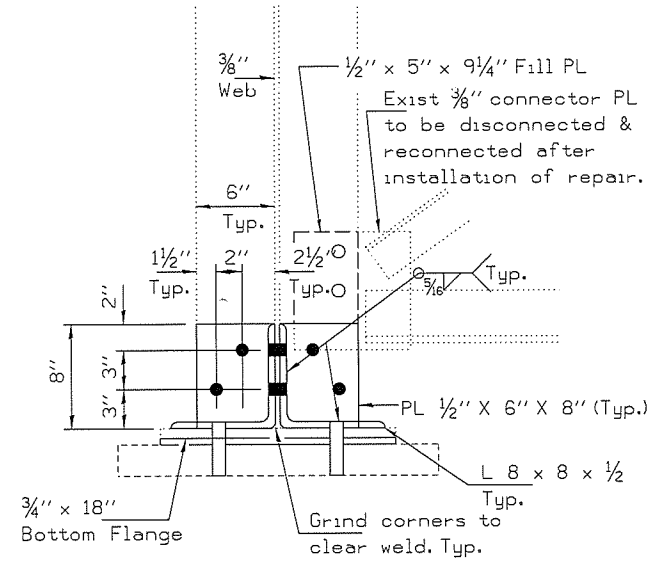
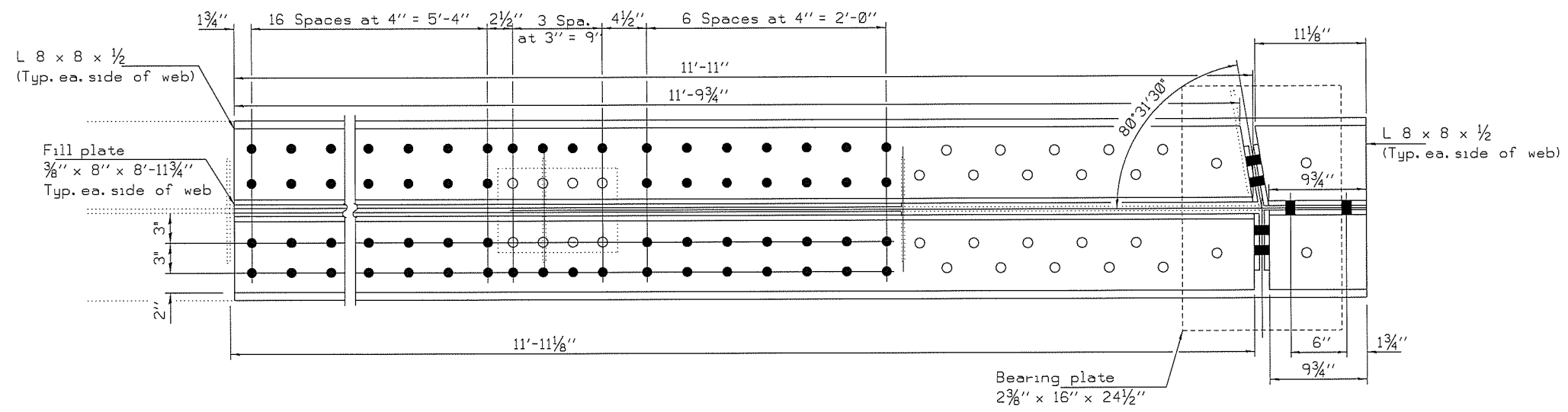


ELEVATION

(*) Seal area between repair angle and top of bottom flange directly above bearing plate with paintable polyurethane or polyurethane blend sealant approved by the Engineer.



SECTION A-A



PLAN

Beam B5-8 Repairs

Weight of Structural Steel Repair for Beam B5-8 = 1,233 lbs.

Note:
For Procedure for Stiffener Removal, see Sheet 28B.

- - Use holes in new steel as template
- - Use holes in existing steel as template

STRUCTURAL STEEL REPAIRS

Detailed Sept 2017
Checked Sept 2017

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28C of 73

C SHEET ADDED 09-21-2017



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED
9/21/2017

ROUTE 1-64 STATE IL
DISTRICT STL SHEET NO. 28C

COUNTY ST. CLAIR
JOB NO. J612377C/J612377D

CONTRACT ID.

PROJECT NO.

BRIDGE NO. 082-0005

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

106 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

HDR Engineering, Inc.

401 S. 18th Street
Suite 300
St. Louis, MO 63103-2267
314-425-8300
Certificate of Authority: 000856



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE PREPARED
9/21/2017

ROUTE 1-64	STATE IL
DISTRICT STL	SHEET NO. 28D
COUNTY ST. CLAIR	
JOB NO. J612377C/J612377D	
CONTRACT ID. -	
PROJECT NO. -	
BRIDGE NO. 082-0005	

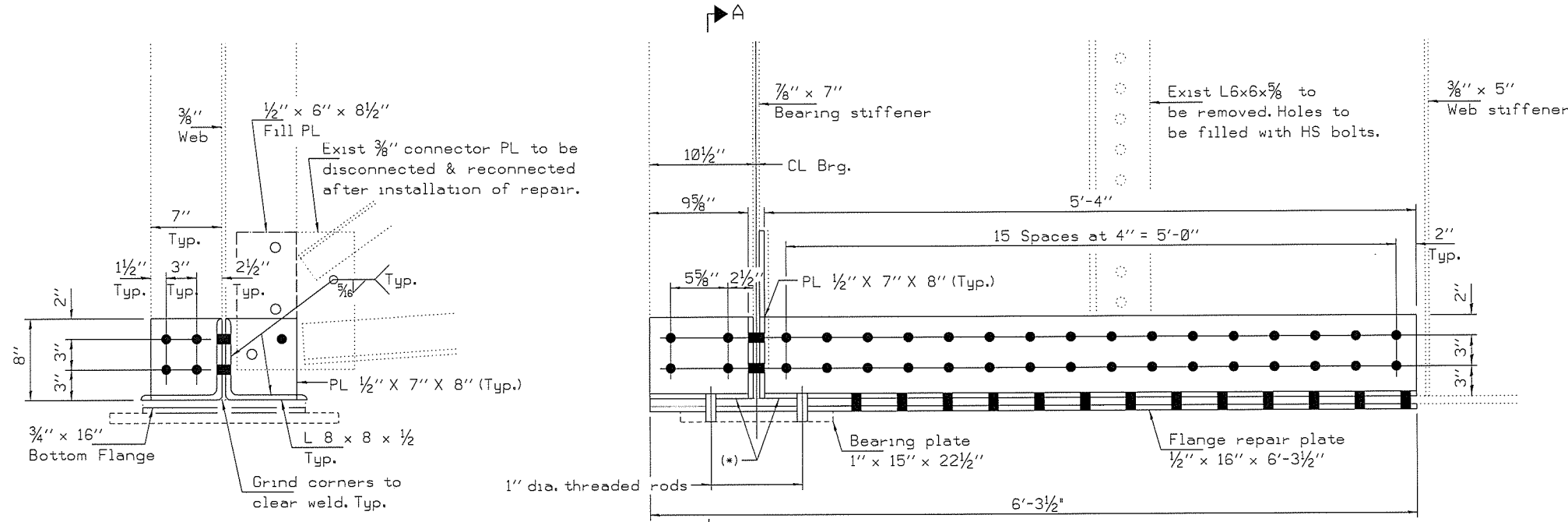
DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

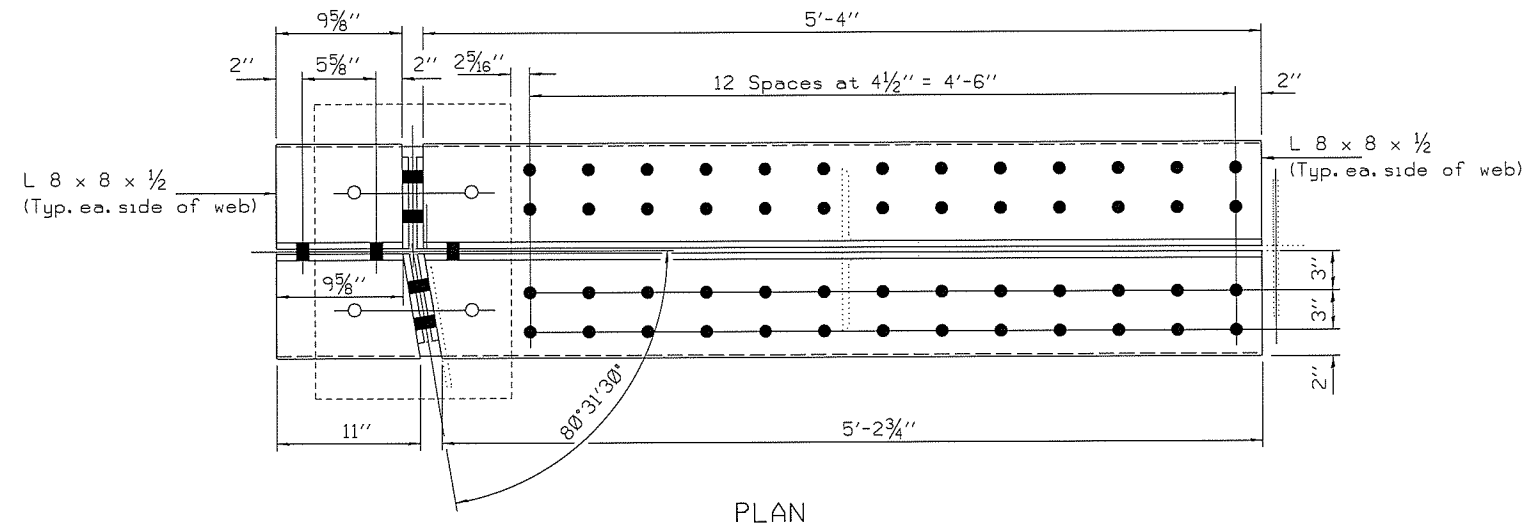
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

HDR

HDR Engineering, Inc.
401 S. 18th Street
Suite 300
St. Louis, MO 63103-2267
314-425-8300
Certificate of Authority: 000866



(*) Seal area between repair angle and top of bottom flange directly above bearing plate with paintable polyurethane or polyurethane blend sealant approved by the Engineer.



Beam BC-1 Repairs
Weight of Structural Steel Repair for
Beam BC-1 = 595 lbs.

- - Use holes in new steel as template
- - Use holes in existing steel as template

STRUCTURAL STEEL REPAIRS



THIS SHEET HAS BEEN
 SHOWN, SEALED AND DATED
 ELECTRONICALLY

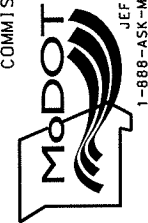
DATE PREPARED
 9/21/2017

ROUTE I-64	STATE IL
DISTRICT STL	SHEET NO. 28E
COUNTY ST. CLAIR	
JOB NO. J612377C/J612377D	
CONTRACT ID. -	
PROJECT NO. -	
BRIDGE NO. 082-0005	

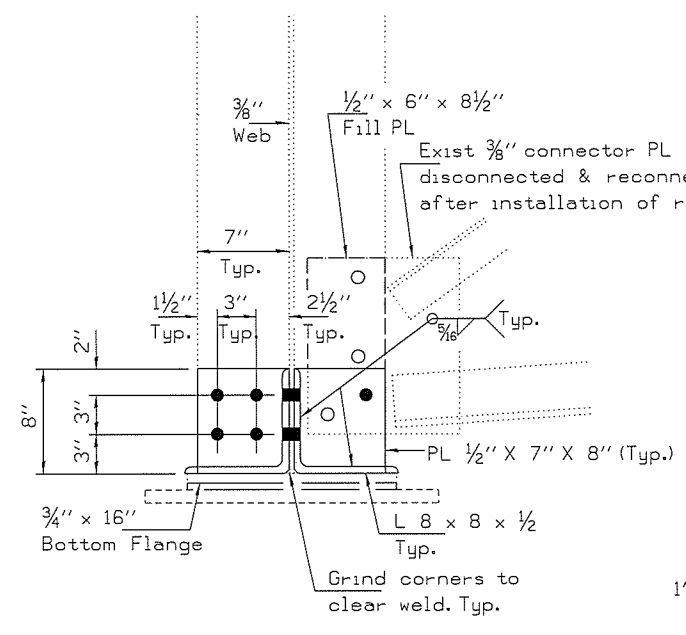
DESCRIPTION

DATE

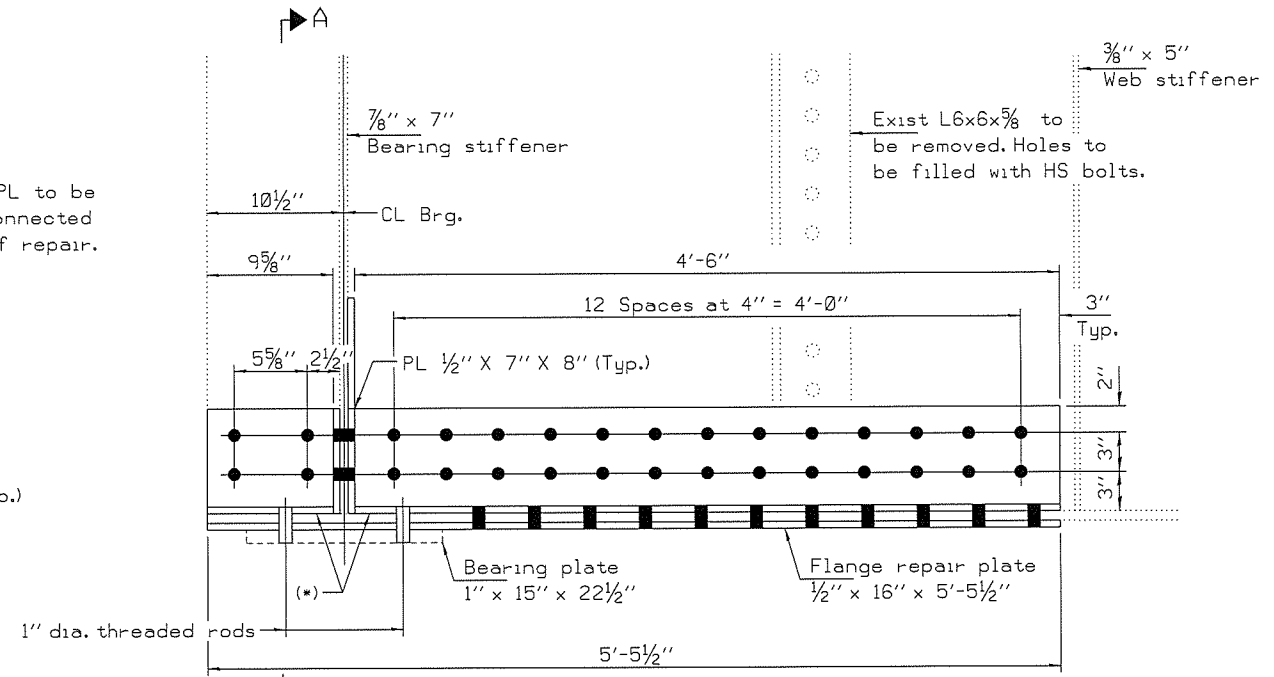
MISSOURI HIGHWAYS AND TRANSPORTATION
 COMMISSION



105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

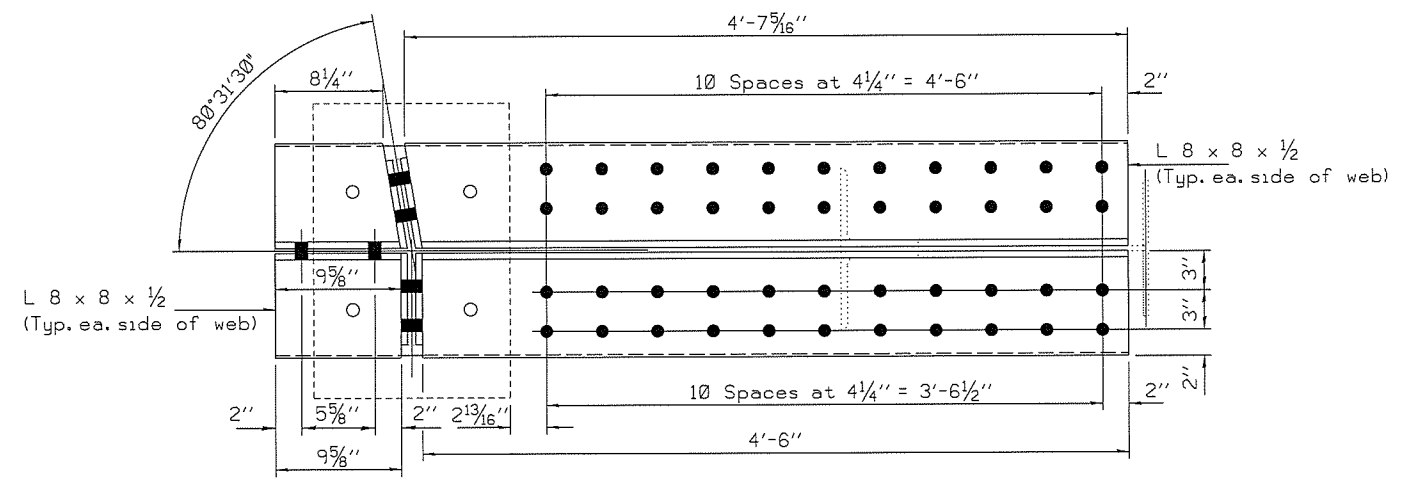


SECTION A-A



ELEVATION

(*) Seal area between repair angle and top of bottom flange directly above bearing plate with paintable polyurethane or polyurethane blend sealant approved by the Engineer.



PLAN

Beam BB-5 Repairs

Weight of Structural Steel Repair for
 Beam BB-5 = 519 lbs.

- - Use holes in new steel as template
- - Use holes in existing steel as template

STRUCTURAL STEEL REPAIRS

Detailed Sept 2017
 Checked Sept 2017

Note: This drawing is not to scale. Follow dimensions.

Sheet No. 28E of 73

C 1 SHEET ADDED 09-21-2017



HDR Engineering, Inc.
 401 S. 18th Street
 Suite 300
 St. Louis, MO 63103-2267
 314-425-8300
 Certificate of Authority: 000856

08-25-95

18

082-0005

Sec.

INDEX OF SHEETS

- 1 TITLE SHEET, INDEX OF SHEETS, SUMMARY OF QUANTITIES
- 2-6 TRAFFIC CONTROL AND PROTECTION, SPECIAL
- 7-9 JOINT REPAIR DETAILS

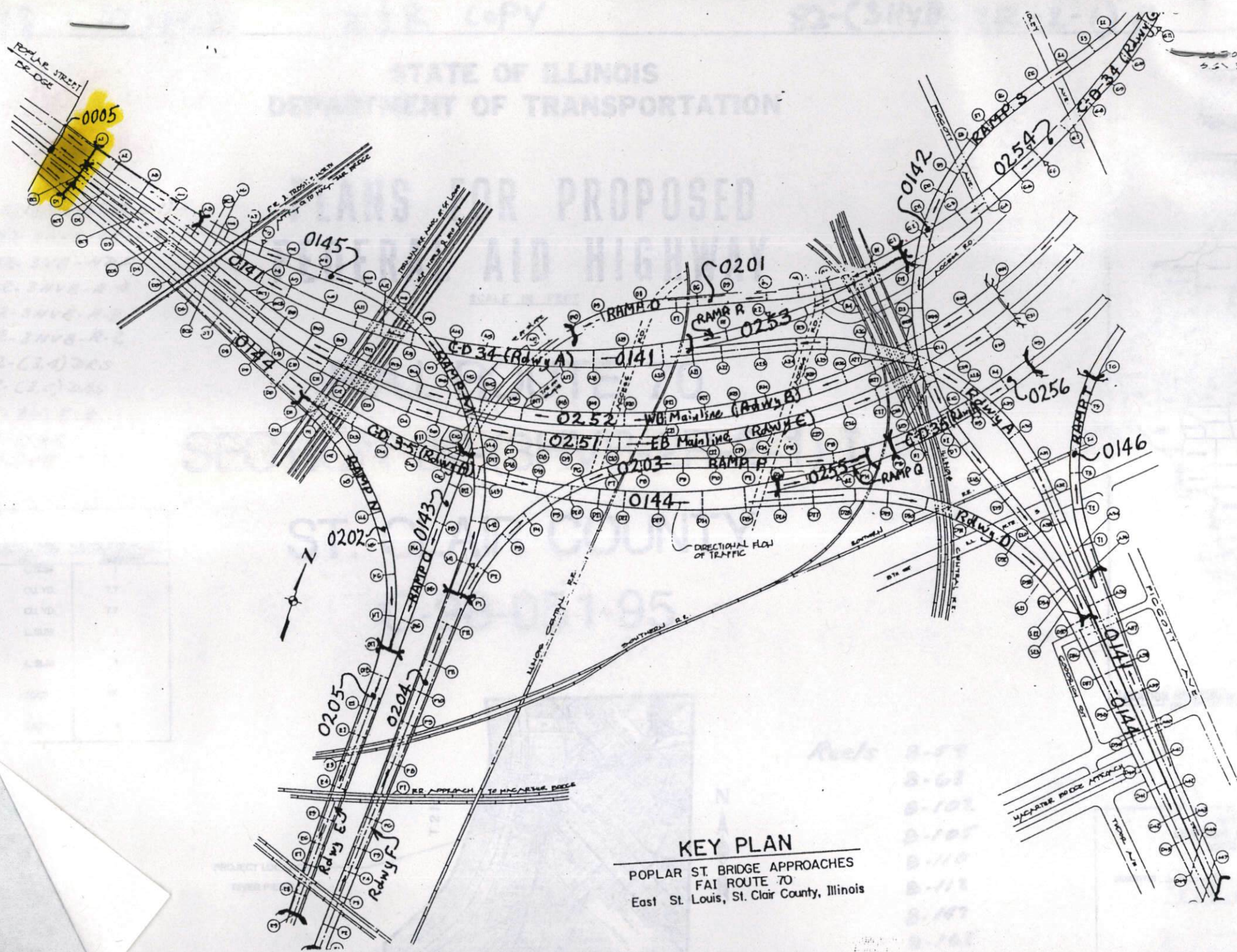
STANDARDS:

- 2298-11
- 2316-15

SUMMARY OF QUANTITIES

CODE No.	ITEM
X5051901	STRUCTURAL STEEL REPAIR
50300255	CONCRETE SUPERSTRUCTURE
50102400	CONCRETE REMOVAL
90101800	TRAFFIC CONTROL AND PROTECTION (SPECIAL)
90102800	TRAFFIC AND PROTECTION STANDARD 2316
90401005	TEMPORARY CONCRETE BARRIER (STATE OWNED)
90401285	TEMPORARY CONCRETE BARRIER, TERMINAL SECTION (STATE OWNED)

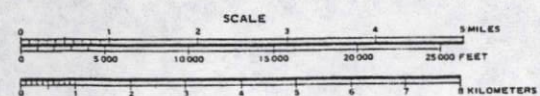
MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS



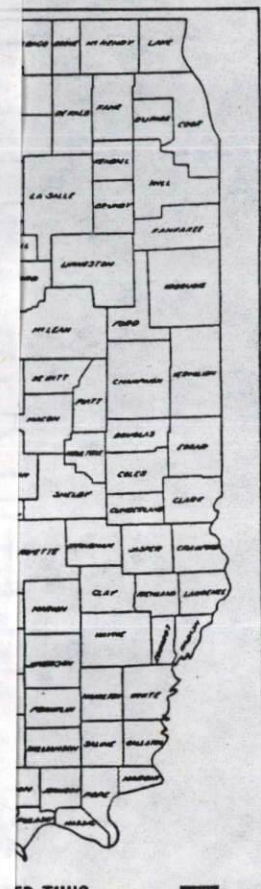
KEY PLAN
 POPLAR ST. BRIDGE APPROACHES
 F.A. ROUTE 70
 East St. Louis, St. Clair County, Illinois

R 10 W

LOCATION MAP



COUNTY	TOTAL SHEETS	SHEET NO.
T. CLAIR	9	1
LINE	PROJECT	
2-1-I		



ED THIS:-

037-95

DIS
ORTATION
WAYS

DISTRICT ENGINEER

MENT AND IMPLEMENTATION

James P. ...
 ENGINEER OF DESIGN AND ENVIRONMENT
 July 28 19 95
James P. ...
 DIRECTOR, DIVISION OF HIGHWAYS

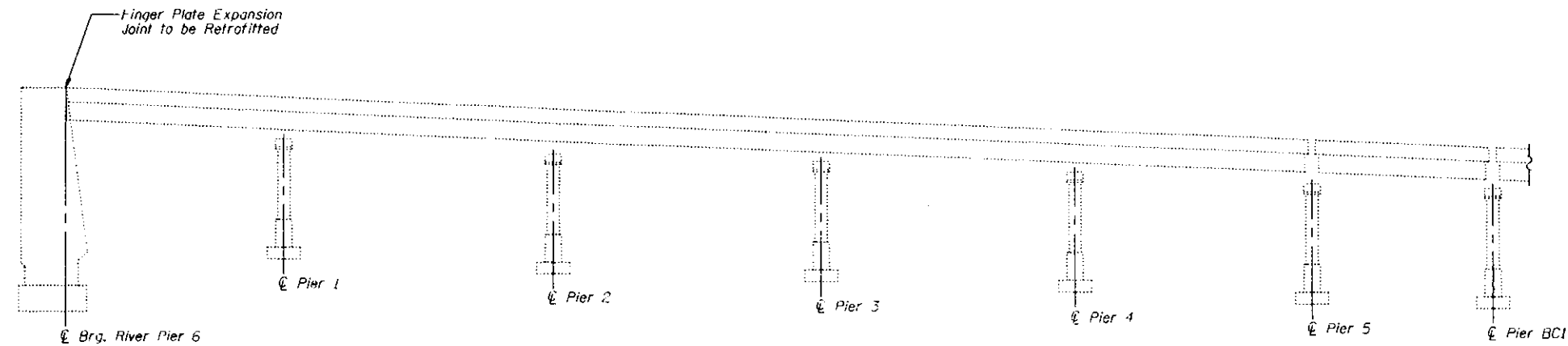
8-217
 8-136
 M3-M6
 Piers

082-0005 CONTRACT NO. 96882

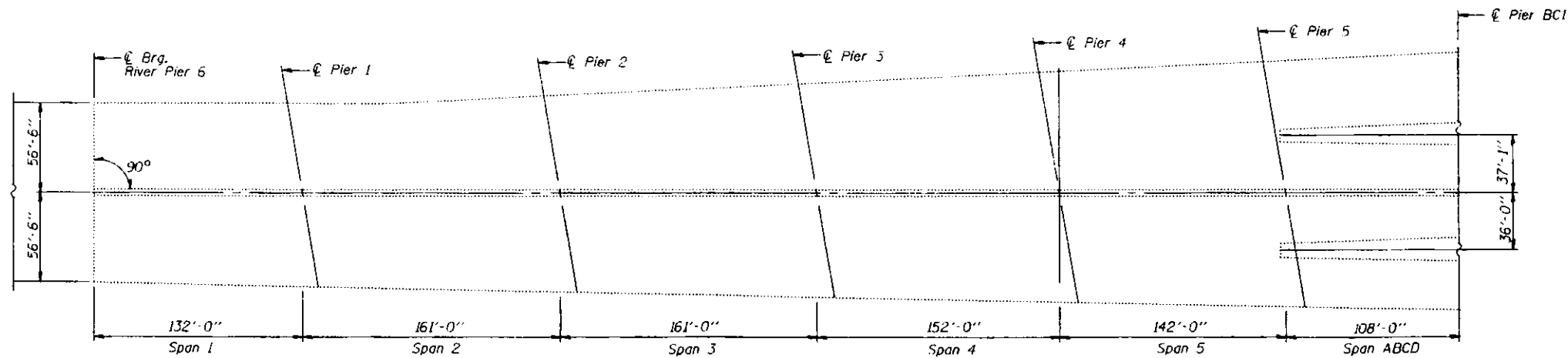
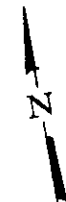
8-219

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SHEET NO.	SHEET NO.
F.A.I. 70		ST. CLAIR	9	7
SHEETS				
# 82-(3HVB-2R-2-1)				



ELEVATION



PLAN

GENERAL NOTES

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36. 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.

Removal of all damaged members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be considered incidental to "Structural Steel Repair".

After fabrication all surfaces of the steel plates shall be given one shop coat of the inorganic zinc rich primer. Cost incidental to "Structural Steel Repair".

Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

Existing reinforcement extending into the repair area shall be cleaned, straightened and incorporated into the new work.

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	7.7
Concrete Superstructure	Cu. Yd.	7.7
Structural Steel Repair	L. Sum	1

DESIGNED <i>Christopher A. Maloney</i>	19
CHECKED <i>Jeffery J. Bauer</i>	EXAMINED
DRAWN <i>J. MARCH</i>	PASSED
CHECKED <i>CHM TTB R773</i>	ENGINEER OF STRUCTURAL SERVICES
	ENGINEER OF BRIDGES AND STRUCTURES

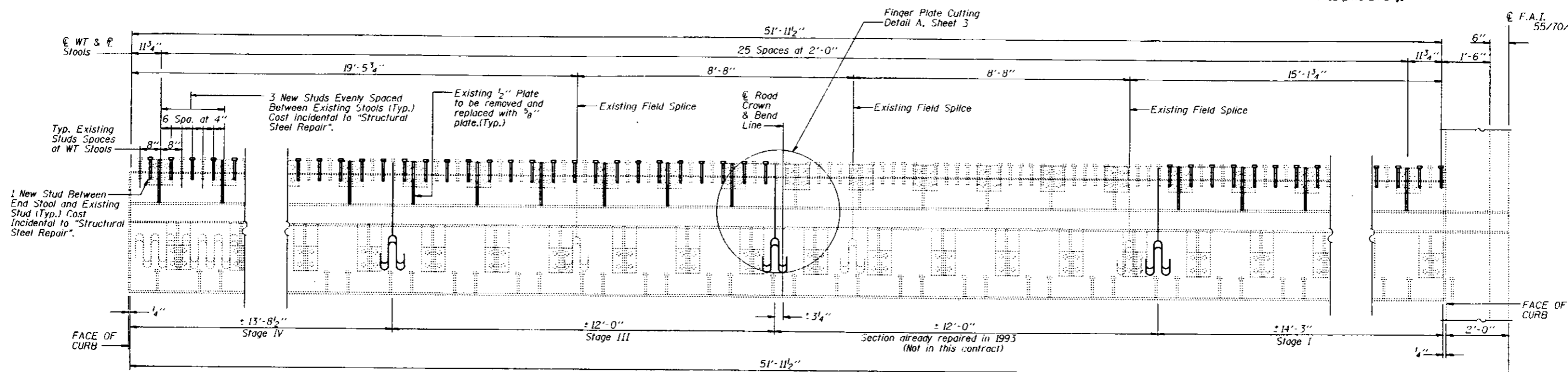
JOINT REPAIR - PIER 6
ROUTE F.A.I. 70
SECTION 82-(3HVB-2R-2-1)I
ST. CLAIR COUNTY
S.N. 082-0005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

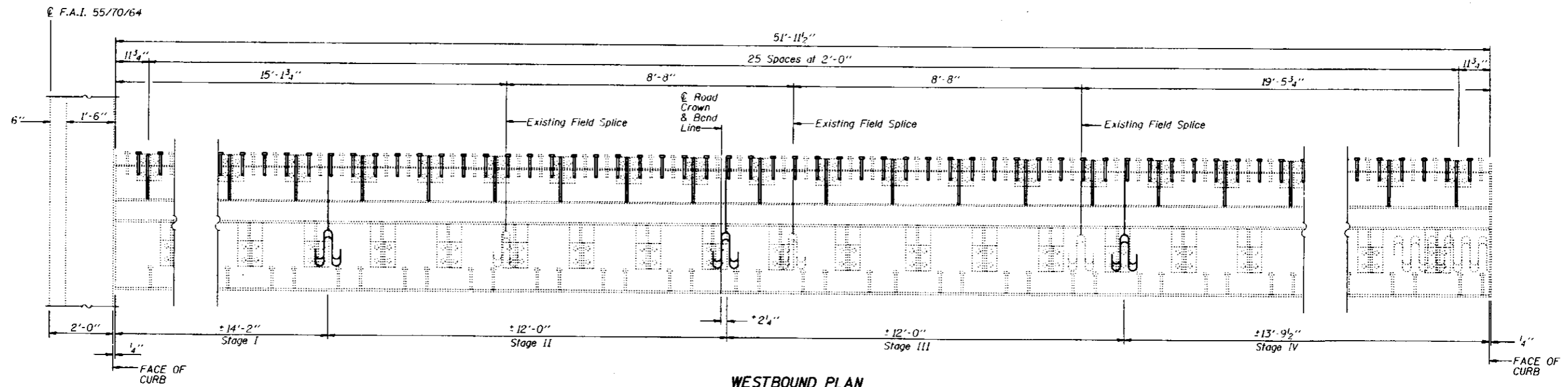
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.I. 70		ST. CLAIR	9 8	2
3 SHEETS				

• 82-(3HVB-2R-2-1)I

© F.A.I. 55/70/64



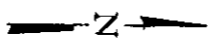
EASTBOUND PLAN



WESTBOUND PLAN

DESIGNED	C.H.M.
CHECKED	J.T.B.
DRAWN	J. MARCH
CHECKED	C.H.M. J.T.B. P.B.

JULY 19
EXAMINED *Joseph E. Adams*
ENGINEER OF STRUCTURAL SERVICES
PASSED
MANAGER OF BRIDGES AND STRUCTURES



JOINT REPAIR - PIER 6
ROUTE F.A.I. 70
SECTION 82-(3HVB-2R-2-1)I
ST. CLAIR COUNTY
S.N. 082-0005

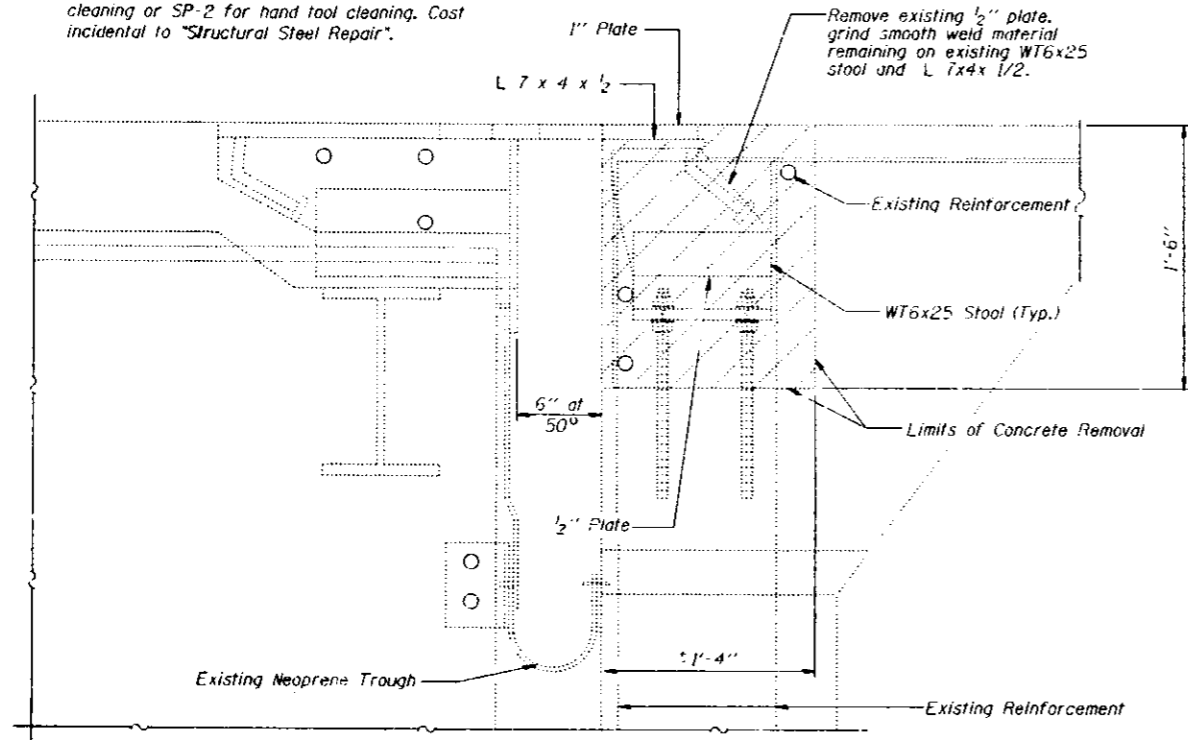
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	9	9
FIELD NO. DIST. NO. 7	BLDG. NO.	FILE NO. PROJECT		

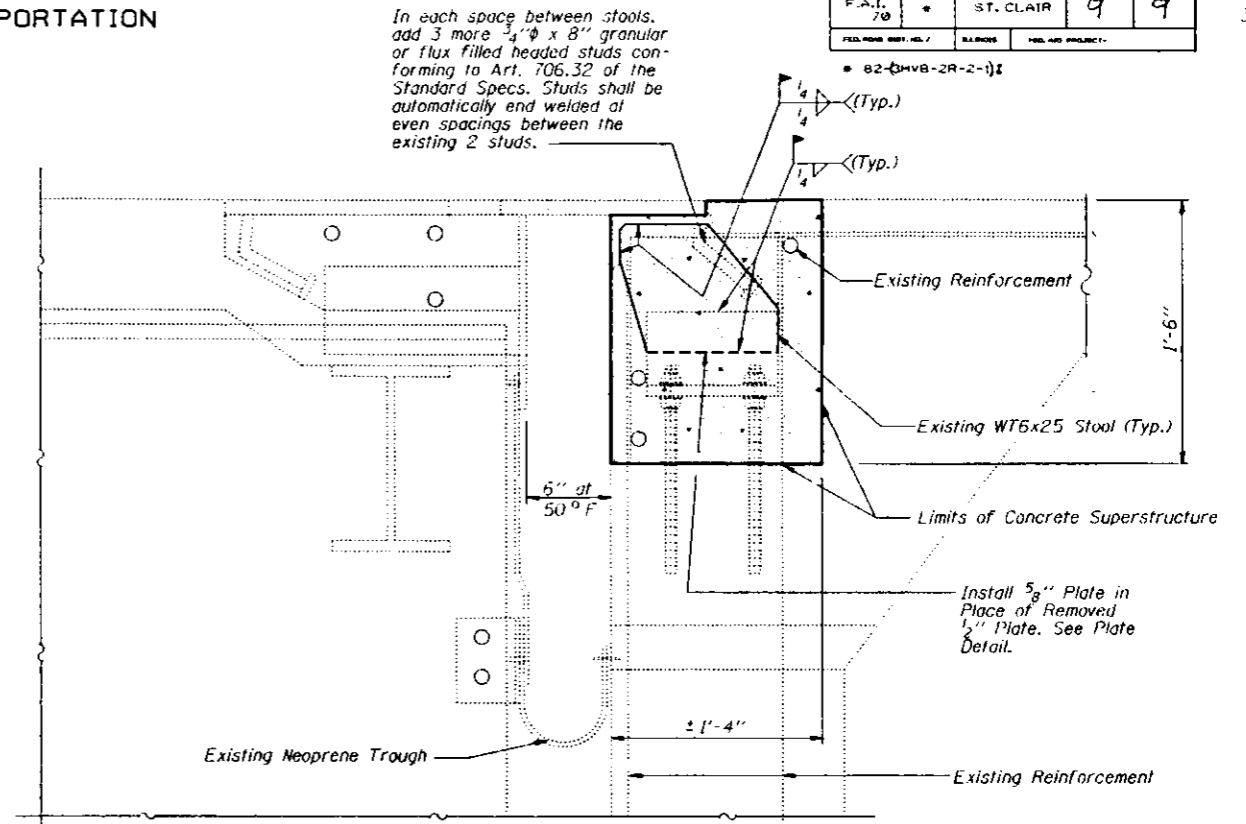
82-(3HVB-2R-2-1)I

3 SHEETS

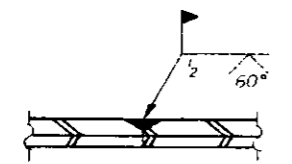
Notes: The existing neoprene trough shall be kept free of debris at all times. The trough may have to be unbolted and removed during the course of the repair work and re-installed after the repair work is completed. Cost incidental to "Concrete Removal". Prior to installing the new plates the existing angle and tee shall be cleaned in accordance with the requirements of the SSPC Surface Preparation Specifications SP-3 for power tool cleaning or SP-2 for hand tool cleaning. Cost incidental to "Structural Steel Repair".



EXISTING SECTION

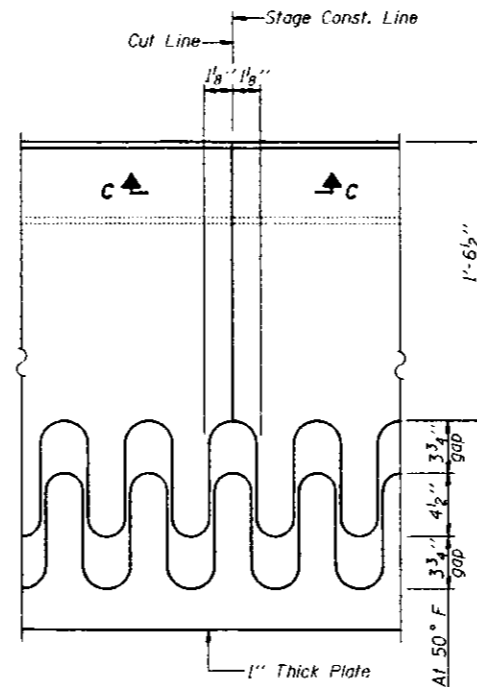


PROPOSED SECTION



SECTION C-C

Finger Plate Field Welding Detail



FINGER PLATE CUTTING DETAIL A

Increase gap $\frac{1}{16}$ " for each 5° fall in temperature.
Decrease gap $\frac{1}{16}$ " for each 5° rise in temperature.

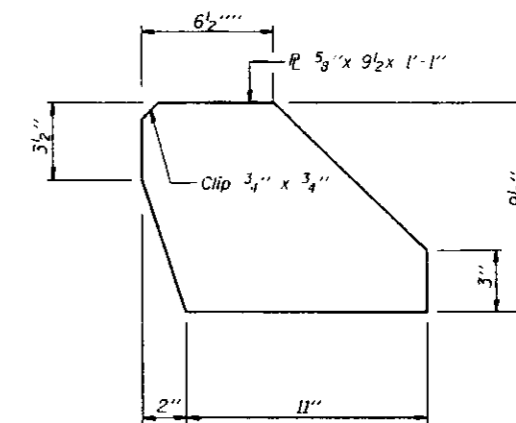


PLATE DETAIL

(46 Required)

(Calculated weight = 1,030 lbs.)

DESIGNED	C.H.M.
CHECKED	T.T.B.
DRAWN	J. MARCH
CHECKED	C.H.M. T.T.B. R.T.B.

EXAMINED	JULY 19
EXAMINED	<i>Joseph E. Adams</i>
PASSED	ENGINEER OF STRUCTURAL SERVICES
	ENGINEER OF BRIDGES AND STRUCTURES

JOINT REPAIR - PIER 6
ROUTE F.A.I. 70
SECTION 82-(3HVB-2R-2-1)I
ST. CLAIR COUNTY
S.N. 082-0005

F.A.I. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
70		ST. CLAIR	105	1
F.A.R. NO.		ILLINOIS PROJECT	IR-70-1(161)	
		82-3HVB-2R-2-1		

100%
6-11-93

FOR INDEX OF SHEETS, SEE SHEET NO. 2

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

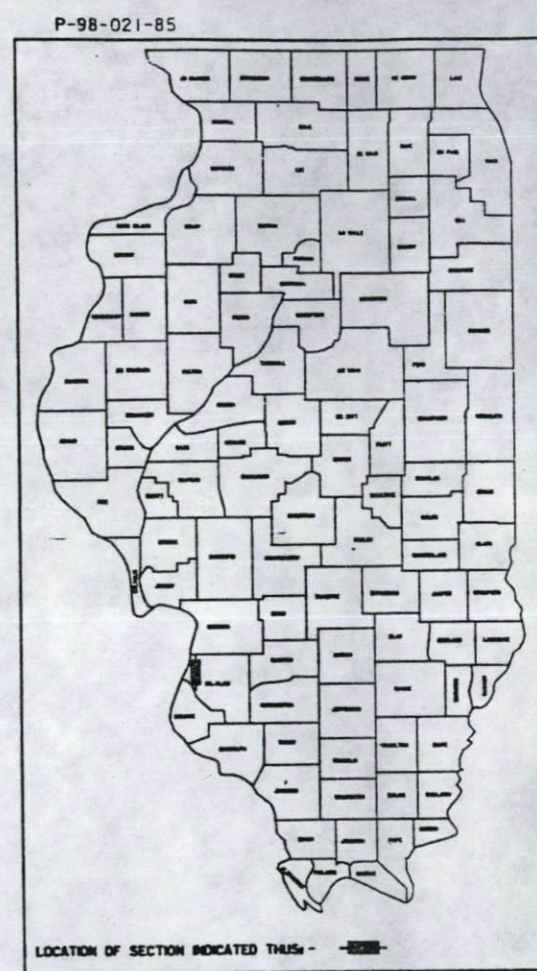
THE STRUCTURES REHABILITATED IN THIS PROJECT WERE BUILT AS SECTIONS:

- 82-3VB
- 82-3HVD-1

SCALES

PLAN	1 INCH = 50 FEET
PROFILE HORIZ.	1 INCH = 50 FEET
PROFILE VERT.	1 INCH = 5 FEET
CROSS SECTIONS	1 INCH = 50 FEET
HORIZONTAL	1 INCH = 10 FEET
VERTICAL	1 INCH = 5 FEET

F.A.I. ROUTE 70
SECTION 82-3HVB-2R-2-1
PROJECT IR-70-1(161)
ST. CLAIR COUNTY
C-98-001-90



MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____

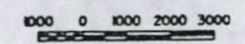
AS BUILT CHANGES WERE MADE ON THE FOLLOWING SHEETS:

DESIGN DESIGNATION



PROJECT ENDS .59+00.14 E.B. CD (ROADWAY D)

PROJECT BEGINS 41+00.00 E.B. I-55/70/64



NET LENGTH OF PROJECT - 180014 . FT. - 0.341 MILES

DEPARTMENT OF TRANSPORTATION
REGIONAL HIGHWAY ADMINISTRATION

APPROVED: _____ DATE: _____
DIVISION ADMINISTRATOR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED: 4/17/90 [Signature]
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

ANTHONY W. MEMEYER NO. 62-39027
CARLOS A. LIZANA-FARAS NO. 81-3956

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

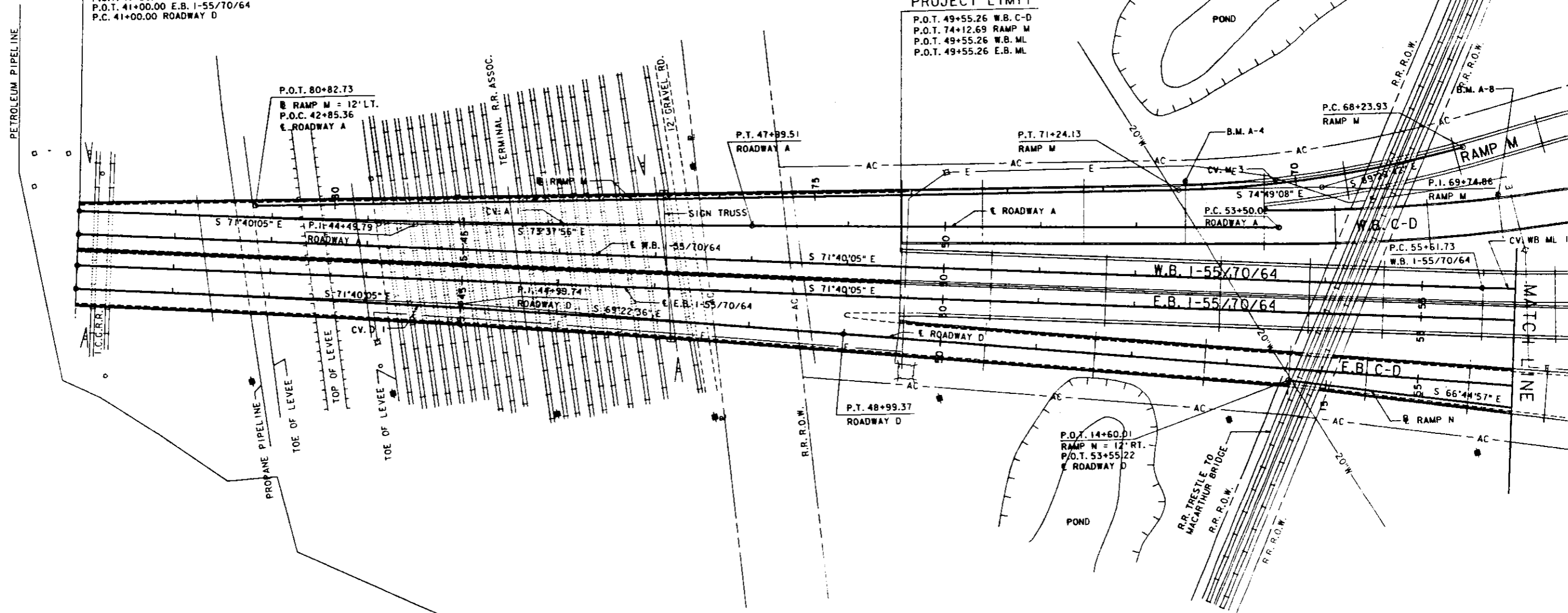
082-0005
CONTRACT NO. 96168

8-181

P.L. ROUTE	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
70		ST. CLAIR	105	11
PROJECT				
82-3HVB-2R-2-1				

BEGIN PROJECT
P.C. 41+00.00 ROADWAY A
P.O.T. 41+00.00 W.B. 1-55/70/64
P.O.T. 41+00.00 E.B. 1-55/70/64
P.C. 41+00.00 ROADWAY D

PROJECT LIMIT
P.O.T. 49+55.26 W.B. C-D
P.O.T. 74+12.69 RAMP M
P.O.T. 49+55.26 W.B. ML
P.O.T. 49+55.26 E.B. ML

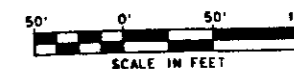


10487 FILE: 155TOPLN1 LEVELS PLOTTED DATE: APRIL 27, 1990
900042 PRF: 1LLPLN1

BENCH MARKS

- A-4 - CHISELED π IN CONCRETE FOUNDATION AT NORTH END OF PIER A-4 ON W.B. C-D ELEV. 405.86
- A-8 - CHISELED π IN CONCRETE FOUNDATION AT NORTH END OF PIER A-8 ON W.B. C-D ELEV. 407.87

- NOTES:**
1. FOR BRIDGE MODIFICATIONS SEE BRIDGE DRAWINGS.
 2. FOR CURVE DATA INFORMATION SEE ALIGNMENT PLAN.



T. 2 N., R. 10 W., 3RD P.M.

* 82-3HVB-2R-2-1

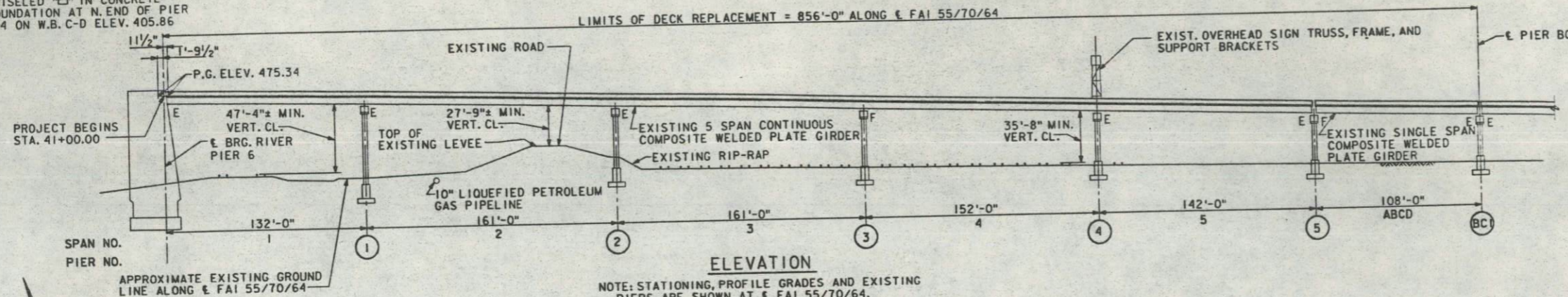
EXISTING STRUCTURE: STA. 44+73.50 F.A.I. RT. 70 SECTION 82-3VB
BUILT IN 1965, STRUCTURE NUMBER 082-0005
SUPERSTRUCTURE REINFORCED CONCRETE SLAB, STEEL GIRDERS.
SUBSTRUCTURE MULTI-COLUMN CONCRETE PIERS.
DECK SLAB TO BE REPLACED.
TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

STATION (SEE NOTES)
REBUILT 199... BY
STATE OF ILLINOIS
F.A.I. 70 SEC. 82-3HVB-2R-2-1
PROJ. 1R-70-1(161)
LOADING HS20 AND ALT.
STR. NO. 082-0005

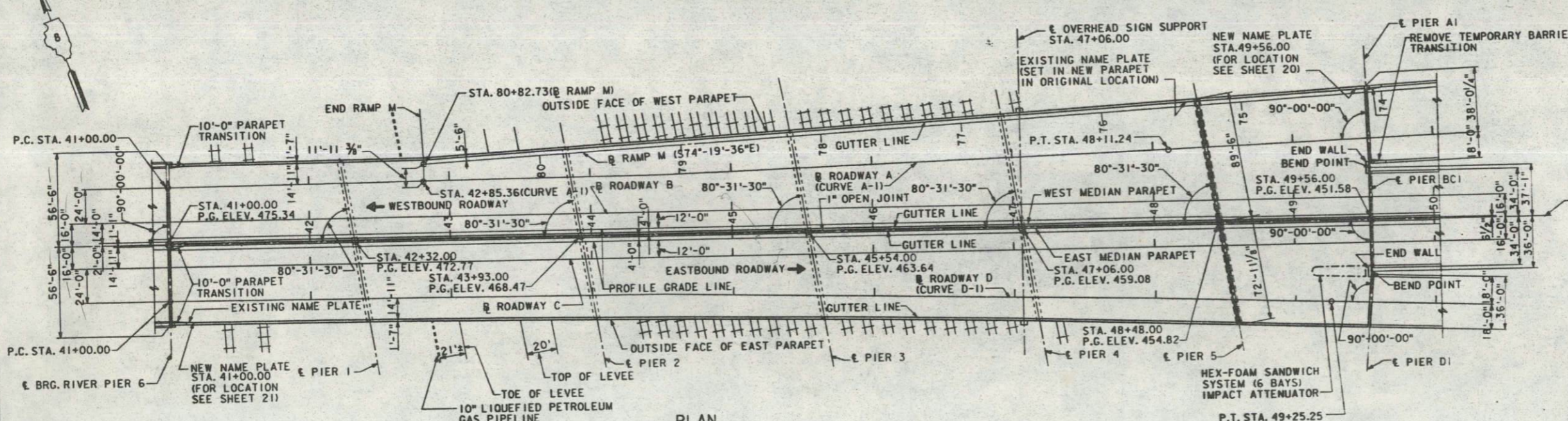
NAME PLATES
(SEE ILL. STD. 2113)

BENCH MARK A-4

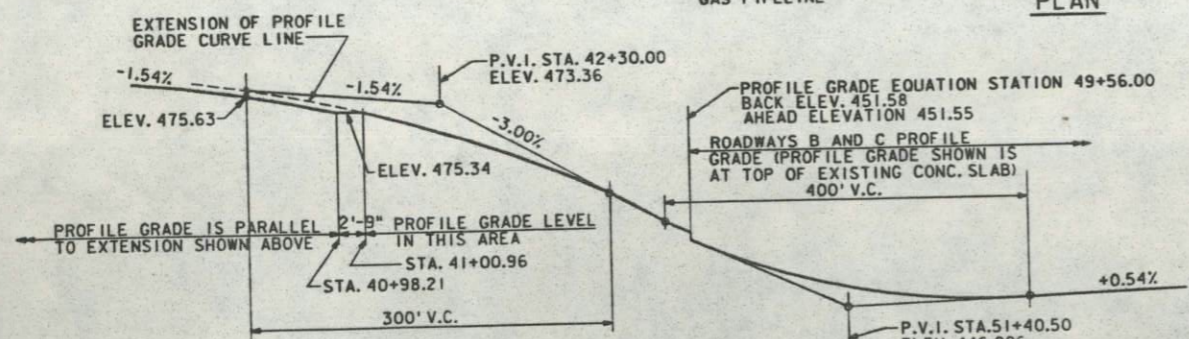
CHISELED "C" IN CONCRETE FOUNDATION AT N. END OF PIER A-4 ON W.B. C-D ELEV. 405.86



NOTE: STATIONING, PROFILE GRADES AND EXISTING PIERS ARE SHOWN AT E FAI 55/70/64.



PLAN



PROFILE GRADE

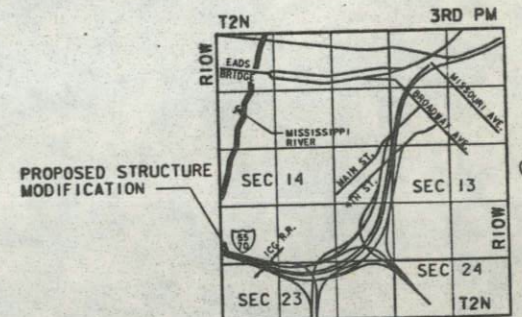
DESIGN STRESSES

CURVE DATA - A-1	CURVE DATA - D-1
P.I. STA. = 44+49.79	P.I. STA. = 44+99.74
Δ = 1°-57'-51" LT.	Δ = 2°-17'-29" RT.
D = 0°-16'-51"	D = 0°-17'-12"
R = 20,405.00'	R = 19,988.00'
T = 349.79'	T = 399.74'
L = 699.51'	L = 799.37'
E = 3.00'	E = 4.00'
S.E. = 3/8" PER FT.	S.E. = 3/8" PER FT.
P.C. STA. = 41+00.00	P.C. STA. = 41+00.00
P.T. STA. = 47+99.51	P.T. STA. = 48+99.37

DESIGN SPECIFICATIONS:	EXISTING STRUCTURES	NEW CONSTRUCTION
AASHTO 1961 AND APPLICABLE 1962 AND 1963 INTERIMS.	AASHTO 1961 AND APPLICABLE 1962 AND 1963 INTERIMS.	AASHTO 1983 AND APPLICABLE 1984, 1985, 1986, 1987 AND 1988 INTERIMS.
LOADING:	HS20-44 AND ALTERNATE	HS20-44 AND ALTERNATE
REINFORCED CONCRETE:		
DECK SLAB	$f_c = 1,400$ psi $n = 10$	$f_c = 3,500$ psi
SUBSTRUCTURE	$f_c = 1,400$ psi $n = 10$	$f_y = 60,000$ psi (REINFORCEMENT)
REINFORCING	$V_c = 75$ psi - FOOTINGS	$f_y = 36,000$ psi
STRUCTURAL STEEL:	$f_b = 20,000$ psi (MIDSPAN)	$f_b = 20,000$ psi
	$f_b = 27,000$ psi (PIERS)	

DESIGNED	
CHECKED	
DRAWN	M.J. JALINSKY
CHECKED	S.S. STEIB

LEVELS PLOTTED DATE: APRIL 27, 1990
2 3 20 26 38 55 63
10487 FILE: ZF3:1101.1386274.DGN
885274 PRF: 885274



LOCATION SKETCH

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
GENERAL PLAN AND ELEVATION

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET
F.A. 170	ST. CLAIR	105	46	

82-3HVB-2R-2

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: THE 1988 EDITION OF THE STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADDENDA AND THE SPECIAL PROVISIONS SHALL GOVERN.

CALCULATED WEIGHT OF STRUCTURAL STEEL:
71,465 LBS. (M183)

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY D1.1-B6. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED ON THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

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 SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL DIMENSIONS ARE MEASURED AT A TEMPERATURE OF 50°F.

ALL TRANSVERSE AND LONGITUDINAL DIMENSIONS ARE MEASURED HORIZONTALLY.

EXISTING OVERHEAD SIGN SUPPORT BRACKETS ARE TO REMAIN IN PLACE. EXISTING OVERHEAD SIGN FRAME AND TRUSS ARE TO BE REMOVED AND REPLACED AS PART OF THIS CONTRACT.

THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE CONCRETE BRIDGE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

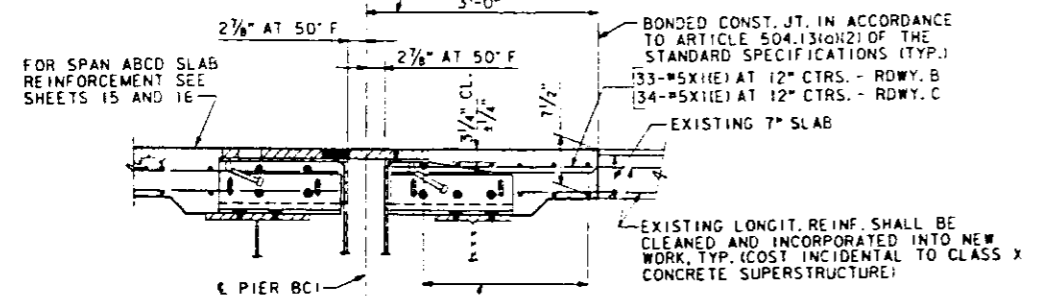
THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE COLOR OF THE FINAL FINISH COAT SHALL BE INTERSTATE GREEN.

ALL CONTACT SURFACE AREAS OF NEW AND EXISTING STRUCTURAL STEEL SHALL BE FREE OF PAINT OR LACQUER.

ALL EXISTING STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED UNDER THIS CONTRACT ACCORDING TO SPECIAL PROVISIONS FOR CLEANING AND PAINTING STEEL STRUCTURES. THE COLOR OF THE FINAL FINISH COAT SHALL BE INTERSTATE GREEN. THIS WORK SHALL BE PAID FOR AT THE UNIT PRICE FOR CLEANING AND PAINTING STEEL BRIDGES. ALL EXISTING STRUCTURAL STEEL SHALL BE CLEANED BY METHOD I.

FOR MAINTENANCE AND CONSTRUCTION SIGN SUPPORT BRACKET DETAILS AND LOCATION, SEE SHEET 105A OF 105.

LIMITS OF CONCRETE REMOVAL
CLASS X CONCRETE REPLACEMENT



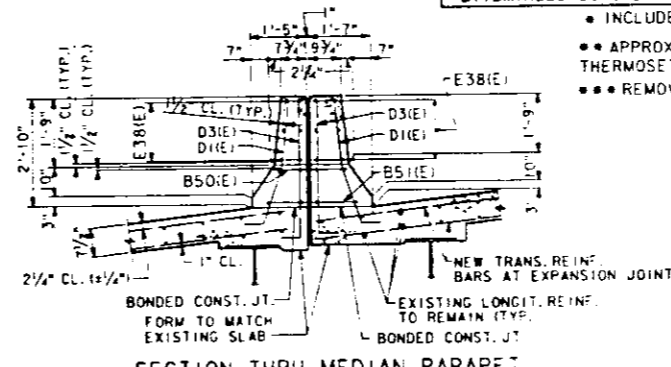
SECTION A-A

NOTE A: BAR SPLICERS REQUIRED FOR A407(E) AND A408(E) OR A510(E) REINF. BARS. PLACE SPLICERS DURING STAGE IV CONSTRUCTION. SEE SHEET 44 FOR DETAILS.

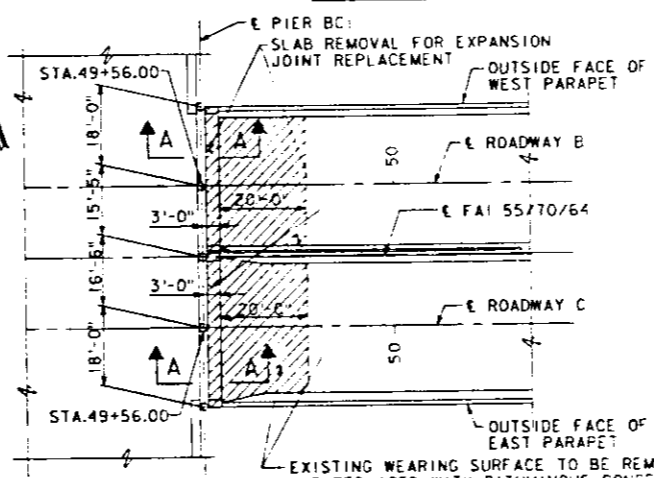
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- 39 STEEL DETAILS
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- 41 DRAINAGE LOCATION PLAN AND DETAILS
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- 44 BAR SPLICER (COUPLER) DETAILS AT STAGE CONSTRUCTION
- 45 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

Mansell Std. No. 7.5 G 4/B.



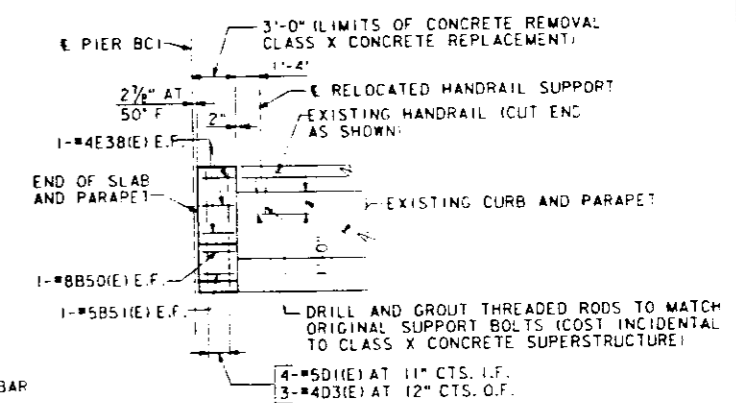
SECTION THRU MEDIAN PARAPET NEAR EXPANSION JOINTS - SPAN BC1



PLAN - SLAB AND PARAPET ROADWAYS B AND C

TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	3132.0		3132.0
CLASS X CONCRETE	CU. YD.		7.5	7.5
REINFORCEMENT BARS, EPOXY COATED	LB.	959,000	500	959,500
NEOPRENE EXPANSION JOINT (4")	LIN. FT.	161		161
REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LIN. FT.	154		154
PREFORMED JOINT SEAL - 1/2"	LIN. FT.	857		857
CONCRETE REMOVAL	CU. YD.		7.5	7.5
FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	0.83		0.83
DRAINAGE SCUPPERS	EACH	91		91
PROTECTIVE COAT	SG. YD.	13,740		13,740
NAME PLATE	EACH	2		2
STUD SHEAR CONNECTORS	EACH	2,680		2,680
DRAINAGE SYSTEM	LUMP SUM	0.8		0.8
REMOVAL OF EXISTING CONCRETE DECK	EACH	1		1
TEMPORARY SLAB SUPPORT SYSTEM	LUMP SUM	1		1
REMOVE AND RE-ERECT OVERHEAD SIGN STRUCTURE	EACH	1		1
REMOVAL OF EXISTING LIGHTING UNIT	EACH	5		5
CLEANING AND PAINTING STEEL BRIDGE	LUMP SUM	1		1
CONCRETE BRIDGE DECK SCARIFICATION (1/4")	SG. YD.	131		131
BITUMINOUS SURFACE COURSE, MIXTURE E, CLASS 1, TYPE 1, (1 1/2")	TON	11.0		11.0
BITUMINOUS CONCRETE SURFACE REMOVAL (BRIDGE DECK)	SG. YD.	131		131

- INCLUDES DECK SLAB SURFACE
- APPROXIMATELY 3,700 LINEAR FEET OF REINFORCED THERMOSETTING PLASTIC PIPE IS REQUIRED.
- REMOVAL OF EXISTING DECK = 2,996.4 CU.YDS. OF CONCRETE.



INSIDE ELEVATION OF WEST PARAPET ROADWAYS B AND C

NOTE: WEST PARAPET SHOWN, EAST PARAPET SIMILAR. I.F. INDICATES INSIDE FACE. O.F. INDICATES OUTSIDE FACE. E.F. INDICATES EACH FACE. EXISTING END HANDRAIL SUPPORT TO BE RELOCATED AS SHOWN.

NOTES

FOR BILL OF MATERIAL SEE SHEET 22.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
GENERAL NOTES, INDEX OF DRAWINGS
AND ESTIMATED QUANTITIES
STRUCTURE NO. 082-0002

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

10487 FILE: ZF31110.1385324.DGN
 85324
 LEVELS PLOTTED DATE: APRIL 27, 1990
 56 63
 F.A. CAMBA DESIGNED
 R.D. WINKELMANN CHECKED
 D.C. SPINK DRAWN
 F.A. CAMBA CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

Revised: PMP 5-29-90

Rev

82-3HVB-2R-2-1

GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: THE 1988 EDITION OF THE STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADDENDA AND THE SPECIAL PROVISIONS SHALL GOVERN.

CALCULATED WEIGHT OF STRUCTURAL STEEL:
71,465 LBS. (M183)

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31, M-42 OR M-53 GRADE 60.

WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY D1.1-86. FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED ON THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP FLANGE FOR A DISTANCE EQUAL TO ONE-FOURTH THE SPAN LENGTH EACH WAY FROM THE PIER SUPPORTS. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

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 SCOPE OF WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

ALL DIMENSIONS ARE MEASURED AT A TEMPERATURE OF 50°F.

ALL TRANSVERSE AND LONGITUDINAL DIMENSIONS ARE MEASURED HORIZONTALLY.

EXISTING OVERHEAD SIGN SUPPORT BRACKETS ARE TO REMAIN IN PLACE. EXISTING OVERHEAD SIGN FRAME AND TRUSS ARE TO BE REMOVED AND REPLACED AS PART OF THIS CONTRACT.

THE CONTRACTOR WILL BE REQUIRED TO MARK ON TOP OF THE CONCRETE DECK THE LOCATIONS OF THE TOP FLANGE OF ALL THE STEEL BEAMS OR GIRDERS, PRIOR TO ANY REMOVAL OF THE CONCRETE BRIDGE DECK. SAW CUTTING DIRECTLY OVER THE TOP OF THE BEAM OR GIRDER FLANGES IS NOT PERMITTED.

THE THREE COAT LEAD AND CHROMATE FREE ALKYD PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF NEW STRUCTURAL STEEL. THE COLOR OF THE FINAL FINISH COAT SHALL BE INTERSTATE GREEN.

ALL CONTACT SURFACE AREAS OF NEW AND EXISTING STRUCTURAL STEEL SHALL BE FREE OF PAINT OR LACQUER.

ALL EXISTING STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED UNDER THIS CONTRACT ACCORDING TO SPECIAL PROVISIONS FOR CLEANING AND PAINTING STEEL STRUCTURES. THE COLOR OF THE FINAL FINISH COAT SHALL BE INTERSTATE GREEN. THIS WORK SHALL BE PAID FOR AT THE UNIT PRICE FOR CLEANING AND PAINTING STEEL BRIDGES.

FOR MAINTENANCE AND CONSTRUCTION SIGN SUPPORT BRACKET DETAILS AND LOCATION, SEE SHEET 105A OF 105.

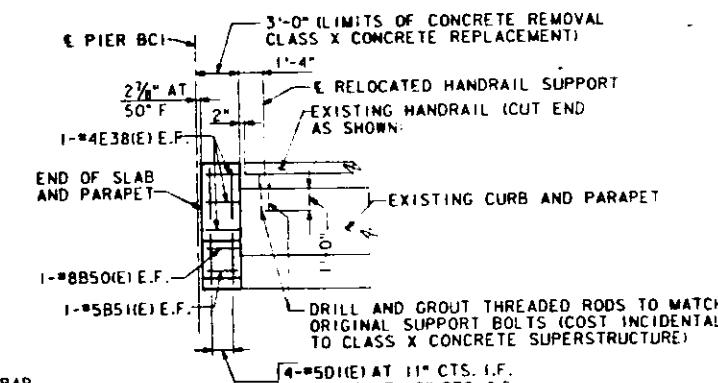
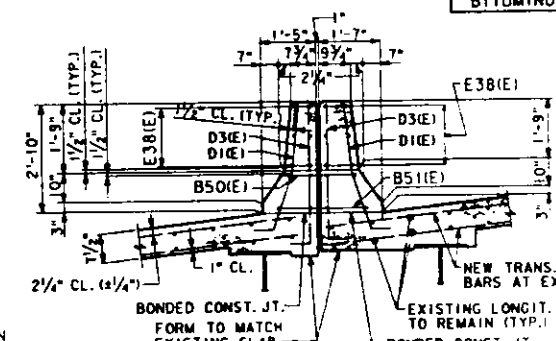
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- 22 PARAPET TRANSITION - TRIMETRIC
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- 29 TOP OF SLAB ELEVATIONS
- 30 TOP OF SLAB ELEVATIONS
- 31 TOP OF SLAB ELEVATIONS
- 32 NEOPRENE EXPANSION JOINTS - 4" MOVEMENT
- 33 FINGER PLATE DETAILS - RIVER PIER 6
- 34 FINGER PLATE DETAILS - PIER BCI
- 35 FINGER PLATE DETAILS - PIERS AI AND DI
- 36 FINGER PLATE DETAILS - PIERS AI, BCI AND DI
- 37 STEEL DETAILS
- 38 STEEL DETAILS
- 39 STEEL DETAILS
- 40 STRESS TABLES
- 41 DRAINAGE LOCATION PLAN AND DETAILS
- 42 DRAINAGE COLLECTION DETAILS
- 43 CAST IRON DRAINAGE SCUPPER
- 44 BAR SPLICER (COUPLER) DETAILS AT STAGE CONSTRUCTION
- 45 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION

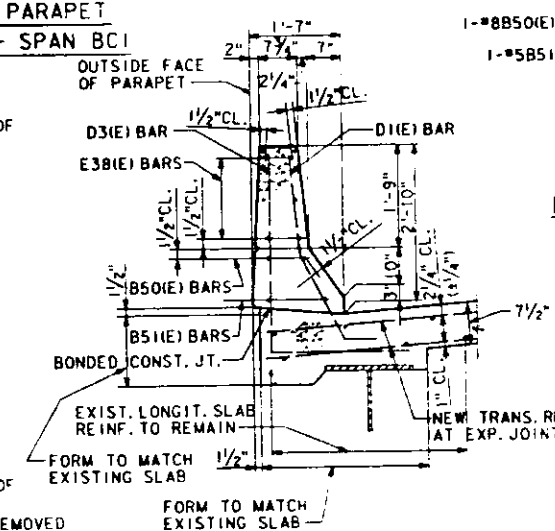
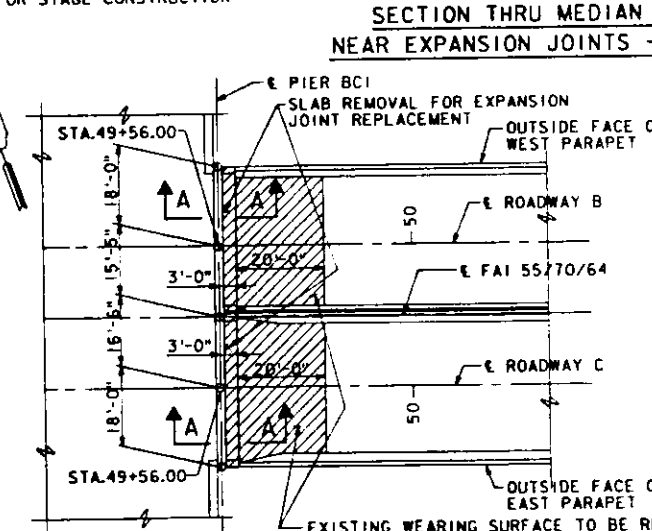
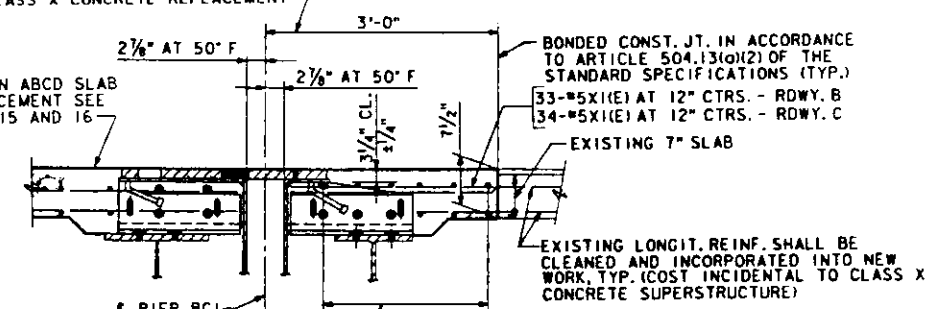
TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPERSTR.	SUBSTR.	TOTAL
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	3132.0		3132.0
CLASS X CONCRETE	CU. YD.		7.5	7.5
REINFORCEMENT BARS, EPOXY COATED	LB.	959,000	500	959,500
NEOPRENE EXPANSION JOINT (4")	LIN. FT.	161		161
REINFORCED NEOPRENE EXPANSION JOINT TREATMENT	LIN. FT.	154		154
PREFORMED JOINT SEAL - 1/2"	LIN. FT.	857		857
CONCRETE REMOVAL	CU. YD.		7.5	7.5
FURNISHING AND ERECTING STRUCTURAL STEEL	LUMP SUM	0.83		0.83
DRAINAGE SCUPPERS	EACH	91		91
PROTECTIVE COAT	SQ. YD.	13,740		13,740
NAME PLATE	EACH	2		2
STUD SHEAR CONNECTORS	EACH	2,680		2,680
BRIDGE DRAINAGE SYSTEM	LUMP SUM	1		1
REMOVAL OF EXISTING CONCRETE DECK	EACH	1		1
TEMPORARY SLAB SUPPORT SYSTEM	LUMP SUM	1		1
REMOVE AND RE-ERECT OVERHEAD SIGN STRUCTURE	EACH	1		1
REMOVAL OF EXISTING LIGHTING UNIT	EACH	5		5
CLEANING AND PAINTING STEEL BRIDGE	LUMP SUM	1		1
CONCRETE BRIDGE DECK SCARIFICATION (1/2")	SQ. YD.	131		131
BITUMINOUS SURFACE COURSE, MIXTURE E, CLASS 1, TYPE 1, (1 1/2")	TON	11.0		11.0
BITUMINOUS CONCRETE SURFACE REMOVAL (BRIDGE DECK)	SQ. YD.	131		131

- INCLUDES DECK SLAB SURFACE
- APPROXIMATELY 3,700 LINEAR FEET OF REINFORCED THERMOSETTING PLASTIC PIPE IS REQUIRED.
- REMOVAL OF EXISTING DECK = 2,996.4 CU.YDS. OF CONCRETE.



LIMITS OF CONCRETE REMOVAL CLASS X CONCRETE REPLACEMENT



SPAN BCI: INSIDE ELEVATION OF WEST PARAPET ROADWAYS B AND C

NOTE: WEST PARAPET SHOWN, EAST PARAPET SIMILAR. I.F. INDICATES INSIDE FACE O.F. INDICATES OUTSIDE FACE E.F. INDICATES EACH FACE EXISTING END HANDRAIL SUPPORT TO BE RELOCATED AS SHOWN.

NOTES

FOR BILL OF MATERIAL SEE SHEET 22.

REHABILITATION FOR FAI - 55/70 COMPLEX ILLINOIS APPROACH TO POPLAR STREET BRIDGE GENERAL NOTES, INDEX OF DRAWINGS AND ESTIMATED QUANTITIES

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

10487 FILE: ZF3:110.1185324.DGN LEVELS PLOTTED DATE: APRIL 27, 1990 56 63

DESIGNED: F.A. CAMBA
CHECKED: R.D. WINKELMANN
DRAWN: D.C. SPINK
CHECKED: F.A. CAMBA

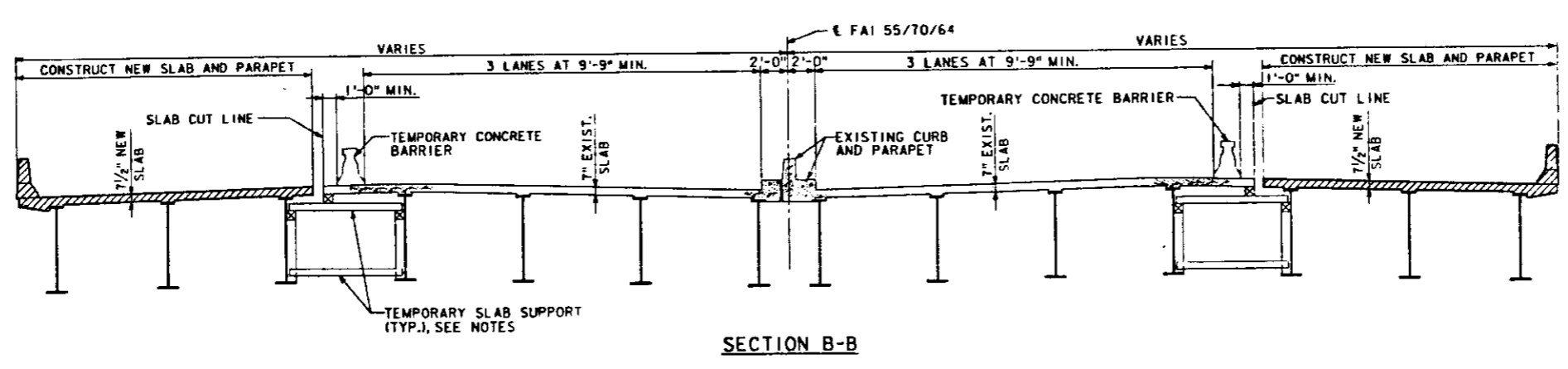
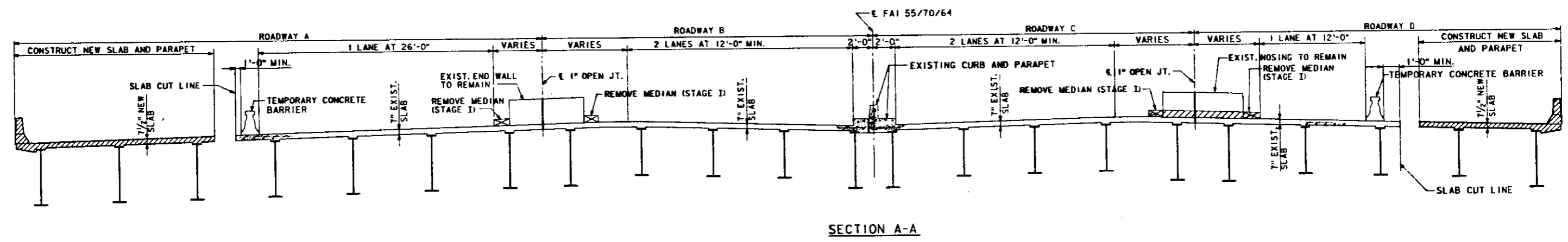
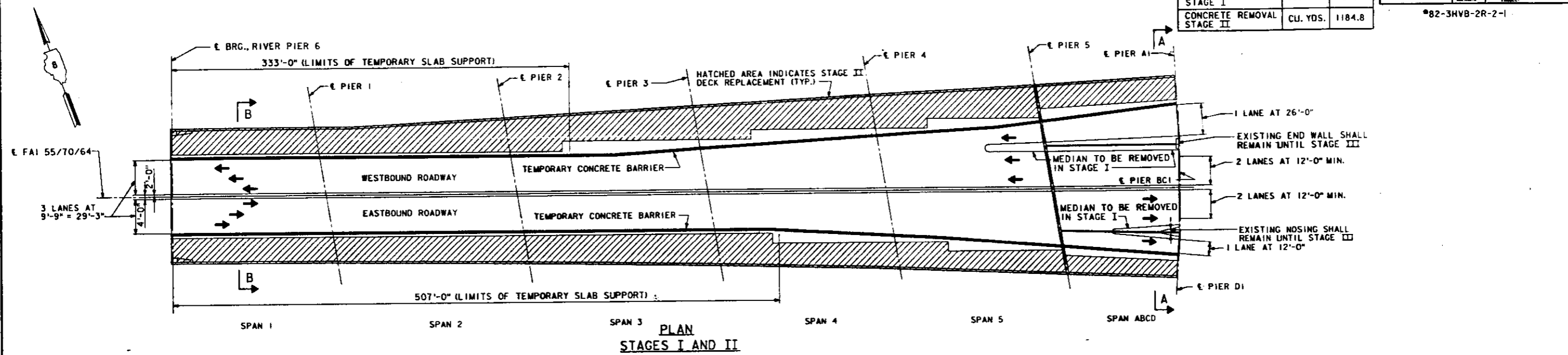
NOTE A: BAR SPLICERS REQUIRED FOR A407(E) AND A408(E) OR A510(E) REINF. BARS. PLACE SPLICERS DURING STAGE IV CONSTRUCTION. SEE SHEET 44 FOR DETAILS.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

BILL OF MATERIAL		
CONCRETE REMOVAL STAGE I	CU. YDS.	50.4
CONCRETE REMOVAL STAGE II	CU. YDS.	1184.8

ROUTE NO.	SECTION	COUNTY	MILE POSTS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	105	47

*82-3HVB-2R-2-1



NOTES

STAGE I CONSISTS OF REMOVING EXISTING MEDIANS AS NOTED, SEE SPECIAL PROVISIONS.
THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER, DETAILED PLANS FOR TEMPORARY SLAB SUPPORT AT THE LOCATIONS SHOWN ON THE PLANS, SEE SPECIAL PROVISIONS.
TEMPORARY SLAB SUPPORT SYSTEM SHOULD BE IN PLACE BEFORE ANY DECK REMOVAL (TYPICAL AT EVERY STAGE REMOVAL SECTION).

**REHABILITATION FOR
FAI - 55/70 COMPLEX**
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONSTRUCTION STAGING
STAGES I AND II
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 @ FAI-701 ST. CLAIR CO.

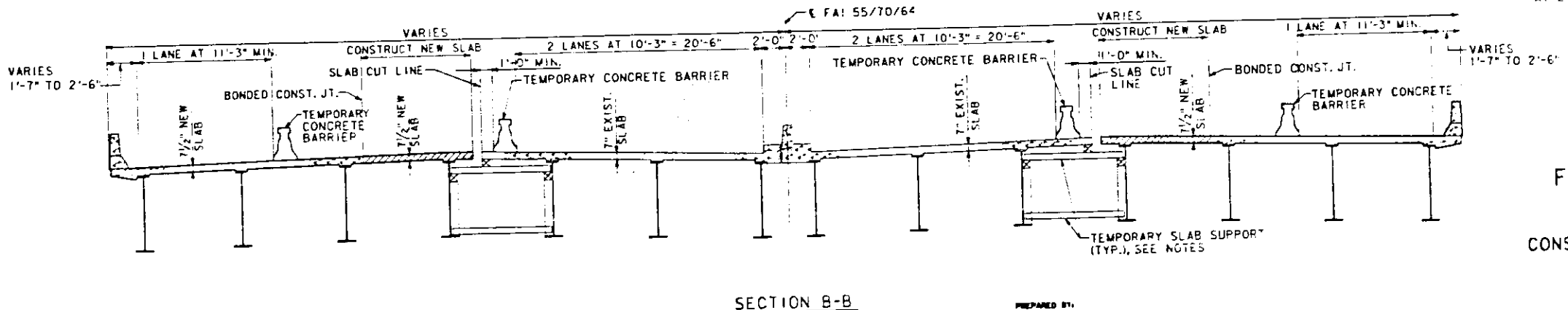
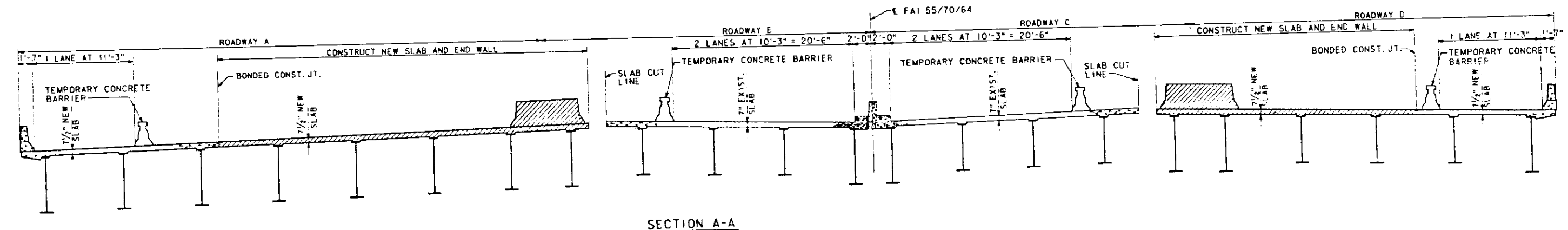
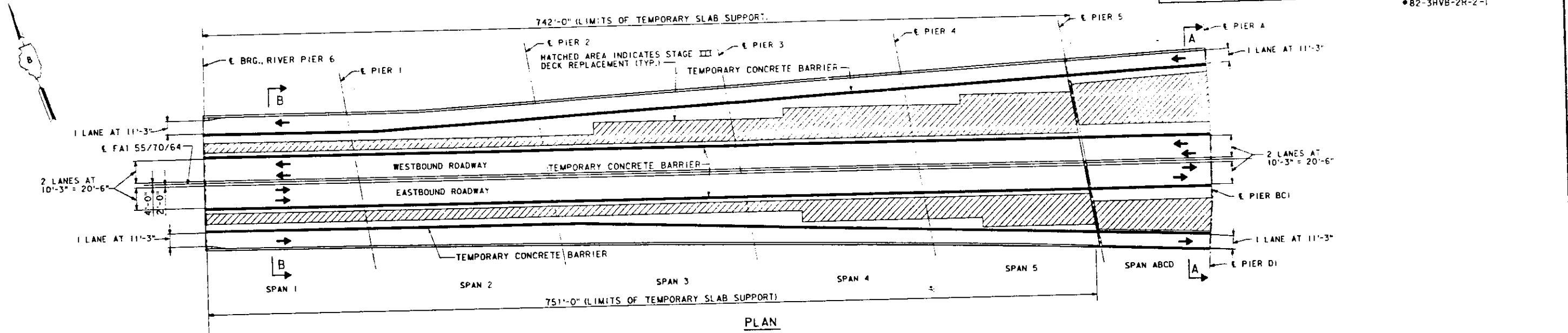
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LEVELS PLOTTED DATE: AUG. 10, 1989
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A.W. NIEMEYER	DESIGNED
L.G. WEAVER	CHECKED
D.C. SPINK	DRAWN
F.A. CAMBA	CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

BILL OF MATERIAL		ROUTE NO.	SECTION	COUNTY	TO S	FROM
CONCRETE REMOVAL	CU. YDS.	632.6	F.A.I. TO	ST. CLAIR	105	48
STAGE III			ILLINOIS	PROJECT		

•82-3HVB-2R-2-1



NOTES

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER, DETAILED PLANS FOR TEMPORARY SLAB SUPPORT AT THE LOCATIONS SHOWN ON THE PLANS. SEE SPECIAL PROVISIONS.

TEMPORARY SLAB SUPPORT SYSTEM SHALL BE IN PLACE BEFORE ANY DECK REMOVAL AT EVERY STAGE REMOVAL SECTION.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONSTRUCTION STAGING - STAGE III

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVDRUP CORPORATION
ST. LOUIS, MISSOURI

Revised: P.M.P. 5-24-90

LEVELS PLOTTED DATE: AUG. 10, 1989
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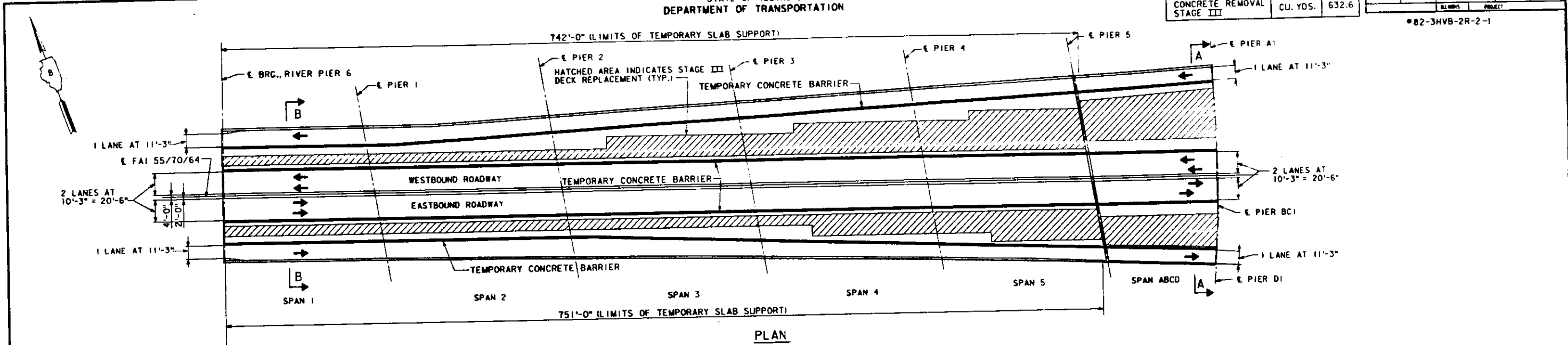
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RBS327 PRF:RBS327

A.W. NIEMEYER	DESIGNED
L.G. WEAVER	CHECKED
D.C. SPINY	DRAWN
F.A. CAMBA	CHECKED

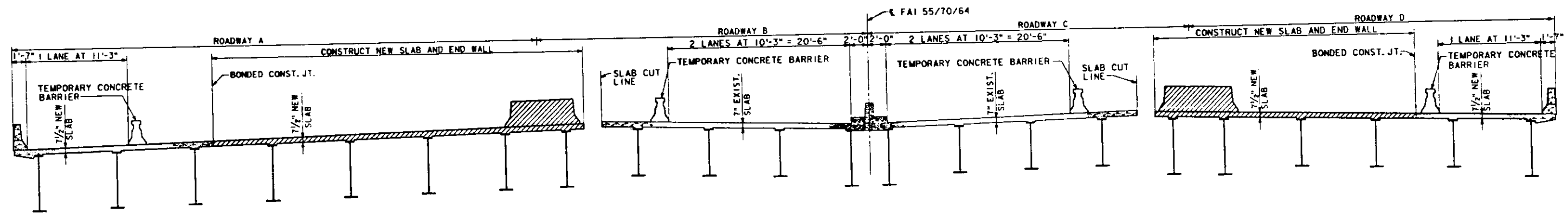
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CONCRETE REMOVAL STAGE III	CU. YDS.	632.6	48

NO. OF SHEETS	SHEET NO.
105	48

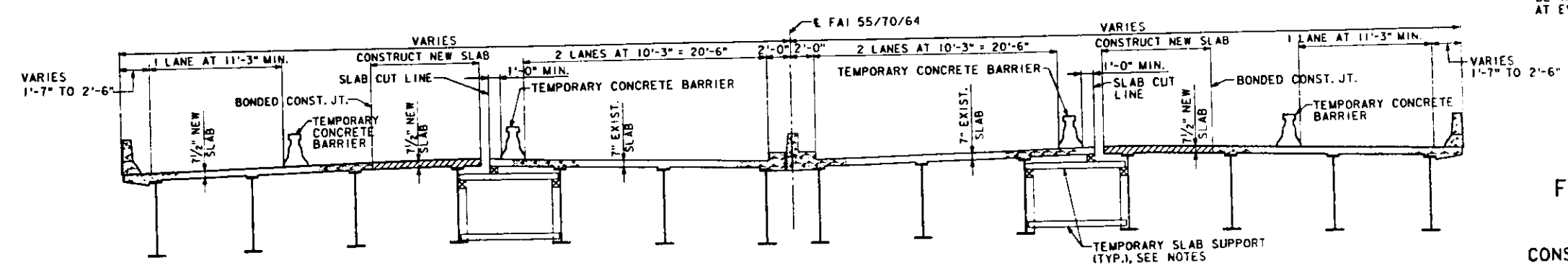
82-3HVB-2R-2-1



PLAN



SECTION A-A



SECTION B-B

NOTES

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER, DETAILED PLANS FOR TEMPORARY SLAB SUPPORT AT THE LOCATIONS SHOWN ON THE PLANS. SEE SPECIAL PROVISIONS. TEMPORARY SLAB SUPPORT SYSTEM SHOULD BE IN PLACE BEFORE ANY DECK REMOVAL. (TYPICAL AT EVERY STAGE REMOVAL SECTION)

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONSTRUCTION STAGING - STAGE III

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 4 OF 45

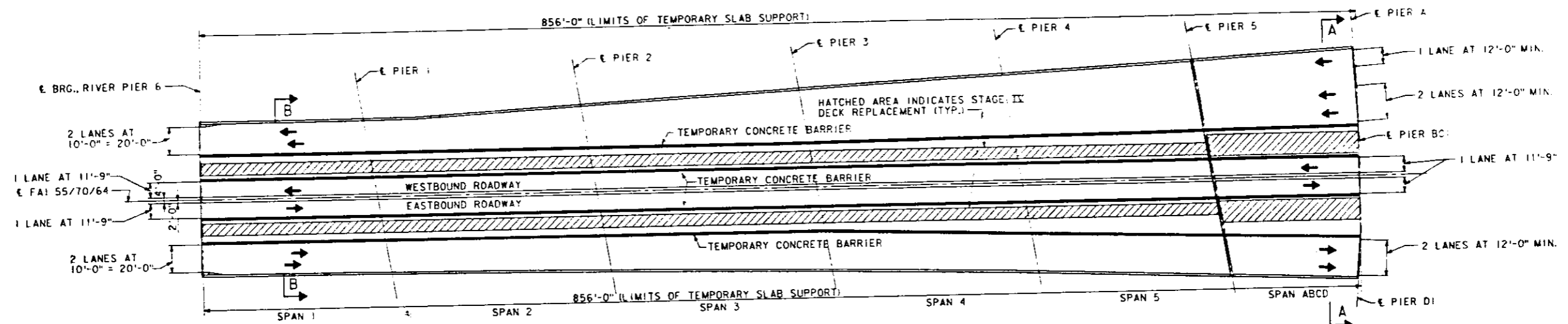
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DESIGNED	A.W. NIEMEYER
CHECKED	L.G. WEAVER
DRAWN	D.C. SPINK
CHECKED	F.A. CAMBA

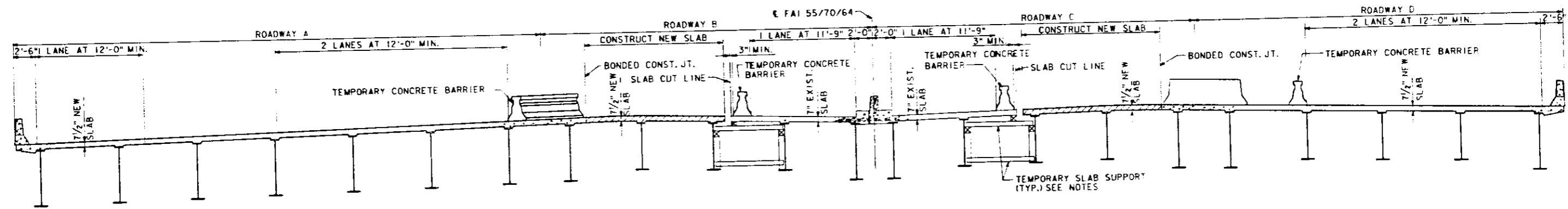
PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

BILL OF MATERIAL		ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CONCRETE REMOVAL STAGE IV	CU. YDS.	FAI 70	•	ST. CLAIR	105	49

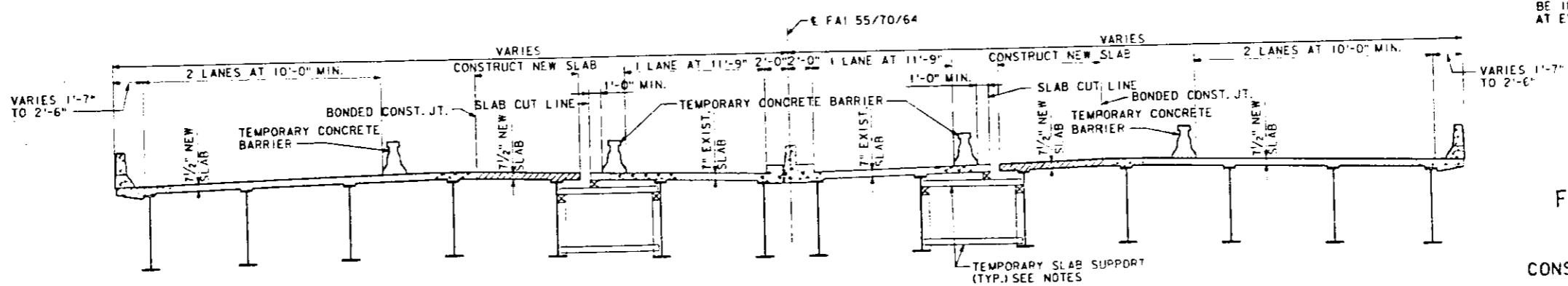
82-3HVB-2R-2-1



PLAN



SECTION A-A



SECTION B-B

NOTES

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER, DETAILED PLANS FOR TEMPORARY SLAB SUPPORT AT THE LOCATIONS SHOWN ON THE PLANS. SEE SPECIAL PROVISIONS.

TEMPORARY SLAB SUPPORT SYSTEM SHALL BE IN PLACE BEFORE ANY DECK REMOVAL. (TYPICAL AT EVERY STAGE REMOVAL SECTION)

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONSTRUCTION STAGING - STAGE IV
STRUCTURE NO. 082-0002
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

LEVELS PLOTTED DATE: AUG. 10, 1989
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R05328 PRF18832R

A.W. NIEMEYER	DESIGNED
L.G. WEAVER	CHECKED
D.C. SPINY	DRAWN
F.A. CAMBA	CHECKED

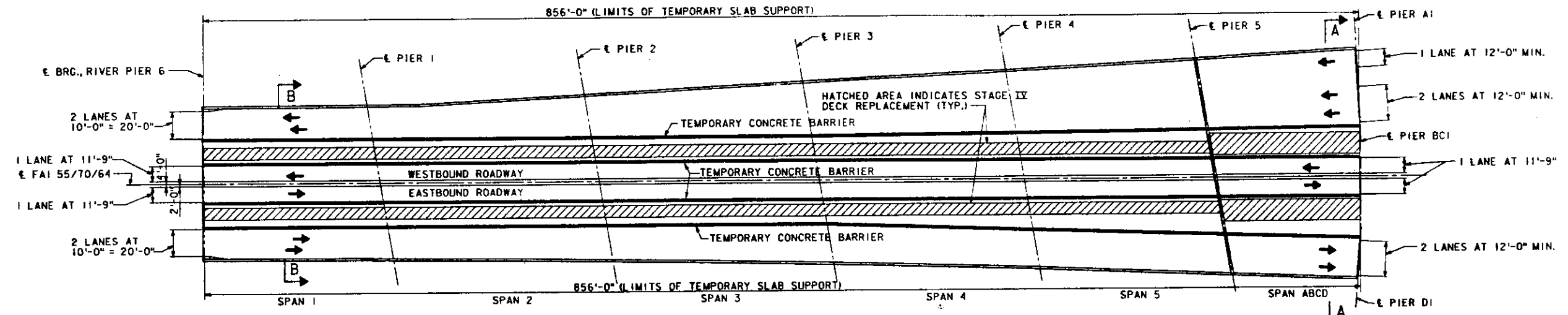
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

Revised: P.M.P. 5-24-90

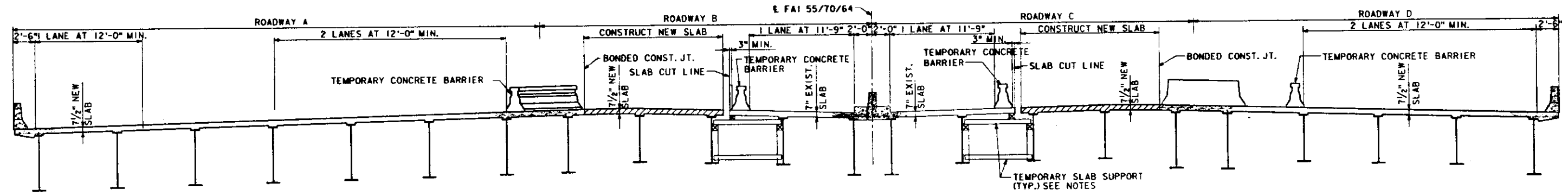
BILL OF MATERIAL		CU. YDS.	355.2
CONCRETE REMOVAL	STAGE IV		

NAME NO.	SECTION	COUNTY	MILE	POST
F.A.I. 70	*	ST. CLAIR	105	49
ILLINOIS		PROJECT		

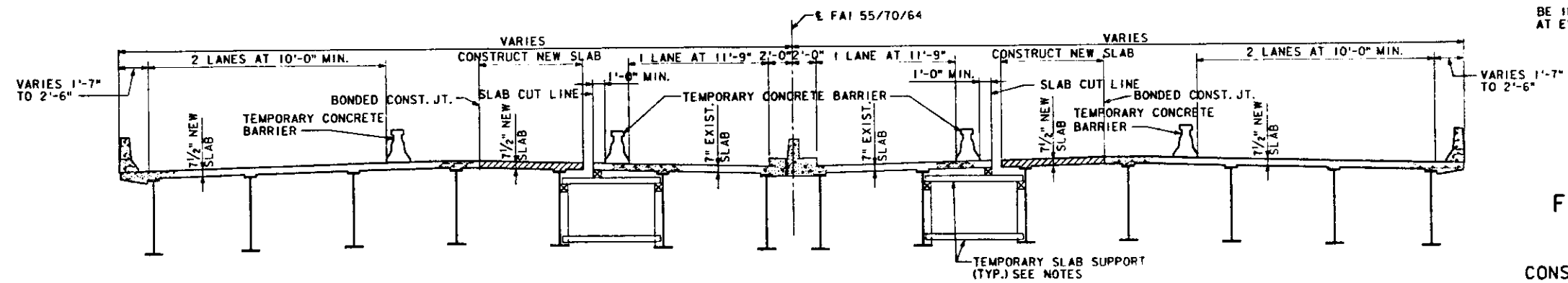
*82-3HVB-2R-2-1



PLAN



SECTION A-A



SECTION B-B

NOTES

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL BY THE ENGINEER, DETAILED PLANS FOR TEMPORARY SLAB SUPPORT AT THE LOCATIONS SHOWN ON THE PLANS. SEE SPECIAL PROVISIONS.

TEMPORARY SLAB SUPPORT SYSTEM SHOULD BE IN PLACE BEFORE ANY DECK REMOVAL. (TYPICAL AT EVERY STAGE REMOVAL SECTION)

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONSTRUCTION STAGING - STAGE IV
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

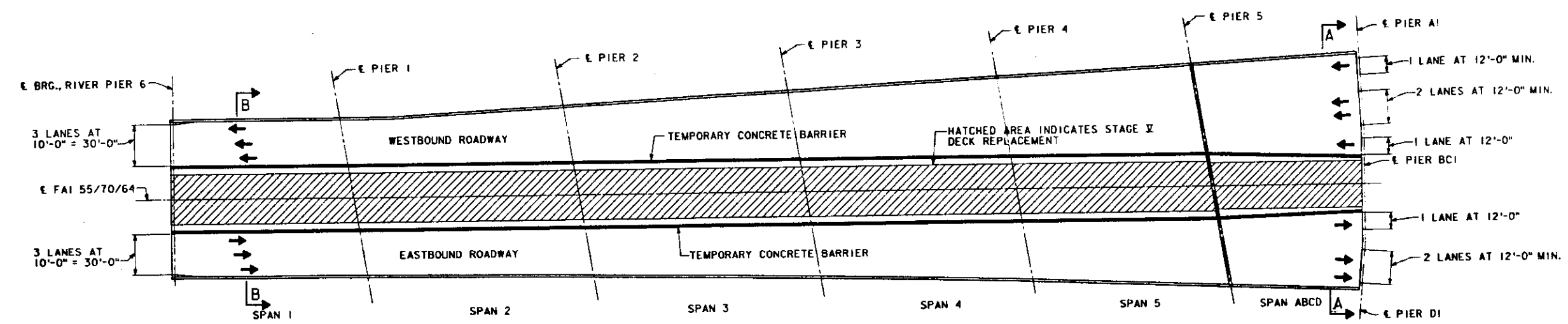
10487
885328
FILE: ZF3J110, J885328.DGN
PRF: 885328
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 58 63

DESIGNED	A.W. NIEMEYER
CHECKED	L.G. WEAVER
DRAWN	D.C. SPINK
CHECKED	F.A. CAMBA

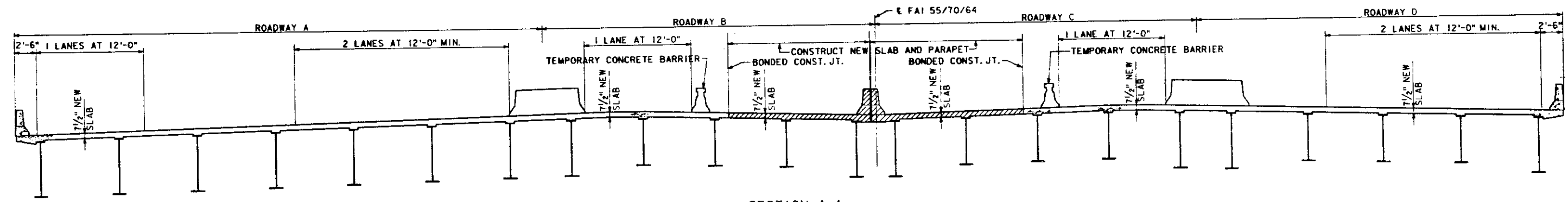
BILL OF MATERIAL	
CONCRETE REMOVAL STAGE V	CU. YDS. 762.4

ROUTE NO.	SECTION	COUNTY	MILE SHEETS	SHEET NO.
F.A.I. TO	*	ST. CLAIR	105	50
BLANKS	PROJECT			

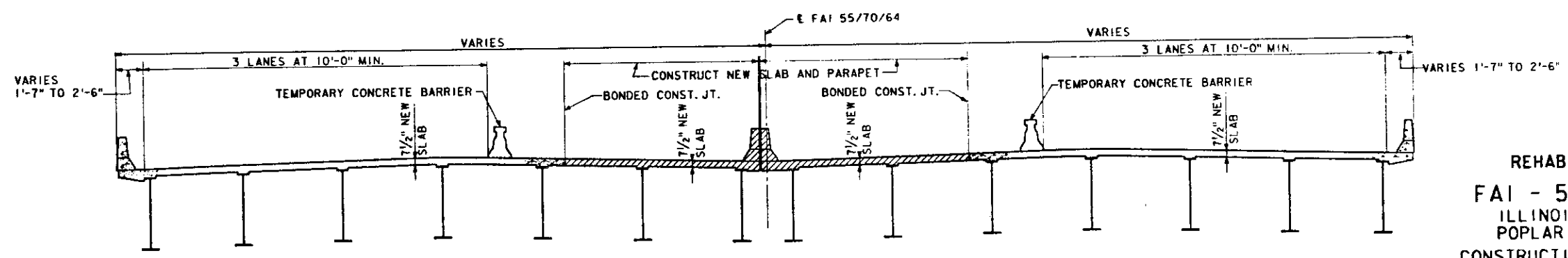
82-3HVB-2R-2-1



PLAN



SECTION A-A



SECTION B-B

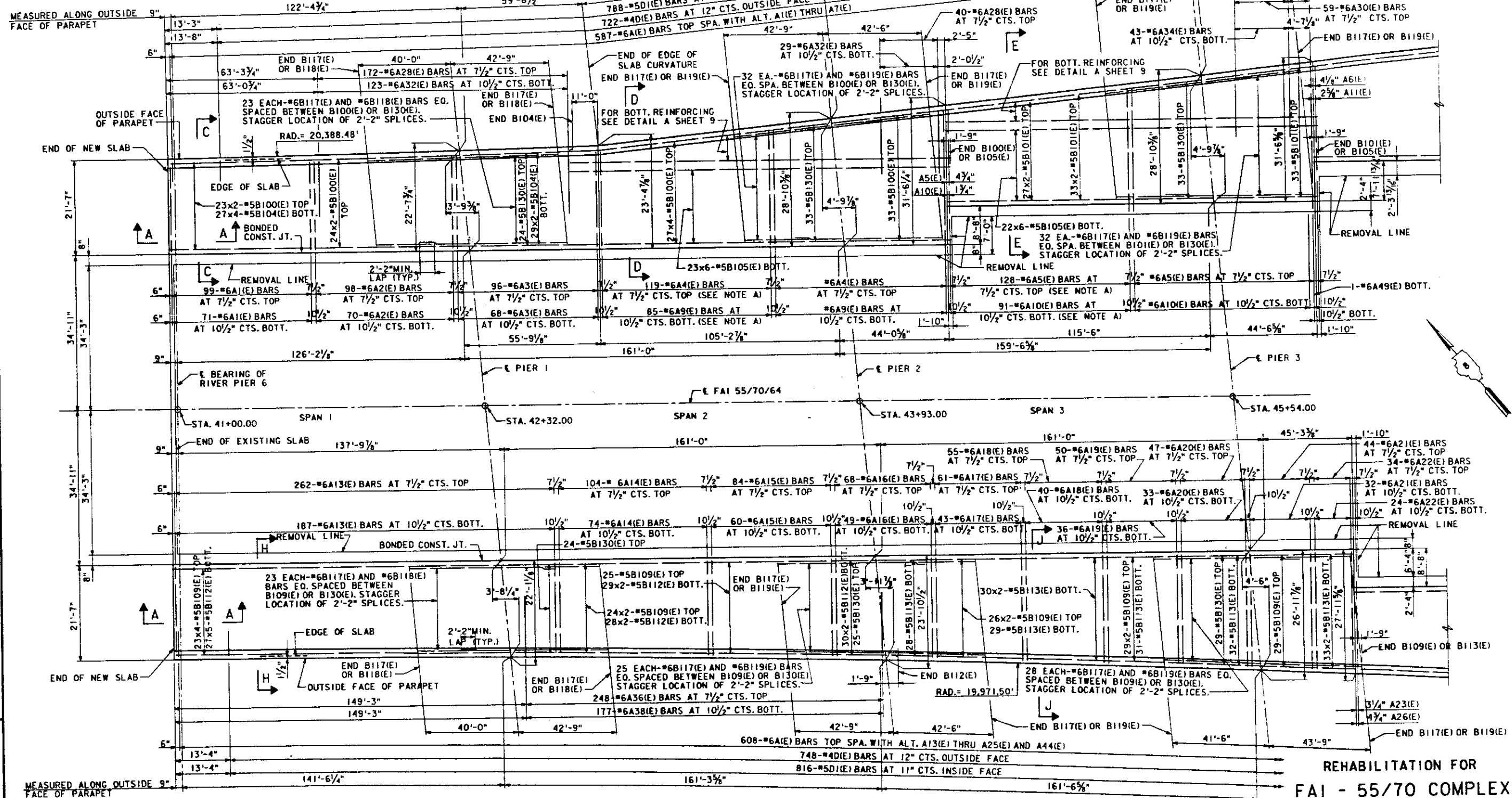
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 885329 PRF: 885329
 LEVELS PLOTTED DATE: AUG. 10, 1989
 35 56 58 63

DESIGNED	A.W. NIEMEYER
CHECKED	L.G. WEAVER
DRAWN	D.C. SPINK
CHECKED	F.A. CAMBA

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONSTRUCTION STAGING - STAGE V
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

MEASURED ALONG OUTSIDE
FACE OF PARAPET



PLAN - SPANS 1 THRU 3

NOTE A: CUT BARS A4(E), A5(E), A9(E) AND A10(E)
IN THE FIELD AND USE REMAINDER WHERE SHOWN.

NOTES

FOR SLAB NOTES, SEE SHEET 11.
WORK THIS SHEET WITH SHEETS 8, 9
AND 10.

REHABILITATION FOR
FAI - 55/70 COMPLEX

ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE II
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

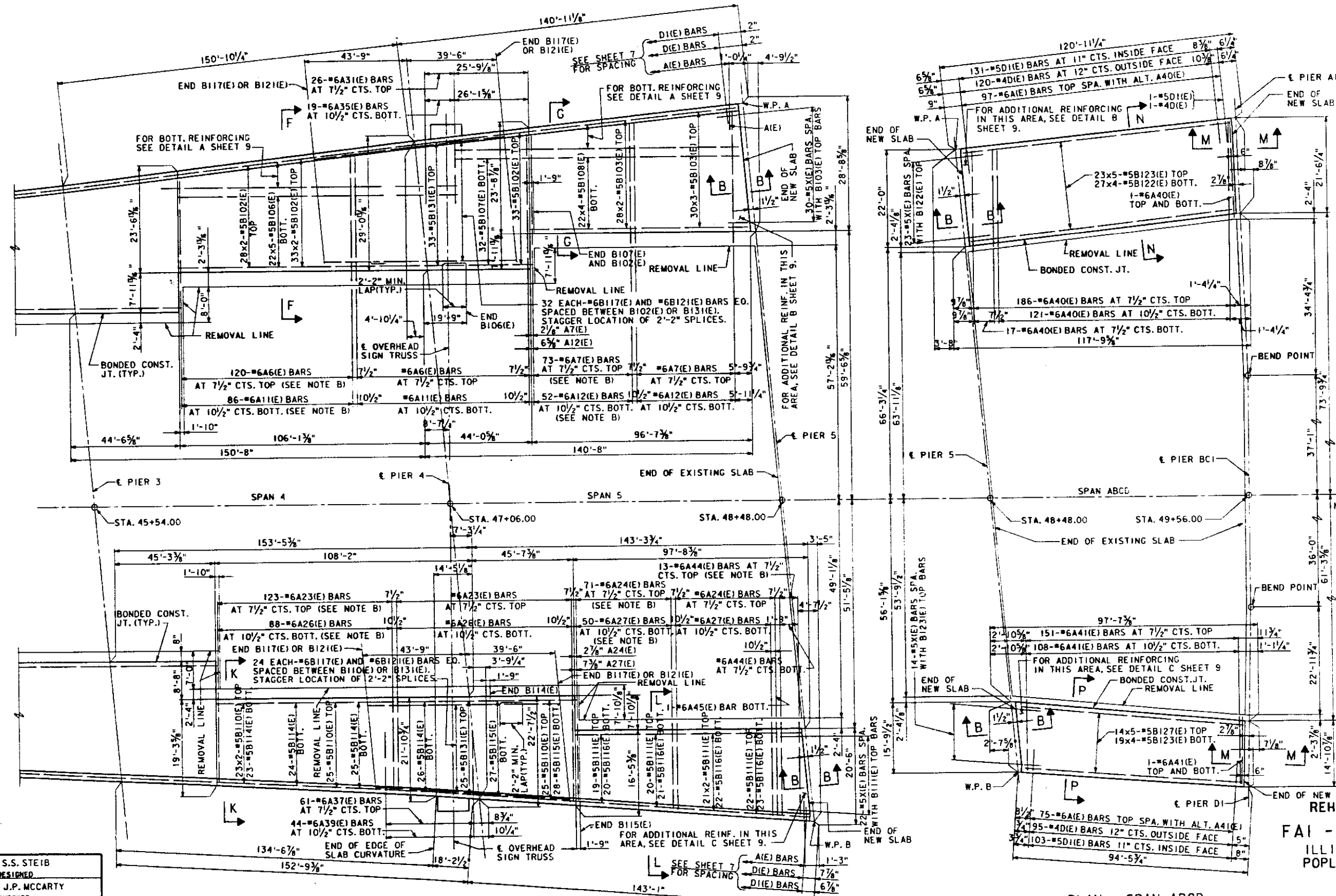
10481 FILE: ZF3E110, 1885276.DGN
885276 PRF: 885276
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63

DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
CHECKED	K. SCHULT
DRAWN	R.F. BECK
CHECKED	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TITLE	SHEET
F.A.I. 70	ST. CLAIR	105		52
BLINDS		PROJECT		

82-3HVB-2R-2-1



NOTE: TRANSVERSE BARS NEAR EAST END OF SLAB SHALL BE SHIFTED SLIGHTLY TO MAINTAIN A DISTANCE OF 3" CLEAR BETWEEN BARS AT EDGE OF SLAB.

NOTES
FOR SLAB NOTES, SEE SHEET 11.
WORK THIS SHEET WITH SHEETS 7, 9 AND 10.

PLAN - SPANS 4 AND 5

NOTE B: CUT BARS A6(E), A7(E), A11(E), A12(E), A23(E), A24(E), A26(E), A27(E) AND A44(E) IN THE FIELD AND USE REMAINDER WHERE SHOWN.

PLAN - SPAN ABCD

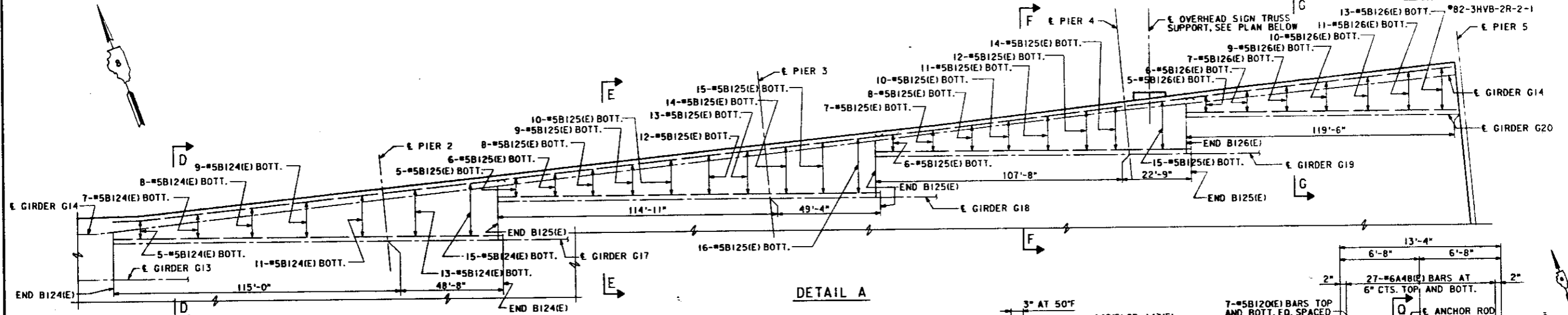
REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE II
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

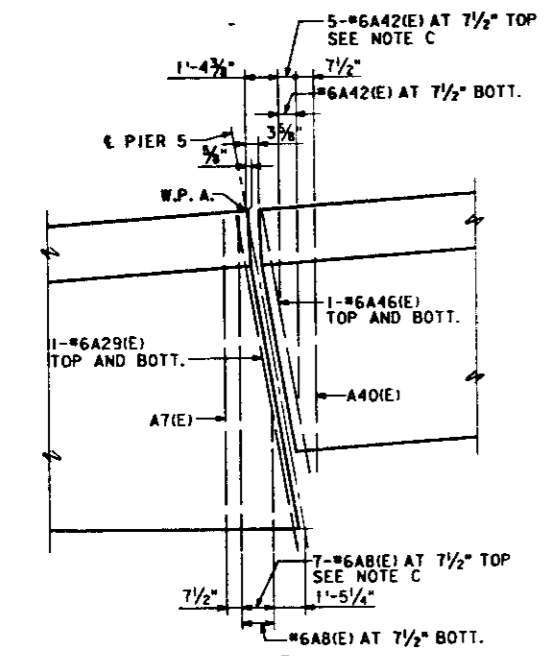
SHEET NO. 8 OF 45

10487 FILE: ZF31110.1385284.DGN
85284 PRF: 885284
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63

DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DRAWN	K. SCHULT
CHECKED	R.F. BECK

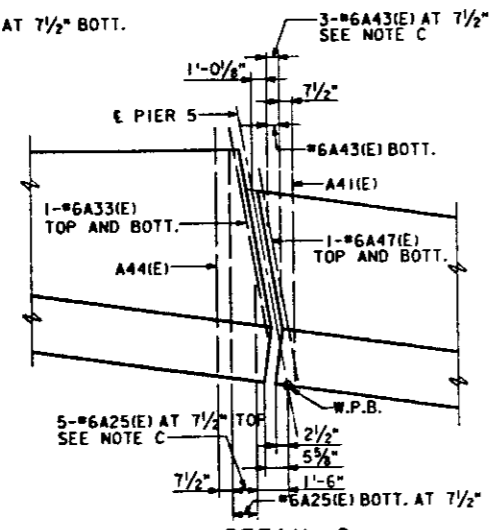


DETAIL A

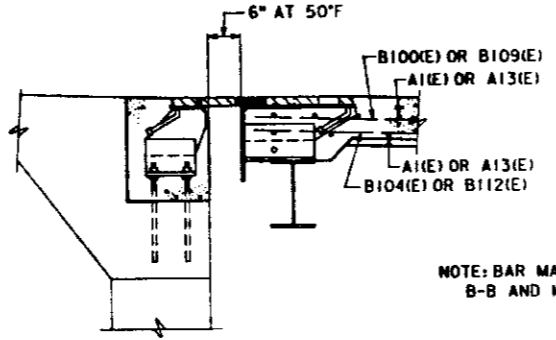


DETAIL B

NOTE C: CUT BARS A8(E), A25(E), A42(E) AND A43(E) IN THE FIELD AND USE REMAINDER WHERE SHOWN.

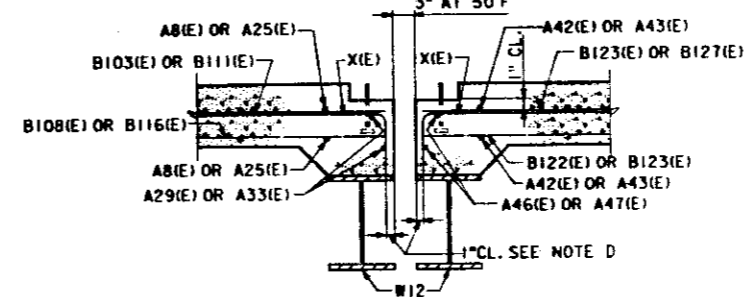


DETAIL C



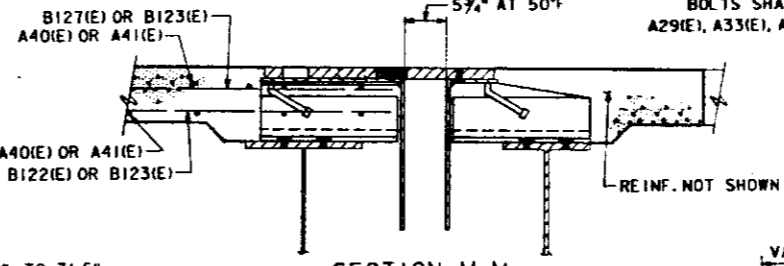
SECTION A-A
SECTION AT SLAB STAGE II
SHOWN, OTHERS SIMILAR.

NOTE: BAR MARKS SHOWN IN SECTIONS A-A, B-B AND M-M ARE FOR STAGE II ONLY.

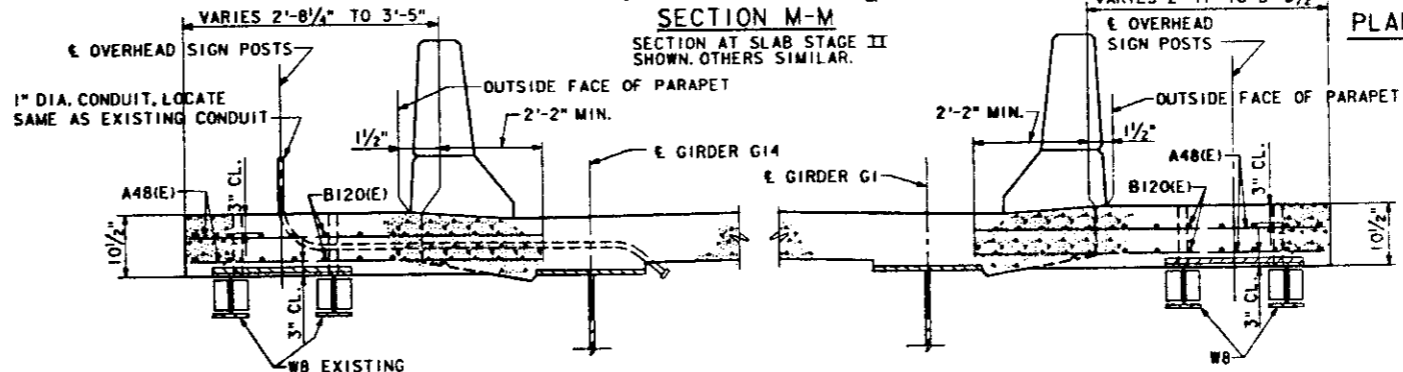


SECTION B-B
SECTION AT SLAB STAGE II
SHOWN, OTHERS SIMILAR.

NOTE D: PLACE BARS A29(E), A33(E), A46(E) AND A47(E) IN BACK OF BOLT FOR NEOPRENE JT. IF REQUIRED TO MAINTAIN 1" CL. (+0-1/8"). BOLTS SHALL BE TIED TO BARS A29(E), A33(E), A46(E) OR A47(E).



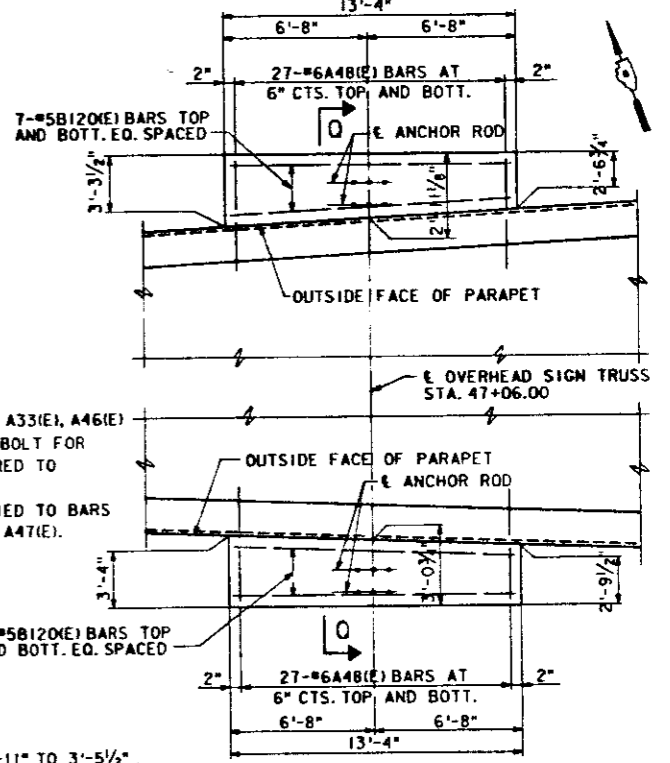
SECTION M-M
SECTION AT SLAB STAGE II
SHOWN, OTHERS SIMILAR.



SECTION Q-Q

NOTE: ANCHOR RODS FOR SIGN POSTS SHOWN FOR INFORMATION ONLY. LOCATION SHALL BE SAME AS EXISTING. ANCHOR RODS SHALL BE 1/2" DIA. x 1'-5" LONG, 6" THREAD, 24 REOD. PROVIDE 3 NUTS AND WASHERS PER ROD. ANCHOR RODS SHALL BE INSTALLED SAME AS EXISTING RODS. COST INCIDENTAL.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI



PLAN-OVERHEAD SIGN SUPPORTS

NOTES

FOR SLAB NOTES, SEE SHEET 11.
WORK THIS SHEET WITH SHEETS 7, 8 AND 10 AND 11.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE II

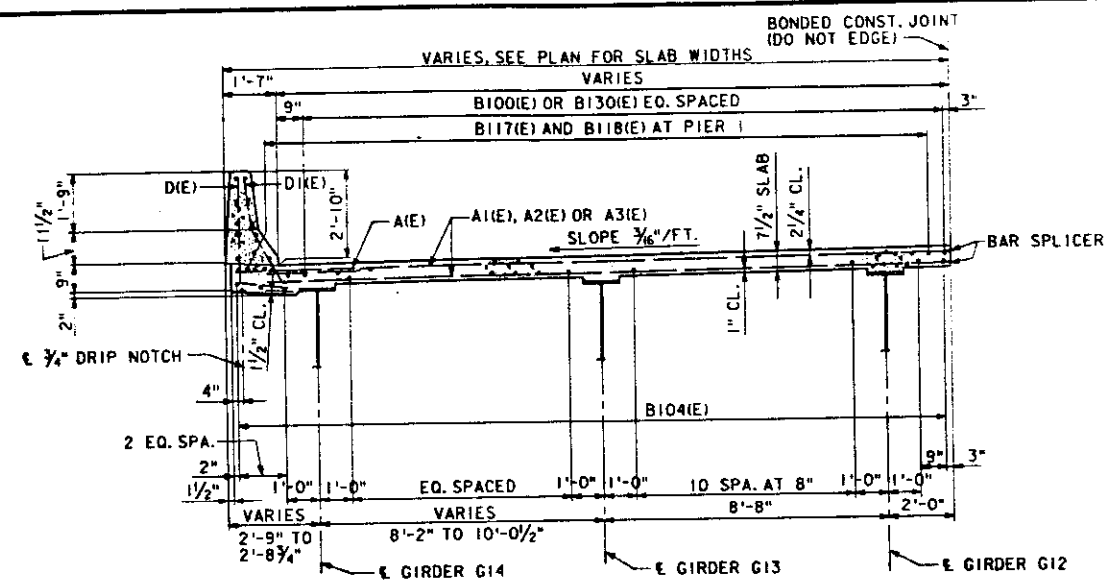
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

10487 FILE: 2F3:110,1388S316.DGN DATE: AUG. 10, 1989
88S316 PRF: 88S316 35 56 57 63 LEVELS PLOTTED

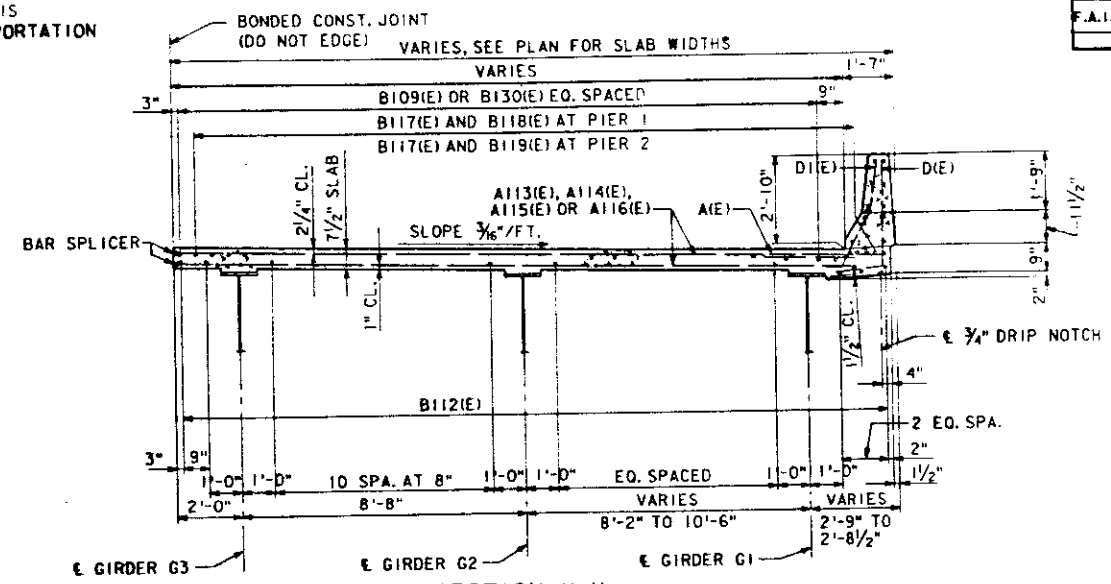
S. STEIB	DESIGNED
J. McCARTY	CHECKED
K. SCHULT	DRAWN
R.F. BECK	CHECKED

ROUTE NO.	SECTION	COUNTY	FILE NO.	SHEET
F.A.I. TO	ST. CLAIR	105	54	
PROJECT				

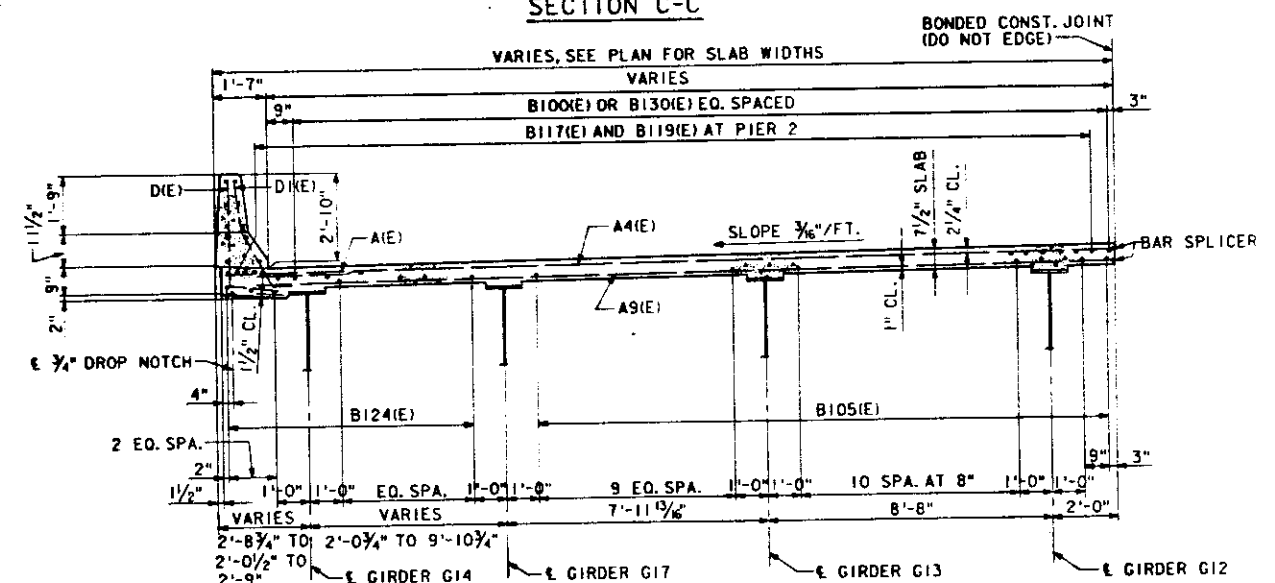
#82-3HVB-2R-2-1



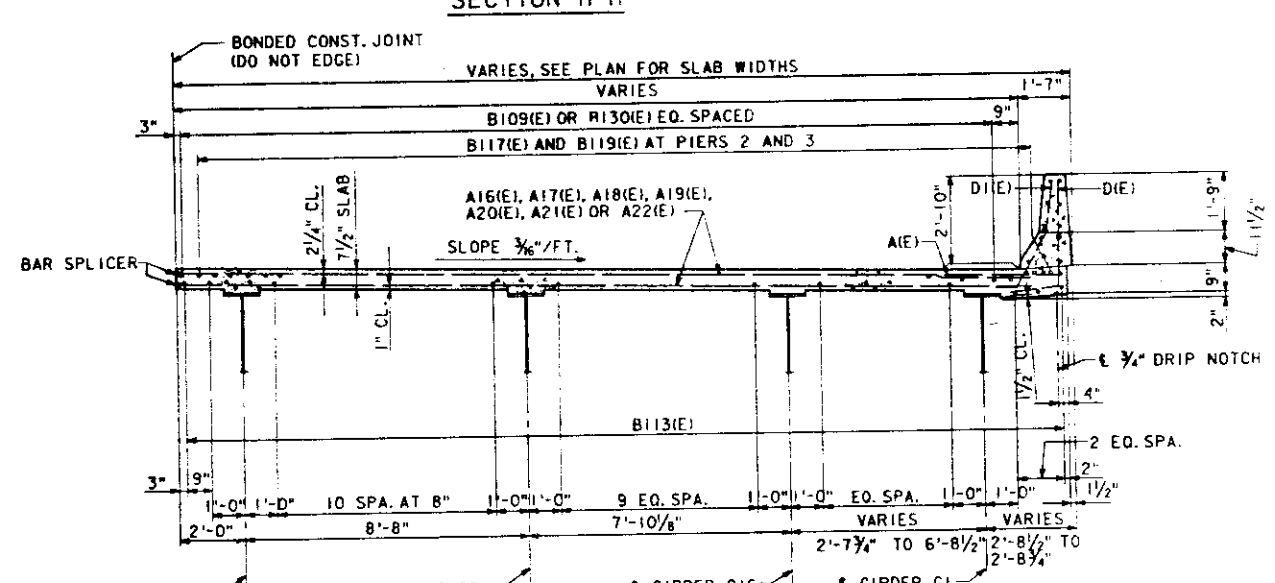
SECTION C-C



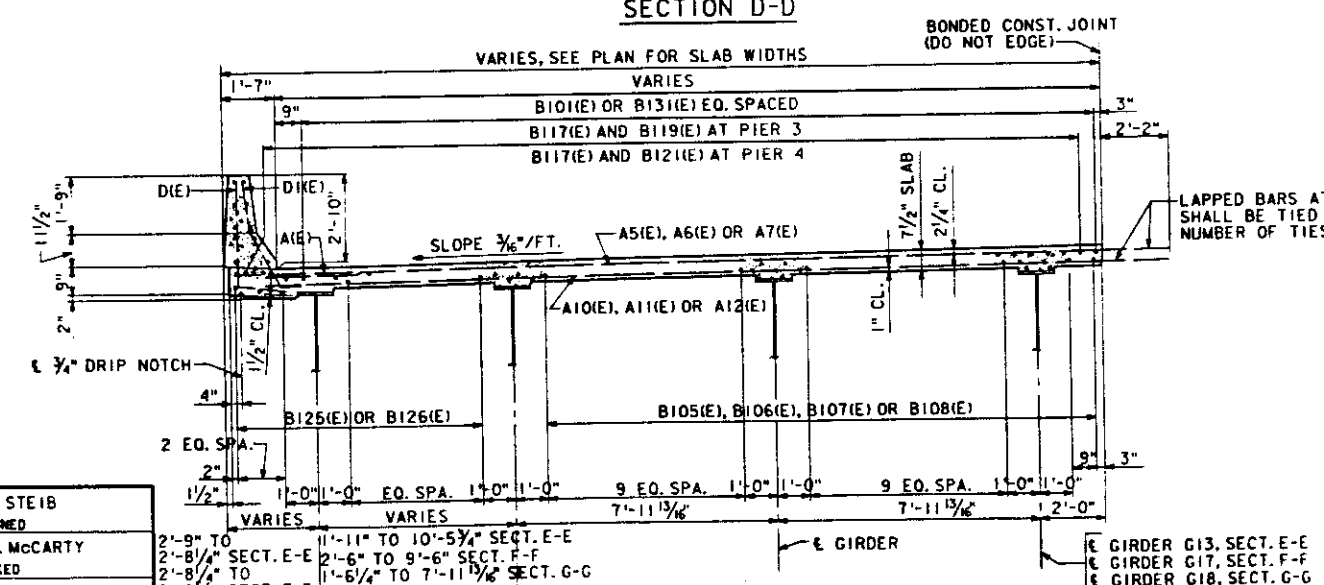
SECTION H-H



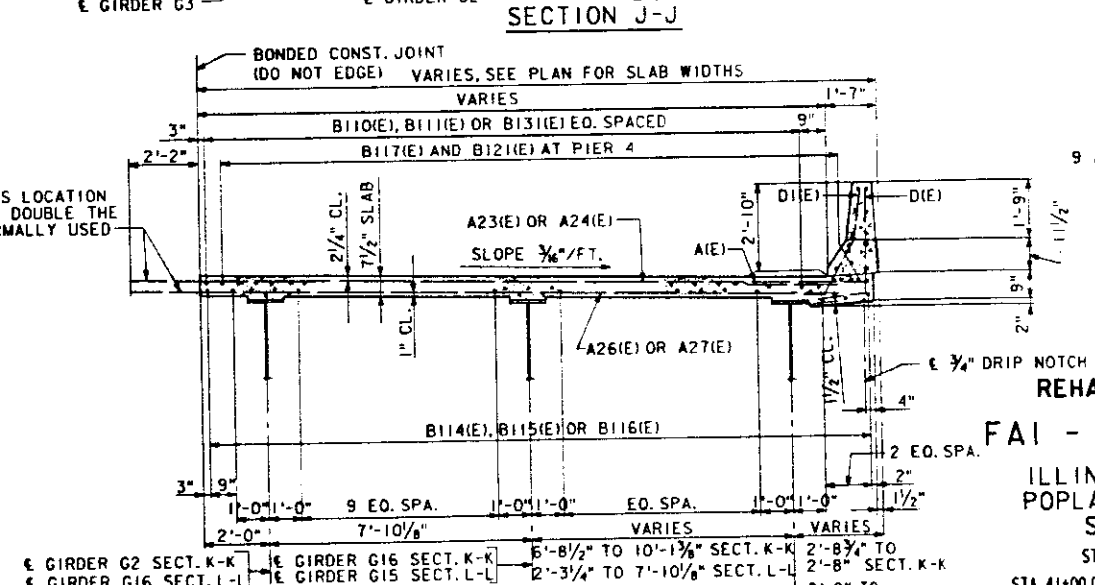
SECTION D-D



SECTION J-J



SECTION E-E
SECTION F-F
SECTION G-G



SECTION K-K
SECTION L-L

NOTES

WORK THIS SHEET WITH SHEETS 7, 8, 9 AND 11.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE II

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

LEVELS PLOTTED DATE: AUG. 10, 1989
FILE: ZF31(10)_0885317.DGN
PREP: 885317

DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DRAWN	K. SCHULT
CHECKED	R.F. BECK

2'-9\"/>

LAPPED BARS AT THIS LOCATION SHALL BE TIED WITH DOUBLE THE NUMBER OF TIES NORMALLY USED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70		ST. CLAIR	105	55

*82-3HVB-2R-2-1

BILL OF MATERIAL

SLAB - SPANS 1 THRU 5 AND SPAN ABCD

BAR	NO.	SIZE	LENGTH	SHAPE	BAR	NO.	SIZE	LENGTH	SHAPE
A1(E)	1367	#6	4'-0"		A47(E)	2	#6	17'-0"	
A11(E)	170	#6	20'-11"		A48(E)	108	#6	5'-6"	
A2(E)	168	#6	21'-7"		A49(E)	1	#6	32'-8"	
A3(E)	164	#6	22'-3"						
A4(E)	119	#6	52'-8"		B100(E)	235	#5	27'-4"	
A5(E)	128	#6	56'-7"		B101(E)	153	#5	24'-2"	
A6(E)	120	#6	57'-6"		B102(E)	155	#5	22'-4"	
A7(E)	73	#6	54'-8"		B103(E)	146	#5	20'-8"	
A8(E)	7	#6	37'-0"		B104(E)	166	#5	29'-11"	
A9(E)	85	#6	52'-8"		B105(E)	270	#5	29'-0"	
A10(E)	91	#6	56'-7"		B106(E)	110	#5	26'-9"	
A11(E)	86	#6	57'-6"		B107(E)	32	#5	27'-10"	
A12(E)	52	#6	54'-8"		B108(E)	88	#5	25'-6"	
A13(E)	449	#6	23'-4"		B109(E)	304	#5	31'-1"	
A14(E)	178	#6	24'-0"		B110(E)	96	#5	28'-2"	
A15(E)	144	#6	24'-8"		B111(E)	103	#5	21'-7"	
A16(E)	117	#6	25'-4"		B112(E)	309	#5	29'-5"	
A17(E)	104	#6	25'-11"		B113(E)	246	#5	27'-1"	
A18(E)	95	#6	26'-7"		B114(E)	98	#5	29'-9"	
A19(E)	86	#6	27'-3"		B115(E)	55	#5	22'-8"	
A20(E)	80	#6	27'-11"		B116(E)	86	#5	26'-7"	
A21(E)	76	#6	28'-6"		B117(E)	219	#6	60'-0"	
A22(E)	58	#6	29'-1"		B118(E)	46	#6	24'-11"	
A23(E)	123	#6	45'-10"		B119(E)	117	#6	27'-5"	
A24(E)	71	#6	38'-6"		B120(E)	28	#5	13'-0"	
A25(E)	5	#6	23'-0"		B121(E)	56	#6	25'-5"	
A26(E)	88	#6	45'-10"		B122(E)	108	#5	31'-6"	
A27(E)	50	#6	38'-6"		B123(E)	191	#5	25'-7"	
A28(E)	212	#6	15'-4"		B124(E)	68	#5	25'-0"	
A29(E)	2	#6	30'-3"		B125(E)	191	#5	18'-0"	
A30(E)	59	#6	16'-0"		B126(E)	61	#5	18'-7"	
A31(E)	26	#6	14'-10"		B127(E)	70	#5	20'-10"	
A32(E)	152	#6	13'-2"		B130(E)	168	#5	53'-6"	
A33(E)	2	#6	22'-0"		B131(E)	58	#5	50'-0"	
A34(E)	43	#6	13'-10"						
A35(E)	19	#6	12'-8"						
A36(E)	248	#6	15'-10"		D1(E)	1685	#4	4'-11"	
A37(E)	61	#6	15'-4"		D11(E)	1839	#5	3'-11"	
A38(E)	177	#6	13'-8"						
A39(E)	44	#6	13'-2"		X(E)	89	#5	4'-1"	
A40(E)	326	#6	23'-1"		BX(E)	336	#5	2'-10"	
A41(E)	261	#6	16'-10"						
A42(E)	5	#6	21'-0"						
A43(E)	3	#6	15'-6"						
A44(E)	1	#6	42'-6"						
A45(E)	1	#6	21'-0"						
A46(E)	2	#6	23'-5"						

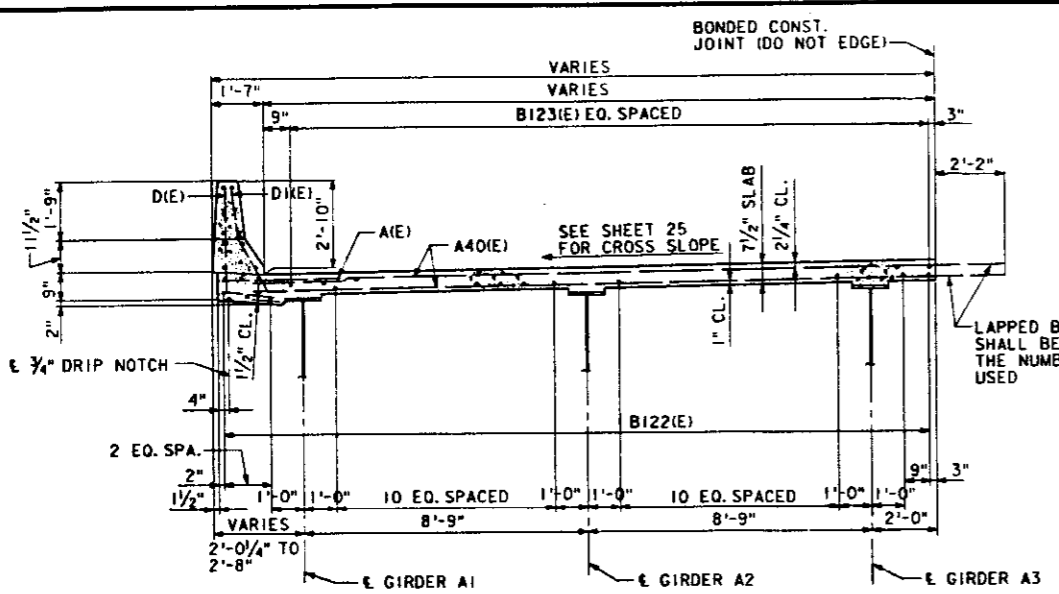
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.

SLAB NOTES

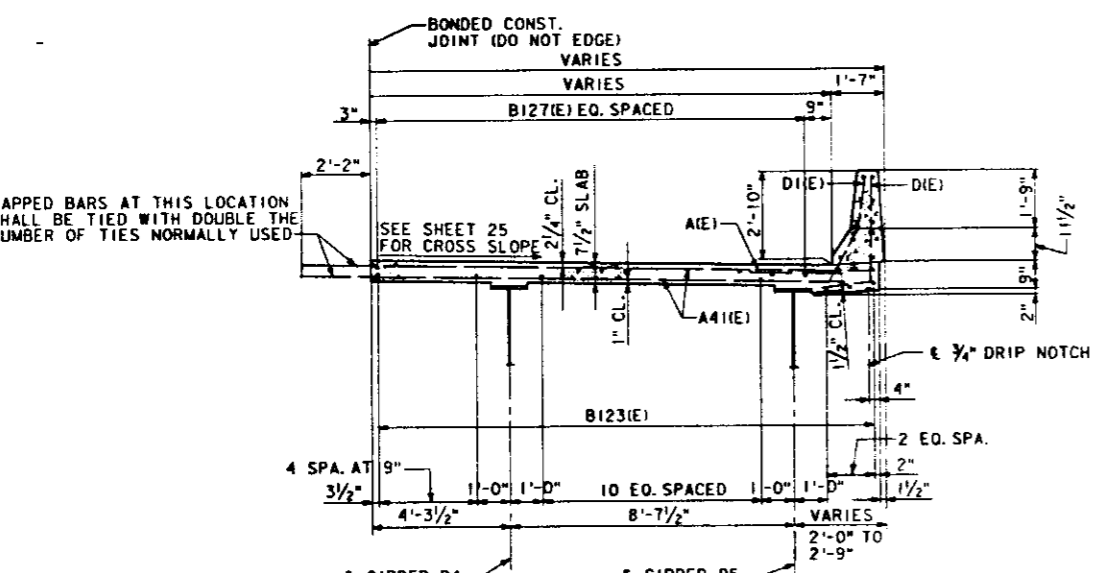
BARS BILLED AS 23x2-#5 ETC. INDICATES 23 LINES OF BARS WITH 2 LENGTHS PER LINE.
 D1(E) BARS LOCATED NEAR ENDS OF PARAPET SHALL BE SET BACK TO CLEAR BLOCKOUT FOR EXPANSION JOINT BY 1".
 LONGITUDINAL BARS SHALL BE LAPPED SPLICED 1'-9" MIN. EXCEPT AS NOTED FOR ADDITIONAL BARS OVER PIERS.
 BARS SHALL BE CUT TO CLEAR DRAINS AND EXPANSION JOINT STEEL WHERE NECESSARY.
 BAR SPLICERS ARE TO BE USED WITH BARS A1(E) THRU A41(E), A9(E), A13(E) THRU A22(E) IN STAGE II (2297 REQ'D.).
 BAR SPLICERS ARE TO BE USED WITH BARS A60(E) THRU A66(E) AND A68(E) IN STAGE III (4115 REQ'D.).
 BAR SPLICERS ARE TO BE USED WITH BARS A400(E) THRU A406(E) IN STAGE IV (4712 REQ'D.).

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE II

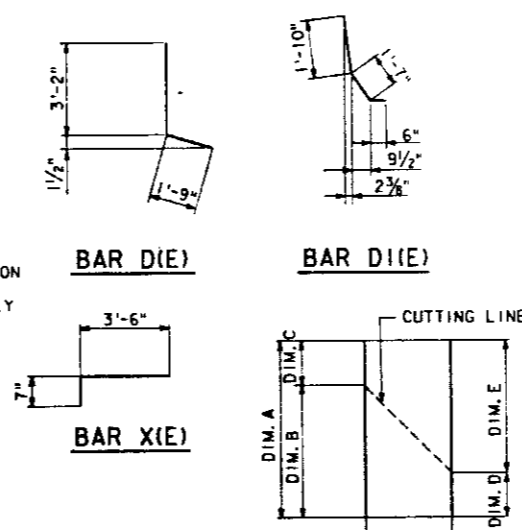
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.



SECTION N-N
(NORMAL TO GIRDERS)

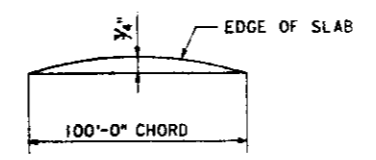


SECTION P-P
(NORMAL TO GIRDERS)



FIELD CUTTING DIAGRAM
NOTE: ORDER BARS FULL LENGTH

BAR	NO. REQ'D	DIM A	DIM B	DIM C	DIM D	DIM E
A4(E)	119	52'-8"	30'-5"	22'-3"	26'-4 1/4"	26'-3 3/4"
A5(E)	128	56'-7"	32'-8"	23'-11"	28'-3 3/4"	28'-3 1/4"
A6(E)	120	57'-6"	32'-10"	24'-8"	28'-9 1/4"	28'-8 3/4"
A7(E)	73	54'-8"	29'-10"	24'-10"	27'-4 1/4"	27'-3 3/4"
A8(E)	7	37'-0"	29'-9"	7'-3"	7'-3"	29'-9"
A9(E)	85	52'-8"	30'-5"	22'-3"	26'-4 1/4"	26'-3 3/4"
A10(E)	91	56'-7"	32'-8"	23'-11"	28'-3 3/4"	28'-3 1/4"
A11(E)	86	57'-6"	32'-10"	24'-8"	28'-9 1/4"	28'-8 3/4"
A12(E)	52	54'-8"	29'-10"	24'-10"	27'-4 1/4"	27'-3 3/4"
A23(E)	123	45'-10"	25'-5"	20'-5"	22'-11"	22'-11"
A24(E)	71	38'-6"	20'-11"	17'-7"	19'-3 1/4"	19'-2 3/4"
A25(E)	5	23'-0"	19'-0"	4'-0"	4'-0"	19'-0"
A26(E)	88	45'-10"	25'-5"	20'-5"	22'-11"	22'-11"
A27(E)	50	38'-6"	20'-11"	17'-7"	19'-3 1/4"	19'-2 3/4"
A42(E)	5	21'-0"	18'-0"	3'-0"	3'-0"	18'-0"
A43(E)	3	15'-6"	11'-6"	4'-0"	4'-0"	11'-6"
A44(E)	13	42'-6"	21'-7"	20'-11"	20'-11"	21'-7"



EDGE OF SLAB ORDINATES
FOR CURVED PORTION OF STRUCTURE

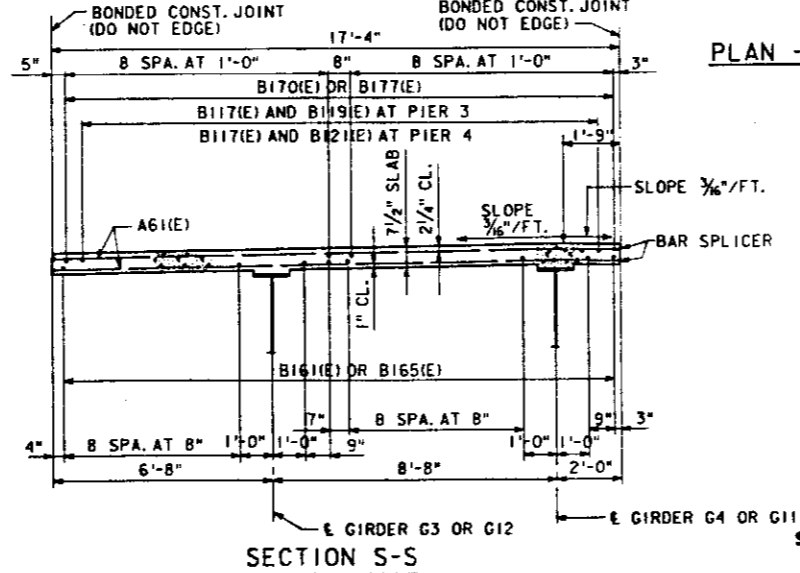
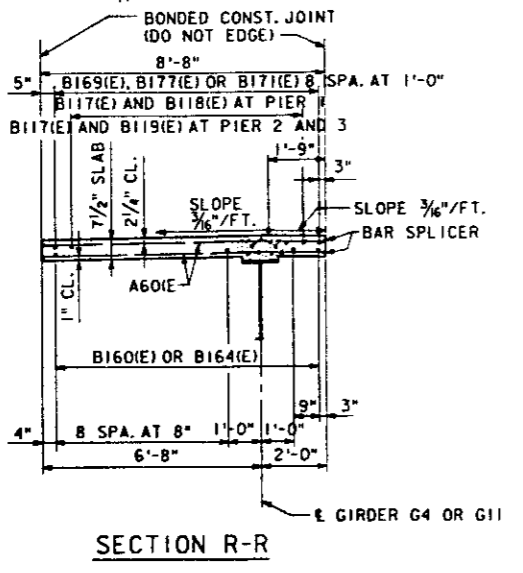
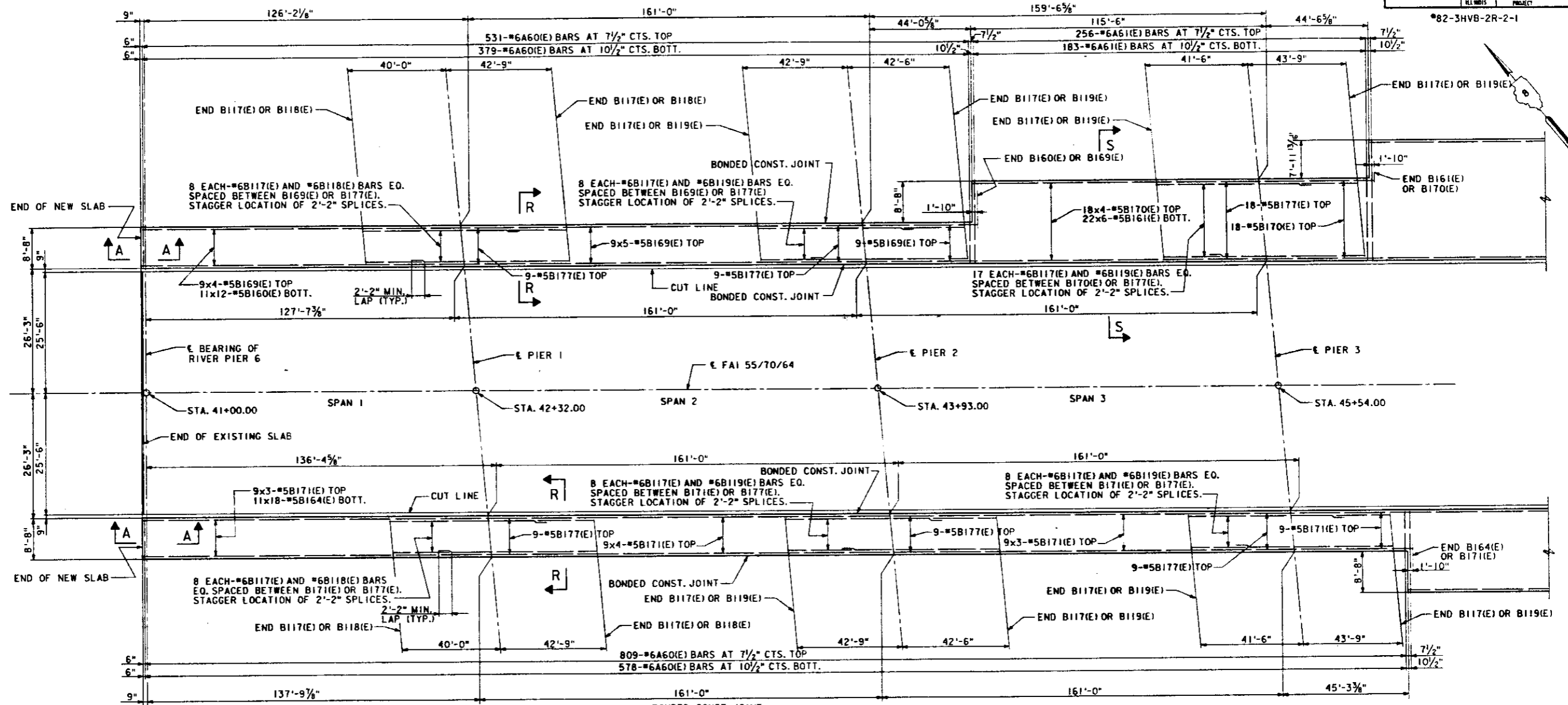
10487 FILE:ZF3:110:188532:LDGN
885321 PRE:885321
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63

DESIGNED	S.S. STEIB
CHECKED	J.P. McCARTY
DRAWN	K. SCHULT
CHECKED	R.F. BECK

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70		ST. CLAIR	105	56
ILLINOIS PROJECT				



PLAN - SPANS 1 THRU 3

NOTES
FOR SLAB NOTES, SEE SHEET 11.
FOR SECTION A-A SEE SHEET 9.
WORK THIS SHEET WITH SHEETS 13 AND 14.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE III
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

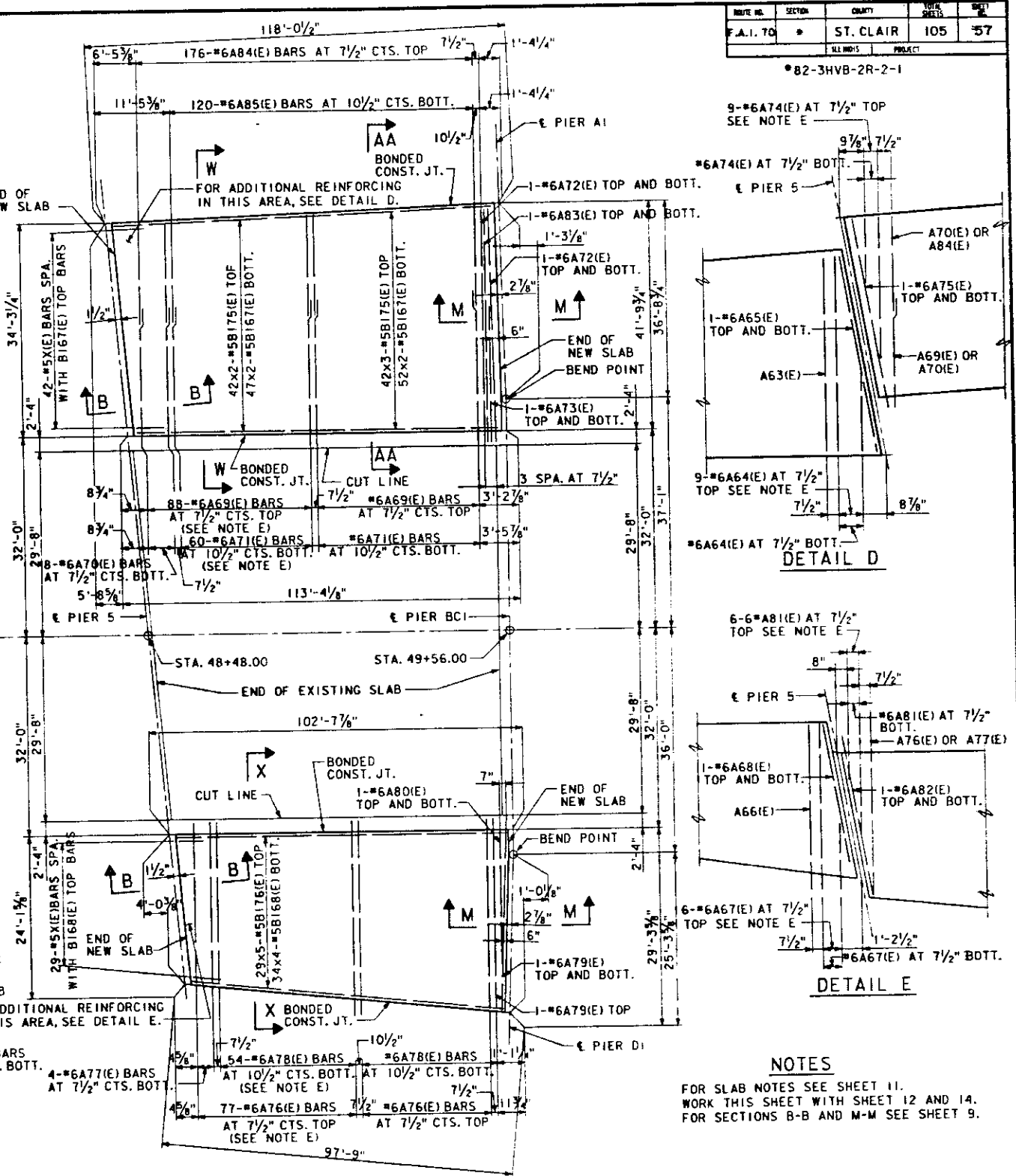
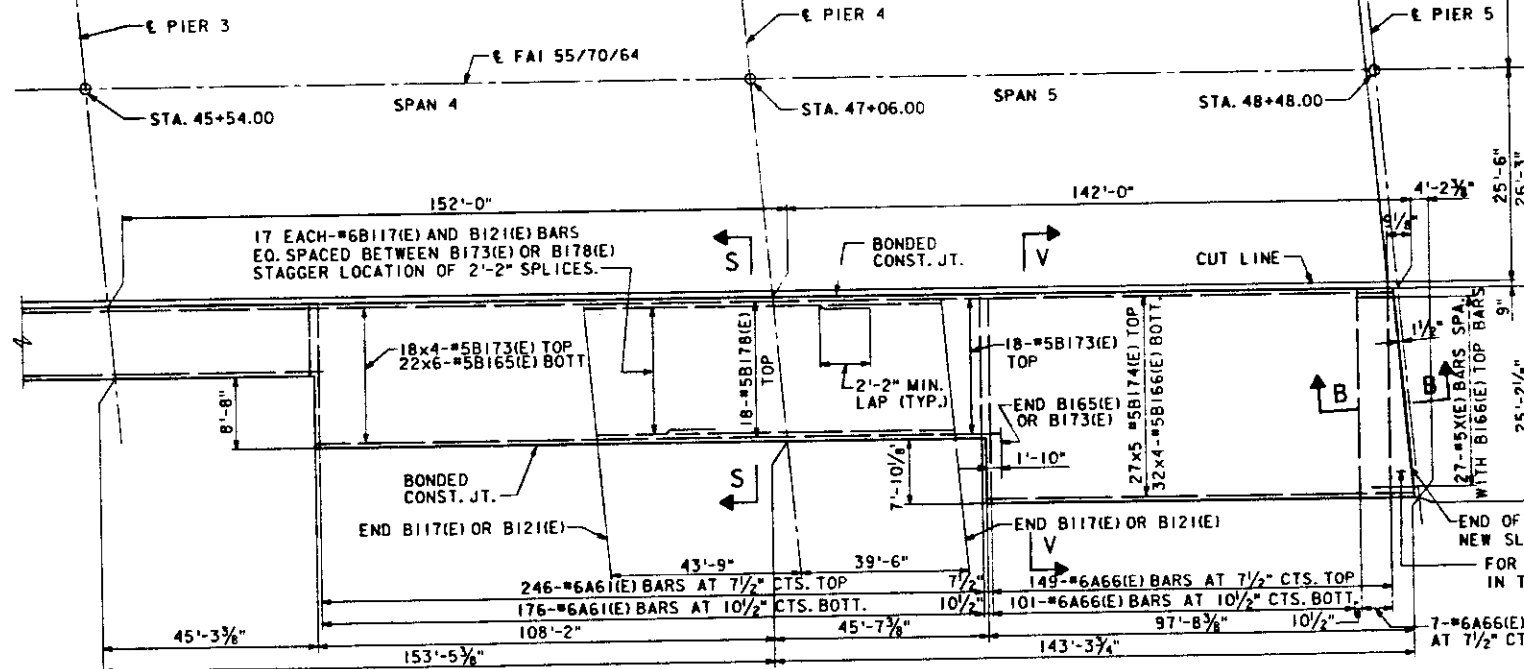
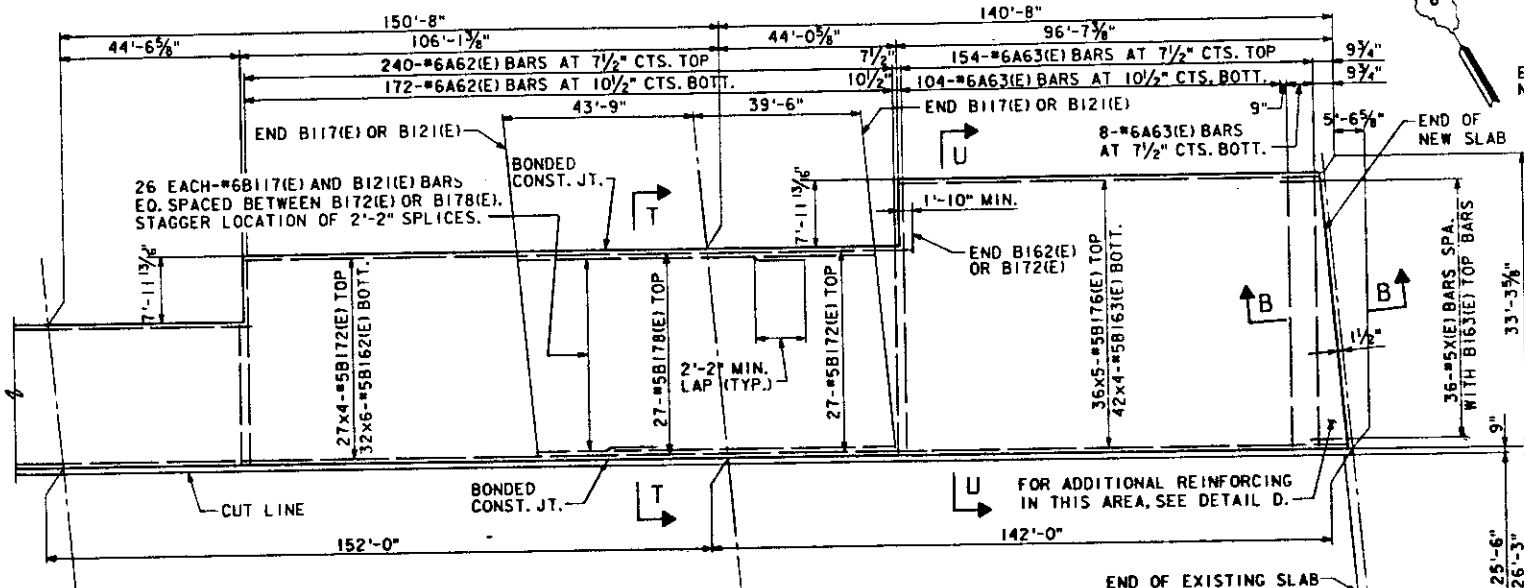
10487 F. FILE: ZF3-C110, J08S331.DGN
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63
885331 PRF: 885331

DESIGNED	S.S. STEIB
CHECKED	J.P. McCARTY
DRAWN	K. SCHULT
CHECKED	R.F. BECK

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DISTRICT	SECTION	DATE	SHEET NO.	TOTAL SHEETS
ST. CLAIR	105	57		



NOTES
FOR SLAB NOTES SEE SHEET 11.
WORK THIS SHEET WITH SHEET 12 AND 14.
FOR SECTIONS B-B AND M-M SEE SHEET 9.

LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63
10487 FILE: ZF3:110,1985333.DGN
885333 PRF: 885333

DESIGNED	S. STEIB
CHECKED	J. MCCARTY
CHECKED	K. SCHULT
CHECKED	R.F. BECK

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE III
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	ST. CLAIR	105	58	

*82-3HVB-2R-2-1

BILL OF MATERIAL

SPANS 1 THRU 5 AND SPAN ABCD

BAR	NO.	SIZE	LENGTH	SHAPE
A60(E)	2,297	#6	8'-4"	
A61(E)	861	#6	17'-0"	
A62(E)	412	#6	25'-0"	
A63(E)	266	#6	33'-0"	
A64(E)	9	#6	35'-0"	
A65(E)	2	#6	33'-4"	
A66(E)	257	#6	24'-10"	
A67(E)	6	#6	28'-9"	
A68(E)	2	#6	25'-2"	
A69(E)	88	#6	42'-10"	
A70(E)	8	#6	36'-9"	
A71(E)	60	#6	34'-6"	
A72(E)	4	#6	43'-10"	
A73(E)	2	#6	24'-0"	
A74(E)	9	#6	36'-0"	
A75(E)	2	#6	36'-7"	
A76(E)	77	#6	57'-5"	
A77(E)	4	#6	26'-2"	
A78(E)	54	#6	57'-6"	
A79(E)	3	#6	31'-3"	
A80(E)	2	#6	22'-5"	
A81(E)	6	#6	27'-3"	
A82(E)	2	#6	26'-6"	
A83(E)	2	#6	42'-0"	
A84(E)	176	#6	21'-0"	
A85(E)	120	#6	25'-4"	
B117(E)	100	#6	60'-0"	
B118(E)	16	#6	24'-11"	
B119(E)	41	#6	27'-5"	
B121(E)	43	#6	25'-5"	
B160(E)	132	#5	29'-6"	
B161(E)	132	#5	28'-6"	
B162(E)	192	#5	26'-10"	
B163(E)	168	#5	27'-0"	
B164(E)	198	#5	30'-0"	
B165(E)	132	#5	27'-5"	
B166(E)	128	#5	25'-8"	
B167(E)	198	#5	30'-9"	
B168(E)	136	#5	27'-0"	
B169(E)	90	#5	24'-10"	
B170(E)	90	#5	23'-3"	
B171(E)	99	#5	34'-0"	
B172(E)	189	#5	23'-3"	
B173(E)	90	#5	22'-4"	
B174(E)	135	#5	20'-11"	
B175(E)	210	#5	24'-11"	
B176(E)	325	#5	21'-11"	
B177(E)	63	#5	53'-0"	
B178(E)	45	#5	53'-0"	
X(E)	134	#5	4'-1"	

CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	693.3
REINFORCEMENT BARS EPOXY COATED	LBS.	213,950

REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.

NOTES

FOR SLAB NOTES SEE SHEET 11.
WORK THIS SHEET WITH SHEETS 12 AND 13.

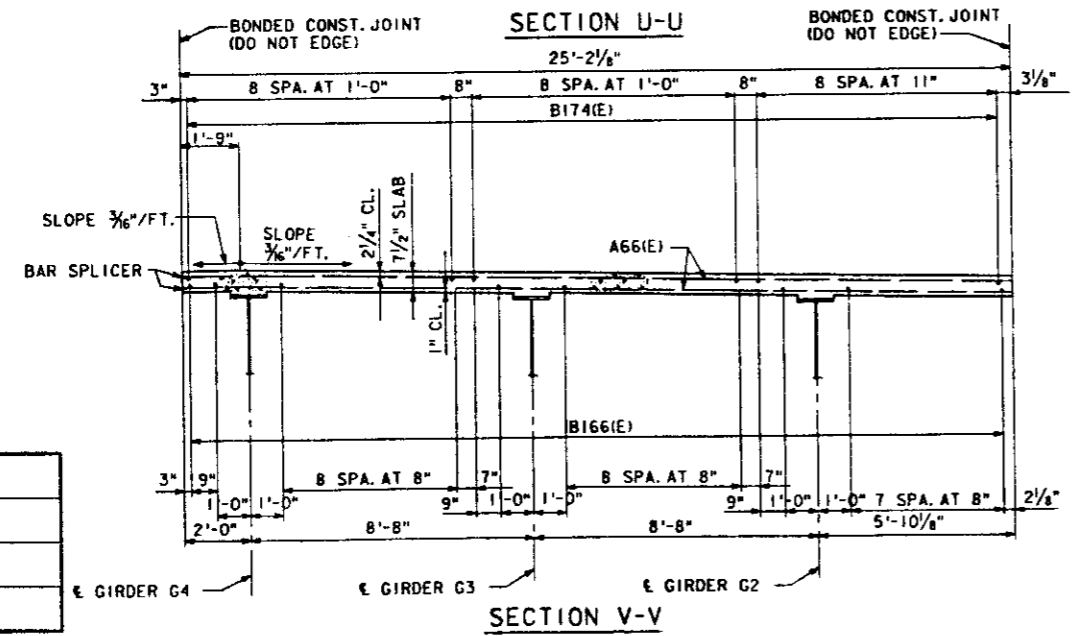
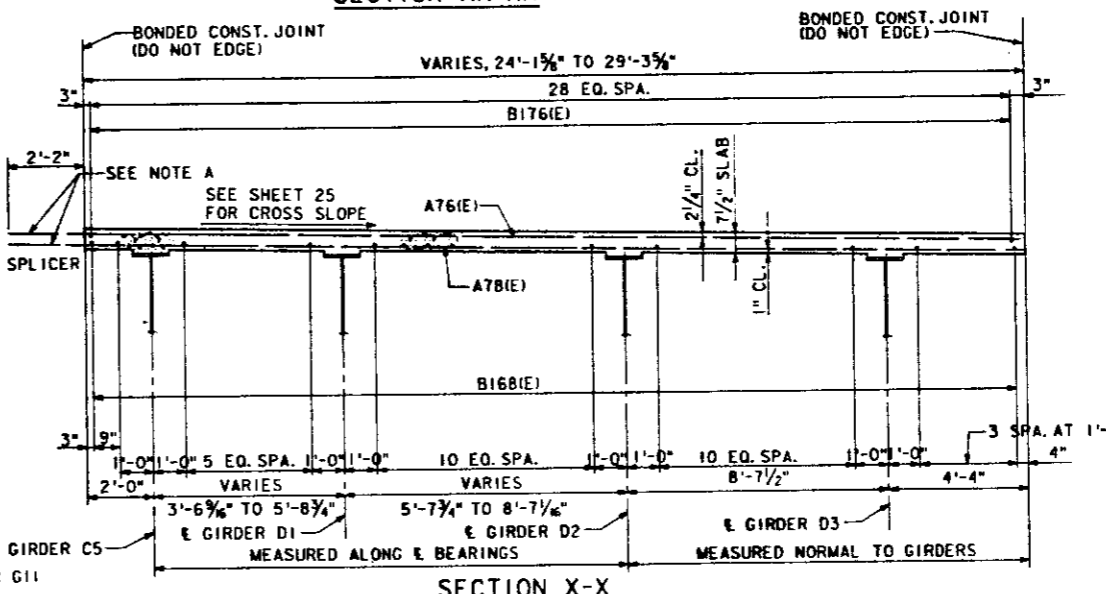
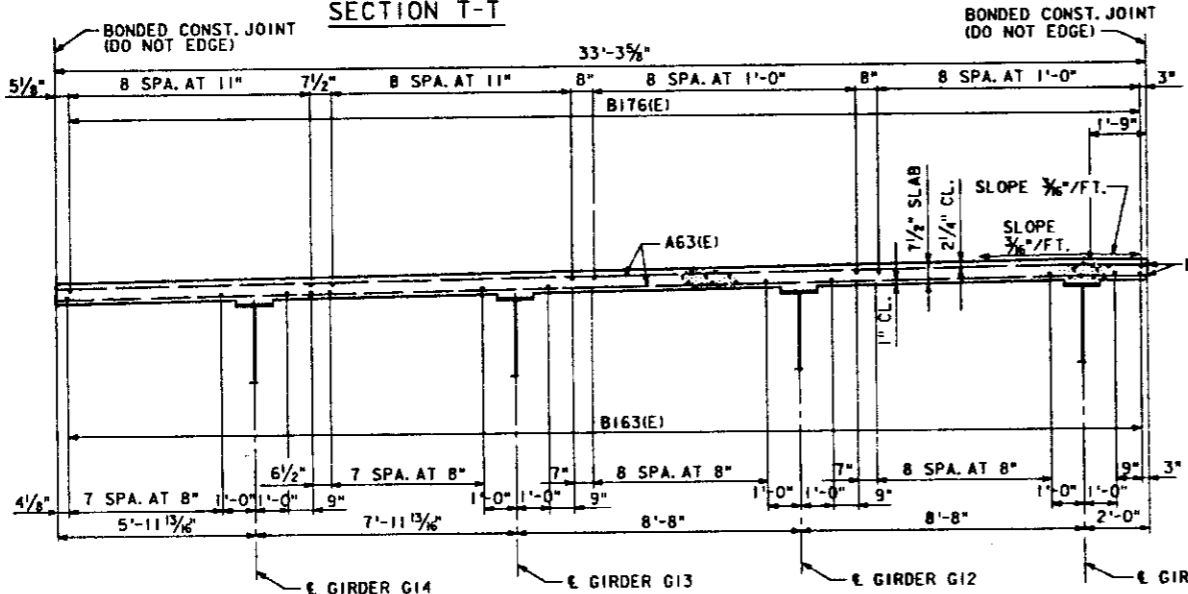
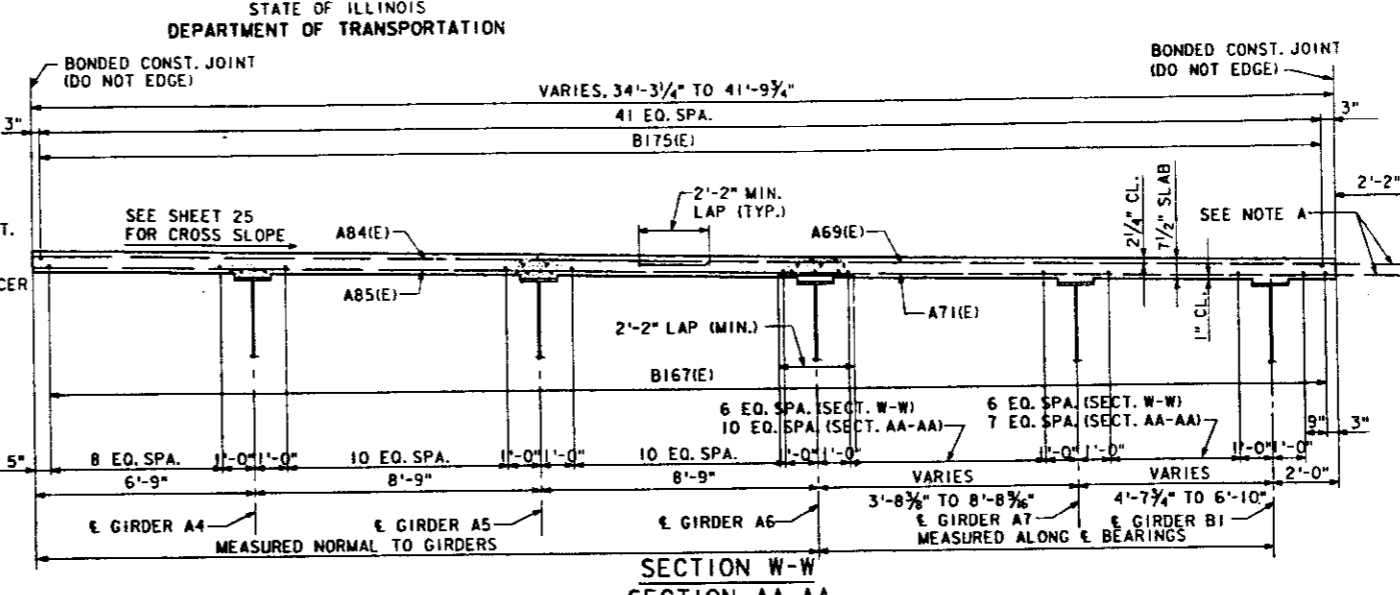
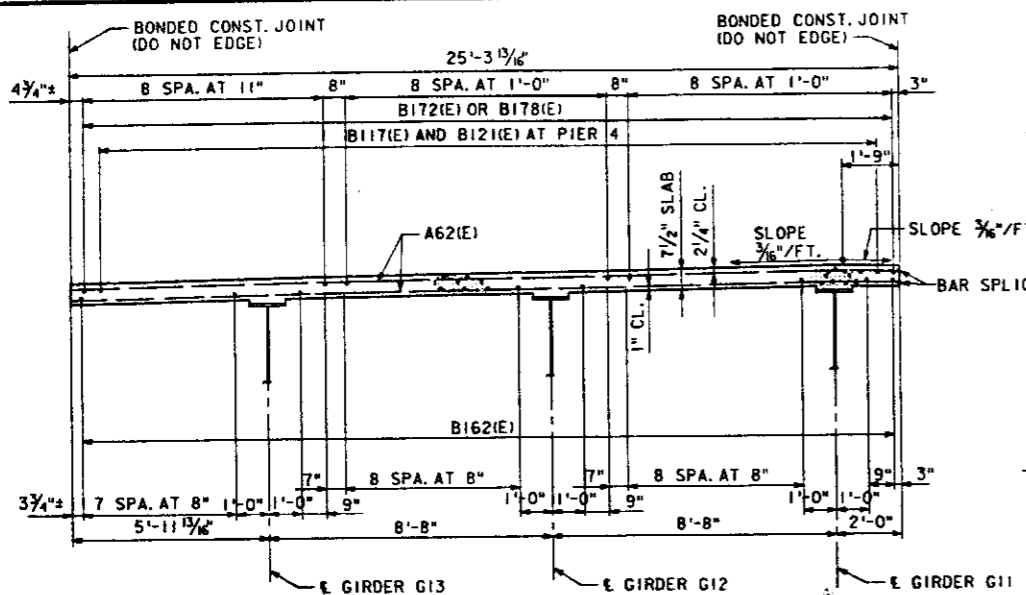
REHABILITATION FOR
FAI - 55/70 COMPLEX

ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SPAN-STAGE III

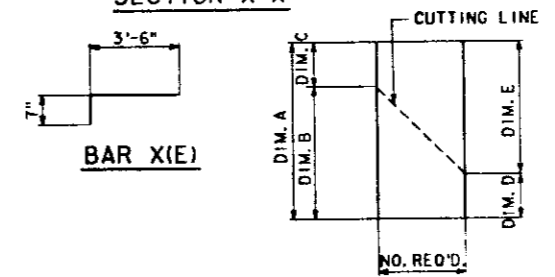
STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 14 OF 45



NOTE A
LAPPED BARS AT THIS LOCATION SHALL BE TIED WITH DOUBLE THE NUMBER OF TIES NORMALLY USED.



BAR	NO. REQ'D	DIM A	DIM B	DIM C	DIM D	DIM E
A64(E)	9	35'-0"	32'-6"	2'-6"	2'-6"	32'-6"
A67(E)	6	28'-9"	23'-9"	5'-0"	5'-0"	23'-9"
A69(E)	88	42'-10"	24'-11"	17'-11"	21'-5 1/4"	21'-4 1/4"
A71(E)	60	34'-6"	20'-7"	13'-11"	17'-3 1/4"	17'-2 1/4"
A74(E)	9	36'-0"	33'-0"	3'-0"	3'-0"	33'-0"
A76(E)	77	57'-5"	31'-3"	26'-2"	28'-8 1/4"	28'-8 1/4"
A78(E)	54	57'-6"	31'-3"	26'-3"	28'-9 1/2"	28'-8 1/2"
A81(E)	6	27'-3"	23'-1"	4'-2"	4'-2"	23'-11"

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487 FILE: ZF3:110:J88S341.DGN
88S341 PRJ: 88S341

LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 58 63

DESIGNED	S.S. STEIB
CHECKED	J.P. McCARTY
DRAWN	K. SCHULT
CHECKED	R.F. BECK

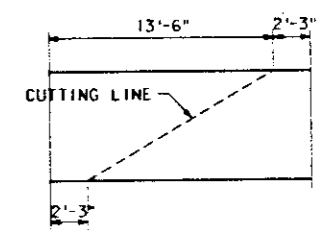
DATE	SECTION	QUANTITY	NO. SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	105	59

*82-3HVB-2R-2-1

BILL OF MATERIAL

SLAB - SPANS 1 THRU 5 AND SPAN ABCD				
BAR	NO.	SIZE	LENGTH	SHAPE
A400(E)	4107	#6	8'-5"	
A401(E)	587	#6	15'-3"	
A402(E)	4	#6	7'-6"	
A403(E)	4	#6	3'-9"	
A404(E)	4	#6	8'-6"	
A405(E)	8	#6	15'-9"	
A406(E)	4	#6	15'-6"	
B117(E)	64	#6	60'-0"	
B118(E)	16	#6	24'-11"	
B119(E)	32	#6	27'-5"	
B121(E)	16	#6	25'-5"	
B400(E)	297	#5	29'-4"	
B401(E)	297	#5	29'-7"	
B402(E)	105	#5	30'-0"	
B403(E)	70	#5	20'-0"	
B404(E)	140	#5	25'-0"	
B405(E)	207	#5	24'-10"	
B406(E)	72	#5	55'-0"	
B407(E)	207	#5	25'-2"	
CLASS X CONCRETE SUPERSTRUCTURE			CU. YDS.	386.3
REINFORCEMENT BARS (EPOXY COATED)			LBS.	115,630

REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



FIELD CUTTING DIAGRAM

NOTE: ORDER BARS FULL LENGTH. CUT 2 SETS OF 4-A405(E) BARS.

NOTES

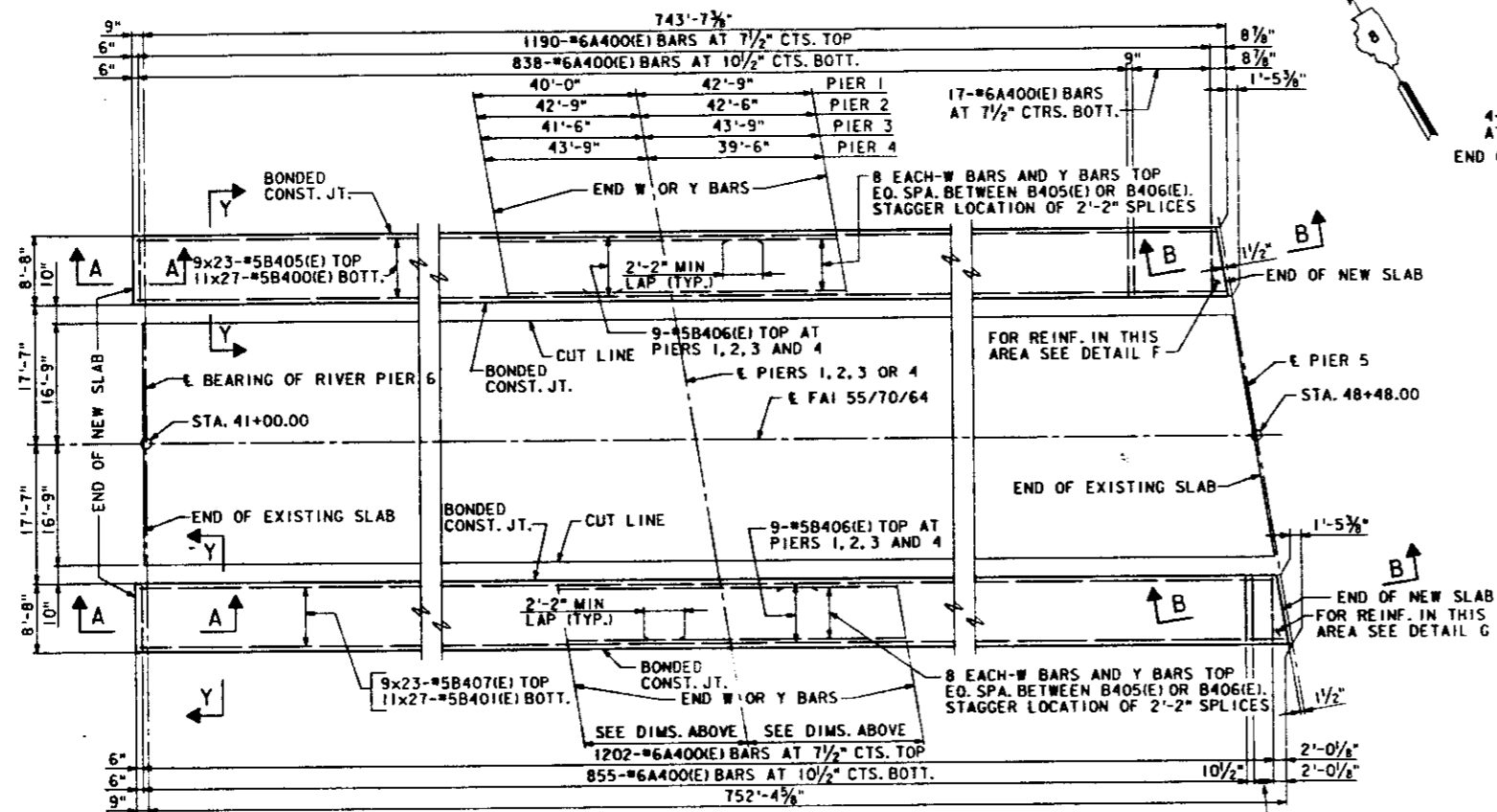
FOR SLAB NOTES SEE SHEET 11. FOR SECTIONS A-A, B-B AND M-M, SEE SHEET 9.

