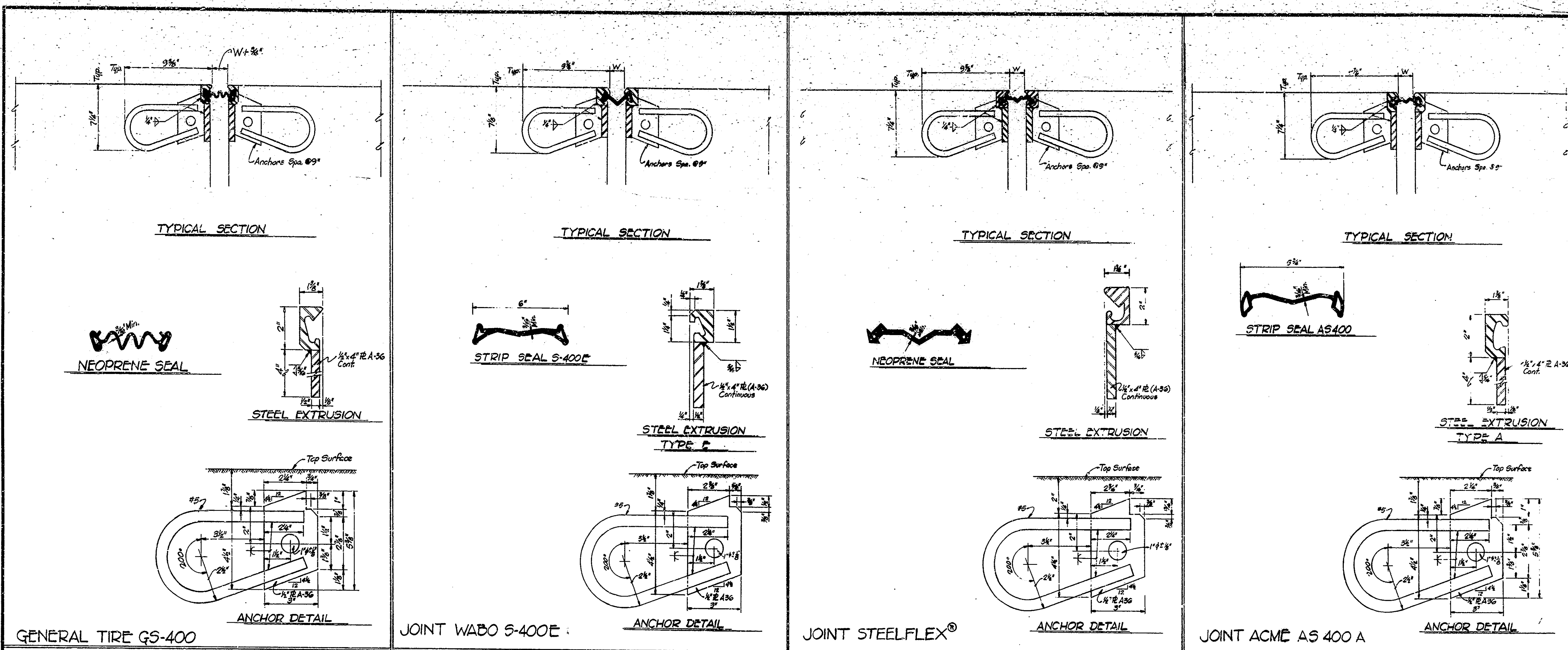


TYPICAL SECTION
 Scale: 3/8" = 1'-0"

NOTES
 See Bridge Std. C1 for Reinforcing Bar Notes.
 See Drwg. D5 for Pavement Offsets Diagram.

FLOOR DETAILS
INDIANA DEPARTMENT OF HIGHWAYS
 MARION COUNTY
 SCALE: AS NOTED DATE: JUN 27, 1974
 SUBMITTED FOR APPROVAL: Robert L. Smith
 DRAWING: D12 OF 13 SHEET: 21 OF 57
 PROJECT: I-465-3(220)142
 CONTRACT NO. B-14462
 BRIDGE FILE: I-465-149-2221B

DESIGNED: J. Beard, C.V.D. R. Smith
 DRAWN: R. Bottom, C.V.D. R. Smith
 TRACED: C.V.D.



