

VERMILION

92-12(HB-4, B-1)BR

I & R COPY

3-20-92

#111

Contractor: Oneil Bros. Construction
Resident: George Davis
Built: 5/4/92 ~ 6/13/94

98%
12-11-93

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DIVISION OF HIGHWAYS

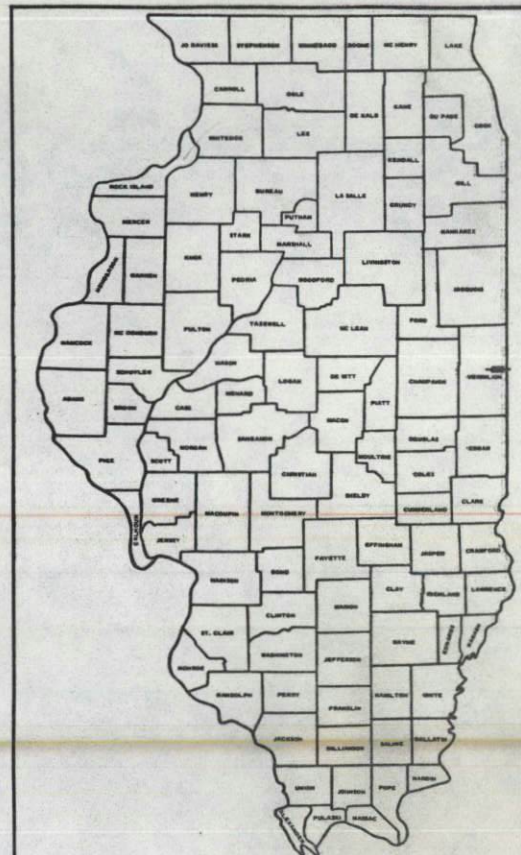
PLANS FOR PROPOSED
FEDERAL AID INTERSTATE HIGHWAY

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.R.I. 74	92-12(HB-4, B-1)BR	VERMILION	65	1
F.H.W.A. REG.	ILLINOIS	PROJECT	IM-74-6 (136) 216	

D95-026-89

FOR INDEX OF SHEETS, SEE SHEET NO. 3
FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 5/6

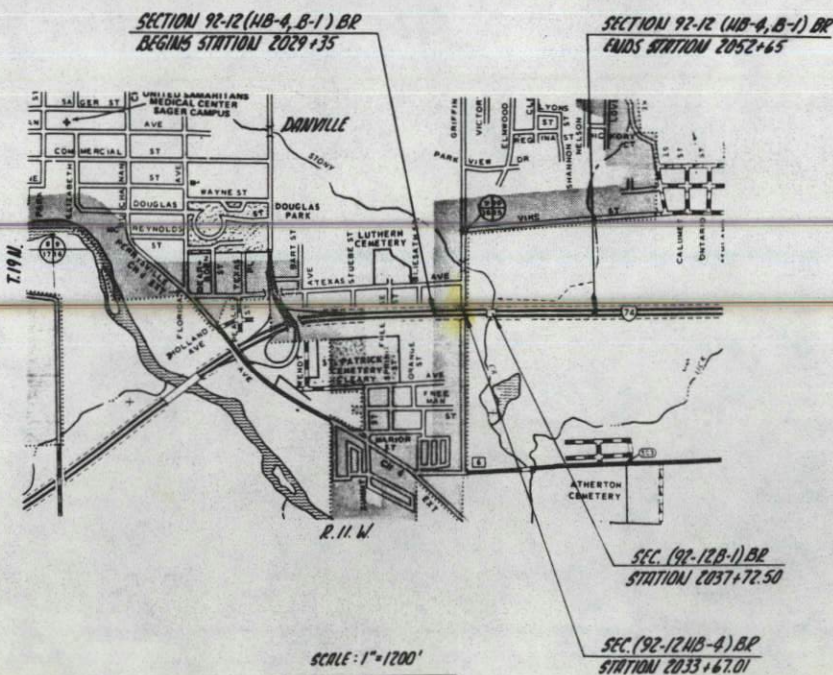
SCALES { PLAN 1"=100'
PROFILE HOR.
PROFILE VERT.
CROSS-SECTIONS



LOCATION OF SECTION INDICATED THUS: —

F.A.I. ROUTE 74
SECTION 92-12(HB-4, B-1)BR
VERMILION COUNTY
PROJECT IM-74-6 (136) 216
C-95-044-91
BRIDGE REHABILITATION

AS BUILT



SCALE: 1"=1200'

TOTAL ROAD NET LENGTH OF SECTION 92-12(HB-4, B-1)BR = 2330.00 FT. = 0.441 MILES
TOTAL ROAD NET LENGTH OF PROJECT = 2330.00 FT. = 0.441 MILES

DESIGN DESIGNATION
N/A

CONTRACT NO. 90313

TOLL FREE J.U.L.I.E. TELEPHONE NO.
1-800-892-0123
DANVILLE TOWNSHIP

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED Jan. 10 1992
EXAMINED 30
PASSED February 14 1992
APPROVED February 11 1992

John Benson DISTRICT ENGINEER
Ray D. Gould ENGINEER OF PLANS AND CONTRACTS
Ralph C. Weber ENGINEER OF DESIGN
Ralph C. Weber DIRECTOR, DIVISION OF HIGHWAYS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
DIVISION ADMINISTRATOR DATE _____

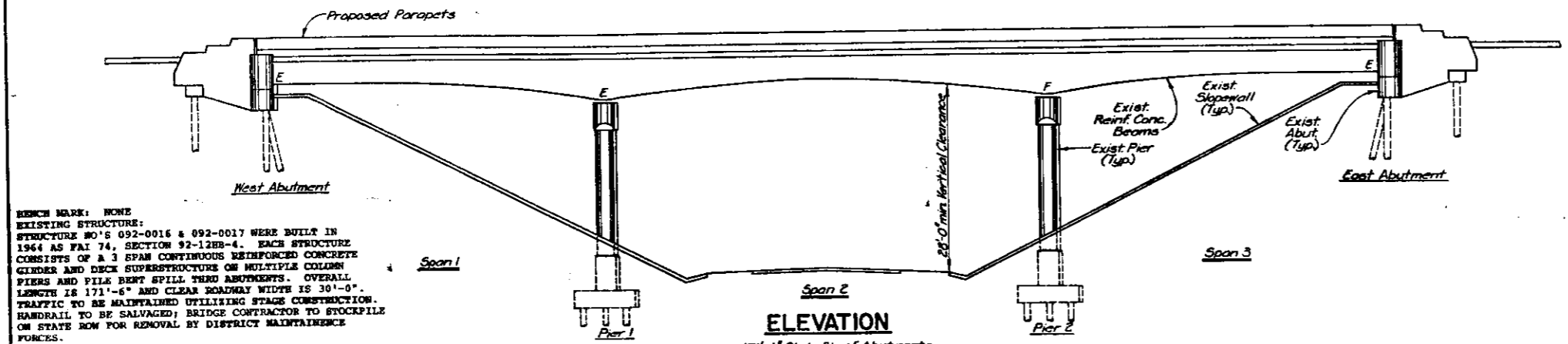
092-0016 & -0017

PROJECT ENGINEER: PHIL KROEMER
SQUAD LEADER: FRANK SEGER

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	X	Vermilion	65	17
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		

* SEC. (92-12HB-4)X
GENERAL NOTES

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42, OR M-53 GRADE 60.
 PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.



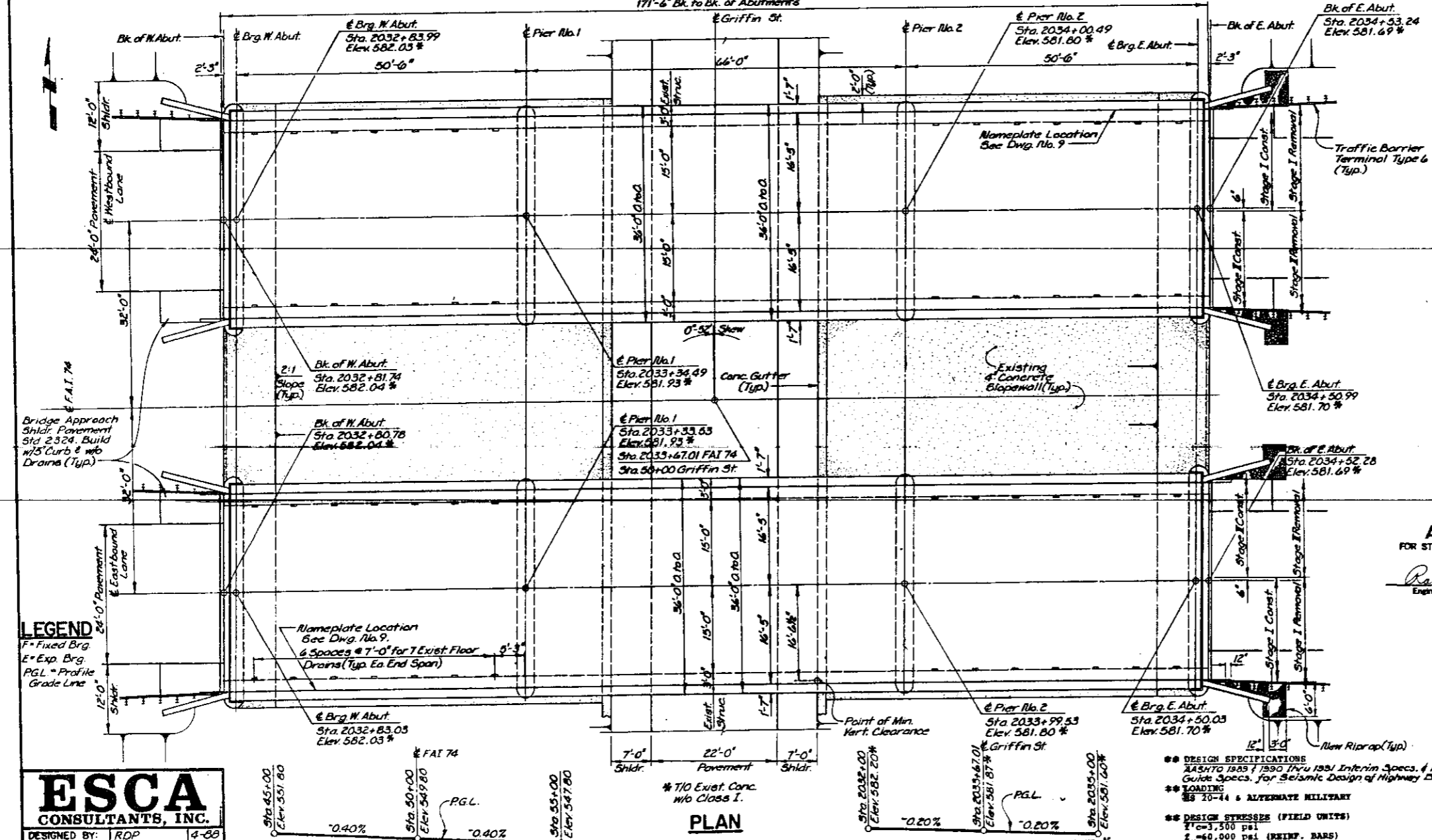
REMARK: NONE
 EXISTING STRUCTURE:
 STRUCTURE NO'S 092-0016 & 092-0017 WERE BUILT IN 1944 AS FAI 74, SECTION 92-12HB-4. EACH STRUCTURE CONSISTS OF A 3 SPAN CONTINUOUS REINFORCED CONCRETE GIRDERS AND DECK SUPERSTRUCTURE ON MULTIPLE COLUMN PIERS AND PILE BENT SPILL THRU ABUTMENTS. OVERALL LENGTH IS 171'-6" AND CLEAR ROADWAY WIDTH IS 30'-0". TRAFFIC TO BE MAINTAINED UTILISING STAGE CONSTRUCTION. HANDRAIL TO BE SALVAGED; BRIDGE CONTRACTOR TO STOCKPILE ON STATE ROW FOR REMOVAL BY DISTRICT MAINTENANCE FORCES.

ELEVATION
 171'-6" Bk. to Bk. of Abutments

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUCTURE	SUB STRUCTURE	TOTAL
Protective Coat	Sq.Yd.	743	-	743
Concrete Removal	Cu.Yd.	83.4	13.0	96.4
Class X Concrete Superstructure	Cu.Yd.	78.0	-	78.0
Class X Concrete	Cu.Yd.	-	12.2	12.2
Structural Steel	Lbs.	510	-	510
Handrail Removal	Lin.Ft.	677	-	677
Bridge Deck Conc. Overlay Optics	Sq.Yd.	1,236	-	1,236
Reinforcement Bars (Epoxy Coated)	Lbs.	17,250	900	18,150
Bituminous Conc. Surface Removal	Sq.Yd.	1,129	-	1,129
Conc. Bridge Deck Scarification (1/2")	Sq.Yd.	1,231	-	1,231
Deck Slab Repair (Full Depth, Type I)	Sq.Yd.	45	-	45
Deck Slab Repair (Partial Depth)	Sq.Yd.	170	-	170
Epoxy Crack Sealing	Lin.Ft.	382	-	382
Epoxy Mortar Repair	Cu.Ft.	43.2	1	44.2
Preformed Joint Sealer (2 1/2")	Lin.Ft.	70	-	70
Preformed Joint Sealer (4")	Lin.Ft.	70	-	70
Concrete Removal (Special)	Cu.Yd.	5.9	-	5.9

* Quantity includes Bridge Deck Surface.



APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Anderson
 Engineer of Bridges and Structures



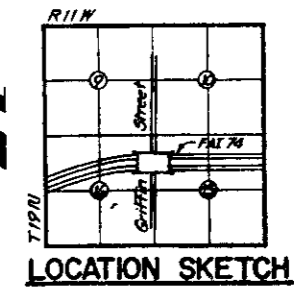
ESCA
 CONSULTANTS, INC.

DESIGNED BY:	RDP	4-88
DRAWN BY:	HEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

GRIFFIN STREET PROFILE GRADE
 (Along & Pavement)

FAI 74 PROFILE GRADE
 (Along & Pavement)

- DESIGN SPECIFICATIONS: AASHTO 1989, 1990 thru 1991 Interim Specs., & 1963 Guide Specs. for Seismic Design of Highway Bridges.
- LOADING: HS 20-44 & ALTERNATE MILITARY
- DESIGN STRESSES (FIELD UNITS):
 f_c = 3,500 psi
 f_s = 60,000 psi (REINP. BARS)
- NEW CONSTRUCTION ONLY

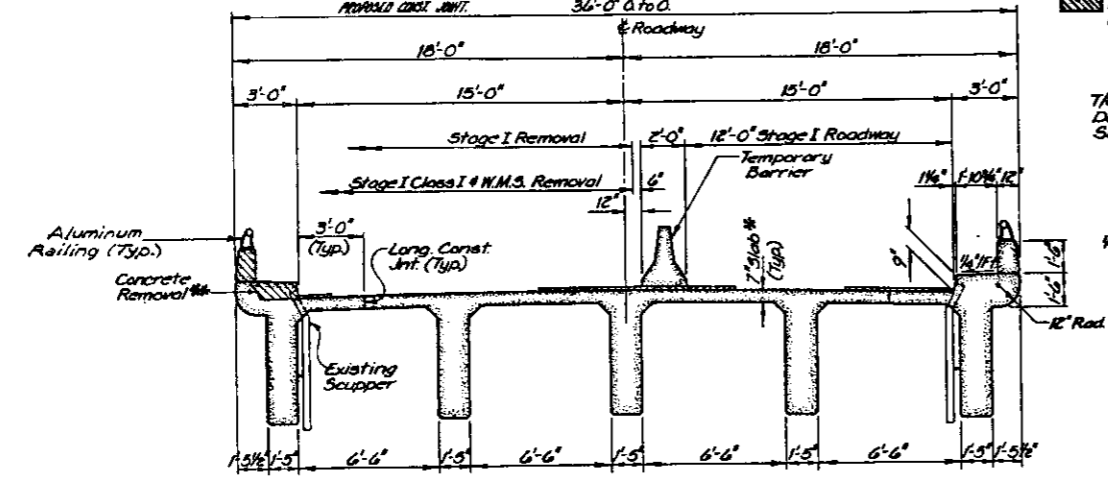


GENERAL PLAN & ELEVATION
 FAI 74 OVER GRIFFIN STREET
 FAI RTE. 74 SECTION 92-12HB-4)X
 VERMILION COUNTY
 STATION 2033+67.01
 STRUCTURE NO. 092-0016 (EB)
 STRUCTURE NO. 092-0017 (WB)

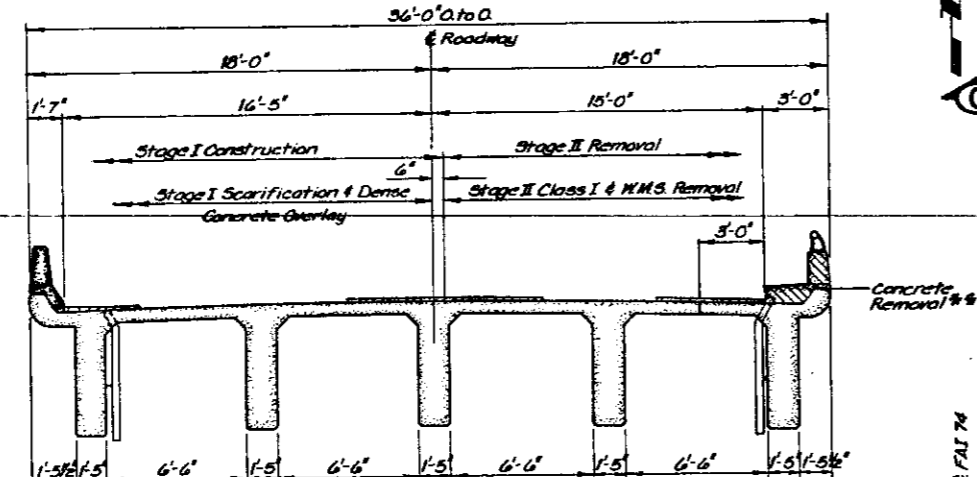
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	*	Vermilion	65	48
STA.	TO STA.		PROJECT	
FED. ROAD DIST. NO.	ILLINOIS	Dwg. No. 2 of 15		

PARAPET & SAFETY WALK REMOVAL SEQUENCE

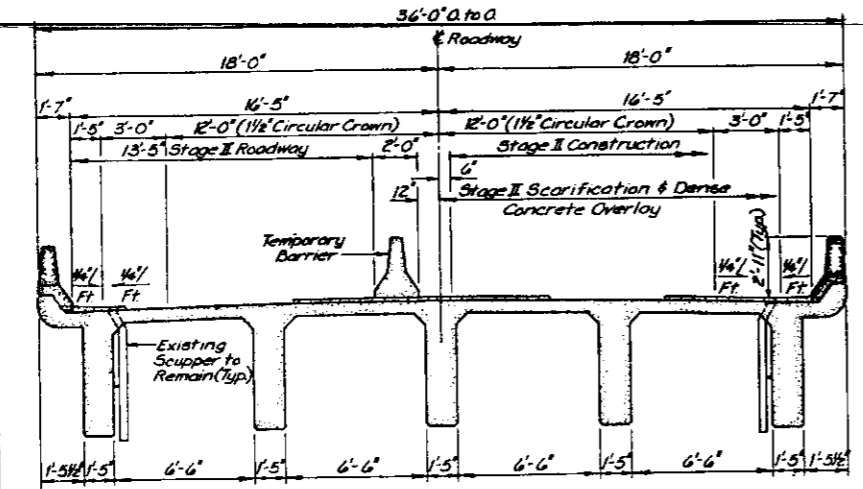
- Remove Parapet Above Safety Walk
 - Sawcut as shown & remove to Rough Removal Line
 - Complete Removal to Finish Line
- THE CONTRACTOR WILL HAVE THE OPTION OF REMOVING EXISTING ALUMINUM RAILING TO THE APPROX. CENTER LINE.



** See Section A-A this dwg. Provide Partial & Full Depth Patching for areas not removed.



Note: For Temporary Concrete Barrier see sheet 14 of 14. Cost of removing aluminum railing and delivering to the District is incidental to "Concrete Removal Special."



CROSS SECTIONS SHOWING STAGE REMOVAL & CONST.
(LOOKING EAST, WESTBOUND LANE; LOOKING WEST, EASTBOUND LANE)

LEGEND

- Removal by Small Hammer (45lb.) or Water Jet. Paid For as Conc. Removal.
- Removal by Small Hammer (30lb.) or Water Jet. Paid For as Concrete Removal (Special)

1/10 Exist. Conc. Deck (W/O Bit Surface)
1/4" Deck Scarification

SECTION A-A
(Showing Limits of Conc. Removal and 1/4" Deck Scarification)

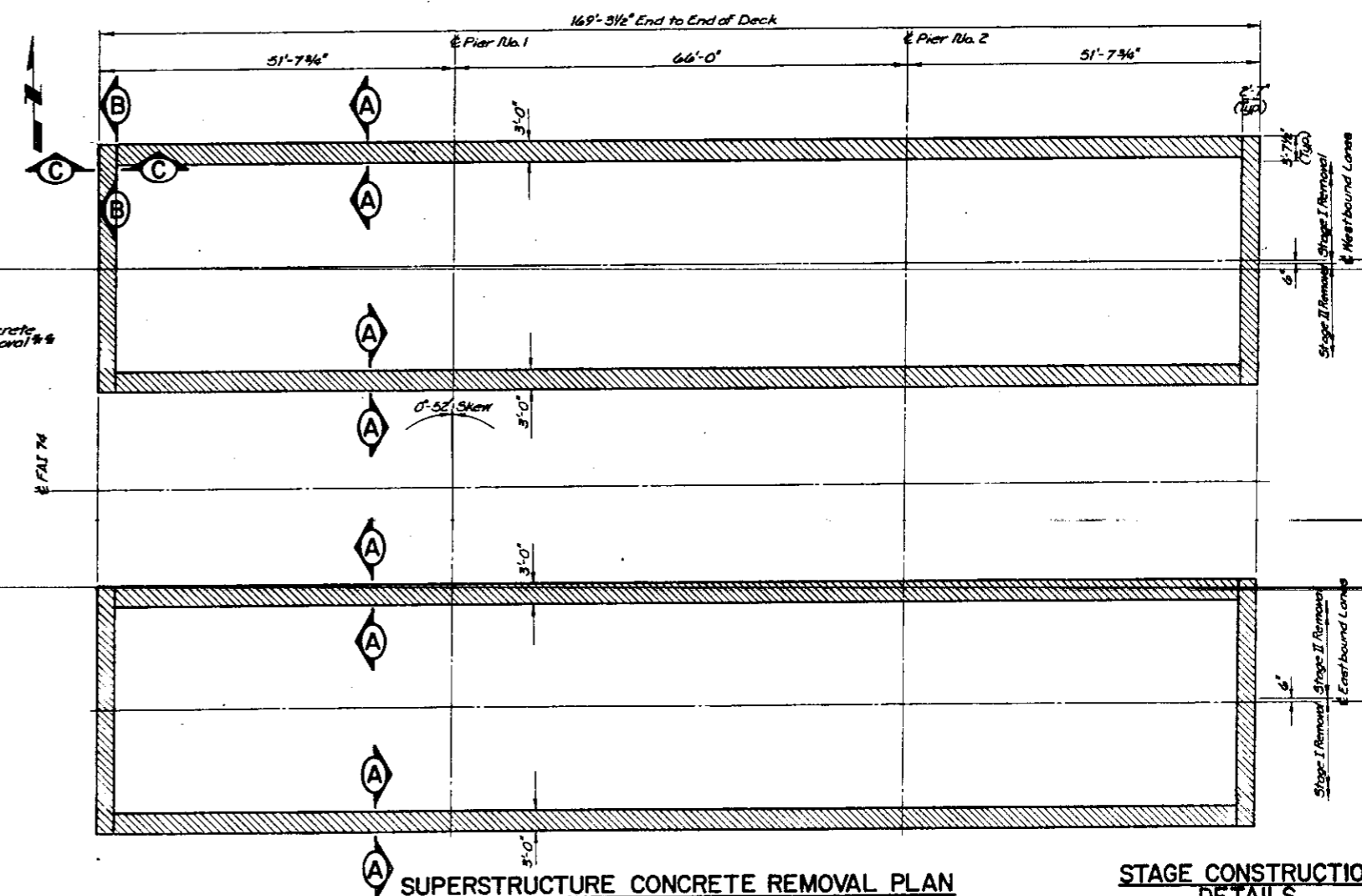
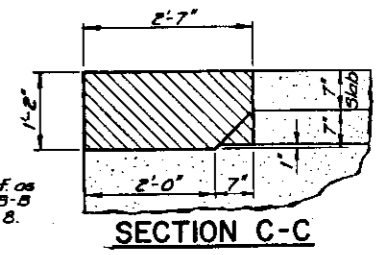
1/10 Exist. Conc. Deck (W/O Bit Surface)
1/4" Deck Scarification

SECTION B-B

Note: Preserve Exist. Reinf. as shown on Sections B-B and C-C on Dwg. 7 & 8.

NOTES

- HATCHED AREAS INDICATE CONCRETE REMOVAL.
- THE COST OF REMOVING EXISTING EXPANSION GUARD ANGLES, BARS, AND PLATES WITHIN CONCRETE REMOVAL AREAS IS INCIDENTAL TO "CONCRETE REMOVAL."
- THE COST OF REMOVING THE EXISTING NEOPRENE JOINT SEAL IS INCIDENTAL TO "CONCRETE REMOVAL."
- QUANTITY FOR TEMPORARY CONCRETE BARRIER IS INCLUDED IN ROADWAY PLANS.



BILL OF MATERIAL
(TWO SUPERSTRUCTURES)

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	83.4
Concrete Removal (Special)	Cu. Yd.	5.9

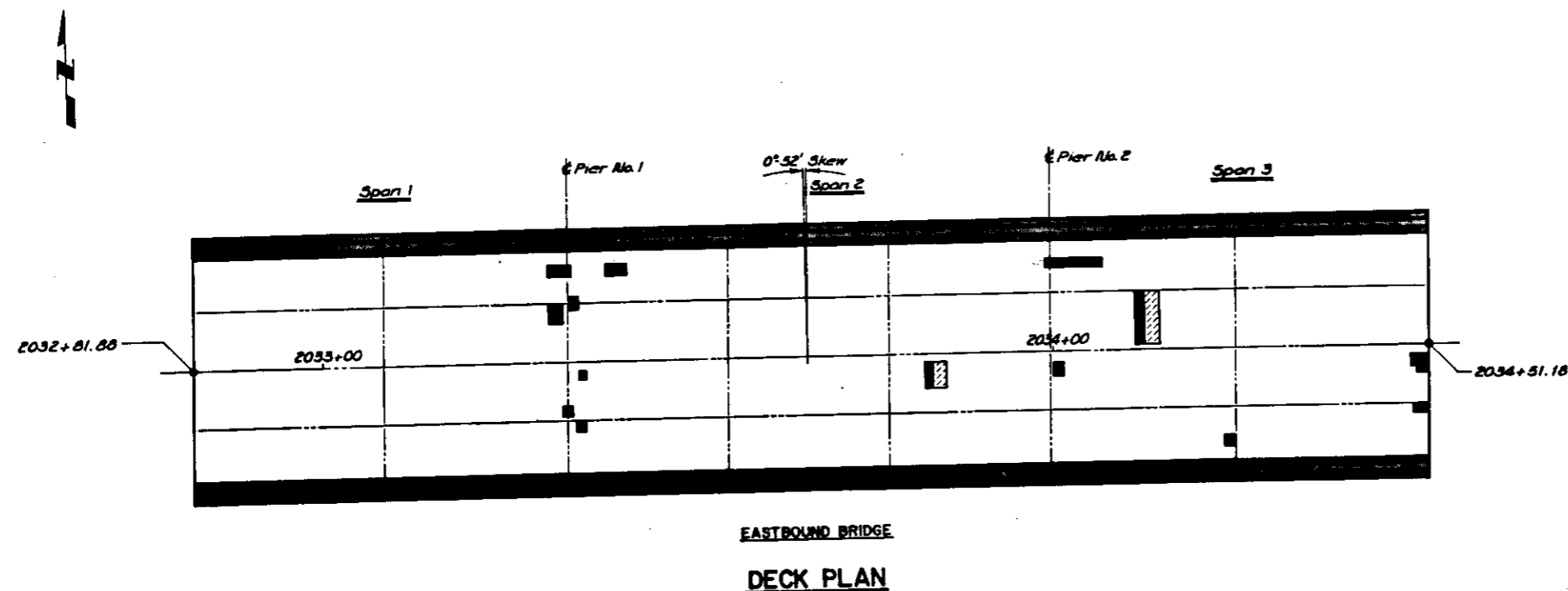
STAGE CONSTRUCTION DETAILS
FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12HB-4)B
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016 (EB)
STRUCTURE NO. 092-0017 (WB)

ESCA
CONSULTANTS, INC.

DESIGNED BY:	RDP	4-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	X	VERMILION	65	19
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS PROJECT			

*SEC (92-12MB-4) Dwg. No. 3 of 15



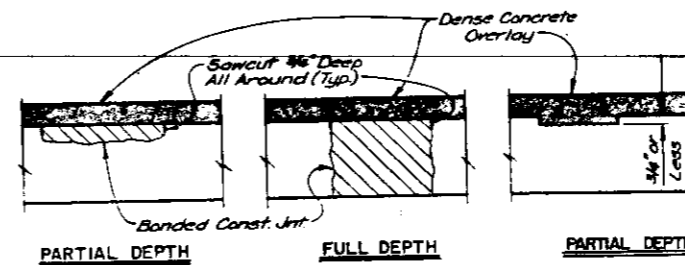
GENERAL NOTES

1. THIS PLAN SHOWS APPROXIMATE LOCATIONS OF DECK REPAIRS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. PROPOSED PATCHING LOCATIONS WERE DETERMINED BY AN OCTOBER, 1986 THERMOGRAPHY SURVEY, AND A CORRELATION WITH DECK CORING.
3. THE PATCHING QUANTITIES WERE ADJUSTED _____ 19 _____ ACCORDING TO DELAMINATION SURVEY PERFORMED ON 7-8-91
4. Full and Partial Deck Slab Repair shall be completed before the placement of Dense Concrete Overlay.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Deck Slab Repair (Full Depth, Type 1)	Sq. Yd.	6*
Deck Slab Repair (Partial Depth)	Sq. Yd.	12*

* Estimated Quantity.



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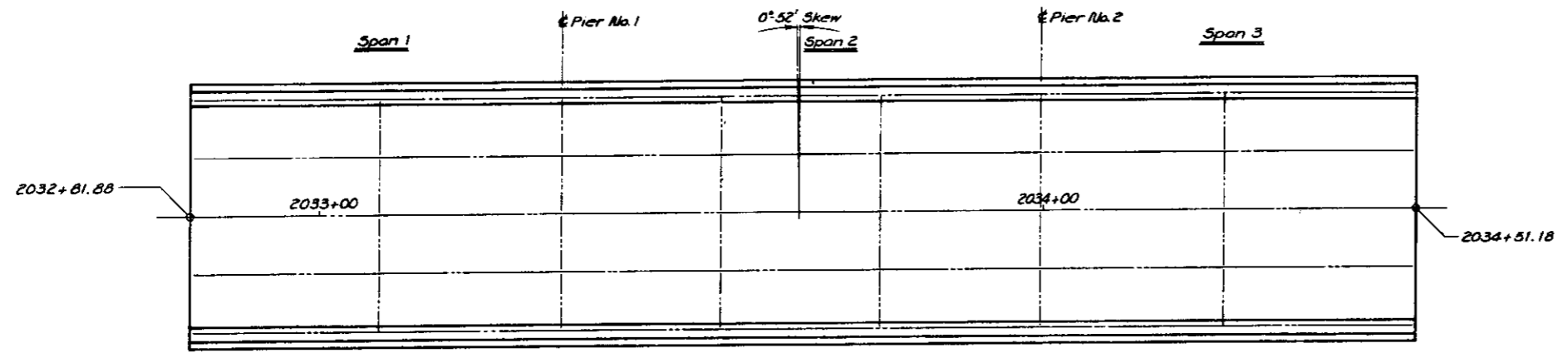
DESIGNED BY:	RDP	4-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

LEGEND

	Concrete Removal
	Full Depth Patch
	Partial Depth Patch

**EASTBOUND LANES
PROPOSED
DECK SLAB REPAIR
FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12MB-4)B
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016(EB)
STRUCTURE NO. 092-0017(WB)**

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	F	VERMILION	65	20
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
*Src (92-12HB-4)B		Dwg. No. 4 of 15		



EASTBOUND BRIDGE
DECK PLAN

AS-BUILT QUANTITIES

ITEM	UNIT	QUANTITY
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	
Deck Slab Repair (Partial Depth)	Sq. Yd.	