REHABILITATION FOR FAI - 55/70 COMPLEX

ILLINOIS APPROACH TO POPLAR STREET BRIDGE

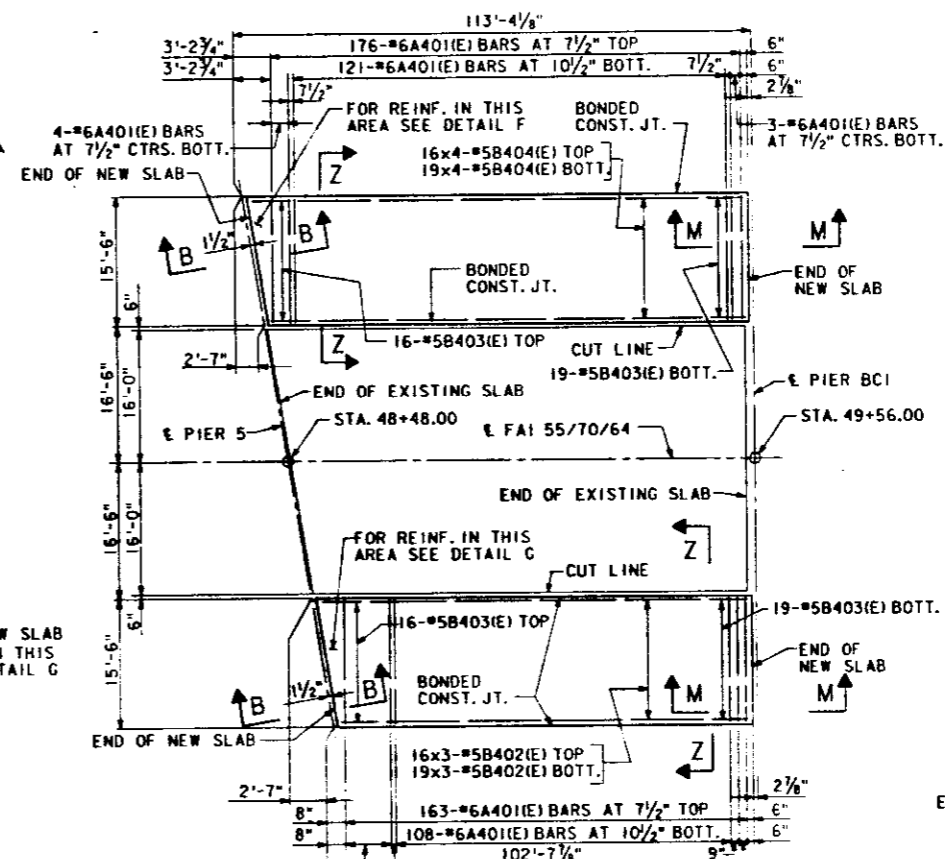
SLAB-STAGE IV

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

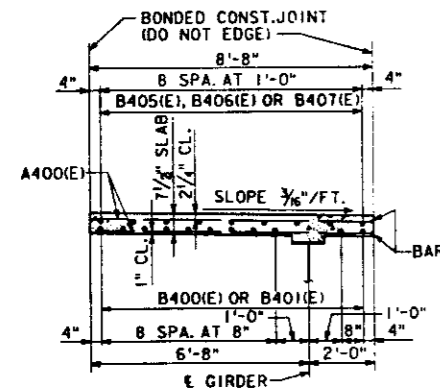


PLAN-SPANS 1 THRU 5

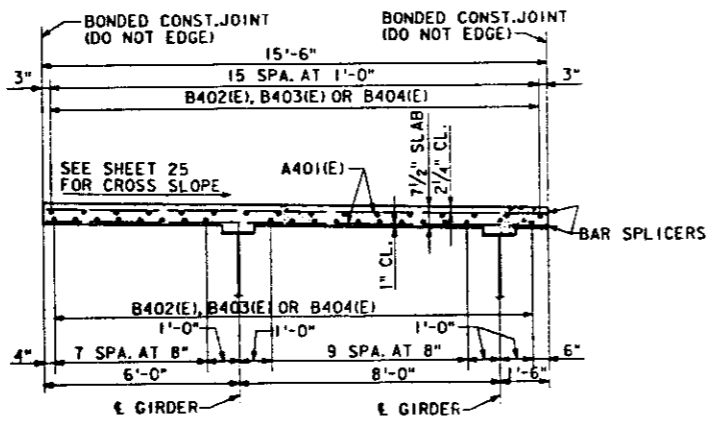
LOCATION	W BARS	Y BARS
PIER 1	*6B117(E)	*6B118(E)
PIER 2	*6B117(E)	*6B119(E)
PIER 3	*6B117(E)	*6B119(E)
PIER 4	*6B117(E)	*6B121(E)



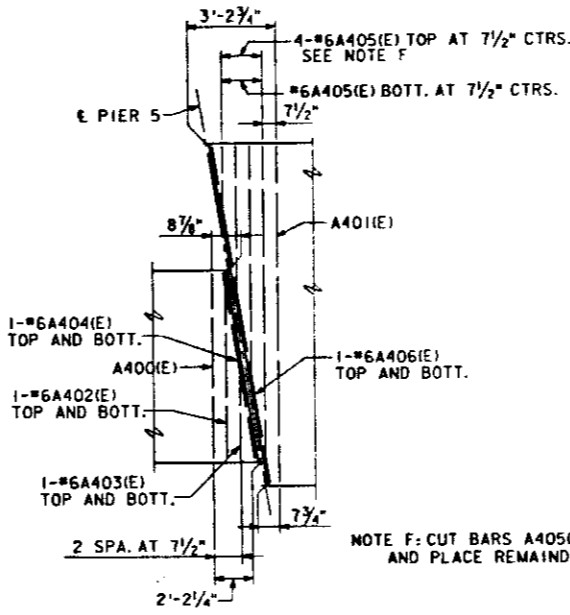
PLAN-SPAN ABCD



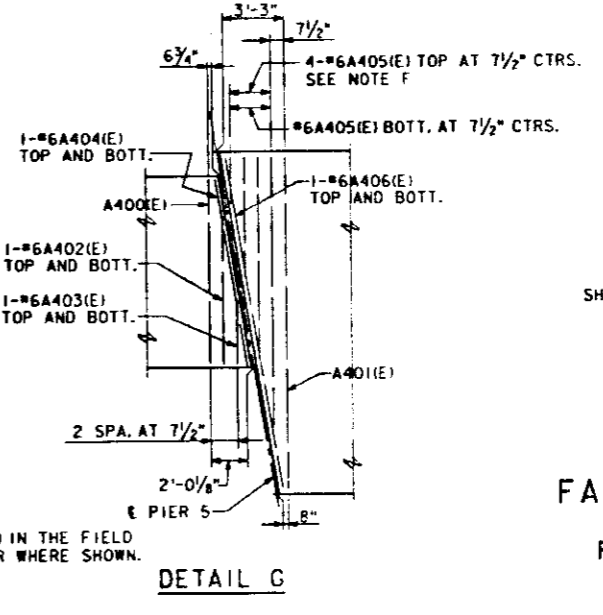
SECTION Y-Y



SECTION Z-Z



DETAIL F



DETAIL G

NOTE F: CUT BARS A405(E) IN THE FIELD AND PLACE REMAINDER WHERE SHOWN.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 58 63
10487 FILE: ZF3:110,1385323.DGN
85323 PRF: 85323

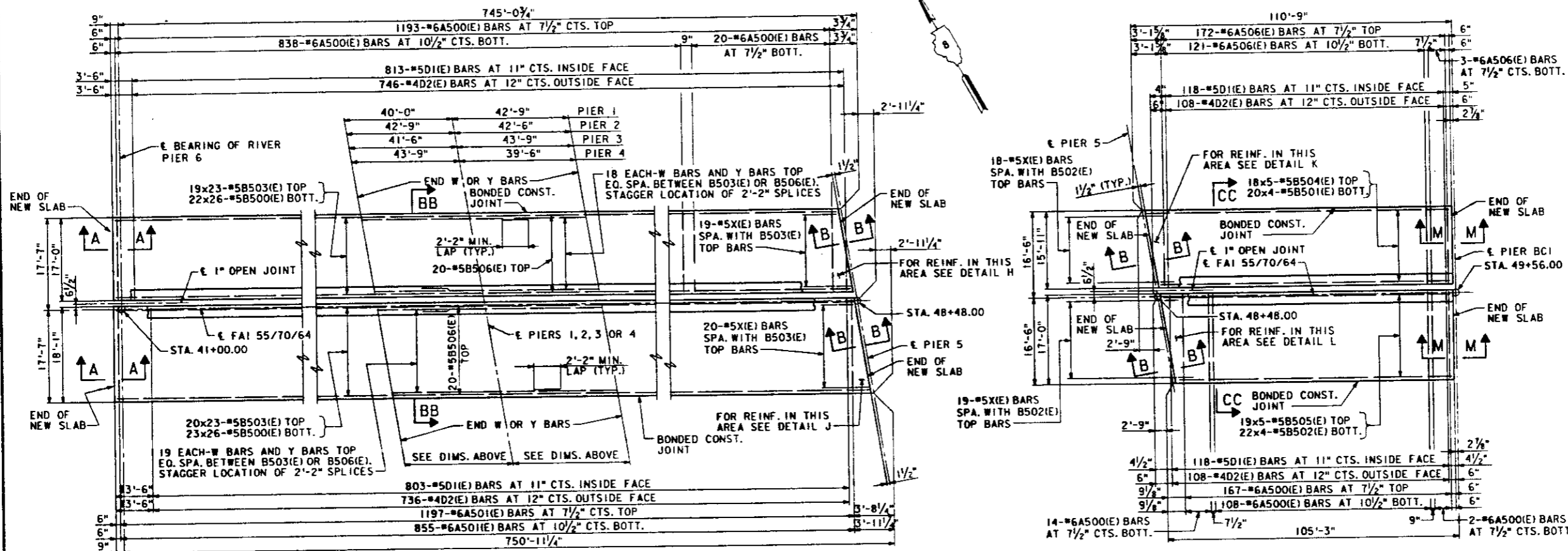
DESIGNED	S. STEIB
CHECKED	J. McCARTY
DRAWN	C. DEED
CHECKED	R.F. BECK

*82-3HVB-2R-2-1

BILL OF MATERIAL

SLAB - SPANS 1 THRU 5 AND SPAN ABCD				
BAR NO.	SIZE	LENGTH	SHAPE	
A500(E)	2342	#6	16'-8"	
A501(E)	2052	#6	17'-9"	
A502(E)	4	#6	16'-11"	
A503(E)	2	#6	18'-0"	
A504(E)	3	#6	18'-10"	
A505(E)	4	#6	21'-7"	
A506(E)	296	#6	15'-7"	
A507(E)	2	#6	15'-10"	
A508(E)	3	#6	18'-3"	
A509(E)	4	#6	20'-0"	
B117(E)	148	#6	60'-0"	
B118(E)	37	#6	24'-11"	
B119(E)	74	#6	27'-5"	
B121(E)	37	#6	25'-5"	
B500(E)	1170	#5	29'-10"	
B501(E)	80	#5	28'-10"	
B502(E)	88	#5	28'-2"	
B503(E)	897	#5	25'-1"	
B504(E)	90	#5	23'-5"	
B505(E)	95	#5	22'-11"	
B506(E)	156	#5	55'-0"	
D1(E)	1852	#5	3'-11"	
D2(E)	1698	#4	4'-11"	
X(E)	76	#5	4'-1"	
BX(E)	392	#5	2'-0"	
CLASS X CONCRETE SUPERSTRUCTURE				CU. YDS. 702.6
REINFORCEMENT BARS EPOXY COATED				LBS. 232,630

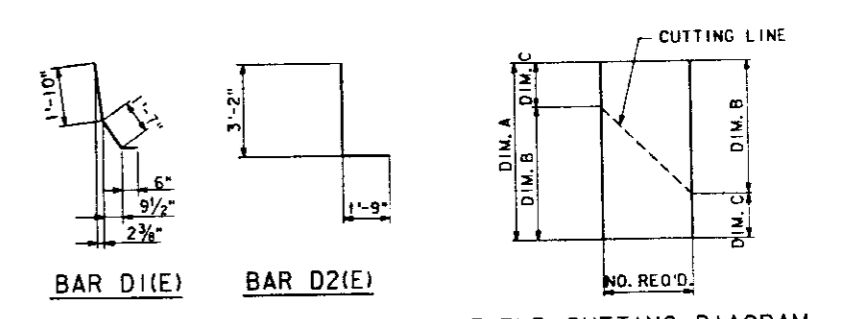
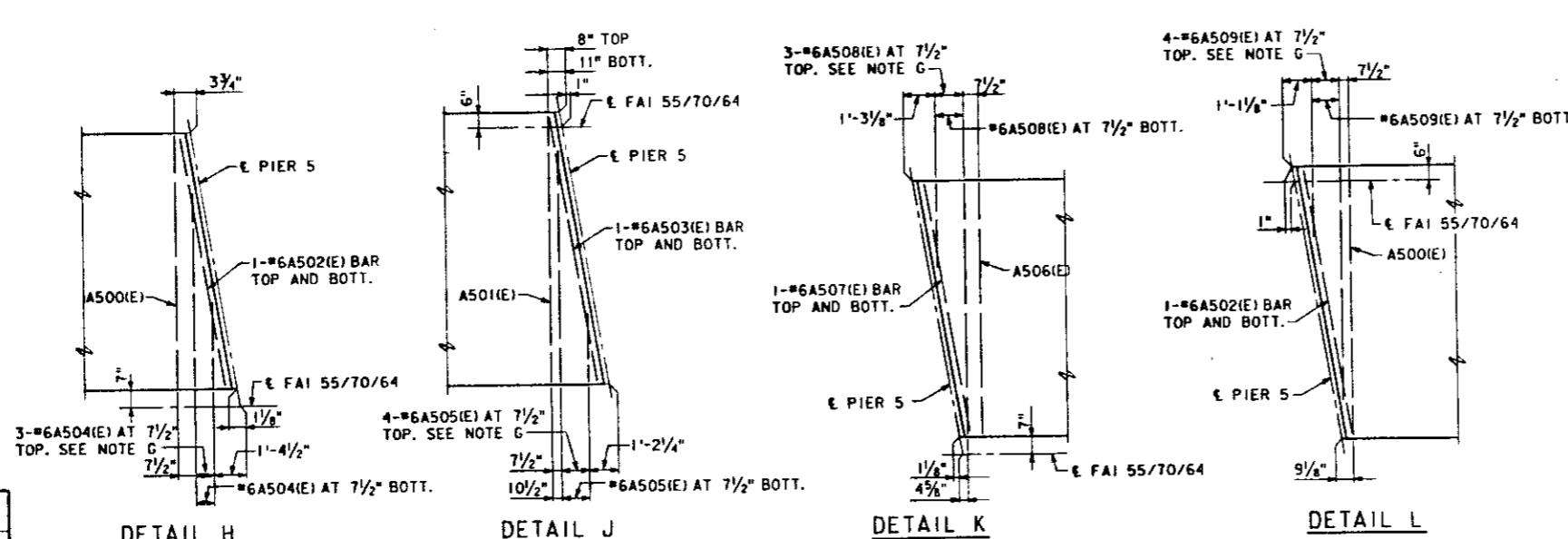
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



PLAN-SPANS 1 THRU 5

LOCATION	W BARS	Y BARS
PIER 1	#6B117(E)	#6B118(E)
PIER 2	#6B117(E)	#6B119(E)
PIER 3	#6B117(E)	#6B119(E)
PIER 4	#6B117(E)	#6B121(E)

PLAN-SPAN ABCD



BAR	NO. REQ'D.	DIM. A	DIM. B	DIM. C
A504(E)	3	18'-10"	13'-2"	5'-8"
A505(E)	4	21'-7"	16'-5"	5'-2"
A508(E)	3	18'-3"	12'-10"	5'-5"
A509(E)	4	20'-0"	15'-7"	4'-5"

**REHABILITATION FOR
FAI - 55/70 COMPLEX**
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE V
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

NOTES
FOR SLAB NOTES, SEE SHEET 11.
FOR SECTIONS A-A, B-B AND M-M, SEE SHEET 9.
FOR SECTIONS BB-BB AND CC-CC, SEE SHEET 17.

NOTE G: CUT BARS A504(E), A505(E), A508(E) AND A509(E) IN THE FIELD AND USE REMAINDER WHERE SHOWN.

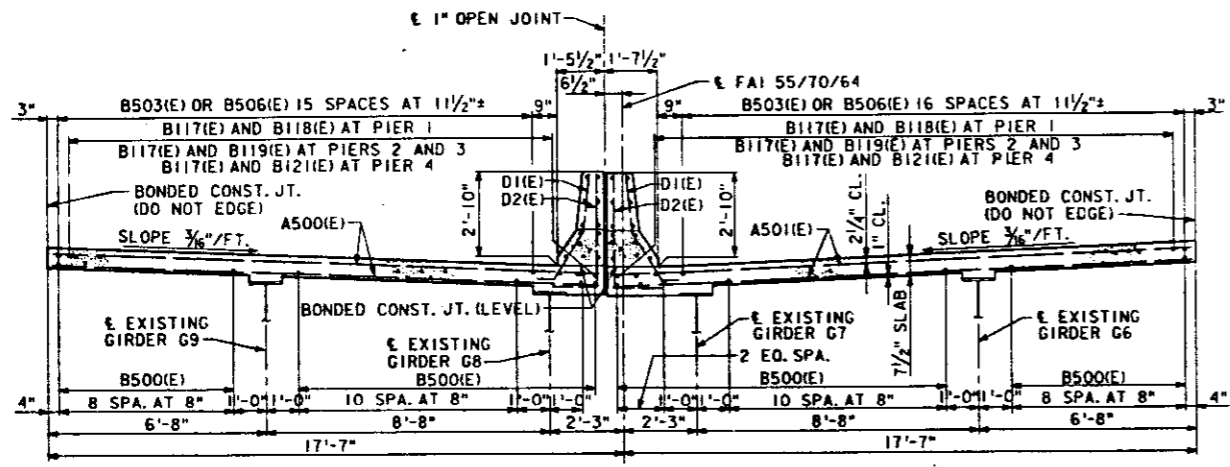
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63

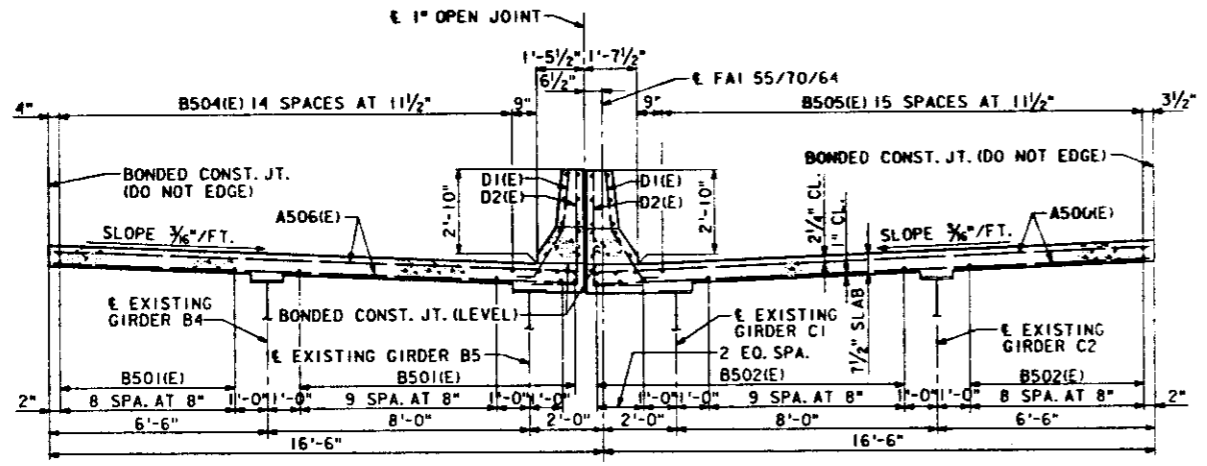
10487 FILE: ZF3:110,1388334.DGN
885334 PRF: 885334

DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
CHECKED	C. DEED
DRAWN	R.F. BECK
CHECKED	

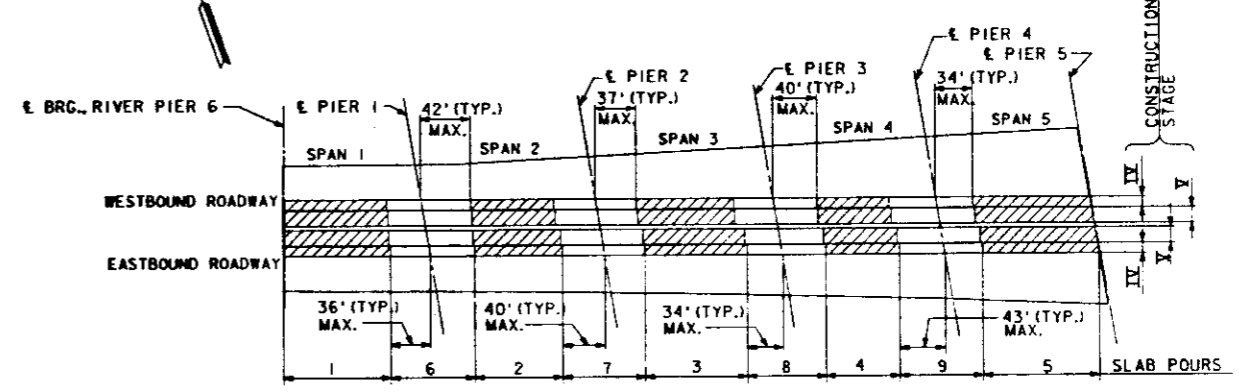
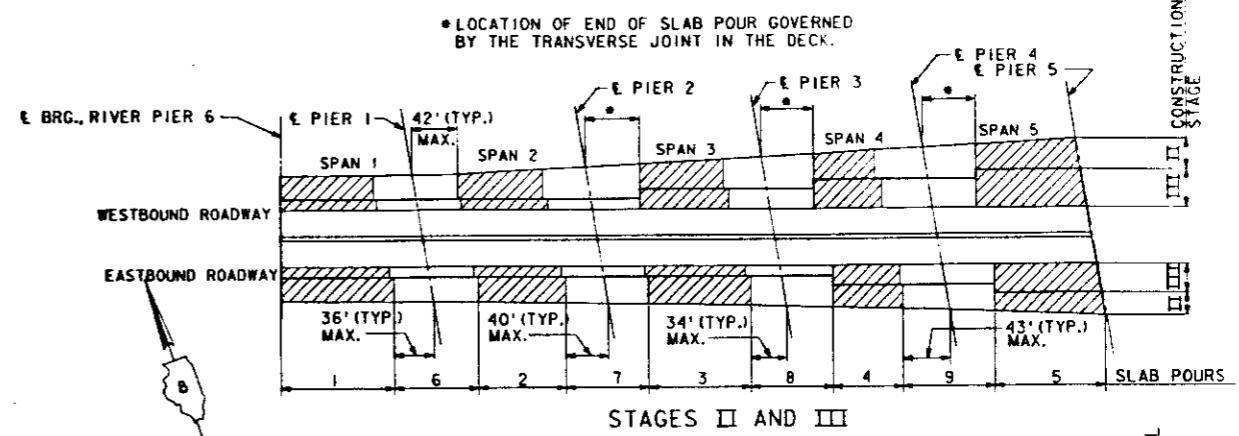
*82-3HV8-2R-2-1



SECTION BB-BB



SECTION CC-CC



STAGES IV AND V
SLAB POURING SEQUENCE - SPANS I THRU 5

NOTES: FOR ANY GIVEN STAGE OF CONSTRUCTION, PORTIONS OF THE DECK SHALL BE POURED IN THE SEQUENCE SHOWN.
PORTIONS 1, 2, 3, 4 AND 5 SHALL BE POURED ON THE SAME DAY.
PORTIONS 6, 7, 8, AND 9 SHALL BE POURED NOT LESS THAN FOUR DAYS AFTER PORTIONS 1, 2, 3, 4 AND 5 ARE POURED.

NOTES

FOR SLAB NOTES, SEE SHEET 11.
WORK THIS SHEET WITH SHEET 16.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB-STAGE V

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487 FILE: ZF3:110:1885343.DGN
885343 PRF: 885343
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 58 63

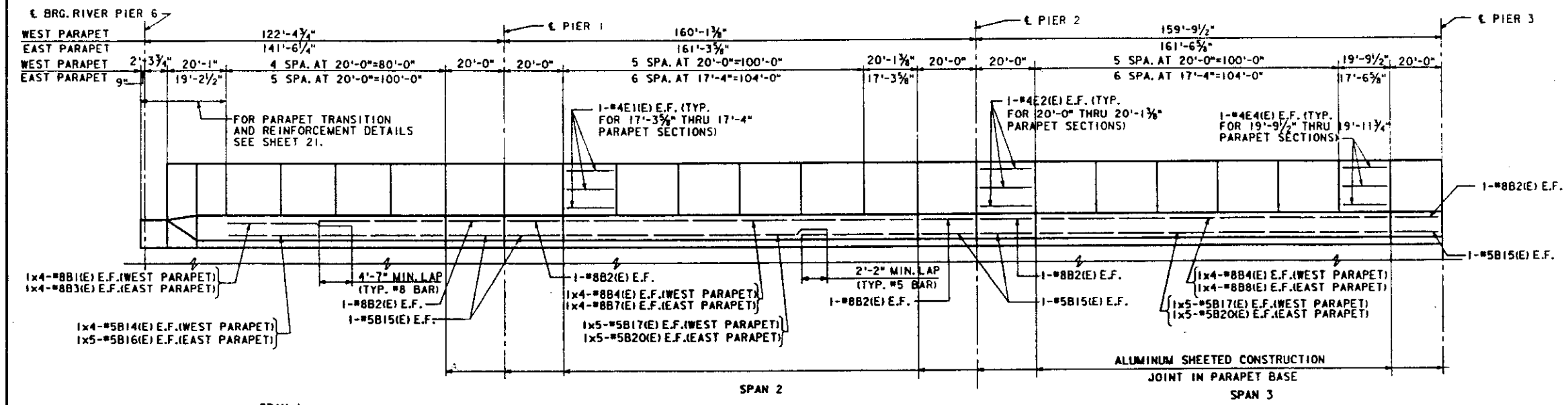
DESIGNED	S.S. STEIB
CHECKED	J.P. McCARTY
DRAWN	C. DEED
CHECKED	R.F. BECK

* 82-3HVB-2R-2-1
BILL OF MATERIAL

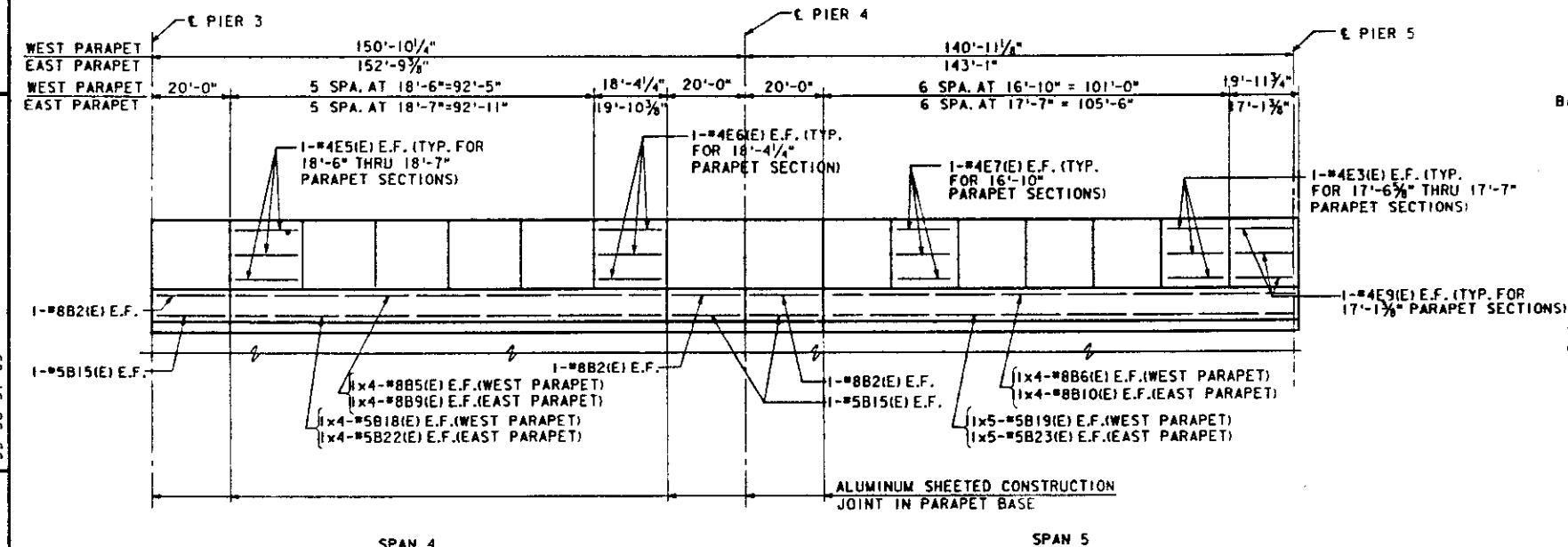
SPANS 1 THRU 5				
BAR	NO.	SIZE	LENGTH	SHAPE
B1(E)	8	#8	23'-6"	---
B2(E)	64	#8	19'-9"	---
B3(E)	8	#8	28'-6"	---
B4(E)	16	#8	33'-5"	---
B5(E)	8	#8	31'-1"	---
B6(E)	40	#8	33'-8"	---
B7(E)	8	#8	33'-9"	---
B8(E)	8	#8	33'-10"	---
B9(E)	8	#8	31'-7"	---
B10(E)	14	#8	34'-1"	---
B11(E)	8	#8	30'-10"	---
B12(E)	20	#8	31'-6"	---
B13(E)	16	#8	33'-11"	---
B14(E)	8	#5	21'-8"	---
B15(E)	64	#5	19'-9"	---
B16(E)	10	#5	21'-9"	---
B17(E)	20	#5	25'-8"	---
B18(E)	8	#5	29'-3"	---
B19(E)	50	#5	25'-11"	---
B20(E)	20	#5	26'-0"	---
B22(E)	28	#5	29'-9"	---
B23(E)	10	#5	26'-3"	---
B24(E)	8	#5	29'-4"	---
B25(E)	8	#5	25'-0"	---
B26(E)	20	#5	24'-2"	---
E1(E)	222	#4	17'-0"	---
E2(E)	312	#4	19'-9"	---
E3(E)	138	#4	17'-3"	---
E4(E)	18	#4	19'-7"	---
E5(E)	192	#4	18'-3"	---
E6(E)	6	#4	18'-1"	---
E7(E)	36	#4	16'-7"	---
E8(E)	6	#4	16'-4"	---
E9(E)	12	#4	16'-10"	---
E10(E)	6	#4	16'-2"	---

CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	302.4
REINFORCEMENT BARS (EPOXY COATED)	LBS.	35,400

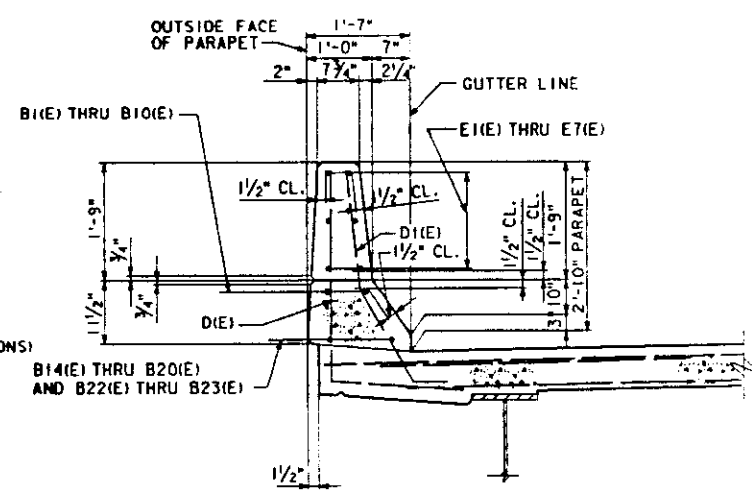
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



ELEVATION OF WEST PARAPET
NOTES: EAST PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSIONS ARE MEASURED ALONG OUTSIDE FACE OF PARAPETS.



ELEVATION OF WEST PARAPET
NOTES: EAST PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSIONS ARE MEASURED ALONG OUTSIDE FACE OF PARAPETS.



SECTION THRU PARAPET
NOTES: ALL EDGES SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.

NOTES
FOR PARAPET JOINT DETAILS, SEE SHEET 20 of 45.
E.F. INDICATES EACH FACE.
WORK THIS SHEET WITH SHEET 19 of 45

**REHABILITATION FOR
FAI - 55/70 COMPLEX**
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
PARAPETS - SPANS 1 THRU 5

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

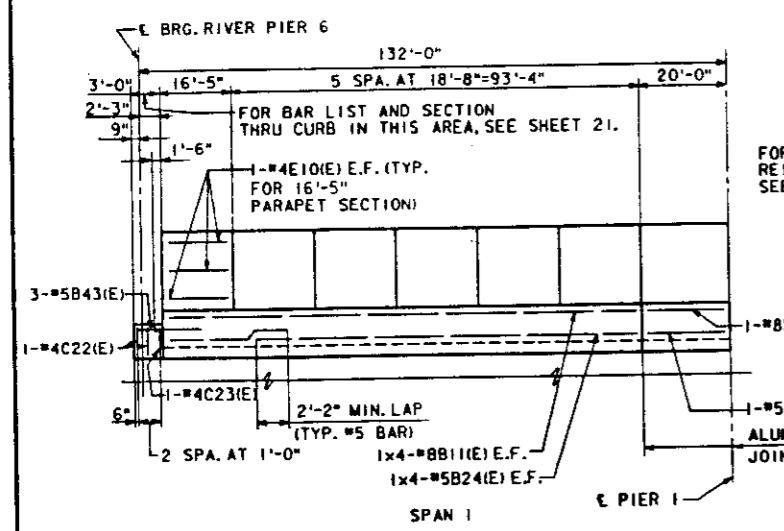
LEVELS PLOTTED DATE: AUG. 10, 1989
55 56 ST. 63

FILE: ZF3E110.138751107.DGN
PRF: B7S1107

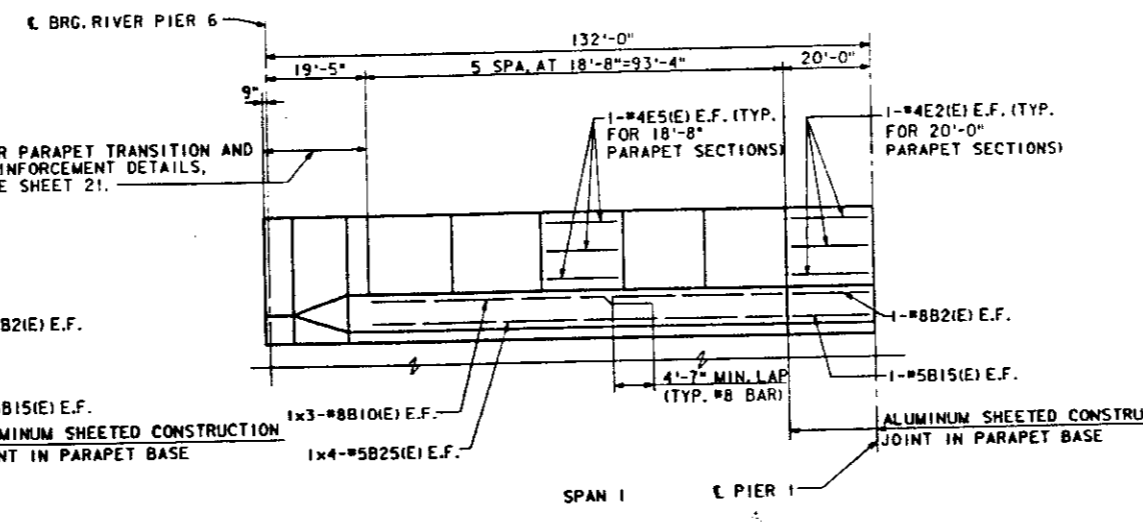
DESIGNED	S.S. STEIB
CHECKED	J.P. McCARTY
DRAWN	M.J. JALINSKY
CHECKED	R.D. WINKELMANN

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

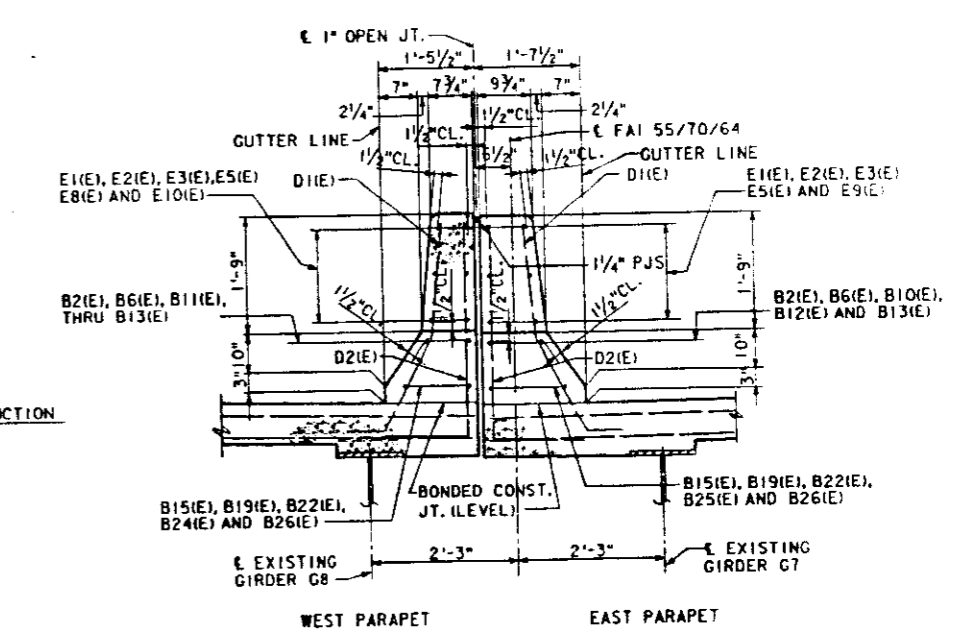
* 82-3HVB-2R-2-1



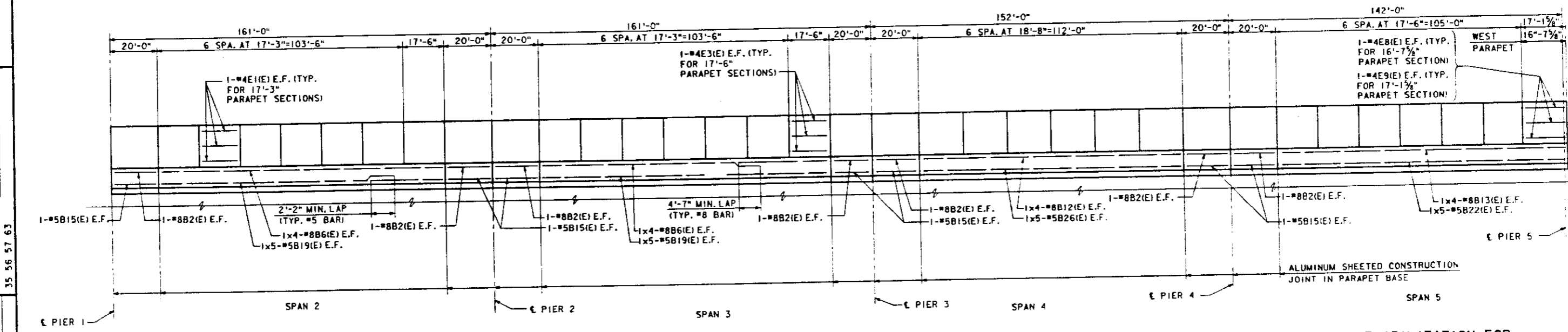
ELEVATION OF WEST MEDIAN PARAPET
NOTE: ALL DIMENSION MEASURED ALONG
€ FAI 55/70/64.



ELEVATION OF EAST MEDIAN PARAPET
NOTE: ALL DIMENSION MEASURED ALONG
€ FAI 55/70/64.



SECTION THRU MEDIAN PARAPETS
NOTES: ALL EDGES SHALL HAVE A 3/4" CHAMFER,
UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB
NOT SHOWN.



ELEVATION OF EAST MEDIAN PARAPET
NOTES: WEST MEDIAN PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSION MEASURED ALONG € FAI 55/70/64.

NOTES
WORK THIS SHEET WITH SHEET 18 of 45.

**REHABILITATION FOR
FAI - 55/70 COMPLEX**
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
MEDIAN PARAPETS - SPANS 1 THRU 5
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 € FAI-70 ST. CLAIR CO.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

SHEET NO. 19 OF 45

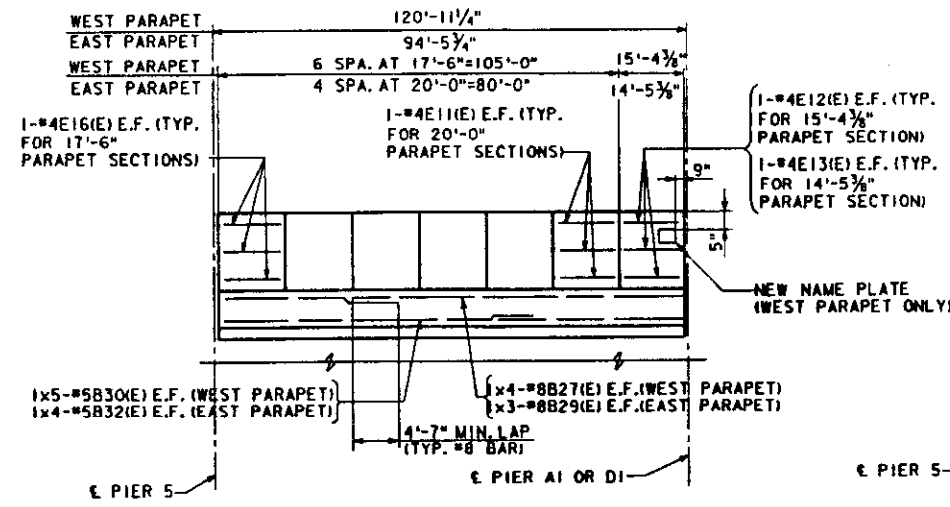
10487 FILE: ZF3(110)108751109.DGN
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 63
BTS1109 PRF: 8751109

DESIGNED	S.S. STEIB
CHECKED	J.P. MCCARTY
DRAWN	M.J. JALINSKY
CHECKED	R.D. WINKELMANN

*82-3HVB-2R-2-1
BILL OF MATERIAL

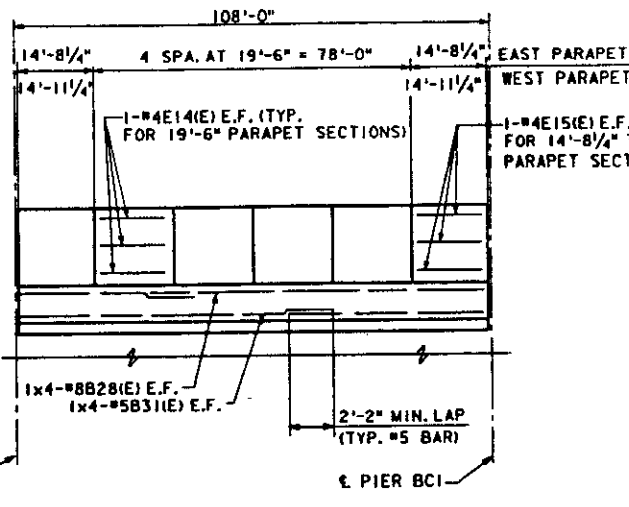
SPAN ABCD				
BAR	NO.	SIZE	LENGTH	SHAPE
B27(E)	8	#8	33'-7"	
B28(E)	16	#8	30'-4"	
B29(E)	6	#8	34'-6"	
B30(E)	10	#5	25'-10"	
B31(E)	16	#5	28'-6"	
B32(E)	8	#5	25'-2"	
E11(E)	24	#4	19'-9"	
E12(E)	6	#4	15'-1"	
E13(E)	6	#4	14'-2"	
E14(E)	48	#4	19'-3"	
E15(E)	24	#4	14'-5"	
E16(E)	36	#4	17'-3"	
CLASS X CONCRETE SUPERSTRUCTURE			CU. YDS.	44.0
REINFORCEMENT BARS (EPOXY COATED)			LBS.	5,220

REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



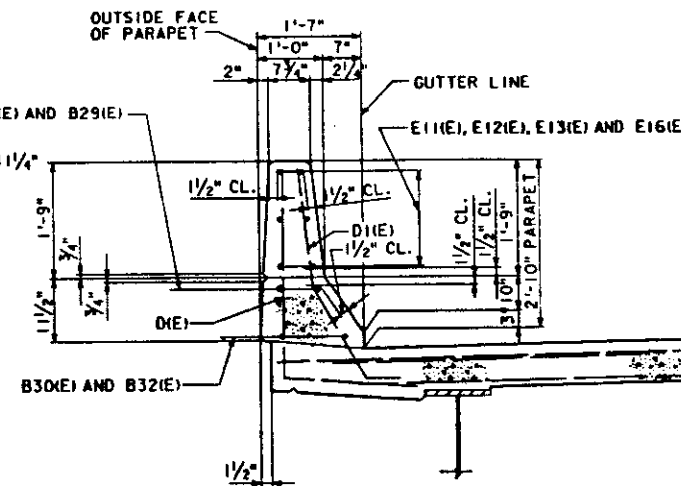
ELEVATION OF WEST PARAPET

NOTES: EAST PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSIONS ARE MEASURED ALONG OUTSIDE FACE OF PARAPETS.



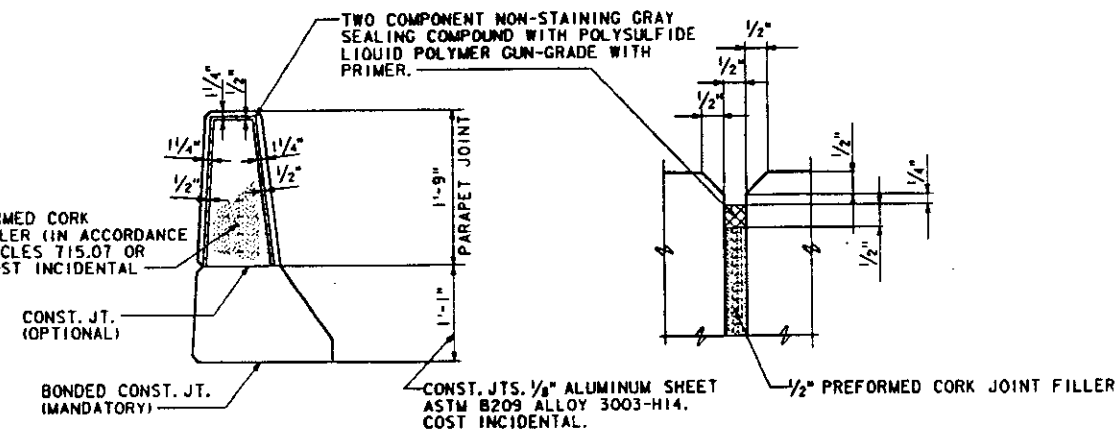
ELEVATION OF EAST MEDIAN PARAPET

NOTES: WEST MEDIAN PARAPET SIMILAR, EXCEPT AS NOTED.
ALL DIMENSIONS ARE MEASURED ALONG F.A.I. 55/70/64

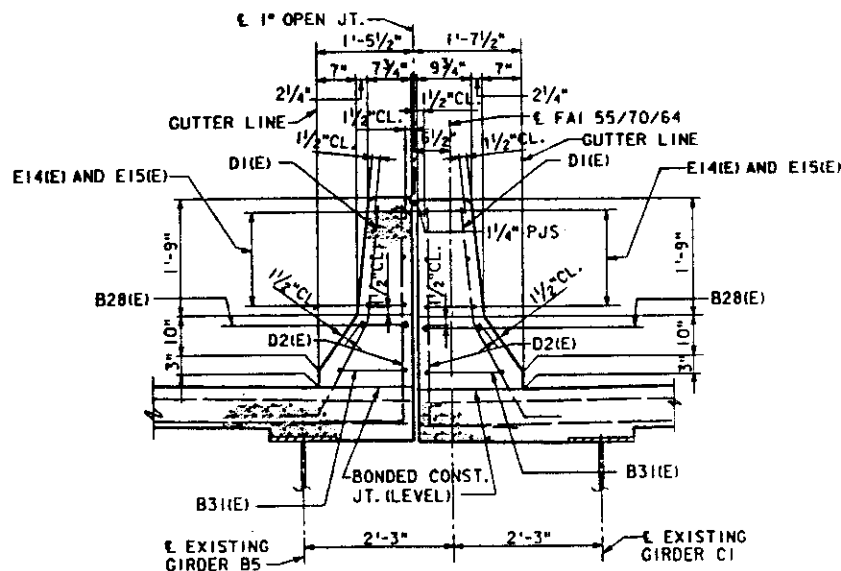


SECTION THRU PARAPET

NOTES: ALL EDGES SHALL HAVE A 3/8" CHAMFER, UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.



PARAPET JOINT DETAILS



SECTION THRU MEDIAN PARAPETS

NOTES: ALL EDGES SHALL HAVE A 3/8" CHAMFER, UNLESS OTHERWISE NOTED.
LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.

NOTES

E.F. INDICATES EACH FACE.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
PARAPETS - SPAN ABCD

STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 F.A.I.-701 ST. CLAIR CO.

SHEET NO. 20 OF 45

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487 FILE: ZFS1110.138751110.DGN
BTS1110 PRF: B7S1110
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 57 58 63

S.S. STEIB
DESIGNED
J.P. MCCARTY
CHECKED
M.J. JALINSKY
DRAWN
R.D. WINKELMANN
CHECKED

*B2-3HVB-2R-2-1
BILL OF MATERIAL

SPAN I (PARAPET TRANSITIONS)

BAR	NO.	SIZE	LENGTH	SHAPE
B40(E)	2	#8	24'-7"	
B41(E)	2	#8	23'-8"	
B42(E)	2	#8	23'-10"	
B43(E)	13	#5	5'-1"	
B44(E)	3	#5	9'-9"	
B45(E)	2	#5	24'-7"	
B46(E)	2	#5	23'-8"	
B47(E)	2	#5	18'-5"	
C10(E)	6	#4	4'-5"	
C11(E)	3	#4	3'-8"	
C12(E)	3	#4	3'-7"	
C13(E)	3	#4	3'-7"	
C14(E)	3	#4	3'-6"	
C15(E)	3	#4	3'-6"	
C16(E)	3	#4	3'-5"	
C17(E)	3	#4	3'-5"	
C18(E)	3	#4	3'-4"	
C19(E)	3	#4	3'-3"	
C20(E)	3	#4	3'-3"	
C21(E)	3	#4	5'-7"	
C22(E)	2	#4	4'-6"	
C23(E)	1	#4	4'-3"	
D1(E)	20	#4	4'-11"	
D2(E)	13	#4	4'-11"	
D10(E)	36	#5	4'-8"	
E20(E)	6	#4	19'-10"	
E21(E)	6	#4	18'-11"	
E22(E)	6	#4	19'-2"	

CLASS X CONCRETE SUPERSTRUCTURE	CU. YDS.	4.5
REINFORCEMENT BARS EPOXY COATED	LBS.	1,250

REINFORCEMENT BARS (E) SHALL BE EPOXY COATED.

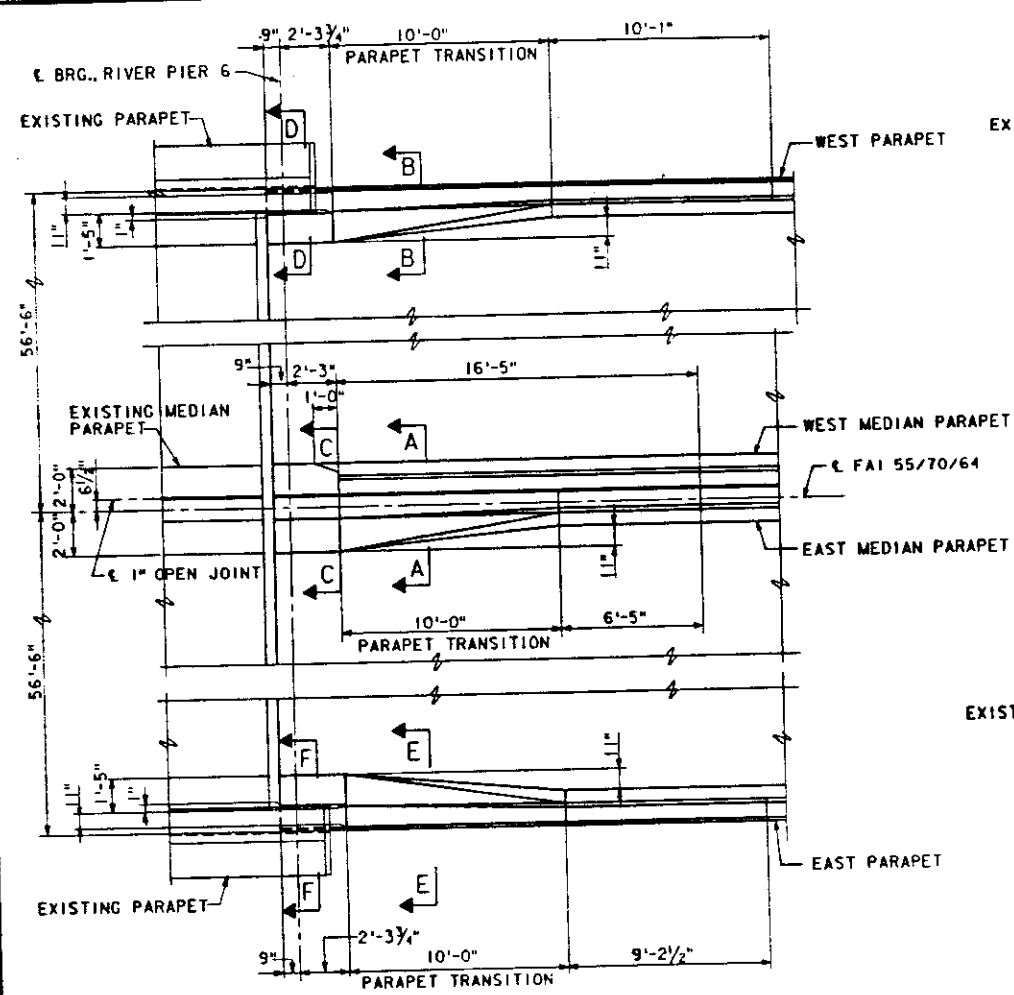
BAR	A	B
C11(E)	1'-2"	1/2"
C12(E)	1'-1"	2"
C13(E)	1'-1"	3 3/4"
C14(E)	1'-0"	5 1/4"
C15(E)	1'-0"	7"
C16(E)	11"	8 1/2"
C17(E)	11"	10 1/4"
C18(E)	10"	11 3/4"
C19(E)	9"	11-1 1/2"
C20(E)	9"	1-3"

NOTES

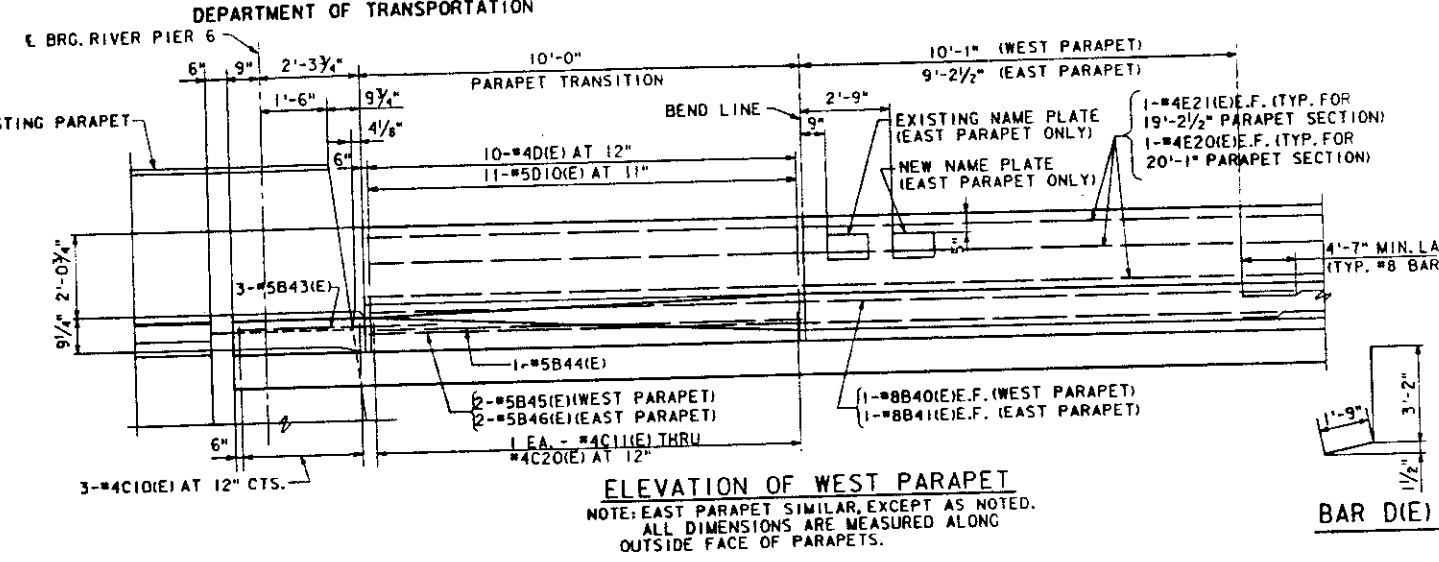
WORK THIS SHEET WITH SHEETS 18, 19 AND 22. FOR PARAPET JOINT DETAILS SEE SHEET 20. E.F. INDICATES EACH FACE.

REHABILITATION FOR FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO POPLAR STREET BRIDGE
PARAPET TRANSITION DETAILS

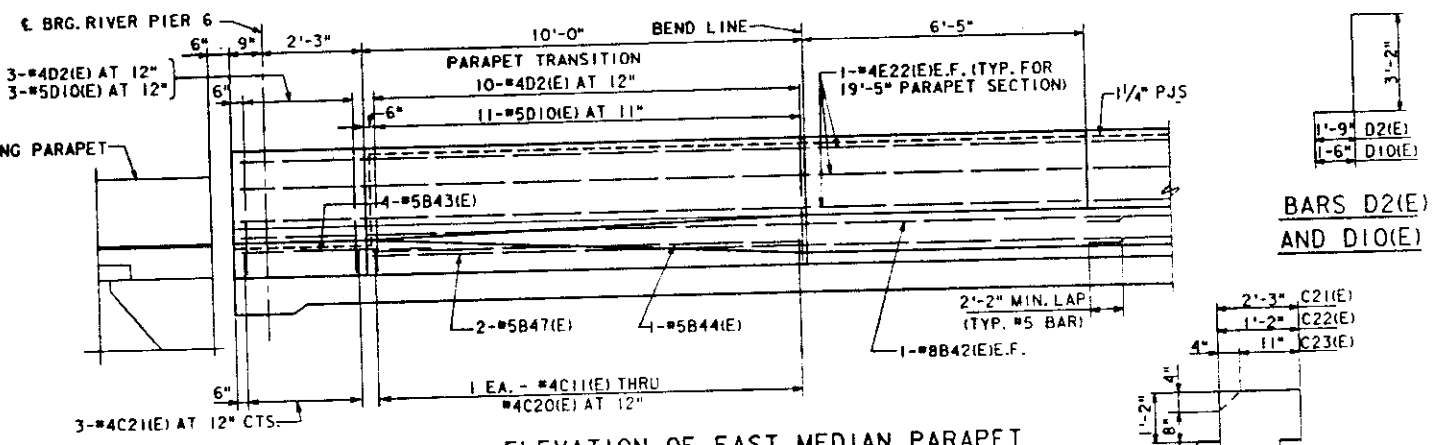
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.



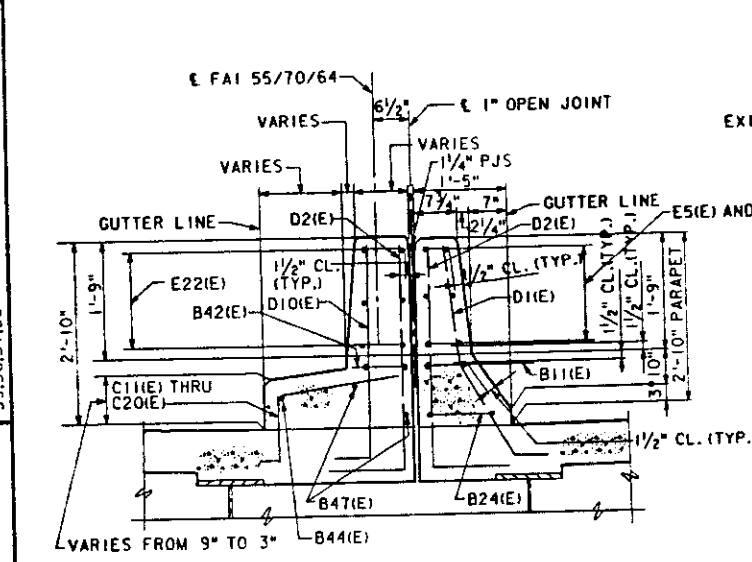
PLAN



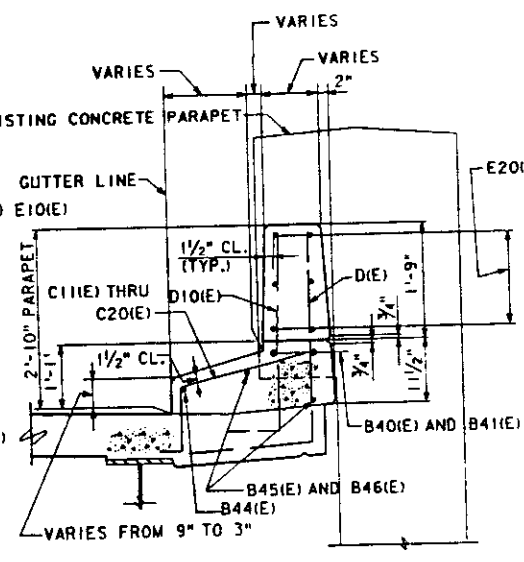
ELEVATION OF WEST PARAPET
NOTE: EAST PARAPET SIMILAR, EXCEPT AS NOTED. ALL DIMENSIONS ARE MEASURED ALONG OUTSIDE FACE OF PARAPETS.



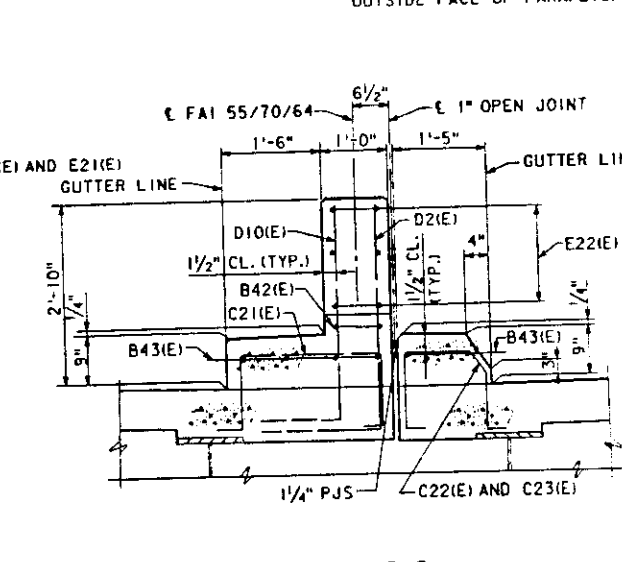
ELEVATION OF EAST MEDIAN PARAPET
NOTE: ALL DIMENSIONS ARE MEASURED ALONG OUTSIDE FACE OF PARAPETS.



SECTION A-A

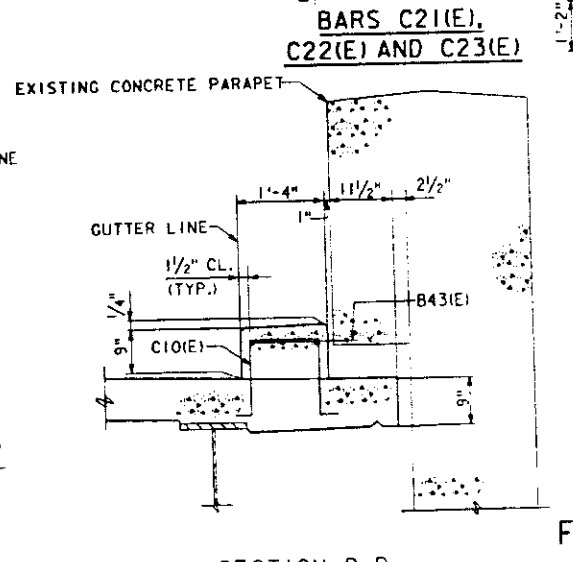


SECTION B-B
NOTE: SECTION E-E OPPOSITE HAND



SECTION C-C

NOTES: ALL EDGES SHALL HAVE A 3/8" CHAMFER, UNLESS OTHERWISE NOTED. LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN. EXPANSION JOINT PLATES IN SLAB AND PARAPET NOT SHOWN.



SECTION D-D

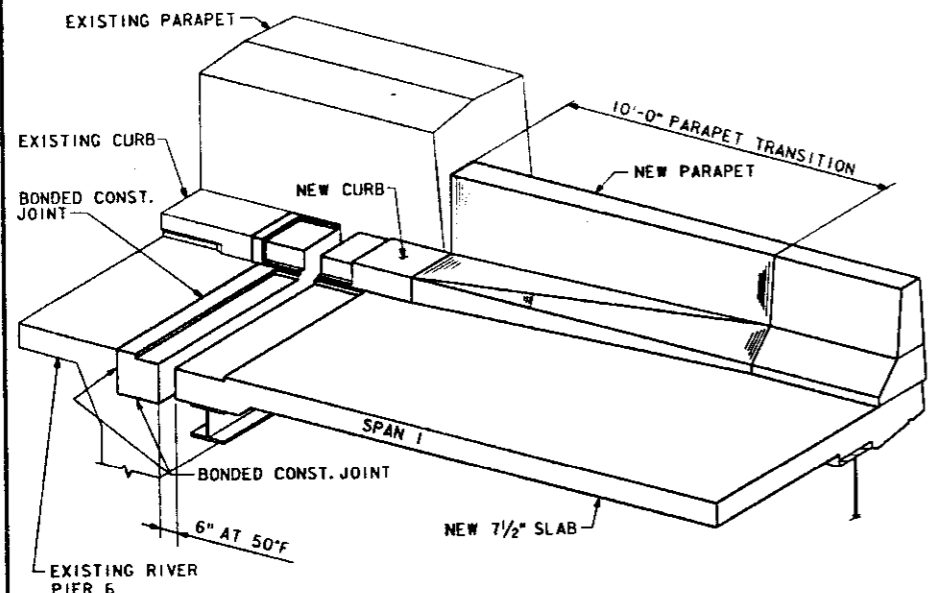
NOTES: ALL EDGES SHALL HAVE A 3/8" CHAMFER, UNLESS OTHERWISE NOTED. LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN. SECTION F-F OPPOSITE HAND.

LEVELS PLOTTED DATE: AUG. 10, 1989
35.56.57.58
10487 FILE: ZF3110.1385306.DGN
885306 PRE: 885306

S.S. STEIB
DESIGNED
J.P. McCARTY
CHECKED
M.J. JALINSKY
DRAWN
R.D. WINKELMANN
CHECKED

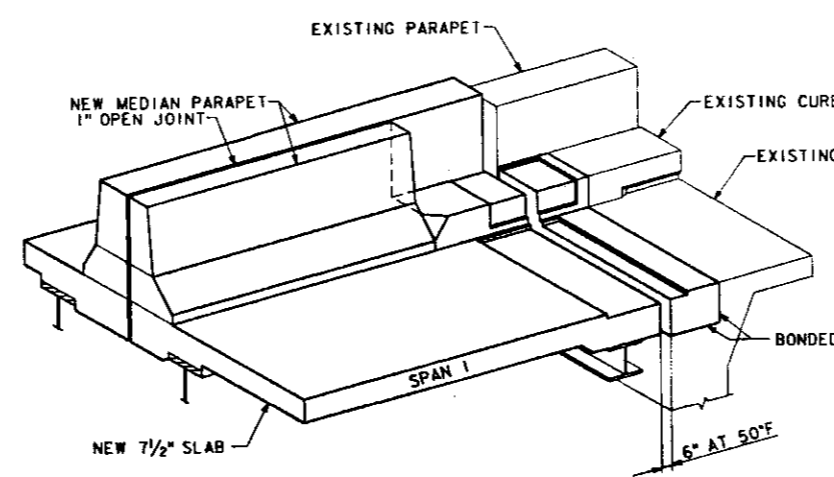
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

82-3HVB-2R-2-1

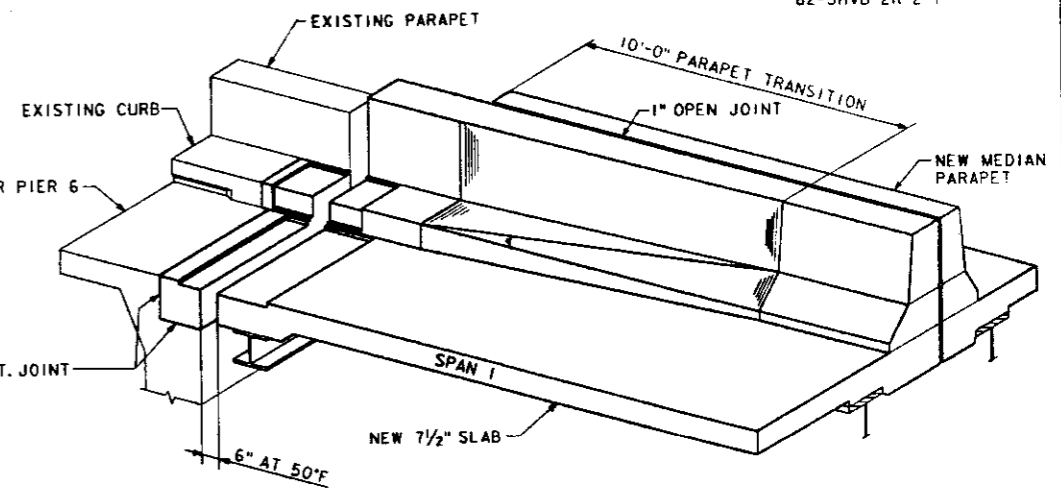


TRIMETRIC - WEST PARAPET TRANSITION
AT RIVER PIER 6

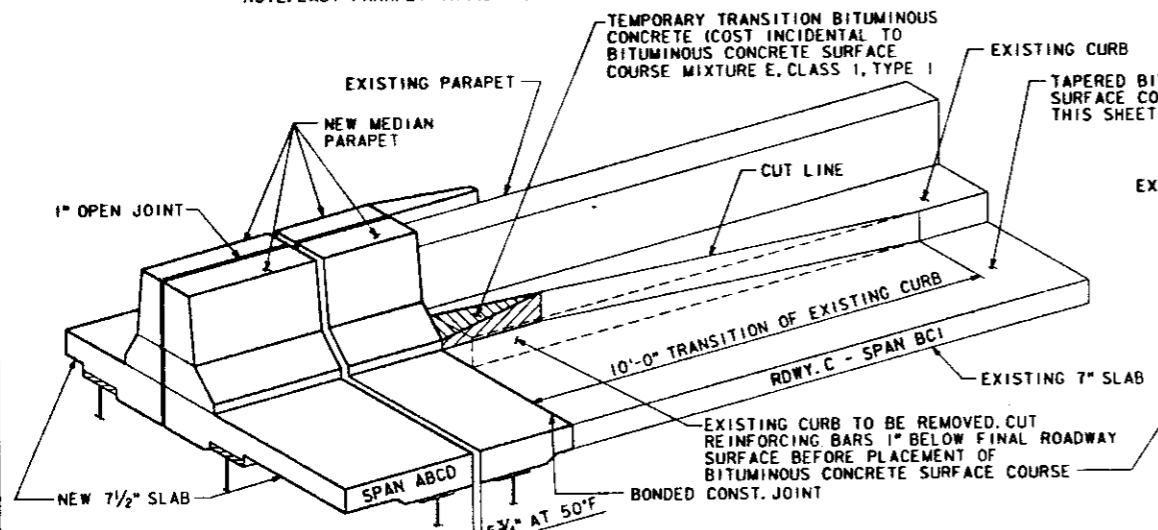
NOTE: EAST PARAPET TRANSITION SIMILAR.



TRIMETRIC - WEST MEDIAN PARAPET
AT RIVER PIER 6

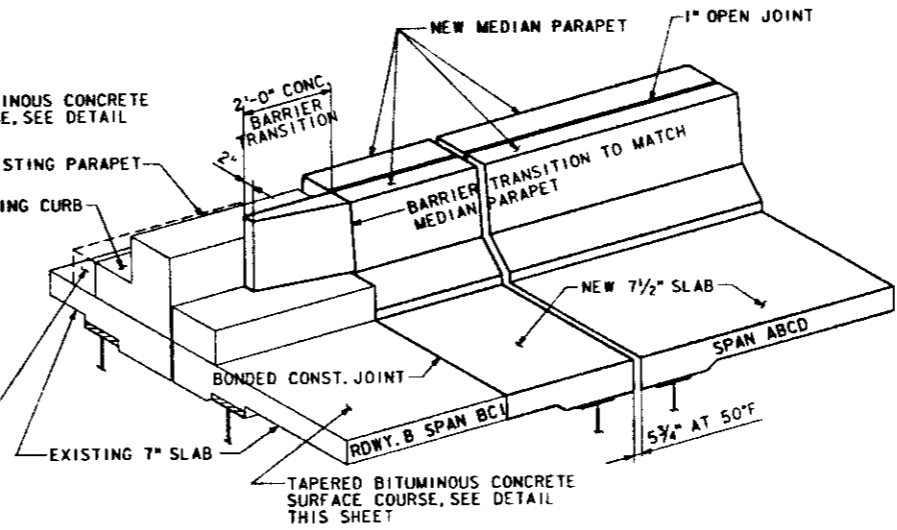


TRIMETRIC - EAST MEDIAN PARAPET TRANSITION
AT RIVER PIER 6



TRIMETRIC - EAST MEDIAN PARAPET - ROADWAY C
AT PIER BCI

NOTE: EAST PARAPET - ROADWAY C SIMILAR EXCEPT OPPOSITE HAND.
EXISTING HANDRAIL NOT SHOWN.

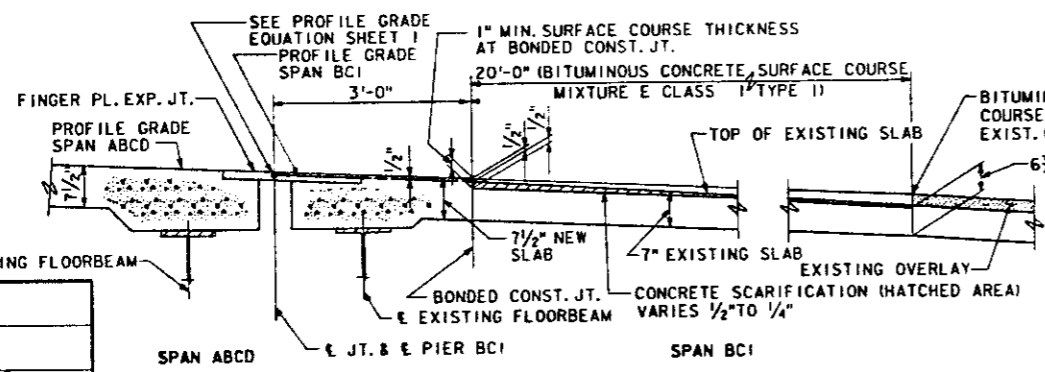


TRIMETRIC - WEST MEDIAN PARAPET - ROADWAY B
AT PIER BCI

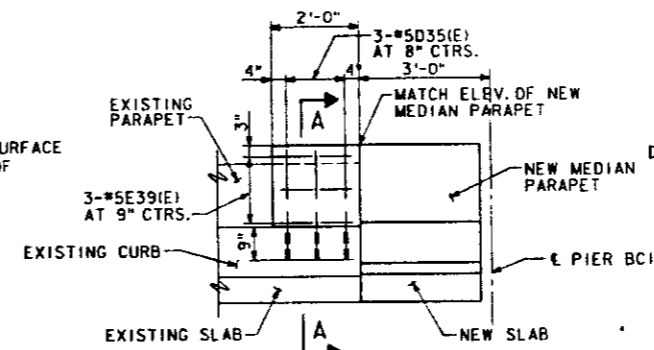
EXISTING HANDRAIL NOT SHOWN.

10487 FILE:ZF3110:1188330.DGN
 88330 PRF.88330
 LEVELS PLOTTED DATE: APRIL 27, 1990
 35 56 63

DESIGNED	F.A. CAMBA
CHECKED	R.F. BECK
DRAWN	M.J. JALINSKY
CHECKED	R.D. WINKELMANN

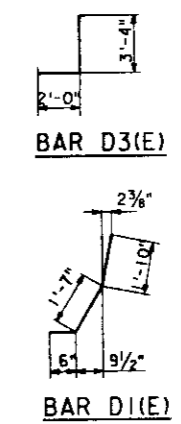


LONGITUDINAL SECTION SHOWING TAPER OF BITUMINOUS
CONCRETE SURFACE COURSE IN SPAN BCI



ELEVATION OF WEST MEDIAN
PARAPET TRANSITION - ROADWAY B

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI



BILL OF MATERIAL

SPAN BCI				
BAR	NO.	SIZE	LENGTH	SHAPE
A407(E)	12	#5	15'-8"	
A408(E)	12	#5	16'-10"	
A510(E)	24	#5	17'-4"	
B501(E)	8	#8	2'-6"	
B511(E)	8	#5	2'-6"	
D1(E)	16	#5	3'-11"	
D3(E)	12	#4	5'-4"	
D35(E)	3	#5	2'-8"	
E38(E)	24	#4	2'-6"	
E39(E)	3	#5	1'-9"	
X1(E)	67	#5	2'-5"	

ITEM	UNIT	TOTAL
CLASS X CONCRETE SUPERSTRUCTURE	CU. YD.	5.9
REINFORCEMENT BARS EPOXY COATED	LBS.	1250

NOTE: REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
PARAPET TRANSITION - TRIMETRIC

STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 22 OF 45

SECTION A-A

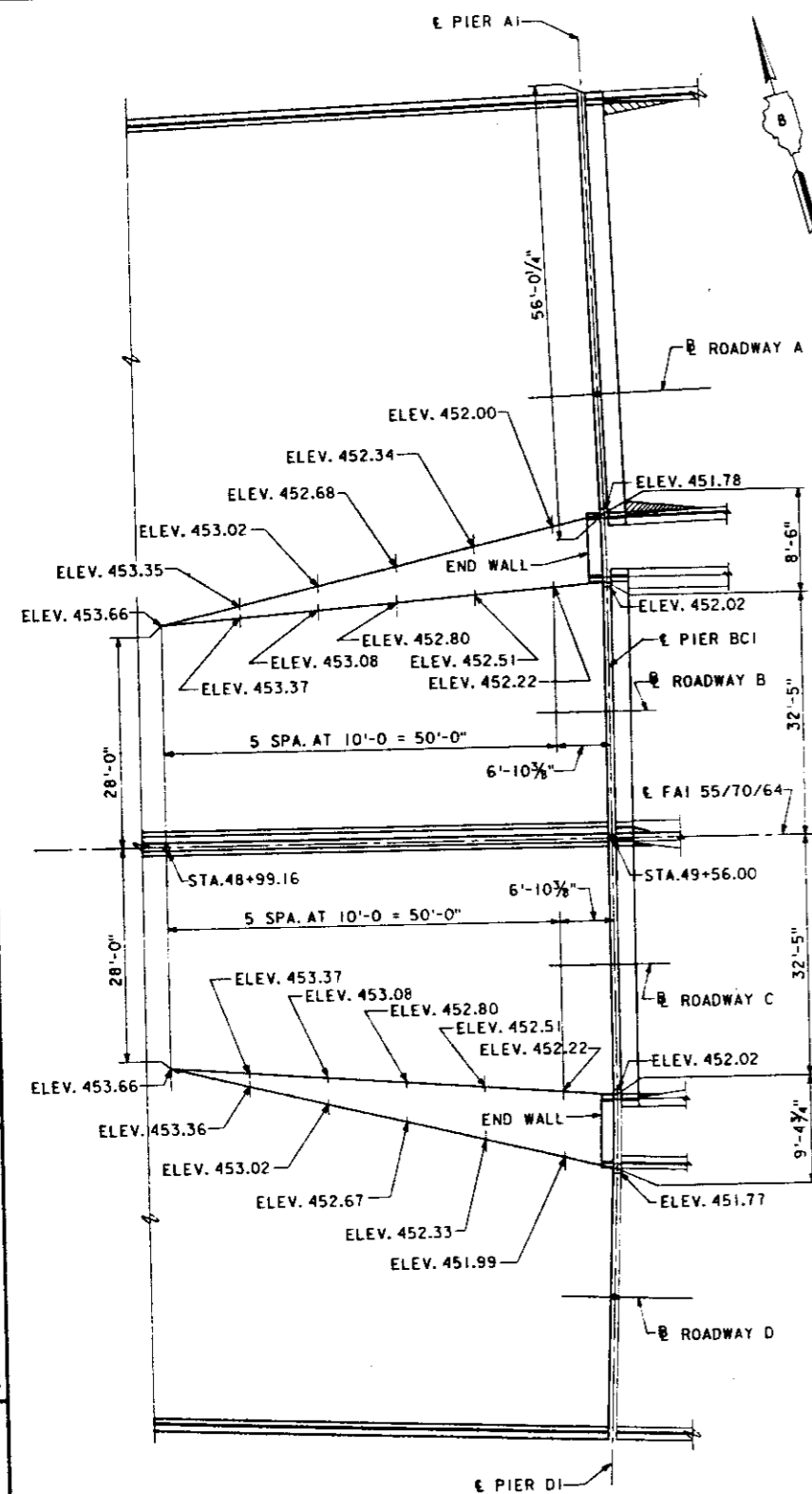
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	105	67
ILLINOIS		PROJECT		

* 82-3HVB-2R-2-1

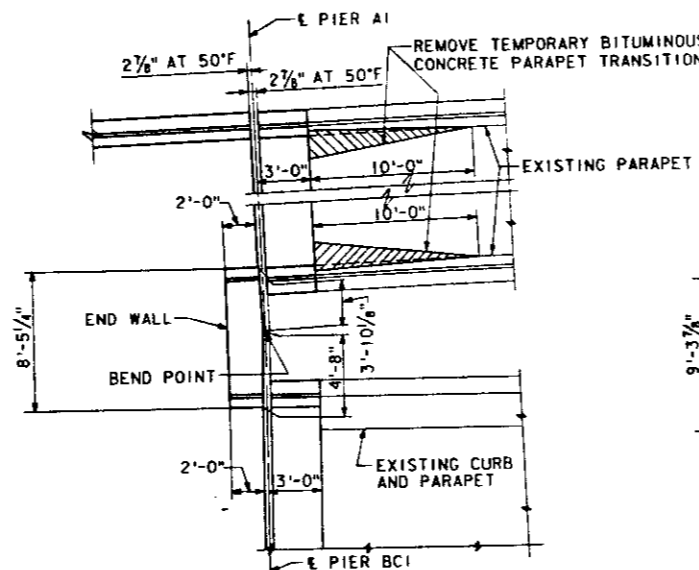
BILL OF MATERIAL

END WALLS, SLAB AND PARAPET				
BAR	NO.	SIZE	LENGTH	SHAPE
A1(E)	6	#6	4'-0"	
A300(E)	24	#5	30'-0"	
B50(E)	4	#8	2'-6"	
B51(E)	4	#5	2'-6"	
E30(E)	2	#5	6'-7"	
E31(E)	2	#5	6'-9"	
E32(E)	2	#5	7'-0"	
E33(E)	2	#5	8'-1"	
E34(E)	2	#5	7'-6"	
E35(E)	2	#5	7'-8"	
E36(E)	2	#5	7'-11"	
E37(E)	2	#5	9'-0"	
E38(E)	12	#4	2'-6"	
D1(E)	6	#4	4'-11"	
D11(E)	6	#5	3'-11"	
D15(E)	13	#5	10'-11"	
D25(E)	12	#5	4'-4"	
CLASS X CONCRETE SUPERSTRUCTURE			CU. YDS.	9.3
REINFORCEMENT BARS EPOXY COATED			LBS.	1,230

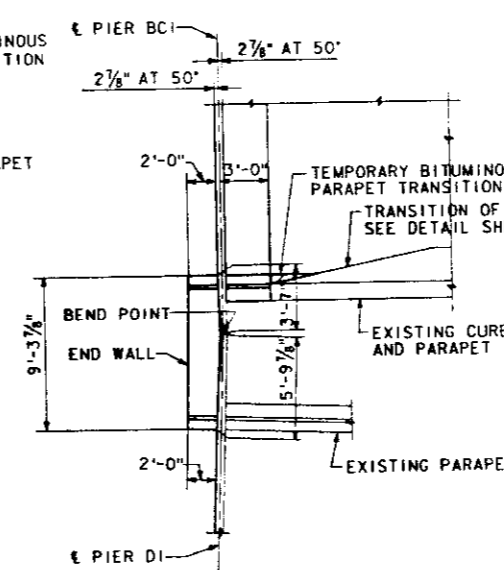
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



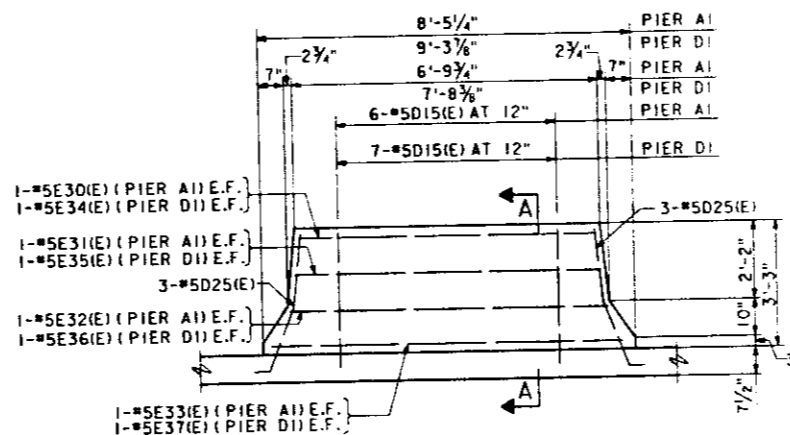
PLAN - TOP OF SLAB ELEVATIONS
IN WARPING AREAS



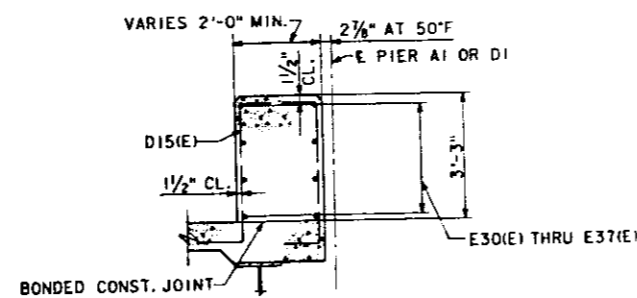
PLAN AT END WALL - PIER AI



PLAN AT END WALL - PIER DI

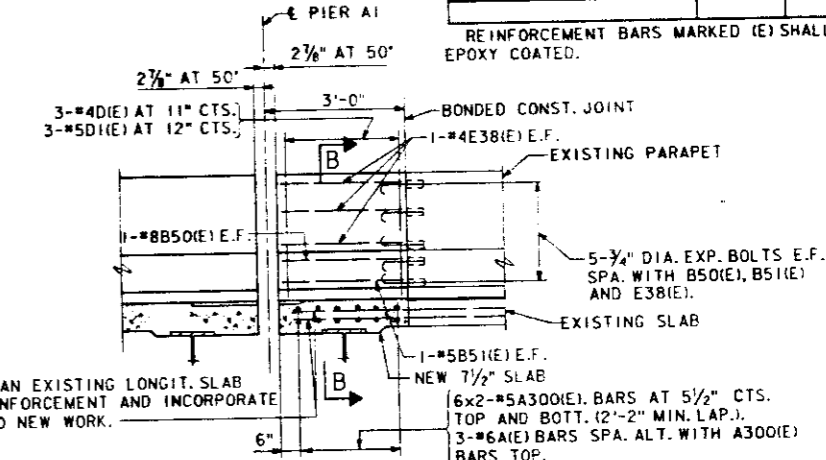


ELEVATION OF END WALL - PIERS AI AND DI
(LOOKING AHEAD STATION)



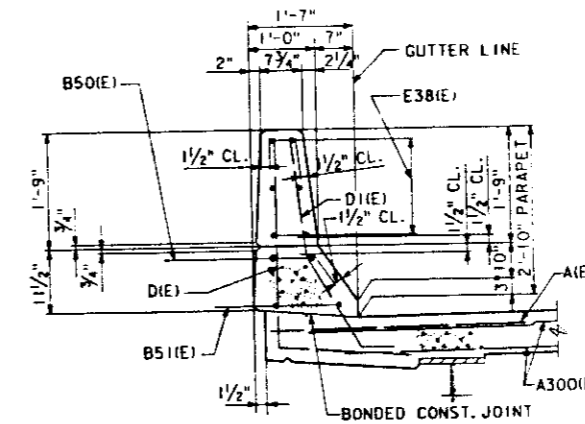
SECTION A-A

NOTE: ALL EDGES SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE NOTED. LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.



ELEVATION OF WEST PARAPET - ROADWAY A

NOTE: EAST PARAPET ROADWAY A SIMILAR.



SECTION B-B

NOTE: EAST PARAPET ROADWAY A SIMILAR. ALL EDGES SHALL HAVE A 3/4" CHAMFER, UNLESS OTHERWISE NOTED. LONGITUDINAL REINFORCEMENT IN SLAB NOT SHOWN.

NOTES

E.F. INDICATES EACH FACE. BARS A300(E) SHALL BE CUT IN THE FIELD TO SUIT THE STAGE CONSTRUCTION. BAR SPLICERS SHALL BE USED AT THESE LOCATIONS.

**REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
SLAB AND END WALL DETAILS
SPAN ABCD
STRUCTURE NO. 082-0005**

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 23 OF 45

10487 FILE:ZF3:110.1985322.DGN
885322 PRJ:885322

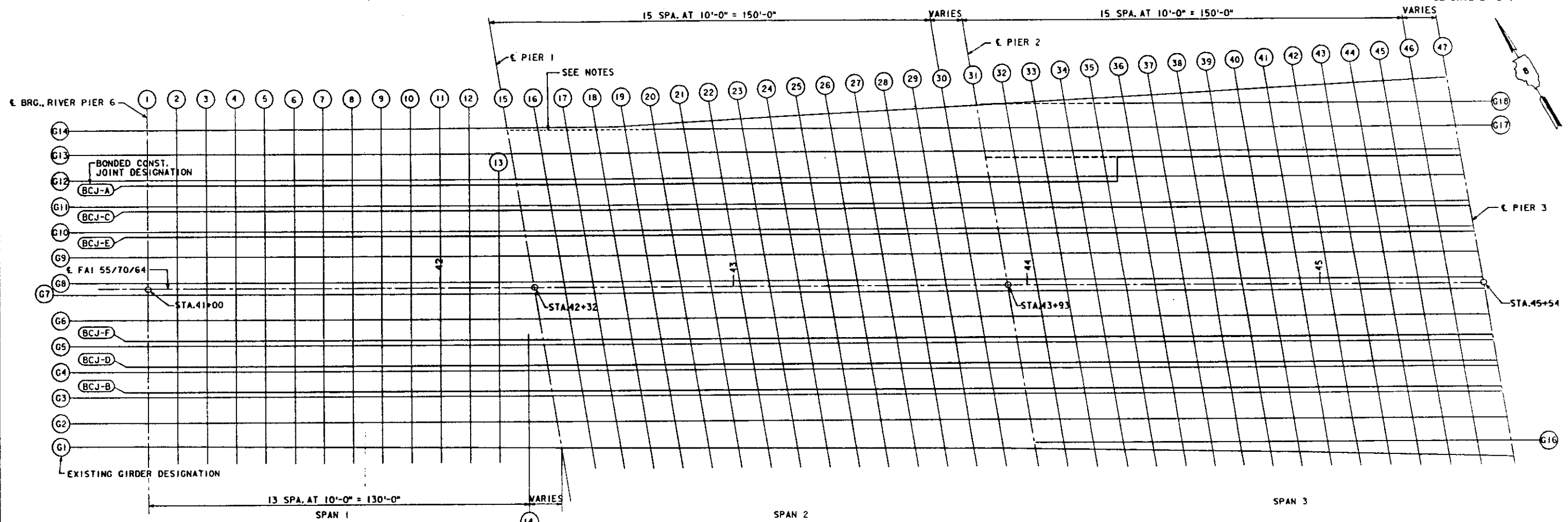
S.S. STEIB	DESIGNED
J.P. McCARTY	CHECKED
M.J. JALINSKY	DRAWN
R.D. WINKELMANN	CHECKED

LEVELS PLOTTED DATE: APRIL 27, 1990
35 56 57 58 63

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

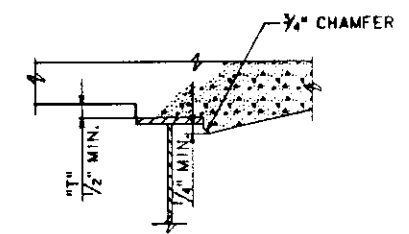
ROUTE NO.	SECTION	COUNTY	MILE POSTS	SHEET
F.A.I. 70	*	ST. CLAIR	105	68
PROJECT	ILLINOIS			

82-3HVB-2R-2-1



PLAN

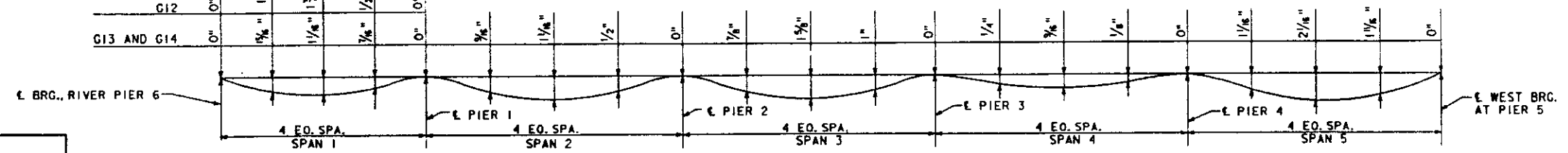
NOTE: INCREMENTS FOR ELEVATIONS ARE ALONG EACH INDIVIDUAL GIRDER AND BONDED CONSTRUCTION JOINT. THE DASHED LINE REPRESENTS THE C. OF GIRDER OR THE BONDED CONSTRUCTION JOINT EXTENDED TO THE C. OF PIER.



FILLET HEIGHTS

TO DETERMINE "T", ELEVATIONS OF THE TOP FLANGES OF THE GIRDERS SHALL BE TAKEN AT THE INTERVALS SHOWN ON THE PLAN. THESE ELEVATIONS SUBTRACTED FROM THE "THEORETICAL GRADE ELEVATION ADJUSTED FOR THE DEAD LOAD DEFLECTION" MINUS THE SLAB THICKNESS EQUALS THE FILLET HEIGHT "T" ABOVE THE TOP FLANGE OF GIRDERS.

G1 AND G2	0"	1 1/8"	2 1/8"	1 1/8"	0"
G3	0"	1 3/8"	1 3/8"	3/8"	0"
G4	0"	1 1/2"	1 3/8"	3/8"	0"
G5	0"	1 3/8"	1 1/8"	3/4"	0"
G6, G7, G8 AND G9	0"	1 3/8"	1 3/8"	1/8"	0"
G10	0"	1 3/8"	1 7/8"	3/8"	0"
G11	0"	1 1/8"	1 3/8"	3/8"	0"
G12	0"	1"	1 3/8"	1/2"	0"
G13 AND G14	0"	3/8"	1 1/8"	3/8"	0"



DEAD LOAD DEFLECTION DIAGRAM
(DUE TO WEIGHT OF CONCRETE ONLY)

NOTES: 1. THE DEFLECTIONS SHOWN ACCOUNT FOR THE PARTIAL-LENGTH COMPOSITE GIRDER SECTION PROPERTIES RESULTING FROM SLAB PLACEMENT IN ACCORDANCE WITH THE POURING SEQUENCE ON SHEET 17.
2. DO NOT USE THE ABOVE DEFLECTIONS IN THE FIELD IF THE ENGINEER IS WORKING FROM THE "THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION".

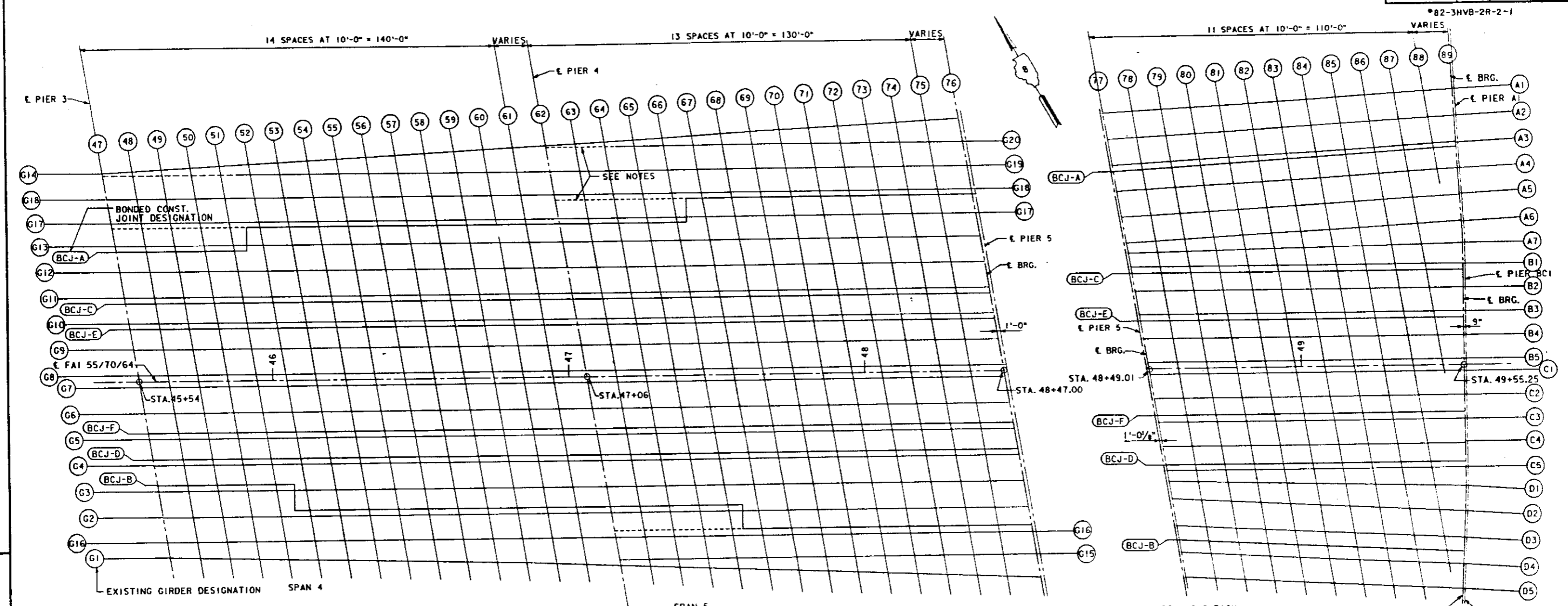
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
TOP OF SLAB ELEVATIONS
PLAN - SPANS 1 THRU 3
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

10487 FILE: ZP3K110.D87S1113.DGN
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 63
87S1113 PRF: 87S1113

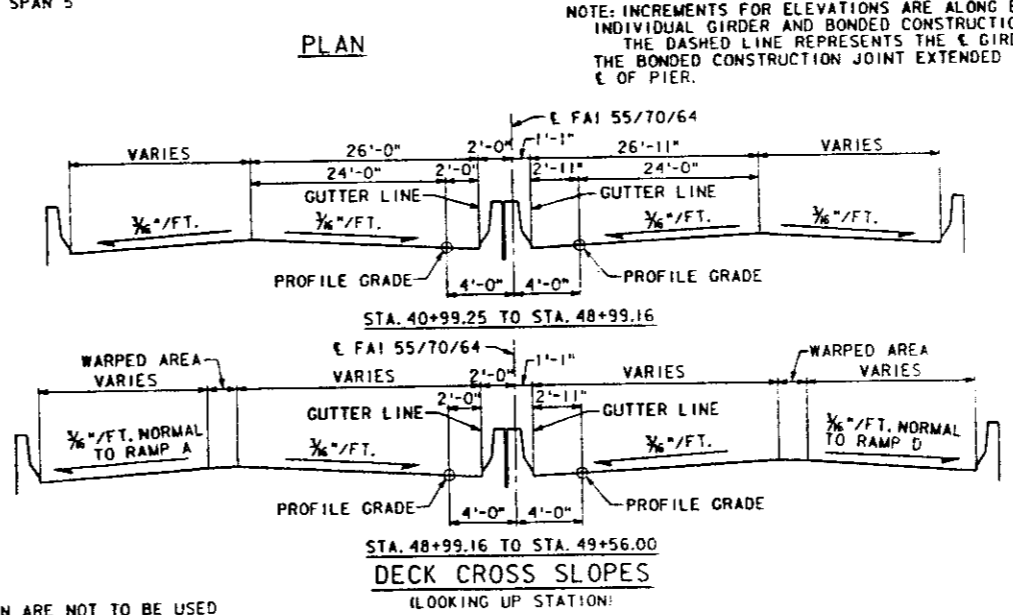
DESIGNED	R.F. BECK
CHECKED	R. WINKELMANN
DRAWN	M. J. JALINSKY
CHECKED	R.F. BECK

NO. OF SHEETS	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	•	ST. CLAIR	105	69
ILLINOIS PROJECT				



A1	0"	1/8"	1/8"	1/8"	0"
A2, A3, A4 AND A5	0"	1/8"	1/8"	1/8"	0"
A6	0"	3/8"	1/2"	1/2"	0"
A7	0"	1/2"	1/2"	1/2"	0"
B1	0"	1/2"	1/2"	1/2"	0"
B2, B3 AND B4	0"	1/2"	1/2"	1/2"	0"
B5	0"	1/2"	1/2"	1/2"	0"
C1	0"	1/2"	1/2"	1/2"	0"
C2, C3, AND C4	0"	1/2"	1/2"	1/2"	0"
C5, D1, D2, D3, D4, AND D5	0"	1/2"	1/2"	1/2"	0"
L1A	0"	1/8"	1/8"	1/8"	0"
L1B, L1C AND L1D	0"	1/8"	1/8"	1/8"	0"

DEAD LOAD DEFLECTION DIAGRAM
(DUE TO WEIGHT OF CONCRETE ONLY)



DECK CROSS SLOPES
(LOOKING UP STATION)

NOTE: INCREMENTS FOR ELEVATIONS ARE ALONG EACH INDIVIDUAL GIRDER AND BONDED CONSTRUCTION JOINT. THE DASHED LINE REPRESENTS THE CENTERLINE OF THE BONDED CONSTRUCTION JOINT EXTENDED TO THE CENTER OF PIER.

NOTE: THE DEFLECTIONS SHOWN ARE NOT TO BE USED IN THE FIELD IF THE ENGINEER IS WORKING FROM THE "THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION".

NOTES
FOR FILLET HEIGHT DETAILS SEE SHEET 24.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
TOP OF SLAB ELEVATIONS
PLAN-SPANS 4, 5 AND ABCD
STRUCTURE NO. 002-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 63
FILE: ZF34110.138751143.DGN
PRF: B751143

DESIGNED	R.F. BECK
CHECKED	R. WINKELMANN
DRAWN	M.J. JALINSKY
CHECKED	R.F. BECK

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DATE: AUG. 10, 1989
LEVELS PLOTTED
55 63

FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
TOP OF SLAB ELEVATIONS

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 26 OF 45

*82-3HVB-2R-2-1

Table with 20 columns: LINE, LOCATION, STATION, OFFSET, THEORETICAL GRADE ELEVATION, THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION, LINE, LOCATION, STATION, OFFSET, THEORETICAL GRADE ELEVATION, THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION, LINE, LOCATION, STATION, OFFSET, THEORETICAL GRADE ELEVATION, THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION. Contains 5 main sections of data for various stationing points.

R.F. BECK
DESIGNED
R.D. WINKELMANN
CHECKED
M.J. JALINSKY
DRAWN
S.S. STEIB
CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
TOP OF SLAB ELEVATIONS
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
SHEET NO. 26 OF 45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Table with columns: SHEET NO., COUNTY, TOTAL SHEETS, SHEET NO. Values: ST. CLAIR, 105, 71

#82-3HVB-2R-2-1

Main data table with columns: LINE, LOCATION, STATION, OFFSET, THEORETICAL GRADE ELEVATION, THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION, LINE, LOCATION, STATION, OFFSET, THEORETICAL GRADE ELEVATION, THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION, LINE, LOCATION, STATION, OFFSET, THEORETICAL GRADE ELEVATION, THEORETICAL GRADE ADJUSTED FOR DEAD LOAD DEFLECTION. Includes multiple columns of stationing and elevation data.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
TOP OF SLAB ELEVATIONS

STRUCTURE NO. 082-0001

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 27 OF 45

10487 883308 FILE: ZF3:1101088308.DGN DATE: AUG. 10, 1989 LEVELS PLOTTED 56 63

R.F. BECK
DESIGNED
R.D. WINKELMANN
CHECKED
M.J. JALINSKY
DRAWN
S.S. STEIB
CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	#	ST. CLAIR	105	72
		ILLINOIS	PROJECT:	

*82-3HV-B-2R-2-1

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	THEORETICAL GRADE ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
36	G1	44+52.356	56.887	466.613	466.702	40	G1	44+92.349	57.655	465.401	465.530	44	G1	45+32.341	58.442	464.189	464.253	48	G1	45+73.873	59.407	462.928	462.932
36	G16	44+51.917	53.427	466.880	466.769	40	G16	44+91.917	53.427	465.480	465.609	44	G16	45+31.917	53.427	464.250	464.344	48	G16	45+72.917	53.427	463.050	463.054
36	G2	44+50.608	45.583	466.842	466.842	40	G2	44+90.608	45.583	465.642	465.771	44	G2	45+30.608	45.583	464.442	464.506	48	G2	45+71.608	45.583	463.212	463.216
36	G3	44+49.161	36.917	467.021	467.110	40	G3	44+89.161	36.917	465.821	465.950	44	G3	45+29.161	36.917	464.621	464.685	48	G3	45+70.161	36.917	463.391	463.395
36	BCJ-B	44+48.827	34.917	467.062	467.151	40	BCJ-B	44+88.827	34.917	465.862	465.991	44	BCJ-B	45+28.827	34.917	464.662	464.726	48	BCJ-B	45+69.827	34.917	463.432	463.436
36	G4	44+47.715	28.250	467.200	467.289	40	G4	44+87.715	28.250	466.000	466.129	44	G4	45+27.715	28.250	464.800	464.864	48	G4	45+68.715	28.250	463.570	463.574
36	BCJ-D	44+47.381	26.250	467.186	467.275	40	BCJ-D	44+87.381	26.250	465.988	466.117	44	BCJ-D	45+27.381	26.250	464.786	464.850	48	BCJ-D	45+68.381	26.250	463.556	463.560
36	G5	44+46.268	19.583	467.115	467.204	40	G5	44+86.268	19.583	465.894	466.023	44	G5	45+26.268	19.583	464.715	464.779	48	G5	45+67.268	19.583	463.485	463.489
36	BCJ-F	44+45.934	17.583	467.094	467.183	40	BCJ-F	44+85.934	17.583	465.882	466.011	44	BCJ-F	45+25.934	17.583	464.694	464.758	48	BCJ-F	45+66.934	17.583	463.464	463.468
36	G6	44+44.822	10.917	467.023	467.112	40	G6	44+84.822	10.917	465.823	465.952	44	G6	45+24.822	10.917	464.623	464.687	48	G6	45+65.822	10.917	463.393	463.397
36	G7	44+43.375	2.250	466.931	467.020	40	G7	44+83.375	2.250	465.731	465.860	44	G7	45+23.375	2.250	464.554	464.618	48	G7	45+64.375	2.250	463.301	463.305
36	G8	44+42.625	2.250	466.931	467.020	40	G8	44+82.625	2.250	465.754	465.883	44	G8	45+22.625	2.250	464.531	464.595	48	G8	45+63.625	2.250	463.324	463.328
36	G9	44+41.178	10.917	467.139	467.228	40	G9	44+81.178	10.917	465.933	466.062	44	G9	45+21.178	10.917	464.733	464.797	48	G9	45+62.178	10.917	463.503	463.507
36	BCJ-E	44+40.056	17.583	467.270	467.359	40	BCJ-E	44+80.056	17.583	466.070	466.199	44	BCJ-E	45+20.056	17.583	464.870	464.934	48	BCJ-E	45+61.056	17.583	463.640	463.644
36	G10	44+39.732	19.583	467.311	467.400	40	G10	44+79.732	19.583	465.911	466.040	44	G10	45+19.732	19.583	464.911	464.975	48	G10	45+60.732	19.583	463.682	463.686
36	BCJ-C	44+38.619	26.250	467.449	467.538	40	BCJ-C	44+78.619	26.250	465.822	465.951	44	BCJ-C	45+18.619	26.250	464.911	464.975	48	BCJ-C	45+59.619	26.250	463.819	463.823
36	G11	44+38.285	28.250	467.482	467.571	40	G11	44+78.285	28.250	465.811	465.940	44	G11	45+18.285	28.250	464.911	464.975	48	G11	45+58.285	28.250	463.852	463.856
36	G12	44+36.839	36.917	467.391	467.480	40	G12	44+76.839	36.917	465.691	465.820	44	G12	45+16.839	36.917	464.811	464.875	48	G12	45+57.839	36.917	463.760	463.764
36	BCJ-A	44+35.726	43.583	467.320	467.409	40	BCJ-A	44+75.726	43.583	465.620	465.749	44	BCJ-A	45+15.726	43.583	464.749	464.813	48	BCJ-A	45+56.726	43.583	463.690	463.694
36	G13	44+35.392	45.583	467.298	467.387	40	G13	44+75.392	45.583	465.598	465.727	44	G13	45+15.392	45.583	464.727	464.791	48	G13	45+55.392	45.583	463.669	463.673
36	G14	44+34.050	53.568	467.214	467.303	40	G14	44+74.050	53.568	465.514	465.643	44	G14	45+14.050	53.568	464.643	464.707	48	G14	45+54.050	53.568	463.584	463.588
36	G18	44+32.727	61.552	467.129	467.218	40	G18	44+72.727	61.552	465.429	465.558	44	G18	45+12.727	61.552	464.558	464.622	48	G18	45+53.727	61.552	463.499	463.503
36	G14	44+32.735	63.754	467.094	467.183	40	G14	44+72.677	63.754	465.362	465.491	44	G14	45+12.677	63.754	464.491	464.555	48	G14	45+52.677	63.754	463.404	463.408

10487 FILE: Z:\3\110\1185309.DGN LEVELS PLOTTED DATE: AUG. 10, 1989
 885309 PRF: 885309 56 63

DESIGNED	R.F. BECK
CHECKED	R.D. WINKELMANN
DRAWN	M.J. JALINSKY
CHECKED	S.S. STEIB

PREPARED BY:
SVERDRUP CORPORATION
 ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
 ILLINOIS APPROACH TO
 POPLAR STREET BRIDGE
 TOP OF SLAB ELEVATIONS
 STRUCTURE NO. 082-0000
 STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
 SHEET NO. 28 OF 45

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.I. 70	9	ST. CLAIR	105	74
PROJECT				
*82-3HVB-2R-2-1				

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED FOR DEAD LOAD DEFLECTION
66	G4	47+50.715	28.250	458.110	458.216	458.110	458.216	69	G17	47+57.060	53.568	457.224	457.397	73	BCJ-F	48+18.934	17.583	455.904	455.040	77	D6	48+60.565	69.211	454.174	454.174
66	BCJ-D	47+50.381	25.250	458.096	458.202	458.096	458.202	69	BCJ-A	47+66.061	59.562	457.160	457.333	73	G6	48+17.822	10.917	455.833	455.969	77	D4	48+59.110	60.496	454.354	454.354
66	G5	47+49.268	19.583	458.025	458.131	458.025	458.131	69	G18	47+65.727	61.552	457.139	457.312	73	G7	48+16.375	2.250	455.741	455.877	77	BCJ-B	48+58.392	56.190	454.443	454.443
66	BCJ-F	47+48.934	17.583	458.004	458.110	458.004	458.110	69	G19	47+64.395	68.536	457.227	457.400	73	G8	48+15.625	2.250	455.764	455.900	77	D3	48+57.666	51.782	454.534	454.534
66	G6	47+47.822	10.917	457.933	458.039	457.933	458.039	69	G20	47+63.062	77.521	456.969	457.142	73	G9	48+14.178	10.917	455.943	456.079	77	D2	48+56.202	43.067	454.714	454.714
66	G7	47+46.375	2.250	457.841	457.947	457.841	457.947	69	G14	47+62.835	81.704	456.909	457.082	73	BCJ-E	48+13.066	17.583	455.080	455.216	77	D1	48+55.272	37.499	454.828	454.828
66	G8	47+45.625	2.250	457.864	457.970	457.864	457.970	70	G1	47+96.547	66.641	456.135	456.314	73	G10	48+12.732	19.583	456.122	456.258	77	G5	48+54.688	34.000	454.901	454.901
66	G9	47+44.178	10.917	458.043	458.149	458.043	458.149	70	G15	47+96.226	61.271	456.228	456.407	73	BCJ-C	48+11.619	26.250	455.250	455.385	77	BCJ-D	48+54.354	32.000	454.942	454.942
66	BCJ-E	47+43.066	17.583	458.022	458.128	458.022	458.128	70	G16	47+94.917	53.427	456.390	456.569	73	G11	48+11.285	26.250	455.282	455.417	77	G4	48+53.353	26.000	455.009	455.009
66	G10	47+42.732	19.583	458.222	458.328	458.222	458.328	70	G17	47+93.608	45.583	456.552	456.731	73	G12	48+09.839	36.917	455.200	455.335	77	G3	48+52.018	18.000	454.918	454.918
66	BCJ-C	47+41.619	26.250	458.359	458.465	458.359	458.465	70	BCJ-B	47+94.583	51.427	456.431	456.610	73	G13	48+08.392	45.583	455.109	455.245	77	BCJ-F	48+51.768	16.500	454.902	454.902
66	G11	47+41.285	26.250	458.392	458.498	458.392	458.498	70	G2	47+93.608	45.583	456.552	456.731	73	G17	48+07.060	53.568	456.024	456.160	77	G2	48+50.683	10.000	454.833	454.833
66	G12	47+40.839	36.917	458.300	458.406	458.300	458.406	70	G3	47+92.161	36.917	456.731	456.910	73	BCJ-A	48+06.061	59.562	455.960	456.096	77	C1	48+49.348	2.000	454.748	454.748
66	G13	47+39.392	45.583	458.209	458.315	458.209	458.315	70	G4	47+90.715	26.250	456.910	457.089	73	G18	48+05.727	61.552	455.939	456.075	77	B5	48+48.680	2.000	454.768	454.768
66	BCJ-A	47+37.994	51.568	458.145	458.251	458.145	458.251	70	BCJ-D	47+90.381	26.250	456.896	457.075	73	G19	48+04.395	69.536	455.804	455.940	77	B4	48+47.345	10.000	454.933	454.933
66	G17	47+37.060	53.568	458.124	458.230	458.124	458.230	70	G5	47+89.268	19.583	456.825	457.004	73	G20	48+03.062	77.521	455.769	455.905	77	BCJ-E	48+46.260	16.500	455.068	455.204
66	G18	47+35.727	61.552	458.039	458.145	458.039	458.145	70	BCJ-F	47+88.934	17.583	456.904	457.083	73	G14	48+02.836	83.875	455.677	455.813	77	E3	48+45.010	18.000	455.098	455.098
66	G19	47+34.395	69.536	457.954	458.060	457.954	458.060	70	G6	47+87.822	10.917	456.912	457.091	73	G7	48+01.619	26.250	455.641	455.820	77	B2	48+44.675	26.000	455.263	455.263
66	G20	47+33.062	77.521	457.869	457.975	457.869	457.975	70	G8	47+85.625	2.250	456.664	456.843	74	G1	48+36.515	68.241	454.911	455.011	77	BCJ-C	48+43.673	32.000	455.262	455.262
66	G14	47+32.939	80.077	457.833	457.939	457.833	457.939	70	G9	47+84.178	10.917	456.843	457.022	74	G15	48+36.226	61.271	455.028	455.128	77	B1	48+43.339	34.000	455.241	455.241
67	G1	47+66.571	65.441	457.053	457.187	457.053	457.187	70	BCJ-E	47+83.066	17.583	456.980	457.159	74	G16	48+34.917	53.427	455.190	455.290	77	A7	48+42.575	38.582	455.192	455.192
67	G15	47+66.226	61.271	457.128	457.262	457.128	457.262	70	G10	47+82.732	19.583	457.022	457.201	74	BCJ-B	48+34.583	51.427	455.231	455.331	77	A6	48+41.966	42.230	455.154	455.154
67	G16	47+64.917	53.427	457.290	457.424	457.290	457.424	70	BCJ-C	47+81.619	26.250	457.159	457.338	74	G2	48+33.608	45.583	455.262	455.362	77	A5	48+40.518	50.904	455.061	455.061
67	BCJ-B	47+64.063	51.427	457.331	457.465	457.331	457.465	70	G11	47+81.285	26.250	457.192	457.371	74	G3	48+32.161	36.917	455.631	455.731	77	A4	48+39.070	59.579	454.969	454.969
67	G2	47+63.608	45.583	457.452	457.586	457.452	457.586	70	G12	47+79.839	36.917	457.279	457.458	74	G4	48+30.715	26.250	455.710	455.810	77	BCJ-A	48+37.943	64.395	454.886	454.886
67	G3	47+62.161	36.917	457.631	457.765	457.631	457.765	70	G13	47+78.392	45.583	457.009	457.188	74	BCJ-D	48+30.381	26.250	455.696	455.796	77	A3	48+37.623	68.254	454.877	454.877
67	G4	47+60.715	26.250	457.810	457.944	457.810	457.944	70	G17	47+77.060	53.568	456.924	457.103	74	G5	48+29.268	19.583	455.625	455.725	77	A2	48+36.175	76.928	454.785	454.785
67	BCJ-D	47+60.381	26.250	457.796	457.930	457.796	457.930	70	BCJ-A	47+76.061	59.562	456.860	457.039	74	BCJ-F	48+28.934	17.583	455.604	455.704	77	A1	48+34.727	85.603	454.693	454.693
67	G5	47+59.268	19.583	457.725	457.859	457.725	457.859	70	G18	47+75.727	61.552	456.839	457.018	74	G6	48+28.375	2.250	455.441	455.541	78	D5	48+70.551	69.743	453.866	453.907
67	BCJ-F	47+58.934	17.583	457.704	457.838	457.704	457.838	70	G19	47+74.395	69.536	456.754	456.933	74	G7	48+27.625	2.250	455.464	455.564	78	D4	48+69.096	61.028	454.046	454.086
67	G6	47+57.822	10.917	457.633	457.767	457.633	457.767	70	G20	47+73.062	77.521	456.669	456.848	74	BCJ-E	48+24.178	10.917	455.643	455.743	78	BCJ-B	48+68.378	56.718	454.135	454.175
67	G7	47+56.375	2.250	457.541	457.675	457.541	457.675	70	G14	47+72.880	82.247	456.601	456.780	74	BCJ-C	48+23.066	19.583	455.780	455.880	78	D3	48+67.642	52.313	454.226	454.265
67	G8	47+55.266	11.568	457.450	457.584	457.450	457.584	70	G1	48+06.539	67.041	455.829	456.004	74	G11	48+21.619	26.250	455.859	455.959	78	D2	48+66.187	43.599	454.406	454.444
67	G9	47+54.178	10.917	457.379	457.513	457.379	457.513	70	G15	48+05.226	61.271	455.928	456.103	74	BCJ-C	48+21.285	26.250	455.928	456.028	78	D1	48+65.270	37.722	454.525	454.563
67	BCJ-E	47+53.066	17.583	457.300	457.434	457.300	457.434	70	G16	48+04.917	53.427	456.090	456.265	74	G12	48+19.839	36.917	455.900	456.000	78	C5	48+64.698	34.000	454.601	454.639
67	G10	47+52.732	19.583	457.222	457.356	457.222	457.356	70	BCJ-B	48+04.583	51.427	456.131	456.306	74	G13	48+18.392	45.583	455.809	455.909	78	BCJ-D	48+64.354	32.000	454.642	454.680
67	BCJ-C	47+51.619	26.250	457.145	457.279	457.145	457.279	70	G2	48+03.608	45.583	456.232	456.407	74	G17	48+17.060	53.568	455.724	455.824	78	C4	48+63.353	26.000	454.703	454.741
67	G11	47+51.285	26.250	457.068	457.202	457.068	457.202	70	G3	48+02.161	36.917	456.431	456.606	74	G18	48+16.061	59.562	455.650	455.750	78	C3	48+62.018	18.000	454.818	454.856
67	G12	47+49.839	36.917	456.990	457.124	456.990	457.124	70	G4	48+00.715	26.														

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNT	TOTAL	SHEET
F.A.I. 70	*	ST. CLAIR	105	75
ILLINOIS PROJECT				

*82-3HVB-2R-2-1

LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED GRADE ELEVATION FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED GRADE ELEVATION FOR DEAD LOAD DEFLECTION	LINE	LOCATION	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ADJUSTED GRADE ELEVATION FOR DEAD LOAD DEFLECTION
80	D5	48+90.522	70.806	453.251	453.257	83	D5	49+20.480	72.400	452.310	452.422	86	D4	49+45.983	65.280	451.576	451.596
80	D4	48+88.068	62.091	453.430	453.536	83	D4	49+18.026	63.686	452.500	452.613	86	BCJ-B	49+48.266	60.946	451.671	451.691
80	BCJ-B	48+86.350	57.775	453.519	453.623	83	BCJ-B	49+18.308	59.361	452.596	452.708	86	D3	49+47.529	56.565	451.767	451.784
80	D3	48+87.614	53.376	453.610	453.714	83	D3	49+17.571	54.971	452.691	452.806	86	D2	49+46.074	47.851	451.957	451.990
80	D2	48+86.159	44.662	453.693	453.803	83	D2	49+16.117	46.256	452.881	452.996	86	D1	49+45.250	39.509	452.122	452.156
80	D1	48+85.265	36.169	453.918	454.021	83	D1	49+15.257	36.839	453.032	453.150	86	C5	49+44.688	34.000	452.284	452.324
80	C5	48+84.688	34.000	454.001	454.103	83	C5	49+14.688	34.000	453.130	453.249	86	BCJ-D	49+44.354	32.000	452.347	452.387
80	BCJ-D	48+84.354	32.000	454.042	454.144	83	BCJ-D	49+14.354	32.000	453.174	453.293	86	C4	49+43.353	26.000	452.303	452.355
80	C4	48+83.353	26.000	454.103	454.223	83	C4	49+13.353	26.000	453.203	453.343	86	C3	49+42.018	18.000	452.275	452.275
80	C3	48+82.018	18.000	454.137	454.137	83	C3	49+12.018	18.000	453.118	453.260	86	BCJ-F	49+41.768	16.500	452.202	452.259
80	BCJ-F	48+81.768	16.500	454.002	454.121	83	BCJ-F	49+11.768	16.500	453.102	453.244	86	C2	49+40.683	10.000	452.133	452.259
80	C2	48+80.683	10.000	453.933	454.051	83	C2	49+10.683	10.000	453.033	453.176	86	C1	49+39.348	2.000	452.048	452.122
80	C1	48+79.348	2.000	453.848	453.977	83	C1	49+09.348	2.000	452.948	453.108	86	B5	49+38.680	2.000	452.068	452.117
80	B5	48+78.680	2.000	453.868	453.950	83	B5	49+08.680	2.000	452.968	453.067	86	B4	49+37.345	10.000	452.233	452.314
80	B4	48+77.345	10.000	454.033	454.162	83	B4	49+07.345	10.000	453.133	453.299	86	BCJ-E	49+36.010	16.500	452.368	452.454
80	BCJ-E	48+76.250	16.500	454.168	454.256	83	BCJ-E	49+06.250	16.500	453.268	453.426	86	B3	49+35.010	18.000	452.398	452.494
80	B3	48+75.010	18.000	454.198	454.326	83	B3	49+05.010	18.000	453.298	453.466	86	B2	49+34.675	25.000	452.563	452.654
80	B2	48+74.675	25.000	454.363	454.491	83	B2	49+04.675	25.000	453.463	453.632	86	BCJ-C	49+33.673	32.000	452.632	452.776
80	BCJ-C	48+73.673	32.000	454.352	454.551	83	BCJ-C	49+03.673	32.000	453.489	453.735	86	B1	49+32.339	34.000	452.646	452.730
80	B1	48+73.339	34.000	454.341	454.530	83	B1	49+03.339	34.000	453.466	453.712	86	A7	49+32.657	40.379	452.684	452.766
80	A7	48+72.269	39.181	454.283	454.426	83	A7	49+02.263	39.780	453.393	453.576	86	A6	49+31.778	48.043	452.380	452.462
80	A6	48+71.903	44.167	454.225	454.328	83	A6	49+01.841	46.105	453.309	453.449	86	A5	49+30.330	56.717	452.279	452.362
80	A5	48+70.456	52.842	454.133	454.258	83	A5	49+00.993	54.780	453.208	453.371	86	A4	49+28.883	65.962	452.177	452.285
80	A4	48+69.008	61.517	454.041	454.166	83	A4	49+00.945	63.464	453.107	453.271	86	BCJ-A	49+27.759	72.085	452.100	452.212
80	BCJ-A	48+67.882	66.252	453.970	454.094	83	BCJ-A	49+00.800	70.168	453.042	453.207	86	A3	49+27.435	74.057	452.076	452.188
80	A3	48+67.560	70.191	453.949	454.073	83	A3	49+00.767	72.129	453.021	453.186	86	A2	49+25.987	82.741	451.975	452.091
80	A2	48+66.112	78.866	453.857	453.981	83	A2	49+00.650	80.804	452.928	453.094	86	A1	49+24.539	91.416	451.874	452.026
80	A1	48+64.664	87.540	453.766	453.922	83	A1	49+00.602	89.478	452.836	453.047	86					
81	D5	49+00.508	71.337	452.926	453.049	84	D5	49+30.466	72.932	452.002	452.097	87	C1	49+49.348	2.000	451.748	451.775
81	D4	48+99.054	62.623	453.122	453.244	84	D4	49+29.011	64.217	452.192	452.289	87	B5	49+48.680	2.000	451.768	451.787
81	BCJ-B	48+98.336	58.304	453.211	453.333	84	BCJ-B	49+28.294	59.889	452.287	452.384	87	B4	49+47.345	10.000	451.933	451.969
81	D3	48+97.559	53.936	453.302	453.422	84	D3	49+27.557	55.502	452.383	452.482	87	BCJ-E	49+46.010	16.500	452.068	452.110
81	D2	48+96.145	45.193	453.482	453.601	84	D2	49+26.103	46.788	452.573	452.674	87	B3	49+45.010	18.000	452.098	452.140
81	D1	48+95.262	36.392	453.615	453.733	84	D1	49+25.255	39.062	452.728	452.831	87	B2	49+44.675	26.000	452.263	452.310
81	C5	48+94.688	34.000	453.701	453.819	84	C5	49+24.688	34.000	452.833	452.936	87	BCJ-C	49+43.673	32.000	452.364	452.442
81	BCJ-D	48+94.354	32.000	453.742	453.860	84	BCJ-D	49+24.354	32.000	452.890	452.993	87	B1	49+43.339	34.000	452.316	452.394
81	C4	48+93.353	26.000	453.803	453.940	84	C4	49+23.353	26.000	452.903	453.026	87	B1	49+42.655	40.579	452.181	452.243
81	C3	48+92.018	18.000	453.718	453.854	84	C3	49+22.018	18.000	452.918	453.046	87	A7	49+42.555	48.689	452.070	452.117
81	BCJ-F	48+91.768	16.500	453.702	453.838	84	BCJ-F	49+21.768	16.500	452.902	453.026	87	A6	49+41.757	48.689	452.070	452.117
81	C2	48+90.683	10.000	453.633	453.769	84	C2	49+20.683	10.000	452.773	452.899	87	A5	49+40.309	57.363	451.969	452.030
81	C1	48+89.348	2.000	453.548	453.696	84	C1	49+19.348	2.000	452.648	452.789	87	A4	49+38.862	66.038	451.868	451.934
81	B5	48+88.680	2.000	453.568	453.660	84	B5	49+18.680	2.000	452.668	452.757	87	BCJ-A	49+37.739	72.724	451.790	451.860
81	B4	48+87.345	10.000	453.733	453.883	84	B4	49+17.345	10.000	452.833	452.922	87	A3	49+37.414	74.713	451.767	451.837
81	BCJ-E	48+86.250	16.500	453.868	454.017	84	BCJ-E	49+16.250	16.500	452.968	453.115	87	A2	49+35.966	83.387	451.665	451.735
81	B3	48+85.010	18.000	453.898	454.047	84	B3	49+15.010	18.000	452.998	453.145	87	A1	49+34.518	92.062	451.564	451.633
81	B2	48+84.675	26.000	454.063	454.211	84	B2	49+14.675	26.000	453.163	453.312	88	A4	49+48.841	66.684	451.598	451.681
81	BCJ-C	48+83.673	32.000	454.062	454.277	84	BCJ-C	49+13.673	32.000	453.190	453.312	88	BCJ-A	49+47.718	73.363	451.480	451.568
81	B1	48+83.339	34.000	454.041	454.256	84	B1	49+13.339	34.000	453.166	453.306	88	A3	49+47.393	75.358	451.457	451.485
81	A7	48+82.567	39.381	453.980	454.141	84	A7	49+12.561	39.980	453.080	453.255	88	A2	49+45.945	84.033	451.366	451.386
81	A6	48+81.852	44.813	453.916	454.036	84	A6	49+11.820	46.751	452.999	453.123	88	A1	49+44.497	92.708	451.254	451.301
81	A5	48+80.435	53.488	453.824	453.965	84	A5	49+10.372	55.426	452.898	453.045	89	D5	49+53.722	74.169	451.285	451.285
81	A4	48+79.987	62.163	453.732	453.872	84	A4	49+09.924	64.100	452.797	452.945	89	D4	49+54.067	65.551	451.419	451.419
81	BCJ-A	48+77.861	68.891	453.660	453.799	84	BCJ-A	49+07.800	70.807	452.719	452.866	89	BCJ-B	49+54.239	61.263	451.488	451.488
81	A3	48+77.539	70.837	453.639	453.778	84	A3	49+07.476	72.775	452.696	452.845	89	D3	49+54.412	56.932	451.554	451.554
81	A2	48+76.091	79.512	453.547	453.686	84	A2	49+06.029	81.450	452.595	452.745	89	D2	49+54.757	48.313	451.689	451.689
81	A1	48+74.644	88.186	453.455	453.631	84	A1	49+04.581	90.124	452.494	452.646	89	D1	49+55.100	39.729	451.829	451.829
82	D5	49+10.494	71.889	452.618	452.746	85	D5	49+40.452	73.463	451.694	451.748	89	C5	49+55.250	34.000	452.001	452.001
82	D4	49+09.040	63.154	452.808	452.938	85	D4	49+38.957	64.749	451.894	451.944	89	BCJ-D	49+55.250	32.000	452.004	452.004
82	BCJ-B	49+08.322	58.832	452.903	453.033	85	BCJ-B	49+38.280	60.418	451.979	452.039	89	C4	49+55.250	26.000	451.946	451.946
82	D3	49+07.585	54.439	452.999	453.130	85	D3	49+37.543	56.034	452.075	452.141	89	C3	49+55.250	18.000	451.821	451.821
82	D2	49+06.131	45.725	453.189	453.322	85	D2	49+36.088	47.319	452.265	452.337	89	BCJ-F	49+55.250	16.500	451.798	451.798
82	D1	49+05.260	36.515	453.335	453.469	85	D1	49+35.252	39.285	452.425	452.500	89	C2	49+55.250	10.000	451.696	451.696
82																	

Joint Size	"C" at 50°F	"D" at 50°F	Location
4"	3"	2 1/2" Min.	Pier 5

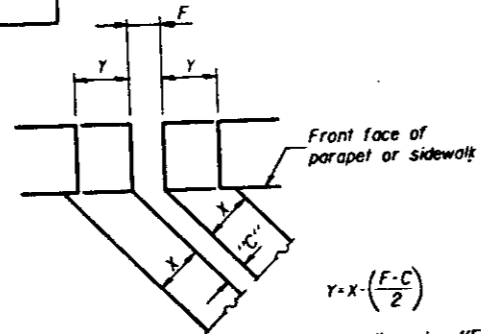
INSTALLATION NOTES

- Install sponge mandrels into positions shown to form flap convolution.
- Install parapet or sidewalk piece (trim roadway flap to fit before applying epoxy).
- Install continuous seal in roadway.
- Install anchor blocks as indicated.

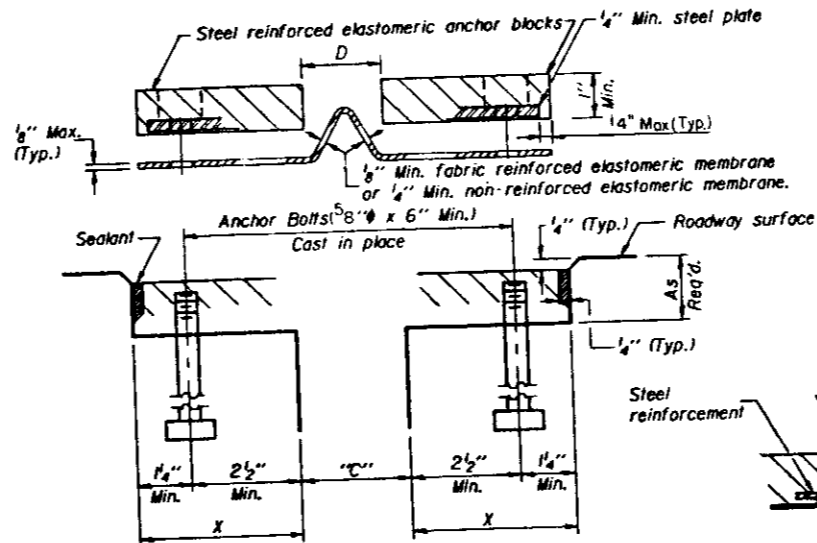
NOTE A: Maximum spacing of anchor bolts shall be 12" centers.

SKREW LIMITATIONS

The details of the anchor blocks and the elastomeric membrane in the parapet, as shown, are for up to 50° skews. For skews greater than 50° the anchor blocks and the elastomeric membrane, installed in accordance with dimension "D" might require modifications to insure a minimum clearance of 1/2" from centerline of anchor studs to edge of parapet opening. The anchor blocks and the elastomeric membrane shall also be installed to the top of the parapet with the anchor studs spaced at ±12" cts.



FORMING BLOCKOUT SKETCH

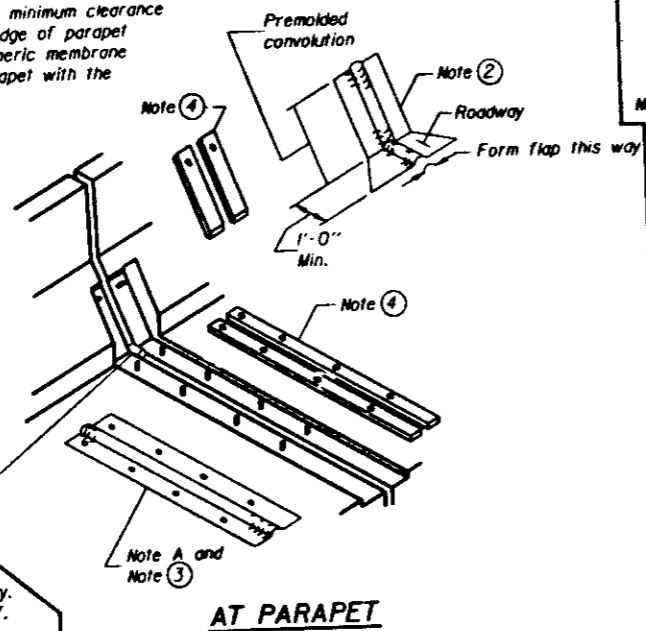


CROSS SECTION

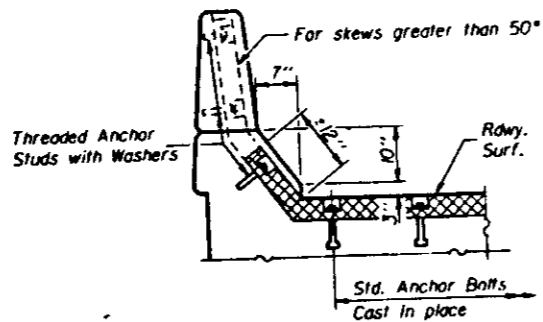
ANCHOR BLOCK REINFORCEMENT WITH ASPHALT SURFACE

GENERAL NOTES

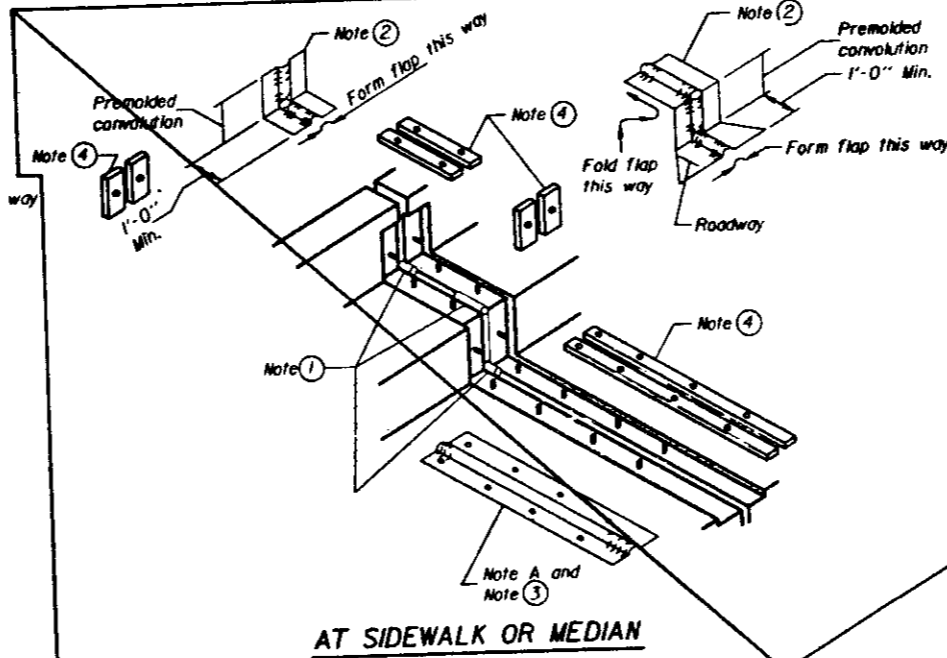
Continuous Seal Neoprene Expansion Joint shall consist of molded anchor blocks of elastomer and steel, field assembled over continuous lengths of elastomeric membrane. See Special Provisions.
The elastomeric membrane shall be pre-molded with a single or a double upward convolution that will have a "memory" to return to its molded position upon joint closure.
The steel reinforcement must extend up the back face of anchor blocks when asphalt surfaces are used but is optional in concrete blockout.
The convolution length shall be such that the extended length will not be greater than the manufactured length when the joint is fully expanded in its design range and will not protrude above the anchor blocks when the joint is fully compressed.
Joint openings shall be adjusted in accordance with Article 503.07(c) of the Standard Specifications when the deck is poured at an ambient temperature other than 50° F.
The parapet and sidewalk flaps may be furnished factory vulcanized to the roadway membrane provided the centerline of the convolution is maintained and the process and method meet the approval of the Engineer.



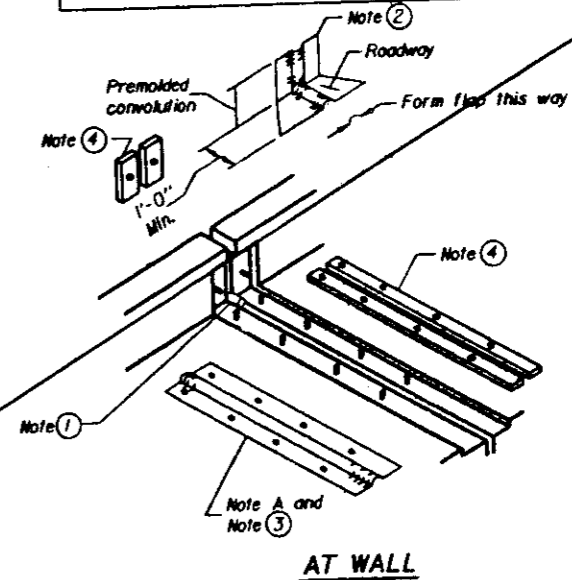
AT PARAPET



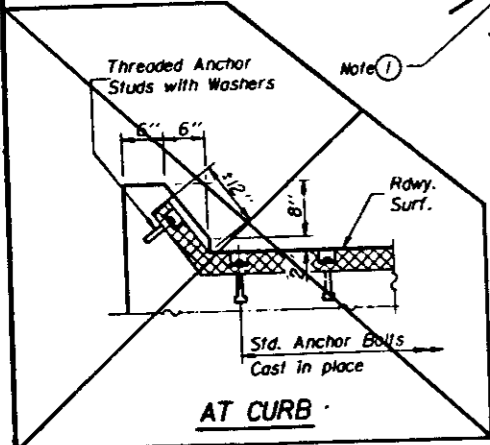
AT PARAPET



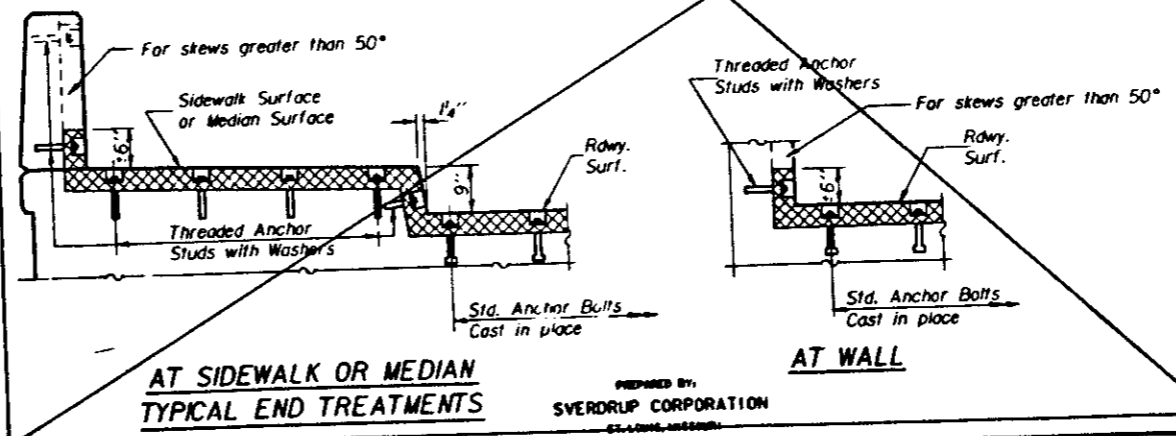
AT SIDEWALK OR MEDIAN



AT WALL



AT CURB



AT SIDEWALK OR MEDIAN TYPICAL END TREATMENTS

AT WALL

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
CONTINUOUS SEAL TYPE
NEOPRENE EXPANSION JOINT
FOR 4" MOVEMENT
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

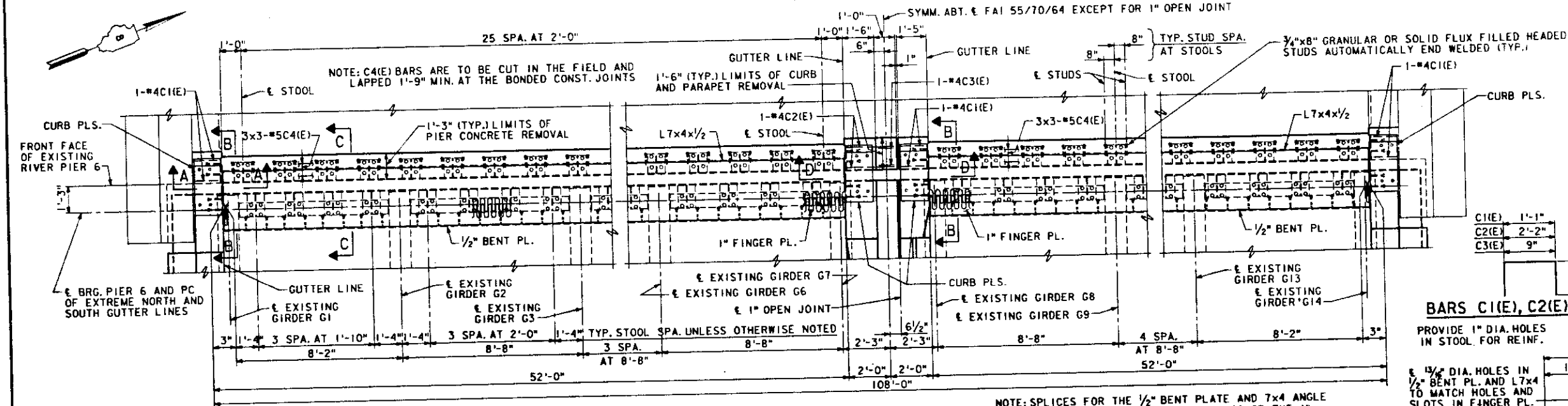
DESIGNED	
CHECKED	
DRAWN	F. A. Camba
CHECKED	

*82-3HVB-2R-2-1

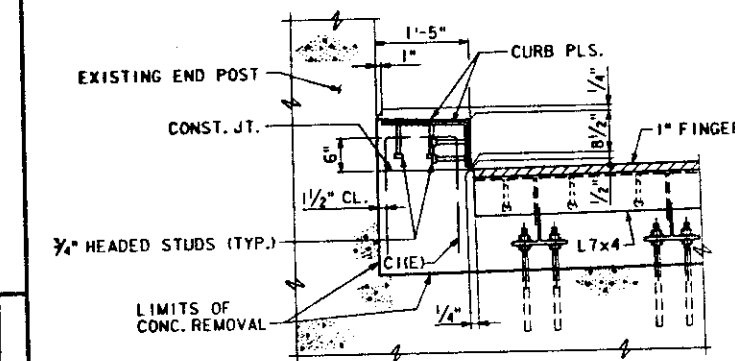
BILL OF MATERIAL

BAR LIST-RIVER PIER 6				
BAR	NO.	SIZE	LENGTH	SHAPE
C1(E)	6	#4	4'-7"	□
C2(E)	2	#4	5'-8"	□
C3(E)	2	#4	7'-5"	□
C4(E)	18	#5	25'-0"	□
CLASS X CONCRETE			CU. YDS.	7.5
REINFORCEMENT BARS (EPOXY COATED)			LBS.	500
CONCRETE REMOVAL			CU. YDS.	7.5

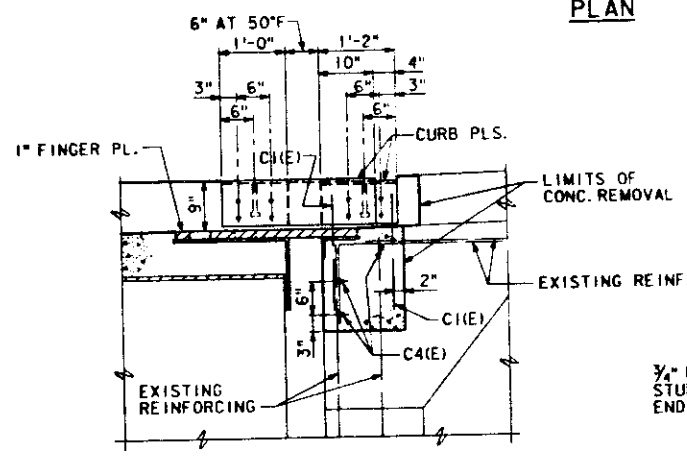
REINFORCEMENT BARS MARKED (E) SHALL BE EPOXY COATED.



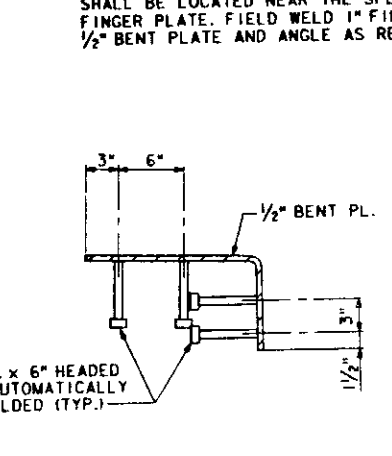
PLAN



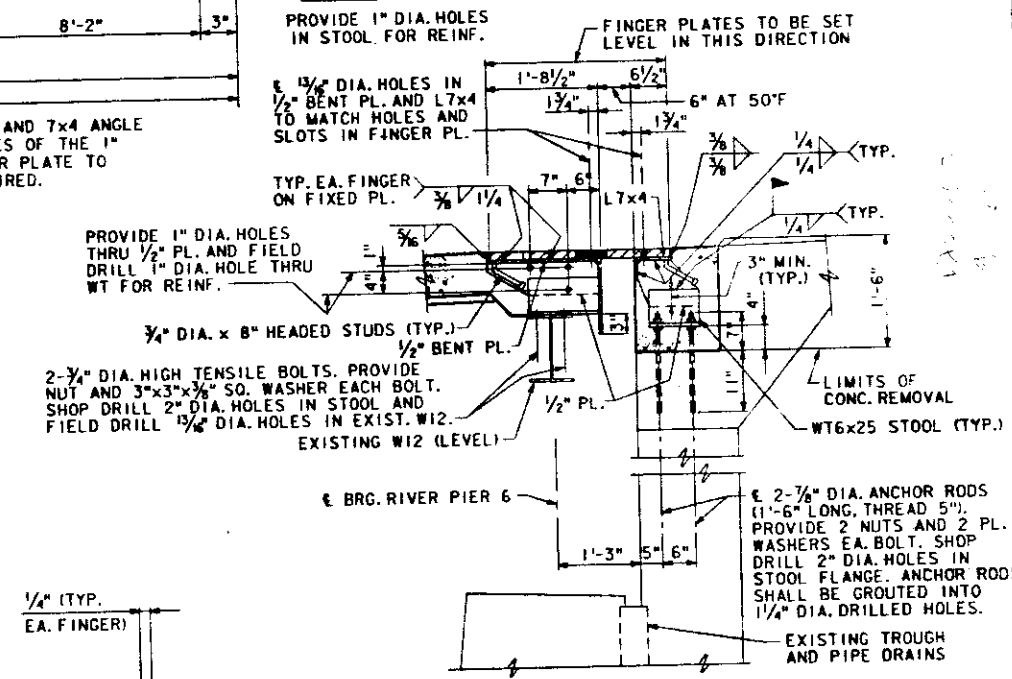
SECTION A-A



SECTION B-B
NOTE: EXISTING END POST OR PARAPET NOT SHOWN.

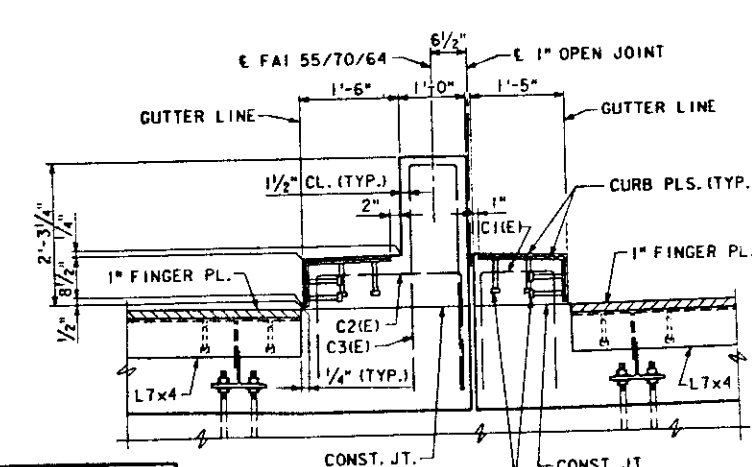


SECTION THRU CURB PLATE

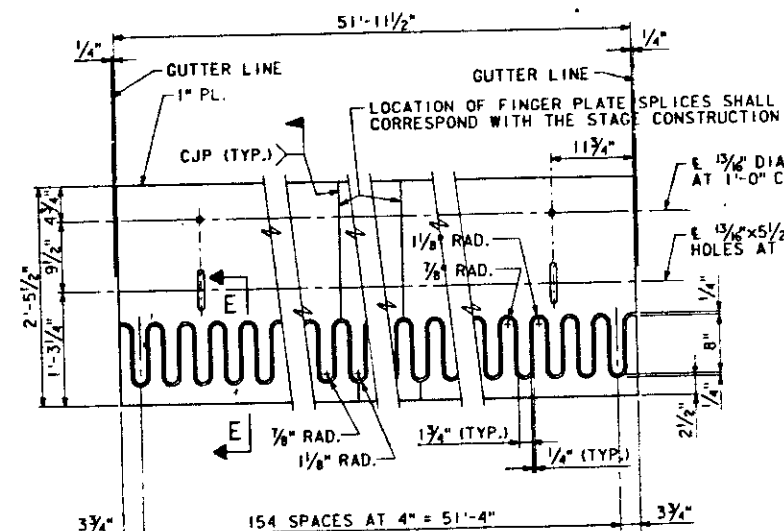


SECTION C-C
NOTE: REINFORCEMENT NOT SHOWN.

SECTION E-E

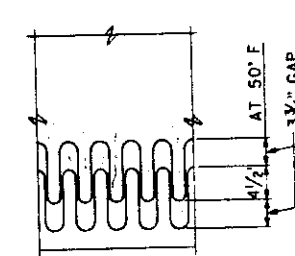


SECTION D-D



FINGER PLATE CUTTING DETAIL
NOTE: FINGER PLATE SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(I) OF THE STANDARD SPECIFICATION USING A 1/4" WIDE CUT.

SECTION E-E



FINGER PLATE SETTING DIAGRAM
NOTE: INCREASE GAP 3/16" FOR EACH 5" FALL IN TEMPERATURE. DECREASE GAP 3/16" FOR EACH 5" RISE IN TEMPERATURE.

NOTES

EXISTING REINFORCEMENT IN RIVER PIER 6 TO BE THOROUGHLY CLEANED AND INCORPORATED INTO THE NEW WORK. EXISTING ANCHOR RODS TO BE CUT OFF 2" ABOVE THE CONCRETE REMOVAL LIMITS.

THE EXPANSION DEVICE SHALL BE FABRICATED TO FIT THE CROSS SLOPE OF THE ROADWAY.

ALL PLATES, STUDS, STOOLES, BOLTS AND ANCHOR RODS COMPLETE IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STRUCTURAL STEEL.

ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-183.

**REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
FINGER PLATE DETAILS-RIVER PIER 6**

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

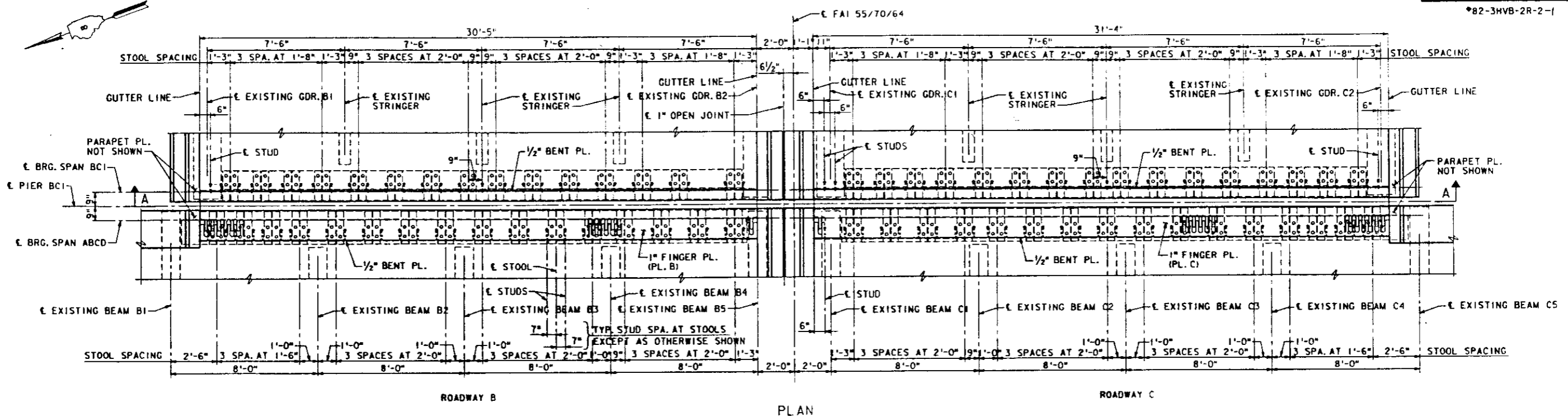
LEVELS PLOTTED DATE: AUG. 10, 1989
FILE: ZP3:110.1385296.DGN
PRF: 885286
10467
885286

S.S. STEIB
DESIGNED
J.P. MCCARTY
CHECKED
C. DEED
DRAWN
R.F. BECK
CHECKED

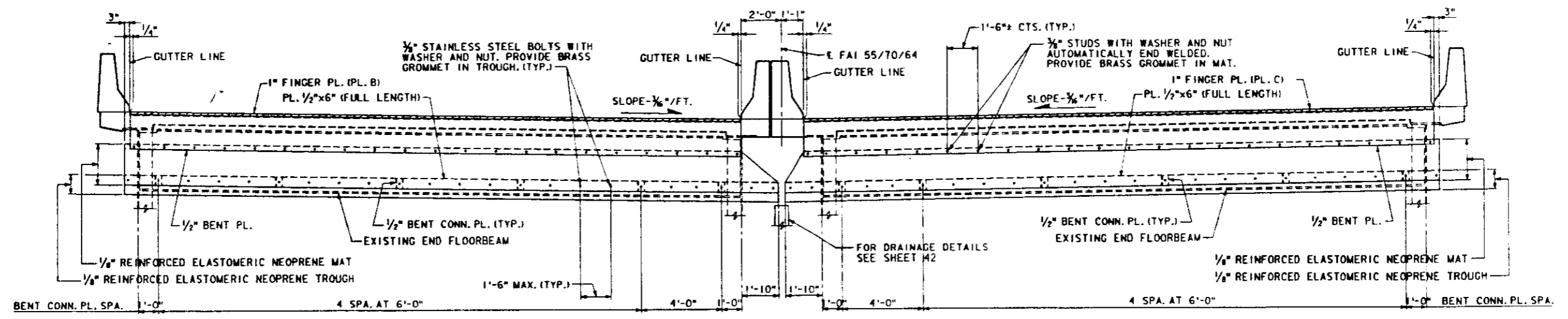
PREPARED BY:
SVDRUP CORPORATION
ST. LOUIS, MISSOURI

ROUTE NO.	SECTION	COUNT	TOTAL SHEETS	SHEET NO.
F.A.I. 70	•	ST. CLAIR	105	78
ILLINOIS		PROJECT		

82-3HVB-2R-2-1



PLAN



SECTION A-A

NOTE: CONN. PLATE SPA. SHOWN IS FOR SPAN BCI ONLY.
SPACING IN SPAN ABCD IS SIMILAR, 6'-0" MAX.

NOTES

- WORK THIS SHEET WITH SHEET 36.
- ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-183.
- THE EXPANSION DEVICE SHALL BE FABRICATED TO FIT THE ROADWAY GRADE AND CROSS SLOPE.
- ALL PLATES, STUDS, STOOLS AND BOLTS FOR THE EXPANSION DEVICE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STRUCTURAL STEEL.
- THE COST OF THE REINFORCED ELASTOMERIC NEOPRENE MAT AND TROUGH COMPLETE IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR REINFORCED NEOPRENE EXPANSION JOINT TREATMENT, SEE SPECIAL PROVISIONS.

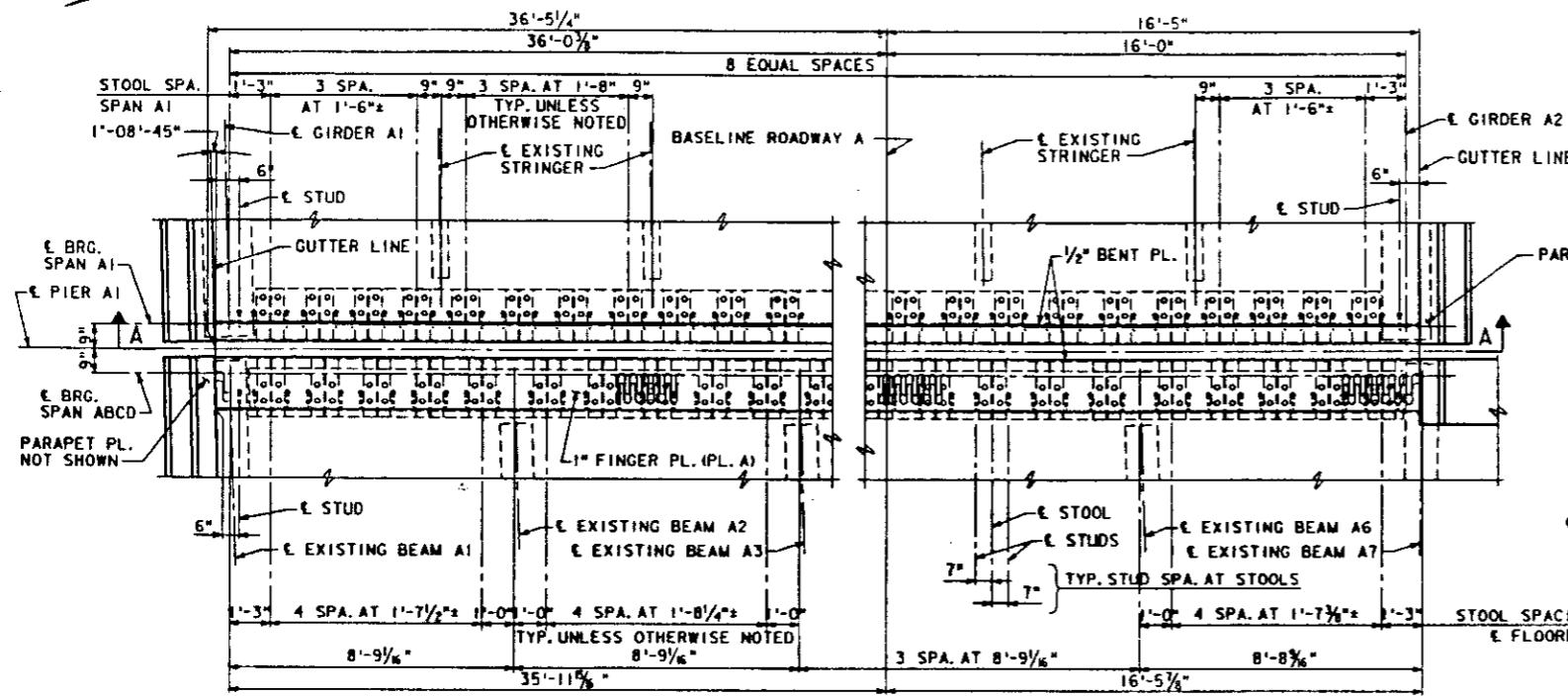
REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
FINGER PLATE DETAILS-PIER BCI
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

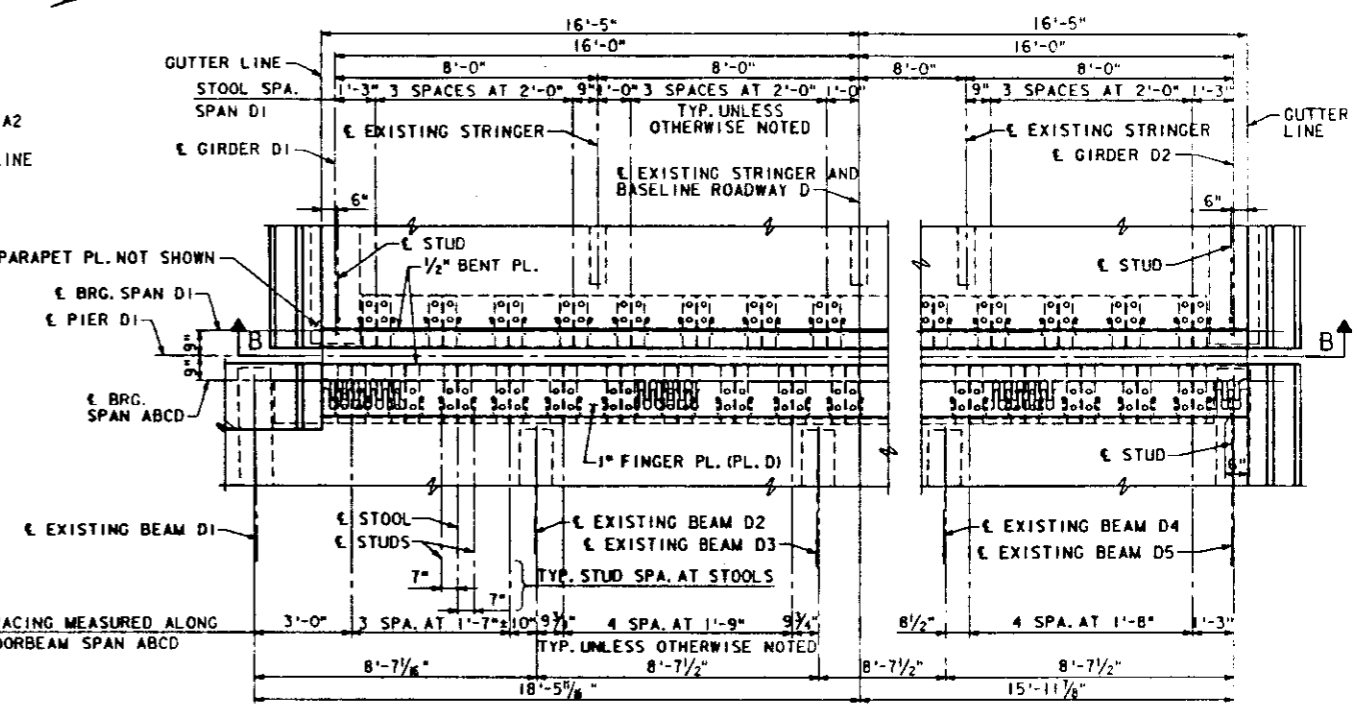
10487 FILE: ZF31110.1388291.DGN
 LEVELS PLOTTED DATE: AUG. 10, 1989
 885297 PRF: 885297 35 56 58 63

S.S. STEIB	DESIGNED
J. McCARTY	CHECKED
C. DEED	CHECKED
R.F. BECK	CHECKED

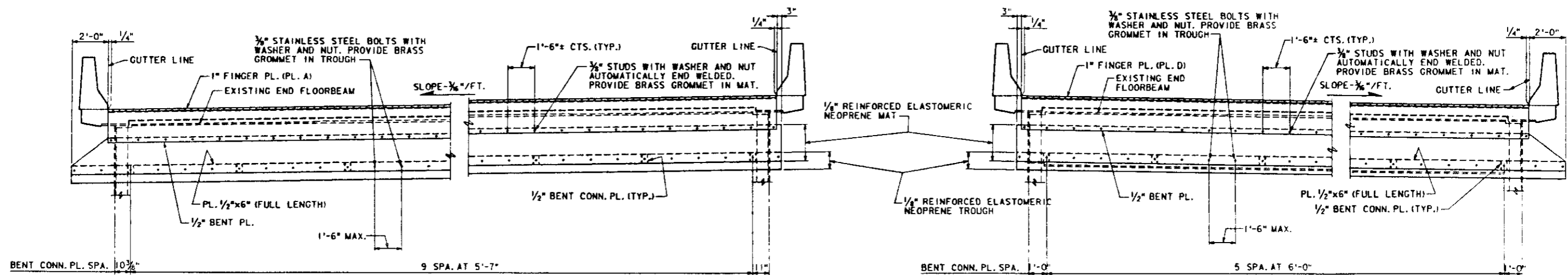
*B2-3HVB-2R-2-1



ROADWAY A
PLAN



ROADWAY D
PLAN



SECTION A-A

SECTION B-B

NOTE: CONN. PLATE SPACING SHOWN IS FOR SPANS A1 AND D1 ONLY.
SPACING IN SPAN ABCD IS SIMILAR, 6'-0\"/>

NOTES

WORK THIS SHEET WITH SHEET 36.
ALL STRUCTURAL STEEL SHALL CONFORM TO AASHTO M-183.
THE EXPANSION DEVICE SHALL BE FABRICATED TO FIT THE ROADWAY GRADE AND CROSS SLOPE.
ALL PLATES, STUDS, STOOLS AND BOLTS FOR THE EXPANSION DEVICE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR STRUCTURAL STEEL.
THE COST OF THE REINFORCED ELASTOMERIC NEOPRENE MAT AND TROUGH COMPLETE IN PLACE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR REINFORCED NEOPRENE EXPANSION JOINT TREATMENT. SEE SPECIAL PROVISIONS.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
FINGER PLATE DETAILS
PIERS A1 AND D1
STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487
885298
FILE: ZF 3-11-10:1885298.DGN
PRF: 885298
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 58 63

DESIGNED	S.S. STEIB
CHECKED	J. McCARTY
DRAWN	C. DEED
CHECKED	R.F. BECK

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	105	80

82-3HVB-2R-2-1

NOTE: SPLICES FOR THE 1/2" BENT PLATES SHALL BE LOCATED NEAR THE SPLICES OF THE 1" FINGER PLATE. FIELD WELD 1" FINGER PLATE TO 1/2" BENT PLATES AS REQUIRED.

PROVIDE 1" DIA. HOLES THRU 1/2" PL. AND FIELD DRILL 1" DIA. HOLES THRU WT FOR REINF.

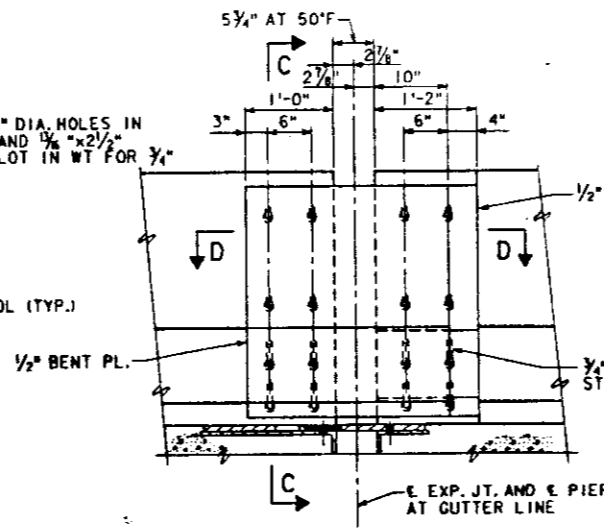
2-3/4" DIA. HIGH TENSILE BOLTS. PROVIDE NUT AND 3"x3"x3/8" SO. WASHER EACH BOLT. SHOP DRILL 2" DIA. HOLES IN STOOL AND FIELD DRILL 1/2" DIA. HOLES IN EXIST. END FLOORBEAM (TYP.)

3/8" DIA. HOLES FOR 3/4" H.S. BOLTS. FIELD DRILL HOLES IN WEB

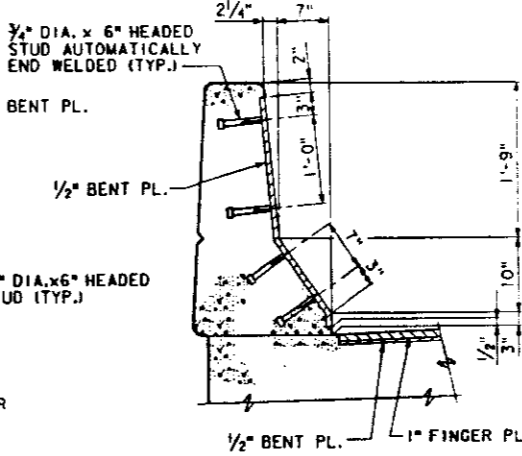
EXISTING END FLOORBEAM (PL. GIRDER)
1/2" BENT CONN. PL. (TYP.) (SEE DETAIL)
3/8" STAINLESS STEEL BOLTS

TYPICAL SECTION AT PIERS

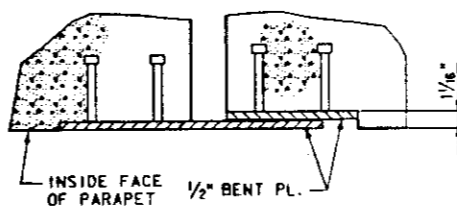
(SECTION SHOWN IS NORMAL TO E PIER)
NOTE: CUT EXISTING EXTERIOR GIRDERS OR BEAMS WHERE REQUIRED TO CLEAR 1/2" PLATES AND TROUGH.



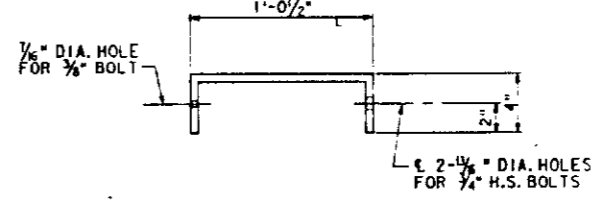
PARAPET SLIDING PLATE DETAIL



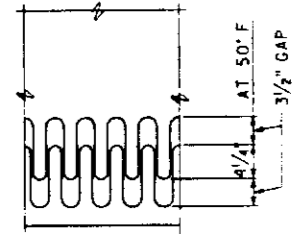
SECTION C-C



SECTION D-D

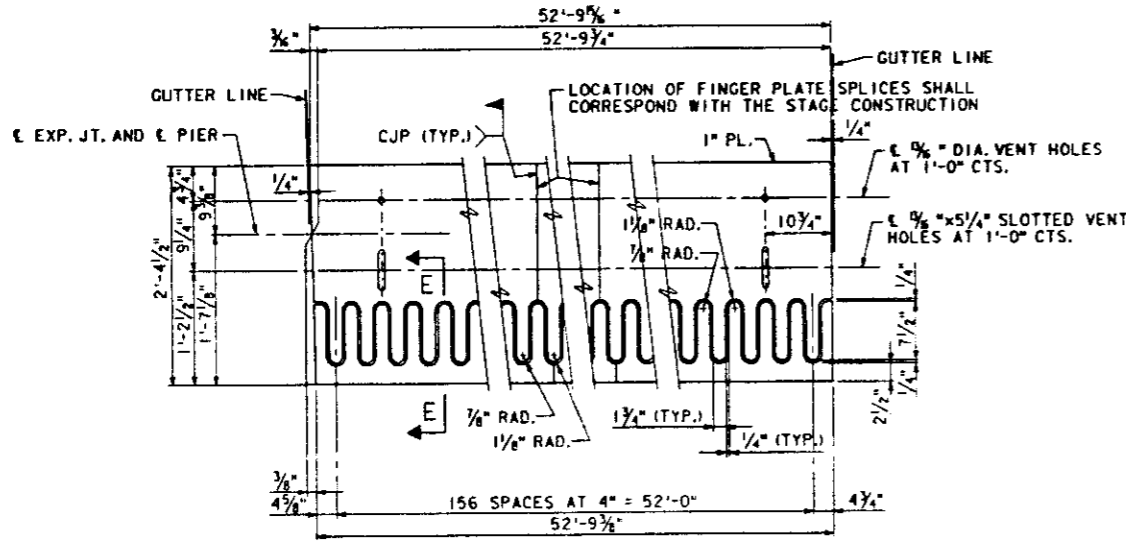


CONNECTION PLATE DETAIL



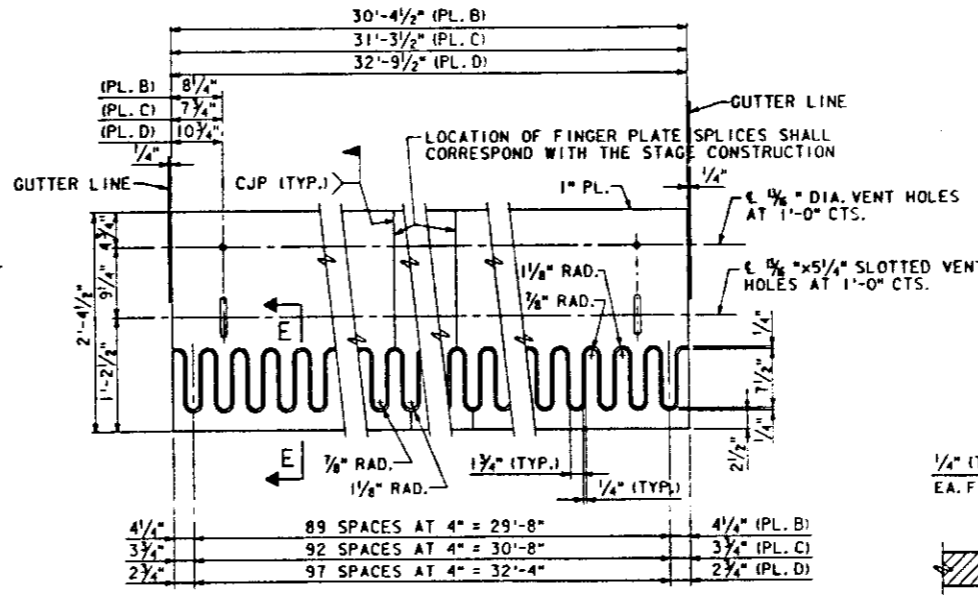
FINGER PLATE SETTING DIAGRAM

NOTE: INCREASE GAP 3/8" FOR EACH 5" FALL IN TEMPERATURE.
DECREASE GAP 3/8" FOR EACH 5" RISE IN TEMPERATURE.



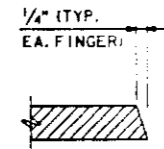
FINGER PLATE CUTTING DETAIL-PL. A

NOTE: FINGER PLATE SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(L) OF THE STANDARD SPECIFICATION USING A 1/4" WIDE CUT.



FINGER PLATE CUTTING DETAIL-PLS. B, C AND D

NOTE: FINGER PLATE SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 507.04(L) OF THE STANDARD SPECIFICATION USING A 1/4" WIDE CUT.



SECTION E-E

10487 FILE:ZF31110.13885299.DGN
895299 PRF: 885299
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 58 63

S.S. STEIB	DESIGNED
J. McCARTY	CHECKED
C. DEED	DRAWN
R.F. BECK	CHECKED

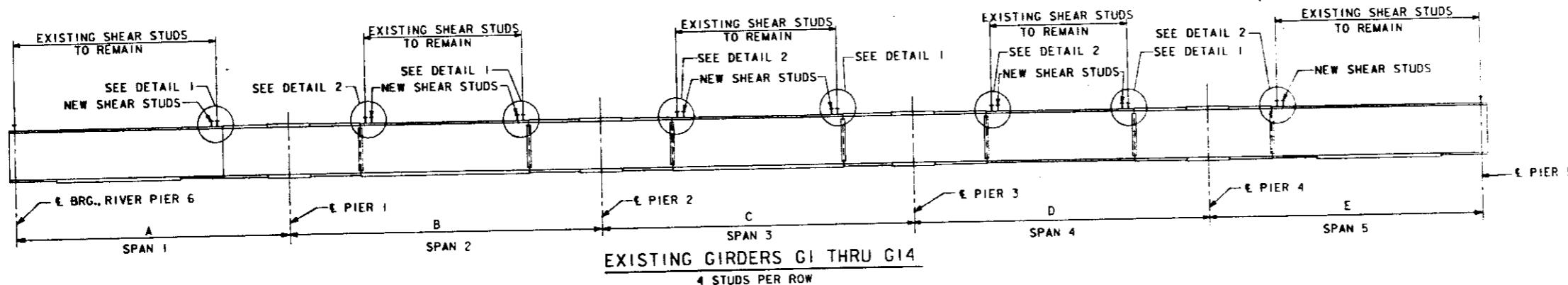
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
FINGER PLATE DETAILS
PIERS A1, BCI AND D1
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.
SHEET NO. 36 OF 45

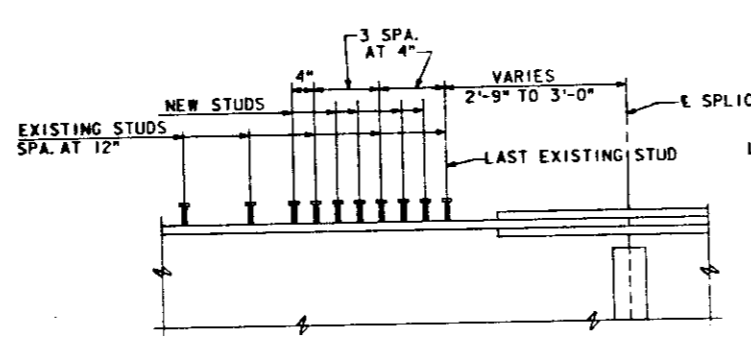
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	105	81
ILLINOIS		PROJECT		

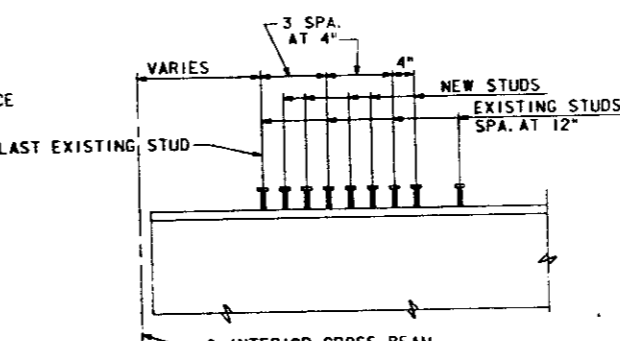
*B2-3HVB-2R-2-1



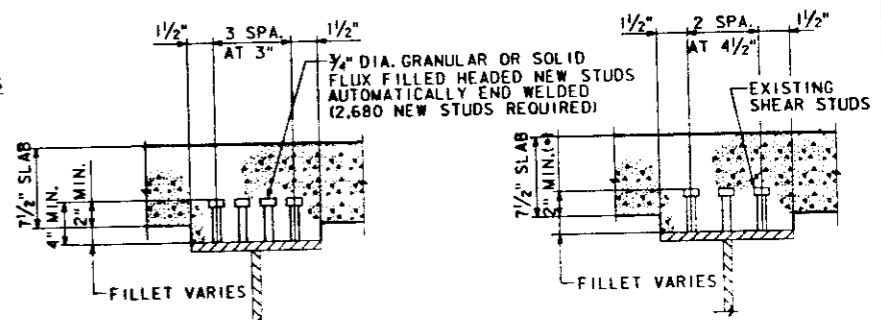
GIRDER	A	B	C	D	E
G1	141'-0 ³ / ₄ "	161'-3 ³ / ₄ "	161'-6 ³ / ₄ "	152'-9 ¹ / ₂ "	142'-0 ¹ / ₂ "
G2	139'-7 ³ / ₄ "	161'-0"	161'-0"	152'-0"	141'-0"
G3	138'-1 ¹ / ₂ "	161'-0"	161'-0"	152'-0"	141'-0"
G4	136'-8 ³ / ₄ "	161'-0"	161'-0"	152'-0"	141'-0"
G5	135'-3 ³ / ₄ "	161'-0"	161'-0"	152'-0"	141'-0"
G6	133'-9 ³ / ₄ "	161'-0"	161'-0"	152'-0"	141'-0"
G7	132'-4 ¹ / ₂ "	161'-0"	161'-0"	152'-0"	141'-0"
G8	131'-7 ¹ / ₂ "	161'-0"	161'-0"	152'-0"	141'-0"
G9	130'-2 ¹ / ₈ "	161'-0"	161'-0"	152'-0"	141'-0"
G10	128'-8 ³ / ₄ "	161'-0"	161'-0"	152'-0"	141'-0"
G11	127'-3 ³ / ₄ "	161'-0"	161'-0"	152'-0"	141'-0"
G12	125'-10 ¹ / ₈ "	161'-0"	161'-0"	152'-0"	141'-0"
G13	124'-4 ¹ / ₈ "	161'-0"	161'-0"	152'-0"	141'-0"
G14	122'-10 ¹ / ₄ "	160'-1 ³ / ₄ "	159'-9 ³ / ₄ "	150'-10 ¹ / ₄ "	139'-11 ¹ / ₄ "



DETAIL 1
DETAIL 2
SIMILAR TO DETAIL 1 BUT OPPOSITE HAND.



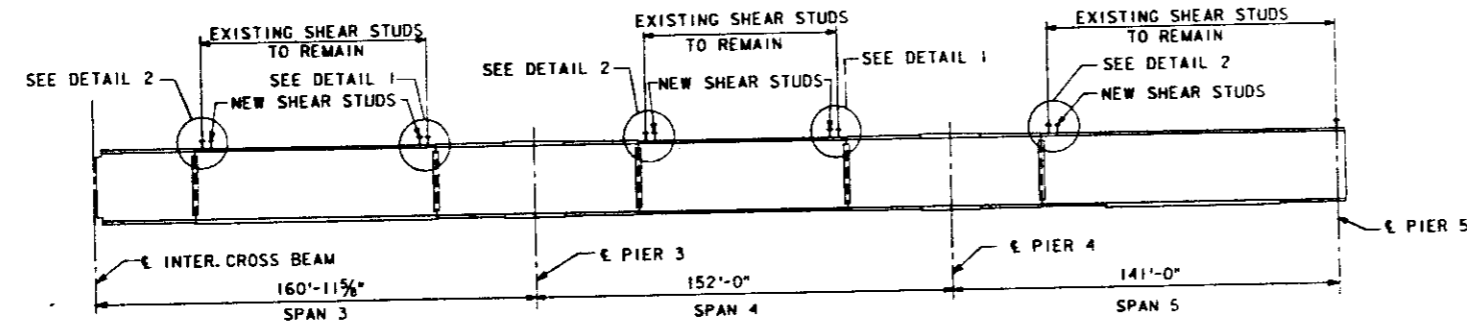
DETAIL 3



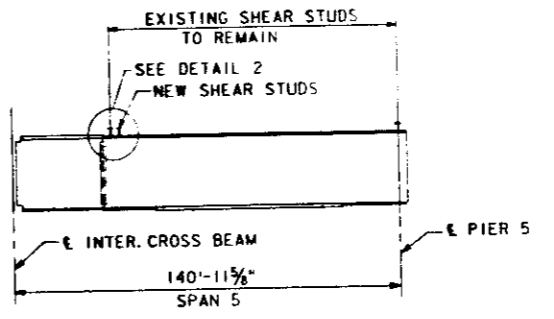
SPANS 1 THRU 5

TYPICAL SECTION

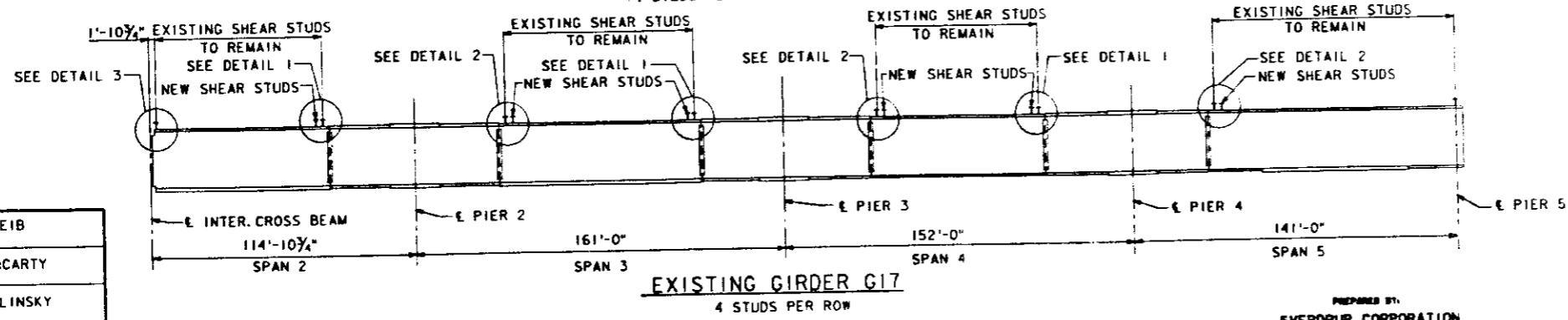
(*) EXISTING SHEAR STUDS AT LOCATIONS WHERE THIS MINIMUM DIMENSION CAN NOT BE MAINTAINED SHALL BE REPLACED WITH LONGER STUDS OF SAME DIAMETER AND IN THE SAME LOCATION. FOR PAYMENT SEE SPECIAL PROVISIONS.



EXISTING GIRDER G16
4 STUDS PER ROW



EXISTING GIRDER G15
4 STUDS PER ROW



EXISTING GIRDER G17
4 STUDS PER ROW

NOTES

WORK THIS SHEET WITH SHEET 38.
IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REPLACE ALL SHEAR CONNECTORS DAMAGED DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER. ANY DAMAGED SHEAR CONNECTOR SHALL BE REMOVED AND THE FLANGE SURFACE SHALL BE GROUND SMOOTH AND FLUSH. IN CASE OF A PULLOUT OF METAL, THE POCKET SHALL BE FILLED WITH WELD METAL USING THE SHIELDED METAL-ARC PROCESS WITH LOW HYDROGEN ELECTRODES AND THEN GROUND FLUSH. REPLACEMENT SHEAR CONNECTOR SHALL BE OF THE SAME TYPE AND SIZE AS THE DAMAGED SHEAR CONNECTOR IT REPLACES AND SHALL BE PLACED IN THE SAME LOCATION.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
STEEL DETAILS

STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 37 OF 45

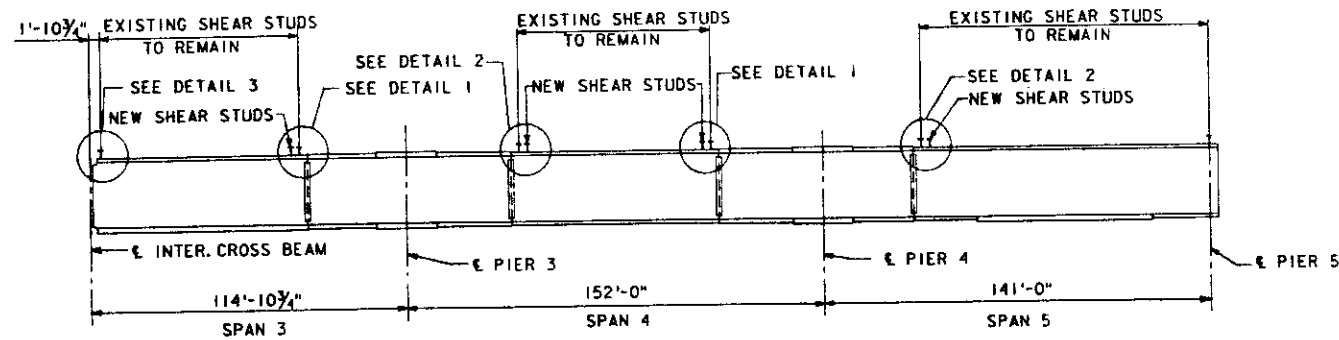
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487 FILE: ZF31101J88S285.DGN
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 63
88S285 PRF: 88S285

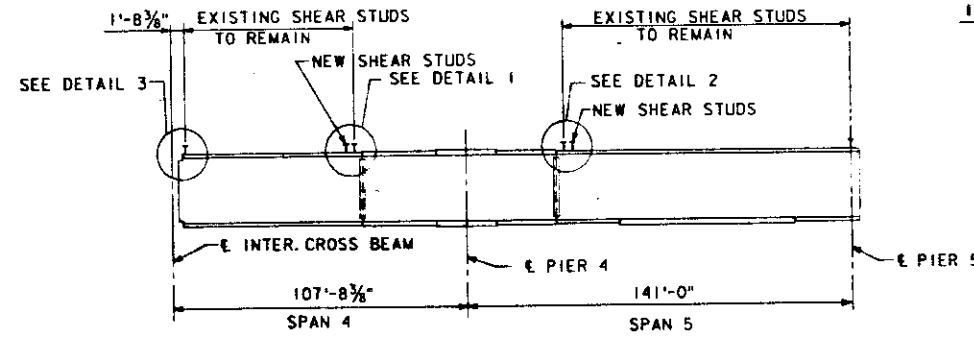
S.S. STEIB DESIGNED
J.P. McCARTY CHECKED
M.J. JALINSKY DRAWN
C. LIZANA CHECKED

DATE	REVISION	QUANTITY	TOTAL SHEETS	SHEET
F.A.I. 70		ST. CLAIR	105	82
		ILLINOIS	PROJECT	

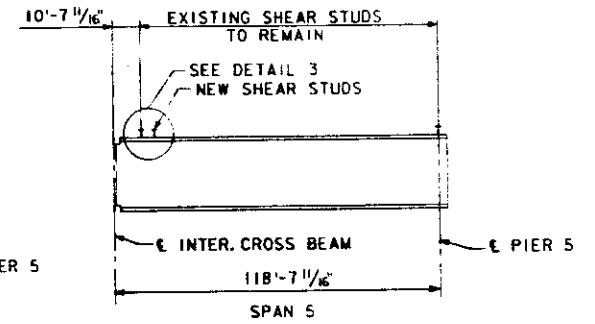
82-3HVB-2R-2-1



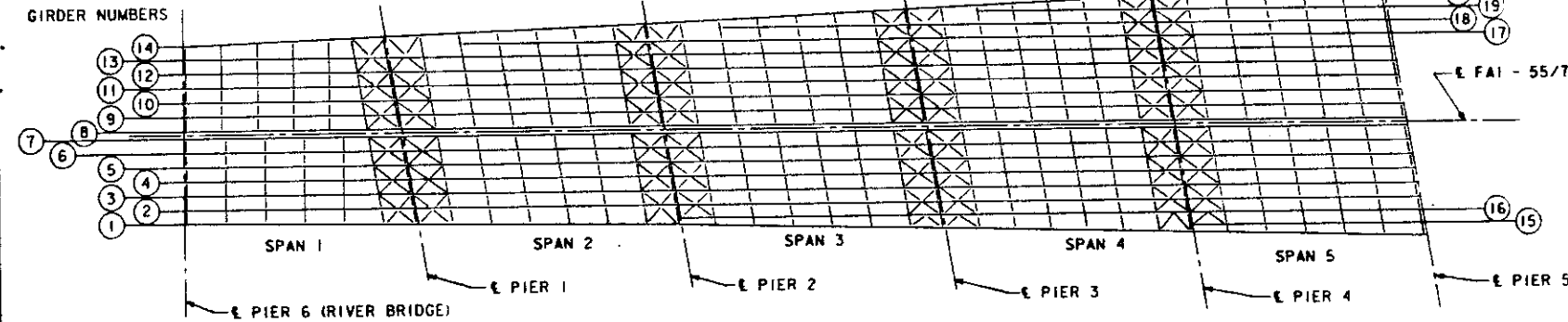
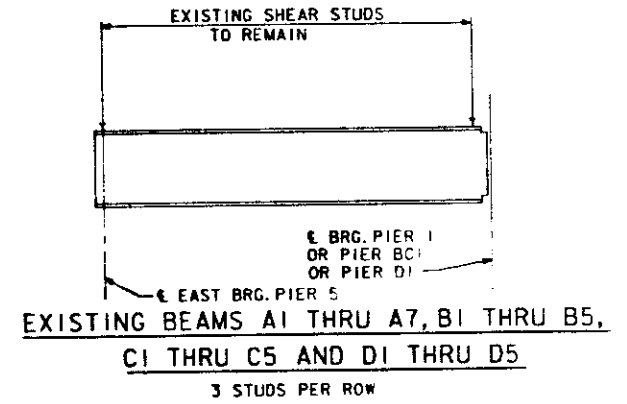
EXISTING GIRDER G18
4 STUDS PER ROW



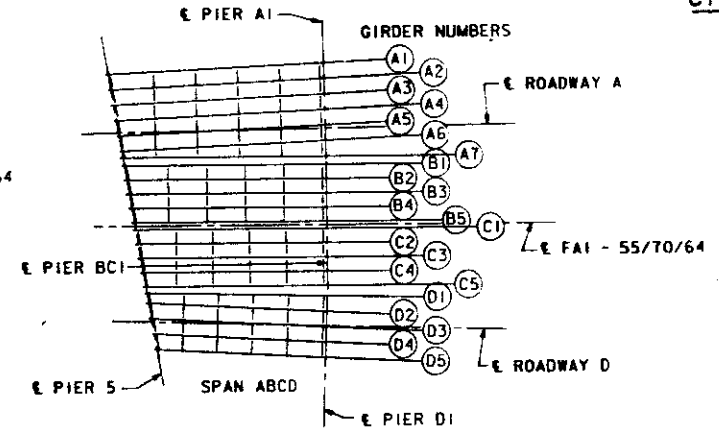
EXISTING GIRDER G19
4 STUDS PER ROW



EXISTING GIRDER G20
4 STUDS PER ROW



EXISTING FRAMING PLAN SPANS 1 THRU 5



EXISTING FRAMING PLAN SPAN ABCD

NOTES

WORK THIS SHEET WITH SHEET 37.

**REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE**

STEEL DETAILS

STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 38 OF 45

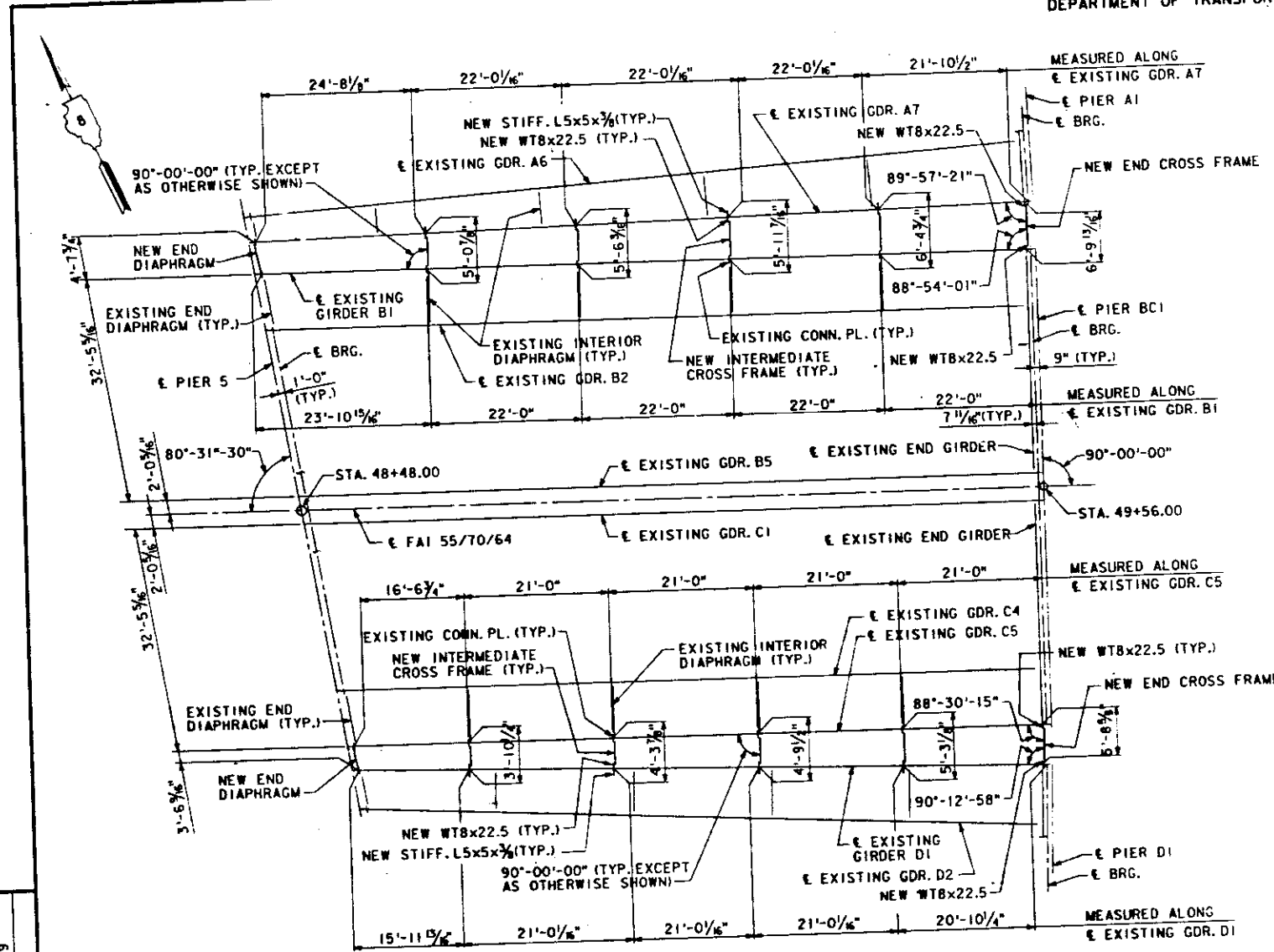
PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487
885292
FILE: ZF31E10.13885292.DGN
PRF: 885292
LEVELS PLOTTED
35 56 58 63
DATE: AUG. 10, 1989

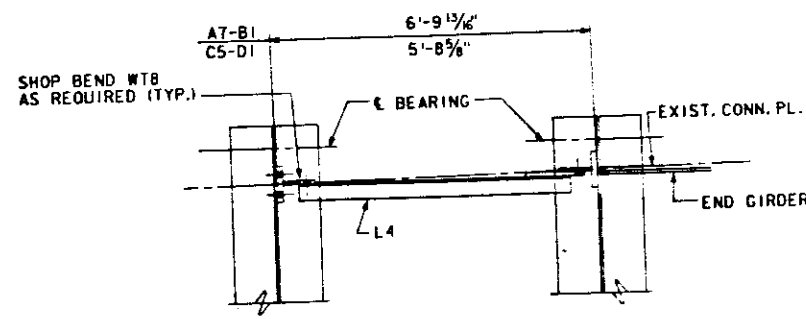
S.S. STEIB	DESIGNED
J.P. McCARTY	CHECKED
M.J. JALINSKY	DRAWN
C.A. LIZANA	CHECKED

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	•	ST. CLAIR	105	83
ILLINOIS	PROJECT			

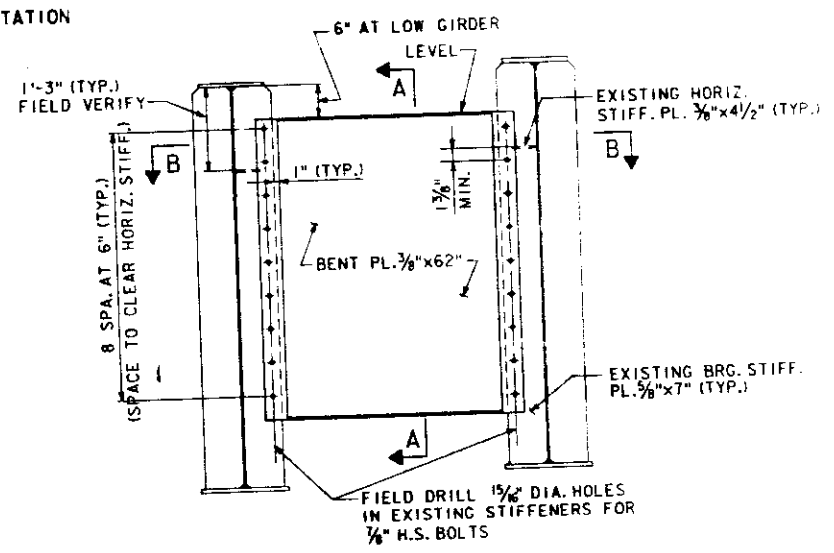
*82-3HVB-2R-2-1



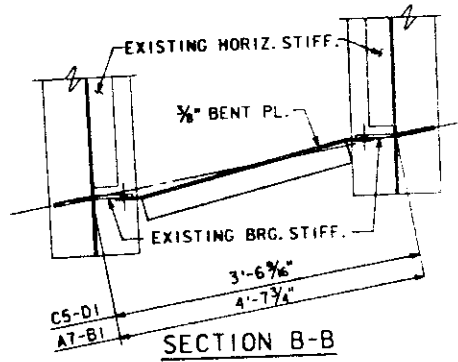
FRAMING PLAN - SPAN ABCD



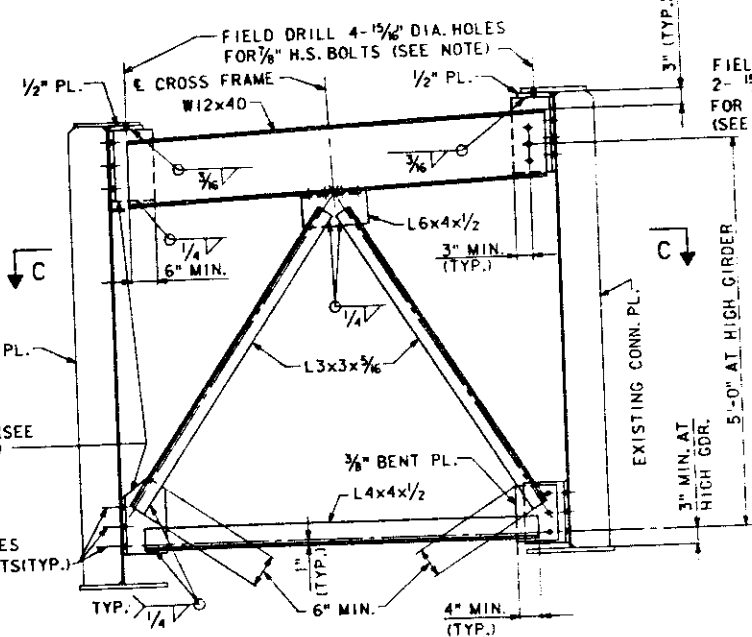
SECTION C-C



TYPICAL END DIAPHRAGM

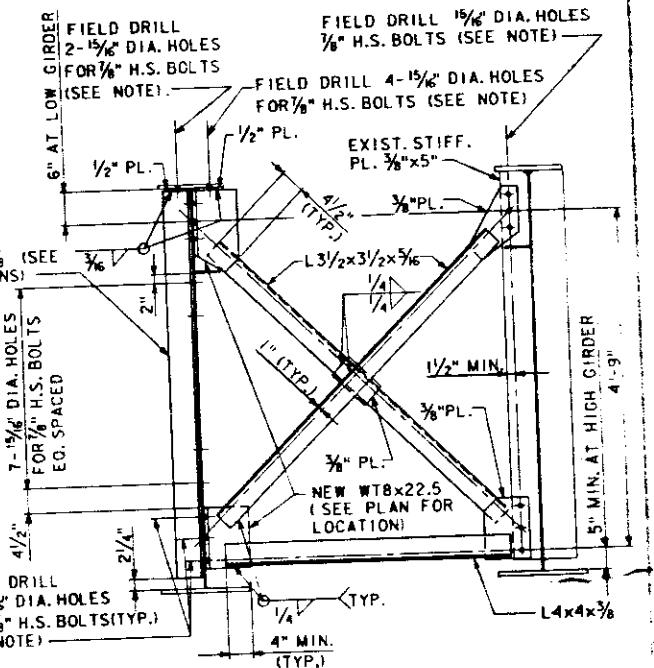


SECTION B-B



TYPICAL END CROSS FRAME

SECTION A-A



TYPICAL INTERMEDIATE CROSS FRAME

NOTES

- FIELD DRILLING OF HOLES FOR ALL INTERMEDIATE AND END CROSS FRAMES EXCEPT THOSE IN THE TOP FLANGE SHALL BE MADE AFTER DECK IS PLACED.
- ALL NEW STIFFENERS AND CONNECTION PLATES SHALL BE VERTICAL.
- ALL SHOP AND FIELD DRILLED 1 1/2" DIA. HOLES FOR 3/8" BOLTS REQUIRE 2 HARDENED WASHERS.
- FASTENERS SHALL BE 3/8" HIGH STRENGTH BOLTS AASHTO M164 WITH 1 1/16" OPEN HOLES UNLESS OTHERWISE NOTED.