NOTES

SEE THE SPECIAL PROVISIONS FOR PROPERTIES OF MATERIALS.

THE STRIP SEAL GLAND SHALL BE SIZED TO ACCOMMODATE AT LEAST FOUR (4) INCHES OF MOVEMENT.

THE STRIP SEAL GLAND SHALL BE INSTALLED IN AN EXTRUDED MOUNTING UNIT.

THE COST OF EXTRUSIONS, ELASTOMERIC SEAL ELEMENTS, SEALANTS, ADHESIVE, CEMENT GROUT, ANCHOR SYSTEM AND INSTALLATION OF JOINT SHALL BE INCLUDED IN THE COST OF EXPANSION JOINT.

THE PROFILE OF THE JOINT IS TO CONFORM TO THE ROADWAY CROSS SECTION.

THE SEAL ELEMENT SHALL BE MOULDED AND FURNISHED IN A CONTINUOUS LENGTH EQUAL TO THAT REQUIRED FOR THE JOINT.

AT CHANGES IN DIRECTION (AT CURBS, MEDIAN BARRIERS, ETC.) THE SECTIONS OF JOINT ARE TO BE CUT TO THE BEVEL NECESSARY TO PRODUCE THE SAME CROSS SECTION ON EACH PIECE BEING JOINED. THE ANCHOR ASSEMBLY IS TO BE SHOP FABRICATED AND DELIVERED TO THE JOB SITE AS A COMPLETE CONTINUOUS UNIT FOR JOINT LENGTHS UP TO 44 FEET. JOINTS ABOVE LENGTHS OF 44 FEET OR JOINTS USED WITH STAGE CONSTRUCTION SHALL BE FIELD WELDED WITH ENDS TO BE SHOP PREPARED.

ALL WORK, BOTH SHOP & FIELD, SHALL BE IN ACCORDANCE WITH 7103.

ALL EXPOSED STRUCTURAL STEEL SURFACES WILL BE PAINTED IN ACCORDANCE WITH ISHC STANDARD SPECIFICATIONS.

THE CONTRACTOR SHALL SUBMIT 3 COPIES OF SHOP DRAWINGS FOR ALL JOINTS INVOLVING CURBS OR OTHER SPECIAL FEATURES.

Ambient Temperature	JOINT SETTING TABLE		
	DIMENSION "W"		
	Expansion Length		
	100'-200'	200'-300'	300'-400'
120°	2 1/4"	2 1/4"	1 1/2"
100°	2 3/8"	1 3/4"	1 1/2"
80°	2 1/2"	2 1/4"	1 1/2"
60°	3"	2 3/4"	2 1/4"
40°	3 1/4"	3 1/4"	2 3/4"
20°	3 3/4"	3 1/2"	3 1/4"
0°	3 3/4"	3 3/4"	4"

NOTE: EXTRUSIONS WITH HEIGHTS BETWEEN 1 1/2" AND 2" MAY BE SUBSTITUTED FOR THOSE SHOWN, IF SUCH A SUBSTITUTION IS MADE, THE NOTCH IN THE ANCHOR PLATE AND THE STRIP SEAL GLAND SHALL BE MODIFIED ACCORDINGLY AND IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

EXPANSION JOINTS CLASS S-5
INDIANA DEPARTMENT OF HIGHWAYS
 MARION COUNTY

SCALE: NONE DATE: 1-27-84
F. L. Northick

DRAWING: D13 OF 13 SHEET: 22 OF 37
 PROJECT: IR-465-4(229) 142
 CONTRACT NO. B-14462
 BRIDGE FILE: I-465-149-3602E



DESIGNED: C.R.D.
 DRAWN: *245* C.K.D.
 TRACED: C.K.D.