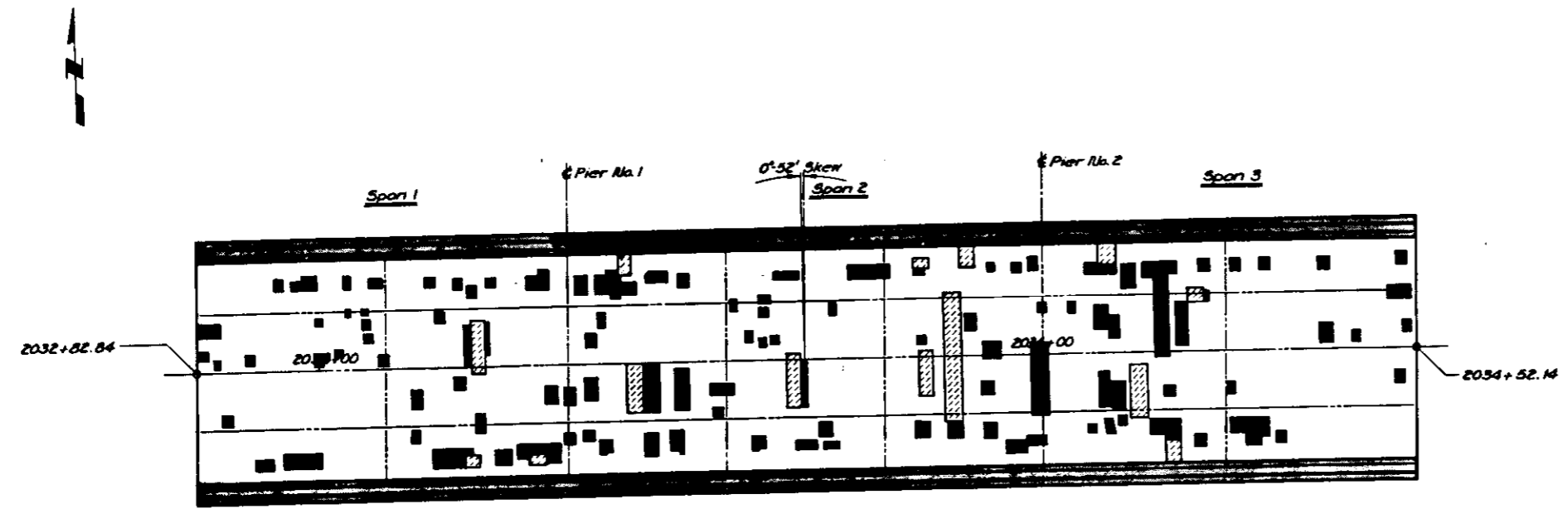
ESCA
CONSULTANTS, INC.

DESIGNED BY:	RDP	9-88
DRAWN BY:	WEM	9-88
CHECKED BY:	WEM	9-88
APPROVED BY:	RDP	9-88

EASTBOUND LANES
AS-BUILT
DECK SLAB REPAIRS
FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12HB-4)B
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016 (EB)
STRUCTURE NO. 092-0017 (WB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FR 74	2	VERMILION	65	21
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
		Dwg. No. 5 of 15		

*SEC (92-12HB-4)BR



WESTBOUND BRIDGE
DECK PLAN

GENERAL NOTES

1. THIS PLAN SHOWS APPROXIMATE LOCATIONS OF DECK REPAIRS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
2. SEE DWG. NO. 3 FOR PATCH DETAILS.
3. PROPOSED PATCHING LOCATIONS WERE DETERMINED BY AN OCTOBER, 1986 THERMOGRAPHY SURVEY, AND A CORRELATION WITH DECK CORING.
4. THE PATCHING QUANTITIES WERE ADJUSTED 13 ACCORDING TO DELAMINATION SURVEY PERFORMED ON 7-8-87.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Deck Slab Repair (Full Depth, Type I)	Sq Yd	35 *
Deck Slab Repair (Partial Depth)	Sq Yd	131 *

* Estimated Quantity

**WESTBOUND LANES
PROPOSED
DECK SLAB REPAIR
FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12HB-4)
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016(EB)
STRUCTURE NO. 092-0017(WB)**

ESCA
CONSULTANTS, INC.

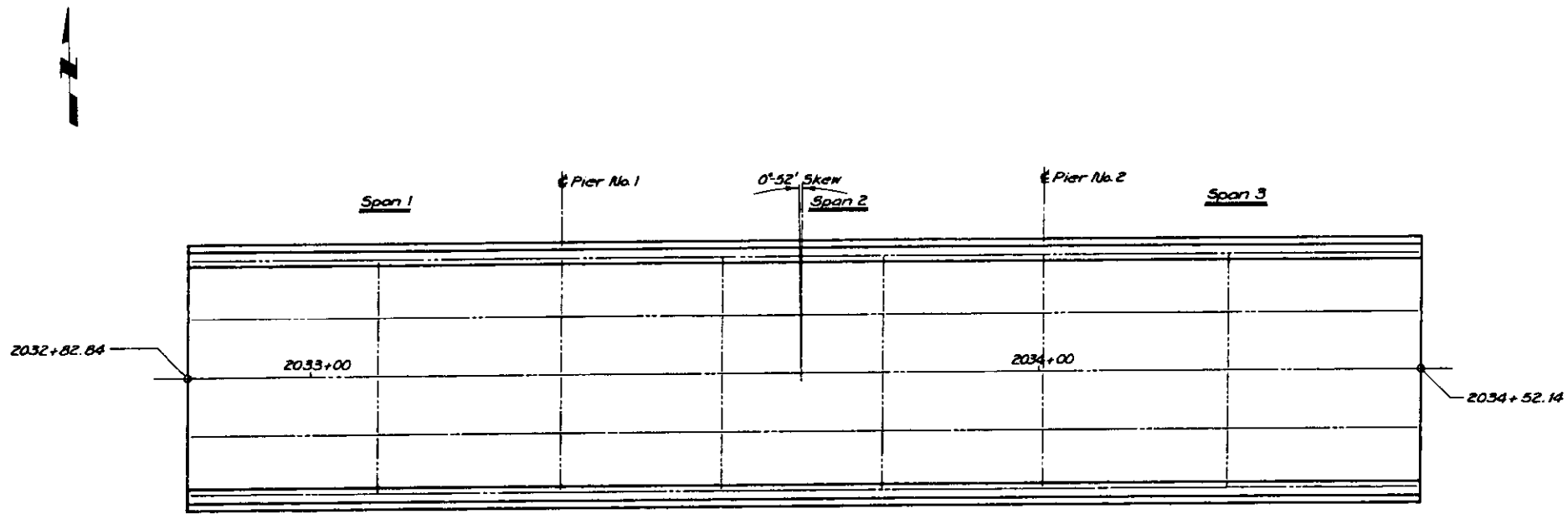
DESIGNED BY:	RDP	4-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

LEGEND

- Concrete Removal
- Full Depth Patch
- Partial Depth Patch

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	2	VERMILION	65	22
STA.	TO STA.			
FED. ROAD DIST. NO.	ILL. PROJ. NO.	PROJECT		
		Dwg No 6 of 15		

* SEC (92-12 HB-4) BK



WESTBOUND BRIDGE

DECK PLAN

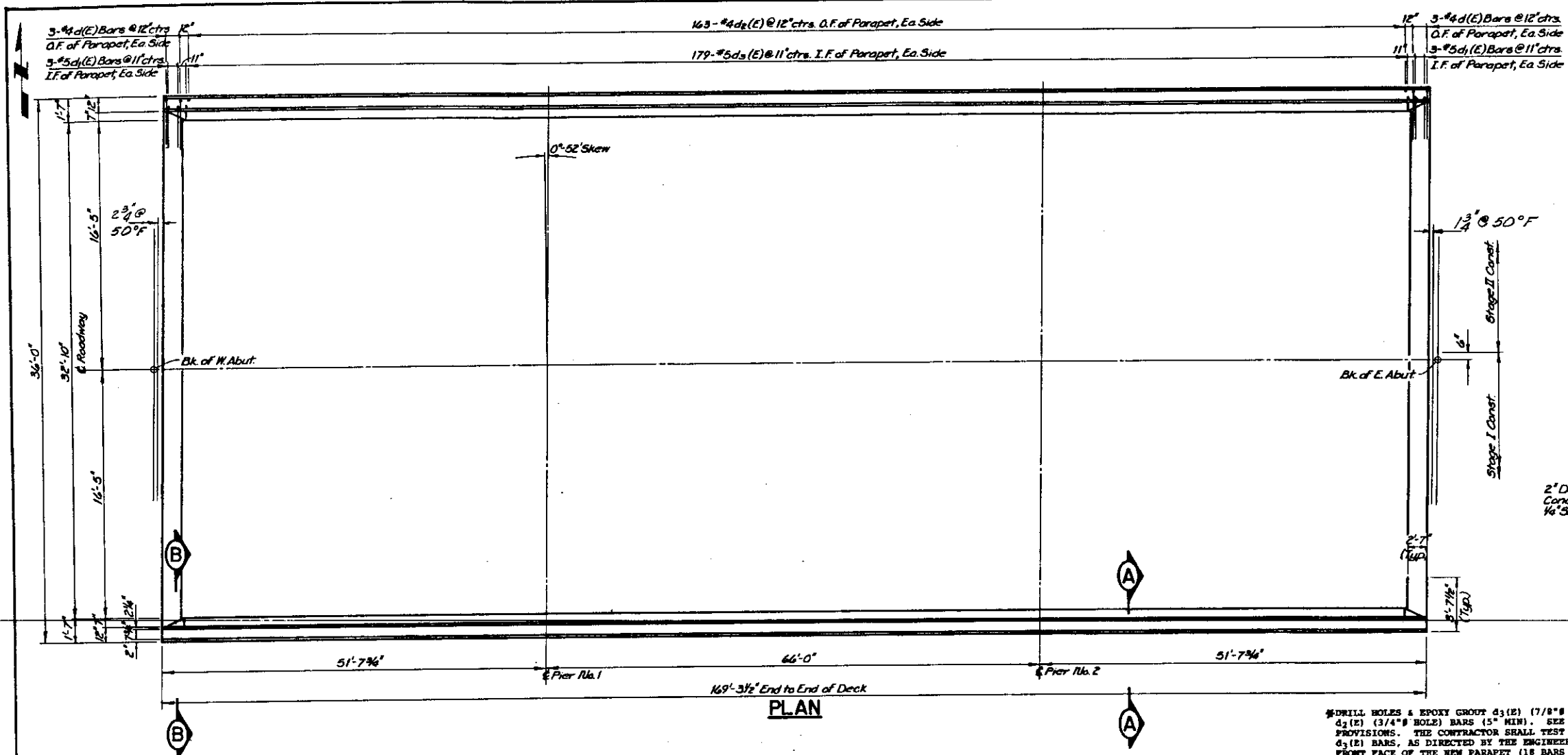
ESCA CONSULTANTS, INC.		
DESIGNED BY:	RDP	9-88
DRAWN BY:	WEM	9-88
CHECKED BY:	WEM	9-88
APPROVED BY:	RDP	9-88

WESTBOUND LANES
AS-BUILT
DECK SLAB REPAIRS
FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12HB-4) BK
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016 (EB)
STRUCTURE NO. 092-0017 (WB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	2	Vermilion	45	23
STA	TO STA		PROJECT	
FED. ROAD DIST. NO.	ALL WORK	PROJECT		
	Dwg No. 7 of 15			

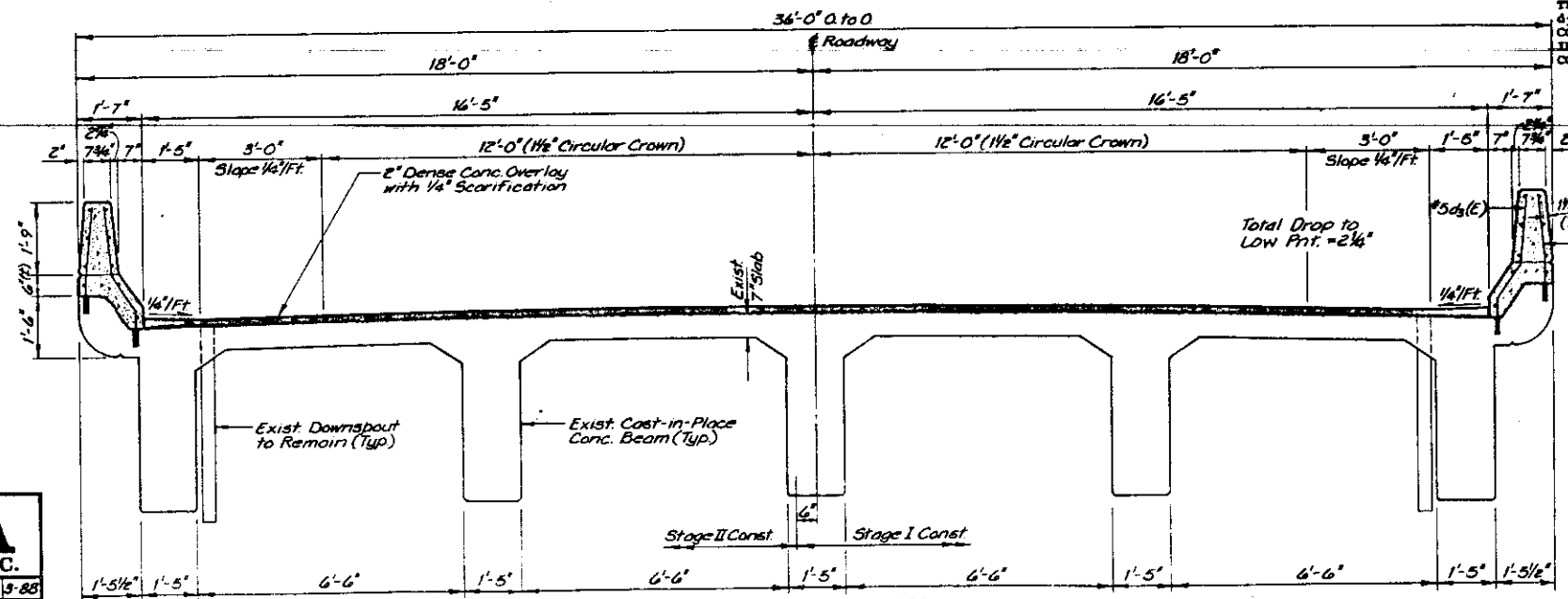
NOTES

- SEE DWGS. 9 & 10 FOR SUPERSTRUCTURE DETAILS & BILL OF MATERIAL.
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- EXISTING REINFORCEMENT WHICH EXTENDS INTO CONCRETE REMOVAL AREAS BEYOND BONDED JOINTS SHALL BE CLEANED AND INCORPORATED INTO THE NEW CONSTRUCTION. COST INCIDENTAL TO CLASS X CONCRETE.
- JOINTS IN PARAPET NOT SHOWN. SEE DWG. NO. 9 FOR DETAILS.



PLAN

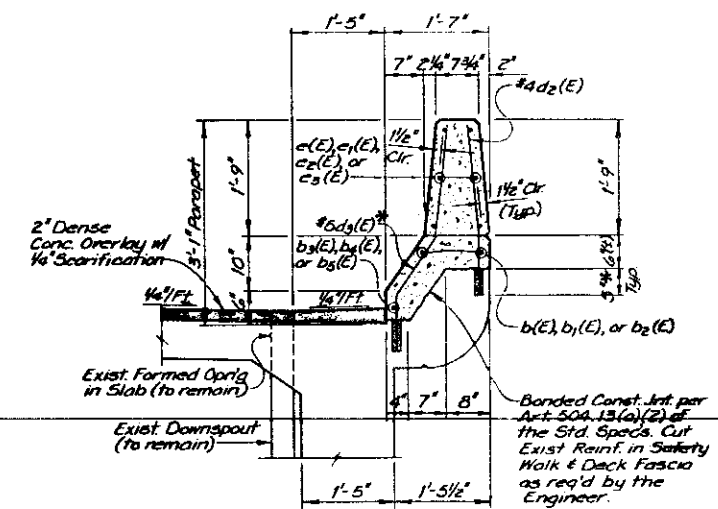
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 O.F. = Outside Face



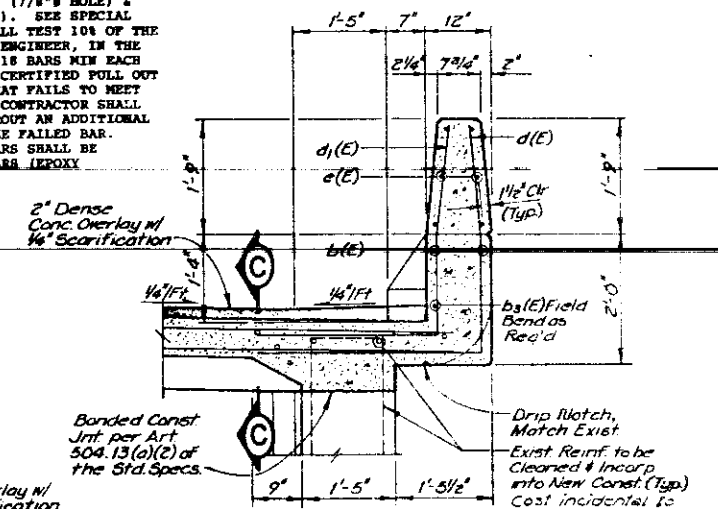
CROSS SECTION (LOOKING EAST)

ESCA CONSULTANTS, INC.

DESIGNED BY:	RDP	5-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

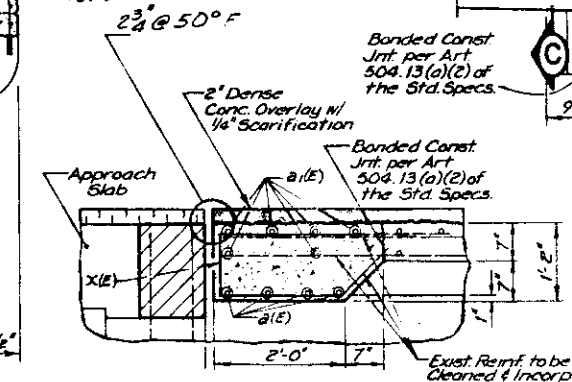


SECTION A-A



SECTION B-B

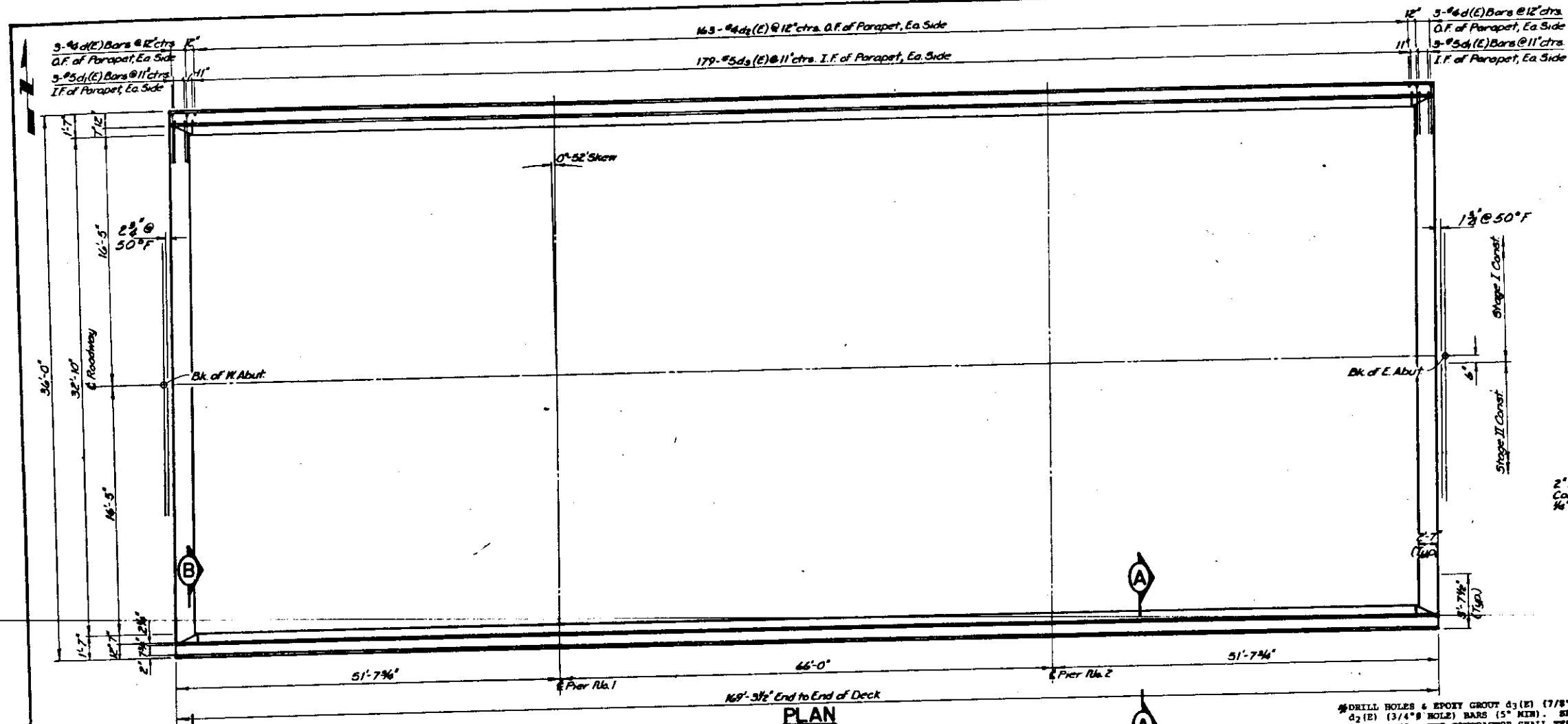
*DRILL HOLES & EPOXY GROUT #3(E) (7/8" HOLE) & #4(E) (3/4" HOLE) BARS (5" MIN). SEE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TEST 10% OF THE #3(E) BARS, AS DIRECTED BY THE ENGINEER, IN THE FRONT FACE OF THE NEW PARAPET (18 BARS MIN EACH SIDE OF BRIDGE) TO MEET A MIN. CERTIFIED PULL OUT LOAD OF 9.2K. FOR EVERY BAR THAT FAILS TO MEET THE PULL OUT LOAD OF 9.2K, THE CONTRACTOR SHALL TEST TWO ADDITIONAL BARS & REGROUT AN ADDITIONAL #3(E) BAR #4" EITHER SIDE OF THE FAILED BAR. COST OF TESTING & ADDITIONAL BARS SHALL BE INCIDENTAL TO "REINFORCEMENT BARS (EPOXY COATED)".



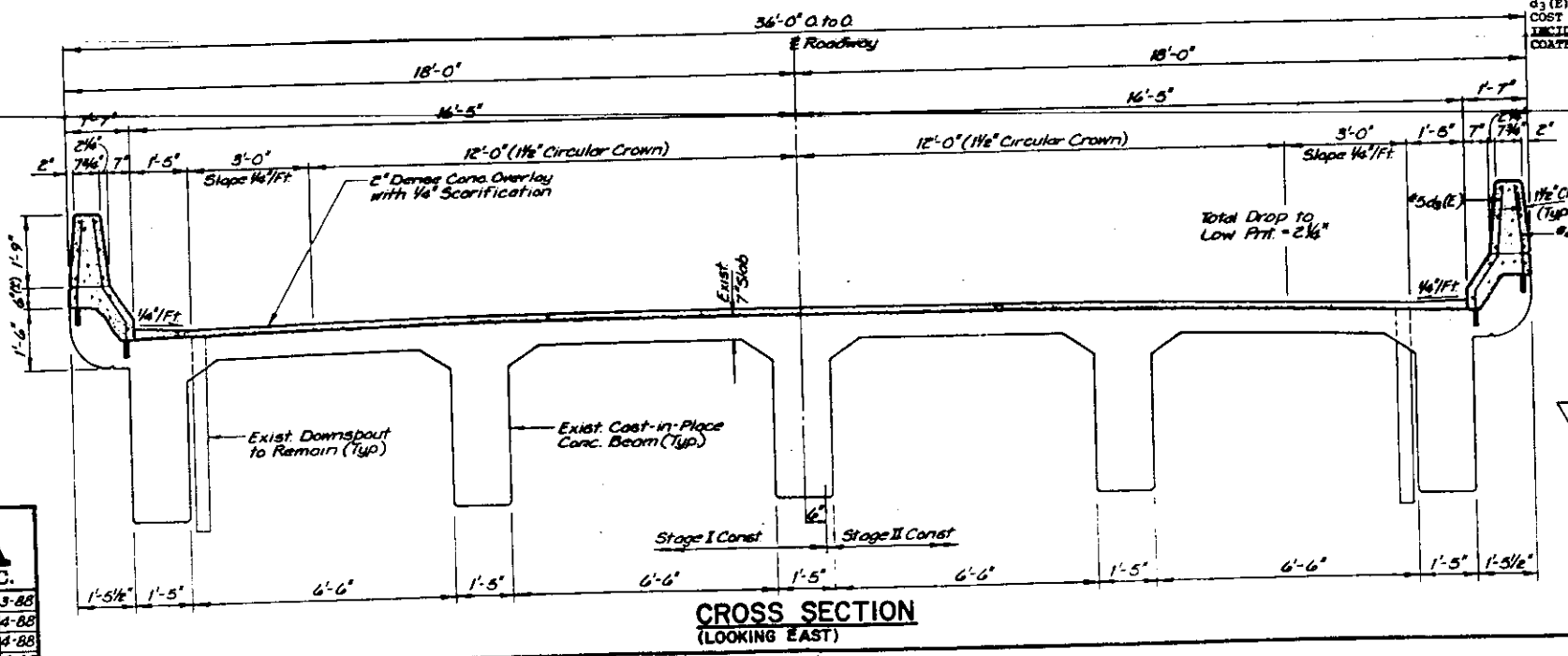
SECTION C-C

SUPERSTRUCTURE (EASTBOUND LANES)
 FAI 74 OVER GRIFFIN STREET
 FAI RTE. 74 SECTION (92-12HB-4)BR
 VERMILION COUNTY
 STATION 2033+67.01
 STRUCTURE NO. 092-0016 (EB)
 STRUCTURE NO. 092-0017 (WB)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	II	Vermilion	65	29
STA	TO STA		ILLINOIS PROJECT	
FED ROAD DIST NO.	PROJECT		DRAWING NO. 8 of 15	
X.S.R. 092-12HB-418				

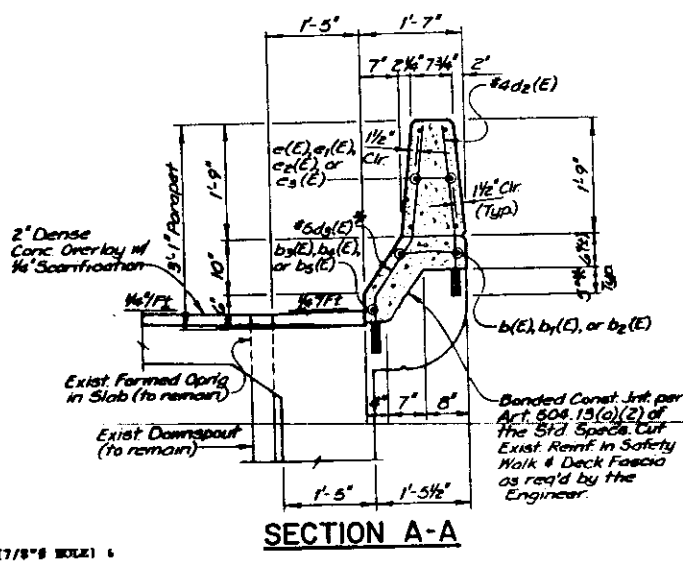


LEGEND
 I.F. = Inside Face
 O.F. = Outside Face

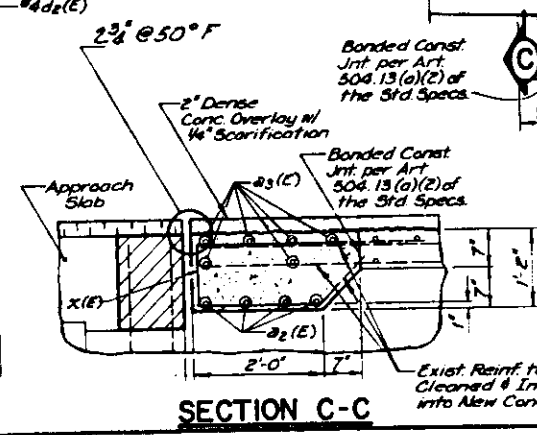
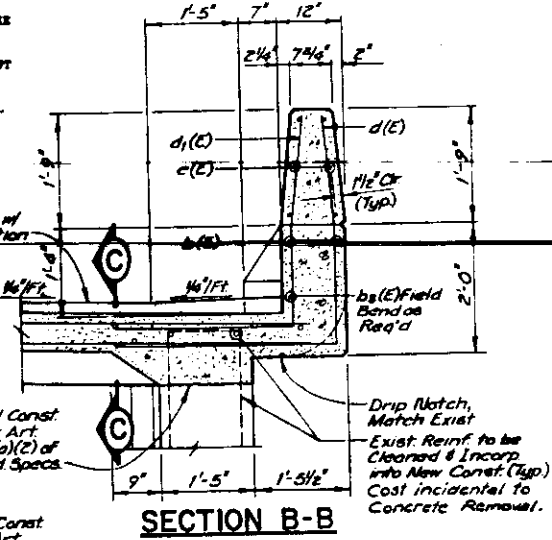


NOTES

- SEE DWGS. 9 & 10 FOR SUPERSTRUCTURE DETAILS & BILL OF MATERIAL.
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- EXISTING REINFORCEMENT WHICH EXTENDS INTO CONCRETE REMOVAL AREAS BEYOND BONDED JOINTS SHALL BE CLEANED AND INCORPORATED INTO THE NEW CONSTRUCTION. COST INCIDENTAL TO CLASS X CONCRETE.
- JOINTS IN PARAPET NOT SHOWN. SEE DET. NO. 9 FOR DETAILS.



DRILL HOLES & EPOXY GROUT $d_3(E)$ (7/8" HOLE) & $d_2(E)$ (3/4" HOLE) BARS (5" MIN). SEE SPECIAL PROVISIONS. THE CONTRACTOR SHALL TEST 10% OF THE $d_3(E)$ BARS, AS DIRECTED BY THE ENGINEER, IN THE FRONT FACE OF THE NEW PARAPET (15 BARS MIN EACH SIDE OF BRIDGE) TO MEET A MIN. CERTIFIED PULL OUT LOAD OF 9.2k. FOR EVERY BAR THAT FAILS TO MEET THE PULL OUT LOAD OF 9.2k, THE CONTRACTOR SHALL TEST TWO ADDITIONAL BARS & REGROUT AN ADDITIONAL $d_3(E)$ BAR 14" EITHER SIDE OF THE FAILED BAR. COST OF TESTING & ADDITIONAL BARS SHALL BE INCIDENTAL TO "REINFORCEMENT BARS (EPOXY COATED)".