**REHABILITATION FOR
FAI - 55/70 COMPLEX**
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
STEEL DETAILS

STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

10487	FILE: ZF31110,13885315.DGN	LEVELS PLOTTED	DATE: AUG. 10, 1989
885315	PRF: 885315	35 56 58 63	
		S.S. STEIB	DESIGNED
		J. McCARTY	CHECKED
		C. DEED	CHECKED
		S.S. STEIB	DRAWN
			CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

*82-3HVB-2R-2-1

MOMENT TABLE												
	TYPICAL INTERIOR GIRDER									72" GIRDER	60" GIRDER	
	SPANS 1 THRU 5									SPAN ABCD	SPAN ABCD	
	0.4 SPAN 1	PIER 1	0.5 SPAN 2	PIER 2	0.5 SPAN 3	PIER 3	0.5 SPAN 4	PIER 4	0.6 SPAN 5	0.5 SPAN ABCD	0.5 SPAN ABCD	
I _s	(In ⁴)	51,776	92,898	47,634	99,289	49,773	92,898	42,877	92,898	55,427	66,519	42,858
I _c	(In ⁴)	133,180	—	114,653	—	121,620	—	100,042	—	141,304	145,686	101,293
S _s	(In ³)	1,763	2,469	1,519	2,630	1,641	2,469	1,272	2,469	2,005	2,156	1,736
S _c	(In ³)	2,414	—	2,044	—	2,202	—	1,728	—	2,675	2,680	2,189
Q	(kips/ft.)	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,046	1,810	1,443
M _Q	(ft.-kips)	1,395	2,628	855	2,439	1,059	2,222	670	2,479	1,504	1,810	1,443
f _s (non-comp.)	(ksi)	9.5	12.8	6.8	11.1	7.7	10.8	6.3	12.0	9.0	10.1	10.0
S _Q	(kips/ft.)	.338	.338	.338	.338	.338	.338	.338	.338	.338	.290	.285
M _{SQ}	(ft.-kips)	519	678	425	662	456	617	352	632	553	512	436
M _L	(ft.-kips)	1,487	1,484	1,483	1,560	1,550	1,496	1,333	1,410	1,519	1,483	1,239
M _{IMP}	(ft.-kips)	281	270	260	273	271	266	241	260	285	304	263
M (total)	(ft.-kips)	2,287	2,432	2,168	2,495	2,277	2,379	1,926	2,301	2,357	2,299	1,938
f _s (comp.)	(ksi)	11.4	11.8	12.7	11.4	12.4	11.6	13.4	11.2	10.6	10.3	10.6
f _s (total)	(ksi)	20.9	24.6	19.5	22.5	20.1	22.4	19.7	23.2	19.6	20.4	20.6
VR	(kips)	68.6	—	61.5	—	62.7	—	61.1	—	68.8	63.6	58.1

MOMENT TABLE			
		END GIRDER L1-A	END GIRDER L1-D
		0.5 PT.	0.5 PT.
I	(In ⁴)	110,526	40,380
S	(In ³)	2,902	1,297
Q	(SEE NOTE) (kips/ft.)	7,119	5,767
S _Q	(SEE NOTE) (kips/ft.)	1,847	1,698
M _Q	(ft.-kips)	2,451	856
M _{SQ}	(ft.-kips)	636	252
M _L	(ft.-kips)	1,659	798
M _{IMP}	(ft.-kips)	345	179
M (total)	(ft.-kips)	5,091	2,085
f _s (total)	(ksi)	21.1	19.3

NOTE: THE VALUE GIVEN IS THE EQUIVALENT UNIFORM D.L. (OR S.D.L.) REQUIRED TO OBTAIN THE MAXIMUM D.L. (OR S.D.L.) MOMENT GIVEN.

NOTES

I_s AND S_s ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING f_s (total).
I_c AND S_c ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f_s (total).
M_Q - MOMENT DUE TO DEAD LOADS ON NON-COMPOSITE SECTION.
M_{SQ} - MOMENT DUE TO DEAD LOADS ON COMPOSITE SECTION.
M_L - MOMENT DUE TO LIVE LOAD ON NON-COMPOSITE OR COMPOSITE SECTION.
IMP - LIVE LOAD IMPACT.
VR IS THE MAXIMUM Q + IMP SHEAR RANGE IN SPAN.
SECTION PROPERTIES ARE COMPUTED BASED ON EXISTING GIRDER DETAILS.

REACTION TABLE											
	RIVER PIER 6	TYPICAL INTERIOR GIRDER					72" GIRDER SPAN ABCD	60" GIRDER SPAN ABCD	END GIRDER L1-A	END GIRDER L1-D	
		PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 5, A1, BCI OR D1	PIER 5, BCI OR D1	AT GIRDERS A1 AND A7	AT GIRDERS D1 AND D5	
R _Q	(K)	72.0	231.7	223.5	213.1	226.6	75.5	78.1	67.9	189.3	93.8
R _L	(K)	56.3	112.6	115.5	113.0	110.9	57.1	52.8	47.9	104.6	65.1
IMP	(K)	10.7	20.5	20.2	20.1	20.4	10.7	10.8	10.2	21.8	14.7
R TOTAL	(K)	139.0	364.8	359.2	346.2	357.9	143.3	141.7	126.0	315.7	173.6

10487 FILE: ZF3:110.1385320.DGN
885320 PRF: 885320
LEVELS PLOTTED DATE: AUG. 10, 1989
35 56 63

S.S. STEIB DESIGNED
J.P. MCCARTY CHECKED
D.C. SPINK DRAWN
R.D. WINKELMANN CHECKED

PREPARED BY:
SYERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
STRESS TABLES
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

*82-3HVB-2R-2-1

MOMENT TABLE												
TYPICAL INTERIOR GIRDER											72" GIRDER	60" GIRDER
SPANS 1 THRU 5												
		0.4 SPAN 1	PIER 1	0.5 SPAN 2	PIER 2	0.5 SPAN 3	PIER 3	0.5 SPAN 4	PIER 4	0.6 SPAN 5	0.5 SPAN ABCD	0.5 SPAN ABCD
I _s	(In ⁴)	51,776	92,898	47,634	99,289	49,773	92,898	42,877	92,898	55,427	66,519	42,858
I _c	(In ⁴)	133,180	—	114,653	—	121,620	—	100,042	—	141,304	145,686	101,293
S _s	(In ³)	1,763	2,469	1,519	2,630	1,641	2,469	1,272	2,469	2,005	2,156	1,736
S _c	(In ³)	2,414	—	2,044	—	2,202	—	1,728	—	2,675	2,680	2,189
Q	(kips/ft.)	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.046	1.025	.944
M _Q	(ft.-kips)	1,395	2,628	855	2,439	1,059	2,222	670	2,479	1,504	1,810	1,443
f _s (non-comp.)	(ksi)	9.5	12.8	6.8	11.1	7.7	10.8	6.3	12.0	9.0	10.1	10.0
S _Q	(kips/ft.)	.338	.338	.338	.338	.338	.338	.338	.338	.338	.290	.285
M _{SQ}	(ft.-kips)	519	678	425	662	456	617	352	632	553	512	436
M _L	(ft.-kips)	1,487	1,484	1,483	1,560	1,550	1,496	1,333	1,410	1,519	1,483	1,239
M _{IMP}	(ft.-kips)	281	270	260	273	271	266	241	259	285	304	263
M (total)	(ft.-kips)	2,287	2,432	2,168	2,495	2,277	2,379	1,926	2,301	2,357	2,299	1,938
f _s (comp.)	(ksi)	11.4	11.8	12.7	11.4	12.4	11.6	13.4	11.2	10.6	10.3	10.6
f _s (total)	(ksi)	20.9	24.6	19.5	22.5	20.1	22.4	19.7	23.2	19.6	20.4	20.6
VR	(kips)	68.6	—	61.5	—	62.7	—	61.1	—	68.8	63.6	58.1

MOMENT TABLE			
		END GIRDER L1-A	END GIRDER L1-D
		0.5 PT.	0.5 PT.
I	(In ⁴)	110,526	40,380
S	(In ³)	2,902	1,297
Q	(SEE NOTE) (kips/ft.)	7.119	5.767
S _Q	(SEE NOTE) (kips/ft.)	1.847	1.698
M _Q	(ft.-kips)	2,451	856
M _{SQ}	(ft.-kips)	636	252
M _L	(ft.-kips)	1,659	798
M _{IMP}	(ft.-kips)	345	179
M (total)	(ft.-kips)	5,091	2,085
f _s (total)	(ksi)	21.1	19.3

NOTE: THE VALUE GIVEN IS THE EQUIVALENT UNIFORM D.L. (OR S.D.L.) REQUIRED TO OBTAIN THE MAXIMUM D.L. (OR S.D.L.) MOMENT GIVEN.

NOTES

I_s AND S_s ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING f_s (total).
I_c AND S_c ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING f_s (total).
M_Q - MOMENT DUE TO DEAD LOADS ON NON-COMPOSITE SECTION.
M_{SQ} - MOMENT DUE TO DEAD LOADS ON COMPOSITE SECTION.
M_L - MOMENT DUE TO LIVE LOAD ON NON-COMPOSITE OR COMPOSITE SECTION.
IMP - LIVE LOAD IMPACT.
VR IS THE MAXIMUM L + IMP SHEAR RANGE IN SPAN.
SECTION PROPERTIES ARE COMPUTED BASED ON EXISTING GIRDER DETAILS.

REACTION TABLE											
		TYPICAL INTERIOR GIRDER					72" GIRDER SPAN ABCD	60" GIRDER SPAN ABCD	END GIRDER L1-A	END GIRDER L1-D	
		RIVER PIER 6	PIER 1	PIER 2	PIER 3	PIER 4	PIER 5	PIER 5, A1, B C1 OR D1	PIER 5, B C1 OR D1	AT GIRDERS A1 AND A7	AT GIRDERS D1 AND D5
R _Q	(K)	72.0	231.7	223.5	213.1	226.6	75.5	78.1	67.9	189.3	93.8
R _L	(K)	56.3	112.6	115.5	113.0	110.9	57.1	52.8	47.9	104.6	65.1
IMP	(K)	10.7	20.5	20.2	20.1	20.4	10.7	10.8	10.2	21.8	14.7
R TOTAL	(K)	139.0	364.8	359.2	346.2	357.9	143.3	141.7	126.0	315.7	173.6

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 LEVELS PLOTTED DATE: AUG. 10, 1989
 35 56 63
 RBS320 PRF: 88S320

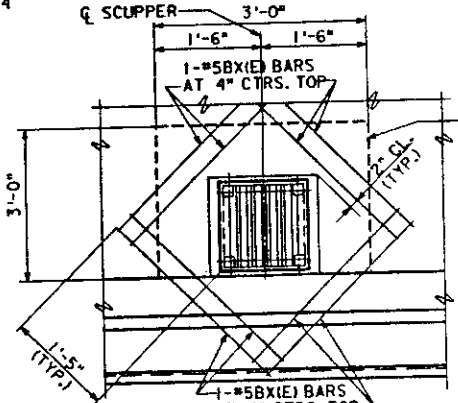
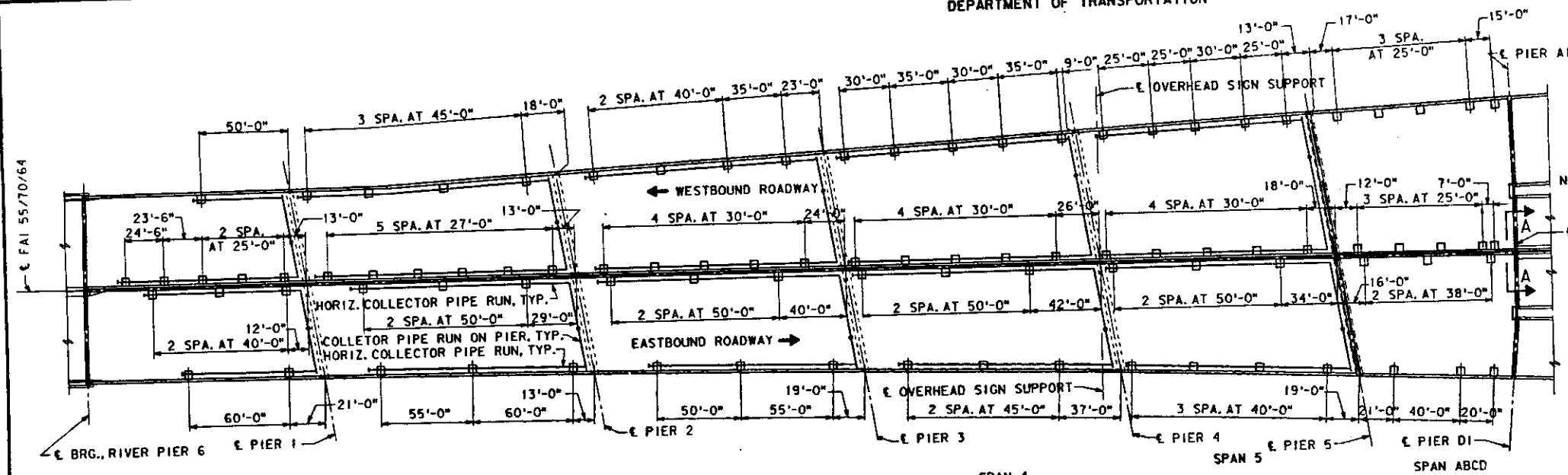
S.S. STEIB	DESIGNED
J.P. MCCARTY	CHECKED
D.C. SPINK	DRAWN
R.D. WINKELMANN	CHECKED

PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
STRESS TABLES
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

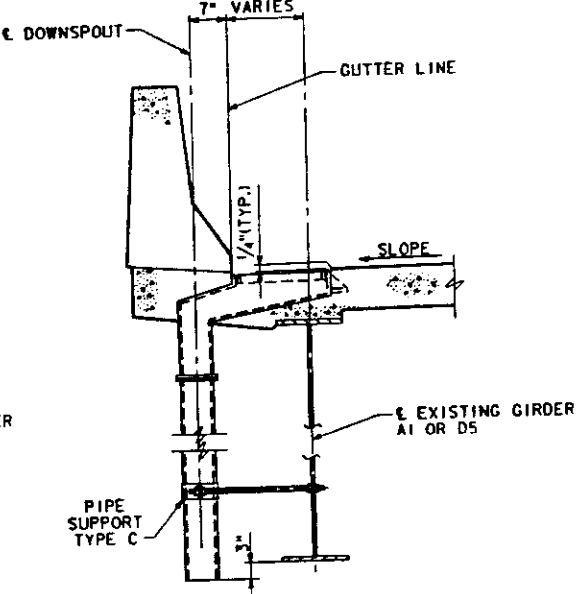
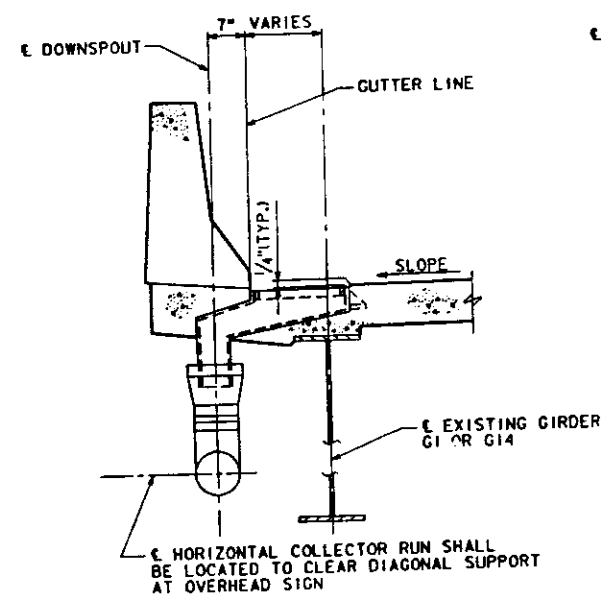
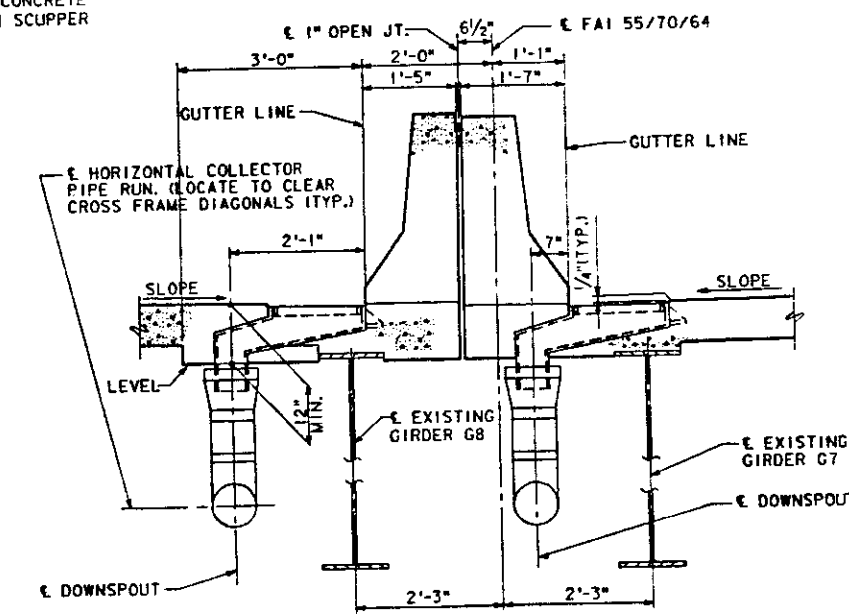
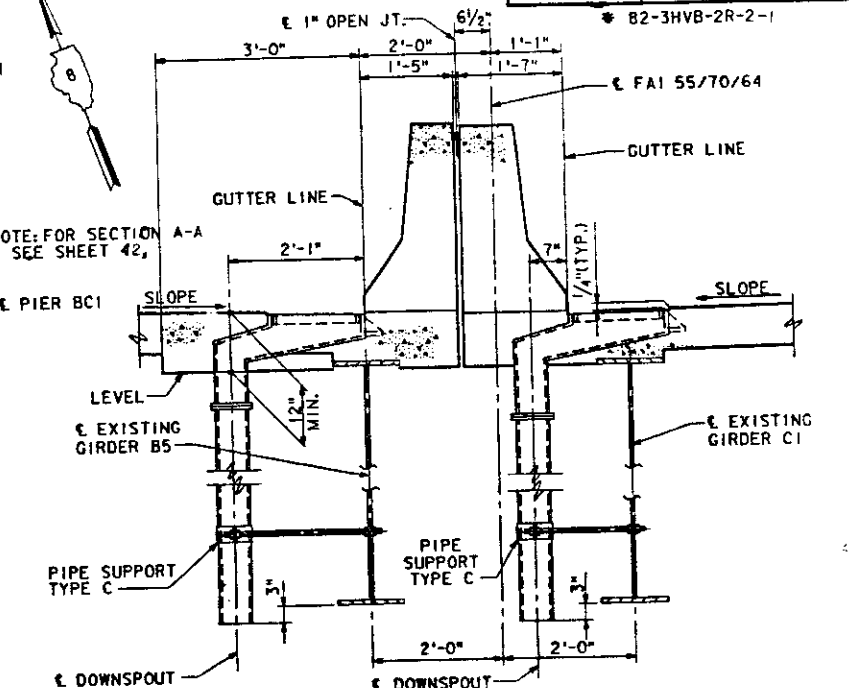
DATE	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
F.A.I. TO	*	ST. CLAIR	105	85
ILLINOIS		PROJECT		



SLAB TO BE THICKENED UNDER SCUPPER ALONG MEDIAN PARAPET OF THE WESTBOUND ROADWAY (31 THUS). ADDITIONAL CLASS X CONCRETE (SUPERSTRUCTURE) FOR 31 SCUPPER LOCATIONS = 3.4 CU. YD.

NOTES

- WORK THIS SHEET WITH SHEET 42. FOR SCUPPER DETAILS SEE SHEET 43.
- BILL OF MATERIAL FOR BX(1) BARS IS ON THE SLAB DETAIL SHEETS PER EACH ROADWAY SECTION.
- HORIZONTAL COLLECTOR PIPE RUNS SHALL HAVE A MINIMUM SLOPE OF 1/4" PER FOOT.
- 3/4" DIA. STUD BOLTS SHALL CONFORM TO AASHTO M164 AND SHALL HAVE 6" OF THREADS AT EACH END.
- PIPE SUPPORTS SHALL BE SPACED AS RECOMMENDED BY THE MANUFACTURER, AND AS SHOWN AT INTERSECTION OF HORIZONTAL AND VERTICAL RUNS OF PIPE.
- ALL COLLECTOR PIPES AND FITTINGS, EXCEPT AS NOTED, SHALL BE REINFORCED THERMOSETTING PLASTIC (FIBERGLASS).
- FIBERGLASS PIPE SHALL CONFORM TO ASTM D2996 WITH SHORT-TIME RUPTURE STRENGTH HOOP TENSILE STRESS OF 30,000 P.S.I. MIN.
- THE EXTERIOR SURFACE OF THE SCUPPERS AND THE COMPLETE DRAINAGE SYSTEM SHALL BE PAINTED WITH THE VINYL ENAMEL COAT PAINTING SPECIFIED FOR STRUCTURAL STEEL.
- SCUPPERS AND PIPES ADJACENT TO STRUCTURAL STEEL SHALL BE PAINTED THE SAME COLOR AS THE STEEL, AND PIPES ATTACHED TO THE PIERS SHALL BE PAINTED TO MATCH THE CONCRETE.
- THE FIBERGLASS PIPES SHALL BE PREWASHED AS PER MIL-P-15328. COST OF PREWASHING AND PAINTING IS TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR DRAINAGE SYSTEM.
- COST OF ALL PIPING, REDUCERS, FLANGES, FITTINGS, SUPPORTS AND HARDWARE COMPLETE IN PLACE SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR DRAINAGE SYSTEM.



REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
DRAINAGE LOCATION PLAN
AND DETAILS
STRUCTURE NO. 082-0005
STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

PREPARED BY:
SYVERDRUP CORPORATION
ST. LOUIS, MISSOURI

S.S. STEIB	DESIGNED
J.P. MCCARTY	CHECKED
D.C. SPINK	DRAWN
R.F. BECK	CHECKED

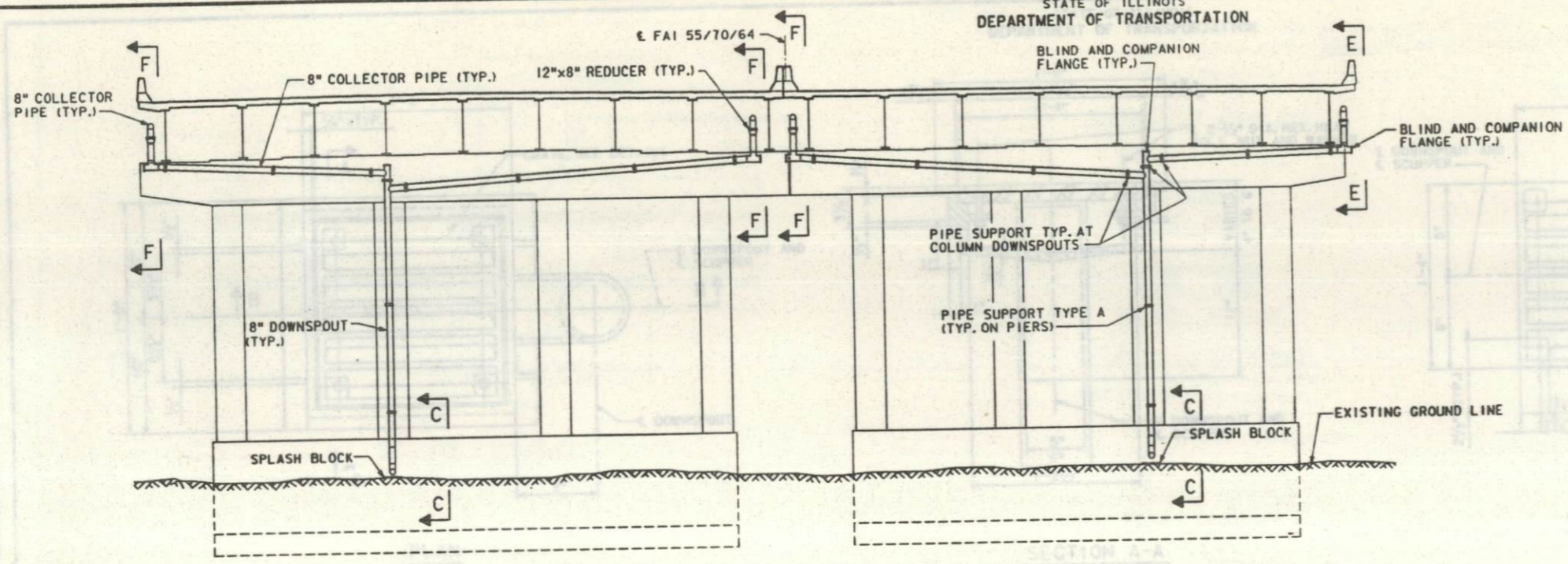
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35 56 57 63
10487 FILE: ZF3:110:1885318.DGN
885318 PRF: 885318

14738157 1989 885318.DGN 14738157 1989 885318.DGN 14738157 1989 885318.DGN

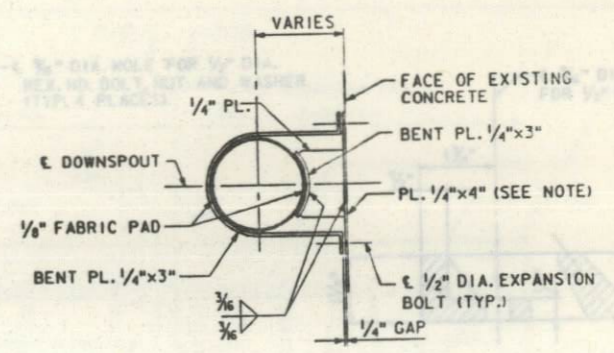
ROUTE NO.	SECTION	COUNTY	SHEET NO.
F.A.I. 70	ST. CLAIR	ILLINOIS	105
PROJECT			86

*82-3HVB-2R-2-1

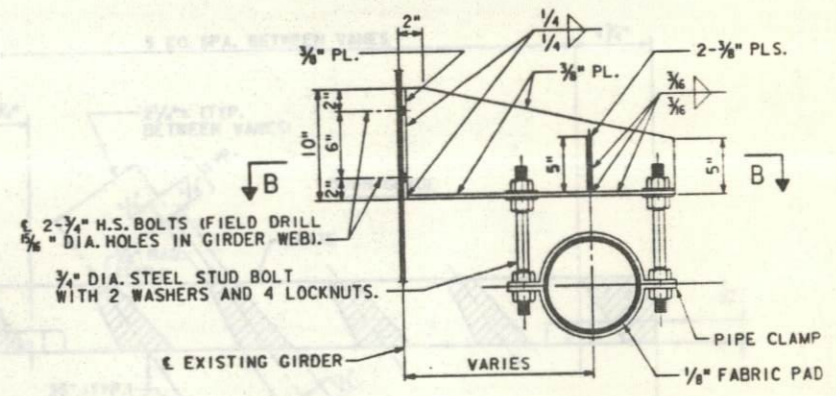
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



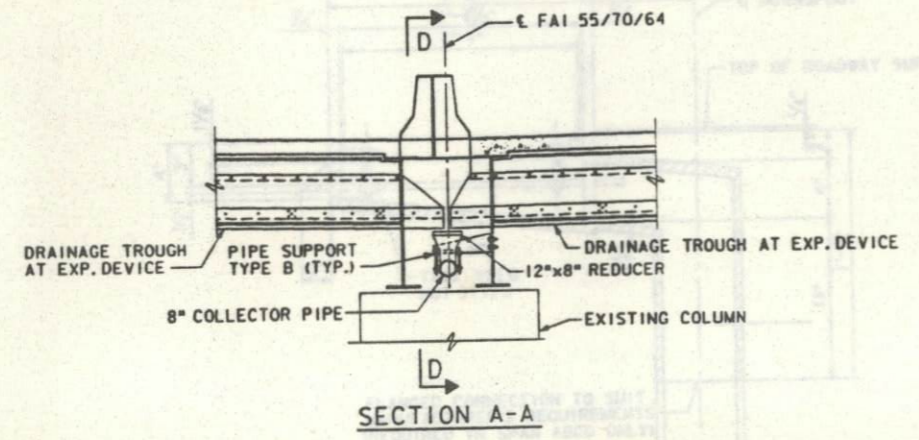
TYPICAL DRAINAGE COLLECTION SYSTEM AND DOWNSPOUTS AT PIERS 1 THRU 5



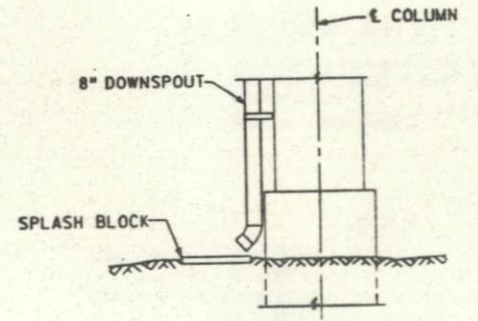
PIPE SUPPORT TYPE A
NOTE: BEND PLATE AS REQUIRED FOR ATTACHMENT TO COLUMN.



PIPE SUPPORT TYPE B

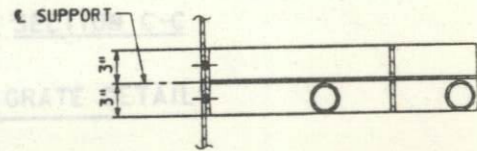


SECTION A-A

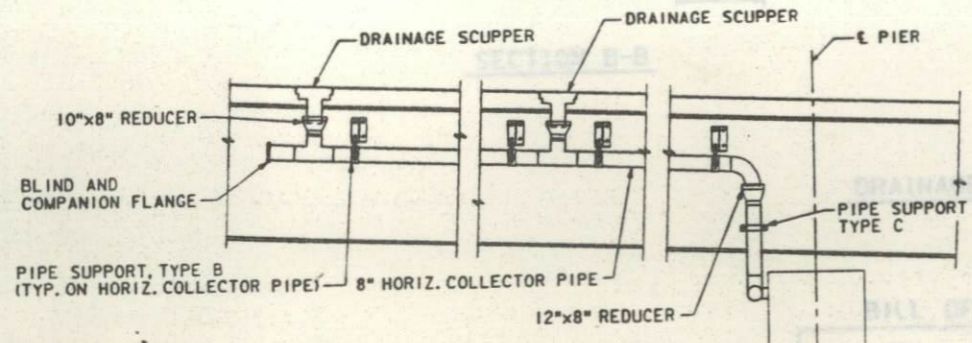


SECTION C-C

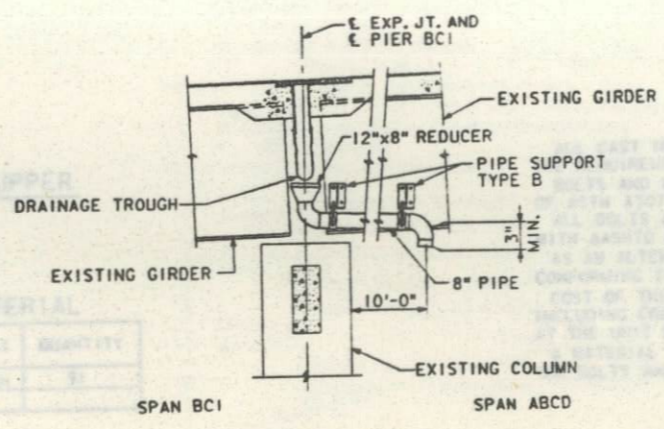
NOTE: SPLASH BLOCK SHALL BE 2'x4'x4" TK. CLASS X CONCRETE. COST INCIDENTAL.



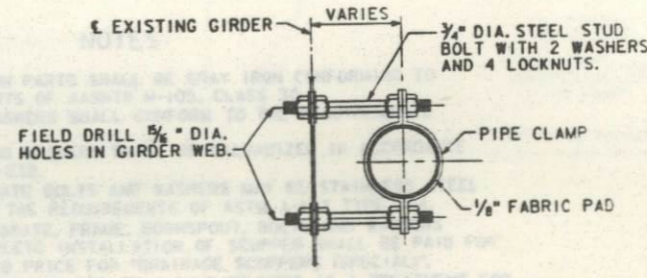
SECTION B-B



SECTION E-E
SECTION F-F (SIMILAR)



SECTION D-D



PIPE SUPPORT TYPE C

NOTES

WORK THIS SHEET WITH SHEET 41.

REHABILITATION FOR
FAI - 55/70 COMPLEX
ILLINOIS APPROACH TO
POPLAR STREET BRIDGE
DRAINAGE COLLECTION DETAILS

STRUCTURE NO. 082-0005

STA. 41+00.00 TO STA. 49+56.00 (FAI-70) ST. CLAIR CO.

SHEET NO. 42 OF 45

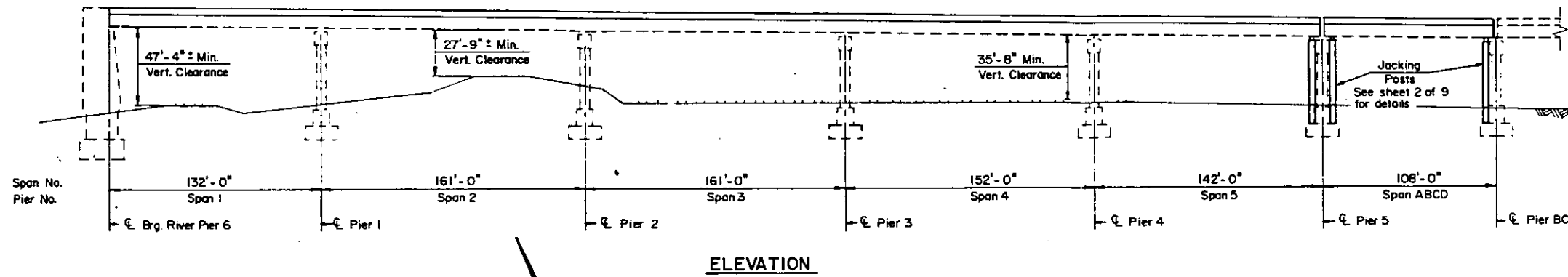
PREPARED BY:
SVERDRUP CORPORATION
ST. LOUIS, MISSOURI

10487 FILE: ZF3:110.1385336.DGN DATE: AUG. 10, 1989
LEVELS PLOTTED 35 56 63
DESIGNED BY S.S. STEIB
CHECKED BY J.P. McCARTY
M.J. JALINSKY
DRAWN BY R.F. BECK
CHECKED

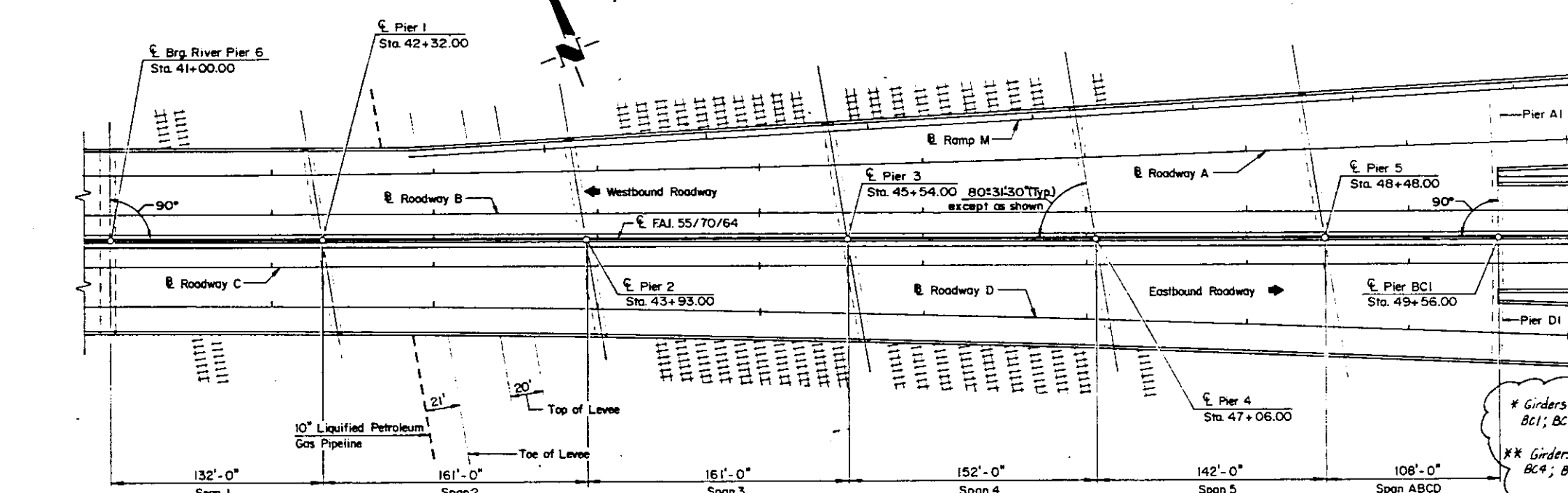
ROUTE NO.	SECTION	COUNTY	SHEET
FAI. 70	*	ST. CLAIR	105 105.1B
FED. ROAD DIST. NO. *	TELEPHONE PROJECT		
* 82-3HVB-2R-2-1			Sheet 1 of 9

NOTES

For Jacking and Removing Bearings
 Jacking stiffeners shall be bolted to the web of the existing girders. The holes in the jacking stiffener shall serve as a template to drill the holes in the girder web. The bolts connecting the jacking stiffener to the existing girder web shall be inserted and tightened to a snug fit as the holes are drilled. After all bolts are installed to a snug fit they shall be tightened in accordance with the Special Provisions.
 Jacking Stiffeners shall be placed as close as practical to the existing bearing points.
 There shall be no loads placed on the jacks prior to completion of the jacking stiffener installation.
 Jacks and jacking posts, if required, shall be placed directly below the outstanding leg of the jacking stiffener except as shown on the detailed drawings.
 Use lock nut cylinder jacks or shim the girders after jacking to the appropriate height. The jacks must be mechanically secure and locked at the lifted position to insure against hydraulic failure of the jacks.
 The existing fixed bearings shall be replaced last. Not two adjacent bearings, either longitudinally or transversely, shall be removed or replaced at the same time.
 All base plates placed on concrete shall have a layer of leveling mortar placed below them to insure uniform seating. The concrete shall be free of dirt and debris prior to placing the bed of leveling mortar.
 All jacking stiffeners shall be milled to bear on the bottom girder flange. Jacking stiffeners shall be left in place after construction.



ELEVATION



PLAN

TABLE A

Pier	Jack Location	No. of Jacks Each Location	Stiffeners at Each Location and Length
River Pier	A	2	2-16"x6"x1/2" 5'-4"
Pier #1,2,3,4	A,B	2	2-18"x8"x3/4" 5'-4"
Pier #5	A	1	2-16"x6"x3/4" 5'-4"
Pier #5	B	1	2-16"x6"x3/4" 5'-4" *
Span ABCD			2-16"x6"x3/4" 10' **
Pier A1	A	1	2-16"x6"x3/4" 5'-4"
Pier A1	B	2	2-18"x8"x1/2" 5'-10"
Pier BC1	A	1	2-16"x6"x3/4" 5'-4"
Pier BC1	B	2	2-18"x8"x1/2" 4'-10" *
Pier D1	A	1	2-16"x6"x3/4" 5'-4"
Pier D1	B	2	2-18"x8"x1/2" 4'-10" *

* Girders BA1 thru BA7, BB1, BB5, BC1, BC5, BD1, BD5
 ** Girders BB2 thru BB4, BC2 thru BC4, BD2 thru BD4

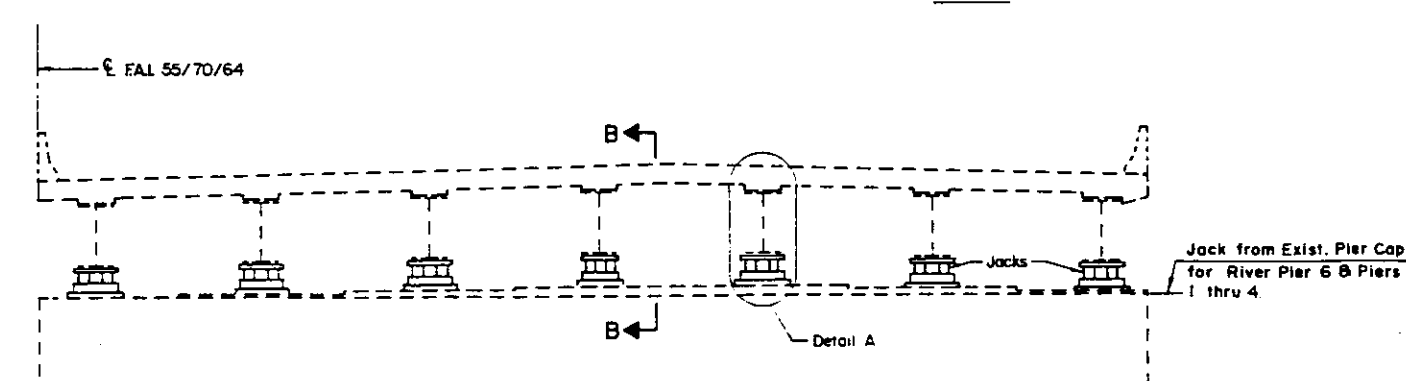


APPROVED FOR STRUCTURAL ADEQUACY
 Ralph E. Anderson
 8-30-91
 Exp. 11-30-92

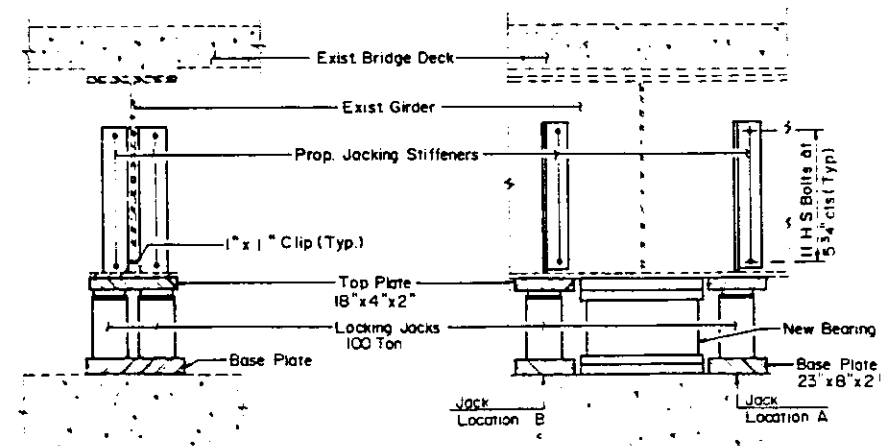
GENERAL PLAN & ELEVATION
 FAI. 55/70/64
 SEC. 82-3HVB-2R-2-1
 ST. CLAIR COUNTY
 STRUCTURE NUMBER 082-0005

HSIONG ASSOCIATES LTD.
 DESIGNED: SKL CHECKED: G.J.G.
 DRAWN: M. MOSSMAN DATE: NO. H-120

AS REVISED



TYPICAL HALF-CROSS SECTION
(Number of Girders Varies from 7 to 12 WBL and from 7 to 10 EBL)



DETAIL A
SECTION B-B
Typical section at Piers 1,2,3 & 4
Similar section at River Pier 6

Revised 5-12-92 S.W.G.
 Revised 5-27-92 P.M.F.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS
FAI 70	*	ST. CLAIR	105 / 105A
PROJECT		PROJECT	
* B2-3HVB-2R-2-1		Sheet 1 of 9	

NOTES

For Jacking and Removing Bearings

Jacking stiffeners shall be bolted to the web of the existing girders. The holes in the jacking stiffener shall serve as a template to drill the holes in the girder web. The bolts connecting the jacking stiffener to the existing girder web shall be inserted and tightened to a snug fit as the holes are drilled. After all bolts are installed to a snug fit they shall be tightened in accordance with the Special Provisions.

Jacking Stiffeners shall be placed as close as practical to the existing bearing points.

There shall be no loads placed on the jacks prior to completion of the jacking stiffener installation.

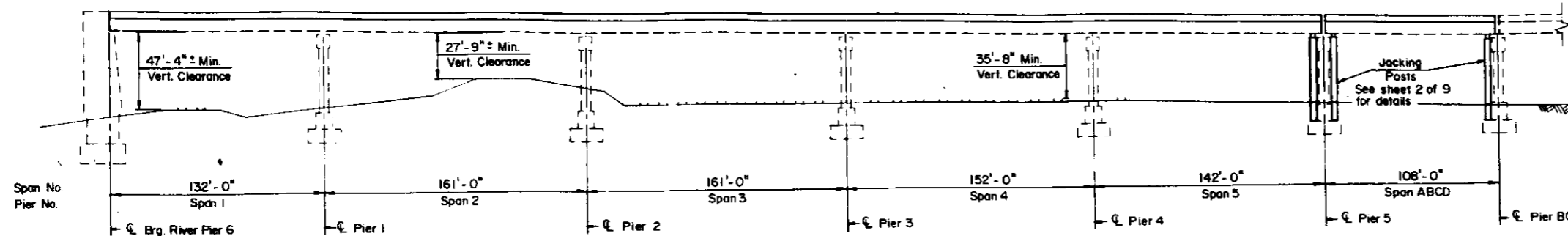
Jacks and jacking posts, if required, shall be placed directly below the outstanding leg of the jacking stiffener except as shown on the detailed drawings.

Use lock nut cylinder jacks or shim the girders after jacking to the appropriate height. The jacks must be mechanically secure and locked at the lifted position to insure against hydraulic failure of the jacks.

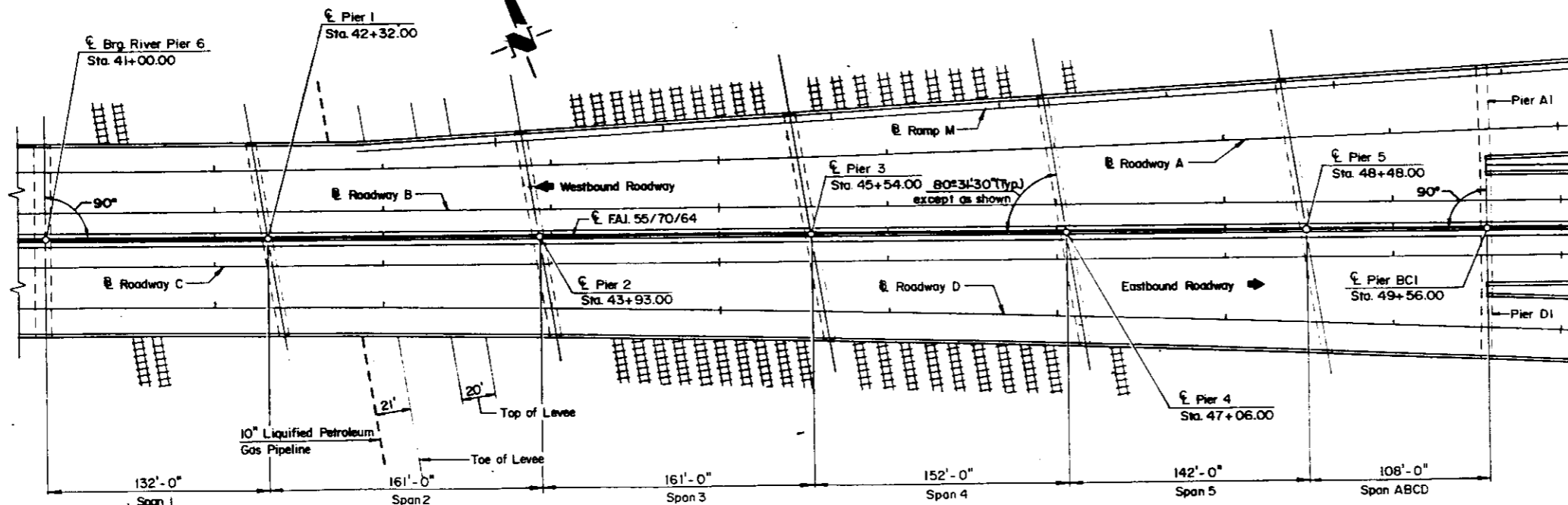
The existing fixed bearings shall be replaced last. Not two adjacent bearings, either longitudinally or transversely, shall be removed or replaced at the same time.

All base plates placed on concrete shall have a layer of leveling mortar placed below them to insure uniform seating. The concrete shall be free of dirt and debris prior to placing the bed of leveling mortar.

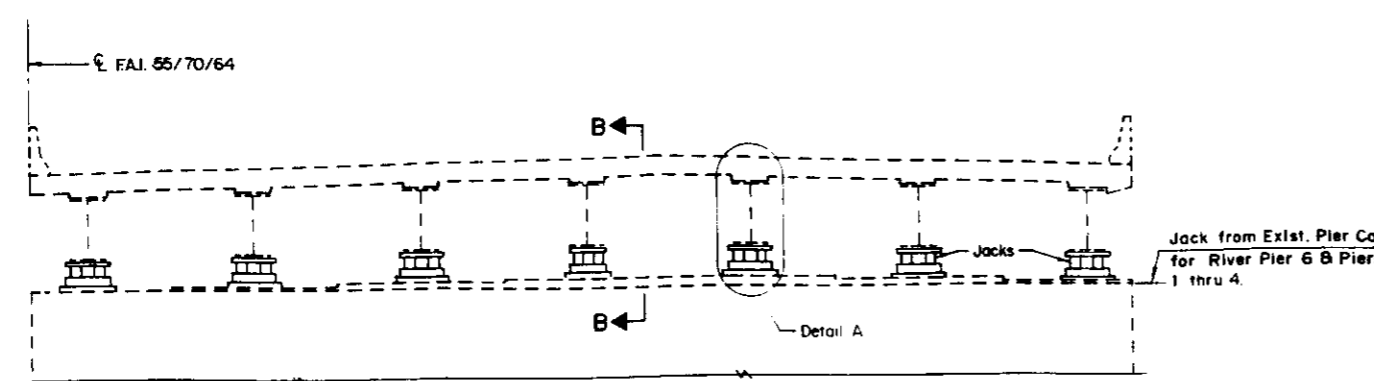
All jacking stiffeners shall be milled to bear on the bottom girder flange. Jacking stiffeners shall be left in place after construction.



ELEVATION

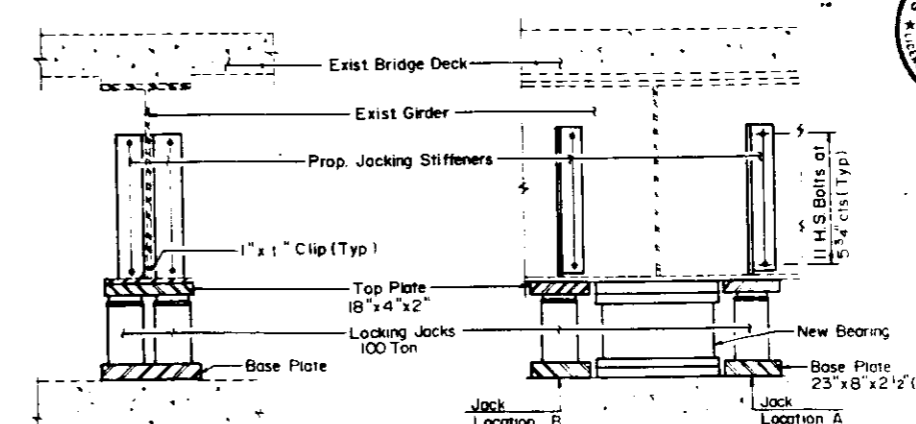


PLAN



TYPICAL HALF-CROSS SECTION

(Number of Girders Varies from 7 to 12 WBL and from 7 to 10 EBL)



DETAIL A

See Table A for additional information

SECTION B-B

Typical section of Piers 1, 2, 3 & 4 similar section at River Pier 6

TABLE A

Pier	Jack Location	No. of Jacks Each Location	Stiffeners at Each Jack Location and Length
River Pier	A	2	2-L6x6x1/2 5'-4"
Pier #1, 2, 3, 4	A, B	2	2-L6x6x3/4 5'-4"
Pier #5	A	1	2-L6x6x3/4 5'-4"
Pier #5 Span ABCD	B	1	2-L6x6x3/4 5'-4"
Pier A1	A	1	2-L6x6x3/4 5'-4"
Pier A1	B	2	2-L6x6x1 1/8 5'-10"
Pier BCI	A	1	2-L6x6x3/4 5'-4"
Pier BCI	B	2	2-L6x6x1 1/8 4'-10"
Pier D1	A	1	2-L6x6x3/4 5'-4"
Pier D1	B	2	2-L6x6x1 1/8 4'-10"



APPROVED FOR STRUCTURAL ADEQUACY

Ralph E. Robinson, License No. 082-0005

Design Date: 8-30-91, Exp: 11-30-92

GENERAL PLAN & ELEVATION

FAI 55/70/64
SEC. 82-3HVB-2R-2-1
ST. CLAIR COUNTY
STRUCTURE NUMBER 082-0005

HSIUNG ASSOCIATES LTD.
DESIGNED: S.K.L. CHECKED: G.J.G.
DRAWN: M. MOSSMAN DATE: NO. H-120

AS REVISED

Revised 5-22-92 G.J.G.

Added 5-15-91

246
105.10

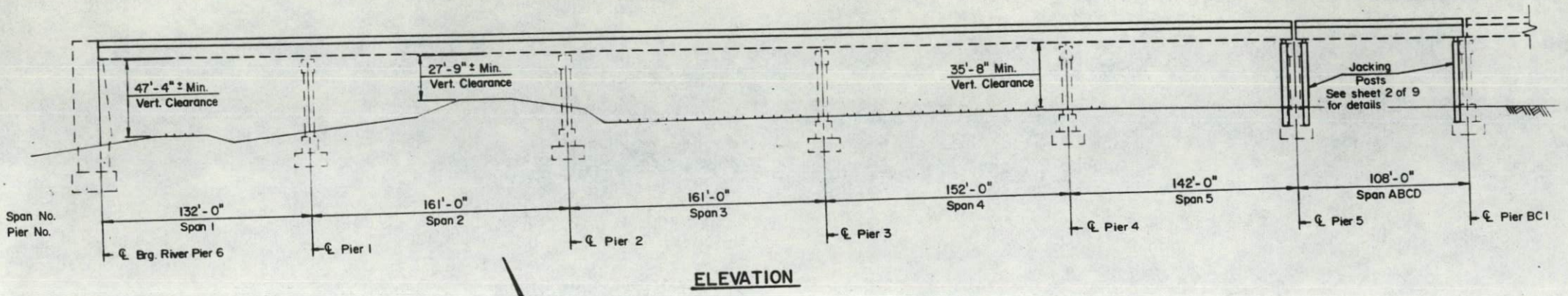
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FAI 70	*	ST. CLAIR	150	150.1
FED ROAD DIST NO 7			ILLINOIS PROJECT	
* 82-3HVB-2R-2-3			Sheet 1 of 9	

NOTES

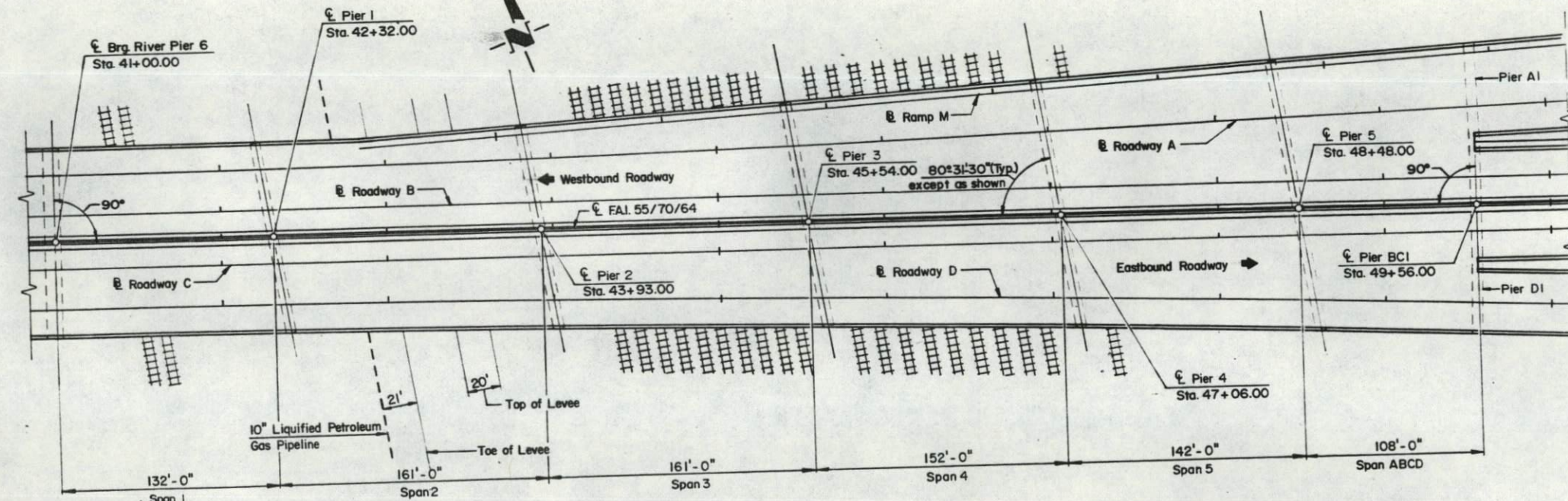
For Jacking and Removing Bearings
 Jacking stiffeners shall be bolted to the web of the existing girders. The holes in the jacking stiffener shall serve as a template to drill the holes in the girder web. The bolts connecting the jacking stiffener to the existing girder web shall be inserted and tighten to a snug fit as the holes are drilled. After all bolts are installed to a snug fit they shall be tightened in accordance with the Special Provisions.
 Jacking Stiffeners shall be placed as close as practical to the existing bearing points.
 There shall be no loads placed on the jacks prior to completion of the jacking stiffener installation.
 Jacks and jacking posts, if required, shall be placed directly below the outstanding leg of the jacking stiffener except as shown on the detailed drawings.
 Use lock nut cylinder jacks or shim the girders after jacking to the appropriate height. The jacks must be mechanically secure and locked at the lifted position to insure against hydraulic failure of the jacks.
 The existing fixed bearings shall be replaced last. Not two adjacent bearings, either longitudinally or transversely, shall be removed or replaced at the same time.
 All base plates placed on concrete shall have a layer of leveling mortar placed below them to insure uniform seating. The concrete shall be free of dirt and debris prior to placing the bed of leveling mortar.
 All jacking stiffeners shall be milled to bear on the bottom girder flange.
 Jacking stiffeners shall be left in place after construction.

TABLE A

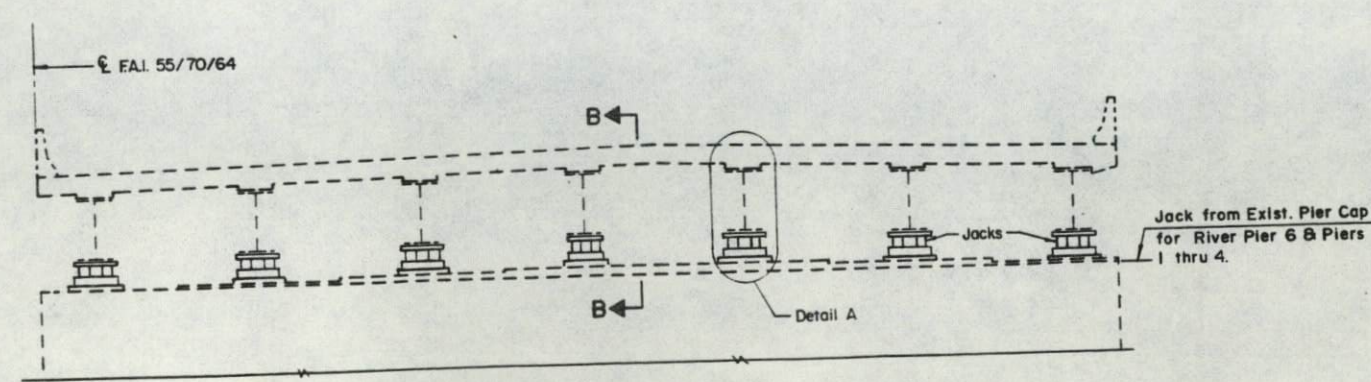
Pier	Jack Location	No. of Jacks Each Location	Stiffeners at Each Jack Location and Length
River Pier	A	2	2-L6"x6"x1/2" 5'-4"
Pier #1,2,3,4	A,B	2	2-L8"x8"x3/4" 5'-4"
Pier #5	A	1	2-L6"x6"x3/4" 5'-4"
Span 5	B	1	2-L6"x6"x3/4" 5'-4"
Pier ABCD	A	1	2-L6"x6"x3/4" 5'-4"
Pier A1	A	1	2-L6"x6"x3/4" 5'-4"
Pier A1	B	2	2-L8"x8"x1 1/8" 5'-10"
Pier BC1	A	1	2-L6"x6"x3/4" 5'-4"
Pier BC1	B	2	2-L8"x8"x1" 5'-4"
Pier D1	A	1	2-L6"x6"x3/4" 5'-4"
Pier D1	B	2	2-L8"x8"x1" 5'-4"



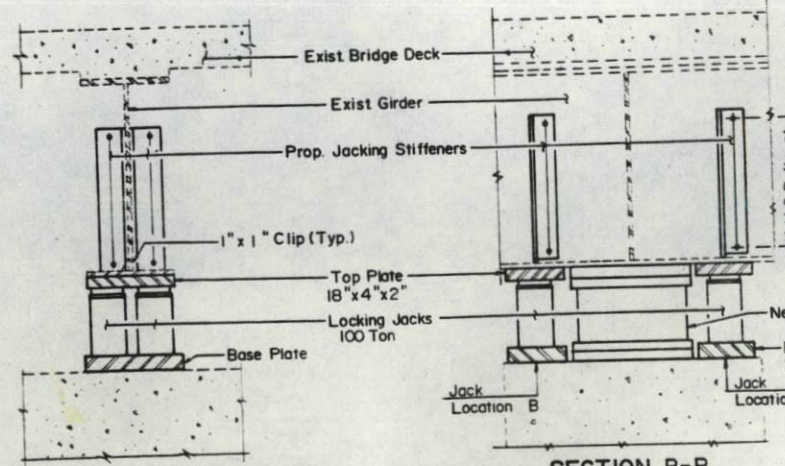
ELEVATION



PLAN



TYPICAL HALF-CROSS SECTION
 (Number of Girders Varies from 7 to 12 WBL and from 7 to 10 EBL.)



DETAIL A

SECTION B-B

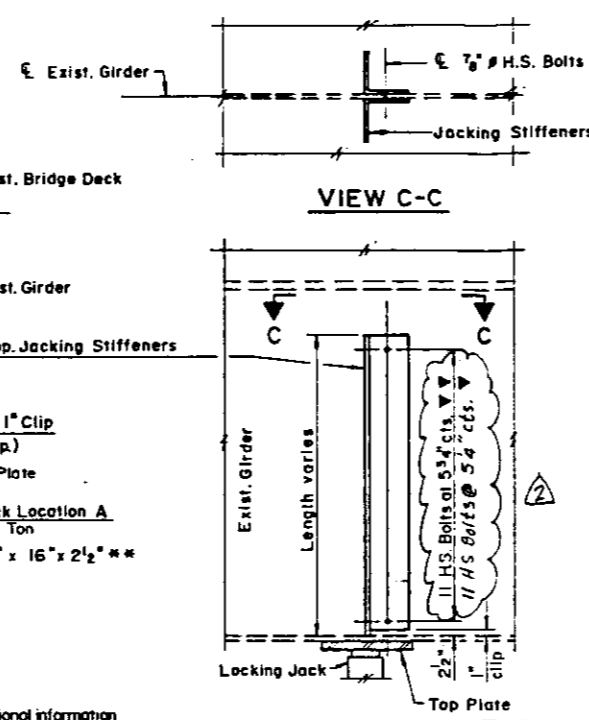
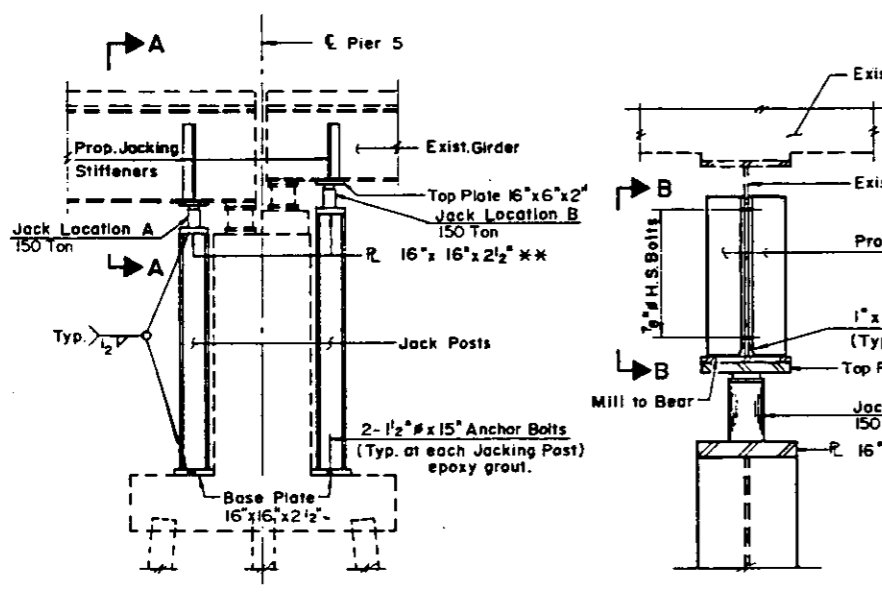
Typical section at Piers 1,2,3 & 4 similar section at River Pier 6.



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

GENERAL PLAN & ELEVATION
 FAI. 55/70/64
 SEC. 82-3HVB-2R-2-3-1
 ST. CLAIR COUNTY
 STRUCTURE NUMBER 082-0005

HSIONG ASSOCIATES LTD.
 DESIGNED: S.K.L. CHECKED: G.J.G.
 DRAWN: M. MOSSMAN DATE: NO. H-120



GENERAL NOTES

Construction Specifications: The 1988 Edition of the State of Illinois Department of Transportation's "Standard Specifications for Road and Bridge Construction", Addenda and the Special Provision shall govern.
Fasteners shall be high strength bolts. Bolts 7/8" ϕ , open holes 15/16" ϕ , unless otherwise noted.
The color of the vinyl finish coat shall be Munsell No. 7.5 G 4/8 Interstate Green.
The first two coats of the Lead and Chromate free Akryd Paint System shall be used for shop and field painting of new structural steel.
Structural steel shall only be cleaned and painted as required by the special provisions "Cleaning and Painting New Steel and Adjacent Areas of Existing Steel Structures".
All contact surfaces of joints for the bolted connections shall be free of paint or lacquer.
Field welding of construction accessories will not be permitted to the bottom flange of girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 223 Grade 50. 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.
Bearing seat surfaces shall be adjusted within a tolerance of 1/8 in. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
See existing plans for dimensions of the existing structure.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Furnishing and Erecting Structural Steel	Lbs.	88,160
Jack and Remove Existing Bearings	Each	128
Protective Coat	Sq Yds.	615
Girder Restrainers	Each	42
Concrete Barrier, Special	Lin. Ft.	712.3
Longitudinal Joint Seal	Lin. Ft.	712.3
Seismic Isolation Brg. Assembly: 13" x 13"	Each	22
Seismic Isolation Brg. Assembly: 14" x 14"	Each	34
Seismic Isolation Brg. Assembly: 18" x 18"	Each	58
Seismic Isolation Brg. Assembly: 20" x 20"	Each	6
Seismic Isolation Brg. Assembly: 21" x 14"	Each	4
Seismic Isolation Brg. Assembly: 22" x 13"	Each	4

DESIGN STRESSES

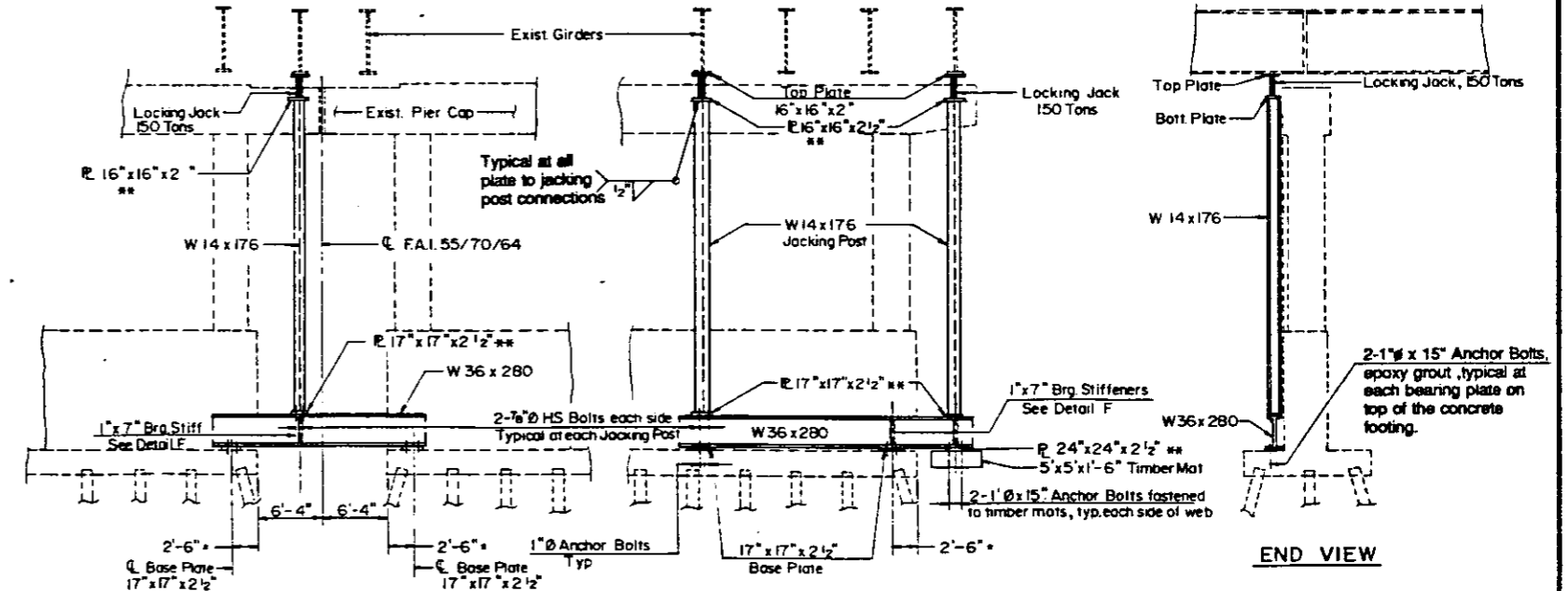
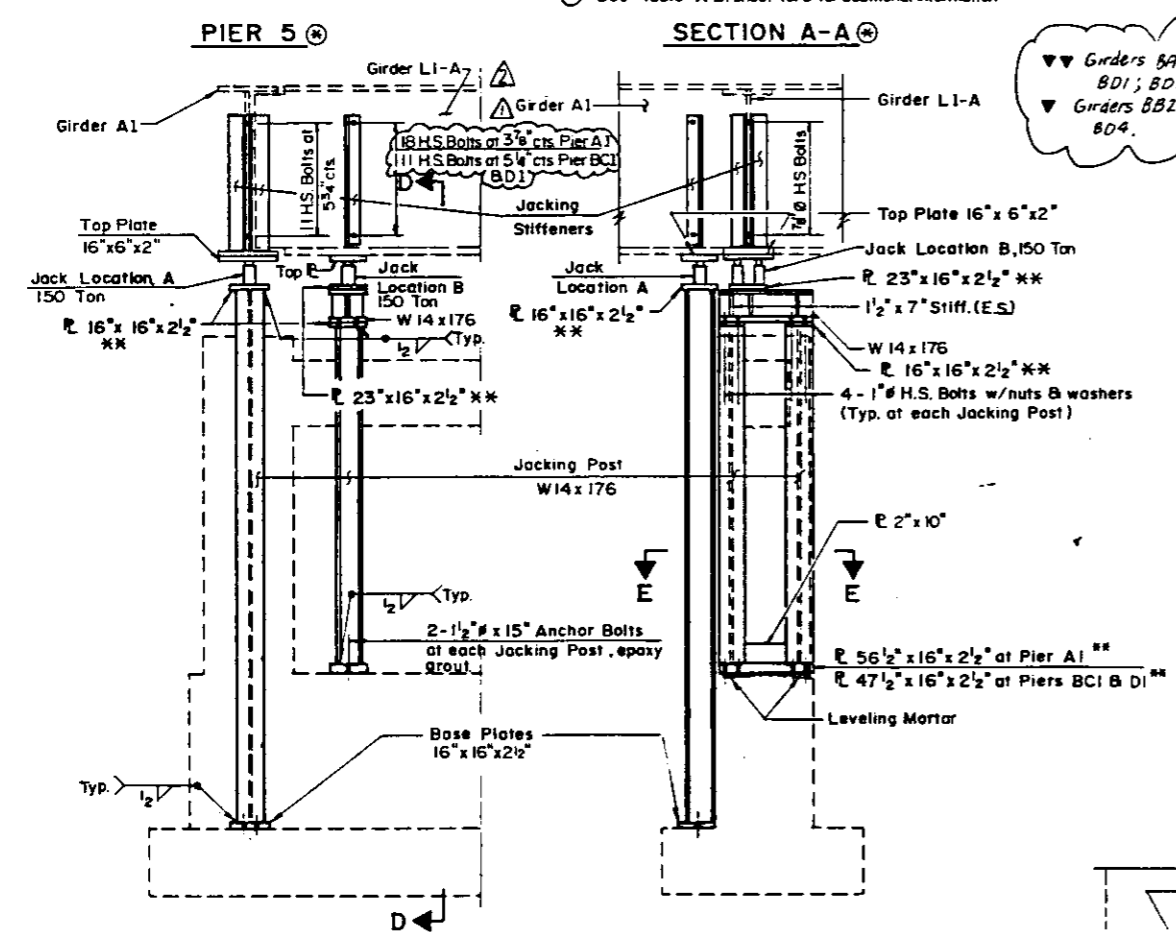
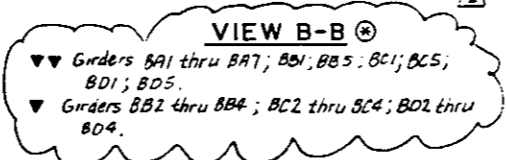
$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (M 183)
 $f_y = 50,000$ psi (M 223)

DESIGN SPECIFICATIONS

AASHTO 1989 Specs. with 1990 B 1991 interims.

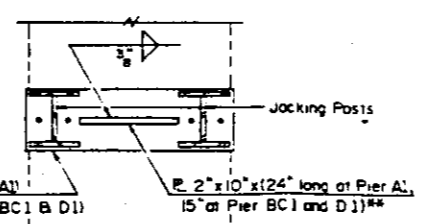
FHWA Report No. FHWA/RD-83/007
 Seismic Retrofitting Guidelines for Highway Bridges, December, 1983.

See Table A on sheet 1 of 9 for additional information



PIER A1
Piers B C1 & D1 Similar

VIEW D-D



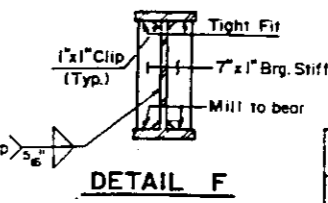
SECTION E-E

AS REVISED

Place the top of the timber mat sufficiently above the top of the concrete footing to compensate for the initial deflection of the timbers and compression of loose soil. Shims, of the same plan dimensions as the plates shown on the details, may be used to insure a minimum soil pressure under the timber mat of 1 ksf and full contact between the W36 x 280 beam and the 17" x 17" x 2 1/2" plates after the minimum soil pressure under the mat is obtained.

Base Plates, Top Plates and Plates designated with ** shall be AASHTO M223 Grade 50.

PIER 5
Showing jacking of girders on cantilevered portion of Pier Cap. For Jacking Stiffeners see Sec. A-A.



DETAIL F

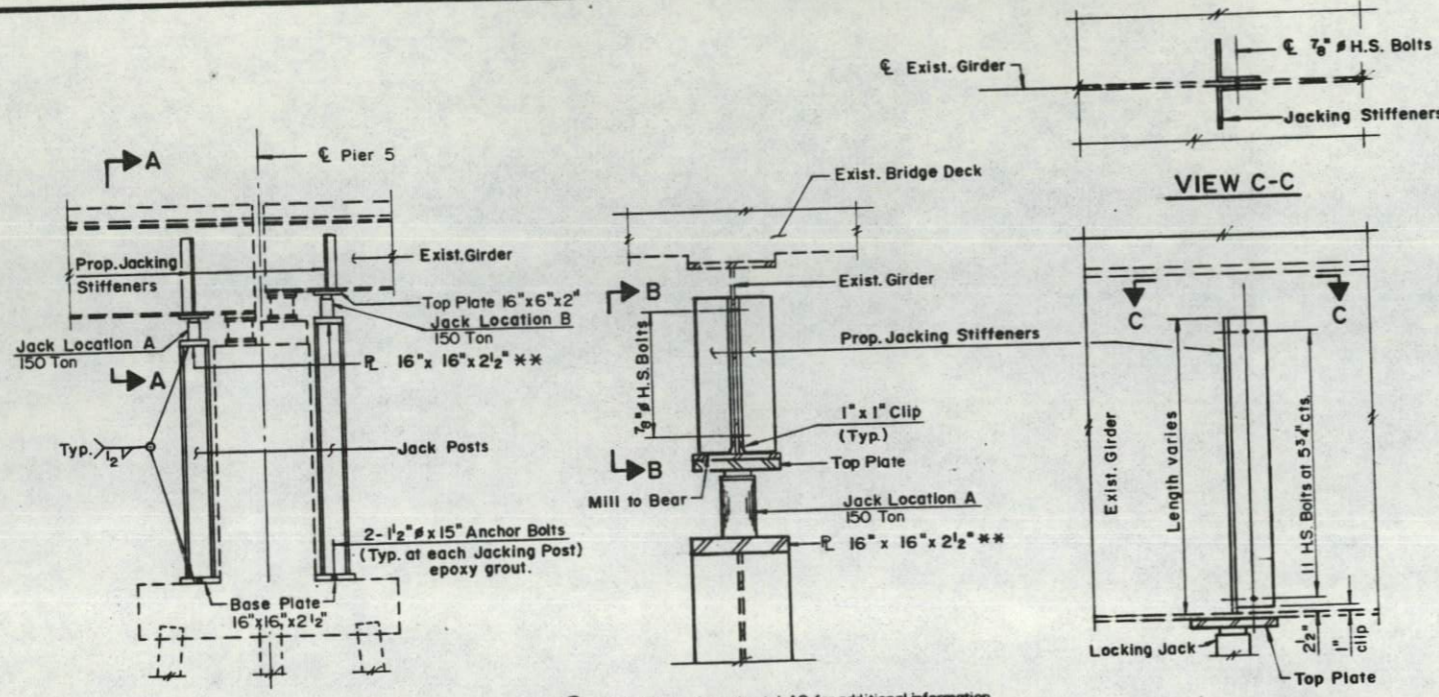
GENERAL NOTES & BILL OF MATERIALS

FAI 55/70/64
 SEC. 82-3HVB-2R-2-1
 ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD	
DESIGNED: S.K.L.	CHECKED: G.J.G.
DRAWN: R.H.H.	DATE
	NO. H-120

Revised 5-12-92 G.J.G. Added 9-15-91 R.H.H.
 Revised 5-27-92 R.H.H.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI. 70	*	ST. CLAIR	150	150.2
FED. ROAD DIST. NO. 1	BLINDS	PROJECT		
*82-3HVB-2R-2-3			Sheet 2 of 9	



GENERAL NOTES

Construction Specifications: The 1988 Edition of the State of Illinois Department of Transportation's "Standard Specifications for Road and Bridge Construction", Addenda and the Special Provision shall govern.
 Fasteners shall be high strength bolts. Bolts 7/8" φ, open holes 15/16" φ, unless otherwise noted.
 The color of the vinyl finish coat shall be Munsell No. 7.5 G 4/8 Interstate Green.
 The first two coats of the Lead and Chromate free Alkyd Paint System shall be used for shop and field painting of new structural steel.
 Structural steel shall only be cleaned and painted as required by the special provisions "Cleaning and Painting New Steel and Adjacent Areas of Existing Steel Structures".
 All contact surfaces of joints for the bolted connections shall be free of paint or lacquer.
 Field welding of construction accessories will not be permitted to the bottom flange of girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
 The structural steel bearing plates of AASHTO M 223 Grade 50. 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.
 Bearing seat surfaces shall be adjusted within a tolerance of 1/8 in. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.
 See existing plans for dimensions of the existing structure.

BILL OF MATERIAL

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Seismic Isolation Brg. Assembly: 18" x 18"	Each	58
Seismic Isolation Brg. Assembly: 20" x 20"	Each	6
Seismic Isolation Brg. Assembly: 21" x 14"	Each	4
Seismic Isolation Brg. Assembly: 22" x 13"	Each	4

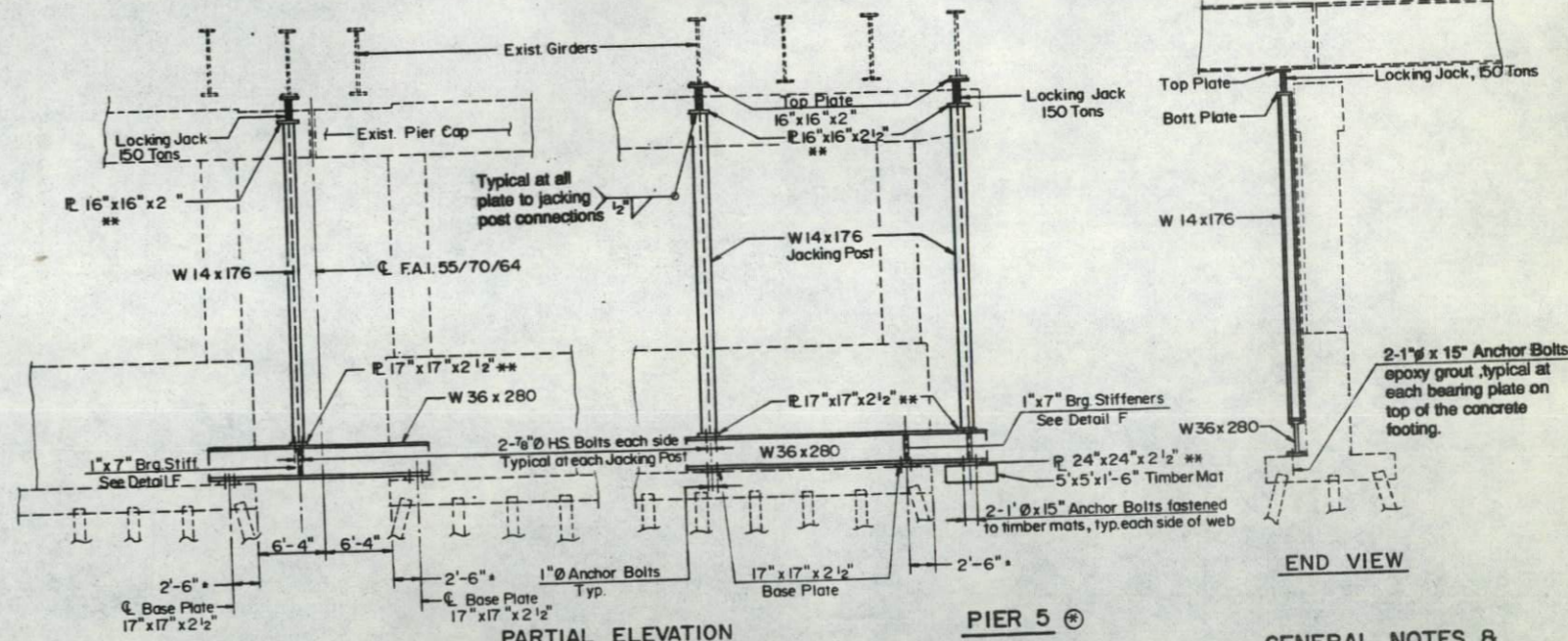
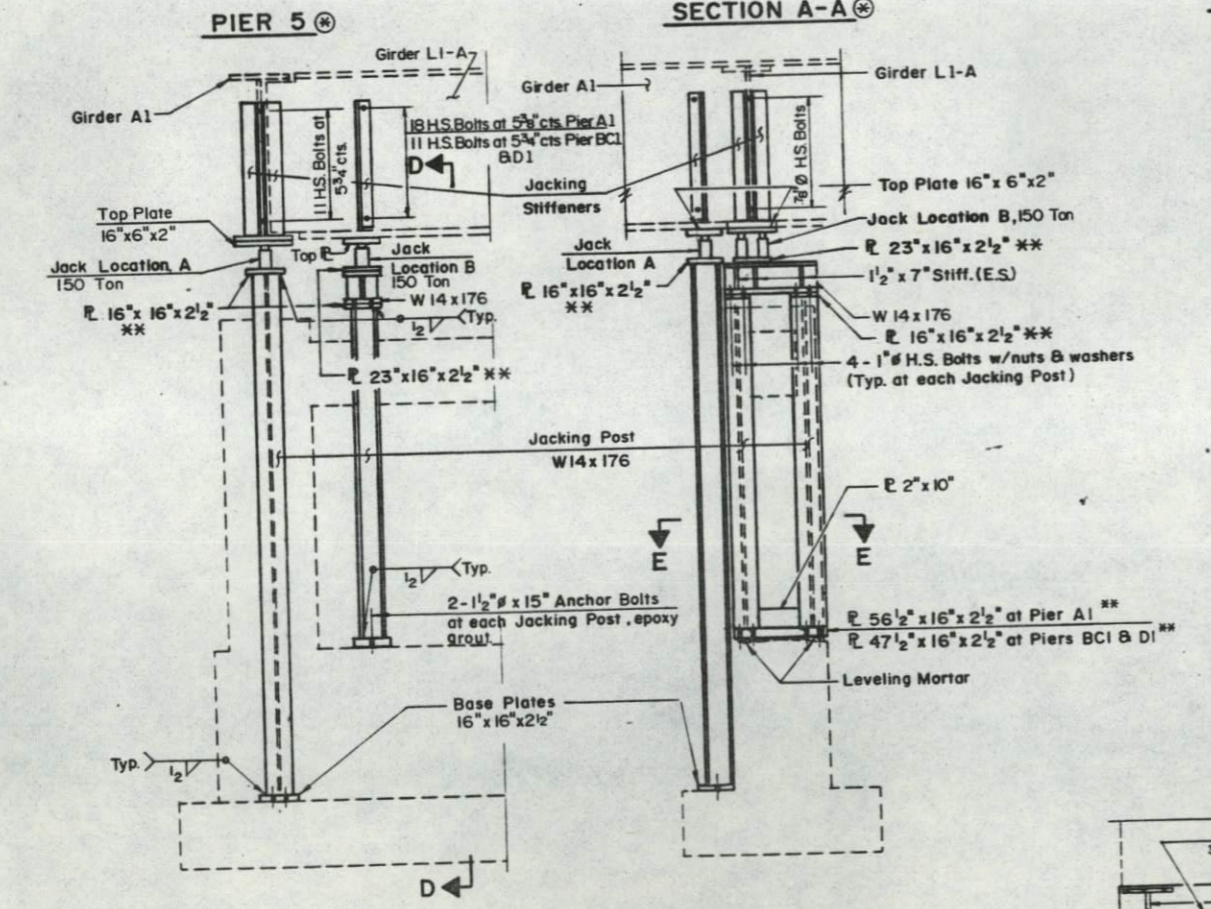
DESIGN STRESSES

f_c = 3,500 psi
 f_y = 60,000 psi (Reinforcement)
 f_y = 36,000 psi (M 183)
 f_y = 50,000 psi (M 223)

DESIGN SPECIFICATIONS

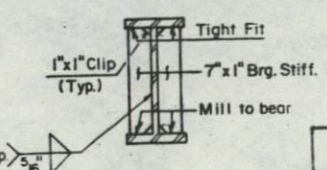
AASHTO 1989 Specs. with 1990 & 1991 interims.

FHWA Report No. FHWA/RD-83/007
 Seismic Retrofitting Guidelines for Highway Bridges, December, 1983.



PIER 5

Showing jacking of girders on cantilevered portion of Pier Cap. For Jacking Stiffeners see Sec. A-A.



DETAIL F

GENERAL NOTES & BILL OF MATERIALS

FAI. 55/70/64

SEC. 82-3HVB-2R-2-3-1

ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD.

DESIGNED: S.K.L. CHECKED: G.J.G.
 DRAWN: R.H.H. DATE NO. H-120

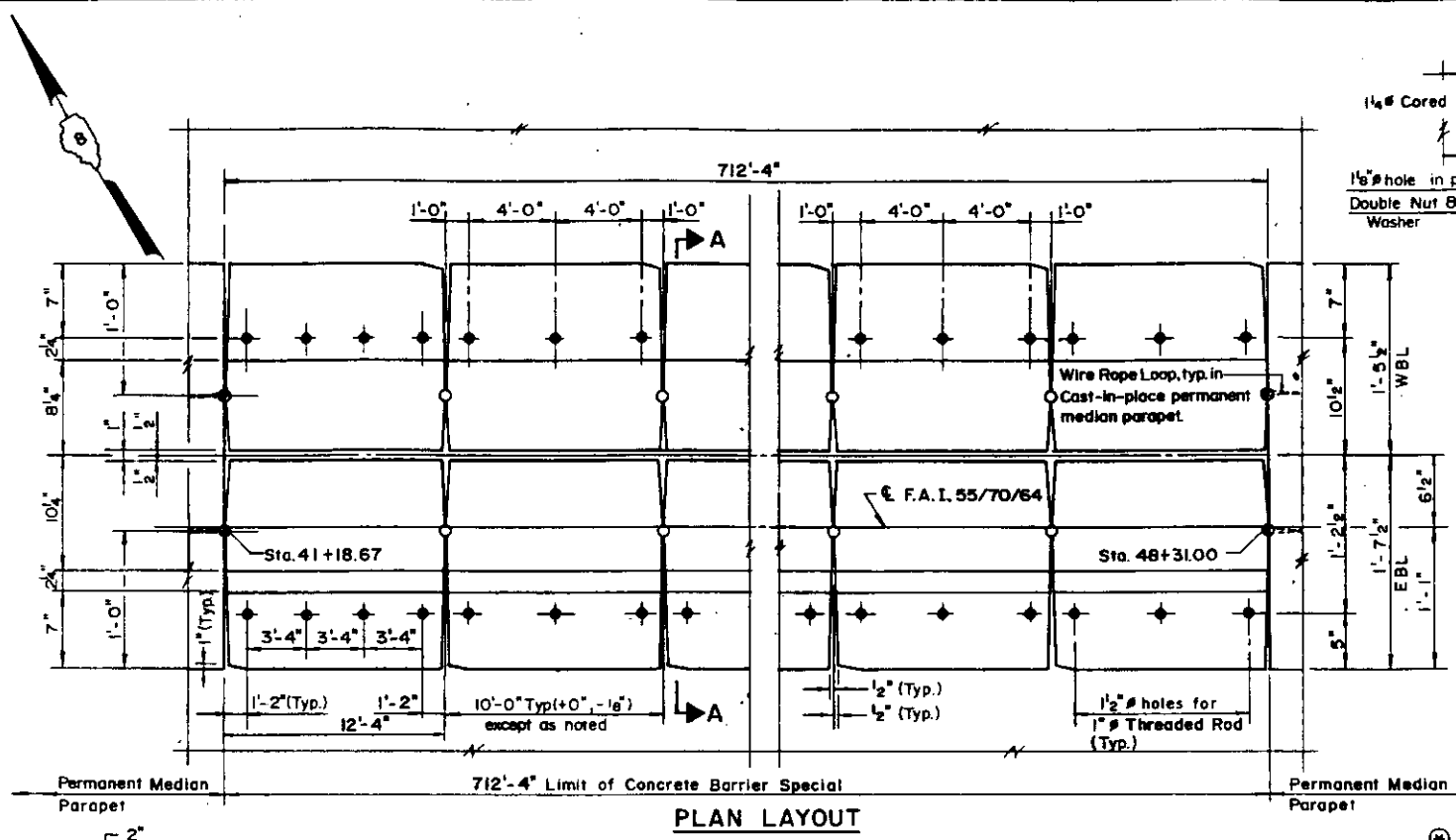
PIER A1
 Piers BC1 & D1 Similar

VIEW D-D

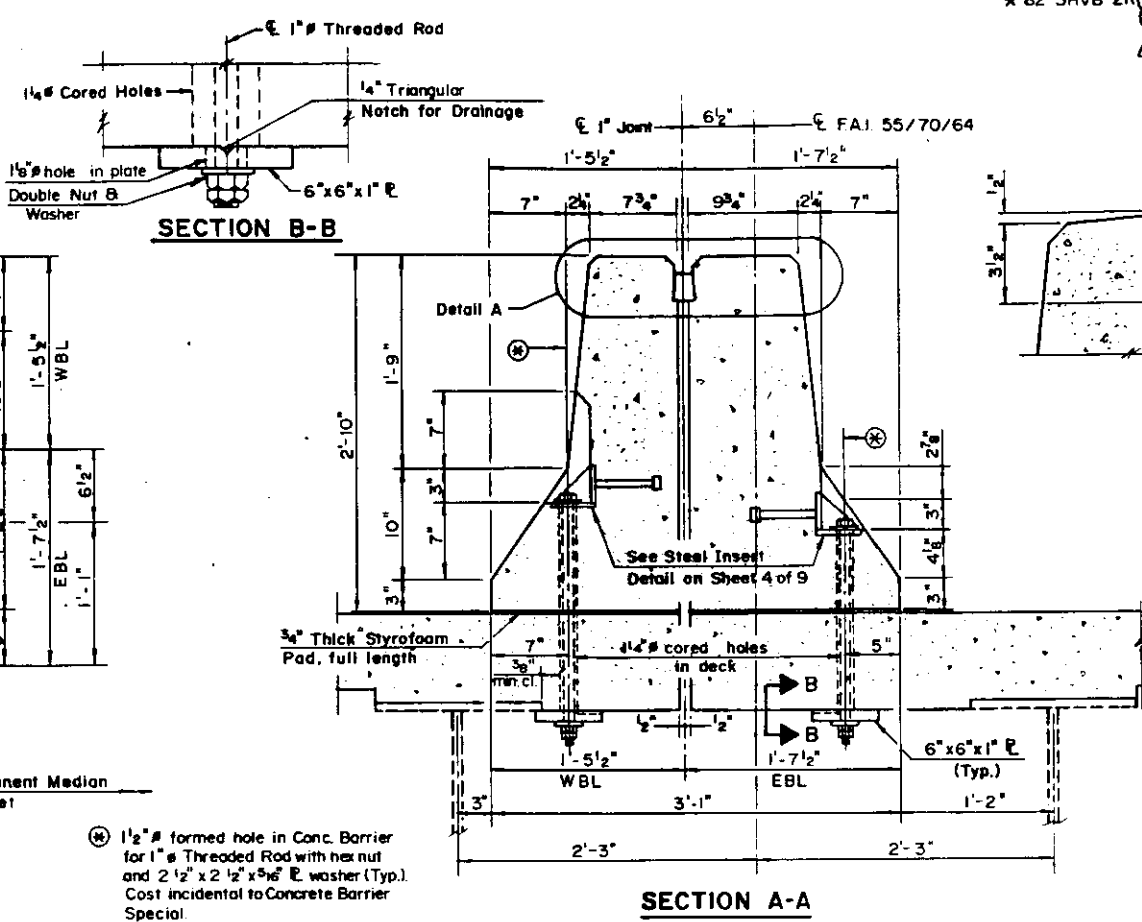
SECTION E-E

Note: Top of the jacking post shall be secured to the concrete pier by methods approved by the Engineer. No intrusion into concrete shall be allowed.

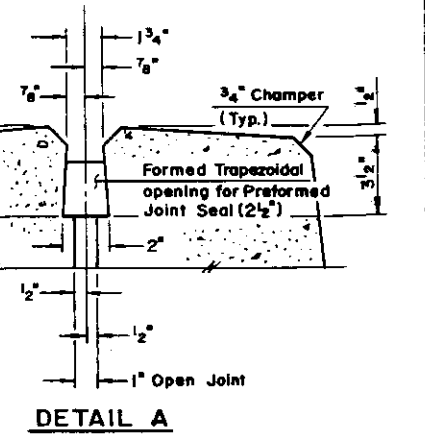
Base Plates, Top Plates and Plates designated with ** shall be AASHTO M223 Grade 50.



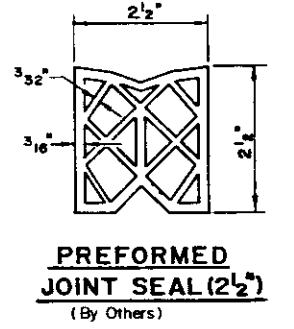
PLAN LAYOUT



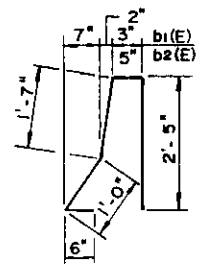
SECTION A-A



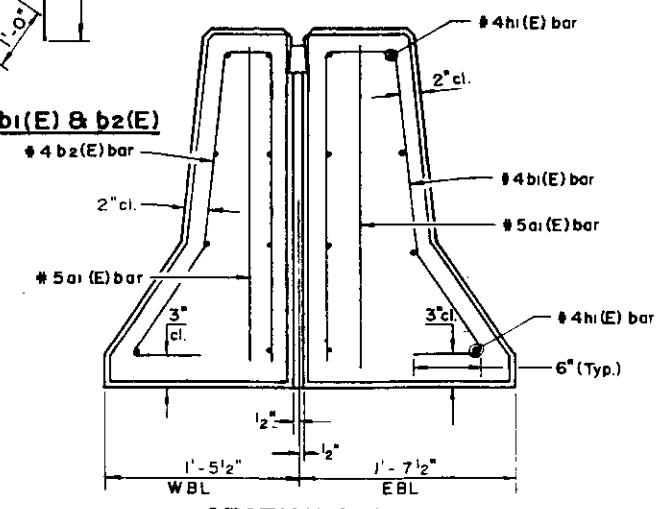
DETAIL A



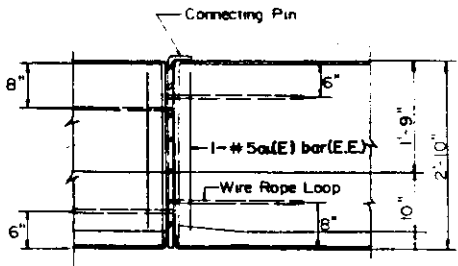
PREFORMED JOINT SEAL (2 1/2") (By Others)



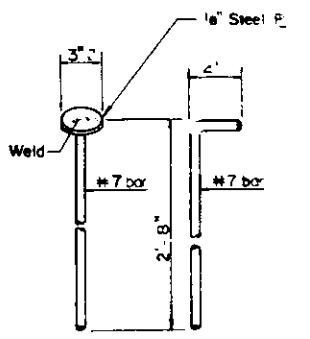
BARS b1(E) & b2(E)



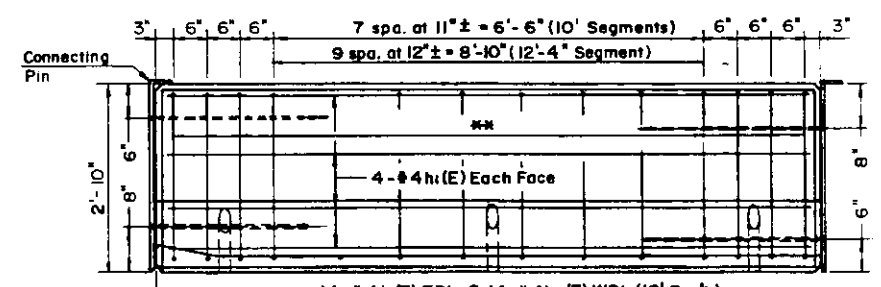
SECTION A-A Showing Bar Reinforcement



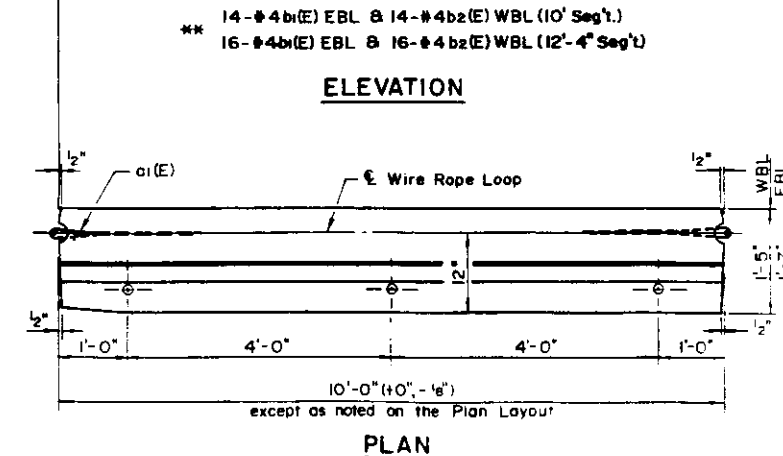
ELEVATION (Showing Pin Connection)



ALTERNATE CONNECTING PIN



ELEVATION



PLAN

- GENERAL NOTES**
1. The threaded rods, nuts, washers, and plates shall be mechanically galvanized in accordance with the requirement of AASHTO M 296, Class 50.
 2. The nut and threaded rod shall not protrude above the surface of the barrier. Cover the top of the threaded rod and nut with mastic to exclude contaminants.
 3. Barrier construction using precast concrete segments shall be in conformance with Section 655 of the Standard Specifications.
 4. See the Deck Plan on sheet 4 of 9 for the limits of payment for Concrete Barrier Special.
 5. Protective Coats shall be applied to all surfaces as specified in Section 503 of the Standard Specifications.
 6. The Wire Rope Loop shall also be cast into the permanent median parapet ends that are to be connected to the Concrete Barrier Special. The location of the Wire Rope Loop shall be consistent with the details shown on this sheet.
 7. Barrier units shall be pinned one to another in continuous smooth line of the exact locations shown on the plans.
 8. Lifting devices meeting the approval of the Engineer shall be proposed by the Contractor.
 9. The #5 bar may be omitted if 2 continuous wire ropes are substituted for the 4 wire rope loops shown. The continuous ropes shall be looped and fastened on each end as shown in the wire rope detail.
 10. The Threaded Rod shall conform to the requirements of AASHTO M 183.
 11. Reinforcement bars designated (E) shall be epoxy coated.

AS REVISE

CONCRETE BARRIER SPECIAL
 F.A.I. 50/70/64
 SEC. 82-3HVB-2R-2(1)
 ST. CLAIR COUNTY

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Barrier Special (1)	Lin. Ft.	712.3

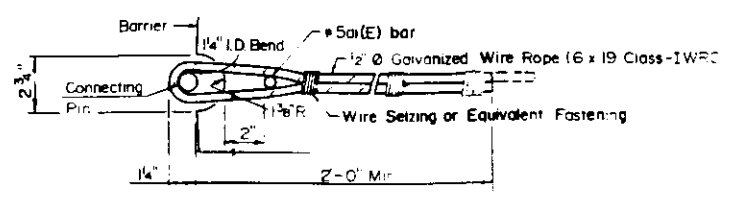
HSIONG ASSOCIATES LTD.
 DESIGNED: SK.L. CHECKED: G.J.G.
 DRAWN: R.H.H. DATE: NO. H-120

(1) includes all items shown in Section A-A

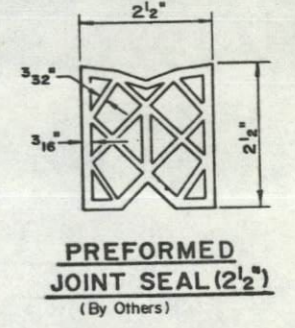
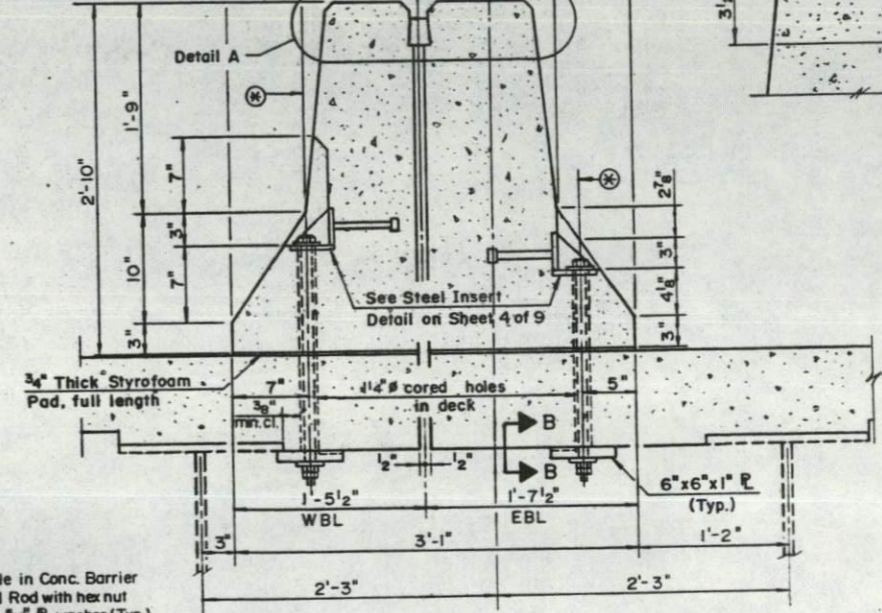
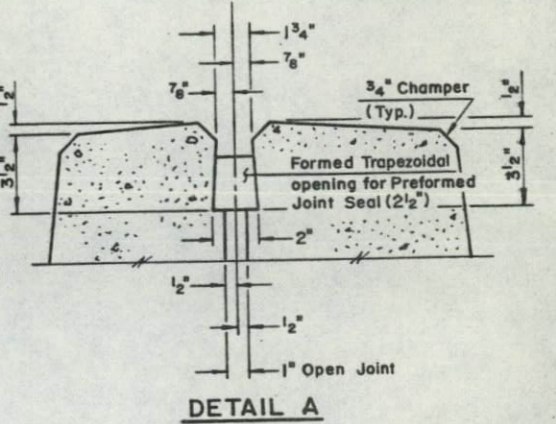
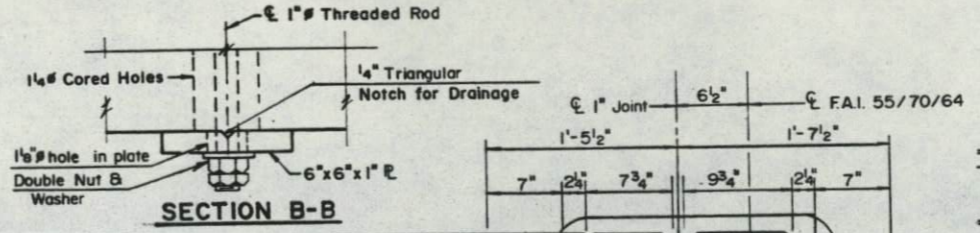
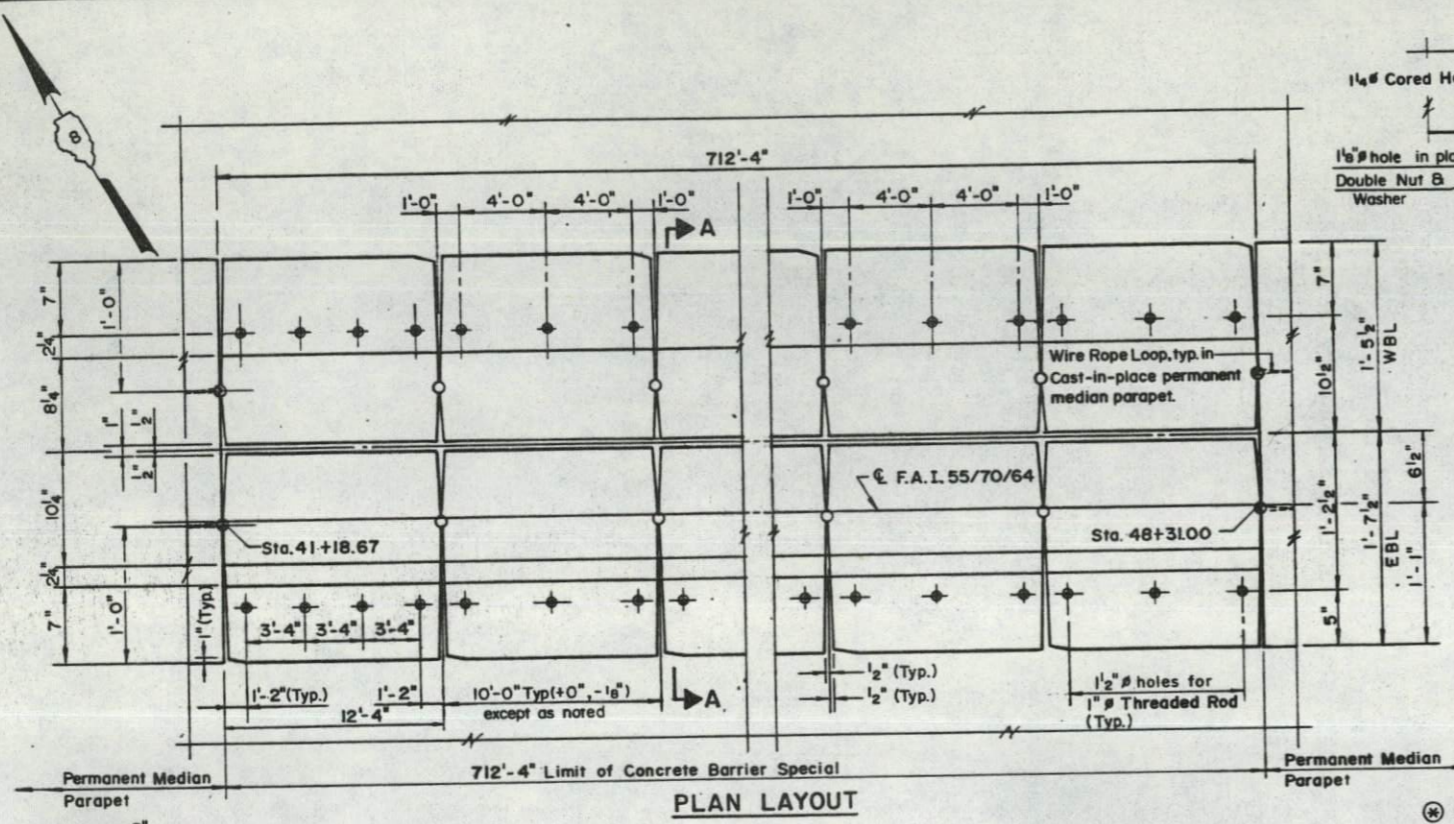
Revised 5-12-92 G.J.G.

Added 9-15-91 P.M.L.

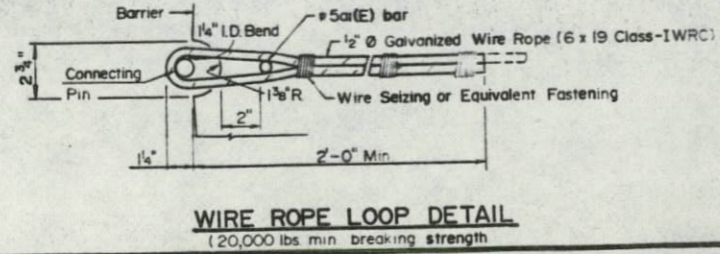
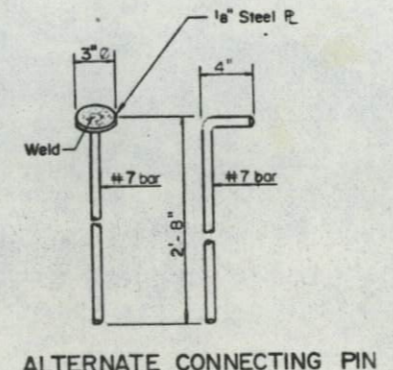
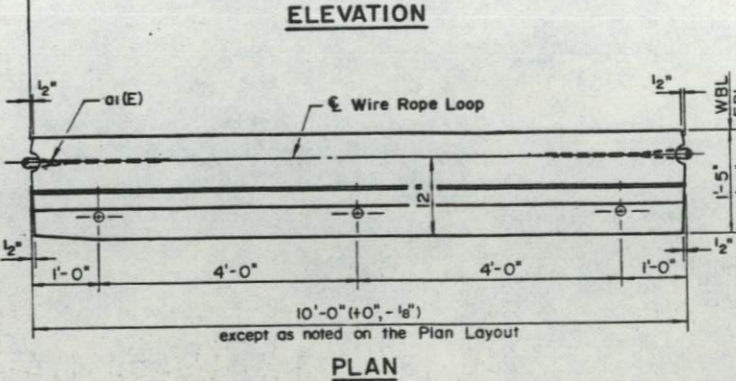
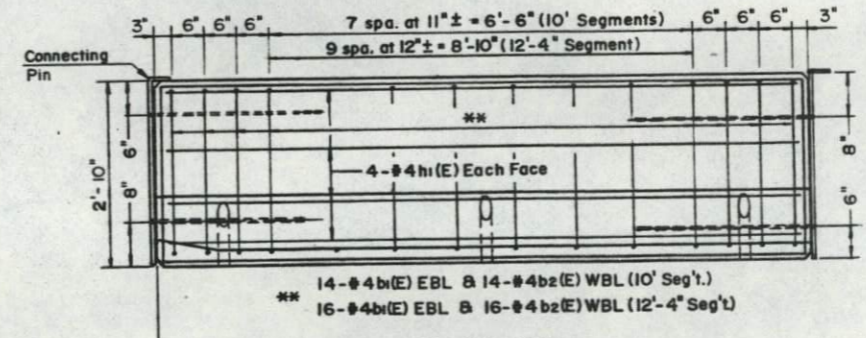
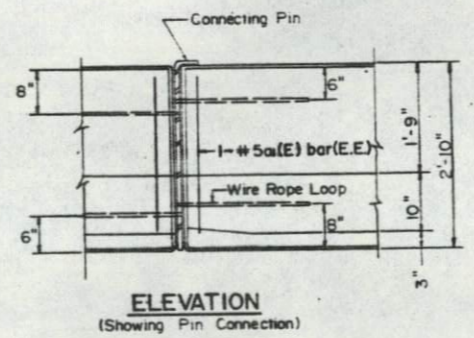
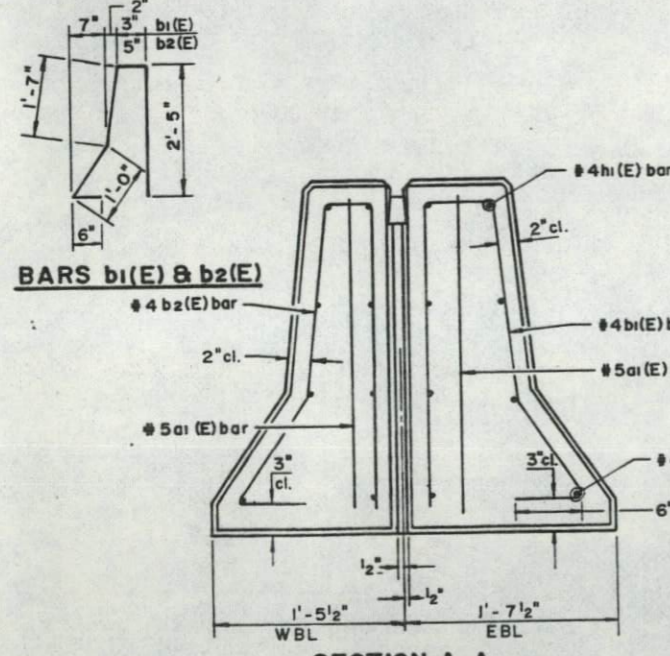
WIRE ROPE LOOP DETAIL
 (20,000 lbs min. breaking strength)



* 82-3HVB-2R-2-3		ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 70		70	*	ST. CLAIR	150	150.3
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		SHEET 3 OF 9		



① 1 1/2" formed hole in Conc. Barrier for 1" Threaded Rod with hex nut and 2 1/2" x 2 1/2" x 3/8" washer (Typ.) Cost incidental to Concrete Barrier Special.



GENERAL NOTES

- The threaded rods, nuts, washers, and plates shall be mechanically galvanized in accordance with the requirement of AASHTO M 298, Class 50.
- The nut and threaded rod shall not protrude above the surface of the barrier. Cover the top of the threaded rod and nut with mastic to exclude contaminants.
- Barrier construction using precast concrete segments shall be in conformance with Section 655 of the Standard Specifications.
- See the Deck Plan on sheet 4 of 9 for the limits of payment for Concrete Barrier Special.
- Protective Coat shall be applied to all surfaces as specified in Section 503 of the Standard Specifications.
- The Wire Rope Loop shall also be cast into the permanent median parapet ends that are connected to the Concrete Barrier Special. The location of the Wire Rope Loop shall be consistent with the details shown on this sheet.
- Barrier units shall be pinned one to another in continuous smooth line of the exact locations shown on the plans.
- Lifting devices meeting the approval of the Engineer shall be proposed by the Contractor.
- The #5 bar may be omitted if 2 continuous wire ropes are substituted for the 4 wire rope loops shown. The continuous ropes shall be looped and fastened on each end as shown in the wire rope detail.
- The Threaded Rod shall conform to the requirements of AASHTO M 183.
- Reinforcement bars designated (E) shall be epoxy coated.

CONCRETE BARRIER SPECIAL
F.A.I. 50/70/64
SEC. 82-3HVB-2R-2-3-1
ST. CLAIR COUNTY

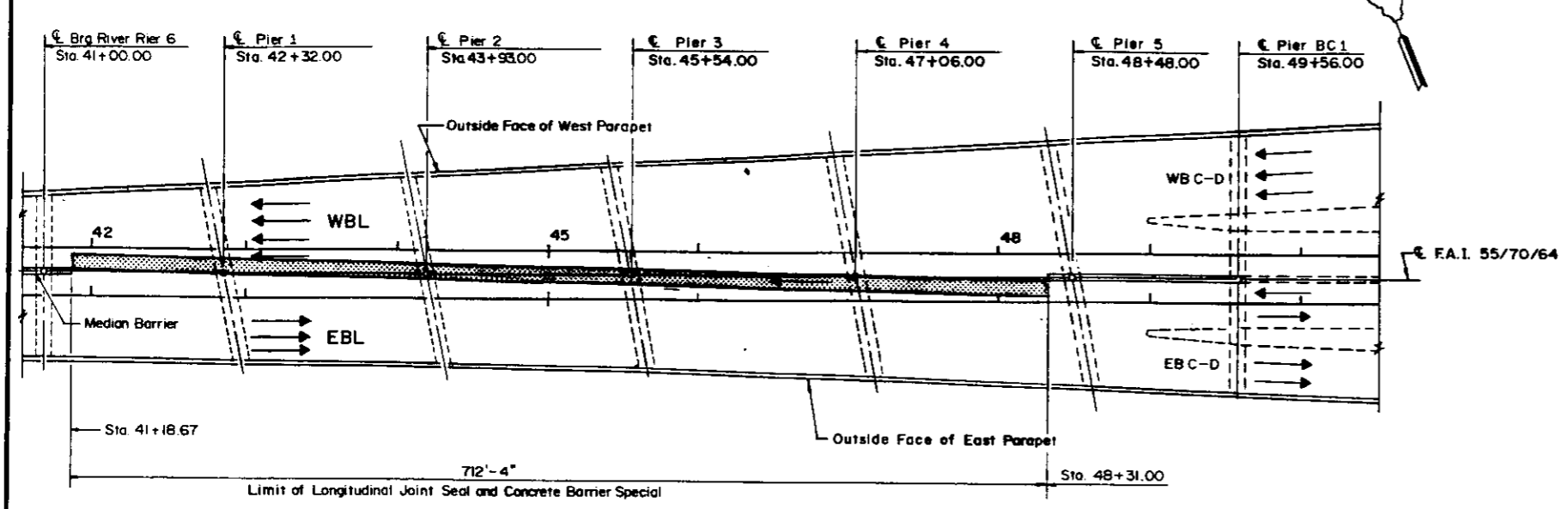
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Barrier Special ①	Lin. Ft.	712.3

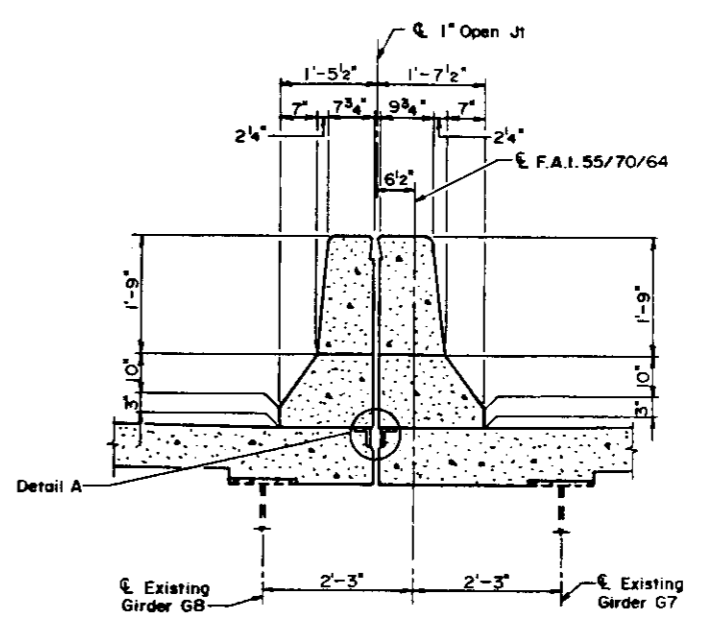
HSIONG ASSOCIATES LTD.

DESIGNED: SK.L.	CHECKED: G.J.G.
DRAWN: R.H.H.	DATE
NO H-120	

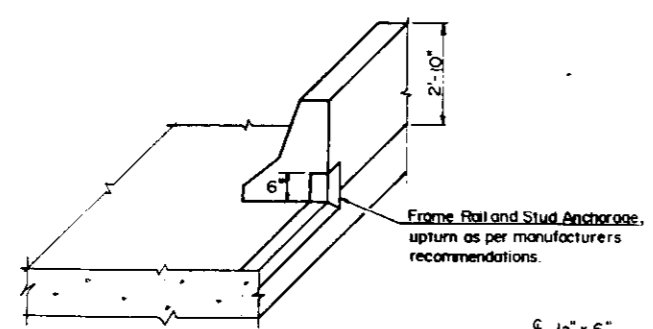
① Includes all items shown in Section A-A



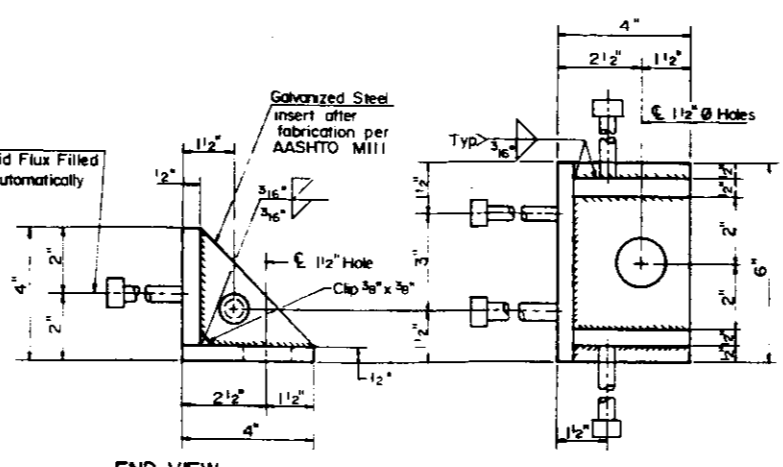
DECK PLAN



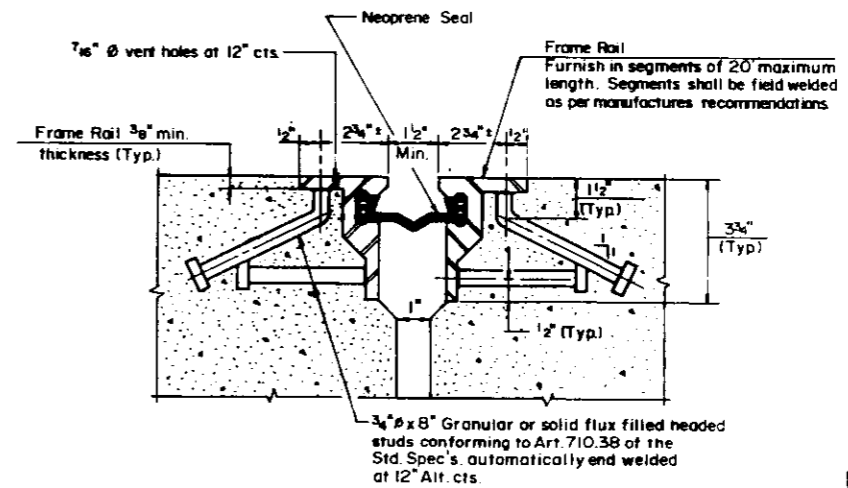
SECTION THRU MEDIAN
(between Sta. 41+18.67 to Sta. 48+31.00)



UPTURN DETAIL
At termination of Longitudinal Joint Seal at permanent median parapet, showing half-barrier



END VIEW PLAN VIEW
STEEL INSERT DETAIL
For location of Steel Insert Detail see sheet 3 of 9



DETAIL A

Note: After fabrication all surface of the steel plates not embedded in concrete shall be given one shop coat of paint specified for Structural Steel.

The minimum weight of the angle anchorage shall be 9.0 lbs per foot.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Longitudinal Joint Seal	Lin Ft	723

MANUFACTURE	FRAME RAIL	SEAL TYPE
D.S Brown	SSCM	L-300
Watson Bowman, Inc	Type MI Extrusion	SE-300

AS REVISED

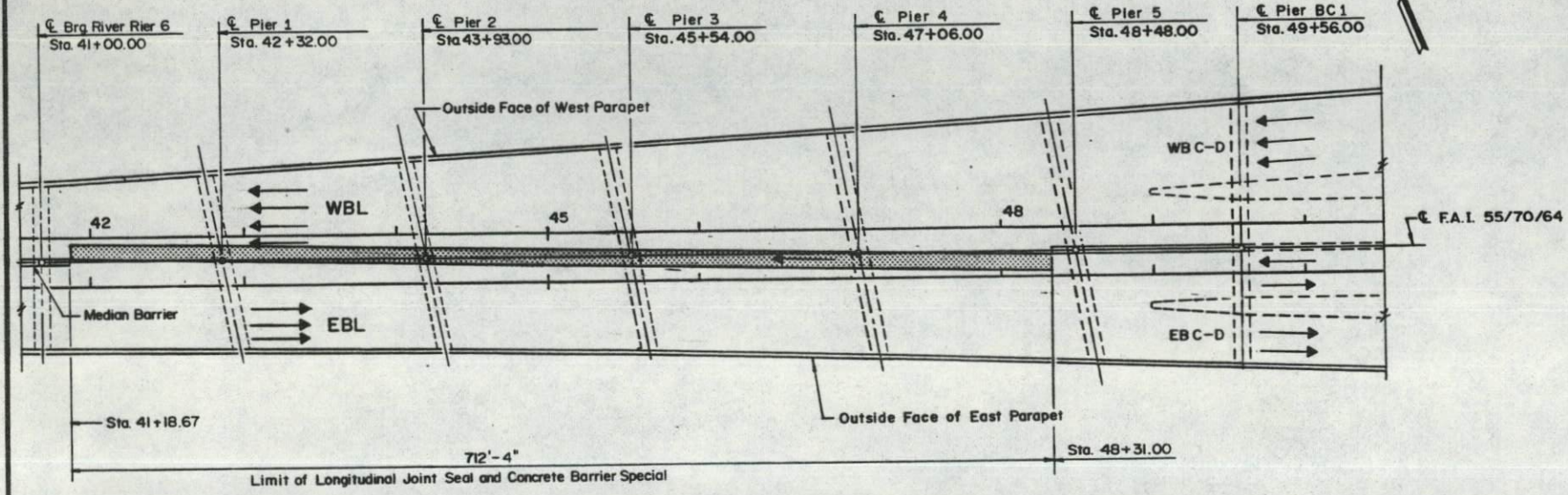
LONGITUDINAL JOINT SEAL
F.A.I. 55/70/64
SEC. 82-3HVB-2R-2-1
ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD
DESIGNED S.K.L. CHECKED G.J.G.
DRAWN R.H.H. DATE NO. H-120

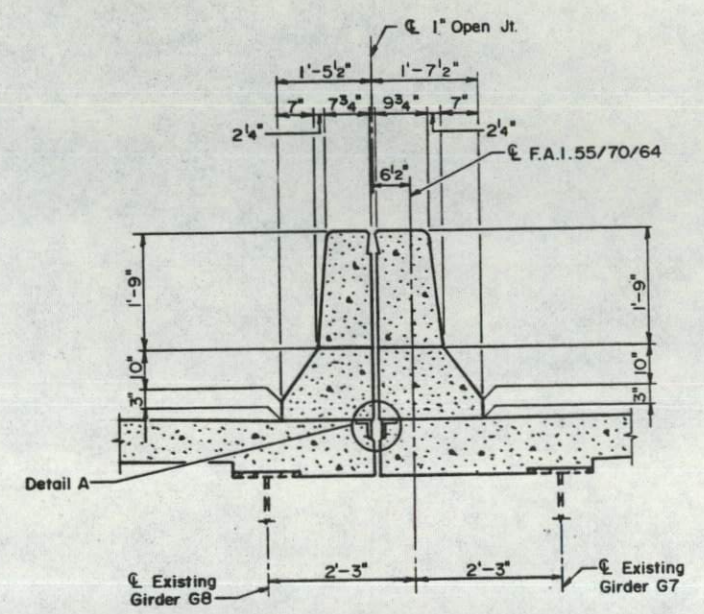
Revised 5-12-92 G.J.G

Add 9-15-91 PMP

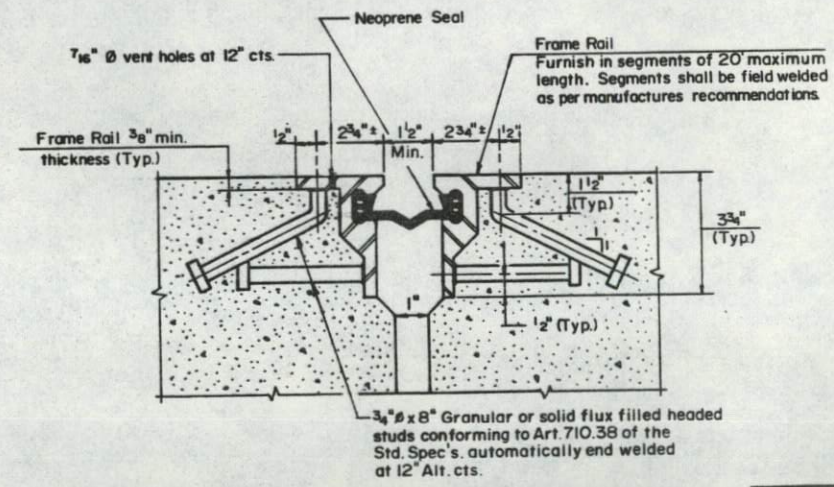
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	150	1504
ILLINOIS PROJECT			SHEET 4 OF 9	



DECK PLAN



SECTION THRU MEDIAN
(between Sta. 41+18.67 to Sta. 48+31.00)



DETAIL A

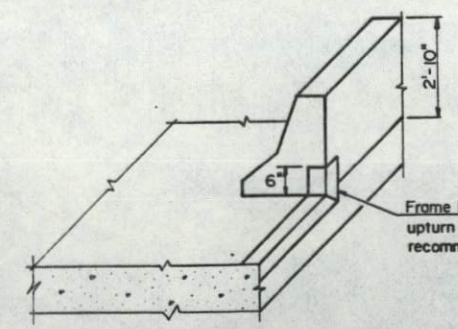
Note: After fabrication all surface of the steel plates not embedded in concrete shall be given one shop coat of paint specified for Structural Steel.

The minimum weight of the angle anchorage shall be 9.0 lbs. per foot.

MANUFACTURE	FRAME RAIL	SEAL TYPE
D.S. Brown	SSCM	L-300
Watson Bowman, Inc.	Type MI Extrusion	SE-300

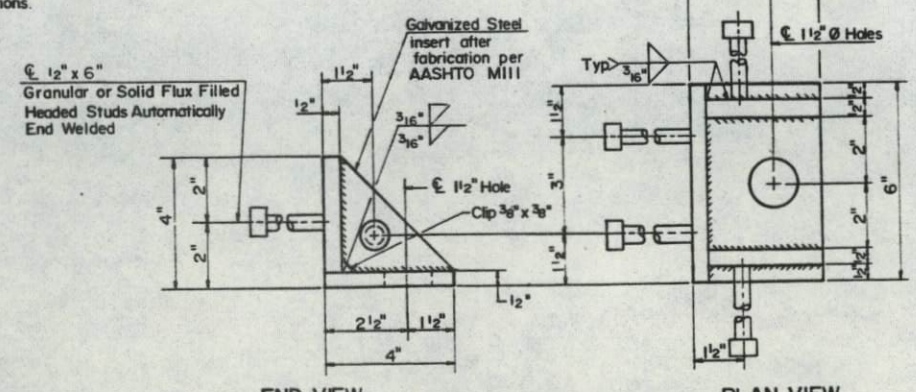
BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Longitudinal Joint Seal	Lin Ft.	712.3



UPTURN DETAIL

At termination of Longitudinal Joint Seal at permanent median parapet, showing half-barrier.

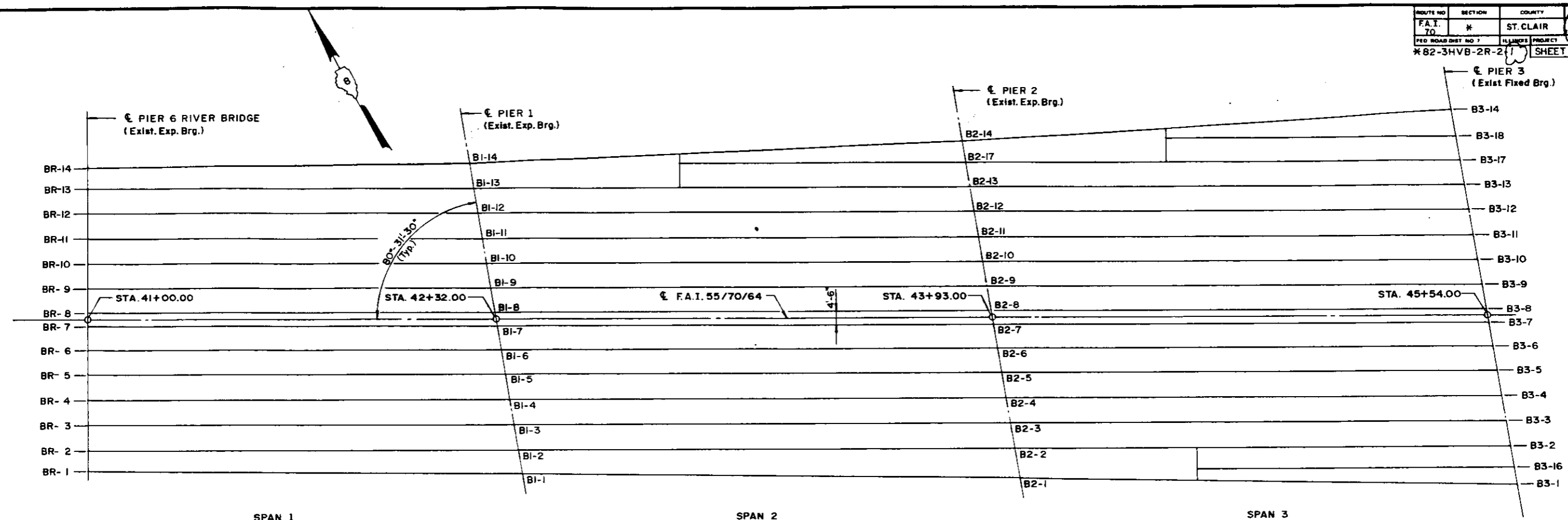


STEEL INSERT DETAIL

For location of Steel Insert Detail see sheet 3 of 9

LONGITUDINAL JOINT SEAL
F.A.I. 55/70/64
SEC. 82-3HVB-2R-2-3-1
ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD.	
DESIGNED: S.K.L.	CHECKED: G.J.G.
DRAWN: R.H.H.	DATE: NO. H-120



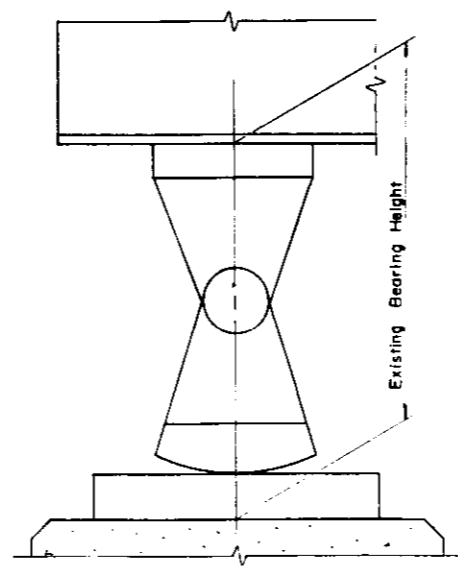
BEARING LOCATION PLAN

BEARING REACTION TABLE

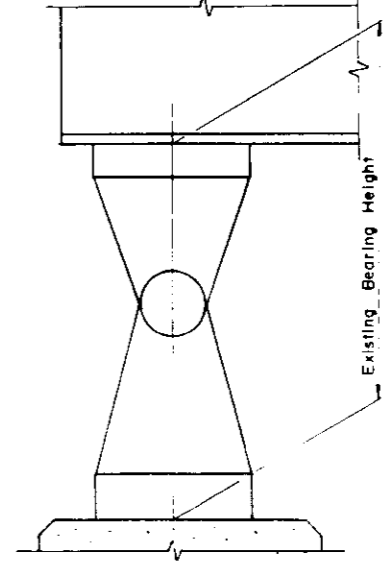
	BR-1 to BR-14	BI-1 to BI-12	BI-13	BI-14	B2-1	B2-2	B2-3 to B2-12 & B2-17	B2-13	B2-14	B3-1 to B3-13 & B3-16 to B3-18	B3-14
Exist. Brg. Height	1'-6 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-4 7/8"	1'-4 7/8"
DL (k)	76	244	254	274	312	254	237	241	288	223	283
LL (k)	53	109	116	130	166	124	113	115	159	110	156
DL + LL (k)	129	353	370	404	478	378	349	356	446	333	439
Impact (k)	10	20	21	24	29	22	20	20	28	19	28
Isolation Brg. Type	(S)14-II-3.25 (7)	(S)18-II-3.00 (7)		(S)18-II-3.00 (1)	(S)20-II-3.00 (1)	(S)18-II-3.00 (5)	(S)18-II-3.00 (5)	(S)18-II-3.00 (1)	(S)18-II-3.25 (1)	(S)18-II-4.50 (8)	(S)20-II-4.50 (1) W.B.

*** To be Verified in Field before Ordering Materials

Definition of Bearing Type Designation (S) 14 - II - 2.75 (7)
 (S) : Square Bearing, (R) : Rectangular
 14 : Plan Dimension, Width, and Length (Inches)
 II : Nominal Bearing Height (Inches), (See Dimension F on sheet 7 of 9 for actual height)
 2.75 : Lead Core Diameter (Inches), (Actual Dimension)
 (7) : Number Required



EXISTING EXPANSION BRG.
Pier 6 RIVER BRIDGE, Piers 1, 2, 4, 5, A1, B, C1, B, D1



EXISTING FIXED BRG.
Pier 3

BEARING REACTION
FAI. 55/70/64
SEC. 82-3HVB-2R-2(1) &
ST. CLAIR COUNTY

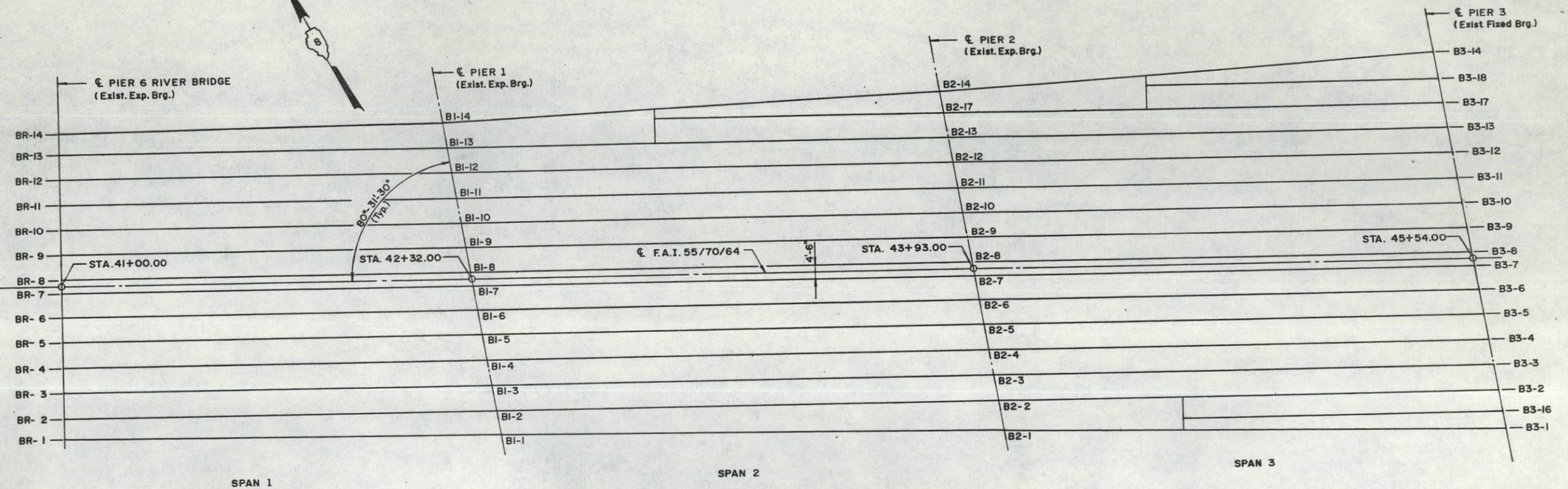
See existing plans for details of the existing bearings and piers
 Work this sheet with sheet 6 of 9

AS REVISED

HSIONG ASSOCIATES LTD
 DESIGNED S.K.L. CHECKED G.J.G.
 DRAWN R.H.H. DATE NO. H-120

Revised 5-12-92 G.J.G. Added 9-15-91 P.M.P.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	150	150.5
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		SHEET 5 OF 9
* 82-3HVB-2R-2-3				



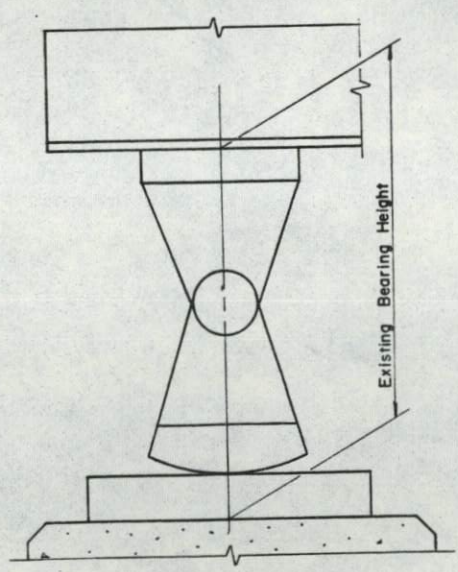
BEARING LOCATION PLAN

BEARING REACTION TABLE

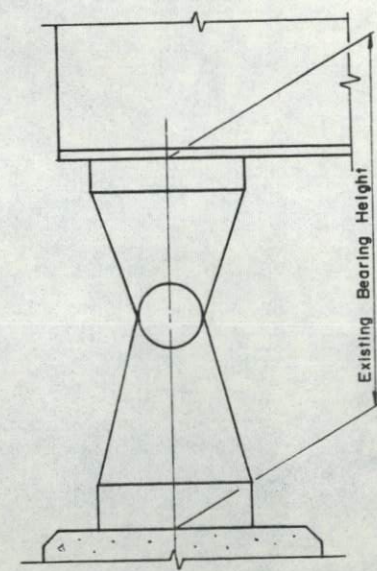
	BR-1 to BR-14	BI-1 to BI-12	BI-13	BI-14	B2-1	B2-2	B2-3 to B2-12 & B2-17	B2-13	B2-14	B3-1 to B3-13 & B3-16 to B3-18	B3-14				
** Exist. Brg. Height	1'-6 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-7 ³ / ₈ "	1'-4 ⁷ / ₈ "	1'-4 ⁷ / ₈ "				
DL(k)	76	244	254	274	312	254	237	241	288	223	283				
LL(k)	53	109	116	130	166	124	113	115	159	110	156				
DL+LL(k)	129	353	370	404	478	378	349	356	446	333	439				
Impact(k)	10	20	21	24	29	22	20	20	28	19	28				
Isolation Brg. Type	(S)14-11-3.25 (7)	(S)18-11-3.00 (7)	(S)18-11-3.00 (7)	(S)18-11-3.00 (7)	(S)20-11-3.00 (1)	(S)18-11-3.00 (1)	(S)18-11-3.00 (5)	(S)18-11-3.00 (6)	(S)18-11-3.00 (1)	(S)20-11-3.25 (1)	(S)18-11-4.50 (8)	(S)18-11-4.50 (6)	(S)20-11-4.50 (1)	E.B.	W.B.

** To be Verified in Field before Ordering Materials

Definition of Bearing Type Designation (S) 14-11-2.75 (7)
 (S) : Square Bearing, (R) : Rectangular
 14 : Plan Dimension, Width, and Length (Inches)
 11 : Nominal Bearing Height (Inches), (See Dimension F on sheet 7 of 9 for actual height)
 2.75 : Lead Core Diameter (Inches), (Actual Dimension)
 (7) : Number Required



EXISTING EXPANSION BRG.
 Pier 6 RIVER BRIDGE, Piers 1, 2, 4, 5, A1, B1, C1 & D1

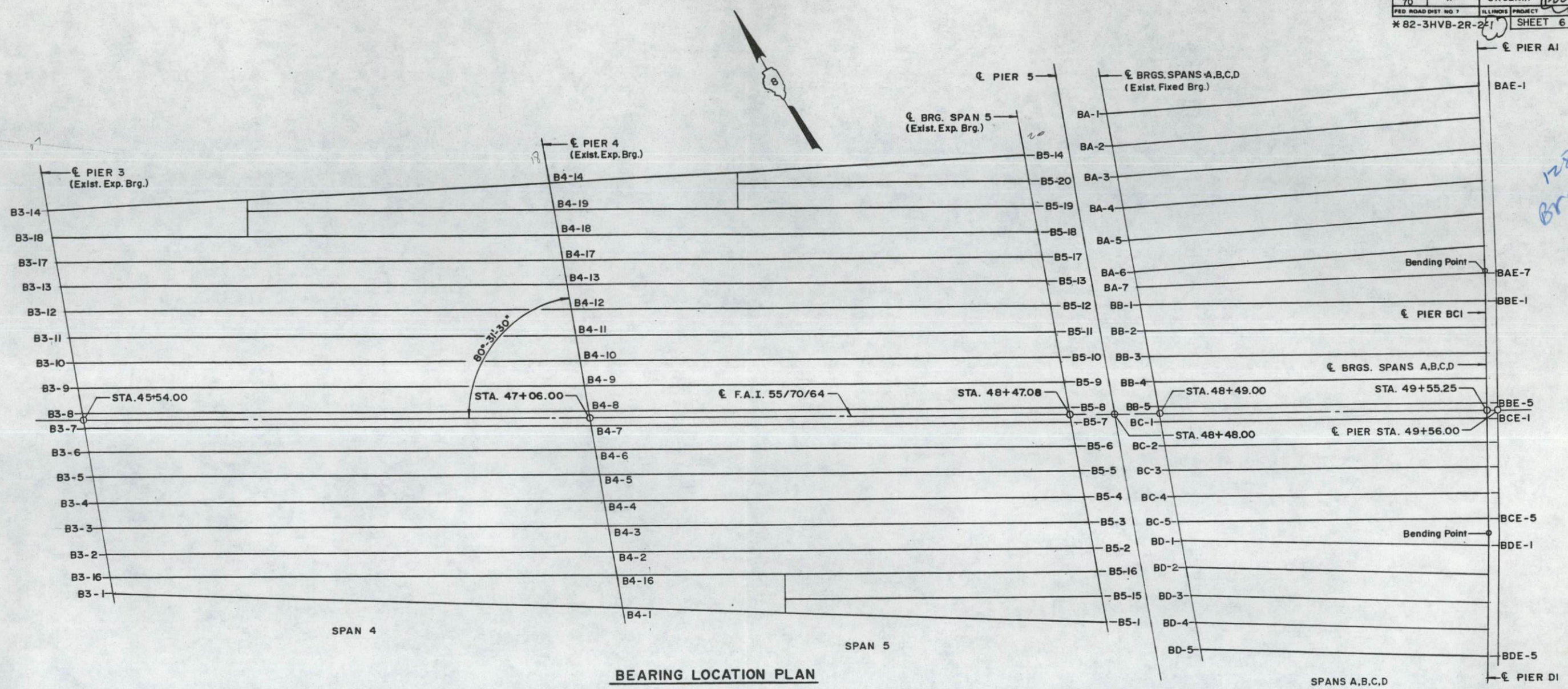


EXISTING FIXED BRG.
 Pier 3

BEARING REACTION
 F.A.I. 55/70/64
 SEC. 82-3HVB-2R-2-3-1
 ST. CLAIR COUNTY

See existing plans for details of the existing bearings and piers.
 Work this sheet with sheet 6 of 9

HSIONG ASSOCIATES LTD.	
DESIGNED: S.K.L.	CHECKED: G.J.G.
DRAWN: R.H.H.	DATE
	NO. H-120

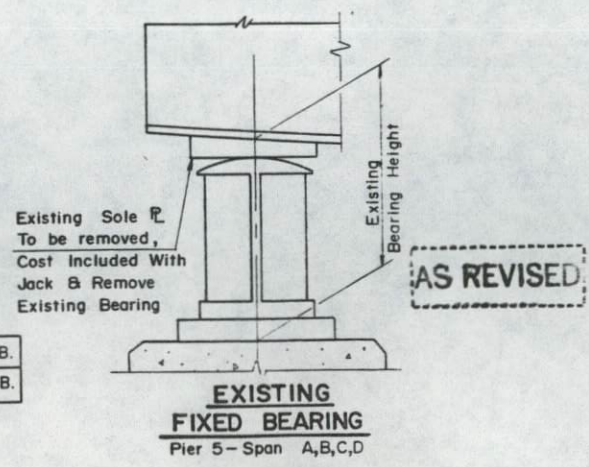


BEARING LOCATION PLAN

BEARING REACTION TABLE

	B4-1	B4-2 to B4-13 B4-17 to B4-19	B4-14	B4-16	B5-1 to B5-13 B5-15 to B5-20	B5-14	BA-1 to BA-7 (1'-3 1/4" (BA-7))	BBI to BB5	BC1 to BC5	BD1 to BD5	BAE1 / BAE7	BBE1 / BBE5	BCE1 / BCE5	BDE1 / BDE5
Exist. Brg. Height	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-6 3/8"	1'-6 3/8"	1'-3 1/4"	1'-3 1/4"	1'-3 1/4"	1'-3 1/4"	1'-10 3/8"	1'-7 1/8"	1'-7 1/8"	1'-7 1/8"
DL(k)	301	239	321	252	79	90	87	77	72	71	303	194	179	178
LL(k)	151	108	165	117	54	62	53	48	48	51	185	120	119	128
DL+LL(k)	452	346	486	370	133	152	140	125	119	123	488	314	298	306
Impact(k)	27	20	29	21	10	12	11	10	10	11	38	25	26	28
Isolation Brg. Type	(S)20-11-3.25(1)	(S)18-11-3.25(6)	(S)20-11-3.25(1)	***	(S)14-11-2.75(9)	(S)14-11-2.25(10)	(S)14-11-2.25(1)	(S)13-10-2.00(7)	(S)13-10-2.00(5)	(S)13-10-2.25(5)	(R)21x14-7-3.50(2)	(R)21x14-7-3.50(2)	(R)22x13-7-3.50(2)	(R)22x13-7-3.50(2)

*** (S)18-11-3.25(1)
** To be Verified in Field Before Ordering Materials.



EXISTING FIXED BEARING
Pier 5 - Span A,B,C,D

BEARING REACTION
F.A.I. 55/70/64
SEC. 82-3HVB-2R-2
ST. CLAIR COUNTY

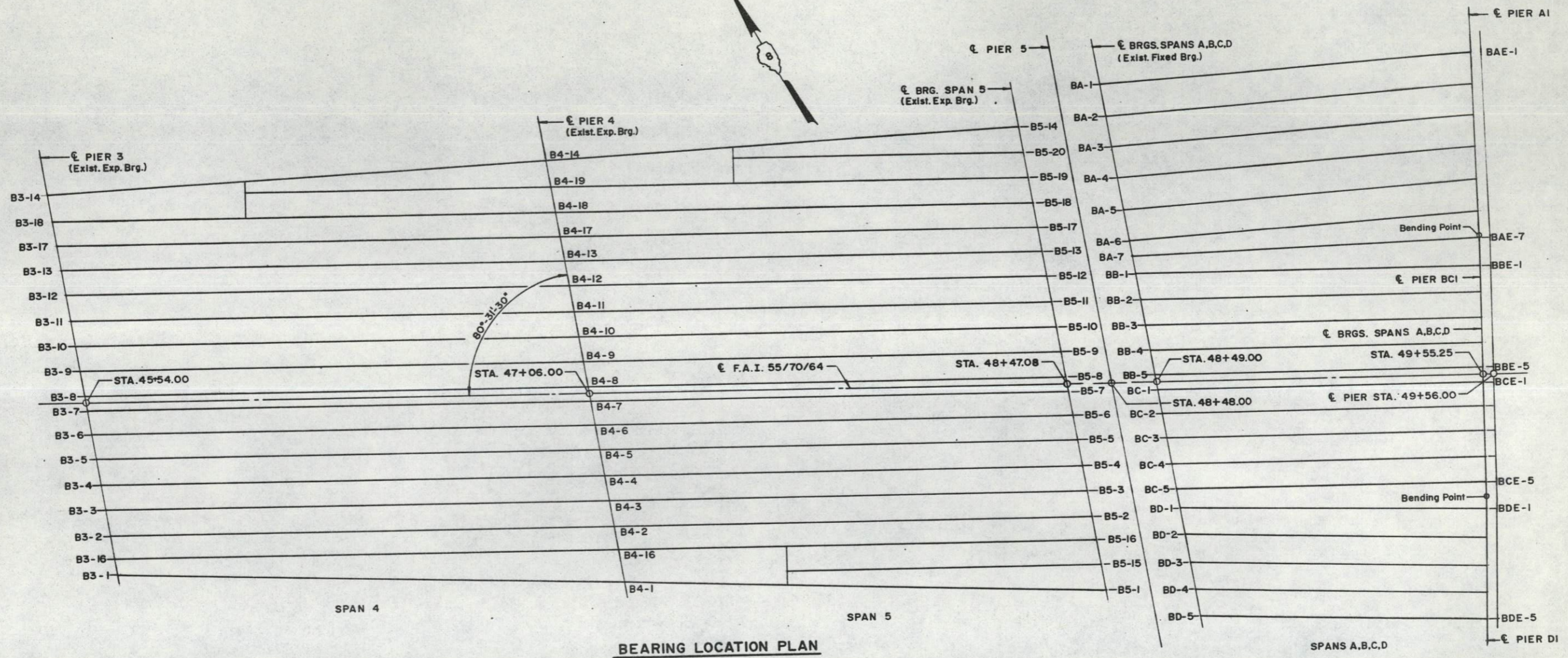
HSIONG ASSOCIATES LTD.
DESIGNED S.K.L. CHECKED G.J.G.
DRAWN R.H.H. DATE _____ NO. H-120

Work this sheet with sheet 5 of 9

Revised 5-12-92 G.J.G.

Added 9-15-91 PMP

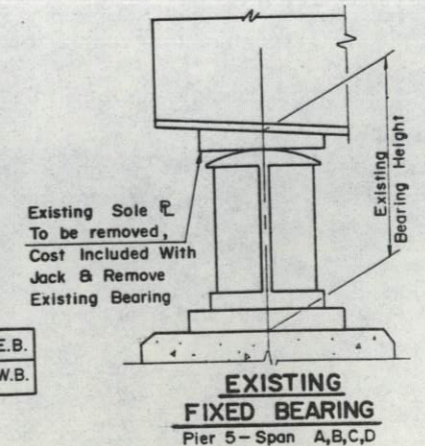
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	150	150.6
FED. ROAD DIST. NO. 1	ILLINOIS PROJECT		SHEET 6 OF 9	
* 82-3HVB-2R-2-3				



BEARING REACTION TABLE

	B4-1	B4-2 to B4-13 B4-17 to B4-19	B4-14	B4-16	B5-1 to B5-13 B5-15 to B5-20	B5-14	BA-1 to BA-7 1'-3 1/4" (BA-7)	BB1 to BB5	BC1 to BC5	BD1 to BD5	BAE1 / BAE7	BBE1 / BBE5	BCE1 / BCE5	BDE1 / BDE5
Exist. Brg. Height	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-7 3/8"	1'-6 3/8"	1'-6 3/8"	1'-3 1/4"	1'-3 1/4"	1'-3 1/4"	1'-3 1/4"	1'-10 3/8"	1'-7 1/8"	1'-7 1/8"	1'-7 1/8"
DL (k)	301	239	321	252	79	90	87	77	72	71	303	194	179	178
LL (k)	151	108	165	117	54	62	53	48	48	51	185	120	119	128
DL+LL(k)	452	346	486	370	133	152	140	125	119	123	488	314	298	306
Impact (k)	27	20	29	21	10	12	11	10	10	11	38	25	26	28
Isolation Brg. Type	(S)20-11-3.25 (1)	(S)18-11-3.25 (6)	(S)20-11-3.00 (9)	***	(S)14-11-2.75 (9)	(S)14-11-2.25 (10)	(S)14-11-2.25 (7)	(S)13-10-2.00 (5)	(S)13-10-2.25 (5)	(S)13-10-2.25 (5)	(R)21x14-7-3.50 (2)	(R)21x14-7-3.50 (2)	(R)22x13-7-3.50 (2)	(R)22x13-7-3.50 (2)
														E.B.
														W.B.

*** (S)18-11-3.25(1)
** To be Verified in Field Before Ordering Materials.

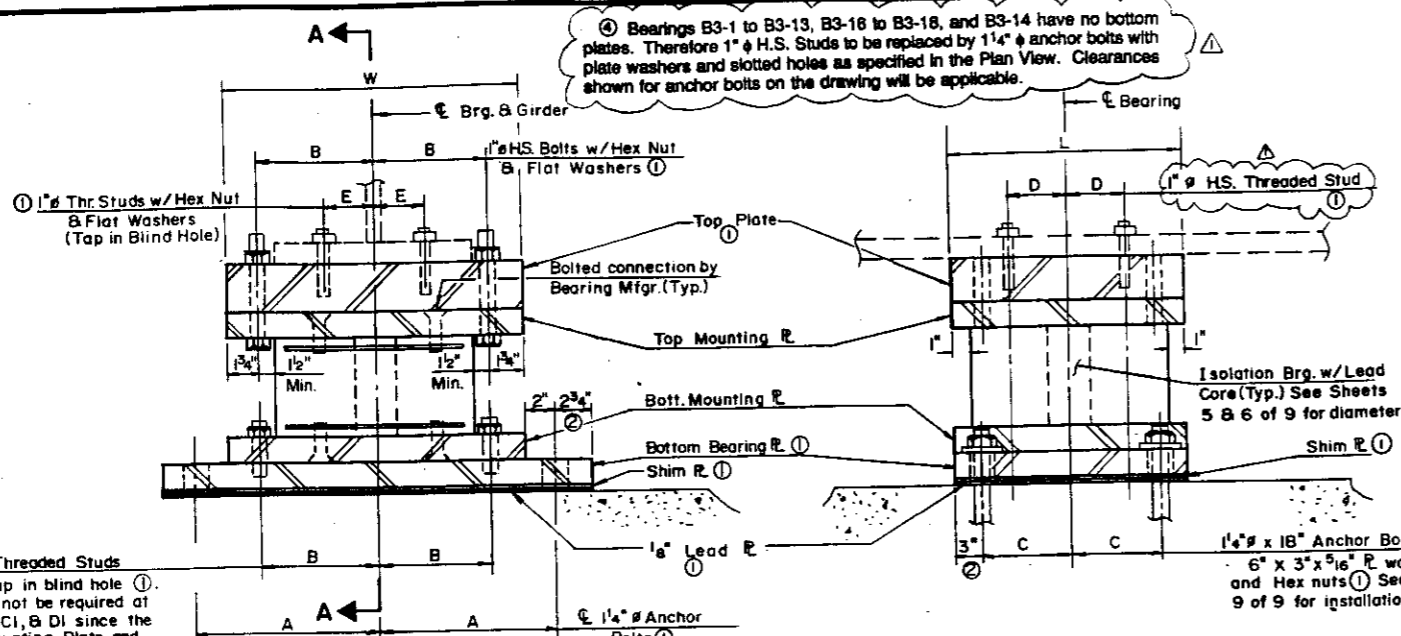


EXISTING FIXED BEARING
Pier 5 - Span A,B,C,D

BEARING REACTION
F.A.I. 55/70/64
SEC. 82-3HVB-2R-2-3-1
ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD	
DESIGNED: S.K.L.	CHECKED: G.J.G.
DRAWN: R.H.H.	DATE
NO. H-120	

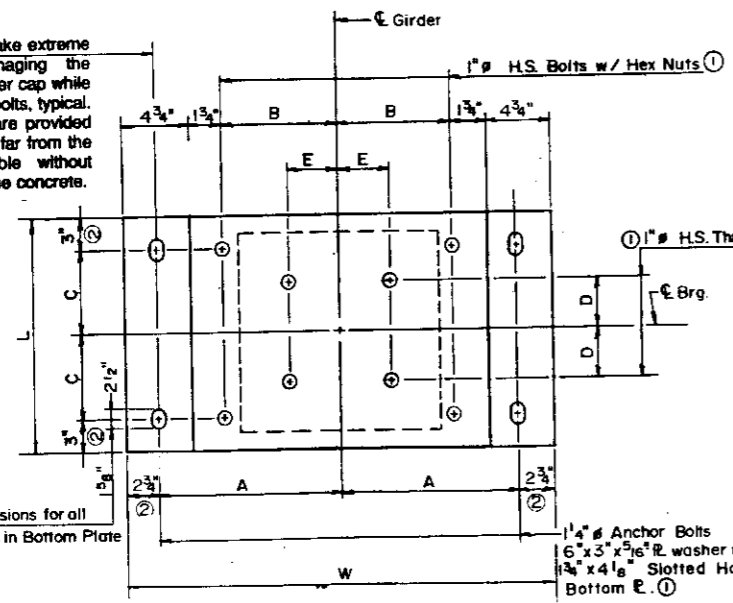
Work this sheet with sheet 5 of 9



ELEVATION

1" H.S. Threaded Studs
 Drill & Tap in blind hole. These will not be required at Piers A1, BC1, & D1 since the Bottom Mounting Plate and Bottom Plate are attached with the anchor bolts, i.e. dimension A is equal to dimension B.
 See Note 4

The Contractor shall take extreme care to avoid damaging the reinforcement in the pier cap while drilling for the anchor bolts, typical. Where slotted holes are provided place anchor bolts as far from the bearing as possible without cutting the rebars in the concrete.



PLAN

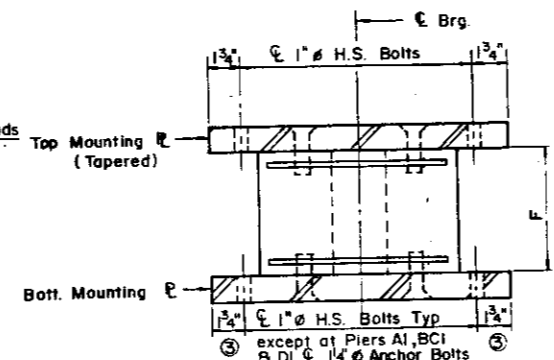
Showing Bot. Brg. Plate, Mounting Plates, and holes through bottom flange of existing girders.
 Typical except as shown on Bottom Plate Clipping Detail.

Typical dimensions for all slotted holes in Bottom Plate

1/4" Anchor Bolts
 6" x 3" x 5/16" R washer under nut
 3/4" x 4/8" Slotted Holes in Bottom R.
 Slotted holes are not required for bearings at Piers A1, BC1 & D1

SECTION A-A

See Table of Plate Sizes
 1 Denotes material included in Structural Steel.
 2 Typical except as shown on Bottom Plate Clipping Detail & B2-4 for Bearing BAE-7, BBE-1 & BCE-5
 3 Typical except 2 3/4" at Piers A1, BC1, & D1 or as shown Bottom Plate Clipping Detail.



BEARING ASSEMBLY

To be Designed and Fabricated by Dynamic Isolation System, Inc.

TABLE OF PLATES SIZES

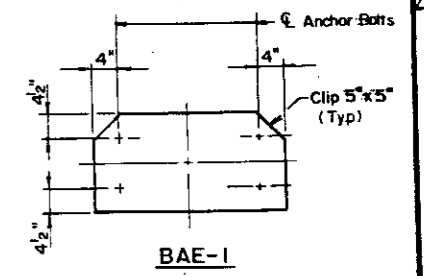
Bearing Size	Top Plate W x L x T	Top Mounting Plate W x L x T	Bot. Mounting Plate W x L x T	Bot. Brg. Plate W x L x T
BR-1 to BR-14	24-1/2"x16"x2"	24-1/2"x16"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2-3/8"
B1-1 to B1-13	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2"
B1-14	26-1/2"x22"x3-1/2"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x1-7/8"
B2-1 & B2-14	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24 1/2" x 20" x 1 1/2"	34"x20"x2"
B2-2 to B2-13 & B2-17	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	27 1/2" x 20" x 2"	-
B3-1 to B3-13	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	-
B3-16 to B3-18	26-1/2"x22"x3-3/8"	26-1/2"x22"x1-1/2"	29 1/2" x 22" x 2"	-
B3-14	26-1/2"x22"x3-3/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2"
B4-1	26-1/2"x22"x3-3/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2-1/8"
B4-14	26-1/2"x22"x3-1/4"	26-1/2"x22"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2"
B4-2 to B4-13	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2"
B4-16 to B4-19	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2"
B5-1 to B5-14	22-1/2"x15"x1"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
B5-15 to B5-20	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1-3/8"
BA-1 to BA-6	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BB-1 to BB-5	27-1/2"x16"x4-7/8"	27-1/2"x16"x3"	34"x18"x3"	34"x18"x4-5/8"
BAE-1, BAE-7	27-1/2"x16"x3-3/4"	27-1/2"x16"x2"	34"x14"x2"	34"x14"x4-1/2"
BBE-1, BBE-5	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	34"x14"x2"	34"x14"x4-3/8"
BCE-1, BCE-5	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	34"x14"x2"	34"x14"x4-3/8"
BDE-1, BDE-5	27-1/2"x16"x3-3/4"	27-1/2"x16"x2"	34"x14"x2"	34"x14"x4-3/8"

*Bottom Bearing Plate and Bottom Mounting Plate to be clipped at edges as shown.

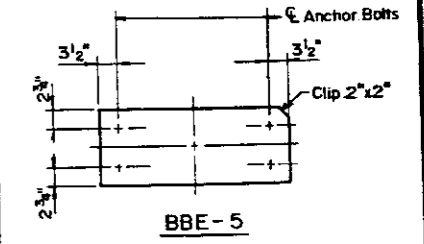
VALUES A THROUGH H

	A	B	C	D	E	F	G	H
BR-1 to BR-14	14-1/4"	10-1/2"	5"	4-1/2"	4-1/2"	10-7/8"	2"	2"
B1-1 to B1-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-9/16"	3-3/16"
B1-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-3/4"	3-1/4"
B2-1 & B2-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	4-1/16"	2-15/16"
B2-2 to B2-13 & B2-17	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
B3-1 to B3-13	11"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	2-7/8"	1-7/8"
B3-16 to B3-18	12"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	2-15/16"	1-13/16"
B3-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-15/16"	2-13/16"
B4-1	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-13/16"	2-11/16"
B4-14	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
B4-2 to B4-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
B4-16 to B4-19	14-1/4"	10-1/2"	5"	4-1/2"	4-1/2"	10-7/8"	2-13/16"	1-15/16"
B5-1 to B5-14	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/4"	3/4"
B5-15 to B5-20	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/2"	1"
BA-1 to BA-6	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	9-7/8"	1-1/2"	1"
BB-1 to BB-5	13"	13"	4-1/2"	2-5/8"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BAE-1	14-1/4"	12"	5" 5/8"	2" 5/8"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BAE-7	14-1/4"	12"	5" 5/8"	2" 5/8"	4-1/16"	6-3/4"	4"	3-1/2"
BBE-1	13-1/2"	12"	5" 3/4"	2" 5/8"	4-1/16"	6-3/4"	4"	3-1/2"
BBE-5	13-1/2"	12"	5" 3/4"	2" 5/8"	4-1/16"	6-7/8"	4"	3-1/2"
BCE-1	14-1/4"	12-1/2"	4" 1/2" x 4" 1/2"	2" 5/8"	4-1/16"	6-7/8"	4"	3-1/2"
BCE-5	14-1/4"	12-1/2"	4" 1/2" x 4" 1/2"	2" 5/8"	4-1/16"	6-7/8"	4"	3-1/2"
BDE-1, BDE-5	13-1/2"	12-1/2"	4" 1/2" x 4" 1/2"	2" 5/8"	4-1/16"	6-7/8"	4"	3-1/2"

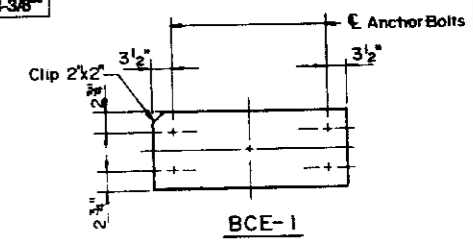
* First Dimension Relates to Top Plate & Second Dimension Relates to Bottom Plates



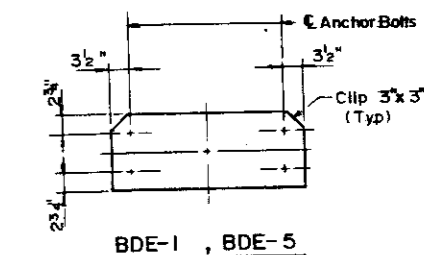
BAE-1



BBE-5



BCE-1



BDE-1, BDE-5

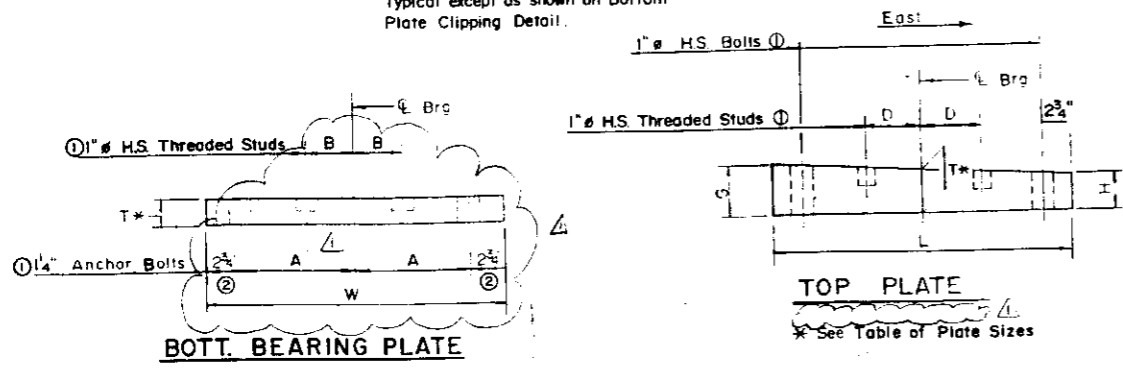
BOTTOM PLATE CLIPPING DETAIL

Slotted holes are not required for bearings at Piers A1, BC1 & D1; therefore, use 3" x 3" x 5/16" plate washer with holes drilled in the shop.

NOTES

Jacking shall be required for the removal and replacement of all bearings for the 6-span approach structure.
 Maximum lift shall be only the amount necessary to remove all or parts of bearing in accordance with jacking procedure but shall not exceed 1/8".
 Anchor bolts shall be removed or cut off and ground flush with top of concrete. If new anchor bolts are in conflict with existing anchor bolts then the existing anchor bolts shall be removed and the holes shall be filled with non-shrink grout.
 Minimum jack capacity shall be determined by the reactions given on sheet 6 and 7 of 9 multiplied by a 1.5 Factor of Safety.
 With new bottom bearing plates in position new holes shall be drilled through the holes in the bottom bearing plate for the new anchor bolts.
 See Special Provisions for additional requirements.
 For anchor bolt details, see sheet 9 of 9.
 Bearing located at pier 5 span ABCD will require holes drilled through the bottom girder flange. Dimensions D and E shall be equal to 4 1/2". Cost incidental to furnishing and erecting structural steel.
 Bearing steel, except surfaces bonded to the elastomeric pad, shall be painted in accordance with the painting requirements for new structural steel.

AS REVISED



BOTT. BEARING PLATE

TOP PLATE

* See Table of Plate Sizes

SEISMIC ISOLATION BEARING ASSEMBLY
 F.A.I. 50/70/64
 SEC. 82-3HVB-2R-2
NORTH & SOUTH ABUTMENTS
ST. CLAIR COUNTY
 HSIONG ASSOCIATES LTD.
 DESIGNED S.K.L. CHECKED G.J.G.
 DRAWN R.H.H. DATE NO. H-120
 Added 9-15-91 PMP

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F.A.I. 70	**	ST. CLAIR	150	150.7
FED. ROAD DIST NO. 7	ILLINOIS PROJECT			
SHEET 7 OF 9				

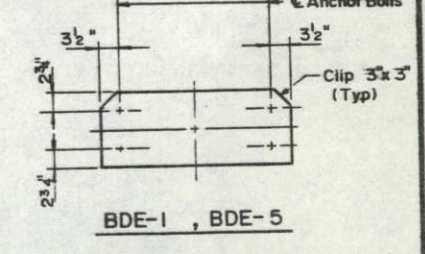
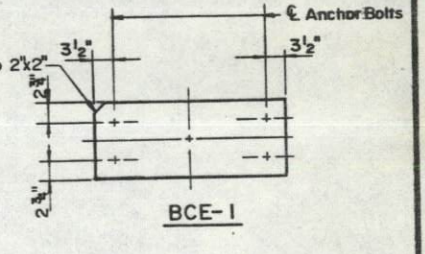
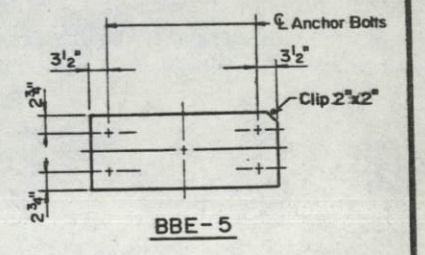
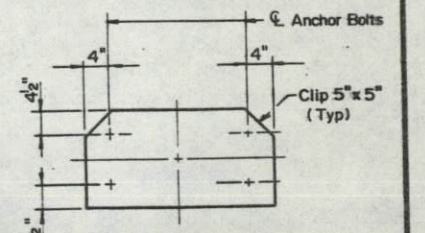
TABLE OF PLATES SIZES

	Bearing Size	Top Plate W x L x T	Top Mounting Plate W x L x T	Bot. Mounting Plate W x L x T	Bot. Brg. Plate W x L x T
BR-1 to BR-14	14"x14"	24-1/2"x16"x2"	24-1/2"x16"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2-3/8"
B1-1 to B1-13	18"x18"	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2"
B1-14	20"x20"	26-1/2"x22"x3-1/2"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x1-7/8"
B2-1 & B2-14	18"x18"	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24"x20"x1-1/2"	34"x20"x2"
B2-2 to B2-13 & B2-17	18"x18"	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	34"x20"x2"	-
B3-1 to B3-13	18"x18"	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	34"x20"x2"	-
B3-16 to B3-18	20"x20"	26-1/2"x22"x2-3/8"	26-1/2"x22"x1-1/2"	36"x22"x2"	-
B3-14	20"x20"	26-1/2"x22"x3-3/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2"
B4-1	20"x20"	26-1/2"x22"x3-3/8"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2-1/8"
B4-14	20"x20"	26-1/2"x22"x3-1/4"	26-1/2"x22"x1-1/2"	26-1/2"x22"x1-1/2"	36"x22"x2-1/8"
B4-2 to B4-13	18"x18"	24-1/2"x20"x3-3/8"	24-1/2"x20"x1-1/2"	24-1/2"x20"x1-1/2"	34"x20"x2"
B4-16 to B4-19	14"x14"	24-1/2"x16"x2-3/8"	24-1/2"x16"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2"
B5-1 to B5-14	14"x14"	24-1/2"x16"x2-3/8"	24-1/2"x16"x1-1/2"	24-1/2"x16"x1-1/2"	34"x16"x2"
B5-15 to B5-20	13"x13"	22-1/2"x15"x1"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BA-1 to BA-6	13"x13"	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1-3/8"
BB-1 to BB-5	13"x13"	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BA-7	13"x13"	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BC-1 to BC-5	13"x13"	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BD-1 to BD-5	13"x13"	22-1/2"x15"x1-1/4"	22-1/2"x15"x1-1/2"	22-1/2"x15"x1-1/2"	32"x15"x1"
BAE-1, BAE-7	21"x14"	27-1/2"x16"x4-7/8"	27-1/2"x16"x3"	34"x18"x3"	34"x18"x4-5/8"
BBE-1, BBE-5	21"x14"	27-1/2"x16"x3-3/4"	27-1/2"x16"x2"	34"x14"x2"	34"x14"x4-1/2"
BCE-1, BCE-5	22"x13"	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	34"x14"x2"	34"x14"x4-3/8"
BDE-1, BDE-5	22"x13"	28-1/2"x15"x3-3/4"	28-1/2"x15"x2"	34"x14"x2"	34"x14"x4-3/8"

*Bottom Bearing Plate and Bottom Mounting Plate to be clipped at edges as shown.

VALUES A THROUGH H

	A	B	C	D	E	F	G	H
BR-1 to BR-14	14-1/4"	10-1/2"	5"	4-1/2"	4-1/2"	10-7/8"	2"	2"
B1-1 to B1-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-9/16"	3-3/16"
B1-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-3/4"	3-1/4"
B2-1 & B2-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	4-1/16"	2-15/16"
B2-2 to B2-13 & B2-17	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
B3-1 to B3-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	2-7/8"	1-7/8"
B3-16 to B3-18	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	2-15/16"	1-13/16"
B3-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-15/16"	2-13/16"
B4-1	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-13/16"	2-11/16"
B4-14	15-1/4"	11-1/2"	8"	4-1/2"	4-1/2"	10-7/8"	3-13/16"	2-11/16"
B4-2 to B4-13	14-1/4"	10-1/2"	7"	4-1/2"	4-1/2"	10-7/8"	3-7/8"	2-7/8"
B4-16 to B4-19	14-1/4"	10-1/2"	5"	4-1/2"	4-1/2"	10-7/8"	2-13/16"	1-15/16"
B5-1 to B5-14	14-1/4"	10-1/2"	5"	4-1/2"	4-1/2"	10-7/8"	2-13/16"	1-15/16"
B5-15 to B5-20	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/4"	3/4"
BA-1 to BA-6	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/2"	1"
BB-1 to BB-5	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/2"	1"
BA-7	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	10-1/8"	1-1/2"	1"
BC-1 to BC-5	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	9-7/8"	1-1/2"	1"
BD-1 to BD-5	13-1/4"	9-1/2"	4-1/2"	4-1/2"	4-1/2"	9-7/8"	1-1/2"	1"
BAE-1	13"	13"	4-1/2"	2-5/8"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BAE-7	14-1/4"	13"	6-1/4"	2-5/8"	4-1/16"	6-3/4"	5-1/8"	4-5/8"
BBE-1	14-1/4"	13-1/2"	4-1/4"	2-7/8"	4-1/16"	6-3/4"	4"	3-1/2"
BBE-5	13-1/2"	13-1/2"	4-1/4"	2-7/8"	4-1/16"	6-3/4"	4"	3-1/2"
BCE-1	13-1/2"	13-1/2"	4-1/4"	2-7/8"	4-1/16"	6-7/8"	4"	3-1/2"
BCE-5	14-1/4"	13-1/2"	4-1/4"	2-7/8"	4-1/16"	6-7/8"	4"	3-1/2"
BDE-1, BDE-5	13-1/2"	13-1/2"	4-1/4"	2-7/8"	4-1/16"	6-7/8"	4"	3-1/2"

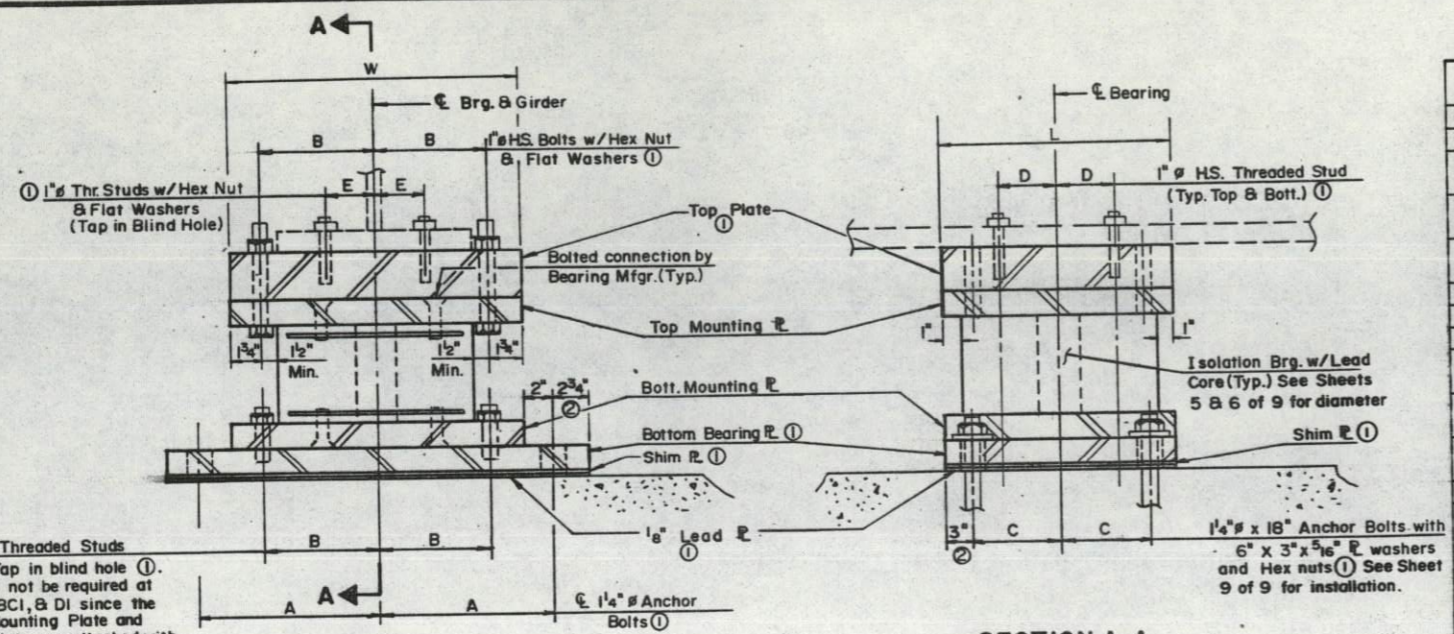


BOTTOM PLATE CLIPPING DETAIL

Slotted holes are not required for bearings at Piers A1, BC1 & D1; therefore, use 3" x 3" x 5/16" plate washer with holes drilled in the shop.

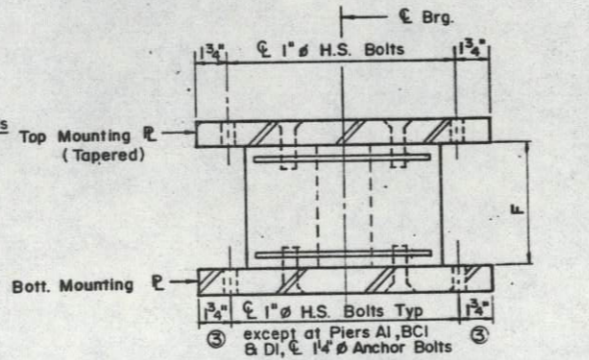
SEISMIC ISOLATION BEARING ASSEMBLY
 F.A.I. 50/70/64
 SEC. 82-3HVB-2R-2-3-1
 NORTH & SOUTH ABUTMENTS
 ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD.
 DESIGNED: S.K.L. CHECKED: G.J.G.
 DRAWN: R.H.H. DATE: NO. H-120



SECTION A-A
 See Table of Plate Sizes

- ① Denotes material included in Structural Steel.
- ② Typical except as shown on Bottom Plate Clipping Detail & 2 3/4" for Bearing BAE-7, BBE-1 & BCE-5
- ③ Typical except 2 3/4" at Piers A1, BC1, & D1 or as shown Bottom Plate Clipping Detail.



BEARING ASSEMBLY

To be Designed and Fabricated by Dynamic Isolation System, Inc.

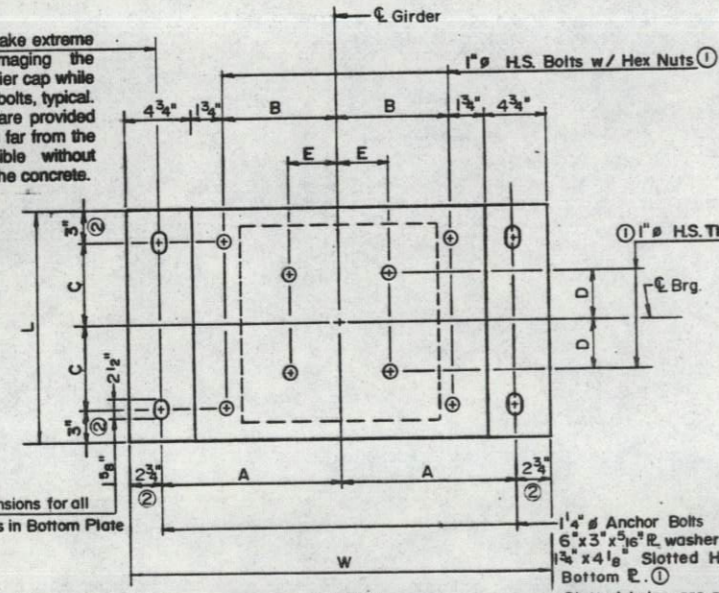
NOTES

Jacking shall be required for the removal and replacement of all bearings for the 6-span approach structure.
 Maximum lift shall be only the amount necessary to remove all or parts of bearing in accordance with jacking procedure but shall not exceed 1/8".
 Anchor bolts shall be removed or cut off and ground flush with top of concrete. If new anchor bolts are in conflict with existing anchor bolts then the existing anchor bolts shall be removed and the holes shall be filled with non-shrink grout.
 Minimum jack capacity shall be determined by the reactions given on sheet 6 and 7 of 9 multiplied by a 1.5 Factor of Safety.
 With new bottom bearing plates in position new holes shall be drilled through the holes in the bottom bearing plate for the new anchor bolts.
 See Special Provisions for additional requirements.
 For anchor bolt details, see sheet 9 of 9.
 Bearing located at pier 5 span ABCD will require holes drilled through the bottom girder flange. Dimensions D and E shall be equal to 4 1/2". Cost incidental to furnishing and erecting structural steel.
 Bearing steel, except surfaces bonded to the elastomeric pad, shall be painted in accordance with the painting requirements for new structural steel.

The hole in plate washer for the anchor bolt shall be drilled in the field except as noted. The hole in the plate shall be located so that the plate completely covers the slotted hole.

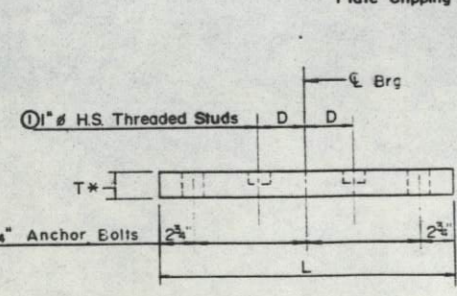
All plates shall be AASHTO M 223, Grade 50 structural steel.
 The Contractor shall set the center of the bottom bearing plates at the dimension shown to the center of the bearing on the existing pier plans. The top plates shall be jacked horizontally so that the center of the top plates are aligned with the center of the existing bearing stiffeners and existing holes through the bottom flange of the girders. The bearings shall be held in the deflected position until installation of the bearing is complete. Horizontal jacking of the bearing and jacking brackets, if required, shall be incidental to Seismic Isolation Bearing Assembly of the type specified.

The Contractor shall take extreme care to avoid damaging the reinforcement in the pier cap while drilling for the anchor bolts, typical. Where slotted holes are provided place anchor bolts as far from the bearing as possible without cutting the rebars in the concrete.

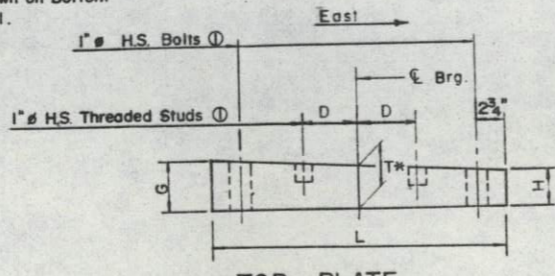


PLAN

Showing Bot Brg. Plate, Mounting Plates, and holes through bottom flange of existing girders.
 Typical except as shown on Bottom Plate Clipping Detail.



BOTT. BEARING PLATE



TOP PLATE

(or Top Mounting Plate)
 * See Table of Plate Sizes

1" H.S. Threaded Studs
 Drill & Tap in blind hole ①. These will not be required at Piers A1, BC1, & D1 since the Bottom Mounting Plate and Bottom Plate are attached with the anchor bolts, i.e. dimension A is equal to dimension B.

1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

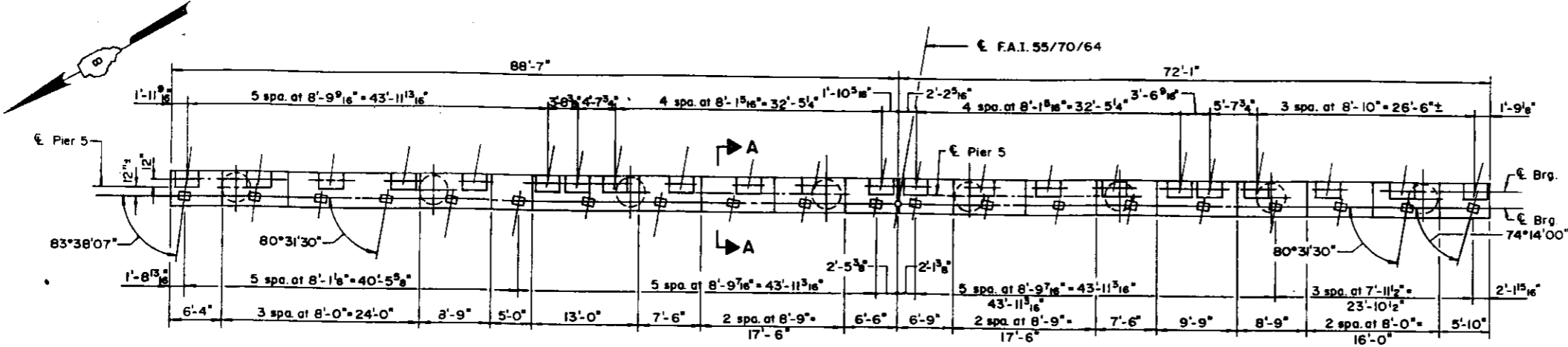
1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

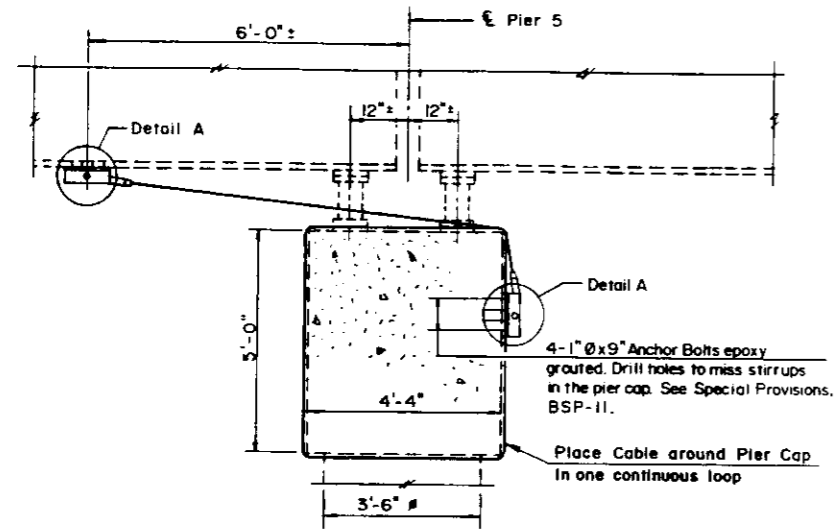
1" H.S. Bolts w/ Hex Nut & Flat Washers (Tap in Blind Hole)

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS
F.A.I. 70	*	ST. CLAIR	105
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT		105.BA
SHEET 8 OF 9			



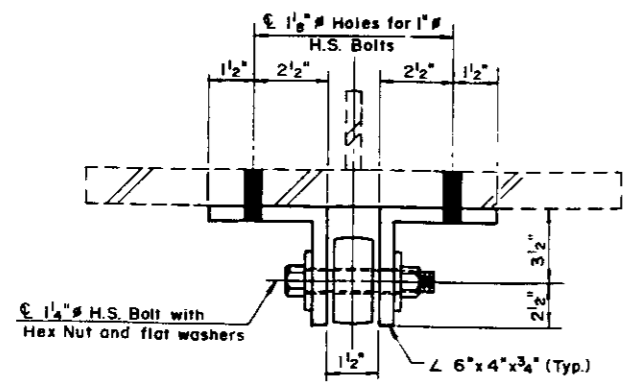
TOP PLAN OF PIER 5
(Existing)

NOTES
 Install Girder Restrainers after the isolation bearings are in place. The location of the cable to girder connection shall be determined by marking the location of the end of the cable when it is pulled tight and then backing off this location by 3".
 Place cables no closer than 3" from the new bearings at any point.
 Cost of Girder Restrainers shall include all cables, angles, swaged sockets, and bolts. See Special Provisions.
 Holes in existing girder flange and pier cap shall be drilled using the holes in the angles as a template. Cost shall be incidental to Girder Restraint.