STRUCTURE PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
			1-465 1-465 1-465 1-465	1-465 1-465 1-465 1-465	
51002	CONCRETE CLASS C IN SUPERSTRUCTURE	CYS.	3072	340620	3512
51001	CONCRETE CLASS A IN SUPERSTRUCTURE	CYS.			
51005	CONCRETE CLASS A IN SUBSTRUCTURE	CYS.	24	6.9	
51010	CONCRETE CLASS B ABOVE FOOTINGS	CYS.			
51013	CONCRETE CLASS B IN FYGS	CYS.			
51075	SPECIAL CLASS A CONCRETE	SFT.	181	110	291
51045	CONCRETE STRUCTURAL MEMBERS	LSUM			
51016	REINFORCING STEEL	LBS.	2272	217	2021
51032	EPOXY COATED REINF. STEEL	LBS.	10640		10640
51035	STRUCTURAL STEEL	LBS.			
51038	STRUCTURAL STEEL	LSUM			
51090	BRONZE PLATES	LBS.			
51070	ANCHOR PLATES (MK-AP 1)	EACH			
51075	ANCHOR PLATES (MK-AP 2)	EACH			
51080	ANCHOR PLATES (MK-AP 3)	EACH			
51085	ANCHOR PLATES (MK-AP 4)	EACH			
51112	ANCHOR BOLTS	EACH			
51068	TIE DOWN ASSEMBLY MK-UB	EACH			
51095	CAST IRON DRAIN PIPE 4 IN.	LBS.			
51100	CAST IRON DRAIN PIPE 6 IN.	LBS.			
51105	CAST IRON DRAIN PIPE 8 IN.	LBS.			
51110	CAST IRON GRATES BASIN AND FITTINGS	LBS.	328		328
51134	REMOVAL OF PRESENT RAILING	LFT.			
51132	RAILING RESET	LFT.			
51115	RAILING (TYPE S OR C)	LFT.			
51120	RAILING (TYPE SA OR CI)	LFT.			
51125	RAILING (TYPE 6 OR D)	LFT.			
51130	RAILING (TYPE 7 OR E)	LFT.			
51020	CLASS C CONCRETE RAILING	CYS.	828		828
51025	CLASS C CONCRETE RAILING	LFT.			
51131	BARRIER RAILING TYPE X	LFT.			
51215	CLASS X EXCAVATION	CYS.			
51220	NET EXCAVATION	CYS.			
51223	WATERWAY EXCAVATION	CYS.			
51224	TERMINAL EXCAVATION	LSUM			
51225	DRY EXCAVATION	CYS.			
51230	FOUNDATION EXCAVATION (UNCLASSIFIED)	CYS.			
51813	PNEUMATICALLY PLACED MOBFAR	SFT.			
51870	REPORTING MASONRY IN STR.	SFT.	37	254	291
51814	WELDED STEEL WIRE FABRIC	SFT.			
51859	PAINTING OLD STEEL BRIDGE	LSUM			
51881	EXPANSION JOINT TYPE BS2	LFT.			
51885	EXPANSION JOINT TYPE BS6	LFT.	230		230
51887	EXPANSION JOINT TYPE BS8	LFT.	105	447	552
51888	EXPANSION JOINT TYPE BS9	LFT.			
51890	EXPANSION JOINT TYPE BS11	LFT.	216	95	311
51925	EXPANSION JOINT CLASS S-S	LFT.	91		91
51926	EXPANSION JOINT CLASS T-S	LFT.			
51874	OVERLAY DAM	SFT.	162	149	311