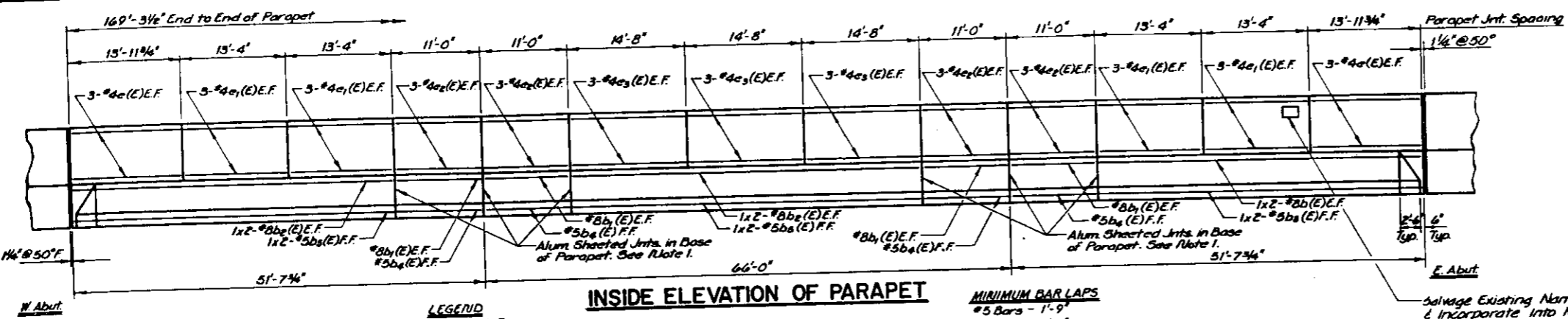
SUPERSTRUCTURE (WESTBOUND LANES)
 FAI 74 OVER GRIFFIN STREET
 FAI RTE. 74 SECTION (92-12HB-4)18
 VERMILION COUNTY
 STATION 2033+67.01
 STRUCTURE NO. 092-0016(EB)
 STRUCTURE NO. 092-0017(WB)

ESCA
 CONSULTANTS, INC.
 DESIGNED BY: RDP 3-88
 DRAWN BY: WEM 4-88
 CHECKED BY: JRF 4-88
 APPROVED BY: RDP 4-88

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET NO.
FAI 74	*	Kern/Kern	65	25
STA.	TO STA.			
FED. ROAD DIST. NO.		ALLOBS	PROJECT	
			Dwg No 9 of 15	

NOTES

1. PROVIDE 1/8" ALUMINUM SHEETS IN BASE OF PARAPET AT LOCATIONS SHOWN. THESE LOCATIONS ARE INTENDED TO MATCH LOCATIONS OF EXISTING ALUMINUM SHEETS IN SAFETY WALK, WHICH ARE BEING PARTIALLY REMOVED. CUT NEW SHEETS TO MATCH CROSS SECTION OF NEW CONCRETE. COST INCIDENTAL.
2. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
3. BARS INDICATED THUS: 1 X 2-#8, ETC., INDICATES 1 LINE OF BARS WITH 2 LENGTHS PER LINE.



INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAPS
 #5 Bars - 1'-9"
 #8 Bars - 5'-1"

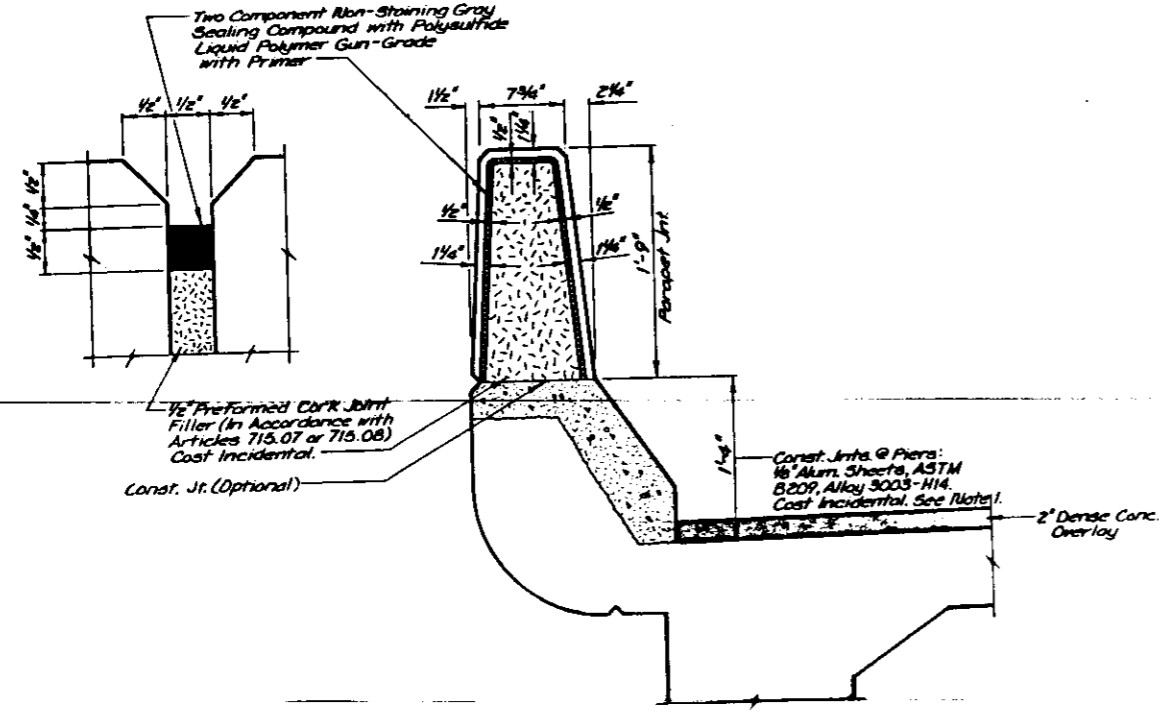
LEGEND
 E.F. - Each Face
 F.F. - Front Face

BILL OF MATERIAL
 (TWO SUPERSTRUCTURES)

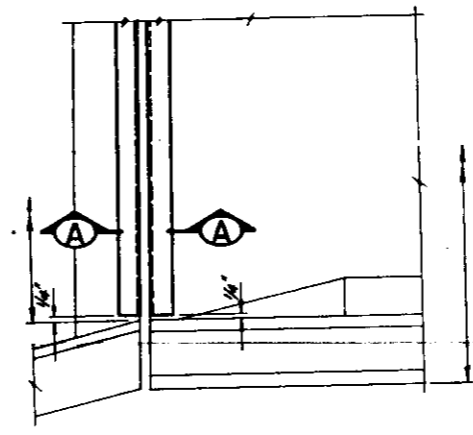
BAR	NO.	SIZE	LENGTH	SHAPE
b(E)	32	#8	22'-9"	—
b ₁ (E)	32	#8	10'-8"	—
b ₂ (E)	16	#8	24'-6"	—
b ₃ (E)	32	#5	21'-1"	—
b ₄ (E)	32	#5	10'-8"	—
b ₅ (E)	16	#5	22'-9"	—
a(E)	16	#7	16'-8"	—
a ₁ (E)	24	#5	17'-9"	—
a ₂ (E)	16	#7	15'-9"	—
a ₃ (E)	24	#5	16'-10"	—
d(E)	24	#4	6'-8"	—
d ₁ (E)	24	#5	5'-9"	—
*d ₂ (E)	652	#4	2'-5"	—
d ₃ (E)	716	#5	3'-5"	—
e(E)	48	#4	13'-7"	—
e ₁ (E)	96	#4	13'-0"	—
e ₂ (E)	96	#4	10'-8"	—
e ₃ (E)	72	#4	14'-4"	—
x(E)	132	#4	5'-6"	—

ITEM	UNIT	QUANTITY
Close X Conc. Superstructure	Cu Yds	78.0
Reinforcement Bars (Epoxy Coated)	Lbs	14,250
Preformed Joint Seal (2 1/2")	Lin Ft	70
Preformed Joint Seal (4")	Lin Ft	70

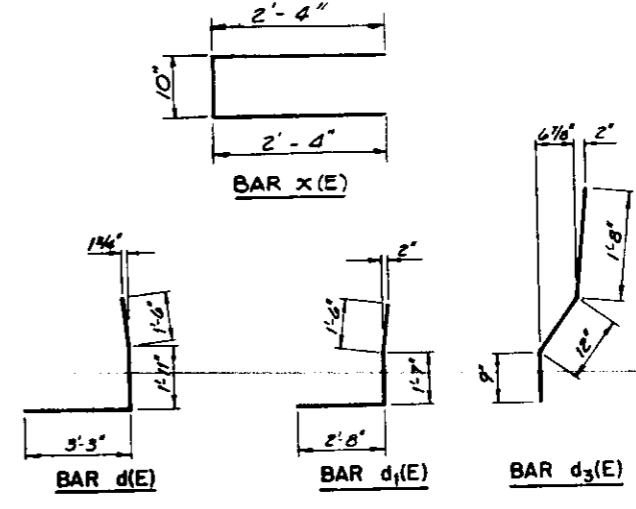
* Field Band as req'd



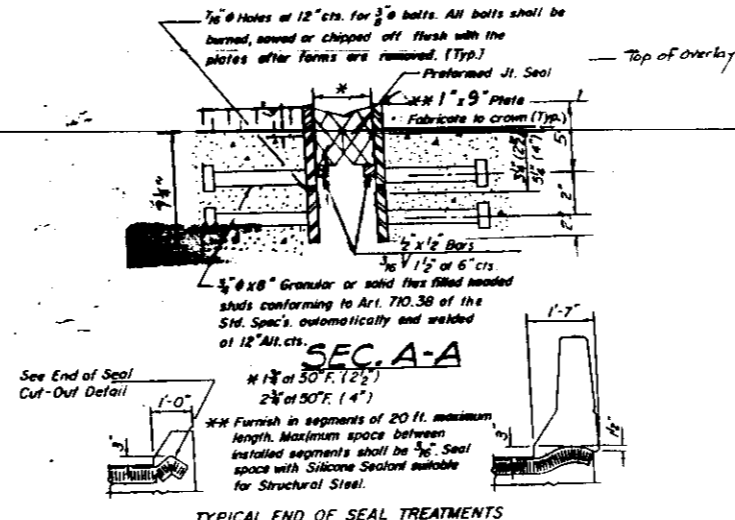
DETAILS OF PARAPET JOINT



PLAN AT ABUTMENTS

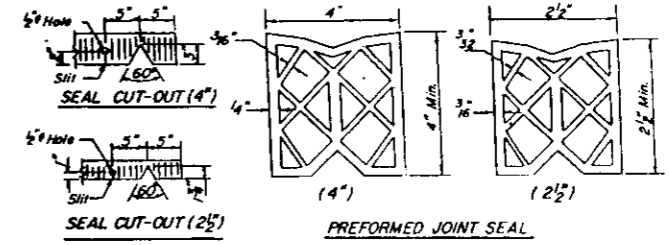


BAR BENDING DETAILS



TYPICAL END OF SEAL TREATMENTS

Note: After fabrication all surfaces of the steel plates shall be given one shop coat of paint specified for Structural Steel. No field painting required.



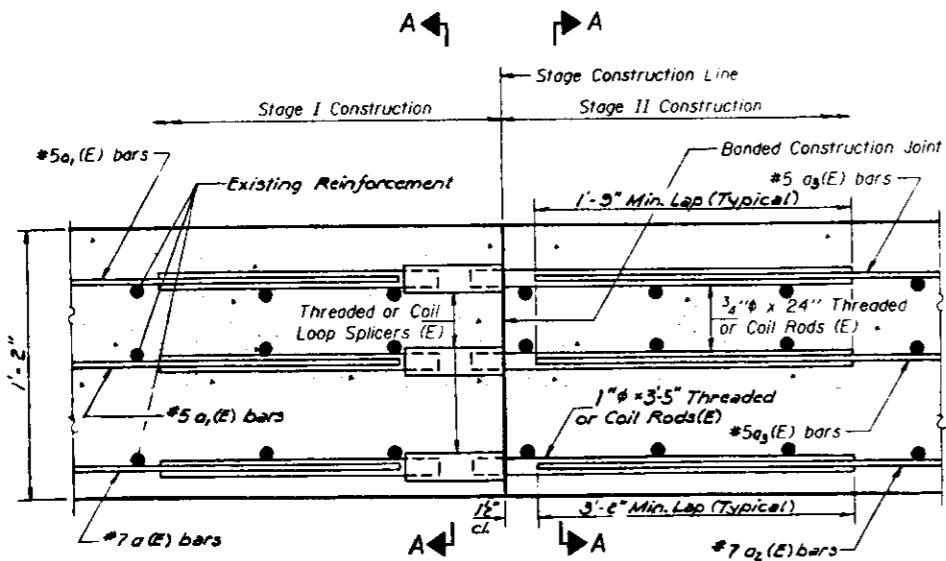
SUPERSTRUCTURE DETAILS

FAI 74 OVER GRIFFIN STREET
 FAI RTE. 74 SECTION (92-12HB-4)R
 VERMILION COUNTY
 STATION 2033+67.01
 STRUCTURE NO. 092-0016(EB)
 STRUCTURE NO. 092-0017(WB)

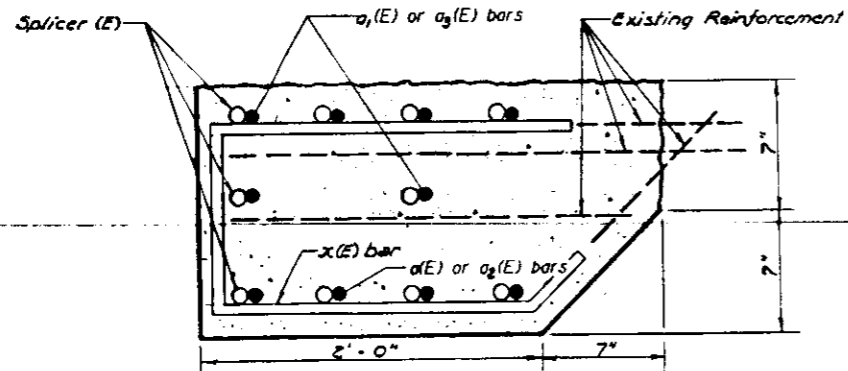
ESCA
 CONSULTANTS, INC.

DESIGNED BY:	RDP	3-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SECTION THRU SLAB



SECTION A-A
SPLICER DETAILS

(1" Splicers (E) Total No. Req'd. = 16)
Cost incidental to Reinforcement Bars (Epoxy Coated).

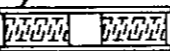
The diameter of this part of Splicer is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



ONE PIECE

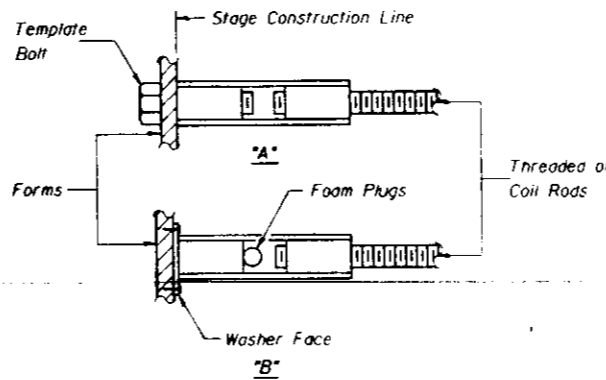
Wire Connector



WELDED SECTIONS

SPLICER ALTERNATIVES

** Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS
"A": Set splicer (E) by means of a template bolt.
"B": Set splicer (E) by nailing to wood forms or cementing to steel forms.
(E): Indicates epoxy coating.

NOTES

All reinforcement bars shall be lapped and tied to the splicer rods.
Steel Splicer (Coupler) assembly shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Steel Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

Splicer (coupler) assembly in the slab shall be epoxy coated in accordance with the requirements for reinforcement bars.

Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed splicer (coupler) assembly satisfies the following requirements:

- Minimum Capacity = $1.25 \times f_y \times A_s$
(Tension in kips)
- Minimum Pull-out Strength = $1.25 \times f_{s,allow} \times A_s$
(Tension in kips)

Where f_y = Yield strength of lapped reinforcement bars in ksi.

$f_{s,allow}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)

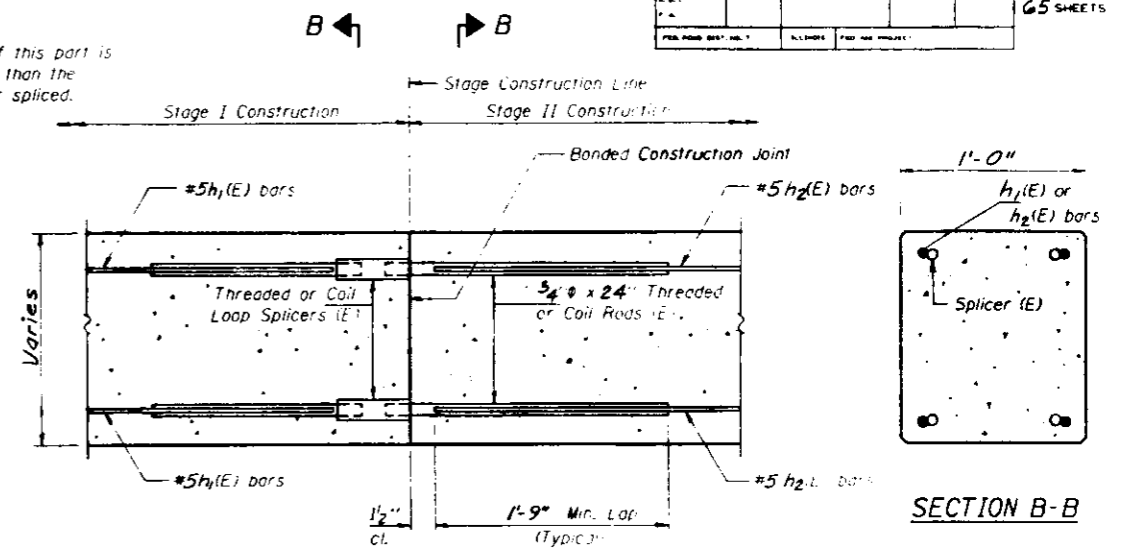
A_s = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

Typical Splicer (Coupler) Assembly Sizes:

In Slabs: #5 bar lap with 3/4" Splicer [Coupler] x 2'-0" Splicer Rods | Minimum Capacity = 23.0 kips-tension | Minimum Pull-out Strength = 9.2 kips-tension

In Slabs: #7 bar lap with 1" Splicer [Coupler] x 3'-8" Splicer Rods | Minimum Capacity = 45.1 kips-tension | Minimum Pull-out Strength = 18.0 kips-tension



SECTION THRU ABUTMENTS

SPLICER DETAILS

(3/4" Splicers (E) Total No. Req'd. = 40)
Cost incidental to Reinforcement Bars (Epoxy Coated).

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

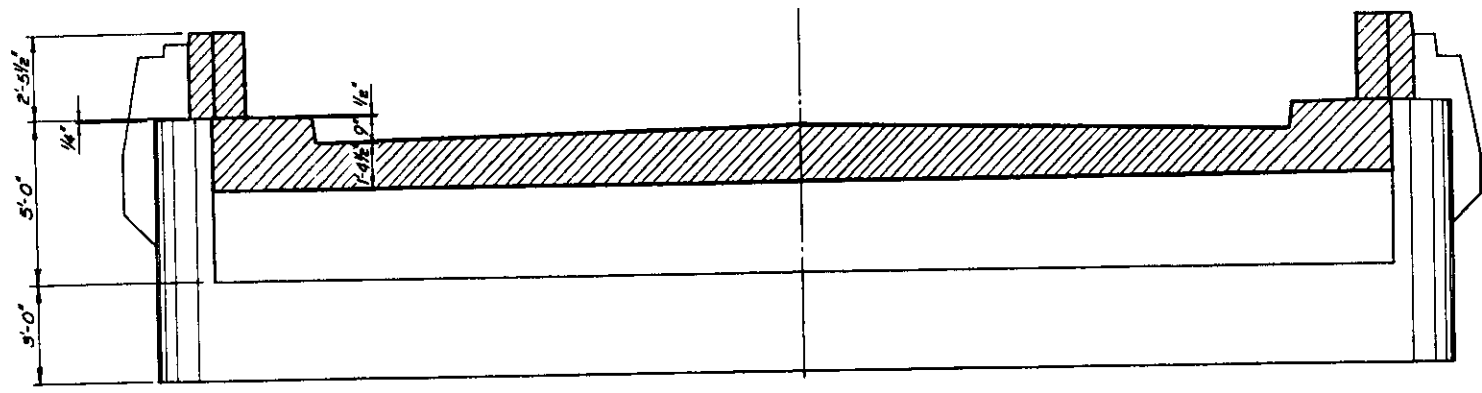
BSD-1 12-16-91

BAR SPICER (COUPLER) DETAILS
AT STAGE CONSTRUCTION

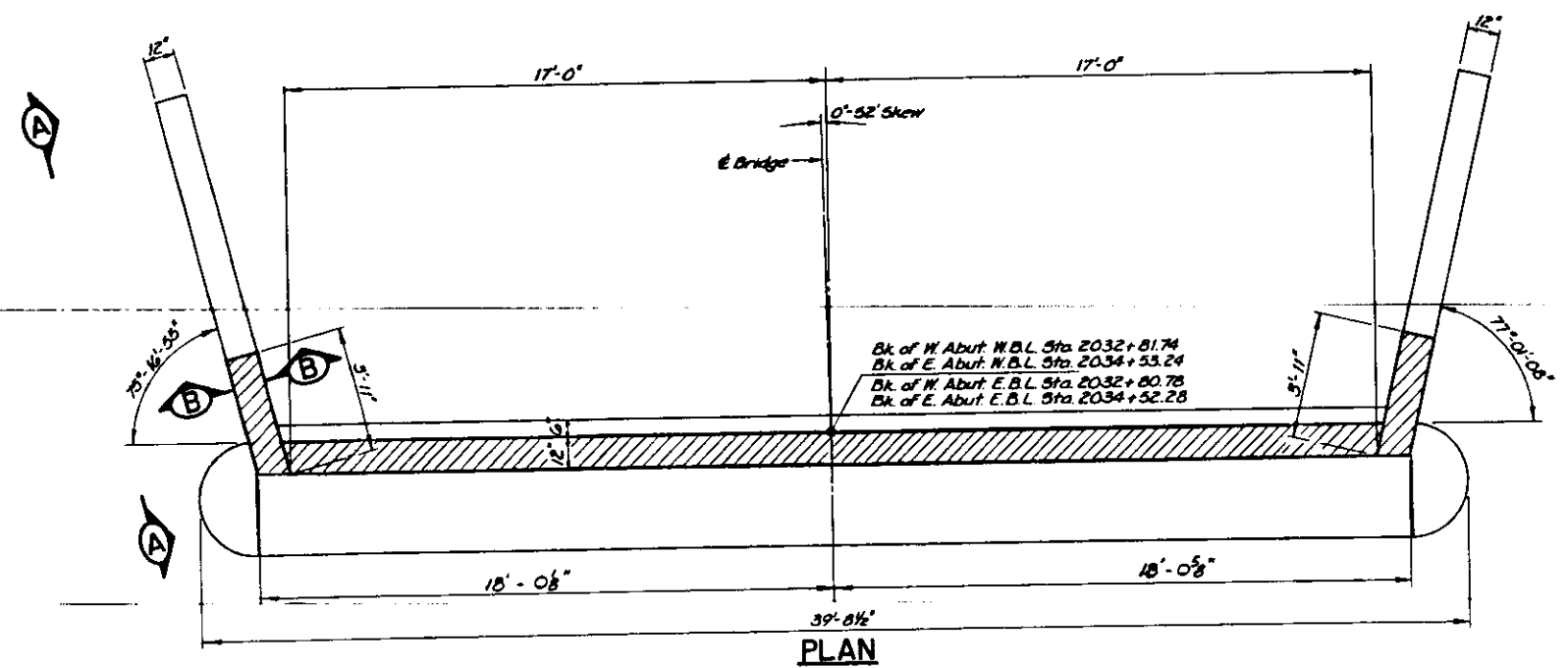
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 74	4	Vermilion	65	27
STA.	TO STA.			
PED. ROAD DIST. NO.	ILL. ROAD DIST. NO.	PROJECT		
		Dwg. No. 11 of 15		

NOTES

- SEE SMG. NO. 2 FOR STAGE CONSTRUCTION DETAILS
- EXISTING NAMEPLATE SHALL BE REMOVED, CLEANED AND REINSTALLED. SEE DWG. NO. 1 FOR LOCATION. COST INCIDENTAL TO CLASS X CONCRETE.
- MATCHED AREAS INDICATE CONCRETE REMOVAL.

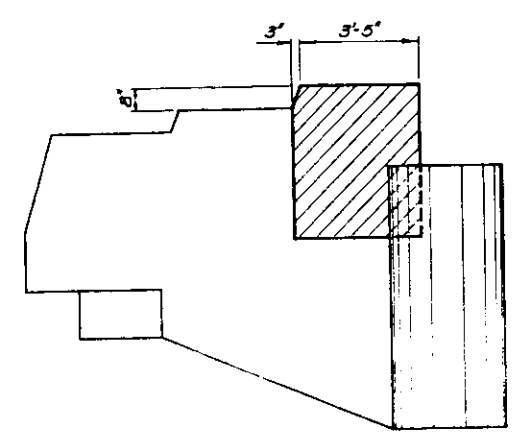


ELEVATION

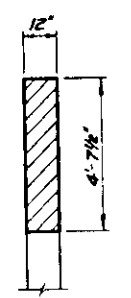


PLAN

LEGEND
 Concrete Removal



SECTION A-A



SECTION B-B

BILL OF MATERIAL
(FOUR ABUTMENTS)

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yds	13.0

CONCRETE REMOVAL
(ABUTMENTS)

FAI 74 OVER GRIFFIN STREET
 FAI RTE. 74 SECTION (92-12HB-4)
 VERMILION COUNTY
 STATION 2033+67.01
 STRUCTURE NO. 092-0016(EB)
 STRUCTURE NO. 092-0017(WB)

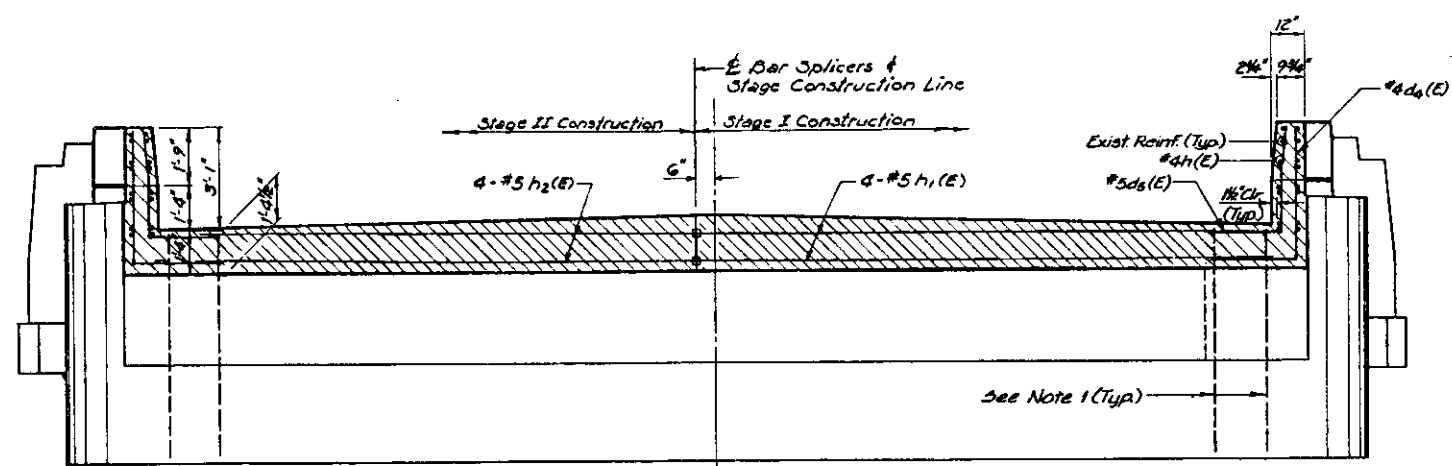
ESCA
 CONSULTANTS, INC.

DESIGNED BY:	RDP	3-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	Vermilion	65	28
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
* (92-1248-1) 8R		Dwg. No. 12 of 15		

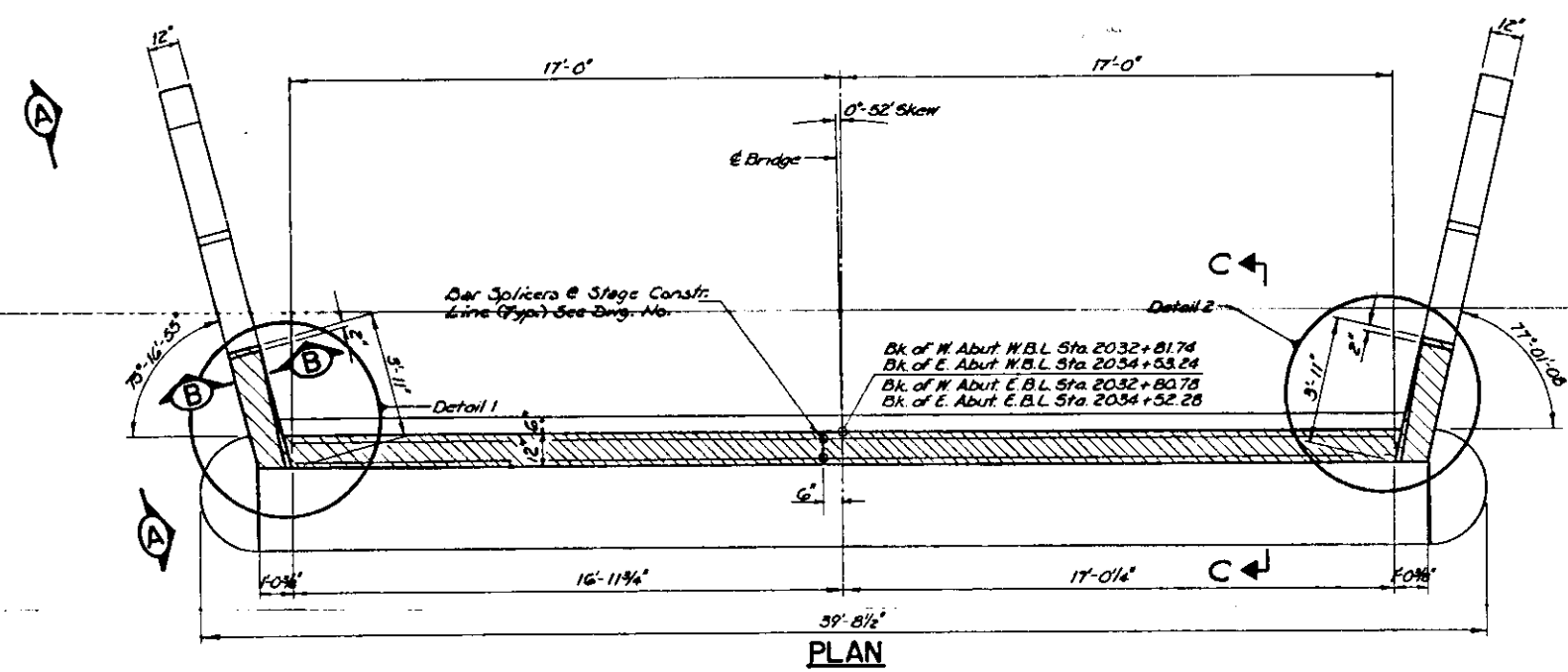
NOTES

- EXISTING REINFORCEMENT EXTENDING INTO REMOVAL AREA SHALL BE CLEANED, STRAIGHTENED OR BENT AND REALIGNED AS REQUIRED, AND INCORPORATED INTO NEW CONSTRUCTION. COST INCIDENTAL TO CLASS & CONC.
 - CUT OFF EXCESS LENGTH OF EXISTING REINFORCEMENT BARS AS DIRECTED BY THE ENGINEER TO PROVIDE 1-1/2" CLEAR COVER.
 - HATCHED AREAS SHALL BE POURED AFTER SUPERSTRUCTURE FORMS HAVE BEEN REMOVED.
 - FOR STAGE CONSTRUCTION DETAILS SEE DWG. NO. 2.
- FOR BAR SPICER DETAIL SEE SHEET OF



ELEVATION

(Eastbound Lane, Looking East; Westbound Lane, Looking West)

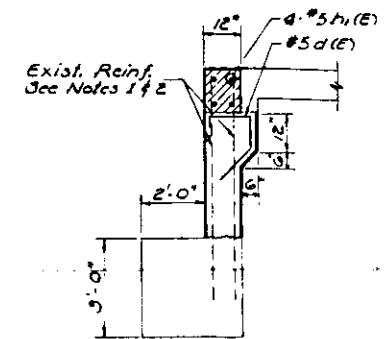


PLAN

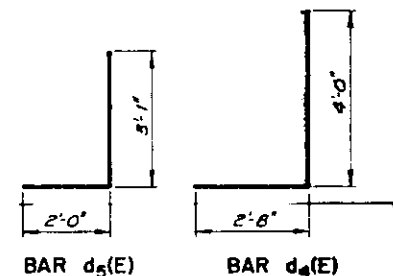
BILL OF MATERIAL
(FOUR ABUTMENTS)

BAR	NO	SIZE	LENGTH	SHAPE
d4(E)	16	#4	6'-8"	J
*d5(E)	16	#5	5'-7"	J
h(E)	80	#4	3'-6"	—
h1(E)	16	#5	17'-4"	—
h2(E)	16	#5	16'-6"	—
ITEM	UNIT	QUANTITY		
Reinforcement Bars (Epoxy Coated)	Lbs.	900		
Class X Concrete	Cu. Yds.	12.2		

* Field Bend as Req'd.