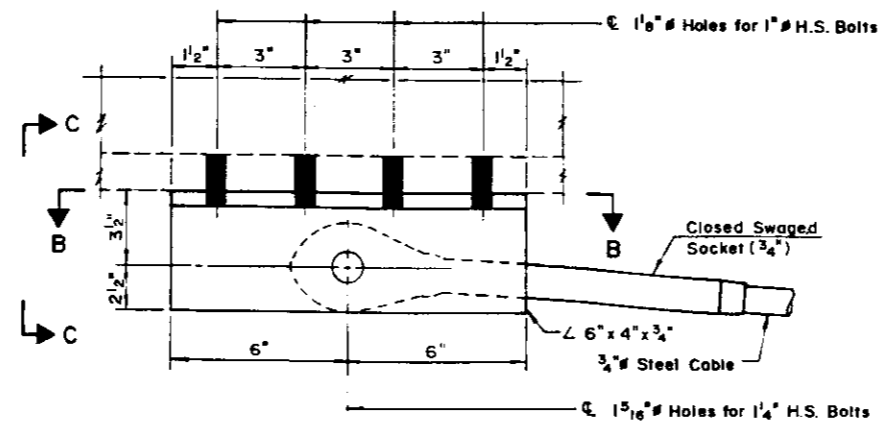


SECTION A-A

Showing Girder Restraint attached to girders of spans ABCD, Girder Restrainers shall be attached similarly to girders of Span 5, 42 Req'd.

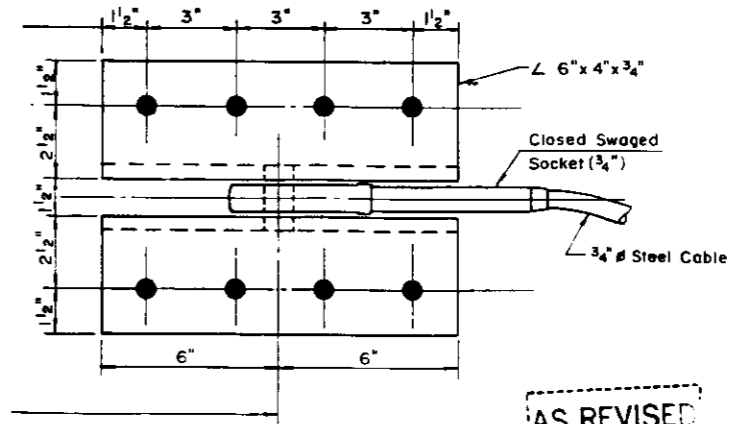


VIEW C-C



DETAIL A

Shown at connection to girder connection to pier cap similar



SECTION B-B

(Bottom Flange not shown)

AS REVISED

GIRDER RESTRAINER
AT PIER 5
 F.A.I. 55/70/64
 SEC. 82-3HVB-2R-2(1)
 ST. CLAIR COUNTY

All Structural Steel shall be AASHTO M 223 Grade 50

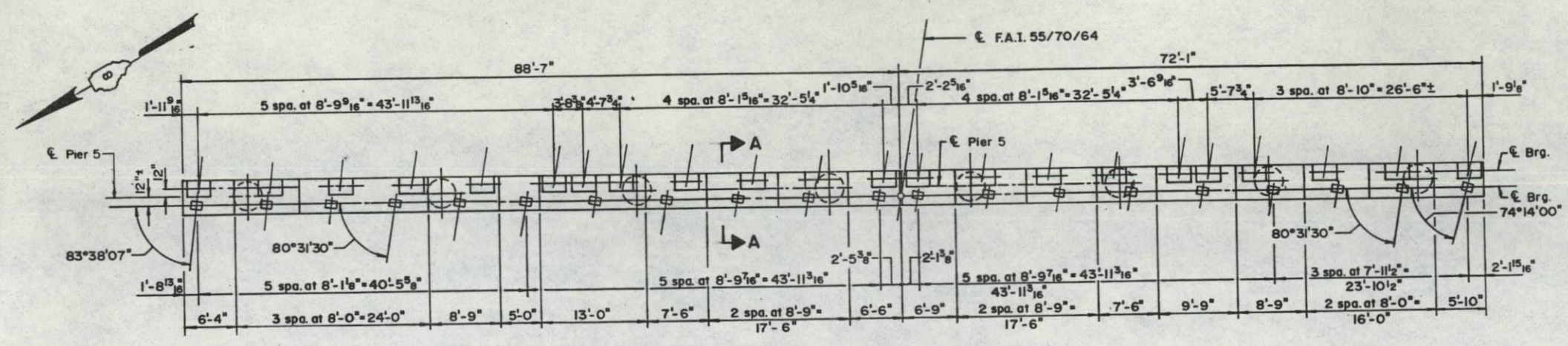
HSIONG ASSOCIATES LTD.	
DESIGNED S.K.L.	CHECKED G.J.G.
DRAWN R.H.H.	DATE
	NO. H-120

Revised 5-12-92 G.J.G. Added 9-15-91 P.M.

105-105.1

* 82-3HVB-2R-2-3

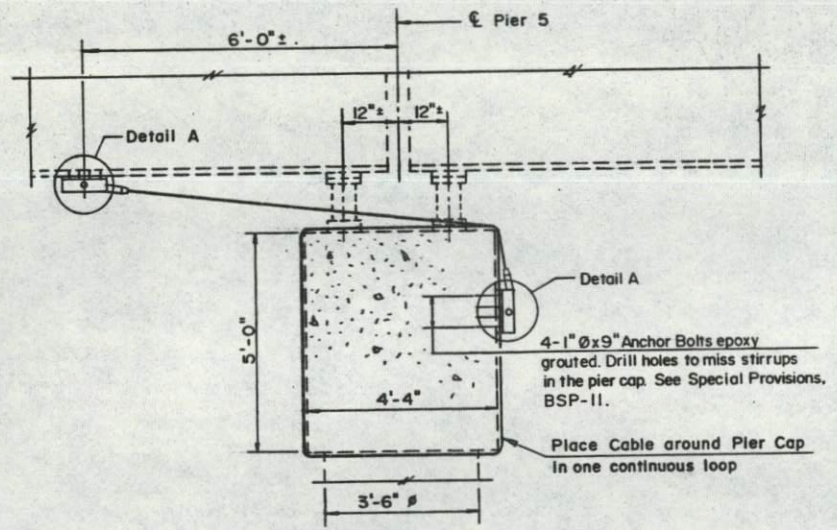
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	*	ST. CLAIR	150	150.8
FED. ROAD DIST. NO. 7		ILLINOIS PROJECT		
SHEET 8 OF 9				



TOP PLAN OF PIER 5
(Existing)

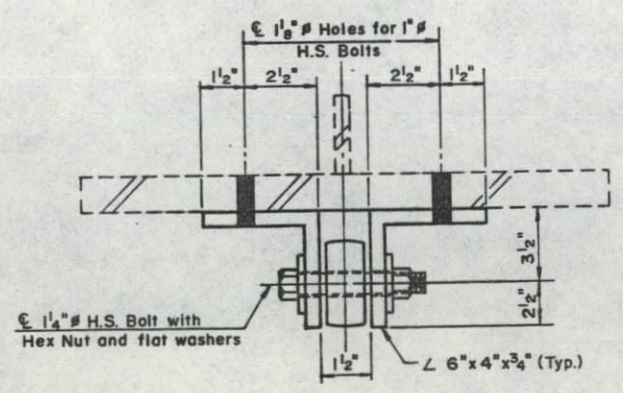
NOTES

Install Girder Restrainers after the isolation bearings are in place. The location of the cable to girder connection shall be determined by marking the location of the end of the cable when it is pulled tight and then backing off this location by 3". Place cables no closer than 3" from the new bearings at any point. Cost of Girder Restrainers shall include all cables, angles, swaged sockets, and bolts. See Special Provisions. Holes in existing girder flange and pier cap shall be drilled using the holes in the angles as a template. Cost shall be incidental to Girder Restraint.

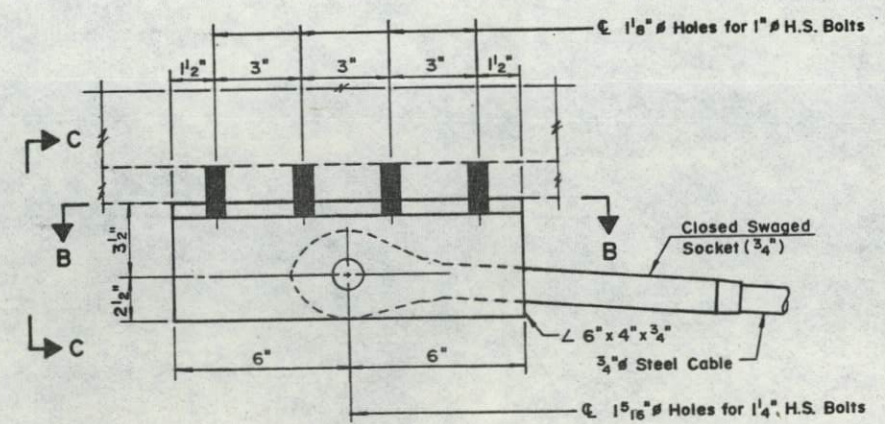


SECTION A-A

Showing Girder Restraint attached to girders of spans ABCD, Girder Restrainers shall be attached similarly to girders of Span 5, 42 Req'd.

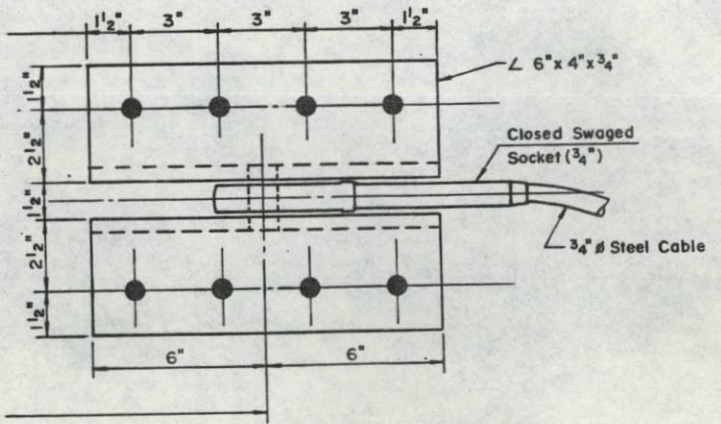


VIEW C-C



DETAIL A

Shown at connection to girder connection to pier cap similar.



SECTION B-B
(Bottom Flange not shown)

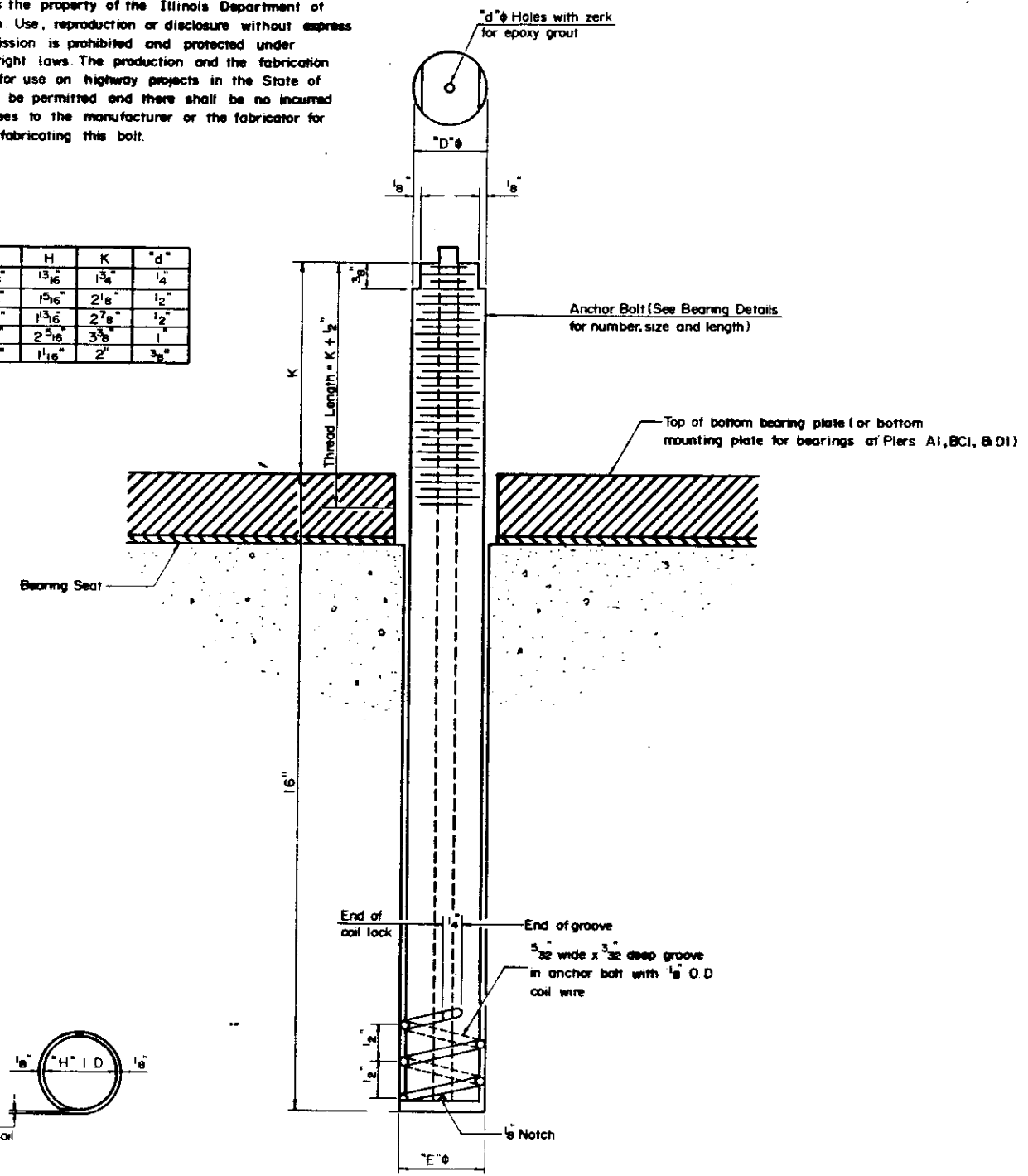
**GIRDER RESTRAINER
AT PIER 5
F.A.I. 55/70/64
SEC. 82-3HVB-2R-2-3-1
ST. CLAIR COUNTY**

HSIONG ASSOCIATES LTD.	
DESIGNED: S.K.L.	CHECKED: G.J.G.
DRAWN: R.H.H.	DATE: NO. H-120

All Structural Steel shall be AASHTO M 223 Grade 50

The Illinois Coil Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/8"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"
1 3/4"	1 5/8"	1 1/16"	2"	3/8"



ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers.
 The coil wire shall be made of any suitable soft steel wire.
 The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade 1 end of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE FOR THE ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures.
 The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
 1. A threaded rod stud with nut & washer conforming to ASTM A307.
 2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted.
 Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
 The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "FURNISHING & ERECTING STRUCTURAL STEEL."

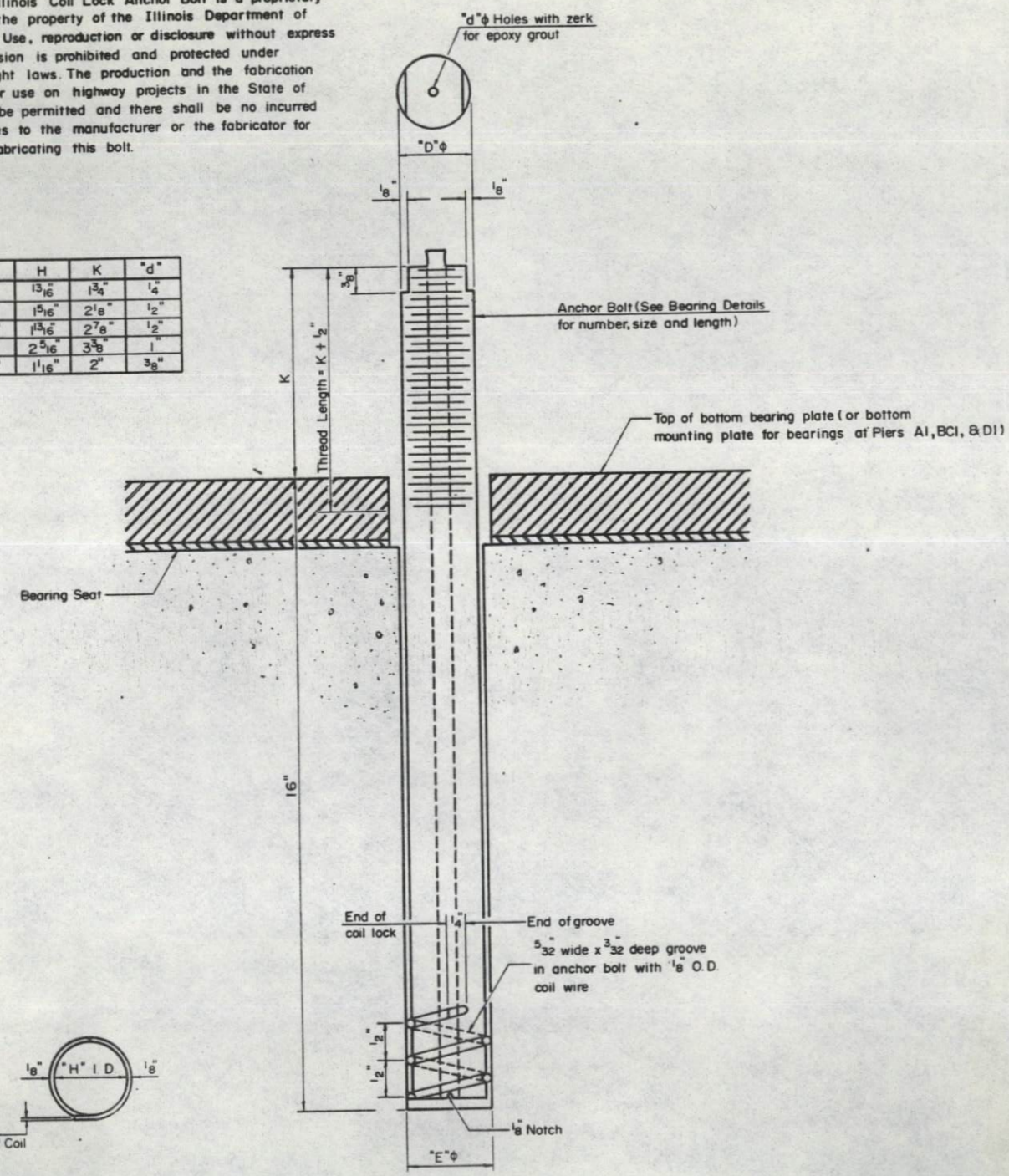
AS REVISED

ANCHOR BOLT DETAILS FOR BEARINGS
 F.A.I. 55/70/64
 SEC. 82-3HVB-2R-2-1
 ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD.
 DESIGNED: S.K.L. CHECKED: G.J.G.
 DRAWN: R.H.H. DATE: NO. H-120

The Illinois Coil Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 3/8"	2 7/8"	3/4"
2 1/2"	2 5/8"	2 1/16"	3 3/8"	1"
3"	3 1/4"	2 1/8"	4 1/4"	1 1/4"



PLAN - COIL WIRE

ILLINOIS COIL-LOCK ANCHOR BOLT

MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A519, Grade 1026 and supplied with hexagonal nuts and cut washers. The coil wire shall be made of any suitable soft steel wire. The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed. The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C881, Type I, Grade 1 end of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE FOR THE ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes in accordance with the manufacturer's recommendations and procedures. The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:

1. A threaded rod stud with nut & washer conforming to ASTM A307.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or in accordance with the manufacturer's recommendation after beams or girders have been erected and adjusted. Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming. The anchor bolts, furnished and installed and including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for "FURNISHING & ERECTING STRUCTURAL STEEL."

ANCHOR BOLT DETAILS
FOR BEARINGS
F.A.I. 55/70/64
SEC. 82-3HVB-2R-2(3) ✓
ST. CLAIR COUNTY

HSIONG ASSOCIATES LTD.
DESIGNED: S.K.L. CHECKED: G.J.G.
DRAWN: R.H.H. DATE: NO H-120

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

INDEX OF SHEETS

- 1 COVER SHEET AND INDEX
- 2 SUMMARY OF QUANTITIES AND GENERAL NOTES
- 3 PARAPET REPAIR DETAILS
- 4 ALUMINUM HANDRAIL
- 5 TEMPORARY BRIDGE RAIL AND GUARD RAIL DETAILS
- 6 TEMPORARY BRIDGE RAIL
- 7 TRAFFIC CONTROL SPECIAL

STANDARDS

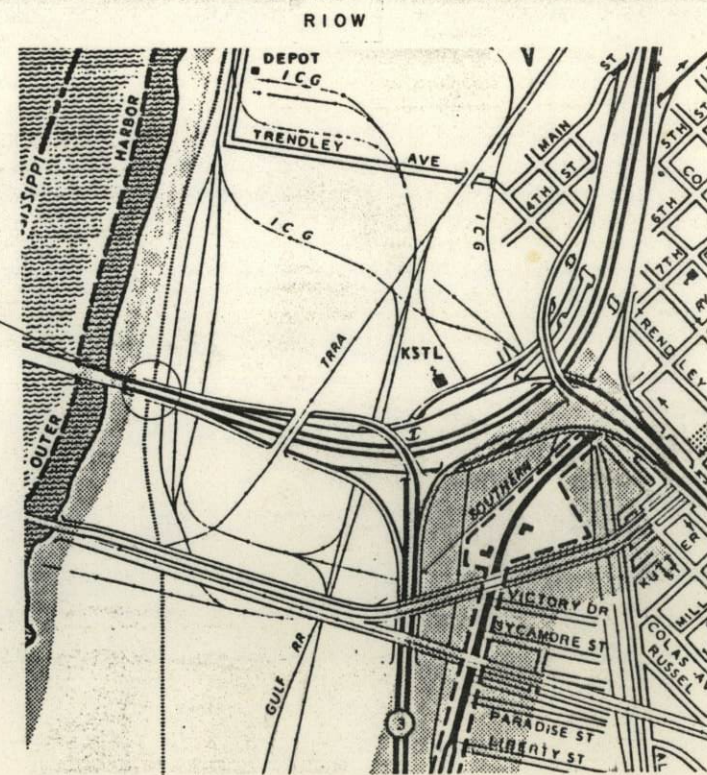
- 2230-14
- 2298-7
- 2299-10
- 2300-3
- 2316-10
- 2340-4
- 2344-1

1002
6-97

STRUCTURE NO. 082-0005

PROJECT LOCATION
STATION 44+25

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS



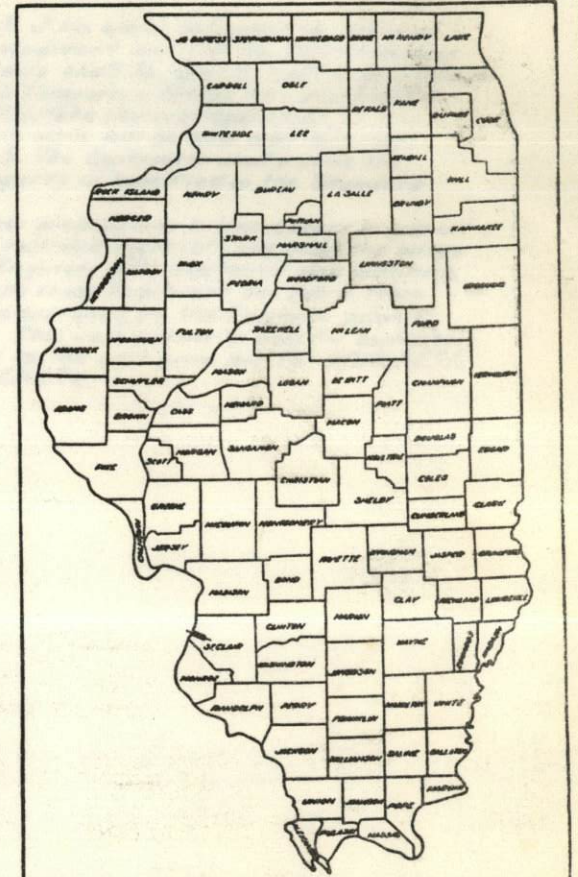
LOCATION MAP

NO SCALE

S. A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	ST. CLAIR	7	1

P-98-053-86

* 82-3VB-HDF



LOCATION OF SECTION INDICATED THIS:—

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: *5-11-86*
 EXAMINED: *12-29-86*
 PASSED: *12-29-86*
 APPROVED: *12-29-86*
 DIRECTOR OF HIGHWAYS

082-0005

CONTRACT NO. 42241

8-102

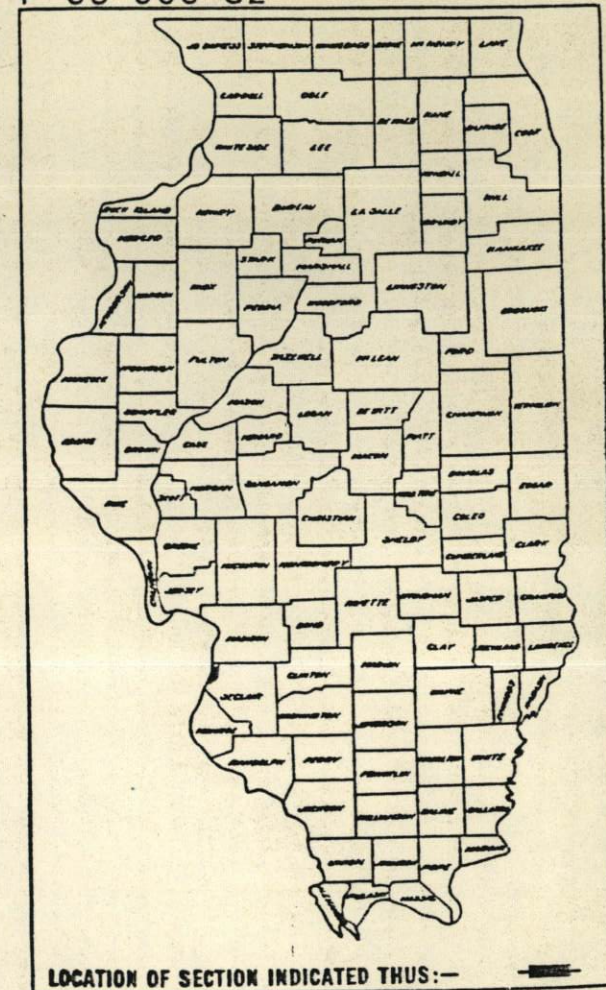
99

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
70	*	St. Clair	4	1
F.H.W.A. PROJ. NO.		ILLINOIS PROJECT		

*82-3HVB-R-4

P-98-066-82



PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

F.A.I. ROUTE 70
SECTION 82-3HVB-R-4
PROJECT IR-70-1(141)0
ST. CLAIR COUNTY

C-98-074-83

INDEX

- THIS SHEET and SUMMARY OF QUANTITIES
- GENERAL PLAN
- POST-TENSIONING SYSTEM and GENERAL NOTES
- END CONNECTION BRACKET

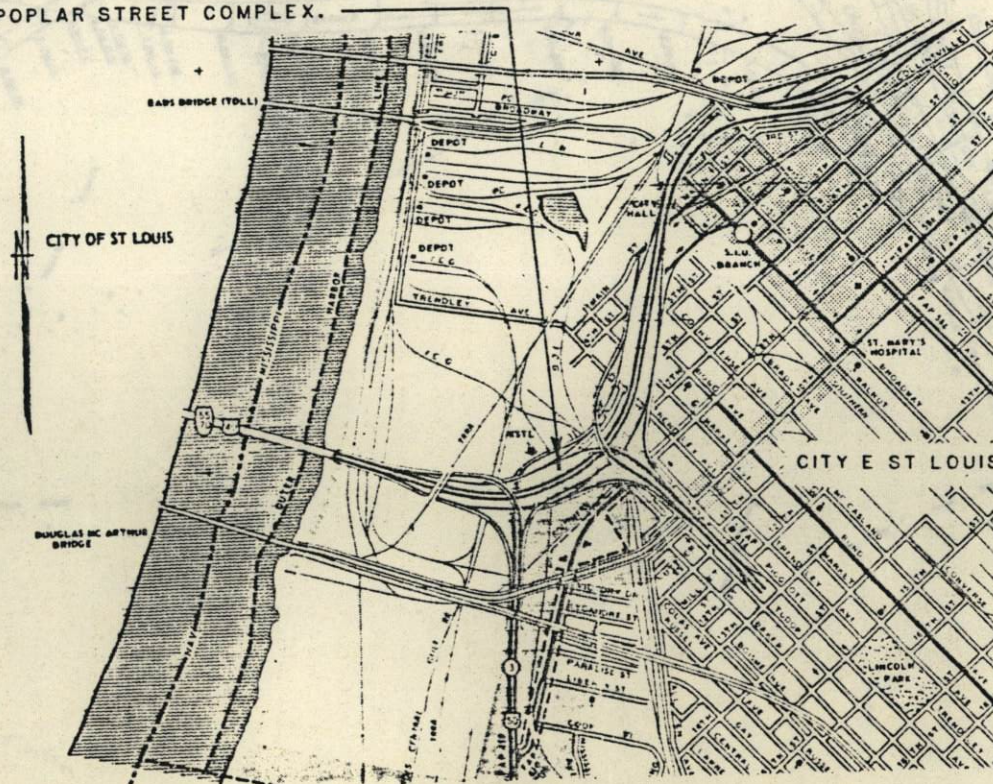
STANDARDS:

- 2298-7
- 2299-10
- 2300-3
- 2307-6

SUMMARY OF QUANTITIES

ITEM NO.	PAY ITEM	UNIT	QUANTITY*
4748	MOBILIZATION	L SUM	1
7723	PIER COLUMN REPAIR, TYPE I	EACH	80
7724	PIER COLUMN REPAIR, TYPE II	EACH	28
* CONSTRUCTION TYPE CODE Y007			

THIS PROJECT CONSISTS OF THE PIER
CAP REPAIR AT VARIOUS LOCATIONS
IN THE POPLAR STREET COMPLEX.



- PROFILMED _____
- FILE NUMBER _____
- RECORDED _____
- DESIGNED BY _____ ENGINEER _____
- IF ANY CHANGES WERE MADE IN THE FOLLOWING SHEETS _____

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED: 1/24/84
EXAMINED: 2-3/84
PASSED: 2-3/84
APPROVED: [Signature] 2-13/84
DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

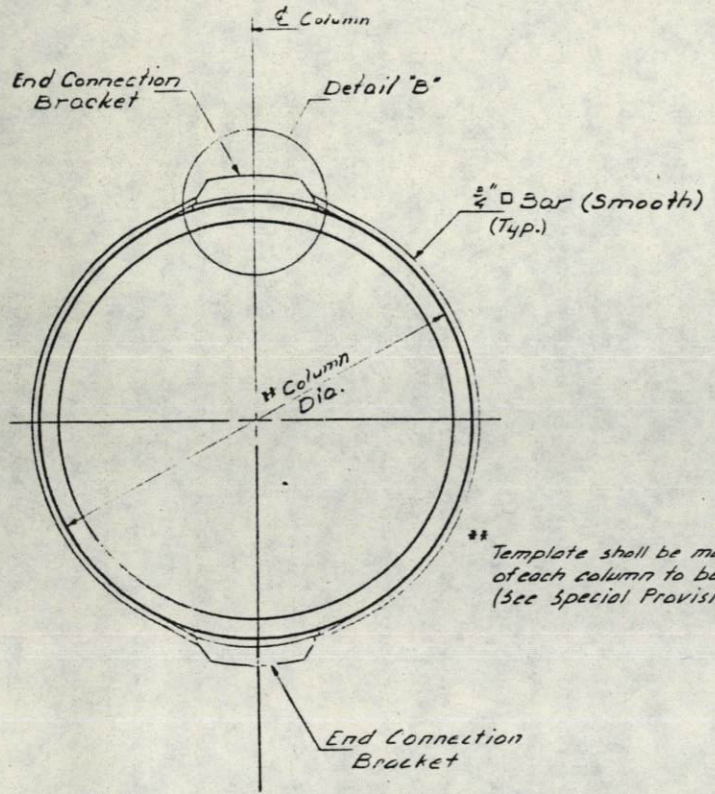
APPROVED: _____ DATE: _____
DIVISION ADMINISTRATOR

0 1200 2400
Scale 1" = 1200'

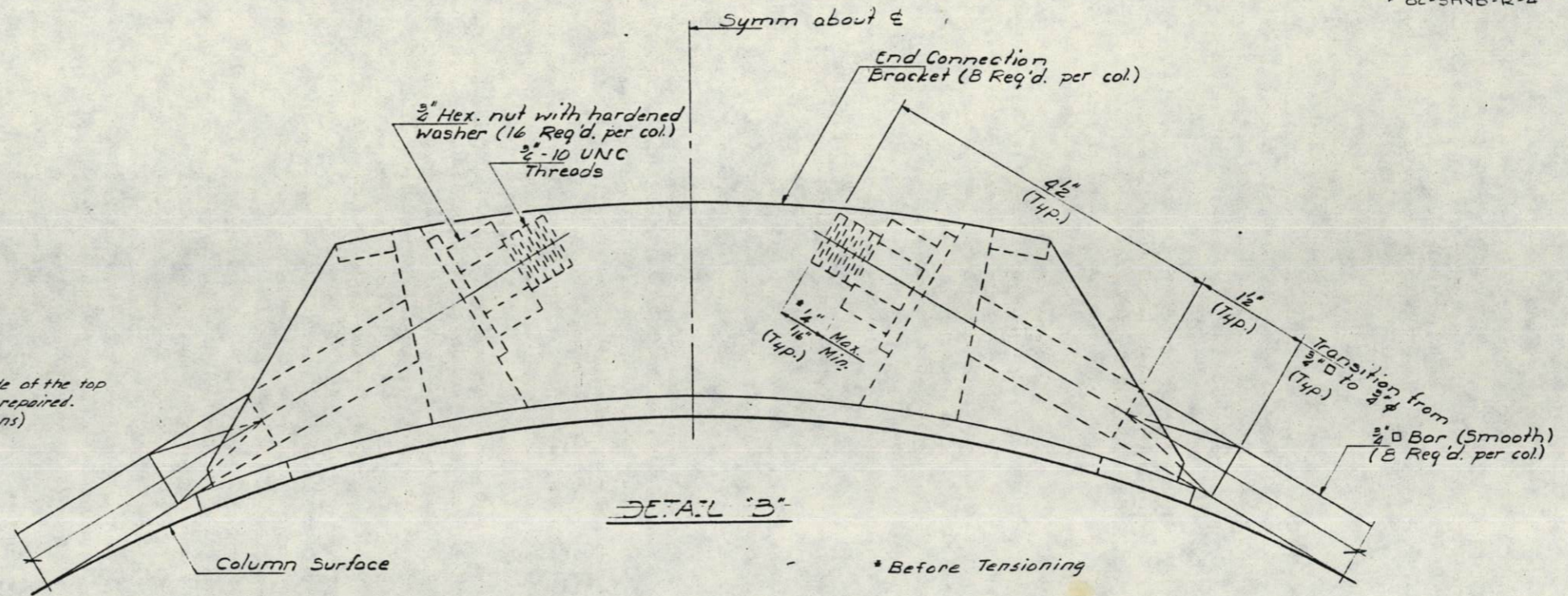
8-147

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 2
P. 4170	*	ST. CLAIR	4	3	3 SHEETS
* 82-3HVB-R-4					

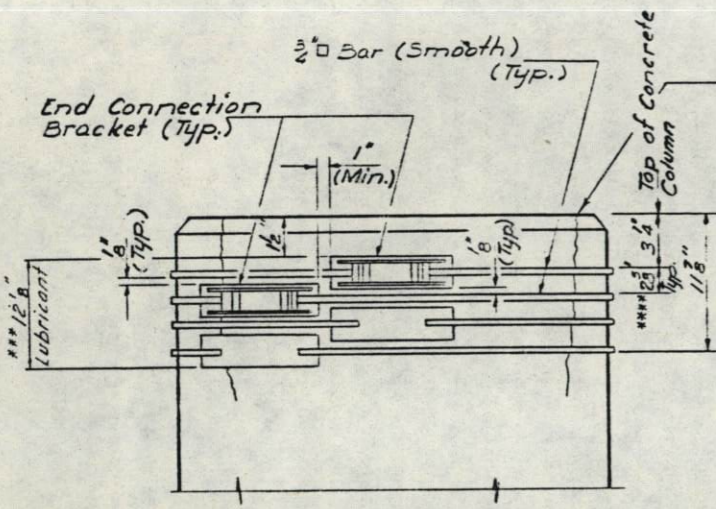


** Template shall be made of the top of each column to be repaired. (See Special Provisions)



DETAIL 'B'

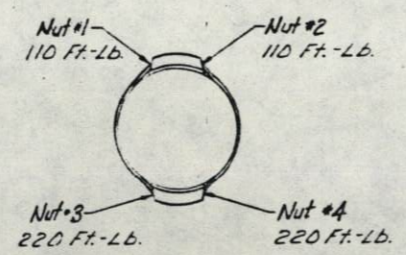
* Before Tensioning



Clean and epoxy grout cracks before bar tensioning. See Special Provisions.

BAR TENSIONING PROCEDURE

The 3/4" bars shall be tensioned in sequence from the bottom bar to the top bar. Each bar shall be tensioned by tightening the nuts to the given torques according to the following sequence:



After tightening all four nuts on a bar they shall all be checked for 220 Ft.-Lb. Torque according to the same above sequence. The Engineer shall then verify the 220 Ft.-Lb. torque on all the nuts and the threads shall be set.

QUANTITY OF STRUCTURAL STEEL PER COLUMN IN LBS.

COL. DIA.	ASHTO M-223	AISI 4140	TOTAL
4'-0"	113	96	214
4'-6"	115	108	226
5'-0"	118	120	238
5'-6"	118	132	250
6'-0"	110	144	262
6'-6"	118	156	274
7'-0"	117	168	285

All Structural Steel is incidental to "Pier Column Repair - Type I" or "Pier Column Repair - Type II" as applicable.

GENERAL NOTES

Concrete surfaces to receive Post-Tensioning System shall be smoothed by sanding or grinding as required to eliminate projections.
End Connection Bracket shall conform to the requirements of A.A.S.H.T.O. M223 Grade 50.
The 3/4" bar shall conform to the requirements of AISI 4140, quenched and tempered to a minimum yield strength of 100,000 psi. and a maximum yield strength of 120,000 psi.
The hardened washer shall conform to the requirements of A.S.T.M. F-436.

The end connection brackets, 3/4" bars, nuts and washers shall receive one shop coat of red lead paint and two shop coats of aluminum paint.
The 3/2" hex nut shall conform to the requirements of A.S.T.M. A-563, Grade DH.
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.

*** A petroleum base lubricant approved by the Engineer shall cover the entire surface area between the 3/4" bars and the concrete surface. This shall be accomplished by applying lubricant on the concrete surface in the area shown and the entire circumference of the column.

**** The spacing of the Post-Tensioning bars shall be maintained throughout the perimeter of the Columns, as shown, by using templates.

DESIGNED *K. F. K...*
CHECKED *Collins R. Sommer*
DRAWN *J. SCHNE...*
CHECKED *PS m RFR*

EXAMINED *August 4, 1983*
James Karstun
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

POST-TENSIONING SYSTEM
PIER COLUMNS REPAIR
F.A.I. RT. 70 SEC. 82-3HVB-R-4
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.R. 70	*	ST. CLAIR	4	4
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
			* 82-3HVB-R-4	

SHEET NO. 3
3 SHEETS

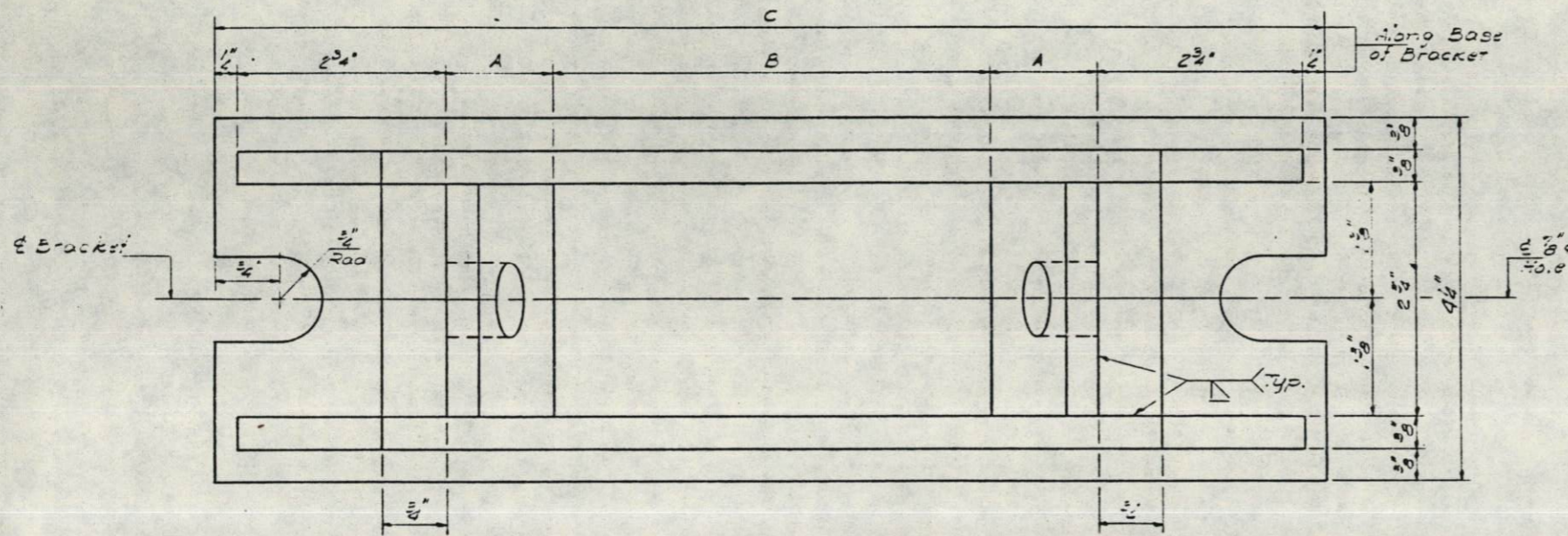
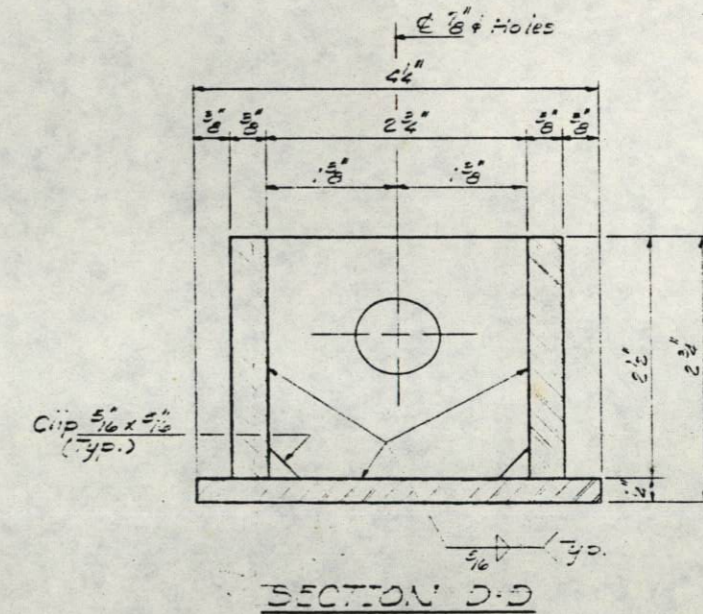
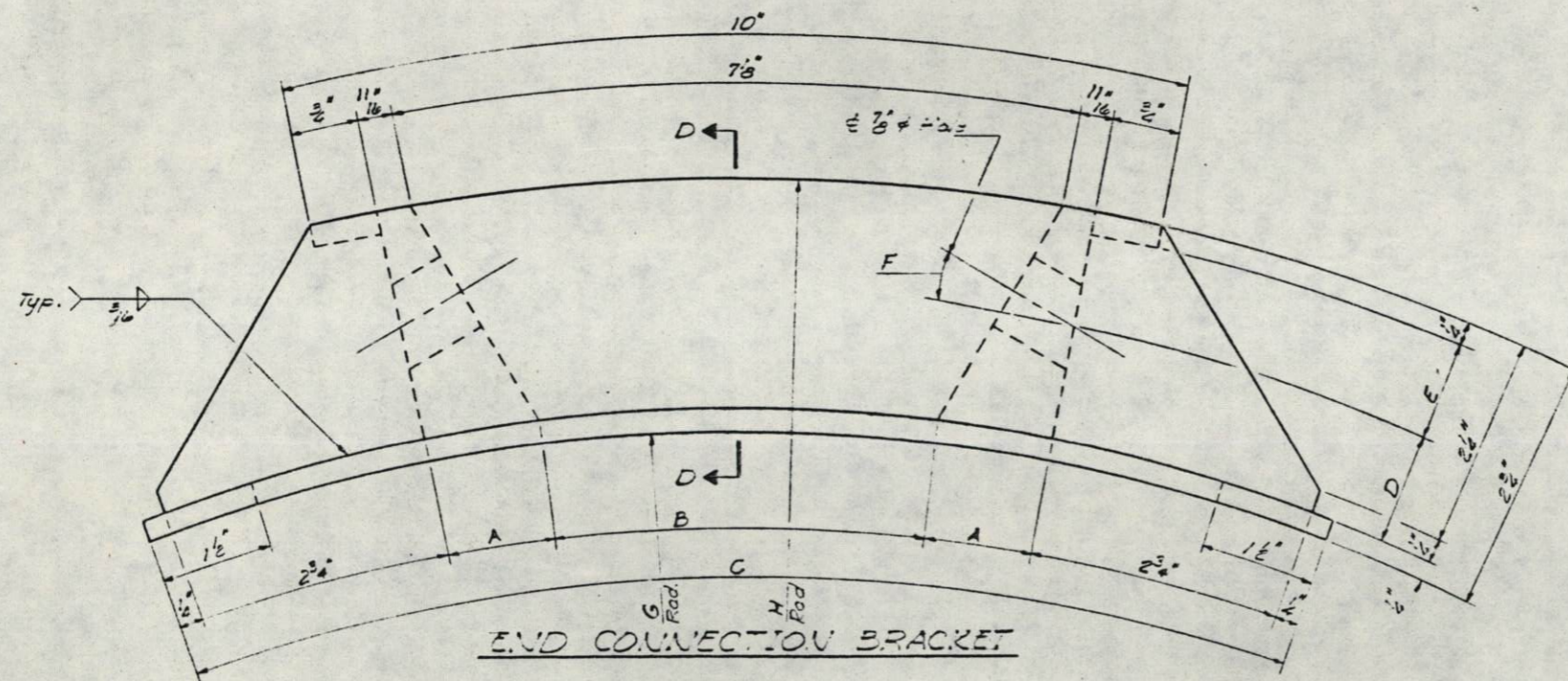


TABLE OF DIMENSIONS

COL. DIA.	A	B	C	D	E	F	G	H
4'-0"	1'7 1/4"	4'3/4"	13'5/8"	1'3/4"	1'1/4"	16'-40'30"	24"	26'3/4"
4'-6"	1'5/8"	4'5/16"	13'11/16"	1'3/16"	1'1/4"	15'-50'-23"	27"	29'3/4"
5'-0"	1'3/8"	5"	13'3/4"	1'4"	1"	15'-28'-01"	30"	32'3/4"
5'-6"	1'5/16"	5'4"	13'7/8"	1'4"	1"	14'-46'-31"	33"	35'3/4"
6'-0"	1'5/16"	5'4"	13'7/8"	1'4"	1"	14'-14'-13"	36"	38'3/4"
6'-6"	1'5/16"	5'5/16"	13'5/16"	1'5/16"	1'5/16"	13'-46'-10"	39"	41'3/4"
7'-0"	1'4"	5'1/2"	14"	1'5/16"	1'5/16"	13'-09'-07"	42"	44'3/4"



SECTION D-D

DESIGNED R. F. [Signature]
CHECKED Paul S. McCann Collins Sommer
DRAWN J. SCHNELLER
CHECKED RSMK RFR

August 4, 1983
EXAMINED James J. [Signature]
PASSED [Signature]
APPROVED [Signature]
DIRECTOR OF HIGHWAYS

END CONNECTION BRACKET
POST-TENSIONING SYSTEM
PIER COLUMNS REPAIR
F.A.R. RT. 70 SEC. 82-3HVB-R-4
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

# 82-3HVB-R-3				
F. A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	#	ST. CLAIR	4	1
F. H. A. REG. NO.		ILLINOIS PROJECT		

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SCALE IN FEET

F.A.I. ROUTE 70
SECTION 82-3HVB-R-3

ST. CLAIR COUNTY

PIER CAP REPAIRS WITHIN
POPLAR STREET COMPLEX

C-98-089-81

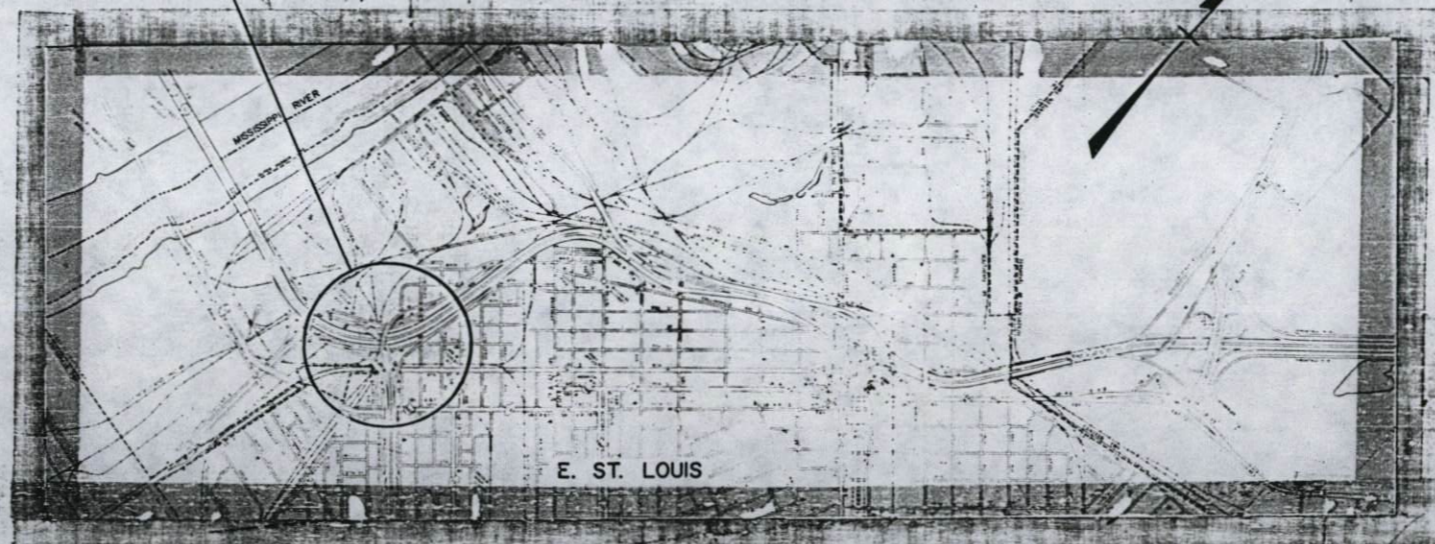
INDEX OF SHEETS

- 1 TITLE SHEET
- 2 GENERAL PLAN, SUMMARY OF QUANTITIES
- 3 POST-TENSIONING SYSTEM, GENERAL NOTES
- 4 END CONNECTION BRACKET

STANDARDS

2298-5 2314-4
2299-9 2315-5
2300-2

THIS PROJECT CONSISTS OF THE
PIER CAP REPAIR AT VARIOUS
LOCATIONS IN THE POPLAR STREET
COMPLEX.



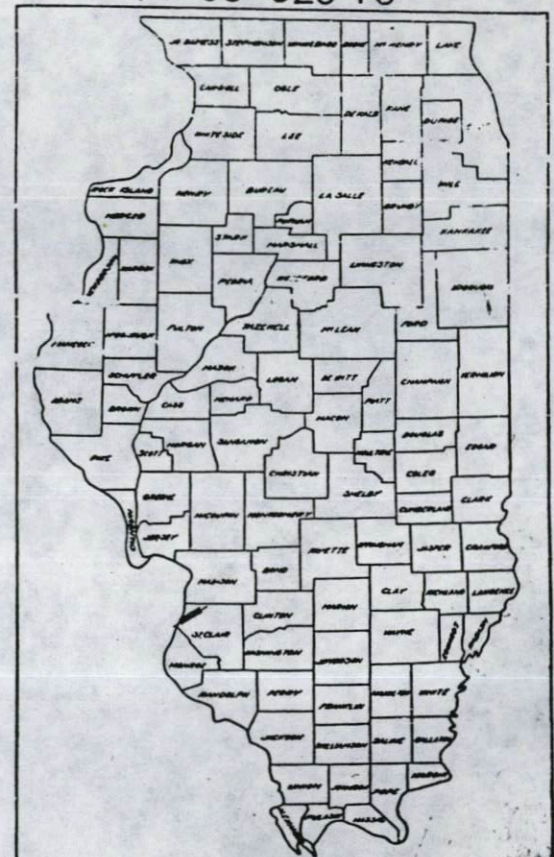
E. ST. LOUIS

LOCATION MAP



SCALE 1 INCH = 1600 FEET

P-98-025-76



LOCATION OF SECTION INDICATED THIS:

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
SUBMITTED	Jan 15 1982
EXAMINED	Feb 8 1982
PASSED	Feb 8 1982
APPROVED	Feb 18 1982
	Thomas R. Knight DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY	
APPROVED	DATE
DIVISION ENGINEER	

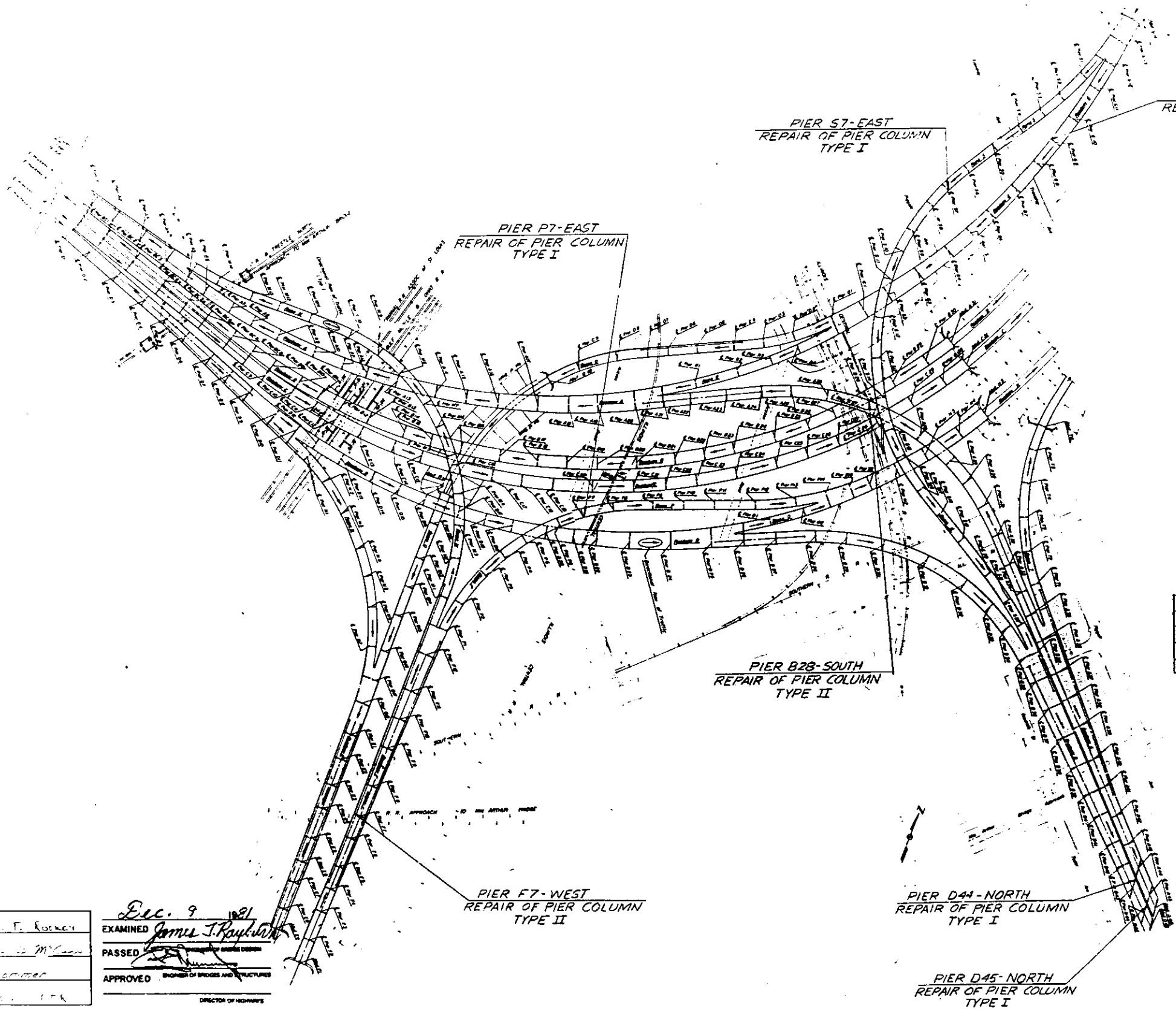
CONTRACT NO. 35391

REEL 8-136



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

82-345-1-10
75



CODE NO.	ITEM	UNIT
X07123	Repair of Pier Columns - Type I	Each
X07124	Repair of Pier Columns - Type II	Each
648007	Traffic Control and Protection, Standard 2015	LSun
X04748		LSun

SL. Y007
Description of Type I and Type II Repair.

DESIGNED S. F. ROSEN
CHECKED *James J. Rayburn*
DRAWN *F. Sommer*
CHECKED *S. F. Rosen*

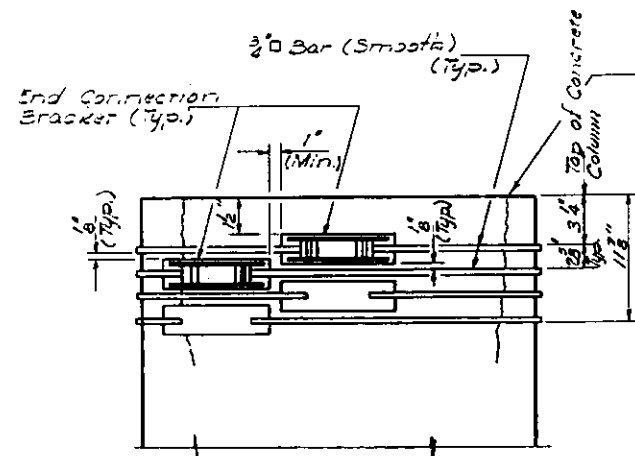
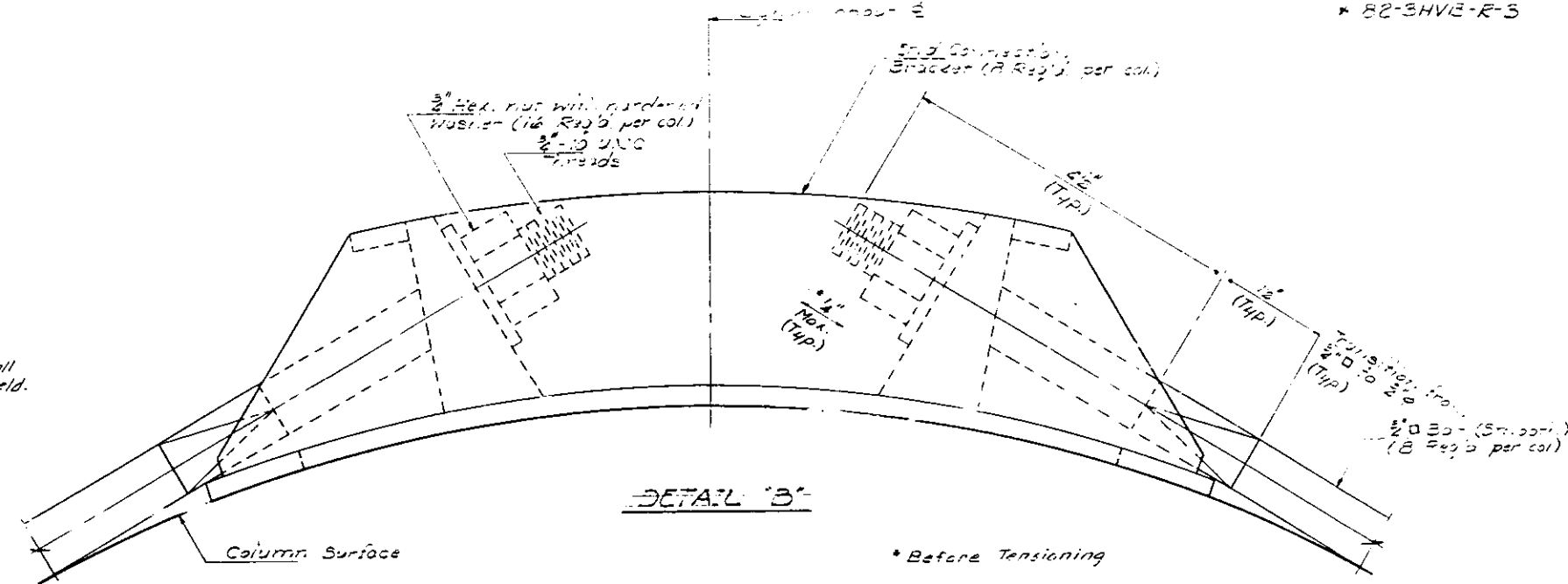
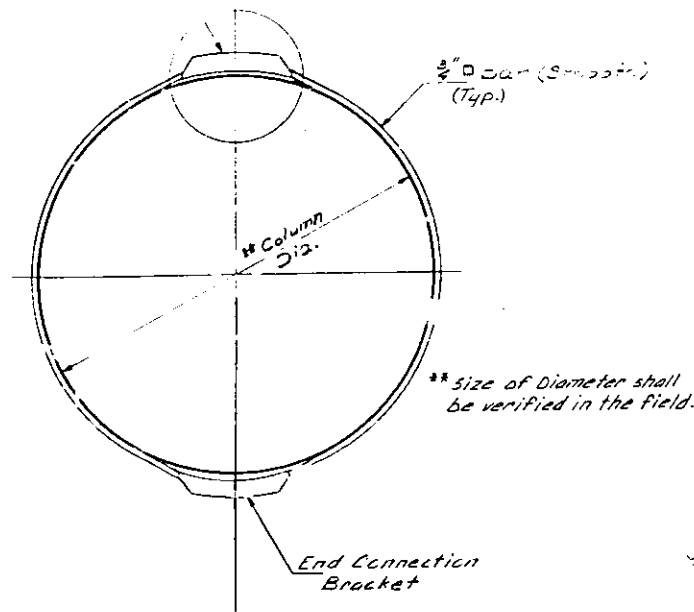
EXAMINED *James J. Rayburn*
PASSED
APPROVED *James J. Rayburn*
DIRECTOR OF BRIDGES AND STRUCTURES
DIRECTOR OF HIGHWAYS

Dec. 9 1981

GENERAL PLAN
FAI. RT. 70 SEC. 82-345-1-10
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

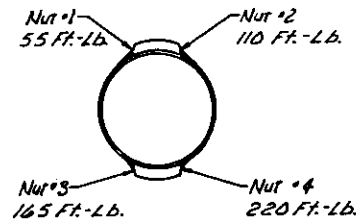
82-3HVE-R-3



Clean and epoxy grout cracks before bar tensioning. See Special Provisions.

BAR TENSIONING PROCEDURE

The 3/4" bars shall be tensioned in sequence from the bottom bar to the top bar. Each bar shall be tensioned by tightening the nuts to the given torques according to the following sequence:



After tightening all four nuts on a bar they shall all be checked for 220 Ft.-Lb. Torque according to the same above sequence and the threads shall be sat.

QUANTITY OF STRUCTURAL STEEL PER COLUMN IN LBS.

COL. DIA.	AASHTO M-223	AISI 4140	TOTAL
4'-0"	118	96	214
4'-6"	118	108	226
5'-0"	118	120	238
5'-6"	118	132	250
6'-0"	118	144	262
6'-6"	118	156	274
7'-0"	117	168	285

All Structural Steel is incidental to "Repair of Pier Columns-Type I" or "Repair of Pier Columns-Type II" as applicable.

GENERAL NOTES

- Surfaces to receive Post-Tensioning System shall be cleaned as required to eliminate projections.
- End Connection Bracket shall conform to the requirements of A.A.S.H.T.O. M223 Grade 50.
- The 3/4" bar shall conform to the requirements of AISI 4140 (Rockwell C Hardness of 25 to 30).
- The 3/4" hex. nut shall conform to the requirements of A.S.T.M. A-490.
- A lubricant approved by the Engineer shall be used between the 3/4" bars and the concrete surface.
- The end connection bracket and 3/4" bar shall be galvanized after shop fabrication in accordance with A.A.S.H.T.O. M-111 and A.S.T.M. A-385.
- The nuts and washers shall be galvanized in accordance with A.A.S.H.T.O. M-232.
- 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.

TOP OF PIER COLUMNS
For locations see Special Provisions

DESIGNED R. F. ROBERT
CHECKED R. L. S. M. C. COLLINS
DRAWN J. SCHNELLER
CHECKED P. S. M. R. F.

EXAMINED Dec 9 1981 James J. Karbuon
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

POST-TENSIONING SYSTEM
PIER COLUMNS REPAIR
PART 10 SEC. 82-3HVE-R-3
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

SECTION	82-3HVB-R-2	OF TOTAL	4	SHEET	1
---------	-------------	----------	---	-------	---

P-98-025-76



INDEX OF SHEETS

- SHEET NO.
- 1 COVER SHEET, INDEX OF SHEETS
 - 2 SUMMARY OF QUANTITIES, GENERAL PLAN
 - 3 SCHEDULE OF REPAIRS, GENERAL NOTES
 - 4 DETAILS OF CONSTRUCTION

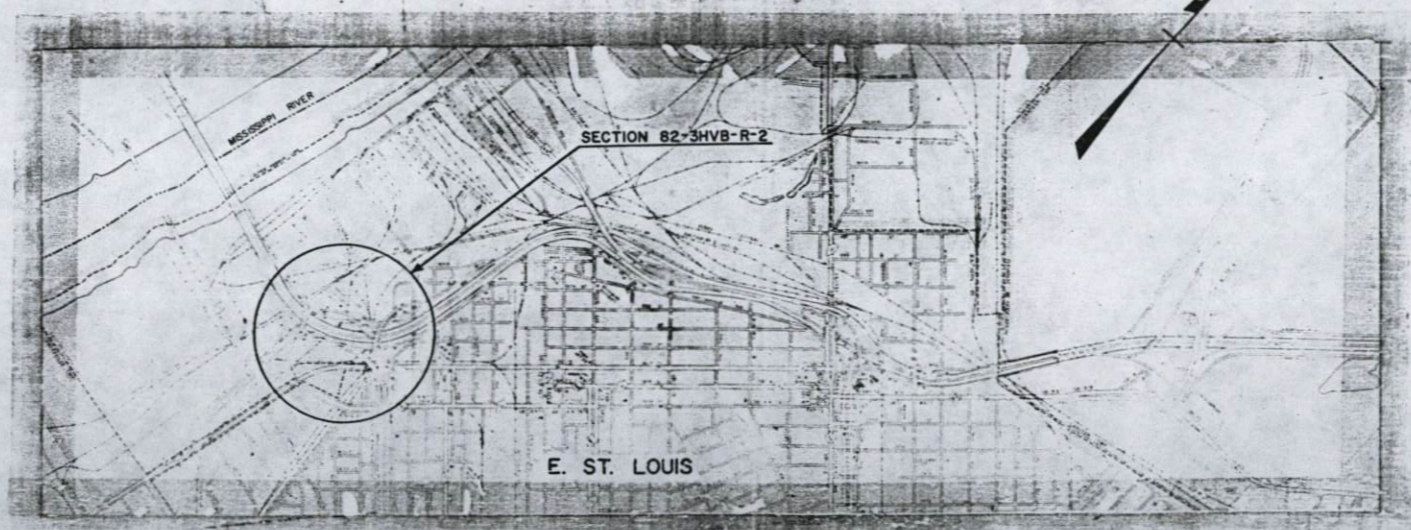
STANDARDS 2298-4
2299-7
2300-1
2314-3

F.A.I. ROUTE 70
SECTION 82-3HVB-R-2

ST. CLAIR COUNTY
BRIDGE REPAIRS

C-98-126-77

082-0005



LOCATION MAP
0 1600 3200 4800
SCALE: 1 INCH = 1600 FEET

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

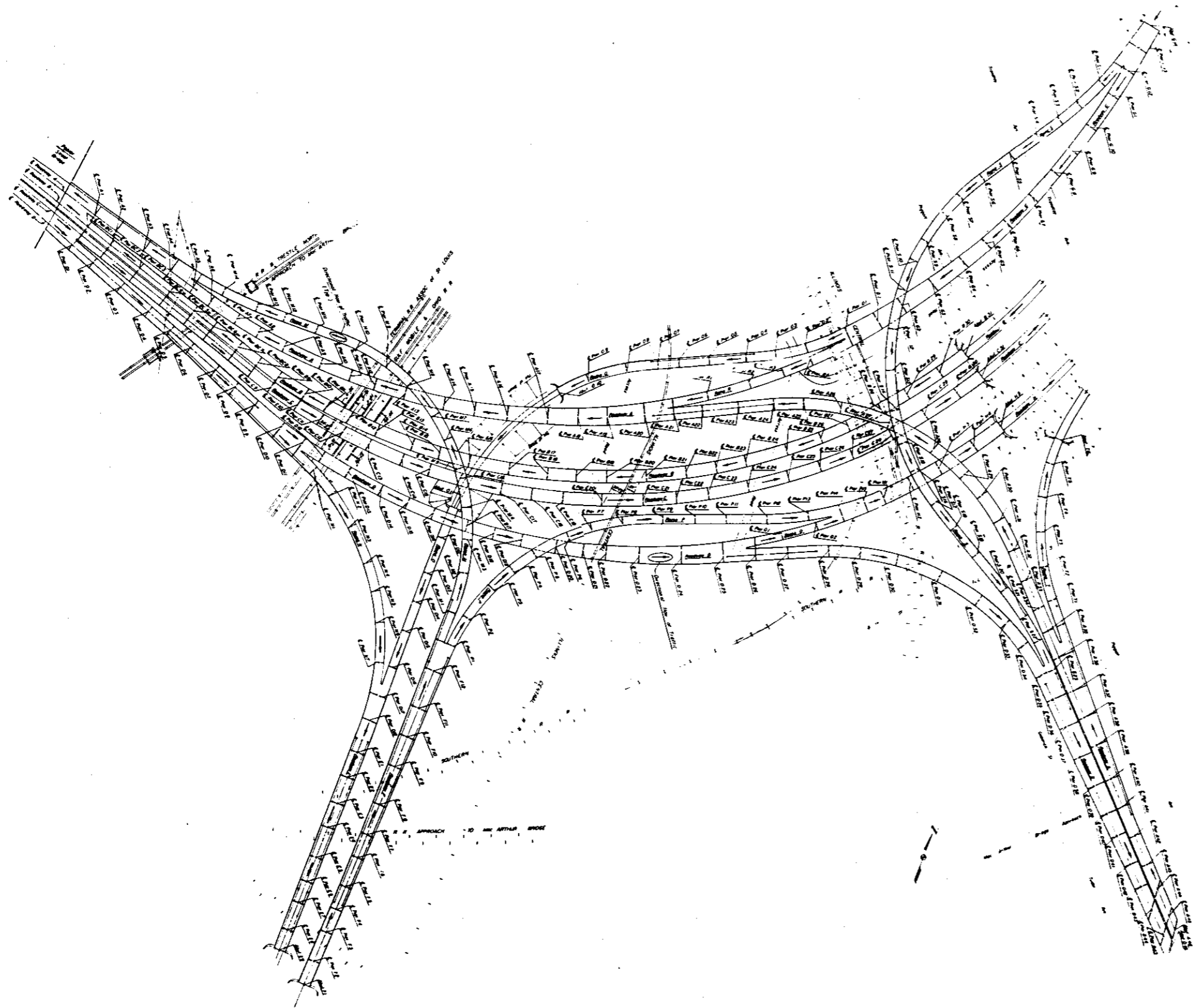
SUBMITTED: 2-28-77
EXAMINED: March 29, 77
PASSED: March 28, 77
APPROVED: March 29, 77

John M. ...
Thomas R. ...
...

CONTRACT NO. 92613

REEL 8-112

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-3HV-2	ST. CLAIR	4	2
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT				



SUMMARY OF QUANTITIES			
CODE NO.	ITEM	UNIT	TOTAL QUANTITY
X05384	PIER COLLING. REPAIR	EACH	145
X05385	ABUT. REPAIR	EACH	2
X64401	ENGR. FIELD OFFICE TYPE-A	CAL. MO.	33

GENERAL PLAN
 FAI RTE. 70
 SEC. 82-3HV-2
 ST. CLAIR CO.
 SUMMARY OF QUANTITIES



TABLE OF COLUMNS TO BE REPAIRED CRACKS (LESS THAN 15")

Pier No.	Diameter	Length Of Crack (Inches)	As Built	Method Of Banding
A-2 N	4'-6"	8-12	82-3HVB-1	Method 1
A-5 S	4'-0"	12		Method 2
A-9 S	4'-0"	6		Method 2
A-11 N	4'-0"	11		Method 2
A-17 S	4'-6"	8-10		Method 2
A-21 N	4'-0"	10		Method 1
A-35 U	4'-0"	4	82-3HVB-3	Method 1
A-36 U	4'-9"	3-3		Method 2
A-37 S	4'-6"	12		Method 2
A-38 S	4'-0"	9		Method 2
B-11 N	4'-0"	6	82-3HVB	Method 1
B-15 N	4'-0"	8		Method 1
B-24 N	4'-0"	12		Method 1
B-24 S	4'-0"	10		Method 2
C-12 N	4'-0"	10-12	82-3HVB	Method 1
C-14 U	4'-0"	3-4-7		Method 1
C-14 S	4'-0"	12		Method 2
C-25 N	4'-6"	13		Method 1
D-1 S	4'-0"	8	82-3HVB	Method 1
D-5 S	4'-0"	10	82-3HVB	Method 1
D-11 S	4'-0"	4		Method 2
D-15 S	4'-0"	12-14		Method 2
D-17 U	4'-6"	5	82-3HVB	Method 1
D-18 S	4'-0"	11-12	82-3HVB-1	Method 2
D-23 U	4'-6"	11		Method 1
D-26 U	4'-0"	13		Method 1
D-26 S	4'-0"	9		Method 2
D-29 U	4'-0"	7		Method 2
D-39 U	4'-0"	10	82-3HVB-3	Method 2
E-3 W	4'-0"	4-11	82-3HVB-2	Method 2
E-5 W	4'-0"	7		Method 1
E-6 W	4'-0"	11		Method 1
E-7 E	4'-0"	14		Method 1
E-8 E	4'-0"	14		Method 1
F-5 W	4'-0"	4		Method 1
F-10 E	4'-0"	8		Method 1
F-11 E	4'-6"	9		Method 1
F-11 W	4'-6"	9		Method 1
G-1 S	4'-0"	14	82-3HVB-1	Method 1
G-6 S	4'-0"	13		Method 2
H-2 S	4'-0"	5		Method 2
H-4 S	4'-0"	13		Method 2
M-1 W	6'-0"	11	82-3HVB-2	Method 1
M-3 W	6'-0"	4	82-3HVB	Method 1
M-12 W	4'-0"	12	82-3HVB-1	Method 1
M-13 W	4'-0"	12		Method 1
N-6 N	4'-0"	13	82-3HVB-2	Method 2
N-6 S	4'-0"	10		Method 1
N-7 S	4'-6"	6-7		Method 1
O-13 S	4'-0"	8	82-3HVB-1	Method 1
O-14 S	4'-0"	13		Method 1
O-16 N	4'-0"	5	82-3HVB-2	Method 2
P-10 E	4'-0"	9	82-3HVB-1	Method 1
Q-1 N	4'-0"	14		Method 1
R-1 N	4'-6"	8		Method 1
R-3 S	4'-0"	12		Method 2
R-4 S	4'-0"	10		Method 2
S-1 E	4'-0"	7-7		Method 2
S-4 E	4'-6"	6-10		Method 2
S-5 E	4'-0"	5		Method 1
S-5 W	4'-0"	6		Method 1
S-6 W	4'-6"	7		Method 2
S-9 W	6'-0"	9		Method 2
S-10 W	7'-0"	10	82-3HVB	Method 1
S-14 E	7'-0"	5		Method 1
S-22 W	4'-0"	13	82-3HVB-3	Method 1
S-23 E	4'-6"	6		Method 2
S-26 W	4'-6"	8		Method 1
T-1 W	4'-0"	4		Method 2

SUBTOTAL TO EACH

ABUTMENT REPAIR

ABUT. NO.	TOTAL	REMARKS
F-1-W	1	See Spec. Prov. & Detail On Sheet #4 In Plans
F-1-E	2 Each	

TABLE OF COLUMNS TO BE REPAIRED CRACKS (15" OR LARGER)

Pier No.	Diameter	Length Of Crack (Inches)	As Built	Method Of Banding
A-11 S	4'-0"	30-30-36	82-3HVB-1	Method 2
A-13 S	4'-0"	16		Method 2
A-18 S	4'-0"	15		Method 2
A-35 S	4'-0"	23	82-3HVB-3	Method 1
A-36 S	4'-6"	10-17		Method 2
A-40 S	4'-0"	12-18		Method 2
A-41 U	4'-0"	15		Method 2
A-45 U	4'-6"	15		Method 2
B-9 U	4'-0"	19	82-3HVB	Method 1
B-11 S	4'-0"	14-18		Method 2
B-12 U	4'-0"	18		Method 1
B-12 S	4'-0"	8-24		Method 2
B-13 S	4'-0"	34		Method 2
B-14 S	4'-0"	18		Method 2
B-15 S	4'-0"	22		Method 2
B-16 U	4'-0"	22		Method 1
B-26 S	4'-6"	16		Method 2
B-27 U	4'-0"	17		Method 1
B-27 S	4'-0"	19		Method 2
B-28 U	4'-0"	16		Method 1
B-30 U	4'-0"	28-36-39		Method 1
C-5 S	4'-0"	24	82-3HVB	Method 1
C-11 U	4'-0"	10-15-15		Method 1
C-13 U	4'-0"	10-24		Method 1
C-13 S	4'-0"	21		Method 2
C-15 U	4'-0"	22		Method 1
C-16 U	4'-0"	18		Method 1
D-8 S	4'-0"	17	82-3HVB-1	Method 2
D-12 U	4'-0"	21		Method 2
D-13 S	4'-0"	6-18		Method 2
D-22 S	4'-0"	12-19		Method 2
D-25 U	4'-6"	25		Method 2
D-27 U	4'-0"	18		Method 2
D-28 U	4'-0"	24-38		Method 2
D-28 S	4'-0"	36		Method 2
D-31 U	4'-6"	2-16		Method 2
D-37 U	4'-6"	7-18-23	82-3HVB-3	Method 2
D-40 U	4'-0"	18		Method 2
D-40 S	4'-0"	17		Method 2
D-44 S	4'-6"	9-20		Method 2
E-6 E	4'-0"	16	82-3HVB-2	Method 1
F-4 W	4'-0"	12-17		Method 1
F-9 W	4'-0"	18		Method 2
F-10 W	4'-0"	21		Method 1
F-12 W	5'-0"	18-24		Method 1
G-2 S	5'-0"	20	82-3HVB	Method 2
G-5 S	4'-0"	16	82-3HVB-1	Method 2
G-7 U	4'-0"	33		Method 1
G-7 S	4'-0"	19		Method 2
G-13 U	4'-0"	22-24		Method 2
H-1 U	4'-0"	12-18		Method 2
H-1 S	4'-0"	18		Method 2
H-2 U	4'-0"	15-19		Method 2
M-9 E	4'-0"	26		Method 2
M-10 E	4'-0"			Re-bar exposed (Pier #)
N-2 S	4'-0"	16		Method 1
O-7 S	4'-0"	33	82-3HVB-1	Method 1
O-7 W	4'-0"	16		Method 1
O-17 U	4'-0"	8-15-25	82-3HVB-2	Method 1
O-17 S	4'-0"	16		Method 1
O-18 U	4'-6"	25-30		Method 1
P-1 W	4'-6"	9-40		Method 1
P-10 W	4'-0"	17	82-3HVB-1	Method 1
P-14 E	4'-0"	18		Method 1
P-15 E	4'-6"	24		Method 2
P-15 W	4'-6"	21-30		Method 2
S-2 E	4'-0"	15		Method 1
S-3 E	4'-0"	20		Method 1
S-3 W	4'-0"	21		Method 2
S-8 E	5'-6"	9-24		Method 2
S-16 E	7'-0"	5-33		Method 2
S-17 E	6'-6"	6-54-60		Method 1
S-18 E	6'-0"	22-23		Method 1
S-18 W	6'-0"	14-65		Method 2
T-2 W	4'-6"	27	82-3HVB-3	Method 1

SUBTOTAL 75 EACH

TOTAL COLUMNS TO BE REPAIRED EACH 145

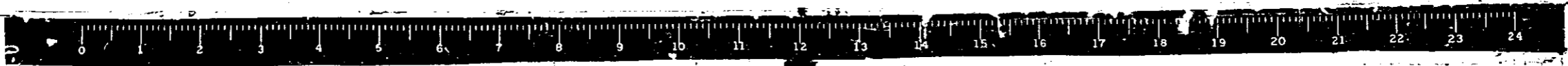
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	#	ST. CLAIR	4	3

* 82-3HVB-R-2

- GENERAL NOTES
- For details of method 162 see Sheet #4
 - See Special Provisions for treatment of cracks in Pier Columns.
 - It will be the responsibility of the contractor to verify the Dia. of all pier columns prior to the fabrication of the bands.
 - Steel bands shall receive one shop coat of red lead paint and two field coats of Alum. Paint.

* See Spec. Prov. for work involved and unit of Pay

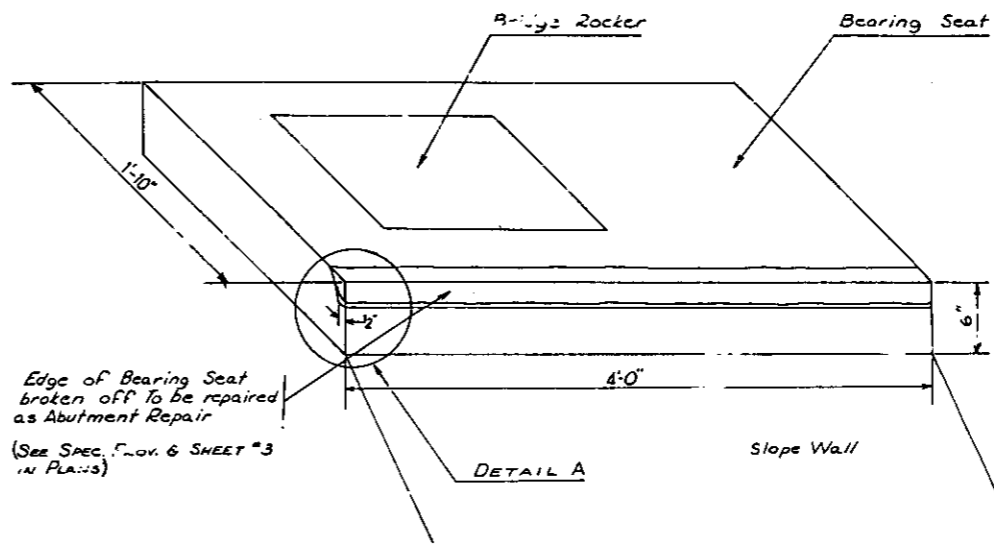
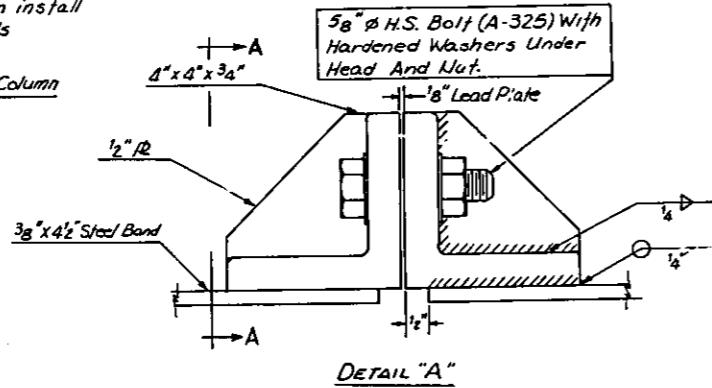
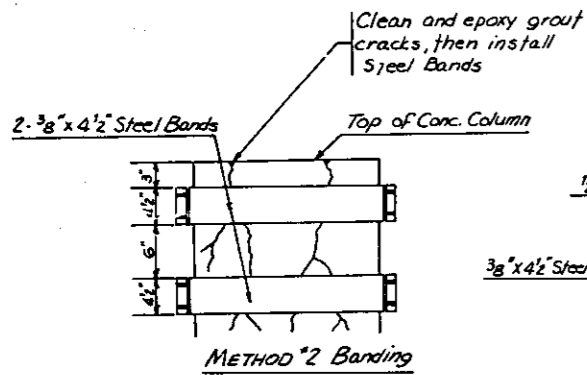
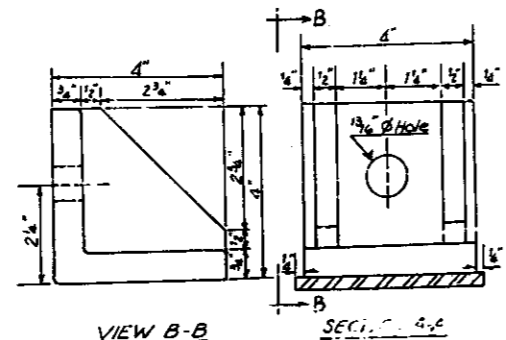
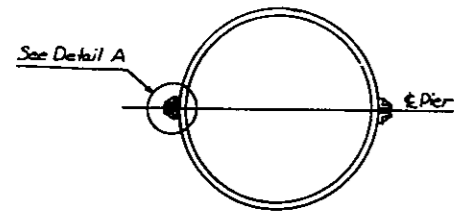
SCHEDULE OF PAIRS
PIER COLUMNS & ABUT'S
FAI. ROUTE 70
SEC. 82-3HVB-R-2



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-3HVB-R-2	ST. CLAIR	4	4
FED. ROAD DIST. NO. 7 ALABAMA PROJECT-				

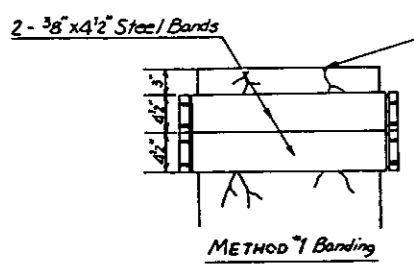
REPAIR OF CRACKED PIER COLUMNS

See table-Table A&B for pier columns that need to be repaired. See Sheet #3

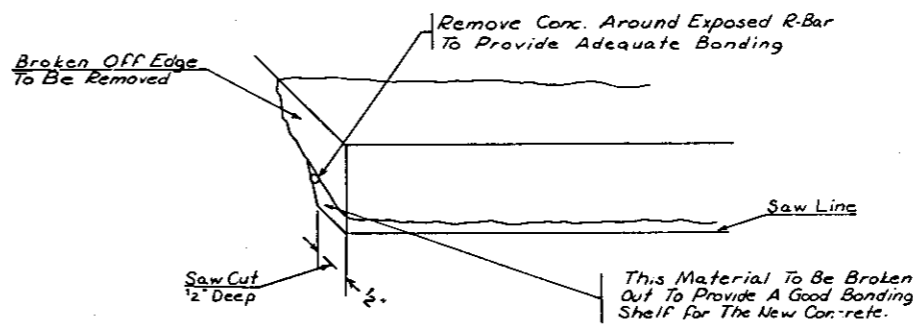


ABUTMENT REPAIR DETAIL
ABUT. NO. F-1-W & F-1-E

Cracks On Top of Columns to be Vee'd by use of a chipping hammer or other suitable method approved by the Engineer

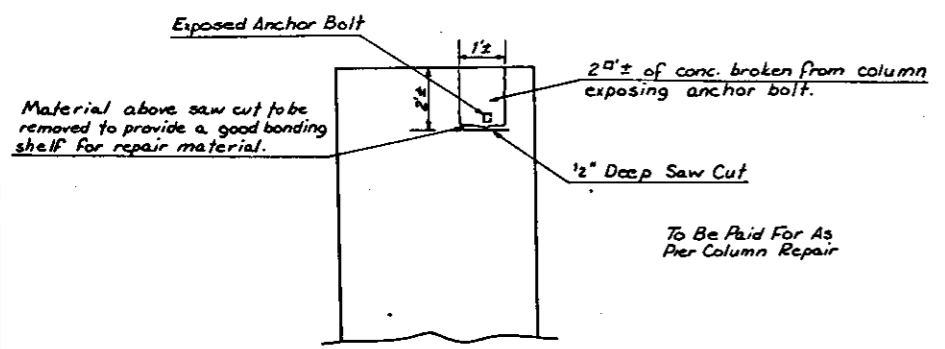


Top of Conc. Column to be cleaned by use of a small air chipping hammer or other suitable method approved by the Engineer to remove all laitance & unsound conc. area to be final cleaned by compressed air.



DETAIL A

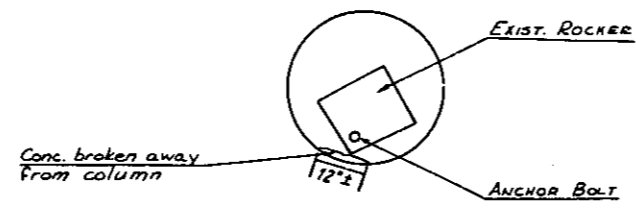
No Scale



PIER COLUMN No. M-10-E

No Scale

To Be Paid For As Pier Column Repair



TOP VIEW OF PIER COLUMN
M-10-E

GENERAL PI

FAI RTE. 7

SEC. 82-3HVB-R-2

ST. CLAIR CO.

DETAILS OF CONSTRUCTION

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

SET NO. 4 OF 4 SETS

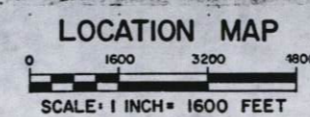
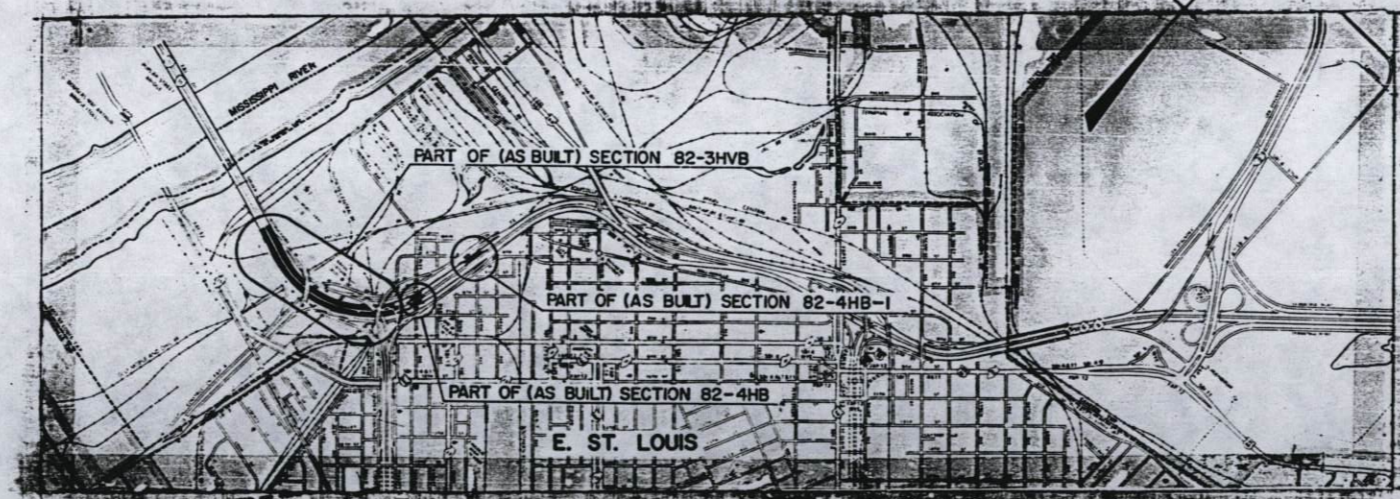
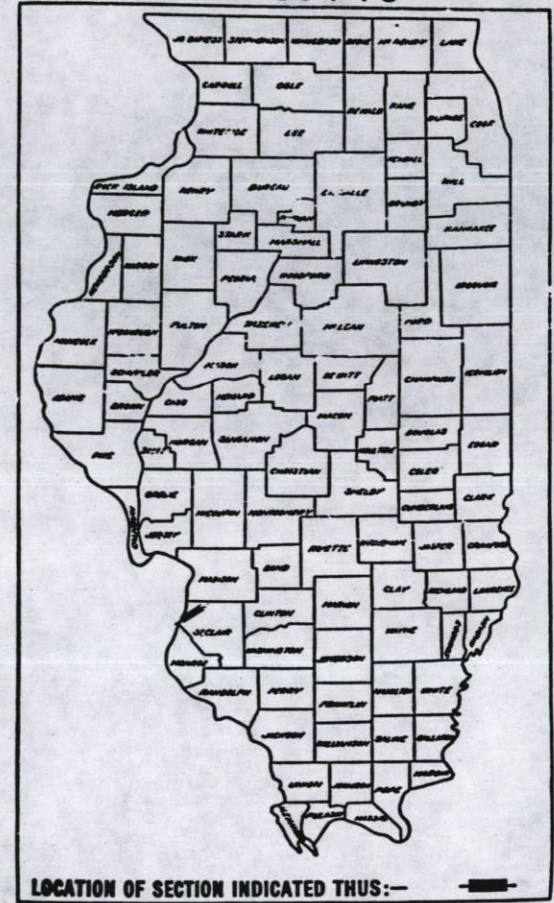
F. A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 70	*	ST. CLAIR	50	1
F. H. W. A. REG. NO. 4 ILLINOIS PROJECT				
* 82-(3,4)DRS				

PC-98-004-73

PLANS FOR PROPOSED FEDERAL AID HIGHWAY

FOR INDEX OF SHEETS
SEE SHEET NO. 2

F.A.I. ROUTE 70
SECTION 82-(3,4)DRS
~~PROJECT I-70-1()0~~
 ST. CLAIR COUNTY
 DECK RESURFACING
~~C-98-115-76~~



NET LENGTH (AS BUILT) SECTION 82-3HV8	ROADWAY B = 3089.00 FT. = 0.584 MILES
NET LENGTH (AS BUILT) SECTION 82-3HV8	ROADWAY C = 3108.36 FT. = 0.600 MILES
NET LENGTH (AS BUILT) SECTION 82-4HE	ROADWAY B = 176.20 FT. = 0.033 MILES
NET LENGTH (AS BUILT) SECTION 82-4HE	ROADWAY C = 183.81 FT. = 0.035 MILES
NET LENGTH (AS BUILT) SECTION 82-4HE-1	ROADWAY E = 221.20 FT. = 0.042 MILES

NET LENGTH OF SECTION = 6035.57 FT. = 1.134 MILES

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED _____ 19____ BY _____
 EXAMINED _____ 19____ BY _____
 PASSED _____ 19____ BY _____
 APPROVED _____ 19____ BY _____
 DIRECTOR OF HIGHWAYS

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

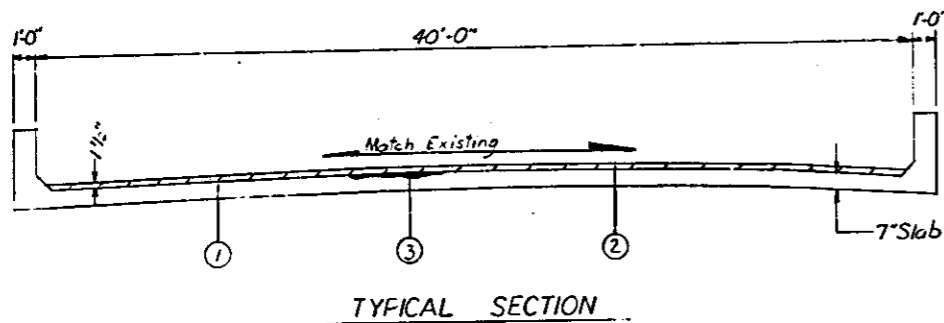
APPROVED _____
 DIVISION ADMINISTRATOR DATE _____

CONTRACT NO.

REEL 8-110

082-0005

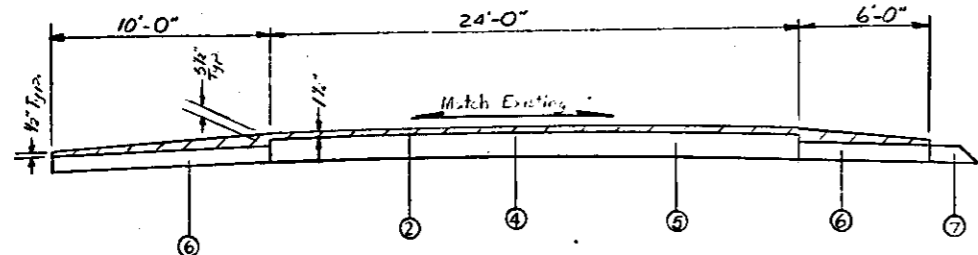
3,4



TYPICAL SECTION

JOINT NUMBER	JOINT LOCATION	CASE	NEOPRENE EXPANSION DAM	4" P.J.S				
1	S.ABUT.	II & II	67'-6"	2'-0"				
	N.ABUT.	II & II*	67'-6"	2'-0"				
TOTALS			135'-0"	4'-0"				

*THE CONTRACTOR SHALL NOT USE TRANSFLEX 200A AT THIS LOCATION



TYPICAL BRIDGE APPROACH

LEGEND

- ① Waterproofing Membrane System
- ② Bituminous Concrete Surface Course, Mixture E, Class I
- ③ Deck Slab Repair (Partial)
- ④ Bituminous Materials (Prime Coat)
- ⑤ Existing Pavement
- ⑥ Existing Stabilized Shoulder
- ⑦ Existing Aggregate Shoulder

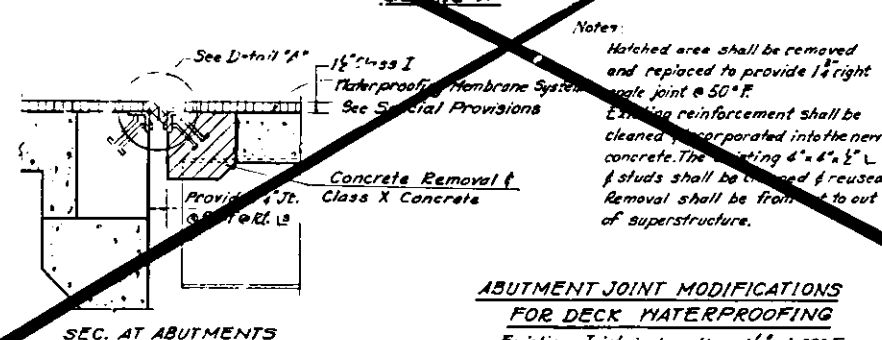
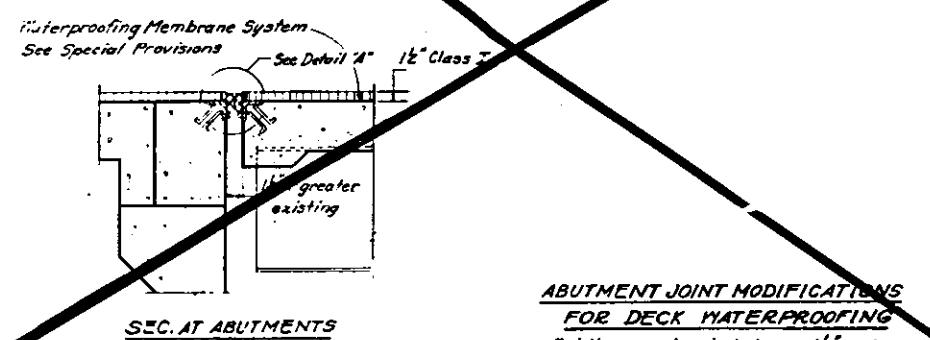
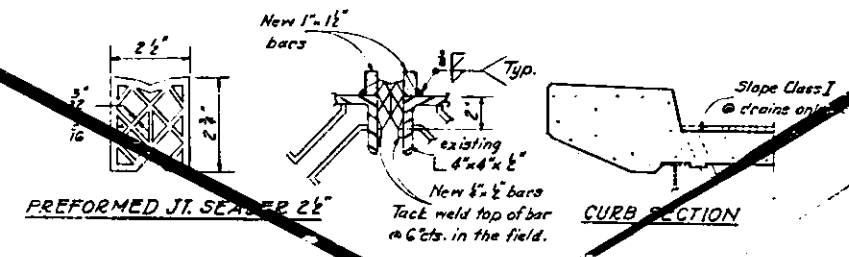
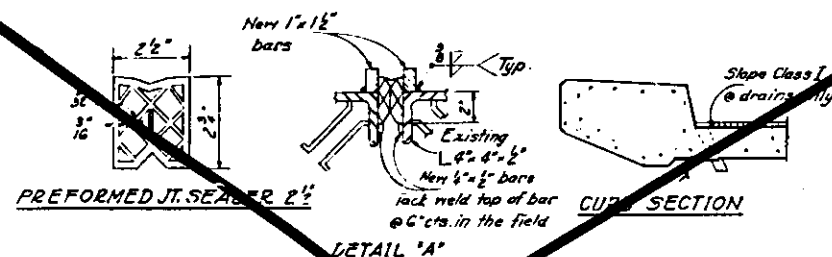
STATION to STATION	0+00 to 0+50	0+50 to 1+50	1+50 to 2+00	2+00 to 2+50	2+50 to 3+00	LANE TOTAL	DECK SLAB REPAIR (FULL DEPTH)	DECK SLAB REPAIR (PARTIAL)
Baseline A								
LANE A	.11					.11		
LANE B	.52			.09		.61		
LANE C	.13		3.19	.13	.23	3.68		
LANE D			.32			.32		
						4.72	1.57	3.15

F.A.I. ROUTE 70
SECTION 82-134DRS
ST. CLAIR COUNTY
(As Built)
Section 82-4HB-1
Roadway B

No Scale

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.	SHEET NO.
FAI 70	*	ST. CLAIR	P	30	18
DESIGNED BY	DRAWN	CHECKED	DATE	PROJECT	
				#82-04,185	

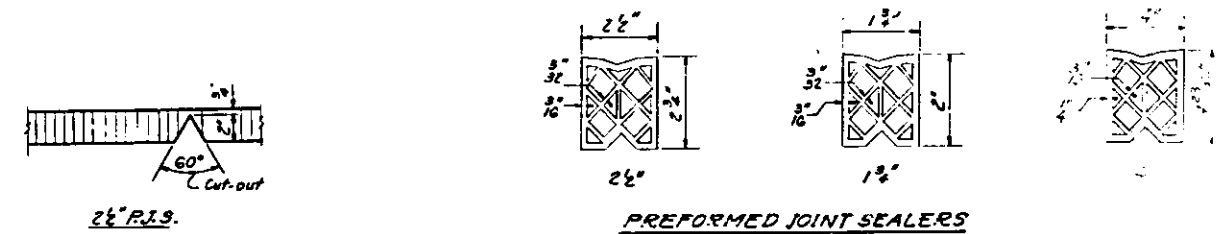
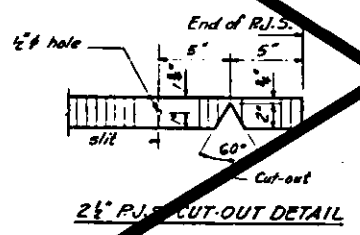
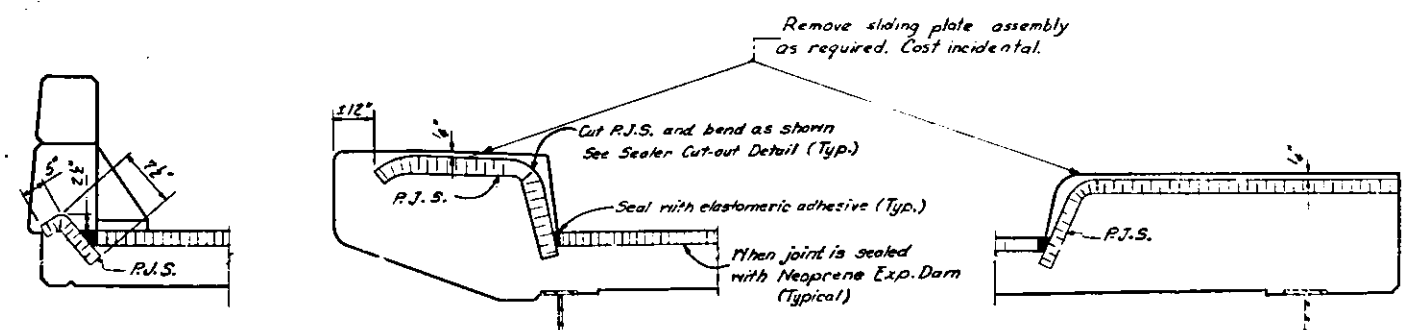
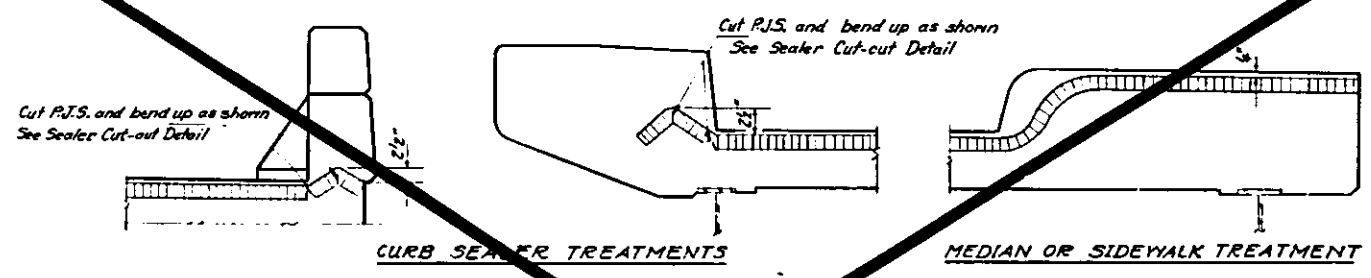


ABUTMENT JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing opening is between 1 1/2" and 2" at 50°F, and the expansion length and stem falls into the 2 1/2" R.J.S. range.

ABUTMENT JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing Joint is less than 1 1/2" at 50°F and the expansion length and stem falls into the 2 1/2" R.J.S. range, but there is not adequate expansion capacity.

CASE I

CASE II



PREFORMED JOINT SEALERS
Use 2 1/2" R.J.S. for 1" min. opening @ 50°F and 1 1/2" R.J.S. for 3/4" min. opening @ 50°F

DESIGNED	EXAMINED	18
CHECKED	PASSED	
DRAWN	APPROVED	
CHECKED		

DIRECTOR OF HIGHWAYS

CASE III

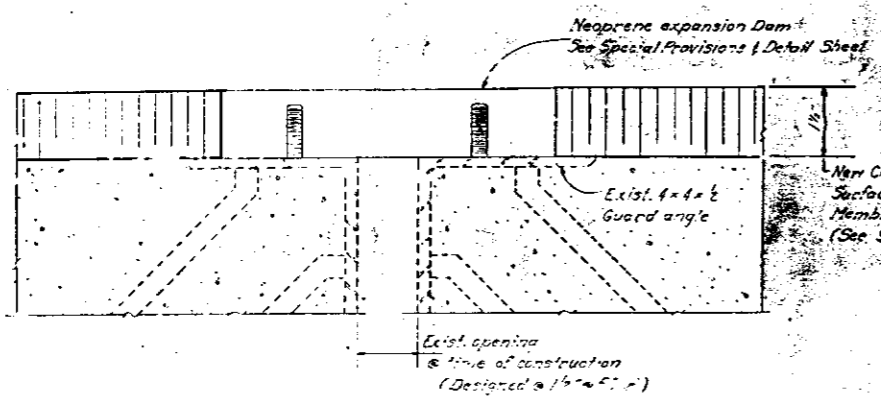
CASE IV



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	FACILITY	COUNTY	SHEET NO.	SHEET NO.
E41 70	*	ST. CLAIR	30	19
FED. ROAD DIST. NO. 7	ALIGNED	ROAD NO.		

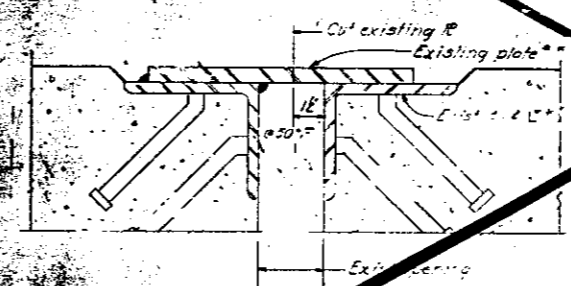
* 32-3,4,DR5



SECTION

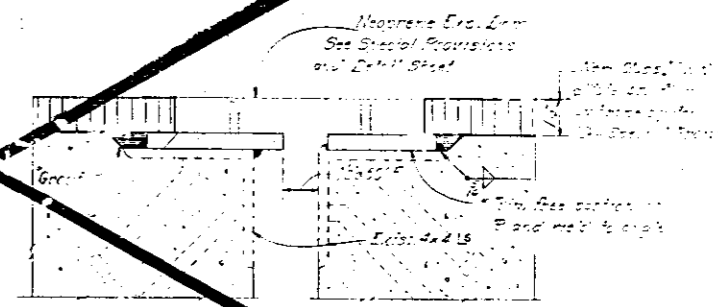
JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing open joint with adequate capacity for required expansion
Max. Exp. length 200 Ft.

CASE V



EXIST. SECTION

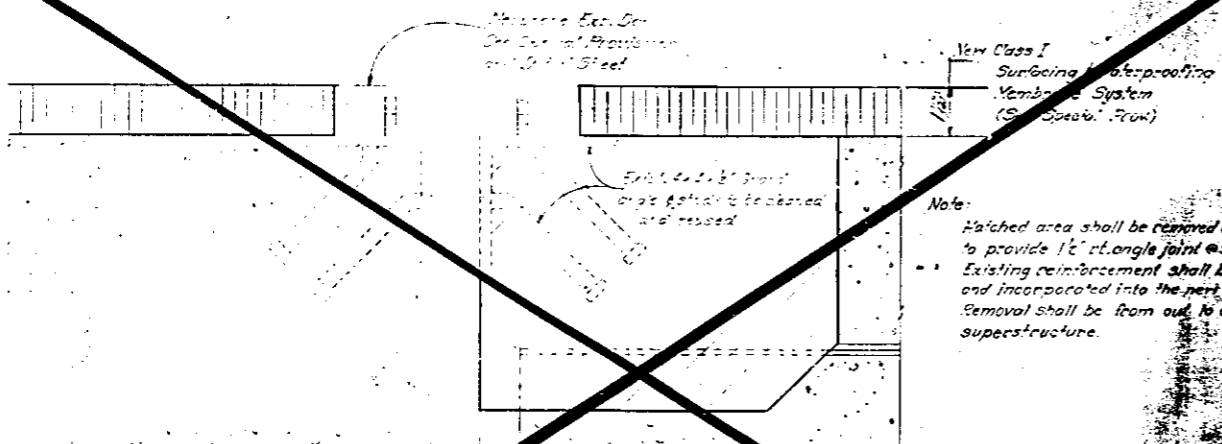
Incidental to Neoprene Exp. Dam
Existing plate and angle shall be adequately cleaned prior to re-tiling.



PROPOSED SECTION

JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing slating plate maximum expansion length 200 Ft.

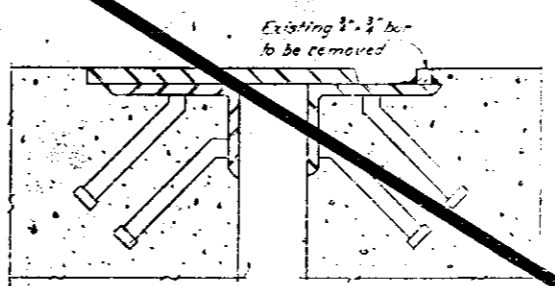
CASE VI



SECTION

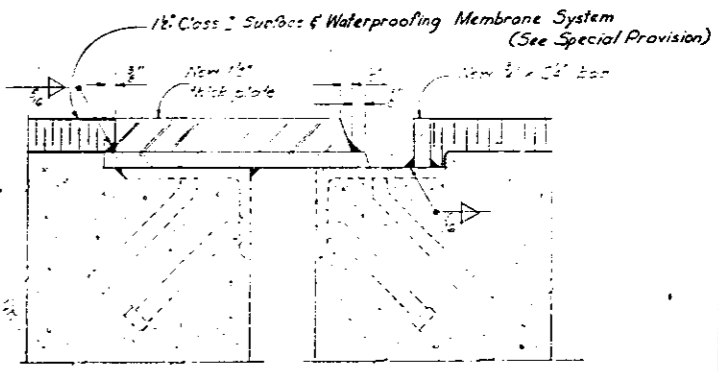
JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing water joint less than 1/2" @ 50°F and there is not adequate capacity for required expansion
Max. Exp. Length 200 feet.

CASE VII



EXISTING SECTION

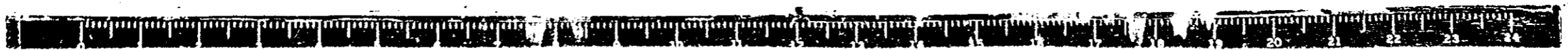
Note:
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.



PROPOSED SECTION

SLATING PLATE MODIFICATION FOR DECK WATERPROOFING

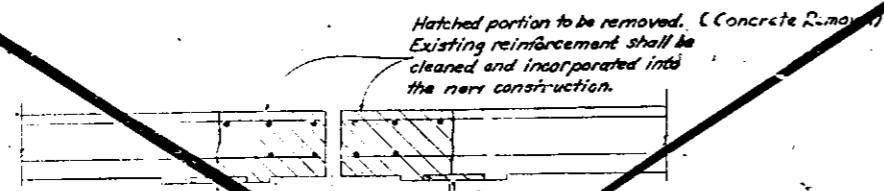
DESIGNED	EXAMINED	19
CHECKED	PASSED	
DRAWN	APPROVED	



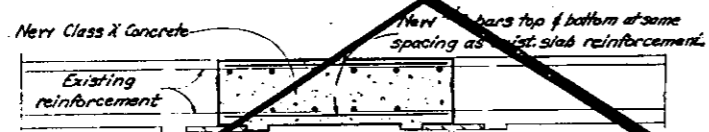
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
FAH 70	*	CLAIR	30	20	

*B2 (3,4) CRS

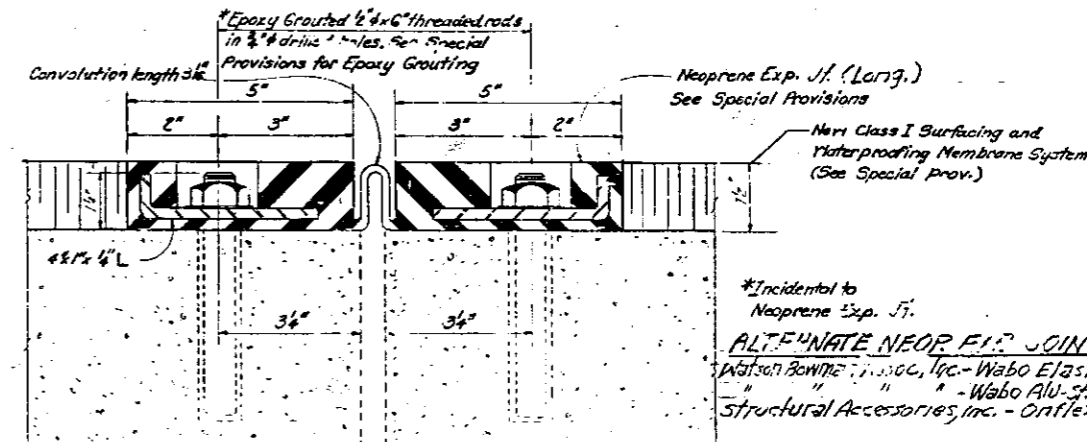


EXISTING LONGITUDINAL JT. CROSS SEC.

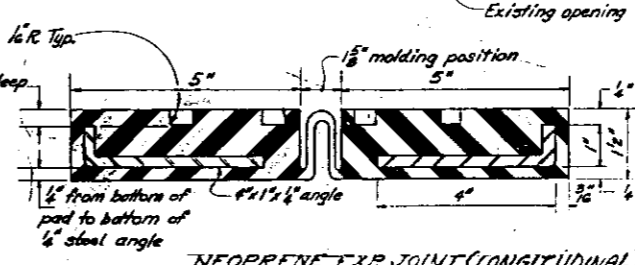


RECONSTRUCTED LONGITUDINAL JT.

METHOD TO RECONSTRUCT LONGITUDINAL JOINT
When ℓ to ℓ outside beams or girders is 65' or more
CASE II



*Incidental to Neoprene Exp. Jt.
ALTERNATE NEOPRENE JOINTS
Watson Bowtie, Inc. - Wabo Elastodam Type 300
" " " - Wabo AU-Strip T.II, S-200
Structural Accessories, Inc. - Oriflex 25 (L.P.)



NEOPRENE EXP. JOINT (LONGITUDINAL)

Note: When Case I is used to seal a transverse expansion joint, the Contractor will be allowed to use any of the 2" Neoprene Expansion Joints shown in these plans in place of the Neoprene Expansion Dam.

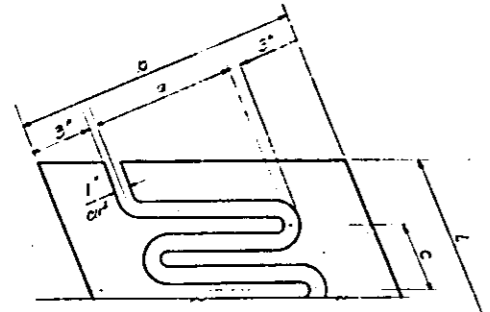
FEL-PRO FEL-SPAN MODEL T-30 SHAWN
(see list of Alternate Neop. Exp. Jts. which may be used)
METHOD TO RECONSTRUCT LONGITUDINAL JOINT
When ℓ to ℓ outside beams or girders is over 65' or more
CASE I

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	

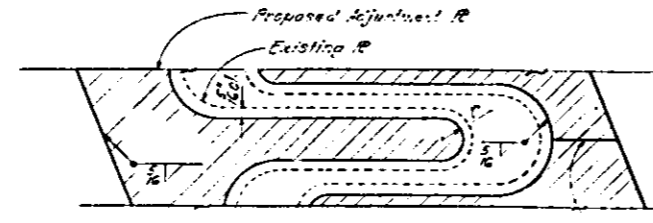


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

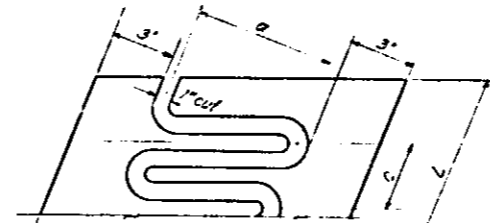
ROUTE NO.	SECTION	SHEET	TOTAL SHEETS	SHEET NO.
1117	+	ST. CLAIR	3	21
JOB NO. 1117-11		DATE	FEB. 20, 1930	
* 82-11-1 EKS				



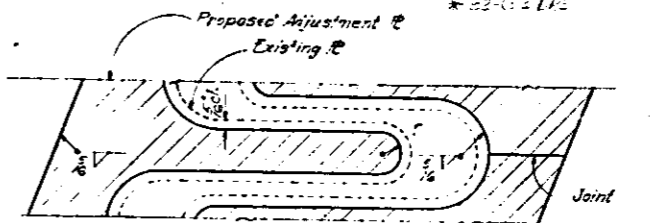
CUTTING PLAN-SKEW RF
Adjustment plates shall be flame cut; all burrs ground smooth and top edges of fingers rounded as shown.



DETAIL C
(Showing optional joint)



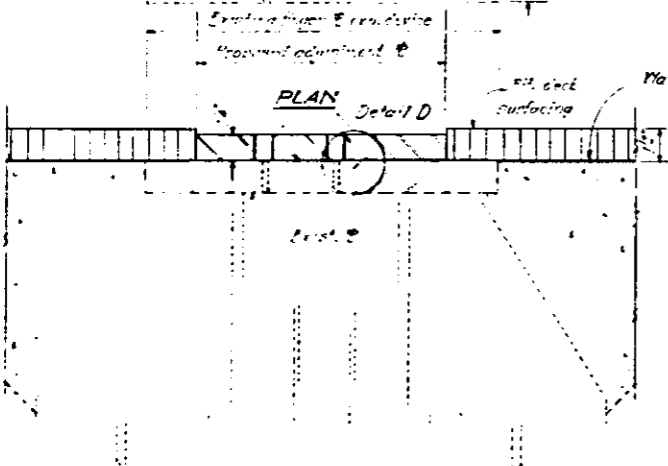
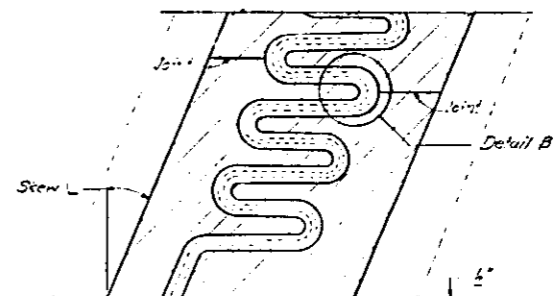
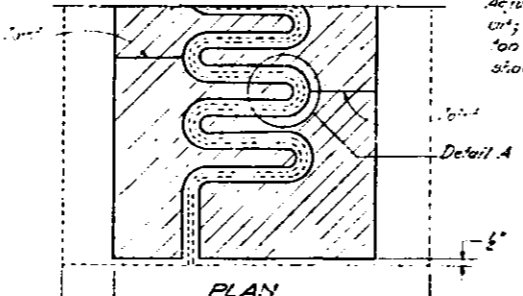
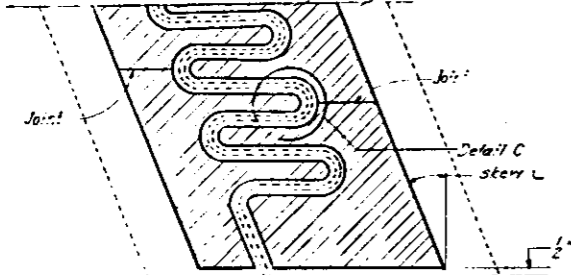
CUTTING PLAN SKEW LF



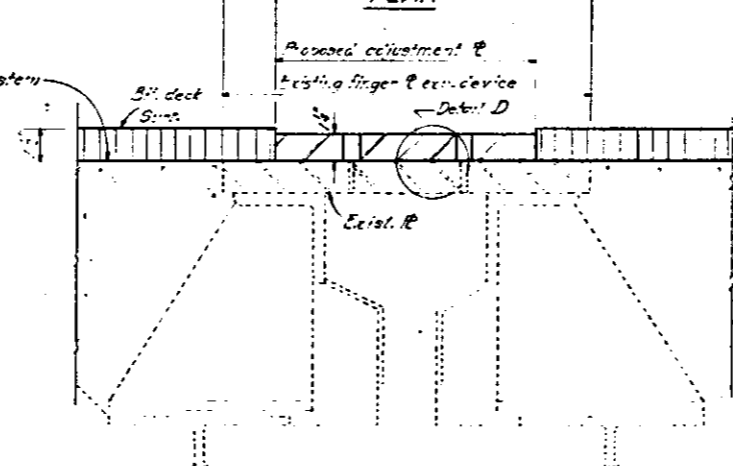
DETAIL B
(Showing optional joint)

Note: Adjustment plates may be furnished in convenient lengths with joints positioned as shown.

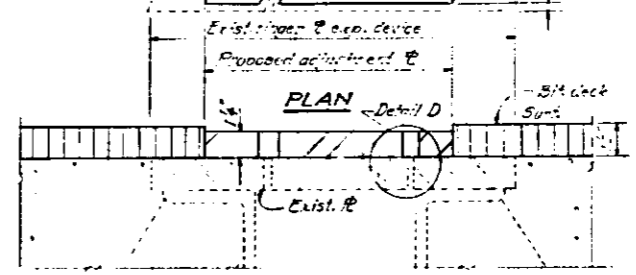
Adjustment plates shall be flame cut; all burrs ground smooth and top edges of fingers rounded as shown.



EXIST. SEC. THRU EXP. JOINT
(Item 1)

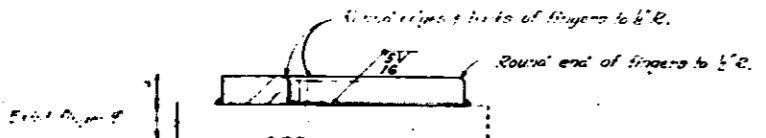


EXIST. SEC. THRU EXP. JOINT
(Item 2)

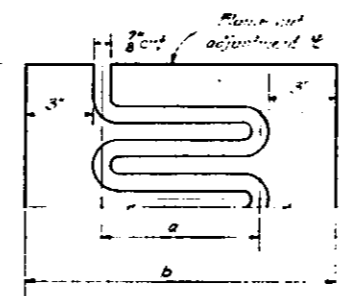


EXIST. SEC. THRU EXP. JOINT SCHEDULE OF MATERIAL ADJUSTMENT PLATES
(Item 3)

Station	Plate	Plate Dimensions	Skew
Sta. No.	Loc. No.	a b c d	angle
70+28 B2-348	St. Clair Per. C-22	11" 17 1/2" 4 1/2" 7 1/2" 3 1/2"	0°
70+74 B2-348	St. Clair Per. C-26	4 1/2" 11 1/2" 4 1/2" 7 1/2" 3 1/2"	0°
70+71+13 B2-348	St. Clair Per. B-23	10 1/2" 17 1/2" 4 1/2" 7 1/2" 3 1/2"	0°

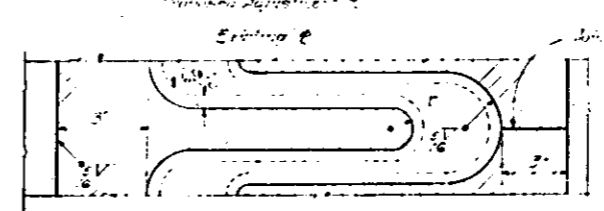


DETAIL D



CUTTING PLAN-O° SKEW

Adjustment plates shall be flame cut; all burrs ground smooth and top edges of fingers rounded as shown.

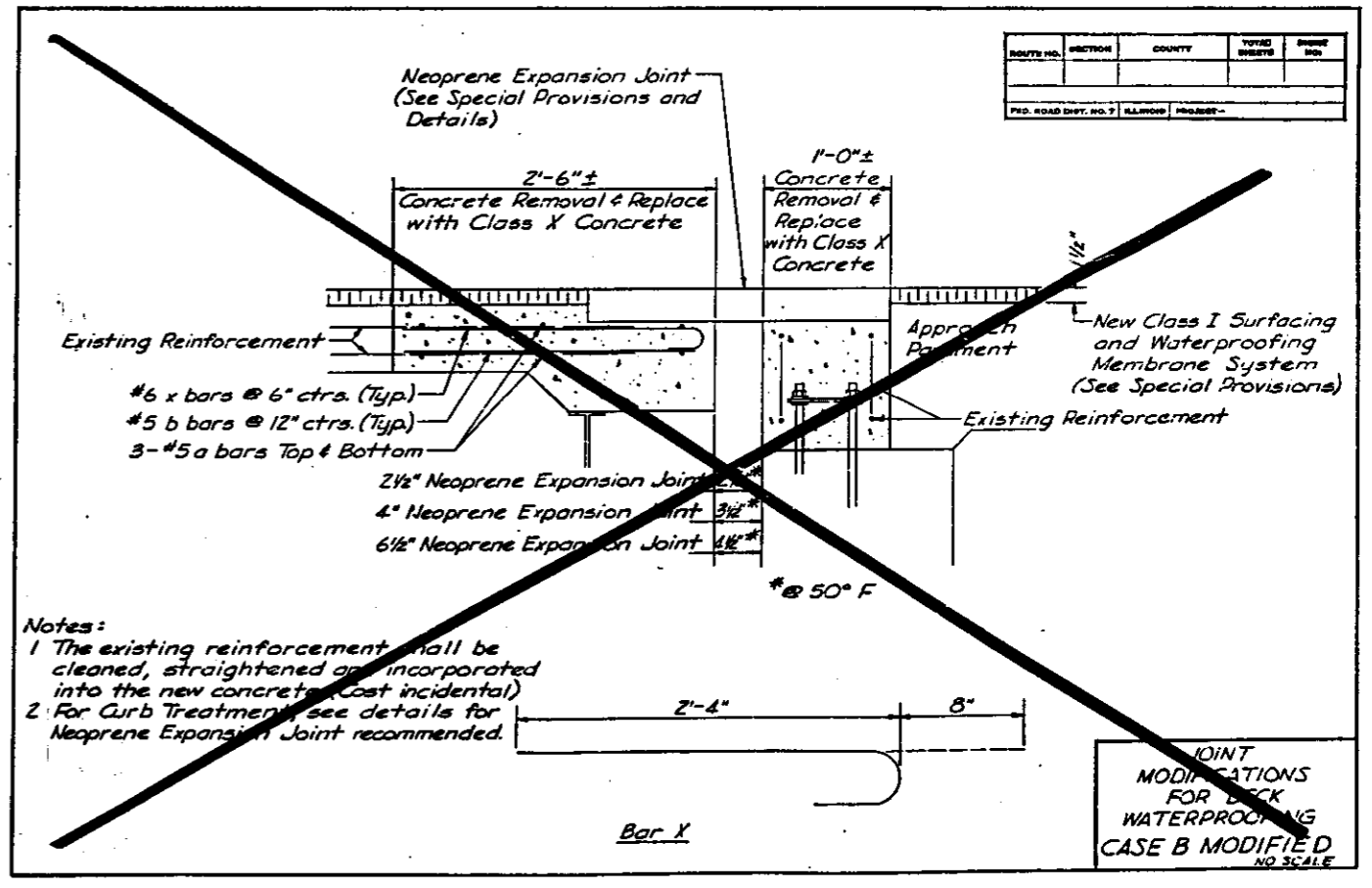
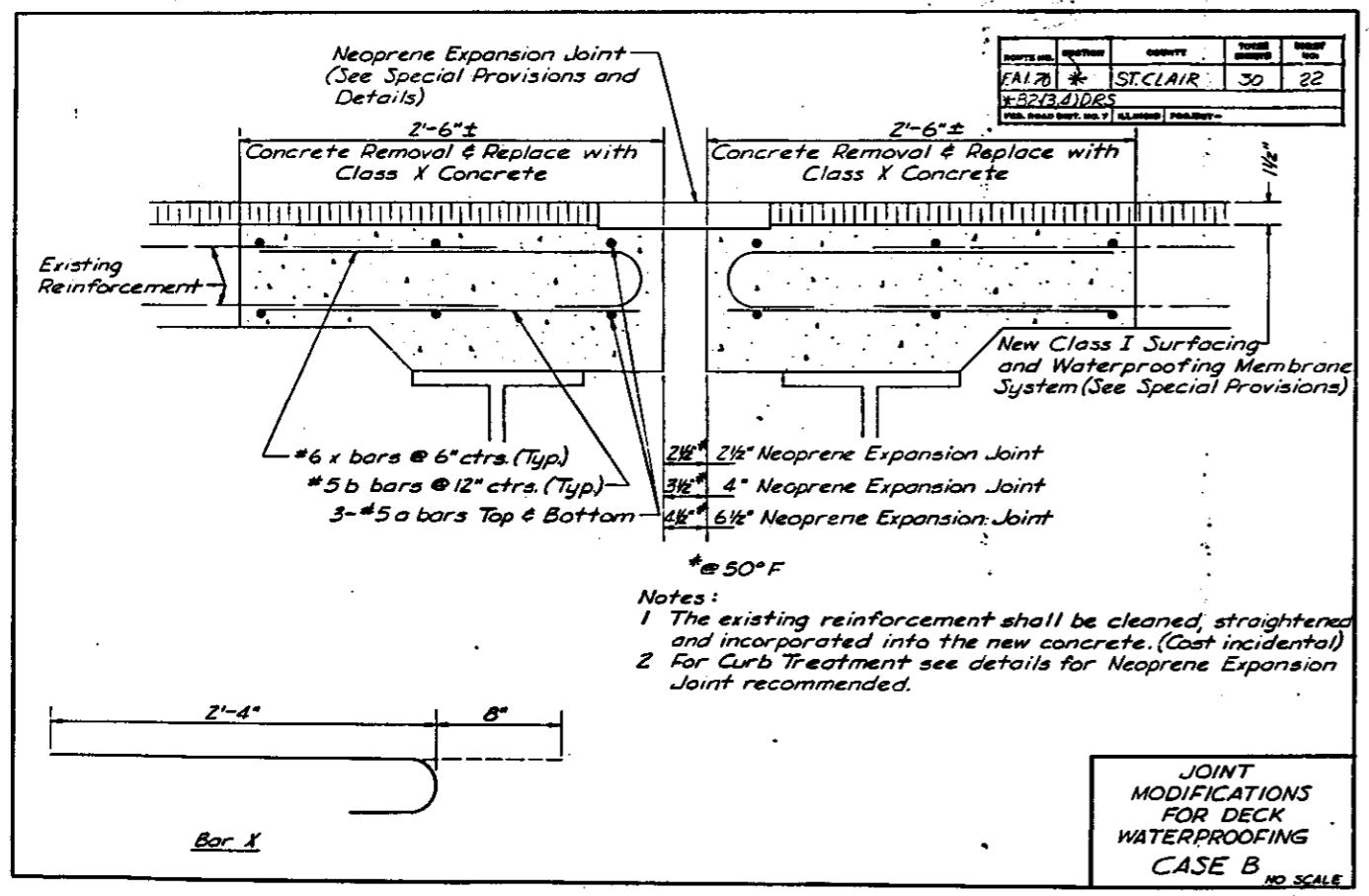
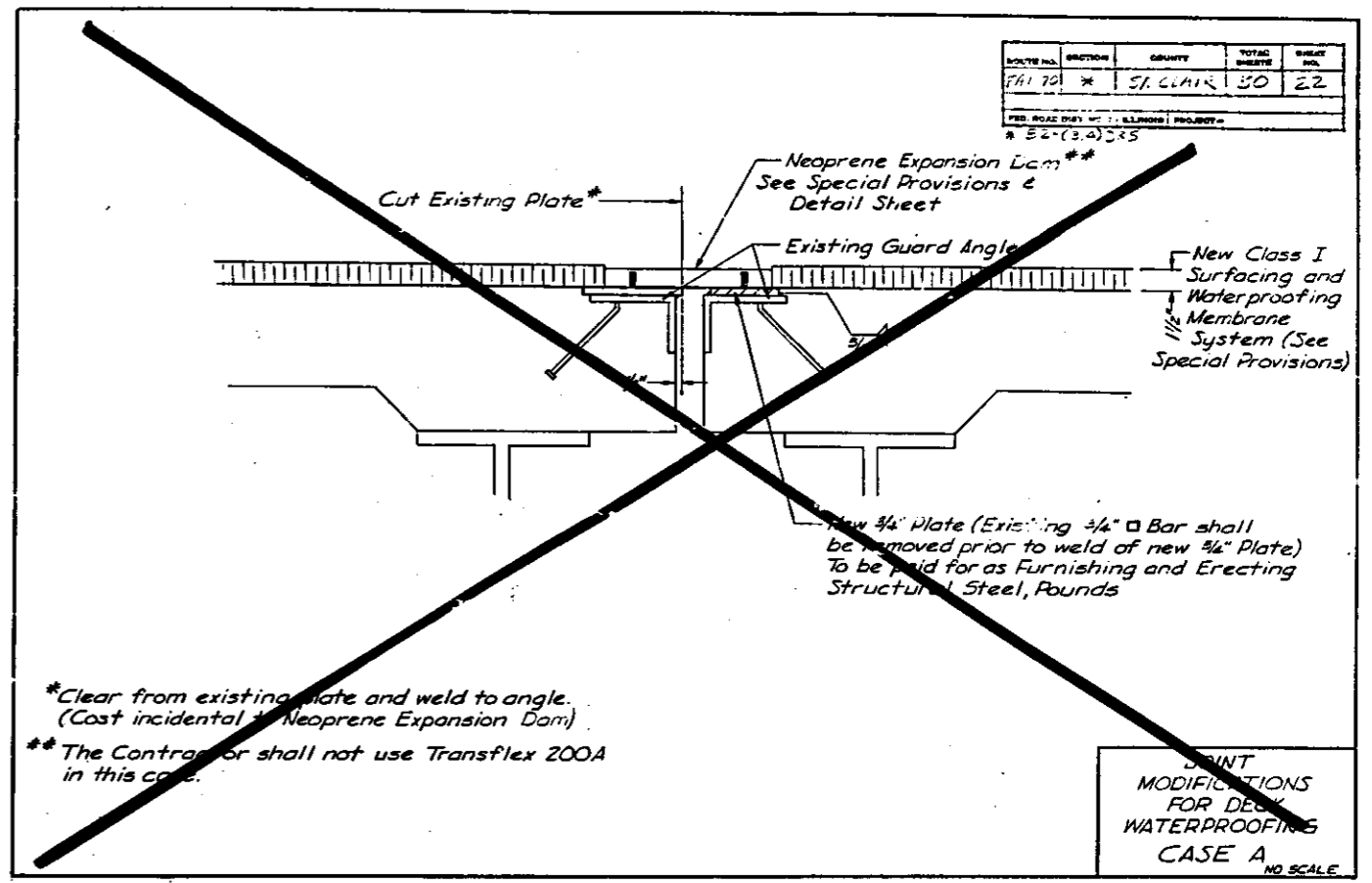
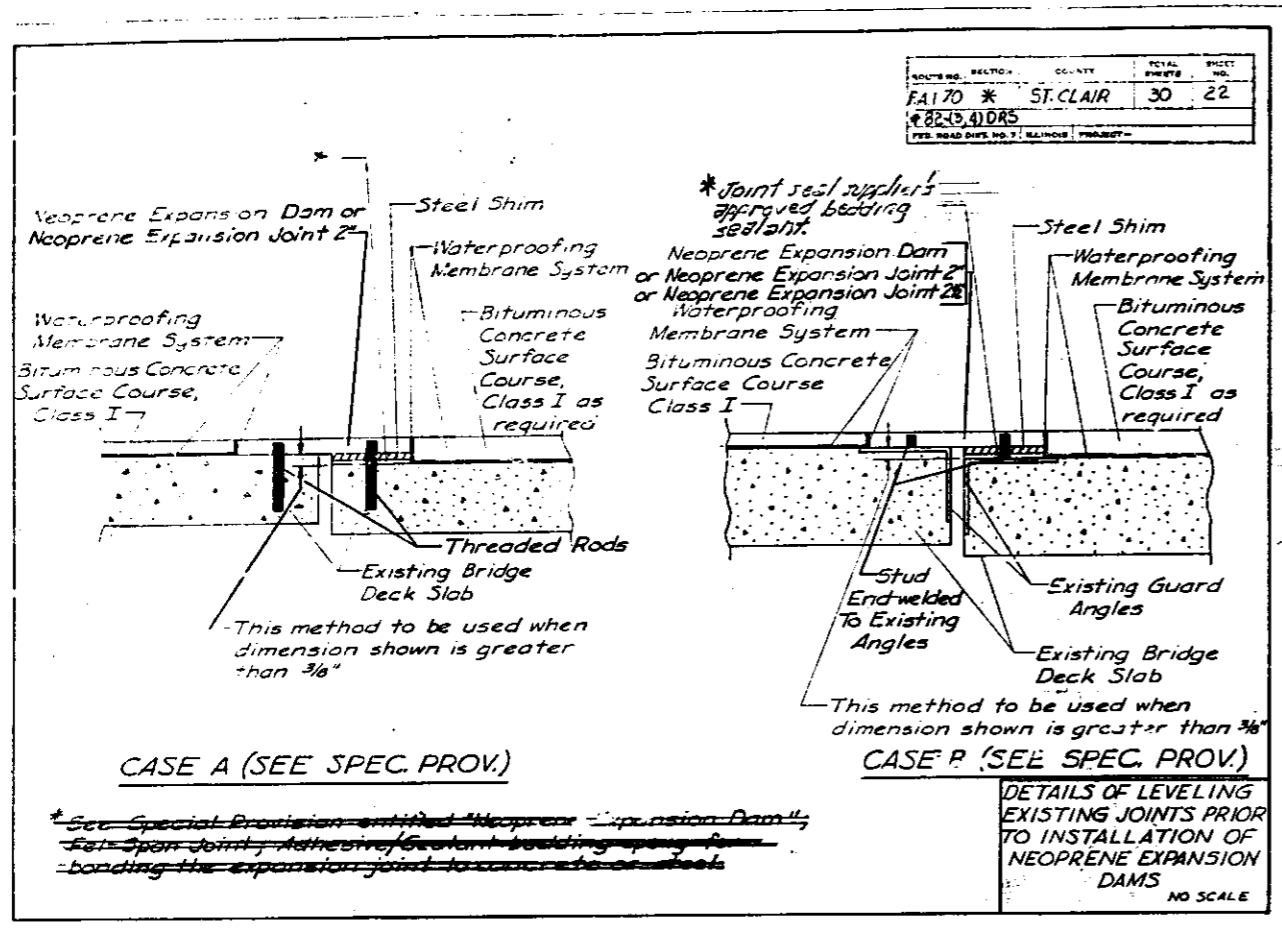


DETAIL A
(Showing optional joint)

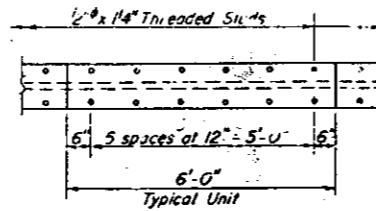
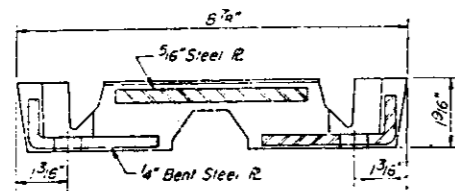
Note: Fabricate adjustment plates to existing crown. It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

FINGER PLATE MODIFICATIONS FOR DECK WATERPROOFING CASE XI

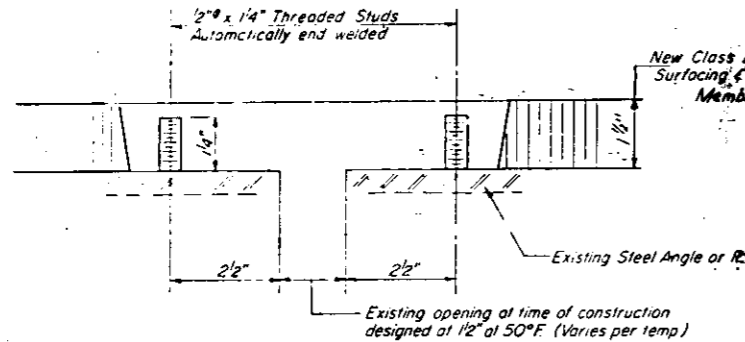
DESIGNED	19
CHECKED	
DRAWN	
CHECKED	
EXAMINED	
PASSED	
APPROVED	
DIRECTOR OF HIGHWAYS	



PROJECT NO.	ST. CLAIR	20	22
* See S.D.P.C.			



PLAN



CROSS SECTION

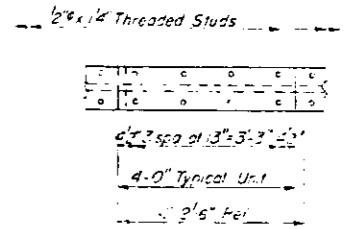
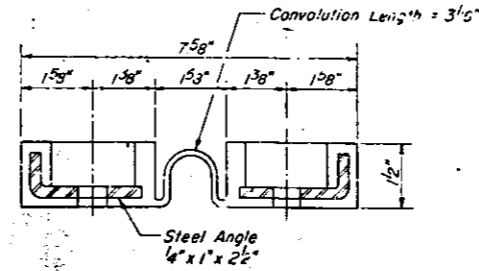
Dimensions are at right angles

Note: Threaded studs require a clipped washer, lockwasher & hex nut.

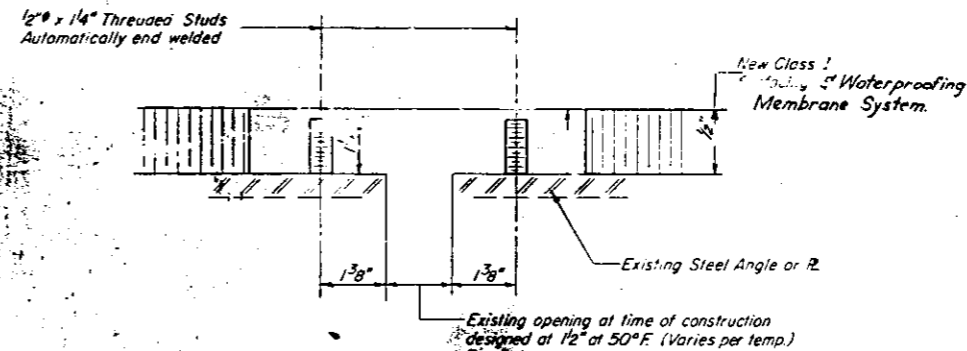
FOR EXPANSION LENGTH OF DECK = 0 to 160 FT.

**TRANSFLEX MODEL 200A
NARROW GAGE**

(Structural Rubber Products Co.)



PLAN



CROSS SECTION

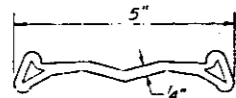
Dimensions are at right angles

Note: Threaded studs require a flat washer & locknut.

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT.

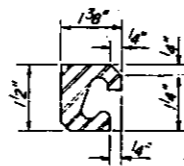
FEL-SPAN MODEL T-30-1/2-S

(Fel-Pro Building Products Inc.)



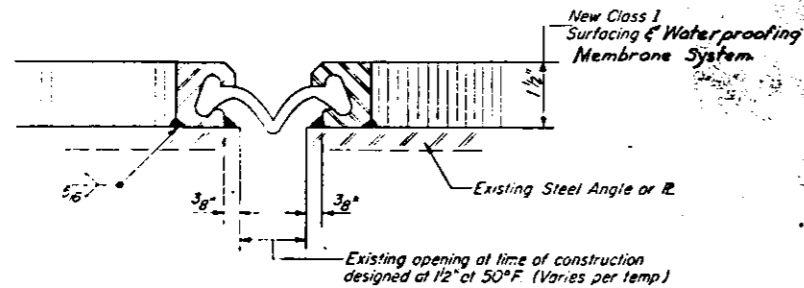
NEOPRENE EXTRUSION S-300

ASTM D-2628 Modified



STEEL EXTRUSION-TYPE E

ASTM A-242



CROSS SECTION

Dimensions are at right angles

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT.
2" MAX. OPENING AT 50°F

WABO-MAUER MODEL S-300E

(Nelson-Bowman Assoc., Inc.)

ALTERNATE NEOPRENE EXPANSION DAMS

(See Special Provisions)

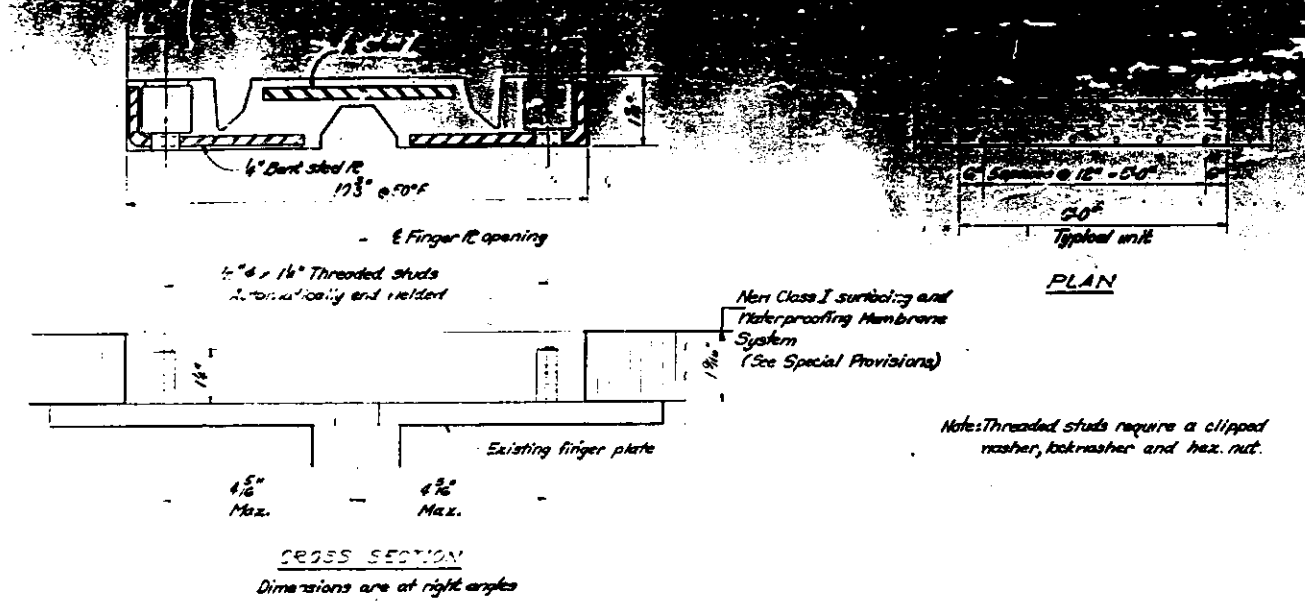
- Nelson-Bowman Assoc., Inc. - Wabo Elastodam Type 300 S
- " " " - Wabo AU-Strip Type III, S300
- Structural Accessories, Inc. - Onflex, Low Profile 25

NEOPRENE EXPANSION DAMS

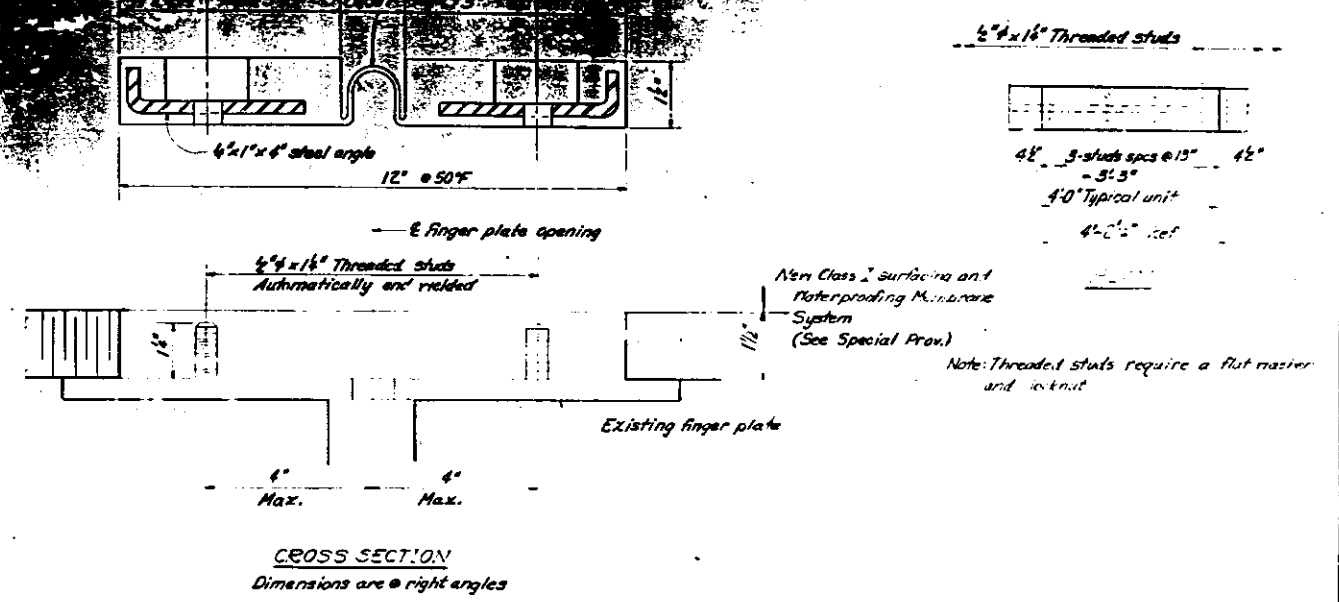
DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
DATE	APPROVED

ED-1

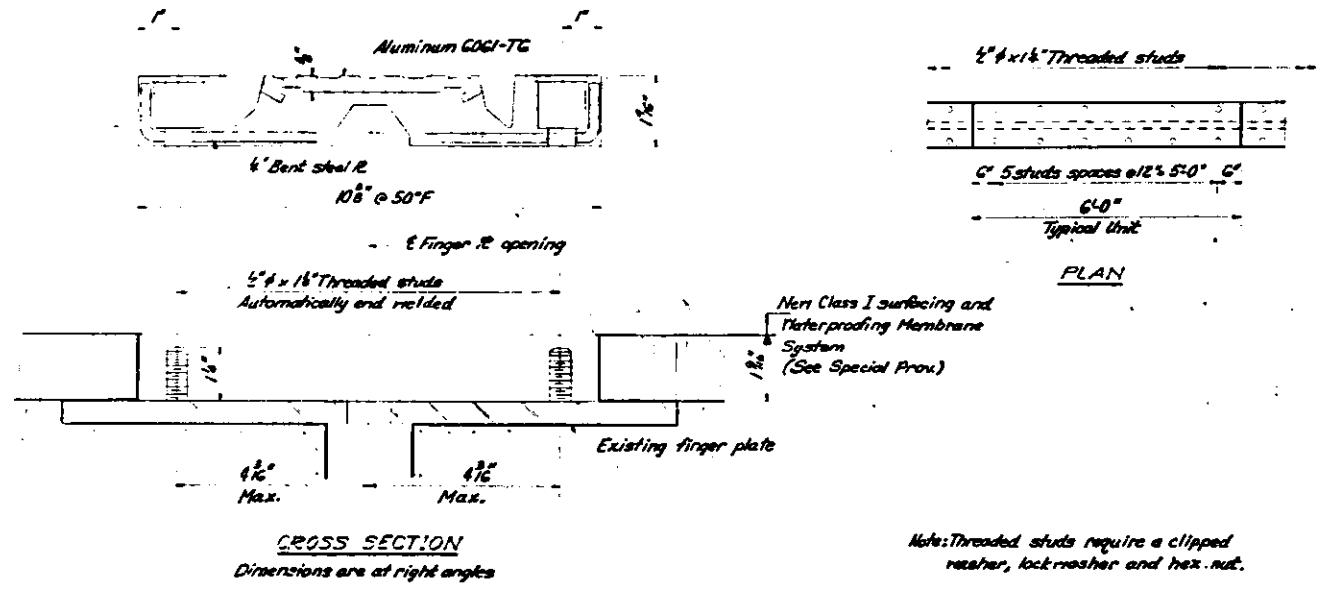




TRANSFLEX MODEL 200-A
(Structural Rubber Products Co.)



FLEX-FLEX MODEL 100
(El Pro Building Products, Inc.)

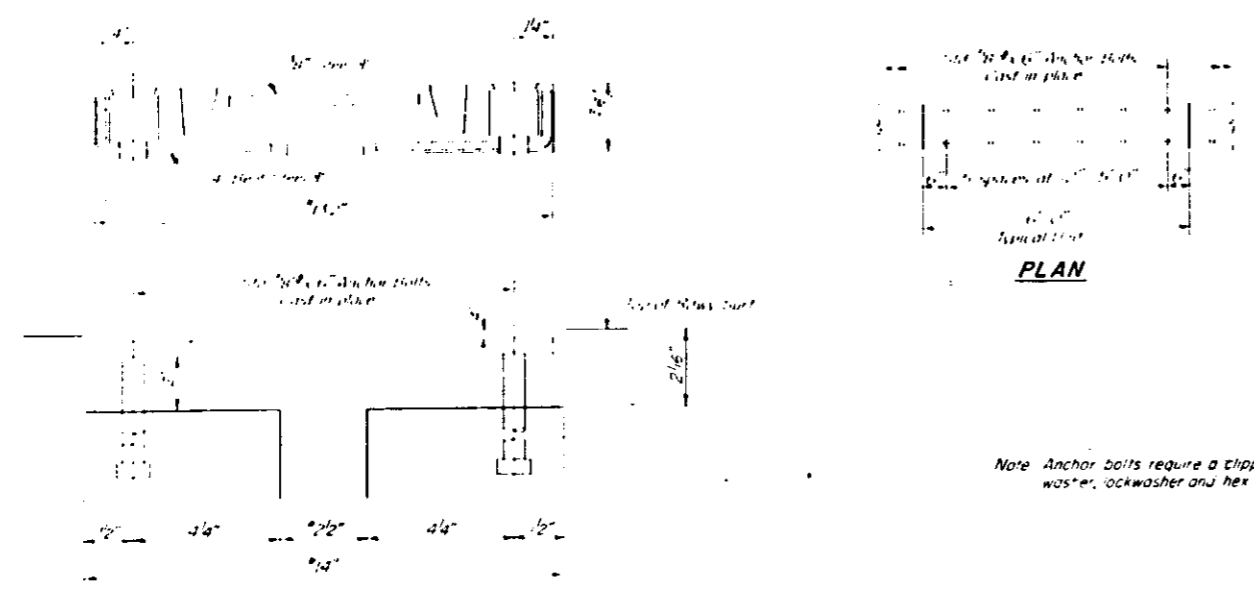


TRANSFLEX MODEL SR 2
(Walton-Bowman Associates Inc.)

ALTERNATE NEOPRENE EXPANSION JOINTS
(See Special Provisions)
Walton Bowman Assoc., Inc. - Wabco Elastodam Type 5300 (set 2" @ 50°F)

NEOPRENE EXPANSION JOINT
For expansion length of Deck = 0 to 100 Ft.

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED



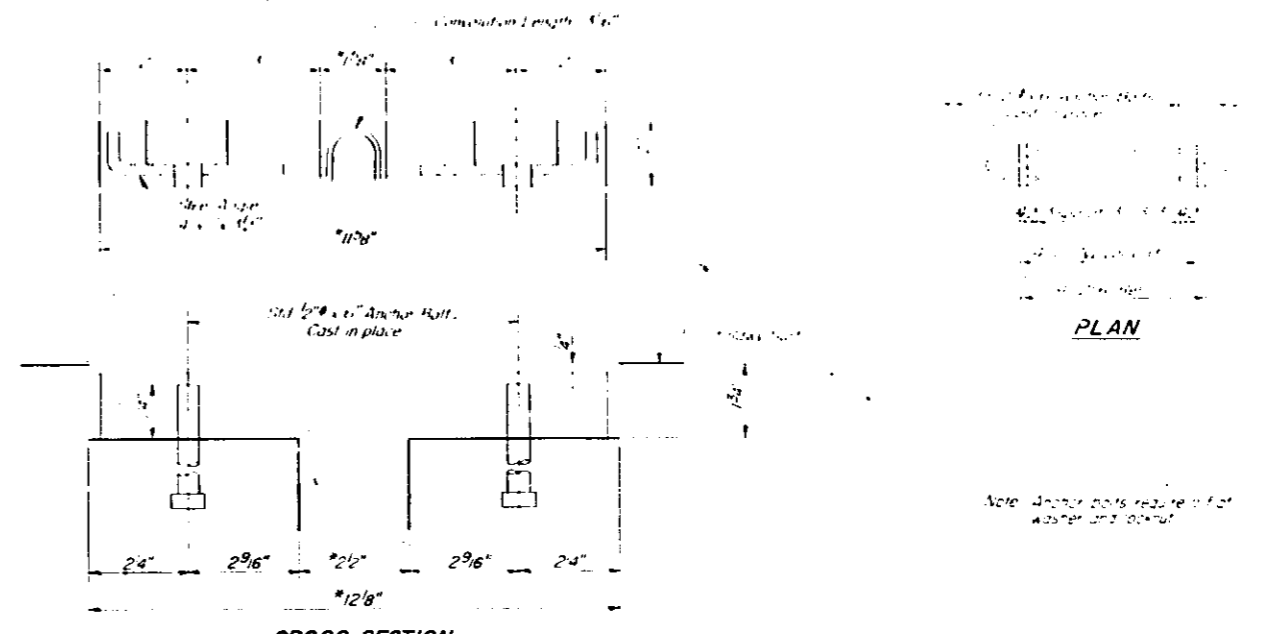
PLAN

CROSS SECTION

*At 50°F
Dimensions are at right angles

Note: Anchor bolts require a clipped washer, lockwasher and hex nut

TRANSFLEX MODEL 250
(Structural Rubber Products Co.)



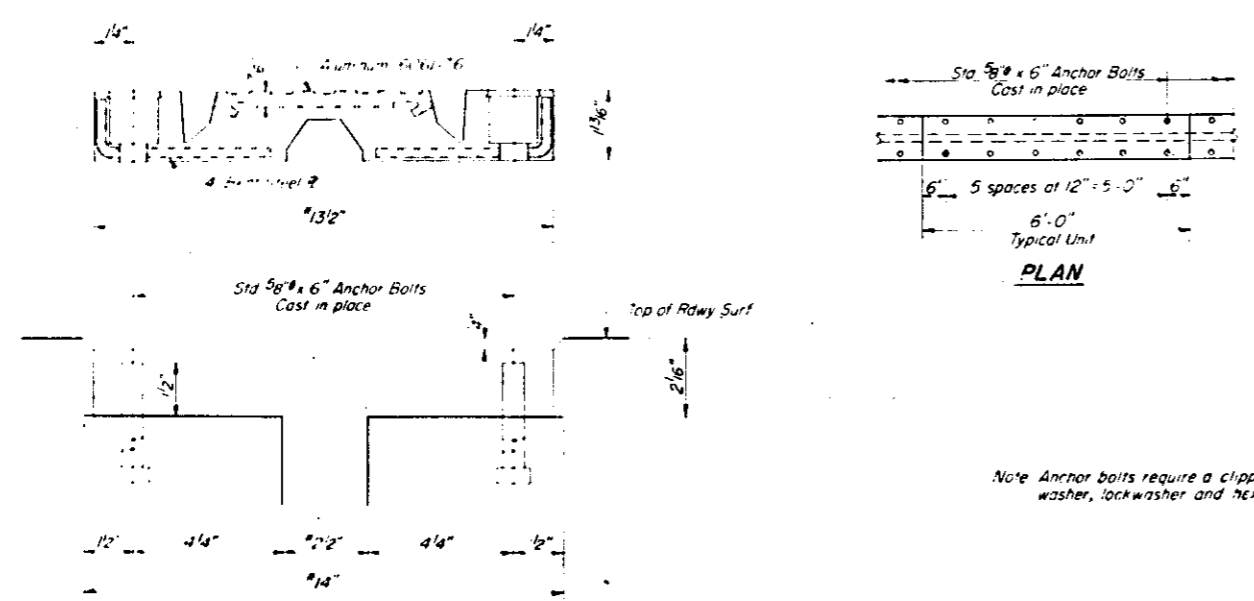
PLAN

CROSS SECTION

*At 50°F
Dimensions are at right angles

Note: Anchor bolts require a clipped washer and locknut

FEL-SPAN MODEL T-30
(Felt-Pro Building Products Inc.)



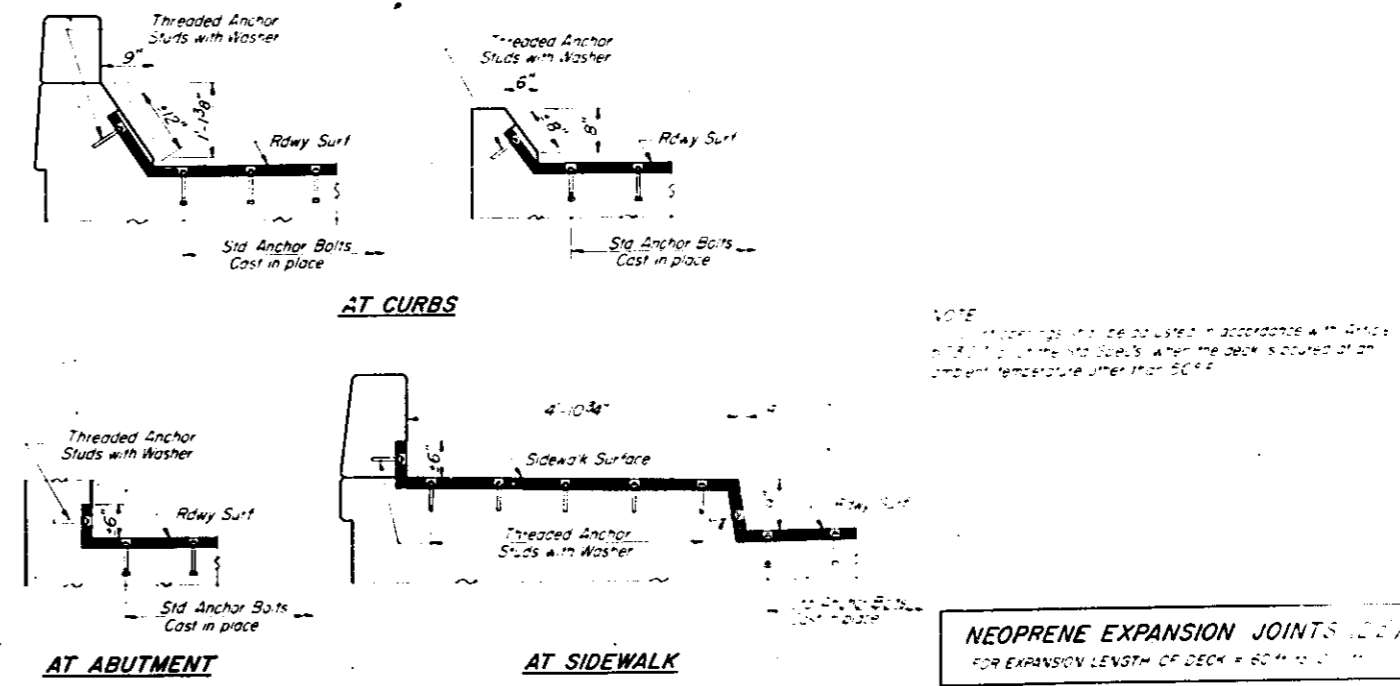
PLAN

CROSS SECTION

*At 50°F
Dimensions are at right angles

Note: Anchor bolts require a clipped washer, lockwasher and hex nut

WABOFLEX MODEL SR 2.5
(Watson-Bowman Associates Inc.)



AT CURBS

AT ABUTMENT

AT SIDEWALK

TYPICAL END TREATMENTS

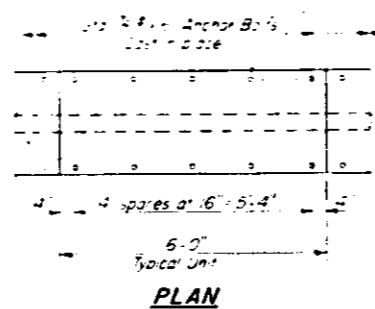
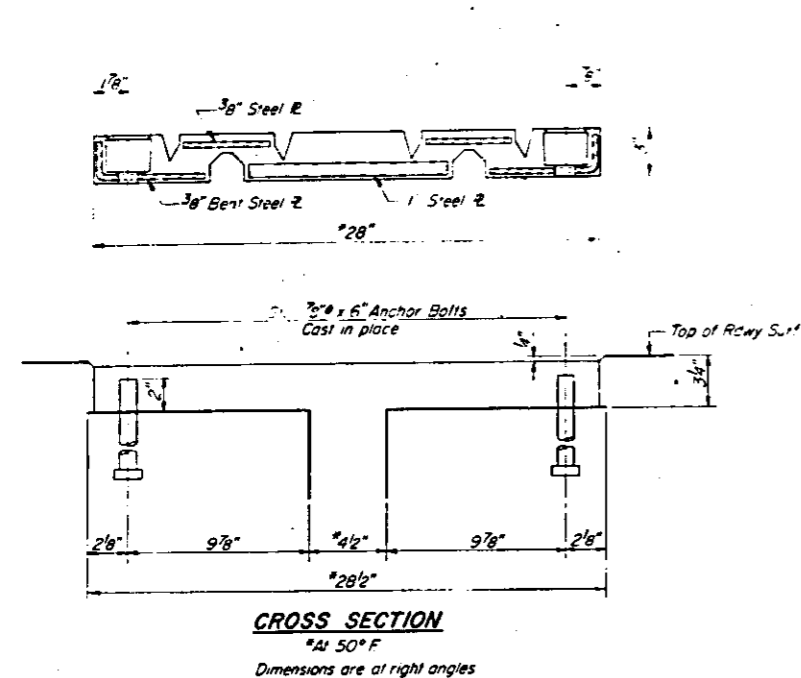
NEOPRENE EXPANSION JOINTS (CE)
FOR EXPANSION LENGTH OF DECK = 60" TO 120"

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
FA 170 *		ST. CLAIR	30	26
SHEETS				

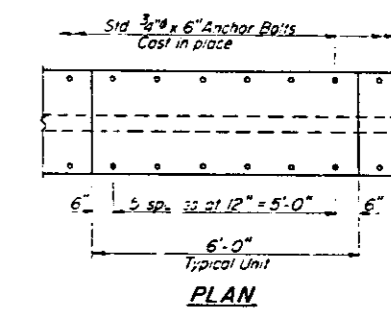
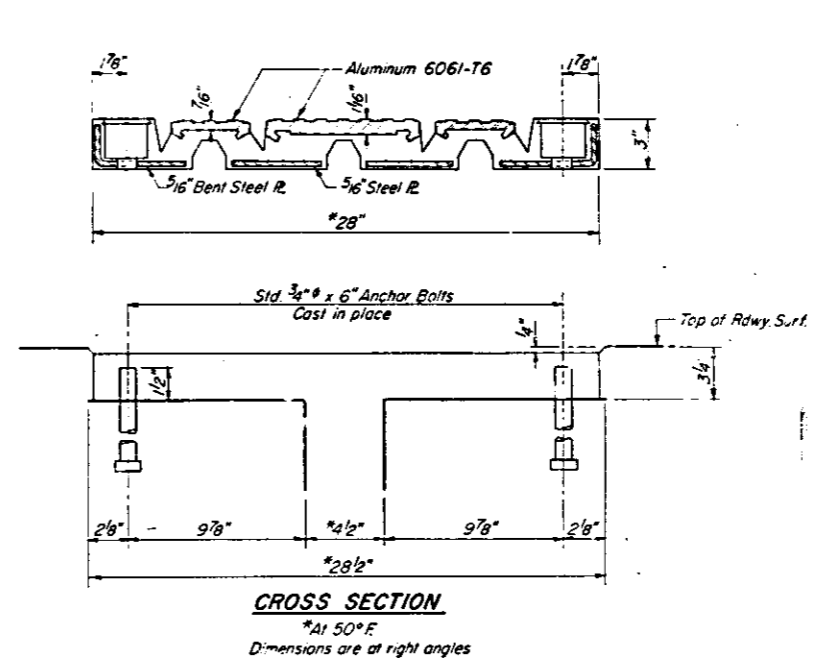
*82(3,4)C.F.S.



PLAN

Note: Anchor bolts require a clipped washer, lockwasher and hex nut

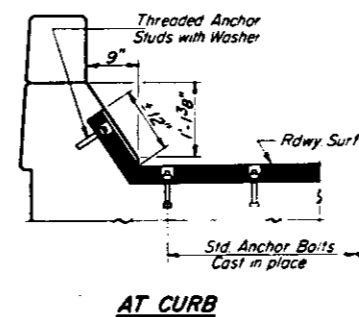
TRANSFLEX MODEL 650
(Structural Rubber Products Co.)



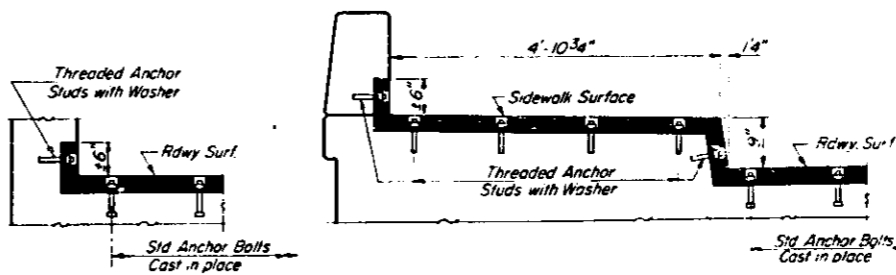
PLAN

Note: Anchor bolts require a clipped washer, lockwasher and hex nut

WABOFLEX MODEL SR 6.5
(Watson-Bowman Associates Inc.)



AT CURB



AT ABUTMENT

AT SIDEWALK

TYPICAL END TREATMENTS

NOTE:
Joint openings shall be adjusted in accordance with Article 503.07 (c) of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F

NEOPRENE EXPANSION JOINTS (6 1/2")
FOR EXPANSION LENGTH OF DECK (SEE SPEC.)

DESIGNED	19
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

BRIDGE RESURFACING

FAI ROUTE 70

SECTION 82-(3,5) DRS

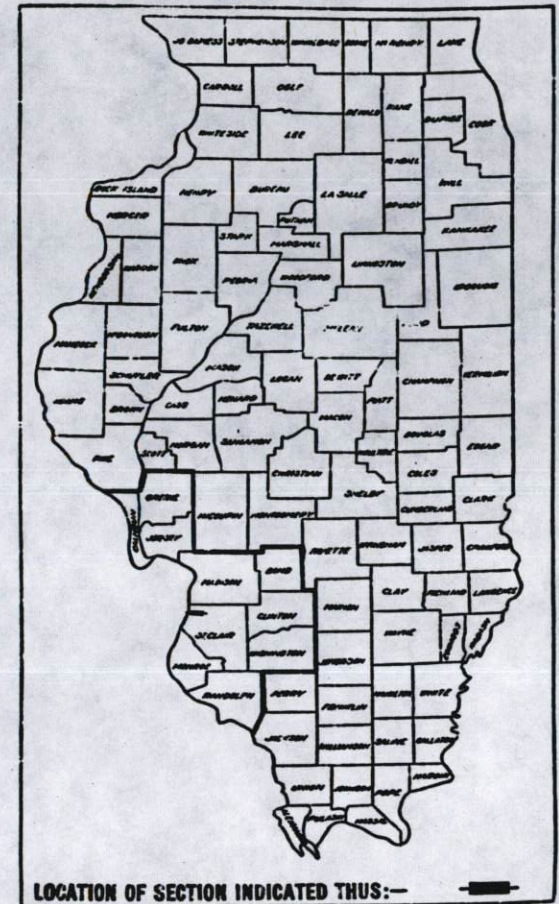
ST. CLAIR COUNTY

PROJECT I-70-0(2)0

PC-98-004-73

FEDERAL-AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	#	ST CLAIR	20	1
F. H. W. A. REG. NO. 1 ILLINOIS PROJECT I-70-0(2)0				
# 82-(3,5) DRS				

PC-98-004-73



LOCATION OF SECTION INDICATED THUS:—

INDEX OF SHEETS ON SHEET NO. 2

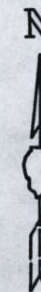
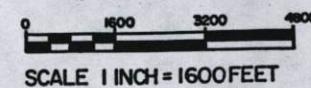
082-0005

MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

NET LENGTH (AS BUILT) SECTION 82-3VB = 748 FEET
NET LENGTH (AS BUILT) SECTION 82-5VB = 1618.98 FEET
NET LENGTH SECTION (82-3,5) DRS = 2366.98 FEET



LOCATION MAP



REVISED SET
1-9-75

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Submitted July 30 1974
Robert S. Kronig District Engineer
Examined Nov. 1 1974
[Signature] Engineer of Plans and Contracts
Passed Nov. 1 1974
Thomas H. Bright Engineer of Design
Approved Nov. 1 1974
[Signature] Director of Highways

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____
DIVISION ENGINEER DATE _____

CONTRACT NO. 30328

ST. CLAIR COUNTY SECTION (82-3,5) DRS F. A. I. ROUTE 70

REEL 8-105

INDEX OF SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	#	ST. CLAIR	20	2
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT - 7-70-0(2)-0				
# 82 - (3,5) DRS				

- SHEET NO. 1
- SHEET NO. 2
- SHEET NO. 3
- SHEET NO. 4
- SHEET NO. 5
- SHEET NO. 6, A
- SHEET NO. 7
- SHEET NO. 8
- SHEET NO. 9-20
- SHEET NO. 20A THRU 20U

- COVER SHEET
- INDEX OF SHEETS, SUMMARY OF QUANTITIES AND GENERAL NOTES
- PLAN SHEET (AS BUILT) SECTION 82-3VB
- PLAN SHEET (AS BUILT) SECTION 82-5VB
- EXPANSION JOINT MODIFICATION CASES I-IV
- EXPANSION JOINT MODIFICATION CASES V-VII
- EXPANSION JOINT MODIFICATION CASES VIII
- EXPANSION JOINT MODIFICATION CASES IX-XI
- TRAFFIC CONTROL PLAN SHEETS
- TRAFFIC CONTROL, SECTION 82-3HYB-R (FOR INFORMATION ONLY)

- STANDARDS: 22-1-5
2300-1
2316-3
2298-4
2342
2173-3

SUMMARY OF QUANTITIES

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	#	ST. CLAIR	20	2
FED. ROAD DIST. NO. 7 ILLINOIS PROJECT - 7-70-0(2)-0				
# 82 - (3,5) DRS				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	PROJECT 7-70-0(2)0		STATE	
				AS BUILT SEC. 82-3VB	AS BUILT SEC. 82-5VB	AS BUILT SEC. 82-3VB	AS BUILT SEC. 82-5VB
	LOCATION OF WORK						
X64701	PAVEMENT MARKING TAPE	LIN FT	592	158	404		
406001	BITUMINOUS MATERIAL (PRIME COAT)	GALLON	151	60.2	90.8		
Z10208	DECK SLAB REPAIR (1" TO 2 1/2" DEPTH)	SQ YDS	2,630			176.0	2,454.0
Z10202	DECK SLAB FULL DEPTH REMOVAL/REPLACEMENT 50 YDS	SQ YDS	12.2			0.7	12.5
XZ1182	NEOPRENE EXPANSION DAM	LIN FT	242		242		
XZ1158	ASBESTOS-ASPHALT MEMBRANE PAVEMENT	TON	8	8			
X04589	EMULSIFIED ASPHALT PRIME, SPECIAL	GALLON	12	12			
X05250	PREFORMED JOINT SEALER 1 3/4"	LIN FT	15		15		
XZ1186	PREFORMED JOINT SEALER 2 1/2"	LIN FT	11		11		
507001	FURNISH AND ERECT STRUCTURAL STEEL	POUNDS	47,311	14,069	33,242		
612250	INLETS TO BE ADJUSTED	EACH	25	0	20		
646002	ENGINEER FIELD OFFICE, TYPE B	EACH	1				
X05251	DELAMINATION DETECTOR	L SUM	1				
ALTERNATE A							
X06613	BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1, MX DESIGN 667	TON	1,704	606	1,098		
X04941	WATERPROOFING MEMBRANE SYSTEM 1	SQ YDS	28,669	10,147	18,522		
X05385	TRAFFIC CONTROL (SECTION 82-3 DRS)	L SUM	1	1	1		
X05386	TRAFFIC CONTROL (SECTION 82-5 DRS)	L SUM	1				
ALTERNATE B							
X06613	BITUMINOUS CONCRETE SURFACE COURSE, CLASS 1, MX DESIGN 667	TON	2,507	890	1,617		
X04941	WATERPROOFING MEMBRANE SYSTEM 2	SQ YDS	28,669	10,147	18,522		
X05385	TRAFFIC CONTROL (SECTION 82-3 DRS)	L SUM	1	1	1		
X05386	TRAFFIC CONTROL (SECTION 82-5 DRS)	L SUM	1				

GENERAL NOTES

THE STANDARDS WITH THE REVISION NUMBERS LISTED IN THE INDEX OF SHEETS INCLUDED IN THE PLANS SHALL HOLD PRECEDENCE OVER STANDARD NUMBERS LISTED IN THE SPECIAL PROVISIONS OR PLANS OF THIS CONTRACT.

THE COMBINED DEPTH OF SURFACE COURSE AND THE WATERPROOFING MEMBRANE SYSTEM IS 1 1/2" THROUGH-OUT THIS PROJECT EXCEPT AT THE NEOPRENE EXPANSION DAMS. THE COMBINED DEPTH AT THE NEOPRENE EXPANSION DAMS IS 1 3/4". THE 1 3/4" SHOULD BE TRANSITIONED BACK TO 1 1/2" IN 5' ON THE BRIDGE DECK. ALL TRANSITIONING BACK TO EXISTING PAVEMENT ON THE APPROACH AREAS TO THE BRIDGES WHETHER TRANSITIONING FROM 1 1/2" OR 1 3/4" SHALL BE ACCOMPLISHED AT THE RATE OF 1" IN 20'.

THE AFOREMENTIONED STATEMENT DOES NOT HOLD TRUE FOR THE APPROACH AREAS OF BRIDGES WITH SKEWED ABUTMENTS. AT THESE LOCATIONS TRANSITIONING SHOULD BE ACCOMPLISHED IN THE MANNER SHOWN ON THE PLANS.

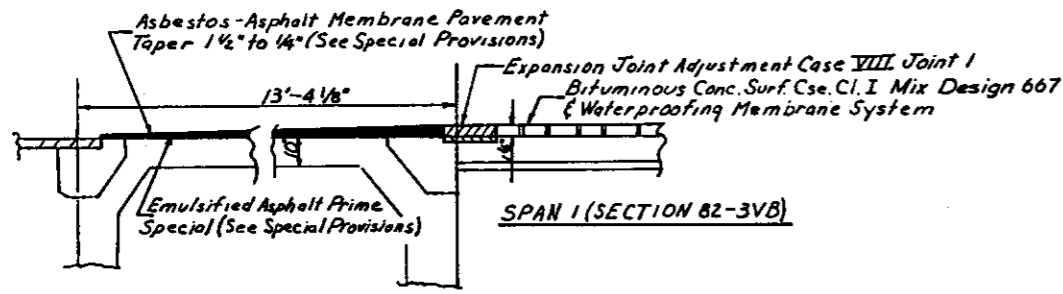
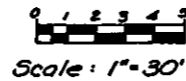
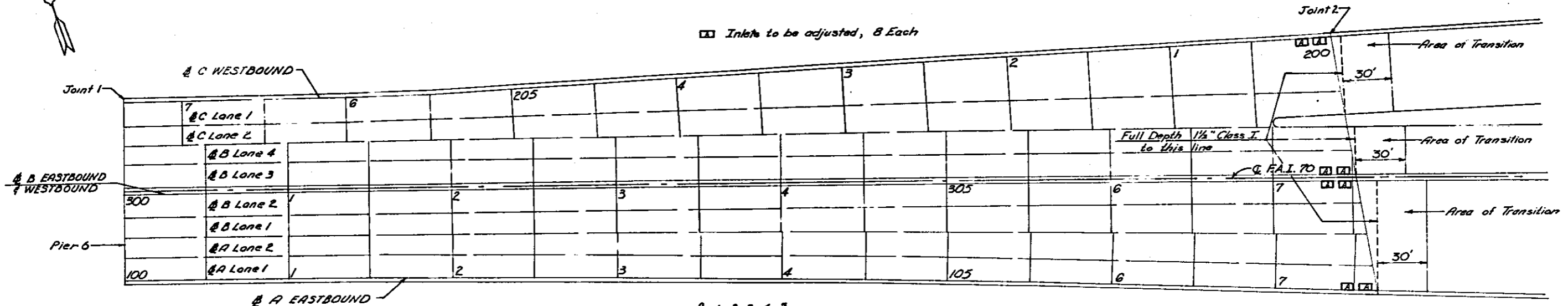
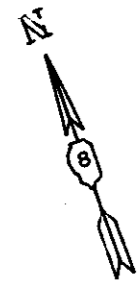
BITUMINOUS MATERIAL (PRIME COAT) SHALL BE USED ON ALL BRIDGE APPROACH PAVEMENT TRANSITION AREAS EXCEPT AT THE LOCATION WHERE THE EMULSIFIED ASPHALT PRIME, SPECIAL IS REQUIRED.

JOINT MODIFICATION SCHEDULE

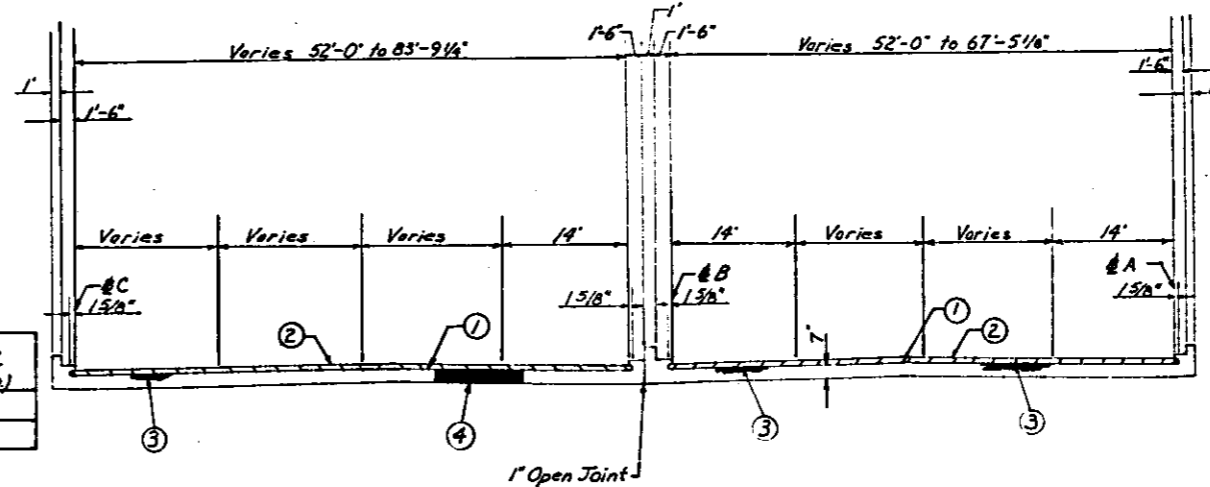
Joint	Case	P.J.S. 1 1/4"	P.J.S. 2 1/2"	F.F. Structural Steel	Neoprene Expansion Dam
1	VIII			4873.9*	
2	XI			9195.7*	
Totals				14,069.6*	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI 70	*	ST. CLAIR	20	3

PROJECT - F-70, DCE 10
* 82-(3,5)DRS



SECTION @ PIER 6 WLLT SPAN
(No Scale)



(No Scale)

DECK SLAB REPAIR (1" to 2 1/2" Depth) SCHEDULE
A EASTBOUND

STA. TO STA.	100+00 TO 100+50	101+00 TO 101+50	102+00 TO 102+50	103+00 TO 103+50	104+00 TO 104+50	105+00 TO 105+50	106+00 TO 106+50	107+00 TO 107+50	108+00 TO 108+50	109+00 TO 109+50	110+00 TO 110+50	Sub. TOTAL (SQ. YD.)	TOTAL (SQ. YD.)
Lane 1	0.8	1.7	0.8	0.8	0.8	1.6	0	0	0	0	0	7.3	9.1
Lane 2	0	0	0	0	0.7	0.7	0	0	0	0	0	2.1	2.6

B EASTBOUND & WESTBOUND

STA. TO STA.	300+00 TO 300+50	301+00 TO 301+50	302+00 TO 302+50	303+00 TO 303+50	304+00 TO 304+50	305+00 TO 305+50	306+00 TO 306+50	307+00 TO 307+50	308+00 TO 308+50	309+00 TO 309+50	310+00 TO 310+50	311+00 TO 311+50	312+00 TO 312+50	313+00 TO 313+50	314+00 TO 314+50	Sub. TOTAL (SQ. YD.)	TOTAL (SQ. YD.)
Lane 1	0	0.6	0	9.2	12.2	12.2	9.2	0	0	0.6	0	0	0	0	0	44.6	53.8
Lane 2	0	0.8	0	0	0.8	0.8	0.8	0	0.8	0.8	0.8	0	0.8	0	0	6.4	8.0
Lane 3	0	0	0	0	0	0	0	0	0	0	0	1.6	0	0	1.6	2.0	
Lane 4	0	0.6	0.6	0	0	0	0	1.2	0.6	0	0	0	0	0	3.0	3.8	

C WESTBOUND

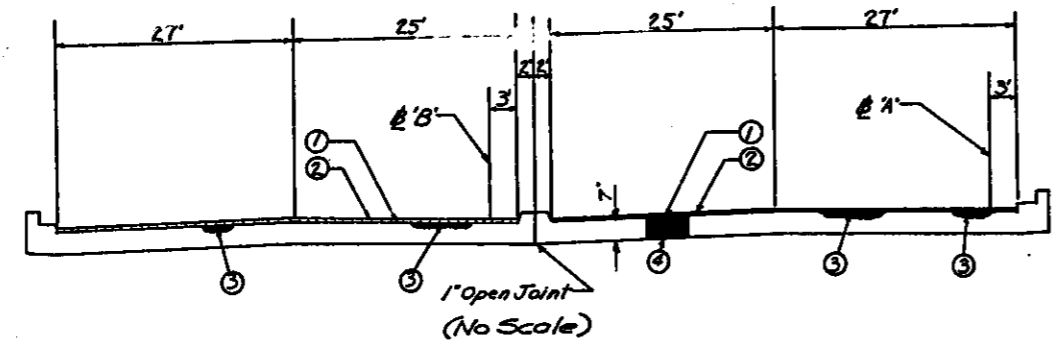
STA. TO STA.	200+00 TO 200+50	201+00 TO 201+50	202+00 TO 202+50	203+00 TO 203+50	204+00 TO 204+50	205+00 TO 205+50	206+00 TO 206+50	207+00 TO 207+50	208+00 TO 208+50	209+00 TO 209+50	210+00 TO 210+50	211+00 TO 211+50	212+00 TO 212+50	213+00 TO 213+50	214+00 TO 214+50	Sub. TOTAL (SQ. YD.)	TOTAL (SQ. YD.)
Lane 1	0	12.1	0	1.5	1.4	0	0	0	5.3	5.1	1.9	5.8	1.7	0.8	0.5	36.1	45.1
Lane 2	0	1.1	2.2	0	1.0	0	0	0	4.2	0.8	0	27.8	1.3	1.3	0	39.7	49.6
TOTAL OF # A, B & C																140.8	176.0 *

TYPICAL SECTION (FACING EAST)

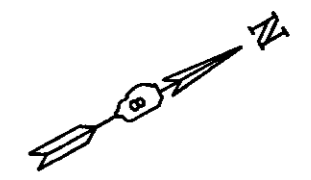
- ① Waterproofing Membrane System (Alt. A or B)
- ② Bituminous Concrete Surface Course Class I Mix Design 667 (1" Alt. A) or (1 1/2" Alt. B)
- ③ Deck Slab Repair (1" to 2 1/2" Depth)
- ④ Deck Slab Full Depth Removal And Replacement

* Total Square Yard Of Patches Plus Anticipated Failures That May Occur Prior To Termination of The Contract. This table does not include Full Depth Patching.