STRUCTURE PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
			1-465 1-465 1-465 1-465	1-465 1-465 1-465 1-465	
51135	TIMBER PILES FURNISHED UNREATED	LFT.			
51140	TIMBER PILES DRIVEN UNREATED	LFT.			
51145	TIMBER PILES FURN. TREATED	LFT.			
51150	TIMBER PILES DRIV. TREATED	LFT.			
51155	PILE SHELLS FURNISHED AND DRIVEN (12 INCH)	LFT.			
51160	PILE SHELLS FURNISHED AND DRIVEN (14 INCH)	LFT.			
51185	STEEL H PILES FURNISHED AND DRIVEN (8 BP 36)	LFT.			
51190	STEEL H PILES FURNISHED AND DRIVEN (10 BP 42)	LFT.			
51195	STEEL H PILES FURNISHED AND DRIVEN (12 BP 53)	LFT.			
51210	PILE ENCASEMENT (CONCRETE)	LFT.			
	REMOVAL OF PRESENT STR. (PORTIONS) (2220B)	LSUM			
51325	REMOVAL OF PRESENT STR. (PORTIONS) (2220C)	LSUM			
51330	REMOVAL OF PRESENT STR. (PORTIONS) (2220D)	LSUM			
51335	TEMPORARY BRIDGE AND APPR. (PORTIONS) (2220E)	LSUM			
51366	CONCRETE SLOPEWALL 5 INCH	SYS.			
51365	SLOPEWALL	SYS.			
51370	RIPPAP	SYS.			
51375	REVEMENT RIPRAP	TON			
51371	HANDLAID RIPRAP 12 INCH	SYS.			
51372	DUMPED RIPRAP	TON			
51374	PLASTIC FILTER CLOTH	SYS.			
51395	STEEL DRAIN PIPE (6 INCH)	LSUM			
51400	STEEL DRAIN PIPE (8 INCH)	LSUM			
51092	STEEL PIPE CONDUIT (2 INCH)	LFT.			
51866	RIVETS REMOVED	EACH			
51864	FIELD DRILLED BOLTS	EACH			
51867	STRUCTURAL STEEL CUTTING	SIN			
51863	FIELD DRILLED HOLE IN CONCRETE	EACH			
51823	SURFACE SEAL # (2220B)	LSUM			
	SURFACE SEAL # (2461A)	LSUM			
	SURFACE SEAL # (3600E)	LSUM			
	SURFACE SEAL # (2220D)	LSUM			
51842	BRIDGE DECK OVERLAY	SYS.	881	2824	3705
51845	BRIDGE DECK SURFACE	SYS.			
51843	BRIDGE DECK PATCHING	SFT.	400	424	824
51833	CONCRETE SCARIFYING	SYS.	480	1078	1558
51840	ADDITIONAL CONC. SCARIFYING	SYS.			
51832	BLASTING AND CLEANING	SYS.	281	570	851
51836	FINISHING AND CURING	SYS.	881	570	1451
	No. 2 AGGREGATE	TONS	12	16	28
	FULL DEPTH PATCHING	SFT.	265	275	540

APPROACH PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
			1-465 1-465 1-465 1-465	1-465 1-465 1-465 1-465	
02045	EXCAVATION FOR SUBGRADE TREATMENT	CYS.			
02020	UNCLASSIFIED EXCAVATION	CYS.			
52240	COMMON EXCAVATION	CYS.			
52245	BORROW	CYS.			
52250	B BORROW	CYS.			
52255	B BORROW FOR STRUCTURE BACKFILL	CYS.			
52303	REMOVAL OF PAVEMENT	SYS.	88	37	125
02235	BREAKING PAVEMENT	SYS.			
52490	TERMINAL JOINT	LFT.			
52495	CONTRACTION JOINT, TYPE D-1	LFT.			
52280	CONC PAVEMENT REINFORCED (7 INCH)	SYS.			
52285	CONC PAVEMENT REINFORCED (8 INCH)	SYS.			
52290	CONC PAVEMENT REINFORCED (9 INCH)	SYS.			
52300	CONC PAVEMENT REINFORCED (10 INCH)	SYS.	110		110
06070	CONCRETE SIDEWALK	SYS.			
52305	TYPE P COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON			
52605	AGGREGATE FOR SHOULDER DRAIN	CYS.			
52610	AGGREGATE FOR UNDER DRAINS	TON			
52308	TYPE O COMPACTED AGGREGATE FOR BASE (SIZE NO. 53)	TON			
52310	SUBBASE	CYS.			
52315	BITUM. STABILIZED SUBBASE TYPE I, II, OR III	TON			
52320	BITUM. STABILIZED SUBBASE	TON			
52445	BITUMINOUS BASE	TON			
04260	BITUMINOUS BASE (TYPE SD)	TON			
52450	BITUMINOUS BINDER	TON			
52455	BITUMINOUS SURFACE	TON			
52458	BITUMINOUS MATERIAL FOR TRUCK COAT	SYS.	1978	456	2434
52460	BITUMINOUS MATERIAL FOR PRIME COAT	SYS.			
04351	SEAL COAT TYPE 5	SYS.			
04348	SEAL COAT TYPE 2	SYS.			
52470	BITUMINOUS MIXTURE FOR APPROACHES	TON	281	34	315
52475	BITUMINOUS MIXTURE FOR SHOULDER	TON			
52500	GUARD RAIL, TYPE A	LFT.			
52505	GUARD RAIL, TYPE B	LFT.	57.5		57.5
52510	GUARD RAIL, TYPE C	LFT.			
52515	GUARD RAIL, TYPE D	LFT.			
52520	GUARD RAIL, TYPE E	LFT.			
52525	GUARD RAIL, TYPE F	LFT.			
52530	GUARD RAIL, TYPE G	LFT.			
52531	GUARD RAIL, TYPE H	LFT.			
52533	GUARD RAIL END TREATMENT	EACH			
06035	RESET GUARD RAIL	LFT.	240	100	340
52535	REMOVAL OF GUARD RAIL	LFT.	57.5		57.5
52380	SODDING	SYS.			
52381	SODDING (NURSERY)	SYS.			
52385	MULCHED SEEDING "R"	SYS.			
06560	MULCHED SEEDING "U"	SYS.			
52382	MULCHED SEEDING (LEGUMES)	SYS.			
52388	SEED MIXTURE "R"	LBS.			
52389	SEED MIXTURE "U"	LBS.			
52395	SEED MIXTURE "CU"	LBS.			
52391	SEED MIXTURE (GRASS)	LBS.			
52400	MULCHING MATERIAL (WOOD CHIPS)	TON			
52405	MULCHING MATERIAL (WOOD CELLULOSE FIBER)	TON			
52405	FERTILIZER	TON			
52410	WATER	M.G.			
52415	AGRICULTURAL LIMESTONE	TON			