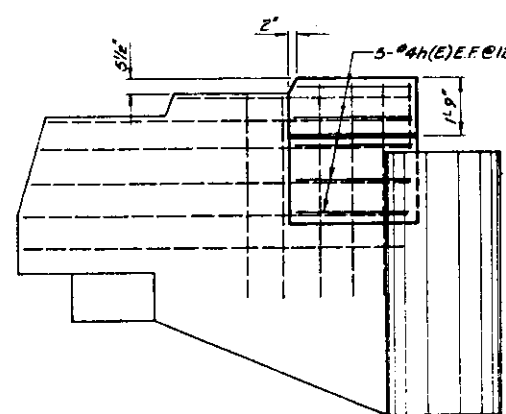
SECTION C-C



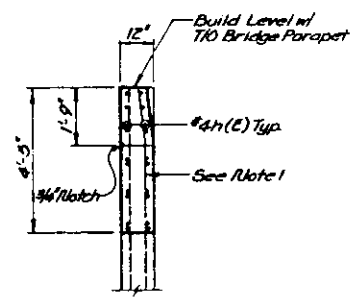
BAR BENDING DETAILS

LEGEND

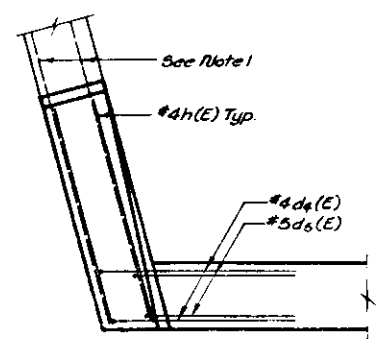
Concrete Removal



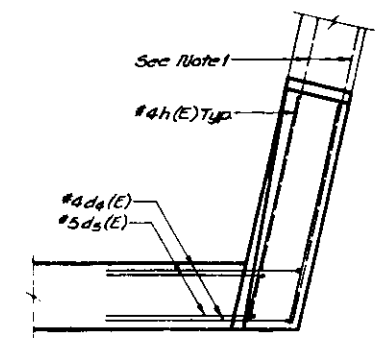
SECTION A-A



SECTION B-B



DETAIL 1



DETAIL 2

ABUTMENTS

FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-1248-4) 8R
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016 (EB)
STRUCTURE NO. 092-0017 (WB)

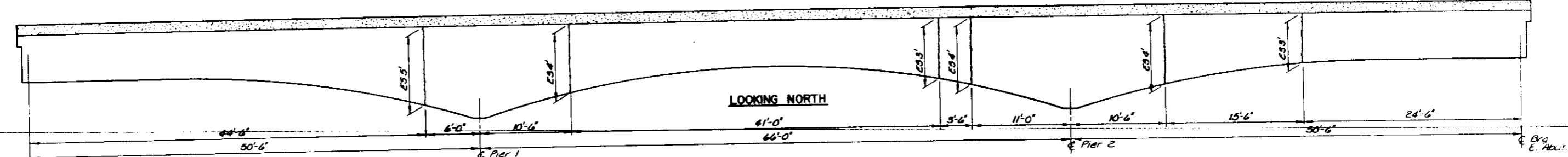
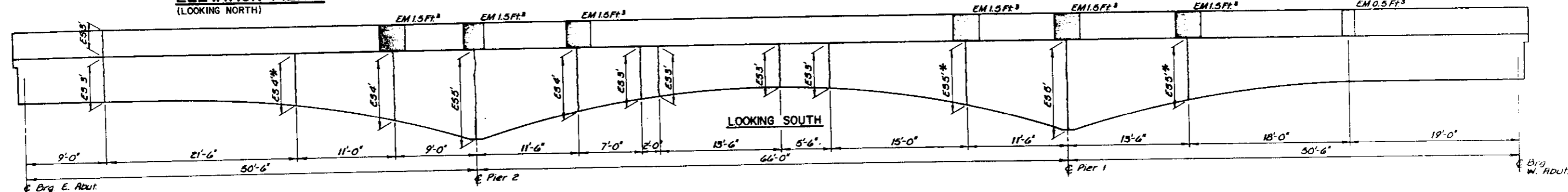
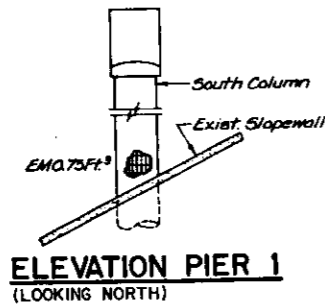
ESCA
CONSULTANTS, INC.

DESIGNED BY:	RDP	5-88
DRAWN BY:	WEM	4-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	*	Vermilion	65	29
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS PROJECT		
92-12HB-4B		Dwg. No. 13 of 15		

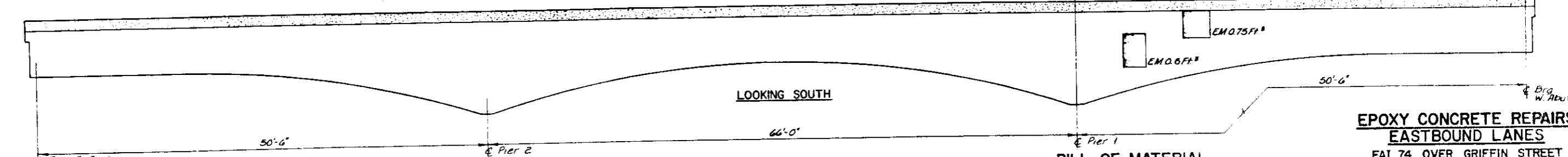
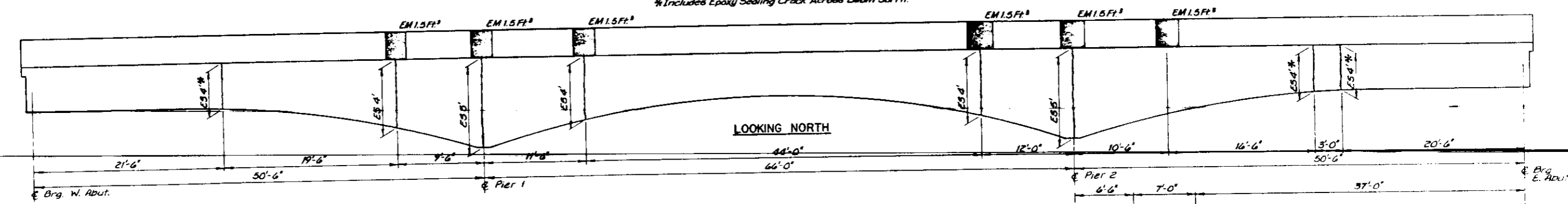
NOTES

- REPAIR LOCATIONS & QUANTITIES SHOWN ARE APPROXIMATE & MUST BE VERIFIED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL NOT COMMENCE ANY WORK RELATED TO REPAIRS SHOWN ON THIS DWG. UNTIL APPROVED BY THE ENGINEER.
- THE REPAIRS SHOWN ON THIS DWG. SHALL BE PERFORMED AFTER COMPLETION OF ALL SUPERSTRUCTURE CONC. REMOVAL OPERATIONS & PRIOR TO FORMING & POURING NEW PARAPETS. REMOVAL OF UNSOUND CONCRETE FOR EPOXY MORTAR REPAIRS SHALL BE PERFORMED WITH LIGHT WEIGHT CHIPPING HAMMERS.
- SEE SPECIAL PROVISIONS FOR EPOXY CRACK SEALING & EPOXY MORTAR REPAIR MATERIALS AND METHODS.
- PERFORM EPOXY MORTAR REPAIRS PRIOR TO COMMENCING EPOXY CRACK SEALING.



NORTH BEAM ELEVATIONS

* Includes Epoxy Sealing Crack Across Beam Soffit.



SOUTH BEAM ELEVATIONS

* Includes Epoxy Sealing Crack Across Beam Soffit.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Sealing	Lin Ft	107
Epoxy Mortar Repair	Cu Ft	20.5

**EPOXY CONCRETE REPAIRS
EASTBOUND LANES**

FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12HB-4)B
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016 (EB)
STRUCTURE NO. 092-0017 (WB)

ESCA
CONSULTANTS, INC.

DESIGNED BY:	RDP	5-88
DRAWN BY:	GGB/WEM	5-88
CHECKED BY:	JRF	4-88
APPROVED BY:	RDP	4-88

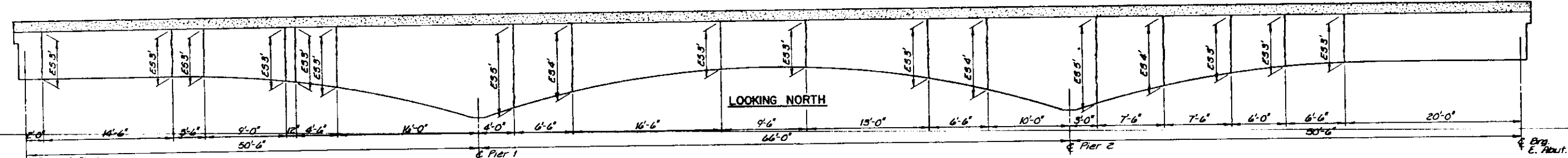
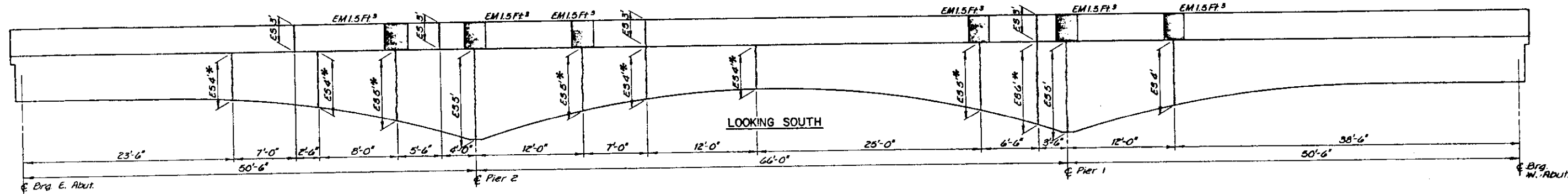
LEGEND

- E5 Epoxy Crack Sealing
- EM Epoxy Mortar Repair

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
11-7	#	Vermilion	65	30
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
(92-12HB-4)BR		Dwg No. 14 of 15		

NOTES

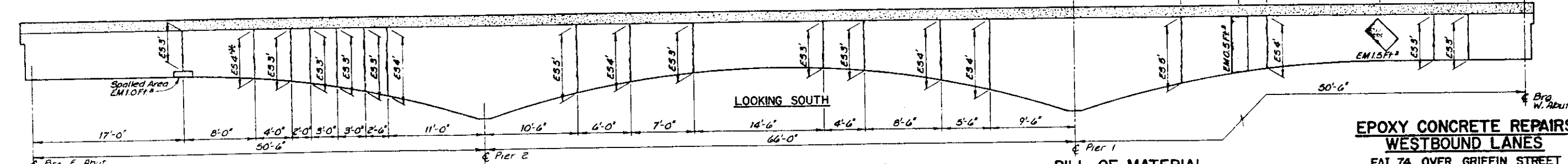
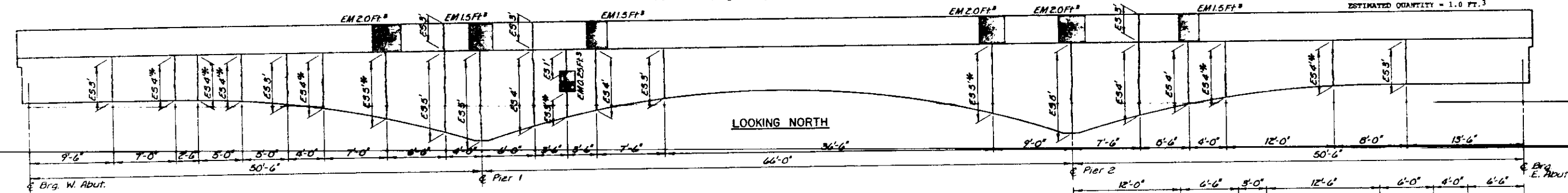
- REPAIR LOCATIONS & QUANTITIES SHOWN ARE APPROXIMATE & MUST BE VERIFIED IN THE FIELD BY THE ENGINEER. THE CONTRACTOR SHALL NOT COMMENCE ANY WORK RELATED TO REPAIRS SHOWN ON THIS DWG. UNTIL APPROVED BY THE ENGINEER.
- THE REPAIRS SHOWN ON THIS DWG. SHALL BE PERFORMED AFTER COMPLETION OF ALL SUPERSTRUCTURE CONC. REMOVAL OPERATIONS & PRIOR TO FORMING & POURING NEW PARAPETS. REMOVAL OF DISORDER CONCRETE FOR EPOXY MORTAR REPAIRS SHALL BE PERFORMED WITH LIGHT WEIGHT CHIPPING HAMMERS.
- SEE SPECIAL PROVISIONS FOR EPOXY CRACK SEALING & EPOXY MORTAR REPAIR MATERIALS AND METHODS.
- PERFORM EPOXY MORTAR REPAIRS PRIOR TO COMMENCING EPOXY CRACK SEALING.



NORTH BEAM ELEVATIONS

*Includes Epoxy Sealing Crack Across Beam Soffit

NOTE: PROVIDE EPOXY MORTAR REPAIR AT SLAB THICKENING AT EAST ABUTMENT JUST NORTH OF SOUTH BEAM. ESTIMATED QUANTITY = 1.0 FT.³



SOUTH BEAM ELEVATIONS

*Includes Epoxy Sealing Crack Across Beam Soffit

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Epoxy Crack Sealing	Lin Ft	275
Epoxy Mortar Repair	Cu Ft	23.75

EPOXY CONCRETE REPAIRS WESTBOUND LANES

FAI 74 OVER GRIFFIN STREET
 FAI RTE. 74 SECTION (92-12HB-4)BR
 VERMILION COUNTY
 STATION 2033+67.01
 STRUCTURE NO. 092-0016(EB)
 STRUCTURE NO. 092-0017(WB)

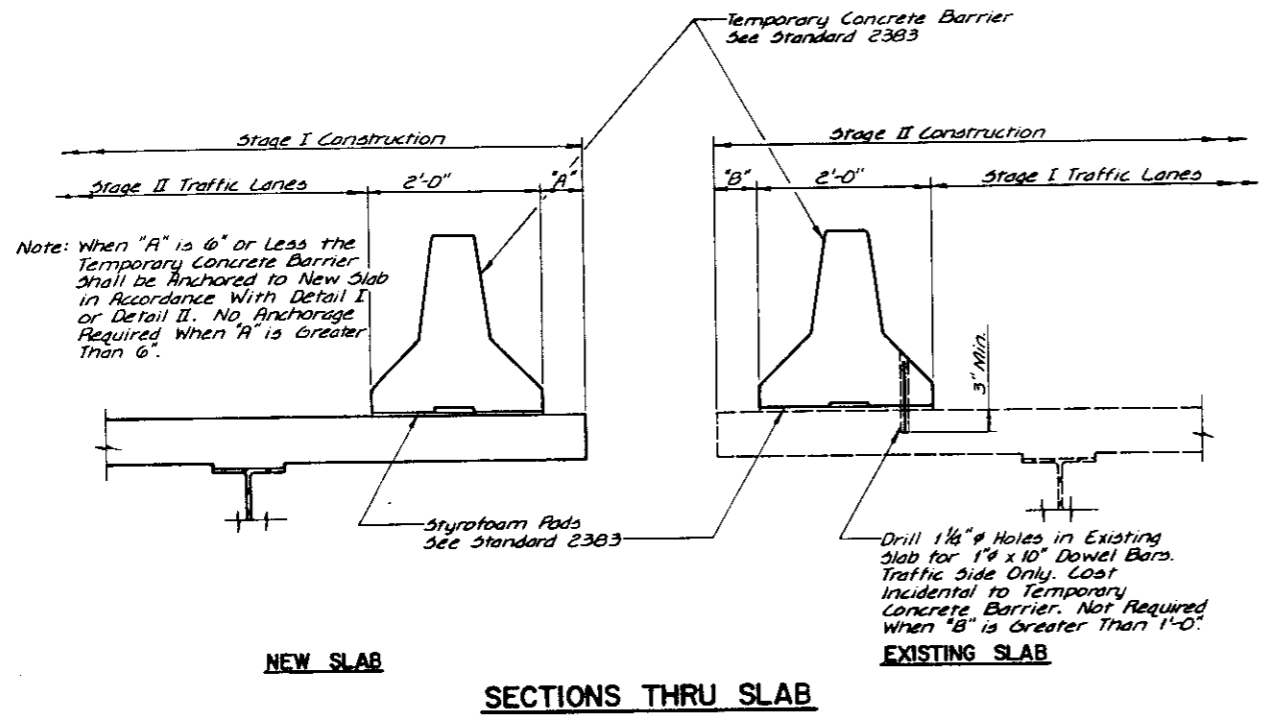
ESCA
 CONSULTANTS, INC.

DESIGNED BY:	RDP	5-00
DRAWN BY:	GGB/WEH	5-00
CHECKED BY:	JRF	4-00
APPROVED BY:	RDP	4-00

LEGEND

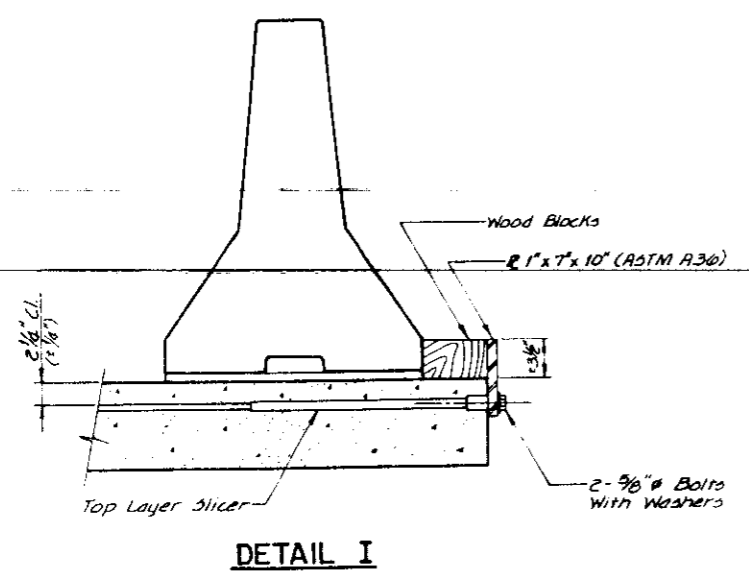
- ES Epoxy Crack Sealing
- EM Epoxy Mortar Repair

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-74	#	Vermilion	65	31
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	PROJECT		
*(92-12HB-4)BR Dwg. No. 15 of 15				

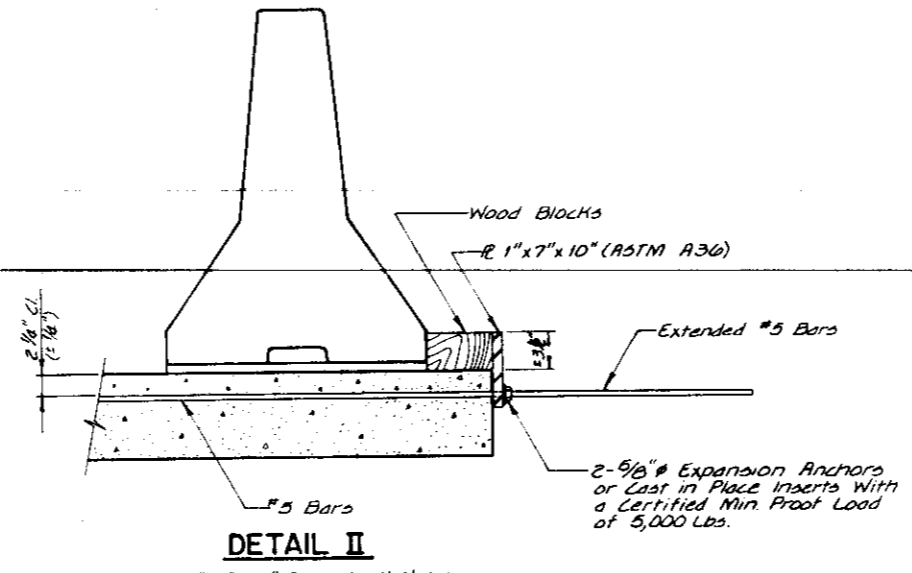


NOTES

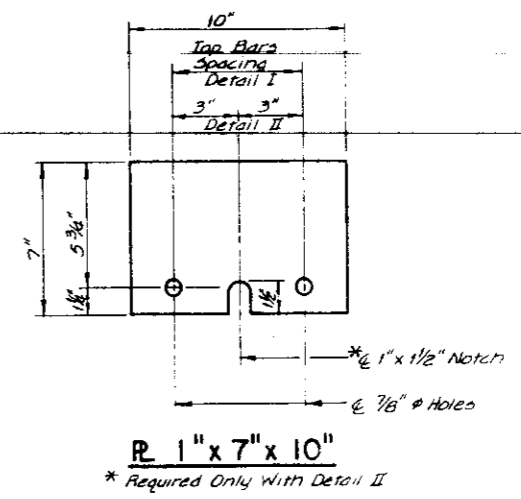
1. **DETAIL I-WITH BAR SPLICER OR COUPLERS:**
CONNECT ONE (1), 1" X 7" X 10" STEEL PLATE TO THE TOP LAYER OF COUPLERS WITH 2-5/8" BOLTS SCREWED TO COUPLER AT APPROXIMATE 1/4 OF EACH 10'-0" BARRIER PANEL.
 2. **DETAIL II-WITH EXTENDED REINFORCEMENT BARS:**
CONNECT ONE (1), 1" X 7" X 10" STEEL PLATE TO THE CONCRETE SLAB WITH 2-5/8" EXPANSION ANCHORS OR CAST IN PLACE INSERTS SPACED BETWEEN THE TOP LAYER OF REINFORCEMENT AT APPROXIMATE 1/4 OF EACH 10'-0" BARRIER PANEL.
- COST OF ANCHORAGE IS INCIDENTAL TO TEMPORARY CONCRETE BARRIER.



Note: The 1" x 7" x 10" Plate Shall Not Be Removed Until Stage II Construction Forms and Reinforcement Bars are in Place.



Note: The 1" x 7" x 10" Plate Shall Not Be Removed Until Stage II Construction Forms and All Reinforcement Bars are in Place and the Concrete is Ready to be Placed.



TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

FAI 74 OVER GRIFFIN STREET
FAI RTE. 74 SECTION (92-12HB-4)BR
VERMILION COUNTY
STATION 2033+67.01
STRUCTURE NO. 092-0016(EB)
STRUCTURE NO. 092-0017(WB)

ESCA
CONSULTANTS, INC.

DESIGNED BY:	RDP	9-88
DRAWN BY:	WEM	9-88
CHECKED BY:	WEM	9-88
APPROVED BY:	RDP	9-88

FOR INDEX OF SHEETS SEE SHEET NO. 3
FOR SUMMARY OF QUANTITIES SEE SHEET NO. 4

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-12HB-4	VERMILION	108	1
PROJECT I-74-6(42)218				
FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-12B-1	VERMILION	108	1
PROJECT I-74-6(42)218				
FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-12F-1	VERMILION	11	1
PROJECT I-74-6(42)218				

FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-12VB	VERMILION	108	1
PROJECT I-74-6(42)218				
FED. ROAD DIST. NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-12VF	VERMILION	10	1
PROJECT I-74-6(42)218				



LOCATION OF SECTION INDICATED THUS: —

SCALES
 PLAN 1" = 100 FT
 PROFILE HOR 1" = 100 FT
 PROFILE VERT 1" = 10 FT
 CROSS SECTIONS 1" = 5 FT

F.A.I. ROUTE 74, SEC. 92-12HB-4 VERMILION COUNTY
 F.A.I. ROUTE 74, SEC. 92-12B-1 VERMILION COUNTY
 F.A.I. ROUTE 74, SEC. 92-12F-1 VERMILION COUNTY
 PROJECT I-74-6(42)218
 F.A.I. ROUTE 74, SEC. 92-12VB VERMILION COUNTY
 F.A.I. ROUTE 74, SEC. 92-12VF VERMILION COUNTY

PROJECT I-G-74-6(43)219
 DESIGN CLASSIFICATION 1700-T-70

SECTION 92-12F-1 INCLUDES FURNISHING AND FABRICATING STRUCTURAL STEEL, FURNISHING AND APPLYING SHOP COAT OF PAINT AND DELIVERY OF STRUCTURAL STEEL AS SPECIFIED BELOW.

NOTE: STRUCTURAL STEEL SHALL BE DELIVERED F.O.B. RAILWAY TEAM TRACK NEAREST TO THE BRIDGE SITE, EXCEPT THAT DELIVERY MAY BE F.O.B. BRIDGE SITE BY TRUCK, IF SUITABLE ARRANGEMENTS ARE MADE WITH CONTRACTOR FOR SECTION 92-12B-1.

SECTION 92-12B-1 INCLUDES TWIN 4 SPAN CONTINUOUS WF-BEAM BRIDGES OVER STONY CREEK, SPANS 56'-6", 70'-0", 70'-0", 56'-6" WITH 30'-0" ROADWAY WIDTH AND 2'-0" SAFETY WALKS ON REINFORCED CONCRETE PIERS AND ABUTMENTS AT STATION 2037+72.50 TOGETHER WITH APPROACH GRADING.

SECTION 92-12VB INCLUDES TWIN 3 SPAN CONTINUOUS WF-BEAM R.R. GRADE SEPARATING STRUCTURES, SPANS 43'-0", 52'-0", 43'-0" WITH 39'-0" ROADWAY WIDTH AND 2'-0" & 1'-0" SAFETY WALKS ON REINFORCED CONCRETE PIERS AND ABUTMENTS AT STATION 2041+90.64 TOGETHER WITH APPROACH GRADING.

SECTION 92-12VF INCLUDES FURNISHING AND FABRICATING STRUCTURAL STEEL, FURNISHING AND APPLYING SHOP COAT OF PAINT AND DELIVERY OF STRUCTURAL STEEL AS SPECIFIED BELOW.

NOTE: STRUCTURAL STEEL SHALL BE DELIVERED F.O.B. RAILWAY TEAM TRACK NEAREST TO THE BRIDGE SITE, EXCEPT THAT DELIVERY MAY BE F.O.B. BRIDGE SITE BY TRUCK, IF SUITABLE ARRANGEMENTS ARE MADE WITH CONTRACTOR FOR SECTION 92-12VB.

APPROVED

FOR DESIGN, FEDERAL AID PROJECT I-74-6(42)218

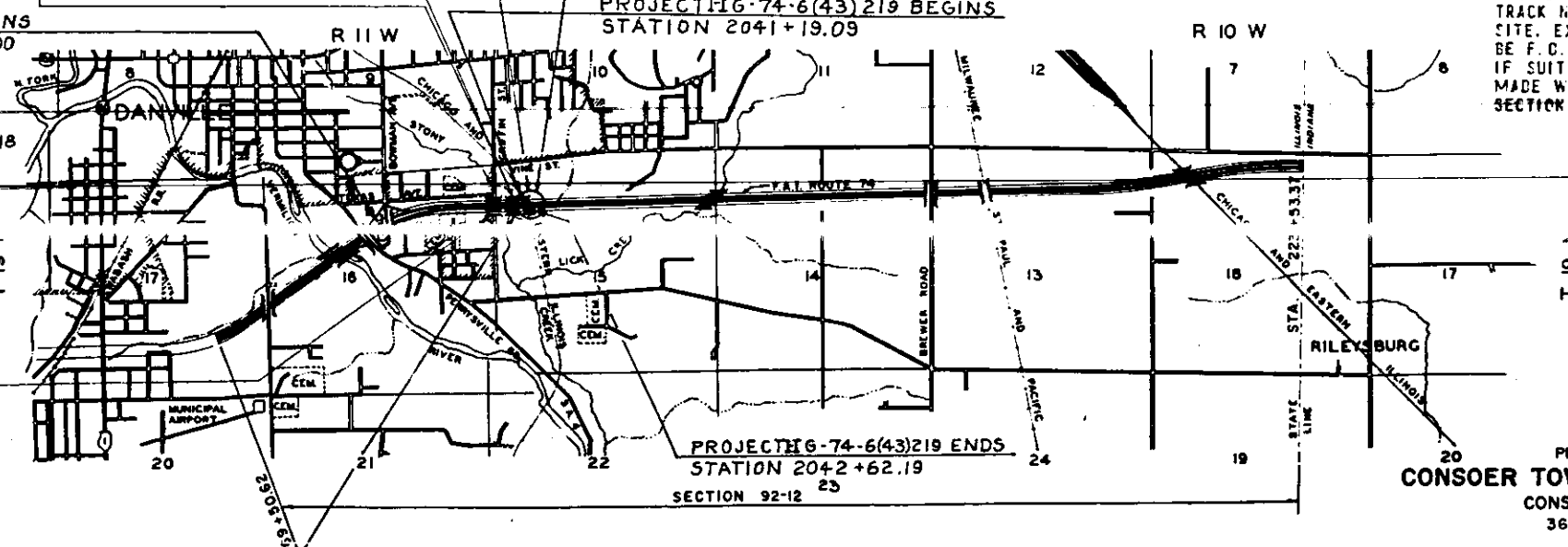
W.E. Bannan
 CHIEF ENGINEER

STATE OF ILLINOIS DEPARTMENT OF PUBLIC WORKS AND BUILDINGS DIVISION OF HIGHWAYS	
SUBMITTED BY	<i>J. J. Cypel</i>
EXAMINED	<i>June 7, 1962</i>
PASSED	<i>June 7, 1962</i>
APPROVED	<i>June 7, 1962</i>
APPROVED	<i>June 7, 1962</i>

PROJECT I-74-6(42)218 BEGINS
STATION 2006+87.00

PROJECT I-G-74-6(43)219 BEGINS
STATION 2041+19.09

OMISSION - PROJECT I-74-6(42)218
STA. 2012+09.00 TO STA. 2018+66



PROJECT I-G-74-6(43)219 ENDS
STATION 2042+62.19
SECTION 92-12 25

PLANS PREPARED BY
CONSOER TOWNSEND & ASSOCIATES
 CONSULTING ENGINEERS
 360 EAST GRAND AVE.
 CHICAGO, ILL.