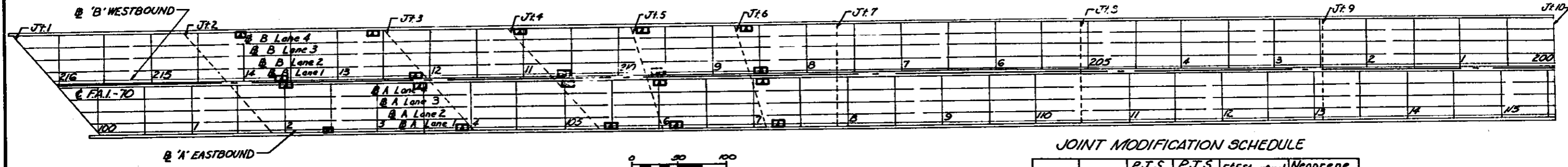
DECK RESURFACING
FAI ROUTE 70
SECTION 82-(3,5)DRS
ST. CLAIR COUNTY
(AS BUILT SECTION 82-3VB)



- TYPICAL SECTION**
- ① Waterproofing Membrane System (A1/A' or B')
 - ② Bituminous Concrete Surface Course Class I (1" A1/A) or (1 1/2" A1/B) Mix Design 667
 - ③ Deck Slab Repair (1" to 2 1/2" Depth)
 - ④ Deck Slab Full Depth Removal And Replacement

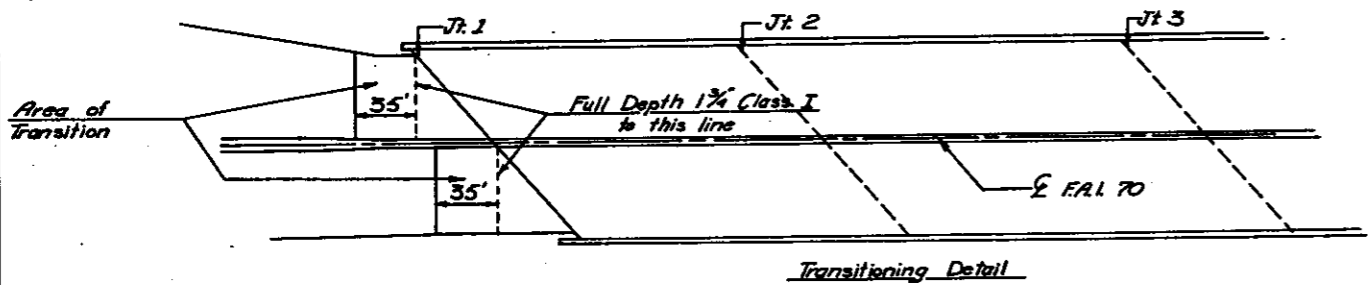


□ Inlets to be adjusted, 20 Each



JOINT MODIFICATION SCHEDULE

Joint	Case	P.J.S. 1 3/4"	P.J.S. 2 1/2"	F.F. Structural Steel	Neoprene Expansion Dam
1	IV & V	15'			137'-8 1/2"
2	VIII			4,610.9 #	
3	VIII			4,610.9 #	
4	VIII			4,610.9 #	
5	VIII			3,357.0 #	
6	VIII			3,357.0 #	
7	VIII			4,231.6 #	
8	VIII			4,231.6 #	
9	VIII			4,231.6 #	
10	IV & V		11'		103'-10"
Totals		15'	11'	33,241.5 #	241'-6 1/2"

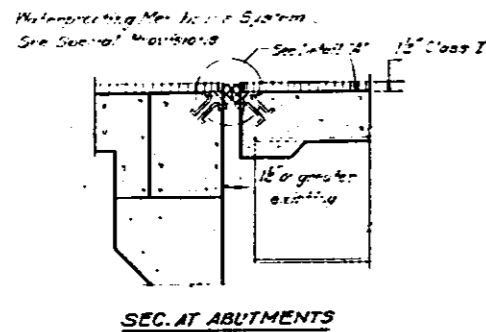
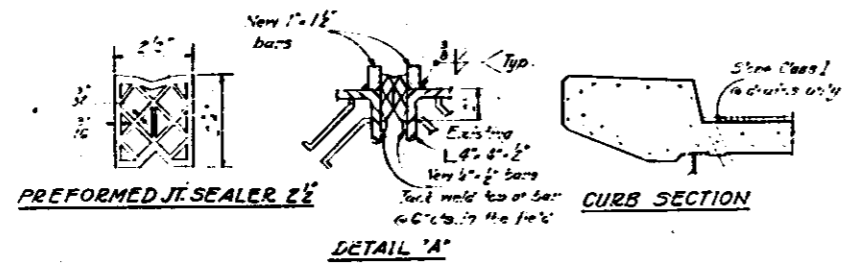


DECK SLAB REPAIR (1" to 2 1/2" Depth) SCHEDULE

A' EASTBOUND																														Sub TOTAL (SQ YD)	TOTAL (SQ YD)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
STA TO	100:00	100:50	101:00	101:50	102:00	102:50	103:00	103:50	104:00	104:50	105:00	105:50	106:00	106:50	107:00	107:50	108:00	108:50	109:00	109:50	110:00	110:50	111:00	111:50	112:00	112:50	113:00	113:50	114:00	114:50	115:00	115:50	116:00	116:50	117:00	117:50	118:00	118:50	119:00	119:50	120:00	120:50	121:00	121:50	122:00	122:50	123:00	123:50	124:00	124:50	125:00	125:50	126:00	126:50	127:00	127:50	128:00	128:50	129:00	129:50	130:00	130:50	131:00	131:50	132:00	132:50	133:00	133:50	134:00	134:50	135:00	135:50	136:00	136:50	137:00	137:50	138:00	138:50	139:00	139:50	140:00	140:50	141:00	141:50	142:00	142:50	143:00	143:50	144:00	144:50	145:00	145:50	146:00	146:50	147:00	147:50	148:00	148:50	149:00	149:50	150:00	150:50	151:00	151:50	152:00	152:50	153:00	153:50	154:00	154:50	155:00	155:50	156:00	156:50	157:00	157:50	158:00	158:50	159:00	159:50	160:00	160:50	161:00	161:50	162:00	162:50	163:00	163:50	164:00	164:50	165:00	165:50	166:00	166:50	167:00	167:50	168:00	168:50	169:00	169:50	170:00	170:50	171:00	171:50	172:00	172:50	173:00	173:50	174:00	174:50	175:00	175:50	176:00	176:50	177:00	177:50	178:00	178:50	179:00	179:50	180:00	180:50	181:00	181:50	182:00	182:50	183:00	183:50	184:00	184:50	185:00	185:50	186:00	186:50	187:00	187:50	188:00	188:50	189:00	189:50	190:00	190:50	191:00	191:50	192:00	192:50	193:00	193:50	194:00	194:50	195:00	195:50	196:00	196:50	197:00	197:50	198:00	198:50	199:00	199:50	200:00	200:50	201:00	201:50	202:00	202:50	203:00	203:50	204:00	204:50	205:00	205:50	206:00	206:50	207:00	207:50	208:00	208:50	209:00	209:50	210:00	210:50	211:00	211:50	212:00	212:50	213:00	213:50	214:00	214:50	215:00	215:50	216:00	216:50	217:00	217:50	218:00	218:50	219:00	219:50	220:00	220:50	221:00	221:50	222:00	222:50	223:00	223:50	224:00	224:50	225:00	225:50	226:00	226:50	227:00	227:50	228:00	228:50	229:00	229:50	230:00	230:50	231:00	231:50	232:00	232:50	233:00	233:50	234:00	234:50	235:00	235:50	236:00	236:50	237:00	237:50	238:00	238:50	239:00	239:50	240:00	240:50	241:00	241:50	242:00	242:50	243:00	243:50	244:00	244:50	245:00	245:50	246:00	246:50	247:00	247:50	248:00	248:50	249:00	249:50	250:00	250:50	251:00	251:50	252:00	252:50	253:00	253:50	254:00	254:50	255:00	255:50	256:00	256:50	257:00	257:50	258:00	258:50	259:00	259:50	260:00	260:50	261:00	261:50	262:00	262:50	263:00	263:50	264:00	264:50	265:00	265:50	266:00	266:50	267:00	267:50	268:00	268:50	269:00	269:50	270:00	270:50	271:00	271:50	272:00	272:50	273:00	273:50	274:00	274:50	275:00	275:50	276:00	276:50	277:00	277:50	278:00	278:50	279:00	279:50	280:00	280:50	281:00	281:50	282:00	282:50	283:00	283:50	284:00	284:50	285:00	285:50	286:00	286:50	287:00	287:50	288:00	288:50	289:00	289:50	290:00	290:50	291:00	291:50	292:00	292:50	293:00	293:50	294:00	294:50	295:00	295:50	296:00	296:50	297:00	297:50	298:00	298:50	299:00	299:50	300:00	300:50	301:00	301:50	302:00	302:50	303:00	303:50	304:00	304:50	305:00	305:50	306:00	306:50	307:00	307:50	308:00	308:50	309:00	309:50	310:00	310:50	311:00	311:50	312:00	312:50	313:00	313:50	314:00	314:50	315:00	315:50	316:00	316:50	317:00	317:50	318:00	318:50	319:00	319:50	320:00	320:50	321:00	321:50	322:00	322:50	323:00	323:50	324:00	324:50	325:00	325:50	326:00	326:50	327:00	327:50	328:00	328:50	329:00	329:50	330:00	330:50	331:00	331:50	332:00	332:50	333:00	333:50	334:00	334:50	335:00	335:50	336:00	336:50	337:00	337:50	338:00	338:50	339:00	339:50	340:00	340:50	341:00	341:50	342:00	342:50	343:00	343:50	344:00	344:50	345:00	345:50	346:00	346:50	347:00	347:50	348:00	348:50	349:00	349:50	350:00	350:50	351:00	351:50	352:00	352:50	353:00	353:50	354:00	354:50	355:00	355:50	356:00	356:50	357:00	357:50	358:00	358:50	359:00	359:50	360:00	360:50	361:00	361:50	362:00	362:50	363:00	363:50	364:00	364:50	365:00	365:50	366:00	366:50	367:00	367:50	368:00	368:50	369:00	369:50	370:00	370:50	371:00	371:50	372:00	372:50	373:00	373:50	374:00	374:50	375:00	375:50	376:00	376:50	377:00	377:50	378:00	378:50	379:00	379:50	380:00	380:50	381:00	381:50	382:00	382:50	383:00	383:50	384:00	384:50	385:00	385:50	386:00	386:50	387:00	387:50	388:00	388:50	389:00	389:50	390:00	390:50	391:00	391:50	392:00	392:50	393:00	393:50	394:00	394:50	395:00	395:50	396:00	396:50	397:00	397:50	398:00	398:50	399:00	399:50	400:00	400:50	401:00	401:50	402:00	402:50	403:00	403:50	404:00	404:50	405:00	405:50	406:00	406:50	407:00	407:50	408:00	408:50	409:00	409:50	410:00	410:50	411:00	411:50	412:00	412:50	413:00	413:50	414:00	414:50	415:00	415:50	416:00	416:50	417:00	417:50	418:00	418:50	419:00	419:50	420:00	420:50	421:00	421:50	422:00	422:50	423:00	423:50	424:00	424:50	425:00	425:50	426:00	426:50	427:00	427:50	428:00	428:50	429:00	429:50	430:00	430:50	431:00	431:50	432:00	432:50	433:00	433:50	434:00	434:50	435:00	435:50	436:00	436:50	437:00	437:50	438:00	438:50	439:00	439:50	440:00	440:50	441:00	441:50	442:00	442:50	443:00	443:50	444:00	444:50	445:00	445:50	446:00	446:50	447:00	447:50	448:00	448:50	449:00	449:50	450:00	450:50	451:00	451:50	452:00	452:50	453:00	453:50	454:00	454:50	455:00	455:50	456:00	456:50	457:00	457:50	458:00	458:50	459:00	459:50	460:00	460:50	461:00	461:50	462:00	462:50	463:00	463:50	464:00	464:50	465:00	465:50	466:00	466:50	467:00	467:50	468:00	468:50	469:00	469:50	470:00	470:50	471:00	471:50	472:00	472:50	473:00	473:50	474:00	474:50	475:00	475:50	476:00	476:50	477:00	477:50	478:00	478:50	479:00	479:50	480:00	480:50	481:00	481:50	482:00	482:50	483:00	483:50	484:00	484:50	485:00	485:50	486:00	486:50	487:00	487:50	488:00	488:50	489:00	489:50	490:00	490:50	491:00	491:50	492:00	492:50	493:00	493:50	494:00	494:50	495:00	495:50	496:00	496:50	497:00	497:50	498:00	498:50	499:00	499:50	500:00	500:50	501:00	501:50	502:00	502:50	503:00	503:50	504:00	504:50	505:00	505:50	506:00	506:50	507:00	507:50	508:00	508:50	509:00	509:50	510:00	510:50	511:00	511:50	512:00	512:50	513:00	513:50	514:00	514:50	515:00	515:50	516:00	516:50	517:00	517:50	518:00	518:50	519:00	519:50	520:00	520:50	521:00	521:50	522:00	522:50	523:00	523:50	524:00	524:50	525:00	525:50	526:00	526:50	527:00	527:50	528:00	528:50	529:00	529:50	530:00	530:50	531:00	531:50	532:00	532:50	533:00	533:50	534:00	534:50	535:00	535:50	536:00	536:50	537:00	537:50	538:00	538:50	539:00	539:50	540:00	540:50	541:00	541:50	542:00	542:50	543:00	543:50	544:00	544:50	545:00	545:50	546:00	546:50	547:00	547:50	548:00	548:50	549:00	549:50	550:00	550:50	551:00	551:50	552:00	552:50	553:00	553:50	554:00	554:50	555:00	555:50	556:00	556:50	557:00	557:50	558:00	558:50	559:00	559:50	560:00	560:50	561:00	561:50	562:00	562:50	563:00	563:50	564:00	564:50	565:00	565:50	566:00	566:50	567:00	567:50	568:00	568:50	569:00	569:50	570:00	570:50	571:00	571:50	572:00	572:50	573:00	573:50	574:00	574:50	575:00	575:50	576:00	576:50	577:00	577:50	578:00	578:50	579:00	579:50	580:00	580:50	581:00	581:50	582:00	582:50	583:00	583:50	584:00	584:50	585:00	585:50	586:00	586:50	587:00	587:50	588:00

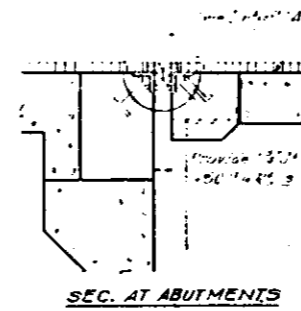
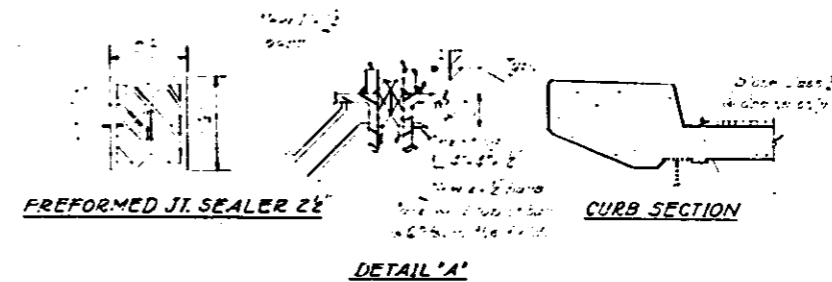
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	DISTRICT	COUNTY	POST MILEAGE	SHEET NO.
1-70	22-AS CRS	St. Clair	20	5
DESIGNED BY	DRAWN BY	CHECKED BY	DATE	SCALE
				1"=20'-0" (1-70-0210)



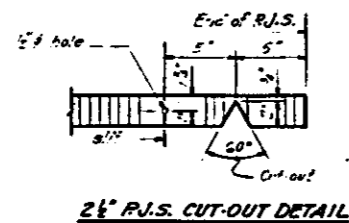
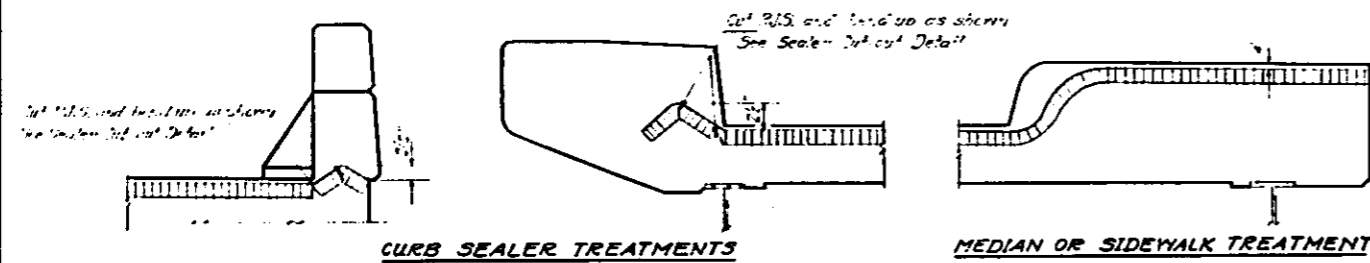
ABUTMENT JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing opening is between 1 1/2" and 2" at 50°F and the expansion length and stem falls into the 2 1/2" R.I.S. range.

CASE I



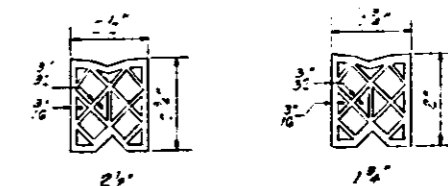
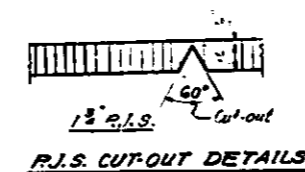
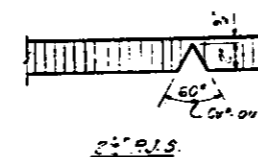
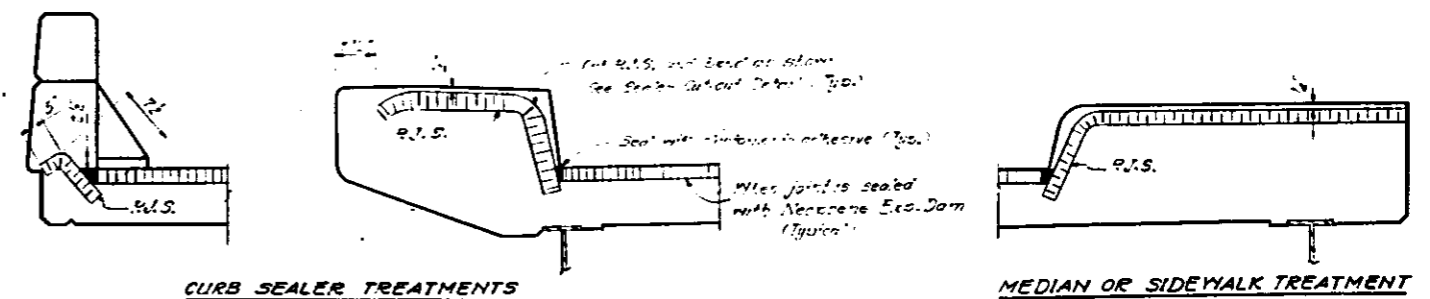
ABUTMENT JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing joint is less than 1 1/2" at 50°F and the expansion length and stem falls into the 2 1/2" R.I.S. range, but there is not adequate expansion capacity.

CASE II



DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN	APPROVED
CHECKED	DIRECTOR OF HIGHWAYS

CASE I

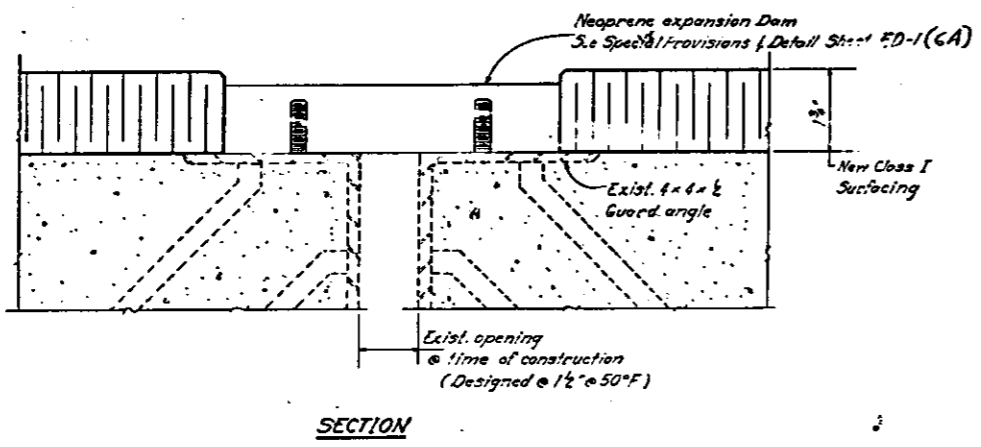


R.I.S. CUT-OUT DETAILS

CASE II

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

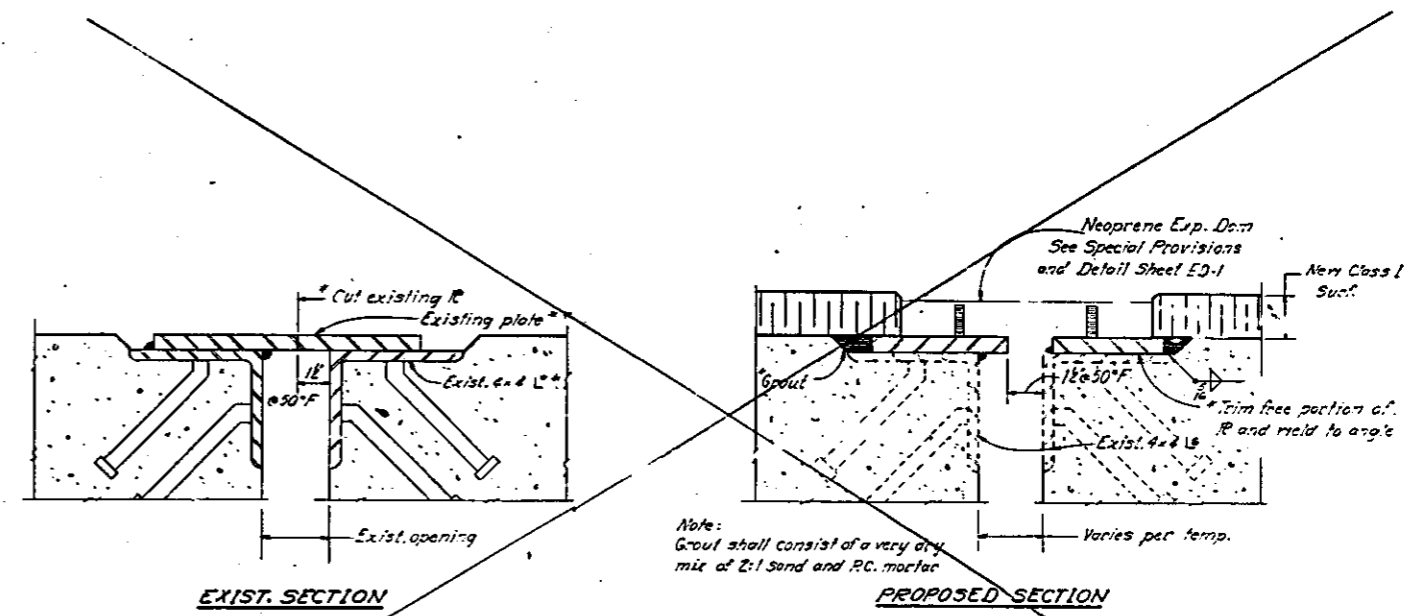
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
20	20	St. Clair	20	6
SHEETS				



SECTION

JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing Open joint with adequate capacity for required expansion
Max. Exp. length 200 Ft.

CASE V



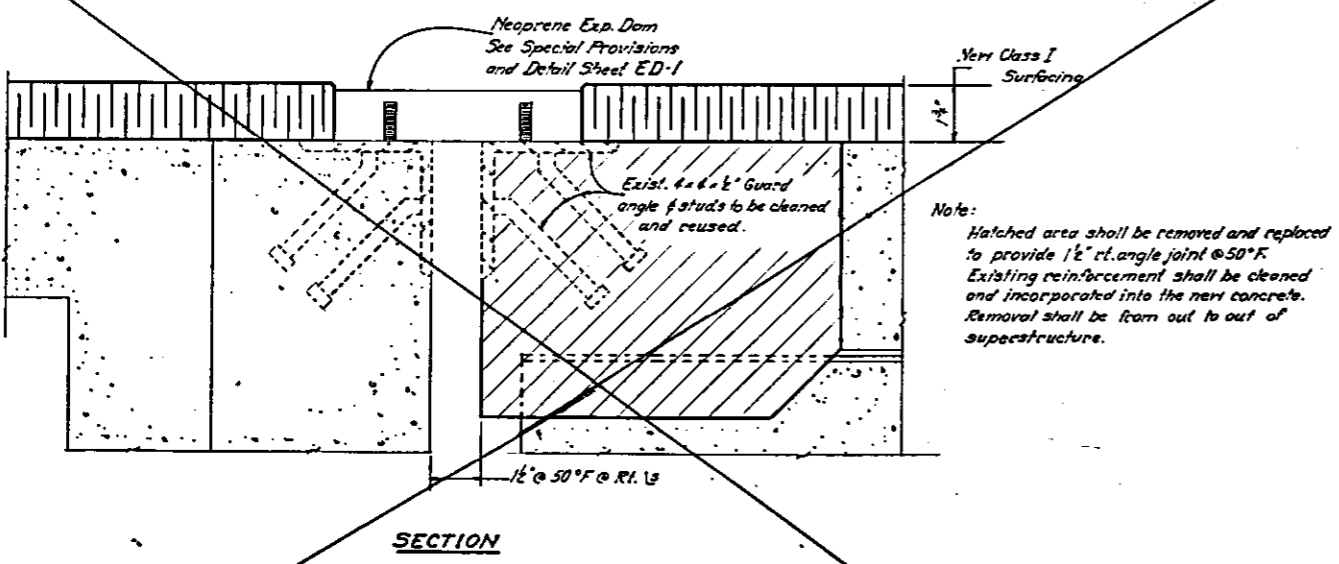
EXIST. SECTION

PROPOSED SECTION

* Incidental to Neoprene Exp. Dam
** Existing plate and angle shall be adequately cleaned prior to welding.

JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing sliding plate maximum expansion length = 200 Ft.

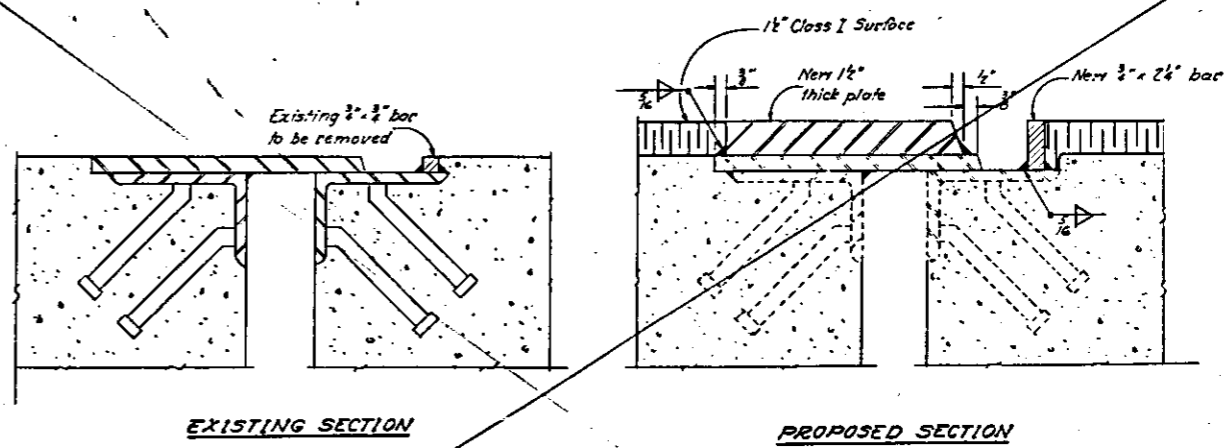
CASE VI



SECTION

JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing open joint is less than 1/2" @ 50°F and there is not adequate expansion capacity. Maximum Exp. Length = 200 Ft.

CASE VII



EXISTING SECTION

PROPOSED SECTION

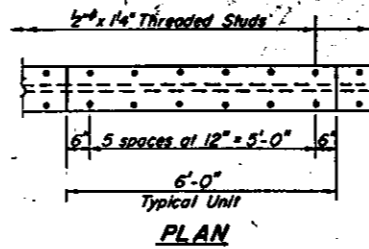
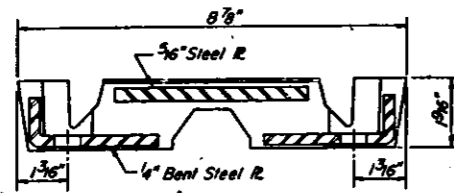
Note:
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

SLIDING PLATE MODIFICATION FOR DECK WATERPROOFING
Use when expansion length is greater than 200 Ft.

CASE VIII

DESIGNED	EXAMINED	19
CHECKED	PASSED	
DRAWN	APPROVED	
CHECKED		

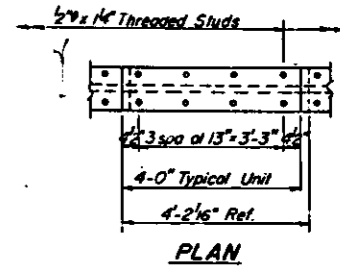
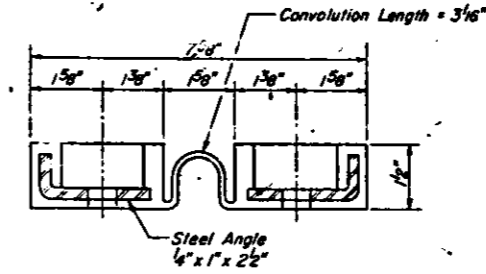
DESIGNED	DATE	BY	NO. OF SHEETS	SHEET NO.
1.70	12/15/75	St. Clair	20	6A
DRAWN		CHECKED		SHEETS



Note: Threaded studs require a clipped washer, lockwasher & hex nut.

FOR EXPANSION LENGTH OF DECK = 0 to 160 FT.

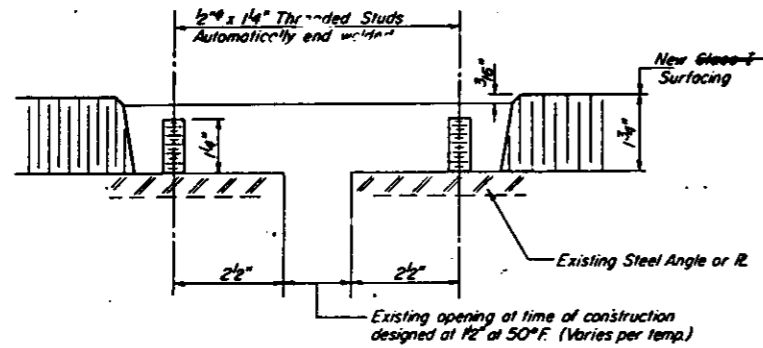
TRANSFLEX MODEL 200A
NARROW GAGE
(Structural Rubber Products Co.)



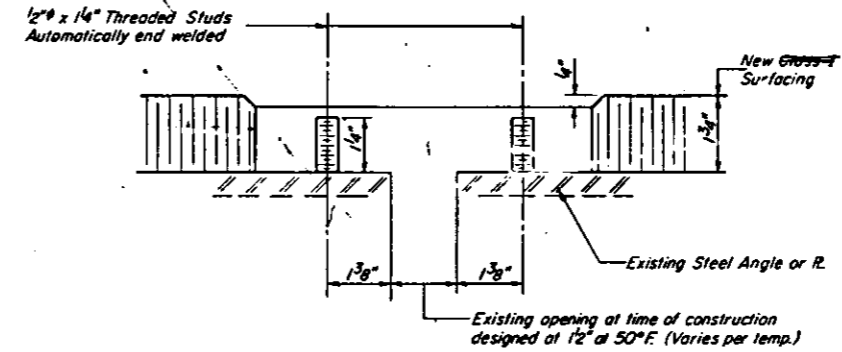
Note: Threaded studs require a flat washer & locknut.

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT.

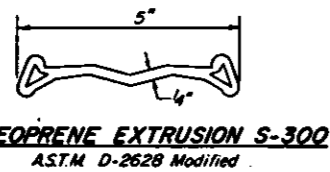
FEL-SPAN MODEL T-30-1/2-S
(Fel-Pro Building Products Inc.)



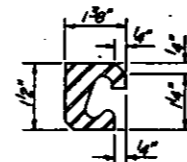
CROSS SECTION
Dimensions are at right angles



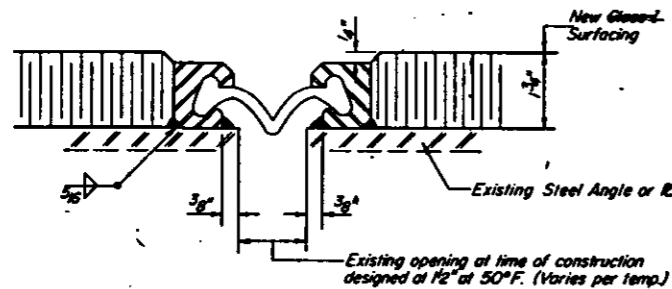
CROSS SECTION
Dimensions are at right angles



NEOPRENE EXTRUSION S-300
ASTM D-2628 Modified



STEEL EXTRUSION-TYPE E
ASTM A-242



CROSS SECTION
Dimensions are at right angles

FOR EXPANSION LENGTH OF DECK = 0 to 200 FT.
2" MAX. OPENING AT 50°F

WABO-MAURER MODEL S-300E
(Watson Bowman Associates Inc.)

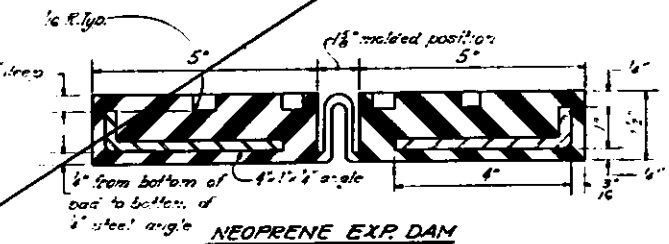
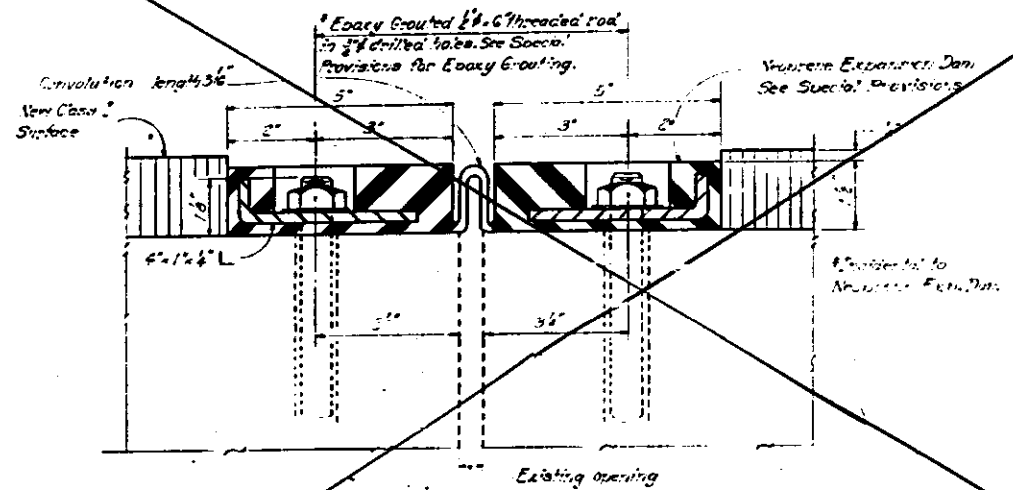
NEOPRENE EXPANSION DAMS

DESIGNED	18
CHECKED	
DRAWN	
CHECKED	
EXAMINED	
PASSED	
APPROVED	

ED-1 6-13-75

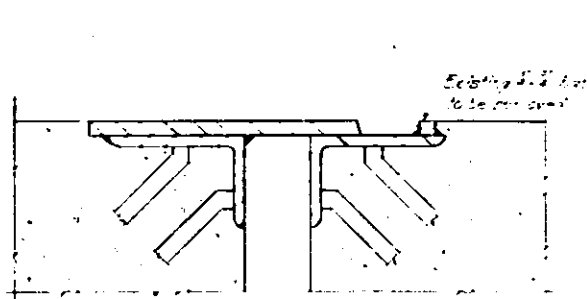
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	DESIGN	SECTION	DATE	SHEET NO.
10-40	DES	8th Clair	20	8
10-40	DES			
10-40	DES			

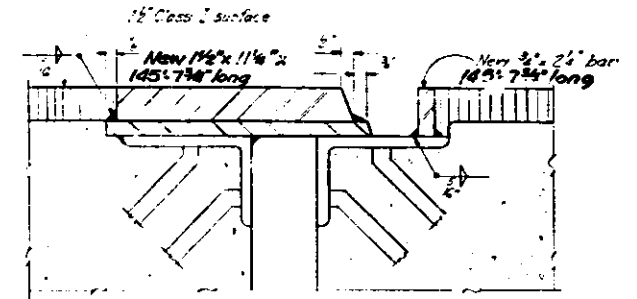


METHOD TO RECONSTRUCT LONGITUDINAL JOINT
When ℓ to ℓ outside beams or girders is over 65:0"

CASE II



EXISTING SEC.

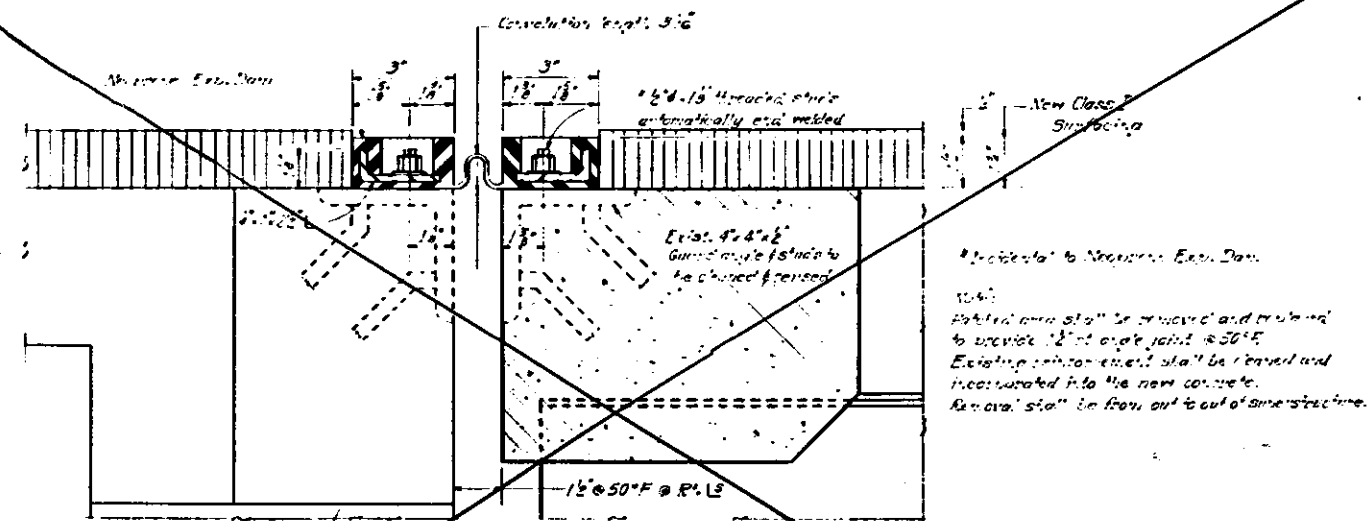


PROPOSED SEC.

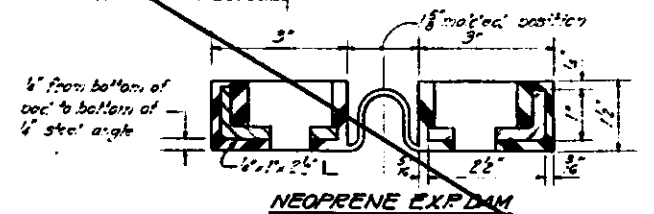
Note:
It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

SLIDING PLATE MODIFICATION FOR DECK WATERPROOFING

CASE XI



SECTION



JOINT MODIFICATIONS FOR DECK WATERPROOFING
Existing over joint is less than 1/2" @ 50°F and there is inadequate expansion capacity.
Max. Exp. Temp. = 220°F, Max. opening = 3"

CASE I

DESIGNED	EXAMINED	18
CHECKED	PASSED	
DRAWN	APPROVED	
CHECKED		

St. Clair Co.

Sec. 82-3HVB-R

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F. A. ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
FAL 70	H	ST. CLAIR	28	1
F. A. ROUTE NO. & PROJECT		ILLINOIS		
H 82-3HVB-R				

P-98-085-74

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY

FOR INDEX OF SHEETS
SEE SHEET NO. 2

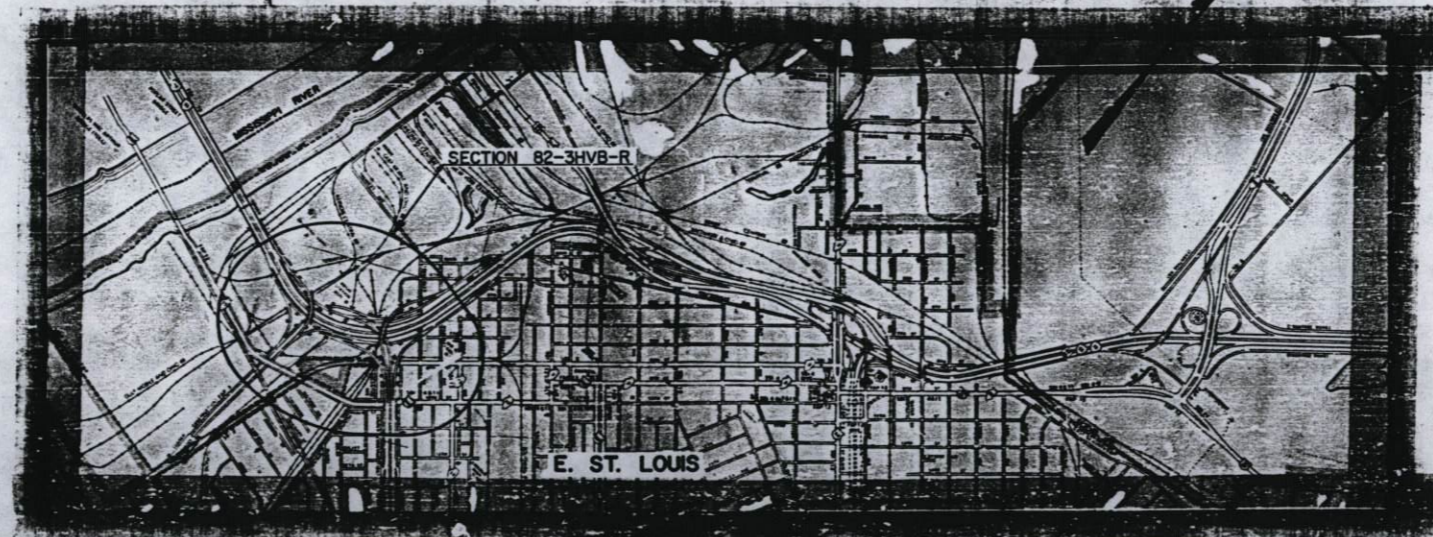
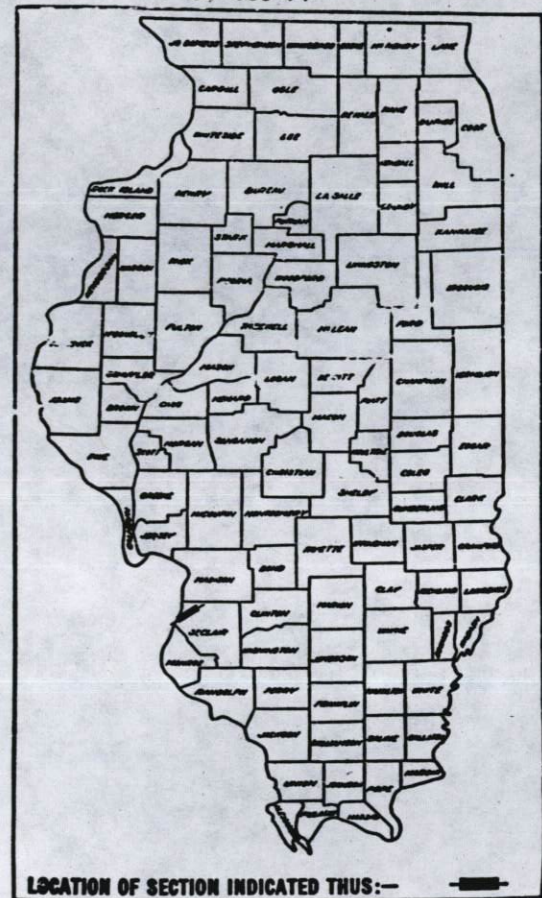
F.A.I. ROUTE 70

SECTION 82-3HVB-R

22A REB
REVISED
3/21/75

ST. CLAIR COUNTY
BRIDGE REPAIRS

C-98-003-75



MICROFILMED _____
REEL NUMBER _____
AWARDED _____
RESIDENT ENGINEER _____
AS BUILT CHANGES WERE MADE
ON THE FOLLOWING SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 1-13-75
REVISION 1-13-75
EXAMINED Jan 16 1975
PASSED Jan 16 1975
APPROVED Jan 16 1975
DIRECTOR OF HIGHWAYS

CONTRACT NO. 80450

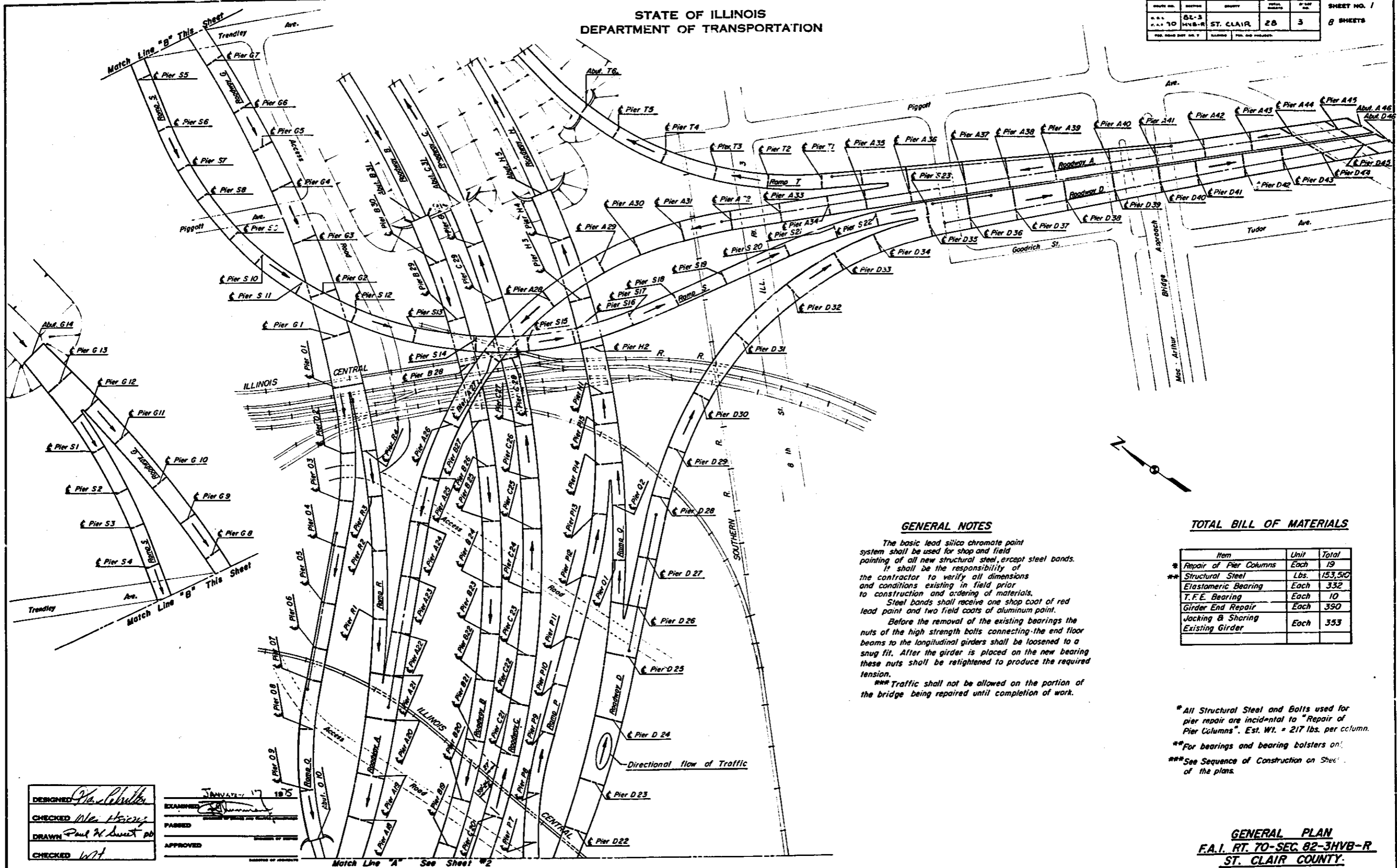
REVISED SET 2-25-75

REEL 8-102

082-0005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS	SHEET NO. 1
82-3	ST. CLAIR	28	3	8 SHEETS



GENERAL NOTES

The basic lead silico chromate paint system shall be used for shop and field painting of all new structural steel, except steel bands. It shall be the responsibility of the contractor to verify all dimensions and conditions existing in field prior to construction and ordering of materials. Steel bands shall receive one shop coat of red lead paint and two field coats of aluminum paint. Before the removal of the existing bearings the nuts of the high strength bolts connecting the end floor beams to the longitudinal girders shall be loosened to a snug fit. After the girder is placed on the new bearing these nuts shall be retightened to produce the required tension. ***Traffic shall not be allowed on the portion of the bridge being repaired until completion of work.

TOTAL BILL OF MATERIALS

Item	Unit	Total
* Repair of Pier Columns	Each	19
** Structural Steel	Lbs.	153,510
** Elastomeric Bearing	Each	332
T.F.E. Bearing	Each	10
Girder End Repair	Each	390
Jacking & Shoring Existing Girder	Each	353

* All Structural Steel and Bolts used for pier repair are incidental to "Repair of Pier Columns". Est. Wt. = 217 lbs. per column.
** For bearings and bearing bolsters on.
*** See Sequence of Construction on Sheet of the plans.

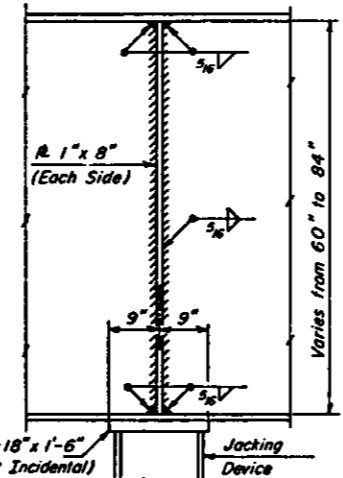
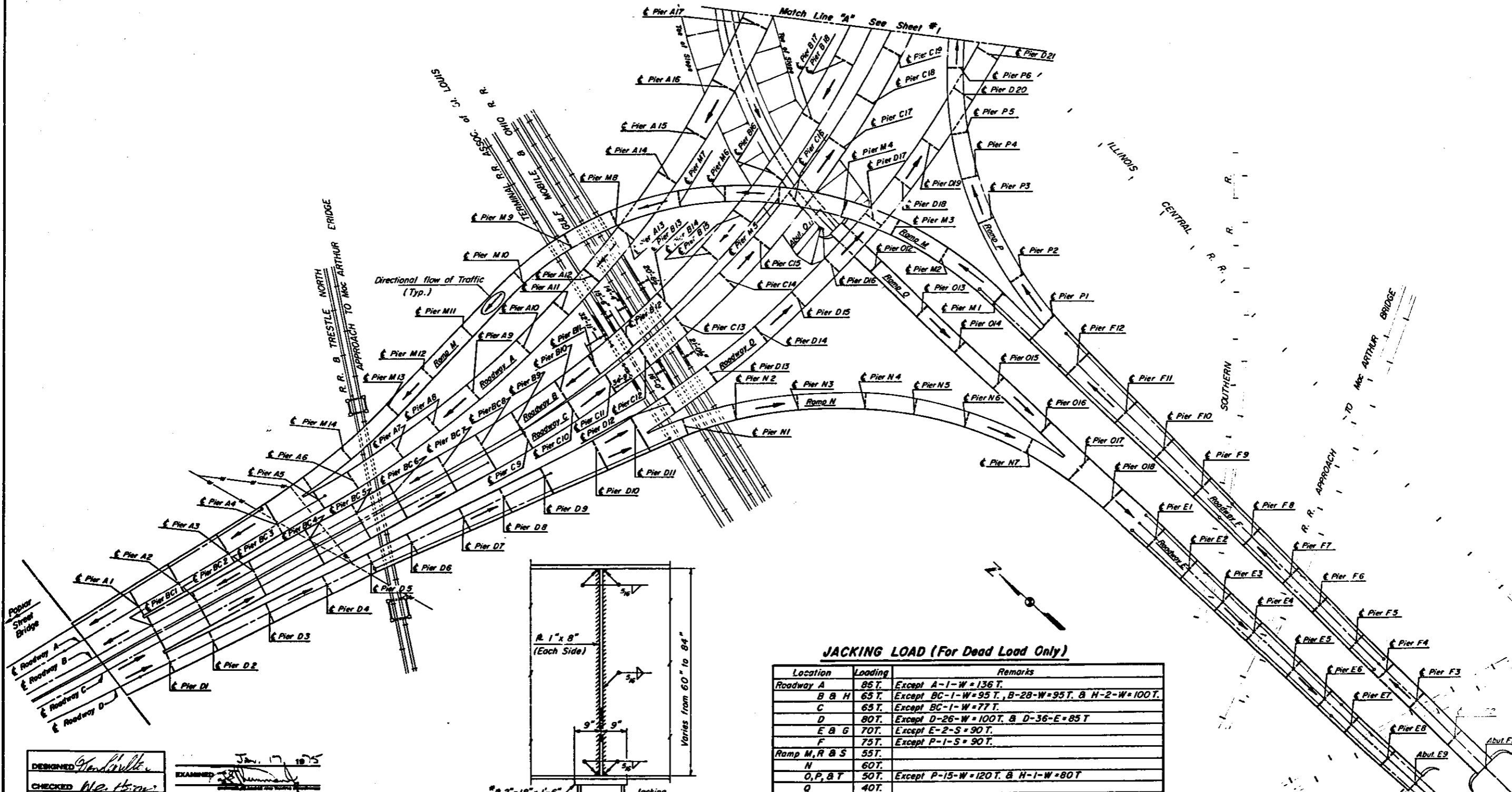
DESIGNED: *W. H. ...*
CHECKED: *W. H. ...*
DRAWN: *Paul W. Sweet pb*
CHECKED: *W. H.*

JANUARY 17 1955
EXAMINED: *...*
PASSED: *...*
APPROVED: *...*

GENERAL PLAN
F.A.I. RT. 70-SEC. 82-3HVB-R
ST. CLAIR COUNTY.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	PROJECT	TOTAL SHEETS	SHEET NO.
82-3	3HV-B-R	ST. CLAIR	28	4
SHEET NO. 2 8 SHEETS				



JACKING LOAD (For Dead Load Only)

Location	Loading	Remarks
Roadway A	85T.	Except A-1-W = 136T.
B B H	65T.	Except BC-1-W = 95T, B-28-W = 95T, & H-2-W = 100T.
C	65T.	Except BC-1-W = 77T.
D	80T.	Except D-26-W = 100T, & D-36-E = 85T
E B G	70T.	Except E-2-S = 90T.
F	75T.	Except P-1-S = 90T.
Ramp M, R & S	55T.	
N	60T.	
O, P, & T	50T.	Except P-15-W = 120T, & H-1-W = 80T
Q	40T.	

A-1-W indicates Pier A-1, West Bearing, Both Girders.

BEARING STIFFENER AT JACKING POINT

Locate jacking point as close to bearing as possible

*Use 3" x 18" x 1'-6" R when loading > 80T.

DESIGNED	<i>Handwritten signature</i>	EXAMINED	<i>Handwritten signature</i>
CHECKED	<i>Handwritten signature</i>	PASSED	<i>Handwritten signature</i>
DRAWN	<i>Handwritten signature</i>	APPROVED	<i>Handwritten signature</i>
CHECKED	<i>Handwritten signature</i>		

GENERAL PLAN
F.A.I. RT. 70-SEC. 82-3HV-B-R
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

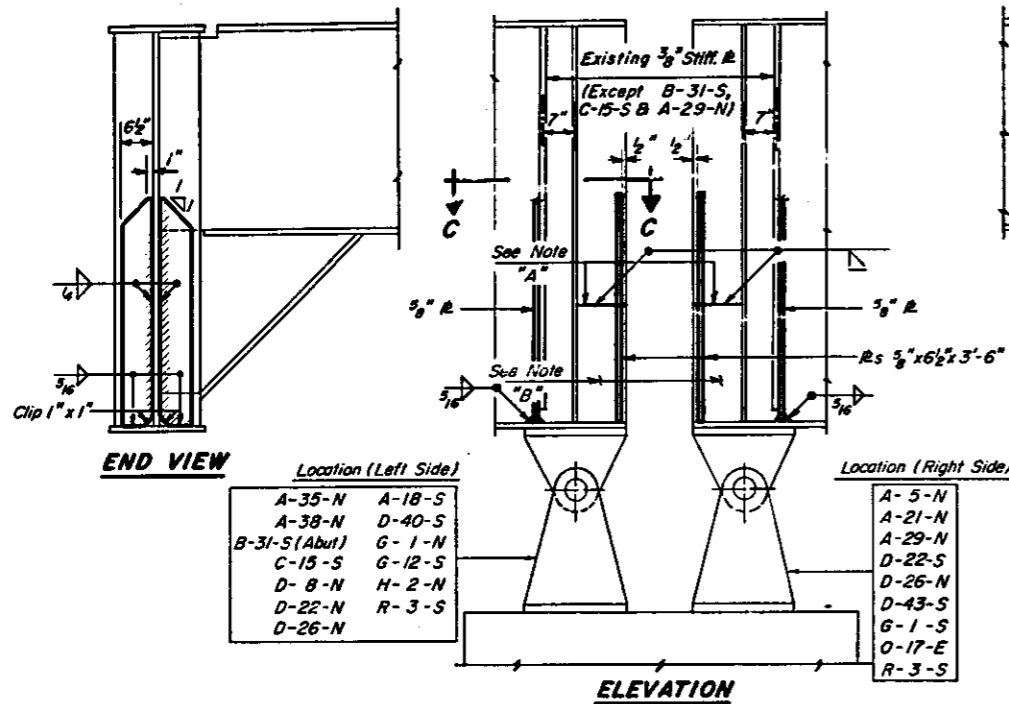
PROJECT NO.	SECTION	COUNTY	TOWNSHIP	SHEET NO.
F.A.I. 70	82-3	ST. CLAIR	28	5
REV. SHEET NO. 1	HVB-R			
				8 SHEETS

Note "A":
The web shall be cut to the face of the existing bearing stiffener just above the buckled area. This shall be done before the buckled area is straightened. After the web is straightened the cut portion shall be welded.

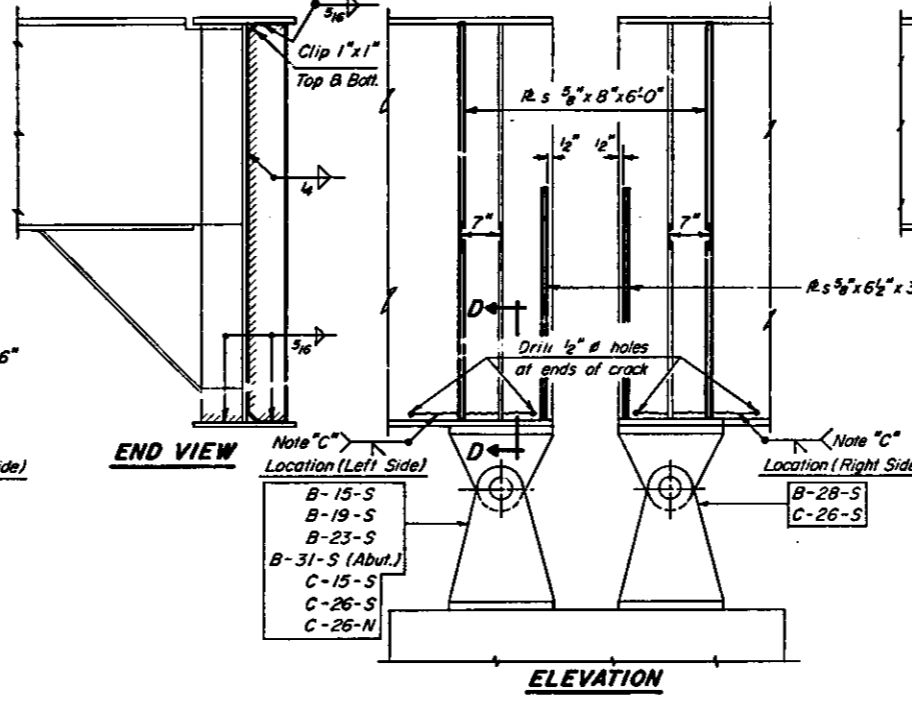
Note "B":
The buckled web shall be straightened using a continuous pressure applied to both sides of the web simultaneously. Cast incidental to Girder End Repair.

Note "C":
Back gauge second side to sound metal and weld. Grind smooth both sides. If the crack extends into the flange, gouge the cracked flange to sound metal and weld, grind smooth. Cast incidental to Girder End Repair.

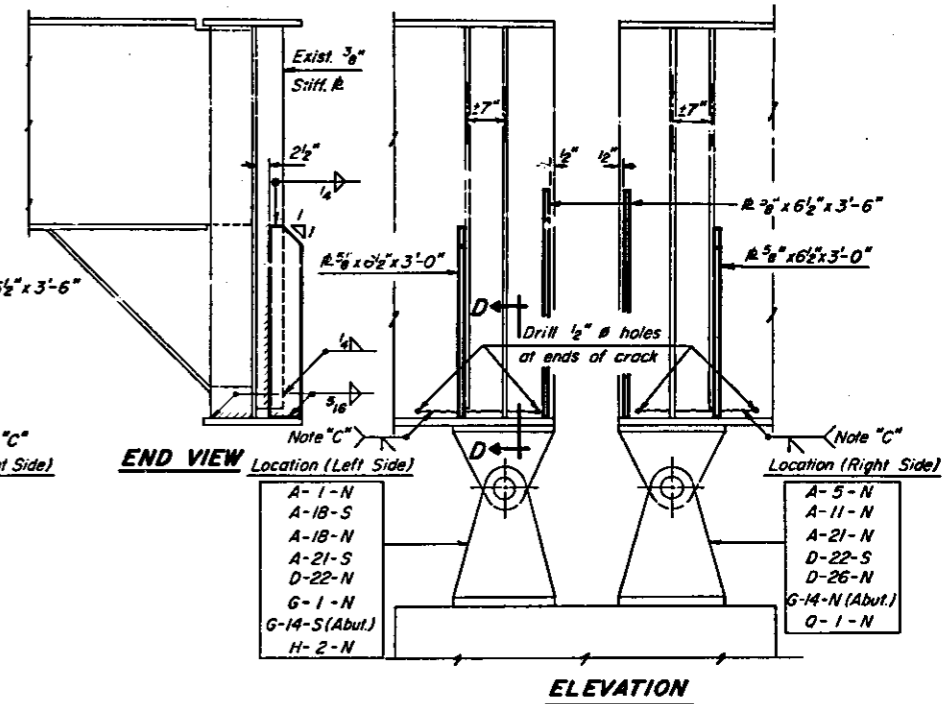
Location Designation Examples:
B-15-S refers to South end of Pier B-15, Looking North.
C-26-N refers to North end of Pier C-26, Looking South.



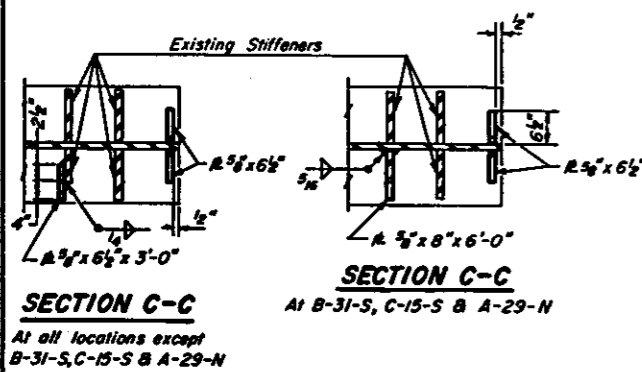
REPAIR OF BUCKLED WEBS



REPAIR OF CRACKED WEBS
WITHOUT INTERMEDIATE
STIFFENER ON OUTSIDE FACE

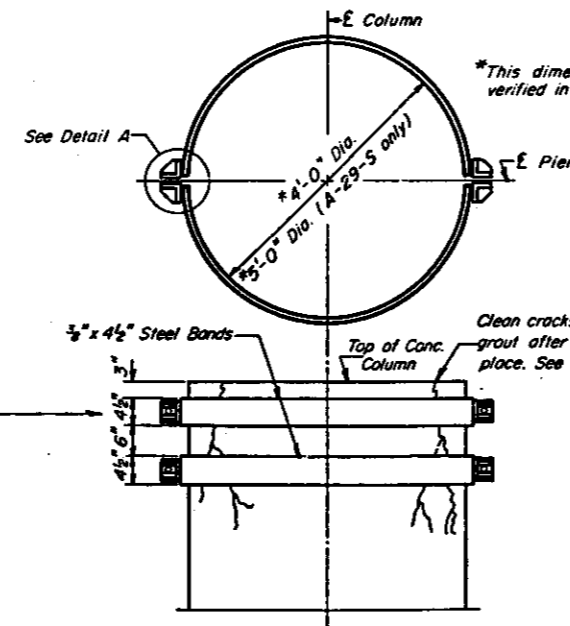


REPAIR OF CRACKED WEBS
WITH INTERMEDIATE
STIFFENER ON OUTSIDE FACE

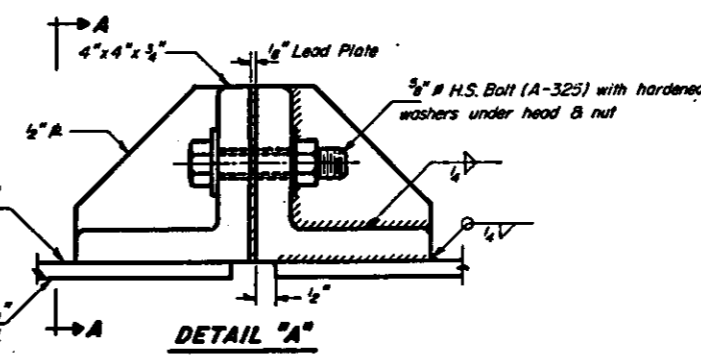
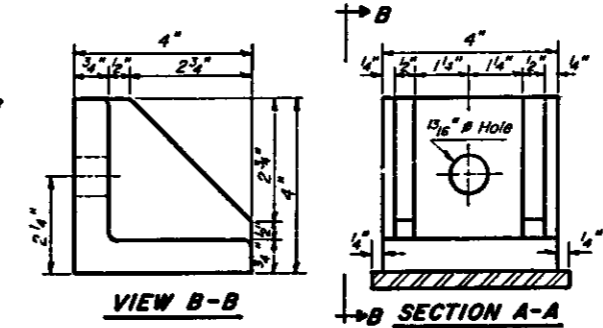


SECTION C-C
At B-31-S, C-15-S & A-29-N

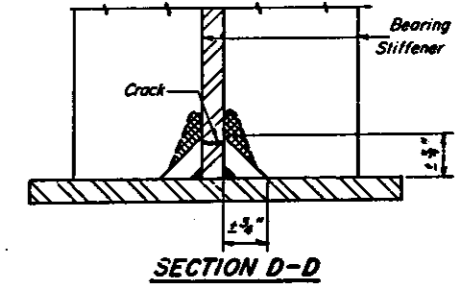
- Location**
- A-1-N
 - A-5-N
 - A-8-S
 - A-18-N
 - A-29-S
 - A-38-N
 - A-40-N
 - B-19-S
 - B-23-S
 - B-28-S
 - C-15-S
 - C-18-S
 - C-26-N
 - C-26-S
 - D-8-N
 - D-28-S
 - F-7-W
 - F-9-E
 - G-12-S



REPAIR OF CRACKED PIER COLUMNS



DETAIL "A"



If the web crack extends past the stiffeners, gouge the crack to sound metal behind the bearing stiffeners, weld and grind smooth. If additional working clearance is required the cross hatched area of the bearing stiffener may be removed by flame cutting and grinding smooth.

WEB AND COLUMN REPAIRS
F.A.I. RT. 70 SEC. 82-3 HVB-R
ST. CLAIR COUNTY

DESIGNED	W. A. Miller	EXAMINED	Jan 17 1975
CHECKED	W. A. Miller	PASSED	
DRAWN	P. Barnett	APPROVED	
CHECKED	W. A. Miller		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

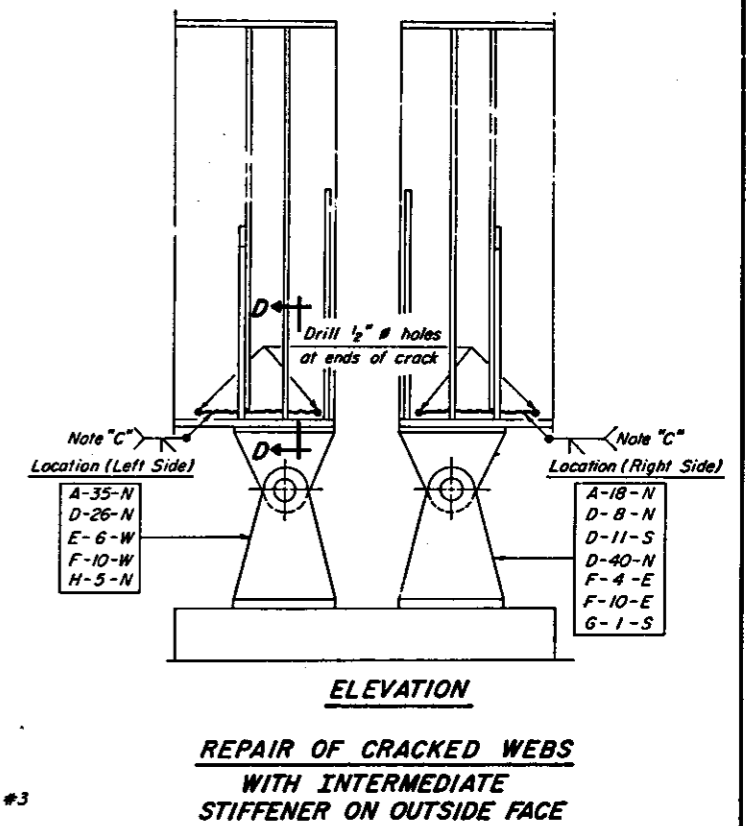
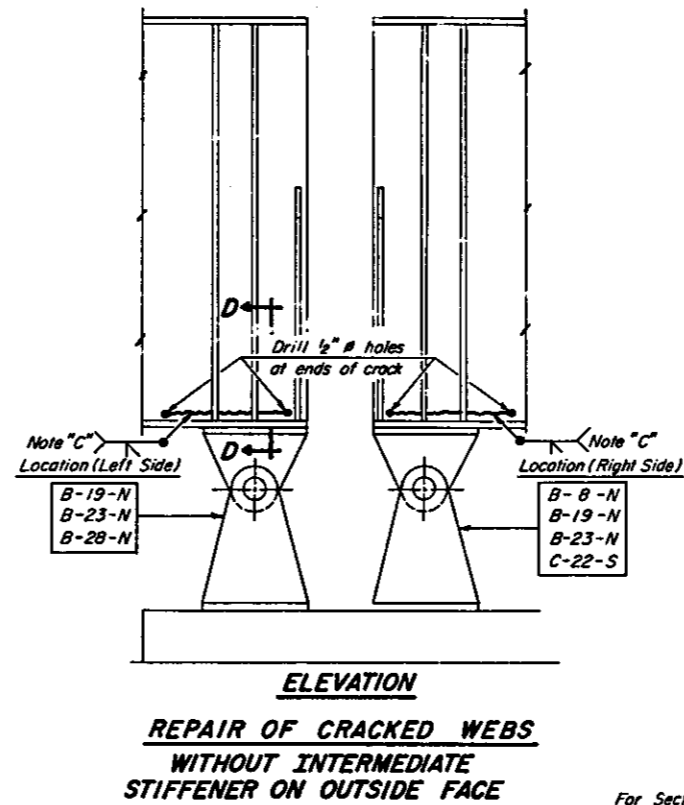
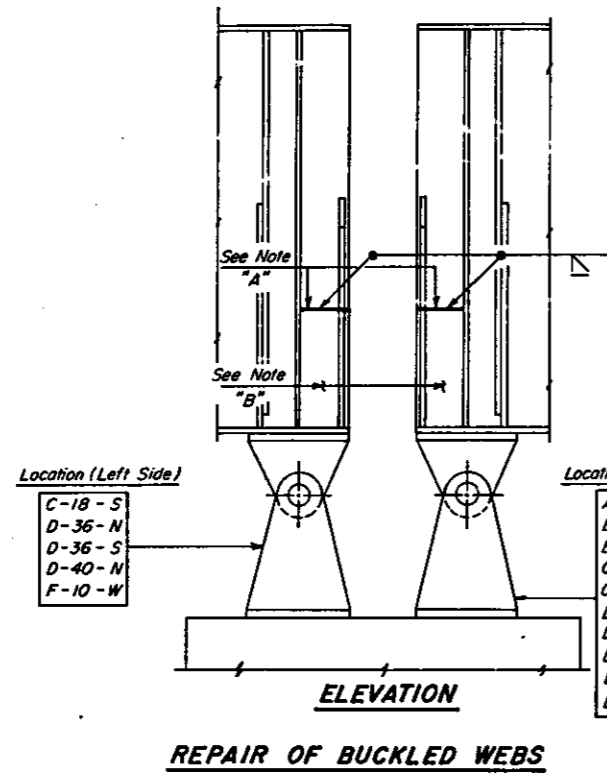
ROUTE NO.	DISTRICT	SECTION	TOTAL SHEETS	SHEET NO.	SHEET NO. 3A 8 SHEETS
70	82-3	ST. CLAIR	28	5A	
F.A.I. RT. 70		HVB-R			
FED. ROAD DIST. NO. 7		PLANNED	FED. AID PROJECT		

Note "A":
The web shall be cut to the face of the existing bearing stiffener just above the buckled area. This shall be done before the buckled area is straightened. After the web is straightened the cut portion shall be welded.

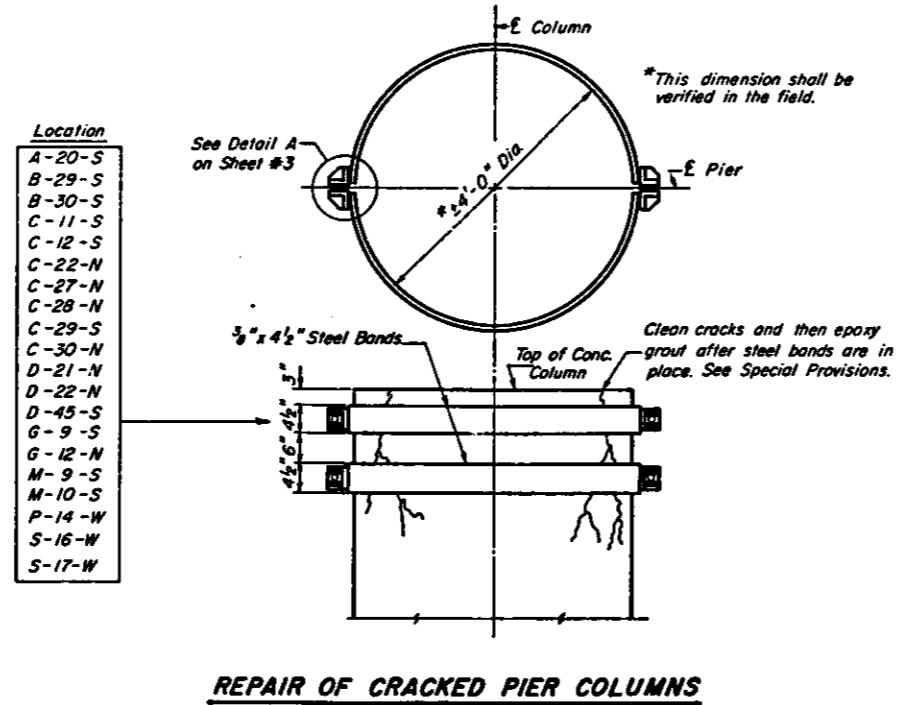
Note "B":
The buckled web shall be straightened using a continuous pressure applied to both sides of the web simultaneously.

Note "C":
Back gouge second side to sound metal and weld. Grind smooth both sides. If the crack extends into the flange, gouge the cracked flange to sound metal and weld, grind smooth.

Location Designation Examples:
C-22-S refers to South end of Pier C-22, Looking North.
D-26-N refers to North end of Pier D-26, Looking South.



For Section D-D See Sheet #3



DESIGNED *W.C. Hayes*
CHECKED
DRAWN P. Barnett
CHECKED

EXAMINED *April 28 1975*
PASSED *Chas. E. Thompson Jr.*
APPROVED

ADDITIONAL LOCATIONS FOR WEB AND COLUMN REPAIRS
F.A.I. RT. 70 SEC. 82-3 HVB-R
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

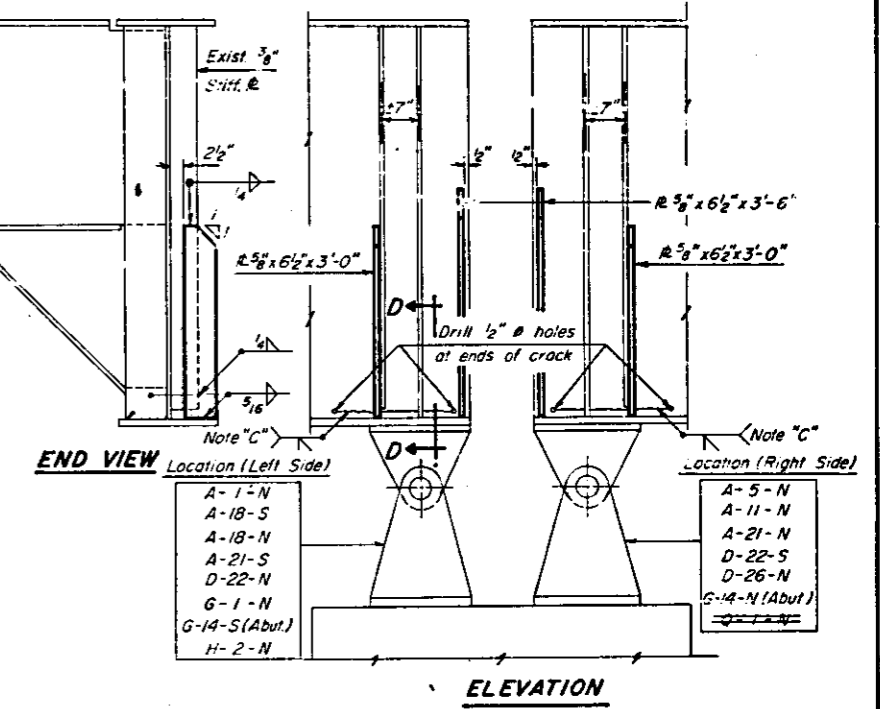
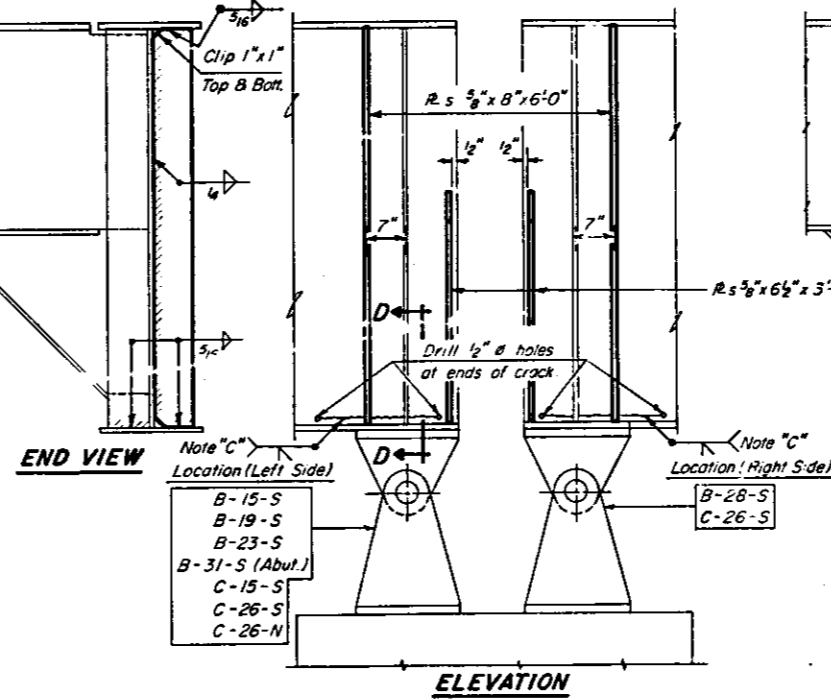
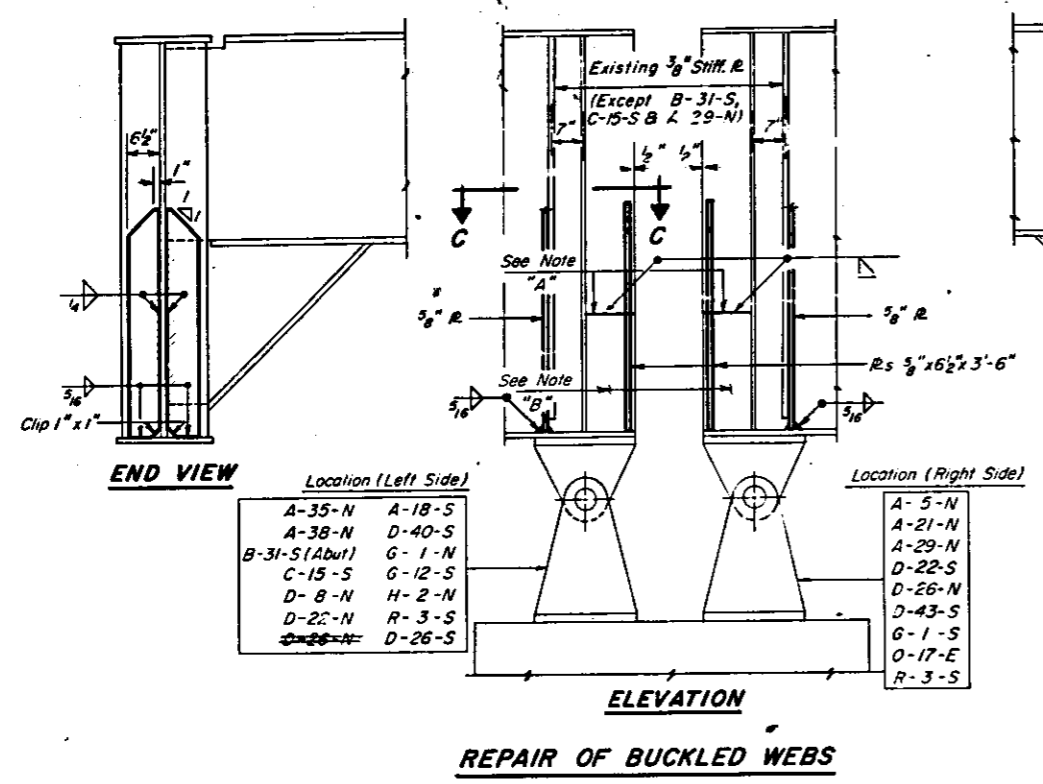
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 B
70	HVB-R	ST. CLAIR	28	58	
PROJECT NO. 7		ST. CLAIR COUNTY			

Note "A":
The web shall be cut to the face of the existing bearing stiffener just above the buckled area. This shall be done before the buckled area is straightened. After the web is straightened the cut portion shall be welded.

Note "B":
The buckled web shall be straightened using a continuous pressure applied to both sides of the web simultaneously. Cost incidental to Girder End Repair.

Note "C":
Back gouge second side to sound metal and weld. Grind smooth both sides. If the crack extends into the flange, gouge the cracked flange to sound metal and weld, grind smooth. Cost incidental to Girder End Repair.

Location Designation Examples:
B-15-S refers to South end of Pier B-15, Looking North.
C-26-N refers to North end of Pier C-26, Looking South.



Location (Left Side)

A-35-N	A-18-S
A-38-N	D-40-S
B-31-S (Abut.)	G-1-N
C-15-S	G-12-S
D-8-N	H-2-N
D-22-N	R-3-S
D-26-N	D-26-S

Location (Right Side)

A-5-N
A-21-N
A-29-N
D-22-S
D-26-N
D-43-S
G-1-S
O-17-E
R-3-S

Location (Left Side)

B-15-S
B-19-S
B-23-S
B-31-S (Abut.)
C-15-S
C-26-S
C-26-N

Location (Right Side)

B-28-S
C-26-S

Location (Left Side)

A-1-N
A-18-S
A-18-N
A-21-S
D-22-N
G-1-N
G-14-S (Abut.)
H-2-N

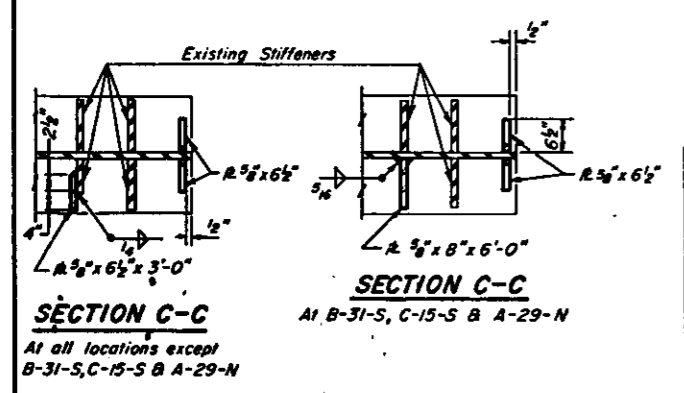
Location (Right Side)

A-5-N
A-11-N
A-21-N
D-22-S
D-26-N
G-14-N (Abut.)

REPAIR OF BUCKLED WEBS

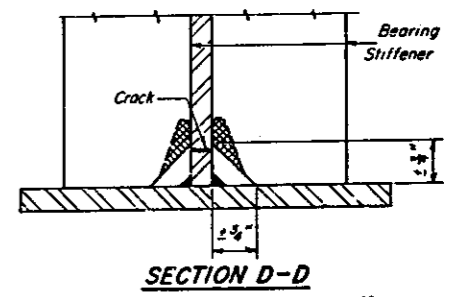
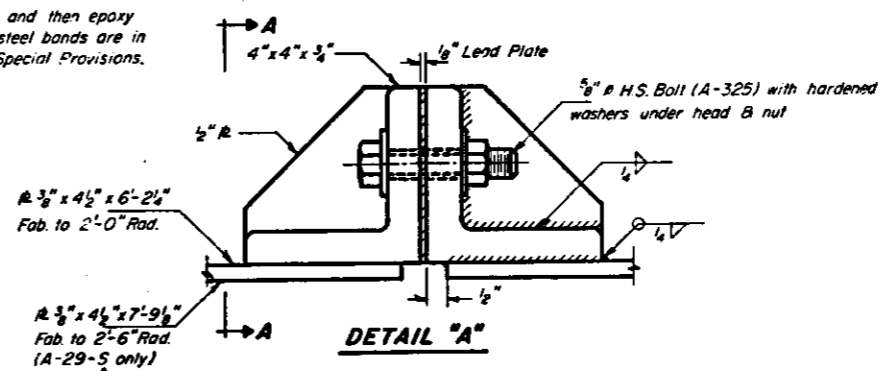
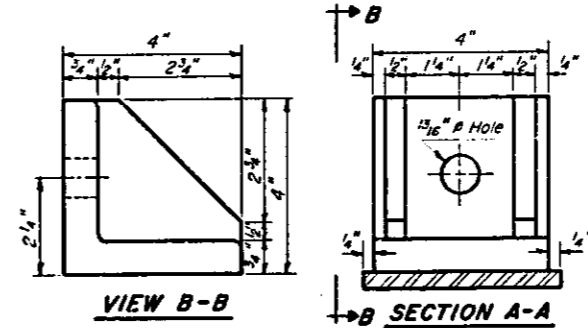
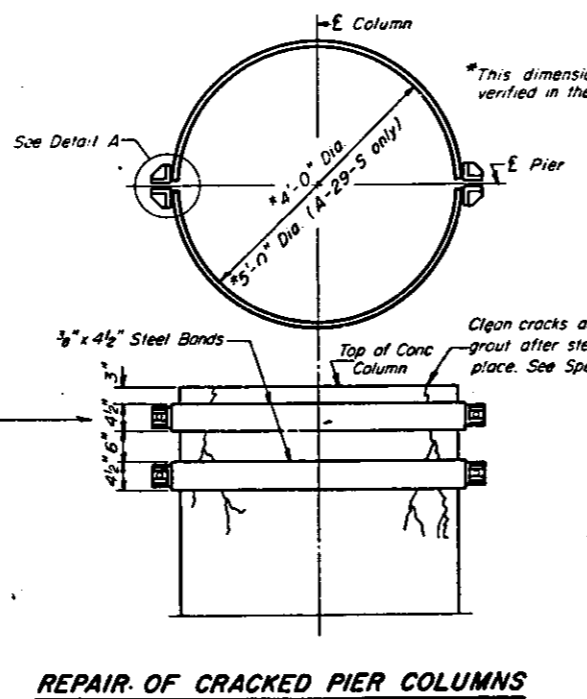
REPAIR OF CRACKED WEBS WITHOUT INTERMEDIATE STIFFENER ON OUTSIDE FACE

REPAIR OF CRACKED WEBS WITH INTERMEDIATE STIFFENER ON OUTSIDE FACE



Location

A-1-N
A-5-N
A-8-S
A-18-N
A-29-S
A-38-N
A-40-N
B-19-S
B-23-S
B-28-S
C-15-S
C-18-S
C-26-N
C-26-S
D-8-N
D-28-S
F-7-W
F-9-E
G-12-S



SECTION D-D
If the web crack extends past the stiffeners, gouge the crack to sound metal behind the bearing stiffeners, weld and grind smooth. If additional working clearance is required the cross hatched area of the bearing stiffener may be removed by flame cutting and grinding smooth.

DESIGNED	Jan 17 1975
CHECKED	
DRAWN	
CHECKED	

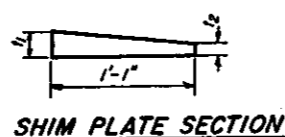
REPAIR OF CRACKED PIER COLUMNS

AS REVISED 5-6-75
WEB AND COLUMN REPAIRS
F.A.I. RT. 70 SEC. 82-3 HVB-R
ST. CLAIR COUNTY

DIMENSIONS OF ELASTOMERIC BEARINGS

Type	"j"	"k"	"L"	"m"	No. Req'd.
Type I	3 3/8"	2 3/8"	1'-6"	3 3/8"	150
Type Ia	3 3/8"	2 3/8"	1'-8"	3 3/8"	12
Type Ib	3 3/8"	2 3/8"	2'-0"	3 3/8"	12
Type Ic	3 1/16"	2 3/8"	1'-6"	3 3/8"	52

Pier Number Increasing.

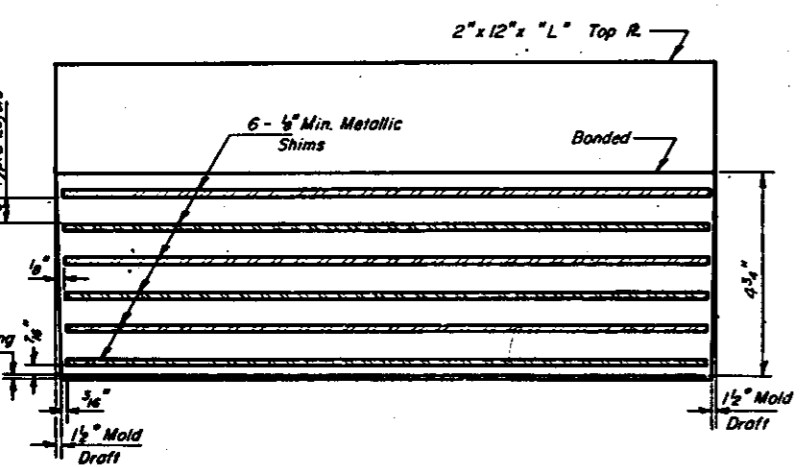


STATE OF ILLINOIS
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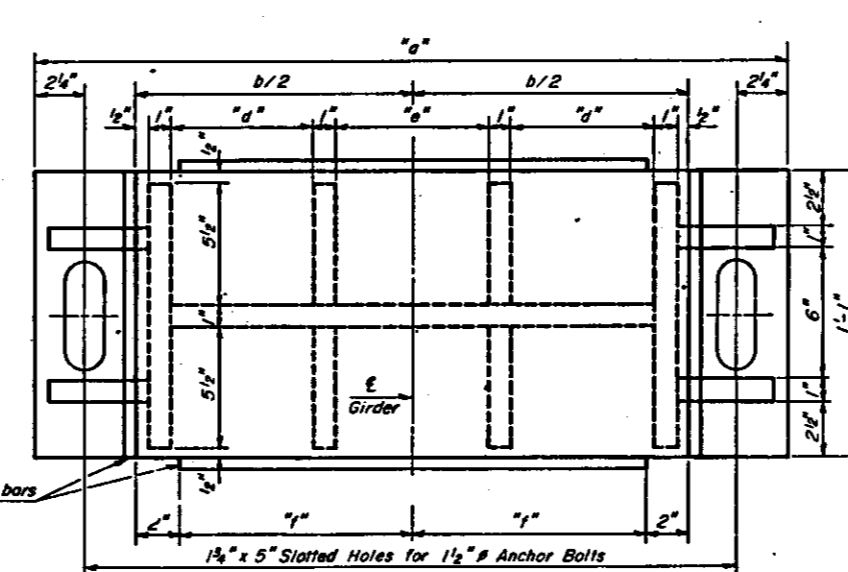
TABLE I

Location	Type of Bolster	Type of Elast. Brg.	Shim R. 1	Shim R. 2	Length of H.S. Bolts.	Location	Type of Bolster	Type of Elast. Brg.	Shim R. 1	Shim R. 2	Length of H.S. Bolts.
A-5-E(N)	1	I	1/4"	1/2"	2 3/4"	BC-5-W(B)	1	Ic	1/2"	1/2"	2 3/4"
A-5-E(S)	1	I	1/8"	1/2"	2 3/4"	BC-5-E(B)	1	Ic	1/2"	1/2"	2 3/4"
A-8-W(B)	1	I	1/2"	1/2"	2 3/4"	BC-6-W(B)	1	Ic	1/2"	1/2"	2 3/4"
A-8-E(B)	1	I	1/2"	1/2"	2 3/4"	BC-8-E(B)	1	Ic	1/2"	1/2"	2 3/4"
A-11-W(B)	1	I	1/2"	1/2"	2 3/4"	BC-8-W(N)	1	Ic	1/2"	1/2"	2 3/4"
A-12-E(B)	1	I	1/2"	1/2"	2 3/4"	BC-8-E(S)	1	Ic	1/2"	1/2"	2 3/4"
A-21-E(N)	1	I	1/4"	3/8"	2 3/4"	C-11-W(B)	1	Ic	1/2"	1/2"	2 3/4"
A-21-E(S)	1	I	1/8"	3/8"	2 3/4"	C-12-E(B)	1	Ic	1/2"	1/2"	2 3/4"
A-35-W(B)	1	I	3/8"	3/8"	3"	C-15-W(B)	1	Ic	1/2"	1/2"	2 3/4"
A-38-W(N)	3	Ia	1"	3/4"	2 3/4"	C-15-E(B)	1	Ic	1/2"	1/2"	2 3/4"
A-38-W(S)	3	Ia	1 1/8"	3/4"	2 3/4"	C-18-W(B)	1	Ic	1/2"	1/2"	2 3/4"
A-41-E(B)	1	I	3/8"	3/8"	2 3/4"	C-18-E(B)	1	Ic	1/2"	1/2"	2 3/4"
A-43-W(B)	2	I	3/8"	3/8"	2 3/4"	C-26-W(B)	1	Ic	3/16"	1/2"	3"
						C-31-Abut(B)	1	Ic	3/16"	1/2"	3"
BC-5-W(B)	1	Ic	1/2"	1/2"	2 3/4"	P-1-N(W)	4	Ia	5/8"	1 1/8"	3"
BC-5-E(B)	1	Ic	1/2"	1/2"	2 3/4"	P-1-N(E)	4	Ia	1/2"	3/4"	3"
BC-6-W(B)	1	Ic	1/2"	1/2"	2 3/4"	M-3-S(W)	4	Ia	7/16"	1 3/16"	2 3/4"
BC-8-E(B)	1	Ic	1/2"	1/2"	2 3/4"	M-3-S(E)	4	Ia	9/16"	1 5/16"	2 3/4"
B-11-W(B)	1	Ic	1/2"	1/2"	2 3/4"	M-3-N(B)	1	Ic	1"	1 1/4"	2 3/4"
B-12-E(B)	1	Ic	1/2"	1/2"	2 3/4"	M-6-E(B)	1	Ic	1 3/16"	1 1/8"	2 3/4"
B-15-W(B)	1	Ic	3/8"	5/8"	2 3/4"	M-6-W(B)	1	I	1 5/16"	1 1/8"	2 3/4"
B-15-E(B)	1	Ic	3/8"	5/8"	2 3/4"	M-9-E(B)	1	I	1 1/16"	1 1/8"	2 3/4"
B-19-W(B)	1	Ic	1/2"	1/2"	2 3/4"	M-9-W(B)	4	Ia	1 3/16"	3/8"	2 3/4"
B-19-E(B)	1	Ic	3/8"	5/8"	2 3/4"	M-12-E(N)	4	Ia	1 3/16"	3/8"	2 3/4"
B-27-W(B)	1	Ic	3/8"	1/2"	2 3/4"	M-12-E(S)	4	Ia	3/4"	1/2"	2 3/4"
B-28-E(B)	1	Ic	3/8"	3/8"	2 3/4"	M-12-W(N)	1	I	1 5/16"	3/8"	2 3/4"
						M-12-W(S)	1	I	3/4"	1/2"	2 3/4"
						A-5-E(B)	1	I	1/2"	1/2"	2 3/4"
D-5-W(B)	1	I	1/2"	1/2"	2 3/4"	N-1-E(B)	1	I	1/2"	1/2"	3"
D-5-E(B)	1	I	3/4"	3/4"	2 3/4"	N-5-S(B)	1	I	5/8"	5/8"	3"
D-8-W(N)	2	Ia	1/2"	1/2"	2 3/4"	O-17-N(B)	2	I	1/2"	1/2"	3"
D-8-W(S)	2	Ia	1 1/16"	1/16"	2 3/4"						
D-8-E(N)	2	Ia	1 1/16"	1/16"	2 3/4"	G-1-W(B)	1	I	1/2"	1/2"	2 3/4"
D-8-E(S)	2	Ia	1 5/16"	1/16"	2 3/4"	O-3-E(N)	1	I	1/2"	1/2"	2 3/4"
D-12-E(B)	1	I	1/2"	1/2"	2 3/4"	O-3-E(S)	1	I	1/2"	1/2"	2 3/4"
D-15-W(B)	1	I	1/2"	1/2"	2 3/4"	O-3-W(N)	1	I	1/2"	1/2"	2 3/4"
D-15-E(B)	1	I	1/2"	1/2"	2 3/4"	O-3-W(S)	1	I	1 1/8"	5/8"	2 3/4"
D-18-W(B)	1	I	1/2"	1/2"	2 3/4"	O-6-E(N)	1	I	1 1/2"	1/2"	2 3/4"
D-18-E(B)	1	I	1/2"	1/2"	2 3/4"	O-6-E(S)	1	I	1 1/2"	1/2"	2 3/4"
D-21-W(B)	1	I	1/2"	1/2"	3"	O-6-W(N)	1	I	1 3/16"	3/8"	2 3/4"
D-26-E(N)	1	I	3/8"	5/8"	2 3/4"	O-6-W(S)	1	I	7/8"	1/2"	2 3/4"
D-26-E(S)	1	I	1/2"	1/2"	2 3/4"	O-7-W(N)	1	I	1 1/8"	1/2"	2 3/4"
D-28-W(N)	1	I	3/8"	5/8"	2 3/4"	O-7-W(S)	1	I	1 5/8"	1/2"	2 3/4"
D-28-W(S)	1	I	5/8"	5/8"	2 3/4"	O-10-Abut(B)	1	I	3/4"	1/2"	2 3/4"
D-33-W(B)	4	Ia	1/2"	1/2"	2 3/4"	O-11-Abut(W)	1	I	3/8"	1/2"	2 3/4"
D-33-E(B)	1	I	1 1/8"	1/2"	2 3/4"	O-11-Abut(N)	1	I	5/16"	1/2"	2 3/4"
D-36-W(N)	2	I	1 1/16"	5/16"	2 3/4"	O-14-N(B)	1	I	1/2"	3/4"	2 3/4"
D-36-W(S)	2	I	1 1/4"	1"	2 3/4"	O-14-S(B)	1	I	1"	1 1/2"	2 3/4"
D-40-E(B)	2	Ia	1 1/8"	1 1/8"	3"	O-17-N(B)	2	I	3/8"	3/8"	2 3/4"
D-43-W(B)	2	I	1 1/8"	5/16"	3"						
O-17-S(W)	2	Ia	1 1/8"	1 1/8"	2 3/4"	P-1-N(B)	1	I	3/8"	5/8"	2 3/4"
O-17-S(E)	2	Ia	3/8"	5/8"	2 3/4"	P-4-S(W)	1	I	7/8"	1 1/8"	2 3/4"
E-2-N(B)	2	Ia	1/2"	1/2"	2 3/4"	P-4-S(E)	1	I	1"	1 1/4"	2 3/4"
E-3-S(B)	1	I	5/8"	3/8"	2 3/4"	P-4-N(B)	1	I	1 1/8"	1 3/8"	2 3/4"
E-6-N(B)	1	I	1 1/8"	3/8"	2 3/4"	P-7-W(B)	1	I	1 1/8"	1 3/8"	2 3/4"
E-6-S(B)	1	I	1 1/8"	5/16"	2 3/4"	P-7-E(B)	1	I	5/8"	3/8"	2 3/4"
E-9-Abut(B)	1	I	1 1/8"	5/16"	2 3/4"	P-10-W(N)	1	I	1 1/2"	1/2"	2 3/4"
						P-10-W(S)	1	I	1 1/4"	3/4"	2 3/4"
						P-14-W(B)	1	I	1/2"	1/2"	2 3/4"
F-1-Abut(B)	1	I	5/16"	1 1/8"	2 3/4"						
F-4-S(B)	1	I	5/16"	1 1/8"	2 3/4"	D-26-E(B)	1	I	3/8"	5/8"	2 3/4"
F-4-N(B)	1	I	1 3/16"	1 3/16"	2 3/4"	P-14-W(B)	1	I	1/2"	1/2"	2 3/4"
F-7-S(B)	1	I	3/8"	1 1/8"	2 3/4"						
G-9-S(B)	1	I	5/8"	5/8"	2 3/4"	A-21-E(B)	1	I	1"	1"	2 3/4"
G-9-N(B)	1	I	1/2"	1/2"	2 3/4"	R-3-W(B)	1	I	1"	1"	2 3/4"
G-12-S(W)	2	I	1 1/8"	5/8"	2 3/4"	R-3-E(B)	1	I	5/8"	5/8"	2 3/4"
G-12-S(E)	2	I	3/4"	1 1/4"	2 3/4"	G-1-W(N)	2	I	1 1/2"	1 1/2"	2 3/4"
H-2-E(B)	2	Ia	5/8"	3/8"	2 3/4"	G-1-W(S)	2	I	1/2"	1/2"	2 3/4"

BEARING ELEVATION



BOLSTER PLAN



ELASTOMERIC BEARING DETAIL

DIMENSIONS OF BOLSTERS

Type of Bolster	No. Required	"a"	"b"	"c"	"d"	"e"	"f"	"g"	"h"
Type 1	188	2'-4"	1'-7"	5 3/8"	4 1/2"	5"	7 1/2"	4 3/8"	5"
Type 2	26	2'-7"	1'-9"	9 3/8"	5"	6"	8 1/2"	8 3/8"	5 1/2"
Type 3	2	2'-10"	2'-1"	9 3/8"	6 1/2"	7"	10 1/2"	8 3/8"	5"
Type 4	10	2'-10"	2'-1"	5 3/8"	6 1/2"	7"	10 1/2"	4 3/8"	5"

DESIGNED *W. Henry*
 CHECKED *R. F. Rodkey*
 DRAWN *P. Barnett*
 CHECKED *L.H.*

EXAMINED *[Signature]*
 PASSED
 APPROVED

Notes:
 Bearings to be replaced are shown in Table I Sheets #4 & #5.
 Existing Anchor Bolts to be reused. Regrout in place where necessary.
 Air temperature at time of setting the elastomeric bearing shall not be lower than 30° F. or higher than 70° F.
 A-5-E(N) indicates Pier #A-5, East Bearing, North Girder.
 A-8-E(B) indicates Pier #A-8, East Bearing, Both Girders.
 Area between retainer bars and elastomeric bearing to be filled with sealer 1" thick, sloped to drain. (Elastomeric Polymer Type Sealer)
 The cost of the 2" Top Plate is included in the unit bid price for "Elastomeric Bearing."
 Calculated Weight of Structural Steel = 89,450 lbs.
 Existing anchor bolts shall be cut off 1/2" above the 3/4" bar.

(See Sheet #5 for continuation of Table I.)
REPLACEMENT BEARINGS
F.A.I. RT. 70 SEC. 82-3HVB-R
ST. CLAIR COUNTY

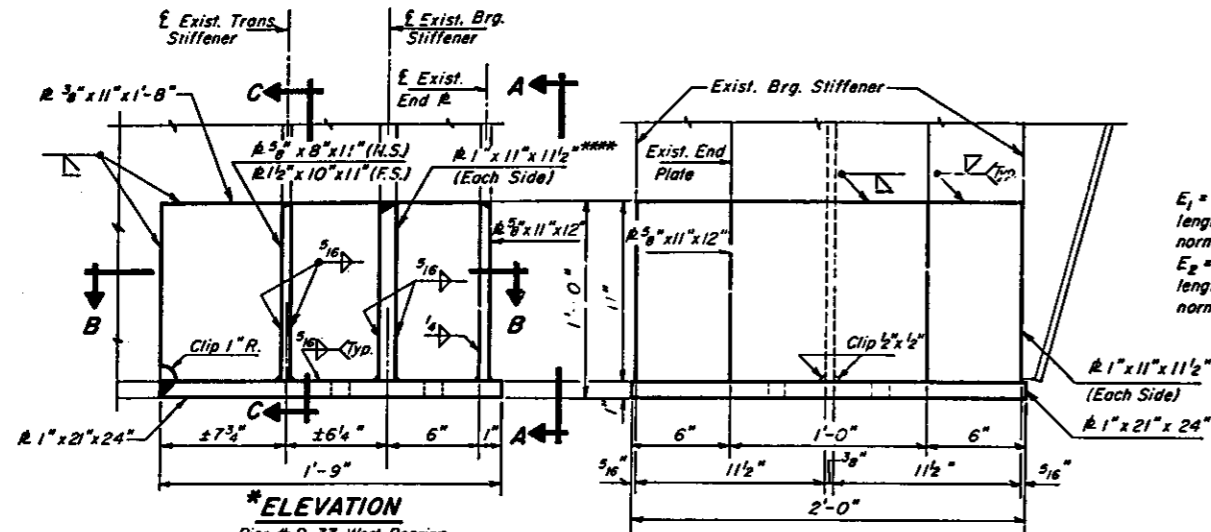
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
70	82-3	ST. CLAIR	7	8
DATE	BY	SCALE		

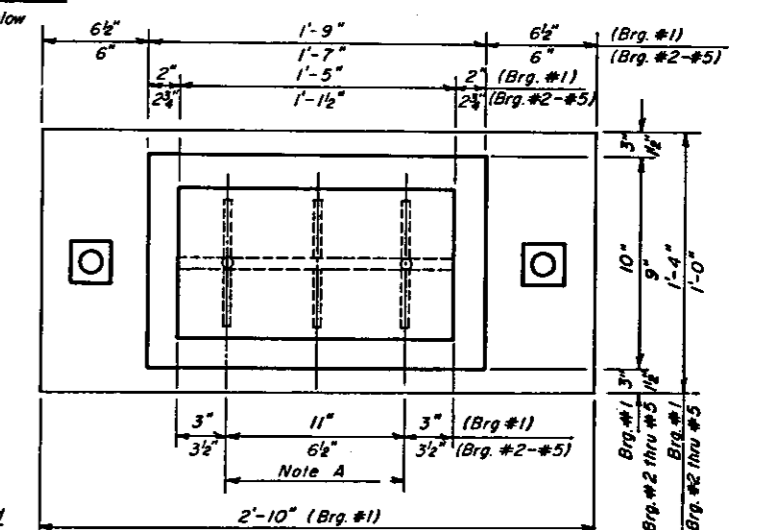
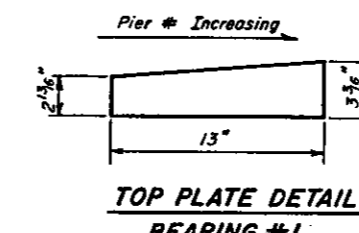
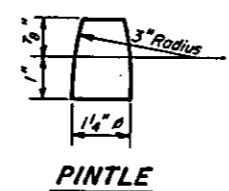
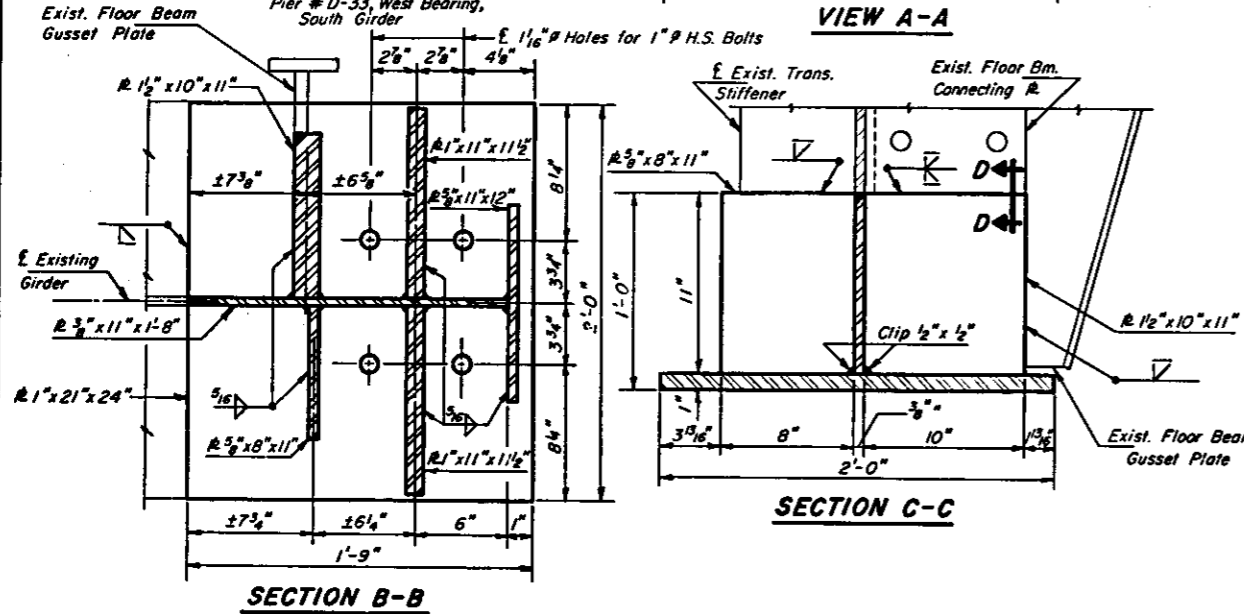
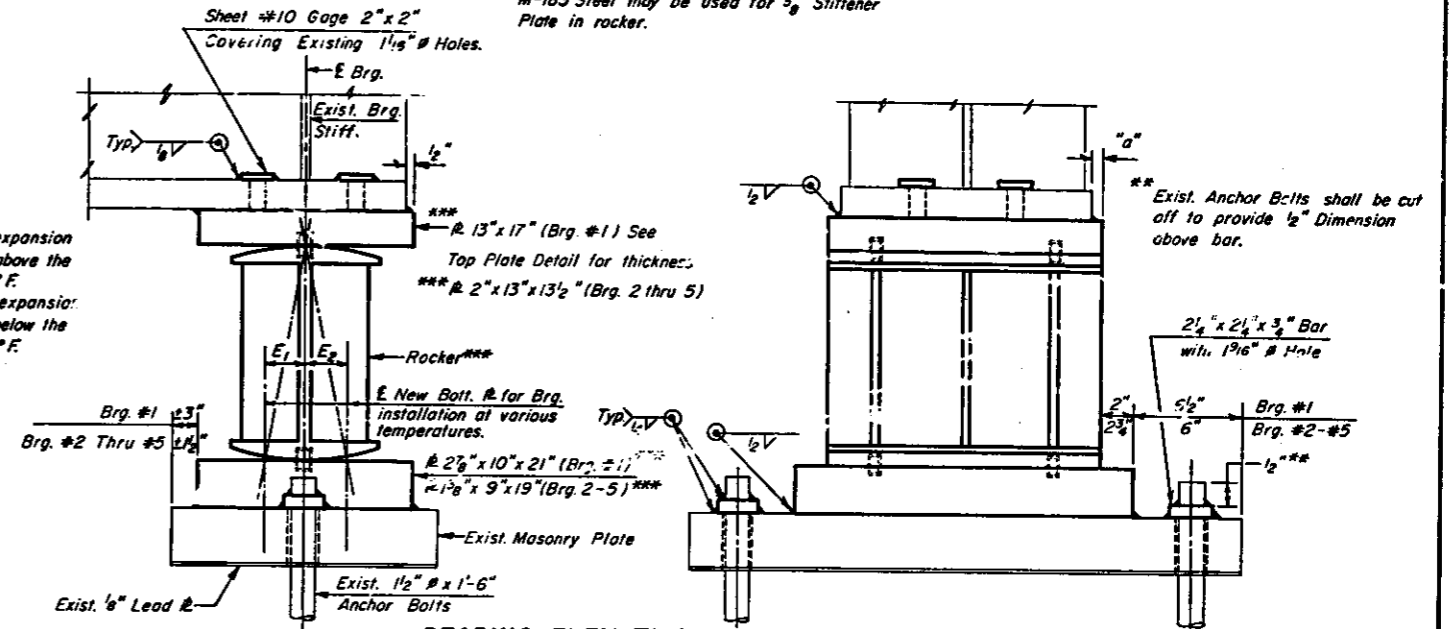
SHEET NO. 7
8 SHEETS

*** Align with existing bearing stiffener before welding.

*** Use A.A.S.H.O. M-198 Steel Except A.A.S.H.O. M-183 Steel may be used for $\frac{5}{8}$ " Stiffener Plate in rocker.



$E_1 = \frac{1}{8}$ " per each 100' of expansion length for every 15° rise above the normal temperature of 50° F.
 $E_2 = \frac{1}{8}$ " per each 100' of expansion length for every 15° fall below the normal temperature of 50° F.



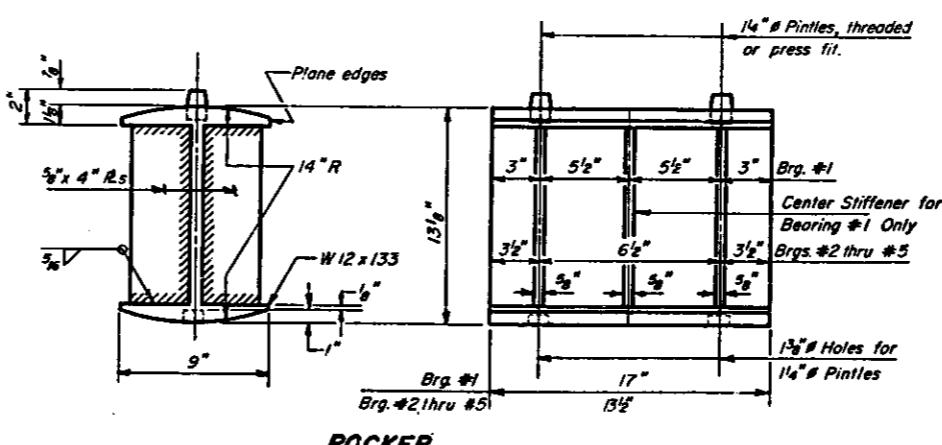
Note A:
 $1\frac{1}{2}$ " Holes - 1" Deep in Top Plate for Pintles. Thread or press fit pintles into bottom plate.

BEARING LOCATIONS

Bearing No.	Location	"a"	Roadway or Ramp	Exp. Length
1	A-1-W	$\frac{1}{2}$ "	A	118' (±)
2	E-2-S	$\frac{1}{16}$ "	E	85' (±)
3	H-2-W	$\frac{1}{16}$ "	H	87' (±)
4	P-15-W	$\frac{1}{16}$ "	P	E
5	H-1-W	$\frac{3}{8}$ "	P	E

*Note:
Cut out 1'-9" x 1'-0" end section of Existing Girder and replace with new Section as shown in the "Elevation".

DESIGNED	R. F. Kozak	EXAMINED	[Signature]
CHECKED	W. H. [Signature]	PASSED	[Signature]
DRAWN	F. Barnett	APPROVED	[Signature]
CHECKED	[Signature]		

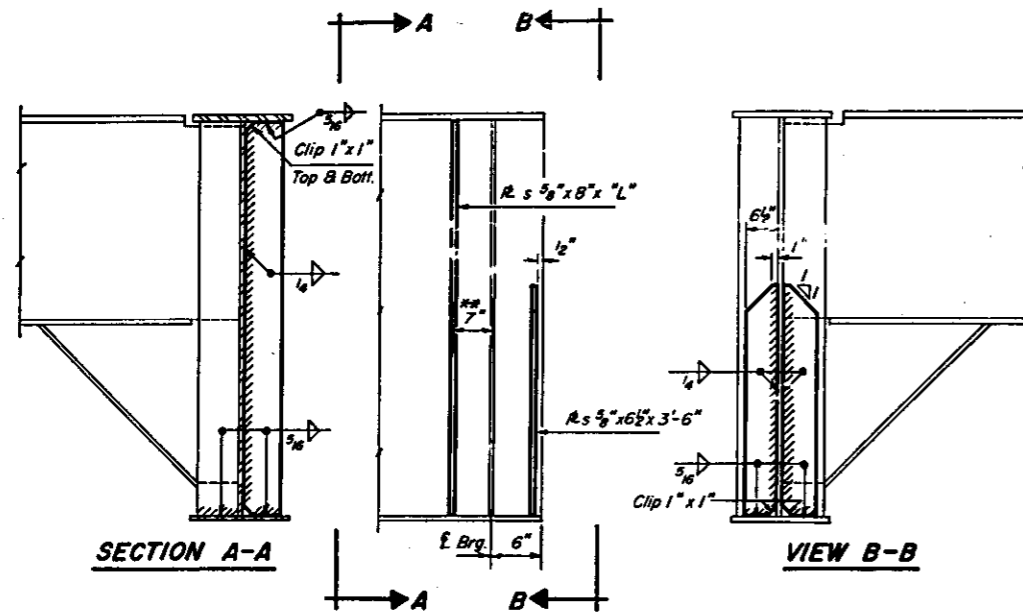


Notes:
A-1-W indicates Pier A-1, West Bearing, Both Girders.
Calculated Weight of Structural Steel = 4240 lbs. (Bearing Only)

STEEL BEARING & D-33-W(S)
F.A.I. RT. 70 SEC. 82-3HVB-R
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 70	HVB-R	ST. CLAIR	28	10
SHEET NO. 8 8 SHEETS				



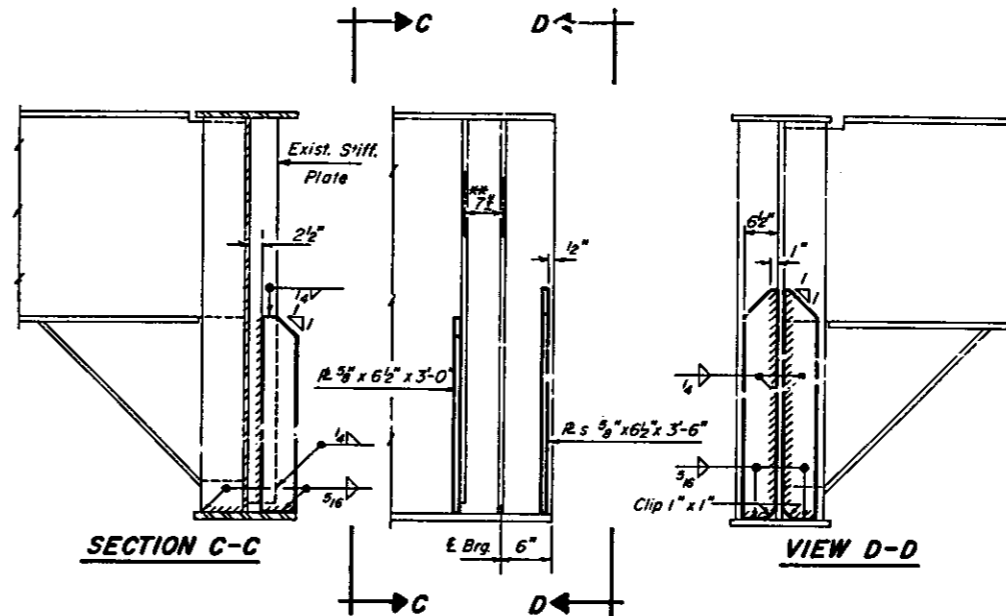
SECTION AT GIRDER END
For Locations See Table A

**Along E Girder or at Right Angles if on Skew.

TABLE "A"

Location	"L"	Location	"L"
A-1-W(B)	82%	D-22-W(B)	85%
A-11-E(B)	69%	D-43-E(N)	72%
A-12-W(B)	70%	D-44-W(B)	72%
A-25-E(B)	66%	D-44-E(B)	67%
A-29-W(S)	66%	D-45-W(B)	69%
A-44-E(B)	70%	D-45-E(B)	69%
A-45-W(B)	69%		
A-45-E(B)	66%	E-2-S(B)	84%
BC-1-W(B)	72%	E-3-N(B)	82%
BC-1-E(B)	72%		
BC-8-W(B)	72%	H-1-E(B)	63%
BC-8-E(B)	72%	H-2-W(B)	85%
B-15-W(N)	72%		
B-15-E(B)	72%		
B-19-W(N)	72%	M-3-N(B)	60%
B-19-E(B)	72%	M-6-E(B)	60%
B-23-W(N)	72%		
B-23-E(B)	72%	D-11-E(N)	89%
B-28-W(B)	69%	D-11-E(S)	89%
B-28-E(B)	72%	N-1-W(N)	85%
		N-1-W(S)	85%
BC-1-W(B)	72%	O-6-W(S)	66%
BC-1-E(B)	72%	O-6-W(N)	66%
BC-8-W(B)	72%	O-7-E(B)	68%
BC-8-E(B)	72%		
C-15-W(N)	72%	RP-14-E(B)	70%
C-15-E(B)	72%	P-15-W(B)	64%
C-22-W(B)	72%	P-15-E(N)	66%
C-22-E(B)	72%	P-15-E(S)	66%
C-26-W(N)	72%	P-15-E(S)	66%
		H-1-W(N)	63%
D-1-W(B)	82%	H-1-W(S)	63%
D-11-E(N)	85%		
D-11-E(S)	81%	S-10-S(B)	60%
D-12-W(N)	70%	S-15-N(B)	60%
D-12-W(S)	70%		
D-21-E(B)	82%		

Note:
A-1-W(B) indicates Pier A-1, West Bearing, Both Girders.
A-29-W(S) indicates Pier A-29, West Bearing, South Girder.

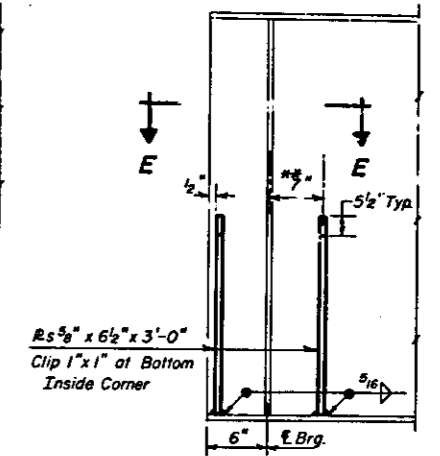


SECTION AT GIRDER END
For Locations See Table B

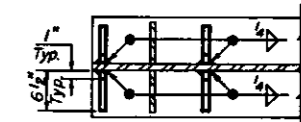
TABLE "B"

Location	Location	Location	Location
A-1-E(S)	D-18-W(B)	G-9-S(B)	P-1-N(B)
A-5-W(S)	D-18-E(B)	G-9-N(B)	P-4-S(B)
A-5-E(B)	D-21-W(B)	G-12-S(E)	P-4-N(B)
A-8-W(B)	D-26-W(S)		P-7-W(B)
A-8-E(B)	D-26-E(S)	H-2-E(S)	P-7-E(B)
A-11-W(S)	D-28-W(S)	H-5-Abut. (B)	P-10-W(B)
A-11-E(B)	D-28-E(B)		P-10-E(B)
A-15-W(B)	D-33-W(N)	P-1-N(B)	P-14-W(B)
A-15-E(B)	D-33-E(B)	M-3-S(B)	
A-18-W(N)	D-36-W(B)	M-6-W(B)	D-26-E(B)
A-18-E(S)	D-36-E(B)	M-9-E(B)	P-14-W(B)
A-21-E(B)	D-40-W(N)	M-9-W(B)	
A-25-W(B)	D-40-E(B)	M-12-E(B)	A-21-E(B)
A-29-E(B)	D-43-W(B)	M-12-W(B)	R-3-W(N)
A-35-W(B)		A-5-E(B)	R-3-E(N)
A-35-E(S)	O-17-S(B)		G-1-W(B)
A-38-W(B)	E-2-N(B)	N-1-E(B)	
A-38-E(S)	E-3-S(B)	N-5-N(B)	G-12-S(B)
A-41-W(B)	E-6-N(B)	N-5-S(B)	S-3-N(B)
A-41-E(B)	E-6-S(B)	O-17-N(B)	S-3-S(B)
A-43-W(B)	E-9-Abut. (B)		S-7-N(B)
A-43-E(B)		G-1-W(B)	S-7-S(B)
A-44-W(B)	F-1-Abut. (B)	O-3-E(B)	S-10-N(B)
	F-4-S(B)	O-3-W(B)	S-15-S(B)
D-1-E(B)	F-4-N(B)	O-6-E(B)	S-18-W(B)
D-5-W(B)	F-7-S(B)	O-7-W(B)	S-18-E(B)
D-5-E(B)	F-7-N(B)	O-10-Abut. (B)	S-21-W(B)
D-8-W(B)	F-10-S(B)	O-11-Abut. (B)	S-21-E(B)
D-8-E(S)	F-10-N(B)	O-14-N(B)	D-36-W(B)
D-11-W(B)	P-1-S(B)	O-14-S(B)	
D-12-E(B)		O-17-N(W)	A-35-N(B)
D-15-W(B)	G-5-S(B)		T-6-Abut. (B)
D-15-E(B)	G-5-N(B)		

*Jacking & Shoring are not required (Total 37 Locations)



SECTION AT GIRDER END
For Locations See Table C



SECTION E-E

TABLE "C"

Location
BC-5-W(B)
BC-5-E(B)
B-11-W(B)
B-11-E(B)
B-12-W(B)
B-12-E(B)
B-27-W(B)
B-27-E(B)
B-31-Abut. (N)
BC-5-W(B)
BC-5-E(B)
C-11-W(B)
C-11-E(B)
C-12-W(B)
C-12-E(B)
C-18-W(B)
C-18-E(B)
C-31-Abut. (B)

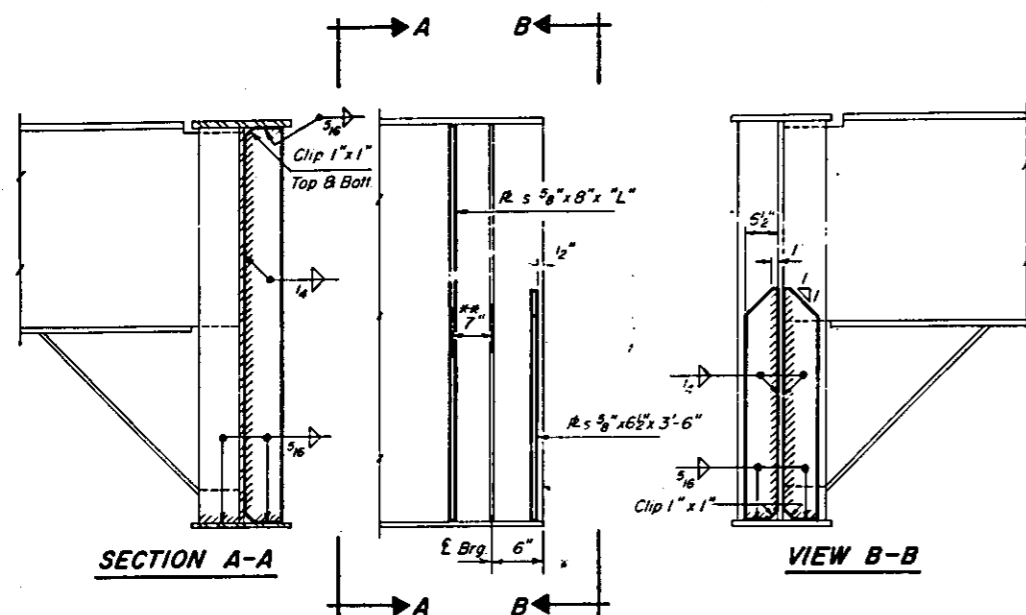
BEAM END REPAIRS

F.A.I. RT. 70 SEC 82-3 HVB-R
ST. CLAIR COUNTY

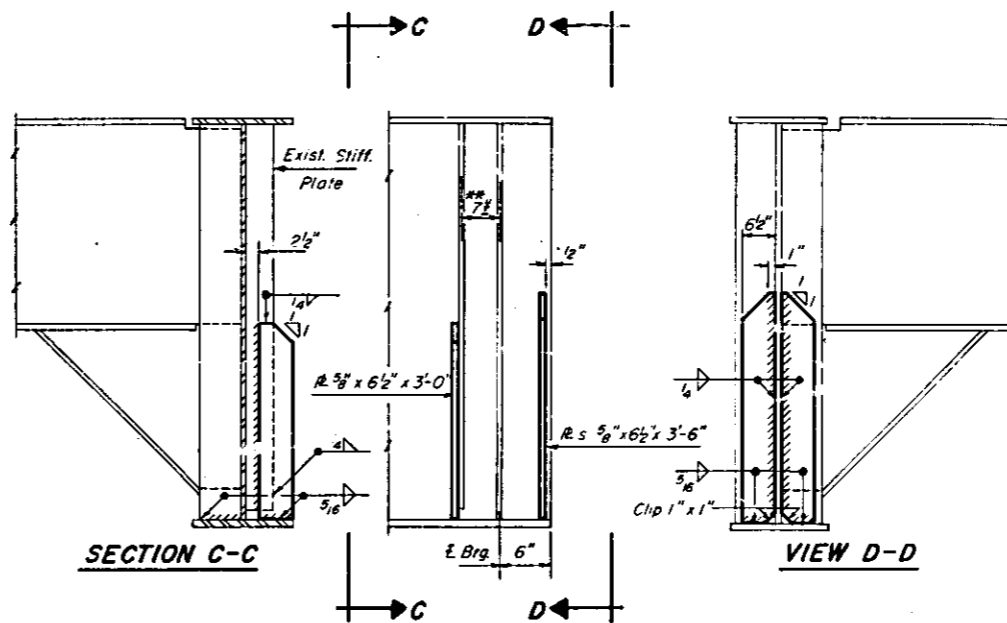
DESIGNED	W. H. H. H.	EXAMINED	[Signature]
CHECKED	P. Barnett	PASSED	[Signature]
DRAWN	P. Barnett	APPROVED	[Signature]
CHECKED	W. H.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

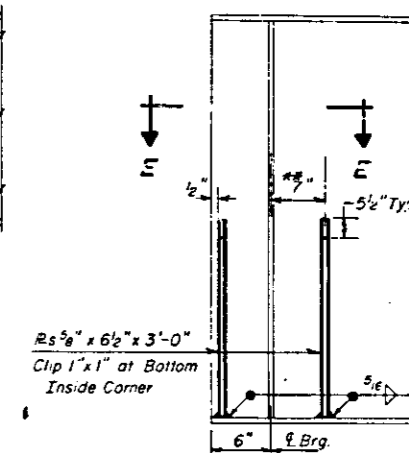
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	HVB-R	ST. CLAIR	28	104
SHEET NO. 84				
8 SHEETS				



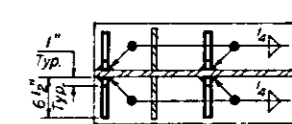
SECTION AT GIRDER END
For Locations See Table A



SECTION AT GIRDER END
For Locations See Table B



SECTION AT GIRDER END
For Locations See Table C



SECTION E-E

TABLE "A"

Location	"L"	Location	"L"
A-1-W(B)	82 3/4"	D-22-W(B)	85 3/4"
A-11-E(B)	69"	D-43-E(N)	72"
*A-12-W(B)	70 1/2"	*D-44-W(B)	72"
A-25-E(B)	66"	D-44-E(B)	67 1/2"
A-29-W(S)	66"	*D-45-W(B)	69 1/2"
A-44-E(B)	70 1/2"	*D-45-E(B)	69 1/2"
*A-45-W(B)	69 1/2"		
*A-45-E(B)	66 1/2"	E-2-S(B)	84 1/2"
BC-1-W(B)	72"	*E-3-N(B)	82 3/4"
BC-1-E(B)	72"		
BC-8-W(B)	72"	*H-1-E(B)	63 1/2"
BC-8-E(B)	72"	H-2-W(B)	85 1/4"
B-15-W(N)	72"		
B-15-E(B)	72"		
B-19-W(N)	72"	M-3-N(B)	60"
B-19-E(B)	72"	M-6-E(B)	60"
B-23-W(N)	72"		
B-23-E(B)	72"	D-11-E(N)	89 1/2"
B-28-W(B)	69 1/2"	D-11-E(S)	89 1/2"
B-28-E(N)	72"	*N-1-W(N)	85 1/2"
		*N-1-W(S)	85 1/2"
BC-1-W(B)	72"	O-6-W(S)	66 1/2"
BC-1-E(B)	72"	O-6-W(N)	66 1/2"
BC-8-W(B)	72"	*O-7-E(B)	68 1/2"
BC-8-E(B)	72"		
C-15-W(N)	72"	*P-14-E(B)	70 1/2"
C-15-E(B)	72"	*P-15-W(B)	64 1/2"
C-22-W(B)	72"	*P-15-E(N)	66 1/2"
C-22-E(B)	72"	*P-15-E(S)	66 1/2"
C-26-W(N)	72"	H-1-W(N)	63 3/4"
		H-1-W(S)	63 3/4"
D-1-W(B)	82 1/4"	S-10-S(B)	60"
D-11-E(N)	85 3/4"	S-15-N(B)	60"
D-11-E(S)	81 1/2"		
*D-12-W(N)	70 1/2"		
*D-12-W(S)	70 1/2"		
*D-21-E(B)	82 3/4"		

TABLE "B"

Location	Location	Location	Location
A-1-E(S)	D-18-W(B)	G-9-S(B)	P-1-N(B)
A-5-W(S)	D-18-E(B)	G-9-N(B)	P-4-S(B)
A-5-E(B)	D-21-W(B)	G-12-S(E)	P-4-N(B)
A-8-W(B)			P-7-W(B)
A-8-E(B)		H-2-E(S)	P-7-E(B)
A-11-W(S)		H-5-Abut.(B)	P-10-W(B)
A-12-E(B)	D-28-E(B)		P-10-E(B)
A-15-W(B)	D-33-W(N)	P-1-N(B)	P-14-W(B)
A-15-E(B)	D-33-E(B)	M-3-S(B)	
A-18-W(N)	D-36-W(B)	M-6-W(B)	D-26-E(B)
A-18-E(S)	D-36-E(B)	M-9-E(B)	P-14-W(B)
A-21-E(B)	D-40-W(N)	M-9-W(B)	
A-25-W(B)	D-40-E(B)	M-12-E(B)	A-21-E(B)
A-29-E(B)	D-43-W(B)	M-12-W(B)	R-3-W(N)
A-35-W(B)		A-5-E(B)	R-3-E(N)
A-35-E(S)	O-17-S(B)		G-1-W(B)
A-38-W(B)	E-2-N(B)	N-1-E(B)	
A-38-E(S)	E-3-S(B)	N-5-N(B)	G-12-S(B)
A-41-W(B)	E-6-N(B)	N-5-S(B)	S-3-N(B)
A-41-E(B)	E-6-S(B)	O-17-N(B)	S-3-S(B)
A-43-W(B)	E-9-Abut.(B)		S-7-N(B)
A-43-E(B)		G-1-W(B)	S-7-S(B)
*A-44-W(B)	F-1-Abut.(B)	O-3-E(B)	S-10-N(B)
	F-4-S(B)	O-3-W(B)	S-15-S(B)
	F-4-N(B)	O-6-E(B)	S-18-W(B)
D-1-E(B)	F-7-S(B)	O-7-W(B)	S-18-E(B)
D-5-W(B)	F-7-N(B)	O-10-Abut.(F)	S-21-W(B)
D-5-E(B)	F-10-S(B)	O-11-Abut.(B)	S-21-E(B)
D-8-W(B)	F-10-N(B)	O-14-N(B)	D-36-W(B)
D-8-E(S)	P-1-S(B)	O-14-S(B)	
D-11-W(B)		O-17-N(W)	A-35-N(B)
D-12-E(B)	G-5-S(B)		T-6-Abut.(B)
D-15-W(B)	G-5-N(B)		
D-15-E(B)			

Note:
A-1-W(B) indicates Pier A-1, West Bearing, Both Girders.
A-29-W(S) indicates Pier A-29, West Bearing, South Girder.

DESIGNED	W. H. C.	EXAMINED	Jun 17 1975
CHECKED	P. J. H.	PASSED	
DRAWN	P. Burnett	APPROVED	
CHECKED	V. H.		

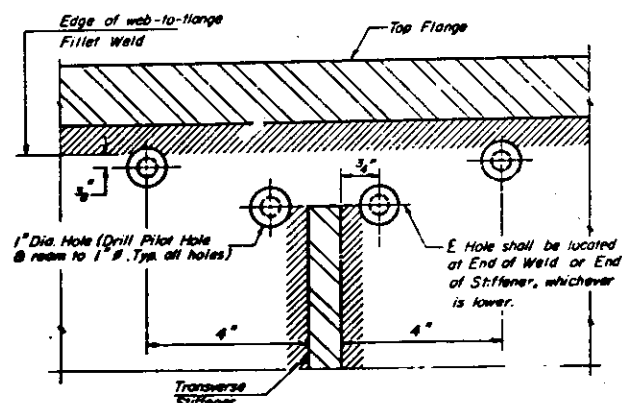
*Jacking & Shoring are not required (Total 37 Locations)

AS REVISED 5-6-75
BEAM END REPAIRS
F.A.I. RT. 70 SEC 82-3 HVB-R
ST. CLAIR COUNTY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

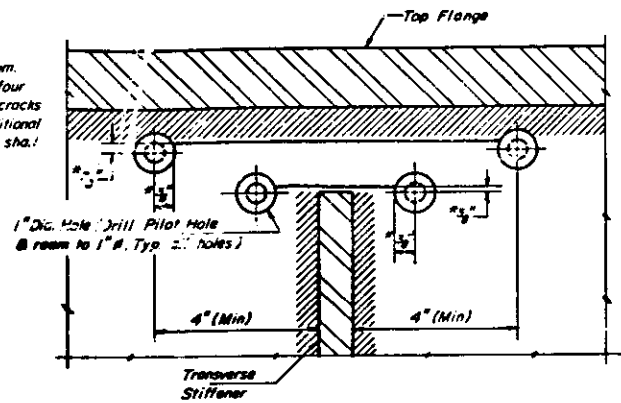
DATE	NO.	REV.	BY	CHKD.	DATE

SHEET NO. _____
SHEETS _____



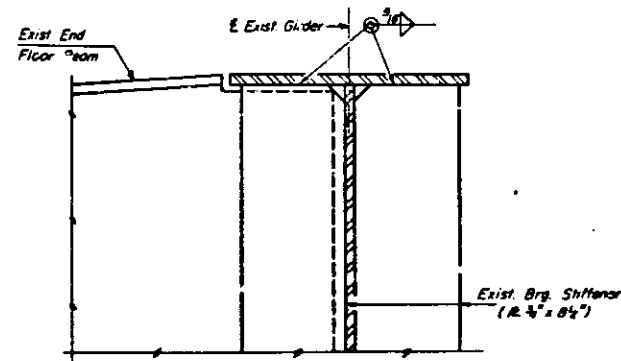
GIRDER REPAIR - TYPE I
SECTION AT FLOOR BEAM CONNECTION
(Showing position of holes to be drilled in web without cracks)
(See Table I for Locations)

Pilot holes shall be 1/2" Dia. maximum. Each location shall have at least four holes, positioned as shown, whether cracks are present or not. If there are additional cracks other than those shown, holes shall be drilled at the crack ends.



GIRDER REPAIR - TYPE II
SECTION AT FLOOR BEAM CONNECTION
(Showing position of holes to be drilled in web at crack ends)
(See Table II for Locations)

*Centrilines of hole shall be located as shown with respect to ends of each crack. Number of holes is not limited to four at each floor beam connection.



GIRDER REPAIR - TYPE III
SECTION AT BEARING STIFFENERS
(Showing welding of stiffener to end of girder)

Note: Location is Roadway B, Pier B 27, North Girder, West bearing.

METHOD FOR LOCATING CRACK ENDS
GIRDER REPAIR - TYPE II

The location of the end of crack shall be determined by ultra-sonic inspection and marked before the pilot hole is drilled.

After the one (1) inch diameter holes are reamed, the Contractor is required to use ultra-sonic inspection around the hole to determine if the crack goes past the hole. If the ultra-sonic inspection shows continuation of the crack beyond the hole, the Contractor will be required to drill and ream another one (1) inch diameter hole. The center of this additional hole will be located a minimum of 1/4 inch from the center of the other hole or holes.

TABLE I
Floor Beam Location for
Girder Repair - Type I

A 2N-IWBIE	A 36B-IWBIE	B 25S-IW	C 24S-IE	D 31B-IWBIE	F 11B-INBIS	M 8B-IWBIE	P 2W-IN	S 1B-INBIS
A 3N-IWBIE	A 37B-IWBIE	B 26S-IW	C 25S-IWBIE	D 32B-IWBIE	F 12B-INBIS	M 10B-IW, 2WBIE	P 2E-INBIS	S 2B-INBIS
A 4S-IW	A 39B-IWBIE	B 29N-IW	C 27B-IWBIE	D 34B-IWBIE	F 13B-INBIS	M 11B-IWBIE	P 3B-INBIS	S 4B-INBIS
A 4N-IWBIE	A 40B-IWBIE	B 29S-IWBIE	C 28N-IE	D 35B-IWBIE	F 14B-INBIS	M 13B-IWBIE	P 5N-IE	S 5B-INBIS
A 6B-IWBIE	A 42B-IWBIE	B 30N-IE	C 28S-IWBIE	D 37B-IWBIE	F 15B-INBIS	M 14B-IWBIE	P 5S-IWBIE	S 6B-INBIS
A 7S-IWBIE		B 30S-IWBIE	C 29B-IWBIE	D 38B-IWBIE	F 16B-INBIS		P 6N-IE	S 8B-INBIS
A 9S-IWBIE			C 30B-IWBIE	D 39B-IWBIE	F 17B-INBIS		P 6S-IWBIE	S 9B-INBIS
A 10N-IW			C 10S-IE	D 41B-IWBIE	F 18B-INBIS		P 8B-IWBIE	S 11B-INBIS
A 10S-IWBIE	BC 2B-IWBIE			D 42B-IWBIE	F 19B-INBIS		P 8S-IWBIE	S 12B-INBIS
A 13N-IWBIE	BC 3B-IWBIE	BC 2B-IWBIE			F 20B-INBIS	N 2B-IWBIE	P 9S-IWBIE	S 13B-INBIS
A 14B-IWBIE	BC 4B-IWBIE	BC 3B-IWBIE	D 2B-IWBIE		F 21B-INBIS	N 3B-IWBIE	P 11S-IWBIE	S 14B-INBIS
A 16N-IE	BC 6N-IWBIE	BC 4B-IWBIE	D 3B-IWBIE		F 22B-INBIS	N 4B-IWBIE	P 12S-IWBIE	S 16B-INBIS
A 16S-IWBIE	BC 7N-IWBIE	BC 6B-IWBIE	D 4B-IWBIE	O 1B-INBIS	F 23B-INBIS	N 6B-INBIS	P 13B-IWBIE	S 17B-INBIS
A 17B-IWBIE	BC 7S-IE	BC 7N-IWBIE	D 6B-IWBIE	E 1B-INBIS	F 24B-INBIS	N 7B-INBIS		S 19B-IWBIE
A 19N-IWBIE	B 9B-IWBIE	BC 7S-IE	D 7B-IWBIE	E 4B-INBIS	F 25B-INBIS			S 20B-IWBIE
A 19S-IW	B 10N-IWBIE	C 9B-IWBIE	D 9B-IWBIE	E 5B-INBIS	F 26B-INBIS			S 22B-IWBIE
A 20N-IW	B 13B-IWBIE	C 10N-IWBIE	D 10B-IWBIE	E 7B-INBIS	F 27B-INBIS			S 23B-IWBIE
A 20S-IE	B 14B-IWBIE	C 10N-IWBIE	D 10B-IWBIE	E 8B-INBIS	F 28B-INBIS			
A 22B-IWBIE	B 16N-IE	C 13B-IWBIE	D 14B-IWBIE		F 29B-INBIS			
A 23B-IWBIE	B 16S-IWBIE	C 14S-IE	D 16B-IWBIE	H 3N-IE	F 30B-INBIS			
A 24B-IWBIE	B 17N-IW	C 16B-IWBIE	D 17B-IWBIE	H 3S-IWBIE	F 31B-INBIS			
A 26B-IW, IE, B 2E	B 18S-IWBIE	C 17N-IE	D 19B-IWBIE	H 4S-IWBIE	F 32B-INBIS			
A 27B-IW, IE, B 2E	B 20N-IW	C 17S-IWBIE	D 20B-IWBIE		F 33B-INBIS			
A 28B-IW, IE, B 2E	B 20S-IWBIE	C 19S-IWBIE	D 23B-IWBIE		F 34B-INBIS			
A 30B-IWBIE	B 21S-IW	C 20N-IW	D 24B-IWBIE		F 35B-INBIS			
A 31B-IWBIE	B 22N-IW	C 20S-IE	D 25B-IWBIE		F 36B-INBIS			
A 32B-IWBIE	B 22S-IWBIE	C 21B-IE	D 27B-IWBIE		F 37B-INBIS			
A 33B-IWBIE	B 24N-IW	C 23N-IE	D 29B-IWBIE		F 38B-INBIS			
A 34B-IWBIE	B 24S-IWBIE	C 24N-IWBIE	D 30B-IWBIE		F 39B-INBIS			

TABLE II
Floor Beam Location for
Girder Repair - Type II

A 2S-IWBIE	B 29N-IE	G 4E-INBIS
A 3S-IE	B 30N-IW	G 6W-INBIS
A 4S-IWBIE		G 8E-INBIS
A 7N-IWBIE		G 10W-IS
A 9N-IWBIE		G 11E-INBIS
A 10N-IE	BC 7S-IW	G 13W-INBIS
A 13S-IWBIE	C 14S-IW	
A 16N-IW	C 17N-IW	
A 19S-IE	C 19N-IWBIE	H 3N-IW
A 20N-IE	C 20N-IE, B 2E	H 4N-IWBIE
A 20S-IW	C 20S-IW	
	C 21N-IW, B 2W	
	C 21S-IW	
	C 23N-IW	
BC 6S-IWBIE	C 23S-IWBIE	P 2W-IS
BC 7S-IW	C 24S-IW	P 3W-2N
B 10S-IWBIE	C 25N-IWBIE	P 5N-IW
B 16N-IW	C 28N-IW	P 6N-IW
B 17N-IE	C 10S-IW	P 9N-IWBIE
B 17S-IWBIE		P 11N-IWBIE
B 18N-IWBIE		P 12N-IWBIE
B 20N-IE		
B 21N-IWBIE	F 2E-INBIS	
B 21S-IE	F 3E-INBIS	
B 22N-IE	F 5E-IN	R 1N-IW
B 24N-IE	F 6E-INBIS	R 1S-IE
B 25N-IWBIE	F 8E-IN	R 2N-IWBIE
B 25S-IE		R 4S-IW
B 26N-IWBIE		
B 26S-IE		

BILL OF MATERIAL

Item	Unit	Total
Girder Repair - Type I	Each	654
Girder Repair - Type II	Each	97
Girder Repair - Type III	Each	1

DESIGNED R. F. ROJWEY
CHECKED [Signature]
DRAWN P. Barnett RR
CHECKED [Signature]

EXAMINED [Signature]
APPROVED [Signature]

Notes:
Edge of holes shall be painted after reaming.
A 2N - IWBIE indicates Pier A2, North Girder, first floor beam West of pier, and first floor beam East of pier.
A 26B - IW, IE, B 2E indicates Pier A26, Both Girders, first floor beam West of Pier, first floor beam East of pier, and second floor beam East of pier.

GIRDER REPAIRS
F.A.I. RT. 70-SEC. 82-3HVB-R
ST. CLAIR COUNTY

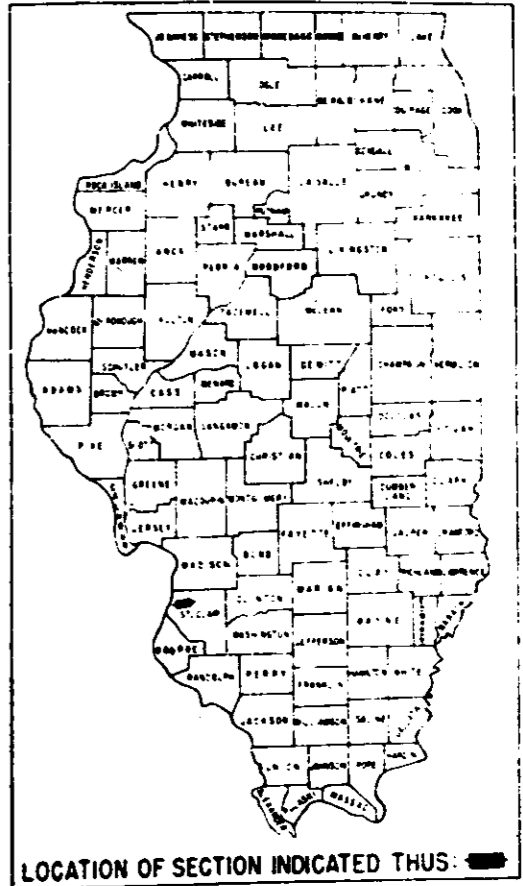
ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
F A I -70	82-3HVB	ST. CLAIR	251	1
FED ROAD DIV NO 4		ILLINOIS	PROJECT 2-26-70-116910	

P-90-067-00

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
DIVISION OF HIGHWAYS

PLANS FOR PROPOSED
FEDERAL AID HIGHWAY
F. A. I. ROUTE 70 SECTION 82-3HVB
PROJECT I-IG-70-1(69)0
POPLAR STREET BRIDGE APPROACHES
ST. CLAIR COUNTY

C-98-059-64



DESCRIPTION OF PROJECT:
SECTION 82-3HVB INCLUDES THE FURNISHING AND FABRICATING OF STRUCTURAL STEEL AND THE COMPLETE CONSTRUCTION OF THE FOLLOWING:

ROADWAYS B AND C	TWO-4 SPAN CONTINUOUS UNITS SPANS: 94'-120'-120'-94'	WELDED PLATE GIRDERS WITH ROLLED FLOORBEAMS AND STRINGERS ON R. C. PIERS
	EIGHT-3 SPAN CONTINUOUS UNITS: SPANS: 2 @ 77'-100'-77' 1 EACH @ 77'-100'-78' 70'-100'-77' 90'-116'-90' 90'-115'-90' 92'-117'-92' 97'-124'-97'	CURVED WELDED PLATE GIRDERS WITH ROLLED FLOORBEAMS AND STRINGERS ON R. C. PIERS (* AND S ILL-THRU ABUTMENTS)
	FIVE-4 SPAN CONTINUOUS UNITS SPANS: 1 @ 93'-119'-119'-93' 2 @ 98'-125'-125'-98'	
	ONE-5 SPAN CONTINUOUS UNIT SPANS: 106'-116'-115'-115'-90'	
	TWO SIMPLE SPANS @ 77'	COMPOSITE WF ON R. C. PIERS
ONE SIMPLE SPAN - 110'	COMPOSITE I LATE GIRDER ON R. C. PIERS	
ROADWAYS A, B, C & D	ONE SIMPLE SPAN - VARIES FROM 116-10 1/8 TO 93-3 1/2	
ROADWAY A	ONE-4 SPAN CONTINUOUS UNIT SPANS: 120'-155'-155'-120'	CURVED WELDED PLATE GIRDERS WITH ROLLED FLOORBEAMS AND STRINGERS ON R. C. PIERS
RAMP M	ONE-3 SPAN CONTINUOUS UNIT SPANS: 111'-121'-96'	
RAMP S	ONE-5 SPAN CONTINUOUS UNIT SPANS: 96'-121'-121'-121'-96'	
ROADWAY D	PIER D17	REINFORCED CONCRETE
ROADWAY G	PIER G2	REINFORCED CONCRETE
RAILROAD TRESTLE	FOUR SIMPLE SPANS @ 65-0, 93-4, 62-8, 62-6	WELDED PLATE GIRDERS ON R. C. PIERS AND STEEL BENTS

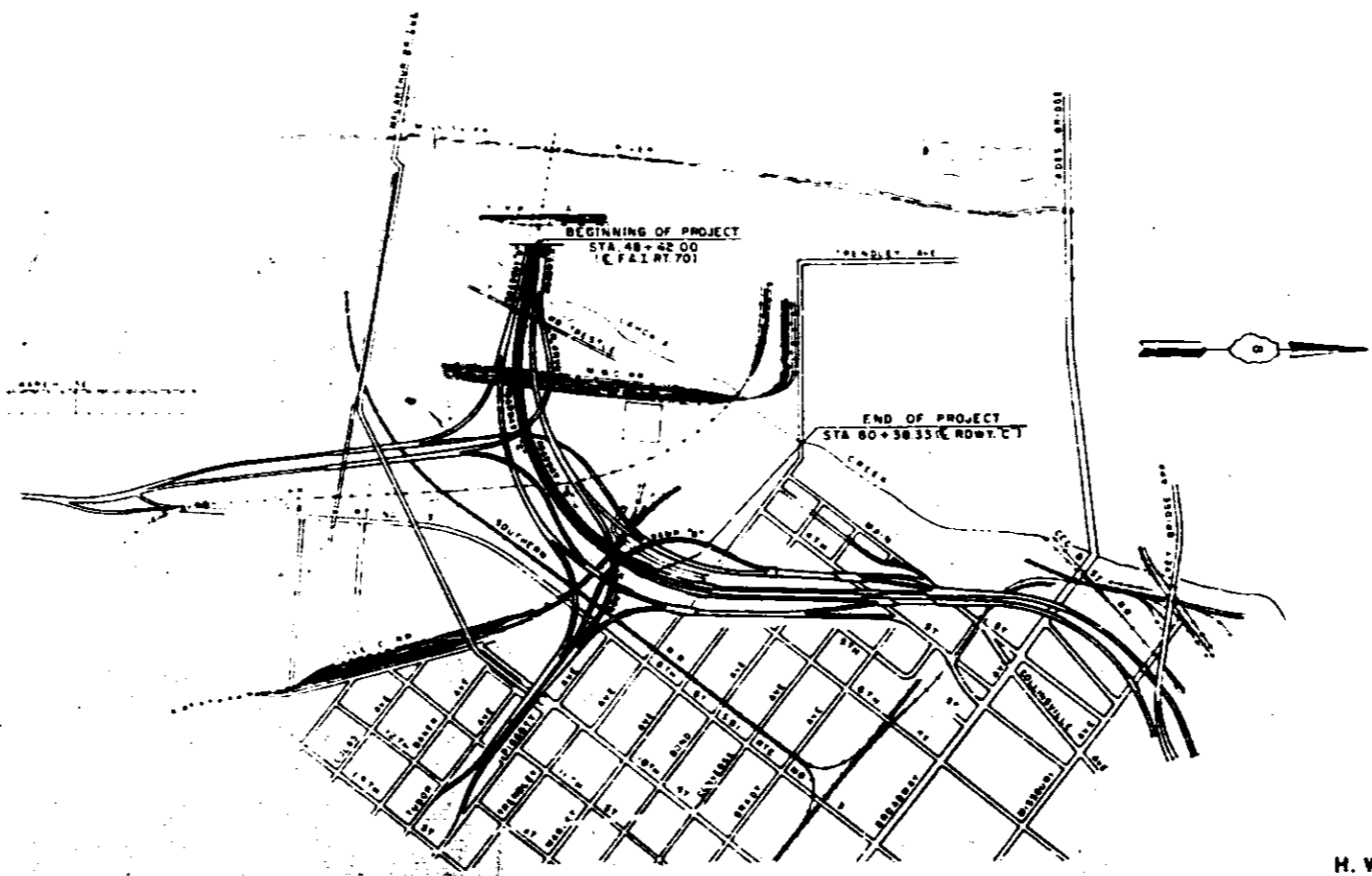
THE POPLAR STREET BRIDGE APPROACHES FOR THIS SECTION CARRY ROADWAYS 'B' AND 'C' OVER THE TRACKS OF THE TERMINAL RAILROAD ASSOCIATION, GULF, MOBILE, AND OHIO, ILLINOIS CENTRAL AND SOUTHERN RAILROADS, RAMP 'O' AND FUTURE ACCESS ROADS, THEY ALSO CARRY ROADWAY 'A' OVER ROADWAYS 'B', 'C' AND 'H', RAMP 'M' OVER ROADWAYS 'B', 'C' AND 'P', AND RAMP 'S' OVER ROADWAYS 'A', 'B', 'C' AND 'G'.

THE RAILROAD TRESTLE IN THIS SECTION CARRIES THE NORTH RAILROAD APPROACH TO THE MACARTHUR BRIDGE OVER ROADWAY 'A', 'B' AND 'C' AND RAMP 'M'.

THIS SECTION INCLUDES THE EMBANKMENT FOR RAMP 'O' BETWEEN ABUTMENTS 010 AND 011 (FROM STATION 17+02.33 TO STATION 21+74.67).

THIS SECTION ALSO INCLUDES ROUGH GRADING, DRAINAGE AND ELECTRICAL FACILITIES AND ALL APPURTENANT AND COLLATERAL WORK NECESSARY TO COMPLETE THE PROJECT, AS SHOWN ON THE PLANS.

NOTE:
FOR INDEX OF SHEETS AND SUMMARY OF QUANTITIES SEE SHEET NO. 3



LENGTH OF PROJECT
3190.33 FT. = .604 MILES
ROAD CLASSIFICATION 4454-T-50

CITY OF EAST ST. LOUIS
LOCATION PLAN

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED _____
DISTRICT ENGINEER DATE _____

REEL B-63

CONTRACT NO. 24130

259
H. W. Lochner
August 15, 1964

B.M. #26 Elev. 404.396
 X-Cut in NW corner of concrete abutment
 at center pier of Ill. Central R.R. Bridge
 over Ill. Rte. 3

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	259	6
FLY. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

GENERAL NOTES

COARSE AGGREGATE TO BE USED IN PARAPET HANDRAILS AND END POST MUST BE ABSOLUTELY FREE OF CHERT, FLINT, LIMONITE, LIMONITE AND SOFT SANDSTONE.

THE CONCRETE FLOOR SLAB SHALL BE FINISHED IN ACCORDANCE WITH ARTICLE 51.19 OF THE STANDARD SPECIFICATIONS.

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6" X 6" MESH, 34 WIRES WEIGHING 50 LBS. PER 100 SQ. FT.

ALL REINFORCEMENT BARS SHALL BE LAPPED 20 DIAMETERS OR LESS OTHERWISE SHOWN.

ALL STRUCTURAL STEEL SHALL CONFORM TO A. S. T. M. DESIGNATION A-36.

ALL FIELD CONNECTIONS BOLTED, HIGH STRENGTH STEEL BOLTS 7/8" OPEN HOLES 15/16" EXCEPT AS NOTED.

ANCHOR BOLTS SHALL BE SET BEFORE BOLTING DIAPHRAGMS OVER SUPPORTS.

ROADWAY EXPANSION GUARDS SHALL BE ASSEMBLED IN THE SHOP IN PROPER POSITION WITH THE ENDS IN PLACE AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION.

EDGE PLATES SHALL BE FLAME CUT AS PROVIDED IN ARTICLE 54.5 (1) OF THE STANDARD SPECIFICATIONS.

ALL SURFACE OF THE EXPANSION GUARD INACCESSIBLE AFTER ERECTION SHALL BE GIVEN TWO SHOP COATS OF RED LEAD PAINT. THE CONTACT SURFACES SHALL BE GIVEN ONE COAT OF RED LEAD PAINT. ANCHOR STUDS SHALL NOT BE PAINTED.

EXPANSION GUARDS ARE INCLUDED IN THE QUANTITY OF STRUCTURAL STEEL. ESTIMATED WEIGHT 165,470 LBS.

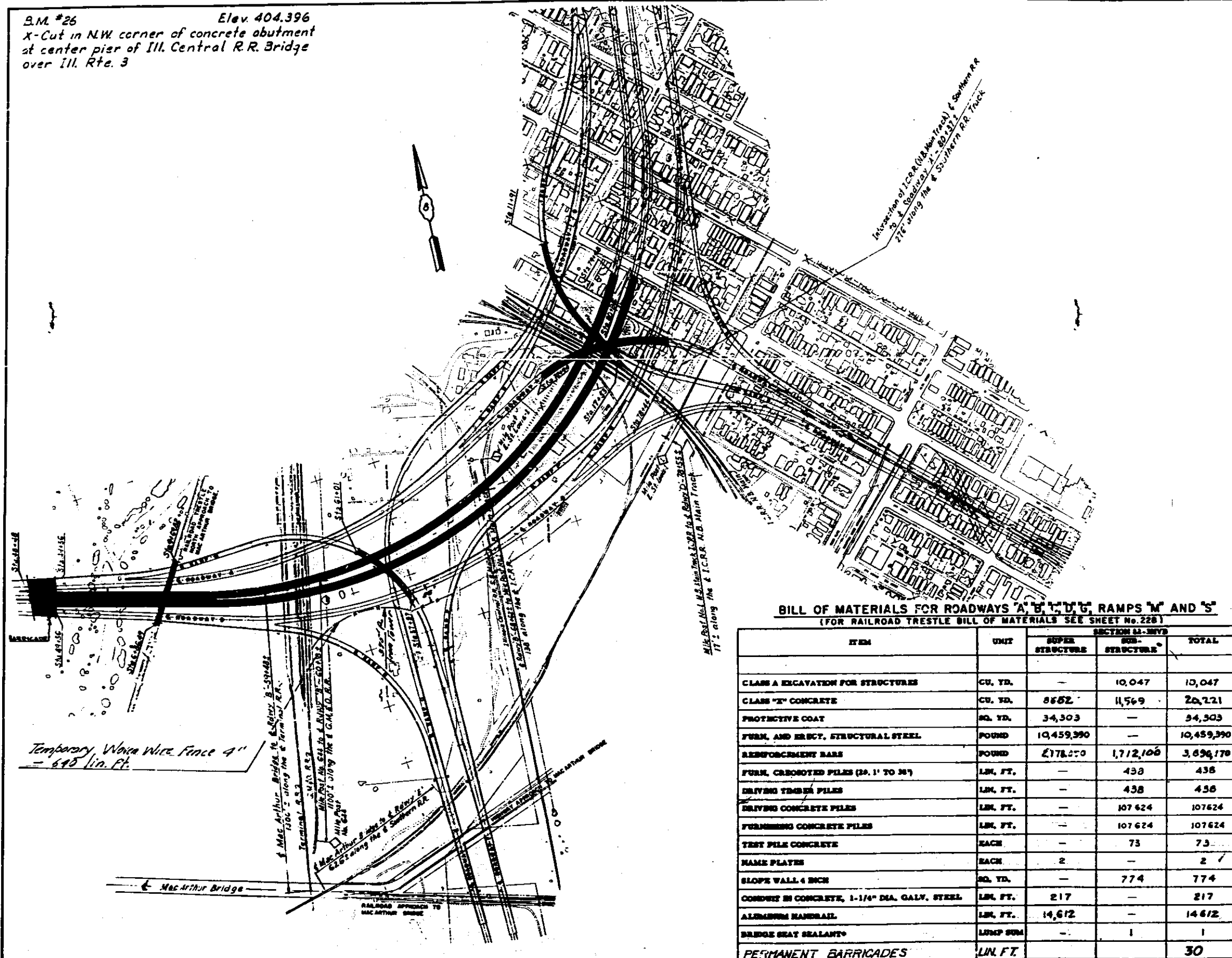
EXCEPT AS OTHERWISE PROVIDED, ALL STRUCTURAL STEEL SHALL RECEIVE ONE SHOP COAT OF RED LEAD PAINT AND TWO FIELD COATS OF GREEN PAINT. SEE ARTICLE 56.1 TO 56.5 INCLUSIVE OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

THE CONTRACTOR SHALL DRIVE ONE CONCRETE TEST PILE IN A PERMANENT LOCATION AT EACH ABUTMENT AND EACH PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

CONCRETE PILES AT ABUTMENTS SHALL BE DRIVEN IN HOLES PIERCED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 64.9 (c) OF THE STANDARD SPECIFICATIONS.

CURVED GIRDERS, INTERMEDIATE FLOOR BEAMS AND END FLOOR BEAMS SHALL BE COMPLETELY ASSEMBLED IN THE SHOP IN PROPER POSITION BEFORE BEAMING FIELD CONNECTIONS AND SHALL BE LEFT ASSEMBLED FOR SHOP INSPECTION.

PERMANENT FORMS WILL NOT BE PERMITTED IN FORMING THE CONCRETE FLOOR.



BILL OF MATERIALS FOR ROADWAYS A, B, C, D, E, RAMP S AND S'
 (FOR RAILROAD TRESTLE BILL OF MATERIALS SEE SHEET No. 228)

ITEM	UNIT	SECTION 82-3HVB		TOTAL
		SUPER STRUCTURE	SUB-STRUCTURE	
CLASS A EXCAVATION FOR STRUCTURES	CU. YD.	-	10,047	10,047
CLASS "X" CONCRETE	CU. YD.	8652	11,569	20,221
PROTECTIVE COAT	SQ. YD.	34,303	-	34,303
FURN. AND ERECT. STRUCTURAL STEEL	POUND	10,459,390	-	10,459,390
REINFORCEMENT BARS	POUND	2,178,070	1,712,106	3,890,176
FURN. CROSBY PILES (20.1' TO 20')	LN. FT.	-	438	438
DRIVING TRUSS PILES	LN. FT.	-	438	438
DRIVING CONCRETE PILES	LN. FT.	-	107,624	107,624
FURNISHING CONCRETE PILES	LN. FT.	-	107,624	107,624
TEST PILE CONCRETE	EACH	-	73	73
NAME PLATES	EACH	2	-	2
SLOPE WALL 4 INCH	SQ. YD.	-	774	774
CONDUIT IN CONCRETE, 1-1/4" DIA. GALV. STEEL	LN. FT.	217	-	217
ALUMINUM HANDRAIL	LN. FT.	14,672	-	14,672
BRIDGE SEAT SEALANT*	LN. FT.	-	1	1
PERMANENT BARRICADES	LN. FT.	-	-	30

DESIGN STRESSES

$f_c = 1400$ psi Super and Sub
 $f_s = 20,000$ psi Reinforcement
 $f_s = 20,000$ psi Struct. (A-36 Steel)
 $v_c = 75$ psi Footings
 $n = 10$

LOADING HS 20-44 & Alt.

Note
 All cross reference sheet numbers shown on the Bridge Plans are the numbers located in the lower right hand corner of each sheet.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS

**KEY PLAN, GENERAL NOTES
 AND BILL OF MATERIAL**

POPLAR STREET BRIDGE APPROACHES

F.A.I. 70 ST. CLAIR CO. SECTION 82-3HVB

H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

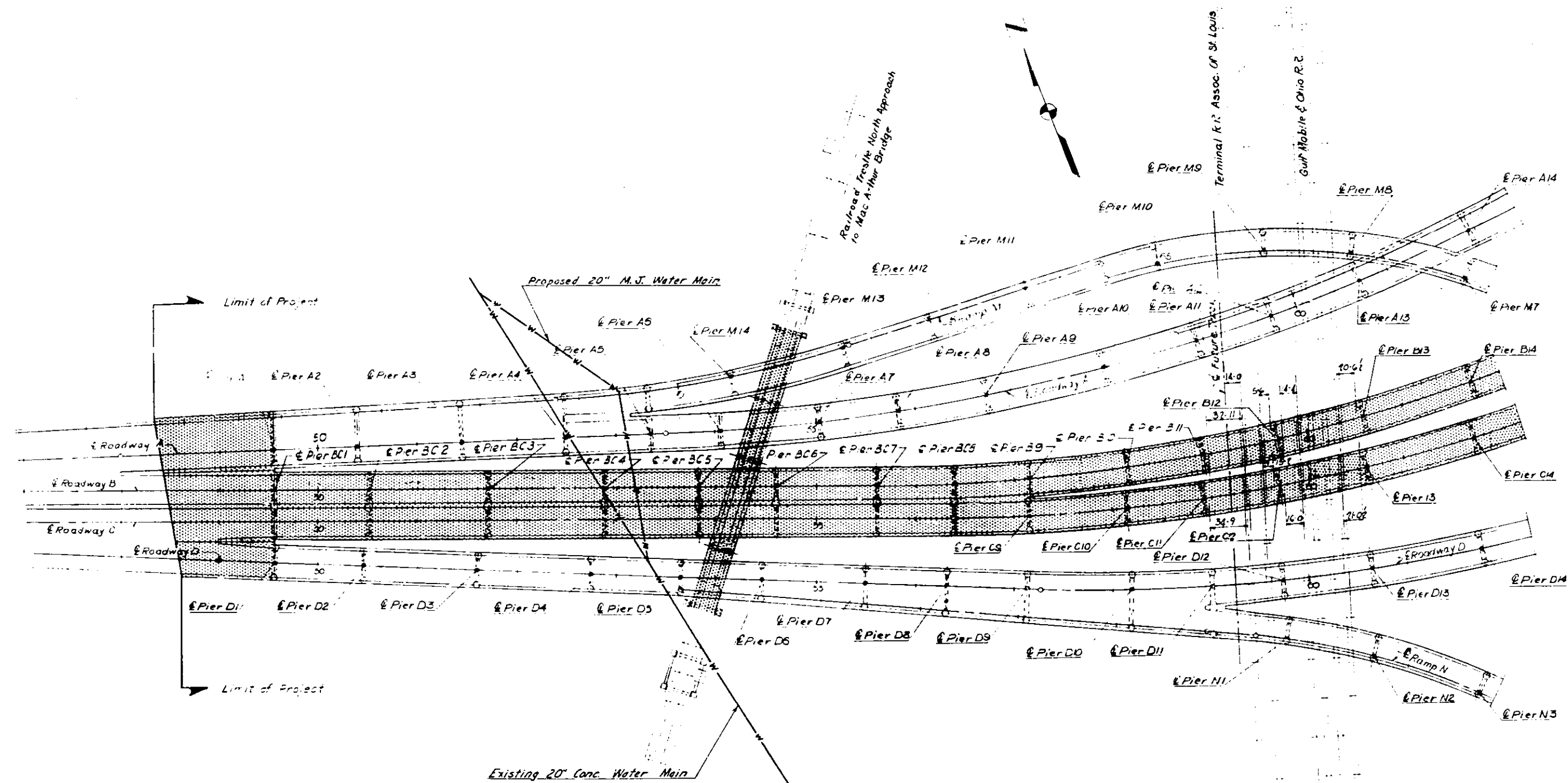
SHEET
 1 of 2


CLASS A EXCAVATION FOR STRUCTURES INCLUDES EXCAVATION FOR SLOPE WITH CURB AND SEALANT TO BE USED AT ABUTMENTS AND PIERS AT EXPANSION JOINTS INCLUDING THE TOP SURFACE OF PIER BEAMS AT END JOINTS

KEY PLAN

NO. 1. 14. D. 1/20/15
 Added 640' Temp. Fenc.

ROUTE NO	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	27
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



 - Indicates Portion included in Sec. 82-3HVB

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

GENERAL PLAN
POPLAR STREET BRIDGE APPROACHES

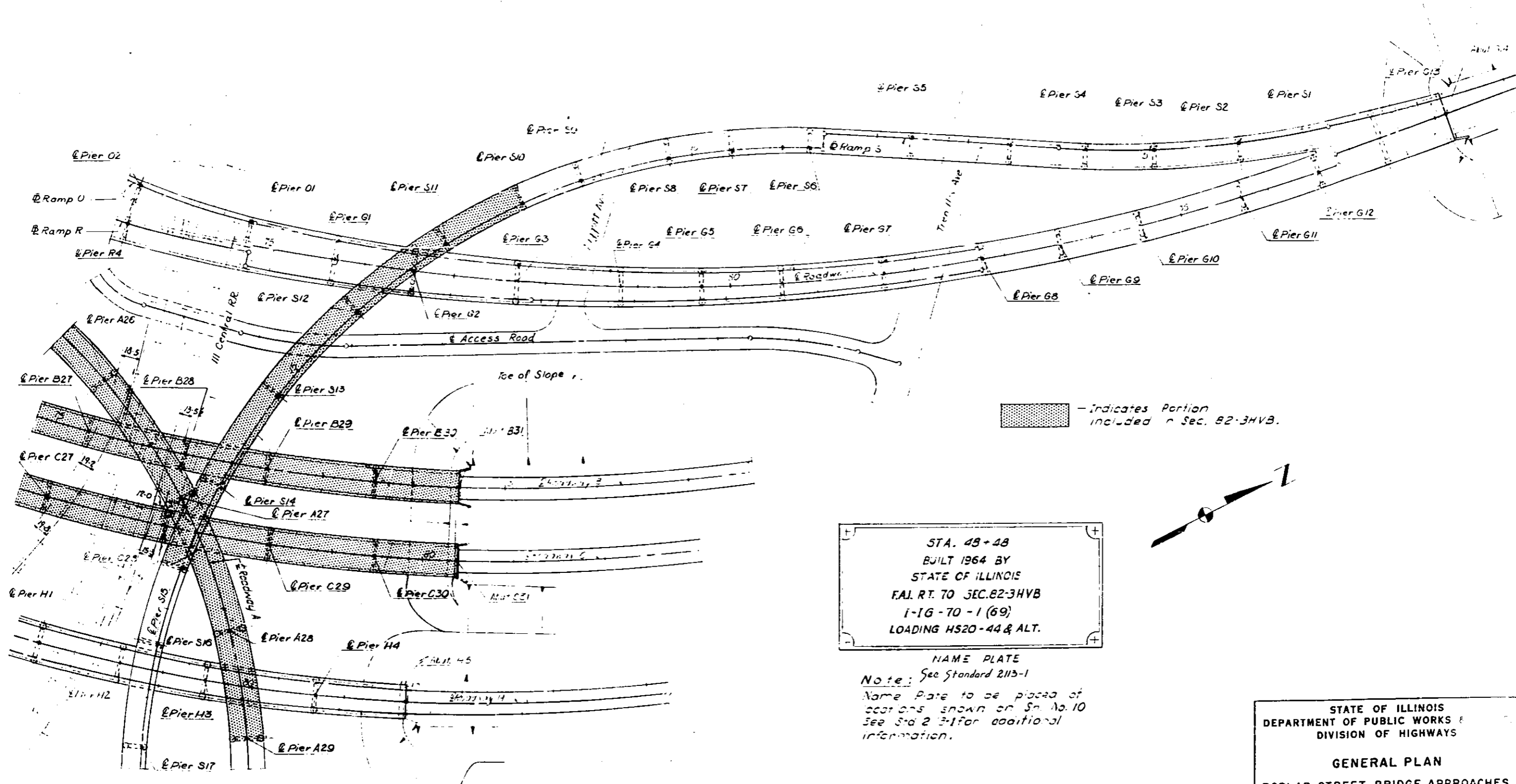
F.A.I. RT.70 ST. CLAIR CO. SECTION 82-3HVB

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
2 OF 24

DESIGNED BY RMR
DRAWN BY H
CHECKED BY RMR
APPROVED BY KA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-3HVB	ST. CLAIR	289	39
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



— Indicates Portion included in Sec. 82-3HVB.

STA. 48+48
 BUILT 1964 BY
 STATE OF ILLINOIS
 F.A.I. RT. TO SEC. 82-3HVB
 I-16-70-1 (69)
 LOADING HS20-44 & ALT.

NAME PLATE
 Note: See Standard 2113-1
 Name Plate to be placed at locations shown on Sp. No. 10
 See Sp. No. 213-1 for additional information.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS

GENERAL PLAN
 POPLAR STREET BRIDGE APPROACHES

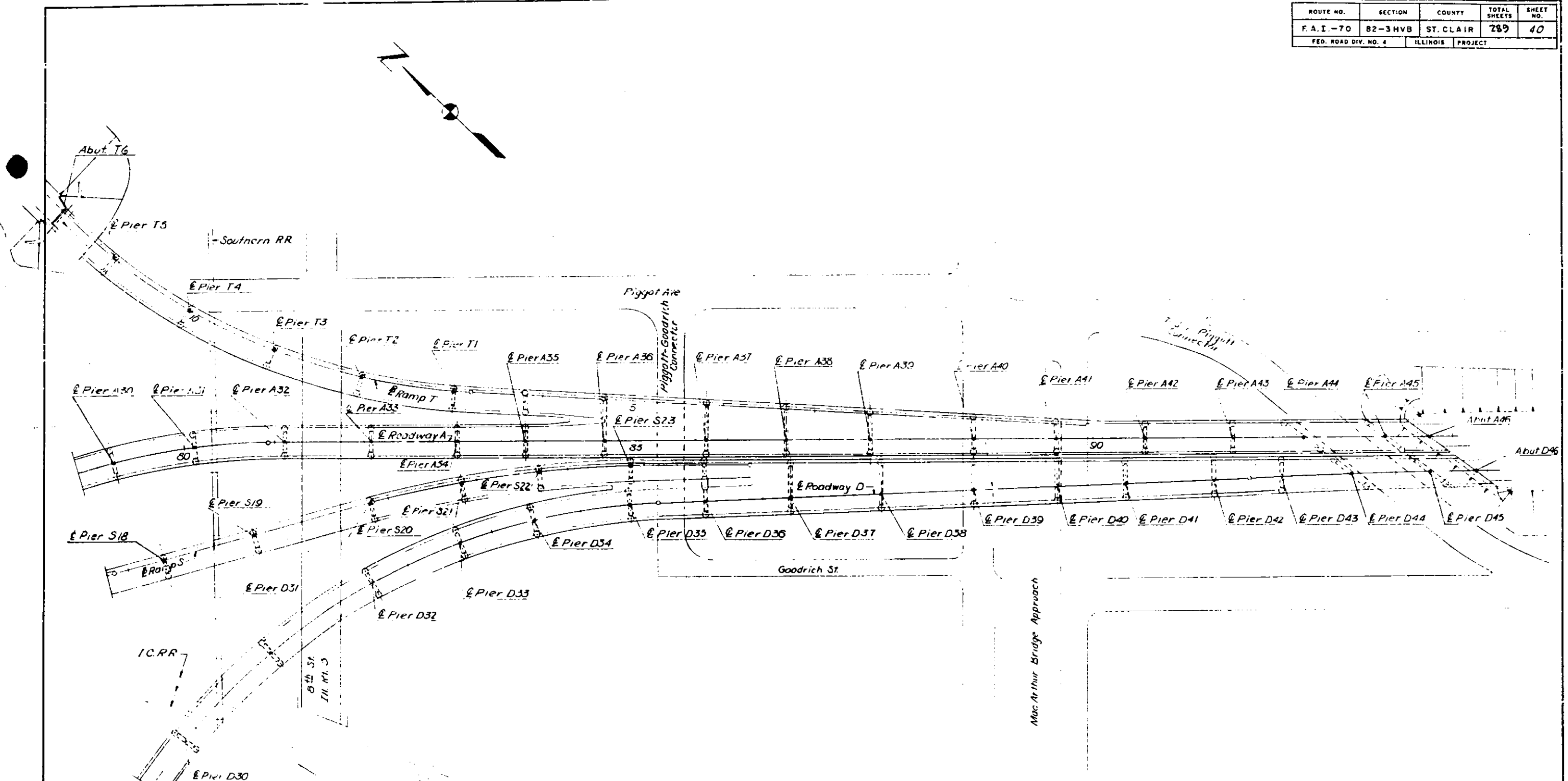
F. A. I. RT. TO ST. CLAIR CO. SECTION 82-3HVB

H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 4 OF 289

DESIGNED BY: RMR
 DRAWN BY: [Signature]
 CHECKED BY: RMR
 APPROVED BY: KA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	40
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



DESIGNED BY R.R.
 DRAWN BY R.M.R.
 CHECKED BY R.M.R.
 APPROVED BY R.A.

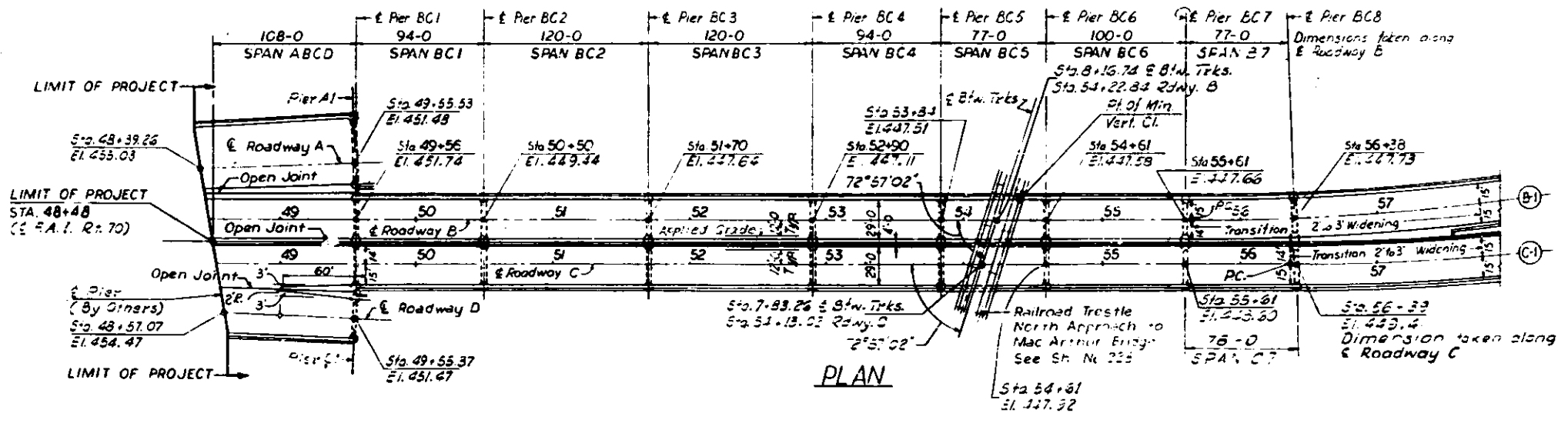
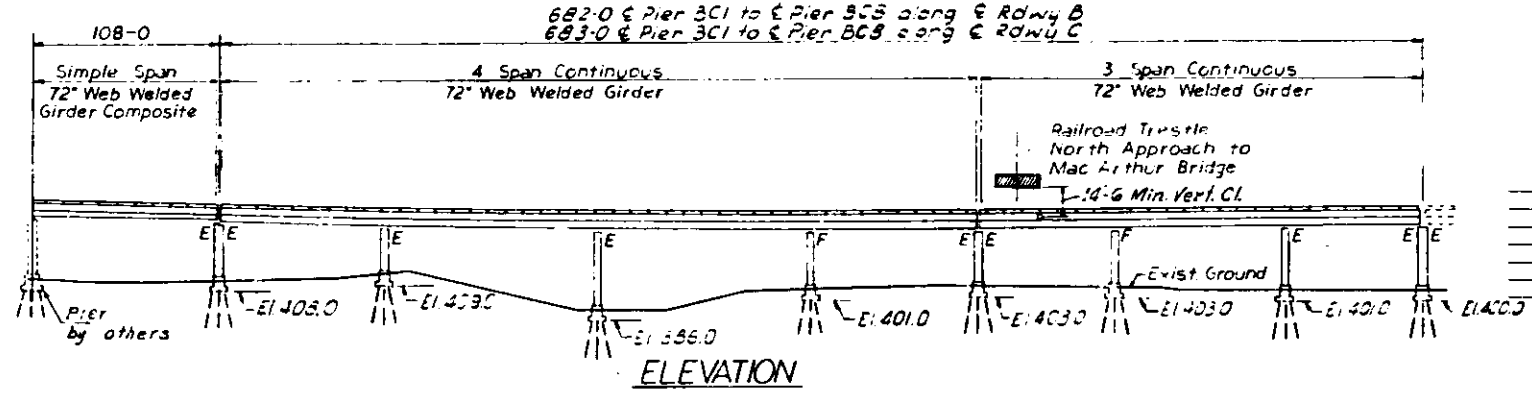
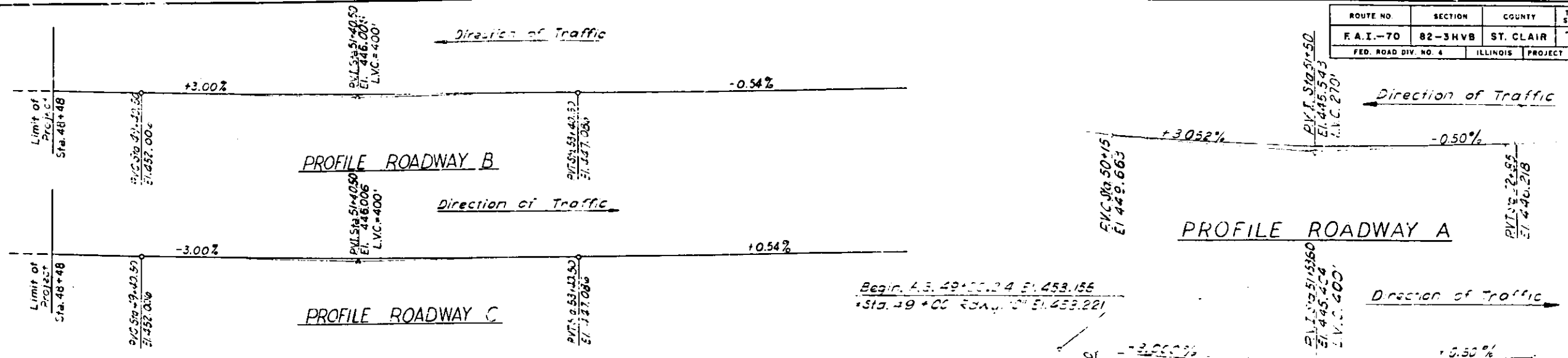
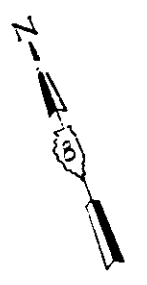
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS

GENERAL PLAN
 POPLAR STREET BRIDGE APPROACHES

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 3 of 4

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	42
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



NOTES:
 For Key Plan, General Notes, Bill of Materials,
 Section Markings, Design Approaches See SH. N° 1.
 For Geometric Layout And Drive Data See
 SH. N° 164 1B.

DESIGNED BY J.J.N.
 DRAWN BY DCF
 CHECKED BY AJC
 APPROVED BY KA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS

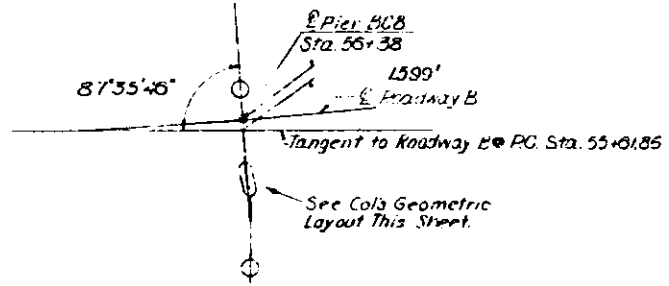
PLAN AND ELEVATION
 SPAN ABCD, SPANS BC1 THRU BC6, SPAN B7 & SPAN B8
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B", "C" AND "D"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB

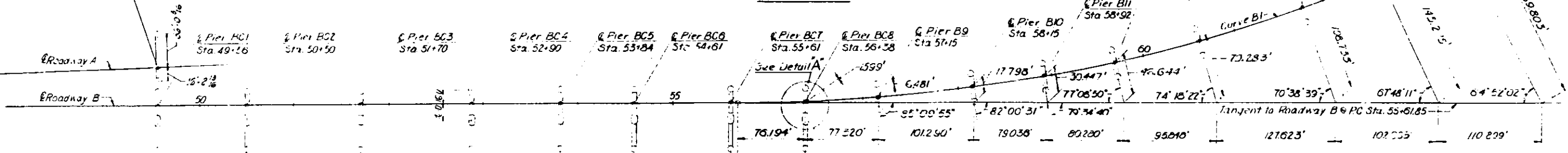
H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 7 of 21

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-3HVB	ST. CLAIR	289	51
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



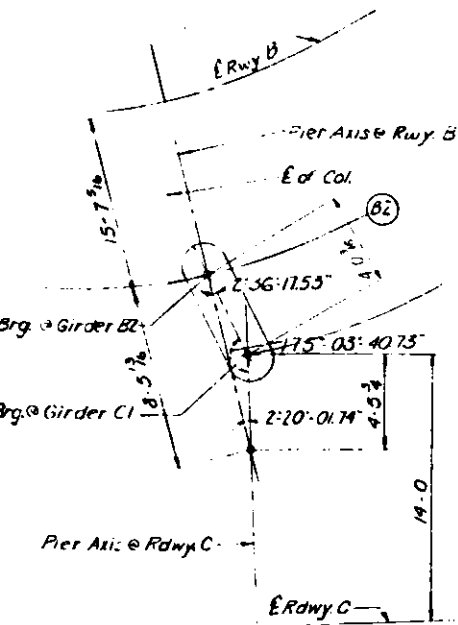
Pier A1
 Sta. 49+56.53
 N. Coord. - 9235.501
 E. Coord. - 30826.075
 Azimuth - 16° 49' 09"



Curve B1
 PI = 76+31.10
 $\Delta = 87^\circ 39' 16''$
 $D = 3^\circ 07' 24''$
 $R = 1815.00'$
 $A = 3093.47'$
 $T = 2075.25'$
 $E = 941.97'$
 $S = 8.00\%$

Pier No.	Station	B		Azimuth	Right Col. Offset	Left Col. Offset
		N. Coordinate	E. Coordinate			
BC1	49+56	9256.143	30813.423	16° 47' 00"	16-0	16-0
BC2	50+50	9225.570	30902.417	16° 47' 00"	16-0	16-0
BC3	51+70	9187.237	31016.020	16° 47' 00"	16-0	16-0
BC4	52+90	9148.598	31129.635	16° 47' 00"	16-0	16-0
BC5	53+84	9118.331	31210.629	16° 47' 00"	16-0	15-0
BC6	54+61	9093.537	31291.528	16° 47' 00"	16-0	16-0
BC7	55+61	9061.338	31386.202	16° 47' 00"	16-0	16-0
BC8	56+38	9030.065	31459.595	16° 22' 46"	15-7 1/2	16-0
B9	57+15	9017.924	31533.908	15° 56' 55"	15-9 3/4	16-0
B10	58+15	8990.504	31631.574	10° 47' 31"	15-11 9/16	16-0
B11	58+92	8983.895	31707.495	8° 21' 40"	16-0	16-0
B12	59+69	8974.117	31783.891	5° 55' 50"	16-0	16-0
B13	60+59	8967.041	31813.804	5° 05' 22"	16-0	16-0
B14	61+75	8964.494	31889.558	179° 25' 39"	16-0	16-0
B15	62+05	8967.624	32079.492	176° 35' 11"	16-0	16-0
B16	63+58	8975.537	32172.145	173° 38' 02"	16-0	16-0
B17	64+77	8992.564	32289.69	169° 53' 38"	16-0	16-0
B18	65+56	9017.269	32406.264	165° 08' 15"	16-0	16-0
B19	66+89	9041.854	32495.965	163° 12' 08"	16-0	16-0
B20	67+02	9071.000	32584.269	160° 15' 57"	16-0	16-0
B21	69+01	9114.824	32654.863	156° 30' 33"	16-0	16-0

*NOTE: Dimension is given to Girder B2 Bearing at Column; see Detail this Sheet.

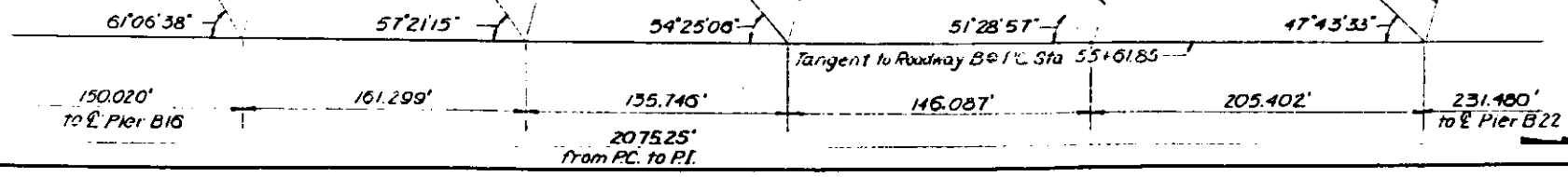


GEOMETRIC LAYOUT CENTER COL. PIER BCB

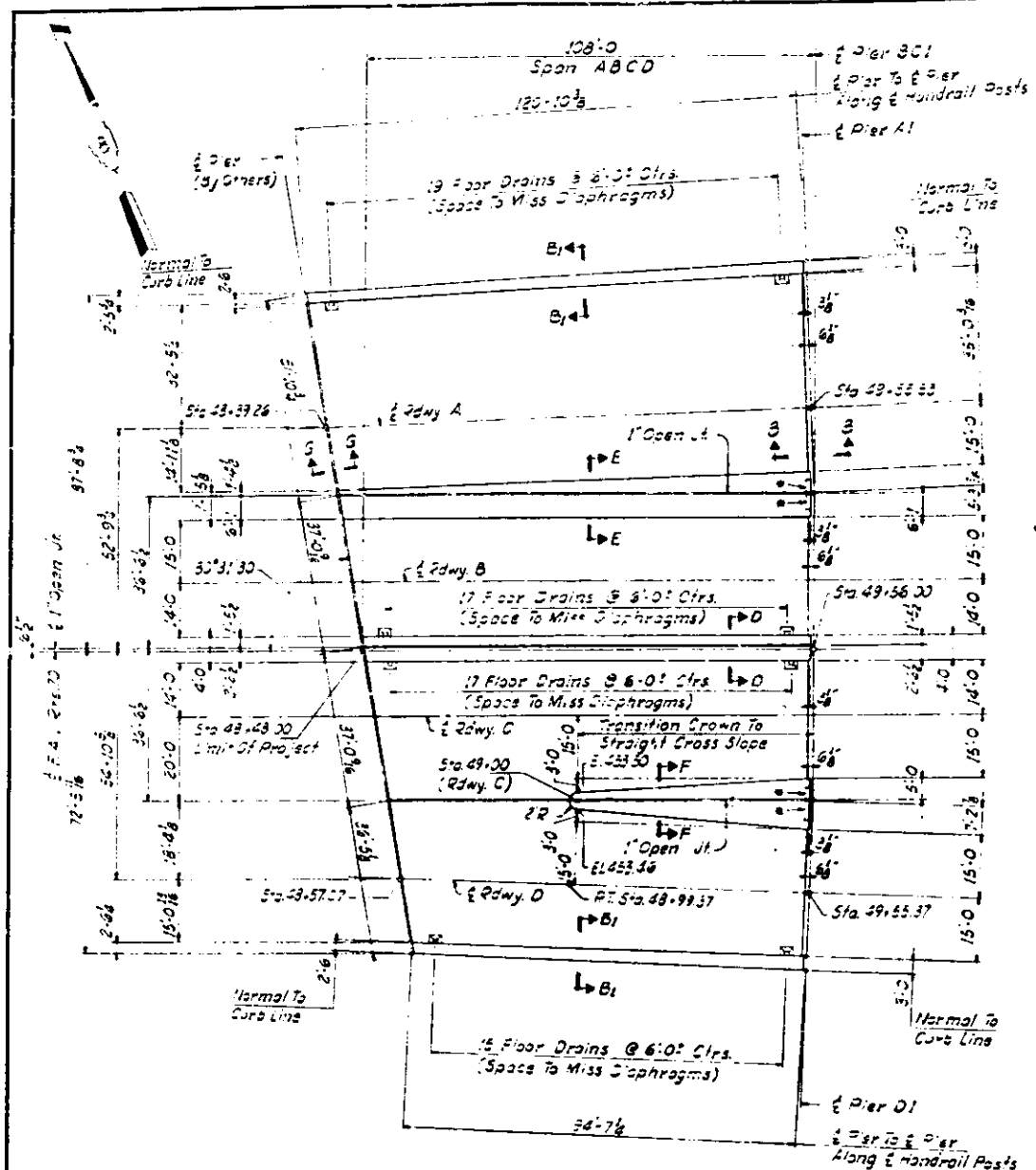
DESIGNED BY RMR
 DRAWN BY AK
 CHECKED BY AS
 APPROVED BY KA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS
GEOMETRIC LAYOUT
 PIER BCI TO PIER B21
 POPLAR STREET BRIDGE APPROACHES
 ROADWAY "B"
 F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

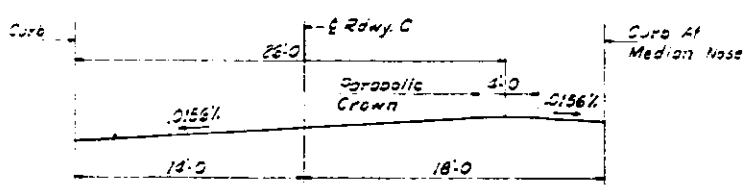
SHEET 16 of 24



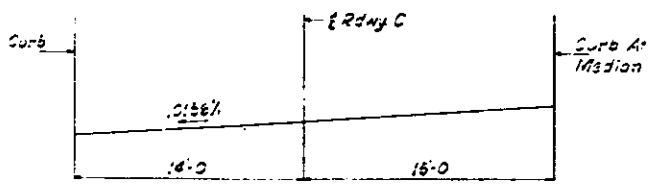
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. I-70	82-3HV8	ST. CLAIR	289	59
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



DIMENSION PLAN
SPAN ABCD



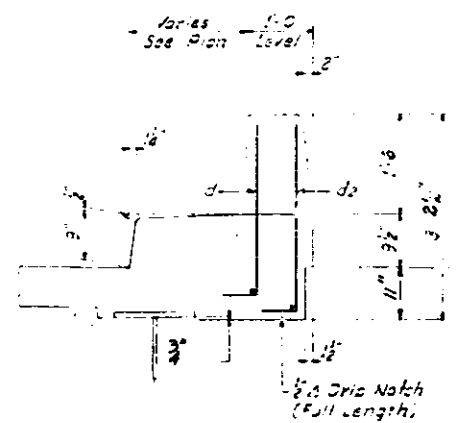
SECTION AT MEDIAN NOSE



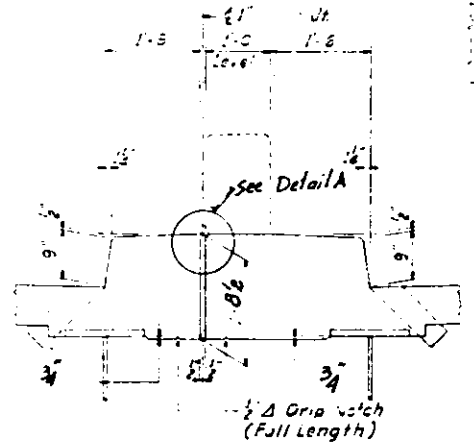
SECTION AT PIER D1

RDWY. C CROSS SLOPE TRANSITION

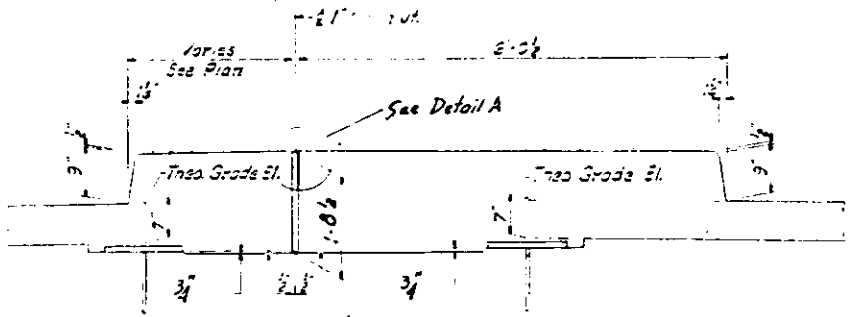
DESIGNED BY: R.S.R.
DRAWN BY: SHATZ
CHECKED BY: G.S.
APPROVED BY: K.A.



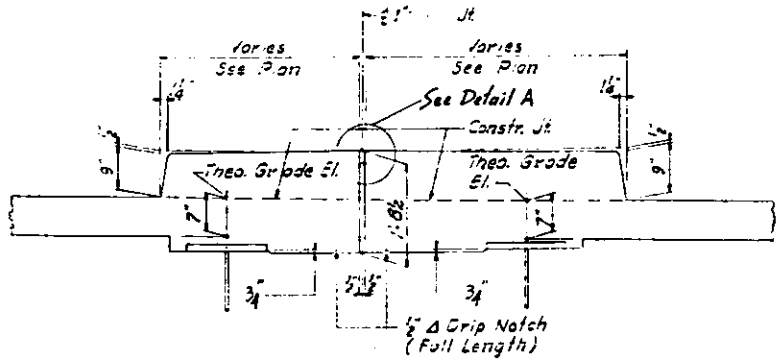
SECTION B1-B1



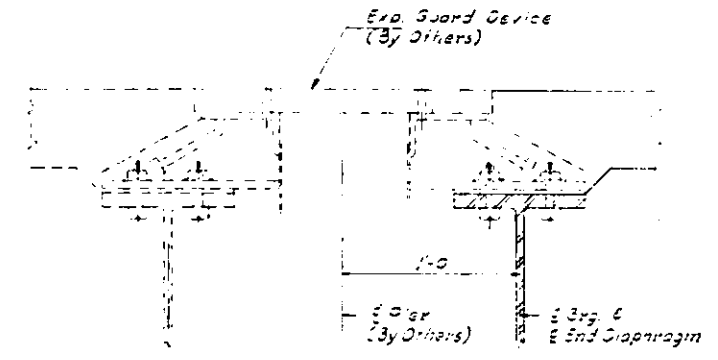
SECTION D-D



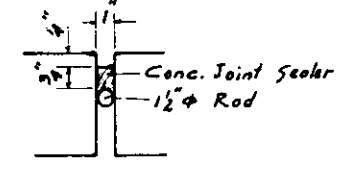
SECTION E-E



SECTION F-F



SECTION G-G



DETAIL A

For Conc. Joint Sealer and 1/2" Rod See Special Provisions
The joints must be covered with a masking tape before the application of the protective coat on the bridge deck to prevent the spray from filling the vertical faces. The concrete joint sealer shall be applied only when the ambient temperature is 68°F and rising.

Notes:
For Notes on S. 1110, Detail's See Sh. N9-24.
For Reinforcement of Slab See Sh. N9-25.
For Parapet Reint. & 2" Spacing See Sh. N9-45.
For Section B-B see Sh. N9-131.
For Dead Load Deflection Diagrams See Sh. N9-84.
For Optional Horizontal Joint Detail's See Sh. N9-30.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

SLAB
SPAN ABCD-DIMENSIONS
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A" "B" "C" AND "D"

F.A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
24 of 25

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-34VB	ST. CLAIR	269	
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

BILL OF MATERIAL

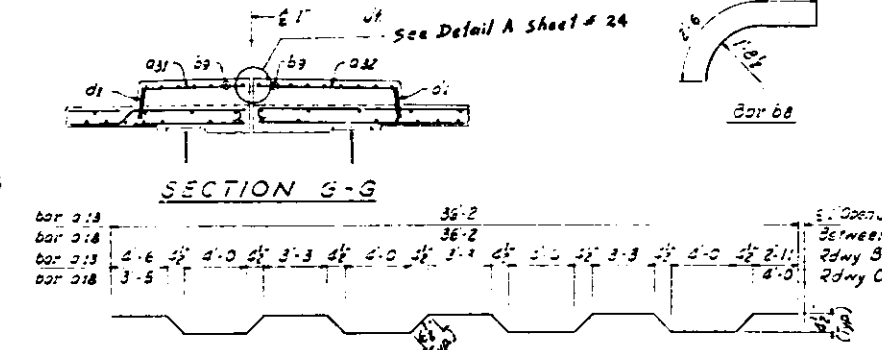
NO.	SIZE	LENGTH	SHAPE
25 a	325	*5	33-11
25 a1	77	*5	27-6
25 a2	76	*5	27-3
25 a3	76	*5	27-2
25 a4	76	*5	27-0
25 a5	320	*5	33-0
25 a6	76	*5	27-0
25 a7	76	*5	27-8
25 a8	76	*5	27-6
25 a9	76	*5	27-4
25 a10	126	*5	3-2
25 a11	54	*5	3-5
25 a12	29	*4	7-11
25 a13	129	*5	27-6
25 a14	129	*5	38-1
25 a15	129	*5	36-2
25 a16	57	*5	6-9
25 a17	54	*4	7-2
25 a18	122	*5	11-5
25 a19	152	*5	31-9
25 a20	112	*5	26-7
25 a21	251	*5	24-9
25 a22	55	*5	14-1
25 a23	84	*5	15-10
25 a24	84	*5	17-7
25 a25	251	*5	33-10
25 a26	63	*5	7-2
25 a27	84	*5	15-11
25 a28	84	*5	15-8
25 a29	21	*5	35-8
25 a30	6	*4	2-9
25 a31	14	*4	8-4
25 a32	14	*4	10-7
25 b	490	*5	30-10
25 b1	20	*4	30-9
25 b2	72	*4	29-2
25 b3	324	*5	29-2
25 b4	32	*4	27-7
25 b5	320	*5	27-8
25 b6	251	*5	34-8
25 b7	15	*4	31-10
25 b8	2	*4	3-6
25 b9	33	*4	19-4
25 c	110	*5	3-6
25 d	131	*5	3-0
25 di	383	*4	7-1

Note X

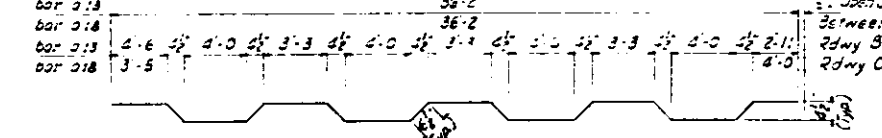
ITEM	UNIT	TOTAL
Class X Concrete	Cu. Yds	517.2
Reinforcement Bars	Lbs.	142,110
Protective Coat	Sq. Yds	2,106
Structural Steel	Lbs.	218,440

Notes:
 For Dimensions See Dimension Plan Span ABCD Sh. N^o 24
 For Notes and Misc. Details See Sh. N^o 33.
 For Parapet Reinf. & Joint Spacing See Sh. N^o 45.