APPROACH PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
			1-465 1-465 1-465 1-465	1-465 1-465 1-465 1-465	
07025	PIPE (GR. A. 0.064" FBCCS) 12"	LFT.			
07075	PIPE (GR. A. 0.064" FBCCS) 15"	LFT.			
07125	PIPE (GR. A. 0.064" FBCCS) 18"	LFT.			
07175	PIPE (GR. A. 0.064" FBCCS) 24"	LFT.			
07225	PIPE (GR. A. 0.064" FBCCS) 30"	LFT.			
07275	PIPE (GR. A. 0.064" FBCCS) 36"	LFT.			
07325	PIPE (GR. A. 0.064" FBCCS) 42"	LFT.			
10000	PIPE (GR. D. 0.064" CS) 12"	LFT.			
10025	PIPE (GR. D. 0.064" CS) 15"	LFT.			
10050	PIPE (GR. D. 0.064" CS) 18"	LFT.			
10075	PIPE (GR. D. 0.064" CS) 24"	LFT.			
10100	PIPE (GR. D. 0.064" CS) 30"	LFT.			
10125	PIPE (GR. D. 0.064" CS) 36"	LFT.			
10150	PIPE (GR. D. 0.064" CS) 42"	LFT.			
34000	PIPE (0.052" FBC PER. CS) 12"	LFT.			
28000	PIPE (0.064" FBCCS) 12"	LFT.			
52375	CONC CLASS B IN STRUCTURE	CYS.			
52376	CONC CLASS C IN STRUCTURE	CYS.			
46000	PIPE END SECTION 12"	EACH			
46005	PIPE END SECTION 15"	EACH			
46010	PIPE END SECTION 18"	EACH			
46015	PIPE END SECTION 24"	EACH			
46020	PIPE END SECTION 30"	EACH			
46025	PIPE END SECTION 36"	EACH			
46030	PIPE END SECTION 42"	EACH			
46035	PIPE END SECTION 30"	EACH			
46040	PIPE END SECTION 16"	EACH			
45000	INLET, TYPE A-1	EACH			
45015	INLET, TYPE D-6	EACH			
45030	INLET, TYPE E-7	EACH			
45070	INLET, TYPE P-12A	EACH			
06335	PAVED SIDE DITCH, TYPE A	LFT.			
06340	PAVED SIDE DITCH, TYPE B	LFT.			
06345	PAVED SIDE DITCH, TYPE C	LFT.			
06350	PAVED SIDE DITCH, TYPE D	LFT.			
06355	PAVED SIDE DITCH, TYPE E	LFT.			
06360	PAVED SIDE DITCH, TYPE F	LFT.			
06365	PAVED SIDE DITCH, TYPE G	LFT.			
52831	DRILLED HOLES FOR MUDJACKING	EACH			
52830	MATERIAL FOR MUDJACKING	CYS.			
99660	DO NOT SPRAY SIGNS	EACH			
	REMOVAL OF BITUMINOUS SURFACE	SYS.	1214	1646	2860
	REMOVAL OF BITUMINOUS OVERLAY	SYS.	3084	1480	4564
	ALUMINUM BARRIER RAIL	LFT.	80	128	208
	BARRIER "X" BRACKET AND PLATE	EACH			
	BARRIER RAIL SPLICE BAR	EACH			
	RESET ROADWAY DRAINS	EACH	12		12