DEPARTMENT OF COMMERCE BUREAU OF PUBLIC ROADS	
APPROVED	
DIVISION ENGINEER	DATE

NET LENGTH PROJECT I-74-6(42)218 = 2656.00 LIN. FT. = 0.503 MILE

NET LENGTH PROJECT I-G-74-6(43)219 = 143.10 LIN. FT. = 0.027 MILE

TOTAL NET LENGTH PROJECTS I-74-6(42)218 & I-G-74-6(43)219 = 2799.10 LIN. FT. = 0.530 MILE

092-0016 + 0017

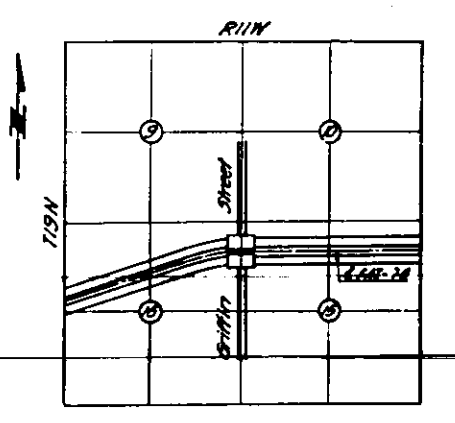
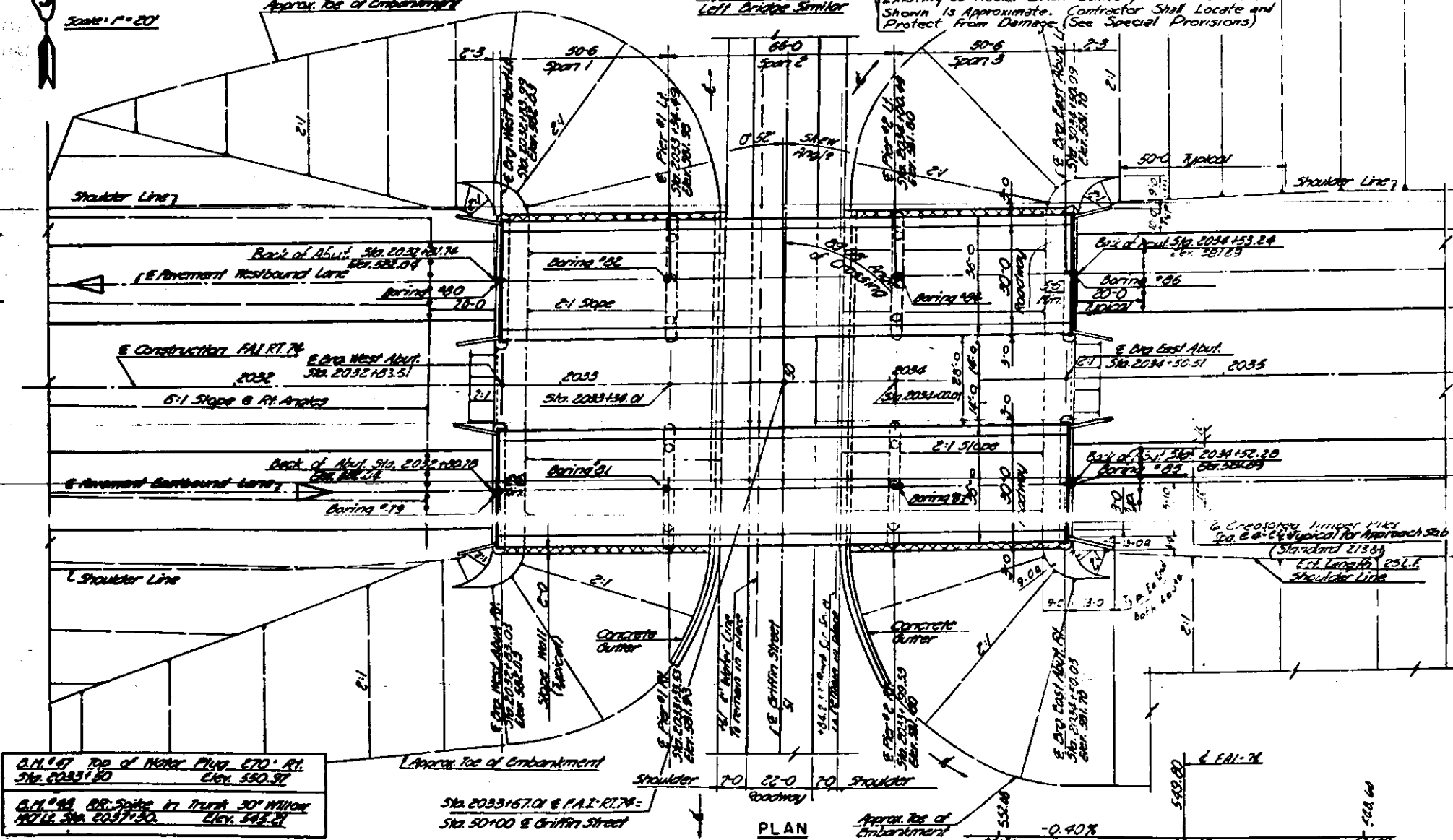
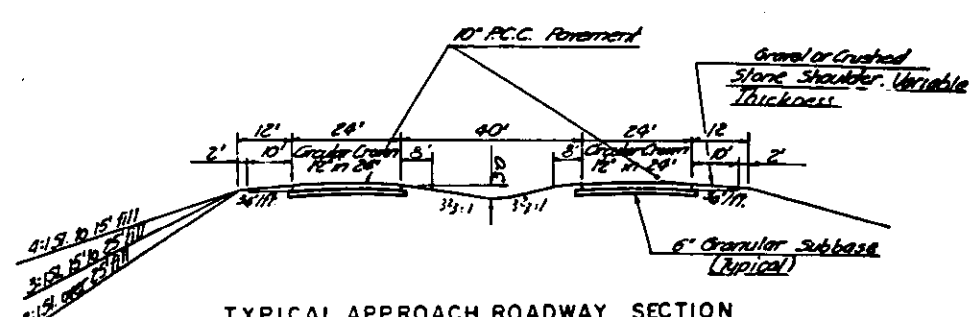
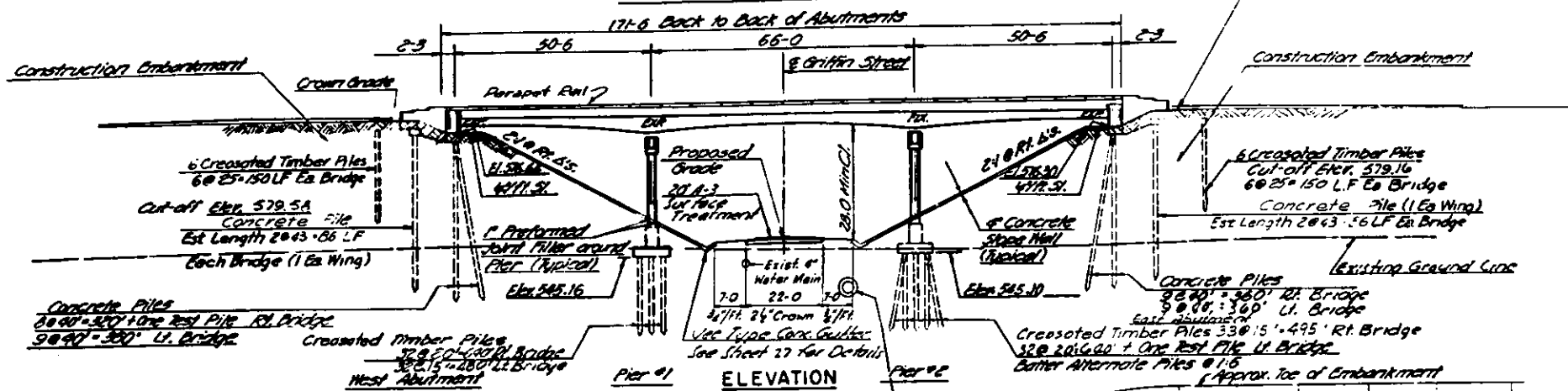
PROJECT I-74-6(42)218 ENDS
STATION 2040+00

VERMILION COUNTY SECTION 92-12HB-4 92-12B-1 92-12F-1 92-12VF F.A.I. RT 74

REEL
5-38

FAI No.	SECTION	COUNTY	STATE	DATE
74	SE-214A	VERMILION	IOB	17
FEDERAL ROAD DISTRICT NO. 7				

PROFILE OF CROWN FOR FAI-74



Design Loading This Structure H-20-S16-44 AT
Roadway Classification FAI-74 "A"
Griffin St. "D"

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
FAI RT. 74 BRIDGE OVER GRIFFIN ST.
FAI 74 SECTION 92-12MB-4
VERMILION COUNTY STA. 2033+67.01

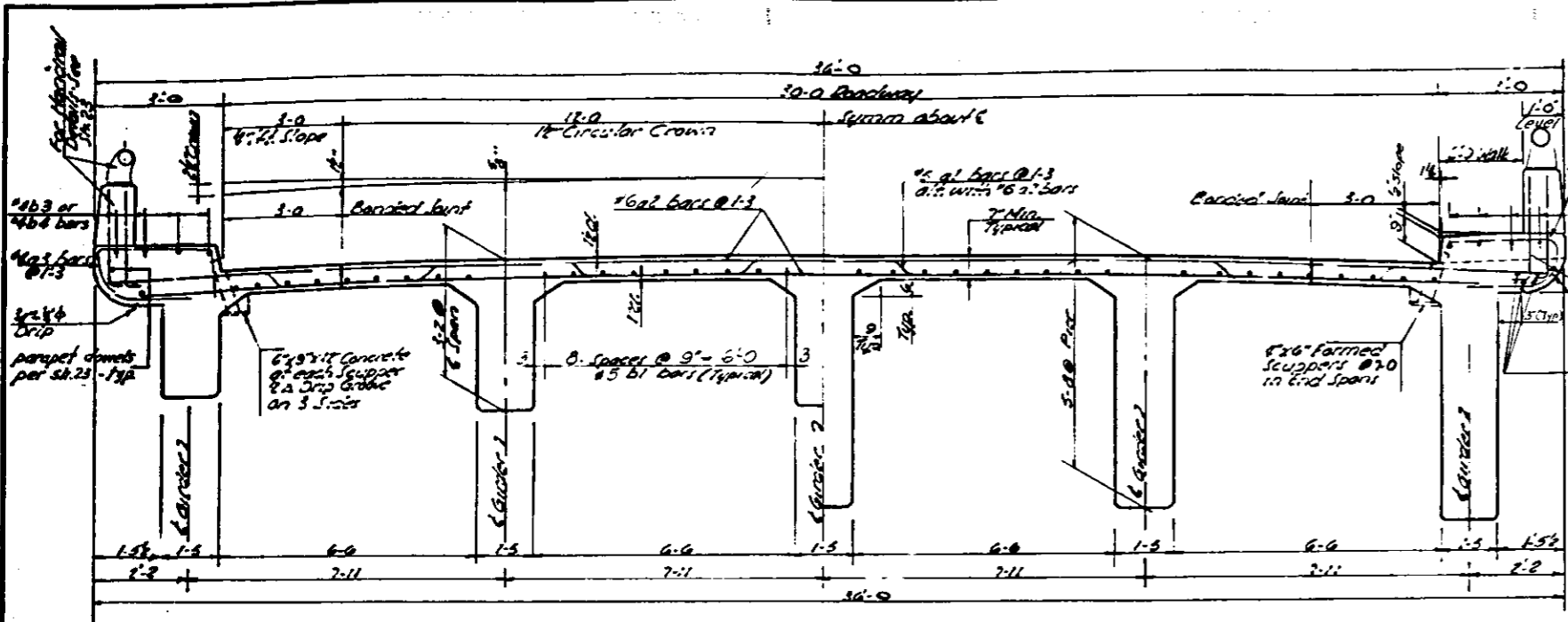
GENERAL PLAN AND LOCATION

DATE	BY	CHECKED	APPROVED	SCALE	REVISION
10-7-60	JH	LDB	HSM	10-7-60	

PROFILE OF CROWN FOR GRIFFIN STREET

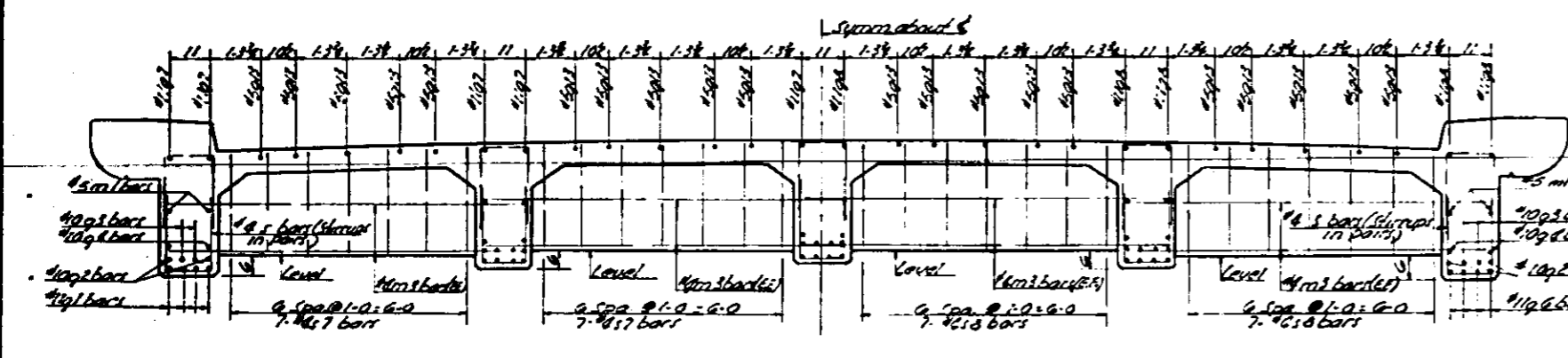
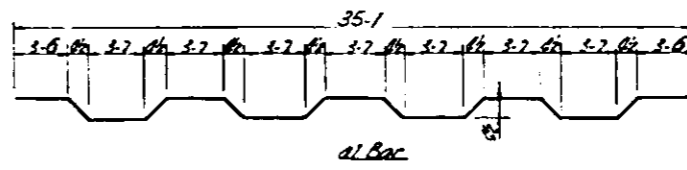
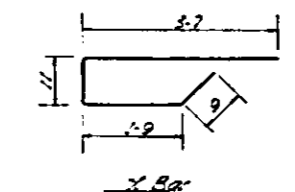
Note: Construct Bridge and all Elements to the Angle of Slew (0°58')

FILE NO.	REVISED	DATE	BY	CHKD
74-2-2094	VERMILION	108	19	
TOTAL SHEET NO. 7		SHEET NO.		TOTAL

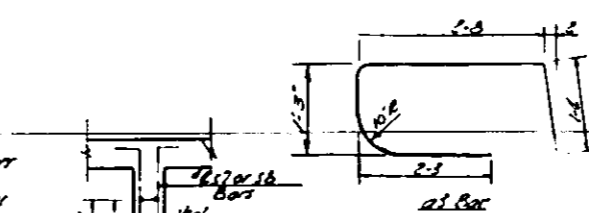


TYPICAL DECK SECTION

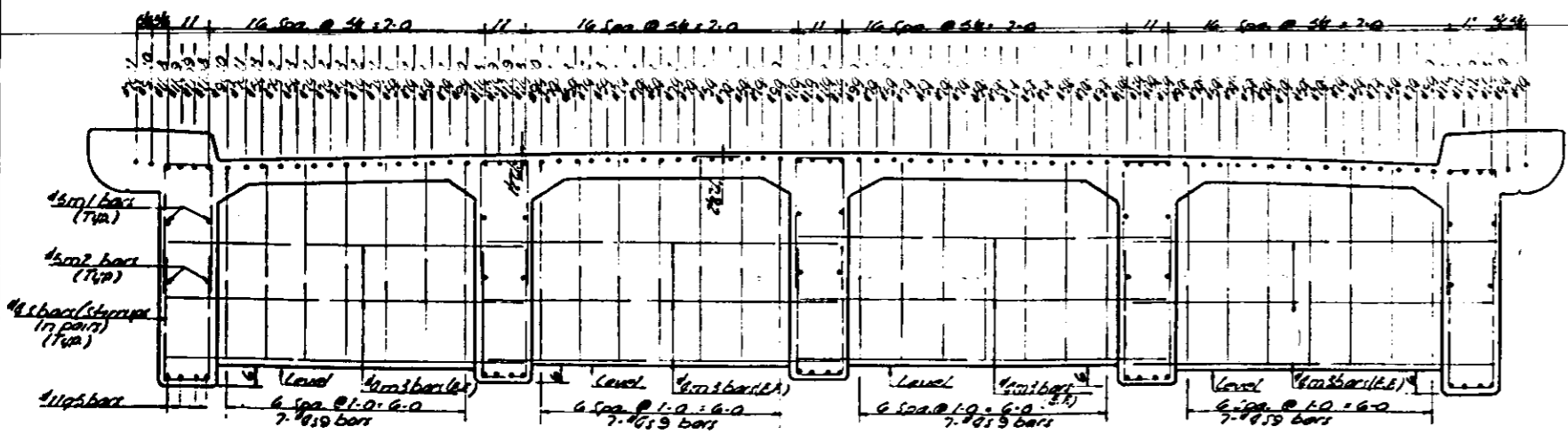
1/8" Aluminum Sheet (3003-H14) See Plan Sh 20 for Location. Do not extend b2, b3 or b4 bars through construction joint



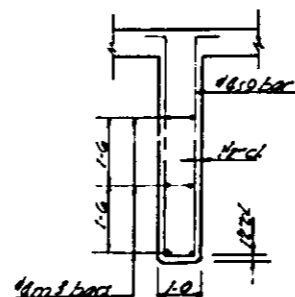
SECTION NEAR & SPAN



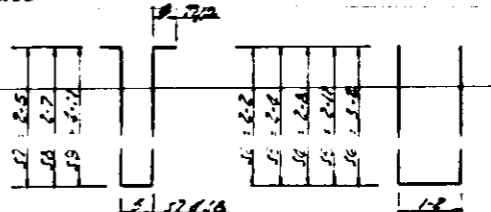
TYPICAL INTERMEDIATE DIAPHRAGM For Spacing See Sh. No. 20



PIER 1 OR 2 SECTION NEAR PIER



TYPICAL PIER DIAPHRAGM For Location See Sh. No. 10



BENDING DIAGRAMS Bar Dimensions are Out to Out

BAR SCHEDULE					
Bar	No.	Size	Length	Spacing	Shape
a1	270	5	36-5	1-3	~
a2	526	6	34-8	1-3	~
a3	566	6	7-1	1-3	~
a4	16	7	32-10	6	~
b1	420	5	32-9	As Shown	~
b2	6	9	10-10	As Shown	~
b3	60	4	20-7	10	~
b4	32	4	22-5	10	~
c1	20	11	45-9	As Shown	~
c2	60	10	38-0	~	~
c3	60	10	28-0	~	~
c4	60	10	20-0	~	~
c5	20	11	20-0	~	~
c6	40	11	32-0	~	~
c7	40	11	33-0	~	~
c8	40	11	34-0	~	~
c9	40	11	31-6	~	~
c10	40	9	29-0	~	~
c11	22	7	21-0	~	~
c12	60	7	15-0	~	~
c13	220	5	34-10	As Shown	~
d1	100	5	32-10	As Shown	~
d2	80	5	25-8	As Shown	~
d3	220	4	9-0	As Shown	~
e1	360	6	2-8	As Shown	~
e2	500	~	5-6	~	~
e3	330	~	5-10	~	~
e4	520	~	6-6	~	~
e5	320	~	7-0	~	~
e6	260	~	7-6	~	~
e7	112	~	6-3	~	~
e8	112	~	6-7	~	~
e9	112	~	11-7	As Shown	~
f	132	~	7-0	1-0	~

SUPERSTRUCTURE QUANTITIES	
Class X Concrete	662.0 cu yd
Reinforcement Bars	153,650 lbs

Quantities shown for 2 Bridges

CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

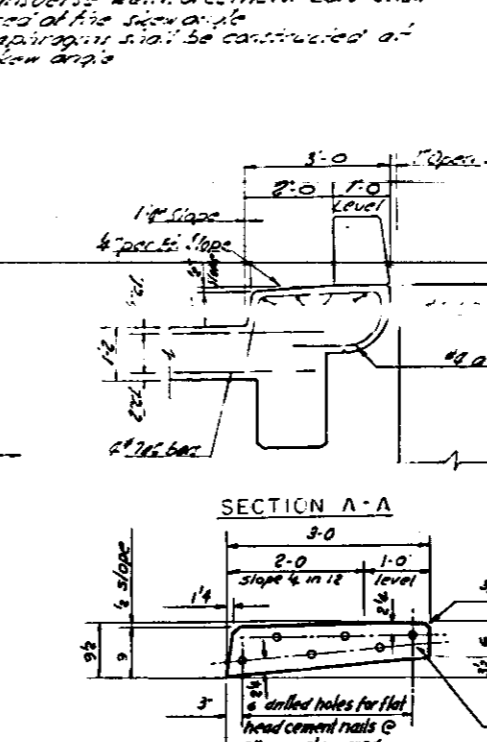
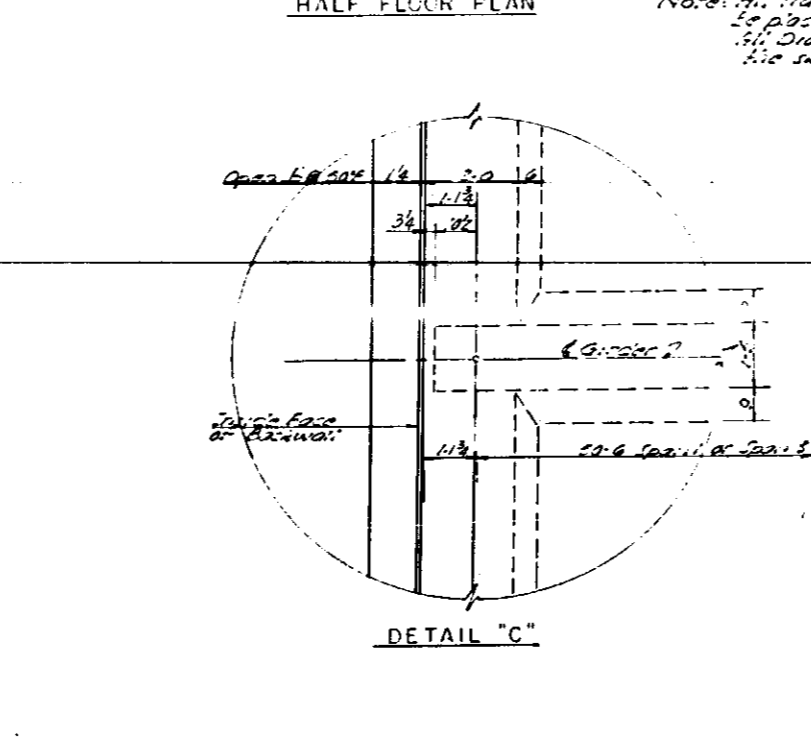
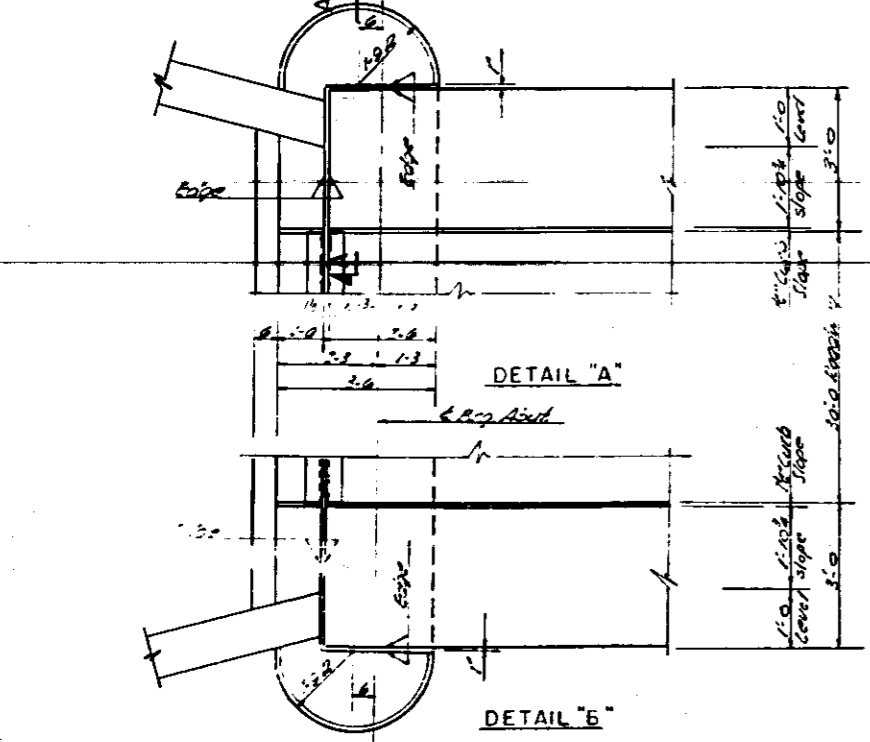
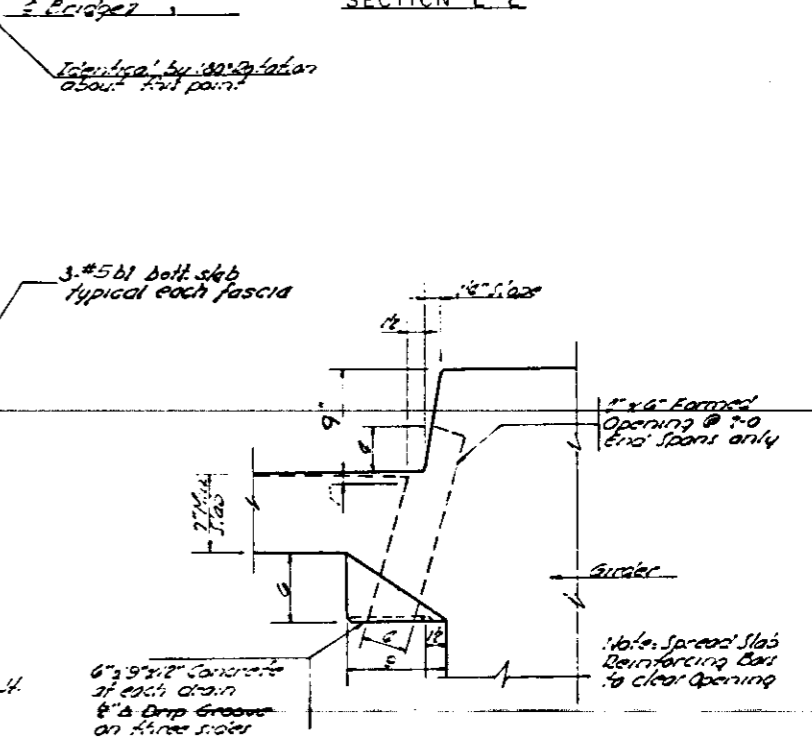
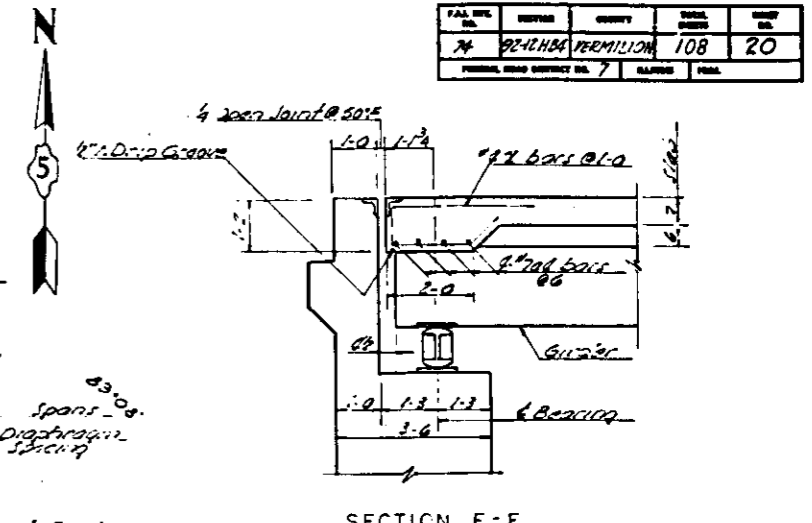
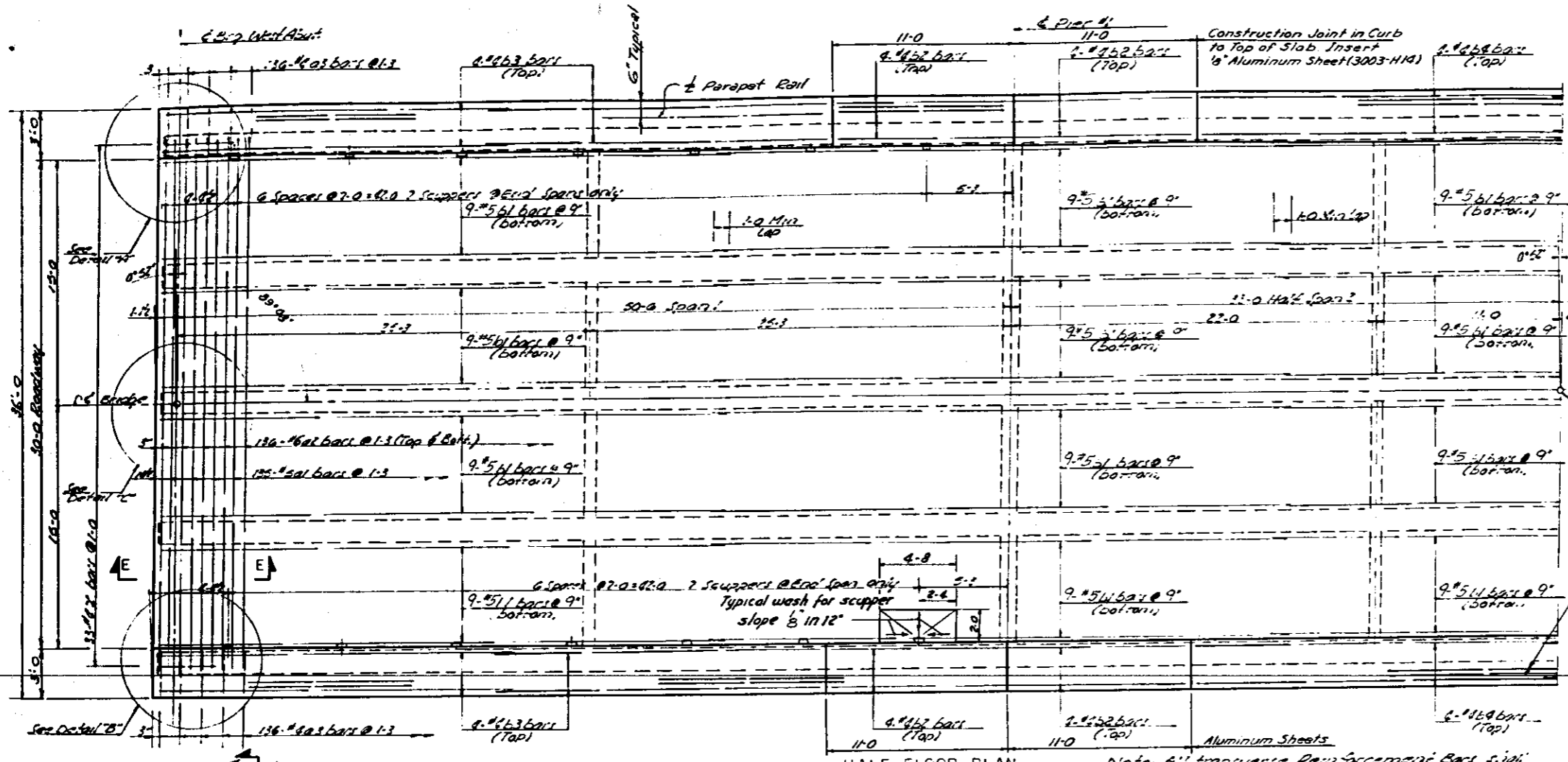
ILLINOIS DIVISION OF HIGHWAYS
FAI RT. 74 BRIDGE OVER GRIFFIN ST.
FAI-74 SECTION 92-12HB-1
VERMILION COUNTY STA. 2033+67.01

SUPERSTRUCTURE DETAILS

DESIGNED BY	DATE	CHECKED BY	DATE
J.T.	10-17-50	LDB	HSM

Revised 4/21/62 Bottom Reinforcing Bars from 6 spacers @ 1-0 to 8 spacers @ 9-2 in. 2 in. dia. 6 bars added from 340 to 420 Quantity of Reinforcement Bars changed from 11,620 to 12,480 lbs. R.A.S.