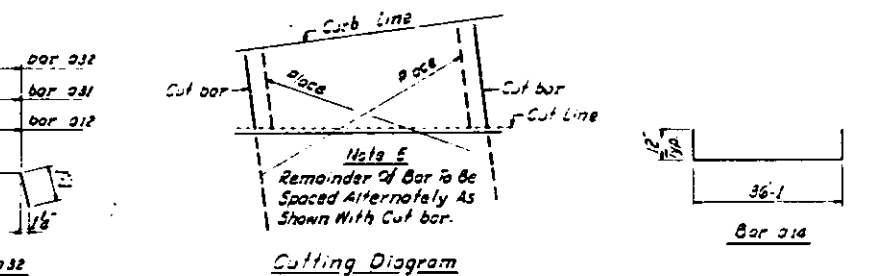
REINFORCEMENT PLAN - MEDIAN



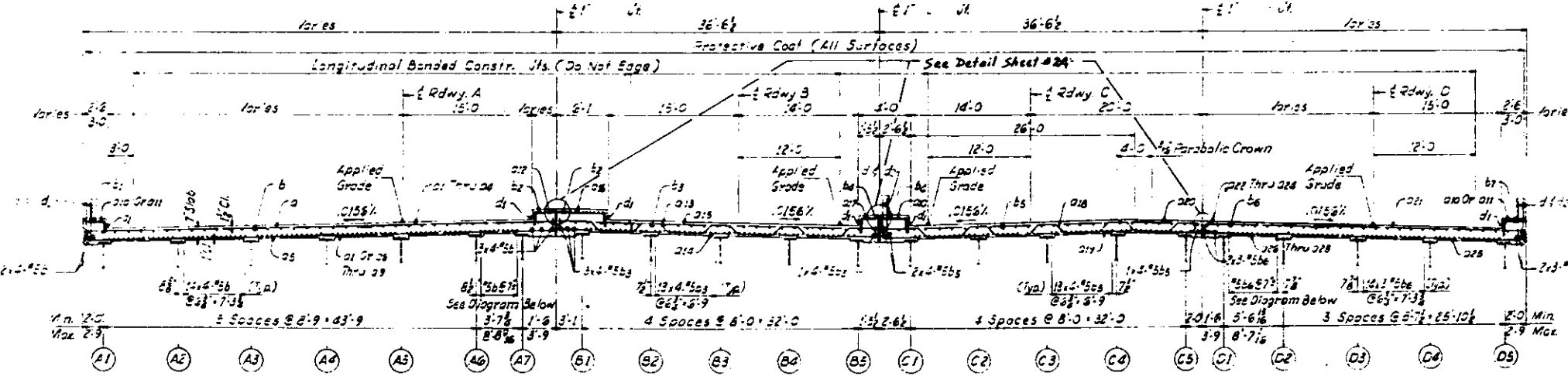
SECTION G-G



Cutting Diagram



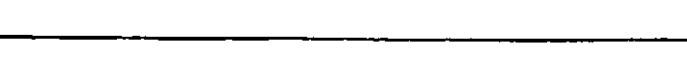
REINFORCEMENT PLAN SPAN ABCD



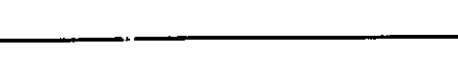
CROSS SECTION



BOTTOM BAR PLACEMENT DIAGRAM



BOTTOM BAR PLACEMENT DIAGRAM



Note:
 Weight of Bearing Assemblies With Lead Plates And Anchor Bolts Are Included As Structural Steel.
 Est. Wt. 13,922 Lbs.

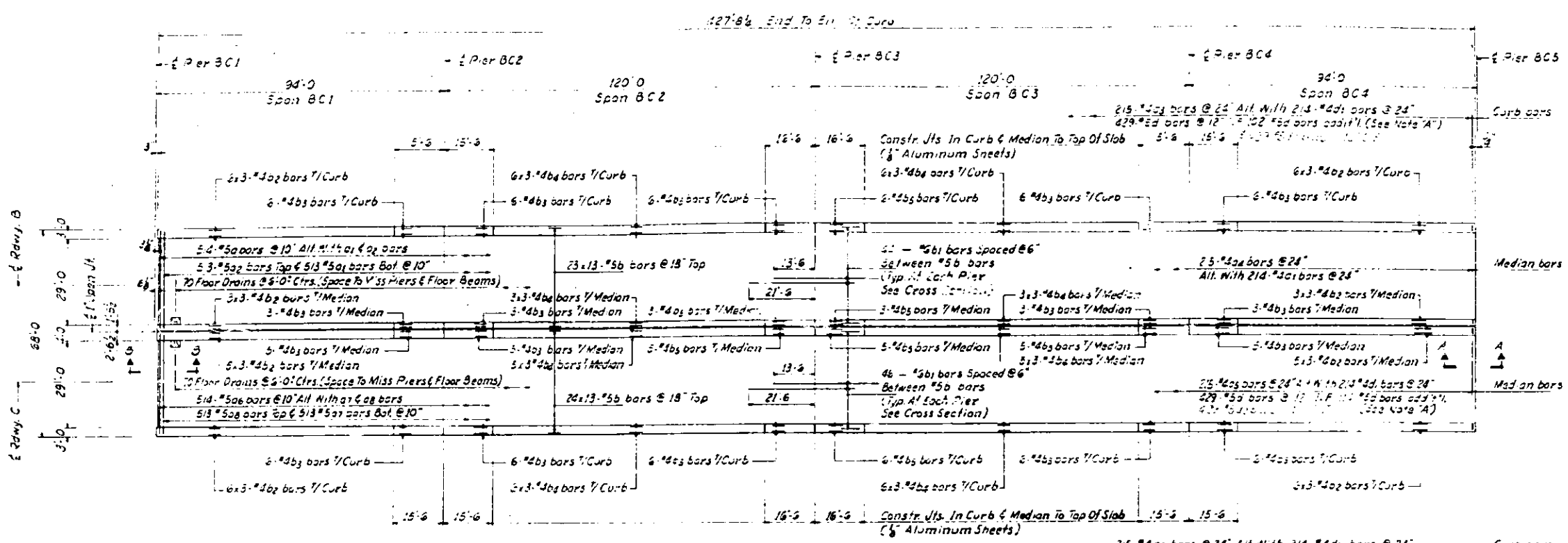
DESIGNED BY: CACZ
 DRAWN BY: CHAZZ
 CHECKED BY: [Signature]
 APPROVED BY: [Signature]

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
SLAB
 SPAN ABCD - REINFORCEMENTS
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A" "B" "C" AND "D"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-34VB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 25 of 26

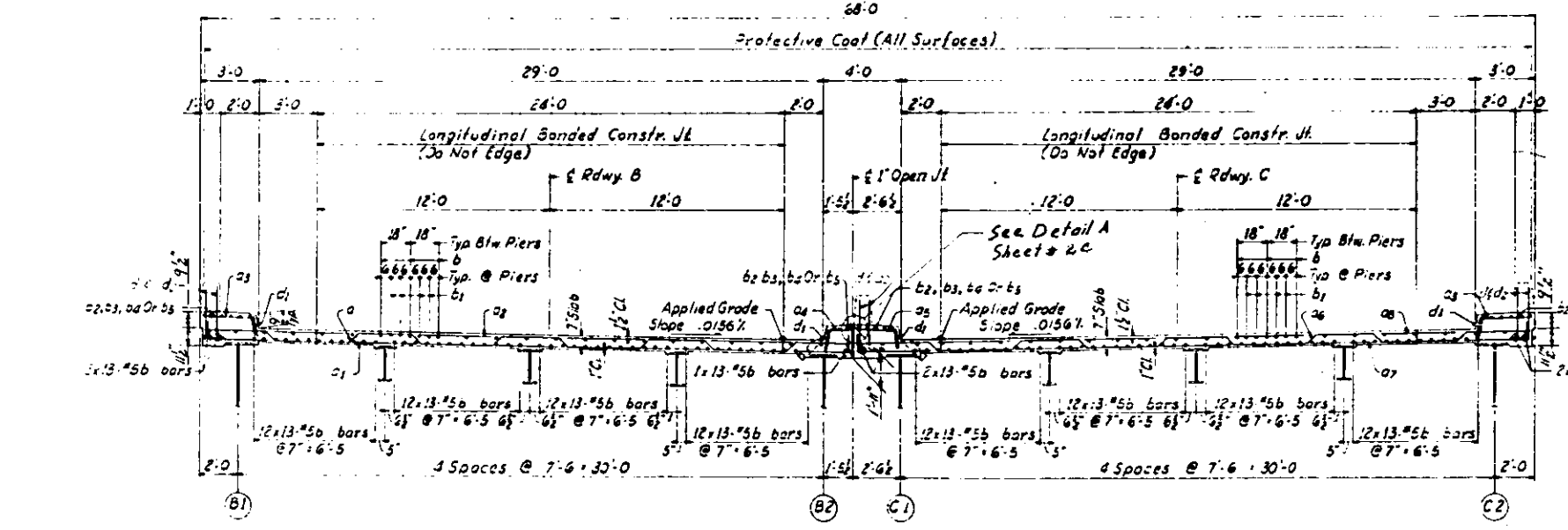
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	61
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



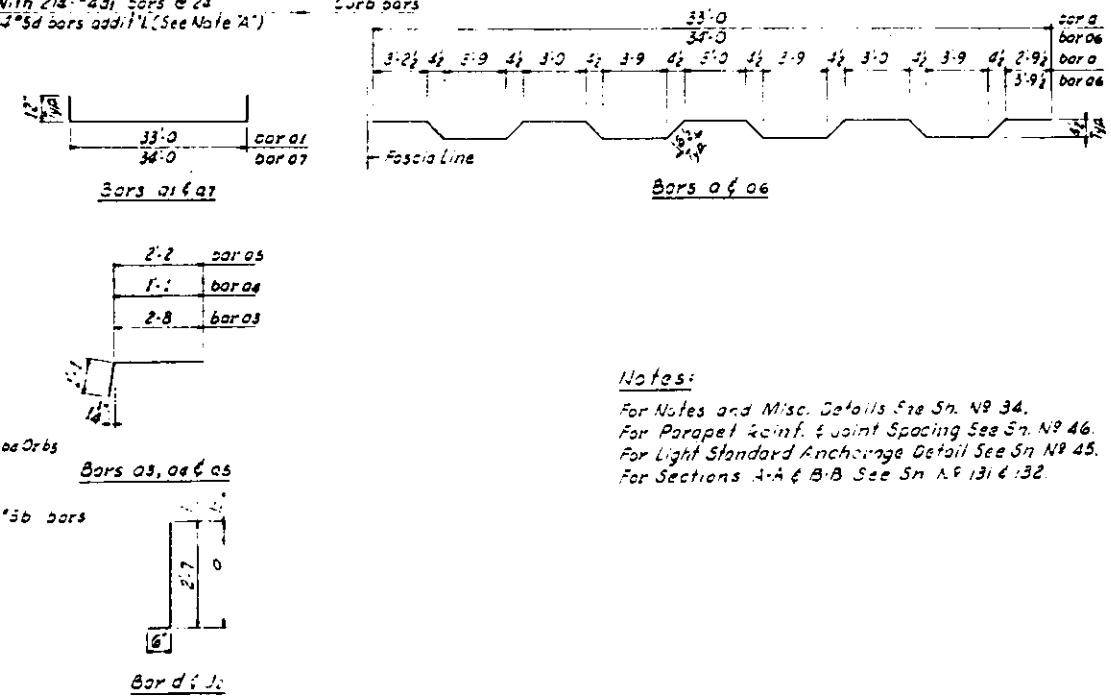
PLAN
SPAN BC1 THRU BC4

BILL OF MATERIAL

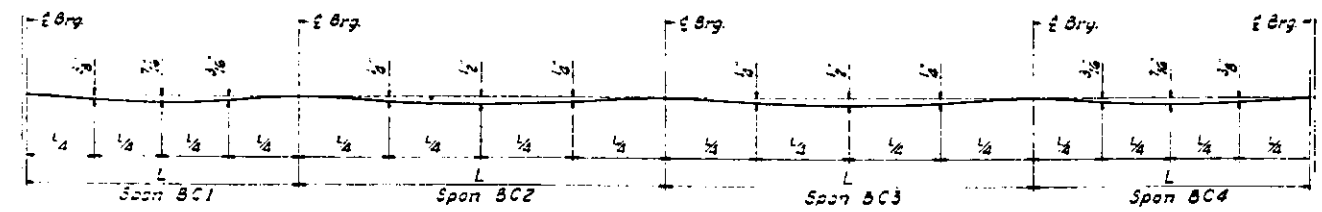
NO.	QTY	SIZE	LENGTH	SHAPE
26 a	514	#5	38'-3"	
26 a1	513	#5	35'-0"	
26 a2	513	#5	32'-0"	
26 a3	430	#4	3'-9"	
26 a4	2-5	#4	2'-2"	
26 a5	215	#4	3'-3"	
26 a6	514	#5	35'-0"	
26 a7	513	#5	36'-0"	
26 a8	513	#5	34'-0"	
26 b	1950	#5	33'-10"	
26 b1	270	#6	35'-0"	
26 b2	120	#4	2'-5"	
26 b3	80	#4	15'-5"	
26 b4	120	#4	30'-0"	
26 b5	-	#4	14'-3"	
26 d	-	#5	3'-1"	
26 d1	856	#4	1'-7"	
26 d2	1227	#5	6'	
26 See Notes X Sn. N9 25				
ITEM	UNIT	TOTAL		
Class X Concrete	Cu Yds	2167		
Reinforcement Bars	Lbs	212,580		
Protective Coat	Sq Yds	3611		
Structural Steel	Lbs	101,650		



CROSS SECTION



Notes:
 For Notes and Misc. Details See Sn. N9 34.
 For Parapet Conf. & Joint Spacing See Sn. N9 46.
 For Light Standard Anchorage Detail See Sn. N9 45.
 For Sections A-A & B-B See Sn. N9 131 & 132.



DEAD LOAD DEFLECTION DIAGRAM
FASCIA GIRDERS (wt. of Concrete Only)

Note:
 Weight of Bearing Assemblies with Lead Piles and Anchor Bolts are included as Structural Steel.
 Est. Nt. 24116 Lbs.

DESIGNED BY: R. V. G.
 DRAWN BY: GRATZ
 CHECKED BY: G.S.
 APPROVED BY: K. 4

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS 35.
 DIVISION OF HIGHWAYS

SLAB
 SPANS BC1 THRU BC4
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 289-61

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. -70	82-3HVB	ST. CLAIR	789	80
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

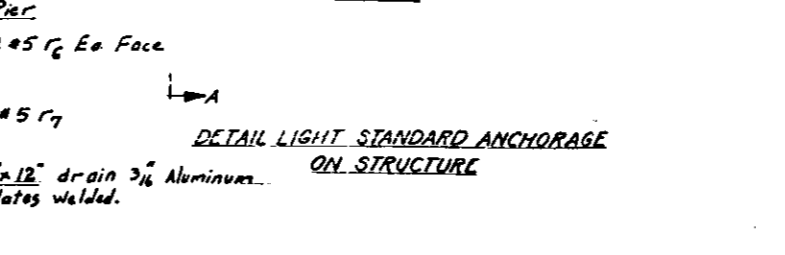
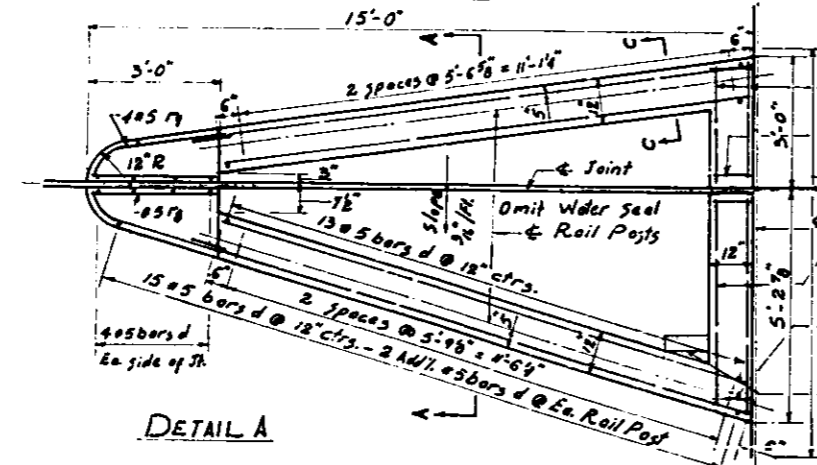
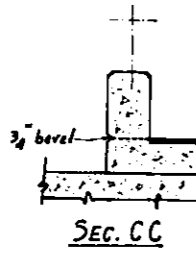
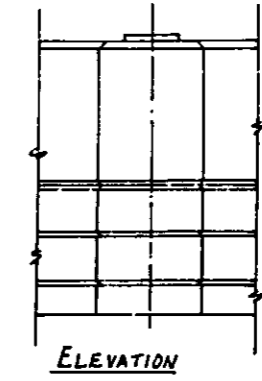
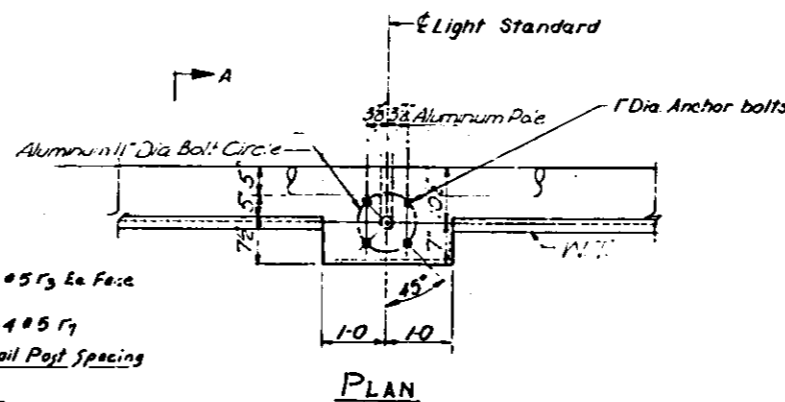
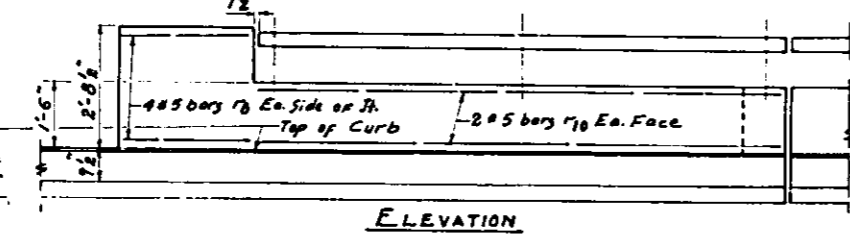
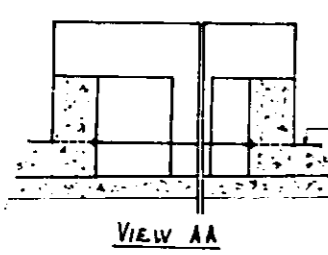
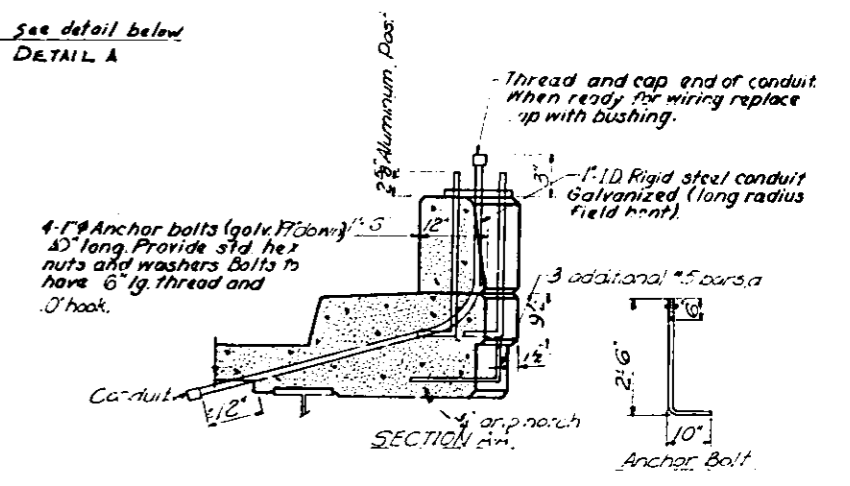
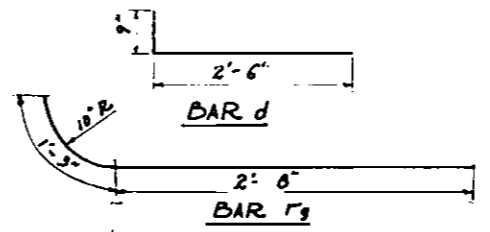
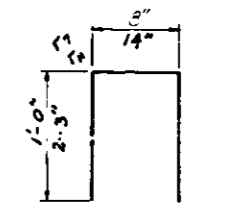
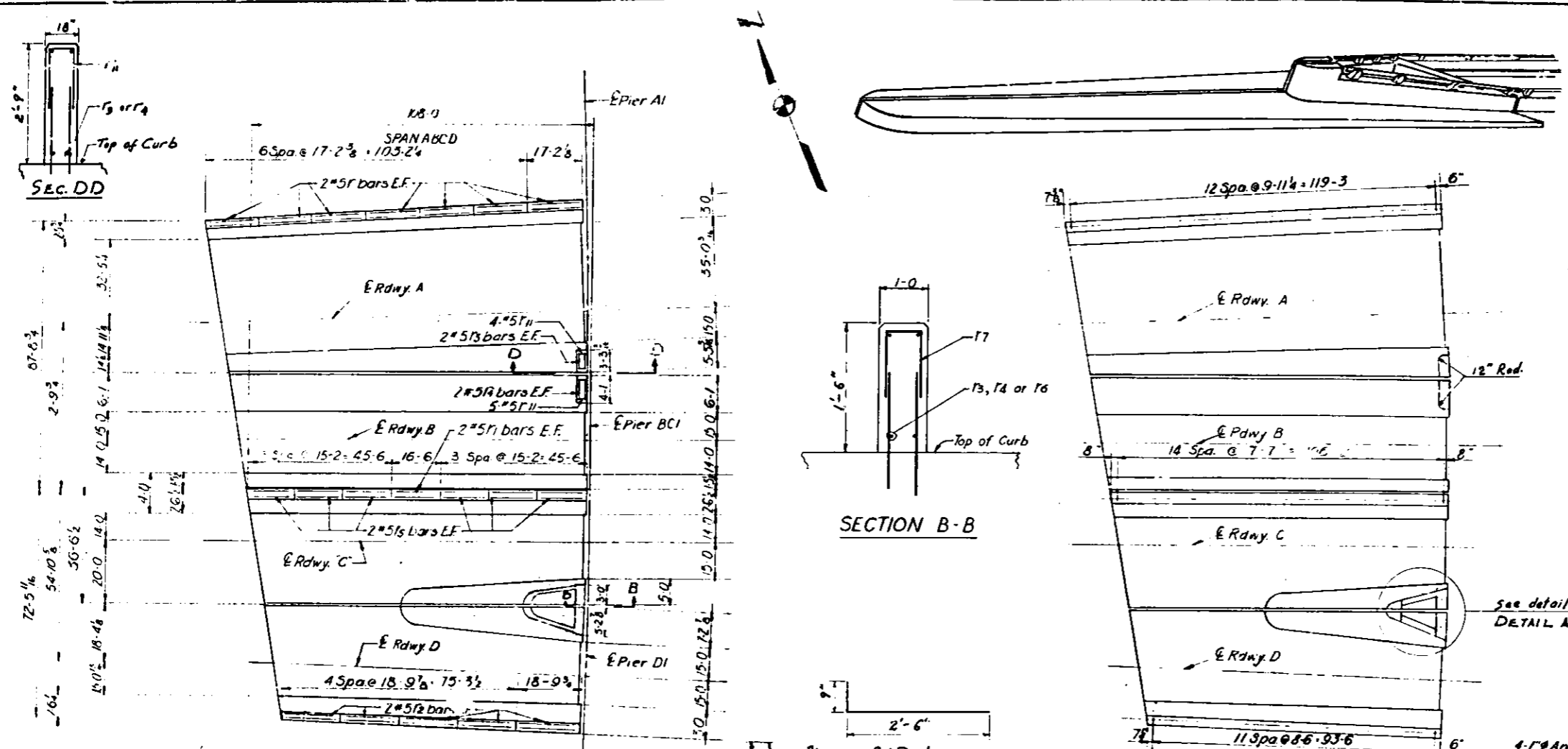
BILL OF MATERIAL

BAR NO.	NO.	SIZE	LENGTH	SHAPE
451	28	#5	16-10	
452	4	#5	16-3	
453	20	#5	18-6	
454	8	#5	2-9	
455	4	#5	2-9	
456	24	#5	14-11	
457	4	#5	4-11	
458	10	#5	2-8	

ITEM	UNIT	TOTAL
CLASS "X" CONCRETE	Cu Yds.	16.9
REINFORCEMENT BARS	Lbs.	1780
ALUMINUM HANDRAIL	Lin Ft.	347

* See Note X Sh. No 25

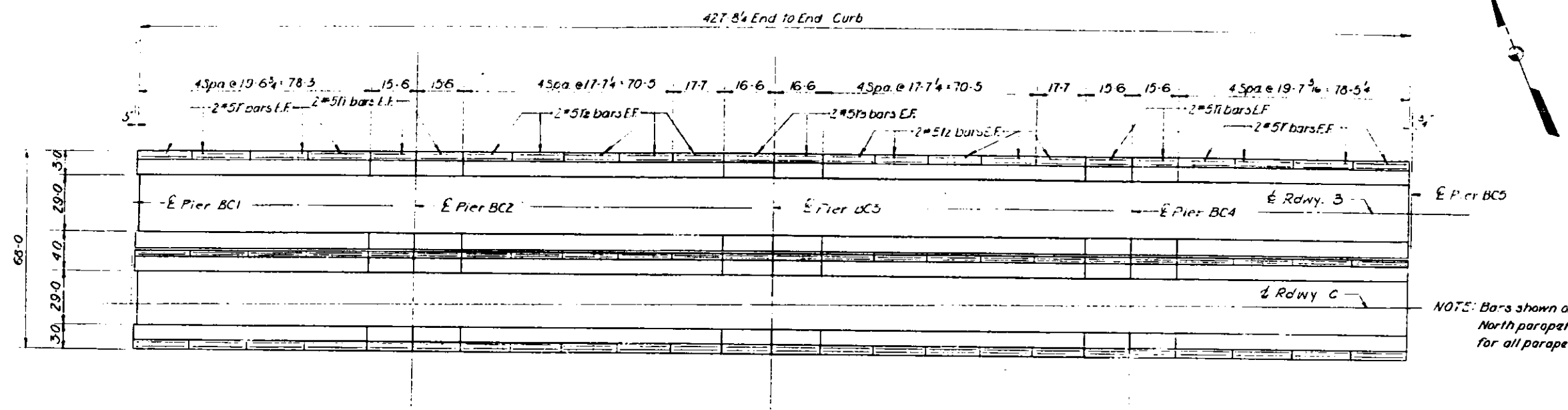
458	8	#5	2'-8"	
459	8	#5	3'-11"	
4510	8	#5	13'-3"	
4511	9	#5	5'-8"	
4512	16	#5	3'-3"	



DESIGNED BY RMR
 DRAWN BY JM
 CHECKED BY AS
 APPROVED BY KA

For Handrail and Parapet Details see Sh. No. 63.
 STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
PARAPET AND HANDRAIL
 SPAN ABCD
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B", "C" AND "D"
 F. A. I. R. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. -70	82-3HVB	ST. CLAIR	289	81
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



PLAN
PARAPET JOINT SPACING
SPANS BCI THRU BC4

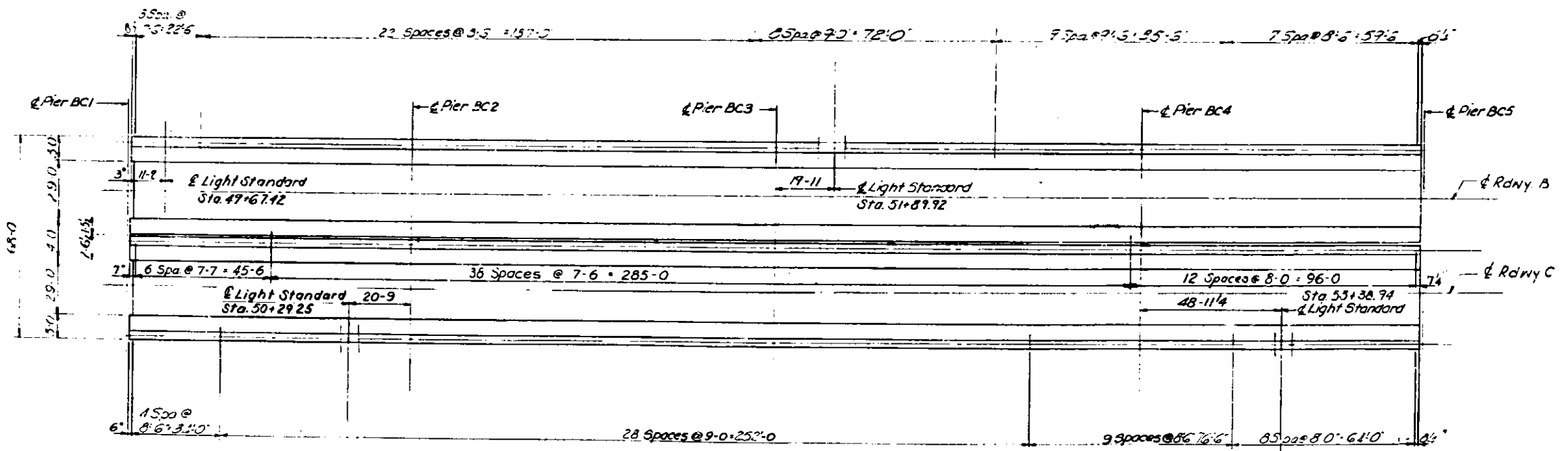
BILL OF MATERIAL

*BAR NO.	SIZE	LENGTH	SHAPE
46F	#5	15.3	
46G	#5	15.7	
46H	#5	17.3	
46I	#5	16.2	

ITEM	UNIT	TOTAL
CLASS 'Y' CONCRETE	Cu. Yds.	67.3
REINFORCEMENT BARS	Lbs.	52.50
ALUMINUM HANDRAIL	Lin. Ft.	1284

NOTE: Bars shown on plan for North parapet are typical for all parapets.

*See Note Y Sh. No. 25



PLAN
HANDRAIL POST SPACING

Notes:
For Detail at Light Std. see Sh. No. 45.
For Handrail and Parapet Joint Details see Sh. No. 63.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & TRANS. DIVISION OF HIGHWAYS
PARAPET AND HANDRAIL
SPANS BCI THRU BC4
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "B" AND "C"

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCKNER, INC. ENGINEERS CHICAGO, ILLINOIS

SHEET 81 OF 289

DESIGNED BY: RME
DRAWN BY: JAH
CHECKED BY: AS
APPROVED BY: RA

ROADWAY "A"

ROADWAY "B" & "C"

ROADWAY "D"

BEAMS	E BRG.	+110	+100	+90	+80	+70	+60	+50	+40	+30	+20	+10	LI-A
GIRD. A1	.000	.046	.091	.141	.172	.192	.199	.194	.176	.147	.107	.056	.000
GIRD. A2-A4	.000	.085	.166	.241	.287	.314	.311	.288	.235	.163	.082	.043	.000
GIRD. A5	.000	.078	.153	.228	.274	.291	.288	.265	.212	.140	.059	.020	.000
GIRD. A6	.000	.069	.138	.207	.253	.270	.267	.244	.191	.119	.038	.000	.000
GIRD. A7	.000	.010	.064	.110	.145	.167	.174	.173	.150	.113	.067	.021	.000

E BRG.	+100	+90	+80	+70	+60	+50	+40	+30	+20	+10	LI-B or LI-C
GIRD. B1	.000	.065	.130	.180	.215	.234	.235	.218	.184	.135	.077
GIRD. B2	.000	.042	.086	.121	.147	.160	.161	.148	.125	.091	.048
GIRD. B3	.000	.017	.046	.069	.085	.094	.095	.089	.076	.059	.025
GIRD. C1	.000	.026	.053	.076	.092	.100	.101	.095	.082	.065	.030
GIRD. C2-C4	.000	.012	.027	.042	.051	.051	.051	.045	.032	.025	.010
GIRD. C5	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

E BRG.	+90	+80	+70	+60	+50	+40	+30	+20	+10	LI-D
GIRD. D1	.000	.041	.077	.102	.117	.122	.123	.124	.124	.124
GIRD. D2	.000	.035	.074	.103	.122	.129	.130	.131	.131	.131
GIRD. D3	.000	.023	.058	.084	.104	.119	.120	.120	.120	.120
GIRD. D4	.000	.018	.058	.084	.104	.119	.120	.120	.120	.120

GIRD

A1	454,621	454,367	454,057	453,747	453,437	453,127	452,816	452,506	452,196	451,886	451,576	451,266	450,956
A2	454,722	454,563	454,193	453,884	453,574	453,264	452,954	452,644	452,335	452,025	451,715	451,405	451,095
A3	454,823	454,640	454,330	454,020	453,710	453,401	453,091	452,781	452,471	452,161	451,852	451,542	451,232
A4	454,924	454,776	454,466	454,157	453,847	453,537	453,227	452,918	452,608	452,298	451,988	451,678	451,368
A5	455,024	454,913	454,603	454,293	453,983	453,674	453,364	453,054	452,744	452,434	452,125	451,815	451,505
A6	455,125	455,049	454,740	454,430	454,120	453,810	453,500	453,191	452,881	452,571	452,261	451,951	451,642
A7	455,168	455,108	454,905	454,503	454,200	453,897	453,594	453,291	452,988	452,686	452,383	452,080	451,777

GIRD

B1	455,388	455,050	454,750	454,450	454,150	453,850	453,550	453,250	452,950	452,650	452,351	452,050
B2	455,223	454,925	454,625	454,325	454,025	453,725	453,425	453,125	452,825	452,525	452,226	451,924
B3	455,059	454,801	454,501	454,201	453,901	453,601	453,301	453,001	427,701	452,401	452,101	451,800
B4	454,894	454,676	454,376	454,076	453,776	453,476	453,176	452,876	452,576	452,276	451,977	451,685
B5	454,729	454,551	454,251	453,951	453,651	453,351	453,051	452,751	452,451	452,151	451,852	451,560
C1	454,709	454,551	454,251	453,951	453,651	453,351	453,051	452,751	452,451	452,151	451,852	451,560
C2	454,794	454,676	454,376	454,076	453,776	453,476	453,176	452,876	452,576	452,276	451,977	451,685
C3	454,878	454,801	454,501	454,201	453,901	453,601	453,301	453,001	452,701	452,401	452,101	451,800
C4	454,963	454,925	454,625	454,325	454,025	453,725	453,425	453,125	452,825	452,525	452,226	451,924
C5	454,861	454,563	454,263	453,963	453,663	453,363	453,063	452,763	452,463	452,163	451,864	451,562

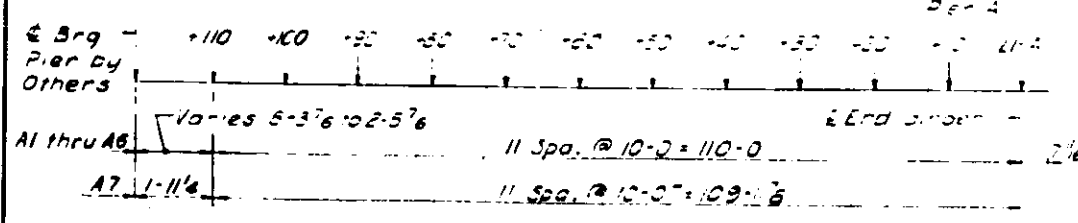
GIRD

D1	454,788	454,509	454,206	453,902	453,598	453,294	452,990	452,686	452,382	452,078	451,774	451,470	451,166
D2	454,674	454,426	454,118	453,810	453,502	453,194	452,886	452,578	452,270	451,962	451,654	451,346	451,038
D3	454,494	454,302	453,994	453,686	453,378	453,070	452,762	452,454	452,146	451,838	451,530	451,222	450,914
D4	454,315	454,178	453,870	453,562	453,254	452,946	452,638	452,330	452,022	451,714	451,406	451,098	450,790
D5	454,135	454,053	453,745	453,437	453,129	452,821	452,513	452,205	451,897	451,589	451,281	450,973	450,665

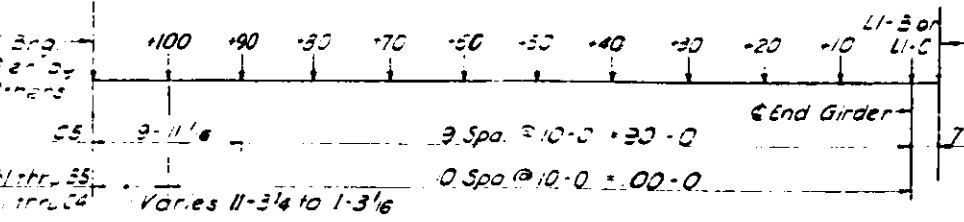
A1	454,621	454,413	454,156	453,889	453,610	453,320	453,017	452,702	452,375	452,036	451,686	451,325	450,959
A2	454,722	454,523	454,260	453,985	453,701	453,408	453,106	452,793	452,471	452,139	451,798	451,449	451,095
A3	454,823	454,665	454,397	454,122	453,838	453,545	453,242	452,930	452,607	452,275	451,934	451,586	451,232
A4	454,924	454,802	454,533	454,258	453,974	453,682	453,379	453,066	452,744	452,412	452,071	451,722	451,368
A5	455,024	454,929	454,663	454,390	454,109	453,816	453,517	453,206	452,883	452,551	452,210	451,860	451,505
A6	455,125	455,059	454,788	454,511	454,227	453,934	453,632	453,321	452,991	452,672	452,335	451,990	451,642
A7	455,168	455,119	454,870	454,613	454,345	454,065	453,772	453,467	453,149	452,820	452,480	452,131	451,777

B1	455,388	455,116	454,880	454,631	454,366	454,084	453,785	453,468	453,135	452,786	452,423	452,048
B2	455,223	454,968	454,712	454,447	454,173	453,886	453,587	453,275	452,951	452,617	452,275	451,924
B3	455,059	454,843	454,587	454,322	454,048	453,761	453,462	453,150	452,826	452,482	452,130	451,780
B4	454,894	454,718	454,462	454,198	453,923	453,636	453,337	453,025	452,702	452,368	452,026	451,685
B5	454,729	454,569	454,297	454,020	453,738	453,445	453,147	452,840	452,527	452,207	451,882	451,560
C1	454,709	454,577	454,324	454,063	453,793	453,509	453,217	452,901	452,578	452,244	451,901	451,560
C2	454,794	454,688	454,434	454,172	453,900	453,617	453,321	453,013	452,694	452,363	452,023	451,685
C3	454,878	454,813	454,569	454,297	454,025	453,742	453,446	453,138	452,818	452,488	452,148	451,800
C4	454,963	454,938	454,683	454,422	454,150	453,867	453,571	453,263	452,943	452,613	452,273	451,934
C5	454,861	454,605	454,338	454,064	453,780	453,492	453,200	452,904	452,605	452,304	452,004	451,704

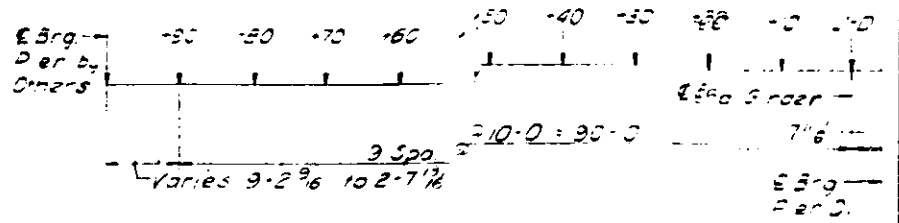
D1	454,205	453,967	453,699	453,421	453,136	452,844	452,544	452,243	451,941	451,638	451,335	451,032	450,729
D2	454,090	453,878	453,609	453,330	453,044	452,752	452,458	452,164	451,869	451,574	451,279	450,984	450,689
D3	453,911	453,741	453,473	453,196	452,912	452,622	452,330	452,036	451,741	451,446	451,151	450,856	450,561
D4	453,731	453,617	453,349	453,072	452,788	452,500	452,210	451,918	451,625	451,332	451,039	450,746	450,453
D5	453,552	453,489	453,221	452,949	452,676	452,398	452,114	451,829	451,544	451,259	450,974	450,689	450,404



ELEVATION LOCATION DIAGRAM ROADWAY "A"



ELEVATION LOCATION DIAGRAM ROADWAY "B" & "C"



ELEVATION LOCATION DIAGRAM ROADWAY "D"

DESIGNED BY RMR
 DRAWN BY YB
 CHECKED BY RMR
 APPROVED BY KA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BLDGS.
 DIVISION OF HIGHWAYS
 TABLES OF ELEVATIONS
 SPAN ABCD
 BRIDGE APPROACHES
 ROADWAYS "A", "B", "C" AND "D"
 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC. ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 64 OF 24

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. I-70	82-3HVB	ST. CLAIR	239	100
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

D.L. DEFLECTION (FT.)

FLOOR BEAMS	SPAN BC 1										SPAN BC 2											
	L2	L2.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5
	.000	.004	.021	.033	.048	.068	.092	.111	.133	.158	.187	.219	.254	.291	.330	.371	.414	.459	.506	.555	.605	.657

THEORETICAL ELEVATION TOP OF CONCRETE

GIRD. B1	451.950	451.771	451.596	451.326	451.066	450.814	450.571	450.337	450.112	448.895	448.688	448.489	448.299	448.118	448.946	448.783	448.629	448.483	448.346	448.218	448.099	447.989
STR.	451.833	451.654	451.478	451.209	450.949	450.697	450.454	450.220	449.995	449.778	449.571	449.372	449.182	449.001	448.829	448.666	448.512	448.365	448.229	448.101	447.982	447.872
STR.	451.716	451.537	451.362	451.092	450.832	450.580	450.337	450.103	449.878	449.661	449.454	449.255	449.065	448.884	448.712	448.549	448.395	448.249	448.112	447.984	447.865	447.755
STR.	451.599	451.420	451.245	450.975	450.715	450.463	450.220	449.986	449.761	449.544	449.337	449.138	448.948	448.767	448.595	448.432	448.277	448.132	447.995	447.867	447.748	447.638
GIRD. B2	451.482	451.303	451.128	450.858	450.598	450.346	450.103	449.868	449.644	449.427	449.220	449.021	448.831	448.650	448.478	448.315	448.161	448.015	447.878	447.750	447.631	447.521

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION

GIRD. B1	451.950	451.776	451.617	451.360	451.104	450.852	450.603	450.359	450.123	448.899	448.688	448.492	448.310	448.140	448.978	448.822	448.670	448.521	448.377	448.238	448.108	447.991
STR.	451.833	451.659	451.500	451.243	450.987	450.735	450.486	450.242	450.006	449.782	449.571	449.375	449.183	449.023	448.861	448.705	448.553	448.404	448.260	448.121	447.991	447.874
STR.	451.716	451.542	451.383	451.126	450.870	450.618	450.368	450.125	449.889	449.665	449.454	449.258	449.076	448.906	448.744	448.588	448.436	448.287	448.143	448.004	447.874	447.757
STR.	451.599	451.425	451.266	451.009	450.753	450.501	450.252	450.008	449.772	449.548	449.337	449.141	448.959	448.789	448.627	448.471	448.319	448.170	448.026	447.887	447.757	447.640
GIRD. B2	451.482	451.308	451.143	450.882	450.626	450.374	450.135	449.891	449.655	449.431	449.220	449.024	448.842	448.672	448.510	448.354	448.202	448.053	447.909	447.770	447.640	447.523

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION - SLAB THICKNESS (7')

GIRD. B1	451.367	451.193	451.034	450.776	450.521	450.269	450.020	449.776	449.540	449.315	449.105	448.908	448.726	448.556	448.395	448.239	448.087	447.938	447.793	447.655	447.525	447.408
STR.	451.250	451.076	450.917	450.659	450.404	450.152	449.903	449.659	449.423	449.198	448.988	448.791	448.609	448.439	448.278	448.122	447.970	447.821	447.676	447.538	447.408	447.291
STR.	451.133	450.959	450.800	450.542	450.287	450.035	449.786	449.542	449.306	449.081	448.871	448.674	448.492	448.322	448.161	448.005	447.853	447.704	447.558	447.421	447.291	447.174
STR.	451.016	450.842	450.683	450.425	450.170	449.918	449.668	449.425	449.189	448.964	448.754	448.557	448.375	448.205	448.044	447.888	447.736	447.587	447.442	447.304	447.174	447.057
GIRD. B2	451.199	451.025	450.866	450.608	450.353	450.101	449.852	449.608	449.374	449.147	448.927	448.717	448.517	448.327	448.146	447.974	447.812	447.659	447.516	447.386	447.266	447.156

D.L. DEFLECTION (FT.)

FLOOR BEAMS	SPAN BC 3										SPAN BC 4												
	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	L3
	.000	.001	.008	.019	.030	.038	.041	.039	.031	.021	.010	.002	.000	.003	.011	.021	.031	.038	.036	.033	.022	.005	.000

THEORETICAL ELEVATION TOP OF CONCRETE

GIRD. B1	447.888	447.795	447.712	447.637	447.571	447.514	447.468	447.427	447.396	447.374	447.362	447.358	447.362	447.376	447.399	447.430	447.470	447.520	447.574	447.628	447.682	447.717	447.753
STR.	447.771	447.678	447.595	447.520	447.454	447.397	447.349	447.310	447.278	447.257	447.245	447.241	447.245	447.259	447.282	447.313	447.353	447.403	447.457	447.511	447.565	447.600	447.636
STR.	447.654	447.561	447.478	447.403	447.337	447.280	447.232	447.193	447.162	447.140	447.128	447.124	447.128	447.142	447.165	447.196	447.236	447.286	447.340	447.394	447.448	447.483	447.519
STR.	447.537	447.444	447.361	447.286	447.220	447.163	447.115	447.076	447.045	447.023	447.011	447.007	447.011	447.025	447.048	447.079	447.119	447.169	447.223	447.277	447.331	447.366	447.402
GIRD. B2	447.420	447.327	447.244	447.169	447.103	447.046	446.998	446.958	446.928	446.906	446.894	446.890	446.894	446.908	446.931	446.962	447.002	447.052	447.106	447.160	447.214	447.249	447.285

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION

GIRD. B1	447.888	447.797	447.721	447.657	447.602	447.553	447.507	447.466	447.428	447.396	447.372	447.360	447.362	447.380	447.410	447.452	447.502	447.558	447.612	447.661	447.704	447.723	447.753
STR.	447.771	447.680	447.604	447.540	447.485	447.436	447.390	447.348	447.311	447.279	447.255	447.243	447.245	447.263	447.293	447.335	447.385	447.441	447.495	447.544	447.587	447.606	447.636
STR.	447.654	447.563	447.487	447.423	447.368	447.319	447.273	447.232	447.194	447.162	447.140	447.128	447.126	447.128	447.146	447.176	447.218	447.268	447.324	447.378	447.427	447.470	447.509
STR.	447.537	447.446	447.370	447.306	447.251	447.202	447.158	447.115	447.077	447.045	447.021	447.009	447.011	447.029	447.059	447.101	447.151	447.207	447.261	447.310	447.353	447.372	447.402
GIRD. B2	447.420	447.329	447.253	447.189	447.134	447.085	447.038	446.998	446.960	446.928	446.904	446.892	446.894	446.912	446.942	446.984	447.034	447.080	447.144	447.193	447.236	447.255	447.285

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION - SLAB THICKNESS (7')

GIRD. B1	447.305	447.214	447.137	447.073	447.018	446.968	446.924	446.882	446.845	446.812	446.788	446.777	446.779	446.796	446.827	446.869	446.919	446.974	447.029	447.078	447.120	447.140	447.170
STR.	447.188	447.097	447.020	446.956	446.901	446.852	446.807	446.765	446.728	446.695	446.671	446.667	446.682	446.679	446.710	446.752	446.802	446.857	446.912	446.961	447.003	447.023	447.053
STR.	447.071	446.980	446.903	446.839	446.784	446.735	446.690	446.648	446.611	446.578	446.554	446.543	446.545	446.562	446.593	446.635	446.685	446.740	446.795	446.844	446.886	446.906	446.936
STR.	446.954	446.863	446.786	446.722	446.667	446.618	446.573	446.531	446.494	446.461	446.437	446.426	446.428	446.445	446.476	446.518	446.568	446.623	446.678	446.727	446.769	446.789	446.819
GIRD. B2	446.837	446.746	446.669	446.605	446.550	446.501	446.456	446.414	446.377	446.344	446.320	446.309	446.311	446.328	446.359	446.401	446.451	446.506	446.561	446.610	446.652	446.672	446.702

DESIGNED BY: RMR
 DRAWN BY: YB
 CHECKED BY: RMR
 APPROVED BY: KA

Note A:
 Floor Beam 15 indicates a line
 1/2 way between Floor Beam 1
 and Floor Beam 2.
 The lines of elevations for girders
 are identified by their relative
 position to the girder indicated
 in the Tables.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & E
 DIVISION OF HIGHWAYS
 TABLES OF ELEVATIONS
 SPANS BC1 THRU BC4
 POPLAR STREET BRIDGE APPROACHES
 ROADWAY "B"
 F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 65 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	B2-3HVB	ST. CLAIR	289	108
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		

D.L. DEFLECTION (FT.)

FLOOR BEAMS	SPAN BC 1										SPAN BC 2											
	L2	L2.5	1	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	10.5
	.000	.005	.002	.033	.038	.038	.031	.021	.011	.003	.000	.007	.010	.021	.031	.039	.041	.038	.030	.019	.008	.001

THEORETICAL ELEVATION TOP OF CONCRETE

GIRD. C1	451.482	451.303	451.128	450.858	450.598	450.346	450.103	449.859	449.644	449.427	449.220	449.021	448.831	448.650	448.478	448.315	448.161	448.015	447.878	447.750	447.631	447.521
STR.	451.599	451.420	451.245	450.975	450.715	450.462	450.220	449.986	449.761	449.544	449.337	449.138	448.948	448.767	448.595	448.432	448.278	448.132	447.995	447.867	447.748	447.638
STR.	451.716	451.537	451.362	451.092	450.832	450.580	450.337	450.103	449.878	449.661	449.454	449.255	449.065	448.884	448.712	448.549	448.395	448.249	448.112	447.984	447.865	447.755
STR.	451.833	451.654	451.479	451.209	450.949	450.697	450.454	450.220	449.995	449.778	449.571	449.372	449.182	449.001	448.829	448.666	448.512	448.366	448.229	448.101	447.982	447.872
GIRD. C2	451.990	451.771	451.596	451.326	451.066	450.814	450.571	450.337	450.112	449.895	449.688	449.489	449.299	449.118	448.946	448.783	448.629	448.483	448.346	448.218	448.099	447.989

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION

GIRD. C1	451.482	451.308	451.150	450.892	450.637	450.384	450.135	449.891	449.655	449.431	449.220	449.029	448.842	448.672	448.510	448.354	448.202	448.053	447.909	447.770	447.640	447.523
STR.	451.599	451.426	451.267	451.009	450.754	450.501	450.252	450.008	449.772	449.548	449.337	449.146	448.959	448.789	448.627	448.471	448.319	448.170	448.026	447.887	447.757	447.640
STR.	451.716	451.543	451.384	451.126	450.871	450.618	450.369	450.125	449.889	449.665	449.454	449.263	449.076	448.906	448.744	448.588	448.436	448.287	448.143	448.004	447.874	447.757
STR.	451.833	451.660	451.501	451.243	450.988	450.735	450.486	450.242	450.006	449.782	449.571	449.380	449.193	449.023	448.861	448.705	448.553	448.404	448.260	448.121	447.991	447.874
GIRD. C2	451.990	451.771	451.618	451.360	451.105	450.852	450.603	450.359	450.123	449.899	449.688	449.497	449.310	449.140	448.978	448.822	448.670	448.521	448.377	448.238	448.109	447.991

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION - SLAB THICKNESS (7')

GIRD. C1	450.899	450.726	450.567	450.309	450.053	449.801	449.552	449.308	449.072	448.847	448.637	448.446	448.258	448.088	447.927	447.771	447.619	447.470	447.325	447.187	447.057	446.940
STR.	451.016	450.843	450.684	450.426	450.170	449.918	449.669	449.425	449.189	448.964	448.754	448.563	448.375	448.205	448.044	447.888	447.736	447.587	447.442	447.304	447.174	447.057
STR.	451.133	450.960	450.801	450.543	450.287	450.035	449.786	449.542	449.306	449.081	448.871	448.680	448.492	448.322	448.161	448.005	447.853	447.704	447.559	447.421	447.291	447.174
STR.	451.250	451.077	450.918	450.660	450.404	450.152	449.903	449.659	449.423	449.198	448.988	448.797	448.609	448.439	448.278	448.122	447.970	447.821	447.676	447.538	447.408	447.291
GIRD. C2	451.367	451.194	451.035	450.777	450.521	450.269	450.020	449.776	449.540	449.315	449.105	448.914	448.726	448.556	448.395	448.239	448.087	447.938	447.793	447.655	447.525	447.408

D.L. DEFLECTION (FT.)

FLOOR BEAMS	SPAN BC 3										SPAN BC 4												
	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	L3
	.000	.001	.008	.018	.030	.038	.041	.039	.031	.021	.010	.007	.000	.003	.011	.021	.031	.038	.038	.033	.022	.005	.000

THEORETICAL ELEVATION TOP OF CONCRETE

GIRD. C1	447.420	447.327	447.244	447.169	447.103	447.046	446.998	446.959	446.928	446.906	446.894	446.890	446.894	446.908	446.931	446.962	447.002	447.052	447.106	447.160	447.214	447.269	447.285
STR.	447.537	447.444	447.361	447.286	447.220	447.163	447.115	447.076	447.045	447.023	447.011	447.007	447.011	447.025	447.048	447.079	447.119	447.169	447.223	447.277	447.331	447.366	447.402
STR.	447.654	447.561	447.478	447.403	447.337	447.280	447.232	447.193	447.162	447.140	447.128	447.124	447.128	447.142	447.165	447.196	447.236	447.286	447.340	447.394	447.448	447.483	447.519
STR.	447.771	447.678	447.595	447.520	447.454	447.397	447.349	447.310	447.279	447.257	447.245	447.241	447.245	447.259	447.282	447.313	447.353	447.403	447.457	447.511	447.565	447.600	447.636
GIRD. C2	447.888	447.795	447.712	447.637	447.571	447.514	447.466	447.427	447.396	447.374	447.362	447.358	447.362	447.376	447.399	447.430	447.470	447.520	447.574	447.628	447.682	447.717	447.753

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION

GIRD. C1	447.420	447.399	447.253	447.189	447.134	447.085	447.038	446.998	446.960	446.928	446.904	446.897	446.894	446.912	446.942	446.984	447.034	447.080	447.144	447.193	447.236	447.255	447.285
STR.	447.537	447.444	447.370	447.306	447.251	447.202	447.156	447.115	447.077	447.045	447.021	447.014	447.011	447.029	447.059	447.101	447.151	447.207	447.261	447.310	447.353	447.372	447.402
STR.	447.654	447.563	447.487	447.423	447.368	447.319	447.273	447.232	447.194	447.162	447.138	447.131	447.128	447.146	447.176	447.218	447.268	447.324	447.378	447.427	447.470	447.489	447.519
STR.	447.771	447.680	447.604	447.540	447.485	447.436	447.390	447.349	447.311	447.279	447.255	447.248	447.245	447.263	447.293	447.335	447.385	447.441	447.495	447.544	447.597	447.606	447.636
GIRD. C2	447.888	447.797	447.721	447.657	447.602	447.553	447.507	447.466	447.428	447.396	447.372	447.365	447.362	447.380	447.410	447.452	447.502	447.558	447.612	447.661	447.704	447.723	447.753

THEORETICAL ELEVATION TOP OF CONCRETE + D.L. DEFLECTION - SLAB THICKNESS (7')

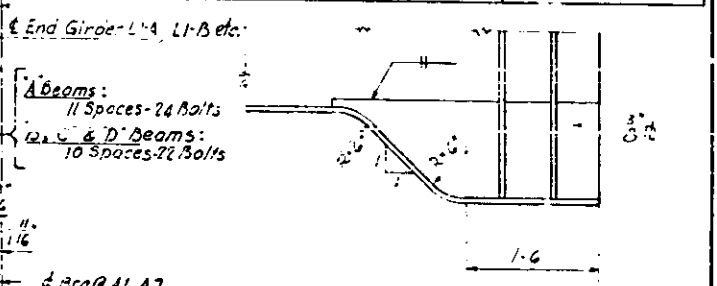
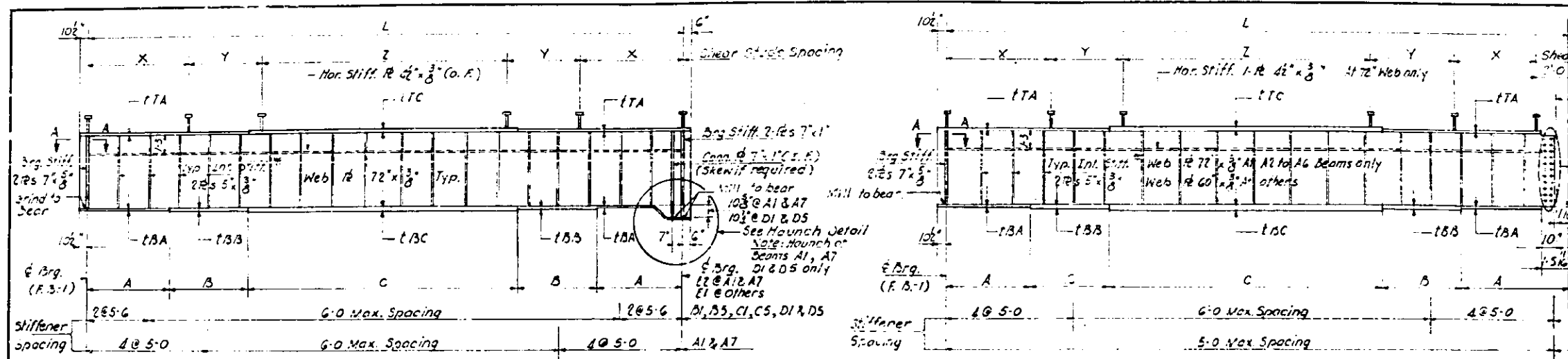
GIRD. C1	446.837	446.746	446.669	446.605	446.550	446.501	446.456	446.414	446.377	446.344	446.320	446.314	446.311	446.328	446.359	446.401	446.451	446.506	446.561	446.610	446.652	446.672	446.702
STR.	446.954	446.863	446.786	446.722	446.667	446.618	446.573	446.531	446.494	446.461	446.437	446.431	446.428	446.445	446.476	446.518	446.568	446.623	446.678	446.727	446.769	446.789	446.819
STR.	447.071	446.980	446.903	446.839	446.784	446.735	446.690	446.648	446.611	446.578	446.554	446.548	446.545	446.562	446.593	446.635	446.685	446.740	446.795	446.844	446.886	446.906	446.936
STR.	447.188	447.097	447.020	446.956	446.901	446.852	446.807	446.765	446.728	446.695	446.671	446.665	446.662	446.679	446.710	446.752	446.802	446.857	446.912	446.961	447.003	447.023	447.053
GIRD. C2	447.305	447.214	447.137	447.073	447.018	446.969	446.924	446.882	446.845	446.812	446.788	446.782	446.779	446.796	446.827	446.869	446.919	446.974	447.029	447.078	447.120	447.140	447.170

DESIGNED BY RMR
 DRAWN BY VS
 CHECKED BY RMR
 APPROVED BY KA

See Note A-30 to B5

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAYS
 TABLES OF ELEVATIONS
 SPANS BC1 THRU BC4
 POPLAR STREET BRIDGE APPROACHES
 ROADWAY "C"
 F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET
 73 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I - 70	82-3HYB	ST. CLAIR	259	120
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



DETAIL OF BEAMS A1 & A7 - D1 & D5
BEAMS B1 & B5 - C1 & C5 SIMILAR

DETAIL OF BEAMS A2 TO A6
B2 to B4 - C2 to C4 - D2 to D4

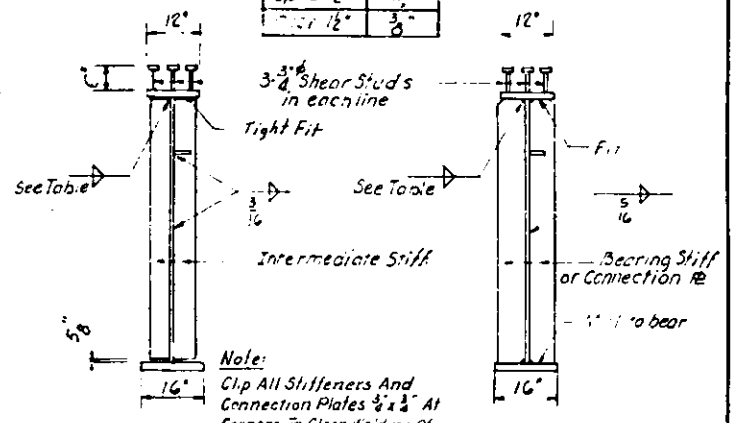
Note
* Asterisk at Intermediate Stiff:
At locations along all beams where
Diaphragms occur, Connection Pls
6"x3/8" shall be used in lieu of Stiff.

BEAM SCHEDULE

Beam No.	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	Beam No.	
L	118-10 1/2	117-8 1/2	116-6 1/2	115-4 1/2	114-2 1/2	113-10	112-8 1/2	111-10 1/4	110-6 1/2	109-2 1/2	107-10 1/2	106-6 1/2	105-10 1/2	104-6 1/2	103-2 1/2	101-10 1/2	100-6 1/2	99-10 1/2	98-6 1/2	96-10 1/2	95-6 1/2	93-3 1/2	L	
A	13-0	13-0	13-0	13-0	13-0	13-0	13-0	13-0	12-0	12-0	12-0	13-0	26-0	12-0	12-0	12-0	26-0	24-0	12-0	12-0	12-0	20-0	A	
B	14-0	14-0	14-0	14-0	14-0	14-0	14-0	13-0	12-0	12-0	12-0	13-0	—	12-0	12-0	12-0	—	—	12-0	12-0	12-0	—	B	
C	64-10 1/2	63-8 1/2	62-6 1/2	61-4 1/2	60-2 1/2	59-10	58-8 1/2	57-10 1/2	62-6 1/2	61-2 1/2	59-10 1/2	58-6 1/2	57-10 1/2	56-6 1/2	55-2 1/2	53-10 1/2	52-6 1/2	51-2 1/2	50-8 1/2	48-10 1/2	47-6 1/2	53-3 1/2	C	
ETA	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	3/2"	ETA	
ETB	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	ETB	
ETC	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	ETC	
ETBA	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	ETBA	
ETBB	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	—	1 1/2"	1 1/2"	1 1/2"	—	—	1 1/2"	1 1/2"	1 1/2"	—	ETBB	
ETBC	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	ETBC	
X	370 7/8"	370 7/8"	370 7/8"	370 7/8"	370 7/8"	370 7/8"	370 7/8"	330 0"	300 7"	300 7"	300 7"	330 0"	32 6 0"	350 7"	350 7"	350 7"	360 7"	360 7"	360 7"	330 7"	330 7"	330 7"	330 0"	X
Y	160 11"	160 11"	160 11"	160 11"	160 11"	160 11"	160 11"	120 11"	130 10"	130 10"	130 10"	120 11"	150 11"	190 10"	190 10"	190 10"	170 10"	170 10"	180 10"	180 10"	180 10"	130 11"	Y	
Z	12"	12"	12"	12"	12"	12"	12"	14"	13"	13"	13"	14"	13"	13"	13"	13"	13"	13"	13"	13"	13"	14"	Z	

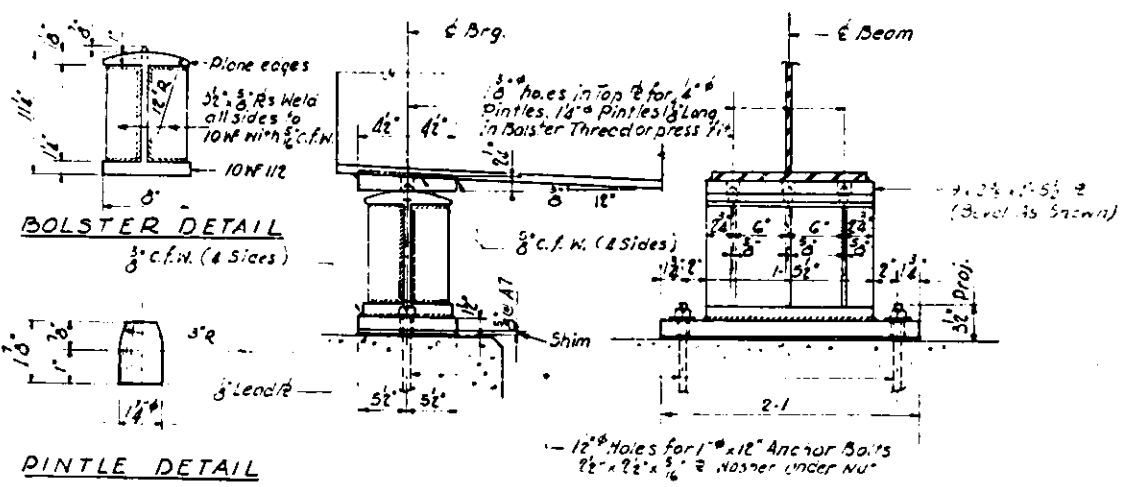
TABLE OF WELDS

R. Thickness	Weld
Up to 1/2"	5/16"
1/2" to 3/4"	3/8"



TYPICAL SECTIONS THRU BEAMS

Note
For Details of Section A-A at Brg. Stiff. see Sht. No. 84
For D.L. Deflections see Sht. No. 84
For Details of Expansion Brqs. E1 & E2 see Sht. No. 129



FIXED BEARING DETAIL (F.B.-1)

Est. wt. Stud Shear Connectors - 5851 Lbs.

DESIGNED BY: RMR
DRAWN BY: AS
CHECKED BY: B.F.M.R.
APPROVED BY: KA

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STEEL DETAILS
SPAN ABCD

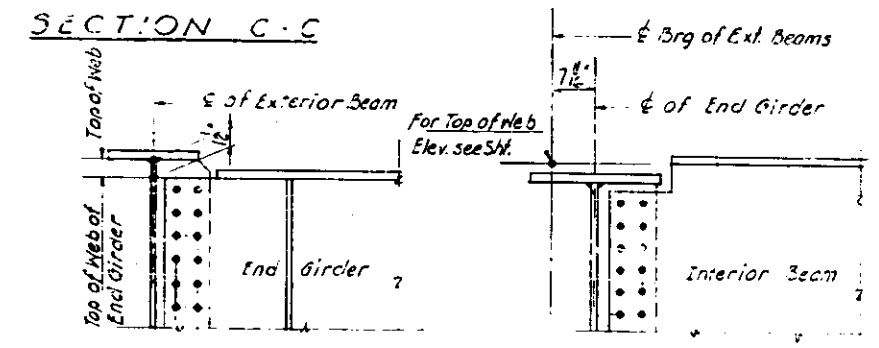
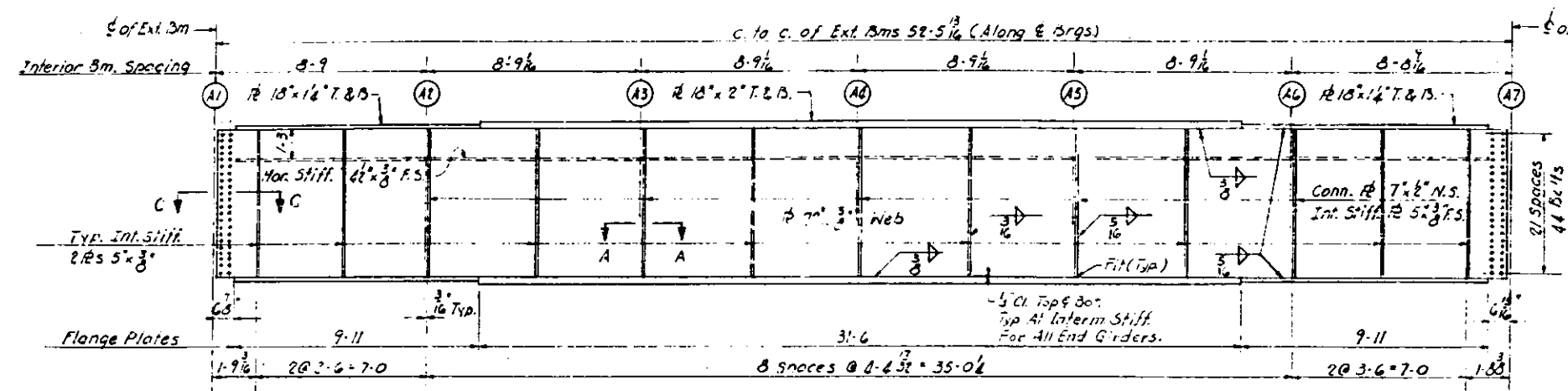
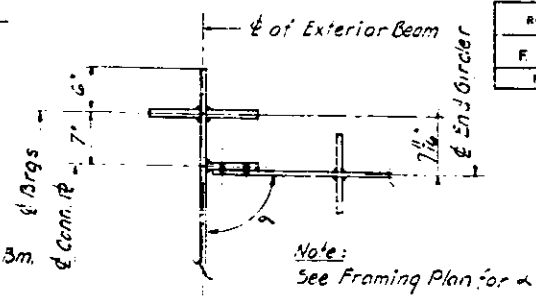
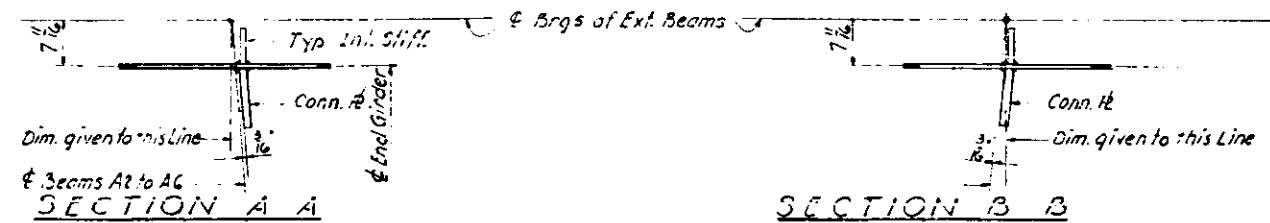
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A" "B" "C" AND "D"

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HYB

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

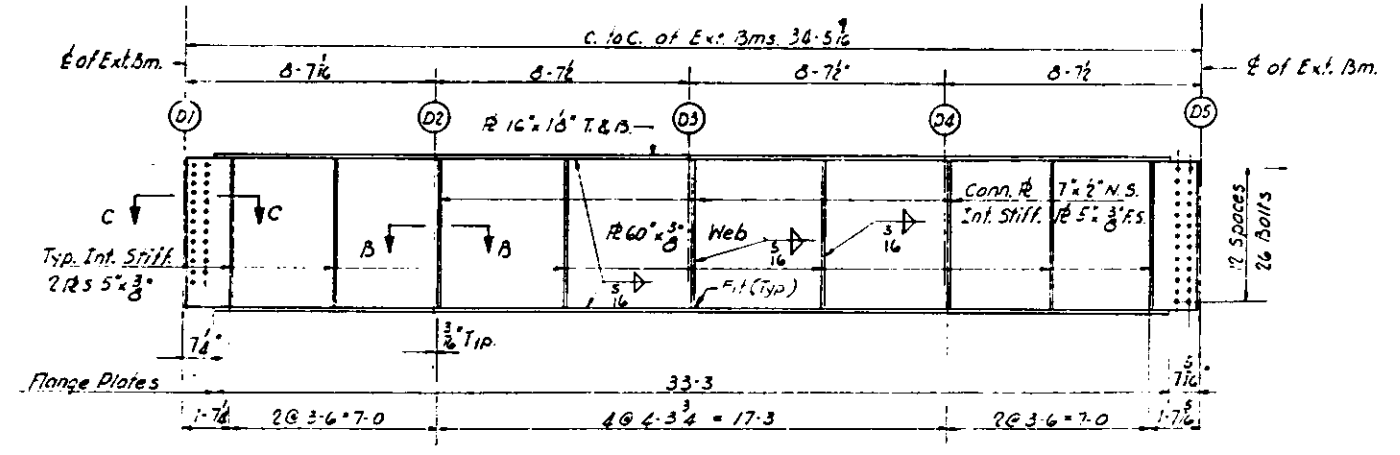
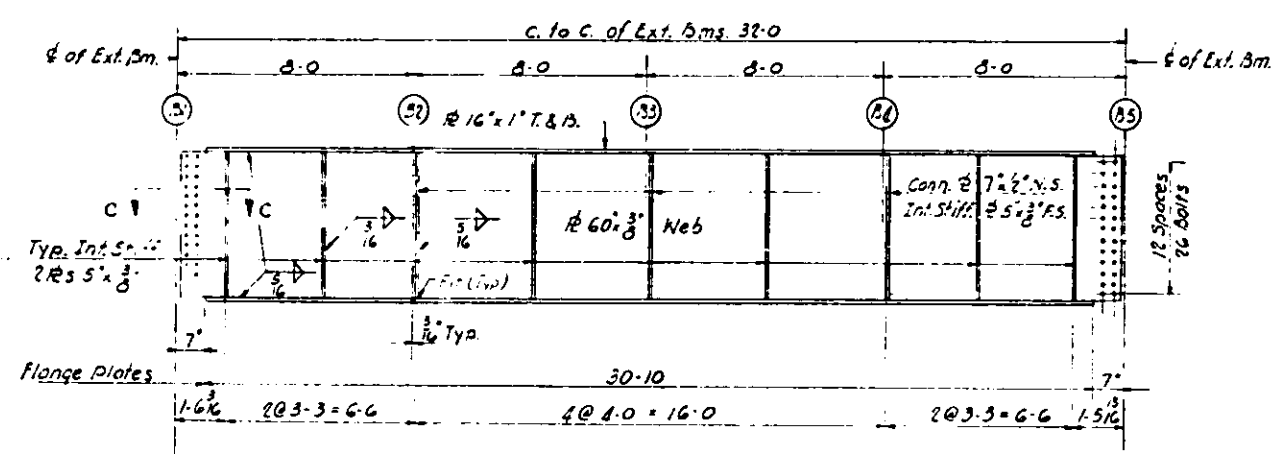
SHEET
85 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	259	121
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



END GIRDER LI-A

TYPICAL FRAMING DETAILS SHOWING RELATIVE TOPS OF WEBS



END GIRDER LI-B
END GIRDER LI-C SAME

END GIRDER LI-D

Note
For D.L. Deflections see Sht. No. 84
For Tables of Welds see Sht. No. 85
For Expansion Device Details see Sht. No. 31

DESIGNED BY: SB
DRAWN BY: AC
CHECKED BY: RMR
APPROVED BY: KA

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS

STEEL DETAILS
SPAN ABCD

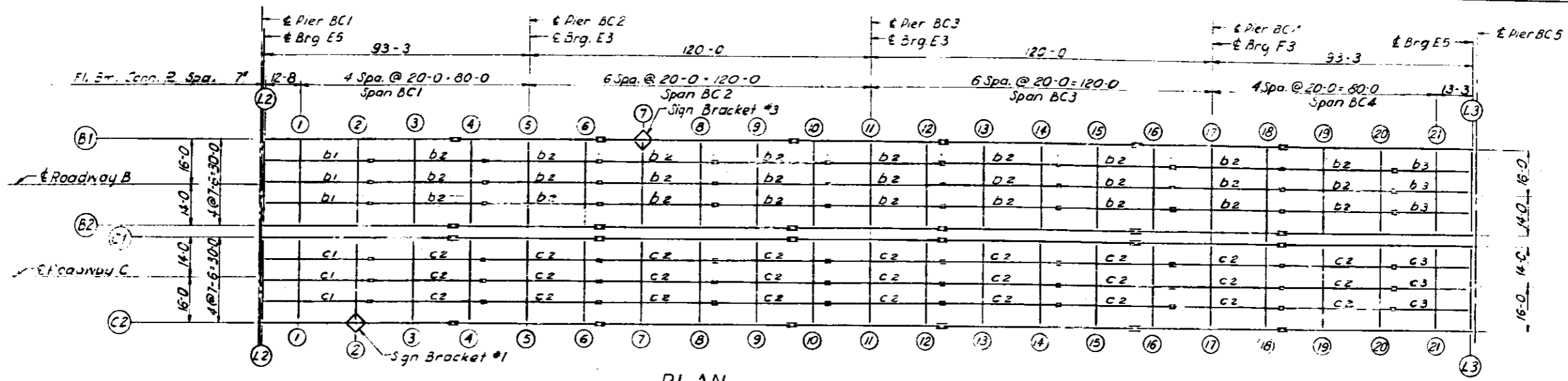
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A" "B" "C" AND "D"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB

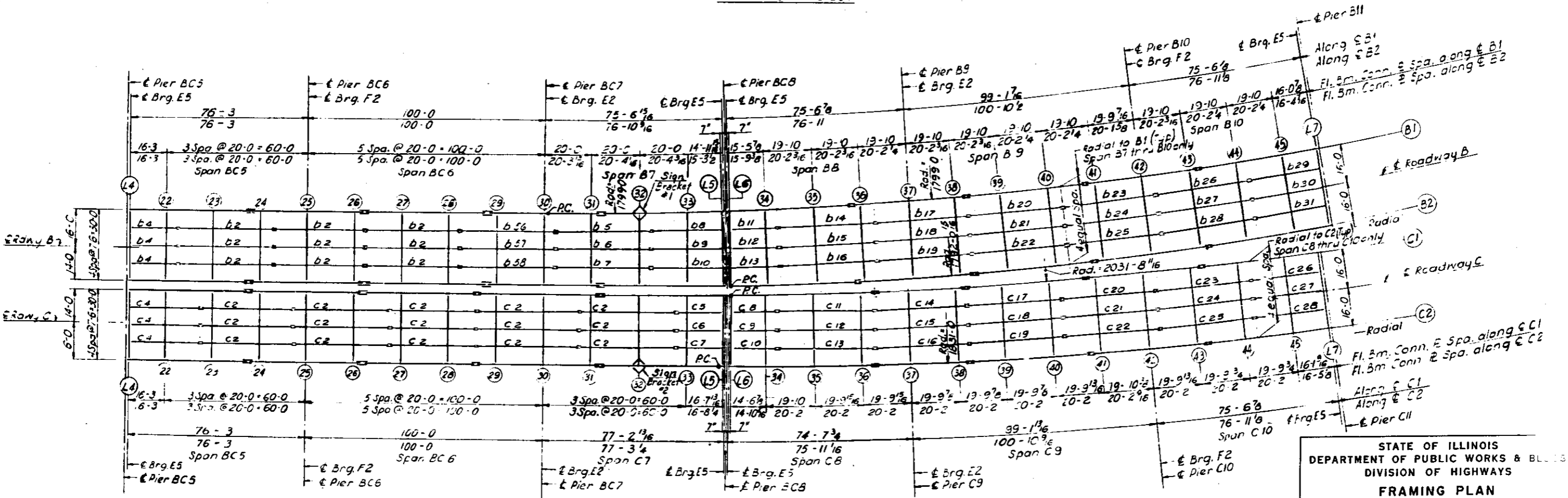
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
06 of 24

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. - 70	82-3HVB	ST CLAIR	129	122
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



PLAN
SPANS BC1 THRU BC4



PLAN
SPANS BC5 THRU B10
SPANS BC5 THRU C10

Note:
Dimensions locating Floor Beams are given to the Floor Beam Conn. Plate see Sketch Sh. No. 90

DESIGNED BY EMR
DRAWN BY J.M.
CHECKED BY AJC
APPROVED BY KA

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

FRAMING PLAN
SPANS BC1 THRU B10 AND C10
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
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ELEVATION TOP OF GIRDER WEBS FOR FABRICATION (DEFLECTION NOT INCLUDED)

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAI-70	82-3HVB	ST. CLAIR	259	149
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

Loc. Gird. No.	E. Brg. Pier B1	SP1	Pier B2	SP2	SP3	Pier B3	SP4	SP5	Pier B4	SP6	E. Brg. Pier B5	SP1	Pier B6	SP2	SP3	Pier B7	SP4	E. Brg. Pier B8	E. Brg. Pier B9	SP1	Pier B10	SP2	SP3	Pier B11	SP4	E. Brg. Pier B12	E. Brg. Pier B13		
B1	451.05	449.27	448.01	448.77	447.34	446.99	446.63	446.52	446.46	446.41	446.34	446.05	446.57	446.45	446.32	446.06	445.93	445.91	445.54	445.54	445.02	445.95	446.00	446.36	446.49	446.62	446.30	447.03	447.45
B2	450.58	448.95	448.34	447.75	446.87	446.52	446.21	446.05	445.99	445.94	446.37	446.38	446.72	446.68	447.04	447.39	447.55	447.71	448.06	448.04	448.36	448.49	448.62	448.91	449.04	449.7	449.46	449.62	450.55

Loc. Gird. No.	E. Brg. Pier B14	SP1	Pier B15	SP2	SP3	Pier B16	SP4	E. Brg. Pier B17	E. Brg. Pier B18	SP1	Pier B19	SP2	SP3	Pier B20	SP4	SP5	Pier B21	SP6	E. Brg. Pier B22	E. Brg. Pier B23	SP1	Pier B24	SP2	SP3	Pier B25	SP4	SP5	Pier B26	SP6	E. Brg. Pier B27	
B1	447.33	447.68	447.81	447.95	448.30	448.44	448.57	448.97	448.93	449.22	449.22	449.56	449.92	450.07	450.22	450.57	450.71	450.83	451.12	451.13	451.28	451.34	451.40	451.4	451.41	451.41	451.25	451.13	451.14	450.86	
B2	449.99	450.24	450.37	450.51	450.06	451.00	451.13	451.48	451.49	451.85	451.98	452.12	452.48	452.63	452.78	453.12	453.27	453.39	453.63	453.69	453.84	453.90	453.96	453.97	453.97	453.97	453.97	453.81	453.75	453.70	453.42

Loc. Gird. No.	E. Brg. Pier B28	SP1	Pier B29	SP2	SP3	Pier B30	SP4	SP5	Pier B31	SP6	E. Brg. Pier B32	Loc. Gird. No.	E. Brg. Pier B33	E. Brg. Pier B34	SP1	Pier B35	SP2	SP3	Pier B36	SP4	SP5	Pier B37	SP6	E. Brg. Pier B38	E. Brg. Pier B39				
B1	450.05	450.26	450.31	450.16	449.60	449.38	449.18	448.45	448.17	447.92	447.07	B1	445.62	445.62	445.52	444.58	444.22	443.85	442.31	442.56	442.21	441.25							
B2	453.41	453.62	452.57	452.77	452.16	451.94	451.74	451.01	450.73	450.44	449.63	B5	449.33	448.18	447.08	447.14	446.73	446.41	445.47	445.12	444.77	443.81							

ROADWAY 'B'

Loc. Gird. No.	E. Brg. Pier C1	SP1	Pier C2	SP2	SP3	Pier C3	SP4	SP5	Pier C4	SP6	E. Brg. Pier C5	E. Brg. Pier C6	SP1	Pier C7	SP2	SP3	Pier C8	E. Brg. Pier C9	E. Brg. Pier C10	SP1	Pier C11	SP2	SP3	Pier C12	SP4	E. Brg. Pier C13	E. Brg. Pier C14		
C1	449.58	448.95	448.32	447.75	446.87	446.52	446.21	446.05	445.99	445.94	446.37	446.38	446.66	446.79	446.92	447.19	447.31	447.42	447.66	447.67	447.88	447.96	448.08	448.33	448.42	448.56	448.82	449.00	449.41
C2	451.05	449.42	448.81	448.22	447.34	446.99	446.68	446.52	446.46	446.41	446.84	446.85	447.13	447.26	447.39	448.11	448.52	449.43	449.46	450.39	450.43	450.56	450.84	450.97	451.10	451.38	451.54	451.97	

Loc. Gird. No.	E. Brg. Pier C15	SP1	Pier C16	SP2	SP3	Pier C17	SP4	E. Brg. Pier C18	E. Brg. Pier C19	SP1	Pier C20	SP2	SP3	Pier C21	SP4	SP5	Pier C22	SP6	E. Brg. Pier C23								
C1	449.75	449.60	449.73	449.86	450.22	450.35	450.48	450.83	450.84	451.22	451.36	451.51	451.88	452.03	452.17	452.55	452.56	452.87	452.98	453.09	453.24	453.30	453.35	453.33	453.32	453.31	453.16
C2	451.81	452.16	452.29	452.42	452.78	452.91	453.04	453.39	453.40	453.78	453.92	454.07	454.44	454.59	454.73	455.11	455.12	455.41	455.54	455.65	455.80	455.86	455.91	455.89	455.88	455.87	455.72

Loc. Gird. No.	E. Brg. Pier C24	SP1	Pier C25	SP2	SP3	Pier C26	SP4	SP5	Pier C27	SP6	E. Brg. Pier C28	E. Brg. Pier C29	SP1	Pier C30	SP2	SP3	Pier C31	SP4	SP5	Pier C32	SP6	SP7	Pier C33	SP8	E. Brg. Abut. C34
C1	453.15	452.88	452.76	452.66	452.21	452.03	451.87	451.24	451.00	450.78	450.02	450.00	449.18	448.77	448.32	447.23	446.89	446.52	445.65	445.34	444.33	444.13	443.60	443.46	442.59
C2	455.71	455.44	455.32	455.22	454.77	454.59	454.43	453.00	453.56	453.34	452.58	452.56	451.74	451.27	450.82	449.34	449.45	449.08	448.25	447.90	447.55	446.69	446.36	446.02	445.15

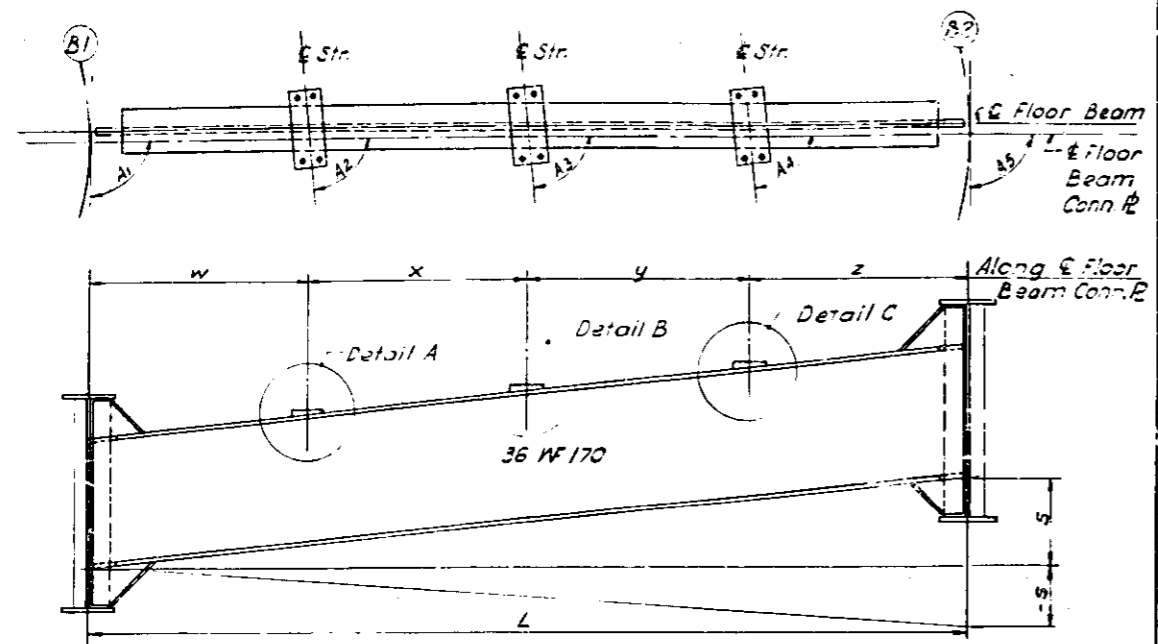
ROADWAY 'C'

Note: * Asterisks indicates elevation to top of Flange of W.

DESIGNED BY A. C.
 DRAWN BY A. M.
 CHECKED BY A. S.
 APPROVED BY K. A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS
 ELEVATIONS — TOP OF GIRDER WEB
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"
 F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
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TYPICAL FLOOR BEAM ELEVATION
RDWY. B

Fl. Bm. No.	L	w	x	y	z	s	A1	A2	A3	A4	A5
1 thru 21	32-0	7-6	7-6	7-6	7-6	-0-5 3/8	90°00'00	90°00'00	90°00'00	90°00'00	90°00'00
22						-0-3 3/8					
23						-0-0 1/2					
24						0-2 1/2					
25						0-3 1/2					
26						0-3 1/2					
27						0-0 1/2					
28						1-1 3/4					
29						1-4 9/16					
30	30-0	7-6	7-6	7-6	7-6	1-7 1/2		90°00'00	90°00'00	90°00'00	90°00'00
31	30-1 1/2	7-5 3/8	7-6 1/2	7-6 1/2	7-6 1/2	1-10 1/4		90°03'11	90°14'41	90°26'05	90°36'36
32	30-3 3/8	7-6 1/8	7-7 1/8	7-7 1/8	7-7 1/8	2-1 1/2		90°41'24	90°52'54	91°04'18	91°14'49
33	30-11 1/8	7-8 3/8	7-9 1/8	7-9 1/8	7-9 1/8	2-3 3/8		90°29'07	90°37'16	91°25'09	91°33'02
34	31-7 1/8	7-10 1/4	7-11	7-11	7-11 3/8	2-6 3/8		90°12'39	90°14'27	90°16'15	90°09'43
35	31-5 1/8	7-9 3/8	7-11 1/8	7-11 1/8	8-0 1/2	2-6 1/2		89°54'17	89°56'31	89°58'43	90°01'54
36	31-9 1/8	7-10 3/8	7-11 3/8	7-11 3/8	8-0	2-6 1/2		90°32'11	90°34'25	90°36'37	90°38'05
37	31-9 1/4	7-10 1/2	7-11 1/2	7-11 1/2	8-0 1/2	2-6 1/2		89°53'30	89°55'37	89°57'23	90°07'16
38	31-10 1/8	7-11 1/8	7-11 1/2	7-11 1/2	8-0	2-6 1/2		90°31'44	90°33'31	90°35'17	90°36'27
39	31-10 3/8	7-10 3/8	7-11 3/8	7-11 3/8	8-1	2-6 3/8		89°53'21	89°54'44	89°56'04	90°03'38
40	31-11	7-11 1/4	7-11 1/2	7-11 1/2	8-0 1/4	2-6 3/8		90°31'18	90°32'38	90°33'58	90°34'49
41	31-11 1/8	7-10 1/8	7-11 1/8	7-11 1/8	8-1 1/8	2-6 1/2		89°52'59	89°53'53	89°54'46	90°03'59
42	31-1 1/8	7-11 1/8	7-11 1/8	7-11 1/8	8-0 1/8	2-6 1/2		90°30'47	90°31'41	90°32'34	90°03'10
43	31-1 1/4	7-10 1/4	7-11 1/4	7-11 1/4	8-1 1/4	2-6 1/2		89°52'56	89°53'49	89°54'42	90°02'20
44	31-11 1/8	7-11 1/2	8-0	8-0	8-0 1/2	2-6 1/2		90°30'30	90°31'43	90°32'36	90°01'31
45	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4		89°59'37	89°59'36	89°59'36	90°00'42
46		7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4		89°49'03	89°49'03	89°49'03	90°00'00
47		7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4		90°25'41	90°25'41	90°25'41	
48		7-10 1/2	8-0	8-0	8-1 1/2	2-6 3/4		89°52'12	89°52'12	89°52'12	
49	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00	90°28'50	90°28'50	90°28'50	90°00'00
50	Same as Floor Beam 48										
51	ditto										
52	ditto										
53	"										
54	"										
55	"										
56	32-0	7-10 3/8	8-0	8-0	8-1 1/8	2-6 1/2	90°00'00	89°52'10	89°52'10	89°52'10	90°00'00
57	32-0	7-11 1/8	8-0	8-0	8-0 1/8	2-6 3/4	90°00'00	90°28'43	90°28'43	90°28'43	90°00'00
58	Same as Floor Beam 48										
59	Same as Floor Beam 49										
60	32-0	7-11 1/8	8-0	8-0	8-0 1/8	2-6 1/2	90°00'00	90°03'42	90°03'42	90°03'42	90°00'00
61		7-11	8-0	8-0	8-1	2-6 1/2		89°48'52	89°48'52	89°48'52	
62		7-11 1/8	8-0	8-0	8-0 1/8	2-6 1/2		90°26'26	90°26'26	90°26'26	
63		7-10 1/4	8-0	8-0	8-1 1/4	2-6 1/2		89°52'02	89°52'02	89°52'02	
64	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00	90°29'37	90°29'37	90°29'37	90°00'00
65	Same as Floor Beam 63										
66	Same as Floor Beam 64										

Fl. Bm. No.	L	w	x	y	z	s	A1	A2	A3	A4	A5
67	Same as Floor Beam 63										
68											
69	ditto										
70											
71	32-0	7-10 1/4	8-0	8-0	8-1 1/4	2-6 3/4	90°00'00	89°52'03	89°52'03	89°52'03	90°00'00
72	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00	90°29'32	90°29'32	90°29'32	90°00'00
73	Same as Floor Beam 63										
74											
75	ditto										
76											
77											
78											
79											
80											
81	32-0	7-11 1/8	8-0	8-0	8-0 1/8	2-6 1/2	90°00'00	90°03'10	90°03'10	90°03'10	90°00'00
82	Same as Floor Beam 61										
83											
84	ditto										
85											
86											
87											
88											
89											
90											
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117											
118											
119											
120											
121											
122											
123	32-0	7-11 1/8	8-0	8-0	8-0 1/8	2-6 1/2	90°00'00	90°02'37	90°02'37	90°02'37	90°00'00
124		7-11	8-0	8-0	8-1	2-6 1/2	90°00'00	89°49'35	89°49'35	89°49'35	90°00'00
125		7-11 1/8	8-0	8-0	8-0 1/8	2-6 1/2		90°26'32	90°26'32	90°26'32	
126		7-10 1/8	8-0	8-0	8-1 1/8	2-6 1/2		89°52'12	89°52'12	89°52'12	
127	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00	90°29'08	90°29'08	90°29'08	90°00'00
128	Same as Floor Beam 76										
129											
130											
131											
132											
133											
134	32-0	7-10 1/8	8-0	8-0	8-1 1/8	2-6 1/2	90°00'00	89°52'11	89°52'11	89°52'11	90°00'00
135	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00	90°29'07	90°29'07	90°29'07	90°00'00
136	Same as Floor Beam 76										
137	Same as Floor Beam 127										
138	32-0	7-11 1/8	8-0	8-0	8-0 1/8	2-6 1/2	90°00'00	90°01'20	90°01'20	90°01'20	90°00'00

For Detail A, B and C see Sh. No. 53

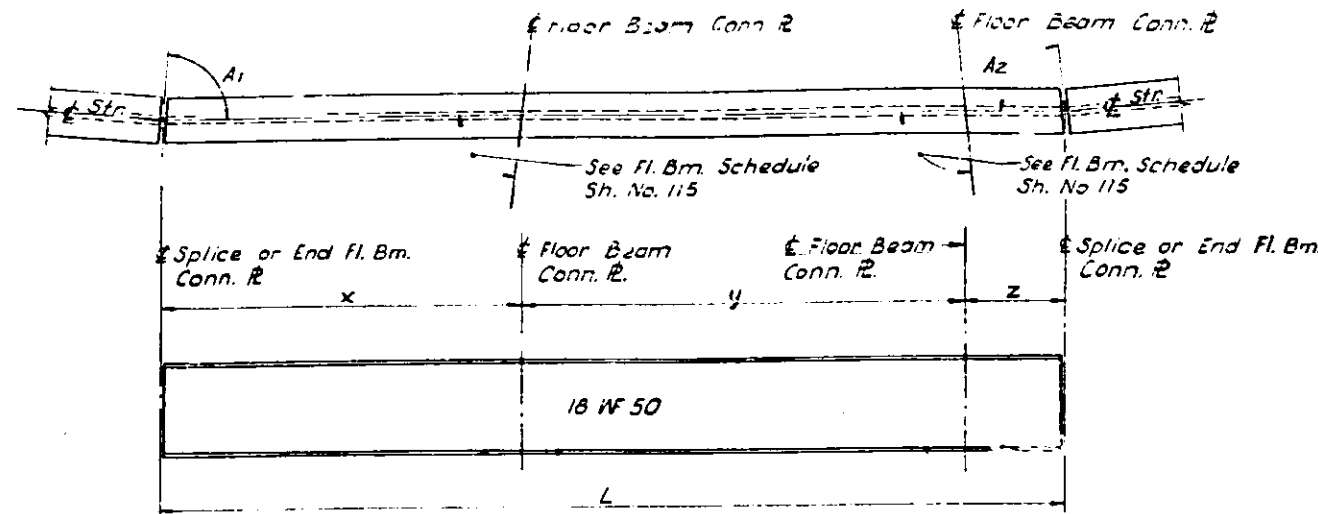
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS BLDGS.
DIVISION OF HIGHWAYS

FLOOR BEAM SCHEDULE
POPLAR STREET BRIDGE APPROACHES
ROADWAY "B"

F A I RT 70 ST. CLAIR CO SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
115 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-3HV8	ST. CLAIR	799	151
FED. ROAD DIV. NO. 4		ILL. DIS.	PROJECT	

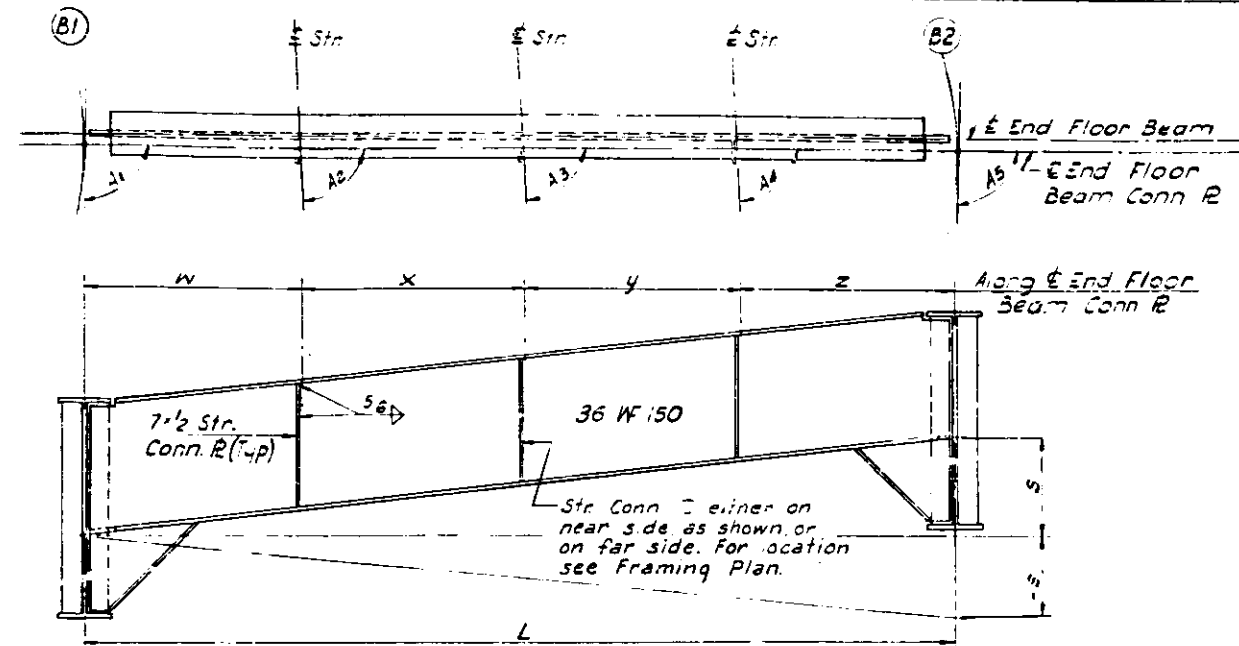


TYPICAL STRINGER ELEVATION
RDWY. B

Str. No.	L	x	y	z	A1	A2
b1	36-11	2-8	20-0	4-3	*	90°00'00"
b2	40-0	5-9	20-0	4-3	20°00'00"	90°00'00"
b3	29-0	5-9	0	13-3	90°00'00"	*
b4	20-6	16-3	0	4-3	*	90°00'00"
b5	40-2	15-9 1/2	20-1	4-3 1/2	89°33'03"	89°10'29"
b6	40-4 1/2	15-10 1/2	20-2	4-3 1/2	89°44'35"	88°58'59"
b7	20-6 1/2	15-1 1/2	20 3/4	4-3 1/2	89°33'39"	88°47'35"
b8	30-0 1/2	15-9 1/2	0	15-0 1/2	89°39'01"	*
b9	31-0 1/2	15-10 1/2	0	15-1 1/2	90°27'10"	*
b10	31-2 1/2	15-11 1/2	0	15-2 1/2	90°35'03"	*
b11	19-8 1/2	15-6 1/2	0	4-2 1/2	*	89°39'24"
b12	19-10 1/2	15-7 1/2	0	4-2 1/2	*	89°37'36"
b13	19-11 1/2	15-8 1/2	0	4-2 1/2	*	89°35'48"
b14	39-10 1/2	15-8 1/2	13-11 1/2	4-2 1/2	89°28'20"	89°19'32"
b15	40-0 1/2	15-9 1/2	20-0 1/2	4-2 1/2	89°26'34"	89°17'33"
b16	40-2 1/2	15-10 1/2	20-1 1/2	4-2 1/2	89°28'46"	89°15'26"
b17	39-10 1/2	15-8 1/2	19-11 1/2	4-2 1/2	89°23'53"	89°20'19"
b18	40-0 1/2	15-9 1/2	20-0 1/2	4-2 1/2	89°23'40"	89°18'32"
b19	40-2 1/2	15-10 1/2	20-1 1/2	4-2 1/2	89°27'26"	89°16'06"
b20	39-10 1/2	15-8 1/2	19-11 1/2	4-2 1/2	89°23'27"	89°20'45"
b21	40-2 1/2	15-9 1/2	20-0 1/2	4-2 1/2	89°23'47"	89°19'28"
b22	40-2 1/2	15-10 1/2	20-1 1/2	4-2 1/2	89°26'07"	89°15'05"
b23	39-9 1/2	15-8 1/2	19-10 1/2	4-2 1/2	89°23'02"	89°21'15"
b24	39-11 1/2	15-9 1/2	19-11 1/2	4-2 1/2	89°23'58"	89°20'21"
b25	40-1 1/2	15-10 1/2	20-0 1/2	4-2 1/2	89°26'49"	89°19'28"
b26	39-10 1/2	15-8 1/2	19-11 1/2	4-2 1/2	89°23'00"	89°21'12"
b27	40-0 1/2	15-9 1/2	20-0 1/2	4-2 1/2	89°23'53"	89°20'19"
b28	40-2 1/2	15-10 1/2	20-1 1/2	4-2 1/2	89°24'46"	89°19'26"
b29	31-10 1/2	15-8 1/2	0	16-1 1/2	89°29'41"	*
b30	32-0 1/2	15-9 1/2	0	16-2 1/2	89°29'40"	*
b31	32-2 1/2	15-10 1/2	0	16-3 1/2	89°29'40"	*
b32	35-2 1/2	11-10 1/2	19-3	4-1 1/2	*	89°26'31"
b33	35-4 1/2	11-10 1/2	19-4 1/2	4-1 1/2	*	*
b34	35-6 1/2	11-11 1/2	19-5 1/2	4-1 1/2	*	89°26'31"
b35	38-6 1/2	15-1 1/2	19-3	4-1 1/2	89°23'23"	89°23'22"
b36	38-8 1/2	15-2 1/2	19-4 1/2	4-1 1/2	*	*
b37	38-10 1/2	15-3 1/2	19-5 1/2	4-1 1/2	89°23'23"	89°23'22"
b38	38-12 1/2	15-4 1/2	19-6 1/2	4-1 1/2	89°23'24"	89°23'24"
b39	38-14 1/2	15-5 1/2	19-7 1/2	4-1 1/2	*	*
b40	38-16 1/2	15-6 1/2	19-8 1/2	4-1 1/2	89°23'24"	89°23'24"
b41	26-4 1/2	15-1 1/2	0	11-3 1/2	89°34'53"	*
b42	26-6 1/2	15-2 1/2	0	11-5 1/2	*	*
b43	26-7 1/2	15-3 1/2	0	11-7 1/2	89°34'53"	*
b44	36-2 1/2	12-2 1/2	19-9 1/2	4-2 1/2	*	89°25'36"

* See End Floor Beam Schedule.

DESIGNED BY: RMR
DRAWN BY: J.M.
CHECKED BY: A.J.C.
APPROVED BY: KA



TYPICAL END FLOOR BEAM ELEVATION
RDWY. B

End Fl. Bm. No.	L	w	x	y	z	s	A1	A2	A3	A4	A5
L2	30-0	7-6	7-6	7-6	7-6	-0-5 1/2	90°00'00"	90°00'00"	90°00'00"	90°00'00"	90°00'00"
L3						-0-5 1/2	*	*	*	*	*
L4	30-0	7-6	7-6	7-6	7-6	-0-5 1/2	90°00'00"	90°00'00"	90°00'00"	90°00'00"	90°00'00"
L5	31-6 1/2	7-10 1/2	7-10 1/2	7-10 1/2	7-10 1/2	2-6 1/2	89°02'33"	89°00'20"	89°28'28"	89°36'21"	89°24'14"
L6	31-7 3/4	7-10 1/2	7-10 1/2	7-10 1/2	7-10 1/2	2-6 3/4	89°57'27"	89°40'30"	89°42'18"	89°44'06"	89°07'51"
L7	32-0	8-0	8-0	8-0	8-0	2-6 1/2	90°01'26"	90°31'46"	90°31'45"	90°31'45"	90°01'26"
L8	See Sheet No. 126										
L9	See Sheet No. 126										
L10	32-0	8-0	8-0	8-0	8-0	2-6 1/2	89°58'34"	89°23'05"	89°25'05"	89°25'05"	89°58'35"
L11							90°02'33"	90°27'40"	90°27'40"	90°27'40"	90°02'30"
L12							89°57'27"	89°23'02"	89°23'02"	89°23'02"	89°57'30"
L13							90°02'33"	90°29'00"	90°29'00"	90°29'00"	90°02'31"
L14							89°57'27"	89°23'02"	89°23'02"	89°23'02"	89°57'30"
L15							90°02'33"	90°29'00"	90°29'00"	90°29'00"	90°02'31"
L16							89°57'27"	89°23'02"	89°23'02"	89°23'02"	89°57'30"
L17	32-0	8-0	8-0	8-0	8-0	2-6 1/2	90°01'26"	90°28'26"	90°28'26"	90°28'26"	90°01'26"
L18	See Sheet No. 127										
L19	See Sheet No. 127										
L20	32-0	8-0	8-0	8-0	8-0	2-6 1/2	89°57'27"	89°23'07"	89°23'07"	89°23'07"	89°57'30"
L21	32-0	8-0	8-0	8-0	8-0	2-6 1/2	90°00'00"	90°27'49"	90°27'49"	90°27'49"	90°00'00"

* Designated as an End Girder.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS

STRINGER AND END FLOOR BEAM
SCHEDULE

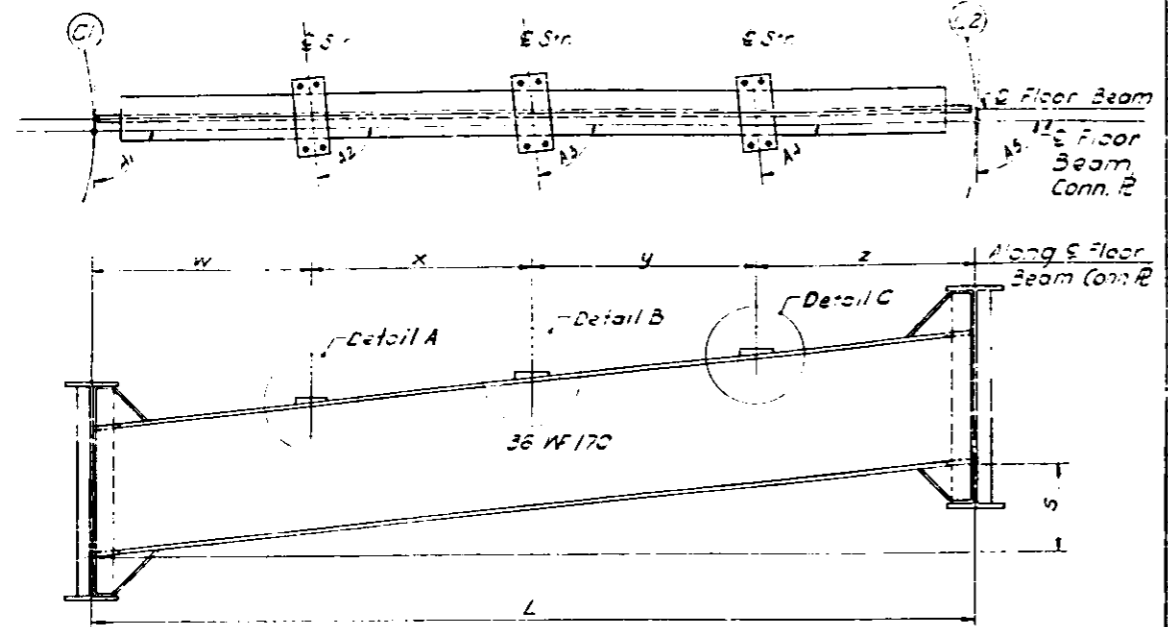
POPLAR STREET BRIDGE APPROACHES
ROADWAY "B"

F. A. I. RT 70 ST. CLAIR CO. SECTION 82-3HV8

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
16 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-3HVB	ST. CLAIR	259	152
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



TYPICAL FLOOR BEAM ELEVATION
RDWY. C

Fl. Bm. No.	L	w	x	y	z	s	A1	A2	A3	A4	A5
17	300	7-6	7-6	7-6	7-6	0-5 3/8	90°00'00"	90°00'00"	90°00'00"	90°00'00"	90°00'00"
22											
23											
24											
25											
26											
27											
28						0-5 3/8					
29						0-3 9/16					
30						0-0 1/8					
31						1 1 3/8					
32						1-4 1/2					
33	300	7-6	7-6	7-6	7-6	1-7 3/4	90°00'00"	90°00'00"	90°00'00"	90°00'00"	90°00'00"
34	30-2 1/2	7-6 1/2	7-6 1/2	7-6 1/2	7-6 1/2	1-11 3/4	89°08'44"	89°31'04"	89°44'30"	89°57'49"	
35	30-6 1/2	7-6 3/4	7-7 1/4	7-7 1/4	7-6 3/4	2-2 3/8	89°13'02"	89°17'24"	89°28'44"	89°39'58"	
36	30-9 1/2	7-7 1/4	7-8 1/4	7-8 1/4	7-6 3/4	2-4 1/2	89°17'20"	89°25'15"	90°06'35"	90°17'49"	
37	31-0 1/2	7-7 1/2	7-9	7-9	7-10 1/2	2-5 3/4	89°21'39"	89°24'11"	89°33'43"	89°43'09"	
38	31-2 1/2	7-9 1/2	7-9 1/2	7-9 1/2	7-10 1/2	2-6	89°25'59"	90°02'03"	90°11'35"	90°21'01"	
39	31-4 1/2	7-9 3/4	7-10 1/2	7-10 1/2	7-11 1/2	2-6 1/2	89°30'18"	89°30'33"	89°37'48"	89°45'00"	
40	31-6 1/2	7-10 1/2	7-10 1/2	7-10 1/2	7-11 1/2	2-6 3/4	89°34'38"	90°08'25"	90°15'40"	90°22'52"	
41	31-8 1/2	7-10	7-11 1/2	7-11 1/2	8-0 1/2	2-6 1/2	89°38'57"	89°36'32"	89°41'52"	89°46'48"	
42	31-9 1/2	7-10 1/2	7-11 1/2	7-11 1/2	7-11 1/2	2-6 1/2	89°43'18"	90°14'50"	90°19'50"	90°24'46"	
43	31-10 1/2	7-10 3/4	7-11 1/2	7-11 1/2	8-0 1/2	2-6 3/4	89°47'38"	89°43'20"	89°46'04"	89°48'46"	
44	31-11 1/2	7-11 1/2	7-11 1/2	7-11 1/2	8-0 1/2	2-6 1/2	89°51'58"	90°21'11"	90°23'55"	90°26'37"	
45	31-11 1/2	7-11 1/2	7-11 1/2	7-11 1/2	8-0 1/2	2-6 1/2	89°56'18"	89°57'01"	89°58'09"	89°59'16"	90°00'00"
46	32-0	7-11	8-0	8-0	8-1	2-6 3/4	90°00'00"	89°49'53"	89°49'53"	89°49'53"	
47		7-11 1/2	8-0	8-0	8-0 1/2		90°26'14"	90°26'14"	90°26'14"		
48		7-10 1/2	8-0	8-0	8-1 1/2		89°52'20"	89°52'20"	89°52'20"		
49	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°28'39"	90°28'39"	90°28'39"	90°00'00"
50	Same as Floor beam 48										
51	ditto										
52											
53											
54											
55											
56	32-0	7-10 1/2	8-0	8-0	8-1 1/2	2-6 3/4	90°00'00"	89°52'19"	89°52'19"	89°52'19"	90°00'00"
57	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-5 3/4	90°00'00"	90°28'38"	90°28'38"	90°28'38"	90°00'00"
58	Same as Floor beam 48										
59	Same as Floor beam 49										
60	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°02'57"	90°02'57"	90°02'57"	90°00'00"
61		7-10 1/2	8-0	8-0	8-1 1/2			89°48'36"	89°48'36"	89°48'36"	
62		7-11 1/2	8-0	8-0	8-0 1/2			90°27'45"	90°27'45"	90°27'45"	
63		7-10 1/2	8-0	8-0	8-1 1/2			89°51'42"	89°51'42"	89°51'42"	
64	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°30'51"	90°30'51"	90°30'51"	90°00'00"
65	Same as Floor beam 63										
66	Same as Floor beam 64										

Fl. Bm. No.	L	w	x	y	z	s	A1	A2	A3	A4	A5
67	Same as Floor beam 63										
68											
69	ditto										
70											
71											
72											
73											
74											
75	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 1/2	90°00'00"	90°02'33"	90°02'33"	90°02'33"	90°00'00"
76		7-10 1/2	8-0	8-0	8-1 1/2			89°49'14"	89°49'14"	89°49'14"	
77		7-11 1/2	8-0	8-0	8-0 1/2			90°28'44"	90°28'44"	90°28'44"	
78		7-10 1/2	8-0	8-0	8-1 1/2			89°51'42"	89°51'42"	89°51'42"	
79	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 1/2	90°00'00"	90°31'12"	90°31'12"	90°31'12"	90°00'00"
80	Same as Floor beam 78										
81											
82	ditto										
83											
84											
85											
86	32-0	7-10 1/2	8-0	8-0	8-1 1/2	2-6 3/4	90°00'00"	89°51'43"	89°51'43"	89°51'43"	90°00'00"
87	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 1/2	90°00'00"	90°31'01"	90°31'01"	90°31'01"	90°00'00"
88	Same as Floor beam 78										
89											
90	ditto										
91											
92											
93											
94											
95											
96	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°03'02"	90°03'02"	90°03'02"	90°00'00"
97	32-0	7-10 1/2	8-0	8-0	8-1 1/2			89°48'41"	89°48'41"	89°48'41"	90°00'00"
98	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 1/2	90°00'00"	90°28'10"	90°28'10"	90°28'10"	90°00'00"
99	Same as Floor beam 78										
100											
101	ditto										
102											
103											
104											
105											
106											
107											
108											
109											
110											
111											
112											
113											
114											
115											
116											
117											
118	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	89°53'23"	89°53'23"	89°53'23"	90°00'00"
119	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°22'41"	90°22'41"	90°22'41"	90°00'00"
120	Same as Floor beam 48										
121											
122	ditto										
123											
124	32-0	7-10 1/2	8-0	8-0	8-1 1/2	2-6 1/2	90°00'00"	89°52'16"	89°52'16"	89°52'16"	90°00'00"
125	32-0	7-11 1/2	8-0	8-0	8-0 1/2			90°29'13"	90°29'13"	90°29'13"	
126	32-0	7-10 1/2	8-0	8-0	8-1 1/2			89°52'12"	89°52'12"	89°52'12"	
127	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°29'05"	90°29'05"	90°29'05"	90°00'00"
128	Same as Floor beam 126										
129	Same as Floor beam 127										
130	32-0	7-10 1/2	8-0	8-0	8-1 1/2	2-6 3/4	90°00'00"	89°52'05"	89°52'05"	89°52'05"	90°00'00"
131	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 1/2	90°00'00"	90°28'23"	90°28'23"	90°28'23"	90°00'00"
132	Same as Floor beam 48										
133											
134	ditto										
135											
136	32-0	7-10 1/2	8-0	8-0	8-1 1/2	2-6 1/2	90°00'00"	89°52'20"	89°52'20"	89°52'20"	90°00'00"
137	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°28'37"	90°28'37"	90°28'37"	90°00'00"
138	Same as Floor beam 48										
139											
140	ditto										
141											
142											
143											
144											
145											
146	32-0	7-11 1/2	8-0	8-0	8-0 1/2	2-6 3/4	90°00'00"	90°01'42"	90°01'42"	90°01'42"	90°00'00"

For Detail A, B and C see Sh No. 153

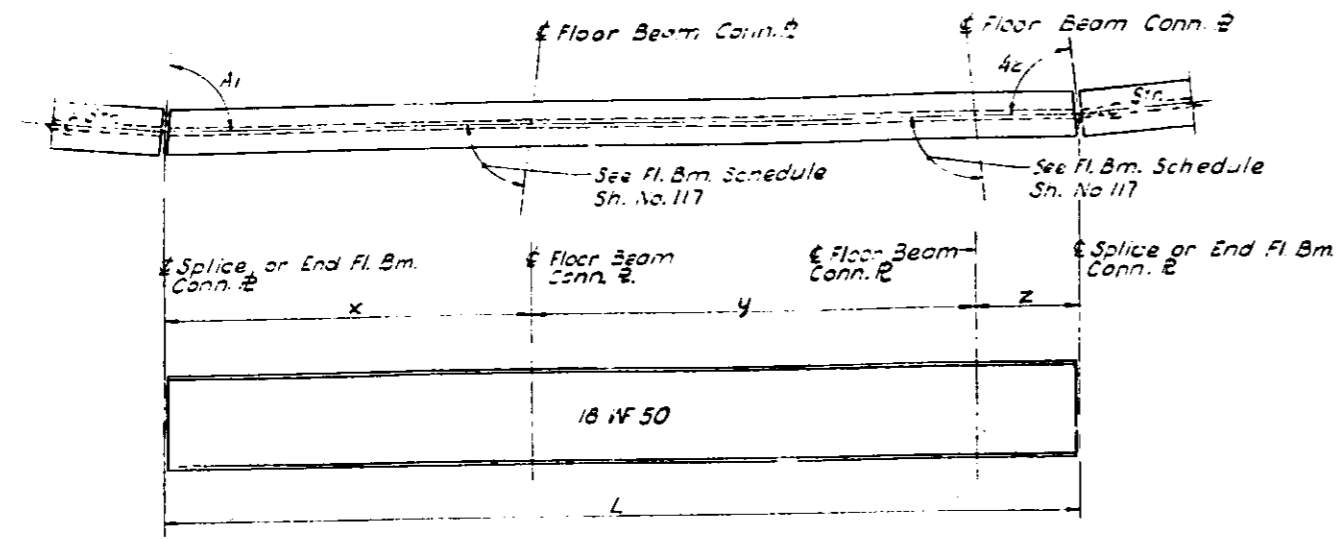
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS

FLOOR BEAM SCHEDULE
POPLAR STREET BRIDGE APPROACHES
ROADWAY "C"

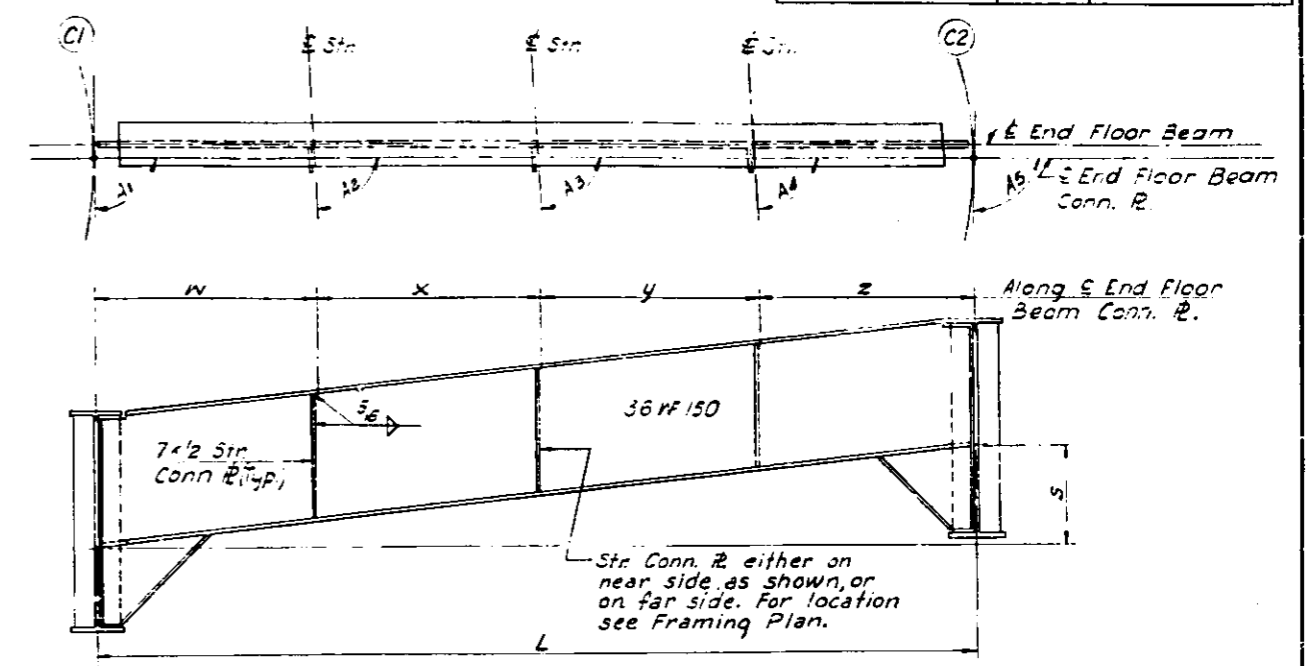
F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
117 of 26

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	B2-3HVB	ST. CLAIR	289	153
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



TYPICAL STRINGER ELEVATION
RDWY. C



TYPICAL END FLOOR BEAM ELEVATION
RDWY. C

Str. No.	L	x	y	z	A1	A2
c1	36-11	12-8	20-0	4-3	90°00'00"	90°00'00"
c2	40-0	15-9	20-0	4-3	90°00'00"	90°00'00"
c3	29-0	15-9	0	13-3	90°00'00"	*
c4	32-0	16-3	0	13-9	90°00'00"	90°00'00"
c5	20-0 1/2	4-3	0	16-7 1/2	90°00'00"	*
c6	20-11	4-3	0	16-8	90°00'00"	*
c7	20-11 1/2	4-3	0	16-8 1/2	90°00'00"	*
c8	18-0	14-7 1/2	0	4-2 1/2	90°20'57"	90°01'31"
c9	18-1	14-8 1/2	0	4-2 1/2	90°01'31"	89°54'13"
c10	19-0 1/2	14-9 1/2	0	4-2 1/2	89°54'13"	*
c11	39-7 1/2	13-8 1/2	19-10 1/2	4-2 1/2	88°57'31"	87°56'43"
c12	39-7 1/2	15-9 1/2	19-11 1/2	4-2 1/2	88°57'31"	87°45'26"
c13	40-2	15-10 1/2	20-1	4-2 1/2	89°10'03"	89°34'11"
c14	39-9 1/2	15-8 1/2	19-10 1/2	4-2 1/2	88°54'19"	89°30'38"
c15	39-11 1/2	15-9 1/2	19-11 1/2	4-2 1/2	89°03'50"	89°40'26"
c16	20-7 1/2	15-10 1/2	20-0 1/2	4-2 1/2	89°13'17"	89°31'00"
c17	39-9 1/2	15-8 1/2	19-10 1/2	4-2 1/2	89°00'40"	89°43'36"
c18	39-11 1/2	15-9 1/2	19-11 1/2	4-2 1/2	89°07'55"	89°36'21"
c19	40-1 1/2	15-10 1/2	20-0 1/2	4-2 1/2	89°13'07"	89°29'10"
c20	39-10 1/2	15-8 1/2	19-10 1/2	4-2 1/2	89°07'20"	89°37'11"
c21	40-2 1/2	15-9 1/2	20-0 1/2	4-2 1/2	89°11'59"	89°32'12"
c22	40-2 1/2	15-10 1/2	20-1 1/2	4-2 1/2	89°16'56"	89°27'15"
c23	39-9 1/2	15-8 1/2	19-10 1/2	4-2 1/2	89°13'26"	89°30'30"
c24	39-11 1/2	15-9 1/2	19-11 1/2	4-2 1/2	89°16'10"	89°28'06"
c25	40-1 1/2	15-10 1/2	20-0 1/2	4-2 1/2	89°18'52"	89°25'26"
c26	31-10 1/2	15-8 1/2	0	16-2 1/2	89°27'08"	*
c27	32-0 1/2	15-9 1/2	0	16-3 1/2	89°28'16"	*
c28	32-2 1/2	15-10 1/2	0	16-4 1/2	89°29'23"	*
c29	35-7 1/2	12-6 1/2	19-1	4-0 1/2	89°26'06"	89°26'06"
c30	35-9 1/2	12-6 1/2	19-2	4-0 1/2	89°26'06"	*
c31	35-11 1/2	12-7 1/2	19-3 1/2	4-0 1/2	89°26'06"	89°26'06"
c32	38-2	15-0 1/2	19-1	4-0 1/2	89°23'41"	89°23'42"
c33	38-4 1/2	15-1 1/2	19-2	4-0 1/2	89°23'41"	*
c34	38-6 1/2	15-2 1/2	19-3 1/2	4-0 1/2	89°23'41"	*
c35	38-1 1/2	15-0 1/2	19-1	4-0 1/2	89°23'41"	*
c36	38-3 1/2	15-1 1/2	19-2	4-0 1/2	89°23'41"	*
c37	38-5 1/2	15-2 1/2	19-3 1/2	4-0 1/2	89°23'41"	89°23'42"
c38	26-11 1/2	15-0 1/2	0	11-11 1/2	89°34'19"	*
c39	27-1 1/2	15-1 1/2	0	11-11 1/2	89°34'19"	*
c40	27-2 1/2	15-2 1/2	0	12-0 1/2	89°34'19"	*
c41	37-0 1/2	12-1 1/2	20-6 1/2	4-4 1/2	89°23'58"	*
c42	32-0 1/2	13-0	20-8	4-4 1/2	89°23'58"	*
c43	33-2 1/2	13-0 1/2	20-9 1/2	4-4 1/2	89°23'58"	*
c44	41-1 1/2	16-2 1/2	20-6 1/2	4-4 1/2	89°20'51"	89°20'51"

Str. No.	L	x	y	z	A1	A2
c45	41-4	16-2 1/2	20-8	4-4 1/2	89°20'51"	89°20'51"
c46	41-6 1/2	16-4 1/2	20-9 1/2	4-4 1/2	89°20'51"	89°20'51"
c47	29-8 1/2	16-2 1/2	0	13-6 1/2	89°31'42"	*
c48	29-10 1/2	16-3 1/2	0	13-7	89°31'42"	*
c49	30-0 1/2	16-4 1/2	0	13-7 1/2	89°31'42"	*
c50	38-0 1/2	3-0 1/2	20-9 1/2	4-4 1/2	89°22'59"	89°22'59"
c51	30-0 1/2	3-0 1/2	20-0 1/2	4-4 1/2	*	*
c52	39-3	13-0 1/2	20-1 1/2	4-4 1/2	*	89°22'59"
c53	41-6 1/2	10-6 1/2	20-9 1/2	4-4 1/2	89°20'30"	89°20'30"
c54	28-8 1/2	16-5 1/2	20-10 1/2	4-4 1/2	*	*
c55	41-0 1/2	16-6 1/2	20-11 1/2	4-4 1/2	89°20'30"	89°20'30"
c56	41-3 1/2	16-3 1/2	20-7 1/2	4-4 1/2	89°20'42"	89°20'42"
c57	41-5 1/2	16-4 1/2	20-8 1/2	4-4 1/2	89°20'42"	89°20'42"
c58	41-8 1/2	16-5 1/2	20-9 1/2	4-4 1/2	89°20'42"	89°20'42"
c59	20-7 1/2	16-5 1/2	0	3-2 1/2	89°31'20"	*
c60	20-8 1/2	16-6 1/2	0	3-3 1/2	*	*
c61	20-10 1/2	16-8 1/2	0	3-5 1/2	89°31'50"	*
c62	32-3 1/2	13-2 1/2	20-9 1/2	4-4 1/2	*	89°23'32"
c63	38-5 1/2	13-3 1/2	20-10 1/2	4-4 1/2	*	*
c64	38-8 1/2	13-4 1/2	20-11 1/2	4-4 1/2	*	89°23'32"
c65	31-10 1/2	2-5 1/2	15-6 1/2	4-0 1/2	*	89°29'39"
c66	32-0 1/2	2-6 1/2	15-7 1/2	4-0 1/2	*	*
c67	32-2 1/2	2-7 1/2	15-8 1/2	4-0 1/2	*	89°29'39"
c68	38-10 1/2	15-4 1/2	17-3	4-1 1/2	89°22'59"	89°22'59"
c69	39-1	15-5 1/2	19-6 1/2	4-1 1/2	89°22'59"	89°22'59"
c70	39-3 1/2	15-6 1/2	19-7 1/2	4-1 1/2	89°22'59"	89°22'59"
c71	37-10 1/2	14-9 1/2	19-1	4-0 1/2	89°23'57"	89°23'57"
c72	35-4 1/2	14-0 1/2	19-2	4-0 1/2	89°23'57"	89°23'57"
c73	38-2 1/2	14-10 1/2	19-3 1/2	4-0 1/2	89°23'57"	89°23'57"
c74	28-3 1/2	5-0 1/2	0	13-3 1/2	89°33'04"	*
c75	29-5 1/2	5-1 1/2	0	13-3 1/2	*	*
c76	28-6 1/2	5-2 1/2	0	13-4 1/2	89°33'04"	*
c77	38-7 1/2	5-0 1/2	19-0 1/2	4-0 1/2	89°23'43"	89°23'43"
c78	38-9 1/2	5-1 1/2	19-1 1/2	4-0 1/2	89°23'43"	89°23'43"
c79	38-11 1/2	5-2 1/2	19-2 1/2	4-0 1/2	89°23'43"	89°23'43"
c80	35-10 1/2	13-3 1/2	19-3	4-1 1/2	89°23'03"	89°23'03"
c81	39-0 1/2	13-4 1/2	19-6 1/2	4-1 1/2	89°23'03"	89°23'03"
c82	39-2 1/2	13-5 1/2	19-7 1/2	4-1 1/2	89°23'03"	89°23'03"

End Fl. Em. No.	L	w	x	y	z	s	A1	A2	A3	A4	A5
L2	32-0	7-6	7-6	7-6	7-6	0-5 1/2	90°20'00"	90°20'00"	90°20'00"	90°00'00"	90°00'00"
L3	30-0	7-6	7-6	7-6	7-6	0-5 1/2	90°00'00"	90°00'00"	90°00'00"	90°00'00"	90°00'00"
L4	30-0	7-6	7-6	7-6	7-6	1-9 1/2	89°04'12"	89°04'12"	89°04'12"	89°04'12"	89°02'30"
L5	30-0 1/2	7-6 1/2	7-6 1/2	7-6 1/2	7-6 1/2	1-9 1/2	89°03'02"	89°03'02"	89°03'02"	89°03'02"	89°02'30"
L6	30-0 1/2	8-0	8-0	8-0	8-0	2-6 1/2	90°01'16"	90°29'17"	90°30'24"	90°03'31"	90°01'25"
+ L8	34-5 1/2	10-12 1/2									
+ L9	34-5 1/2	10-12 1/2									
L10	32-0	8-0	8-0	8-0	8-0	2-6 1/2	89°58'34"	89°24'41"	89°24'41"	89°24'41"	89°58'36"
L11						2-6 1/2	90°02'33"	90°28'11"	90°28'11"	90°28'11"	90°02'30"
L12							89°57'27"	89°21'27"	89°21'27"	89°21'27"	89°57'30"
L13							90°01'26"	90°29'42"	90°29'42"	90°29'42"	90°01'25"
L14							89°58'34"	89°21'35"	89°21'35"	89°21'35"	89°58'36"
L15							90°02'33"	90°30'41"	90°30'41"	90°30'41"	90°02'30"
L16							89°57'27"	89°21'02"	89°21'02"	89°21'02"	89°57'30"
L17							90°02'33"	90°30'41"	90°30'41"	90°30'41"	90°02'30"
L18							89°57'27"	89°21'09"	89°21'09"	89°21'09"	89°57'30"
L19	32-0	8-0	8-0	8-0	8-0	2-6 1/2	90°01'20"	90°26'56"	90°26'56"	90°26'56"	90°01'20"

+ Designated as an End Girder

DESIGNED BY R.M.C.
DRAWN BY L.M.
CHECKED BY A.C.
APPROVED BY K.A.

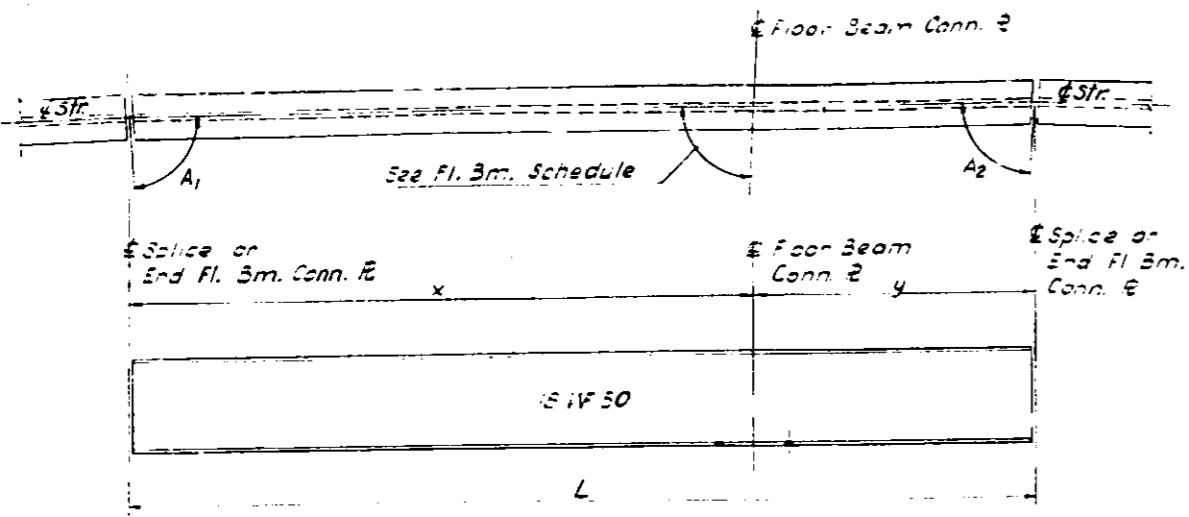
* See End Floor Beam Schedule.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
SS.

STRINGER AND END FLOOR BEAM SCHEDULE
POPLAR STREET BRIDGE APPROACHES
ROADWAY "C"

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC. ENGINEERS CHICAGO, ILLINOIS
SHEET 118 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	299	15-
FED. ROAD DIV. NO. 4	ILLINOIS	PROJECT		



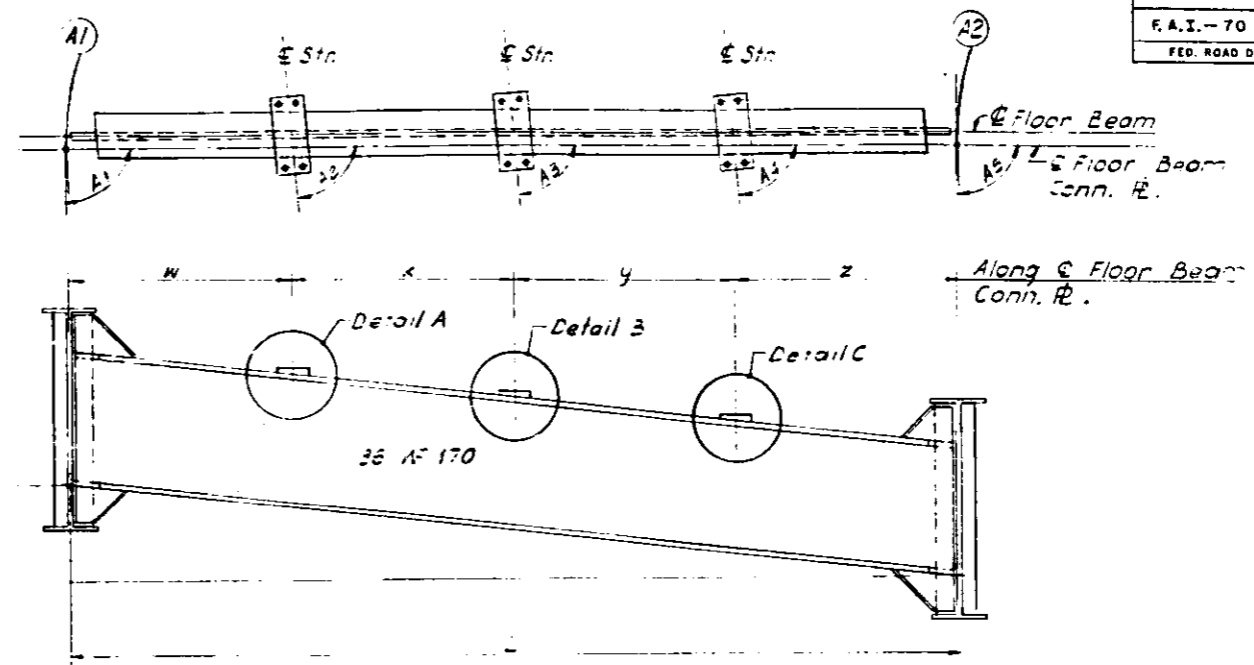
TYPICAL STRINGER ELEVATION

Str. No.	L	x	y	A1	A2
01	20-5 1/2	16-1 1/2	4-4 1/2	*	89° 0'-0"
02	20-3	15-10 1/2	4-4 3/8	*	89° 10'-16"
03	20-5 1/2	15-8 1/2	4-3 5/8	*	89° 10'-16"
04	20-9 1/2	16-4 3/8	4-4 1/2	89° 09'-32"	89° 09'-32"
05	20-6 3/8	16-2 7/8	4-4 3/8	*	89° 10'-16"
06	20-3 1/2	16-0 3/8	4-3 3/8	89° 09'-32"	89° 09'-32"
07	20-6 3/8	16-4 3/8	4-1 1/2	89° 10'-10"	89° 10'-10"
08	20-3 1/2	16-2 7/8	4-1 1/2	*	89° 10'-10"
09	20-0 3/4	16-0 3/8	4-0 9/8	89° 10'-10"	89° 10'-10"
10	19-6 3/8	15-3 1/2	4-1 1/2	89° 12'-28"	89° 12'-28"
11	19-4 3/8	15-3 1/2	2-1 1/2	*	89° 12'-28"
12	19-1 1/2	15-1 1/2	4-0 9/8	89° 12'-28"	89° 12'-28"

Str. No.	L	x	y	A1	A2
013	9-8 1/2	15-6 3/8	4-1 1/2	89° 12'-09"	89° 12'-09"
014	19-3 1/2	15-4 1/2	4-1 1/2	*	89° 12'-09"
015	19-3 1/2	15-2 9/8	4-0 9/8	89° 12'-09"	89° 12'-09"
016	19-10 1/2	15-5 1/2	4-4 3/8	89° 11'-50"	89° 11'-50"
017	19-7 1/2	15-3 3/8	4-4 3/8	*	89° 11'-50"
018	19-4 1/2	15-1 1/2	4-3 3/8	89° 11'-50"	89° 11'-50"
019	19-9	16-4 1/2	3-4 3/8	89° 12'-03"	89° 12'-03"
020	19-6 3/8	16-2 7/8	3-3 3/8	*	89° 12'-03"
021	19-3 1/2	16-0 3/8	3-3 1/2	89° 12'-03"	89° 12'-03"
022	12-8 1/2	*	*	89° 29'-07"	*
023	12-6 3/8	*	*	*	*
024	12-5	*	*	89° 29'-07"	*

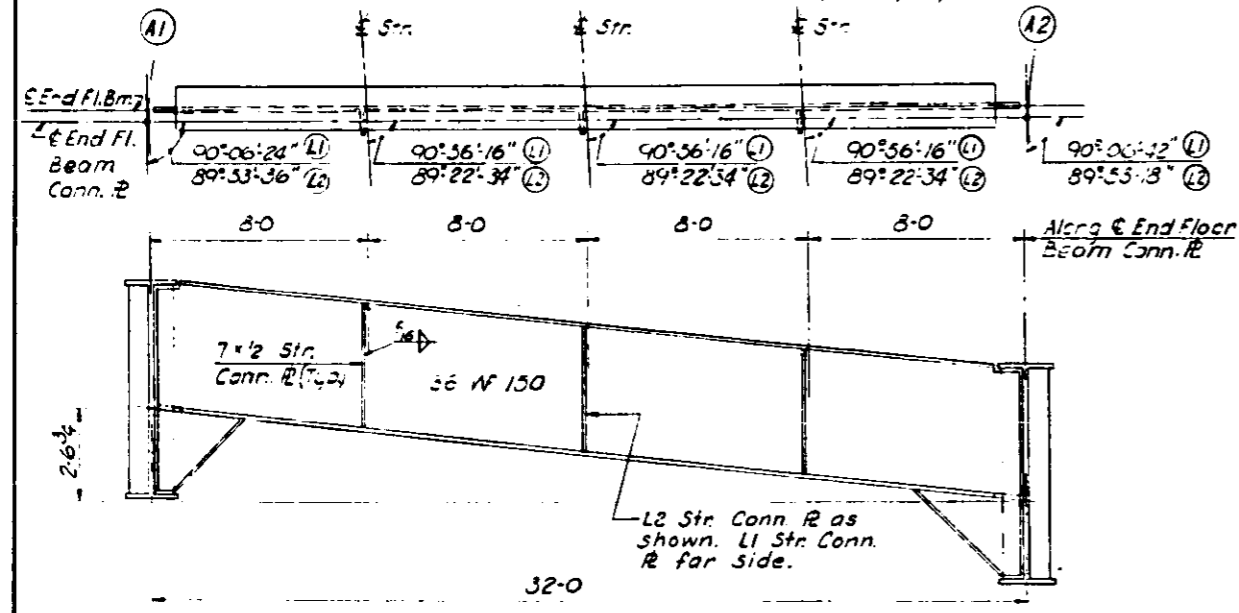
* See End Floor Beam Schedule.

* * No intersecting Floor Beam



TYPICAL FLOOR BEAM ELEVATION

Fl. Bm. No.	L	N	x	y	z	s	A1	A2	A3	A4	A5
1	32-0	8-0 9/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 31' 35"	89° 31' 35"	89° 31' 35"	90° 00' 00"
2	32-0	8-0 3/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 30' 53"	89° 30' 53"	89° 30' 53"	90° 00' 00"
3	Same as Floor Beam 2										
4	ditto										
5											
6	32-0	8-0 9/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 31' 13"	89° 31' 13"	89° 31' 13"	90° 00' 00"
7	32-0	8-0 9/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 32' 34"	89° 32' 34"	89° 32' 34"	90° 00' 00"
8	Same as Floor Beam 7										
9	ditto										
10											
11											
12											
13											
14	32-0	8-0 9/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 32' 15"	89° 32' 15"	89° 32' 15"	90° 00' 00"
15	Same as Floor Beam 14										
16	Same as Floor Beam 7										
17	ditto										
18											
19											
20											
21											
22	32-0	8-0 9/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 33' 12"	89° 33' 12"	89° 33' 12"	90° 00' 00"
23	Same as Floor Beam 2										
24	ditto										
25											
26											
27	32-0	8-0 9/8	8-0	8-0	7-11 1/2	2-6 3/4	90° 00' 00"	89° 28' 23"	89° 28' 23"	89° 28' 23"	90° 00' 00"



TYPICAL END FLOOR BEAM ELEVATION
L1 & L2

DESIGNED BY RMR
DRAWN BY I.M.
CHECKED BY AJC
APPROVED BY KA

For Detail A, B and C see Sh. No. 133

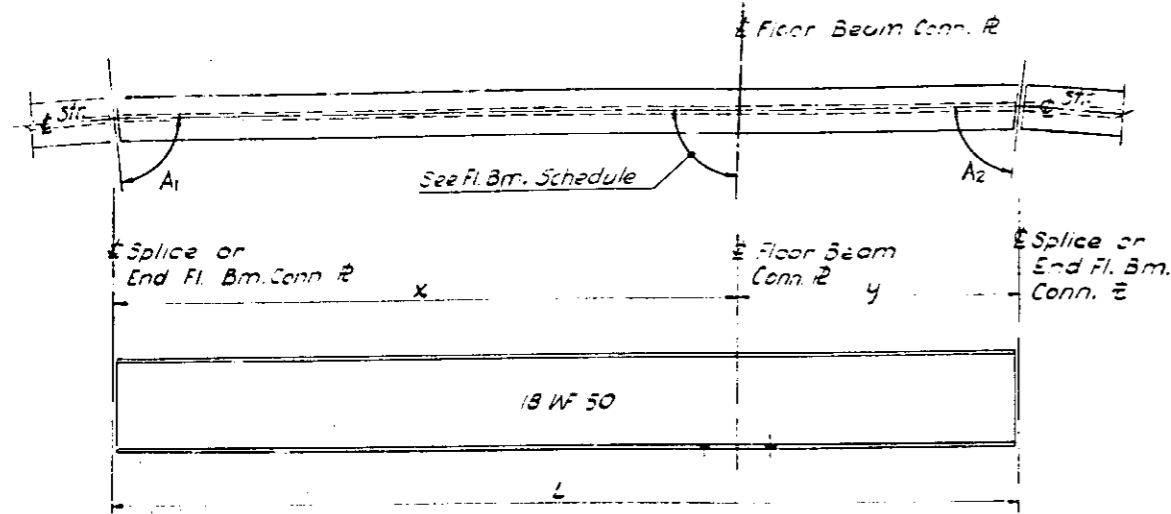
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS

FLOOR BEAM, STRINGER AND
END FLOOR BEAM SCHEDULE
POPLAR STREET BRIDGE APPROACHES
ROADWAY "A"

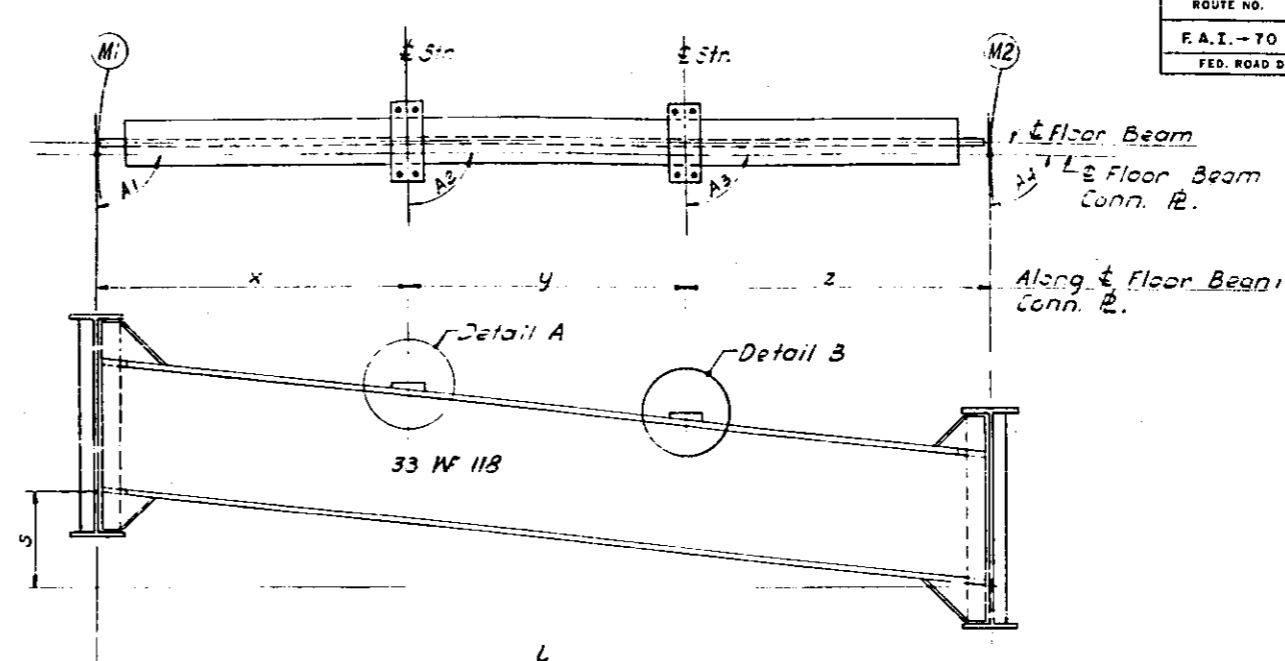
F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
119 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HV8	ST. CLAIR	289	155
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



TYPICAL STRINGER ELEVATION



TYPICAL FLOOR BEAM ELEVATION

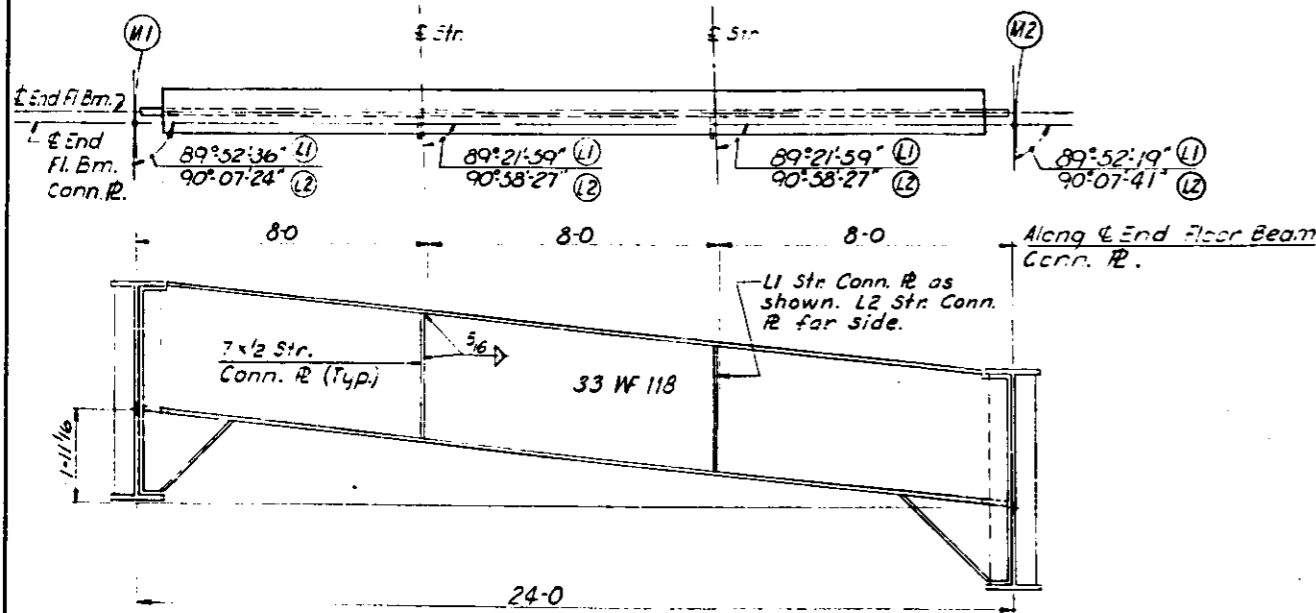
Str. No.	L	x	y	A1	A2
m1	18-7/16	13-9/16	4-4/8	*	89°09'11"
m2	17-10/16	13-6/16	4-3/16	*	89°09'11"
m3	27-8/2	16-4/8	4-4/8	89°01'50"	89°01'50"
m4	20-3/4	16-19/16	4-3/16	89°01'50"	89°01'50"
m5	20-10/16	16-6/16	4-4/8	89°01'18"	89°01'18"

Str. No.	L	x	y	A1	A2
m6	20-7/2	16-3/4	4-3/16	89°01'18"	89°01'18"
m7	19-3	16-4/8	2-10/8	89°05'55"	89°05'55"
m8	19-0	16-19/16	2-10/16	89°05'55"	89°05'55"
m9	10-10/8	*	*	89°29'37"	*
m10	10-8/4	*	*	89°29'37"	*

* See End Floor Beam Schedule
 ** No intersecting Floor Beam

Fl. Bm. No.	L	x	y	z	s	A1	A2	A3	A4
1	24-0	8-0 1/16	8-0	7-11 1/16	1-11 1/16	90°00'00"	89°22'16"	89°22'16"	90°00'00"
2	24-0	8-0 1/16	8-0	7-11 1/16	1-11 1/16	90°00'00"	89°26'21"	89°26'21"	90°00'00"
3	Same as Floor Beam 2								
4	ditto								
5	24-0	8-0 1/16	8-0	7-11 1/16	1-11 1/16	90°00'00"	89°25'49"	89°25'49"	90°00'00"
6	Same as Floor Beam 2								
7	ditto								
8									
9									
10									
11									
12									
13									
14									
15	24-0	8-0 1/16	8-0	7-11 1/16	1-11 1/16	90°00'00"	89°33'42"	89°33'42"	90°00'00"

For Detail A and B see Sh. No. 133



TYPICAL END FLOOR BEAM ELEVATION
 L1 & L2

DESIGNED BY RMR
 DRAWN BY J.M.
 CHECKED BY AJC
 APPROVED BY KA

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & E
 DIVISION OF HIGHWAYS

FLOOR BEAM, STRINGER AND
 END FLOOR BEAM SCHEDULE

POPLAR STREET BRIDGE APPROACHES
 RAMP "M"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 120 of 241

3-Span Continuous

Table of Moments and Reactions							
Spans BC8, B9, B10 *							
Location	Moment			Reaction			
	.4 Span BC8	.5 Span B9	Pier B9	Pier BC8	Pier B9		
Dead Primary	1160	1300	2680	55	312		
Load Secondary	23	26	53	2	5		
Live Primary	1030	1080	1080	71	105		
Load Secondary	21	22	20	1	2		
Impact	261	243	241	13	26		
Centrifugal Force	57	39	37	2	3		
Total	2522	270	4043	130	454		
Section Modulus	1930	930	290				
Torque Loading	Dead Load	4.7	5.2	5.5	* Design applies also to Spans BC5 thru BC7 and Spans BC8, C9, C10		
	Live Load	4.1	4.3	3.4			
	Impact	1.0	1.0	0.8			
	Total	9.8	10.5	3.0			
Section Modulus	67.5	67.5	108.0				

3-Span Continuous

Table of Moments and Reactions							
Spans B28 thru B30 *							
Location	Moment			Reaction			
	.4 Span B28	.5 Span B29	Pier B29	Pier B29	Pier B29		
Dead Primary	1650	1690	3740	104	360		
Load Secondary	33	34	75	2	7		
Live Primary	1290	1430	1460	72	123		
Load Secondary	24	29	29	1	2		
Impact	302	301	323	14	27		
Centrifugal Force	47	52	53	2	4		
Total	3346	3536	5680	195	523		
Section Modulus	2310	340	3970				
Torque Loading	Dead Load	6.6	6.9	12.4	* Design applies also to spans B12 thru B17 and Spans C12 thru C14.		
	Live Load	5.2	5.7	5.0			
	Impact	1.0	1.2	1.3			
	Total	12.8	13.7	3.7			
Section Modulus	87.75	87.75	148.5				

4-Span Continuous

Table of Moments and Reactions							
Spans BC1 thru BC4							
Location	Moment				Reaction		
	.4 Span BC1	.5 Span BC2	Pier BC2	Pier BC3	Pier BC1	Pier BC2	Pier BC3
Dead Primary	690	1510	4100	4400	105	332	393
Load Secondary	—	—	—	—	—	—	—
Live Primary	1250	1270	1630	1830	73	129	133
Load Secondary	—	—	—	—	—	—	—
Impact	288	260	355	373	17	28	27
Centrifugal Force	—	—	—	—	—	—	—
Total	3228	3040	6086	6603	195	530	579
Section Modulus	2090	1930	3970	4450			

Moments in Foot-Kips
Reactions in Kips
Section Modulus - In³

4-Span Continuous

Table of Moments and Reactions								
Spans B15 thru B18 *								
Location	Moment				Reaction			
	.4 Span B15	.5 Span B16	Pier B16	Pier B17	Pier B15	Pier B16	Pier B17	
Dead Primary	660	1490	4060	4340	103	378	384	
Load Secondary	33	30	41	44	2	8	8	
Live Primary	1280	260	640	1530	73	29	134	
Load Secondary	25	25	16	13	1	2	3	
Impact	300	262	357	378	17	29	29	
Centrifugal Force	46	46	60	67	3	5	4	
Total	3344	31.3	6174	6677	199	550	562	
Section Modulus	2260	2260	4300	4800				
Torque Loading	Dead Load	6.6	5.0	3.4	14.3	* Design applies also to Spans B19 thru B22 and Spans B23 thru B26.		
	Live Load	5.1	5.0	5.4	6.0			
	Impact	1.2	1.0	1.2	1.2			
	Total	12.9	12.0	20.0	21.5			
Section Modulus	51.0	91.0	162.0	32.25				

4-Span Continuous

Table of Moments and Reactions								
Spans C18 thru C21 *								
Location	Moment				Reaction			
	.4 Span C18	.5 Span C19	Pier C19	Pier C20	Pier C18	Pier C19	Pier C20	
Dead Primary	1360	1650	4500	4800	111	395	402	
Load Secondary	37	33	45	48	2	—	—	
Live Primary	1360	1360	1790	2000	74	134	139	
Load Secondary	27	27	18	20	2	—	—	
Impact	310	277	382	404	17	29	28	
Centrifugal Force	49	49	65	72	3	5	5	
Total	3643	3396	6800	7344	209	565	574	
Section Modulus	2420	2420	4800	5120				
Torque Loading	Dead Load	7.5	6.6	4.8	15.3	* Design applies also to Spans C22 thru C25.		
	Live Load	5.4	5.4	5.9	6.6			
	Impact	1.2	1.1	1.2	1.3			
	Total	14.1	13.1	21.9	23.7			
Section Modulus	87.6	87.6	132	196				

4-Span Continuous

Table of Moments and Reactions								
Spans A25 thru A28								
Location	Moment				Reaction			
	.4 Span A25	.5 Span A26	Pier A26	Pier A27	Pier A25	Pier A26	Pier A27	
Dead Primary	2695	2466	7238	7488	132	497	499	
Load Secondary	157	79	246	210	6	—	—	
Live Primary	1730	1740	2750	3010	74	161	167	
Load Secondary	100	56	93	84	3	—	—	
Impact	370	317	539	546	15	30	30	
Centrifugal Force	166	163	257	280	7	15	15	
Total	5218	4821	11,122	11618	237	703	711	
Section Modulus	3480	3480	7920	7920				
Torque Loading	Dead Load	34	31	72	75			
	Live Load	22	22	27	30			
	Impact	5	4	5	5			
	Total	61	57	104	110			
Section Modulus	244	244	560	560				

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS - BLDGS.
DIVISION OF HIGHWAYS

STRESS TABLES

POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
22 of 241

5-Span Continuous
Table of Moments and Reactions
Spans C26 thru C30

Location		Moment								Reaction						
		.4Span C26	.5Span C27	.5Span C28	.5Span C29	.6Span C30	Pier C21	Pier C28	Pier C29	Pier C30	Pier C26	Pier C27	Pier C28	Pier C29	Pier C30	Abut. C31
Dead Load	Primary	2250	2377	1151	1591	1554	5124	4594	3450	3714	120	435	388	335	370	97
	Secondary	43	50	24	32	30	105	92	69	74	2	9	8	7	7	2
Live Load	Primary	1520	1560	1250	1260	1230	1920	1710	1640	1532	75	141	140	131	128	61
	Secondary	30	31	25	25	24	38	34	33	30	2	3	3	3	3	1
Impact		335	306	267	268	291	398	350	348	344	16	29	29	28	29	13
Centrifugal force		55	57	45	46	44	70	62	59	54	3	5	5	5	5	2
Total		4233	4381	2762	3222	3163	7655	6842	5599	5748	217	622	573	509	542	176
Section Modulus		3100	3100	2370	2370	2370	5210	5210	4320	4320	-	-	-	-	-	-
Torque Loading	Dead Load	102	120	55	84	72	18.3	15.4	11.1	13.5						
	Live Load	7.5	7.5	6.0	6.0	5.9	6.7	6.5	5.7	5.2						
	Impact	1.6	1.5	1.3	1.3	1.4	1.4	1.3	1.2	1.1						
	Total	19.3	21.0	12.8	15.7	14.5	26.4	23.2	18.0	19.8						
	Section Modulus	192	192	144	144	144	324	324	264	264						

Table of Moments and Reactions
Spans C15 thru C17

Location		Moment			Reaction		
		.4Span C15	.5Span C16	Pier C16	Pier C15	Pier C16	
Dead Load	Primary	850	1300	4200	110	390	
	Secondary	37	38	24	2	8	
Live Load	Primary	1400	1430	1630	75	131	
	Secondary	28	28	32	1	3	
Impact		320	294	346	17	28	
Centrifugal force		51	52	59	2	2	
Total		3686	3742	6351	207	560	
Section Modulus		2390	2590	4250	-	-	
Torque Loading	Dead Load	7.4	7.6	13			
	Live Load	5.6	5.7	5			
	Impact	1.3	1.2	2			
	Total	14.3	14.5	20			
	Section Modulus	94.5	94.5	162			

5-Span Continuous
Table of Moments and Reactions
Spans S11 thru S15

Location		Moment								Reaction						
		.4Span S11	.5Span S12	.5Span S13	.5Span S14	.6Span S15	Pier S13	Pier S14	Pier S15	Pier S16	Pier S10	Pier S11	Pier S12	Pier S13	Pier S14	Pier S15
Dead Load	Primary	670	1430	1440	1490	1670	3920	3960	3960	3920	93	341	343	343	341	93
	Secondary	110	125	121	125	110	39	40	40	39	5	-	-	-	-	5
Live Load	Primary	875	890	975	990	875	1163	1290	1290	83	48	88	92	92	88	48
	Secondary	58	75	92	75	58	12	13	13	12	2	-	-	-	-	2
Impact		210	193	212	193	210	243	260	260	243	10	19	18	18	19	10
Centrifugal force		79	80	88	80	79	105	116	116	105	4	3	8	8	8	4
Total		3002	2953	2918	2953	3002	5439	5679	5679	5489	162	456	461	461	455	162
Section Modulus		2190	2190	2190	2190	2190	4070	4070	4070	4070	-	-	-	-	-	-
Torque Loading	Dead Load	20.2	18.0	17.4	18.0	20.2	39.0	40.0	40.0	39.0						
	Live Load	10.6	10.9	11.8	10.8	10.6	12.0	13.0	13.0	12.0						
	Impact	2.5	2.3	2.6	2.3	2.5	2.5	2.6	2.6	2.5						
	Total	33.3	31.1	31.8	31.1	33.3	53.5	55.6	55.6	53.5						
	Section Modulus	121	121	121	121	121	232	232	232	232						

Table of Moments and Reactions
Spans M4 thru M6

Location		Moment			Reaction		
		.4Span M4	.5Span M5	Pier M4	Pier M3	Pier M4	
Dead Load	Primary	582	1480	5820	94	342	
	Secondary	95	37	127	5	-	
Live Load	Primary	998	930	1120	48	95	
	Secondary	54	22	37	3	-	
Impact		214	180	244	11	18	
Centrifugal force		106	104	132	6	10	
Total		2949	2703	5583	167	455	
Section Modulus		2200	2200	4240	-	-	
Torque Loading	Dead Load	22.5	220	420			
	Live Load	13.5	13.3	13.6			
	Impact	3.0	2.7	2.9			
	Total	39.0	38.0	58.5			
	Section Modulus	121	121	242			

Moments in Foot-Kips
Reactions in Kips
Section Modulus - in.³

DESIGNED BY AJA
DRAWN BY JH
CHECKED BY AJA
APPROVED BY KA

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS BLDGS.
DIVISION OF HIGHWAYS

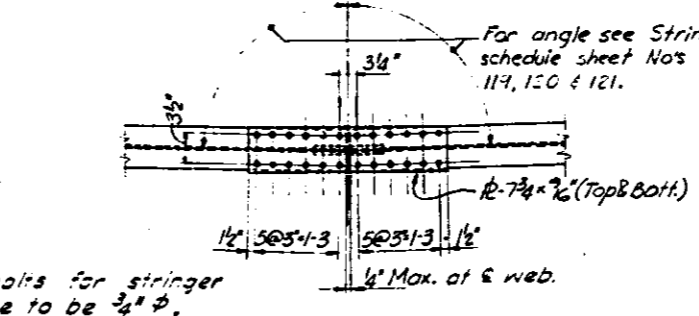
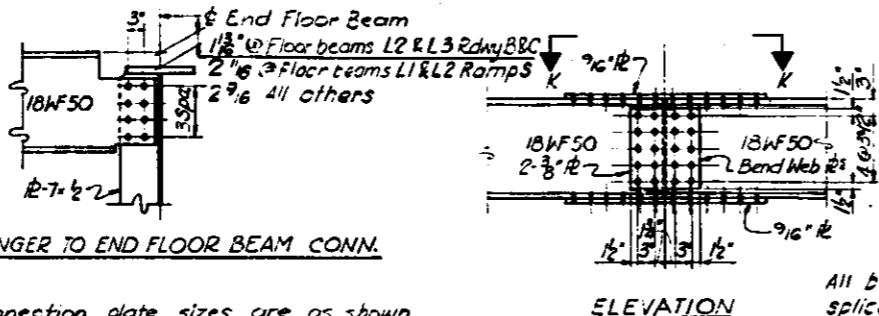
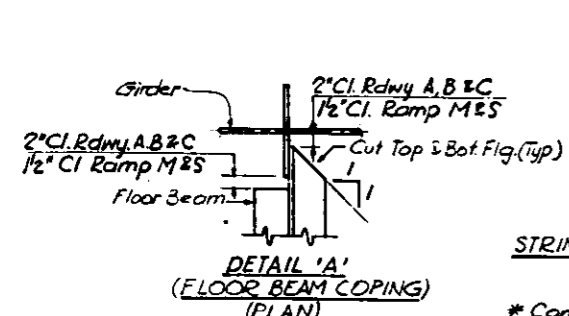
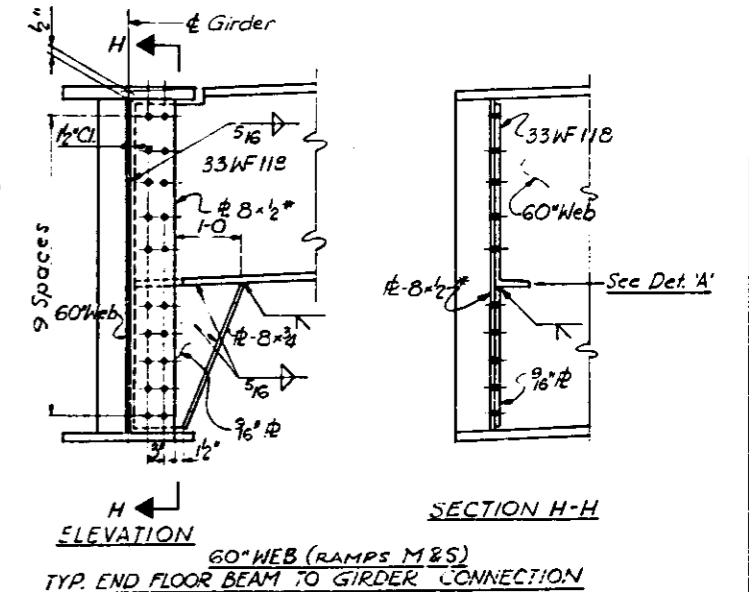
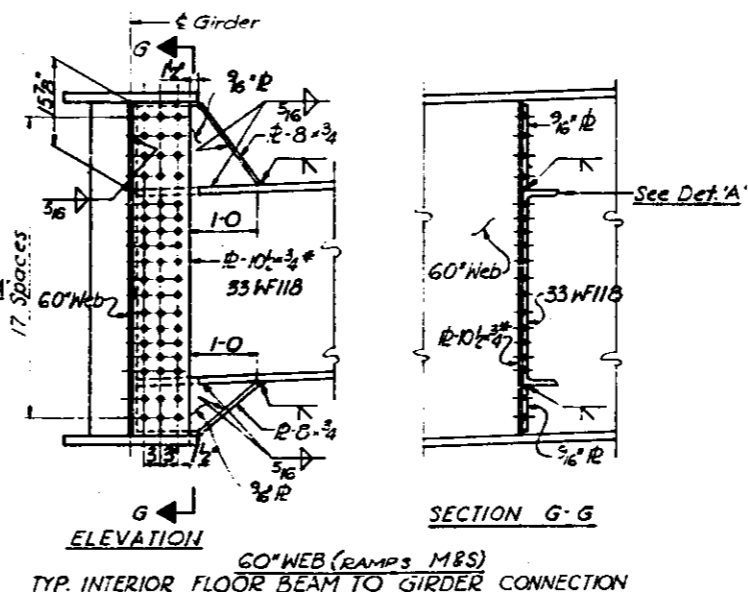
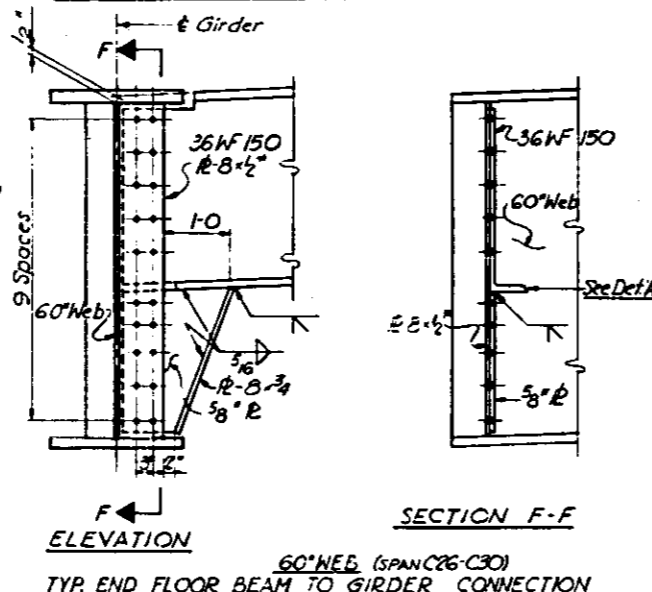
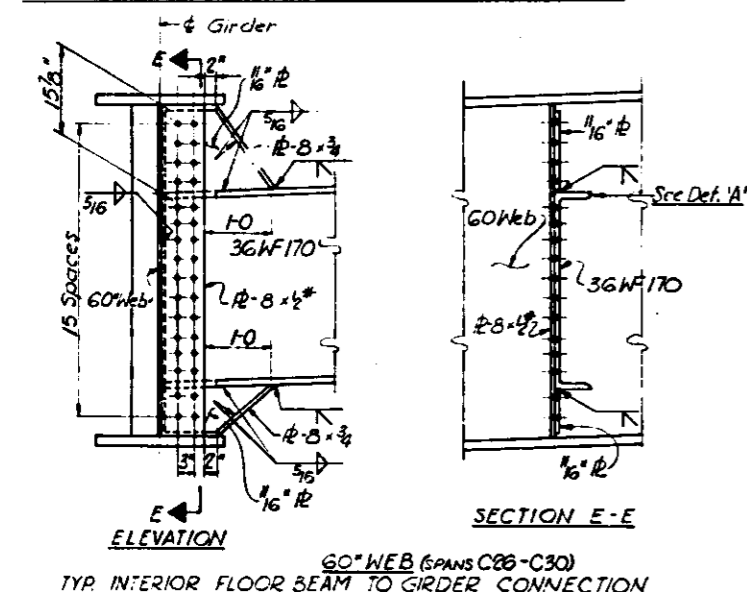
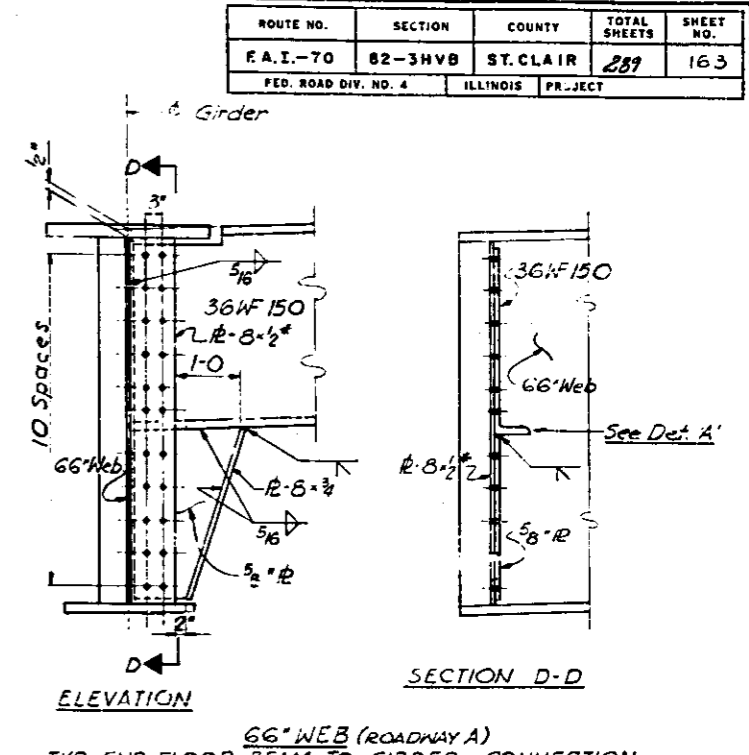
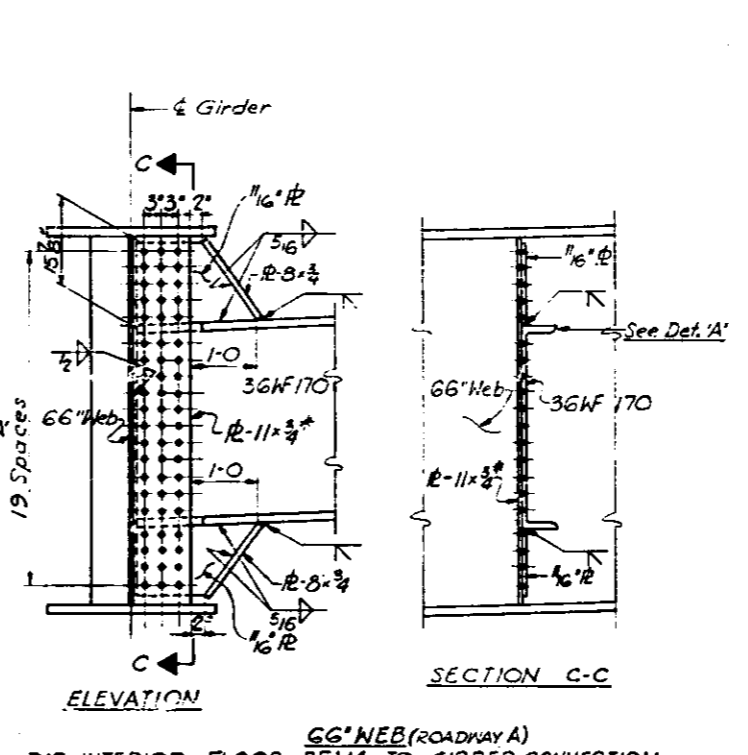
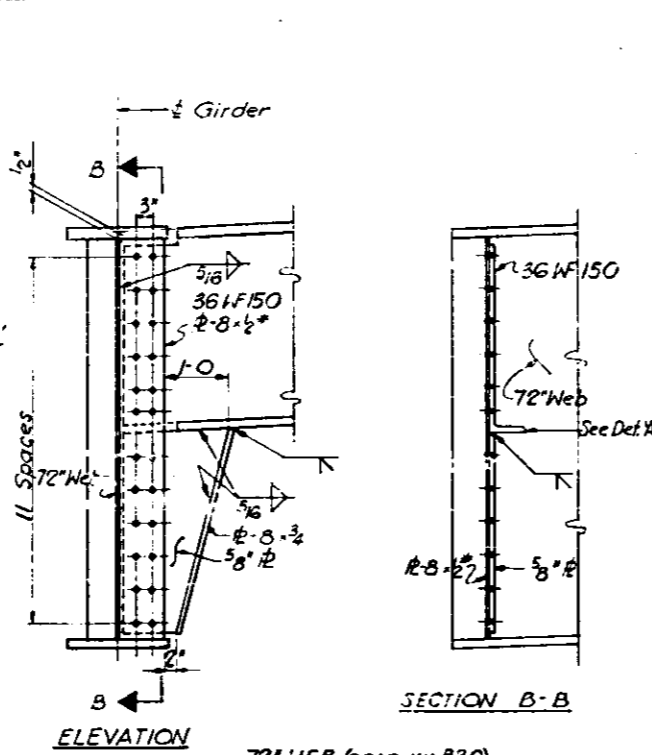
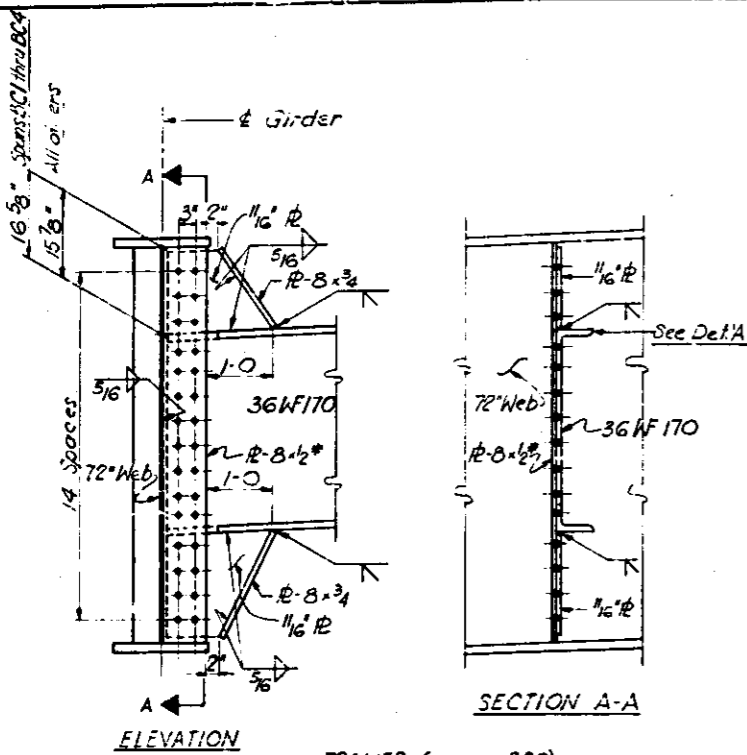
STRESS TABLES

POPLAR STREET BRIDGE APPROACHES
ROADWAY "C" AND RAMPS "M" & "S"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
23 of 24

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HV8	ST. CLAIR	289	163
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



Notes:
For welding of connection plates to Girder Flanges see Notes A, B & C, sheet No. 96

* Connection plate sizes are as shown except where floor beam connects to bearing stiffeners. see girder details

All bolts for stringer splice to be 3/4" φ.

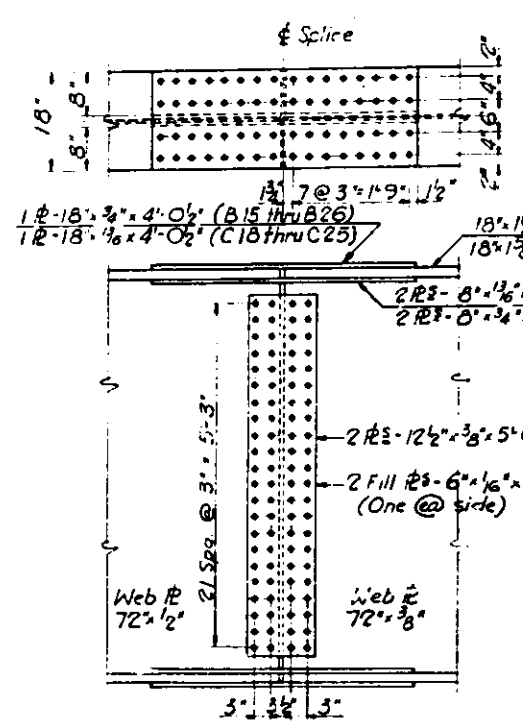
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS BLDGS.
DIVISION OF HIGHWAYS
STEEL FRAMING DETAILS
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"
RAMPS "M" AND "S"

F.A.I. RT 70 ST. CLAIR CO. SECTION 82-3HV8
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

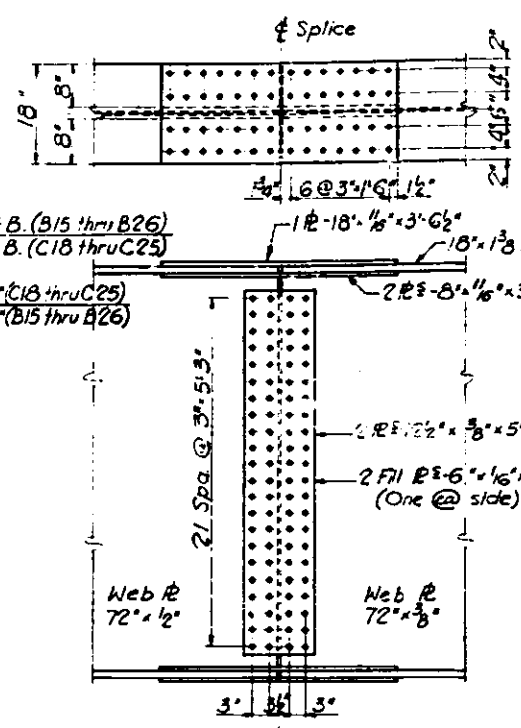
SHEET
289 of 241

DESIGNED BY: R.M.R.
DRAWN BY: Geo. S. C.
CHECKED BY:
APPROVED BY: K.A.

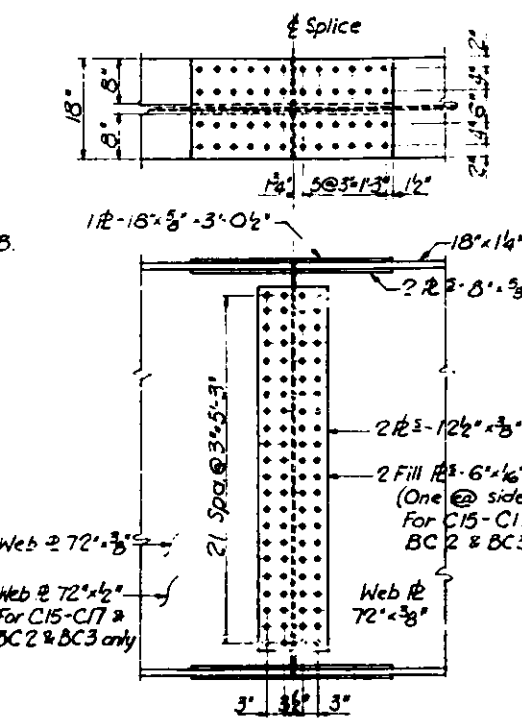
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	165
FED. ROAD DIV. NO. 4	ILLINOIS PROJECT			



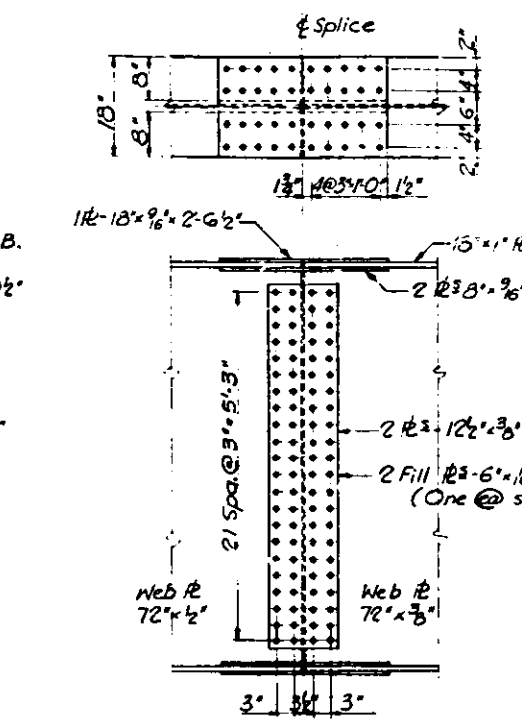
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 1R-18" $\frac{1}{2}$ " x 4'-0" (C18 thru C25)
 2R3-8" $\frac{1}{2}$ " x 4'-0" (C18 thru C25)
 2R3-8" $\frac{3}{4}$ " x 4'-0" (B15 thru B26)
 2R3-12" $\frac{1}{2}$ " x 5'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 5'-6" (One @ side)
 Web R 72" x $\frac{1}{2}$ "
 Web R 72" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS C18 through C21
 SPANS C22 through C25
 SPANS B15 through B18
 SPANS B19 through B22
 & B23 through B26



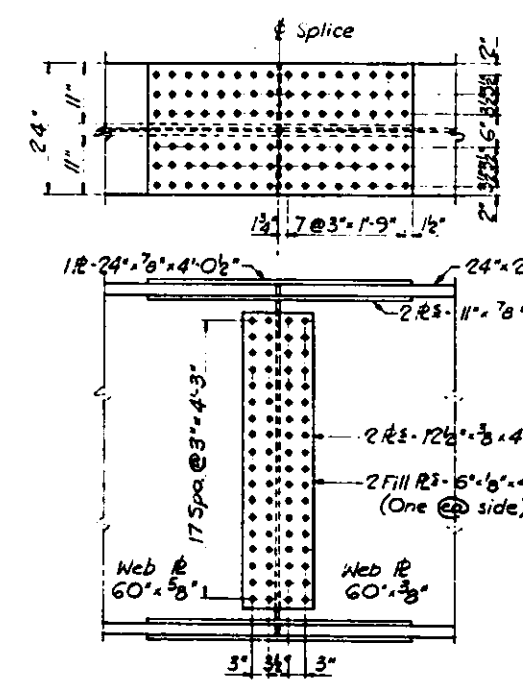
1R-18" $\frac{1}{2}$ " x 3'-6"
 1R-18" $\frac{1}{8}$ " x 3'-6"
 18" $\frac{1}{8}$ " R T.&B. (B15 thru B26)
 18" $\frac{1}{8}$ " R T.&B. (C18 thru C25)
 2R3-8" $\frac{1}{2}$ " x 3'-6"
 2R3-8" $\frac{1}{8}$ " x 3'-6"
 2R3-12" $\frac{1}{2}$ " x 5'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 5'-6" (One @ side)
 Web R 72" x $\frac{1}{2}$ "
 Web R 72" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS BC1 and BC4



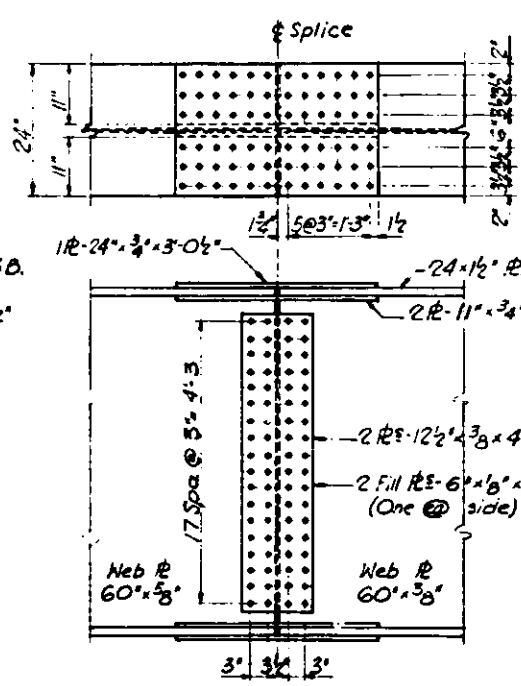
1R-18" $\frac{5}{8}$ " x 3'-0"
 1R-18" $\frac{1}{2}$ " x 3'-0"
 18" $\frac{1}{4}$ " R T.&B.
 2R3-8" $\frac{3}{8}$ " x 3'-0"
 2R3-12" $\frac{1}{2}$ " x 5'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 5'-6" (One @ side) For C15-C17 & BC2 & BC3 only
 Web R 72" x $\frac{1}{2}$ "
 Web R 72" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS BC2 through BC3
 SPANS BC5 through BC7
 SPANS B8 through B10
 SPANS C8 through C10
 & C15 through C17



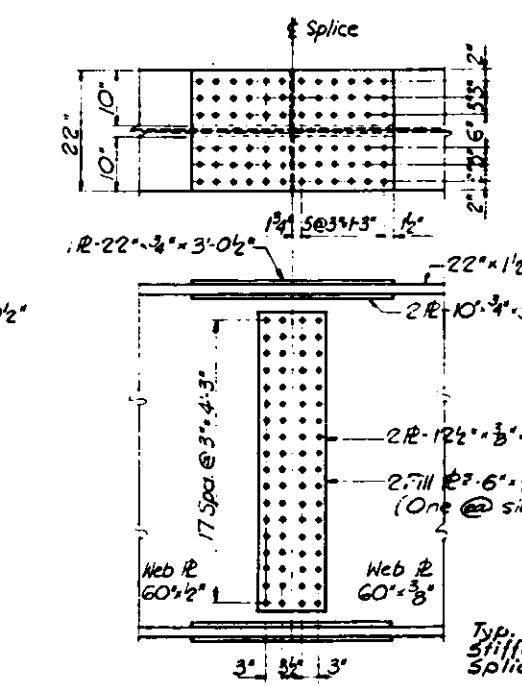
1R-18" $\frac{9}{16}$ " x 2'-6"
 1R-18" $\frac{1}{2}$ " x 2'-6"
 15" $\frac{1}{2}$ " R T.&B.
 2R3-8" $\frac{9}{16}$ " x 2'-6"
 2R3-12" $\frac{1}{2}$ " x 5'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 5'-6" (One @ side)
 Web R 72" x $\frac{1}{2}$ "
 Web R 72" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS B12 through B14
 SPANS C12 through C14
 & B28 through B30



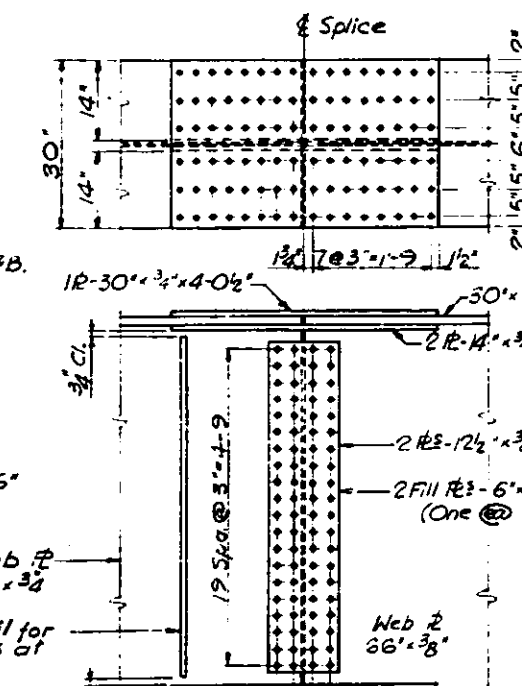
1R-24" $\frac{3}{8}$ " x 4'-0"
 1R-24" $\frac{1}{2}$ " x 4'-0"
 24" $\frac{1}{2}$ " R T.&B.
 2R3-11" $\frac{7}{8}$ " x 4'-0"
 2R3-12" $\frac{1}{2}$ " x 4'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 4'-6" (One @ side)
 Web R 60" x $\frac{5}{8}$ "
 Web R 60" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS C26 and C27



1R-24" $\frac{3}{4}$ " x 3'-0"
 1R-24" $\frac{1}{2}$ " x 3'-0"
 24" $\frac{1}{2}$ " R T.&B.
 2R3-11" $\frac{3}{4}$ " x 3'-0"
 2R3-12" $\frac{1}{2}$ " x 4'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 4'-6" (One @ side)
 Web R 60" x $\frac{5}{8}$ "
 Web R 60" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS C28 through C30



1R-22" $\frac{3}{4}$ " x 3'-0"
 1R-22" $\frac{1}{2}$ " x 3'-0"
 22" $\frac{1}{2}$ " R T.&B.
 2R3-10" $\frac{3}{4}$ " x 3'-0"
 2R3-12" $\frac{1}{2}$ " x 4'-6"
 2 Fill R3-6" $\frac{1}{16}$ " x 4'-6" (One @ side)
 Web R 60" x $\frac{1}{2}$ "
 Web R 60" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS S11 through S15
 SPANS M4 through M6



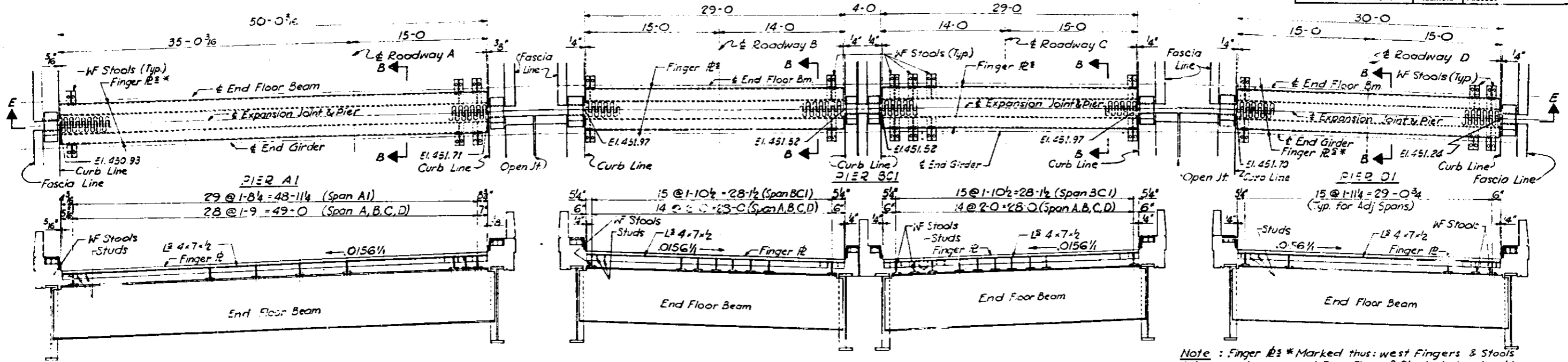
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 30" $\frac{1}{2}$ " R T.&B.
 2R3-11" $\frac{3}{4}$ " x 4'-0"
 2R3-12" $\frac{1}{2}$ " x 5'-0"
 2 Fill R3-6" $\frac{1}{16}$ " x 5'-0" (One @ side)
 Web R 66" x $\frac{3}{4}$ "
 Web R 66" x $\frac{3}{8}$ "
 3" $\frac{3}{4}$ " 3"
 SPANS A25 through A28

DESIGNED BY SB
 DRAWN BY Geo. S. P.
 CHECKED BY AS
 APPROVED BY KA

Note:
 Typ. Detail of Stiffeners at Splices shown on Splice Detail for Spans A25 thru A28

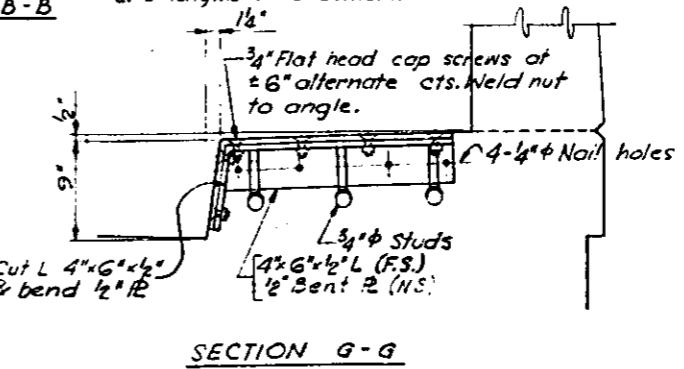
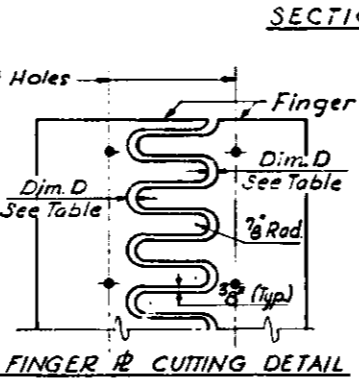
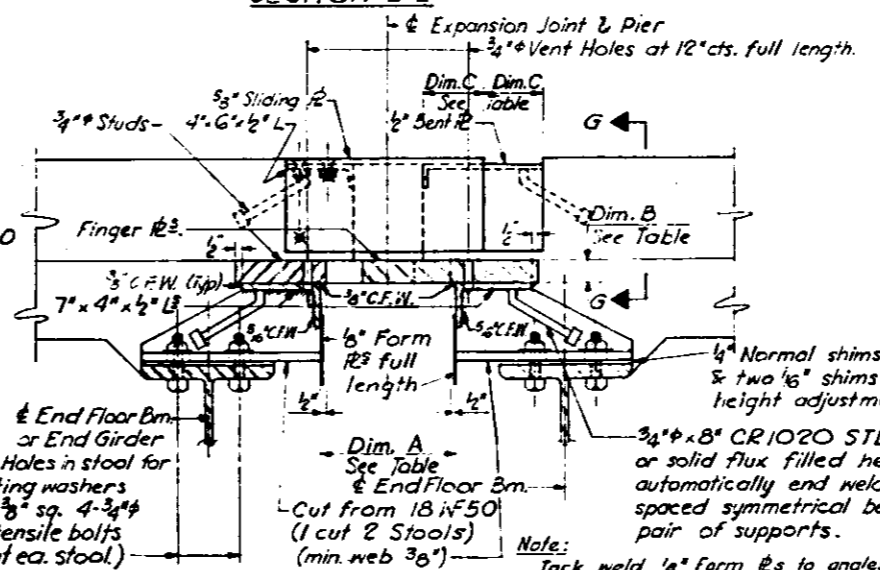
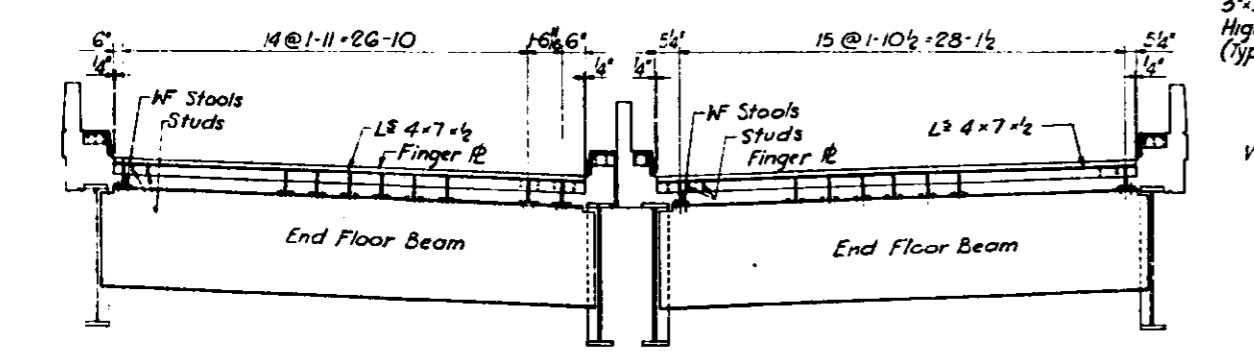
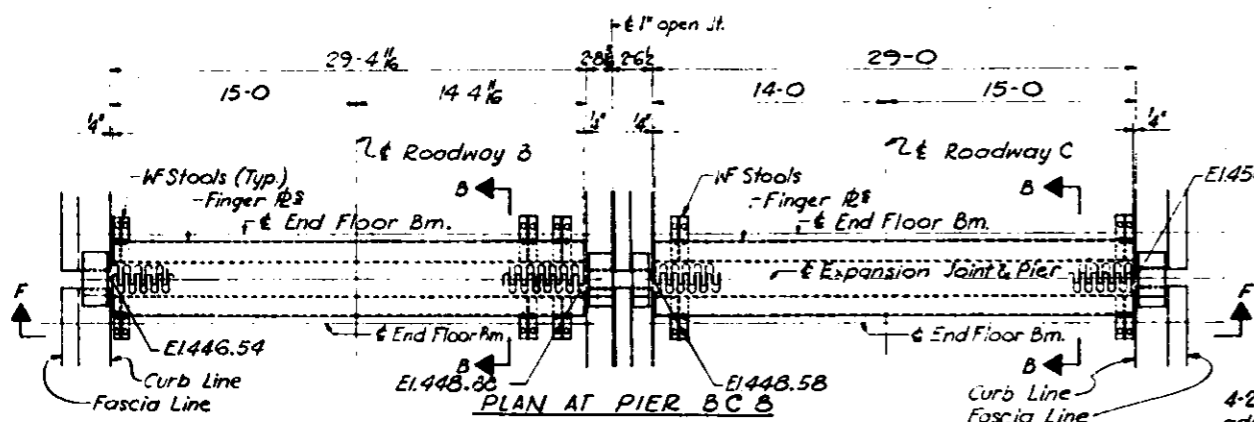
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS
 DIVISION OF HIGHWAY
 GIRDER SPLICES
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B" AND "C"
 RAMPS "M" AND "S"
 F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET NO. 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	166
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	



Note: All Dimensions Are Along ϵ Of Expansion Joint And Pier

Note: Finger Pls * Marked thus: west Fingers & Stools to be placed as required, East Finger & Stools to be stored in shop until they are needed, see Special Provisions.