APPROACH PAY ITEMS					
CODE NO.	DESCRIPTION	UNIT	STRUCTURE		TOTAL QUANTITY
			1-465 1-465 1-465 1-465	1-465 1-465 1-465 1-465	
06040	47" FENCE, F. FIELD	LFT.			
06045	48" FENCE, CHAIN LINK	LFT.			
52340	CONSTRUCTION SIGNS (TYPE A)	EA	17	10	27
52345	CONSTRUCTION SIGNS (TYPE B)	EA	2	1	3
52350	STD. BARRICADES (TYPE III-4)	EACH			
52640	MAINTAINING TRAFFIC	LSUM			
06650	STOP SIGN, TYPE R-1A	EACH			
06652	DO NOT PASS SIGN, TYPE R-11-A	EACH			
06655	YIELD SIGN, TYPE R-301	EACH			
06657	PASS WITH CARE SIGN, TYPE R-12A	EACH			
06660	CURVE SIGN, TYPE W-2AR	EACH			
06665	CURVE SIGN, TYPE W-2AL	EACH			
06670	REVERSE CURVE SIGN, TYPE W-4AR	EACH			
06675	REVERSE CURVE SIGN, TYPE W-4AL	EACH			
06780	LARGE ARROW SIGN, TYPE W-11A	EACH			
06685	STOP AHEAD SIGN, TYPE W-13A	EACH			
06725	DELINEATOR WITH POST, TYPE D-1, 3 INCH	EACH			
06740	DELINEATOR WITH POST, TYPE D-2, 3 INCH	EACH			
52825	FLEXIBLE DELINEATORS	EACH			
06770	DELINEATOR POST	EACH			
06771	FLEXIBLE DELINEATOR POST	EACH			
52365	TEMPORARY PAVEMENT MARKING TYPE II	LFT.	1920	6829	8749
52367	TEMPORARY PAVEMENT MARKING PAINT	LFT.			
52360	RIGHT-OF-WAY MARKERS	EACH			
06500	MONUMENT, TYPE A	EACH			
06505	MONUMENT, TYPE B	EACH			
06510	MONUMENT, TYPE C	EACH			
06515	MONUMENT, TYPE D	EACH			
52820	FLASHING ARROW SIGN	WKS.	13	13	26
06713	LINE, SOLID, WHITE, 4"	LFT.	1720	1672	3392
06714	LINE, SOLID, YELLOW, 4"	LFT.	1720	1672	3392
06702	THERMOPLASTIC LINE, SKIP WHITE, 5"	LFT.	1535	856	2391
06711	LINE, SKIP, WHITE, 4"	LFT.	1535	856	2391
06712	LINE, SKIP, YELLOW, 4"	LFT.	1535	856	2391
06716	REMOVAL OF LINE, SOLID, WHITE, 4"	LFT.	1720	1672	3392
06717	REMOVAL OF LINE, SOLID, YELLOW, 4"	LFT.	928	922	1850
06718	REMOVAL OF LINE, SKIP, WHITE 4"	LFT.	2025	802	2827
56900	REMOVAL OF LINE, SKIP, YELLOW 4"	LFT.			
53055	RE				