F.A.I. No.	92-12HB	PERMILION	108	20
FEDERAL ROAD DISTRICT NO.	7	STATE	ILL.	FILE



Note: All transverse Reinforcement Bars shall be placed at the skew angle.
 All Drip Grooves shall be constructed at the skew angle.

CONSOER, TOWNSEND & ASSOCIATES
 CONSULTING ENGINEERS
 CHICAGO, ILLINOIS

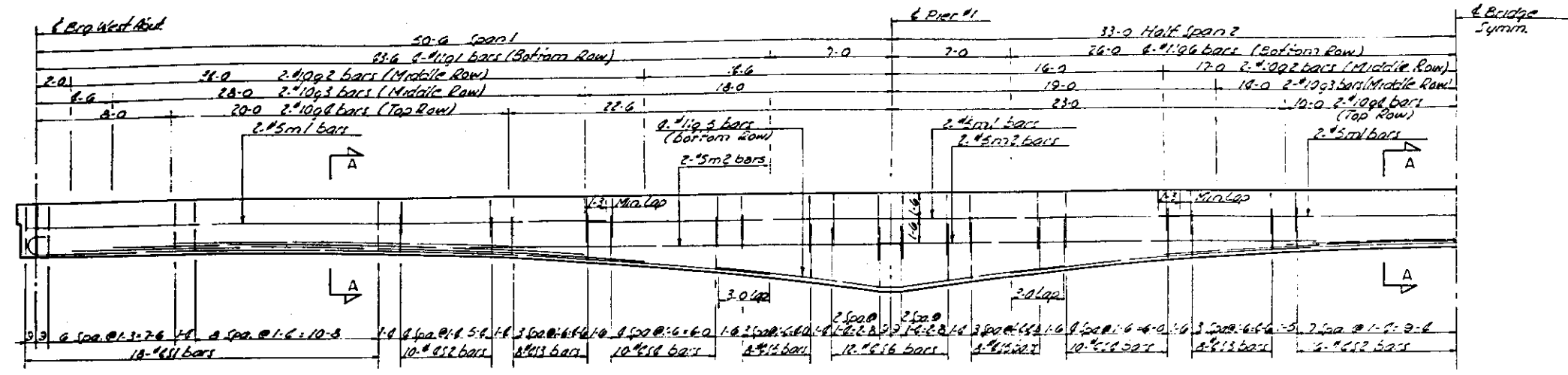
ILLINOIS DIVISION OF HIGHWAYS
 FAI RT. 74 BRIDGE OVER GRIFFIN ST.
 FAI-74 SECTION 92-12HB-4
 VERMILION COUNTY STA. 2033+67.01

SUPERSTRUCTURE DETAILS

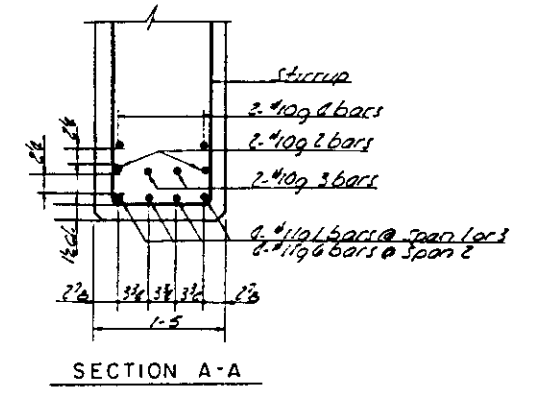
SMH	J.T.	WTS	J.M.H.	LDB	HSM	10-17-60
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Revised 8/26/62. Bottom Slab (Distribution Steel) changed to G776.
 P.R.Z.

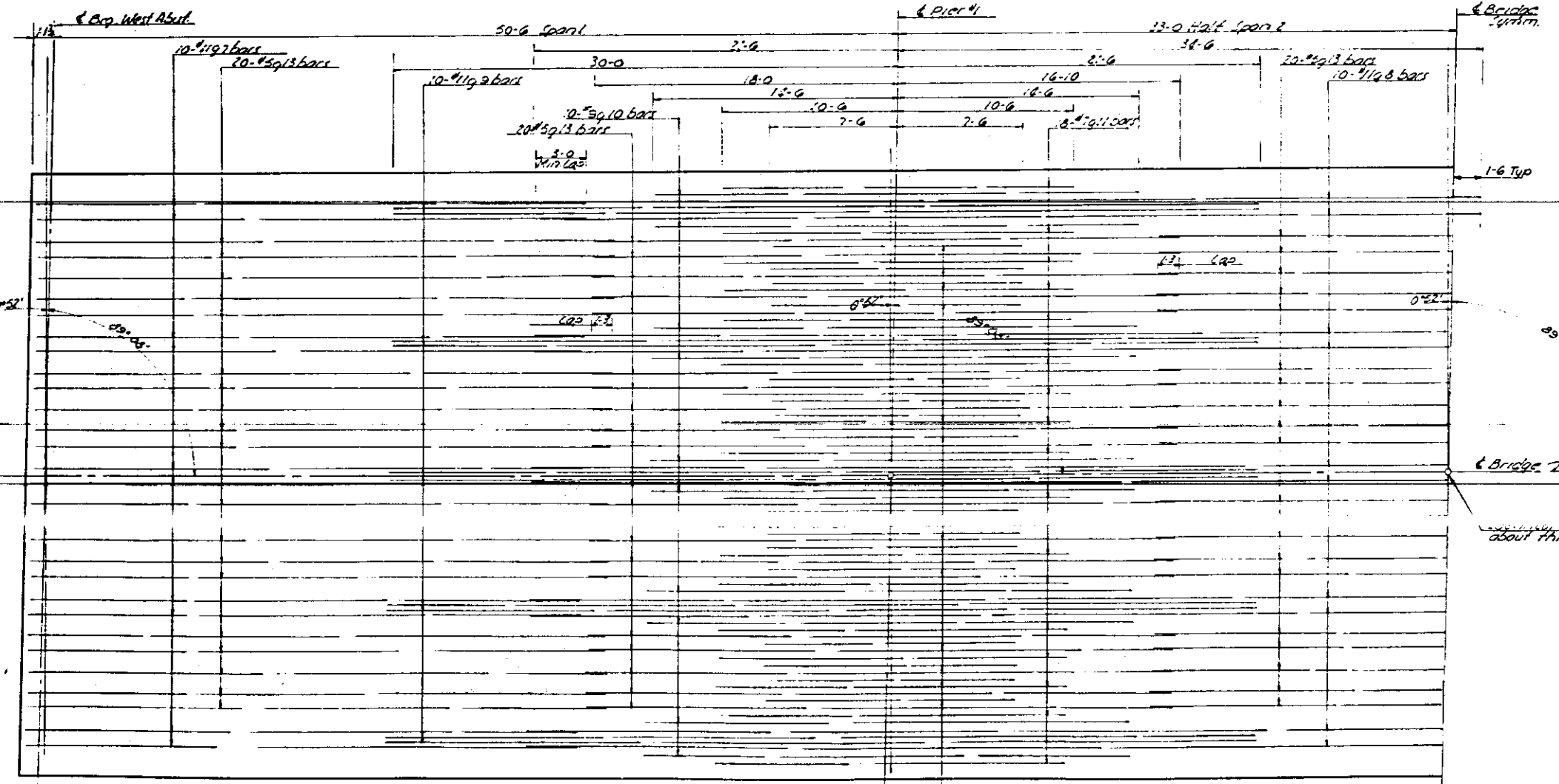
F.A.I. SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-12HB-4	VERMILION	108	21
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	IHL	



HALF GIRDER ELEVATION



SECTION A-A



REINFORCING - HALF PLAN TOP OF SLAB



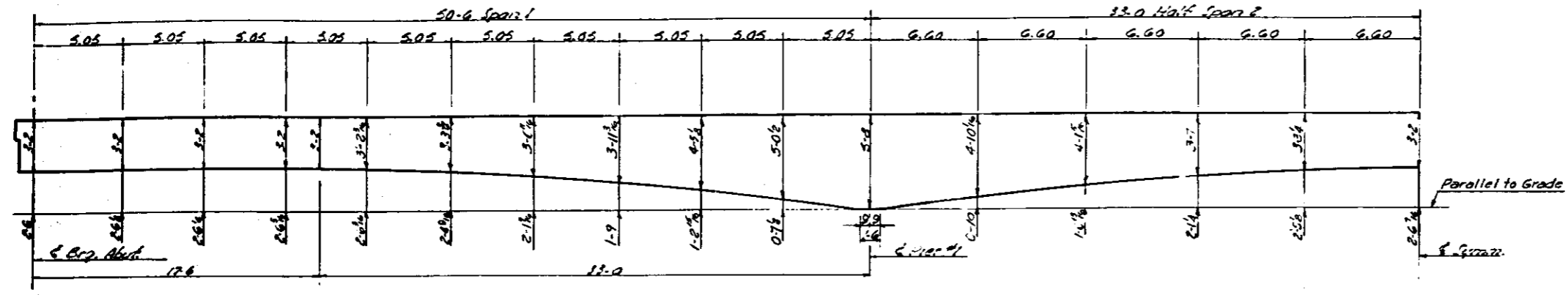
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
FAI - 74 BRIDGE OVER GRIFFIN ST
FAI - 74 SECTION 92-12HB-4
VERMILION COUNTY STA. 2033+67.01

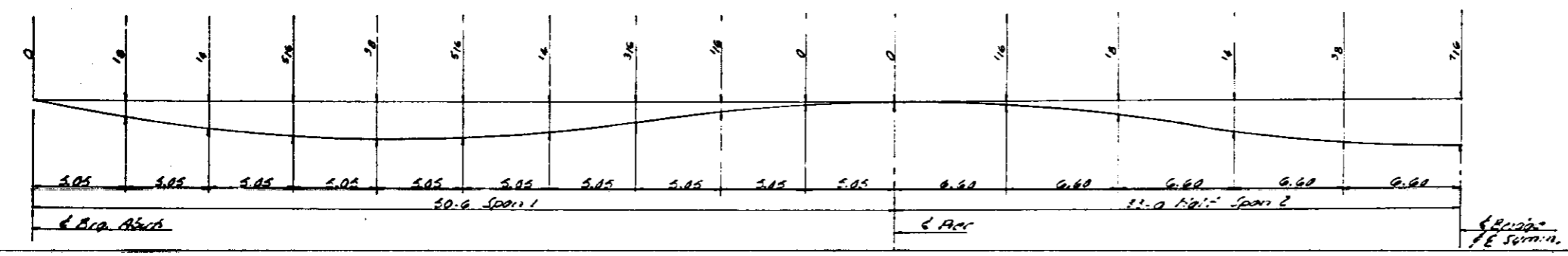
SUPERSTRUCTURE DETAILS

DESIGNED SMH	DRAWN J.T.	CHECKED WES	APPROVED JMH	DATE 10-17-60
			LDB	HSM

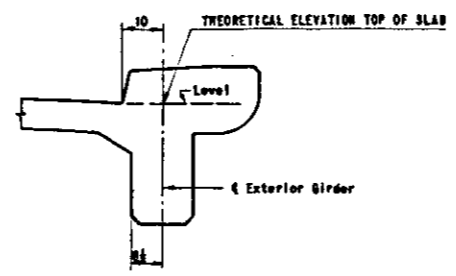
FAI No.	SECTION	DATE	SCALE	SHEET NO.
74	92-12HB VERMILION	108		22
VERTICAL CURVE REPORT NO. 7				



HALF GIRDER ELEVATION
Includes Allowance for D.L. Deflection



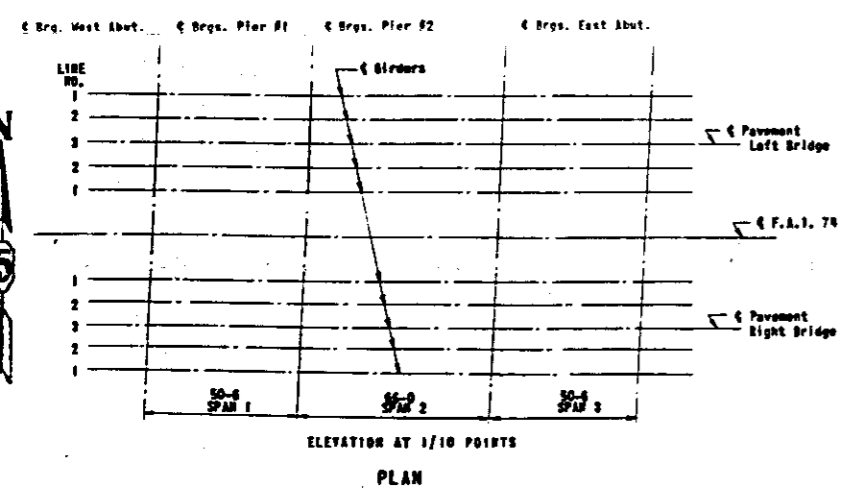
DEAD LOAD DEFLECTION



SECTION EXTERIOR GIRDER

SPAN	LINE NO.	1/10 POINT	STATION		ELEVATION	
			LEFT BRIDGE	RIGHT BRIDGE	THEOR.	ADJUSTED
SPAN 1	1	1	203284.229	203283.268	581.846	581.846
		2	203284.109	203283.140	581.861	581.861
		3	203283.990	203282.930	582.034	582.034
	2	1	203294.329	203293.300	581.825	581.844
		2	203294.208	203293.240	581.961	581.962
		3	203294.090	203293.130	582.013	582.034
	4	1	203304.429	203303.468	581.805	581.836
		2	203304.309	203303.390	581.941	581.972
		3	203304.190	203303.230	581.993	582.024
	6	1	203314.629	203313.568	581.785	581.806
		2	203314.408	203313.449	581.921	581.942
		3	203314.290	203313.330	581.973	581.994
8	1	203324.629	203323.668	581.785	581.770	
	2	203324.509	203323.548	581.900	581.905	
	3	203324.390	203323.430	581.953	581.958	
SPAN 2	1	1	203334.729	203333.768	581.795	581.785
		2	203334.609	203333.648	581.880	581.880
		3	203334.490	203333.530	581.933	581.933
	1	1	203341.329	203340.369	581.751	581.736
		2	203341.209	203340.240	581.867	581.872
		3	203341.090	203340.130	581.919	581.924
	2	1	203347.929	203346.968	581.718	581.728
		2	203347.808	203346.848	581.854	581.864
		3	203347.690	203346.730	581.904	581.914
	3	1	203354.529	203353.568	581.705	581.726
		2	203354.409	203353.448	581.841	581.862
		3	203354.290	203353.330	581.893	581.914
4	1	203361.129	203360.168	581.892	581.723	
	2	203361.009	203360.048	581.827	581.858	
	3	203360.890	203359.930	581.880	581.911	
5	1	203367.729	203366.768	581.679	581.715	
	2	203367.609	203366.648	581.815	581.850	
	3	203367.490	203366.530	581.867	581.902	
6	1	203374.329	203373.368	581.645	581.696	
	2	203374.209	203373.248	581.801	581.832	
	3	203374.090	203373.130	581.853	581.884	
7	1	203380.929	203379.968	581.652	581.678	
	2	203380.809	203379.848	581.788	581.809	
	3	203380.690	203379.730	581.840	581.861	
8	1	203387.529	203386.568	581.639	581.640	
	2	203387.409	203386.448	581.775	581.785	
	3	203387.290	203386.330	581.827	581.837	
9	1	203394.129	203393.168	581.626	581.631	
	2	203394.009	203393.048	581.761	581.766	
	3	203393.890	203392.930	581.814	581.819	
10	1	203400.729	203399.768	581.613	581.618	
	2	203400.609	203399.648	581.748	581.748	
	3	203400.490	203399.530	581.801	581.801	
11	1	203410.629	203409.668	581.582	581.587	
	2	203410.509	203409.548	581.728	581.733	
	3	203410.390	203409.430	581.780	581.785	
12	1	203420.929	203419.968	581.572	581.580	
	2	203420.809	203419.848	581.708	581.728	
	3	203420.690	203419.730	581.760	581.781	
13	1	203431.029	203430.068	581.562	581.563	
	2	203430.909	203430.048	581.698	581.719	
	3	203430.790	203430.030	581.750	581.771	
14	1	203441.129	203440.168	581.552	581.553	
	2	203441.009	203440.048	581.687	581.688	
	3	203440.890	203440.030	581.739	581.741	
15	1	203451.229	203450.268	581.512	581.512	
	2	203451.109	203450.148	581.647	581.647	
	3	203450.990	203450.030	581.700	581.700	

- NOTES:
1. THEORETICAL ELEVATION IS THE THEORETICAL TOP OF SLAB ELEVATION.
 2. ADJUSTED ELEVATION IS THE THEORETICAL TOP OF SLAB ELEVATION ADJUSTED FOR THE CONCRETE DEAD LOAD DEFLECTION.
 3. STATGNS SHOWN ARE AT NORTH THREE GIRDERS.



ELEVATION AT 1/10 POINTS PLAN

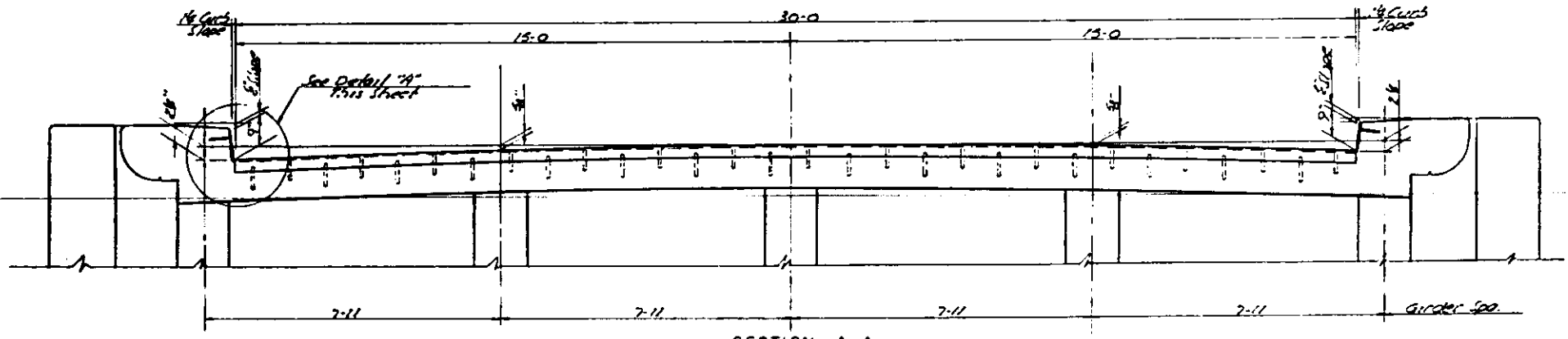
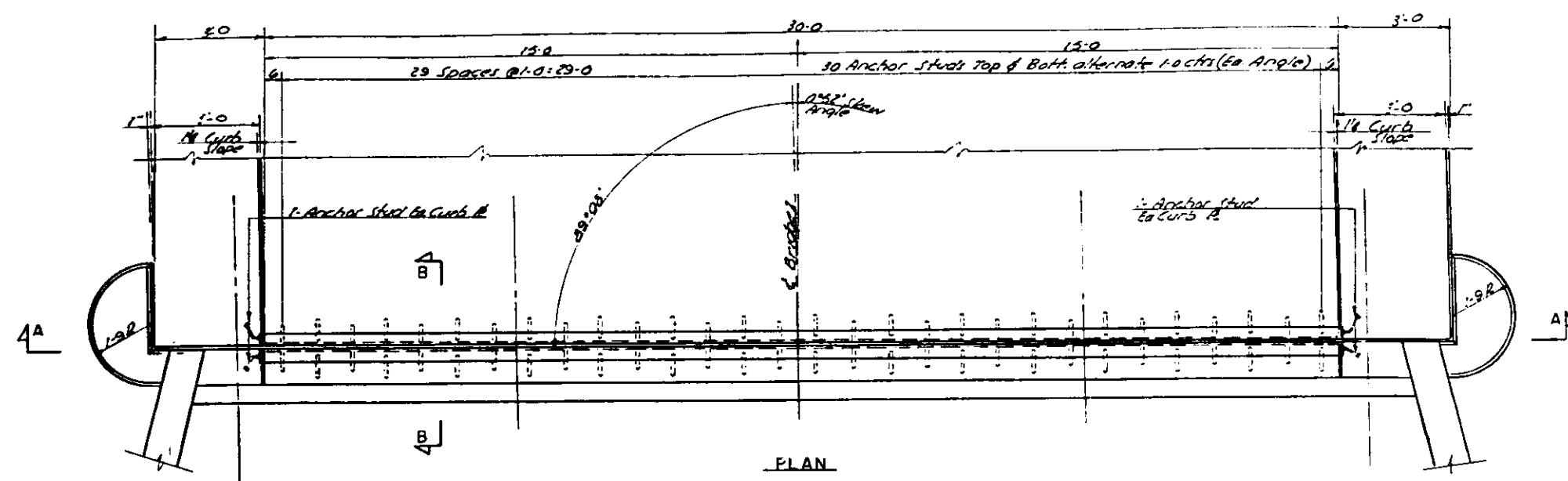
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
FAI - RT 74 BRIDGE OVER GRIFFIN ST
FAI-74 SECTION 92-12HB-4
VERMILION COUNTY STA. 2033+67.01

SUPERSTRUCTURE DETAILS

3MH	27	457	3MH	27	457
LDB	HSM	10-17-60			

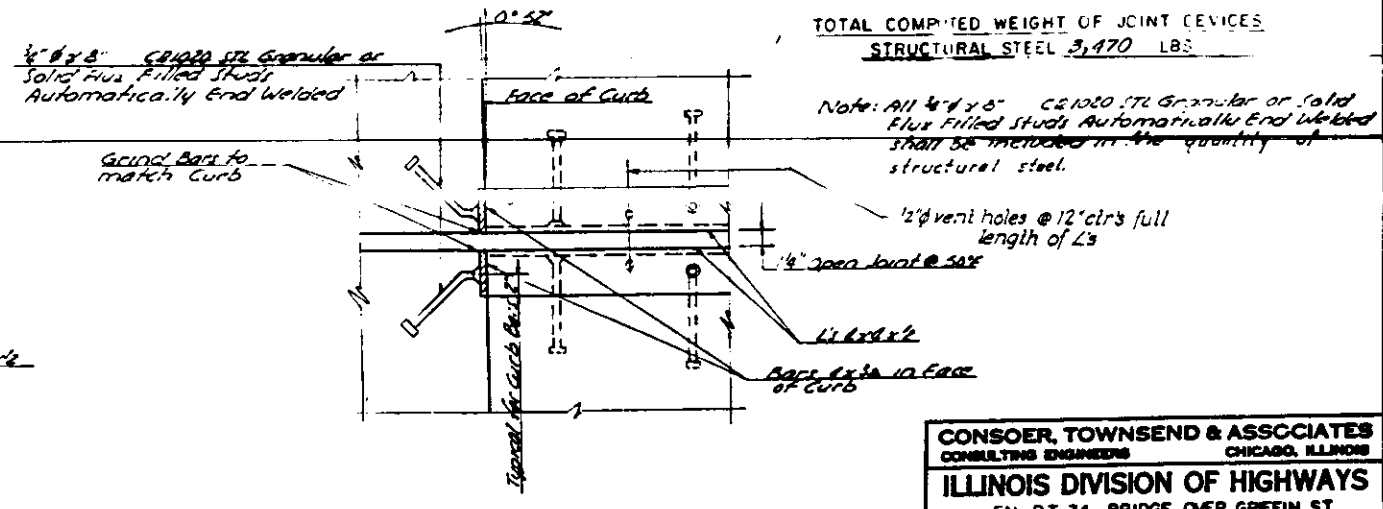
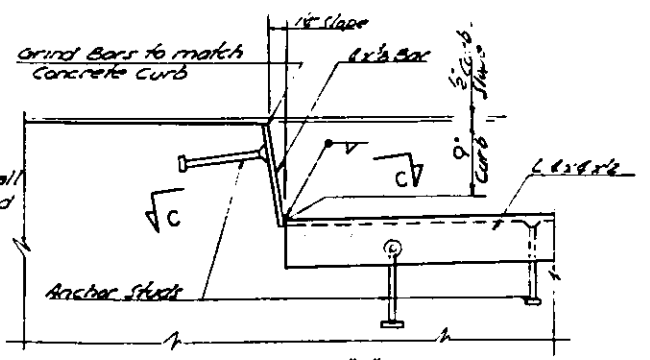
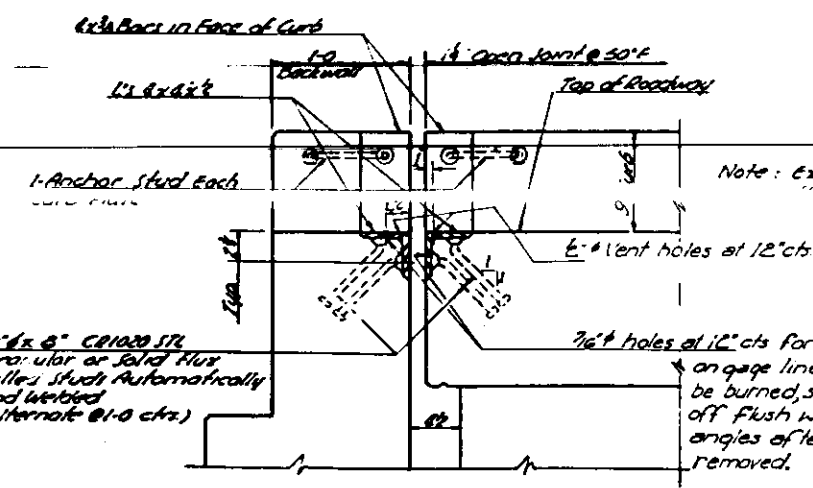
PLAN NO.	CUSTOMER	PROJECT	SHEET NO.	TOTAL SHEETS
74	Illinois	108	24	



EXPANSION JOINT DEVICE
As Required

Note: Set curb plates flush with plane of curb and weld to roadway angles as shown. Grind exposed welds smooth. All welds are 1/8" fillet except as otherwise noted.

TOTAL COMPUTED WEIGHT OF JOINT DEVICES
STRUCTURAL STEEL 3,470 LBS.



1/4" x 5/8" CE1020 STE Granular or Solid Flux Filled Studs Automatically End Welded

Note: All 1/4" x 5/8" CE1020 STE Granular or Solid Flux Filled Studs Automatically End Welded shall be included in the quantity of structural steel.