- EXPANSION DEVICE TABLE -

PIER No	Dim. A (at 50°F)	Dim. B (finger pl. thickness)	Dim. C (at 50°F)	Dim. D (at 50°F)
BC1	12'-0"	1'-6"	4'-0"	3'-2"
BC8	10'-0"	1'-6"	3'-0"	3'-0"
B 15	14'-0"	2'-0"	4'-0"	4'-0"
B 19	8'-0"	1'-6"	3'-0"	2'-0"
B 23	16'-0"	2'-0"	5'-0"	4'-0"
B 28	10'-0"	1'-6"	3'-0"	2'-0"
C 15	11'-0"	1'-6"	4'-0"	3'-0"
C 22	17'-0"	2'-0"	5'-0"	3'-0"
C 26	14'-0"	2'-0"	4'-0"	4'-0"
M 3	10'-0"	1'-6"	3'-0"	3'-0"
M 6	10'-0"	1'-6"	3'-0"	3'-0"
A 25	16'-0"	2'-0"	5'-0"	4'-0"
A 29	16'-0"	2'-0"	5'-0"	4'-0"
S 10	11'-0"	1'-6"	3'-0"	3'-0"
S 15	12'-0"	1'-6"	4'-0"	3'-0"
A 1	12'-0"	1'-6"	4'-0"	3'-0"
D 1	12'-0"	1'-6"	4'-0"	3'-0"

Temperature range = -30°F to 130°F with 50°F = Normal.

DESIGNED BY: R.M.R.
 DRAWN BY: Geo. S.P.
 CHECKED BY: A.Z.
 APPROVED BY: K.A.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS
 EXPANSION DEVICE
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A", "B", "C" AND "D"
 RAMPS "M" AND "S"
 F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS
 SHEET 131 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	167
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

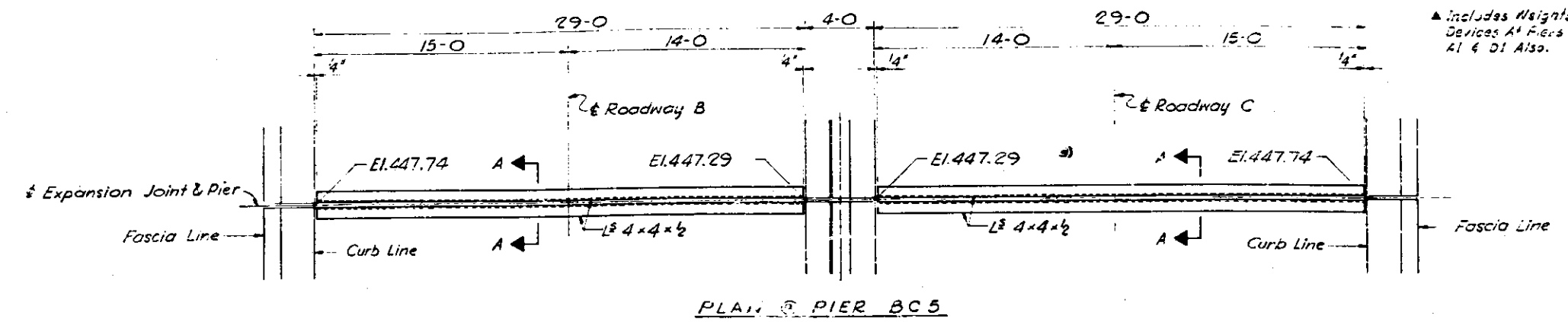
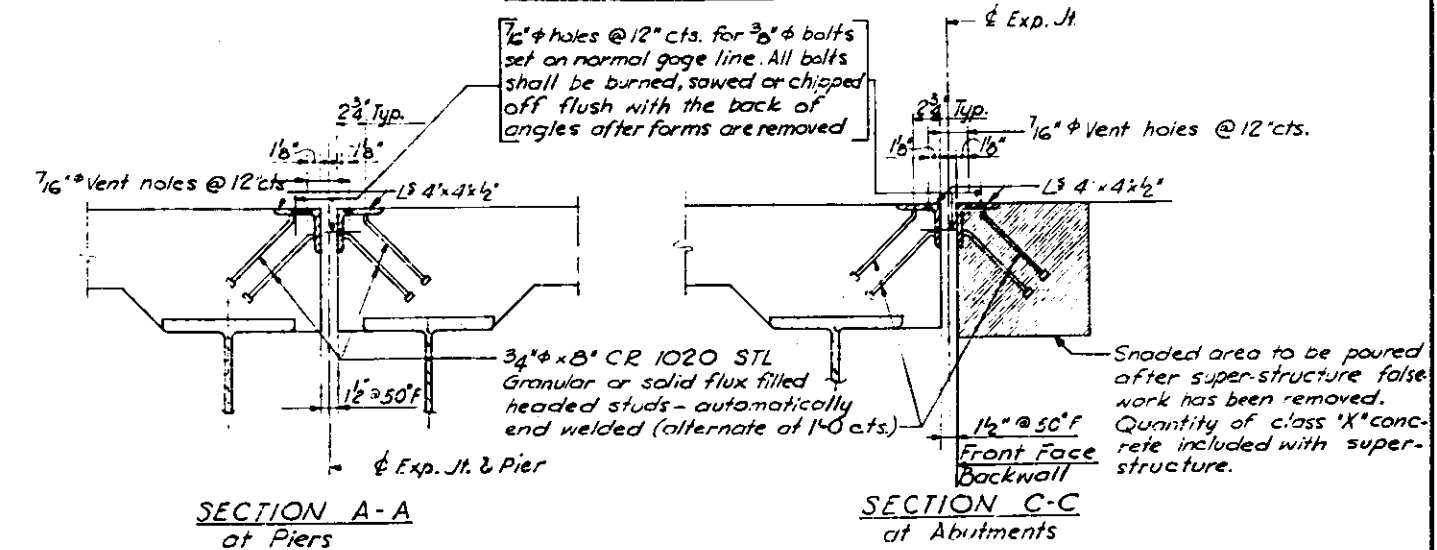
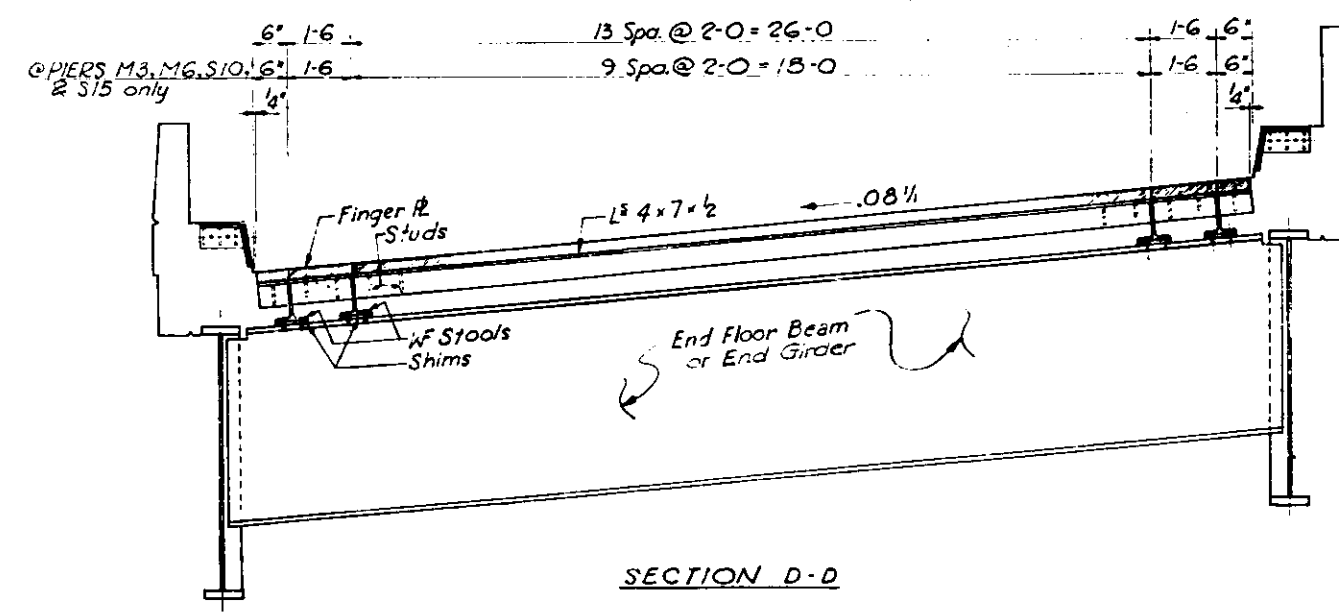
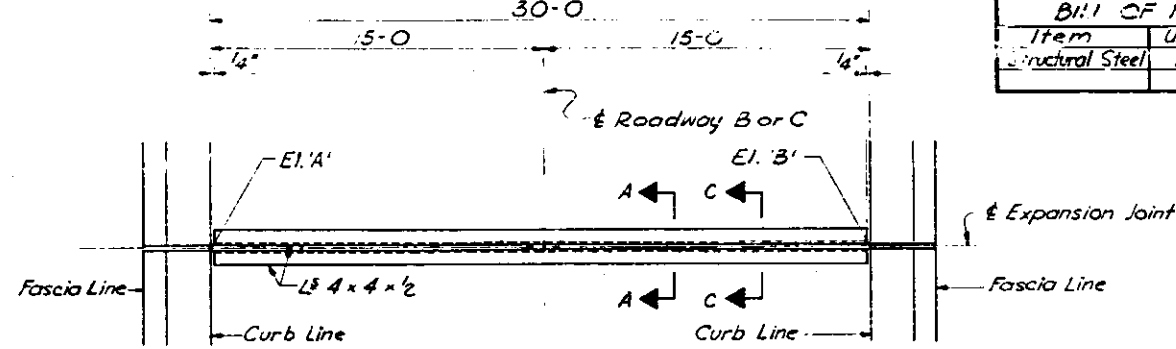
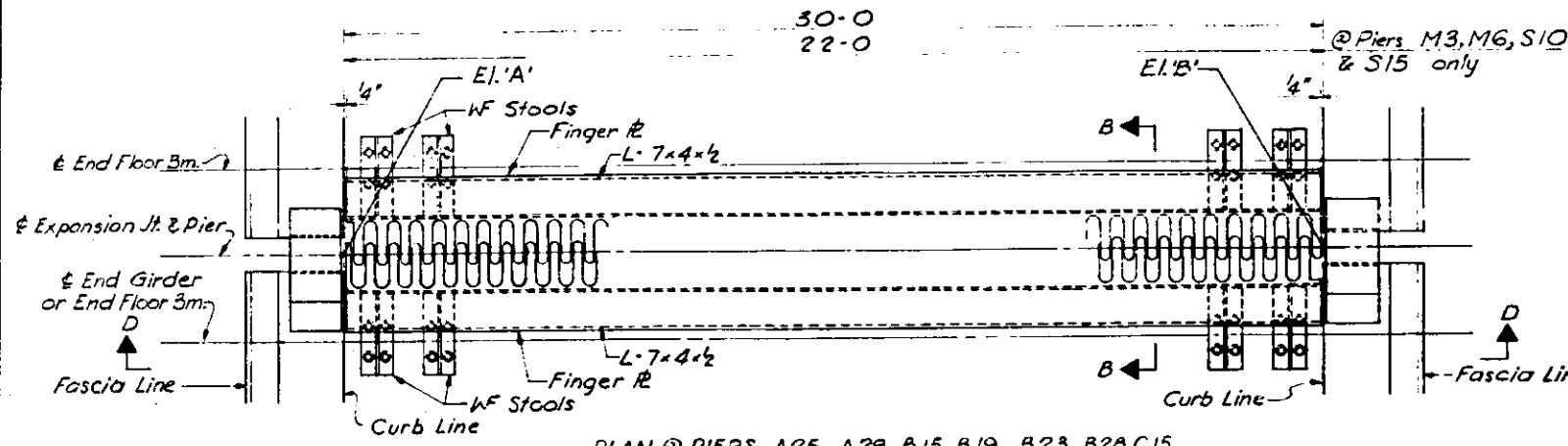


TABLE of ELEVATIONS & WEIGHTS of EXPANSION DEVICE

PIER	EI. A	EI. B	WEIGHT	PIER	EI. A	EI. B	WEIGHT
A25	467.43	469.82	9,685*	C18	453.55	455.95	834*
A29	467.14	469.54	9,685	C26	451.01	456.41	9,399
BC1	See Plan		38,005	M3	474.72	476.48	5,949
BC5	See Plan		1,612	M6	475.94	477.70	5,949
BC8	See Plan		15,318	S10	481.76	483.52	5,984
B11	447.90	450.30	834	S15	494.45	496.21	6,060*
B12	448.32	450.72	834				
B15	449.92	452.32	9,315				
B19	452.12	454.52	7,138				
B23	451.85	454.25	9,402				
B27	448.08	450.48	834	Abut.			
B28	446.53	448.93	7,198	B31	442.24	447.64	334*
C11	449.82	452.22	834	C31	443.57	445.97	834*
C12	450.24	452.64	834				
C15	451.83	454.23	8,046*				

BI'L OF MATERIAL

Item	Unit	Total
Structural Steel	Lbs.	165,470*



Notes:
For Section B-B and Expansion Device Table see Sh. No. 131. At Piers A25 - A29 - M3 - M6 - S10 & S15 only the Finger R's & Studs that can be placed immediately shall be shipped; the future portions shall be stored in shop until they are needed, see Special Provisions.

DESIGNED BY RMB
DRAWN BY Geo.S.P.
CHECKED BY A.S.
APPROVED BY KA

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS.
DIVISION OF HIGHWAYS
EXPANSION DEVICE
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"
RAMPS "M" AND "S"
F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET 132 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-3HV8	ST. CLAIR	289	168
FED. ROAD DIV. NO. 4		ILLINOIS	PROJECT	

ROADWAY A SHIMS

Fl. Bm. No.	Detail A				Detail B				Detail C			
	t1	t2	t3	t4	t1	t2	t3	t4	t1	t2	t3	t4
1 Thru 4	3/8	1/2	5/8	1/2	Same as detail A				Same as detail A			
5 Thru 8	7/16	1/2	3/4	1/2								
9 Thru 12	9/16	1/2	3/4	1/2								
13 Thru 16	5/8	1/2	3/4	1/2								
17 Thru 20	3/4	1/2	3/4	1/2								
21 Thru 24	1/2	1/2	3/4	1/2								
25 Thru 27	1/2	1/2	3/4	1/2								

ROADWAY C SHIMS

Fl. Bm. No.	Detail A				Detail B				Detail C			
	t1	t2	t3	t4	t1	t2	t3	t4	t1	t2	t3	t4
1 Thru 6	1/4	1/8	3/8	5/8	Same as detail A				Same as detail A			
7 Thru 12	1/8	1/8	3/8	5/8								
13 Thru 18	1/8	1/8	3/8	5/8								
19 Thru 21	5/16	1/2	3/4	1/2								
22 Thru 28	1/2	1/2	3/4	1/2								
29	1/2	1/2	3/4	1/2	7/8	3/4	1/2	1/8	1/2	1/2	3/4	1/2
30	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
31	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
32	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
33	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
34	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
35	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
36	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
37 Thru 45	1/2	1/2	3/4	1/2	Same as detail A				Same as detail A			
46 Thru 51	1/2	1/2	3/4	1/2								
52 Thru 57	1/2	1/2	3/4	1/2								
58 Thru 63	1/2	1/2	3/4	1/2								
64 Thru 69	1/2	1/2	3/4	1/2								
70 Thru 75	1/2	1/2	3/4	1/2								
76 Thru 81	1/2	1/2	3/4	1/2								
82 Thru 87	1/2	1/2	3/4	1/2								
88 Thru 93	1/2	1/2	3/4	1/2								
94 Thru 99	1/2	1/2	3/4	1/2								
100 Thru 105	1/2	1/2	3/4	1/2								
106 Thru 111	1/2	1/2	3/4	1/2								
112 Thru 117	1/2	1/2	3/4	1/2								
118 Thru 123	1/2	1/2	3/4	1/2								
124 Thru 129	1/2	1/2	3/4	1/2								

ROADWAY B SHIMS

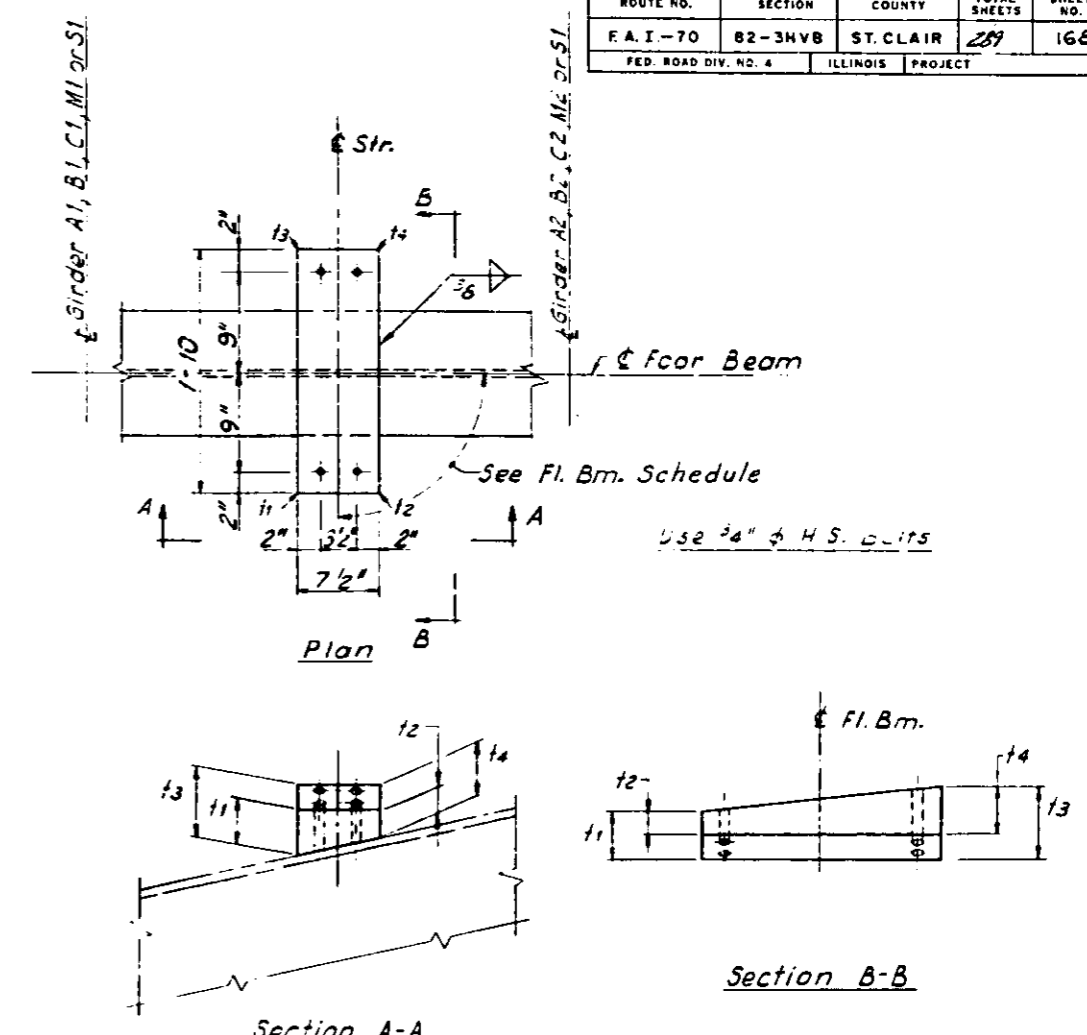
Fl. Bm. No.	Detail A				Detail B				Detail C			
	t1	t2	t3	t4	t1	t2	t3	t4	t1	t2	t3	t4
1 Thru 6	1/8	1/8	3/8	5/8	Same as detail A				Same as detail A			
7 Thru 12	1/8	1/8	3/8	5/8								
13 Thru 18	1/8	1/8	3/8	5/8								
19 Thru 21	1/8	1/8	3/8	5/8								
22	1/8	1/8	3/8	5/8	7/8	3/4	1/2	1/8	1/2	1/2	3/4	1/2
23	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
24	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
25	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
26	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
27	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
28	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
29	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
30	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
31	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
32	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
33	1/8	1/8	3/8	5/8	1/2	1/2	3/4	1/2	1/2	1/2	3/4	1/2
34 Thru 78	1/8	1/8	3/8	5/8	Same as detail A				Same as detail A			
79 Thru 81	1/8	1/8	3/8	5/8								
82 Thru 87	1/8	1/8	3/8	5/8								
88 Thru 93	1/8	1/8	3/8	5/8								
94 Thru 99	1/8	1/8	3/8	5/8								
100 Thru 102	1/8	1/8	3/8	5/8								
103 Thru 108	1/8	1/8	3/8	5/8								
109 Thru 114	1/8	1/8	3/8	5/8								
115 Thru 120	1/8	1/8	3/8	5/8								
121 Thru 123	1/8	1/8	3/8	5/8								
124 Thru 138	1/8	1/8	3/8	5/8								

RAMP M SHIMS

Fl. Bm. No.	Detail A				Detail B			
	t1	t2	t3	t4	t1	t2	t3	t4
1 Thru 3	7/8	1/2	3/4	1/2	Same as detail A			
4 Thru 6	3/4	1/2	3/4	1/2				
7 Thru 9	1/2	1/2	3/4	1/2				
10 Thru 12	1/2	1/2	3/4	1/2				
13 Thru 15	1/2	1/2	3/4	1/2				

RAMP S SHIMS

Fl. Bm. No.	Detail A				Detail B			
	t1	t2	t3	t4	t1	t2	t3	t4
1 Thru 3	1/2	1/2	3/4	1/2	Same as detail A			
4 Thru 6	1/2	1/2	3/4	1/2				
7 Thru 9	1/2	1/2	3/4	1/2				
10 Thru 12	1/2	1/2	3/4	1/2				
13 Thru 15	1/2	1/2	3/4	1/2				
16 Thru 18	1/2	1/2	3/4	1/2				
19 Thru 21	1/2	1/2	3/4	1/2				
22 Thru 24	1/2	1/2	3/4	1/2				
25 Thru 27	1/2	1/2	3/4	1/2				



DETAIL A, B, or C
Shim shown at Floor Beam 37 thru 75
Other shims are similar

Note:
If additional shims are required,
the cost of these shims is to be
incidental to Structural Steel.

NOTE
For location of Detail A, B or C
See Floor Beam Schedule.

DESIGNED BY RMR
DRAWN BY I.M.
CHECKED BY AJC
APPROVED BY KA

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

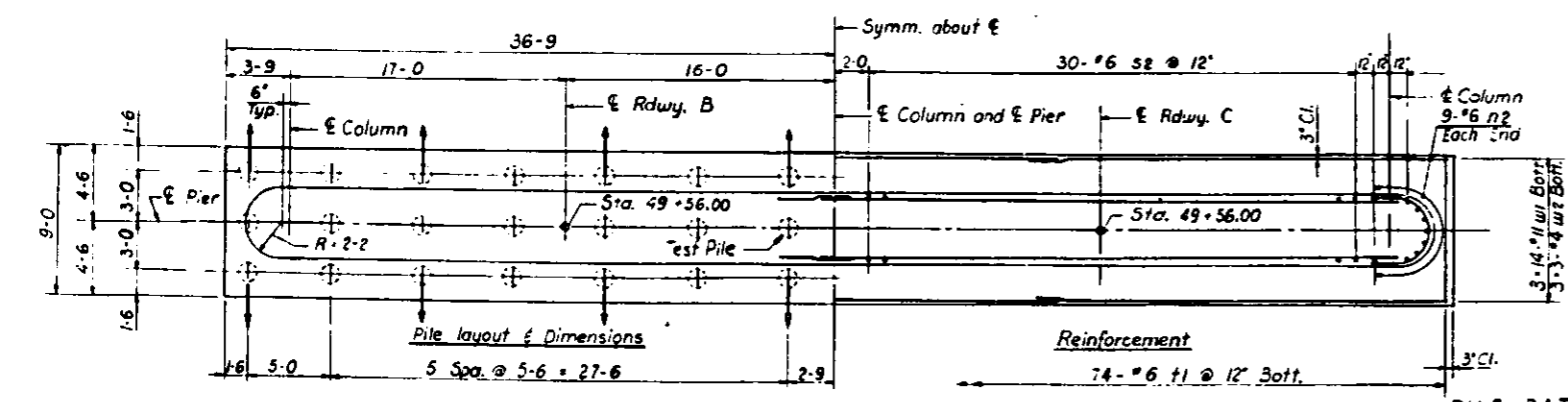
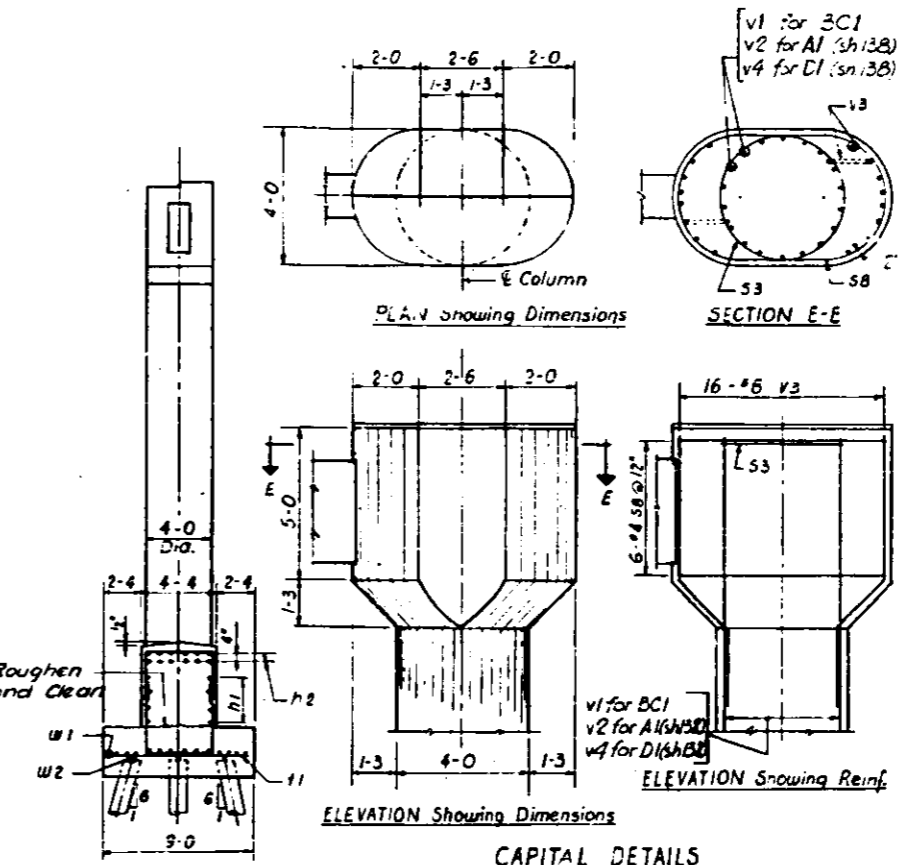
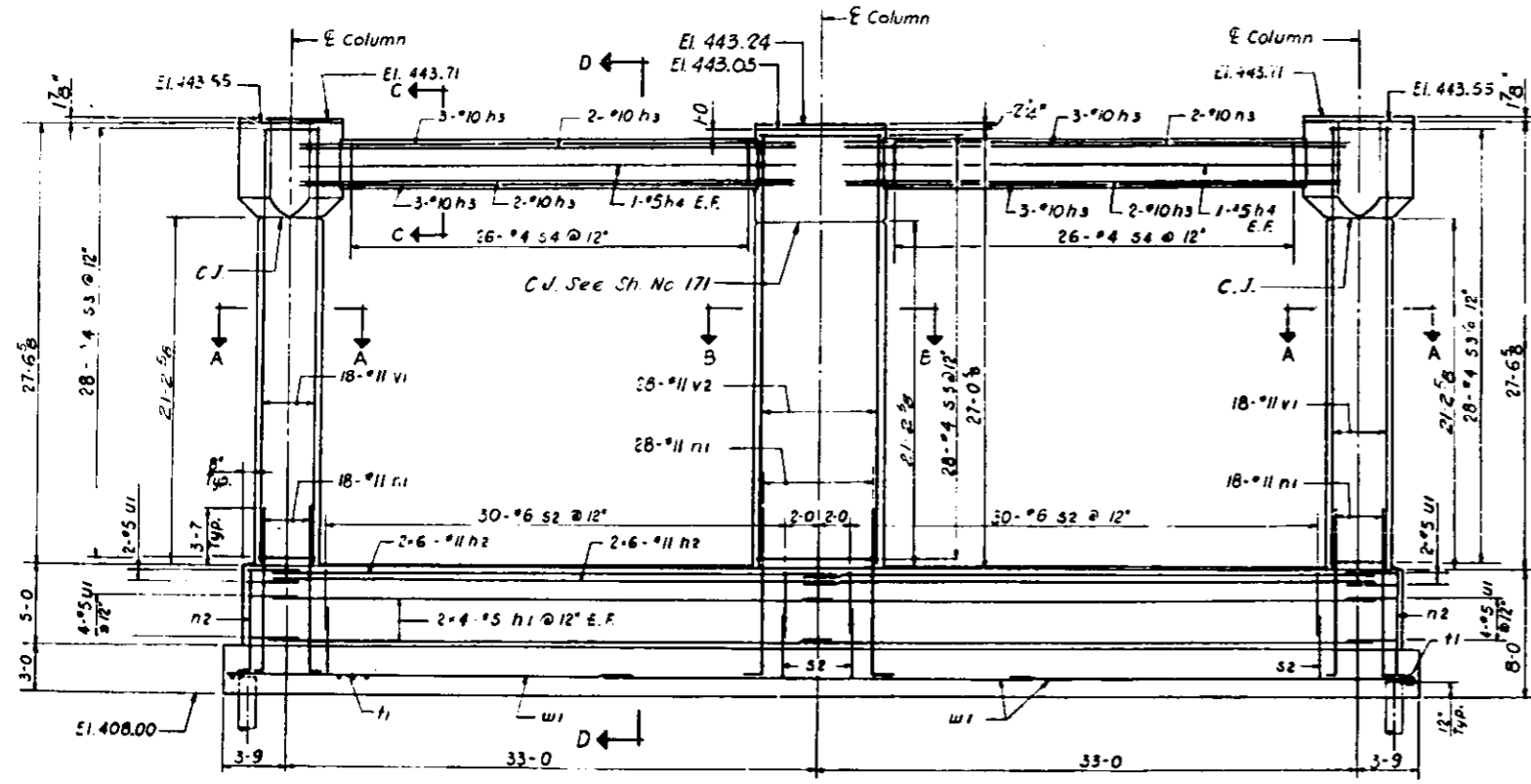
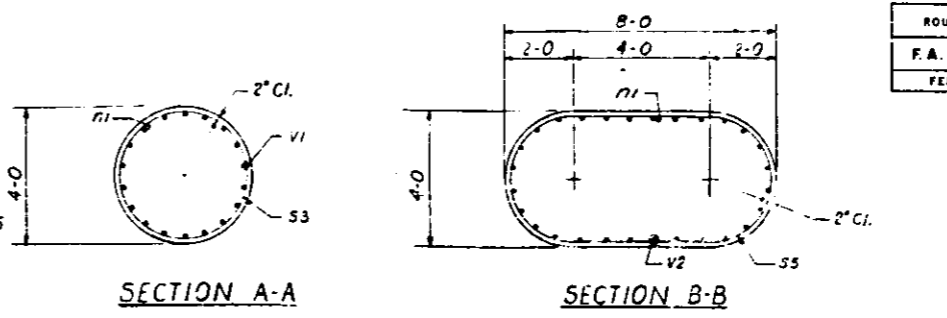
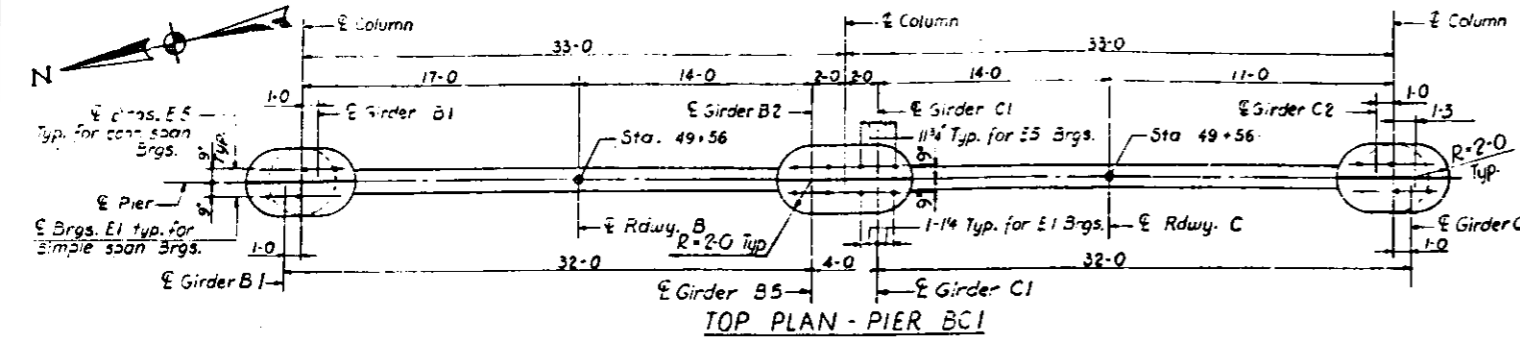
STRINGER SHIMS
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A" "B" AND "C"
RAMPS "M" AND "S"

F. A. I. RT. 70 ST. CLAIR CO. SECTION 82-3HV8

H. W. LOCHNER, INC.
ENGINEERS
CHICAGO ILLINOIS

SHEET
133 of 241

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	239	172
FED. ROAD DIV. NO. 4	ILLINOIS	PROJ.:		



PILE DATA
 Type: Concrete
 Req'd. Capacity: 34 T.
 Est. Length: 45.0
 No. Req'd: 41*
 Test Piles: 1
 * Does not include Test Pile

BILL OF MATERIAL

Mark	No. Req'd	Size	Length	Shape
137 n1	16	#5	34-4	—
137 n2	24	#11	35-4	—
137 n3	20	#10	30-4	—
137 n4	4	#5	28-6	—
137 n1	64	#11	12-7	—
137 n2	18	#6	7-9	—
137 s2	120	#6	12-10	—
137 s3	56	#4	12-9	—
137 s4	52	#4	8-0	—
137 s5	28	#4	20-9	—
137 s8	12	#4	17-9	—
137 t1	74	#6	8-6	—
137 u1	12	#5	9-5	—
137 v1	36	#11	27-4	—
137 v2	28	#11	26-10	—
137 v3	32	#8	8-6	—
137 w1	42	#11	26-10	—
137 w2	9	#4	25-3	—

See Note "X" Sh. No. 25

Item	Unit	Total
Class "X" Concrete	C.Y.	194.8
Reinforcement Bars	Lbs.	33,040
Concrete Piles	L.F.	1845*
Test Piles (Concrete)	Ea.	1

For notes see Sh. No. 171
 For Geometric Layout
 See Sh. No. 16 & 18

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS &
 DIVISION OF HIGHWAYS

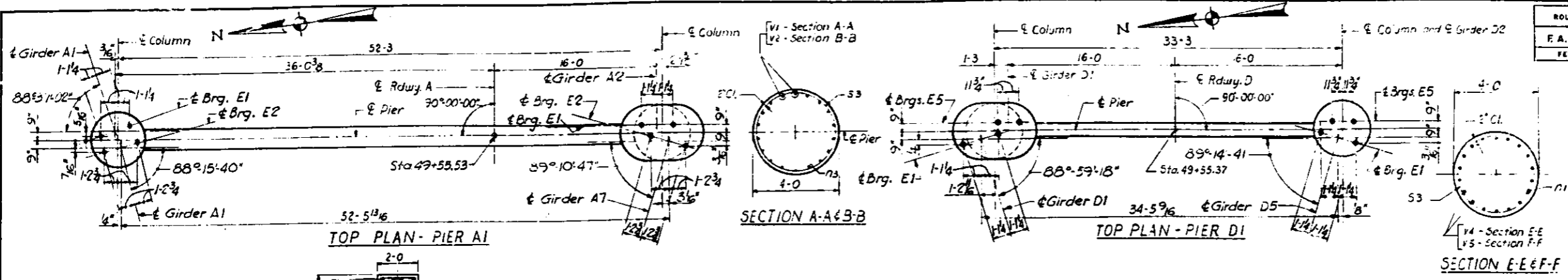
PIER BC1
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET 137 of 241

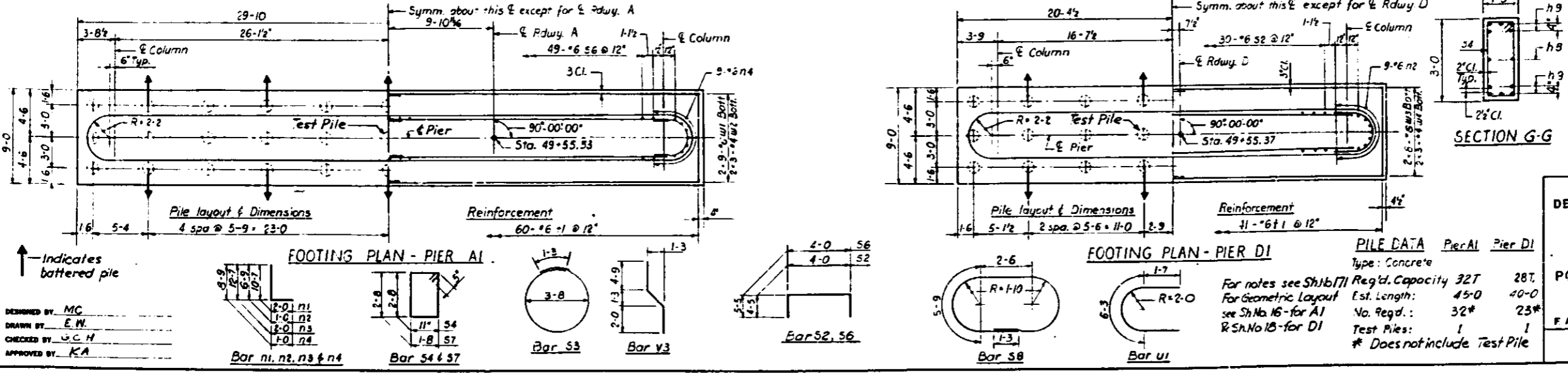
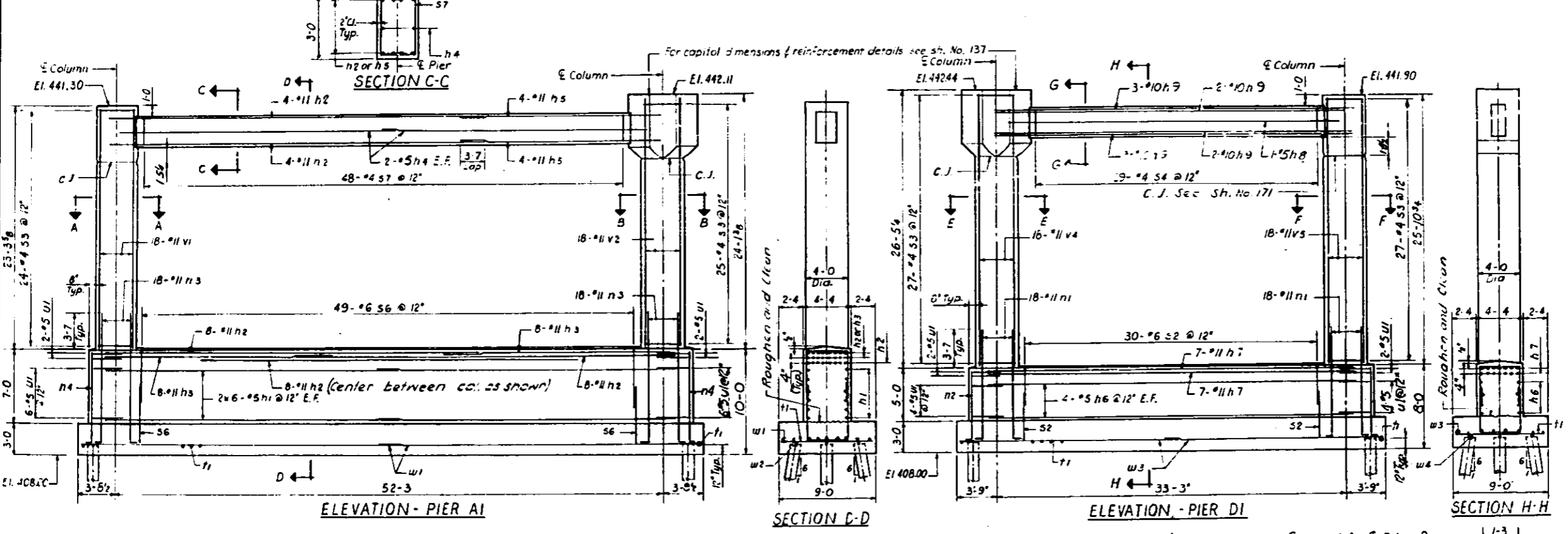
DESIGNED BY: MC
 DRAWN BY: E.H.
 CHECKED BY: C.C.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	173
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		



BILL OF MATERIAL

Mark	No. Req'd.	Per Pier	Size	Length	Shape
138 h1	24	—	#5	27-5	—
138 h2	32	—	#11	36-0	—
138 h3	16	—	#11	20-10	—
138 h4	4	—	#5	26-2	—
138 h5	8	—	#5	22-0	—
138 h6	—	8	#5	34-3	—
138 h7	—	14	#11	34-3	—
138 h8	—	2	#5	31-9	—
138 h9	—	10	#10	35-6	—
138 u1	16	12	#5	9	C
138 n1	—	36	#11	12-7	—
138 n2	—	19	#6	7-9	—
138 n3	36	—	#11	14-7	—
138 n4	18	—	#6	9-9	—
138 s2	—	60	#6	12-10	—
138 s3	49	54	#4	12-9	—
138 s4	—	29	#4	8-0	—
138 s6	98	—	#6	14-10	—
138 s7	48	—	#4	9-6	—
138 s8	6	6	#4	17-9	—
138 f1	60	41	#6	8-6	—
138 v1	18	—	#11	23-1	—
138 v2	18	—	#11	23-11	—
138 v3	16	16	#8	8-6	—
138 v4	—	18	#11	26-3	—
138 v5	—	18	#11	25-8	—
138 w1	18	—	#6	30-8	—
138 w2	6	—	#4	30-2	—
138 w3	—	16	#6	21-3	—
138 w4	—	6	#4	21-0	—



Item	Unit	Total
Class 'X' Concrete	C.Y.	153.2
Reinforcement Bars	Lbs	22,380
Concrete Piles	L.F.	1,620
Test Piles (Concrete)	Eq.	1

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS BLDGS.
 DIVISION OF HIGHWAYS

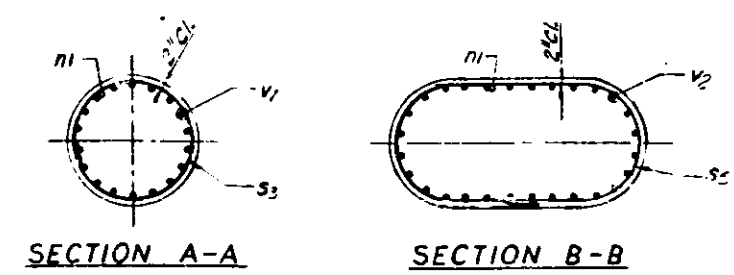
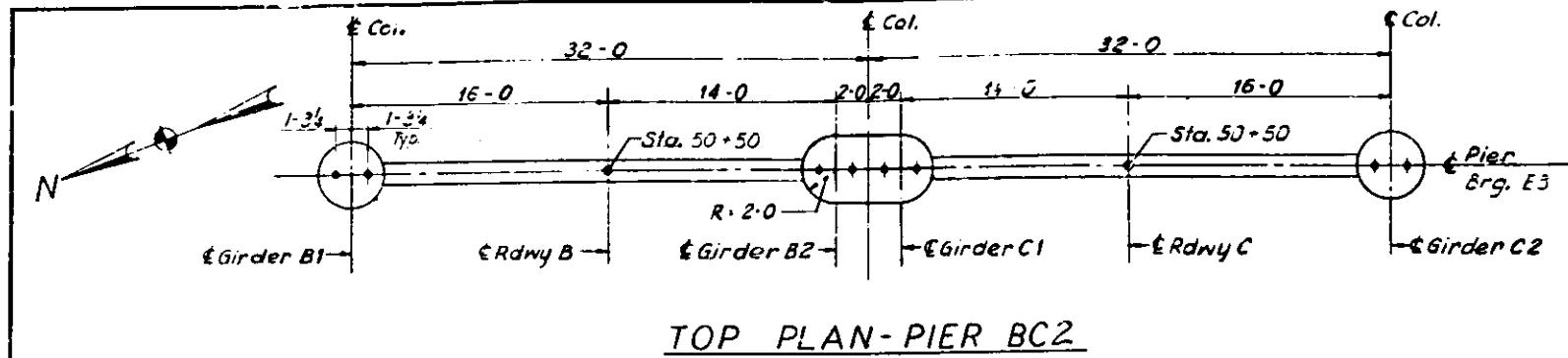
PIERS A1 AND D1
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "A" AND "D"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC. ENGINEERS
 CHICAGO, ILLINOIS

SHEET 173 OF 241

DESIGNED BY: MC
 DRAWN BY: E.W.
 CHECKED BY: G.C.H.
 APPROVED BY: KA

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	289	174
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

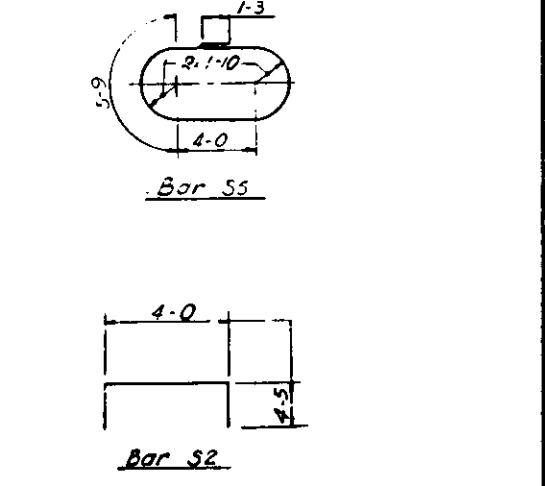


BILL OF MATERIAL!

Mark	No. Req'd	Size	Length	Shape
139 h1	20	#10	30'-4"	—
139 h2	4	#5	25'-6"	—
139 h3	16	#5	33'-4"	—
139 h4	28	#11	33'-4"	—
139 n1	64	#11	12'-7"	—
139 n2	18	#6	7'-9"	—
139 s2	116	#6	12'-10"	—
139 s3	58	#4	12'-9"	—
139 s4	54	#4	8'-7"	—
139 s5	24	#4	20'-9"	—
139 t1	74	—	9'-8"	—
139 u1	12	#5	9'-5"	—
139 v1	36	#11	23'-0"	—
139 v2	28	#11	22'-5"	—
139 w1	51	#11	26'-8"	—
139 w2	9	#4	25'-0"	—

* See Note 'X' Sh. No. 25

Item	Unit	Total
Class 'X' Concrete	C.Y.	187.9
Reinforcement Bars	Lbs.	32,850
Concrete Piles	L.F.	2288*
Test Piles (Concrete)	Ea.	1

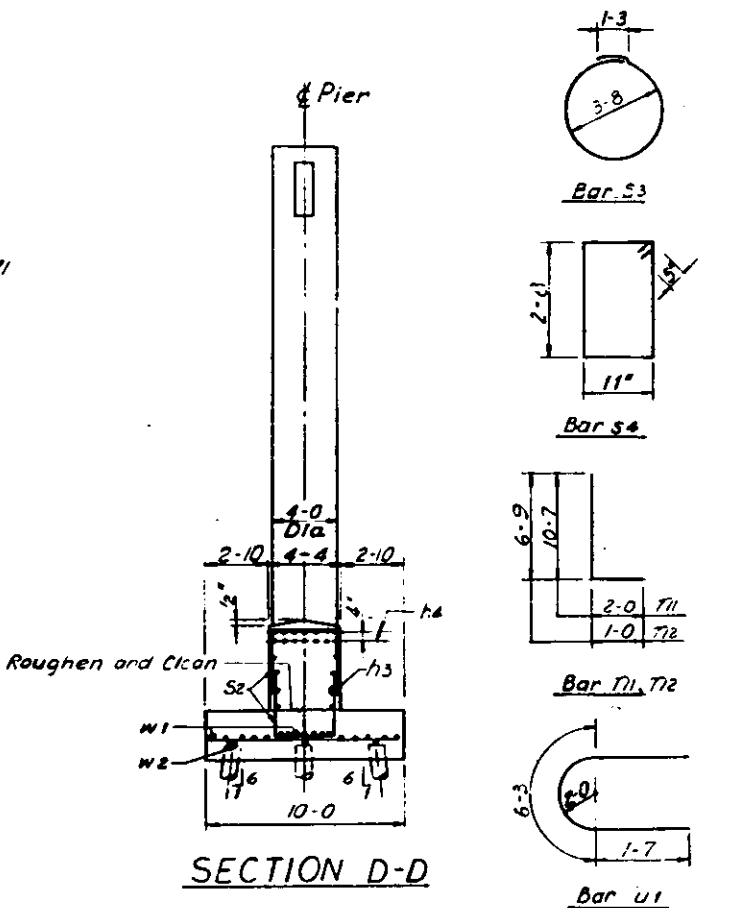
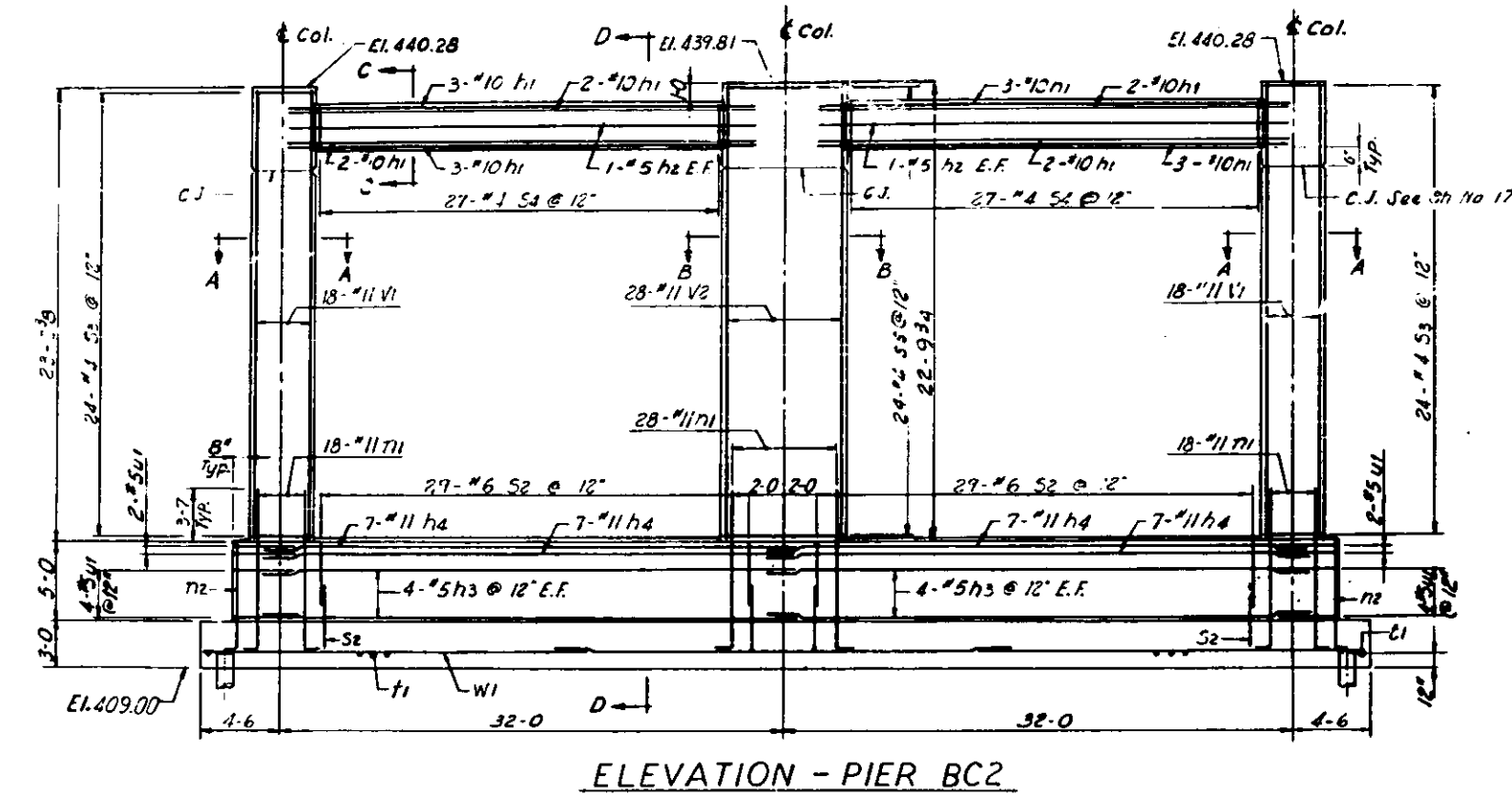


STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS BLDGS.
DIVISION OF HIGHWAYS

PIER BC2
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "B" AND "C"

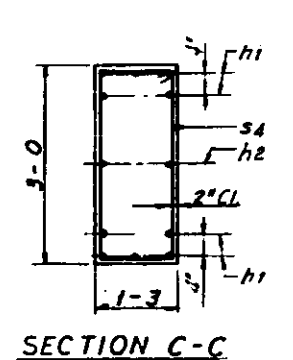
F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS

SHEET
38 of 241

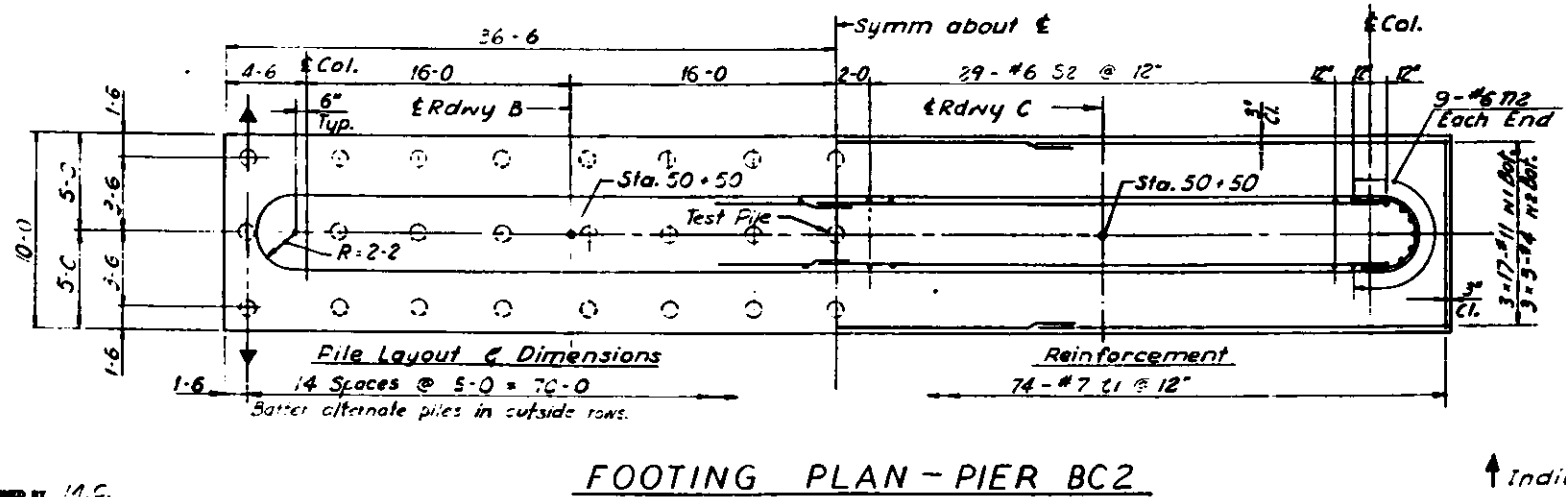


PILE DATA
Type: Concrete
Req'd. Capacity: 34T.
Est. Length: 52'-0"
No. Req'd.: 44*
Test Pile: 1
*Does not include Test Pile

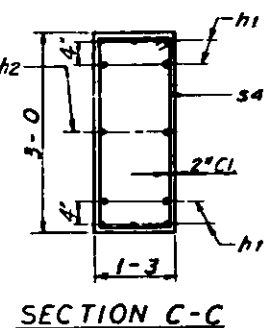
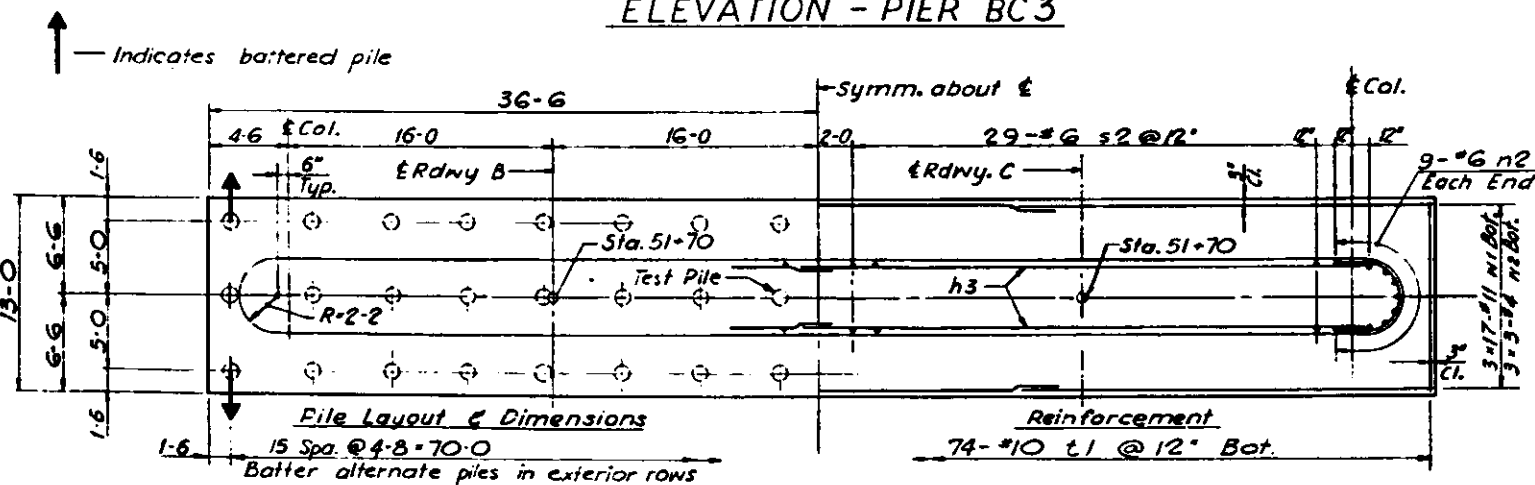
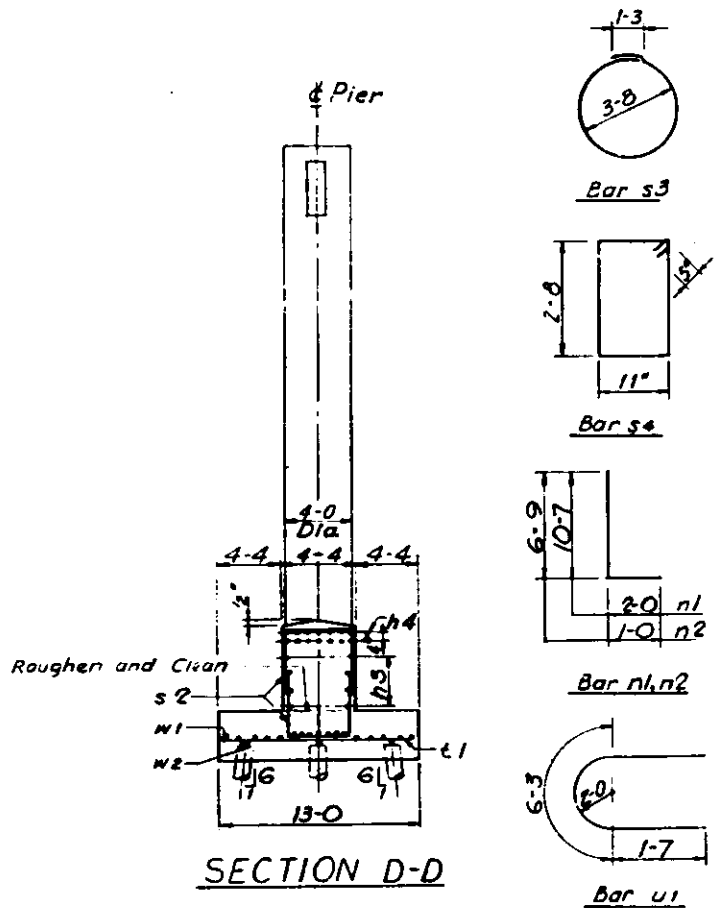
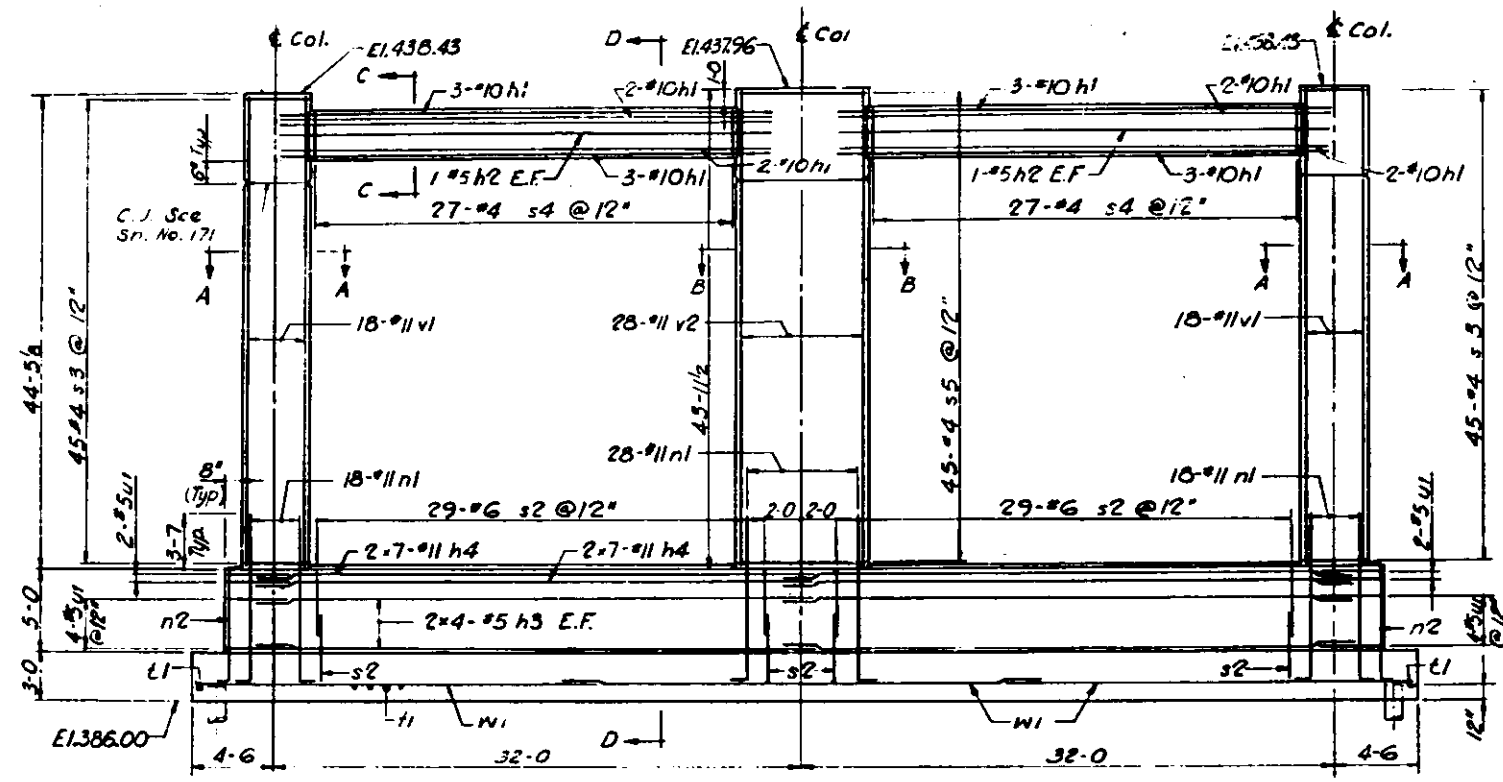
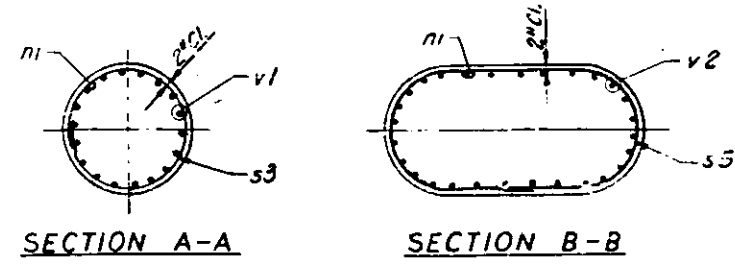
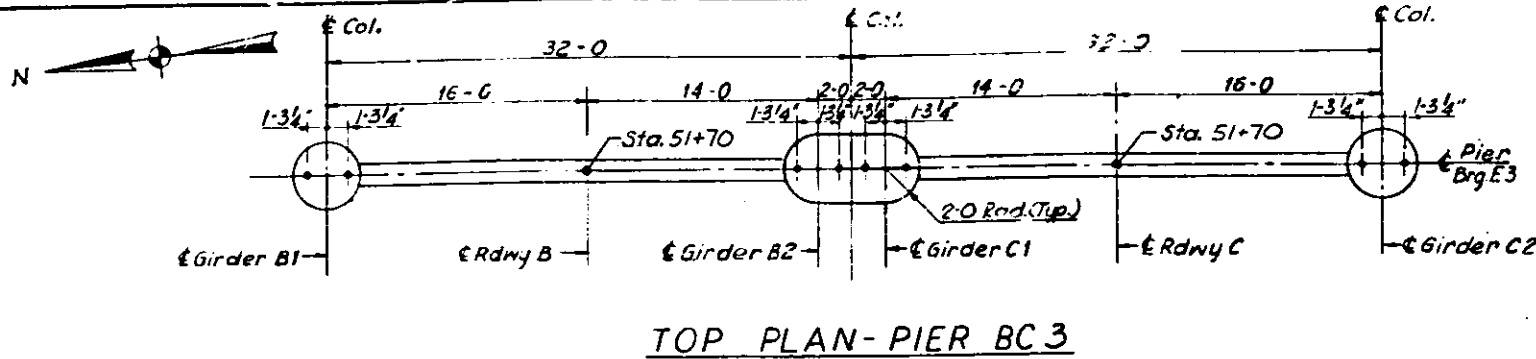
For Notes see Sh. No. 171
For Geometric Layout See Sh. No. 16 & 18.



↑ Indicates Battered Pile.



DESIGNED BY: M.C.
DRAWN BY: D.C.F.
CHECKED BY: G.C.H.
APPROVED BY: S.P.



PILE DATA
 Type: Concrete
 Req'd. Capacity: 35 T
 Est. Length: 53'-0"
 No. Req'd.: 47#
 Test Pile: 1
 *Does not include Test Pile
 For notes see Sh. No. 171
 For Geometric Layout See
 Sh. No. 16 & 18.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-70	82-3HVB	ST. CLAIR	189	175
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

BILL OF MATERIAL				
Mark	No	Req'd. Size	Length	Shape
120 h1	20	#10	30'-4"	—
120 h2	4	#5	28'-6"	—
120 h3	16	#5	33'-4"	—
120 h4	28	#11	34'-4"	—
120 n1	24	#11	12'-7"	—
120 n2	18	#6	7'-9"	—
120 v2	116	#6	12'-10"	—
120 s3	90	#4	12'-9"	—
120 s4	54	#4	8'-0"	—
120 s5	45	#4	20'-10"	—
120 l1	74	#10	12'-5"	—
120 u1	12	#5	9'-5"	—
120 v1	36	#11	44'-3"	—
120 v2	28	#11	43'-9"	—
120 w1	51	#11	26'-6"	—
120 w2	9	#4	25'-1"	—
* See Note 'X' Sh. No. 25				
Item	Unit	Total		
Class 'X' Concrete	C.Y.	254.2		
Reinforcement Bars	Lbs.	43,250		
Concrete Piles	L.F.	2,491 +		
Test Piles (Concrete)	Ea.	1		

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS

PIER BC3

POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F.A.I. RT. 70 ST. CLAIR CO. SECTION 82-3HVB

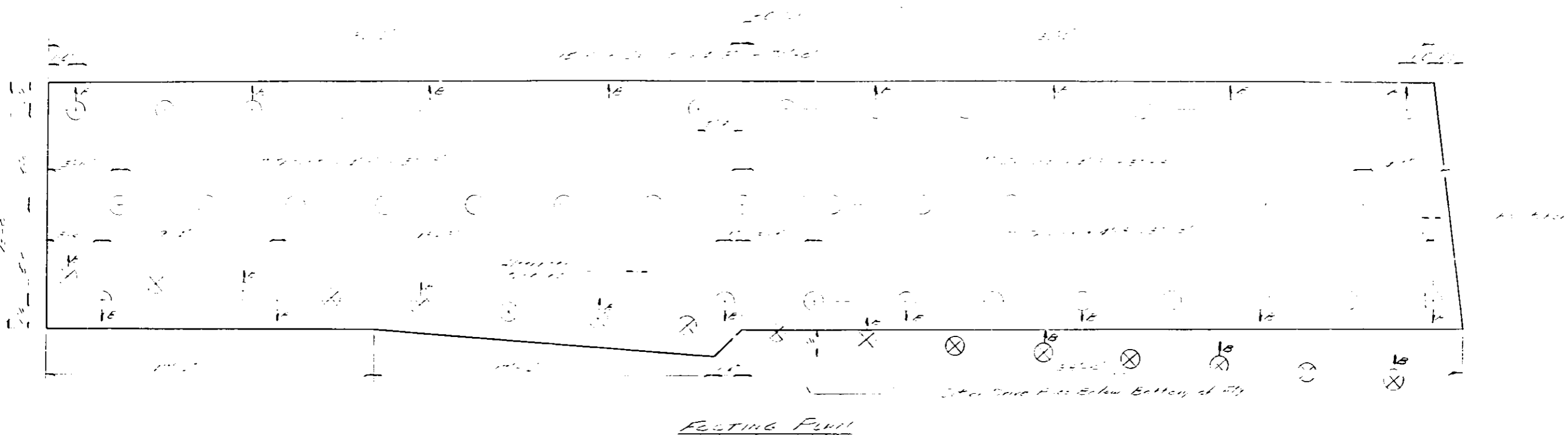
H. W. LOCKNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

SHEET
 140 of 241

DESIGNED BY M.C.
 DRAWN BY G.S.P.
 CHECKED BY G.C.H.
 APPROVED BY K.A.

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.
82-3443	ST. CLAIR	EBP	175A	
SHEET NO.		SHEETS		



LEGEND

- NEW PILE
- ⊗ EXISTING PILE
- ⊕ BATTER PILE

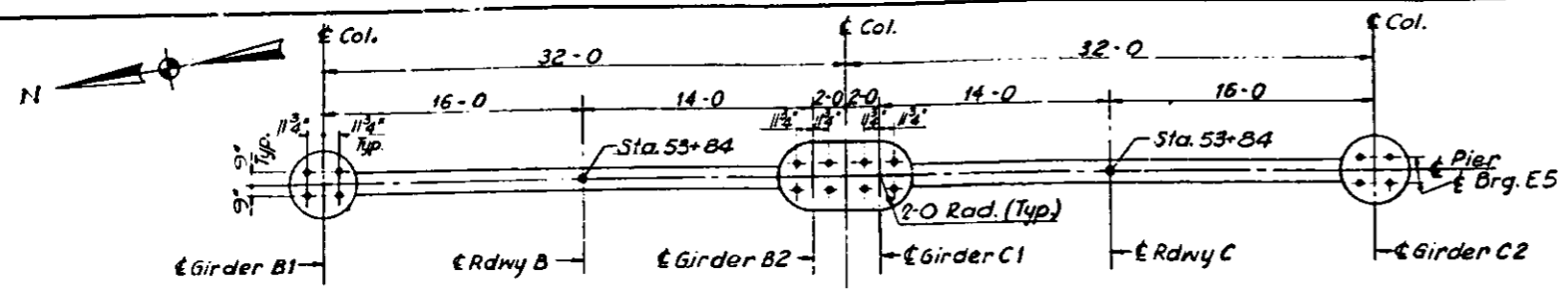
PILE DATA
TYPE: CONCRETE
CAPACITY: 35 TONS
EST LENGTH: 46'
NO REQUIRED: 42

ADDITIONAL MATERIAL
CLASS X CONCRETE 2.6 CU YD
CONCRETE PILES 1932 LIN FT

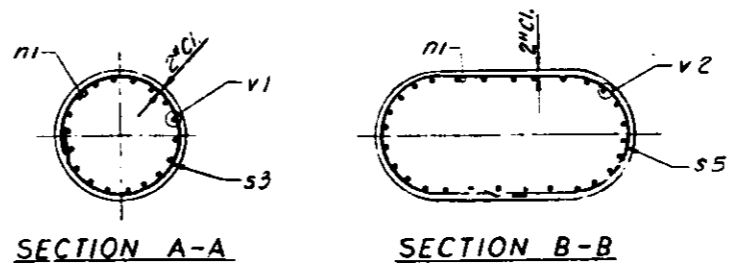
AS BUILT

DESIGNED <u>FKJ</u>	EXAMINED _____
CHECKED <u>RAK</u>	PASSED _____
DRAWN <u>FKJ</u>	APPROVED _____
CHECKED <u>RAK</u>	_____

PIER BC3
POPULAR STREET BRIDGE APPROACHES
FBI R/L 70 SEC 82-3443
ST CLAIR COUNTY
PROJECT I-IG-70-116210



TOP PLAN-PIER BC 5

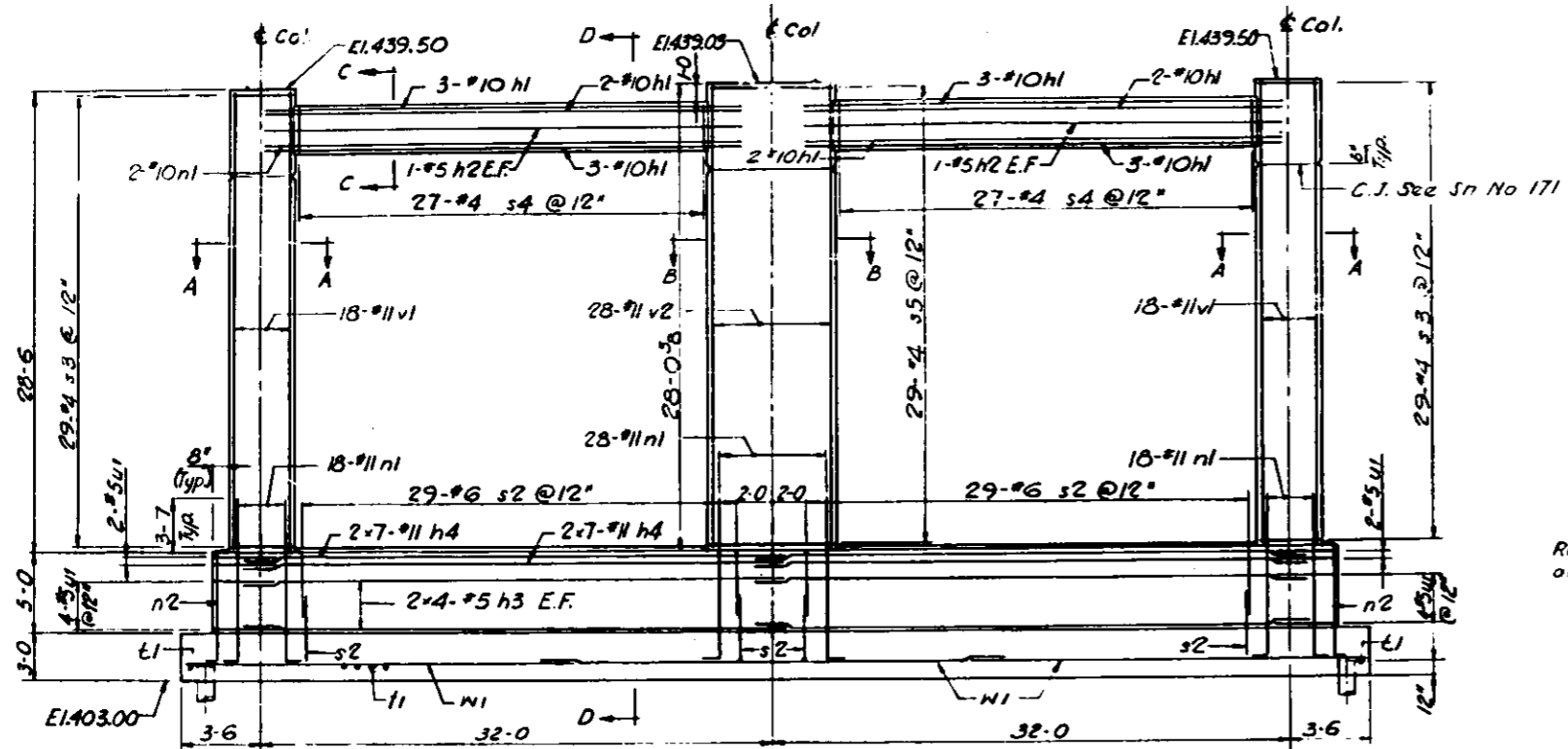


ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F. A. I. - 70	82-3HVB	ST. CLAIR	289	177
FED. ROAD DIV. NO. 4		ILLINOIS PROJECT		

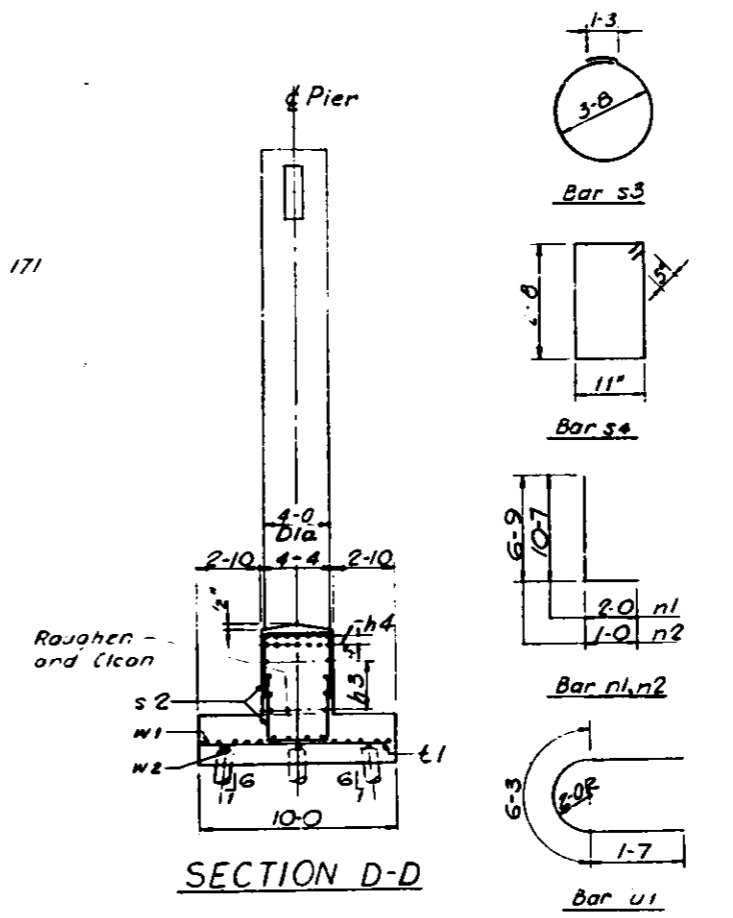
BILL OF MATERIAL				
Mark	No.	Size	Length	Shape
142 h1	20	#10	30-4	—
142 h2	4	#5	28-6	—
142 h3	16	#5	33-4	—
142 h4	28	#11	34-4	—
142 n1	64	#11	12-7	—
142 n2	18	#6	7-9	—
142 s2	116	#6	12-10	—
142 s3	53	#4	12-9	—
142 s4	54	#4	8-0	—
142 s5	29	#4	20-10	—
142 t1	72	#6	9-8	—
142 u1	12	#3	9-5	—
142 v1	36	#11	28-4	—
142 v2	28	#11	27-10	—
142 w1	42	#11	25-11	—
142 w2	9	#4	24-5	—

Item	Unit	Total
Class 'X' Concrete	C.Y.	196.2
Reinforcement Bars	lbs.	32,960
Concrete Piles	L.F.	1330
Test Piles (Concrete)	Ea.	1

*See Note 'X' Sh. No. 25



ELEVATION - PIER BC 5

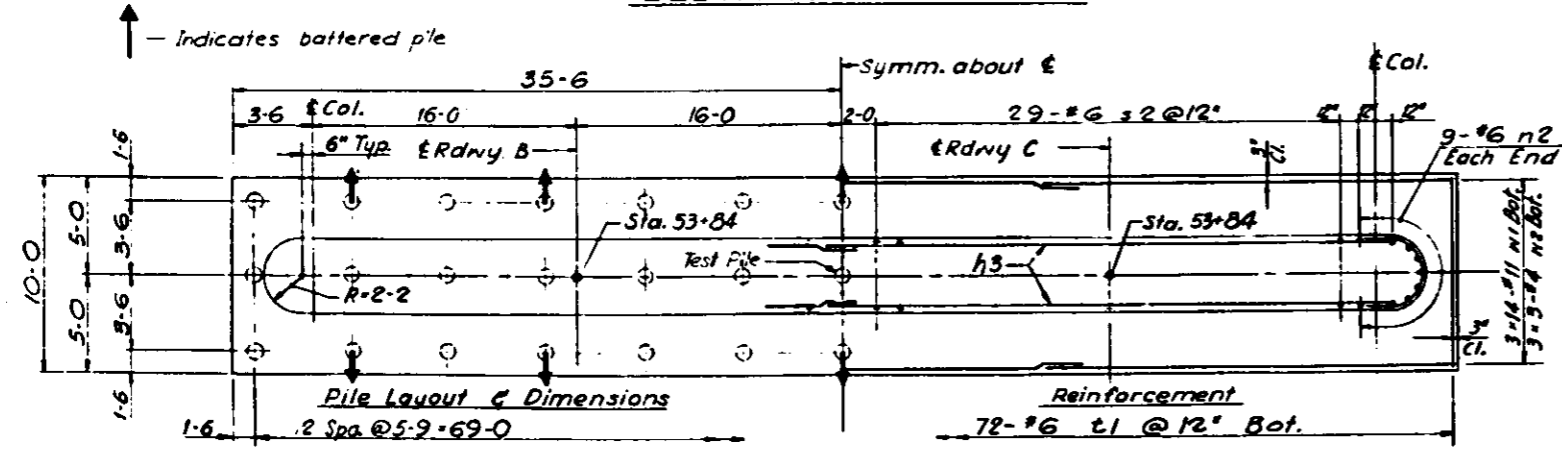


SECTION D-D

PILE DATA

Type: Concrete
 Req'd. Capacity: 28T.
 Est. Length: 35-0
 No. Req'd.: 38*
 Test Pile: 1
 *Does not include Test Pile

For Notes see Sh. No. 171
 For Geometric Layout see Sh. No. 16 & 18.



FOOTING PLAN - PIER BC 5

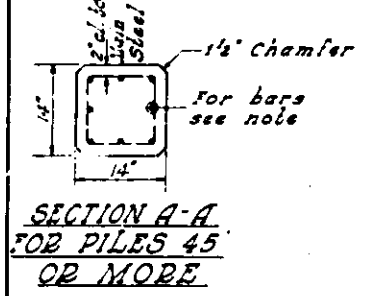
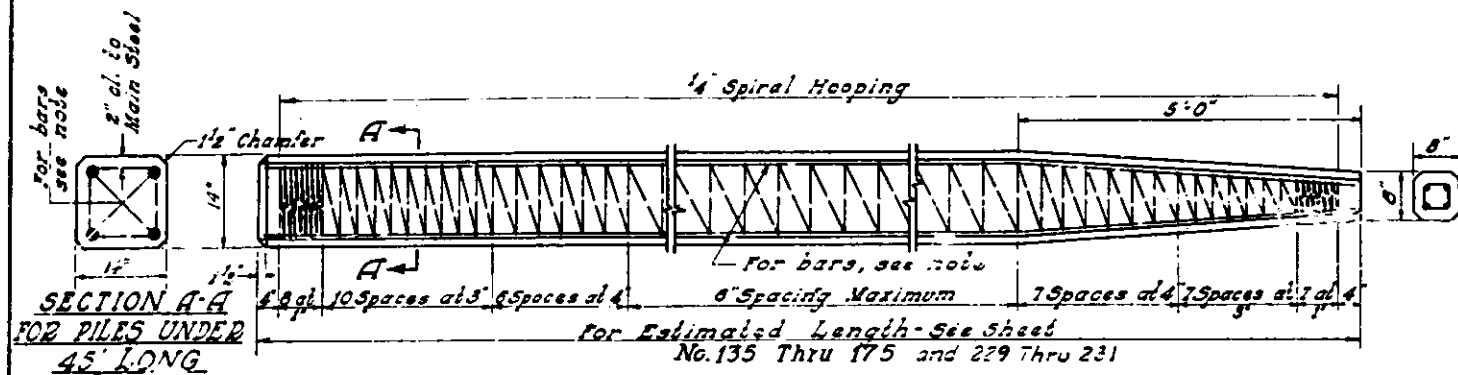
DESIGNED BY: M.S.
 DRAWN BY: G.E.S.P.
 CHECKED BY: G.C.H.
 APPROVED BY: K.L.

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS BLDGS.
 DIVISION OF HIGHWAYS

PIER BC 5
 POPLAR STREET BRIDGE APPROACHES
 ROADWAYS "B" AND "C"

F. A. I. NT. 70 ST. CLAIR CO. SECTION 82-3HVB
 H. W. LOCHNER, INC.
 ENGINEERS
 CHICAGO, ILLINOIS

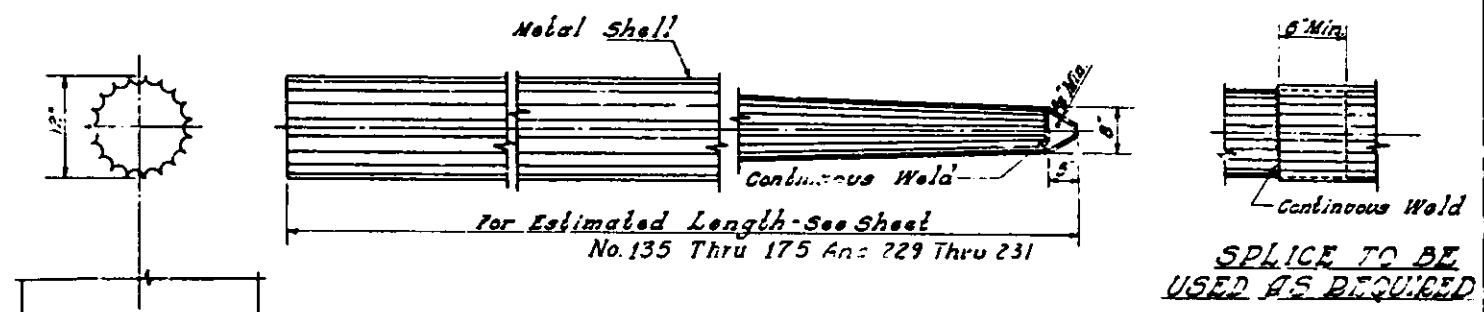
SHEET
 142 of 241



NOTE:
For 14" dia piles 45' long or more use 6-#6 bars - 4 for the full length and 4 to the point of bevel. For 14" dia piles under 45'-0" long use 4-#9 bars the full length.

HANDLING: For Pile lengths up to 45 ft. use slings placed at a distance of 0.21 L* from each end. For Piles longer than 45 ft., use three slings placed at a distance of 0.12 L* from each end and at mid-point of pile.
*L = Over all length of pile to be handled

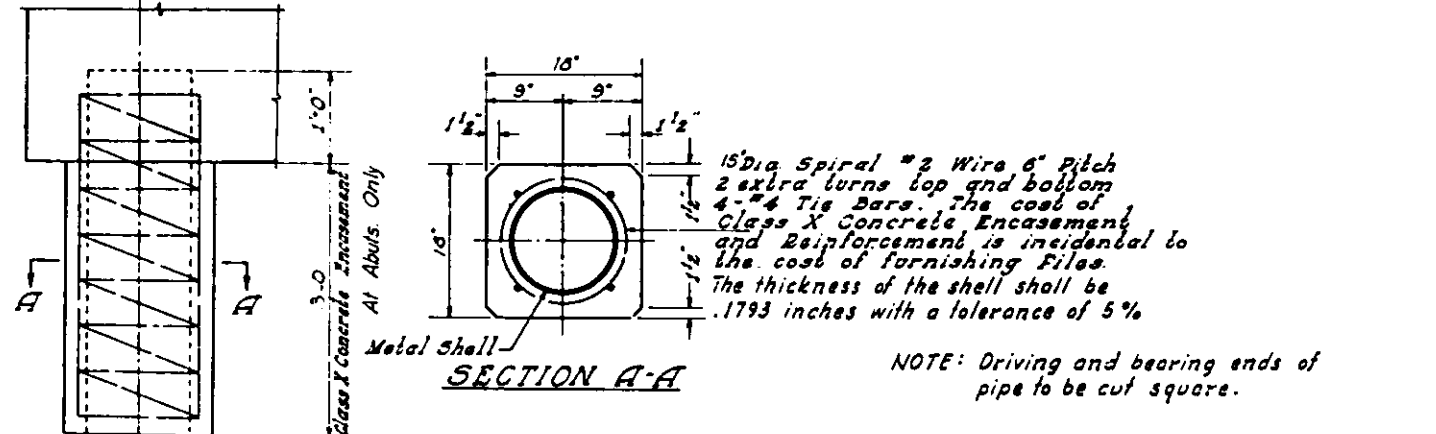
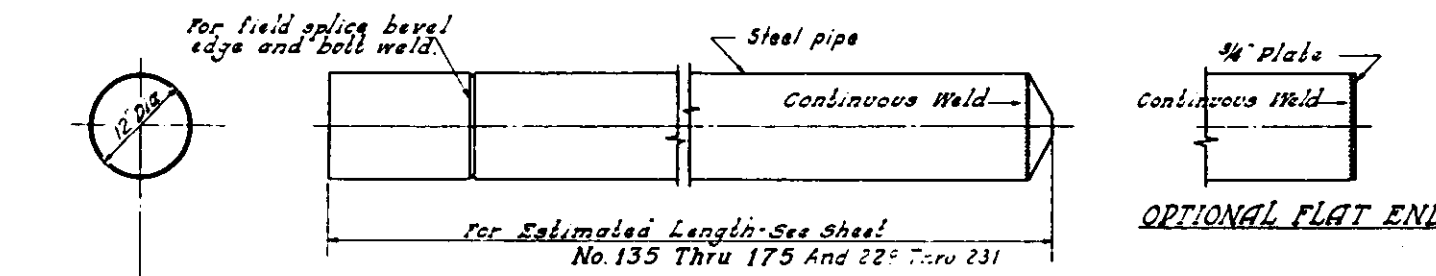
DETAIL OF PRECAST CONCRETE PILES



- ALLOWABLE TAPERS
1. Taper 1/8" for 10' x 12" Cylindrical Section Extension
 2. Taper 1/4" for 17' x 12" Cylindrical Section Extension
 3. Taper 1/7" for 30' x 12" Cylindrical Section Extension

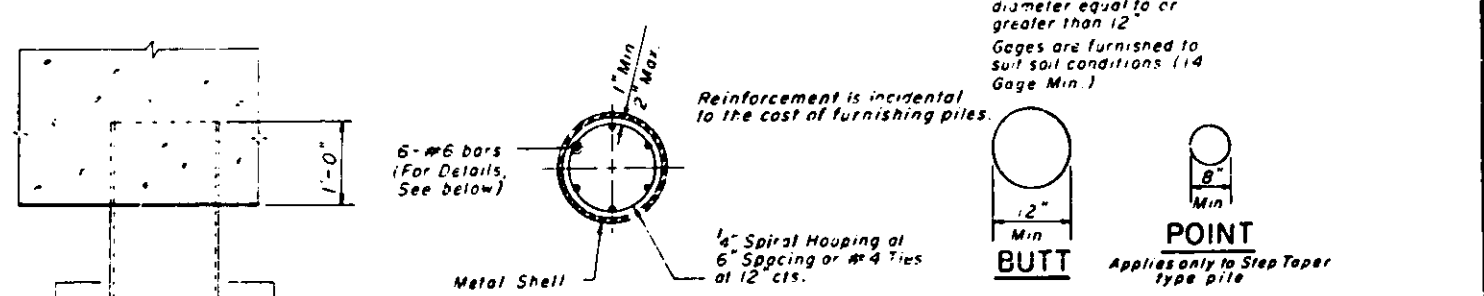
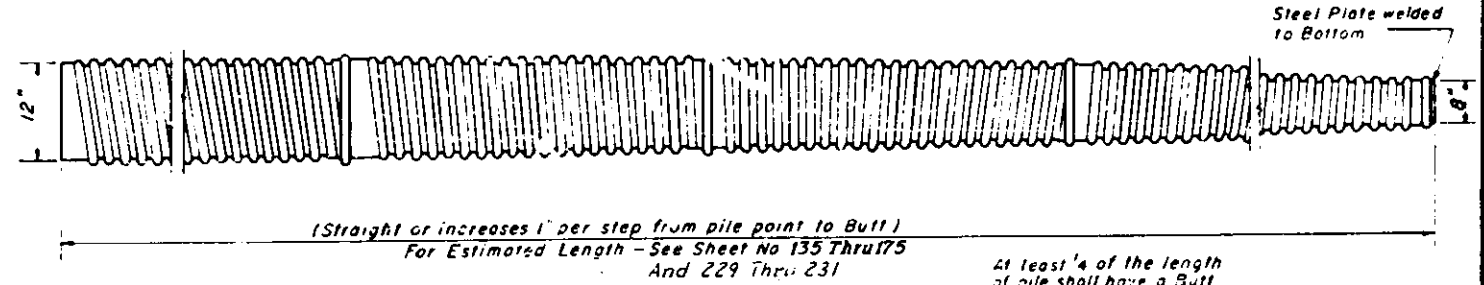
15 Dia Spiral #2 Wire, 6" Pitch
2 extra turns top and bottom
4-#4 Tie Bars. The cost of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing Piles. The thickness of the shell shall be .1793 inches with a tolerance of 5%.

DETAIL OF TAPERED METAL SHELL FOR CAST IN PLACE CONG. PILES.

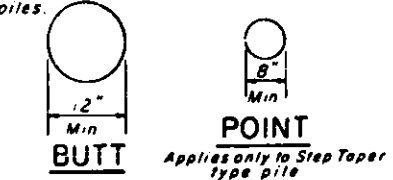


NOTE: Driving and bearing ends of pipe to be cut square.

DETAIL OF CYLINDRICAL STEEL SHELL FOR CAST IN PLACE CONCRETE PILES



At least 1/4 of the length of pile shall have a Butt diameter equal to or greater than 12". Gages are furnished to suit soil conditions (1/4 Gage Min.)



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BLDGS
DIVISION OF HIGHWAYS
CONCRETE PILE DETAILS
POPLAR STREET BRIDGE APPROACHES
ROADWAYS "A", "B" AND "C"
RAMPS "M" AND "S"
F.A.I.R.T. 70 ST. CLAIR CO. SECTION 82-3HVB
H. W. LOCHNER, INC.
ENGINEERS
CHICAGO, ILLINOIS
SHEET 227 of 241

7/2/65 - DLM added pile rebar encasement

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

FEDERAL AID ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
I-70	82-3VB	ST. CLAIR	48	1

P-98-087-00

- 82-3VB
- 82-(3HVB-2R-2-1) I
- 82-3HVB-2R-2-1
- 82-3VB-HDF
- 82-3HVB-R-4
- 82-3HVB
- 82-3HVB-R
- 82-3HVB-R-2
- 82-(3,5) DRS
- 82-(3,4) DRS
- 82-3HVB-R-3

ILLINOIS APPROACH TO POPLAR STREET BRIDGE

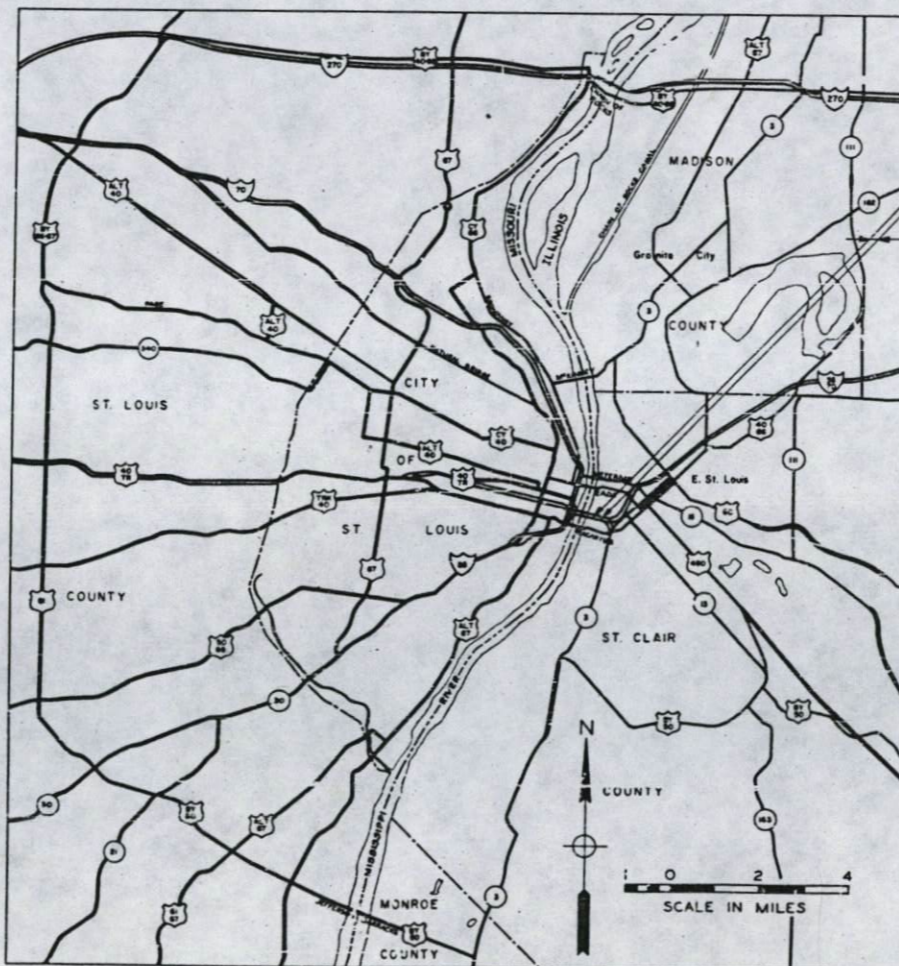
INTERSTATE ROUTE I-70 SECTION 82-3VB
 PROJECT I-IG-70-1(68)0
 ST. CLAIR COUNTY

C-98-058-64

INDEX OF DRAWINGS

SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
1A	SUMMARY OF QUANTITIES & GENERAL PLAN
*2	GENERAL PLAN AND ELEVATION
3	LOG OF BORINGS AND SUBSTRUCTURE LAYOUT
4	ANCHOR BOLT PLAN AND ESTIMATED QUANTITIES
5	PIER 1
6	PIER 2
7	PIER 3
8	PIER 4
9	PIER 5
10	PILING STANDARD
11	FRAMING PLAN AND GIRDER ELEVATIONS
12	GIRDER ELEVATIONS
13	GIRDER DETAILS
14	GIRDER DETAILS AND OVERHEAD SIGN STRUCTURE SUPPORT
15	EXPANSION DEVICE AT PIER 6-RIVER BRIDGE
16	EXPANSION DEVICE AT PIER 5 AND SHOES
17	SLAB DETAILS
18	SLAB DETAILS
19	SLAB DETAILS
20	SLAB LAYOUT
21	TOP OF SLAB ELEVATIONS
22	TOP OF SLAB ELEVATIONS
23	TOP OF SLAB ELEVATIONS
24	SAFETY CURBS AND PARAPET DETAILS
25	SAFETY CURBS AND PARAPET DETAILS
26	MEDIAN DETAILS
27	MEDIAN BARRIER RAIL AND SAFETY ISLAND
28	ALUMINUM HANDRAIL
29	DRAINAGE
30	ELECTRICAL DETAILS
31	ELECTRICAL DETAILS
32	BAR LIST
33	BAR LIST
34	PLAN AND ELEVATION - SIGN TRUSS
35	OVERHEAD SIGN STRUCTURES - SUPPORT FRAME FOR ALUMINUM TRUSS
36	OVERHEAD SIGN STRUCTURES - ALUMINUM TRUSS DETAILS
37	OVERHEAD SIGN STRUCTURES - ALUMINUM WALKWAY DETAILS
38	OVERHEAD SIGN STRUCTURES - ALUMINUM WALKWAY DETAILS
39	OVERHEAD SIGN STRUCTURES - SUPPORT FRAME FOR STEEL TRUSS
40	OVERHEAD SIGN STRUCTURES - STEEL TRUSS DETAILS
41	OVERHEAD SIGN STRUCTURES - STEEL WALKWAY DETAILS
42	OVERHEAD SIGN STRUCTURES - STEEL WALKWAY DETAILS
43	SIGNING
44	STANDARD 2147-2
45	STANDARD 2141-6
46	STANDARD 2151-8
47	STANDARD 2173-1
48	STANDARD 2180-2
48A, 48B, 48C	STANDARD 2113-1, 2114, 2142-4, 2114

CONTRACT NO. 24022



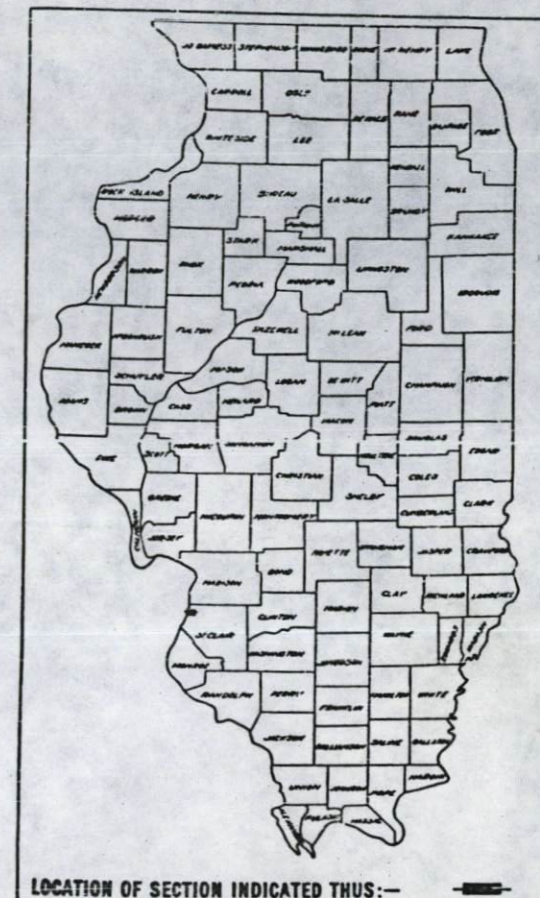
BEGIN PROJECT STA. 41+00
 END PROJECT STA. 48+48
 LENGTH 748 FEET

PROJECT LENGTH = 748 FT = 0.142 MI.

SVERDRUP & PARCEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

HIGHWAY CLASSIFICATION
 4454-T-50

SUBMITTED BY: *Harold Clinton Aug. 10, 1964*



LOCATION OF SECTION INDICATED THUS:—

APPROVED

FOR STRUCTURAL ADEQUACY ONLY

Carl E. Thurman
 Director of Bridges & Traffic Structures

- Reel 8-59 8-181 -
- 8-63 - 8-219 -
- 8-102 - 8-136 -
- 8-105 -
- 8-110 -
- 8-112 -
- 8-147 -
- 8-162 -

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
 DIVISION OF HIGHWAYS

SUBMITTED: *Dec 23, 1964*
John H. Blum
 DISTRICT ENGINEER

EXAMINED: *January 22, 1965*
William D. Randall
 CHIEF OF ROAD PLANS AND SURVEYS

PASSED: *January 23, 1965*
W. H. Adams
 CHIEF OF BRIDGES

APPROVED: *January 23, 1965*
James A. Blum
 DISTRICT ENGINEER

APPROVED: *January 23, 1965*
James A. Blum
 DISTRICT ENGINEER

DEPARTMENT OF PUBLIC WORKS AND BUILDINGS
 BUREAU OF PUBLIC WORKS

APPROVED

DIVISION ENGINEER DATE

8-59



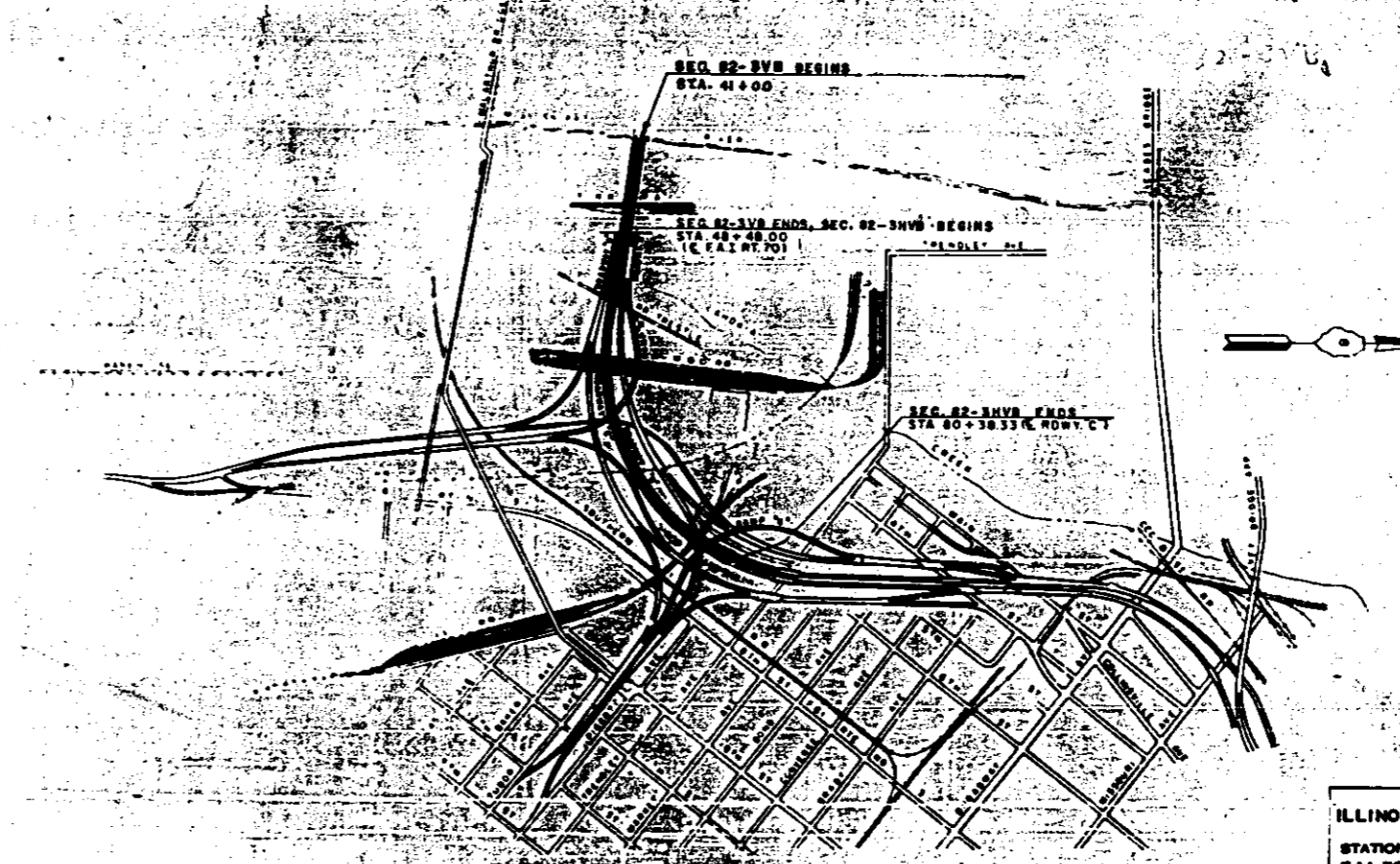
SUMMARY OF QUANTITIES		PROJECT 1-18-70-1(68)	
CODE NO.	ITEM	UNIT	BRIDGE STA.
	LOCATION OF WORK		FAI-70 STA 44 + 73.50 (82-3VB)
	CONSTRUCTION TYPE CODE		X 131
050001	CLASS "A" EXCAVATION FOR STRUCTURE	CU. YD.	2,953
060047	TEST PILES (CONCRETE)	EACH	10
060044	FURNISHING CONCRETE PILES	LIN. FT.	19,309
060043	DRIVING CONCRETE PILES	LIN. FT.	19,309
052003	CLASS "X" CONCRETE	CU. YD.	5,058.6
059001	REINFORCEMENT BARS	POUND	1,101,970
054042	FURNISHING & ERECTING STRUCTURAL STEEL - A36	POUND	2,114,330
054043	FURNISHING & ERECTING STRUCTURAL STEEL - A441	POUND	1,198,930
Z00004	ALUMINUM HANDRAIL	LIN. FT.	1,490
X02766	MEDIUM BARRIER RAIL (ALUMINUM)	LIN. FT.	749
X02767	ROADWAY DRAINS (TYPE C)	LUMP SUM	1
061001	NAME PLATES	EACH	2
052021	PROTECTIVE COAT	SQ. YD.	11,510
Z01023	BRIDGE SEAT SEALANT	LUMP SUM	1
X02768	LEVEE SLOPE PROTECTION	LUMP SUM	1
X02769	SIGNING	LUMP SUM	1
L00056	CONDUIT ATTACHED TO STRUCTURE 2" DIA. GALVANIZED STEEL	LIN. FT.	2,234
L00112	CONDUIT IN CONCRETE 1 1/2" DIA. GALVANIZED STEEL	LIN. FT.	50
L02403	LUMINAIRE MERCURY VAPOR WITH BUILT-IN REGULATOR BALLAST, 400W	EACH	10
L02812	LAMP, MERCURY VAPOR 400 WATTS TYPE H33-1-CD	EACH	10
L06038	ELECTRIC CABLE IN CONDUIT 600V (NEOPRENE RUBBER INSULATED) 1/c NO. 6	LIN. FT.	6,440
L06036	ELECTRIC CABLE IN CONDUIT 600V (NEOPRENE RUBBER INSULATED) 600V 1/c NO. 10	LIN. FT.	660
Z01065	RAILROAD PROTECTIVE SERVICES	L. SUM	1
	ALTERNATE "A"		
L00328	POLE, CONCRETE ANCHOR BASE 30"MH 6' MAST ARM	EACH	6
L00418	POLE, CONCRETE ANCHOR BASE 30"MH TWIN 6' MAST ARM	EACH	2
	ALTERNATE "B"		
L01228	POLE, ALUMINUM ANCHOR BASE 30"MH 6' MAST ARM	EACH	6
L01318	POLE, ALUMINUM ANCHOR BASE 30"MH TWIN 6' MAST ARM	EACH	2

F.A.L. DIST.	SECTION	COUNTY	VERT. DIST.	SECTION	SHEET NO.
70	82-3VB	ST. CLAIR	48	1A	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO.			SHEETS

POPLAR STREET BRIDGE APPROACHE

ST. CLAIR COUNTY

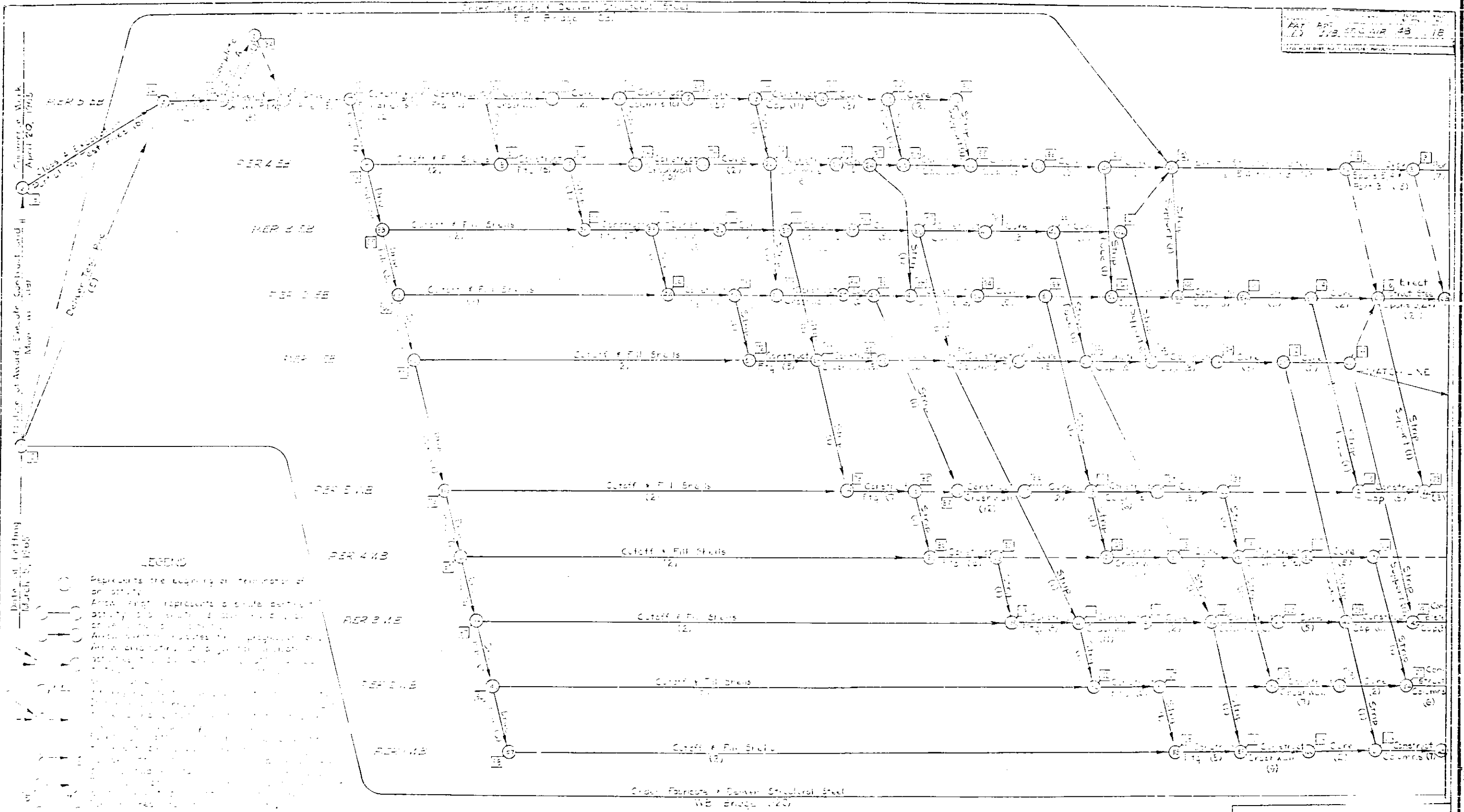
GENERAL PLAN



QUANTITY SUMMARY	
GENERAL PLAN	
ILLINOIS APPROACH TO POPLAR STREET BRIDGE	
STATION - 44 + 73.50	
F.A.L. ROUTE - 70	
SECTION - 82-3VB	
ST. CLAIR COUNTY, ILLINOIS	
SCALE: NONE	
DRAWN: R. Kooser, Oct. 1964	ENGINEER & ARCHITECTS, INC.
CHECKED: L. Glaser, Oct. 1964	ST. LOUIS, MO.

SEE PLAN 1/18/64 FOR DETAIL OF CONC. CABLE IN TRENCH 200 L.F. (10' DIA.) ; SUBMITTED N.A. PLAN SERVICES.

1/18/64
445633



Contract Mark
 April 20, 1953

Place of Award, Enclose Schedule and if
 May 11, 1953

Date of Issue
 March 5, 1953

LEGEND

Represents the beginning or termination of an activity.

Arrow head represents a single path or activity. The number in the circle at the arrow head represents the duration of the activity in days.

Activity within brackets represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a square represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a triangle represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a diamond represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a hexagon represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within an octagon represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a decagon represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a dodecagon represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a hexadecagon represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within an octadecagon represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with a square inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with a triangle inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with a diamond inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with a hexagon inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with an octagon inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with a decagon inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with a dodecagon inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

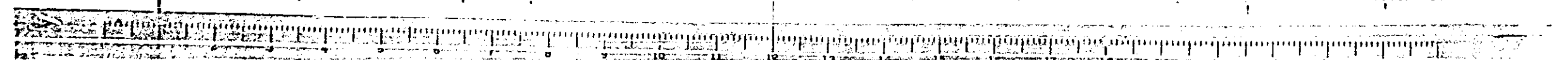
Activity within a circle with a hexadecagon inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

Activity within a circle with an octadecagon inside represents a sub-activity. The number in the circle at the arrow head represents the duration of the sub-activity in days.

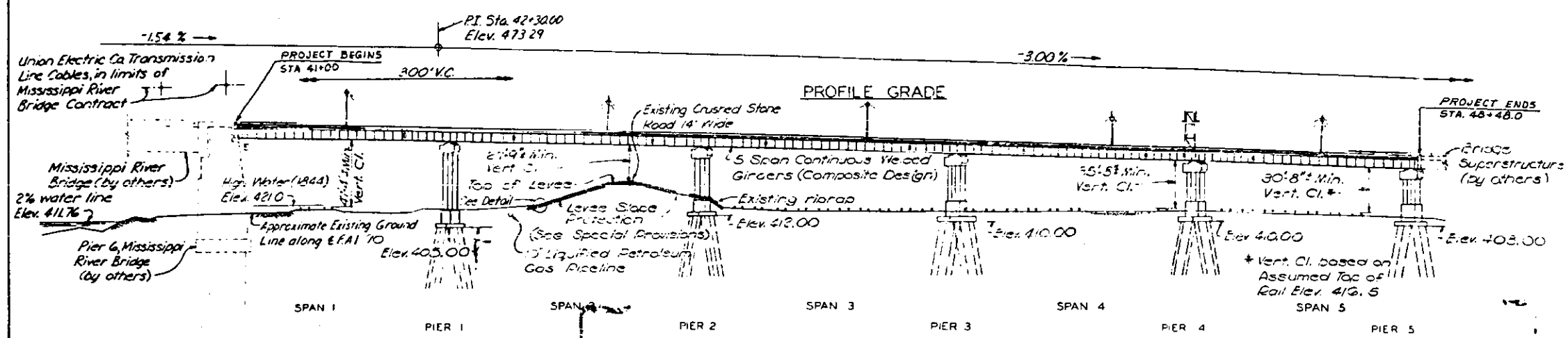
1. See Specifications for details.
2. See Specifications for details.
3. The number in parentheses denotes working days.

CRITICAL PATH

FAT 75
 SECTION 401.01
 ST. CLAR COUNTY
 MISS. RIVER BRIDGE APPROACH



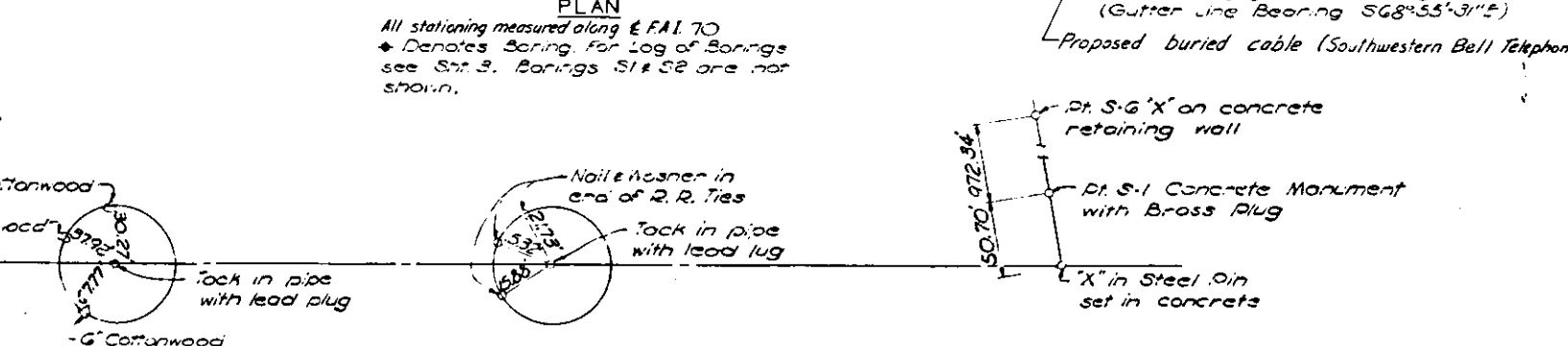
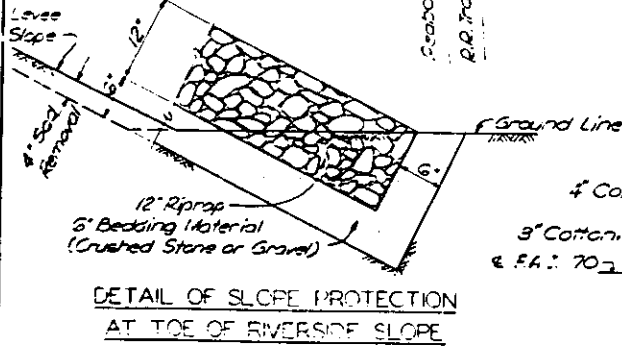
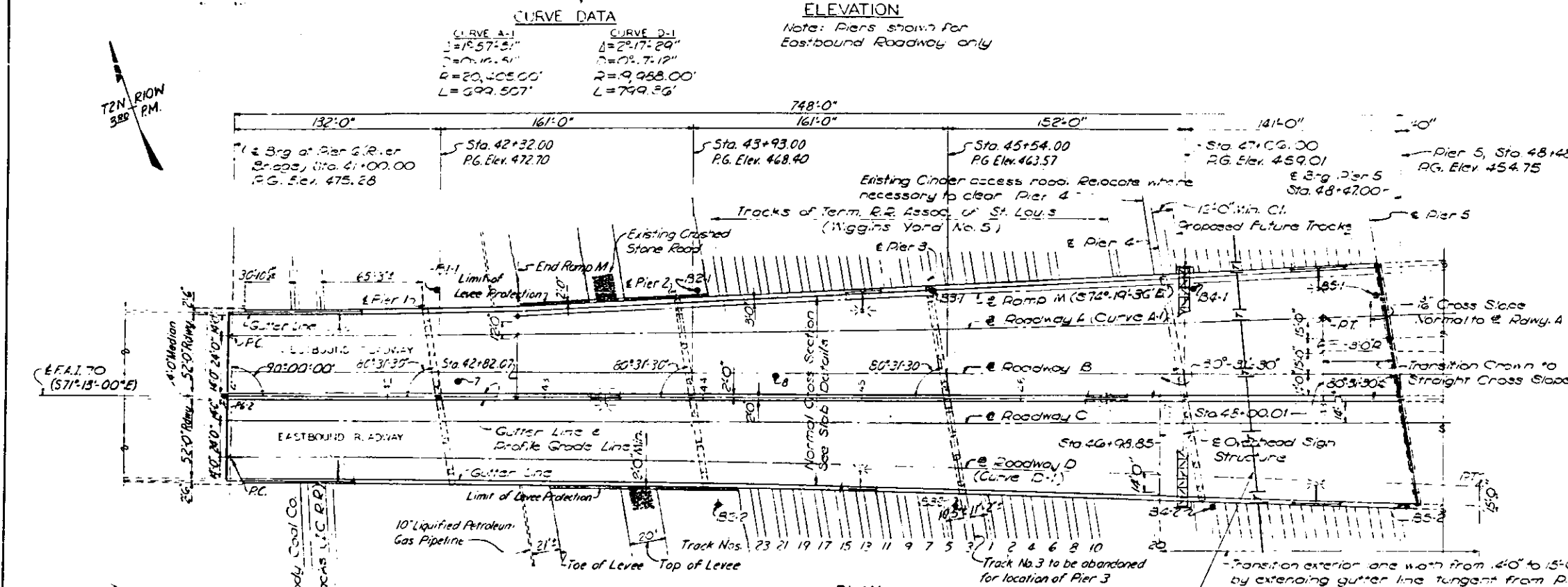
F.A.L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-3VB	ST. CLAIR	48	2
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.	



CURVE DATA

CURVE A-1	CURVE D-1
$\Delta = 18^{\circ}57'51''$	$\Delta = 2^{\circ}17'29''$
$R = 116.51'$	$R = 107.17'$
$E = 20,405.00'$	$E = 9,968.00'$
$L = 699.507'$	$L = 749.86'$

ELEVATION
Note: Piers shown for Eastbound Roadway only



GENERAL NOTES

SPECIFICATIONS Illinois Division of Highways "Standard Specifications for Road and Bridge Construction," adopted January 2, 1958, Supplements, Specifications, Effective March 2, 1964 and Special Provisions.

DESIGN In accordance with Division I of the AASHTO "Standard Specifications for Highway Bridges," 1961 Edition (as modified by AASHTO Interim Specifications dated 1961, 1962 and 1963) except as modified by the provisions, exceptions and interpretations of the notes on these drawings.

DESIGN LOADING Live Load: HS20-44 and Misc. note.
Dead Load: Provision is made for a future wearing surface weighing 18 pounds per square foot.
Impact: No impact is included for substructure units.

DESIGN UNIT STRESSES Concrete in flexure:
Superstructure - 1,400 p.s.i.; Substructure - 1,400 p.s.i.;
V_e in footings - 75 p.s.i.; Reinforcing Steel - 20,000 p.s.i.;
Structural Steel (A36) - 20,000 p.s.i.;
Low-Alloy Structural Steel - As given in AASHTO Article 1.4.7.

CONCRETE Class "X" Concrete shall be used throughout. Coarse aggregate to be used in honor roll parapets must be absolutely free from shert, flat, lumps, lignite and soft sandstone. The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

REINFORCEMENT All dimensions to reinforcing steel on the drawings are to the centerline of the bar except where the clear distance from the face of concrete is noted. Reinforcing shall be lapped a minimum of 20 diameters at splices unless shown or noted otherwise on the drawings.

BEVELED EDGES All exposed edges of concrete shall be beveled 4" unless otherwise shown or noted.

BEARING AREAS Bearing areas to receive superstructure shall be finished smooth and level at the proper elevation.

ANCHOR BOLTS The contractor is to drill the holes in the substructure and set the anchor bolts for girder bearings. Reinforcing steel shall be positioned to avoid interference with drilling for Anchor Bolts and securely fastened in place.

PILE DESIGN LOADS Refer to details of substructure for required capacity of piles for each foundation element.

PILE DRIVING All piles shall be driven to a bearing value not less than the above minimum design loads. Piling shall be driven to a minimum penetration of 30'-0" for Pier 1 and 40' for Pier 2 thru 5.

CONCRETE PILES Where "concrete piles" are called for on the plans the piles shall be either Precast Concrete Piles or Metal Shell Cast-in-Place Concrete Piles as shown on the bridge plans. See Special Provisions.

TEST PILES Test Piles shall be driven to serve as permanent piles in the location indicated on the footing plans or as directed by the Engineer.

PAINT All Structural Steel shall be given one shop coat of red lead paint and two field coats of basic lead silico-chromate green paint.

See Special Provisions. All paint shall be furnished and applied by the Contractor.

BENCH MARKS
B.M. 11-Dica marked S-1 set in concrete near west edge of top of levee, 50' Lt. Sta. 43+40. Elev. 434.40.
B.M. 12-100d spike in south side of utility pole, east side of cinder road, 250' Lt. Sta. 47+28. Elev. 416.98
All elevations refer to Mean Sea Level, U.S.C. & G.S. Datum, 1929 Adjustment.

GENERAL PLAN AND ELEVATION

ILLINOIS APPROACH TO POPLAR RIDGE

STATION - 44+73.50
F.A.L. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE: NONE

DRAWN: L.L. Barnes Jul 64
CHECKED: D.E. DeRomo Jul 64

OVERSEER & PARCEL AND ASSOCIATES, INC.
ENGINEERS & ARCHITECTS
ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

NOTES

Each figure in the column headed "N" indicates the number of blows required to drive a 2" O.D. Sampling Pipe 6 inches using a 140 lb. weight falling 30 inches. Where fractions are shown the numerator indicates the first 6 inches of sampling and the denominator indicates the second 6 inches of sampling, unless otherwise indicated.

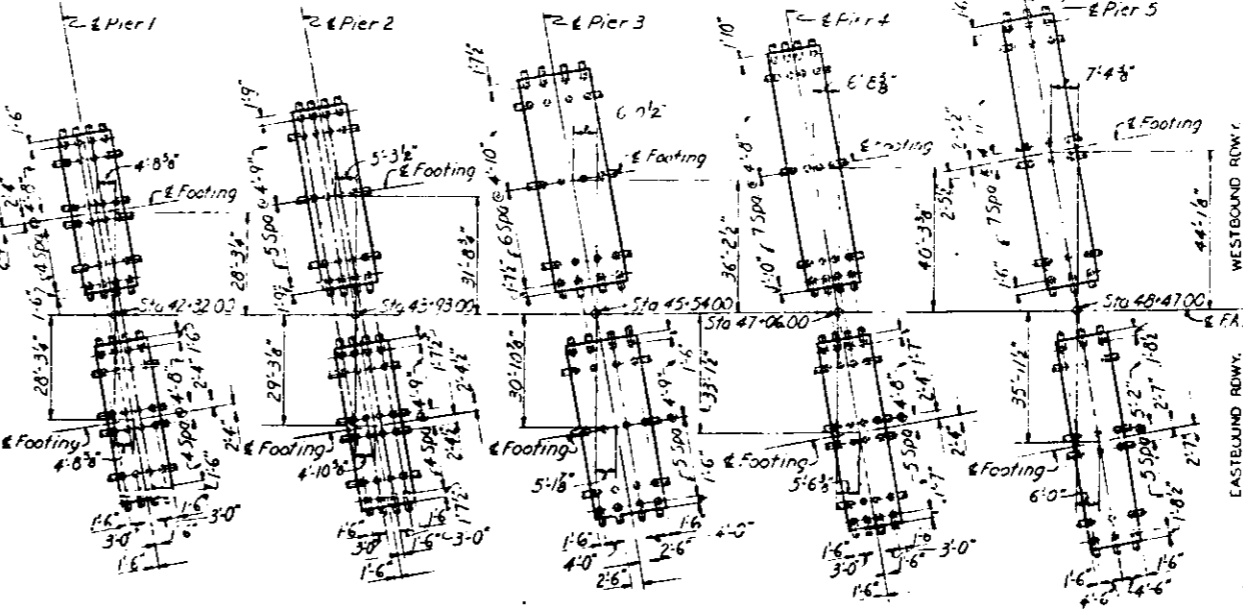
SECTION	QUANTITY	DATE	SHEET NO.
70	82-3VB	ST. CLAIR	48
ILLINOIS		PUBLIC WORKS	

LOG OF BORINGS			
HOLE 7		HOLE 8	
ELEV.	LOG	ELEV.	LOG
420	Surface Elev. 418.7	420	Surface Elev. 415.9
410	2" Brown fine sand	410	Black silt & cinder fill
400	2" Brown fine sand & small gravel	400	Brown silty fine sand fill
390	Brown fine sand	390	Brown sand & cinder fill
380	Brown & grey sandy silt with thin sand seams	380	Brown fine sand
370	Grey very sandy silt	370	Grey sand silt with fine sand seams
360	Grey silty fine sand	360	Brown fine sand
350	Grey fine sand	350	Grey med. sand
340	Grey med. to coarse sand & small gravel	340	Grey fine to coarse sand with limestone fragments
330	Grey med. sand	330	Grey med. to coarse sand and small gravel
320	Grey coarse sand and small gravel	320	Grey coarse sand
310	Grey silty fine sand	310	Grey med. to coarse sand
300	Grey fine	300	Grey coarse sand
290	Grey med. to coarse sand and med. gravel	290	Grey fine sand
280	Grey silty fine sand	280	Some more dense
270	Grey fine	270	Some less dense
260	Grey coarse sand and small gravel	260	Grey coarse sand
250	Grey coarse sand	250	Grey medium to coarse sand
240	Grey coarse sand trace	240	Grey fine sand with small gravel
230	small gravel	230	Grey med. to coarse sand
220	Grey fine sand with limestone fragments	220	Refusal-Rock or Boulder
210	Grey fine to coarse sand	210	Refusal-Rock or Boulder

LOG OF BORINGS																	
HOLE B1-1		HOLE B2-1		HOLE B2-2		HOLE B3-1		HOLE B3-2		HOLE B4-1		HOLE B4-2		HOLE B5-1		HOLE B5-2	
Station 42+30 (70' Left)		Station 43+25 (70' Left)		Station 44+10 (70' Right)		Station 45+40 (70' Left)		Station 45+60 (70' Right)		Station 47+10 (70' Left)		Station 47+25 (70' Right)		Station 48+35 (70' Left)		Station 48+50 (70' Right)	
ELEV.	LOG	ELEV.	LOG	ELEV.	LOG	ELEV.	LOG	ELEV.	LOG	ELEV.	LOG	ELEV.	LOG	ELEV.	LOG	ELEV.	LOG
420	Surface Elev. 423.1	420	Surface Elev. 423.1	420	Surface Elev. 424.8	420	Surface Elev. 415.6	420	Surface Elev. 415.9	420	Surface Elev. 416.4	420	Surface Elev. 414.0	420	Surface Elev. 412.9	420	Surface Elev. 414.0
410	Clay fill	410	Cinders, rock debris fill some clay	410	Yellow clay fill	410	Cinder fill	410	Grey silty sand	410	Dark grey silty sand	410	Grey and red cinder fill	410	Grey cinder fill some clay, some stones in	410	Grey cinder fill
400	Fine to coarse brown sand trace of gravel	400	Cinders, rock brick, gravel fill	400	Grey silty sand	400	Dark grey silty sand	400	Greyish brown silty sand	400	Fine brown sand trace of silt	400	Wet grey silty sand few gravel	400	Fine grey silty sand	400	Wet grey silty clay
390	Ground Water	390	Brownish grey sandy silt	390	Ground Water	390	Greyish brown silty sand	390	Fine brown sand	390	Fine brown sand	390	Fine grey silty sand	390	Ground Water	390	Wet grey silty clay
380	Fine Grey silty sand	380	fine grey sand trace of silt	380	fine grey sand	380	Ground Water	380	Fine brownish grey sand	380	Fine brown silty sand with few small gravel	380	silty clay	380	Grey sand clay	380	silt
370	Fine Grey Sand	370	Fine grey silty sand	370	fine coarse grey sand	370	trace of small gravel	370	Fine grey sand few small gravel	370	Fine brown silty sand	370	Fine grey silty sand	370	Fine grey sand	370	Brown and grey silty sand
360	Fine to coarse grey sand trace of gravel	360	Fine to coarse brownish grey sand trace of gravel boulders	360	Fine to coarse grey sand trace of small gravel	360	Fine grey sand small to medium size gravel	360	Fine to coarse grey sand few small gravel	360	Fine to medium grey sand few small gravel	360	Fine to coarse brown sand few small gravel	360	Fine brown & grey sand	360	Fine to coarse grey sand
350	Grey med. sand	350	Fine to coarse grey sand trace of gravel boulders	350	Fine to coarse grey sand trace of gravel boulders	350	Fine to coarse grey sand some small gravel	350	Coarse sand and small gravel trace of fine grey sand	350	Small to medium grey silty sand changing to silty clay	350	Fine grey sand	350	Fine grey sand	350	Fine to coarse grey sand few small gravel
340	Grey coarse sand and small gravel	340	Fine to coarse grey sand trace of gravel boulders	340	Fine to coarse grey sand trace of gravel boulders	340	Coarse sand and small gravel trace of fine grey sand	340	Fine grey sand	340	Fine grey sand	340	Fine grey sand	340	Fine grey sand	340	Fine grey sand
330	Grey med. to coarse sand and med. gravel	330	Fine to coarse grey sand trace of gravel boulders	330	Fine to coarse grey sand trace of gravel boulders	330	Coarse sand and small gravel trace of fine grey sand	330	Fine grey sand	330	Fine grey sand	330	Fine grey sand	330	Fine grey sand	330	Fine grey sand

* No Recovery - Wash Sample

LOG OF BORINGS			
HOLE S-1		HOLE S-2	
Station 50+00 (150' Right)		Station 52+50 (150' Right)	
ELEV.	LOG	ELEV.	LOG
410	Surface Elev. 413.3	410	Surface Elev. 407.8
400	Red & grey cinders-some small rock fragments	400	Fine grey sand some clay
390	Grey silty clay	390	Ground Water
380	Sandy grey clay	380	Fine grey sand some silt
370	Fine grey sand with trace of clay	370	Fine to medium grain sand
360	Fine grey sand	360	grey few small gravel
350	Fine grey sand	350	Fine grey sand
340	Fine grey sand	340	Med. to large gravel-irreg. some sand



SUBSTRUCTURE LAYOUT
Do not scale this drawing. Follow dimensions.

Note: For the contractor's consideration in evaluating the penetration test values, a brief description of the drilling equipment is as follows:
 Holes 7B-1 - Drilling rig equipped with a smooth spool and a soft manila line to hoist the hammer which had a needle guide attached.
 Holes B1-1, B2-1, B2-2, B3-1, B3-2, B3-2S and S2 - Drilling rig equipped with a smooth spool and soft line to hoist the hammer which followed a 2" pipe guide attached to the drill rod.
 Holes B4-1, B4-2, B5-1 and B5-2 - Drilling rig equipped with drum which had a brake and clutch with a wire rope attached to the drum. A 2" pipe guide was attached to the drill rod.

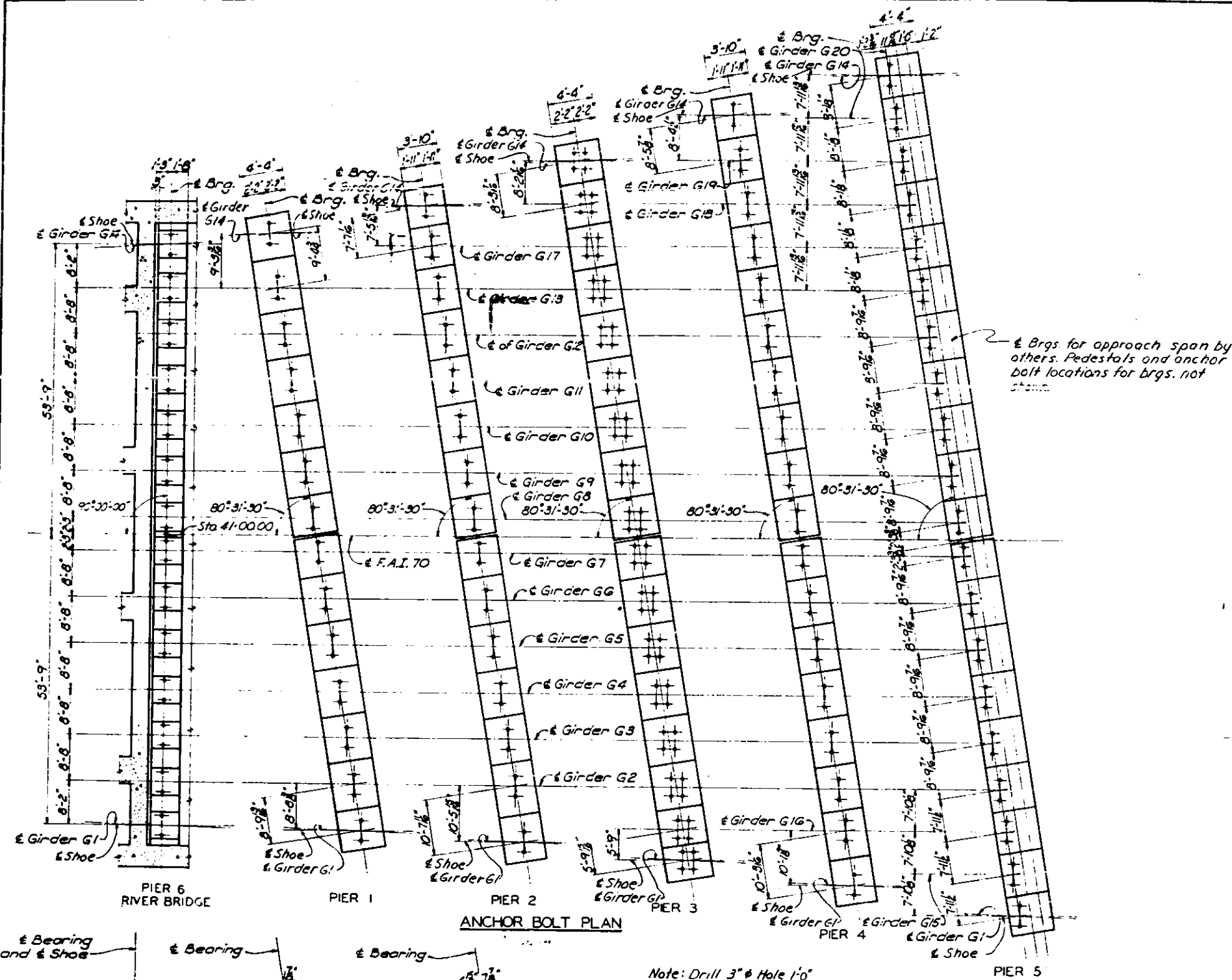
LOG OF BORINGS SUBSTRUCTURE

ILLINOIS APPROACH TO P... T BRIDGE

STATION - 44+73.50
 P.A.L. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

DATE OF BORING: May 17, to May 19, 1962
 DATE OF BORING: May 14, to May 15, 1962

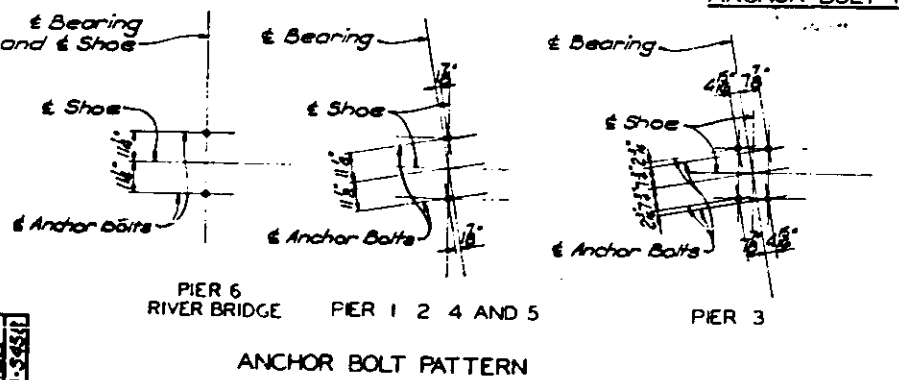
DRIVER: E.L. GORTNER, JR. JUN 52
 CHECKED: R. Hall, July '62



SCHEDULE OF ESTIMATED QUANTITIES

Item	Units	Pier 1	Pier 2	Pier 3	Pier 4	Pier 5	Superstr.	Total
Class "A" Excavation for Structure	Cu Yd.	697	871	444	468	473		2,953
Test Piles (Concrete)	Each	2	2	2	2	2		10
Furnishing Concrete Piles	Lin Ft.	4,602	4,264	3,720	3,333	3,350		19,309
Driving Concrete Piles	Lin Ft.	4,602	4,264	3,720	3,333	3,350		19,309
Class "X" Concrete	Cu Yd.	459.6	391.7	603.4	508.2	587.4	2,508.3	5,058.6
Reinforcement Bars	Lb.	53,490	49,810	71,940	57,820	53,900	814,970	1,101,970
Furnishing & Erecting Structural Steel - A36	Lb.						2,114,330	2,114,330
Furnishing & Erecting Structural Steel - A441	Lb.						1,198,930	1,198,930
Aluminum Handrail	Lin Ft.						1,490	1,490
Median Barrier Rail (Aluminum)	Lin Ft.						749	749
Roadway Drains (Type C)	Lump Sum							1
Name Plates	Each						2	2
Protective Coat	Sq. Yds.						11,510	11,510
* Bridge Seat Sealant	Lump Sum							1
Levee Slope Protection	Lump Sum							1
Signing	Lump Sum							1
Electrical	See Sheets	30	431					

* TO BE APPLIED AT PIER NO 5



Note: Drill 3" Hole 1'-0" deep for all Anchor Bolts.

ANCHOR BOLT PLAN AND ESTIMATED QUANTITIES

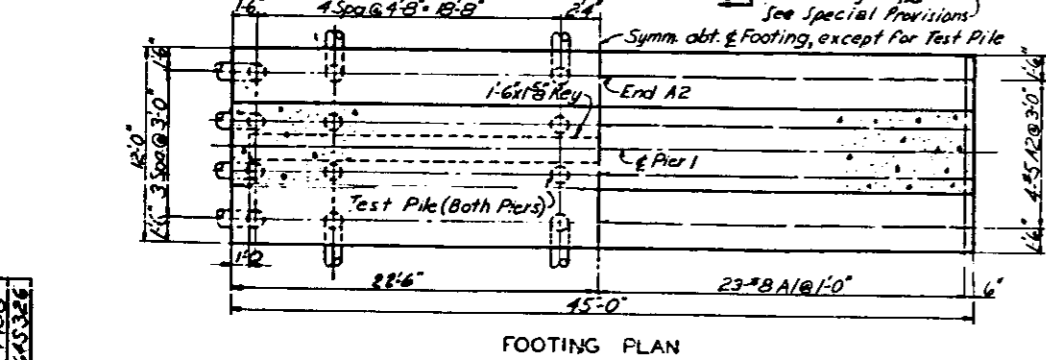
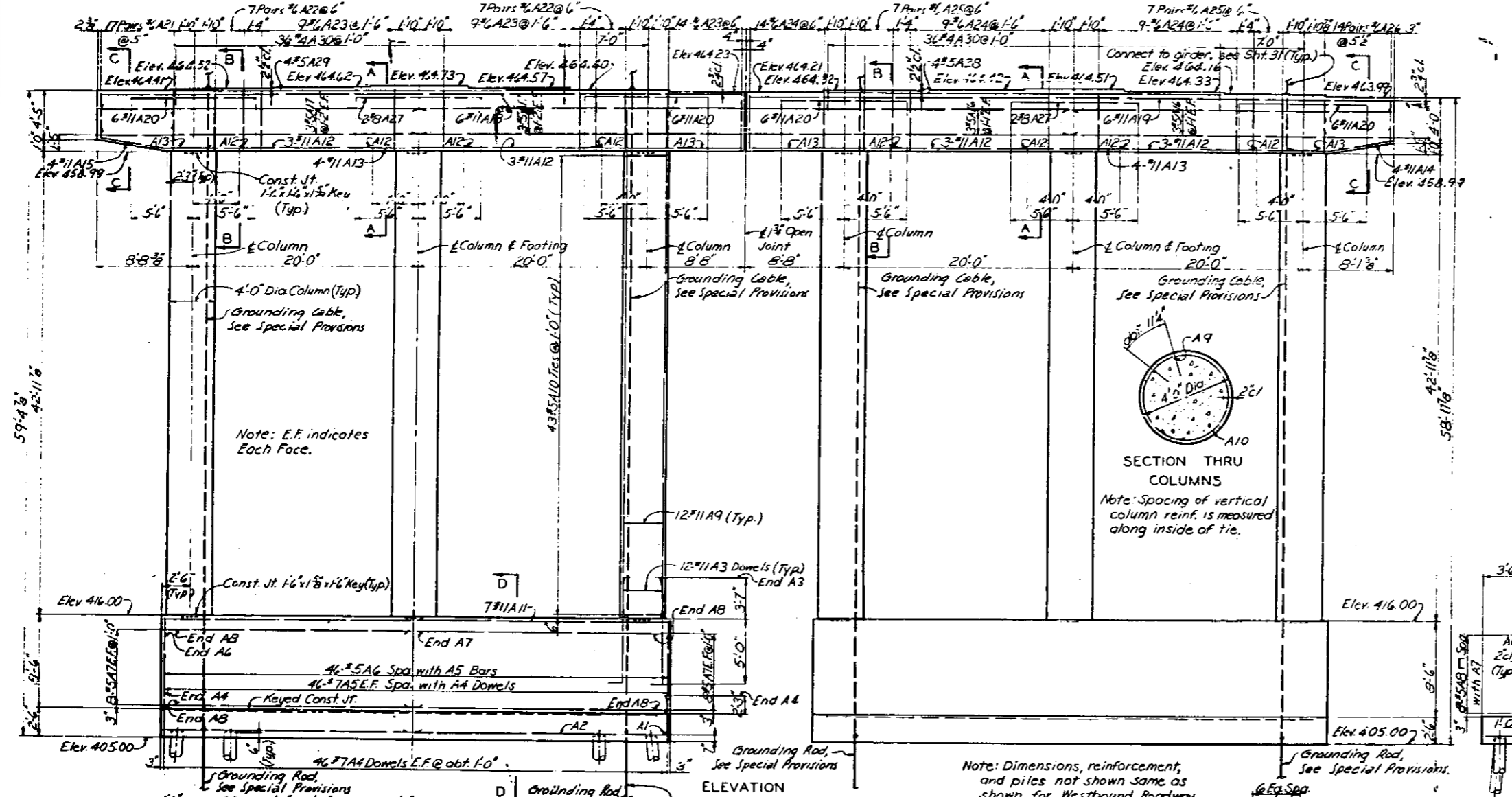
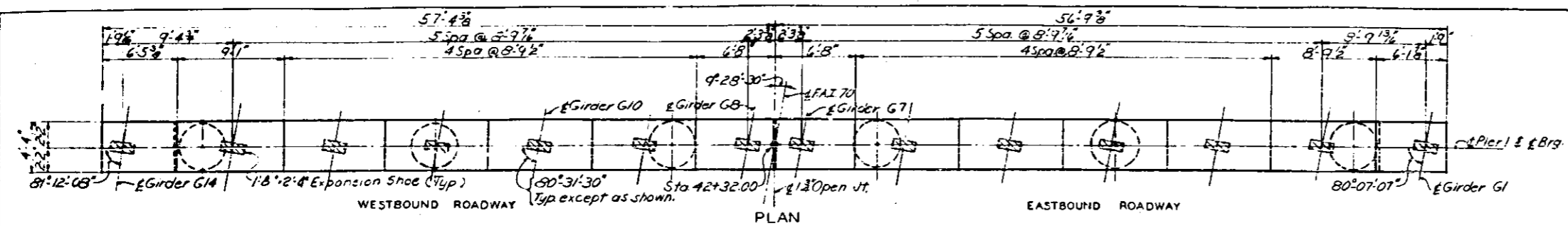
ILLINOIS APPROACH TO POPPERS CREEK BRIDGE

STATION - 44+73.50
 F.A.I. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

SCALE: NONE

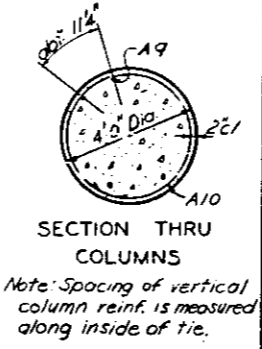
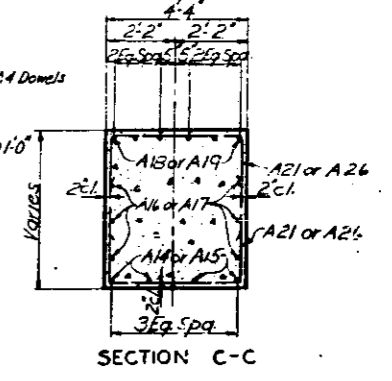
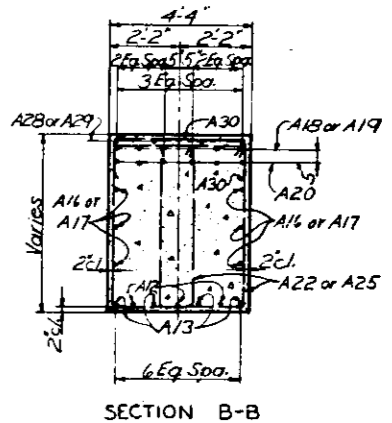
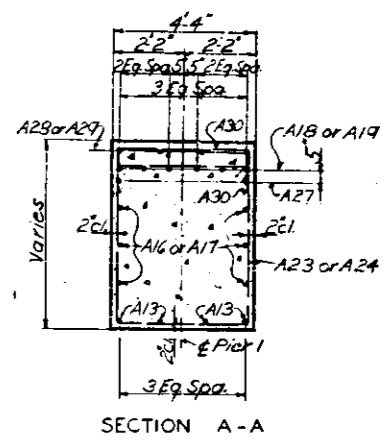
DESIGNED BY: R. Koenig - June 1964
 CHECKED BY: R. Walter - July 1964
 ENGINEERING & SURVEYING ASSOCIATES, INC.
 ST. LOUIS, MO.

P.L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-3VB	ST. CLAIR	48	5
P.L. NO. & CHG. NO. 7		ALIGNED	P.L. NO. & CHG. NO.	SHEETS

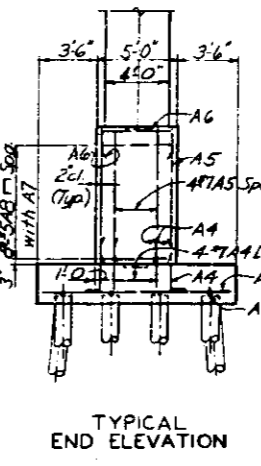


Notes:
 Westbound Rdwy: 40 concrete piles including one test pile.
 45 tons per pile capacity.
 Estimated length = 59 ft.
 Eastbound Rdwy: 40 concrete piles including one test pile.
 45 tons per pile capacity.
 Estimated length = 59 ft.
 Spacing of Piles is measured at bottom of footing. Better outside piles 1 in in direction shown.

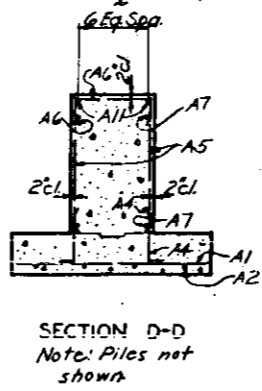
Do not scale this drawing. Follow dimensions.



Note: Spacing of vertical column reinf. is measured along inside of tie.



NOTES
 For Pile details see Sheet 10.
 Spacing of reinforcement in pier cap shall be shifted where necessary to miss anchor bolts for location of anchor bolts see Sheet 4.



Note: Piles not shown

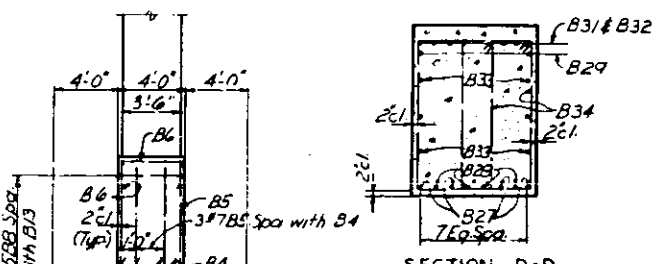
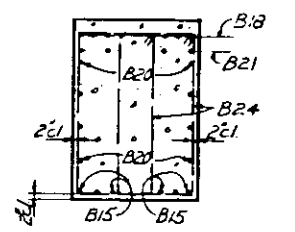
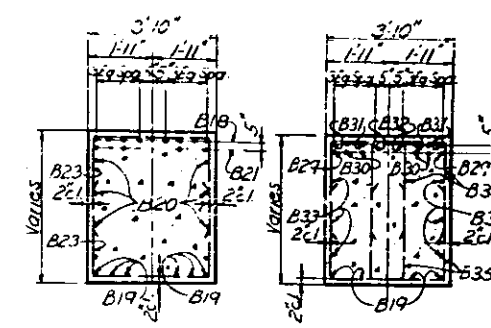
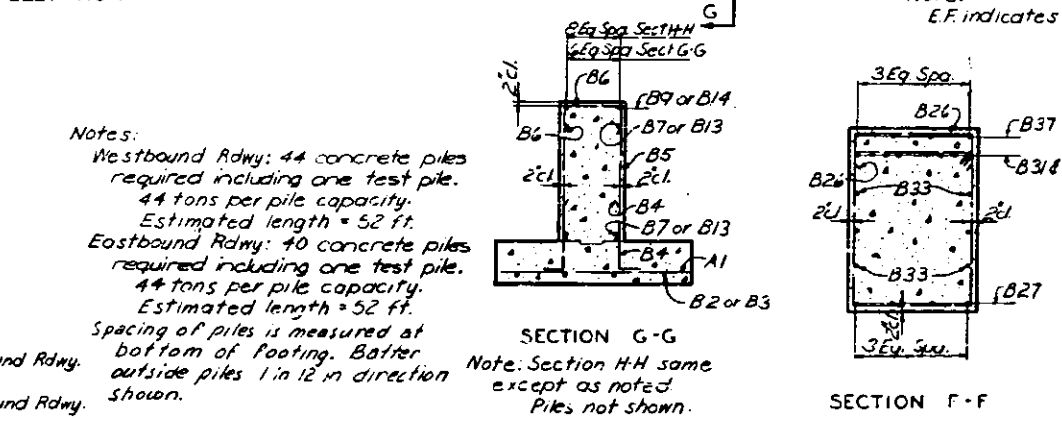
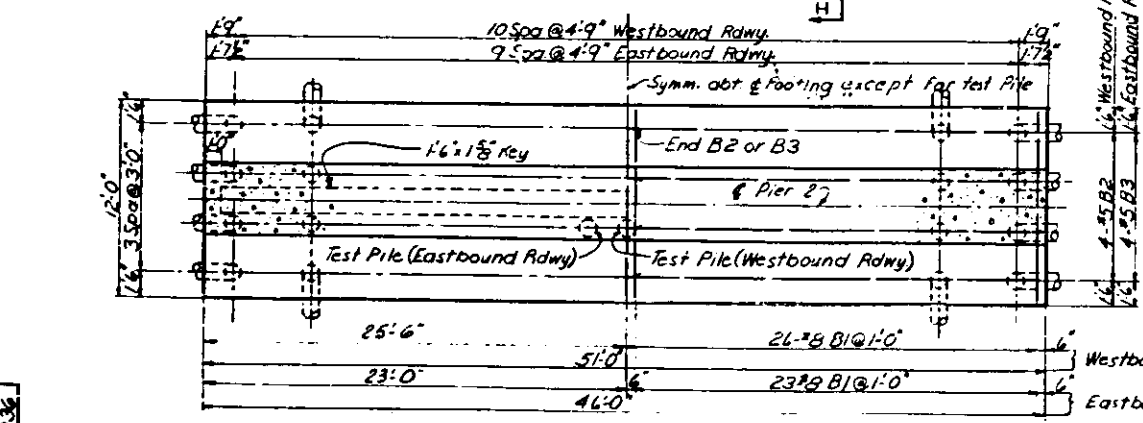
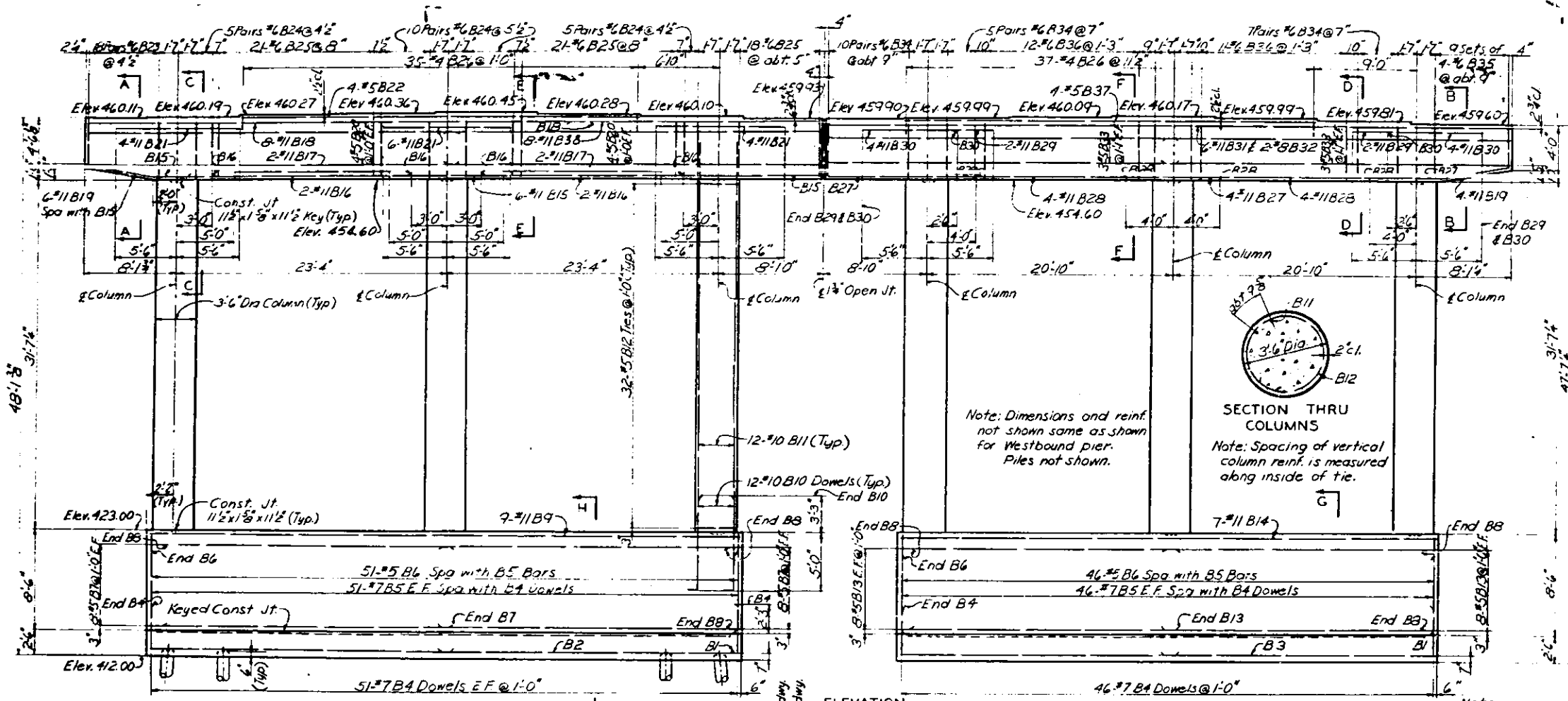
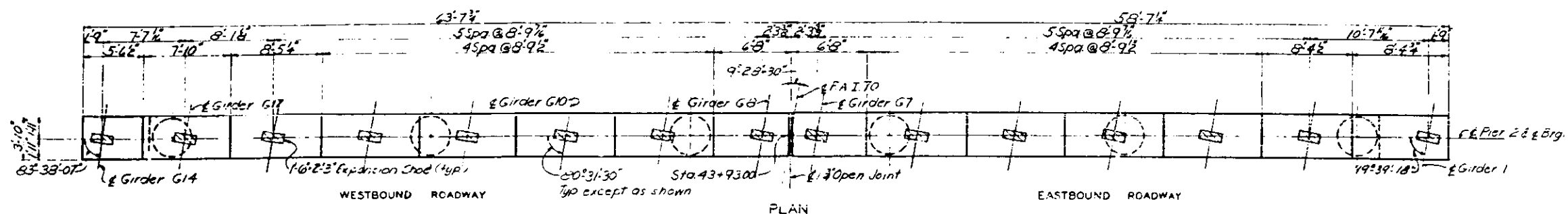
ILLINOIS APPROACH TO BOPLAR STR.
 STATION - 44+73.50
 F.A.L. ROUTE-70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

SCALE NONE

DRAWN: W. Mark, July 1964
 CHECKED: G.E. Bisco, July 1964

MEMORANDUM AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

P.A.L. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-318	ST. CLAIR	48	6
P.L. No. 82-318		ILLINOIS	P.L. AND P.L. NO.	



Notes:
 Westbound Rdwy: 44 concrete piles required including one test pile. 44 tons per pile capacity. Estimated length = 52 ft.
 Eastbound Rdwy: 40 concrete piles required including one test pile. 44 tons per pile capacity. Estimated length = 52 ft.
 Spacing of piles is measured at bottom of footing. Batter outside piles 1 in 12 in direction shown.

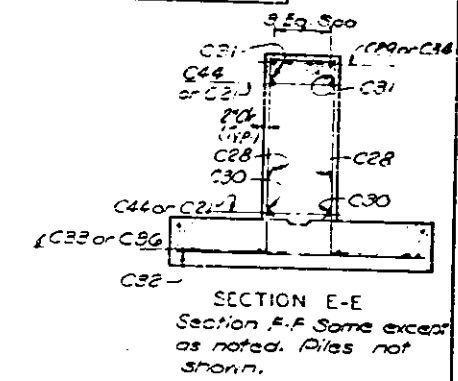
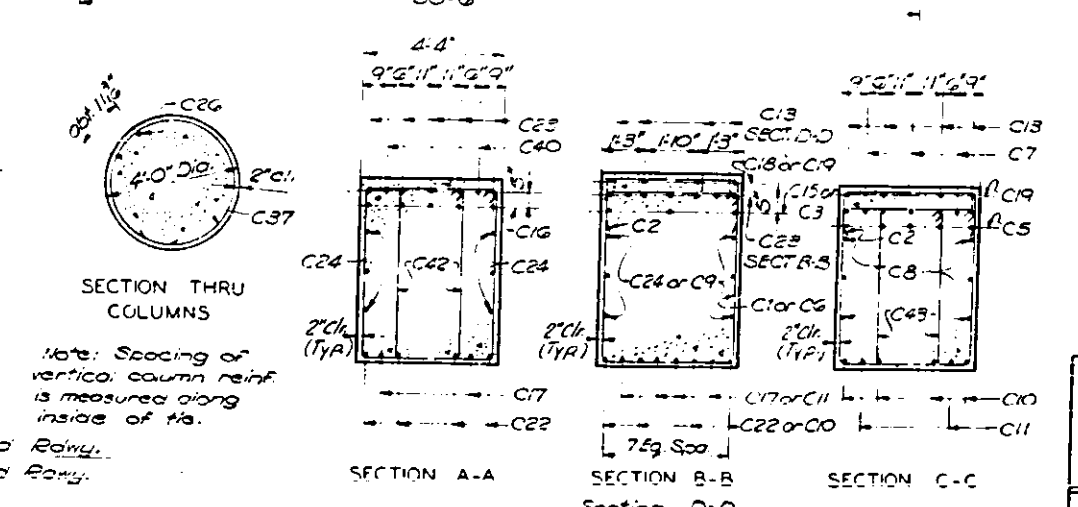
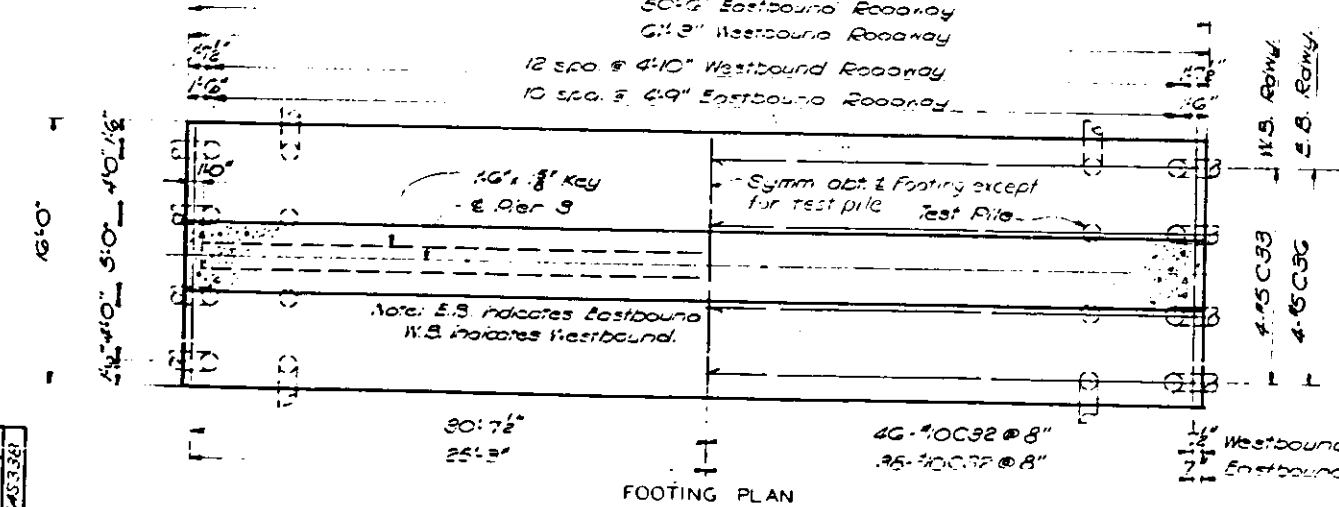
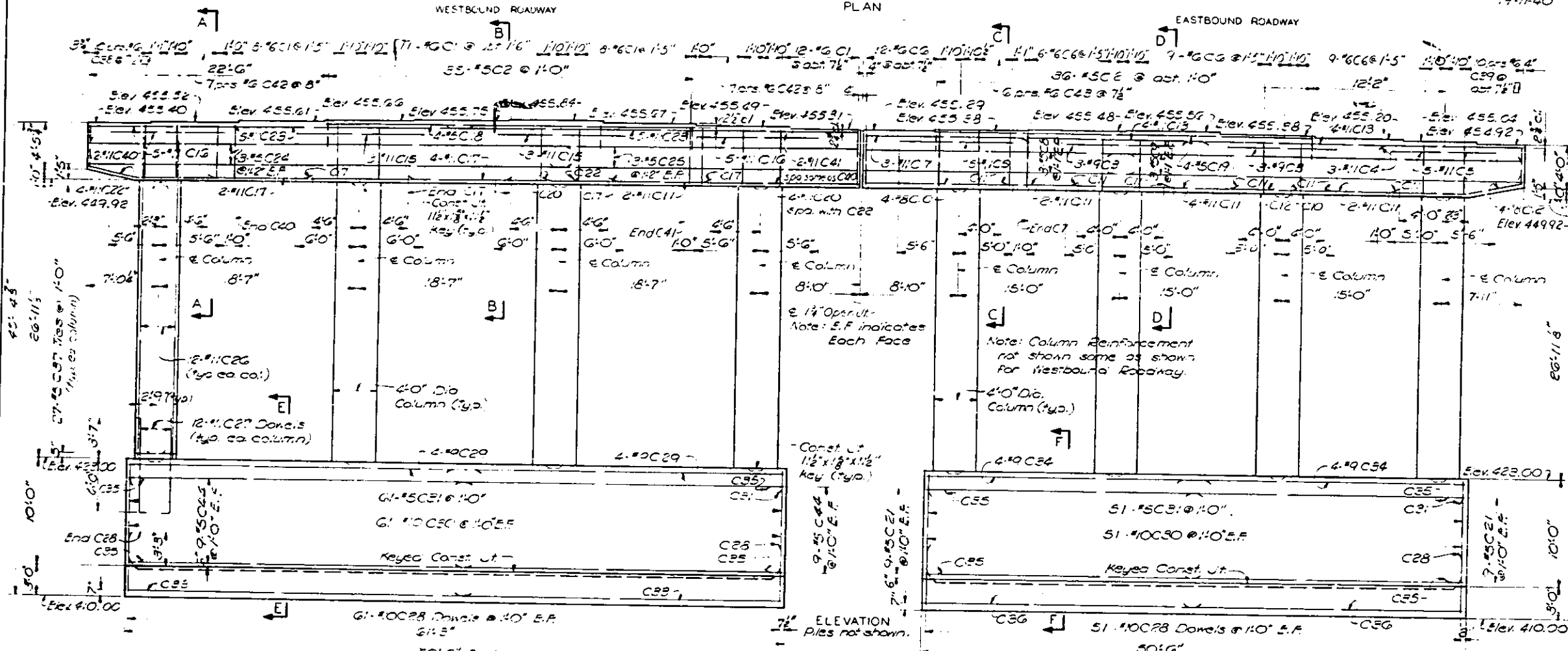
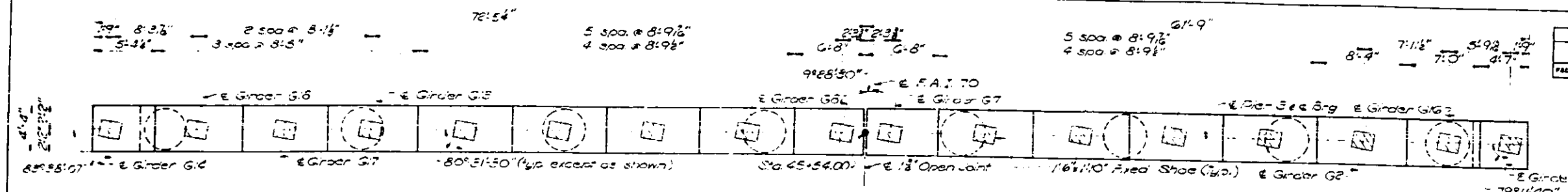
NOTES
 For pile details see sheet 10. B17
 Spacing of reinforcement in the pier cap shall be shifted where necessary to miss anchor bolts. For location of anchor bolts see sheet 4.

PIER 2

ILLINOIS APPROACH TO POPLAR S
 STATION - 44 + 73.50
 P.A.L. ROUTE - 70
 SECTION - 82-318
 ST. CLAIR COUNTY, ILLINOIS
 DRAWN BY: M. J. ...
 CHECKED BY: R. R. ...

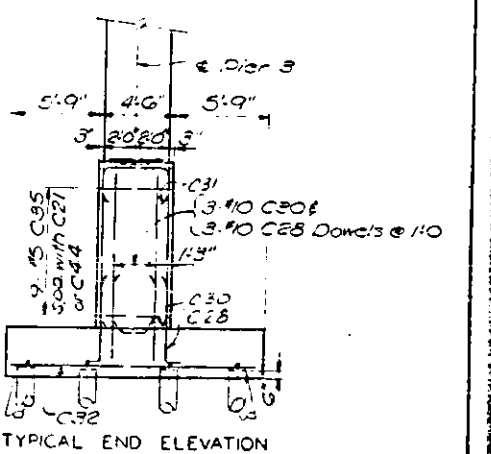
Do not scale this drawing. Follow dimensions.

PALM BEACH COUNTY	SECTION 82-3VB	COUNTY ST. CLAIR	TOTAL SHEETS 48	SHEET NO. 7
FED. ROAD DIST. NO. 7			ILLINOIS	FED. AID PROJ. NO.



SECTION E-E
Section E-E Same except as noted. Piles not shown.

F. Notes Spacing of piles is measured at bottom of footing. Batter outside piles 1 in 12 in direction shown.
Provide 50 Concrete Piles including one Test Pile for Westbound Roadway. Estimated length 40. (42 tons per pile capacity). Provide 44 Concrete Piles including one Test Pile for Eastbound Roadway. Estimated length 40. (44 tons per pile capacity).



NOTES
For Pile details see Sheet 10.
Spacing of reinforcement in pier cap shall be shifted where necessary to miss anchor bolts. For location of anchor bolts see Sheet 4.

PIER 3

ILLINOIS APPROACH TO POPLAR STREET:
STATION - 44+73.50
P.A.L. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE NONE

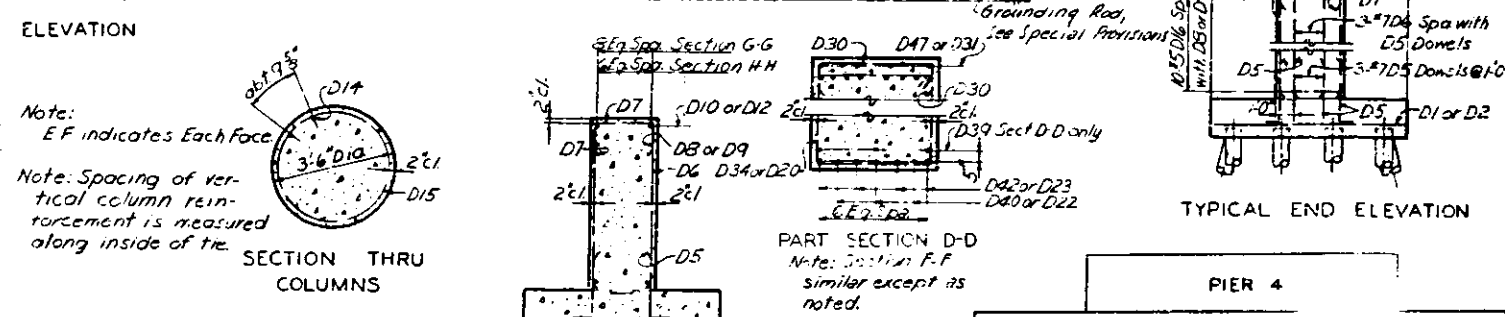
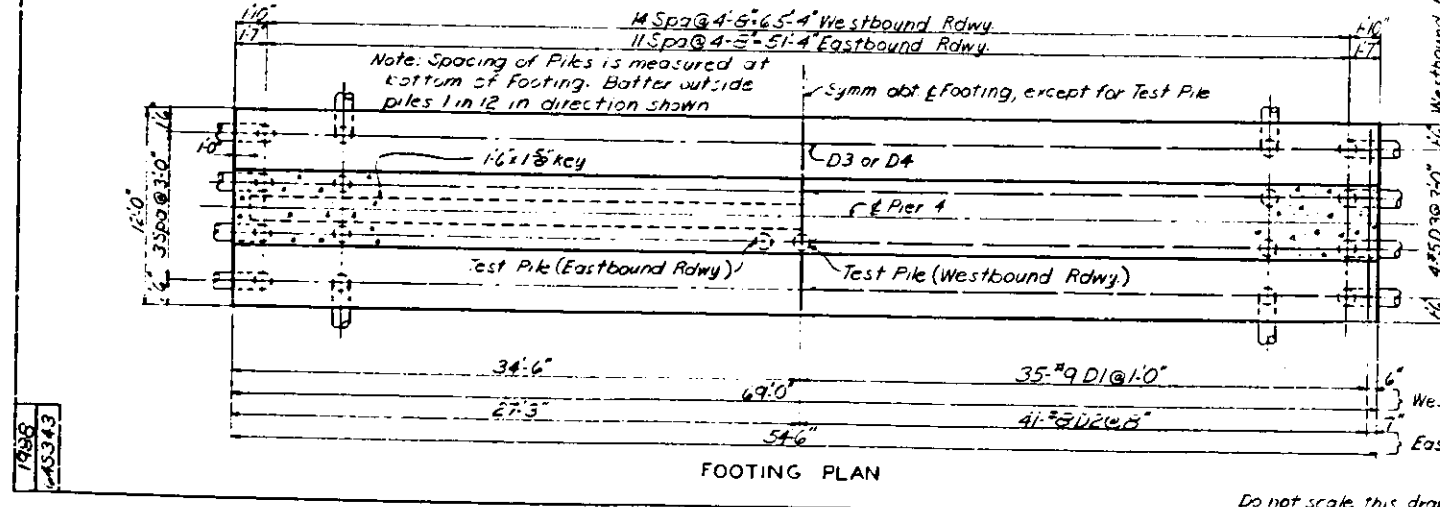
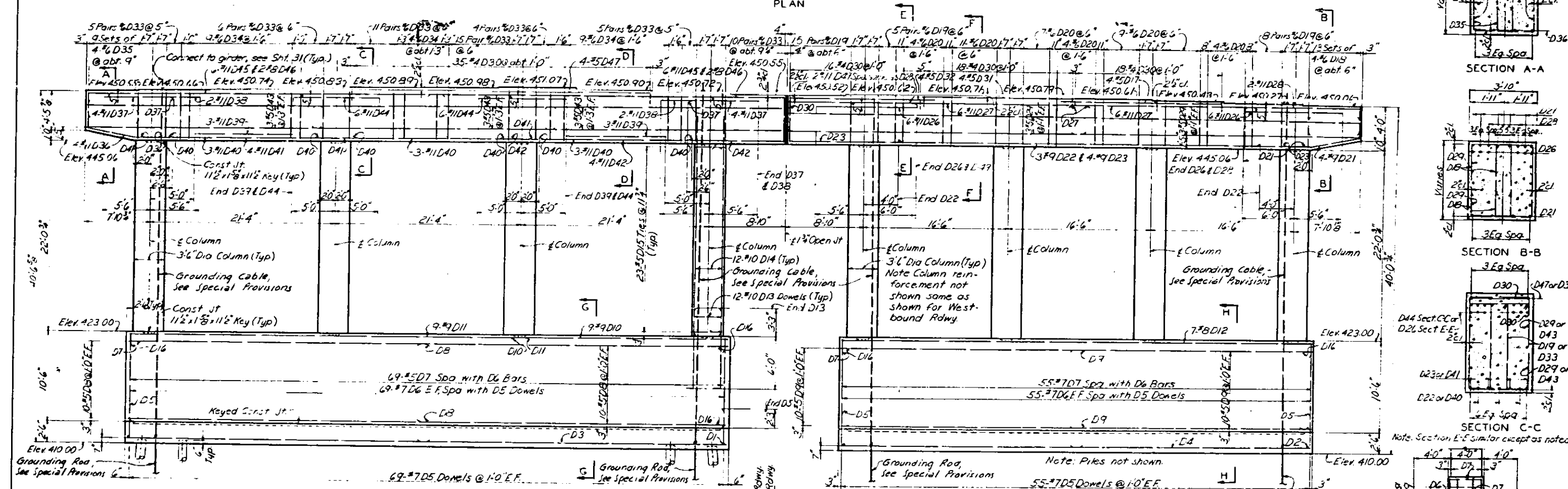
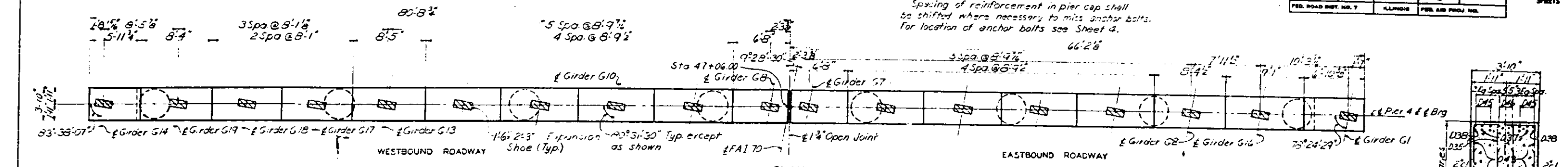
DRAWN: E.L. Barnes July 1964
CHECKED: R.H. Barnes Jr. July 1964

DESIGNED BY: PARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

TRANS
CAS 3328

Note: Do not scale this drawing. Follow dimensions.

NOTES
 For Pile details see Sheet 10.
 Spacing of reinforcement in pier cap shall be shifted where necessary to miss anchor bolts.
 For location of anchor bolts see Sheet 4.



60 Concrete Piles including one Test pile for Westbound Rdwy. Estimated Length 31'. SECTION G-G (38 tons per pile capacity).
 44 Concrete Piles including one Test pile for Eastbound Roadway. Estimated Length 32'. Piles not shown. (41 tons per pile capacity).

ILLINOIS APPROACH TO POPLA BRIDGE
 STATION - 44+73.50
 F.A.I. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

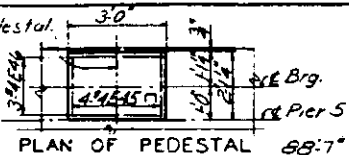
SCALE NONE

DRAWN: W. Maki, July, 1964
 CHECKED: R. Hammer, Jr., July, 1964

OVERSEER: J. MARCEL AND ASSOCIATES, INC.
 ENGINEERS AND ARCHITECTS
 ST. LOUIS, MO.

Do not scale this drawing. Follow dimensions

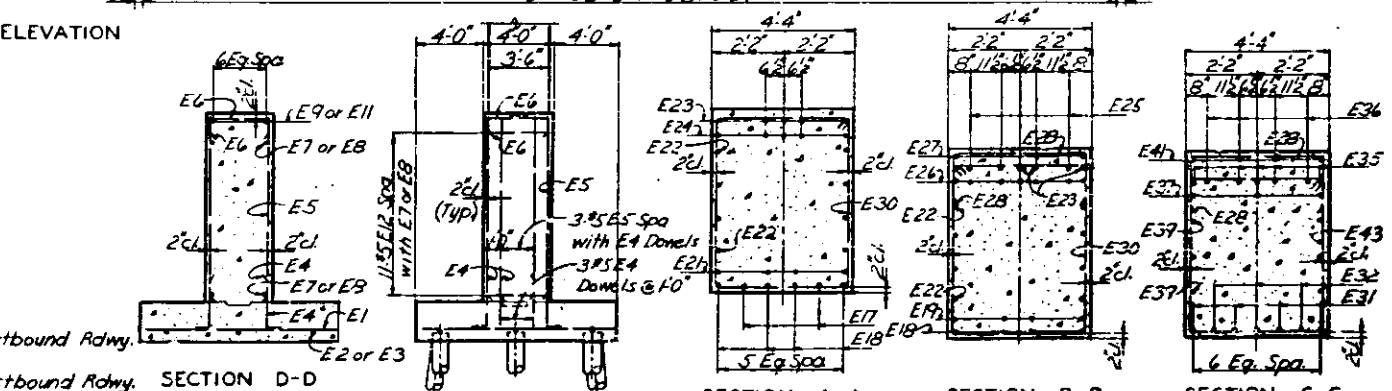
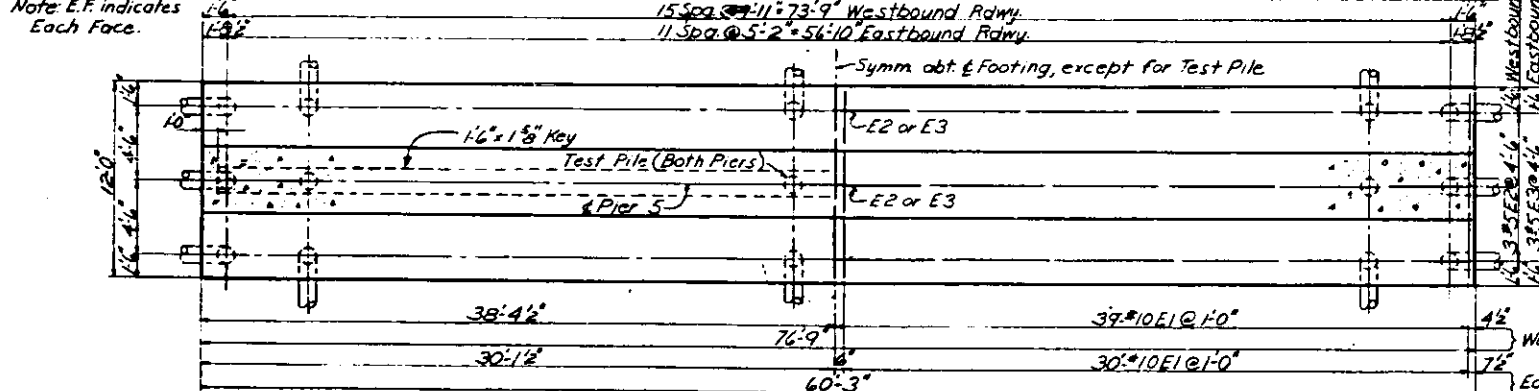
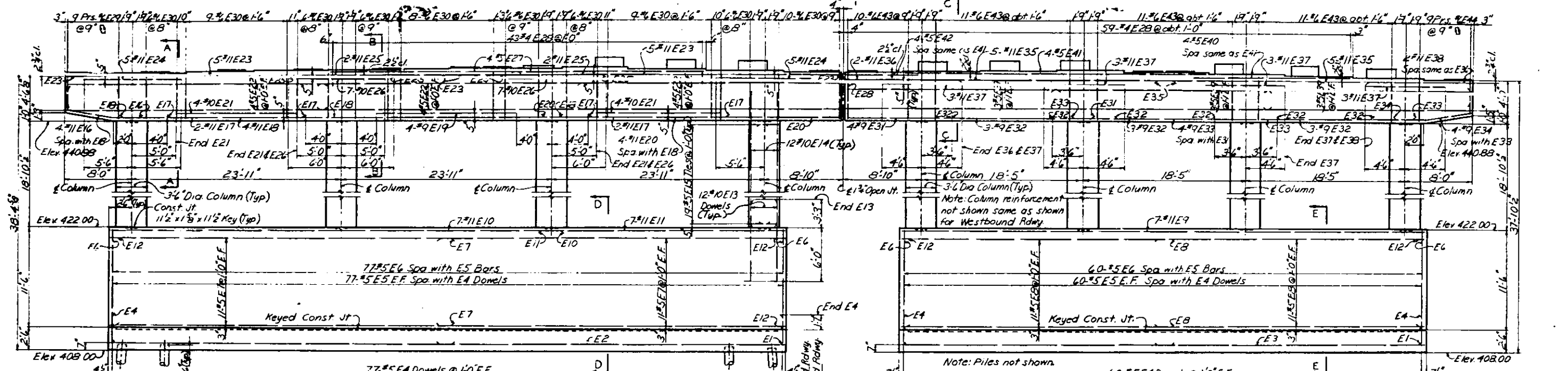
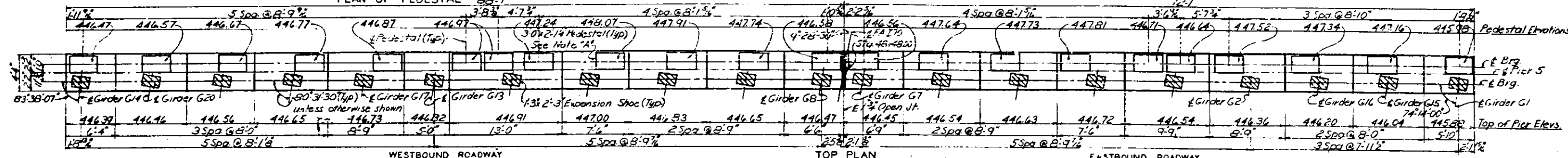
Pedestal Reinforcement Note: Pedestal Reinforcement shown on Plan of Pedestal shall be provided for pedestals 1'0" and over in height (9 pedestals require reinforcement)



Note "A": Pedestals are provided to receive Girder Shoes by others. The Contractor shall be responsible for the placement of the reinforcing steel in the pier cap and pedestals to clear anchor bolts.

PAGE NO.	SECTION	QUANTITY	TOTAL SHEETS	SHEET NO.
70	82-3VB	48	9	9

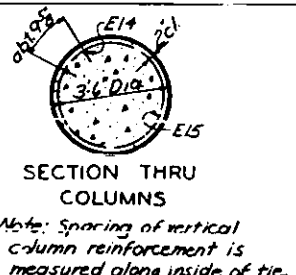
SHEET NO. 9
SHEETS



Pile Notes: Spacing of piles is measured along bottom of footing. Batter outside piles 1 in 12 in direction shown.

Westbound Rdwy: 46 Concrete piles required including one test pile. Estimated length = 40'. 34 tons per pile capacity.

Eastbound Rdwy: 36 Concrete piles required including one test pile. Estimated length = 42'. 44 tons per pile capacity.



NOTES

For pile details see Sheet 10.

Spacing of reinforcement in pier cap shall be shifted where necessary to miss anchor bolts.

For location of anchor bolts see Sheet 4.

ILLINOIS APPROACH TO POPULAR

STATION - 44+73.80

F.A.L. ROUTE - 70

SECTION - 82-3VB

ST. CLAIR COUNTY, ILLINOIS

DATE: 11/1/64

DESIGNED BY: B. HAMMER

Do not scale this drawing. Follow dimensions.

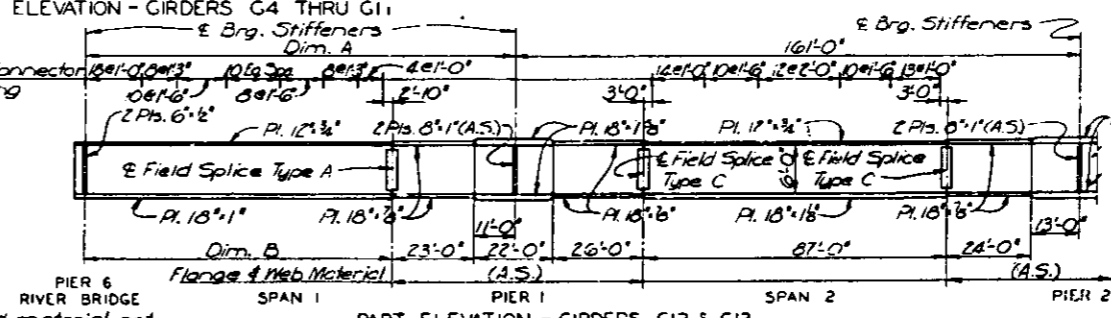
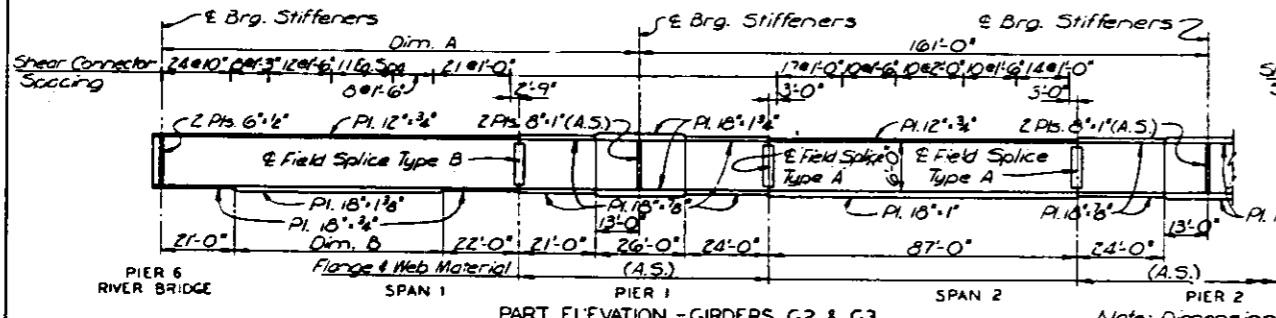
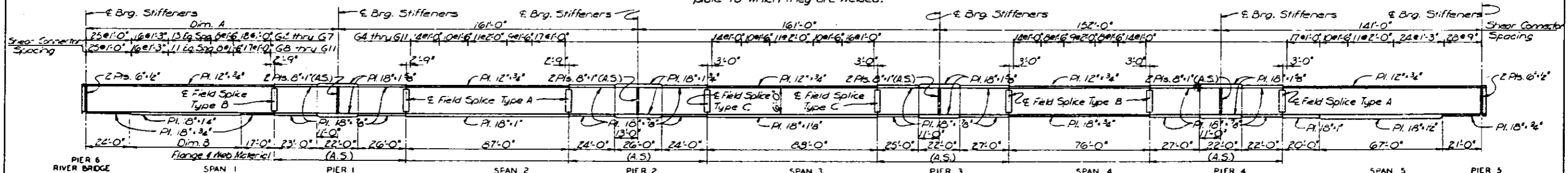
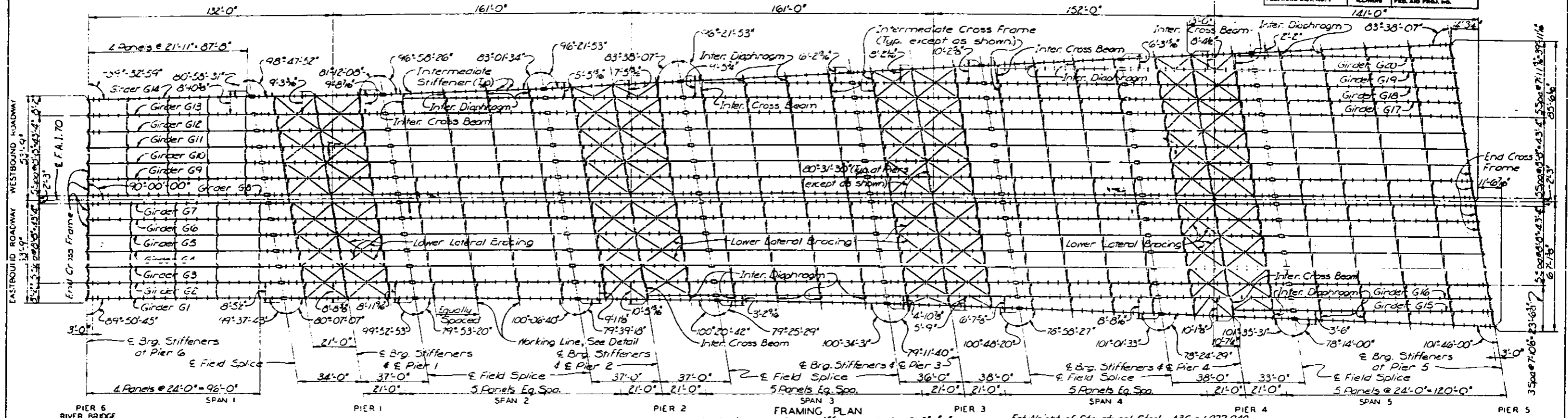
Note: Space intermediate stiffeners for Girders G3 thru G5 same as G2 and for Girders G10 thru G12 same as G13 except as shown.