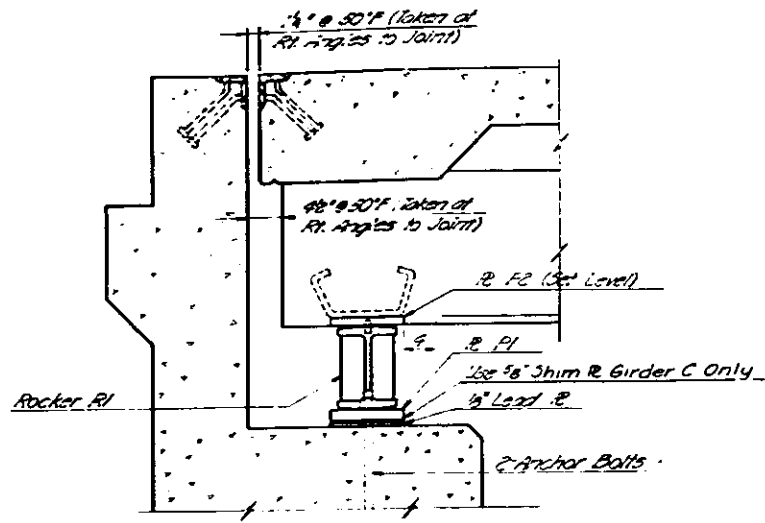
CONSOER, TOWNSEND & ASSOCIATES
CONSULTING ENGINEERS
CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
FAI RT 74 BRIDGE OVER GRIFFIN ST.
FAI-74 SECTION 92-12 HB-4
VERMILION COUNTY STA. 2033+67.01

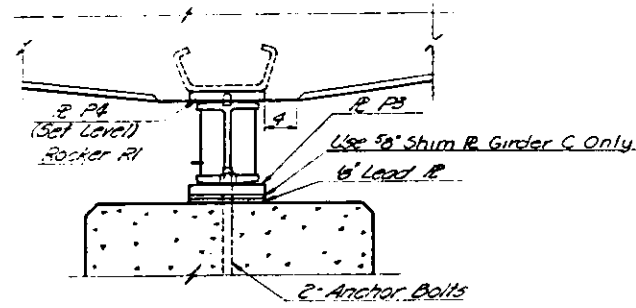
STRUCTURAL STEEL JOINT DETAILS

J.T.	J.T.	M.P.S.	J.W.N.	LDB	HSM	10-760
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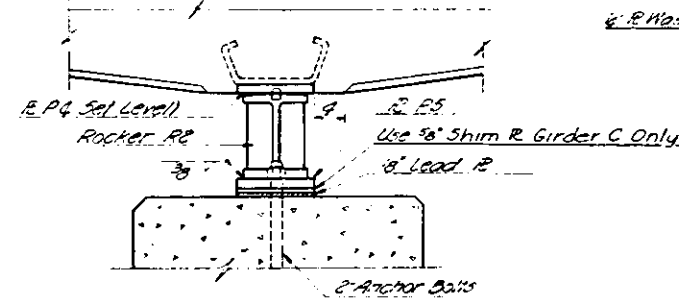
FAL. SHE. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
74	92-2HB-4	VERMILION	108	25
FEDERAL ROAD DISTRICT NO. 7		CLINCH	FILL	



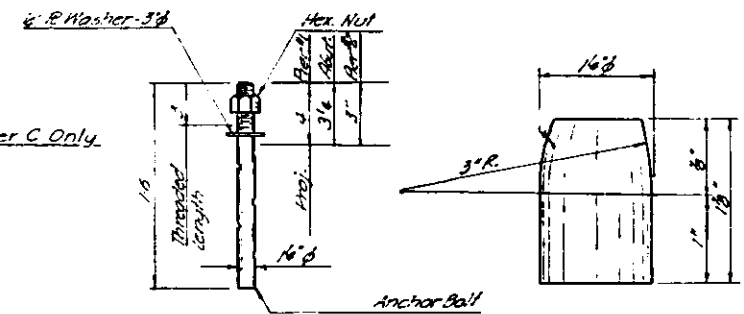
ELEVATION-EXPANSION BEARING DEVICE AT ABUTMENTS



ELEVATION-EXPANSION BEARING DEVICE AT PIER 1



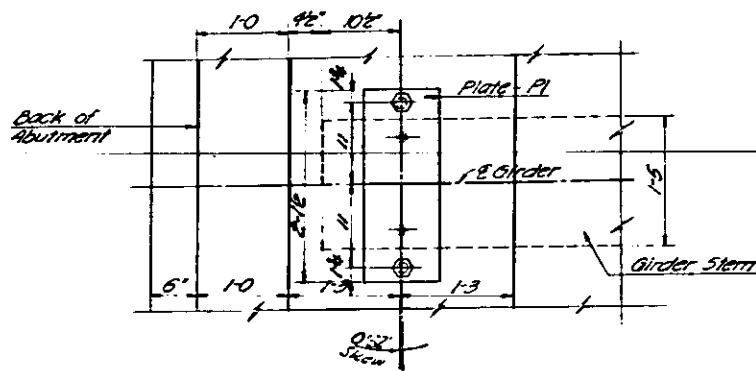
ELEVATION-FIXED BEARING DEVICE AT PIER 2



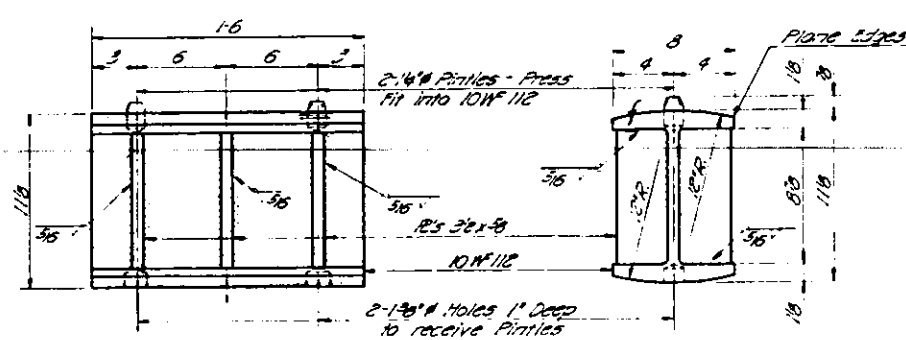
ANCHOR BOLT 80 Required

PINTLE

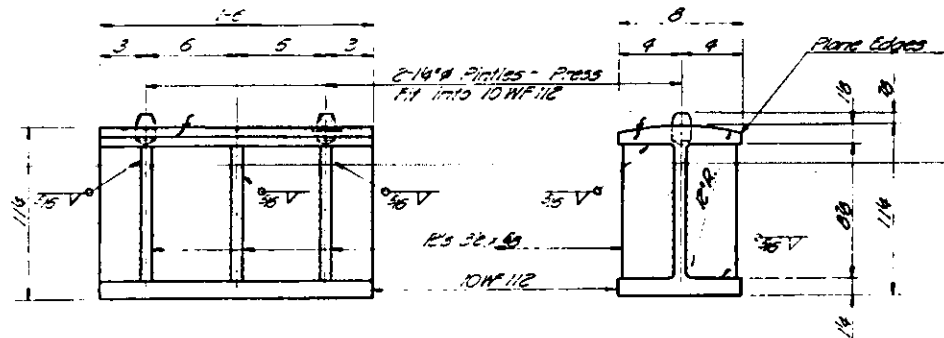
Note: Add 5/8\"/>



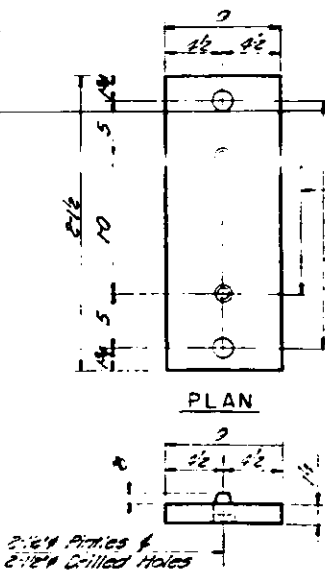
PLAN-BOTTOM ABUTMENT BEARING PLATE



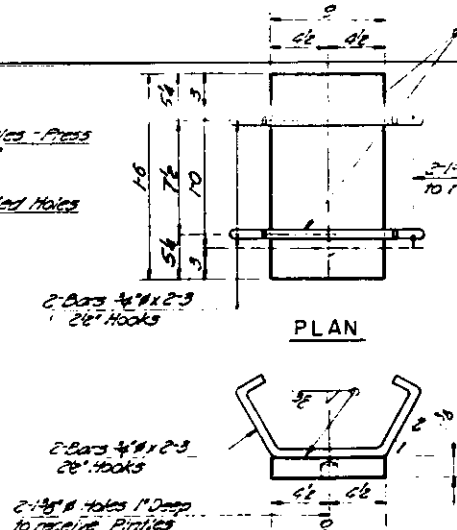
ROCKER - R1 (30 Req'd)



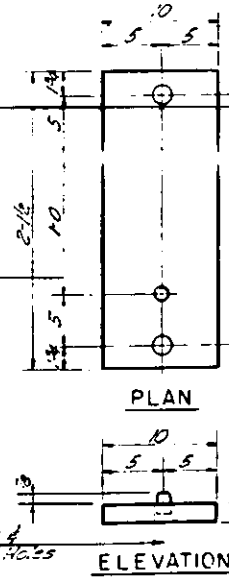
ROCKER - R2 (10 Req'd)



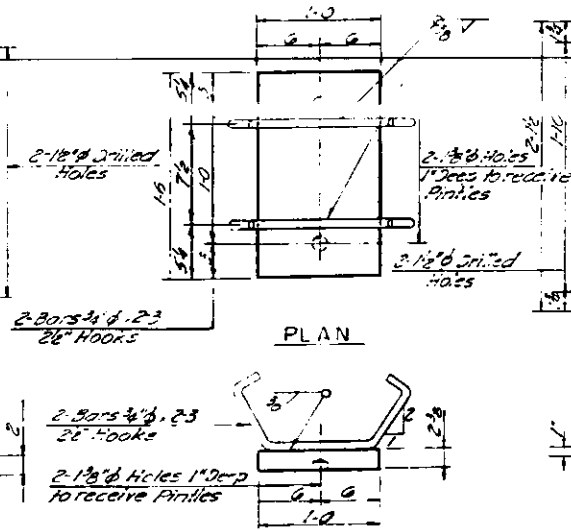
ELEVATION PLATE-P1 (20 Req'd)



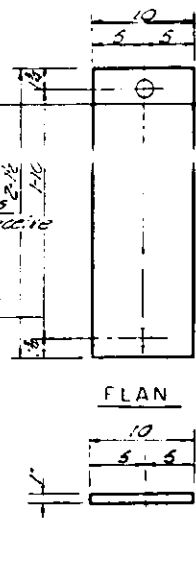
ELEVATION PLATE-P2 (20 Req'd)



ELEVATION PLATE-P3 (10 Req'd)



ELEVATION PLATE-P4 (20 Req'd)



ELEVATION PLATE-P5 (10 Req'd)

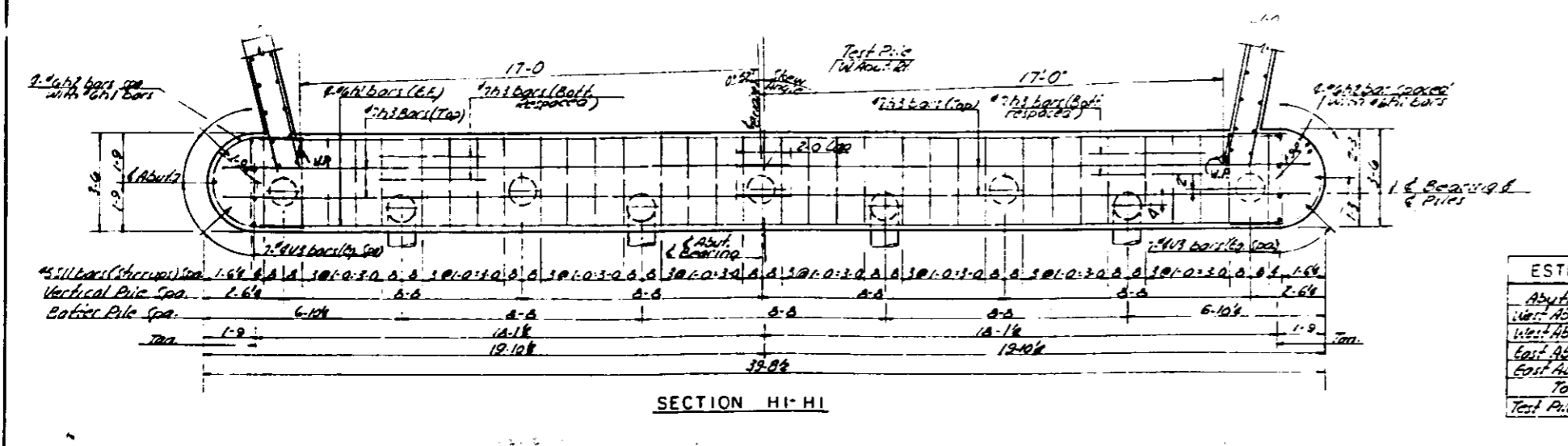
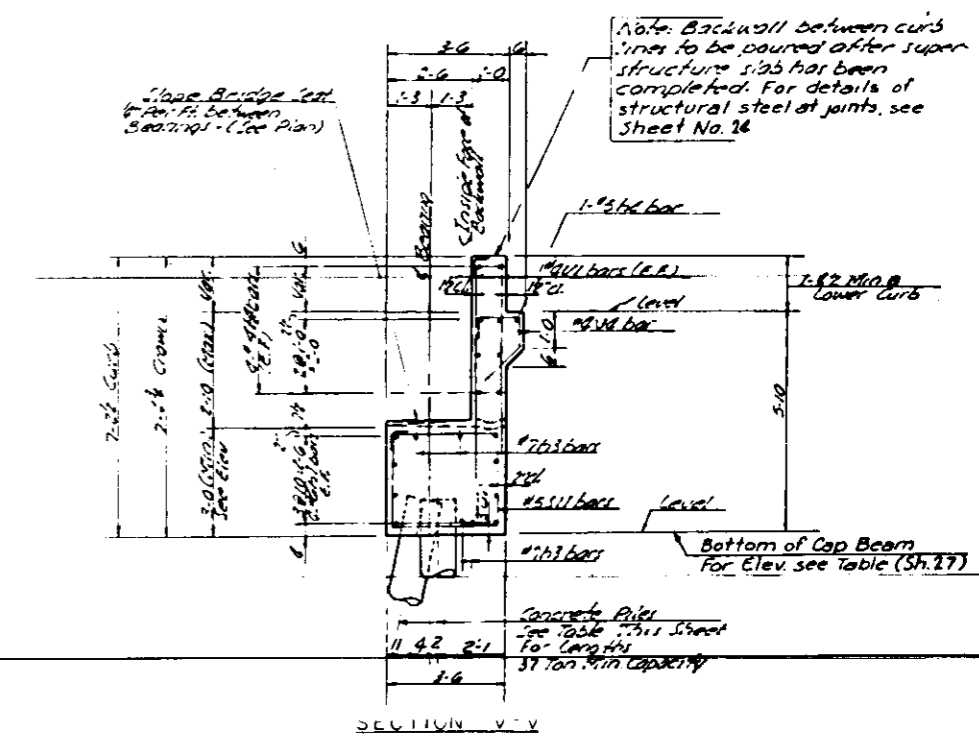
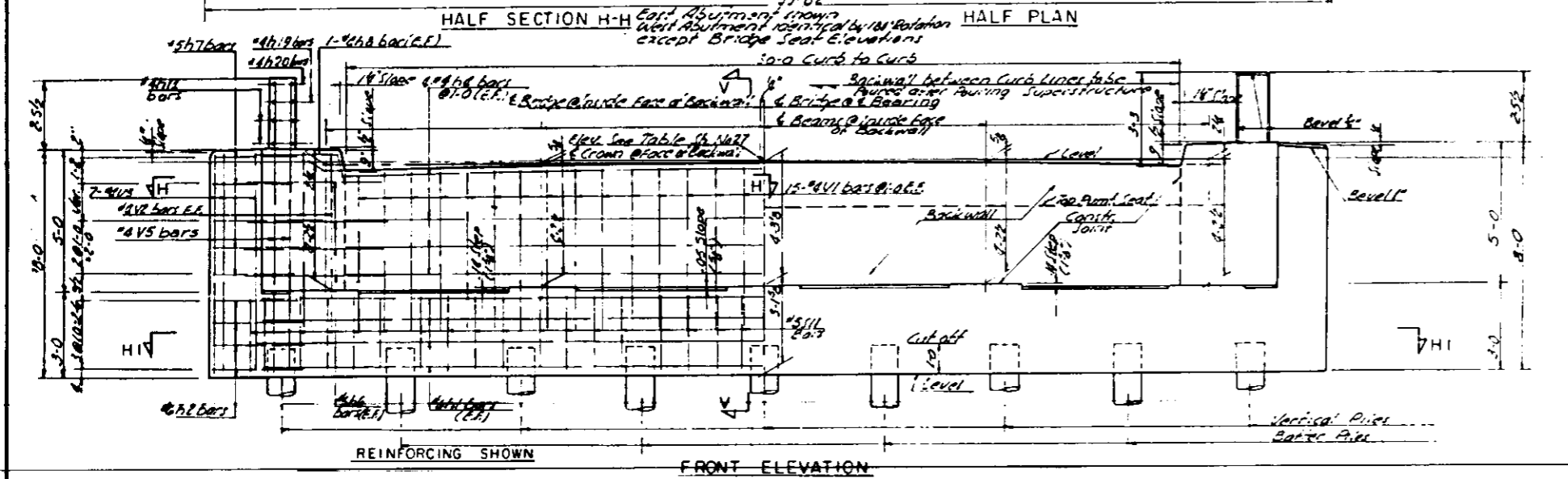
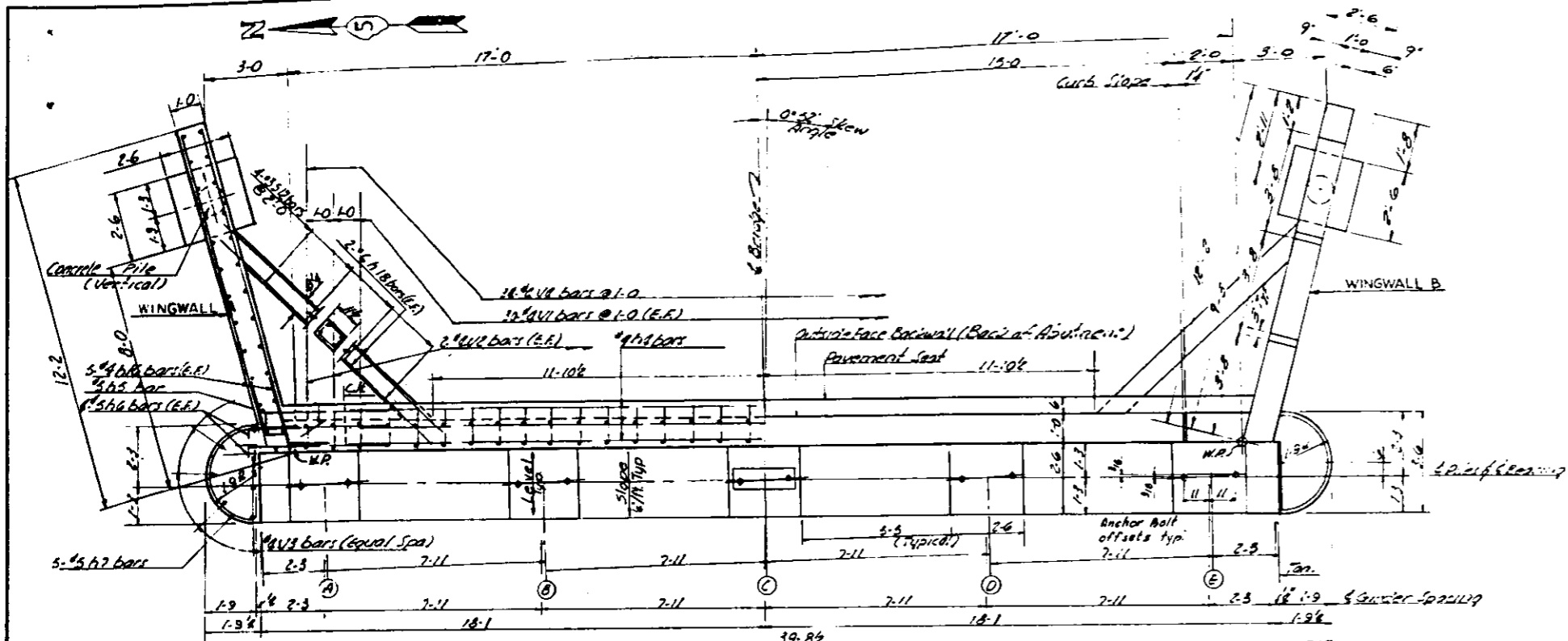
TOTAL COMPUTED WEIGHT OF BEARING DEVICES
STRUCTURAL STEEL 17,730 LBS.
(Quantities shown for 2 Bridges)

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ILLINOIS DIVISION OF HIGHWAYS
FAI RT. 74 BRIDGE OVER GRIFFIN ST.
FAI - 74 SECTION 92-12HB-4
VERMILION COUNTY STA. 2033+67.01

STRUCTURAL STEEL BEARING DEVICES				
REVISION	DATE	BY	CHECKED	DATE
J.T.	11/25	J.T.	J.W.	
			LDB	10/7/66

PAL. DIST. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
76	92-12HB-4	VERMILION	108	26
FEDERAL ROAD DISTRICT NO. 7		ILLINOIS	TOTAL	



ESTIMATED LENGTHS & QUANTITIES OF PILES		
Abutment	Concrete Piles	Concrete Piles Wing Walls
West Abut. Rt.	8 @ 60' = 320	2 @ 23' = 46
West Abut. Lt.	8 @ 60' = 360	2 @ 23' = 46
East Abut. Rt.	8 @ 60' = 360	2 @ 23' = 46
East Abut. Lt.	9 @ 60' = 360	2 @ 23' = 46
Total	1500	344

Test Pile One Test Pile @ West Abut. Rt. Concrete

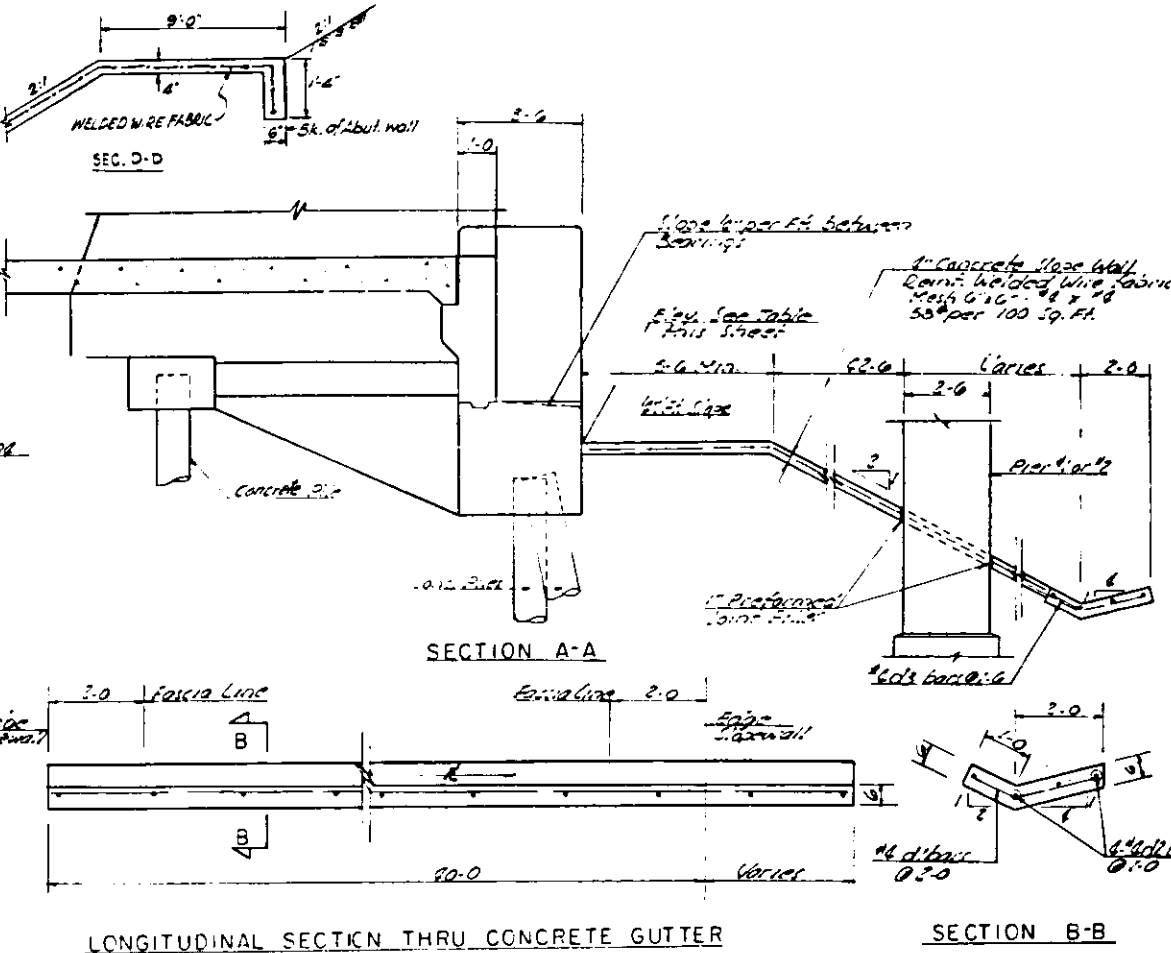
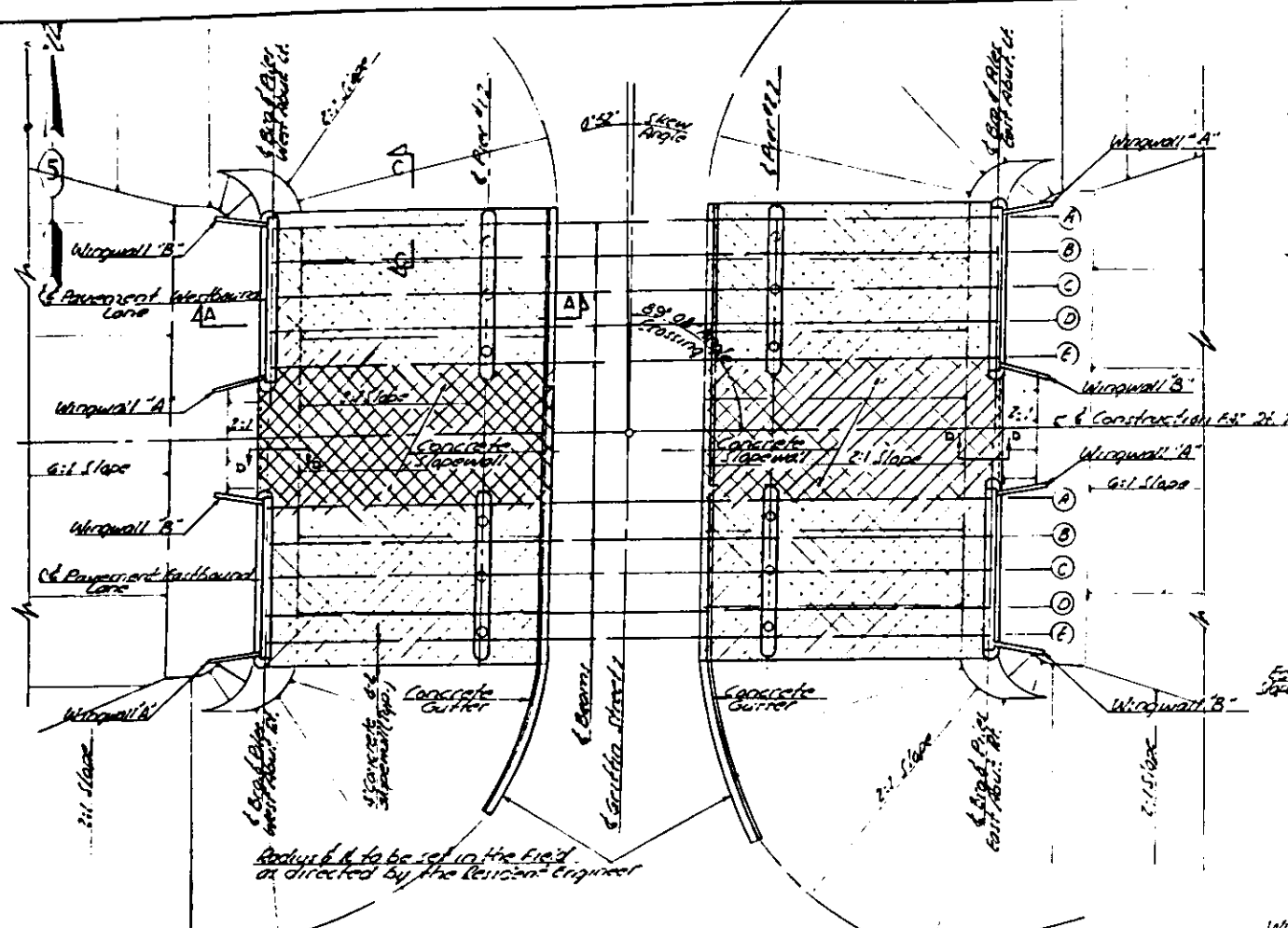
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ILLINOIS DIVISION OF HIGHWAYS
FAI RT. 74 BRIDGE OVER GRIFFIN ST.
FAI-74 SECTION 92-12HB-4
VERMILION COUNTY STA 2033+67.01

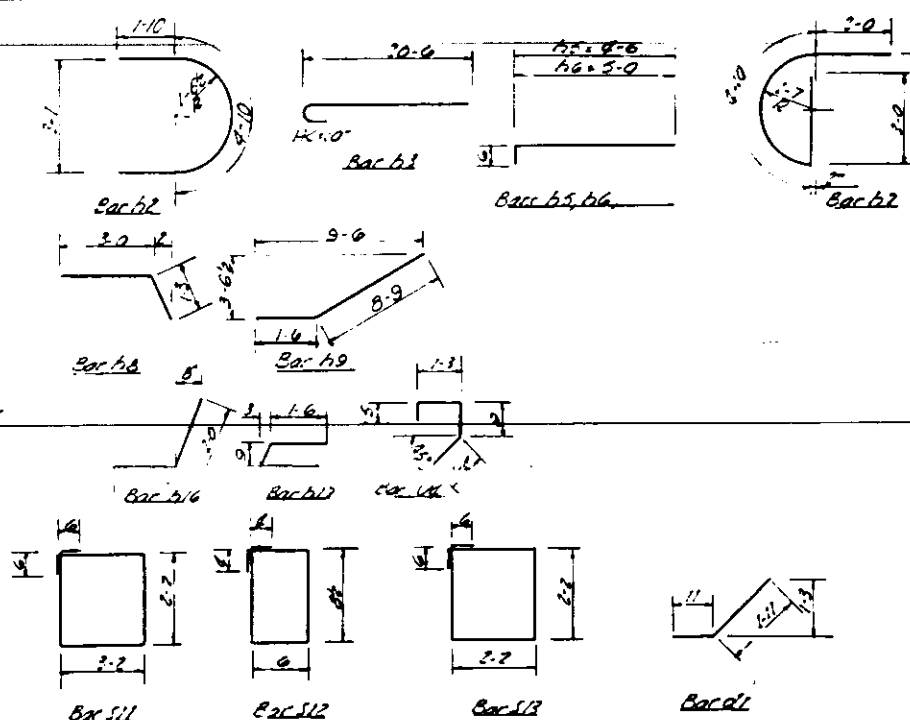
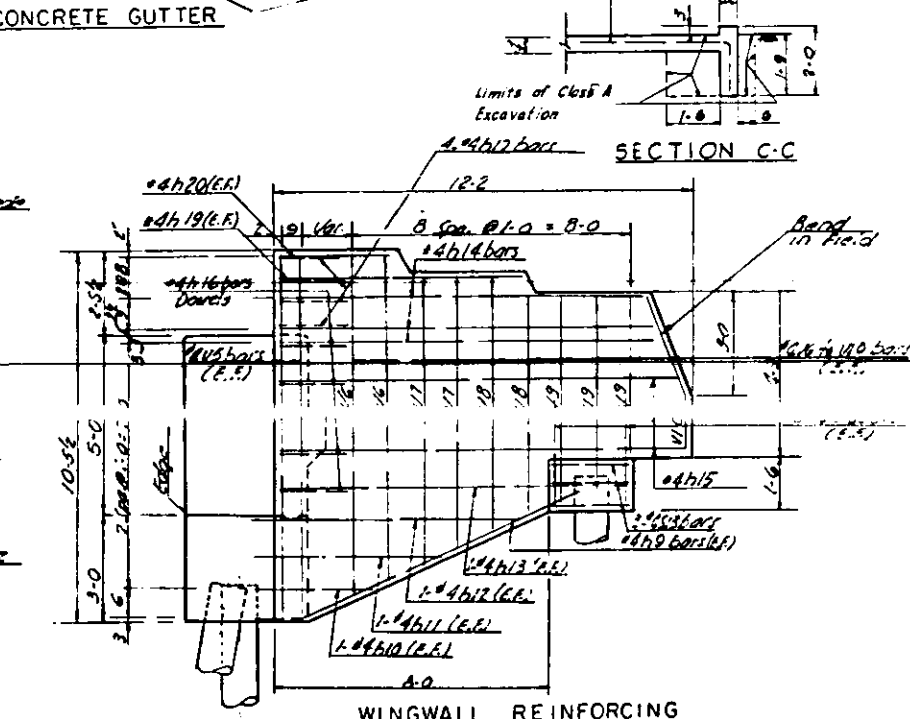
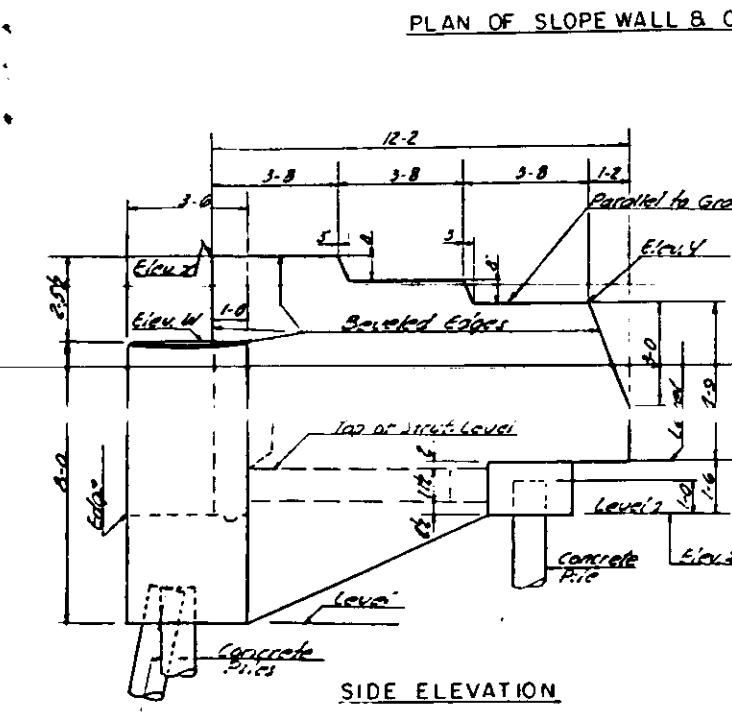
ABUTMENTS

DESIGNED	CHECKED	TRACED	APPROVED	DATE	REVISION
J.T.	J.T.	WET	J.W.M.	LDB	HSM 10-17-60

FAI No.	REVISED	DATE	TOTAL SHEETS	SHEET NO.
74	REVISION	10/21/08	108	27
FURNISH WITH PROJECT NO. 7				



BAR SCHEDULE					
Bar No	Size	Length	Spacing	Shape	
A1	32	6	16-2	10	—
A2	32	6	8-6	10	—
A3	32	7	21-6	As Shown	—
A4	36	4	29-9	1-0	—
A5	8	4	5-0	As Shown	—
A6	6	4	5-6	1-0	—
A7	10	5	9-10	As Shown	—
A8	16	6	8-3	As Shown	—
A9	16	4	10-3	As Shown	—
A10	16	4	3-6	1-0	—
A11	16	4	5-6	1-0	—
A12	16	4	2-0	1-0	—
A13	16	4	9-9	1-0	—
A14	6	4	10-3	1-0	—
A15	6	4	11-6	1-0	—
A16	6	4	3-6	1-0	—
A17	32	4	3-0	As Shown	—
A18	32	6	11-0	As Shown	—
A19	16	4	6-6	As Shown	—
A20	16	4	3-0	As Shown	—
B1	220	6	5-6	1-0	—
B2	32	4	6-8	1-0	—
B3	56	4	7-10	As Shown	—
B4	136	4	3-9	1-0	—
B5	32	6	10-0	9	—
B6	32	4	9-2	1-0	—
B7	32	4	7-7	1-0	—
B8	32	4	6-8	1-0	—
B9	48	4	5-9	1-0	—
B10	16	4	4-3	1-0	—
B11	32	6	3-0	As Shown	—
B12	32	3	3-1	2-0	—
B13	28	4	9-8	6	—
C1	160	6	2-10	2-0	—
C2	80	4	30-10	As Shown	—
C3	100	4	2-6	1-6	—



ABUTMENT QUANTITIES					
Class X Concrete	174.2	Cu Yds.			
Class A Excavation	4.4	Cu Yds.			
The above quantities are for four Abutments and wingwalls and reinforcement only for concrete gutter.					
Estimated Length of Concrete Gutter 300.0 Lin. Ft.					
Concrete Gutter or Road Ditch Included in Quantity of Slope Wall. Est. 1832 Sq. Yds.					