Note: All intermediate stiffeners shall be placed normal to girder web except Girders G1 and G4 at Intermediate Cross Frames, Diaphragms and Cross Beams. (See Detail.)

& Overhead Sign Structure (for details of overhead sign structure support see Sheet 14.)

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
82-3VB	ST. CLAIR	48	11

SHEET NO. SHEETS

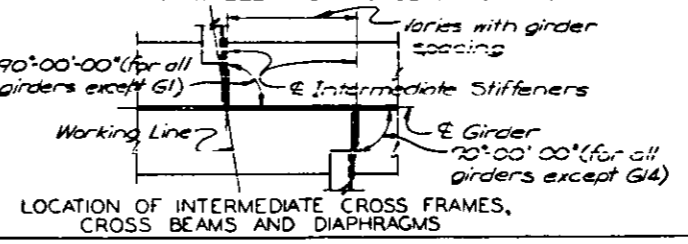


NOTES

All web plates are 7/16". Longitudinal dimensions are measured horizontally along the centerline of girders. Field splice flange plates and intermediate stiffeners are not shown in Girder Elevations. Work this sheet with Sheets 12, 13 and 14. Flange and Splice Plates shall be Universal Mill Plates except as provided in the Special Provisions.

Dim.	GIRDER											
	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13
A	139'-7 1/2"	138'-1 1/4"	136'-0 3/4"	133'-3 1/2"	133'-9 1/8"	132'-4 1/2"	131'-7 1/2"	130'-2 1/4"	128'-8 1/4"	127'-3 1/2"	125'-10 1/8"	124'-4 1/8"
B	62'-7 1/2"	61'-1 1/4"	61'-0 3/4"	60'-3 1/2"	58'-9 1/8"	57'-4 1/2"	56'-7 1/2"	55'-2 1/4"	53'-8 1/4"	52'-3 1/2"	49'-10 1/8"	49'-4 1/8"

Note: Do not scale this drawing. Follow dimensions.



FRAMING PLAN AND GIRDER ELEVATIONS

ILLINOIS APPROACH TO POPLAR CREEK BRIDGE

STATION - 44+73.50
F.A.I. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE: NONE

DRAWN: G.J. Doe, June 1964
CHECKED: D.E. Dromo, July 1964

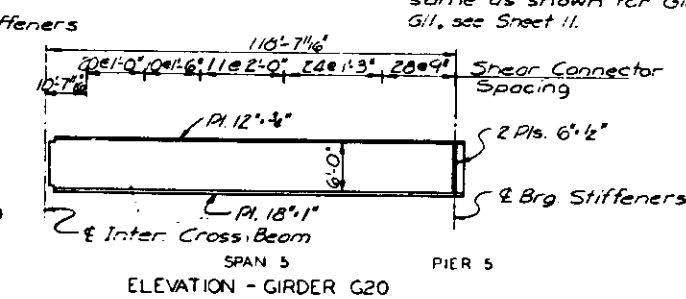
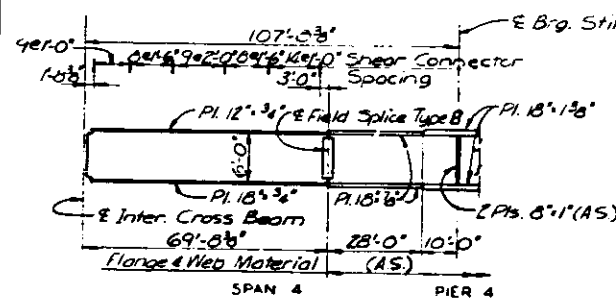
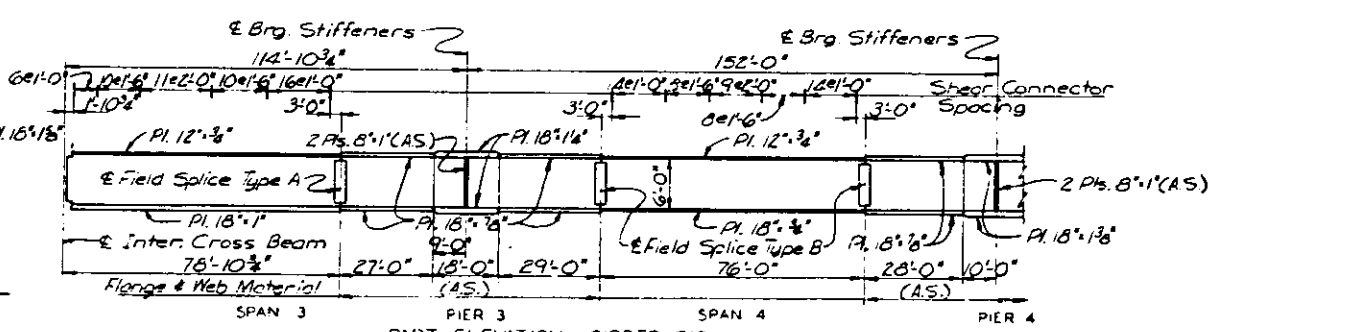
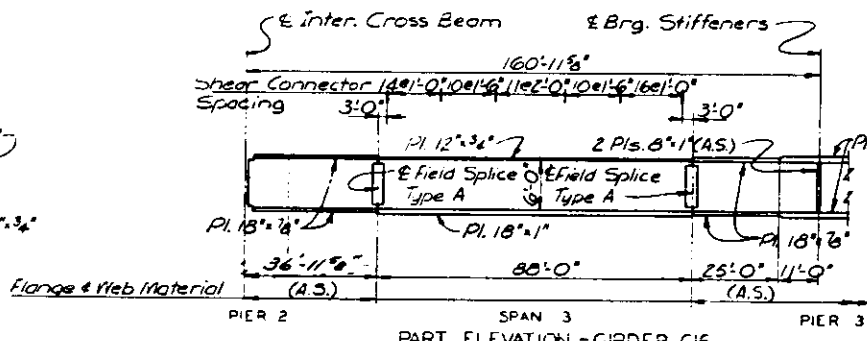
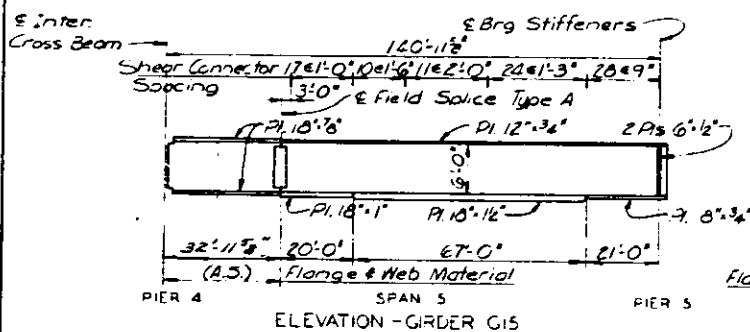
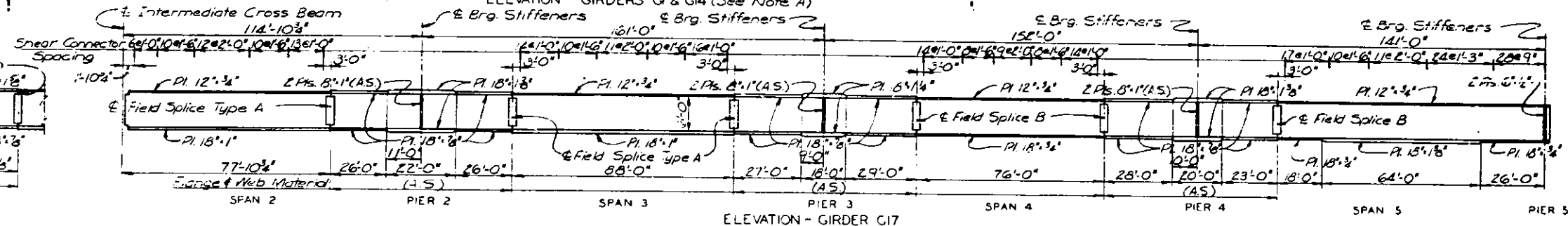
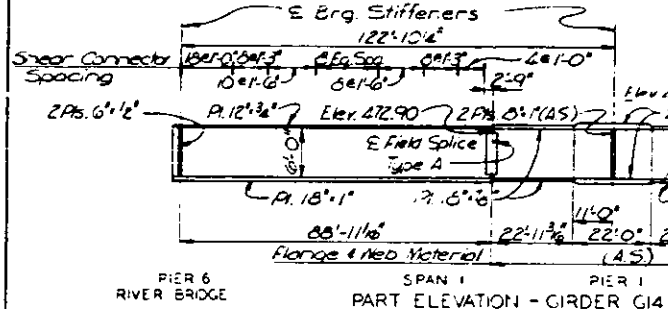
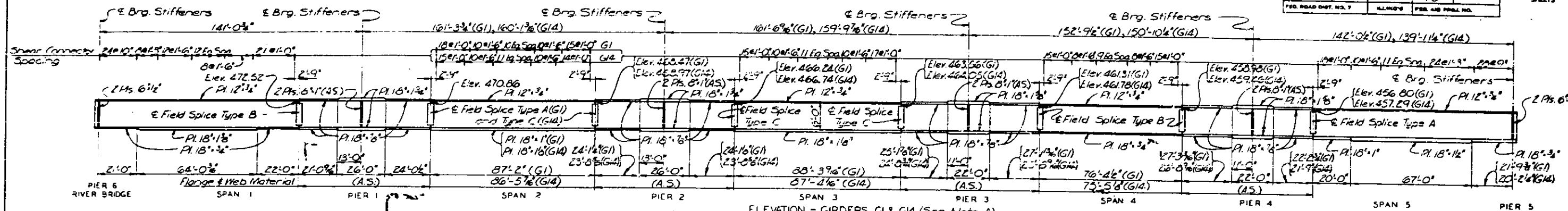
OVERSEER & PARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Note A: Girder G1 shown; dimensions and details for G14 same except as otherwise noted and as shown in Part Elevation, Girder G14.

Note: All elevations shown are Top of Web Elevations.

F.A.I. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
73	82-3VB	ST. CLAIR	48	12
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO.		

SHEET NO.
SHEETS



Note: Dimensions and material not shown, same as shown for Girders G4 thru G11, see Sheet 11.

Note: Dimensions and material not shown, same as shown for Girder G17.

NOTES
See Notes Sheet 11.

Note: Dimensions and material not shown, same as shown for Girder G17.

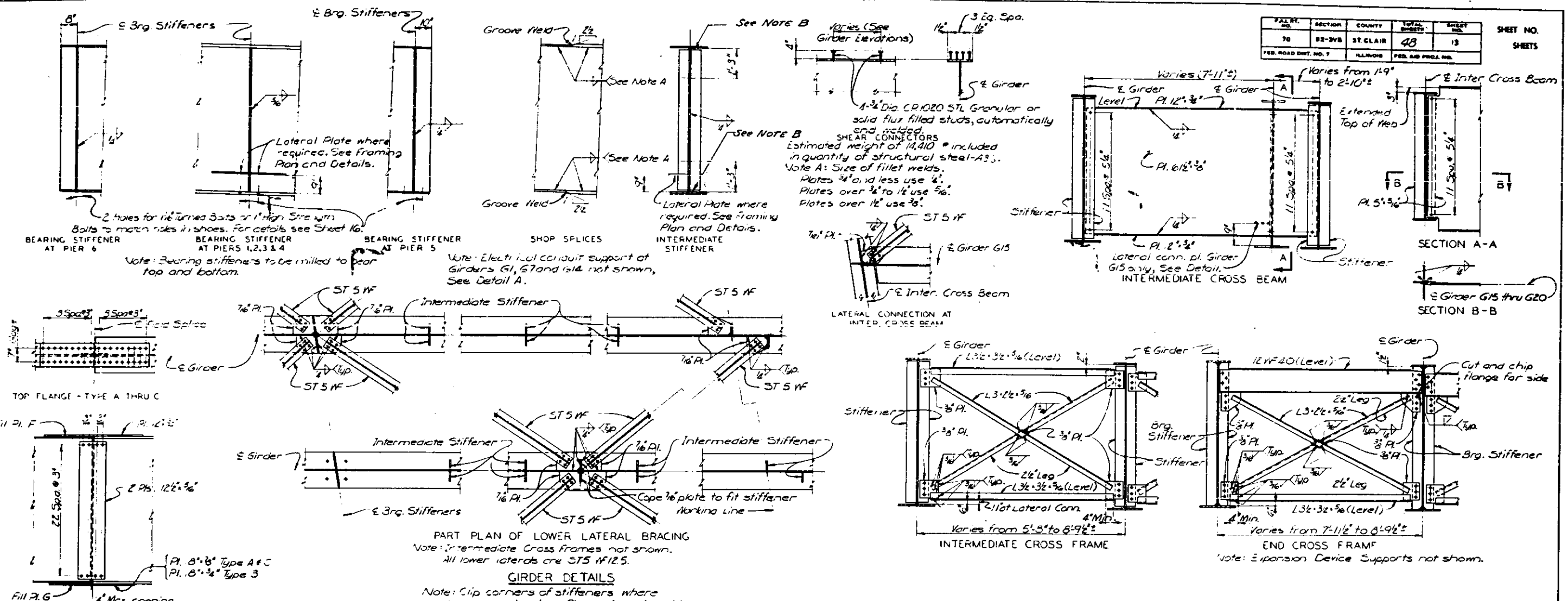
Note: Do not scale this drawing. Follow dimensions.

GIRDER ELEVATION

ILLINOIS APPROACH TO POPLAR BRIDGE
STATION - 44 + 73.50
F.A.I. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE: NONE
DRAWN: G.J. Dee, July 1964
CHECKED: J.E.D'Eranno, July 1964
OVERSEER & PARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

F.A.L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEETS
70	82-3VB	ST. CLAIR	48	13	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.		



SPLICE	PLATE F	PLATE G
Type A	P. 12" x 6"	P. 16" x 6"
Type B	P. 2" x 6"	P. 18" x 6"
Type C	P. 12" x 6"	P. 18" x 6"

FIELD SPLICES

GIRDER DETAILS

ILLINOIS APPROACH TO POPP... BRIDGE

STATION - 44 + 73.50
F.A.L. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

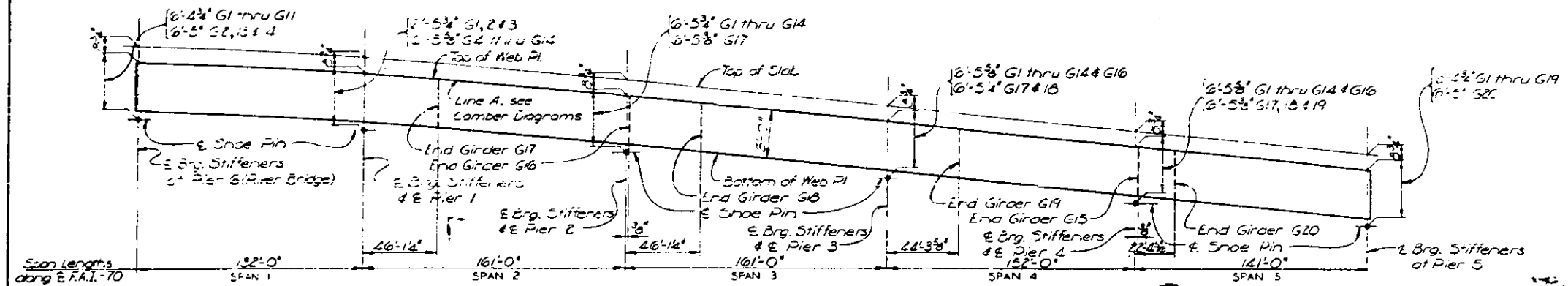
SCALE - NONE

DRAWN: G.V. De... June 1964
TRACED: J.E. De... July 1964
CHECKED: J.E. De... July 1964

OVERDRUP & UNICEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Revision 1-22-65, Added Note B, F.H.J.

Note: Do not scale this drawing. Follow dimensions.

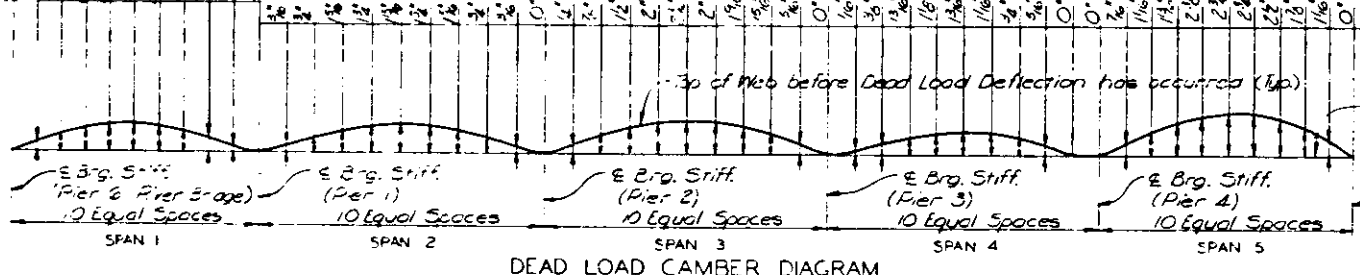


PIER	TOP OF WEB ELEVATIONS																			
	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12	G13	G14	G15	G16	G17	G18	G19	G20
0	474.58	474.66	474.72	474.76	474.83	474.84	474.86	474.89	474.93	474.94	474.97	474.98	474.98	474.98	474.98	474.98	474.98	474.98	474.98	474.98
1	471.76	471.92	472.34	472.28	472.17	472.07	471.96	471.85	471.73	471.62	471.51	471.40	471.29	471.18	471.07	470.96	470.85	470.74	470.63	470.52
2	467.36	467.57	467.75	467.73	467.55	467.76	467.68	467.56	467.52	467.44	467.32	467.20	467.08	466.96	466.84	466.72	466.60	466.48	466.36	466.24
3	462.46	462.74	462.92	463.10	463.22	462.93	462.83	462.60	462.53	462.21	462.35	462.29	462.23	462.14	462.02	461.90	461.78	461.66	461.54	461.42
4	457.61	458.18	458.36	458.54	458.72	458.37	458.27	458.30	458.47	458.43	458.32	458.20	458.08	457.96	457.84	457.72	457.60	457.48	457.36	457.24
5	453.27	453.95	454.23	454.43	454.53	454.14	454.04	454.02	454.32	454.29	454.19	454.08	453.97	453.86	453.74	453.63	453.51	453.40	453.28	453.16

Girders G3414

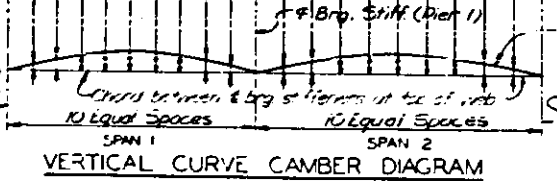
G12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G6 thru G9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: * Indicates Treatment of Top of Web Elevation of Girder & extended at Pier.

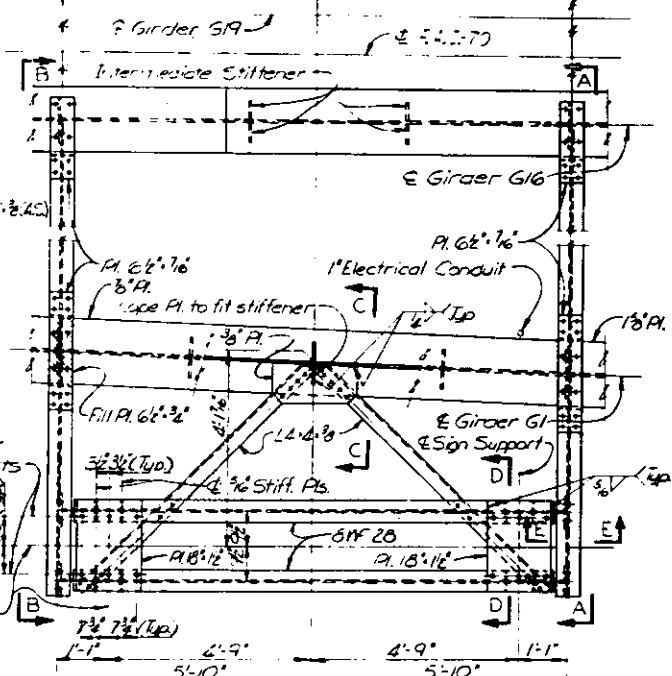
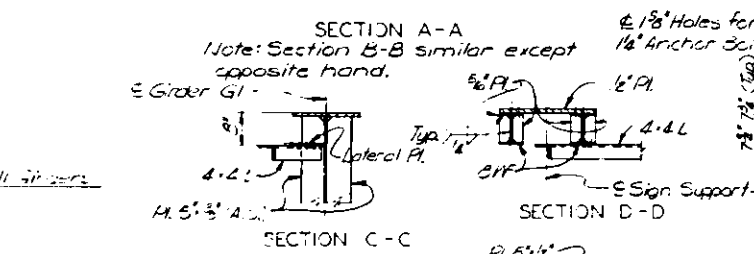
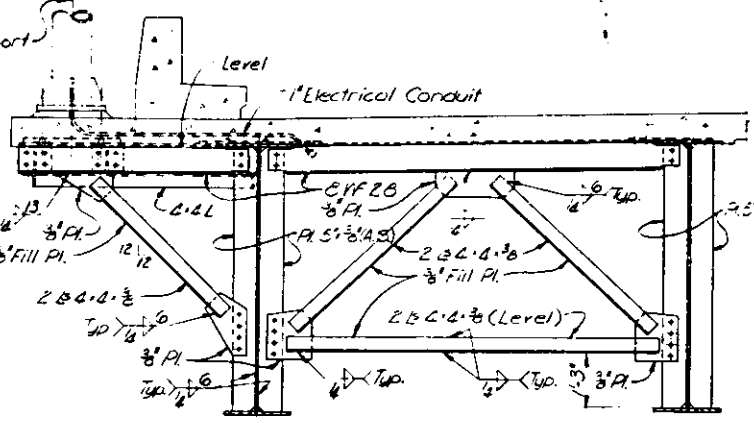


G17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G10112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G10119	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G546	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G344	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G182	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note: Girders in Spans 1 and 2 to be cambered for Vertical Curve and Dead Load Deflections. Girders in Span 3, 4 and 5 to be cambered for Dead Load Deflections.



Note: Do not scale this drawing. Follow dimensions.



NOTES

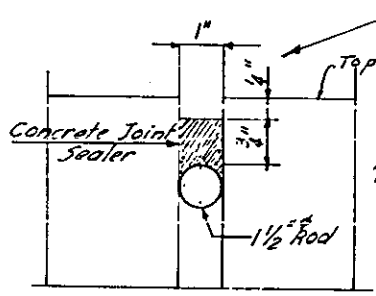
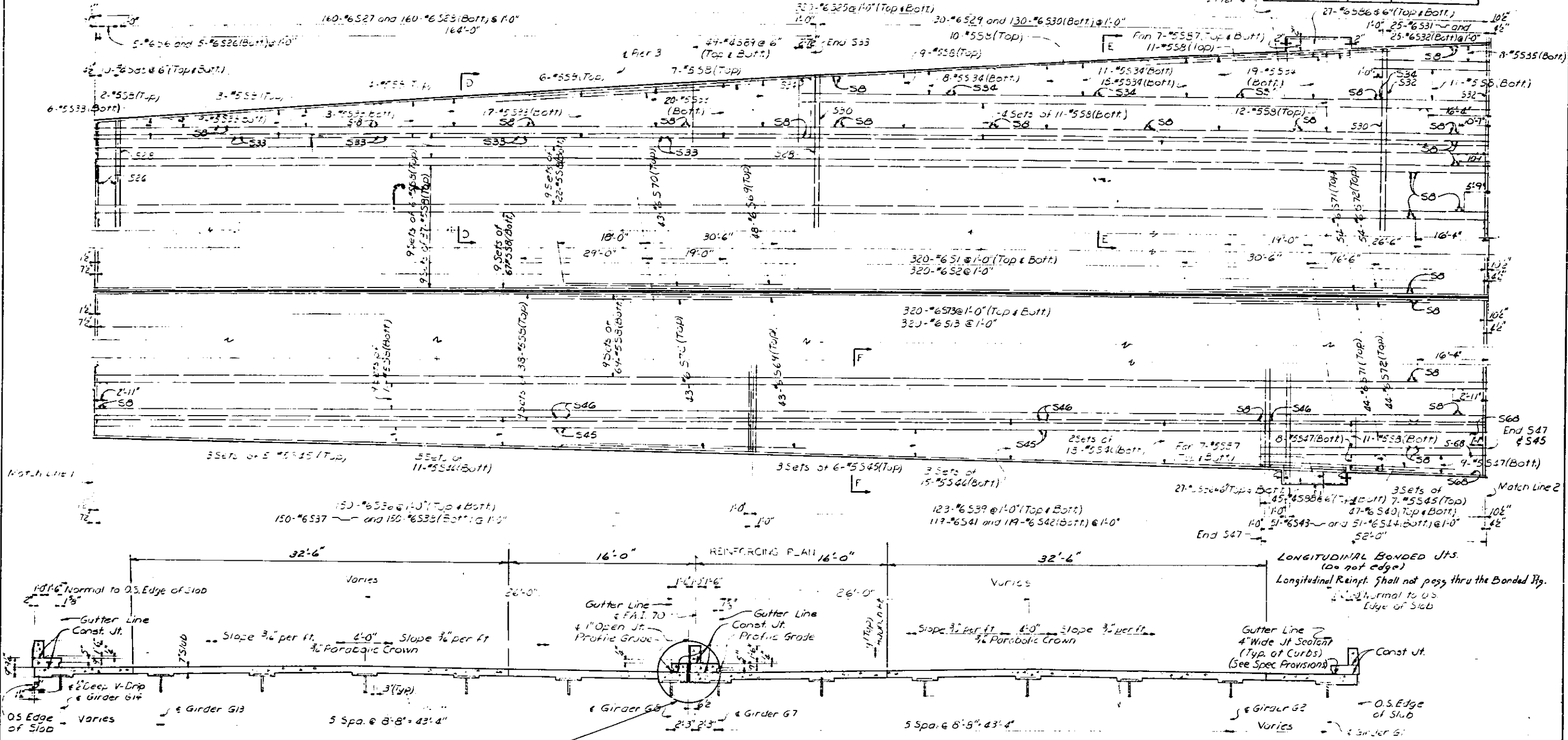
For location of Overhead Sign Structure, see Sheet 11.
 For Details of Sign Truss, see Sheets 34 thru 42.
 Work this Sheet with Sheets 11 thru 13.
 Cost of furnishing and placing conduit to be incidental to the Cost of Class "X" Concrete for Superstructure.

GIRDER DETAILS AND OVERHEAD SIGN STRUCTURE SUPPORT

ILLINOIS APPROACH TO POPLAR STR. SE
 STATION - 44+73.50
 F.A.L. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS
 SCALE: NONE

DRAWN: G.J. Dee, July 1964
 TRACED: G.L.D. Erma, July 1964
 CHECKED: G.L.D. Erma, July 1964
 OVERSHP & PARCEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

F.A.L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEETS
70	82-3VB	ST. CLAIR	48	18	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.		



NOTES

Work this sheet with sheets 17 and 19.

SLAB DETAILS

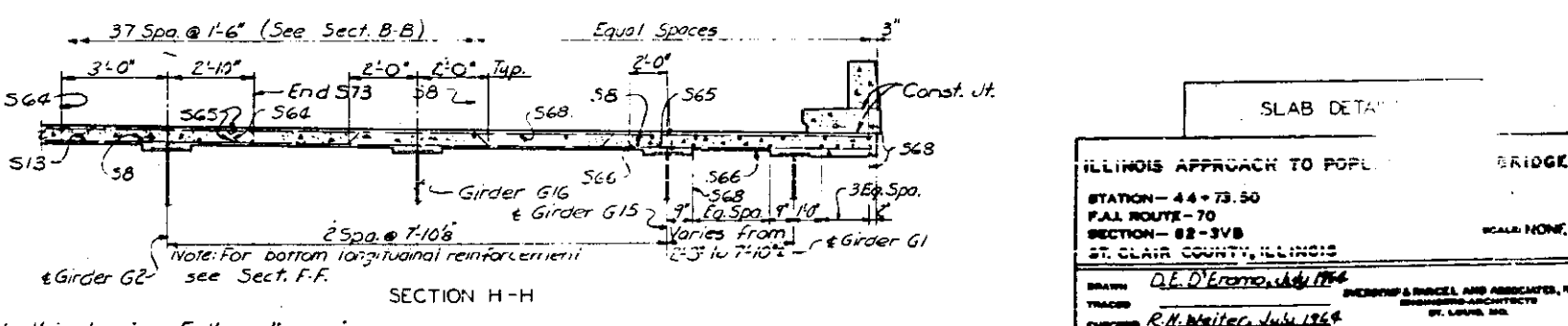
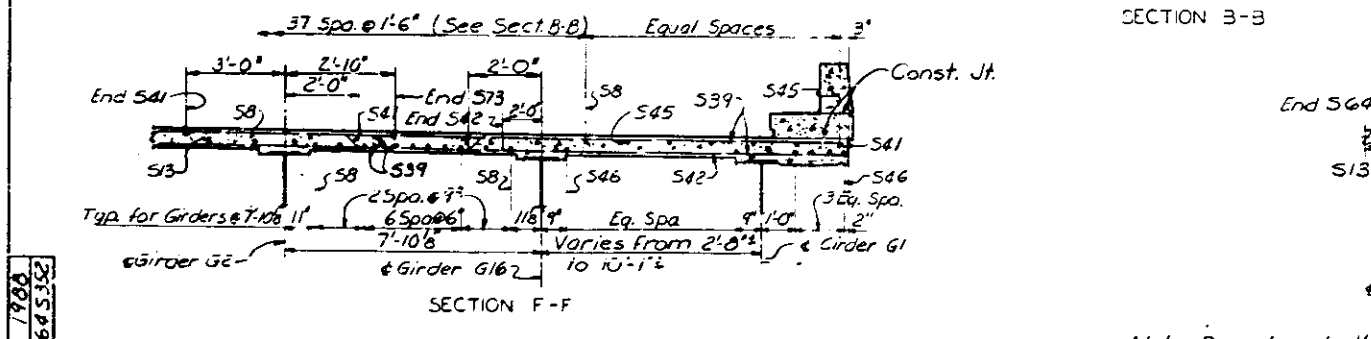
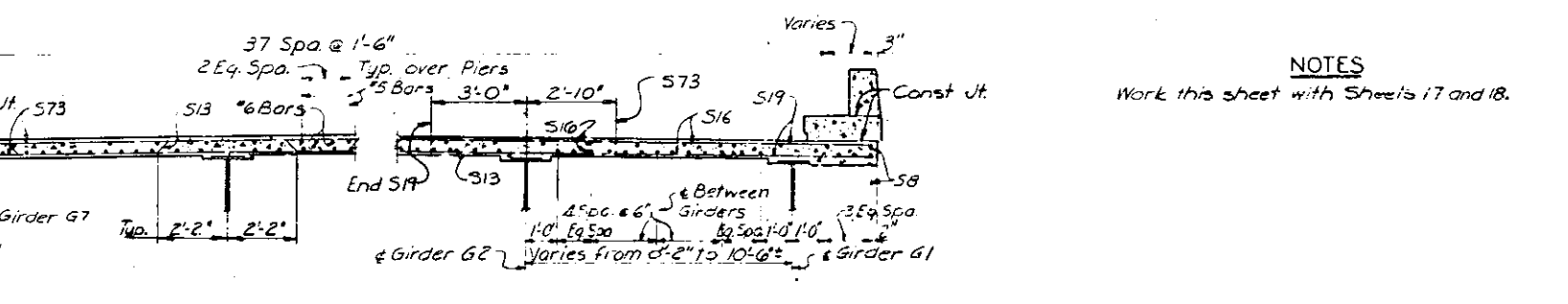
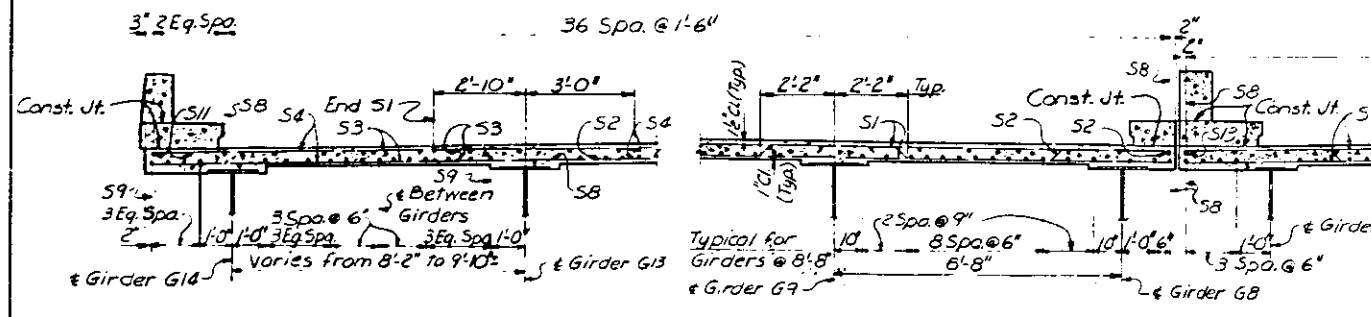
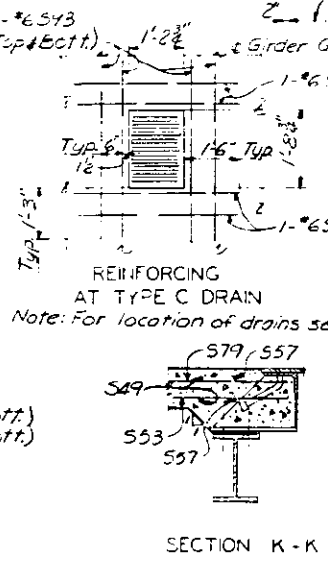
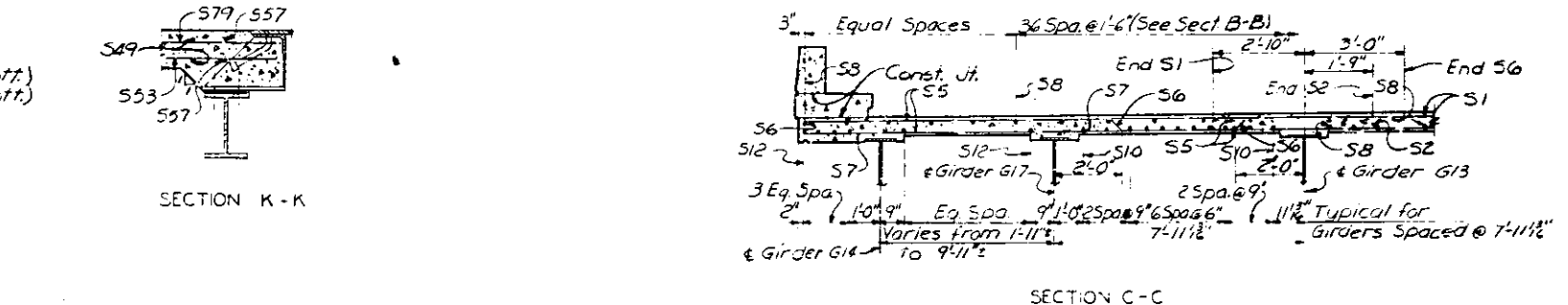
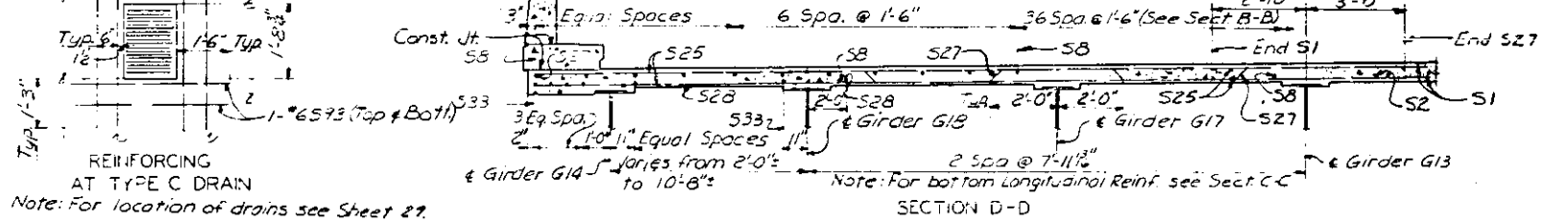
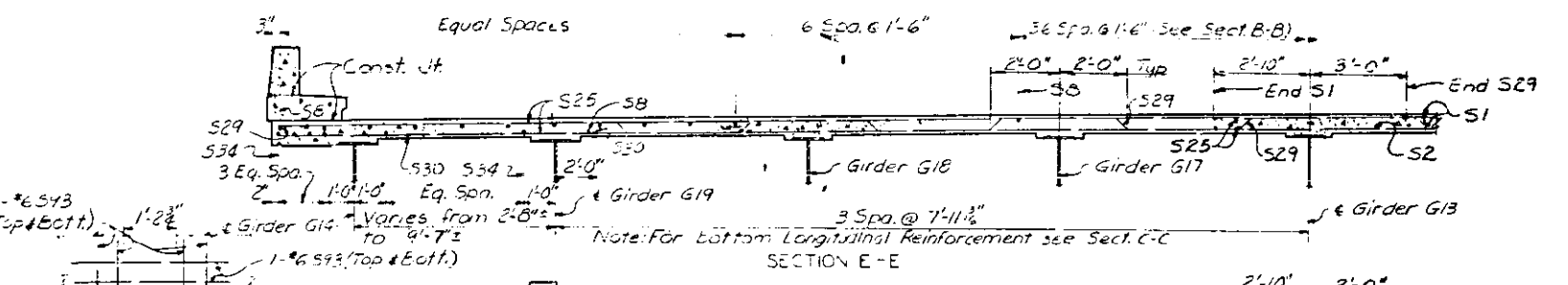
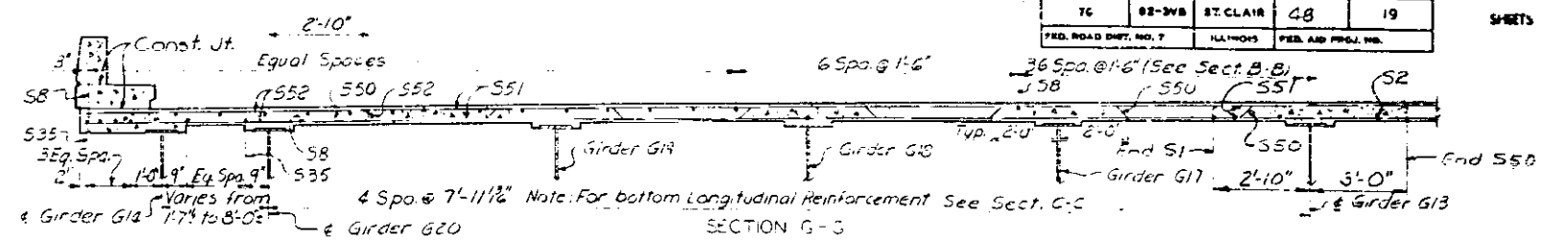
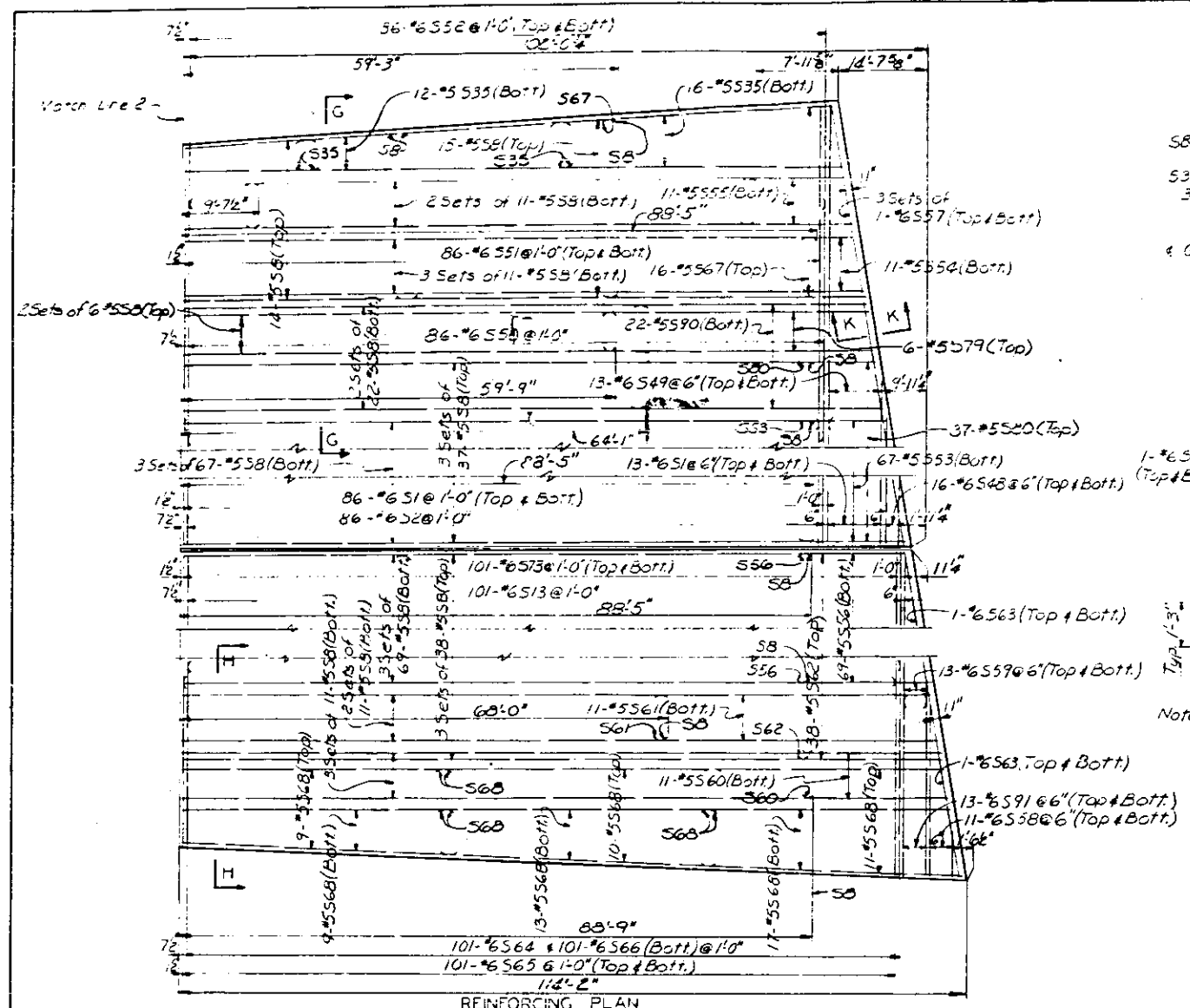
ILLINOIS APPROACH TO POPLAR STREET
 STATION - 44 + 73.50
 F.A.L. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS
 SCALE - NONE
 DRAWN - D.E. D'Eranno, July 1964
 TRACED -
 CHECKED - R.H. Weiler, July 1964
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

1968
645357

Revising 1-22-65 Added Longitudinal Jts. E.K.J.

Note: Do not scale this drawing. Follow dimensions.

PAL. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEETS
76	82-3VB	ST. CLAIR	48	19	
FED. ROAD DIST. NO. 7			ILLINOIS	FED. AID PROJ. NO.	

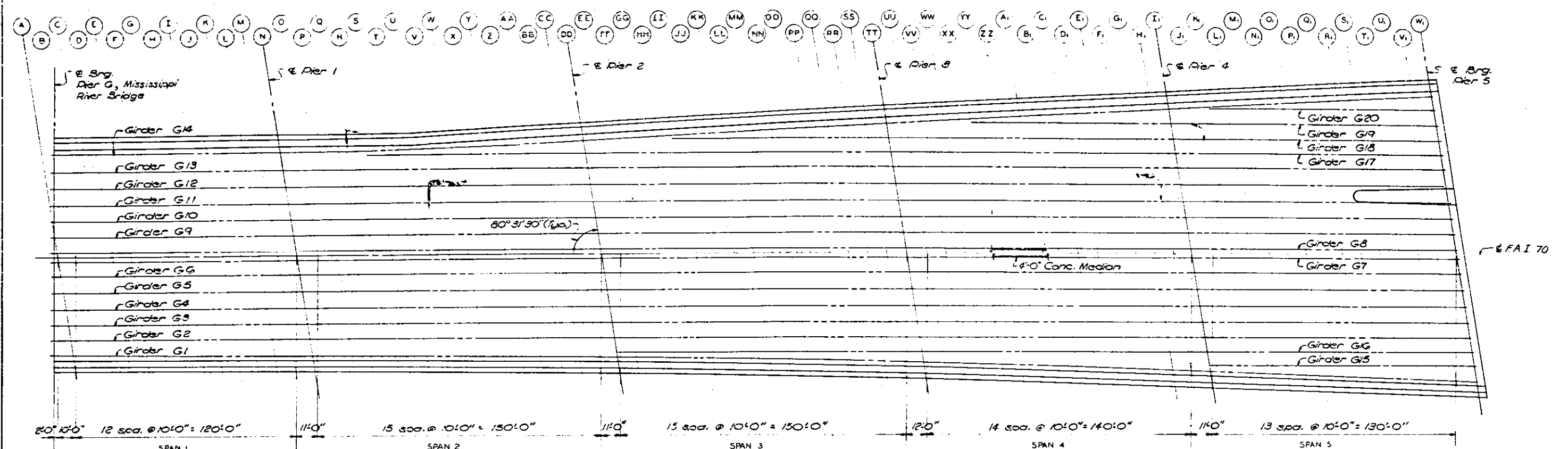


NOTES
Work this sheet with Sheets 17 and 18.

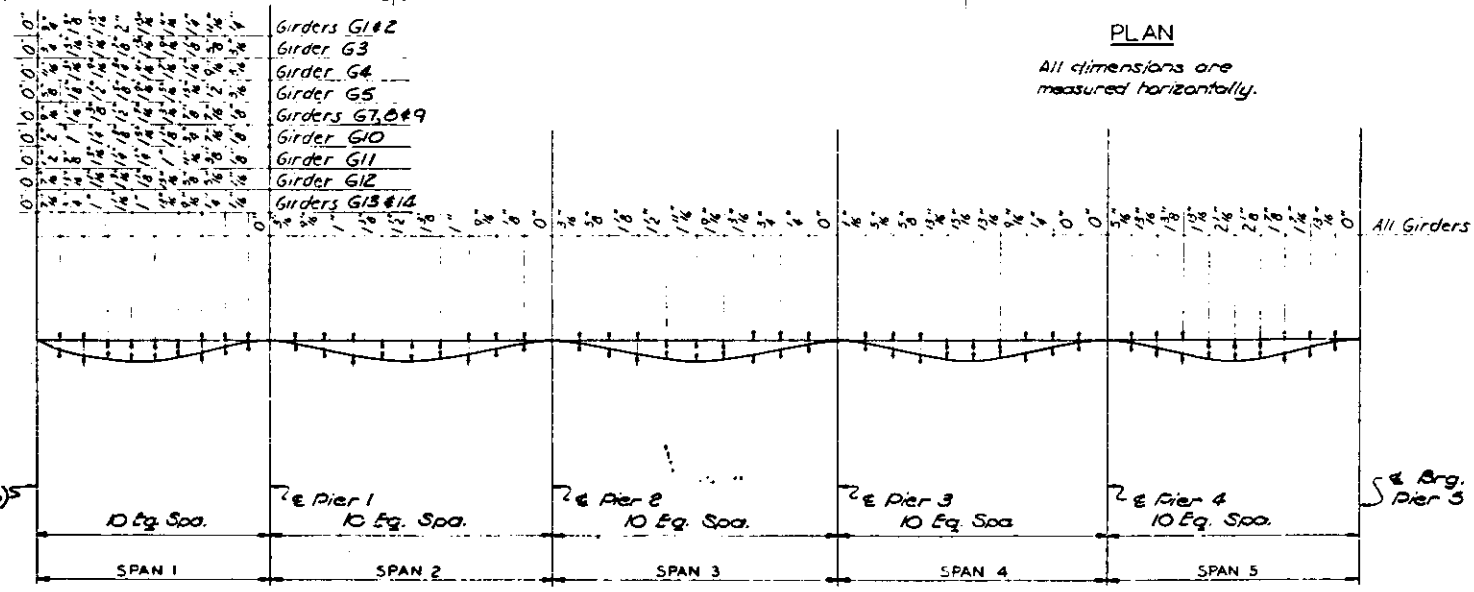
ILLINOIS APPROACH TO POPULAR BRIDGE
STATION - 44+73.50
PAL. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS
SCALE: NONE
DRAWN: D.E. D'Ercole, July 1964
CHECKED: R.M. Walter, July 1964
ENGINEERS & ARCHITECTS, INC.
ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

1760
645352



PLAN
All dimensions are measured horizontally.



DEAD LOAD DEFLECTION DIAGRAM
(Deflections shown are due to weight of concrete only)
Note: The above deflections are not for use in the field if the Engineer is working from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections."

METHOD OF DETERMINING HAUNCH HEIGHT 'Y'

After all structural steel has been erected elevations of the top flanges of the girders shall be taken at the stations shown on sheets 21, 22 & 23. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" minus slab thickness, equals the haunch height above top of girders.

NOTES
Elevations tabulated on Sheets 21, 22 & 23 are for top of Slab only.

SLAB LAYOUT

ILLINOIS APPROACH TO POPLAR RIDGE
STATION - 44+73.50
FAL ROUTE - 70
SECTION - 02-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE NONE

DRAWN: E.L. Barnes - June 1964
CHECKED: R.E. Heil - July 1964

DESIGNED BY: R.E. HEIL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

700
65870

* Theoretical Grade Elevations are adjusted for deflections due to wt of concrete only.

Col. 1	Col. 2	Col. 3	Col. 4
Grade Station	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection *	
1	41+00.00	475.29	475.29
2	41+00.00	475.41	475.41
3	41+00.00	475.55	475.55
4	41+00.00	475.67	475.67
5	41+00.00	475.56	475.56
6	41+00.00	475.42	475.42
7	41+00.00	475.29	475.29
8	41+00.00	475.29	475.29
9	41+00.00	475.42	475.42
10	41+00.00	475.56	475.56
11	41+00.00	475.67	475.67
12	41+00.00	475.55	475.55
13	41+00.00	475.41	475.41
14	41+03.00	475.29	475.29
15	41+10.98	475.10	475.10
16	41+09.61	475.25	475.25
17	41+08.16	475.41	475.41
18	41+06.71	475.57	475.57
19	41+05.27	475.47	475.47
20	41+03.82	475.36	475.36
21	41+02.38	475.25	475.25
22	41+20.98	474.93	474.93
23	41+19.61	475.08	475.08
24	41+18.16	475.24	475.24
25	41+16.71	475.40	475.40
26	41+15.27	475.30	475.30
27	41+13.82	475.19	475.19
28	41+12.38	475.08	475.08
29	41+11.62	475.09	475.09
30	41+10.18	475.25	475.25
31	41+08.73	475.41	475.41
32	41+07.29	475.56	475.56
33	41+05.84	475.45	475.45
34	41+04.39	475.34	475.34
35	41+03.03	475.24	475.24
36	41+30.99	474.75	474.75
37	41+29.61	474.91	474.91
38	41+28.16	475.07	475.07
39	41+26.71	475.23	475.23
40	41+25.27	475.13	475.13
41	41+23.82	475.02	475.02
42	41+22.38	474.91	474.91
43	41+21.62	474.92	474.92
44	41+20.18	475.08	475.08
45	41+18.73	475.24	475.24
46	41+17.29	475.39	475.39
47	41+15.84	475.28	475.28
48	41+14.39	475.17	475.17
49	41+13.01	475.07	475.07
50	41+11.61	474.57	474.57
51	41+39.61	474.73	474.73
52	41+38.16	474.89	474.89
53	41+36.71	475.05	475.05
54	41+35.27	474.95	474.95
55	41+33.82	474.84	474.84
56	41+32.38	474.73	474.83
57	41+31.62	474.74	474.84
58	41+30.18	474.90	475.00
59	41+28.73	475.07	475.16
60	41+27.29	475.22	475.30
61	41+25.84	475.11	475.18
62	41+24.39	475.00	475.06
63	41+23.00	474.89	474.95
64	41+51.00	474.39	474.56
65	41+49.61	474.54	474.71
66	41+48.16	474.70	474.85
67	41+46.71	474.87	475.01
68	41+45.27	474.77	474.90
69	41+43.82	474.66	474.78
70	41+42.38	474.55	474.67
71	41+41.62	474.56	474.68
72	41+40.18	474.72	474.84
73	41+38.73	474.89	475.00

Col. 1	Col. 2	Col. 3	Col. 4
G11	41+37.29	475.04	475.14
G12	41+35.84	474.93	475.02
G13	41+34.39	474.82	474.92
G14	41+32.98	474.71	474.79
G1	41+61.01	474.19	474.36
G2	41+59.61	474.35	474.52
G3	41+58.16	474.51	474.67
G4	41+56.71	474.68	474.83
G5	41+55.27	474.84	474.97
G6	41+53.82	474.47	474.59
G7	41+52.38	474.36	474.45
G8	41+51.62	474.58	474.70
G9	41+50.18	474.54	474.66
G10	41+49.73	474.70	474.81
G11	41+47.29	474.66	474.97
G12	41+45.84	474.75	474.85
G13	41+44.39	474.64	474.73
G14	41+42.97	474.53	474.62
G1	41+70.01	474.00	474.16
G2	41+69.61	474.16	474.32
G3	41+68.16	474.32	474.47
G4	41+66.71	474.48	474.62
G5	41+65.27	474.38	474.51
G6	41+63.82	474.28	474.40
G7	41+62.38	474.17	474.29
G8	41+61.62	474.18	474.30
G9	41+60.18	474.35	474.47
G10	41+58.73	474.51	474.62
G11	41+57.29	474.67	474.78
G12	41+55.84	474.56	474.66
G13	41+54.39	474.45	474.54
G14	41+52.95	474.34	474.43
G1	41+81.02	473.80	473.95
G2	41+79.61	473.96	474.11
G3	41+78.16	474.12	474.26
G4	41+76.71	474.28	474.41
G5	41+75.27	474.19	474.31
G6	41+73.82	474.08	474.19
G7	41+72.38	473.97	474.08
G8	41+71.62	473.99	474.10
G9	41+70.18	474.15	474.26
G10	41+68.73	474.32	474.42
G11	41+67.29	474.47	474.57
G12	41+65.84	474.37	474.46
G13	41+64.39	474.26	474.34
G14	41+62.94	474.15	474.23
G1	41+91.03	473.59	473.71
G2	41+89.61	473.75	473.87
G3	41+88.16	473.92	474.04
G4	41+86.71	474.08	474.19
G5	41+85.27	473.98	474.08
G6	41+83.82	473.88	473.97
G7	41+82.38	473.77	473.86
G8	41+81.62	473.79	473.88
G9	41+80.18	473.95	474.04
G10	41+78.73	474.12	474.21
G11	41+77.29	474.27	474.35
G12	41+75.84	474.17	474.25
G13	41+74.39	474.06	474.13
G14	41+72.92	473.95	474.02
G1	42+01.03	473.38	473.48
G2	41+99.61	473.54	473.64
G3	41+98.16	473.71	473.80
G4	41+96.71	473.87	473.96
G5	41+95.27	473.78	473.86
G6	41+93.82	473.67	473.74
G7	41+92.38	473.57	473.64
G8	41+91.62	473.58	473.65
G9	41+90.18	473.75	473.82
G10	41+88.73	473.91	473.98
G11	41+87.29	474.07	474.13
G12	41+85.84	473.96	474.02
G13	41+84.39	473.86	473.91
G14	41+82.91	473.75	473.80
G1	42+11.04	473.16	473.22
G2	42+09.61	473.33	473.39
G3	42+08.16	473.49	473.55
G4	42+06.71	473.66	473.72
G5	42+05.27	473.56	473.61
G6	42+03.82	473.46	473.51

Col. 1	Col. 2	Col. 3	Col. 4
G7	42+02.38	473.35	473.40
G8	42+01.62	473.37	473.42
G9	42+00.18	473.54	473.59
G10	41+98.73	473.70	473.75
G11	41+97.29	473.86	473.90
G12	41+95.84	473.76	473.80
G13	41+94.39	473.65	473.68
G14	41+92.99	473.54	473.57
G1	42+21.05	472.94	472.97
G2	42+19.61	473.11	473.14
G3	42+18.16	473.27	473.30
G4	42+16.71	473.44	473.47
G5	42+15.27	473.35	473.38
G6	42+13.82	473.24	473.26
G7	42+12.38	473.14	473.16
G8	42+11.62	473.16	473.18
G9	42+10.18	473.32	473.34
G10	42+08.73	473.49	473.51
G11	42+07.29	473.65	473.67
G12	42+05.84	473.54	473.56
G13	42+04.30	473.44	473.46
G14	42+02.88	473.33	473.35
G1	42+31.05	472.71	472.72
G2	42+29.61	472.89	472.90
G3	42+28.16	473.05	473.06
G4	42+26.71	473.22	473.23
G5	42+25.27	473.12	473.13
G6	42+23.82	473.02	473.03
G7	42+22.38	472.92	472.93
G8	42+21.62	472.93	472.94
G9	42+20.18	473.10	473.11
G10	42+18.73	473.27	473.28
G11	42+17.29	473.43	473.44
G12	42+15.84	473.33	473.33
G13	42+14.39	473.22	473.22
G14	42+12.86	473.11	473.11
G1	42+41.06	472.48	472.48
G2	42+39.61	472.65	472.65
G3	42+38.16	472.82	472.82
G4	42+36.71	472.99	472.99
G5	42+35.27	472.90	472.90
G6	42+33.82	472.79	472.79
G7	42+32.38	472.69	472.69
G8	42+31.62	472.71	472.71
G9	42+30.18	472.88	472.88
G10	42+28.73	473.05	473.05
G11	42+27.29	473.21	473.21
G12	42+25.84	473.10	473.10
G13	42+24.39	473.00	473.00
G14	42+22.85	472.89	472.89
G1	42+52.08	472.22	472.23
G2	42+50.61	472.40	472.41
G3	42+49.16	472.57	472.56
G4	42+47.71	472.73	472.74
G5	42+46.27	472.64	472.65
G6	42+44.82	472.54	472.55
G7	42+43.38	472.44	472.45
G8	42+42.62	472.46	472.47
G9	42+41.18	472.62	472.63
G10	42+39.73	472.79	472.80
G11	42+38.29	472.95	472.96
G12	42+36.84	472.85	472.86
G13	42+35.39	472.75	472.76
G14	42+33.78	472.64	472.65
G1	42+62.10	471.98	472.00
G2	42+60.61	472.16	472.18
G3	42+59.16	472.33	472.35
G4	42+57.71	472.50	472.52
G5	42+56.27	472.40	472.42
G6	42+54.82	472.30	472.32
G7	42+53.38	472.20	472.22
G8	42+52.62	472.22	472.24
G9	42+51.18	472.39	472.41
G10	42+49.73	472.56	472.58
G11	42+48.29	472.72	472.74
G12	42+46.84	472.62	472.64
G13	42+45.39	472.52	472.54
G14	42+43.72	472.40	472.42

Col. 1	Col. 2	Col. 3	Col. 4
G1	42+72.12	471.73	471.77
G2	42+70.61	471.91	471.95
G3	42+69.16	472.08	472.12
G4	42+67.71	472.25	472.29
G5	42+66.27	472.16	472.20
G6	42+64.82	472.06	472.10
G7	42+63.38	471.96	472.00
G8	42+62.62	471.98	472.02
G9	42+61.18	472.15	472.19
G10	42+59.73	472.32	472.36
G11	42+58.29	472.48	472.52
G12	42+56.84	472.38	472.42
G13	42+55.39	472.28	472.32
G14	42+53.67	472.16	472.20
G1	42+82.13	471.48	471.55
G2	42+80.61	471.66	471.73
G3	42+79.16	471.83	471.90
G4	42+77.71	472.01	472.08
G5	42+76.27	471.91	471.98
G6	42+74.82	471.82	471.89
G7	42+73.38	471.72	471.79
G8	42+72.62	471.73	

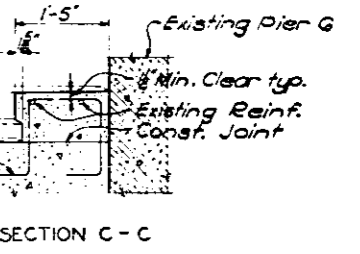
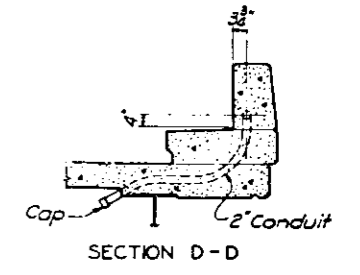
Col 1	Col 2	Col 3	Col 4	Col 1	Col 2	Col 3	Col 4	Col 1	Col 2	Col 3	Col 4	Col 1	Col 2	Col 3	Col 4	Col 1	Col 2	Col 3	Col 4
G1	43-52.27	469.58	469.67	G1	43-72.90	468.90	468.50	G1	44-84.38	465.66	465.77	G1	45-41.61	464.07	464.10	G1	45-67.06	463.18	463.19
G2	43-50.61	469.78	469.81	G2	43-02.36	468.09	468.09	G2	44-83.62	465.69	465.82	G2	45-40.16	464.25	464.28	G2	45-65.73	463.10	463.11
G3	43-49.16	469.96	470.05	G3	43-01.92	468.14	468.14	G3	44-82.18	465.86	465.99	G3	45-38.71	464.42	464.45	G3	45-64.17	463.00	463.01
G4	43-47.71	470.13	470.22	G4	43-00.61	468.30	468.30	G4	44-80.73	466.04	466.17	G4	45-37.27	464.59	464.62	G4	45-62.05	462.91	462.92
G5	43-46.27	470.05	470.14	G5	42-99.16	468.48	468.48	G5	44-79.29	466.21	466.34	G5	45-35.82	464.75	464.78	G5	45-60.17	462.81	462.82
G6	43-44.82	469.95	470.04	G6	42-97.71	468.64	468.64	G6	44-77.84	466.38	466.51	G6	45-34.38	464.91	464.94	G6	45-58.29	462.71	462.72
G7	43-43.38	469.86	469.95	G7	42-96.27	468.80	468.80	G7	44-76.39	466.55	466.68	G7	45-32.93	465.07	465.10	G7	45-56.84	462.61	462.62
G8	43-41.93	469.77	469.86	G8	42-94.82	468.96	468.96	G8	44-75.06	466.72	466.85	G8	45-31.48	465.23	465.26	G8	45-55.39	462.51	462.52
G9	43-40.48	470.06	470.15	G9	42-93.38	469.12	469.12	G9	44-73.73	466.89	467.02	G9	45-30.03	465.39	465.42	G9	45-54.08	462.41	462.42
G10	43-39.03	470.23	470.32	G10	42-91.93	469.28	469.28	G10	44-72.39	467.06	467.19	G10	45-28.58	465.55	465.58	G10	45-52.63	462.31	462.32
G11	43-37.58	470.40	470.49	G11	42-90.48	469.44	469.44	G11	44-71.06	467.23	467.36	G11	45-27.13	465.71	465.74	G11	45-51.18	462.21	462.22
G12	43-36.13	470.57	470.66	G12	42-89.03	469.60	469.60	G12	44-69.73	467.40	467.53	G12	45-25.68	465.87	465.90	G12	45-49.73	462.11	462.12
G13	43-34.68	470.74	470.83	G13	42-87.58	469.76	469.76	G13	44-68.40	467.57	467.70	G13	45-24.23	466.03	466.06	G13	45-48.28	462.01	462.02
G14	43-33.23	470.91	471.00	G14	42-86.13	469.92	469.92	G14	44-67.06	467.74	467.87	G14	45-22.78	466.19	466.22	G14	45-46.83	461.91	461.92
G1	43-62.28	469.29	469.35	G1	44-13.39	467.25	467.25	G1	44-40.73	467.24	467.34	G1	45-21.33	466.35	466.38	G1	45-45.38	461.81	461.82
G2	43-60.61	469.49	469.55	G2	44-12.92	467.31	467.31	G2	44-39.29	467.41	467.51	G2	45-19.88	466.51	466.54	G2	45-43.93	461.71	461.72
G3	43-59.16	469.67	469.73	G3	44-11.61	467.47	467.47	G3	44-37.84	467.51	467.61	G3	45-18.43	466.67	466.70	G3	45-42.48	461.61	461.62
G4	43-57.71	469.85	469.91	G4	44-10.16	467.63	467.63	G4	44-36.39	467.61	467.71	G4	45-16.98	466.83	466.86	G4	45-41.03	461.51	461.52
G5	43-56.27	469.76	469.82	G5	44-08.71	467.79	467.79	G5	44-35.06	467.74	467.84	G5	45-15.53	466.99	467.02	G5	45-39.58	461.41	461.42
G6	43-54.82	469.67	469.73	G6	44-07.27	467.95	467.95	G6	44-33.61	467.84	467.94	G6	45-14.08	467.15	467.18	G6	45-38.13	461.31	461.32
G7	43-53.38	469.58	469.64	G7	44-05.82	468.11	468.11	G7	44-32.16	467.93	468.03	G7	45-12.63	467.31	467.34	G7	45-36.68	461.21	461.22
G8	43-52.02	469.60	469.66	G8	44-04.38	468.27	468.27	G8	44-30.71	468.02	468.12	G8	45-11.18	467.47	467.50	G8	45-35.23	461.11	461.12
G9	43-51.18	469.77	469.83	G9	44-03.02	468.43	468.43	G9	44-29.26	468.11	468.21	G9	45-09.73	467.63	467.66	G9	45-33.78	461.01	461.02
G10	43-49.73	469.95	470.01	G10	44-01.57	468.59	468.59	G10	44-27.81	468.20	468.30	G10	45-08.28	467.79	467.82	G10	45-32.33	460.91	460.92
G11	43-48.29	470.12	470.21	G11	43-00.12	468.75	468.75	G11	44-26.36	468.28	468.38	G11	45-06.83	467.95	467.98	G11	45-30.88	460.81	460.82
G12	43-46.84	470.29	470.38	G12	42-98.67	468.91	468.91	G12	44-24.91	468.36	468.46	G12	45-05.38	468.11	468.14	G12	45-29.43	460.71	460.72
G13	43-45.39	469.93	469.99	G13	42-97.22	469.07	469.07	G13	44-23.46	468.45	468.55	G13	45-03.93	468.27	468.30	G13	45-27.98	460.61	460.62
G14	43-43.94	469.84	469.90	G14	42-95.77	469.23	469.23	G14	44-22.01	468.54	468.64	G14	45-02.48	468.43	468.46	G14	45-26.53	460.51	460.52
G1	43-72.30	468.99	469.03	G1	43-93.71	468.26	468.27	G1	44-50.73	466.94	467.06	G1	45-01.03	468.59	468.62	G1	45-25.08	460.41	460.42
G2	43-70.61	469.20	469.24	G2	43-92.26	468.42	468.43	G2	44-49.29	467.11	467.23	G2	44-99.58	465.25	465.28	G2	45-23.63	460.31	460.32
G3	43-69.16	469.37	469.42	G3	43-90.81	468.58	468.59	G3	44-47.84	467.27	467.39	G3	44-98.14	465.41	465.44	G3	45-22.18	460.21	460.22
G4	43-67.71	469.54	469.59	G4	43-89.36	468.74	468.75	G4	44-46.39	467.43	467.55	G4	44-96.70	465.57	465.60	G4	45-20.73	460.11	460.12
G5	43-66.27	469.71	469.76	G5	43-87.91	468.90	468.91	G5	44-44.94	467.59	467.71	G5	44-95.26	465.73	465.76	G5	45-19.28	460.01	460.02
G6	43-64.82	469.88	469.93	G6	43-86.46	469.06	469.07	G6	44-43.49	467.75	467.87	G6	44-93.81	465.89	465.92	G6	45-17.83	459.91	459.92
G7	43-63.38	469.95	470.00	G7	43-85.01	469.22	469.23	G7	44-42.04	467.91	468.03	G7	44-92.36	466.05	466.08	G7	45-16.38	459.81	459.82
G8	43-61.93	470.12	470.21	G8	43-83.56	469.38	469.39	G8	44-40.59	468.07	468.19	G8	44-90.91	466.21	466.24	G8	45-14.93	459.71	459.72
G9	43-60.48	470.29	470.38	G9	43-82.11	469.54	469.55	G9	44-39.14	468.23	468.35	G9	44-89.46	466.37	466.40	G9	45-13.48	459.61	459.62
G10	43-59.03	470.46	470.55	G10	43-80.66	469.70	469.71	G10	44-37.69	468.39	468.51	G10	44-88.01	466.53	466.56	G10	45-12.03	459.51	459.52
G11	43-57.58	470.63	470.72	G11	43-79.21	469.86	469.87	G11	44-36.24	468.55	468.67	G11	44-86.56	466.69	466.72	G11	45-10.58	459.41	459.42
G12	43-56.13	470.80	470.89	G12	43-77.76	470.02	470.03	G12	44-34.79	468.71	468.83	G12	44-85.11	466.85	466.88	G12	45-09.13	459.31	459.32
G13	43-54.68	470.97	471.06	G13	43-76.31	470.18	470.19	G13	44-33.34	468.87	468.99	G13	44-83.66	467.01	467.04	G13	45-07.68	459.21	459.22
G14	43-53.23	471.14	471.23	G14	43-74.86	470.34	470.35	G14	44-31.89	469.03	469.15	G14	44-82.21	467.17	467.20	G14	45-06.23	459.11	459.12
G1	43-62.32	468.69	468.71	G1	44-03.62	467.95	468.08	G1	44-59.29	466.81	466.93	G1	45-04.78	467.33	467.36	G1	45-04.78	459.01	459.02
G2	43-60.61	468.90	468.92	G2	44-02.17	468.11	468.16	G2	44-57.84	466.97	467.09	G2	45-03.33	467.49	467.52	G2	45-03.33	458.91	458.92
G3	43-59.16	469.08	469.10	G3	44-00.72	468.27	468.32	G3	44-56.39	467.13	467.25	G3	45-01.88	467.65	467.68	G3	45-01.88	458.81	458.82
G4	43-57.71	469.26	469.28	G4	43-99.27	468.43	468.48	G4	44-54.94	467.29	467.41	G4	44-99.29	465.81	465.84	G4	44-99.29	458.71	458.72
G5	43-56.27	469.43	469.45	G5	43-97.82	468.59	468.64	G5	44-53.49	467.45	467.57	G5	44-97.84	465.97	466.00	G5	44-97.84	458.61	458.62
G6	43-54.82	469.60	469.62	G6	43-96.37	468.75	468.80	G6	44-52.04	467.61	467.73	G6	44-96.39	466.13	466.16	G6	44-96.39	458.51	458.52
G7	43-53.38	469.77	469.79	G7	43-94.92	468.91	468.96	G7	44-50.59	467.77	467.89	G7	44-94.94	466.29	466.32	G7	44-94.94	458.41	458.42
G8	43-51.93	469.94	470.01	G8	43-93.47	469.07	469.12	G8	44-49.14	467.93	468.05	G8	44-93.49	466.45	466.48	G8	44-93.49	458.31	458.32
G9	43-50.48	470.11	470.20	G9	43-92.02	469.23	469.28	G9	44-47.69	468.09	468.21	G9	44-92.04	466.61	466.64	G9	44-92.04	458.21	458.22
G10	43-49.03	470.28	470.37	G10	43-90.57	469.39	469.44	G10	44-46.24	468.25	468.37	G10	44-90.59	466.77	466.80	G10	44-90.59	458.11	458.12
G11	43-47.58	470.45	470.54	G11	43-89.12	469.55	469.60	G11	44-44.79	468.41	468.53	G11	44-89.14	466.93	466.96	G11	44-89.14	458.01	458.02
G12	43-46.13	470.62	470.71	G12	43-87.67	469.71	469.76	G12	44-43.34	468.57	468.69	G12	44-87.69	467.09	467.12	G12	44-87.69	457.91	457.92
G13	43-44.68	470.79	470.88	G13	43-86.22	469.87	469.92	G13	44-41.89	468.73	468.85	G13	44-86.24	467.25	467.28	G13	44-86.24	457.81	457.82
G14	43-43.23	470.96	471.05	G14	43-84.77	470.03	470.08	G14	44-40.44	468.89	469.01	G14	44-84.79	467.41	467.44	G14	44-84.79	457.71	457.72
G1	43-92.34	468.39	468.39	G1	44-13.39	467.25	467.25	G1	44-50.73	466.94	467.06	G1	45-01.03	468.59	468.62	G1	45-25.08</		

Col 1	Col 2	Col 3	Col 4
51	46:26.17	461.30	461.27
52	46:24.92	461.45	461.52
53	46:23.61	461.61	461.68
54	46:22.16	461.79	461.86
55	46:20.71	461.97	462.04
56	46:19.27	461.89	461.96
57	46:17.82	461.17	461.26
58	46:16.38	461.70	461.77
59	46:15.62	461.73	461.90
60	46:14.18	461.90	461.97
61	46:12.73	462.08	462.15
62	46:11.29	462.25	462.32
63	46:09.84	462.16	462.23
64	46:08.39	462.07	462.14
65	46:06.94	461.98	462.05
66	46:05.49	461.90	461.97
67	46:04.04	461.82	461.89
68	46:02.59	461.78	461.85
69	46:01.14	461.78	461.85
70	46:00.00	461.85	461.92
71	45:58.45	461.95	462.02
72	45:56.90	462.05	462.14
73	45:55.35	462.15	462.26
74	45:53.80	462.25	462.38
75	45:52.25	462.35	462.50
76	45:50.70	462.45	462.62
77	45:49.15	462.55	462.74
78	45:47.60	462.65	462.86
79	45:46.05	462.75	462.98
80	45:44.50	462.85	463.10
81	45:42.95	462.95	463.22
82	45:41.40	463.05	463.34
83	45:39.85	463.15	463.46
84	45:38.30	463.25	463.58
85	45:36.75	463.35	463.70
86	45:35.20	463.45	463.82
87	45:33.65	463.55	463.94
88	45:32.10	463.65	464.06
89	45:30.55	463.75	464.18
90	45:29.00	463.85	464.30
91	45:27.45	463.95	464.42
92	45:25.90	464.05	464.54
93	45:24.35	464.15	464.66
94	45:22.80	464.25	464.78
95	45:21.25	464.35	464.90
96	45:19.70	464.45	465.02
97	45:18.15	464.55	465.14
98	45:16.60	464.65	465.26
99	45:15.05	464.75	465.38
100	45:13.50	464.85	465.50
101	45:11.95	464.95	465.62
102	45:10.40	465.05	465.74
103	45:08.85	465.15	465.86
104	45:07.30	465.25	465.98
105	45:05.75	465.35	466.10
106	45:04.20	465.45	466.22
107	45:02.65	465.55	466.34
108	45:01.10	465.65	466.46
109	44:59.55	465.75	466.58
110	44:58.00	465.85	466.70
111	44:56.45	465.95	466.82
112	44:54.90	466.05	466.94
113	44:53.35	466.15	467.06
114	44:51.80	466.25	467.18
115	44:50.25	466.35	467.30
116	44:48.70	466.45	467.42
117	44:47.15	466.55	467.54
118	44:45.60	466.65	467.66
119	44:44.05	466.75	467.78
120	44:42.50	466.85	467.90
121	44:40.95	466.95	468.02
122	44:39.40	467.05	468.14
123	44:37.85	467.15	468.26
124	44:36.30	467.25	468.38
125	44:34.75	467.35	468.50
126	44:33.20	467.45	468.62
127	44:31.65	467.55	468.74
128	44:30.10	467.65	468.86
129	44:28.55	467.75	468.98
130	44:27.00	467.85	469.10
131	44:25.45	467.95	469.22
132	44:23.90	468.05	469.34
133	44:22.35	468.15	469.46
134	44:20.80	468.25	469.58
135	44:19.25	468.35	469.70
136	44:17.70	468.45	469.82
137	44:16.15	468.55	469.94
138	44:14.60	468.65	470.06
139	44:13.05	468.75	470.18
140	44:11.50	468.85	470.30
141	44:10.00	468.95	470.42
142	44:08.45	469.05	470.54
143	44:06.90	469.15	470.66
144	44:05.35	469.25	470.78
145	44:03.80	469.35	470.90
146	44:02.25	469.45	471.02
147	44:00.70	469.55	471.14
148	43:59.15	469.65	471.26
149	43:57.60	469.75	471.38
150	43:56.05	469.85	471.50
151	43:54.50	469.95	471.62
152	43:52.95	470.05	471.74
153	43:51.40	470.15	471.86
154	43:49.85	470.25	471.98
155	43:48.30	470.35	472.10
156	43:46.75	470.45	472.22
157	43:45.20	470.55	472.34
158	43:43.65	470.65	472.46
159	43:42.10	470.75	472.58
160	43:40.55	470.85	472.70
161	43:39.00	470.95	472.82
162	43:37.45	471.05	472.94
163	43:35.90	471.15	473.06
164	43:34.35	471.25	473.18
165	43:32.80	471.35	473.30
166	43:31.25	471.45	473.42
167	43:29.70	471.55	473.54
168	43:28.15	471.65	473.66
169	43:26.60	471.75	473.78
170	43:25.05	471.85	473.90
171	43:23.50	471.95	474.02
172	43:21.95	472.05	474.14
173	43:20.40	472.15	474.26
174	43:18.85	472.25	474.38
175	43:17.30	472.35	474.50
176	43:15.75	472.45	474.62
177	43:14.20	472.55	474.74
178	43:12.65	472.65	474.86
179	43:11.10	472.75	474.98
180	43:09.55	472.85	475.10
181	43:08.00	472.95	475.22
182	43:06.45	473.05	475.34
183	43:04.90	473.15	475.46
184	43:03.35	473.25	475.58
185	43:01.80	473.35	475.70
186	42:00.25	473.45	475.82
187	42:58.70	473.55	475.94
188	42:57.15	473.65	476.06
189	42:55.60	473.75	476.18
190	42:54.05	473.85	476.30
191	42:52.50	473.95	476.42
192	42:50.95	474.05	476.54
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194	42:47.85	474.25	476.78
195	42:46.30	474.35	476.90
196	42:44.75	474.45	477.02
197	42:43.20	474.55	477.14
198	42:41.65	474.65	477.26
199	42:40.10	474.75	477.38
200	42:38.55	474.85	477.50
201	42:37.00	474.95	477.62
202	42:35.45	475.05	477.74
203	42:33.90	475.15	477.86
204	42:32.35	475.25	477.98
205	42:30.80	475.35	478.10
206	42:29.25	475.45	478.22
207	42:27.70	475.55	478.34
208	42:26.15	475.65	478.46
209	42:24.60	475.75	478.58
210	42:23.05	475.85	478.70
211	42:21.50	475.95	478.82
212	42:19.95	476.05	478.94
213	42:18.40	476.15	479.06
214	42:16.85	476.25	479.18
215	42:15.30	476.35	479.30
216	42:13.75	476.45	479.42
217	42:12.20	476.55	479.54
218	42:10.65	476.65	479.66
219	42:09.10	476.75	479.78
220	42:07.55	476.85	479.90
221	42:06.00	476.95	480.02
222	42:04.45	477.05	480.14
223	42:02.90	477.15	480.26
224	42:01.35	477.25	480.38
225	41:59.80	477.35	480.50
226	41:58.25	477.45	480.62
227	41:56.70	477.55	480.74
228	41:55.15	477.65	480.86
229	41:53.60	477.75	480.98
230	41:52.05	477.85	481.10
231	41:50.50	477.95	481.22
232	41:48.95	478.05	481.34
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234	41:45.85	478.25	481.58
235	41:44.30	478.35	481.70
236	41:42.75	478.45	481.82
237	41:41.20	478.55	481.94
238	41:39.65	478.65	482.06
239	41:38.10	478.75	482.18
240	41:36.55	478.85	482.30
241	41:35.00	478.95	482.42
242	41:33.45	479.05	482.54
243	41:31.90	479.15	482.66
244	41:30.35	479.25	482.78
245	41:28.80	479.35	482.90
246	41:27.25	479.45	483.02
247	41:25.70	479.55	483.14
248	41:24.15	479.65	483.26
249	41:22.60	479.75	483.38
250	41:21.05	479.85	483.50
251	41:19.50	479.95	483.62
252	41:17.95	480.05	483.74
253	41:16.40	480.15	483.86
254	41:14.85	480.25	483.98
255	41:13.30	480.35	484.10
256	41:11.75	480.45	484.22
257	41:10.20	480.55	484.34
258	41:08.65	480.65	484.46
259	41:07.10	480.75	484.58
260	41:05.55	480.85	484.70
261	41:04.00	480.95	484.82
262	41:02.45	481.05	484.94
263	41:00.90	481.15	485.06
264	40:59.35	481.25	485.18
265	40:57.80	481.35	485.30
266	40:56.25	481.45	485.42
267	40:54.70	481.55	485.54
268	40:53.15	481.65	485.66
269	40:51.60	481.75	485.78
270	40:50.05	481.85	485.90
271	40:48.50	481.95	486.02
272	40:46.95	482.05	486.14
273	40:45.40	482.15	486.26
274	40:43.85	482.25	486.38
275	40:42.30	482.35	486.50
276	40:40.75	482.45	486.62
277	40:39.20	482.55	486.74
278	40:37.65	482.65	486.86
279	40:36.10	482.75	486.98
280	40:34.55	482.85	487.10
281	40:33.00	482.95	487.22
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283	40:29.90	483.15	487.46
284	40:28.35	483.25	487.58
285	40:26.80	483.35	487.70
286	40:25.25	483.45	487.82
287	40:23.70	483.55	487.94
288	40:22.15	483.65	488.06
289	40:20.60	483.75	488.18
290	40:19.05	483.85	488.30
291	40:17.50	483.95	488.42
292	40:15.95	484.05	488.54
293	40:14.40	484.15	488.66
294	40:12.85	484.25	488.78
295	40:11.30	484.35	488.90
296	40:09.75	484.45	489.02
297	40:08.20	484.55	489.14
298	40:06.65	484.65	489.26
299	40:05.10	484.75	489.38
300	40:03.55	484.85	489.50
301	40:02.00	484.95	489.62
302	40:00.45	485.05	489.74
303	39:58.90	485.15	489.86
304	39:57.35	485.25	489.98
305	39:55.80	485.35	490.10
306	39:54.25	485.45	490.22
307	39:52.70	485.55	490.34
308			

F.A.I. RT. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-3VB	ST. CLAIR	48	24
I.L.L. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.	

STATION 44+73.50
 BUILT BY
 STATE OF ILLINOIS
 F.A.I. RT. 70 SEC. 82-3VB
 F.A. PROJ. IIG-70-1(65)
 LOADING HS20 & ALT.

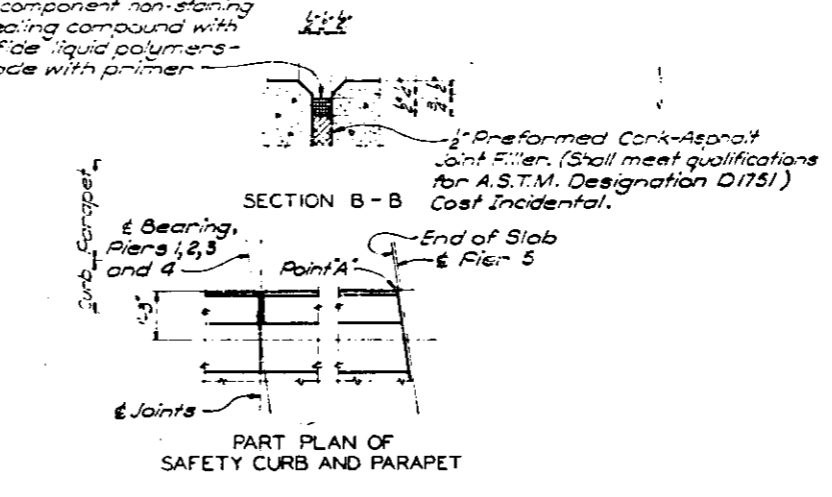
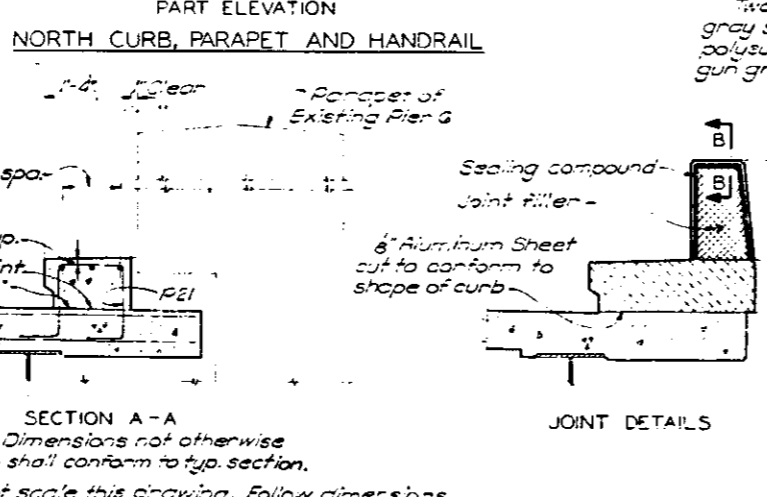
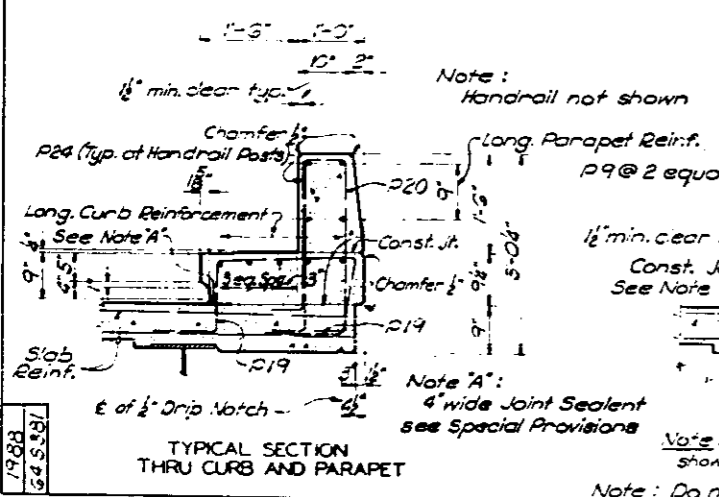
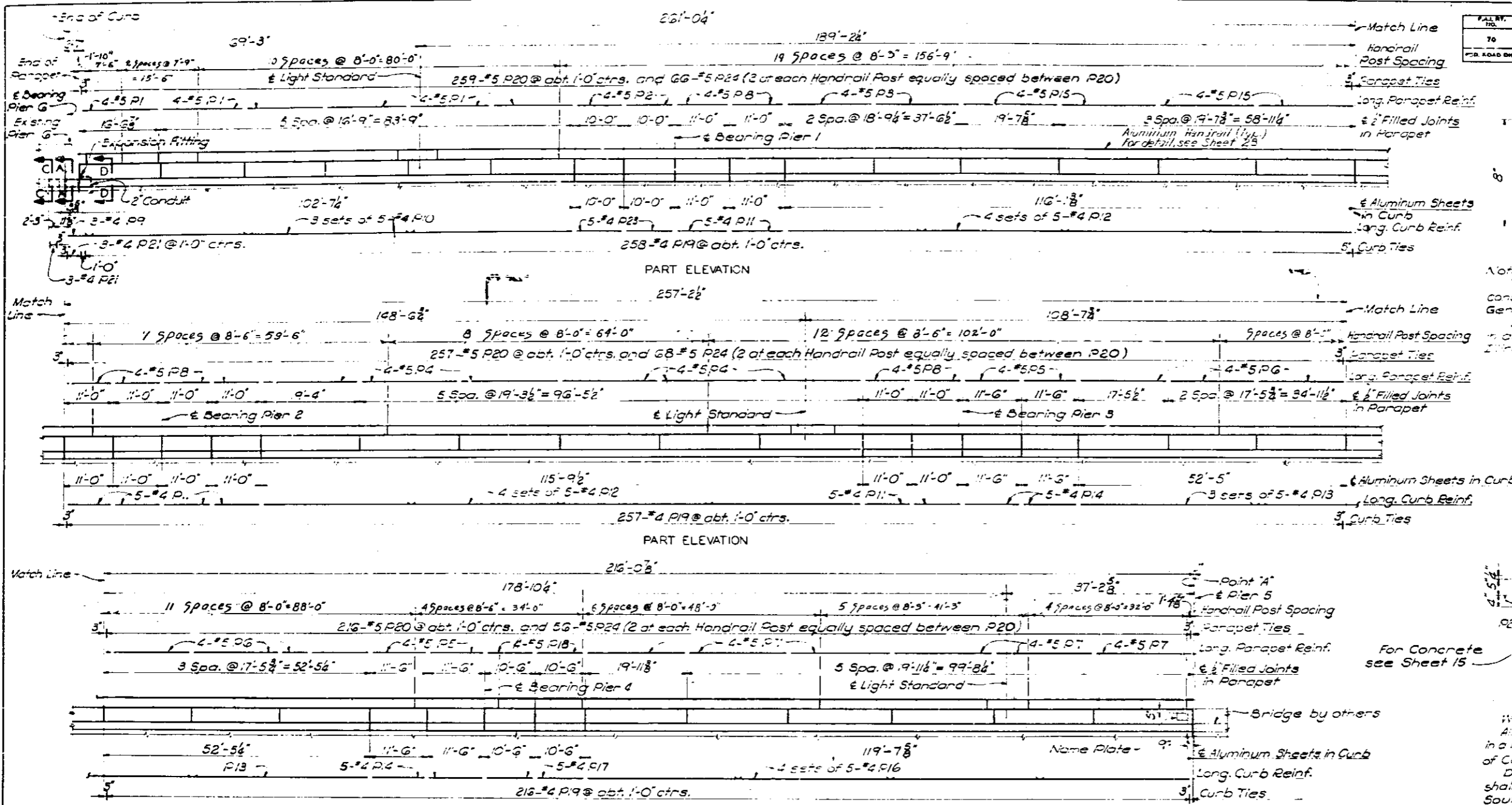
LETTERING FOR NAME PLATE
 Note: See Standard 2113-1
 The name plates shall be embedded in the concrete parapet as designated on the General Plan and the parapet details. Embedment anchors shall be provided in accordance with the Specifications, see Illinois Bridge Standard 2113-1.



NOTES
 Work this Sheet with Sheet 25
 All horizontal dimensions are measured in a horizontal plane and along outside face of curb unless otherwise shown.
 Details not otherwise shown or noted shall be similar to details shown for South Parapet and Curb.
 Cost of furnishing and placing conduit to be incidental to the cost of Class "X" concrete for superstructure.

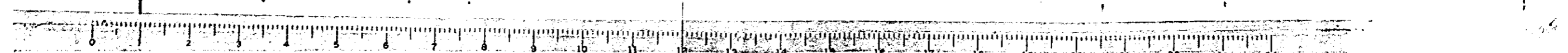
SAFETY CURBS AND PARAPET DETAILS

ILLINOIS APPROACH TO POPLAR ST	
STATION - 44+73.50	FILE NONE
F.A.I. ROUTE - 70	
SECTION - 82-3VB	
ST. CLAIR COUNTY, ILLINOIS	
DRAWN R. Tanner July 64	SYKESDORP & PRINCE AND ASSOCIATES, INC.
TRACED	ENGINEERS-ARCHITECTS
CHECKED G. Rivera July 64	ST. LOUIS, MO.

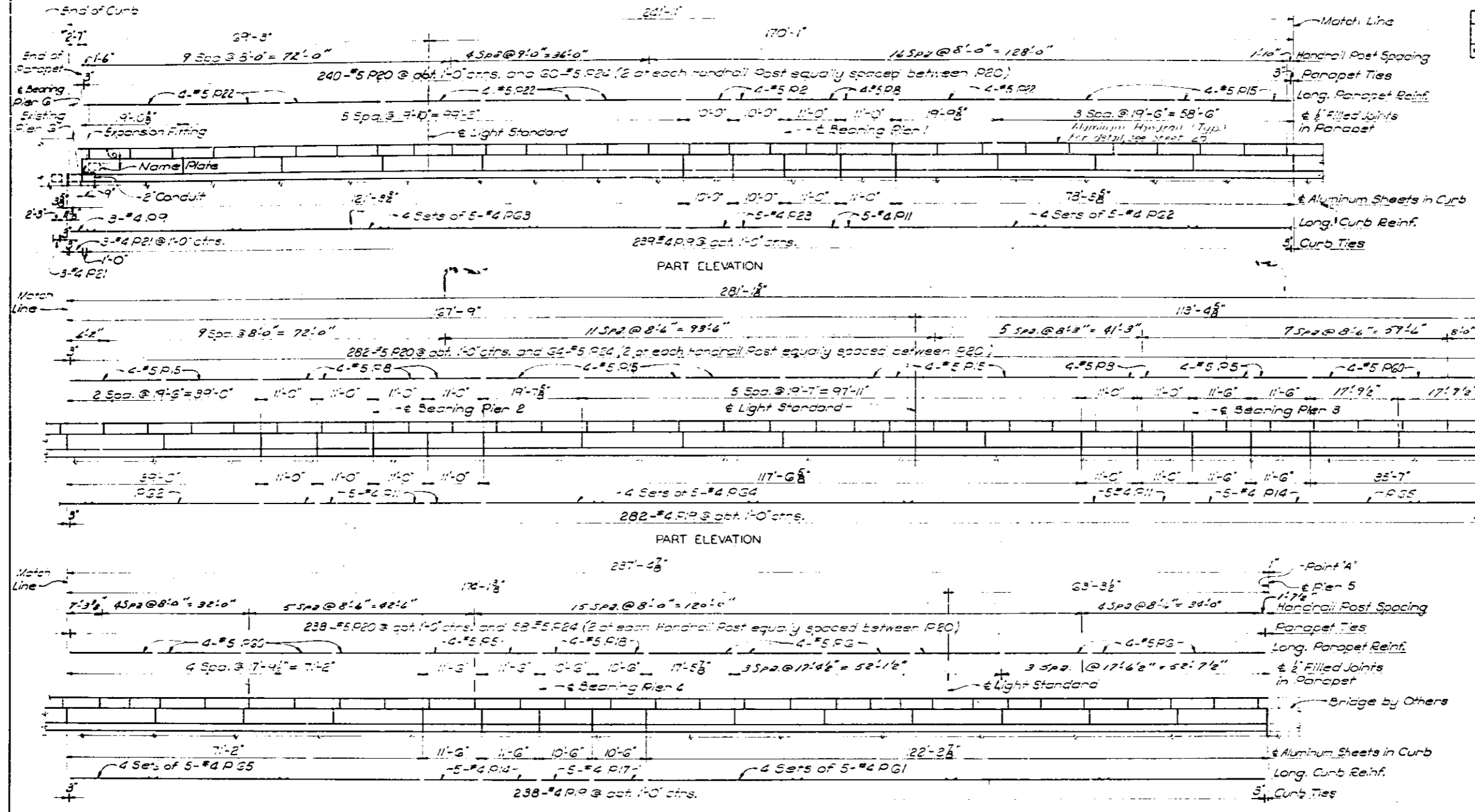


Revised Handrail Post Spacing - A.S.A.

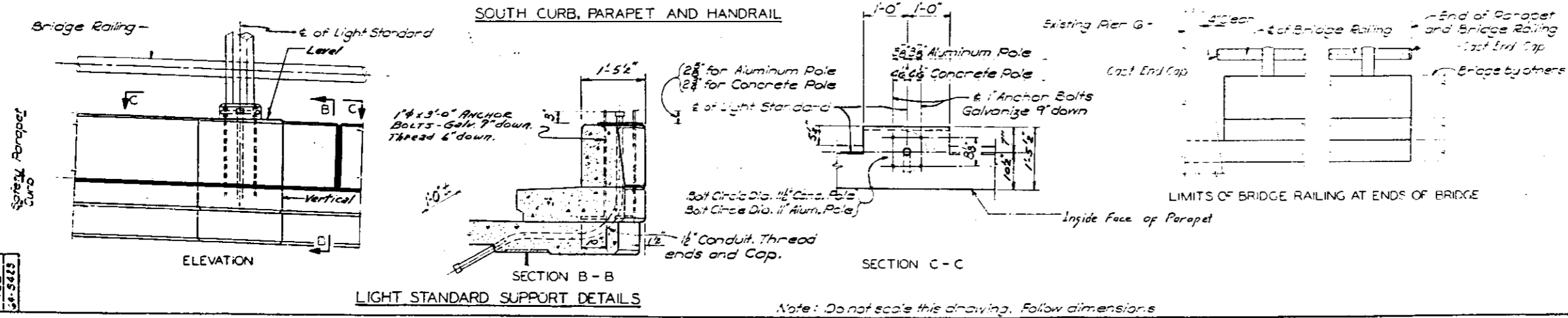
Note: Do not scale this drawing. Follow dimensions.



FED. RD. DIST. NO. 7	SECTION 82-3VB	COUNTY ST. CLAIR	TOTAL SHEETS 48	SHEET NO. 25
ILLINOIS			FED. AID PROJ. NO.	



NOTES
 Work this Sheet with Sheet 24
 All horizontal dimensions are measured in a horizontal plane and along outside face of curb unless otherwise shown.
 Details not otherwise shown or noted shall be similar to details shown for North Parapet and Curb.
 Cost of furnishing and placing conduit to be incidental to the cost of Class 'X' concrete for superstructure.



SAFETY CURBS AND PARAPET DETAILS

ILLINOIS APPROACH TO POPULOUS BRIDGE

STATION - 44+73.50
 F.A.I. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

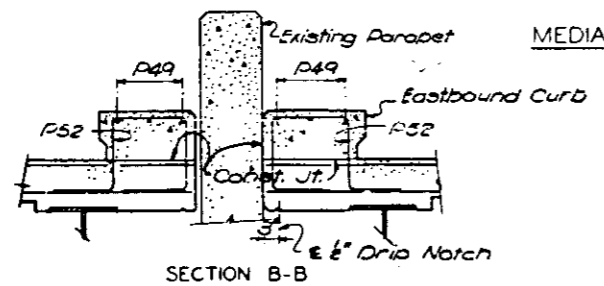
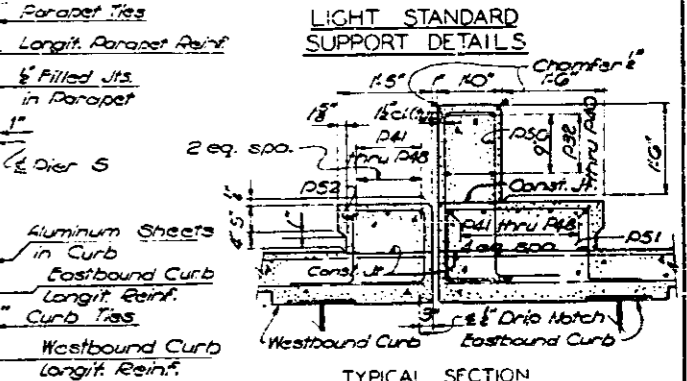
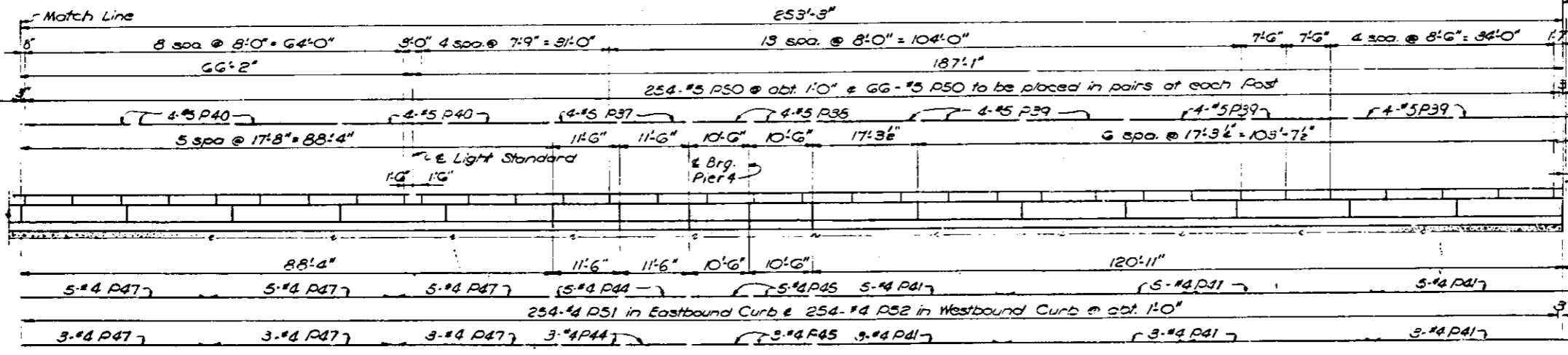
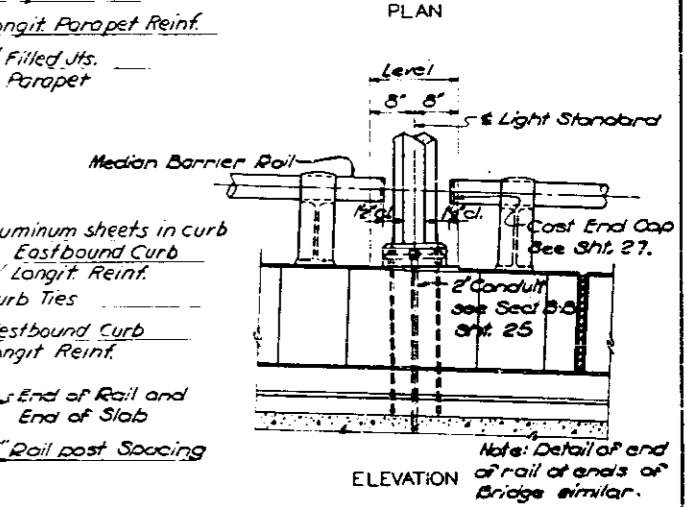
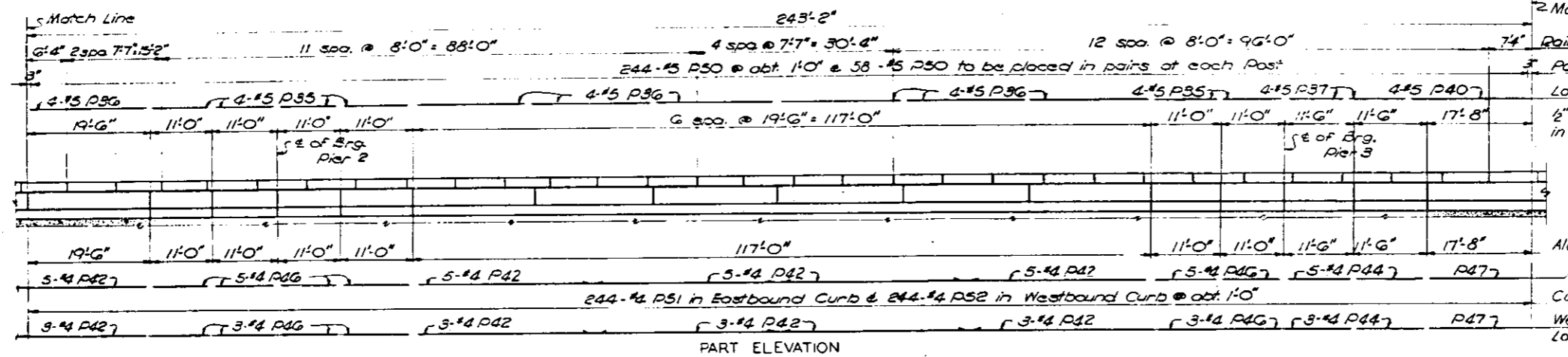
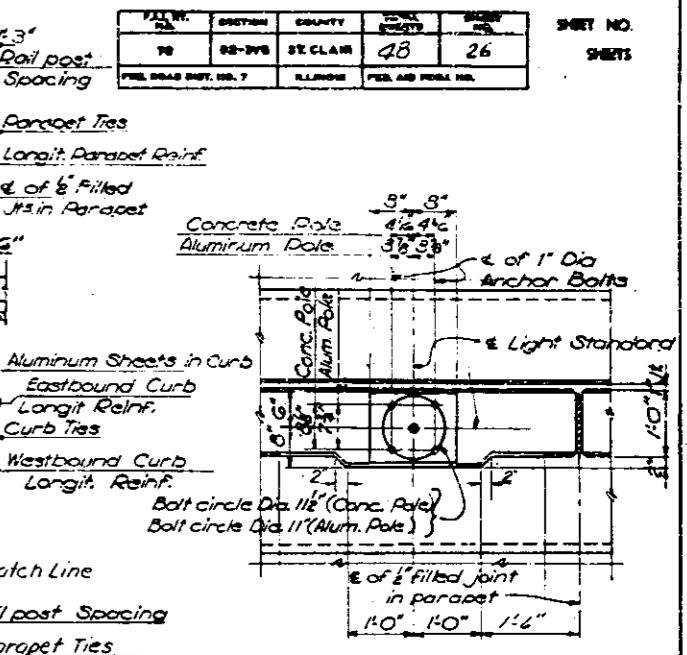
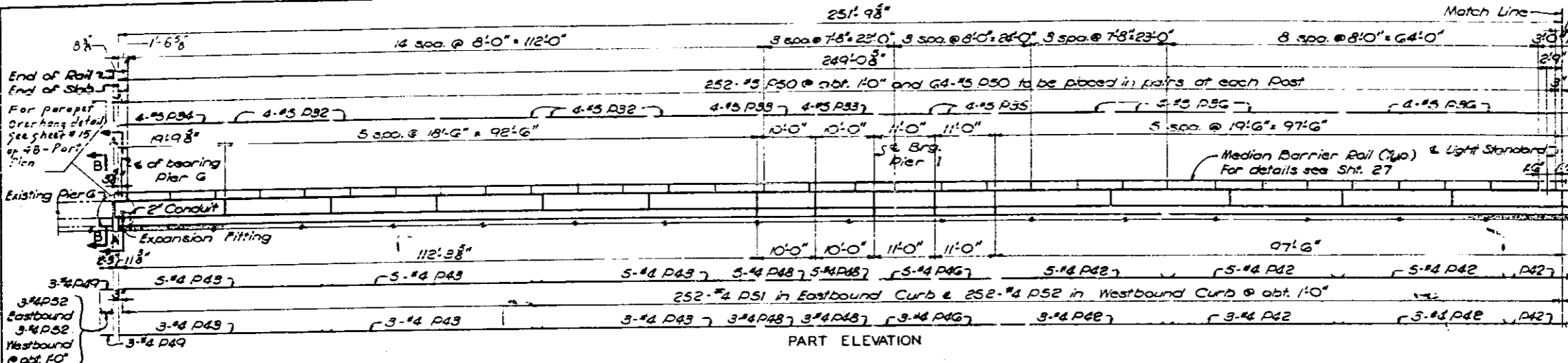
SCALE NONE

DRAWN: R. TANNER July 54
 TRACED: G. JOHNSON July 61
 CHECKED: G. JOHNSON July 61

OVERDORP & PARCEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.





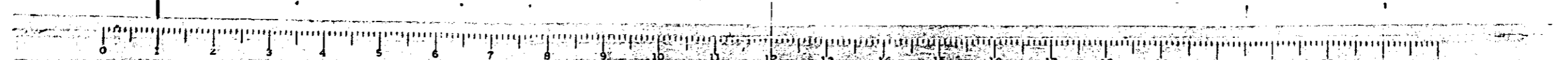
MEDIAN CURB, PARAPET AND HANDRAIL

Note: Cost of furnishing and placing conduit to be incidental to the cost of Class "X" concrete for superstructure.

Note: Westbound Curb same as Eastbound Curb except as shown or noted.
All dimensions are horizontal dimensions.
Section A-A similar to Section D-D Sheet 24.
Section B-B same as Typical Section except as shown or noted.

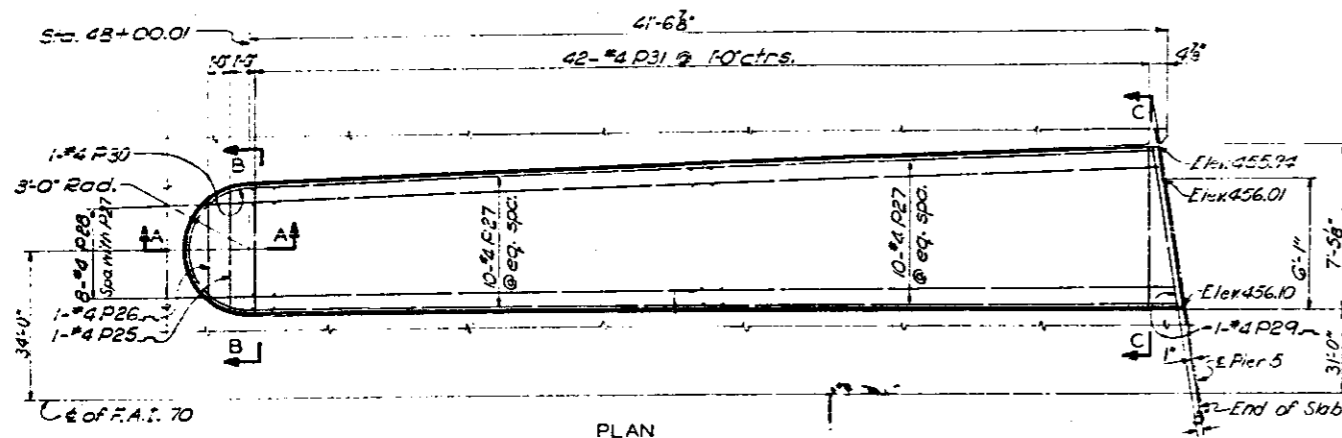
Note: Do not scale this drawing. Follow dimensions.

ILLINOIS APPROACH TO POPULAR BRIDGE	
STATION - 44+73.50	
F.A.L. ROUTE - 70	
SECTION - 82-3VB	
ST. CLAIR COUNTY, ILLINOIS	
DRAWN BY	E.L. Barnes June 1964
CHECKED BY	G.E. Rivera July 1964



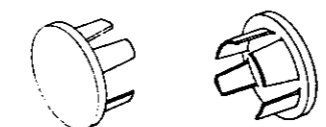
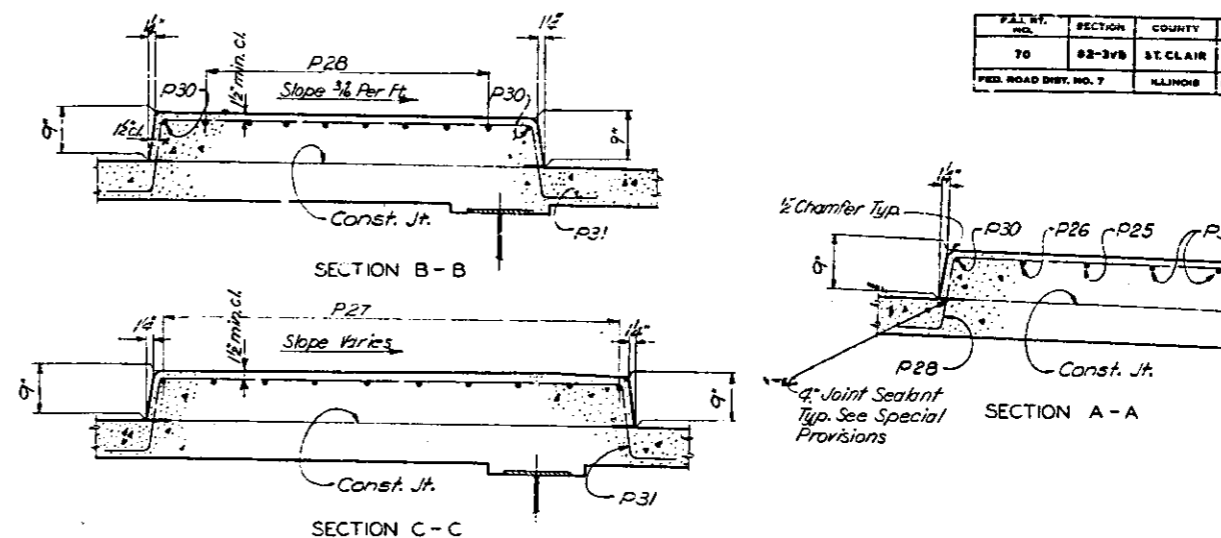
P.L. No.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
70	82-3VB	ST. CLAIR	43	27
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.	

SHEET NO. SHEETS

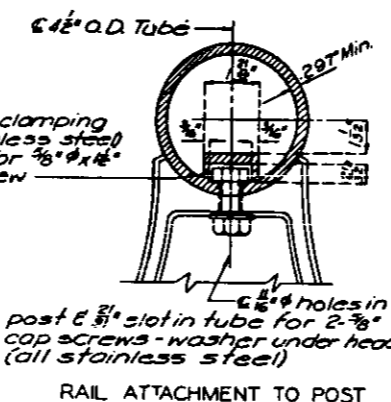


PLAN SAFETY ISLAND

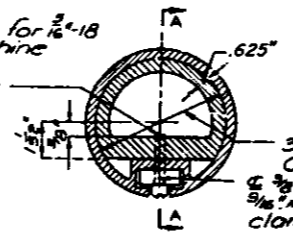
Note: The surface of the safety island shall be transitioned from the normal cross slope of 3/4 per ft. at the nosing to the elevations shown at the end of slab.



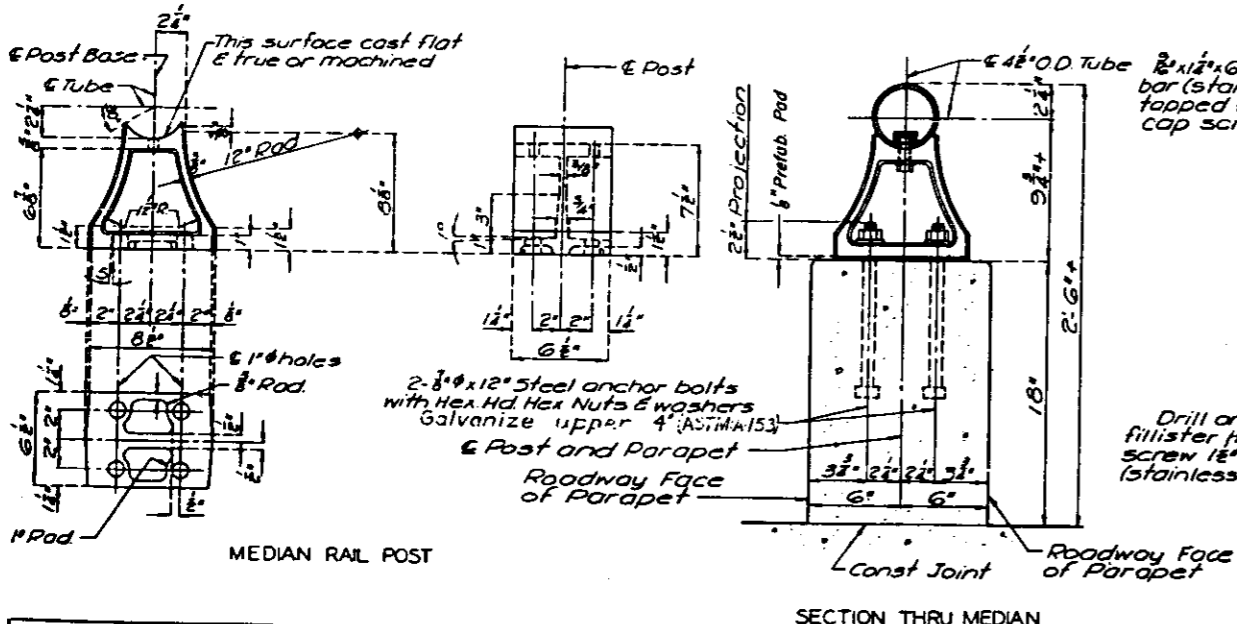
CAST END CAP
Drive fit type
G Required



RAIL ATTACHMENT TO POST



RAIL SPLICE OR EXPANSION DETAIL

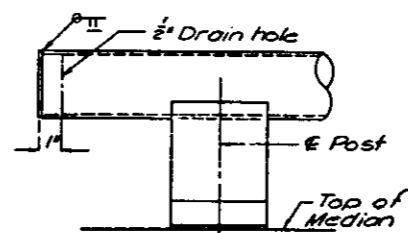


MEDIAN RAIL POST

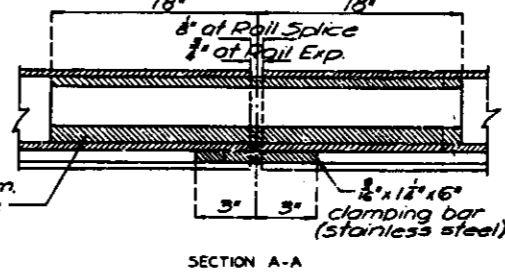
SECTION THRU MEDIAN

ALUMINUM MEDIAN RAIL

Note: Seal base of post to parapet with two component non-staining gray sealing compound with polysulfide liquid polymers - gun grade with primer.



ELEVATION AT END RAIL POST



SECTION A-A

NOTES:

- All Posts shall be normal to parapet
- All Aluminum Alloy Extruded Rail shall conform to ASTM specification B-235 alloy 6061-T6, or 6062-T6, and shall extend a minimum of 2 panel lengths (attached to a minimum of 3 posts) except at ends or at open joints where a minimum of 1 panel length is required. All joints in railing must be spliced per detail.
- All fillets 1/4" except as noted.
- All drafts 2° except as noted.
- All rail splices shall be located near the 1/4 point between rail posts.
- See Special Provisions for following Material Specifications: Cast Aluminum Alloy Bridge Post All A344-T4, Stainless Steel Machine Bolts, Washers, and Bars.
- For material composition of Prefabricated Pod, see Article 54.9(f), (Bearing and Anchorage), of the Standard Specifications.
- METHOD OF MEASUREMENT: Aluminum handrail shall be measured in lineal feet. The length paid for shall be the over all length along top longitudinal railing member thru all posts and gaps.
- BASIS OF PAYMENT: Aluminum handrail shall be paid for at the contract unit price per lineal foot for ALUMINUM HANDRAIL, measured as specified, which price shall be payment in full for all materials, fabrication, transportation, and erection.
- Cost of rail splice, end caps, and hardware to be incidental to item ALUMINUM HANDRAIL.
- Provide 1 - 1/8" and 2 - 1/8" Aluminum Shims for 25% of the Posts. Rail element shall be parallel to Grade - high spots shall be ground and low spots shimmed.

DESIGNED	18
CHECKED	EXAMINED
DRAWN	PASSED
CHECKED	APPROVED

MEDIAN BARRIER RAIL AND SAFETY ISLAND

ILLINOIS APPROACH TO POPLAR STREET 66

STATION - 44+73.50
F.A.L. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

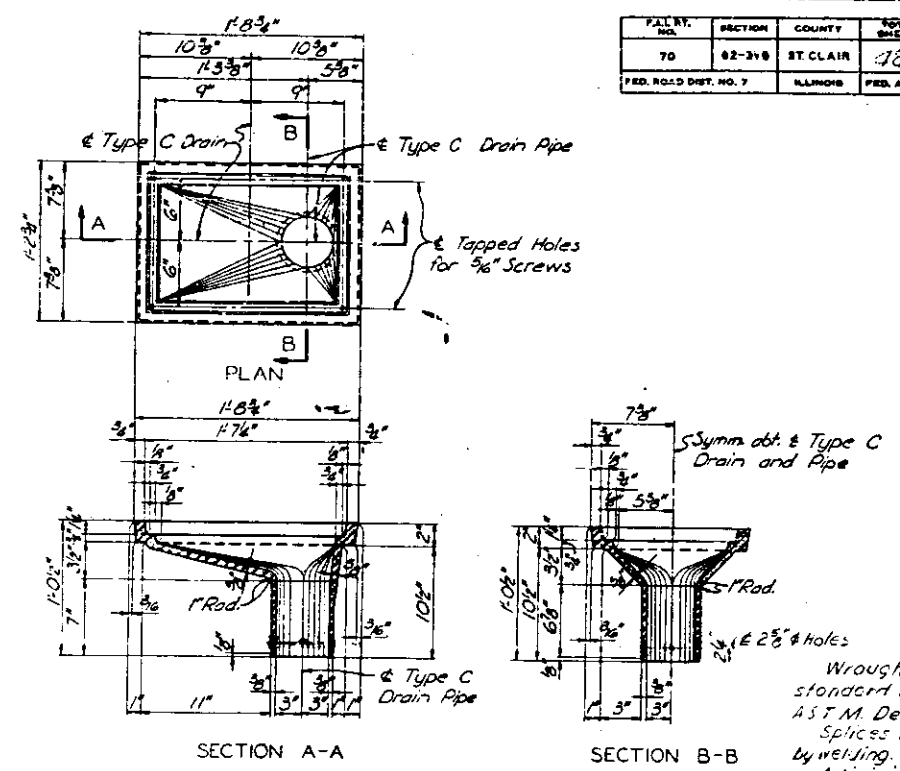
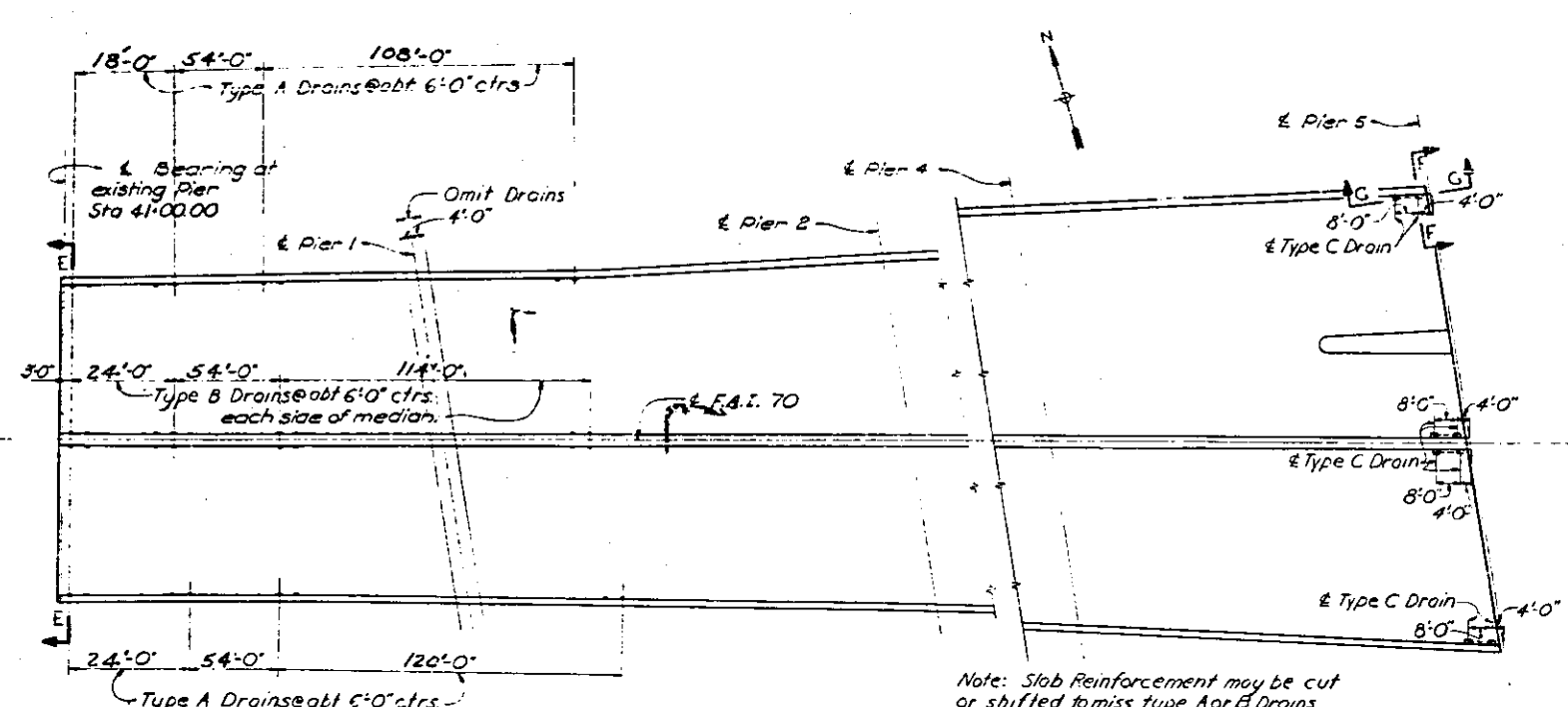
SCALE: NONE

DRAWN: R. Tanager July 1964
CHECKED: R. Hammer Jr. July 1964

BYRON & PARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

Note: Do not scale this drawing. Follow dimensions.

P.L. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. SHEETS
70	82-3VB	ST. CLAIR	48	29	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO.		



NOTES

Wrought iron pipe shall be standard weight and conform to ASTM Designation A 72.

Splices in pipes shall be made by welding.

Adjoining edges may be square or beveled as required to obtain full penetration weld.

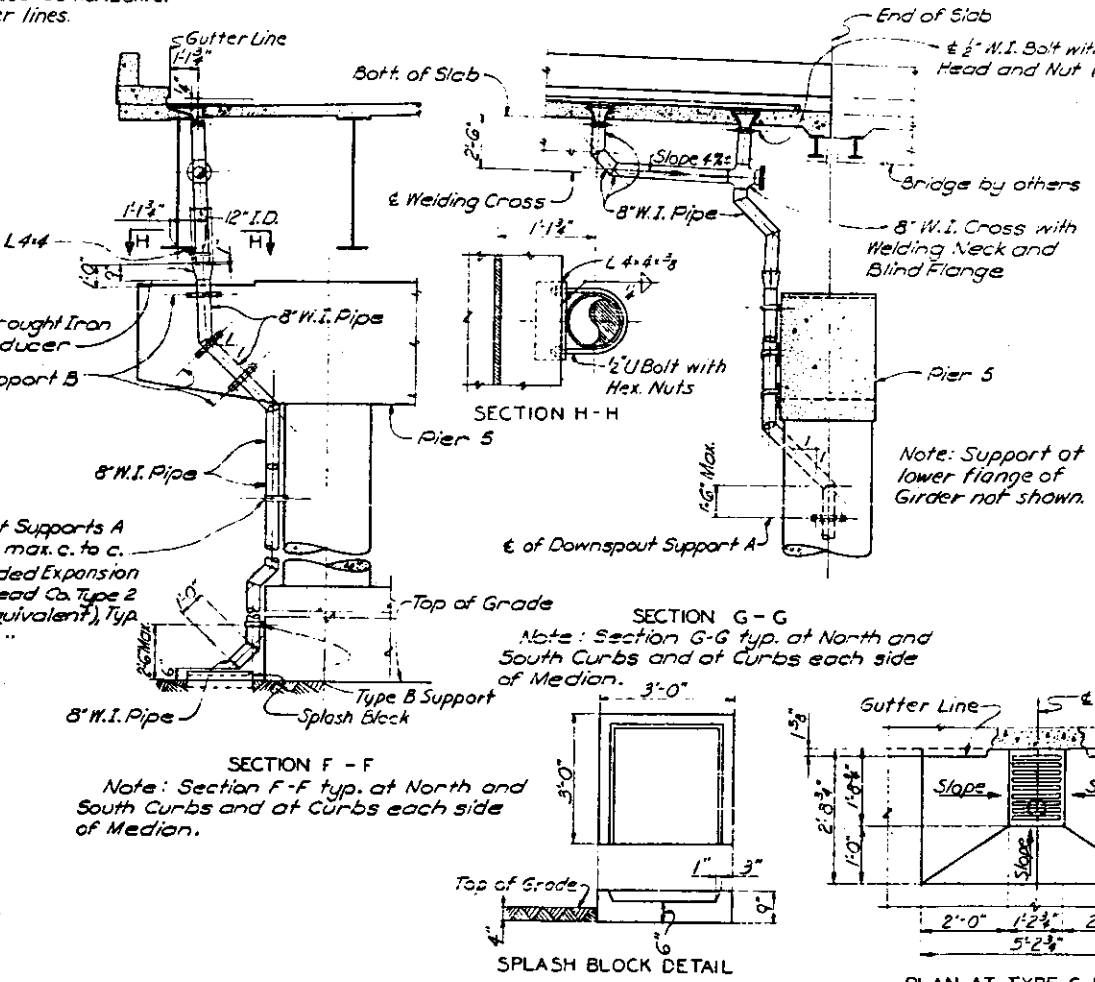
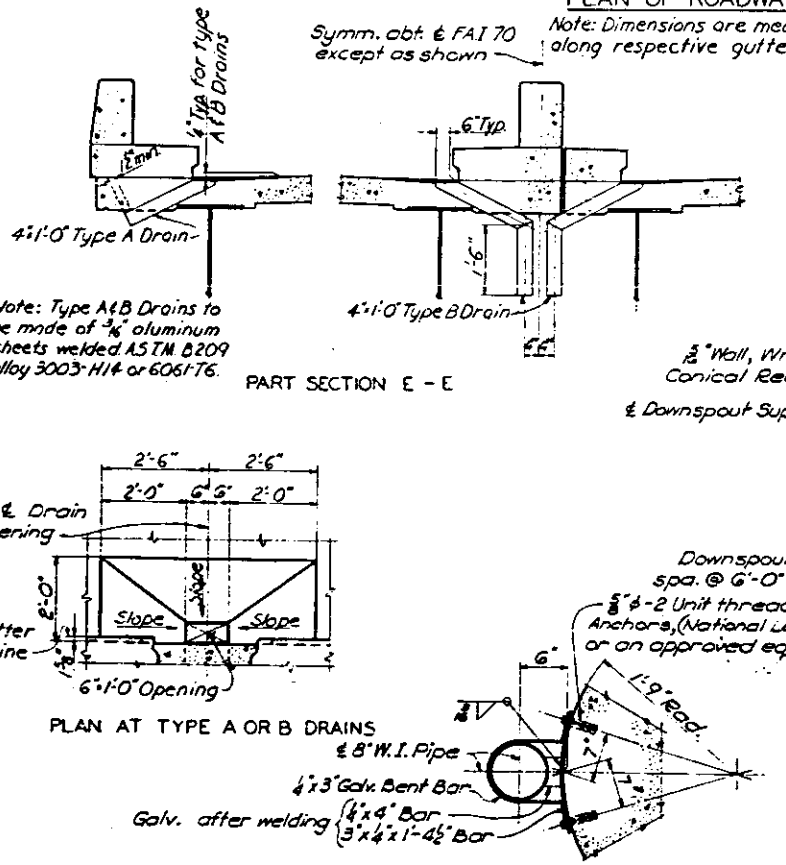
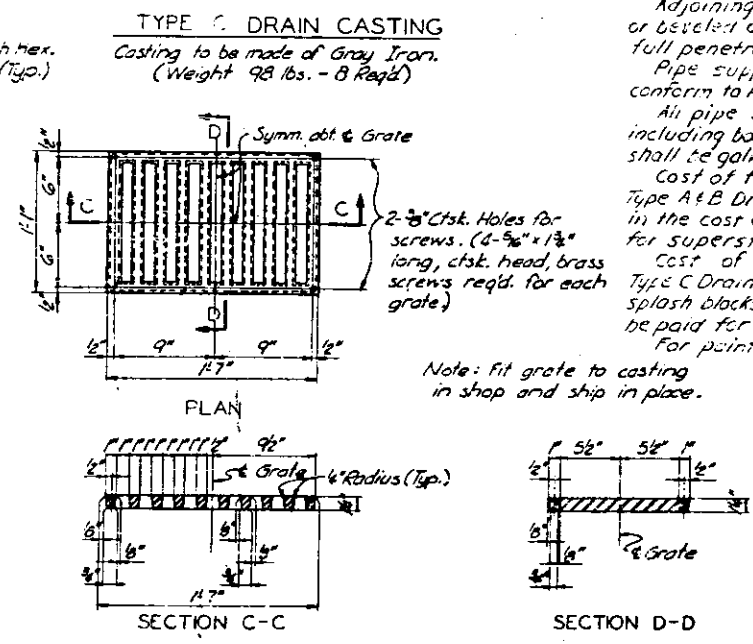
Pipe support material shall conform to ASTM Designation A36.

All pipe support material including bolts, nuts and washers shall be galvanized.

Cost of furnishing and placing Type A & B Drains to be included in the cost of Class "X" concrete for superstructure.

Cost of furnishing and placing Type C Drains, including downspouts, splash blocks and related items to be paid for on a lump sum basis.

For painting see Special Provisions.



DETAIL OF DOWNSPOUT SUPPORT A

Note: Downspout Support B is similar to Support A except the concrete surface is flat.

Note: Do not scale this drawing. Follow dimensions.

DRAINAGE

ILLINOIS APPROACH TO POPLAR S BRIDGE

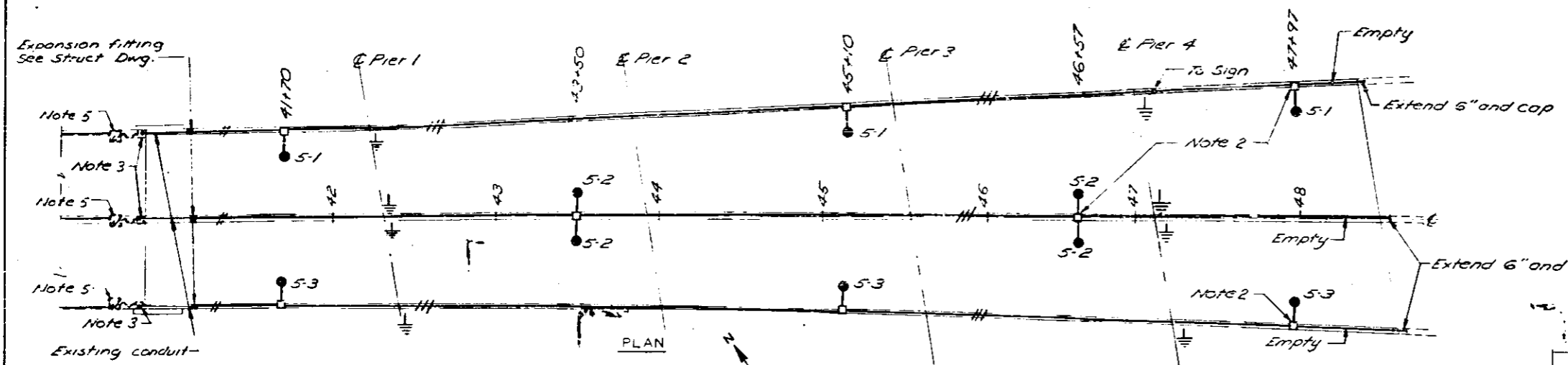
STATION - 44 + 73.50
 F.A.I. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

SCALE: None

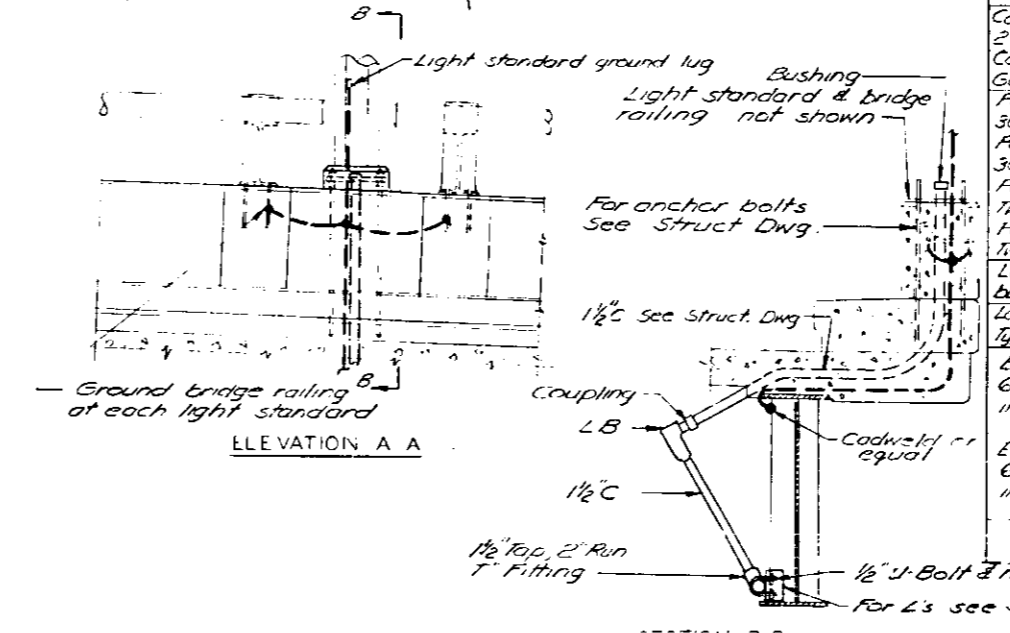
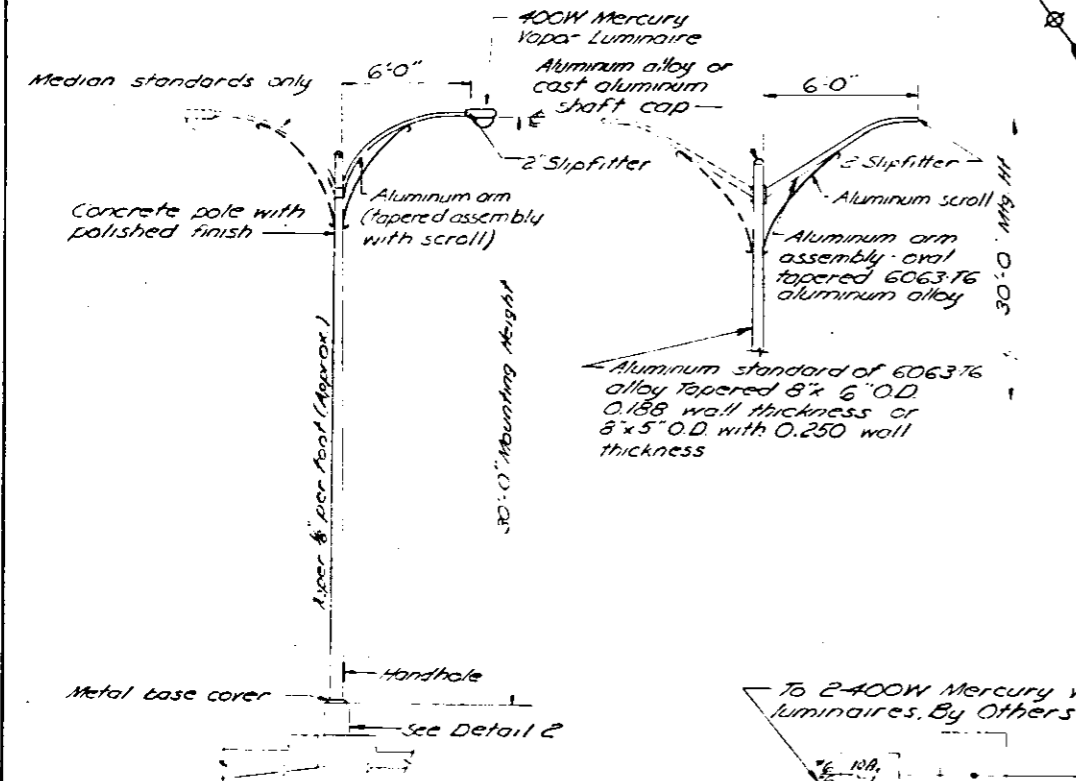
DRAWN: R. Tonner, June 1964
 TRACED: [Signature]
 CHECKED: R. Houser, Jr., July 1964

SPENDING & BRACEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

1988
625450

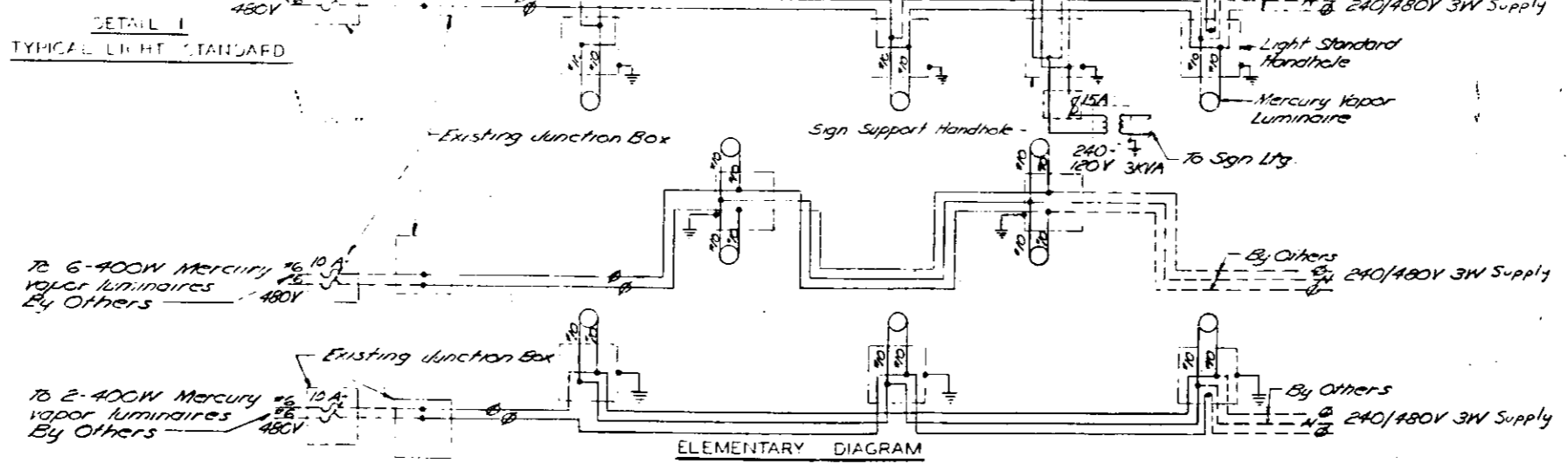


- SYMBOLS**
- Unit Substation No. (By Others)
 - Circuit No.
 - 400W Mercury vapor luminaire
 - Bracket arm
 - Bolt base pole
 - 2" Rigid steel conduit
 - Markings indicate no. of 1/2" #6 600V conductors
 - #2/0 Ground conductor in pier
 - #4 Ground conductor
 - Cadweld or equal



PAY ITEMS	UNIT	ABBREVIATION	QUANT.
Conduit attached to structure	LF	CON S 2 GALVS	2234
2" Dia Galvanized steel			
Conduit in concrete 1 1/2" Dia.	LF	CON C 1 1/2 GALVS	50
Galvanized steel			
Pole, concrete anchor base	Ea	PC AB 30MH 6MA	6
30" MH 6" Mast arm			
Pole, aluminum anchor base	Ea	PA AB 30MH 6MA	2
30" MH 6" Mast arm			
Pole, concrete anchor base 30" MH	Ea	PC AB 30MH TGMA	
1 1/2" x 6" Mast arm			
Pole, aluminum anchor base 30" MH	Ea	PA AB 30MH TGMA	
1 1/2" x 6" Mast arm			
Luminaire, Mercury vapor with built-in regulator ballast, 400W	Ea	LUM MV B REG BL 400W	10
Lamp, Mercury Vapor 400W	Ea	LAMP MV 400W 1/231/CD	10
Type H33-1-CD			
Electric cable in conduit 600V (neoprene rubber insulated) 1/2" No 6	LF	ELCBL C NR IC No 6	6440
Electric cable in conduit 600V (neoprene rubber insulated) 600V, 1/2" No 10	LF	ELCBL C NR IC No 10	660

- NOTES**
- Station No's for light standard locations are approximate and are for information only. For exact locations see Struct. Dwg's.
 - Coil 2' O' of each conductor in pole base for splice to future conductors extending east by others.
 - Splice to existing conductors in existing junction box on face of pier.
 - Luminaires shall produce ASA Type III distribution.
 - Contractor shall install ESNA Style 6% or equal, 600V dual element fuses in existing junction box.



ELECTRICAL DETAIL

ILLINOIS APPROACH TO POPLAR ST. DGE

STATION - 44+73.50
 F.A.L. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS

SCALE: AS NOTED

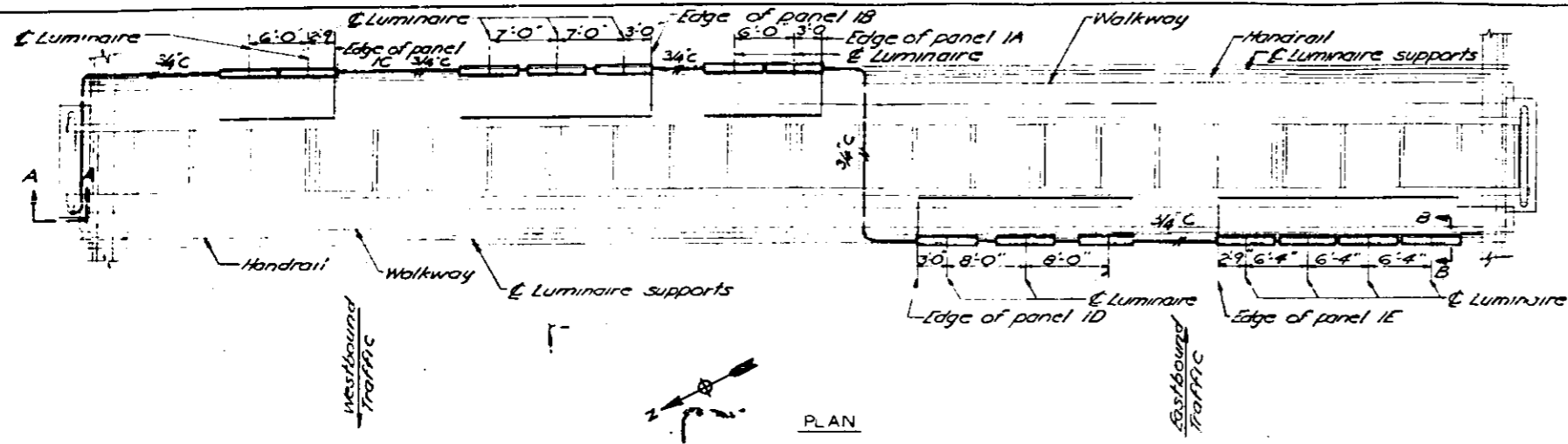
DRAWN	MUSKOPF	7/64
TRACED	J. S. SCOPE	7/64
CHECKED	S.W. BRASS	7/64

OVERDIP & PARCEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

1988
 6-25-80

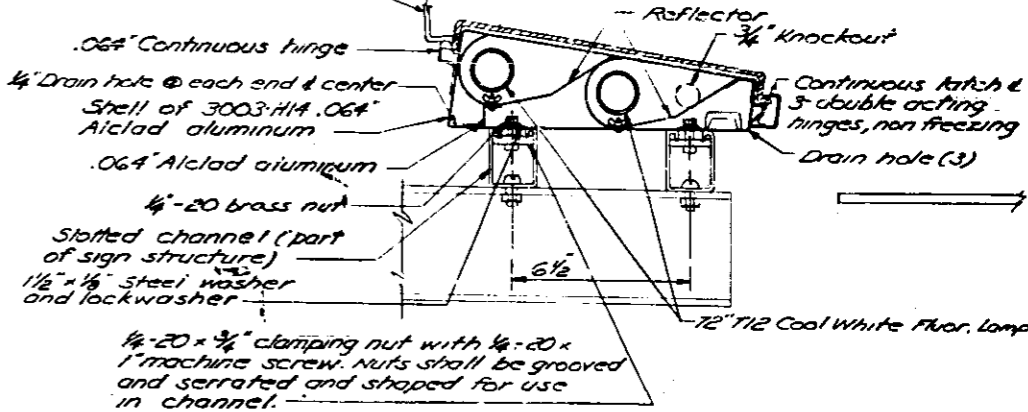
F.A.L. No.	SECTION	COUNTY	TOWNSHIP	SHEET NO.
70	82-3VB	ST. CLAIR	4B	31
FED. ROAD DIST. NO. 7		ILLINOIS		FEE: 1.50 PER SHEET

SHEET NO.
SHEETS



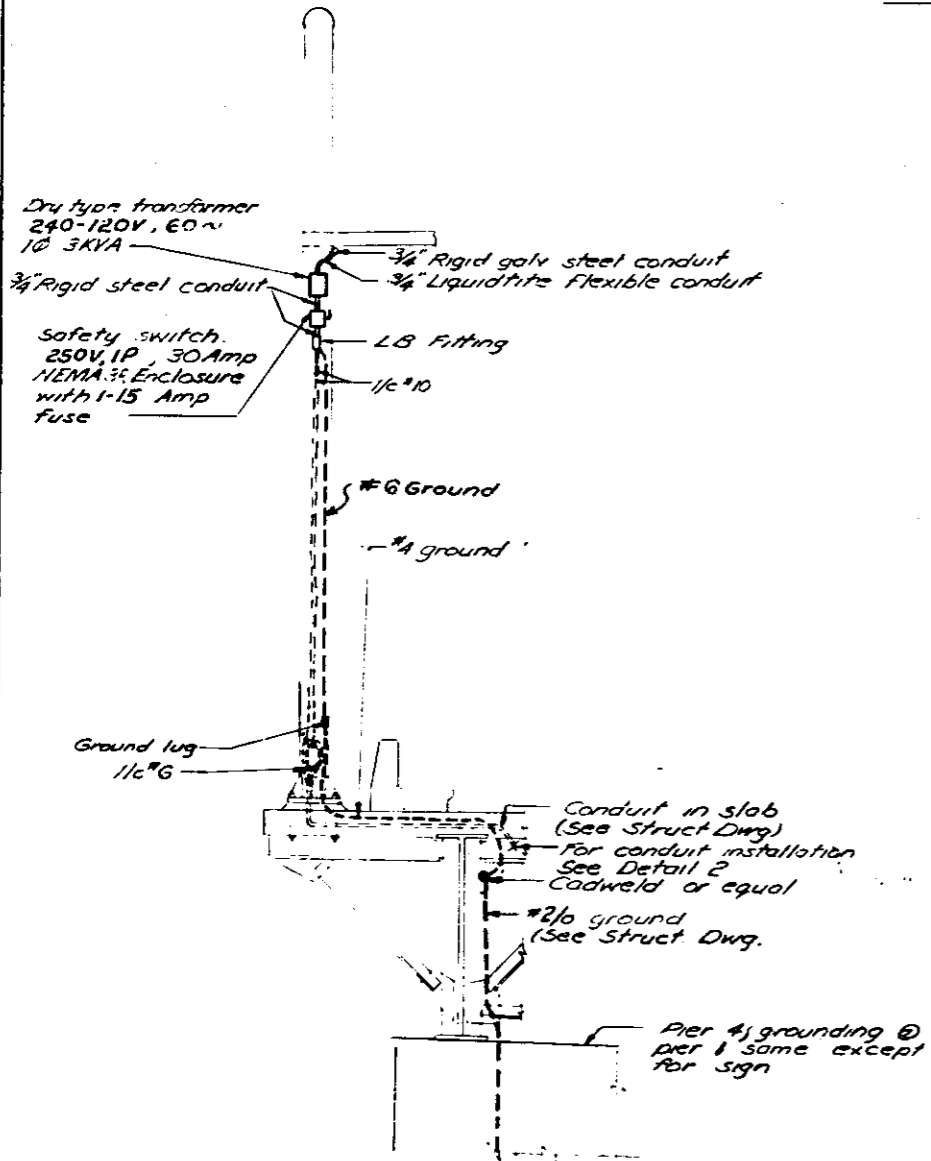
PLAN
DETAIL 3
SIGN LIGHTING

Provide #18 single jack chain at each end with detachable clasp to hold cover in open position



LUMINAIRE MOUNTING
SECTION BB

NOTE
1. Electrical items for sign lighting shall be included in the lump sum bid for the truss.



ELEVATION A A

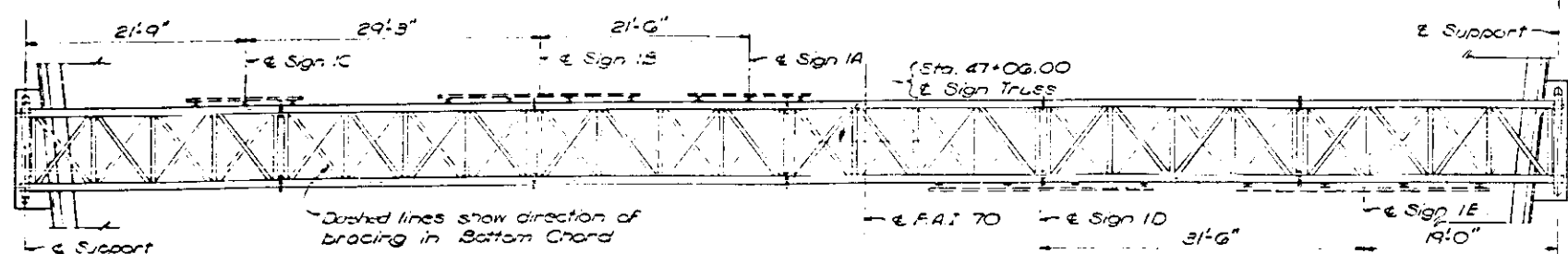
ELECTRICAL DETAILS

ILLINOIS APPROACH TO POPLAR STREET
STATION - 44+73.50
F.A.L. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

SCALE AS NOTED

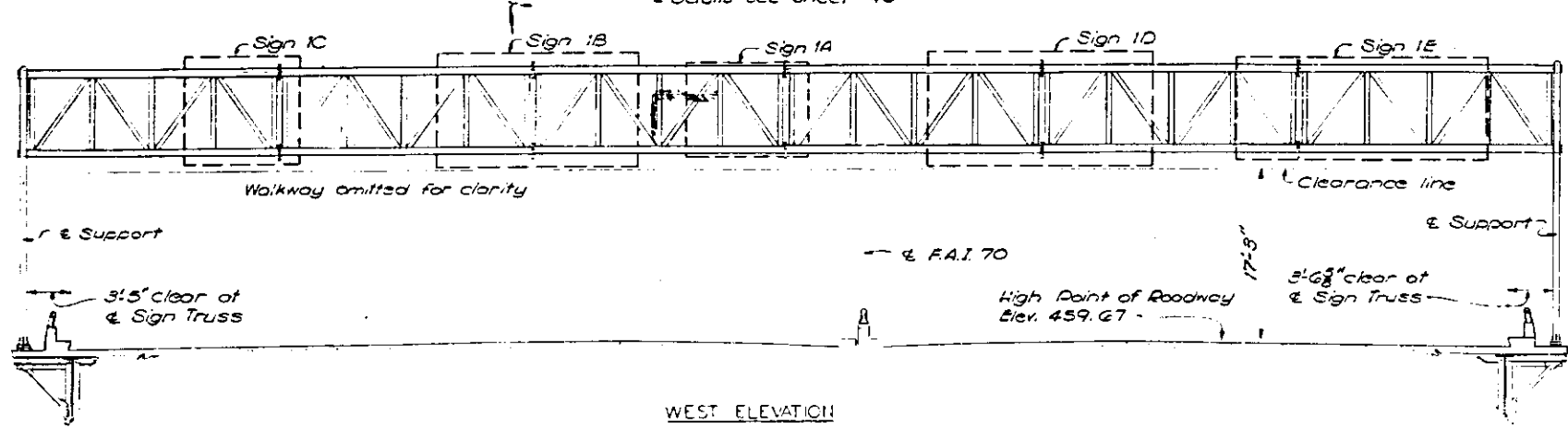
DRAWN: C. MURKOFF 7/68
TRACED: C. MURKOFF 7/68
CHECKED: R.V. BRESS 7/68
OVERDRIP & BRACEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
70	82-3VB	ST. CLAIR	48	34	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO.			



PLAN

Note: For Sign Dimensions & Details see Sheet 43



WEST ELEVATION

150'-0" c. to c. Support Frames

SIGNING NOTES

SPECIFICATIONS:
DESIGN: AASHO Specifications for the Design and Construction of Structural Supports for Highway Signs dated November 1960.
CONSTRUCTION: Standard Specifications for Road and Bridge Construction, State of Illinois, dated January 2, 1958; Supplemental Specifications for Road and Bridge Construction dated March 2, 1974 and Supplemental Specifications for Highway Signing dated March 1963 and Special Provisions.
LOADING:
WIND LOADING: 30 p.s.f. normal to Sign Panel Area (9.0 ft sign height x 75% Design Span plus 7.5 p.s.f. normal to sign truss area).
WALKWAY LOADING: Dead Load + 500# Concentrated Live Load
UNIT STRESSES:
 Structural Steel - 18,000 p.s.i.
 Structural Aluminum - per AASHO Specifications for Highway Signs, Nov. 1960.
 Allowable unit stresses due to wind load in combination with other forces are increased 1/5.
MINIMUM CLEARANCE: Vertical Roadway Clearance: 17'-3" (All Obstructions).
SIGN TRUSS UNITS shall be all welded construction.
WELDING: All welding to be continuous unless otherwise shown. All welding to be made in accordance with current AWS Specifications. Welding on ASTM A-36 Plates and Shapes or ASTM A 53-63T Grade B Pipe shall be done with low hydrogen electrodes conforming to E70XX. Aluminum alloy filler wire for welding aluminum shall conform to ASTM B-285 ER535G.
MATERIALS: Aluminum Alloys as shown throughout plans. All Structural Steel Pipe shall be ASTM A 53-63T Grade B with a minimum yield of 35,000 p.s.i.

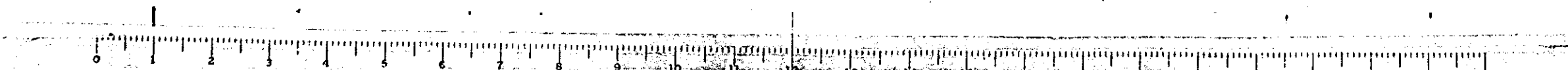
PLAN AND ELEVATION
SIGN TRUSS

ILLINOIS APPROACH TO POPLAR BRIDGE
 STATION - 44 + 73.50
 F.A.I. ROUTE - 70
 SECTION - 82-3VB
 ST. CLAIR COUNTY, ILLINOIS
 SCALE: NONE

DESIGNED BY: E.L. Barnes, July 1964
 TRACED BY: R. Heil & Gubehnk, July 1964
 CHECKED BY: R. Heil & Gubehnk, July 1964
 OVERMAN & PACEL AND ASSOCIATES, INC.
 ENGINEERS-ARCHITECTS
 ST. LOUIS, MO.

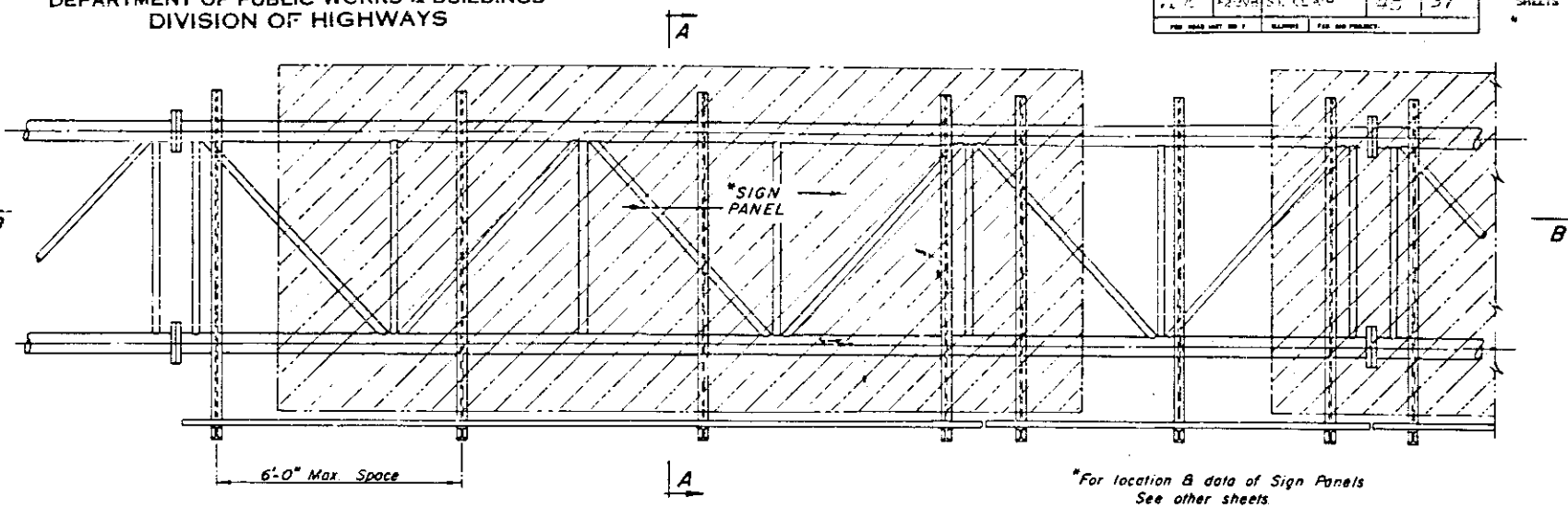
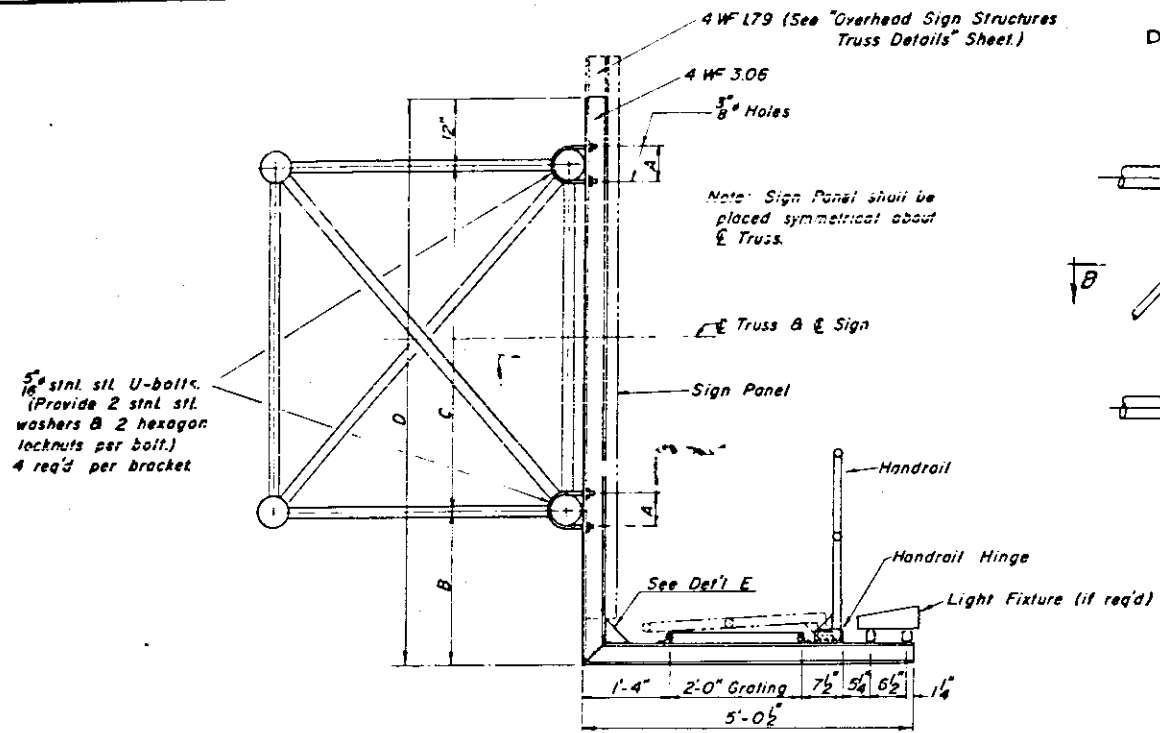
1964
63525

Note: Do not scale this drawing. Follow dimensions.

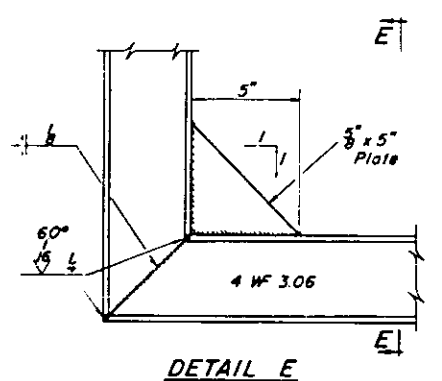


STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

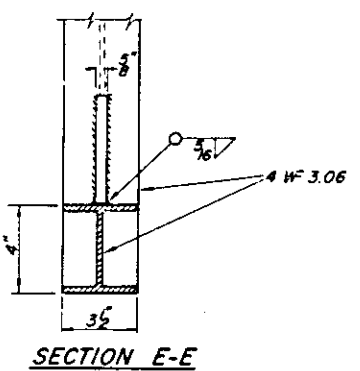
PROJECT NO.	SECTION	SHEET	TOTAL SHEETS	SHEET NO.
82-2VH	ST. CLAIR	15	37	



TYPICAL FRONT ELEVATION
(With Lights & Handrail omitted for clarity)

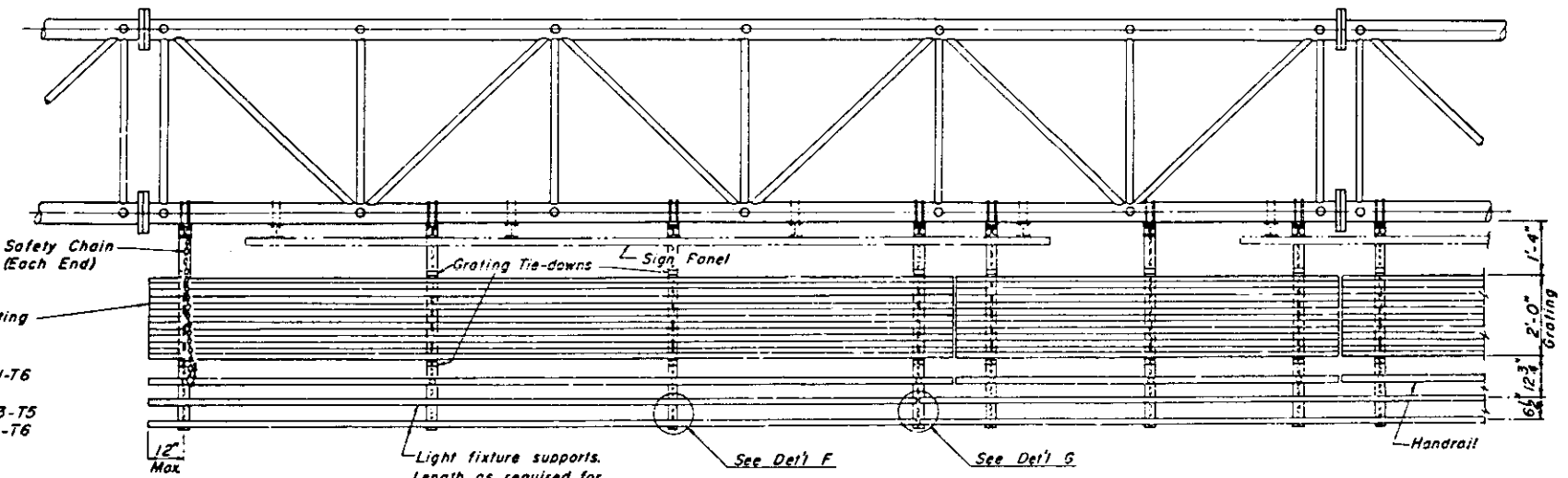


BRACKET DETAILS



SECTION E-E

Standard Aluminum Grating
Bars 3/8 x 1 1/2
Bearing Bars 1 1/8 o.c.
ASTM B-211 Alloy 6061-T6
Cross Bars 4" o.c.
ASTM B-221 Alloy 6063-T5
or Alloy 6061-T6



SECTION B-B

Note: Handrail & Grating shall span a minimum of three brackets. Place all sign and walkway brackets as close to panel points as possible.

Truss Number	Station	A	B	C	D
1	47+06	7 3/8	2'-10"	7'-0"	10'-10"

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN Wm M Best	APPROVED
CHECKED	

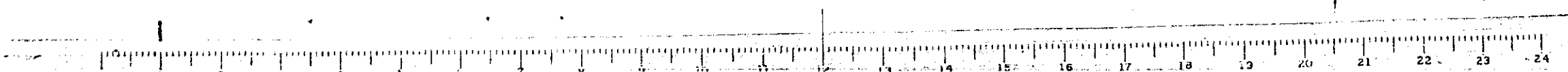
**OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS**

ILLINOIS APPROACH TO POPLAR STREET
STATION - 44+73.50
F.A. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

DRAWN: J.A. July 924
TRACED: J. J. July 924
CHECKED: J. J. July 924

BYRON RUP & MARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO

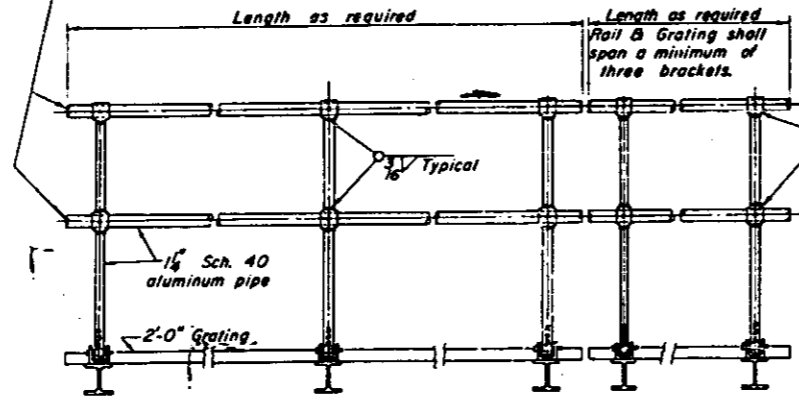
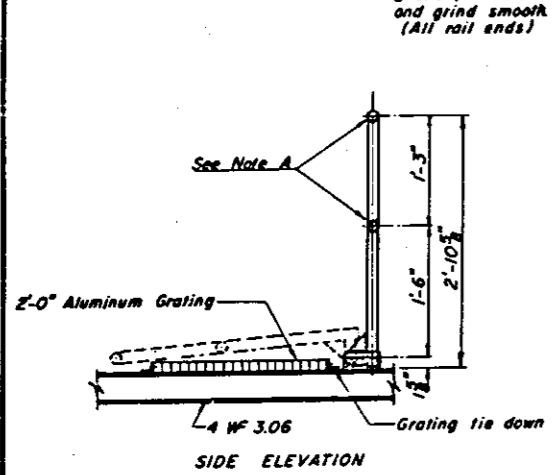
OS-A-8 1-4-63



STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

DATE	SECTION	PROJECT	TOTAL SHEETS	SHEET NO.
1.4.70	B2-3VB	ST. CLAIR	48	38
SHEETS				

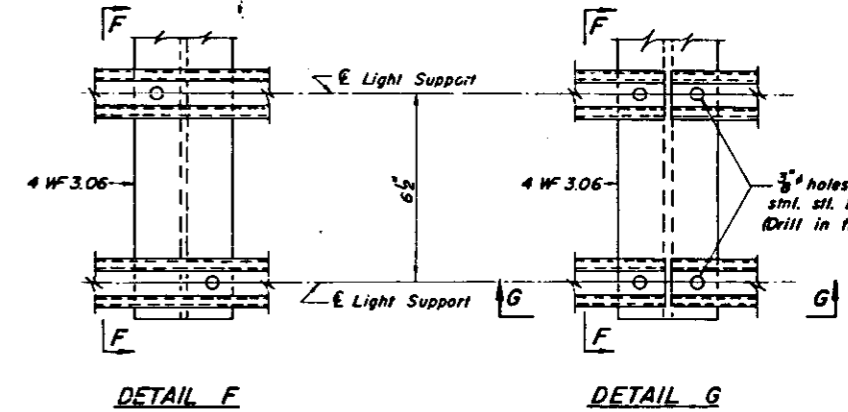
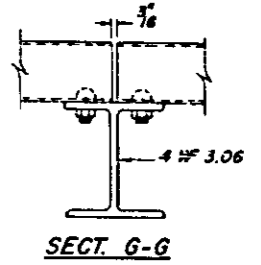
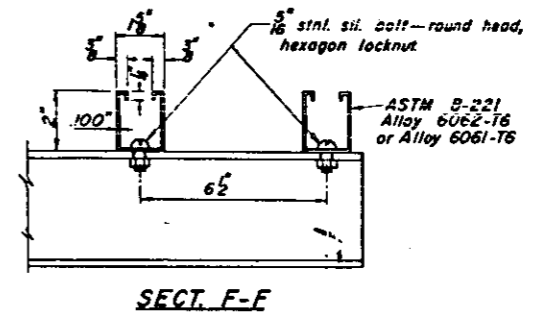
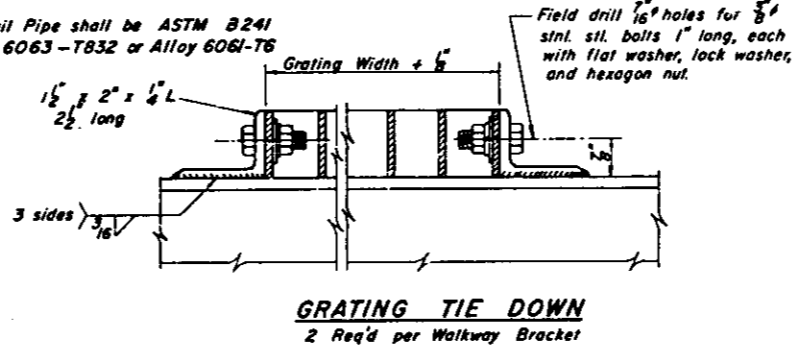
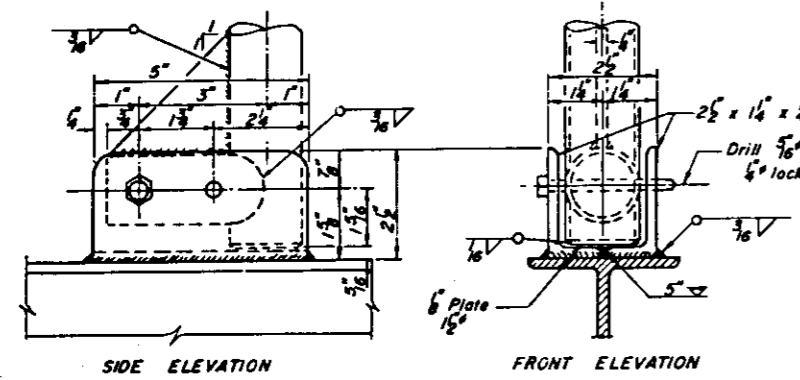
Contractor shall install standard force-fit end caps or weld end plates with 1/8" c.l.w. and grind smooth. (All rail ends)



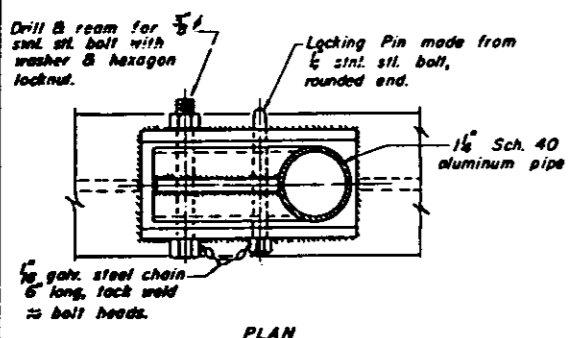
Note A
Horizontal rail member shall be continuous thru fitting. Provide 1/8" hole in fitting for 3/8" bolt. Field drill 1/8" hole in horizontal rail member. Provide washer and locknut for bolt.

TYPICAL HANDRAIL DETAIL

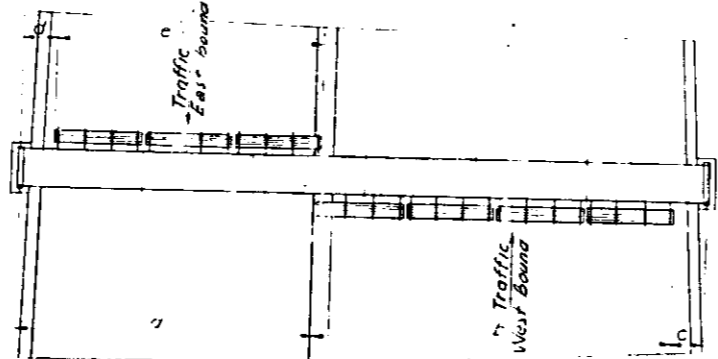
Note: Handrail Pipe shall be ASTM B241 Alloy 6063-T832 or Alloy 6061-T6



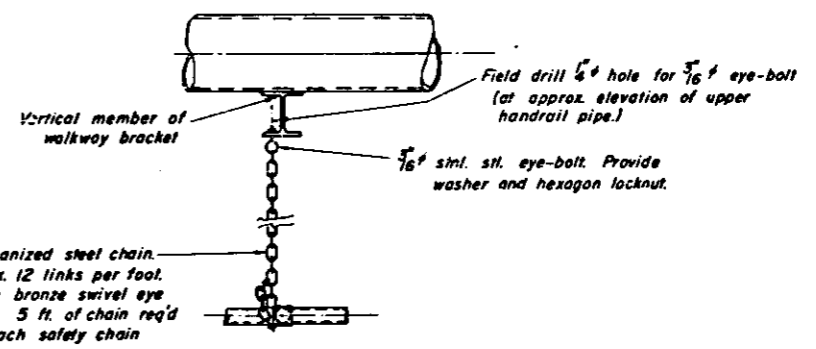
LIGHTING FIXTURE MOUNTS (IF REQ'D.)



DETAILS OF HANDRAIL HINGE



Note: Road Plan shown beneath truss just typical.



Note: All bolts, nuts, and washers shall be stainless steel.

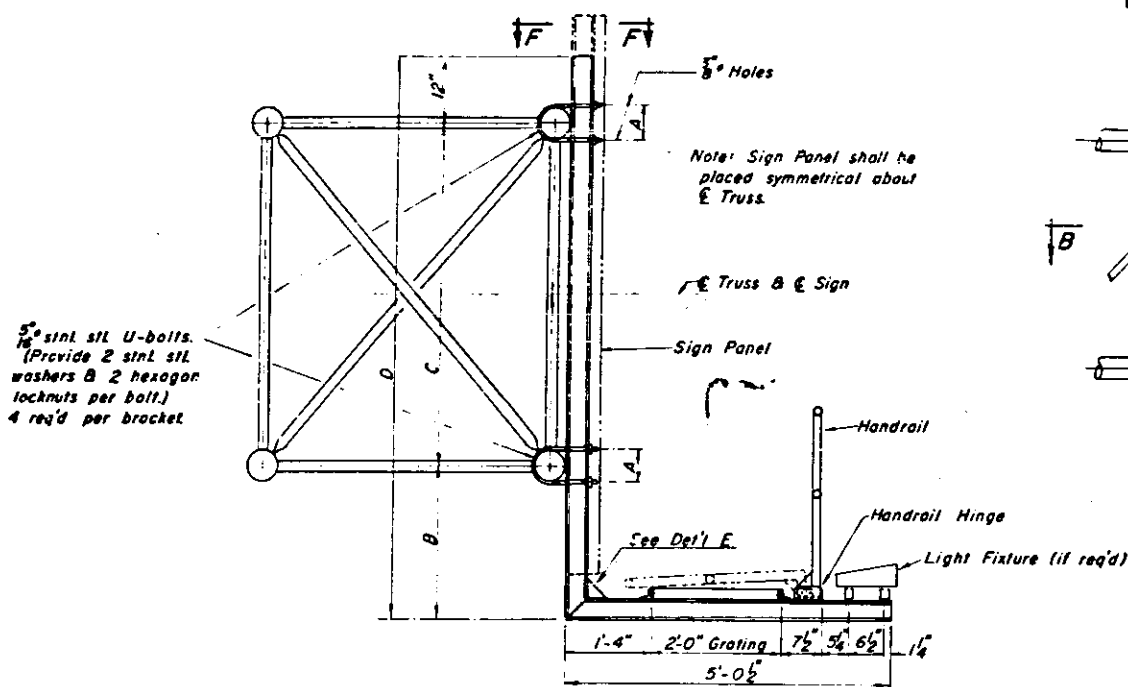
Truss Number	Station	a	b	c	d	e	Grating & Handrail Lengths
1	47+06	70'-0"	74'-0"	6'-0"	6'-0"	56'-0"	130'-0"

OVERHEAD SIGN STRUCTURES
ALUMINUM WALKWAY DETAILS

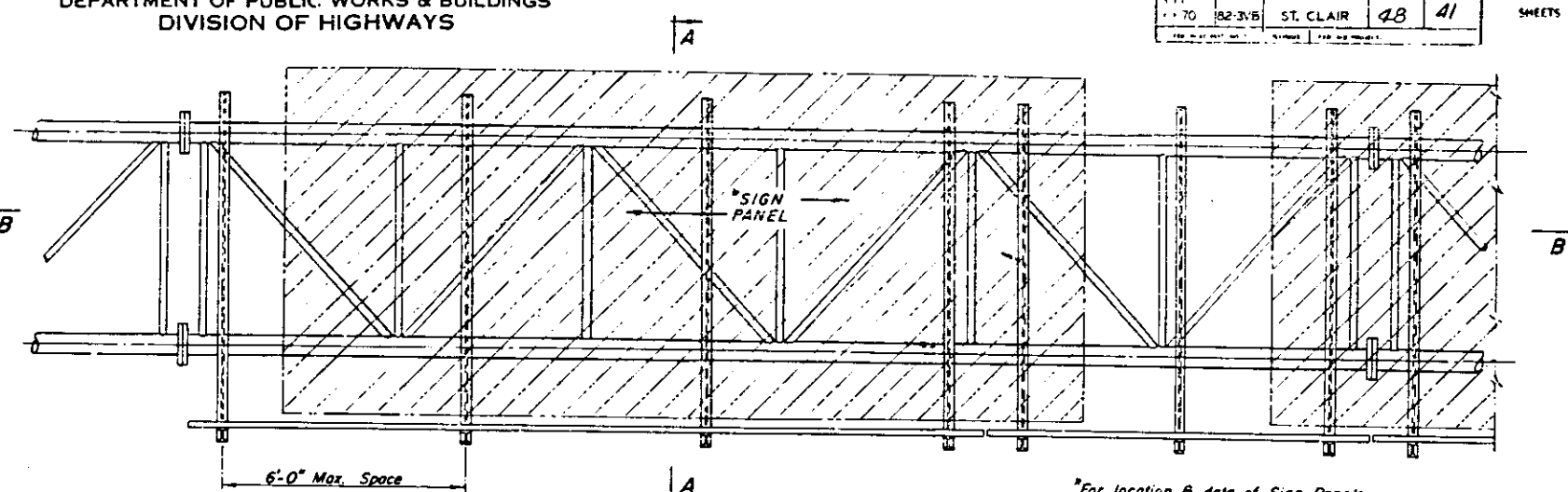
ILLINOIS APPROACH TO POPLAR STREET
STATION - 44+73.50
P.A.L. ROUTE - 70
SECTION - B2-3VB
ST. CLAIR COUNTY, ILLINOIS

DRAWN: NAA July 1964
TRACED: G. W. H. July 1964
CHECKED: G. W. H. July 1964

OVERMAN & BARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

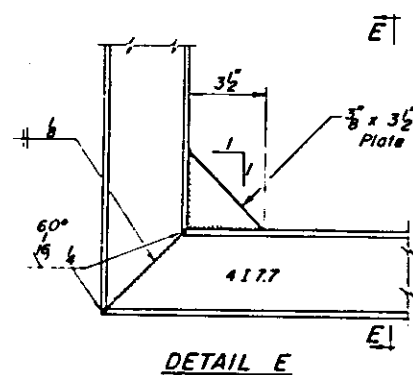


SECTION A-A

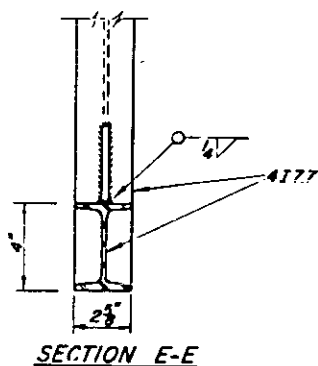


TYPICAL FRONT ELEVATION
(With Lights & Handrail omitted for clarity)

*For location & data of Sign Panels
See other sheets

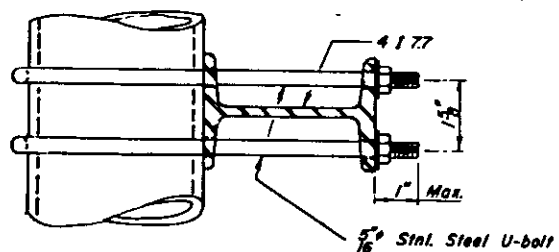


DETAIL E



SECTION E-E

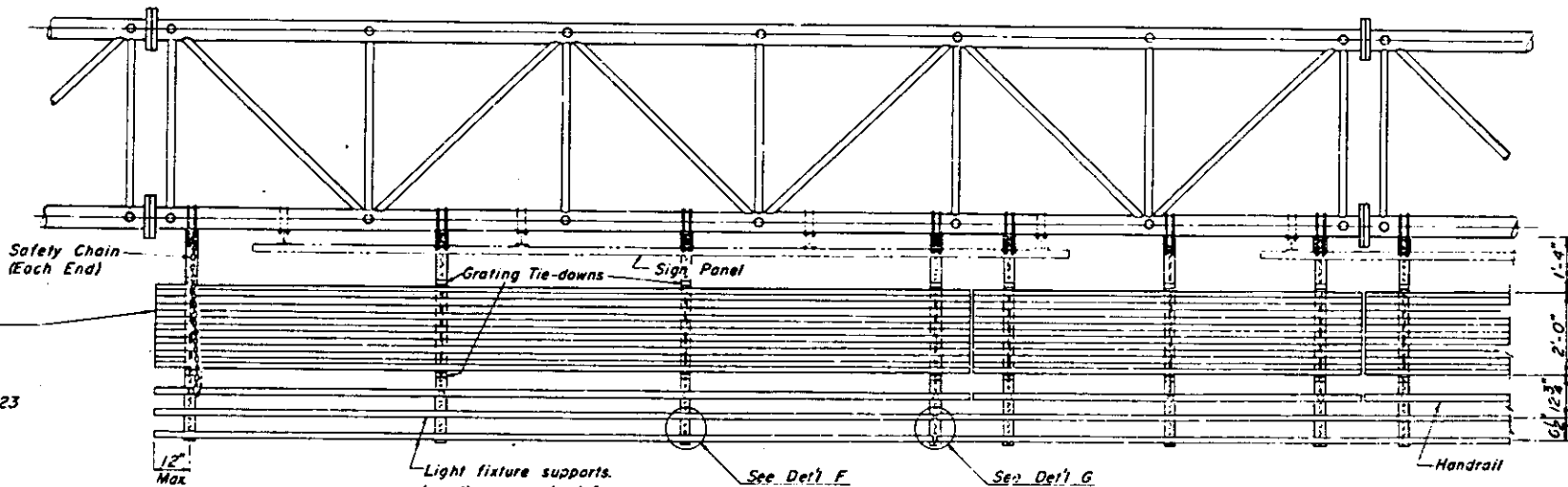
BRACKET DETAILS
Galvanized to ASTM A-123 & A-385



SECTION F-F

DESIGNED	TRAINED
CHECKED	PASSED
DRAWN Wm M Best	APPROVED
CHECKED	

Standard Steel Grating
Bars 7/8 x 1 1/2"
Bearing Bars 1 1/8" o.c.
Cross Bars 4" o.c.
Galvanized to ASTM A-123
and ASTM A-384



SECTION B-B

Note: Handrail & Grating shall span a minimum of three brackets. Place all sign and walkway brackets as close to panel points as possible.

Note: Stainless steel hardware shall not be galvanized.

Truss Number	Station	A	B	C	D
1	47+06	7 3/8"	2'-10"	7'-0"	10'-10"

OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

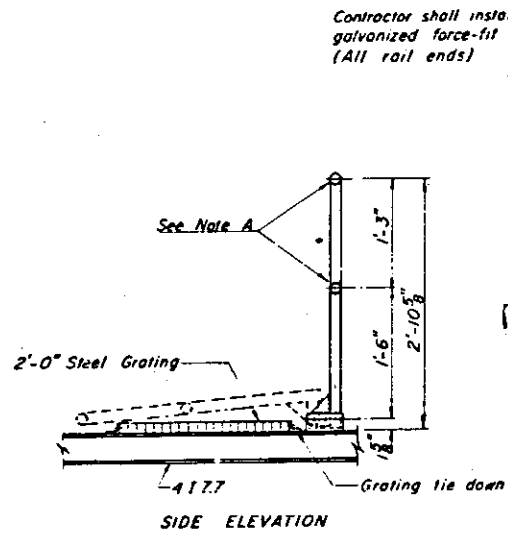
ILLINOIS APPROACH TO POPLAR STREET
STATION - 44 + 73.50
F.A.I. ROUTE - 70
SECTION - 82-3VB
ST. CLAIR COUNTY, ILLINOIS

DRAWN W.A.A. July 1964
TRACED J. W. H. July 1964
CHECKED J. W. H. July 1964
OVERDRUP & SIBTEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

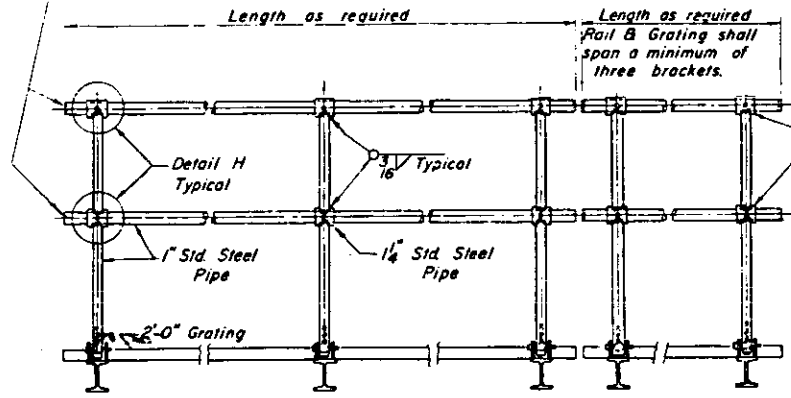
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

PROJECT NO.	SECTION	CITY	SCALE	SHEET NO.
70	P2-2VB	ST. CLAIR	48	42

SHEET NO.
SHEETS

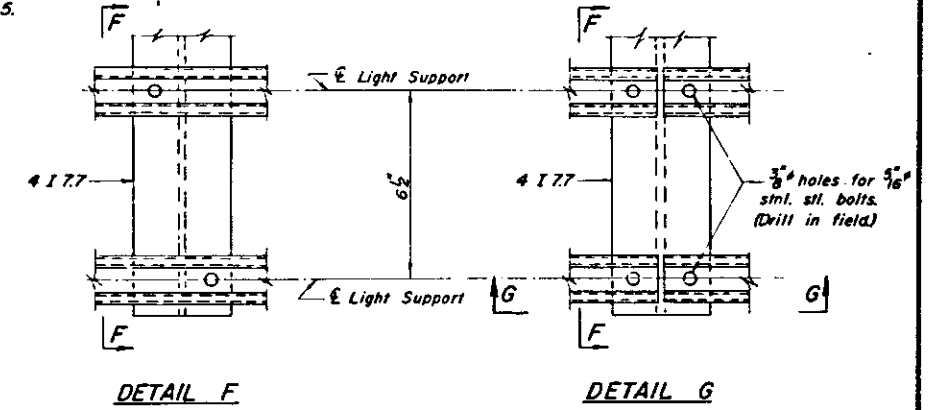
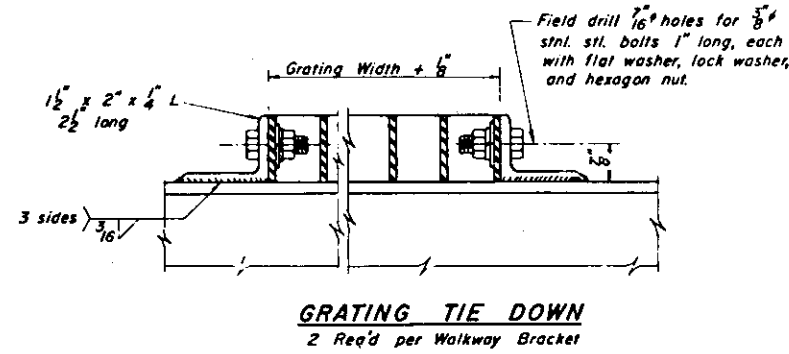
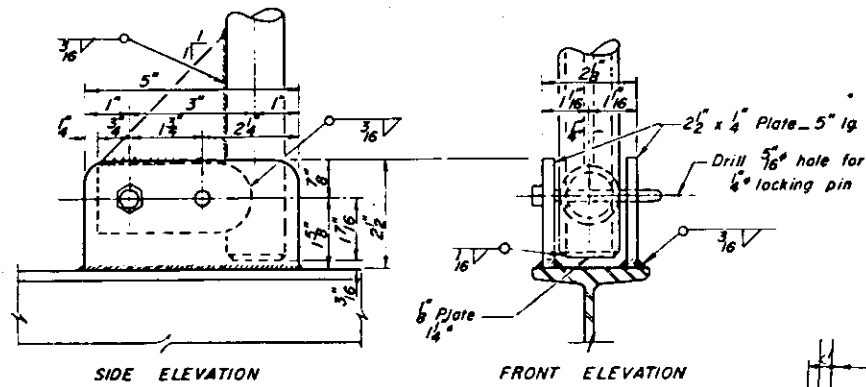
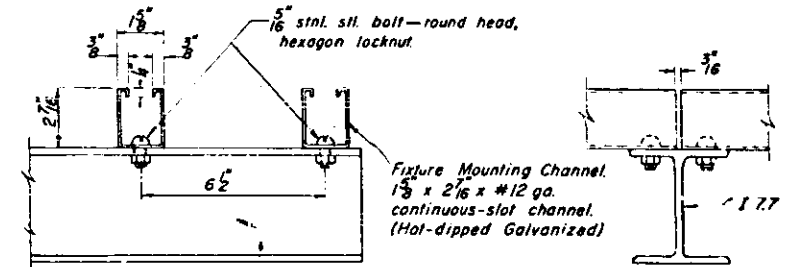


TYPICAL HANDRAIL DETAIL

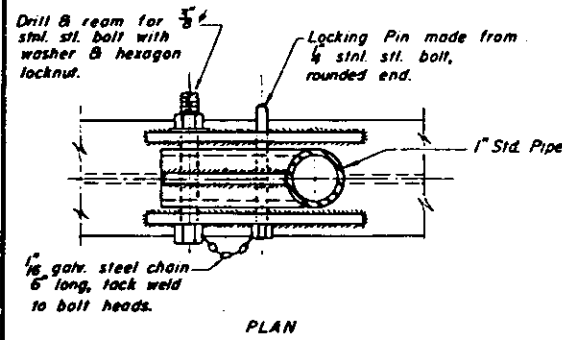


Note A
Horizontal rail member shall be continuous thru fitting. Provide 1/8" hole in fitting for 3/8" bolt. Field drill 1/16" hole in horizontal rail member. Provide washer and locknut for bolt.

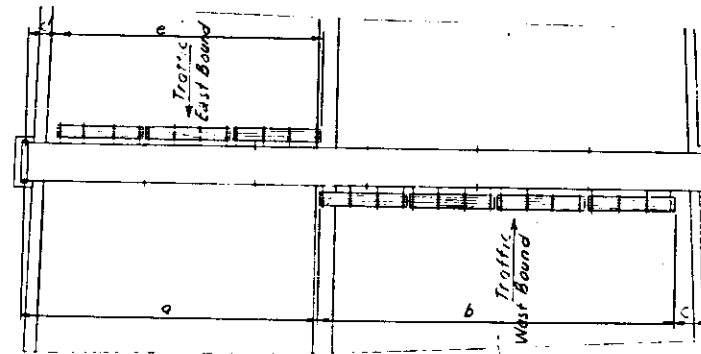
Note: Handrail Pipe shall be ASTM A-53, Grade B. Horizontal Handrail Pipe shall be galvanized to ASTM A-120. Vertical Handrail Pipe Member shall be galvanized after fabrication to ASTM A-123 & A-385. Vent holes shall be provided in all closed or blind sections prior to galvanizing.



LIGHTING FIXTURE MOUNTS (IF REQ'D.)

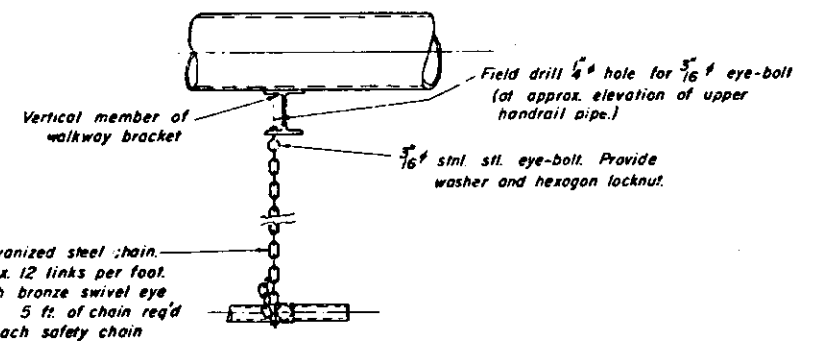


DETAILS OF HANDRAIL HINGE



WALKWAY AND HANDRAIL SKETCH

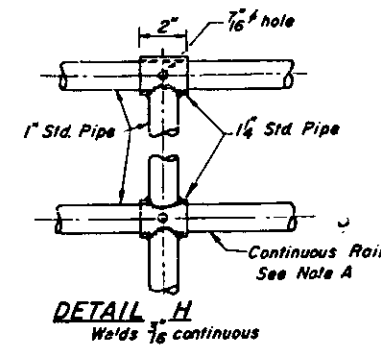
Note: Road Plan shown beneath truss just typical.



SAFETY CHAIN

One (1) required for each end of each walkway.

Note: All bolts, nuts, and washers shall be stainless steel.



OVERHEAD SIGN STRUCTURES
STEEL WALKWAY DETAILS

ILLINOIS APPROACH TO POPLAR STR. GE

STATION—44+73.50

F.A.I. ROUTE—70

SECTION—82-3VB

ST. CLAIR COUNTY, ILLINOIS

DRAWN: Y.A.A. July 1964

TRACED: G. J. Beck

CHECKED: G. J. Beck

OVERSHP & MARCEL AND ASSOCIATES, INC.
ENGINEERS-ARCHITECTS
ST. LOUIS, MO.

OS-S-9 11-27-62

DESIGNED	EXAMINED
CHECKED	PASSED
DRAWN Wm. M. Best	APPROVED
CHECKED	