TABLE OF ELEVATIONS														
Abutments	Form Elev.	Bottom of Cap Beam Elev.	Crown Elev. Top of Box Wall	WINGWALL A			WINGWALL B			Bearing Seat Elev. (Top Concrete)				
				W	X	Z	W	X	Z	A	B	C	D	E
West Abut. RL	576.64	578.64	582.04	582.65	585.11	583.80	577.55	577.64	577.76	577.78	577.78	577.26	577.65	
West Abut. LL	576.64	578.64	582.03	582.64	585.10	583.79	577.54	577.63	577.75	577.77	577.77	577.25	577.64	
East Abut. RL	576.30	578.30	581.70	582.31	584.77	583.42	577.17	577.30	577.64	577.64	577.64	577.30	577.30	
East Abut. LL	576.30	578.30	581.70	582.31	584.77	583.42	577.17	577.30	577.64	577.64	577.64	577.30	577.30	

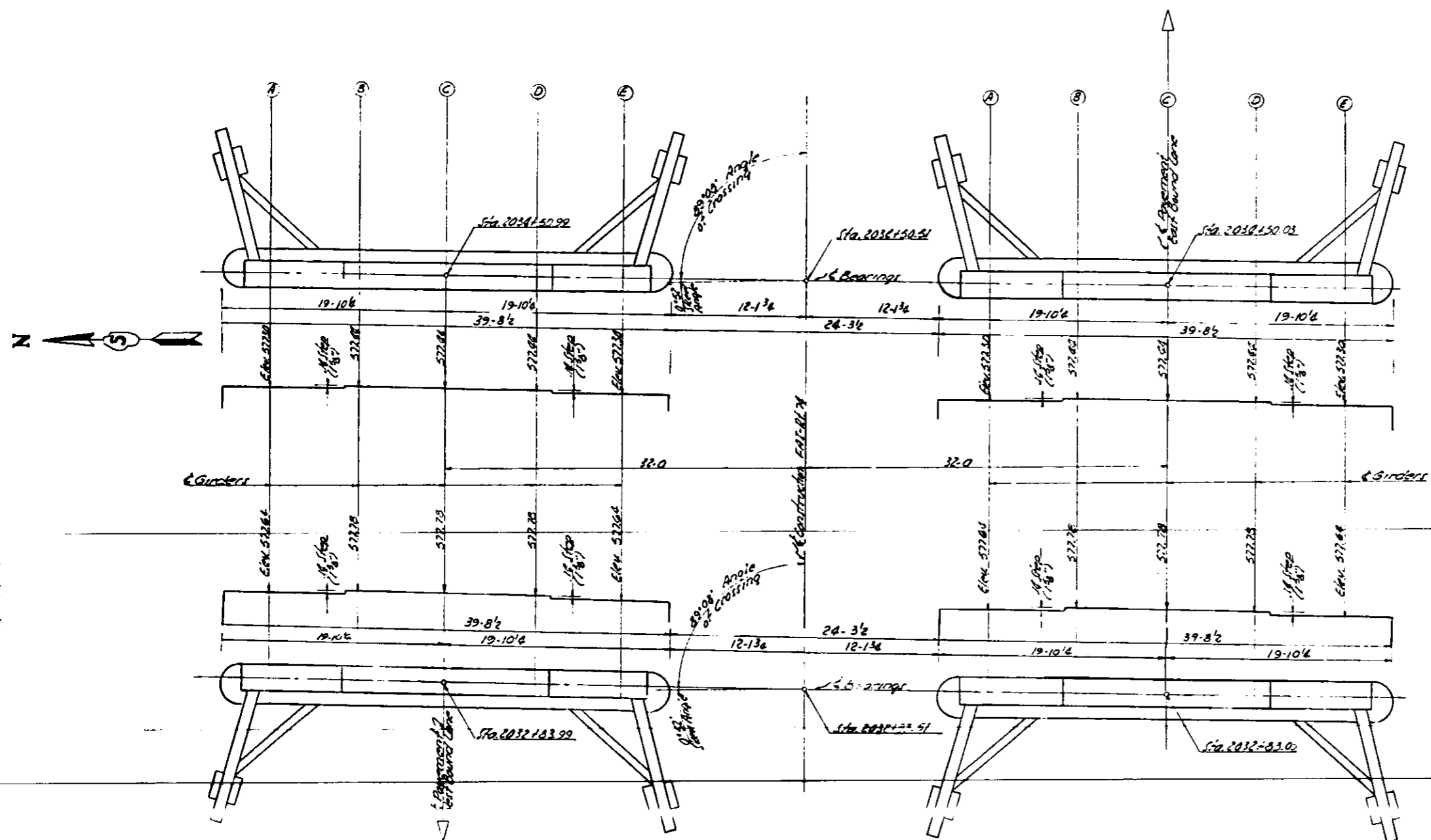
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CONSULTING ENGINEERS CHICAGO, ILLINOIS

ILLINOIS DIVISION OF HIGHWAYS
FAI RT. 74 BRIDGE OVER GRIFFIN ST.
FAI-74 SECTION 92-12-HB-4
VERMILION COUNTY STA. 2033+620

ABUTMENTS

J.T.	J.T.	W.D.S.	J.W.H.	W.D.S.	J.W.H.
		LDB	HSM	10-17-60	

FAA DIST. NO.	SECTION	QUANTITY	TOTAL	REMARKS
76	92-12HB	VERMILION	108	2.8
FEDERAL ROAD DISTRICT NO. 7		SLABES	FOOT.	



EAST & WEST ABUTMENT LT. EAST & WEST ABUTMENT RT.
 GENERAL LAYOUT OF ABUTMENTS BEARING SEAT STEPS & ELEVATIONS

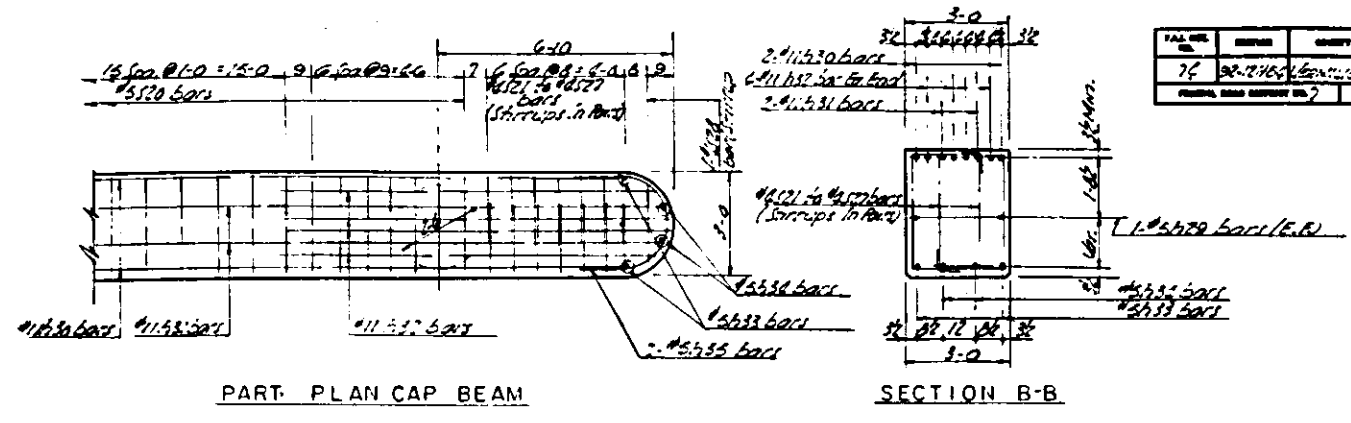
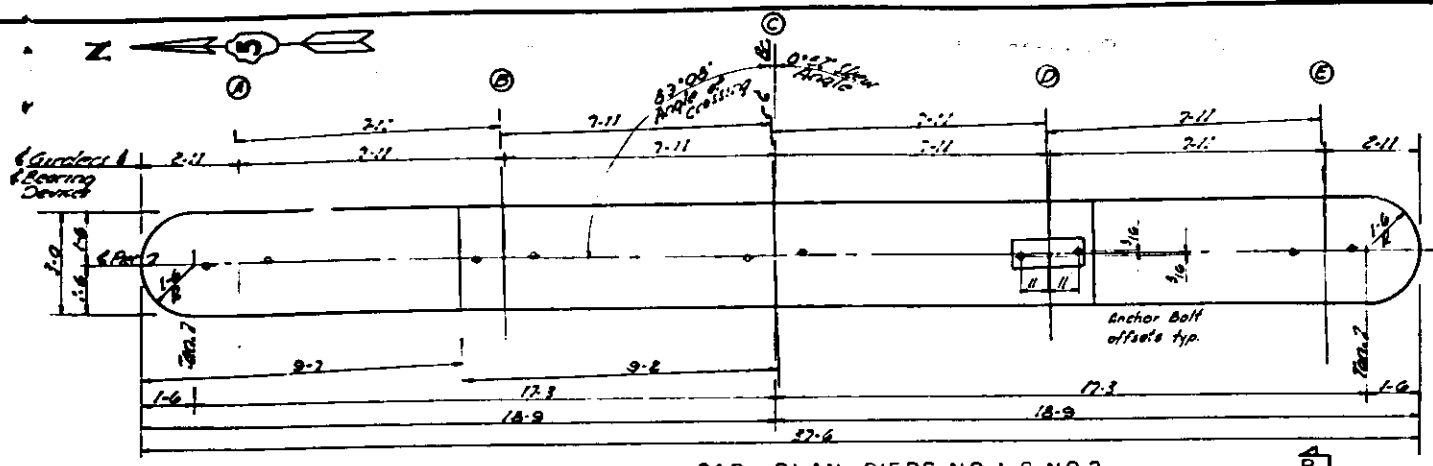
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ILLINOIS DIVISION OF HIGHWAYS
 FAI RT 74 BRIDGE OVER GRIFFIN ST.
 FAI-74 SECTION 92-12HB-4
 VERMILION COUNTY STA. 2033+67.01

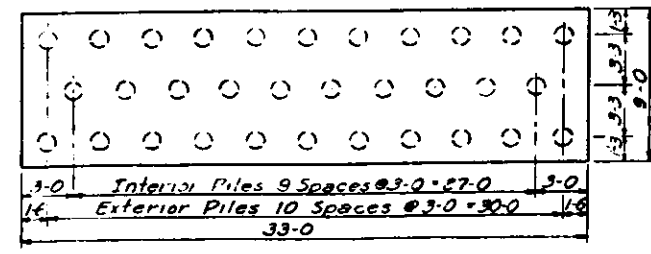
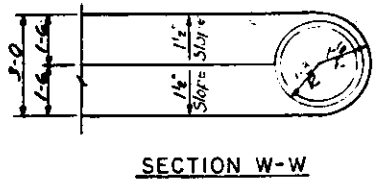
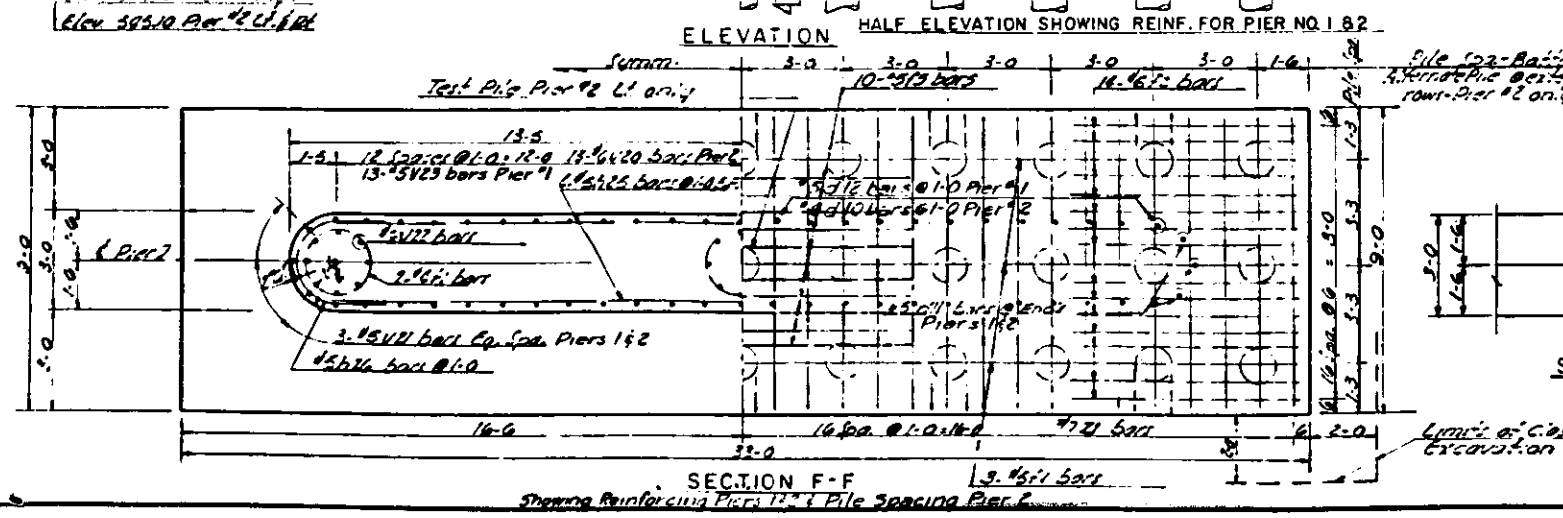
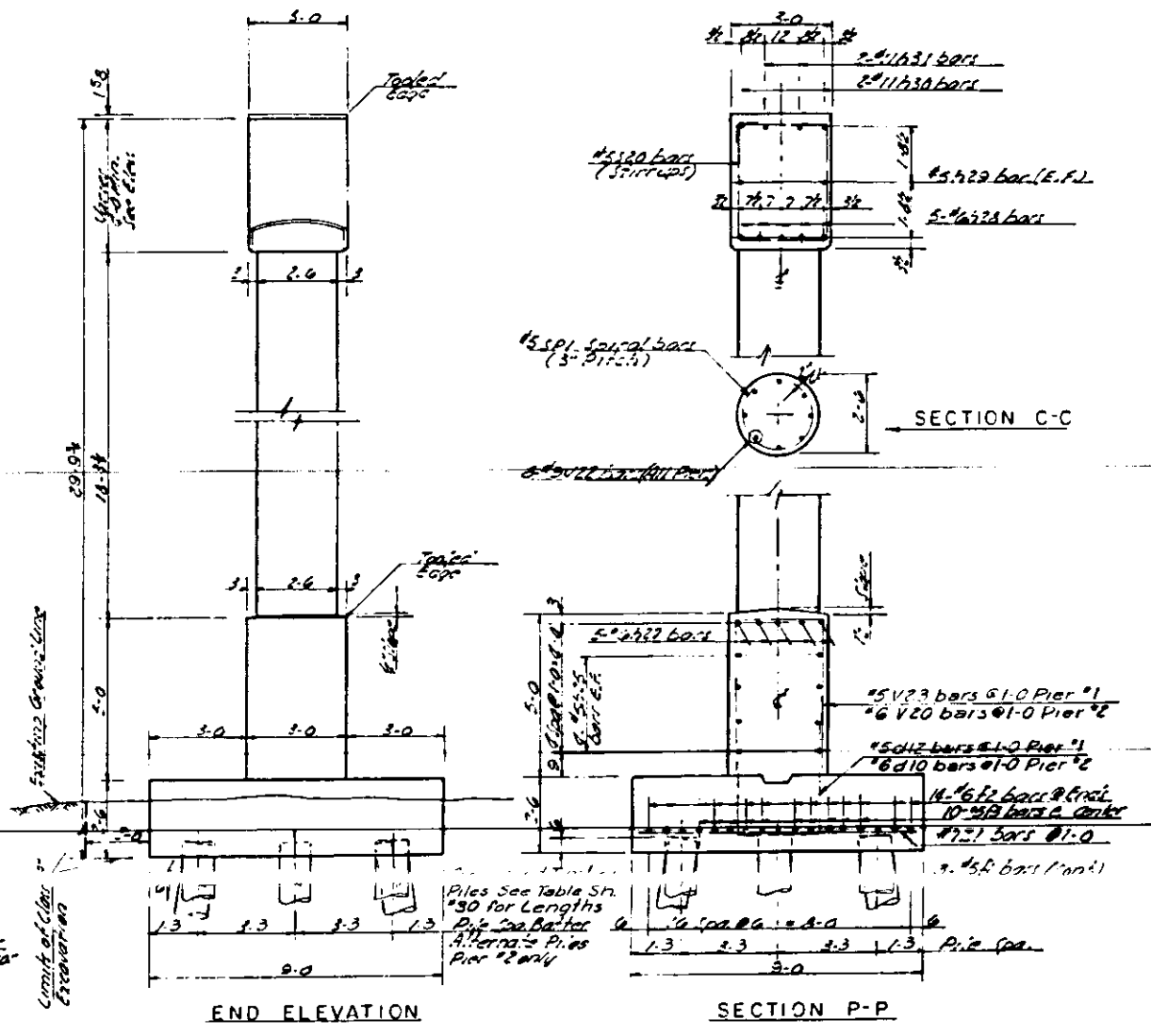
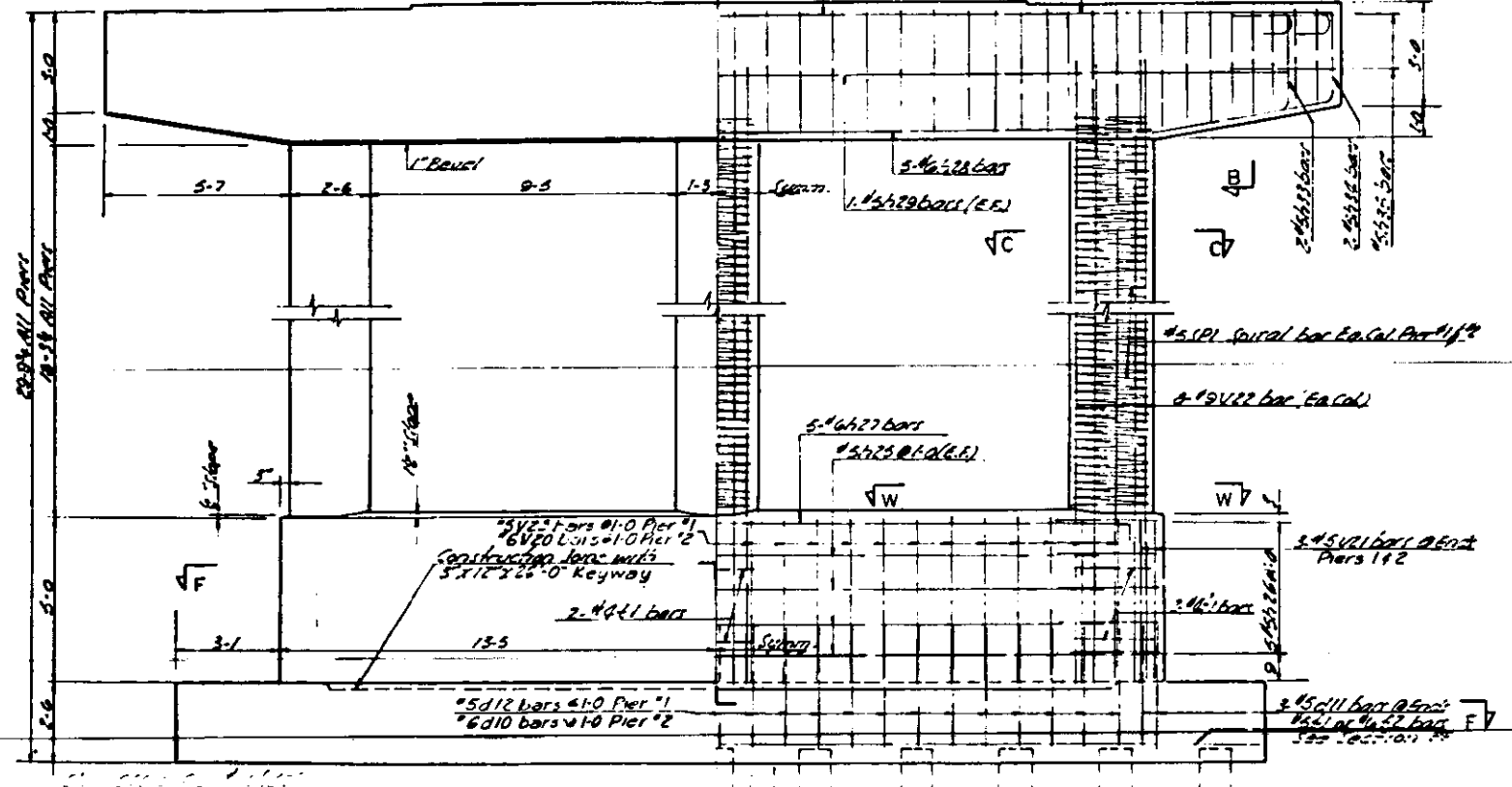
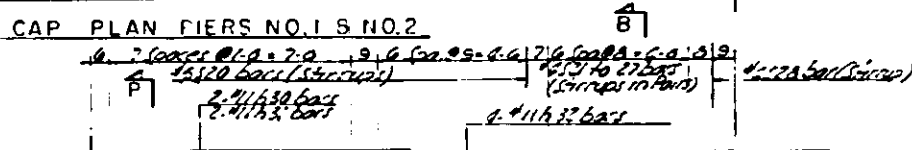
ABUTMENTS

J.T.	J.T.	HES	JWN	HSM	10-17-60
			LDB		

DATE	BY	CHKD	APP'D
7/4	SP-7465	108	29
PIER NO. 1		PIER NO. 2	



Note:
See Sheet No. 30 for Bearing
Seat Steps & Elevations

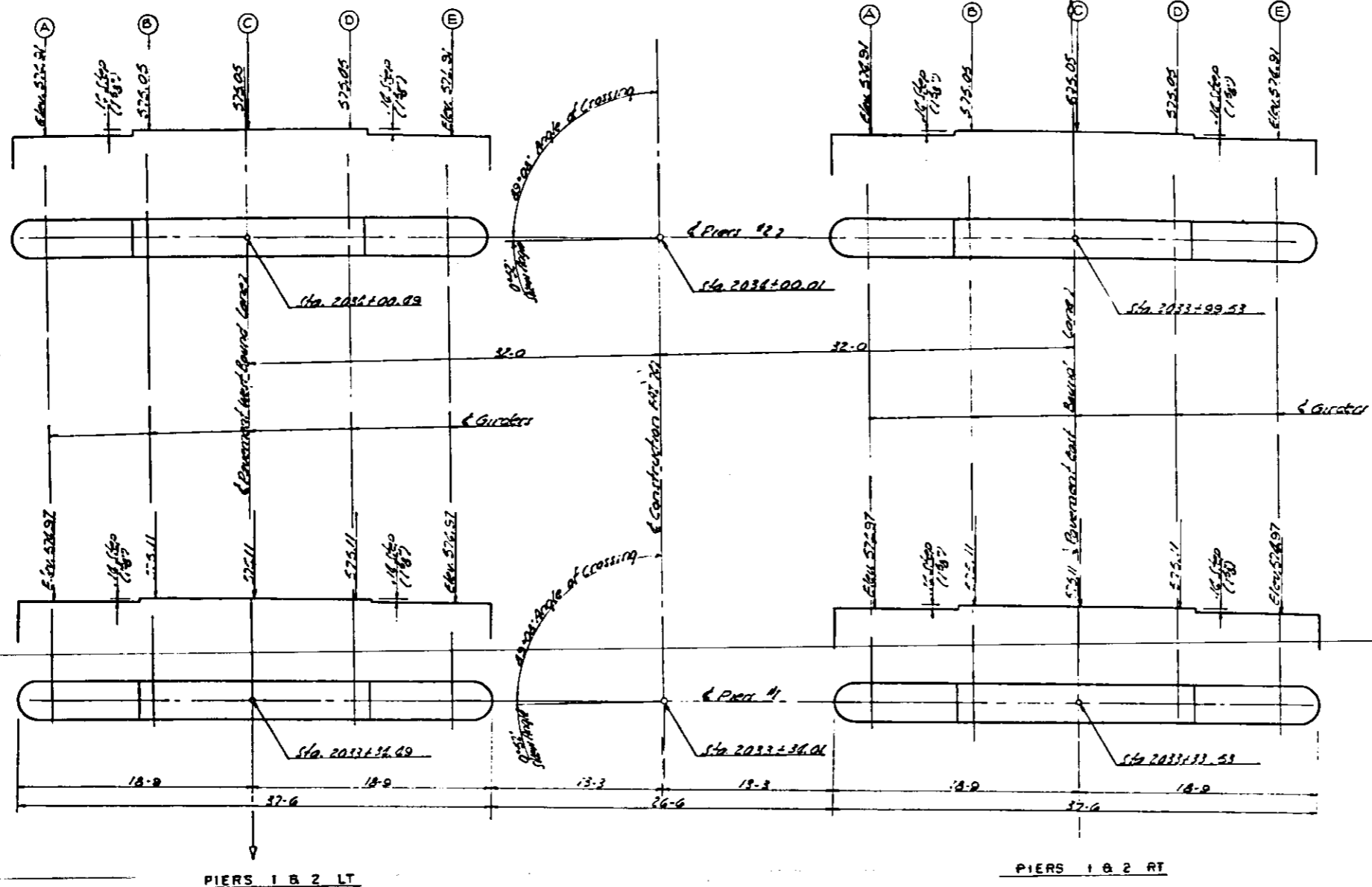


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ILLINOIS DIVISION OF HIGHWAYS
FAI RT. 74 BRIDGE OVER GRIFFIN ST
FAI - 74 SECTION 92-1216-4
VERMILION COUNTY STA 2033+67.01

PIERS				
DATE	BY	CHKD	APP'D	REV
		LDB	HSM	10-17-60

PLAN NO.	76	DATE	02-1-48	PROJECT	BRIDGE OVER GRIFFIN ST.	PIER NO.	108	DATE	30
DESIGNED BY	C. W. TOWNSEND		CHECKED BY	J. T. JONES		APPROVED BY			



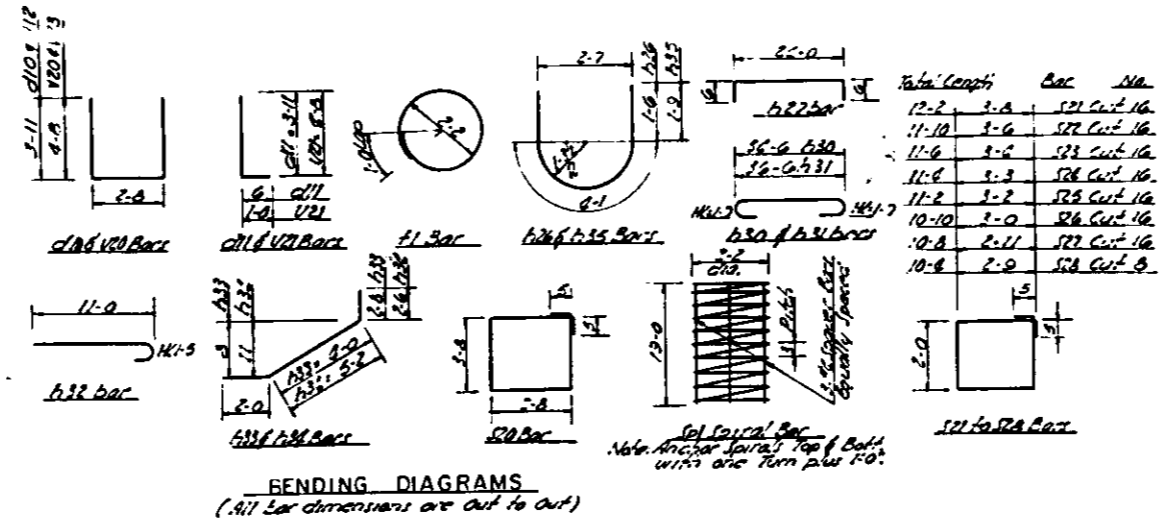
GENERAL LAYOUT OF PIERS - BEARING SEAT STEPS & ELEVATIONS

Pier	Bar	No	Size	Length	Spacing	Shape
182	12	12	3	22.6	At Steps	—
182	12	112	6	6.6	At Steps	—
182	13	40	3	10.0	At Steps	—
2	12	50	6	10.6	1-0	U
182	12	28	5	4.5	Eq. Sp.	L
1	12	50	3	10.6	1-0	U
2	120	50	6	12.0	1-0	U
182	121	28	5	5.8	1-0	L
182	122	28	5	25.9	Eq. Sp.	—
1	123	50	5	12.0	1-0	U
182	21	132	7	8.5	1-0	—
182	21	24	6	2.0	At Steps	O
182	125	32	3	23.0	1-0	—
182	126	60	3	7.4	1-0	U
182	127	20	6	25.0	At Steps	—
182	128	20	6	26.4	At Steps	—
182	129	8	5	36.6	At Steps	—
182	130	8	11	23.8	At Steps	—
182	131	8	11	23.8	At Steps	—
182	132	32	11	12.5	At Steps	—
182	133	16	5	8.8	At Steps	—
182	134	16	5	9.8	At Steps	—
182	135	16	5	7.7	At Steps	—
182	120	120	5	13.6	At Steps	O
182	121-128	120*	6	*	8.8	O
182	129	12	5	*	At Steps	—

PIER QUANTITIES	
Class A Concrete	271.9 Cu. Yds.
Reinforcement Bars	336.80 Lbs.
Furnishing Grouted Piles	2255 Lin. Ft.
Driving Timber Piles	2255 Lin. Ft.
Class A Excavation	137 Cu. Yds.

Note: Quantities shown are for 4 Piers
* See Bending Diagrams

ESTIMATED LENGTHS & QUANTITIES TIMBER PILES			
Pier #1 Lt.	32 @ 20'	=	640 Lin. Ft.
Pier #1 Rt.	32 @ 15'	=	480 Lin. Ft.
Pier #2 Lt.	32 @ 15'	=	499 Lin. Ft.
Pier #2 Rt.	32 @ 20'	=	640 Lin. Ft.
Total			2259 Lin. Ft.



BENDING DIAGRAMS
(All bar dimensions are out to out)

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ILLINOIS DIVISION OF HIGHWAYS
FAT RT. 74 BRIDGE OVER GRIFFIN ST.
FAI - 74 SECTION 32-121B-4
VERMILION COUNTY STA 20+33+ 67.01

PIERS					
NO.	DATE	BY	CHECKED	SCALE	DATE
J.T.	J.T.	W.E.F.	J.M.H.	LDB	HSM 10-17-60